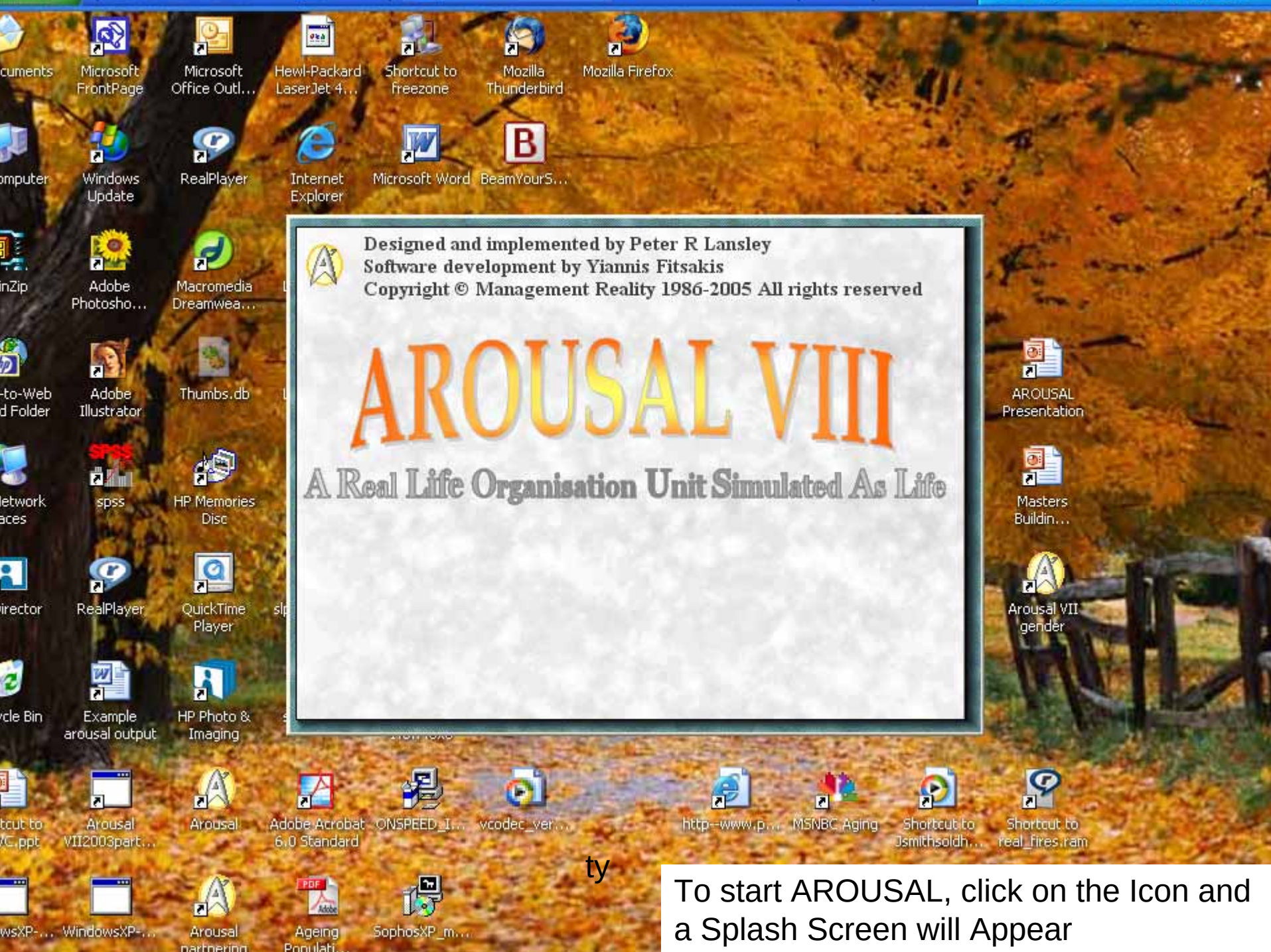
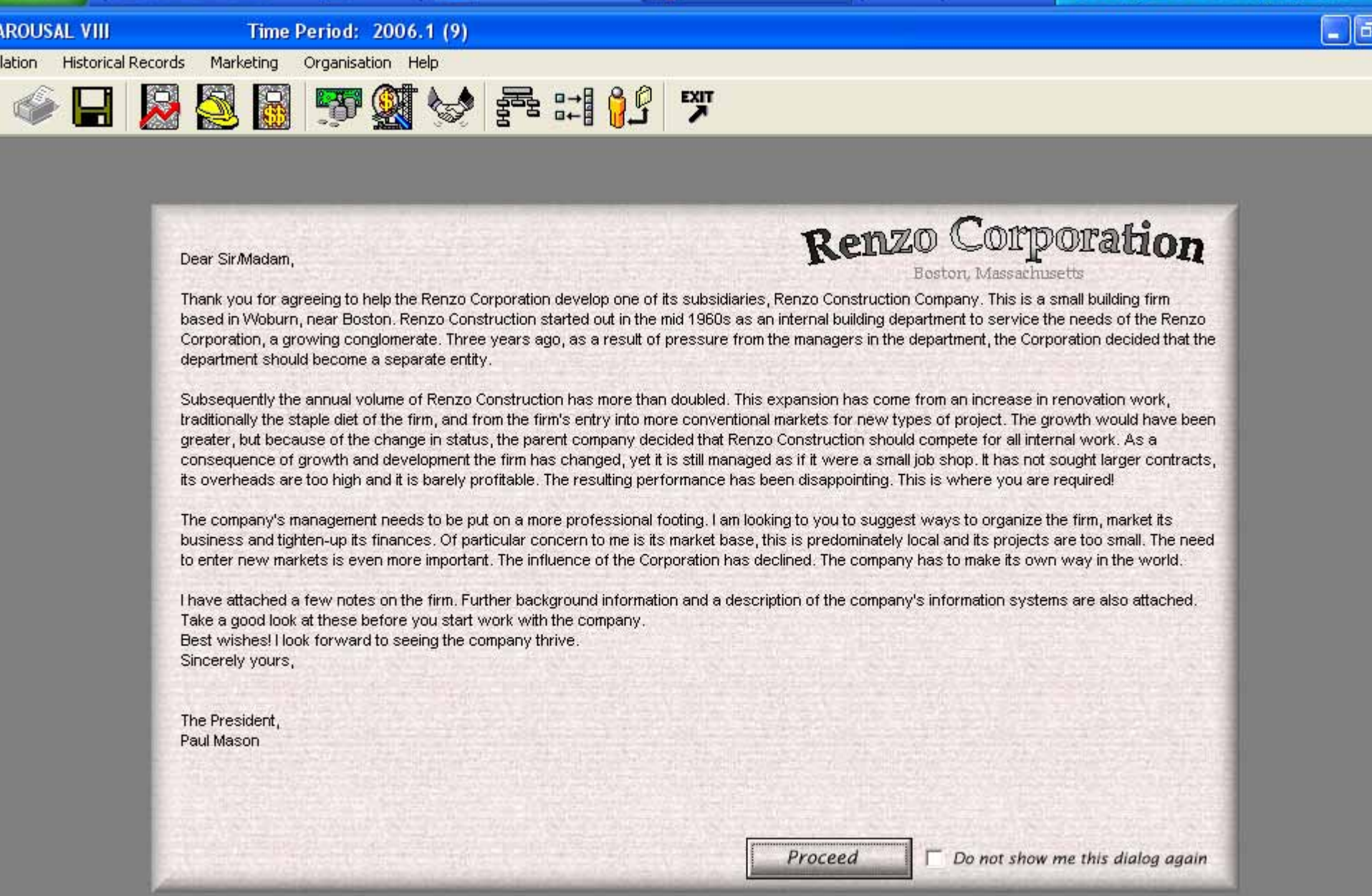
The AROUSAL Simulation System

A Quick Tour of some of the Screen Displays and Simulation Output

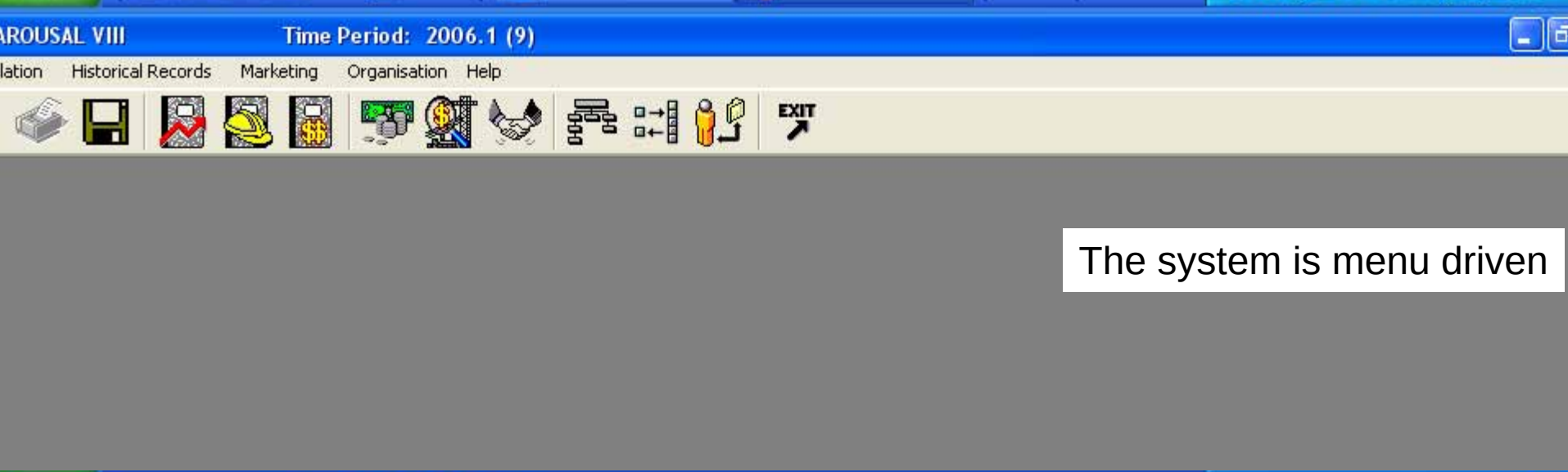
Renzo Construction Company

- This is a small company located near Boston.
- It specialises in refurbishment work, especially offices. These are small and rapidly executed.
- It is seeking to become involved with more conventional projects.
- It’s not really geared up for this development, so needs your help.
- You will take over for the first quarter of 2006.
- The information and simulation system will provide you with information and will process your decisions.

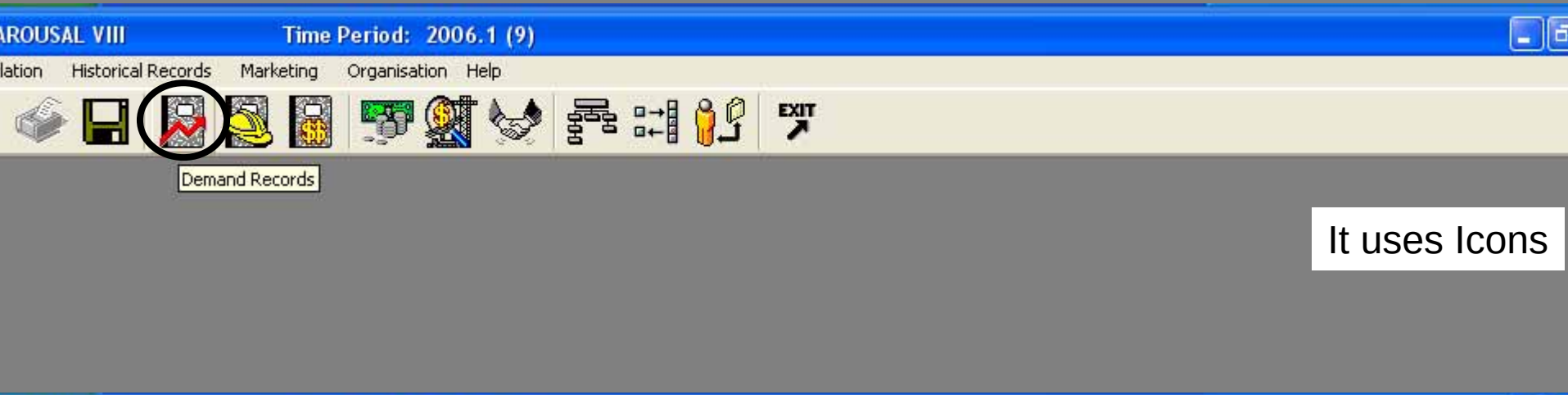

Designed and implemented by Peter R Lansley
Software development by Yiannis Fitsakis
Copyright © Management Reality 1986-2005 All rights reserved
AROUSAL VIII
A Real Life Organisation Unit Simulated As Life
Microsoft FrontPage
Microsoft Office Outl...
Hewl-Packard LaserJet 4...
Shortcut to freezone
Mozilla Thunderbird
Mozilla Firefox
Windows Update
RealPlayer
Internet Explorer
Microsoft Word
BeamYourS...
Adobe Photosho...
Macromedia Dreamwea...
Adobe Illustrator
Thumbs.db
spss
HP Memories Disc
RealPlayer
QuickTime Player
Example arousal output
HP Photo & Imaging
AROUSAL Presentation
Masters Buildin...
Arousal VII gender
Arousal VII2003part...
Arousal
Adobe Acrobat 6.0 Standard
ONSPEED_I...
vcodec_ver...
http--www.p...
MSNBC Aging
Shortcut to Jsmithsoldh...
Shortcut to real_fires.ram
WindowsXP-...
Arousal partnering
Ageing Populati...
SophosXP_m...
ty
To start AROUSAL, click on the Icon and a Splash Screen will Appear



You are invited to run the company.
Click on Proceed

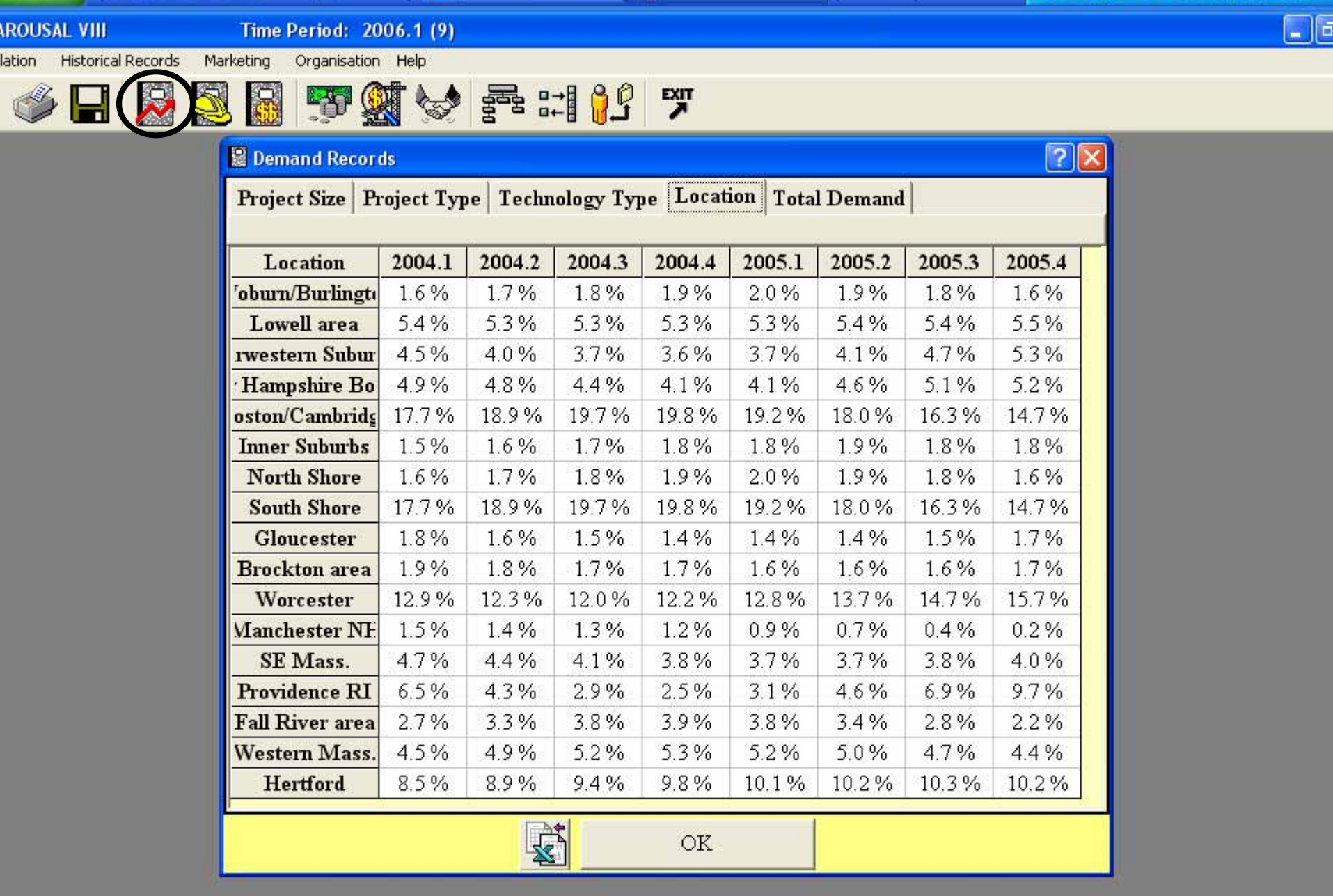


The system is menu driven



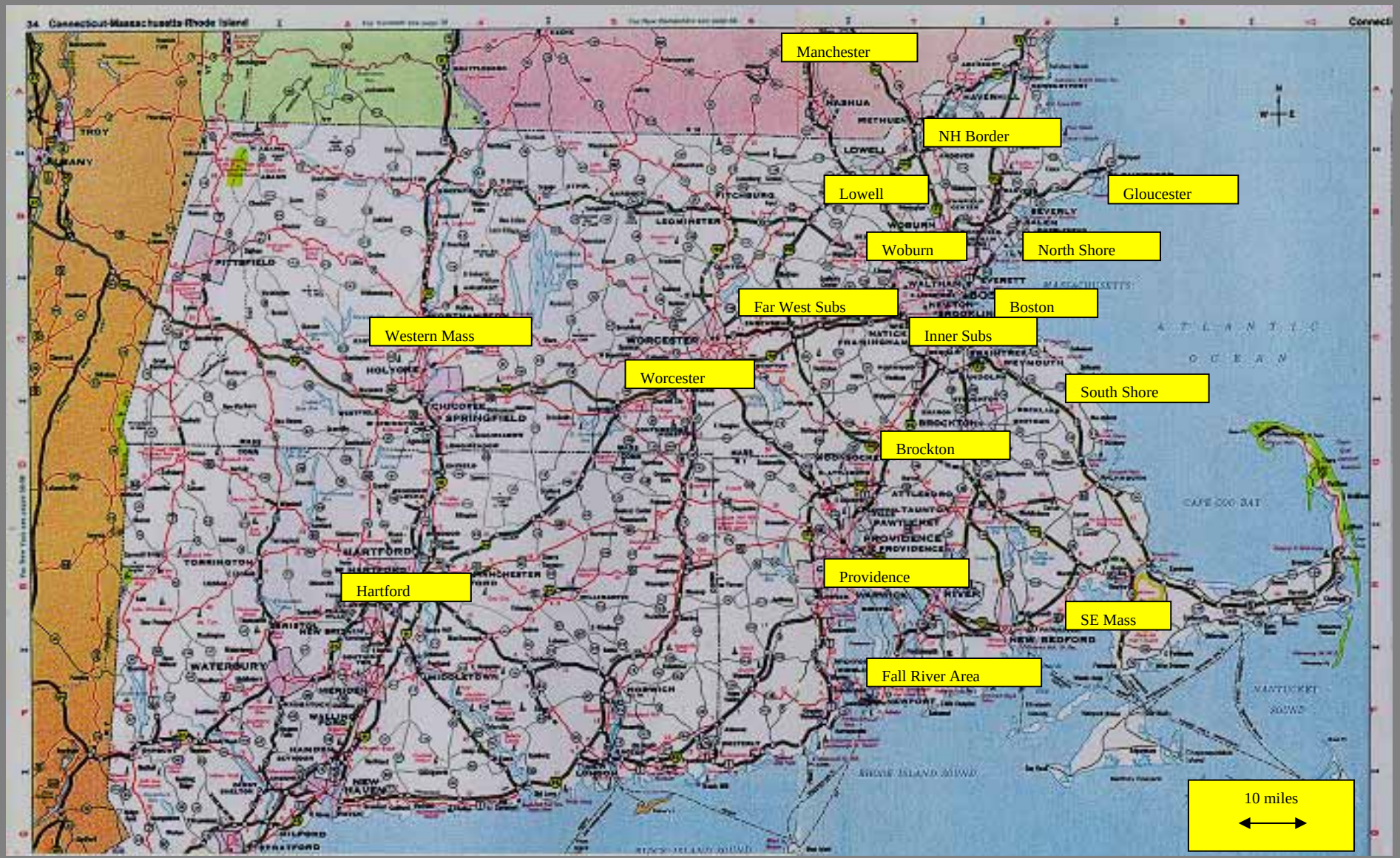
It uses Icons

and drop down menus

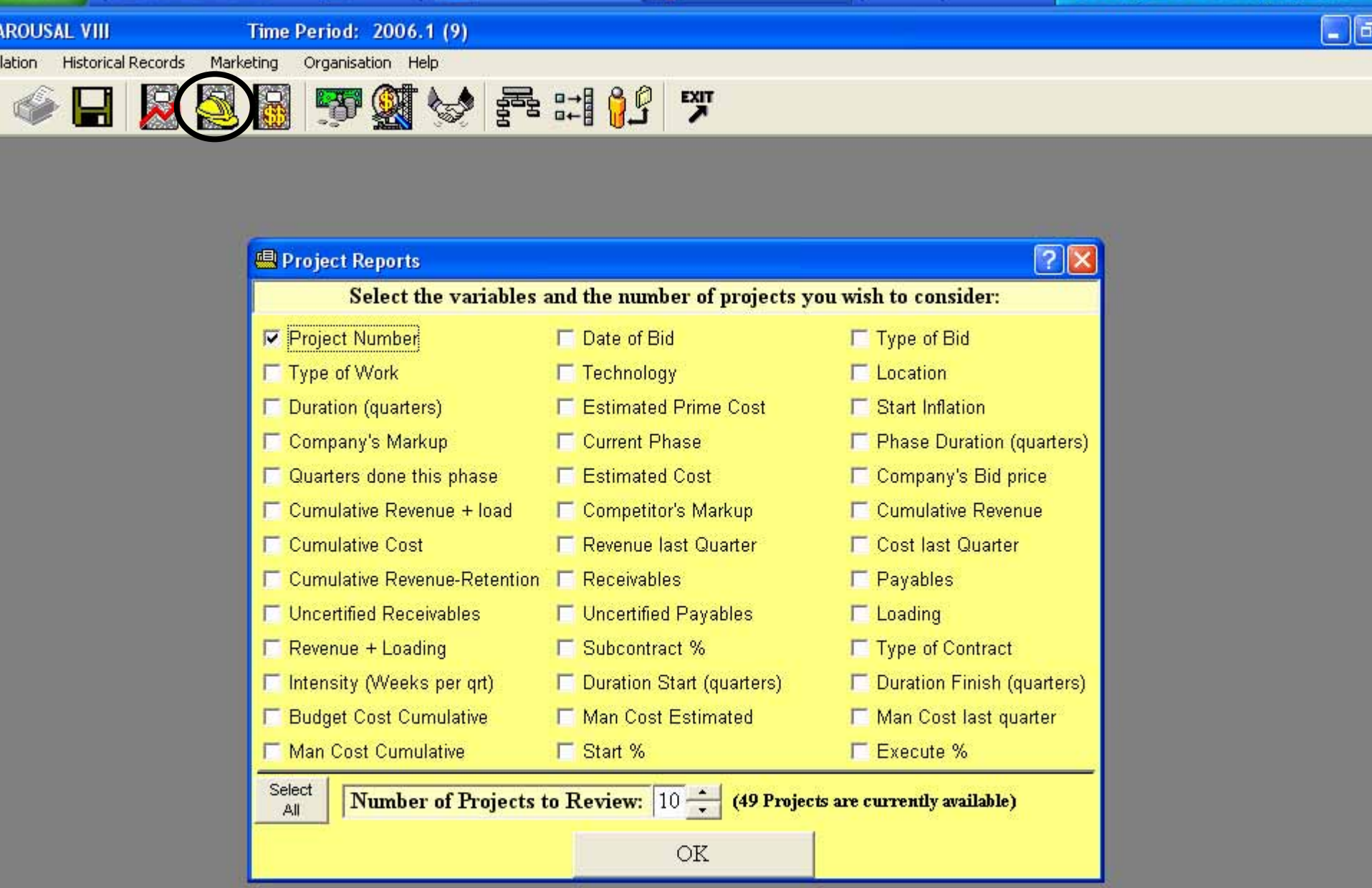


Location	2004.1	2004.2	2004.3	2004.4	2005.1	2005.2	2005.3	2005.4
oburn/Burlingt	1.6 %	1.7 %	1.8 %	1.9 %	2.0 %	1.9 %	1.8 %	1.6 %
Lowell area	5.4 %	5.3 %	5.3 %	5.3 %	5.3 %	5.4 %	5.4 %	5.5 %
rwestern Subur	4.5 %	4.0 %	3.7 %	3.6 %	3.7 %	4.1 %	4.7 %	5.3 %
Hampshire Bo	4.9 %	4.8 %	4.4 %	4.1 %	4.1 %	4.6 %	5.1 %	5.2 %
oston/Cambridg	17.7 %	18.9 %	19.7 %	19.8 %	19.2 %	18.0 %	16.3 %	14.7 %
Inner Suburbs	1.5 %	1.6 %	1.7 %	1.8 %	1.8 %	1.9 %	1.8 %	1.8 %
North Shore	1.6 %	1.7 %	1.8 %	1.9 %	2.0 %	1.9 %	1.8 %	1.6 %
South Shore	17.7 %	18.9 %	19.7 %	19.8 %	19.2 %	18.0 %	16.3 %	14.7 %
Gloucester	1.8 %	1.6 %	1.5 %	1.4 %	1.4 %	1.4 %	1.5 %	1.7 %
Brockton area	1.9 %	1.8 %	1.7 %	1.7 %	1.6 %	1.6 %	1.6 %	1.7 %
Worcester	12.9 %	12.3 %	12.0 %	12.2 %	12.8 %	13.7 %	14.7 %	15.7 %
Manchester NH	1.5 %	1.4 %	1.3 %	1.2 %	0.9 %	0.7 %	0.4 %	0.2 %
SE Mass.	4.7 %	4.4 %	4.1 %	3.8 %	3.7 %	3.7 %	3.8 %	4.0 %
Providence RI	6.5 %	4.3 %	2.9 %	2.5 %	3.1 %	4.6 %	6.9 %	9.7 %
Fall River area	2.7 %	3.3 %	3.8 %	3.9 %	3.8 %	3.4 %	2.8 %	2.2 %
Western Mass.	4.5 %	4.9 %	5.2 %	5.3 %	5.2 %	5.0 %	4.7 %	4.4 %
Hertford	8.5 %	8.9 %	9.4 %	9.8 %	10.1 %	10.2 %	10.3 %	10.2 %

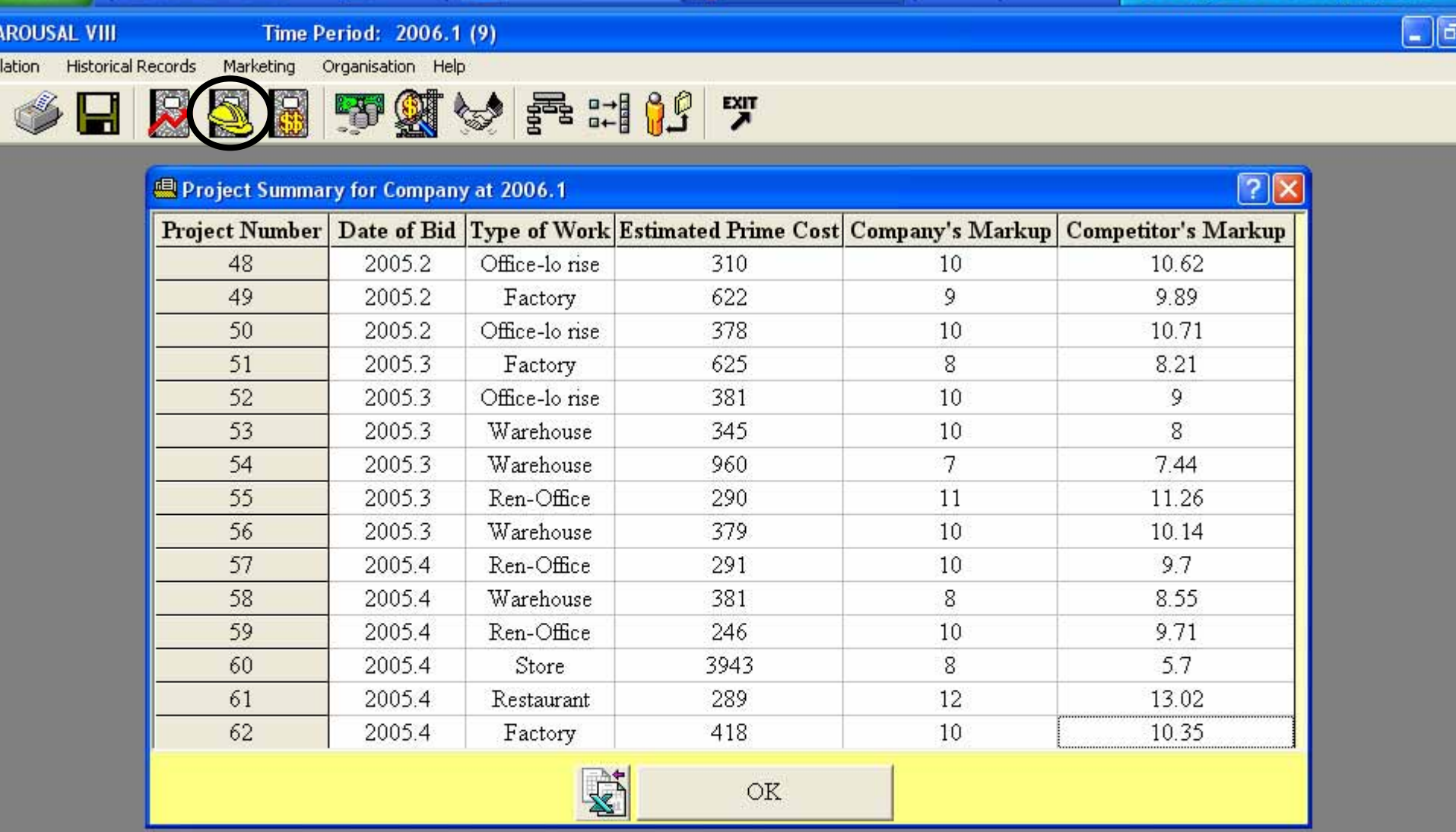
This gives information about market segments in previous quarters. The example is for location. Data can be accessed by Excel.



The location of the firm is Lowell.

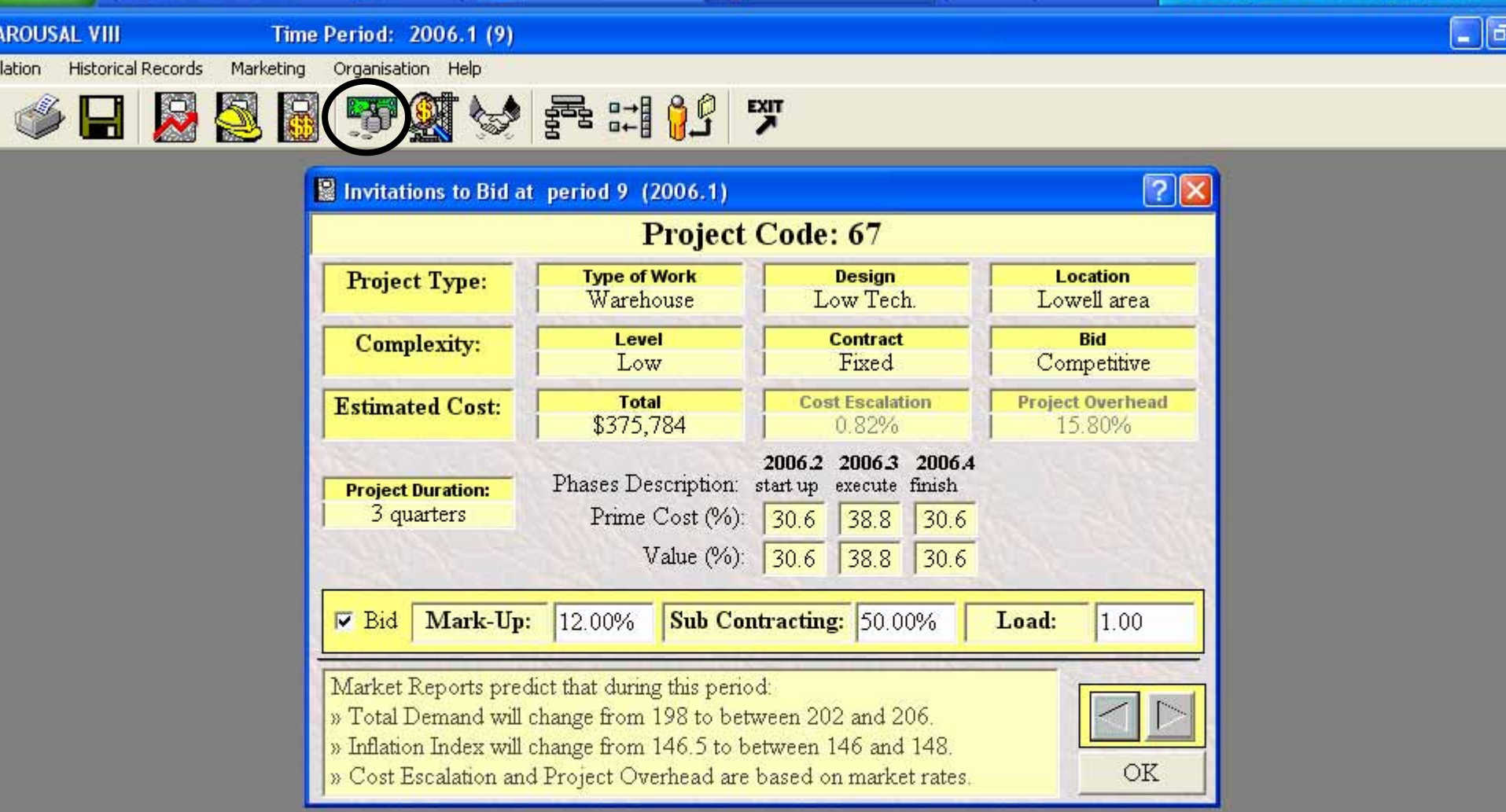


This gives information about all projects that the Company has been involved with. The database is extensive.



Project Number	Date of Bid	Type of Work	Estimated Prime Cost	Company's Markup	Competitor's Markup
48	2005.2	Office-lo rise	310	10	10.62
49	2005.2	Factory	622	9	9.89
50	2005.2	Office-lo rise	378	10	10.71
51	2005.3	Factory	625	8	8.21
52	2005.3	Office-lo rise	381	10	9
53	2005.3	Warehouse	345	10	8
54	2005.3	Warehouse	960	7	7.44
55	2005.3	Ren-Office	290	11	11.26
56	2005.3	Warehouse	379	10	10.14
57	2005.4	Ren-Office	291	10	9.7
58	2005.4	Warehouse	381	8	8.55
59	2005.4	Ren-Office	246	10	9.71
60	2005.4	Store	3943	8	5.7
61	2005.4	Restaurant	289	12	13.02
62	2005.4	Factory	418	10	10.35

Here is a small section of the database, some information about recent bids.



This is one of the current bid invitations, a very small project. Invitations can be declined. Bids can be front loaded. Subcontracting policy may be important.

Current Invitations to Bid

Invitations to Bid at 2006.1

Project Number		Estimated Cost $000	Period (quarters)	Complexity Type	Mark-up %	Load %	Subcontracting
63	Qren-Office High Tech. Boston/Cambrid	310	1	Moderate Fixed Competitive	0.0	1.0	50.0%
64	Warehouse Low Tech. North Shore	491	3	Low Fixed Competitive	0.0	1.0	50.0%
65	Qren-Apart Very High Tech Boston/Cambrid	304	1	Moderate Fixed Competitive	0.0	1.0	50.0%
66	Qren-Apart High Tech. Boston/Cambrid	232	1	Low Fixed Negotiated	13.29	1.0	50.0%
67	Warehouse Low Tech. Lowell area	376	3	Low Fixed Competitive	0.0	1.0	50.0%
68	Office-med ris Very High Tech Lowell area	751	3	Very High Fixed Select List	0.0	1.0	50.0%

The current bid invitations are for very small projects. Qren indicates quality refurbishment work.

Outcome of Bidding in previous quarter

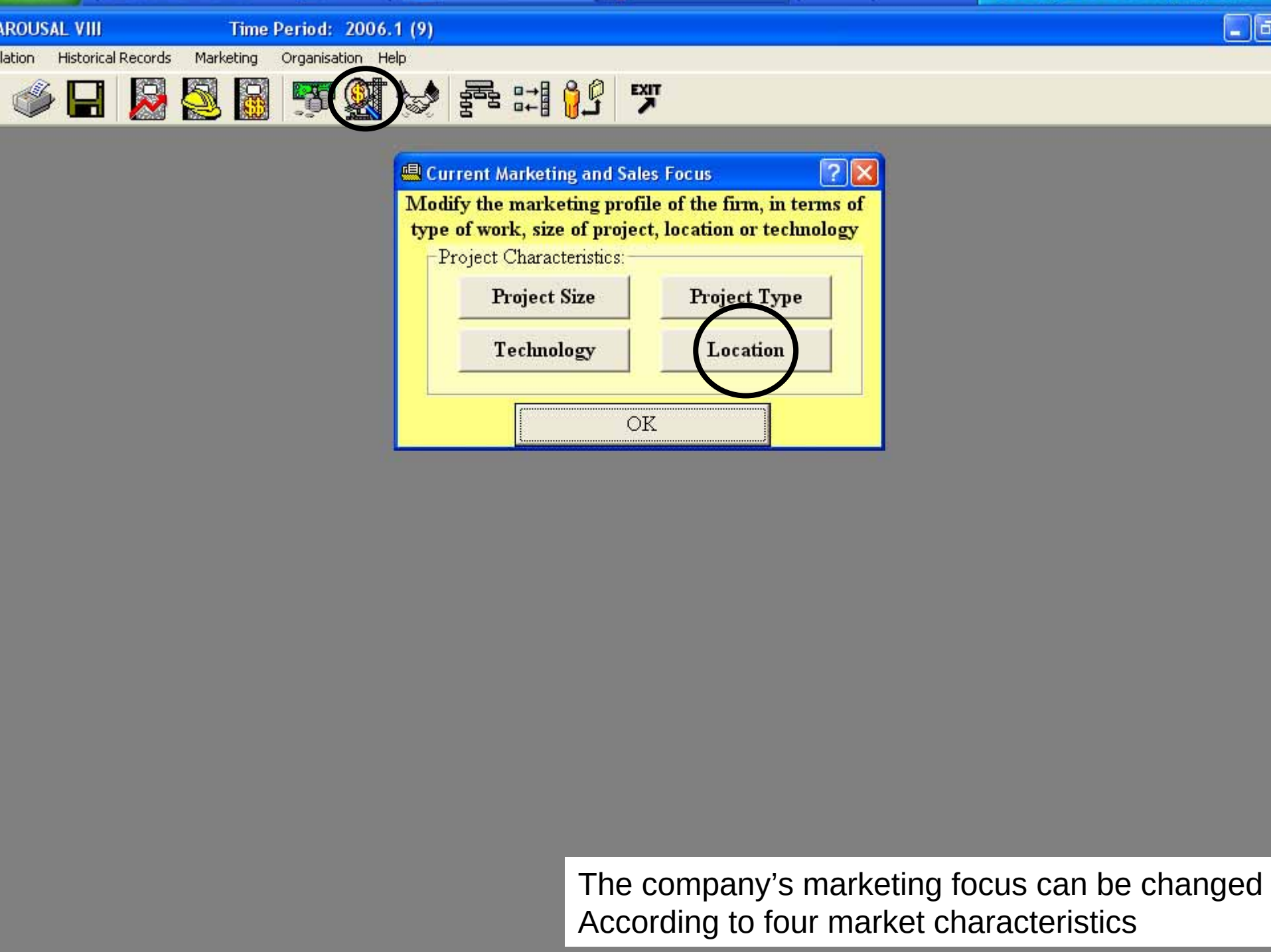
Bid Reports 2005.4

Proj	Company's Bid Cost $000	Overheads $000	Bid $000	Mark-up %	Position	Lowest Competitor's Bid $000	Mark-up %	Position
57	292	49	374	10.0%	lost	373	9.7%	winner
58	381	51	467	8.0%	won	469	8.56%	second
59	247	47	323	10.0%	lost	322	9.72%	winner
60	3943	102	4369	8.0%	lost	4276	5.71%	winner
61	289	49	378	12.0%	won	382	13.03%	second
62	418	52	517	10.0%	won	519	10.36%	second

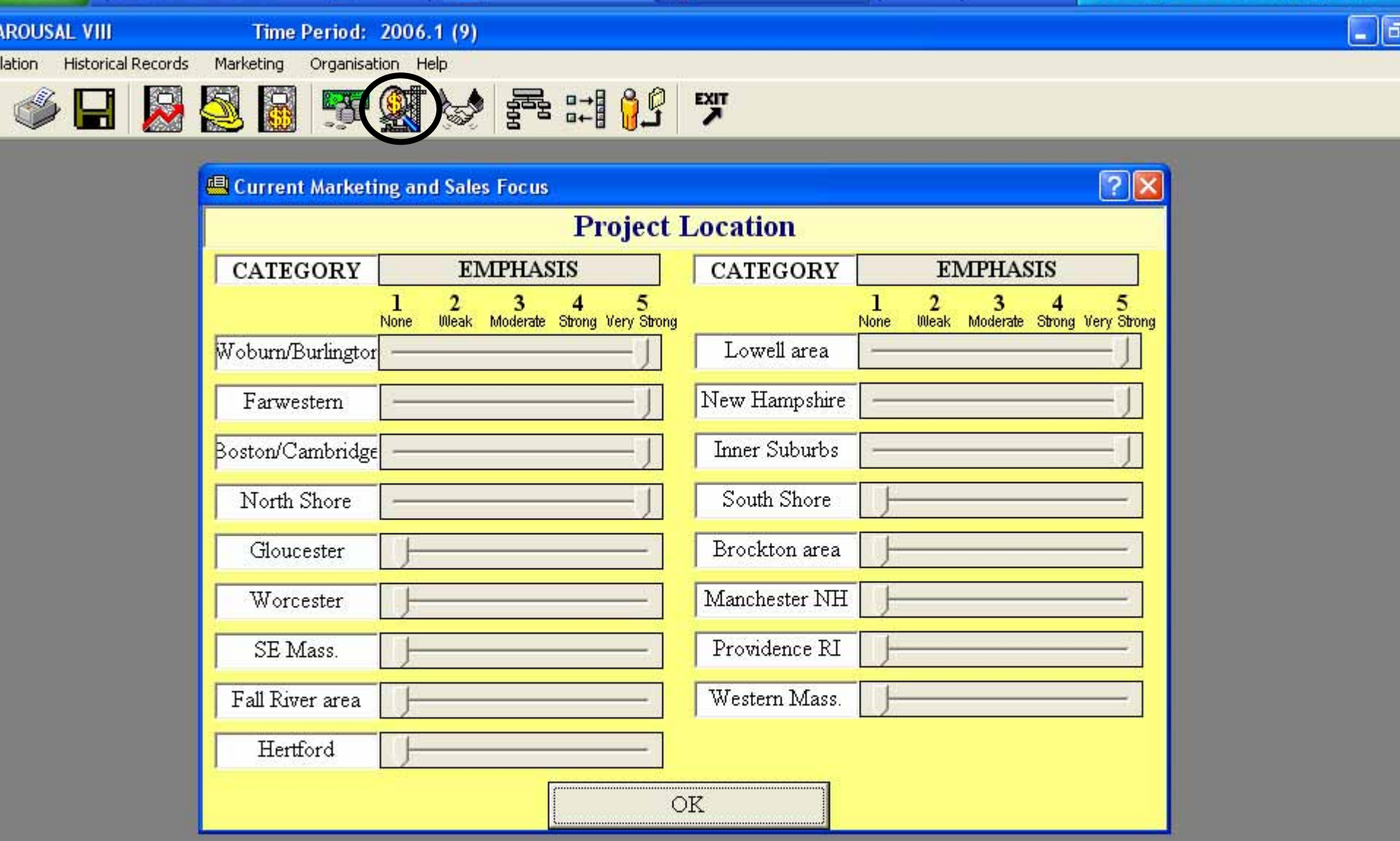
Total demand index = 198

Inflation Index = 146.5

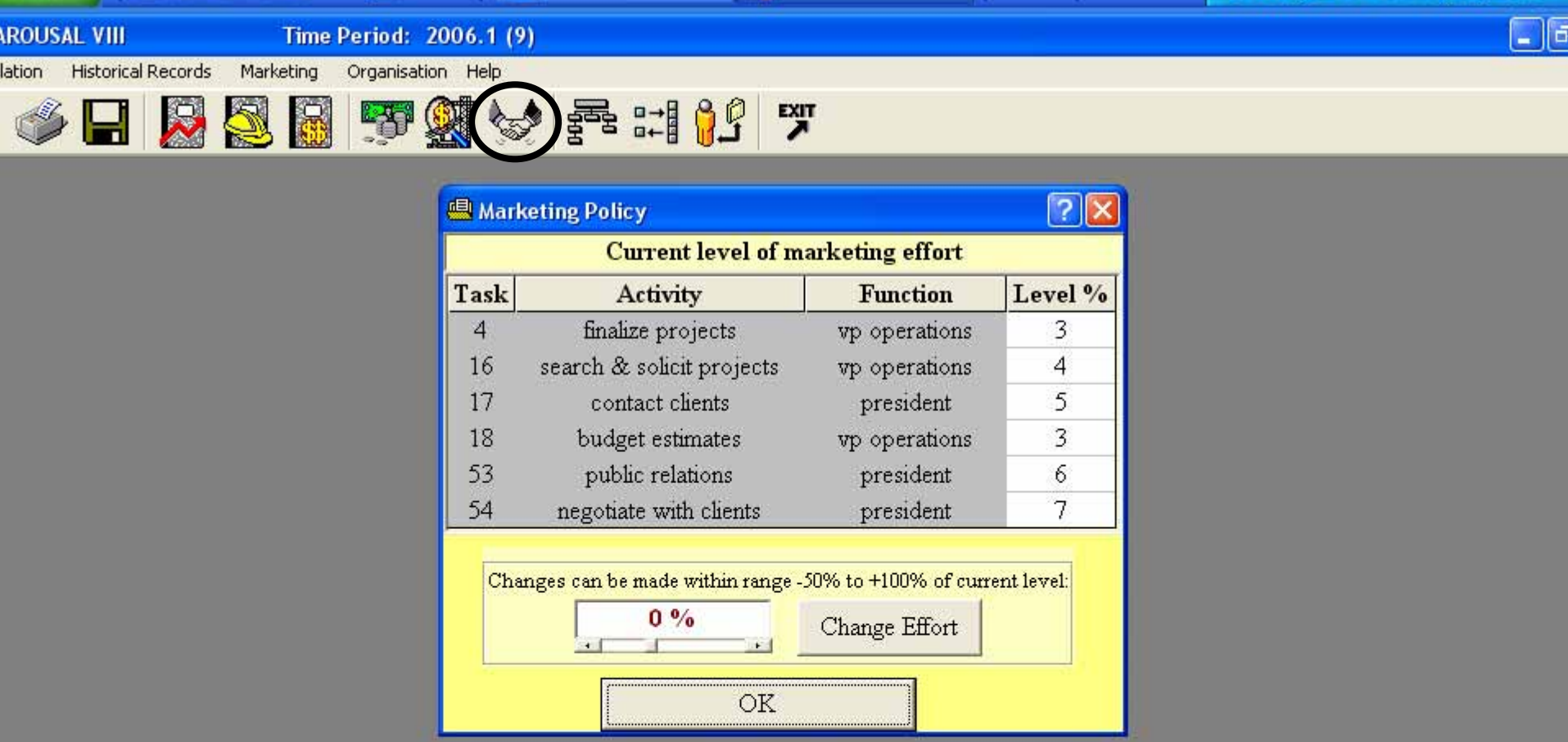
The result of the bids made last quarter. Three small projects were secured.



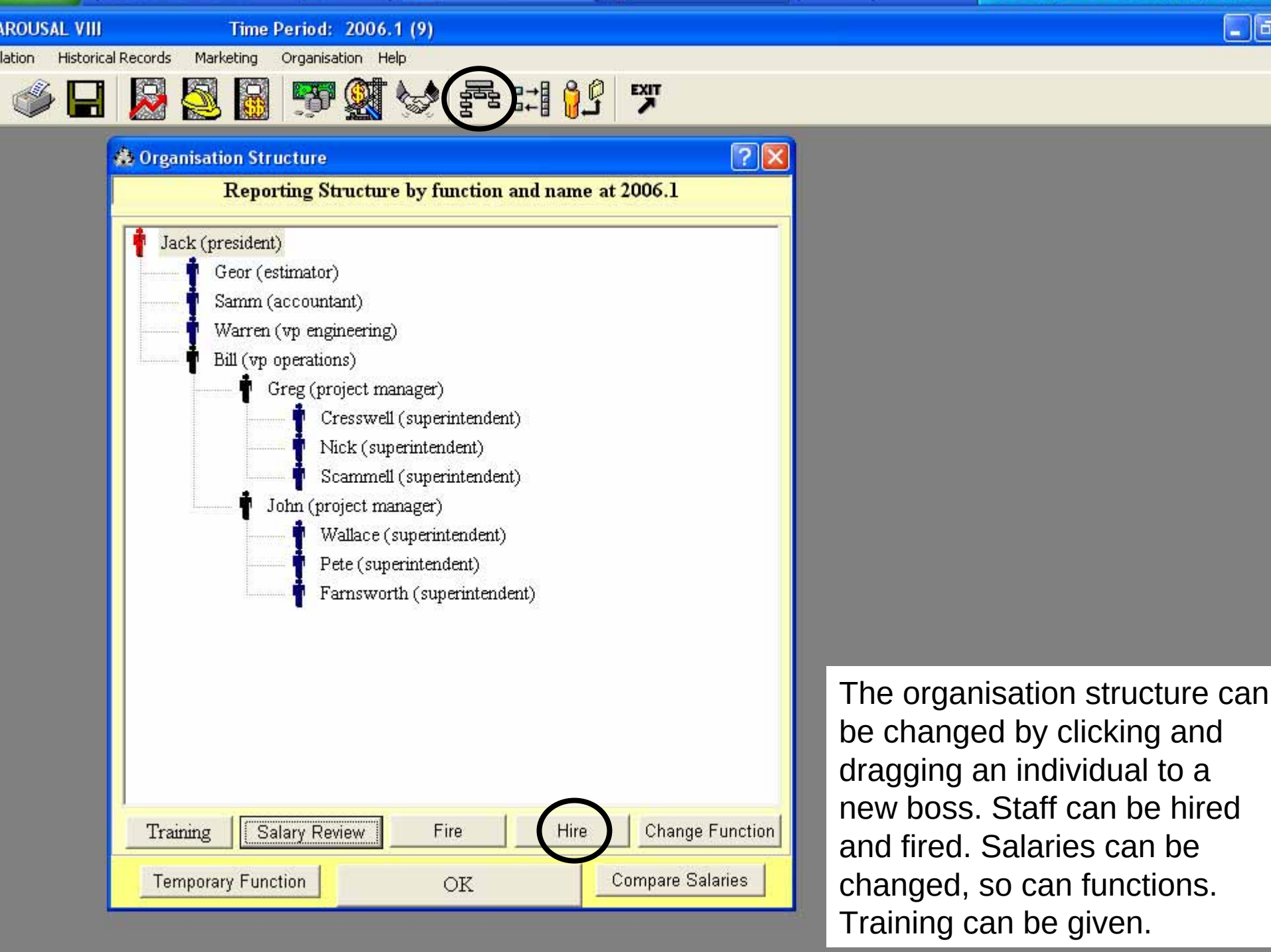
The company's marketing focus can be changed According to four market characteristics



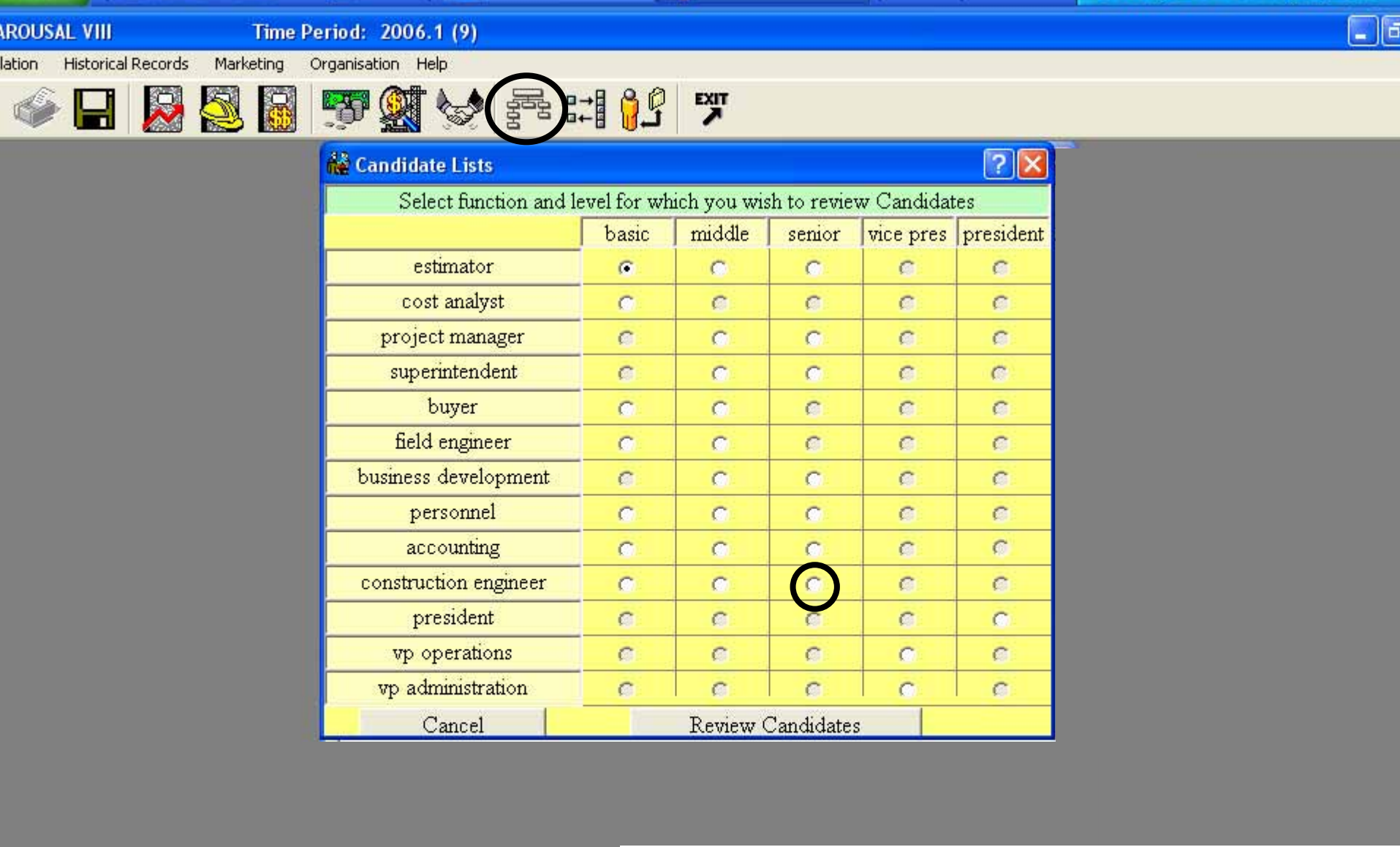
This is the current marketing focus for location.
Just click on the slides to change the focus for a particular location.
This might influence the profile of future bid invitation.



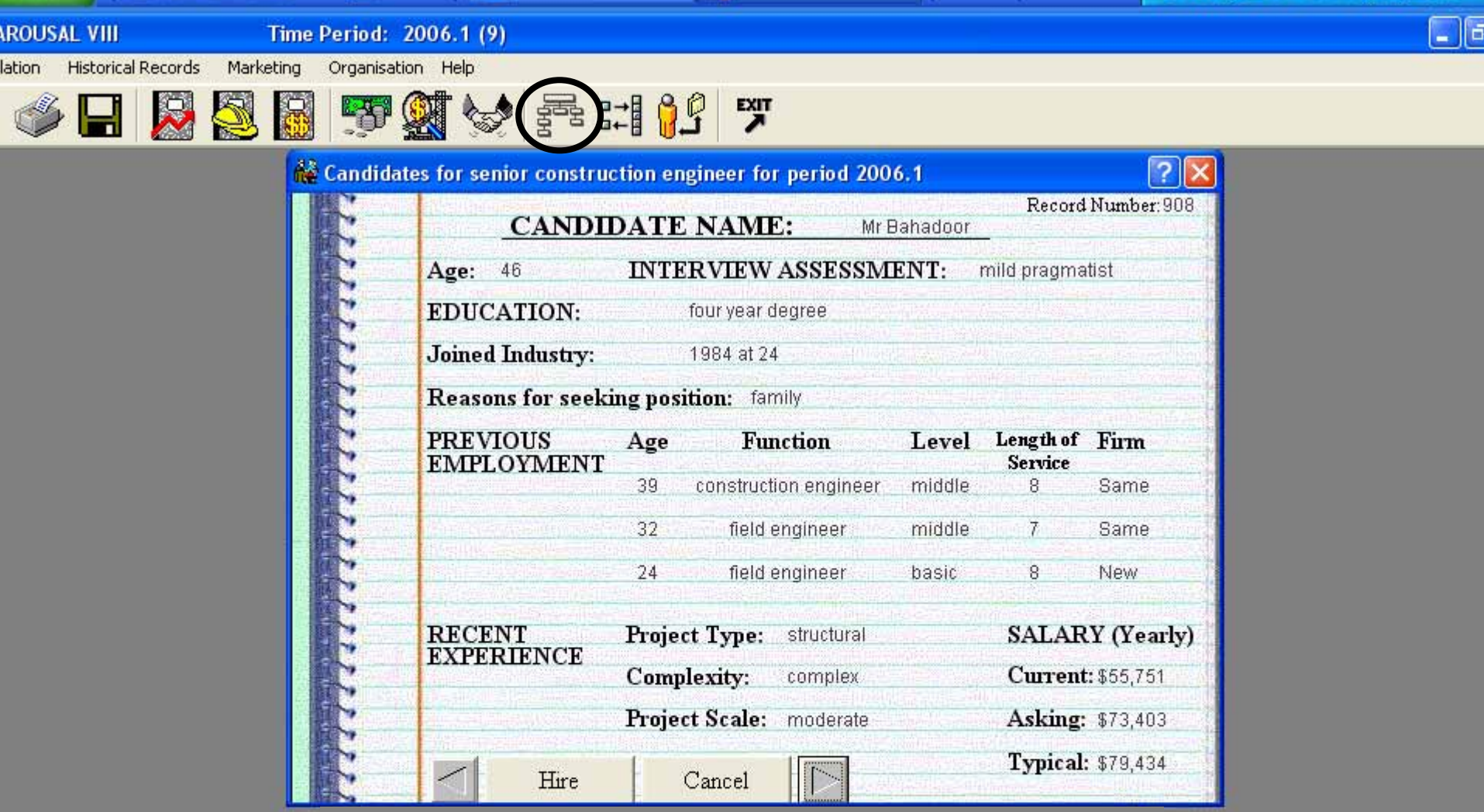
This shows how much time is spent on key marketing activities, and by whom. Move the slider to change the amount of marketing effort. Who does marketing can be changed as well, under job design.



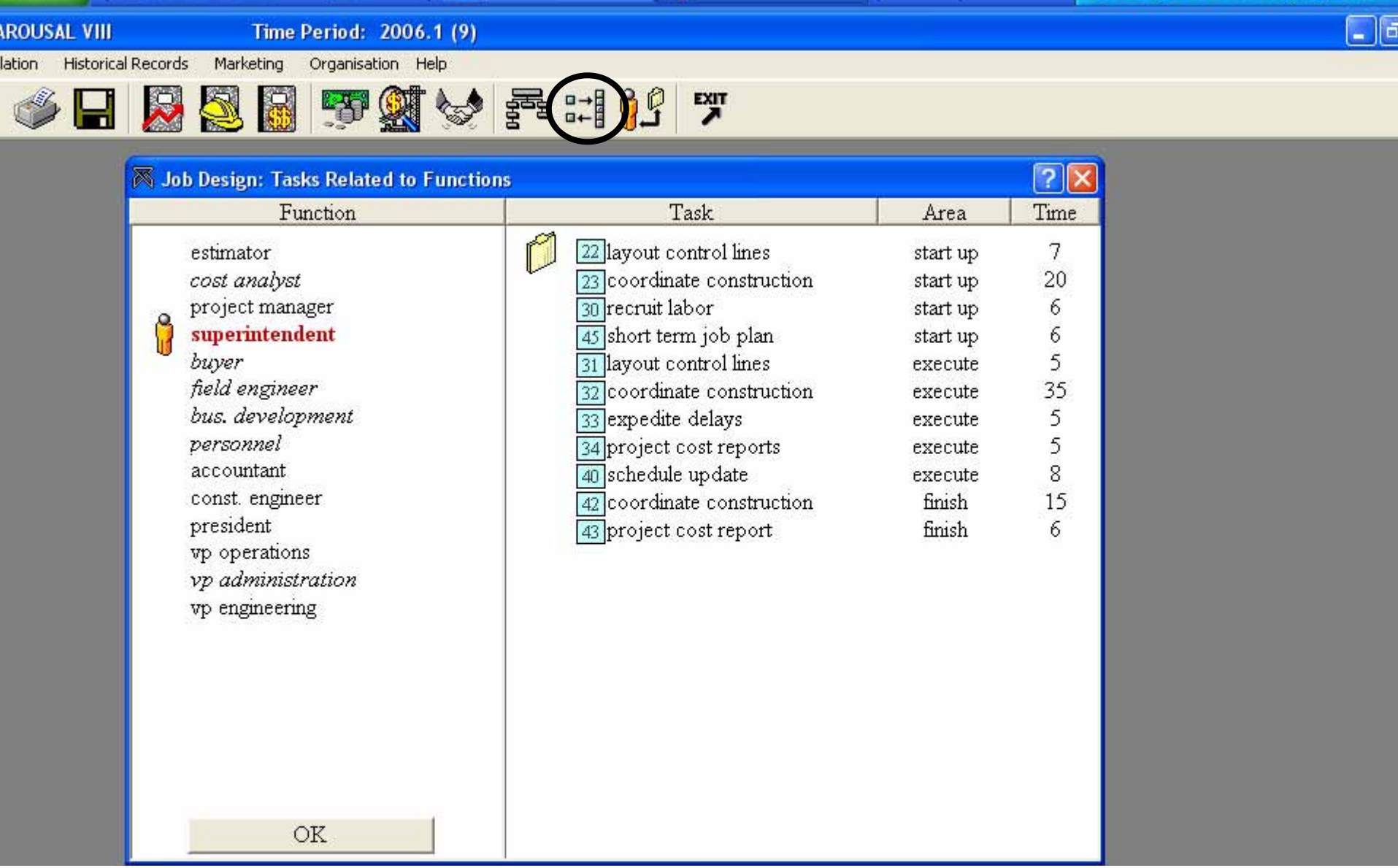
The organisation structure can be changed by clicking and dragging an individual to a new boss. Staff can be hired and fired. Salaries can be changed, so can functions. Training can be given.



Candidates for posts are available at various levels, depending on the function. The quality of the candidates and the number will depend on how well the company handles its personnel activities



An example candidate for post of senior construction engineer
Usually there are six ort seven candidates for a post.



Every person in the company has a job description based on their function, this comprises a series of tasks. The allocation of tasks can be changed by clicking and dragging a task to another function. In some cases it is possible to over-ride the standard job descriptions. It is also possible to construct additional (temporary) functions.

Workload Allocation

- This indicates who is working on which projects and where staff are required (indicated by ????).
- Total workloads based on the current allocation are given in the totals in the next slide. A standard workload is around 100 units. Staff can be overloaded and their performance will then suffer.
- Allocation is achieved through dragging and dropping an individual into a project, and removed by placing an allocation into the waste-basket.
- It is possible for an individual undertaking one function to undertake the work of another function as shown for the construction engineer, where the superintendents, and in one instance the VP engineering, are doing this work.
- The next slide shows the initial allocation for the period, the subsequent slide shows the final allocation, which shows allocations for Pete and Nick which are somewhat ill-advised.

AROUSAL VIII Time Period: 2006.1 (9)

lation Historical Records Marketing Organisation Help

Allocation of Staff

Workload allocation according to Function and Person

Project	estimator		project manager		superintendent		accountant		const. engineer		president		vp operations		vp engineering	
Mgt. Training																
Tech. Training																
00 administration							Samm	13			Jack	39	Bill	12		
01 personnel											Jack	6	Bill	9	Warren	12
02 marketing											Jack	18	Bill	10		
03 accts receivable							Samm	30								
04 accts payable	Geor	3					Samm	27								
3 bid	Geor	17														
4 bid	Geor	18														
5 bid	Geor	17														
6 bid	Geor	16														
7 bid	Geor	18														
8 bid	Geor	20														
8 start up			????	21	????	39	Samm	4	????	17			Bill	17	Warren	14
2 start up			????	22	????	40	Samm	4	????	17			Bill	17	Warren	14
1 execute			Greg	29	Nick	64	Samm	4	Nick	13					Warren	4
4 execute			Greg	31	Scammell	68	Samm	5	Scammell	14					Warren	5
6 execute			John	26	Farnsworth	58	Samm	4	Farnsworth	12					Warren	4
8 finish			John	8	Farnsworth	20	Samm	4	Farnsworth	5						
9 finish			John	9	Wallace	23	Samm	4	Wallace	5						
0 finish			Greg	8	Cresswell	21	Samm	4	Cresswell	5						
1 fasttrack			????	53	????	113	Samm	11	????	33			Bill	16	Warren	17

Total																
	Geor	109	John	58	Scammell	82	Samm	114			Jack	83	Bill	91	Warren	70
			Greg	83	Farnsworth	95										
					Nick	77										
					Pete	0										
					Wallace	28										
					Cresswell	26										

Work Intensity Workload Forecasts OK

Allocation of Staff

Workload allocation according to Function and Person

Project	estimator		project manager		superintendent		accountant		const. engineer		president		vp operations		vp engineering	
Mgt. Training																
Tech. Training																
00 administration							Samm	13			Jack	39	Bill	12		
01 personnel											Jack	6	Bill	9	Warren	12
02 marketing											Jack	18	Bill	10		
03 accts receivable							Samm	30								
04 accts payable	Geor	3					Samm	27								
3 bid	Geor	17														
4 bid	Geor	18														
5 bid	Geor	17														
6 bid	Geor	16														
7 bid	Geor	18														
8 bid	Geor	20														
8 start up			John	21	Pete	39	Samm	4	Pete	17			Bill	17	Warren	14
2 start up			John	22	Nick	40	Samm	4	Nick	17			Bill	17	Warren	14
1 execute			Greg	29	Nick	64	Samm	4	Nick	13					Warren	4
4 execute			Greg	31	Scammell	68	Samm	5	Scammell	14					Warren	5
6 execute			John	26	Farnsworth	58	Samm	4	Farnsworth	12					Warren	4
8 finish			John	8	Farnsworth	20	Samm	4	Farnsworth	5						
9 finish			John	9	Wallace	23	Samm	4	Wallace	5						
0 finish			Greg	8	Cresswell	21	Samm	4	Cresswell	5						
1 fasttrack			Greg	53	Pete	113	Samm	11	Warren	33			Bill	16	Warren	17
Total	Geor	109	John	101	Scammell	82	Samm	114			Jack	83	Bill	91	Warren	103
			Greg	136	Farnsworth	95										
					Nick	134										
					Pete	169										
					Wallace	28										
					Cresswell	26										

Work Intensity | Workload Forecasts | OK

Performance in the first quarter of 2006 as a result of the decisions made in that quarter

Bidding

- Bid Reports 2006.1

Proj	Company's Bid Cost $000	Overheads $000	Bid $000	Mark-up %	Position	Lowest Competitor's Bid $000	Mark-up %	Position
bid 63	253	57	347	12.0%	won	350	13.06%	second
bid 64	428	63	550	12.0%	lost	547	11.36%	winner
bid 65	247	57	340	12.0%	won	349	14.82%	second
bid 66	179	53	263	13.29%	won	263	13.3%	second
bid 67	316	59	421	12.0%	lost	420	11.69%	winner
bid 68	683	68	841	12.0%	won	859	14.35%	second

Total demand index = 202
Inflation Index = 147.1

Three bids were successful but all very small projects, Indeed the invitation list was rather disappointing, probably because of poor marketing strategy

Invitations to Bid in next quarter

- Invitations to Bid at 2006.2

Project Number		Estimated Cost $000	Period (quarters)	Complexity Type	Mark-up %	Load %	Subcontracting
bid 69	Office-med ris Mod Tech. Lowell area	921	3	Moderate Fixed Competitive	0.0	1.0	50.0%
bid 70	Office-lo rise Mod Tech. Farwestern Sub	445	3	Low Fixed Competitive	0.0	1.0	50.0%
bid 71	Warehouse Low Tech. Farwestern Sub	415	3	Low Fixed Competitive	0.0	1.0	50.0%
bid 72	Conv to Office Very High Tech North Shore	3344	4	Very High Fixed Competitive	0.0	1.0	50.0%
bid 73	Factory Low Tech. Lowell area	453	3	Low Fixed Competitive	0.0	1.0	50.0%
bid 74	Factory Mod Tech. Lowell area	1141	3	Moderate Fixed Select List	0.0	1.0	50.0%

A rather mixed bag, but certainly larger projects.

Productivity and Efficiency

- Productivity and Cost Analysis 2006.1

Proj	Time Analysis Schedule Total weeks	Left weeks	Late+/Early-Finish Current weeks	Forecast weeks		Cost Analysis This Period Labour $000	Mats $000	Sub-Con $000	Man't $000	2006.1 Total $000	Overall To Date $000
48	39	0	4.0	4.3	Actual:	23	26	53	(8)	110	359
					Budget:	24	24	49	(15)	112	329
49	39	0	-2.5	0.0	Actual:	47	49	107	(8)	211	683
					Budget:	51	51	106	(17)	226	692
50	39	0	-4.3	0.0	Actual:	26	27	60	(8)	120	419
					Budget:	29	29	60	(14)	133	438
51	39	13	-3.0	-3.7	Actual:	85	90	188	(24)	387	578
					Budget:	94	94	195	(20)	404	598
54	39	13	2.8	4.6	Actual:	120	142	276	(25)	563	779
					Budget:	129	129	266	(18)	541	734
56	39	13	1.6	2.1	Actual:	40	44	88	(22)	194	325
					Budget:	42	42	87	(17)	187	296
58	39	26	0.7	2.4	Actual:	30	32	61	(29)	152	152
					Budget:	30	30	61	(16)	136	136
61	13	0	1.8	0.0	Actual:	73	76	150	(61)	360	360
					Budget:	73	73	150	(49)	344	344
62	39	26	-1.5	-3.9	Actual:	25	27	52	(30)	134	134
					Budget:	27	27	57	(19)	131	131

Budget costs are based on original bid adjusted for inflation
and changes in percentages of subcontrac
Weeks needed to completion are calculate

Most projects are behind schedule and above budget.

Project Revenues and Profitability

Progress Reports

Pro	Type Complex/Bid		2006.1	To Date	Tentative 2006.2	Foreca 2006.3
competitive						
48	Office-lo rise	revenue	119.7	354.6	39.9	
	High Tech.	profit	8.4	-1.2	-0.6	
	modera/fixed	ov'hd%	6.3	15.0	18.9	
	New Hampshire	Border	finish		finish	
		pr+oh%	14.7	13.8	18.3	
competitive						
49	Factory	revenue	240.9	737.6		
	Mod Tech.	profit	12.3	7.4		
	modera/fixed	ov'hd%	3.3	7.7		
	Lowell area		finish			
		pr+oh%	15.6	15.2		
competitive						
50	Office-lo rise	revenue	144.2	471.7		
	High Tech.	profit	16.5	11.1		
	modera/fixed	ov'hd%	5.3	11.5		
	Lowell area		finish			
		pr+oh%	21.8	22.6		
competitive						
51	Factory	revenue	440.4	638.8	96.1	
	Mod Tech.	profit	12.0	9.5	9.3	
	modera/fixed	ov'hd%	5.4	8.8	8.6	
	Lowell area		execute		finish	
		pr+oh%	17.5	18.3	17.9	
competitive						
54	Warehouse	revenue	580.7	775.3	233.2	82.5
	Mod Tech.	profit	3.1	-0.5	8.8	1.7
	modera/fixed	ov'hd%	4.3	7.6	3.7	10.5
	New Hampshire	Border	execute		finish	finish
		pr+oh%	7.4	7.1	12.5	12.1
competitive						
56	Warehouse	revenue	207.7	322.4	130.0	21.1
	Mod Tech.	profit	6.4	-0.7	12.3	-19.1
	modera/fixed	ov'hd%	10.8	16.3	6.0	37.1
	Farwestern Suburbs		execute		finish	finish
		pr+oh%	17.2	15.6	18.3	18.0

Pro	Type Complex/Bid		2006.1	To Date	Tentative Forecasts 2006.2	2006.3	
competitive							
65	Qren-Apart	revenue	0.0	0.0	340.1		
	Very High Tech.						
		profit	0.0	0.0	10.3		
	modera/fixed	ov'hd%	0.0	0.0	18.6		
	Boston/Cambridge		bid		fasttrack		
		pr+oh%	0.0	0.0	28.9		
competitive							
66	Qren-Apart	revenue	0.0	0.0	263.4		
	High Tech.	profit	0.0	0.0	11.4		
	low/fixed	ov'hd%	0.0	0.0	22.5		
	Boston/Cambridge		bid		fasttrack		
		pr+oh%	0.0	0.0	33.8		
competitive							
68	Office-med rise						
		revenue	0.0	0.0	276.5	288.3	276.5
	Very High Tech.						
		profit	0.0	0.0	10.3	10.0	9.6
	v.high/fixed	ov'hd%	0.0	0.0	12.1	10.7	4.1
	Lowell area		bid		start up	execute	finish
		pr+oh%	0.0	0.0	22.4	20.7	13.7
Total-revenue			2391.7		2182.4	613.8	303.0
	-margin (profit)		6.7%		10.3%	8.3%	7.7%
	-overheads		9.0%		13.5%	10.2%	6.1%

Forecasts are based on current levels of efficiency, progress, rate of inflation
and, for new projects, expected levels efficiency and progress.

Gives gross profits and project overheads
Actual and forecast. Secured work is awful.

Cash Flow

Cash Flow Report ($000) cumulative 2006.1

Project	48	49	50	51	54	56	58	61	62
Prime costs	359	683	419	578	779	325	152	360	134
Gross Profit	-4	55	53	61	-4	-2	-8	19	1
Revenue-real	355	738	472	639	775	322	144	378	135
-Due to loading or client saving/penalties	0	0	0	0	0	0	0	-3	0
Payables-certified	33	76	43	116	175	57	42	117	35
-not cert.	14	0	0	58	74	25	18	0	17
Cash outflow	311	606	377	404	531	243	92	243	82
Receivables-retention	20	0	0	37	55	24	11	0	11
-not cert.	25	0	0	79	111	42	30	0	24
-certified	78	211	125	243	305	114	67	244	65
Cash Inflow	232	527	346	279	305	143	36	131	35
Net current assets	75	134	83	186	222	98	49	127	48
Net cash flow	-79	-79	-30	-125	-226	-100	-56	-111	-47
Intensity weeks	13	13	13	13	13	13	13	13	13
Loading	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Subcontract percent	50%	50%	50%	50%	50%	50%	50%	50%	50%

A complex but important table.

Profit & Loss and Balance Sheet

- Financial Report 2006.1

Profit/Loss Account	This Period $000	%	Year to Date $000	%
Gross Revenues	2395			
Gross Profit	164	6.8		
Adjustments from loading or client savings or penalties	-3			
Adjusted Revenues	2392		2392	
Gross Profit	161	6.7	161	6.7
Overheads				
Total Salaries	278		278	
Head office Charge	24		24	
Office expenses	70		70	
Interest +paid(-recd)	5		5	
-Recovered from Project Overheads	-215		-215	
Total	163	6.8	163	6.8
Net Profit	-2	-0.1	-2	-0.1

Cash Flow Statement	$000	$000
+Cash in	2111	2111
-Cash out	-2156	-2156
=Net Cash Flow	-45	-45

Balance Sheet	$000
Accts receivable	1452
+WIP - not cert.	311
+Retentions on WIP	157
+Cash/-Loan	-553
-Accts payable	-720
-Uncertified s/crs	-206
-Reserve - loading	0
=Net Current Assets	443

n.b. Loading revenues are not taken as profit or loss until end of project.

Accts receivable delay (weeks) = 8.4
Accts payable delay (weeks) = 6.4

Current quarterly rate of interest in annual terms = 3.88 %

The books were not quite balanced.
Cash management is poor.

Problem Areas

Problem Activities by Project or Area of Admin. 2006.1

Task Area		Source	Project or
9	monitor accts receivable	accountant	503
10	monitor accts payable	accountant	504
22	layout control lines	superintendent	58, 61
23	coordinate construction	superintendent	58, 61
24	confer with a/e	const. engineer	58, 61
28	initial schedules	vp engineering	58, 61
31	layout control lines	superintendent	54
32	coordinate construction	superintendent	54, 56, 61
35	confer with a/e	const. engineer	54, 61
37	change orders	project manager	54
38	general project admin	project manager	54, 61
40	schedule update	superintendent	54, 56, 61
42	coordinate construction	superintendent	48, 61

N.B. Administrative Areas coded 500 and above

There are problems on projects 58 and 61. Both are run by Pete who was terribly overloaded with work. Project 54, the largest that the company has at present is in difficulty. Also the accountant is not managing the cash very well

Performance of Staff

Staff Progress Report 2006.1

Staff No.		Salary $000	Work load	Performance Displayed	Performance Expected	Commitment	Problems
12 Geor	estimator	59,000	109	V.Good	V.Good	Sound	
4 John	project manager	56,000	101	Good	Good	Sound	Salary
5 Greg	project manager	56,000	136	Good	V.Good	Sound	Salary
8 Scammell	superintendent	48,000	82	Good	Average	Sound	
9 Farnsworth	superintendent	52,000	95	Average	Good	Sound	
10 Nick	superintendent	50,000	134	V.Good	V.Good	Sound	
13 Pete	superintendent	47,000	169	Poor	Good	Left	Technical Relationships Load
14 Wallace	superintendent	47,000	28	Good	Average	Sound	
15 Cresswell	superintendent	50,000	26	V.Good	Good	Sound	
11 Samm	accountant	47,000	114	Average	Good	Sound	
1 Jack	president	163,000	83	V.Good	V.Good	Sound	
2 Bill	vp operations	114,000	91	V.Good	V.Good	Sound	
3 Warren	vp engineering	102,000	103	Good	Good	Sound	

Pete has left the company! But Nick performed very well despite a high workload. Sam has not Performed very well, nor has Farnsworth.
Some staff have complained about their salaries.

AROUSAL VIII Time Period: 2006.2 (10)

lation Historical Records Marketing Organisation Help

Allocation of Staff

Workload allocation according to Function and Person

Project	estimator		project manager		superintendent		accountant		const. engineer		president		vp operations		vp engineering	
Mgt. Training																
Tech. Training																
00 administration							Samm	13			Jack	39	Bill	14		
01 personnel											Jack	7	Bill	9	Warren	14
02 marketing											Jack	18	Bill	10		
03 accts receivable							Samm	32								
04 accts payable	Geor	3					Samm	28								
9 bid	Geor	21														
0 bid	Geor	18														
1 bid	Geor	18														
2 bid	Geor	25														
3 bid	Geor	18														
4 bid	Geor	21														
8 start up			????	23	????	43	Samm	4	????	19			Bill	19	Warren	16
8 execute			John	26	????	58	Samm	4							Warren	4
2 execute			John	27	Nick	59	Samm	4	Nick	12					Warren	4
8 finish			John	8	Farnsworth	20	Samm	4	Farnsworth	5						
1 finish			Greg	9	Nick	23	Samm	4	Nick	5						
4 finish			Greg	9	Scammell	25	Samm	5	Scammell	6						
6 finish			John	8	Farnsworth	21	Samm	4	Farnsworth	5						
3 fasttrack			????	51	????	110	Samm	11	????	32			Bill	16	Warren	17
5 fasttrack			????	51	????	109	Samm	11	????	32			Bill	16	Warren	17
6 fasttrack			????	48	????	103	Samm	10	????	30			Bill	15	Warren	16
Total	Geor	124	John	79	Scammell	31	Samm	134			Jack	84	Bill	109	Warren	88
			Greg	33	Farnsworth	51										
					Nick	99										
					Wallace	0										
					Cresswell	0										

Work Intensity Workload Forecasts OK

Allocation for Next Quarter

And so we arrive at the next quarter with an updated configuration and a new set of issues to consider