



Management Training for Construction Professionals



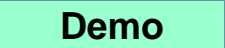

Tutorial

Introduction

The tutorial describes in detail the various features of the **MERIT** simulation.

All the examples are 'fictional', and not related to any data used elsewhere.

You can **navigate** through the tutorial by using :-

-  buttons for movement through the presentation
-  buttons to load specific topics
-  buttons for self-paced demonstrations of topic
-  hotspots to display further information.

The mouse,  and not the keyboard, should be used at all times.

Main Menu

Choose from one of the following options

- Forming a Company Strategy
- Entering Decisions
- Measuring Performance
- Obtaining Information

Forming a Company Strategy - 1

Keep Clicking Anywhere on the screen to advance the demo

It is very easy to take a short-term view to running the company by making decisions for the current period only, without looking at the wider picture. Whilst this hit and miss approach may prove successful, it is unlikely to be as effective as formulating a **long-term strategy for the company, based upon the company's objectives**.

Decisions made in the current period often have an impact in future periods, and in different areas of the company's activities, and to make the most effective use of the company's resources **long-term planning** is essential.

For example, the efforts of the Marketing Department may enable the company to prequalify for a large job in period 5. The company decide to tender for the job, which is costed in period 6, and a bid is submitted in period 7. If the bid is successful, the job will not start until period 8. If it then runs for five periods, it should complete in period 12. In other words, a decision on where to target marketing effort in period 5 has had an affect up until period 12, and beyond if retentions are repaid once the job completes.

In order to decide upon the company's objectives, and what can be realistically achieved over a period of time, there needs to be a detailed analysis of :-

- The **environment** in which the company is operating
- The **strengths and weaknesses** of the business as it stands
- The **likely competition** in the future

In setting the objectives there are many questions that need to be answered, including :-

- What **level of growth** would we like to achieve ?
- How are we going to improve the **value of the company** ?
- What levels of **company overhead** are we likely to need to achieve our objectives ?
- How are we going to look after the **interests of the shareholders** ?
- How are we going to improve **relationships with our clients** ?

There are many other areas that also need to be considered, and creating a long-term strategy is a complex task. Indeed, strategy will have to be **periodically reviewed**, since the objectives to date may have been unattainable for any number of reasons, such as :-

- The Company's future **market forecasts were not very accurate**, and the anticipated growth areas have not materialised
- **Increased competition** has forced margins to be reduced to secure work
- **Jobs have been lost** to competitors with better client relations

We'll now look at an example of setting and reviewing company strategy.

We have been given the task of running a company that has been operating for a year (the **History**), and is considered to be in a sound position by both the industry and its board of directors.

The **status** of the company/market when we take control is :-

- The company is **valued** at around 4.5m, and has a **share price** of 0.9.
- Since the company started from scratch, **turnover** was only generated in the last period of the first year, and this was valued at around 11m.
- A small **gross profit** of 0.8% was made on the work progressed. Unfortunately there was an **operating loss** of 1%, due mainly to overhead costs as the company was being established in the first year without any revenue being earned.
- The company **order book** looks very healthy, with a forward workload of around 19m, and an anticipated profit of 1m.
- The overall value of **new work in the market** seems stable between 90m and 120m.
- A number of **satisfactory relationships** were established with clients.

Based on the information information given above, and a detailed review of your company reports and the market, we must decide upon the company's strategy for the next year.

After a thorough review, the following key objectives are set for the next year :-

- To aim for **steady, profitable growth**, increasing **turnover** from 11m (last period of the History year) to 44m in the next year through increasing prequalification for new work, and competitive tendering.
- To improve the **value** of the company from 4.5m to 5m (by 11%) through improved company profits and making better use of the company's assets.
- To ensure that **company overheads**, especially the Head Office, QHSE and Measurement departments, are staffed sufficiently to manage with the increasing turnover.
- To improve the company's **share price**.
- To **build on and improve** existing client relationships.

A year later, how did we perform against the objectives that were set ?

Forming a Company Strategy - 1

Objective

To aim for **steady, profitable growth**, increasing **turnover** from 11m (last period of the History) to 44m in the next year through increasing prequalification for new work, and competitive tendering.

Objective

To aim for **steady, profitable growth**, increasing **turnover** from 11m (last period of the History) to 44m in the next year through increasing prequalification for new work, and competitive tendering.

Operational Performance of the Company

Job Performance

Measured Value:	8,734,433	(Turnover)
Early Completion Bonus:	0	
Retention Repaid:	0	
(less) Retention Held:	131,017	
Monies Received:	8,603,416	
(less) Costs:	8,196,216	
Gross Profit:	407,200	(5.0 % of costs)

By examining the **Financial Report**, we can see that the **turnover** (measured value) in periods 5-8 was as follows :-

<u>Period</u>	<u>Turnover (m)</u>
5	10.5
6	10.2
7	12.5
8	14.4
	47.6

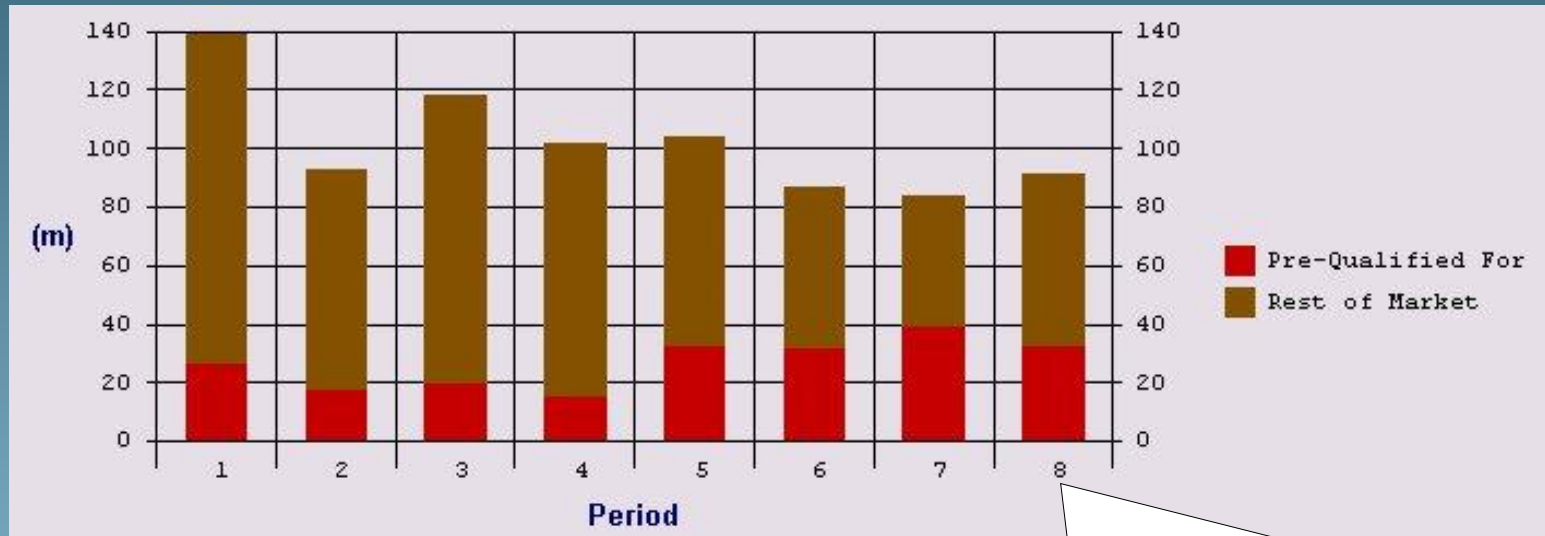
We aimed for 44m, so we **reached** our target.

The level of turnover is related to :-

- The current work in progress
- The success of the prequalification and procurement (estimating and bidding) areas of the business, which we'll now examine in more detail.

Objective

To aim for **steady, profitable growth**, increasing **turnover** from 11m (last period of the History) to 44m in the next year through increasing prequalification for new work, and competitive tendering.



Prequalification

By employing more marketing staff, and directing resources into the market sectors that appeared to be growing, the company's **share of the total market** increased on average over periods 5-8, although there was a disappointing result in period 8.

Objective

To aim for **steady, profitable growth**, increasing **turnover** from 11m (last period of the History) to 44m in the next year through increasing prequalification for new work, and competitive tendering.

Estimating Department

Of the jobs prequalified for: % were actually costed

Of the jobs estimated: % of required effort was allocated

Agency Estimators cost: % of Total

Estimating

In periods 5-8, 100% of the jobs prequalified for were costed, giving the company the opportunity to bid for as many contracts as possible.

Objective

To aim for **steady, profitable growth**, increasing **turnover** from 11m (last period of the History) to 44m in the next year through increasing prequalification for new work, and competitive tendering.

Bidding Analysis

	Able to Bid	Bid For	Won
Number	6	5	4
Success Rate (%)		83	80
Average Mark-Up		5.0	5.2
Average Bid		7,811,963	6,496,931

Bidding

Having prequalified for and costed jobs, to increase turnover it is essential that some of the jobs are successfully tendered for at the bidding stage.

As we can see from the **Performance Statistics**, during periods 5-8 the company bid for 5 of the 6 jobs that it was able to, and won 4, which was the key factor in the large increase in company turnover during the second year.

Objective

To aim for **steady, profitable growth**, increasing **turnover** from 11m (last period of the History) to 44m in the next year through increasing prequalification for new work, and competitive tendering.

Objective

To improve the **value** of the company from 4.5m to 5m through improved company profits, and making better use of the company's assets.

Objective

To improve the **value** of the company from 4.5m to 5m through improved company profits, and making better use of the company's assets.

Assets before decisions

Cash A/C:	427,264	
Capital Base:	4,863,916	
Investments:	749,532	Company Value: 6,040,712

By the end period 8, and the start of period 9, the overall **value of the company** had increased from 4.5m (at the end of period 4) to 6m, representing an annual increase inline with the original objective.

An increase in company value is achieved through a number of means :-

- Good job and overhead management to generate a operating profit (profitable growth), and increase cash-flow.
- Utilising the company's capital base to secure and progress more work.
- Making effective use of the company's assets, such as identifying good investment opportunities that yield a better return than the bank offers, or investments that can secure reduced job costs.

We'll now examine these areas to see which ones contributed to the increase in company value in the last year.

Objective

To improve the **value** of the company from 4.5m to 5m through improved company profits, and making better use of the company's assets.

Turnover & Profit

Turnover has increased by: **446** % since the History

Average job profit: **6.7** % of job cost

Profit Analysis

Average Overhead costs: **1.7** % of job cost

Operating Profit

In the History the company made an operating loss (before tax & interest).

However, in periods 5-8 the loss was **turned into a profit**, through a combination of good job and overhead management.

The profit would have fed directly into the cash account, improving the company's value.

Objective

To improve the **value** of the company from 4.5m to 5m through improved company profits, and making better use of the company's assets.

Company Value has increase by: **28** % since the History
On average **83** % of the Capital Base was utilised

Capital Employed

If the company's capital base (plant, equipment, buildings etc) is being utilised (**capital employed**), through contract progression, then there is more chance of the company making a profit.

In the History, only 25% of the capital base was utilised, but this substantially increased to **83%** during periods 5-8 as more work was secured.

Objective

To improve the **value** of the company from 4.5m to 5m through improved company profits, and making better use of the company's assets.

Average amount invested: **778,680** per period

Average % return on investments: **4.4** %

Job costs were reduced by: **0.23** % due to build cost savings from investments

Investments

Investments in other concerns had two positive results :-

- An excellent average return of **4.4% per period** on investments was made, which was far more than the equivalent return from the bank of around 1.3% per period.
- Overall build costs were reduced by 0.23% by investing in appropriate companies e.g., investments in Robinson Pipelines Plc reduced material costs on Water & Sewage contracts.

Objective

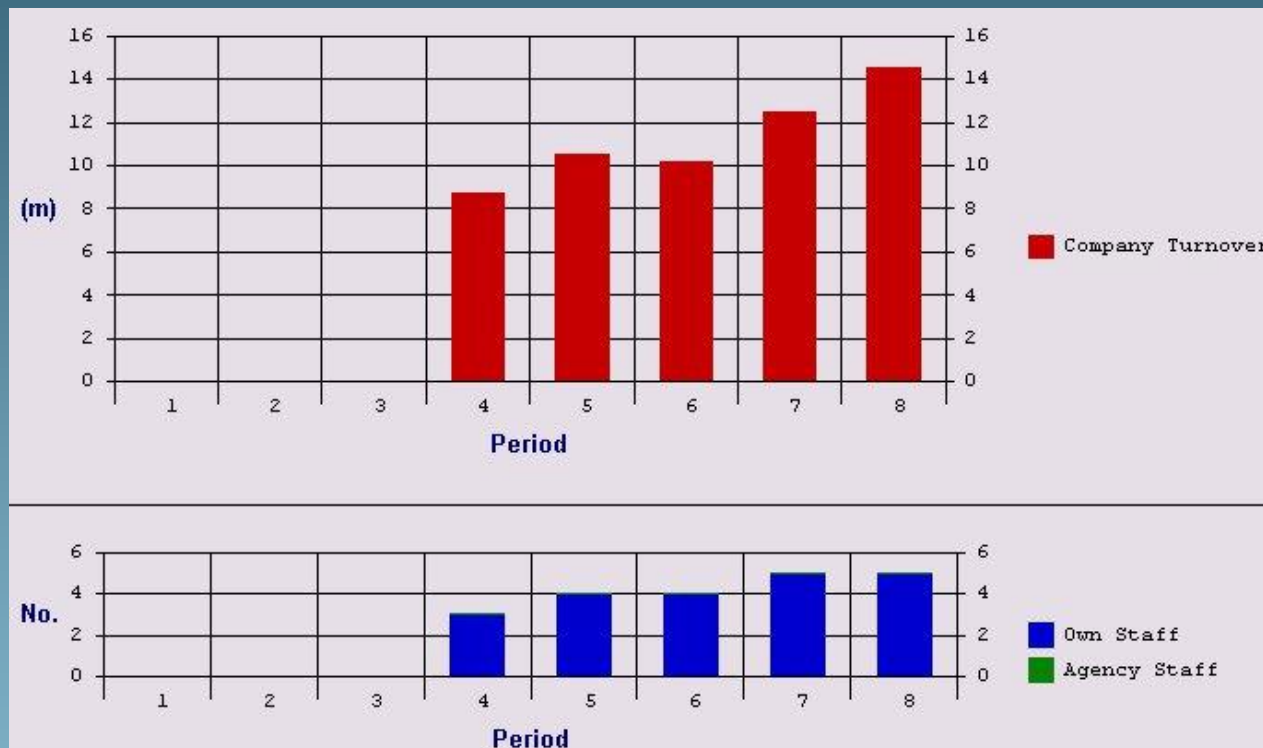
To improve the **value** of the company from 4.5m to 5m through improved company profits, and making better use of the company's assets.

Objective

To ensure that **company overheads**, especially the Head Office, QHSE and Measurement departments, are staffed sufficiently to manage with the increasing turnover.

Objective

To ensure that **company overheads**, especially the Head Office, QHSE and Measurement departments, are staffed sufficiently to manage with the increasing turnover.



Looking at the **Head Office Department** as an example. The **benchmark (last period of the History, period 4)** staffing was 3 staff could cope with around 11m of turnover per period, or 3.7m per person.

Turnover per period fluctuated a lot during periods 5-8, and the staffing levels were adjusted accordingly.

It would appear at first glance that Head Office staffing levels were sufficient, but this can be verified by referring to the **Performance Statistics**.

Objective

To ensure that **company overheads**, especially the Head Office, QHSE and Measurement departments, are staffed sufficiently to manage with the increasing turnover.

	<u>% of the required level to manage the company's turnover</u>		<u>Agency cost as a % of the Total Bill</u>
Head Office Department	100	Graphical Analysis	0 %
QHSE Department	100	Graphical Analysis	0 %
Measurement Department	100	Graphical Analysis	0 %

Clearly the Head Office Department was **adequately staffed**, at 100% of the required level to manage the company's turnover.

Similarly, the QHSE and Measurement Departments, whose staffing is dependent upon the company's turnover, were equally adequately staffed.

We have **succeeded** in our objective of maintaining sufficient staffing levels in the Head Office, QHSE and Measurement Departments.

Objective

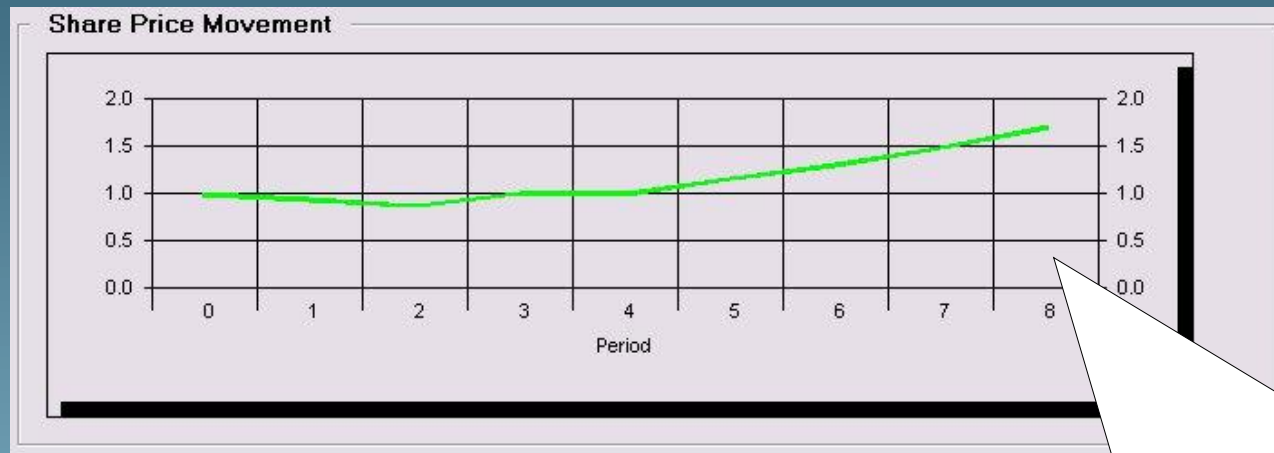
To ensure that **company overheads**, especially the Head Office, QHSE and Measurement departments, are staffed sufficiently to manage with the increasing turnover.

Objective

To improve the company's **share price**.

Objective

To improve the company's **share price**.



The company share price at the end of period 4 was 1.

By the end of period 8, the share price had risen to 1.71, **meeting the original objective**.

We'll now look in more depth at the key areas that influenced the share price :-

- Dividend payments to shareholders
- Changes in company value
- Changes in company future profitability
- Changes in company debt burden (gearing ratio)

Objective

To improve the company's **share price**.

Factors Affecting Share Price

Period	Dividend Payments			Company Value	Forward Margin	Gearing Ratio	Share Information at end of period		
	Initial Equity	Dividend	% of Equity				Num Shares	Share Price	Equity
0	5,000,000	0	0.0	5,000,000	0	0.000	5,000,000	1	5,000,000
1	5,000,000	75,000	1.5	4,864,230	0	0.000	5,000,000	0.94	4,700,000
2	4,700,000	70,500	1.5	4,702,621	0	0.000	5,000,000	0.87	4,350,000
3	4,350,000	65,250	1.5	4,586,255	1,065,237	0.000	5,000,000	1.01	5,050,000
4	5,050,000	75,750	1.5	4,707,343	930,270	0.031	5,000,000	1	5,000,000
5	5,000,000	75,000	1.5	4,988,918	1,045,931	0.000	5,000,000	1.16	5,800,000
6	5,800,000	87,000	1.5	5,294,184	1,094,094	0.000	5,000,000	1.3	6,500,000
7	6,500,000	97,500	1.5	5,691,924	1,168,021	0.000	5,000,000	1.49	7,450,000
8	7,450,000	100,000	1.3	6,040,712	1,738,010	0.000	5,000,000	1.71	8,550,000

There are 2 sources of interactive information that enable a detailed breakdown of the factors affecting the share price to be undertaken :-

- The **Financial Details**, accessed from the Financial Decisions Screen.
- The **External Performance Review**, compiled each period by a consultant hired by the company.

4	Shareholders are content with the level of dividend paid
4	The declining company value has not helped industry confidence in the company
5	The declining future profitability has not helped industry confidence in the company
5	Shareholders are content with the level of dividend paid
5	The increasing company value has noticeably improved industry confidence in the company
6	The increasing future profitability has improved industry confidence in the company
6	The Gearing Ratio increase has marginally reduced industry confidence in the Company
6	Shareholders are content with the level of dividend paid
6	The declining company value has not helped industry confidence in the company
7	Investing in Mockridge & Sons Joinery Ltd is producing a poor return
7	The increasing future profitability has noticeably improved industry confidence in the company
7	The Gearing Ratio increase has noticeably reduced industry confidence in the Company
7	Shareholders are content with the level of dividend paid
7	The increasing company value has improved industry confidence in the company
8	Investing in Mockridge & Sons Joinery Ltd is producing a poor return
8	The declining future profitability has not helped industry confidence in the company
8	Shareholders are content with the level of dividend paid
8	The increasing company value has noticeably improved industry confidence in the company

Objective

To improve the company's **share price**.

Factors Affecting Share Price

Period	Dividend Payments			Company Value	Forward Margin	Gearing Ratio	Share Information at end of period		
	Initial Equity	Dividend	% of Equity				Num Shares	Share Price	Equity
0	5,000,000	0	0.0	5,000,000	0	0.000	5,000,000	1	5,000,000
1	5,000,000	75,000	1.5	4,864,230	0	0.000	5,000,000	0.94	4,700,000
2	4,700,000	70,500	1.5	4,702,621	0	0.000	5,000,000	0.87	4,350,000
3	4,350,000	65,250	1.5	4,586,255	1,065,237	0.000	5,000,000	1.01	5,050,000
4	5,050,000	75,750	1.5	4,707,343	930,270	0.031	5,000,000	1	5,000,000
5	5,000,000	75,000	1.5	4,988,918	1,045,931	0.000	5,000,000	1.16	5,800,000
6	5,800,000	87,000	1.5	5,294,184	1,094,094	0.000	5,000,000	1.3	6,500,000
7	6,500,000	97,500	1.5	5,691,924	1,168,021	0.000	5,000,000	1.49	7,450,000
8	7,450,000	100,000	1.3	6,040,712	1,738,010	0.000	5,000,000	1.71	8,550,000

Dividend Payments

In the History (periods 1 to 4) a dividend of 1.5% was paid each period (6% per annum), which kept the shareholders content.

In periods 5-8 the **level of dividend was maintained**, which continued to keep the shareholders content.

However, although the dividend was sufficient to keep the shareholders content, it would not have had any noticeable effect on the share price, so what did ?

- 4 Shareholders are content with the level of dividend paid
- 4 The declining company value has not helped industry confidence in the company
- 5 The declining future profitability has not helped industry confidence in the company
- 5 Shareholders are content with the level of dividend paid
- 5 The increasing company value has noticeably improved industry confidence in the company
- 6 The increasing future profitability has improved industry confidence in the company
- 6 The Gearing Ratio increase has marginally reduced industry confidence in the Company
- 6 Shareholders are content with the level of dividend paid
- 6 The declining company value has not helped industry confidence in the company
- 7 Investing in Mockridge & Sons Joinery Ltd is producing a poor return
- 7 The increasing future profitability has noticeably improved industry confidence in the company
- 7 The Gearing Ratio increase has noticeably reduced industry confidence in the Company
- 7 Shareholders are content with the level of dividend paid
- 7 The increasing company value has improved industry confidence in the company
- 8 Investing in Mockridge & Sons Joinery Ltd is producing a poor return
- 8 The declining future profitability has not helped industry confidence in the company
- 8 Shareholders are content with the level of dividend paid
- 8 The increasing company value has noticeably improved industry confidence in the company

Objective

To improve the company's **share price**.

Factors Affecting Share Price

Period	Dividend Payments			Company Value	Forward Margin	Gearing Ratio	Share Information at end of period		
	Initial Equity	Dividend	% of Equity				Num Shares	Share Price	Equity
0	5,000,000	0	0.0	5,000,000	0	0.000	5,000,000	1	5,000,000
1	5,000,000	75,000	1.5	4,864,230	0	0.000	5,000,000	0.94	4,700,000
2	4,700,000	70,500	1.5	4,702,621	0	0.000	5,000,000	0.87	4,350,000
3	4,350,000	65,250	1.5	4,586,255	1,065,237	0.000	5,000,000	1.01	5,050,000
4	5,050,000	75,750	1.5	4,707,343	930,270	0.031	5,000,000	1	5,000,000
5	5,000,000	75,000	1.5	4,988,918	1,045,931	0.000	5,000,000	1.16	5,800,000
6	5,800,000	87,000	1.5	5,294,184	1,094,094	0.000	5,000,000	1.3	6,500,000
7	6,500,000	97,500	1.5	5,691,924	1,168,021	0.000	5,000,000	1.49	7,450,000
8	7,450,000	100,000	1.3	6,040,712	1,738,010	0.000	5,000,000	1.71	8,550,000

Company Value

Although there was a slight fall in period 6, in general there was a **steady increase in company value** in periods 5-8, which had a positive affect on industry confidence in the company, and this would have helped to increase the company share price.

4	Shareholders are content with the level of dividend paid
4	The declining company value has not helped industry confidence in the company
5	The declining future profitability has not helped industry confidence in the company
5	Shareholders are content with the level of dividend paid
5	The increasing company value has noticeably improved industry confidence in the company
6	The increasing future profitability has improved industry confidence in the company
6	The Gearing Ratio increase has marginally reduced industry confidence in the Company
6	Shareholders are content with the level of dividend paid
6	The declining company value has not helped industry confidence in the company
7	Investing in Mockridge & Sons Joinery Ltd is producing a poor return
7	The increasing future profitability has noticeably improved industry confidence in the company
7	The Gearing Ratio increase has noticeably reduced industry confidence in the Company
7	Shareholders are content with the level of dividend paid
7	The increasing company value has improved industry confidence in the company
8	Investing in Mockridge & Sons Joinery Ltd is producing a poor return
8	The declining future profitability has not helped industry confidence in the company
8	Shareholders are content with the level of dividend paid
8	The increasing company value has noticeably improved industry confidence in the company

Objective

To improve the company's **share price**.

Factors Affecting Share Price

Period	Dividend Payments			Company Value	Forward Margin	Gearing Ratio	Share Information at end of period		
	Initial Equity	Dividend	% of Equity				Num Shares	Share Price	Equity
0	5,000,000	0	0.0	5,000,000	0	0.000	5,000,000	1	5,000,000
1	5,000,000	75,000	1.5	4,864,230	0	0.000	5,000,000	0.94	4,700,000
2	4,700,000	70,500	1.5	4,702,621	0	0.000	5,000,000	0.87	4,350,000
3	4,350,000	65,250	1.5	4,586,255	1,065,237	0.000	5,000,000	1.01	5,050,000
4	5,050,000	75,750	1.5	4,707,343	930,270	0.031	5,000,000	1	5,000,000
5	5,000,000	75,000	1.5	4,988,918	1,045,931	0.000	5,000,000	1.16	5,800,000
6	5,800,000	87,000	1.5	5,294,184	1,094,094	0.000	5,000,000	1.3	6,500,000
7	6,500,000	97,500	1.5	5,691,924	1,168,021	0.000	5,000,000	1.49	7,450,000
8	7,450,000	100,000	1.3	6,040,712	1,738,010	0.000	5,000,000	1.71	8,550,000

Future Profitability

The company's **Future profitability** (forward margin) fluctuated significantly in periods 5-8, having both a positive and negative affect on industry confidence and the company's share price, as can be seen by the comments in the **External Performance Review**.

4	Shareholders are content with the level of dividend paid
4	The declining company value has not helped industry confidence in the company
5	The declining future profitability has not helped industry confidence in the company
5	Shareholders are content with the level of dividend paid
5	The increasing company value has noticeably improved industry confidence in the company
6	The increasing future profitability has improved industry confidence in the company
6	The Gearing Ratio increase has marginally reduced industry confidence in the Company
6	Shareholders are content with the level of dividend paid
6	The declining company value has not helped industry confidence in the company
7	Investing in Mockridge & Sons Joinery Ltd is producing a poor return
7	The increasing future profitability has noticeably improved industry confidence in the company
7	The Gearing Ratio increase has noticeably reduced industry confidence in the Company
7	Shareholders are content with the level of dividend paid
7	The increasing company value has improved industry confidence in the company
8	Investing in Mockridge & Sons Joinery Ltd is producing a poor return
8	The declining future profitability has not helped industry confidence in the company
8	Shareholders are content with the level of dividend paid
8	The increasing company value has noticeably improved industry confidence in the company

Objective

To improve the company's **share price**.

Factors Affecting Share Price

Period	Dividend Payments			Company Value	Forward Margin	Gearing Ratio	Share Information at end of period		
	Initial Equity	Dividend	% of Equity				Num Shares	Share Price	Equity
0	5,000,000	0	0.0	5,000,000	0	0.000	5,000,000	1	5,000,000
1	5,000,000	75,000	1.5	4,864,230	0	0.000	5,000,000	0.94	4,700,000
2	4,700,000	70,500	1.5	4,702,621	0	0.000	5,000,000	0.87	4,350,000
3	4,350,000	65,250	1.5	4,586,255	1,065,237	0.000	5,000,000	1.01	5,050,000
4	5,050,000	75,750	1.5	4,707,343	930,270	0.031	5,000,000	1	5,000,000
5	5,000,000	75,000	1.5	4,988,918	1,045,931	0.000	5,000,000	1.16	5,800,000
6	5,800,000	87,000	1.5	5,294,184	1,094,094	0.000	5,000,000	1.3	6,500,000
7	6,500,000	97,500	1.5	5,691,924	1,168,021	0.000	5,000,000	1.49	7,450,000
8	7,450,000	100,000	1.3	6,040,712	1,738,010	0.000	5,000,000	1.71	8,550,000

Gearing Ratio

The gearing ratio of the company is a measure of its **debt liability**, and is 0 unless the cash account is overdrawn.

During the History the cash account was always in credit, and the gearing ratio was 0 throughout. Since there was never any change in the ratio, there was no impact on the company share price.

However, in periods 6 to 8 the cash account went into **overdraft**, financing other activities (capital base expansion and investments), and the gearing ratio increased. During these periods industry confidence (as a result of gearing) declined, and this would have had a negative affect on the share price.

4	Shareholders are content with the level of dividend paid
4	The declining company value has not helped industry confidence in the company
5	The declining future profitability has not helped industry confidence in the company
5	Shareholders are content with the level of dividend paid
5	The increasing company value has noticeably improved industry confidence in the company
6	The increasing future profitability has improved industry confidence in the company
6	The Gearing Ratio increase has marginally reduced industry confidence in the Company
6	Shareholders are content with the level of dividend paid
6	The declining company value has not helped industry confidence in the company
7	Investing in Mockridge & Sons Joinery Ltd is producing a poor return
7	The increasing future profitability has noticeably improved industry confidence in the company
7	The Gearing Ratio increase has noticeably reduced industry confidence in the Company
7	Shareholders are content with the level of dividend paid
7	The increasing company value has improved industry confidence in the company
8	Investing in Mockridge & Sons Joinery Ltd is producing a poor return
8	The declining future profitability has not helped industry confidence in the company
8	Shareholders are content with the level of dividend paid
8	The increasing company value has noticeably improved industry confidence in the company

Objective

To improve the company's **share price**.

Factors Affecting Share Price

Period	Dividend Payments			Company Value	Forward Margin	Gearing Ratio	Share Information at end of period		
	Initial Equity	Dividend	% of Equity				Num Shares	Share Price	Equity
0	5,000,000	0	0.0	5,000,000	0	0.000	5,000,000	1	5,000,000
1	5,000,000	75,000	1.5	4,864,230	0	0.000	5,000,000	0.94	4,700,000
2	4,700,000	70,500	1.5	4,702,621	0	0.000	5,000,000	0.87	4,350,000
3	4,350,000	65,250	1.5	4,586,255	1,065,237	0.000	5,000,000	1.01	5,050,000
4	5,050,000	75,750	1.5	4,707,343	930,270	0.031	5,000,000	1	5,000,000
5	5,000,000	75,000	1.5	4,988,918	1,045,931	0.000	5,000,000	1.16	5,800,000
6	5,800,000	87,000	1.5	5,294,184	1,094,094	0.000	5,000,000	1.3	6,500,000
7	6,500,000	97,500	1.5	5,691,924	1,168,021	0.000	5,000,000	1.49	7,450,000
8	7,450,000	100,000	1.3	6,040,712	1,738,010	0.000	5,000,000	1.71	8,550,000

4 Shareholders are content with the level of dividend paid

4 The declining company value has not helped industry co

5 The declining future profitability has not helped ind

5 Shareholders are content with the level of divi

5 The increasing comp

6 The increasing future

6 The Gearing Ratio in

6 Shareholders are cor

6 The declining compa

7 Investing in Mockridg

7 The increasing future

7 The Gearing Ratio in

7 Shareholders are cor

7 The increasing comp

8 Investing in Mockridg

8 The declining future

8 Shareholders are cor

8 The increasing comp

Summary

The company's share price did **rise** during periods 5-8, in line with company strategy, but there were factors that both contributed to and hindered this rise.

- **Dividend** had no affect, since the level paid was just enough to keep the shareholders happy.
- Changes in **Company Value**, on the whole, had a positive affect, and was the main reason for the overall rise in share price.
- Changes in **Forward Profitability** had mixed affects.
- Changes in **Gearing** had a negative affect.

Although there were mixed affects, the positive affects had a slightly **greater impact** than the negative affects, and this accounted for the rise in the share price.

Objective

To improve the company's **share price**.

Factors Affecting Share Price

Period	Dividend Payments			Company Value	Forward Margin	Gearing Ratio	Share Information at end of period		
	Initial Equity	Dividend	% of Equity				Num Shares	Share Price	Equity
0	5,000,000	0	0.0	5,000,000	0	0.000	5,000,000	1	5,000,000
1	5,000,000	75,000	1.5	4,864,230	0	0.000	5,000,000	0.94	4,700,000
2	4,700,000	70,500	1.5	4,702,621	0	0.000	5,000,000	0.87	4,350,000
3	4,350,000	65,250	1.5	4,586,255	1,065,237	0.000	5,000,000	1.01	5,050,000
4	5,050,000	75,750	1.5	4,707,343	930,270	0.031	5,000,000	1	5,000,000
5	5,000,000	75,000	1.5	4,988,918	1,045,931	0.000	5,000,000	1.16	5,800,000
6	5,800,000	87,000	1.5	5,294,184	1,094,094	0.000	5,000,000	1.3	6,500,000
7	6,500,000	97,500	1.5	5,691,924	1,168,021	0.000	5,000,000	1.49	7,450,000
8	7,450,000	100,000	1.3	6,040,712	1,738,010	0.000	5,000,000	1.71	8,550,000

4	Shareholders are content with the level of dividend paid
4	The declining company value has not helped industry confidence in the company
5	The declining future profitability has not helped industry confidence in the company
5	Shareholders are content with the level of dividend paid
5	The increasing company value has noticeably improved industry confidence in the company
6	The increasing future profitability has improved industry confidence in the company
6	The Gearing Ratio increase has marginally reduced industry confidence in the Company
6	Shareholders are content with the level of dividend paid
6	The declining company value has not helped industry confidence in the company
7	Investing in Mockridge & Sons Joinery Ltd is producing a poor return
7	The increasing future profitability has noticeably improved industry confidence in the company
7	The Gearing Ratio increase has noticeably reduced industry confidence in the Company
7	Shareholders are content with the level of dividend paid
7	The increasing company value has improved industry confidence in the company
8	Investing in Mockridge & Sons Joinery Ltd is producing a poor return
8	The declining future profitability has not helped industry confidence in the company
8	Shareholders are content with the level of dividend paid
8	The increasing company value has noticeably improved industry confidence in the company

Objective

To **build on and improve** existing client relationships.

Objective

To **build on and improve** existing client relationships.

Client	Description of Relationship
Crawford Petrochemicals UK	satisfactory
Dales Water Services Ltd	satisfactory
Devon and Cornwall Water Ltd	No relationship
Electragen	No relationship
English Waterways	satisfactory
Fenlands County Council	No relationship
Kegworth Airport	No relationship

At the end of period 4, when we took control of the company the following relationships were already in place.

Client	Description of Relationship
Crawford Petrochemicals UK	satisfactory
Dales Water Services Ltd	good
Devon and Cornwall Water Ltd	No relationship
Electragen	satisfactory
English Waterways	satisfactory
Fenlands County Council	No relationship
Kegworth Airport	satisfactory

Relationships have improved in two ways :-

- Where there was no relationship, such as with **Kegworth Airport**, with whom there is now a satisfactory relationship..
- Where a relationship existed already, such as such as turning a satisfactory relationship with the **Dales Water Services Ltd** into a good one.

Objective

To **build on and improve** existing client relationships.

Per	Total	Turnover	Gross Profit to Turnover	Operating Profit to Turnover	Company Value	Capital Employed	Contract Completion	Forward Workload	Forward Margin	Share Price	Client Satisfaction
4	1000	80	75	60	120	100	120	80	120	120	125
5	1328	141	88	189	127	138	130	93	135	139	148
6	1566	180	95	238	135	168	150	120	141	156	183
7	1770	220	100	270	145	192	175	137	151	179	201
8	2041	259	97	273	154	214	200	166	224	205	249

Overall, the company's client satisfaction rating has **risen steadily** each period, further proof that the company's **objectives have been met** with regard to client relationships.

We'll now look at how we have managed to improve the relationships ?

Objective

To **build on and improve** existing client relationships.

Client: Dales Water Services Ltd					Current Relationship: good			
					Job Progress Details			
Job	Per Preq	Description	Estimating Confidence	Bidding details	Contract Completion Time	Consultant Designer used	Project Manager used	Level of Site Admin cost allocated
28	3	Construct Headworks and tran:	Extremely High	competitive bid, and the job was won	early	excellent	excellent	very good
▶ 66	7	Construct membrane microfiltral	Extremely High					

Looking in particular at the relationship with Dales Water Services Ltd, its not hard to see why a fairly good relationship has been formed :-

- 1 job was procured with a competitive bid, and was then managed very well, resulting in it being completed on time.

Objective

To **build on and improve** existing client relationships.

Overall, in reviewing our performance against the original strategy, we have **done well**, and in many areas have achieved the objectives for the year.

We nearly reached our turnover target, improved our company value as required, our overhead departments were adequately staffed, and share price and client relationships improved.

In summary it is possible to manage a company without any clear strategy in place.

However, this would require a very reactive approach to running the business, which could create untold problems as unforeseen and unconsidered circumstances cause havoc across the organisation.

A **clear, well-considered strategy** will not guarantee success, but it does give the company the best opportunity to grow profitably within the confines of the market in which it is operating.

However, a strategy is not set in stone, and needs to be regularly **reviewed and updated** to take advantage of a continuously changing environment.

The decisions to be entered each period are split by business function. Choose from the list below for a detailed description of each function.

- Financial
- Overheads
- Estimating
- Bidding
- Personnel
- Construction

The order in which decisions are processed

Keep Clicking Anywhere on the screen to advance the demo



Main

Quit

The order in which decisions are processed

The decisions are processed in the order in which they appear on screen :-



Main

Quit

The decisions are processed in the order in which they appear on screen :-

Current Period



Main

Quit

The decisions are processed in the order in which they appear on screen :-

Current Period

Financial

Management of company assets and looking after shareholder interests.



Main

Quit

The decisions are processed in the order in which they appear on screen :-

Current Period

Financial



Overheads

Management of company assets and looking after shareholder interests.

Departmental staffing levels adjusted, and prequalification for new jobs that have become available.



Main

Quit

The decisions are processed in the order in which they appear on screen :-

Current Period

Financial



Overheads



Estimating

Management of company assets and looking after shareholder interests.

Departmental staffing levels adjusted, and prequalification for new jobs that have become available.

Jobs for which estimating time has been allocated are costed.



Main

Quit

The decisions are processed in the order in which they appear on screen :-

Current Period

Financial



Overheads



Estimating



Bidding

Management of company assets and looking after shareholder interests.

Departmental staffing levels adjusted, and prequalification for new jobs that have become available.

Jobs for which estimating time has been allocated are costed.

Bids are submitted, and contracts awarded.



Main

Quit

The decisions are processed in the order in which they appear on screen :-

Current Period

Financial



Overheads



Estimating



Bidding



Personnel

Management of company assets and looking after shareholder interests.

Departmental staffing levels adjusted, and prequalification for new jobs that have become available.

Jobs for which estimating time has been allocated are costed.

Bids are submitted, and contracts awarded.

Project managers allocated to on-going jobs.



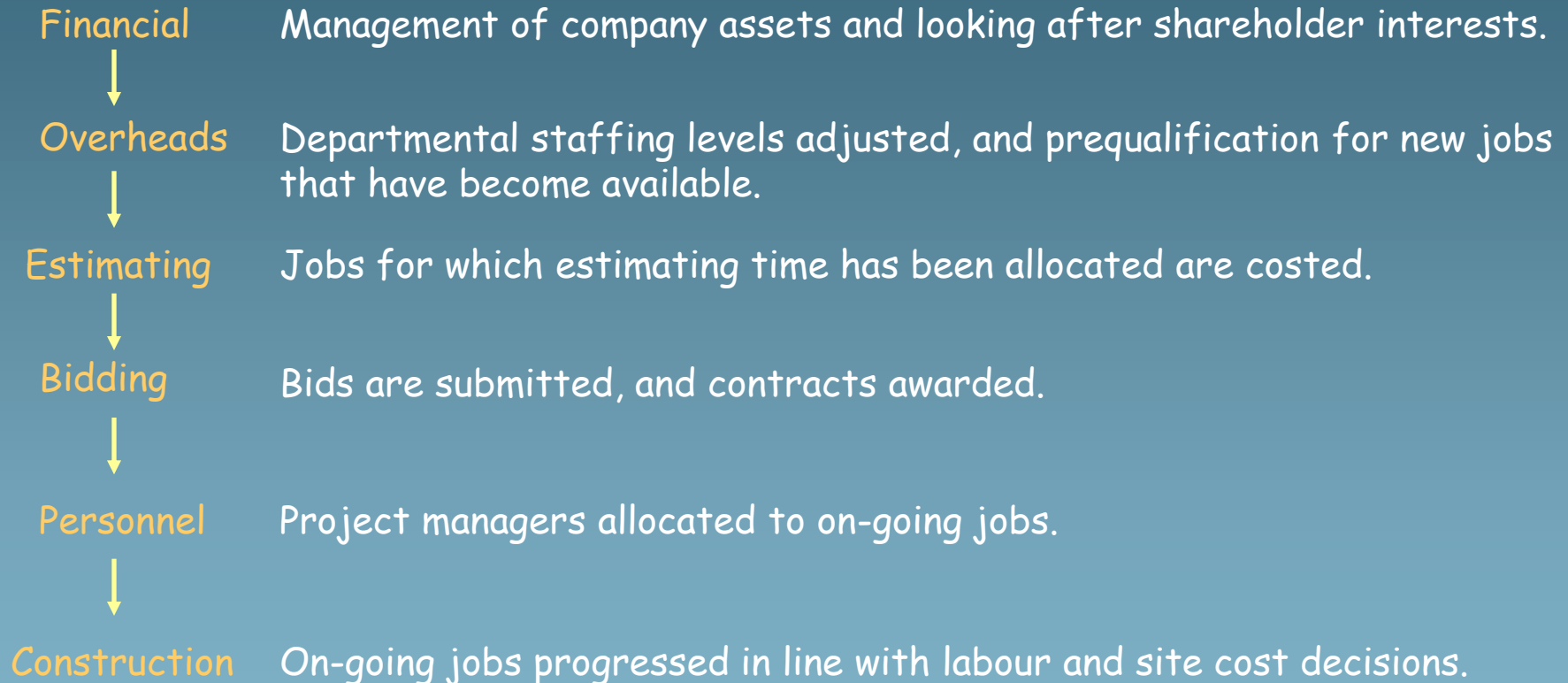
Main

Quit

The order in which decisions are processed

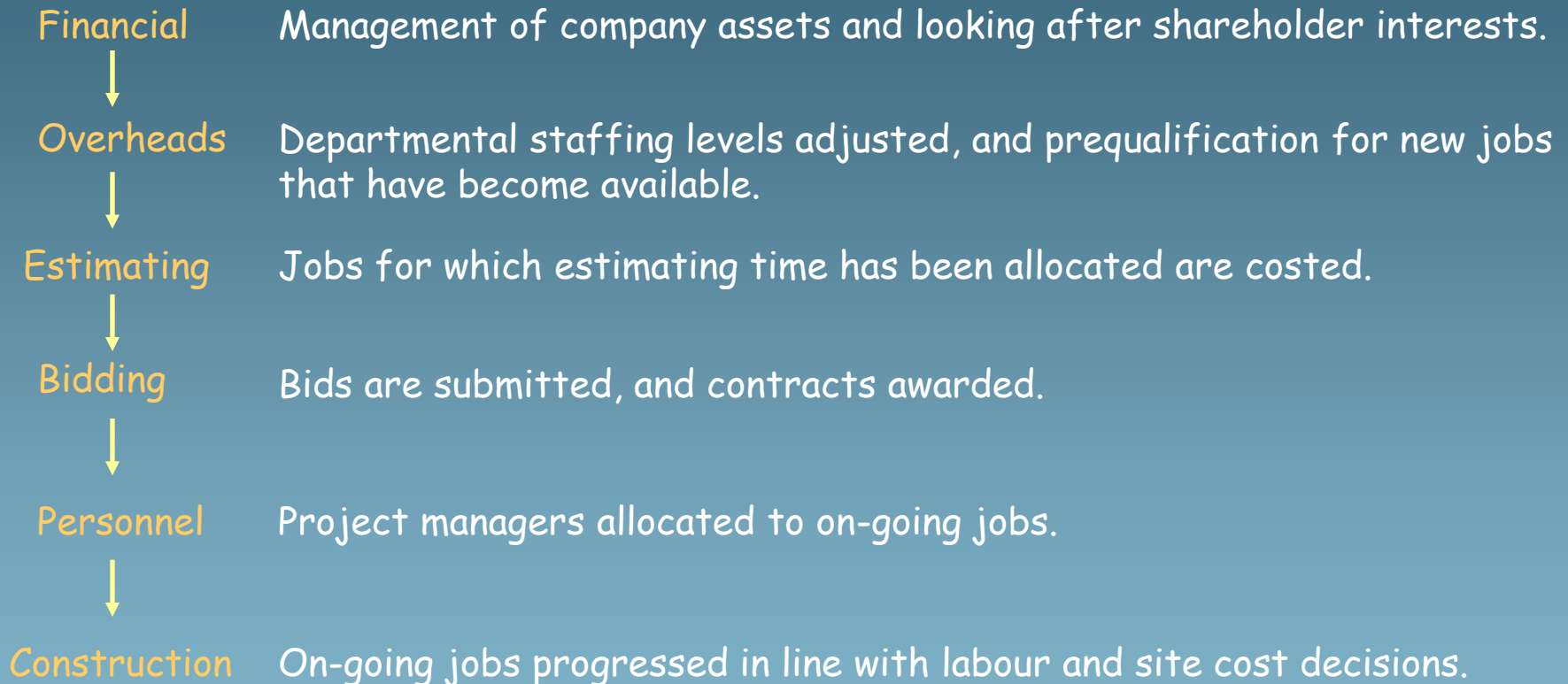
The decisions are processed in the order in which they appear on screen :-

Current Period



The decisions are processed in the order in which they appear on screen :-

Current Period



The Demo is now complete

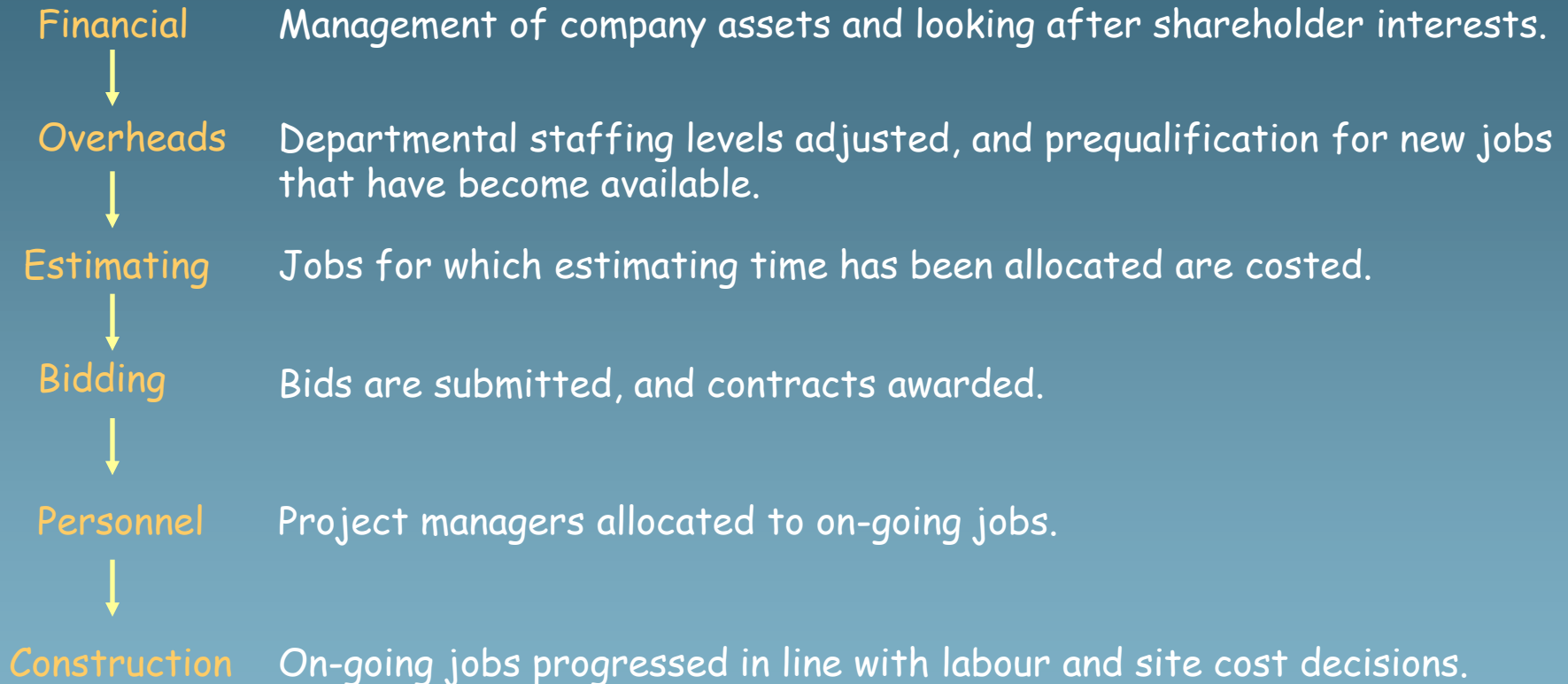


Main

Quit

The decisions are processed in the order in which they appear on screen :-

Current Period



The role of the Financial Manager is to :-

- Look after the **shareholders' interests**
- Make the best use of the **Company's assets** to try and increase the Company's value

Financial Decisions - Period 5

Assets before decisions

Cash A/C: 622,185
Capital Base: 3,900,934
Investments: 156,550 Company Value: 4,679,669

Dividend

Amount to pay shareholders: 0 0% of Equity of 5,150,000

Capital Base

Increase by: 0 limited to 390,093
Reduce by: 0 limited to 780,187

Investments

	Name	Size	Initial Value	Increase	Reduction	Required
▶	AGT Design Services Ltd	Small	52,750	0	0	52,750
	Robinson Pipelines Plc	Medium	103,800	0	0	103,800

Change
Add
Remove

Assets after Decisions

Cash A/C: 622,185
Capital Base: 3,900,934
Investments: 156,550 Company Value: 4,679,669

Entering Financial Decisions - 1

Keep Clicking Anywhere on the screen to advance the demo

Its period 5, and the Financial Manager needs to make review the financial structure of the company, and decide upon any changes that need to be made.

Financial Decisions - Period 5

Assets before decisions

Cash A/C: 622,185
Capital Base: 3,900,934
Investments: 156,550 Company Value: 4,679,669

Dividend

Amount to pay shareholders: 0 0% of Equity of 5,150,000

Capital Base

Increase by: 0 limited to 390,093
Reduce by: 0 limited to 790,187

Investments

	Name	Size	Initial Value	Increase	Reduction	Required
▶	AGT Design Services Ltd	Small	52,750	0	0	52,750
	Robinson Pipelines Plc	Medium	103,800	0	0	103,800

Change
Add
Remove

Assets after Decisions

Cash A/C: 622,185
Capital Base: 3,900,934
Investments: 156,550 Company Value: 4,679,669

One of the key responsibilities of the Financial Manager is to look after the **interests of the company's shareholders**.

Financial Decisions - Period 5

Assets before decisions

Cash A/C: 622,185
Capital Base: 3,900,934
Investments: 156,550 **Company Value:** 4,679,669

Dividend

Amount to pay shareholders: 0 0% of Equity of 5,150,000

Capital Base

Increase by: 0 limited to 390,093
Reduce by: 0 limited to 790,187

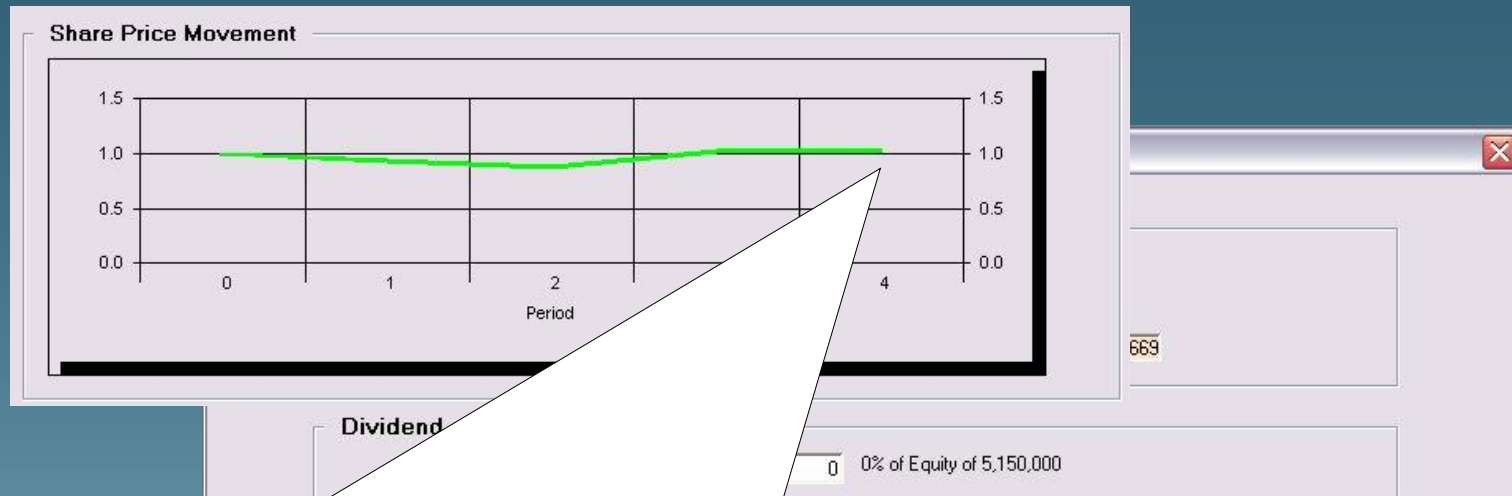
Investments

	Name	Size	Initial Value	Increase	Reduction	Required
▶	AGT Design Services Ltd	Small	52,750	0	0	52,750
	Robinson Pipelines Plc	Medium	103,800	0	0	103,800

Change
Add
Remove

Assets after Decisions

Cash A/C: 622,185
Capital Base: 3,900,934
Investments: 156,550 **Company Value:** 4,679,669

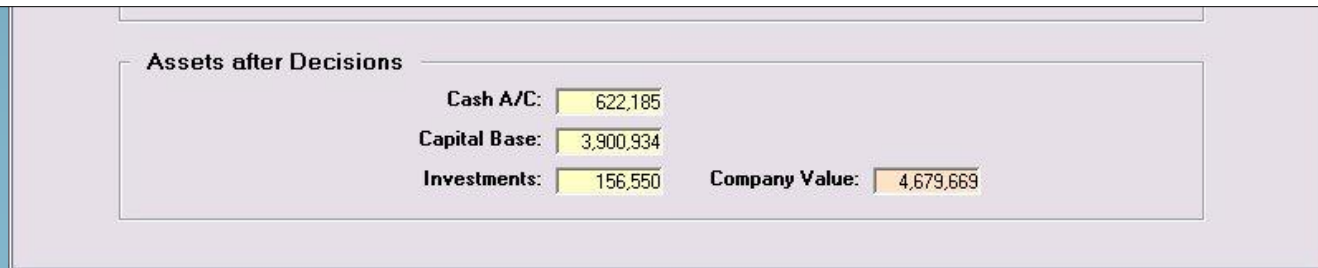


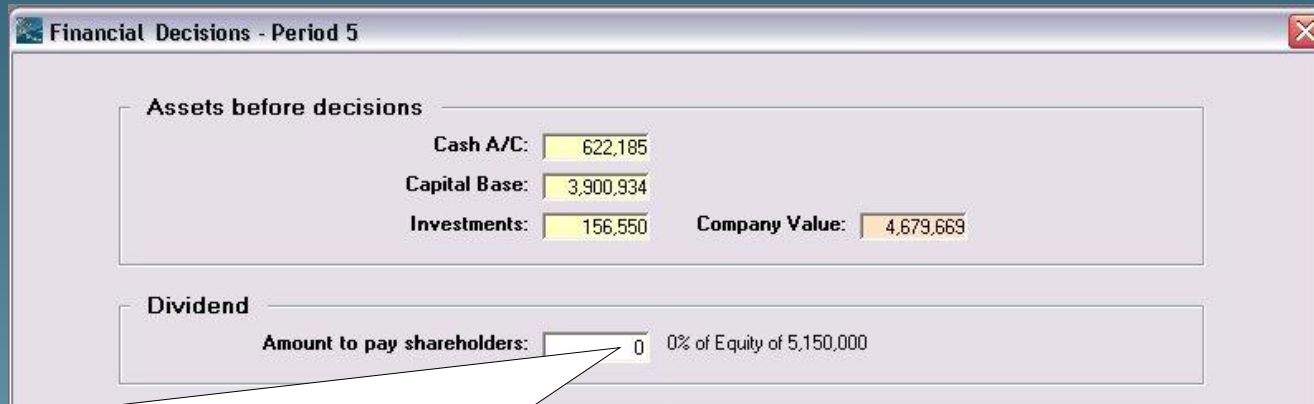
The Company was **originally funded** from a share (equity) issue of 5,000,000 shares of value 1, with an equity value of 5,000,000.

After the History the share price stands at **1.03**, and the equity value at **5,150,000** ($5,000,000 \times 1.03$).

The share price is **influenced** by a number of factors :-

- Paying dividend, which is under the control of the Financial Manager
- Changes in the value of the Company
- The future profitability of the Company
- The debt burden of the Company





Assets before decisions	
Cash A/C:	622,185
Capital Base:	3,900,934
Investments:	156,550
Company Value:	4,679,669

Dividend	
Amount to pay shareholders:	0 0% of Equity of 5,150,000

Dividend

Dividends are taxable payments declared by a company's board of directors and given to its shareholders, normally quarterly. They provide an incentive to own stock in stable companies even if they are not experiencing much growth.

The dividend paid to shareholders is one of the key factors that affects the company **share price** :-

- **Insufficient dividend** will disappoint the shareholders and reduce the share price.
- **Sufficient dividend** will keep the shareholders content, with no change in the share price.
- **Ample dividend** will make the shareholders very happy, and increase the share price.

The affect on share price is determined by the **% of the company's equity** that is paid as a dividend.

Clues as to the affects of different levels of dividend are available by examining what happened in the History, using the **Financial Details** and **Consultants Report**.

Key Point

As the share price changes, so does the equity value of the company, and paying the same level of dividend in consecutive periods will have a different affect on share price as the % of equity changes.

Factors Affecting Share Price

Period	Dividend Payments			Company Value	Forward Margin	Gearing Ratio	Share Information at end of period		
	Initial Equity	Dividend	% of Equity				Num Shares	Share Price	Equity
0	5,000,000	0	0.0	5,000,000	0	0.000	5,000,000	1	5,000,000
1	5,000,000	75,000	1.5	4,864,230	0	0.000	5,000,000	0.94	4,700,000
2	4,700,000	70,500	1.5	4,712,621	0	0.000	5,000,000	0.88	4,400,000
3	4,400,000	66,000	1.5	4,581,542	1,212,726	0.000	5,000,000	1.02	5,100,000
4	5,100,000	76,500	1.5	4,679,669	1,012,535	0.000	5,000,000	1.03	5,150,000

Period	Details
0	Shareholders are content with the level of dividend paid
1	The declining company value has not helped industry confidence in the company
2	Shareholders are content with the level of dividend paid
2	The declining company value has not helped industry confidence in the company
3	The increasing future profitability has dramatically improved industry confidence in the company
3	Shareholders are content with the level of dividend paid
3	The declining company value has not helped industry confidence in the company
4	The declining future profitability has not helped industry confidence in the company
4	Shareholders are content with the level of dividend paid
4	The declining company value has not helped industry confidence in the company

Assets after D

Since period 1 the company has paid dividend of 1.5% of equity every period, and this has kept the shareholders content, as we can see from the **Consultants Report**.

In period 5 we'll continue to pay dividend at this level.

Financial Decisions - Period 5

Assets before decisions

Cash A/C: 622,185

Capital Base: 3,900,934

Investments: 156,550

Company Value: 4,679,669

Dividend

Amount to pay shareholders: 67500

1.3% of Equity of 5,150,000

Capital Base

Increase by: 0 limited to 390,093

Reduce by: 0 limited to 780,187

Investments

Name	Size	Initial Value	Increase	Reduction	Required
▶ AGT Design Services Ltd	Small	52,750	0	0	52,750
Robinson Pipelines Plc	Medium	103,800	0	0	103,800

Change

Add

Remove

Assets after Decisions

Cash A/C: 554,685

Capital Base: 3,900,934

Investments: 156,550

Company Value: 4,612,169

The dividend payment comes out of the cash account, and the value of the company is temporarily reduced.

Financial Decisions - Period 5

Assets before decisions

Cash A/C: 622,185
Capital Base: 3,900,934
Investments: 156,550 Company Value: 4,679,669

Dividend

Amount to pay shareholders: 67500 1.3% of Equity of 5,150,000

Capital Base

Increase by: 0 limited to 390,093
Reduce by: 0 limited to 780,187

Investments

	Name	Size	Initial Value	Increase	Reduction	Required
▶	AGT Design Services Ltd	Small	52,750	0	0	52,750
	Robinson Pipelines Plc	Medium	103,800	0	0	103,800

Change
Add
Remove

Assets after Decisions

Cash A/C: 554,685
Capital Base: 3,900,934
Investments: 156,550 Company Value: 4,612,169

The other main responsibility of the Financial Manager is to make the best use of the **Company's assets** to try and increase the Company's value.

Financial Decisions - Period 5

Assets before decisions

Cash A/C: 622,185
Capital Base: 3,900,934
Investments: 156,550 **Company Value:** 4,679,669

Dividend

Amount to pay shareholders: 67500 1.3% of Equity of 5,150,000

Capital Base

Increase by: 0 limited to 390,093
Reduce by: 0 limited to 780,187

Investments

	Name	Size	Initial Value	Increase	Reduction	Required
▶	AGT Design Services Ltd	Small	52,750	0	0	52,750
	Robinson Pipelines Plc	Medium	103,800	0	0	103,800

Change
Add
Remove

Assets after Decisions

Cash A/C: 554,685
Capital Base: 3,900,934
Investments: 156,550 **Company Value:** 4,612,169

The **value** of the Company at any time is measured by its assets. After paying dividend they consist of :-

Cash in the bank (622,185)

This can either be in credit, or in **overdraft**, when it is considered a liability. There is an **overdraft limit** defined in the **Company and Financial Information**.

Capital Base (3,900,934)

This is the company's investment in plant, equipment, facilities, buildings etc, which determines the level of work that the company can undertake.

Investments (156,550)

The company's cash investment in other concerns, which may not be construction-related.

The company is currently valued at **4,679,669**.

Reduce by: limited to 780,187

Investments

Name	Size	Initial Value	Increase	Reduction
▶ AGT Design Services Ltd	Small	52,750	0	0
Robinson Pipelines Plc	Medium	103,800	0	0

Assets after Decisions

Cash A/C:

Capital Base:

Investments:

Company Value:

An **increase in company value** can be achieved through :-

Operating Profit

Generating an operating profit which increases the cash account. This can be achieved through good job and overhead management, which is responsibility of other people, and the Financial Manager has **no direct impact** upon this.

Making effective use of the company's assets

This is the responsibility of the Financial Manager, and a number of choices are available :-

- Using cash to increase the Capital Base and support further growth.
- Selling off a % of the Capital Base to raise cash, which may be desirable if the cash account is in overdraft, or if the Capital Base is not being fully utilised.
- Using cash to invest further in other companies who offer a better return than can be obtained from the bank, or who may be able to reduce costs on jobs in progress.

We'll now look at these options in more detail.

Investments

Name	Size	Initial Value	Increase	Reduction
▶ AGT Design Services Ltd	Small	52,750	0	0
Robinson Pipelines Plc	Medium	103,800	0	0

Assets after Decisions

Cash A/C:

554,685

Capital Base:

3,900,934

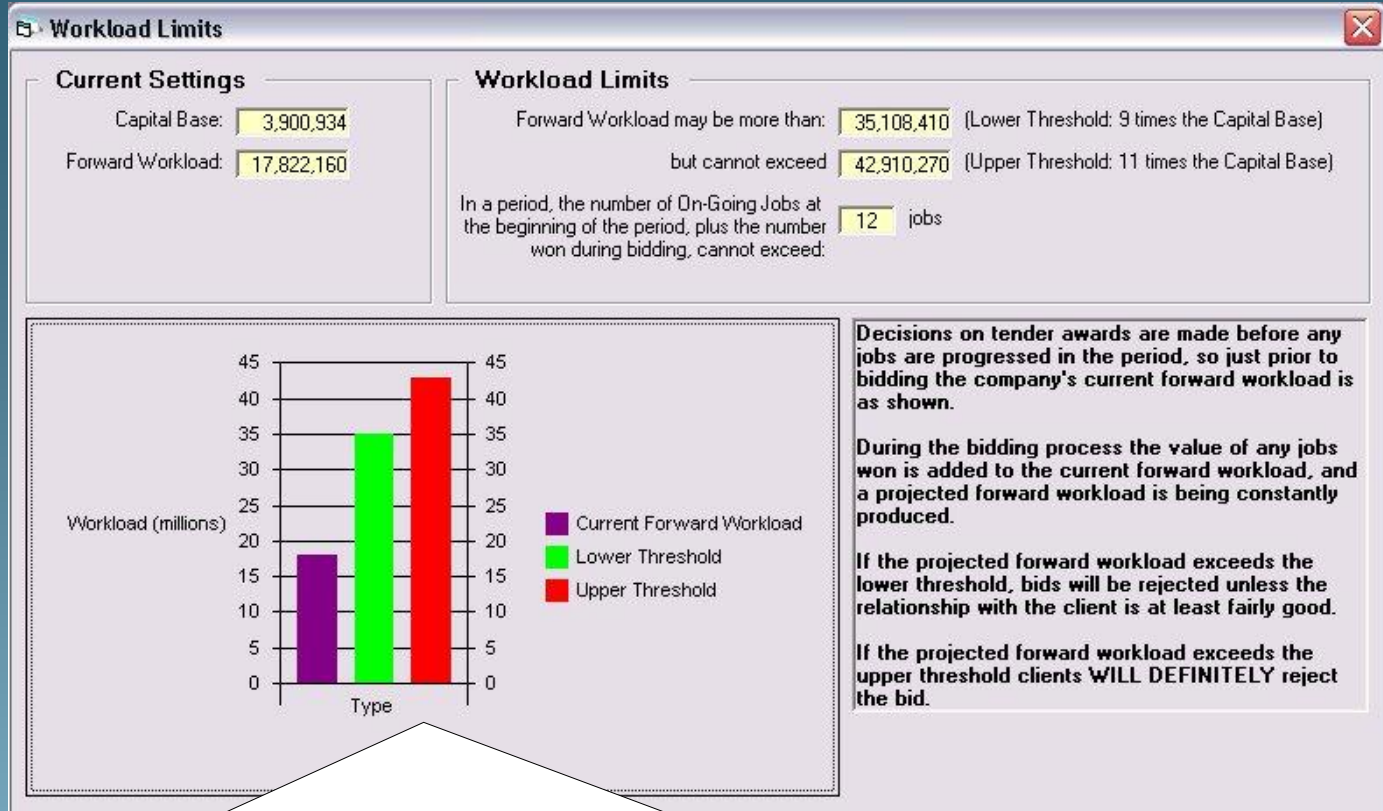
Investments:

156,550

Company Value:

4,612,169

Entering Financial Decisions - 2



Capital Base

The level of future turnover/workload that can be undertaken is **limited** by the size of the company's capital base, as shown on the **Workload Limits** screen (accessed from the **Bidding Screen**).

The capital base of 3.9m can support between 35m and 43m of workload. Since the current forward workload is only 18m, there is still plenty of scope for winning more work. **However, once the company's bidding decisions have been made, there may need to be a reassessment of the size of the capital base to decide if an increase is required.**

At this point in time, since bidding decisions have not been made, and since there is plenty of 'unused' capital base, we'll leave it unchanged.

Capital Base

Some additional points to note :-

- Any changes to the capital base also **affect the cash account**.
- If the capital base is being **underutilised**, it may be appropriate to reduce it to raise cash for other uses, such as further investments or reducing an overdraft.
- There are **limitations** on the changes to the capital base each period, defined in the **Company and Financial Information**.
- The capital base **depreciates** by a % each year, as shown in the **Company and Financial Information**.

Capital Base

Capital Base increase limited to: % each period

Capital Base Depreciation rate: % per annum

Capital Base that can be sold off/liquidated: % this period

Capital Writing Down allowance: % per annum

	Name	Size	Initial Value	Increase	Reduction	Required
▶	AGT Design Services Ltd	Small	52,750	0	0	52,750
	Robinson Pipelines Plc	Medium	103,800	0	0	103,800

Change

Add

Remove

Assets after Decisions

Cash A/C:

Capital Base:

Investments:

Company Value:

Investments

The core business of the Company is procuring and progressing contracts, and if done successfully the Company will report a healthy operating profit, and increase the Company's value.

However, there are alternative ways of increasing the value of the Company, such as by investing in other concerns, which may or may not be construction-related.

We can see that the company currently has an investments of 52,750 and 103,800 in AGT Design Services Ltd and Robinson Pipelines Plc respectively.

There are **2 ways** of increasing the company's value through investments, and we'll examine each one in turn.

Capital

limited to 390,093
 limited to 780,187

Investments

	Name	Size	Initial Value	Increase	Reduction	Required
▶	AGT Design Services Ltd	Small	52,750	0	0	52,750
	Robinson Pipelines Plc	Medium	103,800	0	0	103,800

Change

Add

Remove

Assets after Decisions

Cash A/C:

554,685

Capital Base:

3,900,934

Investments:

156,550

Company Value:

4,612,169

Financial Decisions - Period 5

Assets before decisions

Cash A/C: 622,185
Capital Base: 3,900,934
Investments: 156,550 Company Value: 4,679,669

Dividend

Amount to pay shareholders: 67500 1.3% of Equity of 5,150,000

Capital Base

Increase by: 0 limited to 390,093
Reduce by: 0 limited to 780,187

Investments

	Name	Size	Initial Value	Increase	Reduction	Required
▶	AGT Design Services Ltd	Small	52,750	0	0	52,750
	Robinson Pipelines Plc	Medium	103,800	0	0	103,800

Change
Add
Remove

Assets after Decisions

Cash A/C: 554,685
Capital Base: 3,900,934
Investments: 156,550 Company Value: 4,612,169

Investment Returns

Using cash to invest further in other companies can yield a better return than can be obtained from the bank.

Use the **Change button** to determine look in more detail at the current investment.

Assets before decisions

Cash A/C: 622,185

Capital Base: 3,900,934

Investments: 156,550

Company Value: 4,679,669

Dividend

Amount to pay shareholders: 67500 1.3% of Equity of 5,150,000

Capital Base

Increase by: 0 limited to 390,093

Reduce by: 0 limited to 780,187

Investments

	Name	Size	Initial Value	Increase	Reduction	Required
▶	AGT Design Services Ltd	Small	52,750	0	0	52,750
	Robinson Pipelines Plc	Medium	103,800	0	0	103,800

Change

Add

Remove

Assets after Decisions

Cash A/C: 554,685

Capital Base: 3,900,934

Investments: 156,550

Company Value: 4,612,169

Change Investment

Changes Required

Initial Value: 52,750

Increase By: 0 limited to 50,000

Reduce By: 0

Required Value: 52,750

Investment Details

Name: AGT Design Services Ltd

Desc: Providers of construction design solutions

Size: Small

Form: Loan

Profile: They provide efficient and well engineered structural and civil design solutions for all sectors of industry, commerce and leisure.
When commissioned to work within the framework of a multi-disciplinary

Past Performance (Period Returns)

Period	% return to all Investors	Amount Invested by the Company	Return Value
3	5.1	0	0
4	5.5	50,000	2,750

Financial Rates

Bank Credit rate: 1.5 % per annum

Bank Overdraft rate: 14 % per annum

Corporation Tax rate: 28 %

Bearing in mind that the bank offers a credit rate return of 0.375% per period (1.5% per annum), AGT Design Services Ltd have offered a far better return in the last 2 periods of over 5% per period.

Since we have plenty of spare cash, and **bearing in mind the excellent opportunity the investment offers**, we'll increase our investment by the maximum allowed this period (50,000).

Key Point

Each investment has a number of key properties :-

- The **size** (small, medium or large) determines the amount that can be invested each period, as defined in the **Company and Financial Information**.
- The **form** is the type of investment, either a loan or shares. Loans (debentures) offer a higher return than shares, with the returns on shares being linked to dividend payments.

We now have an investment of 102,750 in AGT Design Services Ltd.

Financial Decisions - Period 5

The additional investment comes out of the cash account, but **since money is being moved between assets**, the value of the company is unchanged.

However, **affects of the changes** on the company's value will be felt during the period when cash account interest is calculated, and investment returns are known.

Key Point

Any investment returns change the value of the investments, and not the cash account.

Increase by:
 Reduce by:

Investments

	Name	Size	Initial Value
▶	AGT Design Services Ltd	Small	52,750
	Robinson Pipelines Plc	Medium	103,800

Required
102,750
103,800

Assets after Decisions

Cash A/C:
 Capital Base:
 Investments:

Company Value:

Financial Decisions - Period 5

Assets before decisions

Cash A/C: 622,185

Capital Base: 3,900,934

Investments: 156,550 Company Value: 4,679,669

Dividend

Amount to pay shareholders: 67500 1.3% of Equity of 5,150,000

Capital Base

Increase by: 0 limited to 390,093

Reduce by: 0 limited to 780,187

Investments

Name	Size	Initial Value	Increase	Reduction	Required
▶ AGT Design Services Ltd	Small	52,750	50,000	0	102,750
Robinson Pipelines Plc	Medium	103,800	0	0	103,800

Change
Add
Remove

Assets after Decisions

Cash A/C: 504,685

Capital Base: 3,900,934

Investments: 206,550 Company Value: 4,612,169

If AGT Design Services Ltd had been performing badly, we could have reduced the investment.

In addition to the current investments, there are also a selection of other companies that can be invested in, and these can be analysed using the **Add button**.

Available Investments

Name	Description	Size	Form
Burton Homes Plc	Specialist housebuilders	Small	Loan
DBY Equipment Ltd	Suppliers of construction equipment	Medium	Loan
Hong Kong Bank Ltd	Banking services	Large	Loan
Melbourne Construction Supplies Ltd	Suppliers of all types of construction materials	Small	Loan
Midlands Plant Hire Ltd	Plant hire	Small	Loan
Mockridge & Sons Joinery Ltd	Joinery products	Small	Loan
Shinnington Glass Company	Providers of glass and glazing products for buildings	Medium	Loan

Select

Investment Profile

Having been established for over 35 years, the Company has become one of Britain's premier park homebuilder, and are a key name in both the residential and leisure markets.

They have a strong reputation for innovation, with new initiatives providing a comprehensive range of related products and services, whilst still focusing on building homes that suit our customer's lifestyle.

Past Performance

Period returns			
Period	% return to all Investors	Amount invested	Amount returned
2	-0.6		
3	0.3	0	
4	3.1	0	

Investments: 2

For each available concern, the following information is given :-

- The **investment profile** describes the concern.
- The **Past Performance** gives the % return given in previous periods to all investors, and details any monies we may have invested.

Taking into account the potential returns from the concerns, and the bank rates on offer each period for the cash account, we must make a decision about whether or not its worth investing any cash in any of the available opportunities.

The **Company and Financial Information** shows that at present the bank offers a credit rate return of 0.375% per period (1.5% per annum). We'll be looking to better this from any investment. However, there are no opportunities that seem to do so, and most have performed quite poorly over previous periods, so we'll not add to our investment portfolio at the moment.



Entering Financial Decisions - 3

Some additional points to note about investments :-

- Any increases or reductions in investments **affect the cash account**.
- There are **limitations** on the :-
 - Increase in a single investment that can be made each period, depending on the size of the concern
 - The number of investments that can be held at any one time

The limitations are shown in the **Company and Financial Information**.

- There is **no limitation** on the reduction that can be made to an investment.

Orders: 1.3% of Equity of 5,150,000

Cash

Increase by: limited to 390,093
Reduce by: limited to 780,187

Investments

	Name	Size	Initial Value	Increase	Reduction	Required
▶	AGT Design Services Ltd	Small	52,750	50,000	0	102,750
	Robinson Pipelines Plc	Medium	103,800	0	0	103,800

Change

Add

Remove

Assets after Decisions

Cash A/C:
Capital Base:
Investments: Company Value:

Financial Decisions - Period 5

Assets before decisions

Cash A/C: 622,185
Capital Base: 3,900,934
Investments: 156,550 Company Value: 4,679,669

Dividend

Amount to pay shareholders: 67500 1.3% of Equity of 5,150,000

Capital Base

Increase by: 0 limited to 390,093
Reduce by: 0 limited to 780,187

Investments

	Name	Size	Initial Value	Increase	Reduction	Required
▶	AGT Design Services Ltd	Small	52,750	50,000	0	102,750
	Robinson Pipelines Plc	Medium	103,800	0	0	103,800

Change
Add
Remove

Assets after Decisions

Cash A/C: 504,685
Capital Base: 3,900,934
Investments: 206,550 Company Value: 4,612,169

Build Cost Savings Due To Investments

As well as investing in other companies to yield a better return than can be obtained from the bank, there is potentially an **even more lucrative reason** for investment opportunity.

If enough money is invested in particular concerns, **build costs may be reduced** on work in progress in specific sectors due to preferential rates on materials, plant etc e.g., investing in an asphalt company would reduce build costs for any Transport work being undertaken. The concerns offering these benefits are suppliers of some commodity to the construction industry, and only where the investment is a loan.

We'll use the **Add button** to look at some available investments.

Dividend

Amount to pay shareholders: 1.3% of Equity of 5,150,000

Capital Base

Increase by: limited to 390,093
Reduce by: limited to 780,187

Investments

	Name	Size	Initial Value	Increase	Reduction	Required
▶	AGT Design Services Ltd	Small	52,750	50,000	0	102,750
	Robinson Pipelines Plc	Medium	103,800	0	0	103,800

Change
Add
Remove

Assets after Decisions

Cash A/C:
Capital Base:
Investments:

Company Value:

Entering Financial Decisions - 4

Available Investments

Name	Description	Size	Form
Burton Homes Plc	Specialist housebuilders	Small	Loan
DBY Equipment Ltd	Suppliers of construction equipment	Medium	Loan
Hong Kong Bank Ltd	Banking services	Large	Loan
Melbourne Construction Supplies Ltd	Suppliers of all types of construction materials	Small	Loan
Midlands Plant Hire Ltd	Plant hire	Small	Loan
Mockridge & Sons Joinery Ltd	Joinery products	Small	Loan
Shingleton Glass Company	Providers of glass and glazing products for buildings	Medium	Loan

Investment Profile

A family business established over twenty five years ago, specialising in high quality bespoke joinery.

They have a wealth of experience in producing joinery products for contemporary and period buildings, and produce products from their own high-tech workshops.

Past Performance

Period	% return to all Investors	Amount Invested by the Company	Build Cost S

By looking at the various opportunities **Mockridge & Sons Joinery Ltd** immediately stand out. They supply joinery products to clients in the Building & Commercial Sector, and if we were undertaking work in that sector, and invested in them, we could obtain preferential rates on joinery supplies and reduce our build costs.

Mockridge & Sons Joinery Ltd are a small company so how much would we need to invest to obtain the preferential rates ?

Assets after Decisions

Cash A/C:	504,685	
Capital Base:	3,900,934	
Investments:	206,550	Company Value: 4,612,169

Investments

Investment Company Size	Maximum increase in investment allowed each period	Minimum total investment required to obtain benefits	Minimum build cost savings
Large	150,000	300,000	0.9 %
Medium	100,000	200,000	0.6 %
Small	50,000	100,000	0.3 %

The total number of investments allowed: 5 at any point in time

The **Company and Financial Information** shows that for a small company we would need to invest at least **100,000** to obtain preferential rates, and we could expect **build cost savings of at least 0.3%**.

Bear in mind that although a minimum of 100,000 is required, any single investment in a period cannot exceed 50,000, so it would take at least 2 periods to gain any build cost savings from the investment.

Key Point

The larger the investment concern the greater the build cost savings on offer, but the more that has to be invested to secure the savings. Also, the % build cost savings rises as more is invested, up to a point.

Assets after Decisions

Cash A/C:	504,685	
Capital Base:	3,900,934	
Investments:	206,550	Company Value: 4,612,169

The actual build cost savings gained through investments can be gauged in a number of ways :-

- When using the **Change button** to alter a particular investment the past performance shows the savings by sector.
- The **Investment History Report** gives a detailed account of all savings by all investments.

Required Value: 200,000

Investment Details

Name: TRB Excavators Plc

Desc: Suppliers of excavators and related products

Size: Medium

Form: Loan

Profile:

Thomas Roy Barton launched the construction equipment manufacturing and supply company that bears his initials, in 1952. He began his business in a brick outbuilding measuring only 15 feet by 13 feet.

Today, the Company has one of the largest factories in the world, employing thousands of workers, and supplying its unique range of excavators, and related products, to all sectors of the Construction Industry.

Per

3

4

5

6

7

8

Investment (Period Returns)

Amount Invested by the Company	Return Value
0	0
100,000	1,200
201,200	-1,610
209,590	5,869
205,459	3,698
306,157	11,328

Past Performance (Build Cost Savings On Jobs)

Sector	Saving
Industrial	0
Building & Commercial	128,284
Transport	55,858
Energy	11,895
Water & Sewage	37,621
	233,658

Finding an investment opportunity that offers a good return, and build cost savings due to the company's sector-based workload, is not always possible, and often a **compromise** has to be reached as to which benefit is more desirable.

For example, an investment opportunity may arise that offers substantial build cost savings in the Transport sector, in which the company are very active. However, the investment returns may not be very good, but the cost-saving benefit outweighs the risk of the investment itself not performing very well.

Dividend

Amount to pay shareholders: 1.3% of Equity of 5,150,000

Capital Base

Increase by: limited to 390,093

Reduce by: limited to 780,187

Investments

	Name	Size	Initial Value	Increase	Reduction	Required
▶	AGT Design Services Ltd	Small	52,750	50,000	0	102,750
	Robinson Pipelines Plc	Medium	103,800	0	0	103,800

Change

Add

Remove

Assets after Decisions

Cash A/C:

Capital Base:

Investments:

Company Value:

Miscellaneous

Cash A/C Overdraft Limit:

External Performance Reviews cost: each period

PL:

Company Value:

All the decisions made by the Financial Manager have an affect on the **cash account**, and it may go into overdraft, or it may already be in overdraft from the last period.

This is not a great concern if the money from the cash account is used productively in other areas, but there is an **overdraft limit**, as defined in the **Company and Financial Information**.

When the overdraft limit is exceeded, **all efforts must be made** to reduce the overdraft to below the limit, which may involve :-

- Not paying any dividend in the current period
- Selling off part of the Capital Base
- Reducing investments

Assets after Decisions

Cash A/C:

Capital Base:

Investments:

Company Value:

Financial Decisions - Period 5

Assets before decisions

Cash A/C: 622,185

Capital Base: 3,900,934

Investments: 156,550

Company Value: 4,679,669

Dividend

Amount to pay shareholders: 67500 1.3% of Equity of 5,150,000

Capital Base

Increase by: 0 limited to 390,093

Reduce by: 0 limited to 780,187

Investments

	Name	Size	Initial Value	Increase	Reduction	Required
▶	AGT Design Services Ltd	Small	52,750	50,000	0	102,750
	Robinson Pipelines Plc	Medium	103,800	0	0	103,800

Change

Add

Remove

Assets after Decisions

Cash A/C: 504,685

Capital Base: 3,900,934

Investments: 206,550

Company Value: 4,612,169

Financial Decisions - Period 5

Assets before decisions

Cash A/C: 622,185
Capital Base: 3,900,934
Investments: 156,550
Company Value: 4,679,669

Dividend

Amount to pay shareholders: 67500 1.3% of Equity of 5,150,000

Capital Base

Increase by: 0 limited to 390,093
Reduce by: 0 limited to 780,187

Investments

	Name	Size	Initial Value	Increase	Reduction	Required
▶	AGT Design Services Ltd	Small	52,750	50,000	0	102,750
	Robinson Pipelines Plc	Medium	103,800	0	0	103,800

Change
Add
Remove

Assets after Decisions

Cash A/C: 504,685
Capital Base: 3,900,934
Investments: 156,550
Company Value: 4,679,669

The Demo is now complete

Financial Decisions - Period 5

Assets before decisions

Cash A/C: 622,185
Capital Base: 3,900,934
Investments: 156,550 Company Value: 4,679,669

Dividend

Amount to pay shareholders: 67500 1.3% of Equity of 5,150,000

Capital Base

Increase by: 0 limited to 390,093
Reduce by: 0 limited to 780,187

Investments

	Name	Size	Initial Value	Increase	Reduction	Required
▶	AGT Design Services Ltd	Small	52,750	50,000	0	102,750
	Robinson Pipelines Plc	Medium	103,800	0	0	103,800

Change
Add
Remove

Assets after Decisions

Cash A/C: 504,685
Capital Base: 3,900,934
Investments: 206,550 Company Value: 4,612,169

Overheads are the non-contract based support services required to enable the company to win and progress work.

They consist of **5 key departments** (Marketing, Estimating, Head Office, QHSE and Measurement) and other **non-departmental overheads** (such as idle labour and idle project managers).

Overhead Decisions - Period 5

Departmental Staffing Levels

		Last Period	This Period	
	Department	Company staff	Company staff	Agency staff
▶	Marketing	2	2	0
	Estimating	2	2	0
	Head Office	3	3	0
	QHSE	2	2	0
	Measurement	2	2	0

Market Analysis

Past Performance

Split of the Marketing Overhead between Sectors

	Sector	Desc	Last Period	This Period
			% split	% Split
▶	1	Industrial	12	12
	2	Building & Commercial	34	34
	3	Transport	9	9
	4	Energy	20	20
	5	Water & Sewage	25	25

100

The Overhead Manager is responsible for decisions **related to the departments**, namely :-

- Setting the staffing levels of the Departments
- Directing marketing effort into the 5 market sectors

The non-departmental overheads are the responsibility of other managers.

Choose from the list below for detailed demonstrations.

- Marketing Department
- Estimating Department
- Head Office, QHSE and Measurement Departments
- Non-Departmental Overheads

Keep Clicking Anywhere on the screen to advance the demo

Main

Quit

The Marketing Department are the **first step** on the ladder to winning and progressing contracts.

The marketing staff seek out and enables the company to prequalify for new contracts that **become available**, which the company may then decide to try and win through the procurement process.

The value and number of jobs that the company can prequalify for in any period is governed by a number of factors :-

- The value and number of jobs available (size of the market)
- The number of staff in the Marketing Department
- Where the marketing effort is directed (5 potential sectors of work)
- Whether or not the company are experts in a particular sector
- The relationship with clients who announce the new contracts

Consider the following situation.

It's the beginning of period 5, and the Overhead Manager needs to decide upon the staffing level for the Marketing Department, and into which sectors the staff's efforts are to be directed.

Overhead Decisions - Period 5

Departmental Staffing Levels

		Last Period	This Period	
	Department	Company staff	Company staff	Agency staff
▶	Marketing	2	2	0
	Estimating	2	2	0
	Head Office	3	3	0
	QHSE	2	2	0
	Measurement	2	2	0

Market Analysis

Past Performance

Split of the Marketing Overhead between Sectors

	Sector	Desc	Last Period	This Period
			% split	% Split
▶	1	Industrial	12	12
	2	Building & Commercial	34	34
	3	Transport	9	9
	4	Energy	20	20
	5	Water & Sewage	25	25

100

There are currently 2 marketing staff, and the split of the marketing effort between the 5 market sectors is presently as shown, with the majority of effort being directed into the Building & Commercial sector.

Overhead Decisions - Period 5

Departmental Staffing Levels

		Last Period	This Period	
	Department	Company staff	Company staff	Agency staff
▶	Marketing	2	2	0
	Estimating	2	2	0
	Head Office	3	3	0
	QHSE	2	2	0
	Measurement	2	2	0

Market Analysis

Past Performance

Split of the Marketing Overhead between Sectors

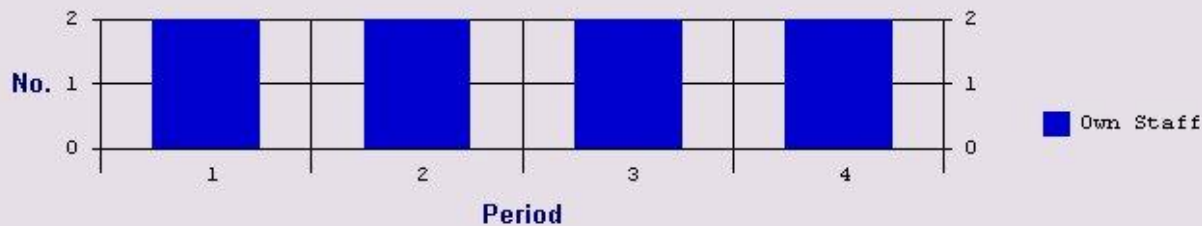
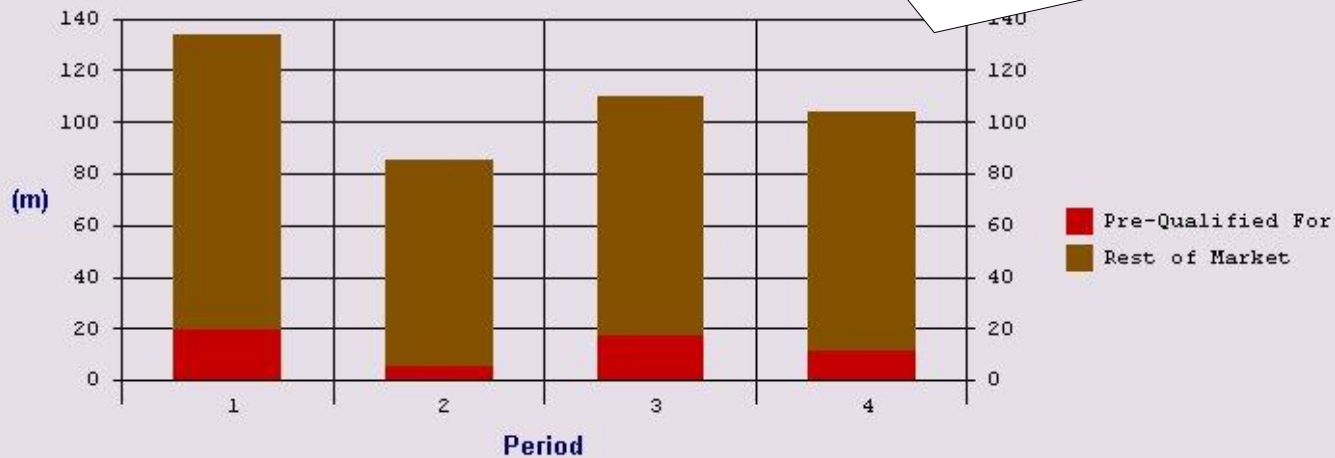
	Sector	Desc	Last Period	This Period
			% split	% Split
▶	1	Industrial	12	12
	2	Building & Commercial	34	34
	3	Transport	9	9
	4	Energy	20	20
	5	Water & Sewage	25	25

100

The **Past Performance button** shows the % of the overall market that the company has prequalified for in past periods.

Based upon the last year, and assuming the marketing effort was directed into sectors in which there was some new work, company was **only able** to prequalify for a maximum of about 20% of the overall market with 2 marketing staff.

The company's strategy is for steady growth, and to achieve this more work will need to be prequalified for, so we'll increase the staffing level by the maximum allowed, **2** (the limit is shown in the **Company and Financial Information**).



Overhead Decisions - Period 5

Departmental Staffing Levels

		Last Period	This Period	
	Department	Company staff	Company staff	Agency staff
▶	Marketing	2	2	0
	Estimating	2	2	0
	Head Office	3	3	0
	QHSE	2	2	0
	Measurement	2	2	0

Market Analysis

Past Performance

Split of the Marketing Overhead between Sectors

	Sector	Desc	Last Period	This Period
			% split	% Split
▶	1	Industrial	12	12
	2	Building & Commercial	34	34
	3	Transport	9	9
	4	Energy	20	20
	5	Water & Sewage	25	25

100

Overhead Decisions - Period 5

Departmental Staffing Levels

		Last Period	This Period	
	Department	Company staff	Company staff	Agency staff
▶	Marketing	2	4	0
	Estimating	2	2	0
	Head Office	3	3	0
	QHSE	2	2	0
	Measurement	2	2	0

Market Analysis

Past Performance

Split of the Marketing Overhead between Sectors

	Sector	Desc	Last Period	This Period
			% split	% Split
▶	1	Industrial	12	12
	2	Building & Commercial	34	34
	3	Transport	9	9
	4	Energy	20	20
	5	Water & Sewage	25	25

100

Entering Overhead Marketing Decisions - 2

Entering Decisions

Main

Quit

The additional marketing staff **will have little affect** if they do not direct their efforts into the market sectors in which there is new work.

To determine where the new work is, we'll use the **Market Analysis button**.

Overhead Decisions - Period 5

Departmental Staffing Levels

		Last Period	This Period	
	Department	Company staff	Company staff	Agency staff
▶	Marketing	2	4	0
	Estimating	2	2	0
	Head Office	3	3	0
	QHSE	2	2	0
	Measurement	2	2	0

Market Analysis

Past Performance

Split of the Marketing Overhead between Sectors

	Sector	Desc	Last Period	This Period
			% split	% Split
▶	1	Industrial	12	12
	2	Building & Commercial	34	34
	3	Transport	9	9
	4	Energy	20	20
	5	Water & Sewage	25	25

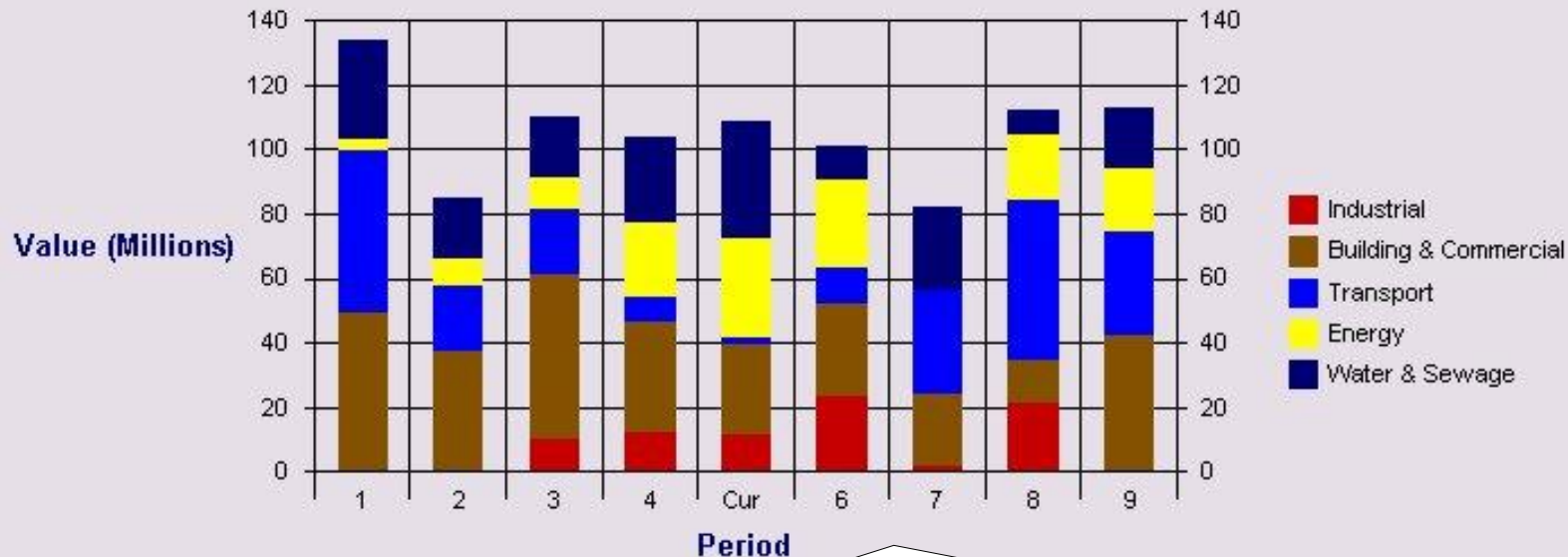
100

The **Market Analysis button** displays the company's forecast of the market trend for the next year. The accuracy of the forecast depends upon the size of the marketing department.

Although decisions have to be made about into which sectors to direct the marketing effort in period 5, the % change in each sector is **limited** to + or - 10, as defined in the **Company and Financial Information**, since wholesale changes cannot be made in one period.

The change limitation makes it imperative that as well as the short-term, the **long-term is considered** when reviewing marketing strategy.

Based on the information about the likely market split in period 5, and also looking to the long-term, the overhead manager decides to concentrate on the Water & Sewage, Transport and Building & Commercial sectors. The Transport sector in particular appears to be improving from period 7 onwards.



The **overall value of the market** appears to be steady at around 100m in the next year or so, except for the significant increase in period 6. Providing the marketing effort is directed sensibly, the additional marketing staff being employed should ensure the company prequalifies for a bigger share of the overall market value in the near future.

Overhead Decisions - Period 5

Departmental Staffing Levels

		Last Period	This Period	
	Department	Company staff	Company staff	Agency staff
▶	Marketing	2	4	0
	Estimating	2	2	0
	Head Office	3	3	0
	QHSE	2	2	0
	Measurement	2	2	0

Market Analysis

Past Performance

Split of the Marketing Overhead between Sectors

	Sector	Desc	Last Period	This Period
			% split	% Split
▶	1	Industrial	12	12
	2	Building & Commercial	34	34
	3	Transport	9	9
	4	Energy	20	20
	5	Water & Sewage	25	25

100

Sector:

 Display Options:

Period	Status	Client List
Cur	Early Years	Dales Water Services Ltd English Waterways London Water Services Ltd Railline Saintesc Foods Sport England Tayoto Cars UK UK Gas Supplies
6	Early Years	Crawford Petrochemicals UK Dales Water Services Ltd Electragen Fenlands County Council London Water Services Ltd Lowry Homes National Steel Ltd South Wales County Council The Environment Department
7	Early Years	Dales Water Services Ltd Kegworth Airport Master Brewers UK

4	Energy	20	20
5	Water & Sewage	25	25

100

Deciding into which sectors to direct the company's marketing effort is primarily governed by where the work is likely to be, but there are **other considerations**.

For example, the company may be basing their marketing strategy on working closely with particular clients. In this scenario they will need to know how future work is likely to be split by client.

The **Marketing Analysis** display enables the forecast future workload to be split by :-

- Value of work (the default)
- Type of work (build only, design & build)
- Number of jobs
- Clients

all of which could have a bearing on where to direct the marketing effort.

Overhead Decisions - Period 5

Departmental Staffing Levels

		Last Period	This Period	
	Department	Company staff	Company staff	Agency staff
▶	Marketing	2	4	0
	Estimating	2	2	0
	Head Office	3	3	0
	QHSE	2	2	0
	Measurement	2	2	0

Market Analysis

Past Performance

Split of the Marketing Overhead between Sectors

	Sector	Desc	Last Period	This Period
			% split	% Split
▶	1	Industrial	12	0
	2	Building & Commercial	34	34
	3	Transport	9	20
	4	Energy	20	21
	5	Water & Sewage	25	25

100

Having set the staffing level, and directed the marketing effort into different job sectors, the company will be able to prequalify for a number of jobs that come onto the market in the period.

In addition, the **value of work prequalified for can be influenced** by other factors :-

- If the company are experts in a particular sector(s)
- The relationship with clients who announce the new contracts

We'll now look at each one in turn.

		Last Period	This Period	
	Department	Company staff	Company staff	Agency staff
▶	Marketing	2	4	0
	Estimating	2	2	0
	Head Office	3	3	0
	QHSE	2	2	0
	Measurement	2	2	0

Market Analysis

Past Performance

Split of the Marketing Overhead between Sectors

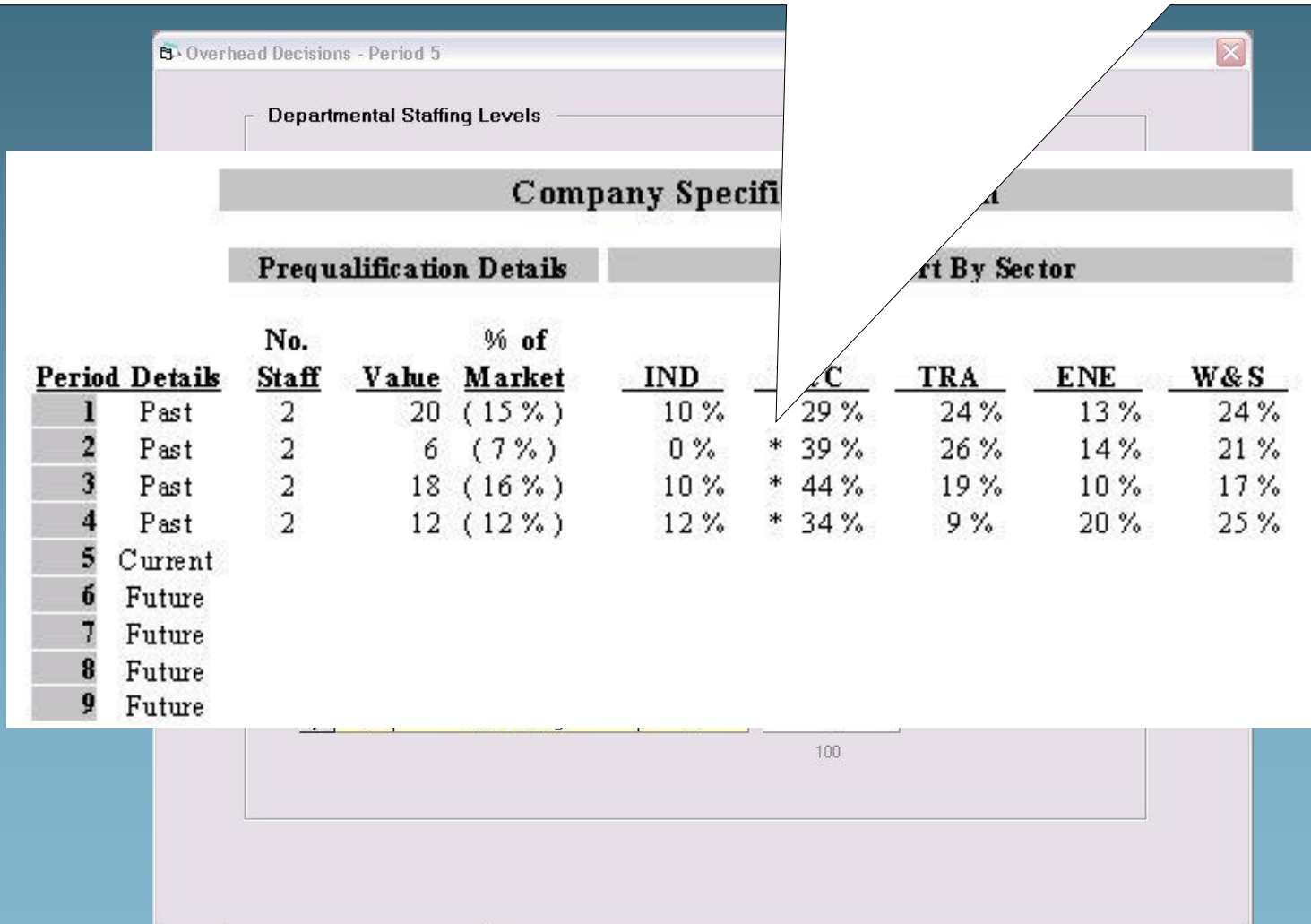
		Last Period	This Period
Sector	Desc	% split	% Split
1	Industrial	12	0
2	Building & Commercial	34	34
3	Transport	9	20
4	Energy	20	21
▶ 5	Water & Sewage	25	25

100

Experts in a Sector

If the company's average marketing effort in a sector exceeds a particular %, then the company are deemed to be experts in the sector, and will prequalify for more work in the sector than anticipated.

The **Marketing Analysis Report** places a '*' against the sectors in which the company is an expert.



Period Details		No. Staff	Value	% of Market	IND	EC	TRA	ENE	W&S
1	Past	2	20	(15 %)	10 %	29 %	24 %	13 %	24 %
2	Past	2	6	(7 %)	0 %	* 39 %	26 %	14 %	21 %
3	Past	2	18	(16 %)	10 %	* 44 %	19 %	10 %	17 %
4	Past	2	12	(12 %)	12 %	* 34 %	9 %	20 %	25 %
5	Current								
6	Future								
7	Future								
8	Future								
9	Future								

Client Relationships and Prequalification

Client Relationships play a role in prequalifying for work in two ways :-

- If the relationship is an **improving one**, and at least at a certain level, the company may prequalify for a job that would have been unattainable, as shown in the **External Performance Review**.
- If the relationship is a **deteriorating one**, then there is a chance the client will not allow prequalification, regardless of the effort being put into the particular job sector.

Departmental Staffing Levels

Department	Last Period		This Period	
	Company staff	Agency staff	Company staff	Agency staff
Marketing	2	0	4	0
Estimating	2	0	2	0
Head Office	2	0	2	0

External Performance Review

Period: Period 9

Category: Overheads

Click on any Detail
If so, simply click
additional notes a
consultant.

Information is available.
button to display the
made by the external

Further Information

Job No	Details	Nature
▶	The Company is considered an expert in the Building & Commercial se	P
	Build costs across all jobs have been reduced because Head Office s	P
	Build costs across all jobs have been reduced because QHSE staff a	P
	Measured value has increased on all jobs because the Measurement staff are able to support the company turnover	P
88	Prequalification only permitted due to the relationship with the Client, South Wales County Council	P

Overhead Decisions - Period 5

Departmental Staffing Levels

		Last Period	This Period	
	Department	Company staff	Company staff	Agency staff
▶	Marketing	2	4	0
	Estimating	2	2	0
	Head Office	3	3	0
	QHSE	2	2	0
	Measurement	2	2	0

Market Analysis

Past Performance

Split of the Marketing Overhead between Sectors

	Sector	Desc	Last Period	This Period
			% split	% Split
	1	Industrial	12	0
	2	Building & Commercial	34	34
	3	Transport	9	20
	4	Energy	20	21
▶	5	Water & Sewage	25	25

100

The Demo is now complete

Overhead Decisions - Period 5

Departmental Staffing Levels

		Last Period	This Period	
	Department	Company staff	Company staff	Agency staff
▶	Marketing	2	4	0
	Estimating	2	2	0
	Head Office	3	3	0
	QHSE	2	2	0
	Measurement	2	2	0

Market Analysis

Past Performance

Split of the Marketing Overhead between Sectors

	Sector	Desc	Last Period	This Period
			% split	% Split
	1	Industrial	12	0
	2	Building & Commercial	34	34
	3	Transport	9	20
	4	Energy	20	21
▶	5	Water & Sewage	25	25

100

Keep Clicking Anywhere on the screen to advance the demo

Main

Quit

The Estimating staff price the jobs that the company have prequalified for, with costing decisions being made on the Estimating Screen.

The Overhead Manager is concerned not with which jobs to price, but with the number of estimating staff needed to fulfil the estimating requirements.

If the company do not have enough man weeks available to fulfil their estimating requirements (Estimating Screen), the number of estimating staff needs to be increased by either employing more company staff, or using agency staff.

Consider the following situation.

It's the beginning of period 5, and the Overhead Manager needs to decide upon the staffing level for the Estimating Department.

Overhead Decisions - Period 5

Departmental Staffing Levels

		Last Period		This Period	
	Department	Company staff	Company staff	Agency staff	
	Marketing	2	4	0	
▶	Estimating	2	2	0	
	Head Office	3	3	0	
	QHSE	2	2	0	
	Measurement	2	2	0	

There are currently 3 estimating staff, each working 12 weeks per period, representing 36 estimating man weeks available.

To see if 36 man weeks is sufficient to fulfil the estimating requirements, **we'll need to look** at the estimating decisions that have been made.

Overhead Decisions - Period 5

Departmental Staffing Levels

		Last Period	This Period	
	Department	Company staff	Company staff	Agency staff
	Marketing	2	4	0
▶	Estimating	2	2	0
	Head Office	3	3	0
	QHSE	2	2	0
	Measurement	2	2	0

19 man weeks of estimating time has been allocated across 3 jobs, and since the estimating time available is 24 man weeks (all the company's own staff) **there is no problem fulfilling** the estimating requirements with the current level of staff, and **no additional staff need to be employed**.

Key Point

If **more man-weeks had been allocated than were available**, unless something was done, some estimates would not be completed. In this scenario jobs would be costed in job number order until the estimating resource ran out, after which point some jobs would not be costed accurately.

To overcome any shortfall, there are 2 choices :-

- Employ more company's staff, bearing in mind that there is a limit on the number of new company staff that can be employed each period, as defined in the **Company and Financial Information**. New company staff also incur a recruitment & training cost in their first period.
- Employ agency staff for the current period only. Agency staff attract a higher salary than company staff.

Its normally more **cost-effective** to increase the company's own staff rather than use agency staff.

☐ Sector Descriptions

Estimating time available

Own staff weeks

Agency staff weeks

Job	Type	Approx. Value	Desc	Sector	Client	Expected Estimating Cost as a % of Approx Value	Additional % due to Job Complexity	Estimating effort to be allocated (man weeks)
35	BO	5,000,000	Improvements to fire station	2	Kegworth Airport	0.08	Medium 10 - 20 %	6
36	BO	4,000,000	Car park extension at railway station	2	Railline	0.1	Medium 10 - 20 %	7
▶ 38	BO	3,000,000	Strengthening of canal tunnel	5	English Waterways	0.11	Medium 10 - 20 %	6

If any changes had been made to the level of estimating staff, the changes would have been immediately transferred to the **Estimating Screen**.

Overhead Decisions - Period 5

Departmental Staffing Levels

		Last Period		This Period	
	Department	Company staff	Company staff	Agency staff	
	Marketing	2	4	0	
▶	Estimating	2	2	0	
	Head Office	3	3	0	
	QHSE	2	2	0	
	Measurement	2	2	0	

Overhead Decisions - Period 5

Departmental Staffing Levels

		Last Period		This Period	
	Department	Company staff	Company staff	Agency staff	
	Marketing	2	4	0	
▶	Estimating	2	2	0	
	Head Office	3	3	0	
	QHSE	2	2	0	
	Measurement	2	2	0	

The Demo is now complete

Overhead Decisions - Period 5

Departmental Staffing Levels

		Last Period		This Period	
	Department	Company staff	Company staff	Agency staff	
	Marketing	2	4	0	
▶	Estimating	2	2	0	
	Head Office	3	3	0	
	QHSE	2	2	0	
	Measurement	2	2	0	

Entering Overhead Other Dept Decisions - 1

Keep Clicking Anywhere on the screen to advance the demo

The staff in these departments perform tasks related to the company's ongoing jobs :-

- **Head Office** staff deal with buying, accounting and IT issues.
- **QHSE** staff deal with quality, health & safety and environmental issues.
- **Measurement** staff (quantity surveyors) ensure that money is recovered from the client.

The task of the Overhead Manager is to ensure that the level of staff in each department each period is able to manage the company's ongoing jobs without any deterioration in the performance of the jobs.

We'll now look at an example of how to set the appropriate staffing levels.

Consider the following situation.

It's the beginning of period 5, and the Overhead Manager needs to decide upon the staffing levels for the Head Office, QHSE and Measurement Departments.

Overhead Decisions - Period 5

Departmental Staffing Levels

	Department	Last Period Company staff	This Period	
			Company staff	Agency staff
	Marketing	2	4	0
	Estimating	2	2	0
▶	Head Office	3	3	0
	QHSE	2	2	0
	Measurement	2	2	0

Past Performance

The principal for setting the staffing level applies to all 3 departments, so we'll concentrate on the Head Office Department.

This period we currently have 3 staff, all company staff and no agency staff.

How do we know if 3 staff will be able to manage the company's turnover this period ?

To answer this question we must first assess the level of turnover that each person can support, and to do this we need to use the **Past Performance button**.

Overhead Decisions - Period 5

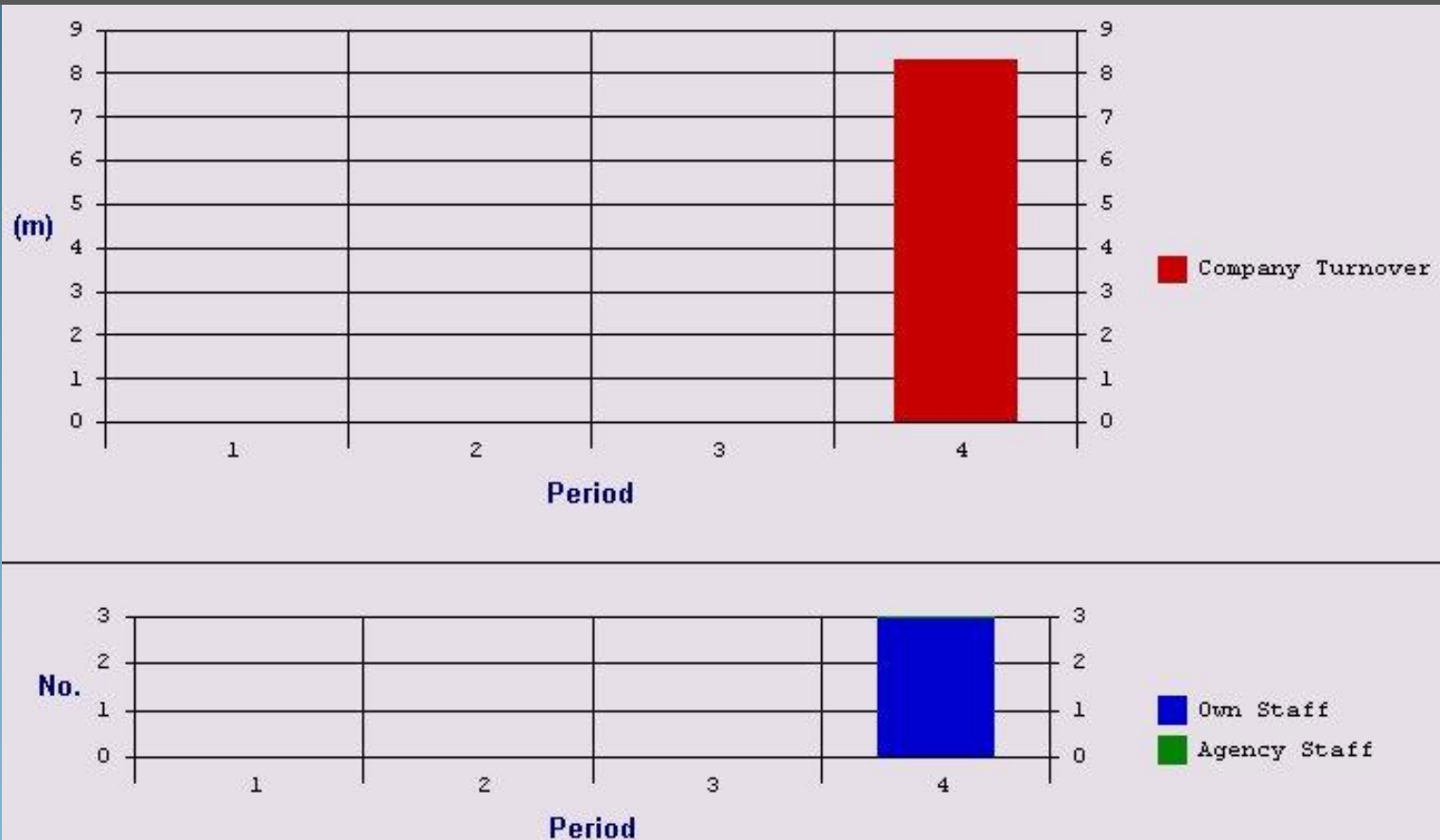
Departmental Staffing Levels

	Department	Last Period Company staff	This Period Company staff Agency staff	
	Marketing	2	4	0
	Estimating	2	2	0
▶	Head Office	3	3	0
	QHSE	2	2	0
	Measurement	2	2	0

Past Performance

Period 4, the last period of the History, set the **benchmark staffing/turnover levels** i.e., the number of staff in each department could support the level of turnover without impairing performance.

We can see that 3 staff can cope with 8.4m of turnover, or 2.8m per person. **This is the benchmark for all future staffing levels for the Head Office Department.**



We now know that the 3 staff can handle 8.4m of turnover.

To see if this staffing level is sufficient we need to determine the likely turnover this period.

To do this we need to refer to the decisions made on the Construction Screen.

Overhead Decisions - Period 5

Departmental Staffing Levels

	Department	Last Period	This Period	
		Company staff	Company staff	Agency staff
	Marketing	2	4	0
	Estimating	2	2	0
▶	Head Office	3	3	0
	QHSE	2	2	0
	Measurement	2	2	0

Past Performance

Overhead Decisions - Period 5

Departmental Staffing Levels

	Department	Last Period	This Period	
		Company staff	Company staff	Agency staff
	Marketing	2	4	0
	Estimating	2	2	0
▶	Head Office	3	3	0
	QHSE	2	2	0
	Measurement	2	2	0

Past Performance

On the Construction screen, and assuming appropriate labour allocations have been made, the **anticipated turnover** for the period is calculated as follows :-

(Total Labour On Site * value per man period)

This equates to :-

Job 1: (27 x 80,258) = 2.2m

Job 2: (95 x 27,086) = 2.6m

etc

Total: 8.6m

	Job	Last Period				This Period										
		Labour On Site			Site Cost Paid	Job Status	Planned Labour	Labour Allocation			Own Labour Transfers				Site Cost Allocation	
		Total	Own	Sub				Total	Own	Sub	From ILP	New	To ILP	Paid Off		
▶	1	27	27	0	315,643	In Second Period	34	27	27	0	0	0	0	0	0	315643
	2	95	95	0	379,480	In Second Period	107	95	95	0	0	0	0	0	0	379480
	13	72	72	0	607,833	In Second Period	58	72	72	0	0	0	0	0	0	607833
	16	0	0	0		In First Period	34	0	0	0	0	0	0	0	0	0
	20	0	0	0		In First Period	20	0	0	0	0	0	0	0	0	0

The **value per man period** is shown on the Job Details (for job 2), and is :-

(original bid / total man periods)

Cost / Value ratios per man period

Build Cost: 19,775

Site Cost: 3,955

Value: 27,086

Since 3 staff can handle 8.4m, and the turnover is likely to be around 8.6m, we have a **shortfall** of Head Office staff, and need to take on an extra staff.

To overcome the shortfall, there are 2 choices :-

- Employ more **company's staff**, bearing in mind that there is a limit on the number of new company staff that can be employed each period, as defined in the **Company and Financial Information** (3 for Head Office). New company staff also incur a recruitment & training cost in their first period.
- Employ **agency staff** for the current period only. Agency staff attract a higher salary than company staff.

Since the company is looking to increase turnover in the next year, its more **cost-effective in the long run** to increase the company's own staff rather than use agency staff, so we'll employ an additional 1 company staff, which is within the limitations for new staff.

Overhead Decisions - Period 3

Departmental Staffing Levels

		Last Period	This Period	
	Department	Company staff	Company staff	Agency staff
	Marketing	2	4	0
	Estimating	2	2	0
▶	Head Office	3	3	0
	QHSE	2	2	0
	Measurement	2	2	0

Past Performance

Overhead Decisions - Period 5

Departmental Staffing Levels

		Last Period	This Period	
	Department	Company staff	Company staff	Agency staff
	Marketing	2	4	0
	Estimating	2	2	0
▶	Head Office	3	4	0
	QHSE	2	2	0
	Measurement	2	2	0

Past Performance

The staffing levels for the QHSE and Measurement Departments are determined in the same manner, based upon benchmark staffing levels and anticipated turnover levels.

Having performed the necessary analysis, 1 extra person is required in each department.

Overhead Decisions - Period 5

Departmental Staffing Levels

	Department	Last Period	This Period	
		Company staff	Company staff	Agency staff
	Marketing	2	4	0
	Estimating	2	2	0
▶	Head Office	3	4	0
	QHSE	2	2	0
	Measurement	2	2	0

Past Performance

Overhead Decisions - Period 5

Departmental Staffing Levels

		Last Period	This Period	
	Department	Company staff	Company staff	Agency staff
	Marketing	2	4	0
	Estimating	2	2	0
	Head Office	3	4	0
	QHSE	2	3	0
▶	Measurement	2	3	0

Past Performance

We have seen that the appropriate staffing levels in the Head Office, QHSE and Measurement Departments are linked to the company's turnover.

But what happens if we get our calculations wrong, and the staffing levels are not sufficient to cope with the turnover in a period ?

Understaffing of the departments can have **serious affects** across all jobs being progressed, namely :-

- Head Office, an increase in job costs (build costs)
- QHSE, an increase in job costs (build and risk costs)
- Measurement, a reduction in measured value (turnover)

Understaffing is a false economy. It might reduce overhead costs, but can significantly reduce job profits, resulting in reduced operating profits for the company.

Conversely, excess staffing levels can reduce costs and increase measured value, and the benefits can far outweigh the additional staffing costs, **but only up to a point**.

Overhead Decisions - Period 5

Departmental Staffing Levels

	Department	Last Period	This Period	
		Company staff	Company staff	Agency staff
	Marketing	2	4	0
	Estimating	2	2	0
	Head Office	3	4	0
	QHSE	2	3	0
▶	Measurement	2	3	0

Past Performance

The Demo is now complete

Overhead Decisions - Period 5

Departmental Staffing Levels

		Last Period	This Period	
	Department	Company staff	Company staff	Agency staff
	Marketing	2	4	0
	Estimating	2	2	0
	Head Office	3	4	0
	QHSE	2	3	0
▶	Measurement	2	3	0

Past Performance

Entering Overhead Non Dept Decisions

Keep Clicking Anywhere on the screen to advance the demo

As well as the departmental overheads, there are a number of **non-departmental overheads** for which decisions are made in other areas, namely :-

- **Idle project managers** (Personnel Screen)
- **Idle labour pool** (Construction Management Screen)

We'll take a brief look at each one.

Idle Project Manager Pool (Personnel Screen)

Project managers employed by the company who are not currently allocated to an on-going job are held in the **Idle Project Manager Pool**.

They can be placed there if :-

- A job has just finished, and the project manager is placed in the pool until the company decides what to do with him
- The project manager has been recruited from the market for use on a future contract, and the company does not want to risk losing them to a rival.

Project managers must be paid their salary whilst they are in the idle pool, so it makes sense to try and allocate them to appropriate contracts, which is the responsibility of the **Personnel Manager**.

Idle Project Manager Pool

Last Period

No	Name
1	Brock, G

This Period

No	Name
▶ 1	Brock, G

Recruit

Details

Payoff

Transfer To Job

Idle Labour Pool (Construction Management Screen)

The company's own site-based labourers who are not currently allocated to an on-going job are held in the **Idle Labour Pool**.

Idle Labourers incur a cost whilst they are in the idle pool, so it normally makes sense to either pay them off, or allocate them to appropriate contracts, which is the responsibility of the **Construction Manager**.

Sometimes a decision is made to **deliberately keep excess labour** in the idle pool. This may happen if the company is expecting to win a labour-intensive job, and its cheaper to pay them for being idle in the short-term, rather than incur high training costs in employing new staff in the future.

Idle Labour Pool	
Start of Period	
Number of men in the pool:	65
Number of men to Layoff This Period:	0
Number of men available in the pool for On-Going Jobs:	65
After Decisions	
Net Transfers from On-Going Jobs:	0
Number of men left in the pool:	65

The Demo is now complete

[Main](#)

[Quit](#)

Entering Overhead Non Dept Decisions

Entering Decisions

Main

Quit

The Company's marketing effort last period will have enabled the Company to prequalify for a number of jobs, which are shown on the estimating screen.

If the Company intends to bid for a job, the Estimating Manager must **decide how much effort** (man weeks) to put into pricing the job, which involves estimating costs and associated risks.

It is important to devote the necessary resources to produce accurate estimates, creating 'high confidence' in the estimate, and enabling more informed and competitive bidding.

Estimating Decisions - Period 5

☐ Sector Descriptions

Estimating time available
 Own staff weeks
 Agency staff weeks
 Allocation:

Job	Type	Approx. Value	Desc	Sector	Client	Expected Estimating Cost as a % of Approx Value	Additional % Cost due to Job Complexity	Estimating Effort to be Allocated (man weeks)
35	BO	5,000,000	Improvements to fire station	2	Kegworth Airport	0.08	Medium 10 - 20 %	0
36	BO	4,000,000	Car park extension at railway station	2	Railline	0.1	Medium 10 - 20 %	0
▶ 38	BO	3,000,000	Strengthening of canal tunnel	5	English Waterways	0.11	Medium 10 - 20 %	0

Entering Estimating decisions - 1

Keep Clicking Anywhere on the screen to advance the demo

Allocation: 6

Quit

Estimating Decisions - Period 5

☐ Sector Descriptions

Estimating time available

Own staff weeks
 Agency staff weeks
 Allocation:

Job	Type	Approx. Value	Desc	Sector	Client	Expected Estimating Cost as a % of Approx Value	Additional % Cost due to Job Complexity	Estimating Effort to be Allocated (man weeks)
35	BO	5,000,000	Improvements to fire station	2	Kegworth Airport	0.08	Medium 10 - 20 %	0
36	BO	4,000,000	Car park extension at railway station	2	Railline	0.1	Medium 10 - 20 %	0
▶ 38	BO	3,000,000	Strengthening of canal tunnel	5	English Waterways	0.11	Medium 10 - 20 %	0

The Estimating Manager is particularly interested in **job 38**, which has the following features :-

- It is a traditional **Build Only** job, where the contractor is responsible for the build only, and not the design
- It has an approximate value of **3,000,000**
- It involves the **strengthening of a canal tunnel**
- The client is **English Waterways**
- The job is categorised as a **Water & Sewage** (sector 5) contract
- The job is classified as **medium complexity**

Entering Estimating decisions - 1

The Estimating Manager must now decide **how many man-weeks** of estimating time need to be allocated to produce an accurate estimate of the costs and risk involved in the completion of job 38 ?

Estimating Decisions - Period 5

☐ Sector Descriptions

Estimating time available

Own staff weeks
Agency staff weeks
Allocation:

Job	Type	Approx. Value	Desc	Sector	Client	Expected Estimating Cost as a % of Approx Value	Additional % Cost due to Job Complexity	Estimating Effort to be Allocated (man weeks)	
<input type="checkbox"/>	35	BO	5,000,000	Improvements to fire station	2	Kegworth Airport	0.08	Medium 10 - 20 %	0
<input type="checkbox"/>	36	BO	4,000,000	Car park extension at railway station	2	Railline	0.1	Medium 10 - 20 %	0
<input checked="" type="checkbox"/>	38	BO	3,000,000	Strengthening of canal tunnel	5	English Waterways	0.11	Medium 10 - 20 %	0

Estimating Decisions - Period 5

☐ Sector Descriptions

Estimating time available
 Own staff weeks
 Agency staff weeks
 Allocation:

Job	Type	Approx. Value	Desc	Sector	Client	Expected Estimating Cost as a % of Approx Value	Additional % Cost due to Job Complexity	Estimating Effort to be Allocated (man weeks)
35	BO	5,000,000	Improvements to fire station	2	Kegworth Airport	0.08	Medium 10 - 20 %	0
36	BO	4,000,000	Car park extension at railway station	2	Railline	0.1	Medium 10 - 20 %	0
▶ 38	BO	3,000,000	Strengthening of canal tunnel	5	English Waterways	0.11	Medium 10 - 20 %	0

The Estimating Manager needs to consider two factors in determining the number of man-weeks to allocate to the estimate.

- The **anticipated estimating cost** required to produce an accurate estimate, which is based upon the job size. In this case it is 0.11% of the approximate value, or 3,300
- The job is classified as one of **high complexity**, requiring between 10 and 20% additional estimating cost. The Estimating Manager decides to add the full 20%, or 660

Thus, the **combined estimating cost** is 3,960, which should guarantee 'high confidence' that the estimate will be accurate.

Estimating Decisions - Period 5

☐ Sector Descriptions

Estimating time available

Own staff weeks
Agency staff weeks Allocation:

Job	Type	Approx. Value	Desc	Sector	Client	Expected Estimating Cost as a % of Approx Value	Additional % Cost due to Job Complexity	Estimating Effort to be Allocated (man weeks)	
<input type="checkbox"/>	35	BO	5,000,000	Improvements to fire station	2	Kegworth Airport	0.08	Medium 10 - 20 %	0
<input type="checkbox"/>	36	BO	4,000,000	Car park extension at railway station	2	Railline	0.1	Medium 10 - 20 %	0
<input checked="" type="checkbox"/>	38	BO	3,000,000	Strengthening of canal tunnel	5	English Waterways	0.11	Medium 10 - 20 %	0

Company costs (per person)

Annual salary:

Marketing Department

Estimating Department

The Estimating Manager must now decide how many **man-weeks** of estimating time the 3,960 equates to ?

The **Company and Financial Information** shows that an estimator costs 27,000 per annum. Allowing for 4 weeks annual leave, this equates to 563 per week ($27,000 / 48$).

Based upon these calculations, the estimating cost of 3,960 is equivalent to 7.03 weeks ($3,960 / 563$), which the Estimating Manager decides to round down to 7 weeks.

Entering Estimating decisions - 1


Estimating Decisions - Period 5


☐ **Sector Descriptions**

Estimating time available

Own staff weeks

Agency staff weeks

Allocation:

Job	Type	Approx. Value	Desc	Sector	Client	Expected Estimating Cost as a % of Approx Value	Additional % Cost due to Job Complexity	Estimating Effort to be Allocated (man weeks)	
<input type="checkbox"/>	35	BO	5,000,000	Improvements to fire station	2	Kegworth Airport	0.08	Medium 10 - 20 %	0
<input type="checkbox"/>	36	BO	4,000,000	Car park extension at railway station	2	Railline	0.1	Medium 10 - 20 %	0
<input checked="" type="checkbox"/>	38	BO	3,000,000	Strengthening of canal tunnel	5	English Waterways	0.11	Medium 10 - 20 %	7

Entering Estimating decisions - 2

Because there are currently 3 estimating staff in the department this period, all of the company's own staff, there are **24 man weeks** of estimating time available.

7 man weeks have now been allocated, leaving plenty of resources for further costing of other jobs.

Estimating Decisions - Period 5

Sector Descriptions

Estimating time available

Own staff weeks

Agency staff weeks

Allocation:

Job	Type	Approx. Value	Desc	Sector	Client	Expected Estimating Cost as a % of Approx Value	Additional % Cost due to Job Complexity	Estimating Effort to be Allocated (man weeks)
35	BO	5,000,000	Improvements to fire station	2	Kegworth Airport	0.08	Medium 10 - 20 %	0
36	BO	4,000,000	Car park extension at railway station	2	Railline	0.1	Medium 10 - 20 %	0
▶ 38	BO	3,000,000	Strengthening of canal tunnel	5	English Waterways	0.11	Medium 10 - 20 %	7

In line with the company's strategy for growth, the Estimating Manager also decides to cost jobs 35 & 36, giving plenty of choice for submitting bids next period.

Estimating Decisions - Period 5

☐ Sector Descriptions

Estimating time available

Own staff weeks
Agency staff weeks
Allocation:

Job	Type	Approx. Value	Desc	Sector	Client	Expected Estimating Cost as a % of Approx Value	Additional % Cost due to Job Complexity	Estimating Effort to be Allocated (man weeks)
35	BO	5,000,000	Improvements to fire station	2	Kegworth Airport	0.08	Medium 10 - 20 %	0
36	BO	4,000,000	Car park extension at railway station	2	Railline	0.1	Medium 10 - 20 %	0
▶ 38	BO	3,000,000	Strengthening of canal tunnel	5	English Waterways	0.11	Medium 10 - 20 %	7

Estimating Decisions - Period 5

☐ Sector Descriptions

Estimating time available

Own staff weeks

Agency staff weeks

Allocation:

Job	Type	Approx. Value	Desc	Sector	Client	Expected Estimating Cost as a % of Approx Value	Estimating Effort to be Allocated (man weeks)
35	BO	5,000,000	Improvements to fire station	2	Kegworth Airport	%	8
36	BO	4,000,000	Car park extension at railway station	2	Railline	%	8
38	BO	3,000,000	Strengthening of canal tunnel	5	English Waterways	%	7

After the estimating decisions have been made, 23 man weeks have been allocated, still leaving 1 week of unused estimating time.

Although the extra 1 week is a wasted resource, the anticipated steady growth should ensure there is no wastage in the future. Indeed, an increase in estimating staff may be required in the following periods.

Any increase in estimating staff takes place on the Overhead Screen, and is covered in more detail in the **Overheads Decision section**.

Key Points

- If there is a **shortfall** in estimating manpower available, some jobs will not being given their full allocated estimating time, or even worse, not be costed at all.

Since jobs are costed in job number order, any shortfall will affect the higher numbered jobs.

- The company are **not able to bid** for jobs that are not costed.

Own staff
 Agency staff weeks

Job	Type	Approx. Value	Desc	Sector	Client	Expected Estimating Cost as a % of Approx Value	Additional % due to Job Complexity	Estimating (effort to be allocated in weeks)
35	BO	5,000,000	Improvements to fire station	2	Kegworth Airport	0.08	Medium 10 - 20 %	8
36	BO	4,000,000	Car park extension at railway station	2	Railline	0.1	Medium 10 - 20 %	8
▶ 38	BO	3,000,000	Strengthening of canal tunnel	5	English Waterways	0.11	Medium 10 - 20 %	7

Allocating the appropriate level of resources will instil 'high' confidence in the accuracy of the estimates, and :-

- Enable more competitive bids to be tendered.
- Enhance client satisfaction.

Allocating insufficient resources will result in 'low' confidence. This will not please the Client, and the Company may not be allowed to bid for the job. Even if bidding is permitted :-

- The estimates may be too low, resulting in a low bid. If the job is won a loss would probably be made on the job since the 'true' costs are far higher than expected.
- The estimates may be too high, resulting in a high bid. This would almost certainly mean the job is not won.

Estimating is only the first stage of the 2-stage procurement process. The bidding takes place next period, when the results of the estimating are known.

Estimating Decisions - Period 5

☐ Sector Descriptions

Estimating time available

Own staff weeks

Agency staff weeks

Allocation:

Job	Type	Approx. Value	Desc	Sector	Client	Expected Estimating Cost as a % of Approx Value	Additional % Cost due to Job Complexity	Estimating Effort to be Allocated (man weeks)
35	BO	5,000,000	Improvements to fire station	2	Kegworth Airport	0.08	Medium 10 - 20 %	8
36	BO	4,000,000	Car park extension at railway station	2	Railline	0.1	Medium 10 - 20 %	8
▶ 38	BO	3,000,000	Strengthening of canal tunnel	5	English Waterways	0.11	Medium 10 - 20 %	7

The Demo is now complete

Estimating Decisions - Period 5

☐ **Sector Descriptions**

Estimating time available

Own staff weeks
 Agency staff weeks
 Allocation:

Job	Type	Approx. Value	Desc	Sector	Client	Expected Estimating Cost as a % of Approx Value	Additional % Cost due to Job Complexity	Estimating Effort to be Allocated (man weeks)	
<input type="checkbox"/>	35	BO	5,000,000	Improvements to fire station	2	Kegworth Airport	0.08	Medium 10 - 20 %	8
<input type="checkbox"/>	36	BO	4,000,000	Car park extension at railway station	2	Railline	0.1	Medium 10 - 20 %	8
<input checked="" type="checkbox"/>	38	BO	3,000,000	Strengthening of canal tunnel	5	English Waterways	0.11	Medium 10 - 20 %	7

Each period the company is given a number of jobs for which a bid can be entered. These are the jobs that the previous period the Estimating Manager allocated estimating resources to.

Bidding Decisions - Period 5
 ✕

☐ Sector Descriptions

Job	Type	Desc	Sect	Client	Bid	Estimated Costs		Consultant Allocated	On-Cost	% Mark-Up	Bid Submitted
						Design % (of build)	Build Cost				
▶ 25	DB	New facilities for train maintain	3	Railline	N	9	4,102,691		0	0.0	0
29	DB	New distribution facility	2	Tayoto Cars UK	N	11	9,733,391		0	0.0	0

Job Details

Consultant

Allocate

Remove

Enter On-Cost

Activate Sequential Tendering: ☐

Entering Decisions

Sequential Tendering

Will we win the job ?

Choosing Consultants

Job Risk



Main

Quit

Bidding for a job - 1

Keep Clicking Anywhere on the screen to advance the demo

The Company are able to bid for jobs that were costed by the Estimating Department last period, providing that the client felt the Company put enough effort into the estimating.

There are two types of jobs that the Company can bid for :-

Build Only

The design has already been produced for the Client, and you, the contractor, are only responsible for the build.

For Build Only jobs a bid consists of :-

- The **estimated build cost**
- **Oncost**; to cover additional costs not included in the build cost, consisting of :-
 - (+) Site support costs
 - (+) Contingency for risk
 - (+) Project manager costs (salary and recruitment charges)
- **Markup** (margin); the profit to hopefully be made on the job

Design & Build

You, the contractor, has responsibility for both the design and the build.

For Design & Build jobs a bid consists of :-

- The **estimated build and design costs**
- An allocated **consultant** to produce the design
- **Oncost**; to cover additional costs not included in the build cost, consisting of :-
 - (+) Site support costs
 - (+) Contingency for risk
 - (+) Project manager costs (salary and recruitment charges)
 - (-) A negative element to represent anticipated savings on the build cost from the design produced by the consultant. Passing some saving onto the client makes the bid far more competitive
- **Markup** (margin); the profit to hopefully be made on the job

Bidding for a job - 1

For either type of job the **estimated build cost** has already been calculated by the Estimating Department, and for design & build jobs the **estimated design cost** has also been determined. These cannot be changed.

If you intend to bid for a job, you now need to enter the remaining elements.

There are more elements required for a design & build job, but the elements to be considered include all those in a bid for a build-only job. Hence, we'll concentrate on how to form the bid for a design & build job.

Bidding for a job - 1

Entering Decisions

Main

Quit

Bidding for a job - 2

Lets assume that the Company decides to bid for job 29, a Design & Build job. How is the bid formulated ?

Bidding Decisions - Period 5

☐ Sector Descriptions

						Estimated Costs					
Job	Type	Desc	Sect	Client	Bid	Design % (of build)	Build Cost	Consultant Allocated	On-Cost	% Mark-Up	Bid Submitted
25	DB	New facilites for train maintenanc	3	Railline	N	9	4,102,691		0	0.0	0
▶ 29	DB	New distribution facility	2	Tayoto Cars UK	N	11	9,733,391		0	0.0	0

Job Details

Consultant

Allocate

Remove

Enter On-Cost

Activate Sequential Tendering: ☐

Bidding for a job - 2

The **Job Details** button can be used to display the information compiled by the estimators about job 29.

This is the **key data** to be used in determining the final bid.

Sector

Job

25
29

Job Details

Estimated Costs

Desc	Sect	Client	Bid	Design % (of build)	Build Cost	Consultant Allocated	On-Cost	% Mark-Up	Bid Submitted
ites for train mainten	3	Railline	N	9	4,102,691		0	0.0	0
tribution facility	2	Tayoto Cars UK	N	11	9,733,391		0	0.0	0

Job 29 (Bidding Stage)

General

Procurement

Performance

Job Progress

Print Options

Estimating Information

Estimating Confidence: Extremely High

Estimated Design Cost: 11 % of Build Cost

Estimated Build Cost: 9,733,391

Estimated Site Cost: 1,946,676

Risk Level: High

Addition to build cost of: 1.3 % if risk occurs

Estimated Details by Period

Job Period	Build Cost	Site Cost	Labour Manning
1	2,920,017	584,003	90
2	4,866,696	973,338	150
3	1,946,678	389,335	60

Total Labour Manning: 300 man periods

Activate Sequential Tendering:

Bidding for a job - 2

Bidding Decisions - Period 5

☐ Sector Descriptions

						Estimated Costs					
Job	Type	Desc	Sect	Client	Bid	Design % (of build)	Build Cost	Consultant Allocated	On-Cost	% Mark-Up	Bid Submitted
25	DB	New facilites for train maintenanc	3	Railline	N	9	4,102,691		0	0.0	0
29	DB	New distribution facility	2	Tayoto Cars UK	N	11	9,733,391		0	0.0	0

A 'Y' must be entered to indicate that a bid is to be submitted.

Job Details

Consultant

Allocate

Remove

Enter On-Cost

Activate Sequential Tendering: ☐

Bidding for a job - 2

☐ Sector Descriptions

Job	Type	Desc	Sect	Client	Bid	Estimated Costs		Consultant Allocated	On-Cost	% Mark-Up	Bid Submitted
						Design % (of build)	Build Cost				
25	DB	New facilites for train maintenanc	3	Railline	N	9	4,102,691		0	0.0	0
▶ 29	DB	New distribution facility	2	Tayoto Cars UK	Y	11	9,733,391		0	0.0	0

Job Details

Consultant

Allocate

Remove

Enter On-Cost

Activate Sequential Tendering: ☐

Bidding for a job - 2

Bidding Decisions - Period 5												
Sector Descriptions												
						Estimated Costs						
Job	Type	Desc	Sect	Client	Bid	Design % (of build)	Build Cost	Consultant Allocated	On-Cost	% Mark-Up	Bid Submitted	
25	DB	New facilities for train maintenance	3	Railline	N	9	4,102,691		0	0.0	0	
29	DB	New distribution facility	2	Tayoto Cars UK	Y	11	9,733,391		0	0.0	0	

The estimators deduced that the **estimated build cost** would be 9,733,391 for the job. This is automatically incorporated into the bid, and cannot be altered. It covers the labour, plant, materials and specialist subcontractors needed to complete the job.

Their **confidence** in the estimate was extremely high, since they devoted enough time(man weeks) to complete a thorough estimate, and consequently the 'true cost' should be close to the estimate.

Key Point

If the job is won, the 'true' build cost, which the company never sees, will be used to calculate the build costs when the job is progressed.

Bidding for a job - 2

Bidding Decisions - Period 5												
Sector Descriptions												
						Estimated Costs						
Job	Type	Desc	Sect	Client	Bid	Design % (of build)	Build Cost	Consultant Allocated	On-Cost	% Mark-Up	Bid Submitted	
25	DB	New facilities for train maintenance	3	Railline	N	9	4,102,691		0	0.0	0	
29	DB	New distribution facility	2	Tayoto Cars UK	Y	11	9,733,391		0	0.0	0	

Based upon using a **reasonable** consultant designer, the **estimated design cost** was calculated as 11% of the build cost. As with the build cost, this is automatically incorporated into the bid, although the on-cost provides a mechanism for adjusting the estimate if a better designer can be found.

Their **confidence** in the estimated design cost was extremely high, since they devoted enough time to complete a thorough estimate.

If a job is won, the **true design cost** will be charged, which will vary from the estimate depending upon both the accuracy of the estimate, and the choice of consultant to produce the design. Consultants without the required expertise for the job do not charge the full design cost, but exceptional consultants will charge more.

If a team wins a d&b job the **design cost will be payable pro-rata** over the planned duration of the job. If the job finishes early the remaining design cost is paid in full.

A consultant needs to be allocated to produce the design.

The **Allocate Consultant** button can be used to display a list of all available consultants, and an appropriate consultant for the job can be found by reviewing the profiles of each consultant, and matching the **consultant's experience to the job sector**.

The choice of consultant **can impact on both the build and design costs**. 'Good' consultants produce designs that save on the build cost, but they charge more for the design.

The saving in build cost that can be achieved by allocating the best possible consultant for the job is given in the **Company and Financial Information**.

For job 34, a Building & Commercial contract, consultant **14, Chester Consultants** have been chosen due to their expertise in the Building & Commercial sector.

Key Point

The list of available consultants changes each period due to some consultants being unavailable. The reasons for unavailability are displayed using the **Unavailable button** on the Allocate Consultants Screen, and a typical reason is too much current workload.

No	Name	Used before
12	Alan Armstrong Associates	No
13	DP Thomas & Associates	No
▶ 14	Chester Consultants	No

Teamwork, planning, communication and commitment has given the company a reputation for reliability and quality in all their designs.

A The Company specialises in the design of new buildings to a very high standard, and have worked for many high-profile clients, at home and abroad.

They recently introduced a new computer system to create their designs, and are currently getting to grips with the new technology.

Consultant

Allocate Remove Enter On-Cost

Consultants

Allocating the best possible designer to a design and build job can result in a reduction of the build costs by up to: %

Main Quit

Bidding Decisions - Period 5

☐ Sector Descriptions

Job	Type	Desc	Sect	Client	Bid	Estimated Costs		Consultant Allocated	On-Cost	% Mark-Up	Bid Submitted
						Design % (of build)	Build Cost				
25	DB	New facilites for train maintenanc	3	Railline	N	9	4,102,691		0	0.0	0
29	DB	New distribution facility	2	Tayoto Cars UK	Y	11	9,733,391	14	0	0.0	10,804,060

The **Oncost** is an additional allowance added to a bid to cover the contract costs over and above the build and design costs.

For a Design and Build job the Oncost covers :-

- (+) Site Cost
- (+) Contingency for Risk
- (+) Project manager costs
- (-) Design savings on the build costs

To enter the On-Cost use the **Enter On-Cost** button.

Job Details

Activate Sequential Tendering: ☐

Bidding for a job - 3

On-Cost Entry for Job Number 29

Costs to be Added

Site Support costs:

0

Risk contingency:

0

Project Manager costs:

0

Cost Savings to be Subtract

Build cost savings to be passed on due to the anticipated quality to be produced by the

Job Details

Type:

Design & Build

Job Duration:

3 periods

Estimating Confidence:

Extremely High

Estimated Design Cost:

11

Estimated Build Cost:

9,733,391

Estimated Site Cost:

1,946,676

Risk Level:

High

Low Risk is a 5-20% chance of something going wrong;
Medium Risk is a 20-40% chance;
High Risk is a 40-50% chance

Site Cost

Site Costs pay for the support staff and services required to administer a site.

The Company's estimators determine the estimated level of site cost required. This **will not be** the 'true' cost. The degree of inaccuracy is governed by the amount of effort put into producing the estimate.

The company never sees the 'true' cost, and has **to rely on** their estimate when making bidding decisions, and deciding how much to allow for the site cost in the bid.

For Job 34, the estimated site cost is 1,946,676

Since confidence in the estimate is very high, the estimate should be close to the true cost, so we'll allow 1,947,250 in the bid, adding a small % on to allow for estimating inaccuracy.

On-Cost Entry for Job Number 29

Costs to be Added

Site Support costs: 1947250

Risk contingency: 0

Project Manager costs: 0

Cost Savings to be Subtracted

Build cost savings to be passed onto the Client due to the the anticipated quality of the design to be produced by the design consultant: 0

On-Cost: 1,947,250

Job Details

Type: Design & Build

Job Duration: 3 periods

Estimating Confidence: Extremely High

Estimated Design Cost: 11

Estimated Build Cost: 9,733,391

Estimated Site Cost: 1,946,676

Risk Level: High

Low Risk is a 5-20% chance of something going wrong;
Medium Risk is a 20-40% chance;
High Risk is a 40-50% chance

Addition to build cost of: 1.3 % if risk occurs

Allocating the best possible designer to a design and build job can result in a reduction of the build costs by up to: 3 %

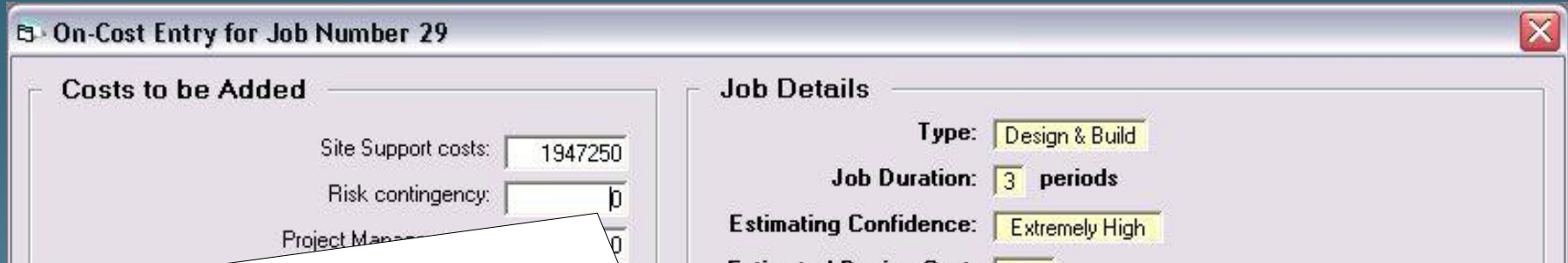
Consultant

Allocate

Remove

Enter On-Cost

Activate Sequential Tendering: ☐



On-Cost Entry for Job Number 29

Costs to be Added	Job Details
Site Support costs: 1947250	Type: Design & Build
Risk contingency: 0	Job Duration: 3 periods
Project Management: 0	Estimating Confidence: Extremely High

Risk

At the estimating stage, an assessment was made of the potential risks that could occur on the job causing monetary losses to the company. The risk has two elements :-

- The **likelihood** of the risk occurring (risk level), classified as **No, Low, Medium or High**, and also expressed as a % chance of happening.
- The **severity (cost)** if the risk hits, which is expressed as a % of the build cost.

An allowance for the risk cost needs to be made to cover the company if the risk occurs.

For job 29 the risk level is high, and has a 40-50% chance of occurring.

If the risk hits there will be a 1.3% addition to the build cost, or $0.013 \times 9,733,391 = 126,534$.

We could cover ourselves for the full 1.3% of the risk cost, but this could make our bid uncompetitive (too high).

We'll cover ourselves for 45% of the risk cost, or 56,940, which makes our bid far more competitive, but does provide some cover if the risk occurs.

Key Point

Assuming we win the job, if the risk does not occur then the extra risk becomes profit, or margin, made on the job. Conversely, if the risk hits it will eat into job profits, although this will be offset by the risk contingency we're building into the bid.

On-Cost Entry for Job Number 29

Costs to be Added

Site Support costs:

1947250

Risk contingency:

56940

Project Manager costs:

0

Cost Savings to be Subtracted

Build cost savings to be passed onto the Client due to the anticipated quality of the design to be produced by the design consultant:

0

On-Cost:

2,004,190

Job Details

Type:

Design & Build

Job Duration:

3 periods

Estimating Confidence:

Extremely High

Estimated Design Cost:

11

Estimated Build Cost:

9,733,391

Estimated Site Cost:

1,946,676

Risk Level:

High

Low Risk is a 5-20% chance of something going wrong;

Medium Risk is a 20-40% chance;

High Risk is a 40-50% chance

Addition to build cost of:

1.3 % if risk occurs

Allocating the best possible designer to a design and build job can result in a reduction of the build costs by up to:

3 %

Consultant

Allocate

Remove

Enter On-Cost

Job Details

Activate Sequential Tendering:

☐

Main

Quit

On-Cost Entry for Job Number 29

Costs to be Added

Site Support costs: 1947250

Risk contingency: 56940

Project Manager costs: 0

Job Details

Type: Design & Build

Job Duration: 3 periods

Estimating Confidence: Extremely High

Estimated Design Cost: 11

Estimated Build Cost: 9 722 291

Project Manager Costs

An allowance is made in the bid for the costs of **recruiting and paying** a project manager to oversee the job for its planned duration.

Project managers vary in experience and salary, and the choice of an appropriate project manager for a job can have serious consequence on the progress of the job.

Project manager details (salary etc) can be found on the **Personnel Screen**, and the **Company and Financial Information** shows the cost of recruiting a project manager.

Job 29 is a 3-period job, and we'll anticipate recruiting an excellent project manager whose annual salary is likely to be about 60,000.

Our project manager allowance is :-

Salary: 45,000 (for the 3 periods of the job)

Recruitment Charge/ bonuses (15% of annual salary): 9,000

Total: 54,000

Project Managers

Costs [% of annual salary]

Recruiting costs: 15 %

On-Cost Entry for Job Number 29

Costs to be Added

Site Support costs: 1947250

Risk contingency: 56940

Project Manager costs: 54000

Cost Savings to be Subtracted

Build cost savings to be passed onto the Client due to the the anticipated quality of the design to be produced by the design consultant: 0

On-Cost: 2,058,190

Job Details

Type: Design & Build

Job Duration: 3 periods

Estimating Confidence: Extremely High

Estimated Design Cost: 11

Estimated Build Cost: 9,733,391

Estimated Site Cost: 1,946,676

Risk Level: High

Low Risk is a 5-20% chance of something going wrong;
 Medium Risk is a 20-40% chance;
 High Risk is a 40-50% chance

Addition to build cost of: 1.3 % if risk occurs

Allocating the best possible designer to a design and build job can result in a reduction of the build costs by up to: 3 %

Consultant

Allocate

Remove

Enter On-Cost

Job Details

Activate Sequential Tendering: ☐

Main

Quit

On-Cost Entry for Job Number 29

Costs to be Added

Site Support costs: 1947250

Risk contingency: 56940

Project Manager costs: 54000

Cost Savings to be Subtracted

Build cost savings to be passed onto the Client due to the anticipated quality of the design to be produced by the design consultant: 0

On-Cost: 2,058,190

Job Details

Activate Sequential Tendering: ☐

Build-cost savings due to the quality of the design

A good consultant will reduce the 'true' build costs by producing a quality design, and we are informed that the saving can be up to 3% of the build cost.

We can pass some of this '**opportunity for saving money**' onto the client by reducing the on-cost. This will make the bid **more competitive**.

For job 29, since we chose a seemingly very suitable consultant, who we deem to be one of the best in the sector, we can possibly save the full 3% on the build costs.

But how much should we reduce the on-cost by ?

You should always assume that rival bidders will try and allocate a good consultant, although not the very best, and will pass on a around 1% of the anticipated build cost saving onto the client, making the rival bid more competitive.

We'll pass on 1.5% i.e., $0.015 \times 9,733,391$

If the consultant manages the anticipated 3% build cost saving, then we will have made an additional 1.5% in profit. Any saving below 1.5% will reduce any profit that is made on the job.

On-Cost Entry for Job Number 29

Costs to be Added

Site Support costs:

1947250

Risk contingency:

56940

Project Manager costs:

54000

Cost Savings to be Subtracted

Build cost savings to be passed onto the Client due to the anticipated quality of the design to be produced by the design consultant:

146000

On-Cost:

1,912,190

Job Details

Type:

Design & Build

Job Duration:

3 periods

Estimating Confidence:

Extremely High

Estimated Design Cost:

11

Estimated Build Cost:

9,733,391

Estimated Site Cost:

1,946,676

Risk Level:

High

Low Risk is a 5-20% chance of something going wrong;

Medium Risk is a 20-40% chance;

High Risk is a 40-50% chance

Addition to build cost of:

1.3 % if risk occurs

Allocating the best possible designer to a design and build job can result in a reduction of the build costs by up to:

3 %

Consultant

Allocate

Remove

Enter On-Cost

Job Details

Activate Sequential Tendering:

☐

On-Cost Entry for Job Number 29

Costs to be Added

Site Support costs:

1947250

Risk contingency:

56940

Project Manager costs:

54000

Cost Savings to be Subtracted

Build cost savings to be passed onto the Client due to the anticipated quality of the design to be produced by the design consultant:

146000

On-Cost:

1,912,190

Job Details

Type:

Design & Build

Job Duration:

3 periods

Estimating Confidence:

Extremely High

Estimated Design Cost:

11

Estimated Build Cost:

9,733,391

Estimated Site Cost:

1,946,676

Risk Level:

High

Low Risk is a 5-20% chance of something going wrong;

Medium Risk is a 20-40% chance;

High Risk is a 40-50% chance

Addition to build cost of:

1.3 % if risk occurs

Allocating the best possible designer to a design and build job can result in a reduction of the build costs by up to:

3 %

Consultant

Allocate

Remove

Enter On-Cost

Activate Sequential Tendering:

The oncost has now been determined for job 29, and is automatically transferred to the Bidding Screen.

On-Cost Entry for Job Number 29

Costs to be Added

Site Support costs: 1947250

Risk contingency: 56940

Project Manager costs: 54000

Cost Savings to be Subtracted

Build cost savings to be passed onto the Client due to the the anticipated quality of the design to be produced by the design consultant: 146000

On-Cost: 1,912,190

Job Details

Type: Design & Build

Job Duration: 3 periods

Estimating Confidence: Extremely High

Estimated Design Cost: 11

Estimated Build Cost: 9,733,391

Estimated Site Cost: 1,946,676

Risk Level: High

Low Risk is a 5-20% chance of something going wrong;
Medium Risk is a 20-40% chance;
High Risk is a 40-50% chance

Addition to build cost of: 1.3 % if risk occurs

Allocating the best possible designer to a design and build job can result in a reduction of the build costs by up to: 3 %

Consultant

Allocate

Remove

Enter On-Cost

Job Details

Activate Sequential Tendering: ☐

Bidding Decisions - Period 5

☐ Sector Descriptions

						Estimated Costs					
Job	Type	Desc	Sect	Client	Bid	Design % (of build)	Build Cost	Consultant Allocated	On-Cost	% Mark-Up	Bid Submitted
25	DB	New facilities for train mainten	3	Railline	N	9	4,102,691		0	0.0	0
29	DB	New distribution facility	2	Tayoto Cars UK	Y	11	9,733,391	14	1,912,190	0.0	12,716,250

After entering the on-cost, the bid is **automatically** updated by the system

Job Details

Activate Sequential Tendering: ☐

Consultant

Allocate Remove Enter On-Cost

Bidding Decisions - Period 5

☐ Sector Descriptions

						Estimated Costs					
Job	Type	Desc	Sect	Client	Bid	Design % (of build)	Build Cost	Consultant Allocated	On-Cost	% Mark-Up	Bid Submitted
25	DB	New facilities for train maintenanc	3	Railline	N	9	4,102,691		0	0.0	0
29	DB	New distribution facility	2	Tayoto Cars UK	Y	11	9,733,391	14	1,912,190	0.0	12,716,250

Job Details

Activate Sequential Tendering: ☐

The **markup** applied to a bid is one of the company's most **critical decisions**, and is the margin, or profit, to be made by the job over and above the costs.

It is entered as a %, and is added to the combined Design, Build and On-Cost.

Bidding for a job - 4

Bidding Decisions - Period 5

☐ Sector Descriptions

						Estimated Costs					
Job	Type	Desc	Sect	Client	Bid	Design % (of build)	Build Cost	Consultant Allocated	On-Cost	% Mark-Up	Bid Submitted
25	DB	New facilities for train maintenanc	3	Railline	N	9	4,102,691		0	0.0	0
29	DB	New distribution facility	2	Tayoto Cars UK	Y	11	9,733,391	14	1,912,190	0.0	12,716,250

To determine the mark-up to be applied, a number of factors need to be taken into account :-

Covering other company costs

The profit made across all jobs should at least cover the company related costs not covered in the individual jobs, such as :-

- Company overheads
- Increasing the company capital base
- Paying dividend to shareholders

If the profit over all jobs progressed does not cover these additional company costs, then the company could suffer serious cashflow problems.

Enter On-Cost

Bidding for a job - 4

Bidding Decisions - Period 5

☐ Sector Descriptions

Rival Bids

In the Early Years, rival companies are unlikely to submit tenders with mark-ups less than:

4	% for Large jobs
5	% for Medium jobs
6	% for Small jobs

Client	Design % Bid (of build)	Estimated Costs		Consultant Allocated	On-Cost	% Mark-Up	Bid Submitted
		Build Cost					
airline	N	9	4,102,691		0	0.0	0
ayoto Cars UK	Y	11	9,733,391	14	1,912,190	0.0	12,716,250

What level of mark-ups are rival bidders likely to apply ?

When determining the mark-up, the level **that may be set by rival bidders** needs to be considered very carefully.

Assuming similar estimated design/build costs and on-cost, setting too high a mark-up could make the bid uncompetitive, and not give the Company a chance of winning the job.

In the **early years**, the Company and Financial Information gives some help in determining the likely mark-up of any rival bidder, in this case the computer. We are told that 5% may win a tender for medium-sized jobs, which job 29 is, since this is the minimum mark-up that would likely to be submitted by any rival bidder.

In the **final years** we cannot be so certain of the rival bids, since there are more companies likely to be bidding, and the computer 'rival' becomes more competitive, so setting the level of mark-up becomes far harder.

Bidding for a job - 4

Bidding Decisions - Period 5

☐ Sector Descriptions

						Estimated Costs					
Job	Type	Desc	Sect	Client	Bid	Design % (of build)	Build Cost	Consultant Allocated	On-Cost	% Mark-Up	Bid Submitted
25	DB	New facilities for train mainten	3	Railline	N	9	4,102,691		0	0.0	0
29	DB	New distribution facility	2	Tayoto Cars UK	Y	11	9,733,391	14	1,912,190	0.0	12,716,250
<div> <p>Based upon or company requirements, and potential rival bids, we'll enter a markup of 5.5%, concluding that any rival bid may not be lower. This should also generate enough profit to contribute to paying off the aforementioned company costs.</p> </div>											

Job Details

Consultant

Allocate

Remove

Enter On-Cost

Activate Sequential Tendering: ☐

Bidding Decisions - Period 5

☐ Sector Descriptions

						Estimated Costs					
Job	Type	Desc	Sect	Client	Bid	Design % (of build)	Build Cost	Consultant Allocated	On-Cost	% Mark-Up	Bid Submitted
25	DB	New facilites for train mainten	3	Railline	N	9	4,102,691		0	0.0	0
29	DB	New distribution facility	2	Tayoto Cars UK	Y	11	9,733,391	14	1,912,190	5.5	13,415,650

Job Details

Consultant

Allocate

Remove

Enter On-Cost

Activate Sequential Tendering: ☐

Bidding for a job - 4

Bidding Decisions - Period 5

☐ Sector Descriptions

						Estimated Costs					
Job	Type	Desc	Sect	Client	Bid	Design % (of build)	Build Cost	Consultant Allocated	On-Cost	% Mark-Up	Bid Submitted
25	DB	New facilities for train maintenanc	3	Railline	N	9	4,102,691		0	0.0	0
29	DB	New distribution facility	2	Tayoto Cars UK	Y	11	9,733,391	14	1,912,190	5.5	13,415,650

Job Details

Activate Sequential Tendering: ☐

Costs

The cost of Bidding is:

1,000 for a Large job

750 for a Medium job

500 for a Small job

The bid has now been set for job 29.

We'll know **next period** whether or not we have won the job.

Key point

The company incur a cost for each bid submitted, depending upon the size of the job. The costs are defined in the **company and financial information**.

The key part of the company's bidding strategy is deciding which jobs to try and win, but there are **other factors** that impact upon the decision process :-

- **Sequential Tendering** can be used to dynamically alter mark-ups as bids are submitted.
- The size of the company's capital base controls the level of work that can be undertaken, and its important to use the **workload limits** button to determine if the capital base needs to be altered to fit in with the company's bidding requirements.
- There is a limit on the **number of ongoing jobs** the company can support at any time, as defined in the company and financial information.
- The nature of the **company's relationship with the clients** with whom the bids are being submitted. If bids are very close, a job can be won or loss on client relationship.

Once the bids have been submitted, whether or not the company is successful is dependant both on the quality of the bids themselves, and outside influences, and it won't be till next period that the bidding results are known.

Bidding Decisions - Period 5

☐ Sector Descriptions

Job	Type	Desc	Sect	Client	Bid	Estimated Costs		Consultant Allocated	On-Cost	% Mark-Up	Bid Submitted
						Design % (of build)	Build Cost				
25	DB	New facilites for train mainten	3	Railline	N	9	4,102,691		0	0.0	0
29	DB	New distribution facility	2	Tayoto Cars UK	Y	11	9,733,391	14	1,912,190	5.5	13,415,650

Job Details

Consultant

Allocate

Remove

Enter On-Cost

Activate Sequential Tendering: ☐

The Demo is now complete

Bidding Decisions - Period 5

☐ Sector Descriptions

						Estimated Costs					
Job	Type	Desc	Sect	Client	Bid	Design % (of build)	Build Cost	Consultant Allocated	On-Cost	% Mark-Up	Bid Submitted
25	DB	New facilites for train maintenanc	3	Railline	N	9	4,102,691		0	0.0	0
29	DB	New distribution facility	2	Tayoto Cars UK	Y	11	9,733,391	14	1,912,190	5.5	13,415,650

Job Details

Consultant

Allocate

Remove

Enter On-Cost

Activate Sequential Tendering: ☐

Sequential Tendering

Keep Clicking Anywhere on the screen to advance the demo

Sequential Tendering is a mechanism for varying markups during the bidding process, depending upon how many jobs have been won and/or lost.

Bidding Decisions - Period 5

☐ Sector Descriptions

Job	Type	Desc	Sect	Client	Bid	Estimated Costs		Consultant Allocated	On-Cost	% Mark-Up	Bid Submitted
						Design % (of build)	Build Cost				
▶ 25	DB	New facilites for train maintenaz	3	Railline	Y	9	4,102,691	6	976,770	6.2	5,786,523
29	DB	New distribution facility	2	Tayoto Cars UK	Y	11	9,733,391	14	1,912,190	5.5	13,415,650

Job Details

Consultant

Allocate

Remove

Enter On-Cost

Activate Sequential Tendering: ☐

Bidding Decisions - Period 5

☐ Sector Descriptions

Job	Type	Desc	Sect	Client	Bid	Estimated Costs			On-Cost	% Mark-Up	Bid Submitted
						Design % (of build)	Build Cost	Consultant Allocated			
25	DB	New facilities for train maintain	3	Railline	Y	9	4,102,691	6	976,770	6.2	5,786,523
29	DB	New distribution facility	2	Tayoto Cars UK	Y	11	9,733,391	14	1,912,190	5.5	13,415,650

Job Details

Activate Sequential Tendering: ☐



Consider the following situation where bids have been submitted for jobs 25, and 29.

The bids are submitted in job number order.

If the bids were submitted in the 'real' world, then the markups for job 29 may be adjusted depending on whether or not job 25 was won.

Sequential Tendering provides a means for simulating this bidding strategy, and enables the markup of jobs to be varied depending upon the result of previous submissions.

We'll switch on sequential tendering by clicking on the check box.


Bidding Decisions - Period 5


☐ **Sector Descriptions**

Job	Type	Desc	Sect	Client	Bid	Estimated Costs			On-Cost	% Mark-Up	Bid Submitted
						Design % (of build)	Build Cost	Consultant Allocated			
▶ 25	DB	New facilities for train maintenanc	3	Railline	Y	9	4,102,691	6	976,770	6.2	5,786,523
29	DB	New distribution facility	2	Tayoto Cars UK	Y	11	9,733,391	14	1,912,190	5.5	13,415,650

Job Details

Consultant

Allocate

Remove

Enter On-Cost

Activate Sequential Tendering: ☒

If we win jobs then for all subsequent jobs that we bid for, the markup should be increased by %

If we lose jobs then for all subsequent jobs that we bid for, the markup should be decreased by %

Bidding Decisions - Period 5

☐ Sector Descriptions

						Estimated Costs						
Job	Type	Desc	Sect	Client	Bid	Design % (of build)	Build Cost	Consultant Allocated	On-Cost	% Mark-Up	Bid Submitted	
▶ 25	DB	New facilities for train maintenanc	3	Railline	Y	9	4,102,691	6	976,770	6.2	5,786,523	
29	DB	New distribution facility	2	Tayoto Cars UK	Y	11	9,733,391	14	1,912,190	5.5	13,415,650	

Job Details

Activate Sequential Tendering: ☒



If we win jobs then for all subsequent jobs that we bid for, the markup should be increased by %
 If we lose jobs then for all subsequent jobs that we bid for, the markup should be decreased by %

Consultant

Lets suppose that we would be **satisfied** with winning job 25, and that winning job 29 would be a bonus.

If this was the 'real world', and we had won job, we might try and extract a higher margin from job 29.

We can transmit our strategy into the bidding process by indicating that if we win a job then for all subsequent jobs, in this case job 29, the markup should be increased by 1%.


Bidding Decisions - Period 5


☐ **Sector Descriptions**

Job	Type	Desc	Sect	Client	Bid	Estimated Costs			On-Cost	% Mark-Up	Bid Submitted
						Design % (of build)	Build Cost	Consultant Allocated			
▶ 25	DB	New facilities for train maintenanc	3	Railline	Y	9	4,102,691	6	976,770	6.2	5,786,523
29	DB	New distribution facility	2	Tayoto Cars UK	Y	11	9,733,391	14	1,912,190	5.5	13,415,650

Job Details

Consultant

Allocate

Remove

Enter On-Cost

Activate Sequential Tendering: ☒

If we win jobs then for all subsequent jobs that we bid for, the markup should be increased by %

If we lose jobs then for all subsequent jobs that we bid for, the markup should be decreased by %

Bidding Decisions - Period 5

☐ Sector Descriptions

Job	Type	Desc	Sect	Client	Bid	Estimated Costs			On-Cost	% Mark-Up	Bid Submitted
						Design % (of build)	Build Cost	Consultant Allocated			
25	DB	New facilities for train maintenanc	3	Railline	Y	9	4,102,691	6	976,770	6.2	5,786,523
29	DB	New distribution facility	2	Tayoto Cars UK	Y	11	9,733,391	14	1,912,190	5.5	13,415,650

If we win job, the markup for job 29 will be increased by 1% to 6.5%, enabling additional margin to be earned.

Job Details

Activate Sequential Tendering: ☒

If we win jobs then for all subsequent jobs that we bid for, the markup should be increased by %

If we lose jobs then for all subsequent jobs that we bid for, the markup should be decreased by %

Consultant

Allocate
 Remove

 Enter On-Cost

Bidding Decisions - Period 5

Sector Descriptions

						Estimated Costs						
Job	Type	Desc	Sect	Client	Bid	Design % (of build)	Build Cost	Consultant Allocated	On-Cost	% Mark-Up	Bid Submitted	
25	DB	New facilities for train maintenanc	3	Railline	Y	9	4,102,691	6	976,770	6.2	5,786,523	
29	DB	New distribution facility	2	Tayoto Cars UK	Y	11	9,733,391	14	1,912,190	5.5	13,415,650	

If we **lost** job 25, then it would be important to wins jobs 29.

We can transmit this thinking into the bidding process by indicating that if we lose 1 job then for all subsequent jobs (in this case jobs 29) the markup should be decreased by 1%, giving us a better chance of winning the other jobs.

Job Details

Consultant

Allocate

Remove

Enter On-Cost

Activate Sequential Tendering: ☒

If we win

1

jobs then for all subsequent jobs that we bid for, the markup should be increased by

1

%

If we lose

0



jobs then for all subsequent jobs that we bid for, the markup should be decreased by

0

%

Main

Quit


Bidding Decisions - Period 5


☐ **Sector Descriptions**

Job	Type	Desc	Sect	Client	Bid	Estimated Costs			On-Cost	% Mark-Up	Bid Submitted
						Design % (of build)	Build Cost	Consultant Allocated			
▶ 25	DB	New facilites for train maintenaz	3	Railline	Y	9	4,102,691	6	976,770	6.2	5,786,523
29	DB	New distribution facility	2	Tayoto Cars UK	Y	11	9,733,391	14	1,912,190	5.5	13,415,650

Job Details

Consultant

Allocate

Remove

Enter On-Cost

Activate Sequential Tendering: ☒

If we win jobs then for all subsequent jobs that we bid for, the markup should be increased by %

If we lose jobs then for all subsequent jobs that we bid for, the markup should be decreased by %

Bidding Decisions - Period 5

Sector Descriptions

						Estimated Costs						
Job	Type	Desc	Sect	Client	Bid	Design % (of build)	Build Cost	Consultant Allocated	On-Cost	% Mark-Up	Bid Submitted	
25	DB	New facilities for train maintenanc	3	Railline	Y	9	4,102,691	6	976,770	6.2	5,786,523	
29	DB	New distribution facility	2	Tayoto Cars UK	Y	11	9,733,391	14	1,912,190	5.5	13,415,650	

If we lose job 25 then the markups for subsequent jobs will be adjusted as follows :-

- for job 29 from 5.5 down to 4.5

In each case the margin to be earned will be reduced, the chances of winning the jobs is better.

Job Details

Consultant

Allocate

Remove

Enter On-Cost

Activate Sequential Tendering: ☒

If we win jobs then for all subsequent jobs that we bid for, the markup should be increased by %

If we lose jobs then for all subsequent jobs that we bid for, the markup should be decreased by %

Bidding Decisions - Period 5

☐ Sector Descriptions

Job	Type	Desc	Sect	Client	Bid	Estimated Costs			On-Cost	% Mark-Up	Bid Submitted
						Design % (of build)	Build Cost	Consultant Allocated			
▶ 25	DB	New facilites for train mainten	3	Railline	Y	9	4,102,691	6	976,770	6.2	5,786,523
29	DB	New distribution facility	2	Tayoto Cars UK	Y	11	9,733,391	14	1,912,190	5.5	13,415,650

Job Details

Consultant

Allocate
Remove



Enter On-Cost

Activate Sequential Tendering: ☒

If we win jobs then for all subsequent jobs that we bid for, the markup should be increased by %

If we lose jobs then for all subsequent jobs that we bid for, the markup should be decreased by %

The Demo is now complete


Bidding Decisions - Period 5


☐ **Sector Descriptions**

Job	Type	Desc	Sect	Client	Bid	Estimated Costs			On-Cost	% Mark-Up	Bid Submitted
						Design % (of build)	Build Cost	Consultant Allocated			
▶ 25	DB	New facilites for train maintenanc	3	Railline	Y	9	4,102,691	6	976,770	6.2	5,786,523
29	DB	New distribution facility	2	Tayoto Cars UK	Y	11	9,733,391	14	1,912,190	5.5	13,415,650

Job Details

Consultant

Allocate

Remove

Enter On-Cost

Activate Sequential Tendering: ☒

If we win jobs then for all subsequent jobs that we bid for, the markup should be increased by %

If we lose jobs then for all subsequent jobs that we bid for, the markup should be decreased by %

All on-going contracts require a project manager to oversee the job, and each period the Personnel Manager needs to make decisions about who the company should employ. Employing the most appropriate person can noticeably improve the progress of the job, and conversely the wrong person can adversely affect progress.

Personnel Decisions - Period 7
✕

Golden Hello

Idle Project Manager Pool

Last Period		This Period	
No	Name	No	Name
1	Brock, G	▶ 1	Brock, G
11	Gouda, F	11	Gouda, F

Recruit
Details
Payoff
Transfer To Job

On-Going Jobs

Job Details
▶

	Job	Desc	Sector	Last Period		This Period	
				Proj Mgr	% Bonus	Proj Mgr	% Bonus
▶	24	City centre market renovation	Building & Commercial	12	0	12	0
	28	Build series of mini-roundabouts	Transport	55	0	55	0
	29	New storage unit	Building & Commercial	26	0	26	0
	41	Improvements to Towson reservoir	Water & Sewage	0	0	0	0
	42	Water treatment plant improvements	Water & Sewage	0	0	0	0

Recruit
Details
Payoff
Transfer To Pool
Transfer To Job

Entering Personnel Decisions - 1

Keep Clicking Anywhere on the screen to advance the demo

Project managers are concerned with the overall planning and co-ordination of a project from inception to completion aimed at meeting the client's requirements and ensuring completion on time, within cost and to the required quality standards.

A project manager with well-matched experience for a particular type of job will handle available resources more efficiently, whilst a project manager with inappropriate experience will impair contract efficiency.

Project Managers employed by the company are either :-

- In the idle pool awaiting a placement on site; once a job finishes the project manager on site is placed in the idle pool. Idle project managers still have to be paid, so its far more cost-effective to have them working on site than doing nothing.
- Allocated to a specific on-going job

The Personnel Manager needs to make decisions about :-

- Which idle project managers to payoff
- Allocating suitable project managers to on-going jobs, especially those that don't currently have one, or have a poorly-performing one. The project manager can come from the idle pool, another job or from the the market (a list of available ones who have registered with recruitment agencies)

Entering Personnel Decisions - 1

At the start of period 7 the company employs the following project managers :-

- Brock and Gouda in the idle pool
- Project Managers 12, 55, 26 on jobs 24, 28 and 29 respectively

Personnel Decisions - Period 7
Golden Hello

Idle Project Manager Pool

Last Period

No	Name
1	Brock, G
11	Gouda, F

This Period

No	Name
1	Brock, G
11	Gouda, F

Recruit
Details
Payoff
Transfer To Job

On-Going Jobs

Job Details

	Job	Desc	Sector	Proj Mgr	Proj Mgr	% Bonus
▶	24	City centre market renovation	Building & Commercial	12	12	0
	28	Build series of mini-roundabouts	Transport	55	55	0
	29	New storage unit	Building & Commercial	26	26	0
	41	Improvements to Towson reservoir	Water & Sewage	0	0	0
	42	Water treatment plant improvements	Water & Sewage	0	0	0

Last Period
This Period

Recruit
Details
Payoff
Transfer To Pool
Transfer To Job

If possible **Brock and Gouda** should be placed on suitable on-going jobs, and there are 2 jobs beginning this period that do not have a project manager :-

- Job 41, a Water & Sewage contract
- Job 42, a Water & Sewage contract

But how suitable are they for the jobs ?

We can determine their suitability by using the **Details** button.

Last Period

No	Name
1	Brock, G
11	Gouda, F

This Period

No	Name
1	Brock, G
11	Gouda, F

Recruit

Details

Payoff

Transfer To Job

On-Going Jobs

Job Details

	Job	Desc	Sector	Proj Mgr	Last Period	This Period	% Bonus
	24	City centre market renovation	Building & Commercial	12	12	0	
	28	Build series of mini-roundabouts	Transport	55	55	0	
	29	New storage unit	Building & Commercial	26	26	0	
	41	Improvements to Towson reservoir	Water & Sewage	0	0	0	
	42	Water treatment plant improvements	Water & Sewage	0	0	0	

Recruit

Details

Payoff

Transfer To Pool

Transfer To Job

Entering Personnel Decisions - 1

Brock's profile and past history with the company indicate a lot of experience and expertise in the Building & Commercial sector, **but not** in the Water & Sewage sector.

Since we don't have any Building & Commercial work in the pipeline, we'll payoff Brock using the **payoff** button.

Project Manager Details

No: **1**

Name: **Brock, G**

Age: **29**

Qualifications: **BSc (Hons) Construction Management, CEr**

Salary: **48500** per annum

Cash incentive required to secure services: **None**

Profile: **On graduation spent 3 years in a small consultant's office as a graduate designer, working on a ground-breaking housing project, winning a design award in the process. Moved onto site with a major private contractor, working first as site engineer and then a site manager. Experience is predominately in industrial, building and commercial contracts.**

Career has progressed at a fast rate so far, and is considered to have all the skills required for management. Likes to be the centre of attention, and outspoken at times, but a good motivator. Has a keen interest in sports.

Per	Job	Sector	Basic Performance	Factors Improving Performance		Factors Deteriorating Performance		Overall Performance	Reason for leaving, if applicable		
				Time with the Company	Bonus payments in the period	Distance of the job from Head Office	Taking over from another				
				Improve.	% Bonus Improvement	(miles)	Deterioration				
4	5	Building & Commercial	average	none	4	noticeable	21	noticeable	none	average	
5	5	Building & Commercial	average	marginal	1	marginal	21	noticeable	none	average	
6	6	Building & Commercial	average	marginal	4	noticeable	150	noticeable	none	average	

Entering Personnel Decisions - 1

Gouda's profile and past history with the company indicates **experience and expertise** in the Transport sector.

Since we don't have any Transport work in the pipeline, we'll payoff Gouda using the **payoff** button

Project Manager Details

No: **11**

Name: **Gouda, F**

Age: **38**

Qualifications: **BEng Civil Engineering, MICE, CEng**

Salary: **58500** per annum

Cash incentive required to secure services: **Around 11,550**

Profile: **Spent 4 years as a graduate engineer working for the Highways Agency, followed by 6 years as site engineer for a major UK contractor on a motorway extension scheme. Moved into site management for the same company, and has worked on numerous further roadwork schemes.**

Pays a lot of attention to detail, and as a result can be over-critical of colleagues at times, perhaps they deserve it. However, is very well-respected and an excellent team player. Currently single, and is a member of a historical society.

Per	Job	Sector	Basic Performance	Factors Improving Performance			Factors Deteriorating Performance			Overall Performance	Reason for leaving, if applicable
				Time with the Company	Bonus payments in the period		Distance of the job from Head Office	Taking over from another			
				Improve.	% Bonus Improvement		(miles)	Deterioration	Deterioration		
5	21	Transport	very good	none	0	none	105	noticeable	none	very good	
6	21	Transport	very good	marginal	4	noticeable	105	noticeable	none	very good	

Entering Personnel Decisions - 1

Personnel Decisions - Period 7
✕

Golden Hello

Idle Project Manager Pool

Last Period

No	Name
1	Brock, G
11	Gouda, F

This Period

No	Name
----	------

Recruit

On-Going Jobs

Job Details

	Job	Desc	Sector	Proj Mgr	Proj Mgr	% Bonus
▶	24	City centre market renovation	Building & Commercial	12	12	0
	28	Build series of mini-roundabouts	Transport	55	55	0
	29	New storage unit	Building & Commercial	26	26	0
	41	Improvements to Towson reservoir	Water & Sewage	0	0	0
	42	Water treatment plant improvements	Water & Sewage	0	0	0

Last Period

This Period

Recruit
Details
Payoff
Transfer To Pool
Transfer To Job

Since there is nobody in the idle pool suitable for jobs 41 and 42, the Water & Sewage contracts, we'll have to recruit from the market i.e., the **available project managers that have signed up with a recruitment agency**.

Starting with job 41, a Water & Sewage job, we first select the job by clicking on the appropriate line, and then use the **Recruit button** to choose from the available project managers.

Idle Project Manager Pool

Last Period

No	Name
1	Brock, G
11	Gouda, F

This Period

No	Name
----	------

On-Going Jobs

Job Details

	Job	Desc	Sector	Proj Mgr	This Period	
					Proj Mgr	% Bonus
	24	City centre market renovation	Building & Commercial	12	12	0
	28	Build series of mini-roundabouts	Transport	55	55	0
	29	New storage unit	Building & Commercial	26	26	0
	41	Improvements to Towson reservoir	Water & Sewage	0	0	0
	42	Water treatment plant improvements	Water & Sewage	0	0	0

Recruit

Details

Payoff

Transfer To Pool

Transfer To Job

A **Search Phrase** can be entered to narrow down the list.

The key to finding the right person is to review the profile (or cv), which covers both work and personal details, both of which may be important.

On close examination of all suitable project managers, it appears that **Davis** is the ideal choice for job 41, our Water & Sewage contract.

We can use the **Select button** to identify our choice.

Key Point

Each period, the **Unavailable button** can be used to show details of project managers who are **unavailable** for a number of reasons, including :-

- They may be off work due to illness
- If they have previously resigned from the company, they may bear a grudge and be unwilling to work for us again for a while

Available Project Managers

Search Phrase (for Profile):

No.	Name	Age	Qualifications	Salary	Incentive required to secure services	Used Before
2	Ahmed, M	30	BSc Construction Management, CEng	45,350	None	No
7	Prince, J	37	BSc (Hons) Building Surveying, MCIOB	52,800	In the region of 10% of annual salary	No
9	MacGregor, R	33	BSc Land Engineering/Surveying	54,525	None	No
19	Davis, H	33	BSc Land Surveying	48,500	None	No
20	Patterson, W	36	MEng Civil Engineering	52,500	None	No
22	Scott, A	40	BSc Construction Management	55,700	Around 4,800	No

After University moved to work in Asia for 3 years on cartographic and setting-out work. Changed continents to work for 6 years in Africa as a site engineer on a major dam reconstruction project. Returned to the UK as site manager for a company specialising in sea defence contracts.

A very clever and competent individual whose easy manner makes friends everywhere. Still has a lot to learn, but is always willing to take on a new challenge, and is sure to go a long way in the Industry. Regards sewage and water contracts as his main strength.

Entering Personnel Decisions - 1

Personnel Decisions - Period 7
✕

Golden Hello

Idle Project Manager Pool

Last Period

No	Name
1	Brock, G
11	Gouda, F

This Period

No	Name
----	------

Recruit

On-Going Jobs

Job Details

	Job	Desc	Sector	Proj Mgr	Proj Mgr	% Bonus
▶	24	City centre market renovation	Building & Commercial	12	12	0
	28	Build series of mini-roundabouts	Transport	55	55	0
	29	New storage unit	Building & Commercial	26	26	0
	41	Improvements to Towson reservoir	Water & Sewage	0	19	0
	42	Water treatment plant improvements	Water & Sewage	0	0	0

Last Period

Proj Mgr
12
55
26
0
0

This Period

Proj Mgr	% Bonus
12	0
55	0
26	0
19	0
0	0

Recruit

Details

Payoff

Transfer To Pool

Transfer To Job

Personnel Decisions - Period 7
Golden Hello

Idle Project Manager Pool

Last Period

No	Name
1	Brock, G
11	Gouda, F

This Period

No	Name
----	------

Recruit

On-Going Jobs

Job Details

	Job	Desc	Sector	Last Period Proj Mgr	This Period Proj Mgr	% Bonus
▶	24	City centre market renovation	Building & Commercial	12	12	0
	28	Build series of mini-roundabouts	Transport	55	55	0
	29	New storage unit	Building & Commercial	26	26	0
	41	Improvements to Towson reservoir	Water & Sewage	0	19	0
	42	Water treatment plant improvements	Water & Sewage	0	2	0

Recruit

Details

Payoff

Transfer To Pool

Transfer To Job

For job 42, another Water & Sewage contract, Project Manager 2 (Ahmed) was chosen from the available list, based on a lot of previous experience in the sector.

Entering Personnel Decisions - 1

There are a number of **charges** incurred for recruiting, paying off and relocating project managers.

These are shown in the **Company and Financial Information**.

Project Managers

Costs [% of annual salary]

Recruiting costs: 15 %

Paying off costs: 15 %

Relocating costs: 6 %

Personnel Decisions - Period 7

Idle Project Manager Pool

Last Period

No	Name
1	Brock, G
11	Gouda, F

This Period

No	Name

Recruit

On-Going Jobs

Job Details

				Last Period	This Period	
	Job	Desc	Sector	Proj Mgr	Proj Mgr	% Bonus
▶	24	City centre market renovation	Building & Commercial	12	12	0
	28	Build series of mini-roundabouts	Transport	55	55	0
	29	New storage unit	Building & Commercial	26	26	0
	41	Improvements to Towson reservoir	Water & Sewage	0	19	0
	42	Water treatment plant improvements	Water & Sewage	0	2	0

Recruit

Details

Payoff

Transfer To Pool

Transfer To Job

Entering Personnel Decisions - 1

Personnel Decisions - Period 7
✕

Golden Hello

Idle Project Manager Pool

Last Period

No	Name
1	Brock, G
11	Gouda, F

This Period

No	Name
----	------

Recruit

On-Going Jobs

Job Details

	Job	Desc	Sector	Last Period Proj Mgr	This Period Proj Mgr	This Period % Bonus
▶	24	City centre market renovation	Building & Commercial	12	12	0
	28	Build series of mini-roundabouts	Transport	55	55	0
	29	New storage unit	Building & Commercial	26	26	0
	41	Improvements to Towson reservoir	Water & Sewage	0	19	0
	42	Water treatment plant improvements	Water & Sewage	0	2	0

Recruit

Details

Payoff

Transfer To Pool

Transfer To Job

Each job now has a project manager allocated.

However, **allocating in itself may not be enough** to secure the services of project managers selected from the market, in this case 19 and 2, and we may have to offer them a cash incentive to secure their services.

We can check if this is the case using the **Golden Hello** button.

The services of project
from the market, in this
we may have to offer them
secure their services.

This is the case using the

on.

Golden Hello

This Period

No	Name
----	------

Recruit

On-Going Jobs

				Last Period	This Period	
Job Details	Job	Desc	Sector	Proj Mgr	Proj Mgr	% Bonus
	24	City centre market renovation	Building & Commercial	12	12	0
	28	Build series of mini-roundabouts	Transport	55	55	0
	29	New storage unit	Building & Commercial	26	26	0
	41	Improvements to Towson reservoir	Water & Sewage	0	19	0
	42	Water treatment plant improvements	Water & Sewage	0	2	0

Recruit

Details

Payoff

Transfer To Pool

Transfer To Job

Entering Personnel Decisions - 2

Offering 'Golden Hellos' to secure the services of project managers

No.	Name	Salary	Where Required	Incentive required to secure services	Cash incentive offered
2	Ahmed, M	45,350	On a Job	None	0
19	Davis, H	48,500	On a Job	None	0

If a cash incentive is required to secure the services the the project manager, and you not enough money, you will NOT be able to employ the project manager this period, and staff will be employed.

Last period This period

No	Name
1	Brock, G

The top project managers i.e., those with experience and expertise in one or more sectors, can command '**golden hellos**' to attract them to particular companies.

The 'golden hello' could be in the form of perks, such as special pension rights, share schemes, medical insurance etc. In this scenario the perk is in the form of a **cash incentive**, which incorporates all of the above and more.

You are given clues as to the likely incentive required. If the incentive required is "**None**" then no further action need be taken.

The incentive, if needed, could be higher or lower than what is suggested. It all depends on how much you want to recruit that consultant.

Key Point

If we don't offer enough incentive, and our offer is rejected, we'll be allocated an **unnamed agency project manager** for the period, whose performance is average, and whose annual cost is shown in the **Company and Financial Information**.

Agency staff

Annual cost: 50,000

We can increase the performance level of the project managers for the period by paying them a bonus.

This is a % of their salary for the period (quarterly salary).

Personnel Decisions - Period 7

Idle Project Manager Pool

Last Period

No	Name
1	Brock, G
11	Gouda, F

This Period

No	Name
----	------

On-Going Jobs

	Job	Desc	Sector	Proj Mgr	Last Period	This Period	% Bonus
Job Details	24	City centre market renovation	Building & Commercial	12	12	0	
	28	Build series of mini-roundabouts	Transport	55	55	0	
	29	New storage unit	Building & Commercial	26	26	0	
	41	Improvements to Towson reservoir	Water & Sewage	0	19	0	
	42	Water treatment plant improvements	Water & Sewage	0	2	0	

Recruit

Details

Payoff

Transfer To Pool

Transfer To Job

But how do we know the affects that different levels of bonus have on performance ?

The clues lie in the **Project Manager History**, which shows in the level of bonus paid for each period a project manager has worked for the company (on site), and the affects.

Bearing in mind the information given, it look like a 4% bonus should improve performance 'noticeably'. If we pay too much bonus, it may be money down the drain, because there comes a point when the performance does not improve no matter how much bonus is paid; **the trick is to find the level.**

Since 4% appears to result in a 'noticeable' improvement, we'll give all the project managers a bonus of 5% each, to hopefully considerably boost performance.

Project Manager Performance History											
Project Manager: 12 Mason, E											
			Factors Improving Performance				Factors Deteriorating Performance				
			Time with the Company		Bonus payments in the period		Distance of the job from Head Office		Taking over from another		Reason for leaving, if applicable
Per	Job	Sector	Basic Performance	Improve.	% Bonus	Improvement	(miles)	Deterioration	Deterioration	Overall Performance	
6	24	Building & Commercial	average	none	4	noticeable	134	noticeable	none	average	

Personnel Decisions - Period 7
×

Golden Hello

Idle Project Manager Pool

Last Period

No	Name
1	Brock, G
11	Gouda, F

This Period

No	Name
----	------

Recruit

On-Going Jobs

Job Details

▶

Job	Desc	Sector	Proj Mgr	Last Period	This Period	% Bonus
24	City centre market renovation	Building & Commercial	12	12	5	
28	Build series of mini-roundabouts	Transport	55	55	5	
29	New storage unit	Building & Commercial	26	26	5	
41	Improvements to Towson reservoir	Water & Sewage	0	19	5	
42	Water treatment plant improvements	Water & Sewage	0	2	5	

Recruit

Details

Payoff

Transfer To Pool

Transfer To Job

Project Manager Resignations

Project Managers can resign from the company for two reasons :-

- **Good** project managers whose **average bonus over the time they are on a particular job** is below a certain level may **resign** because they do not feel they are being adequately rewarded.
- The top performing project managers can be **poached** by rival companies regardless of the level of bonus they are paid.

In either case, once a project manager has resigned they cannot be re-employed next period. In addition, project managers who resigned due to feeling unrewarded may **bear a grudge**, and many not be available for some time in the future.

On-Going Jobs

Job Details

	Job	Desc	Sector	Proj Mgr	Last Period	This Period	Proj Mgr	% Bonus
	24	City centre market renovation	Building & Commercial	12	12	5		
	28	Build series of mini-roundabouts	Transport	55	55	5		
	29	New storage unit	Building & Commercial	26	26	5		
	41	Improvements to Towson reservoir	Water & Sewage	0	19	5		
	42	Water treatment plant improvements	Water & Sewage	0	2	5		

Recruit
Details
Payoff
Transfer To Pool
Transfer To Job

Personnel Decisions - Period 7
Golden Hello

Idle Project Manager Pool

Last Period

No	Name
1	Brock, G
11	Gouda, F

This Period

No	Name
----	------

Recruit

On-Going Jobs

Last Period

Job	Desc	Sector	Proj Mgr
24	City centre market renovation	Building & Commercial	12
28	Build series of mini-roundabouts	Transport	55
29	New storage unit	Building & Commercial	26
41	Improvements to Towson reservoir	Water & Sewage	0
42	Water treatment plant improvements	Water & Sewage	0

This Period

Proj Mgr	% Bonus
12	5
55	5
26	5
19	5
2	5

Job Details

Recruit
Details
Payoff
Transfer To Pool
Transfer To Job

The Demo is now complete

Entering Personnel Decisions - 2

Personnel Decisions - Period 7
×

Golden Hello

Idle Project Manager Pool

Last Period

No	Name
1	Brock, G
11	Gouda, F

This Period

No	Name
----	------

Recruit

On-Going Jobs

Job Details

	Job	Desc	Sector	Proj Mgr	Proj Mgr	% Bonus
▶	24	City centre market renovation	Building & Commercial	12	12	5
	28	Build series of mini-roundabouts	Transport	55	55	5
	29	New storage unit	Building & Commercial	26	26	5
	41	Improvements to Towson reservoir	Water & Sewage	0	19	5
	42	Water treatment plant improvements	Water & Sewage	0	2	5

Last Period		This Period	
Proj Mgr	% Bonus	Proj Mgr	% Bonus
12	5	12	5
55	5	55	5
26	5	26	5
0	5	19	5
0	5	2	5

Recruit
Details
Payoff
Transfer To Pool
Transfer To Job

The task of the Construction Manager is to progress the jobs that have been awarded to the company by :-

- Ensuring **the workforce (labour)** on the sites is sufficient to progress jobs in line with the company's strategy for job completion.
- Providing enough **site support** to keep the jobs running smoothly.

The profits made each period on jobs progressed are **paid straight into the cash account**.

Construction Management Decisions - Period 7

Idle Labour Pool

Start of Period

Number of men in the pool: 48

Number of men to Layoff This Period: 0

Number of men available in the pool for On-Going Jobs: 48

After Decisions

Net Transfers from On-Going Jobs: 0

Number of men left in the pool: 48

On-Going Jobs

Job	Last Period				Site Cost Paid	Job Status	Planned Labour	This Period							Site Cost Allocation		
	Labour On Site			Site Cost Paid			Planned Labour	Labour Allocation			Own Labour Transfers				Site Cost Allocation		
	Total	Own	Sub					Total	Own	Sub	From ILP	New	To ILP	Paid Off			
▶ 20	110	110	0	446,000		In Third Period	77	110	110	0	0	0	0	0	341000		
28	36	36	0	315,800		In Second Period	34	36	36	0	0	0	0	0	374900		
29	83	83	0	498,700		In Second Period	100	83	83	0	0	0	0	0	493000		
38	0	0	0			In First Period	38	0	0	0	0	0	0	0			
43	0	0	0			In First Period	56	0	0	0	0	0	0	0			

Keep Clicking Anywhere on the screen to advance the demo

Main

Quit

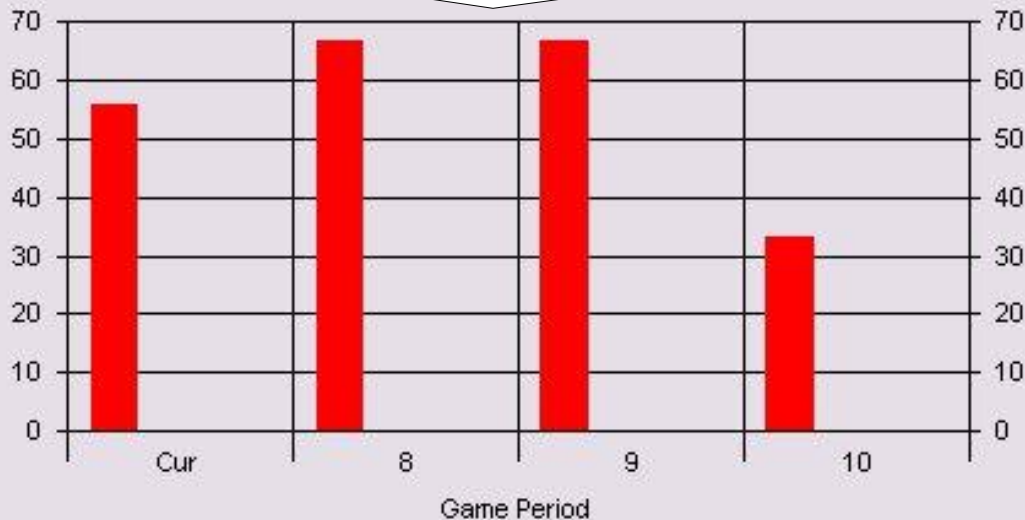
When deciding upon the strategy to be used for completing jobs a number of **different scenarios** are normally used :-

- Try and complete all jobs **on time**
- Try and complete all jobs **earlier** than the planned duration (e.g., complete a 3-period job in 2 periods)
- A **mixture** of the above

In all cases the Construction Manager needs to **assess the labour requirements** each period for each job based upon the strategy being used.

Planned labour levels each period were determined during the estimating stage in order for the job to complete on time, and they can be used as guidelines in setting the labour levels for whichever completion scenario is chosen.

To complete a job early it is possible to overman above the planned levels. Overmanning limits are given in the **Company and Financial Information**, and are sector-based.



Overmanning Limits

The effective labour overmanning that is allowed above the planned labour levels in a period is:

- 35 % for Industrial jobs
- 35 % for Building and Commercial jobs
- 45 % for Transport jobs
- 18 % for Energy jobs
- 25 % for Water and Sewage jobs

Consider the following situation.

It's the start of period 7, and the company has 5 on-going jobs :-

- Job 20 is in its 3rd period but has a planned duration of 4 periods
- Job 28 is in its 2nd period but has a planned duration of 4 periods
- Job 29 is in its 2nd and final planned period and **needs to be completed** this period
- Jobs 38 and 43 were won last period, and are in their first period.

[illegible]

The Construction Manager must first ensure that each job has sufficient labour to enable them to progress in line with company strategy.

There are two types of labour that can be used :-

- The **company's own labour**; available either in the idle labour pool or on site
- **Subcontract labour** being used on site

Construction Management Decisions - Period 7

Idle Labour Pool

Start of Period

Number of men in the pool: 48

Number of men to Layoff This Period: 0

Number of men available in the pool for On-Going Jobs: 48

After Decisions

Net Transfers from On-Going Jobs: 0

Number of men left in the pool: 48

On-Going Jobs

	Job	Last Period				This Period										Site Cost Allocation
		Labour On Site			Site Cost Paid	Job Status	Planned Labour	Labour Allocation			Own Labour Transfers					
		Total	Own	Sub				Total	Own	Sub	From ILP	New	To ILP	Paid Off		
▶	20	110	110	0	446,000	In Third Period	77	110	110	0	0	0	0	0	341000	
	28	36	36	0	315,800	In Second Period	34	36	36	0	0	0	0	0	374900	
	29	83	83	0	498,700	In Second Period	100	83	83	0	0	0	0	0	493000	
	38	0	0	0		In First Period	38	0	0	0	0	0	0	0		
	43	0	0	0		In First Period	56	0	0	0	0	0	0	0		

Main

Quit

Due to the requirements of each individual job, it is likely that one of two situations may have to be resolved :-

- An overall **labour shortfall**; new recruits into the company's own workforce or subcontractors may have to be taken on, or jobs may even be delayed in the short-term.
- A **labour surplus**; jobs could be overmanned to aim at early completion, or labour may have to be released.

Construction Management Decisions - Period 7																																																																																																																																											
<div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <h3 style="margin-top: 0;">Idle Labour Pool</h3> <p>Start of Period</p> <p>Number of men in the pool: <input type="text" value="48"/></p> <p>Number of men to Layoff This Period: <input type="text" value="0"/></p> <p>Number of men available in the pool for On-Going Jobs: <input type="text" value="48"/></p> </div> <div style="width: 48%;"> <h3 style="margin-top: 0;">After Decisions</h3> <p>Net Transfers from On-Going Jobs: <input type="text" value="0"/></p> <p>Number of men left in the pool: <input type="text" value="48"/></p> </div> </div>																																																																																																																																											
<h3>On-Going Jobs</h3> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th rowspan="3"></th> <th rowspan="3">Job</th> <th colspan="4">Last Period</th> <th colspan="10">This Period</th> </tr> <tr> <th colspan="3">Labour On Site</th> <th rowspan="2">Site Cost Paid</th> <th rowspan="2">Job Status</th> <th rowspan="2">Planned Labour</th> <th colspan="3">Labour Allocation</th> <th colspan="4">Own Labour Transfers</th> <th rowspan="2">Site Cost Allocation</th> </tr> <tr> <th>Total</th> <th>Own</th> <th>Sub</th> <th>Total</th> <th>Own</th> <th>Sub</th> <th>From ILP</th> <th>New</th> <th>To ILP</th> <th>Paid Off</th> </tr> </thead> <tbody> <tr> <td>▶</td> <td>20</td> <td>110</td> <td>110</td> <td>0</td> <td>446,000</td> <td>In Third Period</td> <td>77</td> <td>110</td> <td>110</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>341000</td> </tr> <tr> <td></td> <td>28</td> <td>36</td> <td>36</td> <td>0</td> <td>315,800</td> <td>In Second Period</td> <td>34</td> <td>36</td> <td>36</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>374900</td> </tr> <tr> <td></td> <td>29</td> <td>83</td> <td>83</td> <td>0</td> <td>498,700</td> <td>In Second Period</td> <td>100</td> <td>83</td> <td>83</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>493000</td> </tr> <tr> <td></td> <td>38</td> <td>0</td> <td>0</td> <td>0</td> <td></td> <td>In First Period</td> <td>38</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td></td> </tr> <tr> <td></td> <td>43</td> <td>0</td> <td>0</td> <td>0</td> <td></td> <td>In First Period</td> <td>56</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td></td> </tr> </tbody> </table>																Job	Last Period				This Period										Labour On Site			Site Cost Paid	Job Status	Planned Labour	Labour Allocation			Own Labour Transfers				Site Cost Allocation	Total	Own	Sub	Total	Own	Sub	From ILP	New	To ILP	Paid Off	▶	20	110	110	0	446,000	In Third Period	77	110	110	0	0	0	0	0	0	341000		28	36	36	0	315,800	In Second Period	34	36	36	0	0	0	0	0	0	374900		29	83	83	0	498,700	In Second Period	100	83	83	0	0	0	0	0	0	493000		38	0	0	0		In First Period	38	0	0	0	0	0	0	0	0			43	0	0	0		In First Period	56	0	0	0	0	0	0	0	0	
	Job	Last Period				This Period																																																																																																																																					
		Labour On Site			Site Cost Paid	Job Status	Planned Labour	Labour Allocation			Own Labour Transfers						Site Cost Allocation																																																																																																																										
		Total	Own	Sub				Total	Own	Sub	From ILP	New	To ILP	Paid Off																																																																																																																													
▶	20	110	110	0	446,000	In Third Period	77	110	110	0	0	0	0	0	0	341000																																																																																																																											
	28	36	36	0	315,800	In Second Period	34	36	36	0	0	0	0	0	0	374900																																																																																																																											
	29	83	83	0	498,700	In Second Period	100	83	83	0	0	0	0	0	0	493000																																																																																																																											
	38	0	0	0		In First Period	38	0	0	0	0	0	0	0	0																																																																																																																												
	43	0	0	0		In First Period	56	0	0	0	0	0	0	0	0																																																																																																																												

At the end of the last period, and available at the beginning of period 7, were :-

- 48 men in the idle labour pool
- 229 men on ongoing jobs (229 are the company's own operatives; 0 are subcontractors)

If we take the combined idle labour and site-based labour, the company has a current workforce of **277 men**.

[illegible]

Key point

The **default labour requirements** for each on-going job are the levels from the end of the last period.

However, the default levels are **unlikely to be** the required ones for the current period.

Construction Management Decisions - Period 7

Idle Labour Pool

Start of Period

Number of men in the pool: 48

Number of men to Layoff This Period: 0

Number of men available in the pool for On-Going Jobs: 48

After D

Net Transfers from On-Going Jobs: 0

Number of men left in the pool: 48

On-Going Jobs

Job	Last Period				Site Cost Paid	Job Status	Planned Labour	This Period								Site Cost Allocation
	Total	Own	Sub					Labour Allocation			Own Labour Transfers					
	Total	Own	Sub				Total	Own	Sub	From ILP	New	To ILP	Paid Off			
▶ 20	110	110	0		446,000	In Third Period	77	110	110	0	0	0	0	0	341000	
28	36	36	0		315,800	In Second Period	34	36	36	0	0	0	0	0	374900	
29	83	83	0		498,700	In Second Period	100	83	83	0	0	0	0	0	493000	
38	0	0	0			In First Period	38	0	0	0	0	0	0	0		
43	0	0	0			In First Period	56	0	0	0	0	0	0	0		

The Construction Manager begins by looking at the labour requirements for job 29.

[illegible]

[illegible]

Period 7 is the **second period** of job 29, and its final planned period.

There are currently 83 of the company's own operatives on site, but the planned requirement is 100.

Normally, allocating slightly above the planned level each period is sufficient to complete a job on time.

However, since this is the final planned period of the job, we should take a closer look at how the job has progressed to date, in order to make sure we allocate sufficient labour complete the job, and as efficiently as possible.

Due to a number of factors the job may be behind/ahead of schedule, and require more/less labour than planned.

We can use the **Job Details** button to investigate further.

Start of Period

Number of men in the pool:

Number of men to Layoff This Period:

Number of men available in the pool for On-Going Jobs:

After Period

On-Going Jobs:

Men left in the pool:

On-Going Jobs

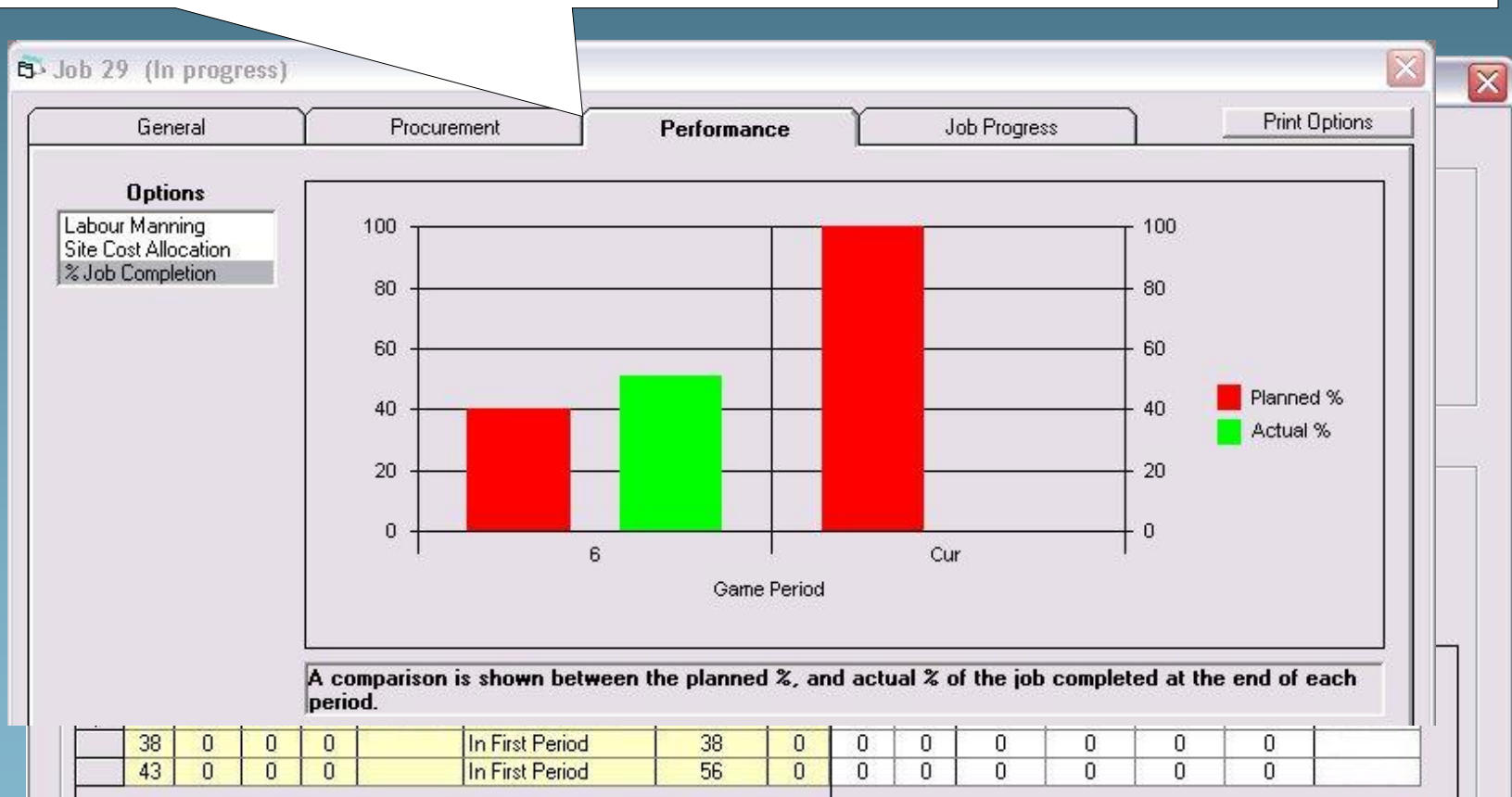
Job	Last Period			Site Cost Paid	Job Status	Planned Labour	This Period			Own Labour Transfers				Site Cost Allocation
	Total	Own	Sub				Total	Own	Sub	From ILP	New	To ILP	Paid Off	
20	110	110	0	446,000	In Third Period	77	110	110	0	0	0	0	0	341000
28	36	36	0	315,800	In Second Period	34	36	36	0	0	0	0	0	374900
▶ 29	83	83	0	498,700	In Second Period	100	83	83	0	0	0	0	0	493000
38	0	0	0		In First Period	38	0	0	0	0	0	0	0	
43	0	0	0		In First Period	56	0	0	0	0	0	0	0	

The **Performance** tab shows the **percentage of the job completed** (planned v actual)

At the end of period 6 the actual % of the job completed (**green**) was ahead of the planned % complete (**red**), indicating that the **job was ahead of schedule**.

Bearing this in mind, to complete the job in period 7, we could allocate less than the planned labour level of 54.

But how do we determine the exact labour level ?



Estimated Details by Period

Job Period	Build Cost	Site Cost	Labour Manning	Expected Value	Cumulative % Complete
1	1,994,480	398,896	66	2,534,784	40
2	2,991,720	598,345	100	3,802,176	100

Total Labour Manning: 166 man periods

Cumulative Analysis

Total Value: 3,266,808

Total Cost: 3,024,986

Gross Profit: 241,822 8.0 % of costs

% complete 51.3 **Ahead of Schedule**

Construction Management Decisions - Period 7

Using the **Job Details** button, and focusing on the **Procurement** tab, the planned % of the job that should have been completed at the end of its first period was 40%.

However, using information from the **Job Progress** tab, it can be seen that the **actual** % of the job completed at the end of its third period was 51.3%; the job is **ahead of schedule** (as we also deduced earlier from the graphical analysis).

Since there is 48.7% of the job left to complete, we'll allocate 49% of the total labour (166 man periods), which allows for any productivity reductions.

Hence, **we'll allocate 81 men** (49% of 166) to job 29.

The planned allocation was 100 men, which although guaranteeing to complete the job, would have completed the job a lot **earlier in the period**, which would have the following **detrimental affects** :-

- Labour is still retained until the end of the period, incurring additional labour costs
- Labour could be utilised other jobs, where it may be more productively used

38	0	0	0		In First Period	38	0	0	0	0	0	0	0	0	0
43	0	0	0		In First Period	56	0	0	0	0	0	0	0	0	0

To set the new labour level for job 29 we need to adjust the **own** and **subcontract** labour required this period.

Having looked at the relative merits of using either the company's own labour or subcontractors, the Construction Manager has decided its more **cost-effective in the long-term** to try and use the company's own labour.

For job 29, we'll reduce the own labour from 83 to 81 by **transferring** the surplus (2) to the idle labour pool.
(Enter the details directly into the table, or 'Double click' to open an input box)

Key Point

The choice of whether to use the company's own labour or subcontractors is dependant on a number of factors, and is discussed in a separate demo.

Idle Labour Pool

Start of Period

Number of men in the pool:

Number of men to Layoff This Period:

Number of men available in the pool for On-Going Jobs:

After Decision

Number of men in the pool:

Number of men available in the pool for On-Going Jobs:

On-Going Jobs

Job	Last Period			Site Cost Paid	Job Status	Planned Labour	Labour Allocation	
	Total	Own	Sub				Total	Own
20	110	110	0	446,000	In Third Period	77	110	110
28	36	36	0	315,800	In Second Period	34	36	36
▶ 29	83	83	0	498,700	In Second Period	100	83	83
38	0	0	0		In First Period	38	0	0
43	0	0	0		In First Period	56	0	0

Labour allocation - Job 29

	Own	Sub	Total
Previous Period	<input type="text" value="83"/>	<input type="text" value="0"/>	<input type="text" value="83"/>
From ILP	<input type="text" value="0"/>		
To ILP	<input type="text" value="2"/>		
New	<input type="text" value="0"/>		
Paid Off	<input type="text" value="0"/>		
This Period	<input type="text" value="81"/>	<input type="text" value="0"/>	<input type="text" value="81"/>

Apply Close

	Site Cost Allocation
0	341000
0	374900
0	493000
0	
0	

Construction Management Decisions - Period 7

Idle Labour Pool

Start of Period

Number of men in the pool: 48

Number of men to Layoff This Period: 0

Number of men available in the pool for On-Going Jobs: 48

After Decisions

Net Transfers from On-Going Jobs: 2

Number of men left in the pool: 50

On-Going Jobs

Job	Last Period				This Period										Site Cost Allocation
	Labour On Site			Site Cost Paid	Job Status	Planned Labour	Labour Allocation			Own Labour Transfers					
	Total	Own	Sub				Total	Own	Sub	From ILP	New	To ILP	Paid Off		
20	110	110	0	446,000	In Third Period	77	110	110	0	0	0	0	0	341000	
28	36	36	0	315,800	In Second Period	34	36	36	0	0	0	0	0	374900	
▶ 29	83	83	0	498,700	In Second Period	100	81	81	0	0	0	2	0	493000	
38	0	0	0		In First Period	38	0	0	0	0	0	0	0		
43	0	0	0		In First Period	56	0	0	0	0	0	0	0		

Main

Quit

One important point to grasp is the use of the '**Own Labour Transfers**' boxes.

When the **own labour level** is set for a job, the number **may vary** from the level on site last period. The difference (increase or decrease) **must be sourced** from the own labour transfers. This can involve a number of options.

If **more** own labour is required on site the options are :-

- Transfer labour to site from the idle labour pool (from ILP)
- Take on new recruits
- A combination of both

Conversely, if **less** own labour is required on site, the options are to :-

- Transfer excess labour to the idle labour pool (to ILP)
- Pay some of the workforce off
- Use a combination of both

Since there are a number of potential options, you must balance the labour movements on the job using the own labour transfers boxes. Failure to do so will cause an **error** to be displayed, and no further changes can be made until the line is balanced.

Subcontract labour changes are much simpler, and are automatically handled by the computer, by either taking on or laying off as required.

On-Going Jobs

Job	Last Period					This Period									
	Labour On Site			Site Cost Paid	Job Status	Planned Labour	Labour Allocation			Own Labour Transfers				Site Cost Allocation	
	Total	Own	Sub				Total	Own	Sub	From ILP	New	To ILP	Paid Off		
	20	110	110	0	446,000	In Third Period	77	110	110	0	0	0	0	0	341000
	28	36	36	0	315,800	In Second Period	34	36	36	0	0	0	0	0	374900
▶	29	83	83	0	498,700	In Second Period	100	81	81	0	0	0	2	0	493000
	38	0	0	0		In First Period	38	0	0	0	0	0	0	0	
	43	0	0	0		In First Period	56	0	0	0	0	0	0	0	

Entering Construction Management Decisions - 2

The 2 transfers to the idle labour pool are added to the pool, leaving 50 men in the pool.

If possible, **we'll utilise the men**, who are costing the company lying idle, on other jobs.

Construction Management Decisions - Period 7

Idle Labour Pool

Start of Period

Number of men in the pool: 48

Number of men to Layoff This Period: 0

Number of men available in the pool for On-Going Jobs: 48

After Decisions

Net Transfers from On-Going Jobs: 2

Number of men left in the pool: 50

On-Going Jobs

Job	Last Period				This Period										Site Cost Allocation
	Labour On Site			Site Cost Paid	Job Status	Planned Labour	Labour Allocation			Own Labour Transfers					
	Total	Own	Sub				Total	Own	Sub	From ILP	New	To ILP	Paid Off		
20	110	110	0	446,000	In Third Period	77	110	110	0	0	0	0	0	341000	
28	36	36	0	315,800	In Second Period	34	36	36	0	0	0	0	0	374900	
▶ 29	83	83	0	498,700	In Second Period	100	81	81	0	0	0	2	0	493000	
38	0	0	0		In First Period	38	0	0	0	0	0	0	0		
43	0	0	0		In First Period	56	0	0	0	0	0	0	0		

Main

Quit

Construction Management Decisions - Period 7

Idle Labour Pool

Start of Period

Number of men in the pool: 48

Number of men to Layoff This Period: 0

Number of men available in the pool for On-Going Jobs: 48

After Decisions

Net Transfers from On-Going Jobs: 2

Number of men left in the pool: 50

On-Going Jobs

Job	Last Period				This Period										Site Cost Allocation
	Labour On Site			Site Cost Paid	Job Status	Planned Labour	Labour Allocation			Own Labour Transfers					
	Total	Own	Sub				Total	Own	Sub	From ILP	New	To ILP	Paid Off		
20	110	110	0	446,000	In Third Period	77	110	110	0	0	0	0	0	341000	
28	36	36	0	315,800	In Second Period	34	36	36	0	0	0	0	0	374900	
▶ 29	83	83	0	498,700	In Second Period	100	81	81	0	0	0	2	0	493000	
38	0	0	0		In First Period	38	0	0	0	0	0	0	0		
43	0	0	0		In First Period	56	0	0	0	0	0	0	0		

Main

Quit

The Construction Manager now sets the labour levels for the other on-going jobs by :-

- Setting labour levels in line with planned labour levels where jobs are **NOT** in their final planned period, and trying to use the company's own labour.
- Setting labour levels by examining the % job progress to date where jobs are **IN** their final planned period, and using the company's own labour.

For jobs 20, 28 and 38 the labour levels were set as follows.

Construction Management Decisions - Period 7

Idle Labour Pool

Start of Period

Number of men in the pool: 48

Number of men to Layoff This Period: 0

Number of men available in the pool for On-Going Jobs: 48

After Decisions

Net Transfers from On-Going Jobs: 2

Number of men left in the pool: 50

On-Going Jobs

Job	Last Period				Site Cost Paid	Job Status	Planned Labour	This Period								Site Cost Allocation
	Labour On Site							Labour Allocation			Own Labour Transfers					
	Total	Own	Sub					Total	Own	Sub	From ILP	New	To ILP	Paid Off		
▶ 20	110	110	0		446,000	In Third Period	77	110	110	0	0	0	0	0		341000
28	36	36	0		315,800	In Second Period	34	36	36	0	0	0	0	0		374900
29	83	83	0		498,700	In Second Period	100	81	81	0	0	0	2	0		493000
38	0	0	0			In First Period	38	0	0	0	0	0	0	0		
43	0	0	0			In First Period	56	0	0	0	0	0	0	0		

[illegible]

Attention now turns to job 43, which was won last period, and hence is in its first planned period.

In line with company strategy, we wish to try and complete the job on time, so we'll allocate the planned labour level of 56 men to the job. **The planned labour levels were determined at the estimating stage.**

However, there are only 12 men left in the idle labour pool. An additional 44 men are needed, so we are faced with 3 choices to make-up the shortfall :-

- **Underallocate** this period, which will put the job behind schedule, but attempt to catch-up later
- Take on some '**New**' recruits into our own workforce, who are not so effective in their first period whilst they are being trained
- Use **subcontractors**, who are fully effective, but cost incur an additional premium

Since company strategy is to employ our own operatives, and we don't want any jobs to fall behind schedule, we'll take-on and train some new recruits, **but is 44 enough bearing in mind they are not fully effective in their first period ?**

Start of Period

Number of men in the pool:

Number of men to Layoff This Period:

Number of men available in the pool for On-Going Jobs:

After Decision

Number of men in the pool:

Number of men to Layoff This Period:

On-Going Jobs

Job	Last Period				This Period										
	Labour On Site			Site Cost Paid	Job Status	Planned Labour	Labour Allocation			Own Labour Transfers				Site Cost Allocation	
	Total	Own	Sub				Total	Own	Sub	From ILP	New	To ILP	Paid Off		
20	110	110	0	446,000	In Third Period	77	110	110	0	0	0	0	0	0	341000
28	36	36	0	315,800	In Second Period	34	36	36	0	0	0	0	0	0	374900
29	83	83	0	498,700	In Second Period	100	81	81	0	0	0	2	0	0	493000
38	0	0	0		In First Period	38	38	38	0	38	0	0	0	0	
43	0	0	0		In First Period	56	0	0	0	0	0	0	0	0	

The **Company and Financial Information** indicates that it takes 2 weeks (a sixth of a period) to train a new recruit, so a new recruit is only $5/6$ effective.

To allow for this, we'll employ 53 new men (instead of 44), which should give us **effectively 44 man periods**, as required.

It takes: weeks to train own labour

Annual training costs are: 30,000 per person

[illegible]

[illegible]

Construction Management Decisions - Period 7															
Idle Labour Pool															
Start of Period															
										Number of men in the pool:					<input type="text" value="48"/>
										Number of men to Layoff This Period:					<input type="text" value="0"/>
										Number of men available in the pool for On-Going Jobs:					<input type="text" value="48"/>
After Decisions															
										Net Transfers from On-Going Jobs:					<input type="text" value="-48"/>
										Number of men left in the pool:					<input type="text" value="0"/>
On-Going Jobs															
Job	Last Period				This Period										
	Total	Own	Sub	Site Cost Paid	Job Status	Planned Labour	Labour Allocation			Own Labour Transfers				Site Cost Allocation	
							Total	Own	Sub	From ILP	New	To ILP	Paid Off		
▶ 20	110	110	0	446,000	In Third Period	77	110	110	0	0	0	0	0	341000	
28	36	36	0	315,800	In Second Period	34	36	36	0	0	0	0	0	374900	
29	83	83	0	498,700	In Second Period	100	81	81	0	0	0	2	0	493000	
38	0	0	0		In First Period	38	38	38	0	38	0	0	0		
43	0	0	0		In First Period	56	65	65	0	12	53	0	0		

Key Point

Where there is an overall labour shortfall in the period, and the intention is to bridge the shortfall by **taking on new recruits rather than use subcontractors**, this strategy may not be possible due to the **limit on the number of new recruits** that can be taken on in a period, as defined in the **Company and Financial Information**. The limit can vary each period.

For period 7, only 53 new recruits are required, which is lower than the limit, and so subcontractors are not required.

Miscellaneous

Retention: % of Tender Value

No more than: new recruits can be taken on this period

Idle Labour Pool

Start of Period

Number of men in the pool:

Number of men to Layoff This Period:

Number of men available in the pool for On-Going Jobs:

After Decisions

Net Transfers from On-Going Jobs:

Number of men left in the pool:

On-Going Jobs

	Job	Last Period				This Period									
		Labour On Site			Site Cost Paid	Job Status	Planned Labour	Labour Allocation			Own Labour Transfers				Site Cost Allocation
		Total	Own	Sub				Total	Own	Sub	From ILP	New	To ILP	Paid Off	
►	20	110	110	0	446,000	In Third Period	77	110	110	0	0	0	0	0	341000
	28	36	36	0	315,800	In Second Period	34	36	36	0	0	0	0	0	374900
	29	83	83	0	498,700	In Second Period	100	81	81	0	0	0	2	0	493000
	38	0	0	0		In First Period	38	38	38	0	38	0	0	0	
	43	0	0	0		In First Period	56	65	65	0	12	53	0	0	

After making the labour allocation decisions for each job, there may be a **surplus of labour left in the idle pool**. If this is the case, there are a number of options :-

- Leave them in the pool for use next period, if they are likely to be required
- Use the **“Number of men to Layoff This Period”** to layoff as much of the surplus as possible prior to any labour allocations
- Instead of transferring men to the idle labour pool from site, pay them straight off from site

Construction Management Decisions - Period 7

Idle Labour Pool

Start of Period

Number of men in the pool:

48

Number of men to Layoff This Period:

0

Number of men available in the pool for On-Going Jobs:

48

After Decisions

Net Transfers from On-Going Jobs:

-48

Number of men left in the pool:

0

On-Going Jobs

	Job	Last Period				Job Status	Planned Labour	This Period								Site Cost Allocation
		Labour On Site		Site Cost Paid				Labour Allocation			Own Labour Transfers					
		Total	Own	Sub				Total	Own	Sub	From ILP	New	To ILP	Paid Off		
▶	20	110	110	0	446,000	In Third Period	77	110	110	0	0	0	0	0	341000	
	28	36	36	0	315,800	In Second Period	34	36	36	0	0	0	0	0	374900	
	29	83	83	0	498,700	In Second Period	100	81	81	0	0	0	2	0	493000	
	38	0	0	0		In First Period	38	38	38	0	38	0	0	0		
	43	0	0	0		In First Period	56	65	65	0	12	53	0	0		

Main

Quit

Having now established the labour requirements for each on-going job, the next task is to **allocate site support** to ensure the jobs run smoothly.

Construction Management Decisions - Period 7

Idle Labour Pool

Start of Period

Number of men in the pool:

Number of men to Layoff This Period:

Number of men available in the pool for On-Going Jobs:

After Decisions

Net Transfers from On-Going Jobs:

Number of men left in the pool:

On-Going Jobs

	Job	Last Period			Site Cost Paid	Job Status	Planned Labour	This Period								Site Cost Allocation
		Total	Own	Sub				Labour Allocation			Own Labour Transfers					
							Total	Own	Sub	From ILP	New	To ILP	Paid Off			
▶	20	110	110	0	446,000	In Third Period	77	110	110	0	0	0	0	0	341000	
	28	36	36	0	315,800	In Second Period	34	36	36	0	0	0	0	0	374900	
	29	83	83	0	498,700	In Second Period	100	81	81	0	0	0	2	0	493000	
	38	0	0	0		In First Period	38	38	38	0	38	0	0	0		
	43	0	0	0		In First Period	56	65	65	0	12	53	0	0		

Construction Management Decisions - Period 7

Idle Labour Pool

Start of Period

Number of men in the pool:

Number of men to Layoff This Period:

Number of men available in the pool for On-Going Jobs:

After Decisions

Net Transfers from On-Going Jobs:

Number of men left in the pool:

On-Going Jobs

	Job	Last Period			Site Cost Paid	Job Status	Planned Labour	This Period							
		Labour On Site Total Own Sub	From ILP	New				To ILP	Paid Off	Site Cost Allocation					
▶	20	110			110	0	446,000				In Third Period	77	110	110	0
	28	36	36	0	315,800	In Second Period	34	36	36	0	0	0	0	0	374900
	29	83	83	0	498,700	In Second Period	100	81	81	0	0	0	2	0	493000
	38	0	0	0		In First Period	38	38	38	0	38	0	0	0	
	43	0	0	0		In First Period	56	65	65	0	12	53	0	0	

Entering Construction Management Decisions - 4

Site costs pay for the **support staff and services** that are needed to run a site.

When a bid was placed for a job, the on-cost figure included an amount for the site costs to be paid during the lifetime of the contract, based on the estimated level of site cost required.

Each period the company must decide how much site cost to allocate to the job, depending upon the level of labour allocated, irrespective of whether the labour is the company's own or subcontractors.

Construction Management Decisions - Period 7

Idle Labour Pool

Start of Period

Number of men in the pool:

48

Number of men to Layoff This Period:

0

Number of men available in the pool for On-Going Jobs:

48

After Decisions

Net Transfers from On-Going Jobs:

-48

Number of men left in the pool:

0

On-Going Jobs

Job	Last Period				This Period										Site Cost Allocation
	Labour On Site			Site Cost Paid	Job Status	Planned Labour	Labour Allocation			Own Labour Transfers				Site Cost Allocation	
	Total	Own	Sub				Total	Own	Sub	From ILP	New	To ILP	Paid Off		
20	110	110	0	446,000	In Third Period	77	110	110	0	0	0	0	0	341000	
28	36	36	0	315,800	In Second Period	34	36	36	0	0	0	0	0	374900	
29	83	83	0	498,700	In Second Period	100	81	81	0	0	0	2	0	493000	
38	0	0	0		In First Period	38	38	38	0	38	0	0	0	0	
43	0	0	0		In First Period	56	65	65	0	12	53	0	0	0	

Main

Quit

In the same way that labour levels are initially set to the levels that were present on site at the end of the previous period, so the amount of money to be allocated for site administration is **assumed to be** the same as last period.

However, the levels of site cost last period are **unlikely** to be the required level for this period, unless there has been no change in labour levels on site.

Start of Period

Number of men in the pool:

Number of men to Layoff This Period:

Number of men available in the pool for On-Going Jobs:

Decisions

Net Transfers from On-Going Jobs:

Number of men left in the pool:

On-Going Jobs

Job	Last Period				This Period									
	Total	Own	Sub	Site Cost Paid	Job Status	Planned Labour	Labour Allocation			Own Labour Transfer				Site Cost Allocation
							Total	Own	Sub	From ILP	New	To ILP	Paid Out	
20	110	110	0	446,000	In Third Period	77	110	110	0	0	0	0	0	341000
28	36	36	0	315,800	In Second Period	34	36	36	0	0	0	0	0	374900
29	83	83	0	498,700	In Second Period	100	81	81	0	0	0	2	0	493000
38	0	0	0		In First Period	38	38	38	0	38	0	0	0	0
43	0	0	0		In First Period	56	65	65	0	12	53	0	0	0

The **Job Details** button can be used to display information to help set the site cost level.

Main Quit

Each man period requires 6,495 site cost to enable the productivity of the workforce to be maintained i.e., there will be no reduction or improvement in the normal levels of output.

This will be the original **estimated site cost** divided by the total number of labour periods required for the duration of the job.

For 110 man periods we require $110 \times 6,495 = 714,450$ which we'll round up to 715,000.

It should be noted that the ratio of 7,933 is only an estimate of the 'real' ratio, and how accurate our estimate is depends on the level of estimating effort, and confidence in the estimate.

For job 20, we have '**extremely high**' confidence in the estimate, so we'll pay the calculated amount of 715,000.

Instead of paying the calculated level, there are a number of alternative strategies, which each has a number of drawbacks :-

- **Pay less site cost.**

This may appear to save money, but **adverse** affects on the productivity of the labour on the site will reduce overall value, and delay the job, and the cost will outweigh the benefit.

- **Pay additional site cost**

This will cost more, but will marginally **improve** the site productivity of the labour and the progress of the job. However, the cost will almost certainly outweigh the benefit.

Key Point

Whilst a job is within its original duration, a minimum level of site cost is required to keep the site operational, based upon the planned labour for the period. This minimum amount will always be incurred, even if a job is deliberately delayed e.g., no labour allocated for the period.

Cost / Value ratios

Build Cost: 32
Site Cost: 6,495
Value: 44,100

Job Status	Planned Labour	Total	Own	Sub	From ILP	New	To ILP	Paid Off	Site Cost Allocation
Third Period	77	110	110	0	0	0	0	0	341000
Second Period	34	36	36	0	0	0	0	0	374900
Second Period	100	81	81	0	0	0	2	0	493000
First Period	38	38	38	0	38	0	0	0	0
First Period	56	65	65	0	12	53	0	0	0

Construction Management Decisions - Period 7

Idle Labour Pool

Start of Period

Number of men in the pool: 48

Number of men to Layoff This Period: 0

Number of men available in the pool for On-Going Jobs: 48

After Decisions

Net Transfers from On-Going Jobs: -48

Number of men left in the pool: 0

On-Going Jobs

Job	Last Period				This Period										Site Cost Allocation
	Labour On Site			Site Cost Paid	Job Status	Planned Labour	Labour Allocation			Own Labour Transfers				Site Cost Allocation	
	Total	Own	Sub				Total	Own	Sub	From ILP	New	To ILP	Paid Off		
20	110	110	0	446,000	In Third Period	77	110	110	0	0	0	0	0	715000	
28	36	36	0	315,800	In Second Period	34	36	36	0	0	0	0	0	374900	
29	83	83	0	498,700	In Second Period	100	81	81	0	0	0	2	0	493000	
38	0	0	0		In First Period	38	38	38	0	38	0	0	0	0	
43	0	0	0		In First Period	56	65	65	0	12	53	0	0	0	

Main

Quit

We'll now set the level for the other jobs using the same technique.

Construction Management Decisions - Period

Idle Labour Pool

Start of Period

Number of men in the pool:

Number of men to Layoff This Period:

Number of men available in the pool for On-Going Jobs:

Decisions

Net Transfers from On-Going Jobs:

Number of men left in the pool:

On-Going Jobs

Job	Last Period				This Period										
	Labour On Site			Site Cost Paid	Job Status	Planned Labour	Labour Allocation			Own Labour Transfers				Site Cost Allocation	
Total	Own	Sub	Total				Own	Sub	From ILP	New	To ILP	Laid Off			
20	110	110	0	446,000	In Third Period	77	110	110	0	0	0	0	0	0	715000
28	36	36	0	315,800	In Second Period	34	36	36	0	0	0	0	0	0	374900
29	83	83	0	498,700	In Second Period	100	81	81	0	0	0	2	0	0	493000
38	0	0	0		In First Period	38	38	38	0	38	0	0	0	0	0
43	0	0	0		In First Period	56	65	65	0	12	53	0	0	0	0

Construction Management Decisions - Period 7

Idle Labour Pool

Start of Period

Number of men in the pool:

Number of men to Layoff This Period:

Number of men available in the pool for On-Going Jobs:

After Decisions

Net Transfers from On-Going Jobs:

Number of men left in the pool:

On-Going Jobs

	Job	Last Period				This Period									
		Total	Own	Sub	Site Cost Paid	Job Status	Planned Labour	Labour Allocation			Own Labour Transfers				Site Cost Allocation
								Total	Own	Sub	From ILP	New	To ILP	Paid Off	
	20	110	110	0	446,000	In Third Period	77	110	110	0	0	0	0	0	715000
	28	36	36	0	315,800	In Second Period	34	36	36	0	0	0	0	0	322000
	29	83	83	0	498,700	In Second Period	100	81	81	0	0	0	2	0	487000
	38	0	0	0		In First Period	38	38	38	0	38	0	0	0	381000
▶	43	0	0	0		In First Period	56	65	65	0	12	53	0	0	423000

The labour and site cost decisions have now been made for all the company's on-going jobs.

At first glance it appears that efficient use was made of the company's existing 'own' labour, since the idle labour is empty, and some subcontractors used on job 15 were replaced. However, it won't be until next period that a full analysis can be undertaken of just how well the jobs were progressed this period.

Key Point

Any profits (or losses) generated from the jobs will be added to the company's cash account at the end of period. Hopefully, overall there will be a profit that will help to increase the company's value.

Construction Man

Idle Labour Pool

Start of Period

Assets after Decisions

Cash A/C: -64,000

Capital Base: 4,477,537

Investments: 783,500

Company Value: 5,196,684

Number of men to Layoff This Period: 0

Number of men left in the pool: 0

Number of men available in the pool for On-Going Jobs: 48

On-Going Jobs

Job	Last Period				This Period										
	Labour On Site			Site Cost Paid	Job Status	Planned Labour	Labour Allocation			Own Labour Transfers				Site Cost Allocation	
	Total	Own	Sub				Total	Own	Sub	From ILP	New	To ILP	Paid Off		
20	110	110	0	446,000	In Third Period	77	110	110	0	0	0	0	0	0	715000
28	36	36	0	315,800	In Second Period	34	36	36	0	0	0	0	0	0	322000
29	83	83	0	498,700	In Second Period	100	81	81	0	0	0	2	0	0	487000
38	0	0	0		In First Period	38	38	38	0	38	0	0	0	0	381000
43	0	0	0		In First Period	56	65	65	0	12	53	0	0	0	423000

The Demo is now complete

Construction Management Decisions - Period 7

Idle Labour Pool

Start of Period

Number of men in the pool:

Number of men to Layoff This Period:

Number of men available in the pool for On-Going Jobs:

After Decisions

Net Transfers from On-Going Jobs:

Number of men left in the pool:

On-Going Jobs

	Job	Last Period				This Period									
		Total	Own	Sub	Site Cost Paid	Job Status	Planned Labour	Labour Allocation			Own Labour Transfers				Site Cost Allocation
								Total	Own	Sub	From ILP	New	To ILP	Paid Off	
	20	110	110	0	446,000	In Third Period	77	110	110	0	0	0	0	0	715000
	28	36	36	0	315,800	In Second Period	34	36	36	0	0	0	0	0	322000
	29	83	83	0	498,700	In Second Period	100	81	81	0	0	0	2	0	487000
	38	0	0	0		In First Period	38	38	38	0	38	0	0	0	381000
▶	43	0	0	0		In First Period	56	65	65	0	12	53	0	0	423000

Choose from one of the following options

- Performance Indicators
- External Performance Review
- Performance Statistics

The success of a team in managing their company is measured by the changes in **10 key performance indicators** :-

- Turnover
- Gross Profit to Turnover ratio
- Operating Profit to Turnover ratio
- Company Value
- Capital Employed
- Contract Completion
- Forward Workload
- Forward Margin
- Share Price
- Client Satisfaction

The indicators are weighted according to their variability, totalling a **1000** at the start of the early years.

As the early years progress the value of each indicator will change, highlighting improvements or deteriorations in that area, but the overall total will be the **measure** by which the ultimate progress of the company is determined.

Performance Indicator History											
(TIP: Click on an indicator heading to alter the graphical display)											
Per	Total	Turnover	Gross Profit to Turnover	Operating Profit to Turnover	Company Value	Capital Employed	Contract Completion	Forward Workload	Forward Margin	Share Price	Client Satisfaction
4	1000	80	75	60	120	100	120	80	120	120	125
5	1328	141	88	189	127	138	130	93	135	139	148
6	1566	180	95	238	135	168	150	120	141	156	183
7	1770	220	100	270	145	192	175	137	151	179	201
8	2041	259	97	273	154	214	200	166	224	205	249

An **external performance review (EPR)** is carried out each period by an external consultant, and is an essential aid in managing the company successfully.

The consultant looks in detail at all areas of the company's business, especially where there may be **problems**, and compiles an appropriate report.

External Performance Review


Period: Period 6

Category: Bidding

Bidding Analyser

Provides a detailed analysis of all bids entered for the selected period.

Click on any Details line to see if further information is available. If so, simply click on the Further Information button to display the additional notes about the observation made by the external consultant.




	Job No	Details	Nature
▶	38	Job won on price alone	P
	40	Bids close; job not awarded because a rival had a slightly better relationship with the client (Crawford Petrochemicals UK)	N
	43	Job won on price alone	P
	43	The lack of expertise of consultant 18 significantly increases the build costs, but the design cost is much lower than expected	N
	43	The old-fashioned qualities of consultant 18 slightly increases the build costs	N

The nature is either :-

- 'P' if the comment is positive
- 'N' if the comment is negative
- 'U' if the comment is unclassified

Further Information



Main

Quit

Company **Performance Statistics** provide a detailed set of statistics relating to all aspects of the company's activities, and can be used to identify strengths and weaknesses, and explain the rise and fall of particular performance indicators.

Company Performance Statistics

Financial

Overheads

Procurement

Construction

Print Statistics

Early Years Onwards

Company Value

Company Value has increase by: 28 % since the History

On average 83 % of the Capital Base was utilised

Average amount invested: 778,680 per period

Average % return on investments: 4.4 %

Job costs were reduced by: 0.23 % due to build cost savings from investments

Average Gearing Ratio: 0

Share Information

Share price has increased by: 71 % since the History

0 % of dividend paid was wasted, and had no affect

Dividend Payments: 0.8 % of job costs

Turnover & Profit

Turnover has increased by: 446 % since the History

Average job profit: 6.7 % of job cost

Average Overhead costs: 1.7 % of job cost

Profit Analysis

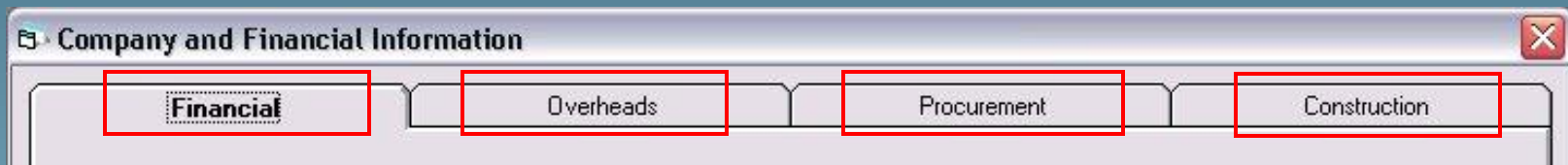
Choose from one of the following options

- Company and Financial Information
- Job Analyser
- Bidding Analyser
- Interactive Information
- Reports

Company and financial information parameters define the environment in which the company is operating.

Most remain **fixed** for the time you are managing the Company but some can **vary** from period to period, such as the prevalent interest rates.

Click on a hotspot for further information.



The **Job Analyser** is the gateway to detailed information about any of the jobs that the company has prequalified for.

All Jobs can be displayed, or they can be filtered dependant upon their current status, as show.

Jobs Analyser

Job Status Filter

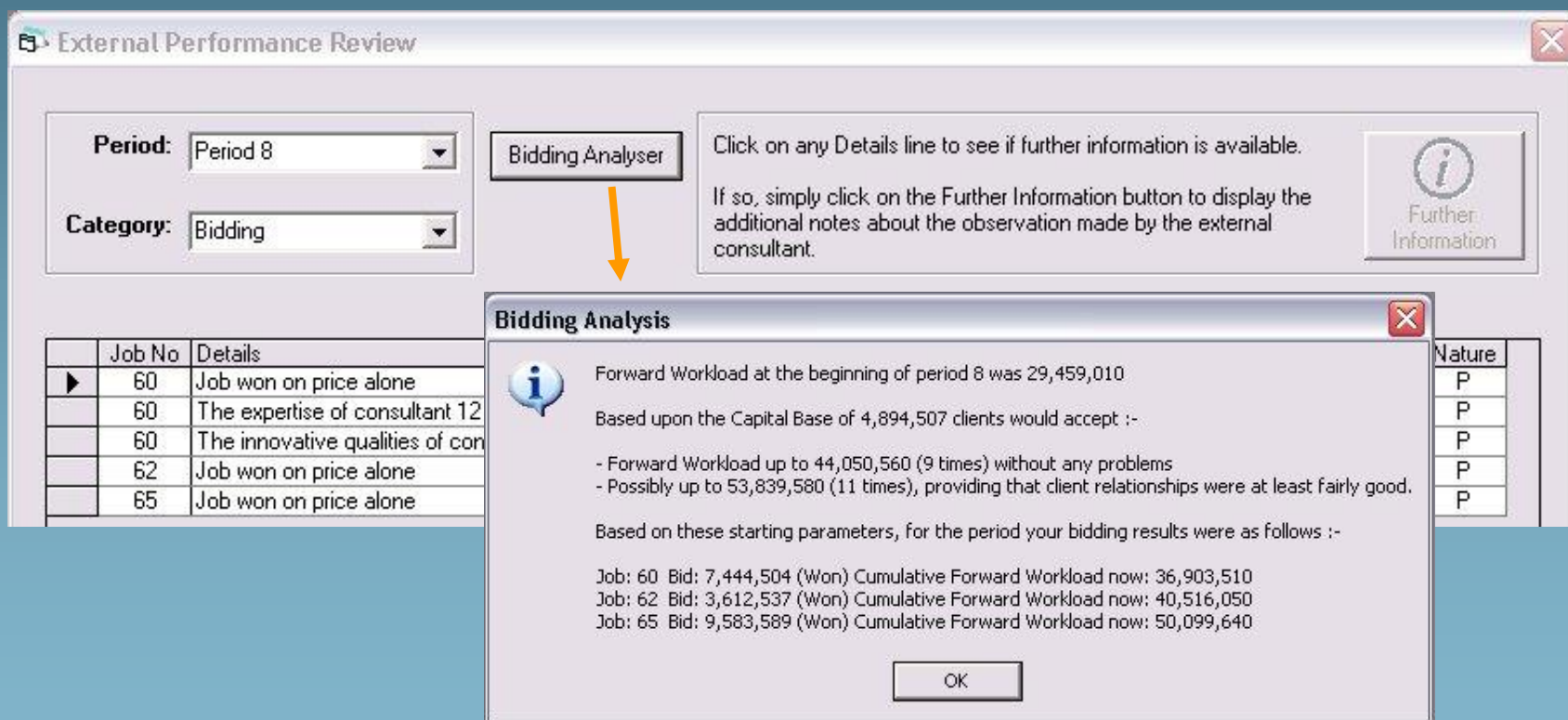
Job Details

All Jobs
Jobs at the Estimating Stage (ESTIP)
Jobs not Estimated (ESTNO)
Jobs Estimated, but not allowed to bid for (BIDNA)
Jobs at the Bidding Stage (BIDIP)
Jobs that were not bid for (BIDNO)
Jobs Bid For, But Lost (BIDUS)
Jobs Bid For, and Won
Jobs that are currently On-Going (JOBIP)
Jobs that have been Completed (JOBFIN)

Job	Status	Type	Approx Value	Desc	Sector	Client
▶ 43	JOBIP	DB	9,000,000	New storage unit	Building & Commercial	Saintesc Foods
46	JOBIP	BO	13,000,000	Modernise leisure centre	Building & Commercial	Sport England
50	JOBIP	BO	2,000,000	Library repairs and renovation	Building & Commercial	New Forest County Council
60	JOBIP	DB	7,000,000	Extension to conference centre	Building & Commercial	Maddison Bank Ltd
62	JOBIP	BO	3,000,000	Upgrade lesiure facilities in local park	Building & Commercial	London City Council
65	JOBIP	BO	9,000,000	Coast protection and stablising scheme	Water & Sewage	Tyne and Wear City Council

The **Bidding Analyser**, available from the External Performance Review screen, displays the company's bidding results for a period.

Each job is examined in turn to see why it was won or lost, taking into account the various factors that affect the bidding, such as cumulative workload and the size of the company's capital base.



The screenshot shows the 'External Performance Review' window. At the top, there are dropdown menus for 'Period' (set to 'Period 8') and 'Category' (set to 'Bidding'). A 'Bidding Analyser' button is highlighted with an orange arrow. To the right of this button is a text box that says: 'Click on any Details line to see if further information is available. If so, simply click on the Further Information button to display the additional notes about the observation made by the external consultant.' Below this text box is a 'Further Information' button with an information icon. At the bottom left, there is a table with columns 'Job No' and 'Details'.

Job No	Details
60	Job won on price alone
60	The expertise of consultant 12
60	The innovative qualities of con
62	Job won on price alone
65	Job won on price alone

On the right side of the window, there is a table with a column 'Nature'.

Nature
P
P
P
P
P

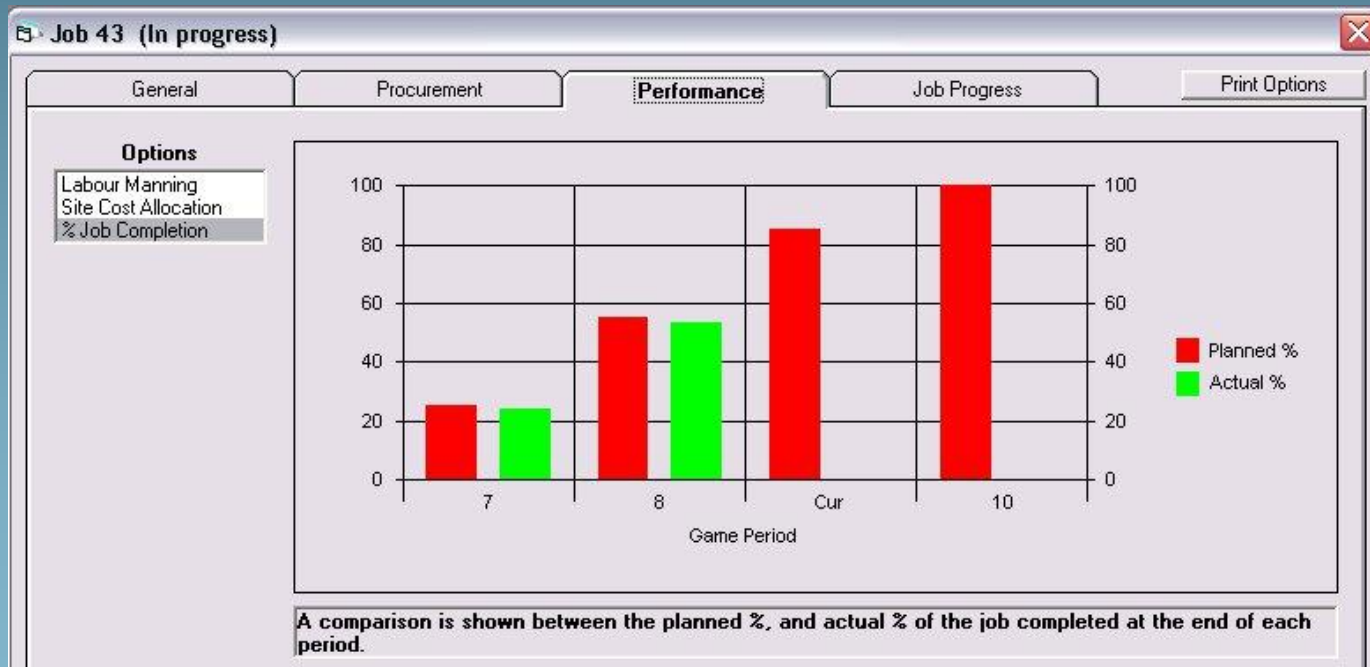
The 'Bidding Analysis' window is open, displaying the following information:

- Forward Workload at the beginning of period 8 was 29,459,010
- Based upon the Capital Base of 4,894,507 clients would accept :-
 - Forward Workload up to 44,050,560 (9 times) without any problems
 - Possibly up to 53,839,580 (11 times), providing that client relationships were at least fairly good.
- Based on these starting parameters, for the period your bidding results were as follows :-
 - Job: 60 Bid: 7,444,504 (Won) Cumulative Forward Workload now: 36,903,510
 - Job: 62 Bid: 3,612,537 (Won) Cumulative Forward Workload now: 40,516,050
 - Job: 65 Bid: 9,583,589 (Won) Cumulative Forward Workload now: 50,099,640

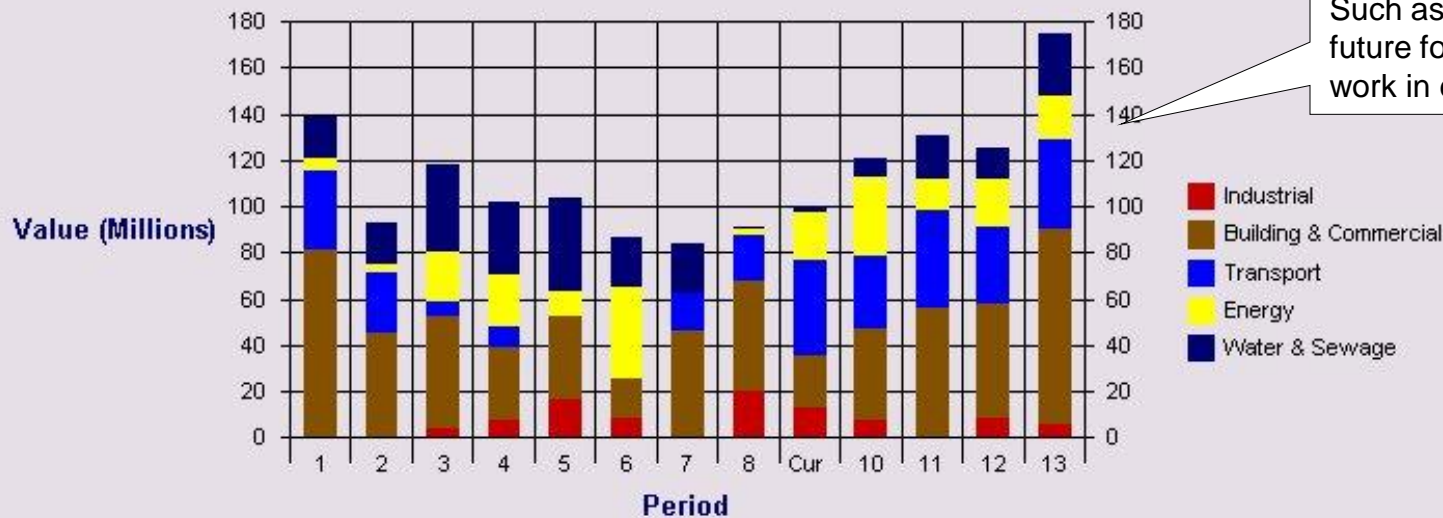
An 'OK' button is at the bottom of the 'Bidding Analysis' window.

Depending upon the job status, different types of information is displayed :-

Information	Availability
General	Always
Procurement	Estimating & Bidding stage onwards
Graphical Performance	Job in Progress onwards
Job Progress	Job in Progress onwards



Interactive information is available in a number of formats to provide details of the status of the company, as shown below.



Graphical Information

Such as the past, current and future forecast of the value of work in each market sector



Tabular Information

Such as financial details period by period.



Main

Quit

The Report Options

You can select multiple reports. Click on the hotspots for more information.

Report Options

Company Reports

Decision Forms

The reports initially checked are the suggested set required to enable decisions to be made for the current period

Measuring Performance

Performance Indicators: ☒

Performance Statistics: ☐ (whilst in charge)

External Performance Review: ☒ (last period)
☐ (all periods)

Job Related

Bidding report for jobs: ☒ (last period)
☐ (All periods)

Job details: ☒ (that can be costed this period)
☒ (that can be bid for this period)
☒ (on-going jobs)
☐ (all jobs prequalified for)
☐ (all jobs bid for)
☐ (all jobs won)
☐ (all jobs lost)
☐ (all jobs completed)

Job progress: ☒ (ongoing jobs)
☐ (completed jobs)

Retention: ☒

Forward Workload & Margin: ☒

People Related

Idle Project Manager Pool: ☒

Project Manager details: ☒

Project Manager history: ☒

Consultant details: ☒

Consultant history: ☒

Client Relationships: ☒ (Summary)
☐ (Full History)

Company Wide

Company & Financial Information: ☒

Financial Report: ☒ (last year)
☐ (all periods)

Investment Opportunities: ☒

Investment History: ☒

Overheads: ☒

Marketing Analysis: ☒

Risk Analysis: ☐

Select NONE

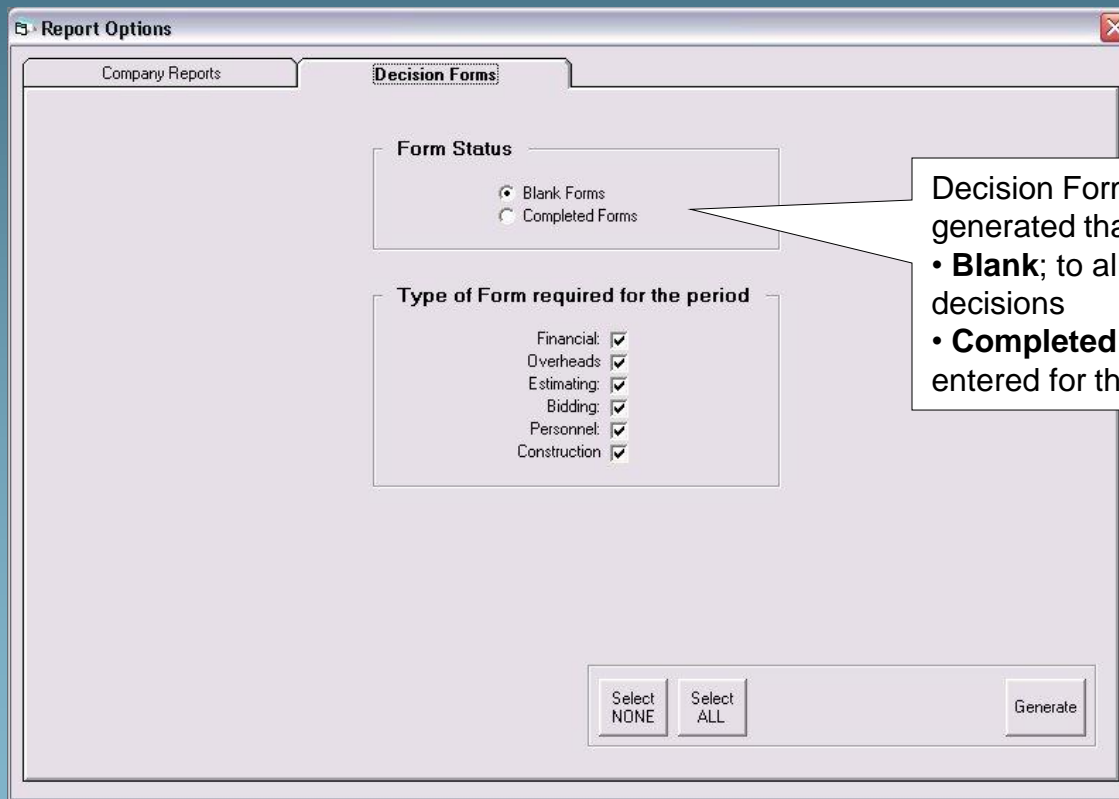
Select ALL

Default

Generate

Sometimes it is more suitable to enter the decisions for a period on **printed forms** prior to using the team module interface.

In this case, multiple decision forms can be generated by clicking on the **Decision Forms** tab.



Report Options

Company Reports | **Decision Forms**

Form Status

☒ Blank Forms
☐ Completed Forms

Type of Form required for the period

Financial: ☒
 Overheads: ☒
 Estimating: ☒
 Bidding: ☒
 Personnel: ☒
 Construction: ☒

Select NONE | Select ALL | Generate

Decision Forms can be generated that are either :-

- **Blank**; to allow entry of decisions
- **Completed**; all decisions entered for the period

The Bidding Report shows the outcome of the bidding that took place in a particular period.

Different Bidding Reports exist for the early and final years, as illustrated below.

Early Years (company specific)

All jobs bid for by a **particular** company are shown, along with the rival bid (computer), and if the job is not won the reason is given.

Job	Desc	Client	Company Bid	Rival Bid	Job Won	Client reason for rejecting Company bid
71	Construct day-care unit at local hospital	Fenlands County Council	12,358,615	12,247,225	No	Bid Too High

Final Years (all jobs bid for in the period)

All jobs bid for in the period by **any company** are shown, along with the winning company and bid, and the rival bids.

Job No	Desc	Winning Details		Other Bidding Details	
		Team	Bid	Team	Bid
42	Medical School Alterations, Phase II,		3,902,522		
43	American School, Phase 2,		1,658,592	1	1,687,724
				2	1,639,703

Since no team/company number is given, the computer-simulated company won job 43.

Companies 1 and 2 also bid for job 43, but their bids were not successful.

There is **no direct link** from the companies to the bids, so company 1 could have submitted either of the two bids shown.



Main

Quit

Job Details/Progress Report

The **Job Details Report** displays comprehensive information about jobs that the company prequalified for, including estimating and bidding details.

Job Details						Estimating Details				Bidding Details				Finish (per)
Job	Period	Type of Job	Size	Approx Value	Complex	Job Per	Build Cost	Site Cost	Lab Man	Bid Details	Reason For Loss	Expected Value	% Done	
15	2	Design & Build	Medium	13,000,000	Medium	1)	2,451,224	490,244	92	Bid submitted, Job Won		3,328,218	25 %	
						2)	2,941,468	588,294	110			3,993,862	55 %	
						3)	2,941,468	588,294	110			3,993,862	85 %	
						4)	1,470,733	294,146	55			1,996,931	100 %	
							9,804,893	1,960,978	367					
Duration: 4 periods						Design Cost is 9.0 % of the Build Cost				Design Cost: 882,440 (Consultant No 2)				
Desc: New adult mental health unit						Estimating confidence Extremely High				Build Cost: 9,804,893				
Location: Basingstoke, 88 miles from the Company H/O						The job has a Medium risk level				On-Cost: 1,991,592				
Sector: 2 Building & Commercial						Risk costs are 1.5 % of the build cost				Mark-Up: 5.0 %				
Client: New Forest County Council										Bid: 13,312,872				

The **Job Progress Report** displays progress information on a period by period basis for each job awarded to the company.

Job	Dur	Per	Labour Analysis				Costs incurred during the period				Value Accrued		Progress/Profit	
			Labour on Site				Cost breakdown		Project Manager Details					
15	4	5	Planned:	92			Design Fee:	224,905	Agency Cost:	0				
			Actual:	125	Own: 5 + Sub: 120		Build Cost:	3,256,636	Person on Site:	8				
					New: 5		Site Cost:	674,587						
					From ILP: 0		Risk Cost:	0	Salary:	11,650				
					Paid Off: 0		Penalty:	0	Bonus:	466				
					To ILP: 0		Training New Recruits:	6,000	Relocation:	0				
			Effective:	124.2			Labour Payoff:	0	Golden Hello:	0				
			Ineffective:	0.8	Training: 0.8		Sub Premium:	180,000	Recruit:	6,990	Measured value:	4,594,298	34.4 % Complete	
					Overman: 0.0				Previous mgr Payoff:	0	Completion bonus:	0	Ahead of Schedule	
									Period Costs:	4,361,234	Period Value:	4,594,298	Profit:	233,064



Main

Quit

Retention Report

The **Retention Report** gives a detailed breakdown for each job progressed of any monies withheld and repaid by the client.

Job	Desc	Client	<-- Period Retention Details -->			
			Finished Details	Period	Held	Repaid
4	Upgrade Membrane Microfiltration Plant	London Water Services Ltd	Yes (in period 5)	4	58,119	0
				5	96,439	77,279
				7	0	77,279
					154,558	154,558
6	New low head hydro power station	Electragen	Yes (in period 6)	4	46,735	0
				5	77,546	0
				6	6,194	65,238
				8	0	65,238
					130,475	130,476
10	Pier redevelopment	Fenlands County Council	Yes (in period 5)	4	63,577	0
				5	83,036	73,306
				7	0	73,306
					146,613	146,612
17	Install fibre-optic cables in towpaths	English Waterways	Yes (in period 6)	5	10,362	0
				6	12,340	11,351
				8	0	11,351
					22,702	22,702

A % of the measured value each period is **withheld by the client** until the job is completed.

The retention is **repaid** by the client in two equal instalments in :-

- The period the job is completed
- Two periods after completion



Main

Quit

Forward Workload and Margin Report

The **Forward Workload and Margin Report** gives a snapshot of the remaining workload (turnover) and margin on any on-going jobs.

The company's capital base can only support a certain level of forward workload (turnover), so the value at the beginning of the period can have a significant bearing on the company's ability to win work.

No	Desc	Sector	Size	Client	Remaining Value	Forward Workload	Remaining Cost	Forward Margin
55	Town centre refurbishment	3 Transport Contracts	Medium	National Transport	8,540,389	8,540,389	8,058,652	481,737
58	A17 Newark-on-trent	3 Transport Contracts	Large	National Transport	15,289,734	15,289,734	14,562,858	726,876
						23,830,123		1,208,613


[Main](#)
[Quit](#)

The **Idle Project Manager Pool Report** gives a snapshot of the company's current idle project managers.

Projects Managers can be held in the idle pool for use on future contracts, provided they are not kept idle for too long, since they still have to be paid.

No	Name	Age	Qualifications	Salary	Profile
1	Arkwright, R	42	BEng Building Engineering, MCIOB	48,900	<p>On graduating, spent a very rewarding 4 years working for a large consultancy specialising in energy contracts. This was followed by 6 years as senior planning engineer on the construction of a nuclear plant in Cumbria. Since then, has progressed into site management, working for a number of contractors on a wide variety of different types of work.</p> <p>A real all-rounder who can adapt to most types of work. Conscientious and a good team player. One failing is sometimes cutting corners to get the job done, which resulted in disciplinary action a few years ago. Married, two children, and a keen rugby player.</p>
2	Tennant, C	42	BSc Building Technology, MIOB	52,780	<p>On graduation, spent 4 years as an estimator on all types of building works, followed by 11 years as site engineer on some large commercial building projects. Since then, has been the area manager for a well-known housing contractor.</p> <p>A real achiever, very self-motivated, and prepared to travel if the right opportunities present themselves. Had a string of personal relationships, but never married. A keen fitness fanatic.</p>

Project Manager Details Report

The **Project Manager Details Report** shows all the possible project managers that can be used by the Company. Some will already be employed, but many will be awaiting employment.

No.	Name	Age	Qualifications	Salary	Profile	Incentive required to secure services	Employment Status
1	Snickerton, L	29	BSc Quantity Surveying	30,000	<p>After an undistinguished time at University, acquired a post as a graduate engineer on a small building contract. After only a year, moved to a larger company working as a trainee site engineer on building estate work. Recently moved again to take up a site engineer's post on a commercial building contract in Liverpool.</p> <p>Has many outside interests, which often cause work distraction, and is suspected of having a drink problem. Is looking for a break into site management, and hoping to do so soon.</p>	None	Awaiting employment
2	Parsons, C	32	HNC Building practice	39,800	<p>Spent 5 years as a junior engineer on housing and shopping developments. Changed companies and worked for 4 years as a building surveyor with a contractor specialising in providing sheltered housing. Was promoted recently to site manager and given special responsibility for a new inner city housing development.</p> <p>Always hard working and devoted percent to the job, but sometimes by nature finds it difficult to make decisions. Has a stable family life, and likes nothing more than to be with the family.</p>	None	Employed by yourselves on job 11

The **profile** provides clues to the project manager's **expertise** in each market sector, and should enable project managers to be allocated to appropriate jobs.

Having a project manager on site with the appropriate skills can **improve** the progress of a job, but conversely progress can be **hindered** by a poor project manager.

The employment status indicates whether the project manager is :-

- **Currently employed** by the company (on site or idle)
- Employed by another company, and **unavailable** (final years only)
- In the market, and **available**



Main

Quit

Project Manager History Report

The **Project Manager History Report** gives a detailed account of which jobs a project manager was used on each period, along with performance information.

<- Improvement Factors -> <- Deteriorating Factors ->													
		<----- Job Details ----->			Time with the Company		<- Bonus Paid -->		< Distance from H/O >		Taking over from another		Reason for leaving, if applicable
No.	Name	Per	Job	Sector	Basic Performance	Improvement	%	Improvement	(miles)	Deterioration	Deterioration	Overall Performance	
2	Parsons, C	9	68	Building and Commercial Contr	good	none	3.0 %	marginal	94	noticeable	none	good	
		10	68	Building and Commercial Contr	good	marginal	3.0 %	marginal	94	noticeable	none	good	
3	Gurney, J	9	61	Energy Contracts	excellent	none	3.0 %	marginal	78	marginal	none	excellent	
		10	61	Energy Contracts	excellent	marginal	3.0 %	marginal	78	marginal	none	excellent	
6	Haldane, J	9	65	Industrial Contracts	reasonable	none	3.0 %	marginal	115	noticeable	none	reasonable	
		10	65	Industrial Contracts	reasonable	marginal	3.0 %	marginal	115	noticeable	none	reasonable	
13	Trentham, C	5	24	Transport Contracts	good	none	3.0 %	marginal	44	marginal	none	good	
		6	24	Transport Contracts	good	marginal	3.0 %	marginal	44	marginal	none	good	
		7	24	Transport Contracts	good	marginal	3.0 %	marginal	44	marginal	none	good	
		8	55	Energy Contracts	reasonable	marginal	3.0 %	marginal	280	noticeable	none	reasonable	
		9	55	Energy Contracts	reasonable	noticeable	3.0 %	marginal	280	noticeable	none	good	
		10	55	Energy Contracts	reasonable	noticeable	3.0 %	marginal	280	noticeable	none	good	

The project manager's **basic performance** is shown each period, along with the effects of :-

- Time spent with the company
- Any bonus paid in the period
- The distance of the job from the company's head office
- Taking over from another project manager at the beginning of the period, if that was the case

which result in the **overall performance**.



Main

Quit

This **Consultant Details Report** shows all of the consultants that can be used by the Company. Some will already be being used on design & build jobs, but there may be many others who have not been used to date.

No	Name	Profile	Availability
6	SD Partridge Consultants	<p>A family owned and managed company that has been providing a design and service solely to the aerospace, automotive, and associated industries in excess of 40 years.</p> <p>They believe firmly in providing a high level of customer care and support, and this has resulted in a lot of repeat business over the years.</p> <p>Although their work is always of a high standard, their facilities are in need of modernisation, especially on the technology side.</p>	Available
7	CV Godfrey Associates	<p>Formed over thirty years ago, the company draws on its proven experience and management skills to provide its extensive list of clients with a high quality service.</p> <p>The company operates exclusively in the Building & Commercial sector, and is renowned throughout the industry for its supermarket and residential developments.</p> <p>The practice is located centrally within the UK enabling it to operate successfully in all regions of the country. Management are looking to expand into overseas markets.</p>	Unavailable: Influx of overseas work

The **company profile** provides clues to the consultant's **expertise** in each market sector, and should enable consultants to be allocated to appropriate design and build jobs.

Employing a consultant with the appropriate skills can **improve** the design, and save on the build costs, albeit at a higher design fee. Conversely build costs can be far higher by using a poorer consultant, but there may be a lower design fee.

The **availability** status indicates whether the consultant is currently available for use.



Main

Quit

For each design & build job on which a consultant is used, the report gives an indication of the consultant's impact on the :-

- **build cost**, which is affected by their **expertise** in the job sector, and **innovative** qualities. The % change in build costs is also shown
- **design cost**; which is affected by their **expertise** in the job sector

In the example show, Crawford & Partners were the 'best' consultants used.

<----- Job Details -----> <----- Factors Affecting Build Costs -----> <-- Affects on Design Costs -->

No.	Name	Job	Status	Sector	Expertise in the Sector	Innovative qualities	% change	Expertise in the Sector
3	Crawford and Partners	102	In First Period	Water and Sewage Contracts	significantly reduces	slightly increases	-2.52	much higher than expected
11	Henry Croft Associates	43	Completed	Water and Sewage Contracts	no noticeable affect on	slightly increases	0.51	as expected
12	Design International Ltd	96	In First Period	Building and Commercial Contract	reduces	slightly reduces	-2.02	higher than expected
23	MDK Basford Consulting Ltd	28	Completed	Transport Contracts	no noticeable affect on	slightly increases	0.49	as expected
32	DR Cowlishaw & Partners	94	In Second Period	Water and Sewage Contracts	no noticeable affect on	reduces	-1.02	as expected


[Main](#)
[Quit](#)

The **Client Relationships Report (Summary)** describes the current state of the company's relationship with each Client, and gives details of the value of work won, and at what markup.

<u>Client</u>	<u>Relationship</u>	<u>Value of work Won, and % Markup above Cost</u>		
National Transport	satisfactory			
New Forest County Council	fairly good	13,312,872	at 5.0 %	(19.5 % of the Total)
Railline	fairly good	5,440,605	at 6.3 %	(8.0 % of the Total)
Saintesc Foods	satisfactory			
South Wales County Council	satisfactory			
Sport England	fairly good	21,088,508	at 4.8 %	(30.9 % of the Total)

The **Client Relationships History** expands upon the summary, showing how the relationship was arrived at.

					Job Progress Details			
Period		Description	Estimating Confidence	Bidding Details	Contract Completion Time	Consultant Designer Used	Project Manager Used	Level of Site Admin Cost Allocated
Job	Preq							
Sport England								
8	1	Build headquarters	Extremely High	competitive bid, and the job was won	early		good	very good
49	5	Build Wheelchair tennis centre	Extremely High	competitive bid, and the job was won	not finished	good		

The relationship **depends** on a number of factors relating to each job that the company prequalified for with the client, such as :-

- the quality of the estimate
- how competitive the bid was
- how the job was progressed



Main

Quit

Financial Report

The **Financial Report** shows the period by period financial structure of the Company.

Per	Profit & Cashflow	Balance Sheet
7	<p>Cash Account changes due to Financial Decisions</p> <p><u>Additional Income</u></p> <p>Reducing the Capital Base: 0</p> <p>Reducing Investments: 513,856</p> <p>513,856</p> <p><u>Additional Expenditure</u></p> <p>Dividend: 81,000 (1.5% of equity)</p> <p>Increasing the Capital Base: 0</p> <p>Increasing Investments: 400,000</p> <p>481,000</p> <p>Net change: 32,856</p> <p>Operational Performance of the Company</p> <p>Job Performance</p> <p>Measured Value: 9,234,875 (Turnover)</p> <p>Early Completion Bonus: 66,564</p> <p>Retention Repaid: 183,836</p> <p>(less) Retention Held: 138,523</p> <p>Monies Received: 9,346,752</p> <p>(less) Costs: 8,964,860</p> <p>Gross Profit: 381,892 (4.3 % of costs)</p> <p>Operating Profit</p> <p>(less) Overheads: 251,580 (2.8 % of costs)</p> <p>130,312 (before Tax & Interest)</p> <p>(less) Corporation Tax: 38,225 (21,098 Capital Allow, 35% rate)</p> <p>(plus) Credit Interest: 0 (5.2% pa from Cash A/C)</p> <p>(less) Overdraft Interest: 3,442 (11.3% pa from Cash A/C)</p> <p>Operating Profit: 88,645</p> <p>Cash Account Summary</p> <p>Previous balance: -121,838 (prior to any decisions)</p> <p>Impact of Financial Decisions: 32,856</p> <p>Net Operating Profit: 88,645</p> <p>Cash Account balance: -337</p>	<p>Shareholder Information</p> <p>Number of Shares: 5,000,000</p> <p>Current Share Price: 1.23</p> <p>Equity: 6,150,000</p> <p>Work in Progress</p> <p>Forward Workload: 26,406,906</p> <p>Forward Margin: 1,524,708</p> <p>Debt Burden</p> <p>Gearing Ratio: 0.00</p> <p>Assets & Liabilities</p> <p>Cash Account: -337</p> <p>Capital Base</p> <p>Previous Value: 4,253,421</p> <p>Increased by: 0</p> <p>Reduced by: 0</p> <p>Depreciation: 26,584 (2.5% pa)</p> <p>4,226,837 (76% Capital Employed)</p> <p>Investments</p> <p>Previous Value: 764,314</p> <p>Increased by: 400,000</p> <p>Reduced by: 513,856</p> <p>650,458</p> <p>Investment Returns: 10,446 (1.6 %)</p> <p>660,904</p> <p>Company Value: 4,887,404 (0.2% decrease)</p>

The **Investment Opportunities Report** shows all the possible investment opportunities available at the current time along with past performance information for each one.

<u>Name</u>	<u>Desc</u>	<u>Size</u>	<u>Form</u>	<u>Status</u>	Previous Performance ->	
					<u>Period</u>	<u>% Return</u>
AGT Design Services Ltd	Providers of construction design solutions	Medium	Loan	Available for investment		
<p>They provide efficient and well engineered structural and civil design solutions for all sectors of industry, commerce and leisure.</p> <p>When commissioned to work within the framework of a multi-disciplinary design team, they aim to integrate the structural and civil elements into the overall project philosophy, with considered attention down to the finest detail.</p>						
					6	-7.1 %
					7	-9.9 %
British Fuels Plc	Nuclear energy services	Medium	Loan	Currently investing in		
<p>An international nuclear energy business that employs some 20,000 people in 15 countries.</p> <p>Their activities span the entire nuclear energy cycle. That means everything from reactor design and fuel manufacture to power station decommissioning and clean-up.</p> <p>They have around a 15% share of the world nuclear market.</p>						
					5	-0.5 %
					6	3.2 %
					7	1.4 %



Main

Quit

Investment History Report

The **Investment History Report** shows all the concerns that the company has invested in to date, along with the % returns and any build costs savings earned.

Investment Details			Period changes				Period Returns			Job Benefits
Name	Desc	Period	Starting Value	Increase by	Reduced by	Required Value	% Return	Return Value	Final Value	Build Cost Savings
British Fuels Plc	Nuclear energy services	7	0	100,000	0	100,000	1.4 %	1,400	101,400	0
						100,000	1.40 %	1,400		0
Cymru Water Plc	Water supply and waste water management	4	0	150,000	0	150,000	8.1 %	12,150	162,150	0
		5	162,150	150,000	0	312,150	7.1 %	22,163	334,313	0
		6	334,313	150,000	0	484,313	6.1 %	29,543	513,856	0
		7	513,856	0	513,856	0	7.5 %	0	0	0
						946,463	6.75 %	63,856		0
DBY Equipment Ltd	Suppliers of construction equipment	5	0	100,000	0	100,000	-1.4 %	-1,400	98,600	0
		6	98,600	100,000	0	198,600	-0.6 %	-1,192	197,408	0
		7	197,408	100,000	0	297,408	0.7 %	2,082	299,490	40,615
						596,008	-0.09 %	-510		40,615



Main

Quit

Overhead Report

The **Overhead Report** gives a period by period breakdown of the staffing levels and costs in each overhead department, including unproductive staff, along with other overhead costs.

Departmental												Non-Departmental	
Staffing Levels						Period Costs							
Per	Department	<--- Company Staff --->				<----- Company Staff ----->						Other Overhead Costs	Total Overheads
		New	Paid off	Own	Agency	Total	Salaries	Recruit	Pay Offs	Agency	Total		
5													
	Marketing	2	0	4	n/a	4	28,000	10,080	0	n/a	38,080		
	Estimating	0	0	3	0	3	18,750	0	0	0	18,750		
	Head Office	3	0	6	1	7	33,000	7,920	0	8,250	49,170		
	QHSE	2	0	4	1	5	30,000	10,800	0	11,250	52,050		
	Measurement	2	0	4	1	5	35,000	14,000	0	13,500	62,500		
											220,550	Cost of Bidding:	1,750
												Idle Labour Pool:	0
												Idle Project Manager Pool:	0
												External Performance Review:	10,000
													232,300



Main

Quit

Marketing Analysis Report

The **Marketing Analysis Report** provides the Overhead manager with detailed information about the past, present and future market trends, along with the value of work prequalified for to date.

The information enables informed decisions to be made about **marketing strategy**, in terms of where marketing effort needs to be directed, and the size of the marketing department needed to achieve the required prequalification targets.

Market Information								Company Specific Information						
<----- The value of new tenders (millions, % in brackets) ----->								<- Prequalification Details ->		<----- % Effort By Sector ----->				
Period Details	Overall	IND	B&C	TRA	ENE	W&S	No. Staff	Value	% of Market	IND	B&C	TRA	ENE	W&S
1 Past	162	8 (5%)	45 (28%)	35 (22%)	34 (21%)	40 (25%)	2	40 (25%)		5 %	28 %	22 %	21 %	24 %
2 Past	125	7 (6%)	34 (27%)	25 (20%)	44 (35%)	15 (12%)	2	14 (11%)		6 %	31 %	17 %	31 %	15 %
3 Past	111	0 (0%)	29 (26%)	38 (34%)	1 (1%)	43 (39%)	2	12 (11%)		0 %	25 %	27 %	23 %	25 %
4 Past	111	0 (0%)	45 (41%)	25 (23%)	23 (21%)	18 (16%)	2	16 (14%)		1 %	35 %	22 %	24 %	18 %
5 Past	104	5 (5%)	14 (13%)	30 (29%)	8 (8%)	47 (45%)	4	25 (24%)		5 %	25 %	30 %	14 %	26 %
6 Past	108	0 (0%)	43 (40%)	29 (27%)	0 (0%)	36 (33%)	6	62 (57%)		0 %	35 %	27 %	4 %	34 %
7 Past	72	4 (6%)	16 (22%)	31 (43%)	4 (6%)	17 (24%)	8	37 (51%)		5 %	26 %	37 %	6 %	26 %
8 Past	68	0 (0%)	30 (44%)	26 (38%)	12 (18%)	0 (0%)	10	27 (40%)		0 %	34 %	37 %	13 %	16 %
9 Current	90	12 (13%)	25 (28%)	38 (42%)	12 (13%)	3 (3%)								
10 Future	101	8 (8%)	34 (34%)	42 (42%)	6 (6%)	11 (11%)								
11 Future	105	9 (9%)	24 (23%)	32 (30%)	28 (27%)	12 (11%)								
12 Future	120	19 (16%)	24 (20%)	20 (17%)	21 (18%)	36 (30%)								
13 Future	128	21 (16%)	44 (34%)	25 (20%)	23 (18%)	15 (12%)								

The **size** of the past, present and future market is shown, along with sector breakdowns. The current and future periods are estimated, with the accuracy of the estimates depending upon the size of the marketing department.

The **value** of work prequalified for each period is shown, along with the amount of marketing effort (dept size), and where the effort was directed (by sector).



Main

Quit

The **Risk Analysis Report** provides a detailed analysis of the affect risk has had on the company, up to the current point in time.

The report shows, for each job secured, the :-

- Risk contingency included at the procurement stage
- The total risk cost incurred to date on the job, along with influencing factors

There is also an overall summary.

Ideally, the company would be hoping that the overall risk contingency would exceed the total adjusted risk cost, providing additional profit across jobs progressed.

<----- Job Progression (to date) ----->				
Job	Job Details	Procurement Details	Risk Cost Incurred/Influencing Factors	When the Risk Occurred
58	Type: Build Only Sector: 3 Transport Contracts Description: A17 Newark-on-trent Client: National Transport	Estimated Build Cost: 12,099,521 Risk level: High Estimated % Risk Cost: 2.5 % of Build Cost Estimated Risk Cost: 302,488 Risk Contingency in the Bid: 136,120	Initial risk cost incurred: 0 QHSE Department staffing level: 0.0 % Project Manager performance: 0.0 % Number of own labour paid off: 0.0 % Number of subcontractors used: 0.0 % Adjusted risk cost incurred: 0 (0 % of Contingency)	Not occurred to date
TOTALS for ALL jobs ==>		Risk Contingency: 348,329	Adjusted Risk Cost Incurred: 0	(0 % of Contingency)

Each round of the simulation is known as a **period**, which represents 3 trading months, or one quarter.

The periods fall into three distinct phases :-

Historical Year

This covers periods 1 to 4, and is used to establish the history of the company before you take over its management.

The Early Years

You take over the management in period 5, and run the company for a number of periods, normally 8 (2 trading years). During this time the company is competing against a computer-simulated company for any jobs that are available.

The Final Years

At the end of the early years the leading companies will be invited to compete against each other and the computer-simulated company in the final years, which normally last another 6 periods ($1\frac{1}{2}$ more trading years). During this time the competition will be for both jobs and people, such as project managers and consultants.

Based on the three phases the game period can be any value from 5 onwards, normally finishing at 18.

[Main](#)[Quit](#)

Keep Clicking Anywhere on the screen to advance the demo

The amount of money that can be borrowed from the bank is not unlimited, and the **overdraft limit** is shown in the **Company and Financial Information**.

The overdraft limit is fixed, and does not vary from period to period.

But what happens if the overdraft limit is exceeded ?

Miscellaneous

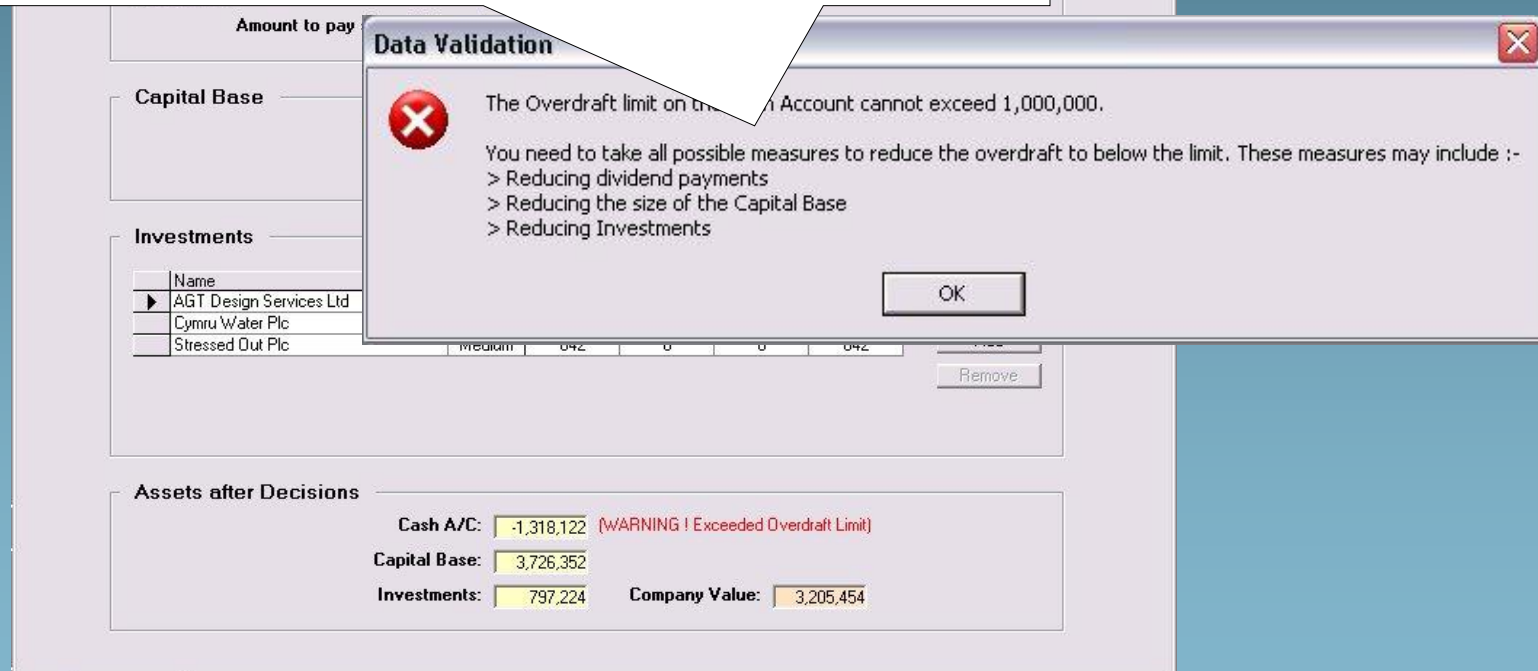
Cash A/C Overdraft Limit:	<input type="text" value="1,000,000"/>
External Performance Reviews cost:	<input type="text" value="12,000"/> each period

Consider the following example.

Its period 8, and after decisions were processed last period the company's overdraft has reached 1,318,122, which has exceeded the limit of 1,000,000. As a result, a warning message is displayed.

As soon as the Financial Decisions Screen is closed a **critical warning message** appears. The message informs the Financial Manager that all possible measures need to be taken to reduce the overdraft to below the limit.

The Financial Manager decides the best action to take is to reduce the capital base by 400,000.



The screenshot shows a software interface for financial management. A 'Data Validation' dialog box is open, displaying a warning about the overdraft limit. The background screen shows the 'Financial Decisions' screen with sections for 'Amount to pay', 'Capital Base', 'Investments', and 'Assets after Decisions'.

Data Validation Dialog Box:

- Title:** Data Validation
- Message:** The Overdraft limit on the Current Account cannot exceed 1,000,000.
- Text:** You need to take all possible measures to reduce the overdraft to below the limit. These measures may include :-
- List of measures:**
 - > Reducing dividend payments
 - > Reducing the size of the Capital Base
 - > Reducing Investments
- Buttons:** OK

Financial Decisions Screen:

- Amount to pay:** (Empty field)
- Capital Base:** (Empty field)
- Investments:**

Name	Medium	042	0	0	042	000
▶ AGT Design Services Ltd						
Cymru Water Plc						
Stressed Out Plc						
- Assets after Decisions:**

Cash A/C:	-1,318,122	(WARNING ! Exceeded Overdraft Limit)
Capital Base:	3,726,352	
Investments:	797,224	
Company Value:	3,205,454	

Financial Decisions - Period 8

Assets before decisions

Cash A/C: -1,318,122
Capital Base: 3,726,352
Investments: 797,224 Company Value: 3,205,454

Dividend

Amount to pay shareholders: 0 0% of Equity of 2,100,000

Capital Base

Increase by: 0 limited to 372,635
Reduce by: 400000 limited to 931,588

Investments

	Name	Size	Initial Value	Increase	Reduction	Required
▶	AGT Design Services Ltd	Large	326,400	0	0	326,400
	Cymru Water Plc	Large	469,982	0	0	469,982
	Stressed Out Plc	Medium	842	0	0	842

Change
Add
Remove

Assets after Decisions

Cash A/C: -918,122
Capital Base: 3,326,352
Investments: 797,224 Company Value: 3,205,454

The warning message has now disappeared, and the cash account balance is below the overdraft limit.

Key Points

- If all possible measures have been taken, and the cash account balance **still exceeds** the overdraft limit, then no further action needs to be taken, and the user is not prevented from moving to another screen.
- The cash account **can go above** the overdraft limit when decisions are processed, but during the following period all possible measures need to be taken to reduce the balance to below the overdraft limit.

Financial D

As

Dividend

Amount to pay share

00,000

Capital Base

Increase

Reduce t

Investments

Name	Size	Increase	Reduction	Required
AGT Design Services Ltd	Large	0	0	326,400
Cymru Water Plc	Large	0	0	469,982
Stressed Out Plc	Medium	0	0	842

Change

Add

Remove

Assets after Decisions

Cash A/C: -918,122

Capital Base: 3,326,352

Investments: 797,224

Company Value: 3,205,454

Financial Decisions - Period 8

Assets before decisions

Cash A/C: -1,318,122
Capital Base: 3,726,352
Investments: 797,224 Company Value: 3,205,454

Dividend

Amount to pay shareholders: 0 0% of Equity of 2,100,000

Capital Base

Increase by: 0 limited to 372,635
Reduce by: 400000 limited to 931,588

Investments

	Name	Size	Initial Value	Increase	Reduction	Required
▶	AGT Design Services Ltd	Large	326,400	0	0	326,400
	Cymru Water Plc	Large	469,982	0	0	469,982
	Stressed Out Plc	Medium	842	0	0	842

Change
Add
Remove

Assets after Decisions

Cash A/C: -918,122
Capital Base: 3,326,352
Investments: 797,224 Company Value: 3,205,454

The Demo is now complete

Financial Decisions - Period 8

Assets before decisions

Cash A/C: -1,318,122

Capital Base: 3,726,352

Investments: 797,224 Company Value: 3,205,454

Dividend

Amount to pay shareholders: 0 0% of Equity of 2,100,000

Capital Base

Increase by: 0 limited to 372,635

Reduce by: 400000 limited to 931,588

Investments

Name	Size	Initial Value	Increase	Reduction	Required
▶ AGT Design Services Ltd	Large	326,400	0	0	326,400
Cymru Water Plc	Large	469,982	0	0	469,982
Stressed Out Plc	Medium	842	0	0	842

Change

Add

Remove

Assets after Decisions

Cash A/C: -918,122

Capital Base: 3,326,352

Investments: 797,224 Company Value: 3,205,454

Factors that affect Share Price

Keep Clicking Anywhere on the screen to advance the demo

Factors that affect Share Price

The company's share price is one of the key performance indicators in measuring the success or failure of the company, with a rising share price signifying increasing industry confidence in the fortunes of the Company.

The share price is influenced by :-

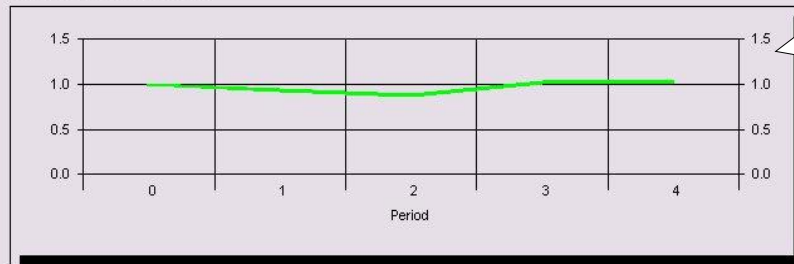
- The level of **Dividend** paid to the shareholders
- The **value** of the company
- The **future profitability** of the company
- The **debt burden** (gearing ratio) of the company

Factors that affect Share Price

Factors Affecting Share Price

Period	Dividend Payments			Company Value	Forward Margin	Gearing Ratio	Share Information at end of period		
	Initial Equity	Dividend	% of Equity				Num Shares	Share Price	Equity
0	5,000,000	0	0.0	5,000,000	0	0.000	5,000,000	1	5,000,000
1	5,000,000	75,000	1.5	4,864,230	0	0.000	5,000,000	0.94	4,700,000
2	4,700,000	70,500	1.5	4,712,621	0	0.000	5,000,000	0.88	4,400,000
3	4,400,000	66,000	1.5	4,581,542	1,212,726	0.000	5,000,000	1.02	5,100,000
4	5,100,000	76,500	1.5	4,679,669	1,012,535	0.000	5,000,000	1.03	5,150,000

Share Price Movement



Consider the following example, where a company is in period 5.

To analyse the **share price history** we can use :-

- The **Financial Details button** from the Financial Screen
- Information from the **Consultants' Report**

The share price trend for the first 4 periods has been a **fluctuating** one.

We'll now look in more detail at why this has been the case.

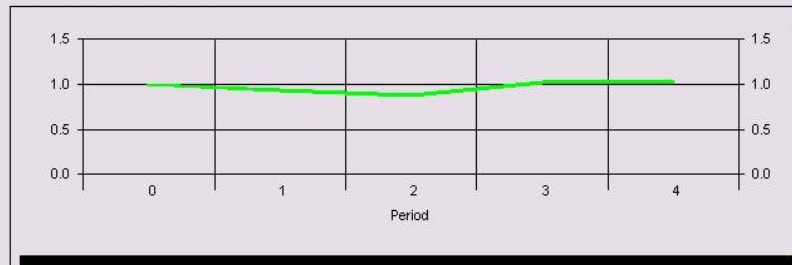
Period	Details
1	Shareholders are content with the level of dividend paid
1	The declining company value has not helped industry confidence in the company
2	Shareholders are content with the level of dividend paid
2	The declining company value has not helped industry confidence in the company
3	The increasing future profitability has dramatically improved industry confidence in the company
3	Shareholders are content with the level of dividend paid
3	The declining company value has not helped industry confidence in the company
4	The declining future profitability has not helped industry confidence in the company
4	Shareholders are content with the level of dividend paid
4	The declining company value has not helped industry confidence in the company

Factors that affect Share Price

Factors Affecting Share Price

Period	Dividend Payments			Company Value	Forward Margin	Gearing Ratio	Share Information at end of period		
	Initial Equity	Dividend	% of Equity				Num Shares	Share Price	Equity
0	5,000,000	0	0.0	5,000,000	0	0.000	5,000,000	1	5,000,000
1	5,000,000	75,000	1.5	4,864,230	0	0.000	5,000,000	0.94	4,700,000
2	4,700,000	70,500	1.5	4,712,621	0	0.000	5,000,000	0.88	4,400,000
3	4,400,000	66,000	1.5	4,581,542	1.212 726	0.000	5,000,000		
4	5,100,000	76,500	1.5	4,581,542					

Share Price Movement



Period	Details
1	Shareholders are content with the level of dividend paid
1	The declining company value has not helped industry confidence in the company
2	Shareholders are content with the level of dividend paid
2	The declining company value has not helped industry confidence in the company
3	The increasing future profitability has dramatically improved industry confidence in the company
3	Shareholders are content with the level of dividend paid
3	The declining company value has not helped industry confidence in the company
4	The declining future profitability has not helped industry confidence in the company
4	Shareholders are content with the level of dividend paid
4	The declining company value has not helped industry confidence in the company

Dividend payments

Dividends are taxable payments declared by a company's board of directors and given to its shareholders, normally quarterly. They provide an incentive to own stock in stable companies even if they are not experiencing much growth. Dividend payments are based upon the current share price.

The **equity** of the company at any time is the overall share value i.e., the number of shares in circulation multiplied by the current price per share.

There is a level of dividend, measured as a % of the equity, at which the share price **does not change**. Paying more than the 'equilibrium' level will cause the share price to rise, but paying less will be not be well received by the shareholders, and the price will fall.

Dividend payments of 1.5% of equity have been made each period, and the affect has been **"Shareholders are content with the level of dividend paid"**, implying no change to the share price.

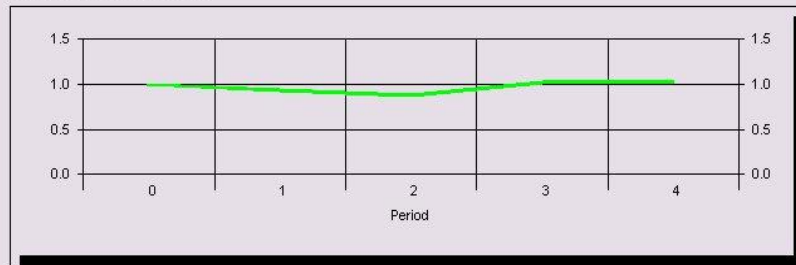
If dividend has had little affect on the share price, what about other factors ?

Factors that affect Share Price

Factors Affecting Share Price

Period	Dividend Payments			Company Value	Forward Margin	Gearing Ratio	Share Information at end of period		
	Initial Equity	Dividend	% of Equity				Num Shares	Share Price	Equity
0	5,000,000	0	0.0	5,000,000	0	0.000	5,000,000	1	5,000,000
1	5,000,000	75,000	1.5	4,864,230	0	0.000	5,000,000		
2	4,700,000	70,500	1.5	4,712,621	0	0.000	5,000,000		
3	4,400,000	66,000	1.5	4,581,542	0	0.000	5,000,000		
4	5,100,000	76,500	1.5	4,679,669	1.012,535	0.000	5,000,000		

Share Price Movement



Company Value

Changes in the **value of the company** from period to period also affect the share price.

If the company value falls in a period, it will have a **depressing effect on share price** as shareholder and industry confidence falls. Conversely, if the value increases then confidence will improve, and the **share price will increase**.

As can be seen the **trend has been for the value to fall**, adversely affecting industry confidence in the company, and having a negative affect on the share price, as indicated in the **Consultants Report**.

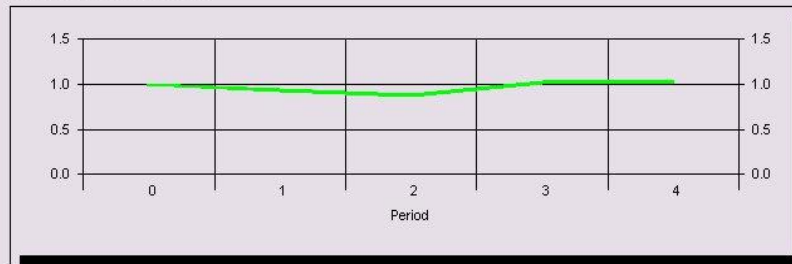
Period	Details
1	Shareholders are content with the level of dividend paid
1	The declining company value has not helped industry confidence in the company
2	Shareholders are content with the level of dividend paid
2	The declining company value has not helped industry confidence in the company
3	The increasing future profitability has dramatically improved industry confidence in the company
3	Shareholders are content with the level of dividend paid
3	The declining company value has not helped industry confidence in the company
4	The declining future profitability has not helped industry confidence in the company
4	Shareholders are content with the level of dividend paid
4	The declining company value has not helped industry confidence in the company

Factors that affect Share Price

Factors Affecting Share Price

Period	Dividend Payments			Company Value	Forward Margin	Gearing Ratio	Share Information at end of period		
	Initial Equity	Dividend	% of Equity				Num Shares	Share Price	Equity
0	5,000,000	0	0.0	5,000,000	0	0.000	5,000,000	1	5,000,000
1	5,000,000	75,000	1.5	4,864,230	0	0.000	5,000,000	0.94	4,700,000
2	4,700,000	70,500	1.5	4,712,621	0	0.000	5,000,000	0.94	4,700,000
3	4,400,000	66,000	1.5	4,581,542	1,212,726	0.000	5,000,000	0.94	4,700,000
4	5,100,000	76,500	1.5	4,679,669	1,012,535	0.000	5,000,000	0.94	4,700,000

Share Price Movement



Future Profitability

Another factor that affects the share price is the **future profitability** (forward margin) of the company, which is based upon the company's work in progress.

At the end of periods 1 and 2, whilst the company was being established, there were no ongoing jobs, and hence no forward margin.

However, successful tendering in period 3 secured some profitable work, and by the end of the period the forward margin was standing at a healthy 1,410, 421. This dropped slightly in period 4.

The **fluctuating changes** are reflected in the changes in industry confidence in the company, which had both positive ("dramatic improvement") and negative ("not helped") affects on the company's share price.

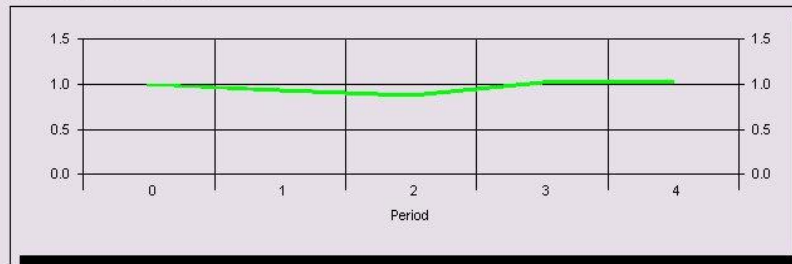
Period	Details
1	Shareholders are content with the level of dividend paid
1	The declining company value has not helped industry confidence in the company
2	Shareholders are content with the level of dividend paid
2	The declining company value has not helped industry confidence in the company
3	The increasing future profitability has dramatically improved industry confidence in the company
3	Shareholders are content with the level of dividend paid
3	The declining company value has not helped industry confidence in the company
4	The declining future profitability has not helped industry confidence in the company
4	Shareholders are content with the level of dividend paid
4	The declining company value has not helped industry confidence in the company

Factors that affect Share Price

Factors Affecting Share Price

Period	Dividend Payments			Company Value	Forward Margin	Gearing Ratio	Share Information at end of period		
	Initial Equity	Dividend	% of Equity				Num Shares	Share Price	Equity
0	5,000,000	0	0.0	5,000,000	0	0.000	5,000,000	1	5,000,000
1	5,000,000	75,000	1.5	4,864,230	0	0.000	5,000,000	0.94	4,700,000
2	4,700,000	70,500	1.5	4,712,621	0	0.000	5,000,000	0.88	4,400,000
3	4,400,000	66,000	1.5	4,581,542	1,212,726	0.000	5,000,000	0.92	4,700,000
4	5,100,000	76,500	1.5	4,679,669	1,012,535	0.000	5,000,000	0.94	4,700,000

Share Price Movement



Period	Details
1	Shareholders are content with the level of dividend paid
1	The declining company value has not helped industry confidence in the company
2	Shareholders are content with the level of dividend paid
2	The declining company value has not helped industry confidence in the company
3	The increasing future profitability has dramatically improved industry confidence in the company
3	Shareholders are content with the level of dividend paid
3	The declining company value has not helped industry confidence in the company
4	The declining future profitability has not helped industry confidence in the company
4	Shareholders are content with the level of dividend paid
4	The declining company value has not helped industry confidence in the company

Gearing Ratio

The final factor affecting the share price is changes in the **gearing ratio**.

The Gearing Ratio is the ratio of the company's borrowings (cash account overdraft) to its assets (cash account in credit, capital base and investments, and indicates the **debt burden** of the company. If there is no cash account overdraft, the gearing ratio is 0.

If the gearing ratio increases the company will be viewed as being vulnerable to both interest rate rises, and its ability to service its debts from its future profit flows. Consequently, this will have a **depressing effect on share price**. Conversely, if the gearing ratio decreases then the company will be viewed as being more financially sound, and the **share price will increase**.

As can be seen, there was no cash account overdraft in periods 1-4, and the **gearing ratio rose** remained at 0, with no affect on the share price.

Factors that affect Share Price

Factors Affecting Share Price									
Period	Dividend Payments			Company Value	Forward Margin	Gearing Ratio	Share Information at end of period		
	Initial Equity	Dividend	% of Equity				Num Shares	Share Price	Equity
0	5,000,000	0	0.0	5,000,000	0	0.000	5,000,000	1	5,000,000
1	5,000,000	75,000	1.5	4,864,230	0	0.000	5,000,000	0.94	4,700,000
2	4,700,000	70,500	1.5	4,712,621	0	0.000	5,000,000	0.88	4,400,000
3	4,400,000	66,000	1.5	4,581,542	1,212,726	0.000	5,000,000	1.02	5,100,000
4	5,100,000	76,500	1.5	4,679,669	1,012,535	0.000	5,000,000	1.03	5,150,000

Summary

Each of the 4 factors :-

- Dividend payments
- Changes in company value
- Changes in future profitability
- Changes in gearing

have different levels of impact upon the company share price. It may be, for example, that the share price rises even though 3 of the factors have negative affects, but the positive affect of the 4th factor has the greatest impact.

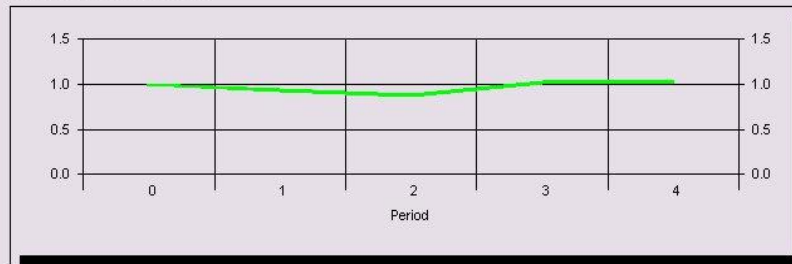
Careful examination is needed of the company data to determine which factors have had which affects, and to what level.

Factors that affect Share Price

Factors Affecting Share Price

Period	Dividend Payments			Company Value	Forward Margin	Gearing Ratio	Share Information at end of period		
	Initial Equity	Dividend	% of Equity				Num Shares	Share Price	Equity
0	5,000,000	0	0.0	5,000,000	0	0.000	5,000,000	1	5,000,000
1	5,000,000	75,000	1.5	4,864,230	0	0.000	5,000,000	0.94	4,700,000
2	4,700,000	70,500	1.5	4,712,621	0	0.000	5,000,000	0.88	4,400,000
3	4,400,000	66,000	1.5	4,581,542	1,212,726	0.000	5,000,000	1.02	5,100,000
4	5,100,000	76,500	1.5	4,679,669	1,012,535	0.000	5,000,000	1.03	5,150,000

Share Price Movement



Period	Details
1	Shareholders are content with the level of dividend paid
1	The declining company value has not helped industry confidence in the company
2	Shareholders are content with the level of dividend paid
2	The declining company value has not helped industry confidence in the company
3	The increasing future profitability has dramatically improved industry confidence in the company
3	Shareholders are content with the level of dividend paid
3	The declining company value has not helped industry confidence in the company
4	The declining future profitability has not helped industry confidence in the company
4	Shareholders are content with the level of dividend paid
4	The declining company value has not helped industry confidence in the company

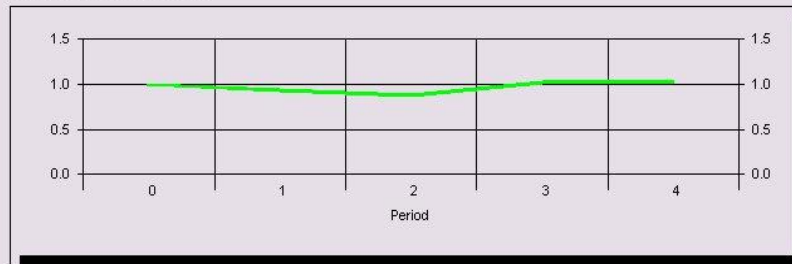
The Demo is now complete

Factors that affect Share Price

Factors Affecting Share Price

Period	Dividend Payments			Company Value	Forward Margin	Gearing Ratio	Share Information at end of period		
	Initial Equity	Dividend	% of Equity				Num Shares	Share Price	Equity
0	5,000,000	0	0.0	5,000,000	0	0.000	5,000,000	1	5,000,000
1	5,000,000	75,000	1.5	4,864,230	0	0.000	5,000,000	0.94	4,700,000
2	4,700,000	70,500	1.5	4,712,621	0	0.000	5,000,000	0.88	4,400,000
3	4,400,000	66,000	1.5	4,581,542	1,212,726	0.000	5,000,000	1.02	5,100,000
4	5,100,000	76,500	1.5	4,679,669	1,012,535	0.000	5,000,000	1.03	5,150,000

Share Price Movement



Period	Details
1	Shareholders are content with the level of dividend paid
1	The declining company value has not helped industry confidence in the company
2	Shareholders are content with the level of dividend paid
2	The declining company value has not helped industry confidence in the company
3	The increasing future profitability has dramatically improved industry confidence in the company
3	Shareholders are content with the level of dividend paid
3	The declining company value has not helped industry confidence in the company
4	The declining future profitability has not helped industry confidence in the company
4	Shareholders are content with the level of dividend paid
4	The declining company value has not helped industry confidence in the company

The **value** of the Company at any time is measured by its assets and liabilities, which consist of :-

- **Cash in the bank.** This can either be in credit (an asset) or in overdraft (a liability). There is an overdraft limit.
- **Capital Base.** This is the company's investment in plant, equipment, buildings etc, which determine the level of work that the company can undertake.
- **Investments.** The company's cash investment in other concerns, which may not be construction-related.

The value is **increased** by :-

- Generating an operating profit through the company's activities, which goes into the cash account
- Good investments

The value is **reduced** by :-

- Dividend payments to shareholders
- Making an operating loss through the company's activities, which comes out of the cash account
- Depreciation of the capital base
- Poor investments

The Company has one bank account, known as the **Cash Account**.

The Cash Account can be in two states :-

- In **Credit**, when it is considered an asset
- In **Overdraft**, when it is considered a liability. There is an overdraft limit defined in the Company and Financial Information.

Miscellaneous	
Cash A/C Overdraft Limit:	1,000,000

The Cash Account is **increased** by :-

- The company generating an operating profit
- Selling off a % of the capital base
- Selling investments

The Cash Account is **reduced** by :-

- Dividend payments to shareholders
- The company making an operating loss
- Increasing the capital base
- Increasing investments

[Main](#)[Quit](#)

The dividend paid to shareholders each period is one of the key factors that affects the **share price** of the company.

The dividend paid is expressed as a **% of the equity of the company**.

Amount to pay shareholders: 1.3% of Equity of 5,150,000

The **equity** of the company at any time is the overall share value i.e., the number of shares in circulation multiplied by the current price per share.

The dividend % of equity can be :-

- **Insufficient** to satisfy the shareholders, which will reduce the share price
- **Sufficient** to satisfy the shareholders, which will have a no effect on the share price
- **More than sufficient** to satisfy the shareholders, which increase the share price

The External Performance Review gives an indication of how the shareholders felt about the level of dividend paid in a particular period.

Details
Shareholders are content with the level of dividend paid
The increasing company value has improved industry confidence in the company
The declining future profitability has not helped industry confidence in the company

Gross Profit

Gross profit is the difference between measured value and total costs across all jobs progressed.

It is a measure of how profitable the company's jobs have been.

On some reports, such as the Company profit and Cashflow Report, retentions paid and withheld by the client are also taken into account.

Operating Profit

Operating profit is gross profit less other company costs/revenues, and is a measure of the overall profitability of the Company.

The 'other' company costs/revenues are :-

- Overheads (cost)
- Corporation Tax (cost)
- Credit interest from the Cash Account (revenue)
- Overdraft interest from the Cash Account (cost)

The Capital Base

Defined

The **capital base** is the company's investment in plant, equipment, buildings etc, which determine the level of work that the company can undertake.

Increasing

Changes to the capital base are the responsibility of the Financial Manager.

It can be increased from cash reserves in order to **support further growth**. There are limitations on the increase possible each period.

Capital Base increase limited to: % each period

The **Workload Limitations** button on the Bidding Screen gives an indication of when an increase may be necessary.

Reducing

The capital base can be Reduced to raise cash, which may be desirable if money is needed for other things, or it is not being fully utilised. There are limitations on the % of the Capital Base that can be sold off each period.

Capital Base that can be sold off/liquidated: % this period

Depreciation

Each period the Capital Base depreciates by a %, reducing the overall value of the Company. This occurs at the end of the period.

Capital Base Depreciation rate: % per annum

Measuring Usage

One of the key company performance indicators is **Capital Employed**, which measures how well the Capital Base is being utilised over a period of time.

The core business of the Company is procuring and progressing contracts, and if done successfully the Company will report a healthy operating profit, and increase the Company's value.

However, there are alternative ways of increasing the value of the Company, such as by **investing in other concerns**, which may or may not be construction-related. Such investments can :-

- Offer a better return than can be obtained from the bank.
- Offer a competitive advantage for work in progress e.g., investing enough money in a tarmac company would reduce build costs for Transport jobs as preferable material rates would be obtained.
- Each period a number of new investment opportunities may arise, adding to the list of available investments, and for each one some key information is given to help in making investment decisions :-
 - The **investment profile** describes the concern.
 - The **Past Performance** gives the % return given in previous periods to all investors, and details any money the Company invested, and any build cost savings gained.

There are **limitations** to any investments made, described in the company and financial information :-

- The increase in a single investment each period cannot exceed a given amount, depending upon the size of the investment concern.
- Depending upon the size of the concern, there is a minimum level of investment required to gain build cost savings, and a minimum potential % saving.
- The number of investments that can be held at any one time is fixed.

Gearing Ratio

The **Gearing Ratio** is the ratio of the company's borrowings (cash account overdraft) to its assets (cash account in credit, capital base and investments), and indicates the **debt burden** of the company.

If there is no cash account overdraft, the gearing ratio is 0.

Changes in the Gearing Ratio have an impact on the Company share price :-

- If the gearing ratio increases the company will be viewed as being vulnerable to both interest rate rises, and its ability to service its debts from its future profit flows. Consequently, this will have a **depressing effect on share price**.
- Conversely, if the gearing ratio decreases then the company will be viewed as being more financially sound, and the **share price will increase**.

Corporation Tax

Corporation Tax is calculated on the company's Operating Profit each period before tax and interest (**Gross Profit - Overheads**) each period, less any **Capital Allowances** accrued by the company; details of the rate are shown in the company and financial information.

Corporation Tax rate: 28 %

If the company makes an Operating Loss, then no Corporation Tax is paid, and any capital allowances are carried forward to future periods.

Capital Allowances are acquired by investing in the company's **capital base**, and are calculated on a 'written down' basis; the rate of writing down allowances is given in the company and financial information.

Capital Writing Down allowance: 25 % per annum

Calculating Capital Allowances

Keep Clicking Anywhere on the screen to advance the demo

Consider the following example where a company is in period 6, and the **Financial Report is being reviewed** for period 5.

Operational Performance of the Company

Job Performance

Measured Value:	11,346,592	<i>(Turnover)</i>
Early Completion Bonus:	75,393	
Retention Repaid:	145,397	
(less) Retention Held:	170,199	
Monies Received:	11,397,183	
(less) Costs:	10,591,534	
Gross Profit:	805,649	<i>(7.6 % of costs)</i>

Operating Profit

(less) Overheads	165,800	<i>(1.6 % of costs)</i>
	639,849	<i>(before Tax & Interest)</i>
(less) Corporation Tax:	166,506	<i>(45,186 Capital Allow; 28% rate)</i>
(plus) Credit Interest:	0	<i>(1.5% pa from Cash)</i>
(less) Overdraft Interest:	5,217	<i>(14.0% pa)</i>
Operating Profit:	468,126	

The Company made an Operating Profit before tax & interest of 639,849 in period 5.

Corporation Tax at 28% was paid on the 639,849 less Capital Allowances of 45,186.

But how was the Capital Allowance figure determined ?

Financial Report

Game Period:

Work in Progress

Forward Workload:

Forward Margin:

Assets & Liabilities

Cash Account balance:

Capital Base

Previous Value:

Increased by:

Reduced by:

Depreciation: (2.5% pa)

(61% Capital Employed)

Capital Allowances are the result of investment in the company's capital base i.e., any investment can be used as tax relief to offset the affects of corporation tax.

In period 5 the company invested 421,996 in their capital base.

The Capital Writing Down Allowance (given in the **Company & Financial Information**) is 25% per annum, or 6.25% per period.

In other words 6.25% of the 421,996 could be used as capital allowance in period 5, or **45,186**.

The remaining balance (421,996 – 45,186) would be similarly written off in the same way in future periods.

Capital Base

Capital Base increase limited to: % each period

Capital Base that can be sold off/liquidated: % this period

Capital Base Depreciation rate: % per annum

Capital Writing Down allowance: % per annum

Operational Performance of the Company

Job Performance

Measured Value:	5,898,200	<i>(Turnover)</i>
Early Completion Bonus:	0	
Retention Repaid:	63,191	
(less) Retention Held:	88,473	
Monies Received:	5,872,918	
(less) Costs:	7,581,905	
Gross Profit:	-1,708,987	<i>(-22.5 % of costs)</i>

Operating Profit

(less) Overheads	179,261	<i>(2.4 % of costs)</i>
	-1,888,248	<i>(before Tax & Interest)</i>
(less) Corporation Tax:	0	
(plus) Credit Interest:	10,286	<i>(5.4% pa from Cash A/C)</i>
(less) Overdraft Interest:	0	<i>(11.5% pa from Cash A/C)</i>
Operating Profit:	-1,877,962	

If an **Operating Loss** is made, then any Capital Allowances accrued will be carried forward to future periods.

The Demo is now complete

Calculating Capital Allowances

The prevalent interest rates each period are defined in **the Company and Financial Information**.

Cash Account interest is earned/paid on the Cash Account balance at the beginning of the period.

Cash Account Credit Interest

If the Cash Account is in credit, interest is earned at the annual rate shown.

Cash Account Overdraft Interest

If the Cash Account is overdrawn, interest is paid at the annual rate shown

Financial Rates

Bank Credit rate:	1.5	% per annum
Bank Overdraft rate:	14	% per annum
Corporation Tax rate:	28	%



Main

Quit

Overheads are the non-contract based support services required to enable the company to win and progress work.

They consist of :-

- **5 key departments**; Marketing, Estimating, Head Office, QHSE and Measurement.
- **Non-departmental overheads**, such as idle labour and project managers, who are not assigned to jobs being progressed.

The staff in each department can be either :-

- The company's own staff
- Agency staff

and are subject to costs and limitations shown in the **company and financial information** :-

Costs

- Company staff incur an annual salary per person.
- Agency staff incur an annual cost per person, which is higher than for company staff.
- For new company staff, the recruitment and training cost per person expressed as a % of the annual salary. Agency staff incur no recruitment/training cost.

Limitations

- There is a cap on the number of new company staff that can be employed in a period.

Keep Clicking Anywhere on the screen to advance the demo

All jobs belong to one of 5 sectors :-

- Industrial
- Building and Commercial
- Transport
- Energy
- Water and Sewage

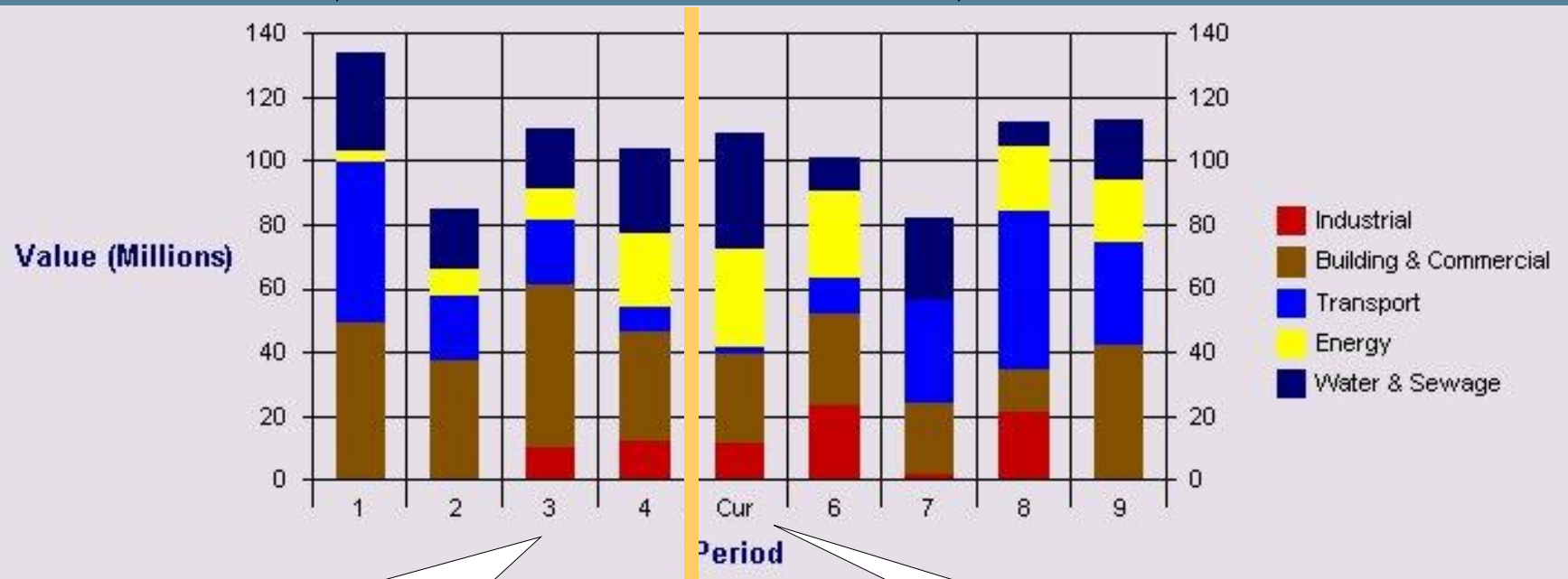
It is the role of the marketing department to identify jobs that the company can prequalify for in each of the sectors.

But how do they identify in which sectors work will be available ?

At any point in time the marketing department are able to :-

Accurately determine the past value of work available in each sector

Forecast the future trend of the market, the accuracy of the data based upon the marketing effort, or number of staff in the department



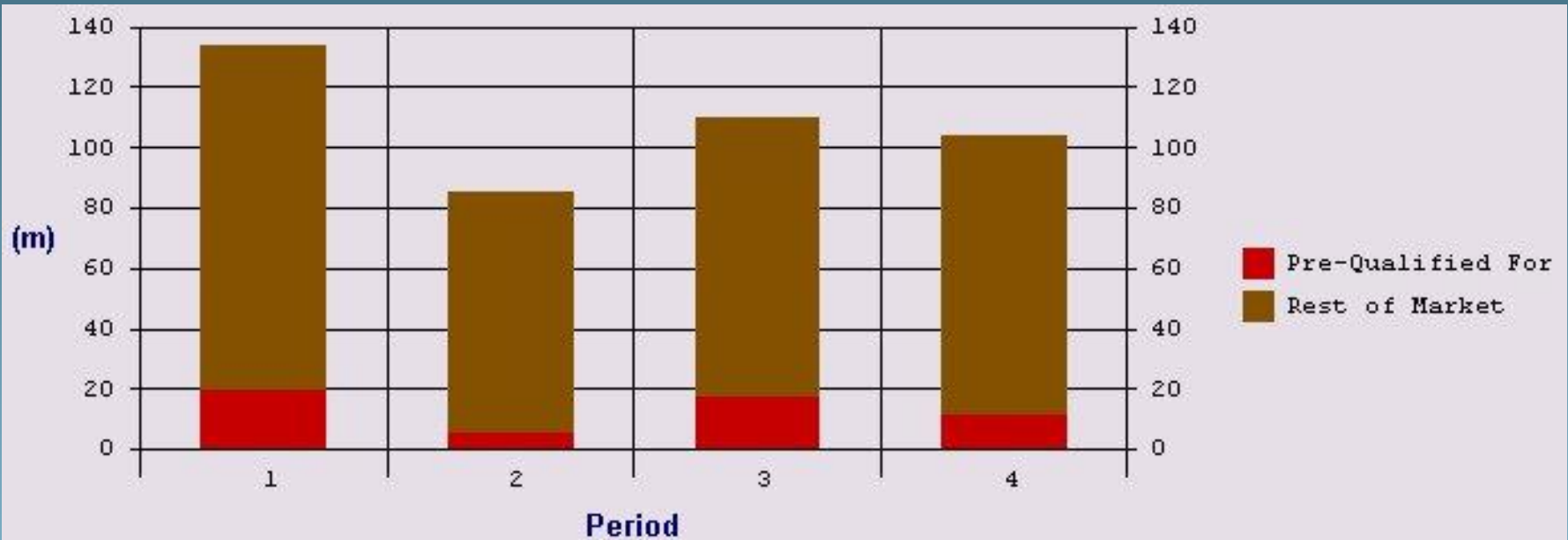
The market trend for periods 1 to 4 is **accurate**, since the data for the past is readily available.

The market trend for the current period onwards is a **forecast**.

Having identified the market trend, the **value of work the company is able to prequalify** for depends upon :-

- The **marketing effort applied**, based upon the number of staff in the department. As the department grows more work can be identified, up to a point.
- **Where the marketing effort is directed**. If effort is directed into sectors with no work, then jobs will not be identified, so it is vital that resources are used as efficiently as possible.
- Whether or not the company are **experts in a particular sector**. If enough effort is consistently directed into one particular sector, then they will become experts in the sector, and prequalify for more work than might be expected
- **The relationship with clients**. The company may not be able to prequalify for a job if the relationship with the client is deteriorating. Conversely, an improving relationship may secure additional prequalification

The value of work **actually prequalified for** each period can be obtained from the marketing performance analysis.



The Demo is now complete

Market Sectors

The Job Period

Keep Clicking Anywhere on the screen to advance the demo



The Job Period

The company is managed over a number of **game periods**. You takeover the management in period 5, and could be in charge until period 18, if your company is involved in both the Early and Final Years.

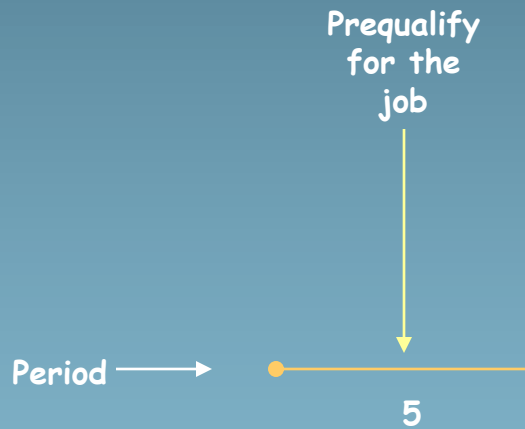
During this time a number of jobs will become available in the market, and you will prequalify, bid for and hopefully win a number of them.

You will begin progressing the jobs won in one of the game periods between 5 and 18, and the jobs can last from 2 to 5 job periods. It is important then to grasp the concept of the **period of a job**, as distinct from the game period.

The following example should illustrate the difference.

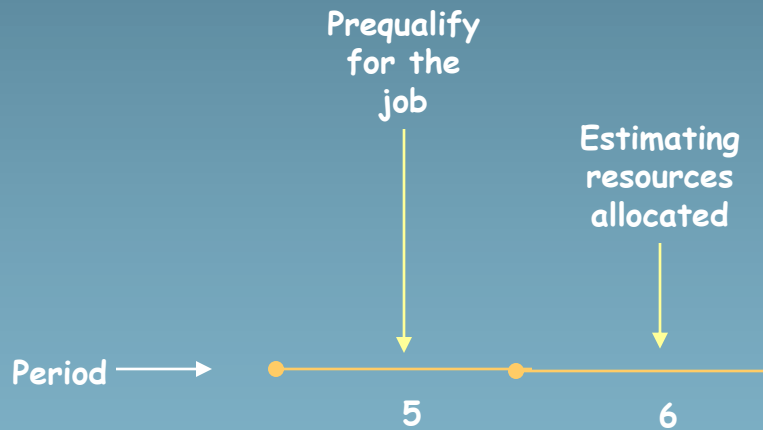
The Job Period

The company prequalified for a job in period 5. The job had a planned duration of 4 periods.



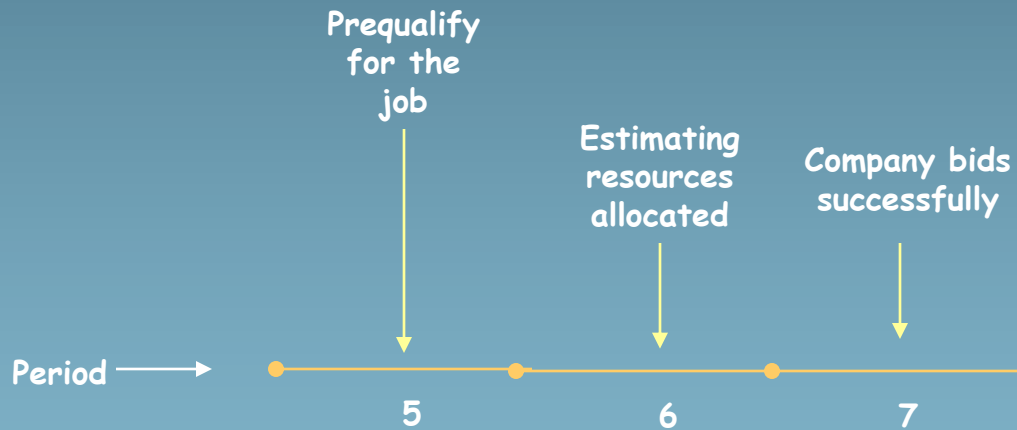
The Job Period

The company were interested in bidding for the job, so the estimating manager allocated resources to cost the work in period 6.



The Job Period

In period 7 the company put in a bid for the job, which was successful.

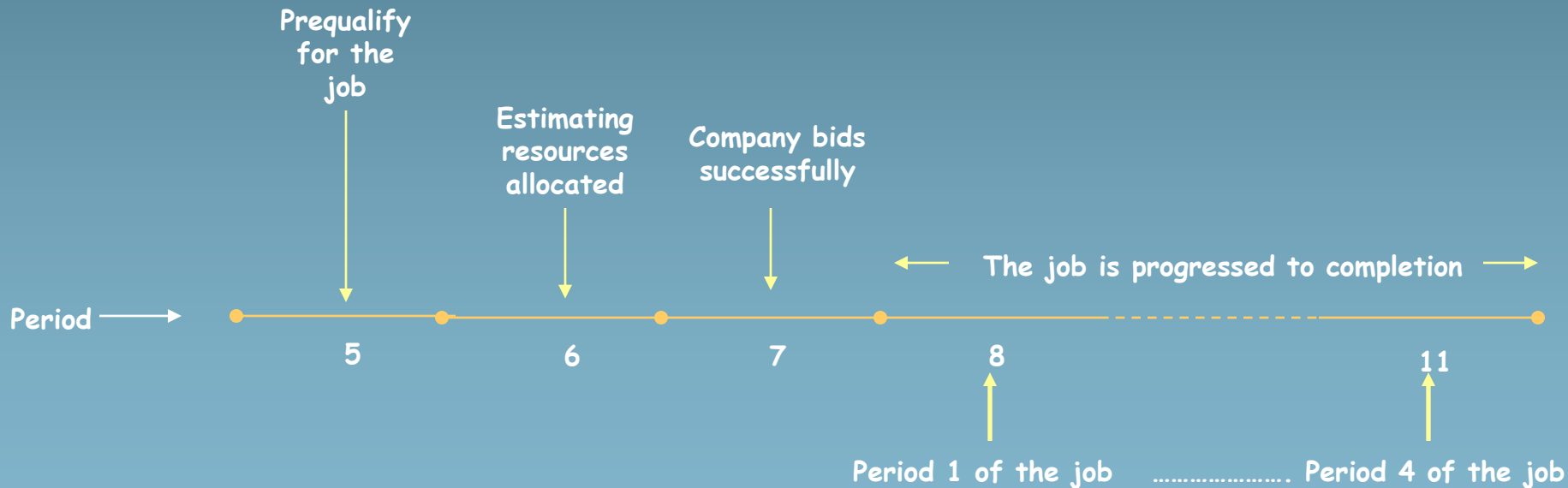


Work started in period 8, and the job was completed in its planned duration, 4 periods, finishing in period 11.



The Job Period

You can see now where the job period becomes relevant, since period 1 of the job is actually period 8 of the game, and period 2 of the job is period 9 of the game etc.

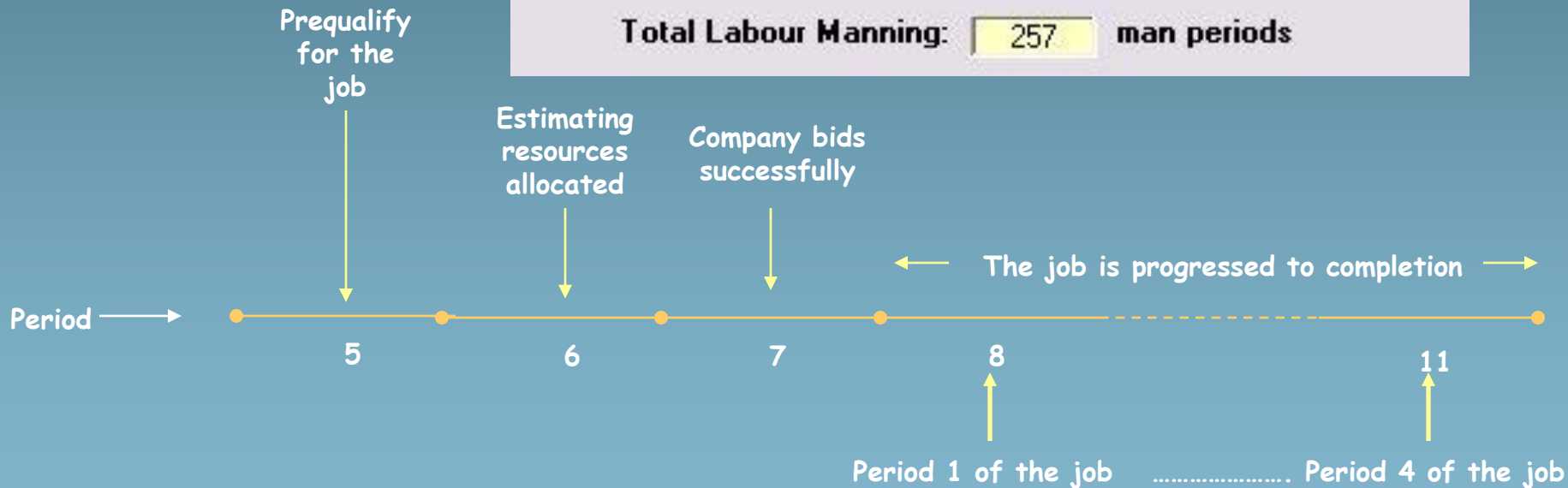


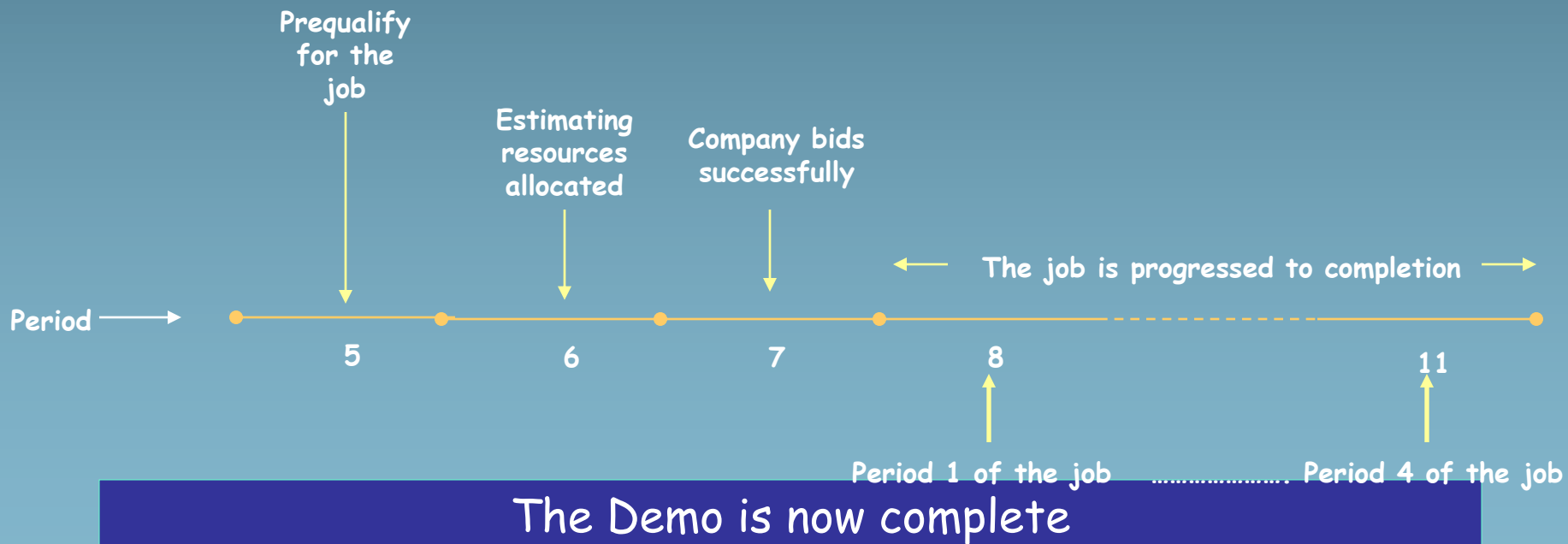
The Job Period

Close examination of the job details shows the breakdown of the costs and labour manning period by period. Since the job was a 4-period job, the breakdown is given for the 1st, 2nd, 3rd and 4th periods of the job.

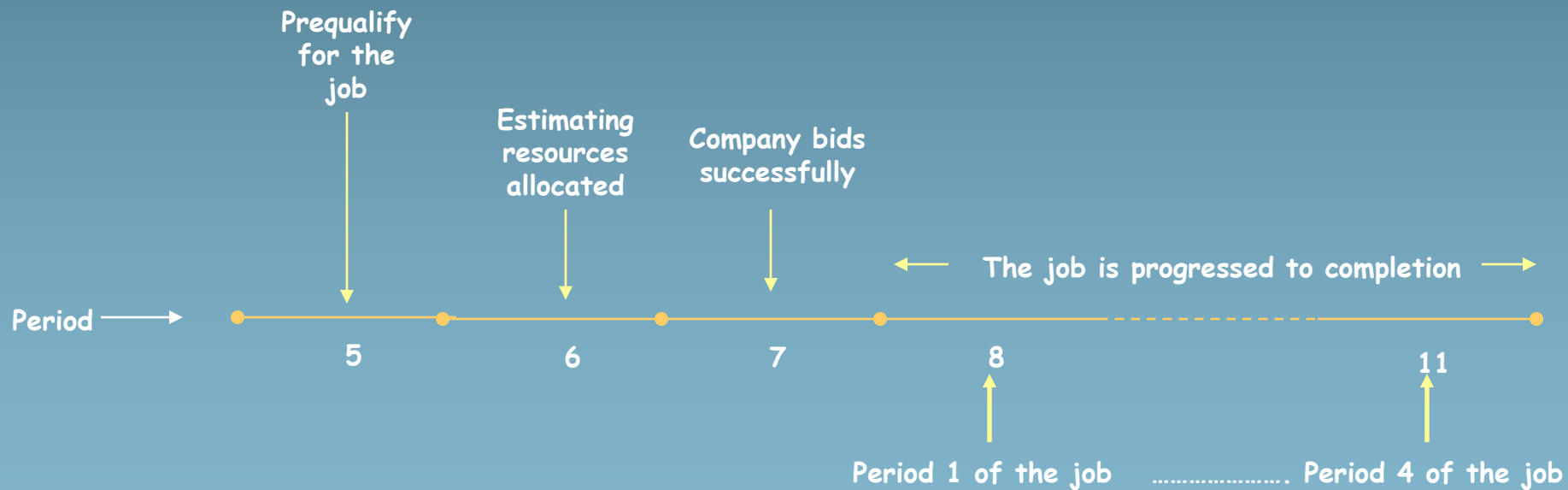
Estimated Details by Period					
Job Period	Build Cost	Site Cost	Labour Manning	Expected Value	Cumulative % Complete
1	1,301,126	260,225	64	1,661,280	25
2	1,561,350	312,270	77	1,993,535	55
3	1,561,350	312,270	77	1,993,535	85
4	780,676	156,135	39	996,768	100

Total Labour Manning: 257 man periods





The Job Period



Keep Clicking Anywhere on the screen to advance the demo

Job Number

A unique number that identifies a job, ranging from 1 (earliest jobs) onwards.

Period Offered

The period in which the company prequalified for the job.

Type

There are two types of job :-

- **BO (Build Only)**; traditional type of job where the client is responsible for the design, and the contractor is only responsible for the build. A bill of quantities is available to the contractor for use during the estimating process.
- **DB (Design and Build)**; the contractor has responsibility for both the design and build.

Sector

Each job falls into one of 5 market sectors :-

1. Industrial
2. Building and Commercial
3. Transport
4. Energy
5. Water and Sewage

Size

A job can either be small, medium or large, depending upon the value of the job.

Approximate Value

The anticipated cost of the job rounded to the nearest million.

Complexity

How complex the construction of the job is likely to be; grade as low, medium high complexity.

Description

A brief description of what the job entails.

Duration

The duration of the job in periods (2 to 5).

Total Labour Manning

The total number of man periods required to complete the job.

Location and Distance from Head Office

Where the job is physically located, and its distance (in miles) from the company's head office.

Client

The public or private-sector organisation for whom the job is being carried out.

The Demo is now complete

Job Details

Estimating Accuracy

Keep Clicking Anywhere on the screen to advance the demo

Estimating Accuracy

The company prequalifies for a number of jobs as a result of the effort of the Marketing Department.

If the Company intends to bid for a job, the job costs need to be determined in order to enable a sensible bid to be submitted. This is done by allocating man-weeks of estimating time to the job, and enough resources need to be allocated to produce an accurate estimate.

The Estimating Manager must decide how many man-weeks to allocate, and in doing so needs to consider two factors :-

- The anticipated estimating cost for the size of the job
- The additional estimating cost arising from the complexity of the job

If enough estimating effort is allocated an accurate estimate will be produced, but less than the required effort will result in poorer estimates.

But how accurate is an 'accurate' estimate, and conversely how inaccurate is a 'poor' estimate ?

The following example will demonstrate these points.

In period 5 the Estimating Manager must decide how much estimating effort to allocate to the following jobs.

Estimating Decisions - Period 5
 ✕

☐ Sector Descriptions

Estimating time available

Own staff weeks
 Agency staff weeks
 Allocation:

Job	Type	Approx. Value	Desc	Sector	Client	Expected Estimating Cost as a % of Approx Value	Additional % Cost due to Job Complexity	Estimating Effort to be Allocated (man weeks)
35	BO	5,000,000	Improvements to fire station	2	Kegworth Airport	0.08	Medium 10 - 20 %	0
36	BO	4,000,000	Car park extension at railway station	2	Railline	0.1	Medium 10 - 20 %	0
▶ 38	BO	3,000,000	Strengthening of canal tunnel	5	English Waterways	0.11	Medium 10 - 20 %	0

Estimating Decisions - Period 5

☐ Sector Descriptions

Estimating time available
 Own staff weeks
 Agency staff weeks
 Allocation:

Job	Type	Approx. Value	Desc	Sector	Client	Expected Estimating Cost as a % of Approx Value	Additional % Cost due to Job Complexity	Estimating Effort to be Allocated (man weeks)
35	BO	5,000,000	Improvements to fire station	2	Kegworth Airport	0.08	Medium 10 - 20 %	0
36	BO	4,000,000	Car park extension at railway station	2	Railline	0.1	Medium 10 - 20 %	0
▶ 38	BO	3,000,000	Strengthening of canal tunnel	5	English Waterways	0.11	Medium 10 - 20 %	0

The Estimating Manager is **very interested** in job 35, and decides to allocate 8 weeks of estimating time.

Based on the anticipated cost, and allowing for the job complexity, 8 weeks should be enough time to produce an accurate estimate.

Estimating Decisions - Period 5
 ✕

☐ Sector Descriptions

Estimating time available

Own staff weeks
 Agency staff weeks
 Allocation:

Job	Type	Approx. Value	Desc	Sector	Client	Expected Estimating Cost as a % of Approx Value	Additional % Cost due to Job Complexity	Estimating Effort to be Allocated (man weeks)
35	BO	5,000,000	Improvements to fire station	2	Kegworth Airport	0.08	Medium 10 - 20 %	8
36	BO	4,000,000	Car park extension at railway station	2	Railline	0.1	Medium 10 - 20 %	0
▶ 38	BO	3,000,000	Strengthening of canal tunnel	5	English Waterways	0.11	Medium 10 - 20 %	0

Estimating Decisions - Period 5
 ✕

☐ Sector Descriptions

Estimating time available

Own staff weeks
 Agency staff weeks
 Allocation:

Job	Type	Approx. Value	Desc	Sector	Client	Expected Estimating Cost as a % of Approx Value	Additional % Cost due to Job Complexity	Estimating Effort to be Allocated (man weeks)
35	BO	5,000,000	Improvements to fire station	2	Kegworth Airport	0.08	Medium 10 - 20 %	8
36	BO	4,000,000	Car park extension at railway station	2	Railline	0.1	Medium 10 - 20 %	0
▶ 38	BO	3,000,000	Strengthening of canal tunnel	5	English Waterways	0.11	Medium 10 - 20 %	0

The Estimating Manager is **not so interested** in job 36, and decides to allocate only 3 weeks of estimator time to produce the estimate.

7 weeks are actually required for an accurate estimate, so the estimate **will not be 'accurate'**.


Estimating Decisions - Period 5


☐ **Sector Descriptions**

Estimating time available

Own staff weeks

Agency staff weeks

Allocation:

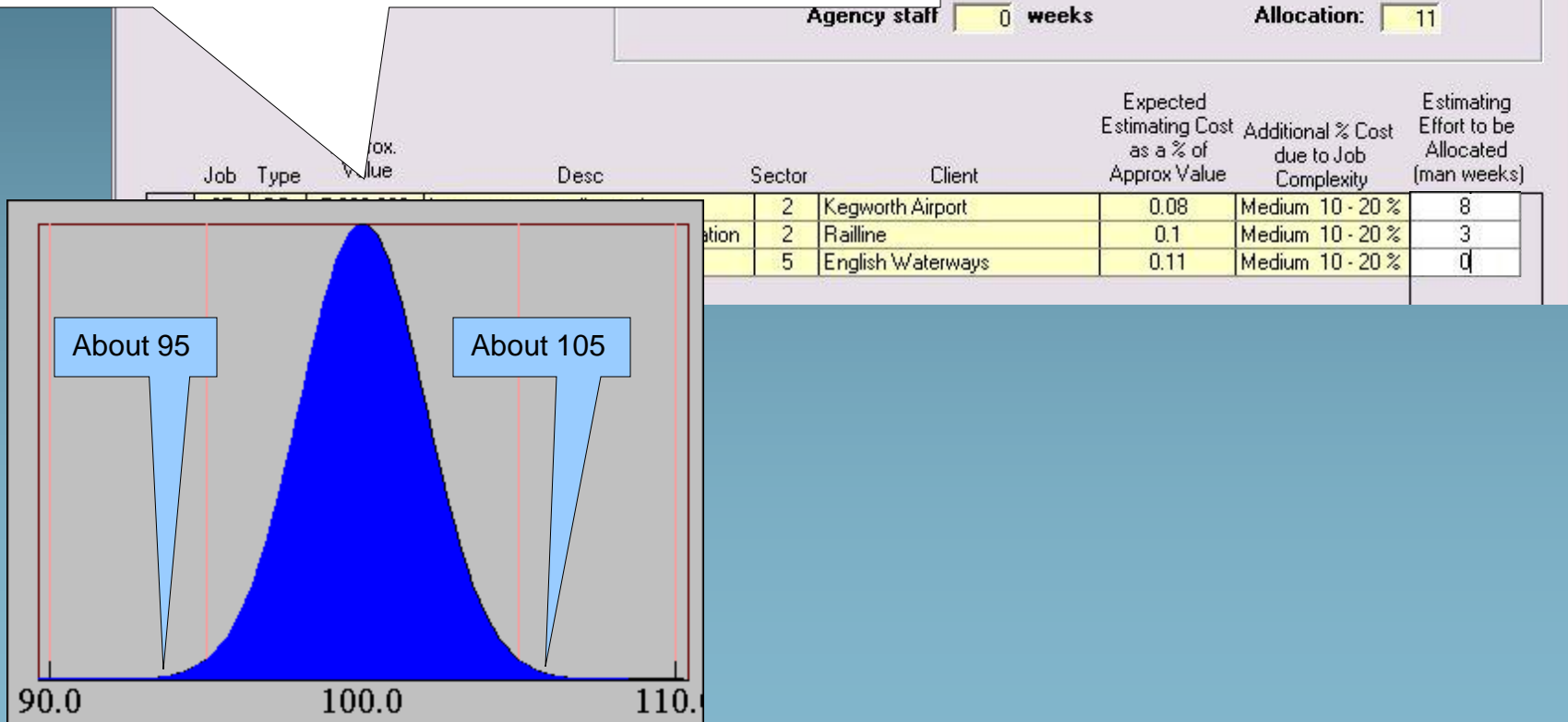
Job	Type	Approx. Value	Desc	Sector	Client	Expected Estimating Cost as a % of Approx Value	Additional % Cost due to Job Complexity	Estimating Effort to be Allocated (man weeks)	
<input type="checkbox"/>	35	BO	5,000,000	Improvements to fire station	2	Kegworth Airport	0.08	Medium 10 - 20 %	8
<input type="checkbox"/>	36	BO	4,000,000	Car park extension at railway station	2	Railline	0.1	Medium 10 - 20 %	3
<input checked="" type="checkbox"/>	38	BO	3,000,000	Strengthening of canal tunnel	5	English Waterways	0.11	Medium 10 - 20 %	0

How accurate is the estimate ?

The accuracy is based upon the normal distribution shown.

If we again assume that the true costs are represented by 100%, then the estimate generated will be somewhere in the shaded area, between about 95 and 105% of the true cost.

Of course, the estimate could be higher or lower than the true cost. In either case, **we do not have** confidence that it will be close.



Estimating Decisions - Period 5
 ✕

☐ Sector Descriptions

Estimating time available

Own staff weeks
 Agency staff weeks
 Allocation:

Job	Type	Approx. Value	Desc	Sector	Client	Expected Estimating Cost as a % of Approx Value	Additional % Cost due to Job Complexity	Estimating Effort to be Allocated (man weeks)
35	BO	5,000,000	Improvements to fire station	2	Kegworth Airport	0.08	Medium 10 - 20 %	8
36	BO	4,000,000	Car park extension at railway station	2	Railline	0.1	Medium 10 - 20 %	3
▶ 38	BO	3,000,000	Strengthening of canal tunnel	5	English Waterways	0.11	Medium 10 - 20 %	0

The Demo is now complete


Estimating Decisions - Period 5


☐ **Sector Descriptions**

Estimating time available

Own staff weeks

Agency staff weeks

Allocation:

Job	Type	Approx. Value	Desc	Sector	Client	Expected Estimating Cost as a % of Approx Value	Additional % Cost due to Job Complexity	Estimating Effort to be Allocated (man weeks)	
<input type="checkbox"/>	35	BO	5,000,000	Improvements to fire station	2	Kegworth Airport	0.08	Medium 10 - 20 %	8
<input type="checkbox"/>	36	BO	4,000,000	Car park extension at railway station	2	Railline	0.1	Medium 10 - 20 %	3
<input checked="" type="checkbox"/>	38	BO	3,000,000	Strengthening of canal tunnel	5	English Waterways	0.11	Medium 10 - 20 %	0

Choosing the right designer

Keep Clicking Anywhere on the screen to advance the demo

One of the key decisions when bidding for a design & build job is the choice of the consultant to produce the design.

But why is the decision so important ?

A consultant who has expertise in designing the type of work in question can produce designs that can **significantly reduce** the build costs, which in turn can improve the profit margin on the job.

There are a number of consultants available, and there is **no restriction** on the number of design & build jobs a particular consultant can work on at any one time, but finding the consultant whose **experience matches** the type of work is not always easy.

Consider the following example.

The company is submitting a bid for design & build job 29, a medium-sized building & commercial contract.

Bidding Decisions - Period 5

☐ Sector Descriptions

						Estimated Costs					
Job	Type	Desc	Sect	Client	Bid	Design % (of build)	Build Cost	Consultant Allocated	On-Cost	% Mark-Up	Bid Submitted
25	DB	New facilites for train mainten	3	Railline	Y	9	4,102,691	6	976,770	6.2	5,786,523
▶ 29	DB	New distribution facility	2	Tayoto Cars UK	Y	11	9,733,391	5	1,912,190	5.5	13,415,650

Choosing the right designer

Available Consultants

Search Phrase (for Profile):

No	Name	Used before
1	Logan & Partners	No
2	Dave Moore Associates	No
4	Foley-Fox Design Services	No
5	Crane & Moore Design Services	Yes
6	DK Risley and Partners	No
7	Steiner Consulting Ltd	No
8	Melbourne Consultants	No
9	Downes-Fordham Consulting Ltd	No
10	Thurxton Design Group	No
11	Reighton Consulting Ltd	No
12	Alan Armstrong Associates	No
13	DP Thomas & Associates	No
14	Chester Consultants	No

Established over twenty years ago by 2 friends, the Company has gone from strength to strength, and now operates out of a number of strategically placed offices.

The client is assured of the employment of qualified, experienced and professional personnel in all aspects of the design process.

The company does not specialise in a particular sector, and has provided design solutions for a number of major engineering projects across a wide range of applications.

Computer Aided Design and Draughting techniques are fully-integrated into

Consultant no 5, **Crane & Moore Design Services**, have been allocated to produce the design.

Their company profile indicates that they have a **lot of experience** in the building & commercial sector, and they appear to be an ideal choice.

They have also been **used before**, and we can look at their past performance by using the **History button**.

Choosing the right designer

Consultant History

Consultant:

5

Crane & Moore Design Services

Established over twenty years ago by 2 friends, the Company has gone from strength to strength, and now operates out of a number of strategically placed offices.

The client is assured of the employment of qualified, experienced and professional personnel in all aspects of the design process.

The company does not specialise in a particular sector, and has provided design solutions for a number of major engineering projects across a wide range of applications.

Factors Affecting Build Costs					Factors Affecting design Costs		
Job	Status	Sector	Expertise in the Sector	Innovative qualities	% change	Expertise in the Sector	
▶	🗑️	In Second Period	Energy	reduces	reduces	-2.47	higher than expected

Crane & Moore Design Services were used on job 1, and their expertise **reduced the overall build cost** on the job by 2.47%, quite a saving.

Design costs were higher as they charged a higher than average fee, but the build cost saving would have more than compensated for this.

Clearly Crane & Moore Design Services are worth using again.

If the company wins the job then the design produced by Chester Consultants should ensure **significant saving** on the build costs, although they may be charged a slightly higher design fee than anticipated. However, the **savings should easily outweigh the additional design costs**.

Some of the anticipated reduction in build costs due to the quality of the design can be passed onto the client by including part of the saving as a negative amount in the on-cost, making the bid **more competitive**. Additional profit would still be made on the job, since only part of the expected saving is being passed onto the client.

The reduction in build cost possible for the best possible designer for the job is shown in the Company and Financial Information.

Consultants

Allocating the best possible designer to a design and build job can result in a reduction of the build costs by up to: %

Choosing the right designer

The Demo is now complete

Choosing the right designer

Design Fee

Whilst tendering for a Design & Build job the company :-

- Estimates the likely **design costs**, based on average designer
- Approaches an **external consultant** to produce the design, should the job be awarded

If the job is won, the consultant completes the design and charges a design fee, which is payable pro-rata over the planned duration of the job.

The design fee is **subject to variation** from the original estimate depending upon :-

- The accuracy of the original estimate
 - The expertise of the consultant in the sector of work with which the job is associated.
- A top consultant would charge a higher design fee (but save on the build costs), but one without the required expertise for the job do not charge the full design fee, although additional build costs can be incurred from inferior designs.

Keep Clicking Anywhere on the screen to advance the demo

At the estimating stage, an assessment was made of potential risks occurring on a job that could cause monetary losses to the company.

The likelihood of the risk occurring (**risk level**) is classified as **None, Low, Medium or High**, and also expressed as a % chance of happening.

The **severity (cost)** if the risk hits is expressed as a % of the estimated build cost.

Consider job 25, a small-sized Transport contract.

The job is classified as having **Low** risk.

The Company and Financial Information reveals that for low-risk contracts there is a 5-20% chance the risk will occur **at some point** during the progressing of the job.

If it does, there will be a 3.5% addition to build cost, or :-

$$0.035 \times 4,102,691 = 143,594$$

Estimating Information

Estimating Confidence:

Estimated Design Cost: % of Build Cost

Estimated Build Cost:

Estimated Site Cost:

Risk Level:

Addition to build cost of: % if risk occurs

Estimated Details by Period

Job Period	Build Cost	Site Cost	Labour Manning
1	1,641,076	328,215	52
2	2,461,615	492,324	79

Total Labour Manning: man periods

Lets suppose the Company decides to bid for the job.

If the risk occurs the additional cost incurred could have serious affects on the cashflow of the Company, unless an allowance is made during the bidding stage to provide contingency for the risk.

The contingency for risk forms part of the oncost, and there are 3 possible scenarios for the contingency.

Scenario 1: No risk contingency

If no risk contingency is added to the oncost then there is a good chance of the company winning the job since their bid would be lower than their competitors who have included some risk contingency.

However, if they do win the contract, and the risk occurs the additional cost could seriously affect the job profits, and adversely affect the cashflow of the company.

Costs to be Added

Site Support costs: 1825000

Risk contingency: 0

Project Manager costs: 39000

Scenario 2: Full risk contingency

If the full cost of the risk is added to the oncost then there is less chance of the company winning the job since their bid would be higher than competitors who may have included some, but not full, risk contingency.

However, if they are awarded the contract, and the risk occurs the additional cost will have been covered, and will not affect the job margin. If the risk does not occur the margin would be significantly improved.

Costs to be Added

Site Support costs:

Risk contingency:

Project Manager costs:

Scenario 3: Some risk contingency

If some of the risk cost is added to the oncost then there is a fair chance of the company winning the job, and they have partly covered themselves in case the risk occurs.

Since there is a 5-20% chance of the risk occurring, it may be reasonable to cover 20% of the risk cost, or 28,718.

If the risk occurs, the company has to find the other 80% of the risk cost, or 114,876, which eats into the margin. However, if the risk does not occur then the 28,718 is additional margin.

Costs to be Added

Site Support costs:

Risk contingency:

Project Manager costs:

As we have seen, the setting of the risk contingency can have **significant effects** on both a company's chances of winning a contract, and subsequent margins and cashflows if the job is awarded and progressed.

If a job is being progressed, and risk costs are incurred, the costs can be reduced by :-

- **Employing a good project manager**, who will be able to identify and address the potential effects of the risk. Conversely, employing a poor project manager may increase the risk costs.
- A **good labour relations policy**, using the company's own labour in preference to subcontractors and not laying off own labour. Conversely, a poor labour relations policy, with reliance on subcontractors and laying off own labour, can increase the risk costs.
- Having a well-staffed **QHSE Dept.**

Conversely, risk costs can be increased if the above factors are not adequate.

The Demo is now complete

Risk

The **build cost** covers all the labour, plant, material and subcontract costs incurred during the completion of a job.

During the tendering stage the company **estimated** the build costs, the degree of inaccuracy being governed by the amount of effort put into producing the estimate.

However, once the job commences the '**true**' **build costs** are generated, which should be very close to the estimated costs providing that there is high confidence in the accuracy of the estimate.

The company never sees the 'true' build cost, although they can be deduced from careful examination of the job progress report.

The build costs incurred each period depend upon the **level of labour allocated** to the site.

Site costs pay for the **support staff and services** required to administer a site.

During the tendering stage **estimates** were made of the level of site cost required for the job, the degree of inaccuracy being governed by the amount of effort put into producing the estimate.

Once the job is undertaken the '**true**' level of site cost needs to be paid, which should be close to the estimated cost if there was high confidence in the estimate produced.

Unlike build costs, which are automatically generated by the level of labour used on site, site costs have to be allocated by the construction manager each period. The level of site cost should be sufficient to administer the labour allocated to the site.

Paying insufficient site costs can have **severe adverse** affects on the productivity of the labour on site, reducing the progress of the job.

Paying additional site cost over and above the required levels can marginally improve the productivity, but the benefit is offset by the additional cost.

Successful Tendering - 1

Keep Clicking Anywhere on the screen to advance the demo

Based upon the company's strategy for growth, a number of bids may be submitted in a period, but there are a **number of factors** that can affect the company's ability to secure the contracts ?

These tendering factors fall into 2 categories :-

- Company factors, such as the size of the company's capital base
- Job-specific factors, such as the price submitted

We'll look at each set in turn.

Company Factors

Company growth, and successful tendering, is limited by :-

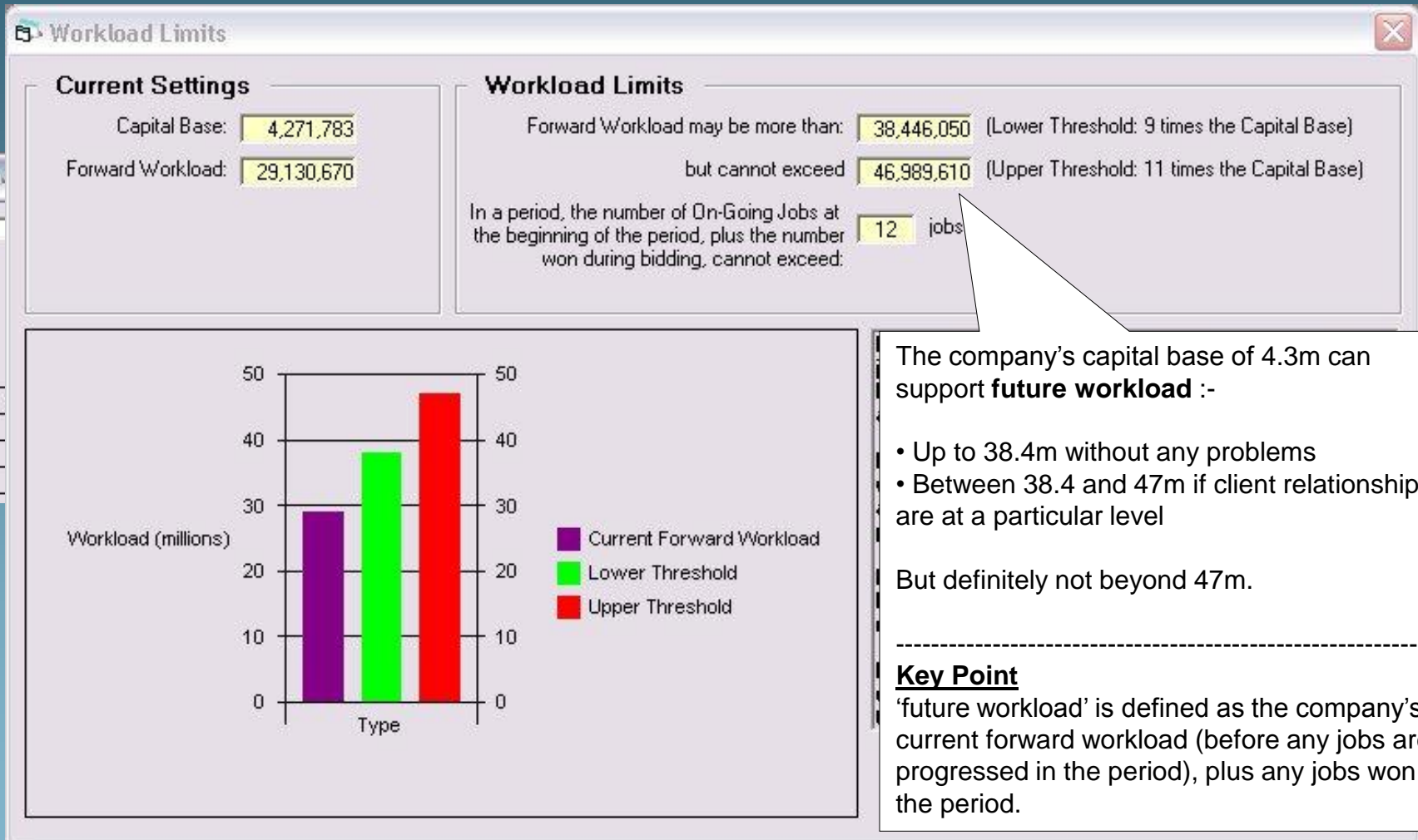
- The size of the **company's capital base**. Clients will not accept a bid from the company if they feel that the company does not have the resources to complete the job.
- The **number of jobs in progress**. If the company has too many job commitments, clients will reject a company's bid because they feel that the company will not be able to manage further contracts efficiently.

Its period 8, and the company has bid for 3 jobs.

Will the company be able to support winning the 3 jobs, on top of any existing workload ?

We'll use the **Workload Limits** to find out.

Bidding Decisions - Period 8												
<input type="checkbox"/> Sector Descriptions												
						Estimated Costs						
Job	Type	Desc	Sect	Client	Bid	Design % (of build)	Build Cost	Consultant Allocated	On-Cost	% Mark-Up	Bid Submitted	
▶ 59	DB	New MDT, valet and wash ba	2	Tayoto Cars UK	Y	10	6,135,153	22	1,400,782	5.5	8,597,670	
60	BO	Preparation plant extension	1	National Steel Ltd	Y		6,594,770		1,410,567	5.5	8,445,630	
61	BO	Training school extension at R	2	The Defence Agency	Y		3,759,369		775,432	5.5	4,784,215	
65	DB	Construct a waste to energy u	4	Electragen	N	11	7,833,748		0	0.0	0	

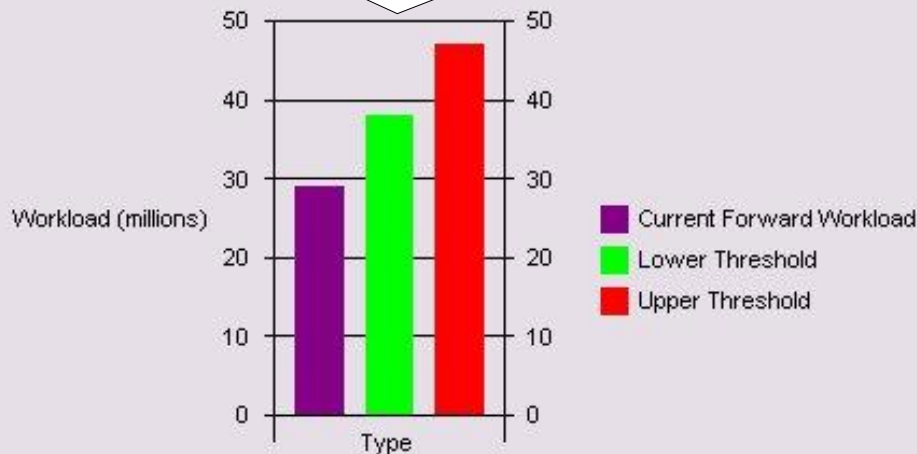


The current forward workload is 29.2m, and if the 3 bids were to be won the affect would be :-

- Job 59: 8.6m (cumulative workload 37.8m)
- Job 60: 8.5m (cumulative workload 46.3m)
- Job 61: 4.8m (cumulative workload 51.1m)

However, the workload limitations will affect the bidding as follows :-

- Jobs 59 could be secured since the cumulative workload would not exceed the lower threshold of 38.4m.
- If jobs 59 and 60 are won, job 61 cannot be won since the cumulative workload would exceed the upper threshold. If the lower threshold was exceeded, but not the upper threshold, the job could only be won, price permitting, if the relationship with the client is at least 'fairly good', as defined in the **Company and Financial Information**.



If a company's projected forward workload falls between the lower and upper thresholds, then the company's bid will be rejected unless the relationship with the client is at least:

fairly good

before any
t prior to
orkload is

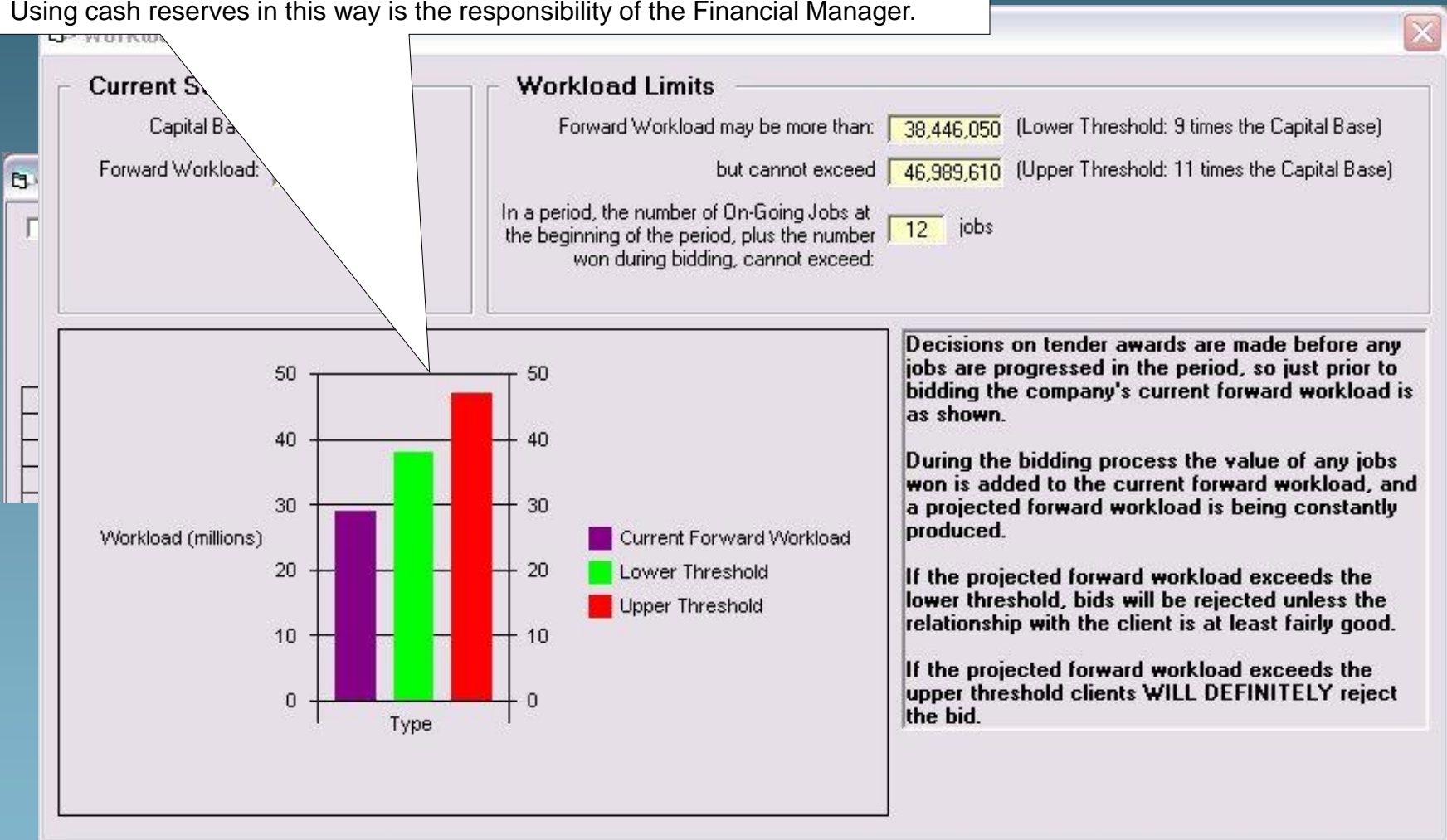
During the bidding process the value of any jobs won is added to the current forward workload, and a projected forward workload is being constantly produced.

If the projected forward workload exceeds the lower threshold, bids will be rejected unless the relationship with the client is at least fairly good.

If the projected forward workload exceeds the upper threshold clients WILL DEFINITELY reject the bid.

The **lower and upper thresholds** can be raised for the current period by using more of the company's cash reserves to increase the capital base.

Using cash reserves in this way is the responsibility of the Financial Manager.



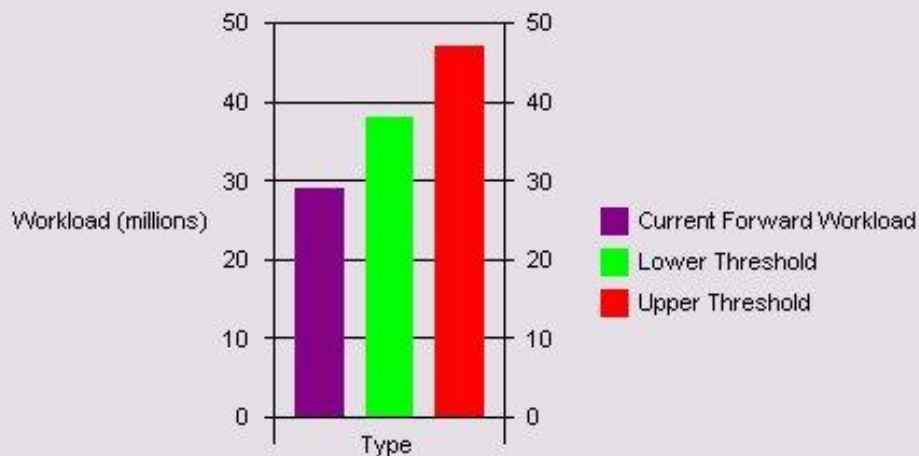
The current forward workload of 29.2m comprises 4 on-going jobs. If the 3 submitted bids are successful, the number of on-going jobs would be 7, still well short of the upper limit of 12.

However, in future periods the choice of jobs to tender for could well be affected by the on-going job limitation.

Capital Base: 4,271,783
Forward Workload: 29,130,670

Forward workload must be less than: 38,446,050 (Lower Threshold: 9 times the Capital Base)
but cannot exceed: 46,989,610 (Upper Threshold: 11 times the Capital Base)

In a period, the number of On-Going Jobs at the beginning of the period, plus the number won during bidding, cannot exceed: 12 jobs

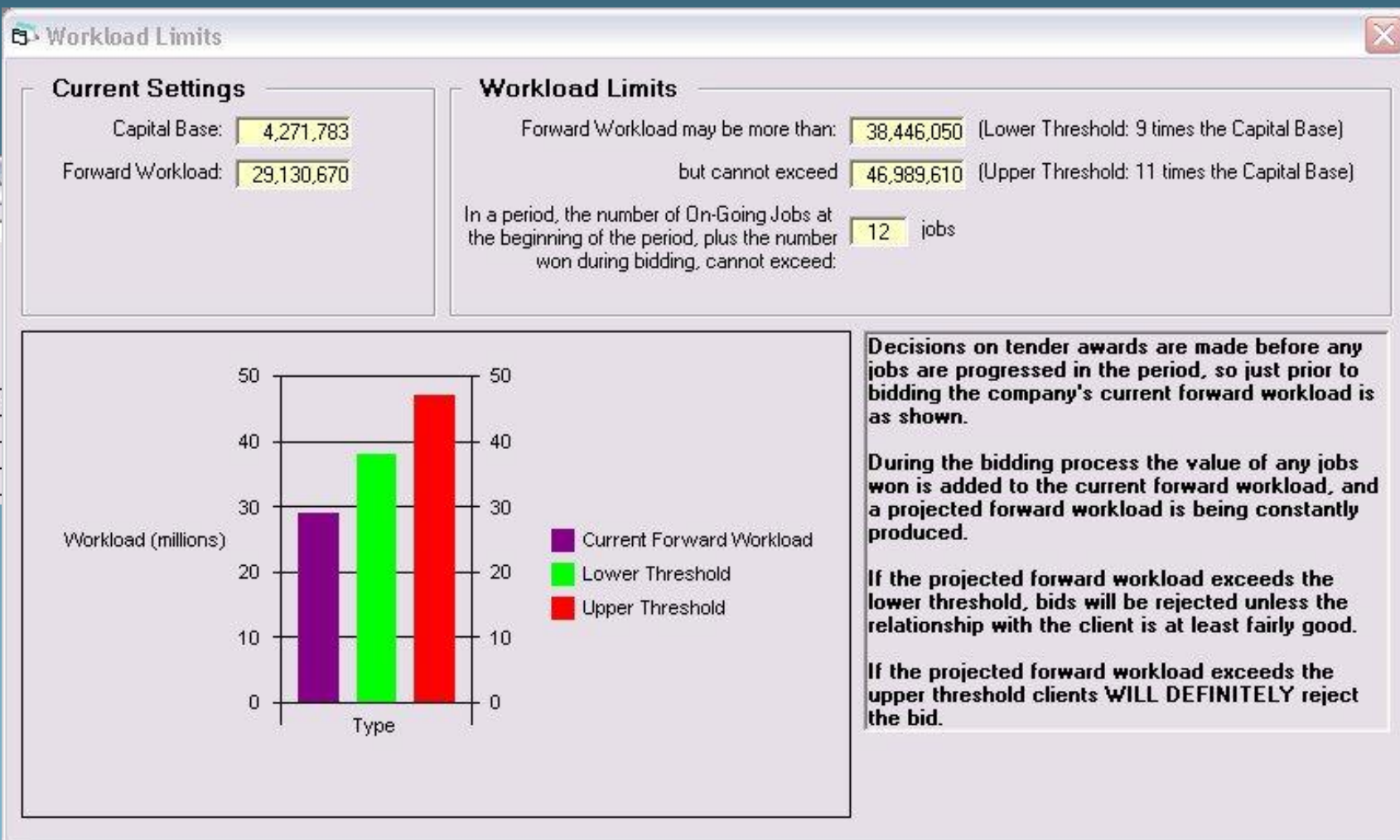


Decisions on tender awards are made before any jobs are progressed in the period, so just prior to bidding the company's current forward workload is as shown.

During the bidding process the value of any jobs won is added to the current forward workload, and a projected forward workload is being constantly produced.

If the projected forward workload exceeds the lower threshold, bids will be rejected unless the relationship with the client is at least fairly good.

If the projected forward workload exceeds the upper threshold clients WILL DEFINITELY reject the bid.



Job-Specific Factors

If the Client does not immediately reject the company's bid because of company factors, then job-specific factors may prevent the Company from being awarded the contract.

These can be summarised as :-

- The price submitted
- The relationship with the job client

We'll look at them in more detail.

In the early years the company is always bidding against a computer-simulated rival company.

In the final years the company bids against both the computer-simulated rival company and the other companies that are involved the final years, so the competition is far more fierce.

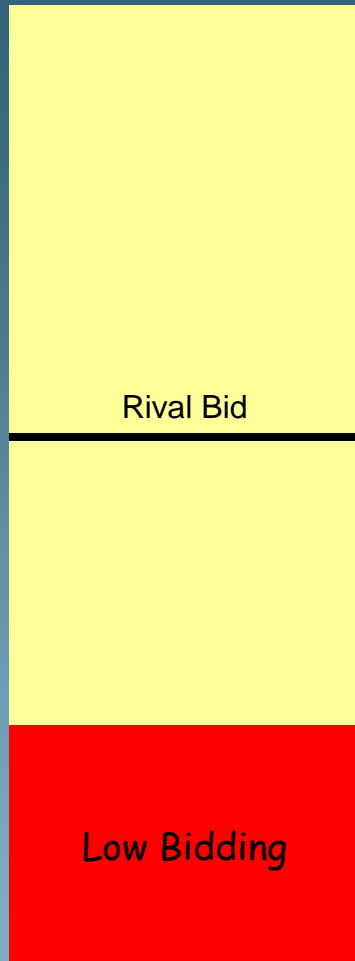
In either case there is **some** competition.

Successful Tendering - 2

Rival Bid

Consider the following example in the Early Years.

The rival bid is as shown



Low Bidding

If the company's bid is too far below the rival bid, the client will reject the company's bid on the grounds of **low bidding**, believing that the quality of the work will be undermined because the company cannot possibly complete the project without cutting costs.



High Bidding

If the company's bid is too far above the rival bid, the client will reject the company's bid on the grounds of **price**.

High Bidding

Rival Bid

Low Bidding

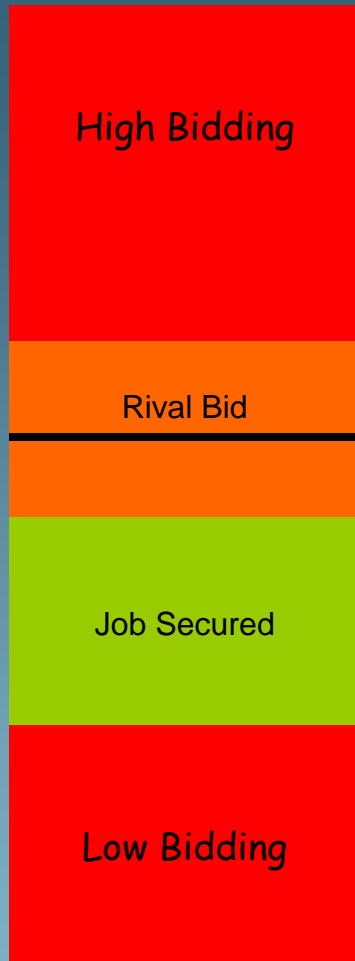
Client Relationship

If the company's bid is within a certain % of the rival bid, the contract is awarded to the company if they have a better client relationship than the rival company.

The company's client relationship is based on a number of factors, such as :-

- The quality of previous tenders submitted to the client
- How well the company has managed previous contracts with the client

Note that your rivals improve their relationships with each client as each period passes, so bidding for a job with a client with whom you have not formed a reasonable relationship might prove unsuccessful if the bids are very close.



High Bidding

Rival Bid

Job Secured

Low Bidding

The bid (or planned value) to be submitted to the client consists of :-

Mark-Up

The **margin** to be made by the job, expressed as a percentage of the sum of the Build, Design and Oncost.

It is one of the company's critical decisions because it affects the job's gross profit.

The gross profit is required to fund the **company related costs** not covered in the individual jobs, such as head office overheads, increases to the company capital base and paying dividend to shareholders.

On-Cost

An additional allowance to cover costs not covered by the estimated build and design costs, which should include :-

- (+) Site costs
- (+) Contingency for Risk
- (+) Project Manager Costs
- (-) an allowance to represent the anticipated savings on the build cost due to the design produced by the consultant

Estimated Build Cost, Design Cost and Consultant designer

The estimated build and design costs (D&B jobs only) are determined by the estimators.

They cannot be altered during bidding.


[Main](#)
[Quit](#)

The **markup, or margin** included in a submitted bid is one of the company's critical decisions because it affects the job's gross profit. The gross profits on all jobs are required to fund the company related costs not covered in the individual jobs, such as company overheads and dividend payments to shareholders.

Considerable care is required at the bidding stage in coming to a decision on mark-up, and assuming that the oncosts are set at appropriate levels, **what level of mark-up would be likely to secure a job ?**

This information is given in the Company and Financial Information, by job size.

Rival Bids		
In the Early Years, rival companies are unlikely to submit tenders with mark-ups less than:	4	% for Large jobs
	5	% for Medium jobs
	6	% for Small jobs

The mark-up given is the **minimum** that the computer (rival company) is likely to include in its bid, and a useful benchmark in the Early Years for setting mark-ups.

However, bear in mind that :-

- The level given **may not be higher enough** to satisfy the long-term profit requirements of the Company, and a higher level may be needed
- In the **Final Years** other companies, as well as the computer, are bidding for the same job, and their mark-up strategy is unknown. Indeed, lower margins may be entered to try and secure work in a more competitive environment.

In both the early and final years there is always competition for the available jobs from a **computer-simulated company**.

In the early years the computer is the **only rival**, but in the final years the other competing teams provide tendering competition, and securing work becomes far harder.

The computer bid has certain characteristics :-

- It is based on accurate estimates of build and design costs.
- The oncost element includes :-
 - Sufficient site costs, adequate risk contingency and allowance for a reasonable project manager (including salary and recruitment charges)
 - If the job is design & build, then it is assumed that the consultant allocated will produce a design that reduces the build costs, and some of the reduction is passed onto the client by taking money off the the oncost. The reduction can be up to 1% of the estimated build cost.
- The markup is at least at the level shown in the Company and Financial Information, dependent upon the size of the job

Bearing in mind these factors the computer bid is always **competitive**, and acts as a stabilising influence on the bidding process i.e., bids submitted with markups that are too high will be rejected by the client in favour of the computer-simulated company. Conversely bids that are much lower than the computer bid will also be rejected, since the client does not believe you can produce a quality job at the price suggested.

The **forward workload (or potential turnover)** on a job is the **remaining value** to be recovered from the present time until the job has been completed.

If a job is 40% complete then a further 60% of the job's value, the submitted bid, has not yet been recovered from the client, and forms the forward workload.

In this scenario 60% of the job's '**true**' **remaining cost** has not been incurred, and the difference between the remaining value and cost is referred to as the **forward margin**.

Forward workload and margin are two of the **key performance indicators** upon which a company's progress is measured.



Main

Quit

Key point for progressing jobs

Progressing jobs to completion is often a **complex task**, and the decisions that have to be made are often the result of the strategies adopted in other areas.

For example, if the company has an aggressive tendering policy, and secures a large number of profitable new contracts in a particular period, this can cause problems when it comes to adequately resourcing the new and existing jobs.

More work normally means more labour, and the company may have a significant shortfall of its own fully-trained labour. This would then require decisions on how to overcome the shortfall, by taking on new recruits into the company's own direct workforce, or using subcontractors. An alternative policy may even be to deliberately delay jobs in the short-term, but this can affect the relationship with the clients.

Some of the key issues are dealt with in the following demos.

- Labour used to progress a job
- Attempting to complete jobs early
- What happens if a job overruns ?
- The choice of taking on new recruits or subcontractors to overcome labour shortfalls
- The factors that can affect labour relations
- Setting varying levels of site administration cost

Labour used to progress a job

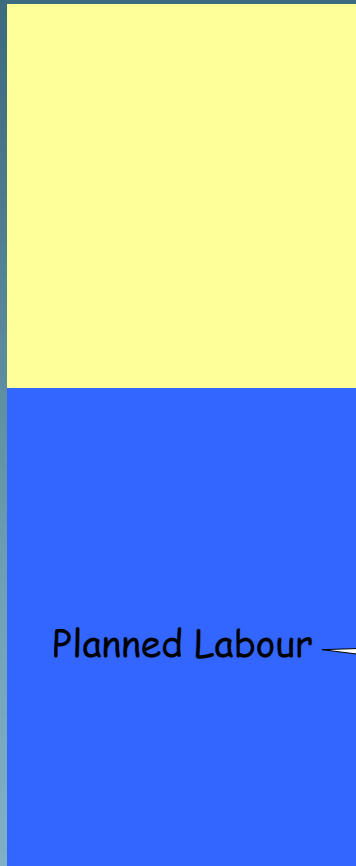
Keep Clicking Anywhere on the screen to advance the demo

Labour used to progress a job

To progress jobs the Construction Manager must allocate labour to the site, and in doing so there are a number of alternatives available.

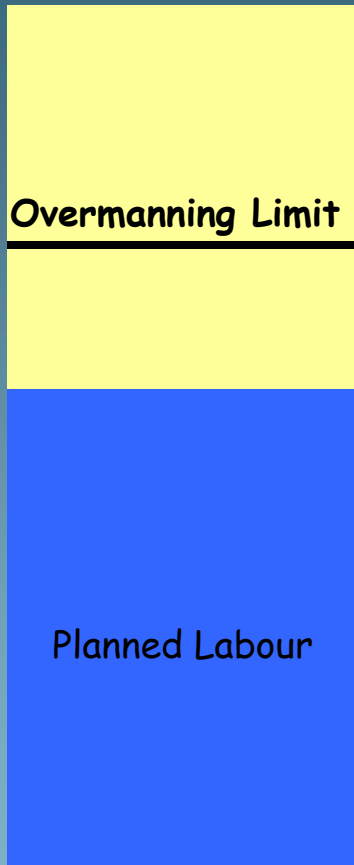
The following example should demonstrate the choices, based upon a job within its planned duration.

Labour used to progress a job



Planned Labour

The planned labour level for the period was estimated during tendering in order to complete a contract on time.



Overmanning limit

Based upon the job sector, and the overmanning limits shown in the **Company & Financial Information**, the **permitted level of effective labour** that can be allocated without any detrimental affect on performance is as shown.

The **effective labour** at this point is the total labour allocated less the ineffective labour due to the **training** of the company's new recruits.

Overmanning Limits

The effective labour overmanning that is allowed above the planned labour levels in a period is:

35 % for Industrial jobs

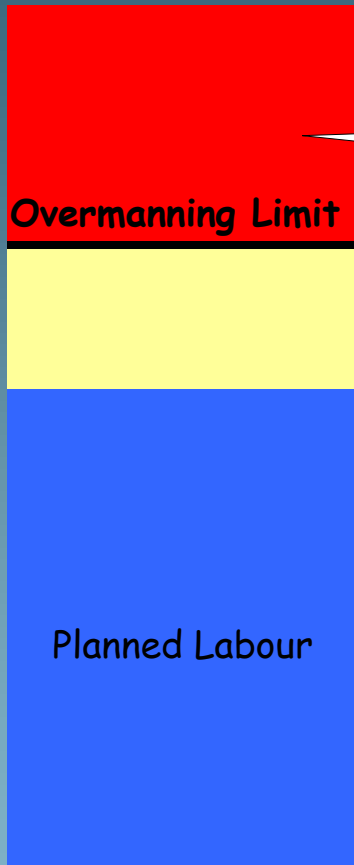
35 % for Building and Commercial jobs

45 % for Transport jobs

18 % for Energy jobs

25 % for Water and Sewage jobs

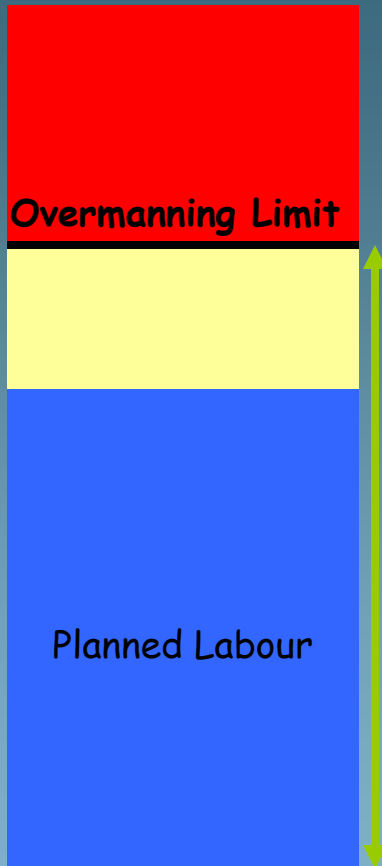
Labour used to progress a job



Above the overmanning limit

After taking into account the training of new recruits, any labour above the permitted level of overmanning is classed as ineffective labour.

Labour used to progress a job



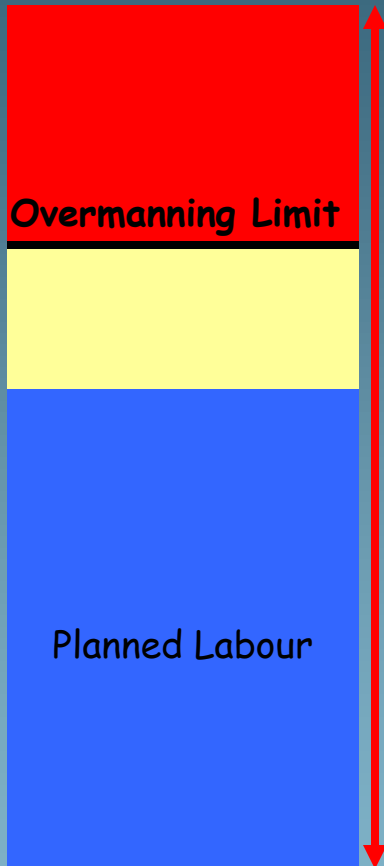
Job Progression

Its **only the effective labour** that contributes to progressing the job.

As a rough guide, if the effective labour is 30% of the total labour required to complete a job, 30% of the job's value (original bid) should be earned from the client.

However, there are numerous other factors that can affect the measured value recovered, including :-

- The quality of the project manager on the site
- Morale of the company's own labour
- The level of site admin allocated
- Measurement effort across the company



Build costs

Both the effective and ineffective labour contribute to the build costs.

As a rough guide, if the effective labour is 30% of the total labour required to complete a job, 30% of the job's total build costs will be incurred.

The ineffective labour incurs labour costs only, which are incorporated in the build costs.

There are numerous other factors that can affect the overall job costs, including :-

- project manager salary
- site administration costs
- training cost for new recruits
- risk
- Head Office and QHSE effort across the company

Labour used to progress a job



The Demo is now complete

Labour used to progress a job



Trying to complete a job early

Keep Clicking Anywhere on the screen to advance the demo

Trying to complete a job **early** has a number of benefits to the company, including :-

- The client may pay a **bonus** for early completion (see below).
- The company's own labour that was being used on the completed job **can be used on other sites**, preventing the need to take on new recruits, or perhaps having to use more costly subcontractors.
- The **company's capital assets** (plant, buildings etc) being used on the job can be diverted elsewhere.
- **Cashflows** are improved

Job Completion Bonuses & Penalties

The % of the tender value payable as a bonus for early completion is:

0.4	% for Large jobs
0.5	% for Medium jobs
0.6	% for Small jobs

Early completion of a job means **completing at least one period before the end of the planned duration** e.g., if the planned duration is 4 periods, it must be completed in 3 periods or less to obtain the client bonus.

The bonus paid by the client varies depending upon the job size.

To complete a job early the Construction Manager needs to refer to the sector-based overmanning limits given in the **Company and Financial Information (shown below)**.

For example, consider a Building & Commercial job that has a planned duration of 3 periods, and that can be overmanned by up to 35%. If the Construction Manager follows the overmanning guidelines, the completion schedule should be as follows :-

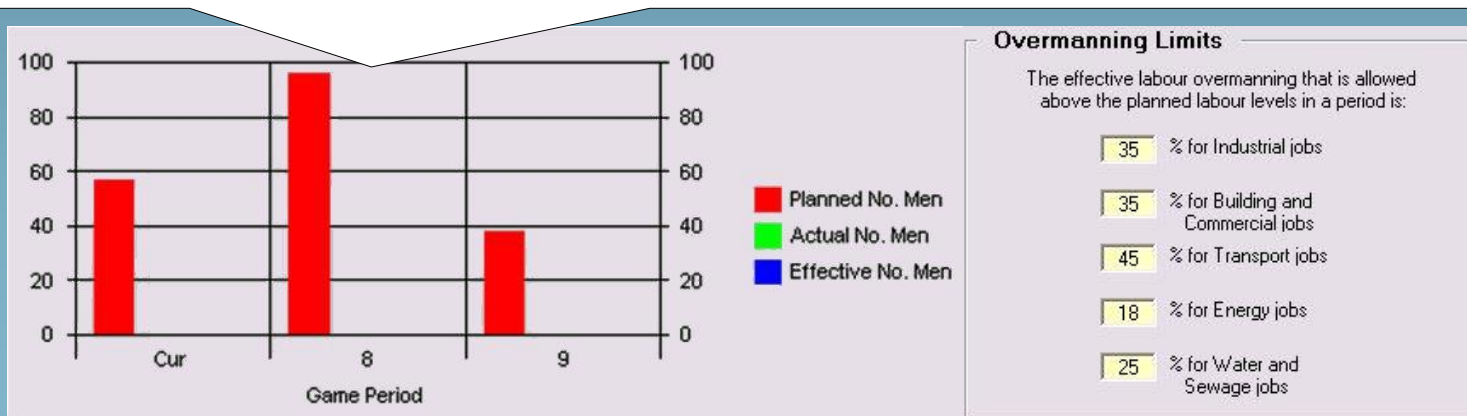
Period	Planned Labour	Actual Labour	% overmanning	Cumulative Labour
1	57	77	35 %	77
2	96	114	19 %	191
3	38			

	191			

The job should complete a period early, securing a bonus from the client.

Key Point

Overmanning above the limits results in ineffective labour that does not contribute to the progress of the job, but incurs labour costs.



Trying to complete a job early

But what happens if the Construction Manager attempts to complete the job early, but is not able to do so ?

This may occur if a job is not overmanned enough, or 'ineffective labour' resulting from the training of new recruits into the company's workforce delays the anticipated progress of the job.

In this scenario, the job would enter its final planned period ahead of schedule, and the Construction Manager must be very careful about setting the labour level, since the planned level cannot be relied upon.

Consider the following job, which has a planned duration of 3 periods, and is in its final planned period.

The Job Details button shows :-

- The planned % complete after each period (**Procurement** tab).
- The actual % of work completed to date (**Job Progress** tab).

The job was overmanned in its first period to try and complete the job early, but this strategy was only partially adhered to in its second period due to staffing shortfalls on other jobs. The net result is that overall the job is ahead of schedule going into the final planned period, and is currently 85.2% complete, as opposed to the planned % complete after 2 periods of 80%.

The Construction Manager needs to allocate less than the planned level of labour (27 men) in the job's final period to enable the job to complete at the end of its final period. If the full 27 men are allocated, the job will complete before the end of the period, and additional labour costs will be incurred until the period end.

Since there is 15% of the job left to complete, the labour level required is 15% of the total labour (135), or 21 men (rounded up), well short of the planned level of 27.

Estimated Details by Period

Job Period	Build Cost	Site Cost	Labour Manning	Expected Value	Cumulative % Complete
1	1,680,722	336,144	40	2,111,836	30
2	2,801,203	560,240	68	3,519,728	80
3	1,120,481	224,096	27	1,407,891	100

Total Labour Manning: 135 man periods

Cumulative Analysis

Total Value: 6,028,724

Total Cost: 5,647,972

Gross Profit: 380,752 6.7 % of costs

% complete 85.2 **Ahead of Schedule**

Trying to complete a job early

If the planned level of 38 men was allocated, the job would have completed very early in the period, with the following affects (ref: **External Performance Review**) :-

- An **increase in costs** as ineffective labour was retained until the end of period.
- **Inefficient use** of ineffective labour that could have been used elsewhere.

External			
Period		Click on any Details line to see if further information is available.	
Category		If so, simply click on the Further Information button to display the additional notes about the observation made by the external consultant.	
		Further Information	
Job N			Nature
29	(and productivity) of own labour weakened by increasing level of own labour layoffs		N
29	(and productivity) of own labour improved by relying on the use of own labour		P
29	There is a noticeable improvement in the performance of Proj Mgr 2 (Dickens, J) due to experience to date with the company		P
29	There is a noticeable improvement in the performance of Project Manager 2 (Dickens, J) due to the 4 % bonus paid		P
29	There is a noticeable deterioration in the performance of Project Manager 2 (Dickens, J) due to the job location		N
29	The overall performance of Project Manager 2 (Dickens, J) is very good		P
29	Almost enough Site Cost paid. Very little effect on the workforce productivity		U
29	The job completes in the first month of the period, but the labour is kept until the end of the period, increasing costs		N
29	Expertise of Project Manager 2 (Dickens, J) reduced the risk costs incurred by 5%		P
29	Increasing levels of labour layoffs increased the risk costs incurred by 17%		N
29	Use of own labour, rather than subcontractors, helped to reduce the risk costs incurred by 5%		P
29	The level of QHSE Dept effort has helped to reduce risk costs incurred by 20%		P
29	Risk cost of 83,284 incurred this period		N

Trying to complete a job early

The Demo is now complete

Trying to complete a job early

What happens if a job overruns ?

Keep Clicking Anywhere on the screen to advance the demo

What happens if a job overruns ?

Ideally all jobs progressed will be completed either early or on time.

However, if a job is badly managed it may well overrun, which has several affects :-

- A **penalty** will be incurred from the client for late completion, expressed as a % of the tender value for each period the job overruns. This can have a severe affect on the company's cash account, and value.
- **Resources will be needed** to complete the job (labour, project manager, site admin), diverting them from elsewhere.
- It **reflects badly** on the industry's perception of the company, reflected in the 'contract completion' and 'client satisfaction' key performance indicators used to measure the progress of the company.

If a job overruns, it is imperative that the Construction Manager allocates enough labour to complete the job in its first overrunning period.

What happens if a job overruns ?

Consider the following example.

Job 5, planned to be a 2-period job, has **overrun** into its third period.

There are currently 53 men on site, but with no planned labour as a guide, **what level of labour is required to complete the job this period ?**

On-Going Jobs

	Job	Last Period				This Period									
		Labour On Site			Site Cost Paid	Job Status	Planned Labour	Labour Allocation			Own Labour Transfers				Site Cost Allocation
		Total	Own	Sub				Total	Own	Sub	From ILP	New	To ILP	Paid Off	
▶	5	53	53	0	382,241	In Third Period	Overrun	53	53	0	0	0	0	0	382241
	6	68	68	0	514,709	In Third Period	57	68	68	0	0	0	0	0	514709
	10	146	146	0	818,513	In Third Period	62	146	146	0	0	0	0	0	818513
	21	55	55	0	346,500	In Second Period	75	55	55	0	0	0	0	0	346500

The Job Details button shows :-

- The planned % complete after each period (**Procurement** tab).
- The actual % of work completed to date (**Job Progress** tab).

The job is currently 94.7% complete, and has overrun.

There is 5.3% of the job left to complete, equating to 7.2 men (0.053×135).

To **ensure** the job completes we'll allocate 8 men, and appropriate site cost to support them.

If a job overruns you can allocate as much labour as is required to complete the job, and the normal overmanning rules do not apply, since there is no planned labour as a guide.

Estimated Details by Period

Job Period	Build Cost	Site Cost	Labour Manning	Expected Value	Cumulative % Complete
1	1,399,771	279,954	54	1,931,286	40
2	2,099,657	419,931	81	2,896,928	100

Total Labour Manning: man periods

Cumulative Analysis

Total Value:

Total Cost:

Gross Profit: 5.8 % of costs

% complete **Behind Schedule**

What happens if a job overruns ?

Job 5 (Completed)

General

Procurement

Performance

Job Progress

Print Options

Game Period Period 6

Labour Analysis

Planned: 0

Own labour changes for period

Own: 8

New recruits: 0

From ILP: 0

Paid off: 0

To ILP: 45

+ Sub: 0

Actual: 8

Effective: 8

Ineffective: 0

training new recruits: 0

Overmanning: 0

Cost and Project Manager Details

Design fee: 0

Build cost: 179,347

Site cost: 382,241

Risk cost: 0

Late completion Penalty: 96,564

Training new recruits: 0

Labour payoffs: 0

Subcontract premium: 0

Value and Profit Analysis

Measured value: 260,980

Early completion bonus: 0

Total Value: 260,980

Total Cost: 670,277

Period Gross Profit: -409,297

Cumulative Analysis

Total Value: 4,819,486

Total Cost: 4,979,819

Gross Profit: -160,333 -3.2 % of costs

% complete 100 Late Completing

Brock, G

Salary: 12,125

Bonus: 0

Relocation fee: 0

Golden Hello: 0

Recruitment charges: 0

Prev Mgr Payoff: 0

Once the period has been completed, the **job progress report** shows the penalty incurred for late completion.

Main

Quit

What happens if a job overruns ?

The **relationship with the client** will also have been affected by the late completion of the job.

In this particular example, the relationship with Railline has deteriorated to a 'poor' one as a results of completing job 31 late, and it will be hard to procure any further work with the client.

Client History

Client: **Kegworth Airport**

Current Relationship: **poor**

Job Progress Details

Job	Per Preq	Description	Estimating Confidence	Bidding details	Contract Completion Time	Consultant Designer used	Project Manager used	Level of Site Admin cost allocated
▶ 5	1	New baggage reclaim hall	Extremely High	competitive bid, and the job was won	late	good	reasonable	very good

What happens if a job overruns ?

The Demo is now complete

What happens if a job overruns ?

Own v Subcontract Labour

Keep Clicking Anywhere on the screen to advance the demo

In progressing jobs it is always **far more cost-effective** to use the company's own fully-trained **operatives** since subcontractors :-

- Cost more than own labour
- Reliance on subcontractors can affect the morale of the company's own labour

However, if there is an overall **labour shortfall** that the Construction Manager needs to address, two options are available :-

- Take-on **new recruits**, adding to the company's own labour
- Use **subcontractors**

But which option is the most cost-effective ?

To answer this question we need to compare the costs involved in taking on one new recruit against one subcontractor.

Subcontractors

Subcontractors do not need to be trained, and are fully effective from day one.

However, they do incur an additional subcontract premium, shown in the **Company and Financial Information**.

In this example the premium is 3,500 per period for each Subcontractor used.

Key Point

The subcontractor premium is the same regardless on the job upon which they are used.

Subcontractors cost an extra: per period

Own v Subcontract Labour

New Recruits: Training Cost

A new recruit needs to be trained in their first period with the Company, and as a result there is an associated training cost.

Using information in the **Company & Financial Information** the training cost per new recruit is calculated as follows :-

- The training time is 2 weeks
- The training cost per week is 577 (training cost per annum / 52)
- The training cost is 1,154 (2 x 577)

Key Point

The training cost is the same regardless of the job upon which the new recruit is used.

It takes: weeks to train own labour

Annual training costs are: per person

New Recruits: Site Cost

Even though the new recruit is being trained, and is not effective on site, site costs still need to be paid to cover them on the job they are allocated to.

Site costs per man period vary from job to job, but tend to be cheaper in sectors that are more labour intensive, such as the Transport Sector

In the example shown, the site cost per man period is 11,575. The cost per week is 965 ($11,575/12$). For the 2 weeks training for a new recruit, the cost is 1,930.

Cost / Value ratios per man period

Build Cost:	57,874
Site Cost:	11,575
Value:	80,258

New Recruits: Hidden Costs

As well as the training and site costs, there are also a number of hidden costs that are hard to quantify :-

- The training time could extend the planned contract time resulting in penalty charges, although this could be offset by allocating labour levels above the planned ones.
- Eventually own labour may need to be paid off when work dries up, incurring additional labour payoff charges. The laying off of own labour may then impact on labour relations, affecting the morale and productivity of the workforce across the company.

Labour Payoff Rate: 750

Clearly the decision as to whether to employ new recruits or use subcontractors is **complex**, and involves **many factors and costs**, including :-

- The time it takes to train new recruits, and cost involved.
- The site costs that need to be paid whilst people are being trained.
- The additional cost of employing subcontractors.
- The anticipated duration of a contract.
- How many periods subcontractors need to be employed for.
- The affect of using subcontractors on the morale of the company's own labour, which is covered in another demo.

However, it is worth taking the time to determine the most cost-effective approach, which is often job-dependant, as this can affect the **profitability of a contract**.

In general, in the short-term the choice can vary, but in the long-term the continued use of subcontractors will almost certainly prove more costly than taking on and training new staff, since the subcontract premium has to be paid every period.

Key Point

Where there is an overall labour shortfall in the period, the decision as to whether to employ new recruits or use subcontractors is further complicated by the **limit on the number of new recruits** that can be taken on in a period, as defined in the **Company and Financial Information**. The limit can vary each period.

Miscellaneous

Retention: % of Tender Value

No more than: new recruits can be taken on this period

Own v Subcontract Labour

The Demo is now complete

Own v Subcontract Labour

Keep Clicking Anywhere on the screen to advance the demo

Labour Relations

In any period a Company's total labour force consists of :-

- Men in the **Idle Labour Pool** (Own Labour)
- Men on **On-Going Jobs** (Own Labour+ Subcontract Labour)

Each period the Construction Manager has to decide how best to manipulate the labour force in order to progress the on-going jobs.

The options available include :-

For the Company's Own Labour

- Laying men off from the Idle Labour Pool (ILP)
- Transferring men from the ILP to jobs, or from jobs to the ILP
- Taking on new recruits onto jobs or laying off labour from jobs

For Subcontract Labour

- Taking on or releasing subcontractors

The **most cost-effective** way of managing the labour force is to use the company's own fully trained labour, rather than subcontractors.

For example, if 50 men are transferred to the idle labour pool from job A, then they are immediately used on job B. No training is required, no men are laid off, and the company does not incur any additional costs such as subcontractor premiums.

In this scenario the company would be perceived to have a **good labour relations policy**, and the morale of the company's own labour would be high, ensuring greater productivity.

The **least cost-effective way** of managing the labour force is to be constantly hiring and laying off, and also relying on subcontractors.

For example, if a high proportion of the company's own labour is laid off in a period, then the morale of the remaining own labour (not subcontractors) would be weakened, leading to reduced productivity. In this case the Company would have a **poor labour relations policy**.

We'll now look at more detailed examples that illustrate good and bad labour relations.

178 men were available in the idle labour pool, and none were laid off. Indeed, all 178 men were used on On-Going jobs.

Example 1: good labour relations in action

All 178 idle labour transferred to site.

Number of men in the pool: 178
 Number of men to Layoff This Period: 0
 Number of men available in the pool for On-Going Jobs: 178

After Decisions

Net Transfers from On-Going Jobs: -178
 Number of men left in the pool: 0

On-Going Jobs

No men were laid off from site.

	Job	Last Period			Site Cost Paid	Job Status	Planned Labour	This Period			Own Labour Transfers				Site Cost Allocation
		Total	Own	Sub				Total	Own	Sub	From ILP	New	To ILP	Paid Off	
	20	82	82	0	333,000	In Fourth Period	39	38	38	0	0	0	44	0	154500
	38	38	38	0	381,000	In Second Period	56	54	54	0	16	0	0	0	541500
	40	9	9	0	84,000	In Second Period	14	14	14	0	5	0	0	0	131000
▶	43	56	56	0	364,200	In Second Period	67	91	91	0	35	0	0	0	592000
	46	0	0	0		In First Period	97	131	131	0	31	0	0	0	756000
	47	0	0	0		In First Period	11	13	13	0	13	0	0	0	165500
	50	0	0	0		In First Period	18	24	24	0	22	2	0	0	157000

The Construction Manager was able to manipulate the labour force so that :-

- None of the company's own labour was laid off
- No subcontractors were used
- All idle labour was redeployed to site

This is an example of **good labour relations**, and the productivity of the company's own labour would be improved.

No subcontractors were used.

Example 2: poor labour relations in action

178 men were available in the idle labour pool. All 5 were laid off when they could have been utilised on jobs.

Number of men in the pool: 178
 Number of men to Layoff This Period: 5
 Number of men available in the pool for On-Going Jobs: 173

After Decisions

Net Transfers from On-Going Jobs: -173
 Number of men left in the pool: 0

On-Going Jobs

Job	Last Period				This Period									
	Labour On Site			Site Cost Paid	Job Status	Planned Labour	Labour Allocation			Own Labour Transfers				Site Cost Allocation
	Total	Own	Sub				Total	Own	Sub	From ILP	New	To ILP	Paid Off	
20	82	82	0	333,000	In Fourth Period	39	38	38	0	0	0	0	44	154500
38	38	38	0	381,000	In Second Period	56	54	54	0	16	0	0	0	541500
40	9	9	0	84,000	In Second Period	14	14	9	5	0	0	0	0	131000
43	56	56	0	364,200	In Second Period	67	91	91	0	35	0	0	0	592000
46	0	0	0		In First Period	97	131	122	9	122	0	0	0	756000
47	0	0	0		In First Period	11	13	0	13	0	0	0	0	165500
50	0	0	0		In First Period	18	24	0	24	0	0	0	0	157000

44 men were laid off from site, when they could have been utilised on other jobs.

The Construction Manager did not manipulate the labour force effectively, and :-

- Used 51 subcontracts when men were available in the idle pool, but were paid off
- Laid off 44 men from site, some of whom could have been used instead of subcontractors

This is an example of **poor labour relations**, and the productivity of the company's own labour would be adversely affected.

51 subcontractors were used.

The affect of the company's construction management decisions on labour relations is reflected in comments in the **External Performance Review**.


External Performance Review

Period: Period 7

Category: Construction

any Details line to see if further information is available.

simply click on the Further Information button to display the additional notes about the observation made by the external consultant.



Further Information

	Job No	Details	Nature
▶		Morale (and productivity) of own labour weakened by increasing level of own labour layoffs	N
		Morale (and productivity) of own labour improved by relying on the use of own labour	P
	24	There is a marginal improvement in the performance of Proj Mgr 12 (Mason, E) due to experience to date with the company	P
	24	There is a noticeable improvement in the performance of Project Manager 12 (Mason, E) due to the 4 % bonus paid	P
	24	There is a noticeable deterioration in the performance of Project Manager 12 (Mason, E) due to the job location	N
	24	The overall performance of Project Manager 12 (Mason, E) is dreadful	N

As we have seen, the morale (and productivity) of the company's own labour can be influenced by :-

- The % of the company's own labour that is laid off
- The % of subcontractors used

If the company's own labour is more productive, jobs will be progressed quicker, with reduced costs. Conversely, a more unproductive workforce will delay the progress of jobs, and result in higher costs.

In either case, the Construction Manager must constantly review the actual progress of jobs against planned levels in order to ensure that the labour allocations are as required each period.

The Demo is now complete

Labour Relations

Different levels of Site Administration

Keep Clicking Anywhere on the screen to advance the demo



Different levels of Site Administration

Allocating enough money for Site Administration is **crucial** to keep a job progressing as productively as possible.

The alternatives, both of which can adversely affect a job, are two-fold :-

- **Paying far too much** site cost. This may improve site productivity, and a job may be slightly ahead of schedule. However, the benefits are far outweighed by the increased costs, and can seriously affect profit
- **Not paying enough** site cost. This reduces site productivity, puts a job behind schedule, and results in inefficient use of the labour resources available

We'll now demonstrate the scenarios outlined.

Its period 7, and the Construction Manager made the labour allocations shown below for the company's on-going jobs.

We'll concentrate on job 5, which is in its final planned period

The required level of site cost to support the 65 men on site is 382241. **This was allocated.**

The job progress details for the period reveal that :-

- A healthy gross profit of 329,957 was made
- The job completed on schedule

There appear to be no problems with the job.

On-Going Jobs

Job	Last Period				This Period									
	Labour On Site			Site Cost Paid	Job Status	Planned Labour	Labour Allocation			Own Labour Transfers				Site Cost Allocation
	Total	Own	Sub				Total	Own	Sub	From ILP	New	To ILP	Paid Off	
▶ 5	73	73	0	382,241	In Second Period	81	65	65	0	0	0	8	0	382241
6	68	68	0	514,709	In Second Period	57	62	62	0	0	0	6	0	514709
10	146	146	0	818,513	In Second Period	156	106	106	0	0	0	40	0	818513
21	0	0	0		In First Period	50	54	54	0	54	0	0	0	312285

Cumulative Analysis

Total Value:	4,845,906
Total Cost:	4,515,949
Gross Profit:	329,957 7.3 % of costs
% complete	100 On Schedule

This time, the actual site cost allocation was 458,680, **20% above** the required level.

The affects this time were :-

- on the positive side, the job still completed on schedule.
- On the negative side, and more worryingly, gross profit was down from 329,957 to 258,295 as a direct result of the increased site costs

This situation would become much worse as the % of additional site cost increased, showing that the cost far outweighs the benefits.

On-Going Jobs															
Job	Last Period				This Period										
	Labour On Site			Site Cost Paid	Job Status	Planned Labour	Labour Allocation			Own Labour Transfers				Site Cost Allocation	
	Total	Own	Sub				Total	Own	Sub	From ILP	New	To ILP	Paid Off		
▶ 5	73	73	0	382,241	In Second Period	81	65	65	0	0	0	8	0	458680	
6	68	68	0	514,709	In Second Period	57	62	62	0	0	0	6	0	514709	
10	146	146	0	818,513	In Second Period	156	106	106	0	0	0	40	0	818513	
21	0	0	0		In First Period	50	54	54	0	54	0	0	0	312285	

Cumulative Analysis
Total Value: 4,846,561
Total Cost: 4,588,266
Gross Profit: 258,295 5.6 % of costs
% complete 100 **On Schedule**

This time, **no site cost** is allocated in an attempt to save money.

The affects this time are all negative :-

- At 95.4% complete, the job has not completed on time
- Gross profit is down from 329,957 to only 167,541, and further analysis would show that a minimum level of site cost was incurred to keep the site operational
- The site productivity is much lower than it should have been, and labour resources have been wasted

This situation is as serious as wasting money on paying too much site cost.

On-Going Jobs

	Job	Last Period				This Period										% complete		95.
		Labour On Site			Site Cost Paid	Job Status	Planned Labour	Labour Allocation			Own Labour Transfers				Site Cost Allocation			
		Total	Own	Sub				Total	Own	Sub	From ILP	New	To ILP	Paid Off				
▶	5	73	73	0	382,241	In Second Period	81	65	65	0	0	0	8	0	0			
	6	68	68	0	514,709	In Second Period	57	62	62	0	0	0	6	0	514709			
	10	146	146	0	818,513	In Second Period	156	106	106	0	0	0	40	0	818513			
	21	0	0	0		In First Period	50	54	54	0	54	0	0	0	312285			

Cumulative Analysis

Total Value:	4,624,136
Total Cost:	4,296,595
Gross Profit:	167,541 3.9 % of costs
% complete	95.4 Behind Schedule

The Demo is now complete

Different levels of Site Administration

The **total cost** accrued on a job in a particular period can include :-

- Design fees
- Build costs
- Site staff costs
- Risk costs if the risk has occurred
- Penalty for late completion
- Training of new recruits
- Labour payoffs
- Subcontractor premiums
- Agency project manager costs
- Project manager salary, recruitment charge, payoff cost, bonus

The labour costs relate to costs incurred on or off site. Each one is shown in the **company and financial information**

On-site costs

Subcontract premium

Subcontractors are 100% productive as soon as they are taken on by the Construction Manager, and require no training. However, using them incurs an additional cost above the normal labour cost.

On/Off site costs

Labour payoff rate

This is the cost per person of laying off the Company's own labour from either :-

- The Idle Labour Pool
- An On-Going Job

Subcontractors cost an extra:	3,500	per period
Labour Payoff Rate:	750	
Idle labour costs:	6,000	per annum
It takes:	2	weeks to train own labour
Annual training costs are:	30,000	per person

On-site costs

Training costs

A new recruit needs to be trained in their first period with the Company, and as a result there is an associated training time and cost.

Off-site costs

Annual cost of idle labour

This is the cost of keeping someone idle for a year, and takes into account the redeployment of the person in other areas.


[Main](#)
[Quit](#)

Penalty for Late Completion of a Job

If the duration of a job exceeds its planned duration, the company is charged a penalty for each late period.

The penalty is a percentage of the total planned value (bid entered) for the job; details are given in the **company and financial information**.

Penalty clause for late completion is:

% of Tender Value per period

As well as the monetary cost of completing a job late, there is a serious affect on the relationship with the client, which is reflected in the overall client satisfaction performance indicator.

Retention is a percentage of the measured value (turnover) achieved on a job in a period that is retained by the client, until the job is completed.

It is repaid in two equal instalments, in the period when the job is completed and two periods later.

Details of the percentage retained are shown in the **company and financial information**.

Retention: % of Tender Value



Main

Quit

Percentage of a job completed

Keep Clicking Anywhere on the screen to advance the demo

Percentage of a job completed

A job was awarded with the following bidding details.

The bid itself	Cost / Value ratios per man period
Estimated Build Cost: 8,107,786 On Cost: 1,703,415 Breakdown Mark-Up: 4.9 % Bid: 10,291,950 (Job Won)	Build Cost: 41,793 Site Cost: 8,359 Value: 53,051

The job was won with a bid of **10,291,950**

The job has just completed its 1st period, and has three periods left to complete on time.

The Job Progress screen shows that after 1 period of the job the **total value** to date is 3,547,934.

This equates to **34.4%** of the bid i.e.,

$$(3,547,934 / 10,291,950) * 100$$

However, the % complete shown is **34.5%**, so why is there a difference ?

The % complete is derived from the **Actual amount of the job completed** to date.

However, the company's **measurement effort** has secured an extra 0.1% of value over the period, which is incorporated in the total value.

Cumulative Analysis			
Total Value:	3,547,934		
Total Cost:	3,431,650		
Gross Profit:	116,284	3.4 % of costs	
% complete	34.5	Ahead of Schedule	

Percentage of a job completed

The Demo is now complete

Percentage of a job completed

Measured Value (Turnover)

For each job awarded to the company, there is a **planned value per man period** based upon :-

Bid (planned value) submitted by the company / **Planned labour manning** (number of man-periods, to complete the job in the planned duration)

Each period, three values are calculated for a job :-

- **Expected value** is the labour on site that contributes to progressing the job (**effective labour**) multiplied by the **planned value per man period**
- **Actual value** is the expected value adjusted to take into account a number of factors that affect productivity on the job :-
 - The performance of the project manager allocated to the job
 - The level of site support (site cost allocated)
 - The labour relations policy of the company
- **Measured Value (Turnover)** is the actual value adjusted by the measurement effort of the company for the period.

The **measurement effort** depends upon how well the company's measurement staff are able to cope with the turnover in the period across all jobs. The last period of the history provides the benchmark for determining the appropriate level of staff required.

The client pays a bonus for early completion of a job.

Early completion of a job means completing **at least one period** before the end of the planned duration e.g., if the planned duration is 4 periods, it must be completed in 3 periods or less to obtain the client bonus.

The bonus varies depending upon the size of the job, and is expressed as a percentage of the tender value (bid entered) for the job; details are given in the **company and financial information**.

The % of the tender value payable as a bonus
for early completion is:

0.4	% for Large jobs
0.5	% for Medium jobs
0.6	% for Small jobs

Company and Financial Information

Financial

Overheads

Procurement

Construction

Capital Base

Capital Base increase limited to: 10 % each period
Capital Base that can be sold off/liquidated: 20 % this period

Capital Base Depreciation rate: 2.5 % per annum
Capital Writing Down allowance: 25 % per annum

Investments

Investment Company Size	Maximum increase in investment allowed each period	Minimum total investment required to obtain benefits	Minimum build cost savings
Large	150,000	300,000	0.9 %
Medium	100,000	200,000	0.6 %
Small	50,000	100,000	0.3 %

The total number of investments cannot exceed: 5 at any point in time

Financial Rates

Bank Credit rate: 1.5 % per annum

Bank Overdraft rate: 14 % per annum

Corporation Tax rate: 28 %

Miscellaneous

Cash A/C Overdraft Limit: 1,000,000
External Performance Reviews cost: 12,000 each period

CFI - Overheads

Company and Financial Information

Financial	Overheads	Procurement	Construction		
	Marketing Department	Estimating Department	Head Office Department	QHSE Department	Measurement Department
Company costs (per person)					
Annual salary:	32,000	27,000	24,000	30,000	35,000
Recruitment and training: (% of annual salary)	18 %	15 %	12 %	18 %	20 %
Paying off: (% of annual salary)	16 %	14 %	14 %	16 %	17 %
General					
Maximum additional staff that can be employed each period:	2	2	3	2	2
Agency staff cost (per annum):		40,000	33,000	45,000	54,000
Miscellaneous					
The absolute change in % Marketing effort directed into each sector cannot exceed: 10 each period					



Main

Quit

Company and Financial Information

Financial

Overheads

Procurement

Construction

Rival Bids

In the Early Years, rival companies are unlikely to submit tenders with mark-ups less than:

4	% for Large jobs
5	% for Medium jobs
6	% for Small jobs

Costs

The cost of Bidding is:

1,000	for a Large job
750	for a Medium job
500	for a Small job

Job Risk Definition

Low Risk is a 5-20% chance of something going wrong;
Medium Risk is a 20-40% chance;
High Risk is a 40-50% chance

Workload and Number of Jobs

Forward Workload may be more than: 9 times the Capital Base
but cannot exceed: 11 times

If a company's projected forward workload falls between the lower and upper thresholds, then the company's bid will be rejected unless the relationship with the client is at least: fairly good

In a period, the number of On-Going Jobs at the beginning of the period, plus the number won during bidding, cannot exceed: 12 jobs

Consultants

Allocating the best possible designer to a design and build job can result in a reduction of the build costs by up to: 3 %


[Main](#)
[Quit](#)

Company and Financial Information

Financial

Overheads

Procurement

Construction

Project Managers

Costs [% of annual salary]

Recruiting costs:

15

%

Paying off costs:

15

%

Relocating costs:

6

%

Agency staff

Annual cost:

50,000

Miscellaneous

Retention:

1.5

% of Tender Value

No more than:

75

new recruits can be taken on this period

Subcontractors cost an extra:

3,500

per period

Labour Payoff Rate:

750

Idle labour costs:

6,000

per annum

It takes:

2

weeks to train own labour

Annual training costs are:

30,000

per person

Overmanning Limits

The effective labour overmanning that is allowed above the planned labour levels in a period is:

35

% for Industrial jobs

35

% for Building and Commercial jobs

45

% for Transport jobs

18

% for Energy jobs

25

% for Water and Sewage jobs

Job Completion Bonuses & Penalties

The % of the tender value payable as a bonus for early completion is:

0.4

% for Large jobs

0.5

% for Medium jobs


0.6

% for Small jobs

Penalty clause for late completion is:

2

% of Tender Value per period



[Main](#)

[Quit](#)

Keep Clicking Anywhere on the screen to advance the demo

A unique number that identifies a project manager, ranging from 1 onwards.

Project Manager Details

No: 1

Name: Brock, G

Age: 29

Qualifications: BSc (Hons) Construction Management - CE

Salary: 48500 per annum

Cash incentive required to secure services: None

Profile:

On graduation spent 3 years in a small consultant's office as a graduate designer, working on a ground-breaking housing project, winning a design award in the process. Moved onto site with a major private contractor, working first as site engineer and then a site manager. Experience is predominately in industrial, building and commercial contracts.

Career has progressed at a fast rate so far, and is considered to have all the skills required for management. Likes to be the centre of attention, and outspoken at times, but a good motivator. Has a keen interest in sports.

History

Personal and professional qualifications.

The annual salary includes wages, company car, expenses etc.

A guide to the cash incentive that may be required to secure the services of the project manager.

Work and personal details to help identify suitability for a particular type of work.

Weighting (never seen)

A factor between 1 and 10 that measures performance in each market sector.

This is adjusted further by a number of other factors (time with the company, bonus payments, taking over from another, job distance from the company's head office) to determine overall performance on a particular job in a period.

Recruitment, Payoff and Relocation charges

Project managers can be :-

- Recruited into the company
- Paid off from the company
- Moved from job to job within the company

Costs (% of annual salary)

Recruiting costs: 15 %

Paying off costs: 15 %

Relocating costs: 6 %

Each action attracts a cost expressed as a % of annual salary; details are given in the **company and financial information**.

Bonus

A **bonus** may be paid to the Project Manager on a job, expressed as a % of the salary paid in the period. This is a one-off payment that does not change the current salary level.

The payment of a bonus will **improve** performance in the period in which the bonus is paid.

Good project managers who are not paid a regular bonus may **resign** due to dissatisfaction, and can also be poached by rival companies. A project manager who has resigned cannot be reappointed by the company for 2 periods.

Agency Staff

Agency staff may be used if the services of a particular project manager cannot be secured e.g., if not enough cash incentive is offered. Agency project managers incur a cost above normal salary levels, and their performance is average.

The Demo is now complete

Project Manager Information

Keep Clicking Anywhere on the screen to advance the demo

Project managers are concerned with the **overall planning and co-ordination** of a project from inception to completion aimed at meeting the client's requirements and ensuring completion on time, within cost and to the required quality standards.

But how do we know the affect a project manager has had on the performance of the company's jobs ?

The **Project Manager History** indicates how well the project manager has managed the company's jobs, and shows :-

- The **basic performance**; based on the project manager's profile
- The **overall performance**, taking into account a number of performance factors

Project Manager Performance History												
Project Manager: 8 Bacon, T												
			Basic Performance	Factors Improving Performance			Factors Deteriorating Performance			Overall Performance	Reason for leaving, if applicable	
Per	Job	Sector		Time with the Company	Bonus payments in the period		Distance of the job from Head Office	Taking over from another				
				Improve.	% Bonus	Improvement	(miles)	Deterioration	Deterioration			
5	4	Building & Commercial	excellent	none	8	significant	46	marginal	marginal	excellent		
6	29	Building & Commercial	excellent	marginal	8	significant	90	marginal	none	excellent		
7	29	Building & Commercial	excellent	marginal	7	significant	90	marginal	none	excellent		
8	50	Building & Commercial	excellent	marginal	8	significant	126	marginal	none	excellent		
9	50	Building & Commercial	excellent	noticeable	6	noticeable	126	marginal	none	excellent		

T Bacon has managed jobs 4, 29 and 40 since period 5, all Building & Commercial contracts, and has a **excellent** basic and overall performance level for each period.

Project Manager Performance History

Project Manager: 8 Bacon, T

Per	Job	Sector	Basic Performance	Factors Improving Performance			Factors Deteriorating Performance			Overall Performance	Reason for leaving, if applicable
				Time with the Company	Bonus payments in the period		Distance of the job from Head Office	Taking over from another			
					Improve.	% Bonus		Improvement	(miles)		
5	4	Building & Commercial	excellent	none	8	significant	46	marginal	marginal	excellent	
6	29	Building & Commercial	excellent	marginal	8	significant	90	marginal	none	excellent	
7	29	Building & Commercial	excellent	marginal	7	significant	90	marginal	none	excellent	
8	50	Building & Commercial	excellent	marginal	8	significant	126	marginal	none	excellent	
9	50	Building & Commercial	excellent	noticeable	6	noticeable	126	marginal	none	excellent	

We'll take a look at the factors that have contributed to Freshwater's excellent overall performance level.

Project Manager Performance History

Project Manager: 8 Bacon, T

Per	Job	Sector	Basic Performance	Factors Improving Performance			Factors Deteriorating Performance			Overall Performance	Reason for leaving, if applicable
				Time with the Company	Bonus payments in the period		Distance of the job from Head Office	Taking over from another			
				Improve.	% Bonus	Improvement	(miles)	Deterioration	Deterioration		
5	4	Building & Commercial	excellent	none	8	significant	46	marginal	marginal	excellent	
6	29	Building & Commercial	excellent	marginal	8	significant	90	marginal	none	excellent	
7	29	Building & Commercial	excellent	marginal	7	significant	90	marginal	none	excellent	
8	50	Building & Commercial	excellent	marginal	8	significant	126	marginal	none	excellent	
9	50	Building & Commercial	excellent	noticeable	6	noticeable	126	marginal	none	excellent	

Project Manager Performance History												
Project Manager: 8 Bacon, T												
			Basic Performance	Factors Improving Performance			Factors Deteriorating Performance			Overall Performance	Reason for leaving, if applicable	
Per	Job	Sector		Time with the Company	Bonus payments in the period		Distance of the job from Head Office	Taking over from another				
				Improve.	% Bonus	Improvement	(miles)	Deterioration	Deterioration			
5	4	Building & Commercial	excellent	none	8	significant	46	marginal	marginal	excellent		
6	29	Building & Commercial	excellent	marginal	8	significant	90	marginal	none	excellent		
7	29	Building & Commercial	excellent	marginal	7	significant	90	marginal	none	excellent		
8	50	Building & Commercial	excellent	marginal	8	significant	126	marginal	none	excellent		
9	50	Building & Commercial	excellent	noticeable	6	noticeable	126	marginal	none	excellent		

Profile:

30 years working with a variety of employers starting as apprentice and progressing to general foreman. Was promoted into site management at the age 48 and has excelled in overseeing a number of medium-sized building and commercial contracts, largely in the East of England. Building and commercial contracts are the strenght of his experience.

Highly regarded by both colleagues and senior management, having worked up the ranks to current position. Copes well under pressure, leaning on years of practical experience, and lives and loves the job. Sadly, this has caused some problems at home, and was re...

Profile

Bacon's basic performance is **very good** because of an excellent track record in the Transport sector.

A good project manager, one with the relevant experience for a particular job, will produce more output from the resources available, while a poor project manager will impair contract efficiency.

Project Manager Performance History

Project Manager: **8** **Bacon, T**

Per	Job	Sector	Basic Performance	Factors Improving Performance			Factors Deteriorating Performance			Overall Performance	Reason for leaving, if applicable
				Time with the Company	Bonus payments in the period	Improvement	Distance of the job from Head Office	Deterioration	Taking over from another		
5	4	Building & Commercial	excellent	none	8	significant	46	marginal	marginal	excellent	
6	29	Building & Commercial	excellent	marginal	8	significant	90	marginal	none	excellent	
7	29	Building & Commercial	excellent	marginal	7	significant	90	marginal	none	excellent	
8	50	Building & Commercial	excellent	marginal	8	significant	126	marginal	none	excellent	
9	50	Building & Commercial	excellent	noticeable	6	noticeable	126	marginal	none	excellent	

Time with the Company

The longer a project manager works for the Company, the better the performance, as they gain experience and knowledge and how the company operates.

We can see that Freshwater has been with the Company 5 periods, and over that time there has been an improvement in performance due to experience gained.

Project Manager Performance History												
Project Manager: 8 Bacon, T												
			Basic Performance	Factors Improving Performance			Factors Deteriorating Performance					
Per	Job	Sector		Time with the Company	Bonus payments in the period		Distance of the job from Head Office	Taking over from another		Overall	Reason for leaving, if applicable	
				Improve.	% Bonus	Improvement	(miles)	Deterioration	Deterioration	Performance		
5	4	Building & Commercial	excellent	none	8	significant	46	marginal	marginal	excellent		
6	29	Building & Commercial	excellent	marginal	8	significant	90	marginal	none	excellent		
7	29	Building & Commercial	excellent	marginal	7	significant	90	marginal	none	excellent		
8	50	Building & Commercial	excellent	marginal	8	significant	126	marginal	none	excellent		
9	50	Building & Commercial	excellent	noticeable	6	noticeable	126	marginal	none	excellent		

Bonus

The performance of the project manager can be improved for the current period only by paying a **bonus**, which is a % of the salary for the period.

An average of 7% bonus has been paid to Bacon, and this has **significantly improved** performance.

Other reasons for paying a bonus ?

Paying a bonus to good project managers will prevent them from resigning. Its the average bonus over all the periods a Project Manager has been on a particular job that governs resignations due to disaffection, so its possible to pay a large bonus in one period, and none in another period.

Project Manager Performance History

Project Manager: 8 Bacon, T

Per	Job	Sector	Basic Performance	Factors Improving Performance			Factors Deteriorating Performance			Overall Performance	Reason for leaving, if applicable
				Time with the Company	Bonus payments in the period		Distance of the job from Head Office	Taking over from another			
					Improve.	% Bonus		Improvement	(miles)		
5	4	Building & Commercial	excellent	none	8	significant	46	marginal	marginal	excellent	
6	29	Building & Commercial	excellent	marginal	8	significant	90	marginal	none	excellent	
7	29	Building & Commercial	excellent	marginal	7	significant	90	marginal	none	excellent	
8	50	Building & Commercial	excellent	marginal	8	significant	126	marginal	none	excellent	
9	50	Building & Commercial	excellent	noticeable	6	noticeable	126	marginal	none	excellent	

Good project managers that are not consistently given a reasonable bonus may not only **resign** because they do not feel they are being adequately rewarded, but they may be poached by another company, regardless of any bonuses paid.

Project Manager Performance History												
Project Manager: 8 Bacon, T												
Per	Job	Sector	Basic Performance	Factors Improving Performance			Factors Deteriorating Performance			Overall Performance	Reason for leaving, if applicable	
				Time with the Company	Bonus payments in the period	Improvement	Distance of the job from Head Office	Deterioration	Taking over from another Deterioration			
5	4	Building & Commercial	excellent	none	8	significant	46	marginal	marginal	excellent		
6	29	Building & Commercial	excellent	marginal	8	significant	90	marginal	none	excellent		
7	29	Building & Commercial	excellent	marginal	7	significant	90	marginal	none	excellent		
8	50	Building & Commercial	excellent	marginal	8	significant	126	marginal	none	excellent		
9	50	Building & Commercial	excellent	noticeable	6	noticeable	126	marginal	none	excellent		

Distance from the Company's Head Office

The distance of the job from the company's head office can also affect the performance of the project manager, especially those without the necessary experience..

Job 50, for example, was 126 miles from the company's head office, a fair distance, and this **'marginally'** deteriorated performance.

Project Manager Performance History

Project Manager: 8 Bacon, T

Per	Job	Sector	Basic Performance	Factors Improving Performance			Factors Deteriorating Performance			Overall Performance	Reason for leaving, if applicable
				Time with the Company	Bonus payments in the period		Distance of the job from Head Office	Taking over from another			
					Improve.	% Bonus		Improvement	(miles)		
5	4	Building & Commercial	excellent	none	8	significant	46	marginal	marginal	excellent	
6	29	Building & Commercial	excellent	marginal	8	significant	90	marginal	none	excellent	
7	29	Building & Commercial	excellent	marginal	7	significant	90	marginal	none	excellent	
8	50	Building & Commercial	excellent	marginal	8	significant	126	marginal	none	excellent	
9	50	Building & Commercial	excellent	noticeable	6	noticeable	126	marginal	none	excellent	

Taking over from another project manager

Taking over from another project manager can impair performance. The previous project manager will have worked differently, and there will be a period of adjustment. Better project managers are not affected so much.

There was a **marginal deterioration** in Period 5 when Bacon took over Job 4 from another manager.

Project Manager Performance History												
Project Manager: 8 Bacon, T												
Per	Job	Sector	Basic Performance	Factors Improving Performance			Factors Deteriorating Performance			Overall Performance	Reason for leaving, if applicable	
				Time with the Company	Bonus payments in the period	Improvement	Distance of the job from Head Office	Deterioration	Taking over from another Deterioration			
5	4	Building & Commercial	excellent	none	8	significant	46	marginal	marginal	excellent		
6	29	Building & Commercial	excellent	marginal	8	significant	90	marginal	none	excellent		
7	29	Building & Commercial	excellent	marginal	7	significant	90	marginal	none	excellent		
8	50	Building & Commercial	excellent	marginal	8	significant	126	marginal	none	excellent		
9	50	Building & Commercial	excellent	noticeable	6	noticeable	126	marginal	none	excellent		

To summarise, the **main factor** that affects a project manager's performance is the **Past experience** in the job sector.

There are additional factors that can improve performance :-

- **Time spent** with the Company
- **Bonus payments**

and others that can deteriorate performance :-

- **Distance of the job** from the company's head office
- **Taking over** from another project manager

Although these can be graded from "None" to "Dramatic" for affect, none of them has anything like the impact as the past experience.

The experience/performance of the project manager can be gauged from :-

- Their profile
- Their career **history** with the company

Project Manager Performance History												
Project Manager: 8 Bacon, T												
Per	Job	Sector	Basic Performance	Factors Improving Performance			Factors Deteriorating Performance			Overall Performance	Reason for leaving, if applicable	
				Time with the Company	Bonus payments in the period	Improvement	Distance of the job from Head Office	Taking over from another				
				Improve.	% Bonus		(miles)	Deterioration	Deterioration			
5	4	Building & Commercial	excellent	none	8	significant	46	marginal	marginal	excellent		
6	29	Building & Commercial	excellent	marginal	8	significant	90	marginal	none	excellent		
7	29	Building & Commercial	excellent	marginal	7	significant	90	marginal	none	excellent		
8	50	Building & Commercial	excellent	marginal	8	significant	126	marginal	none	excellent		
9	50	Building & Commercial	excellent	noticeable	6	noticeable	126	marginal	none	excellent		

The Demo is now complete

Project Manager Performance History												
Project Manager: 8 Bacon, T												
Per	Job	Sector	Basic Performance	Factors Improving Performance			Factors Deteriorating Performance			Overall Performance	Reason for leaving, if applicable	
				Time with the Company	Bonus payments in the period	Improvement	Distance of the job from Head Office	Deterioration	Taking over from another Deterioration			
5	4	Building & Commercial	excellent	none	8	significant	46	marginal	marginal	excellent		
6	29	Building & Commercial	excellent	marginal	8	significant	90	marginal	none	excellent		
7	29	Building & Commercial	excellent	marginal	7	significant	90	marginal	none	excellent		
8	50	Building & Commercial	excellent	marginal	8	significant	126	marginal	none	excellent		
9	50	Building & Commercial	excellent	noticeable	6	noticeable	126	marginal	none	excellent		

Number

A unique number that identifies the consultant, ranging from 1 onwards.

Experience

Company profile which highlights the sectors of expertise of the consultant.

The choice of consultant can impact on both the build and design costs.

Consultants with the appropriate expertise for a particular design and build job will produce designs that save on the build cost, but they charge more for the design. The saving in build cost that can be obtained by using the best possible consultant is defined in the **Company and Financial Information**.

Consultants

Allocating the best possible designer to a design and build job can result in a reduction of the build costs by up to: %

Consultants with insufficient experience will produce designs that result in higher than anticipated build costs, although they may be cheaper. However, the savings on the design cost are no compensation for the higher build costs.

Weighting

A factor between 1 and 5 that measures the experience of the consultant in each market sector, based on the profile.


[Main](#)
[Quit](#)

Idle Labour Pool

Contains the company's own fully-trained workers who are not currently allocated to a job.

Labour can reside in the pool for a number of reasons :-

- They may have been **deliberately transferred** there by the construction manager, and not reallocated to site
- Own labour is **automatically transferred** to the pool upon completion of a job

It is always **more cost-effective** to keep the idle labour pool as low as possible, using the company's own fully-trained staff on contracts that are in progress.

Idle Project Manager Pool

Contains the company's project managers who are currently not allocated to a job.

Project managers can reside in the pool for a number of reasons :-

- They may have been **deliberately recruited** by the personnel manager prior to being used on site, perhaps to prevent other companies from employing them (final years)
- Project Managers are **automatically transferred** to the pool upon completion of a job

Forming Relationships with Clients

Keep Clicking Anywhere on the screen to advance the demo

Forming Relationships with Clients

Each period a number of jobs are available in the market. The company's marketing effort will determine how many of the jobs the company prequalify for.

Each job has a client, in either the public or private sector, for whom the work is to be carried out.

Consider the following job for which the company has prequalified.

Period of Prequalification:	8	
Type:	Build Only	
Size:	Large	
Approximate Value:	16,000,000	
Complexity:	Medium	
Duration:	5 periods	
Description:	New sports hall and leisure centre	
Location:	Swansea	163 miles from Head Office
Sector:	Building & Commercial	
Client:	South Wales County Council	Client History

The client is **South Wales County Council**.

As the company tenders for and secures work with the client a **relationship** is built up between the two parties, which can analysed using the **client history** button.

The company can **influence** this relationship in a number of ways :-

positively by :-

- Submitting a good tender
- Completing the job on time

negatively by :-

- Submitting an uncompetitive (poor) bid for a job
- Managing the job poorly, and completing late

The **Client History button** gives a detailed analysis of the factors affecting the company's relationship with the client.

In this example, the company **appears to have a good relationship** with National Transport based upon :-

- Producing good estimates for jobs 20, 33 and 78 (Extremely high estimating confidence)
- Competitive bidding for jobs 20 and 33
- Completing job 20 on time, and managing it well (good project manager and site support)
- Completing job 33 early, and managing it well (good project manager and site support)

But how can the assumed 'good relationship' be verified ?

Client: **South Wales County Council**

Client Relationship: **extremely good**

				Job Progress Details					
	Job	Per Freq	Description	Estimating Confidence	Bidding details	Contract Completion Time	Consultant Designer used	Project Manager used	Level of Site Admin cost allocated
▶	20	2	Composite viaduct and slip road	Extremely High	competitive bid, and the job was won	on time		excellent	very good
	33	3	New respite and rehabilitation c	Extremely High	competitive bid, and the job was won	early		excellent	very good
	78	8	New sports hall and leisure cer	Extremely High					

The **client relationships button** (from the main menu) details in words the type of relationship the company has with all clients.

Clearly, the relationship with the South Wales County Council is currently **extremely good**.

Client Relationships: THE EARLY YEARS

Relationship Filter: All

Client History

Client	Description of Relationship	Value Of Work Won	% Mark-Up Above Cost	% Of The Total
▶ South Wales County Council	extremely good	14,076,020	4.9	11.3
Sport England	fairly good	14,042,340	3.8	11.3
Tayoto Cars UK	satisfactory	0	0.0	0.0
The Defence Agency	good	3,955,031	5.6	3.2

Per	Total	Turnover	Gross Profit to Turnover	Operating Profit to Turnover	Company Value	Capital Employed	Contract Completion	Forward Workload	Forward Margin	Share Price	Client Satisfaction
4	1000	80	75	60	120	100	120	80	120	120	125
5	1442	147	97	235	129	128	160	92	141	144	169
6	1746	182	109	291	138	152	160	127	205	176	206
7	2056	233	124	369	156	174	185	143	192	221	259
8	2477	279	127	394	174	198	215	196	289	288	317
9	2750	333	128	407	196	216	250	198	279	361	382

But why is the relationship with the client so important ?

- If two companies submit very similar bids for a job company with the best relationship with the client is **awarded** the contract
- The company's relationships with ALL clients forms one of the **key performance indicators** upon which the progress of the company is measured
- The company may **not be able to prequalify** for work with a client if the relationship has deteriorated

The Demo is now complete

Forming Relationships with Clients

Turnover

Value accrued across all jobs progressed.

Gross Profit to Turnover ratio

The ratio of gross profit to turnover across all jobs progressed; a measure of how profitable the company's jobs have been.

Operating Profit to Turnover ratio

The ratio of operating profit to turnover; a measure of how profitable the company is after taking into account all operating factors.

Company Value

A measure of the assets of the company.

Capital Employed

Measures how much of the company's Capital Base is being utilised.

Contract Completion Rate

A measure of the number of jobs completed early, on time or late.

Forward Workload

The anticipated remaining workload (turnover/value) on jobs still in progress.

Future Margin

The anticipated profit remaining on jobs still in progress.

Share Price

Current market share price.

Client Satisfaction

A measure of how happy the company's clients are; based on tendering and job progression.

The weighting for each indicator at the end of a period is based on a comparison with the position at the end of the History year, and there are two types of comparison :-

Trend comparison

Smoothes the calculations over the time the company has been operating.

Applies to Turnover, Gross Profit to Turnover ratio, Operating Profit to Turnover ratio, Capital Employed, Contract Completion Rate and Client Satisfaction.

Snapshot comparison

Compares the current indicator to the position at the end of the History.

Applies to Company Value, Forward Workload, Forward Margin and Share Price.

Click on the hotspots below for more information about how each indicator is calculated at the end of period 8.

Per	Total	Turnover	Gross Profit to Turnover	Operating Profit to Turnover	Company Value	Capital Employed	Contract Completion	Forward Workload	Forward Margin	Share Price	Client Satisfaction
4	1000	80	75	60	120	100	120	80	120	120	125
5	1328	141	88	189	127	138	130	93	135	139	148
6	1566	180	95	238	135	168	150	120	141	156	183
7	1770	220	100	270	145	192	175	137	151	179	201
8	2041	259	97	273	154	214	200	166	224	205	249

Calculating PI's - Turnover

Keep Clicking Anywhere on the screen to advance the demo

Calculating PI's - Turnover

The Company is now in period 9, but how was the Turnover indicator value of 259 calculated at the end of period 8 ?

Per	Total	Turnover	Gross Profit to Turnover	Operating Profit to Turnover	Company Value	Capital Employed	Contract Completion	Forward Workload	Forward Margin	Share Price	Client Satisfaction
4	1000	80	75	100	120	100	120	80	120	120	125
5	1328	141	88	189	127	138	130	93	135	139	148
6	1566	180	100	238	135	168	150	120	141	156	183
7	1770	220	100	270	145	192	175	137	151	179	201
8	2041	259	97	273	154	214	200	166	224	205	249

By examining the **Financial Report** we first determine the turnover (measured value) for the History Year (periods 1-4).

The Historical turnover is **8,734,433**, and serves as the **benchmark** for any changes in turnover in future periods.

The turnover indicator weighting of **80** at the end of the History is the Performance indicator benchmark.

Operational Performance of the Company

Job Performance

Measured Value:	8,734,433	(Turnover)
Early Completion Bonus:	0	
Retention Repaid:	0	
(less) Retention Held:	131,017	
Monies Received:	8,603,416	
(less) Costs:	8,196,216	
Gross Profit:	407,200	(5.0 % of costs)

History Year

The turnover (measured value) was :-

Period 1:	0
Period 2:	0
Period 3:	0
Period 4:	8,734,433

	8,734,433

We now need to determine what has happened to turnover up to the end of period 8.

The cumulative turnover (measured value) for all 8 periods the company has been operating totals **56,450,950**.

To compare fairly this with the Historical benchmark of **8,734,433**, which is based upon one year, we need to work out the average per year, which is **28,225,475** ($56,450,950 / 2$).

The yearly average by the end of period 8 was **3.23** times the value at the end of the History.

This improvement is reflected in a rise in the turnover performance indicator from **80**, the initial weighting, to **259** (80×3.23).

The Demo is now complete

Calculating PI's - Turnover

Keep Clicking Anywhere on the screen to advance the demo

The Company is now in period 9, but how was the **Gross Profit to Turnover** indicator value of 97 calculated at the end of period 8 ?

Per	Total	Turnover	Gross Profit to Turnover	Operating Profit to Turnover	Capital Employed	Contract Completion	Forward Workload	Forward Margin	Share Price	Client Satisfaction
4	1000	80	75	60	120	100	120	80	120	125
5	1328	141	88	127	138	130	93	135	139	148
6	1566	180	95	138	168	150	120	141	156	183
7	1770	220	100	270	192	175	137	151	179	201
8	2041	259	97	273	214	200	166	224	205	249

By examining the **Financial Report** we first determine the turnover (measured value) and gross profit values for the History Year (periods 1-4).

- The Historical turnover was **8,734,433**
- The Historical gross profit **407,200**

The historical gross profit to turnover ratio was **.0466** ($407,200 / 8,734,433$) and serves as the **benchmark** for any changes in the ratio in future periods.

The gross profit/turnover indicator weighting of **75** at the end of the History is the Performance indicator benchmark.

Operational Performance of the Company

Job Performance

Measured Value:	8,734,433	(Turnover)
Early Completion Bonus:	0	
Retention Repaid:	0	
(less) Retention Held:	131,017	
Monies Received:	8,603,416	
(less) Costs:	8,196,216	
Gross Profit:	407,200	(5.0 % of costs)

History Year

The values were :-

	Turnover	Gross Profit
Period 1:	0	0
Period 2:	0	0
Period 3:	0	0
Period 4:	8,734,433	407,200
	-----	-----
	8,734,433	407,200

We now need to determine what has happened to the ratio up to the end of period 8.

For all 8 periods the company has been operating the values were :-

- Turnover (measured value) of 56,450,950
- Gross Profit of 3,401,393

The gross profit to turnover ratio was 0.0603.

The ratio at the end of period 8 was 1.29 (0.0603 / 0.0466) times the value at the end of the History.

This improvement is reflected in a rise in the gross profit to turnover performance indicator from 97, the initial weighting, to 105 (75 x 1.29).

The Demo is now complete

Calculating PI's - Gross Profit to Turnover ratio

Keep Clicking Anywhere on the screen to advance the demo

Calculating PI's - Operating Profit to Turnover ratio

The Company is now in period 9, but how was the **Operating Profit to Turnover** indicator value of 273 calculated at the end of period 8 ?

Per	Total	Turnover	Gross Profit to Turnover	Operating Profit to Turnover	Company Value	Contract Completion	Forward Workload	Forward Margin	Share Price	Client Satisfaction
4	1000	80	75	60	100	120	80	120	120	125
5	1328	141	88	189	138	130	93	135	139	148
6	1566	180	95	238	135	150	120	141	156	183
7	1770	220	100	270	145	175	137	151	179	201
8	2041	259	97	273	154	200	166	224	205	249

By examining the **Financial Report** we first determine the turnover (measured value) and operating profit values for the History Year (periods 1-4).

- The Historical turnover was **8,734,433**
- The Historical gross profit **58,474**

The historical operating profit to turnover ratio was **0.0067** ($58,474 / 8,734,433$) and serves as the **benchmark** for any changes in the ratio in future periods.

The operating profit/turnover indicator weighting of **60** at the end of the History is the performance indicator benchmark.

Operating Profit

(less) Overheads	137,990 (1.7 % of costs)
	269,210 (before Tax & Interest)
(less) Corporation Tax:	69,761 (20,065 Capital Allow; 28% rate)
(plus) Credit Interest:	1,488 (1.5% pa from Cash A/C)
(less) Overdraft Interest:	0 (14.0% pa from Cash A/C)
Operating Profit:	200,937

History Year

The values were :-

	Turnover	Operating Profit
Period 1:	0	-35,770
Period 2:	0	-66,265
Period 3:	0	-40,428
Period 4:	8,734,433	200,937
	-----	-----
	8,734,433	58,474



Calculating PI's - Operating Profit to Turnover ratio

We now need to determine what has happened to the ratio up to the end of period 8.

For all 8 periods the company had been operating the values were :-

- Turnover (measured value) of 56,450,950
- Operating Profit of 1,720,915

The operating profit to turnover ratio was 0.034, which we must now compare to the historical one of 0.0067

The ratio at the end of period 8 was 4.55 times the value at the end of the History.

This improvement is reflected in a rise in the operating profit to turnover performance indicator from 60, the initial weighting, to 273 (60×4.55).

The Demo is now complete

Calculating PI's - Company Value

Keep Clicking Anywhere on the screen to advance the demo

Calculating PI's - Company Value

The Company is now in period 9, but how was the **Company Value** indicator 154 calculated at the end of period 8 ?

Per	Total	Turnover	Gross Profit to Turnover	Operating Profit to Turnover	Company Value	Contract Completion	Forward Workload	Forward Margin	Share Price	Client Satisfaction
4	1000	80	75	60	120	120	80	120	120	125
5	1328	141	88	189	127	138	93	135	139	148
6	1566	180	95	238	135	168	120	141	156	183
7	1770	220	100	270	145	192	137	151	179	201
8	2041	259	97	273	154	214	200	224	205	249

Balance Sheet

Shareholder Information

Number of Shares: 5,000,000
 Current Share Price: **1.00**
 Equity: 5,000,000

Work in Progress

Forward Workload: 17,253,292
 Forward Margin: 930,270

Debt Burden

Gearing Ratio: 0.03

Assets & Liabilities

Cash Account **-149,063**

Capital Base

Previous Value: 3,925,468
 Increased by: 321,037
 Reduced by: 0
 Depreciation: 26,541 (2.5% pa)
4,219,964 (56% Capital Emp)

Investments

Previous Value: 264,000
 Increased by: 350,000
 Reduced by: 0
614,000

Investment Returns: 22,442 (3.7 %)
636,442

Company Value: 4,707,343 (2.6% increase)

By examining the Financial Report we first determine the company value at the end of the History Year, which was **4,707,343**

By the end of period 8 the company value was 6,040,712.

The value at the end of period 8 was 1.28 times the value at the end of the History (4,714,302 / 4,574,778).

This slight improvement was reflected in a rise in the company value performance indicator from 120, the initial weighting, to 154 (120×1.28).

The Demo is now complete

Calculating PI's - Company Value

Calculating PI's - Capital Employed

Keep Clicking Anywhere on the screen to advance the demo

Calculating PI's - Capital Employed

The Company is now in period 9, but how was the **Capital Employed** indicator of 214 calculated at the end of period 8 ?

Per	Total	Turnover	Gross Profit to Turnover	Operating Profit to Turnover	Company Value	Capital Employed	Contract Completion	Forward Workload	Forward Margin	Share Price	Client Satisfaction
4	1000	80	75	60	100	100	120	80	120	120	125
5	1328	141	88	189	138	138	130	93	135	139	148
6	1566	180	95	238	168	168	150	120	141	156	183
7	1770	220	100	270	192	192	175	137	151	179	201
8	2041	259	97	273	214	214	200	166	224	205	249

By examining the **Financial Report** we first determine the average capital employed per period during the History Year (periods 1-4).

This equates to **25.3 %** ($101 / 4$), and serves as the **benchmark** for any changes in the average in future periods.

The capital employed indicator weighting of **100** at the end of the History is the performance indicator benchmark.

Definition

After Bids have been processed, the workload of the company as a % of the upper threshold of workload that can be undertaken, based upon the company's capital base, is defined as the capital employed.

Assets & Liabilities

Cash Account -149,063

Capital Base

Previous Value: 3,925,468

Increased by: 321,037

Reduced by: 0

Depreciation: 26,541 (2.5% pa)

4,219,964 (56% Capital Employed)

History Year

The capital employed figures were :-

Capital Employed

Period 1:	0 %
Period 2:	0 %
Period 3:	45 %
Period 4:	56 %

101 %

Calculating PI's - Capital Employed

At the end of period 8 the average capital employed per period was **54 %**.

The value at the end of period 8 was **2.14** times the value at the end of the History (54 / 25.3).

The improvement was reflected in a rise in the company value performance indicator from **100**, the initial weighting, to **214** (100×2.14).

The Demo is now complete

Calculating PI's - Capital Employed

Calculating PI's - Contract Completion

Keep Clicking Anywhere on the screen to advance the demo

Calculating PI's - Contract Completion

The Company is now in period 9, but how was the **Contract Completion** indicator of 200 calculated at the end of period 8 ?

Per	Total	Turnover	Gross Profit to Turnover	Operating Profit to Turnover	Completed Value	Capital Employed	Contract Completion	Forward Workload	Forward Margin	Share Price	Client Satisfaction
4	1000	80	75	60	120	100	120	80	120	120	125
5	1328	141	88	189	127	110	130	93	135	139	148
6	1566	180	95	238	135	168	150	120	141	156	183
7	1770	220	100	270	145	192	175	137	151	179	201
8	2041	259	97	273	154	214	200	166	224	205	249

Company Performance Statistics

Financial

Overheads

Procurement

Construction

Print Statistics

Early Years Onwards

Performance Statistics

jobs finished early: 2

on time: 5

late: 0

of labour allocation in the final period of a job: 0.94

0 - 1, where 1 is perfect

average value per man period: 41,181

Of the Labour used on site: 0 % was Subcontract

1 % was Ineffective

Of the Total Site Cost Required: 100 % was allocated

Additional Site Cost Paid: 0 % of the required

By examining the **Performance Statistics** we first determine the **number of jobs completed** since the History, and then give them a weighting :-

• Early:	2 jobs	x	15	=	30
• On Time:	5 jobs	x	10	=	50
• Late:	0 jobs	x	-20	=	0

					80

The total calculated is added to the initial indicator weighting at the end of the History, 120, to give an indicator of **200** (120 + 80) at the end of period 8.

Notes

- Jobs that are complete late incur a bigger penalty than the gain from jobs completing early.
- The multiplication factors of 15, 10 and -20 may vary for other games.
- No jobs can be completed during the History

The Demo is now complete

Calculating PI's - Contract Completion

Keep Clicking Anywhere on the screen to advance the demo

Calculating PI's - Forward Workload and Margin

The Company is now in period 9, but how were the **Forward Workload and Margin** indicators of 166 and 224 respectively calculated at the end of period 8 ?

Per	Total	Turnover	Gross Profit to Turnover	Operating Profit to Turnover	Company Value	Capital Employed	Contract Completion	Forward Workload	Forward Margin	Share Price	Client Satisfaction
4	1000	80	75	60	120	100	120	80	120	120	125
5	1328	141	88	189	127	138	130	93	135	139	148
6	1566	180	95	238	135	168	150	120	141	156	183
7	1770	220	100	270	145	192	175	137	151	179	201
8	2041	259	97	273	154	214	200	166	224	205	249

Calculating PI's - Forward Workload and Margin

Balance Sheet

Shareholder Information

Number of Shares: 5,000,000
 Current Share Price: **1.00**
 Equity: 5,000,000

Work in Progress

Forward Workload: 17,253,292
 Forward Margin: 930,270

By examining the **Financial Report** we first determine the forward workload and margin values at the end of the History Year :-

- Forward Workload was **17,253,292**
- Forward Margin was **930,270**

By the end of period 8 the values were :-

- Forward Workload of 35,699,384 (2.07 times the value at the end of the History)
- Forward Margin of 1,738,010 (1.87 times the value at the end of the History)

The improvements were reflected in a rise in the performance indicators :-

- For forward workload from 80, the initial weighting, to 166 (80×2.07)
- For forward margin from 120, the initial weighting, to 224 (120×1.87)

The Demo is now complete

Calculating PI's - Forward Workload and Margin

Calculating PI's - Share Price

Keep Clicking Anywhere on the screen to advance the demo

Calculating PI's - Share Price

The Company is now in period 9, but how was the **Share Price** indicator of 205 calculated at the end of period 8 ?

Per	Total	Turnover	Gross Profit to Turnover	Operating Profit to Turnover	Company Value	Capital Employed	Contract Completion	Forward Load	Forward Margin	Share Price	Client Satisfaction
4	1000	80	75	60	120	100	120	80	120	120	125
5	1328	141	88	189	127	138	130	93	135	139	148
6	1566	180	95	238	135	168	150	120	141	156	183
7	1770	220	100	270	145	192	175	137	151	179	201
8	2041	259	97	273	154	214	200	166	224	205	249

Calculating PI's - Share Price

Balance Sheet

Shareholder Information

Number of Shares:	5,000,000
Current Share Price:	1.00
Equity:	5,000,000

Work in Progress

Forward Workload:	17,253,292
Forward Margin:	930,270

By examining the **Financial Report** we first determine the share price value at the end of the History Year, which was 1.00.

By the end of period 8 the share price was 1.71.

The value at the end of period 8 was 1.71 times the value at the end of the History (1.71 / 1.00).

This slight improvement was reflected in a rise in the company value performance indicator from 120, the initial weighting, to 205 (120×1.71).

The Demo is now complete

Calculating PI's - Share Price

Calculating PI's - Client Satisfaction

Keep Clicking Anywhere on the screen to advance the demo

Calculating PI's - Client Satisfaction

The Company is now in period 9, but how was the **Client Satisfaction** indicator of 249 calculated at the end of period 8 ?

Per	Total	Turnover	Gross Profit to Turnover	Operating Profit to Turnover	Company Value	Capital Employed	Contract Completion	Worked	Forward Margin	Share Price	Client Satisfaction
4	1000	80	75	60	120	100	120	80		120	125
5	1328	141	88	189	127	138	130	93	135	139	148
6	1566	180	95	238	135	168	150	120	141	156	183
7	1770	220	100	270	145	192	175	137	151	179	201
8	2041	259	97	273	154	214	200	166	224	205	249

Client Relationships: THE EARLY YEARS

Relationship Filter:

Client History

Client	Description of Relationship	Value Of Work Won	% Mark-Up Above Cost	% Of The Total
▶ Crawford Petrochemicals UK	satisfactory	0	0.0	0.0
Dales Water Services Ltd	good	6,998,790	4.5	7.6
Devon and Cornwall Water Ltd	No relationship	0	0.0	0.0
Electragen	satisfactory	0	0.0	0.0
English Waterways	satisfactory	6,054,004	5.9	6.6
Fenlands County Council	No relationship	0	0.0	0.0
Kegworth Airport	satisfactory	0	0.0	0.0
London City Council	satisfactory	3,612,537	5.8	3.9
	No relationship	0	0.0	0.0
	No relationship	0	0.0	0.0
	satisfactory	7,444,504	4.8	8.1
	No relationship	0	0.0	0.0
	No relationship	0	0.0	0.0
	satisfactory	0	0.0	0.0
	very good	8,306,623	5.2	9.0
	satisfactory	0	0.0	0.0
	poor	9,834,286	4.9	10.7
	good	6,645,118	4.8	7.2
	fairly good	14,056,680	3.8	15.3
	satisfactory	0	0.0	0.0
	fairly good	3,955,031	5.6	4.3

To gain a feel for the **relationship with each client**, a textual description is given.

The description is based upon a **numerical value** determined by a number of factors :-

- Prequalifying for jobs with the client
- How well jobs were costed
- How competitive the submitted bids were
- How well the jobs were managed

The sum of the numerical values across all clients is calculated for the **relationship changes since the History**, and then added to the performance indicator weighting at the end of the History.

In this example the numerical value during periods 5-8 came to 124. This was added to the Historical client satisfaction indicator of 125 to give an indicator of 249 at the end of period 8.

Although the **factors** use in calculating the client satisfaction values are hidden, the **relative affects**, from largest to smallest are :-

- Job Progression
- Procurement (estimating and bidding)
- Prequalification

The Demo is now complete

Calculating PI's - Client Satisfaction

Keep Clicking Anywhere on the screen to advance the demo

[Main](#)[Quit](#)

The External Performance Review report gives brief details of any points that the external management consultant feels are important, most of which need no further explanation.

However, **some of the points need elaborating upon**, and further information is provided in such cases.

Period:

Period 7

Category:

Construction

Click on any Details line to see if further information is available.

If so, simply click on the Further Information button to display the additional notes about the observation made by the external consultant.

i

Further Information

Job No	Details	Nature
29	There is a marginal improvement in the performance of Proj Mgr 26 (Brand, R) due to experience to date with the company	P
29	There is a noticeable improvement in the performance of Project Manager 26 (Brand, R) due to the 4 % bonus paid	P
29	There is a noticeable deterioration in the performance of Project Manager 26 (Brand, R) due to the job location	N
29	The overall performance of Project Manager 26 (Brand, R) is very good	P
29	Almost enough Site Cost paid. Very little effect on the workforce productivity	U
29	Investment in Stressed Out Plc has reduced build costs by 0.87%	P
29	Investment in Melbourne Construction Supplies Ltd has reduced build costs by 0.62%	P
41	There is a marginal improvement in the performance of Proj Mgr 1 (Brock, G) due to experience to date with the company	P
41	There is a noticeable improvement in the performance of Project Manager 1 (Brock, G) due to the 5 % bonus paid	P
41	There is a significant deterioration in the performance of Project Manager 1 (Brock, G) due to the job location	N
41	The overall performance of Project Manager 1 (Brock, G) is good	P
41	Almost enough Site Cost paid. Very little effect on the workforce productivity	U
41	Investment in Melbourne Construction Supplies Ltd has reduced build costs by 0.55%	P
42	There is a marginal improvement in the performance of Proj Mgr 11 (Gouda, F) due to experience to date with the company	P
42	There is a noticeable improvement in the performance of Project Manager 11 (Gouda, F) due to the 5 % bonus paid	P
42	There is a significant deterioration in the performance of Project Manager 11 (Gouda, F) due to the job location	N
42	The overall performance of Project Manager 11 (Gouda, F) is excellent	P
42	An adequate amount of site administration cost has been paid to cover the labourforce on site	P
42	Investment in Melbourne Construction Supplies Ltd has reduced build costs by 0.57%	P

The external management consultant has made a number of comments in relation to the construction management decisions in period 7.

But how do we know if the comments are good or bad ?

The answer lies in the **nature** which is either :-

- 'P' if the comment is positive
- 'N' if the comment is negative
- 'U' if the comment is unclassified

Further information is available.

Click on the button to display the external consultant.

Further Information

Job No	Details	Nature
29	There is a marginal improvement in the performance of Proj Mgr 26 (Brand, R) due to experience to date with the company	P
29	There is a noticeable improvement in the performance of Project Manager 26 (Brand, R) due to the 4 % bonus paid	P
29	There is a noticeable deterioration in the performance of Project Manager 26 (Brand, R) due to the job location	N
29	The overall performance of Project Manager 26 (Brand, R) is very good	P
29	Almost enough Site Cost paid. Very little effect on the workforce productivity	U
29	Investment in Stressed Out Plc has reduced build costs by 0.87%	P
29	Investment in Melbourne Construction Supplies Ltd has reduced build costs by 0.62%	P
41	There is a marginal improvement in the performance of Proj Mgr 1 (Brock, G) due to experience to date with the company	P
41	There is a noticeable improvement in the performance of Project Manager 1 (Brock, G) due to the 5 % bonus paid	P
41	There is a significant deterioration in the performance of Project Manager 1 (Brock, G) due to the job location	N
41	The overall performance of Project Manager 1 (Brock, G) is good	P
41	Almost enough Site Cost paid. Very little effect on the workforce productivity	U
41	Investment in Melbourne Construction Supplies Ltd has reduced build costs by 0.55%	P
42	There is a marginal improvement in the performance of Proj Mgr 11 (Gouda, F) due to experience to date with the company	P
42	There is a noticeable improvement in the performance of Project Manager 11 (Gouda, F) due to the 5 % bonus paid	P
42	There is a significant deterioration in the performance of Project Manager 11 (Gouda, F) due to the job location	N
42	The overall performance of Project Manager 11 (Gouda, F) is excellent	P
42	An adequate amount of site administration cost has been paid to cover the labourforce on site	P
42	Investment in Melbourne Construction Supplies Ltd has reduced build costs by 0.57%	P

EPR - Further Information

The external consultant made a **unclassified comment** relating to Site Cost paid on job 41 in period 7, for which further information is available.

The more detailed explanation can be viewed by clicking on the **Further Information** button.

External Performance Review

Period: Period 7

Category: Construction

Click on any Details line to see if further information is available.
If so, simply click on the Further Information button to display the additional notes about the observation made by the external consultant.

Further Information

Job No	Details	Nature
29	There is a marginal improvement in the performance of Proj Mgr 26 (Brand, R) due to experience to date with the company	P
29	There is a noticeable improvement in the performance of Project Manager 26 (Brand, R) due to the 4 % bonus paid	P
29	There is a noticeable deterioration in the performance of Project Manager 26 (Brand, R) due to the job location	N
29	The overall performance of Project Manager 26 (Brand, R) is very good	P
29	Almost enough Site Cost paid. Very little effect on the workforce productivity	U
29	Investment in Stressed Out Plc has reduced build costs by 0.87%	P
29	Investment in Melbourne Construction Supplies Ltd has reduced build costs by 0.62%	P
41	There is a marginal improvement in the performance of Proj Mgr 1 (Brock, G) due to experience to date with the company	P
41	There is a noticeable improvement in the performance of Project Manager 1 (Brock, G) due to the 5 % bonus paid	P
41	There is a significant deterioration in the performance of Project Manager 1 (Brock, G) due to the job location	N
41	The overall performance of Project Manager 1 (Brock, G) is good	P
41	Almost enough Site Cost paid. Very little effect on the workforce productivity	U
41	Investment in Melbourne Construction Supplies Ltd has reduced build costs by 0.55%	P
42	There is a marginal improvement in the performance of Proj Mgr 11 (Gouda, F) due to experience to date with the company	P
42	There is a noticeable improvement in the performance of Project Manager 11 (Gouda, F) due to the 5 % bonus paid	P
42	There is a significant deterioration in the performance of Project Manager 11 (Gouda, F) due to the job location	N
42	The overall performance of Project Manager 11 (Gouda, F) is excellent	P
42	An adequate amount of site administration cost has been paid to cover the labourforce on site	P
42	Investment in Melbourne Construction Supplies Ltd has reduced build costs by 0.57%	P

A **detailed explanation** of the external consultant's brief comment is given, and a pointer to where even more information is available.

External Performance Review

Close

Details
 Almost enough Site Cost paid. Very little effect on the workforce productivity

Description
 Site costs pay for the support staff and services that are needed to run a site.

 Each period the company must decide how much site cost to allocate to the job, depending upon the level of labour allocated, irrespective of whether the labour is the company's own or subcontractors. .

 Allocating insufficient site cost can adversely affect the productivity of the labour on the site, and the value achieved, and delay a job. Conversely, allocating more site cost than is required can marginally improve the productivity, but the cost of paying too much can soon outweigh any benefit accrued.

 To set the site cost, refer to the Procurement information on the Job Details screen.

 If there is high estimating confidence, then the site cost per man period (estimated) will be a good measure of the site cost to allocate for each man, and this can be multiplied by the number of men on the site.

 For example: a ratio of 3,314 per man period, and 100 men, gives site cost allocation of 331,400.

 It may also be worth adding on a small amount, say 1,000, to cover any estimating inaccuracy.


Suggested additional help
 Merit Tutorial/"Entering Decisions"/"Site Administration Decisions"/"Entering Decisions" demo

Period:
Period 7

Category:
Construction

Click on any Details line to see if further information is available.

If so, simply click on the Further Information button to display the additional notes about the observation made by the external consultant.



Further Information

Job No	Details	Nature
29	There is a marginal improvement in the performance of Proj Mgr 26 (Brand, R) due to experience to date with the company	P
29	There is a noticeable improvement in the performance of Project Manager 26 (Brand, R) due to the 4 % bonus paid	P
29	There is a noticeable deterioration in the performance of Project Manager 26 (Brand, R) due to the job location	N
29	The overall performance of Project Manager 26 (Brand, R) is very good	P
29	Almost enough Site Cost paid. Very little effect on the workforce productivity	U
29	Investment in Stressed Out Plc has reduced build costs by 0.87%	P
29	Investment in Melbourne Construction Supplies Ltd has reduced build costs by 0.62%	P
41	There is a marginal improvement in the performance of Proj Mgr 1 (Brock, G) due to experience to date with the company	P
41	There is a noticeable improvement in the performance of Project Manager 1 (Brock, G) due to the 5 % bonus paid	P
41	There is a significant deterioration in the performance of Project Manager 1 (Brock, G) due to the job location	N
41	The overall performance of Project Manager 1 (Brock, G) is good	P
41	Almost enough Site Cost paid. Very little effect on the workforce productivity	U
41	Investment in Melbourne Construction Supplies Ltd has reduced build costs by 0.55%	P
42	There is a marginal improvement in the performance of Proj Mgr 11 (Gouda, F) due to experience to date with the company	P
42	There is a noticeable improvement in the performance of Project Manager 11 (Gouda, F) due to the 5 % bonus paid	P
42	There is a significant deterioration in the performance of Project Manager 11 (Gouda, F) due to the job location	N
42	The overall performance of Project Manager 11 (Gouda, F) is excellent	P
42	An adequate amount of site administration cost has been paid to cover the labourforce on site	P
42	Investment in Melbourne Construction Supplies Ltd has reduced build costs by 0.57%	P

The Demo is now complete

Period:


Period 7

Category:

Construction

Click on any Details line to see if further information is available.

If so, simply click on the Further Information button to display the additional notes about the observation made by the external consultant.



Further Information

Job No	Details	Nature
29	There is a marginal improvement in the performance of Proj Mgr 26 (Brand, R) due to experience to date with the company	P
29	There is a noticeable improvement in the performance of Project Manager 26 (Brand, R) due to the 4 % bonus paid	P
29	There is a noticeable deterioration in the performance of Project Manager 26 (Brand, R) due to the job location	N
29	The overall performance of Project Manager 26 (Brand, R) is very good	P
29	Almost enough Site Cost paid. Very little effect on the workforce productivity	U
29	Investment in Stressed Out Plc has reduced build costs by 0.87%	P
29	Investment in Melbourne Construction Supplies Ltd has reduced build costs by 0.62%	P
41	There is a marginal improvement in the performance of Proj Mgr 1 (Brock, G) due to experience to date with the company	P
41	There is a noticeable improvement in the performance of Project Manager 1 (Brock, G) due to the 5 % bonus paid	P
41	There is a significant deterioration in the performance of Project Manager 1 (Brock, G) due to the job location	N
41	The overall performance of Project Manager 1 (Brock, G) is good	P
41	Almost enough Site Cost paid. Very little effect on the workforce productivity	U
41	Investment in Melbourne Construction Supplies Ltd has reduced build costs by 0.55%	P
42	There is a marginal improvement in the performance of Proj Mgr 11 (Gouda, F) due to experience to date with the company	P
42	There is a noticeable improvement in the performance of Project Manager 11 (Gouda, F) due to the 5 % bonus paid	P
42	There is a significant deterioration in the performance of Project Manager 11 (Gouda, F) due to the job location	N
42	The overall performance of Project Manager 11 (Gouda, F) is excellent	P
42	An adequate amount of site administration cost has been paid to cover the labourforce on site	P
42	Investment in Melbourne Construction Supplies Ltd has reduced build costs by 0.57%	P

Keep Clicking Anywhere on the screen to advance the demo

Main

Quit

Consider the performance indicators of the company after 7 periods.

Performance Indicator History											
(TIP: Click on an indicator heading to alter the graphical display)											
Per	Total	Turnover	Gross Profit to Turnover	Operating Profit to Turnover	Company Value	Capital Employed	Contract Completion	Forward Workload	Forward Margin	Share Price	Client Satisfaction
4	1000	80	75	60	120	100	120	80	120	120	125
5	1442	147	97	235	129	128	160	92	141	144	169
6	1746	182	109	291	138	152	160	127	205	176	206
7	2056	233	124	369	156	174	185	143	192	221	259

Performance Indicator History											
(TIP: Click on an indicator heading to alter the graphical display)											
Per	Total	Turnover	Gross Profit to Turnover	Operating Profit to Turnover	Company Value	Capital Employed	Contract Completion	Forward Workload	Forward Margin	Share Price	Client Satisfaction
4	1000	80	75	60	120	100	120	80	120	120	125
5	1442	147	97	235	129	128	160	92	141	144	169
6	1746	182	109	291	138	152	160	127	205	176	206
7	2056	233	124	369	156	174	185	143	192	221	259

The Contract Completion indicator has **risen** since the beginning of the early years.

The reason for the rise should be that many of the jobs completed to date have done so either early or on time.

To **verify** our reasoning, we can look at the performance statistics for the early years.

Performance Indicator History

(TIP: Click on an indicator heading to alter the graphical display)

Per	Total	Turnover	Gross Profit to Turnover	Operating Profit to Turnover	Company Value	Capital Employed	Contract Completion	Forward Workload	Forward Margin	Share Price	Client Satisfaction
4	1000	80	75	60	120	100	120	80	120	120	125
5	1442	147	97	235	129	128	160	92	141	144	169
6	1746	182	109	291	138	152	160	127	205	176	206
7	2056	233	124	369	156	174	185	143	192	221	259

Company Performance Statistics

Financial Overheads Procurement **Construction** Print Statistics Early Years Onwards

Project Manager Weighting (1-10)

Basic weighting: 8.7

Adjustment due to :-

Experience with the Company: 0.1

Bonus payments: 0.8

Distance of job from Head Office: 0.2

Job Management

jobs finished early: 3

on time: 2

late: 0

Measure of labour allocation in the final period of a job: 0.98 0 - 1, where 1 is perfect

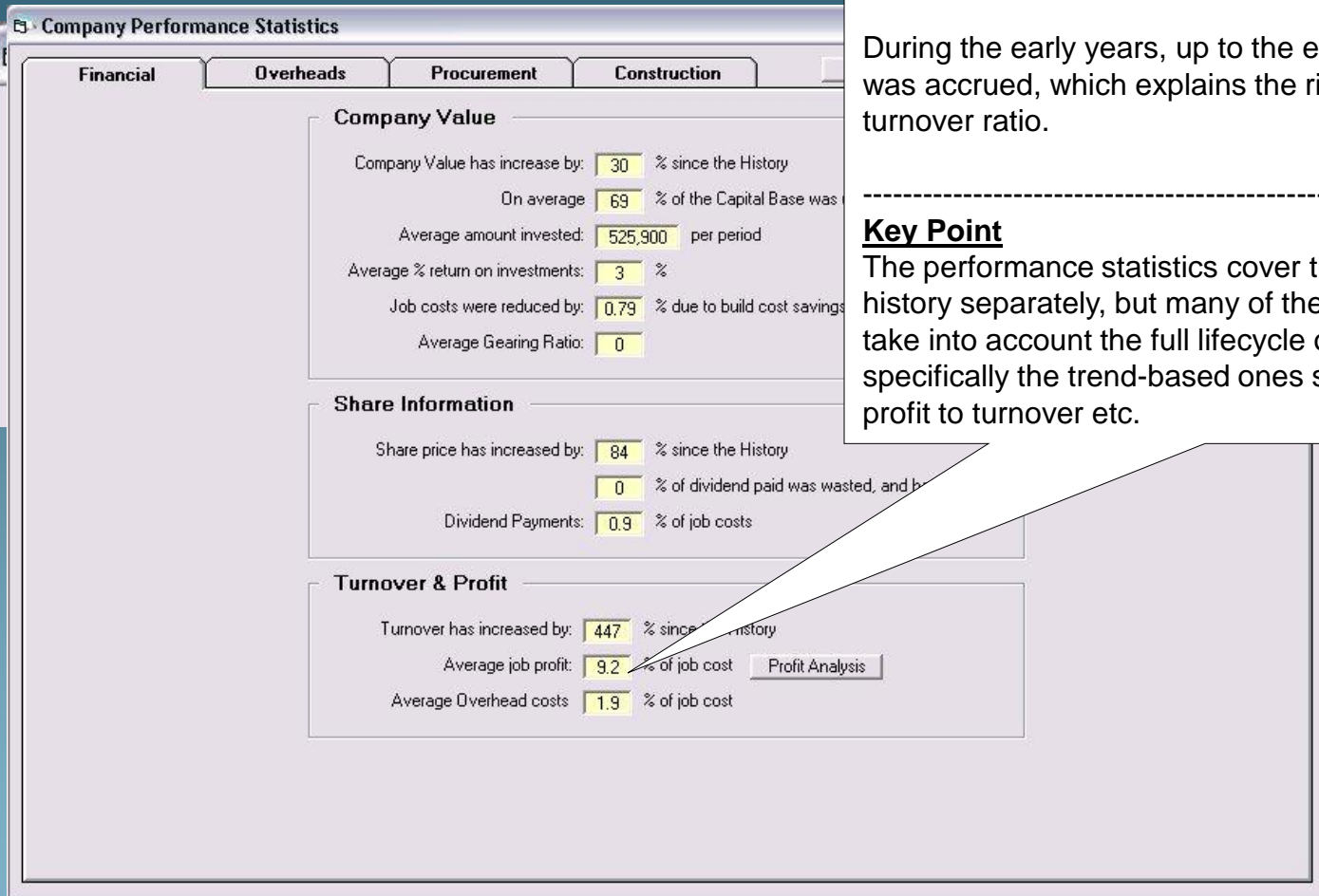
As suspected, **3 jobs have completed early, and 2 on time** in the Early Years, which explains why the contract completion indicator has risen so much.

Performance Indicator History											
(TIP: Click on an indicator heading to alter the graphical display)											
Per	Total	Turnover	Gross Profit to Turnover	Operating Profit to Turnover	Company Value	Capital Employed	Contract Completion	Forward Workload	Forward Margin	Share Price	Client Satisfaction
4	1000	80	75	60	120	100	120	80	120	120	125
5	1442	147	97	235	129	128	160	92	141	144	169
6	1746	182	109	291	138	152	160	127	205	176	206
7	2056	233	124	369	156	174	185	143	192	221	259

Since the end of period 4 the **Gross Profit to Turnover** indicator has increased.

This would appear to indicate that jobs have been managed better since the end of the History.

Again, to **verify** our reasoning, we can look at the performance statistics for both the History and the Early Years.



In the History year the average job profit was **5.0%** (of cost).

During the early years, up to the end of period 7, **9.2%** profit was accrued, which explains the rise in the gross profit to turnover ratio.

Key Point

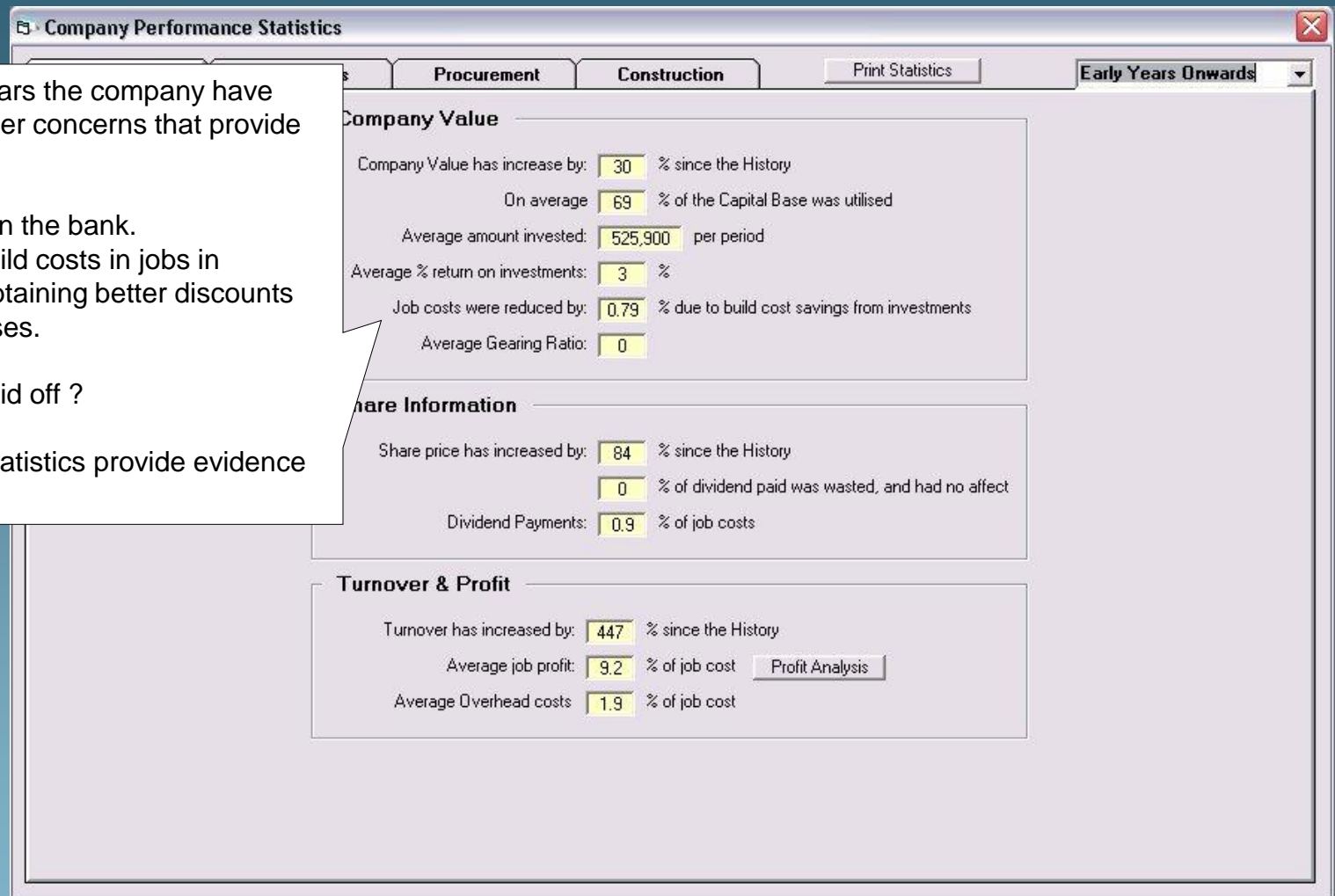
The performance statistics cover the early years and the history separately, but many of the performance indicators take into account the full lifecycle of the company. These are specifically the trend-based ones such as turnover, gross profit to turnover etc.

During the Early Years the company have tried to invest in other concerns that provide :-

- A better return than the bank.
- Reduce overall build costs in jobs in progress e.g., by obtaining better discounts on material purchases.

Has the strategy paid off ?

The performance statistics provide evidence that it has.



Performance Indicator History											
(TIP: Click on an indicator heading to alter the graphical display)											
Per	Total	Turnover	Gross Profit to Turnover	Operating Profit to Turnover	Company Value	Capital Employed	Contract Completion	Forward Workload	Forward Margin	Share Price	Client Satisfaction
4	1000	80	75	60	120	100	120	80	120	120	125
5	1442	147	97	235	129	128	160	92	141	144	169
6	1746	182	109	291	138	152	160	127	205	176	206
7	2056	233	124	369	156	174	185	143	192	221	259

The Demo is now complete

Performance Indicator History



(TIP: Click on an indicator heading to alter the graphical display)

Per	Total	Turnover	Gross Profit to Turnover	Operating Profit to Turnover	Company Value	Capital Employed	Contract Completion	Forward Workload	Forward Margin	Share Price	Client Satisfaction
4	1000	80	75	60	120	100	120	80	120	120	125
5	1442	147	97	235	129	128	160	92	141	144	169
6	1746	182	109	291	138	152	160	127	205	176	206
7	2056	233	124	369	156	174	185	143	192	221	259