

# Approaching Knowledge Management in Organisations

Hilda Tellioglu

Institute of Design and Assessment of Technology  
Vienna University of Technology  
Multidisciplinary Design Group  
[hilda.tellioglu@tuwien.ac.at](mailto:hilda.tellioglu@tuwien.ac.at)

# Research Setting

---

Knowledge

Knowledge management

⇒ Organisations & their business processes

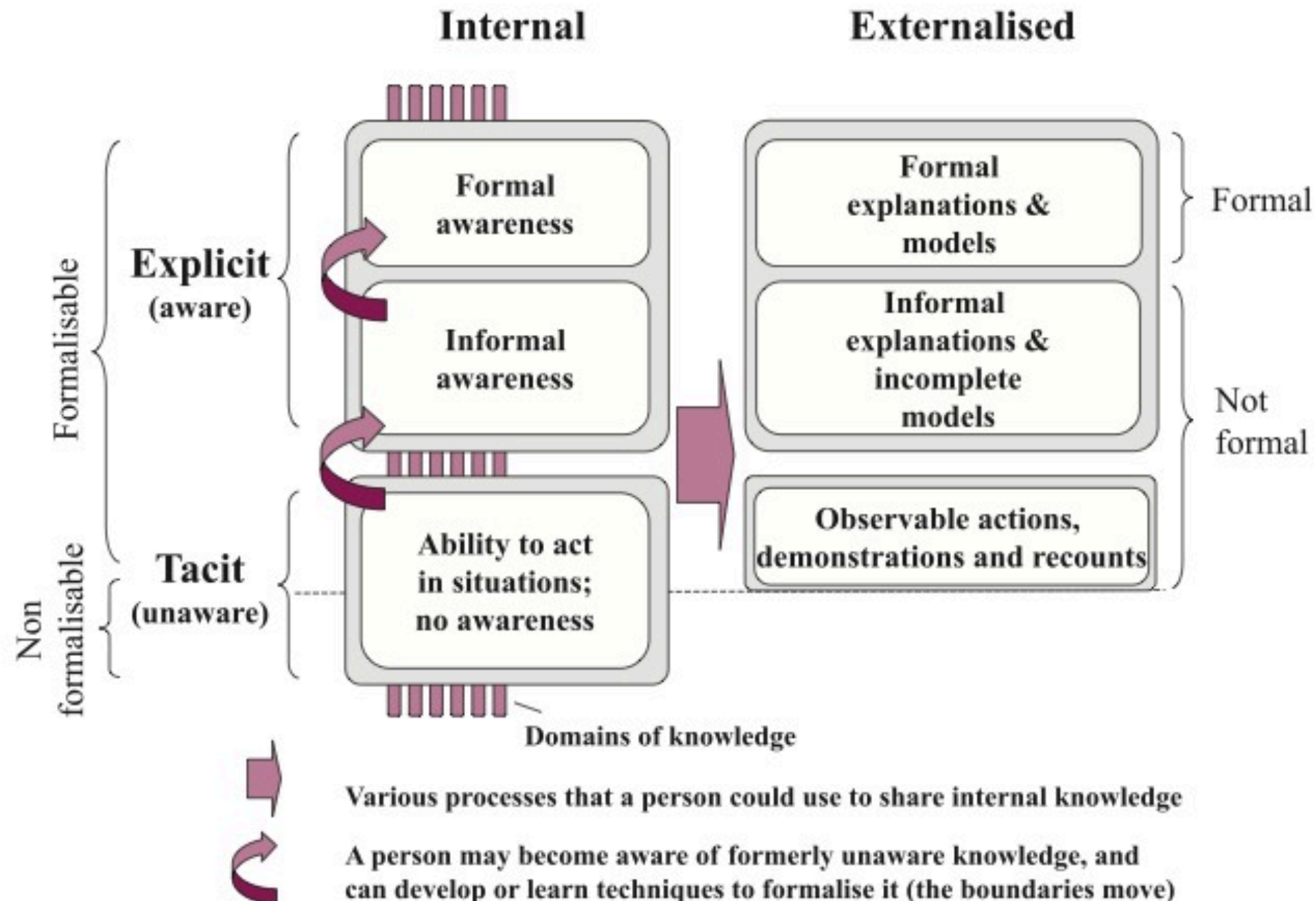
- **Problems** in management of dynamic context-dependant changes
  - identification of KM elements in organisations & impact factors
  - definition of KM processes according to their business
  - establishment of methods & supporting systems

# Knowledge

---

- bunch of “facts, feelings, or experiences known by a person or group of people”
- combination of information, skills, experiences, & personal capability of people
- in artefacts people produce
- in communications they carry out
- at the places they work and live
  
- related to people, products, processes, or culture

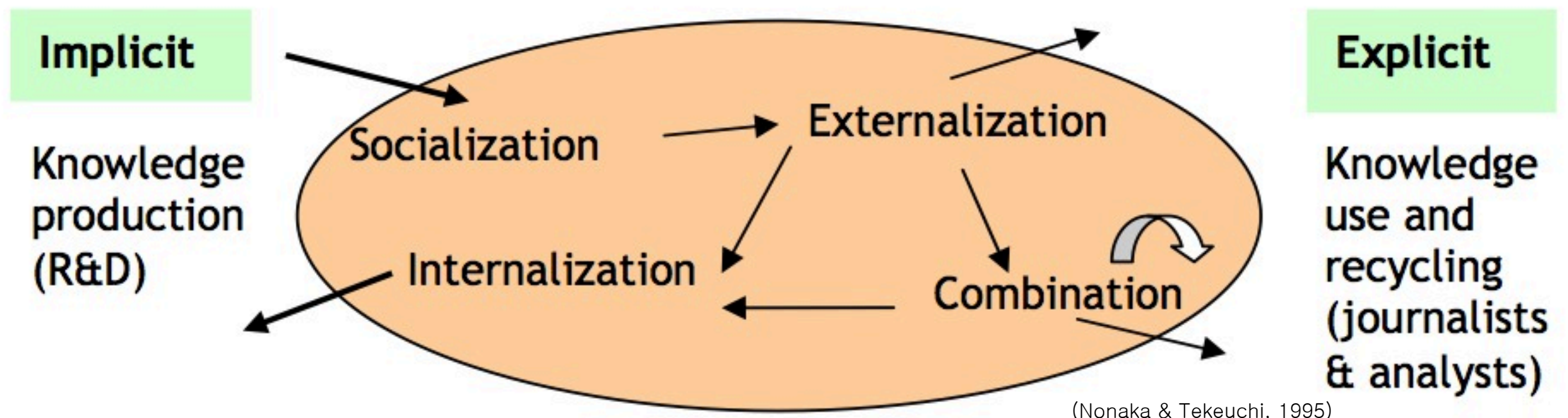
# Research on Knowledge



(Kalpic & Bernus, 2006)

# Research on Knowledge

- individual knowledge = content knowledge
- preserved, transferred, shared
- challenge: management of organisational or collective knowledge = schema knowledge
- knowledge life-cycles



(Nonaka & Takeuchi, 1995)

# Knowledge Management

---

- capture, store, exchange, retrieve valued information
- active management of knowledge in an organisation by using systematic processes
- to transport knowledge from those who have it to those who need it
- to keep knowledge in the organisation

# KM Approaches

---

- generation, codification, transfer, application
- sharing, utilisation, storage, refinement
- acquisition, indexing, filtering, classification, cataloging and integrating, distributing, and application
- procure, organise, store, maintain, analyse, create, present, distribute, and apply
- acquiring, selecting, internalising, and using
- storage and retrieval, sharing and synthesis
- ...



# KM in Industrial Context

---

- technology–push model  $\Rightarrow$  process–focus
- study of SMEs
- product– vs. service–based SMEs
- low– vs. high–volatility context
- 12 steps to implement KM  $\Rightarrow$  framework & methodology for the implementation
- own survey on KM and sharing



# KM in Industrial Context

---

- to understand social network services and their private & professional use
- 31 questions on
  - popularity and availability of SNS for private and professional use
  - areas of application with the duration of use, motivation, features used
  - integration into the daily work
  - possible impacts on one's own work processes
- 282 answers evaluated

# KM in Industrial Context

---

- Organisations use only certain SNS and applications, like Skype, blogs, Windows Live Spaces, RSS feeds. Skype, mainly its IP-based telephony feature, is the most and longest used application for communication.
- 68% mean that the collaboration with other organisations or partners is the same with SNS as it was without using them, whereas 31% see an improvement in collaboration processes when SNS are applied.

# KM in Industrial Context

---

- Among the ones who found that SNS improve the collaboration processes, 30% found that SNS speed everything in business organisation and work processes, and the coordination of work becomes easier.
- 21% found that the distribution of work can be carried out faster and easier, and additional 18% meant that there are other advantages of the use of SNS in organisations.

# KM in Industrial Context

---

- 41% perceived that SNS ease the cooperation at all.
- 73% would recommend the use of SNS in business processes to their existing and new partners.
- 64% would use SNS again in the future projects, 15% would not use them any more.

# KM in Industrial Context

---

- 66% of the SNS users want to separate their private contacts and exchange with others from the ones which are work-related, whereas 16% currently make no difference between private and professional, but can imagine to do that in the future, and 18% do not see the need to separate them.

# So what?

---

- correlation between business processes and knowledge management
- organisations host structured predictable and unstructured situated processes at the same time
- dependant on the knowledge available to carry out the particular activities included in processes
- unexpected contingencies arise at work

# Findings (1)

---

Based on research in MAPPER (EU project)

- how organisations can be characterised depending on their main activities, business focus, and organisation of work
- differentiate time-, product-, or service-based organisations
- help analyse the organisational context and economic, environmental, cultural circumstances
- define and analyse processes, management, coordination and cooperation issues, success factors in such organisations, by focusing on knowledge management processes to provide support for organisations



# Findings (2)

## Time-based Organisations

---

- deadlines drive everything
- temporal conditions define interdependencies
- time-based project plan
- temporal space for improvisations in case of unexpected contingencies  $\Rightarrow$  changes in business processes
- simultaneity & ad-hoc changes in resource allocation
- distributed decision-making
- meetings
- success: meet deadlines, delivering expected results in the restricted time

# Findings (3)

## Product-oriented Organisations

---

- product – subparts
- subparts assigned to persons
- interdependencies between subparts, change over time
- coordination protocols: interfaces, deadlines, quality & quantity
- central decision-making
- monitoring, intervention, reallocation
- plans, meetings, tools
- success: product quality, its integrity, completeness, unity

# Findings (4)

## Service-based Organisations

---

- predefined, well-structured, routine processes
- persons assigned to processes
- workflow(-like) systems define the processes
- no improvisations
- model & monitor
- intervention, reallocation, reassignment, central decisions
- success: efficient workflow, no deadlocks, no uncertain situations, everything runs as planned, service delivered at the right time to the right people

# Findings (5)

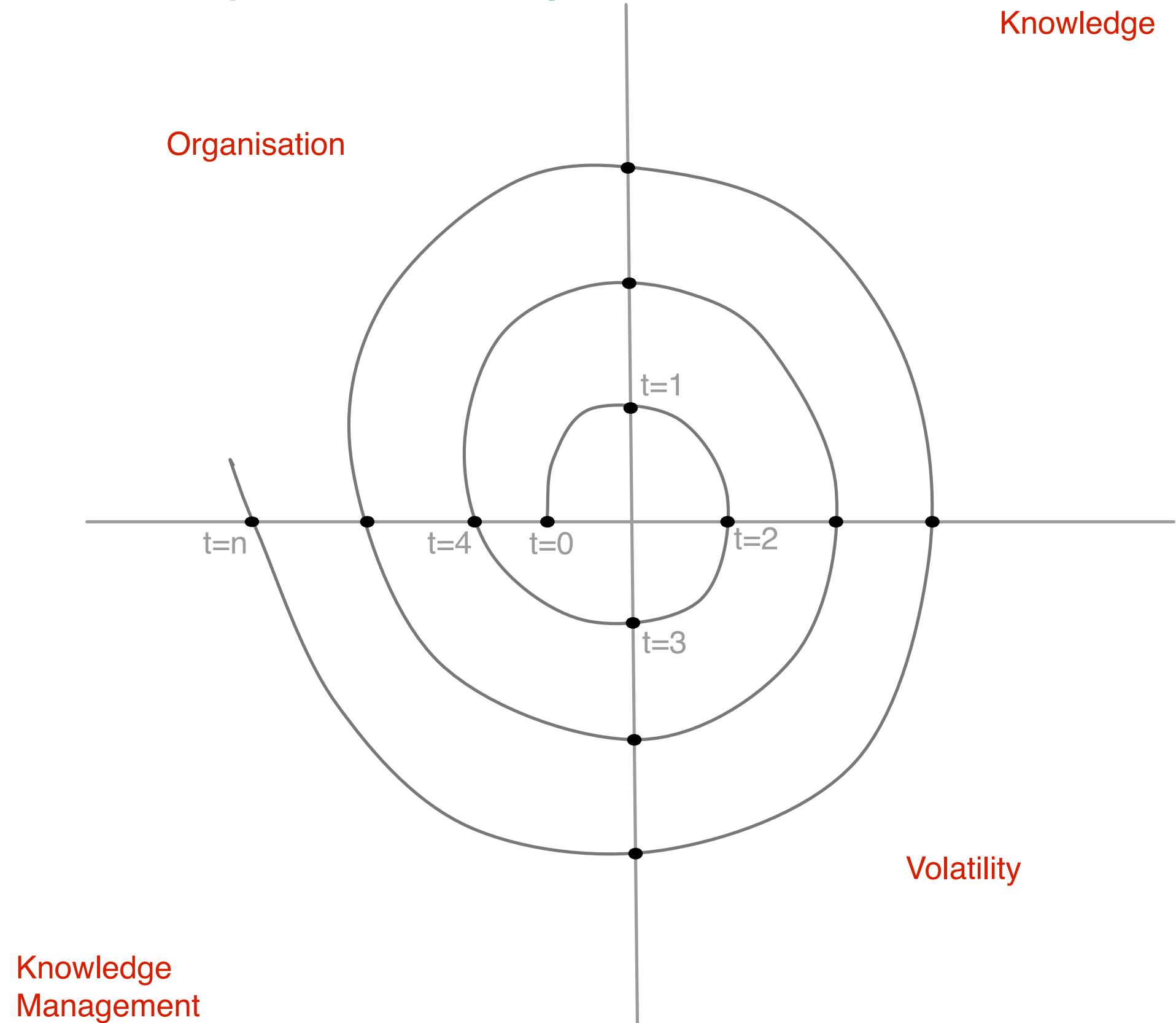
## Other Impact Factors

---

- changes in organisations
  - dealing with volatility
  - dealing with KM and change management practices
- ⇒ complex process changing over time

a spiral knowledge life-cycle model

# Knowledge Life Cycle Model



time-based?

product-based?

service-based?

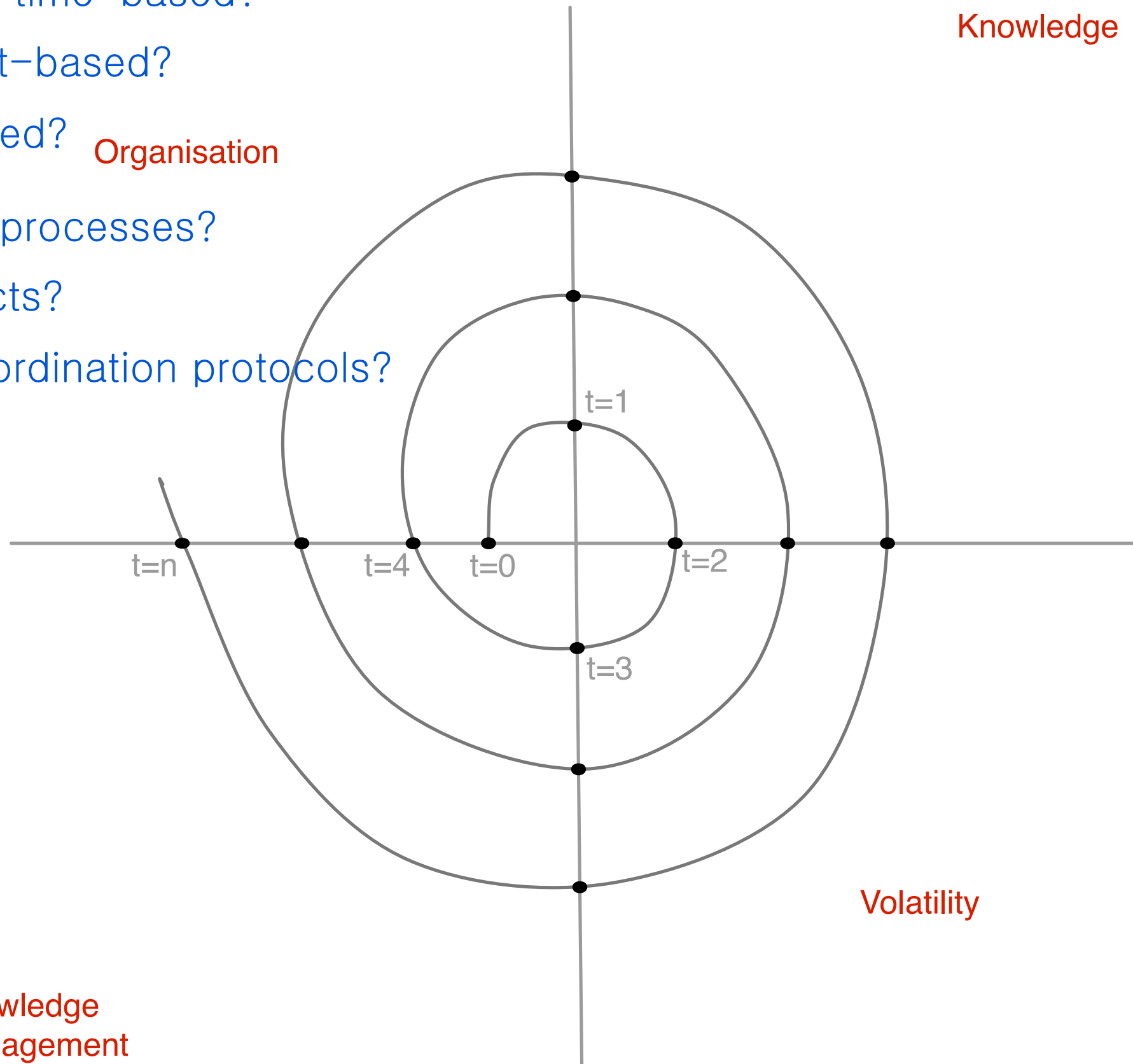
Organisation

business processes?

artefacts?

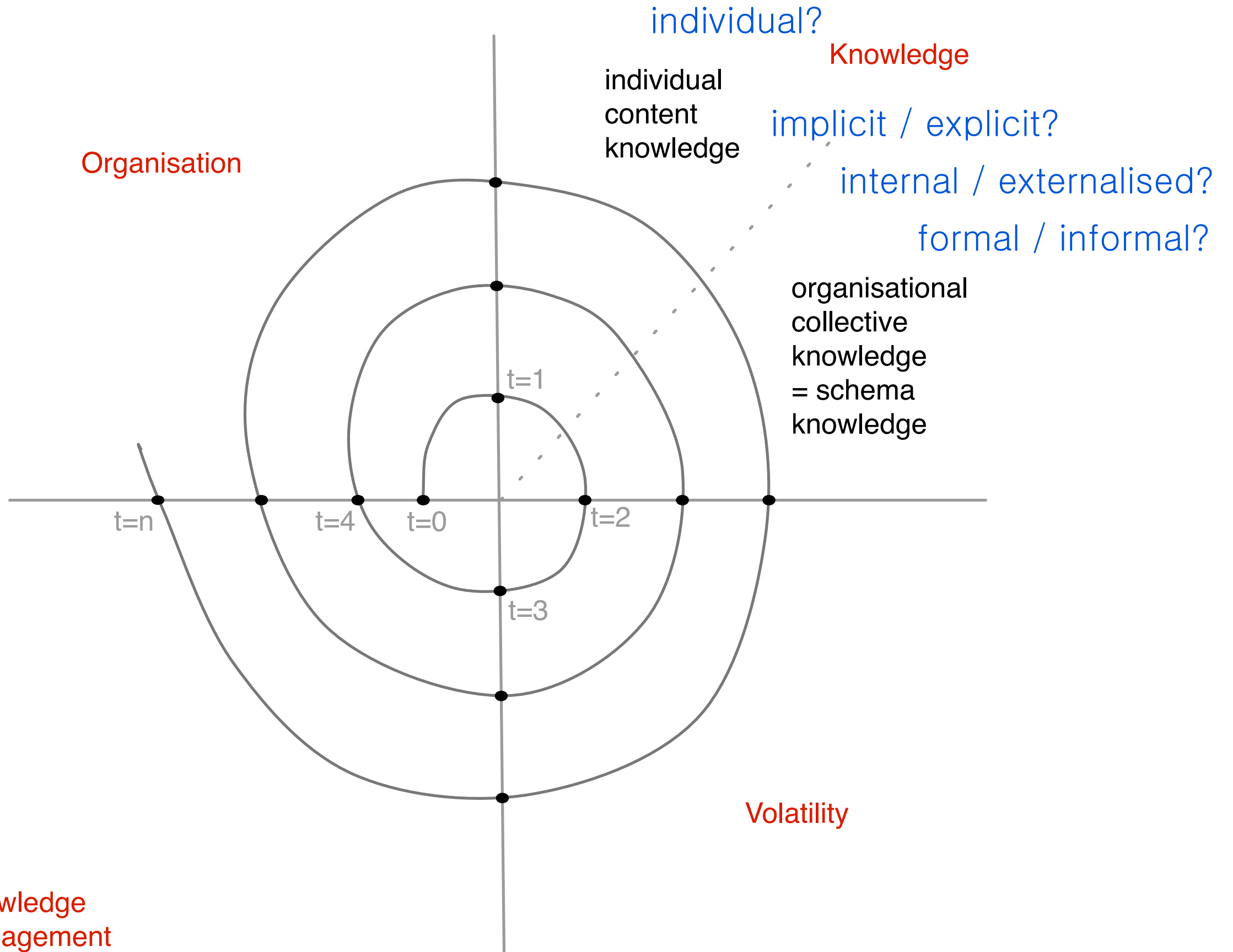
coordination protocols?

Knowledge

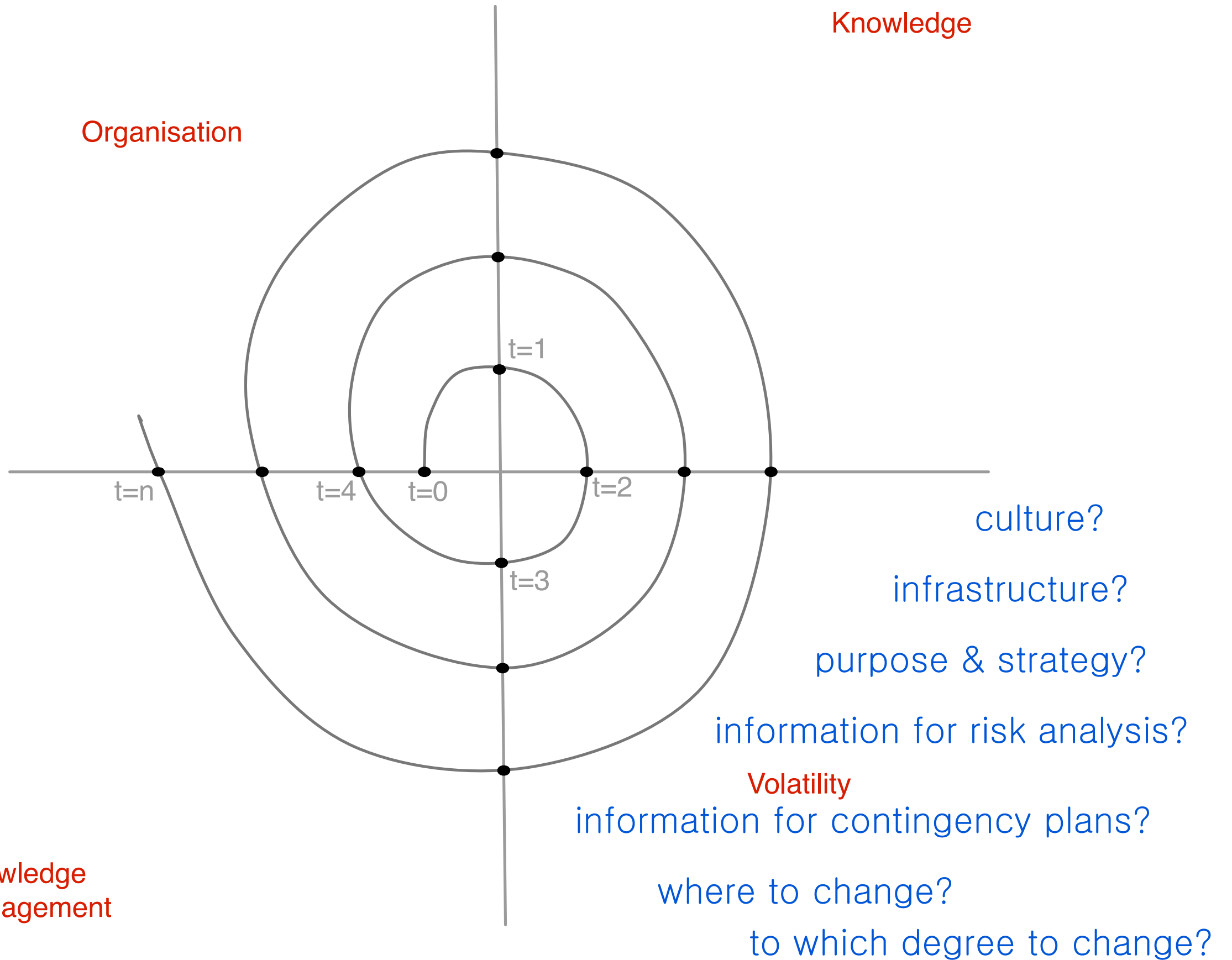


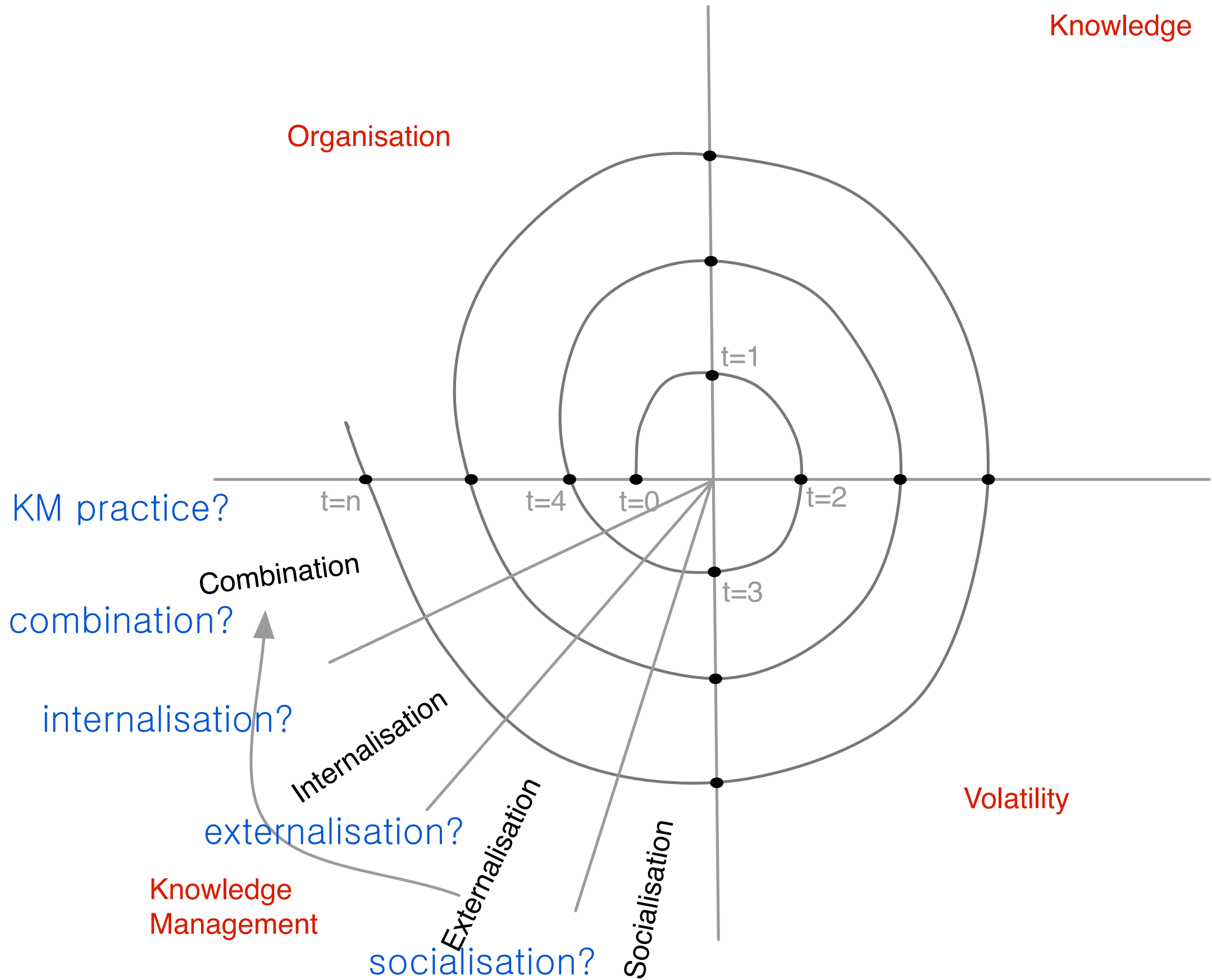
Knowledge  
Management

Volatility









KM established?

efficient KM?

accepted KM?

successful KM? Organisation

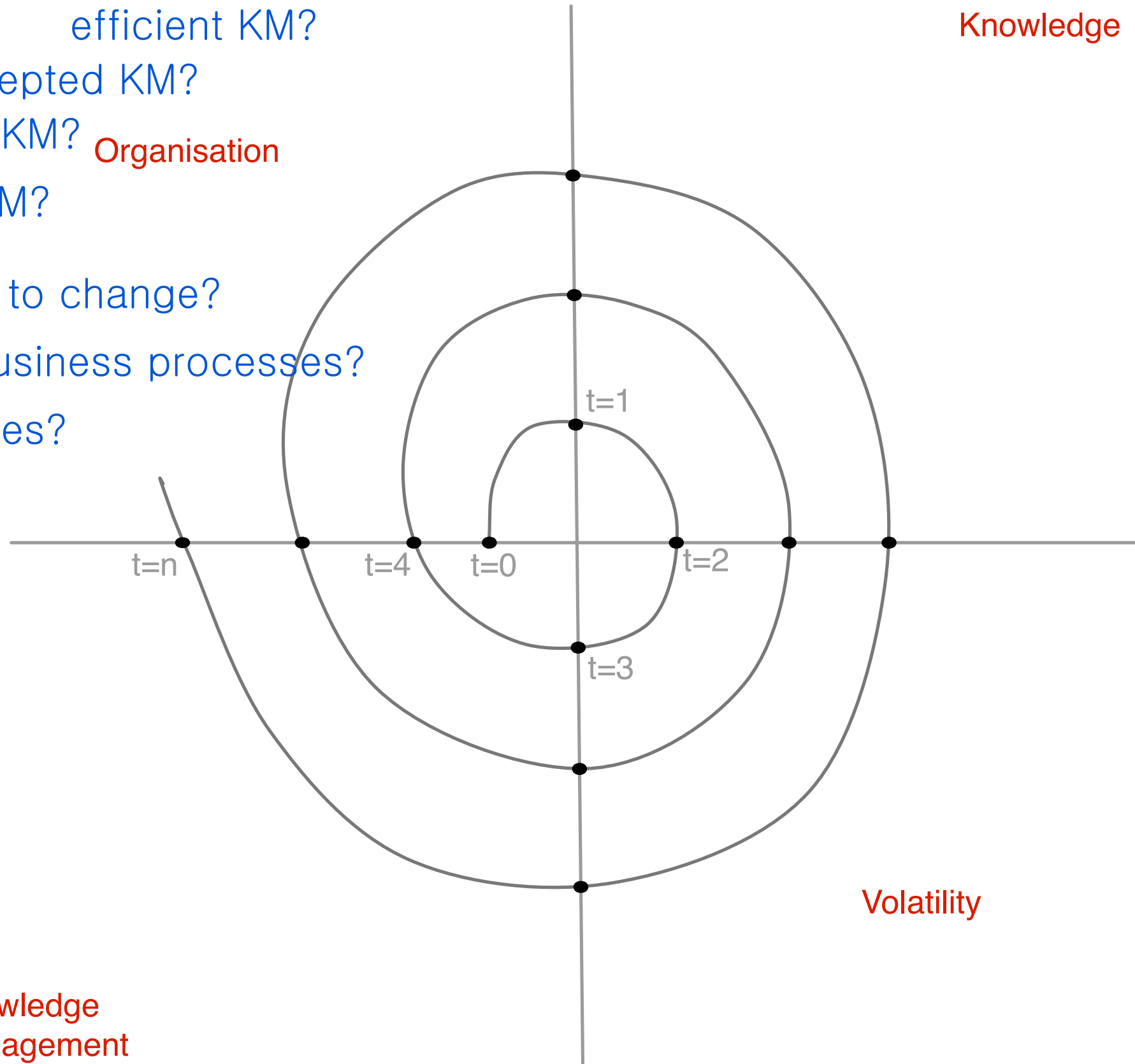
change KM?

what to change?

impact on business processes?

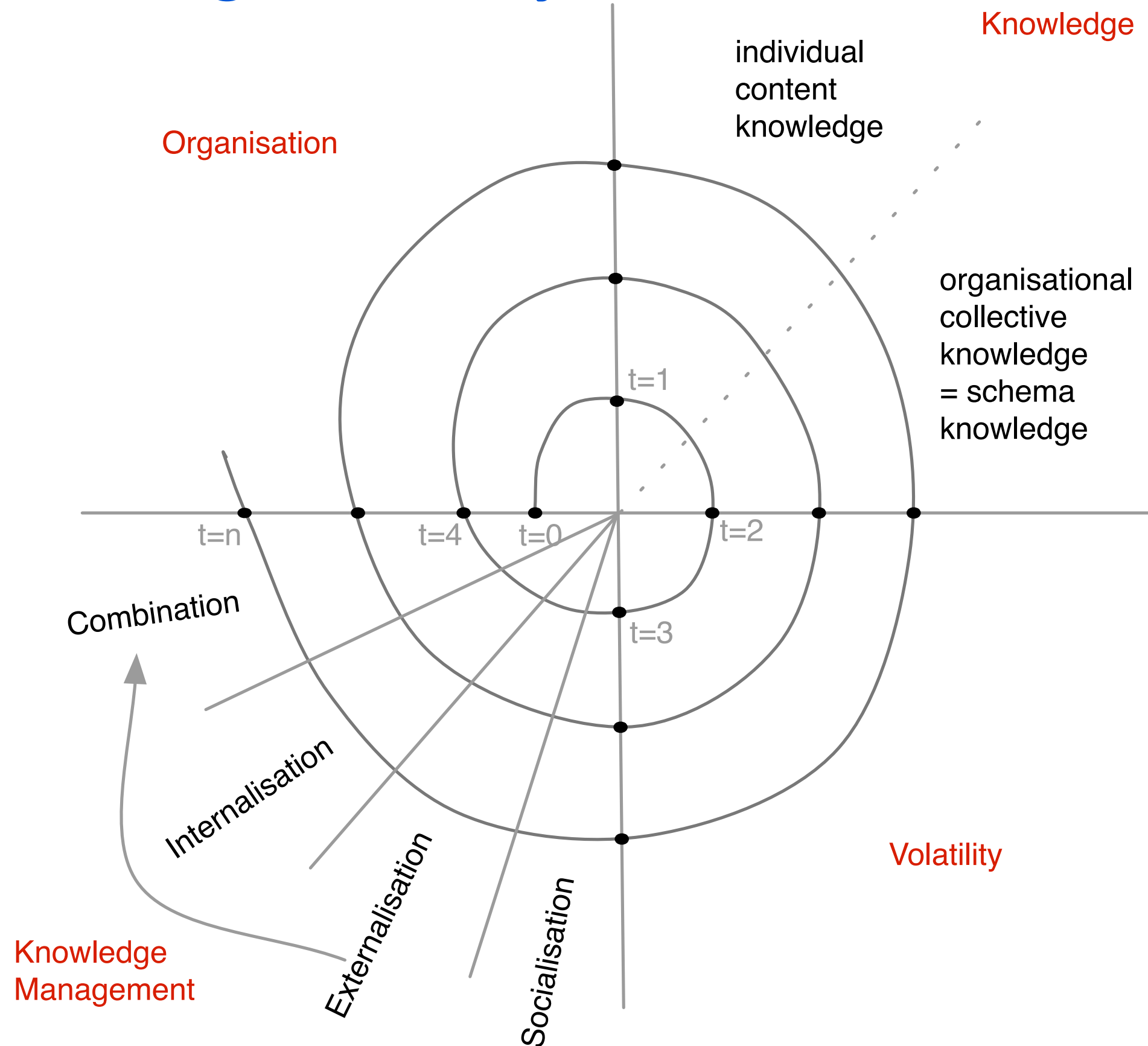
consequences?

Knowledge

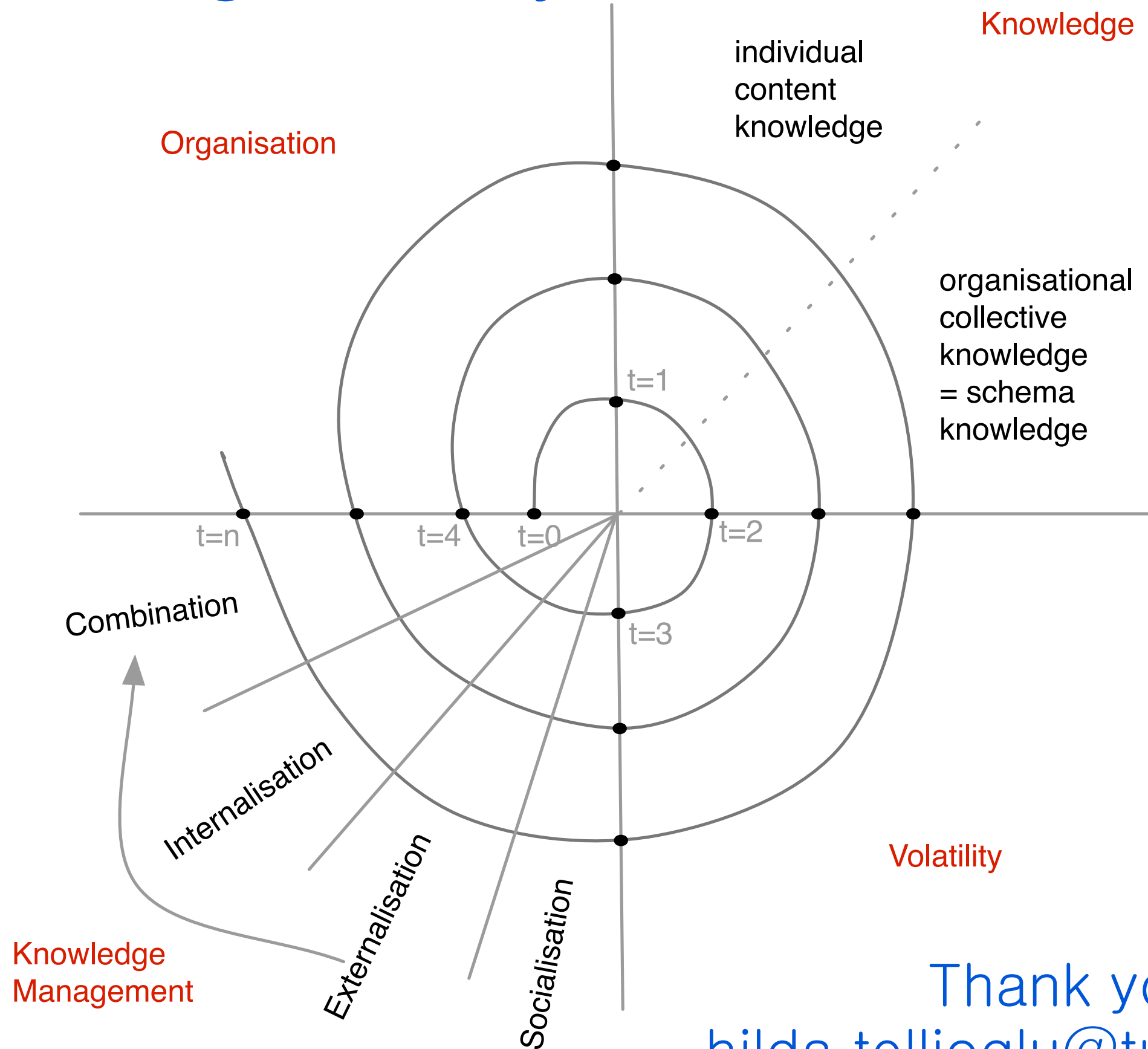


Knowledge  
Management

# Knowledge Life Cycle Model



# Knowledge Life Cycle Model



Thank you!  
[hilda.tellioglu@tuwien.ac.at](mailto:hilda.tellioglu@tuwien.ac.at)