



eBook

First Steps to  
Operational Excellence



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## Introduction

As more and more companies seek to improve their productivity and reduce the cost of goods produced, the focus turns to consolidating the various processes within their business. With multi-site organisations, it is more important that they have consistent approaches to how they conduct business. This has many benefits, including the ability to compare performance across sites, knowing that the methods and systems are common within the organisation.

Over the years, businesses have consolidated and standardised, for example, their human resource practices, their finance systems and practices, their information systems and production methods, but one area that has generally been allowed to develop on its own is maintenance and, more recently, asset management.

It is not uncommon in multi-site organisations to see that the approach to the maintenance of the manufacturing and utility's equipment is left to the individual sites to develop their own practices. The problems this produces become apparent when, as is increasingly common, software systems are introduced across the organisation - systems such as SAP and Maximo.

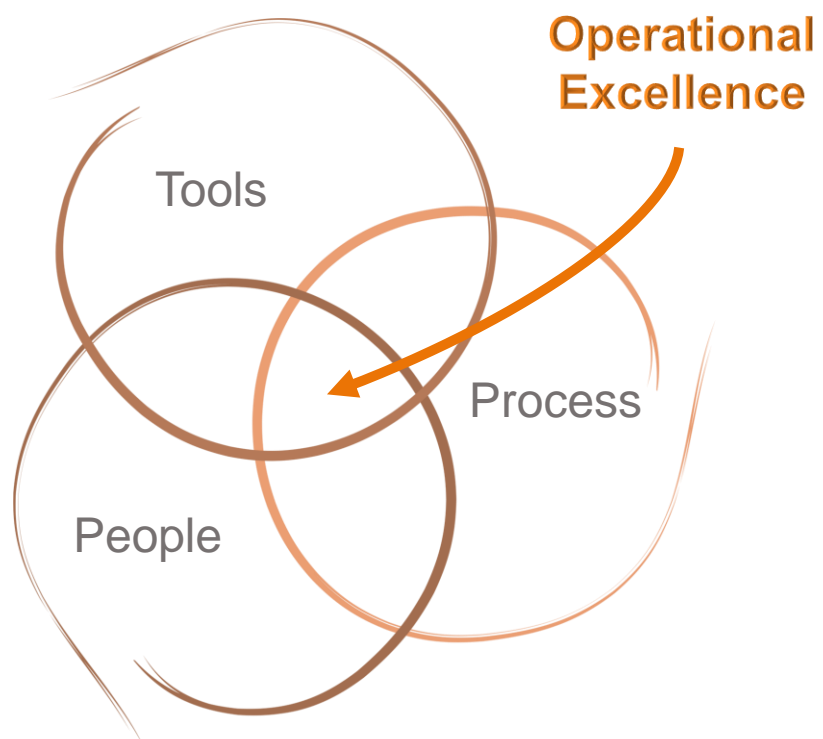
The use of such systems requires consistency of approach and therefore, it becomes more important that there are consistent maintenance processes across the organisation. This consistent approach allows sites to compare their performance, their equipment reliability and failure and maintenance programmes.

# First steps

In our eBook – First Steps to Operational Excellence, we look in more detail at the main Key Performance Areas (KPAs) that form part of an Operational Excellence programme, these are:

1. Business Focus
2. Management Values and Leadership
3. Organisation
4. Communication
5. Structure and Performance Management
6. Rewards and Benefits/Recognition
7. Operations Skills and Development
8. Health and Safety
9. Product Planning and Control
10. Quality Control of Processes
11. Supply Management
12. Operations
13. Productivity
14. Plant Maintenance
15. Continuous Improvement

Read on for an overview of each KPA, to find out what the first steps are to achieve Operational Excellence and how you can take them...



## 1. Business focus

Your business objectives and strategy should be communicated throughout all levels of your organisation - but keeping your business focussed is not just about communication.

An organisation has three pillars:

### People

Having the right people, motivated and performing is naturally a key requirement for your plant to perform.

### Technology

Providing people with the right tools to do their jobs well is also vitally important. Computerised Maintenance Management Systems (CMMS) have revolutionised the manufacturing and services environment. With the utilisation of Industry 4.0 predictive maintenance solutions, many businesses are becoming much more efficient while driving down costs.

### Process

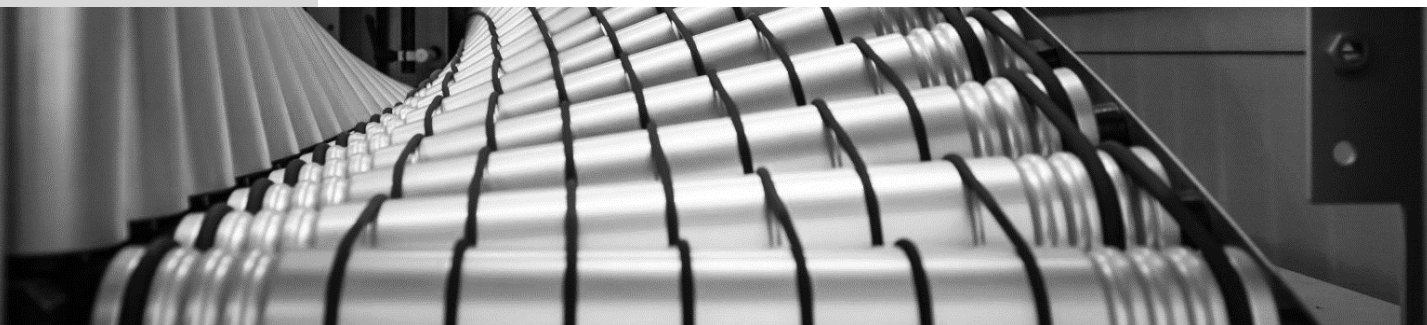
Processes are what holds it all together. Processes can include your manufacturing strategy, sales and marketing plans, supplier management, purchasing of equipment, machinery and materials, to name just a few.

Whether you are aiming to be more efficient, drive down costs or improve customer satisfaction, business processes will cut across the whole organisation, not just one individual element. Having effective processes in place, which are followed by your staff, will ultimately support the company's objectives and strategy.

If your business is looking to make improvements and changes then you need to focus on the sum of all the above and how they work together, to form a complete and uniform business process. You can achieve this by completing an Operational Excellence programme.

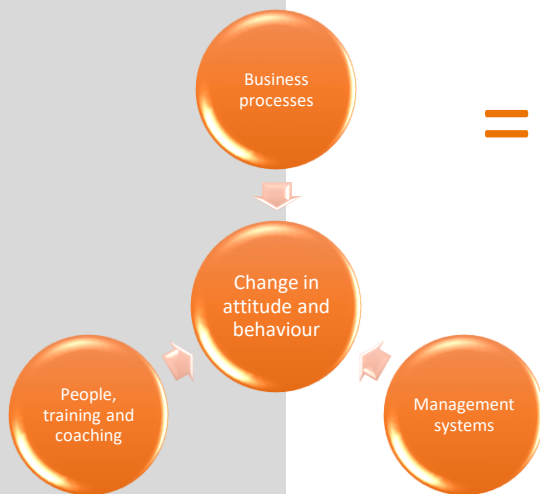
## 2. Management values and leadership

Having clear management values helps your company ensure that all your employees are working towards the same goals. Your core values support the company's vision, which will shape its culture and impact your business strategy. They help you create a purpose, improve team cohesion, and create a sense of commitment in the workplace.

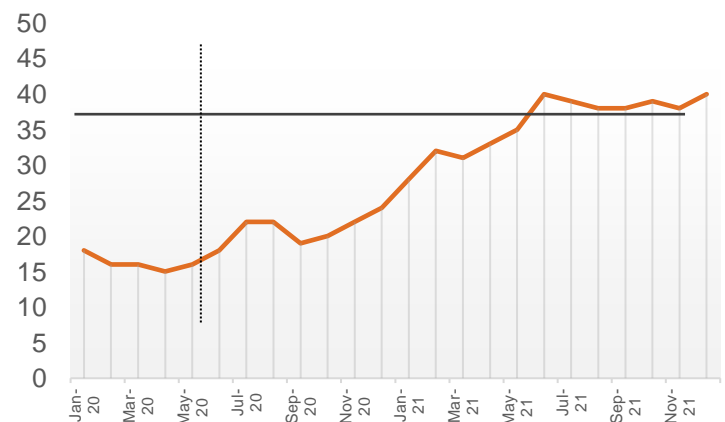


When assessing your management values and leadership, you need to ask yourselves if the senior management team are leading by example? Do they follow the company values? Do they follow their own training and self-development plans? The leadership team need to create and support an environment which promotes creativity and proactivity regarding continuous improvement.

Teams and individuals need to be allowed to operate with self-sufficiency, within safety and commercial constraints, and feel they can openly approach their leaders.



Improved Sustainable Results



Few manufacturing organisations undertake a transformation with the goal of shaping or re-shaping their own culture. Often, when looking to commence an Operational Excellence programme, management realise that these new ways of working can be so different from their current ways, that making those changes seems impossible - without a cultural change.

If you are looking to transform your manufacturing performance, then this will likely mean changing the organisation's culture and this means that the leaders must change how they lead first.

### 3. Organisation

A well-structured organisation provides guidance to employees by clearly showing the official reporting relationships that govern the workflow of the plant. A formal outline of the structure makes it easier to add new positions as required, as well as providing a flexible and ready means of growth.

The structure needs to be designed to allow for rapid decision-making which is filtered through every level. For this to happen, communication is key.

Teamworking should be supported, and regular team briefings will aid the communication process and build a sense of belonging.

Skills analysis and training should be formalised and managed to create a level of flexibility and competence at all levels with follow ups in place to help staff expand their roles.

An effective organisation structure will give employees more clarity, help manage their expectations, enable better decision-making, and provide consistency within the business.



#### 4. Communication

Effective communication can have an enormous positive impact on a manufacturing company's productivity, profits, and workplace attitude. The benefits can include:

- Reduced risk in the workplace
- Greater efficiency in production
- Improved cohesion and engagement

With communication having such an influence over the business, when assessing your internal behaviours, you need to consider if you brief your employees regularly about business topics and vital information. Management should listen and respond to feedback and suggestions from employees and undertake regular motivational/attitude surveys. Employees should be consulted about any major decisions or initiatives that may affect them and be given a platform to voice their opinions.

Communication can often become an ongoing and intractable problem but if this is addressed head on, then challenges can be overcome with a thoughtful, strategic and well-planned approach.

#### 5. Structure and performance management

Organisation structures can inhibit or promote performance, depending on how effectively the supervisory relationships and workflow influence productivity. These define departmental structure and the reporting hierarchy.

Performance management involves goal-setting activities and periodic reviews by managers in the reporting hierarchy. Without defined policies and procedures that are consistently enforced throughout the organisation, performance management strategies can fail to achieve their desired goal of improving product and service quality for end-user customers.



When assessing your internal structure and performance management, you need to address if each employee has a suitable job profile which also outlines their objectives and provides a way of measuring performance. Can up-skilling and/or multi-skilling your people improve performance and aid a flatter, leaner organisation? Do you monitor job satisfaction and promote teamwork?

When taking steps to promote performance management, always include the reviewing of organisational goals, prioritising work,

specifying targets, identifying specific measures and metrics, aligning employees' goals to the company's strategic objectives and defined standards.

## 6. Rewards, benefits and recognition

In competitive industries, companies look to improve quality while reducing costs. Employee rewards, benefits and recognition programs are one method of motivating employees to change work habits and key behaviours for the benefit of the business and themselves.

Adopting a fair and open approach to basic pay should be the same for everyone and competencies and achievements should be rewarded whether personal or as part of a team.

The business's success should be reflected in a rewards system with motivational recognition for employees and teams.

Rewards, benefits, and recognition programmes have a valued place in any business, and you should first determine desired employee behaviours, skills, and accomplishments that will support your business goals. By rewarding and recognising outstanding performance, your company can have an edge in a competitive climate.

## 7. Operations skills and development

Employers are responsible for the growth and progress of their employees and must remain abreast with the requirements of the law and health and safety regulations.

Employer-endorsed skills development has an important role to play in the future of any industry. Employers who invest in their staff are more likely to have a team that is loyal, be able to create new opportunities (both internally and externally) and, by employing skills development, create a capable workforce equipped with the tools they need to excel.

Individuals should have targets and their performance regularly appraised. Time needs to be allocated for training and regular team activities undertaken.

## 8. Health and safety

Employee development requirements can change, and employers should undertake regular reviews to ensure that employee development plans continue to meet the needs of their business and its staff. Human resource is one of the most important aspects of any business and trained personnel are an extremely valuable asset in the promotion of a safe and efficient working environment.

As part of an Operational Excellence assessment, to establish any gaps that your organisation has with regard to operations skills and development, we will check that procedures are in place to ensure the correct training is being provided and recorded and that a training matrix for your team is available.

There are an estimated 2.5m workers in the manufacturing industry (source: HSE). Over the past 5 years, each year an average of 22 workers died in workplace accidents. There was also an average of more than 3,100 reports of major injuries and about 4,100 reports of injuries that kept workers away from work for seven days or more. Many manufacturing workers also suffer ill health from workplace exposures.

To reduce risks in your workplace, formal procedures need to be in place and all your employees need to be aware of your company's health and safety regulations, as well as all visitors and contractors that visit your site.

Systems need to be in place for the risk assessment for all production processes and materials and any accidents recorded through a formal accident reporting procedure.

The equipment and systems belonging to your organisation will be covered by some form of legislation. Maintaining health and safety standards and ensuring you comply with current regulations must form an integral part of your manufacturing and maintenance operations.

# WORK SAFETY





## 9. Production planning and control

Production planning deals with the basic concepts of what to produce, when to produce, how much to produce etc. It also involves taking a long-term view of overall production planning. Production control looks to utilise different types of control techniques to optimise performance out of the production system to achieve the overall production planning targets.

Production planning and control are essential ingredients for the success of an Operational Excellence programme. The benefits are as follows:

- It ensures that optimum utilisation of production capacity is achieved, by proper scheduling of the machine items which reduces the idle time as well as overuse.
- It ensures that inventory levels are maintained at optimum levels at all time.
- It ensures that production time is kept at optimum level and thereby increases the turnover time.
- Since it overlooks all aspects of production, the quality of the final product is always maintained.



The areas that will be reviewed, as part of an Operational Excellence initial assessment include; the production planning system that is driven by the sales forecasts, the communication process between various parts of the business including planning, purchasing, stores and maintenance, capacity planning, the flexibility of production plans and various key performance areas.

The many benefits of effective production planning and control show that it can increase a business's revenues by maximising the utilisation of its resources. Overall, if the individual components within the organisation are not working well together, there will only be a limited amount of success for the entire manufacturing operation.

# QUALITY CONTROL



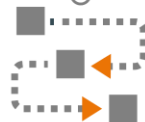
ANALYSIS



EVALUATE



IMPROVE



PROCESS



APPROVAL



RESULT



CUSTOMER

## 10. Quality control of processes

Quality is an important factor when it comes to any product or service. With tough market competition, quality has become the market differentiator for almost all products and services.

Quality control is essential to building a successful business that delivers products that meet or exceed customers' expectations. It also forms the basis of an efficient business that minimises waste and operates at high levels of productivity. A quality control system based on a recognised standard provides a strong foundation for achieving a wide range of operational benefits.

When reviewing the quality control of your processes, you need to ensure that parameters have been established and a statistical process control is employed to monitor performance. Skills and operating requirements need to be clearly defined for each process and the individuals performing the tasks assessed on a regular basis. There needs to be excellent working relationships between production and quality management with regular reviews conducted. The causes of any quality problems need to be regularly reviewed by both the production and quality departments, working together to resolve the issue.

Your quality management information system needs to be effective and fully utilised to provide the required information to the quality department. Robust quality control processes can prevent faulty goods being sold which will improve your business reputation for quality, which can increase sales.

## 11, Supply management

Supply management affects manufacturing in a variety of ways, from both a daily operational, and a strategic perspective. It is an important aspect of manufacturing, impacting processes such as the availability of inputs needed for production processes, costs and profitability of manufactured items, company infrastructure and ways in which companies interact with their suppliers and customers.

Effective supply management ensures that raw materials consistently arrive at manufacturing production facilities on time, in turn preventing the need to source additional materials from alternative sources, subsequently avoiding higher prices and preventing lower profitability.

When looking to assess your supply management, first you need to ensure that your buyers have the necessary skills, targets and supporting training programmes in place. You will need to review how your purchasing system integrates with your production and maintenance planning. When selecting your suppliers, you need to ensure they are fully Quality, Cost, Delivery, Development and Management (QCDDM) evaluated and that these objectives are reviewed regularly. You also need to ensure you are benchmarking your existing suppliers to ensure you are getting the best value while also monitoring your customer satisfaction levels.

Management of both company infrastructure and supplier and customer integration within supply management can enable manufacturers to achieve optimum efficiency within all their production processes, allowing them to remain competitive within the global marketplace. Additionally, manufacturers implementing continuous quality improvement programmes, can initiate changes to wider reach supply-chain dynamics, encouraging collaboration with customers, suppliers, distribution systems and transportation contractors.



## 12. Operations

Operations ensures that the physical equipment and the user interface of a business work harmoniously for the benefit of the company. A manufacturing system provides a platform where human and automated activities are blended in real-time.

Managing your business operations gives you the ability to deal with important factors such as intellectual capital, operating policies, average attrition rates and how to improve competitiveness.

When the operations are running smoothly, managers will have more time to generate new ideas and apply them to increase company sales.

Managing your operations effectively gives you the opportunity to increase the efficiency of the way you manufacture goods and ensures you comply with government regulations.

Areas that need to be assessed as part of an Operational Excellence programme include the overall condition and performance of the production plant, to ensure that operators are working in a flexible way, identifying any bottlenecks and putting the plan of action together to eliminate them. There needs to be well defined procedures for product changeovers, and a maintenance programme that causes minimal disruption to production schedules. Stores, warehousing and production need to co-ordinate to ensure that stock levels are kept to a minimum through the whole production process from raw materials to finished goods.

Manufacturing operations requires different departments to work together to produce quality products. This helps improve business productivity and meet the expectations of your customers.

Employing innovative technology can help your company achieve its set goals and objectives. You also need to ensure that your system is working efficiently by carrying out regular statistical control methods.



### 13. Productivity

Productivity is one of the main concerns of business management and engineering. Practically all companies have established procedures for collecting, analysing, and reporting productivity data.

Many companies have formal programmes for improving productivity via existing control systems. Companies are constantly looking for ways to improve quality, reduce downtime, and increase inputs of labour, materials, energy and purchased services. Simple changes to operating methods or processes can increase productivity. The biggest gains often come from adopting new technologies or concepts, which requires capital expenditure for new equipment, computers or software.

## 14. Plant maintenance

When assessing your productivity, the cycle time of product through the process needs to be defined and recognised, as does the cost to produce a part and the cost of downtime. Lost opportunities need to be recorded. Mean Time Between Failures (MTBF), Mean Down Time (MDT) and Mean Time to Repair (MTTR) need to be monitored. The Overall Equipment Effectiveness (OEE) needs to be calculated by the production team. Measuring OEE is a manufacturing best practice. By measuring OEE and the underlying losses, you will gain important insights on how to systematically improve your manufacturing process. OEE is the single best metric for identifying losses, benchmarking progress, and improving the productivity of manufacturing equipment (i.e. eliminating waste).

Productivity growth is important to any organisation because increased income means the company can meet its obligations to customers, suppliers, staff, and shareholders while remaining competitive or even improve its competitiveness in the marketplace.

Effective plant maintenance is a fundamental requirement for any organisation that owns physical assets, to guarantee operational efficiency and to ensure that assets are in optimum condition. Well maintained equipment reduces unplanned downtime.

A well delivered preventive maintenance programme helps improve the operational performance and reliability of manufacturing and facilities equipment, contributing to profitability by reducing operating costs and improving the output and quality of manufactured products. In addition to cost savings, other benefits include improved workplace safety and enhanced labour productivity.



When assessing your company's plant maintenance regime, you should first take into consideration any unplanned downtime and the causes. Plant operators should be monitored to ensure they are operating the plant in a way that avoids damage and that the maintenance team have the training to a level that enables them to carry out the tasks required effectively. The skills and training required by operators and the maintenance team need to be regularly reviewed. There needs to be excellent working relationships between both production and maintenance personnel. You should also ascertain if your maintenance management information system is effective and being fully utilised.

Maintaining your company's assets and resources while controlling costs will support the reliability of the operation of your organisation's physical assets, to achieve the required standards and remain compliant.



## 15. Continuous improvement

Continuous Improvement (CI) is an ongoing effort to improve products, processes, or services by reducing waste or increasing quality. This continuous effort drives a competitive advantage for organisations that get it right, but consistency is not easy to achieve. Nor is change; whether your current processes are good or bad, effective or ineffective, they are deep rooted habits for your organisation. Setting up a clear and realistic plan allows your organisation to recognise and reward the right behaviour and create the foundation for true cultural change.

A successful continuous improvement plan can be demonstrated through strategies and actions. All levels of management and employees need to be aware of the principles and expected approach. There should be a dedicated team for CI activity management and the progress should be discussed and documented. Benchmarking processes throughout the company will identify operational improvements and establish effective goals and objectives.

Many companies struggle to assemble a cohesive, continuous improvement plan and often turn to external companies such as MCP for assistance in analysing their current CI situation, to develop a deeper understanding of strategic objectives, identify opportunities across the enterprise, and drive better outcomes for long-term success.

# first steps towards operational excellence

MCP has over 30 years' experience of working with multi-site organisations to develop and deliver Operational Excellence programmes across many different industry sectors including food and drink, pharmaceutical, medical devices, automotive, paper, airports and facilities.

Our four-stage process for delivering operational excellence includes:

1. Initial Assessment (or gap analysis against best practices)
2. Implementation Planning
3. Implementation Programme
4. Benefit Realisation

Using this approach, we initially identify the gaps between good practices and current practices using [MCP proprietary assessment system called AMIS \(Asset Maintenance Improvement System\)](#).

Step 4 Benefit Realisation

Step 3 Implementation Programme

Step 2 Implementation Planning

Step 1 Initial Assessment

## 1. Initial assessment

The [AMIS Assessment](#) is recognised as the industry standard and provides the largest database of benchmarks and Key Performance Ratios of efficiency and effectiveness, worldwide.

The deliverables of The AMIS Assessment are:

- Identification of gaps between your current performance and industry best practice
- A set of effectiveness scores
- Comparisons with similar or competitor organisations within your sector
- Standard Key Performance Ratios, comparing your site with data collected from other sites

## Example Assessment Scores

— Example Business — World Class



### 2. Implementation planning

Once the initial assessment is complete, we move on to developing an implementation programme that meets the requirements of the business and its objectives. This programme will invariably be divided into workstreams which will be delivered by site champions, supported by MCP consultant facilitators and trainers.

We then provide support, resources and training to implement the agreed plan and ensure site teams are supported to achieve the business goals.

### 3. Implementation programme

In many cases, training programmes are introduced which provide site teams with an understanding of the tools and techniques that can be applied to drive improvements.

### 4. Benefit realisation

MCP has supported clients with their Operational Excellence programmes and have delivered reductions in unplanned breakdown maintenance; typically, removal of 25% to 50% of wasted, unnecessary preventive maintenance hours and increased productivity by 40 to 80%.

Typical benefits from our Operational Excellence programme can include:

- Manufacturing cost reduction by 20%
- Maintenance costs reduced by 20%
- Breakdowns reduced by 50%
- Quality costs reduced by 30%
- Productivity gains by 20%

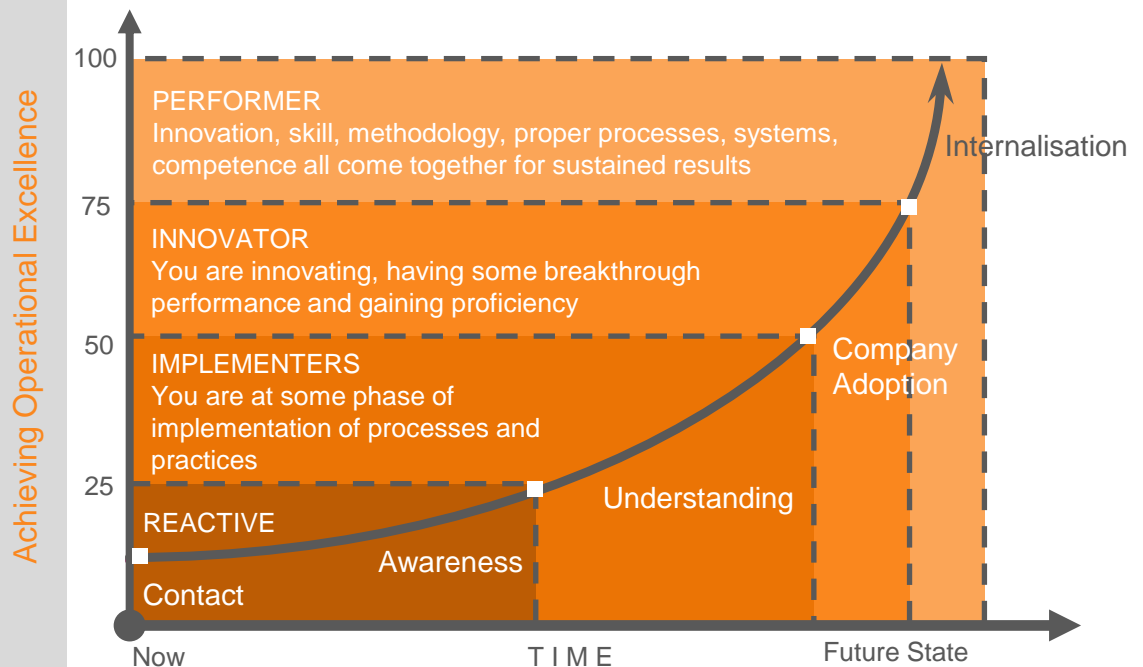


# Conclusion

Before you embark on an Operational Excellence programme, it is essential that your initial evaluations and assessments are accurate as these will formulate your future implementation plans.

By working with MCP and completing a full, detailed AMIS Assessment of your manufacturing and maintenance operations, we can ensure that the path you subsequently embark on will provide you with the outcomes that you require to help your organisation flourish in a highly competitive marketplace.

Are you looking to achieve Operational Excellence within your organisation, or have already started a programme and uncovered some hidden stumbling blocks along the way - then we can help.



# About Us

The [MCP Group of Companies](#) was originally established in 1987 providing physical asset management and maintenance consulting and training services to clients on a worldwide basis.

We are focused on supporting our clients' future business objectives and proud that our history has given us the firm foundations upon which to grow and keep pace with industry changes.

Our consultants have the skills to help you each step of the way. They are Institute of Asset Management accredited and can support you in developing better awareness of your strengths and weaknesses, help to create an improvement plan, build capacity and deliver positive business change.



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