CROSS DISSOLVE METHOD FOR EA IMPLEMENTATION

Prithviraj S, Principal Consultant, Satyam Computer Services Limited

Monday, June 23, 2008
Agenda

- What is the need for EA in this Enterprise
- Cross Dissolve methodology: A gist
- Enterprise’s Major Business Initiative
- How was EA developed parallel to the initiative?
- What benefits EA provided to the initiative
- Other facets of EA development: MM, Tools, Governance
- Summary
# Need for EA in this Enterprise

<table>
<thead>
<tr>
<th>Business Scenario</th>
<th>Its implications</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Pressure to increase bottom line</td>
<td>• Constraints on budget allocation for each activity</td>
</tr>
<tr>
<td>2. Merging company’s technology platforms with its parent company</td>
<td>• Budget constraints exist for EA development</td>
</tr>
<tr>
<td>3. Business wanted to retain their number one position in conventional media business</td>
<td>• ROI need to be shown at every stage of EA development</td>
</tr>
<tr>
<td>4. Business felt e-business was competing with conventional media</td>
<td>• Wanted a powerful e-business platform</td>
</tr>
<tr>
<td>5. Competition offered powerful e-commerce features and attracted the market</td>
<td>• Wanted IT to be agile and provide least time-to-market</td>
</tr>
<tr>
<td>6. Business wanted to improve customer satisfaction arising out poor information from existing systems</td>
<td>• Wanted IT to be fully aligned with business</td>
</tr>
</tbody>
</table>
What does EA mean to this Enterprise

• Definition of EA in this context
  – It is a repository of Artifacts
  – Evolve guidelines, standards, and policies for subsequent IT projects
  – Ensuring adherence to guidelines and alignment with business

• EA development objectives are: It should serve the purpose to:
  – Help in Business – IT alignment
  – Help in improving Business – IT agility

• EA users: Business

• Initial Scope of EA: Only Business or customer Facing units

• Out of scope for EA development: Vendor and Internal facing units
Agenda

• What is the need for EA in this Enterprise

• Cross Dissolve methodology: A Gist

• Enterprise’s Major Business Initiative

• How was EA developed parallel to the initiative?

• What benefits EA provided to the initiative

• Other facets of EA development: MM, Tools, Governance

• Summary
<table>
<thead>
<tr>
<th>Data (What)</th>
<th>Activities (How)</th>
<th>Locations (Where)</th>
<th>People (Who)</th>
<th>Time (When)</th>
<th>Motivation (Why)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Objectives / Scope (Planner’s view)</td>
<td>List of things important to the enterprise</td>
<td>List of processes the enterprise performs</td>
<td>List of enterprise locations</td>
<td>Organization approaches</td>
<td>Business Master Schedule</td>
</tr>
<tr>
<td>Enterprise model (Business Owner’s view)</td>
<td>Language, divergent data model</td>
<td>Business process model</td>
<td>Logistics network</td>
<td>Organization chart</td>
<td>State/transition diagram</td>
</tr>
<tr>
<td>Model of Fundamental concepts (Architect’s view)</td>
<td>Convergent e/r model</td>
<td>Essential data flow diagram</td>
<td>Locations of roles</td>
<td>The viable system, use cases</td>
<td>Entity Life History</td>
</tr>
<tr>
<td></td>
<td>Data (What)</td>
<td>Activities (How)</td>
<td>Locations (Where)</td>
<td>People (Who)</td>
<td>Time (When)</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-------------</td>
<td>-----------------------------</td>
<td>-------------------------</td>
<td>-------------------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Technology model</td>
<td>Data base</td>
<td>System design, program</td>
<td>Hardware, software</td>
<td>User interface, security</td>
<td>Control</td>
</tr>
<tr>
<td>(Designer’s view)</td>
<td>design</td>
<td>structure</td>
<td>distribution</td>
<td>design</td>
<td>structure</td>
</tr>
<tr>
<td></td>
<td><img src="Image" alt="Database" /></td>
<td><img src="Image" alt="System Design" /></td>
<td><img src="Image" alt="Hardware" /></td>
<td><img src="Image" alt="User Interface" /></td>
<td><img src="Image" alt="Control Structure" /></td>
</tr>
<tr>
<td>Detailed Representation</td>
<td>Physical</td>
<td>Detailed program design</td>
<td>Network architecture, protocols</td>
<td>Screens, security coding</td>
<td>Timing definitions</td>
</tr>
<tr>
<td>(Builder’s view)</td>
<td>storage design</td>
<td><img src="Image" alt="Program Design" /></td>
<td><img src="Image" alt="Network Architecture" /></td>
<td><img src="Image" alt="Security Coding" /></td>
<td><img src="Image" alt="Timing Definitions" /></td>
</tr>
<tr>
<td></td>
<td><img src="Image" alt="Physical Storage" /></td>
<td><img src="Image" alt="Detailed Program Design" /></td>
<td><img src="Image" alt="Network Architecture" /></td>
<td><img src="Image" alt="Screen and Security Coding" /></td>
<td><img src="Image" alt="Timing Definitions" /></td>
</tr>
<tr>
<td>Functioning System</td>
<td>Converted Data</td>
<td>Executable programs</td>
<td>Communications facilities</td>
<td>Trained People</td>
<td>Business events</td>
</tr>
<tr>
<td></td>
<td><img src="Image" alt="Converted Data" /></td>
<td><img src="Image" alt="Executable Programs" /></td>
<td><img src="Image" alt="Communications Facilities" /></td>
<td><img src="Image" alt="Trained People" /></td>
<td><img src="Image" alt="Business Events" /></td>
</tr>
</tbody>
</table>
Cross Dissolve Methodology

- Along a strategic initiative, develop EA for vital units of the enterprise.
- Recursively include other units; in each recursion typically:
  - Collect at least one major artifact such as business data or functions or services or processes.
  - Collect mostly from target architecture or SBBs.
  - Evolve guidelines or procedures or standardization relevant to the area.
  - ADM change management process is invoked every time.

Typical changes | Cause for change
--- | ---
Simplification Change | To reduce investments
Incremental Change | To get more values for same investment
Rarely Re-architecting | While new investments are planned
Cross Dissolve Methodology (Continued…)

In Every Cycle:

– Cycle through ADM phases (Mostly between A to E of TOGAF)
– increase alignment with business
– Take Constraints into account during planning
– Prepare Enterprise for subsequent cycle
– Deliver visible benefits in current cycle

• Cross Dissolve is bottom-up implementation methodology

• EA development spirals up to complete as much as ROI can permit

• Cross Dissolve Method is incremental

• Business focused
Agenda

• What is the need for EA in this Enterprise
• Cross Dissolve methodology: A gist

• Enterprise’s Major Business Initiative

• How was EA developed parallel to the initiative?
• What benefits EA provided to the initiative
• Other facets of EA development: MM, Tools, Governance
• Summary
Case Study’s Four Projects

• Project- 1: was as-is EA architecture Development

• Project-2: SOA was used as EAI (enterprise applications integration), some features of e-business platform was implemented

• Project-3: Aqua logic Service Bus was used as SOA infrastructure; a POC was done to use BPM for one business service

• Project-4: BPM was used for all business processes; validated all SBBs, requirements and completed the implementation to reach target architecture.
Project-1: As-is Architecture

Print System 1
- Print System 2
- Print System 3 & Billing system
- Print System 4
- External System

Bulk List Tools
- Internal App
- SMS
- External System

Print Ads
- Bundled Ads
- Online Billing Data
- Print Bundle Ads
- Print Ads
- User Details
- Payment Request
- User Details
- Payment System

Click-2-call Requests
- MapLocation Requests
- MapLocation
- Online Maps
- VIVIDAS
- Data Warehouse
- Chart

Online Classified System
- Request for Advertisements
- Dealer Ads & Photos
- Online Maps
- Site Usage Stats
- Site Stats
- User Details
- Payment Request
- User Details
- Payment System
Target Architecture: Project 4 An Overview
Project-2: SOA is used for EAI
Project-3: BPM is added for one Business Service
<table>
<thead>
<tr>
<th>IT Architecture and key activities description</th>
<th>Project-1</th>
<th>Project-2</th>
<th>Project-3</th>
<th>Project-4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Developed As-is architecture to help develop target Architecture</td>
<td>Developed As-is architecture to help develop target Architecture</td>
<td>Used Services as API for point-to-point interface between Enterprise Applications</td>
<td>Added process for one business service. Stabilized process governance.</td>
<td>Invested in BPM infrastructure</td>
</tr>
<tr>
<td>Implemented Processes using e-business COTS platform features</td>
<td>Implemented Processes using e-business COTS platform features</td>
<td>Implemented a few functions in e-business platform</td>
<td>Added SOA infrastructure (ALSB). Services became detect and consume. Implemented more functions in e-business</td>
<td>All processes were on BPM. Undone earlier way of implementing processes</td>
</tr>
<tr>
<td>Implemented a few functions in e-business platform</td>
<td>Implemented a few functions in e-business platform</td>
<td></td>
<td></td>
<td>Obviously services were aligned to processes steps</td>
</tr>
</tbody>
</table>
Table -2: Key EA Artifacts developed along the sides of every project

<table>
<thead>
<tr>
<th>Key EA artifacts developed</th>
<th>Project-1</th>
<th>Project-2</th>
<th>Project-3</th>
<th>Project-4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collected Components for Business Architecture</td>
<td>Collected and aligned requirements and business functions</td>
<td>Collected business services of as-is and target</td>
<td>Business process (BPM) for all services had been identified</td>
<td>Documented explicit business rules (collected from various places)</td>
</tr>
<tr>
<td>Visualized target architecture Solution-Building-Blocks (SBBs)</td>
<td>Visualized target architecture Solution-Building-Blocks (SBBs)</td>
<td>Set up service governance</td>
<td>Setup Process governance</td>
<td>Aligned Organization structure and roles to business architecture</td>
</tr>
<tr>
<td>These activities were preparatory and guiding next project</td>
<td>These activities were preparatory and guiding next project</td>
<td>Set up business function (use case) governance</td>
<td>Finalized / standardized BPM tool</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Standardized service support tool/technology</td>
<td>Formal business data was developed</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>17</td>
</tr>
</tbody>
</table>
Agenda

- What is the need for EA in this Enterprise
- Cross Dissolve methodology: A gist
- Enterprise’s Major Business Initiative
- How was EA developed parallel to the initiative?
- What benefits EA provided to the initiative
- Other facets of EA development: MM, Tools, Governance
- Summary
### Table-3: Benefits due to EA development

<table>
<thead>
<tr>
<th>Benefits due to EA development</th>
<th>Project-1</th>
<th>Project-2</th>
<th>Project-3</th>
<th>Project-4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Target architecture was aligned with business architecture.</td>
<td>Averted the path of huge investment for infrastructure at one shot.</td>
<td>Applications got consolidated</td>
<td>Business got its envisioned target architecture</td>
<td></td>
</tr>
<tr>
<td>Business functions mapped to SBBs.</td>
<td>Stake holders comprehend their view of target architecture.</td>
<td>Resulted in cost saving</td>
<td>Business could feel that IT was aligned well with business.</td>
<td></td>
</tr>
<tr>
<td>calculated impact on cost, time-to-market for target</td>
<td>Could articulate their priorities</td>
<td>POC of modeling process for one new business idea helped tech absorption</td>
<td>IT agility was tested through a few new services introduced</td>
<td></td>
</tr>
<tr>
<td>Increased stake holders involvement</td>
<td>Project-1</td>
<td>Project-2</td>
<td>Project-3</td>
<td>Project-4</td>
</tr>
<tr>
<td>------------------------------------</td>
<td>-----------</td>
<td>-----------</td>
<td>-----------</td>
<td>-----------</td>
</tr>
<tr>
<td></td>
<td>Business was the sponsor for EA with a limited scope</td>
<td>Architects from affected areas of system</td>
<td>Key stake holders of organization, Business joined in Services, Process and data governance boards</td>
<td>Key stake holders from Parent company joined EA governance board. Could use EA for impact analysis during business planning</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Extended EA’s scope</td>
</tr>
</tbody>
</table>
Agenda

• What is the need for EA in this Enterprise
• Cross Dissolve methodology: A gist
• Enterprise’s Major Business Initiative
• How was EA developed parallel to the initiative?
• What benefits EA provided to the initiative
  • Other facets of EA development: MM, Tools, Governance
• Summary
EA Maturity Assessment

- EA Maturity Assessment
  - What MM model to choose
  - How to align with Other Organization Models
  - Finding Quality Assessor

- EA Tool Selection
  - How to arrive at tool selection criteria
  - What are all EA artifacts it should support
  - What is tool’s life span

- Justify cost, effort to benefit - As optimization of EA Governance and Practice

- Defer till picture emerges

- Governance Evolved: Infrastructure, Service, Process, EA with Corporate Governance
Agenda

• What is the need for EA in this Enterprise
• Cross Dissolve methodology: A gist
• Enterprise’s Major Business Initiative
• How was EA developed parallel to the initiative?
• What benefits EA provided to the initiative
• Other facets of EA development: MM, Tools, Governance

• Summary
Key Advantages of Cross Dissolve Method

- It is a consensus build process – so people are committed to adhere to the resulting process
- It leaves many people well educated in EA practice, framework, principles and benefits
- Since it is a bottom-up approach, the information is more accurate
- Since information collected from target implemented system, the base data life is longer and more useful to upcoming projects
- Since it is kind of iterative approach, the refinement of data, model and practice are continuous
- ROI is very well justified in each stage; Gets an effective buy-in of stakeholders
- Business turns around and sees an enormous value, IT being agile and aligned to business.
Summary

Key Takeaways:

• ‘Cross Dissolve’ is an Implementation approach methodology to develop EA where constraints or barriers exits for top-down

• Take a small portion of enterprise at a time to build EA

• Using Cross Dissolve you can show value every stage

• ‘Cross Dissolve’ builds EA as much as ROI can permit.
THANK YOU!

Prithviraj_S@satyam.com

Monday, June 23, 2008