

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

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ITANA

Home

Created by Steve Olshansky, last modified by Piet Niederhausen on Sep 13, 2017

Home

Our latest updates

Join

Become a member

Events

Join a call or meeting

Groups

Collaborate with peers

Library

Resources for architects

About

Charter and contacts

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.

Next Conference Call

NOTE: October 31 - Itana Face2Face at EDUCAUSE No Call November 3

Topic: Young Professionals Outreach

Day/Time November 17, 2017 - 11AM PST, Noon Mountain, 1PM Central, 2PM Eastern (7PM GMT)

Adobe Connect: <http://confer.uw.edu/EA> -Audio is only on the phone, not Adobe.

Dial-in number: +1-734-615-7474 Access Code: 0165350

Autumn 2017 Call Program

Date	Track	Session	Materials
Oct 6	n/a	2017-2018 Kick-off Call - Book Club, Working Groups, Face2Face 2017, Focus for the Year - Digital Transformation, DEI, IoT Call for Practice Examples Facilitator: Jim Phelps	2017-10-06 Itana Call Minutes
Oct 20	EA Maturity Model	Report out on the Maturity Model and how we include it in the year ahead.	2017-10-20 Itana Call Minutes Presentation (Google) EA Maturity Model Working Doc (Google) EAMM.pdf

Recent Activity

Spring 2016 Face2Face Meeting

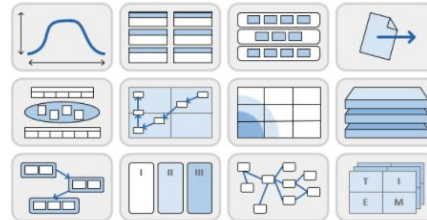
Face2Face Outcomes: [Architecture Leadership](#)



See the [Spring Face2Face 2016 Notes](#) for more on this F2F.

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

+ Δ ! ?

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

Time	Section	Who/Links
08:00 - 08:15 am	Intro Kick Off - Ice Breaker	Jim
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09:30-09:45	BREAK	
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10:00 - 11:00	Table Work: Scenario Work - Good/Bad	Louis
11:00-11:30	Scenario Work Report	Louis
11:30 am-12:30 pm	LUNCH - Room 113	

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12:30-01:00	Value of EA and Changing Shape of EA	Chris
01:00-02:00	Table / Discussion: How do you work differently (from artifact to facilitators, federation builders)	Chris
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3:00 - 3:30	What does digital transformation mean to your practice?	Chris
03:30-03:45	Lessons Learned from the day	Jim
03:45-04:00	Wrap-Up +, Δ, !, ?	Jim

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.

Alaska Airlines



ALASKA AIRLINES

NOW

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**

TechDesk



Proactive Support (*aka SplunkWorks*)

*We know more, we know first.
This is a game-changer*



How can I help you?


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

X

buy|laptop

- buy chemicals
- buy equipment
- buy laptop
- buy new PC



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](#)

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[Mac OS X Yosemite](#)

[Windows virtual machine](#)

INTRANET SEARCH RESULTS

[PDF] Acquisition Hazard Assessment

... Acquisi Hazard Assessment ... Use of a laptop com

Did you find this helpful?



TOPIC INDEX

No results matching your search were found.



Turn Employees into Consumers

Harnessing the Consumer Psyche in the Workplace

Pacific Northwest National Laboratory
Presidential Operations by IBM® since 1981

Brian Abrahamson

Brian Abrahamson

CIO

Pacific Northwest National Laboratory

- 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

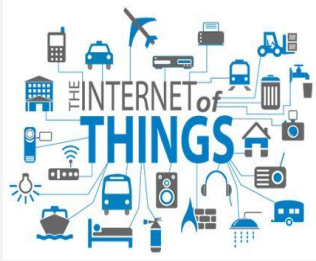
Mobile Delivery

Data Driven

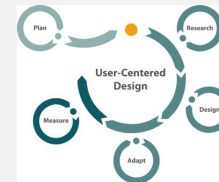
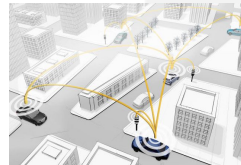
Autonomous



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**

HBR: IT's Most Important Contribution

What will be IT's most important contribution to the business over the next three years?

HBR: IT's Most Important Contribution

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21

Lead and implement most IT projects

HBR: IT's Most Important Contribution

What will be IT's most important contribution to the business over the next three years?

41

Support business-led IT initiatives

HBR: IT's Most Important Contribution

What will be IT's most important contribution to the business over the next three years?

48

Drive business innovation through IT



Drive business innovation through IT



Manage security and risk



Establish architectures to support digital



Support business-led IT initiatives



Provide access to tech capabilities (vendor)



Lead and implement most IT projects

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

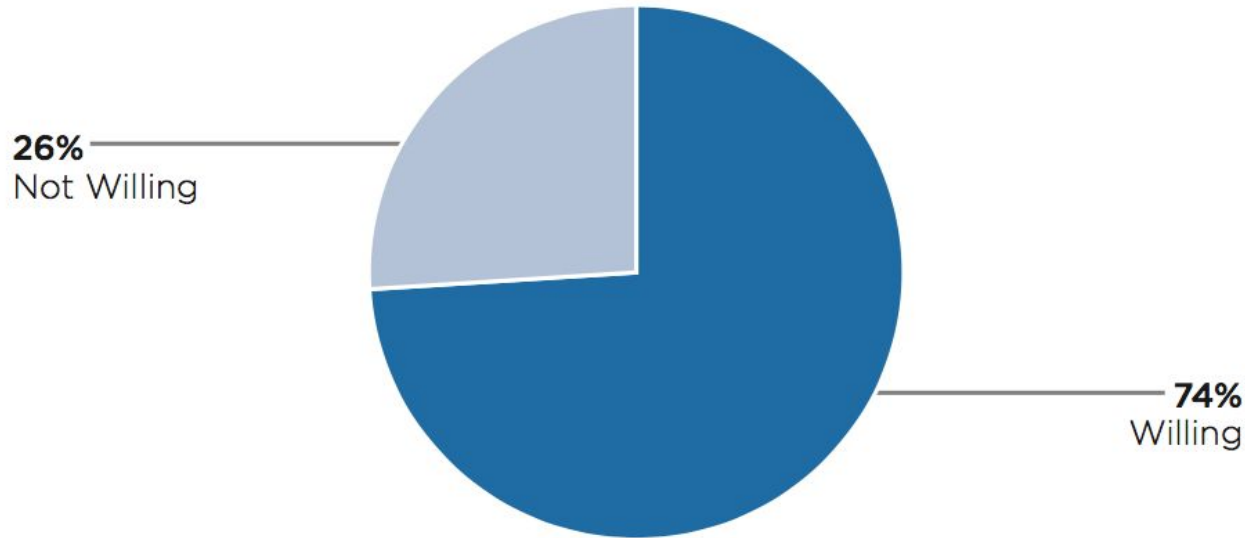
- Cloud, SaaS
- Consumer technologies
- More vendors
- Nontraditional vendors

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



$n = 181$ 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.

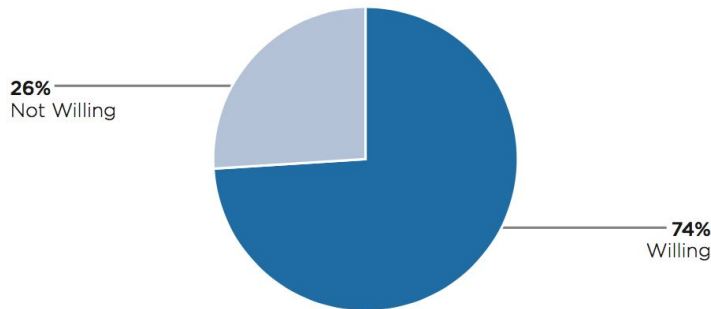
BUSINESS LEADERS EXPECT TO PLAY A NEW ROLE IN TECHNOLOGY



Drivers of Greater Business Partner Technology Responsibility

- 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
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Digital Enterprise Transformation

Technical Drivers

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- > Big Data
- > Internet-of-things

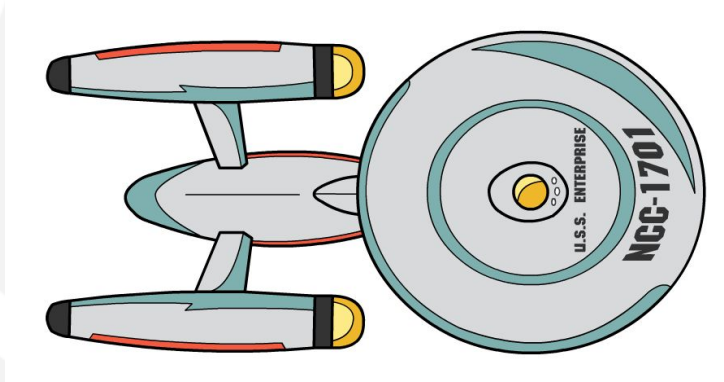
Cultural Drivers

- > Business Lead Technology
- > Enabled and encouraged business leaders
- > Rate of change in the business landscape

Outcomes

- > Digital Enterprise Transformation

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**

Cloud

A blue cloud icon with the word "build" written in yellow lowercase letters across its center.

build
IaaS

A blue cloud icon with the word "buy" written in yellow lowercase letters across its center.

buy
SaaS

A blue cloud icon with the word "deploy" written in yellow lowercase letters across its center.

deploy
PaaS

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

Technical Drivers

- > User Center Design
- > Hyper-personalization
- > Effortless Experience
- > Artificial Intelligence
- > Autonomous Systems
- > Data Driven
- > Big Data
- > Internet-of-things
- > **B.Y.O.E**
- > **Cloud**

Cultural Drivers

- > Business Lead Technology
- > Enabled and encouraged business leaders
- > Rate of change in the business landscape
- > **Digital Natives**

Outcomes

- > Digital Enterprise Transformation

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:

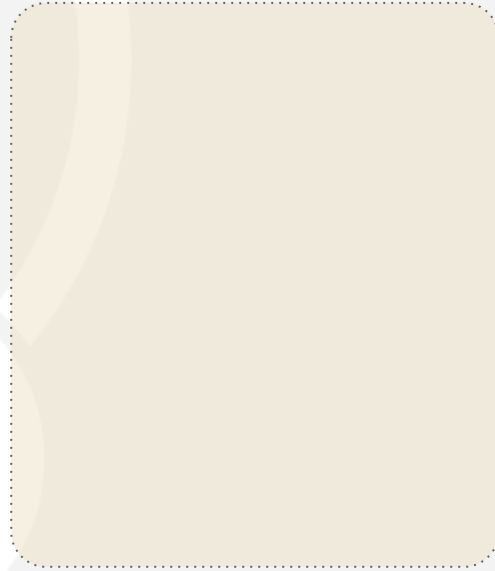
<https://spaces.internet2.edu/x/oA-9Bg>

Force Field Analysis

FUTURE STATE

Drivers →

← Barriers



EA Role ↑

UW-IT business management force field

Drivers

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)

FUTURE STATE

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...

Barriers

Some stakeholder reluctance:

Lack of confidence due to past efforts:

Generally low management capacity relative to the scale of UW-IT.

EA
role

- 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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11:30 am-12:30 pm	LUNCH	

Lunch

Room 113 - 100 Level
Reconvene at 12:30PM



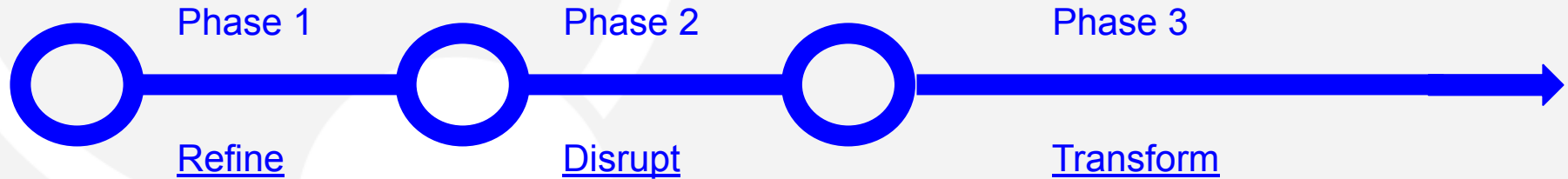
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11:30 am-12:30 pm	LUNCH	
12:30-01:00	The Changing Shape and Value of EA	Chris
01:00-02:00	Table / Discussion: How do you work differently (from artifact to facilitators, federation builders)	Chris
02:00-02:15	BREAK	
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The 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



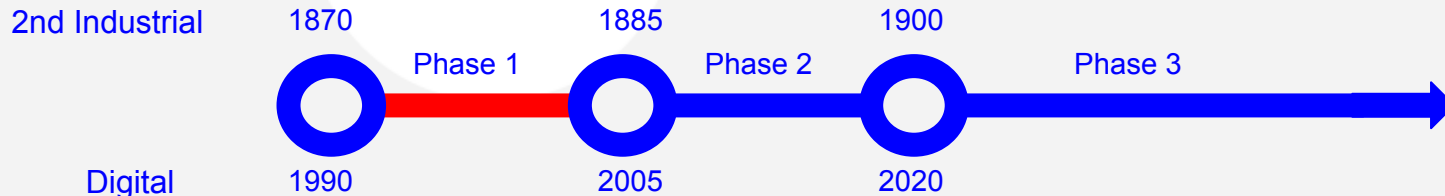
An architect between revolutions

- > 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
- > There 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



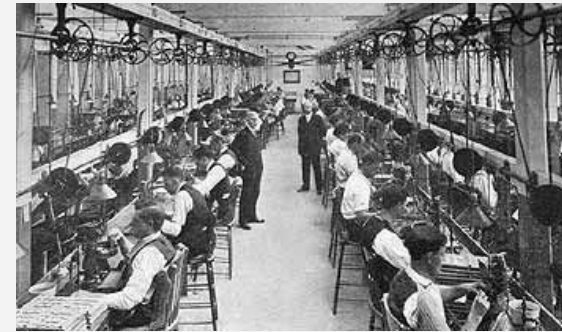
Digital camera



Pass/time cards

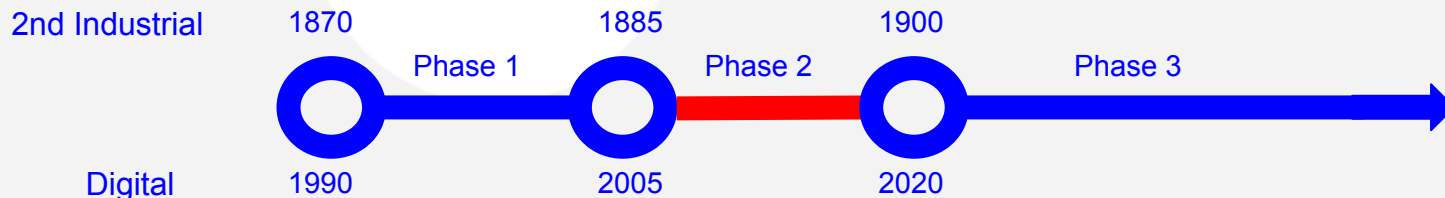
An architect during phase 1

- > 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.



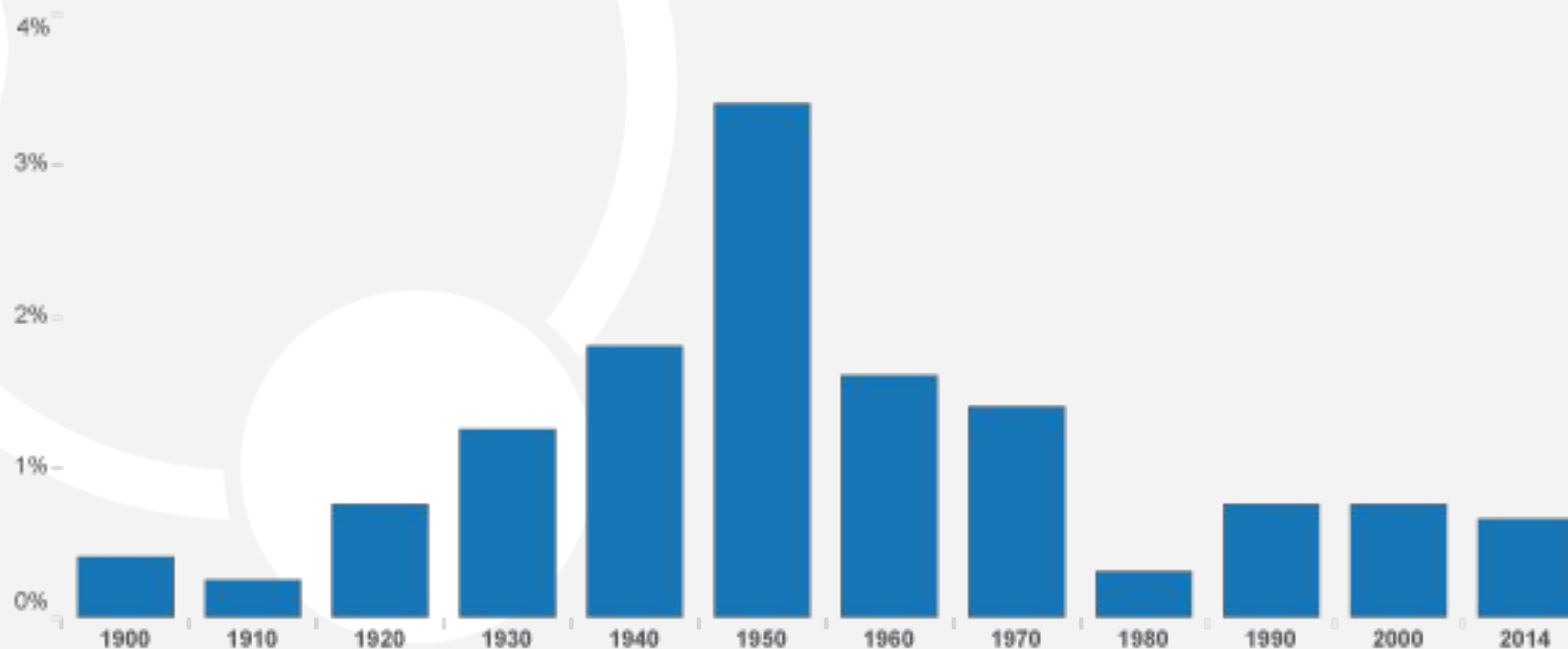
Phase 2: Disrupt - invent things that couldn't exist before (10-15 years)

- > 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



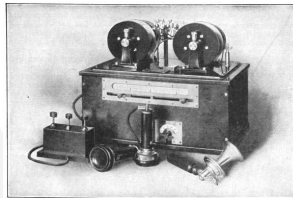
Pocket computer



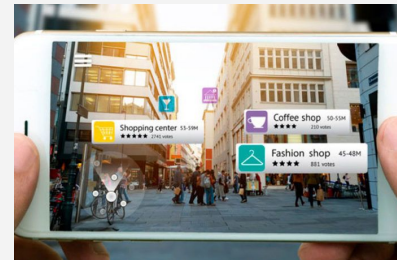
Brokered services



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.

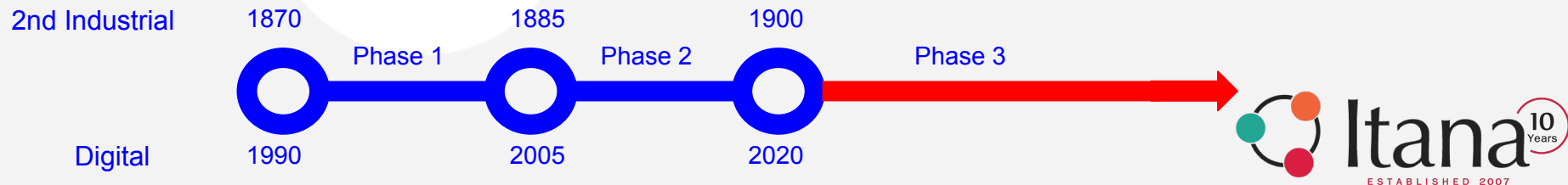


From the Collections of The Henry Ford



Phase 3 - Transformation (20-30 years)

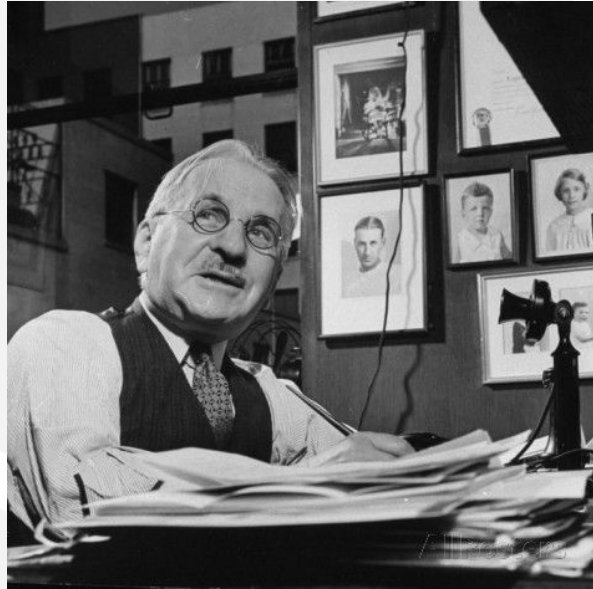
- > The revolution transcends technology and changes how society functions
- > Major paradigms completely shift
- > Productivity is greatly increased
- > Society reshapes itself, incorporating the technology into the “new normal”
- > This phase lasts longer, because changing human behavior is harder 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!





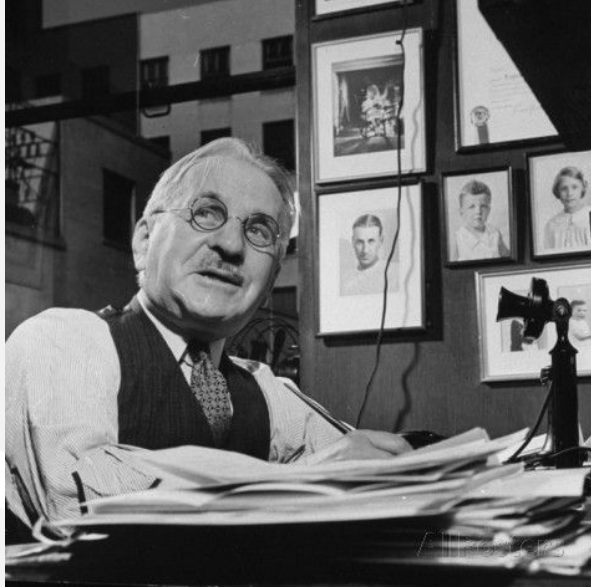
Albert Kahn



Albert Kahn



Henry Ford

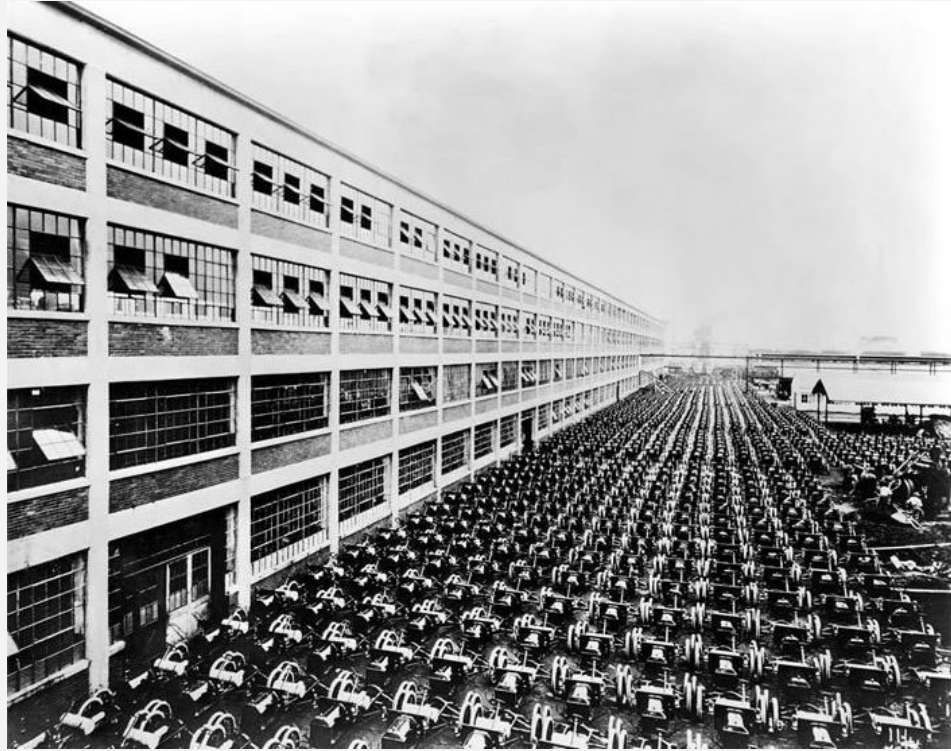


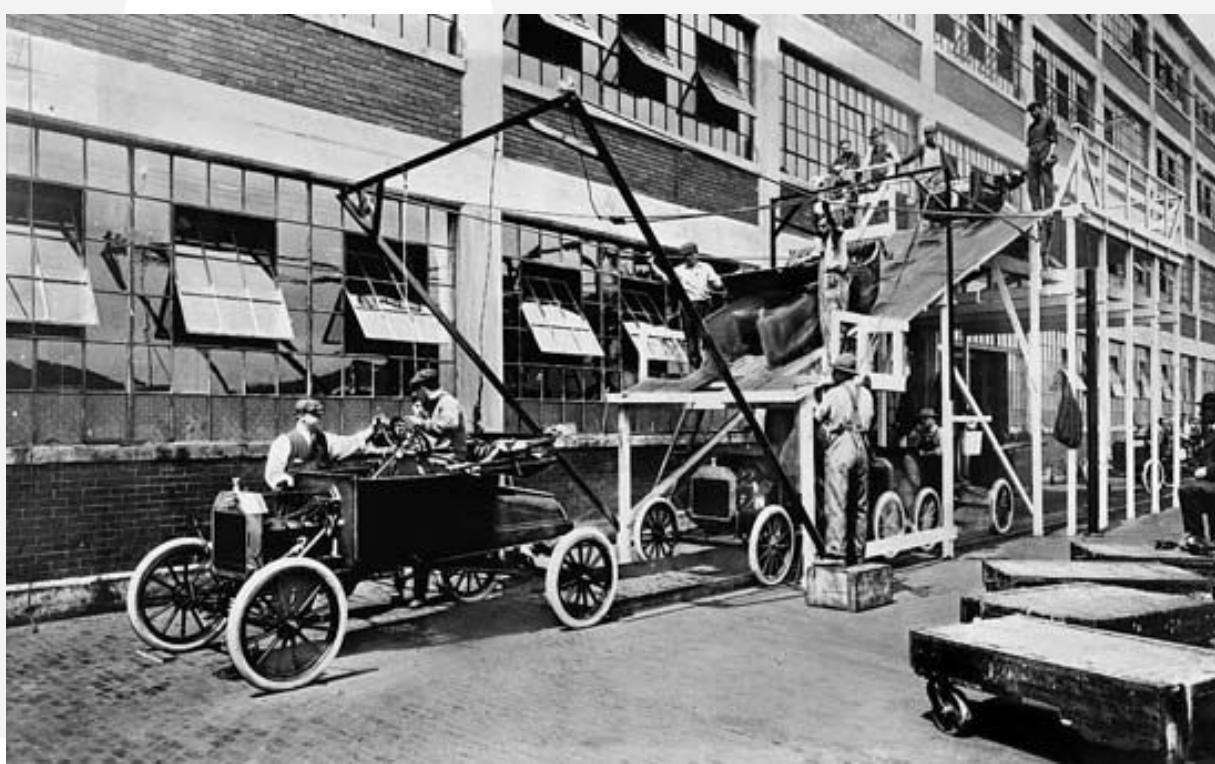
Albert Kahn

“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.”

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](http://www.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”



GIFAK.NET

Reporting Structure

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?

Δ - 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?