

**Green Cities 2010  
Melbourne**

# Existing or Exiting ?

How Everything Can be New Again

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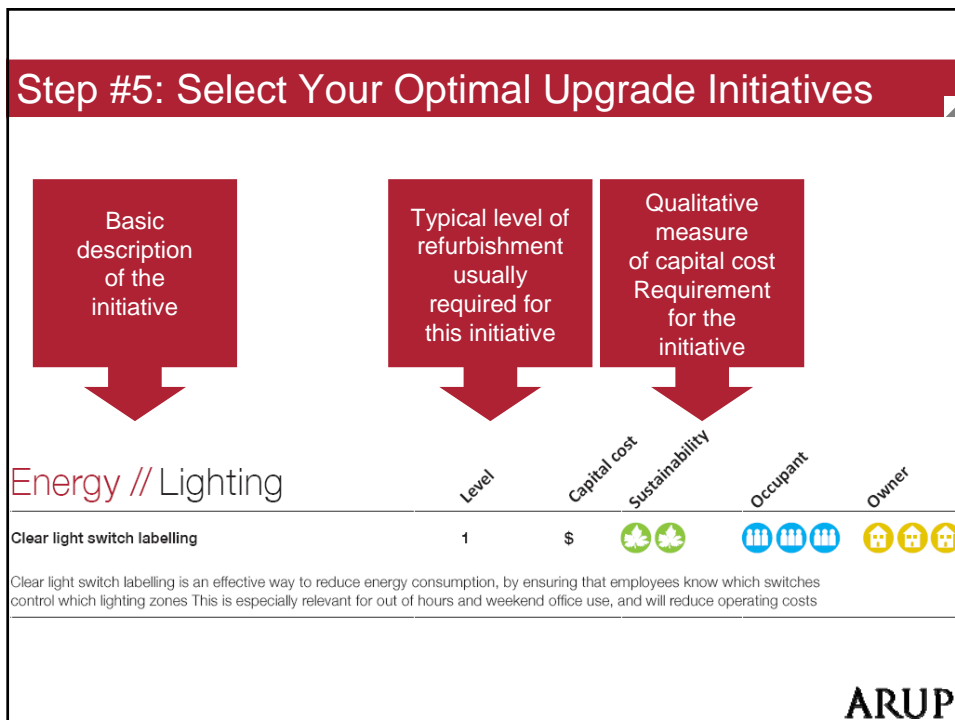
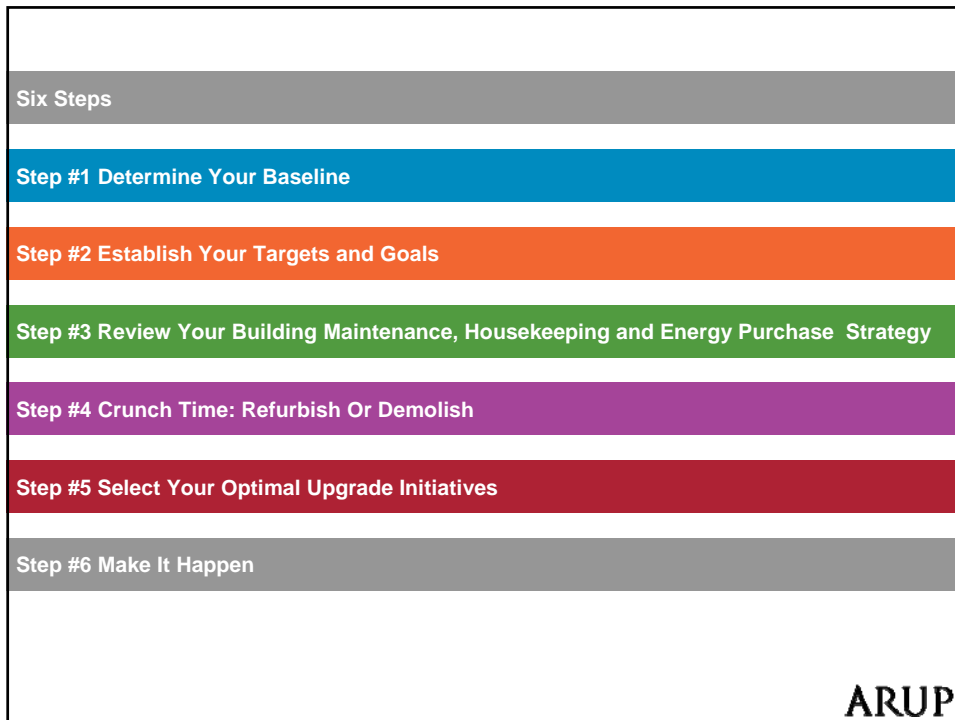
## existing buildings// survival strategies

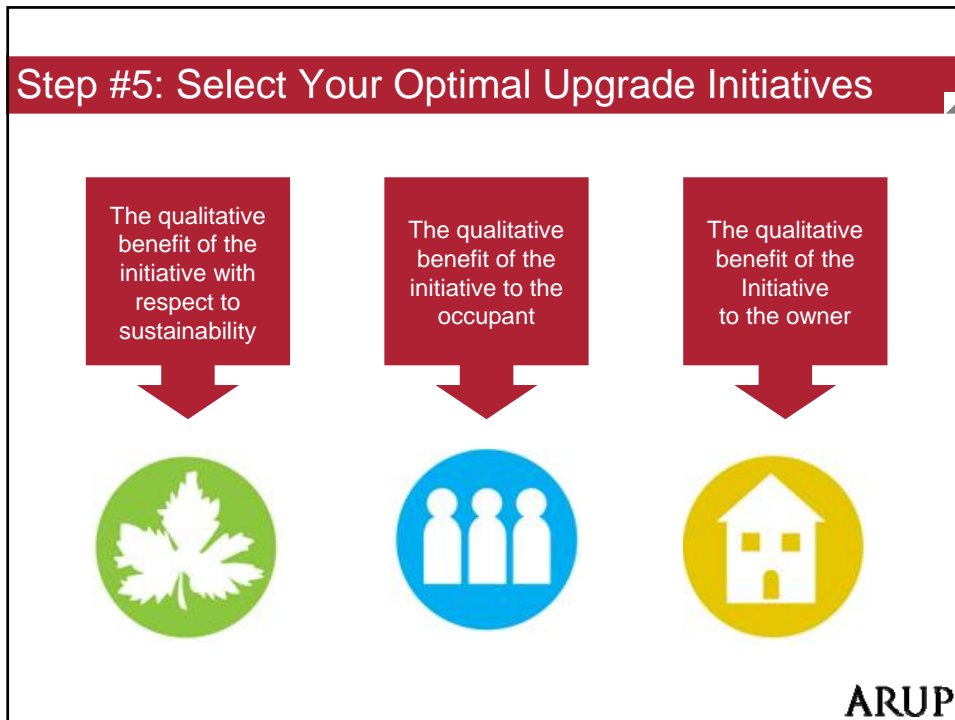
A toolbox for re-energising tired assets

- 2008 PCA approached Arup to utilise global expertise to write the guide
- 13 weeks to deliver in July 2008
- Huge interest
- Copied globally (U.K, South Africa, Singapore, USA, Germany)



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## 2009 follow up to existing buildings// survival strategies

A toolbox for re-energising tired assets

Joined by Davis Langdon & Colliers International

existing buildings// survival strategies  
Making it happen - putting the tools to work

ARUP PROPERTY CONSULTANTS Davis Langdon

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## Focusing more on a practical application:

How do you decide what initiatives to choose?

What will they cost?

What will the financial implications be?

The first booklet was the toolbox; this is the nuts and bolts



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## Methodology

- Established three existing 1980's buildings; in CBD, fringe CBD & a suburban office
- Appropriate refurbishment upgrade initiatives were selected for each case
- Capital cost estimated
- Energy and water savings estimated
- Cash flow analysis




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## Investment Analysis Overview...




	Base Case	Level 1	Level 2	Level 3	Level 4
Cap Ex (\$/m <sup>2</sup> )	-	\$35	\$226	\$980	\$2040
Net Rent	\$313	\$313	\$324	\$365	\$491
Energy Savings	-	17%	26%	53%	56%

Optimum Investment Achieves **10% IRR**




	Base Case	Level 1	Level 2	Level 3
Cap Ex (\$/m <sup>2</sup> )	-	\$37	\$232	\$997
Net Rent	\$290	\$290	\$300	\$345
Energy Savings	-	17%	27%	56%

Optimum Investment Achieves **11.2% IRR**



	Base Case	Level 1	Level 2	Level 3
Cap Ex (\$/m <sup>2</sup> )	-	\$33	\$258	\$959
Net Rent	\$190	\$190	\$220	\$280
Energy Savings	-	18%	24%	54%


Optimum Investment Achieves **10.9% IRR**



## Asset Improvement

### Overview of Each Case

	Level 1	Level 2	Level 3	Level 4
<b>Case A – CBD Tower</b>				
NPV of Investment (10 Years)	-\$19,000,000	-\$15,000,000	<b>\$7,000,000</b>	\$4,500,000
IRR of Investment (10 Years)	4.2%	5.1%	<b>10.0%</b>	9.1%
<b>Case B – Fringe High Rise</b>				
NPV of Investment (10 Years)	-\$11,700,000	-\$2,650,000	<b>\$4,200,000</b>	-
IRR of Investment (10 Years)	5.4%	9.2%	<b>11.2%</b>	-
<b>Case C – Suburban Office</b>				
NPV of Investment (10 Years)	-\$1,900,000	-\$1,000,000	<b>\$200,000</b>	-
IRR of Investment (10 Years)	3.4%	7.7%	<b>10.9%</b>	-



### Asset Improvement

#### Detailed View of Case A – CBD Tower


Case A – CBD Tower	Existing Building	Level 1	Level 2	Level 3a	Level 4
NPV of Investment (10 Years)	-	-\$19,000,000	-\$15,000,000	<b>\$7,000,000</b>	\$4,500,000
IRR of Investment (10 Years)	-	4.2%	5.1%	<b>10.0%</b>	9.1%
Capital Cost (\$/m2)	-	35	226	<b>980</b>	2040
PCA Grade	C	C	B	<b>B</b>	A
NABERS Energy Rating	2.0	3.0	3.5	<b>4.5</b>	4.5
Approx Reduction in CO2 pa	-	17%	26%	<b>53%</b>	56%
NABERS Water Ratings	2.0	2.5	3.0	<b>4.0</b>	4.0
Approx Reduction in Water Use pa	-	16%	35%	<b>67%</b>	69%

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### Asset Improvement

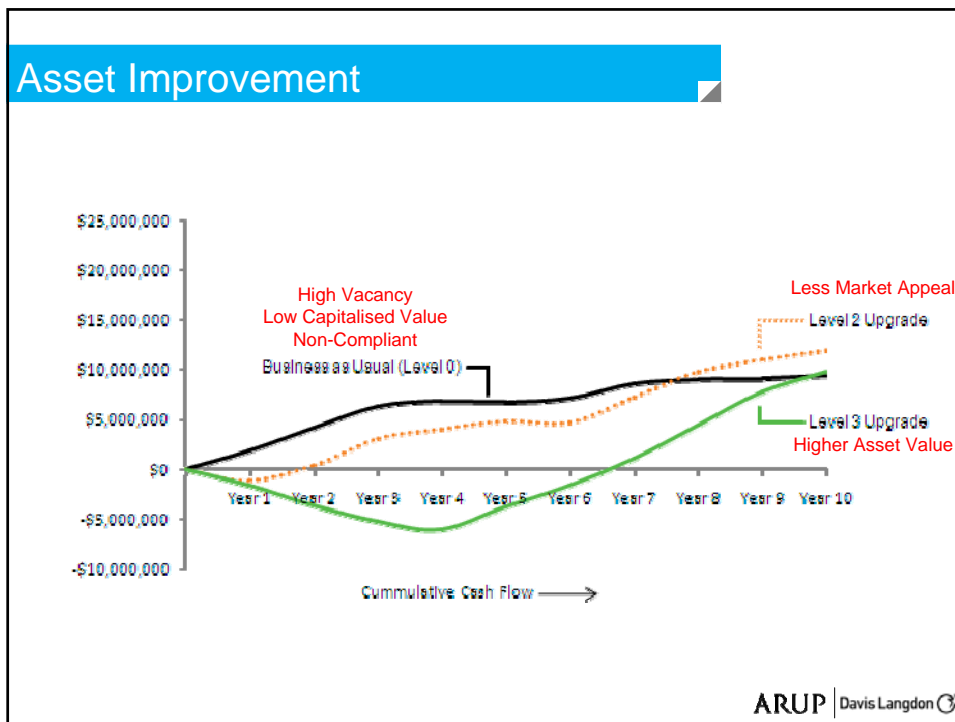
#### What is the Market Value?

Case A – CBD Tower	Market Value 2009 (\$m)	Increase from Base Case
Base Case	58.4	-
Level 1	59.3	1.5%
Level 2	62.2	6.5%
Level 3	64.4	10.3%
Level 4	63.2	8.2%



Valuation Performed by Colliers International

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- ### Conclusions
- Although Level 1 & 2 upgrades are not considered attractive investments the cost of doing nothing could be far greater!
  - Obsolescence created by tenant demand for 'green' office space has greater impact than the escalation of utility costs
  - Important that you 'Know Your Building'. Don't be caught off guard holding a fading asset. Complete a full building assessment
- ARUP | Davis Langdon

**Thank you**

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