As operating plants come towards the end of their design life an asset life assessment is vital to identify the investment required to restore integrity and sustain present operating performance.

This will allow the plant to meet future production requirements for the longer term of 10 to 20 years and provide a focus for both finances and effort.

There is increasing pressure to run assets far beyond their design life because replacing them is simply not an option. Before deciding to extend an assets life operators must prove to themselves and often their regulators, that the asset is fit and safe to operate. This can be a difficult hurdle to overcome.

Once assets run beyond their design life new failure mechanisms and integrity problems occur that site personnel may have not previously encountered. In many cases this can cause production to cease unexpectedly and result in costly emergency repairs to get the asset back online.

What we offer
ABB can provide an independent detailed assessment of asset life and the opportunities for improvement.

The study will cover equipment condition, systems and practices, competencies and skills. It will generate a plan for asset life extension, including future requirements to maintain equipment integrity and reliability by:

- Reviewing key issues affecting asset life
- Determining a view of equipment life based upon deterioration mechanisms
- Providing a detailed profile of future investment required
- Developing recommended actions to maintain integrity

The study can be tailored to meet your needs; depending on requirements the study can be focused on an entire production site or on a class of equipment such as boilers or rotating machines. We require initial on site discussions with production personnel, followed by a further period of data collection, analysis and evaluation depending on the scope. The overall program for these studies is typically 6 months.
Once the opportunities for improvement are identified ABB can then help in prioritising improvements, generating solutions and implementing actions. We can project manage the implementation process and, calling upon the vast skill set of ABB, can undertake actions ourselves, giving you a complete solution to your asset problems.

The asset life assessment follows ABB’s pRIME philosophy, pRIME (process Reliability and Integrity Management Excellence) is about the asset and integrity management improvement journey; it’s recognising the symptoms, diagnosing the issues, and implementing improvement / treatment.

The pRIME approach is a consultancy programme supported by tried, tested, consistent and coherent methodologies and capability. Following pRIME means a beneficial, cost effective sustainable solution. All processes are risk based, ensuring that effort is concentrated on areas that will give the highest return. This approach is supported by a coherent set of IT tools (pRIME Toolkit), providing a consistent and efficient approach.

Benefits
- The study ensures resources are focused in the right areas and provides a basis for ongoing asset life planning and implementation of risk based philosophies
- Production losses can be avoided as any potential failures are identified before they occur
- Necessary repairs can be planned and carried out more effectively and cheaply, saving breakdown costs and reactive repairs

- The study can aid in providing justification to the authorities that the plant is fit and safe to operate for its extended life
- The client will gain confidence in the integrity and availability of the asset through the extended term. Ensuring that production requirements are met and allowing safe and reliable operation without having to invest in a new asset

Why ABB?
ABB offer the complete solution; we can provide the assessment right through to the implementation of resulting actions to ensure the asset is fit for its extended life.

Our experienced specialists will apply their operational heritage to provide pragmatic advice and solutions. Each equipment type is studied by appropriate specialists and is supported by other functional specialists. The team are fully versed in the legal requirements for both onshore and offshore assets.

ABB have conducted over 100 multi functional studies in many parts of the world and in different industries. We not only help deliver action plans but also impart knowledge through knowledge transfer agreements and may deliver software for ongoing use by the client.

Above: ABB’s asset management process.
Right: Asset health check review summary.

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