



E&DS and KM

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Agenda

- ▶ Major E&DS Scenarios
- ▶ Unifying key problems
- ▶ Being prepared and ready
- ▶ KM
- ▶ OODA thinking
- ▶ Discussion
- ▶ Conclusions



Types of E&DS



natural vs man made



▶ Titanic:

§ Over confidence – not enough life boats

§ Pressure to succeed – travelling too fast

§ Belief disaster was impossible – unsinkable ship

§ Confusion & chaos

▶ Tsunami Dec 2004:

§ Over confidence

§ Belief disaster was impossible

§ Confusion & chaos

Prepared vs Ready

- ▶ Contempt for the opposition prevents *objective assessment* of its strengths and weaknesses
- ▶ Disregard of pertinent information prevents generation of knowledge that is pertinent to the interaction(s)
- ▶ Pertinent information is not equal to pertinent knowledge since pertinent information represents merely aggregation of structured data, grouped into readily perceived, understood, and coherent categories.
- ▶ *Pertinent (germane) knowledge* represents, on the other hand, the ability to use information as the essential tool in the interaction with- and the response to the competitor's moves.

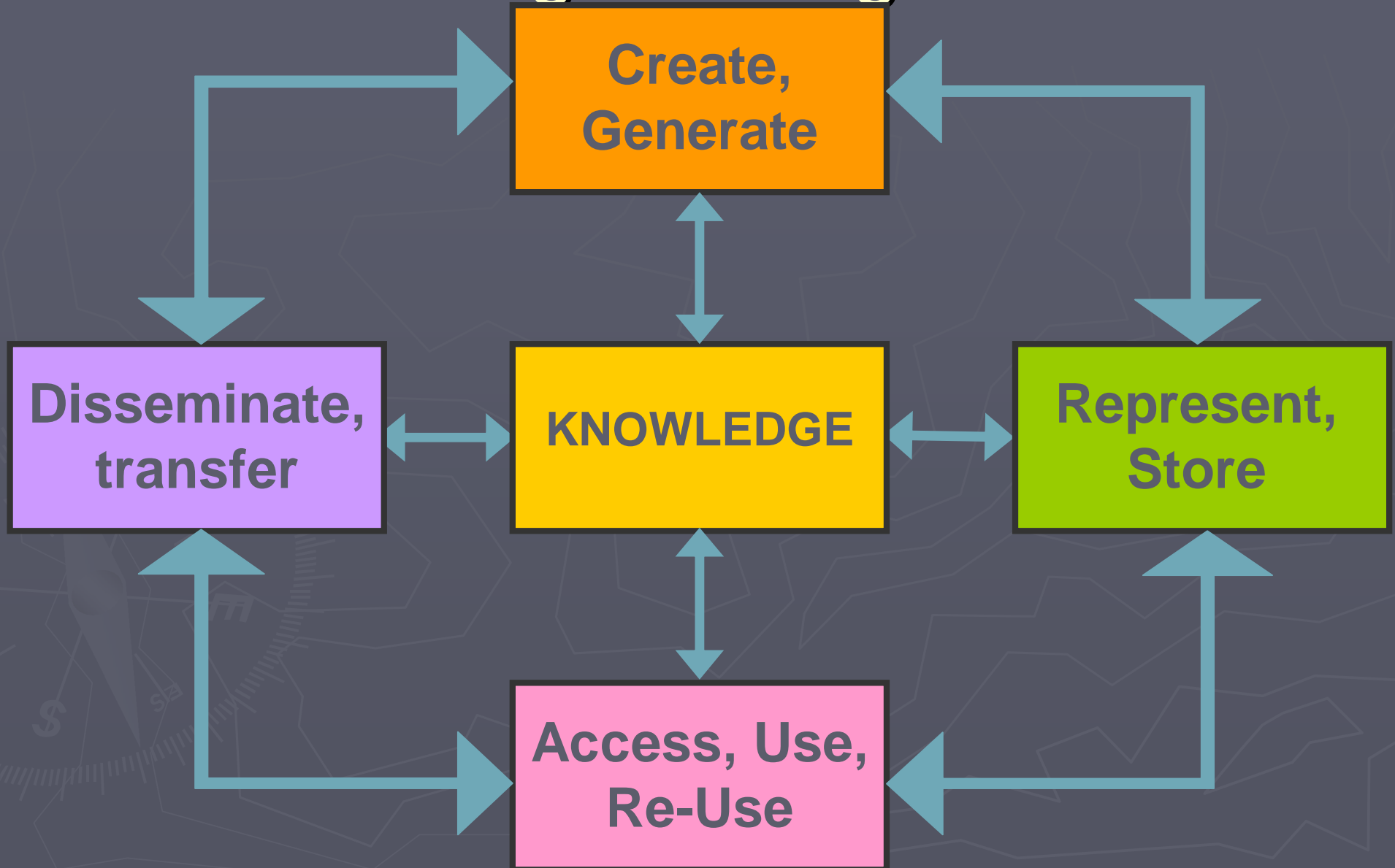
- ▶ Preparedness is not the equivalent of readiness
- ▶ preparedness is defined as *the availability (prepositioning) of all resources, both human and physical, necessary for the management of, or the consequences of, a specific crisis event or event complex.*
- ▶ readiness is defined as *instantaneous ability to respond to a suddenly arising major crisis (e.g. sudden slow-down in the manufacturing supply chain) based on the instantaneously available human and materiel countermeasure resources that may or may not be prepositioned for crisis-related mobilization.*

Models of knowledge creation

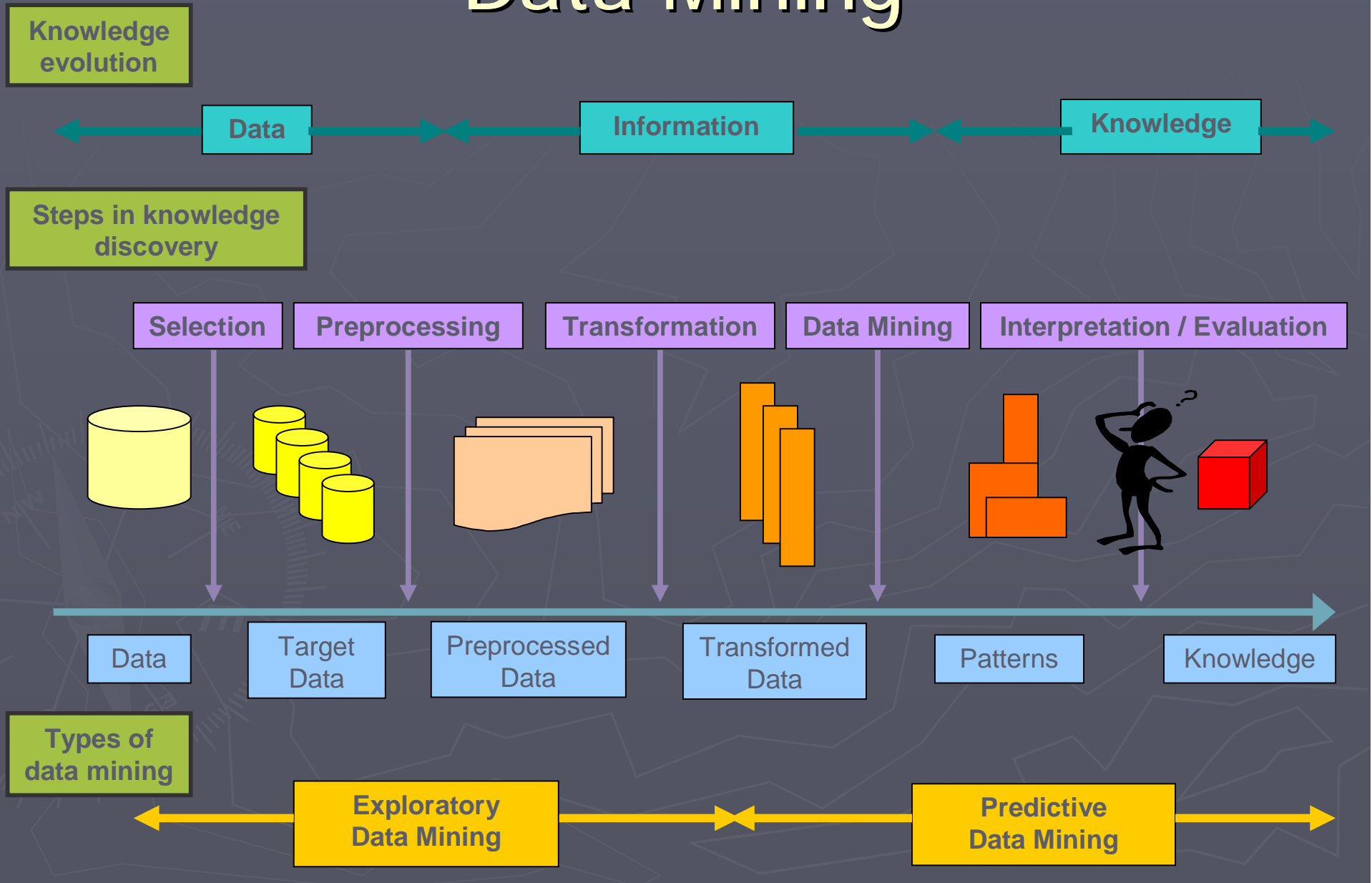
- ▶ Technology centric
- ▶ People centric
- ▶ Socio-technical
- ▶ Process centric



Knowledge Management

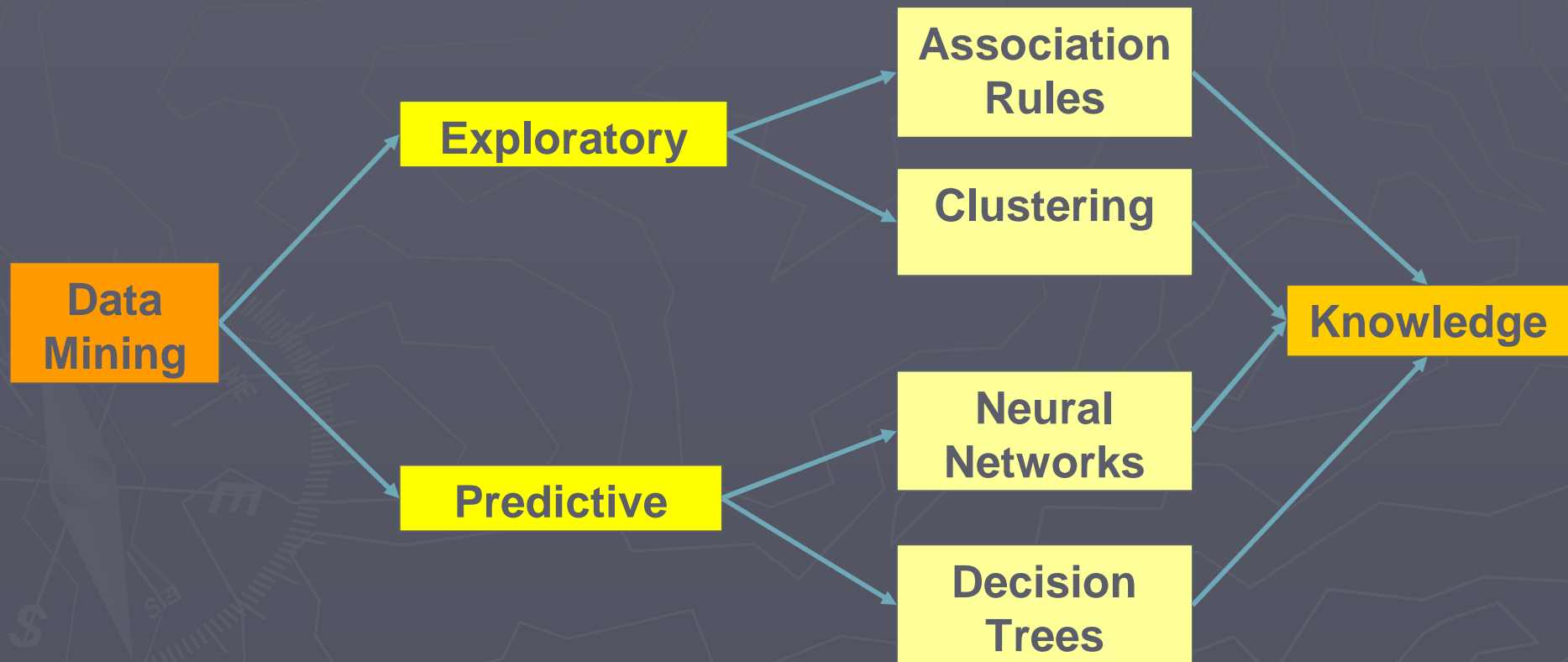


Data Mining



Why / How KM/DM

► Not why.....but why not!



DM and the K Spiral

KNOWLEDGE



TACIT



EXPLICIT



TACIT



Socialization



Externalization

Association Rules

Classification

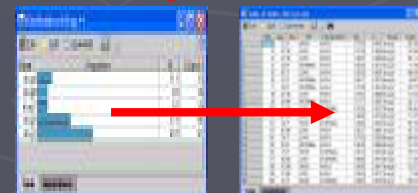
Data Mining

Prediction



Internalization

Clustering



Combination

EXPLICIT



Knowledge Spiral Actualized

EXPLICIT

Patient ID	Drug
1	D1,D2
2	D3,D4,D5
3	D3,D1,D5
4	D5,
5	D3,D1 D5, D2

EXPLICIT

- D1 is administered to 60% of the patients.
- D1 and D2 are administered together to 40% of the patients.
- D2 is administered to 67% of the patients who are given drug D1.

Information Processing

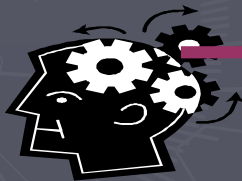
EXPLICIT

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TACIT



TACIT



Sense Making

EXPLICIT

If a patient's age is ≤ 40 years and the patient had a heart attack and D1 is administered to the patient, then D2 should also be administered to that patient.

TACIT



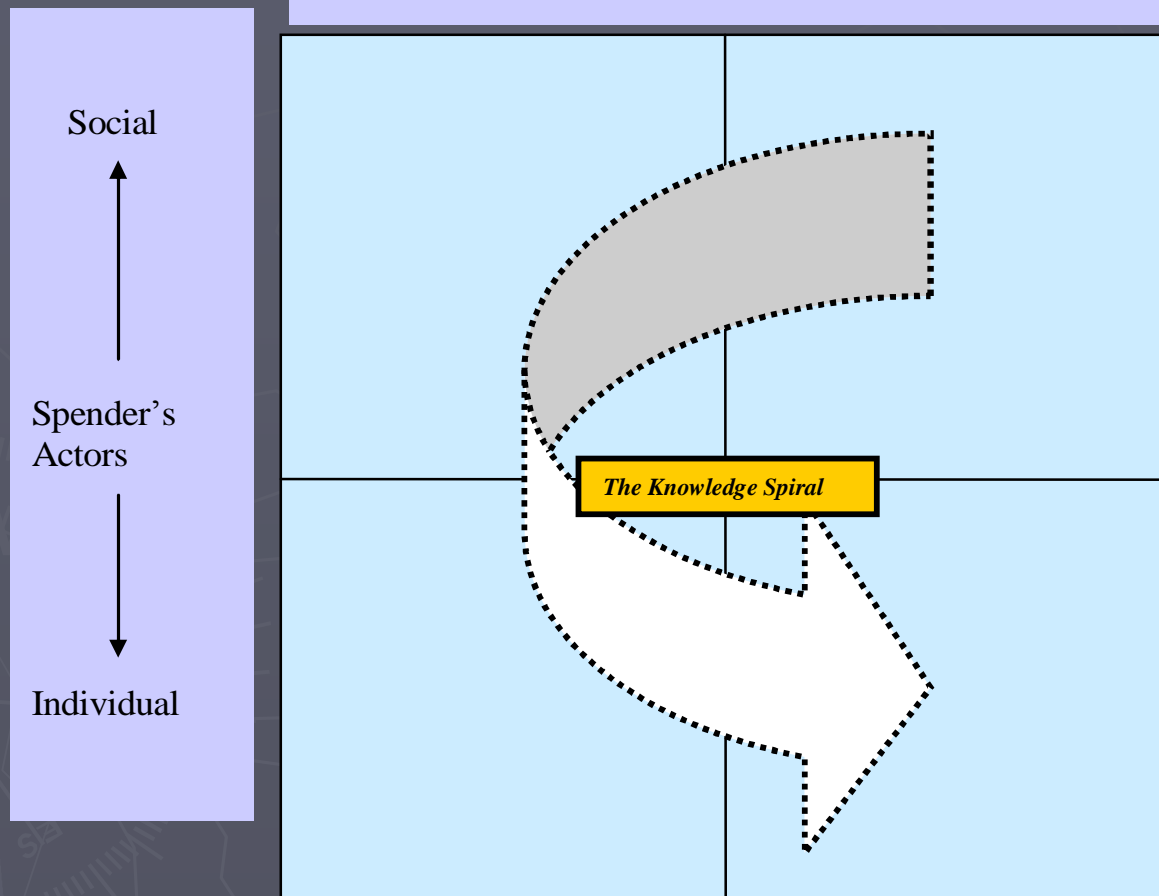
TACIT



The Knowledge Spiral

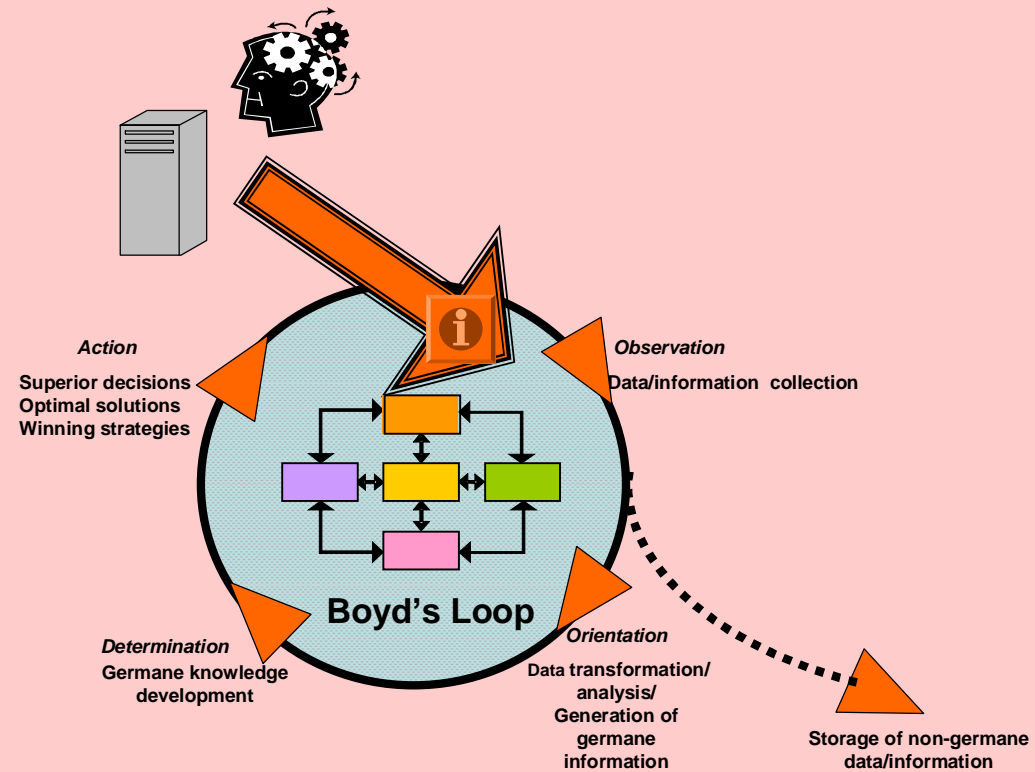
The Knowledge Continuum

Explicit → other K Types (embodied, encultured, embedded) → Tacit/Implicit/Embrained

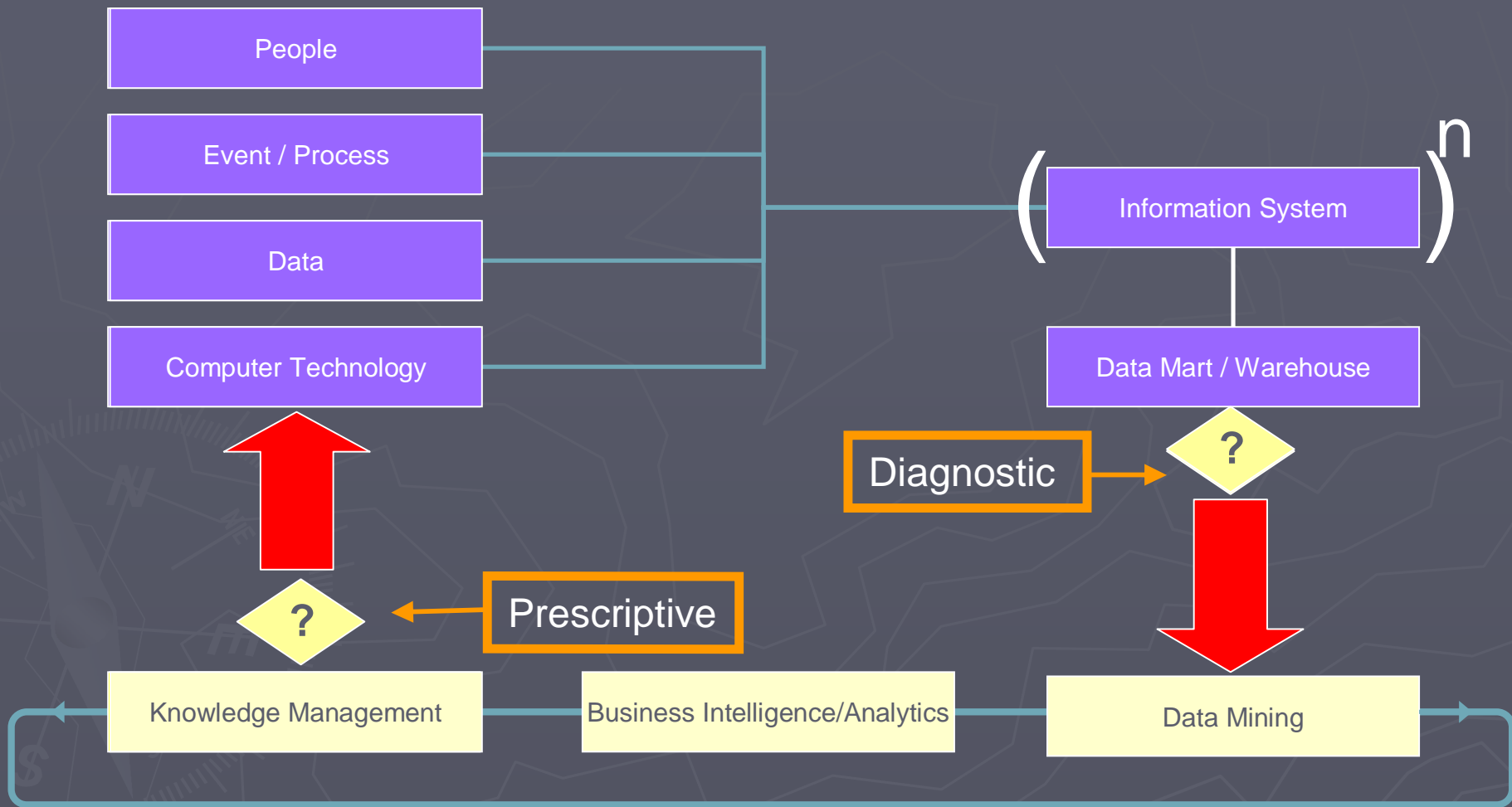


Process centric

Process-centric Perspective to Knowledge Creation



The Intelligence Continuum



Impact of the Intelligence Continuum

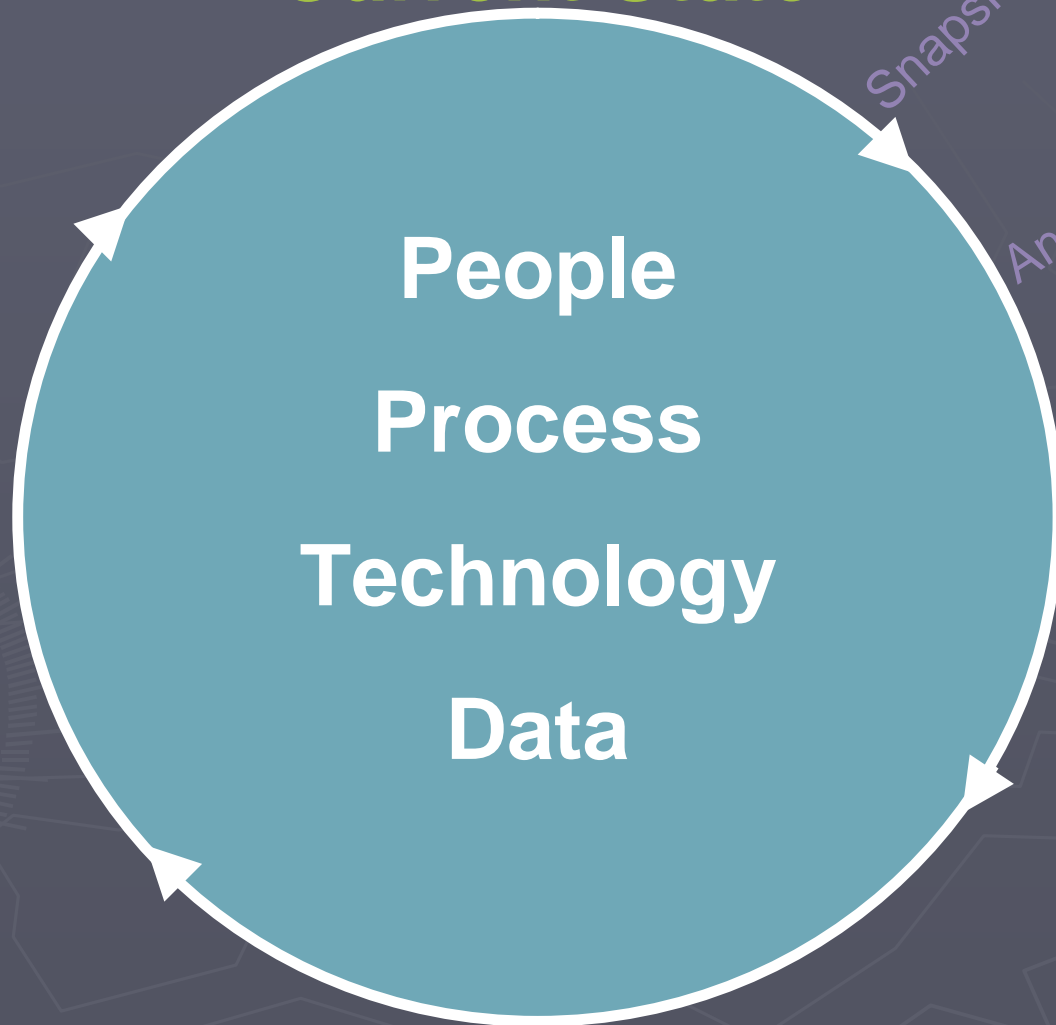
Current State

Snapshot

Analysis

Future State

Diagnostic Evaluation



Prescriptive Evaluation

Discussion

- ▶ Sound emergency management requires the ability to (Alexander, 2004;2002; Marincioni, 2001) :-
- ▶ Focus on solvable problems
- ▶ Prioritise the elements of a problem in terms of how much progress can be achieved with each element in a small amount of time
- ▶ delegate responsibility
- ▶ Manage the “span of control”
- ▶ Communicate clearly and rationally
- ▶ Keep a level head in a crisis
- ▶ Make sound decisions

conclusion

- ▶ Need to be both prepared and ready to face E&DS whether man made or natural

Questions?

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