#entarch in end-to-end change-friendly capability delivery

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ea2011 = CAUDIT Enterprise Architecture in Higher Education Symposium
the ultimate outcome of enterprise architecture is change-friendly capability delivery
today’s session

• nature of the University’s entarch practice
• challenges and benefits encountered
• artefacts used to communicate architecture
• key performance metrics of the practice
nature
university structure
team roles

• Enterprise Architect
  – define the overall architecture
  – stakeholder relationships
  – repository strategy
  – Burton = principles layer

• Solutions Architects
  – business-facing
  – strong outward links with business and projects
  – strong inward links with technologists
  – establish solution patterns
  – supported by the Technical Architects
  – Burton = technical positions
team roles

• Technical Architects
  – technical proof-of-concepts
  – establishing delivery patterns
  – delivery-group capability-building focus
  – strong links with Development Architects
  – Burton = specific technical solution templates

• Information Custodian
  – harvest and manage artefacts
  – keep the architects honest
organised implementation
organised implementation
organised implementation
• integration = business process
• integration = web
• integration = identity
• Integration = functionality
• integration = data
• integration = infrastructure
## Current Activities

<table>
<thead>
<tr>
<th>Integration Replatforming</th>
<th>University Directory</th>
<th>Information Management Strategy</th>
<th>Enterprise Search</th>
</tr>
</thead>
<tbody>
<tr>
<td>Integration Remediation</td>
<td>Peoplesoft HR Upgrade</td>
<td>Electronic Document Records Management</td>
<td>Content Management System Upgrade</td>
</tr>
<tr>
<td>PeopleTools Upgrades</td>
<td>Research Outputs Integration</td>
<td>Ecommerce Platform</td>
<td>Alumni Self-Service</td>
</tr>
<tr>
<td>Project Costing Integration</td>
<td>Buildings and Spaces Integration</td>
<td>Accommodation Service Integration</td>
<td>Online Scholarships</td>
</tr>
<tr>
<td>On-Demand Text-Messaging Service</td>
<td>Self-Managed Password Service</td>
<td>Alumni System Integration</td>
<td>Assignment Tracking</td>
</tr>
<tr>
<td>Hosted Spaces in SharePoint</td>
<td>Enterprise Service Bus Patterns</td>
<td>Find-a-Thesis Initiative</td>
<td>Identity Management Improvements</td>
</tr>
<tr>
<td>Federated Single Sign-On</td>
<td>Solutions Matrix for Goldengate</td>
<td>ID Cards Strategy</td>
<td>Usability of Key Online Transactions</td>
</tr>
<tr>
<td>Identity Integration with RightNow CRM</td>
<td>P3M Artefacts</td>
<td>Network Strategy</td>
<td>Social/Flexible Authentication</td>
</tr>
<tr>
<td>Tuakiri Access Federation</td>
<td>Cloud Strategy</td>
<td>Telephony and Unified Communications</td>
<td>Mobility Strategy</td>
</tr>
<tr>
<td>Candidate Gateway Reimplementation</td>
<td>EResearch Service TRM</td>
<td>Optometry Clinic Systems</td>
<td>Doctoral Expression of Interest</td>
</tr>
</tbody>
</table>
leverage

- **design for leverage**: improve quality, consistency, and performance through:
  - the use of standards
  - focus on interoperability
  - focus on shareability
  - robust security mechanisms

evolveability

- *design for evolveability*: ensure that a sound migration path exists from the current to future versions of software architectures.
• **design for simplicity**: enable less-skilled participants to create and maintain solutions. Improve productivity, and facilitate the speed of architectural and design changes.
• *design for serendipity*: serendipity is the pinnacle of flexibility. Architecture should not only facilitate known flexibility needs, but should also strive to enable emergence and innovation that is yet unknown.
twin goals

...based on the ideas of Andy Kyte from Gartner.
journey
end-to-end

- USPO
  - University Strategic Programmes Office
- P3M methodology
  - Portfolio, Programme, and Project Management
...and/with:

- Service Domain Strategy Templates
- Application Portfolio
- Information Management
end-to-end

• Vertical scalability is essential
  – design and delivery teams must use consistent templates for artefacts when working on USPO and non-USPO initiatives

• Horizontal dockability is essential
  – artefacts must be extendable to become more detailed as they progress through the stage/gate process
• Enterprise Architecture
  – involved more intensively earlier in the process
  – responsible for repository management
  – responsible for identifying solutions
  – responsible for high-level solutions design
  – co-facilitates each stage’s discovery festival
• Challenges
  – the process is still being confirmed
  – few initiatives have pass through the process
  – the “discovery festival” is sometimes a hard sell
  – P3M culture and templating
  – time, engagement, and change
  – project-recoveries and pre-business-case work
  – under-the-radar initiatives
  – recognising non-USPO initiatives equally
  – consensus on the #entarch takeaways
end-to-end

• Benefits
  – formalised certain #entarch involvement
  – much-improved governance of change
  – much-improved visibility of change
  – the “discovery festival” works really well
refooting the practice

• Environmental changes
  – organisational restructure
  – organisational need
  – new senior management

• Auckland’s EA is becoming
  – more traditional
  – more strategic
  – differently trusted
artefact
end-to-end

- Just-in-time details capture
- Informal sketches
  - phone cameras
  - wiki articles
  - Context Diagrams
  - Component Diagrams
- Information Management
  - exchange between groups
  - exchange across stage/gates
solution design
metrics
• Communicate the value of #entarch
  – anecdotes and word-of-mouth
  – positive use cases
  – reporting and engagement

• Quantify the value of #entarch
  – key performance indicators
  – measurement and metrics
  – ownership and causality
  • it can be difficult to claim the benefit
maturity as metric

e.g., United States Department of Commerce =
http://ocio.os.doc.gov/ITPolicyandPrograms/Enterprise_Architecture/PROD01_004935, also covered at
http://pubs.opengroup.org/architecture/togaf8-doc/arch/chap27.html
<table>
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<th>Acronym</th>
<th>$NAIE$ (or $NAIE_{ISA}$)</th>
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<tbody>
<tr>
<td>Name</td>
<td>Average Number of Applications per «Information Entity»</td>
</tr>
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</table>
| Computation | The Average Number of Applications per «Information Entity» is computed counting the average number of applications («IS Blocks») that through its «operations» support each «information entity».  

$$NAIE_{ISA} = \frac{\sum_{i=1}^{\#\text{Information Entity}} \#\text{ISBlocks} \in \exists\text{«operation» CUD «InformationEntity»}_i}{\#\text{«Information Entity»}},$$

where:  

$\#\text{ISBlocks} \in \exists\text{«operation» CUD «InformationEntity»}_i$ – is the number of «IS Blocks» in which exists an «operation» that CUD (Creates, Updates or Deletes) the «information entity» $i$.  

$\#\text{«Information Entity»}$ – is the number of «Information Entities» |
| Scale   | $[0;+\infty)$ |

causally-challenged metrics

• improved agility
• shorter cycle times
• ability to extend systems to meet increasing demand
• faster systems operations
• new client system capabilities
• better ability to outsource
• improved ability to seize new business opportunities

...attributed to Deborah Weiss from her Gartner days back in 2006: http://ea.typepad.com/enterprise_abstraction/2006/07/metrics.html
Sample Metrics

Activity oriented metrics
- Number of architecture and design artefacts reviewed
- Number of architects certified

Acceptance oriented metrics
- Percentage of compliant projects
- Relative rating of EA as a support function in the organisation
- Number of software development team members in business units who look to EA for mentoring
- Feedback surveys (qualitative)

Value oriented metrics
- Revenues generated by new business initiatives during the time to market won by improved agility
- Cost savings through re-use of software components
big-ticket metrics

1. IT Total Cost of Ownership (TCO) as a Percentage of Revenue
   - aiming for low/benchmark levels
2. Total Cost Savings (TCS)
   - intervention in projects and ensuring reuse
3. Percentage Of Spend That's Strategic (PSTS)
   - strategic investment vs tactical investment
4. Common Services Compliance Rate (CSCR)
   - stop buying server-bound storage
   - use the middleware platforms
5. Architectural Due Diligence Rate (ADDR)
   - projects and changes coming through EA governance
6. Sunset Technology (ST)
   - TIME model and application portfolio management
7. Business-Specific
   - delivery times, quality of service, higher-education KPIs

http://simplicable.com/new/7-key-enterprise-architecture-metrics
gartner metrics 1

• EA Process Performance
  – internal measures of EA process activities
    • currency, speed, completeness, accuracy, effectiveness

• Organisational Coverage
  – interaction of the EA process with those external to the EA team
    • %staffParticipants, %projects, %governedSpend, %trainedArchitects

• Component Content Utility
  – usefulness of deliverables created by the EA process
    • %deviantProjects, %noncompliantSpend, %variance by architecture layer, %positiveStakeholderFeedback

• Enterprise Technical Architecture metrics
• begin with basic metrics, get sophisticated later
• include cost-savings attributed to #entarch
  – somehow, using an agreed technique
• compliance and throughput metrics are easier to establish first
• metrics indicating reuse:
  – conceptual alignment: principle alignment
  – logical alignment: product match
  – physical/implementation alignment: product-set configuration and platform reuse

Robertson, B. (2010) *Develop Enterprise Technical Architecture Metrics to Demonstrate Enterprise Architecture Value*, Gartner Research, IDG00175274
close
enterprise architecture charter

- scope
- objectives
- metrics
- governance
- roles
- responsibilities
- processes
- deliverables
- communications

summary

• we’re becoming less maverick
• organisational change is widespread
• optempo and pace increases down the stack
• baseline metrics are essential
• #entarch must earn/pay its way
• #entarch must be adaptive
• #entarch is a long-term practice
• #entarch is a force for good
thank you

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