

# MOT121A

# Leadership and Technology Management

2023-2024

Dr. Robert M. Verburg  
Module Manager

# (cluster) Technology, Innovation and Organization

## **MOT 121A**

**Leadership and Technology Management**

## MOT 122A

Business Process Management and Technology

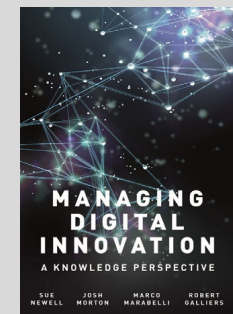
## MOT 123A

Inter- and Intra-Organization Decision Making

- 15 ECTS

# MOT121A Course Schedule

	Time	Place	Topic	Chapters	Professor
1	Wednesday September 6, 2023	TPM-A 10.45 – 12.30	The Changing Context of Work And the nature of innovation	1,2	RV
2	Wednesday September 13, 2023	TPM-A 10.45 – 12.30	Organizing and Strategizing for innovation	3,4	RV
	Introduction days	Introduction days	Introduction days	Introduction days	
3	Wednesday September 27, 2023	TPM-A 10.45 – 12.30	Projects, Teams and Open Innovation	5,6	RV
4	Wednesday October 4, 2023	TPM-A 10.45 – 12.30	Best Practices	articles	NP
5	Wednesday October 11, 2023	TPM-A 10.45 – 12.30	Leadership, Management and Power	7	RV
6	Wednesday October 18, 2023	TPM-A 10.45 – 12.30	Explicit and implicit Digital Connectivity Future Developments	8,9,10	NP
7	Wednesday October 25, 2023	TPM-A 10.45 – 12.30	Recap and exam info. Presentations group assignments		RV, AS
Final Exam	Tuesday November 7, 2023	Drebbelweg-Hall 1 13.30 – 16.30	Digital exam with essay questions	All materials	



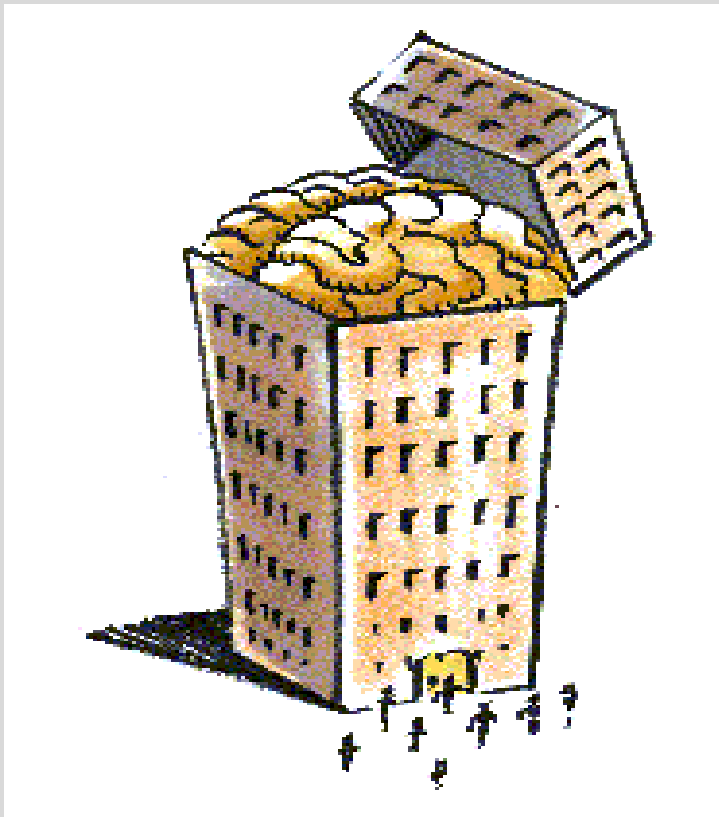
Last time

## Examples of different types of innovation

= development, adoption and use of a new idea/thing across a community of potential users.

	Process innovation	Product innovation
<b>Radical innovation</b>	Business Process Reengineering	iPhone
<b>Incremental innovation</b>	Six Sigma	iPhone Generations
<b>Disruptive innovation</b>	Assembly line	Compact Disks

# Managing knowledge processes



*Establishing the knowledge that is needed*

*Inventory of available knowledge*

*Knowledge development*

*Knowledge storage*

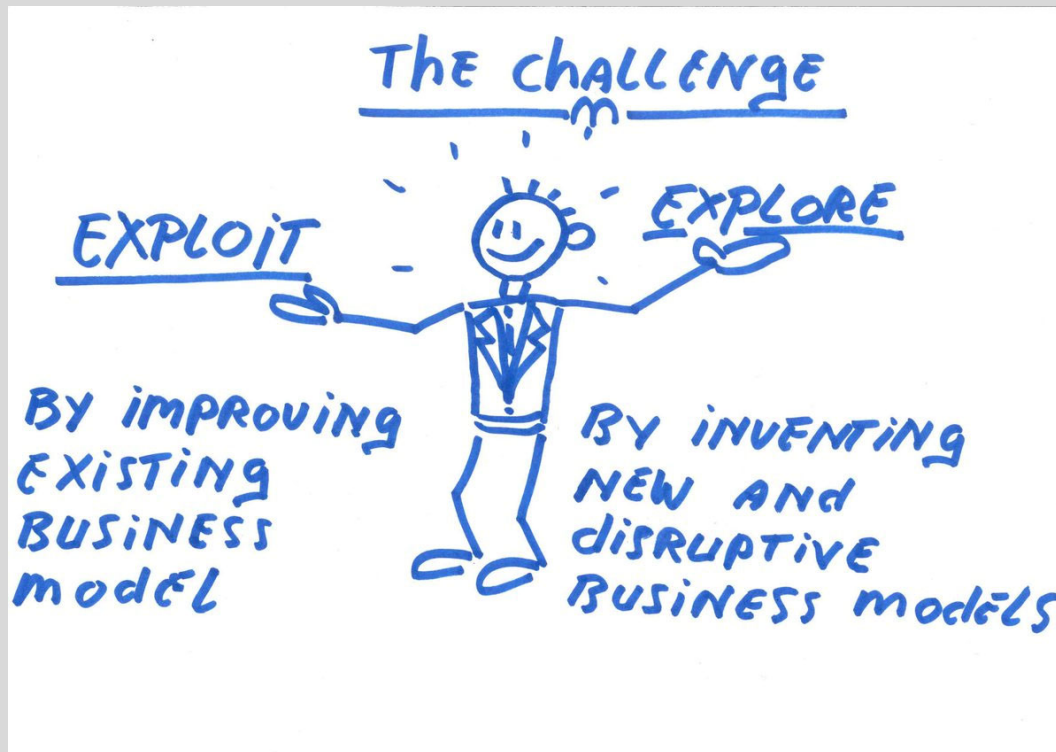
*Knowledge sharing*

*Applying knowledge*

*Evaluating knowledge*

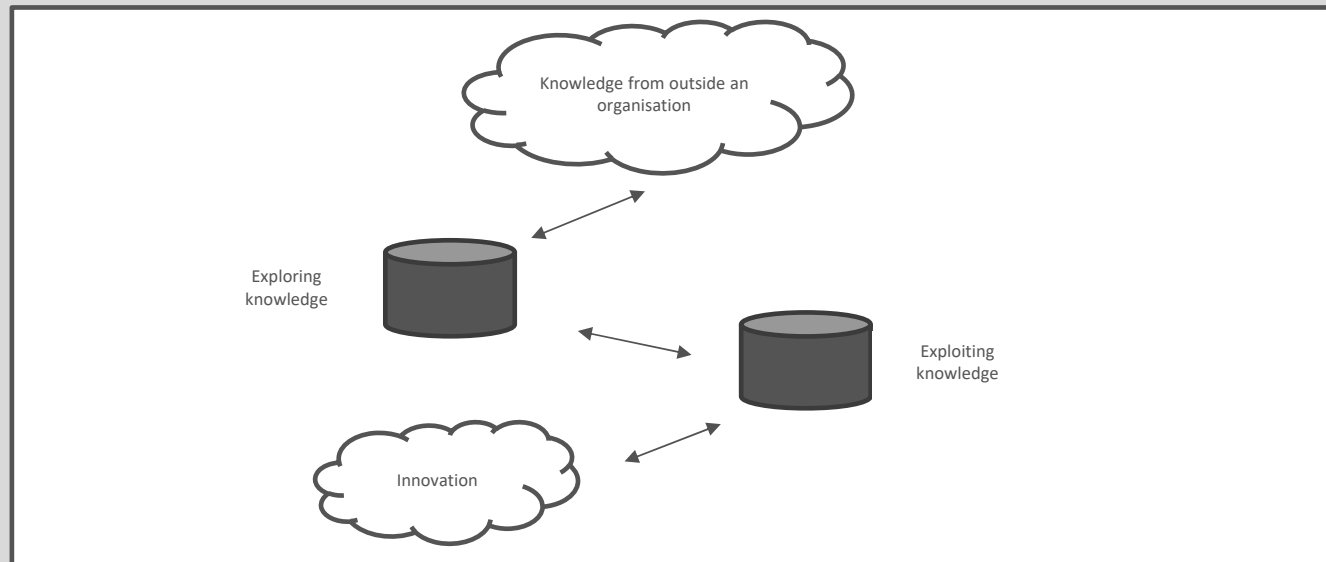
# Ambidexterity

= firm's ability to combine both exploitation (delivery) and exploration (new idea generation)



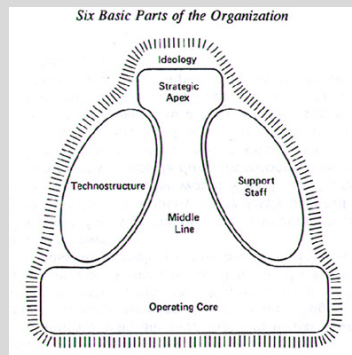
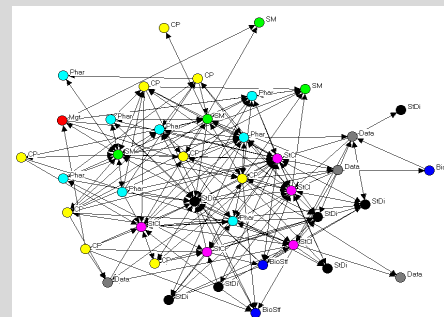
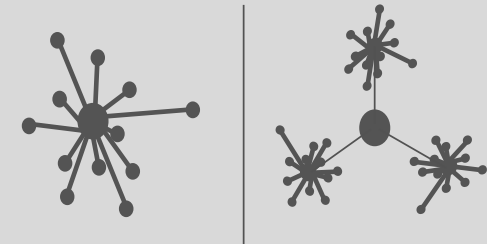
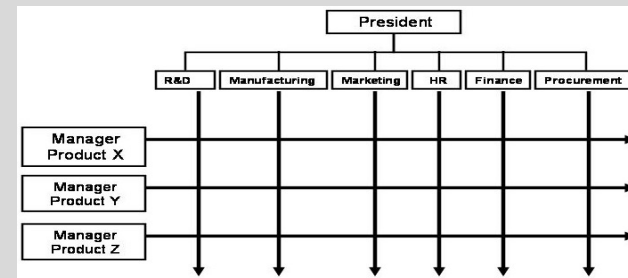
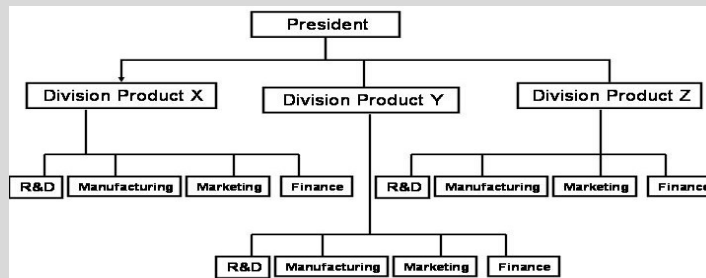
# Interactive view of absorptive capacity

= firm's ability to transform knowledge into a successful operational process or product



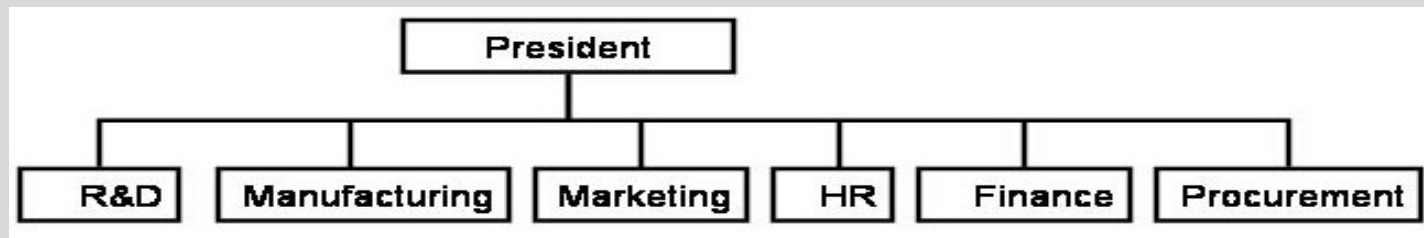
Builds on process view but does not assume exploitation follows in linear sequence from exploration

# Today: The Structuring of Organizations

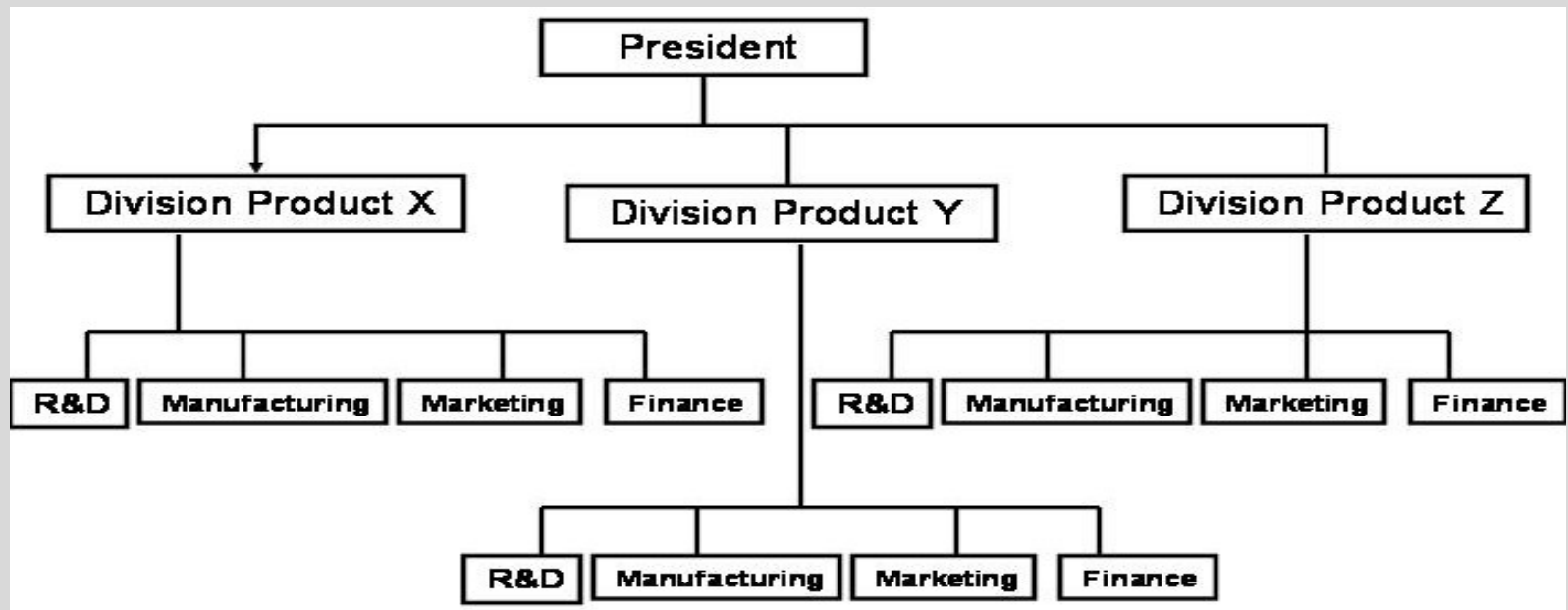




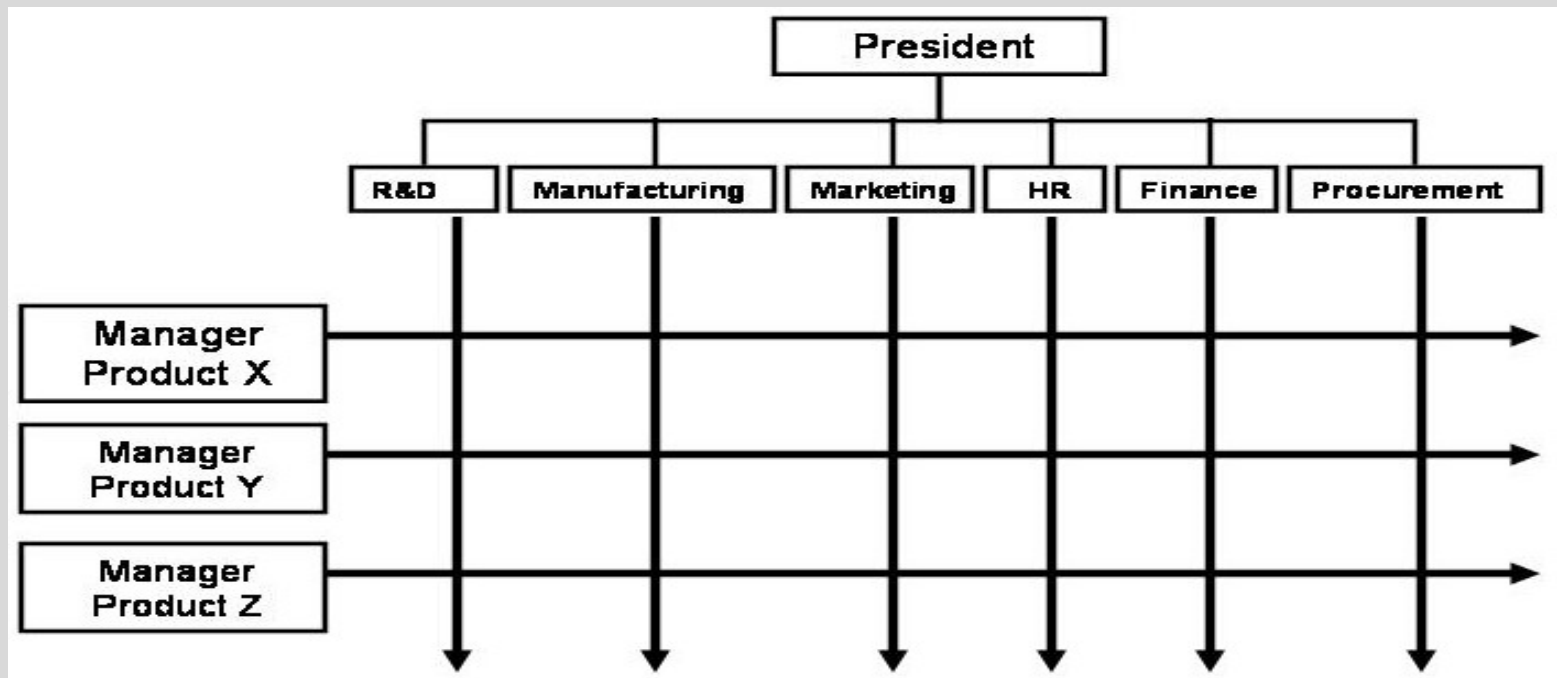
# Functional Structure



# Divisional Structure



# Matrix structure



# Elements of organizational structure

1. Work specialization – *To what degree should work tasks in an organization be subdivided into separate jobs? How well should these jobs be defined?*
2. Hierarchy –
3. Span of Control –
4. Chain of command –
5. Departmentalization –
6. Formalization –
7. Centralization –

# Elements of organizational structure

1. Work specialization –
  2. Hierarchy –
  3. Span of Control –
  4. Chain of command –
  5. Departmentalization –
  6. Formalization –
  7. Centralization –
- Should there be many layers of management (tall hierarchy) or few (flat hierarchy)? What are the implications in terms of communication, employees' motivation and staff costs?*

# Elements of organizational structure

1. Work specialization –
2. Hierarchy –
3. Span of Control –
4. Chain of command –
5. Departmentalization –
6. Formalization –
7. Centralization –

*How many subordinates should a single manager / supervisor be responsible for?*

# Elements of organizational structure

1. Work specialization –
2. Hierarchy –
3. Span of Control –
4. Chain of command –
5. Departmentalization –
6. Formalization –
7. Centralization –

*To whom should a given individual or group report with respect to their work? Should there be unity of command?*

# Elements of organizational structure

1. Work specialization –
2. Hierarchy –
3. Span of Control –
4. Chain of command –
5. Departmentalization –
6. Formalization –
7. Centralization –

*Should jobs be grouped within departments whose staff share a common expertise (functional); or according to the product or service they offer, the geographical area they operate in, the type of customer they serve, or some other basis?*



# Elements of organizational structure

1. Work specialization –
2. Hierarchy –
3. Span of Control –
4. Chain of command –
5. Departmentalization –
6. Formalization –
7. Centralization –

*To what degree should written rules, operating procedures, job-descriptions, organizational charts, and formal, written communication be used?*

# Elements of organizational structure

1. Work specialization –
2. Hierarchy –
3. Span of Control –
4. Chain of command –
5. Departmentalization –
6. Formalization –
7. Centralization –

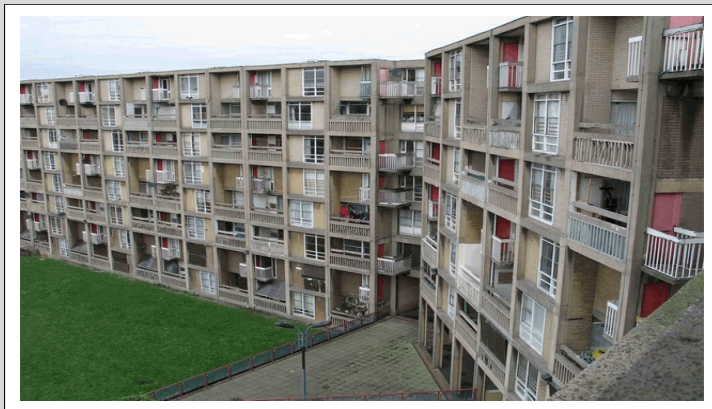
*Should decisions be made at the top of the company or should decision making be delegated to the lower managers in the organizational hierarchy? – Advantages and disadvantages*

# Organizational Structures

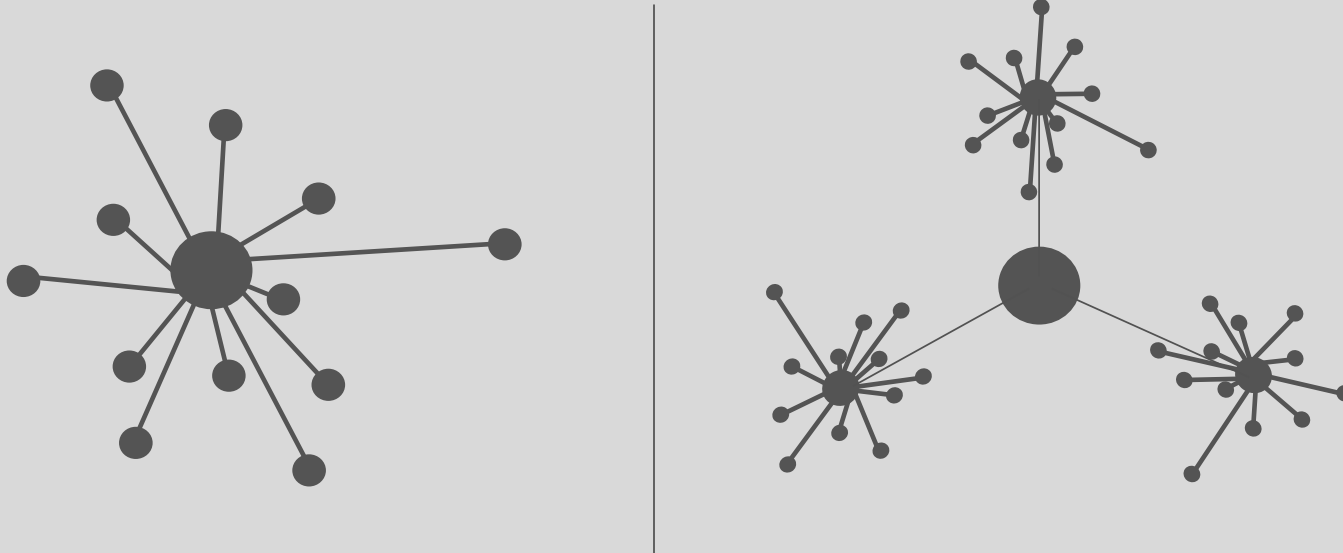
## Mechanistic (bureaucratic) versus Organic?

1. High specialization
2. Rigid departmentalization
3. Clear chain of command
4. Narrow spans of control
5. Centralization
6. High formalization

Cross-functional teams  
Cross-hierarchical teams  
Free flow of information  
Wide spans of control  
Decentralization  
Low Formalization



# Centralised vs. decentralised organisational forms



# The Strategy-Structure Relationship

What structure would fit the following strategies?

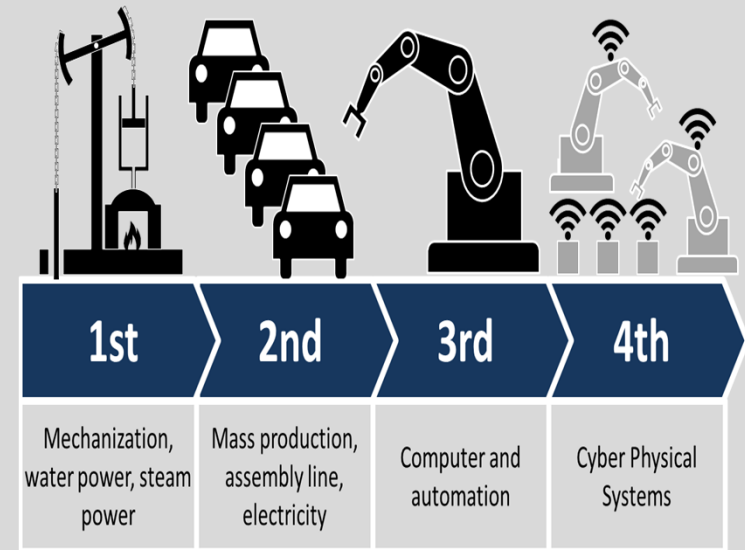
Innovation

Cost minimization

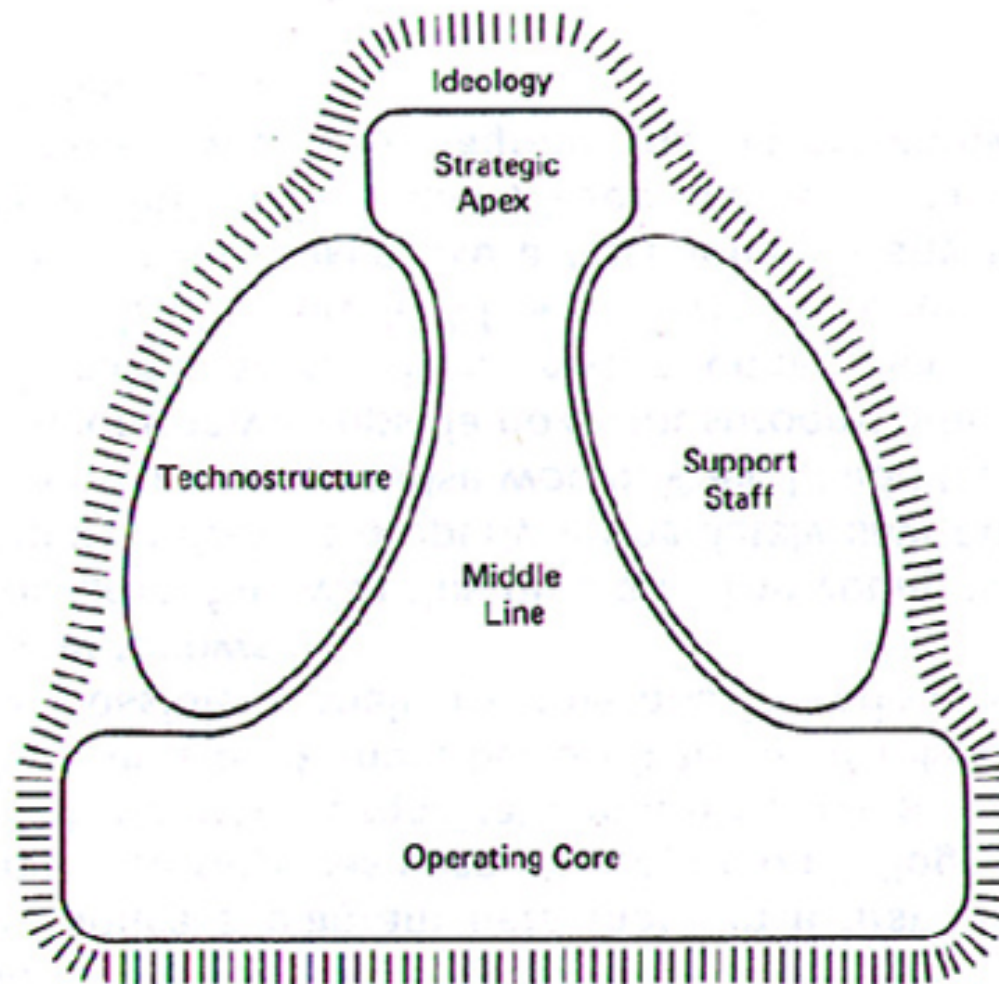
Imitation

# The changing nature of work

- **intellectual** rather than physical
- **innovative** rather than routine
- culturally **diverse** rather than standard
- Geographically **distributed** rather than co-located
- Communication and coordination are increasingly done through **electronic** means rather than by face-to-face interaction



### *Six Basic Parts of the Organization*



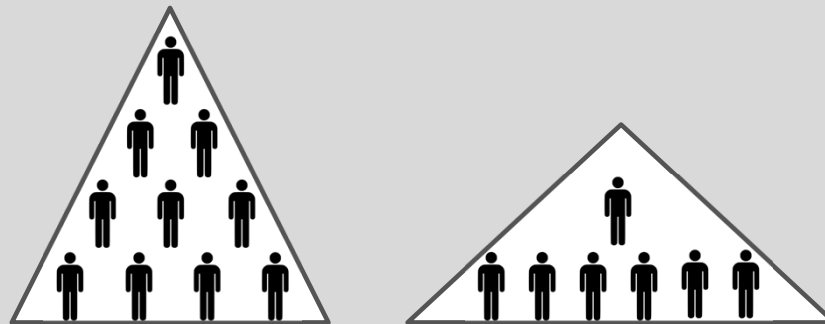
## 7 structural configurations of organizations (Mintzberg p110)

Configuration	Prime Coordination Mechanism	Key Part of Organization	Type of Decentralization
Entrepreneurial organization	Direct supervision	Strategic apex	Vertical and horizontal centralization
Machine organization	Standardization of work processes	Technostructure	Limited horizontal decentralization
Professional organization	Standardization of skills	Operating core	Horizontal decentralization
Diversified organization	Standardization of outputs	Middle line	Limited vertical decentralization
Innovative organization	Mutual adjustment	Support staff	Selected decentralization
Missionary organization	Standardization of norms	Ideology	Decentralization
Political organization	None	None	Varies



## New forms of organising

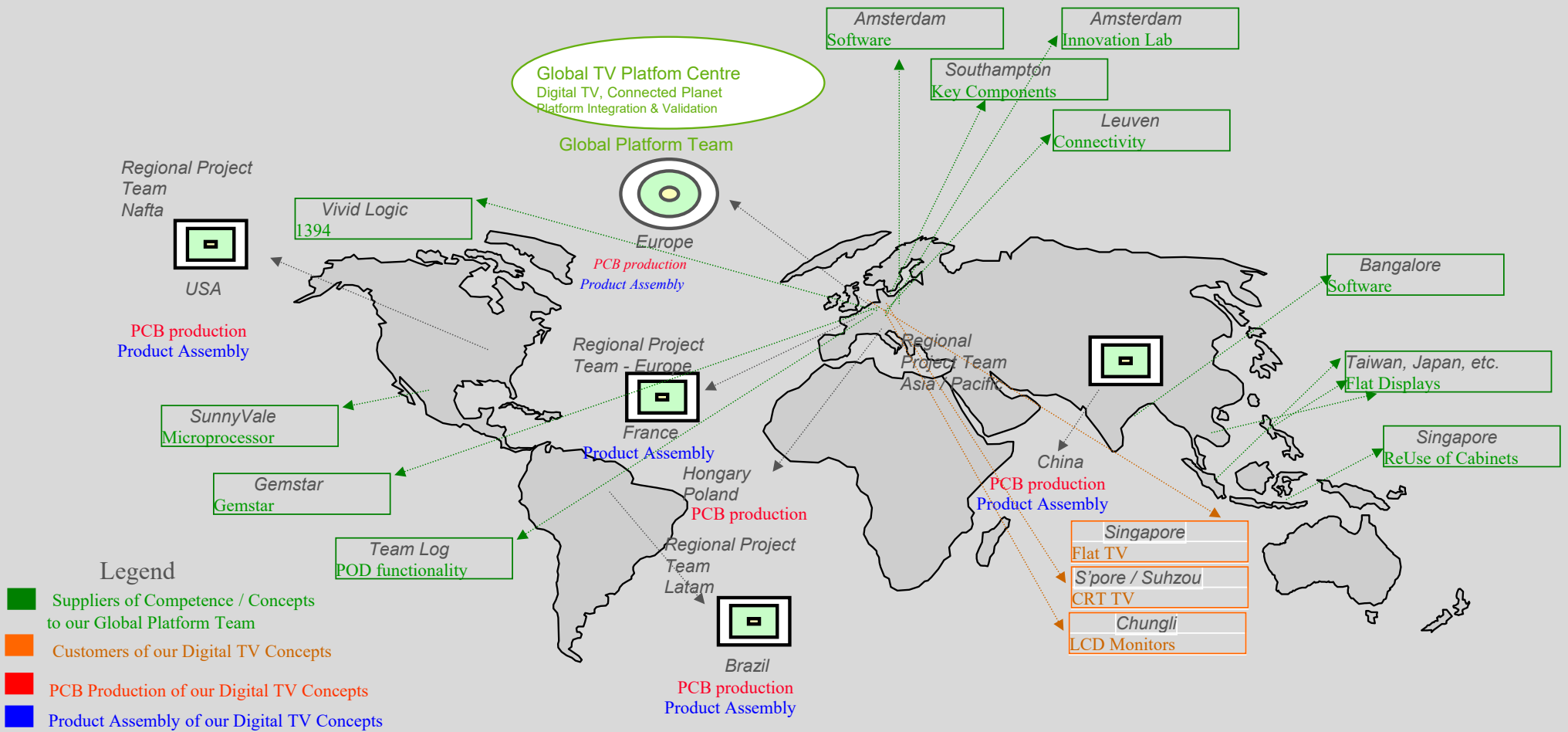
In place of tall hierarchies, flatter structures allow for more decentralised decision-making, thereby reducing the burden on top executives and allowing for quicker and more responsive decision-making.



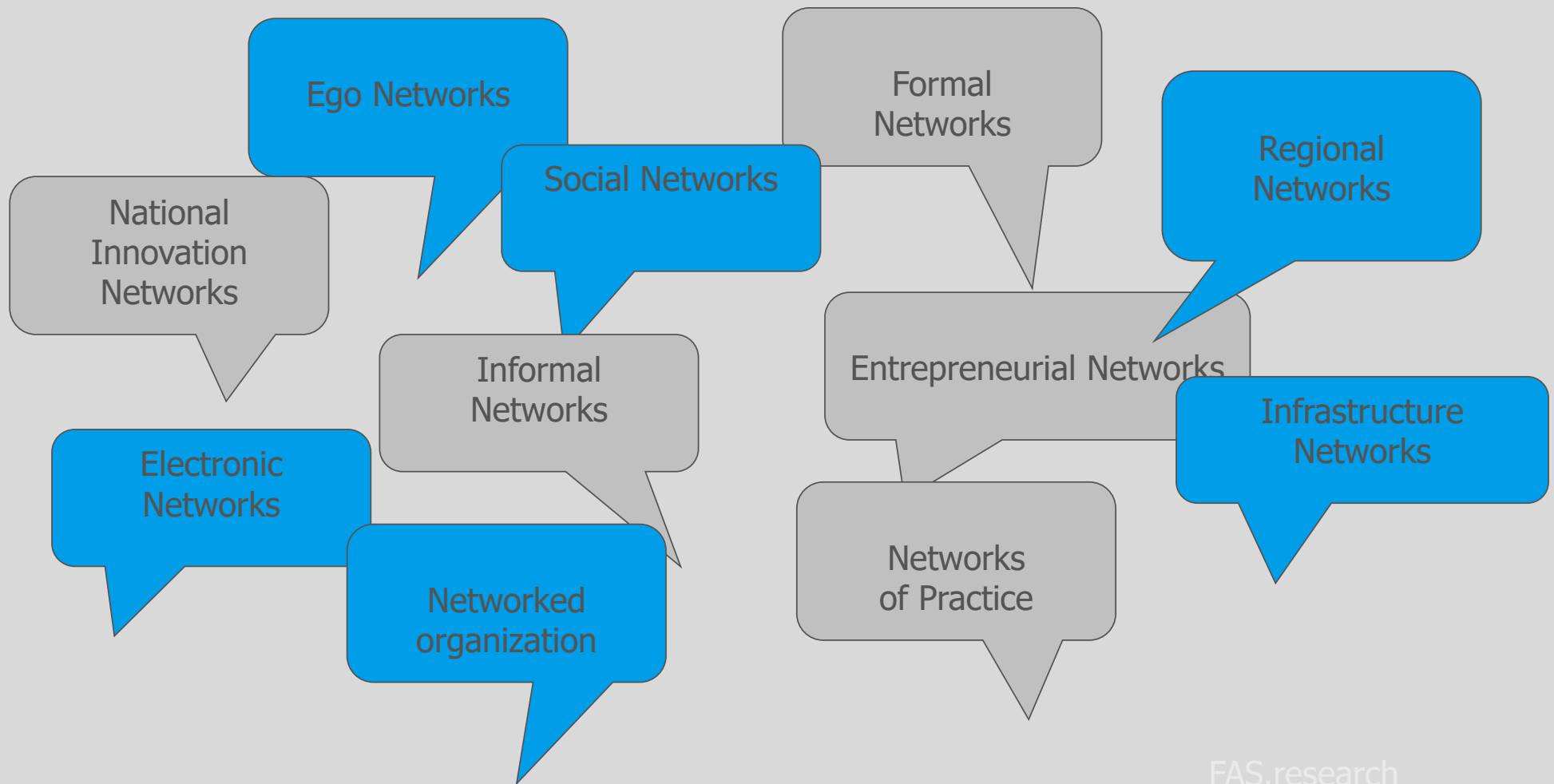
## Business units, Projects

As organisations grow more complex, it becomes very difficult for managers to understand and be in control of everything that is going on → Large organisations are often divided into smaller units or divisions (by product, region etc.).

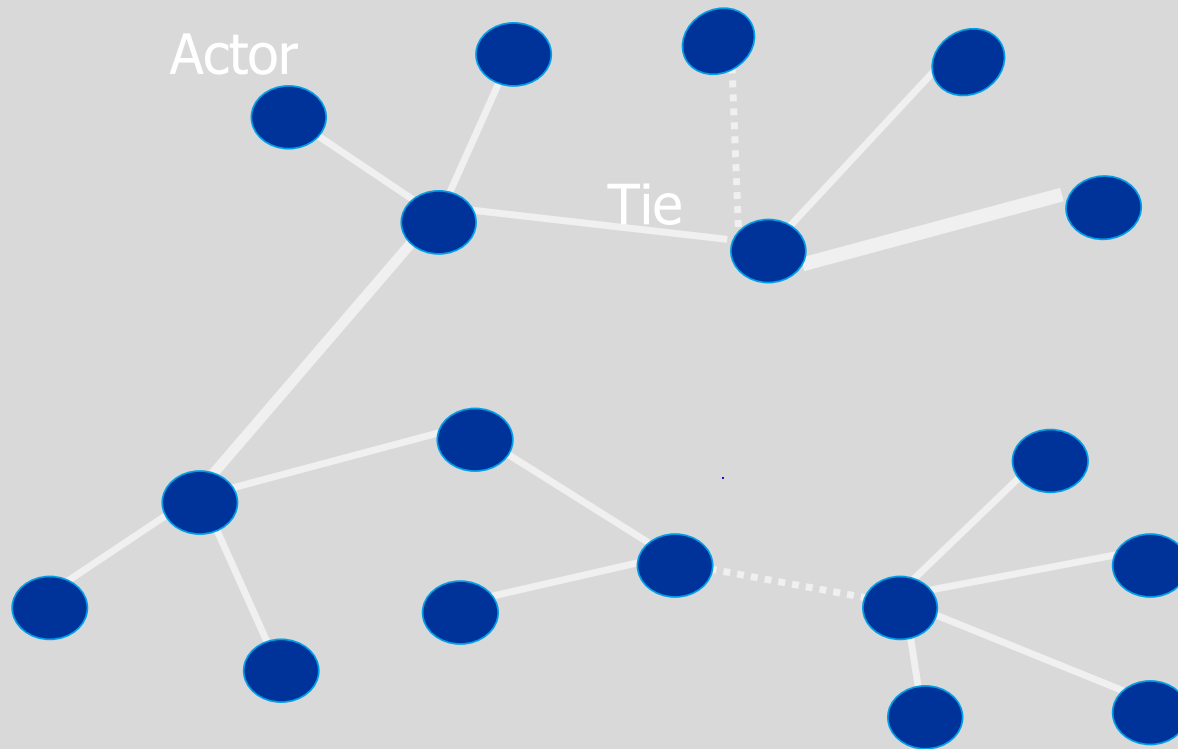
Modularisation, is an alternative strategy, which makes divisions by task rather than product or region.



# Everyone is talking about networks



# What is a network?



- Actors/Nodes
  - Individuals
  - Teams, organizations, etc.

- Ties/Links
  - Knowledge, trust, team, sit by, dislike, etc.
  - Alliance, customer, investment, etc.

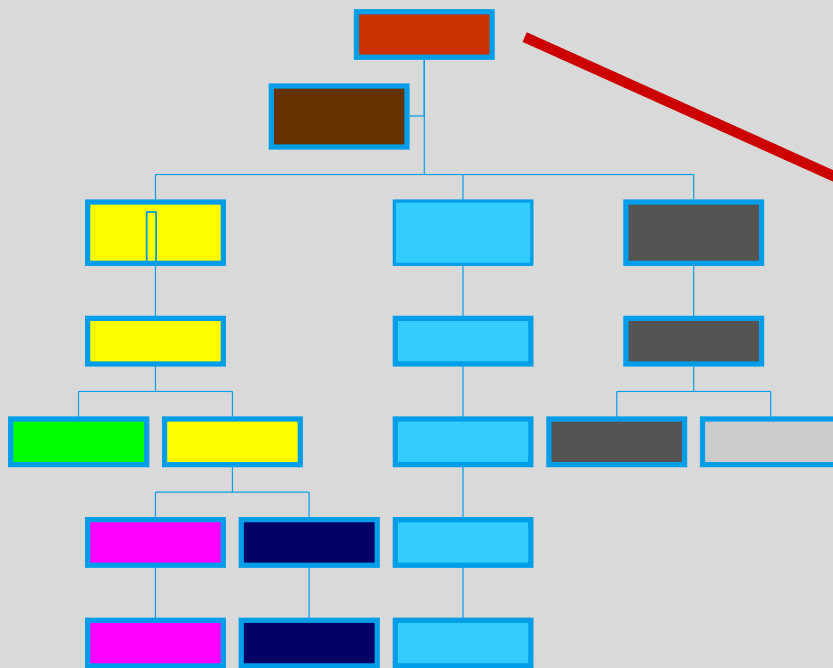
**A set of actors connected by ties**

....that is increasingly connected

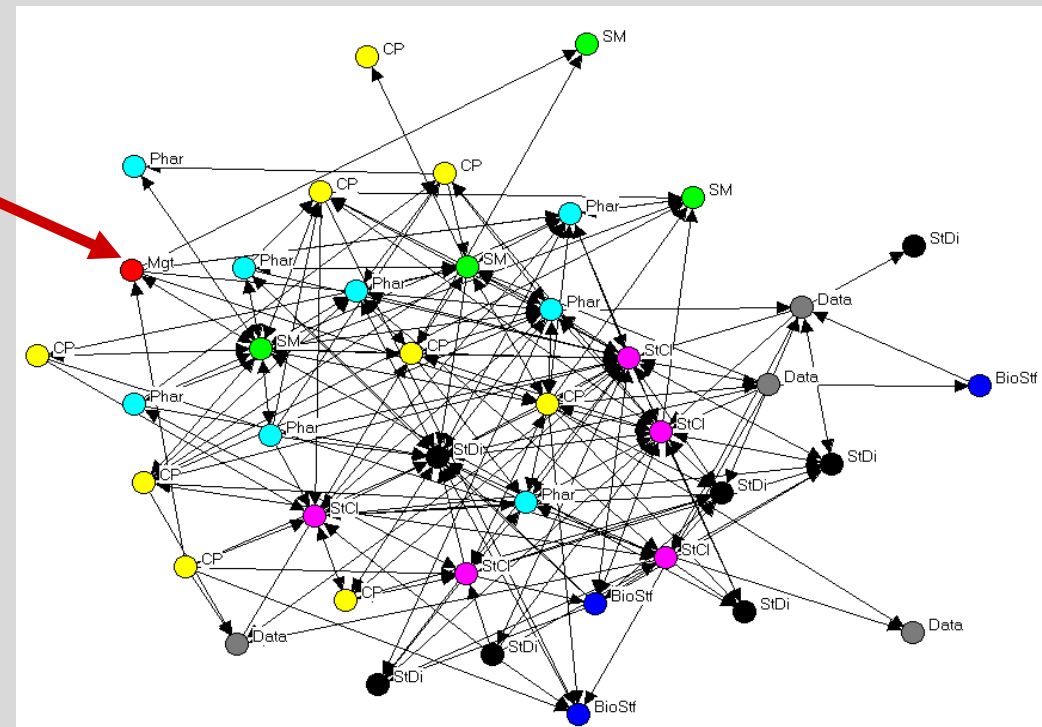


# Uncovering networks in an organization

## Formal organization

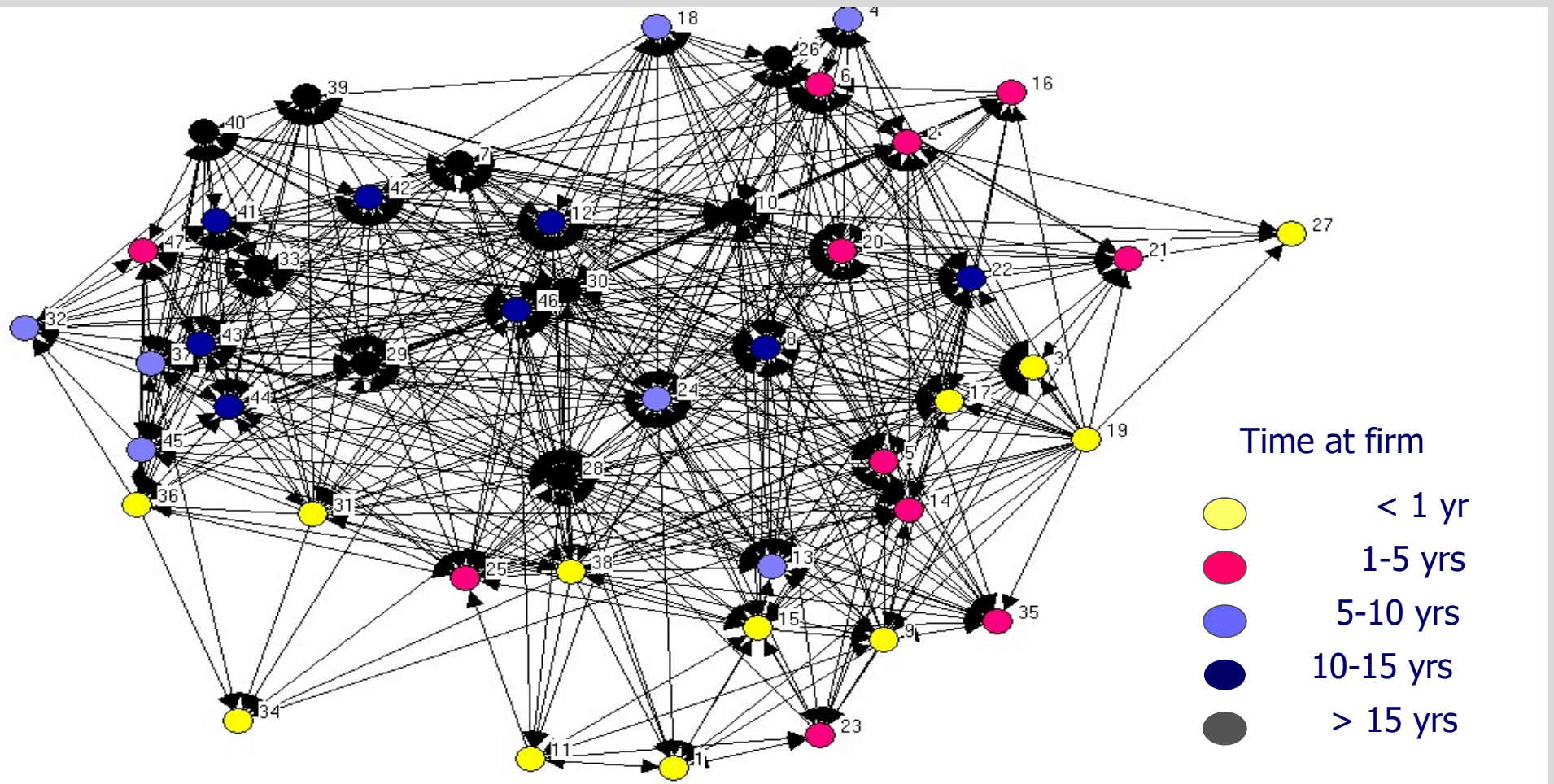


## Informal organization



Teigland et al. 2005

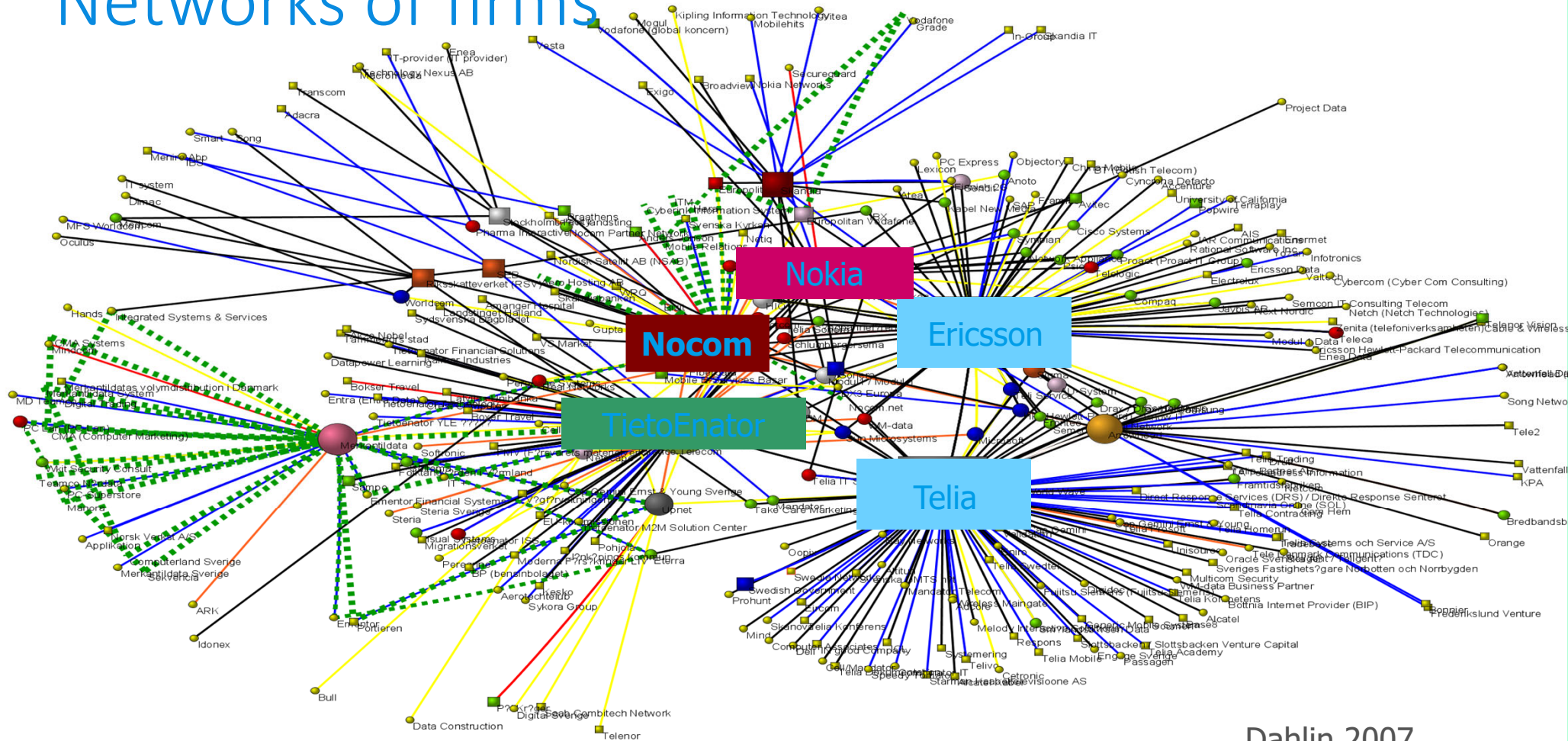
# Individuals within a firm



Mattsson 2004

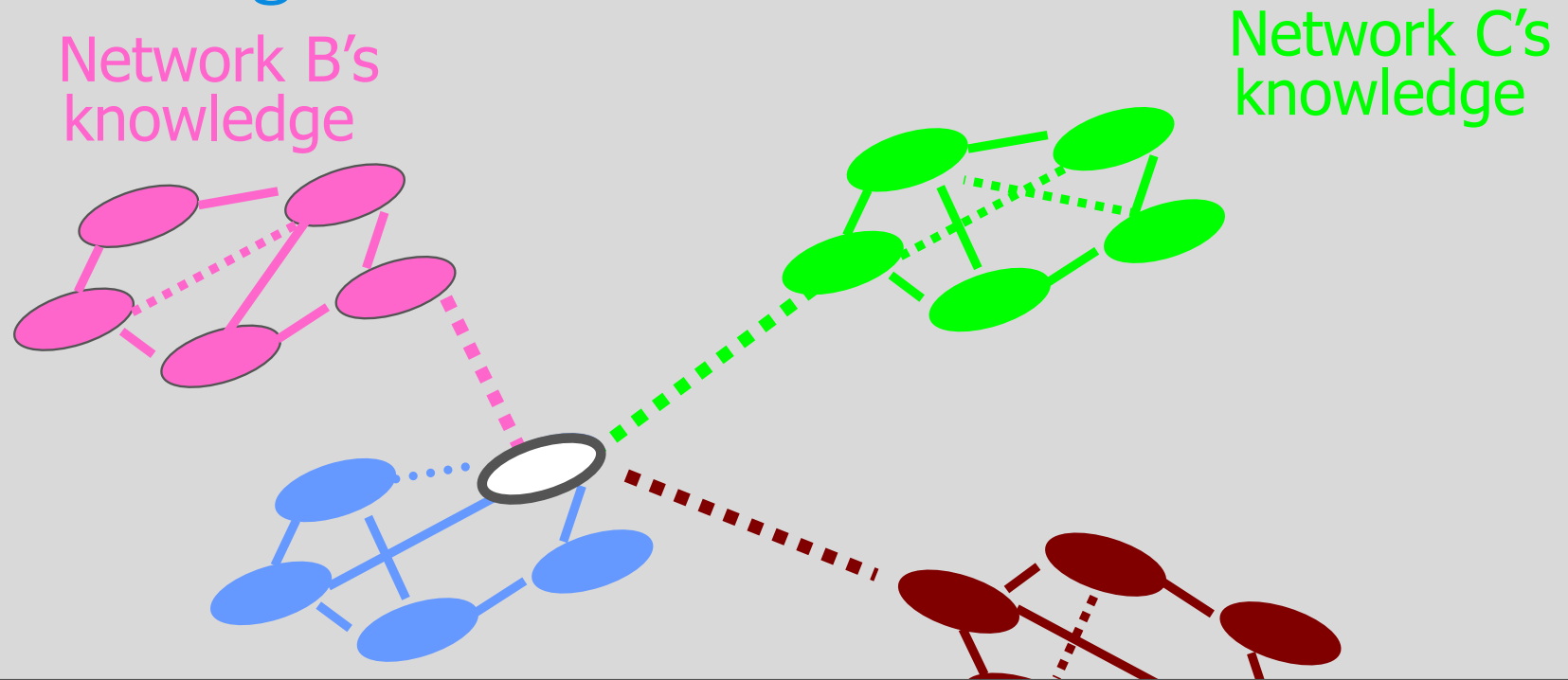


# Networks of firms



Dahlin 2007

# The strength of weak ties



It is the people with whom we are the least connected who offer us the most opportunities.

Granovetter 1973

# Personalization strategy

- *Focus:* inter-personal knowledge sharing
  - Master -apprentice relationships
  - Knowledge brokers
  - **communities of practice**
- *ICT:* Limited: Used for communication (e-mail) and reference (Yellow Pages)
- *Challenge:* transfer to the organization

*Groups of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis.'*

(Wenger, McDermott & Snyder, 2002, p.4)

## A unique combination of three fundamental elements:

*A domain* of knowledge, which defines a set of issues;

*A community* of people who care about this domain,

The shared *practice* that they are developing to be effective in their domain.

# What is a Community of Practice?

people

with similar goals and interests

who employ common practices

who work with the same tools

who use a common language

hold similar beliefs and value systems.

# Cops in relation to other groups

	<b>Communities of Practice</b>	<b>Functional units</b>	<b>Project teams</b>	<b>Informal Networks</b>
<b>Purpose</b>	Develop capability	Produce an output	Accomplish a specific task	Disseminate information
<b>Boundary</b>	Knowledge domain	Market, product or function	Assigned charter	Scope of relationships
<b>Connection</b>	Identity	Reporting relationships	Commitment to the goal	Interpersonal acquaintance
<b>Time period</b>	Enduring	Enduring	Temporary	Variable

## Summary: CoPs are groups...

- Within or between organizations  
(so no internet communities)
- Distributed work (geographical, organizational)
- Long term
- Aimed at knowledge exchange and learning  
(no production, such as project teams)
- Interest in a certain topic
- Group identity  
(so not a professional society)



# CoPs are hard to grasp

Often there are loose ties

There are many different guises

Important differences are:

- Strategic (corporate) and spontaneous CoPs
- Aimed at knowledge sharing or knowledge development
- Within or between organizations

CoPs may have many different functions

# Benefits of CoPs

Benefits for individual members:

- To solve 'ad hoc' problems
- To accumulate knowledge through presentations, discussions, etc.
- To network
- To establish social bonds within the organization

Benefits for the organization:

- To develop 'best practices'
- To reduce costs (by creating more efficiency)
- To innovate: developing new ideas

# Typology of CoPs

- Local knowledge sharing communities ( Atos):  
10 -20 members, physical proximity; intra-organizational
- Formal expert communities (Unilever)  
10 - 25 members, established by management, often inter-organizational,  
Mode of interaction: face to face and through ICT
- Informal network communities (IBM)  
20-200 members, informal, free access, very distributed,  
Mode of interaction: through ICT
- Problem solving communities  
Large amount of members (e.g. 1600 oil drillers, distributed)  
Mode of interaction: distribution list /e-mail Q&A sessions
- Latent networks (Delft Cluster)



## Chapter 4



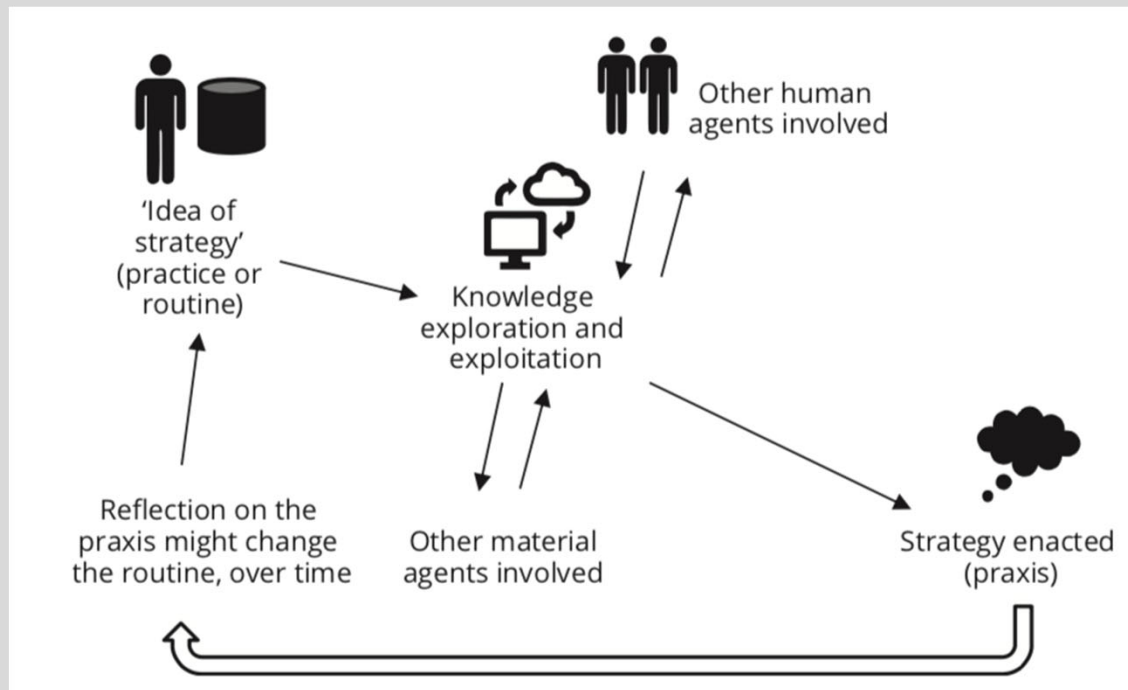
Strategy versus strategizing

## Strategy-as-practice

Strategy-as-practice is a lens for understanding strategizing. It focuses on three main areas in the practice (the 'doing' of strategy).

The three areas comprise practitioners (the people who do the strategy work); practices (the routines – social, symbolic and material – that guide the strategy work); and praxis (the flows of actual activity through which strategy is achieved).

# Practice, praxis and knowledge exploration and exploitation



## For next time

Introduciton days!

Next lecture Prepare for chapters 5,6

Check out Brightspace for assignments...

Do not forget to work on your mandatory group  
assignment

# Thank you !

The MOT 1524 Course Team

Robert Verburg, lecturer

Nikos Pachos, lecturer,

Sander Smit, moderator group assignment