Putting the "Agile" into an Enterprise Architecture Process

Creating an AgileEA Process

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Version 1.1
Meta-Presentation

• Context
• The Challenge
  1. The **Agile in EA** part
  2. The **EA Process** part
  3. The **EPF** part
• Conclusion
Context
Past Threads
(My background)

Future Threads
(This Talk)

Enterprise Architecture Now
Where from? (Past Threads)

- **Modelling**
  - Flow Charts, Entity-Relationships, Data Flow, IEW & other case tools (80’s)
  - InfoMet - South Africa - EA modelling (90-97)
  - UML 1..2 (from 97 → current),
  - Sparx Enterprise Architect (2003),
  - ARIS (2005)

- **Enterprise Architect @ Umgeni water (92-95)**
  - Tracked SCADA, Telephony, Computing LANs & WANs, incl. GIS and Chemistry Laboratory equipment

- **RUP implementation & iterative mentoring**
  - All IBM Rational Tools & others + RUP (1999-2007)
  - Agile Methods, Scrum, XP, Agile Modelling, etc.

- **TOGAF 8.1.1**
Where to? (Future Threads)

• **Agile in EA**
  - How we can use Agile concepts in Enterprise Architecture.

• **Enterprise Architecture Process**
  - The daily process an EA Practice uses.

• **Eclipse Process Framework**
  - Show how an Agile EA process can be simply represented.
The Challenges
Business & IT Environment

- Changes → Come Faster & faster
- Compliance → Gets Tighter & tighter
- Delivery → Needed Sooner & sooner
- Application distribution → Wider & wider
- Stress → Pressure Higher & higher

UNLESS WE CONTROL THIS CHAOS = FAILURE!
Enterprise Architecture Environment

- EA is becoming more relevant \( \rightarrow \text{Why?} \)
- Understand the BIG picture in the organisation
- Understand divergence \( \rightarrow \text{Converge Architecture} \)
- Understand & enable software component reuse
  - Microsoft’s - Software Factory concept
  - Commercial-off-the-shelf (COTS) integrations
  - Reuse of Services in a SOA world
- Understand the growing complexity

“YOU CAN’T MANAGE WHAT YOU CAN’T SEE & UNDERSTAND”
Enterprise Architecture Processes

- As more Companies see the benefit & start up EA
- Look to TOGAF, Zachman, etc. for guidance
- **TOGAF (ADM)** = Architecture Development Method

Some **PROs**
- Generic (purposely)
- Configurable
- Broad Coverage
- Growing
- Open
- Helps governance...

Some **CONs**
- Difficult to know where to start
- No Artefact Meta-Model
- No relationship between
  - Roles, Activities and Artefacts
- 500 Pages of good stuff, but where do I start?...
The Agile in EA part
Unified Process & Agile + EA = AgileEA
Phases & Milestones

Money to start EA department or Project.

Concepts sold to Business. EA Vision, Business Case, Benefits, etc.

1st baseline of a working EA Practice Process Activities, Roles, Artefacts, Resources, etc.

On-going: No specific milestone. Could be carved up into any phases. E.g. Annual cycle, Maturity steps, etc.

Time Dimension
Iterations in EA

- Iteration Activity stack (When Aspect)
Use SCRUM management

Its intended use is for management of software development projects, and it has been successfully used to "wrap" Extreme Programming and other development methodologies. However, it can theoretically be applied to any context where a group of people need to work together to achieve a common goal – such as setting up a small school, scientific research projects or planning a wedding. (Wikipedia) [2] – EA Practice??

- A living backlog of prioritized work to be done;
- Completion of a largely fixed set of backlog items in short sprints;
- Brief daily meeting (scrum), at which progress is explained, upcoming work is described and impediments are raised.
- A brief planning session in which the backlog items for the sprint will be defined. (At the end of sprint once per sprint)
- A brief heartbeat retrospective, at which all team members reflect about the past sprint. (At the end of sprint once per sprint) [3][4]
**Normal Scenario** - new work item arrives
Start

Consider within prioritized context of all work items

[Can wait till next iteration]

[Must do NOW]

Add to Iteration plan

Remove something else from Iteration plan

Add to Backlog List

- Define a strategy for X, Priority = Very High, Iteration 1
- Evaluate This Project, Priority = High, Iteration 1
- Evaluate That Product, Priority = High, Iteration 1
- Model The Business, Priority = Medium, Iteration 1
- Define Strategy for Y, Priority = High, Backlog
- Manage the Data, Priority = Medium, Backlog
- Upgrade the Security, Priority = Medium, Backlog
- Retire the SAN, Priority = Medium, Backlog
- Propose a Candidate, Priority = Low, Backlog
- Propose a Candidate, Priority = Low, Backlog
Model The Business, Priority = Medium
Evaluate This Project, Priority = High
Evaluate That Product, Priority = High
Define Strategy for Y, Priority = High
Manage the Data, Priority = Medium
Upgrade the Security, Priority = Medium
Retire the SAN, Priority = Medium
Propose a Candidate, Priority = Low
Propose a Candidate, Priority = Low

Evaluate New Project, Priority = Medium

[Can wait till next iteration]

Consider within prioritized context of all work items

[Must do NOW]

Add to Iteration plan

[Can wait till next iteration]

Add to Backlog List

Remove something else from Iteration plan

Define a strategy for X, Priority = Very High Iteration 1
Evaluate New Project, Priority = Medium Iteration 1
Evaluate This Project, Priority = High Iteration 1
Evaluate That Product, Priority = High Iteration 1
Model The Business, Priority = Medium Iteration 1
Define Strategy for Y, Priority = High Backlog
Manage the Data, Priority = Medium Backlog
Upgrade the Security, Priority = Medium Backlog
Retire the SAN, Priority = Medium Backlog
Propose a Candidate, Priority = Low Backlog
Propose a Candidate, Priority = Low Backlog
Model The Business, Priority = Medium
Evaluate This Project, Priority = High
Evaluate That Product, Priority = High
Define Strategy for Y, Priority = High
Manage the Data, Priority = Medium
Upgrade the Security, Priority = Medium
Retire the SAN, Priority = Medium
Propose a Candidate, Priority = Low
Propose a Candidate, Priority = Low
Evaluate New Project, Priority = Medium
Add to Iteration plan
Add to Backlog List
Consider within prioritized context of all work items
[Must do NOW]
[Can wait till next iteration]
Remove something else from Iteration plan

Define a strategy for X, Priority = Very High
Evaluate This Project, Priority = High
Evaluate That Product, Priority = High
Model The Business, Priority = Medium
Define Strategy for Y, Priority = High
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Upgrade the Security, Priority = Medium
Retire the SAN, Priority = Medium
Propose a Candidate, Priority = Low
Propose a Candidate, Priority = Low

Iteration 1
Iteration 1
Iteration 1
Iteration 1
Iteration 1
Backlog
Backlog
Backlog
Backlog
Backlog
Model The Business, Priority = Medium
Evaluate This Project, Priority = High
Evaluate That Product, Priority = High
Define Strategy for Y, Priority = High
Define a strategy for X, Priority = Very High
Manage the Data, Priority = Medium
Upgrade the Security, Priority = Medium
Retire the SAN, Priority = Medium
Evaluate New Project, Priority = Medium
Propose a Candidate, Priority = Low
Propose a Candidate, Priority = Low

Consider within prioritized context of all work items
[Can wait till next iteration]

Add to Iteration plan
Remove something else from Iteration plan

Add to Backlog List
[Must do NOW]

Iteration 1
Iteration 1
Iteration 1
Iteration 1
Backlog
Backlog
Backlog
Backlog
New

[Can wait till next iteration]
15 March 2007

- Model The Business, Priority = Medium
- Evaluate This Project, Priority = High
- Evaluate That Product, Priority = High
- Define Strategy for Y, Priority = High
- Define a strategy for X, Priority = Very High
- Manage the Data, Priority = Medium
- Upgrade the Security, Priority = Medium
- Retire the SAN, Priority = Medium
- Evaluate New Project, Priority = Medium
- Propose a Candidate, Priority = Low
- Propose a Candidate, Priority = Low

Add to Iteration plan
Remove something else from Iteration plan
Add to Backlog List

Consider within prioritized context of all work items
[Can wait till next iteration] [Must do NOW]
High Priority scenario - new work item arrives
Priorities:

- Define a strategy for X, Priority = Very High
- Evaluate This Project, Priority = High
- Evaluate That Product, Priority = High
- Model The Business, Priority = Medium
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- Propose a Candidate, Priority = Low
- Propose a Candidate, Priority = Low

Steps:

1. Start
2. Consider within prioritized context of all work items
3. [Can wait till next iteration]
4. [Must do NOW]
5. Add to Iteration plan
6. Remove something else from Iteration plan
7. Add to Backlog List
8. [Can wait till next iteration]
9. Start Iteration 1
Evaluate New Project, Priority = Very High
Consider within prioritized context of all work items
[Can wait till next iteration]
Add to Backlog List

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Add to Iteration plan
Remove something else from Iteration plan
Consider within prioritized context of all work items

[Can wait till next iteration]

[Must do NOW]

Add to Iteration plan

Evaluate New Project, Priority = Very High

Remove something else from Iteration plan

Add to Backlog List

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Iteration 1

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Iteration 1

Iteration 1

Backlog

Backlog

Backlog

Backlog

Backlog
Consider within prioritized context of all work items

[Can wait till next iteration]

[Must do NOW]

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Remove something else from Iteration plan

Add to Backlog List

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Upgrade the Security, Priority = Medium
Retire the SAN, Priority = Medium
Propose a Candidate, Priority = Low
Propose a Candidate, Priority = Low

Consider within prioritized context of all work items
[Can wait till next iteration]
[Must do NOW]
Add to Iteration plan
Remove something else from Iteration plan
Add to Backlog List

Done

Consider within prioritized context of all work items
[Can wait till next iteration]
[Must do NOW]
Add to Iteration plan
Remove something else from Iteration plan
Add to Backlog List

Done
Disciplines

- Groups of like Activities – Grouping the Who, How, & What aspects
Roles, Activities & Work Products

- **Role** – The *Who* aspect
- **Activity** – The *How* aspect
- **Work Product** – The *What* aspect
The **EA Process** part
Multi Views

- Repository that holds all our EA information
- A way of specifying **Viewpoints** on the info.
- A way of seeing **Model Views** of the info.
Multi-view e.g.

- **CEO**
  - Concern: Strategy

- **CTO**
  - Concern: Performance
  - Concern: Reliability
  - Concern: Security

- **Auditor**
  - Concern: Security

- **Application Viewpoint**
  - **Business Viewpoint**
  - **Services Viewpoint**
  - **Technology Viewpoint**
  - **Data Viewpoint**
  - **Hardware Viewpoint**
  - **Security Viewpoint**
EA Practice Maturity View

- Use Phases to grow, build and evolve maturity
- Enterprise effort low initially → keep growing
- EA Process effort high initially → trails off after each iteration.
This is a **Viewpoint**. A selection filter forms all things in the EA repository.

This is a **Discipline group**. It groups like Disciplines.

This is a **Discipline**. It groups like Roles, Activities and Artifacts.

This is the **View** defined by the Viewpoint.
Software Development Life-Cycle View

This is a Viewpoint. A selection filter form all things in the EA repository. Where you are looking from.

This is the View defined by the Viewpoint. What you are looking at.

Software Development (UP) Project Viewpoint

Software Development Practice

- Project Management Discipline
- Requirements Discipline
- Analysis & Design Discipline
- Implementation Discipline
- Test Discipline
- Deployment Discipline
- Config & Change Control Discipline
- Environment Discipline

This is a Discipline. It groups Activities.
Projects View vs. EA Practice View
AgileEA Process → maps → TOGAF ADM

Enterprise Architecture Practice

Project Management Discipline Group
- Plan
- Risks
- Governance

Architecture Discipline Group
- Business Architecture
  - Arch Vision
  - Strategy
  - Opportunities
- Information Systems Architecture
  - Arch Vision
  - Solutions
- Technology Architecture
  - Arch Vision

Foundation Discipline Group
- Configuration Management Discipline
- Change Control
- Process & Tools Principles

TOGAF to Agile EA Mapping Viewpoint

TOGAF Viewpoint
- Prelim Framework & Principles
  - A-Architecture Vision
- Architecture
  - B-Business Architecture
  - C-Information Systems Architecture
  - D-Technology Architecture
- E-Opportunities & Solutions
- F-Migration Planning
- G-Implementation Governance
- H-Architecture Change Management
The EPF part
What is EPF?

- Eclipse Process Framework
- [www.eclipse.org/epf](http://www.eclipse.org/epf)
EPF-Composer

- EPF-Composer is a tool developed in the Eclipse IDE.
- It can be freely downloaded as a stand-alone tool [8]
- Develop your own static Process Websites, based upon existing Plug-in modules.
- Reuse Industry standards
  - Plug-in’s exist for OpenUP, XP, Scrum (AgileEA)
  - IBM plug-ins are also compatible giving you many other processes. SOA, J2EE, COTS, ....
Demo Agile EA (developed using EPF)

- Demo is a VERY early version
- Just showing the possibilities
- It may not be correct...
  - but that’s where we want your involvement
Where to from here for AgileEA?

- Aware of TOGAF developing the ADM in EPF.
- Can extend AgileEA from TOGAF’s ADM later.
- We needed AgileEA sooner so we just started.
- All now need to begin working together:
  - TOGAF ADM community
  - EPF community
  - AgileEA community
Conclusion

1. Get More Agile in EA
   - Base your EA process on Scrum or OpenUP logic.

2. Use Iterative processes for EA Practice
   - With Serial Phases that have milestones,
   - Serial Iterations over a short time-frame (+/- 1 month)
   - Build up your Work Products, Activities & Roles.

3. Use an EA Process web (open)
   - So that the EA Practice knows what is expected of them.
   - AgileEA in development currently, available at www.AgileEA.com
The End

- Questions?
  - Thank you
- Contact:
  - charles.edwards@processwave.com
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