The Planning Under Time pressure model - presentation

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Report Documentation Page

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Disposition

1. The current status off the Planning Under Time-pressure (PUT) model.
2. Why invent a new military planning model?
3. Background to the PUT model.
4. Presentation of the basic PUT model.
5. Presentation of the Quick PUT.
6. Differences between PUT and traditional models.
7. Some results from testing with PUT.
8. Conclusions for military planning and decision making.

Current status of the PUT-model

- **The PUT model is a new military, tactical level, decision making (or mission planning) model.**
- **The PUT model was developed by Thunholm, at the Swedish National Defence College, within the framework of the Swedish Supreme Commander's Program for Doctoral Studies.**
- **The model has been tested both in scientifically controlled studies and in training and field evaluations since 2000.**
- **Will be the base of a new unified armed forces tactical planning model and is currently adapted for use in integrated/parallel planning within the framework of the Swedish NBD C2 Development project.**
- **Is the only tactical model trained and used at the NDC for navy and army officers.**
- **"Locally" adapted to Mechanized units, SF, and Anti-Aircraft force.**

Why invent a new planning model?

- Several studies indicate that traditional military decision making models are seldom followed in real time planning situations!
- Reasons for this are that traditional models are seen as too time-consuming and prescribe unnecessary steps, not adding any substantial value to the process.
- This leaves the military without a useful tool for planning and decision making!
- Thus, the problem was not low military decision quality, but the problem was that traditional models are not much used outside military schools.

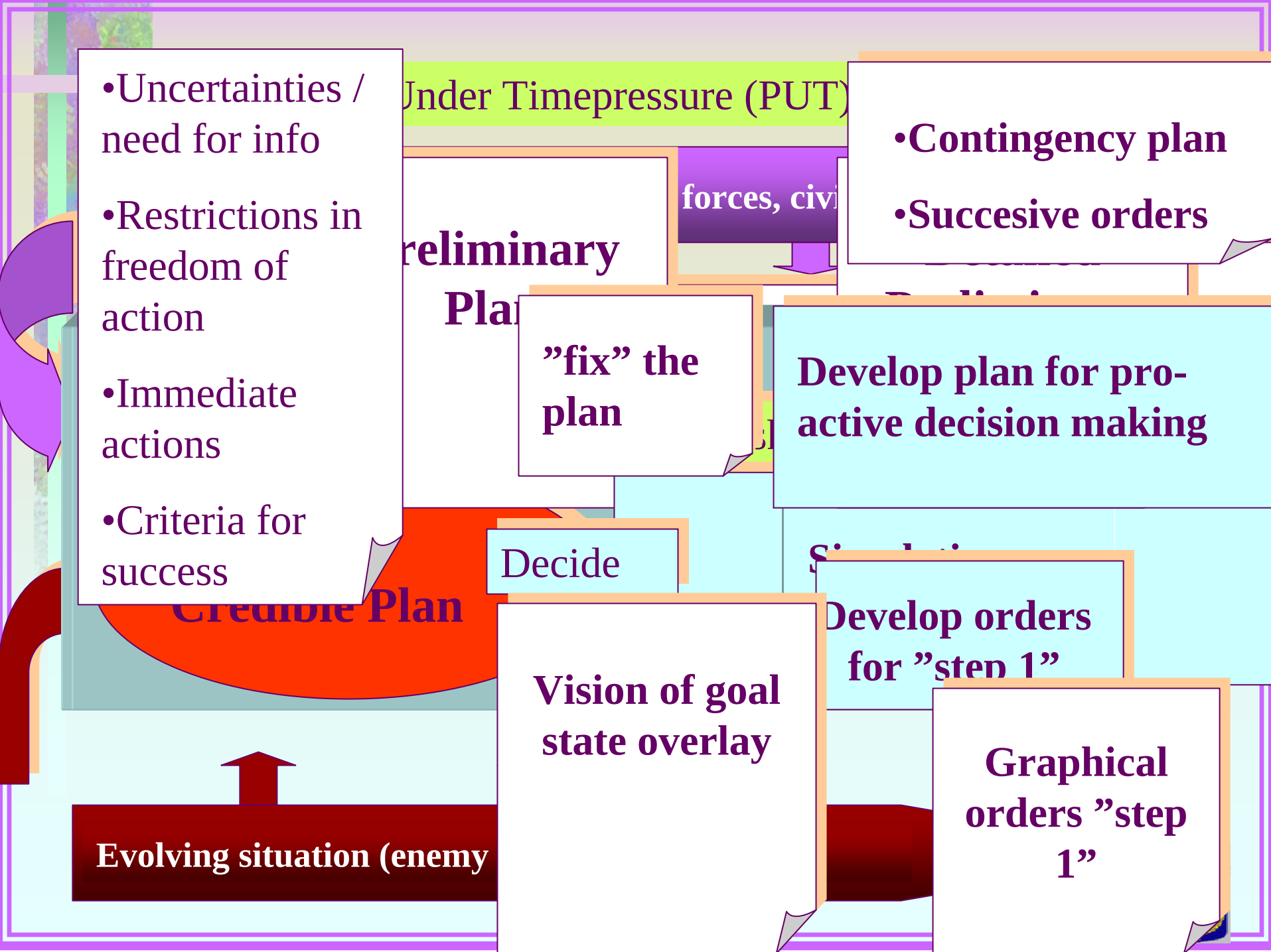
Background to the PUT model

PUT is based in three different areas:

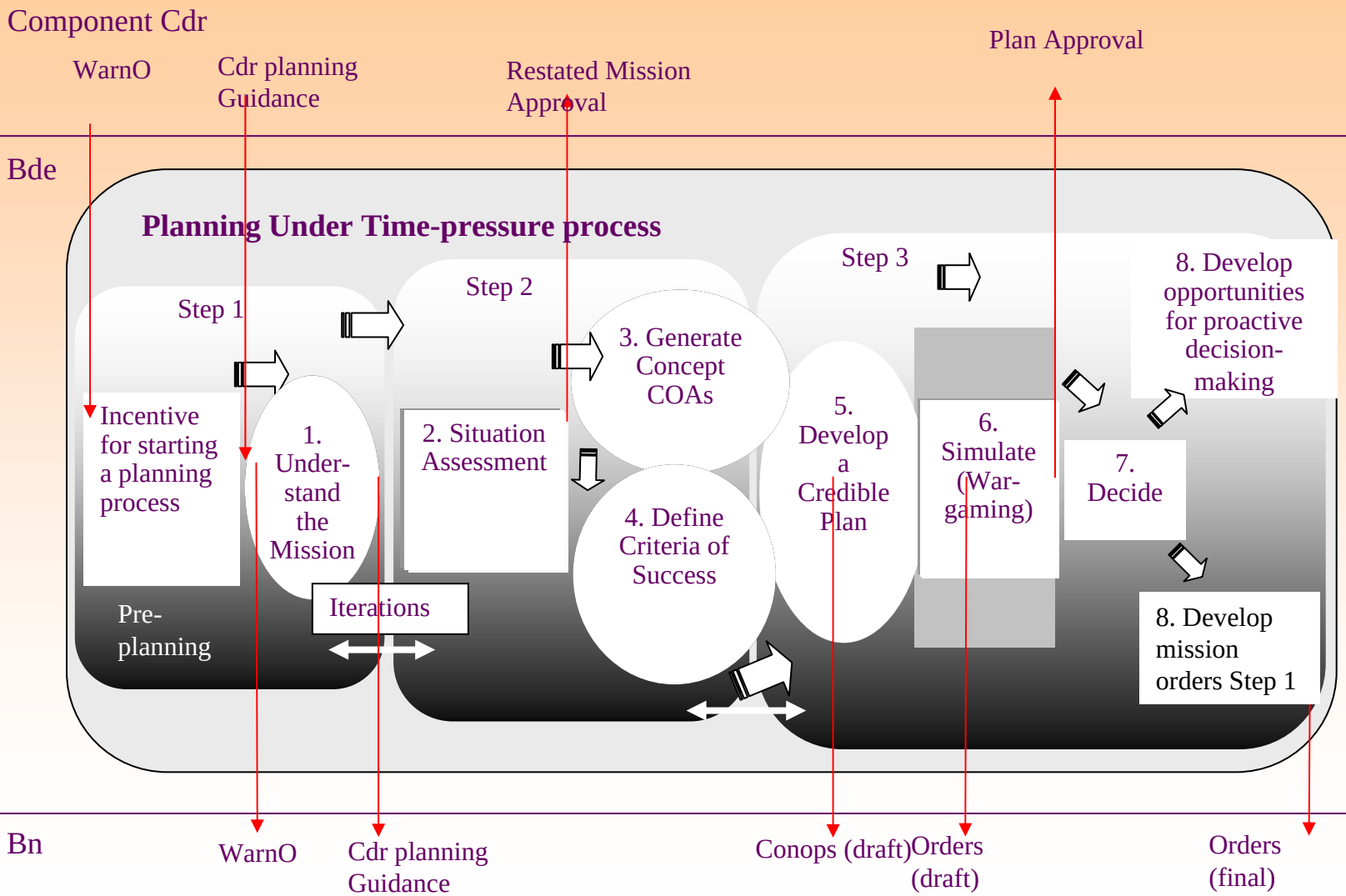
1. **Military decision-making and planning tradition, i.e. experience, captured in traditional models. (e.g Army doctrines, manuals and regulations)**

2. **Contemporary (NDM-) research on military decision making and military planning. (e.g. Klein, 1989; Pascual & Henderson, 1997; Schmitt & Klein 1999)**

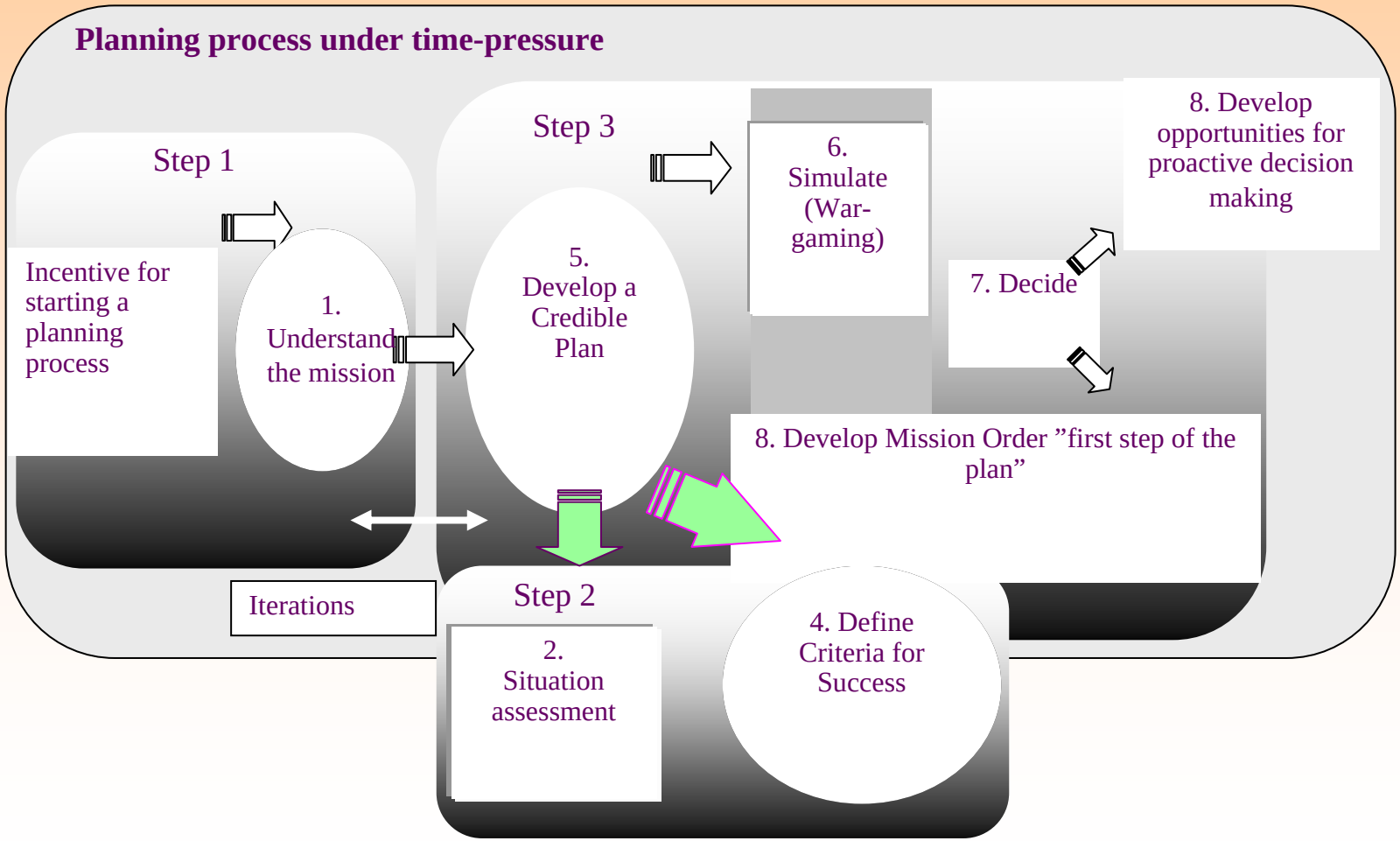
3. **General or context-free psychological research on decision-making under time-pressure and uncertainty, problem solving, creativity and expertise. (e.g Zakay, 1993; Lipshitz & Strauss, 1997; Dunker, 1945; Claxton, 1999)**


•Uncertainties / need for info
•Restrictions in freedom of action
•Immediate actions
•Criteria for success
Under Timepressure (PUT)
forces, civi
reliminary
Pla
•Contingency plan
•Succesive orders
”fix” the plan
Develop plan for pro-active decision making
Decide
redible Plan
Develop orders for ”step 1”
Vision of goal state overlay
Graphical orders ”step 1”
Evolving situation (enemy

PUT adapted to NATO/EU



Quick PUT

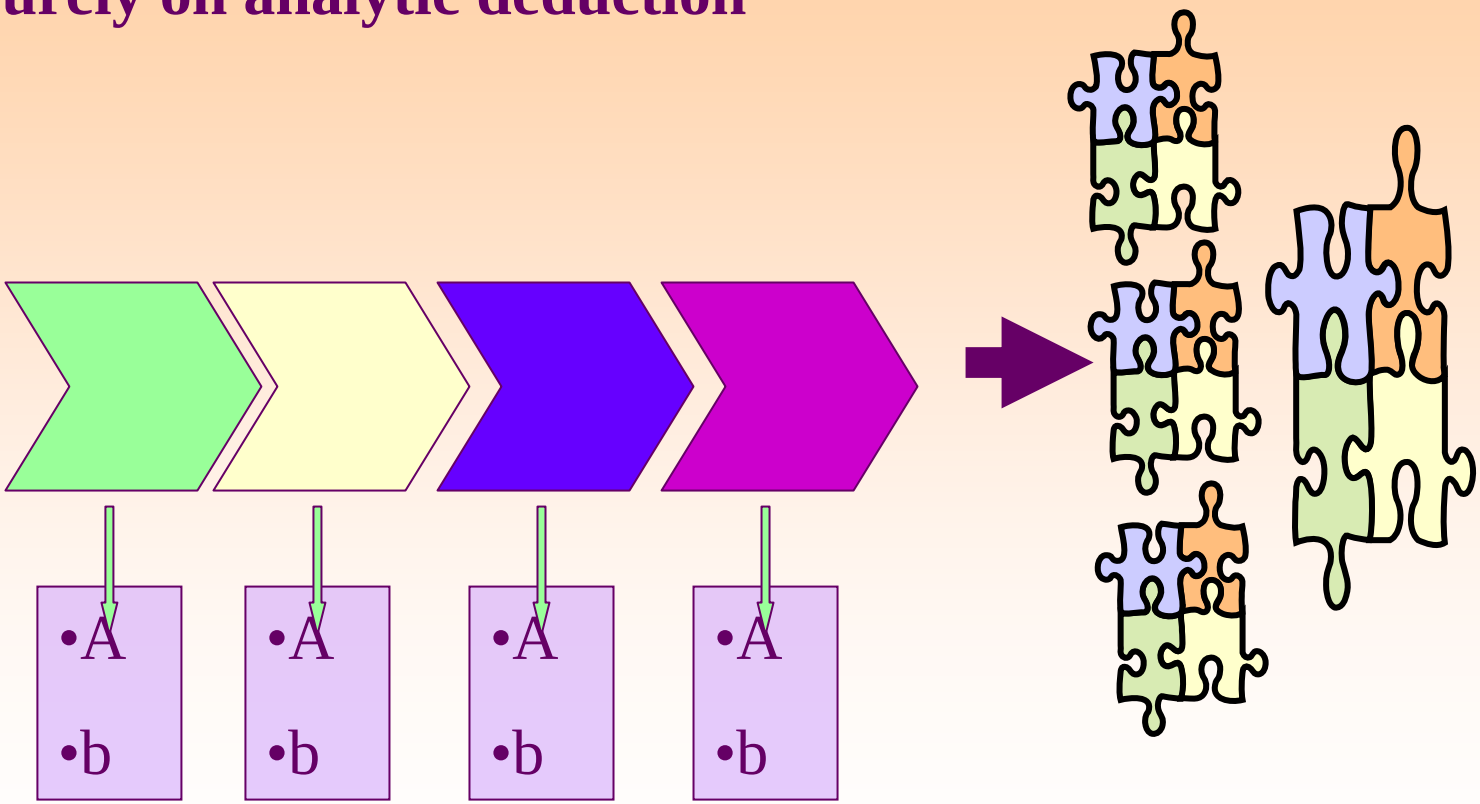

Planning process under time-pressure
Step 1
Incentive for starting a planning process
1. Understand the mission
Step 3
5. Develop a Credible Plan
6. Simulate (War-gaming)
7. Decide
8. Develop opportunities for proactive decision making
8. Develop Mission Order ”first step of the plan”
Iterations
Step 2
2. Situation assessment
4. Define Criteria for Success

Differences PUT – Traditional models

- Satisficing vs. Optimisation
- Product vs. Process focus
- Commander vs. Staff centric
- Iterative/parallel vs. Step-by-step

The traditional military decision making process

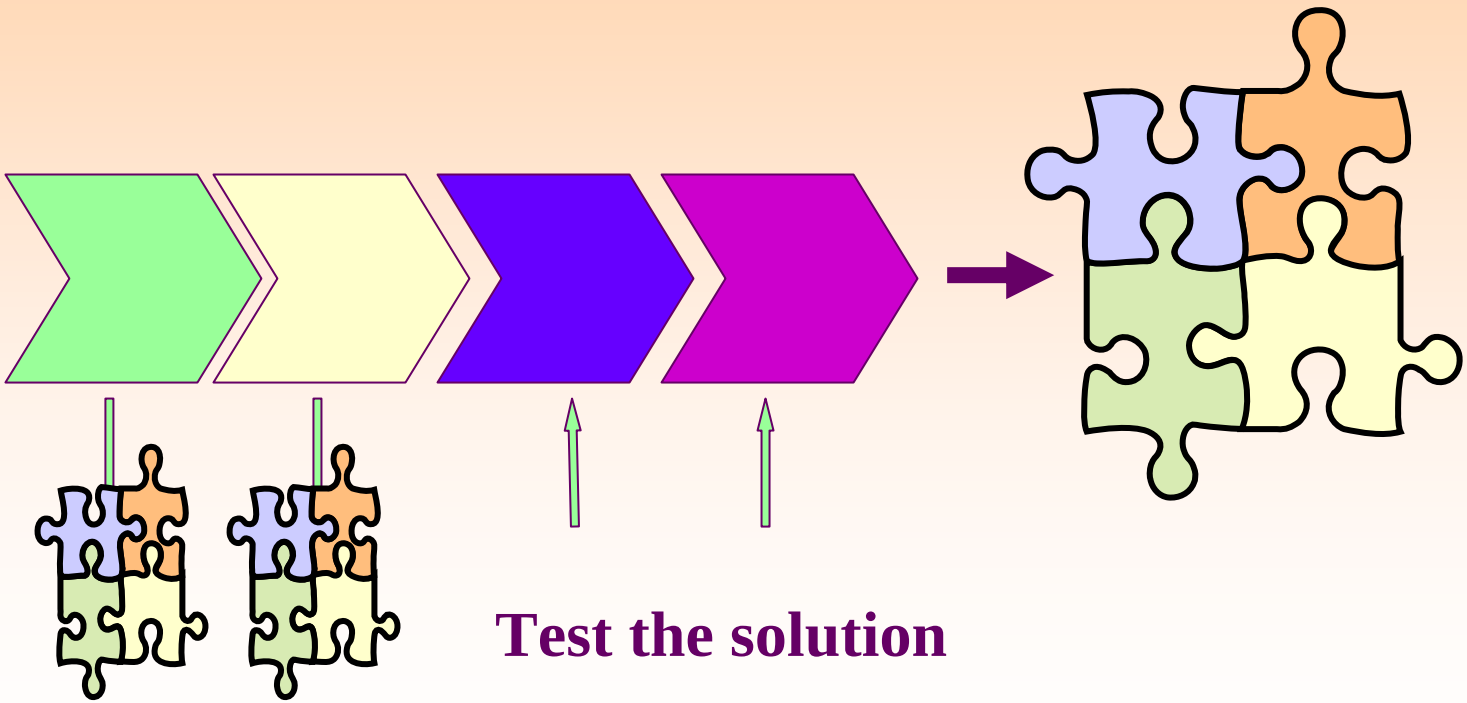
- The ideal-process is sequential, additive, and is based purely on analytic deduction



- The solution (COA) is to rise ”logically” in the end of the process

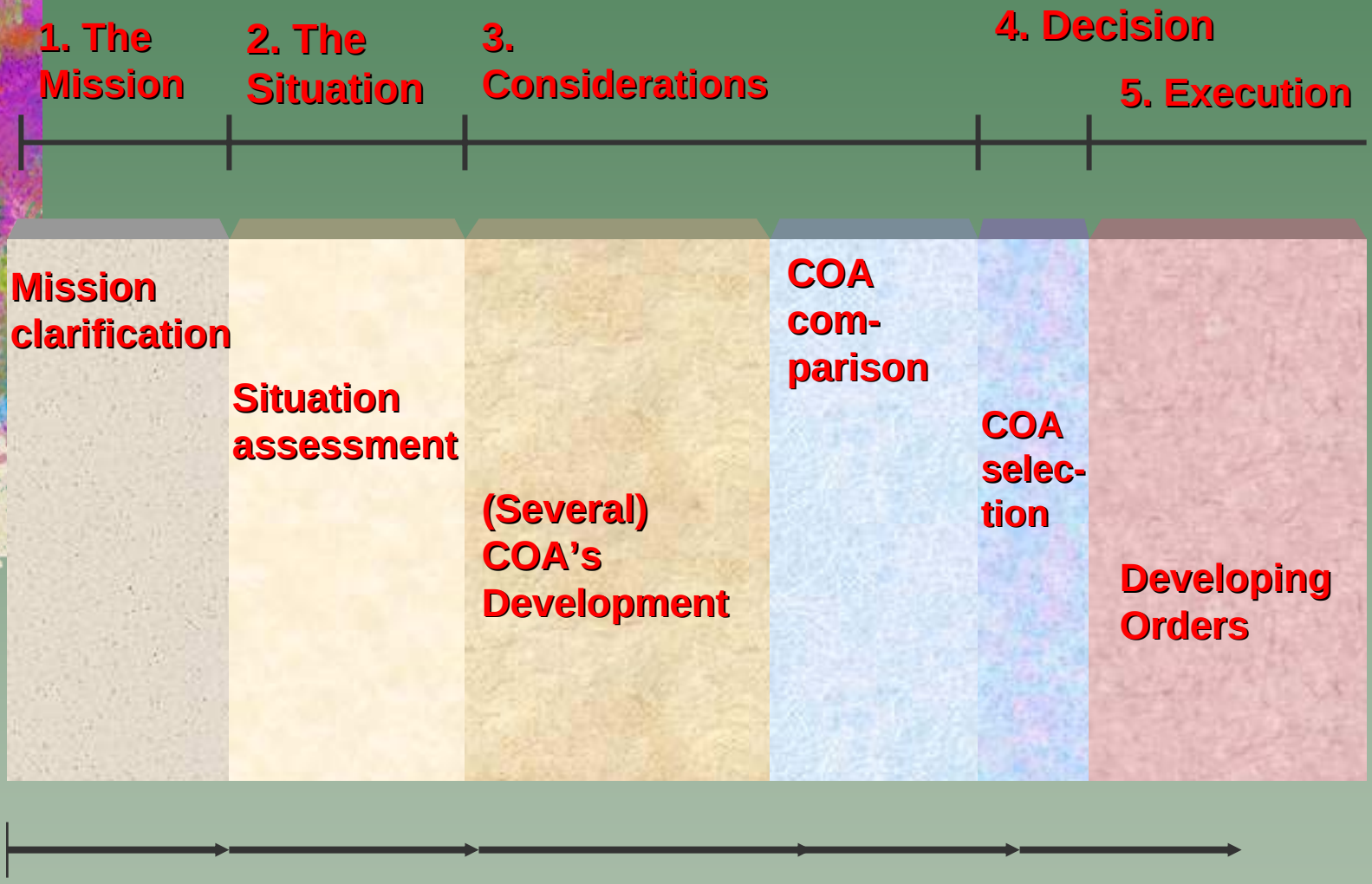
The PUT process

- **In real-life decision making deviations from the ideal process often occur**

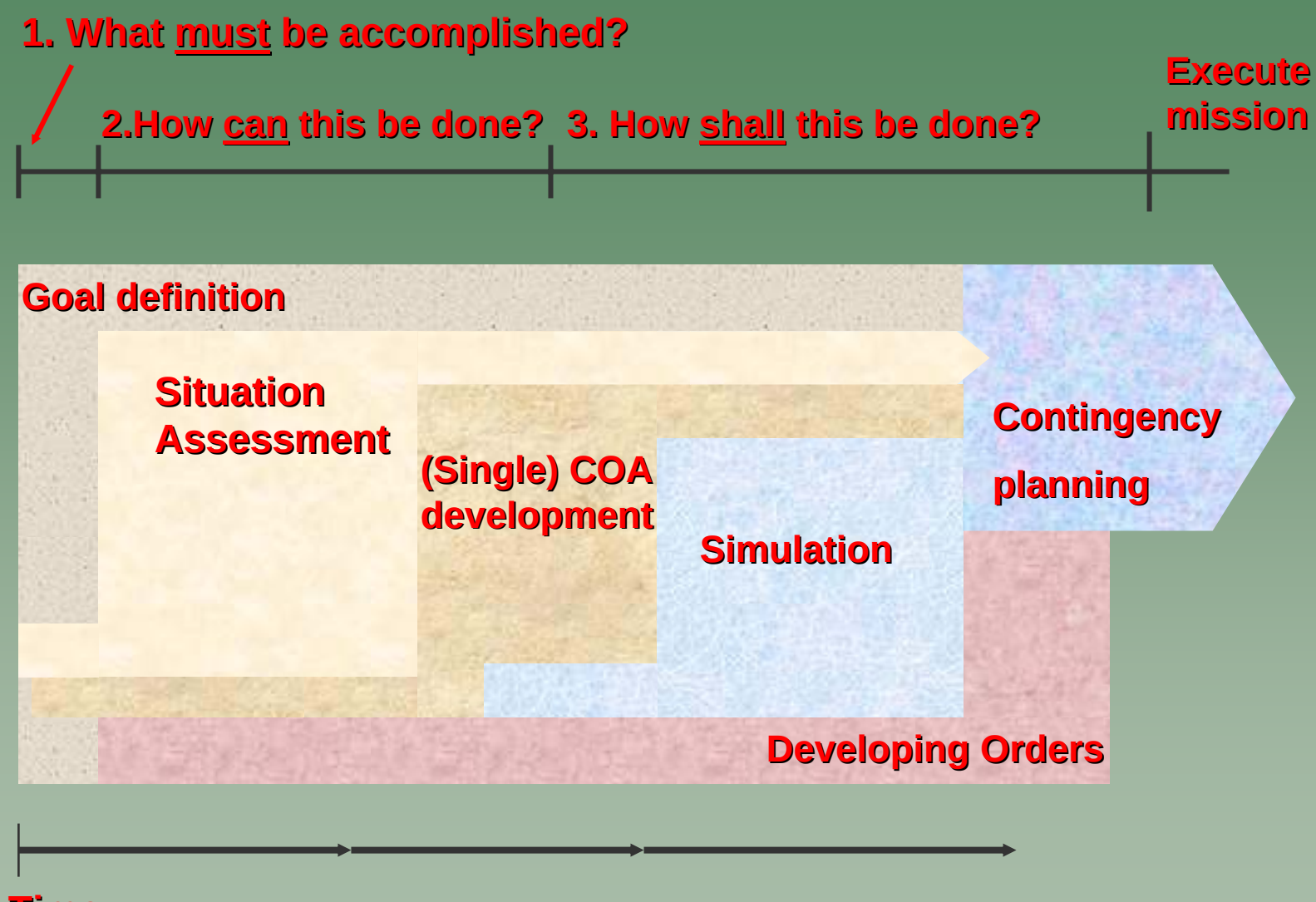


- **The solution comes to mind when the decision maker is ready!**

Traditional Western Army Planning model



The Planning Under Time pressure model



Two experiments: PUT vs.SAR (I)

- Significantly quicker decisions when utilizing PUT compared to the SAR model!
- In average no differences (study 1), or higher objectively measured decision quality (study 2) when planning according to PUT!
- Higher decision confidence when planning according to PUT !
- PUT was evaluated as a good model for planning under realistic circumstances, SAR was evaluated as a bad model (5.1 vs. 2.7). High rating for the PUT model has been consistent in every evaluation (4.6 – 5.3)

Two experiments: PUT vs.SAR (II)

- Wide range in the process among individuals as when to make the actual committment for a COA! 90% decide before the ”correct” moment according to the model.
- No differences in physical or psychological arousal.
- More time-pressure perceived when using the SAR.

Conclusions

- The PUT model is a simplification compared to traditional models.
- Planning according to PUT have resulted in significantly faster planning without loss of plan quality.
- The PUT model is generally perceived to be a suitable model for use on the field .
- The PUT model has been adapted for use in two- and three-level parallel/integrated planning, and the model works well.
- The model is still under development and the next step is to integrate the model with NATO OPP…