Setting up an Effective Enterprise Architecture capability

Simon Townson
Principal Enterprise Architect
SAP
Agenda

• Why ?
• People and Organisation
• EA Framework
• Standards and Templates
• Tools
• Processes
• SAP “Must-Have” Checklist
• Questions
An Enterprise Architecture Capability ensures Business-IT alignment
Why?........Winchester House example

- 38 years of construction
- 160 rooms, 40 bedrooms, kitchens, 2 basements, 950 doors
- 65 doors to blank walls, 13 staircases abandoned, 24 skylights in floors
- 147 builders, 0 architects
- No architectural blueprint

Does your systems landscape resemble this?
Finding the right trade-off is difficult…

……careful governance is needed
How to set up an effective EA capability?

- Ensure leadership and skills are available for architecture development combined with an effective organization and roles to maintain, manage and govern the architecture effectively
  --> People and Organization

- Ensure architecture development is carried out using a proven and flexible methodology with standard deliverables while ensuring Business/IT alignment
  --> Enterprise Architecture Framework

- Ensure the availability of standards and a system of compliance with them, plus a set of best practice templates for architecture deliverables
  --> Standards and Templates

- Ensure effective management of architecture content and deliverables
  --> Enterprise Architecture Tools

- Ensure architecture processes are integrated with other key processes
  --> Integrated Processes

All of these elements are critical when setting up an effective Enterprise Architecture capability
The Five Dimensions of an effective Enterprise Architecture Capability

1. People and Organization
2. EA Framework
3. Standards and Templates
4. EA Tools
5. Integrated Processes

Business Strategy and Planning (Corporate and BU) (PLAN)

Research & Development (CTO) (INNOVATE)

Enterprise Architecture

Governance Framework

Service Management (IT Operations) (RUN)

Management of Projects and Programs (PMO) (BUILD)
Agenda

• Why?
• **People and Organisation**
  • Framework
  • Standards and Templates
  • Tools
  • Processes
  • SAP “Must-Have” Checklist
• Questions
1. People and Organization
Recommended EA Governance Mechanisms

- **IT Management Team**
  - sets the overall governing IT strategy

- **Architecture Board**
  - responsible for governing and maintaining the overall architecture that delivers the strategy
  - co-ordinates, shapes and reviews all programs

- **Business and Program Design Authorities**
  - delegated responsibility for shaping and reviewing specific business unit and program architectures

- **Projects**
  - ensure their own solutions are controlled and adhere to architecture standards
1. People and Organization

Key roles within EA Governance mechanisms

- **CIO**
  - chairs the IT Management Team

- **Chief Enterprise Architect**
  - chairs the Architecture Board

- **Enterprise Architects**
  - assigned to specific programs and/or business units or areas
  - assures the program and/or BU architectures conform to standards
  - May also specialise in Business, Application, Data or Technology architecture domains

- **Solution Architects**
  - aligned to projects and assure the solution architectures conform to standards

- **Other roles play their part:**
  - Business Analysts
  - Domain Experts and SMEs
  - Infrastructure Specialists
1. People and Organization

Example EA team showing structure and major functions

- Chief Enterprise Architect
- Business and IT Stakeholders
- Enterprise Architecture Framework
- Processes, Policies & Standards
- Domain Experts (*)
- EA Tools and Repository
- EA / IT Integration & Mappings
- Other key areas

*) Domains are
- Business
- Application
- Data
- Technology

EA Leadership
EA Functions
Other key areas
EA Training / Certification Provider
Strategic Vendor Architecture Teams
Tool Provider e.g. IDS Scheer
1. People and Organization

Example team showing operational roles and recommended numbers.

- Chief Enterprise Architect (1)
- Enterprise Architecture Framework (1)
- Processes, Policies & Standards (1)
- EA Domain Experts (3/4)
- EA / IT Integration & Mappings (1)
- Tools and Repository (1)
- Enterprise Architects (2/5/8)
- Enterprise Architects (2/5/8)
- Solution Architects (IT/BU)
- Business Architects (BU)
- Specialists & SMEs (IT/BU)
The SAP Enterprise Architect Curriculum including SAP TOGAF™ training

Certified Associate SAP Enterprise Architect Curriculum

- EA100 3 Days: Enterprise SOA Fundamentals
- EA200 5 days: SAP Enterprise Architect Framework Level I
- Certified Associate SAP Enterprise Architect

Certified Professional SAP Enterprise Architect Curriculum

- Certified Associate SAP Enterprise Architect
- EA250 5 Days: SAP Enterprise Architect Framework Level II
- Certified Professional SAP Enterprise Architect

Certified TOGAF™ Enterprise Architecture Training

- EA220 5 Days: TOGAF 9
- TOGAF Level I and II Certification
Agenda

• Why?
• People and Organisation
• **EA Framework**
• Standards and Templates
• Tools
• Processes
• SAP “Must-Have” Checklist
• Questions
## 2. EA Framework

SAP EAF - a proven, clearly-defined method for EA development

### SAP EAF

<table>
<thead>
<tr>
<th>SAP Specific Tools</th>
<th>SAP-Specific Mappings</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SAP Content Tools</strong> (e.g. Solution Composer, Roadmap Composer, SAP Service Workplace)</td>
<td><strong>Supplier Independent Framework</strong></td>
</tr>
<tr>
<td><strong>EA Modelling Tools</strong> (e.g. IDS Scheer)</td>
<td><strong>Templates, Examples and Case Studies</strong></td>
</tr>
<tr>
<td><strong>SAP Implementation Tools</strong> (e.g. Solution Manager, System Landscape Directory)</td>
<td><strong>Architecture Development Method</strong></td>
</tr>
</tbody>
</table>

### SAP-Specific Mappings

<table>
<thead>
<tr>
<th><strong>Usage Guidelines</strong></th>
<th><strong>Resource Base</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TOGAF Architecture Development Method</strong></td>
<td><strong>SAP Business Reference Models</strong></td>
</tr>
<tr>
<td><strong>TOGAF Resource Base</strong></td>
<td><strong>SAP Technology Reference Models</strong></td>
</tr>
</tbody>
</table>

### Supplier Independent Framework

- Templates, Examples and Case Studies
- Architecture Development Method
- Content Metamodel

### Resource Base

- SAP Business Reference Models
- SAP Technology Reference Models
Summary - SAP EAF has contributed many significant additional elements to TOGAF 9.0.
2. EA Framework

Recommendations

- For SAP customers with a large footprint of SAP solutions and supporting infrastructure, SAP EAF must be considered as the strategic EA Framework. Other frameworks lack the specific focus on packaged solutions and mapping with vendor methods, services and tools.

- Any framework requires tailoring for specific enterprise and business unit terminology, standards, deliverables and capabilities, and time should be allowed for this activity.

- All enterprises have the ability to get involved with the Open Group and the evolution of The Enterprise Architecture Framework (TOGAF) through involvement in the Architecture Forum (TOGAF governance and development) and the IT Architecture Certification (ITAC) Forum (EA training and certification).
Agenda

- Why?
- People and Organisation
- EA Framework
- **Standards and Templates**
- Tools
- Processes
- SAP “Must-Have” Checklist
- Questions
3. Standards and Templates

**Standards ensure:**
- Enterprise complexity is reduced
- Solutions can be maintained efficiently
- Business and IT are aligned

**Templates ensure:**
- the right information is available
- the right quality is produced
- consistency between projects

**Typical standards needed include:**
- Business Process Standards
  - How are processes to be modeled and documented?
- Design Standards
  - How will we develop, customize and implement solutions?
- Infrastructure Standards
  - What infrastructure technologies will we standardize on

**Typical templates needed include:**
- Statement of Opportunity
  - What’s the problem?
- Outline Design
  - How do I intend to build it?
- Detailed Design
  - How am I actually building it?
- Support Model
  - How will what is built be supported?

SAP EAF provides a set of standards and templates for EA development.
Partners and developers provide sets of standards for Solution development.
3. Standards and Templates

Recommendations

- Existing Architecture standards for all domains (including Solution Architecture) should be collected and compared against best practice and existing SAP EAF examples.

- Existing templates for EA and Solution Architecture artefacts should be collected and compared against best practice and existing SAP EAF templates.

- A consolidated set should then be managed and governed by the Architecture Board.
3. Standards and Templates
Examples implemented @ SAP
Agenda

- Why?
- People and Organisation
- Framework
- Standards and Templates
- **Tools**
- Processes
- SAP “Must-Have” Checklist
- Questions
4. Tools

- **Tools are needed to:**
  - Enable easy maintenance of architecture as the business and IT landscape changes
  - Efficient share architecture knowledge sharing across the whole organization
  - Provides stakeholders with models most relevant to their role
  - Promotes re-use of models
  - Promotes more consistent quality as the models are integrated
  - Everyone uses the same language
  - Provides one source of the truth properly managed

- **Tools help prevent:**
  - Proliferation of non-standard artifacts
  - Unmaintainable Visio and Excel files
  - Knowledge locked away in only one person’s head or ‘C’ drive
4. Tools

Recommendations

- An evaluation of tools is recommended considering functionality, technology architecture, costs (TCO), service and support capabilities.
- Focus on tools that provide SAP EAF and/or TOGAF starter kits e.g. Sybase Power Designer, ARIS IT Architect.
- The EA team should consider integration with Solution Manager to map SAP instance landscape.
- The EA team should liaise with the Business Process Office to ensure integration of EA and BPM models and tooling approaches.
- The EA repository (database and filters/templates) should be managed and governed by the Chief Enterprise Architect.
- Training in the tool, using the SAP EAF Metamodel and viewpoints should be carried out for Enterprise Architects and the Business and Program Architecture community.
Agenda

• Why ?
• People and Organisation
• Framework
• Standards and Templates
• Tools
• Processes
• SAP “Must-Have” Checklist
• Questions
An effective EA capability must be aligned with four other key areas in your IT organisation.
In order for Enterprise Architecture to function effectively, we need:

- A clear set of business processes linked to existing programs and projects
  - Which roles perform what tasks and when
- A clear set of task descriptions
  - What happens at each process step
- A clear set of RACI matrices
  - Who is Responsible, Accountable, Consulted, Informed
- A set of review checklists for key design artifacts

SAP have already developed a working set of EA processes and RACIs.
5. Processes
Recommendations

- Existing EA and Solution Architecture processes need to be integrated with SAP EA best practice processes and a gap analysis should be carried out.

- An analysis should also be carried out to identify existing management processes in the following four key areas for integration with key EA processes:
  - Business Strategy and Planning (PLAN)
  - Research and Development (INNOVATE)
  - Management of Projects and Programs (BUILD)
  - Service Delivery and Service Management (RUN)

- A set of consolidated EA processes should be developed, agreed, approved and documented including process models in EA/BPM tools, task descriptions, RACIs and checklists for key design artifacts.
5. Processes
Example EA Processes @ SAP

EA processes accessible and transparent to all employees
Agenda

• Why?
• People and Organisation
• Framework
• Standards and Templates
• Tools
• Processes
• **SAP “Must-Have” Checklist**
• Questions
SAP “must have” checklist for success!

- You must give yourselves adequate time for EA set-up activities. Guidelines would be:
  - If you have help – at least 3 months
  - If you are on your own – at least 6 months
  - If you are still setting up in 12 months – you have failed!
- You must have sponsorship at CxO level
- You must be clear on the “burning platform”........not EA for EA’s sake
- You must have a great EA leader
- You must have a compelling EA vision/mission
- You must have experienced EA resources who can mentor/grow others
- You must treat setting up an EA Capability just like any Business Change
- You must have an effective marketing and communications strategy
  - Use all channels – print, electronic, formal and informal
  - Use your marketing department who know how to do this!
- You must consider the role of your strategic vendors and partners
Example EA Capability Roadmap

Q1
- Set up EA team
- EA for major programs
- New Architecture roles
- Proving new EA Processes aligned with programs
- Business Unit 'As Is' Architectures
- Roll out Stakeholder map & Communication plan
- Proving new EA Templates
- Program EA using current tool and standards
- Pilot of ARIS
- New Architecture KPIs

Q2
- TOGAF 9 accreditation
- ARIS training
- Business Unit 'To Be' Architectures

Q3
- Additional training for other architecture roles
- Refine EA Processes
- Align roadmaps
- Business Unit 'To Be' Architectures
- Architecture Website
- Maturity Assessment

Q4
- Create stakeholder reports
- Refine EA Templates
- Migrate tool to ARIS
- EA using ARIS
How to build the perfect house......

- People and Organisation
- EA Framework
- Standards and Templates
- Tools
- Processes
- SAP “Must-Have” Checklist
Questions

Simon Townson
Simon.Townson@sap.com
Finally.........measuring benefits

### Business Benefits
- # Projects initiated linked to drivers/goals
- Benefits identified of initiated Projects
- Ease of access to information ("Boundaryless Information Flow")
- # Process improvements identified

### IT Benefits
- IT cost savings achieved through EA
- # Applications retired/consolidated
- # Technologies retired/consolidated
- Simplification of IT landscape

### EA Coverage
- % AS-IS and TO-BE architectures complete
- # of Implementation and Migration Plans
- # of Projects engaging design assurance
- # of Programs with Enterprise Architects

### EA Processes
- # Solution designs approved/rejected
- # and frequency of design reviews
- # Architecture Change Requests
- # Programmes with Enterprise Architects

### EA Presence
- # Enterprise Architects in place
- # Enterprise Architects trained
- # Enterprise Architects certified
- # Approved standards in place
Further information – Value of EA

Blog Series: The Value of Enterprise Architecture

In Part 3 of his blog series on topics facing Enterprise Architects, SAP's Simon Townsend, Principal Enterprise Architect, discusses how to show the value that can be derived from enterprise architecture. See also Part 1 and Part 2, and stay tuned for more! 11 Mar 2011

- The Value of Enterprise Architecture - SDN Blog
Further information – EA Best Practice Benchmark

EA Maturity Best Practice Survey is based on the practices within following six major EA categories. Corresponding metrics data has been collected to assess influence of each practice on the performance.

- **Business-IT Alignment**: Aligning business vision, strategies, drivers and goals with IT vision and architecture.
- **Architecture Development**: Documented products, architecture, strategy, vision, standards, principles, migration strategies and specifications.
- **Enterprise Architecture Process**: Framework, process, methodology and templates used for Enterprise Architecture.
- **Stakeholder Involvement**: Support of the EA program throughout the organization including senior executives and stakeholders.
- **Architecture Communication**: Education and distribution of EA artifacts including architecture specifications, standards, principles and guidelines.
- **Architecture Governance**: Direct or guide architecture practice ensuring that organizational performance aligns with the strategic intent of EA practices.

https://www.benchmarking.sap.com/cgi-bin/qwebcorporate.dll?idx=DQM5VB&LNG=0&SHSP1Q2A=ASUG