Fluid ICT-Strategies
Enabled by Semantics

By R.M.G. Dols

Introduction

- Roger Dols
- Professionally
  - Close cooperation with Morpheus Software
  - Also independent consultant
- Knowledge Management & ICT Strategy

Agenda

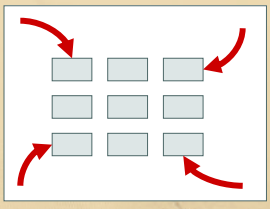
- An example of fluid strategy
- Strategy models
- Essentials of fluid ICT-strategies
- Forces enabling fluid ICT-strategies
- How Topic Maps enable fluid ICT-strategies

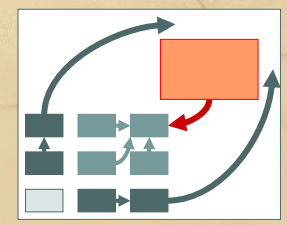
One Morning in 1806 …

- Napoleon set out on a campaign against the coalition forces.
- It would lead him to his victory in the battle of Jena-Auerstadt
- How? **Le Batallion Carré**

… Le Batallion Carré

- His army was split up in 9 mini army groups.
  - Within 1 day's march.
  - Interchangable smaller groups to meet actuallity
- It allowed him to change direction quickly AND focus all his force in this new direction cohesively.
- This strategy flows like a river.
  - Whatever turn it meets, it keeps flowing forward.





Strategical Essence

Two key concept

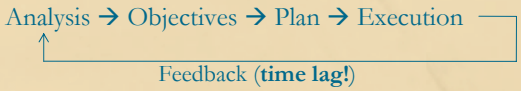
- Agility
  - Being able to change course quickly
- Momentum
  - Being able to focus one's effort in this new direction

Elemental for the facilitation and communication of the relevant organisational assetts.

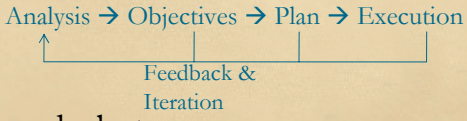
Elemental for keeping focused on one's vision and mission

Existing Strategy Models

- Static Strategy: Formulate and Implement



- Dynamic Strategy: Iterate



Nice track records, but …

Both are based on information-principles,
not on knowledge principles and processes

Problems with Existing Models

- Existing systems are structurally inert because of the relational information model on which it is built;
- Suppliers charge high prices to change their systems from one static state to another;
- Changes to systems and processes have a long time-to-market;
- Knowledge-based problems are being solved using information-based principles and systems.

Fluid Strategy Essentials

- Based on knowledge principles, processes and tools!!!
- Facilitate these
- Thus create the two steering mechanisms
  - Agility
  - Momentum

Fluid Strategy Essentials

- Agility
  - Interaction with your environment
  - External focus → internalize developments
- Momentum
  - Thorough repositioning of assetts
  - Internal focus → externalize knowledge and ideas

Why Fluid Strategies

- Changes in society
  - Globalization
  - Accessability of media
  - Knowledge becomes the core-assett in modern organisations
- Changes in technology
  - The web
  - Ambient intelligence
  - Semantics
  - Social networks
  - Mobile devices

Why Fluid Strategies

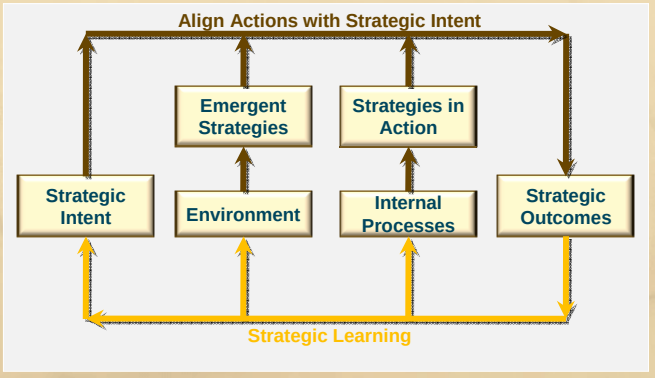
- In short:
  - Knowledge based economy
  - In a globalized world
  - With fast paced changes
- This means:
  - Turning knowledge into new products and services
  - Turning knowledge into value
- **Making the continuous creation of value your core business!**

Return On Investment

- Creating value compensates for high costs
- The creation of exploitable new knowledge and ideas →Innovation!
- Innovation doesn't just 'happen' to you.
- It's a conscious, manageable process
  - **Pitfall**: tackling innovation with inadequate methods
- **<u>Innovation</u>: creating and crafting the future of your organization**.

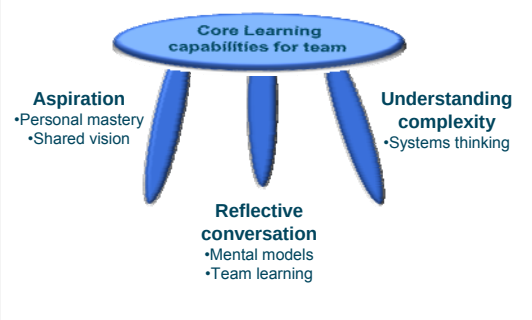
Strategy Dynamics

Moncrieff Model of Strategy Dynamics



Mindset of Knowledge organizations

Peter Senge's three-legged stool
for core learning capabilities for teams



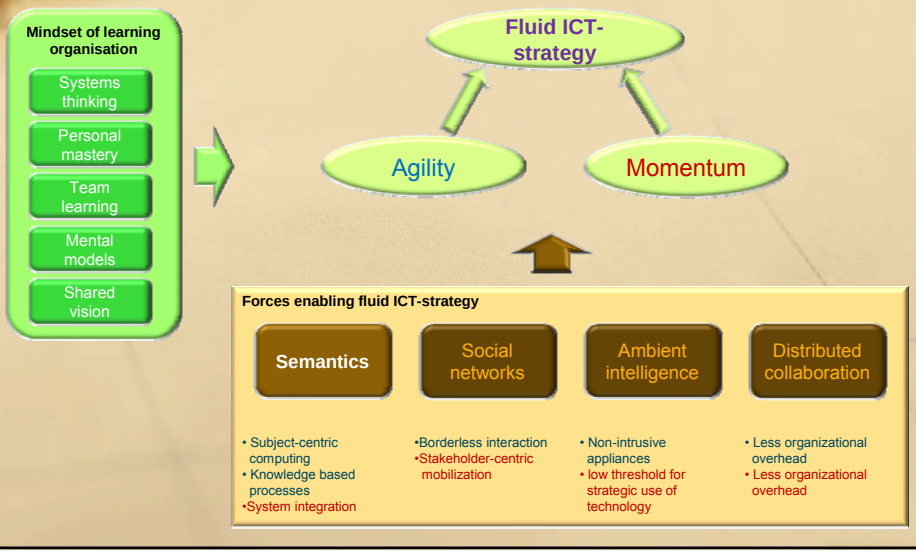
Core learning capabilities for teams

- Building shared vision
  - fosters a commitment to the long term.
- Mental models
  - focus on the openness needed to unearth shortcomings in our present ways of seeing the world.
- Team learning
  - develops the skills of groups of people to look for the larger picture beyond individual perspectives.
- Personal mastery
  - fosters the personal motivation to continually learn how our actions affect our world.
- Systems thinking
  - a conceptual framework to make the full patterns clearer and helps to see how to change them effectively.

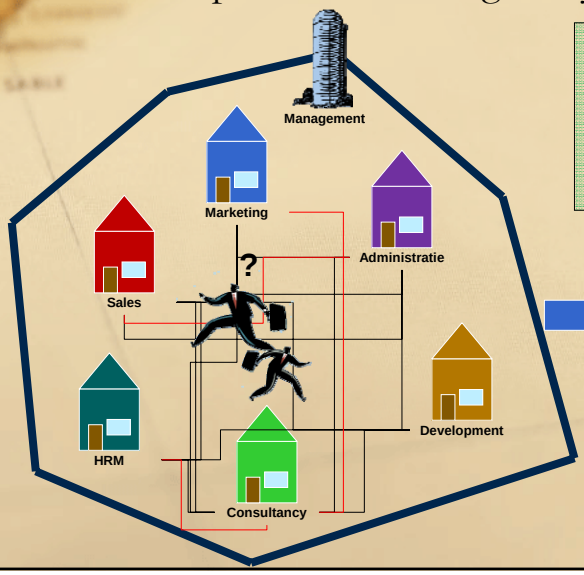
Forces enabling fluid ICT-strategy

- **Semantics**
  - From information to knowledge
  - Adds context, association and reasoning to information
- Social networks
  - Folksonomies
- Ambient intelligence
  - Non-intrusive, mobile appliances
- Distributed collaboration tools
  - 'Live collaboration' for brainstorming, meeting and document-creation

The emergence of fluid ICT-strategies



How Semantics Make a Difference
A Metaphore: Knowledge City



Currently:
Claims of connectivity,

but

from where to where,
with what purpose,
how flexible,
how much insight

Time consuming

Sensitive to misunderstanding

Labour intensive

Blind to:
- **Black holes**
- **Hot spots**
- **Frozen forrests**

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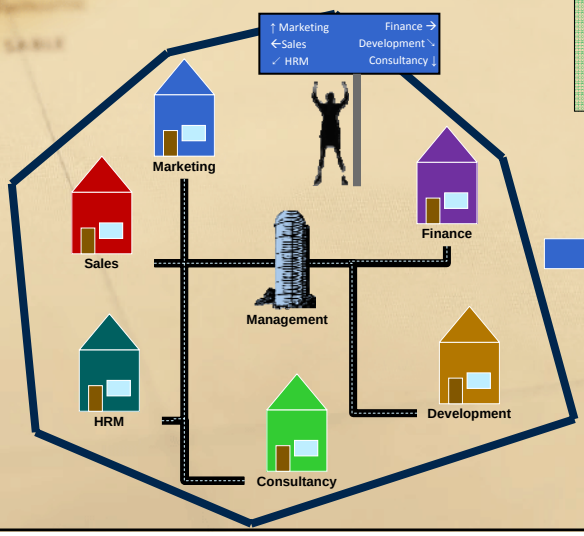

Opportunity:
Connected in:
- Content
- Context
- Process
- Architecture

Saves time

Less sensitive to error

Leaves time and opportunity for core-activities instead of searching for info.

Black holes, hot spots and frozen forrests are easily traceable

Non-intrusively steering the organisation

Topic Maps & Fluid ICT Strategies

- Semantics is the core enabler:
  - capturing, modeling & unlocking knowledge
- Topic Maps work on the knowledge level,
- The level on which knowledge is transformed into new value.

Topic Maps & Fluid ICT Strategies

- Subject centric computing
- PSI's: merging & integration
- Intuitive knowledge model
- Scalability, extendibility and flexibility

Subject-centric computing

- No longer talk about tables, systems and applications.
  - System X has to be upgraded to include Module Y for the incoming mail department…
- Talk about:
  - John Doe leads project SemApp, which extends the document scanning process to include automatic classification of incoming documents.
  - Actual topics and subjects.
- eLearning project MCIS
  - Don't navigate a GUI. Navigate the knowledge map!

PSI's: Merging & Integration

- Using PSI's to merge systems and processes
  - Normally:
    - A very expensive and time-consuming undertaking, involving several suppliers and very high cost
    - Result: several static systems are connected in a static way
  - With Topic Maps:
    - Save time and money, while shortening the time-to-market
    - Gain a high level of flexibility in extending or changing the integration
- It enables a cohesive steering mechanism and view on the organization.
- Dutch Police: project Topicview
  - Merged 5 systems in a few months using Topic Maps

Intuitive Knowledge Model

- Facilitating knowledge and innovation processes using knowledge based models
- It fits the way people think and associate.
- Example, project idSpace:
  - Research & develop tooling and training for collaborative, distributed product innovation processes using semantics to create context-awareness

Scalability, Extendibility and Flexibility

- PSI's, merging and subject-centrism:
  - Enables a highly distributed collection knowledge maps
  - Enables on-the-fly connections on identical subjects
- This means:
  - Scalable knowledge maps
  - Contextualized content
  - On-the-fly extendable content
  - Flexible knowledge-architectures

The Result

- Subject-centricity leads to richer and contextually focused information flows.
- Using Topic Maps, system integration provides a clear insight in current processes and subjects.
- More flexibility in systems and processes
- Topic Mapped knowledge hubs
- Faster and more focused mobilization of company's abilities

Questions?