

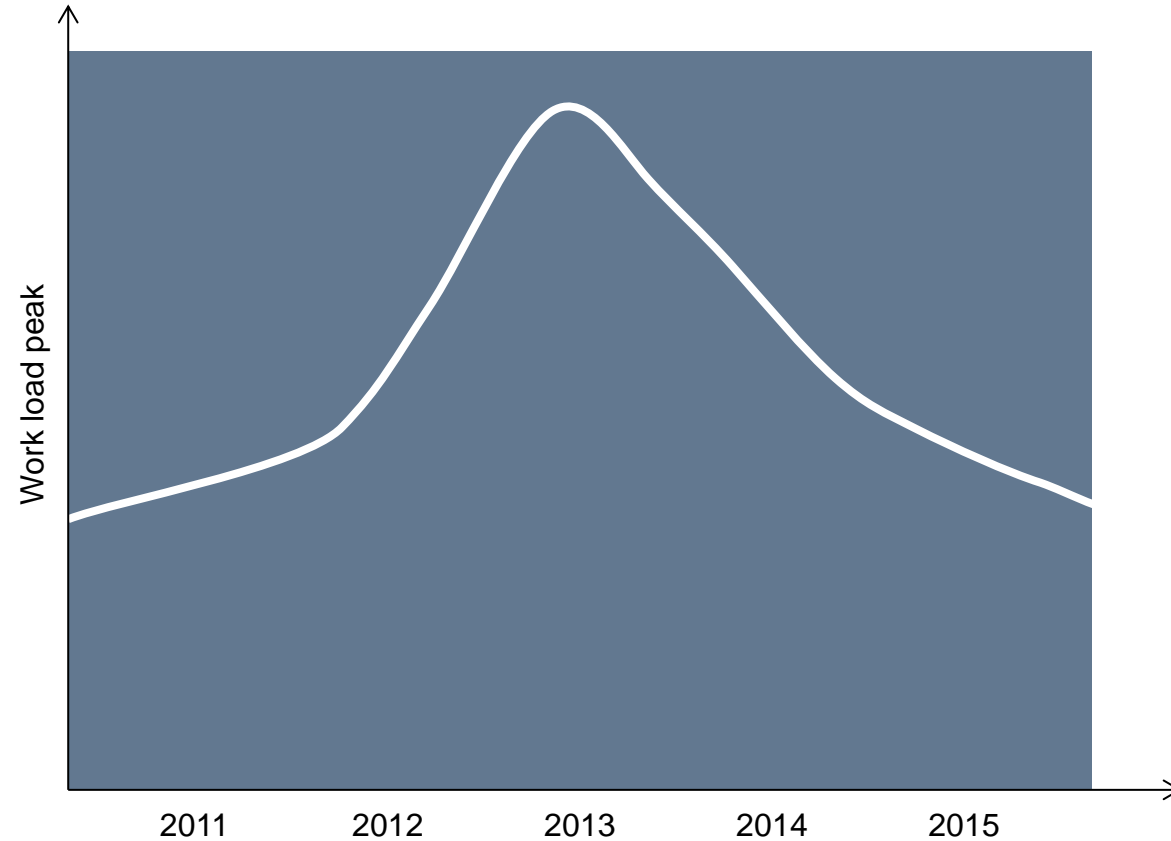


CAPITAL MARKETS DAY

Optimizing the Volvo Group manufacturing cost
Mikael Bratt – EVP Volvo Group Trucks Operations

Demanding double production peak during 2013 - challenging, costly and successful

- New product program for Volvo Trucks, Renault Trucks and UD Trucks industrialized 2012-2013 – old program produced in parallel
- Euro VI HD and MD engines industrialized 2013 – old program produced in parallel
- New UD Trucks plant in Thailand opened 2013 – plant in Japan right-sized in parallel
- New MD engine plant opened in India for new engine platform – phase out of old in parallel
- Big volume swing and pre-buy in Europe in 2013
- ~10,000 assembly workers trained



New products will improve industrial productivity

- Improved products
 - More modularized
 - Design for assembly
- Improved industrial process
 - Fishbone layout
 - Line upgrades
 - Internal logistics
- Result
 - More efficient assembly
 - Higher first time through
 - Better ergonomics



We are on time and on track in optimizing our manufacturing cost

2012

Q1-Q2

Analysis of total potential

Q3

Launch of manufacturing optimizing project

(Part of Strategic Objective 1.2)

2013

Q1-Q2

Detailed planning

Q3-Q4

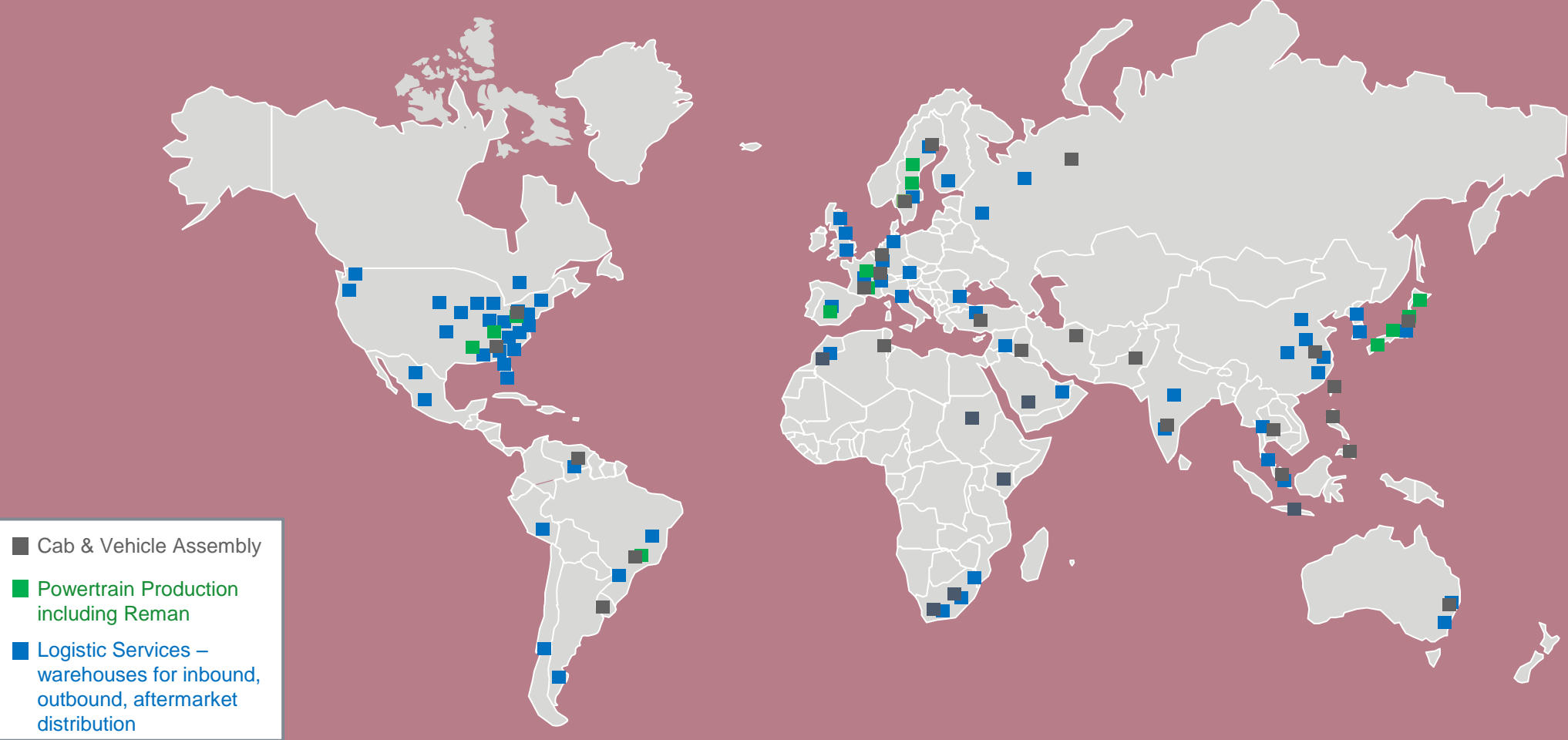
Decision-making and first implementation

2014-2015 Implementation

- Major installations during summer vacations 2014 and 2015



130 Volvo Group Trucks Operations sites around the world – potential for consolidation

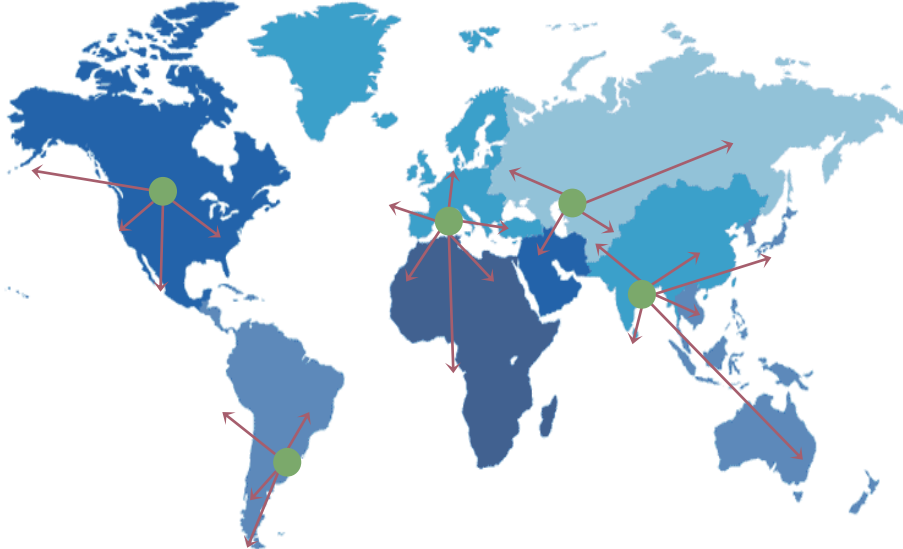


Towards a multi brand industrial footprint to support Group brand positioning

Current brand related footprint



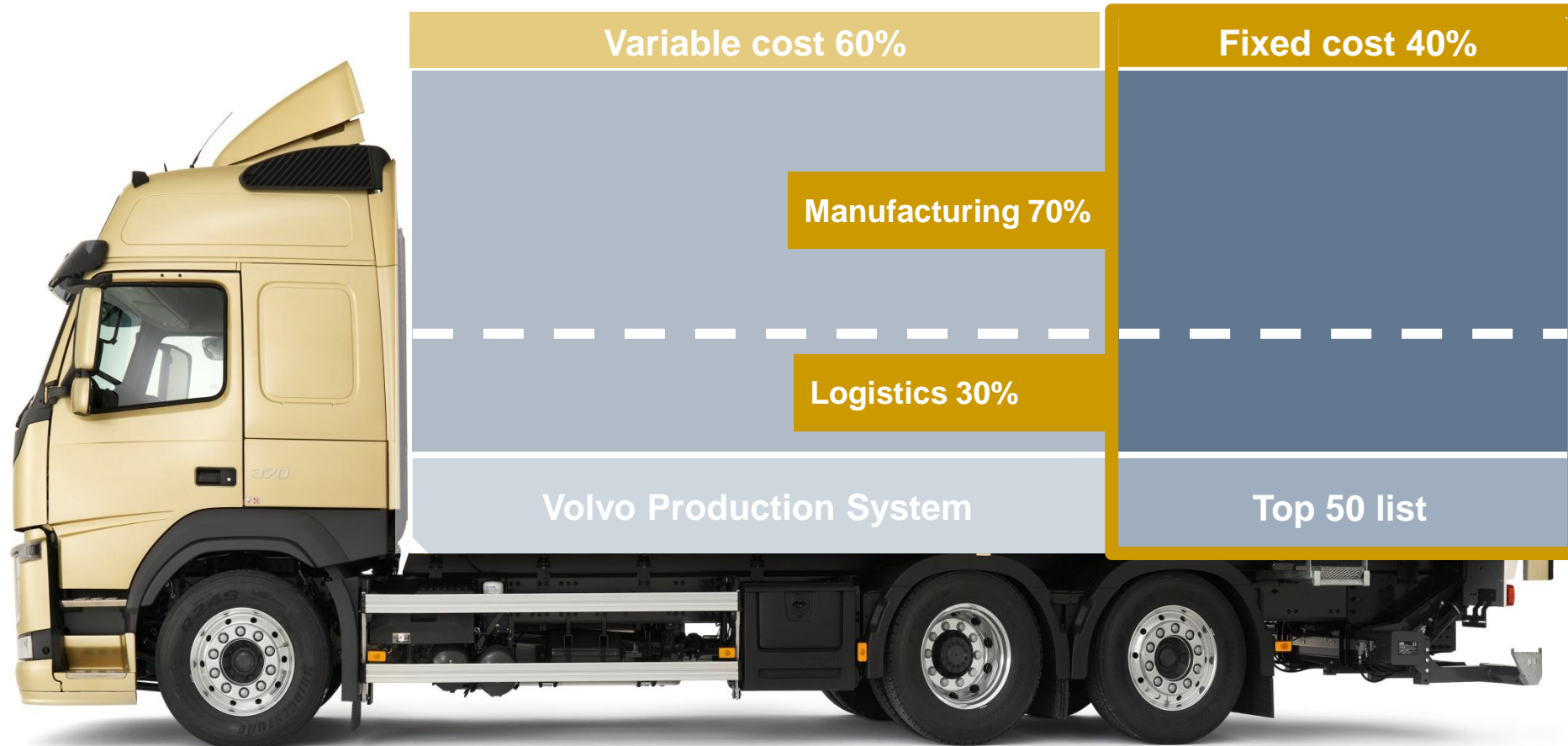
Future multi brand footprint



+ European/US centered.....	Global coverage	+
+ Lack of or redundant capacity.....	Balanced capacity	+
+ Lack of flexibility.....	High flexibility	+
+ High tech and feature orientation.....	Technology level and feature adaptation	+
<hr/>		
= Sub optimized	Optimized	=

Our vehicle for cost reduction

Targeting reduction of fixed cost



Fixed cost reduction in the industrial structure - some examples

Asia

- **Stepwise optimization of truck industrial footprint in Asia**
- New plants for value products
- Right-sizing of manufacturing in Japan

North America

- **Stepwise optimization of warehouse footprint in North America**
- Insourcing of axle operation
- Consolidation of remanufacturing footprint
- Optimization of engine assembly in Hagerstown
- Move Mack CKD to Macungie plant

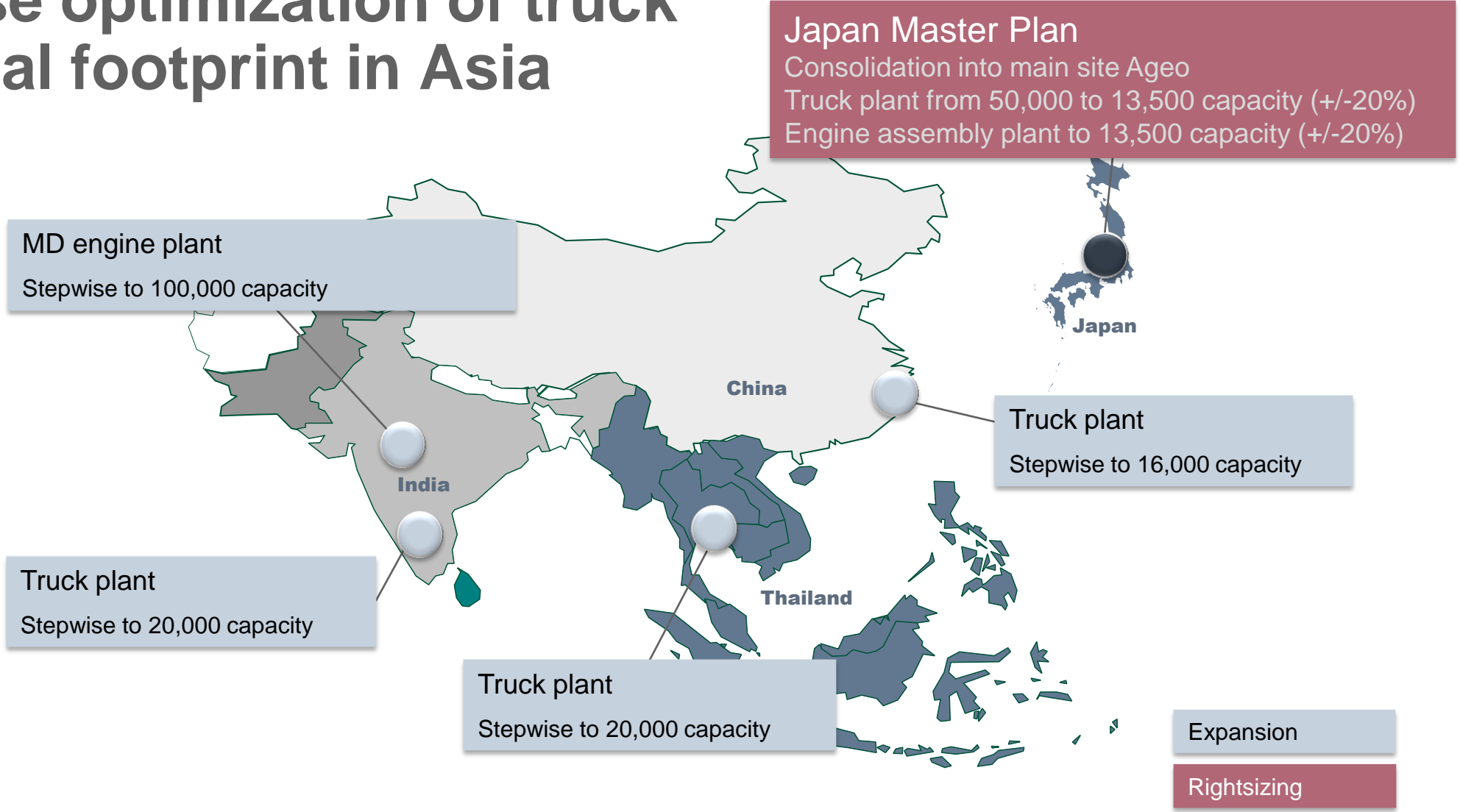
Europe

- **Stepwise optimization of truck industrial footprint in Europe**
- Optimization of engine assembly in Skövde, Sweden
- Consolidation of remanufacturing footprint
- Exit of Karsan truck assembly in Turkey
- External business exit from Volvo Group logistics footprint
- Study of central warehouse footprint
- Closing of Leganes machining plant

Global

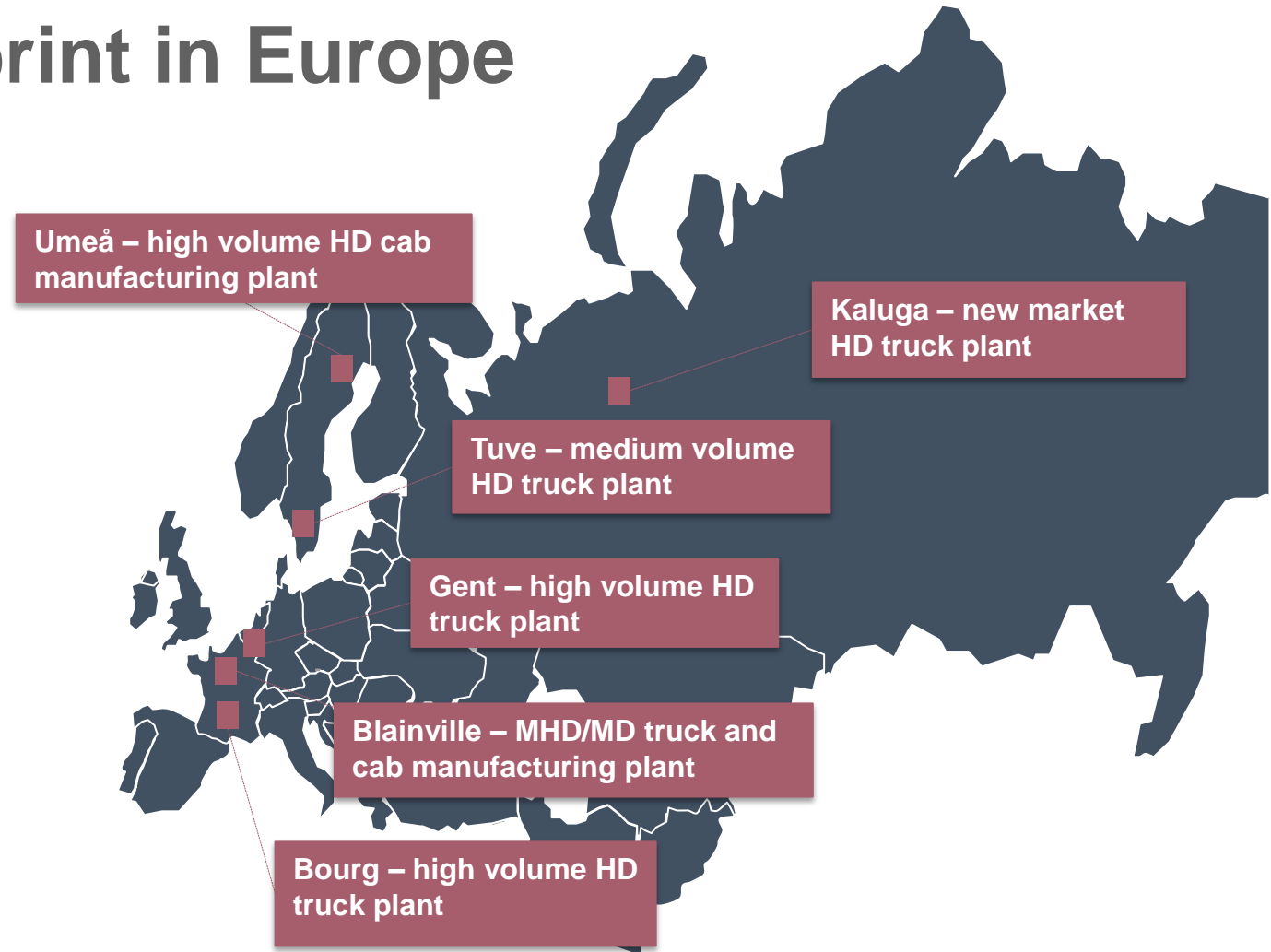
- White collar efficiency

Stepwise optimization of truck industrial footprint in Asia



Stepwise optimization of truck industrial footprint in Europe

- From 6 to 5 assembly lines in 4 heavy-duty truck plants – close one line in Tuve
- Move cab trim from Umeå to Tuve
- Concentrate to 1 medium duty truck assembly line in Blainville
- Optimize plant logistics
 - Volvo Assembly Concept in Gent and Tuve



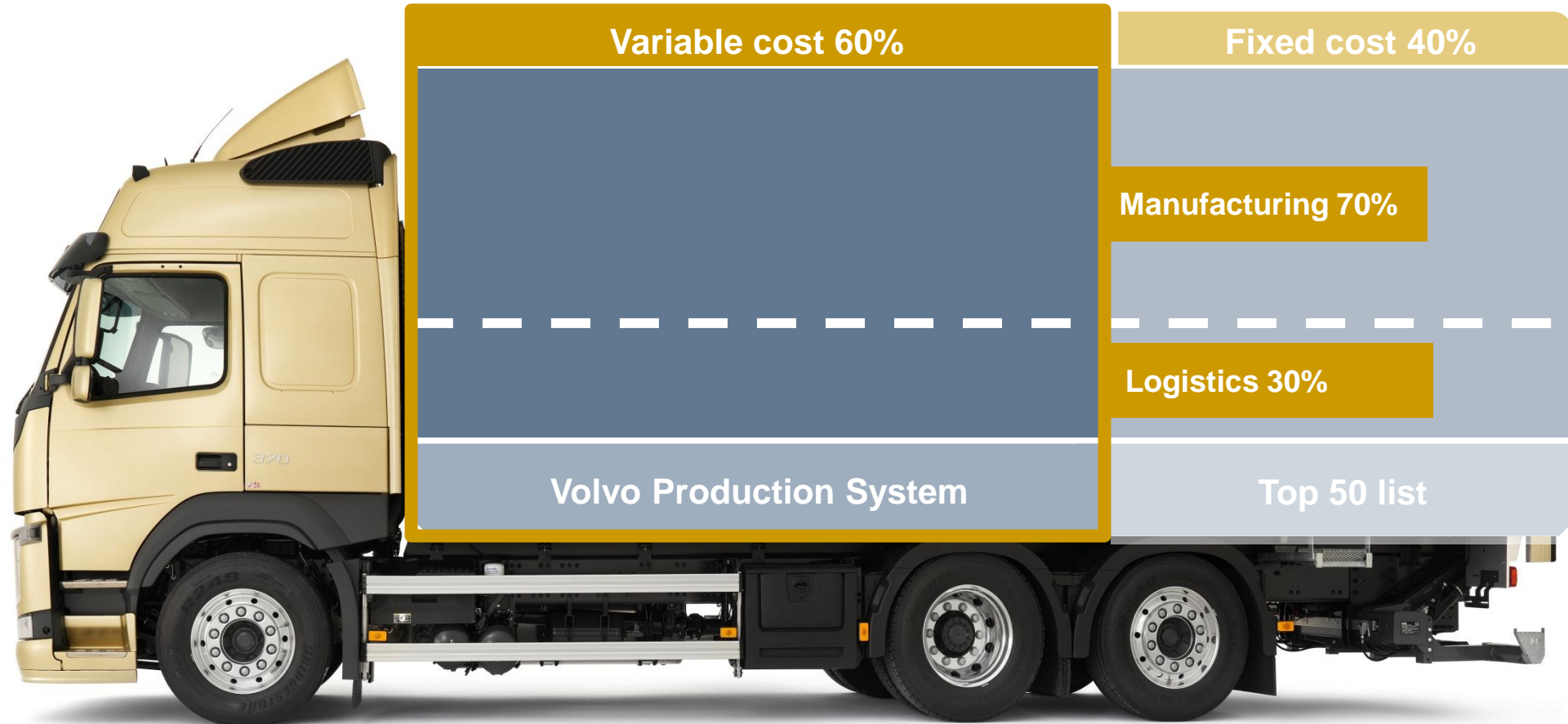
Stepwise optimization of warehouse footprint in North America

- One new central warehouse for fast- and medium-moving parts in Tri state area of Tennessee/Mississippi/Arkansas
- One central warehouse for slow-moving parts in Columbus
- Dallas, Memphis and Atlanta to be closed
- Baltimore, Chicago and Jacksonville to be downsized
- Improved delivery performance to dealers and customers
- Improved overall cost-efficiency

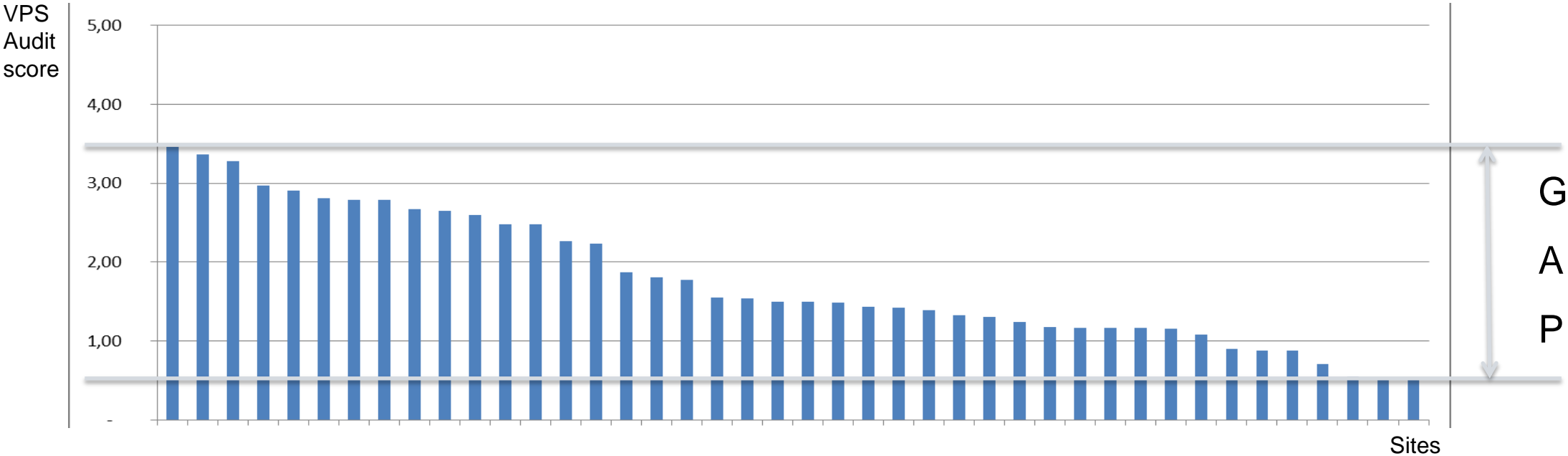


Our vehicle for cost reduction

Targeting reduction of variable cost



Significant improvement potential by lifting productivity and performance of low-performing plants

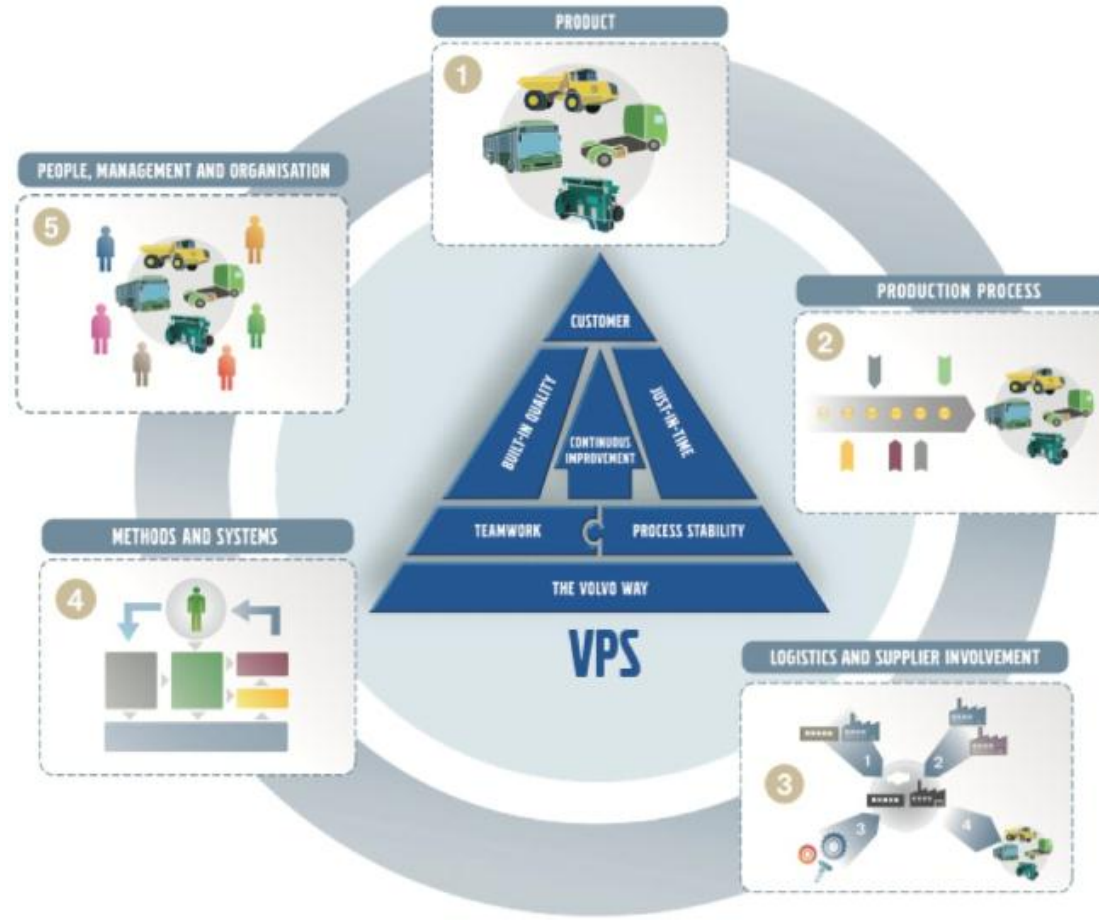


Bring the best together to be the guiding stars

Challenge every site

Focus on best practice sharing and implementation

Key areas for successful continuous improvement by Volvo Production System



Key areas addressed to optimize our manufacturing performance

- **Quality**
 - First time through
 - Warranty
- **Lead Time**
 - Factory delivery precision
 - Inventory
- **Cost efficiency**
 - Variable cost per unit
 - Fixed cost



Summary

- **We have traction**
 - One target
 - Comprehensive program
 - Activities well underway
 - Full attention and commitment

