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MILITARY ACADEMY

Lisbon, Portugal

Information and Knowledge Management
as Competitive Advantage Sources in Information Age

Lt. Art Sérgio Rocha



AGENDA



- Introduction
- Information and Knowledge Management
- Competitive Intelligence
- Interoperability
- Knowledge based Organizations
- Organizational Self-synchronization
- Conclusions



INTRODUCTION



Introduction

INFO and K Manag.

CI

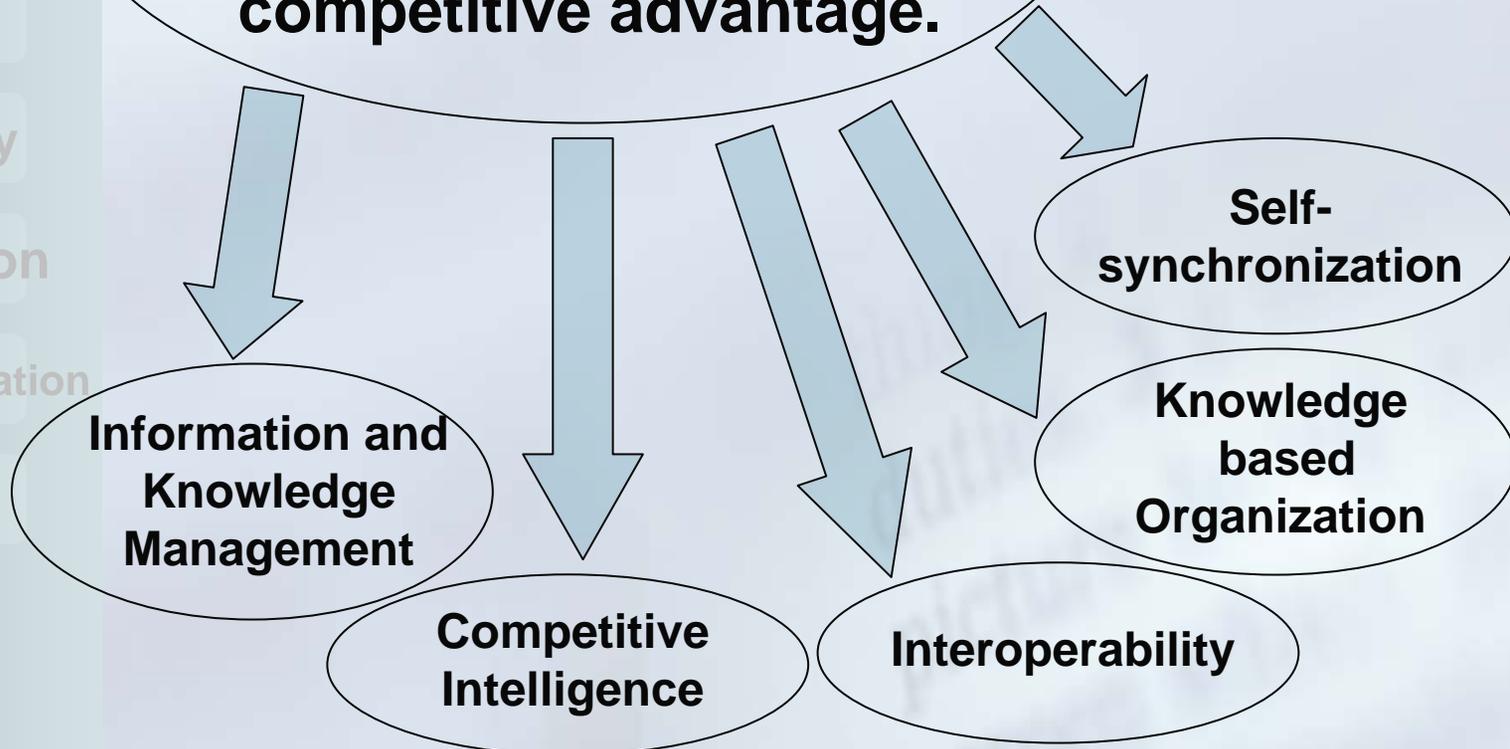
Interoperability

K Organization

Self-synchronization

Conclusions

To Identify the tools, used and created, by Organizations to generate competitive advantage.





INTRODUCTION



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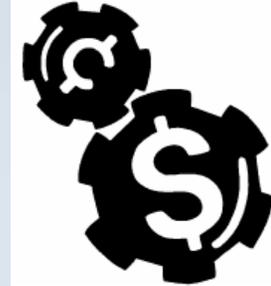
Interoperability

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Conclusions

- More competitive markets;
- Organization developed response mechanisms;
- INFO and Knowledge (K) – essential resources;
- Assessment and security processes for INFO and K;
- Surveillance and alert systems;
- Intelligence vs counterintelligence;
- Competitive advantage creation.





INFORMATION AND KNOWLEDGE MANAGEMENT



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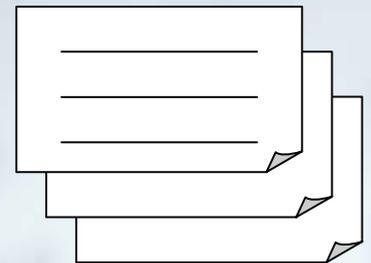
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- Large INFO volume;
- Implementation of flow representation models. Charts of:
 - Information
 - Networks and Communications
 - Technology



(Allows to detect opportunities and INFO flows bottle-necks).



INFORMATION AND KNOWLEDGE MANAGEMENT



Source INFO Actor	Destination INFO Actor	Used network resources (%)	Information type delivered	INFO Volume delivered	Observations
Chief of Staff	Force Commander General	77	Enemy Reserve Activities	50 Mb	Daily
Platoon Leader	Squad leader	98	Enemy location	1 Mb	Permanent
Platoon Sergeant	Squad leader	37	Ammunition supply	800 Kb	29SMC4368
...



INFORMATION AND KNOWLEDGE MANAGEMENT



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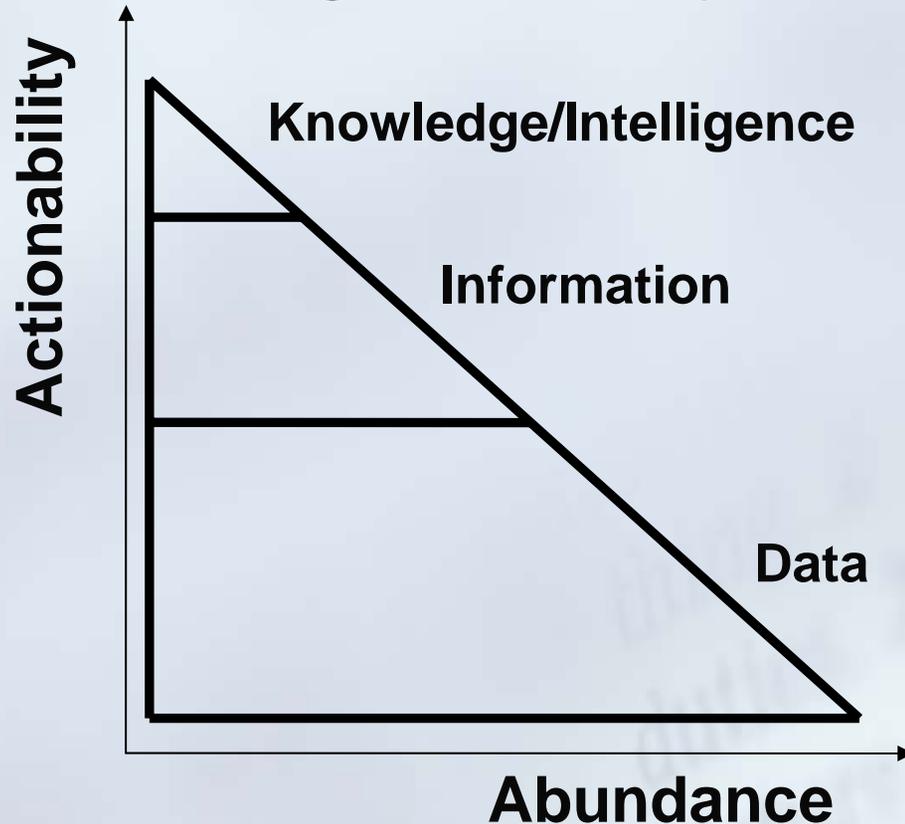
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➤ Knowledge Hierarchy Triangle



Source: Adapted from Nissen (2002, p. 253)



INFORMATION AND KNOWLEDGE MANAGEMENT



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- Increasing importance of Knowledge;
 - Trade-off ICT vs Knowledge;
 - Knowledge networks implementation – allows decision at the lowest levels (*empowerment*);
 - Stimulates collaborators inspiration;

GENERATE

NEW KNOWLEDGE



INFORMATION AND KNOWLEDGE MANAGEMENT



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K Management must allow:

- Charting Organization's K assets;
- Optimize K network;
- Access to large cooperative INFO quantities, better practices and technology.





COMPETITIVE INTELLIGENCE



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“It’s the organization’s attitude that leads it to be alert, in a continuous bases, at all levels, trying to understand and respond to signs from the surrounding fields. And respond means to decide.”

(Adapted, Taborda & Ferreira, 2002, p.12).





COMPETITIVE INTELLIGENCE



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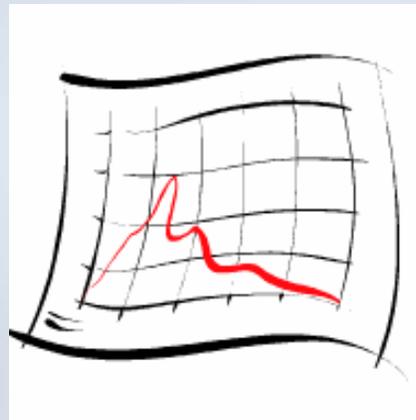
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- Assessment and alert mechanism;
- Analysis surrounding field's fluctuations;
- Analysis Competitor's behaviors;
- Supports Manager's decisions – “right timing”;





COMPETITIVE INTELLIGENCE



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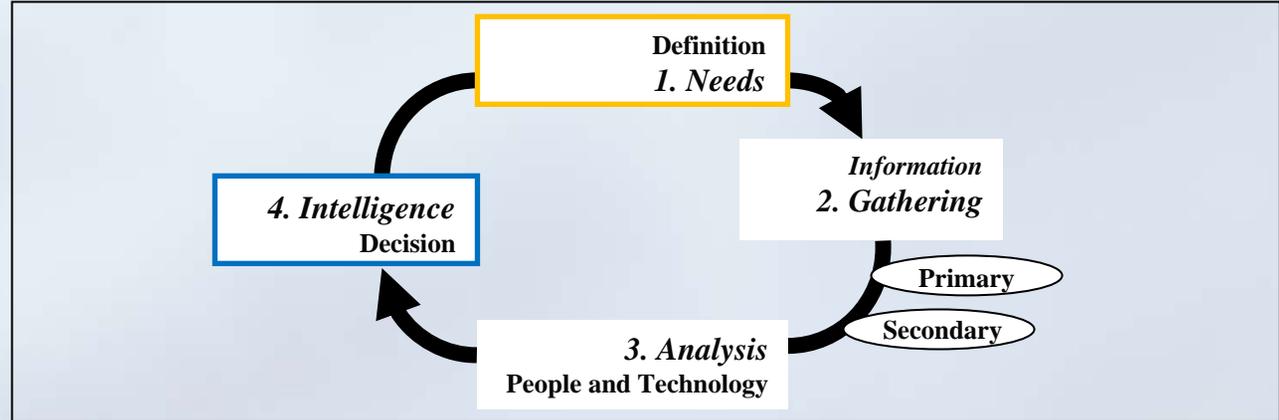
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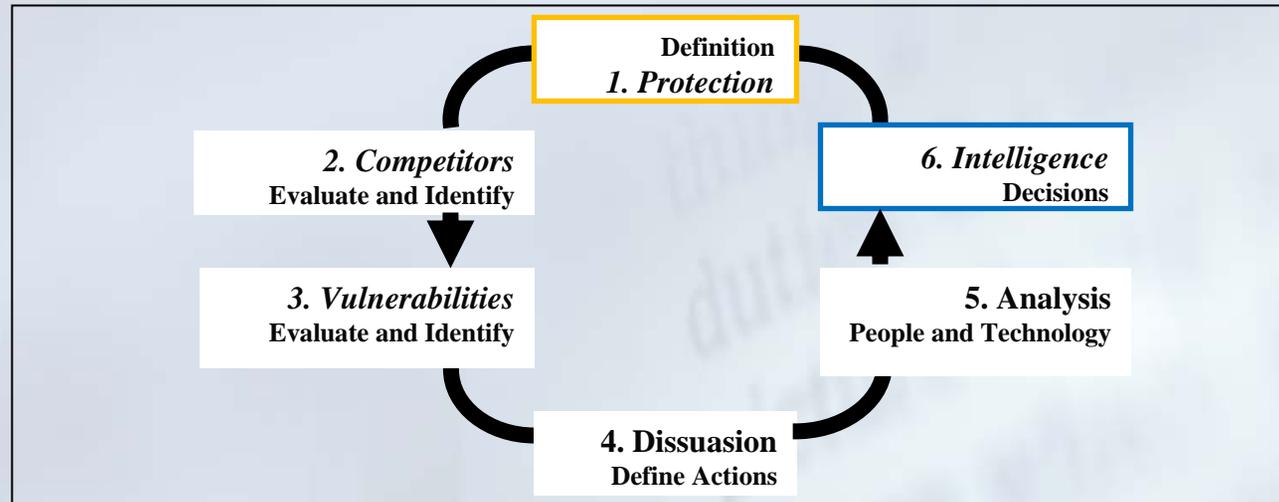
Conclusions

INTELLIGENCE CYCLE



Source: Taborda and Ferreira (2002, p.36)

COUNTERINTELLIGENCE CYCLE



Source: Taborda and Ferreira (2002, p.185)



INTEROPERABILITY



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- Situations complexity:
 - Need of information share;
 - Stimulates cooperative work.
- Build a system that:
 - Allow connection between organizations;
 - Deliver only the necessary information;
 - Allow new connections for new organizations;
 - Deliver new information – high speed.



INTEROPERABILITY



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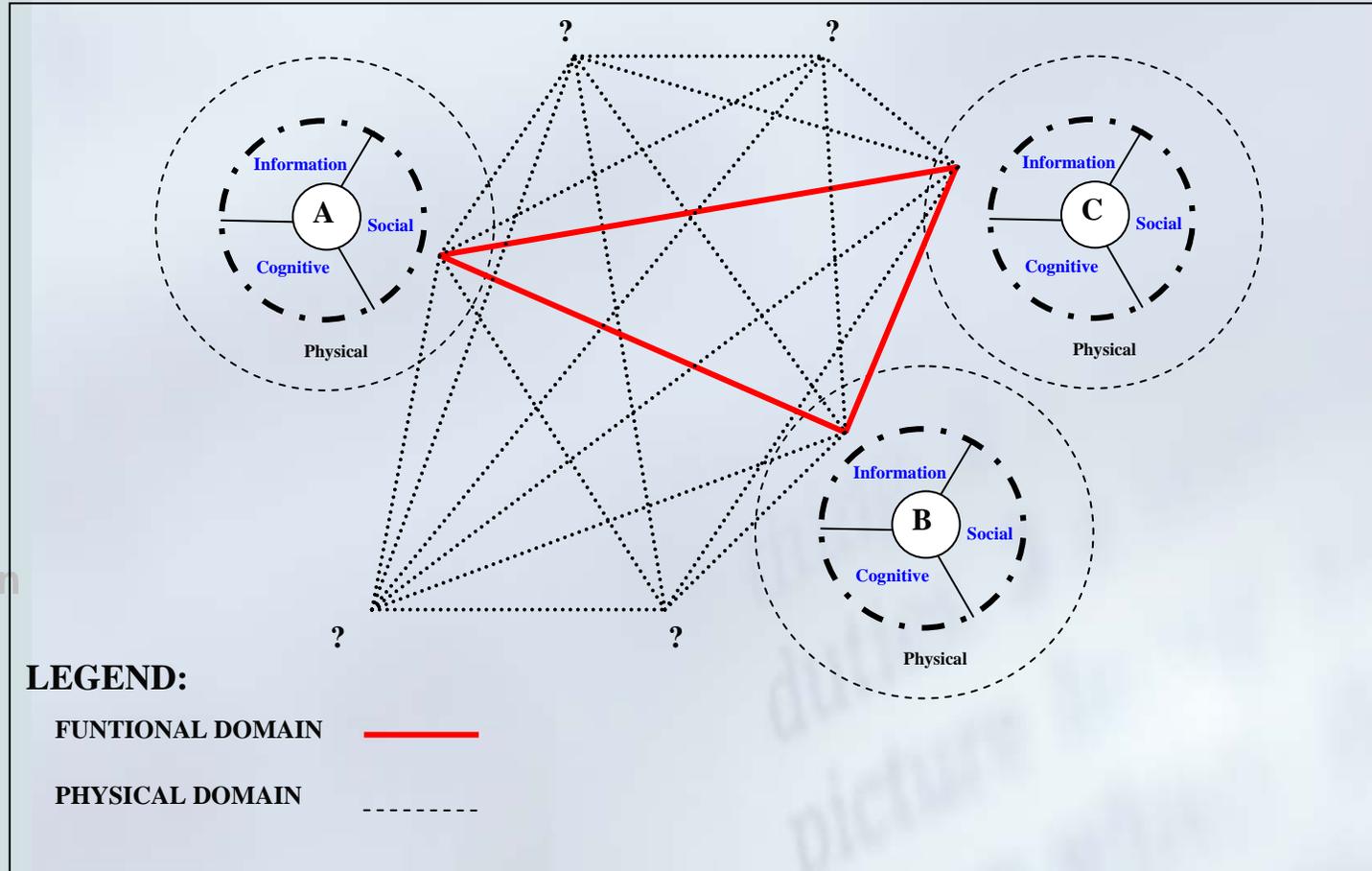
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INTEROPERABILITY



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Access all available information

- Information deliver;
- Information understanding;
- Collaboration with other Organizations.

~~INTEROPERABILITY~~

EXCLUSION



KNOWLEDGE BASED ORGANIZATION



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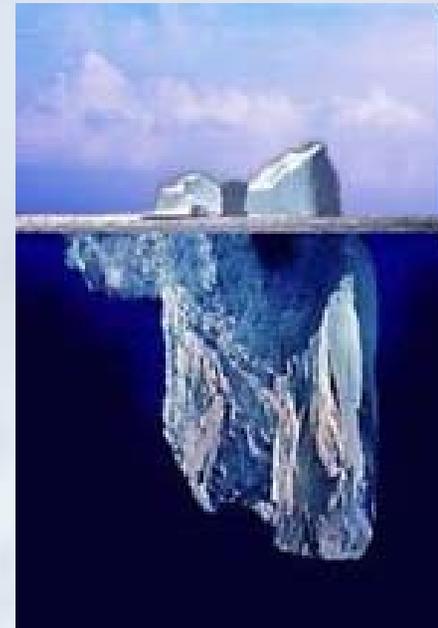
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- Optimizes human resources;
- Converts knowledge in organizational capital;
- Iceberg model:
 - K / Organization's structure



DEVELOPMENT = INOVATION X TECHNOLOGY X KNOWLEDGE



KNOWLEDGE BASED ORGANIZATIONS



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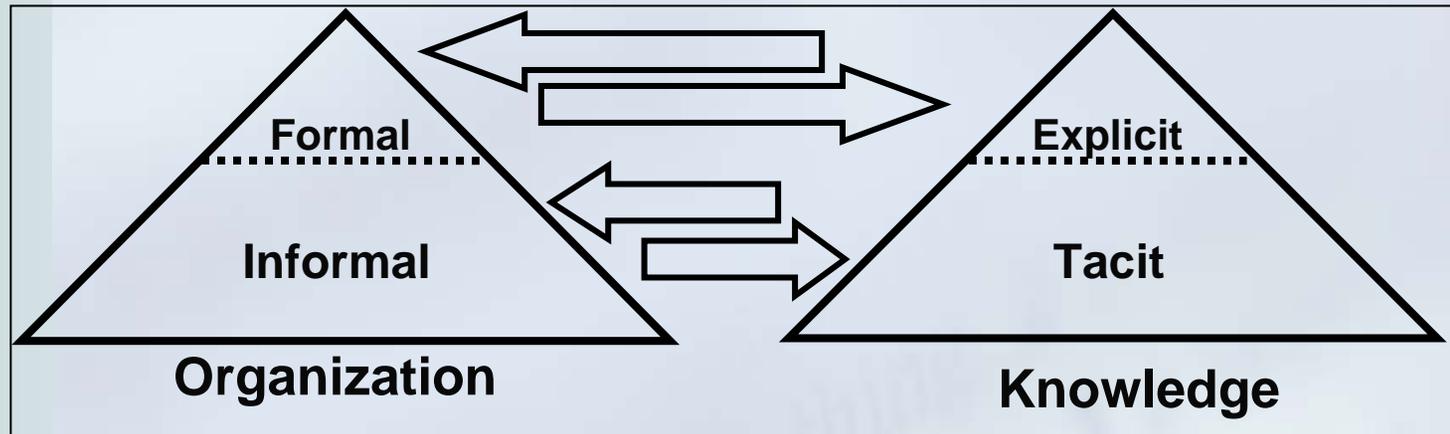
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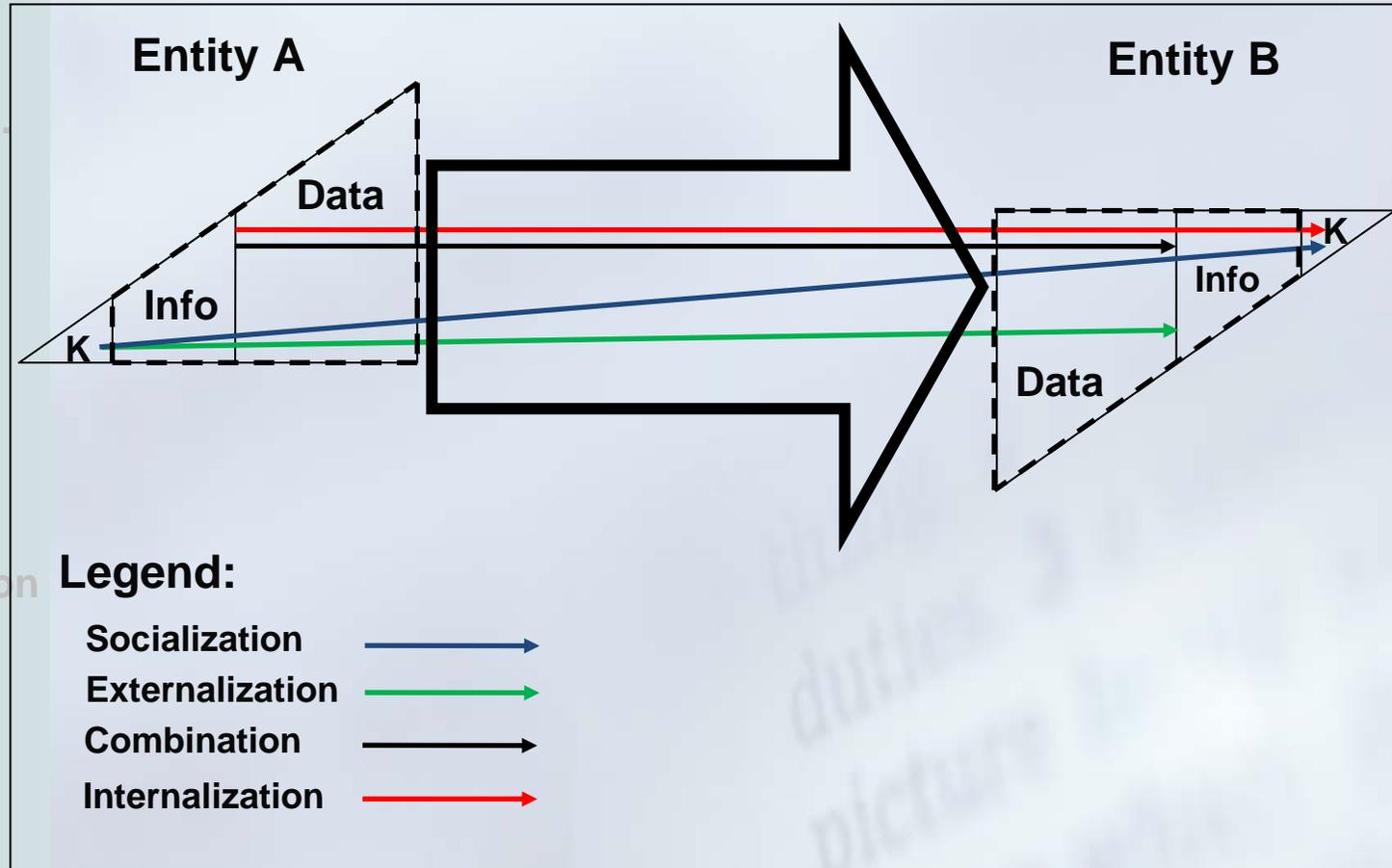
Source: Adapted from Sousa et al. (2000, p. 12)



KNOWLEDGE BASED ORGANIZATIONS



Knowledge Flow and Directionality



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KNOWLEDGE BASED ORGANIZATIONS



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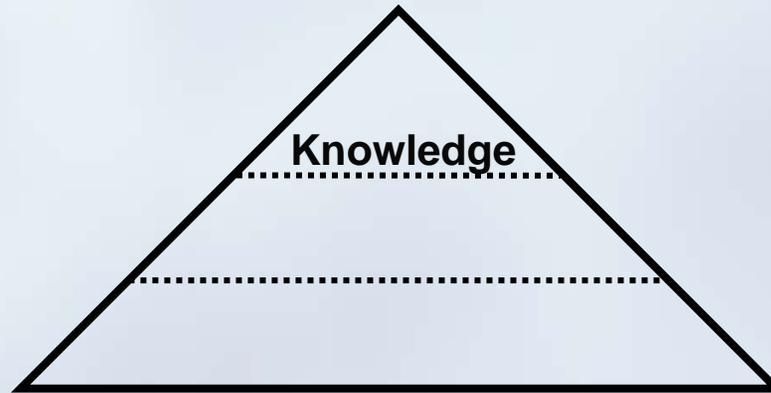
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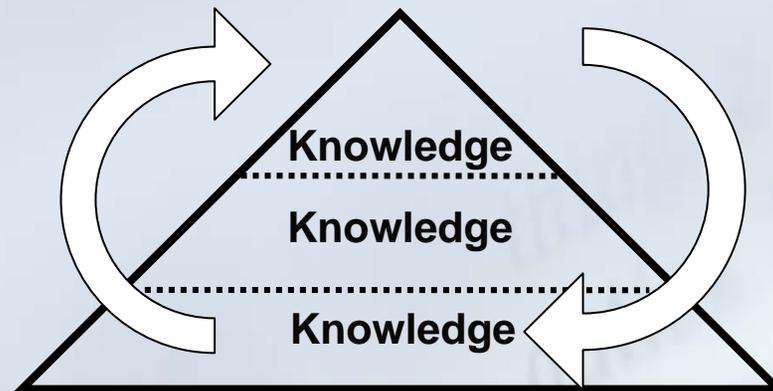
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Knowledge centred organization



Knowledge based organization

Source: Adapted from Sousa et al. (2000, p. 15)



KNOWLEDGE BASED ORGANIZATIONS



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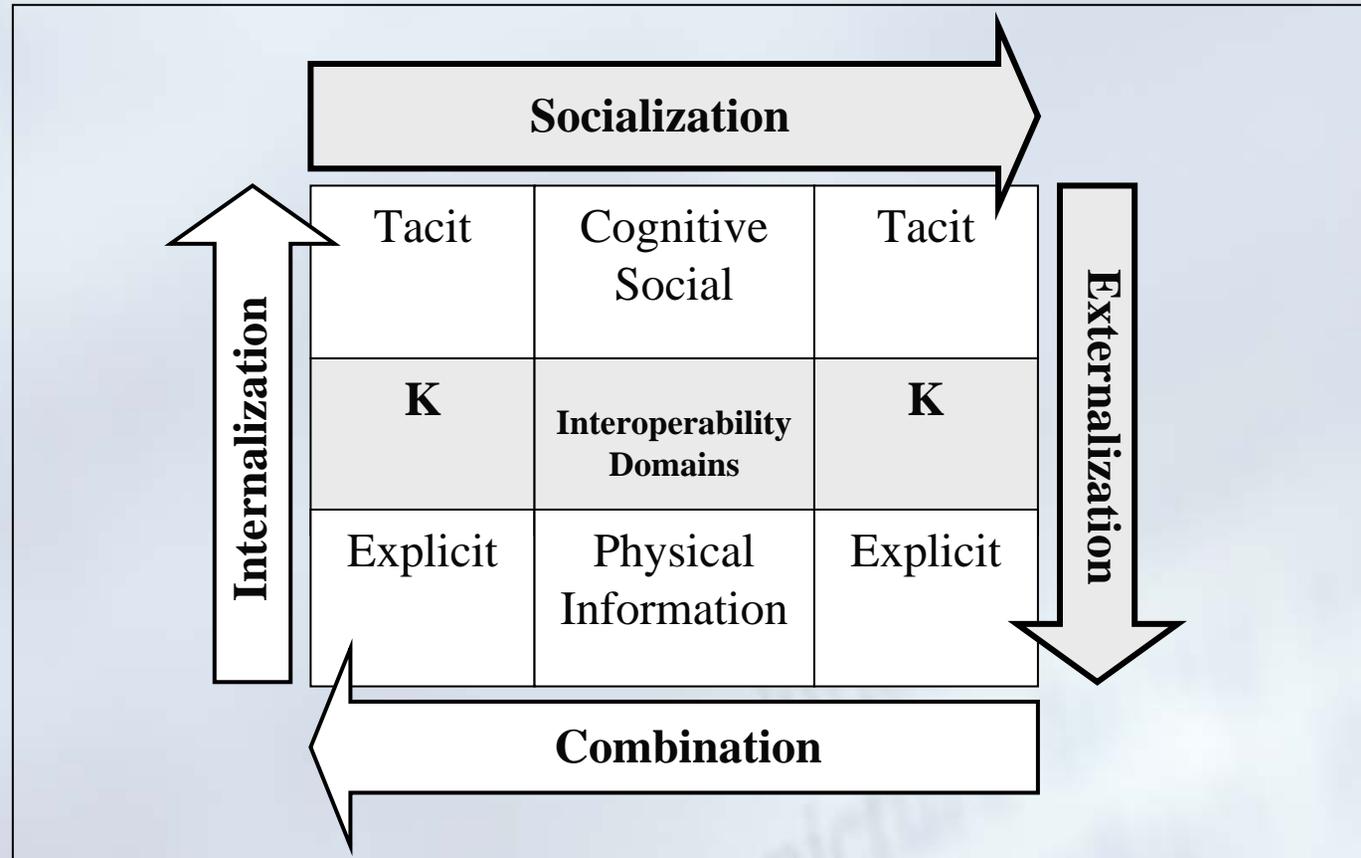
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SELF-SYNCHRONIZATION



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SYNCHRONIZATION

- Develop work in the right timing;
- Adjust production to suppliers, retailers and distributors rhythms;
- Adjusted reply of all organization's internal agencies;
- Adjusted reply of all organizations from the same group;

- Joint situation awareness;
- Individual decision capability, according to organization's strategy.

SELF-SINCHRONIZATION



CONCLUSIONS



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Conclusions

➤ Intelligence and Knowledge Management:

- Generates a propitious environment for new knowledge production;

➤ Competitive intelligence:



- Tries to anticipate eventual surrounding's problems.



➤ Interoperability:

- Better connectivity;
- Cooperative work.





CONCLUSIONS



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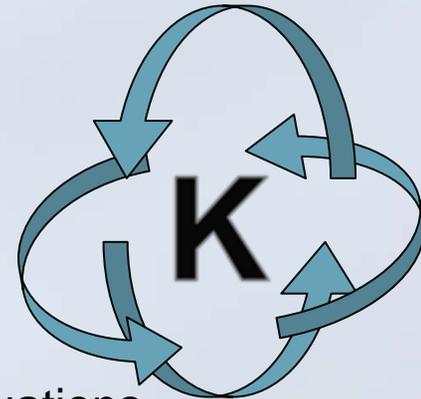
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Conclusions

- Knowledge based Organization:
 - Interoperability enabled capabilities;
- Self-synchronization:
 - Fast restructuring according to new situations.



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