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Shopfloor Management

World Class Manufacturing –
“Proizvodnja svetovnega razreda”

13th & 14th of March 2014

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(Director of Production)



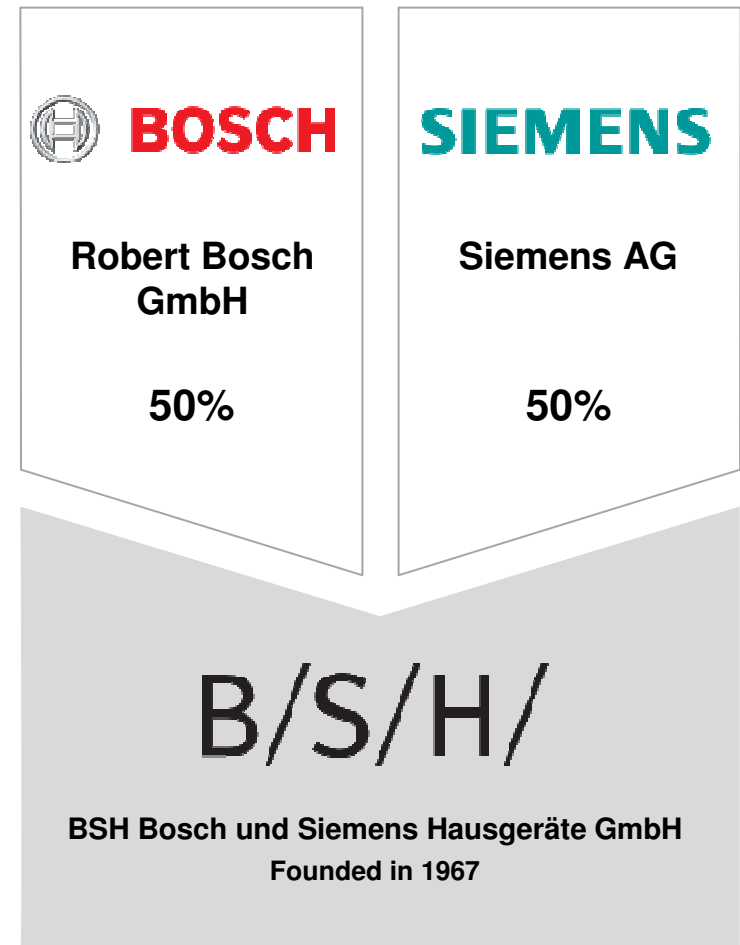
Agenda

- **Bosch and Siemens Home Appliance Group**
- Introduction SFM
- 5 Modules of SFM
- Situation FCPN
- Summary, Recommendation & Outlook

BSH at a Glance

- Founded in 1967 as a joint venture between Siemens AG and Robert Bosch GmbH
- Market leader in Europe, No. 3 in the world
- Sales revenue: 9.8 billion Euros
- Product portfolio: all modern home appliances
- Employees worldwide: over 46,000
- BSH named as a top employer in numerous countries
- R&D expenditure: 326 million Euros
- Around 3,000 R&D specialists in BSH's international production and development network
- Customer service: around 7,000 specialists in 50 countries
- Energy efficiency and environmental protection throughout the value-added chain
- Super Efficiency Portfolio comprises the most energy efficient appliances on the market; confirmed annually by auditors

As of 31st December 2012



BSH Shareholder



Number of employees 2012: 305,877
Revenue 2012: 52.5 bn. Euros

Number of employees 2012: 370,000
Revenue 2012: 78.3 bn. Euros

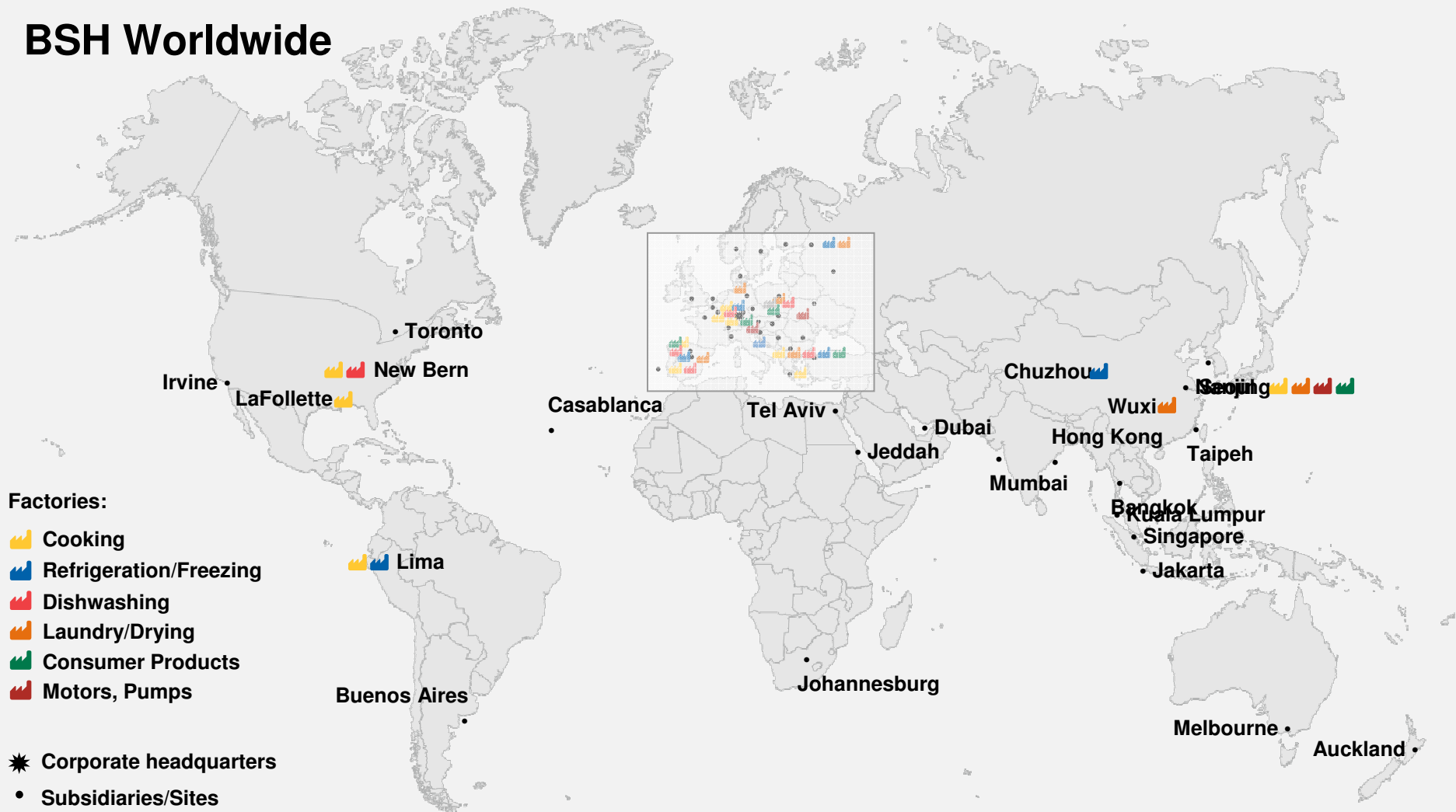
Areas:

Automotive Technology
Industrial Technology
Consumer Goods
Energy and Building Technology

Sectors:

- Industry
- Energy
- Healthcare
- Infrastructure & Cities

BSH Worldwide



BSH Europe



Our Brands

Main Brands



SIEMENS

Special Brands

GAGGENAU



Thermador★

Constructa

viva

ufesa

JUNKER

zelmer

Regional Brands



PITSOS

PROFILO

Coldex

BSH's product portfolio covers the entire spectrum for daily life

Cooking and Baking



Washing and Drying



Dishwashing



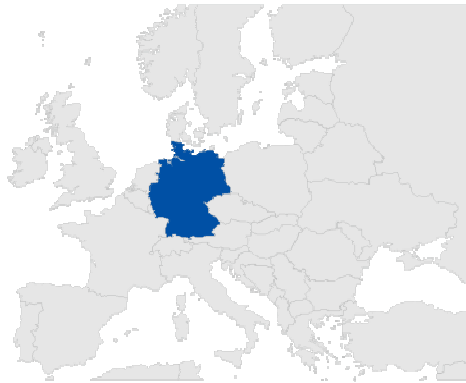
Refrigeration and Freezing



Consumer Products



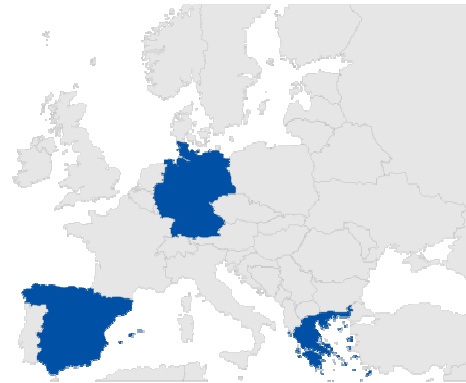
From German exporter to Global No. 3



1967

3 factories in Germany

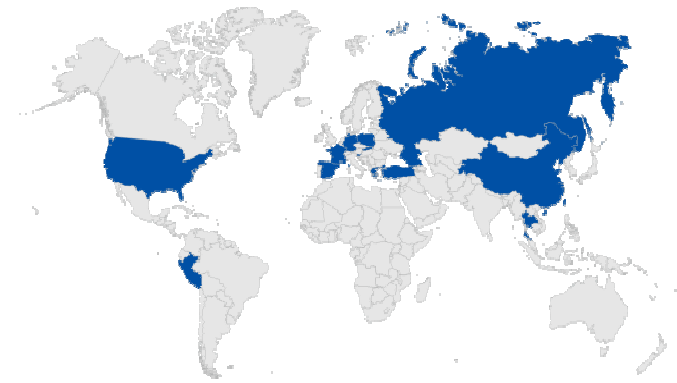
■ Companies	7
■ Employees	14,000
■ Revenue	0.5 bn. Euros



1990

13 factories in Germany, Greece, Spain

■ Companies	41
■ Employees	23,000
■ Revenue	3.3 bn. Euros



2013

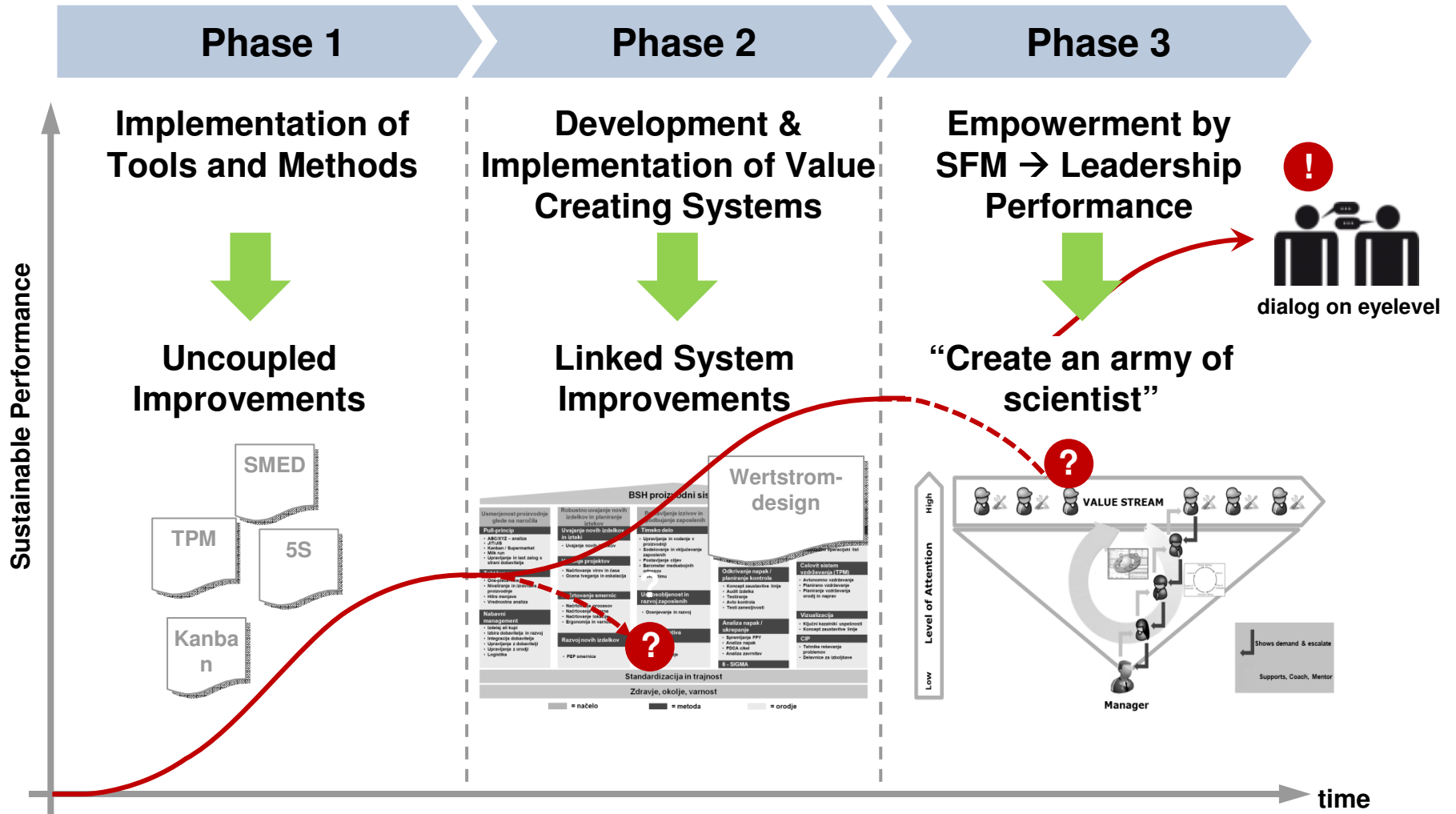
40 factories in Germany, China, France, Greece, Peru, Poland, Russia, Slovakia, Slovenia, Spain, Thailand, Turkey, USA

■ Companies (2012)	70 in 50 countries
■ Employees (2012)	46,925
■ Revenue (2012)	9.8 bn. Euros

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Lean Production is developing in phases...



The activities of Shopfloor Managers were observed from external view.

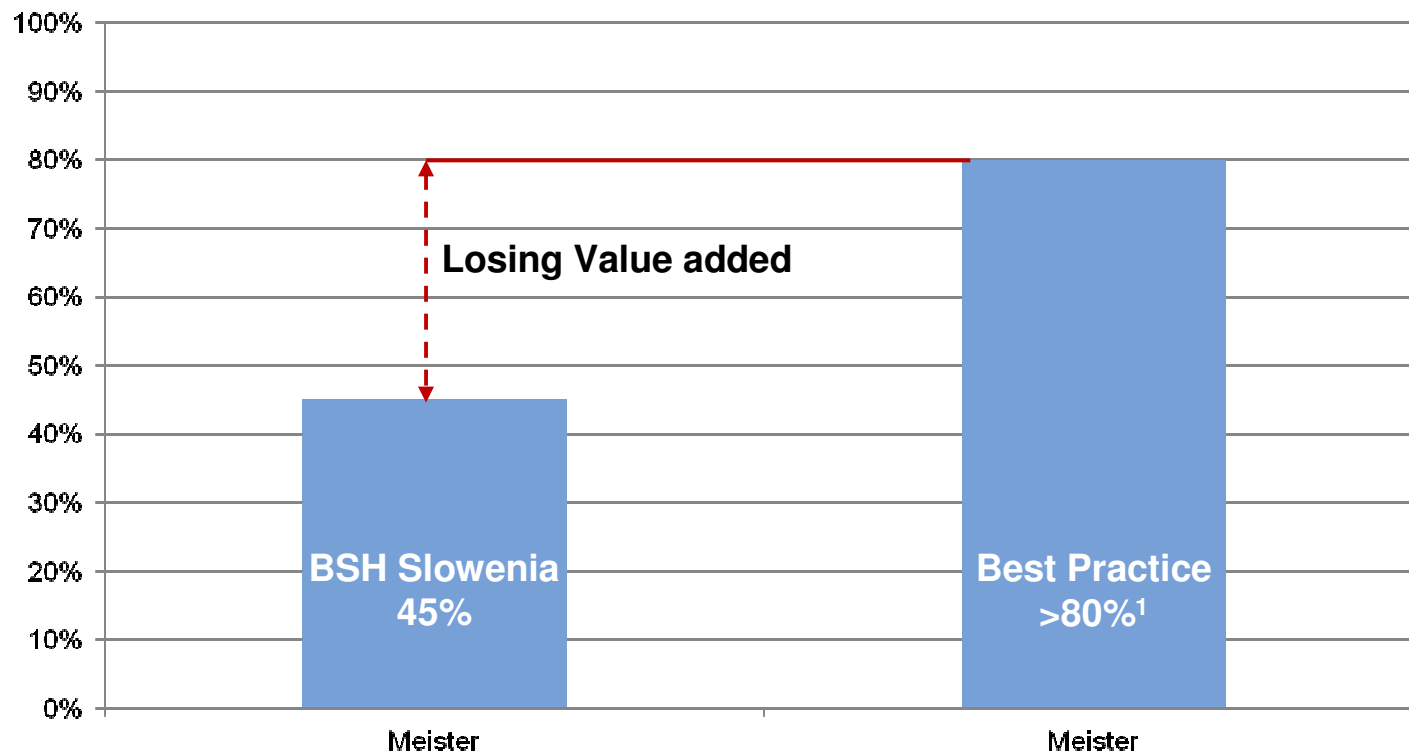
Diagnosis - A day in the life of a Meister

Categories				
Shopfloor Meeting	Shopfloor Go&See	Shopfloor Presence	Office Admin	Organizational
At Shopfloor	Problemsolving Coaching Training	Activities Factory tour Reperatures, Work	E-mail, Calls, Staff meeting / review Meetings, SAP , Excel	Material
60 min	40 min	90 min	100 min	130 min
14%	10%	21%	24%	31%

**Just 45% for leadership
and shopfloor activities**

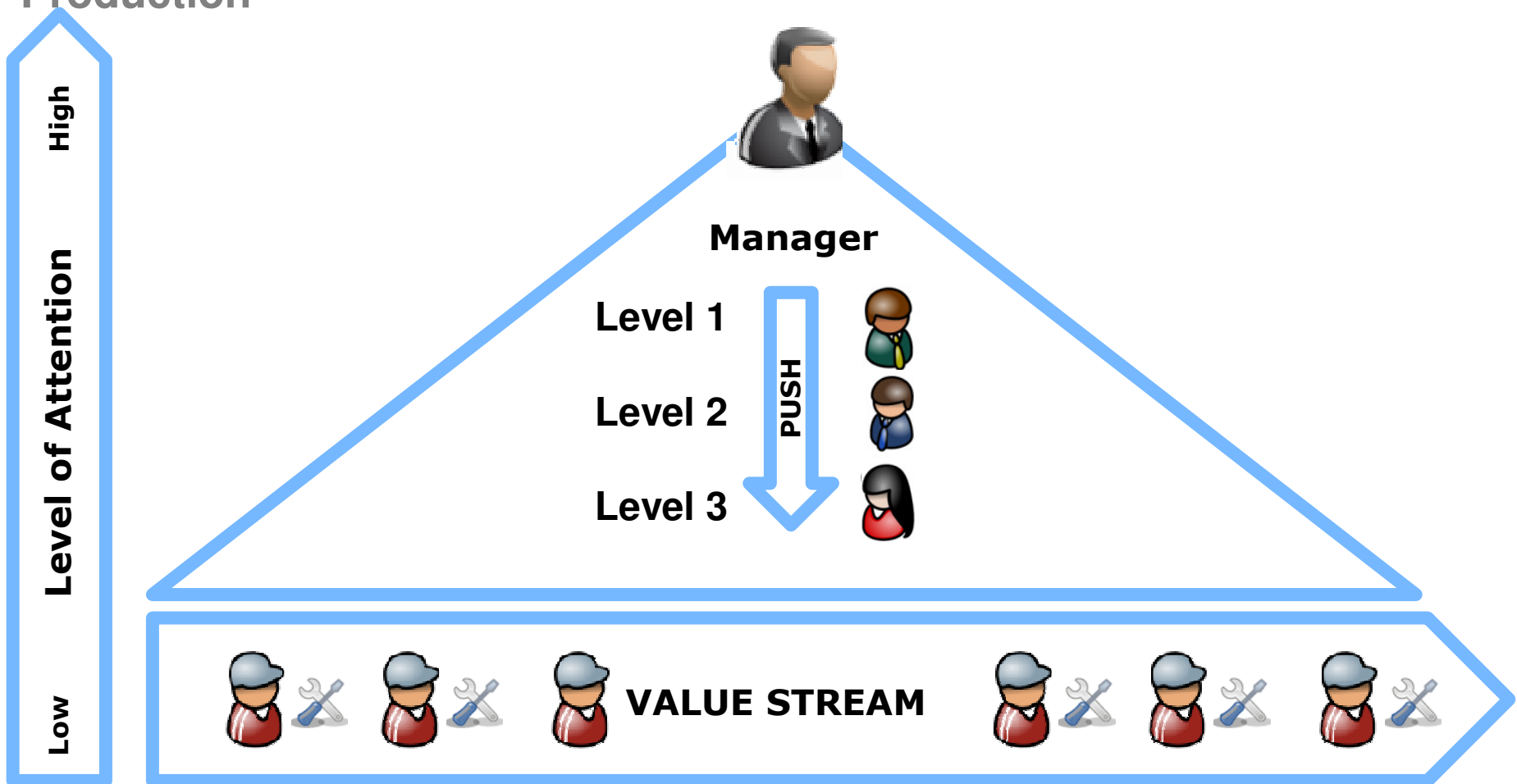
45% Shopfloor presence were observed. This shows potential for more leadership attendance and Shopfloor Management.

Diagnosis - A day in the life of a Meister

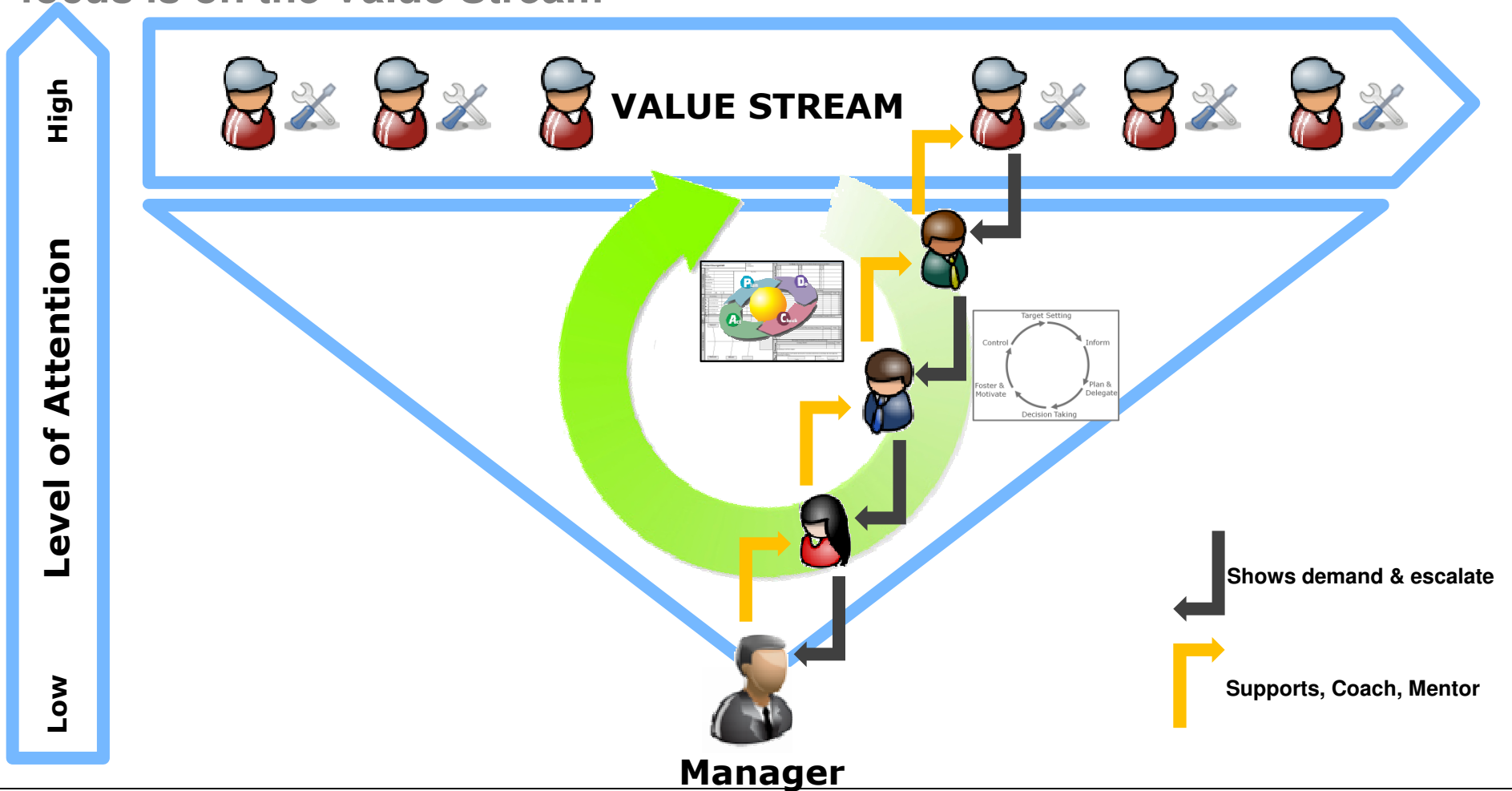


¹Source: Festo

Base of Shopfloor Management | Be aware of Traditional Management in Production



Base of Shopfloor Management | Create a (Management) Culture, which focus is on the Value Stream



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Communication | The communication takes place in front of the Information Boards and is defined by Structural Days for Each Level

Time	Monday	Who	Tuesday	Who	Wednesday	Who	Thursday	Who
07.00 07.20	Review last Day SFM Board	DL M	Review last Day SFM Board	DL M	Review last Day SFM Board	DL M	Review last Day SFM Board	DL M
07.20 08.00	Go&See SF Activities	DL, M	Go&See	M	Go&See	M	Go&See	M
08.00 09.00	CIP	DL Top Idea Coord. TL	Meeting, Projects, etc.					
09.00 09.20	SFM Meeting	M, DL	SFM Meeting	M, DL	SFM Meeting	M, DL	SFM Meeting	M, DL
09.20 09.45	Prepare Data for Gemba							
09.45 10.15	Gemba	M, QM, IE SC, R&D, PS, PU PDCP	Gemba	M, QM, IE SC, R&D, PS, PU PDCP	Gemba	M, QM, IE SC, R&D, PS, PU PDCP	Gemba	M, QM, IE SC, R&D, PS, PU PDCP
10.15 10.45	Break							
10.45 12.00	Cross Department Meeting, Projects							
12.00 12.30	KPI Walk SF Activities	M, DL	KPI Walk SF Activities	M, DL	KPI Walk SF Activities	M, DL	KPI Walk SF Activities	M, DL
12.30 13.10	Check open Points	DL	Check open Points	DL	Check open Points	DL	Check open Points	DL
13.10 13.40	Go&See SF Activities, SS, SM	M, DL, TL	Go&See SF Activities	M, DL	Go&See SF Activities	M, DL	Go&See SF Activities	M, DL
13.40 13.50	SFM Meeting	DL HP, PD	SFM Meeting	DL HP, PD	SFM Meeting	DL HP, PD	SFM Meeting	DL HP, PD
13.50 14.00	Information for Shift and Groups							
14.00 14.30	Go&See SF Activities, SS, SM	DL HP, PD	Go&See SF Activities	DL HP, PD	Go&See SF Activities	DL HP, PD	Go&See SF Activities	DL HP, PD
14.30 15.00	Free Time (Admin, Email, Calls)							

Example Perfect Day of Coordinator



1. Preparation of Facts & Figures
2. Present in front/ of Boards




Communication | Simple Meeting and Communication Rules are supporting entire process and are bringing discipline.

BOSCH AND SIEMENS HOME APPLIANCES GROUP

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Shop Floor Management
BSH Hišni aparati d.o.o

1. Vsak sestanek se začne in konča pravočasno
2. Ne uporabljamo mobilnih telefonov
3. Vsi nosimo vamo obutev
4. Sestanek se začne kljub odsotnosti udeležencev
5. Vsak sestanek ima agendo / dnevni red
6. Odgovoren je sklicatelj sestanka
7. Odnos med nami je spoštljiv
8. Udeleženci so pripravljene (pisalo, papir in s potrebnimi informacijami)
9. Sestanki se zaključijo primerno dokumentirani



Shop Floor Management Rules
BSH Hisni aparati d.o.o

1. Meeting starts and ends on time
2. We do not use mobile phones
3. All wear safety shoes
4. Meeting starts despite missing members
5. Every meeting has an agenda
6. Responsible is the organizer
7. We treat us with respect
8. Participants are prepared (pencil, paper and needed information)
9. Meetings are closed in time with documentation

Problem Solving | Problem Solving Techniques are mandatory in terms of deviation to standard and are the “entrance ticket” for escalation the next level.

5 x Why

Fishbone

FCPN		CIP - KAIZEN			BSH Production System	
ZAPOREDNA ŠT./TRACKING NO:		DATUM ZAČETKA / DATE START:	ODDELEK / DEPARTMENT:	MATERIAL-DEL / PART:		
STROJ / MACHINE:		PROCESS:				
5 X Zakaj? 5 X Why?		Diagram "Fishbone" "Vzrok - Posledica" (UKREP) / Fishbone "Cause - Effect" Diagram (MEASURE)				
1. P	Zakaj niso NÁČRTOVALCI predvidevali te napake? / Why didn't PLANNING process realize this failure before?					
1. M	Zakaj ni PROIZVODNI proces preprečil napake? / Why didn't MANUFACTURING (APPLICATION) process prevent failure?					
3. Q	Zakaj ni proces KONTROLE KVALITETE preprečil te napake? / Why didn't QUALITY (CONTROL) process prevent the customer from this failure?					
Zakaj? / Why?						
Zakaj? / Why?						
Zakaj? / Why?						
Zakaj? / Why?						
Zakaj? / Why?						
Uvajanje in spremljanje ukrepov / Applying and monitoring measures						
Vzrok / Root Cause		Ukrep / Measure		Odgovoren / Responsible	Rok / Deadline	Status
						⊕
						⊕
						⊕
<small>■ D1: Ukrep, odgovoren, postavljen rok / Measure, responsible, deadline defined</small>		<small>▶ D2: Izvajanje ukrepov se je pričelo / Implementation measure has begun</small>		<small>🔄 D3: Ukrepi opravljeni / Measures done</small>	<small>● D4: Učinki ukrepov so opazni / Effects of measure have observed</small>	
Lastnik procesa: / Process Owner:		Vodja oddelka / Head of Department:		Datum zaključka / Closing Date:		

Process Confirmation | T-Card systematic supports the follow up of regular task and gives clearly an overview what was done.

Účnik aktivnosti v proizvodnji TASSIMO (SFM)

MOJSTRI	MOJSTRI	MOJSTRI	MOJSTRI	MOJSTRI	MOJSTRI	MOJSTRI	MOJSTRI	MOJSTRI	MOJSTRI
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Topic:
Shift handover

Daily: 05:50 - 06:00

Task:
Collected Data from previous shift
Quality (blocked appliances)
Pieces
FPY
Stops
Open points
5S

Topic:
Shift handover

Daily: 05:50 - 06:00

Task be done

Done: _____

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So far it is hard to evaluate measurable results, but...

- ❑ With in the last 2 weeks we did the best DEP in Pilot factory ever**
- ❑ One week of production without deviation from output in any shift on hourly base**
- ❑ The quantity of CIP activities is rising strongly**
- ❑ KPIs are well known in the organization**
- ❑ The activities are more transparent and can be followed up on each level**
- ❑ 5x Why as Must Have ensures more sustainable problem solving and this is recognized by all**
- ❑ Team is convinced that SFM is helping us to manage future complex challenges**

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Thank you very much for your attention!