

Institute of Information Management



University of St.Gallen

Architectural Thinking

Rolling out long-term, holistic considerations in enterprises

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*“From insight
to impact”* 

 Competence Center
Corporate Intelligence



Agenda

- 1 Background CC CI @ IWI-HSG
- 2 What is so special about Architecture Management?
- 3 Is more Architecture Management always better?
- 4 Architectural Thinking: A first conceptualization
- 5 Going from here

Background

University of St.Gallen (HSG)

- St.Gallen: “Switzerland's prestigious business school” (Business Week)
- 7500+ Students
- Focus: Management, Technology and Law
- Consistent top-ten rankings among Europe's top universities
- First continental European university to be accredited from top European as well as top US accreditation bodies

The Network Institute of Information Management (IWI-HSG)

IWI-HSG provides an extensive network based on their research program, executive education, and their community events.

Research Program

CC Competence Center
CI Corporate Intelligence

HNE
Health Network Engineering

BI Business Intelligence
BC Banking Community

Independent Living

sourcing
competence center 3

CDQ
Institute of Information Management
University of St. Gallen

IIM

Executive Education

- Executive Master of Business Engineering
- IT Business Management
- Individual Programs (e.g. DQM, EAM, BE-Methods)

Events & Community

AWF
St. Galler Anwenderforum

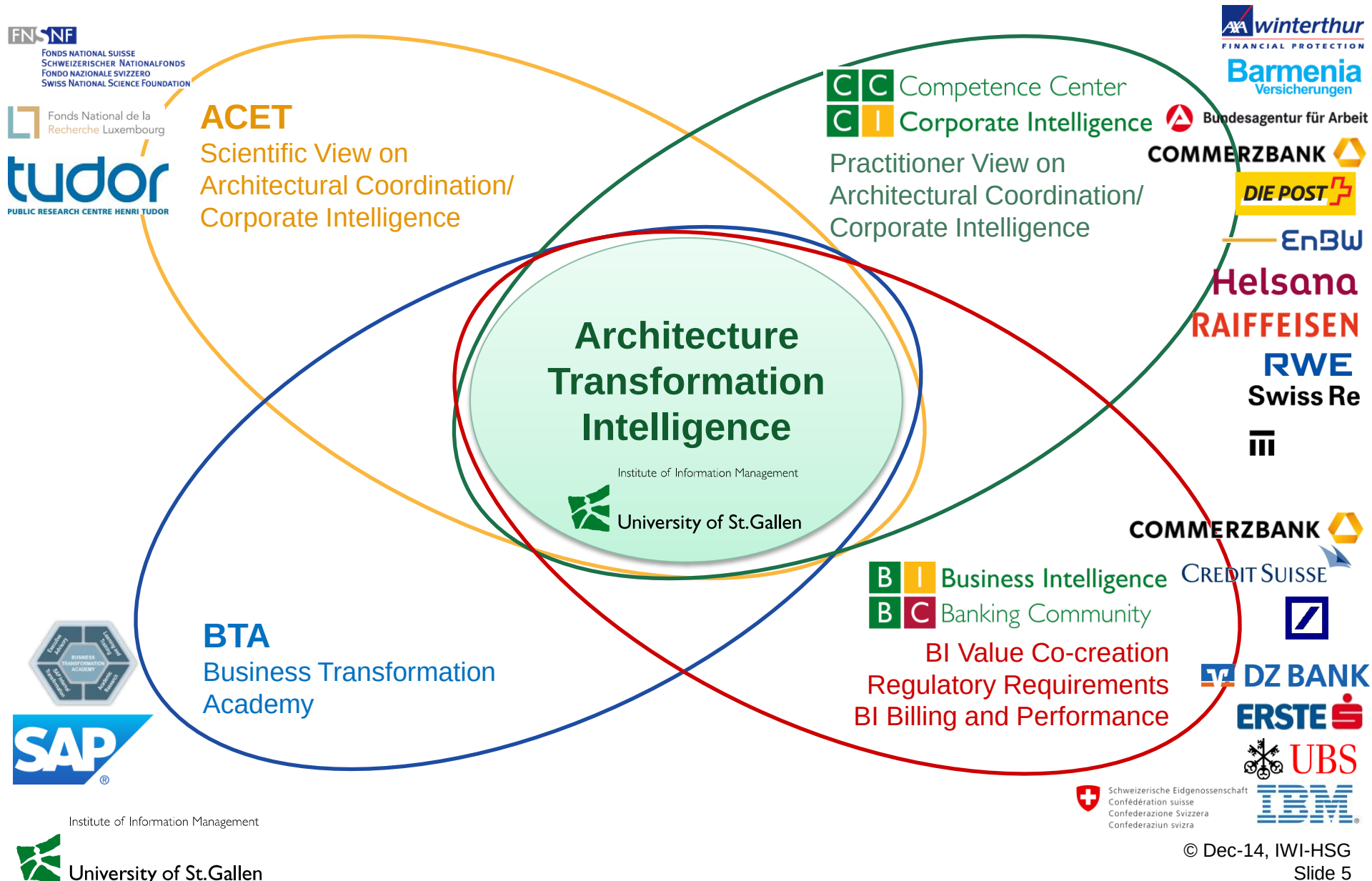
DW2014



Business
Engineering Forum

Architecture and Transformation Group's Four Project Perspectives

Architecture, Transformation, Intelligence



Agenda

1

Background CC CI @ IWI-HSG

2

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3

Is more Architecture Management always better?

4

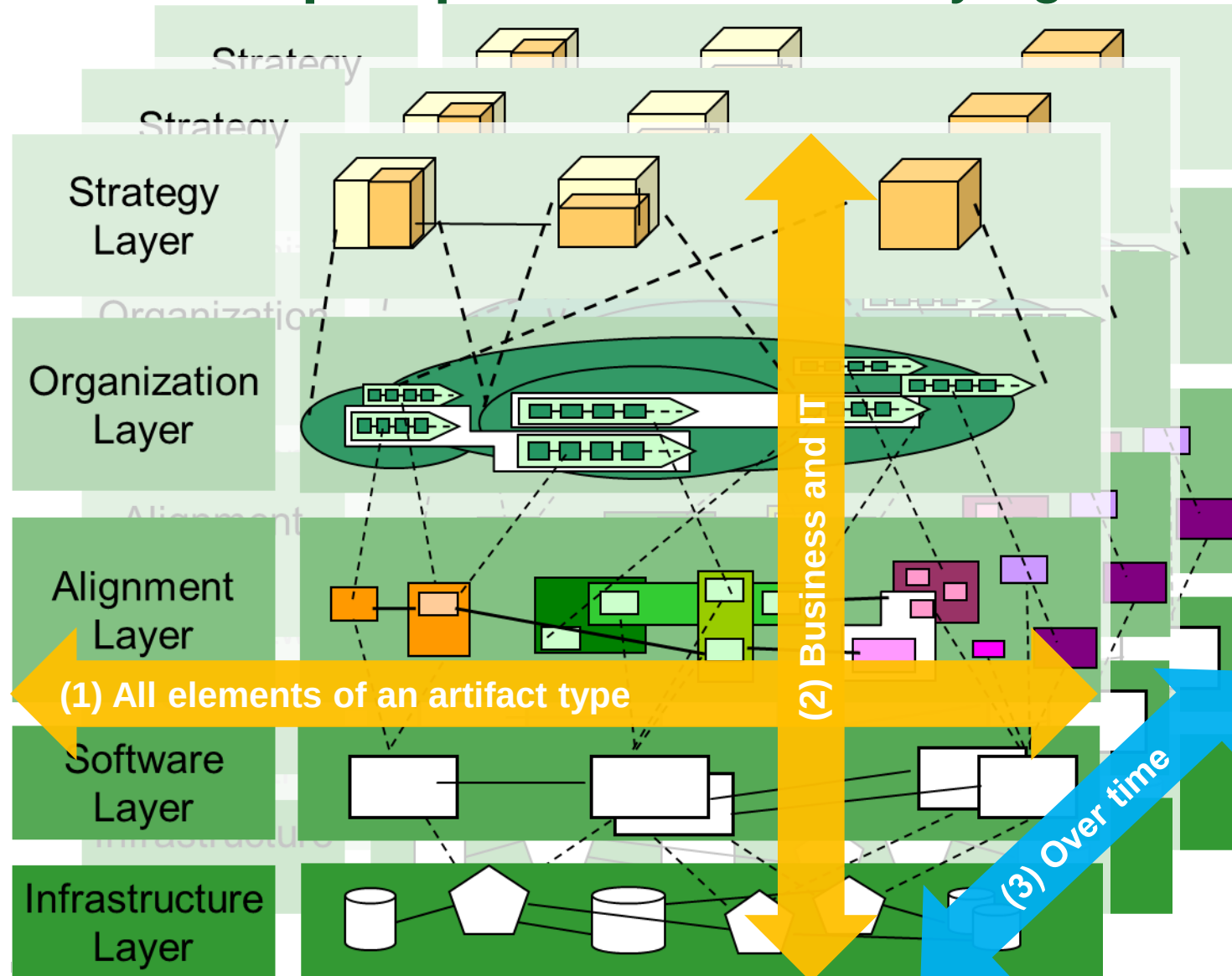
Architectural Thinking: A first conceptualization

5

Going from here



A **holistic perspective** on the Playing Field



Types of Architecture Management



+ business aspects

+ proactive action

+ penetration of business

> Strategic means for business
> Partnership with business

> Active EAM planning
> Definition and enforcement of EA principles
> Integration of EAM in IT governance

> Extended scope with business aspects
> Additional focus on business processes
> Strict stakeholder-centricity (by IT for IT and business)

> Focus on IT (by IT for IT)
> Goal of transparency
> Rooted and positioned in IT

▶ The core use case of modern EAM are fundamental, non-local, often enterprise-wide changes, i.e. transformations.

▶ This is **NOT** a maturity model.

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1

Background CC CI @ IWI-HSG

2

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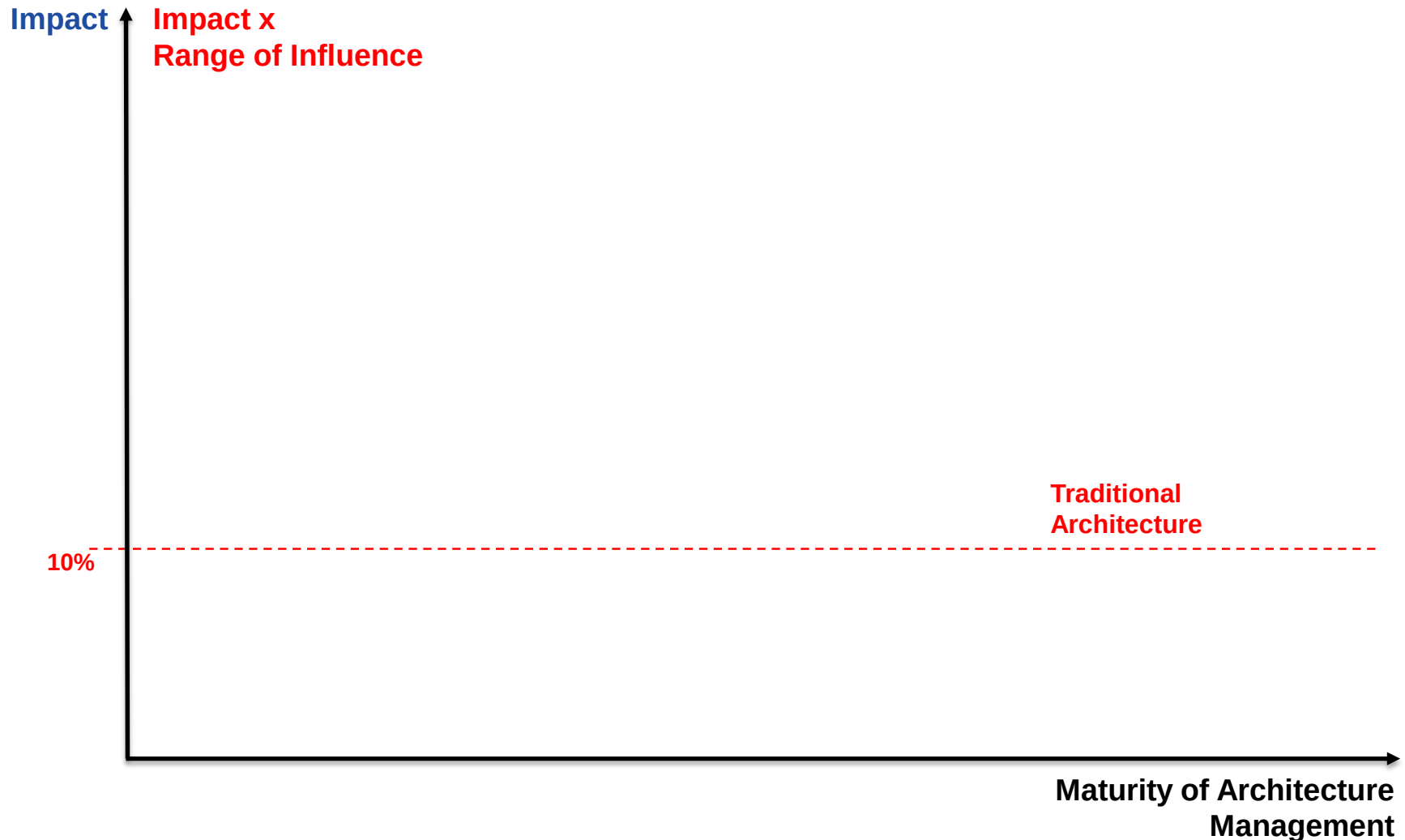
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Architectural Thinking: A first conceptualization

5

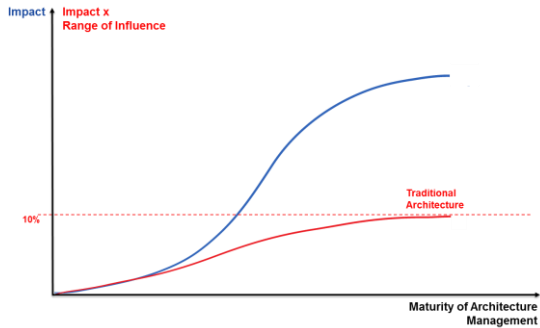
Going from here

The Limits of Architecture Management



Are architects tilting at windmills?

Two learnings

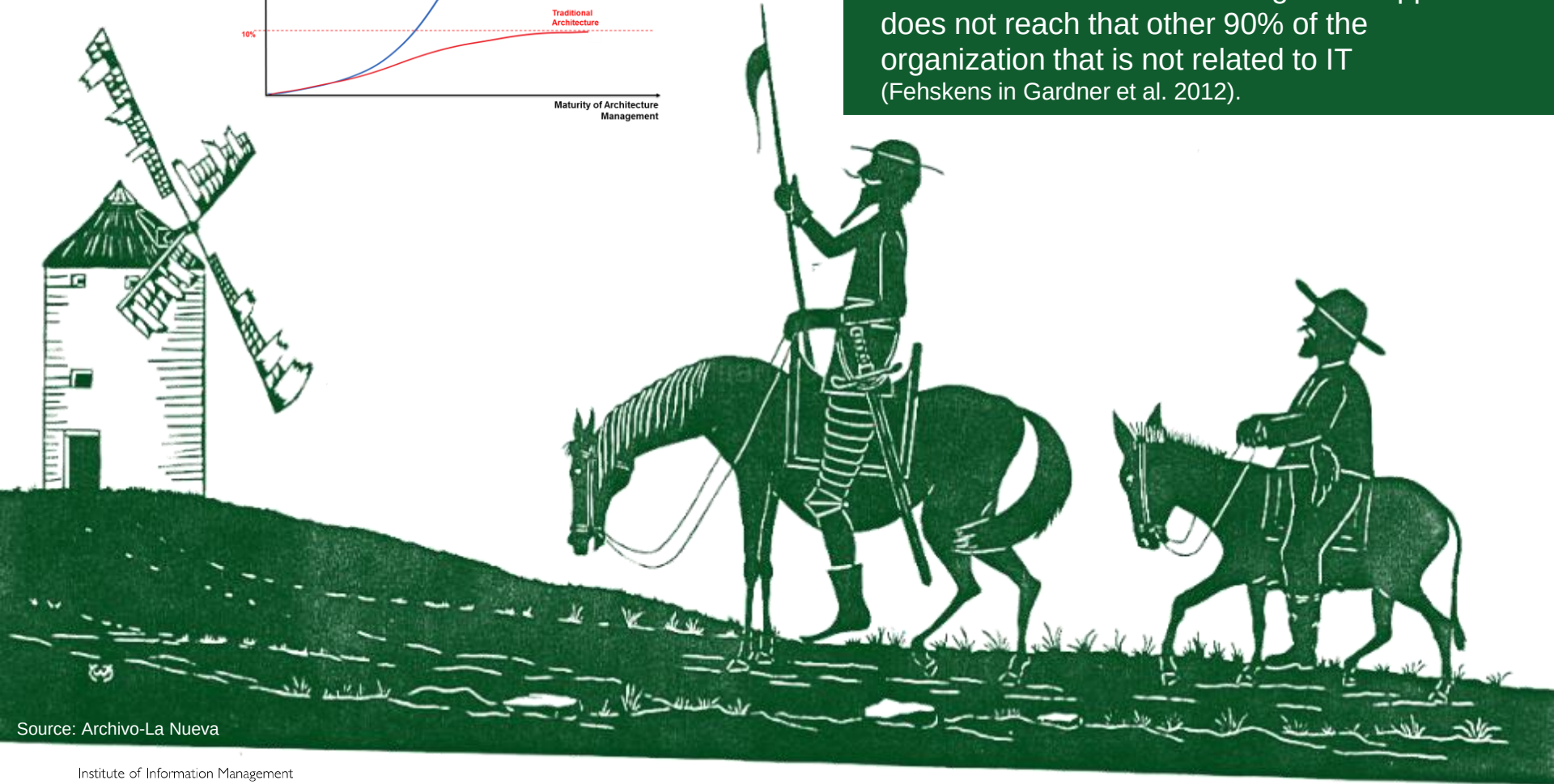


1

Higher maturity of Architecture Management does not necessarily lead to higher impact (Ross und Quaadgras 2012).

2

Traditional Architecture Management approach does not reach that other 90% of the organization that is not related to IT (Fehskens in Gardner et al. 2012).



Source: Archivo-La Nueva

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University of St. Gallen

EAM Studies at MIT



CISR

Center for
Information
Systems
Research

Research Briefing

Volume XII, Number 9, September 2012

ENTERPRISE ARCHITECTURE IS NOT JUST FOR ARCHITECTS

Jeanne W. Ross, *Director & Principal Research Scientist*

Anne Quaadgras, *Research Scientist*

MIT Center for Information Systems Research

For many years, MIT CISR has been studying how organizations design and build valuable business capabilities—specifically digitized process platforms—by maturing their enterprise architecture. Since 2004, our case studies and surveys have shown a significant direct link between architecture maturity and business outcomes. However, the results from our 2011 survey¹ challenge those earlier findings: they indicate that *more mature architectures do not necessarily lead to business value*. Rather, business value accrues through management practices that propagate architectural thinking throughout the enterprise.

In this briefing we discuss the management practices that distinguish companies driving value from their digitization initiatives. We then describe how one company, USAA, has implemented those management practices.

The Impacts of Architecture Maturity

building technology platforms. By 2011, we sensed that more firms were moving into the later stages of architecture maturity, so we distributed a survey to better understand the business impacts of digitized process platforms.

As expected, the 2011 survey found that companies are in general more mature—the percentage of companies in stages 3 or 4 is up from 29% of respondents in 2007 to 49% in 2011—with companies in stage 4 increasing from 2% to 15% (see figure 1). In short, more companies are building and reusing digitized process platforms. But the statistical relationship between architecture maturity and business outcomes has been lost. In other words, it is possible to become more architecturally mature *without* getting more value from IT.

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Architectural Thinking

Architectural Thinking is a

- **lightweight** (e. g., less formalized),
- **utility-centered** approach,

that is **aimed at**

- **supporting non-architects** and
- **people outside the IT function**

to

- **understand, analyze, plan, transform and communicate fundamental structures and design/evolution principles** of what they perceive as their work system, i.e.
- **to adopt holistic, long-term considerations** in their **daily decisions**.

Traditional EAM vs. Architectural Thinking

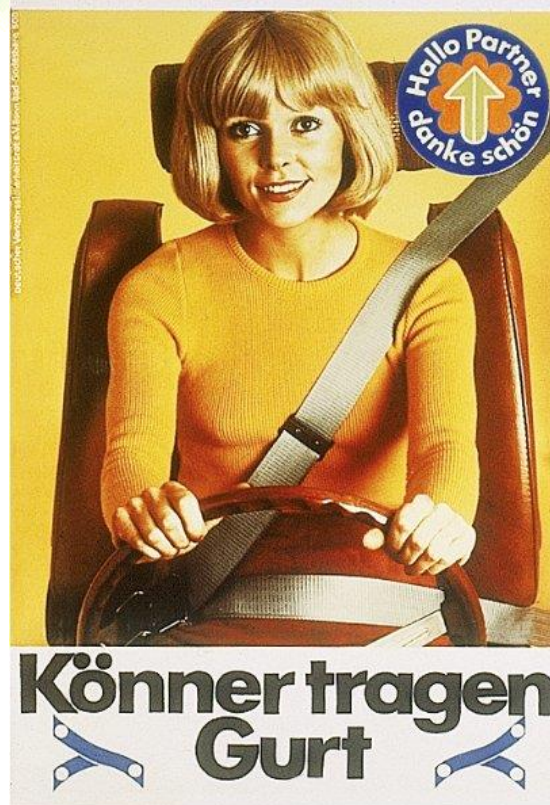
Shared Properties	Traditional EAM	Architectural Thinking
Granularity of decision-making information base	Fundamental structures and principles	
Scope of considerations	Holistic, long-term	
Differences	Traditional EAM	Architectural Thinking
Degree of formalization	High; dedicated methods and tools	As low as possible; lightweight approach
Driver / Owner	Architects	Decision-makers
Hosting Organizational Unit	Mainly IT; sometimes corporate center	Decision making units, business lines etc.
Relevant stakeholders	Diverse (corporate management, local units)	Local unit
Benefit	Enterprise-wide, long-term: “what’s in for the enterprise”	Local utility, medium-term: “what’s in for me and why is it beneficial for all of us”
Challenges	“ivory tower” architecture	“local” architectures

► It is **NOT** either/or – it is both: **Traditional EAM AND Architectural Thinking.**

Making «The Other 90% of the Organization» Comply with Architecture

- EAM exerts pressure to comply with ‘grand designs’
- Organizational actors’ reactions range from acquiescence over compromise and avoidance all the way to defiance and manipulation (Oliver 1991, Pache and Santos 2013)
- Architectural Thinking aims at **avoiding negative reactions** and creating **conditions that support agreement with restricted design freedom**
- New institutionalism aims at explaining why and how imposed regulations in organizations are “institutionalized” by the addressed actors, i.e. develop “a rulelike status in social thought and action.” (Meyer and Rowan 1977)

How to foster long-term, holistic considerations in the daily decisions of individuals?



How to foster long-term, holistic considerations in the daily decisions of individuals?

**I'd love to quit smoking.
But my dad won't let me.**



**SECONDHAND SMOKE
IS FIRSTHAND DEATH.**

Protect your children from secondhand smoke.



kinderkrebsstiftung.de

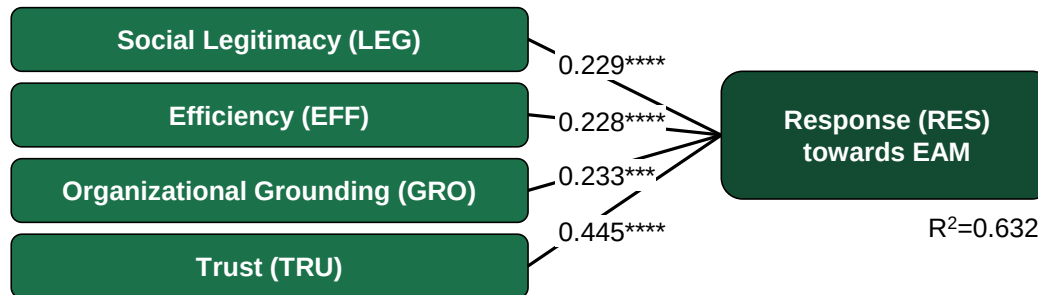
How to foster long-term, holistic considerations in the daily decisions of individuals?



Now, what is the strategy of that other 90%?



Architectural Thinking Needs to Create Supportive Conditions so that



1. actors **gain social fitness** inside the organization **when complying** with rules and guidelines (social legitimacy)
2. actors **become more efficient** when **following rules and guidelines** (efficiency)
3. AT is **anchored within the organization's values** in terms of strategy definition, top management support or the position in the organizational hierarchy (organizational grounding)
4. actors are **confident** that the EAM function **does the right things right** (trust).

Demonstrate appreciation



Support people doing their jobs



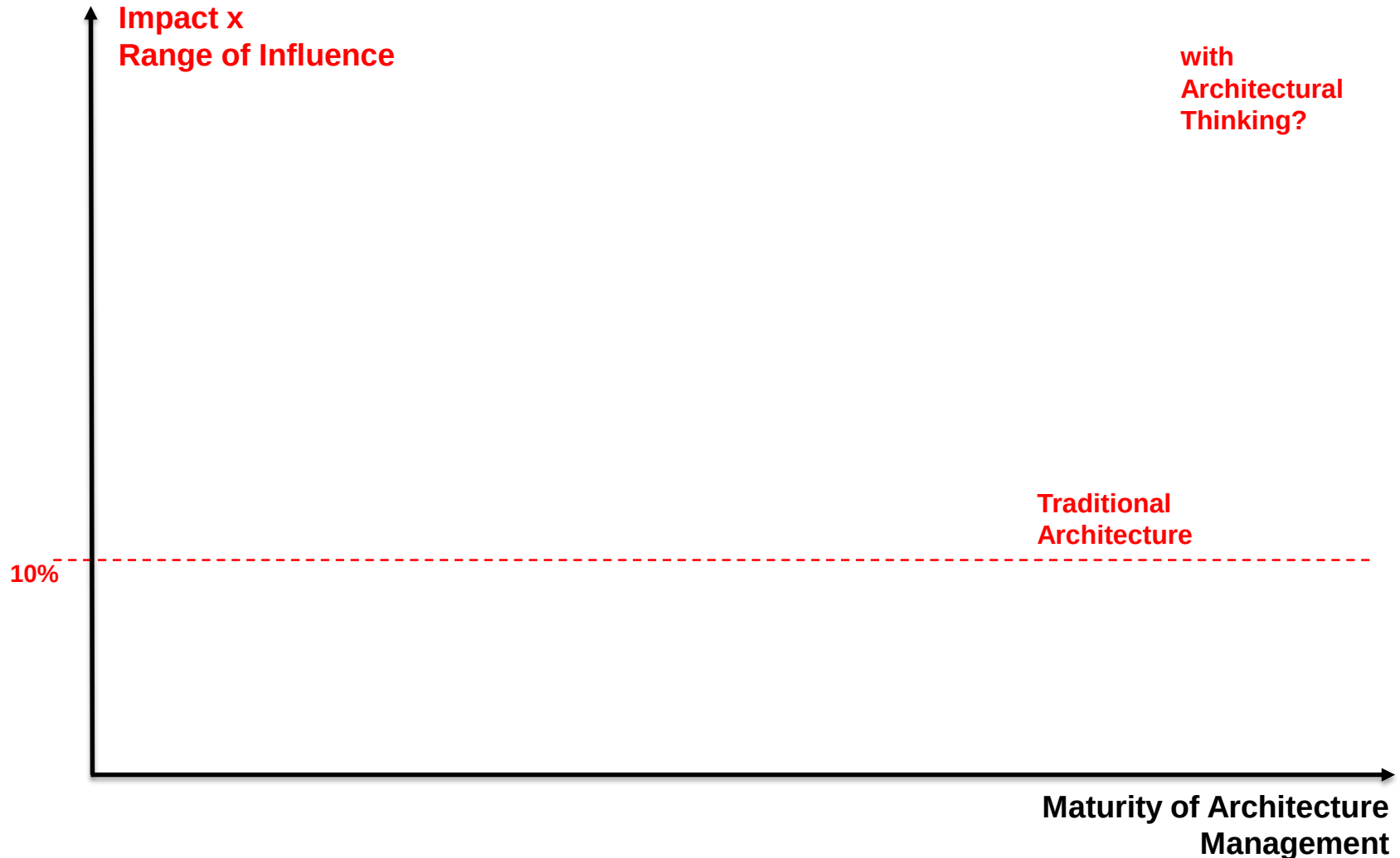
Consistency of communication and decisions



Develop a track record documenting achievements



Going beyond the limits of traditional Architecture Management?



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1

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4

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5

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Consequences

1. EAM will see an increasing stakeholder orientation and thus needs to further **differentiate its service**.
2. Not everybody doing EAM is called «**Architect**» (or should be called this way).
3. Current transformation drivers like digitalization, regulatory requirements etc. provide new challenges for EAM, which requires a **certain maturity** (e.g. effectiveness, proven value contribution); this drives the **required effort**.
4. However, these (possibly increasing) efforts can only be justified if we **create conditions** that allow for reaching «**that other 90% of the organization**».
5. **Architectural Thinking** is NOT an alternative to traditional EAM, it's a **companion**.
6. **Managing Architectural Thinking** means addressing dimensions such as social status, efficiency, establishment of values and trust to **complement traditional EAM** efforts.

Resulting Research Directions

1. Mechanisms that **impact the social fitness of actors** and **relate it to architectural compliance**.
2. **Co-creation** mechanisms that link actors' 'tasks to be done' to rules and guidelines. Those guidelines are not a 'product' that is consumed by "that other 90% of the enterprise", but instead are an **affordance** that should create '**value in use**' for these actors.
As a consequence, **context and use situations** need to be better understood, and architectural guidelines need to be **configurable** to those contexts and use situations.
3. Architectural Thinking needs to be positioned as a valuable **business support** instead of an annoying 'restriction of design freedom'.
AT has to become an **organizational value** and thus has effects on how **KPIs, incentive systems, and project reviews** are designed.
4. Architectural Thinking needs to constantly **demonstrate and communicate its value contribution**. As providers of a service, architects need to understand their **share of value creation**, need to **tailor their support** to a variety of 'tasks to be done'.

Future Research at CC CI

Value co-creation in EAM and in IT-Services

Design the **USE** of architecture:

Currently we are **dumping EA products** and EA information «**over the fence**» and we wonder why they are not used. The same is true for the often found **IT Demand /Supply structures**. We need to understand how to realize **value co-creation in use and context**.

Institutionalization of Architectural Thinking

Establish Architectural Thinking:

There are only a few architects, their impact is limited. But «**business value** accrues through management practices that **propagate architectural thinking** throughout the enterprise.» (Ross/Quaadgras 2012) «Architecture Management covers only 10% of an organization that is somehow related to IT» (Fehskens in Gardner et al. 2012)
We need to understand **how to reach “the other 90%”** of the organization.

Management of Complexity

Complexity as a central construct:

Everyone in an organization has an idea about complexity. However, it is difficult to find and agree on **affective strategies and means to control complexity**. How can the management of complexity be integrated with existing EAM processes?

Still Boundary Objects

Making EA Models effective boundary spanners:

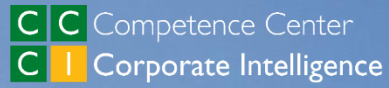
What are the processes of building boundary objects? How become boundary objects **effective**? **Sociomateriality**?

EAM as Entrepreneur/ Innovation support

Inhibitor or Entrepreneur:

How can **architects** become **entrepreneurs** and **innovation supporter** from time to time – within IT and beyond? What is the contribution of EAM to **innovation processes**?

Thank You!



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