



TRAMS

pesa

TRAMS



1. Innovation
2. Safety
3. Flexibility
4. Environmental care
5. Handicapped friendly
6. Modularity



TRAMS



POLAND



HUNGARY



RUSSIA



ROMANIA



BULGARIA



POLAND

PESA TRAMS

VEHICLE CHARACTERISTICS



Modern design

matching the city's aesthetics

Safety

protection of passengers and crew

PESA control systems

innovative, adapted to the carrier's requirements

Customization

ability to use any sub-suppliers depending on the customer's requirements

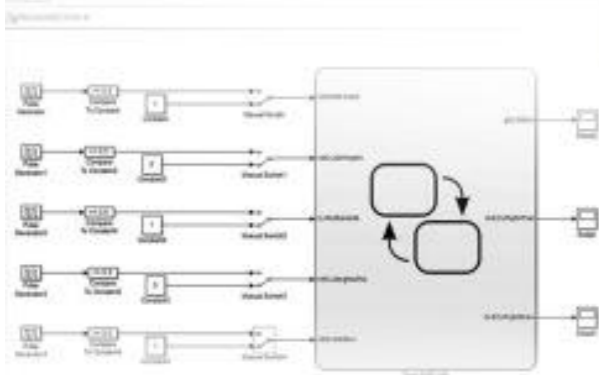
PESA information systems

P(D)S Passenger;
OA(D)S Onboard;
O(V)AS (Onboard) Voice;
CCTV Closed Circuit systems



Variety of bogies

a wide range of available cars which can be adapted to any vehicle structure



ONLINE DIAGNOSTICS

REMOTE MONITORING OF THE PARAMETERS AND STATE OF THE VEHICLE'S DEVICES, PROVIDING THE ABILITY TO TRANSMIT INFORMATION TO THE OPERATOR AND TO PESA'S MAINTENANCE SERVICE



WI-FI



BOStrab



GOST

COLLISION RESISTANCE

EN 15227 standard

Passenger and driver safety

thanks to the energy absorption zone providing protection from the effects of a collision - this reduces the excess loads acting on the vehicle and thus also on the passengers and driver inside



Absorption zone

prevents damage and deformation of the vehicle structure in case of collision



MODULAR

VEHICLES CAN BE ADAPTED TO THE CUSTOMER'S INDIVIDUAL REQUIREMENTS



FRIENDLY

ADAPTED TO THE NEEDS OF DISABLED USERS



ECOLOGICAL

ENERGY RECUPERATION, RECYCLABLE MATERIALS



GOST

THE HIGHEST POSSIBLE SAFETY STANDARDS

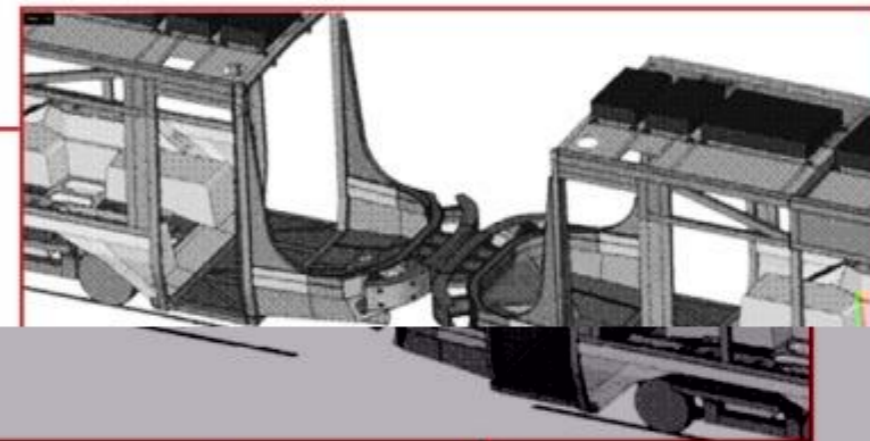
SAFETY

COLLISION RESISTANCE

EN 15227 standard

Passenger and driver safety

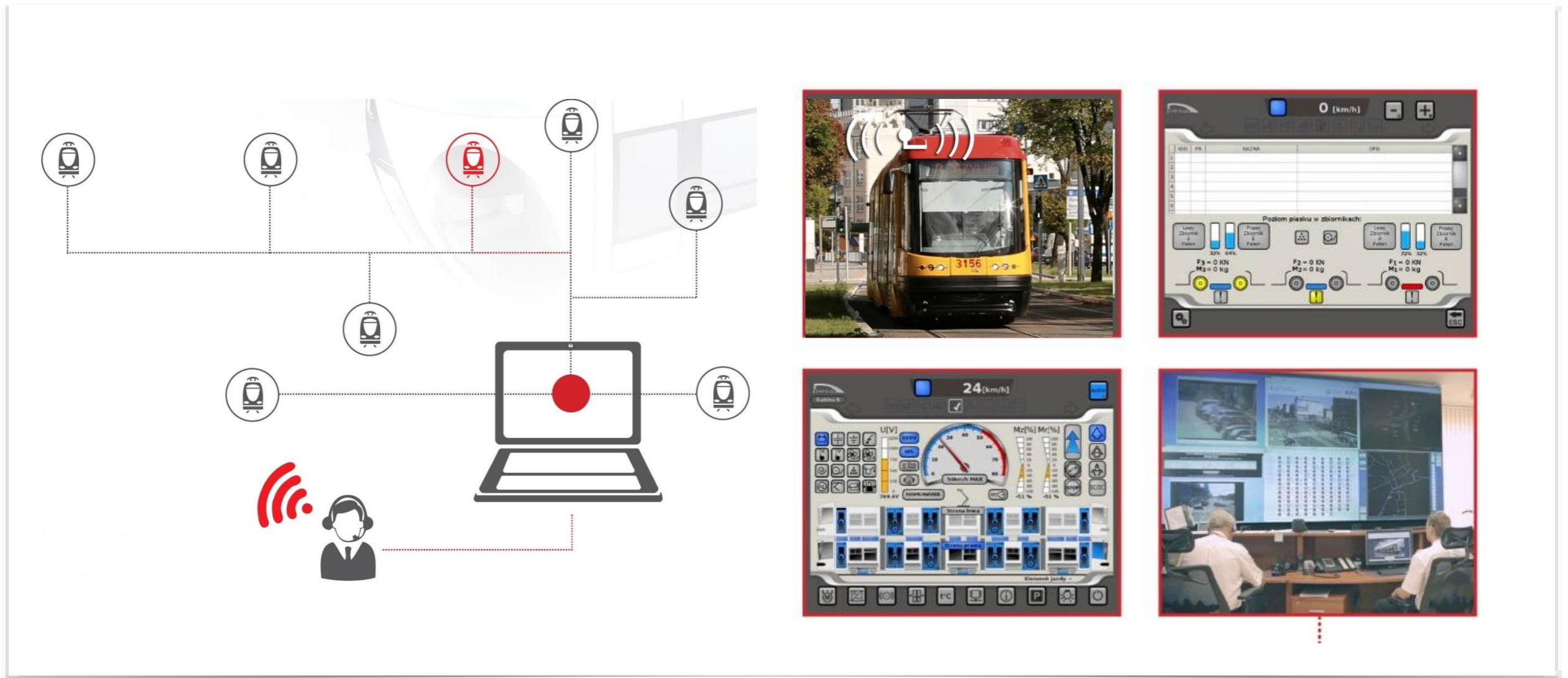
thanks to the energy absorption zone providing protection from the effects of a collision – this reduces the excess loads acting on the vehicle and thus also on the passengers and driver inside



Absorption zone

prevents damage and deformation of the vehicle structure in case of collision

ON-LINE DIAGNOSTICS



JAZZ





PIV / CIV

THE HIGHEST POSSIBLE SAFETY
STANDARDS



100% LOW FLOOR

SAFETY AND COMFORT OF TRAVEL
FOR PASSENGERS WITH
REDUCED MOBILITY



ORIGINAL DESIGN

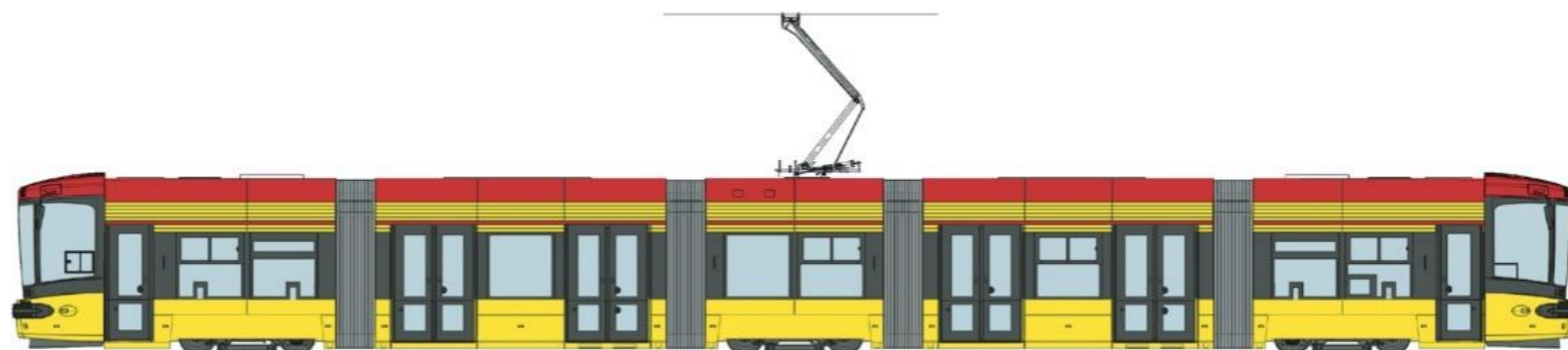
MATCHING THE CITY'S
AESTHETICS



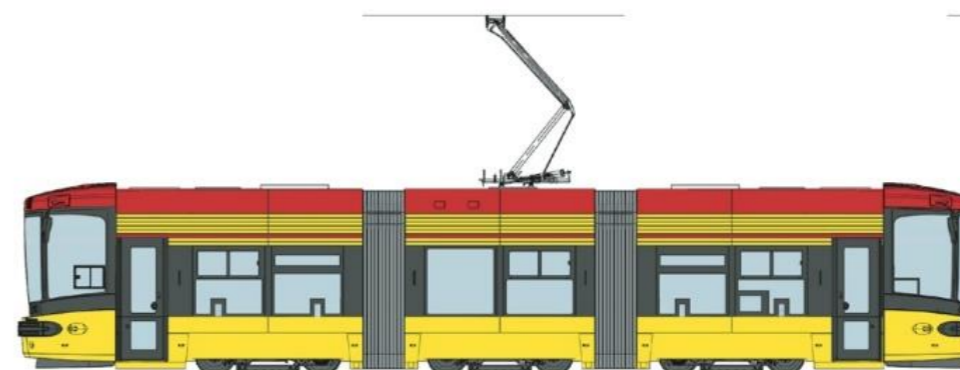
Vehicle family



7 units



5 units



3 units



Poland



TWIST





PIV / CIV

THE HIGHEST POSSIBLE SAFETY
STANDARDS



100% LOW FLOOR

SAFETY AND COMFORT OF TRAVEL
FOR PASSENGERS WITH
REDUCED MOBILITY



ORIGINAL DESIGN

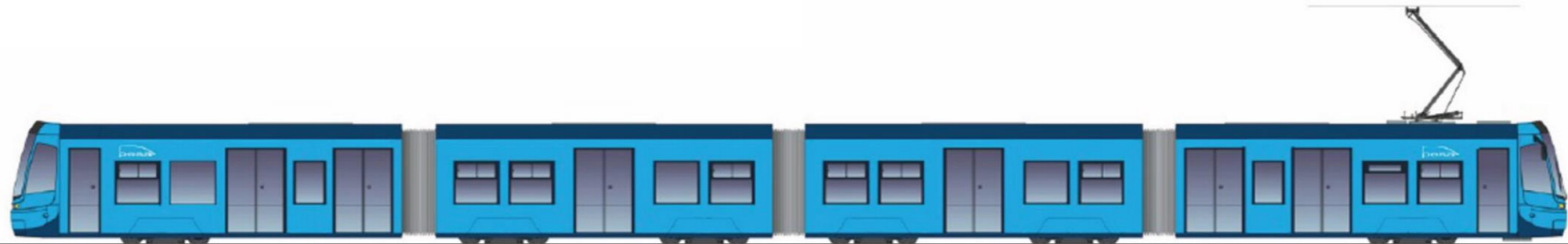
MATCHING THE CITY'S
AESTHETICS

TWIST – technical data

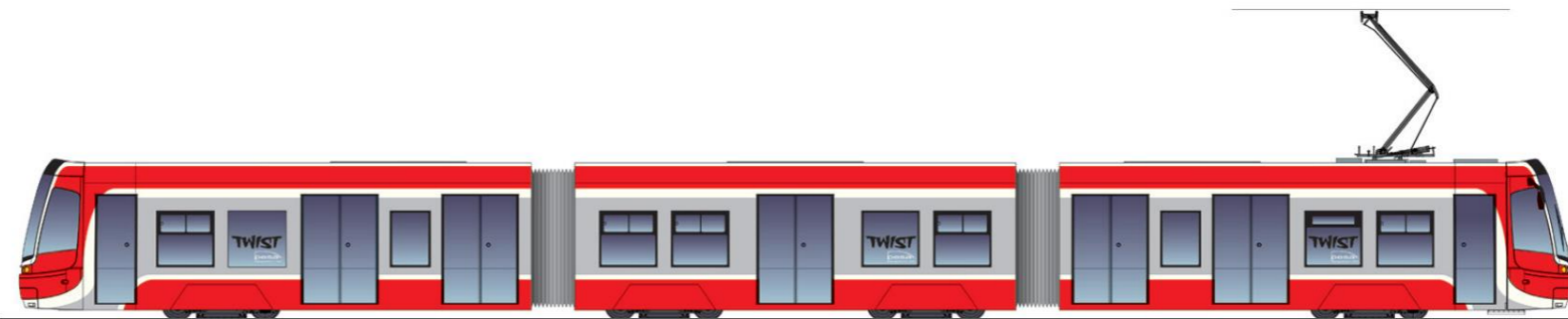
Principal technical data for the Twist tram family (2-4 units)	
Number of units	2/3/4
Length	22 700 - 42 830 mm
Width	2 300 - 2 650 mm
Height	3 500 - 3 700 mm
Number of seats	from 32 to 156
Number of standing places	from 95 to 211
Entrance height	from 300 mm
Low floor	up to 100%
Track gauge	1 000 - 1 524 mm
Maximum speed	up to 80 km/h
Voltage	600 - 750 V
Vehicle lifetime	up to 35 years
Directions	uni-/bidirectional
Wheel size new / used	600-520 mm

TWIST

Vehicle family



4 units



3 units



2 units

TWIST

Poland



fakstrot
FORWARD





GOST

THE HIGHEST POSSIBLE
SAFETY STANDARDS



100% LOW FLOOR

SAFETY AND COMFORT OF TRAVEL
FOR PASSENGERS WITH
REDUCED MOBILITY

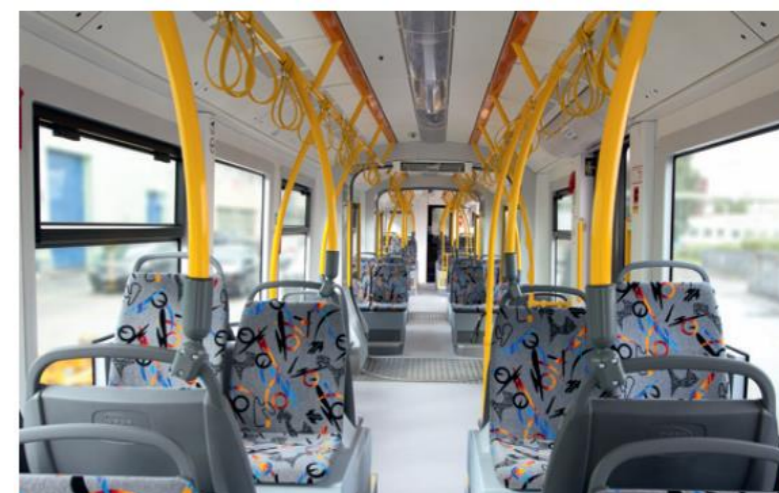


-40°C + 40°C

WIDE TEMPERATURE RANGE

FORWARD – technical data

Principal technical data for the Fokstrot FORWARD tram	
Number of units	3
Length	26 255 mm
Width	2 300 - 2 650 mm
Height	3 700 mm
Number of seats	from 56 to 80
Number of standing places	from 124 to 155
Entrance height	370 mm
Low floor	100%
Track gauge	1 000 - 1 524 mm
Maximum speed	75 km/h
Voltage	600 - 750 V
Vehicle lifetime	up to 35 years
Directions	uni-/bidirectional
Wheel size new / used	630-550 mm
Temperature range	-40 °C to +40 °C



SWING





PIV / CIV

THE HIGHEST POSSIBLE SAFETY
STANDARDS



100% LOW FLOOR

SAFETY AND COMFORT OF TRAVEL
FOR PASSENGERS WITH
REDUCED MOBILITY



ORIGINAL DESIGN

MATCHING THE CITY'S
AESTHETICS

SWING – technical data

Principal technical data for the Swing tram family (3-7 units)	
Number of units	3/5/7
Length	19 370 - 43 400 mm
Width	2.300 - 2 650 mm
Height	3 430 - 3 850 mm
Number of seats	from 18 to 70
Number of standing places	from 60 to 290
Entrance height	330-350 mm
Low floor	100%
Track gauge	900 - 1 524 mm
Maximum speed	up to 80 km/h
Voltage	600-750 V
Vehicle lifetime	up to 35 years
Directions	uni-/bidirectional
Wheel size new / used	680 mm - 600 mm

SWING

Vehicle family



7 units



5 units



3 units

SWING

Poand



SWING

Hungary



SWING

Romania



SWING

Bulgaria



Trams

Future



LRV

Future



LRV

Future





innovation

flexibility

design

pesa

Thank You

PESA Bydgoszcz SA

