

# Benchmarking Process Plant

Identifying where the money goes



**ABB**

## How much is under-performance costing you?

- How far ahead are world class performers?
- How do your operational practices measure up?
- Where are your hidden opportunities?
- How quickly could your performance gap be closed?
- What will be the financial impact of closing the gap?

ABB Engineering Services supplies a range of consulting services in manufacturing operations and engineering, including project implementation and management to customers in the chemical, petrochemical, oil and gas, pharmaceutical and consumer industries worldwide.

*“Your team has identified more opportunities in three days than an internal team did in several months.”*

Major German Chemical Company

## Capabilities

We have a comprehensive approach to assess industrial processes. This provides your decision makers with a rapid, independent view of the value of performance and practice improvement opportunities, thus establishing a firm platform for planning sustainable change programmes.

We identify key issues and opportunities for improvement through benchmarking your performance & practices in areas such as :

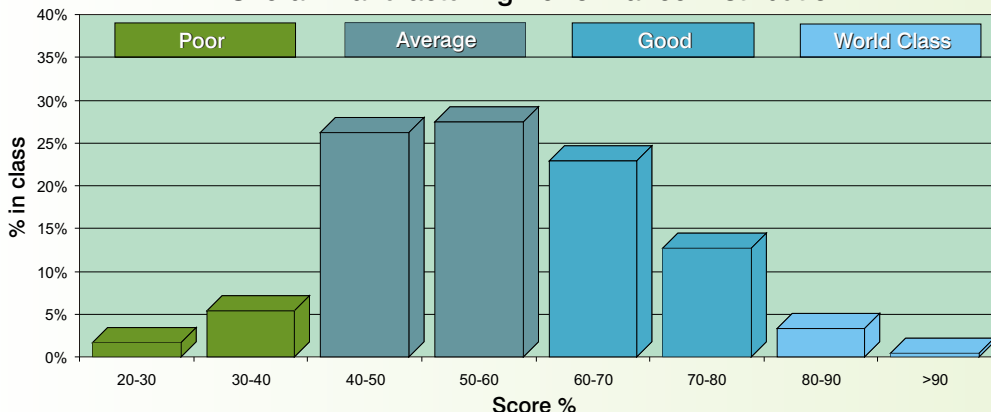
- Supply chain
- Manufacturing
- Maintenance
- Energy
- Yield
- Waste
- Safety
- Environment
- Quality
- HR
- Competitive position
- Strategy



*“We engaged ABB Engineering Services for the front-end study because they can think outside proprietary technology solutions.”*

Refinery Manager, UK Petrochemical Company

## Overall Manufacturing Performance Distribution



## Our experience

Track record:

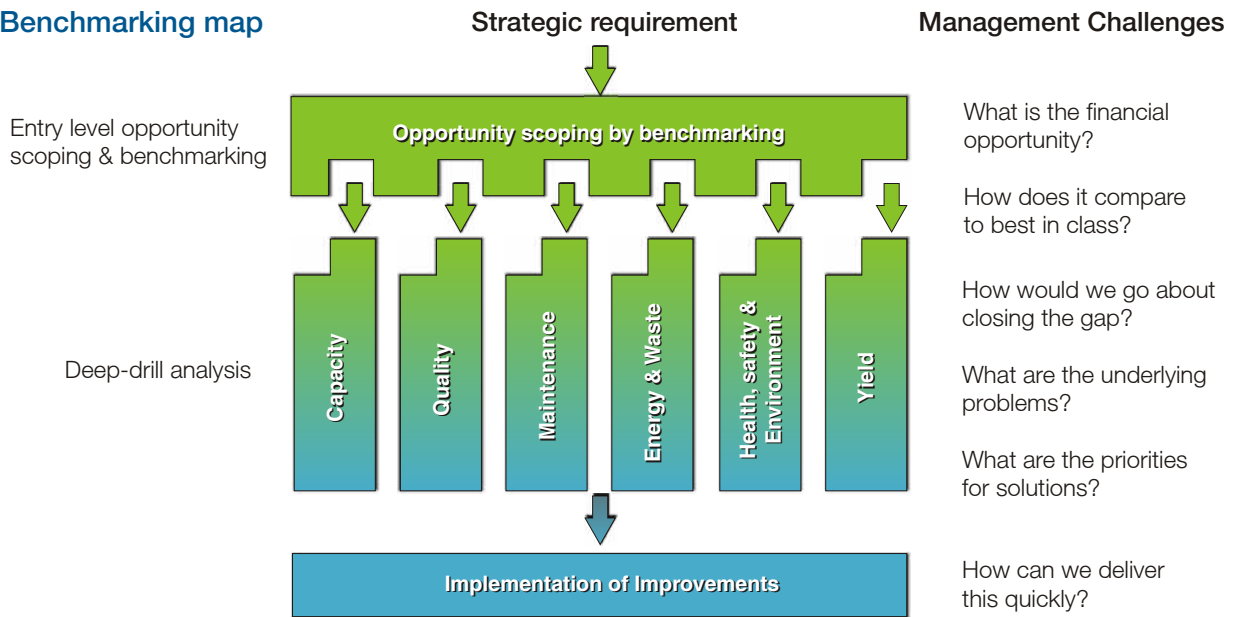
- Database of 500 plant assessments
- 24 countries
- Over \$25b turnover surveyed
- Over \$100m client benefits in 1st year
- Wide range of businesses ranging from small-scale batch to large-scale continuous operation
- All regions of the world

# Benchmarking process

*“I found it inspirational to see how benchmarking created a clear case for action within our company and to see how ABB helped our people apply techniques, both new and traditional, to improve their business.”*

Group Vice President, Specialty Chemical Company

## Benchmarking map



## Making improvements after the study

Our approach to benchmarking has consistently laid the foundations for making rapid operational improvements - often with little need for capital expenditure. Our tried and tested manufacturing improvement process delivers step-change improvements to asset performance.



Business	Project	Outcomes
Petrochemical plant	Manufacturing excellence	\$16m per annum value
Petrochemical plant	Operations improvement	\$10m per annum value
Continuous chemical plant	Manufacturing Improvement Teams	\$1m per annum value
Specialty chemicals	Batch plant OEE	\$2.9m extra output plus fixed cost reductions
Specialty chemicals	Polymer processing	\$4.3m variable cost plus \$3m fixed cost savings
Catalyst manufacturer	Operational excellence	\$4m per annum value
Specialty chemicals	Manufacturing excellence	\$1.5m per annum value
Food company	Throughput project	+40 OEE points \$4m benefit

*“This benchmark study and its follow-up are absolutely central to our strategy of growing the business. Its success is due to its involvement of people in improving our performance.”*

Senior Vice President, US Chemical Company



# The services we offer

## Benchmarking and associated support

- Evaluation of performance
  - Plant operations
  - Process costing
  - Maintenance
  - Scheduling & forecasting
  - Demand management
  - Energy usage & management
  - Effectiveness of control systems
- Evaluation of practices
  - Operations practices
  - Maintenance practices
  - Organisational / safety culture
  - Efficacy of improvement processes
- Manufacturing strategy
  - Formulation & deployment
- Improvement delivery teams

## Our capabilities include:

- Asset assurance
- Asset care
- Asset performance improvement
- Business process optimisation
- Capital project management and execution
- Energy and utilities
- Engineering design services
- Environment services and IPPC
- Manufacturing process optimisation
- Operational plant support
- Organisation and competency development
- Safety management
- Software solutions

ABB Engineering Services is part of ABB's Automation Technologies division serving customers in the chemicals, consumer, life sciences, manufacturing, metals, paper, petroleum and utility industries.

### UK locations

Warrington  
Teesside  
East Kilbride  
Derby

### International locations

Americas  
Asia  
Europe  
Middle East



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