Roche’s Lean Journey: Learning by Doing It!

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Agenda

- Kick Off and Introductions
- Brief introduction of Roche
- Overview of Lean Production System (LPS)
- LPS & Obeya Room for Capital Projects
- Overview of Obeya Room
- Roche Examples of Obeya Room & SQDEC
- Lessons Learned
Roche - a global pioneer in pharmaceuticals and diagnostics

**Key figures 2016**

<table>
<thead>
<tr>
<th>Category</th>
<th>2016</th>
<th>2015</th>
<th>Change</th>
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</thead>
<tbody>
<tr>
<td>Group sales</td>
<td>CHF 50.6 billion</td>
<td>48.1 billion</td>
<td>+28%</td>
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<tr>
<td>Pharmaceuticals sales</td>
<td>CHF 39.1 billion</td>
<td>37.3 billion</td>
<td>+5%</td>
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<tr>
<td>Diagnostics sales</td>
<td>CHF 11.5 billion</td>
<td>10.8 billion</td>
<td>+6%</td>
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<tr>
<td>IFRS net income</td>
<td>CHF 9.7 billion</td>
<td>9.1 billion</td>
<td>+7%</td>
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<td>Research &amp; development (R&amp;D)</td>
<td>CHF 9.9 billion</td>
<td>8.1 billion</td>
<td>+23%</td>
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**Roche’s global presence**

- North America: 25,494 employees**
- Europe: 40,869 employees**
- Asia: 4,587 employees**
- Africa: 1,166 employees**
- Latin America: 4,587 employees**
- Australia/New Zealand: 710 employees**

**74 NMEs in clinical development**

**311,726 patients participating in clinical trials**

**29 Roche medicines on the WHO List of Essential Medicines**

* All growth rates in this report are at constant exchange rates (CER; average 2015).
** Number of employees expressed in full-time equivalents
Roche Lean Production System (LPS)

Application to CAPEX Projects

Goals and ambitions
Continuous Improvement

- Leveled flow
- Equipment availability
- Zero defects

Standardization

- Daily rhythm and schedule
- People and organization
- Lean leadership

LPS methods in scope:

- Problem solving
- Lean maturity assessment
- Visual management
- Structured meetings
- Metrics & performance boards
- Mindset
- PT behaviors
Summary: Obeya is an integral part of the Lean Production System (LPS)

Team to ensure consistency of approach and coordination with ongoing LPS work in PTA function
Obeyas are the industry benchmark to implement Lean Performance Management in operations

**What?**

Obeya (Japanese "大部屋"), literally meaning "Big rooms" or "War rooms", are a component of lean production systems used in the Japanese automotive industry.

**When?**

Proven approach to effectively manage large-scale projects such as new model launches or construction megaprojects.

**Benefits**

Multiple benefits achieved by the implementation of Obeyas

- Provide focal points to align on project priorities and objectives
- Provide transparency on current problems and future restrictions
- Structure information and dialogues in a logical sequence that enables rapid counter measures taken in the room
- Bring together an entire project teams to have structured discussions on performance, enabling improved coordination
Core aim to address was increase of active project steering across interfaces

Three key issues in daily project management…

- **Performance** of contractors and sub-project teams not actively measured across project
- **Activity interdependencies** across sub-project teams not easily visible
- **Individualized planning view** per sub-project not always readily available

… addressed by Obeya concept and frequent Gemba walk implementation

- Integrated performance dialogs building on SQDEC\(^1\) metrics including all sub-project teams
- Construction site visits to understand the actual status and identify challenges pro-actively
- Structured key activity review supports early identification and resolution of challenges across sub-projects
- Increased schedule and milestone ownership of sub-project teams
- Intuitive visual formats for schedule planning and performance reviews enable at-a-glance understanding
- Active participation of entire project team with shifting focus based on project phase needs

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1. SQDEC comprised of Safety, Quality, Delivery, Engagement, Cost metrics
Obeyas focus on three key areas to achieve change

I. Processes
"Lean routines"

- Shorter and structured meetings with strong focus on performance management
- Routines that encourage root cause analysis and timely corrective actions (PDCA)
- Clear definition of weekly priorities for the teams (critical path/restrictions to solve)

II. Tools
"Visual management"

- Visual management that makes performance visible (Obeya Room)
  - Integrated set of visual panels distributed throughout the room to support Obeya routines and performance discussions
  - Use of best practices that enable at-a-glance view of current status
    – Relevant KPIs (real vs plan)
    – Performance projections

III. People
"Change management"

- Behavioral change before, during and after Obeya meetings
  - Joint definition of new norms to interact among team members
  - Individual coaching sessions to reinforce behavioral change
  - Cross functional participation in Obeya meetings (including contractors and support functions)
Lean management: Routines that encourage root cause analysis & timely corrective actions - based on PDCA cycle

1. KPIs review (focus on deviations)
2. Root cause discussion
3. Escalation of other request to participants
4. Corrective actions commitments
5. Status review of previous commitments
6. Review of projections
7. Identification and solution of interferences
8. Definition of weekly obj. and priorities
9. Execution of corrective actions

Obeya routines follow a continuous improvement logic (PDCA) and encourage timely corrective actions.
Visual management: Integrated set of visual panels distributed throughout the room to support Obeya routines

**KPIs Section**
- Real vs planned status for most critical performance KPIs
- Supports discussion on current status and root cause analyses

**Commitments to action section**
- Commitments to corrective actions, with clear responsibilities and deadlines
- Supports definition and tracking of corrective actions

**Room Dynamics section**
- Highlights Obeya best practices and logistic information about the room and routines
- Reference for participants behaviors during Obeya meetings

**Priorities and Planning section**
- Weekly priorities for the team
- Highlight monthly/weekly targets
- Supports discussion on production programs, interferences & restrictions

**Project Information section**
- Relevant project information to support technical discussions
  - Critical path
  - Construction plans
Obeya Room Structure

Planning board

Behavior

Metric board

Countermeasure board
Change management: Lean Performance Management is not just about boards on walls!

Process for running Information Centers

- KPIs hand-updated before reviews
- “Stand-up” reviews
- Senior leader is chairman - not facilitator
- Start/finish strictly on time and <30 minutes
- KPIs reported in logical flow, left to right
- Metrics reported on by owners by exception
- No problem-solving in review
- “Go & See” when discussing issues

Behaviors for effective LPM

- **Challenge:** missed targets, data and perception of root causes – Questioning mindset!
- **Go-Look-See:** Go to were the real value is created, understand "reality"
- **Respect:** frontline staff – See them as experts
- **Prioritize:** e.g., small improvements over CAPEX
- **Place:** Customer first – Drive understanding of how team influences client outcomes and company performance

Well-executed process and behavioral focus are critical
Change management: Clear definition of roles is key to ensure good meeting dynamic

**Leader of the Obeya meeting**
- Leads the meeting, following the Obeya routine
- Asks participants explanations when KPIs are off-target
- Assigns responsible for each commitment

**Moderator of the Obeya meeting**
- Ensures compliance with the routine and manages time
- Ensures good definition and contractualization of the commitments
- Sends invites to participants, review participation list, coordinates the update of all KPIs before the meeting

**Owner of the Obeya room**
- Consolidates new commitments and send them to the participants
- Tracks all commitments (old and new)
- Is in charge of the room house keeping

**Participant of the Obeya meeting**
- Prepares the meeting beforehand:
  - updates KPIs
  - performs root cause analysis to explain deviations
- Listens carefully and participates actively during the meeting
LPS Deployment in PTA

LSL Project in Kaiseraugst Switzerland – Obeya room

- Macro view through integrated project plan and critical path summary
- Micro view – 3 month milestone look-ahead

- SQDEC metrics defined with specific ownership
- PDCA cycle is followed to address and deviation from the target on the SQDEC
LPS Deployment in PTA

P2 Project in Oceanside California – Obeya room

Key Project Info:
- PFD
- Floor Plan
- CIP Circuits

Key Project Info:
- Priorities
- Master Schedule
- Organization
- Meeting Rules

SQDEC+
- Safety
- Quality
- Delivery
- Engagement
- Cost

Detailed Schedules by Area
- 6 Week Look Ahead
- Progress Updated Daily
Lessons Learned So Far in Our Lean Journey

• Make sure to have a big enough room to accommodate all appropriate project team members
• Ensure to have a robust kick-off for Obeya and SQDEC
• Assign an experienced OE partner and co-locate the OE partner with the project team from kick-off until project teams optimizes use of Obeya room
• Get the team started using the Obeya room as quickly as possible rather than waiting for a perfect Obeya room
• Strong sponsor and PM involvement are critical success factors for successful Obeya execution
• Learn, improve, share and communicate
## Contact Us

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