COBIT® 5, GWEA and TOGAF® as a vehicle for Public-Private partnership

Stuart Macgregor
ISACA SA Conference
August 2013
Agenda

- **Introduction** to Enterprise Architecture (EA)
  *what is it and why the discipline is so important*

- **Frameworks**
  *TOGAF®, GWEA and COBIT®*

- **Opportunities** for Public-Private partnership

- **Conclusions** - your next steps…
Business Value

Effective IT governance is the single most important predictor of the value an organization generates from IT...

Top-performing enterprises generate returns on their IT investments up to 40% greater than their competitors.

- They clarify business strategies and the role of IT in achieving them.
- They measure and manage the amount spent on and the value received from IT.
- They assign accountability for the organizational changes required to benefit from new IT capabilities.
- They learn from each implementation, becoming more adept at sharing and reusing IT assets.

…but there is no single model of good corporate governance

**King III Report on Governance for South Africa 2009**

**Principle 5.4: The board should monitor and evaluate significant IT investments and expenditure**

The company should ensure that it acquires and uses the appropriate technology, processes and people to support its business and governance requirements in a timely manner and accurately.

The level of investment in IT is significant and continues to increase and few companies would survive without appropriate IT. While there are many examples of companies generating value from investing in IT, many executives are questioning whether the business value is in proportion to the level of investment.

The board should oversee the proper value delivery of IT and should ensure that the expected return on investment from significant IT investments and projects is delivered and that the information and intellectual property contained in the information systems are protected. This can be achieved by:

- Clarifying business strategies and objectives and the role of IT in achieving them;
- Measuring and managing the amount spent on the value received from IT;
- Assigning accountability for organisational changes required to benefit IT capabilities; and
- Learning from each implementation and becoming more adept at sharing and re-using IT assets.

Good governance principles should apply to all parties in the supply chain or channel for the acquisition and disposal of IT goods or services. This applies equally to a division within a company, subsidiary or a third party.

Where the responsibility for the provision of IT goods or services has been delegated to another party (or division), all parties (including the board) remain accountable for enforcing and monitoring effective IT governance.

The company should obtain independent assurance on the IT governance and controls supporting outsourced IT services. This assurance should be aligned to the company’s normal assurance activities under the auspices of the audit committee.

IT management should ensure that all the basic elements of appropriate project management principles are applied to all IT projects. Effective review processes by independent experts are recommended.
“In 1995 we started our study of enterprise architecture – we just did not know it. At the time we thought we were studying information technology infrastructure transformations. In 1998 we thought we were studying enterprise system implementations. In 2000 it was e-business. But sometime in 2000, we recognized that each of these studies examined basically the same thing: Enterprise Architecture”
## Enterprise Architecture

### Gartner

“The process of translating business vision and strategy into effective enterprise architecture change by creating, communicating and improving key principles and models that describe the enterprise’s future state and enable its evolution.”

### EA as Strategy

“The organizing logic for core business processes and IT infrastructure reflecting the standardization and integration of a company’s business model.”

### Wikipedia

“Enterprise Architecture is the organizing logic for business processes and IT infrastructure reflecting the integration and standardization requirements of the firm’s operating model.”

### IEEE Standard 1471

“The fundamental organization of a system embodied in its components, their relationships to each other, and to the environment, and the principles guiding its design and evolution.”

### ISACA

“Business-orientated technology road map for the attainment of business goals and objectives.”

### GWEA Framework

The Business, Data, Application and Technology Architectures required to enable and support the Enterprise missions over time; including a baseline architecture, target architecture, and an implementation plan. [Derived TOGAF]
Enterprise Architecture is a Strategic Imperative

Enterprise Architecture is required to transform a legacy of fragmented applications, organisational structures and processes (both manual and automated) into an integrated environment with optimised processes that are responsive to change and the delivery of the business strategy.
Enterprise Architecture Domains

- Consists of current and future state models
- Is implemented through the Enterprise:
  - Business Architecture,
  - Information Architecture,
  - Data Architecture,
  - Applications portfolio, and
  - Enterprise-wide technical architecture
- Provides organizations with the ability to conduct impact assessments, analyze alternative scenarios and implement appropriate strategies
- (Re-)Defines the business design for sustainable competitive advantage
Business Enterprise Architecture is not easy…

DoD business architecture lacks detail, says GAO

May 20, 2013 | By David Perera

Despite at least $379 million spent over a decade by the Defense Department to establish a business enterprise architecture, the DoD has yet to show that it’s using that architecture as intended, says the Government Accountability Office.

The BEA is meant to guide investment decisions on thousands of administrative systems ranging in function from personnel and financial management to healthcare and logistics; for the coming fiscal year, the DoD says its needs $6.51 billion in funding for them.

Among other things, the architecture is meant to enable interoperability among the approximately 2,100 defense business systems, but auditors say in a May 17 report (.pdf) that the BEA lacks detail.

GWEA ICT Planning Focus

Government developed ICT House of Values*

- Lower Cost
- Increased Productivity
- Citizen Convenience

ICT Value

Principles / Pillars

- Security
- Interoperability
- Reduced Duplication
- Economies of Scale
- Digital Inclusion

Means / Foundation / Services

ICT Planning (GWEA) → ICT Acquisition → ICT Operations

* From e-Government Policy, SITA Regulations & SITA Act (amended)
Government Wide Enterprise Architecture framework

GWEA 1.2 Purpose & Applicability

• Purpose
  – To define the minimum standard by which to use an Enterprise Architecture approach to develop and construct National and Departmental ICT Plans and Blueprints in the Government of South Africa.

• Applicability
  – to all public and private entities that engage in an Enterprise Architecture Planning programme for or on behalf of the Government of South Africa.
Corporate Governance of Information and Communication Technology Policy Framework

8 COBIT 5 Priority Areas

It is indicated in the Framework that the Governance of ICT Framework will be informed by COBIT 5 processes. The CITOC (2012) adopted 12 minimum processes that should inform implementation. These processes are informed by the priority focus areas for ICT audits, as defined by the AG. The minimum processes are:

- EDM01: Governance framework setting and maintenance
- APO01: Manage the ICT management framework
- APO02: Manage strategy
- APO03: Manage enterprise architecture
- APO05: Manage portfolio
- APO10: Manage Suppliers
- APO12: Manage Risk
- APO13: Manage security
- BAI01: Manage security: Manage programmes and projects
- DSS01: Manage operations
- DSS04: Manage continuity
- MEA01: Monitor, evaluate and assess performance and conformance

APO03 - A minimum (pg. 4) or an optional requirement (pg. 16)?
World-Class Enterprise Architecture

General Business Capabilities Supporting an Architecture Practice

- Architecture Team Leadership & Direction
- Performance Measurement
- Team Management
- Risk Management
- Enterprise Engagement & Enrollment

Architecture at the Strategy and Portfolio Management Level

- Architecture-Led Enterprise Strategy Development
- Architecture Support for Business and IT Strategy definition
- Architecture Road-Mapping

Architecture at the Program Level

- Architecture Supported Program Inception
- Architectural Governance and Issue Management

Architecture at the Project Level

- Architecture Budgeting & Estimation (Effort & Cost)
- Solution Architecture
- Project Assurance

Using Architecture to Manage Third Party Contractors

- Architecture Supported Procurement
- Architecture Supported Contractor Governance
- Contractor Collaboration and Integration Management

Foundational Architecture Capabilities

- Architecture Standards & Reference Models
- Architecture Deliverable Standardization
- Architecture Infrastructure & Tools Standardization
- Knowledge Management for Architecture Products
- Configuration Management of Architecture Products

World-Class Enterprise Architecture A White Paper by The Open Group Adoption Strategies Working Group
Leading the development of open, vendor-neutral IT standards and certifications

http://opengroup.co.za/  http://opengroup.org/
The Open Group Architecture Framework

TOGAF is an architecture framework developed by The Open Group to provide the methods and tools for assisting in the acceptance, production, use and maintenance of an enterprise architecture.
Why TOGAF®

- A comprehensive general method
- Complementary to, not competing with, other frameworks
- Widely adopted in the market
- Tailorable to meet an organization and industry needs
- Available under a free perpetual license
- Vendor, tool and technology neutral open standard
- Avoids re-inventing the wheel
- Business IT alignment
- Based in best practices
- Possible to participate in the evolution of the framework
Mapping COBIT 5 to TOGAF 9

Frameworks
Mapping COBIT 5 to TOGAF 9

COBIT 5 Management Practice

APO03.01  Develop the enterprise architecture vision
APO03.02  Define reference architecture
APO03.03  Select opportunities and solutions
APO03.04  Define architecture implementation
APO03.05  Provide enterprise architecture services

TOGAF
H, Prelim. + A
B, C, D
E
F
G + Requirements
### GWEA Deliverable Reference Model

#### Preliminary (P) & Vision (A) Views

<table>
<thead>
<tr>
<th>EA Org Model</th>
<th>EA FW</th>
<th>EA Request</th>
<th>EA SOW</th>
<th>EA Principles</th>
<th>EA Vision</th>
<th>Comm Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Business Architecture Views (B)</strong></td>
<td><strong>Data Architecture Views (C1)</strong></td>
<td><strong>Application Architecture Views (C2)</strong></td>
<td><strong>Technology Architecture Views (D)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business Performance Model</td>
<td>Data Reference &amp; Standards Model</td>
<td>Application Reference &amp; Standards Model</td>
<td>Technology Reference &amp; Standards Model</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organisation Structure Model</td>
<td>Data Security Model</td>
<td>Application Distribution Model</td>
<td>Technology/Network Distribution Model</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business Function/Service Model</td>
<td>Data-Application Model</td>
<td>Application Stakeholder Model</td>
<td>Technology Platform Model</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business Information Model</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business Process Model</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business Gap</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business Roadmap</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Opportunities & Solution (E) and Implementation Plan (F) Views (Programmatic Views)

<table>
<thead>
<tr>
<th>Consolidated Roadmap &amp; Transition Architecture</th>
<th>Implementation and Migration Plan</th>
<th>Implementation Governance Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Gap</td>
<td>Application Gap</td>
<td>Technology Gap</td>
</tr>
<tr>
<td>Data Roadmap</td>
<td>Application Roadmap</td>
<td>Technology Roadmap</td>
</tr>
</tbody>
</table>
GWEA Future Developments

a) **Guidelines for Implementation.** Develop a comprehensive set of guidelines for the enlisted stakeholders to enable them to implement and conform to the GWEA Framework. Such guidelines should include Enterprise Architecture responsibility matrices for an organ of state, templates and samples of the deliverables, and how the GWEA Framework will supersede the existing “IT Planning Guidelines” and “Master System Planning” processes in the Government of South Africa.

b) **Architecture Knowledge Base.** Create an on-line knowledge base (web site) to publish Enterprise Architecture and Interoperability related policies, standards, and guidelines.

c) **Architecture Principles.** Develop a set of Architecture Principles that is relevant to the Government of South Africa.


e) **Architecture Training.** To establish a mechanism (tender) through which architects in Government can obtain affordable and relevant training and certification.

f) **Architecture Tools.** To establish a mechanism (tender) through which any Government entity can acquire GWEA compliant Enterprise Architecture Software.
GWEA EA Product Dependency
Progressive Architecture Development

- TOGAF Next…
- Refine pragmatic approach to EA in Government
- …
GWEA Approach

Opportunities
Enterprise Architecture Content

- EA Content Frameworks
- Share and Reuse
- Global Collaboration

DoD business architecture lacks detail, says GAO

May 20, 2013 | By David Perera

Despite at least $378 million spent over a decade by the Defense Department to establish a business enterprise architecture, the DoD has yet to show that it's using that architecture as intended, says the Government Accountability Office.

The BEA is meant to guide investment decisions on thousands of administrative systems ranging in function from personnel and financial management to healthcare and logistics; for the coming fiscal year, the DoD says its needs $6.51 billion in funding for them.

Among other things, the architecture is meant to enable interoperability among the approximately 2,100 defense business systems, but auditors say in a May 17 report (.pdf) that the BEA lacks detail.

- Reference Models

Opportunities
Technical Reference Model

MINIMUM INTEROPERABILITY STANDARDS (MIOS)
for Government Information Systems

Revision 5.0

November 2011
Organizational Transformation – Change Management

ORGANIZATIONAL TRANSFORMATION

A Framework for Assessing and Improving Enterprise Architecture Management (Version 2.0)
Some suggestions on next steps…

- Membership or TOGAF Commercial Licensing
  https://www.opengroup.org/togaf/cert/licensees.tpl
- TOGAF Certification
- South African GWEA Workgroup
- Collaboration
- Adding value…don’t confuse activity with progress
- Business appropriate and sustainable EA Practice

http://opengroup.co.za/ea-forum

Conclusion
The Importance of Architecture

“Increasing flexibility and reducing time to market is not going to happen by accident or through one more technology acquisition or one more package or one more application implementation…

…it will only happen because of a responsible and intellectual investment in this case, in developing and maintaining Enterprise Architecture, to deliver quality information, in fact, to produce a quality Enterprise.”
Contact Details

Stuart Macgregor is the CEO of Real IRM and The Open Group - South Africa. Through his personal achievements, he has gained the reputation of an Enterprise Architecture and IT Governance specialist, both in South Africa and internationally. He is openly obsessed with Enterprise Architecture with a definite business bias.

Stuart is a member of John Zachman’s advisory committee. He has participated in the development of both COBIT® and TOGAF® over a number of years. As the lead researcher, Stuart assisted the IT Governance Institute map COBIT to TOGAF® which was published by ISACA and The Open Group. In the role of lead consultant, he has assisted numerous organisations establish their Enterprise Architecture practices and has also used COBIT to develop IT Governance frameworks for NYSE Top 100 companies. Stuart participated in the COBIT 5 development workshops held in London and Washington.

Stuart Macgregor
+27 11 805 3734 (office)
+27 11 805 2823 (fax)
stuart.macgregor@realirm.com
Twitter: @RealiRM

Real IRM Solutions (Pty) Ltd
Registration number: 2001/026036/07