

A new look at valuation and the actuarial profession

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Institute of Actuaries of Australia







What is sustainability



What is its value?







	CUF	RENT BASELINE	INITIATIVE IMPA	ACT - BENEFITS	S									NEW BASELINE						
	Value (total \$ for a calender year)	Proportion (% of total time, cost or people)	Number (days or people)	C. Joseph	I A TIO	C1 - Customer service C2 - Customer satisfaction surveys	Chart invoicing S1 - Supen isor role S2 - Supen isor access to infe	S3 - New product Iraining Cons pracoss improvements	T1 - Streamline site ardering T2 - Trade scheduling	T3 - Supply eptimisation T4 - Order ancessing	P1 - Pred Estimate earlier	P2 - Construction prefities P3 - BOG accuracy	P4 - eT ender farmats O1 - Cons dept reles	02 - MH way	03 - Cans Admin processes	Total	Value	Proportion	Number	Cha
						n			- 1											\equiv
ROFITABILITY Revenue	117,000,000		624	Jobs finalled in cales sar 20 Jobs: 2002 = 711, 20 490				$\mathbf{A} \mathbf{U}$		W							117,000,000			24
Sydney	76,000,000		420	2002 = \$76m, 2001 = \$50m	ANITA, 2003 figures		-								-		76,000,000		42	20
Sydney H&L	19,000,000		118														19,000,000			120 18
Major projects (Duplexes) average revenue per job	22,000,000 187,500		86	2002 = \$20m, 2001 = \$22m	ANITA, 2003 figures										-	_	22,000,000 187,500			86
Construction expense (incl. wty and 90 day) average construction expense per job	93,400,000			2002 = \$95.8m	ANITA; 2003 calendar year					1% 0%	6	0%			-	1%	92,366,000			
Gross margin	23,600,000		20%														24,634,000		215	96
Oresial assesses																				
General expense Recruiting	530,942	60%		Estimate	Team analysis										-		398,206			
Supervisors	392,435						25%									25%	294,326			
Other construction Advertising	138,506 2,000,000			Estimate	J Lunney	10%							25%		0%	25% 10%	103,880 1,800,000			
	2,000,000					10.99										.076	.,000,000			
Overhead - Construction									_											
Construction Supervisors	1,953,200	100%	19	Annualised couled by a people sect on-cost Estimate Derived "more all" be received expressed a 2004 Testimate Estimate Estimate office paperwork, meeting with AM	J Lumpy the Con June 2014											-	1,400,156	100%	13.6	62 -
customer mgt	195,320 1,275,146	10%		Estimate	Poths in se	59										75% 10%	48,830	3% 82%		
construction scheduling (forward)	1,275,146	66% 5%		Derived - "nor al" time receive a procedure 2004 les	With interior	\cup V			10	T-		00%				10%	1,147,632	82% 0%		
other admin	195,320	10%		Estimate - other paperwork, meeting with AM	A withran, interviews		20%			$\mathbf{}$	- '	100 %				100% 20% 75%	156,256	11%		
ordering (expediting)	189,754	10%		Derived - paperwork, chasing up information	Pavithran, interviews		10%		20%	10%	30%	5%				75%	47,438	3%		
Non-construction supervisors Area Managers	616,800	100%	- 6		J Lunney, based on June 2004 figures J Lunney, based on June 2004 figures												616,800	100%	6.0	
Area Managers disputes	523,000 52,300	100%	- 4	Estimate - esclated disputes	A Pavithran, interviews	50%									-	40%	523,000 26,150	100% 5%	4.0	
training/ coaching	104,600	20%		Estimate	A Pavithran, interviews		-25%									50% -25%	26,150 130,750	25%		
construction	156,900	30%		Estimate - incl. site visits	A Pavithran, interviews				20%		0				_	0% 70%	156,900	30%		
ordering scheduling (forward)	104,600 52,300	20% 10%		Estimate - incl. approvals Estimate	A Pavithran, inteniews A Pavithran, inteniews				20%	10%	6 40%	40%			-	-40%	31,380 73,220	6% 14%		
other admin	52,300	10%		Estimate - incl. reporting	A Pavithran, interviews							-0.10			100%	-100%	104,600	20%		
Construction Admin	301,000	100%	6	Annualised current cost and people, incl. on-costs	J Lunney, based on June 2004 figures							004				100%	270,900	100%	5.4	40 -
scheduling (forward) scheduling (trade)	30,100	10%		Estimate - portion of Cons Scheduler's time	A Pavithran, interviews				-			100%			-	100%	75.250	0% 28%		
ordering	150,500	50%		Estimate	A Feethral in	00			3%		20%	5%				0% 75%	37.625	14%		
construction	90,300	30%		Estimate - incl. c st c , fin te	Faithra in the sees										-42%	-42%	127,925 30,100	47% 11%		
customer mgt Customer relations	30,100	10%	3.5	Estimate Annualised current stand prole	A Parthran internews A Fathran in Section 1 A Parthran internews A Fathran in Section 1 A Parthran internews A Rathran internews A Parthran internews A Parthran internews	5 3	-	v	ш						-	0%	30,100	11%	3.5	50
customer mgt	80,500	50%		Estimate	A Pavithran, interviews										-80%	-80%	144,900	90%	0.0	-
disputes	16,100 64,400	10%		Estimate Estimate	A Pavithran, interviews			-							100%	100%	16,100	10% 0%		
construction	64,400	40%		Estimate	A Pavithran, interviews										100%	100%		U%		
Total Construction overhead	3,555,000		38.5	5													2,971,856		3	33 -
	92,338														_					
average per FTE average per construction supervisor	102 800														_					
average per area manager	130,750																			
average per cons admin staff average per customer relations staff	50,167 46,000														-	-				
average per coacriner relations diany	40,000																			
Overhead - Non-Construction																				
Accounts Reconciliation	233,000 80,000	34%	4.8	Annualised current cost and people, incl. on-costs 2 FTEs full time	Junney, based on June 2004 gure.										-	30%	209,000 56,000	27%	4.30557939	<i>89</i> -
Other departments		34%	i i	Addressed elsewhere, incl. HATS, HIC, PE, Sales			14									50.10	50,500	27.70		
				Dheel, attached in time and of many and define	Janney, based on June 200 gare A 7, 78 Dassif Co Yon busin															
Interest Rate		5%		poank rate used in time cost of money calculations	United Con. You busin			•			-				-	-				
PROCESS Build time (modes)			27.67	Avg days from Constr Start to Final	ANITA 2004 Sevens analysis														20.9	93 .
Build time (weeks) Construction time (incl. scheduling, ordering)		65%	18.00	Derived "normal" based on 2004 capacity and results	ANITA, 2004 figures, analysis ANITA, 2004 figures, analysis										-	0%		86%	18.0	00
Delays - scheduling, ordering		15%	4.06	Derived - sum of additional ordering and scheduling time	A Pavithran, interviews		10%		10%	5%	6 10%	10% 1	0%			55%		9% 1%	1.8	83
Quality issues Disputes		10%	2.76	Estimate - incl. rework Estimate	A Pavithran, intentews A Pavithran, intentews	10% 10%	20%	10%				20% 2	3%	20%	-	90% 70%		1%	0.2	
		10%	2.76		Journally Internetts	10% 10%	20.70							20.70		7.576		470		
Avg completed jobs per construction supervisor			32.84	40															45.8	31
Supervisor construction capacity (person-weeks in a year) Construction activity (lob-weeks executed)				# Supervisors x 48 weeks a year x % time spent building # iobs x average weeks to final											-	-			53 13.06	
Net supervisor productivity (jobs per supervisor in a week)				Activity / capacity															24.3	
CUSTOMER																				
Satisfaction																-				
Tribunal hearings	10,385		54	Assumes each takes a day @\$50K p.a.	K Parker, based on 2003 figures	20% 10%								5%		35%			36.1	0
NNOVATION AND LEARNING																				
Skills continuity (negative indicator)																				
Attrition																				
Construction Const Admin			17	Supervisors	Payroll figures (12 months to 30 June 200	4)													17.0	.00
Const Admin Const Mgt			- 1	Construction Manager															1.0	30
Cust relations			- 1	Loss of 1 FTE for maternity leave															1.0	.00
Trades				Attrition not quantified																
New positions Construction																				
Const Admin			3				6	۸	100	D -	! .	th	n '	201	$^{-}$	Λ	الماده أميا	to ro	Or 30	0 -
Const Mgt			1				C	/ Ari	นทล	12	1VI	ma	11.	ノロ	JO	. А	ll right	12168	CIVE	-) (
Cust relations																				







One year later









Five minutes later









Valuation problems

- Professional vs wasteful?
- Apples and oranges
- Imperfect information
- Short-termism (vs sustainability)







A real live case comparison

- Tech start-up 1999
- Electrical signal error decoding, welding app.
- Industry awards in Ausand overseas
- 2002: 4 on exec team, incl. inventor (not CEO); <10 distributors</p>
- Complementary strategy incl. higher education
- Value \$3-5 million

- Tech start-up 1999
- Middleware for easy data exchange
- Industry awards in Aus and overseas
- 2002: 2 on exec team, inventor (CEO + CIO), angel; <10 employees</p>
- Complementary strategy incl. higher education
- Value \$3-5 million







Corporate Alchemy









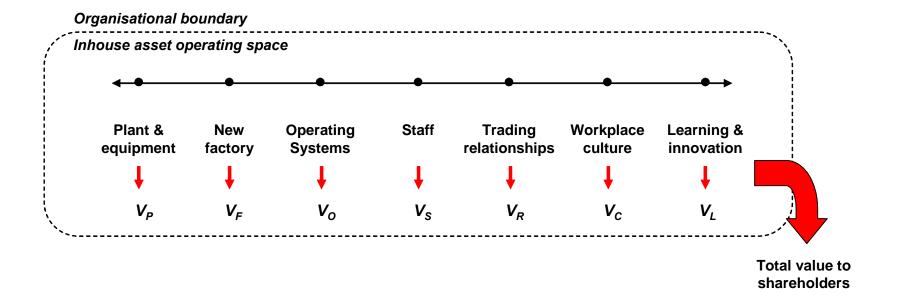








Assets



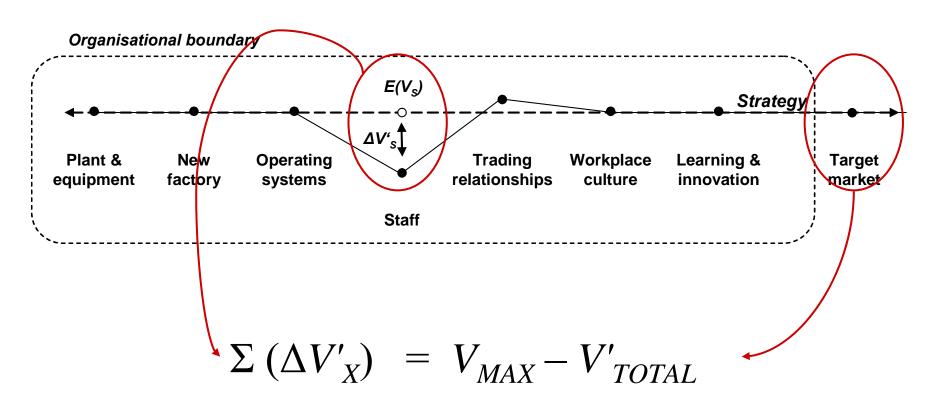
 V_{TOTAL}







Misalignment and value

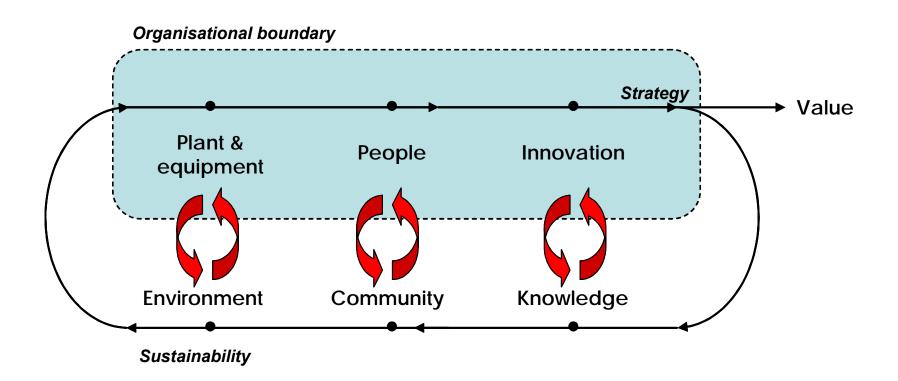








Sustainability

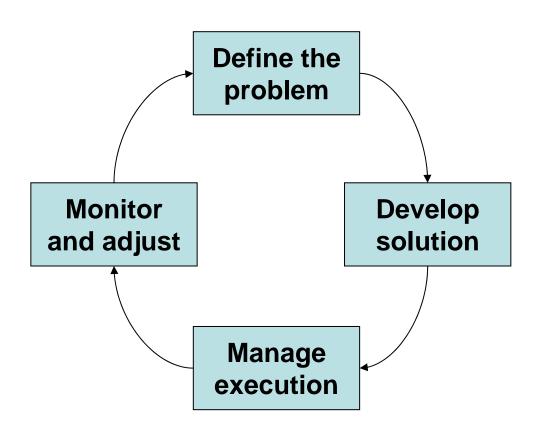








An actuarial revolution?



- Ongoing
 (e)valuation ofcorporations
- Actuaries' USP: risk vs models
- Competition to the profession
- Technicians vs advisors







The salient hypotheses

- Returns to entities are just as predictable as returns to portfolios
- Modelling chaos undermines the understanding of it
- Alchemy is no mystery







Conclusion

- A valuation methodology that is consistent across applications is warranted
- Managers and valuers must come to grips with how assets interact to create value
- The opportunity for actuaries a return to risk management?



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