

DEVELOPING A STANDARD METHODOLOGY FOR DYNAMIC NAVIGATION IN THE LITTORAL ENVIRONMENT

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PRESENTATION

Presentation

Research collaboration

Defining the issue

navigation

driving

Chronological development

DYNAV methodology

Phases, Standard instructions & error trapping

Situation assessment process

Decision making & planning

Conclusions

Further development



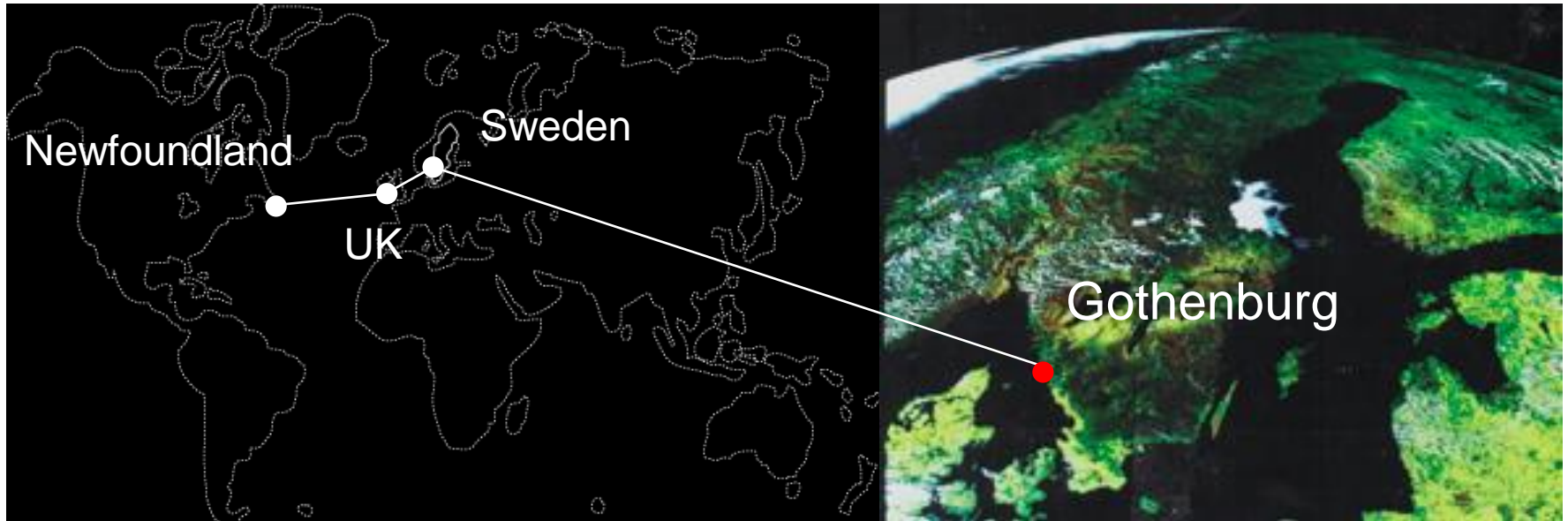
Research collaboration

Chalmers University of Technology

SSRS

Memorial University of Newfoundland

STRResearch



Defining the issue

Crew tasks/workload - navigation

Challenging situation – resilience?

- Increased speed is an increased challenge
- Time shortage
- Reduced display effectiveness due to WBV
- Lack of local knowledge
- Demanding tasks - shouts

- Reduce speed or negotiate safety

Defining the issue

Crew tasks/workload - driving

Challenging situation – resilience?

- Speed and responsibility
- accentuated need for a dedicated driver
- Understanding of other vessels

Chronological development

Swedish Amphibious Corp

- Hard shell strategy to movability
- Slow boats old school navigation to more adopted methodology.
- Need of a methodology to fit the purpose and new constraints



Chronological development



Chronological development

Swedish Sea Rescue Society

- Slow steel fishing boats type to GRP water jet propelled high speed crafts.
- Changed recruitment base



Chronological development

Swedish Maritime Authority

- Number of serious accidents
- Looked at the Amph. Corps.
- Legislated a 40 hours training – TNA?



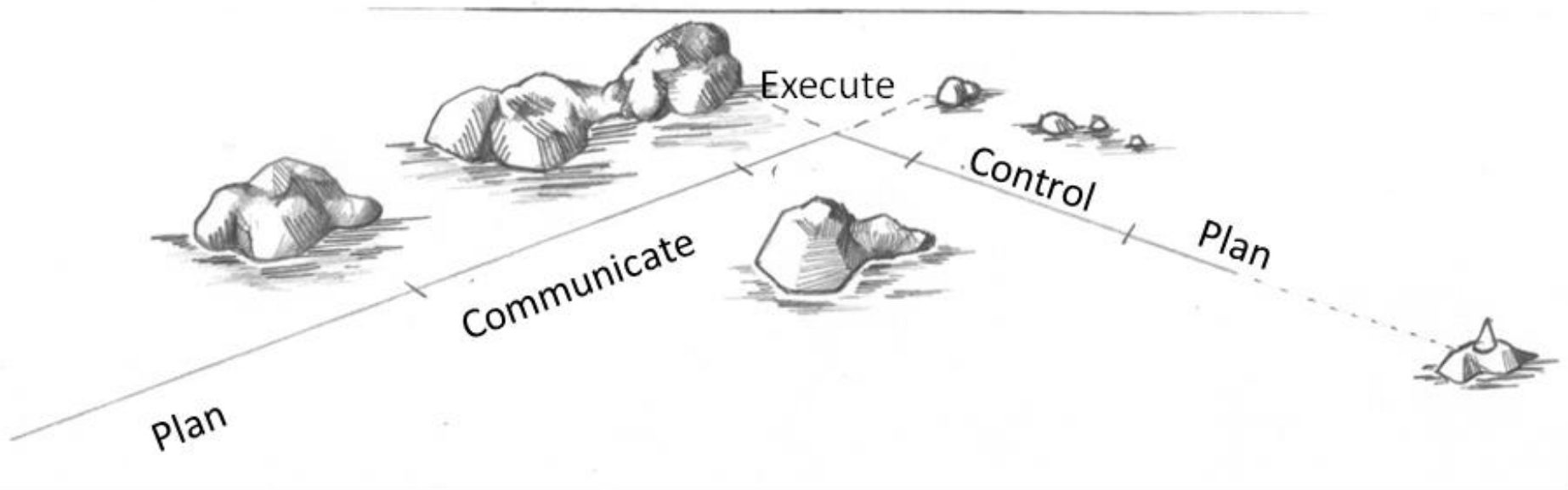
Basic methodology

The foundation

1. Working phases
2. Set of standard instructions
3. Positioning & navigation techniques

DYNAV methodology

The Phases



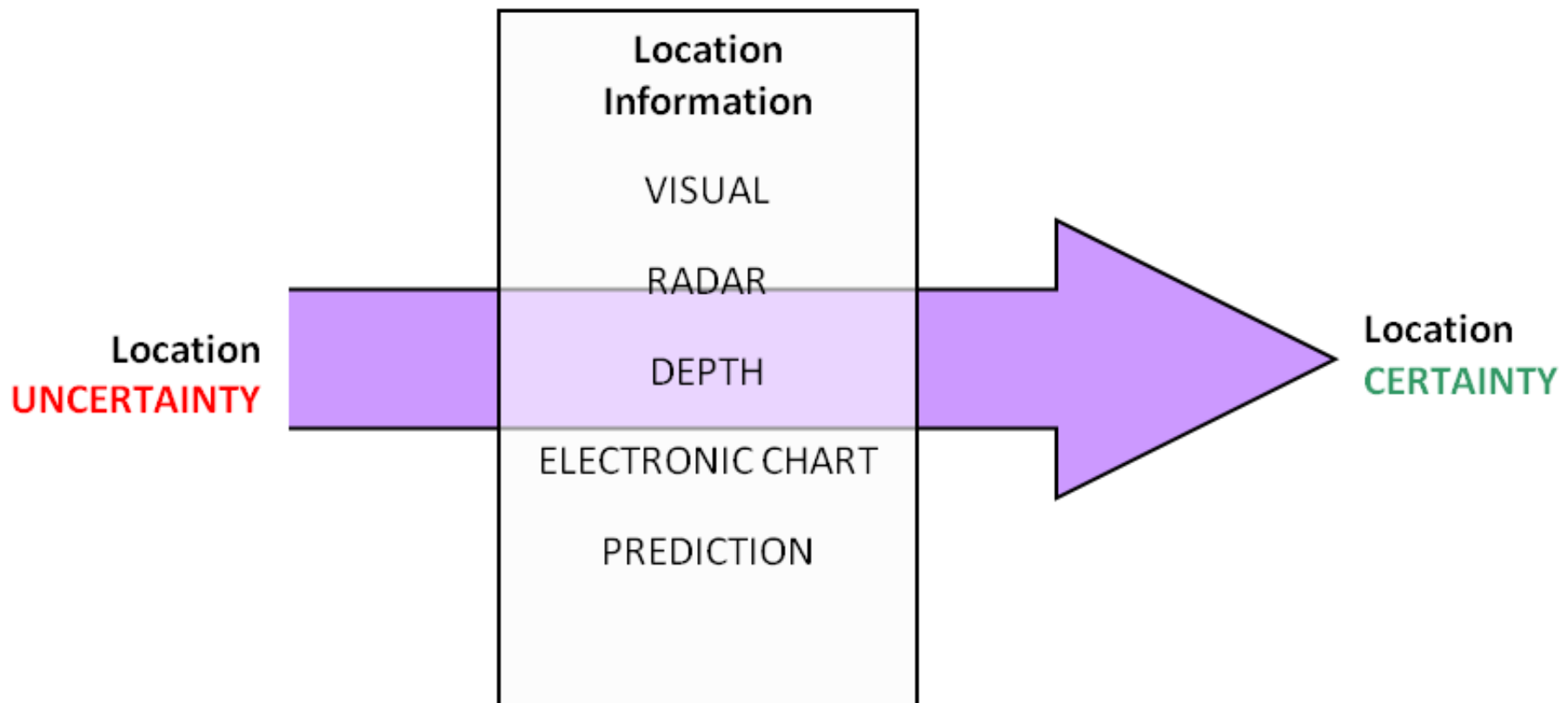
DYNAV methodology

Standard instructions

- General briefing about the situation
- In what direction next turn will be (port or starboard)
- What the next steering mark will be.
- On what information cues the turn shall be executed
- Where there are dangers.
- The next course and how to control the outcome of the turn.

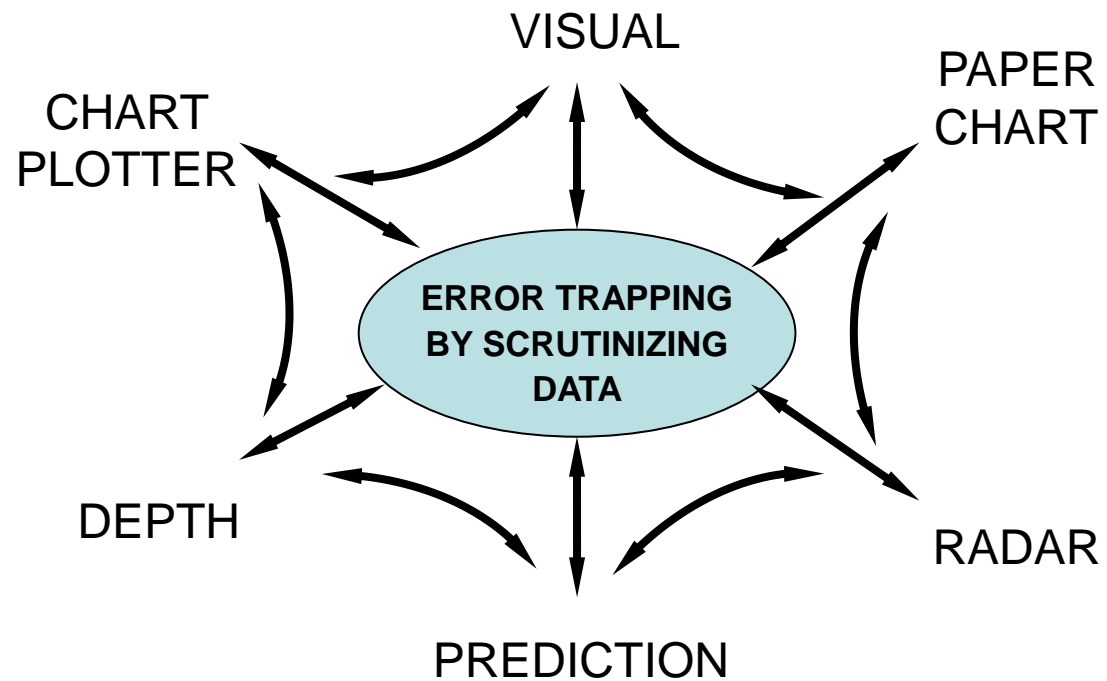
DYNAV methodology

The situation assessment process



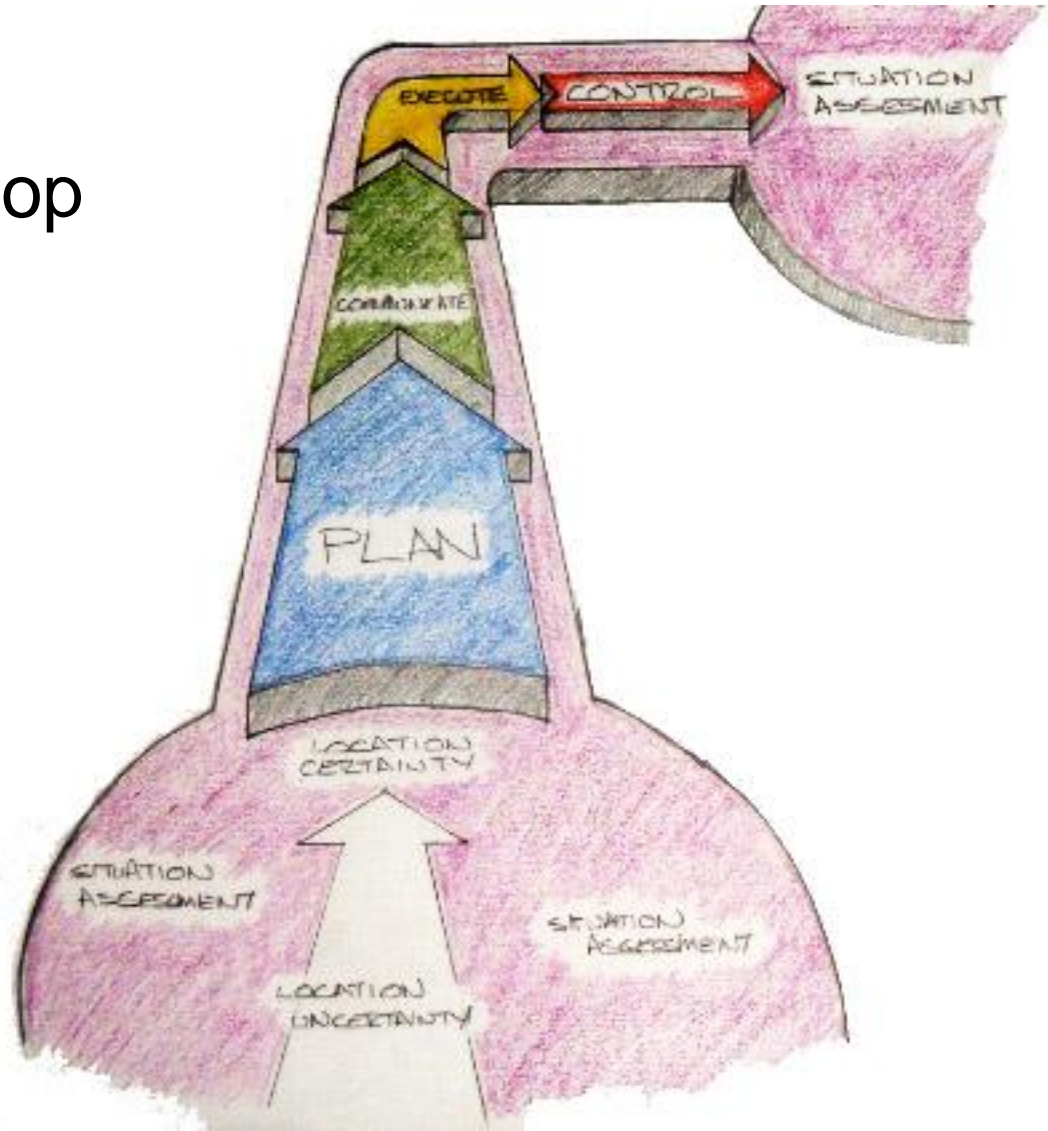
DYNAV methodology

Error trapping



Decision making and planning

Operational planning loop
Tactical planning loop



Does today's navigation aids provide appropriate assistance to the crew?



Conclusions

- DYNAV Designed to increase safety and ability.
- It is designed to be fairly simple and has both a rigid core and possibilities for local or contextual adaption.

Continuing development

- The DYNNAV methodology as such need to be further developed by scientific research.
- What are the implications of new technology ?
- Need for understanding the Situation Assessment process and how it supports decision making in order to continue the development as such and the display development.

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