Reducing Operational Costs

Integrated Logistic Support services
Spare Parts Optimisation Strategy
Context

Estimation of surplus spare parts

38 to 45 %

In 10 years, increase of the number of spares

+ 100 %

> High value in spare parts stocks recognised by operators

Source: an Oil & Gas operator
Challenge

How to reduce spare parts stocks in a demonstrable way without compromising asset availability?
Spare parts optimisation: a case study

Apsys were tasked to optimise sparing for a network of 24 gas compression stations.

The challenge was to minimise stockholding costs without availability reduction.

Local sparing was provided in each case, supported by centralised warehouse stock. Spares deployment was on a national scale.

~ 6000 items including consumables
Spare parts optimisation: results

- Reduction of sparing at 23 out of 24 compression stations
- Availability risk at one location resulting in a requirement to increase sparing
- 35% increase in sparing at the central warehouse to provide better network support

Stock Inventory reduced from M€ 9.6 to M€ 2.4 - Saving: 75%
Spare parts optimisation approach

New logistic Strategy
- Stock location
- Transport
- Operational availability targets
- Level of repair eco² optimal
- Quantified cost reduction

New stock
- Number items
- Cost
- Details per sub system / component

Assets

Logistic

Experience
(failures, events, etc)

RAMS, RCM studies

Methods and Tools

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Spare parts optimisation strategy

- From design to operations
- Cost part of the analysis
- Obsolescence management can be included
- Possibility to link tools to CMMS (SAP, Maximo, etc) for real time analysis
Integrated Logistic Support Solutions

> Objectives of ILS activities are to **reduce life support costs and delays of realization**, while ensuring the system’s performance.
Integrated Logistic Support Approach

- Supply chain optimisation
- Spare parts optimisation
- Level of Repair Analysis optimisation (LORA)
- Maintenance management (RCM, IMR)
- Obsolescence strategy
- Cost of ownership
Integrated Logistic Support: an example

- Upgrade of French Navy communication system (fleet of ~60 ships)
- RAMS and Logistic support analysis:
  - Cost of ownership vs availability
- Various constraints:
  - High level availability targets
  - Various level of confidentiality
  - Limited space on board for spares
  - Environmental conditions / equipment
  - Mission time with no possibility of resupply
  - Limited maintenance on board
Thank You

Q & A

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