Opus Suite Conference | FUSARO

14 May 2025

News in Opus Suite

Emma Olsson

by Systecon opus suite

Systecon

Opus Suite News

2025.0 release

1. Age dependent Failure rates: Weibull distributions
2. New result viewers for OPUS10 & SIMLOX
3. Downtime drivers in SIMLOX

Systecon

Opus Suite Conference | FUSARO

Weibull Distributions

Weibull distributions

Modelling age dependent failure rates

Background

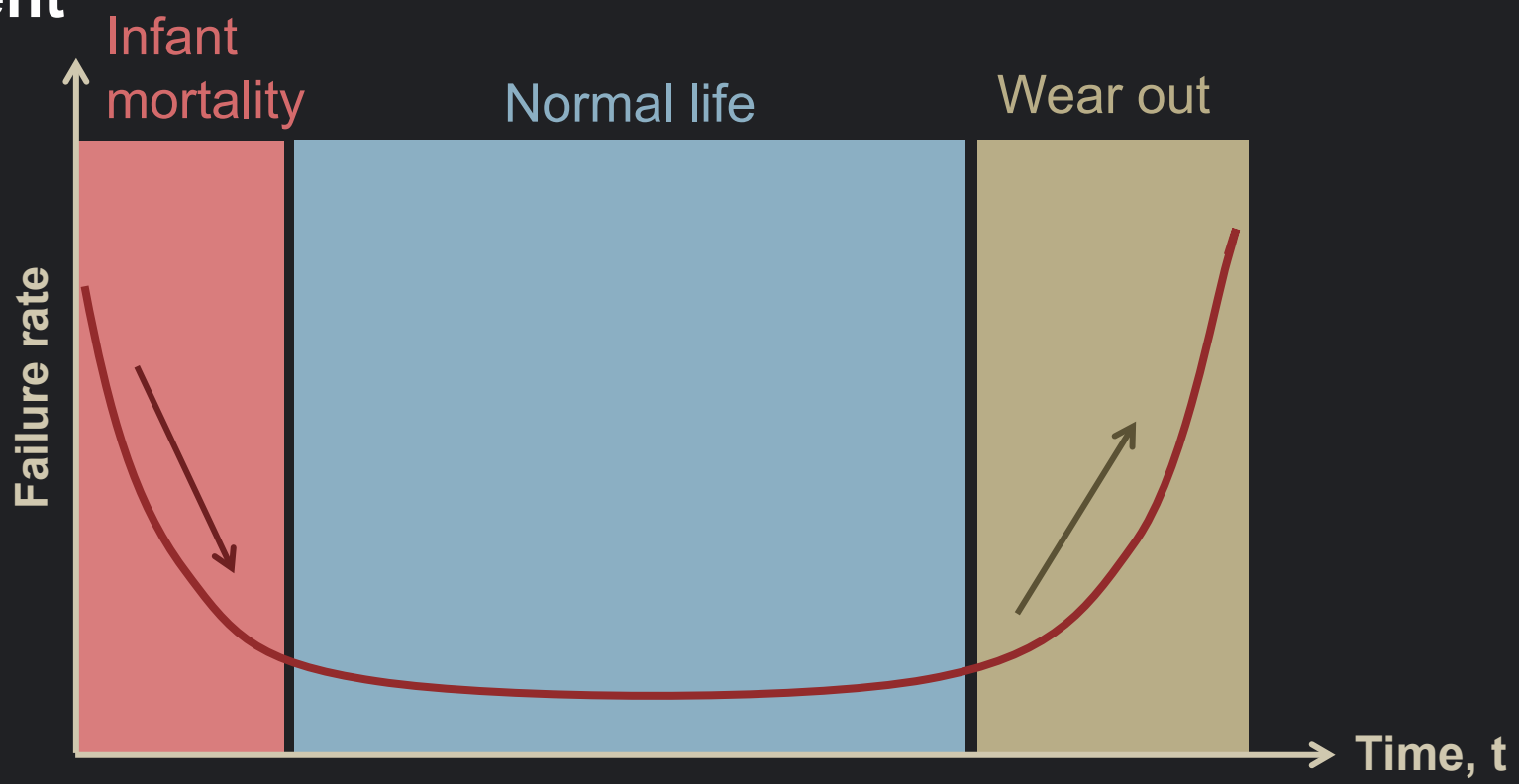
- Priorly, assumed constant failure
- Introduced the ability to describe failure intervals according to a Weibull distribution.
- Possible to model components that fail more, or less, likely due to age.

FailureIntervalWeibull

	FRID	OPID	SHAPE	SCALE	NOTE
	Failure identifier	Operation parameter identifier	Shape	Scale	User note
1	FAILURE	<OPHOURS>			

Systecon

Time dependent failure rates



Decreasing failure rate

- Weibull Shape < 1
- Infant mortality
- Typically, electronics

Constant failure rate

- Weibull Shape of 1
- Scale = MTBF
- FRT = 1 / Scale

Increasing failure rate

- Weibull Shape > 1
- Wear out
- Mechanical parts

Systecon

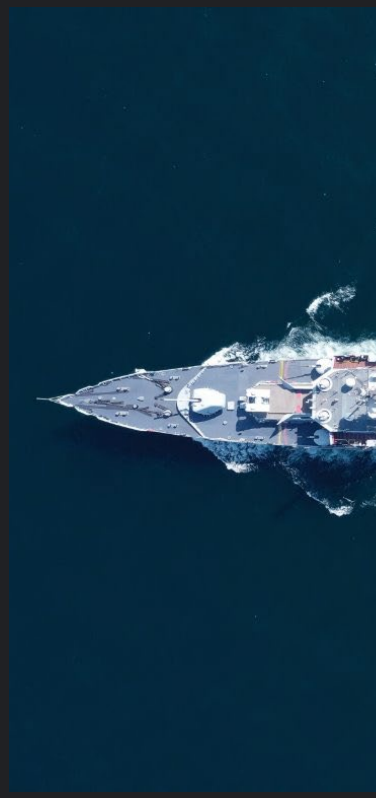
Opus Suite Conference | FUSARO

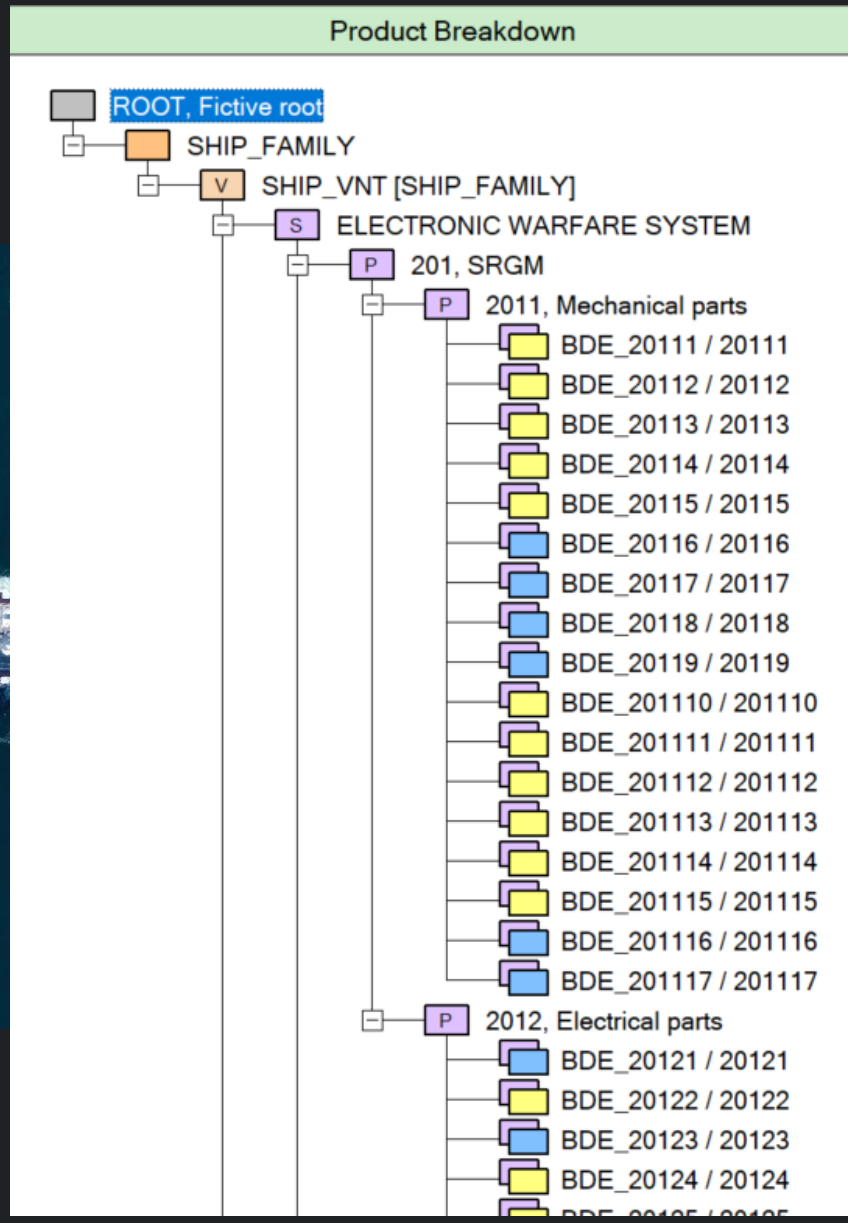
New Result Viewers

Modelling schenario

Example model of a fleet of ships

- Five ships
  - Operated differently
- Each ship consists of 6 subsystems:
  - Electronic Warfare System
  - Air and Missile Defense System
  - Torpedo System
  - Sonar System
  - Mine Detonation System
  - Propulsion
- ~300 items
- Obtained a list of spare parts



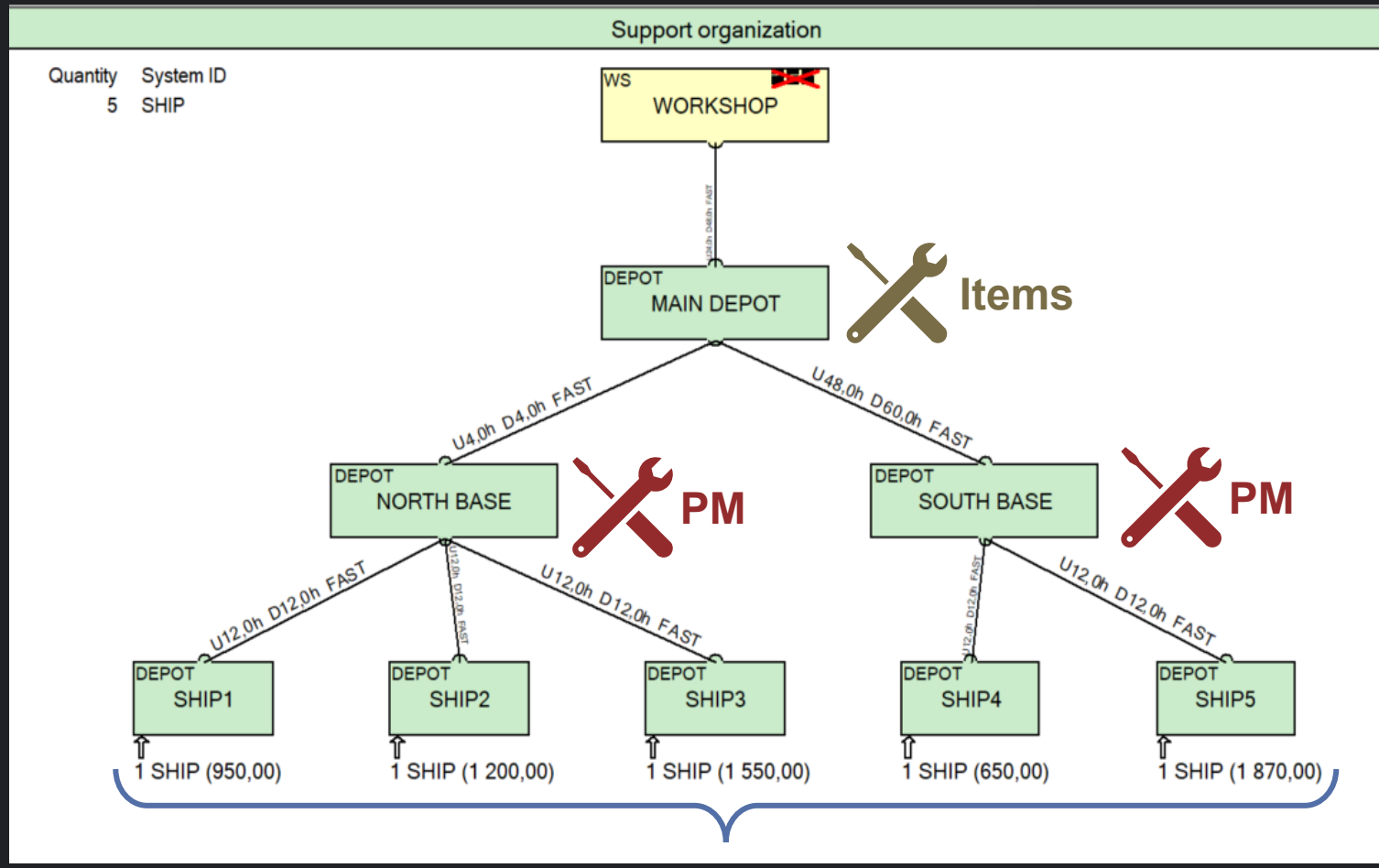


Systecon

Modelling scenario

Support organization

- Five ships
  - Operated differently
  - Can perform simple maintenance on board
- Two bases: North & South
  - Performs PM maintenance
- Main depot & Workshop
  - Repairs components



Maintenance on board - Replace components

Systecon

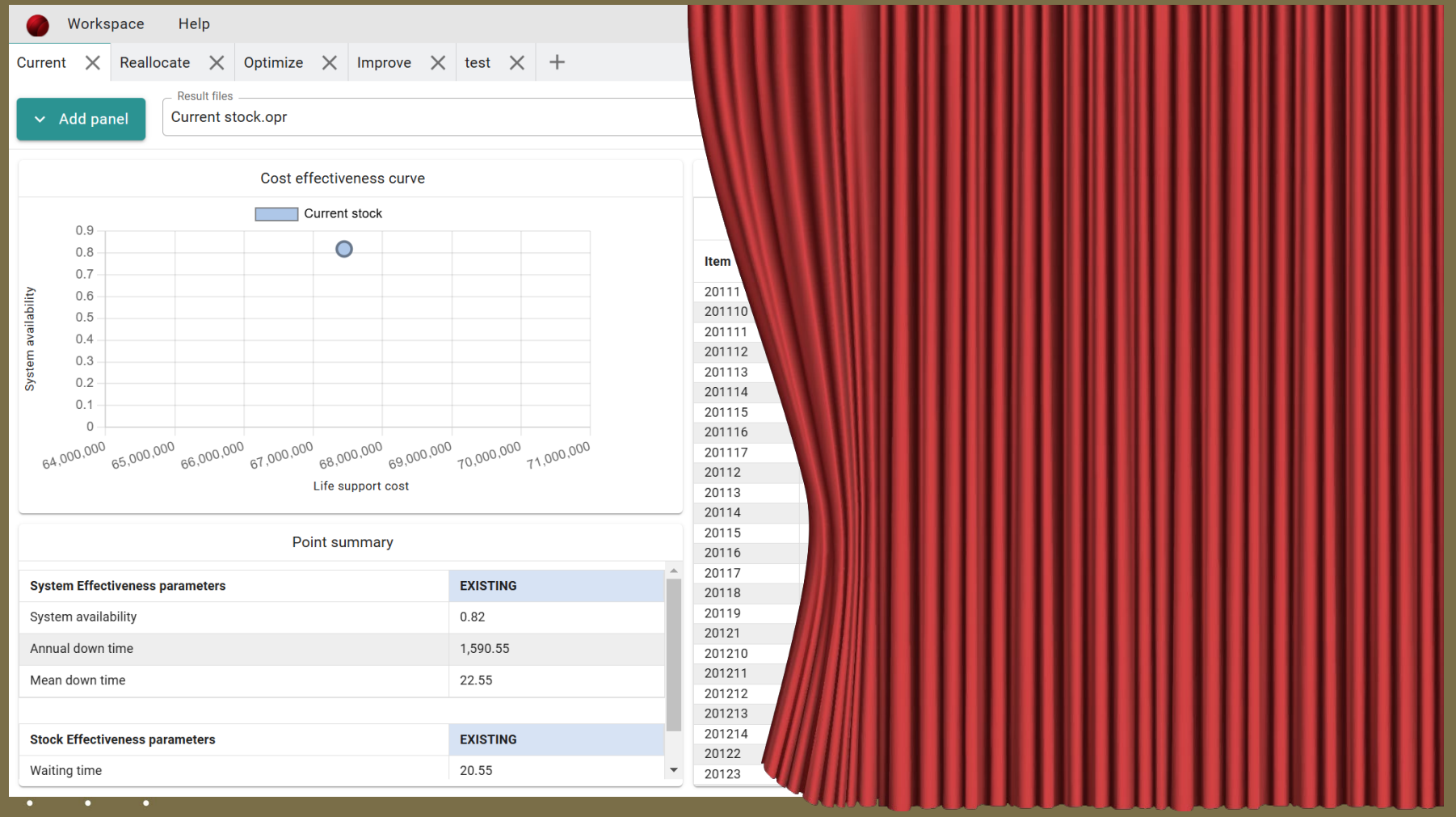
Key questions

by Systecon opus suite

1. Where are we today?	- What is the projected operational outcome? - What will this cost?
2. Why do we stand here?	- Reasons for lost operation, downtime and costs.
3. How do we improve?	- Evaluating alternatives, optimization etc.

Let’s look into Opus Suite...

Opus Suite Conference | FUSARO



Opus Suite Conference | FUSARO

Thank you.