

Mindset and sustainable societies
What is this about?
Introduction and discussion

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General Overview

- | What focus on “Mindset” and Society?
- | What are we aiming to do in this course and why?
- | What is the base of knowledge base we need to know?
- | What is a Knowledge System and why is it relevant?
- | Implementation and Methodology
- | Possible Future Directions

What is needed and expected?

- | Engagement
- | Adjustment
- | Responsibility (ability to respond)
- | You are responsible for creating your project presentation (freedom has responsibility)
- | This work is participatory and builds up,
- | Communicate any concerns or insights
- | Daily diary MEANS daily – 5 entries

So what are we talking about?

- | What is a Society?
- | What is a Mindset
- | What context are we going to work in?
- | Why is this theory relevant?
- | How and why are we going to apply this to a live case?

What context do we need to consider?

- | Multi-disciplinary/cross-disciplinary
- | Boundaries of groups, communities, organizations – the fabric of society
- | Human and environment
- | Layers and scales – what is this about?
- | How do we begin understanding this – a building block of knowledge

What is Knowledge?

- | Not just Information.
- | Application of Experience and Environment to Information in order to achieve a result.
 - Policy / Process
 - Discussion / Conversation
 - Analysis

Choosing a scale or level...

Why is that important?

- | Lets begin with choosing the organization as a starting or entry point into the discussion
- | What is this important?
- | Knowledge systems existing in all operations with or without our attention.
- | These systems are horizontal working simultaneously with vertical knowledge bases
- | People process and structures...

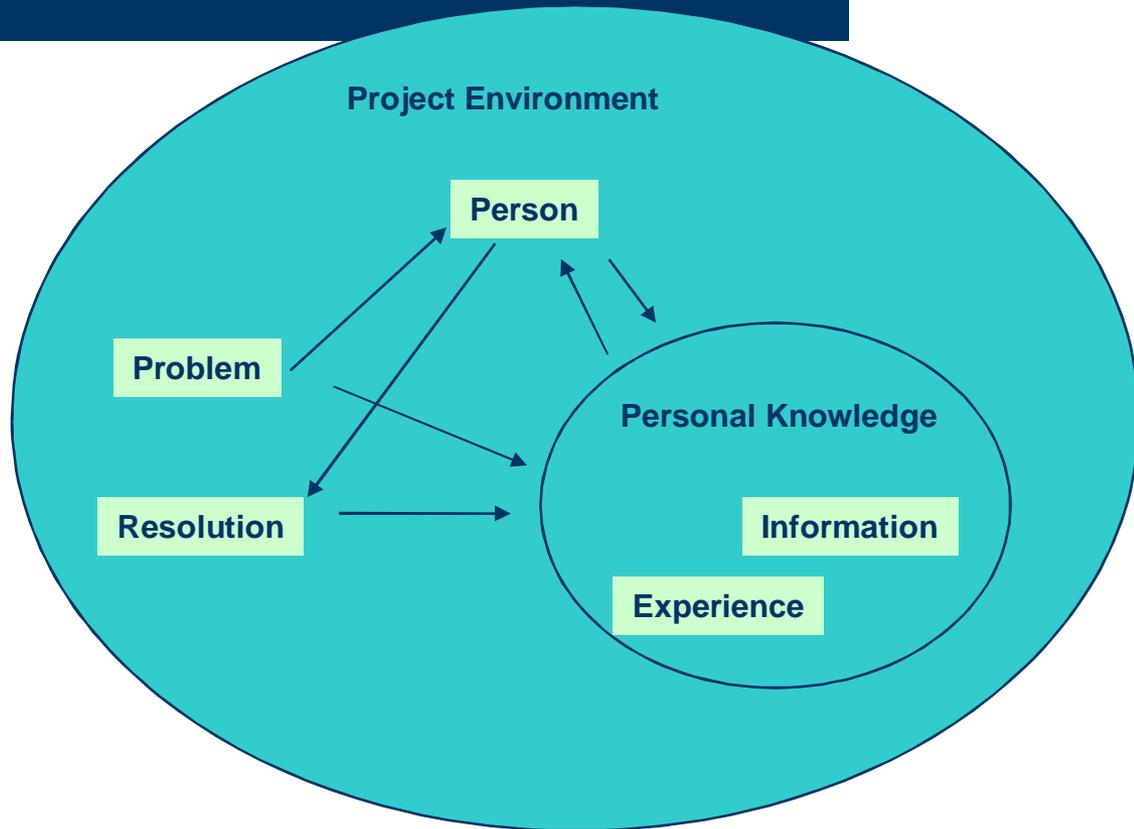
The knowledge system

- u Like a stool, leave one leg off and it is of no use.
- u People, Product and Process



Knowledge in Action

- | Problem created within Project Environment.
- | Person relies on personal knowledge to solve problem.
- | Problem resolution experience generates additional personal knowledge.

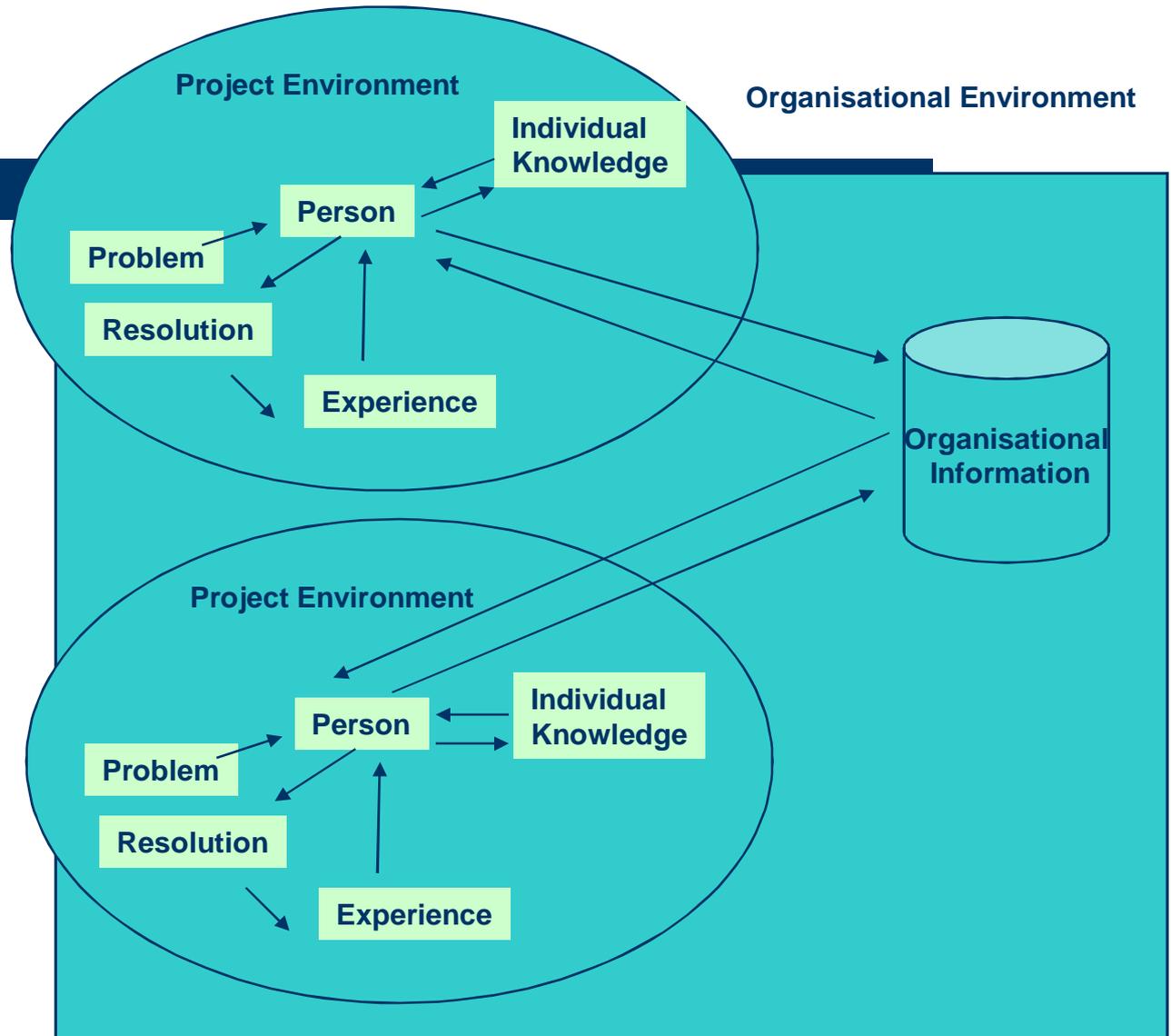


Understand the difference between knowledge and information

- | What are we trying to manage?
 - Technology Push Environment leads to aim:
 - “Capture and record knowledge so that others in the company can benefit”
 - Worthy Goal, but it leads to Information Sharing rather than knowledge sharing.

Information Sharing

- | Information of value is shared.
- | Personal experience in how useful that information was is not.
- | Golden Examples can only be copied, not necessarily understood



What to aim for or What' s a better aim?

“To enhance the accessibility of group/community/organizational Knowledge to all within the system boundary.”

Do we also need to know about systems and boundaries?

Are these are tools for future policy makers and facilitators.....

Introducing the theory behind the practice...

Presenting a theoretical framework of organizational experiences that was developed based on an autopoietic theory of organization and extended with insights from evolutionary epistemology

Theoretical Background

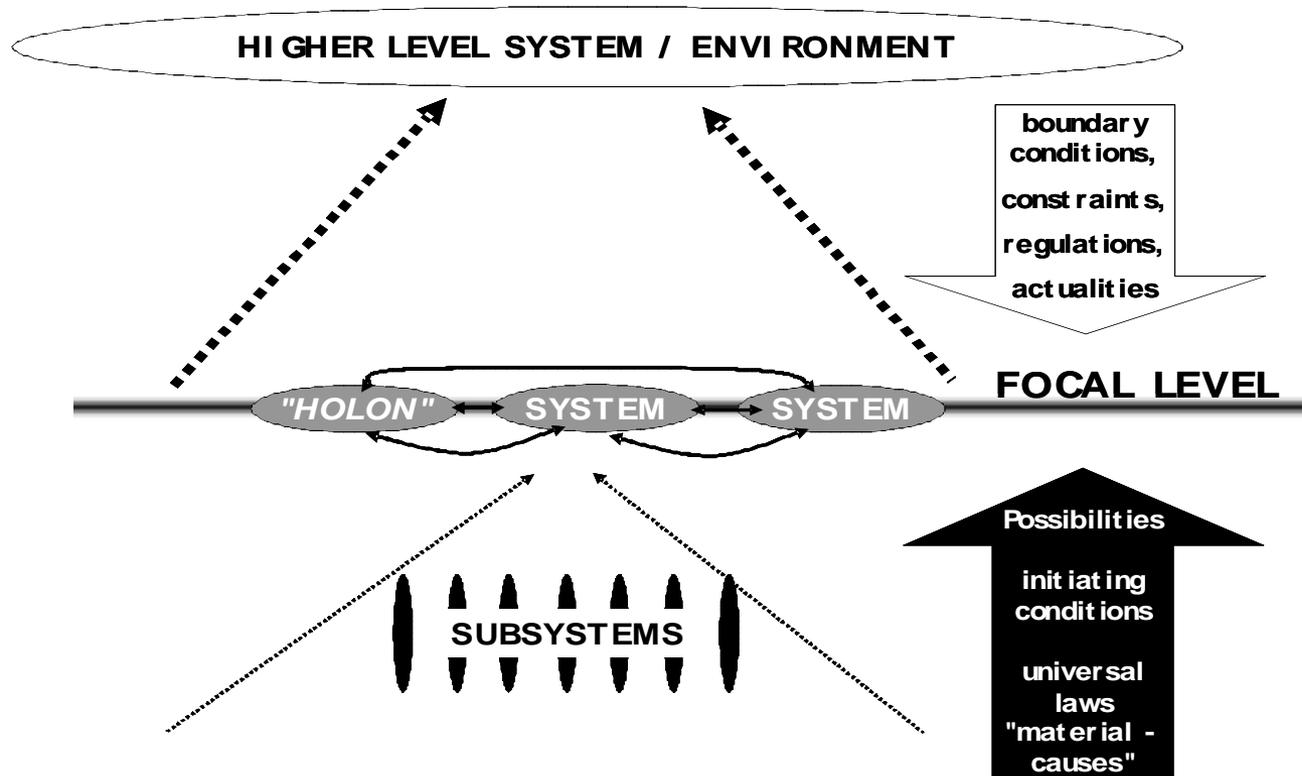
- | Human organizations are complex systems.
- | The term “autopoiesis” (~ self + production) was coined in the 1970' s by the Chilean biologists Humberto Maturana and Francisco Varela.
- | Living complex system could be considered to be complex when they are comprised of a number of components whose laws of interaction are imprecisely known.
- | Basically, there is a need for complex systems to be approached from a “biological” point of view.

Autopoiesis

The six properties a system must exhibit to be considered living, and therefore autopoietic, are:

- | *Bounded* (system components are self-identifiably demarcated by the system from its environment)
- | *Complex* (there are separate and functionally different components within the boundary)
- | *Mechanistic* (system dynamics driven by self-sustainably regulated fluxes or metabolic processes)
- | *Self-differentiated* (system demarcation intrinsically produced)
- | *Self-producing* (system intrinsically produces own components)
- | *Autonomous* (self-produced components are necessary and sufficient to produce the system).

Hierarchical Complexity and Emergence of New Levels



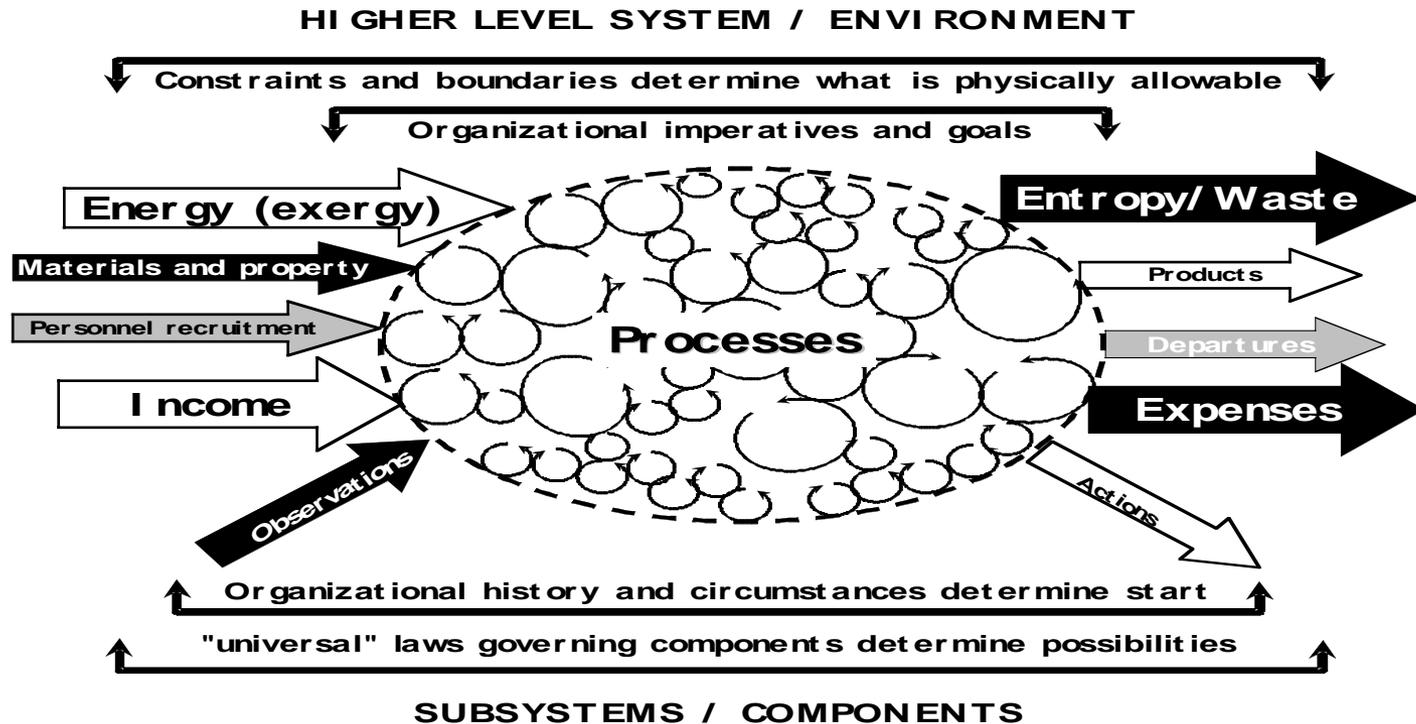
What will be your practical application?

- | The house project will be your practical application for this Mindset course
- | The following case example is to show the broad application that this type of horizontal knowledge base can cover and why it requires a multi-cross-disciplinary approach

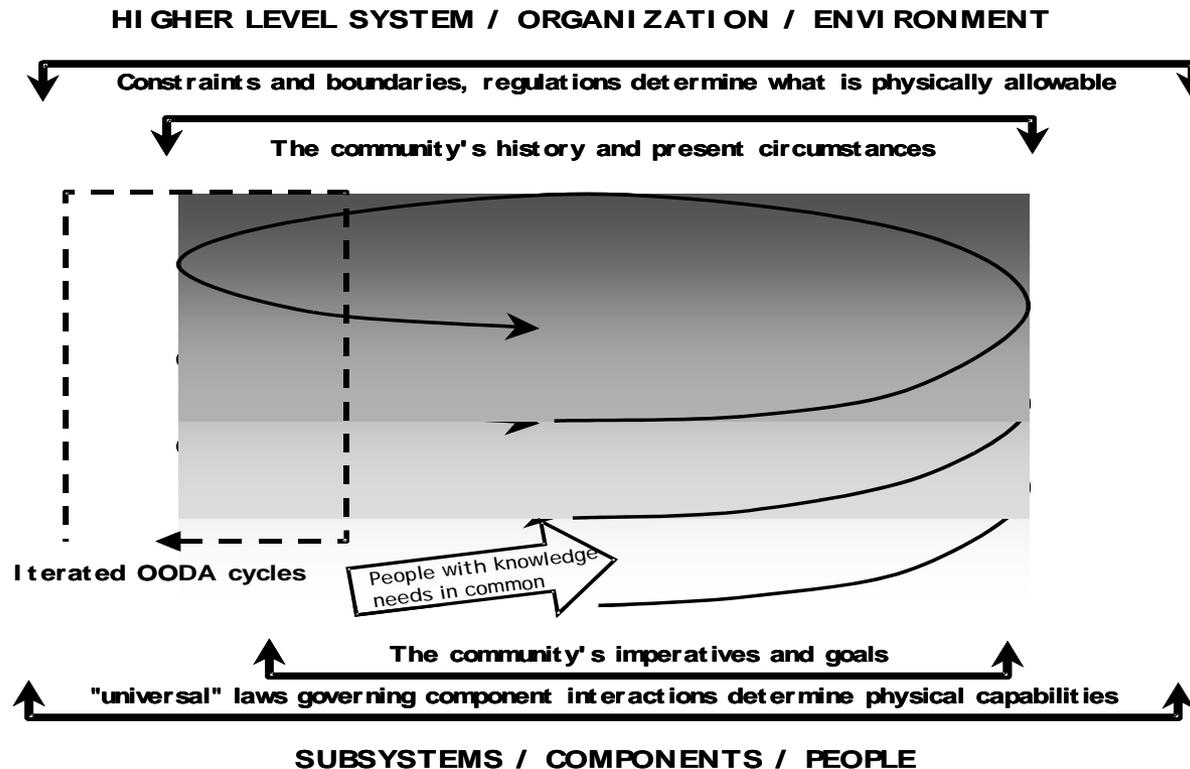
Using Case Study Material

- | The model for the emergence of knowledge-based autopoietic communities is based on many years of field work and practice with a focus on building sustainable knowledge sharing communities in the organizational sphere.
- | The range of experiences (both documented and undocumented) relate to cases in the literature including,
 - | Small and medium enterprises
 - | Engineering and software development companies
 - | Medium sized companies
 - | Service organizations
 - | Large, distributed organizations such as defense engineering project management and pharmaceutical organizations
 - | National and international science, technology and industry associations
 - | Industry clusters

How Knowledge-Based Communities Emerge: Structure of an autopoietic organization



The knowledge spiral process



Application to our case

- | Our group is a human complex system between stages 2 and 3.
- | A territory is also a human complex system:
 - We need to address all scales simultaneously.
 - Be aware of several scales: of individuals, multiple groups, the “whole” community (city, region).
 - What are the relevant scales?
 - Where there are constraints and problems, is where you find solutions.

Example – application of our case – short term

“where there are constraints there are solutions”

Scales are important as they impact short and long term aims:

- | An example: category 5 cyclone, what knowledge is needed can be “Silos”. Due to security, information moved vertically. A loss of “know how” information which is “experience” in peoples heads’ needed to be “moved” or shared horizontally.

Example: of our case long term...

- | Long term – a society
- | Our case the house project what are the long and short term issues?
- | What context are these in?
- | Problem: how to keep sharing between silo structures?
- | Solution: connect relevant knowledge levels between relevant organizational scales (bottom up and top down).

Application to our case cont.

- | The group is a scale of the territory/society
 - It is part of the answer (and the problem)
 - Future proposal and the future of the group are the same question
 - We have to manage the group as part of the territory, (group scale with territory/society scale)
 - Design the questions for the group from the questions for the territory/society
 - Membership of the group - must be representative of the territory/society

Membership of the group represents the territory - examples

- | As Johnston [2003] notes, clusters are not easily brought together by outside intervention.
- | On the other hand Silicon Valley [Kenny & von Berg, 1999], the Nokia Cluster [Paija, 2001] and the North Jutland Cluster [Dahl et al., 2005; Pedersen, 2005] all appeared to emerge spontaneously as dynamic entities, this happened without any conscious design or directed processes.
- | Active clusters are complex systems bound together by ties comprised of personal networks, economic relationships and tacit and explicit knowledge exchanges.

Membership of the group represents the territory - examples

- | Active clusters appear to be on the borderline of becoming autopoietic entities, where subsystems below the focal level are entrepreneurial companies and other constituted organisations, and the supersystem or environment in which they act is the global economy.
- | In the Danish studies [Dahl et al., 2005; Pedersen, 2005], it is evident that organic processes of largely tacit knowledge exchange (TKE) [Nousala 2006; Nousala et al.

Membership of the group represents the territory - examples

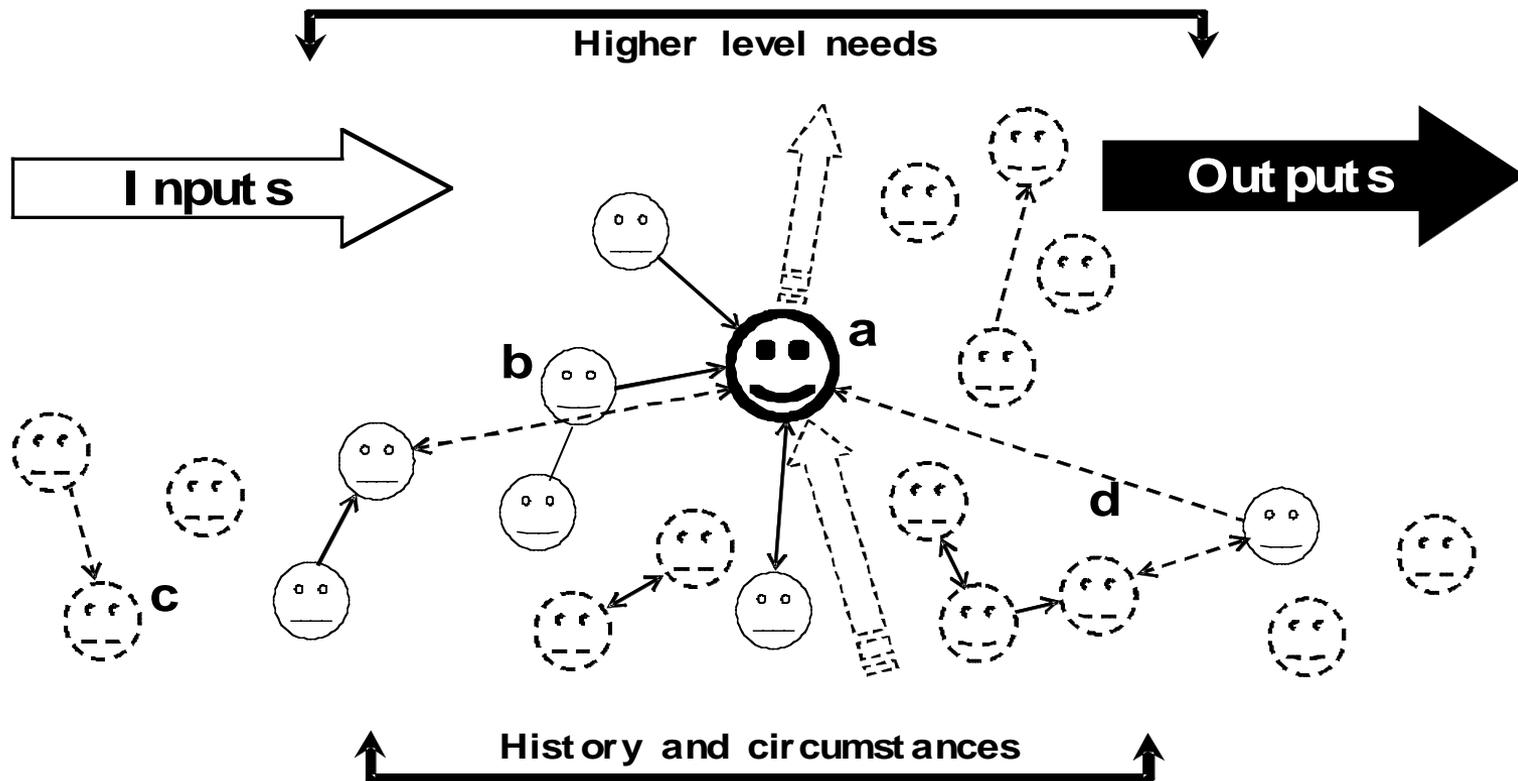
- | Enhancing industry capacity and capability through collaborative clustering via SME level is innovative, in so far as it is predominantly a bottom up approach.
- | This break from the traditional top down approach enhances the capability of the entire supply chain simultaneously and begins with the SME as an individual entity [Nousala 2009].

The basis of the knowledge system

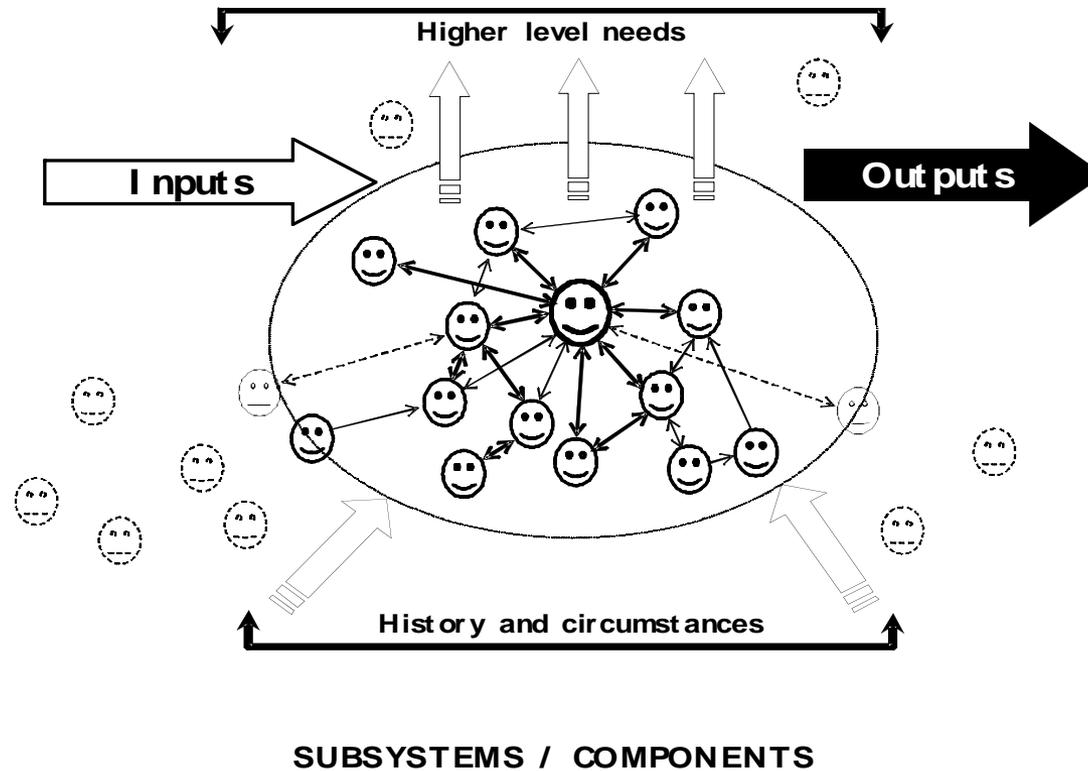
| People

- Knowledge Attractors
 - | Bring experts together
 - | Create a...
- Community of Interest
 - | Coalesces and develops...
- Community of Practice

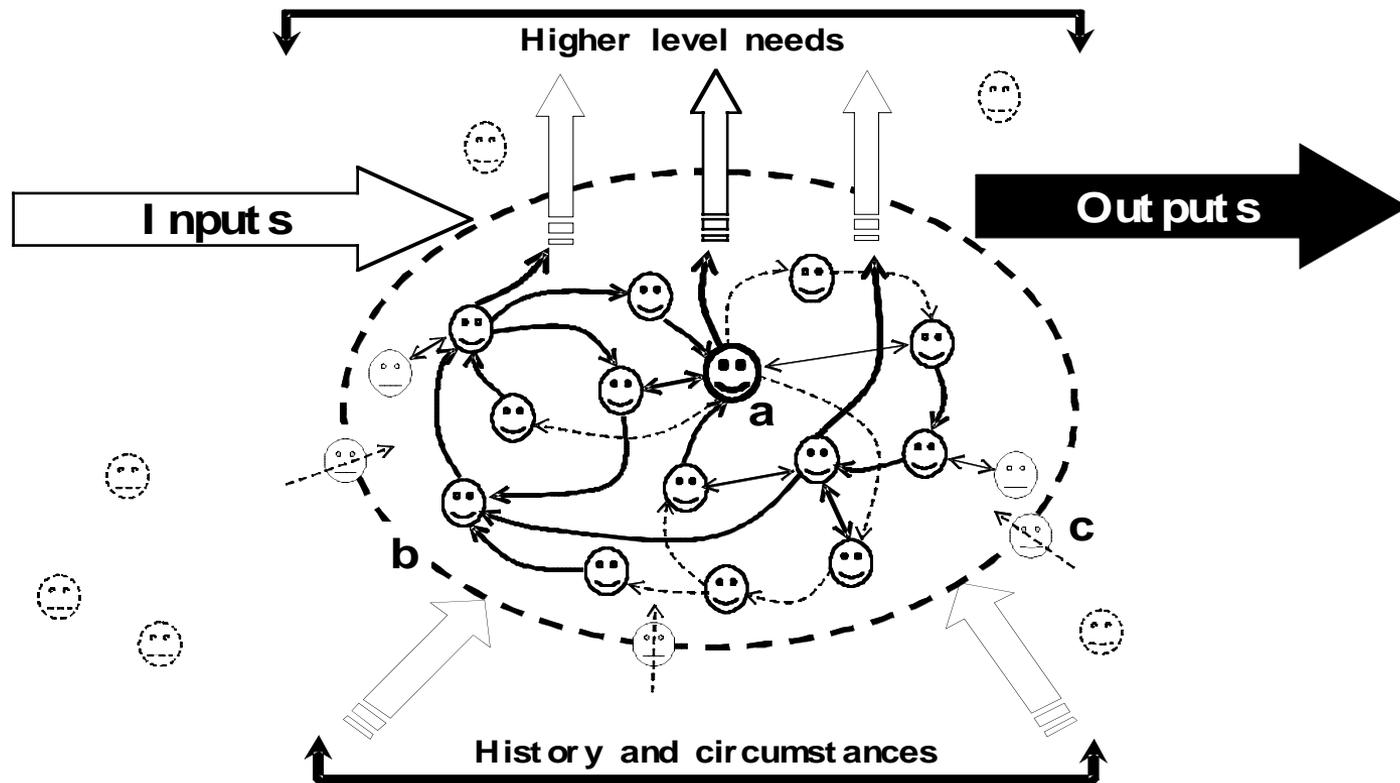
A social network created by a "Human attractor" Step 1.



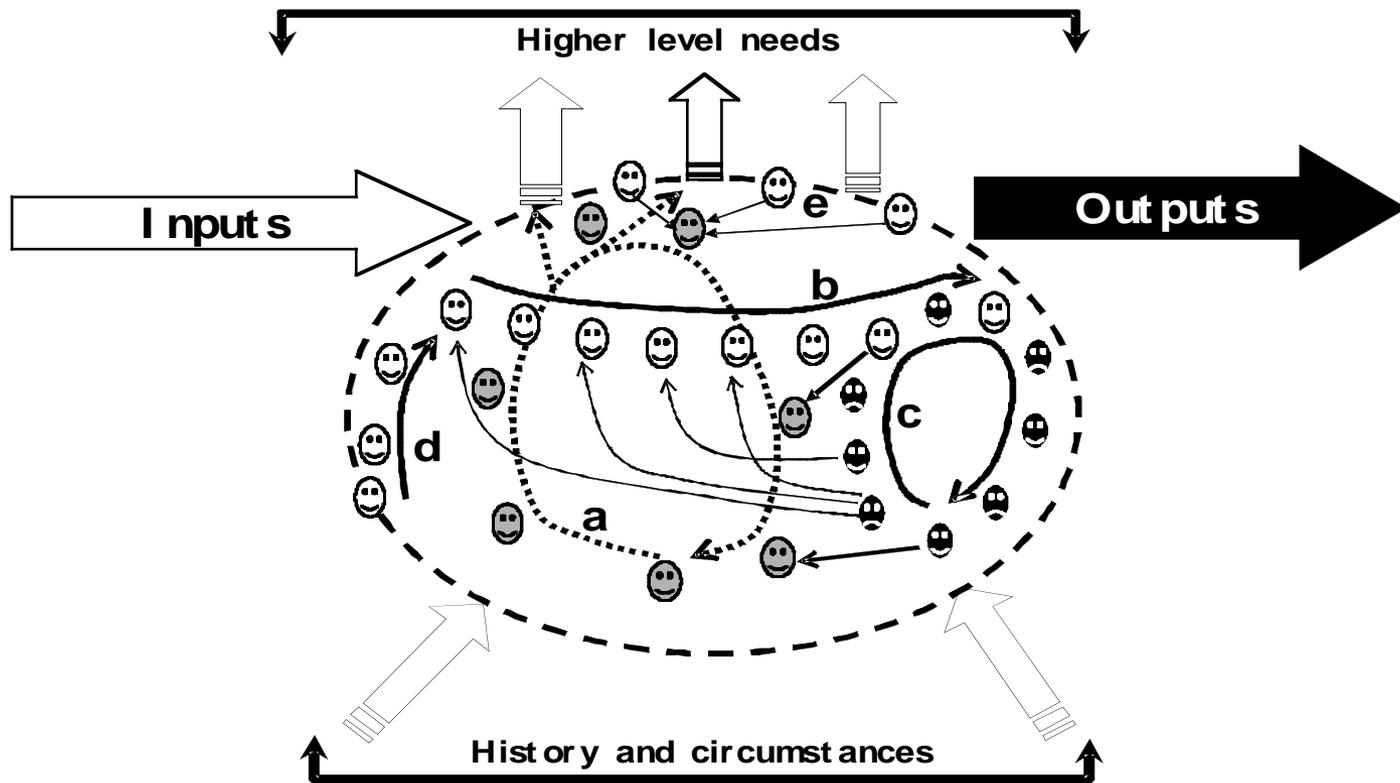
The coalescence of a community of interest (Col) Step 2.



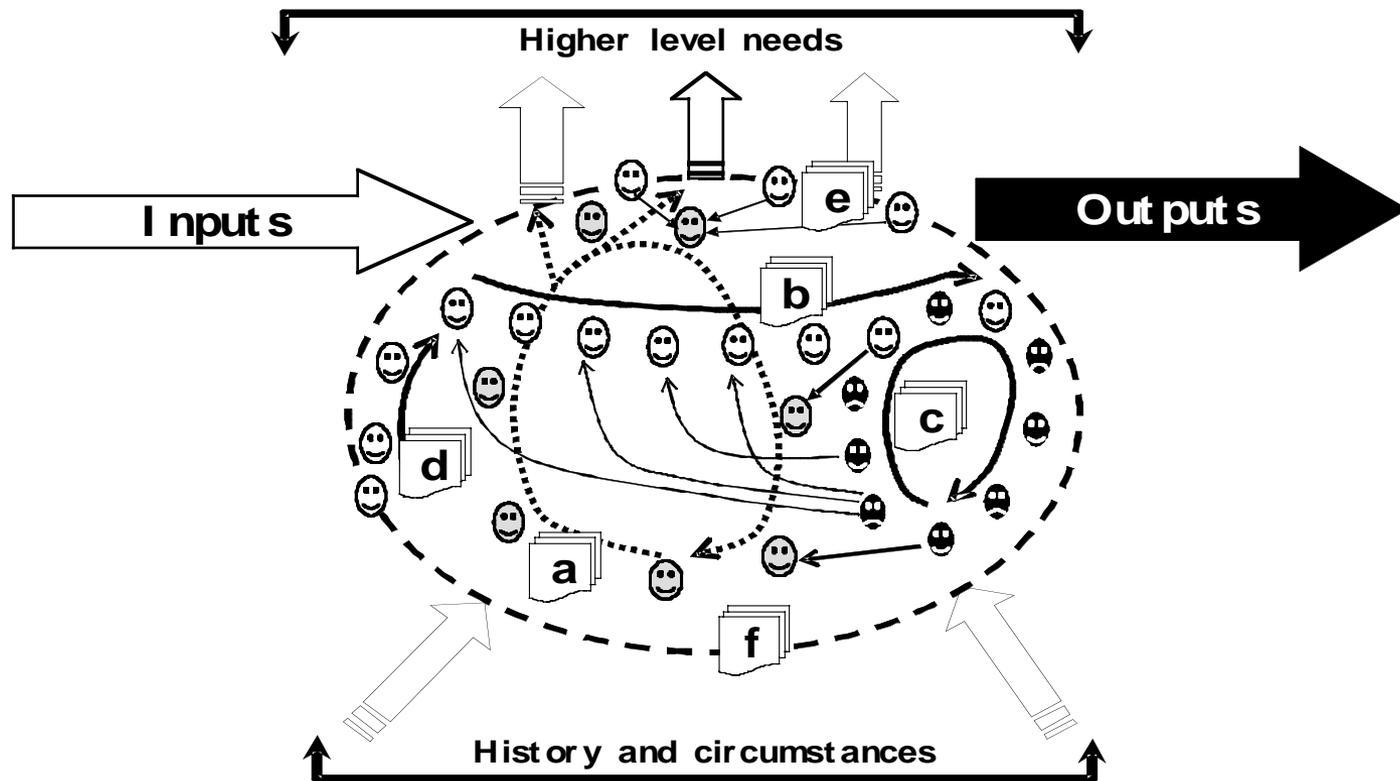
Stabilization around a human attractor, Step 3.



Achievement of dispositional autopoiesis, Step 4.



Semiotic autopoiesis, Step 5.



A conclusion...for now

- | This series of developmental snapshots have been observed in several large organizations or in the establishment of inter company or organizational bodies and forums.
- | The human attractor may be an outside facilitator or an existing charismatic staff member with a particular concern. Similarly, this corresponds to what has been observed during the formation of small and medium enterprises around a charismatic entrepreneur serving as the personal attractor.