



# PIRELLI, GLOBAL HIGH VALUE

Walter Trinca Colonel  
Head of Pirelli Manufacturing System & Academy



# ICONIC BRAND GLOBALLY RECOGNISED\_



**PERFORMANCE**

**INNOVATION**

**HERITAGE**

**CULTURE &  
LIFESTYLE**

**DESIGN**

# PIRELLI AT A GLANCE

## GLOBAL PREMIUM TYRE LEADER WITH UNIQUE FOCUS ON CONSUMER SEGMENT

<b>Revenues</b> €3,352 Mln		<b>Adj. EBIT<sup>1</sup></b> w/o start-up costs €27 Mln (Margin 17.3%)	
Standard 42% 58% High Value <sup>2</sup>	Standard 17% 83% High Value <sup>2</sup>	<b>Car</b> 93% of revenues <sup>3</sup>	<b>Moto</b> 7% of revenues
<b>145+ years</b> of heritage		#1 ~50% Market Share Prestige Car Manufacturers	

<b>REVENUE BY CHANNEL</b> Original Equipment 26% Replacement 74%	Long standing partnership with and exclusive  supplier
<b>REVENUE BY REGION</b> LATAM 17% MEAI 5% Europe 42% APAC 15% Russia 3% NAFTA 18% <b>75%</b>	14,600 PoS in 160+ countries
<b>PRODUCTION CAPACITY</b> Mature Countries 22% Low Cost Countries 78%	18 plants in 12 countries <sup>4</sup>

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

# LEADERSHIP POSITION IN HIGH VALUE MARKETS\_

EUROPE



NAFTA



APAC



LATAM



PRESTIGE

**GLOBAL LEADER**



NEW PREMIUM<sup>1</sup>  
REPLACEMENT

LEADER<sup>4</sup>

AMONG TOP 4  
IN USA  
Leader in marked tyres

LEADER IN  
CHINA

LEADER IN  
BRAZIL



RADIAL TYRES  
FOR MOTO<sup>2</sup>

**GLOBAL LEADER**



PREMIUM TYRES<sup>3</sup>  
FOR MOTO<sup>2</sup>

LEADER<sup>4</sup>

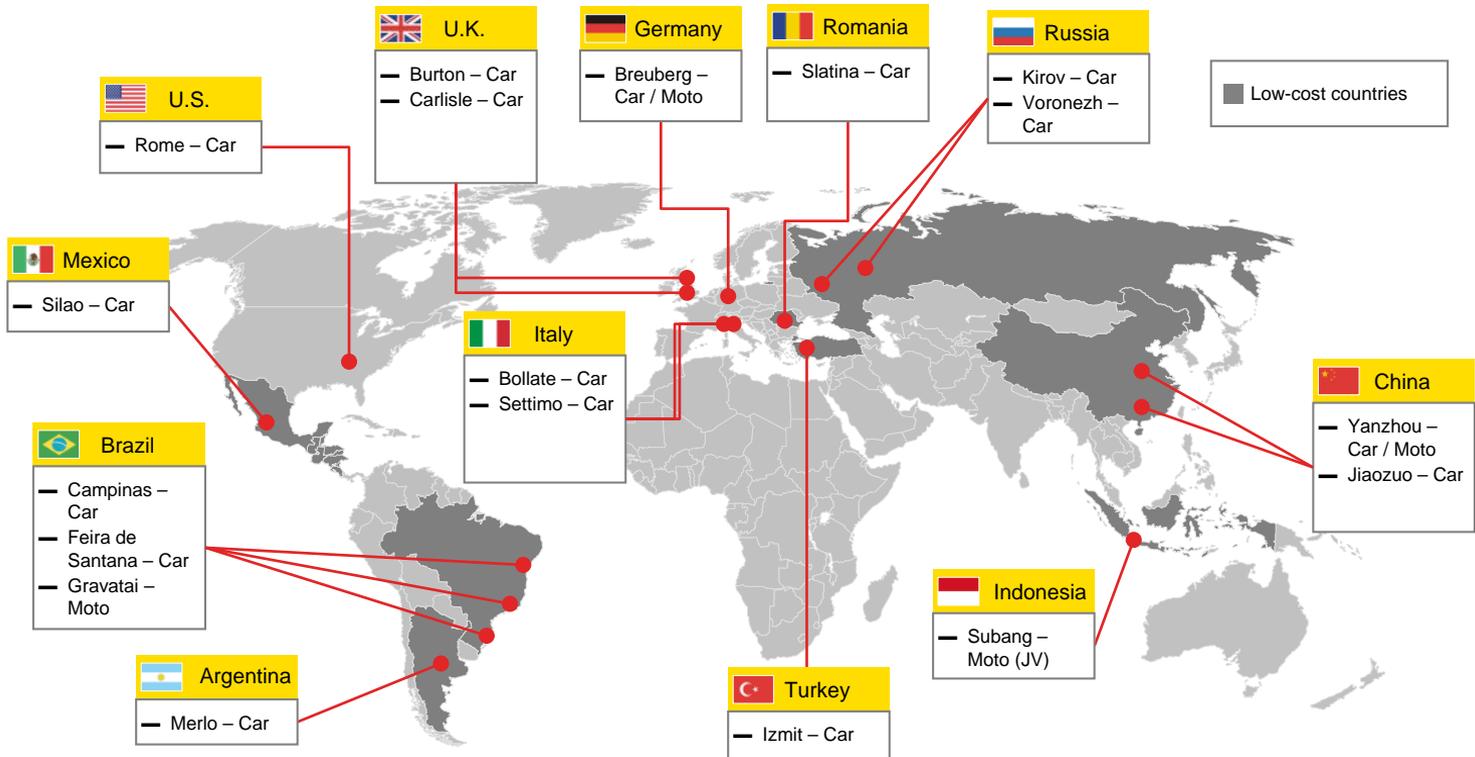
THIRD

LEADER

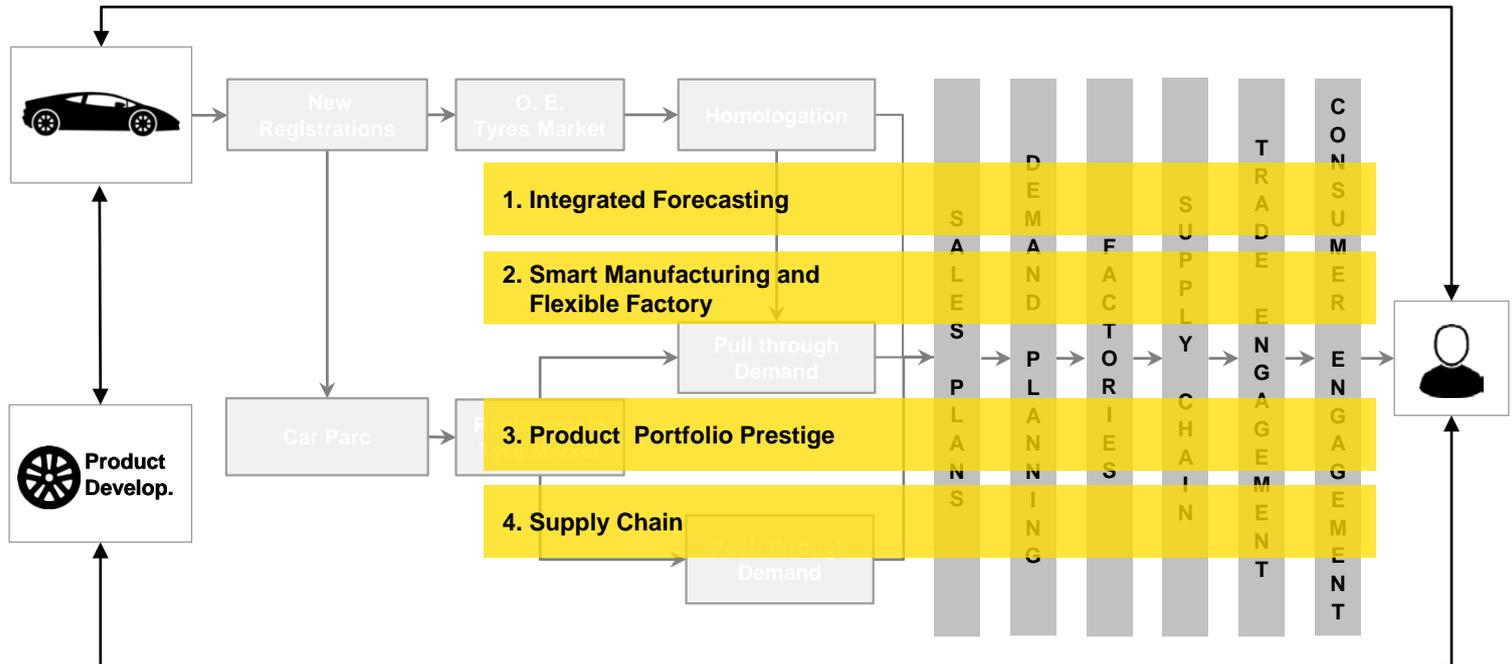
LEADER

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

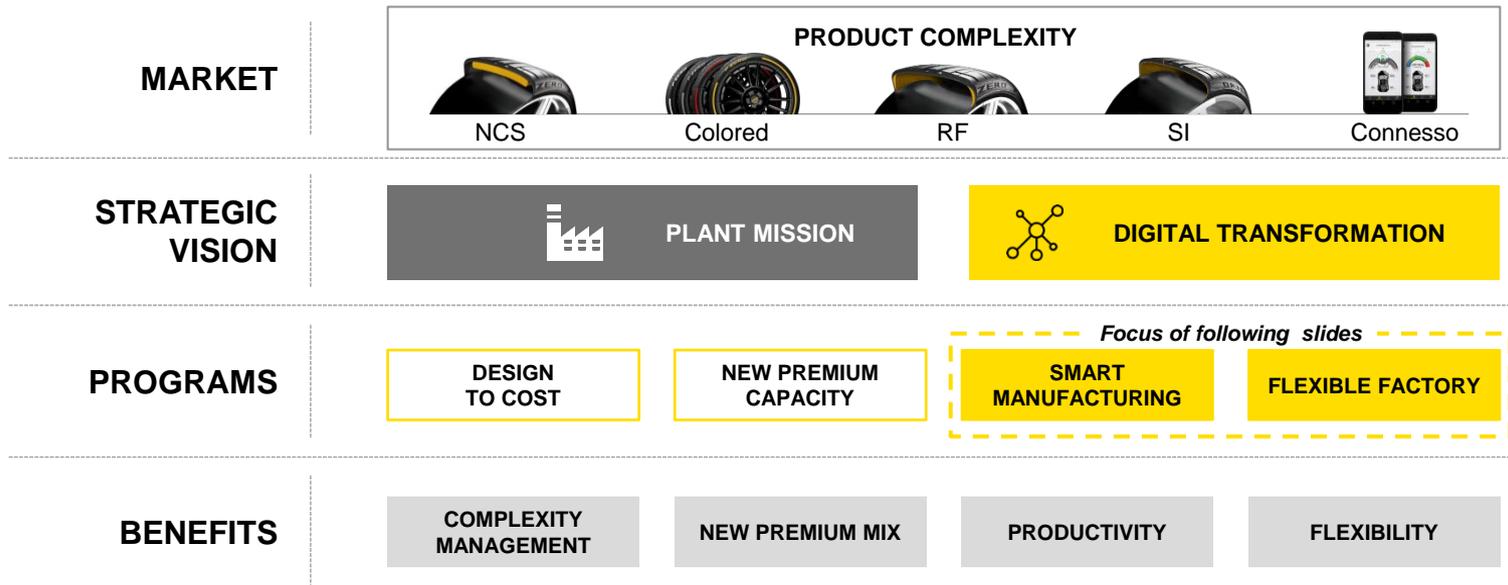
# PIRELLI MANUFACTURING FOOTPRINT\_



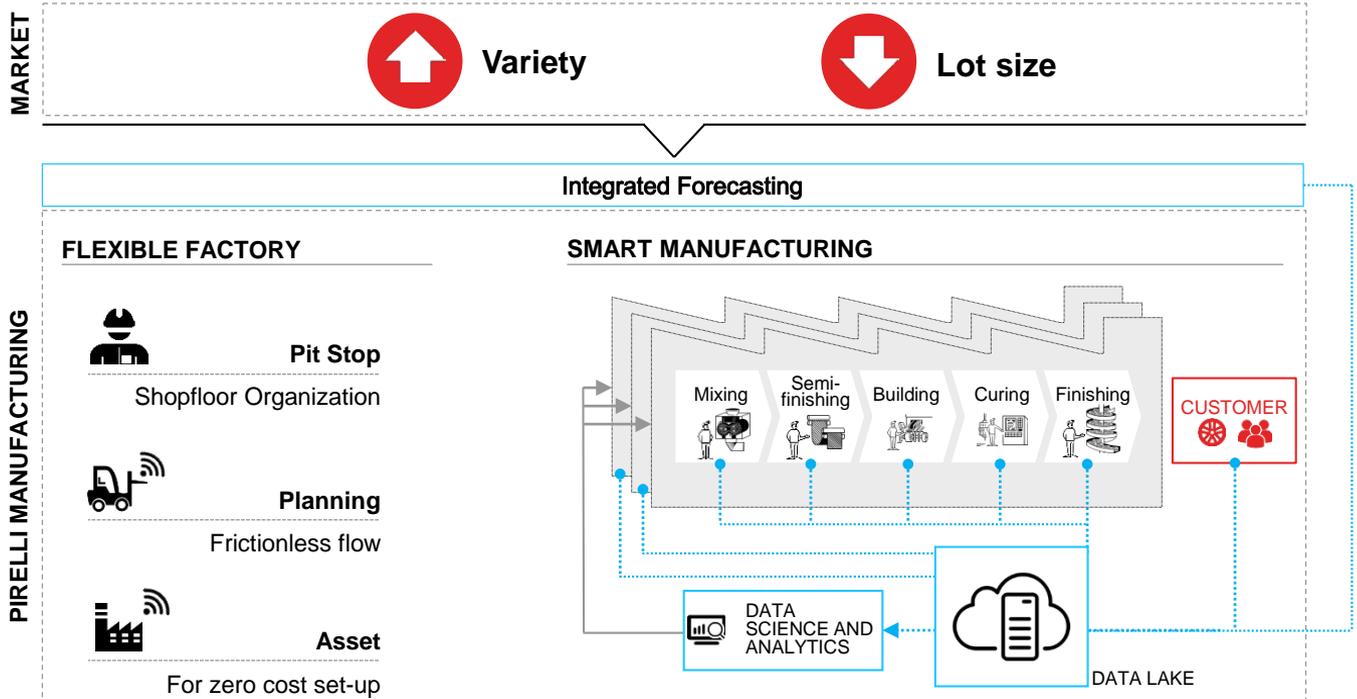
# DIGITAL TRANSFORMATION BUSINESS PROGRAMS RESPONDING TO MARKET EVOLUTION\_



# DIGITAL TRANSFORMATION IN MANUFACTURING RESPONDING TO MARKET EVOLUTION\_



# DIGITAL TRANSFORMATION IN MANUFACTURING DELIVERING BETTER SERVICE WHILE MANAGING COMPLEXITY\_

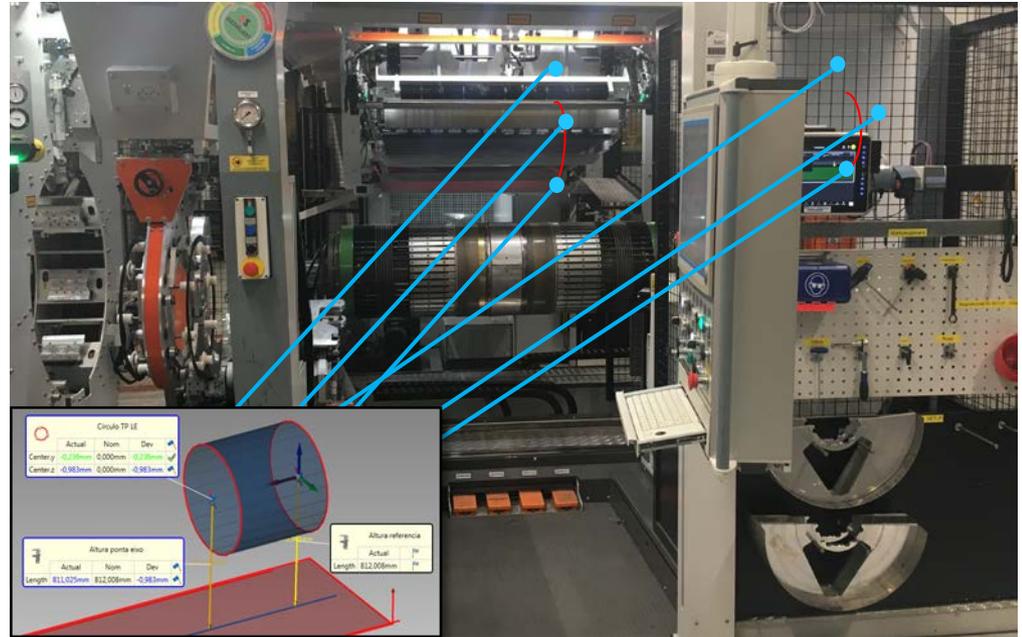


# DIGITAL TRANSFORMATION IN MANUFACTURING

## 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\_

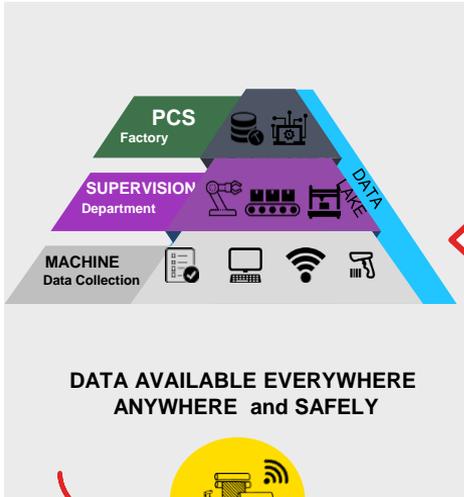
### SMART MANUFACTURING

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\_

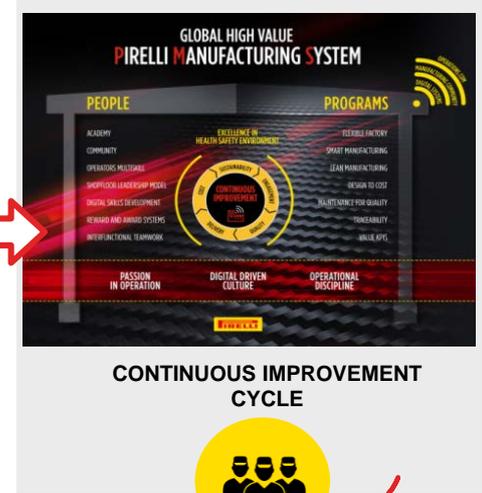
## ASSET CONNECTIVITY



## DATA SCIENCE ANALYTICS



## PIRELLI MANUFACTURING SYSTEM



**DEVELOPING our PEOPLE TECH SKILLS**

# GLOBAL HIGH VALUE PIRELLI MANUFACTURING SYSTEM

OPERATIONS.COM  
MANUFACTURING COMMUNITY  
DIGITAL SYSTEMS

## PEOPLE

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

## PROGRAMS

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

EXCELLENCE IN  
HEALTH SAFETY ENVIRONMENT



PASSION  
IN OPERATION

DIGITAL DRIVEN  
CULTURE

OPERATIONAL  
DISCIPLINE

PIRELLI

# DIGITAL TRANSFORMATION IN MANUFACTURING

## PEOPLE ENGAGEMENT\_



**People  
Multiskill &  
Digital**

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

# 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

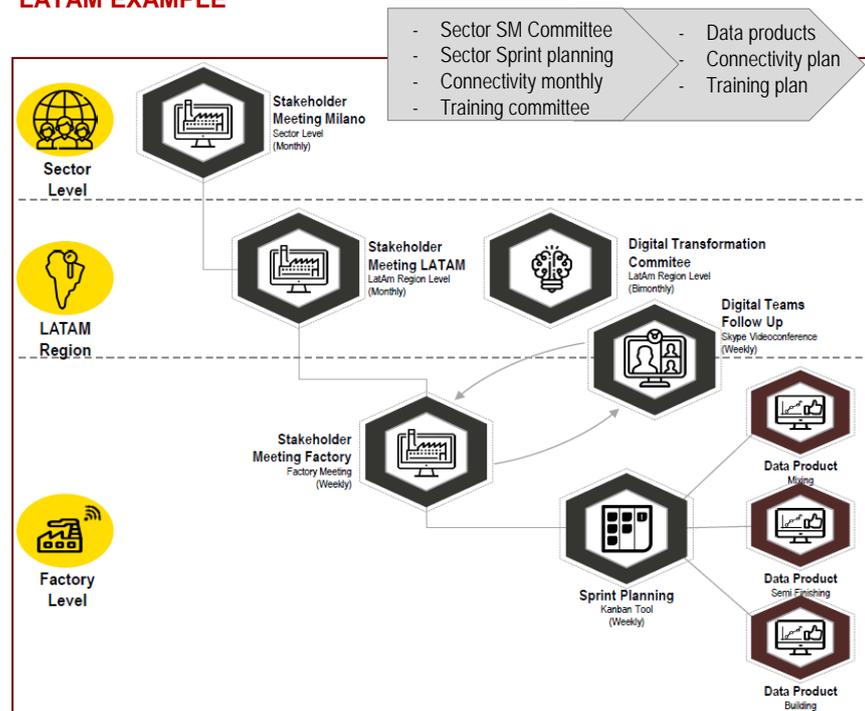
## REGIONAL|PLANT SMART MAN OFFICE

- 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**

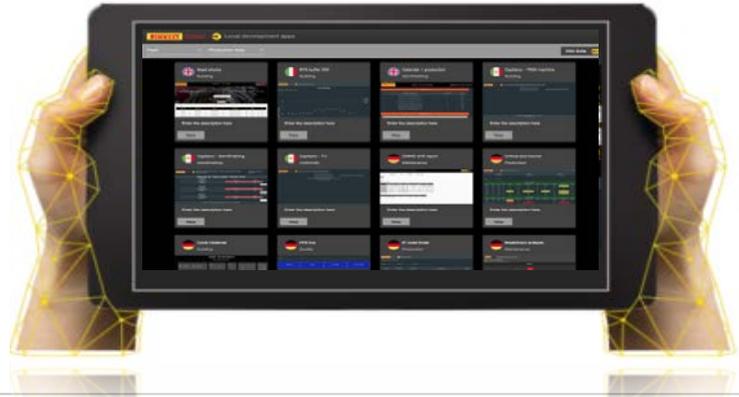


# DIGITAL TRANSFORMATION IN MANUFACTURING PRACTICES SHARING



## 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\_

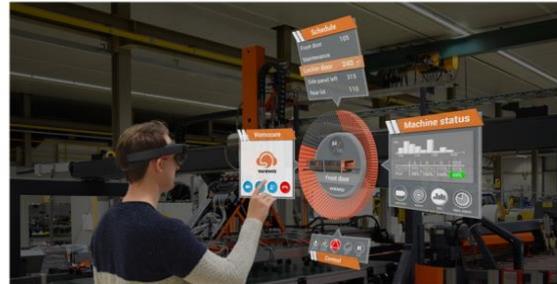


## AUGMENTED REALITY

- 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



