



Enterprise Architecture and
Business Value

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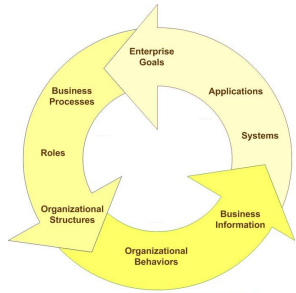
Davis Distinguished Professor of Business
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CIO Symposium

Helsinki, Finland



ECIS2011*



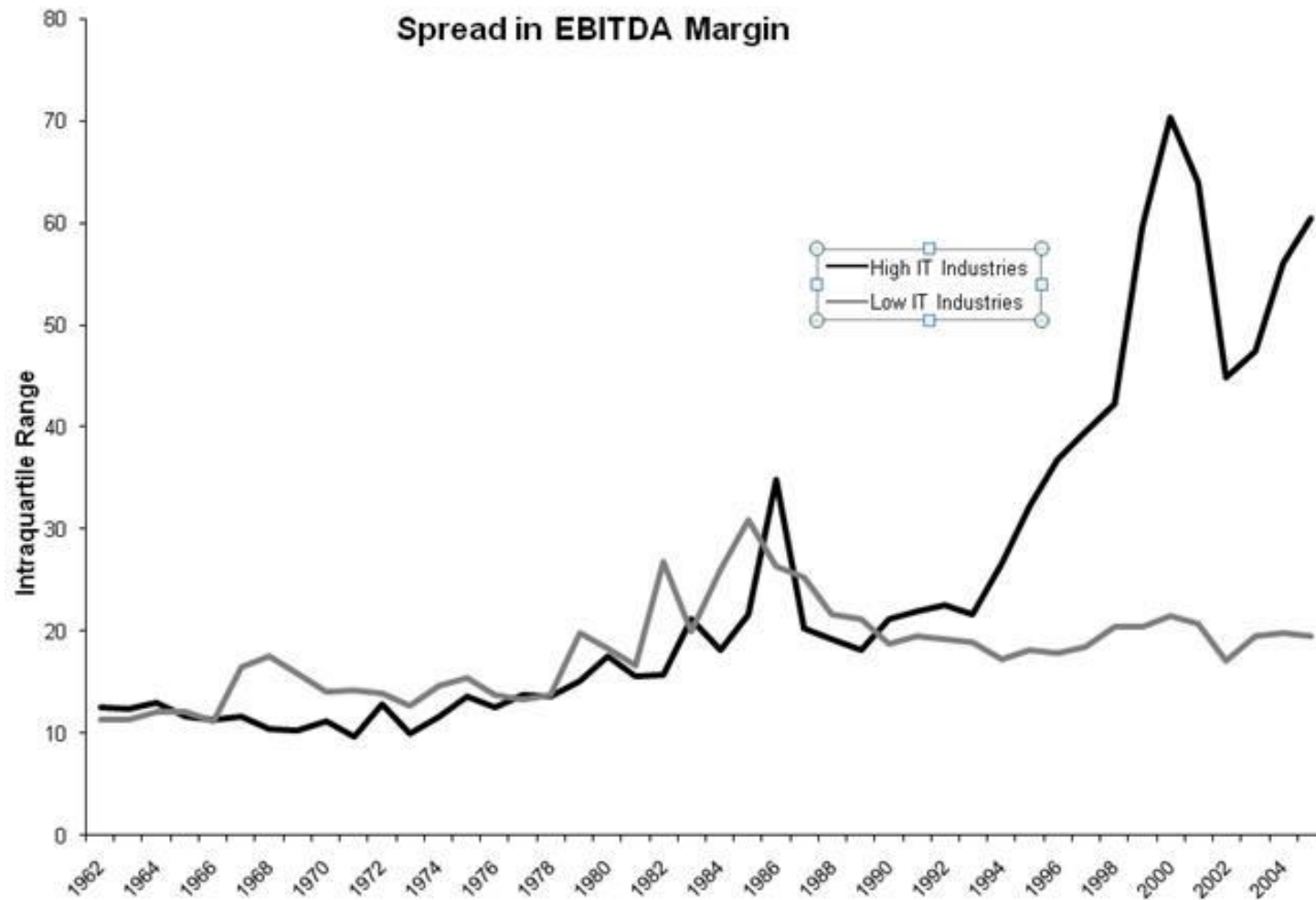
Enterprise Architecture

An evolving definition

- Zachman (1987) vision: “business value and agility could best be realized by a holistic approach to systems architecture”
TAFIM ('94) → FEAF ('99) → TOGAF ('03) → Gartner/Meta group ('05) → Contemporary FEA ('06)
- EA is a strategic information asset base, which defines the mission, the information necessary to perform the mission, the technologies necessary to perform the mission, and the transitional processes for implementing new technologies in response to the changing mission needs. An enterprise architecture includes a baseline architecture, target architecture, and a sequencing plan
- EA (now equated to architecting enterprise change) is continually evolving and focused on addressing two complementary problems:
 - System complexity
 - Poor business alignment

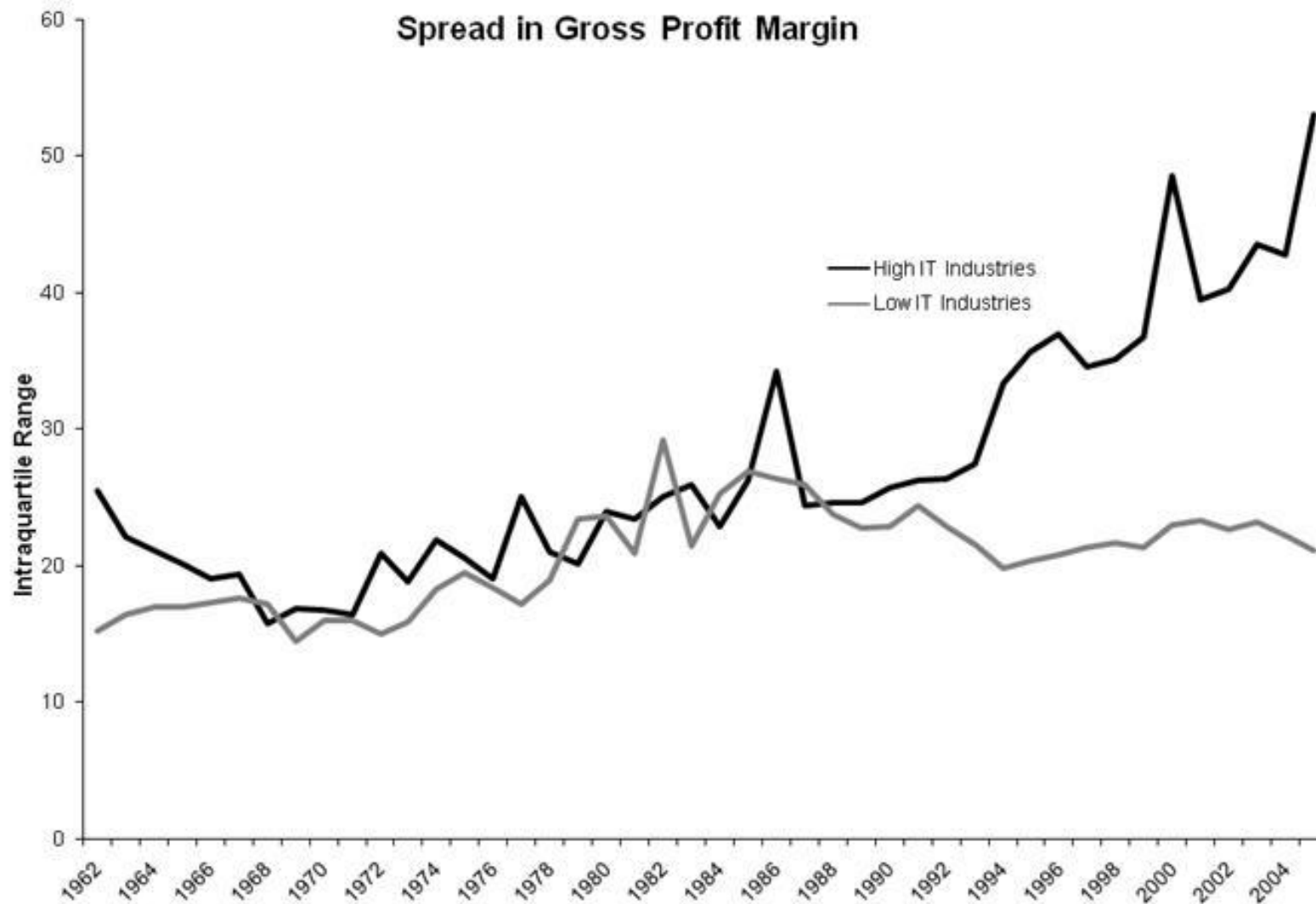
IT Matters ... *EA enables it* ...

Consider this (McAfee and Brynjolfsson, 2008)



More evidence

(McAfee and Brynjolfsson, 2008)



Deriving Business Value from EA

A tale of three projects

*AZ Healthcare roadmap;
EpiPlanz; and H1N1 Planner*

(*) These research efforts have been supported part by: a faculty research award from IBM's T.J. Watson Research Center; a grant from CDC; and, funding from the Maricopa County Department of Public Health



Roadmap Process

- Executive Order
- Call to Action Summit
- Steering Committee Oversight
- Established five task groups
 - Arizona leaders chaired
 - National experts facilitated
- Inclusive, open process to participate
 - Geographic and functional representation
 - >300 people actively participated via task groups
- Roadmap presented to Governor Napolitano



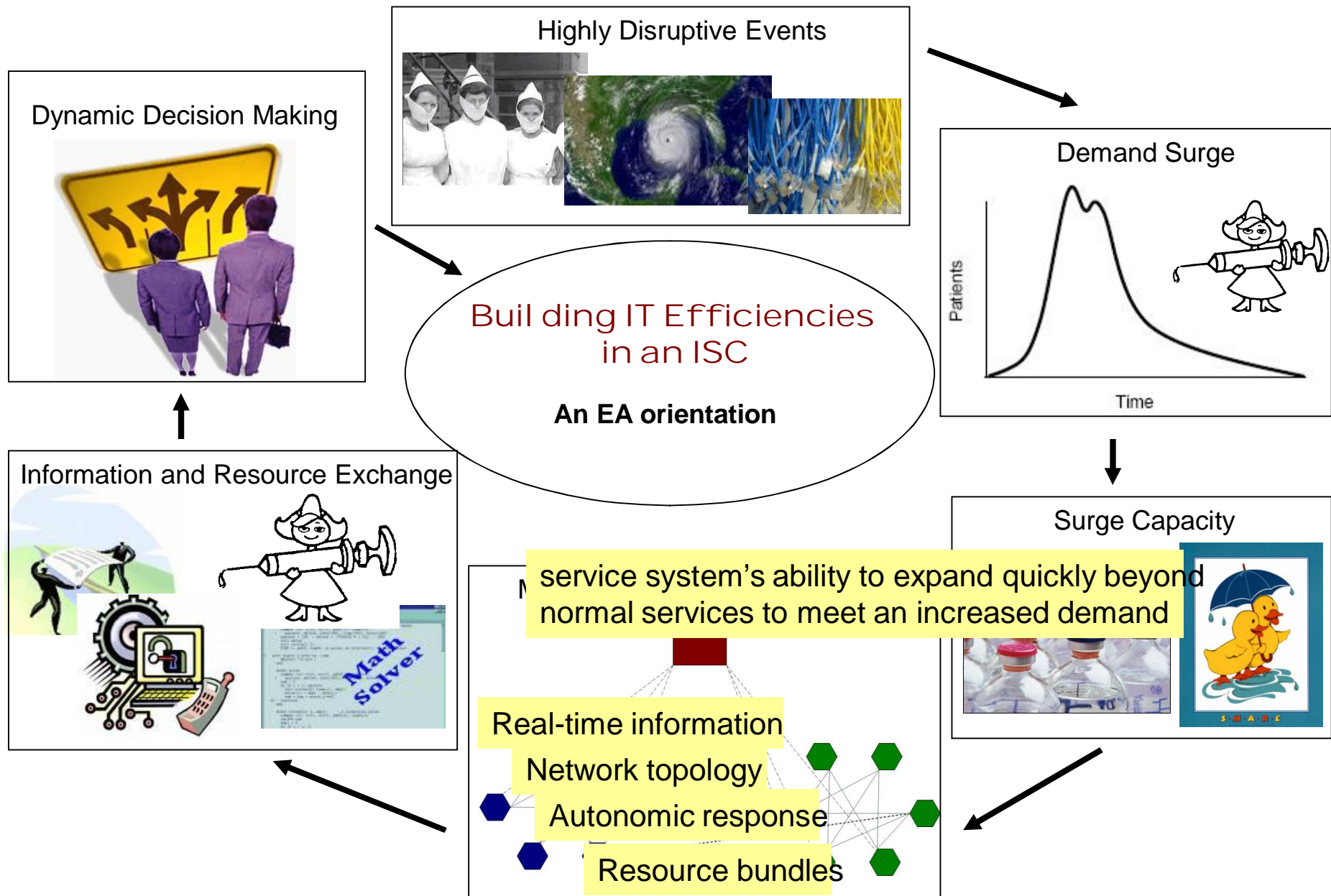
Healthcare Transformation Roadmap

Goals of Roadmap are **improving quality** and **reducing costs** of healthcare in Arizona by

- Ensuring health information is available at point-of-care
- Reducing medical errors
- Avoiding duplicate medical procedures
- Improving coordination of care
- Furthering healthcare research
- Encouraging patient participation
- Enhancing business environment
- Reducing state expenditures

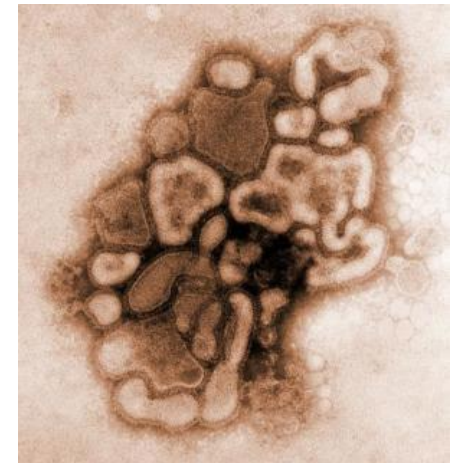
Current status: 501(c)(3) corporation ... HII ... Political realities!

Changing vision for Public Health



The H1N1 Planner

- Once vaccine was available, federal government decided how much was allocated to individual states – this was done one day at a time
- The states then decided how much the counties could order (communicated by email to one or two people).
- The counties decided which providers would receive the vaccine



Decoding a virus

A virus's ability to subtly or dramatically change into a new strain – such as in the current influenza pandemic – keeps officials looking at its origin for answers.

WHAT'S IN A NAME
Virus type
Of the three types – A, B and C – the first two are the most common causes of epidemics.

A Found in a variety of animal species.
B Normally only in humans.

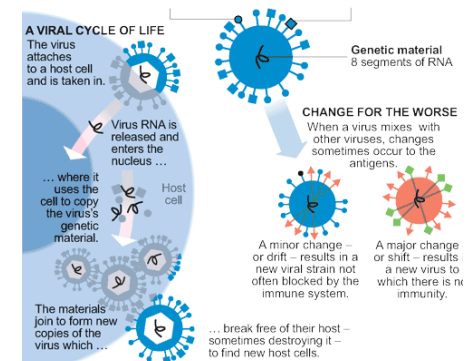
A (H1N1) Swine influenza

Subtype
Determined by a combination of two surface proteins – or antigens.

Hemagglutinin protein
Attaches virus to the host cell.

Neuraminidase protein
Indicates specific type of H or N protein.
Helps release new virus from host.

Strain



Sources: Centers for Disease Control and Prevention; "The Merc Manual;" Florida State University
The Associated Press



Complications

- Vaccines came in different doses and delivery formats
 - Appropriate for different “priority” populations
- Maricopa County Department of Public Health (MCDPH) serves more than a thousand providers.
- Some vaccines had to be ordered through the MCDPH warehouse
- Tracking numbers were not available for most shipments
- Not every provider wanted the vaccine they were given
- Actual provider orders were sent to the state and not given to the county
- Other issues seemed to arise daily

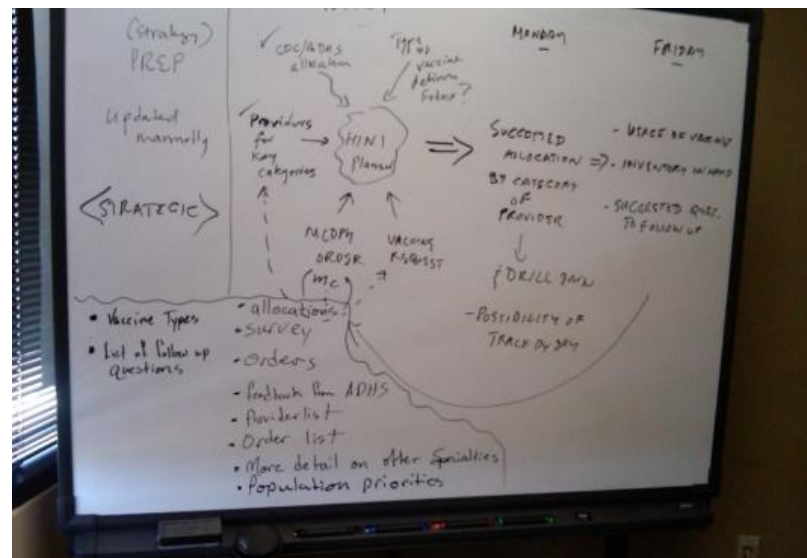
Confounding (Data) Issues

How Records Were Kept

- Email ... allotment of vaccine and actual orders
- A calendar
- 20 to 30 spreadsheets
 - predictions
 - Actual vaccine allotments
 - Lists of providers
 - Lists of categories of providers
 - Lists of the types of vaccines
 - Much more

Expectations

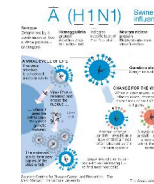
- Facilitate constraint based allocation
- Streamline data flow
- MCDPH should be able to manage it themselves
- Need it last week, yesterday may be acceptable!



Enterprise Architecture

When using the lens of Healthcare projects in Arizona

- Business value for EA is defined through ...
... the process (it's a process and a thing)

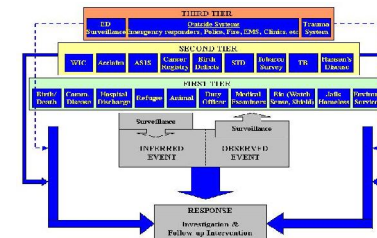


Dealing with a crisis H1N1

... of translating business vision and strategy

... into effective enterprise change

(if no change is needed, no architecture is needed)



Changing vision for Public Health

... by creating, communicating and improving the key requirements, principles and models that describe the enterprise's future state and enable its evolution

(architecture produces the creative constraints that

bir

Healthcare transformation Roadmap



Arizona Health-e Connection

Roles and Responsibilities for the CIO

An evolving orientation to EA

Organization (Plan)

How to:

Share Knowledge

Reward re-use

Change Culture



Processes (Prepare)

How to:

Change Operations

Identify Knowledge

Capture, Structure &
Re-use Knowledge



Implementation (Execute)

How to:

Develop systems

Data Integration

Create org.
knowledge building
blocks



Business Value from EA

Critical Success Factors

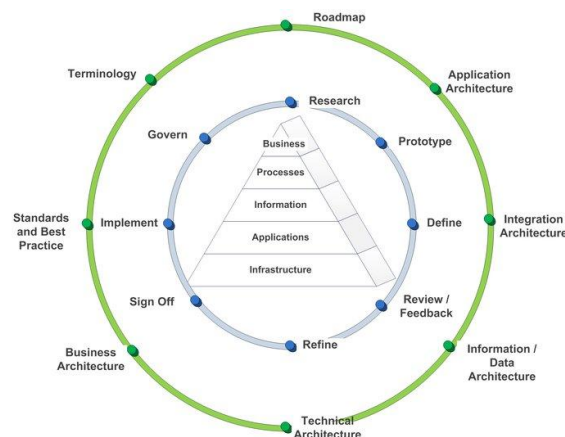
(it is not about the technology!)

Research findings

1. Stakeholder commitment
2. Trust building
3. Information Sharing
4. Incentive alignment
5. Goal congruence

Gartner ('11)

1. Weak lead architect
2. Lack of stakeholder understanding
3. Not engaging the business
4. Only doing technical level architecture
5. Focusing on the current state of EA
6. EA group does most of the architecture
7. Failure to measure and communicate impact
8. Only architecting the boxes
9. Late to establish EA governance
10. Lack of communication with stakeholders



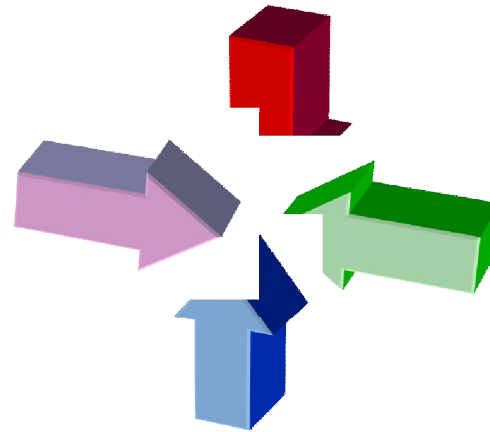
Evolving challenges for EA

Storage and Retrieval

*What do we know, where is it
and how do we get it?*

Practices and Metrics

*How do we
document and measure it?*



Culture & Learning

*How do you manage the social
networks and facilitate the
distribution and dissemination
of know-how?*

Sharing, Generation and Collaboration

How do we use, share, secure & collaborate with this know-how?