



Flexibility

An exploration

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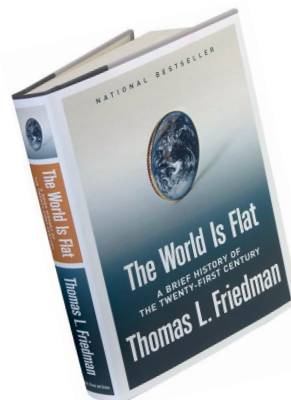


what makes you  special?

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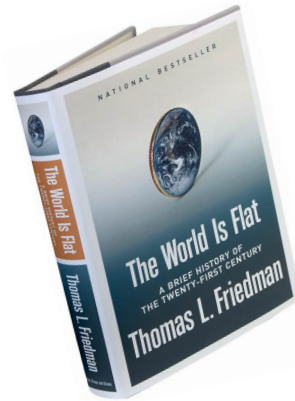
The world is changing fast



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Impact on (y)our clients

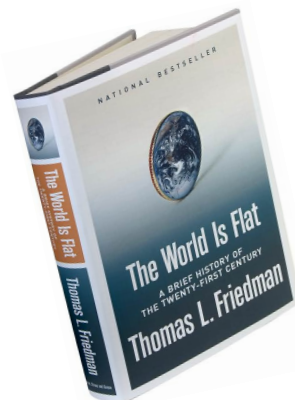
1. Continuous and fast changes with potential large impacts
2. Hyper competition & commoditization



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Impact on (y)our clients

1. Continuous and fast changes with potential large impacts
→ Need for speed, flexibility & adaptability to change
2. Hyper competition & commoditization
→ Need to differentiate

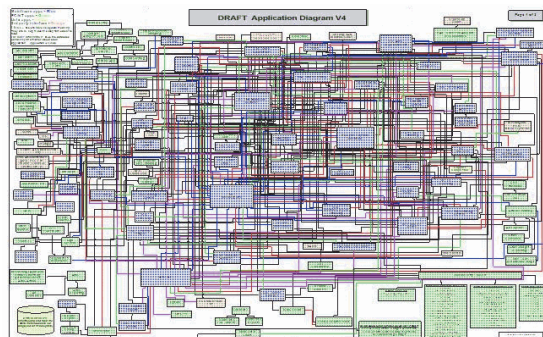


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An ordinary day in the IT industry

IT landscapes of organizations

IT environments start simple but quickly become complex relations between hardware, software, processes and people



Why?

- New requirements
- Undocumented systems
- Hardware & software updates
- Acquisitions

Other domain: IT landscapes

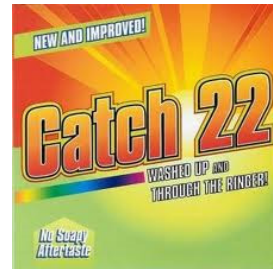
The result:

- *Expensive*
- *Inflexible*
- *Unstable*

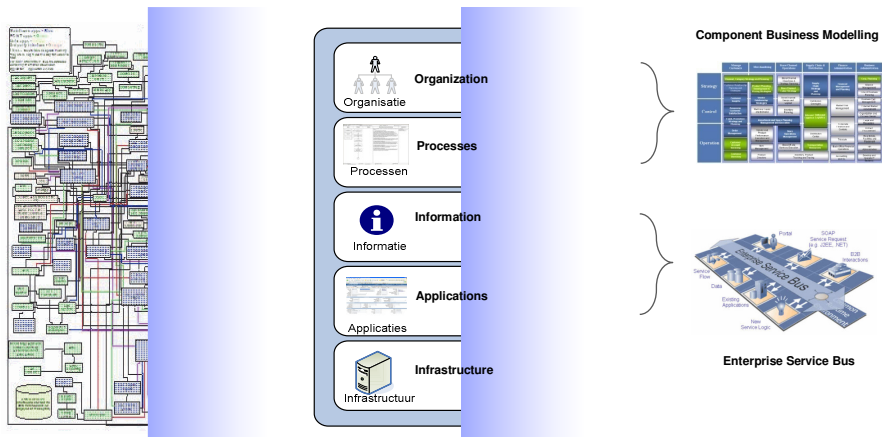


Because:

- *Maintenance costs run sky high*
- *So no budget for new capabilities*
- *Increased outages with potential large business impacts*



Addressing the problem



Enterprise Architecture: decoupling, standards, guiding principles for design & evolution

- **Lower maintenance costs**
- **Flexibility**
- **Lower risk of business failure**

Networked Communications & Swarm Intelligence

Two Developments of the past 20 years

1. The development and widespread adoption of **networked communications** technologies and applications.
 - End user control
 - Enabling self organization
2. Improved scientific understanding of “**swarm intelligence**” or “emergent behavior.”
 - Social insects such as bees, ants, and termites have meager intelligence yet, through collaborative, self-organizing action, create highly-sophisticated structures and collaborative projects



“Swarm Intelligence” & Emergency Response

3 Characteristics of “Swarm Intelligence”:

1. Flexibility
2. Robustness
3. Self-organization

All three were missing from the **government** response to Katrina



Swarm Intelligence & Emergency Response

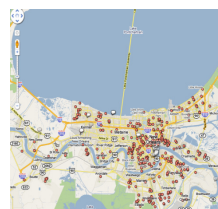
2 noteworthy exceptions to centralized response:

1. US Coast Guard; despite:
 - *Being underfunded*
 - *Aged equipment*
 - *Many employees had lost their own houses*

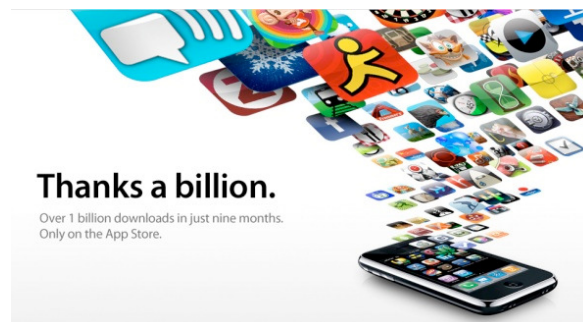
- Daily operations: business as usual
- Decentralized organization & decision making authority



2. Individuals
 - *Using IT technology to create combinations of data*
 - *PeopleFinder & ShelterFinder*
 - *90,000 entries in 5 days*
 - *4000 volunteers*



Business Intelligence in Retail

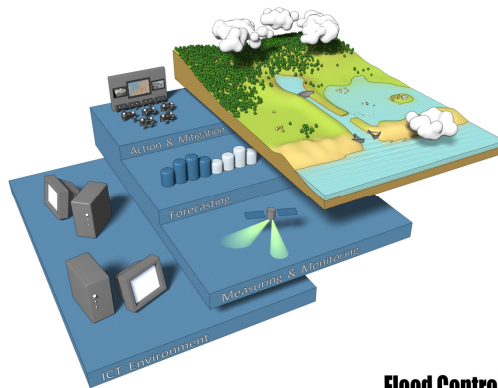


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Flood Control 2015

- Decoupling
- Standards
- Guiding Principles
- Self Organization



**Flood Control
2015**



Net Centric Operations

- Increased Situational Awareness
- Enhanced Speed of Command
- Self Organization

Current operations may:

- *have incompatible systems*
- *not have timely access to all data needed*
- *be overwhelmed by sheer volume of data*
- *not have access to people/resources to interpret that data*
- *not have a common operating picture of situation*
- *not know what capabilities are (or are not!) available*
- *not be able to effectively make or receive decisions*
- *not be able to quickly see effect of action/inaction*

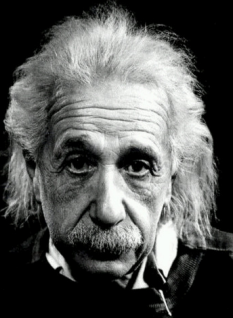


Through robust networking enabling well informed dispersed teams **allowing new forms of organizational behavior**

To ponder about

- Could Flood Risk Management go from **Command & Control** to **Sense & Respond**?
- Is there anything to **decouple and decentralize**?
- Is **self organization** feasible?
- What would be **guiding principles for design and evolution** of self organizing teams, applications or components?

How to make flood risk management flexible, resilient and at a lower maintenance cost?



**Imagination is
more important
than knowledge**

Inspired by:
– presentationzen.com

Photos:
– istockphoto.com
– google.com

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