



Factsheet

Effective Maintenance & Reliability

For some industrial companies, plant maintenance is still viewed as Production's poor relation. However, managing maintenance cleverly will generate far more profit than it costs. The good news is that best practice techniques in optimising maintenance have not only been fine-tuned but have become cheaper to implement in companies of all sizes.

In most industrial organisations, maintenance expenditure is one of the largest business outlays and also the one about which there is a belief that it is hard to manage.

Organisations often embark on costly initiatives aimed to improve on a certain aspect of maintenance, without linking to the corporate strategy and organisational culture. The result, in most cases, lacks purpose, clarity and sustainability.

Best class practices in maintenance and reliability management are based on a combination of plant, processes, systems and people.

A Total Approach

The Lysis Total Approach to Maintenance & Reliability provides clients with the benefits of:

- Increased plant reliability
- Better control of maintenance costs
- Improved return on investment

How we can help

Lysis provides a range of services covering all aspects of maintenance optimisation.

Maintenance/Reliability Audits

Lysis has developed a unique approach for assessing maintenance

performance against world-class standards. Our experts would carry out an *independent* review based on a number of "pillars of maintenance excellence", such as organisational effectiveness, materials management and workload planning. Recommendations are then developed to close performance gaps and drive through real improvements. We also offer independent **Gap Analysis** against the **PAS 55 Asset Management standard**.

Maintenance Strategies

Companies need to have a clear strategy for maintenance of their assets, which sets out how each element of the management process should be applied. Such strategy needs to best combine planned maintenance, condition monitoring, opportunity maintenance, etc. Our strategy development approach involves staff at all levels and considers the activities and processes that achieve maximum return on investment.

Spares Management

Lysis uses a tailored methodology for defining the correct level of spares parts to stock. We also advise on stores management procedures and systems, stock control, parts coding and cataloguing. With our complete spares management approach, stock savings of 20% are achievable.

Maintenance Organisation

Lysis provides advice on the most effective organisation arrangements for maintenance. Whether there is a central team, an out-sourced group or a combined production/maintenance function, it is vital that there are well-defined roles, responsibilities and interfaces. A review of the management processes can be applied to identify the best structure for your company, as well as reducing wasted effort.

Reliability Studies/CMMS

The focus of the Reliability study is to analyse the data either in the CMMS or Process Logs, qualify performance and highlight "bad actors". Such studies can be carried out using Weibull analysis, reliability growth and **RAM Modelling** tools. Use of reliability software and equipment libraries is applied. Additionally, **RCM and Root Cause Analysis** studies for specific system/equipment are executed.

Total Productive Maintenance

TPM is an established asset performance improvement methodology based on redefining tasks and teamwork. Lysis takes the elements of TPM that are right for each business and (using our change management process), we are able to deliver sustainable benefits within short timescales.

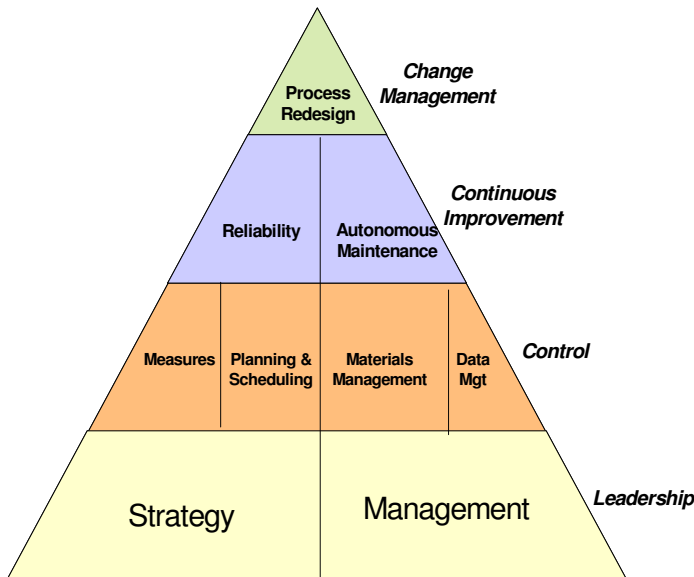




Approach & Work Example

Over the last 15 years, the Lysis Maintenance Improvement model has been fine-tuned to deliver maximum benefits at minimum time and cost. Our structured methodologies are tailored to the needs of large and smaller industrial clients in Energy, Utilities, Engineering and Manufacturing.

We deliver excellence in maintenance operations by applying a holistic approach that is both top-down and bottom-up. Its key elements can be represented in the following diagram.



Maintenance Pyramid of Excellence

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Our track record

As an independent resource with many successful implementations worldwide, Lysis provides objectivity and insights to minimize projects risks during the change process. Increases in plant performance ranging from 25-50% were realized in most implementations. Some implementations were done to rescue previous attempts.

Our Operations Consulting practice works with leading companies on all aspects of asset management (plant, processes, systems and people) to achieve their goals.

Example of Work

This UK-based utility provides water and sewerage services to 1.5 million people in England's South West region. In order to satisfy the requirements of its customers, the water regulator and its shareholders, the Company needed to achieve high return on net assets, high plant availability and reliability and a reduction in operating and capital costs.

In order to ascertain the potential and scope for business improvements, the Company assigned Lysis to undertake a detailed review of its Maintenance function.

Lysis consultants started by establishing 10 key elements that together defined the Maintenance function; for example, Maintenance Strategy, Metrics/Scorecards and Organisational Effectiveness. Via a series of structured interviews, observations, computer data analyses and internal benchmarking comparisons, our consultants rated the performance of each "element". We produced evidence, for instance, that Workload Management and Materials Management were problematic and any small improvements would lead to significant cost savings.

Based on the findings, we formulated an improvement approach aiming to bring together changes to certain aspects of Maintenance, under the umbrella of a Business Transformation initiative. This in-house initiative would have been supported by dedicated, expert teams, operating both at central and regional level, with each team being responsible for practising value-adding methodologies to raise asset performance to a world-class level. Some of the techniques that were put forward included Reliability-Centred Maintenance, Condition Monitoring and Total Productive Maintenance

The review undertaken by Lysis consultants identified in a short time many improvement opportunities; produced a clear plan for realising those opportunities and calculated projected annualised savings of over £1.1 million.