SEAM

Collaborative tool
for the co-development of business and IT strategies
Goals for SEAM

• To be a collaborative tool for developing shared understanding between all business and IT actors.

• Similar to « mind maps » but with more structure to guide the thinking process
SEAM Facts Sheet

- Developed since 2003 by Prof. Wegmann’s group
- Used for teaching and consulting (business and IT strategies, requirements analysis, team building)
- Based on systems thinking and on formal methods.
- Includes / compatible with: strategic thinking, requirements engineering enterprise architecture, IT architecture, project management, service management, risk management
- Open and public (creative commons)
SEAM Method

- Systemic
  (hierarchical complex systems, networked organizations)
- Concrete
  (project-based, story-telling, “examples”, …)
- Rigorous
  (discrete simulation, system dynamics, logic)
- Subject-based
  (viewpoints, goals)

Credits

- Guy Genilloud - RM-ODP & Alloy
- Andrey Naumenko - PhD 2002 – RM-ODP
- Gil Regev - PhD 2003 – goal modeling
- Otto Preiss - PhD 2004 – quality modeling
- Pavel Balabko - PhD 2005 – role modeling
- José Diego de la Cruz - PhD 2007 – declarative semantics
- Irina Rychkova - PhD 2008 – operational semantics
- Lam-Son Lê - PhD 2008 – system modeling
- Arash Golnam - PhD 2013 - coopetition & business strategy
- Anshuman Saxena - PhD – cognition & value modeling (2009 - …)
- Biljana Bajic - PhD – SEAM to code (2010 - …)
- Gorica Tapandjieva - PhD – enterprise architecture (2013 - …)
- George Popescu - PhD – notation (2013 - …)
- Julien Ramboz - Tools
- Blaise Carrupt - Tools
- Gil Regev – overall SEAM, system thinking (1997 - …)
SEAM Adopters

Business Strategy:

IT Strategy:

Service Level Management (ITIL): (incl. dizaines de startups)

Organisation IT:

IT Consulting:

Case Study

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Issue: gray computing – unsecure application
Overview

2013
Unsecure application

2014
No agreement on a shared business processes

2015
Data coordination, but no architecture

2016
SI re-organization – one overall IT functional organization

2017 – 2019
Technical architecture, data architecture,
One service for overall project management

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HOMEOSTATIS

2014

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Homeostasis

1. “In an open system, such as our bodies … agencies are acting or ready to act, to maintain its constancy.”

2. “If a state remains steady it does so because any tendency towards change is … met by increased effectiveness of the factor or factors which resist the change.”

3. “The regulating system which determines a homeostatic state may comprise a number of cooperating factors brought into action at the same time or successively.”

4. “When a factor is known which can shift a homeostatic state in one direction it is reasonable to look for automatic control of that factor, or for a factor or factors having an opposite effect.”


Example: Glycemia Regulation
Example

Recherche  BA  top mgt / middle mgt / line
Finance    BA  top mgt / middle mgt / line
SI         BA “i/f”  top mgt / middle mgt / line

BA are not BA but technical people
IT are not technical but business people

SI strategy with SI lead

2ND ORDER CHANGE

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1\textsuperscript{st} & 2\textsuperscript{nd} Order Change

• Changes of 1\textsuperscript{st} order are related to events and facts “as-is”

• Changes of 2\textsuperscript{nd} order are related to the meanings of the changes.

Source: Watzlawick (MRI) referenced by Henri Dorvil “Problèmes sociaux”
Service Organization

“PARADIGME EVOLUTIF”

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“Paradigme évolutif”

• “La crise est une situation féconde. L’instabilité permet les changements structurels, pour autant qu’un cadre suffisamment protecteur est là pour tenter le changement”.

Source: IDRES, Thérapie d’orientation systémique, 2006

Conclusion

Need for a social or psychological understanding of changes
http://lams.epfl.ch
http://lams.epfl.ch/reference/seam

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