



**BREAKTHROUGH FACILITY MANAGEMENT**  
Towards Cost Saving, Greener & Smarter Buildings

24 & 25 November 2010  
Holiday Inn, Glenmarie, KL, Malaysia

# Facility Management The Basic Trilogy

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**About Nick Ferrara**  
 Director | Advisory Rider Levett Bucknall

Rider Levett Bucknall - one of the largest, independent property construction and facilities consulting companies in the world with over 100 offices and 2,000 staff!

**Academic Qualifications**  
 Bachelor of Architecture (Hons Class 1)  
 Master of Engineering (Fire Safety)  
 Project Management Certificate (H. Dist.)

**Accreditations**  
 Registered Architect since 1984  
 Accredited NABERS Assessor  
 Certified Facility Manager (CFM)

**Professional Memberships**

- Australian Institute of Architects
- Australian Institute of Project Management
- Facility Management Association Australia
- IFMA Foundation - Ambassador
- Maintenance Engineering Society Australia & Asset Management Council
- PCA Regulation Review Roundtable
- PCA Building Quality Grade Review Committee
- PCA (NSW) Building Services Committee
- Aust Government Facility Management Action Agenda – Regulatory Review Working Group

**225** Rider Levett Bucknall  
 1785-2010

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**Facility Management**

A profession that encompasses multiple disciplines to ensure functionality of the built environment by integrating people, place, process and technology. (definition from IFMA website)

The practice of coordinating the physical workplace with the people and work of the organization; integrates the principles of business administration, architecture and the behavioural and engineering sciences (FMpedia).

Source: <http://www.qsishare.com/ifma/FMpedia/gv.aspx>

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## Facility – A Definition

Something that is built, installed or established to serve a purpose. (FMpedia)  
 Source: <http://www.gsishare.com/ifma/FMpedia/qv.aspx>



Image courtesy of NASA



Source: Malaysia Expat (2009)

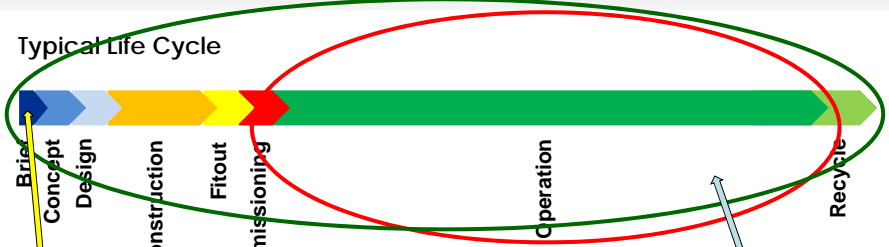
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## Life Cycle – the operational phase ?






Typical Life Cycle

Brief, Concept, Design, Construction, Fitout, Commissioning, Operation, Recycle

The role of the FM starts at much earlier!

Can cost 5 to 7 times the initial capital outlay!

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## Facility Management – the Basic Trilogy

- Building Quality Assessment
- Building Engineering Services
- Risk Management - OHS

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## Facilities Management

“A business practice that optimises *people, process, assets* and the work environment to support the delivery of the organisation’s *business objectives*.”

Source: Glossary of FM Terms (FMA Australia)

**5 P’s = People, Place, Processes, Productivity  
AND PLANET**

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## Building Quality Assessment (BQA™)

- Property Council of Australia (PCA) 36 pages (2006)
- Office Quality grading
- Recognised for the first time the use of Green Rating tools linking sustainability to Quality
- a Guide in 2 parts
  - Grading matrix for existing
  - Specification for new offices

[www.propertyoz.com.au](http://www.propertyoz.com.au)

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## Building Quality Assessment (BQA™)

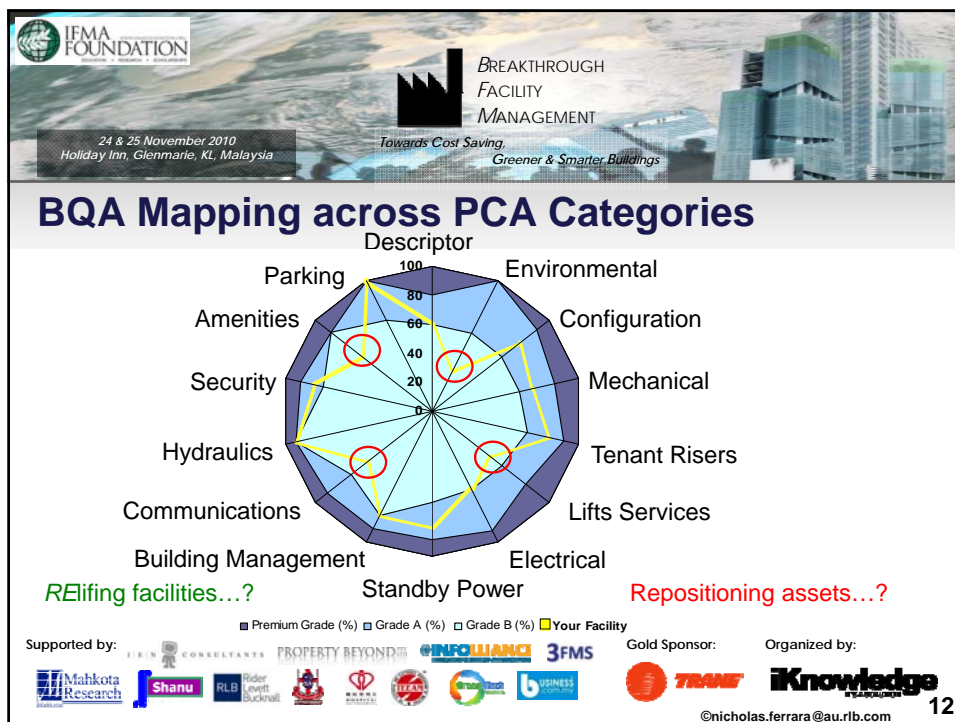
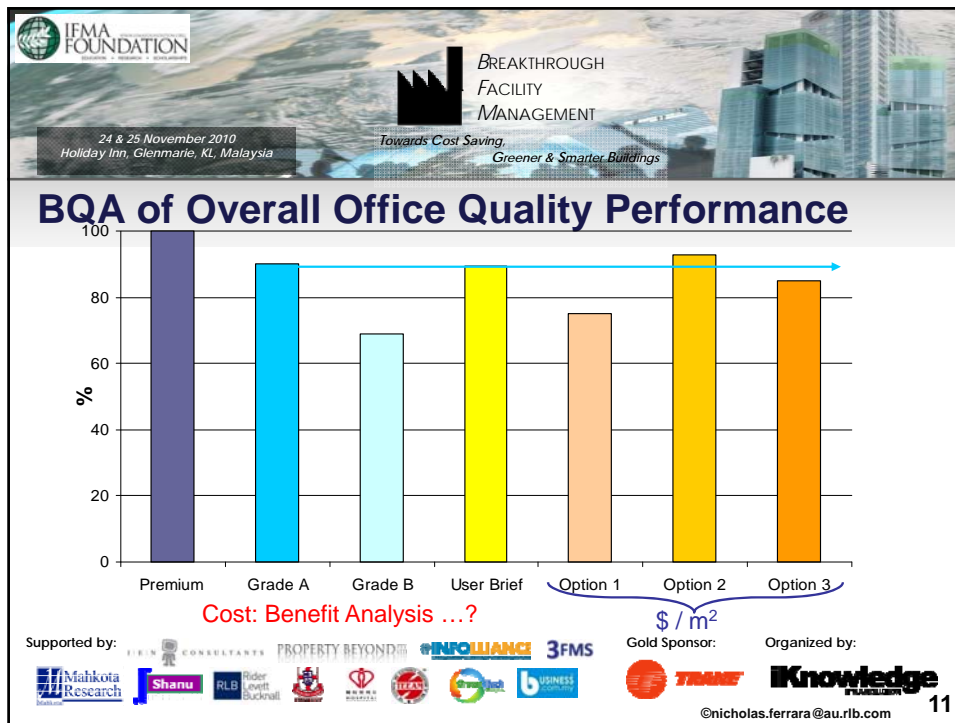
- Design, refurbishment or CRE / FM optimisation
- Basis for benchmarking for all stakeholders
- A quantitative approach to quality
- PCA's 52 factors 14 categories
- Consider user weighting
- Criteria matching
- BQA index


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## Building Engineering Services

**PCA Building Services & Operation Guidelines**

Provides guides on maintenance matters, statutory & other recommended requirements, records to keep and practical pointers:


- Mechanical Services
- Fire Protection & Emergency Training
- Vertical Transport Systems
- Access Control & Monitoring Systems
- Electrical Systems
- Emergency Power Systems
- Hydraulics
- Building & Structure
- Environmental
- Occupational Health & Safety
- Cleaning
- NABERS



Building Services and Operational Guidelines

MANAGING YOUR PROPERTY IN  
A REGULATORY MAZE  
NSW Edition

By the Building Services Committee  
Property Council of Australia (NSW) Division


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## Building Engineering Services

**PCA Building Services & Operation Guidelines**



**Practical Pointers:**

Mechanical Services:

- Dedicated Tenant Condenser Water Systems
- Maintenance by Manufacturers
- Chiller inspections by competent and qualified persons
- Independent monthly monitoring / treatment of cooling towers for legionella


Fire Protection:

- Alternate (Fire Engineered) Solutions
- Integrity of Fire Rated Structures
- Paths of Travel for Egress
- False fire alarms
- Evacuation / Emergency Procedures


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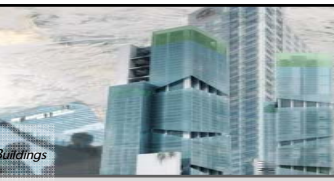
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## Building Engineering Services

### PCA Building Services & Operation Guidelines


**Practical Pointers:**

Lifts:	<ul style="list-style-type: none"> <li>- New "glass lifts" / ventilation loss / air conditioning</li> </ul>	
Electrical Services:	<ul style="list-style-type: none"> <li>- Lighting levels may require regular change of lamps to maintain efficiency</li> <li>- Separate meters for tenants' light and power usage</li> <li>- Separate meters for high power usage elements</li> </ul>	
Hydraulics:	<ul style="list-style-type: none"> <li>- Sub-metering of high use water systems</li> <li>- Regular inspection of sump pumps</li> </ul>	
Façade Systems:	<ul style="list-style-type: none"> <li>- Regular inspections of seals, gaskets, framing elements</li> <li>- Access anchor points for façade cleaning</li> </ul>	


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## Building Engineering Services

### PCA Building Services & Operation Guidelines


**Practical Pointers:**

Hazardous Substances:	<ul style="list-style-type: none"> <li>- Material Safety Data Sheets</li> <li>- Contractors should also provide Material Safety Data Sheets</li> <li>- Correct labelling of containers</li> <li>- Monitor and provide health surveillance</li> <li>- Disposal of hazardous substances</li> </ul>	
		


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## Risk Management

**Evaluated and ranked risk**

Is risk acceptable? **YES** → **Accept** → **Monitor and review**

**NO** → **Reduce Likelihood** / **Reduce Consequence** / **Transfer** / **Avoid**

**Identify treatment options** → **Consider feasibility costs & benefits**

**Assess treatment options** → **Recommend treatment strategies**


**Prepare treatment plans** → **Select treatment strategy**



**Implement treatment plans** → **Prepare treatment plan**

**Reduce Likelihood** / **Reduce Consequence** / **Transfer Part or Full** / **Avoid**


**Risk Acceptable** → **Retain** → **Monitor and review**

AS/NZS 4360: 1999

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## Risk Management

<b>E</b> Extreme risk; immediate action required		CONSEQUENCES				
<b>H</b> High risk; senior management attention needed	LIKELIHOOD	Insignificant	Minor	Moderate	Major	Catastrophic
<b>M</b> Moderate risk; management responsibility must be specified	Almost certain	H	H	E	E	E
	Likely	M	H	H	E	E
	Moderate	L	M	H	E	E
	Unlikely	L	L	M	H	E
<b>L</b> Low risk; manage by routine procedures	Rare	L	L	M	H	H

**Table A**





Image Source: <http://www.psychologytoday.com>



**Table B**

Likelihood Descriptors	Definitions
Almost Certain	The event is expected to occur in most circumstances.
Likely	The event will probably occur in most circumstances.
Moderate	The event should occur at some time.
Unlikely	The event could occur at some time.
Rare	The event may only occur in exceptional circumstances.

Consequence Descriptors	Definitions
Insignificant	Negligible impact upon Heritage Significant item.
Minor	Minor impact upon Heritage Significant item; repairable damage to this item.
Moderate	Some impact upon Some Significant item; permanent damage to low value item.
Major	Major damage / impact upon Considerable Significant item; irreparable damage to medium value item.
Catastrophic	Loss of Exceptional Significant item, irreparable damage to high value items.

**Table C**

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## Risk Management – Property Compliance

**OH&S\***

Building Code

Equitable Access

**RISK MANAGEMENT**

Australian Standards Codes of Practice

Other Legislation

- Environmental Protection
- Dangerous Goods
- Public Health

\* OH&S - Occupational Health & Safety Legislation and Regulations

Diagram Source: Ms Katherine Morris – Corrs Chambers Westgarth

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## Risk Management – OHS Objectives

- Secure the health, safety and welfare of employees and others at (or from) work
- Protect people at a place of work against risks to health or safety arising out of the activities of persons at work
- Promote a working environment that is adaptive to health and safety needs
- Foster a cooperative, consultative relationship between employers and employees on matters of occupational health, safety and welfare

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## Risk Management – Who is responsible for OHS?

- Employers and Self-employed Persons
- Controllers of Work Premises, Plant or Substances
- Designers, Manufacturers and Suppliers
- Persons Who Erect or Install Plant and Equipment
- Employees

**Therefore, every person no matter his or her position of an Organisation or in a Facility is responsible for OH&S and this cannot be delegated or contracted away**

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## Putting it all together – from start to great finish!

1. Take your organisation's temperature
2. Create alignment (economic, social & environmental)
3. Establish your starting point
4. Create and prioritise sustainable initiatives
5. Implement, measure and monitor the plan

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**Putting it all together – from start to finish!**  
**HOT OFF THE PRESS!!!**

FMA Australia's technical step by step guide for Facility Managers to implement sustainable practices to improve performance outcomes

Soft Landings is a concept that is changing the design and delivery of sustainable buildings. It provides a way to improve sustainability and overall building performance.

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**Putting it all together – from start to finish!**

FMA Australia:  
**"An Operational Guide to Sustainable Facilities Management"**

- Sustainability & Facility Management
- Policy & Legislation
- Implementing Sustainability
- Energy Efficiency & Reducing Emissions
- Water
- Waste
- Indoor Environment Quality
- Monitoring & Reporting
- Procurement
- Knowledge Transfer

With an emphasis on reducing greenhouse gases, preventing emissions of hazardous chemicals, cutting the volume of waste we generate and safeguarding biodiversity, procurement is an essential element of sustainable facilities management.

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## Putting it all together – from start to finish!


“Soft Landings” provides a process that links:


- The procurement process
- Initial occupation, providing support and fine tuning
- Longer term monitoring, review, post occupancy evaluations and feedback



“Soft Landings” helps to avoid failures by:

- Minimising the chance of unsatisfactory performance
- Address and pre-empt problems during occupation by on-site assistance
- Ensure that lessons learnt are shared to the benefit of all

<http://www.bsria.co.uk/goto/softlandings-anz> or  
<http://www.usablebuildings.co.uk>



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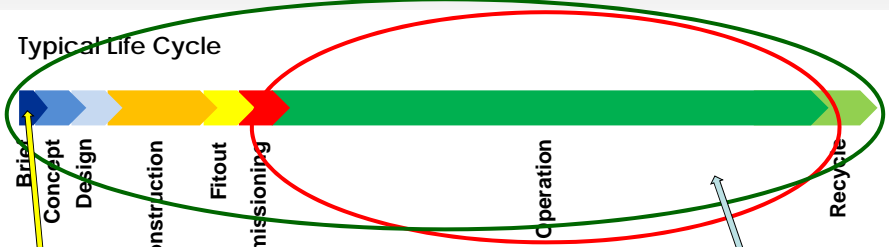
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## Putting it all together – from start to finish!


Typical Life Cycle





The role of the FM starts at much earlier!

Can cost 5 to 7 times the initial capital outlay!

### Life Cycle – the operational phase?

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## Putting it all together – from start to finish!

**Soft Landings Activities**

Project Team Effort

At inception, client champions Soft Landings

Cost-neutral or cost saving | Needs a Budget

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## You are not alone! Useful FM Links

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 BSRIA is a test, instruments, research and consultancy organisation, providing specialist services in construction and building services. As a non-profit distributing, member-based association, clients can be assured of our independent approach and authoritative reputation. Any profits made are invested in our on-going research programme, producing industry recognised best practice guidance. BSRIA (owned by The Building Services Research and Information Association) was founded in 1955

**<http://www.usablebuildings.co.uk/>**  
 The Usable Buildings is a free resource for practitioners, managers, building owners, developers, students and anyone else who wants to make buildings more suitable for the people who use them, less damaging to the natural environment and a better long-term investment. Usable Buildings is run by the Usable Buildings Trust.

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- [www.construction-innovation.info](http://www.construction-innovation.info)
- [www.gbca.org.au](http://www.gbca.org.au)
- [www.yourbuilding.org](http://www.yourbuilding.org)
- [www.warren.usyd.edu.au](http://www.warren.usyd.edu.au)
- [www.californiamayday.com](http://www.californiamayday.com)
- [www.rics.org/Networks/Regions/Oceania/](http://www.rics.org/Networks/Regions/Oceania/)
- [www.environment.gov.au/settlements/government/publications/esd-operations-guide.html](http://www.environment.gov.au/settlements/government/publications/esd-operations-guide.html)

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**“To expand our knowledge of the Built Environment in a changing world through scholarships, education and research”**

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