Mens – Machine en ICT

ICT en Organisatie

Prof.dr. Sjaak Brinkkemper
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MINNEAPOLIS, October 31, 2008 (AP) -- One day after his airline swallowed Northwest Airlines, Delta executive Ed Bastian was in town with a polar bear tie and a smile in a bid to reassure travelers that little would change. It will probably take two years for Delta and Northwest to operate as a single carrier.

“Although dozens of teams with members from both companies have been working together for months toward the integration, several items still have not been decided yet.”

Delta and Northwest will have to integrate different corporate cultures, different software for ticketing and schedules, different fleets, different unions (most of Delta's workers are not unionized) -- and it all has to be done without missing a beat in a 24-7 operation that includes hubs from Tokyo to Amsterdam.
15 months later ...

ATLANTA, Feb. 1 -- Delta Air Lines this weekend completed the integration of the Northwest Airlines reservation system, including the transition of all Northwest flights into the Delta schedule, migration of Northwest passenger reservations into the Delta system, and retirement of nwa.com.

"Throughout the integration of Delta and Northwest, we've taken a phased, deliberate approach to make the transition simple and seamless for our customers," said Theresa Wise, Delta's senior vice president and Chief Information Officer. "In this spirit, customers previously booked on Northwest are able to check in using their original reservation information, even if they arrive at the airport with no prior knowledge of the switch. We continue to work around the clock to minimize any potential impact to our operations and to customers."

(see http://news.delta.com/index.php?s=43&item=911 )
- The SVB organization
  - https://www.youtube.com/watch?v=kXzZ-MPN-nA

- FloraHolland
  - https://www.youtube.com/watch?v=zx7buFdpis4

- For the break:
  - https://www.youtube.com/watch?v=Slf_XNroXS8
Large Enterprises

- Complex organizational structures with many employees
- Different office locations spread over a city, country or even the world (see next slide)
- Offer different products and services to both enterprises and citizens
- Varying history, infrastructure, culture, economic circumstances

→ Strategic decision making is extremely difficult
Multi-national Organization

headcount end 2010: 119,001
Issue: Performance is business critical

traffic control Rijnmond

dealing room ABNAmro

supported by the right infrastructure
On the agenda of the Board

Questions like:

- **Outsourcing:**
  - Should we outsource certain business functions?
  - Which? How? Where?

- **Organization:**
  - Should we change the structure because of new products and services?
  - How do we deal with the consequences of the merger?

- **IT support:**
  - Should we start implementing SAP in that unit?
  - When can we replace system X with a standard product?

- **Service continuity:**
  - Is our IT infrastructure trustworthy for 7x24?
  - Do we get back to our customers in time?

- .... and many, many more ...
Strategic assets

All these decisions involve strategic assets:

- **Budget**: 1, 10, 100 million €
- **Organization**: merger, split, acquisitions, changes
- **Jobs**: disposal, change or new (job rotation)
- **Systems**: IT infrastructure (HW incl. networks, System SW incl. operating systems, databases, Web servers), applications
- **Products and services**: innovations, changes, termination
Enterprise Architecture

Key issue:

What documentation should the enterprise architect provide and what communication should be performed to support transparent decision making?
EAM: Enterprise Architecture Modeling

EAM is a method for **documenting and communicating** enterprise architectures

1. Supply Chain Diagram - SCD
2. **Enterprise Function Diagrams** - EFD
3. Scenario Overlays - SO
4. Application Overlays - AO
5. System Infrastructure Diagrams - SID

EAM is inspired by DEM of Baan, ARIS of Scheer, and Archimate
Model Decomposition

SCD

EFD (corporate)

EFD (function)

SID (Sales)
Case 1: Cisco Systems, Inc.

- Worldwide leader in providing networking equipment (71,883 employees as of 2016; 49.2 B$ revenue)
- Focus on core technologies, service provider market and advanced technology market
- Strategies: product innovation, operational excellence and customer relationships
- 95% outtasking to contract manufacturers
- Markets: enterprises, small to medium business, service providers, home customers

On the agenda of the Board:

*Is Cisco properly organized for outtasking?*
Supply chain diagram

Manufacturing by sub-contractors; products go directly to customers

Component Suppliers

Contract Manufacturers (OEM/EMS)

Cisco

Enterprise Customers

Channel Partners

Customers
Functions for purchase, manufacturing, and warehousing are missing. Subcontractor monitoring is added.
Definitions

**Enterprise:**
legal entity that provides products or services to other legal entities (incl. individuals)

**Enterprise architecture:**
the high-level set of views and prescriptions that guide the coherent design and implementation of processes, organizational structures, information provision and technology within an organization or other socio-technical system

Central scientific question

What underlying concepts determine an effective enterprise architecture?

- What type of decisions?
- What is the scope of work?
- What is effective communication?
- Who is involved as a stakeholder?
- What is essential and what is detail?
- How much documentation is needed?
- etc.
Case 2: SVB

- Founded in 1901
- Facilitation social allowances
- 5.6 million customers (2015)
- 2015: 3000 employees (2010: 3200)
- 40.4 billion of total expenses
- AOW, AKW, PGB, Anw, ...

On the agenda of the Board:

*How does SVB arrange the demands for service continuity?*
Supply chain model
Corporate EFD: SVB
System infrastructure

Double central mainframes and identical ICT infrastructures in all office locations
Case 3: Center Parcs Europe

- **History**
  - 1953: Sporthuis Centrum
  - 1968: Center Parcs
  - Pierre et Vacances Groupe (2007)

- 30 parks, over 10,000 bungalows
- 5.2m guests in 2014
- Turnover: € 551m (2014/2015)

On the agenda of the Board:

*How does Center Parcs distribute the responsibilities over the Central Office and the Parcs?*
Central office arranges bookings and financials where parks provide the leisure services.
Central office arranges bookings and financials where parks provide the leisure services. Supermarkets have been outsourced.
Central office arranges bookings and financials where parks provide the leisure services
Identifying Enterprise Functions

- **What is an Enterprise function?**
  - An *enterprise function* is a collection of coherent activities, continuously performed within an enterprise and supporting its mission.

- **Examples:**
  - Corporate Planning
  - Human Resource Management
  - Supplier Contract Management
  - Shop Floor Control

- **Naming standards:**
  - Use nouns
  - Precise, determining words known in the business domain
  - Name is Capitalized
Decomposition of functions

- **Business Planning**
  - Business Plan
  - Master Plan
  - Master Plan

- **Product Innovation**
  - Product Information
  - Material Plan
  - Order for Assembly

- **Requirements Planning**
  - Material Plan
  - Subcontracting
  - Production

- **Production**
  - Orders/Schedules
  - Production
  - FAS Order

- **Final Assembly Scheduling**
  - Packing order
  - Sales Forecast

- **Sales**
  - Invoiced Sales Order
  - Customer Request

- **Supplier**
  - Purchase Order/Contracts/Inquiries
  - Purchase
  - Material Plan

- **Warehousing**
  - Received Goods
  - Picking List
  - Picking List

- **Customer**
  - Shipment order
  - Packing & Shipping
  - Packing order
  - Invoiced Sales Order

- **Other**
  - Receipt & Inspection
  - Component Manufacture
  - Assembly

- **Progress**
  - Purchase
  - Purchase
  - Production

- **Business Plan**
  - Business Plan
  - Business Plan

- **Master Plan**
  - Master Plan
  - Material Plan

- **Material Plan**
  - Material Plan
  - Material Plan

- **Subcontracting**
  - Subcontracting
  - Subcontracting

- **Production**
  - Production
  - Production
  - Production
Decomposition of EFD

Order for Assembly

Sales Forecast

Customer Request

Invoiced Sales Order

Packing Order

Sales
Sales Function

Quotation / Proposal Management

Sales Order Management

Customer Request for Proposal

Delivered Proposal

Customer Order

Order Confirmation

Invoiced Sales Order

Order for Assembly

Packing Order

Sales Forecast

Sales

Functional EFD
Two dimensions (suggestion)

Flow of execution progress
ICT strategy

Scientific research project:
PhD of Ralph Foorthuis

Compliance Assessments of Projects Adhering to Enterprise Architecture

Ralph Foorthuis, UWV Business Services, The Netherlands
Frank Hofman, Statistics Netherlands, The Netherlands
Sjaak Brinkkemper, Utrecht University, The Netherlands
Rik Bos, Utrecht University, The Netherlands

ABSTRACT

This article examines how to assess projects, which implement business processes and IT systems, on compliance with an Enterprise Architecture (EA) that provides them with constraints and high-level solutions. The authors begin by presenting the core elements of EA compliance testing. Next, the authors discuss the testing process and four types of compliance checks (i.e., correctness check, justification check, consistency check, and completeness check). Finally, an empirical case is reported in which a real-life project has been tested on conformance, demonstrating and evaluating the authors’ approach. The results indicate that objective compliance testing cannot be taken for granted. Therefore, several suggestions are presented to decrease the subjectivity of assessments, such as operationalization of EA prescriptions.

Keywords: Compliance Assessment, Compliance Checks, Conformance, Enterprise Architecture, Projects, Subjectivity
From Business Strategy to ICT Projects

- **Management level**
  - Manage organization
  - Strategy

- **EA level**
  - Define constraints and solution-directions
  - Enterprise Architecture
  - Vision and goals

- **Project level**
  - Create local solution
  - Local Solution
  - EA prescriptions
  - Models, applications, documentation

- **Production level**
  - Run periodical business process
  - Business output
Ethical Dilemmas

The company I currently work for, let's call it AppCorp, currently has a client, let's call him Bill, who has built and launched a small social networking product. We inherited this project when he switched consultancies, and we are now maintaining it.

Our maintenance team works by having clients buy chunks of hours at a time ("maintenance retainers"). Bill has been renewing his maintenance retainers for the last few cycles, and he's an absolutely fantastic client. Likely the best that has ever come through this place – he is humble, patient, kind, and knows what he wants his product to be but doesn't dictate how to get there.

Today, Bill sent me a private text message that I'll summarize below:

- The app has raised $750k, so it's relatively good in terms of capital
- Operational costs are getting too high, so I won't be renewing my maintenance retainer.
- I'm offering you 5% of the company to be a CTO in your free time, with you only doing maintenance and not adding features or doing anything too complex.
- I plan on telling AppCorp all of this later in the week, but I wanted you to have an early heads-up.
- This causes a list of problems in my head.

What is the best thing to do?
I am currently part of a project with a consulting firm. The project has a fairly firm end date, after which I will return to work as normal, with the additional responsibility of knowledge transfer, which may last an indefinite time.

My team and I work onsite at the firm’s offices and I have noticed that their processes, work style, workplace environment, and field suit me much better than my current workplace.

Assuming for the moment that there are no contractual issues, would it be ethical to consider applying for a job with the consultant in a situation like this, and if so, how long after the project should one wait?

What is the best thing to do?
Enterprise Architecture: Concluding

- EAM provides *interrelated diagramming techniques* for the Enterprise Architecture
- **Linking** with
  - Business strategy
  - Application design
  - Process modeling
  - IT strategy
- **Simple** formalisms for fast understanding and communication in interaction with non-IT people
- **Overview** and internal structuring
- Managerial *decision making*
- Research opportunities:
  - Metrics for Enterprise architecture
  - Quality attributes