Strategic facilities management: international best practice

Moscow, 9 December 2014
Maarten Vermeulen FRICS
Programme

- 10.00 – 12.00: Strategic Facilities Management
- 12.00 – 12.45: Facilities Management Case Studies
- 12.45 – 13.30: International Standards
- 13.30 – 14.00: Questions & discussion
RICS is the leading global professional body in the land, property and built environment sector and promotes the highest ethical and professional standards.

As a result of the above life long learning as a concept is integrated in everything RICS stands for.

In order to facilitate life long learning RICS recently started a new initiative and now offers web classes, e-learning and distance learning courses via the internet.

However, RICS appreciate that there are also professionals who prefer face-to-face training over on-line training, and there are of course professionals who are keen to have a mix of both, this is called blended learning.

This four hour course on strategic facilities management is a stand-alone face-to-face training, especially designed for the Russian market and based on identified needs.

Since this is the first time that RICS offers this training any feed back is welcome if it helps to further improve the quality of the course.
Maarten Vermeulen FRICS

- Age: 45
- Nationality: Dutch
- Education:
  - Bachelor in hotel and facilities management
  - MBA in general management
  - MSRE in real estate investment management
- Accreditation:
  - Member of RICS since 2004 and Fellow since 2008
- Current position: Regional Managing Director for RICS in Europe, Russia and CIS
- Background in:
  - Portfolio, asset and property management
  - Acquisition and disposition
  - Fund and asset restructuring
  - Private equity real estate

Lecturer and author on a broad range of real estate related topics across Europe
Before we start…

► Ask questions if you don’t understand something or if you want to make a comment!

► No breaks given the intensity of the programme

► First time for this course in Russia, therefore share your thoughts!
Strategic facilities management: international best practice

Moscow, 8 – 10 December 2014
Maarten Vermeulen FRICS
What we will (not) discuss today…

<table>
<thead>
<tr>
<th>Services</th>
<th>Management</th>
<th>Real estate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Catering</td>
<td>Administration</td>
<td>Occupational and financial strategy</td>
</tr>
<tr>
<td>Cleaning</td>
<td>Business continuity</td>
<td>Asset strategy and management</td>
</tr>
<tr>
<td>Documents</td>
<td>Compliance</td>
<td>Transactions</td>
</tr>
<tr>
<td>Front of house</td>
<td>Contract management</td>
<td>Capital projects</td>
</tr>
<tr>
<td>Logistics</td>
<td>Corporate social responsibility</td>
<td></td>
</tr>
<tr>
<td>Maintenance</td>
<td>Customers</td>
<td>Leasehold management</td>
</tr>
<tr>
<td>Security</td>
<td>Finance</td>
<td>Business agility</td>
</tr>
<tr>
<td>Staff welfare</td>
<td>Human resources</td>
<td></td>
</tr>
<tr>
<td>Telecomms</td>
<td>ICT</td>
<td></td>
</tr>
<tr>
<td>Utility supplies</td>
<td>Networking</td>
<td></td>
</tr>
<tr>
<td>Waste management</td>
<td>Performance management</td>
<td></td>
</tr>
<tr>
<td>Workspace</td>
<td>Procurement</td>
<td></td>
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<tr>
<td></td>
<td>Risk</td>
<td></td>
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<tr>
<td></td>
<td>Strategy</td>
<td></td>
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<tr>
<td></td>
<td>Change management</td>
<td></td>
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<tr>
<td></td>
<td>Workplace</td>
<td></td>
</tr>
</tbody>
</table>
Todays journey…

- Starting point
- Context
- Value proposition
- Organization design

- Sourcing
- Procurement
- Project management
- Hospitality

- Quality
- Sustainability
- Space planning
- BSC

- Risk management
- BCM
- Trends
- Competencies
Strategic facilities management

► Management and coordination of supporting services: from catering via work space planning to maintenance of installations
► Holistic or integrated approach which creates additional value
► Client is key and looking for an integrated working, residing, learning or caring environment, which optimizes performance and outcome
► Blend of knowledge: organization theory, financial management, technical studies, change management, maintenance management et cetera
Context

General management

- Strategic decision-making
  - Corporate strategy
  - Relationship core activities and facilities
  - Location choice
  - Financial boundary conditions
  - Final approval

Property asset management

- Transactions and contracts
  - Property database
  - Feasibility studies (buy, rent, sale & lease back)
  - Legal assessment
  - Contract negotiation
  - Return on investment

Facilities management

- Accommodation
  - Services management
  - Works space management
  - Maintenance
  - Business continuity and risk management

Project management

- Project realization
  - Requirements
  - Refurbishment, redevelopment, extension
  - Planning
  - Oversight and quality control
Cohesion corporate and facilities management strategy

Corporate strategy

Culture

Organization ‘skills’

Processes

Management systems

Infrastructure

Information and communication

Facilities management strategy
Value proposition (1)

Strategic orientation

Product leadership

Leadership

Value

Market conform

Client perspective
- Innovation
- Creativity

Internal perspective
- Product is king
- Constant stream of new products

Client perspective
- Tailor-made product
- Unique service

Internal perspective
- Client is king
- Understanding of and adopting to client demands

Client perspective
- Price / quality
- Reliable
- No mistakes

Internal perspective
- Process is king
- Focus on costs and quality

Operational excellence

Customer intimacy
### Value proposition (2)

#### Strategic orientation and control aspects

<table>
<thead>
<tr>
<th>Culture</th>
<th>Product leadership</th>
<th>Customer intimacy</th>
<th>Operational excellence</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Create the future</td>
<td>Client focus</td>
<td>Process focus</td>
</tr>
<tr>
<td></td>
<td>Experiment</td>
<td>Variety, tailor-made</td>
<td>‘One size fits all’ mentality</td>
</tr>
<tr>
<td></td>
<td>Out-of-the-box</td>
<td>Empowered employees</td>
<td>Disciplined team work</td>
</tr>
<tr>
<td>Organisation ‘skills’</td>
<td>Flexible structure</td>
<td>Entrepreneurship with focus on client</td>
<td>Centralized functions</td>
</tr>
<tr>
<td></td>
<td>Focus on talent management</td>
<td>Self managed client contact</td>
<td>Brain trust at head office</td>
</tr>
<tr>
<td></td>
<td>Agile response to change</td>
<td></td>
<td>Limited self management</td>
</tr>
<tr>
<td>Processes</td>
<td>Inventive</td>
<td>Client participation</td>
<td>Head-to-tail distribution</td>
</tr>
<tr>
<td></td>
<td>Product development</td>
<td>Integrated solution</td>
<td>System efficiency</td>
</tr>
<tr>
<td></td>
<td>Market exploitation</td>
<td>Flexible service</td>
<td>Reliable, easy accessible service</td>
</tr>
<tr>
<td>Management systems</td>
<td>Risk orientation</td>
<td>Focus on growth</td>
<td>Return per transaction</td>
</tr>
<tr>
<td></td>
<td>Profit per product life cycle</td>
<td>Profit per client</td>
<td>Standardized operational procedures</td>
</tr>
<tr>
<td></td>
<td>Reward for innovative individuals</td>
<td>Client satisfaction</td>
<td>Activity based costing</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>Futuristic</td>
<td>Tailor made buildings and / or work environment</td>
<td>Standardized buildings</td>
</tr>
<tr>
<td></td>
<td>Diverse</td>
<td>Close to the client</td>
<td>Standardized services</td>
</tr>
<tr>
<td></td>
<td>Lead by ‘icons’</td>
<td></td>
<td>Central design</td>
</tr>
<tr>
<td></td>
<td>Central coordination</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Information and communication</td>
<td>Programme management</td>
<td>Customer relation management systems</td>
<td>Process automation</td>
</tr>
<tr>
<td></td>
<td>Limited integration</td>
<td>Close relationship between sales and delivery</td>
<td>Mobile and remote technology</td>
</tr>
<tr>
<td></td>
<td>Communication systems to</td>
<td></td>
<td>The system is the process</td>
</tr>
<tr>
<td></td>
<td>communicate</td>
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</tbody>
</table>
Organization design

- Follows from value proposition
- Each organization is based on five key elements: strategic top, technical staff, support, middle management and operations
- Design of the organization depends on:
  - Efficient and effective split in tasks and responsibilities
  - Relationships between roles and/or responsibilities
  - Communication structure to optimize information and knowledge transfer
- Centralization versus decentralization
- Horizontal versus vertical differentiation
- Coordination
- Structure, led by: product, market, function or geography
Implementing change…
Key questions…

► What is the reason for change?
► How much time do we have?
► What kind of change fits the organization best (planned versus exploring)?
► What kind of leadership is needed?
► At which level of the organization is change needed?
► How much experience does the organization have with change processes and how successful has it been?
## Change plan

<table>
<thead>
<tr>
<th>Plan</th>
<th>Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Create urgency</td>
<td>• Time</td>
</tr>
<tr>
<td>• Form a powerful coalition</td>
<td>• Money</td>
</tr>
<tr>
<td>• Create a vision for change</td>
<td>• Organization</td>
</tr>
<tr>
<td>• Communicate the vision</td>
<td>• Communication</td>
</tr>
<tr>
<td>• Remove obstacles</td>
<td>• Information</td>
</tr>
<tr>
<td>• Create short term wins</td>
<td></td>
</tr>
<tr>
<td>• Build on change</td>
<td></td>
</tr>
<tr>
<td>• Anchor the change in the corporate culture</td>
<td></td>
</tr>
</tbody>
</table>
Change leadership

- Low level of anxiety
- Emotionally stable
- Action orientated
- Confidence
- Openness
- Risk tolerant
Sourcing strategies

► Which activities will I do myself? Which activities can be outsourced to third parties and for which activities do I need to seek cooperation?

► How do I structure, manage and organize my relationships with suppliers / partners?

► What are the experience, skills and competencies needed to work with a network of suppliers / partners?
## Sourcing strategies: pro’s and cons

<table>
<thead>
<tr>
<th>Outsourcing (insourcing)</th>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Risk control</td>
<td>Loss of strategic knowledge</td>
</tr>
<tr>
<td></td>
<td>Client satisfaction</td>
<td>Loss of skills</td>
</tr>
<tr>
<td></td>
<td>Redefining core business</td>
<td>Dependant on third parties</td>
</tr>
<tr>
<td></td>
<td>Cost reduction</td>
<td>Loss of client contact (tenants)</td>
</tr>
<tr>
<td></td>
<td>Flexibility (smaller organisation)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Economies of scale</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Limited capital investments</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Access to specific knowledge</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Less volatility in costs</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Co-makership:</th>
<th>Considerations:</th>
</tr>
</thead>
<tbody>
<tr>
<td>One legal entity</td>
<td>Cultural differences</td>
</tr>
<tr>
<td>Management at all levels</td>
<td>Transparency towards each other</td>
</tr>
<tr>
<td>Both parties contribute their own specific knowledge and skills</td>
<td>Dependency</td>
</tr>
<tr>
<td>Proportional share in risk and return</td>
<td>Long term</td>
</tr>
</tbody>
</table>
Procurement meta model

- Company policy
- Purchasing policy

- Organisation & personnel
- Methods & Procedures

- Specify
- Select
- Contract
- Order
- Monitor
- After care

- Information

- Performance indicators

- Internal Customers
- Suppliers (Market)
Procurement value drivers

Corporate values

- Ethics / integrity
- Transparency
- Legitimacy
- Sustainability / CSR
- Brand value / reputation
- Employment practices
- Safety

Operational excellence

- Costs
- Effort
- Time
- Waste
- Complexity
- Risk
- Capital requirements

Turnover / market share
- Margin
- Quality
- Service
- Innovation
- Flexibility
- Cash
Service level agreement

► Introduction
► Definitions, boundaries and parameters of the service being outsourced
► Minimum acceptable service levels for all aspects of the job
► Detailing of improvements from the status quo (if sought)
► Agreed cultural norms of (for example) appearance (if contractors are to be perceived as company employees)
► Quality criteria (where contractors have to supply materials)
► Who reports to whom, how, when and why
► How service levels are to be monitored, when and by whom
► Measures for rewarding exceptional performance, if appropriate
► Measures for penalizing under-performance, if appropriate
► General payment terms and conditions
► Conflict resolution procedures
Various activities…

<table>
<thead>
<tr>
<th></th>
<th>Improvisation</th>
<th>Routine</th>
<th>Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>When?</td>
<td>Ad hoc, all of a sudden</td>
<td>Reparative</td>
<td>Planned</td>
</tr>
<tr>
<td>Result?</td>
<td>Uncertain</td>
<td>Certain</td>
<td>Reasonably certain</td>
</tr>
<tr>
<td>Familiarity?</td>
<td>New</td>
<td>Familiar</td>
<td>New, planned</td>
</tr>
<tr>
<td>Freedom</td>
<td>Lot of freedom</td>
<td>Limited freedom</td>
<td>Thought trough in advance</td>
</tr>
<tr>
<td>Way of working?</td>
<td>Chaotic</td>
<td>Fixed procedures</td>
<td>Phased</td>
</tr>
</tbody>
</table>
Project approach

Phasing

- Idea Initiative
- What Definition
- How Design
- How to deliver Preparation
- Act Realization
- Maintain After sales

Decision-making

- Go No Go Order
- Go No Go Programme
- Go No Go Design
- Realization
- Aftersales

Control

- TIME
- MONEY
- ORGANIZATION
- COMMUNICATION
- INFORMATION
Project decision-making

- Initiative
- Definition
- Design
- Preparation
- Realization
- Aftersales

Alternative projects drop off
Alternative solutions drop off
Alternative requirements drop off
Alternative realisation opportunities drop off
Alternative maintenance solutions drop off

- Project result: Detailed for next phase
- Plans related to the content: Approximate for later phases
- Control plans
Hospitality and service

Integrated approach

► The service provider (human) needs to have the knowledge, attitude and skills to not only focus on providing services in themselves, but also in how the client appreciates these services and if the services provided really meet client expectations.
► The service delivery process needs to be designed from a client perspective and has to put client interests first.
► The client needs to feel comfortable in the environment and the environment needs to suit the purpose of the client.
## Human, process and environment

<table>
<thead>
<tr>
<th>Human</th>
<th>Process</th>
<th>Environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact without judgement</td>
<td>Order of activities</td>
<td>Safety</td>
</tr>
<tr>
<td>Think as if you were the client</td>
<td>Visibility of the process</td>
<td>Recognizable</td>
</tr>
<tr>
<td>Take the client by the hand</td>
<td>Completion time</td>
<td>Comfort</td>
</tr>
<tr>
<td>Approve exceptions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Listen to your eyes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Don’t let the client to his / her fate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complaints are tips for improvement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hospitality and service are people’s business</td>
<td></td>
<td></td>
</tr>
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</tbody>
</table>
Servqual model

- Mouth-to-mouth advertising
- Personal needs
- Experience from the past
- Expected service
- Experienced service
- Service provided
- External communication to clients
- Translate perceptions in service provided
- Manage perceptions of client expectations
Quality management

- Demand
- Specification of demand
- Definition of service levels
- Organise measurement
- Measure results
- Match results and demands

- Client
- Employee
- End user

- Indicator identification
- Input / output indicator characteristics
- Develop methods and tools for measurement
- Audit satisfaction
- Analyse differences between demand agreed service levels

- Execution

- Ongoing process, evaluate, optimize, bonus / penalty

PLAN
DO
CHECK
ACT
Sustainability

 Reporting

 Business values

 CSR

 Sustainable facility management

 Green building

 Stakeholder management

 Governance

 Transparency

 Energy sources

 Energy usage reduction

 Construction materials

 Water

 Waste management

 Pollution
Long term accommodation plan

- Developments and trends inside the organization
- What are the future accommodation needs?
- What accommodation do we currently have?
- Match future accommodation needs with existing accommodation
- Lease versus develop versus buy
  - Pricing
  - Sustainability requirements
  - Strategic versus non strategic accommodation
- Facilities
Analysing existing accommodation (1)

Terrain
- Is it possible to expand the existing accommodation?
- What is possible according to the planning consent?
- Logistics and parking possibilities
- Commercial value
- Who owns the properties and the terrain?

Properties and installations
- Surface (gross / net)
- Functional and technical straits
- How flexible are the properties
- Book versus commercial value
- Representation
- Technical quality / state of maintenance
- Exploitation costs
Analysing existing accommodation (2)

Accommodation

- Contemporary
- Health and safety
- Future proof
Balanced score card

CUSTOMER AND STAKEHOLDER
Experience and contribution

FINANCIAL
Value for Money delivery

STRATEGIC
Results against key performance outcomes

OPERATIONAL EXCELLENCE
Efficiency and effectiveness
Staff satisfaction

INNOVATION AND LEARNING
Continuous improvement and collaborative learning
### Generic scorecard

<table>
<thead>
<tr>
<th>Objectives</th>
<th>Operational measurement areas for accommodation and services</th>
<th>Measurement methodology</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Strategic</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Achieving / assisting in achieving the organization’s objectives</td>
<td>Improving quality of services and accommodation; increasing efficiency of space usage</td>
<td>Metrics associated with space efficiency and satisfaction with accommodation and services</td>
</tr>
<tr>
<td><strong>Customer and stakeholder</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Satisfied customers, staff and stakeholders</td>
<td>Talking to customers / staff at all levels about the accommodation and services ‘experience’</td>
<td>Survey of customers. Stakeholder surveys and interviews</td>
</tr>
<tr>
<td><strong>Operational excellence</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effective and efficient operations</td>
<td>Better space promotes improved ‘quality of live’ and increased productivity, flexible working, efficiency in space usage</td>
<td>Satisfaction with accommodation, location of building, space quality servicing standards, occupational levels</td>
</tr>
<tr>
<td><strong>Financial</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Value for money, budget adherence</td>
<td>Financial metrics</td>
<td>Operating costs, capital budget</td>
</tr>
<tr>
<td><strong>Innovation and learning</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Best practice captured and new ideas continually trialled</td>
<td>Performance compared to other organizations; research about new ways of working / delivery of services</td>
<td>Benchmarking performance and learning groups</td>
</tr>
</tbody>
</table>
Risk management

- Risk analysis: what kind of risks does the company face?
- Risk assessment: how do we assess those risks in terms of probability and impact?
- Risk response: what is the best solution when a specific risk occurs?
- Risk mitigation: how can we avoid risks identified and if they happen reduce the impact?
- Risk contingency: make sure that for certain specific risks a contingency plan is in place
Risk analysis

Pure risks

► Physical effects of nature, such as fire, flood, storm et cetera
► Technical events, such as equipment failure
► Personal issues such as sickness or injury
► Social deviations from norms of behaviour, including theft, violence, and negligence

Business risks

► The impact of new technology or changes in technology
► Social impact, such as changes in customer expectations, or increasing litigiousness
► Economic impact, such as inflation or budgetary constraints
► Political impact, such as the imposition of government ideology, policy or philosophy
## Risk probability

### Probability of occurrences

<table>
<thead>
<tr>
<th>Definition</th>
<th>Meaning</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequent</td>
<td>- Occurs frequently&lt;br&gt;- Will be continuously experienced unless action is taken to change events</td>
<td>5</td>
</tr>
<tr>
<td>Likely</td>
<td>- Occur less frequently if process is corrected&lt;br&gt;- Issues identified with minimal audit activity&lt;br&gt;- Process performance failures evident to trained auditors or regulators</td>
<td>4</td>
</tr>
<tr>
<td>Occasional</td>
<td>- Occurs sporadically&lt;br&gt;- Potential issues discovered during focused review</td>
<td>3</td>
</tr>
<tr>
<td>Seldom</td>
<td>- Unlikely to occur&lt;br&gt;- Minimal issue identification during focused review</td>
<td>2</td>
</tr>
<tr>
<td>Improbable</td>
<td>- Highly unlikely to occur</td>
<td>1</td>
</tr>
</tbody>
</table>
## Risk assessment (2)

### Risk impact

<table>
<thead>
<tr>
<th>Catastrophic</th>
<th>Critical</th>
<th>Moderate</th>
<th>Minor</th>
<th>Negligible</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Regulatory / compliance violations / issues</td>
<td>A non-compliance finding resulting in process, or operational degradation</td>
<td>Security finding requiring a Corrective Action Plan</td>
<td>No regulatory/compliance violation</td>
</tr>
<tr>
<td></td>
<td>Inability to validate data</td>
<td>A security finding requiring immediate corrective action prior to continued operation</td>
<td>Production element errors that may pose indirect consequences to the operation</td>
<td>No security/confidentiality element affected</td>
</tr>
<tr>
<td></td>
<td>Withdrawal of product manufacturer</td>
<td>Reoccurring violation of any safety regulation resulting in serious injury</td>
<td></td>
<td>On time production</td>
</tr>
<tr>
<td></td>
<td>Tainted product</td>
<td>Production errors containing regulatory violations that pose direct consequence to the operation</td>
<td></td>
<td>Validated experiments</td>
</tr>
<tr>
<td></td>
<td>Materials breach</td>
<td></td>
<td></td>
<td>“Clean” product</td>
</tr>
<tr>
<td></td>
<td>Production delays</td>
<td></td>
<td></td>
<td>Properly executed communications</td>
</tr>
<tr>
<td></td>
<td>Technical miscommunications</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Security / confidentiality breeches</td>
<td></td>
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</tr>
</tbody>
</table>

- Production errors containing quality system and / or opportunities for improvement
Risk response

- **Avoid**
  Change the project to avoid the risk. Change scope, objectives, etc.

- **Transfer**
  Shift the impact of a risk to a third party (like a subcontractor). It does not eliminate it, it simply shifts responsibility.

- **Mitigate**
  Take steps to reduce the probability and/or impact of a risk. Taking early action, close monitoring, more testing, et cetera

- **Accept**
  Simply accept that this is a risk and accept the cost, schedule, scope, and quality impacts if the risk event occurs

- **Defer**
  A determination of how to address this risk will be addressed at a later time
Risk mitigation

Involves two steps:

- Identifying the various activities to reduce the probability and/or impact of an adverse risk.
- Creation of a contingency plan to deal with the risk should it occur.

Mitigation activities should be documented in the Risk Register, and reviewed on a regular basis. They include:

- Identification of potential failure points for each risk mitigation solution.
- For each failure point, document the event that would raise a ‘flag’ indicating that the event or factor has occurred or reached a critical condition.
- For each failure point, provide alternatives for correcting the failure.
Risk contingency planning

- Certain risks can’t be mitigated or avoided. Therefore if they happen you need to act upon those risks.
- See also next slides on business continuity management
### Business continuity management

- **Business continuity plan (template)**

<table>
<thead>
<tr>
<th>Process</th>
<th>Content and actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparation of incident response schedule</td>
<td>Consisting of notification and escalation arrangements, outline procedures for dealing with the most incidents, contacts and checklist</td>
</tr>
<tr>
<td>Business impact analysis (BIA)</td>
<td>The BIA will determine the priorities and recovery objectives, based on likely impacts of a cessation of all or some operations over varying timescales</td>
</tr>
<tr>
<td>BCM strategies</td>
<td>Analysis of a range of recovery strategies taking account of pre-existing resilience and the importance of different products and services in priority for restoration</td>
</tr>
<tr>
<td>Recovery procedures</td>
<td>The plan made up of the emergency response, incident management and recovery processes</td>
</tr>
<tr>
<td>Continuing processes</td>
<td>Plan testing, maintenance, audit and review on a regular sequence to ensure the plan remains relevant and –up-to-date</td>
</tr>
<tr>
<td>BCM becomes a normal business process</td>
<td>Education of all staff and senior management team as well as suppliers, and as necessary customers</td>
</tr>
</tbody>
</table>
Business impact analysis

- Identification of operations which support key products and services
- Assessing the impact over time of stopping anyone operation
- An estimate of maximum allowable period of disruption – this is the period after which the organization’s viability is threatened because of the damage caused to the organization by the interruption to operations
- The maximum period within which ceased activities must be resumed
- The time required to resume all normal operational levels
- The prioritising of recovery plans to focus on critical activities and services
- Identifying imperatives to enable recovery of priorities, in particular, required external resources
The BCM process through an emergency incident

- Initial response
- BCM process
- Investigation
- Peak activity levels
- Recovery phase
- Testing
- Restoration of normality
Core competencies (1)

**Building and workplace management**
- Building maintenance and performance
- Environmental services
- Workspace design and management
- Technology and communications

**Financial management**
- Accounting
- Purchasing and supply
- Budgets
- Business cases
Core competencies (2)

Service delivery
- Account / customer relationship management
- Delivery processes and systems
- Contracts
- Performance metrics

General management
- Communication
- Leadership
- Strategy
- Change management
- Procurement
- Risk management
Building information modelling (BIM) is a process involving the generation and management of digital representations of physical and functional characteristics of a facility in 3D format. The resulting building information models become shared knowledge resources to support decision-making about a facility from the earliest conceptual stages, through design and construction and through its operational life – hence the application to facilities management.

Big data is an evolving term that describes any voluminous amount of structured, semi-structured and unstructured data that has the potential to be mined for information. Although big data doesn’t refer to any specific quantity, the term is often used when speaking about petabytes and exabytes of data.

Building automation systems (BAS) core functionality keeps building climate within a specified range, lights rooms based on an occupancy schedule, monitors performance and device failures in all systems, provides malfunction alarms to building engineering/maintenance staff and contractors. BAS reduce building energy and maintenance costs compared to a non-controlled building.
Facility estate management organization is an independent legal entity

- Offering exploitation services
- At risk (for example: vacancy risk)
- Based on service level agreements, defining: price, quality, flexibility and scope of services
- Manager is single point of contact for both property and facility management
- Pro-active anticipation on tenant requests which offers added value for both landlord and tenant
Further reading…

- RICS Strategic Facilities Management, case studies (2014)
- IFMA List of competencies (2013)
Facilities Management Case Studies

Professionalizing the profession in the UK and beyond!

Moscow, 9 December 2014

Maarten Vermeulen FRICS
Contents

► Building Information Modelling (BIM)
► National Health Services, United Kingdom
► Employee wellbeing
► Customers first
► Transforming the delivery of facilities services
► Final takeaways
BIM works by embedding key product and asset data into a three-dimensional computer model that can be used for the effective management of information throughout a project’s lifecycle – from earliest concept through to operation.

This information typically includes specifications on space and quantities, but may also include contract and maintenance data.

What this means for facilities managers is that key data for a building is embedded within multi-dimensional computer models that can be accessed easily to manage information effectively throughout the building’s lifecycle, rather than relying on paper-based documents and systems that don’t coordinate or integrate with one another.

However, despite its advantages, research suggests there has been some lack of understanding amongst facilities managers on BIM and how it could be used within the built environment.

Moreover, one of the real challenges for facilities management is to integrate existing facility management software with BIM software, but due to smart interfaces this hurdle has now been taken.
Advantages for the end-user

► **Sustainability** – buildings are fit for purpose from the outset as clients can see exactly how their buildings will perform at an operational level, leading to improved performance in areas such as energy, carbon, cost savings and user experience.

► **Proactive facilities management and maintenance** – facilities management staff have operations data at their fingertips on a handheld device, allowing staff to respond to incidents in a timely manner and undertake proactive maintenance to prevent issues in the future, saving time and money.

► **Improvements in the planning of changes and maintenance**, plus responses to reactive tasks, achieving a ‘Faster First Fix’ and improving building and service performance.
Advantages for facilities management

► **Certainty** – BIM for facilities management provides a best practice approach that seamlessly links design, construction and facilities management data into the BIM model, ensuring that buildings perform as predicted during the operations phase.

► **Time saving and efficiencies** – practice demonstrates that the first fix phase in facilities management operations can be much faster.

► **Easier handover** – gone are 2D drawings and paper O&M manuals which can be hard to locate and interpret; instead BIM for facilities management offers 3D walkthroughs and visuals that contain the relevant facilities data, making it easier for operations teams to understand their building and how it works.
Overview

Business objectives

Property strategy

Asset information as workspace design input

Intelligent decision-making based on accurate asset information

Workspace (user needs)

Energy led maintenance

BIM in facilities management, supporting strategic input across The full Asset Lifecycle

Efficient & effective handover of capital projects

Life cycle (5+ years)

Asset management (0-1 year)

Higher quality service levels

Asset performance data

Cost efficiency

Forward maintenance (1-5 years)

Efficient & effective handover of capital projects

Asset information as workspace design input

Intelligent decision-making based on accurate asset information

Asset performance data

Higher quality service levels

Cost efficiency
The National Health Service (NHS) was created out of the ideal that good healthcare should be available to all, regardless of wealth. When it was launched it was based on three core principles: that it meets the needs of everyone, that it be free at the point of delivery, and that it be based on clinical need, not ability to pay.

Whilst remaining true to its principles, the current NHS is faced with an increasing set of modern demands, such as an ageing population, a rise in obesity and increasingly sophisticated and expensive medical innovations, all of which impact on costs. The Government has therefore conducted reviews on how better to deliver the health service.

Following a series of public consultations, the Government decided that putting GPs in charge of the key decisions in the NHS would deliver a more responsive service to patients. One of the main tenets of this was to move health services into a community rather than a hospital setting.
Strategic objectives

Effectiveness
- Prevent people from dying prematurely
- Enhancing the quality of life for people with life-long conditions
- Helping people to recover from episodes of ill health or following injury

Experience
- Ensuring people have a positive life experience

Safety
- Treating and caring for people in a safe environment and protecting them from avoidable harm
Challenges for facilities management

► A large number of non-standardised hard and soft facilities management contracts; historically these were procured by the Primary Care Trust but were no longer in line with the geographical boundaries of the new NHS Property Services local areas and regions.

► The facilities management strategy and function was not uniform; whilst many areas had opted to outsource the service, there were still a large number of in-house staff performing the function.

► Where contracts have been outsourced, there were many contracts with the same providers up and down the country with an enormous variation in price and service specs.

► There was evidence that no real thought and regard had been given to the appropriateness of service specs; for example, under-utilised buildings with unused areas were being cleaned twice a day.

► Rates and utilities were not harmonised into the relevant areas and regions.

► Alongside this was the recognition that sustained and radical action was required to close the gap between the poor health and high mortality rates.
Strategic approach and outcome

- NHS, being a landlord entered into a joint venture with a facilities management firm and have jointly made an strategic facilities management plan, addressing issues like insourcing versus outsourcing and organisation re-design.
- The plan included an analysis of capacity (optimizing supply and demand) and the ability to deliver GP care within 15 minutes from where patients live.
- Re-procurement of services: hard and soft facilities management services, rent and insurance, and by doing so optimizing the relationship between supply and demand in terms of efficiency, effectiveness and cost.

Impact

- The above resulted in significant cost savings and client (patient) satisfaction (see also Facility Estate Management concept).
Employee wellbeing

- One in five employees across the UK regularly works unpaid overtime, while over half of those working at managerial level admit to working during their annual leave. The introduction of mobile data devices has meant the line between work and leisure time has become blurred, making it all the more difficult for many people to achieve a healthy work-life balance.

- There is an increasing awareness that employees can be encouraged to opt for healthier ways of eating and taking more exercise during the working day. There are also undoubted business benefits to employers who take a proactive approach to improving their employees’ health and wellbeing.

- The most obvious benefit is in helping to reduce workplace absence. The direct costs of employee absence to the UK economy are estimated at over £14bn per year – and the average total cost to business for each absent employee is £975 per year.

- Employers need to move away from taking a reactive approach to health and wellbeing (i.e. supporting ill or absent staff) to a more proactive one that actively addresses their employees’ level of fitness and health before any problems emerge.
Employee wellbeing (cont’d)

► However, reducing sickness absence isn’t the only reason why employers should be encouraged to address health and fitness within their organisation.

► Another powerful reason is the positive impact a workplace wellbeing programme can have on staff retention and engagement.
Workplace wellbeing

Workplace Wellbeing

A THIRD of workers would consider leaving their job due to poor workplace wellbeing

The Business Impact of Wellbeing

What employees would do if they experienced poor workplace wellbeing:

- 30% would consider leaving their job
- 26% would be less motivated to work
- 21% would be less likely to stay with an employer long term

Employee Experiences

- 66% think they are well cared for
- 34% think they are poorly cared for
- 42% of women think they are poorly cared for, compared to 30% of men

1/5 thought things had become worse over the last 3 years

Building Blocks of Staff Loyalty

What employees value:

- 83% a competitive salary
- 81% a good relationship with line manager
- 79% feeling empowered at work
- 65% a comprehensive benefits package
- 62% financial support if I fall ill
- 54% a good bonus
- 54% a good pension

Wellbeing Breakdown by Sector

- Media: Good care 73%; Poor care 27%
- Accountancy: Good care 71%; Poor care 29%
- Retail: Good care 63%; Poor care 37%
- IT: Good care 63%; Poor care 37%
- Legal: Good care 59%; Poor care 41%

Online survey conducted by ICM Research in April 2014, commissioned by Unum

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Strategic approach

- Despite the growing body of evidence, wellbeing programmes in the workplace are too often viewed as a ‘nice to have’ or an extra benefit. Yet if seen as a strategic imperative, yielding employee and business benefits, they can result in a happier and more motivated workforce.

- Facilities management can take a pivotal role in driving a wellness programme within an organisation; one that goes way beyond taking a tactical approach by, for example, appointing a caterer that supplies healthy meal options.

- This case study looks at a client that engaged its facilities management provider (Sodexo) to help it improve the image and importance of employee wellbeing within the company, partnering towards a shared goal.

- Sodexo (being a global facilities management services provider) was also able to implement a combined offer of fitness and catering, based on four pillars (see next slide).
Value proposition

► Care of its members: comprehensive induction and tailored programmes by fully qualified staff
► Customer expectations: meeting expectations in a supportive and motivational way, through excellent service standards
► Innovation: offering innovative solutions to help motivate and achieve goals
► Wellbeing: offering a fully supported total package which incorporates nutritional guidance, cholesterol testing and therapy services.

Services provided

► Health screening
► Goal setting
► Fitness inductions
► Exercise programme
► Member challenges
► Classes e.g. yoga, spinning, pilates
Impact

► The gym has a really positive effect on work-life balance and staff motivation, as well as supporting the company’s commitment to health and wellbeing

► More and more facilities managers are leading the way in introducing an integrated services model. This encompasses not only facilities but also human resources, occupational health and the senior level teams in those organisations – all of which appreciate the strategic role that facilities management plays in their organisations

Lessons learned

► Facilities management is not about managing facilities per se; rather, it is about enabling the workforce to be productive and engaged. The workplace is nothing more (or less) than a tool for supporting work, for shaping the experiences of the workforce, and for producing competitive advantage

► Heads of facilities management should be playing a stronger coordinating role across corporate real estate – space (maximise space); finance – budget approval, cost allocation; and human resources – staff retention (creating environment for staff to work in)
Since Britain handed Hong Kong back to mainland China in 1997, the People’s Republic of China (PRC) has governed the region under a principle of ‘one country, two systems’. This framework allows Hong Kong to maintain an independent judiciary and press, and it remains an open economy and international financial centre that acts as a conduit into and out of China for both goods and capital.

Hong Kong property developers have identified mainland Chinese visitors as a source of growth in their shopping malls, and have carried out in-depth research to help understand their needs to help ensure they offer customers the right mix of retailers.

Using the research data, property developers can operate a bespoke service, with optimal opening hours, staff and signage provided in appropriate languages, convenient payment methods, culturally-sensitive choices of food and beverages, efficient transportation and product deliveries introduced to create a familiar and friendly shopping experience for mainland visitors.
Buildings in Hong Kong are regulated by Building Management Ordinance (BMO) and Deed of Mutual Covenant (DMC). They are mostly multi-unit or multi-storey, so to avoid any disputes clear guidelines are needed for those who own and run them, from owners and managers to users of the building. This means it is vitally important for developers and operators to understand the principles of real estate management.

But running a mall also requires a professional skillset, encompassing project management, construction, valuation of assets, managing and development of retail talent, contract and lease management, marketing, research and customer service and delivery.

This means shopping mall managers not only need to understand property management but have retail knowledge, marketing skills, as well as an understanding of physical asset management, facilities management and contract management. It is this recognition and understanding of the different skillsets required that has made such a difference in terms of commercial success in shopping malls, both in Hong Kong and mainland China.
Facilities management plays a strategic-tactical role to determine the best retail tenant mix by studying the strategic location and vicinity, the development’s potentials or limitations, the consumers’ needs and by comparing the strength and weaknesses of potential tenants.

Running a shopping mall is no different from running a business, as facilities managers must ensure a safe and comfortable environment that complies with corporate and statutory regulations and provides an ongoing high level of customer service.

Leasing approval is not only based on the basic rental income or brand prestige from potential new tenants, but also whether the products would have a good chance of being welcomed by shoppers, based on the consumer behavioural data.
Challenges for facilities management

► Building or revamping a shopping mall is a major capital expenditure, and may take months or even years to plan. Therefore great attention needs to be paid to changes in population demographics.

► Getting the location right is one of the vital determinations and preconditions to the success of a mall, and converting a ‘weakness’, for instance the inferior location of a mall, to an accessible site that attracts consumers, is one of its greatest challenges.

► Filling these huge buildings with the right tenants is another major challenge, as getting the wrong mix of retailers could spell disaster.

► Another major task is in ensuring that good communications are maintained. Converting or building a mall, filling it with the right tenants and managing the whole edifice requires a great deal of stakeholder involvement, both internally and externally; including inter-departments, tenants, customers, contractors and government bodies.
Market research

- Where would the shoppers come from?
- How to get them across the border?
- What products would be welcomed by these visitors?
- What services would they need?
- How to create a PRC friendly shopping experience?
- How should the tenants be prepared?
- What kind of food and beverages would appeal to them?
- What would be the main reason for coming across the border?

This might not all be typical questions for the facilities manager to ask, but with facilities management it is all about customer / tenant satisfaction and therefore facilities managers quite often understand better what is needed than for example an asset and / or a property manager. This approach has been proven very successful and has let to significant footfall and customer spend.
Lessons learned

- Mall managers need to be able to meet the needs of their clients and customers, balancing what they do as marketeers with the physical constraints of a property.

- To deliver this kind of service requires facilities managers to encompass multiple disciplines to ensure the landlord’s promises are delivered to tenants.

- Facilities managers act as on-site coordinators and action takers, so if an incident occurs they can spot the problem and react to it immediately. But they’re also taking a core strategic role, as they’re able to receive first-hand market and business information from shoppers or store operators and feed this back to the leasing and marketing team for trade-mix or tenant-mix planning and improvement.
One of the greatest challenges for facilities management is being seen as more than a commodity or cost-centre, and being recognised as playing an integral part in the overall performance of an organisation. This problem goes right to the top.

A survey by International Workplace in 2013, revealed that a third of client boards still do not understand the contribution good facilities management can make to the success of their organisation.

However, a lack of recognition of the strategic role of facilities management is not just down to the (senior) management. In many organisations, the facilities management leadership itself does not give enough thought to considering the organisation’s business strategy and how it translates into tangible targets and actions for facilities management.
For facilities management to be effective and serve an organisation’s real estate and business needs, facilities managers must work on a number of multi-disciplinary relationships within their organisation, and they must focus on gaining the buy-in needed to provide coordinated workforce support from all the infrastructure functions.

But there are a number of barriers to success, which are common experiences for facilities managers in many regions. In China and Hong Kong for example, facilities managers report a lack of definition concerning what facilities management actually does, or is. In these regions the facilities management industry often experiences high staff turnover, a situation related to lower perceived value and lack of structure, which in turn leads to lower job satisfaction.

Facilities management is perceived to be closely tied to property management, which is seen as ‘a cost’, rather than a value-added resource. Additionally, there is an over-orientation towards operational and process issues at the expense of strategic activities and a failure to communicate effectively with senior executive colleagues.

However, this case study proves that this process can also be turned around.
Change management

- Governance of the change management programme
- Assessment of the existing organization, to create clarity on roles, tasks and responsibilities
- Development of road map from vision to implementation
- Targeting operating models and defining pro’s and cons
- Establishment of facilities management delivery principles
Delivery principles

► Facilities management is accountable and responsible for the operations and maintenance of all property assets

► Facilities management will operate and maintain the property assets in a safe and suitable manner to meet our stakeholders’ needs

► Facilities management will work with their customers to develop and agree the annual budget that they will be accountable and responsible to deliver

► Having fully consulted with their customers, Facilities management will plan all maintenance and ensure it is delivered safely and cost effectively

► Facilities management will be able to demonstrate cost effectiveness of operations and maintenance and will seek to continuously drive value

► Facilities management will work with their stakeholders to agree SLA’s (Service Level Agreements) and then report on these on a monthly basis

► In procuring or carrying out work, sustainability will be taken into account.
Goals to deliver the future…

**Our assets**
- Safe and secure
- Compliant and reliable
- Welcoming and clean
- Great place to work / live / be entertained
- Risk free

**Our stakeholders**
- Satisfied
- Informed
- Respected
- Listened to
- Get value for money
- Get great service

**Our people**
- Competent and confident
- Professional and courteous
- Working together
- Connect with customers
- Satisfied
- Enjoy the work
- Effective and efficient

**Our services**
- Integrated with customer needs
- Accessible
- Leading
- Innovative
- Value for money
- High quality service

FM the cornerstone of business, securing the future
Lessons learned…

► In most organisations around the world, the basic role of facilities management is understood differently in different industries and at different levels

► This presents one of the biggest challenges for the facilities management profession; recognising that these differences exist and working within their individual organisations to build the profile of ‘strategic facilities management’ amongst their peers and other management professionals

► Key to the success is an incremental process and the implementation of massive structure changes in stages, which – critically – have gained approval from the Board at each stage

► For facilities managers to really make a strategic impact they need visibility and buy-in at (senior) management level. Visibility can be created through the fact that facilities management directly positively impacts the sustainability of their organisation
Final takeaways…

- Case studies are not representative for a specific market, each market has its own dynamics and is not equally mature
- However, case studies are useful to get us starting to think out-of-the-box and to bring us new ideas
- Facilities management as a profession continuous to develop and expands its activities, depending on the country, the (corporate) culture, the sense of urgency, development is possible towards human resources, marketing activities and / or new (technical) services
- Facilities management, also becomes more strategic-tactical instead of tactical-operational
Standards in the built environment

Towards global consistency!

Moscow, 9 December 2014
Maarten Vermeulen FRICS
Introduction

- RICS have been asked and come and speak about NRM 1, 2 & 3 because the Russian market is looking for guidance when it comes to measurement practice in the built environment and NRM 1, 2 & 3 might be something that could potentially adopted

- This presentation will give you an overview of what NRM 1, 2 & 3 is all about, what the differences are and how they are linked

- Additionally, the future of measurement will be discussed as well as the chance of successful adoption of NRM 1, 2 & 3 by the Russian market and potential alternatives
Starting point

- NRM stands for New Rules of Measurement
- NRM 1, 2 & 3 are guidance notes published by RICS
- NRM 1, 2 & 3 are based on English law
- NRM 1 is about cost estimation and planning for capital building works
- NRM 2 is about quantification and description of building works for the purpose of for example tendering
- NRM 3 is about cost estimation and planning of maintenance works
- NRM 1, 2 & 3 are interlinked
Result of cross-border collaboration…

- Policy – Government Procurement Unit
- Professions - RICS, BCIS, CIBSE, &ES (formerly HVCA) plus others
- Procurers/ Large Portfolio Owners
- Providers – PFI & maintenance contractors
- Practitioners - RICS QS forum members
- Pan industry bodies – BRE, BSI, BSRIA
<table>
<thead>
<tr>
<th>Type of document</th>
<th>Definition</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>RICS practice statement</td>
<td>Document that provides members with mandatory requirements under Rule 4 of the Rules of Conduct for members</td>
<td>Mandatory</td>
</tr>
<tr>
<td>RICS code of practice</td>
<td>Standard approved by RICS, and endorsed by another professional body that provides users with recommendations for accepted good practice as followed by conscientious Practitioners</td>
<td>Mandatory or recommended good practice (will be confirmed in the document itself)</td>
</tr>
<tr>
<td>RICS guidance note</td>
<td>Document that provides users with recommendations for accepted good practice as followed by competent and conscientious practitioners</td>
<td>Recommended good practice</td>
</tr>
<tr>
<td>RICS information paper</td>
<td>Information and/or explanatory commentary</td>
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</table>
Provides guidance on the quantification of building works for the purpose of preparing cost estimates and cost plans.

Provides direction on how to quantify other items forming part of the cost of a construction project, but which are not reflected in the measurable building work items, i.e. preliminaries, overheads and profit, project team and design team fees, risk allowances, inflation, and other development and project costs.

Is the ‘cornerstone’ of good cost management of construction projects – enabling more effective and accurate cost advice to be given to clients and other project team members, as well as facilitating better cost control.

In addition, the rules can be used as a basis for capturing historical cost data in the form required for order of cost estimates and elemental cost plans, thereby completing the ‘cost management cycle’.
NRM 2

- Provides fundamental guidance on the detailed measurement and description of building works for the purpose of obtaining a tender price.
- Addresses all aspects of bill of quantities (BQ) production, including setting out the information required from the employer and other construction consultants to enable a BQ to be prepared, as well as dealing with the quantification of non-measurable work items, contractor designed works and risks.
- Provides guidance on the content, structure and format of BQ, as well as the benefits and uses of BQ.
- While written mainly for the preparation of bill of quantities, quantified schedules of works and quantified work schedules, the rules will be invaluable when designing and developing standard or bespoke schedules of rates.
The prime purpose of the rules of measurement is to provide consistent rules for quantification and measurement of maintenance works – for the purpose of producing order of estimates and costs plans throughout the building’s life cycle.

Secondary functions include, amongst others, providing information for:

- Input into life cycle cost plan in a structured way so that the same approach is adopted for all life cycle cost plan cash flows and option appraisals. This in turn will facilitate meaningful comparison and more robust data analysis.
- Advising clients on the likely cash flow requirements for the purpose of annual budgeting (+ initiating sinking funds) and informing forward maintenance programmes of works.
- Informing the implementation of the maintenance strategy.
- Informing building information modelling (BIM).
Relationship NRM 1, 2 & 3

- Construction cost estimation
- Construction cost planning
- Maintenance cost estimation
- Maintenance cost planning
- Standard form of cost analysis

Capital costs
- Capital works
- Refurbishment capital works

Maintenance costs
- Maintain works
- Renewal costs

NRM 1
- Works procurement
  - Construction costs
  - Capital replacement costs

NRM 2
- Works procurement
  - Maintenance costs
  - Measure term contracting

NRM 3
- Exclusions
  - Operation costs
  - Occupancy costs
  - End of life costs
  - Income
  - Externalities
  - Non-construction costs
RICS NRM 3 - provides a structured basis for measuring and quantifying the annualised maintenance and life cycle renewal works for buildings – which are carried out post the construction procurement and throughout the in use phases of the constructed assets, or built environment or facility.

The rules deals with measurement for the preparation of:

- Order of cost estimates
- Elemental cost plans
- Formal cost plans during construction phase – generated from a capital cost plan
- Formal cost plans - post construction phase – generated from a capital cost plan and / or an asset maintenance register
- Cost reporting and analysis
- Cost benchmarks (by floor area, functional & elemental methods)
### Context with work stages and project management phases

#### RIBA Work Stages

<table>
<thead>
<tr>
<th>Stage</th>
<th>Work Stage</th>
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<tr>
<td>A</td>
<td>Appraisal</td>
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<tr>
<td>B</td>
<td>Design Brief</td>
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<tr>
<td>C</td>
<td>Concept</td>
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<tr>
<td>D</td>
<td>Design Development</td>
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<td>E</td>
<td>Technical Design</td>
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<tr>
<td>F</td>
<td>Production Information</td>
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<td>G</td>
<td>Tender Documentation</td>
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<tr>
<td>H</td>
<td>Tender Action</td>
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<tr>
<td>J</td>
<td>Mobilisation</td>
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<tr>
<td>K</td>
<td>Construction to Practical Completion</td>
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<tr>
<td>L</td>
<td>Post Practical Completion</td>
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</tbody>
</table>

#### RICS order of cost estimating and formal maintenance cost planning for Maintenance Works

<table>
<thead>
<tr>
<th>Work Stage</th>
<th>Cost Planning</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Order of Cost Estimates (Renewal / Maintain)</td>
</tr>
<tr>
<td>B</td>
<td>1 - Business Justification</td>
</tr>
<tr>
<td>C</td>
<td>2 - Delivery Strategy</td>
</tr>
<tr>
<td>D</td>
<td>3A - Design Brief and Concept Approval</td>
</tr>
<tr>
<td>E</td>
<td>3B - Detailed Design Approval</td>
</tr>
<tr>
<td>F</td>
<td>3C - Investment Decision</td>
</tr>
<tr>
<td>G</td>
<td>Out of scope of NRM 3: Bills of Quantities for R&amp;M and Quantified Schedule of Rates</td>
</tr>
<tr>
<td>H</td>
<td>4 - Readiness for Service</td>
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<tr>
<td>K</td>
<td>5 - Operational Review and Benefits Realisation</td>
</tr>
<tr>
<td>L</td>
<td>Formal maintenance cost plan 4 (Renewal / Maintain)</td>
</tr>
</tbody>
</table>
**Relationship NRM 1 & 3**

**CONSTRUCT**
- Capital building works
  - Construction works
  - Refurbishment works
  - Fit-out & adaptation works
  - End-of-life works (demolition)
- Main contractor’s:
  - Preliminaries
  - Overheads & profit
- Other specific costs:
  - Project / design team fees
  - Development / project costs

**BASE COST ESTIMATE**

**RENEWAL**
- Forward maintenance
  - Major repairs / replacements – predicted scheduled actions
  - Refurbish and upgrade works
  - Redecorations (if separated)
- Maintenance contractor’s:
  - Management & admin costs
  - Overheads & profit
- Other specific costs:
  - Consultant / specialist fees
  - Employer definable works

**BASE COST ESTIMATE**

**MAINTAIN**
- Annualized maintenance
  - Planned – scheduled tasks
  - Reactive – unscheduled tasks
  - Proactive – inspect / monitor
- Maintenance contractor’s:
  - Management & admin costs
  - Overheads & profit
- Other specific costs:
  - Consultant / specialist fees
  - Employer definable works

**BASE COST ESTIMATE**

**Risk allowance estimate**
- Inflation estimate (construct)
- VAT assessment
- Other considerations

**TOTAL COST ESTIMATE**

**Risk allowance estimate**
- Discounting (renewal)
- VAT assessment
- Other considerations

**TOTAL COST ESTIMATE**

**Risk allowance estimate**
- Discounting (maintain)
- VAT assessment
- Other considerations

**TOTAL COST ESTIMATE**
Guidance for the preparation of brief maintenance works

► Agree the purpose and specific requirements - for the estimates or cost plans
► Agree the type of cost estimate or cost plan – i.e. Maintain (M) and / or Renewal (R) or both
► Agree the precise scope of costs to be included / excluded and how to express them
► Agree the period of analysis and method of economic evaluation
► Agree the level of detail of the annualised maintain or renewal plans - generated from a capital cost plan (based on BQ or as built data or generated from an asset register)
► Cost reporting and analysis format and presentation of the result
► Cost benchmark – base unit rates + specific metrics and rules to apply
Key points

- Is a toolkit for Cost Management of Maintenance Works and the life cycle cost planning (i.e. Linking construction costs with renewal and maintain work costs)
- Dealing with Total Maintenance Costs – ‘Renewal and Maintain’ Works
- Defines the information required by the Cost Manager / Quantity Surveyor to prepare Order of Cost Estimates and Cost Plans
- Provides rules for not only measurement but also cost analysis
Toolkit for cost management (same as NRM 1)

- Works estimate; for renewal (R) and maintain (M)
- Project team and consultants fees estimate
- Other employer definable maintenance-related costs estimate
- Risk allowances estimate
- Inflation estimate – i.e. net present value / discounting method
## Overview of methods of measurement in NRM 3

<table>
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<tr>
<th>Cost Data Structure</th>
<th>Capital Building Works Cost Plan Data</th>
<th>Quantification of Renewal (R) Works</th>
<th>Event Cycle</th>
<th>Renewal (R) Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Group element</td>
<td>(b) Element</td>
<td>(c) Sub-element</td>
<td>(d) Component</td>
<td>(e) Component Specification</td>
</tr>
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</table>
Overview of methods of measurement in NRM 3 (cont’d)

<table>
<thead>
<tr>
<th>Group element</th>
<th>Element</th>
<th>Sub-element</th>
<th>Component</th>
<th>Component Specification</th>
<th>Quantity</th>
<th>Unit of Measurement</th>
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<th>Cost Per Event</th>
<th>Total Renewal (R) Cost</th>
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</thead>
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<tr>
<td>(a)</td>
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<td>(s)</td>
<td>(t)</td>
<td>(u)</td>
</tr>
</tbody>
</table>
Building market confidence

- Developing standards
- Regulation
- Accreditation of people & organizations
- Providing training & education

CONSISTENCY ACROSS THE GLOBE
International Standards

- Facilitate trade
- Provide a framework for achieving economies, efficiencies and interoperability
- Enhance consumer protection and confidence
- Demonstrate market leadership
- Create competitive advantage
- Develop and maintain best practice
Work in progress…

Result of a global coalition

- International Valuation Standards (exist)
- International Property Measurement Standards (launched in November this year)
- International Ethical Standards (coalition formed in October this year)
- International Construction Measurement Standards (coalition to be formed in June next year)

RICS to provide:

- Practice Statements & Guidance Notes
- Training
- Certification
- Regulation
British Standards Institution

- Comparable to RICS (has been awarded a royal charter and provide certification)

- However, certification at an tactical – operational level, whilst RICS focus more on the strategic-tactical level

- BSI features for example standards like ISO 9001 (quality management), ISO 14001 (environmental management) and ISO 22301 (business continuity)

- RICS is currently looking into opportunities for cooperation to service the Russian facilities management market with education and training at: strategic, tactical and operational level
British Standards
• BS 8536:2010, Facility management briefing – Code of practice
• BS 8572:2011, Procurement of facility-related services – Guide
• BS 8577:2012, Guide to facility information management
• BS 8210:2012, Facilities maintenance management – Guide
• BS 8544:2013, Guide for life cycle costing of maintenance during the in-use phases of buildings
• BS 8892:2014, Transition management of facility-related services – Code of Practice
• PAS 1192-3:2014, Specification for information management for the operational phase of assets using building information modelling
• BS 1192-4, Collaborative production of information – Fulfilling employers information exchange requirements using COBie – Code of practice

European Standards
• BS EN 15221-1:2006, Facility management – Terms and definitions
• BS EN 15221-2:2006, Facility management – Guidance on how to prepare facility management agreements
• BS EN 15221-3:2011, Facility management – Guidance on quality in facility management
• BS EN 15221-4:2011, Facility management – Taxonomy, classification and structures in facility management
• BS EN 15221-5:2011, Facility management – Guidance on facility management processes
• BS EN 15221-6:2011, Facility management – Area and space measurement in facility management
• BS EN 15221-7:2012, Facility management – Guidelines for performance benchmarking

Standards
• BS ISO 18480-1, Facilities management – Terms and definitions
• BS ISO 18480-2, Facilities management – Guidance on strategic sourcing and the development of agreements
• BS ISO 55000:2014, Asset management – Overview, principles and terminology
• BS ISO 55001:2014, Asset management – Management systems – Requirements
• BS ISO 55002:2014, Asset management – Management systems – Guidelines for the application of ISO 55001
• BS ISO 37500, Guidance on outsourcing
• BS ISO XXXXX, Facilities management – Management systems

What next?
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