Conceptual dependencies between two connected IT domains: Business/IS alignment and IT governance

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Overview

• Research question and goals
• IT governance and Business/IT alignment
• Research approach
• Results and discussion
• Conclusion
Research question and goals

• State-of-the-art
  – IS are seen as support tools for business
  – Business/IT alignment becomes a starting point in modeling IS
  – IT governance offers a new domain of research investigation for IS engineering
  → Relationships between IT governance and Business/IT alignment have not been explicitly identified

• Research question
  – How to characterise the relationships between IT governance and Business/IT alignment?

• Goals
  – To provide a framework for benchmarking IS engineering approaches dealing with alignment and IT governance purposes.
  – To understand and characterise Business/IS alignment and IT governance related requirements.

Context of change

[Diagram showing the context of change with stages: As-is model to To-be model through change process, including reverse analysis, change definition, change implementation, and legacy integration. The diagram also includes old reality transitioning to new reality with control system and action variables indicated.]
IT governance and Business/IT alignment

• Definitions
  – Business/IT alignment
    – Good alignment means that the organization is applying appropriate IT in given situations in a timely way, and that these actions stay congruent with the business strategy, goals, and needs (Luftman & Brier, 1999)
    – Correspondence, fit, coherence, link...
  – IT governance
    – The continuous process, involving management and design sub-processes, of consciously and coherently interrelating all components of the business – IT relationship in order to contribute to the organisation's performance over time (Maes et al., 2000)

• Improvements of two frameworks
  – (Gmati & Nurcan, 2007)
  – (Claudepierre & Nurcan, 2007)
Typology of relationships

• **Existence (E)**
  – the validity of a given attribute -with a known value or not-, implies the validity of target attributes.
  – **EXIST** (Attribute\_src, Attribute\_tgt)
  – **Sample**: EXIST(\texttt{ITG.DevW.[18 MODELING PARADIGM]}, \texttt{ITG.SysW.[23 FORM]})

![Diagram of IT governance with Existence relationship](image1)

• **Support (S)**
  – a source attribute, when defined, promotes the satisfaction of the target attribute.
  – **SUPPORT** (Attribute\_src, Attribute\_tgt)
  – **Sample**: SUPPORT(\texttt{ALI.SysW.[30 MODULARITY]}, \texttt{ITG.UW.[9 VALUE]})

![Diagram of Alignment with Support relationship](image2)
Typology of relationships

- Implication $\Rightarrow$
  - the value of a source attribute defines values for target attribute.
  - $\text{Attribute}_\text{src}=\text{value}_\text{src} \Rightarrow \text{Attribute}_\text{tgt}=\text{value}_\text{tgt}$
  - Sample: IT governance coverage = ‘Internal’ $\Rightarrow$ Value = ‘Organisation’

Frameworks overview

Business/IT alignment

IT governance
General comments on the Business/IT alignment framework

General comments on the IT
Research approach

• Research goals
  – To provide a framework for benchmarking IS engineering approaches dealing with alignment and IT governance purposes.
  – To understand and characterise Business/IS alignment and IT governance requirements.

• How
  – By reusing the typology of relations previously identified
  – By focusing on the attributes and their values

Alignment measures and decision making
Alignment measures and decision making

Alignment
- Intentional ali. measures
- Functional ali. measures
  System world
  =>
  EA level representation
  System world
  =>

IT governance
- Content
  System world
  =>
  Decision
  Subject world

Alignment: a source of value generation

Alignment
- Development world
  Modelling paradigm
  =>

IT governance
- Usage world
  Value
  E
  Architecture approach
  Development world

System world
- IS flexibility degree
Alignment: a source of value generation

Alignment
- Modularity
- IS flexibility degree

System world

IT governance
- Usage world
- Value
- Architecture approach

Development world

Research process extraction

IT Governance  
?  
Business/IT alignment

Select source attribute
Select target attribute
Identify relationship

Start

Mining strategy
Deductive strategy
Inductive strategy

Switch strategy

Deductive strategy
Inductive strategy

Completeness
Conclusion

• Results
  – IT governance and Business/IS alignment are performed in the context of change and are focused on the value creation
  – IT governance as a set of control processes is a way to support the measurement of the degree of alignment between business and IT support
  – The modeling paradigm and the enterprise modeling, as characteristics of the IS development processes, are enablers and facilitators for Business/IS alignment and ITG

• Future works
  – Evaluate the feasibility of the suggested approach within several industrial case studies
  – Identify the impact of alignment and ITG requirements on IS engineering methods
  – Improve system engineering methods

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QUESTIONS