



What Drives Obsolescence?

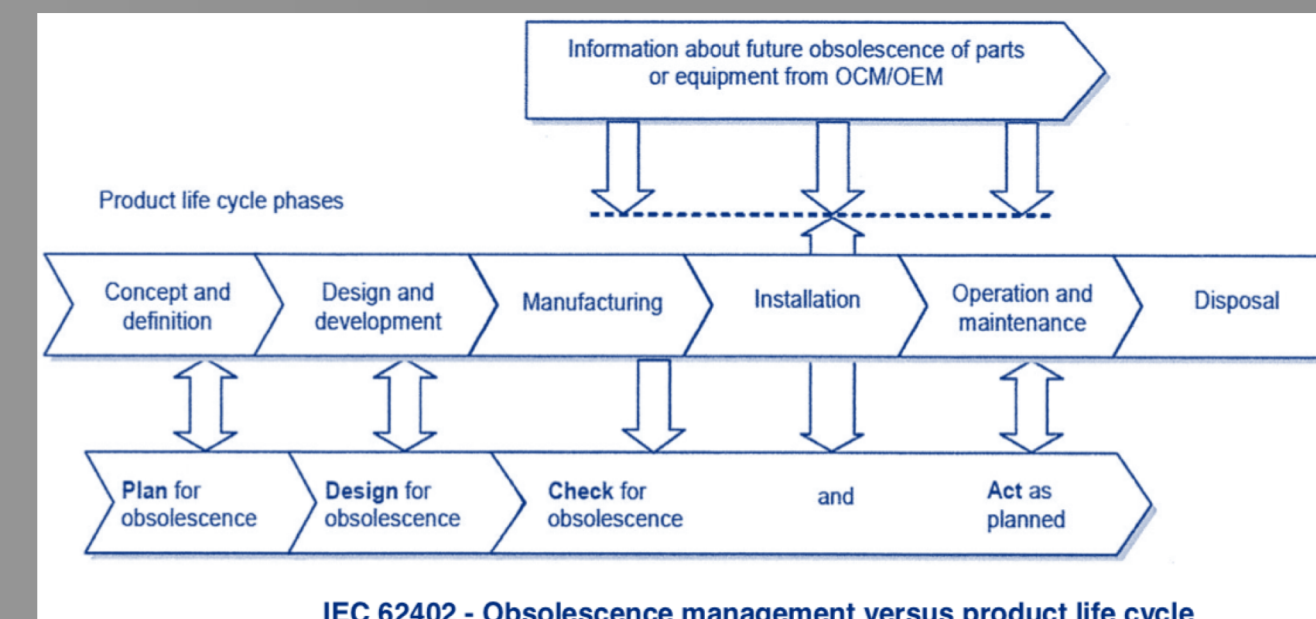
Research into the causes for obsolescence revealed that it is inevitable for a multitude of different reasons:

- ▶ Product discontinuation
- ▶ Rapid technology advancements
- ▶ Military market trends
- ▶ Changes in legislation
- ▶ Planned obsolescence
- ▶ Extended platform utilisation lifetime

A review of the threats to HMS VANGUARD showed that the **primary route cause** for obsolescence is a combination of the **platform being required to outlive its intended lifetime** and the **lack of military market control** of materiel in the wake of increased commercial market demands.

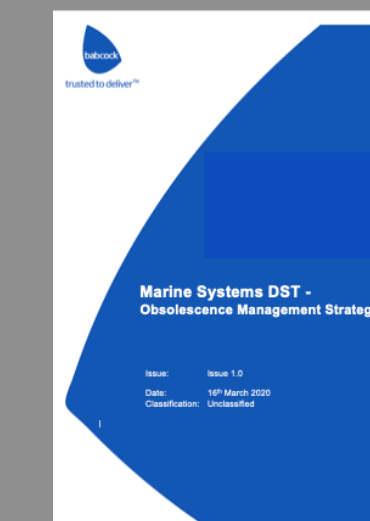
Industry Best Practice

An investigation into methodologies adopted within both the Defense Sector and Nuclear Industry revealed that **organisations most successfully mitigating** the impact of obsolescence were those which were aligned to the **IEC 62402 standard** and proactive in their approach to managing obsolescence.



Developing an Obsolescence Management Strategy...

An **Obsolescence Management Strategy** has been developed featuring the following areas:



- ▶ Resource Allocation
- ▶ Risk Matrix
- ▶ Collaborative Working
- ▶ Roles and Responsibilities
- ▶ Obsolescence Response Strategy

The Strategy acknowledges that evidence shows the only way to mitigate against the risk of obsolescence is through **implementing robust management and control measures**.

Depending on the criticality of the system to which the equipment is pertaining and the likelihood of it becoming obsolete, these can be reactive through to proactive. The **course of action taken should be proportionate** to the risk presented by the obsolete materiel, therefore, the proactive approach will not always be time or cost effective.

Investigation into the Effects of Obsolescence within the Marine Industry

The most significant and enduring benefits were found in organisations which considered **obsolescence against the full Product Life Cycle** whether this be through implementing collaborative working groups with key stakeholders **across the supply chain** or through the adoption of service-oriented business models.

Quantifying the Impact of Obsolescence...

A series of workshops were chaired with representatives from both HMS VANGUARD Project and Production Teams at Babcock International and data was collated in order to facilitate **both qualitative and quantitative assessments** of the impact of obsolescence on HMS VANGUARD.

An in-depth analysis further reinforced the significance of obsolescence on the schedule and cost on such a sizeable project.

Obsolescence accounts for 22% of all risk on HMS VANGUARD.

89% of the Production workforce interviewed have Experienced being unable to progress a task as a result of Pending obsolete materials.

Obsolete materiel accounts for 12.18% of the total equipment required for the HMS VANGUARD refit project.

“For every submarine refit we undertake, I can guarantee you that everything will come to a grinding halt at least once as a result of obsolescence...”

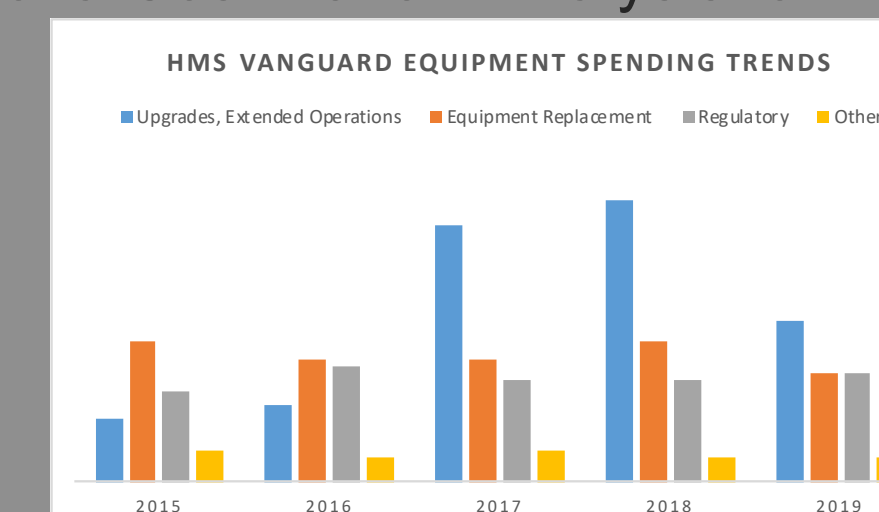
- HMS VANGUARD Boat Manager

4 Methods of Managing Obsolescence

REACTIVE	PASSIVE	PROGRESSIVE	PROACTIVE
SYSTEM CRITICALITY			
Low			
High			
Excess stock supply chain	Excess stock supply chain	Limited stock supply chain	No stock supply chain
Future usage low	Future usage low	Future usage exceeds stock	Future usage certain
Ability to reverse engineer	Ability to reverse engineer	Unable to reverse engineer	Unable to reverse engineer
Multiple manufacturers	Multiple manufacturers	Limited manufacturers	Sole manufacturer

Project Aim “...to quantify and substantiate the impact of obsolescence on Vanguard Class Submarines in order to propose well-informed counteractive measures to Babcock International via an Obsolescence Management Strategy.”

In light of the distribution of HMS VANGUARD Equipment Spending Trends, the Strategy recommends the use of a Cost Benefit Analysis to collaboratively determine with the Customer in the Ministry of Defence if it would be more cost effective longer term to replace the whole equipment rather than continuing to replace like for like components, incurring large costs and significant detriment to the timeliness of project delivery.



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