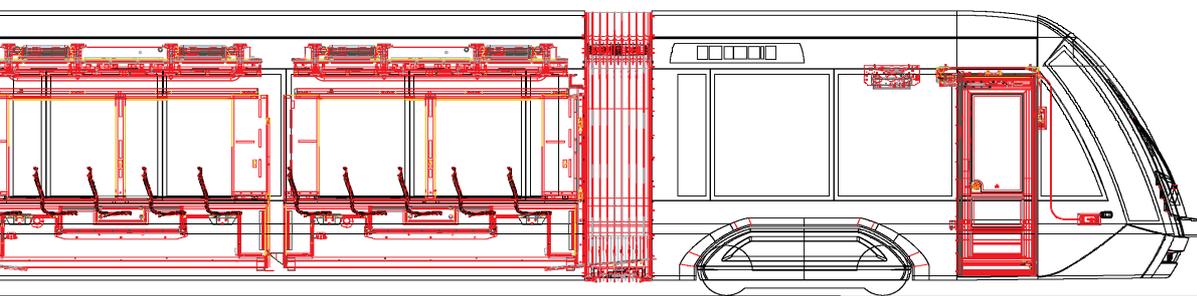




**ULTIMATE**  
Transportation Equipment

Doors  
Gangways  
Interiors



**COMPETITIVE  
BY INNOVATION**

A high-speed train is shown in a station, with a green map overlaying the scene. The map highlights a route across the region. The train is white and sleek, moving along the tracks. The station has a modern, clean design with concrete walls and a glass platform. The text "COMPETITIVE BY INNOVATION" is written in red, bold, uppercase letters, followed by a red circle containing a black 'T' symbol.

**COMPETITIVE BY  
INNOVATION** 

## CONTENT

04_05	Company
06_07	OEM & Refurbishment Doors, Gangways, Interiors
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## EDITORIAL

ULTIMATE is a benchmark for being the best possible, with a wide product portfolio, and impresses with forward thinking and market presence. That is our primary goal when developing, producing and delivering our products for the railway industry. Learning from the best to become even better and providing Ultimate solutions for doors, gangways and interiors for the benefit of our customers.

Our product range is not just limited to deliveries of system solutions; it also covers total cost considerations, including logistics planning, optimizing assembly, waste management, environmental care, etc. Since its foundation in 1979, products as well locations are constantly expanding – ULTIMATE has become a brand name in the railway market.

This industry is driven by globalisation, whereby it is always a goal to produce high quality products with a long service life in different manufacturing plants worldwide.

The global regulations, necessary certificates, qualifications and environmental influences in this industrial sector are diverse – this is what challenges and drives us.

That's why we are looking forward to constructive collaboration with our customers and partners every day.



Irwin Tsai  
*President*



# ULTIMATE

The ULTIMATE Group supplies complete solutions for doors, gangways, as well as interiors and exteriors for rail vehicles, from design to the finished product.

## SYSTEM SUPPLIER

Starting from the engineering through validation to the finished product, Ultimate operates as a full range system supplier from light rail to high speed applications. Various logistics hubs enable Ultimate to provide just in time deliveries with reusable packaging.

## INTERNATIONAL

Ultimate has set up worldwide production, service and sales

subsidiaries. Each subsidiary is specialised in localisation requests and an expert in local standards and demands, enabling it to serve international customers in the best way.

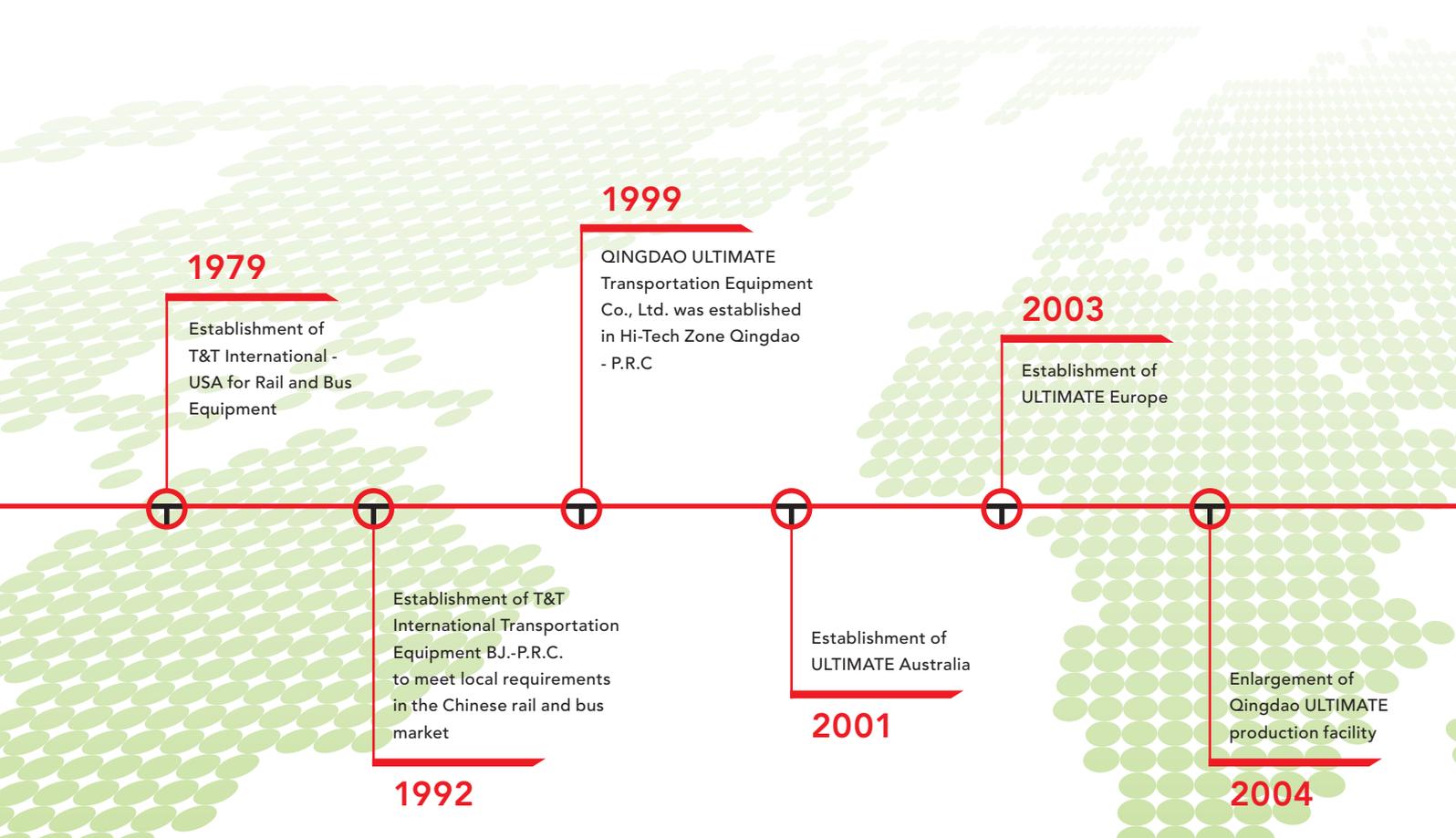
## QUALITY

Extensive tests and state-of-the-art machines secure a high quality standard of our products. Ultimate products correspond to the valid standards for components of the rail and bus industry

and are certified acc. IRIS, ISO9001, ISO14001, EN15085CL1 and DIN6701 A1.

## DEVELOPMENT

"Competitive by innovation", the slogan of Ultimate, is the daily motivation of more than 1800 employees worldwide to improve the product portfolio and increase efficiency and sustainability.





**INTERNATIONAL**



**QUALITY**



**SYSTEM SUPPLIER**



**DEVELOPMENT**

**2008**

Establishment of  
ULTIMATE  
North America

**2010**

Establishment of  
ULTIMATE Zhuzhou

**2010**

Establishment of  
ULTIMATE Beijing

**2013**

Establishment of  
ULTIMATE Romania

**2015**

Establishment of  
ULTIMATE Brazil

**2016**

Establishment of  
GUANGDONG  
Railway Tech



# DOORS, GANGWAYS, INTERIORS

From Engineering to the Finished Product...

## CUSTOMER SUPPORT

- › 24h service hotline
- › Worldwide service support, which is handled by local subsidiaries or agents
- › The local offices also take care of spare parts and after-sales activities

## LOGISTICS

- › Worldwide logistic centers
- › "Just in time" delivery directly to the customer's production line
- › Customized re-useable packing

## QUALITY CONTROL

- › Certified acc. ISO9001/ ISO14001/ IRIS / DIN6701 A1 / EN15085 CL1
- › Constantly expanding to latest national and international standards
- › 3D component measuring

## PRODUCTION

- › Internationally audited & validated
- › Automated production and assembly lines
- › In-house metal and bellow production
- › In-house GRP and mould production
- › Surface technology (coating / painting / bonding)





## SALES

- › Customized technical and commercial solutions
- › Quick and flexible tender department
- › Vast variety of references

## DEVELOPMENT

- › “Competitive by innovation”
- › Innovation and ongoing development have highest priority
- › State-of-the-art analysis and production methods
  - › Steadily increasing number of patents
- › Product optimization such as weight & life-time
  - › FEM calculations from an early project stage

## ENGINEERING

- › 3D working stations
- › In-house movement analysis software to simulate motion sequences
- › Embedded software engineering

## PRODUCT / PROJECT MANAGEMENT

- › Main contact person for the overall project
- › Project documentation and professional validation procedures
- › Safety and reliability analysis (RAMS/LCC)

## VALIDATION

- › Test methods secure continuous development and high quality products
- › In-house testing on 1:1 full size equipment (endurance tests, movement tests, water tests, ...)
- › Independent test institutes perform shock & vibration tests, noise, fire, climate and paint tests





# DOORS

ULTIMATE supplies door systems for a full range of different vehicle types: **plug sliding doors, sliding doors, drivers cab doors, interior doors, moveable steps and ramps**

## ENGINEERING

The design, function and physical characteristics such as sound insulation, fire protection and heat transfer properties are adapted to the respective customer specifications and are optimized in terms of cost.

## MATERIAL TECHNOLOGY

Ultimate has in-depth know-how in the production of **aluminium frame / full-glass door leaves, aluminium sandwich door leaves, stainless steel door leaves.**

Ultimate doors meet and are constantly adapted to all the latest relevant applicable norms and standards.

TSI conform plug sliding door with heated sliding steps



Integrated light barrier and light curtain solutions fulfil the latest EN and VDV norms



TSI conform single leaf plug sliding door with folding step

## FACTS / STANDARDS

Interoperability TSI	
Fire	EN45545
Door	EN14752
	VDV111
Software	EN50128
Safety	EN50129



Sliding door with stainless steel door panels

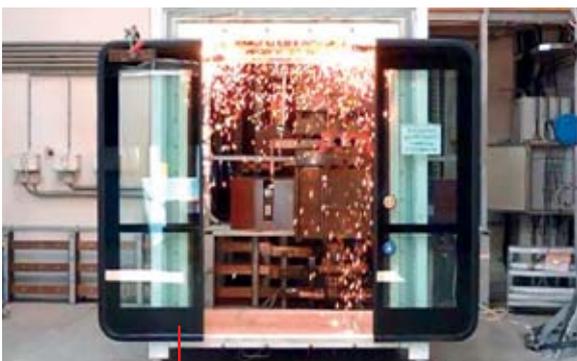


Our door control units are available with all relevant data bus interfaces and support central software upload (Ethernet)

Service and diagnostic tool facilitates the servicing and maintenance of the doors throughout their entire service life



Depending on train speed and pressure loads different locking systems are available



High-voltage test on plug sliding tram door system



# GANGWAYS

ULTIMATE offers a wide range of gangways, suitable for all types of articulated and non-articulated vehicles, which can be equipped with: **folding bellows, single corrugated bellows, double corrugated bellows, interior panelling, floor systems (bridge plate, chainbridge, rotatable floor), air ducts or cable support systems, compact upper and lower articulation systems for light rail.**

## ENGINEERING

Design, noise insulation, fire safety and thermal insulation are adjusted to the client's particular specification with a focus on best price for our clients.

## MOVEMENT INVESTIGATION

Ultimate has developed a special movement analysis software, which can evaluate and simulate all envisaged vehicle movements, already in the design phase.

This software can also be used later on our special six axis test bench to confirm all results of initial evaluations through movement and endurance testing and finally proves the product safety and product liability.



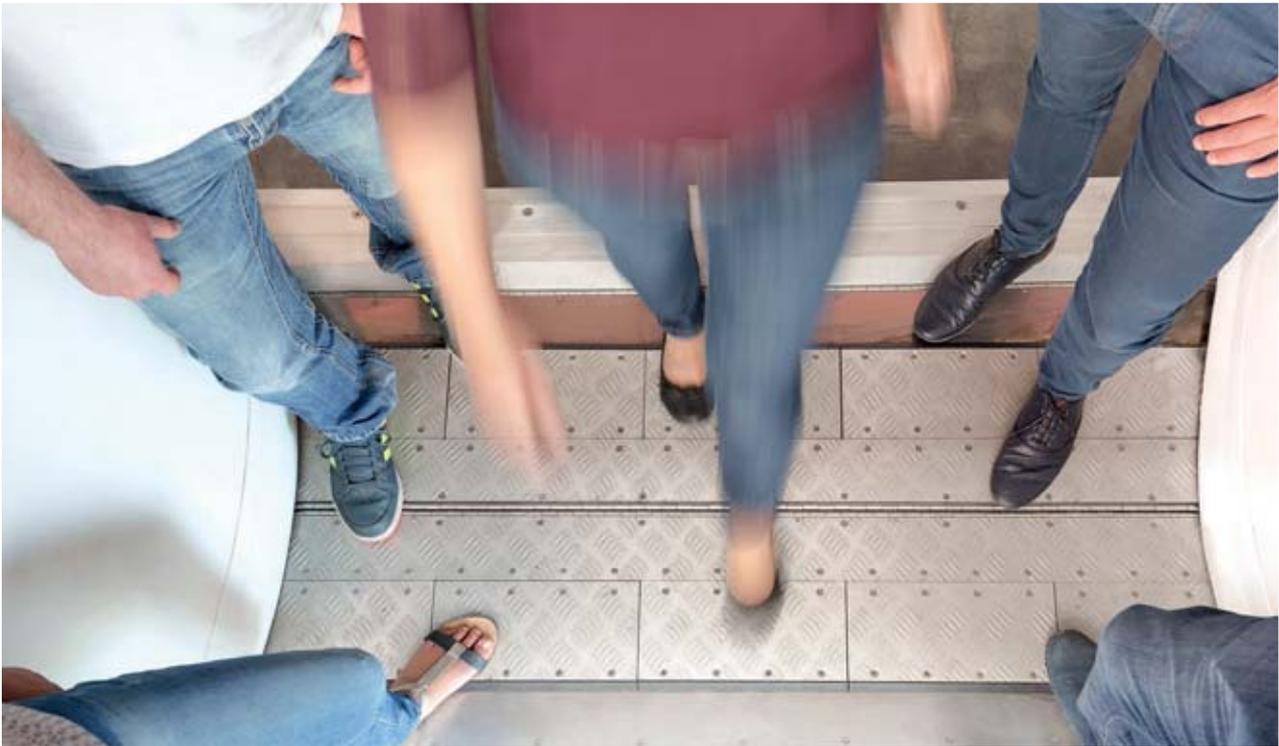
Tram gangway with articulation system



Commuter train gangway with separately latchable inner bellow for maintenance access to jumper cables

## FACTS / STANDARDS

Interoperability TSI	
Fire	EN45545 NFPA130
Gangway	EN16286
Noise	ISO140-3 EN16286



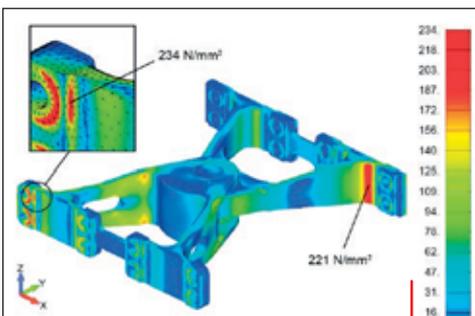
High-speed gangway with quick-latching middle frame (noise test)



Metro gangway with flexible sidewall panels



Chainbridge with patented service opening



Strength verified by FEM calculations



6-axis movement test bench for track investigation



# INTERIORS

Due to our wide spectrum of products, ULTIMATE is able to offer its clients interior solutions from engineering to the finished product for complete "Total interior".

## ENGINEERING

Based on technical specifications and carbody drawings, Ultimate offers complete engineering solutions for total interior applications. From fulfilling current standards over fast mounting concepts to flexible logistics flows, Ultimate engineers have a holistic view of the project.

## MATERIAL TECHNOLOGY

Ultimate offers considerable expertise in the manufacturing of **GRP parts, thermoplast parts and aluminium, sandwich construction, super lightweight solutions (Prepreg)**

Ultimate operates their own mould production for GRP products, which are checked by using state-of-the-art 3D measuring instruments.

Sandwich ceiling with automatic light control with LED lighting



Just in time logistic services

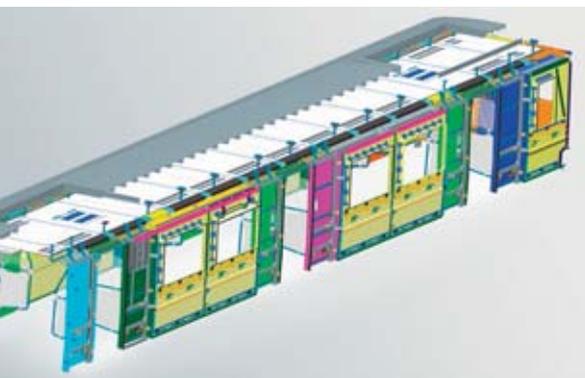
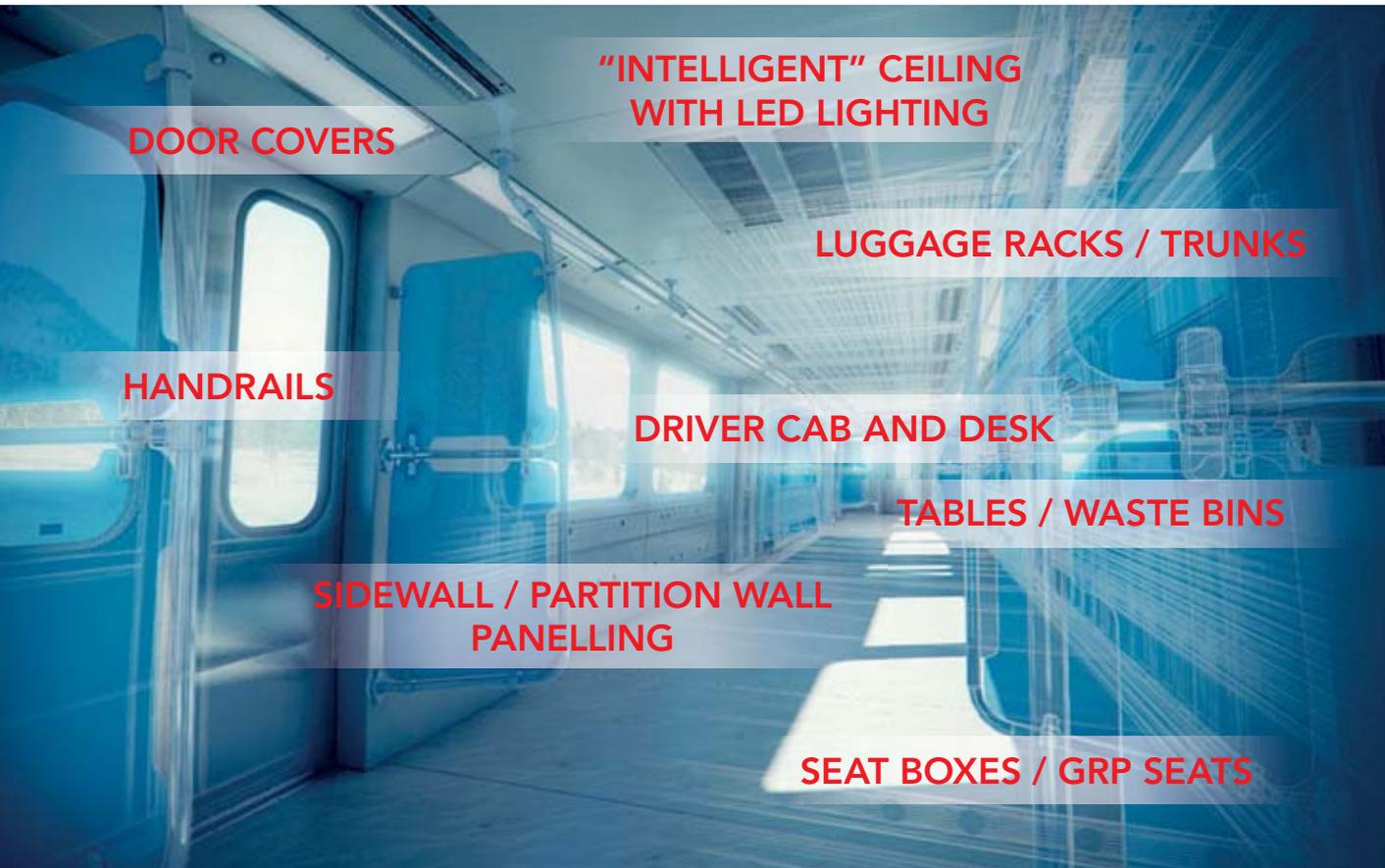
Total interior solutions with modern and lightweight materials

## FACTS / STANDARDS

Fire	EN45545 NFPA130 BS6853 NFF16-101 UNI11170-3
Lighting	EN13272
Loading	UIC566
Bonding	DIN6701
Welding	EN15085

Individual table and waste bin solutions





Aluminium & stainless steel handrails



Luggage rack and partition wall with reading lights

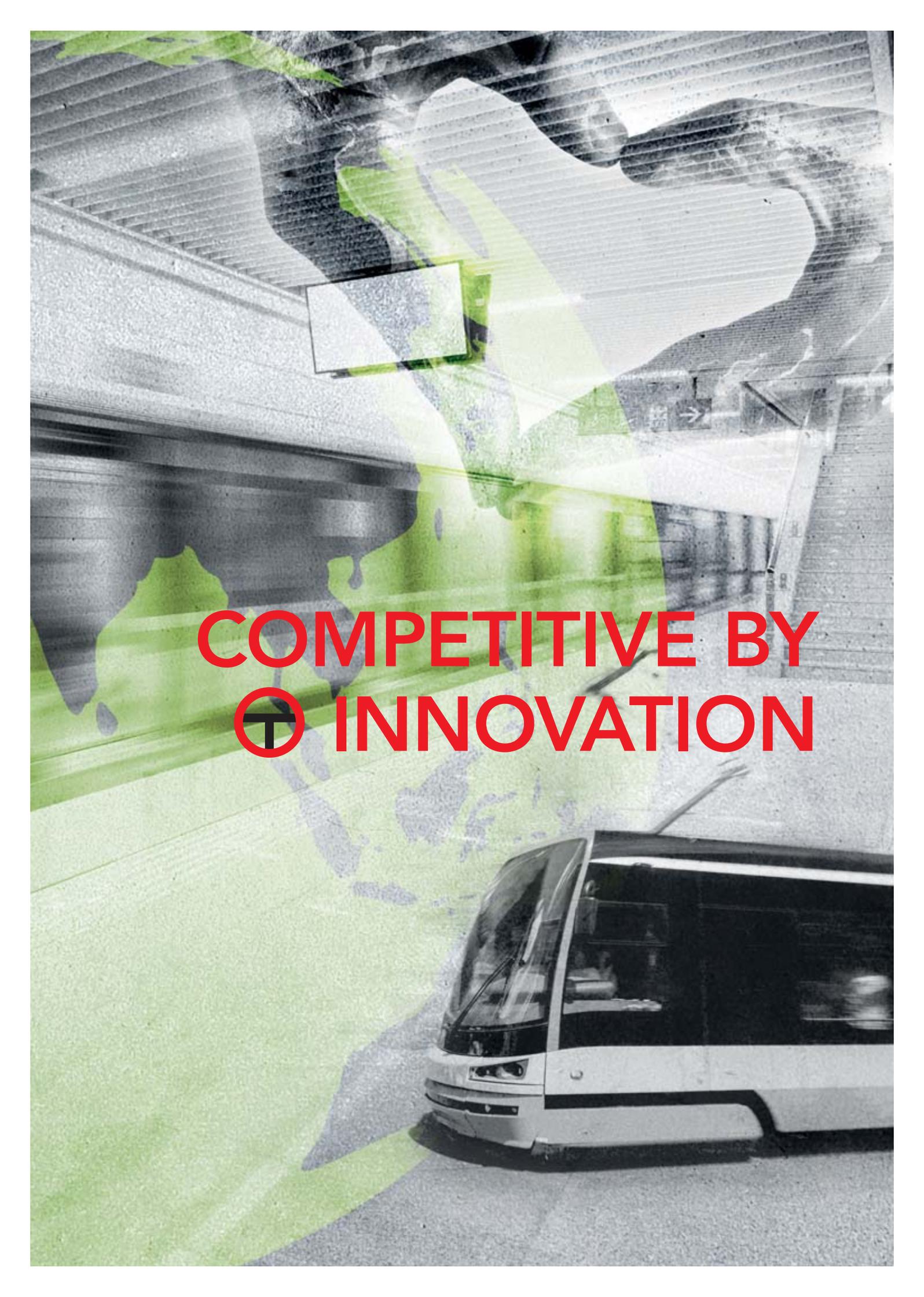


Besides the OEM (Original Equipment Manufacturer) business, ULTIMATE is your partner for refurbishments



# ULTIMATE – GLOBAL CUSTOMERS

<p><b>//</b> The growing number of worldwide public mass transport enables our children a greener future. Ultimate is contributing to this goal and therefore I am proud to be a member of the team.”</p> <p><i>Sales Manager, Ultimate Australia</i></p>				
		<p><b>//</b> The close and cooperative daily contact with our business partners all over the world is what makes work interesting and absorbing.”</p> <p><i>Project Manager, Ultimate Europe</i></p>		
<p><b>//</b> To solve creative engineering challenges and satisfy the customers’ needs is the daily motion and joy of my work.”</p> <p><i>Door engineer, Ultimate North America</i></p>				

A black and white photograph of a modern bus, possibly a trolleybus, with a large green map overlay. The map shows a city layout with a prominent road network. The bus is positioned in the lower right corner, moving towards the left. The background shows a street scene with a building and a sign. The text "COMPETITIVE BY INNOVATION" is overlaid in red, with a circular logo containing a stylized 'T' symbol.

**COMPETITIVE BY  
T INNOVATION**

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