

Distribution of Finished Vehicles Audi Mexico

Vehicle Logistics (M/PL-12), April 2017, San José Chiapa

Agenda

**02.
General Information**

**03.
Layout & Infrastructure**

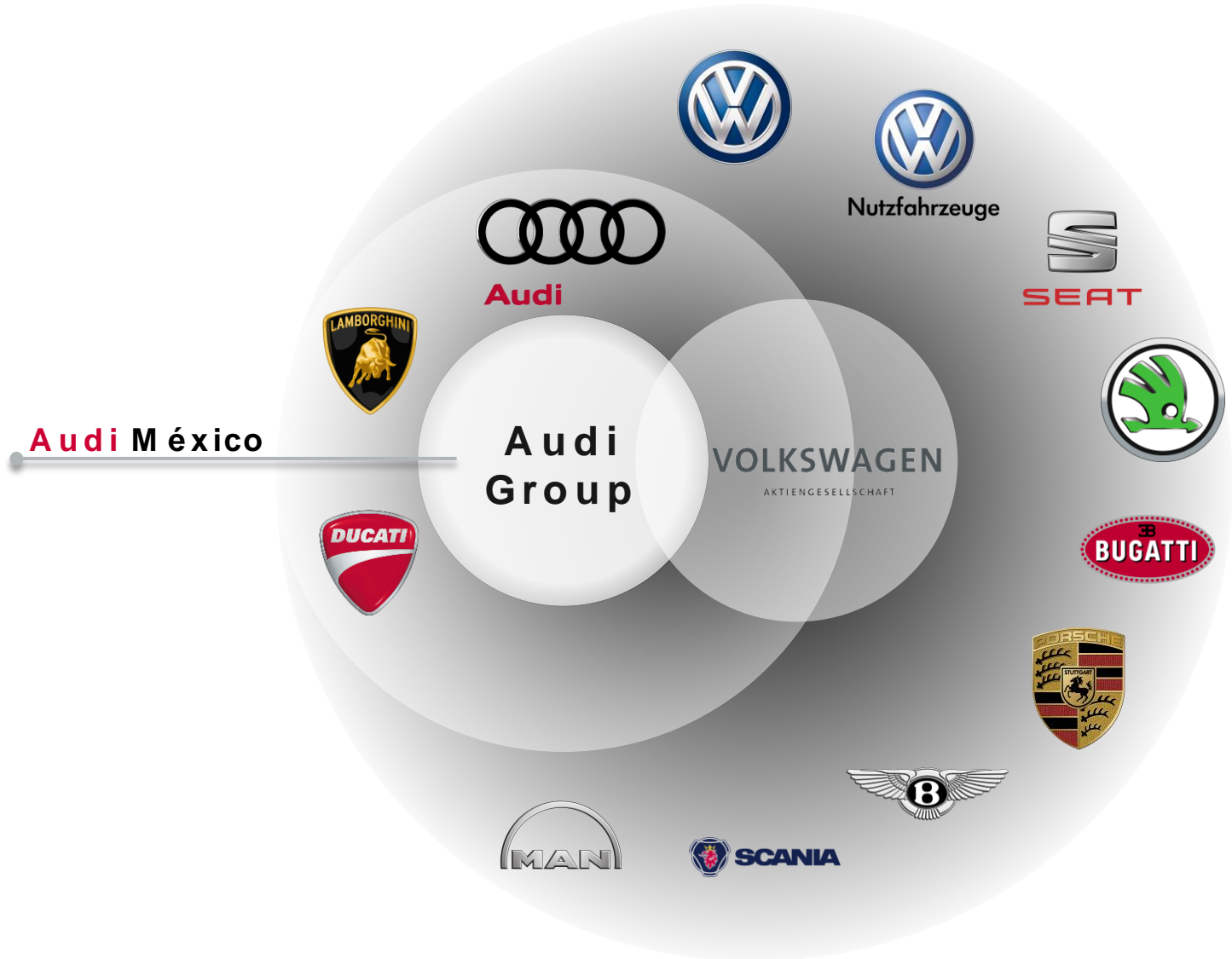
**04.
Finished Vehicle Flow inside
Audi Mexico**

**05.
Distribution Network**

**06.
Ports Mexico**

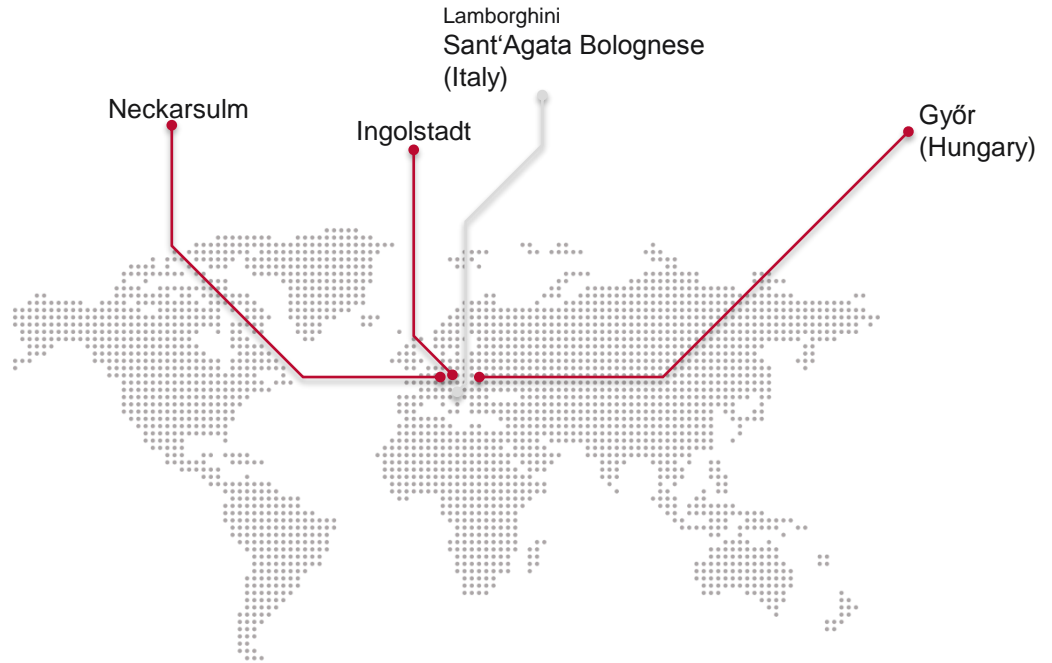
Audi Group and VW Group

General Information



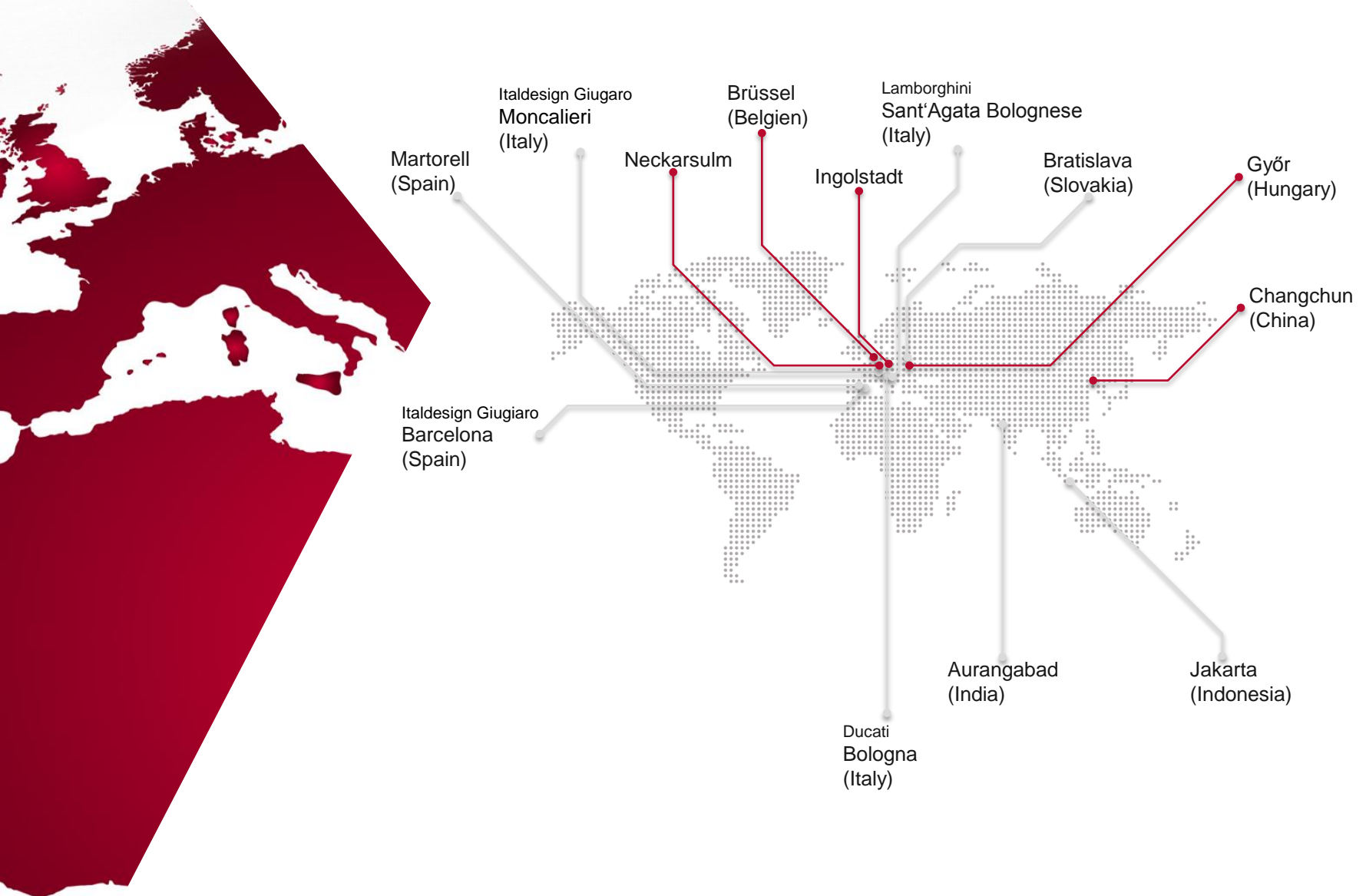
Audi Group: Production sites from 2000

General Information



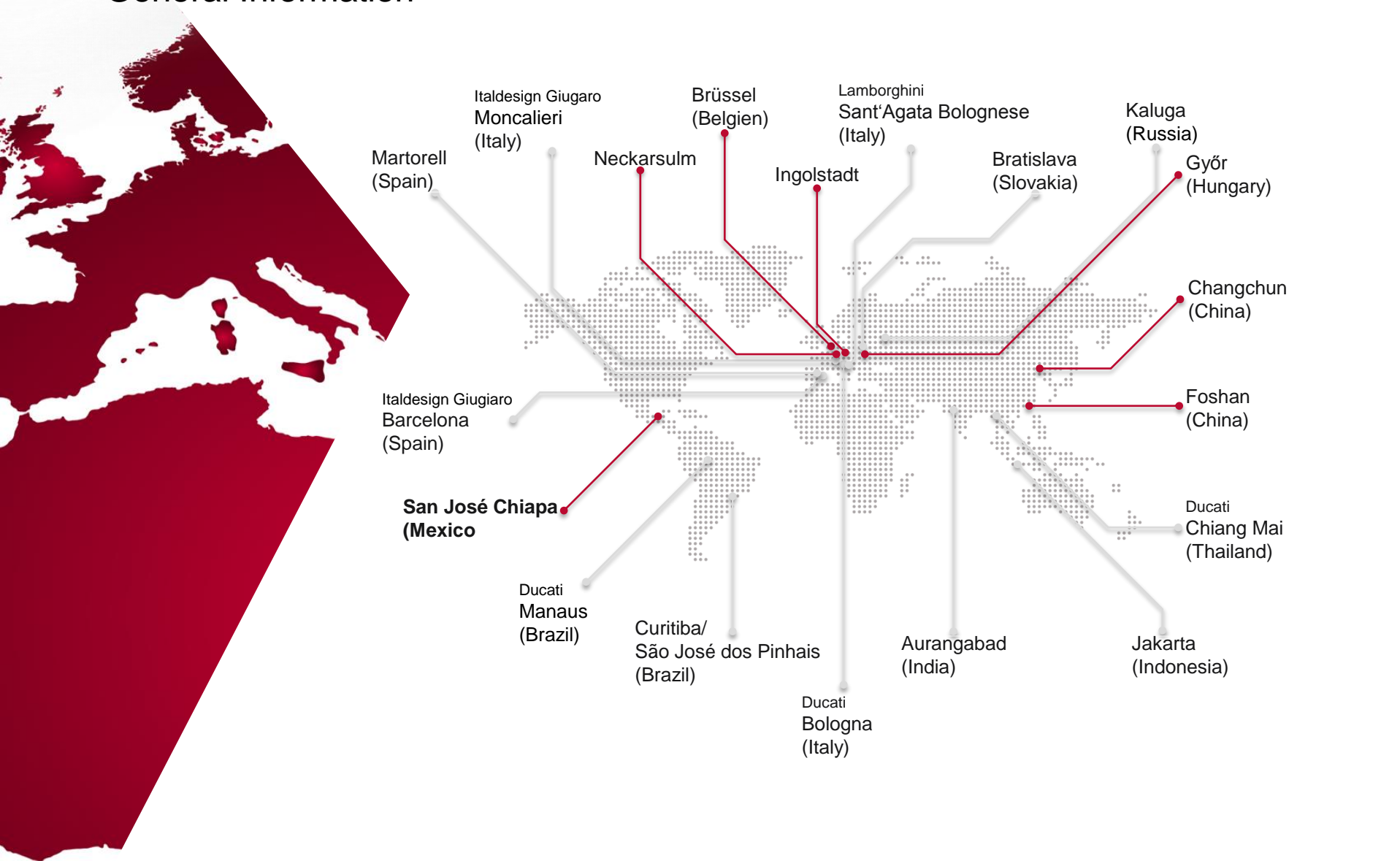
Audi Group: Production sites from 2012

General Information



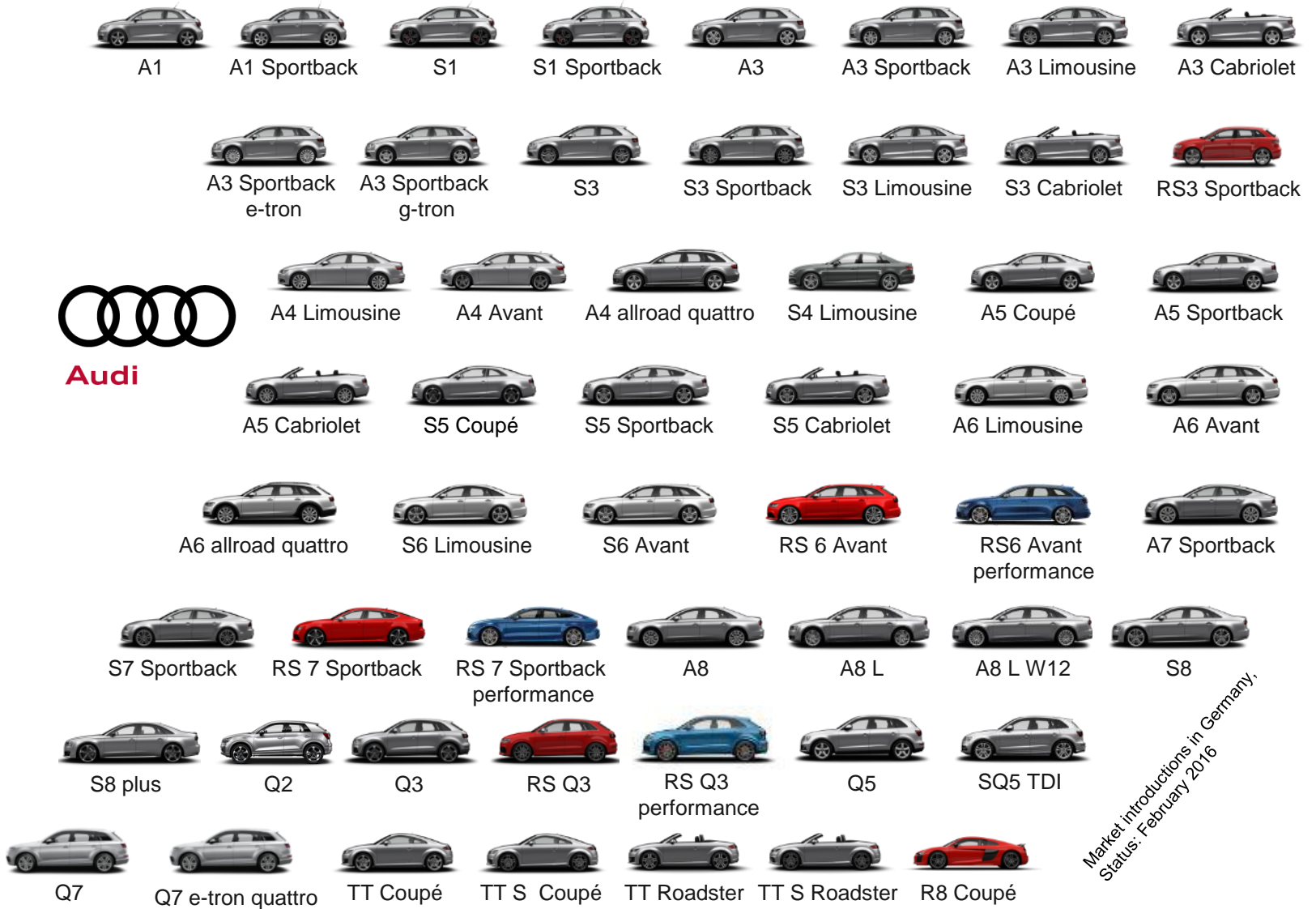
Audi Group: Production sites from 2016

General Information



Product Portfolio Audi Group

General Information



Market introductions in Germany,
Status: February 2016

Audi Mexico

General Information



Audi México



Audi Mexico

General Information

San José Chiapa

Basic Information



Employees: ~**4.700** (by December 2016)



Investments: **more than € 1,4 billion**



Audi Q5-Successor

Segments



Assembly



Press shop



Body shop



Paint shop



Pre-series center

Audi Mexico

Why the Audi Q5?

Why the Q5?

Continuously growing demand in the SUV segment

Falling lead times for North- and Latin-American customs -15 days

Mexico will become the hub for the Q5



- **Models** Q5/SQ5
- **Capacity** 675 vehicles/day (3 shifts per day)
- **Annual volume** ~150.000 vehicles/year



Audi Mexico

Why Mexico?

Why Mexico?

Location decision



Free trade agreements with a total of 45 countries including **NAFTA**

Strategically favorable **bridge position** between North and South America

Attractive automotive site (among others, Volkswagen de México has been located here for more than 50 years)

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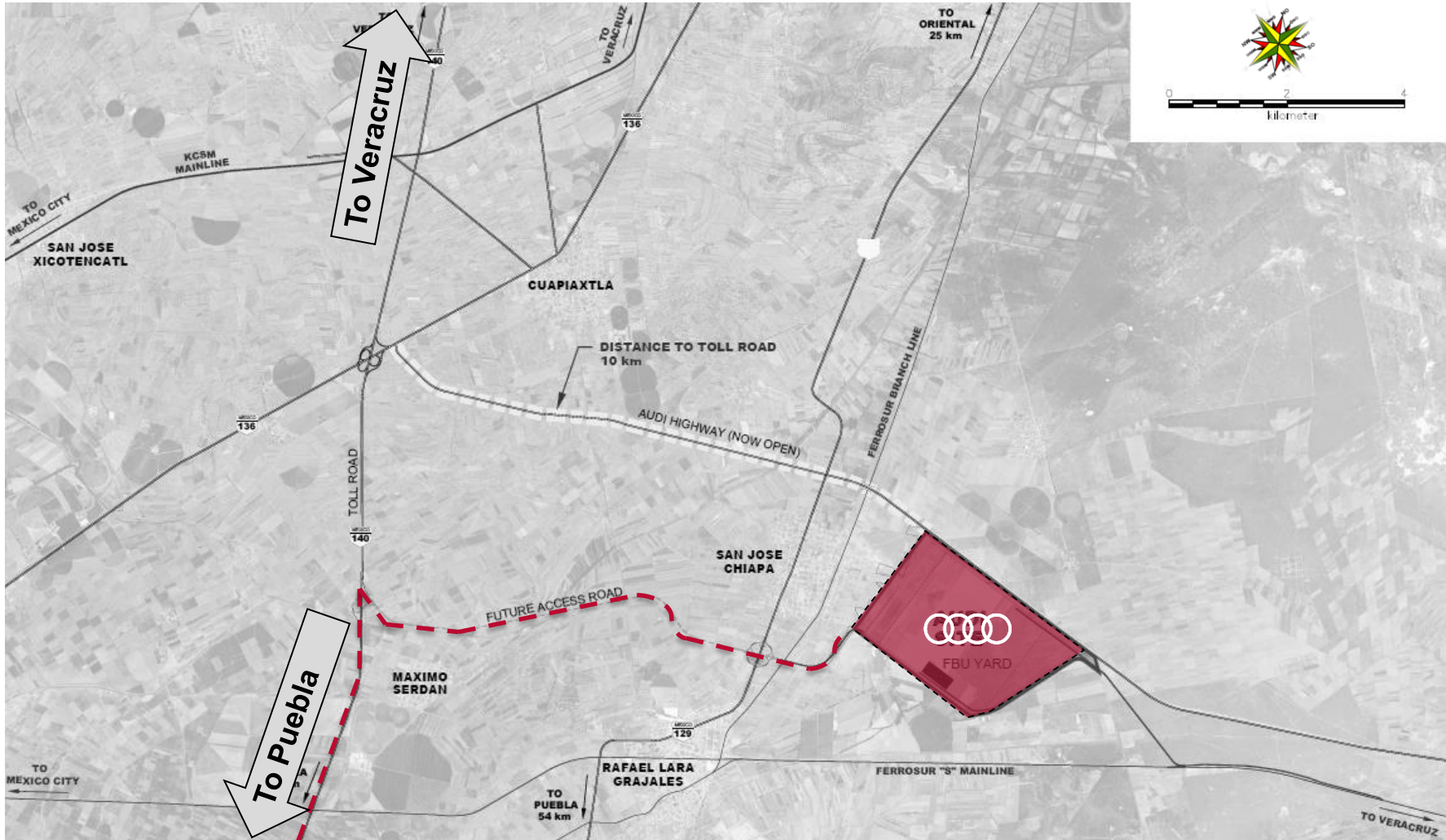
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Finished Vehicle Flow inside
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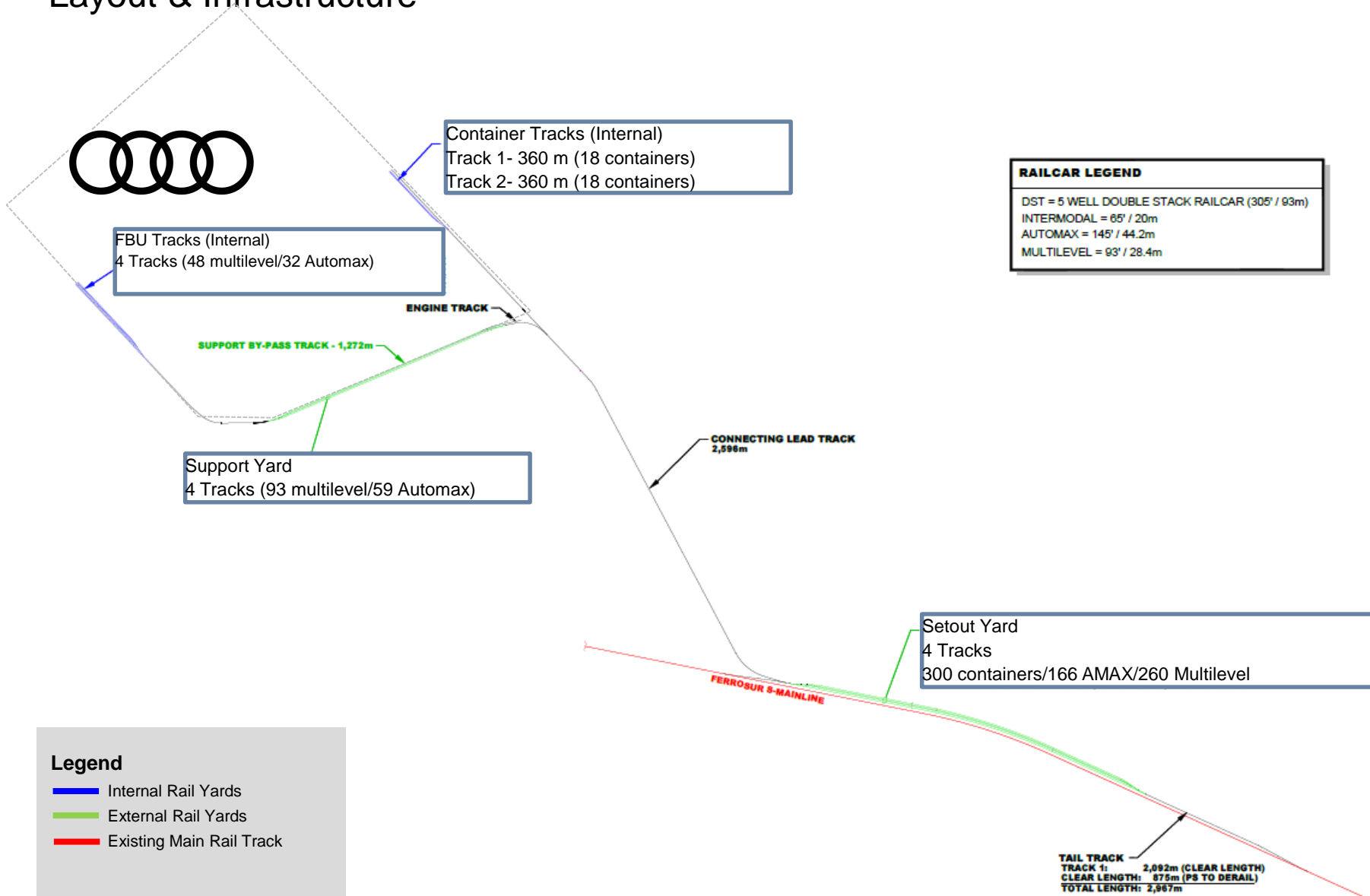
**05.
Distribution Network**

Location of Audi Mexico II/II

Layout & Infrastructure

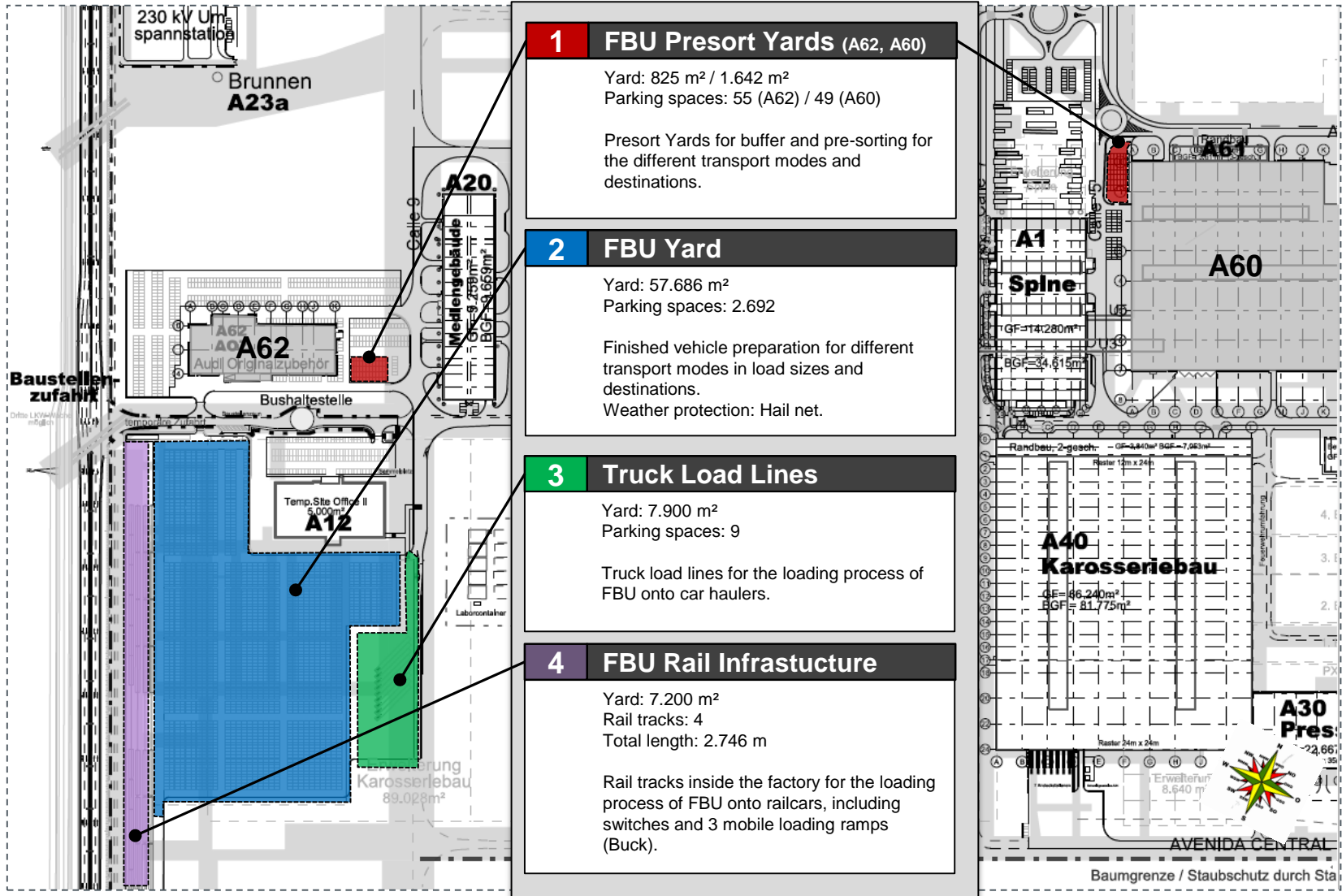


External Rail Infrastructure Layout & Infrastructure



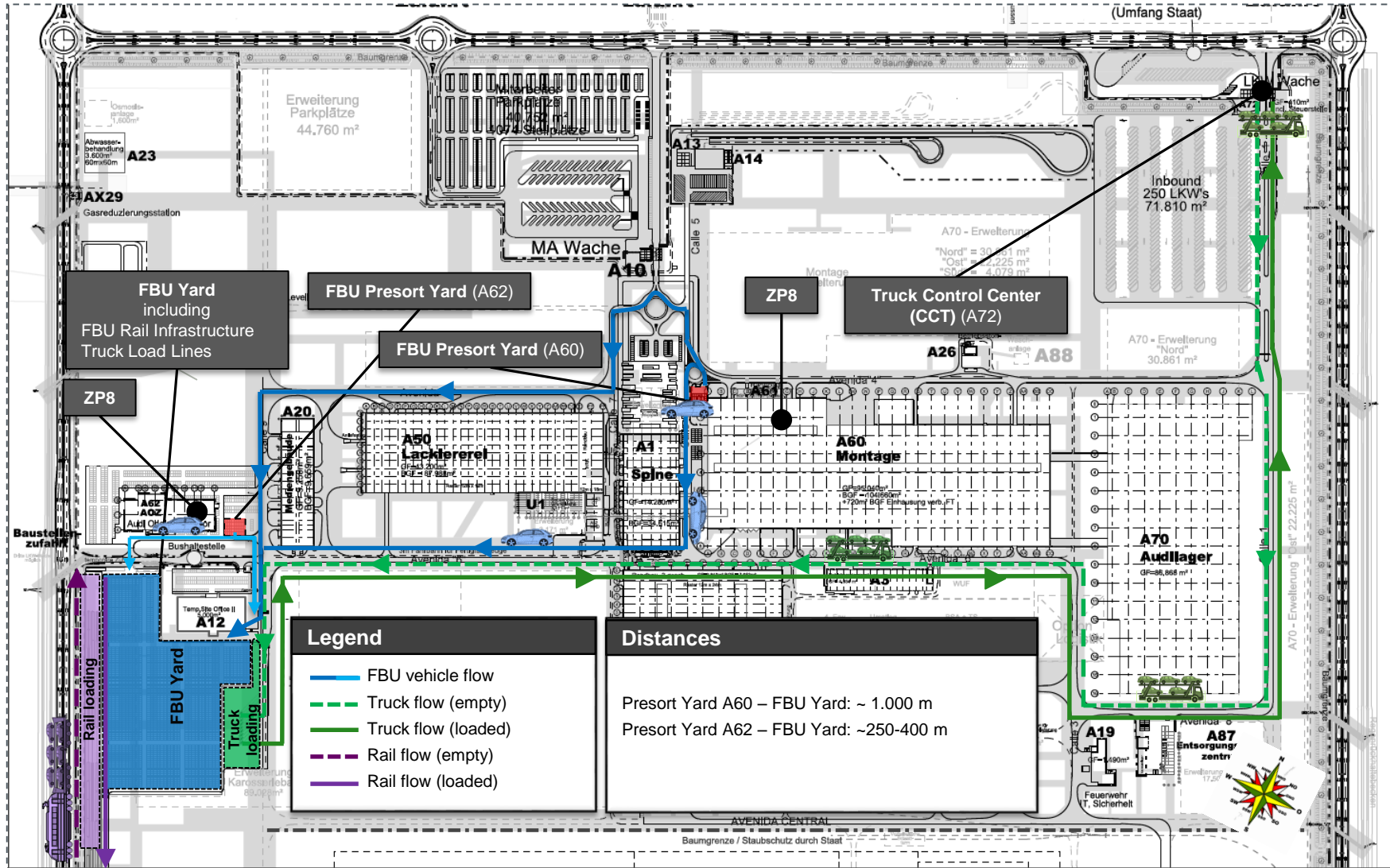
Infrastructure FBU Outbound

Layout & Infrastructure



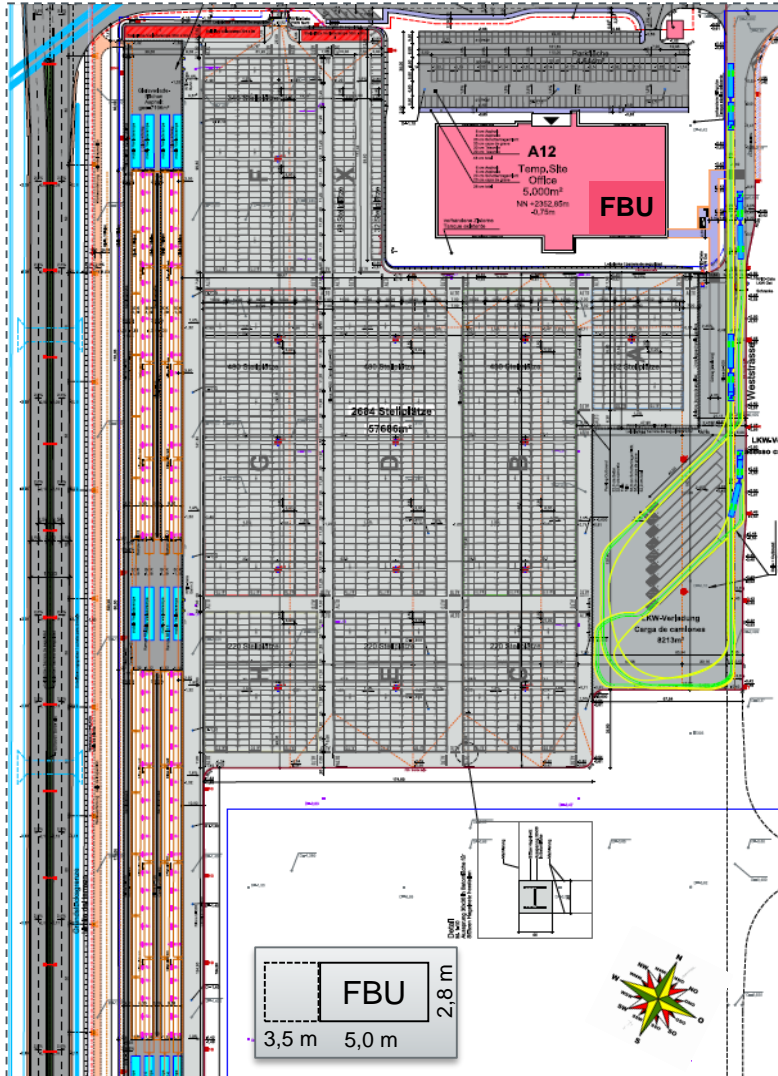
Finished Vehicle Flow Inside the Factory

Layout & Infrastructure



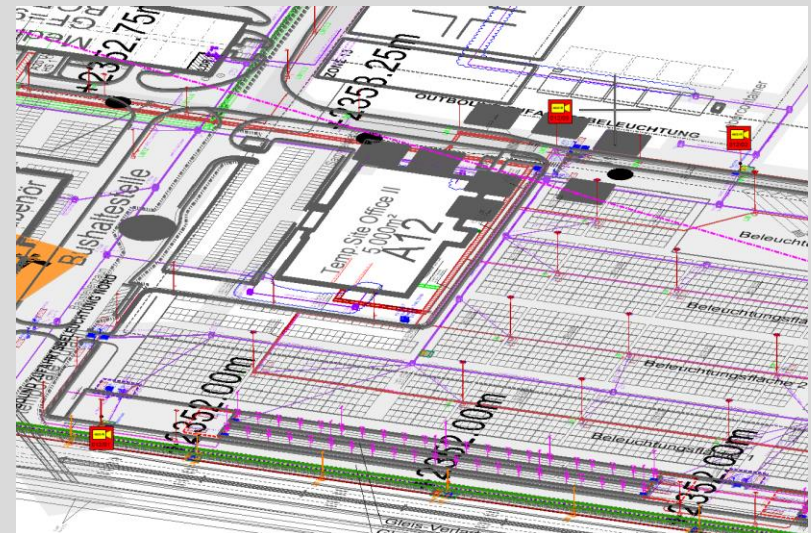
Layout FBU Yard

Layout & Infrastructure

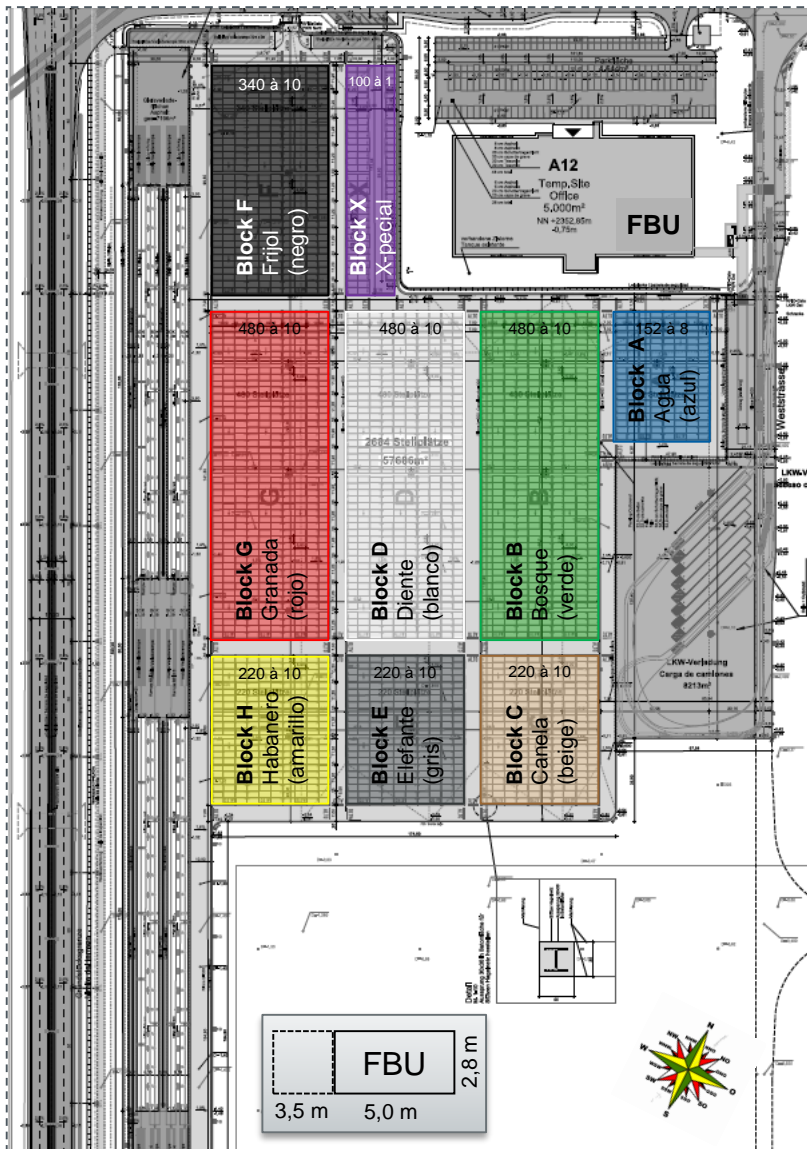


Facts FBU Yard

- ▶ **Capacity:**
 - ▶ FBU-parking spaces: 2.592 parking spaces in line arrangement + 100 single storage parking spaces = 2.692 (~ 4 production days)
 - ▶ Truck loading lines: 9 (W x L = 4 m x 40 m)
 - ▶ Rail loading tracks: 4 (L = 2.746 m)
- ▶ Weather protection of the FBU parking spaces with hail net
- ▶ **Settings:** 6 x RFID-Gate, 3 x CCTV, 13 x WIFI



Color Concept FBU Yard Layout & Infrastructure



Color Concept

► **Capacity:** 2.592 parking spaces in line arrangement + 100 single storage parking spaces = 2.692

Block	Name	Color	Capacity	Storage arrangement
A	A gua (Water)	Azul (Blue)	152	Lines of 8 vehicles
B	B osque (Forest)	Verde (Green)	480	Lines of 10 vehicles
C	C anela (Cinnamon)	Beige (Beige)	220	Lines of 10 vehicles
D	D iente (Teeth)	Blanco (White)	480	Lines of 10 vehicles
E	E lefante (Elephant)	Gris (Grey)	220	Lines of 10 vehicles
F	F rijol (Beans)	Negro (Black)	340	Lines of 10 vehicles
G	G ranada (Pome-granate)	Rojo (Red)	480	Lines of 10 vehicles
H	H abanero (Habanero Chilli)	Amarillo (Yellow)	220	Lines of 10 vehicles
X	X -pecial	Violetta (Violett)	100	Single storage
Total			2.692	

Protection with Hail Net and Full Body Cover

Layout & Infrastructure



Rail Equipment

Layout & Infrastructure

> Types of rail cars

Type	Equipment	Dimensions	Load Factor
Railcar	Bilevel (Canada, exception) 	<ul style="list-style-type: none"> •Loadable length: 89' 4" standard •Loadable width: 9'0" standard •Overall Height: 19' 0" ATR standard 	10 Audi Q5
	Automax (all destinations beside Canada) 	<ul style="list-style-type: none"> •Loadable length: 141' 3" standard •Loadable width: 9' 3 1/2" standard •Overall Height: 20' 2" standard 	22 Audi Q5

> 3 mobile loading ramps

> Buck



Agenda

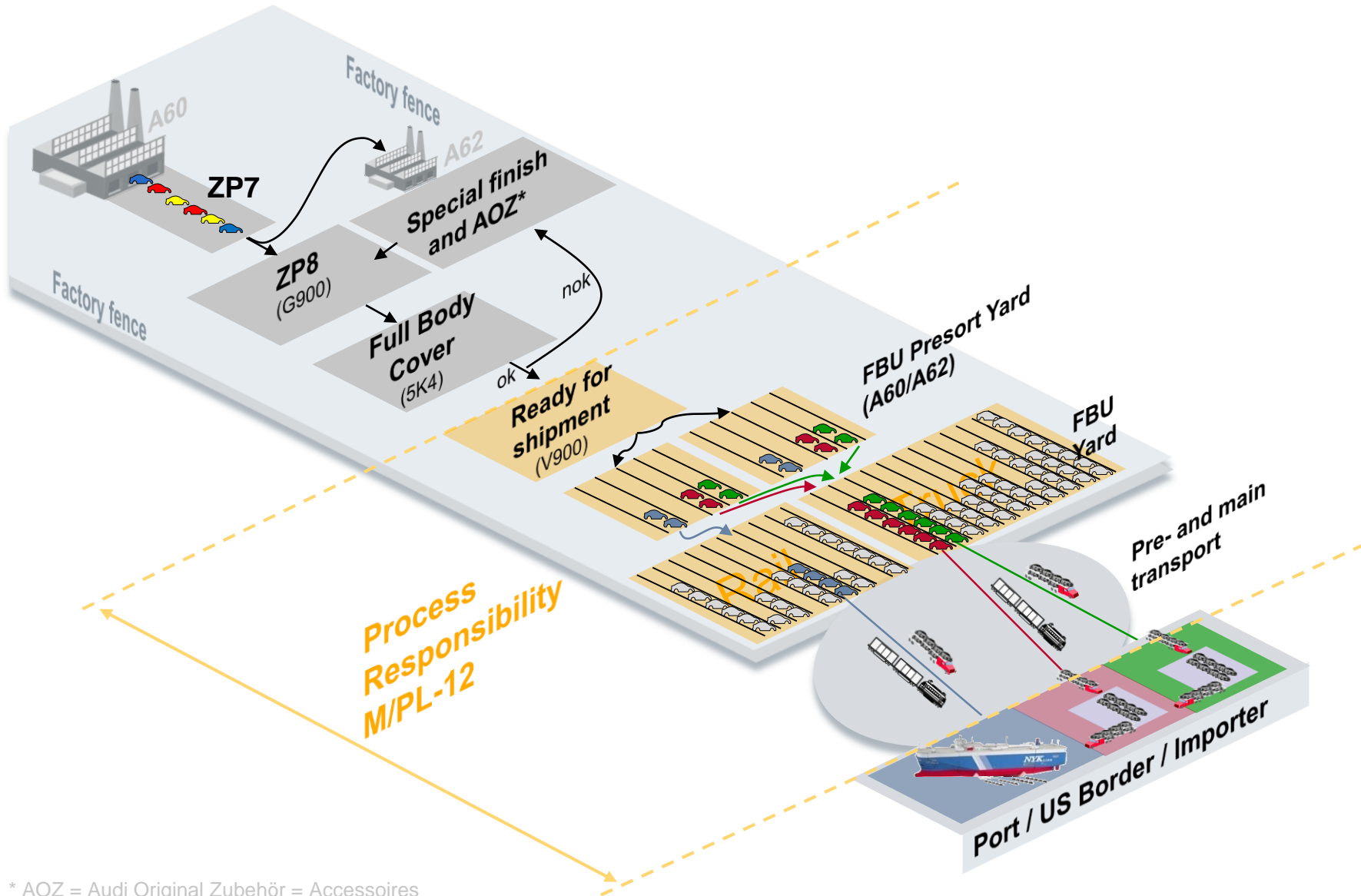
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Finished Vehicle Flow inside
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Process Responsibility Vehicle Logistics



* AOZ = Audi Original Zubehör = Accessoires

Overview Operations Vehicle Logistics

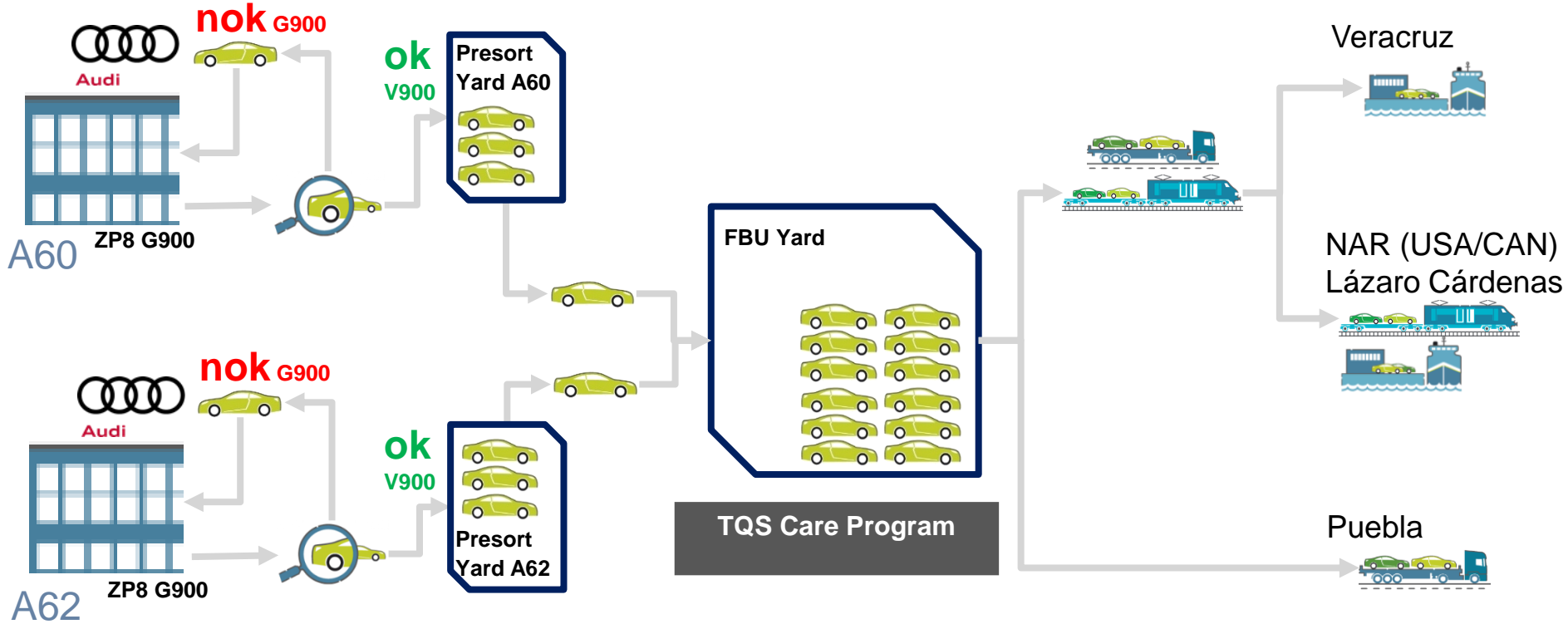
Finished Vehicle Flow inside Audi Mexico

1 – Inspect & Receive

2 – Move

3 – Store

4 – Load & Transport



Audits Mobile Checks

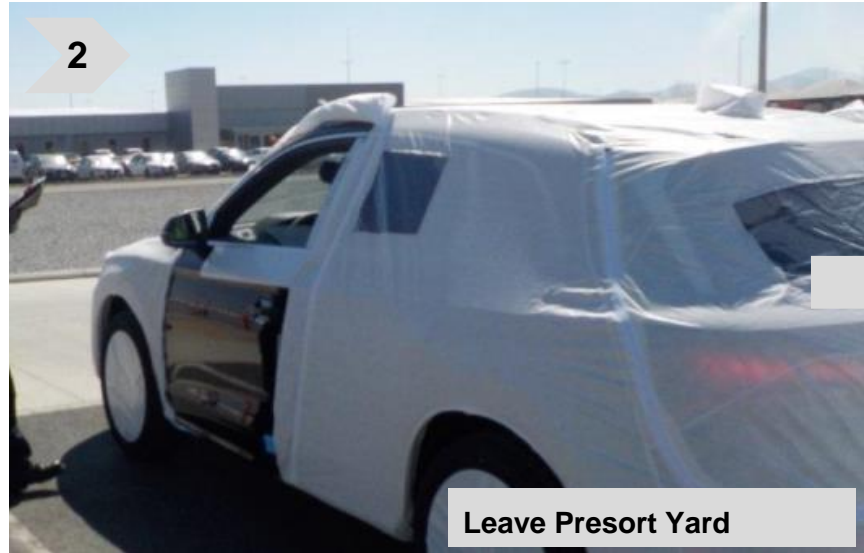
Reivement, Inspection and Grant V900

Finished Vehicle Flow in the factory



Movements and Storage FBU Yard

Finished Vehicle Flow in the factory



Truck Loading

Finished Vehicle Flow in the factory

3



Truck Loading I/III



Truck Loading II/III



Truck Loading III/III



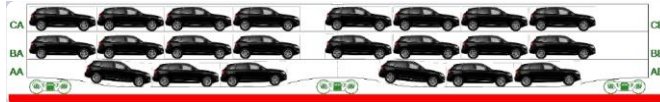
Exit Truck after Loading

Rail Loading

Finished Vehicle Flow in the factory



1. Check and collect FBU for rail loading



2. Adjustment of mobile loading ramps



3. Loading FBU via mobile loading ramp onto railcar



3. Driving FBU until final loading position



4. Bridge plates to connect railcars while loading



5. Loading securing



6. Closing of railcars



7. Sealing

Agenda

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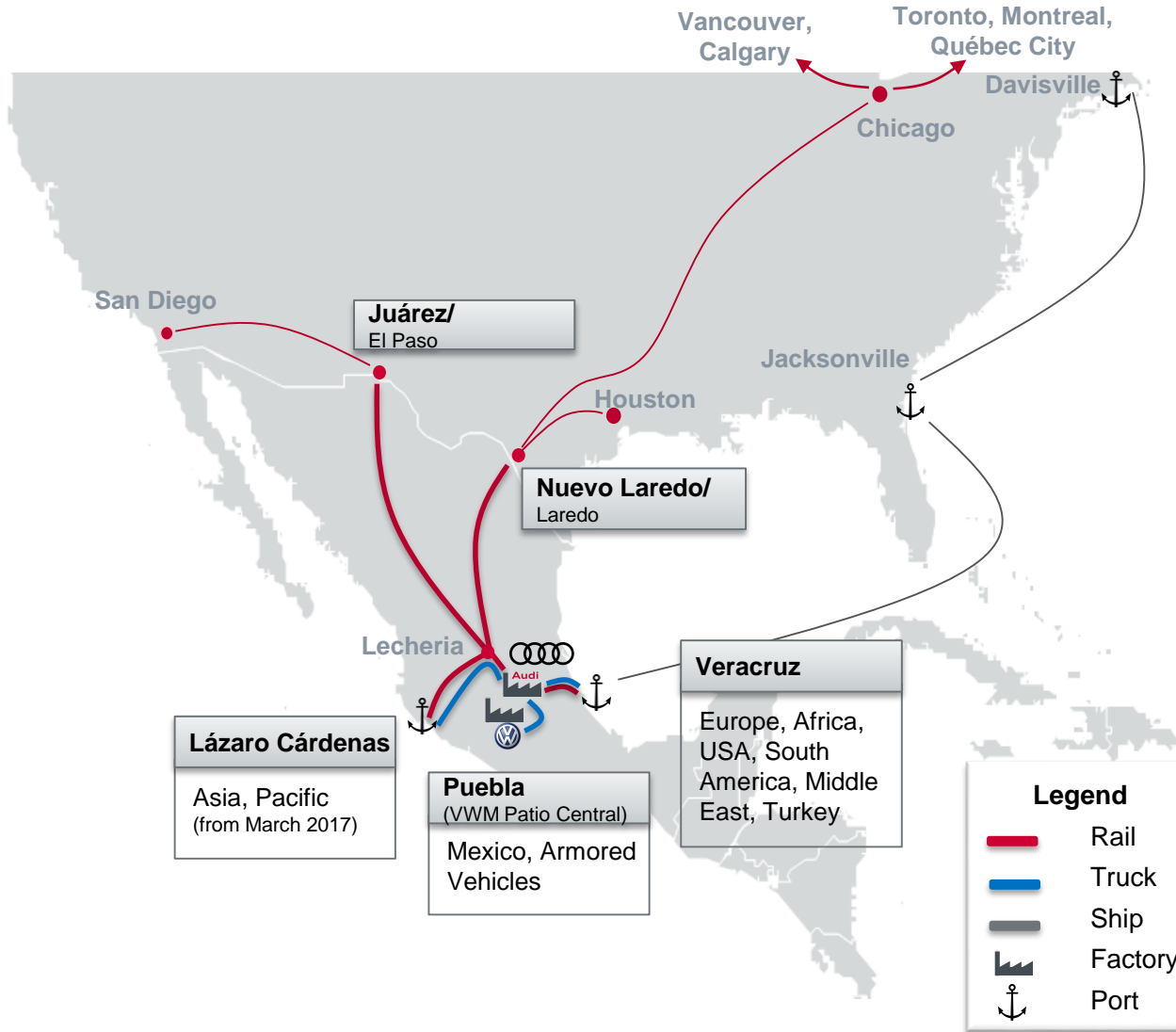
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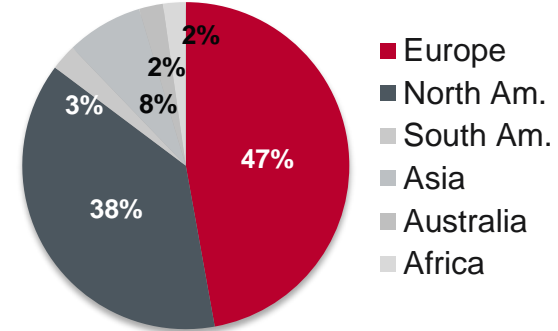
**05.
Distribution Network**

Overview Distribution Network North America

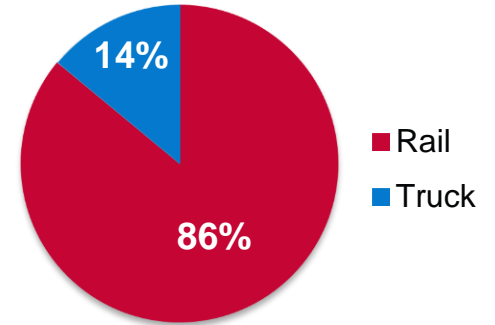
Distribution Network Audi Mexico



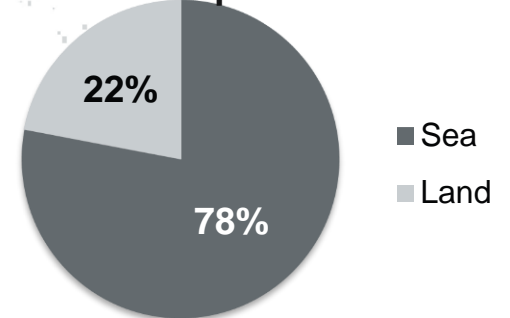
•Volume Split Destination



•Distribution Split Rail/Truck



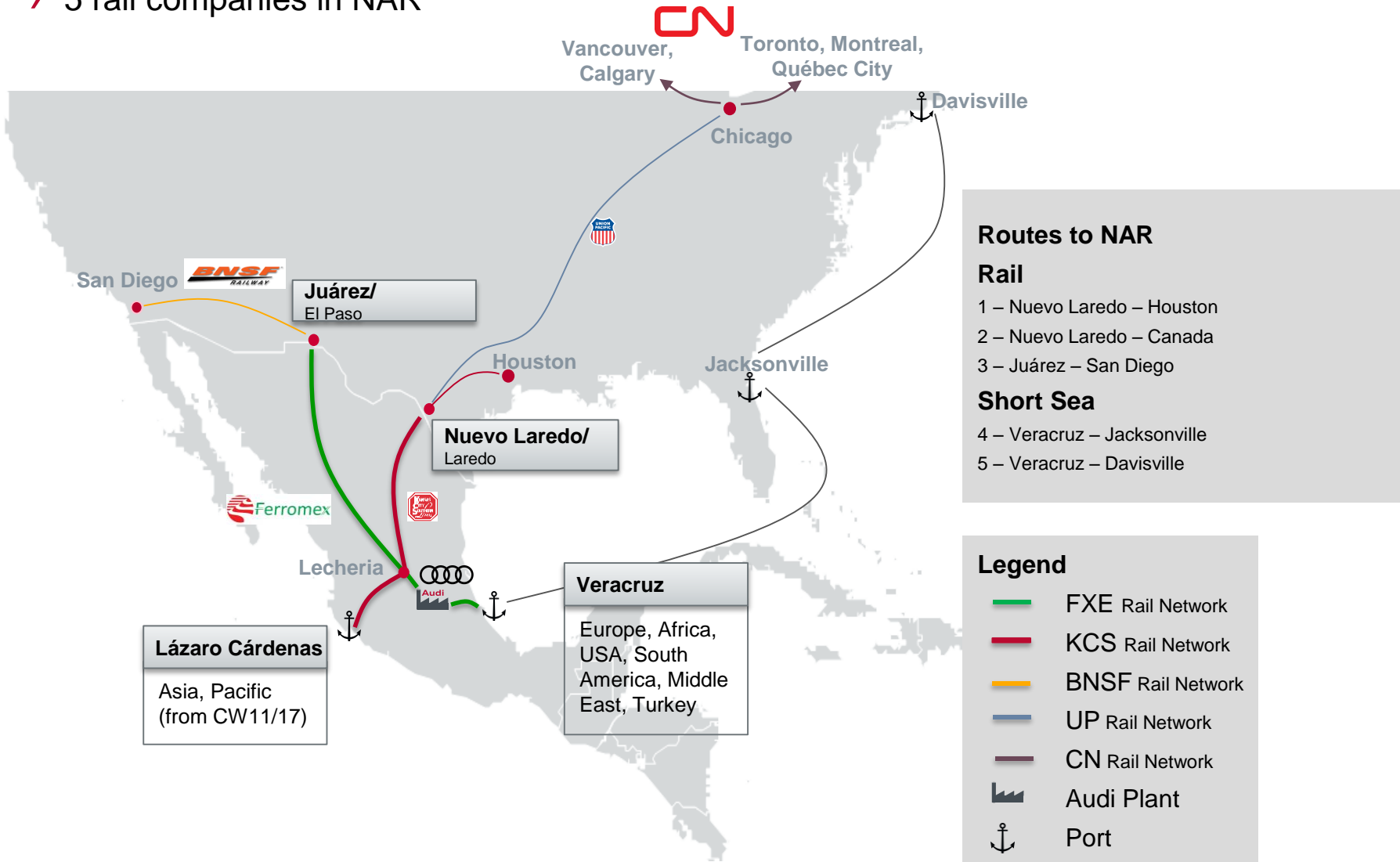
•Distribution Split Sea/Land



Rail Network North America (NAR)

Distribution Network Audi Mexico

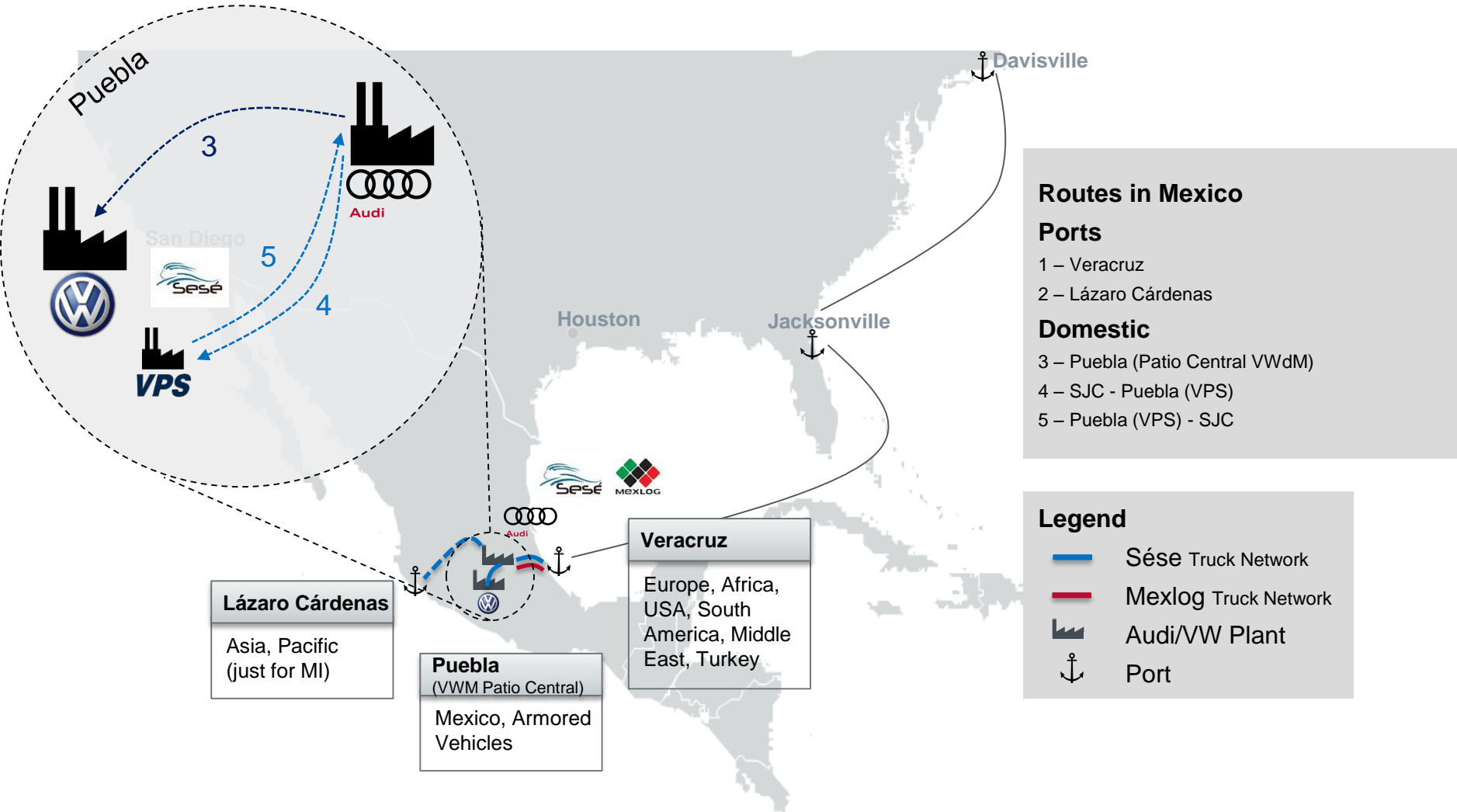
> 5 rail companies in NAR



Truck Network Mexico

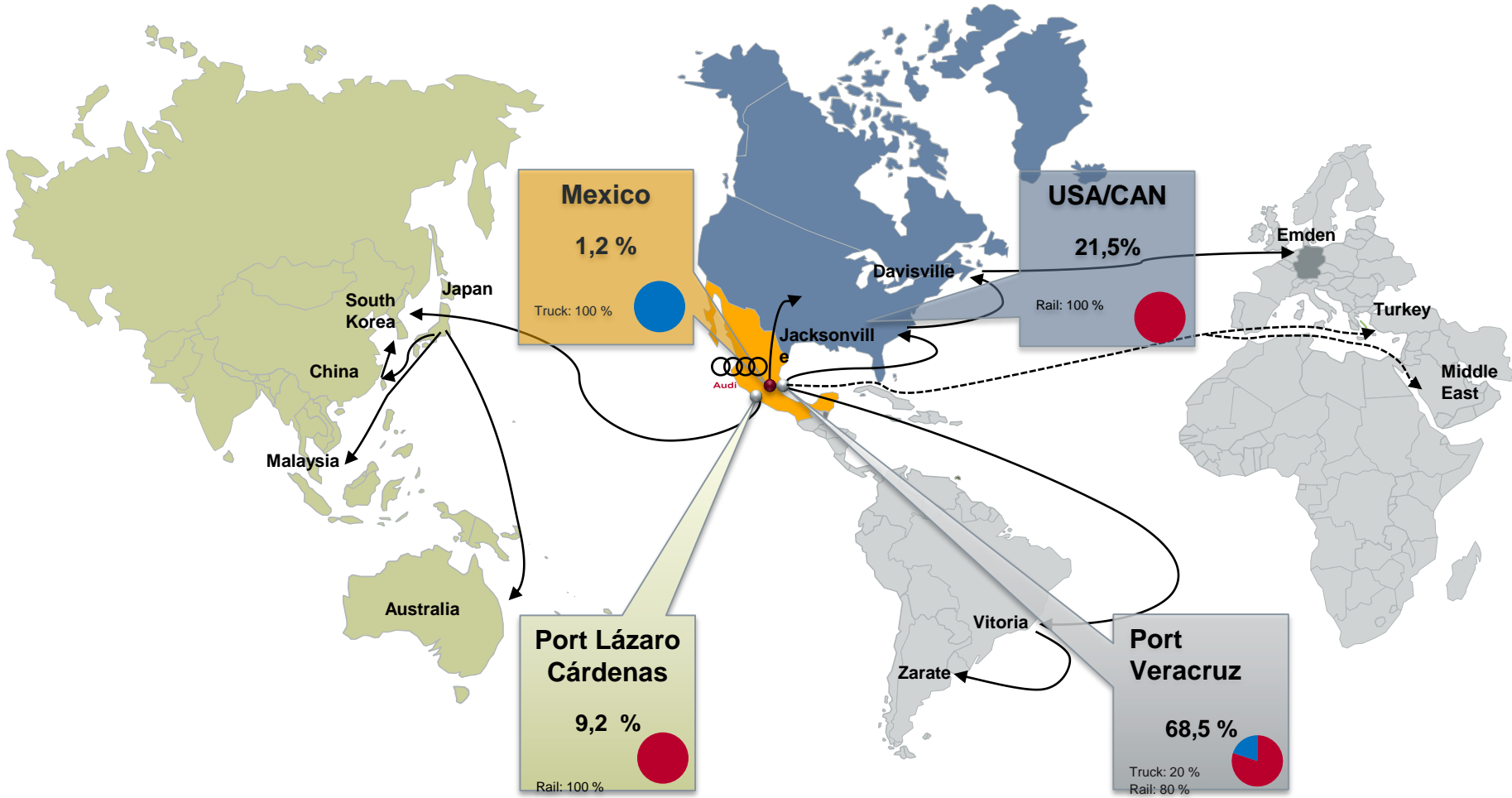
Distribution Network Audi Mexico

> 2 truck companies in Mexico

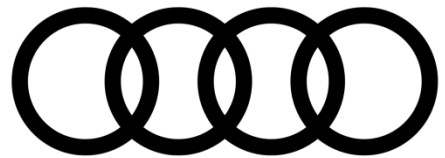


World Wide Distribution

Distribution Network Audi Mexico



Muchas gracias!



Thank you!

Vielen Dank für Ihre Aufmerksamkeit!