LAYERED PROCESS AUDIT

Executives achieve process execution through brief process audits
Layered Process Audit (LPA) is a successful method to improve the implementation of processes and specifications at all levels and in all areas in companies, and thereby to increase the productivity of the organisation.

“Layer” stands for the various levels of management in the considered process wherein the LPA is implemented. “Process Audit” is a tried and tested form of assessment to identify if processes are implemented as agreed, and if the desired results are achieved.

Through its implementation, LPA brings along a lot of advantages and outcomes in the company and achieves that

- processes are carried out demonstrably and that specifications, which cannot be implemented, are identified
- for the managers and employees, there is better process understanding and increased clarity about the important standards or regulations
- Managers understand their responsibility and managerial functions in a systematically improved manner and use the LPA as a tool for the same
- Employees develop a better sense of responsibility for the implementation and improvement of processes
- systematic causes that hinder the implementation of the standards are identified, and that measures are initiated and verified
- in case of deviations, the focus in the cause analysis shifts from people to the organisation, management or processes
- concerned employees, supported by higher implementation probability, participate more actively in the search of improvement
- through the preparation of LPA-checklists, the required specifications are defined more clearly and more bindingly between the management and employees
- other internal audits are partly replaced by LPA and the necessary expenses can be reduced

At the turn of the millennium, LPA has been developed in the automobile industry in parallel by DaimlerChrysler and Toyota. In the mean time, the requirement for LPA for suppliers has increased with Original Equipment Manufacturers (OEM).

Because of the opportunities that LPA offers for companies, there are more and more companies from other sectors who see a prospect in the method, to actually implement and optimise processes and standards in their companies.

Layered Process Audit is also very well suited as a temporary method for the introduction of new processes and for the safeguarding of important or venturous processes.

“LPA is an excellent tool to solve one of the largest problems in companies, viz the adherence to and implementation of rules.”

*Michael Mohr, Production Manager Machining, ZF Friedrichshafen AG*
The LPA method consists of three interdependent procedures:

1. The execution of brief audits by managers

With the help of simple checklists in random samples, managers from defined different hierarchies (layers) verify the adherence to standards, regulations and specifications (process) in the process in question.

Because of company-specific objectives, processes and management structures, there are different versions in the execution of audits. The direct senior as well as the managers at a higher level can conduct audits of the relevant process. The number of audits to be conducted depends on the size of the relevant department, the importance, complexity and variety of the process, as well as the experience of the employees.

“LPA allows us a dynamic process control, which is not based on or aimed at one person, but reaches out to the entire company; the people or managers who know their way around are involved. By scaling the layer, one is always close to knowing one’s way around and knowing what is to be done.”

Frank Pfeuffer, MD, Mazurczak Elektrowärme GmbH
The important process specifications are identified and these are also verified in the LPA, and corrected if required.

The LPA-questions result from the specifications and experience values. The points to be tested result from the most important process steps, procedures and standards. These test points are formulated in suitable LPA-questions and entered in an LPA-checklist. On the basis of the LPA-checklist, it is checked whether the specified standards are adhered to in the process. Processes are thus implemented systematically.

2. Correction or measures in case of deviations from the standard

If the manager (auditor) ascertains during the audit, any deviations or that standards have not been implemented, it is corrected immediately together with the (audited) employee. When the required standards cannot be implemented even together with the management, corresponding measures must be formulated in an action plan and a change must be initiated in the department. The seniors from the department must provide the corresponding means for the implementation of the measure; the process in-charge takes the responsibility for the formation and implementation of the necessary measures and the central in-charges (e.g. quality management) monitor the implementation and check the effectiveness.

Deviations are Corrected immediately or measures are initiated

Higher frequency and wider participation of employees will ensure that the learning effect for the employees is significantly higher than in case of the current internal audits.

Claudia Dorner, Quality Management In-charge, ContiTech MGW GmbH

“LPA is no additional expense. Running after deviations would be more expensive than actually implementing the LPAs.”

Jens Zimmermann, Production Co-ordinator, profine GmbH

“With the internal audit, I would not come so close to the finer details in the processes, which make one’s life difficult.”

Markus Hofmann, Head of Quality Assurance, Mazurczak Elektrowärme GmbH
3. Visualisation of the results on the LPA board

The implementation and results from the audits of the relevant department are assessed using colour coding (green, yellow and red) and displayed visually on an LPA board such that it is transparent for all employees and managers.

<table>
<thead>
<tr>
<th>Green</th>
<th>The employee is aware of the specification and has implemented it.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yellow</td>
<td>The manager has subsequently implemented the specification together with the employee. There must have been certain shortcomings, because of which the employee could not implement the specification on his/her own.</td>
</tr>
<tr>
<td>Red</td>
<td>The employee and the manager are prevented by circumstances outside their sphere of influence to implement the specification. Corresponding measures must be initiated for the realisation of the process.</td>
</tr>
</tbody>
</table>

Processes are mandatorily brought to implementation with their specifications in the combination and effect of the three procedures as well as the simple logic and systematic consequence. This promotes the dynamics in the process improvement and the process understanding in employees and managers.

“During the period of the LPA-introduction, the internal rejects costs improved by 20% and the complaint costs by 25%.”… “With LPA and its transparency, the Production Department has obtained a means to implement a lot of improvements in the systems together with the Industrial Engineering Department. The process stability thus achieved reduced the rejects and thereby even the customer complaints.”

Friedrich Marquardt, Head, Corporate Quality Management, profine Group
Layered Process Review replaces LPA and assesses the actual effectiveness of the audited processes

A practical substitute for the Layered Process Audit is the Layered Process Review. The effectiveness of the processes is assessed and a corresponding change is initiated on the basis of the Layered Process Audits conducted. In this regular review, all the information gathered from the LPA can flow into the assessment. It is assessed herein whether the specifications for the planned results are the right ones, whether the objectives and specifications of the processes have been achieved and if the process results are adequate. For instance, a direct result from the Layered Process Review can be a change in the LPA checklists, in the frequency of the LPAs or a change in the corresponding specifications.
LPA Training

The participants get to know the LPA method during the two training days, and are in a position to assess where LPA can be applied in their own companies and the advantages of applying it. In a lot of exercises, the participants develop possible LPA implementation concepts, prepare the first checklists for the various layers, find the right test points, formulate questions and design possible visualisations.

LPA training plan 2015 for 2-day trainings

<table>
<thead>
<tr>
<th>Datum</th>
<th>Raum</th>
<th>Veranstaltungsort</th>
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</thead>
<tbody>
<tr>
<td>13.-14.01.15</td>
<td>Cologne</td>
<td>51515 Kürten, Hotel Gut Hungenbach</td>
</tr>
<tr>
<td>10.-11.02.15</td>
<td>Hannover</td>
<td>31319 Sehnde, Park-Hotel Bilm im Glück</td>
</tr>
<tr>
<td>10.-11.03.15</td>
<td>Straubing</td>
<td>94505 Bernried, Hotel Winterl</td>
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<tr>
<td>14.-15.04.15</td>
<td>Kassel</td>
<td>34308 Bad Emstal, Parkhotel Emstaler Höhe</td>
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<tr>
<td>04.-05.05.15</td>
<td>Stuttgart</td>
<td>75223 Niefern-Öschelbronn, Hotel Krone</td>
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<tr>
<td>09.-10.06.15</td>
<td>Münster</td>
<td>48167 Münster, Hotel Münich</td>
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<tr>
<td>14.-15.07.15</td>
<td>Berlin</td>
<td>16552 Schildow, Hotel Schildow</td>
</tr>
<tr>
<td>15.-16.09.15</td>
<td>Munich</td>
<td>83620 Feldkirchen, Berghotel Aschbach</td>
</tr>
<tr>
<td>13.-14.10.15</td>
<td>Leipzig</td>
<td>04668 Grimma, Hotel Kloster Nimbschen</td>
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<tr>
<td>10.-11.11.15</td>
<td>Hamburg</td>
<td>21271 Egestorf, Hotel Hof Sudermühlen</td>
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<tr>
<td>08.-09.12.15</td>
<td>Würzburg</td>
<td>97440 Werneck, Hotel Krone-Post</td>
</tr>
</tbody>
</table>

Participation charges:
€880 plus VAT per participant
(from the 2nd participant from a company €740 plus VAT)

Registration:
short email to lpa@umsetzer.com and we will contact you

“Here, I got to know a method entirely new to me. I had as good as no idea of what LPA was. What I liked is the simplicity and transparency of the method. LPA does not seem to be a method of psychological warfare, but it is simple things that are comprehensible and that I can manage at the machine with my boss or the operator. I would recommend the training to others.”
Bernd Fuchs, Head of Quality Management, Elektrisola Dr. Gerd Schildbech GmbH & Co. KG

“I could take away a lot of specific information from the discussions in the last two days, and run through the schema in the exercises. This relieved me of a lot of work, to come up with something, solely because of the numerous suggestions and examples for the implementation.”
“I would recommend the training to one and all, even to those who do not belong to the automobile sector, because everyone has the same ambition for quality. LPA, a highly efficient tool.”
Mr. Robert Schmid, Head of Quality Processes, Saint-Gobain Oberland AG

The LPA-training opened up for me the very simple and at the same time brilliant logic of the Layered Process Audit for continuous process improvement. Through the involvement of all employees and seniors participating in the process, who deal with their processes regularly on account of the high frequency, the process concept incl. the specifications, implementation and improvement becomes a “sure-fire success” en passant.”
Bernd Wirges, Quality Manager and Auditor, Kautex Textron GmbH & Co. KG

In case of questions about LPA or about the implementation in your company, please send a brief email to lpa@umsetzer.com. We will contact you and will be pleased to support you.
With a 28-year old company history, TQU International GmbH is an experienced partner in the development and improvement of quality in companies. In a lot of projects, the implementers at TQU have proved that the company results with their customers can be improved by means of functioning management systems, more effective processes and an improved product quality. A result-oriented, process-oriented and behaviour-oriented approach helps in identifying the opportunities in companies, developing feasible solutions together with the company and implementing them successfully with the help of suitable methods.

Companies that we have supported in the LPA implementation locally or through trainings
- Albany, Göppingen
- Endress+Hauser Conducta, Gerlingen
- ETO MAGNETIC, Stockach
- Hirschvogel Umformtechnik, Denklingen
- IFA ROTORION, Haldensleben
- Liebherr-Aerospace, Lindenber
- MAHLE Brockhaus, Plettenberg
- Mazurczak Elektrowärme, Schwabach
- profine, Pirmasens
- Saint-Gobain Oberland, Bad Wurzach
- Spar– und Bauverein Hannover
- SHW Automotive, Aalen
- Taifun-Tofu, Freiburg
- ZF Friedrichshafen, Schweinfurt
- and a lot more

The latest book in this topic

Layered Process Audit (LPA)
Leitfaden zur Umsetzung

Elmar Zeller

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