Shifting role of Enterprise & Business Architecture.

SEM06F-Itana Face2Face 2017
Facilitators for the day

Chris Eagle
IT Strategist & EA, U-Mich
Vice-Chair & CG Leader, Itana

Louis King
Enterprise Architect, Yale
Steering Committee, Itana

Jim Phelps
Dir. of EA & Strategy, UW
Chair, Itana
About Itana (Itana.org)

About
Peer Group for Enterprise, Business and IT Architects in Higher Education.

EDUCAUSE and Internet2

~ 750 people

Steering Committee
About Itana (Itana.org)

Engage with Itana

Bi-Weekly Calls

Annual Face2Face

Working Groups/Book Club
  API - Ashish Pandit
  EA Maturity Model - Louis King
  IoT White Paper - Ken Klingenstein
  Business Architecture - Dana Miller
  Book Club - JJ DuChateau

Spring Face2Face Working Meeting

About

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Coming Up

Fall Face2Face 2017 - October 31, 2017 in Philadelphia, PA
Join us for a full-day preconference session at EDUCAUSE Annual 2017. The Itana Fall Face2Face will focus on the shifting role of Enterprise and Business Architecture in the Digital Transformation.

Go to the EDUCAUSE Registration site to register for this event.

Recent Activity

Spring 2016 Face2Face Meeting
Face2Face Outcomes: Architecture Leadership

See the Spring Face2Face 2016 Notes for more on this F2F.

Autumn 2017 Call Program

<table>
<thead>
<tr>
<th>Date</th>
<th>Track</th>
<th>Session</th>
<th>Materials</th>
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<tbody>
<tr>
<td>Oct 6</td>
<td>n/a</td>
<td>2017-2018 Kick-off Call - Book Club, Working Groups, Face2Face 2017, Focus for the Year - Digital Transformation, DEL, IoT Call for Practice Examples Facilitator: Jim Phelps</td>
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<td>Oct 20</td>
<td>EA Maturity Model</td>
<td>Report out on the Maturity Model and how we include it in the year ahead.</td>
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Spring 2015 Face2Face Meeting
Face2Face Outcomes: Architecture Methods

See the Spring Face2Face 2015 Notes for more on how the participants worked together.
Reflection

“serious thought or consideration”
Inclusion: Hear all the voices & ideas

“1” Time
1, 2, 4, all
Reflection: Important to learning

\[ + \Delta ! ? \]
Goals for the day

- Learn about the **FORCES** of the Digital Transformation
- Create and share **FUTURE STATE SCENARIOS**
- Understand how EA/BA **WORK IS CHANGING**
- Create your own **ROADMAP** for how you will work differently in the future
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**Icebreaker**

1. **Count off:** 1, 2, 3, 4, 1, 2, 3, 4, 1, 2...

2. **Line Up:** 1s & 2s across from 3s & 4s

3. **Meet:** 1s go find someone across from you

4. **Inquire:** Learn something about each other
Forces of Digital Transformation

What are the external changes or forces that are driving the digital transformation?

> Technologies
> Culture
> Etc.
Welcome to SeaTac. If you don’t have luggage to check, you can head straight to the TSA Pre checkpoint 4.
Alaska Airlines

Hyper-Personalized
Effortless Experience
Timely / Context Aware
Mobile Delivery
Data Driven
Autonomous
Turn Employees into Consumers

Harnessing the Consumer Psyche in the Workplace

Brian Abrahamson
CIO
Pacific Northwest National Laboratory
A mantra we write on the wall...

» Keep it absolutely simple
» Obsess on an effortless user experience
» Make it personal
Proactive Support (aka SplunkWorks)

We know more, we know first. This is a game-changer
It’s tax season. Here’s some stuff that might help you out.

**LEARN**
- Pay Statements from 2014

**ACT**
- Your W2 form is ready.
- Sign up for Electronic W2
- Adjust your Federal Tax Withheld

**CONNECT**
- Who can answer questions about my paycheck and income tax?
  - Payroll Accounting
    - Jonathan Bates
Here's what I found.

**LEARN**

- Acquire Product via Business-to-Business (B2B)
- B2B Website

**ACT**

These are the top Mac laptops available from the IT catalog.

- **MacBook Pro Retina 15”**
  - 16GB memory, 512 GB storage
  - $2,657.00
  - Buy Now

- **MacBook Air 13”**
  - 4GB memory, 256 GB storage
  - $1,365.00
  - Buy Now

See more in the IT catalog

**CONNECT**

Who can order a laptop for me?

- Group Administrator
  - Eloise Sparks

Who can add items to the IT catalog?

- Desktop & Mobile Management
  - Scott Snyder

**RELATED SEARCHES**

- PNNL apps
- Software library
- Mac OS X Yosemite
- Windows virtual machine

**INTRANET SEARCH RESULTS**

- Acquisition Hazard Assessment
- Use of a laptop computer to monitor and control an existing fire alarm system in EMS, to remove devices to be replaced to ensure...
Turn Employees into Consumers

Harnessing the Consumer Psyche in the Workplace

Hyper-Personalized
Effortless Experience
Timely / Context Aware
Mobile Delivery
Data Driven
Autonomous
Nordstrom’s Flagship Store

Ken Schow
VP of Engineering
Nordstrom
Nordstrom’s NY Flagship Store
Nordstrom’s NY Flagship Store

Hyper-Personalized
Effortless Experience
Timely / Context Aware
Mobile Delivery
Data Driven
Autonomous
Nordstrom’s NY Flagship Store
The Digital Enterprise
Digital Enterprise Transformation

Technical Drivers

- User Center Design
- Effortless Experience
- Hyper-personalization
- Artificial Intelligence
- Autonomous Systems
- Data Driven
- Big Data
- Internet-of-things

Outcomes

- Digital Enterprise Transformation
What will be IT’s most important contribution to the business over the next three years?
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HBR: IT’s Most Important Contribution

What will be IT’s most important contribution to the business over the next three years?
Drive business innovation through IT: 48%
Manage security and risk: 47%
Establish architectures to support digital: 47%
Support business-led IT initiatives: 41%
Provide access to tech capabilities (vendor): 28%
Lead and implement most IT projects: 21%

1. Business Depends on Specialized Technology
   - Seventy two percent of executive suite priorities depend on technology.
   - CEOs rank technology first among factors that drive business value.

2. Business Leaders Are More Tech Savvy
   - Eighty percent of business leaders have experience with technology projects.
   - Other functions are hiring technology-savvy staff.

3. Technology Is More Accessible
   - Cloud, SaaS
   - Consumer technologies
   - More vendors
   - Nontraditional vendors

4. IT Has Limited Capacity
   - Limited budgets and capacity
   - A focus on scale and efficiency
   - Rigid governance processes that are ill-suited to new technologies
Average Percentage of Business Partners Willing to Lead Technology Projects

- **26%** Not Willing
- **74%** Willing

$n = 181$ business executives.
Source: CEB analysis.
Note: Average of “willing to lead” for identifying capabilities of tools, selecting and procuring tools, project management, and vendor management.
**BUSINESS LEADERS EXPECT TO PLAY A NEW ROLE IN TECHNOLOGY**

Drivers of Greater Business Partner Technology Responsibility

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Trend: Technology as a Service

Technology as a Service:
The point at which technology is no longer a thing you own and do but is instead a thing you lease, rent or use for free.
BYOE

Bring
Your
Own
Everything
Big-Data Drive Advertising Platforms
Digital Natives

API Economy - making things easy to connect

User Experience Driven Solutions - making things easy to use

Maker Trend - digital DIY as a lifestyle

Digital Natives / Immigrants - who are comfortable with technology
## Digital Enterprise Transformation

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Forces of Digital Transformation

What are the outside / technical changes that are driving the digital transformation?

> User expectations
> New technologies
> Etc.
Definition of Digital Transformation

How would you define the digital transformation?
Impacts

Given these forces:
What value chains, processes, domains, areas of higher education will be most impacted?

How?
Break
Drivers:
https://spaces.internet2.edu/x/oA-9Bg
Force Field Analysis

Drivers → FUTURE STATE → Barriers

EA Role
Expectation to do more with less.

UW executive leadership expectations for UW-IT to provide insight into its management.

Increased competition in IT services due to structural changes (such as cloud)

UW-IT is managed as a business to serve the UW, with:
- Shared language...
- Shared view of business outcomes and value
- Ability to identify and act on opportunities...
- Ability to improve process & project effectiveness
- Appropriate levels of delegation...

Some stakeholder reluctance:
Lack of confidence due to past efforts:
Generally low management capacity relative to the scale of UW-IT.

- Promote shared language (e.g., white paper, capability map, strategy practice)
- Join and support related work under way
- Encourage and guide use of ITBM tools
- Lead structural improvement
- Define Roadmaps and Opportunities for maturity
Future State - Scenarios

How will this forces affect different aspects of University?

> Volunteers for Scribe & Reporter
> Pick one domain or process area (15m)
  – Narrow to something reasonably specific
  – Stick to a 2-3 year horizon
> Think of how the forces will change that domain (20m)
> Sketch out two future states: (20m)
  – Positive - what if it goes well
  – Negative - what if we don’t respond
> Report Out (20m)
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Lunch
Room 113 - 100 Level
Reconvene at 12:30PM
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The Changing Shape and Value of Enterprise Architecture
Societal Revolutions in Western Civilization

1. Leaving the dark ages (1100+) - Arabic numerals
2. Printing revolution (1440+) - Printing press
3. Industrial revolution (1760+) - Steam engine
4. Second Industrial revolution (1870+) - Electric dynamo (generator)
5. Digital revolution (1990+) - Personalized and connected digital devices
Phases of a Societal Revolution

Phase 1: Refine
Phase 2: Disrupt
Phase 3: Transform
An architect between revolutions

- Example of 1860s: “Design a standard factory”
- Work in “Facilities Design”
- Paradigms are unchanging
- Reference architecture is tried and true
- His skill set is almost entirely technical - math and physics.
Phase 1 - Refine and Re-create (10-15 years)

> Work out the kinks in the core technology
> Build out the infrastructure
> The is no to little productivity gain at the society level
> Resistance from “old-timers”
> Items that already exist are refitted to the new technology
Phase 1: Refine and re-create

- Electric trolley
- Electric light
- Word processor
- Games
- Electric vacuum
- Electric Iron
- Digital camera
- Pass/time cards
An architect during phase 1

- Example of 1890s: “Design a standard factory, but power it with electricity”
- Work in “Facilities Design”
- Paradigms are unchanging
- Reference architecture is tried and true
- Components are replaced with up-to-date ones
- His skill set is still technical, but he must keep up with latest developments.
Phase 2: Disrupt - invent things that couldn’t exist before (10-15 years)

- Infrastructure has been built out
- Natives are joining the workforce
- Old-timers are retiring
- The first “cloud”/outsourcing capabilities are available
- Innovators start creating new things that require the new technology
- Productivity begins to ramp slightly
Growth in Total Factor Productivity
The average annual growth rate is over the ten years prior to the year shown. The bar labeled 2014 shows the average annual growth rate for 2001-2014.

*Reproduced from The Rise and Fall of American Growth (Gordon, 2016)
Phase 2: Disrupt/Invent new things

- Washing machine
- Refrigerator
- Pocket computer
- Brokered services
- Internal combustion engine
- Radio
- Augmented Reality
- Self-driving cars
An architect during phase 2

- Example of 1905: “I need to make automobiles. Design a building that helps us beat the competition.”
- May work outside of facilities
- Paradigms are shifting
- Reference architectures need to be recreated, and quickly go out of date
- Solutions are mashups of old and new - and “old” might only be a few years.
- He must understand more than the technology - he must understand how it will be used. Understanding business process becomes as important as technical skills.
Phase 3 - Transformation (20-30 years)

> The revolution transcends technology and changes how society functions
> Major paradigms completely shift
> Productivity is greatly increased
> Society reshapes itself, incorporating the technology into the “new normal”
> This phase lasts longer, because changing human behavior is harder than changing technology.
A phase 3 shift during the 2nd industrial revolution

- Women have time to do things other than wash and shop for food.
- Women join the workforce
- Women get the right to vote (1920)
- Women read books!
Albert Kahn
“When Henry Ford took me to the old race course where the Highland Park plant stands and told me what he wanted, I thought he was crazy. No buildings such as he talked of had been known to me.”

Albert Kahn
An architect during phase 3 (today)

- Works for executives
- Paradigms are being replaced by completely new paradigms - nothing is guaranteed to be the same
- Reference architectures reference entirely different things than they did a few years ago
- Individual solutions and components are less important than the big picture.
- The architect's most important skill is the ability to predict and prepare for the future. Technical skill is still important because they have to document solutions and designs, but they also need a whole set of new skills that help them interface with the ever-changing business needs - business understanding, listening, communication, persuasion to name just a few.
“The Highland Park Ford Plant ... didn’t just change the way Model Ts were built. It changed how everything was built, setting a new template for manufacturing and industry” wttw.com, “10 Buildings that Changed America”
Possible phase 3 shifts during the digital revolution

> Driverless cars
  - Anyone can drive (10 year-olds, disabled people, drunk people)
  - Cars are rented by the trip and seldom owned
  - City parking is not an issue
  - Radio disappears

> Everything is connected
  - Pills will know when they’ve been taken. Doctors will proactively know how patients are doing.
  - Food will know when it’s been eaten and be automatically replaced.
Shifting structure of EA

Current State
Where does your institution sit on the digital revolution timeline?
How well is your EA practice aligned with where your institution is?
How do you think EA can better align to your institution?
Shifting structure of EA

*Future State*

Are there Model T challenges in your future? What changes need to be made to EA to prepare for them? What needs to be done to make these changes?
Break
Leading as an Architect

“Being the white dog”
How does your position (where you report, your title) affect your effectiveness and efforts?

How do you respond?
What does Digital mean to you?

What does the Digital Transformation mean to you and your practice?

> What do you do differently?
> What do you do more off?
> What do you stop doing?
> What do you start doing?
Lessons Learned

What did you learn today?
What are your key takeaways?

What big questions do you have?
Plus, Delta, Big Ideas, Questions

➕ - What **went well** today? What did you like?

⊿ - What could have been **improved**?

❗ - What “**Big Idea**” or “**Aha! Moment**” did you have?

❓ - Any “**Big Questions**” strike you during the day?
Thank you!

Shifting role of Enterprise & Business Architecture.
SEM06F-Itana Face2Face 2017
Appendix
Facilitation Supplies to Bring

Blue Tape (Jim)
Chimes (Jim)
Markers and Sharpies (Louis)
Post-It Notes (Louis)

Hard copies of the agenda?
Hard copies of the attendee list?