



SOLARIS

# COMMON DIRECTION >

Company Presentation

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







**COMMON  
DIRECTION >**

**Company >**

## Solaris Bus & Coach

- > **Independent manufacturer** of buses, trolleybuses and trams
- > **100% owned** by **Olszewski** founding family
- > **€396 million** annual turnover (2016)
- > **2500 employees**
- > **1300 vehicles** annual **production**
- > **15 000** vehicles sold since start of production
- > International presence – **32 countries**



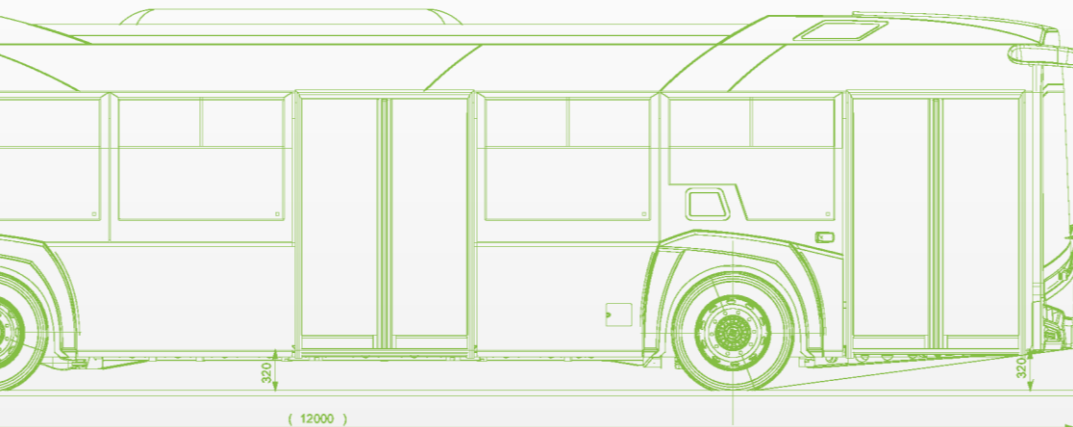
**BUS  
OF THE YEAR  
2017**





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**Company >**



**> Solange Olszewska**  
CEO



**> Solange and Krzysztof Olszewscy**  
Founders and owners



**> Dr.Eng. Dariusz Michalak**  
Deputy CEO  
R&D, Quality Assurance



**> Paweł Kaczalski**  
Deputy CEO  
Production, Logistics



**> Zbigniew Palenica**  
Deputy CEO  
Rolling Stock, Sales



**> Paweł Hajduk**  
Deputy CEO  
Finance, Purchasing

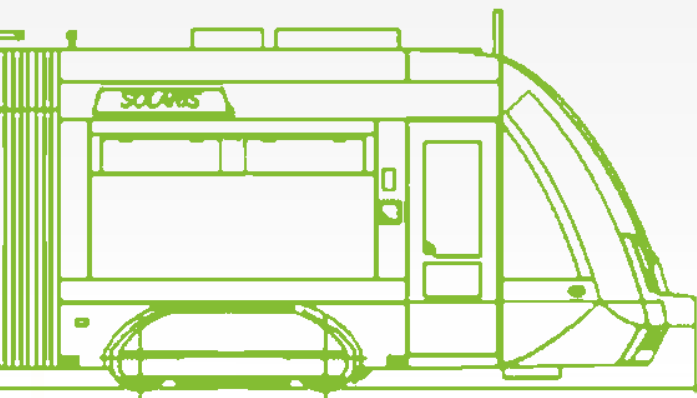
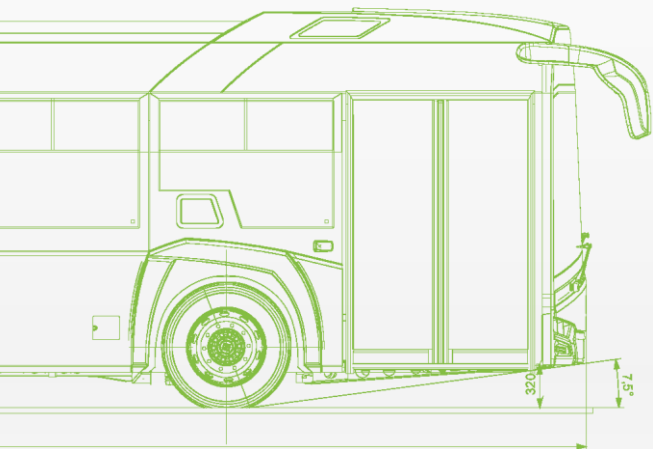


**> Krystyna Woźniak**  
Deputy CEO  
Human Resources, IT



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**Company >**



## BOLECHOWO

Headquarters  
Bus assembly



## ŚRODA WIELKOPOLSKA

Bus welding plant



## JASIN

Solaris Logistics Center

## POZNAŃ

Tram assembly

## ŚRODA WIELKOPOLSKA

Tram welding plant







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**Company >**

## Solaris vehicles have been sold to 32 countries

- 📍 Austria
- 📍 Belgium
- 📍 Bulgaria
- 📍 Croatia
- 📍 Czech Republic
- 📍 Denmark
- 📍 Estonia
- 📍 Finland
- 📍 France
- 📍 Germany
- 📍 Greece
- 📍 Hungary
- 📍 Israel
- 📍 Italy
- 📍 Latvia
- 📍 Lithuania
- 📍 Luxembourg
- 📍 Malta
- 📍 Morocco
- 📍 Netherlands
- 📍 Norway
- 📍 Russia
- 📍 Serbia
- 📍 Slovakia
- 📍 Spain
- 📍 Switzerland
- 📍 Sweden
- 📍 Turkey
- 📍 United Arab Emirates







## COMMON DIRECTION >

### History >



> 1981

Krzysztof Olszewski  
works for Neoplan  
in Berlin



> 1996

Bolechow factory  
opens with  
Neoplan licence

> 1994

First low-floor  
city bus sold  
in Poland



> 2001

Trollino  
trolleybus  
is first step  
to electric  
mobility

> 1999

Urbino launches  
Solaris's own  
product range



> 2004

Major export order of  
260 buses for BVG Berlin





## COMMON DIRECTION >

### History >

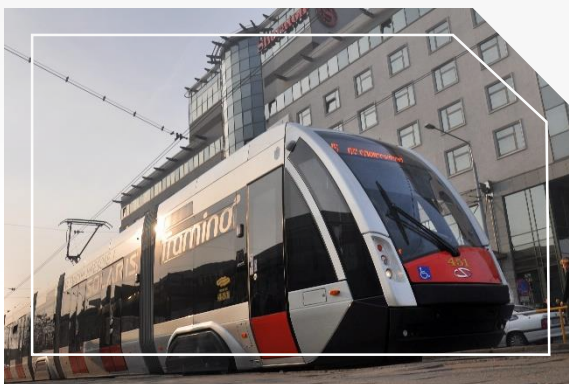


### > 2006

Pioneer in diesel-electric  
hybrid buses

### > 2009

Diversification into  
rail vehicles  
with **Tramino** tram



### > 2011

Zero-emission  
electric mobility  
with **battery bus**  
**Urbino electric**



### > 2015

Major investment  
in **expansion**  
of **Bolechowo**  
plant

### > 2014

The new **Solaris**  
**Urbino** renews  
the core product



### > 2016

Solaris **Urbino 12** electric  
announced  
**BUS OF THE YEAR 2017**

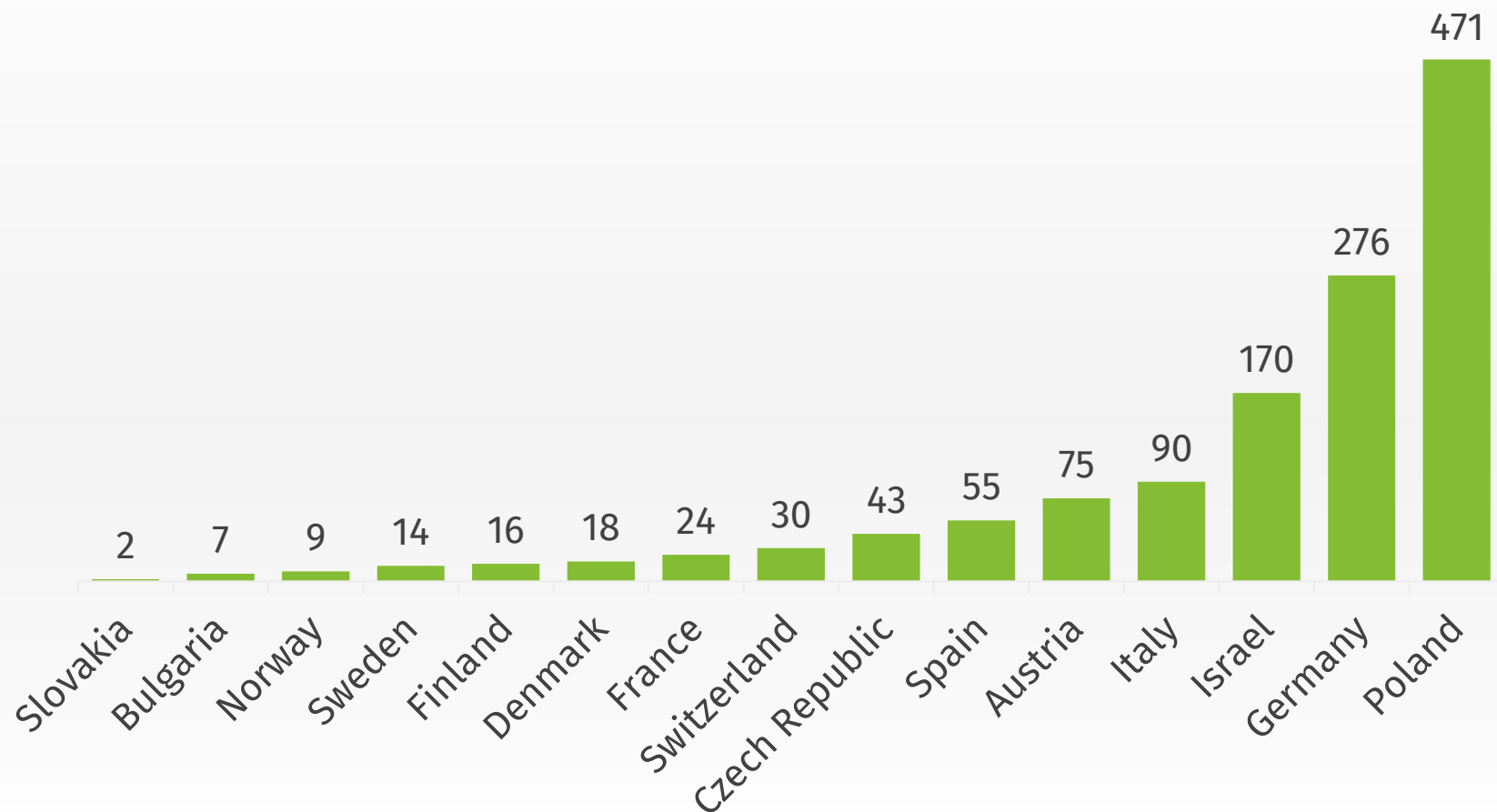




## Market data

- › Number of vehicles sold in 2016 by country in units

source: Solaris Bus & Coach

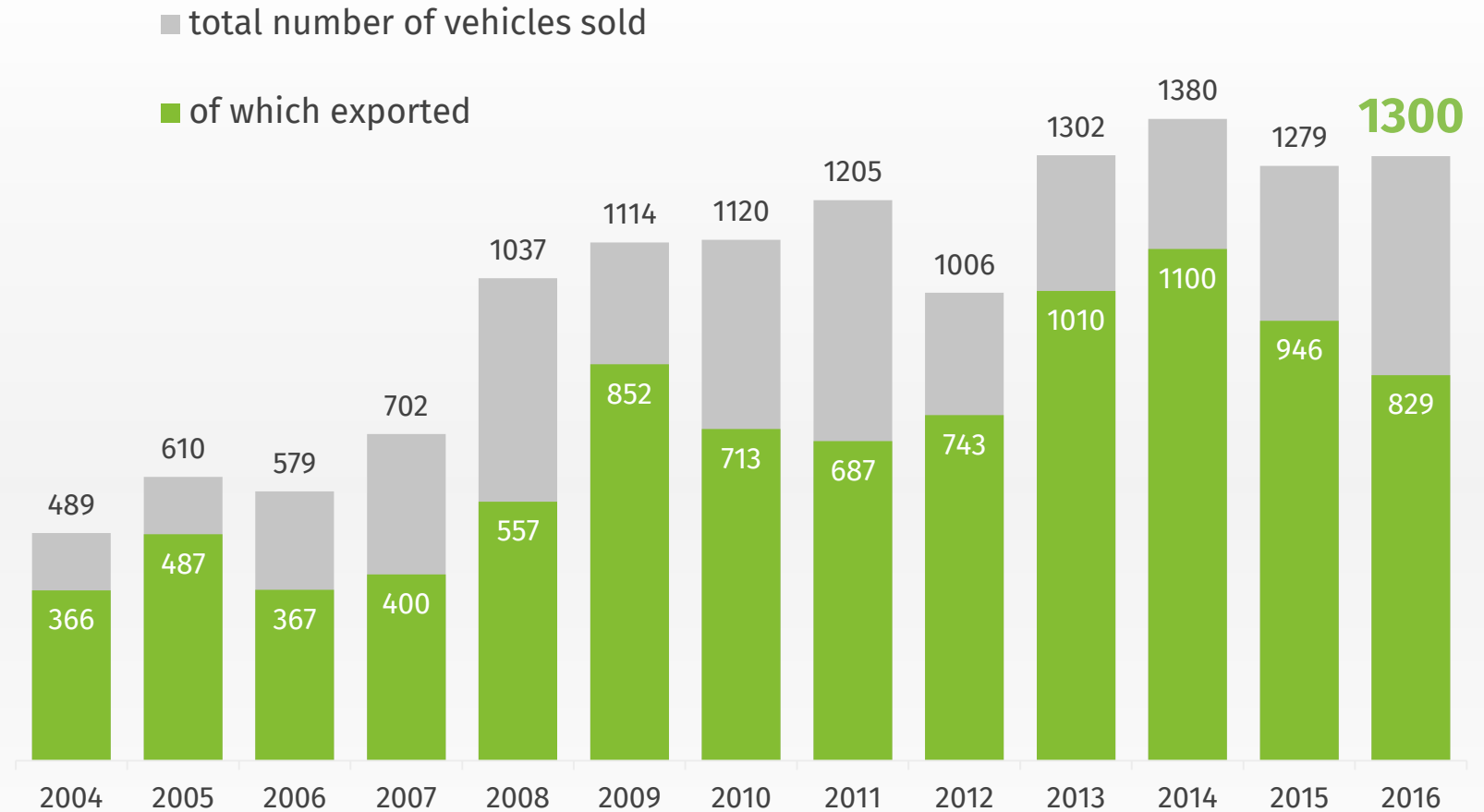




## Export share

- > Sales of Solaris vehicles and export share in 2004-2016 by units

source: Solaris Bus & Coach

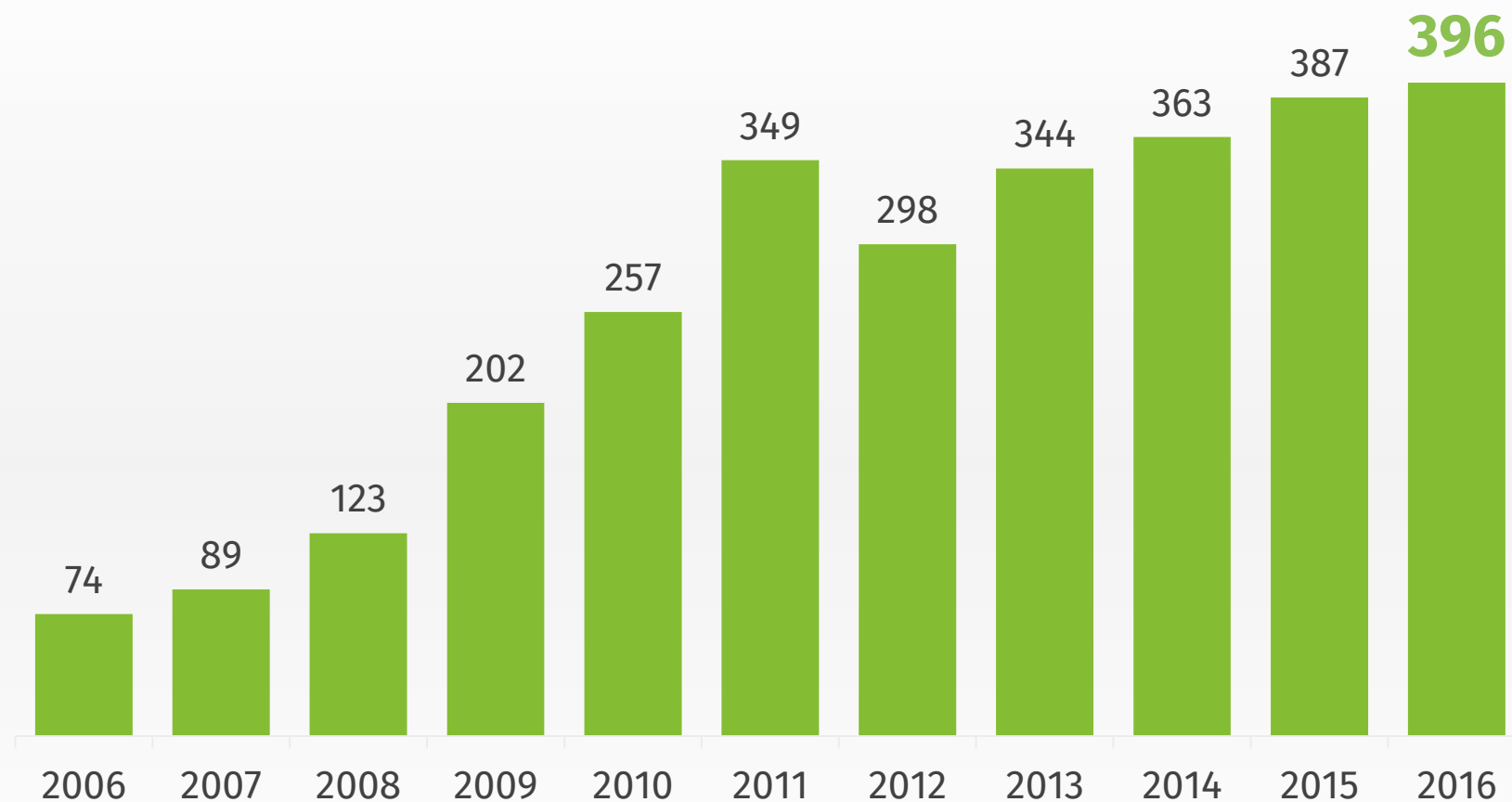




## Financial figures

- > **Turnover**  
in million EUR
- > Prognosis data from  
before the financial audit

source: Solaris Bus & Coach



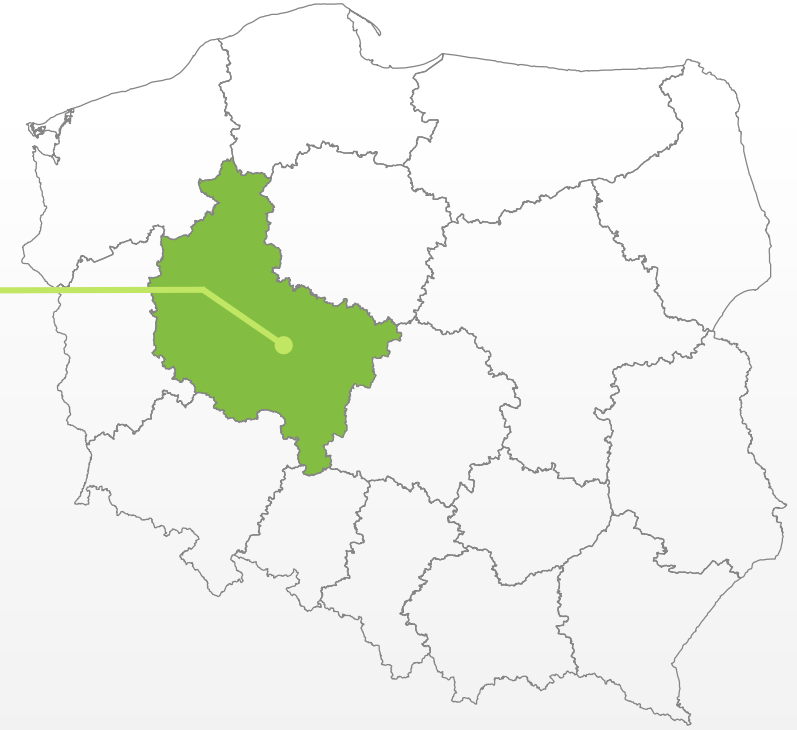




## The influence on economy



Solaris  
belongs to the **Top 5%**  
organisations providing **the highest  
wages** in Wielkopolskie voivodship  
in the industry



### 31%

the average  
employment  
increase over  
the last 20  
years



### 8%

an average annual  
**employment increase**  
in Solaris over the  
period 2005-2015

It is a **more than 43%  
increase** than the one  
recorded by the  
automotive industry over  
the years 2005-2015 in  
Poland





Prezentacja firmowa



SOLARIS

PRODUCT  
RANGE >

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**Combustion powertrains >**

## City bus **Solaris Urbino**

> 8,6 / 10,5 / 12 / 15 / 18 / 18,75 m



## Intercity bus **Solaris Urbino LE**

> 8,9 / 10,9 / 12 / 15 m



## Intercity bus **Solaris InterUrbino**

> 12 / 12,8 m



Urbino 12



Urbino 18



Urbino 18



Urbino 18



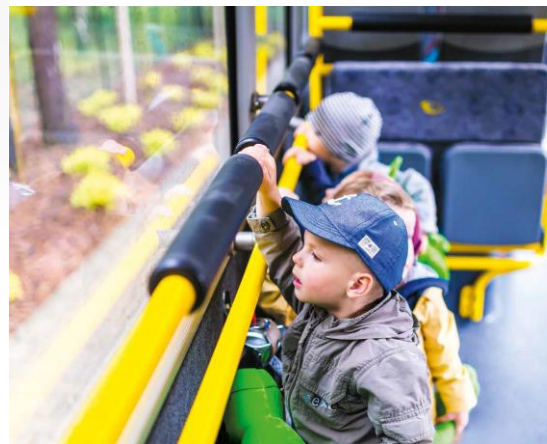
Urbino 12 LE



Urbino 12 LE



Urbino 12 LE



InterUrbino



InterUrbino





**COMMON  
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## Alternative powertrains >

### Electric bus **Solaris Urbino electric**

> 8,9 / 12 / 18 / 18,75 m



### CNG bus **Solaris Urbino CNG**

> 12 / 15 / 18 / 18,75 m



### Hybrid bus **Solaris Urbino Hybrid**

> 12 / 18 m



### Trolleybus **Solaris Trollino**

> 12 / 15 / 18 / 18,75 m



Urbino electric



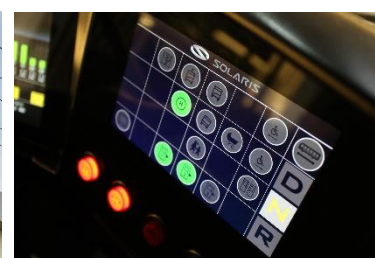
Urbino electric



Urbino electric



Urbino CNG



Urbino Hybrid



Urbino CNG



Trollino





**COMMON  
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**Trams & BRT >**

## **BRT/BHNS Solaris Urbino MetroStyle**

> 12 / 18 / 18,75 m



## **Tram Solaris Tramino**

- > Poznan (32 m)
- > Olsztyn (29 m)
- > Jena (29 m)
- > Braunschweig (36 m)
- > Leipzig (37,63 m)



Tramino Braunschweig



Tramino Braunschweig



MetroStyle



MetroStyle



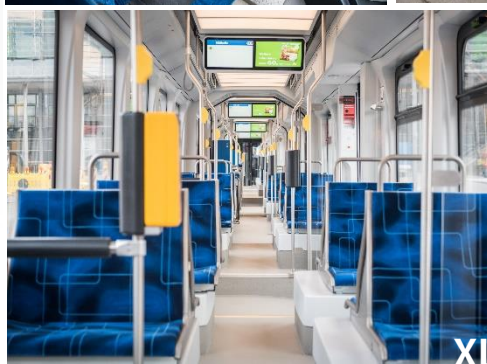
Tramino Poznan



XI



Tramino Jena



XI



Tramino Olsztyn





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**E-mobility**

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➤ The next ten years will see the electric bus market **expanding fivefold**. Now, it is growing at a compound annual **growth rate of 20%** in terms of unit sales.

Source: IDTEchEX Research of Cambridge, 2016





➤ **By mid-century, GHG emissions** from transport will need to be **at least 60% lower** than in 1990 and be firmly on the path towards **zero concerning both GHG and pollutant emissions** in order to meet the EU's emissions targets.

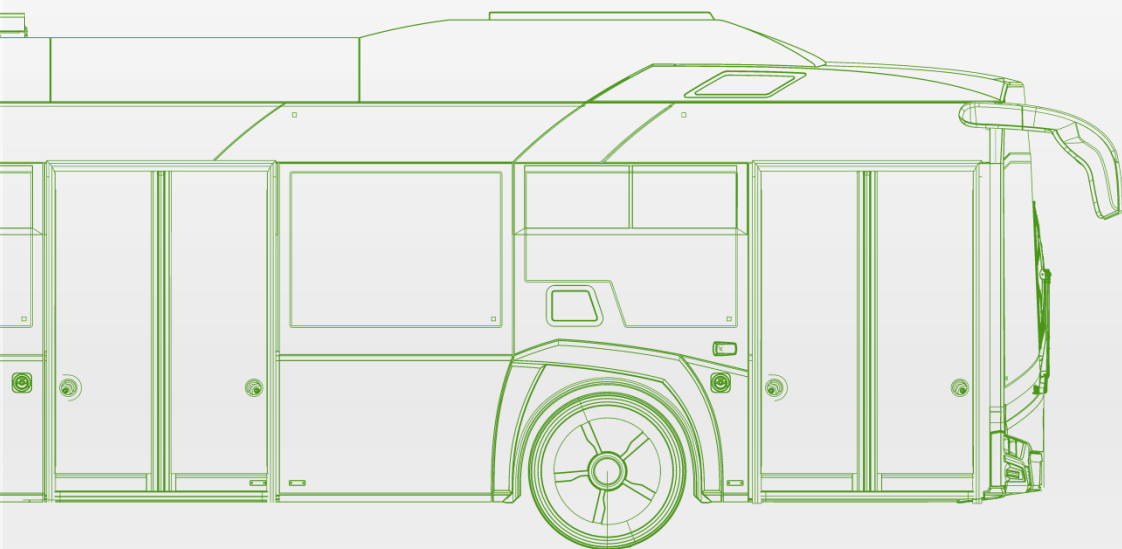
Source: A European Strategy for low-emission mobility





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**E-mobility >**



**2000** buses  
with **electric  
powertrains**  
(including buses in production)



The map shows zero-emission buses as well as trolleybuses with batteries allowing the vehicles the autonomous drive



## SOLARIS URBINO ELECTRIC a tailor made bus



- › Urbino electric 8,9 LE
- › Urbino 12 electric
- › Urbino 18 electric
- › Urbino 18,75 electric



- › electric drive axle with axle-mounted motors
- › central electric motor



- › plug-in
- › pantograph
- › induction
- › hydrogen fuel cell  
range extender



- › High Energy
- › High Power



**Charging solutions >**

**Plug-in >**



- > 16 ÷ 120 kW CCS
- > Manual operation
- > Low costs
- > Contact charging

**Pantograph >**



- > up to 600 kW
- > Automatic operation
- > Relatively low costs
- > Contact charging

**Induction >**



- > 200 kW
- > Automatic operation
- > High costs
- > Contactless charging

**Fuel cell range  
extender >**



- > Batteries are being recharged using hydrogen fuel cell range extender while driving
- > The electricity is generated by fuel cell from hydrogen



**Standardisation** of charging infrastructure will facilitate mass **deployment of electric buses** in European cities



STATE-OF-THE-ART

SAFE

RELIABLE

LOW VIBRATIONS

LOW MAINTENANCE COSTS

QUIET

ZERO-EMISSION

COMFORTABLE

CUTTING-EDGE DESIGN



**BUS**  
OF THE YEAR  
**2017**

**New Solaris Urbino 12 electric**  
Bus of the Year 2017





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CSR

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**Corporate social responsibility >**

**PATRONAGE CLASSES**

- Practical education of a profession and support of vocational education
- The programme implemented in collaboration with vocational schools in the region

**2007**



**„SAFE DRIVING  
PROGRAMME”**

- Over 1000 drivers trained
- Specially adapter test track in Bednary near Poznan

**2005**



**THE INTEGRATED MANAGEMENT SYSTEM**

- Meeting quality and environmental standards as well as legal requirements
- ISO 9001:2015
- ISO 14001:2015
- IRIS (International Railway Industry Standard)



**2003**



**2012**



**NURSERY UNDER THE GREEN DACHSHUND**

- Over 30 places dedicated to children of a company's employees
- Support for parents returning to work after paternity leave

**2012**



**GREEN DACHSHUND FOUNDATION**

- Established to support not only the most vulnerable people, but also animals

**2014**



**DUAL STUDIES**

- In cooperation with Poznan University of Technology
- Educating future engineers

**2015**



**ENVIRONMENTALLY-FRIENDLY, ORGANIC FARM**

- The promotion of healthy lifestyle
- Organic products distributed among employees







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DIRECTION >**

## Awards and honours >



**NAGRODA  
GOSPODARCZA  
PREZYDENTA RP**

**Economic Prize of the  
President** of the Republic  
of Poland in the exporter  
category



**BUS BUILDER  
OF THE YEAR**

**Solange Olszewska**  
recognized as an outstanding  
personality  
of the European  
bus industry



for the contribution  
in the development  
of zero-emission  
public transport

  
**EBUS  
AWARD  
2017**



**2017**

**2011**



**NAGRODA  
GOSPODARCZA  
PREZYDENTA RP**  
in the innovation  
category



**2014**



**Ludzie Wolności**

Solange and Krzysztof Olszewski  
honored as **"People of Freedom"**  
in a organized by "Gazeta  
Wyborcplebiscyte za" daily newspaper  
and TVN television

**2015**



**red dot award 2015**  
winner

for Tramino  
Braunschweig

**2015, 2016**



for the **design**  
of the new Urbino

**2016**



Urbino 12 electric announced  
**BUS OF THE YEAR 2017**







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THANK YOU FOR  
**YOUR ATTENTION >**

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