



PIRELLI, GLOBAL HIGH VALUE

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ICONIC BRAND GLOBALLY RECOGNISED_



PERFORMANCE

INNOVATION

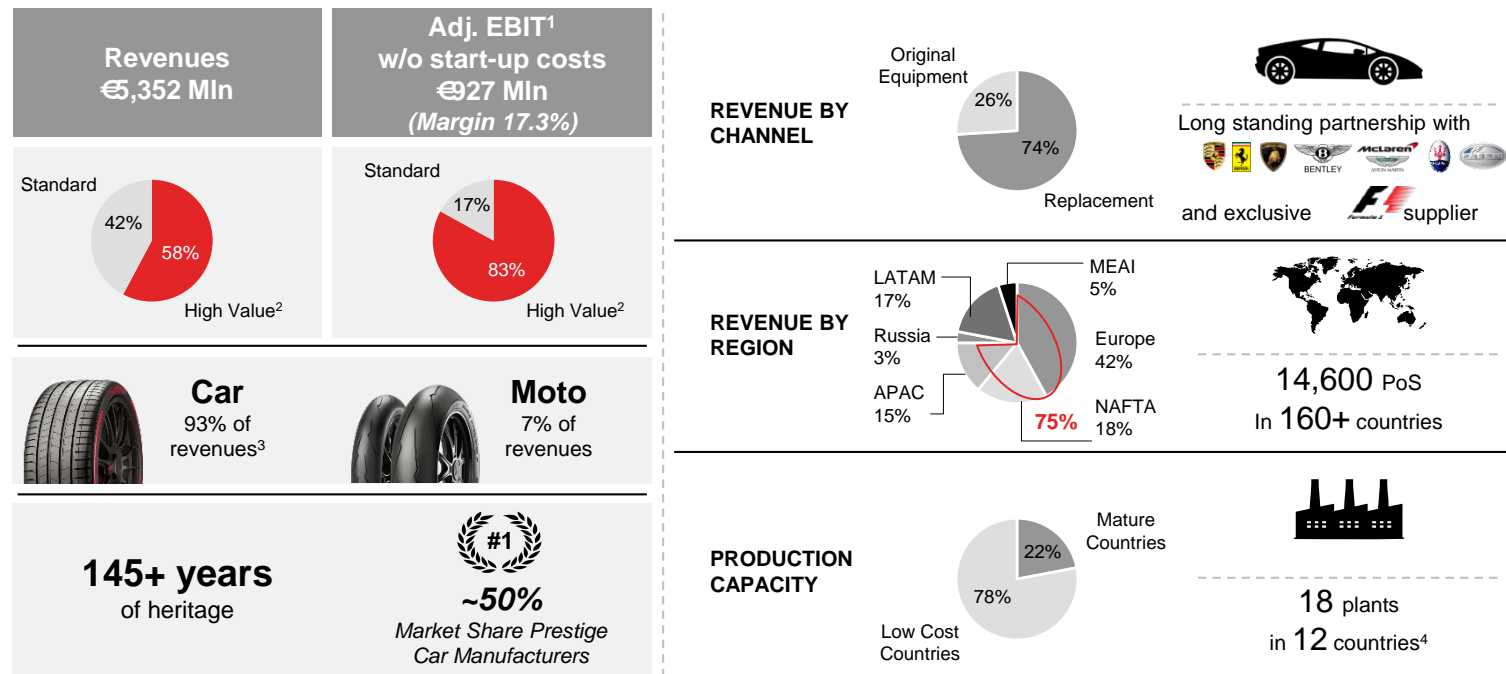
HERITAGE

**CULTURE &
LIFESTYLE**

DESIGN

PIRELLI AT A GLANCE_

GLOBAL PREMIUM TYRE LEADER WITH UNIQUE FOCUS ON CONSUMER SEGMENT



1. Excluding non recurring, one-off and extraordinary items; 2. Include prestige, new premium (≥18"), specialties and super specialties; 3. Percentage based on 2017 Consumer revenues net of Moto only; 4. Following the disposal of the Venezuela plant in September 2018. Source: FY 2017 financial statements consumer business only, Pirelli estimates on third party data

PIRELLI, GLOBAL HIGH VALUE

COMPANY PRESENTATION – NOVEMBER 2018

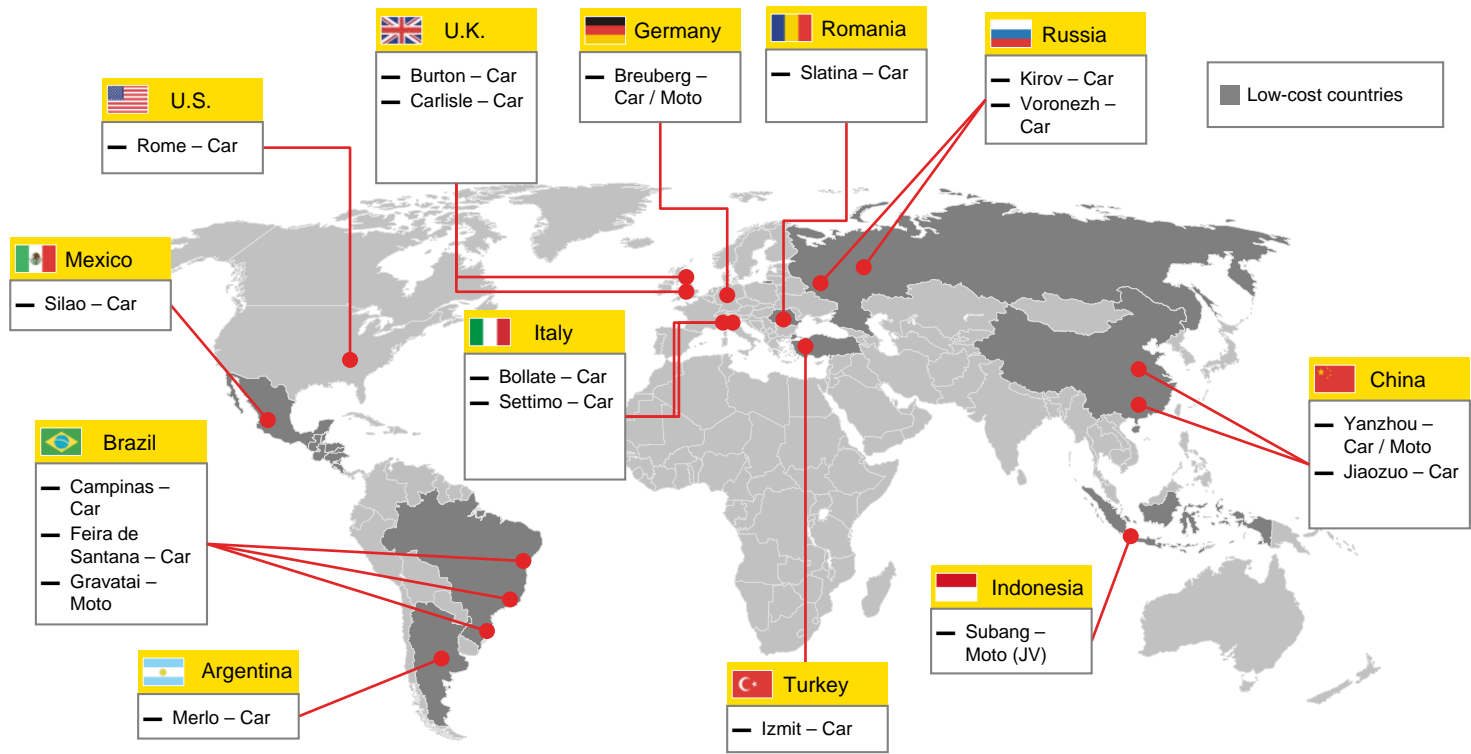
LEADERSHIP POSITION IN HIGH VALUE MARKETS_



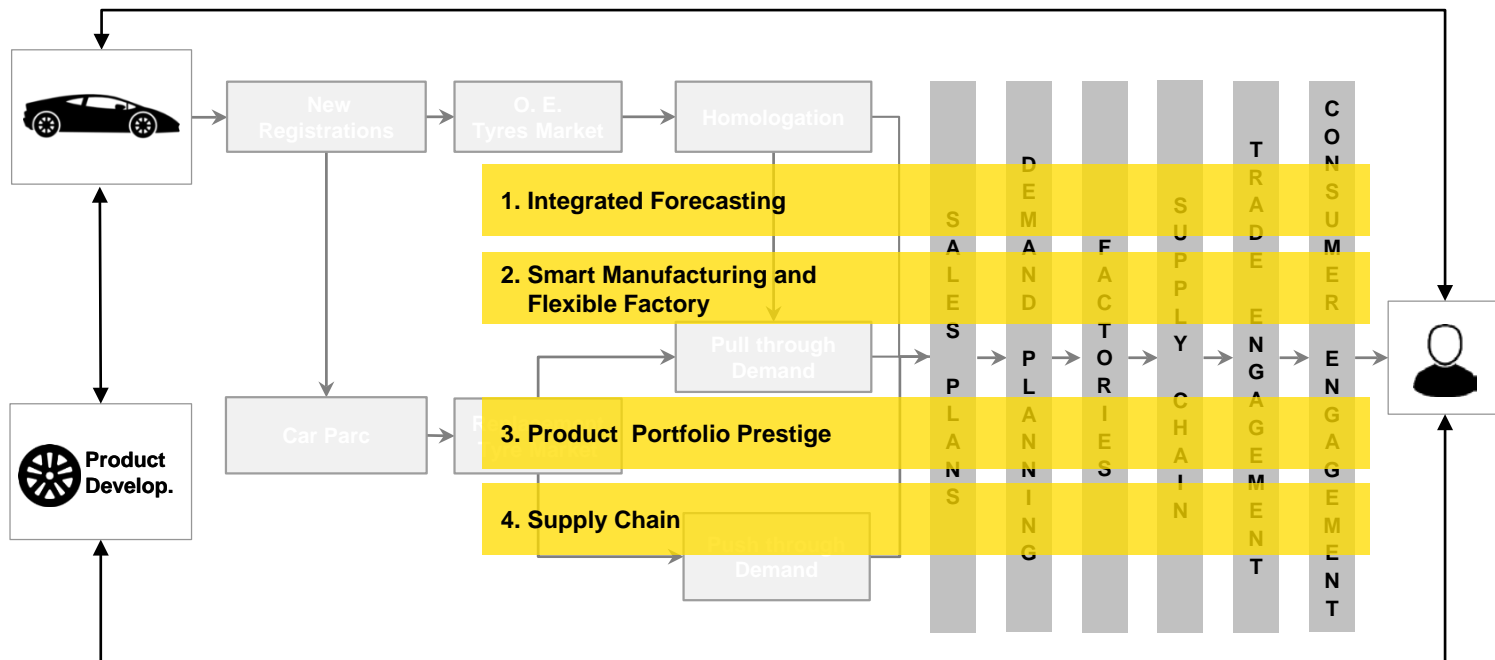
	PRESTIGE	GLOBAL LEADER			
	NEW PREMIUM ¹ REPLACEMENT	LEADER ⁴	AMONG TOP 4 IN USA <small>Leader in marked tyres</small>	LEADER IN CHINA	LEADER IN BRAZIL
	RADIAL TYRES FOR MOTO ²	GLOBAL LEADER			
	PREMIUM TYRES ³ FOR MOTO ²	LEADER ⁴	THIRD	LEADER	LEADER

1. Car tyres with rim size ≥18"; 2. Data referred to Pirelli and Metzeler brands combined; 3. Radial, Custom Touring, Off Road and Sport Touring X-ply with speed index ≥H; 4. Perimeter includes Italy, Spain, France, UK and Germany. Source: Pirelli estimates on third party data

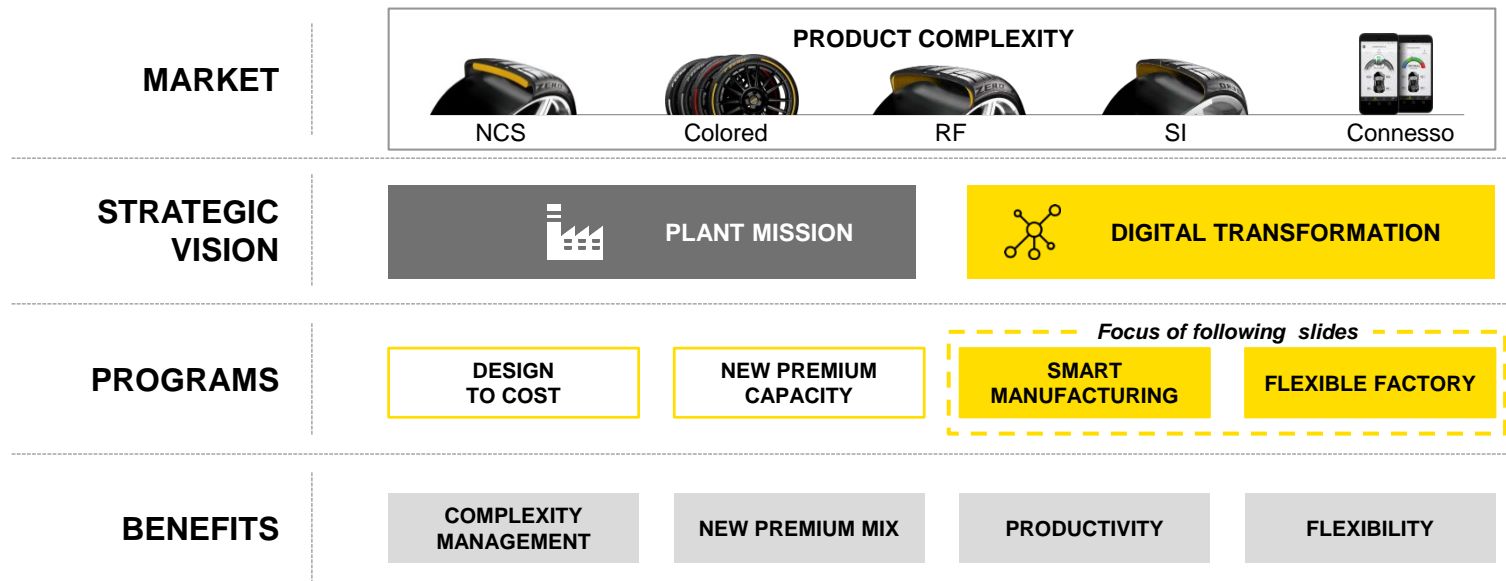
PIRELLI MANUFACTURING FOOTPRINT_



DIGITAL TRANSFORMATION BUSINESS PROGRAMS RESPONDING TO MARKET EVOLUTION

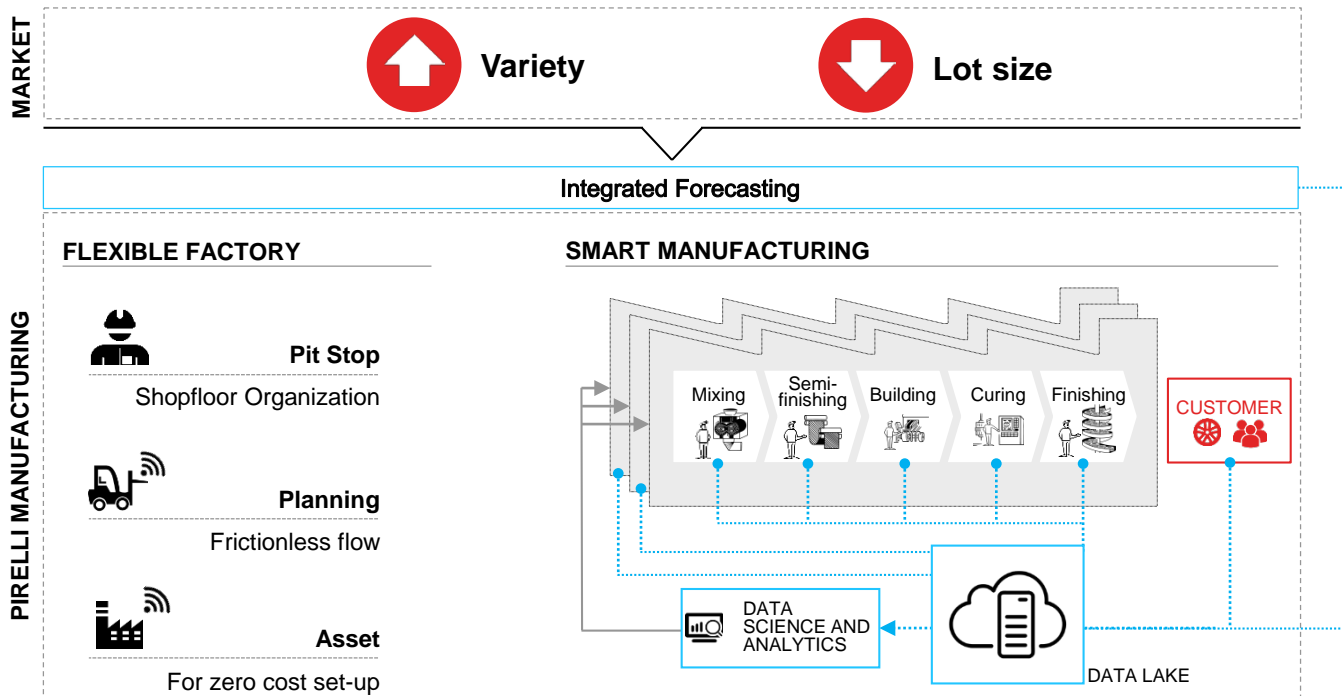


DIGITAL TRANSFORMATION IN MANUFACTURING RESPONDING TO MARKET EVOLUTION_



DIGITAL TRANSFORMATION IN MANUFACTURING

DELIVERING BETTER SERVICE WHILE MANAGING COMPLEXITY_

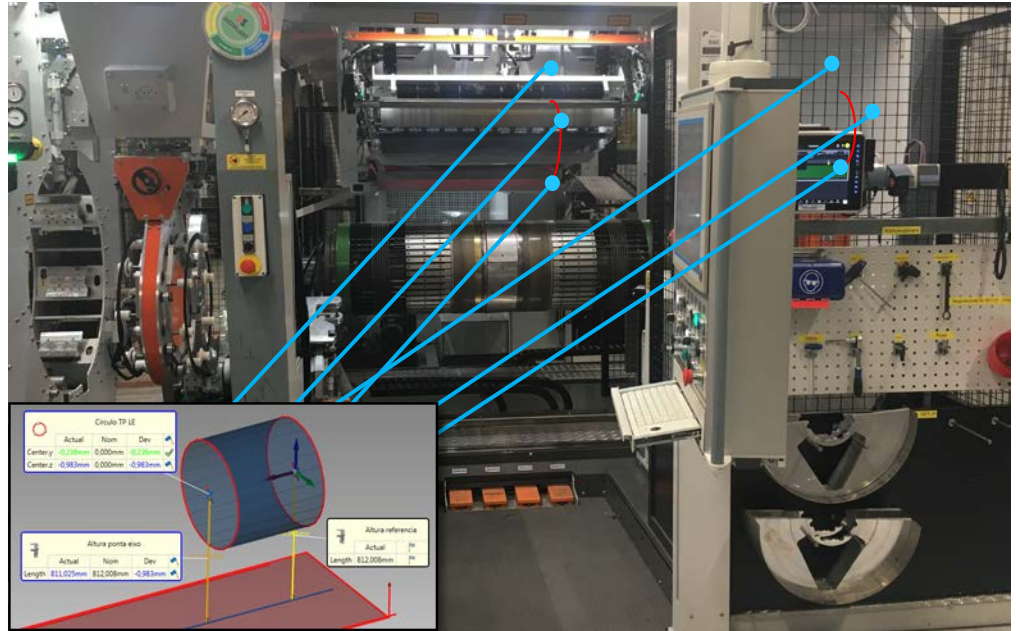


DIGITAL TRANSFORMATION IN MANUFACTURING

FLEXIBLE FACTORY PROGRAM_

FLEXIBLE FACTORY

equipment alignment
with digital twin



DIGITAL TRANSFORMATION IN MANUFACTURING

FLEXIBLE FACTORY PROGRAM_

**FLEXIBLE
FACTORY**

**zero set-up cost
pit-stop approach**



DIGITAL TRANSFORMATION IN MANUFACTURING

SMART MANUFACTURING PROGRAM_

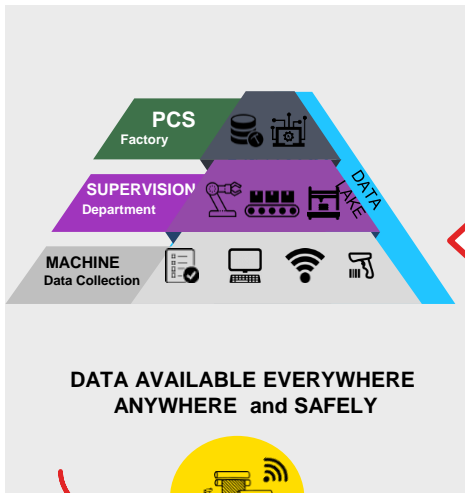
SMART MANUFACTURING

re-engineering
factory value chain

- **New processes ‘end to end’** to assure customer satisfaction
- **New tools** to monitor and solve machinery and process inefficiency and deviations
- **New automated intelligence** to address increasing complexity, reducing overall costs

DIGITAL TRANSFORMATION IN MANUFACTURING VALUE CHAIN RE-ENGINEERING_

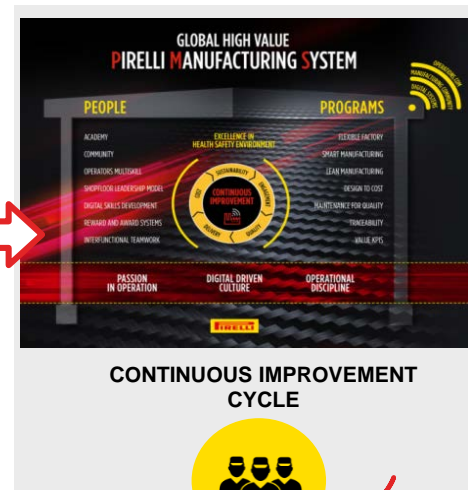
ASSET CONNECTIVITY



DATA SCIENCE ANALYTICS



PIRELLI MANUFACTURING SYSTEM



DEVELOPING our PEOPLE TECH SKILLS

GLOBAL HIGH VALUE PIRELLI MANUFACTURING SYSTEM



PEOPLE

ACADEMY
COMMUNITY
OPERATORS MULTISKILL
SHOPFLOOR LEADERSHIP MODEL
DIGITAL SKILLS DEVELOPMENT
REWARD AND AWARD SYSTEMS
INTERFUNCTIONAL TEAMWORK

EXCELLENCE IN
HEALTH SAFETY ENVIRONMENT



PROGRAMS

FLEXIBLE FACTORY
SMART MANUFACTURING
LEAN MANUFACTURING
DESIGN TO COST
MAINTENANCE FOR QUALITY
TRACEABILITY
VALUE KPIS

PASSION
IN OPERATION

DIGITAL DRIVEN
CULTURE

OPERATIONAL
DISCIPLINE



DIGITAL TRANSFORMATION IN MANUFACTURING

PEOPLE ENGAGEMENT_



**People
Multiskill &
Digital**

		ACTIVITY	SKILLS	PROGRAMS	
	HQ	Roadmap & Priorities	Data driven culture	Smart Manufacturing program <i>(Manufacturing / DSA / ICT / Quality / R&D)</i>	✓
	Plant management	Digital Transformation	Change management	Manufacturing to Digital	✓
	Engineers	Analytics skills coupled with technical and industrial methodologies	Problem solving by High Value competencies	Manufacturing to Digital <ul style="list-style-type: none"> • SMO/SMC Training = 60 People involved • Target 300 Training > 240 People involved 	✓
	Operators	Shopfloor leadership multiskill program	Flexible approach & fast reaction	Kaizen Week Training	✓

DIGITAL TRANSFORMATION IN MANUFACTURING GOVERNANCE MODEL_

HQ SMART MANUFACTURING BOARD

- Management plan of Smart Man
- Quarterly frequency
- Connectivity priors / budget
- DSA priors
- Learning priors/budget

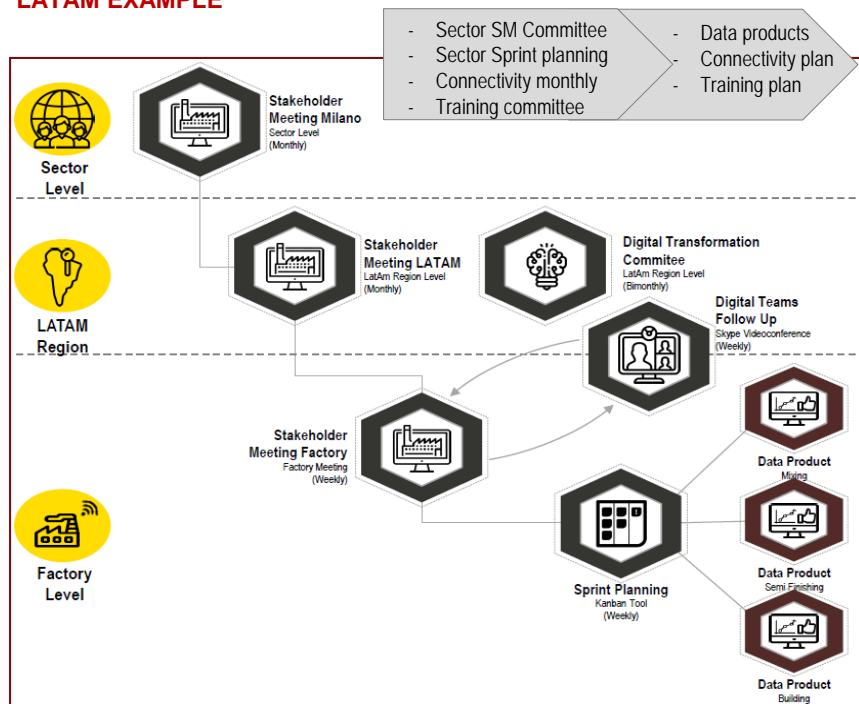
REGIONAL|PLANT SMART MAN OFFICE

- Monthly frequency
- Organizational alignment
- Business priors alignment
- Training needs update
- Backlog and Sprint planning review
- Shopfloor implementation follow up

PLANT SMART STAKEHOLDERS MEETING

- Bi-weekly frequency
- Backlog and Sprint planning review
- Shopfloor implementation follow up

LATAM EXAMPLE



DIGITAL TRANSFORMATION IN MANUFACTURING SHOPFLOOR RELAYOUT_



COCKPIT CAPITANO

- Factory management tool with **online applications**
- Support the **decision-making** process
- **Real-time** data, scenario **prediction** and execution **speed**

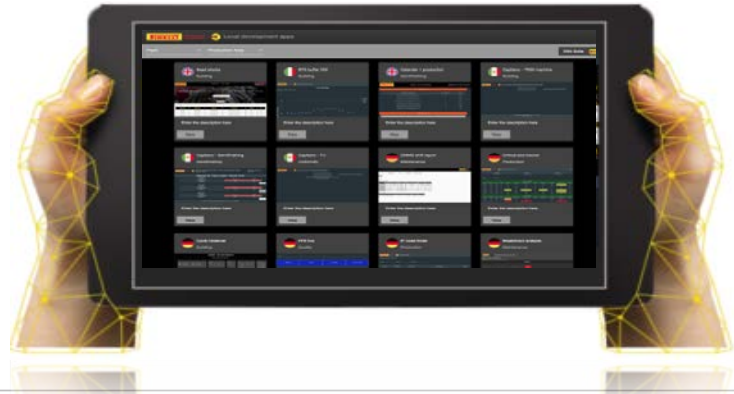


DIGITAL TRANSFORMATION IN MANUFACTURING PRACTICES SHARING_



CONNECTED PLANTS

- All plants are connected with a **common landing page**
- All the **data products** are **available** to plants
- **Transparency** and 1st number management
- **Pirelli appstore** ensures the **best practice** sharing



DIGITAL TRANSFORMATION IN MANUFACTURING AUGMENTED TECHNOLOGIES

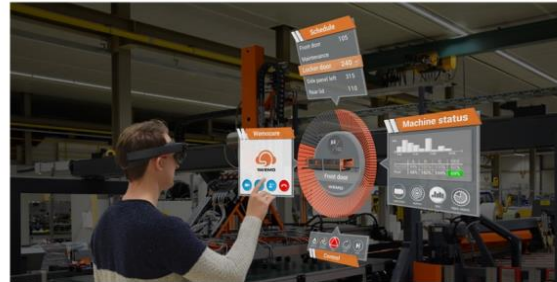


AUGMENTED REALITY

- Augmented technologies to improve our **process capabilities**
- Reduced travel times/costs of engineers due **to virtual capabilities**
- **Digital SOP** Standard Operating Procedures to speed up **training** period and **precision**

AUGMENTED REALITY IN FACTORY SHOPFLOOR

STREAMLINING LOCAL PLANT ISSUES WITH AUGMENTED REALITY



The Modern Workplace with Hololens Mixed Reality



Remote Maintenance with Hololens



Mixed-reality paperless SOP



PIRELLI

Pirelli proprietary and strictly confidential

Slide 2

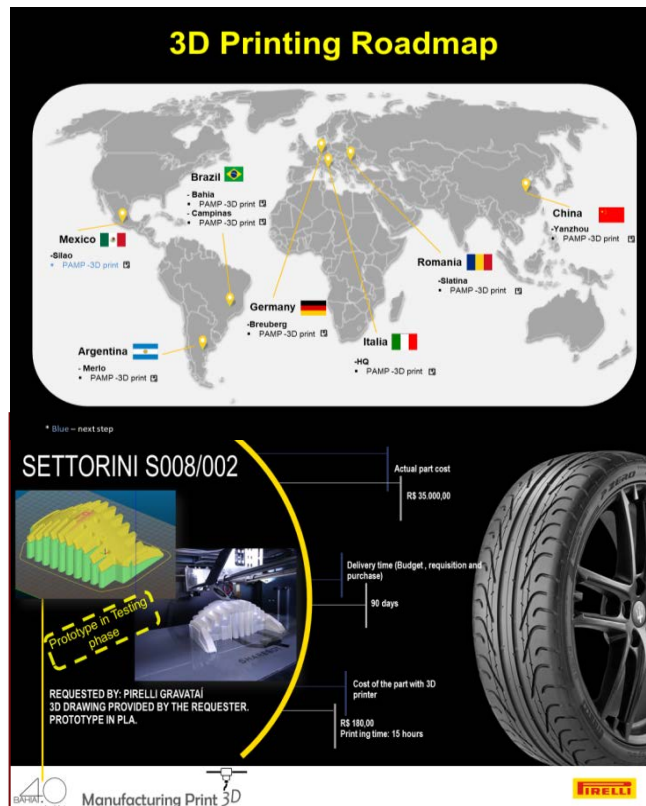
DIGITAL TRANSFORMATION IN MANUFACTURING

ADDITIVE TECHNOLOGIES_



ADDITIVE MANUFACTURING

- Low invest, high **flexibility**
- Initial **tests on tooling**, handling with positive results
- Brings speed and **quick testing capabilities** in our operations
- Small **gains in consumable** cost structure



DIGITAL TRANSFORMATION IN MANUFACTURING RESULTS IN SHOPFLOOR_



Pit Stop
performance
in shopfloor

PIT STOP KAIZEN WEEK

IMPROVEMENT

Building Set up time

-28%

Curing Set up time

-66%

Tyre Uniformity Set up time

-62%

160 specialists involved coming from 18 connected plants



