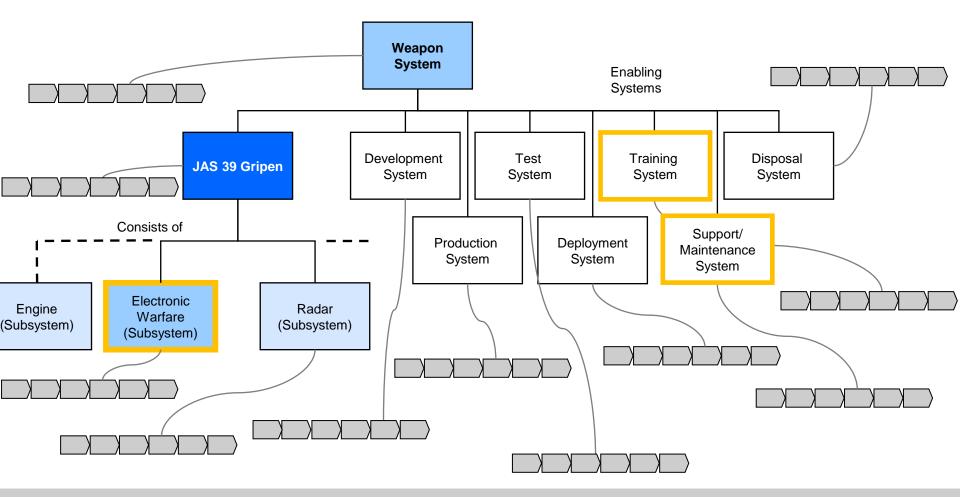


# INTRODUCING SUPPORT SYSTEMS FOR SAAB ELECTRONIC WARFARE

Mikael Larsson Ulf Carlsson OEWESF Systems Engineering Syntell/SAAB Kockums

#### WE SELL SYSTEMS TO OUR CUSTOMERS

Life cycle steps





## SYSTEMS ENGINEERING IS ESSENTIAL

- SAAB as a supplier today has to think in systems and life cycles much more than previously when FMV did it for us (Compare with Ericsson & Televerket)
- ISO/IEC 15288 is a foundation for this
- CM plays an important role in ISO/IEC 15288 and is absolutely crucial for success in managing the entire life cycle





# WHAT'S IN IMPROVEMENT OF THE SUPPORT CAPABILITY?

- Start to treat Maintenance & Support as a system on its own
- Improve our capacity to integrate products with their support and maintenance systems
- Improve the capability to do Logistics Support Analysis, LSA (In short: What maintenance tasks to do and how to do it)
- Improve feedback from the fleet of products in utilization (Failure Reporting, Analysis and Corrective Action System, FRACAS)
- Improve on Configuration and Change Management of manufactured products till they are scrapped
- Improve on how to create, package and supply services (e.g. on site support, training, etc)



# HOW TO DO IT?

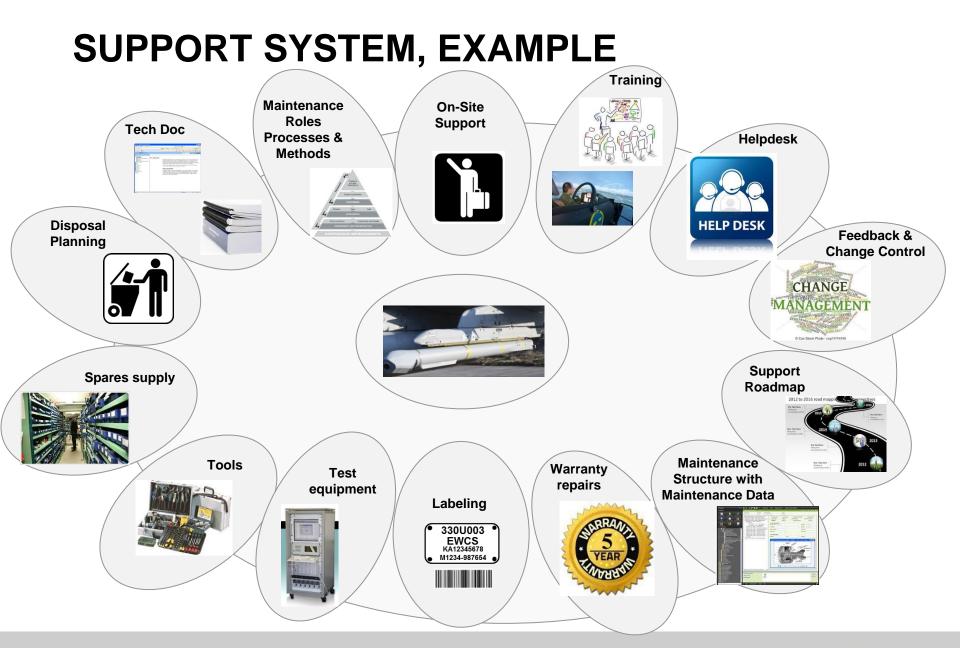
- Implement Configuration Controlled Maintenance Structures that relates the design of a product to its Maintenance System
  - Make sure we are using a modern standard for Logistics Support Analysis (AeroSpace and Defence Industries Association of Europe, ASD)
- Identify stakeholders for all our products and their stakeholders needs for start defining and developing Maintenance Systems (Still with focus on manufactured Hardware and Software)
- Extend Maintenance Systems to include more advanced, selfstanding services (Support Systems)



### BENEFITS

- More predictable Supply Chain (e.g. spare parts)
- Better Root Cause Analysis
- More effecient work in smaller teams
- Easier planning and better predictions in economic estimates
- Support solutions packaged already in the design stage
- Clearer Maintenance levels towards customers
- Base Support Solutions easier to adapt to specific customer needs



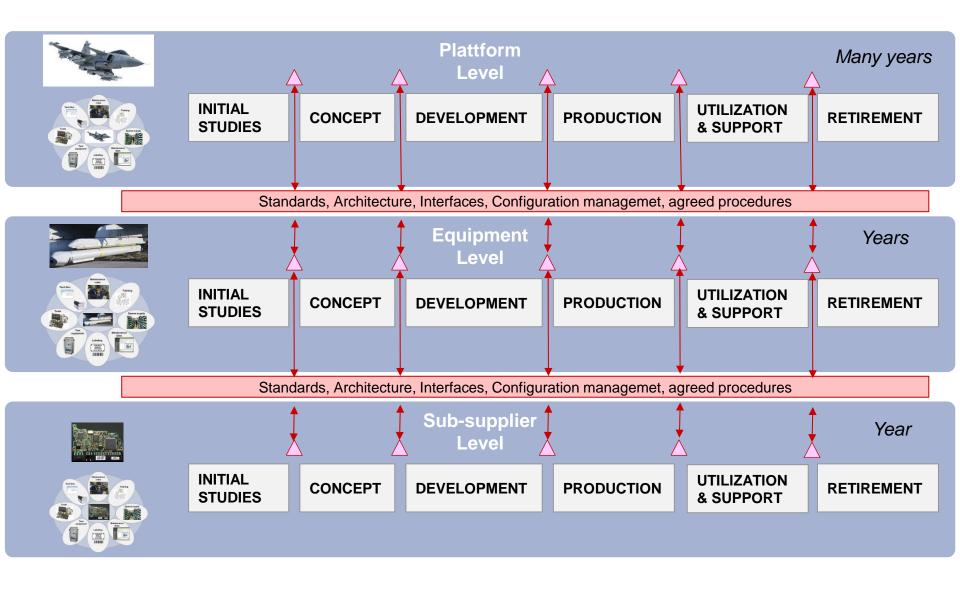




#### **MAINTENANCE AS AN OWN SYSTEM** SSS Manufactu-SSDD **System Utilization** ring of Product Analysis and Design **Product** Manager Individual VR Structure Analysis and Design of **Maintenance Properties of the Product** Manufactu-SSDD SSS aintenance System ring of **In Service** Utilization alysis and Design **Maintenance** Support Product Maintenance **Products** VR Manager Structure Maintenance Maintenance Plan Plan System Equipment Maintenance Design Maintenance SSEUROS EWCS Prima area Structure Defect Reporting / Feedback utilization / Change Control



#### **MULTIPLE ORGANIZATION COLLABORATION**





#### **PRODUCT AND SUPPORT SYSTEM DEVELOPMENT**

