Increasing output and gaining portfolio transparency with implementation of CCPM

JTA Conference 2015 in Tokyo

July 16th, 2015

Mr. Josua Schwab, PACB/MFF, Portfolio Engineer Product Management, Bosch Packaging Systems AG, Beringen, SWITZERLAND
## Business units

<table>
<thead>
<tr>
<th>Business Unit</th>
<th>Image 1</th>
<th>Image 2</th>
<th>Image 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pharma</strong></td>
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<td><strong>Liquid Food</strong></td>
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<td><strong>Packaging Services</strong></td>
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Bosch Packaging Technology

Confectionery & Food

Process Technology

Primary Packaging

Secondary Packaging & Handling

System Competence

Packaging Technology

Integrated system solutions

**Systems engineering**
- General contracting
- Packaging consulting
- **System definition**
- Integration of third-party suppliers
- Project management and on-site support
- Field service engineers

**Seamless design**
- Uniform mechanical design
- Consistent components
- **Seamless control concept**
- Uniform operating philosophy
- One documentation standard
our Value Stream

Project Management

Sales

Engineering

12 engineering departments in 3 Business Units
Mechanical
Electrical
Software

Purchasing

Parts
Modules
Machines

Assembly

Pre-assembly
System-
assembly
(integration point)
Internal
commissioning

Commissioning

Commissioning at Customers factory
our Customer Project Portfolio

- 60 Customer projects in progress
- Project volumes from 1 to 10 million swiss francs
- Lead time from 6 to 11 months
- 10 to 25 departments are involved in projects
Where our journey to implement CCPM started

Situation 2012
- Increasing lead time / stagnancy on “high level”
- pain level for our customers reached
- on time delivery KPI declined
- customer project volumes were getting bigger

Goals
- reduction of lead time of 50% until 2015
- sustained growth – increasing output
- improve on time delivery KPI
Our journey of Implementation of CCPM

- strategy discussion
- understand CCPM
- kick off

- start communication
- CCPM Training
- create priority list

- tool evaluation
- Do it room concept

- Being & CCPM training
- Installation

- stabilize organization
- new steering meetings

2013

- forming a team
- value stream analysis
- potential evaluation

- new working principles
- freezing projects
- start to prioritize
- harbor master principle

- templates
- eliminate milestones
- definition of new roles
- start new

2014

- test of Being
- preparation go live
- clear order & handover

- Implementation
- Go live with BM3
- start up do it room

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Start up of Project – Teambuilding and analysis

Manager and team leaders out of all business units and departments were involved

A value stream analysis gave us an overall understanding and we had evaluated potentials
Creating new working principles

What will help us in future, to work better

We defined new working principles according CCPM, for example:

- we do not start, before we have the necessary information
- we start as late as possible with the first process step, then, we work as fast as possible (reduce tasks in progress)
- having as many employees as possible on the task (Harbour master)
- We only work on one task (no multitasking)
- Reaching the expected quality obtains higher priority then keeping dates

⇒ With these measures we will reduce multitasking
Communication and Training

Communication about change with all stakeholders

Inform and discuss:
- reasons of change
- targets
- changing processes and organization
- project status
- achievements
- next steps

Training of:
- new working principles
- being management 3

Top management
Project core team
Middle management
Employees
New project planning and steering

→ Reducing Work in Progress and focus resources
  - Freezing customer projects
  - Focus resources on less projects
  - Freezing other process improvement projects

→ Change project planning and steering
  - Shorten project plans & adding buffer at the end
  - Eliminate milestones
  - Staggering new projects
  - Start to prioritize according to buffer consumption
Harbor master principle

Speed up projects by focussing resources

When more than one ship is ready to unload at the dock usually we worked with three employees in parallel. So the total time at the dock is 9 hours.

If the harbour master is focusing all resources on one boat, then continue to unload one after each other he is gaining three hours of transportation time.

This simple principle is successfully communicated and implemented in our assembly departments.
New tool - Being Management 3

Evaluation of tool
- 4 different providers
- Key arguments for BM3
  - already successful in use
  - excellent visualisation
  - easy usability / operations
  - fast implementation
  - acceptable efforts for user

Preparation
- Installation of test environment & organize training
- Create new project plan templates for all business cases

Start up
- Training of project manager (1 day) and task manager (1/2 day)
- Installation and setup of Being Management 3
- Kick off project manager
- Kick off task manager
- Built up existing projects in BM3
- Going live

User support

Packaging Technology

Roll based transparency using BM3

- Top Management
- Pipeline Manager
- Project Manager
- Task Manager

- Project portfolio overview
- Ressource view
- Project status
- Priorities for tasks
- Staggering projects
- CCPM project plan
Do it room – our operational headquarters

**Clear order**
- Handover to project management

**Projects in progress**
- Hot projects
- Book in orders

**Pipeline view**
- New projects
- Priority for quotation

**Special attention**
- Critical projects
- Development projects

**Projects @ customer**
- Commissioning
- Site acceptance test

**Financial management**
- Open debitor payments

**KPI’s**
- On time delivery
- Lead time

**Meetings @ Do it room**

<table>
<thead>
<tr>
<th>Meeting</th>
<th>Frequency</th>
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<tbody>
<tr>
<td>Sales meeting</td>
<td>Twice a month</td>
</tr>
<tr>
<td>Project review meeting</td>
<td>Weekly</td>
</tr>
<tr>
<td>Project review with management</td>
<td>Monthly</td>
</tr>
<tr>
<td>Management board meeting</td>
<td>Monthly</td>
</tr>
<tr>
<td>Payment review</td>
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Clear order and handover

We identified two interfaces with a leverage effect

**Clear order** – in 3 steps from Sales to project team

1. Handover Sales to PM
   - Handover of relevant documents

2. Project planning (Project requirement spec)
   - Do we have all necessary project informations?

3. Kick off
   - Does the project team have the necessary information to work efficiently?

**Handover** of machines to System-Assembly with a handover protocol

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Results 2014 and 2015

On time delivery

Lead time D2 projects
Projects <2500 hours engineering & assembly

-18%

Lead time D3 projects
Projects >2500 hours engineering and assembly

-31%

Turn over

+27%

FAT passed in first attempt

Lead time for CHF100,000
D2 projects

-53%

D3 projects
Important (from our point of view):

- Consequent reduction of task length
- Good templates as a base for project planning
- CCPM/Being is a radical change
  - needs time
  - needs capacities
- Include employees in development of system
  - Information (all employees)
  - Inclusion of key players in development of concepts
- Take setbacks happily
- discuss, discuss, discuss
- Consultant for an external view is important
Next steps

- Material availability must be improved (by whole chain from design engineering till assembly)
  - Learnings from finished projects
    - Further optimization of project plans
    - Analyzing delay reasons
  - Further optimization of Clear Order / Hand Over
Thank you for your Attention – Are there any questions?

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