Building an Effective IT Governance Structure

Professor Joe Peppard
Agenda

• The problem to be addressed
• Influencing behaviour in the organization
• Mechanisms of IT governance
• A model of IT governance
• Principles of IT governance
• Designing the IT governance structure
• Take-a-ways
What is IT governance? A view from the executive suite...

• “Setting up steering committee”
• “Aligning IT and the business”
• “Something to do with Sarbanes Oxley?”
• “Establishing checks and balances”
• “Addressing IT security”
• “Delivering business value”
• “Discussing IT at board level”
• “The arrangement by which implementation of the IT strategy is managed”
• “Redesigning and configuring the IT department”

Source: Various IT governance workshops
The evolution of the IT Function...

Corporation

- SBU/LOB 1
- SBU/LOB 2
- SBU/LOB 3

IT function

Formal reporting lines
... to a devolved environment...

Push down decision-making

Central IT function/unit

Local IT function/unit

“Traditional” IS decisions devolved into business

Devolution to local IT units

Devolution from IS organizations into business
... raises the challenge of coherence ...

Central IT function/unit

Local IT function/unit

“Traditional” IS decisions devolved into business

Formal reporting lines

The new IS organization
## Arrangements for IS decision-making...

<table>
<thead>
<tr>
<th>Structural arrangements for IS decision-making</th>
<th>Philosophy for decision-making</th>
<th>Advantages</th>
<th>Critical management issues</th>
</tr>
</thead>
</table>
| **Independent IS decisions made in business units - “Multi-local”** | • Business units pursue independent IS initiatives | • Business units have ownership  
• Users control IS priorities  
• Responsive to business unit’s needs | • Integration  
• Variable standards of IS competence  
• “Reinvention of wheels”  
• Little synergy  
• Managing cost |
| **Centrally-driven IS decision making** | • Corporate-wide IT solutions imposed on business units | • Scale economies  
• Control of standards  
• Critical mass of skill  
• Cost | • Politics  
• Unresponsive  
• Does not meet every business unit’s needs  
• Effect on customer |
| **Informal co-operation in IS decision making across business units** | • Informal social networking between centre and units  
• Movement of key personnel | • Awareness of IS issues across the enterprise | • Co-ordination and direction setting  
• Leaving too much to chance |
| **“Federalism” (Integrated IS decision making)** | • Balancing central control and business unit autonomy | • Group-wide IS/IT strategy and architecture with devolution where appropriate | • Complexity (defining “where appropriate”)  
• Execution and timing |
...raises the challenge of IT governance

Diversity and differentiation

Integration and unity of direction

Local innovation and responsiveness

Scale and scope

Empowerment

Control
IT Governance

The framework for making decisions regarding information, systems and technology, their deployment and use...

... to encourage *behaviours* that will lead to the generation of value through IT

- Allocating accountabilities and responsibilities
- Establishing relevant committees, forums
- Defining decision making processes
- Creating an environment for effective information use
- Protecting information assets
- Providing guidance for decision-making
- Instigating mechanisms to ensure conformance

*(Management is making decisions)*
What are we trying to govern?

- Co-evolution of IT investments with the business strategy
- Value realisation through IT (delivery of IT-enabled change)
- Using/working with information/systems
- Resources and their utilisation
- Performance (people, projects, services,...)
- Risk assurance (including protection of information assets)
Legislation dictates that executives could end up in jail if financial transaction mis-reported or financial situation mis-represented.

Company Financial Manual

- Where budgets reside
- Budgeting process
- Sign-off procedures
- Operational budget approval process
- Capital budgeting process
- Revenue recognition
- Expenses
Influences on behaviour in an organisation...

Enterprise Governance
- What is the enterprise’s operating model?
- What aspects of business are controlled centrally? What aspects devolved to local management?
- Who reports to whom?
- What autonomy do local management have?
- What control systems are in place?

Financial Governance
- Where do budgets reside?
- Who controls funding? What is budgeting process?
- Do business units/LOBs have P&L responsibility?
- How will IT be funded?

Performance Governance
- How are employees evaluated?
- How is performance rewarded?
- What criteria are used?

Regulatory Governance
- What legislation impacts behaviour (e.g. Health and Safety, Sarbanes Oxley, Data Protection)?
- How are accounting rules deployed?
... and they must be aligned ...
... but now introducing a new demand

- Enterprise Governance
- IT Governance
- Financial Governance
- Performance Governance
- Regulatory Governance

Business Strategy
Influencing behaviour... not always obvious

- Day-care centre, Haifa, Israel (approx $380/week)
- Kids to be picked up by 4 p.m.
- Problem: **Very often parents late**
- Solution: fine the tardy parents $3/child
- 1st 4 weeks, no fine, approx 8 late pick-ups/week
- Before long over 20 late pickups/week

**Incentives**

**Economic:** e.g. tax on cigs

**Social:** e.g. ban on smoking

**Moral:** e.g. terrorist raise money through selling cigs

**What went wrong?**

- Fee too small ($60 per month)
  - Cheaper than baby sitting!
  - But at $100 may have engendered ill will
- Late parents could buy off guilt
- Signal that late pickups not a problem
- When fine stopped, no reduction in numbers arriving late!

Mechanisms of governance

Steering Committee deciding on IS strategy

Information technology

Chief Executive

Sales
Marketing
Finance
Manufacturing
Logistics

CIO

j.peppard@cranfield.ac.uk
“We found that aligning IS and business strategies did, indeed, improve IS performance. However, the eight cases call into question the value of the business and IS aligning their formal organization structures; this type of alignment did not always improve IS performance. On the other hand, we found that informal organization structures played a far more important role than expected in improving IS performance.”

Chan, 2002

“Our findings suggest that a shared vision between the CIO and TMT is critical to creating, and maintaining through co-evolution, IS strategic alignment in the organisation.”

Preston and Karahanna, 2009

“We conclude that effective IT governance is the single most important predictor of the value an organisation generates from IT.”

Weill and Ross, 2004
“The result suggests that there is a strong link between business IS-alignment and shared cognition between business and IS executives. .. It is important to note that this study is not saying that the cognition between business and IS executive groups be identical. Business and IS executives differ from each other in their assumptions, knowledge and expectations regarding business-IS alignment. ... Business and IS executives in the companies that report a higher level of business-IS alignment do have a set of core beliefs in common regarding IS...”

Tan and Gallupe, 2006

“The one construct that seemed to predict long-term alignment was shared domain knowledge... The most important direct predictor of alignment in this study was a high level of communication between IT and business executives. However, one cannot mandate meaningful communication between individuals. IT people have to earn the right to play a meaningful role in management forums.... Organisations must realise, however, that without some background of shared domain knowledge or shared beliefs, mechanisms such as IT steering committees may degrade into project review or budget approval committees.”

Reich and Benbasat, 2000
Mechanisms of IT governance

- **Structural integration** mechanisms: formal structures established in an organisation, e.g. reporting relationships, direct line supervision of staff, liaison roles, full-time integrating roles (i.e. relationship managers).

- **Horizontal integration** mechanisms: structural overlays (e.g. groups, committees or other forums) and non-structural devices (such as physical co-location) to facilitate cross unit collaboration, communication and awareness.

- **Functional integration** mechanisms: decision-making processes. Outlines the degree to which decision making follows specified rules, standards and procedures; and who involved. Pre-chosen decisions are captured in policies.

- **Social integration** mechanisms: concerned with the achievement of shared understanding between stakeholders. They focus on developing shared beliefs, trust and mutual understanding across all employees. (e.g. education)

- **Supplemental** mechanisms: often within remit of IT to influence employee behaviour (e.g. charge-back, performance metrics, innovation lab)
Establishing IT governance: The triumvirate of value generation through IT

- **Thinking**
  - Ensuring that information is of appropriate quality and is protected
  - How information, systems and technology are to be used by the business

- **Doing**
  - Building and maintaining applications and infrastructure

- **Using**
  - Working with information
  - Change/service delivery

Thinking about the *thinking*; thinking about the *doing*; and thinking about the *using*
IT governance (Deployment)

What are we going to do?

"Thinking"

IT decision making (thinking)
- Strategy and policy
  - Application needs
  - Investment & prioritisation
  - Architecture
- Opportunities/threats
- Day-to-day running of IT projects, operations, service delivery

How are we going to do it?

"Doing"

IT activities (doing)
- Building systems
- Managing relationships with vendors
- Maintenance
- Service delivery
- etc.
IT governance (Deployment)

“Thinking”

- Why?
- How?
- Who?
- When?
- Whether?
- What?

“Doing”

- Deployment
- Change/Services

- Strategy
- Evaluate
- Monitor
- Direct
- Performance

- (IT) projects
- IT Operations
- Service delivery
Fundamental principles of IT governance

1. Frame within strategic context
2. Must fit with overall governance structure of organisation (enterprise, financial, performance, and regulatory)
3. The set of decisions made in an organisation with regard to IT can be determined
4. How organisations differ is how these decisions are made (prescribed processes and policies), who makes them, how coordinated and policed.
   • Policies reflect decisions already made.
5. Accountabilities must match with authority
6. Accountabilities lie with people not committees*
7. Running projects, IT operations and service delivery usually defined by standards (e.g. ISO 2000), policies (e.g. Prince2) and processes (e.g. ITIL)

* Generally
<table>
<thead>
<tr>
<th>Decision (e.g.)</th>
<th>Desired behaviour</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funding level for IT</td>
<td>The executive management team should determine annual spend on IT</td>
</tr>
<tr>
<td>IS Strategy</td>
<td>The IS strategy should be business driven and involve all heads of business units in its formulation</td>
</tr>
<tr>
<td>Prioritising of spending</td>
<td>Heads of business units should agree priorities for IT spending</td>
</tr>
<tr>
<td>Required IT capabilities</td>
<td>Group CIO should determine technical capabilities required to implement IS strategy with input</td>
</tr>
<tr>
<td>Managing projects</td>
<td>All projects to follow a similar methodology; only one way to do IT enabled change projects</td>
</tr>
<tr>
<td>Change management</td>
<td>One process to follow for any changes</td>
</tr>
<tr>
<td>IT security</td>
<td>Total organisational conformance</td>
</tr>
</tbody>
</table>
For each decision, how will this desired behaviour be achieved...

- **Authority**: individuals or organisation forums that have the power to make the decision. Ultimately accountable for making the decision and its outcome
- **Process**: defines decision-making process including role of those with input
- **Responsibility**: individual or organisation grouping responsible for managing the day-to-day execution/implementation of the decision
- **Coordination**: mechanisms for coordination when input to decision/effect is distributed (can also be defined by process)
- **Monitoring**: mechanisms for policing decisions, ensuring conformance to decisions, corporate policies and legal requirements
## IT Governance by design

<table>
<thead>
<tr>
<th>Decision</th>
<th>Authority</th>
<th>Process</th>
<th>Responsibility</th>
<th>Coordination</th>
<th>Monitoring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funding level for IT</td>
<td>Executive management team</td>
<td>Zero budgeting</td>
<td>Executive management team</td>
<td>IT steering Committee</td>
<td>Group Audit</td>
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<tr>
<td>IS strategy</td>
<td>CEO</td>
<td>IS strategy process</td>
<td>CIO</td>
<td>IT steering Committee</td>
<td>IT steering Committee</td>
</tr>
<tr>
<td>Prioritisation of spending</td>
<td>IT steering Committee</td>
<td>Annual strategy day</td>
<td>CIO</td>
<td>IT steering Committee</td>
<td>Group Audit</td>
</tr>
<tr>
<td>Required IT capabilities</td>
<td>CIO</td>
<td>IT strategy process</td>
<td>CIO</td>
<td>Architecture Committee</td>
<td>Architecture Committee</td>
</tr>
<tr>
<td>Managing Projects</td>
<td>CIO</td>
<td>Policy: PRINCE 2</td>
<td>IT project managers</td>
<td>IT project managers</td>
<td>Project managers forum</td>
</tr>
<tr>
<td>Change management</td>
<td>CIO</td>
<td>ITIL process</td>
<td>Applications portfolio manager</td>
<td>Architecture Committee</td>
<td>Architecture Committee</td>
</tr>
<tr>
<td>IT Security</td>
<td>Group Security Forum</td>
<td>IT security policy</td>
<td>IT security manager</td>
<td>IT security manager</td>
<td>Group Audit</td>
</tr>
<tr>
<td>Decision Area</td>
<td>Accountability</td>
<td>Senior Committee</td>
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<tr>
<td>Mission/Vision</td>
<td>CIO</td>
<td>IS Committee</td>
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<tr>
<td>Strategy</td>
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<tr>
<td>Functional IS strategic plans</td>
<td>Function IS Leader</td>
<td>Function Senior Mgt Team</td>
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<tr>
<td>Enterprise IS strategic plans</td>
<td>CIO</td>
<td>IS Committee</td>
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<td>Governance</td>
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<tr>
<td>Enterprise IS Governance</td>
<td>CIO</td>
<td>IS Committee</td>
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<td>Enterprise IS Standards/</td>
<td>CIO</td>
<td>IS Leadership Team</td>
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<td>Operating Framework</td>
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<td>Enterprise Policies &amp;</td>
<td>Corporate IS Leader</td>
<td>IET/AAC/IMC/ISSC/ISQMC</td>
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<td>Standards</td>
<td>Function IS Leader</td>
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<td>Define</td>
<td>Corporate IS Leader</td>
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<td>Enact</td>
<td>CIO</td>
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<td>Assure</td>
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<td>Exception approval</td>
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Source: Paul Burfitt
## Template

<table>
<thead>
<tr>
<th>Decision</th>
<th>Desired Behaviours</th>
<th>Current Situation</th>
<th>Authority</th>
<th>Process</th>
<th>Responsibility</th>
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**Current Situation**

**Authority**

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**Decision**

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</tbody>
</table>
Example (1)

<table>
<thead>
<tr>
<th>Decision</th>
<th>IT Principles</th>
</tr>
</thead>
</table>

**Desired Behaviours**
- Shared ownership of a set of high level principles / statements on how IT is used in the Parliament
- Driven by business objectives not opinion (or technology!)

**Current Situation**
- Viewed as an IT problem (-ve)
- Principles that are in place have little buy in (-ve)
- Some high level principles already defined and being worked to (+ve)
- Difficult to link principles clearly to organisational objectives mainly due to lack of clarity on the latter! (-ve)

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<th>Monitoring</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT Principles</td>
<td>Currently Head of BIT would like to be Directors Group</td>
<td>IT Strategy Process</td>
<td>Head of BIT</td>
<td>BIT Strategy Team</td>
<td>BIT Management Team</td>
</tr>
</tbody>
</table>
**Example (2)**

<table>
<thead>
<tr>
<th>Decision</th>
<th>IT Project Management</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Desired Behaviours</th>
</tr>
</thead>
<tbody>
<tr>
<td>• All projects managed by the BIT Office to use the same methodology</td>
</tr>
<tr>
<td>• Common language</td>
</tr>
<tr>
<td>• Accountability for project performance</td>
</tr>
<tr>
<td>• Transparent reporting</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Current Situation</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Framework based on PRINCE2 in place (+ve)</td>
</tr>
<tr>
<td>• Inexperienced project managers (-ve)</td>
</tr>
<tr>
<td>• IT PMs trained to PRINCE2 Practitioner level (+ve)</td>
</tr>
<tr>
<td>• Monthly project reports published on Intranet (+ve)</td>
</tr>
<tr>
<td>• Inconsistent application of project management approach (-ve)</td>
</tr>
<tr>
<td>• Poor or lack of project documentation (-ve)</td>
</tr>
<tr>
<td>• SROs not engaged and primarily focus on quality (-ve)</td>
</tr>
</tbody>
</table>

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</thead>
<tbody>
<tr>
<td>IT Project Management</td>
<td>Head of BIT</td>
<td>Project Approach (PRINCE2)</td>
<td>Head of Development (BIT)</td>
<td>Project Managers</td>
<td>Project Technicians / Project Managers Forum</td>
</tr>
</tbody>
</table>

j.peppard@cranfield.ac.uk
### Example (3)

#### Decision Change Management

<table>
<thead>
<tr>
<th>Desired Behaviours</th>
</tr>
</thead>
<tbody>
<tr>
<td>• One process for all change / work requests</td>
</tr>
<tr>
<td>• Customer focused</td>
</tr>
<tr>
<td>• Transparent process (resource, effort, cost, progress)</td>
</tr>
<tr>
<td>• Good communications with stakeholders</td>
</tr>
<tr>
<td>• Managed demand focused on value</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Current Situation</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Demand driven (reactive) (-ve)</td>
</tr>
<tr>
<td>• No consequence of request (-ve)</td>
</tr>
<tr>
<td>• Demand outstrips capacity to supply (-ve)</td>
</tr>
<tr>
<td>• Not focused on maximising value (who shouts loudest) (-ve)</td>
</tr>
<tr>
<td>• Part of process already in place and familiar to customers (+ve)</td>
</tr>
<tr>
<td>• Poor</td>
</tr>
</tbody>
</table>

<table>
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<th>Coordination</th>
<th>Monitoring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change Management</td>
<td>Head of BIT Office</td>
<td>Work Request / Change Request Process</td>
<td>Head of Delivery (BIT Office)</td>
<td>IT Team Leaders</td>
<td>IT Team Leaders</td>
</tr>
</tbody>
</table>
An approach for designing the IT governance structure (for deployment)

Regulatory Governance 

Business Objectives

Desirable Behaviors

IT Principles

Shape

Determine

Financial Governance

Enterprise Governance

Performance Governance

Frames

Day-to-day running service delivery
Day-to-day running of IT operations
Day-to-day running of projects

Strategy and policy

• Authority
• Process
• Responsibility
• Coordination
• Monitoring

Determines

What is the enterprises operating model?
What is the operating model for IT?
How will IT be funded?
Establishing a philosophy for IT Governance: European Power Utility

**Business drivers**

- Hit ROCE targets of 10%
- Be customer led
- Integrated European business
- Attract and retain quality people

**IT principles**

- Focus on costs control and reduction
- Maximise value from IT investments
- Rigorous capital rationing
- Top quartile IT performance
- Maintain flexibility to meet customer needs
- Maintain currency of solutions
- Secure the integrity of Company data and brand
- Do things once and only once
- Optimise the value from shared services
- IT teams to work as a unit
- Share IT expertise and best practice across UK
- Provide IT that enables people to do their job well
- Enable flexibility and choices in working locations
Establishing a philosophy for IT Governance: ING Direct

**Strategy**
- Provide simple financial products through multiple channels to savvy consumers
- Reuse expertise through standardised, shared processes
- Encourage local innovation and global implementation
- Focus on low-overhead services to minimise cost

**IT Governance Principles**
- Replicate, don’t centralise, infrastructure
- Modularise and reuse applications
- Standardise business unit innovations across firm
- Achieve universal compatibility of architecture and platforms

*Source: CISR, MIT Sloan School of Management*
Template

Business Objectives

Desirable Behaviours

Enterprise Governance

Financial Governance

Performance Governance

Regulatory Governance
Strategy and Policy: decisions to address

- What are our IT principles (philosophy)?
- What is our IT governance structure?
- What funding level will be established for IT?
- What is our strategy for information and systems that are required to meet business objectives?
- What IT capabilities are required?
- What IT opportunities will receive funding (prioritisation)?
- What is our strategy for information (data) management?
- What are the opportunities for deploying IT?
  - What is the potential value, risk and return of these opportunities?
  - What is the business case for the opportunity?
  - What are the technical requirements of the opportunity?
- What use do we make of the external marketplace?
  - How can service running costs be minimised?
Day-to-day running of projects: decisions to address

- How will resources be allocated?
- How will the design of the IT service be determined?
- How will the required software be developed?
- How will people be allocated roles?
- How will collaboration between business and IT be achieved?
- How will business changes be managed?
- How will the technical (implementation) be managed?
- How will the design of the technical architecture be determined?
- How do we manage relationships with vendors?
- How will the delivery of business benefits be managed?
- How will performance (value) be assessed and evaluated?
- How will programmes (of projects) be managed?
- How will we ensure that only authorised technical components are used?
- How will new systems be rolled out?
- How will value be measured?
Day-to-day running of IT operations: decisions to address

- How will service delivery be maintained?
- How will the IT platform be refreshed?
- How will applications be retired?
- How will backup be performed?
- How will security be ensured?
- How will integrity of data be guaranteed?
- How is technical risk minimised?
- How will overall operational IT performance be evaluated?
- How will capacity requirements be assessed?
- How will “change management” be managed and administered?
- How will releases be managed?
- How will access to service be managed?
- How will application and network availability be managed?
Day-to-day running of service delivery: decisions to address

• How is user support delivered?
• How are service levels managed and reported?
• How do we manage problems?
• How do we ensure that service is available when required?
• How do we ensure reliability of service?
IT governance reference model

Source: Mead, 2006
IT Governance (Usage)

“Thinking”

- Strategy
- Evaluate
- Monitor

"Using"

- Direct
- Performance

Questions:
- Why?
- When?
- Who?
- How?
- What?
- Whether?
Take-a-ways

- Governance is about behaviour
- Identify the behaviours being sought
- Don’t confuse (IT) governance with (IT) management
- Governance cannot replace lack of IT leadership
- Seek governance-by-design rather than evolution
- Use *Thinking, Doing and Using* as a framework
- Describe, Diagnose and Design
- No “one size fits all” solution
- Adopt an incremental approach to implementation of new governance structure
- Generating business value cannot be achieved by managing IT from within a box on the organisation chart