



# Agenda

- Modeling of maintenance alternatives - LORA
  - Introduction
  - Example
    - Baseline
    - With alternatives

# Introduction

- Investigate alternatives for specific components:

|   | AID                | COID                 | STID               | TRID                        | TIID                           |
|---|--------------------|----------------------|--------------------|-----------------------------|--------------------------------|
|   | Alternative number | Component identifier | Station identifier | Task requirement identifier | Task implementation identifier |
| 1 | 1                  | ITEM41               | DEPOT              | DR_SUB_MAJOR                | DR_SUB_MAJOR                   |
| 2 | 2                  | ITEM41               | DEPOT              | DR_SUB_MAJOR                | <REORDER>                      |

Two AID → Same component } → Two different alternatives

- Can be used with general or detailed maintenance modeling

MaintenanceCapabilityAlternative

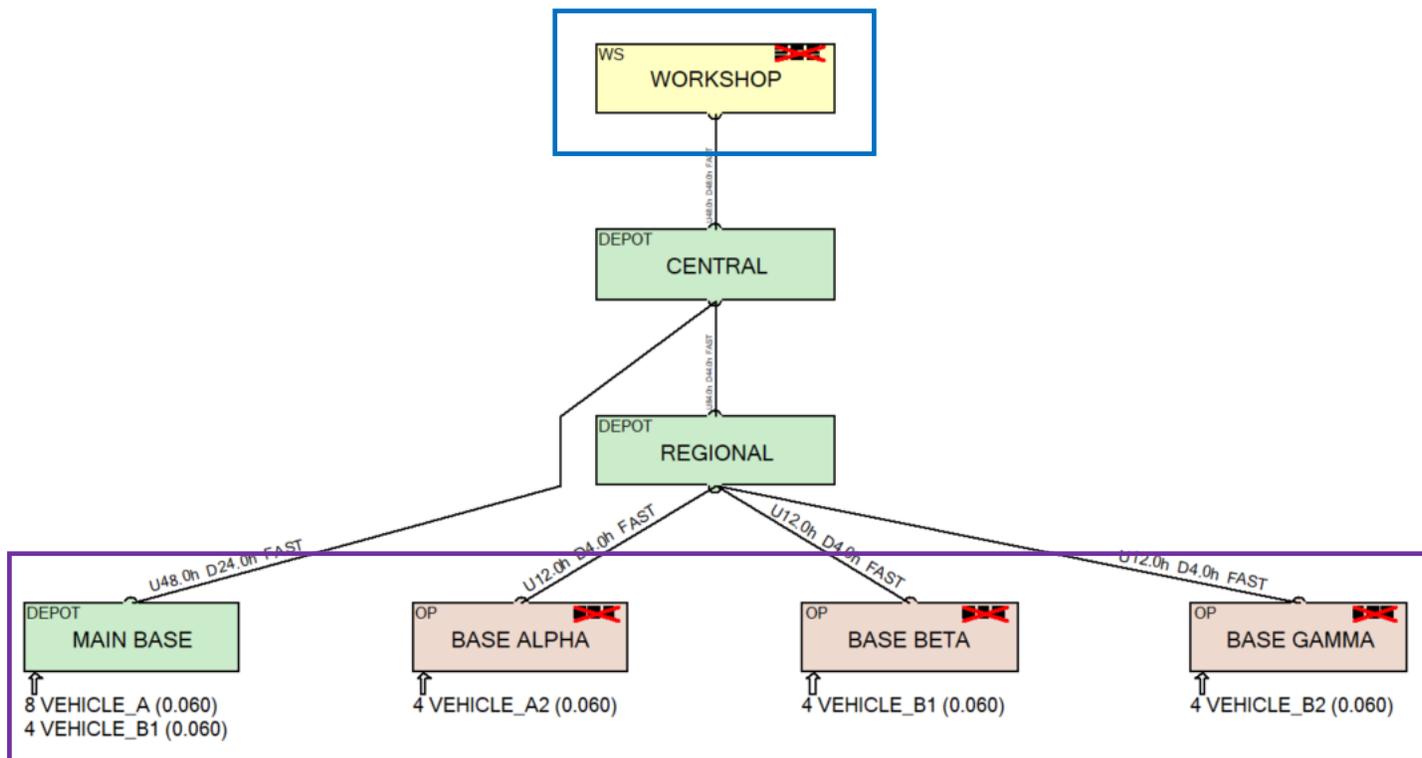
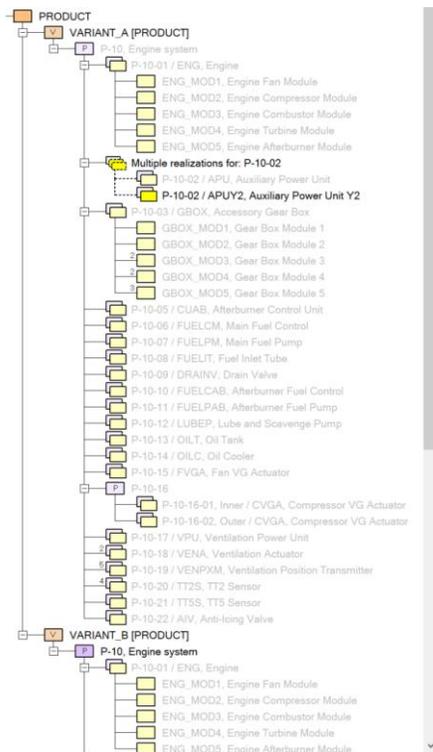
|   | AID                | COGID                      | SGID                        | LEVLID                                   | NOTE      |
|---|--------------------|----------------------------|-----------------------------|------------------------------------------|-----------|
|   | Alternative number | Component group identifier | Station or group identifier | Maintenance level identifier (inclusive) | User note |
| 1 |                    |                            |                             |                                          |           |

TaskImplementationAlternative

|   | AID                | COID                 | STID               | TRID                        | TIID                           | NOTE      |
|---|--------------------|----------------------|--------------------|-----------------------------|--------------------------------|-----------|
|   | Alternative number | Component identifier | Station identifier | Task requirement identifier | Task implementation identifier | User note |
| 1 |                    |                      |                    |                             |                                |           |

# Example

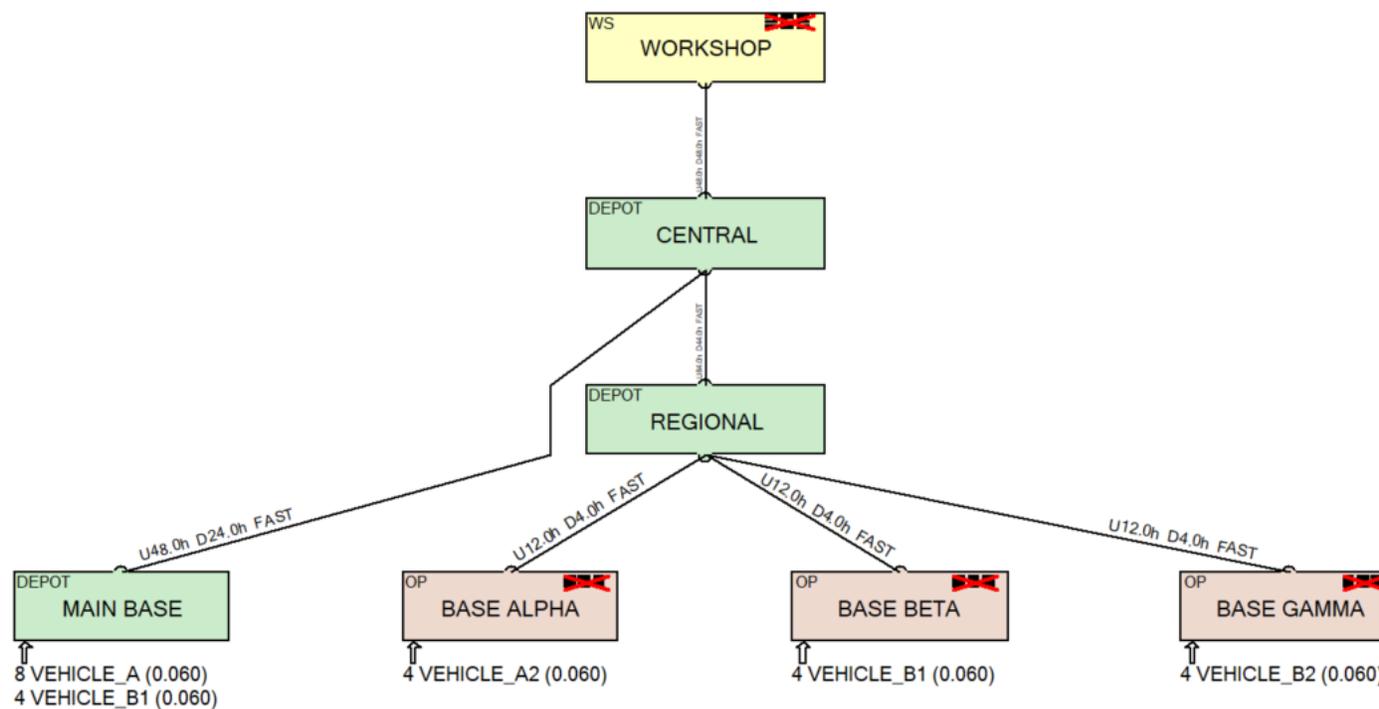
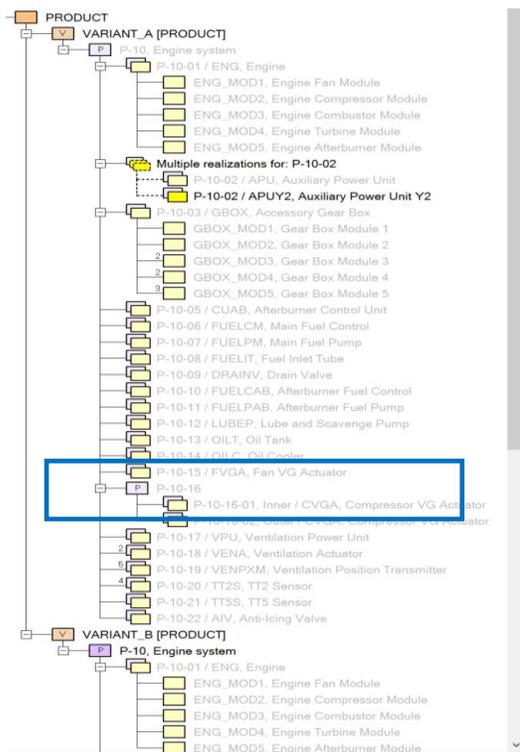
- Purpose: Demonstrate how to model different repair strategies using LORA in OPUS10
- Base case
  - Removal of primary items at operational sites
  - Repairs (almost exclusively) performed at WORKSHOP



# Example

- Investigate alternatives for VPU

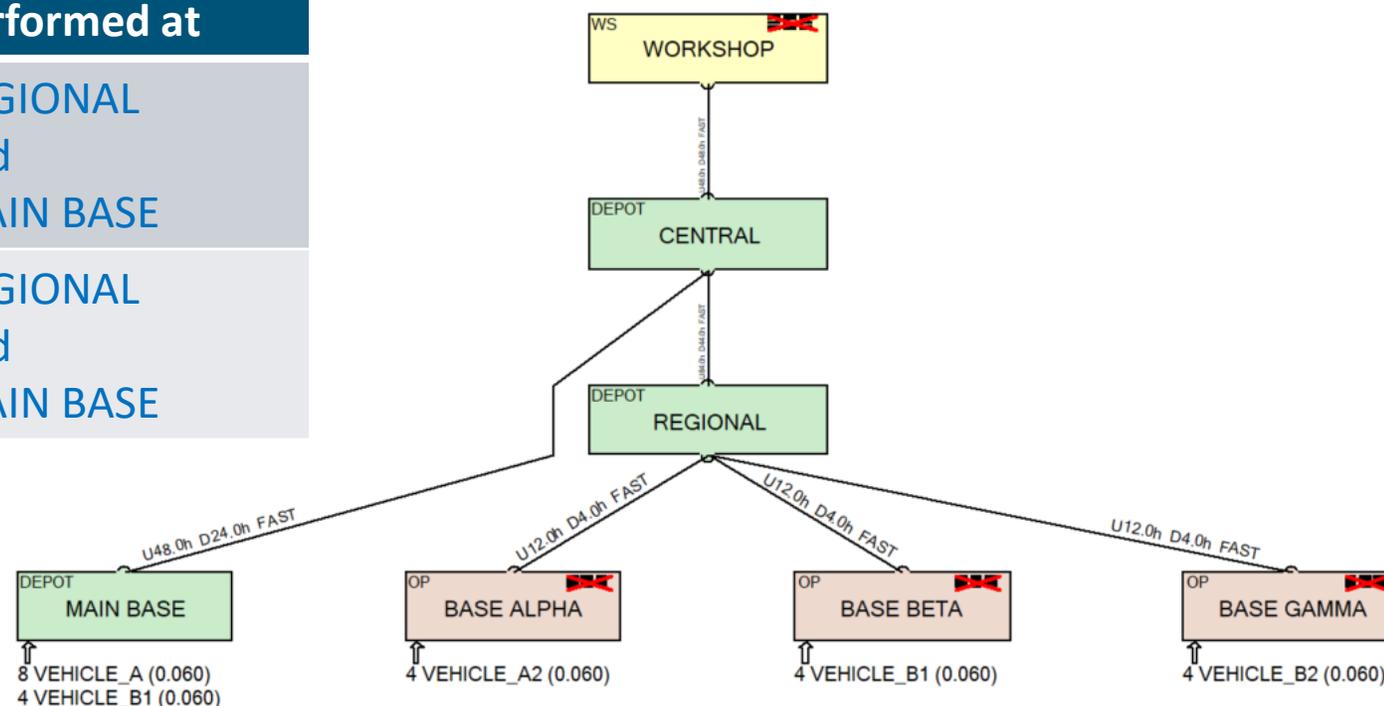
Two failures - FAILURE\_VPU\_SIMPLE and FAILURE\_VPU\_COMPLEX  
 Rectified using RECTIFY\_VPU\_SIMPLE and RECTIFY\_VPU\_COMPLEX  
 Baseline: Both tasks performed at WORKSHOP



# Example

Add alternatives for VPU:

| Alternative | Task                                          | Performed at                 |
|-------------|-----------------------------------------------|------------------------------|
| 1           | RECTIFY_VPU_SIMPLE                            | REGIONAL<br>and<br>MAIN BASE |
| 2           | RECTIFY_VPU_SIMPLE<br>and RECTIFY_VPU_COMPLEX | REGIONAL<br>and<br>MAIN BASE |



# Example

Add alternatives for ENGINE:

| Alternative | Task                                 | Performed at           |
|-------------|--------------------------------------|------------------------|
| 1           | All tasks in MAINT_LEVEL_2           | CENTRAL                |
| 2           | All tasks in MAINT_LEVEL_2           | REGIONAL and MAIN BASE |
| 3           | All tasks except removal from system | CENTRAL                |
| 4           | All tasks except removal from system | REGIONAL and MAIN BASE |

# Vill du veta mer om hur vi tillsammans kan skapa samhällsnytta?

Rehngatan 20, Stockholm

08-459 07 50

[info@systecon.se](mailto:info@systecon.se)

[systecongroup.com/se](https://systecongroup.com/se)