Achieving success with Enterprise architecture in digital transformation

- Garima Singh, Chief Architect,
WHO IS GARIMA?

- Working as “Chief Architect” at Sandvik Machining Solutions

- 16 years of experience in software industry, with extensive background in software development (Java, Spring, Hibernate, React, BI/Al/ML data platforms, AWS, Azure and GCP)

- Worked with different architecture disciplines: application architecture, information architecture, business architecture etc

- International standards co-author (ISO, CCC digital key)
What is Enterprise Architecture and key contributing roles in Enterprise Architecture

Why companies need Enterprise Architecture

Challenges working with traditional enterprise architecture model in big size enterprises

Enterprise architecture role in addressing digital disruption
WHAT IS ENTERPRISE ARCHITECTURE?
ENTERPRISE ARCHITECTURE

ENTERPRISE
Any Organization that uses software system

ARCHITECTURE
The manner in which the components of a computer or computer system are organized and integrated

ENTERPRISE ARCHITECTURE

Organization
Capabilities
Applications
Information

Deals with the complex relationships between an enterprise organization, its people, the business processes they support, and systems that automate those processes.

SANDVIK
ENTERPRISE ARCHITECTURE ELEMENTS
- TOGAF FRAMEWORK

Enterprise Architecture = Business architecture + Data architecture + IT architecture

- Business Architecture
- Information Architecture
- Application Architecture
- Technology Architecture
KEY CONTRIBUTING ROLES IN ENTERPRISE ARCHITECTURE

- Business Architects
- Information Architects
- Solution Architects
- Business Architecture
- Information Architecture
- Application Architecture
- Technology Architecture
WHAT DOES ENTERPRISE ARCHITECTS DO THEN?
BRINGING BUSINESS, IT AND DATA TOGETHER
RELATIONSHIP BETWEEN LAYERS ARE GETTING "BI-DIRECTIONAL"

Enterprise Architecture

Business Architecture

Application Architecture

Information Architecture

Technology Architecture

Business driving tech strategy

Tech driving new business revenue streams
**STRATEGY TO EXECUTION JOURNEY**

- **Vision**
  - Business vision, strategy, benefits
  - Transformation Roadmap

- **Business Operating Model**
  - Business capability identification and priorities
  - Business process and value streams

- **Dependencies**
  - Capability mapping per product
  - Identification of all users/actors per capability

- **Information Managers**
  - Data
    - Identification of data objects across value streams, users, context
    - Relationship between data objects, governance, lifecycle management

- **IT Managers/CIOs**

- **Solution Architecture**
  - Business capability → product capability → IT capability mapping
  - Target IT architecture, incl data and security

- **IT Execution Model**
  - Execution roadmap
  - Compliance and adaptations

- **Delivery Plan**
  - IT deployment roadmap
  - Operations and maintenance

- **New trend, “Business from Tech”**
NON-FUNCTIONAL DOMAINS UNDER ARCHITECTURE RESPONSIBILITY

- Legal compliance
- Technology and risk management
- Geopolitical situations
- IT operations
- Security (applications, data)
- Seamless integration with external eco system
**WHY EVERY ENTERPRISE NEED ENTERPRISE ARCHITECTURE?**

<table>
<thead>
<tr>
<th>FROM</th>
<th>TO</th>
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<tbody>
<tr>
<td>Unclarity in strategy to execution plan</td>
<td>Integrated technology, business strategy and operations plan</td>
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<tr>
<td>Siloed WoW with more risk of higher gaps</td>
<td>Engaged organizations end to end with lesser gaps</td>
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<tr>
<td>Heterogeneous, scattered and uncontrolled IT landscape and data management</td>
<td>Consolidated/simplified system landscape, building common, reusable services, managing data as asset</td>
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<td>Unrealistic decision making</td>
<td>Data driven decision making</td>
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Challenges working with Enterprise Architecture in fast moving, modern big size enterprises
KEY CHALLENGES

- Decentralized, Distributed and Decoupled autonomous organization set up, with no central governance
- Lack of single tool to store EA data of all elements
- EA information stored in tools is far away from ground situation
- Everyone in organization, strives for faster decision making process – dev teams, business, management
- Fast organic/inorganic growth of companies, contributing to dynamic application portfolio. For ex: acquisitions, joint ventures
- Legal compliance and geopolitical situations are getting more challenging
DIGITAL TRANSFORMATION FOCUS AREAS

SPEED IN NEW SERVICES DEVELOPMENT

SEEMLESS INTEGRATION WITH EXTERNAL ECO SYSTEM

DIGITAL MODERNIZATION

DATA DRIVEN STRATEGY AND DECISION MAKING

AUTOMATION TO ACHIEVE OPERATIONAL EFFICIENCY
ENTERPRISE ARCHITECTURE STEP WISE APPROACH
– LEADING THE DIGITAL TRANSFORMATION
STEPS TO REACH SUCCESS

**STEP 1**
Assessment of current situation, using multi-dimensional EA matrix

**STEP 2**
Bring agile thinking and automation in enterprise architecture WoW and tooling

**STEP 3**
Establish architecture champions/communities to establish engaged workforce, top to bottom

**STEP 4**
“Decoupled still connected” decision making model

**STEP 5**
Consistent Communication and engagement with entire organization
### STEP 1: EVALUATION USING ENTERPRISE ARCHITECTURE MATRIX

#### Business and IT Alignment
- **Enterprise information management**
  - Information architecture

#### IT Governance, Strategy, and Execution
- **Enterprise information management**
  - Data architecture
  - Data maturity assessment
  - Data ownership

#### IT Operations
- **Business transformation management**
  - Business process/capability management
  - Product portfolio management

#### Business transformation management
- **Enterprise application management**
  - Enterprise IT landscape

- **Legacy migration plan**
- **Technical foundation for intelligent centralisation**

- **Data architecture**
- **Data maturity assessment**
- **Data ownership**

- **Target solution architecture and gap analysis from AS-IS**

- **IT support tools, for new products**
- **IT support strategy**

- **IT lifecycle management**

Connecting strategy to execution
STEP 2: BI-DIRECTIONAL CENTRALIZED EA TOOL WITH AUTOMATION

- One wrapper tool, to consolidate all EA layers data from different tools (capability, data, IT)
- Real time view of top to down navigation, capability → data → product → system → server

Automated generation of data models and IT landscape, from CI/CD tools
STEP 3: ENGAGEMENT AND COMPOSABILITY

- Establish CoP (community of practice), engaging experts from all over the organizations globally, based on skills and domain (integrations, data, infrastructure platform)

- CoP should act as working body to build and own tech and architecture related roadmap (tools, frameworks, tech stack etc)

- Train one person within each team as EA champion, who contributes as well as help in maintaining EA related information.
STEP 4: BI-DIRECTIONAL COMMUNITY BASED DECISION MAKING – “DECOUPLED STILL CONNECTED”

Cross domain/enterprise level
- Architecture principles
- Technical vision and roadmap
- DevSecOps framework, platforms and tools
- Setting up ADR process

Business Domain level
- Domain level architecture vision and strategy
- Architecture decision making impacting domain

Product Team Level
- Solution level architecture vision and strategy
- Architecture decision making impacting solution
STEP 5: COMMUNICATION AND AWARENESS

MONTHLY ARCHITECTURE WEBINAR

MONTHLY TECH LETTER TO ENTIRE ORGANIZATION

PROACTIVE APPROACH TOWARDS STAKEHOLDERS

SHOW VALUE AND SHARE SUCCESS STORIES
WAY OF WORKING - VISION TO EXECUTION
WAY OF WORKING - CONNECTED WITH GROUND

Enterprise level

Enterprise portfolio management

Defines and prioritize

Business Epics

Architecture Epics

Product level

Product and release management

Owned by

Features

Team level

Team management

Owned by

Prioritizes and elaborate

Stories
 ENTERPRISE ARCHITECTURE CONTRIBUTING TO 

 IT SUSTAINABILITY

 ELLIMINATING NON ESSENTIAL APPLICATIONS

 CLOUD MIGRATION FROM ON PREM

 BETTER IT ASSET MANAGEMENT

 BETTER DATA LIFECYCLE MANAGEMENT
K E E P  I T  R E A L  A N D  C L O S E  T O  R E A L I T Y


C O N N E C T  W I T H  V A L U E  A N D  D R I V E R S

W O R K  H A R D  W I T H  A W A R E N E S S  A N D  C O M M U N I C A T I O N

E N G A G E M E N T  I S  A  K E Y  !!!
THANK YOU

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