Benchmarking Process Plant
Identifying where the money goes
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
ABB Engineering Services supplies a range of consulting services in manufacturing operations and engineering, including project implementation and management to customers in the chemical, oil and gas, pharmaceutical and consumer industries worldwide.

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?

+ What will be the financial impact of closing the gap?

How quickly could your performance gap be closed?

**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**

**Strategic requirement**

Opportunity scoping by benchmarking

- Capacity
- Quality
- Maintenance
- Energy & Waste
- Health, safety & Environment
- Yield

Entry level opportunity scoping & benchmarking

Deep-drill analysis

**Management Challenges**

- What is the financial opportunity?
- How does it compare to best in class?
- How would we go about closing the gap?
- What are the underlying problems?
- What are the priorities for solutions?
- How can we deliver this quickly?

**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.

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

“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.

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East Kilbride
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Americas
Asia
Europe
Middle East

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