How to achieve EA benefits using a EA team

Presented by Louw Labuschagne
EAPC 2008 Johannesburg
Objectives

- Scoping of Enterprise Architecture initiative
- Overview of Role players and Organisational structure
- Aligning Organisational Structure with EA approach

- It is not always easy to justify the cost of having a dedicated EA practice within an organisation, as the benefits is sometimes difficult to justify to a management group that is focused on finding the next silver bullet.
- This presentation will walk through an "EA lite" approach,
  - based on TOGAF,
  - which will demonstrate how to assemble a virtual EA team from within the ICT organisation and
  - how to integrate and direct their activities
  - in such a manner that there is greater synergy and alignment with organisational objectives
  - when executing the business strategy.
- The approach will be explained based on a practical case study within the public sector.
Acknowledgements

- TOGAF 8.1.1
- COBIT 4.1
- Val IT
- IBM RUP
- King Report II
- Enterprise Architecture as Strategy
Simplified National Government Service Delivery Overview

National Government

- Vote 8: Public Service & Administration
- Vote 7: National Treasury
- Vote 28: Minerals and Energy

National Department

- National Department
  - Vote 8: Public Service & Administration
  - Vote 7: National Treasury
  - Vote 28: Minerals and Energy
  - Programme 4: Information and Technology Management
  - Programme 1: Administration
  - Programme 3: Asset and Liability Management

Division / Service Delivery

- State Information Technology Agency
- Programme 4: Information and Technology Management
- Programme 1: Administration
- Programme 3: Asset and Liability Management
- Programme 2: Promotion of Mine Health and Safety

Government wide ICT Infrastructure
- Government wide ICT Architecture
- Department wide ICT Infrastructure
- Divisional ICT Project Management
- Department wide ICT Infrastructure
- Divisional ICT Project Management
IT Governance not optional anymore.

- **King II Recommendations on Information Systems**
  - Information technology has had a profound effect on processes within organisations. Accordingly, boards need to ensure that the necessary skills are in place to ensure that their responsibilities in respect of internal control systems are adequately discharged.
  - Potential benefits that result from using technology to improve reporting and transparency should be embraced.
  - Auditing around the computer is no longer an option for the auditors, the controls and processes incorporated in modern systems have to be evaluated and tested. In many instances, internal control systems are altered to bring them in line with best practices included with the basic functionality of many of these systems.
  - Employees across the organisation have been empowered with a greater degree of responsibility. Some important controls occur, at transaction level rather than in a central accounting area.
  - All of these changes have had fundamental implications for management in discharging their responsibility for maintaining a sound control environment. Responsible management needs to demonstrate adequate knowledge of modern IT-enabled systems as well as an appreciation of the related changes in the organisation’s internal control system.
Legislation is also driving the need for better control over information systems.

- Public Finance Management Act
- SITA Act
- Financial Intelligence Centre Act
- Treasury Regulations
- Etc..
Using Enterprise Architecture to achieve compliance and alignment.

- “The Enterprise Architecture is the organising logic for business processes, information, applications and IT infrastructure reflecting the integration and standardisation requirements of the company's operating model. The Enterprise architecture provides a long-term view of a company's processes, systems, and technologies so that individual projects can build capabilities - not just fulfil immediate needs.”

Responsibilities of Enterprise Architects

- Probe for information, listen to information, influence people, facilitate consensus building, synthesise and translate ideas into actionable requirements, articulate those ideas to others.
- Identify use or purpose, constraints, risks, etc.
- Participate in the discovery and documentation of the customer's business scenarios that are driving the solution.
- The architect is responsible for requirements understanding and embodies that requirements understanding in the architecture specification.

- Take the requirements and develop well-formulated models of the components of the solution, augmenting the models as necessary.
- Show multiple views through models to communicate the ideas effectively.
- Responsible for the overall architecture integrity and maintaining the vision of the offering from an architectural perspective.
- Maintain these models as a framework for understanding the domain(s) of development work, guiding what should be done within the organization, or outside the organization.

- Verify assumptions, bring in subject matter experts, etc. in order to improve the model and to further define it, adding as necessary new ideas to make the result more flexible and more tightly linked to current and expected requirements.

- Continuously monitor the models and update them as necessary to show changes, additions, and alterations.
- Represent architecture and issues during development and decision points of the program or project implementation.
- Be an "agent of change".
Core Skills for Enterprise Architects

- Proficient in the techniques that go into producing designs of complex IT systems, including requirements discovery and analysis, formulation of solution context, identification of solution alternatives and their assessment, technology selection, and design configuration.

- Should possess an extensive technical breadth through experience in the IT industry. Must have, skills in at least one discipline that is considered to be at the level of a subject matter expert.

- Approach his or her job through the consistent use of recognized design methods such as the TOGAF Architecture Development Method (ADM). Should have working knowledge of more than one design method and be comfortable deploying parts of methods appropriate to the situation in which s/he is working. Proficiency in methodology use is in knowing what parts of methods to use in a given situation, and what methods not to use.

- Vital to have experience with all aspects of a project from design through development, testing, implementation, and production. The impact of full project scope experience should lead the Enterprise Architect to make better design decisions, and better inform the trade-offs made in those decisions.

- The Enterprise Architect must have strong communications and relationship skills. Ability to communicate complex technical information to all stakeholders of the project, including those who do not have a technical background. Good technical skill and the ability to lead with strong negotiation and problem-solving skills.
THE TOGAF Architecture Development Methodology (ADM)

Why use TOGAF?

• Reduced complexity in IT infrastructure
• Maximum return on investment in existing IT infrastructure
• The flexibility to make, buy, or out-source IT solutions
• Reduced risk overall in new investment, and the costs of IT ownership
• Faster, simpler, and cheaper procurement
• Buying decisions are simpler, because the information governing procurement is readily available in a coherent plan.
• The procurement process is faster - maximizing procurement speed and flexibility without sacrificing architectural coherence.

Source: Togaf 8.1
The TOGAF ADM can logically be divided into 3 phases:

**PHASE 1** Establish Framework
- Prelim: Framework and Principles
- Requirements
- A Architecture Vision
- H Architecture Maintenance

**PHASE 2** Define Requirements
- B Business Architecture
- C Information Systems Architecture
- D Technology Architecture
- G Implementation Governance

**PHASE 3** Select & Implement Solutions
- E Opportunities and Solutions
- F Migration Planning
- G Implementation Governance
Overview of the objectives of the 3 phases

Phase 1: Establish Framework
- Review or establish a new IT engagement model that includes a system of governance mechanisms that will ensure that the business and IT projects achieve alignment and meet organisational objectives.

Phase 2: Define Requirements
- The Operating Model of an organisation defines the level of business process integration and standardisation appropriate for that particular organisation and commitment on how the business will operate. The purpose of this phase is to understand and model the Operating Model and baseline business, systems and technology architectures against long-term target organisational processes, systems and technologies that can be built through individual projects to realise the target Operating Model.

Phase 3: Select & Implement Solutions
- Implement project using organisational solution lifecycle methodology. Prioritise and select appropriate building blocks required to realise the target architectures and Operating Model.
Logical overview of an ICT environment

PLAN
- Strategy & Management
  - Enterprise Architecture
  - Quality Management
  - Financial Management
  - HR Management

BUILD
- Program Management
  - Project Support
  - Requirements Management
  - Planning & Design
  - Project Management

RUN
- Operations
  - Hosting
  - Training & Support
  - Helpdesk Services

IT Governance
- Performance Measurement
- Strategic Alignment
- Value Delivery
- Risk Management
- Resource Management

BUSINESS INTELLIGENCE
- Business Information Management
IT Governance Life Cycle

- The **strategic alignment** processes include:
  - Business strategy planning involving IT
  - IT strategic planning
  - IT operational planning
  - Stakeholder analysis: services (current and future requirements), performance expectations and satisfaction, and risks

- The basic principles of **IT value** are **delivery** on time, within budget and with the benefits that were intended.

- **Risk management** should be a continuous process that starts with the identification of risks (impact on assets, threats and vulnerabilities). Once identified, risks must be mitigated by countermeasures (control).

- **Resource management** is about establishing and deploying the right IT capabilities for business needs. It primarily targets human resources, including knowledge, skills and infrastructure.

- **The performance measurement** phase includes audit and assessment activities and continuous performance measurement, and provides a link back to the alignment phase by providing evidence that the direction is being followed. This also creates the opportunity to take timely corrective measures, if needed.
## Business Scorecard

<table>
<thead>
<tr>
<th>Financial Perspective</th>
<th>Customer Perspective</th>
</tr>
</thead>
<tbody>
<tr>
<td>■ Improve corporate governance and transparency.</td>
<td>■ Achieve cost optimisation of service delivery.</td>
</tr>
<tr>
<td>■ Manage IT-related business risk.</td>
<td>■ Create agility in responding to changing business requirements.</td>
</tr>
<tr>
<td>■ Provide a good return on investment of IT-enabled business investments.</td>
<td>■ Establish service continuity and availability.</td>
</tr>
<tr>
<td></td>
<td>■ Improve customer orientation and service.</td>
</tr>
<tr>
<td></td>
<td>■ Offer competitive products and services.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Internal Perspective</th>
<th>Learning and Growth Perspective</th>
</tr>
</thead>
<tbody>
<tr>
<td>■ Improve and maintain business process functionality.</td>
<td>■ Acquire and maintain skilled and motivated people.</td>
</tr>
<tr>
<td>■ Improve and maintain operational and staff productivity.</td>
<td>■ Manage product and business innovation.</td>
</tr>
<tr>
<td>■ Lower process costs.</td>
<td>■ Obtain reliable and useful information for strategic decision making.</td>
</tr>
<tr>
<td>■ Manage business change.</td>
<td></td>
</tr>
<tr>
<td>■ Provide compliance with external laws, regulations and contracts.</td>
<td></td>
</tr>
<tr>
<td>■ Provide compliance with internal policies.</td>
<td></td>
</tr>
</tbody>
</table>
IT Goals that support the selected Balanced Scorecard Goals

- **Establish service continuity and availability.**
  1. Ensure mutual satisfaction of third-party relationships. [DS2]
  2. Reduce solution and service delivery defects and rework. [PO8, AI4, AI6, AI7, DS10]
  3. Ensure minimum business impact in the event of an IT service disruption or change. [PO6, AI6, DS4, DS12]
  4. Make sure that IT services are available as required. [DS3, DS4, DS8, DS13]

- **Create agility in responding to changing business requirements.**
  5. Respond to business requirements in alignment with the business strategy. [PO1, PO2, PO4, PO10, AI1, AI6, AI7, DS1, DS3, ME1]
  6. Create IT agility. [PO2, PO4, PO7, AI3]
  7. Deliver projects on time and on budget, meeting quality standards. [PO8, PO10]
The high-level of process integration within National Treasury Program 3 is only visible when using a Process View.
Benefits in analysing the ALM division from a Process viewpoint

- Capturing complexity e.g. considering the main relationships (Directorates, responsibilities, roles, systems, ...)
- Developing ownership of issues e.g. identifying roles and responsibilities: “Who gets involved, how and where?”
- Improving steering effectiveness e.g. a process based operating model gives the possibility to intervene in case of errors
- Meeting internal and external stakeholder expectations e.g. knowing and understanding expectations of previous and following processes
- Continuous process improvement e.g. introducing process awareness across all directorates touching a specific process
- Providing a process description including a start-to-end-relation e.g. what are the important processes of the business
Solution Development & Change management

PHASE 3 Select & Implement Solutions

PLAN
Strategy & Management

BUILD
Program Management

BUSINESS INTELLIGENCE
Business Information Management

PHASE 3 Select & Implement Solutions

RUN
Operations

Performance Measurement
Strategic Alignment
Risk Management
Value Delivery

resource Management

Helpdesk Services
Training & Support
Hosting
Development
Planning & Design
Software Project Development & Implementation Process

**Inception**
The overriding goal of the inception phase is to achieve concurrence among all stakeholders on the lifecycle objectives for the project. The inception phase is of significance primarily for new development efforts, in which there are significant business and requirements risks which must be addressed before the project can proceed. For projects focused on enhancements to an existing system, the inception phase is more brief, but is still focused on ensuring that the project is both worth doing and possible to do.

**Elaboration**
The goal of the elaboration phase is to baseline the architecture of the system to provide a stable basis for the bulk of the design and implementation effort in the construction phase. The architecture evolves out of a consideration of the most significant requirements (those that have a great impact on the architecture of the system) and an assessment of risk. The stability of the architecture is evaluated through one or more architectural prototypes.

**Construction**
The goal of the construction phase is clarifying the remaining requirements and completing the development of the system based upon the baselined architecture. The construction phase is in some sense a manufacturing process, where emphasis is placed on managing resources and controlling operations to optimize costs, schedules, and quality. In this sense the management mindset undergoes a transition from the development of intellectual property during inception and elaboration, to the development of deployable products during construction and transition.

**Transition**
The focus of the Transition Phase is to ensure that software is available for its users. The Transition Phase can span several iterations, and includes testing the product in preparation for release, and making minor adjustments based on user feedback. At this point in the lifecycle, user feedback should focus mainly on fine tuning the product, configuring, installing and usability issues, all the major structural issues should have been worked out much earlier in the project lifecycle.
Questions