OBsolescence Management in the Oil & Gas Industry
Programme Scope and Delivered Examples

Rockwell Automation offers a proactive structured obsolescence management service, delivered by a progressive, dedicated, dynamic and experienced team, which deploys tried and tested industry working practices.

Benefits and results include
• Integration into the HSE Ageing and Life Extension (ALE) programme
• Asset Integrity Management (AIM)
• Reduced downtime
• Reduced cost
• Extended life of asset
• Enhanced proactive/preventative/scheduled maintenance
• HSE KP4 compliance
• Enhanced safety culture
• Promote awareness and enhance risk management
• Product life cycle management
• Up-to-date reference of assets and components
• Enhanced reliability and availability

Introduction

The Obsolescence Management Team from Rockwell Automation has been created to promote awareness and assist with the management of risks associated with ageing offshore assets and onshore facilities. The UK Health and Safety Executive (HSE) recognise this challenge, initiating both the Key Programme 4 (KP4) initiative (2010) and HSE report RR509 (first published 2006).

Rockwell Automation recognises that this is an ever increasing concern for the industry and has reacted to the demands of obsolescence. We have established an international team to generate Obsolescence Assessment Reports (OAR) for both existing and potential customers.

Every company must have plans in place to accommodate the requirements of KP4. These are usually formulated via an internal process, however due to the increasing demands placed on engineering staff, this is either considered a low priority, or even forgotten altogether. Only select companies have the skills and knowledge to provide insight into specific obsolescence management, and Rockwell Automation has a proven track record in Oil and Gas.
Rockwell Automation delivers this service with:

- A proactive structured approach.
- A dynamic progressive team.
- Up-to-date life cycle status from vendors.
- Tried and tested working practices

**Aim**

All types of industrial designs have a policy of planning and designing a product with a limited soft/hard life, which will inevitably become obsolete. By looking at obsolescence you can achieve the following:

- Integration into the HSE Ageing and Life Extension programme
- Asset Integrity management
- Reduced downtime
- Reduced cost
- Extended life of asset
- Enhanced proactive/preventative/scheduled maintenance
- HSE KP4 compliance
- Enhanced safety culture
- Promote awareness and enhance risk management.

**The Rockwell Automation® Obsolescence Management Team**

- Dedicated departments for each engineering discipline.
- Highly experienced and diverse backgrounds of mechanical and electrical engineers.
- Many years of experience specialising in obsolescence management
- CVs/résumés available on request

**Benefits**

- Boundaries pre-defined & agreed up front to ensure that reports meet your requirements
- Clear identification of equipment/software that could impact production or asset availability
- Insight to prepare strategies for preventative risk and asset integrity
- Comprehensive documentation
- Maturity report detailing current status
- Accurate & concise action table
- All vendors identified, with up-to-date contact information
- Provision of a single source of reference data
- Demonstration of due diligence to all stakeholders.
- Help to protect business reputation, safety and financial performance
- Effective and accurate gap analysis of data and documentation

- Operations within a client’s location or remotely at our Aberdeen offices
- Versatility to work worldwide – with overall control and central operations managed from our Aberdeen offices.

**Standard Package**

- Project plan
- Single point of contact
- Periodic progress reports and/or meetings
- Sourced data stored by Rockwell Automation and fully auditable
- Comprehensive Obsolescence Overview
- Integrated report format – aligning with existing HSE reports with no questions or return / rework required

**Custom Options**

- Full parts list
- Tailored report structure
- Structure to fit your existing obsolescence plan
- Extended system reviews
- Spares strategy
- Flexible and customisable deliverables
- Integration to SAP/ERP
- Data trending – additional to KP4 recommendations
- Software custody – version control/management
Example 1

**Discipline:** Mechanical & Piping  
**System:** Generators, Turbine Driven  
**Boundary:** Inlet of gas generator to exit of the power turbine  
**Inclusions:**  
- Turbine Engine System  
- Lube Oil System  
- Liquid Fuel System  
- Ventilation & Exhaust System  
- CO₂ Fire Extinguisher System  
- Compressor Washing System  
**Time to report:** Four weeks.

**Report Findings:**  
- Categorisation and quantification of obsolescence status of turbine-driven system – deemed “End of Life”.  
- Identification of specific critical motors no longer supported.  
- Clear, prioritised action list created – including detailing options for replacement and repair where applicable

**Outcomes/Actions:**  
- Operational risks re-classed as “Mitigated”, enabling system to remain in use.

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Example 2

**Discipline:** Electrical, Controls & Instrumentation  
**System:** Alarm and Emergency Shutdown Systems  
**Boundary:** Topsides & Vessel, including all ESD system & marshalling panels and operator interfaces.  
**Inclusions:**  
- Safety Instrumented System  
- High Integrity Pressure Protection System  
- Emergency Shutdown Topside  
- Emergency Shutdown Vessel  
**Time to report:** Four weeks.

**Report Findings:**  
Significant discoveries;  
- Modicon Programmable Logic Controller & Klippon Field Termination Assemblies confirmed as obsolete  
- ESD system (previously unknown) identified with serious issues.

**Outcomes/Actions:**  
- Client-initiated Topsides ESD System Upgrade project to mitigate long-term risk. Short term, extra spares and repair service purchased.
Example 3

**Discipline:** Structural, Naval & Marine

**System:** Thruster Positioning

**Boundary:** Thrusters, thruster cooling system, lubrication system, thruster steering system, thruster local controls, thruster motor drives, thruster pitch control system and associated hydraulic system.

**Inclusions:**
- Azimuth Thrusters
- Thruster Motor Drives
- Disc Brakes
- High torque low speed Hydraulic Motors
- Oil Purifiers
- Rotary Vane Vacuum pumps
- Outlet Pumps
- Variable Displacement Pumps
- Electric Motors for Outlet Pumps
- Heat Exchangers
- Hydraulic Oil Coolers
- Filter Housings / Filter Elements
- Thruster Main Bearings
- Lubrication Systems

**Time to report:** Four weeks.

**Report Findings:**
- Thruster positioning-Thruster System status classified “Active”. Components deemed within Life Cycle or in a “Mature” phase.
- Current suppliers and alternatives identified for all key components; providing client with latest data for future supply solutions and ongoing obsolescence reviews.

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<th>Obsolescence Risk (OR) Category &amp; Recommended Action</th>
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Table used in a typical report to define obsolescence risks and recommended actions