

## Alstom in Poland

1st February 2019

**ALSTOM**  
*Designing fluidity*

# Alstom Group: A complete range of transport solutions



**ROLING  
STOCK**



**SERVICES**



**SIGNALLING**



**SYSTEMS**

# Alstom Group: Worldwide presence 2017/2018

**€7.3**  
BILLION  
SALES

## ACTIVITY (% of sales)



**ROLLING STOCK**

**43%**



**SIGNALLING**

**17%**



**SERVICES**

**19%**



**SYSTEMS**

**21%**

## ORDERS (% per region)

**€7.2**  
BILLION  
ORDERS

**AMERICAS**



**23%**

**EUROPE**



**48%**

**ASIA PACIFIC**



**14%**

**MIDDLE EAST  
& AFRICA**



**15%**

All figures at 31 March 2018  
« Restated IFRS 9&15 »

# Alstom Group: Worldwide presence 2017/2018

**60**  
COUNTRIES

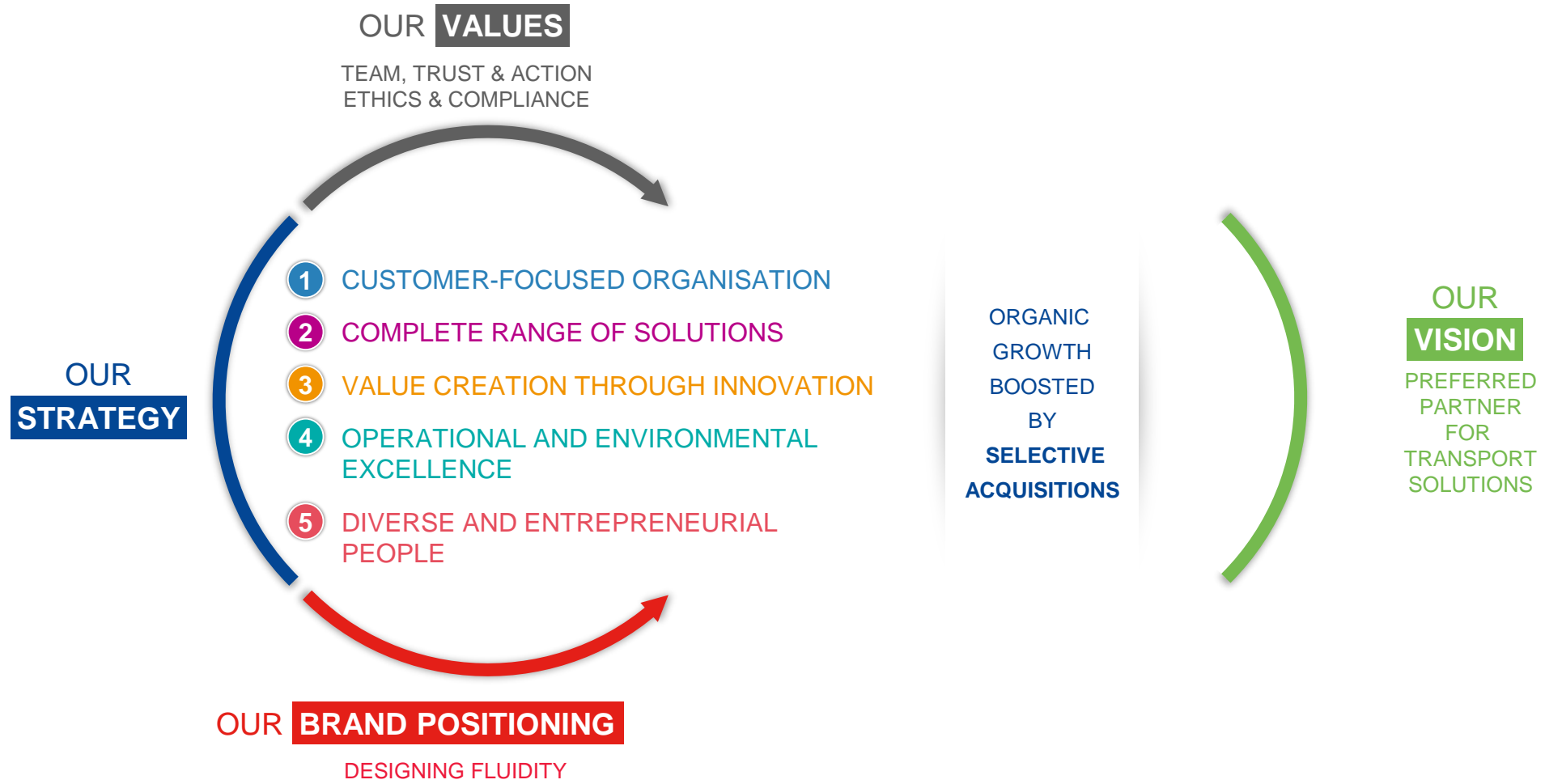
**34.500**  
EMPLOYEES

**250**  
CUSTOMERS



All figures at 31 March 2018

# Alstom Group: An ambitious strategy for 2020



# Alstom in Poland

Business units:  
Rolling Stock and Services

Close  
**2,500**  
employees

Over  
**400**  
Million Euro sales

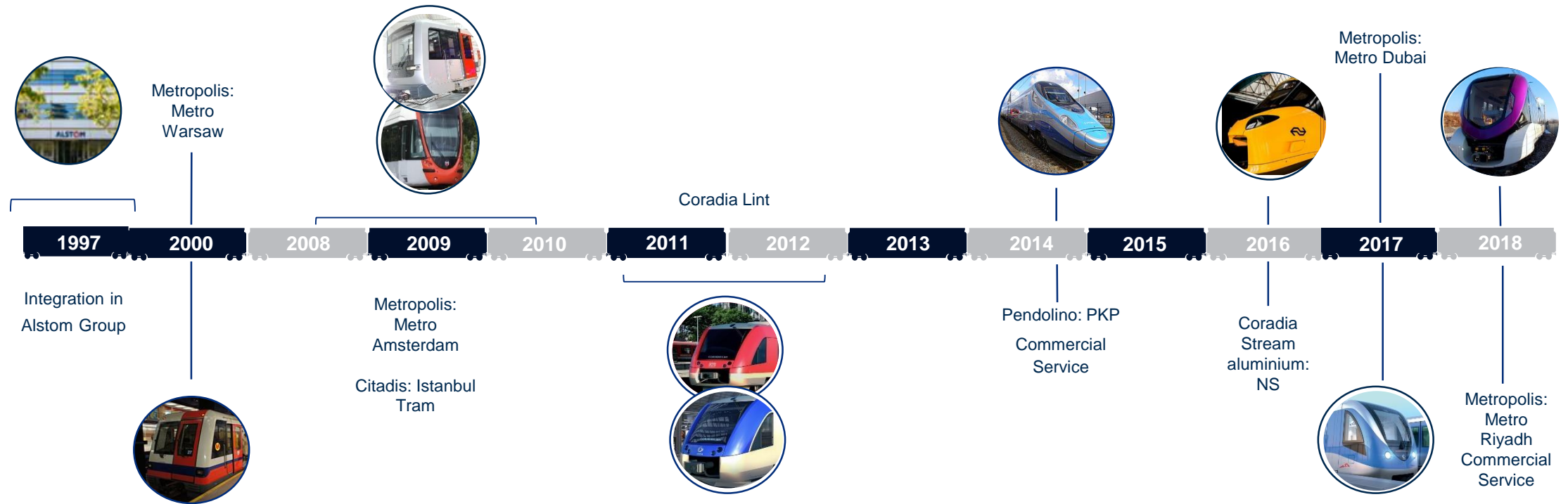
**5**  
Locations

**1**  
Industrial Centre





# Alstom in Poland: Main milestones



# Alstom in Poland: Key figures



More than **150 years** of industrial heritage



Alstom's presence **since 1997**



Invested **more than €100M** since Konstal acquisition in 1997



Close to **2500 employees**



**19 projects** in **10 countries**



**100%** of its production is destined for **exportation**



Polish suppliers collaborate also with **27 Alstom's sites worldwide**



# Alstom in Poland: CSR Commitment



**We change kilometres into zlotys for those in need – 2018 edition – Who we helped**

On 16<sup>th</sup> and 17<sup>th</sup> June our employees, together with their families, friends and the We run with Heart Foundation from Gliwice, took part in the 2<sup>nd</sup> edition of the sporting charity event of Alstom in Poland. Thanks to an exceptional involvement of our staff, we managed to achieve **63 000 km!** Total number of participants was **1 686 people!**

**THANK YOU !!!**

As per the rule: 1km=1PLN, Alstom will donate PLN 63 000 to the charity causes. This year we support disabled kids in their treatment, children under care of social NGO institutions in Chorzów and Warsaw as well as animals.

**Thanks to our action we managed to support:**

- Biegamy z Sercem Foundation** – our partner and organiser of the Challenge – PLN 29 000, to help:
  - 12 years old Laura Zamada, suffering from children's cerebral palsy (stem cell treatment)
  - 4 years old Malgosia Zdrętkiewicz, suffering from cytomegalovirus (stem cell treatment)
  - 14 years old Julia Siniwńska, suffering from autism (physiotherapy)
- Children and Youth Assistance Association The Guardian Angels Home in Chorzów** (purchase of equipment) – PLN 15 000
- Day-care centre at Budzińska street in Warsaw**, run by Street Children Friends Association (purchase of equipment and educational toys) – PLN 11 000
- Kanina – People for animals Foundation** (purchase of special feed and support in actions towards number limiting in Poland) PLN 8 000

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**Sustainable Mobility Week** 27<sup>th</sup> June, 2018

Alstom Poland, 18<sup>th</sup> – 22<sup>nd</sup> June, 2018 - summary

We have just celebrated another edition of the Sustainable Mobility Days in Alstom. Throughout the week 18<sup>th</sup> – 22<sup>nd</sup> June, we had a chance to familiarise with the sustainable mobility idea, Alstom's solutions in this area as well as how an individual contribute to the negative impact on the environment reduction.

We received Teams Flashes, materials and on TV screens, the following Alstom's sustainable mobility solutions were presented:

- Coradia iLint**: the 1<sup>st</sup> emission-free train powered by a hydrogen fuel cell
- Alstom train levelling system**
- Aptis** – an example of a full low floor bus
- Mastria** – the first multimodal supervision center

Thursday, 21<sup>st</sup> June was a bike maintenance day, which initiative was very well received and the service company provided the maintenance all day long.

Warsaw Depot staff has also joined the initiative bringing their bikes to work. Details of the stationary service in Olczyńska Grochowska Depot will be provided soon.

Thank you very much for your participation in the Alstom's Sustainable Mobility Week.

It's time to **FEEL GOOD!**

Weeks 4<sup>th</sup>, 5<sup>th</sup> and 6<sup>th</sup> of 2019

Health & Well-being Day

**ALSTOM**  
Designing flexibility

# Alstom in Poland: Local Universities Commitment



Silesian  
University  
of Technology

**Award “Meritorious for the Transport Department of the Silesian University of Technology”, received in October 2018.**



# Rolling Stock: Katowice Site



## HISTORY

- 1864** | 1st manufacturing halls are established
- 1931** | First tram produced
- 1996** | Over 7000 tram cars produced
- 1997** | **Integration in Alstom Group**

## KEY FIGURES

- **> 2,300** employees
- **290,000 m<sup>2</sup>** plant area
- **90,000 m<sup>2</sup>** manufacturing area
- **2 Million hours** capacity
- **100%** export market

## RANGE OF ACTIVITIES

Production for Rolling Stock

- **Engineering and manufacturing** of metro, trams and regional trains
- **Centre of excellence** for aluminium and steel car body-shells

One of the largest Alstom site worldwide



# Katowice Site: Key technological processes



## Welding

- Welding of carbon steel with MAG, TIG
- Welding of stainless steel with MAG, TIG
- Welding of aluminum with MIG, TIG



## Painting

- Corundum-blasting and painting equipment
- Solvent and water-based paints
- Capacity: 40 cars/month



## Assembly

- Final assembly line (Metro & Coradia Stream)
- Pre – assembly (Regional Trains)



## Testing

- Water tightness tests
- Static tests – 4 tracks



## Dynamic test track

- Length: 700m (possible extension to 1500m)
- Connection to the PKP network
- Voltage: 700V and 1,5 kV (3kV and 25kV possible)

# Katowice Site: 1997 - 2014 development phase

## Participating unit

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## Industrial development

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- Footprint
- Competencies

## First integrated projects

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- 108 cars Metro Warsaw - 2005
- 37 Trams Istanbul - 2011
- 170 cars Metro Budapest - 2013
- 168 cars Metro Amsterdam - 2015



Growing competences

# Katowice Site: 2014 transformation into a Leading Unit

## Leading unit

- Metropolis
- Coradia Stream

## Key competencies to grow

- Project Management: over 30 professionals hired/ developed
- Engineering: **> 90 engineers** on-board
- All industrial métier



Katowice is part of Alstom global engineering competence centre



# Katowice Site: Products - Metropolis



**Metropolis**   
Already in service



## Metropolis for Amsterdam

- Lines - M5/M6
- **28 six-car trains**
- Completion: September 2015




## Metropolis for Budapest

- Line 2: **22 five-car trains**
- Line 4: **15 four-car trains**
- Completion: August 2013



# Katowice Site: Products - Metropolis



**Metropolis**   
Under execution




## Metropolis for Riyadh

- Line 4: King Abdullah Financial District and King Khaled International Airport
- Line 5: King Abdulaziz Street
- Line 6: Abdulrahman Bin Out and Sheik Hassan Bin Hussein Ali Streets
- **69 Trains of 2 cars each**
- Duration: 2013 - 2018

# Katowice Site: Products - Metropolis



**Metropolis**   
Under execution



## Metropolis for Dubai

- New 14,5 kilometre-long line with 7 stations for Expo 2020
- **50 x 5 cars trains**
- Completion: November 2019

# Katowice Site: Products - Coradia Stream



Coradia Stream



## Coradia Stream for Netherlands (NS Lease)

- Base order 79 trains in two configurations:
  - 8-coaches-30TSs
  - 5-coaches-49TSs
- Duration: July 2016 - October 2022

# Katowice Site: Products – Coradia Lint



**Coradia Lint**



Regional single-deck DMU trains



## Coradia Lint for DB and several Private Operators

>570 painted and pre-fitted CBSs

Starting from September 2012

### PAINTED CAR BODIES

- **Lint Dieselnetz Köln (DB AG)**  
165 painted car bodies - 2014
- **Lint LNVG VII**  
20 painted car bodies - 2014
- **Lint Dieselnetz Südwest (Netinera)**  
144 painted car bodies - 2014
- **Lint Dieselnetz Südwest (DB AG)**  
76 painted car bodies - 2015
- **Lint Eifel-Westerwald-Sieg Abellio (EWS)**  
14 painted car bodies – 2014
- **Lint AKN**  
34 painted car bodies – 2015
- **Lint Dieselnetz Ost West - DNOW/TOW (DB AG)**  
34 painted car bodies - 2015
- **Lint LNVG VIII**  
12 painted car bodies - 2015
- **Lint Regentalbahn (Ostbayern)**  
24 painted car bodies - 2016
- **Lint Erft Schwalm Netz (ESN)**  
24 painted car bodies - 2016
- **Lint NJR Denmark**  
26 painted and pre-fitted car bodies - 2016

# Katowice Site: Products - X'Trapolis



**X'Trapolis**



Regional single-deck EMU trains



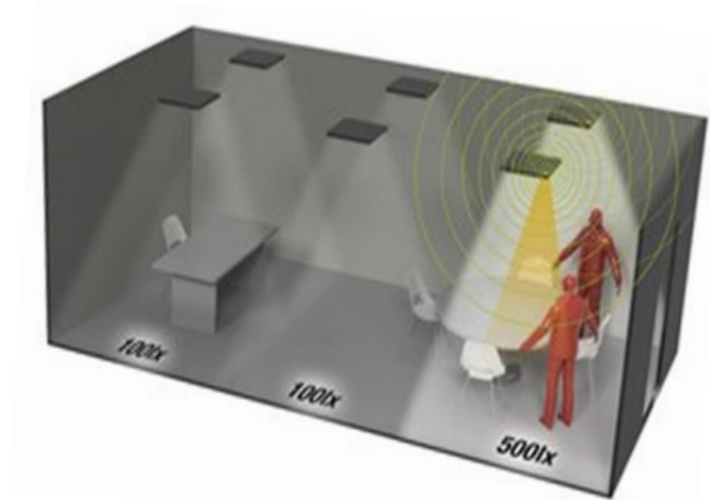
## **X'Trapolis for Australian Market**

- >350 painted and pre-fitted CBSs
- Since 2008

# Katowice Site: Environmental excellence

## Smart, flexible light system

- Fixture of the latest generation able to combine the advantages of the LED light source.
- The **Autodimmer Sensor** accessory allows the fixture to work with intelligent dimming:
- Self-adapting technology automatically adjusts the emission of light according to the natural light on the work surface.

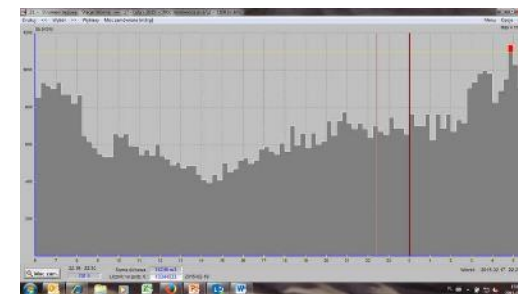


## INTROBAT system

### Monitoring system of gas consumption:

- Control of valves and halls heating via website
- Electronic analysis of gas consumption

Hourly monitoring



**ALSTOM** ALSTOM KONSTAL S.A.  
ul. Metalowców 9, Chorzów

Wybierz do wyboru Hall

Hala nr 9

Temperatura: 17.5 [°C]

Strefa 7	
Strefa 5	Strefa 6
Strefa 3	Strefa 4
Strefa 1	Strefa 2

Strefa 1	Strefa 2	Strefa 3	Strefa 4	Strefa 5	Strefa 6	Strefa 7
Temperatura zadana w strefie						
15.0 [°C]	15.0 [°C]	15.0 [°C]	15.0 [°C]	15.0 [°C]	15.0 [°C]	15.0 [°C]
Temperatura zmierzona w strefie						
19.3 [°C]	19.5 [°C]	19.8 [°C]	19.8 [°C]	19.8 [°C]	19.8 [°C]	18.8 [°C]
Odczyty	Odczyty	Odczyty	Odczyty	Odczyty	Odczyty	Odczyty
Nastawy	Nastawy	Nastawy	Nastawy	Nastawy	Nastawy	Nastawy



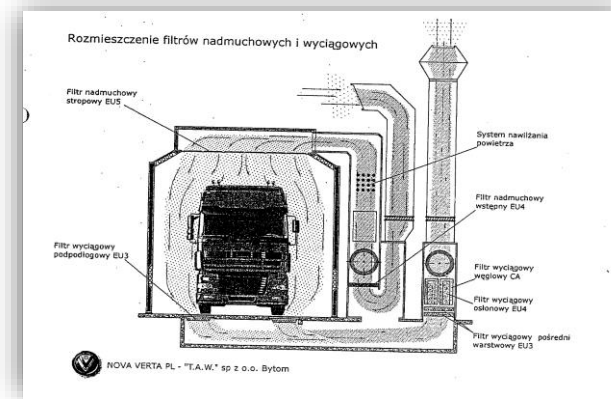
# Katowice Site: Environmental excellence

## Carbon Filters in paintshops

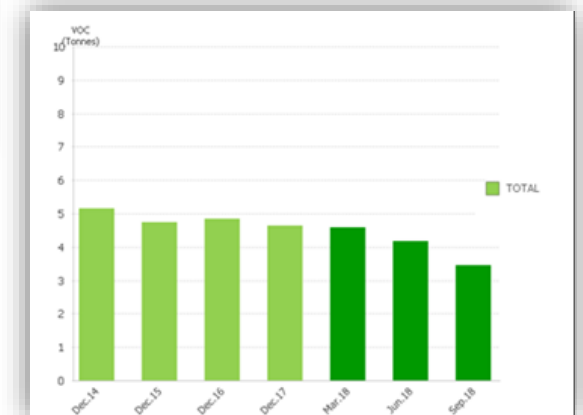
- The efficiency of absorption of VOCs by activated carbon filters can range from 90 to 98% \*
- \*According to producer declaration and confirmed by measurement by Mining Institute.

## Virtual Painting

- Reduction of paint consumption
- Reduction of emissions to air
- Reduction of hazardous waste



## Volatile Organic Compounds Emission





# Alstom in Poland: Services



## MAIN SCOPE

- **20 Avelia Pendolino trains** ED250
- **Preventive Maintenance** and cleaning up to level 5 maintenance activity
- Activity started in **March 2014**
- Duration of contract: **15 to 17 years**

## KEY FIGURES

- **> 150** employees
- **26,152 m<sup>2</sup>** plant area
- **13,210 m<sup>2</sup>** building area
- Total fleet mileages on 31/12/2018: **28,752,423 km**

## ACHIEVEMENTS

- **96,5% of availability**
- 1<sup>st</sup> Pendolino train with **Wi-Fi**, successfully **tested** according to the contract on 28<sup>th</sup> Dec 2018

100% trains delivered to PKP IC every day

# Alstom Poland: Services Sites and Equipment







[www.alstom.com](http://www.alstom.com)

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