

From Kaizen Events to Quick-Wins Culture

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THE LANGUAGE OF ELECTRONICS

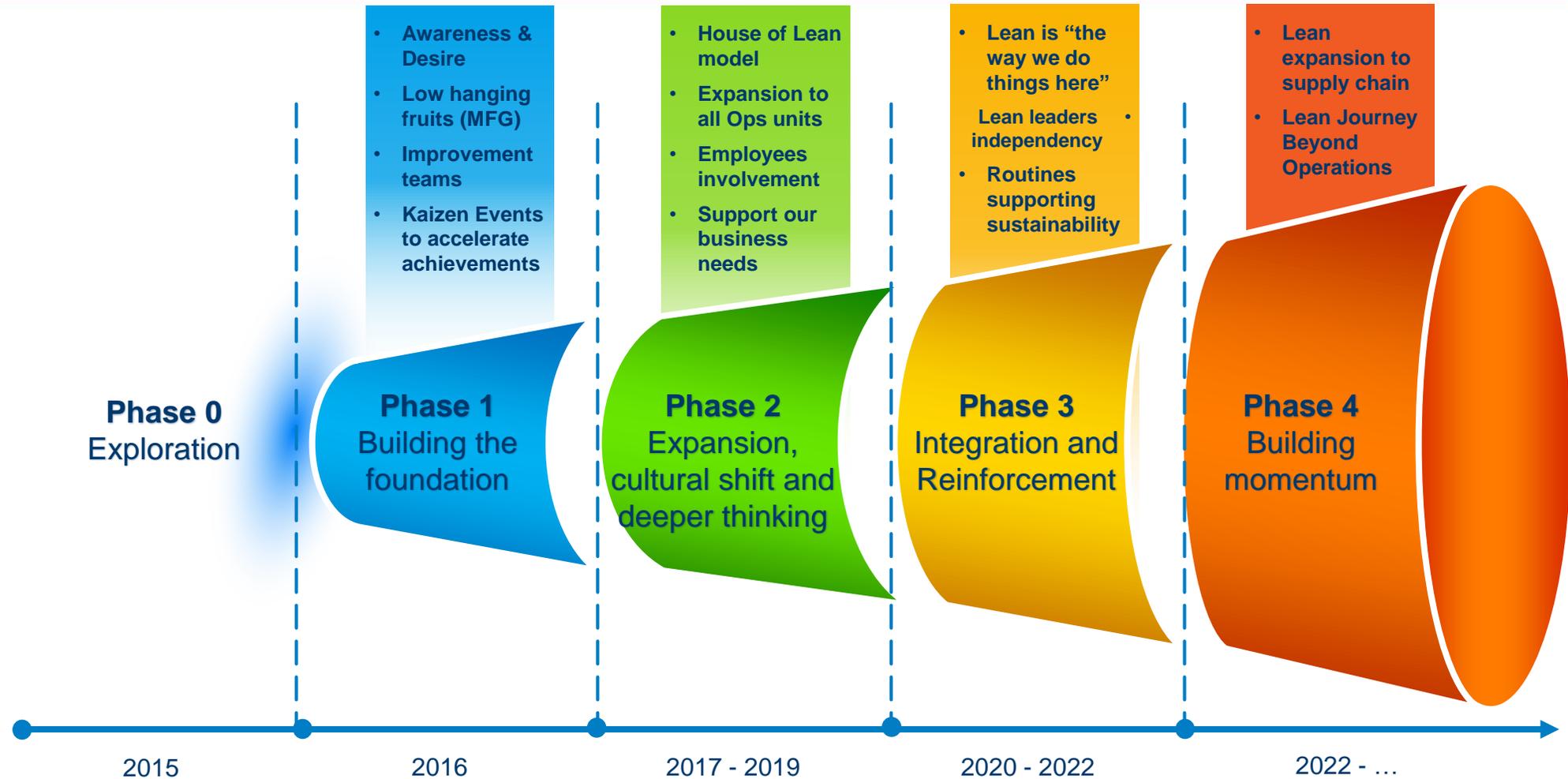


Operations Lean Journey

Looking from the back mirror view



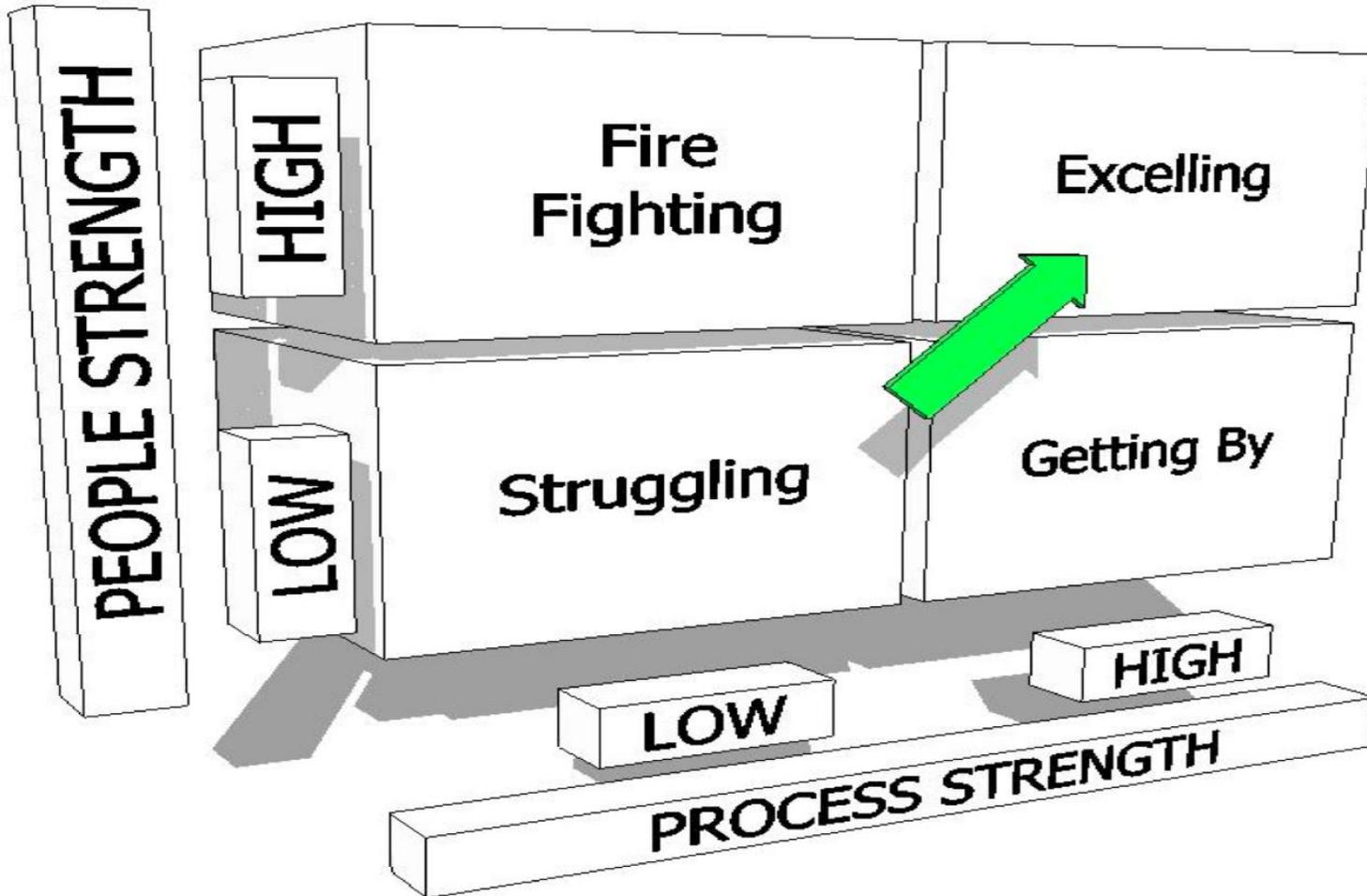
Orbotech Operations Lean Transformation Roadmap





Phase I - Building the Foundation

Orbotech Operations - Lean Journey 1st Year



Focus Area – 1st year
Manufacturing unit •

Improvements Focus

- COGS reduction
- Capacity increase
- Ease of Delivery

Orbotech Operations Lean Journey – 2016 Summary

Capability Building

Type of Trainings / Workshops

4 Types

- Lean Introduction
- OPEX Workshops
- Kaizen Leadership
- Lean Leadership



Total Trainings: Workshops days (x participants)

~240 Days



Total Participation - OPEX Workshops

45 Employees

- Extended management
- Focal points from all teams



“Introduction to Lean” training for all employees

**~90 Employees
outside
Production**



7 teams

Outcome

- Awareness & Desire, common language for all employees
- Capability building for the improvement teams

Operations Lean Journey – 2016 Summary

Kaizen Events & Improvement teams activities

Total of Kaizen events & Improvement teams performed

2 Improvement teams

4 Kaizen Events



Avg. Goals set (selected processes)

28%

STD Hours Reduction



Avg. Current Achievement (selected processes)

26%

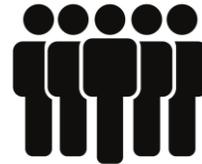
STD Hours Reduction



Overall Participants

35 People

• Operations (Israel & Germany)



Product COGS reduction impact / Machine - 2016

Product A – 1.7 K\$

Product B – 3.1 K\$



Additional annual Capacity (same resources)

39 Product A

23 Product B



2016 Lean Journey summary

Voice of the leaders - Strength areas



- Feeling that we had **done a lot** this year and **shifting our mindset** to the right direction
- **Good exposure to the lean domain** by the trainings which were done to all operations
- **High employees motivation** to improve, good examples of **employees personal initiatives**
- **Good selection of improvement teams members** - brought the right expertize and knowledge. In addition, **Persistence & determination** of team leaders to execute the plan
- **Kaizen events** had proven their added value as an enabler & accelerator for improvements, with good collaboration with other divisions

2016 Lean Journey summary

Voice of the leaders – Areas for Improvement



- Improvement team / kaizen members **availability vs. time constraints & priorities**
- **Manufacturing employees outside the improvement teams are less involved** in the improvement activities although they wish to be and have great initiatives
- A feeling that the lean is mostly a **Production journey** – less to none involvement from other units in operations (Purchasing, Engineering, Planning, etc.)
- Gap in **recognition & appreciation** of employees personal improvement initiatives



Phase II - Expansion, Cultural Shift and Deeper Thinking

Operations Lean Journey – Phase II Focus Areas



Expansion

- **ISL Operations (main focus)**
All operations units
- **Global Operations - Collaboration**
- **Corporate**
Key projects in Corporate & Divisions



Engagement

- Implementation of **Quick-Wins improvements by everyone**
- **Value Stream Improvement (VSI)**
- **A3 Structured Problem Solving**



Driven by our Business Needs

**Big gains come from
small & rapid
improvements from
EVERY EMPLOYEE**

Quick-Wins Goals



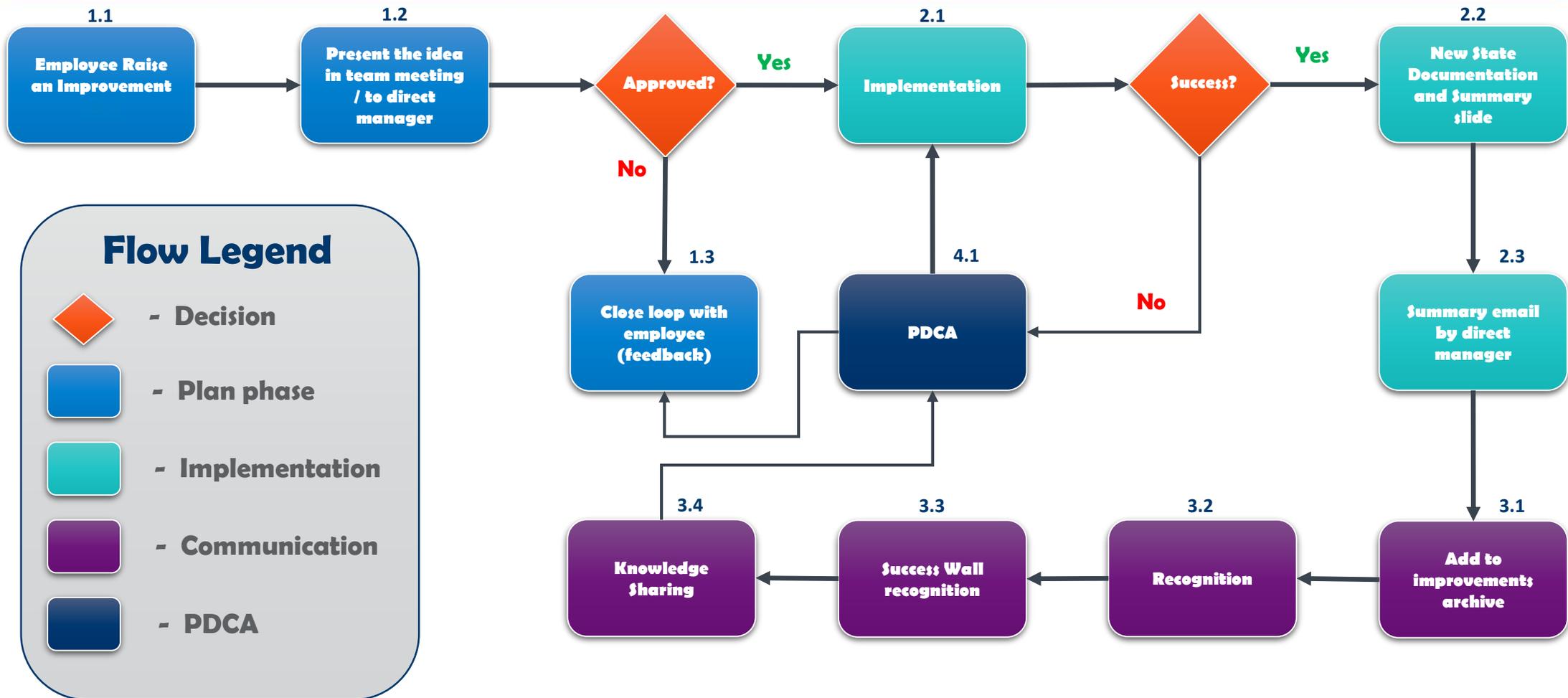
- Encourage **employees involvement** in the Lean Journey
- **Empower employees** - give them a chance to **make a difference**, and be **recognized** for it
- Implement a “**Welcome Problems**” culture among our employees
- Eliminate wastes, Improve performance, increase **Ease of delivery**

Key Guidelines for Quick-Win initiatives

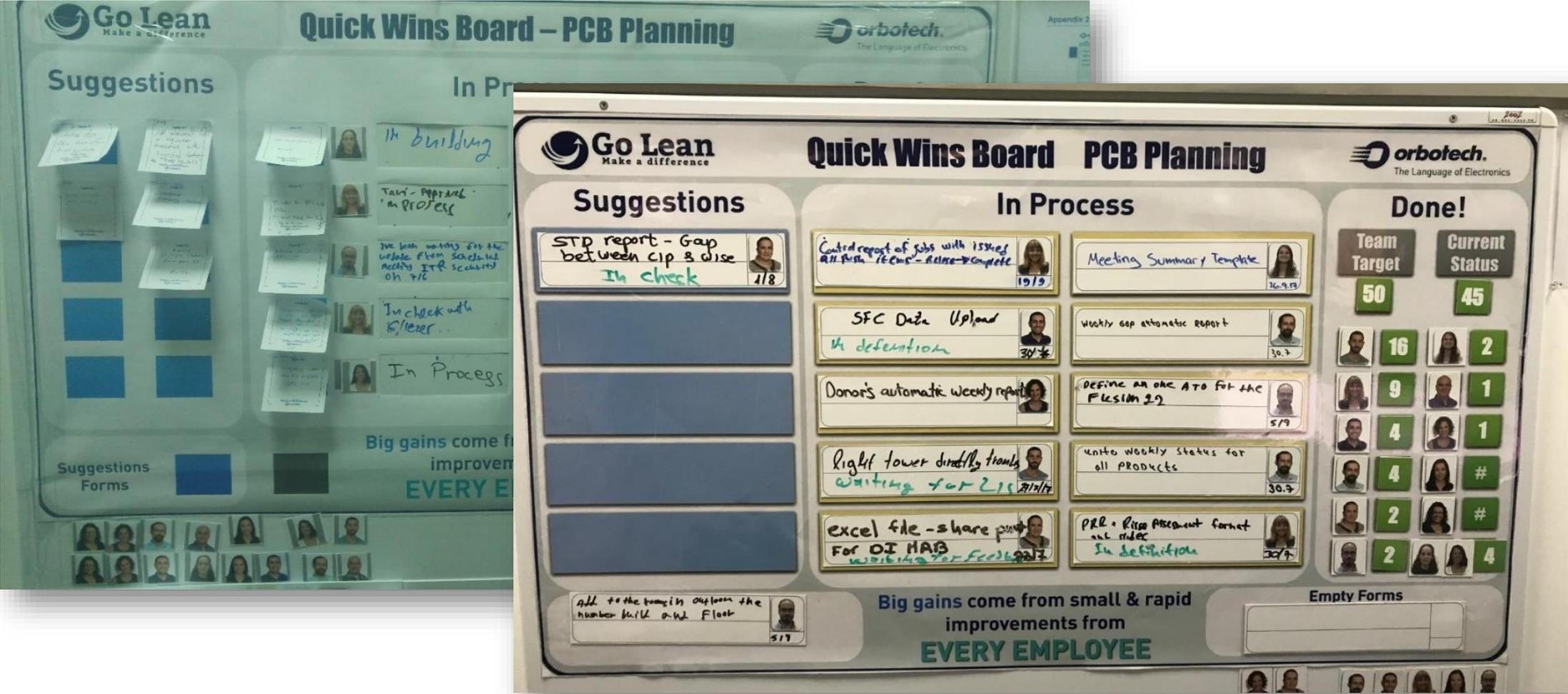
- Improvement related to **your own team** processes
- Can be performed with **your own resources**
- Can be implemented in the **short term** (up to a month)
- Improves:
 - > Improve **Safety**
 - > Eliminate **Wastes**
 - > Enhance **Quality**
 - > **Cost** reduction
 - > **Workspace** optimization
 - > Increase employee **Ease of work**



Quick Wins Flow



Quick-Win Visual Boards



Quick Wins Weekly routines – 15 min. / week



Quick Wins Summary Slide Template



orbotech.
The Language of Electronics

Quick Win Summary
Project Name



Go Lean
Make a difference

<u>Before</u>	<u>After</u>	
<p style="text-align: center;">Describe Previous state, Include pictures and drawings if possible.</p> <p><u>Guidelines:</u></p> <ul style="list-style-type: none"> 2-4 Summary bullets 1-3 Pictures 	<p style="text-align: center;">Describe Current state, Include pictures and drawings if possible.</p> <p><u>Guidelines:</u></p> <ul style="list-style-type: none"> 2-4 Summary bullets 1-3 Pictures 	<p style="text-align: center;">Employee Picture</p>
<p style="text-align: center;"><u>House of Lean</u></p> <p style="text-align: center;">Which Rule / Principle from the House of Lean does this improvement support?</p>		<p style="text-align: center;">Employee Name: Employee Name</p> <p style="text-align: center;">Department: Department</p> <p style="text-align: center;">Date: Date</p>
<u>The Benefit</u> (COGS, STD HRs, Quality, etc.)		<p style="text-align: center;">House of Lean</p> 
<p style="text-align: center;">Describe the metrics effected by this improvement – Try to provide <u>quantitative</u> results</p>		

Quick-Wins Share-point System

WELCOME *Quick Wins Website!*



New Quick Win



My Quick Wins



Quick Win Slide



Training

Quick Win Data Base by Unit



GMP



Purchasing



OPEX



HR

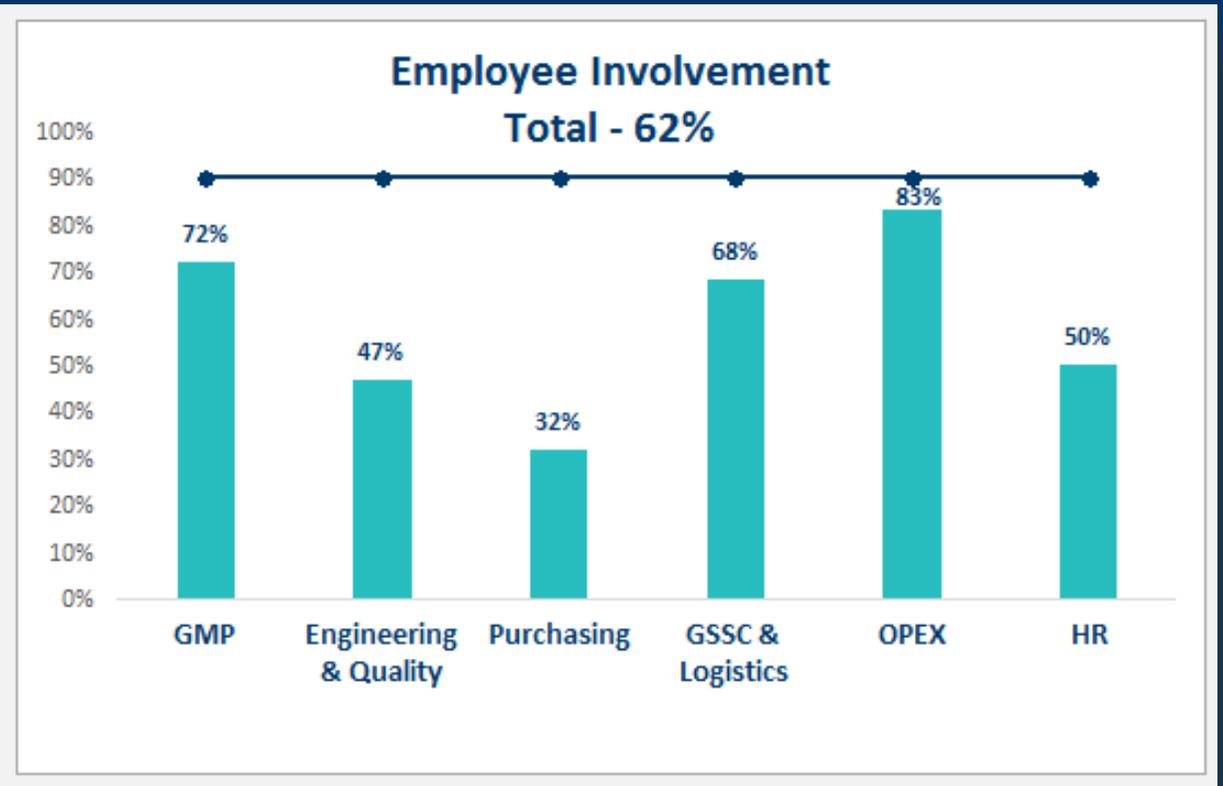
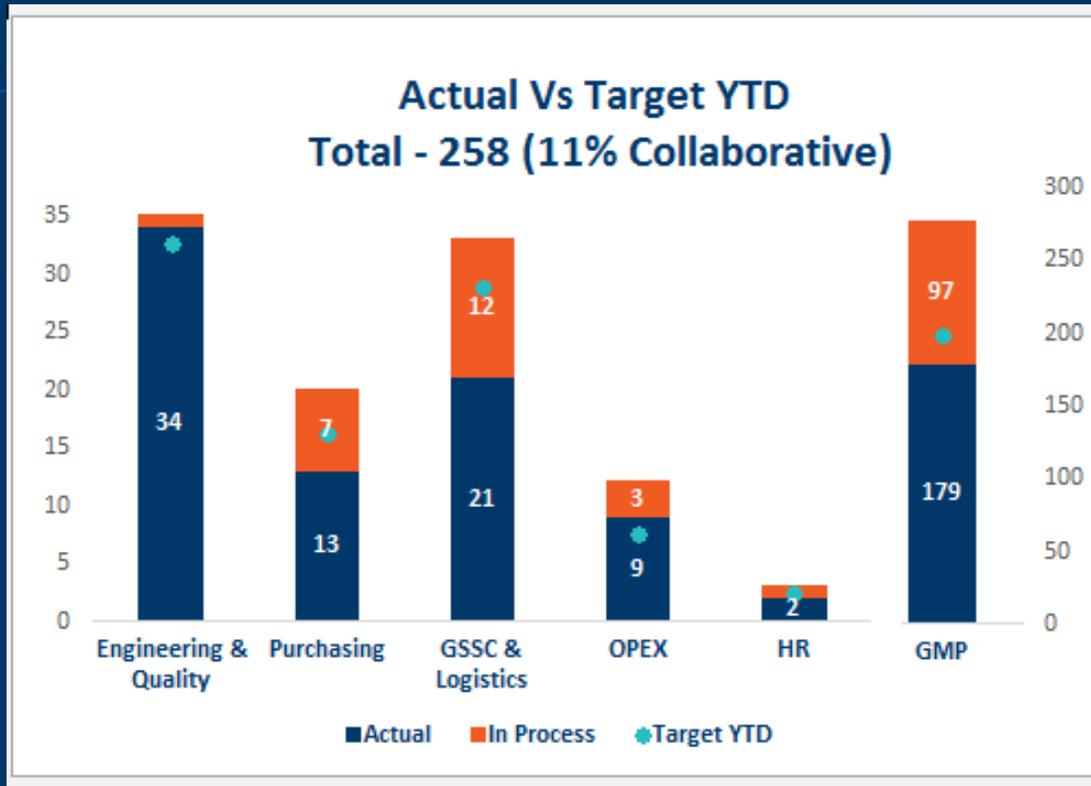


Engineering & Quality



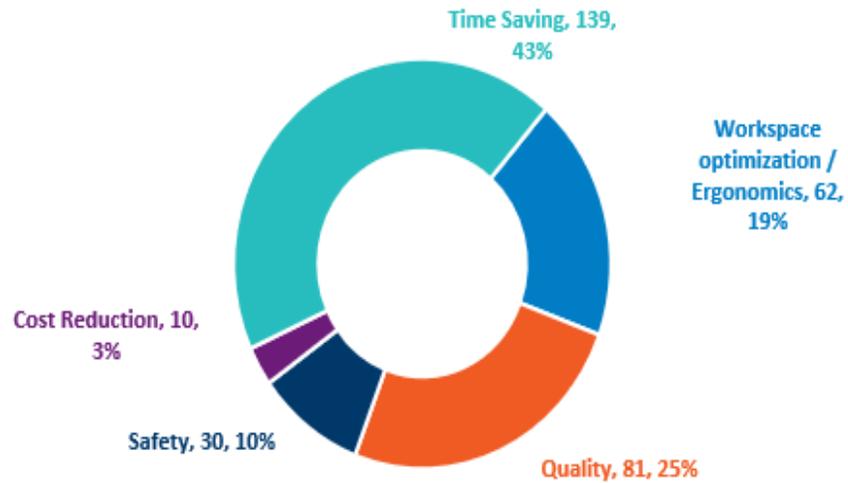
GSSC & Logistics

12 Weeks – 258 Quick Wins, 62% Employee involvement



Benefits

Quick Wins Benefits



Quick Wins Savings



41,402 USD/ Year



7,210 Hrs./ Year

170 USD/ Machine

19 Hrs./ Machine

QTM Nuvogo Diamond
170 0 0

QTM Nuvogo Diamond
16.90 1.20 1.12

Quick Wins Recognition - Part of our weekly management BDB routine



Certificate of Appreciation

Awarded to

Erez Kahana

In recognition of your creativity and excellence way of thinking, led to improved MRB reporting process and working routines, resulting in time and costs savings

February 2017

Shmulik Perez
VP Operations

Tamir Ben Shimol
PCB systems Manufacturing Manager

Quick Wins Recognition - Part of our weekly management BDB routine



Shmuelik Perez
VP Operations

Tamir Ben Shimon
PCB systems Manufacturing Manager

Quick-Wins Wall of Fame



2018 - Thank You

Operation employees!



997

Quick Wins
Implemented



87%

Employee
involvement



4.8

Avg. QW per
Employee



What is your Quick Win?



THANK YOU