Transition Architectures

*TOGAF 9 and JD Group Approach*

By Komborero Makoni
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- Benefits Of Transition Architectures
- JD Group: Practical Example
• Architecture Development Method (ADM) is an iterative process which details a step by step approach of developing Enterprise Architecture (EA).

• ADM phases can be grouped as follows:

1. **Architecture Context**
   - Preliminary Phase, Phase A

2. **Architecture Definition**
   - Phase B to F

3. **Transition Planning**
   - Phase E & F

4. **Architecture Governance**
   - Phase G & H
Phase B to D involved with defining Business, Data, Application and Technology architecture.

9 steps proposed in defining the architecture in each domain, which include:

**Develop Baseline Architecture Description**
- Baseline Architecture is the existing defined system architecture before entering a cycle of architecture review and redesign.

**Develop Target Architecture Description**
- Target Architecture is a description of a future state of the architecture being developed.
Transition Architectures Defined

- A Transition Architecture shows the enterprise at **incremental states reflecting periods of transition** that sit between the Baseline and Target Architectures.

- Transition Architectures are used to allow for **individual work packages and projects to be grouped** into managed portfolios and programs, illustrating the business value at each stage.

- Transition Architectures take a **Baseline and Target Architecture definition** as the start and end points and considers the **practical steps required to transition** from one state to the next. This provides an ability to **continuously deliver business value**.

- Transition Architecture phases represent **the sequence and priority** with which architecture transformation is implemented.

- Transition Architectures do not have to be uniform in duration.

- Transition Architectures are identified and developed within Phases E and F of the ADM.
• Transition Architectures are developed within Phases E and F of the ADM

• **Phase E: Opportunities and Solutions:**
  
  ➢ Perform initial implementation planning and the identification of delivery vehicles for the architecture defined in the previous phases.

  ➢ Identify Transition Architectures

• **Phase F: Migration Planning:**
  
  ➢ Formulate a set of detailed sequence of Transition Architectures with a supporting Implementation and Migration Plan.

  ➢ Confirm Transition Architectures
TOGAF 9: Capability-Based Planning

• Phase E and F features a detailed technique for defining and planning enterprise transformation based on principles of Capability-Based Planning.

• Capability-Based Planning is a business planning technique that focuses on business outcomes and how they are delivered to the organisation.
Developing Transition Architectures

Phase E: Opportunities and Solutions

• Development of Transition Architectures should be based on:
  ➢ Preferred implementation approach.
  ➢ Consolidated gaps, solutions and dependencies.
  ➢ Listing of projects and portfolios.
  ➢ Organisation’s capacity of creating and absorbing change.

• Approach:
### Implementation Factor Assessment and Deduction Matrix

<table>
<thead>
<tr>
<th>Factor</th>
<th>Description</th>
<th>Deduction</th>
</tr>
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<tbody>
<tr>
<td>&lt;Name of Factor&gt;</td>
<td>&lt;Description of Factor&gt;</td>
<td>&lt;Impact on Migration Plan&gt;</td>
</tr>
</tbody>
</table>
| Change in Technology       | Shut down the message centers, saving 700 personnel, and have them replaced by email. | • Need for personnel training, re-assignment  
                              |                                                                             | • Email has major personnel savings and should be given priority           |
| Consolidation of Services  |                                                                             |                                                                           |
| Introduction of New Customer Service |                                                                         |                                                                           |

### Consolidated Gaps, Solutions, and Dependencies Matrix

<table>
<thead>
<tr>
<th>No.</th>
<th>Architecture</th>
<th>Gap</th>
<th>Potential Solutions</th>
<th>Dependencies</th>
</tr>
</thead>
</table>
| 1   | Business     | New Order Processing Process     | Use COTS software tool process  
                              | Implement custom solution | Drives applications (2)    |
| 2   | Application  | New Order Processing Application | COTS software tool X  
                              | Develop in-house          |                            |
| 3   | Information  | Consolidated Customer Information Base | Use COTS customer base  
                              | Develop customer data mart |                            |
Phase F: Migration Planning

• Confirmation of Transition Architectures developed in Phase E, and ensure resources are available to ensure realisation of Transition Architectures.
  - Confirm Transition Architecture timeframes, increments and content.
  - Confirm business value delivered by the increments.

• Develop Transition Architecture Roadmap
  - Consolidate deliverables by project increments for each Transition Architecture.
Developing Transition Architectures

**Phase F: Migration Planning**

- Create an **Architecture Definition Increments Table** which shows a series of Transition Architectures outlining the status of the enterprise architecture at specified times.

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<tbody>
<tr>
<td>Enterprise e-Services Capability</td>
<td>Training and Business Process</td>
<td>e-Licensing Capability</td>
<td>e-Employment Benefits</td>
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<tr>
<td>IT e-Forms</td>
<td>Design and Build</td>
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<tr>
<td>IT e-Information Environment</td>
<td>Design and Build Information Environment</td>
<td>Client Common Data Web Content Design and Build</td>
<td>Enterprise Common Data Component Management Design and Build</td>
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Transition Architectures Content

Summary of the content that is typically specified within a Transition Architecture:

- **Opportunity Portfolio**
  - Consolidated gaps, solutions, and dependency assessment; Opportunity description; Benefit assessment; Capabilities and capability increments; Interoperability and co-existence requirements;

- **Work Package Portfolio**
  - Work package description; Functional requirements; Dependencies; Relationship to opportunity; Relationship to Architecture Definition Document and Architecture Requirements Specification

- **Milestone And Milestone Transition Architectures**
  - Definition of transition states; Business, Data, Application & Technology Architecture for each transition state;

- **Implementation Factor Assessment And Deduction Matrix**
  - Risks; Issues; Assumptions; Dependencies; Actions;

- **Consolidated Gaps, Solutions, And Dependencies Matrix**
  - Architecture Domain; Gap; Potential Solutions; Dependencies;
Advantages of using the phased Transition Architecture approach include:

- Breakdown of huge architecture change initiatives into smaller manageable work packages.
  - Architecture change is difficult to implement or undertake in a single phase, due to the huge impact it has on an organisation. Migration often requires consideration of a number of business and technical issues e.g. issues associated with introducing change to operational systems.

- Integrate and support implementation governance and any follow-on design, or detailed architecture definition.
  - Monitor the progress of architecture transformation.
JD Group: Background

- The JD Group is primarily a:
  - diversified mass consumer financier; and
  - a furniture, appliance, electronic goods, home entertainment and office automation retailer.

- The JD Group primarily targets the mass middle market with a secondary focus on the entry and top end market segments within South and Southern Africa.

- Additional operations include:
  - Credit insurance products to the credit retail market.
  - Customer Contact Centre Solutions
  - B2B debt collection, Small value un-secured credit & financial products
In 2007, JD Group changed its business and operating model resulting in the decoupling of its furniture retail and financial services operating division.

One legacy system used to support both retail and consumer finance business functions.

In an effort to optimise operations in both divisions, two projects were launched to:

- Replace legacy ERP functionality with SAP in the Retail division.
- Replace legacy loan origination and loan management systems with Capstone and VisionPLUS respectively within the Financial Services division.

Major implementation dependencies between both projects.

Significant changes to the Business, Data, Application and Technology architecture across the enterprise over an extended period of time.
JD Group: Architecture Development Focus

Project 1

Baseline Architecture

JDG Enterprise Architecture Vision

Architecture definition #1

BA
DA
AA
TA

Project 2

Target Architecture

Architecture definition #2

BA
DA
AA
TA

JDG Focus
JD Group: Transition Phases

- Identify milestones to represent as transition architecture phases.

- **JD Group:**
  - High level implementation & migration strategy developed for both projects.
  - Timeline based on the release phases in the two projects.
  - 6 transition phases.
  - Application architecture for each transition state.
JD Group: Need For Transition Architectures

- JD Group applied the concept of transition architectures with specific focus on application architecture.

**Viewpoints required:**

1. An **integrated view of the evolution** of JD Group application landscape.
   - Stakeholders: CIOs; Solution Architects; Development & Integration Team;

2. View of **co-existence of applications** over the implementation period.
   - Stakeholders: Development & Integration Team; Solution Architects;

3. View of all **application interfaces** that exist between applications (both temporary and permanent) and the associated data definitions and transfers.
   - Stakeholders: Development & Integration Team; Solution Architects
ARIS Models

- ARIS used to document selected application architecture views for each transition architecture.

- Three models used to represent required viewpoints supporting the transition architectures:

  1. **Application Evolution and Co-Existence Matrix**
     - ARIS Model: Process Support Map

  2. **Application Interaction Models**
     - ARIS Model: Application System Type Diagram

  3. **Interface Catalogue & Interface Definition Models**
     - ARIS Model: Program Flow Chart
Important to create or select architecture components to use when generating views that support the transition architectures. Make use existing building blocks where applicable.

JD Group: Primary focus on representing transformation and evolution of application architecture.

Architecture components utilised include:

- Business processes and business scenarios.
- Applications and application components.
- Application interfaces.
- Data elements (associated with application interfaces).
Application Evolution and Co-Existence Matrix shows:

• Evolution of application or application components in the JDG landscape in relation to core business processes and scenarios. Also shows application co-existence relationships.

• For each phase, list the
  - Business processes and scenarios that fulfil particular core business functions or capabilities.
  - Applications and application components that manage or process data and support a core business process or scenario.
### Example: Application Evolution and Co-Existence Matrix

<table>
<thead>
<tr>
<th>Business Process:</th>
<th>Create New Article</th>
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<tbody>
<tr>
<td>Business Scenario:</td>
<td>Cash Sale For DC Delivery</td>
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<tr>
<th>Transition Architecture 1 - Jan 2011</th>
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<tbody>
<tr>
<td>Coreus Merch</td>
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<tr>
<td>Coreus Central</td>
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<tr>
<td>Coreus March 003mm</td>
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<tr>
<td>Coreus EU</td>
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<td>SharePoint</td>
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<tr>
<td>SAP ECC</td>
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<td>SAP FI</td>
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<tr>
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<th>Transition Architecture 3 - April 2011 (TR 2)</th>
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<td>SharePoint</td>
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<td>SAP ECC</td>
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</table>
Application Interaction Model shows:

- Interactions between applications and application components which support a particular core business process or scenario.

- Application interfaces that exist between applications that support one particular core business process or scenario.
Example: Application Interaction Model

➢ Create New Article - Phase 1

- Ceres Merch 000mn
- Ceres Merch
- Ceres Central
- Ceres BU

➢ Create New Article - Phase 2 & 3

- Sharepoint
  - Manual
  - SAP ECC
  - SAP PI
  - IO80
    - Ceres Merch 000mn
    - Ceres Chain Merchandise
    - Ceres Central
    - Ceres BU
Example: Application Interaction Model

- **Cash Sale For DC Delivery - Phase 1 & 2**
  - Computer Facilities
  - Ceres BU_Comp...
  - Ceres BU
  - Ceres BU_JEMS
  - JEMS
  - Ceres WH_Freig...
  - Ceres BU_EDW#3
  - Freightware
  - EDW

- **Cash Sale For DC Delivery – Phase 3**
  - Computer Facilities
  - Ceres BU_Comp...
  - Ceres BU
  - Ceres BU_JEMS
  - JEMS
  - Ceres WH_Freig...
  - Ceres BU_EDW#3
  - EDW
  - Ceres BU_SAP...
  - Ceres Central
  - SAP WHM
  - 1083
  - 1085
  - SAP PI
  - SAP ECC
Interface Definition Model shows:

- Data interactions between applications for each interface.
- Interface protocols.
Example: Interface Definition Model
Challenges

• Level of maturity of organisation in relation to EA makes it difficult to incorporate complete transition planning as prescribed by an architecture framework such as TOGAF.
  
  ➢ Projects scheduled and started without full assessment of architectural impact.

• Architecture repository still a work in progress.

Future Plans

• Align EA framework and principles with existing JDG strategic and management frameworks or methodologies e.g. business planning, portfolio or project management, and operations management.
Questions