



CAPITAL MARKET DAY 2015

**CLOSING THE
GAP**

Welcome!

Agenda



- 10.45** **Welcome & introduction**
- Olof Persson, CEO
- Focus on Group Trucks Operations**
- Mikael Bratt, EVP GTO
- Olivier Vidal, SVP EMEA Cab & Vehicle
- Kamel Sid, VP Gent plant
- 12.00** **Lunch**
- 13.00** **Plant tour**
- 15.00** **Break**
- 15.30** - **Group Trucks Sales, Joachim Rosenberg, EVP**
- **Volvo CE, Martin Weissburg, President**
- **Volvo Group, Olof Persson, CEO**
- **Q&A**
- 18.15** **End of program**
- 19.00** **Dinner at the Sandton Hotel, Gent**



CAPITAL MARKET DAY 2015

**CLOSING THE
GAP**

**Olof Persson
CEO Volvo Group**

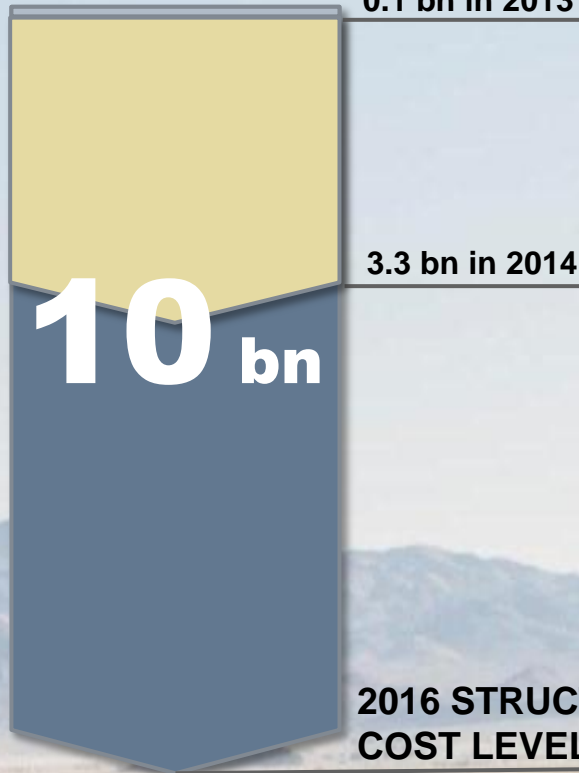
Today's focus



- **We have strong assets to build on – are well invested for the future**
- **Right-sizing the structural cost-base – program on track and delivering**
- **Addressing specific improvements – focusing on product and market priorities**
- **Transforming the Volvo Group – to profitability driven by organic growth and world class efficiency**

Main focus 2013-2015 to reduce the overall structural cost level across the Group...

**2012 STRUCTURAL
COST LEVEL**







GENERAL REDUCTIONS IN:

- Manufacturing/logistics
- R&D
- Selling expenses
- Administrative expenses

SUPPORTING
PROPORTIONALLY
IMPROVED
PROFITABILITY
ACROSS BUSINESS
AREAS

... gradually shifting focus to targeted & selective activities to address specific performance priorities

FY 2014	NORTH AMERICA	SOUTH AMERICA	EMEA	APAC
	Higher performance	Higher performance	Higher performance	Higher performance
	n/a	Low volume	Lower performance	Lower performance
	n/a	Low volume	Lower performance	Low volume
	Higher performance	Lower performance	Low volume	Higher performance
Volvo Construction Equipment	Lower performance	Lower performance	Higher performance	Higher performance

- Align product, industrial and commercial strategies
- Align governance and responsibility structure to support
- Specific activities for each region and brand

■ Higher performance
 ■ Medium performance
 ■ Lower performance

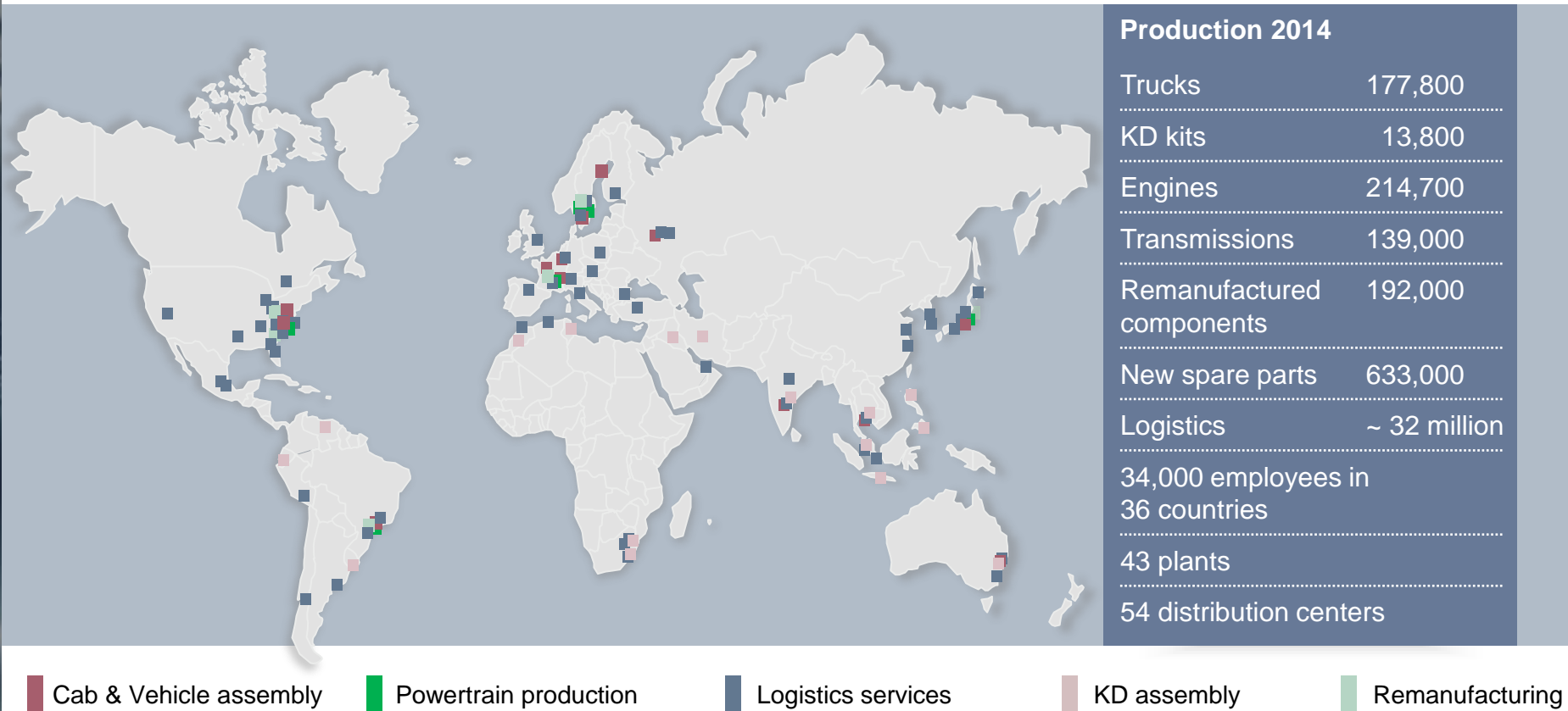


CAPITAL MARKET DAY 2015

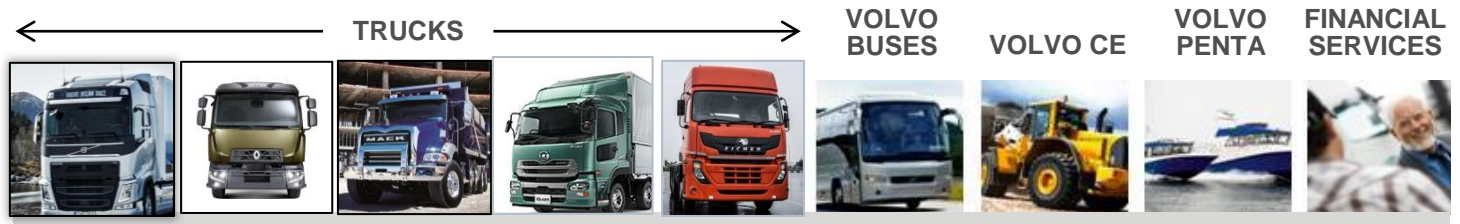
CLOSING THE GAP Group Trucks Operations

**Mikael Bratt
EVP Volvo Group**

Group Trucks Operations has a global, modern and well-invested footprint



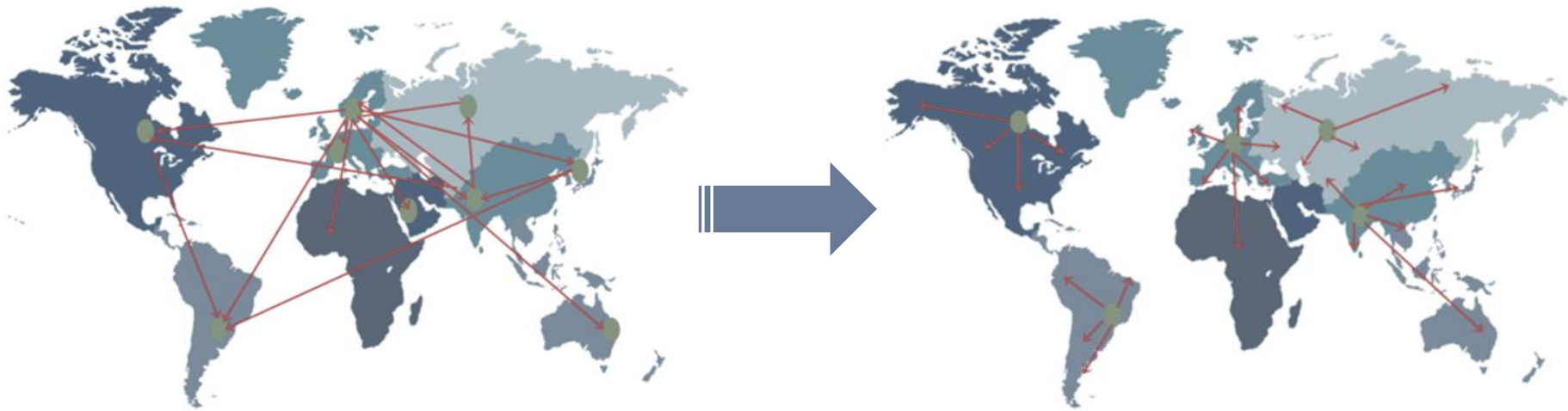
Our responsibility throughout operations spans across the Group



GROUP TRUCKS OPERATIONS

	TRUCKS	VOLVO BUSES	VOLVO CE	VOLVO PENTA	FINANCIAL SERVICES
Manufacturing of cabs and trucks	Dark Blue	Light Blue	Light Blue	Light Blue	Light Blue
Manufacturing of engines and transmissions	Dark Blue	Dark Blue	Dark Blue	Dark Blue	Dark Blue
Remanufacturing of components	Dark Blue	Dark Blue	Dark Blue	Dark Blue	Dark Blue
Logistics and aftermarket services	Dark Blue	Dark Blue	Dark Blue	Dark Blue	Dark Blue
Purchasing	Dark Blue	Light Blue	Light Blue	Light Blue	Light Blue
Volvo Production System	Dark Blue	Dark Blue	Dark Blue	Dark Blue	Dark Blue
Health and safety	Dark Blue	Dark Blue	Dark Blue	Dark Blue	Dark Blue

We are on our way to one global system with optimized quality, lead-time and cost efficiency



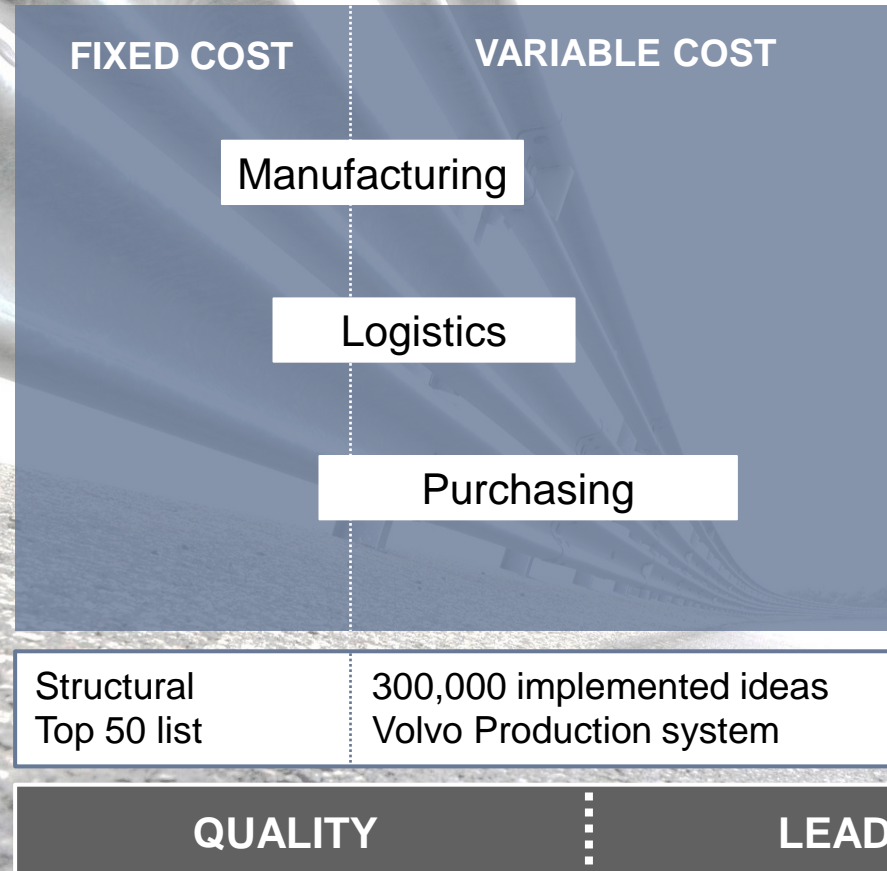
FROM SEPARATE SILOS

European
Brand designated footprint
Brand designated capacity
Brand designated logistics
Uneven site performance
Hardware driven

TO UNLOCKED SYNERGIES

Global operations - regional adaptation
Common market footprint
Common market capacity
Common market logistics
Best practice site performance
Continuous improvement driven

Our main focus is on fixed and variable cost reduction



- Global presence, in proximity to our customers
- Modern and well invested systems and facilities
- Focus on fixed and variable cost reduction, but also to
 - Increase industrial flexibility to manage shifts in markets situations
 - Build base for continuous improvements

Cost reduction activities cross functions are on track and delivering

→ MANUFACTURING

- 8 plants closed and 2 outsourced
- 2 new plants installed in growth markets
- Re-enforced continuous improvements
- Systematically rolled out best practices cross plants

→ LOGISTICS

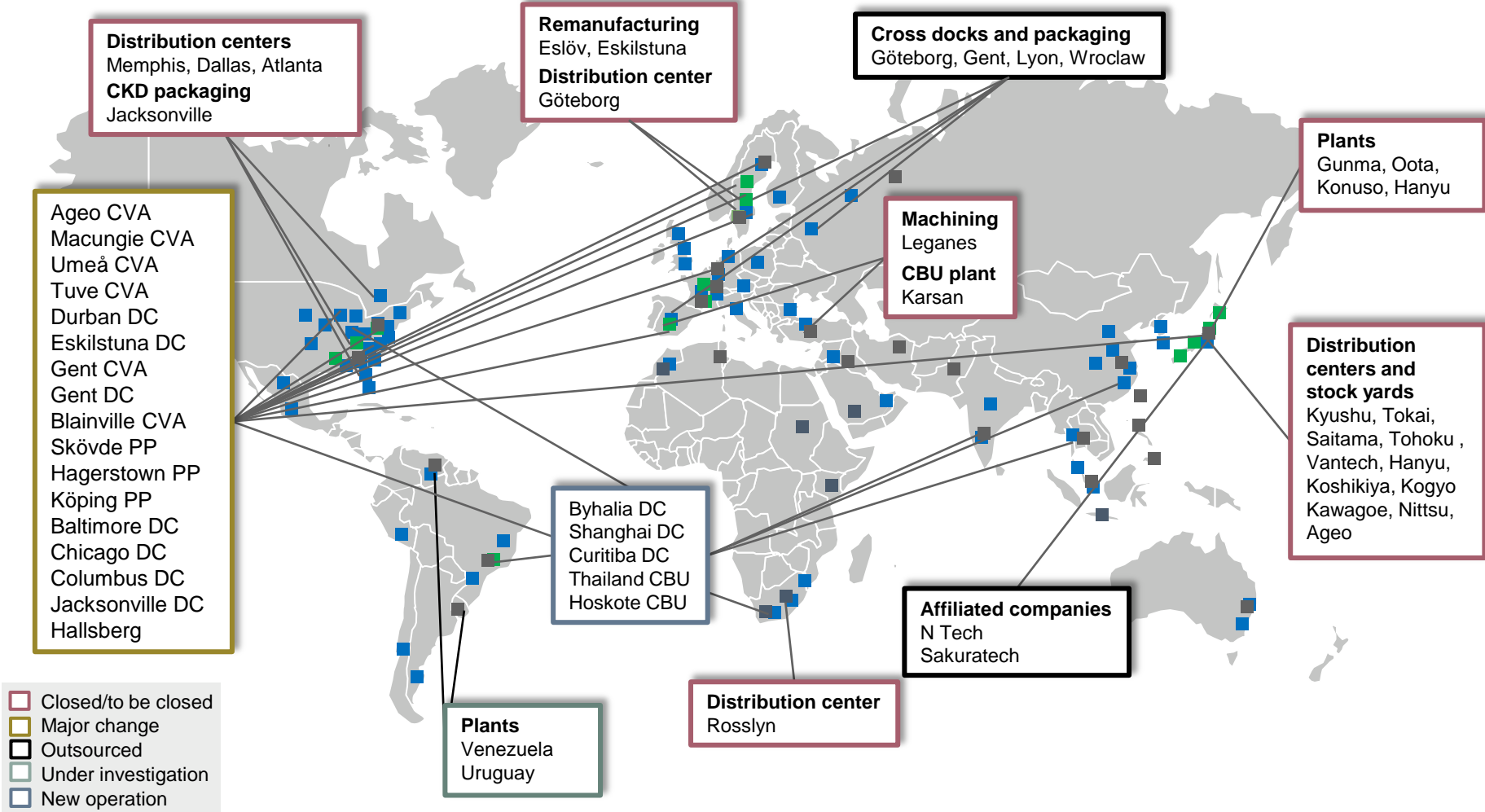
- 10 logistics centers closed and 4 outsourced
- 3 logistics centers set up to optimize big flows
- New way of working to optimize performance installed
- Systematically rolled out best practices cross plants

→ PURCHASING

- Installed new tool box for contract negotiations
- Introduced new suppliers to enable supplier switches
- Increased level of productivity agreements



Restructuring of our network is on track and will continue with high pace

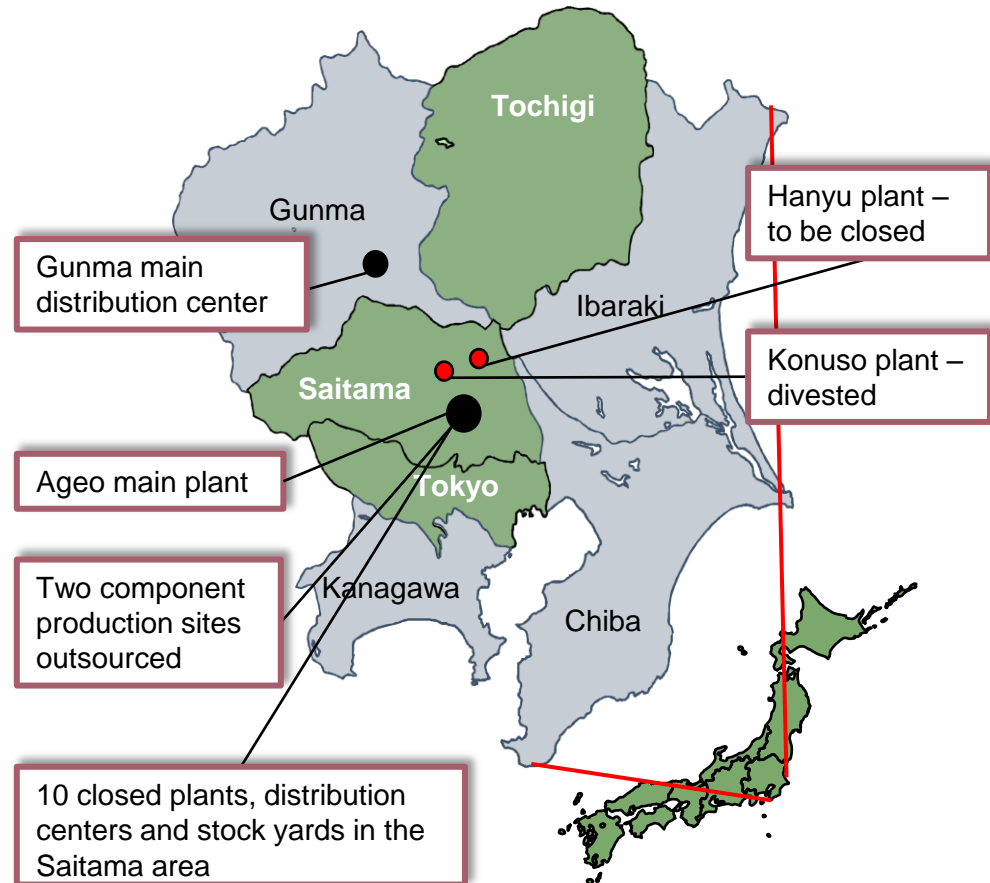
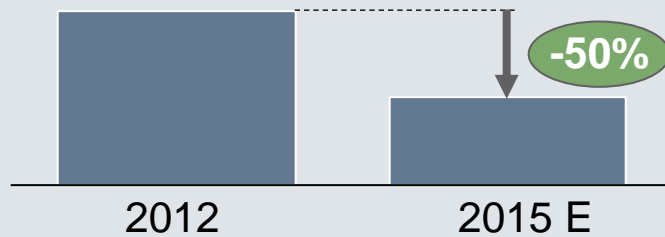


Japan restructuring activities reduce Group Trucks Operations headcount by 50%

Main restructuring activities

- 10 sites closed - operations consolidated into Ageo plant and Gunma distribution center
- One legacy plant divested, one to be closed
- 2 non-core business divested

Impact on head count



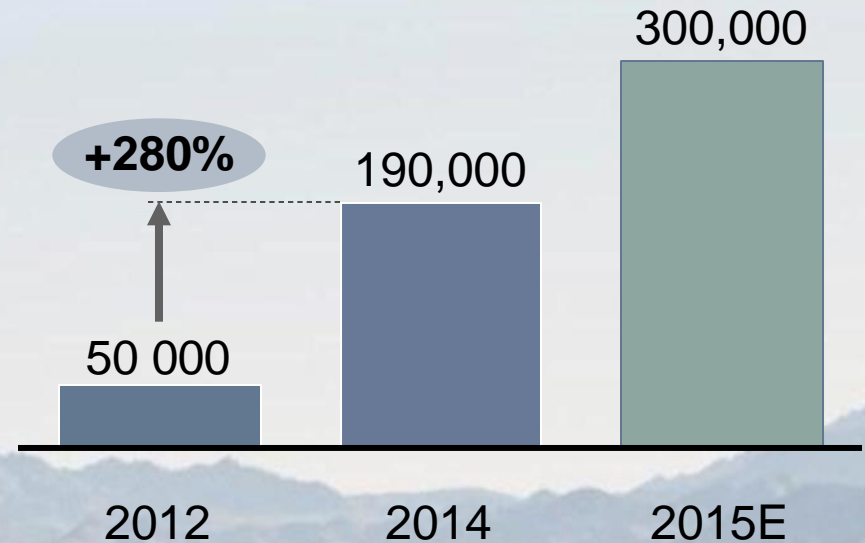
We have re-enforced continuous improvement activities to ensure productivity development

WHAT WE HAVE DONE

- Continues improvements reinforced
- Selected plants with high cost base in focus
- Central expert team supporting to build local capabilities
- All employees targeted towards same yearly objective
 - 20 ideas / blue collar
 - 8 ideas / white collar

IMPACT

Number of implemented ideas
Number, #



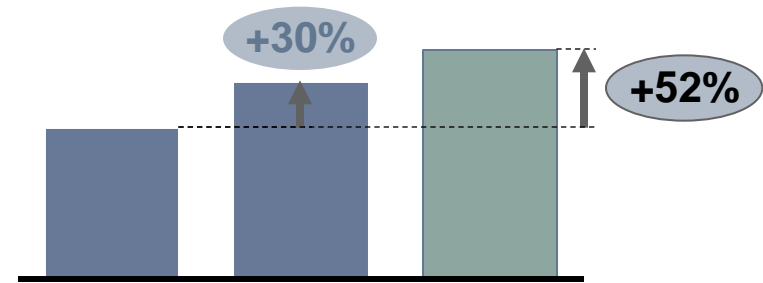
One common production system to share best practice – collectively we know how to do it!

Restructuring and continuous improvement have had substantial impact on productivity

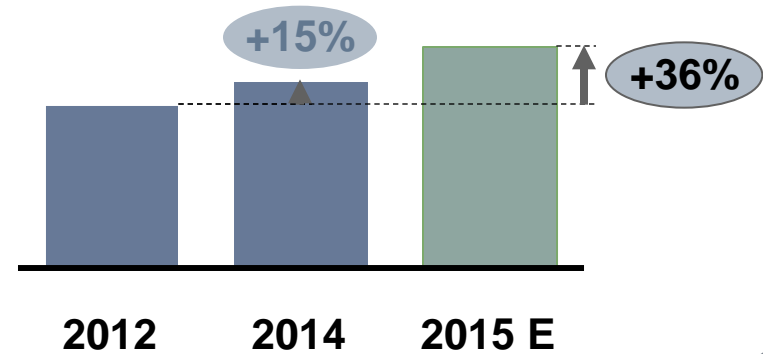
Structural white and blue collar reduction in progress according to plan

- Trucks per **white collar** increased with 30%, with additional 22% to realize in 2015
- Trucks per **blue collar** increased with 15%, with additional 21% to realize in 2015

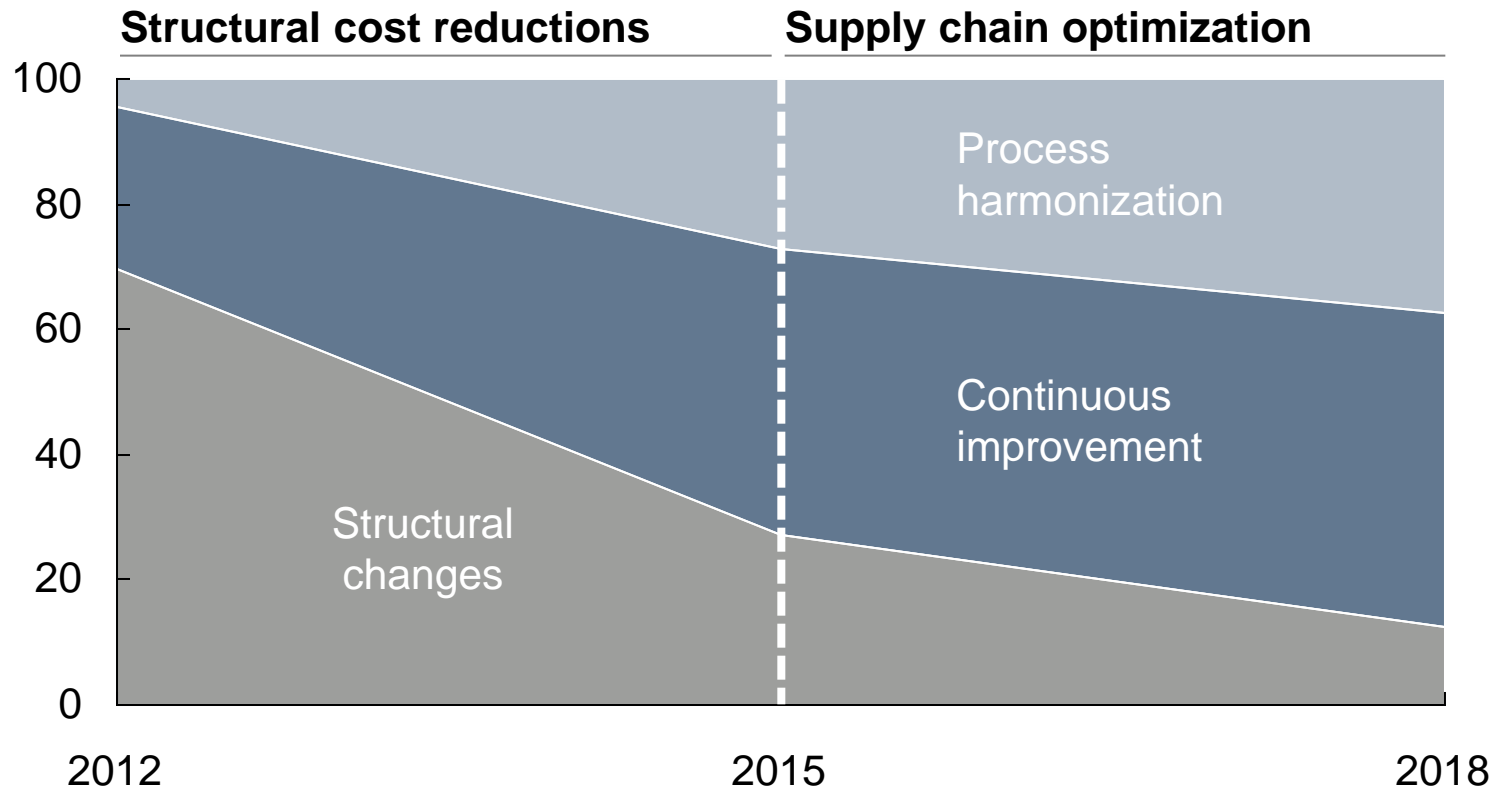
TRUCKS PER WHITE COLLAR



TRUCKS PER BLUE COLLAR

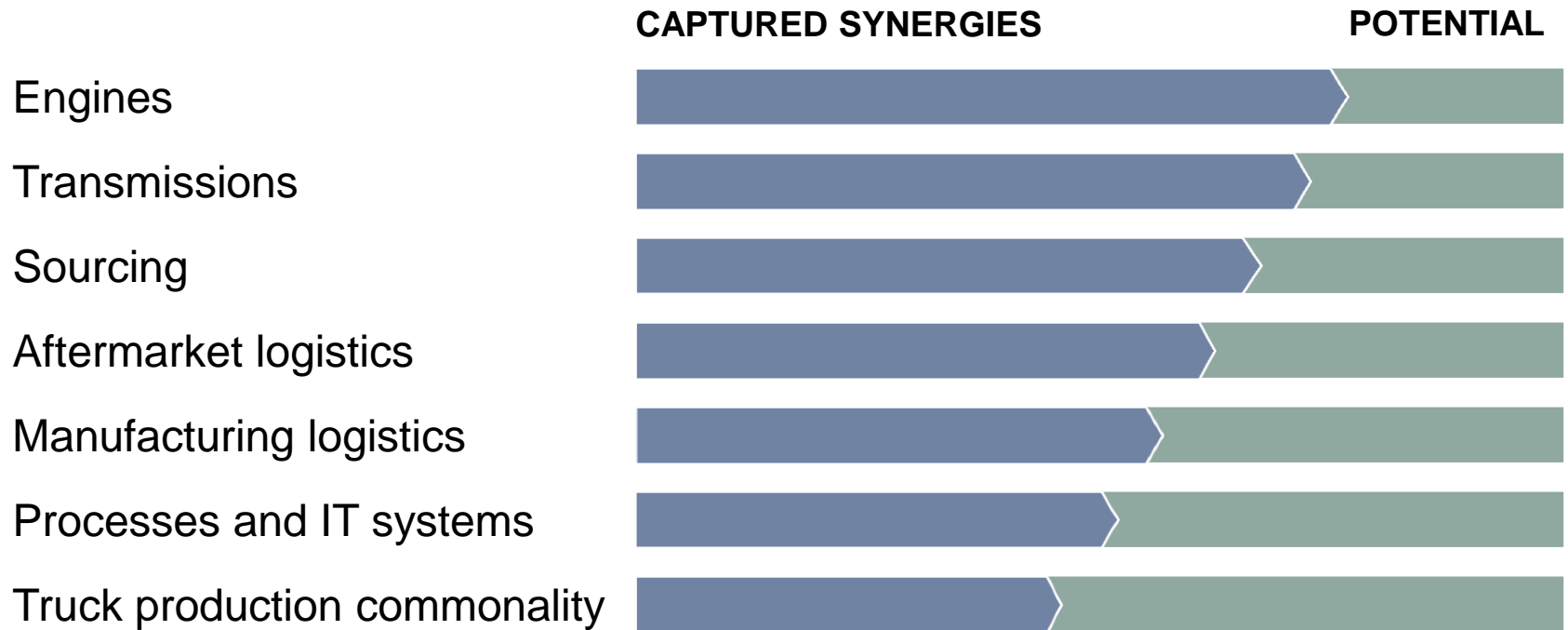


As we deliver, focus shifts towards continuous improvement and process harmonization



Productivity challenge is 5 percentages / year over business cycle

In addition, we leverage best practice and gain efficiency cross our operations



Synergy work in Powertrain serves as industrial model for rest of the operation

Still synergies to be captured from the existing engine and transmission footprint

POWERTRAIN EXAMPLE

2001

- Full engine and transmission footprint per brand

Limited Group synergies

- 2011

- Global engine and transmission product platforms
- Global manufacturing footprint
- Global sourcing footprint

Initial Group synergies captured

2012 - 2015 →

- Further optimization of existing engine and transmission manufacturing footprint
- Capital intense base production sites localized close to main suppliers
- Final assembly localized close to markets

Second wave of Group synergies to be captured

Additional synergies to be captured within Group aftermarket and manufacturing logistics

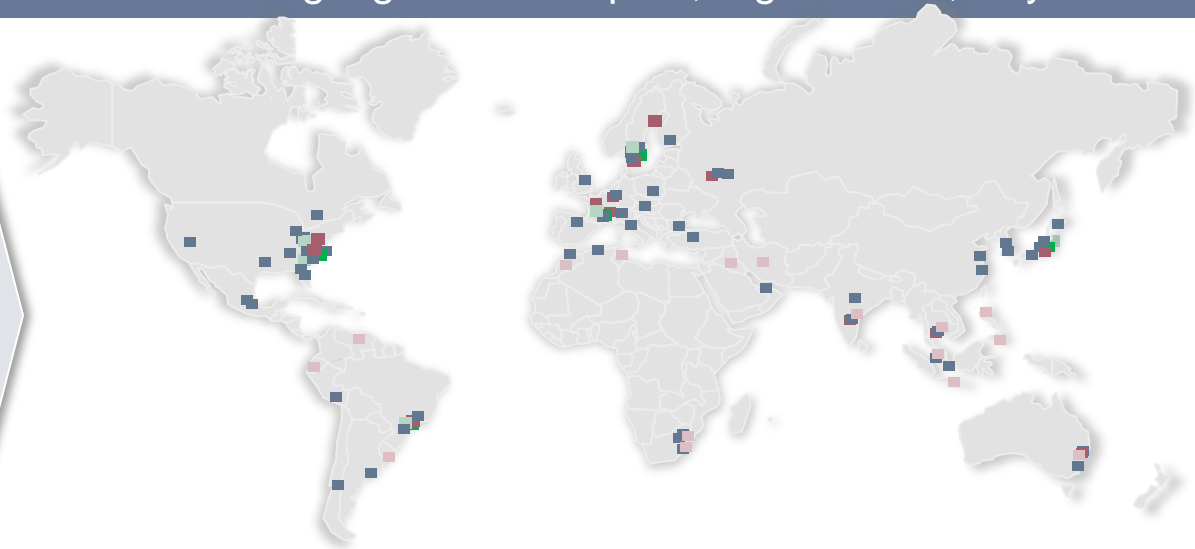
Historic phases:

2001 Full logistics setup per brand with no Group synergies

2011

- Separate optimization of aftermarket logistics did capture synergies
- Limited synergies captured in manufacturing logistics

2012 - 2015 → Group consolidation and optimization of aftermarket and manufacturing logistics – footprint, organization, ways of working



- Logistics purchasing synergies
- One standard IT platform roll out
- End-to-end operational efficiencies

Group Trucks Operations set up enables end-to-end optimization of the entire supply chain



Purchasing – Manufacturing – Logistics Services

QUALITY

LEAD TIME

COST EFFICIENCY

Let's get into more details on optimization of our European operations





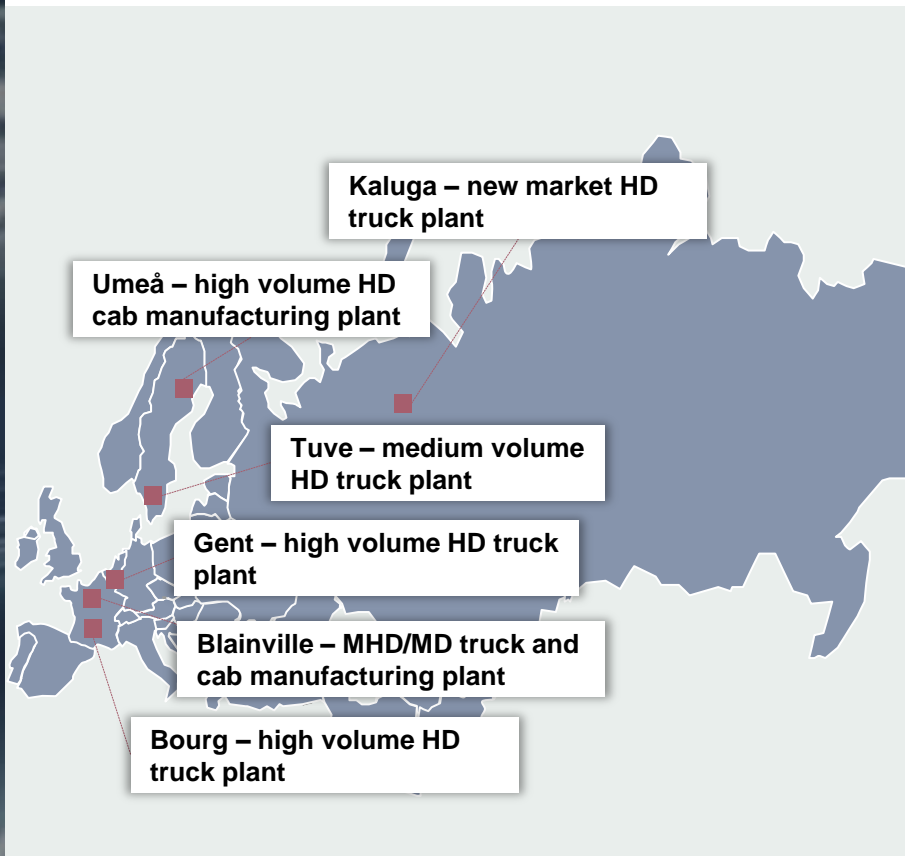
CAPITAL MARKET DAY 2015

CLOSING THE GAP

**Optimizing
European
manufacturing**

Olivier Vidal
SVP Volvo Group

Stepwise structural changes and optimization of the European truck footprint 2014-15



- From 6 to 5 assembly lines in 3 heavy-duty truck plants
- Move cab trim from Umeå to Tuve
- Move medium duty truck assembly from Gent and concentrate to 1 medium duty truck assembly line in Blainville
- Within saved surfaces in Tuve and Gent fully optimize internal plant logistics and deploy **Volvo Operations Concept**
- High focus on best practices sharing between plants
- Strengthen continuous improvement and people engagement through **Volvo Production System** anchoring

The structural changes means removal of 620 fixed positions with 20% manufacturing cost savings from actions above

The Renault D range/Volvo FL/Volvo FE in Blainville

Common architecture allows cost efficient multi brand assembly for medium duty trucks

Consolidation of medium duty trucks to one line in six months

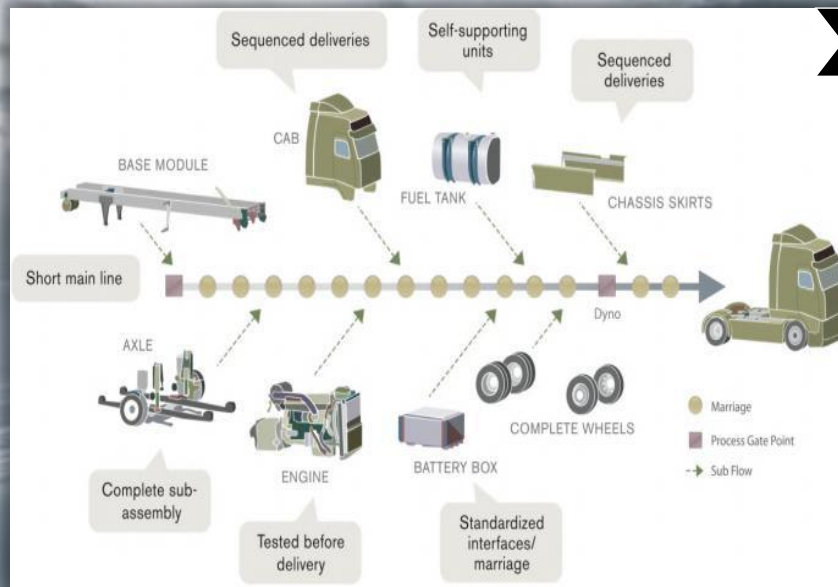
ENABLERS

- Same truck platform
- Same supply chain
- Common manufacturing process and IS/IT platform



Manufacturing cost is challenged to decrease by 21% end of 2015

Tuve and Gent twin plants optimized for Volvo heavy duty trucks assembly



- 90% commonalities targeted on assembly and logistics processes
- Volvo Operations Concept fully applied
- Full involvement of our people through continuous improvement activities
- Process performance by best practice sharing
- Work distribution and specialization between the two plants

Consolidation from 4 to 3 assembly lines with kept capacity

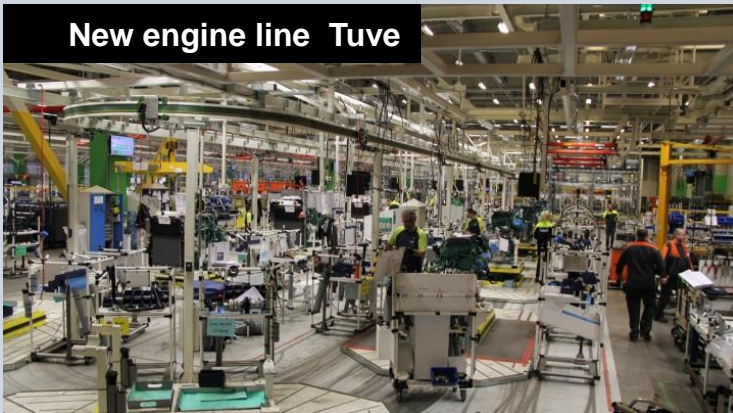
Gent and Tuve twin plants

Commonality will improve performance

New engine line Gent



New engine line Tuve



From a restricted commonality...

- Tooling
- Packaging

... to a result oriented commonality

- Same equipment suppliers
- Border of line
- Fish bone logistics
- Cab trim line
- Pre-assembly lines for axle and engine
- Way of working and shop floor organization
- Networking and WC efficiency

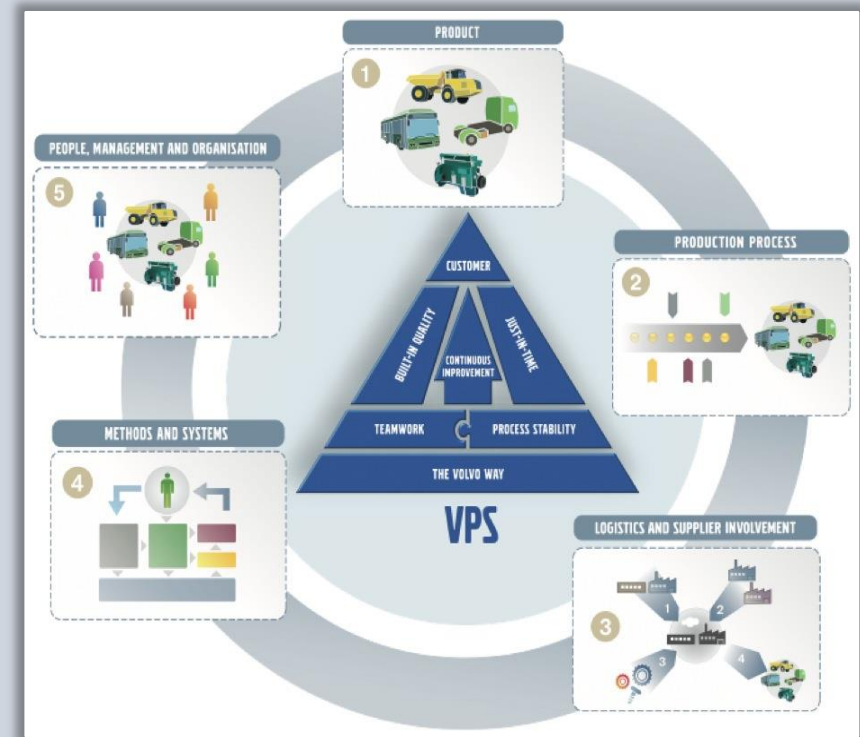
Gent is challenged to improve variable manufacturing cost by 20% and Tuve by 30%.

By 2015 we will have lean assembly in all the four European truck plants

- Volvo Operational Concept in Gent, Tuve, Bourg, Blainville
- Best practice assembly and logistics processes
- Continuous improvement structure in place
- Improved leveling and average balancing
- Fixed cost reduction in place
- Strengthened common manufacturing culture

TARGET 2015 >>>

Material availability 98%
Delivery precision 95%



Optimizing our European manufacturing Summary **»**



- We are confident to reach our targets
- We are defining a new standard to assemble trucks
- We are building on people skills and engagement
- We are building a common strong industrial culture

Stepwise structural changes and optimization of the European truck footprint 2014-15

– Let's focus on the changes in Gent



- From 6 to 5 assembly lines in 3 heavy-duty truck plants
- Move cab trim from Umeå to Tuve
- **Move medium duty truck assembly from Gent and concentrate to 1 medium duty truck assembly line in Blainville**
- **Within saved surfaces in Tuve and Gent fully optimize internal plant logistics and deploy Volvo Operations concept**
- High focus on best practices sharing between plants
- Strengthen continuous improvement and people engagement through Volvo Production System

The structural changes means removal of 620 fixed positions with 20% manufacturing cost savings from actions above

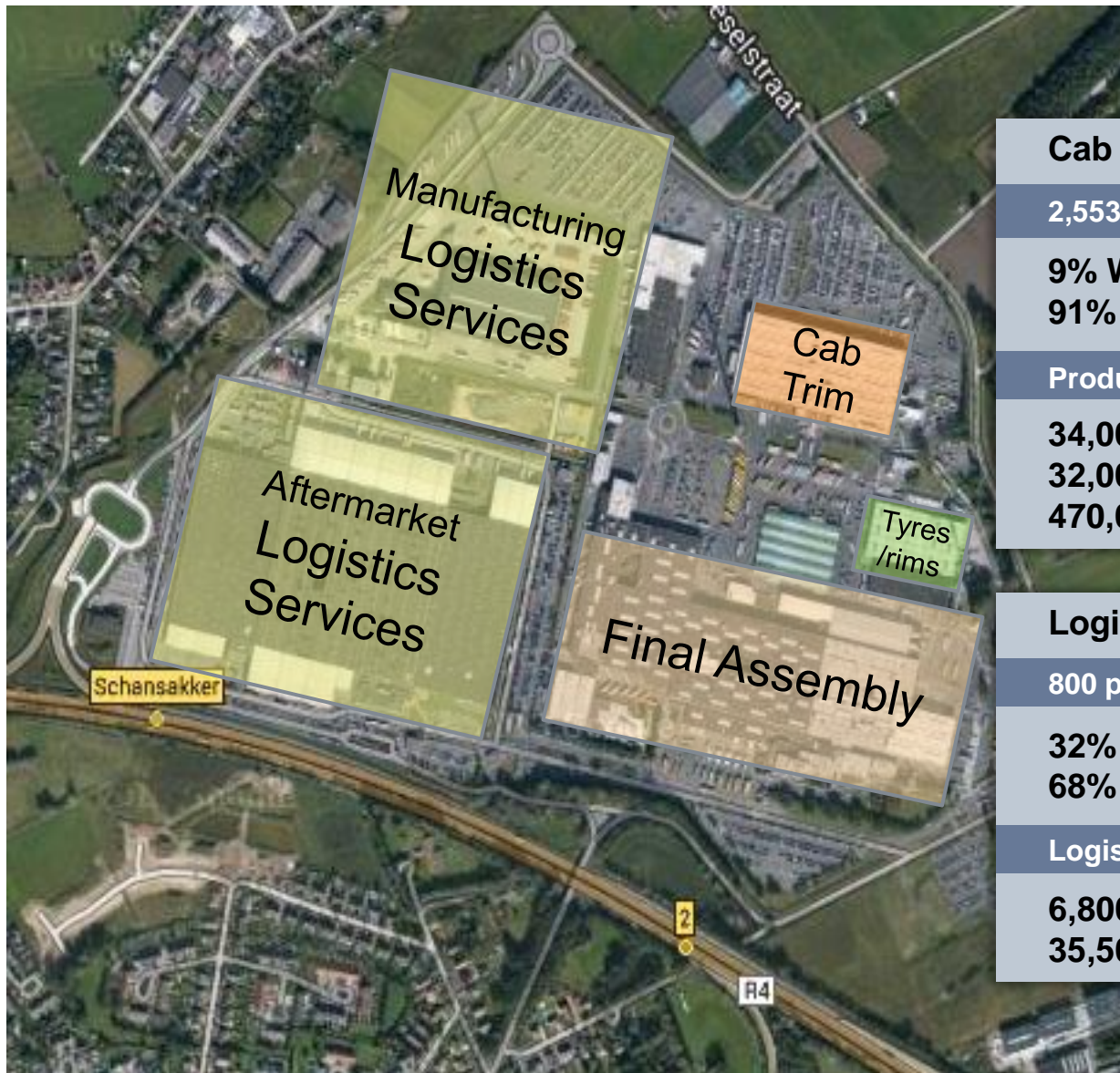


CAPITAL MARKET DAY 2015

**CLOSING THE
GAP**

Gent site

Kamel Sid
VP Gent plant



Cab and Vehicle Assembly, Gent

2,553 people

9% WC

91% BC

Production figures

34,000 Trucks

32,000 Cabs

470,000 Tires

Logistics Services, Gent

800 people

32% WC

68% BC

Logistics figures

6,800,000 Aftermarket order lines

35,500 Trucks delivered

The major structural steps of the Gent site transformation



NEW AXLES LINE

2012- 2013

Largest product renewal ever in Gent

2014

European Optimization Program

Efficiency program at distribution center

Continuous improvement reinforcement initiative

2015

Full speed in both site optimization programs as continuous improvement reinforcement



NEW ENGINE LINE



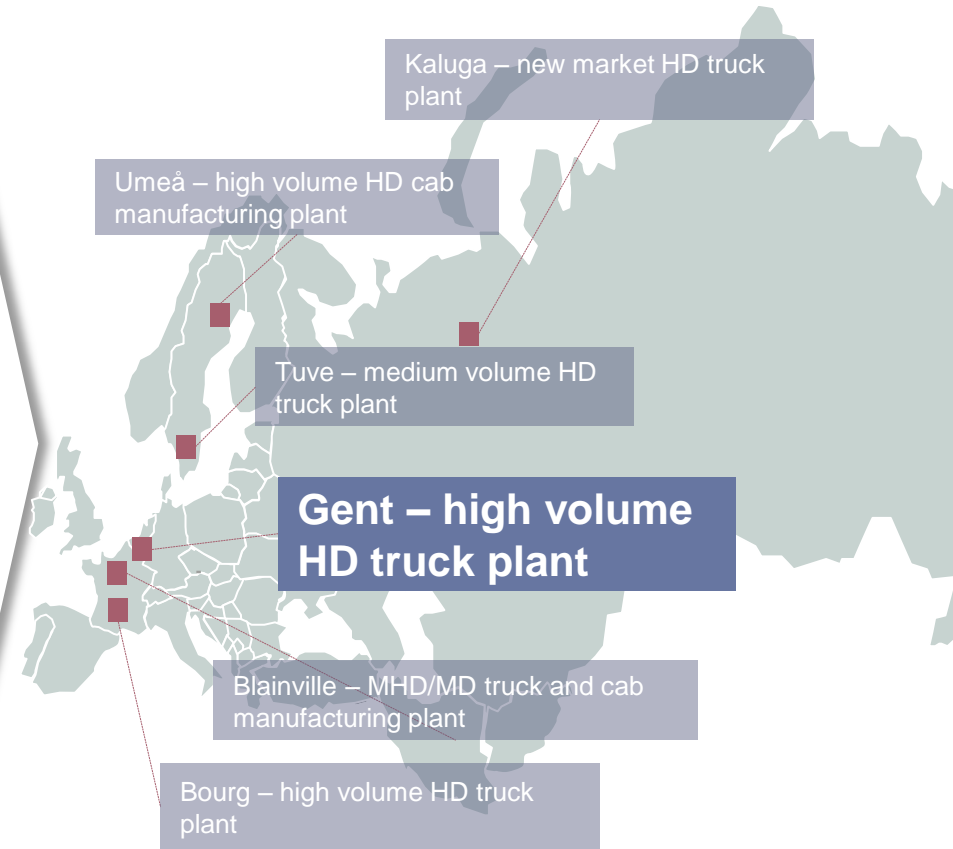
EXTENSION CAB TRIM



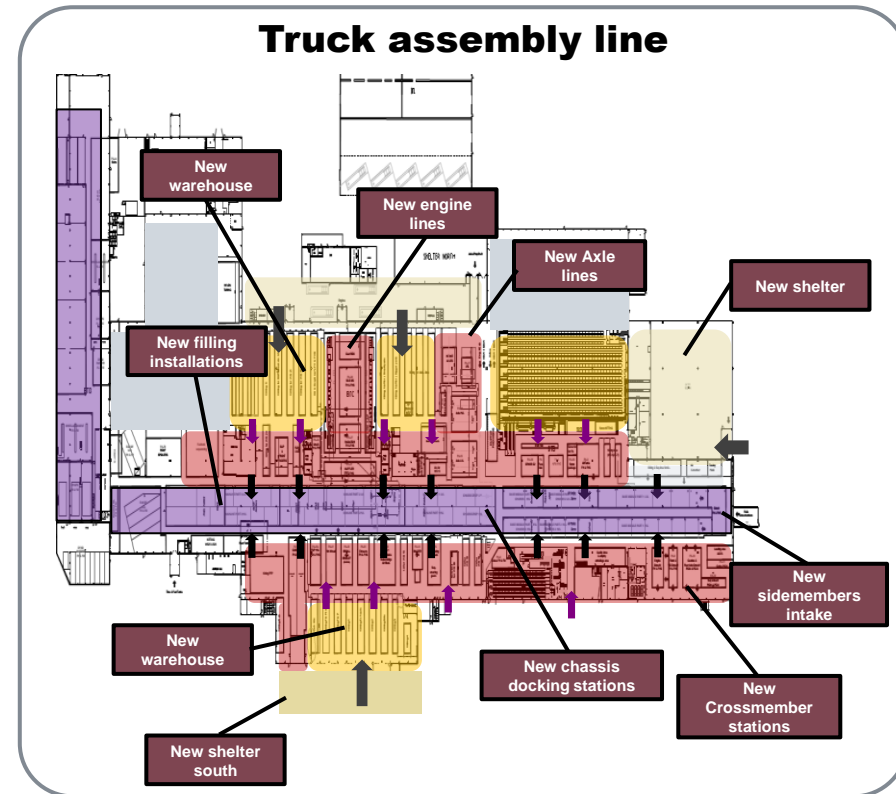
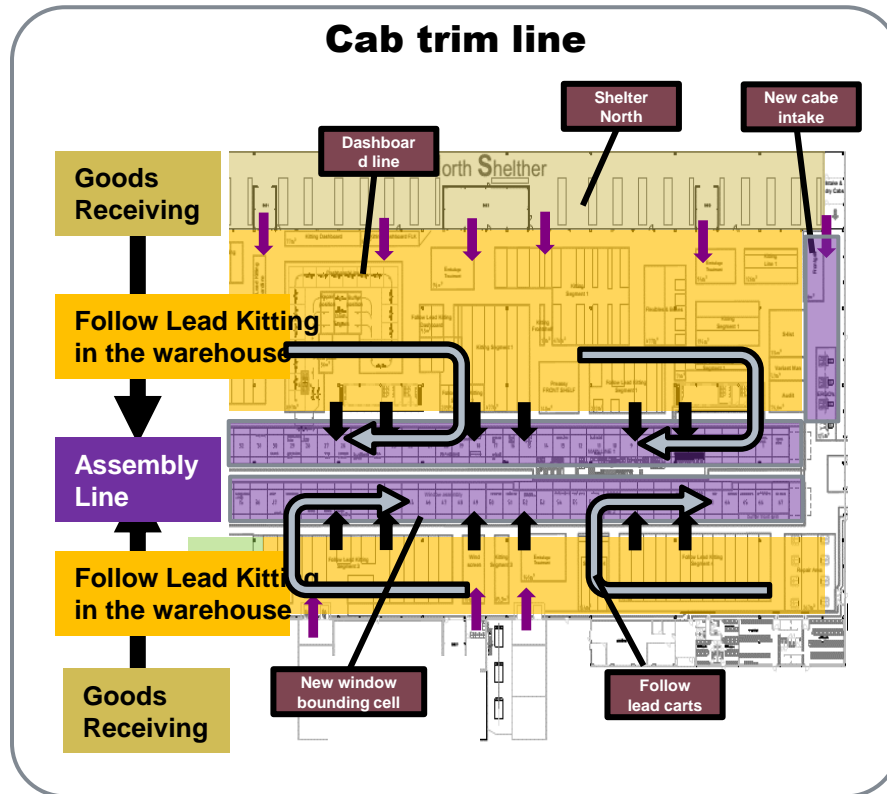
NEW WAREHOUSE Logistics Services

European Optimization Program – a big change for the Gent truck plant

- Medium-duty line in Gent closed and transferred to Blainville, France
 - Effective June 2014
 - 200 fixed positions removed
- Heavy-duty truck base capacity increased from 128 to 160 trucks /day
- Max capacity increased from 144 to 200 trucks /day in 2 shifts
- Optimize manufacturing logistics
- Strengthen continuous improvement
- Quality, Lead time, Cost efficiency








Major logistics upgrade of the truck assembly and cab trim lines – productivity is improving



- Production capacity of 200 trucks/day
- 20% productivity improvement in both manufacturing logistics and production
- Material availability at point of use improved to 98%

Performance has improved in the Gent plant - main KPI's are moving in the right direction

*2016

QUALITY	02/2014	02/2015		Target Q4/2015
First time through, new FH	68%	75%		80% / 90%*
LEAD TIME				
Factory delivery precision	81%	93%		95%
Part availability at point of use	87%	94%		98%
COST EFFICIENCY - Hours per unit				
Trucks	70	65		54
Cabs	23	21		18

New ways of working has resulted in major product quality steps



Operators can stop the line by Andon calls



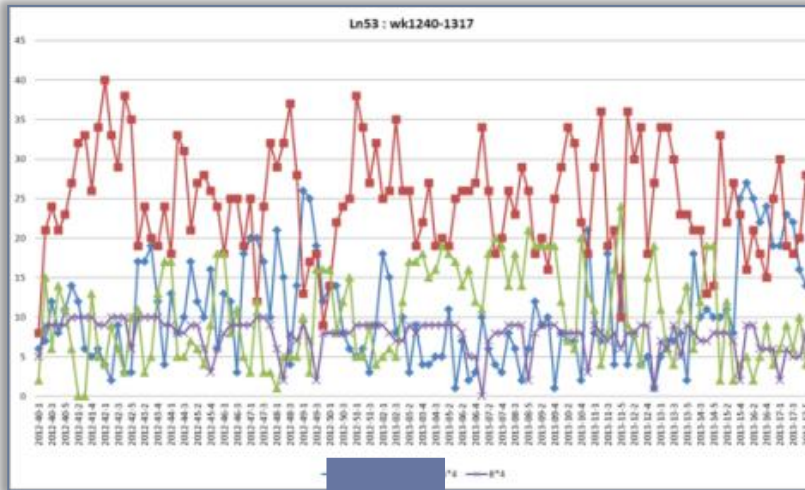
Prioritization and daily problem solving on the shopfloor



Standardized work as foundation for basis training and production method confirmation

- Fault frequency reduced by 40% versus 02/2014
- First time trough improved by 8 percentage points versus 02/2014

Production leveling has stabilized the assembly flow and improved the lead time significantly

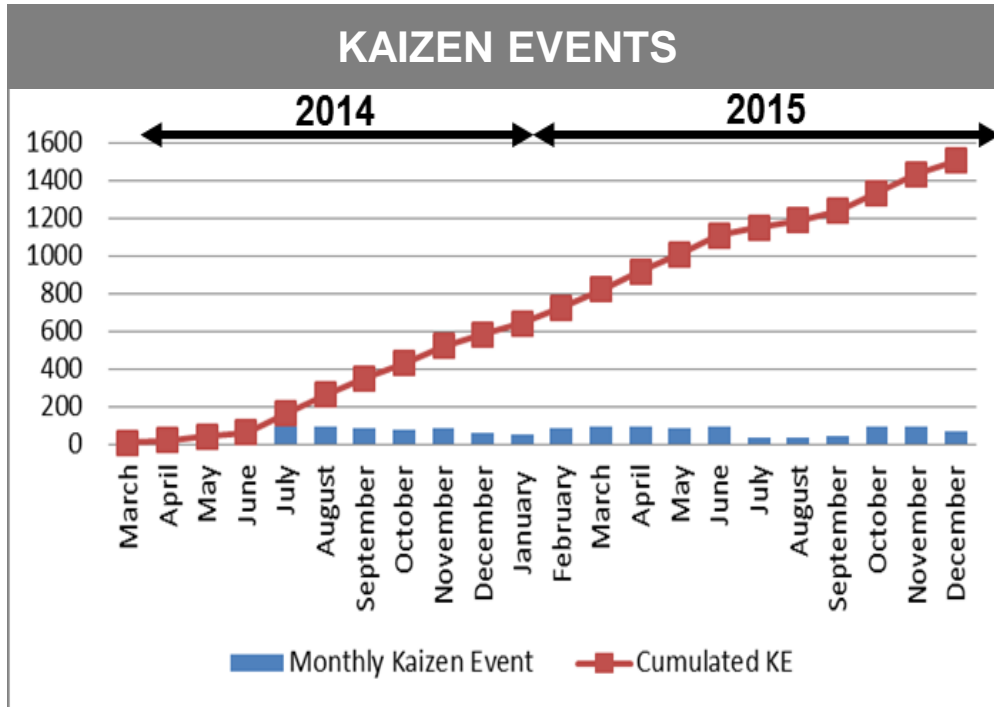


- Heavy variant spread out
- More stability into the supply chain
- Work load better balanced



- Delivery precision > 93%

Continuous improvement are accelerating – higher number of kaizen events and amount of savings

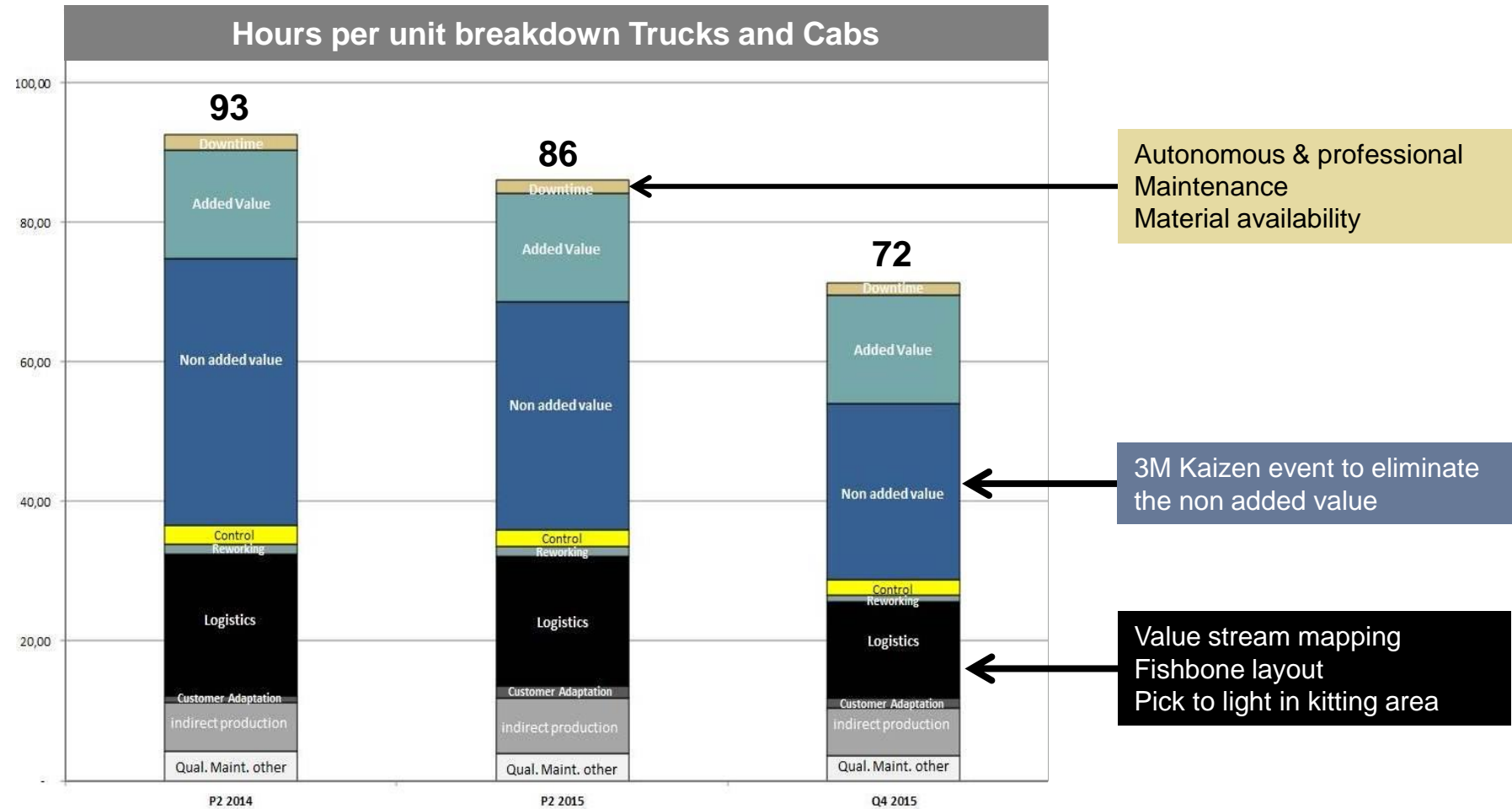


- Speed increase in executing kaizen activities
- 600 Kaizens in 2014
- 1000 Kaizens in 2015 identified and planned

- 150 MSEK savings already achieved (Ref 2012)
- 170 MSEK savings identified and planned towards Q4 2015

Total assembly time (truck & cab) from 93 to 72 hours per unit

Cost deployment to identify “waste” and prioritize improvement activities



Expansion of the central distribution center in Gent to include Volvo CE parts and get synergies

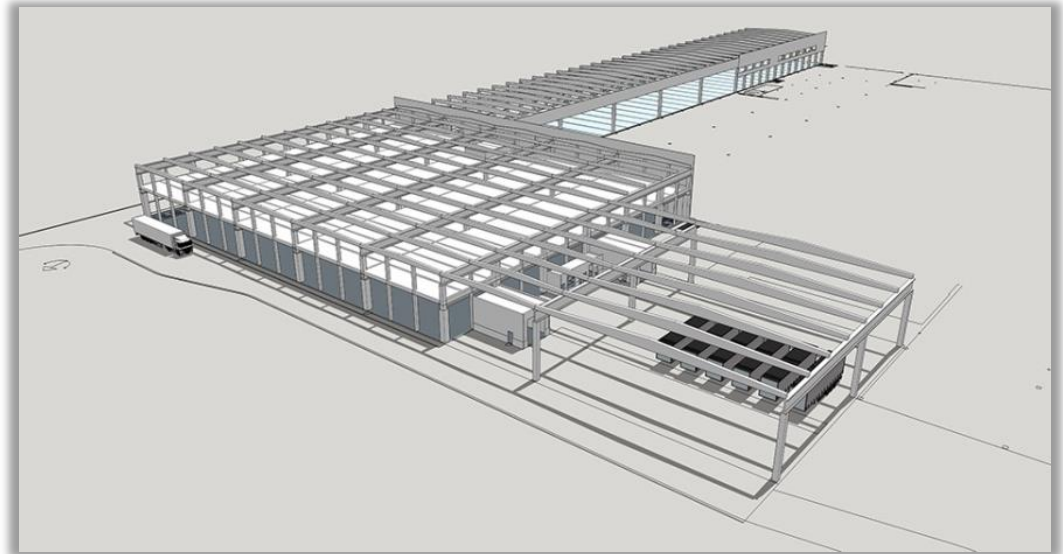
EXPANSION

+ 15,000 m² warehouse space

+ 1,000,000 order lines

+ 1.8 BSEK sales

+ 75,000 part numbers



- Consolidation of brands into a leaner structure & integration of transports
- Supporting global system solution for warehousing
- Outsourcing of the physical activities related to the crossdock and the related administrative tasks

Future Volvo Group aftermarket support requires a less complex parts distribution structure **enabling optimization of transport and lead time**, which are both important drivers for efficiency in the system.



CAPITAL MARKET DAY 2015

Site visit

Let's look for ourselves at 8 site visit stops

THE GENT TRUCK PLANT

- New cab dashboard line
- New cab logistics
- New side member intake
- New axle line
- New engine line
- Production leveling



THE GENT DISTRIBUTION CENTER

- Logistics Services efficiency program
- Productivity at distribution center Gent

Practical matters

- Divided into 8 groups
- Groups = color on your name badge
- 1 guide per group
- For your own safety:
 - safety jacket
 - do not walk in the middle of the gangways
- Headsets will be handed out