Largest Independent Pharmaceutical Benchmarking Survey

Operational Excellence in the Pharmaceutical Industry II
Operational Excellence in the Pharmaceutical Industry

Largest Independent Pharmaceutical Benchmarking Survey for Operational Excellence

The international project "Operational Excellence in the Pharmaceutical Industry 2" (OPEX_Pharma2) deals with the implementation of 6 Sigma, Lean Thinking and other basic principles of Operational Excellence in the Pharmaceutical Industry. In the year 2004 the first edition of OPEX_Pharma1 was launched by the Institute of Technology Management of the University of St. Gallen (ITEM-HSG), Switzerland. The participation of 102 production plants all over Europe permitted the most detailed recording of a current status of the Pharmaceutical Industry in terms of Operational Excellence.

Key Findings of OPEX_Pharma1 had been:

1. **OPEX drives Business Performance**
   The site's status of Operational Excellence and Lean Thinking has a significant impact on business performance.

2. **Strong Need of Pharma-adapted Production Systems**
   The industry is lacking behind concerning the implementation of basic principles of Operational Excellence. Top Performer Site's revealed a higher implementation of basic elements. The study also pointed out that there have not been major operational improvements for years and that there are tremendous differences in the efficiency of quality management. Another point was the low implementation of Just-In-Time practices which influenced the management of inventory.

3. **Development Pathway for a sustainable Transformation**
   The statistical analysis of the sample revealed that Top Performer in Total Productive Maintenance who operate with stable running equipment have an above average implementation of TQM. This pays off with stable operating processes and a higher JIT Performance which enables significant lower lead times.

**Objectives of OPEX_Pharma2**

Major changes and trends have taken place since our first survey. Almost all multinational pharmaceutical companies have launched efficiency and continuous improvement initiatives. Global competition, increasing cost pressure, shorter product life cycles and a more and more complex production program have a strong impact on the industry and its production sites. OPEX_Pharma2 is launched to quantify today’s level of OPEX, to demonstrate its journey within the last years and to analyze its future role in manufacturing.
The overall hypothesis of the project OPEX\textsubscript{Pharma}2 is that the right implementation of basic principles of OPEX will lead to a significantly higher performance among pharmaceutical manufacturing plants and thus lead to a higher overall business performance of the company. This hypothesis was proven by the first survey!

Research Questions of OPEX\textsubscript{Pharma}2 are:

- What is the status of OPEX today?
- What has changed compared to the OPEX\textsubscript{Pharma}1?
- Which principles of OPEX are implemented today?
  - Just-In-Time
  - Total Quality Management / 6 Sigma
  - Total Productive Maintenance
  - Management System
- What is the future role of manufacturing?
- What are the implications for manufacturing?
- How should pharmaceutical manufacturing respond to the changing environment?
Your Benefit

OPEX\text{Pharma}2 is a research project conducted by the University of St. Gallen. It is operated by one of the leading European benchmarking institutes (experiences with over 40 international benchmarkings) and financed by the participating partners!

Our experience ensures:

- Independence from single sponsors
- High interest in added value of the results for practitioners as well as for the scientific community
- Procedure according to the International Benchmarking Code of Conduct (that ensures a correct attitude of all participants)
- Data handling with utmost discretion for high data security

The study will deliver:

- a Performance Rating of your site against Top Performers as well as against industry level including major Key Performance Indicators
- an Implementation Rating of your site against Top Performers as well as against industry level including basic principles of TPM, TQM and JIT
- a representative picture of Practices which really drive Operational Excellence
- the knowledge of Best Practice in your industry to identify your own room for improvement
- an Anticipation of Existing Trends in pharmaceutical operations
- a Multiple sites Rating within your company network against one another
- an Improvement Report in case you have participated in OPEX\text{Pharma}1
- a Comparison between regions (India, Europe, China, Puerto Rico, US, …)
Example of Overall Result for "OPEX @ Your Site"

Implementation of basic principles

1. Process management:

2. Cross functional product development:

3. Customer involvement:

Performance Indicator

QA/QC-costs / Total cost (COGS) (Median: 5.12%)

QA/QC-costs / Direct labour costs (Median: 39%)

Complaint rate - supplier (Median: 1.0%)
Example of Results for "OPEX @ Pharmaceutical Industry"

Cost Savings for Average Plant compared to Top Performer

<table>
<thead>
<tr>
<th></th>
<th>Average plant</th>
<th>TOP 10%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labor</td>
<td>25%</td>
<td>17%</td>
</tr>
<tr>
<td>Property, Plant &amp; Equipment</td>
<td>15%</td>
<td>11%</td>
</tr>
<tr>
<td>Cost of material</td>
<td>44%</td>
<td>40%</td>
</tr>
</tbody>
</table>

- €1.5m lower QC/QA costs
- €1.4m lower maintenance costs
- €840k lower depreciation due to better asset utilisation
- €740k lower costs due to better yield

Operations Strategies

- Research driven company
- Generic manufacturer
- Contract manufacturer

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We will provide you with three specific reports:

"OPEX @ My Site"  A personalized site report that focuses your relative KPI performance, your strengths and weaknesses concerning TPM, TQM, JIT and your management system as well as an analysis of regional site-related factors

"OPEX @ Pharmaceutical Industry”  An industry report that shows which pattern Top Performers have in common and which practices are really driving Operational Excellence within pharmaceutical companies

"OPEX Development 2004-2008"  If you have already participated in the first survey, this report will give you insights in both, yours and the industry's development.

The book "Operational Excellence in the Pharmaceutical Industry" by Prof Dr. Thomas Friedli et al. that provides a detailed overview of the results and shows the different key issues of setting up an improvement program for operational excellence.
Data Security

The benchmarking project will be conducted in accordance to the International Benchmarking Code of Conduct which ensures a correct attitude of all participants. The company data will be handled with utmost discretion and if applicable will be made anonymous. Company specific data is not to be used without prior approval of the respective company. The project initiators reserve to themselves to use the project results in summary and blinded for publications.

Investment

The investment for the participation in the Benchmarking-Study is € 2000 (excl. VAT) per participating site. For more than three sites, please ask for discounts.

Time Table

<table>
<thead>
<tr>
<th>May</th>
<th>August</th>
<th>September</th>
</tr>
</thead>
<tbody>
<tr>
<td>Survey/Questionnaire</td>
<td>Analysis</td>
<td>Sending Reports</td>
</tr>
</tbody>
</table>

Project Partners

The University of St. Gallen (HSG) is among Europe's leading business universities. It is not only well-known for its basic research but also for its applied research for direct implementation which is performed by its institutes.

As one of the institutes at the University of St. Gallen, the purpose of the Institute for Technology Management (ITEM-HSG) is to act as a "Center of Excellence" in the following fields: a leading European research institution for the management and use of technologies, recognized in the scientific as well as in the management community; a competent center for the efficient transfer of research results into practice.

Contact

Thomas Gronauer  
thomas.gronauer@unisg.ch  
University of St. Gallen (HSG)  
Institute of Technology Management  
Dufourstrasse 40a, CH-9000 St. Gallen  

Saskia Guetter  
saskia.guetter@unisg.ch  
University of St. Gallen (HSG)  
Institute of Technology Management  
Dufourstrasse 40a, CH-9000 St. Gallen
Contact
Benchmarking Project
Operational Excellence
in the Pharmaceutical Industry II

To:

ITEM-Institute of Technology Management
University of St. Gallen
Thomas Gronauer
Dufourstrasse 40a
CH-9000 St. Gallen

FAX: +41 (0)71 224 73 11
FON: +41 (0)71 224 72 69
E-mail: thomas.gronauer@unisg.ch

From:

Name: ..............................................................................................................................
Company: ..........................................................................................................................
Function: ............................................................................................................................
Telephone: .........................................................................................................................
Fax: .................................................................................................................................
E-mail: .............................................................................................................................
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My interest is:

○ I would like to participate in this project. Please provide me with the needed documentation.
○ I would like to know more about this project. Please contact me.