SAAB FUTURE COMBAT AIR SYSTEM (FCAS)

How to integrate and validate disruptive technologies within FCAS

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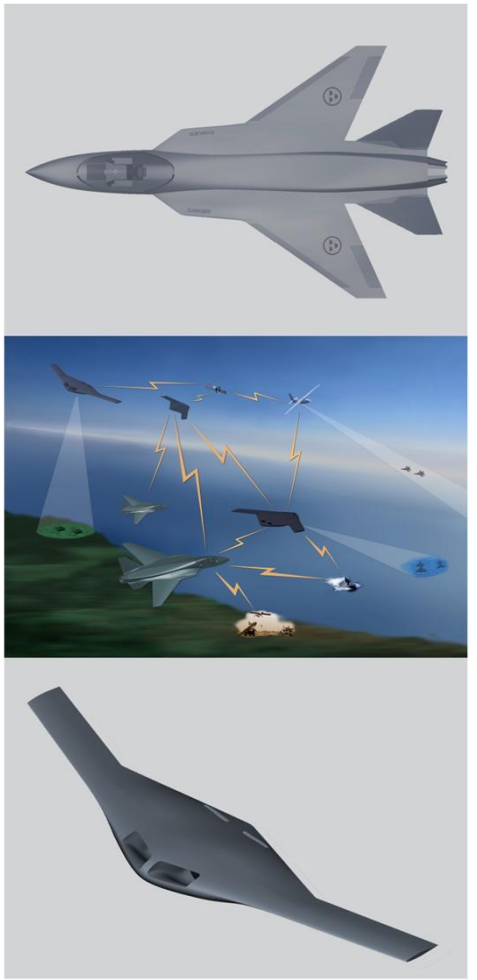
CONTENTS

- **Introduction**
  - Disruptive technologies?
  - Way of working
  - Overview process
- FCAS in SoS context
- Threats / Technical opportunities
- Example – Effect mapping
- Technology integration
- Evaluation / Validation
- Way forward



DISRUPTIVE TECHNOLOGIES?

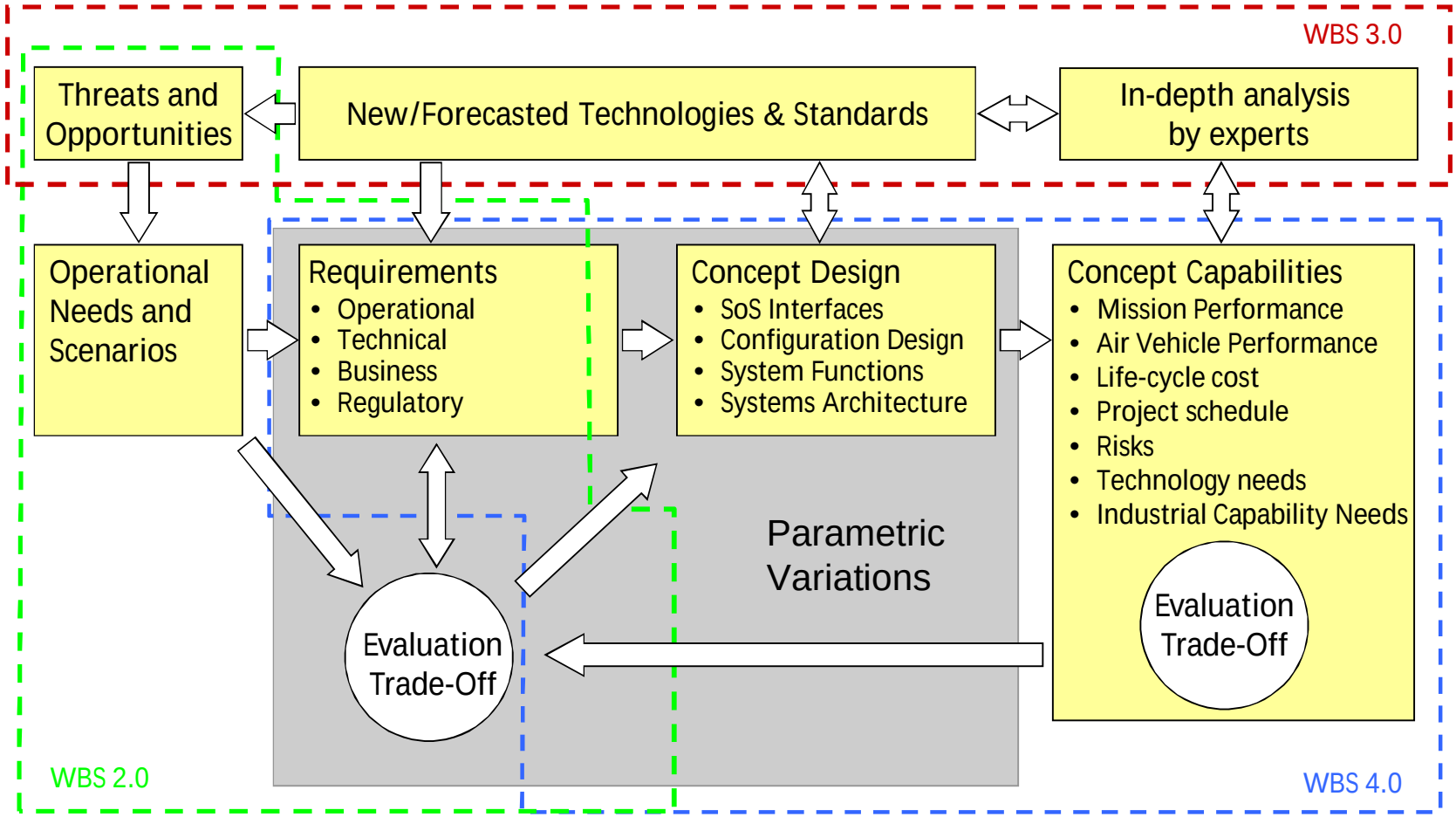
Accelerating opportunities:

- Information – access & connectivity
- Mobility and security
- Autonomy
- Data processing and data storage
- Intuitive applications
- Quality of life
- Environment

FCAS WAY OF WORKING

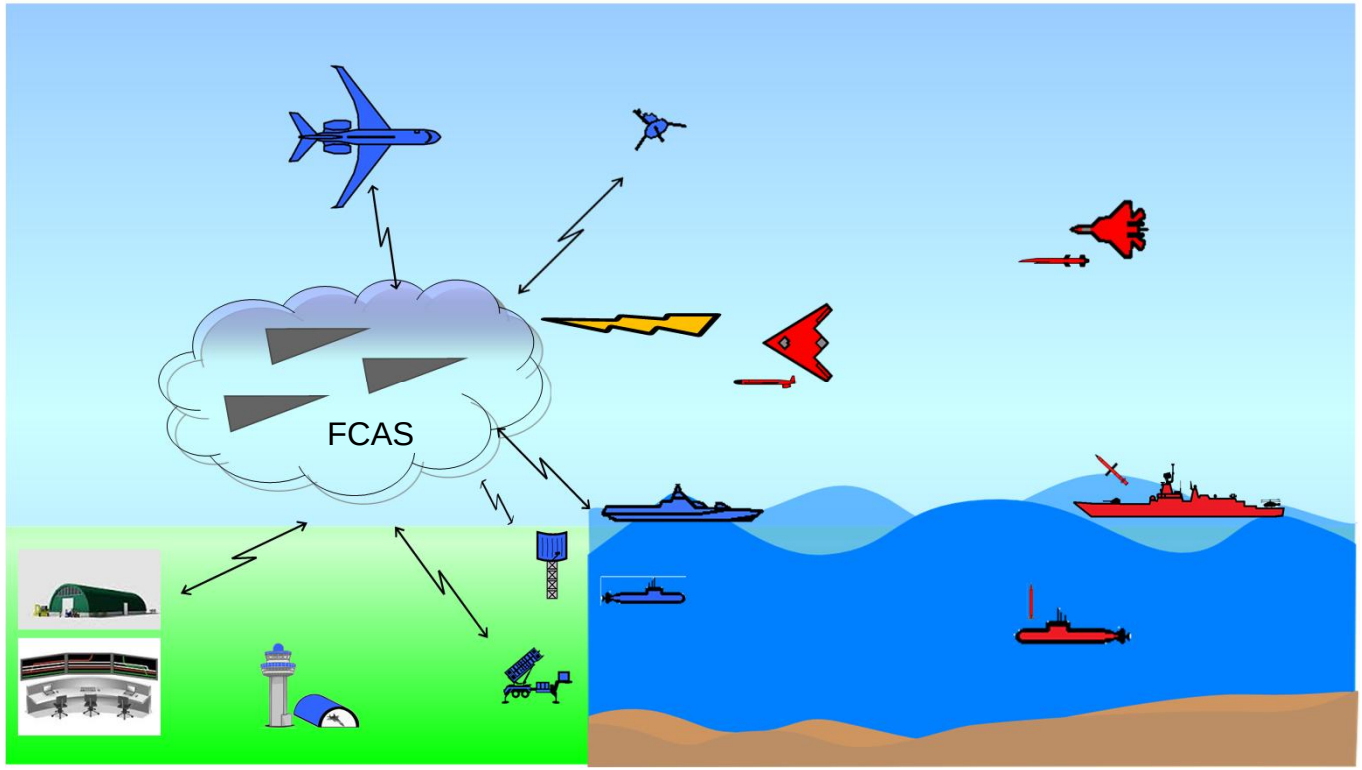
- Iterative, traceable process with short cycles
- Already well established at Aircraft level
- Top – Down:
  - Operational needs
- Bottom – Up:
  - Trends and Intelligence
  - Technology opportunities
- Expand to Air System level with C2
- Goal:
  - Simulate and validate on all system levels
  - Optimize roles in collaboration
  - Clear prioritizations and strategies – Roadmap

OVERVIEW OF WORK PROCESS



FCAS IN SYSTEM OF SYSTEM CONTEXT

- The architecture defines how the conceptual components integrate together into a system of system
- Operational architecture:
  - Co-operating Components
  - Information
  - Command
  - Functions
  - Measures of Effectiveness



THREATS / TECHNICAL OPPORTUNITIES

Conventional threats

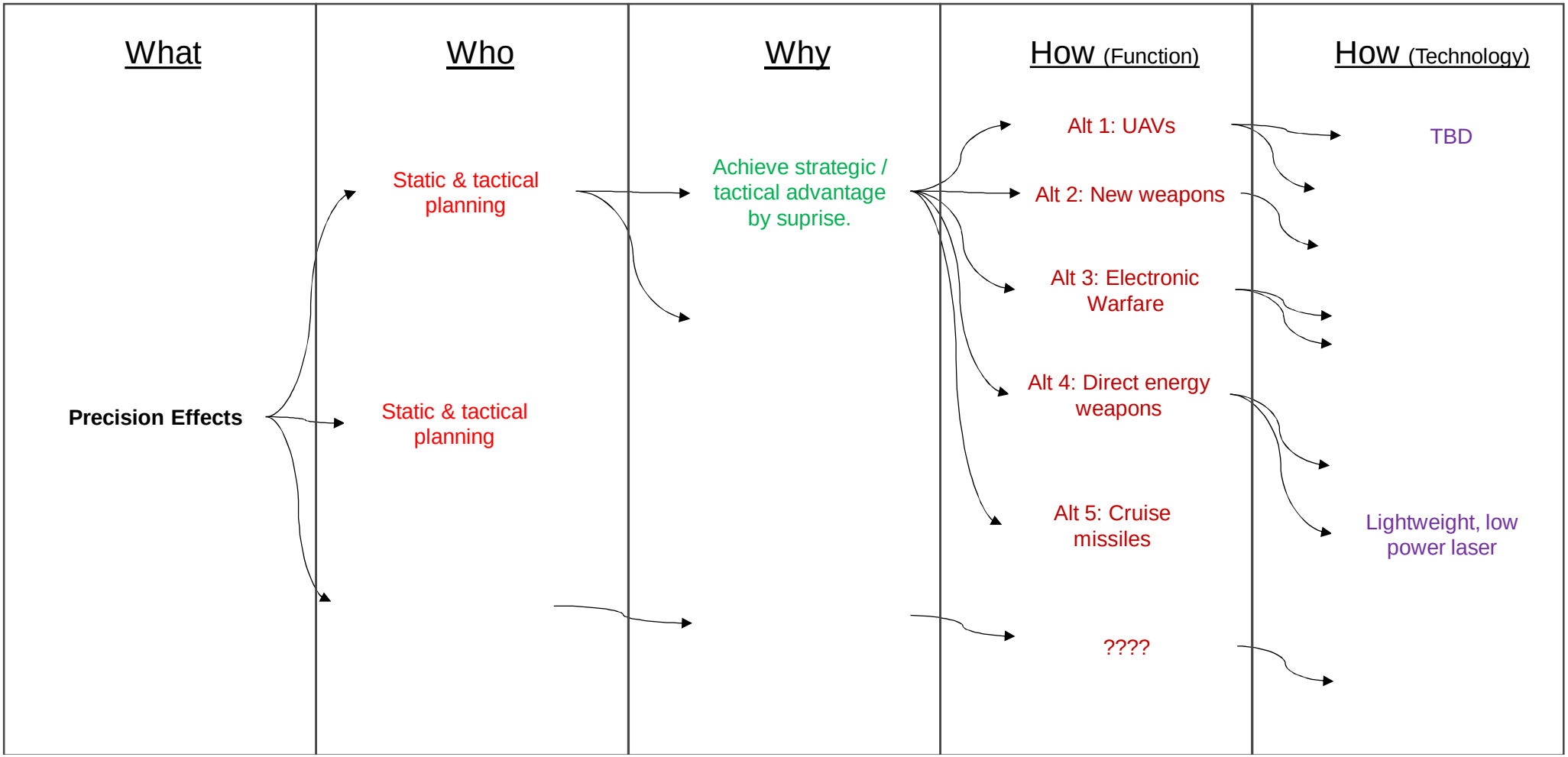
- Longer range
- Greater precision
- Higher density
- More mobile
- Increased connectivity

Emerging threats

- Non-nuclear EMP
- Laser weapons
- Cyber warfare
- Hypersonic weapons

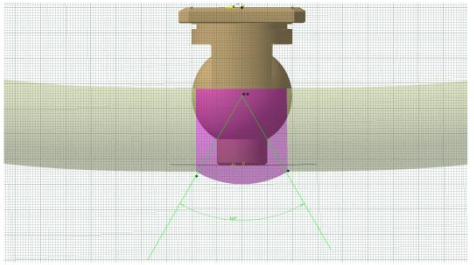
TECHNOLOGY OPPORTUNITIES = POTENTIAL THREATS

EXAMPLE - EFFECT VS SOLUTION MAPPING

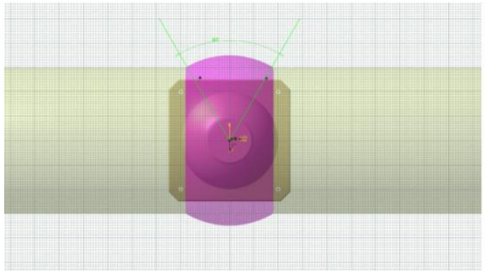


TECHNOLOGY INTEGRATION

- Technology - Laser weapon
  - Capability
  - Performance



- System Integration - Generic future fighter
  - Placement
  - External shape
  - Volume
  - Power supply
  - Operational Environment



EVALUATION/VALIDATION

- Round the table analysis
  - Identify strengths and weaknesses
  - Concept of Operation
  - Countermeasures

- Tactical simulations & cost/risk analysis
  - Duel and system of system integration
  - Development-, production- & life cycle cost analysis
  - Assessing the technical readiness levels

WAY FORWARD

- Concurrent analysis of systems and operational concepts