



ADVANCING
PUBLIC
TRANSPORT

► REPORT

RAIL SUCCESS STORIES

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INTRODUCTION

Rail transport provides a safe, reliable, cheap and environmentally friendly service to travellers all around the world. It connects cities and regions sustainably, allowing users to reach their destinations within or across urban areas. The latest advances in technology through digitalisation, automation, big data, artificial intelligence, Internet of Things, and material science, constitutes a great opportunity for the rail sector to deliver more tailored approaches and efficient services to users with evolving demands. By contributing significantly to changing their lives and creating a better environment to live in, rail will become the backbone of the mobility system in cities and regions.

A lot still needs to be done to fully adapt to these new challenges, in some cases these have been accentuated and become more urgent as a result of the COVID-19 pandemic. Despite this, the purpose of the 'Rail Success Stories' report is to share positive and successful examples of rail service development in cities, metropolitan areas and regions worldwide, showcasing how it continues to contribute to the improvement of the quality of life for citizens and users and how positively it has impacted the areas, acting as a booster for the economies, the fight against climate change and the societal challenges at large.

In the success stories presented, different actors from all around the globe showcase their experiences, covering a wide range of aspects and tackling different challenges: from automation to the environment, the fight against terrorism, tourism, digitalisation of services, and much more. The initiatives provide positive examples of how the rail sector's disruptive potential can be exploited, generating added value not only for customers, but for regions and cities as well as for broader society.

All the following stories are shortened versions. To see the full stories, UITP members can access the extensive report on MyLibrary.



BACKGROUND

THE RAIL 2050 VISION

According to the European Rail Research Advisory Council's (ERRAC) 'Rail 2050 Vision' document, rail transport "already plays a vital role in supporting Europe's society, developing its economy, and protecting its environment. It has the potential to contribute much more"¹. In its document, ERRAC wanted to draw the attention on the rail sector and its contributions to economic, societal and environmental aspects, and on the challenges and opportunities the sector faces arising from societal changes and other trends. A deep analysis on the unexploited potential is made, and key enablers for delivering the Rail 2050 Vision are listed.

KEEP IT RAIL CAMPAIGN

The work on this document started as part of the activities carried out by UITP in occasion of the 'European Year of Rail'², an initiative launched by the European Commission to communicate and promote the benefits of rail all around the continent, highlighting its role as a sustainable, smart and safe means of transport.

Additionally, the publication has been launched following UITP's 'Keep it Rail'³ campaign. The campaign focused on the added value of international urban rail, including a series of activities across the world to highlight the key contribution of rail transport to citizens' everyday lives.



CATEGORIES

Each of the success stories has been categorised by theme, indicated below.



Intermodal integration



Green and sustainable transport



Service optimisation



Digitalisation and digital tools



Crisis Management



Tourism services



Response to COVID-19



Marketing and communication campaigns



Diversity and inclusion



Encouraging modal shift



Mobility as a Service



Restoring trust in public transport



Attracting talents and skills



Automated/Autonomous vehicles



Maintenance/Predictive Maintenance



Artificial Intelligence

¹ ERRAC, 2017. Rail 2050 vision: Rail – The backbone of Europe's mobility

² For more information: www.europa.eu/year-of-rail

³ For more information: www.keepitrail.uitp.org/keep-it-rail

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REGION IN FOCUS: AFRICA



TRANSFORMING PEOPLE, SPACES AND THE ECONOMY THROUGH MOBILITY - GAUTENG PROVINCE (SOUTH AFRICA)



COMPANY

Gautrain Management Agency (GMA).

CHALLENGE(S) TACKLED

- The new COVID-19 pandemic and GMA's response
- Continuing to support communities during COVID-19
- Introducing an integrated and innovative public transport system particularly integration with the minibus taxi industry
- Continuing to advocate for a shift from private car use to rail public transport usage

OBJECTIVE(S)

- To position rail as a sustainable and efficient public transport service through the quick COVID-19 response
- To create shared value by continuing to support communities
- To continuously market the Gautrain, instilling customer confidence and advocating for public transport
- To promote public transport integration by transforming the midibus taxi industry and integrating the service with the Gautrain system as an extension of mobility services
- To encourage a shift from car usage to rail public transport usage due to its many benefits of rail public transport usage such environmental, economic and sustainable benefits.

TYPE OF SERVICE

Urban intermodal rapid rail, bus and midi-bus service.

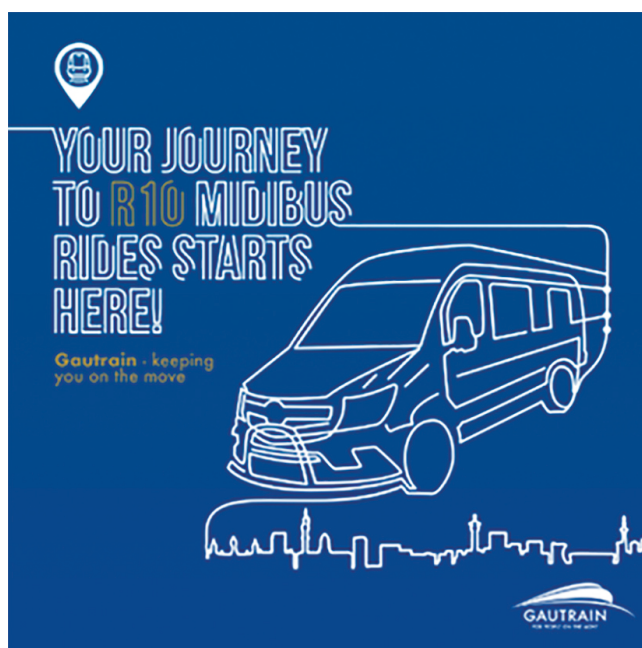
TYPE OF INITIATIVE

Own Initiative.

CAMPAIGNS AND PUBLIC ACCEPTANCE

In order to achieve its objectives, GMA has several campaigns:

- Additional cleaning and an education and information campaign as well as cashless payments are part of the campaign that has positioned rail as an efficient and safe mode of travel.
- The Social Investment Project has continued to support non-profit organisations, distributing one million rand (€61,809.50) amongst several organisations to support as many people as possible. Most of the funding went to sanitisers and PPE, but other uses include food parcels for communities and contributions to internet costs for students unable to travel to university facilities.
- GMA launched a Student Discounted Programme with a targeted advertising campaign to market public transport to attract students to the service.
- As part of their commitment to Knowledge Management Thought Leadership and Dialogue, GMA has continued to promote public transport via knowledge sharing sessions, seminars and podcasts.
- Promoting transport integration, GMA in consultation with the Bombela Concession have developed a plan to integrate the Gautrain system with Midibus Taxi industry as an extension of the Gautrain service and an opportunity to shift more people from private vehicles.



► Midibus service Promotion

TIMELINE

2020 - Present. The Midibus was launched in 2011.

FINANCING

Financed by Gautrain Management Agency.

SUCCESS

- **COVID-19:** The Gautrain was the only passenger rail and supporting bus service operating during the strict COVID lockdowns, providing commuters with a completely safe transport service that was fully compliant to all regulations. The Gautrain assisted and moved essential services and healthcare workers during periods of lockdown and curfews. The GMA COVID Relief Fund went a long way in supporting several beneficiaries and communities.
- **Local Economy:** The Gautrain also continued to add enormous value to Gauteng's economy it has spent just under a billion Rand (€61,892,170) on local South African materials, maintaining jobs in critical supply chains and industries.
- **Promoting public transport:** The Gautrain student project is a successful campaign and is part of GMA's post-COVID-19 plans. Since the project launch on 1 March 2021, just over 4,000 students have registered for the product.
- **Increasing Mobility:** The success of the project midibus taxi industry integration project can be seen in the transformation of the industry and partnership which enabled the taxi industry to harness business and operational skills within a legislative environment. Several sustainable jobs have been created through this partnership including the employment of women. The GMA is currently enhancing the payment method through the pilot test of electronic payment solution which will further improve the commuter experience.



▶ Advert for Student Discount Programme

REGION IN FOCUS: ASIA-PACIFIC



GREEN AND HEALTHY TRAVEL BEIJING (CHINA)



COMPANY

Beijing MTR Corporation Limited. (BJMTR).

CHALLENGE(S) TACKLED

- High Average Traffic Index
- Healthy Commuting
- Promotion of Green travel alternatives

OBJECTIVE(S)

- To implement the Government development plan to increase the proportion of green travel and healthy travel in China
- To enrich and improve a passenger's travel experience
- To advocate for a green and healthy lifestyle

TYPE OF SERVICE

Urban rail transport.

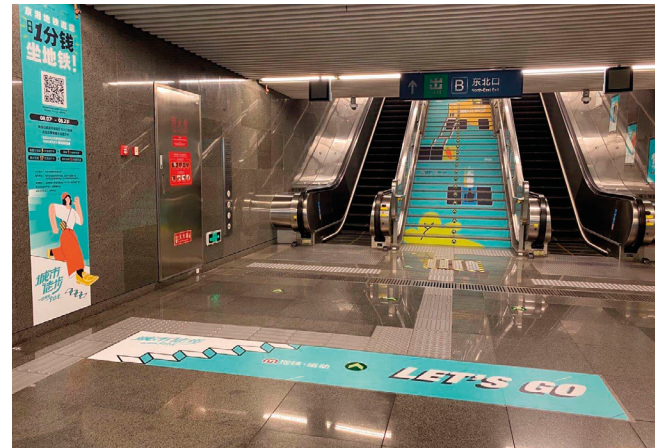
TYPE OF INITIATIVE

Own Project.

CAMPAIGNS AND PUBLIC ACCEPTANCE

Promotions and initiatives were launched to both inform and involve passengers. Social media especially played a major role in ensuring participation by passengers. BJMTR has launched several initiatives such as “M-Sports”,

“Climb stairs and enjoy health”, “Let’s walk and talk”, “The last kilometre of commuting”, “City walking” and “Stairway climbing check-in” and “Walking the last kilometre” to promote green and active transport.



TIMELINE

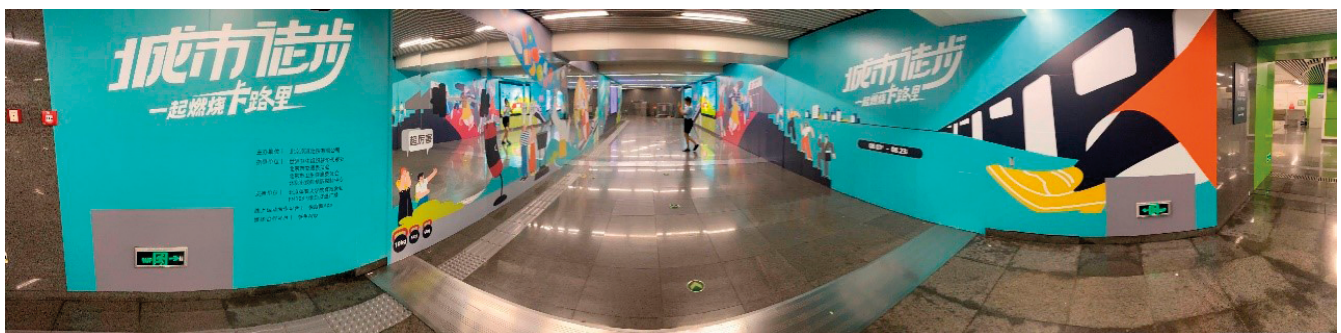
2016 – Present.

FINANCING

Self-funded.

SUCCESS

The campaigns have received great online interest and participation from the public and passengers. Online participation in one of the campaigns exceeded 220,000, an online short video challenge received more than 25.5 million views with about 3.1 million viewers watching the live streaming of the launch of the campaign.



► “City walking” themed passage at Chaoyang Park Station

RELIEVING THE PRESSURE OF LARGE PASSENGER FLOWS BEIJING (CHINA)



COMPANY

Beijing MTR Corporation Limited. (BJMTR).

CHALLENGE(S) TACKLED

- Large Passenger flows
- Through running of two separate lines (Line 4 and the Daxing Line)

OBJECTIVE(S)

- To optimise transport integration
- To contribute to the sustainable development of the city
- To relieve the pressure of large passenger flows
- To lower loading rates
- To improve the passenger travel experience

TYPE OF SERVICE

Urban rail transport.

TYPE OF INITIATIVE

Own Project.

TIMELINE

2009 – Present.

FINANCING

Self-funded.

CAMPAIGNS AND PUBLIC ACCEPTANCE

Passengers were well informed from the beginning of the project using various media channels including social media such as Weibo and WeChat, as well as more traditional methods such as station announcements. Passenger representatives and the customer service hotline collected feedback from passengers to help with the project. The improved passenger experience won extensive support from the public and the media.

SUCCESS

Line 4 started its Automatic Train Operation in 2009 and following this the Daxing Line was successfully integrated with Line 4 allowing for through running without a single day of disruption. In 2011, BJL4 realised the shortest headway of 1'43" from south to north during morning peak hours on weekdays. Given the passenger flow, the alignment of railway lines, and the technical standards of signalling system at that time, it has nearly reached the technical limit of train headways. In 2021, BJMTR innovatively adopted a composite full-length and short- turn routing mode which further improved the overall capacity of BJL4-DXL. Timetabling changes as well as operational changes allow for the optimisation of running across the line increasing passenger capacity and overall passengers carried.



► Before and after the new timetable at Xihongmen Station

ALL-IN-ONE LIFESTYLE MTR MOBILE – HONG KONG (S.A.R OF CHINA)



COMPANY

MTR Corporation Limited.

CHALLENGE(S) TACKLED

- Increasing passenger riding and shopping experience
- Several applications were required to have a full experience

OBJECTIVE(S)

- To produce a new All-in-one application
- To provide more personalised journey information using data analysis
- To enhance convenience for customer

TYPE OF SERVICE

Urban Network Metros.

TYPE OF INITIATIVE

Own Initiative.

CAMPAIGNS AND PUBLIC ACCEPTANCE

- Public Engagement:
 - Promotion via social media
 - Involvement of the media via Press Release and Conference.
 - Publication of station leaflets for distribution and download via website
- Public acceptance:
 - High participation in MTR points scheme
 - More frequent usage of functions in MTR Mobile, particularly “next train” and “trip planner” functions.
 - Over 625,000 registered users as of May 2021

TIMELINE

2010 – Present.

FINANCING

Self-funded.

SUCCESS

- Showed commitment to continuously improving customer-oriented services
- Passengers now have an all-in-one app for greater convenience for the customer
- Data analysis can be used to prepare for future uncertainties and challenges



► The interface of the mobile app

MOBILE QR PAYMENT – HONG KONG (S.A.R OF CHINA)



COMPANY

MTR Corporation Limited.

CHALLENGE(S) TACKLED

Improving and increasing fare-payment options using the latest technologies.

OBJECTIVE(S)

- To develop a mobile payment method in line with the company's digital transformation
- To provide a convenient, secure and seamless payment option and a new smart mobility experience for travellers

TYPE OF SERVICE

Urban Network Metros.

TYPE OF INITIATIVE

Joint initiative with AlipayHK (an e-payment service provider).

CAMPAIGNS AND PUBLIC ACCEPTANCE

Public Engagement:

1. Promotion via social media (Facebook & Instagram)
2. Media conference and Joint Press Release with AlipayHK
3. Publication and posting of signs, notices and leaflets.

Passengers reacted positively as they had another option to pay for travel. Passengers using a QR code for payment also enjoyed a 20% rebate for every trip until 31 March 2021. Those using the MTR Mobile application for travel can earn MTR points for redeeming rewards, while AlipayHK users can earn e-stamps which can be used widely in Hong Kong.

TIMELINE

2018 – 2021 (AlipayHK), 2022 (Union Pay & WeChat Pay), 2023 (Credit cards).

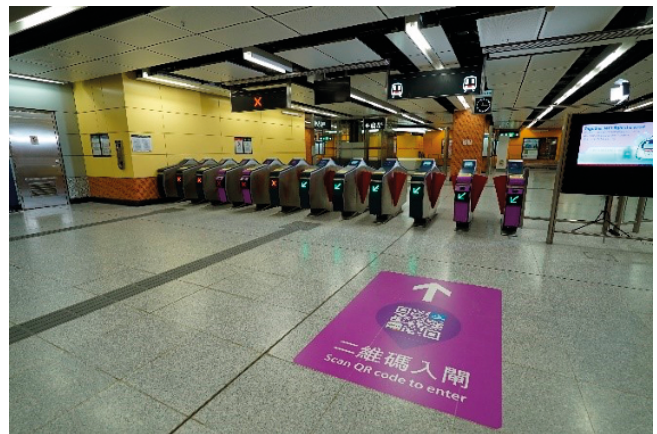
FINANCING

Design-Build-Finance-Operate Partnership with AlipayHK – with a 12-month exclusivity agreement for QR code payments.

SUCCESS

Introduction of the option to pay by QR Code has diversified payment options and is a milestone in the company's digital transformation paving the way to change passenger behaviours.

During the COVID pandemic the option to pay by QR code has been very well received.



► QR Code payment gates and scanner

SETTING UP A WAR ROOM IN THE CONTROL CENTRE – HONG KONG (S.A.R OF CHINA)



COMPANY

MTR Corporation Limited.

CHALLENGE(S) TACKLED

Renewal and modification of the incident control room in the Operations Control Centre to a fit-for-purpose War Room for crisis management and better incident response and decision making.

OBJECTIVE(S)

- To create a new War Room serving as a central command centre in the event of a crisis or of major incidents and allow for discussions of response strategies with stakeholders, such as Government officials, as well as the dissemination of relevant decisions/plans to internal parties during large-scale incidents.
- To create a monitoring centre to oversee the introduction of services on new railway lines.

TYPE OF SERVICE

Local, intercity and international railway services. MTR is also involved in business activities such as property development, advertising, telecoms, etc

TYPE OF INITIATIVE

Own initiative.

CAMPAIGNS AND PUBLIC ACCEPTANCE

As this project related to internal facilities there was no major campaign to involve passengers. The impact following its opening can however be noted by the successful opening of new rail lines and better service to passengers particularly during a crisis or following an incident.

TIMELINE

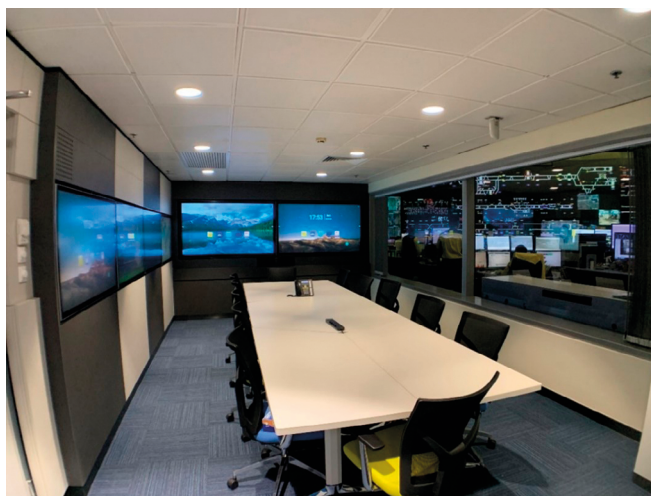
2019 - 2020.

FINANCING

Self-financed.

SUCCESS

The War Room was successfully used to introduce passenger services on the new Tuen Ma Line which has 27 stations over 56km. With real-time information and state of the art conference technologies, discussions with stakeholders are performed instantly and with ease.



► Before and after: The war room

ESG MANAGEMENT – TOKYO (JAPAN)



COMPANY

East Japan Railway Company (JR East).

CHALLENGE(S) TACKLED

Environmental and social issues, specifically climate change, energy conservation and diversity.

OBJECTIVE(S)

- To address social issues through JR EAST's business
- To commit to the sustainable development and growth of communities as well as of JR EAST's business

TYPE OF SERVICE

Regional/Urban.

TYPE OF INITIATIVE

Corporate initiative.

CAMPAIGNS AND PUBLIC ACCEPTANCE

These projects have been communicated to the public through the company website and the 'JR East INTEGRATED REPORT 2020'.

TIMELINE

From corporate establishment (1987) to present.

FINANCING

Corporate funding.

SUCCESS

Development of "ecoste" (eco-friendly stations)

JR East introduced energy-saving upgrades, renewable energy, and other environmentally friendly technologies at target stations. Twelve stations completed their target as "ecoste" model stations within FY2020. To highlight the huge advantages of rail travel from the environmental point of view and to make it the preferred transportation mode in the future, JR EAST has undertaken the challenge of achieving net-zero CO₂ emissions in rail operations by FY2051.

Promoting involvement of women in the workforce

As a result of various measures taken since corporate establishment to promote gender equality and to widen opportunities available to women, all positions now include female personnel including in higher-tier positions.

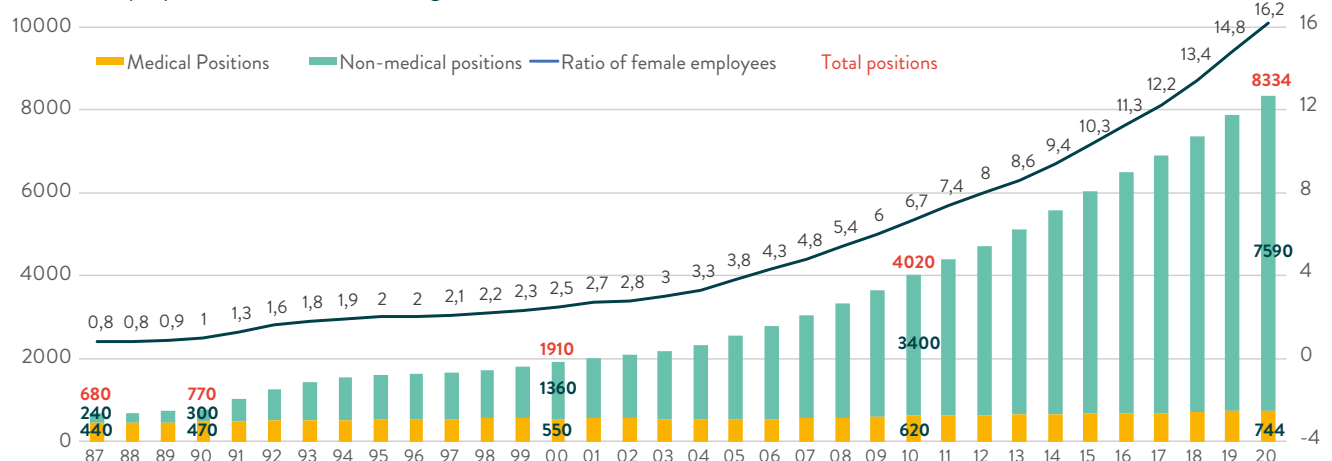
Initiatives to promote "diversity management"

JR EAST promotes "diversity management" to create a company group where diverse employees can leverage their full strength and now all employees wear a similar trousers-style uniform. This uniform renewal is one of the initiatives to promote awareness of LGBT employees.



▶ Development of "ecoste"

Female employees since JR's founding



TECHNICAL INNOVATIONS, PUBLIC HEALTH CONSIDERATIONS IN PASSENGER CABINS – TOKYO (JAPAN)



COMPANY

East Japan Railway Company (JR East).

CHALLENGE(S) TACKLED

Technical innovations and public health considerations in passenger cabins.

OBJECTIVE(S)

- To develop environmentally friendly railcars and high-speed rail transport.
- To reinforce hygienic standards for passenger cabins

TYPE OF SERVICE

Regional/Urban.

TYPE OF INITIATIVE

Corporate initiative.

CAMPAIGNS AND PUBLIC ACCEPTANCE

Initiatives introduced through press releases, media coverage, etc. Following introduction of technical innovations, JR EAST continuously collects feedback from customers.

TIMELINE

From corporate establishment (1987) to present.

FINANCING

Implemented by internal budget.

SUCCESS

Efforts in reducing environmental impact

The company is committed to the practice of ESG (environmental social governance) management. In this context, JR EAST is taking on technological challenges aimed at further reducing the environmental impact of rolling stock, which is already known as an environmentally friendly mode of transport. The company developed the world's first hybrid railcar in 2003, in operation by 2007; also introduced Japan's first battery-powered train in 2014. For the future, JR EAST is developing a

hybrid vehicle to use fuel cells, that is expected to extend operation distances through high-pressure hydrogen (such as 70 MPa) as a world first.



"NE-Train (New Energy Train)," the world's first hybrid train, developed in 2003.



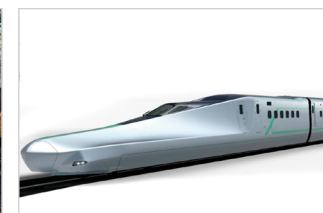
"HYBARI (Hydrogen-Hybrid Advanced Rail vehicle for Innovation)" was tested as a hybrid (fuel cell) test train. Scheduled to debut in 2022.

Safer, speedier

The high-speed rail "Shinkansen" has not seen a single fatality or injury in commercial operations since its inauguration in 1964. Even during the M9.0 Great East Japan Earthquake in 2011, no commercial trains were derailed, and no passengers were injured. In 2020, JR EAST completed a Shinkansen test train which will run at higher speeds with higher standards of safety as well. Advances in "intangible factors" such as noise reduction and riding comfort have been implemented on the new train.



Series E5 Shinkansen operating at Japan's maximum rail speed 320km/h.



"ALFA-X" (Advanced Labs for Front-line Activity in rail eXperimentation): Test train shooting for 360km/h at commercial operation speed.

Facing the pandemic

The COVID-19 pandemic has dealt a major blow to the public's perception of safety in mass transportation. JR EAST has been providing frequent cleaning and constant ventilation for hygienically safe trains. The commuter trains are known around the world for their high congestion, but the service have continued to operate throughout the pandemic with no cluster outbreaks. JR EAST keeps track of passenger volume utilizing big data and works to adjust to the declining demand in rail transport providing real-time congestion information for stations and trains, as well as awarding points for off-peak commuters or frequent riders. At the same time, the company is looking into the potential of its railcars for new types of business, such as using Shinkansen for small-scale freight transport or a co-working space environment.

TECHNOLOGICAL INNOVATIONS - TOKYO (JAPAN)



COMPANY

East Japan Railway Company (JR East).

CHALLENGE(S) TACKLED

Digitalisation through transportation IC cards, Suica, MaaS applications and technological innovations.

OBJECTIVE(S)

To promote digitalisation for customer satisfaction and business revolution.

TYPE OF SERVICE

Regional/Urban.

TYPE OF INITIATIVE

Corporate initiative.

CAMPAIGNS AND PUBLIC ACCEPTANCE

These projects have been communicated to the public through the official JR EAST website and the 'JR East INTEGRATED REPORT 2020'.

TIMELINE

- IT and Suica business: Since 2001
- Promoting MaaS: Since 2014
- Technical innovations: Since 2016

FINANCING

Corporate Funding.

SUCCESS

IT and Suica business

Since 2001, JR EAST have started IT Suica business. Suica is a prepaid e-money card. The number of Suica cards issued is more than 80 million and the transactions are completed in 0.2 seconds. Suica can be used as e-money and its utilisation has been promoted to encourage the transition towards a cashless society. In 2006, the Mobile Suica app was released and since 2016 customers can use Suica in Apple Pay for simplifying the customer experience. JR EAST keeps working on improving the service (in particular making it more and more easy to use) in order to increase the

utilisation of Suica. At the moment, Suica can be used at around 5,000 stations including those available through reciprocal service arrangements with other companies.

Promoting MaaS

JR EAST aims to develop an all in one "Mobility Linkage Platform" that offers travel information such as ticketing and payment service for seamless mobility, shortening total trip time and ensuring a comfortable travel. JR EAST is working on MaaS in both urban and rural areas. In urban areas, JR EAST App was released in 2014, and it was renewed in 2019, when new functionalities have been added. At the moment, JR EAST App provides route navigation and train operation information services. Ringo Pass App integrates transactions for various mobility services.

In rural areas, the company conducted MaaS trials in sightseeing destinations in order to provide seamless travel experience for tourists since 2019. Currently, JR EAST provides "Tohoku MaaS" in North wide area in Japan as a final trial. Based on these trials, the company will define the use cases.

Technical innovations

JR EAST group's medium- and long-term vision for technical innovation, as formulated in 2016, is to accelerate research and development activities in order to create new AI-based value from data gathered through business activities. For example, the Mobility Innovation Consortium was formed in 2017. As part of these activities, at Takanawa Gateway Station, which opened in 2020 in Tokyo metropolitan area, robots provide navigation using AI, autonomous mobile security and cleaning services have been implemented on a trial basis. Other innovative initiatives include CBM (Condition based maintenance), autonomous driving and new monitoring system and so on. Particularly in CBM, JR EAST is working on maintenance transformation by using multiple sensors and AI technology.



▶ Robots providing navigation, mobile security and cleaning services

REGION IN FOCUS: EUROPE



EVACTUNNEL: SECURITY TRAINING BRUSSELS (BELGIUM)



COMPANY

STIB/MIVB Société des Transports Intercommunaux Bruxellois - Maatschappij voor het Intercommunaal Vervoer te Brussel.

CHALLENGE(S) TACKLED

Following a terrorist attack on the metro system in 2016, several tram drivers contacted the training centre for more instructions on what to do in a similar event.

There are no tunnels without traffic to allow for training.

OBJECTIVE(S)

- To increase the practical knowledge of drivers in case of evacuation
- To increase the safety of customers
- To improve service to customers

TYPE OF SERVICE

Urban.

TYPE OF INITIATIVE

Internal project .

CAMPAIGNS AND PUBLIC ACCEPTANCE

A mock-up of a tunnel was created in a maritime container to simulate an evacuation in tunnel to be used for training purposes. Emergency services such as the fire brigade



were also able to train in the Evactunnel. This project received a very positive response from the media and trained drivers on what to do in case of an emergency.

TIMELINE

2017

FINANCING

Self-funded: €1,450

SUCCESS

- All tram drivers (approx. 1,450) have been trained in the Evactunnel, metro drivers are now being trained
- A lot of positive press attention was received
- Other Belgian transport companies have copied the initiative
- Other than the container all other materials were recovered/recycled



► The Evactunnel exterior

TRAM EXPERIENCE – BRUSSELS (BELGIUM)



COMPANY

STIB/MIVB Société des Transports Intercommunaux Bruxellois - Maatschappij voor het Intercommunaal Vervoer te Brussel in collaboration with VisitBrussels.

CHALLENGE(S) TACKLED

In 2012 during Brusselicious, a yearlong campaign about gastronomy in Brussels, visit.brussels (the Tourist Office of the Brussels Capital Region and its municipalities) asked STIB/MIVB to collaborate on a tram restaurant that would travel around the city.

OBJECTIVE(S)

To participate in the development of Brussels by offering a unique, tourist and gastronomic experience.

TYPE OF SERVICE

Tourism / Urban.

TYPE OF INITIATIVE

Partnership between STIB/MIVB and visit.brussels.

CAMPAIGNS AND PUBLIC ACCEPTANCE

The Tram Experience has been a great success for almost 10 years and requires booking several weeks in advance. The tram was completely renovated in 2019 but was temporarily paused due to COVID-19.

TIMELINE

2012 – Present.

FINANCING

Funded by visit.brussels and in a partnership with Electrolux/AEG.

SUCCESS

- More than 70,000 visitors since its inception!
- In 2018 alone:
 - 256 outings for the general public
 - 44 corporate outings (tailor-made privatisations)
 - More than 8,700 people on board
 - A dozen media campaigns in three languages, national & regional
 - More than 2,500,000 views on social networks
- 670,000 visits to the website



► The Tram Experience vehicle and interior



OCCUPANCY MONITORING WITH HECTOR PARIS/ÎLE-DE-FRANCE (FRANCE)



COMPANY

SNCF (Société Nationale des Chemins de fer Français)
Transilien.

CHALLENGE(S) TACKLED

Occupancy limits of vehicles during COVID and trying to encourage passengers to reschedule their trip.

OBJECTIVE(S)

- To create a digital service to display occupancy in real-time allowing passengers to change their position on the platform.
- To provide a new and long-awaited service
- To encourage occupancy redistribution in vehicles
- To increase performance by facilitating boarding and alighting

TYPE OF SERVICE

Urban.

TYPE OF INITIATIVE

Cooperation between SNCF Transilien and Île de France Mobilité.

CAMPAIGNS AND PUBLIC ACCEPTANCE

- A large emailing campaign to around 50,000 clients
- Social networks including Twitter and LinkedIn
- SNCF-related media including Transilien.com as well as the blog of the line H

TIMELINE

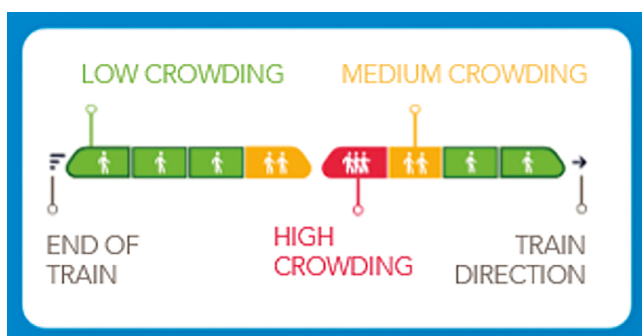
2020-Present.

FINANCING

Self-Funded (Line H and Transilien Laboratory of Innovation).

SUCCESS

The webservice was very successful with over more than 3,000 connections made on the webservice. With regard to user satisfaction, HECTOR was given at least 3 out of 5 stars 70% of the time. Due to COVID (lock-downs and restrictions) it was not possible to fully evaluate the impact of information on passenger platform position however 71% of participants in a survey found the information to be “useful” or “very useful”.



➤ Example of occupancy display



➤ HECTOR displayed on an outdoor screen installed at platform entrance of one of the major stations of line H

NUDGING SHIELDING MEASURES AGAINST COVID-19 PARIS/ÎLE-DE-FRANCE (FRANCE)



COMPANY

SNCF (Société Nationale des Chemins de fer Français)
Transilien.

CHALLENGE(S) TACKLED

Encouraging more passengers to follow COVID safety advice as traditional methods were not always the most effective.

OBJECTIVE(S)

- To increase the number of passengers following COVID safety measures using new methods based on behavioural science

TYPE OF SERVICE

Regional/Urban.

TYPE OF INITIATIVE

Own initiative.

TIMELINE

2020-present.



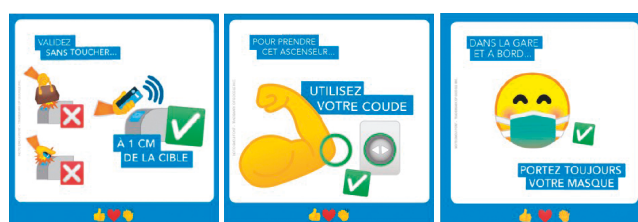
© Ekaterina Pokrovsky

FINANCING

Transilien.

CAMPAIGNS AND PUBLIC ACCEPTANCE

- Nudging – by using new audio announcements and more attractive signage
- Large number of visuals placed across the network showing simple recommendations, using emoticons and common symbols.
- Increasing audio announcements using different sounds (different voice actors, coughing sounds, humour) to attract the attention of passengers.
- Ground marking at platforms to indicate safe distances



► Examples of emoticons used in the network

SUCCESS

A survey found that:

- 61% of customers remember the stickers
- 92% of respondents say that they appreciate the fact that Transilien has used emoticons to communicate; 57% of them “absolutely appreciate”
- 87-90% agree that the stickers are easy to understand, cool, and transfer their message quickly
- 90% of respondents say they want SNCF Transilien to continue using emoticons to inform/advise

TRACK AND BALLAST RENEWAL ON RER SUBURBAN LINE A PARIS/ÎLE-DE-FRANCE (FRANCE)



COMPANY

RATP Group

CHALLENGE(S) TACKLED

RER A is the backbone of the Parisian regional transport network carrying over one million passengers per day. Track and ballast renewal required traffic to be stopped on the line over a 4-week period each summer between 2015 and 2021.

OBJECTIVE(S)

- Temporary closure each summer between 2015 and 2021
- To ensure support and information for passengers affected by the stoppage.

TYPE OF SERVICE

Regional Train service – connecting inner city Paris to the suburbs.

TYPE OF INITIATIVE

RATP Group with the support of Île-de-France-Mobilités

CAMPAIGNS AND PUBLIC ACCEPTANCE

Passengers were informed via various campaigns (email, events in stations, billboard posters) well in advance of each closure.

During each day of closure services on eight metro lines, five bus lines and two tram lines were increased based on RATP's tool to predict passenger flows and cumulative understanding of traffic as well as on feedback received from previous years.

A large-scale customer care system was set up to reassure and provide information to passengers during stoppages with staff deployed in major stations.



► The passenger information campaign

TIMELINE

2015-2021 (four weeks each summer).

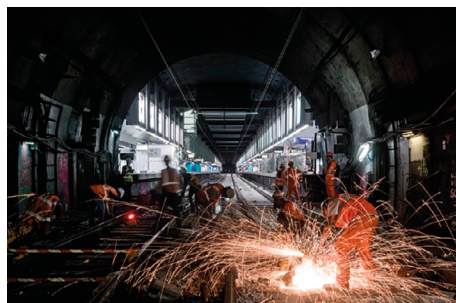
FINANCING

RATP Group with the support of Île-de-France-Mobilités.

SUCCESS

More than 1,000 members of staff were deployed during peak hours as part of the customer care system.

The tracks in the central section of Line A are now fully renewed and are ready to be upgraded to GoA2.



► Maintenance works on line A

GREEN TRAM STOP FRANKFURT AM MAIN (GERMANY)



COMPANY

Verkehrsgesellschaft Frankfurt am Main (VGF).

CHALLENGE(S) TACKLED

Tackling rising levels of carbon dioxide and increasing biodiversity.

OBJECTIVE(S)

- To plant “Sedum Green” on the roof of the tram stop
- To install a digital screen, providing information about nearby mobility

TYPE OF SERVICE

Urban Tram System.

TYPE OF INITIATIVE

Internal Innovation – suggested idea from employee.

CAMPAIGNS AND PUBLIC ACCEPTANCE

The public was informed by means of a press release, a clip on VGF YouTube channel and features VGF social media channels: Twitter, Facebook, Instagram. The number of positive reactions was overwhelming.

TIMELINE

2020 – present.

FINANCING

VGF and “Frankfurt frisst auf” (a programme to support green roofs and walls in the city).

SUCCESS

- Huge number of positive reactions have been received
- VGF now tries to make sure all new tram or bus stops have at least “sedum plants” on the roof
- Furthermore, VGF wants to make more progress and is currently testing the usage of solar panels on the roofs of bus and tram stops



➤ The first green tram stop in Frankfurt

#GESUNDHEITSHATVORFAHRT [HEALTH HAS PRIORITY] FRANKFURT AM MAIN (GERMANY)



COMPANY

Verkehrsgesellschaft Frankfurt am Main (VGF).

CHALLENGE(S) TACKLED

A declining number of passengers as many were questioning whether it was still safe to use public transport due to the COVID-19 pandemic.

OBJECTIVE(S)

- To introduce multiple health measures (e.g. virucidal UV light on escalator handrails, increasing cleaning of vehicles and stations, occupancy now available in the mobile application)
- To launch a Public Campaign #gesundheithatvorfahrt [health has priority] – to make passengers feel safer, but also to identify which measures were considered useful.



► Key visual for the campaign

TYPE OF SERVICE

Urban

TYPE OF INITIATIVE

Joint initiative with Rhein-Main-Verkehrsverbund (RMV), traffiQ and Frankfurt University of Applied Sciences (UAS).

CAMPAIGNS AND PUBLIC ACCEPTANCE

The public was informed by several official press releases, billboard advertising, a newly published website featuring all the measures taken, by clips on the info screens in the subway stations and on ticket vending machines and by frequent updates on social media (photos, videos) using the hashtag #gesundheithatvorfahrt (health has priority).

VGF also published an online survey about using public transport during the pandemic (approximately 2,000 participants), and every single measure was accompanied by on-site-interviews with passengers carried out.

TIMELINE

2020 – present

FINANCING

VGF, as part of their “corona budget”

SUCCESS

- Since the start of the campaign #gesundheithatvorfahrt, the passenger numbers have increased steadily.
- The evaluation of the surveys showed how effective are considered the different measures by passengers.
- Since the UV light on escalator handrails turned out to be very effective, VGF decided to equip all new escalators with it.
- For the campaign, VGF won the annual innovation prize awarded by RMV for innovative projects in public transportation companies.
- VDV [the German Transport Association] featured our campaign on their [website](#).



► Information showing virucidal UV-light on escalator handrail

RECRUITMENT CAMPAIGN FRANKFURT AM MAIN (GERMANY)



COMPANY

Verkehrsgesellschaft Frankfurt am Main (VGF).

CHALLENGE(S) TACKLED

VGF needs to recruit a high number of employees, particularly specialists are urgently required.

The current average age of employees is 45 and with many retirements in the near future combined with the normal turnover rate, VGF has predicted that it will have to recruit 300 new employees per year.

OBJECTIVE(S)

- To present the company as a future oriented public transport provider
- To increase the number of high-quality applications
- To increase the number of female employees, especially in the technical sector (initially 17%)

TYPE OF SERVICE

Urban tram-system.

TYPE OF INITIATIVE

Project initiated by VGF.

CAMPAIGNS AND PUBLIC ACCEPTANCE

The campaign was designed to work cross-media and combined outdoor advertising with digital advertising and social media.

A new website and a new Instagram profile played a major role within the communication.

TIMELINE

2019 – present.

FINANCING

Financed by VGF.

SUCCESS

- The number of applications increased by 36%
- The number of female applicants rose by 75%
- Recruitment time was reduced by 25%
- VGF achieved its goal not only by increasing the number of applications but also by improving the number of high-quality applicants



► Examples from the campaign

INCREASING CONNECTIVITY WITH THE “KARLSRUHE MODEL” KARLSRUHE (GERMANY)



COMPANY

Albtal-Verkehrs-Gesellschaft mbH (AVG).

CHALLENGE(S) TACKLED

Provide a seamless transition between an inner-city tram trip and a regional train journey, increasing connectivity between villages and cities in the region surrounding Karlsruhe.

OBJECTIVE(S)

- To give priority for rail-bound public transport on cross-roads
- To create separate track system inside and outside of the city areas
- To allow closed (transfer-free) transport trips and a consistent tariff system
- To lower investment through sharing of existing infrastructure
- To put local and regional public transport companies “under one umbrella”
- To develop comfortable, bright, and clean light dual-mode vehicles and new infrastructure.

TYPE OF SERVICE

Regional.

TYPE OF INITIATIVE

An initiative by Dr. Dieter Ludwig, in the early 1990s, the then director of the local transport authorities Albtal-Verkehrs-Gesellschaft (AVG), Verkehrsbetriebe Karlsruhe (VBK) and Karlsruhe Verkehrsverbund (KVV)

CAMPAIGNS AND PUBLIC ACCEPTANCE

From the beginning of the “Karlsruhe Model” there was a broad acceptance to the ambitious project by the citizens and politicians of Karlsruhe and the further region. This acceptance was directly connected to the many advantages of the new model to reach far destinations in the region without changing trains.

TIMELINE

1992 – Present.

FINANCING

The original initiative was financed by various local authorities.

SUCCESS

The implementation of the “Karlsruhe Model” required technical innovation, including the use of a complex dual-mode track-sharing system. To keep the required investment to a minimum, it was necessary to use as much existing infrastructure as possible, and to make as few modifications to the infrastructure and rolling stock as allowed.

The pioneer-route was the route between Karlsruhe and Bretten-Gölshausen which is located around 30 kilometres from Karlsruhe city. The public interest of the passengers was tremendous. The rapid development of the ridership shows that the “Karlsruhe Model” was at the right spot in the right time. As the development of new tram-train-routes proceeded the ridership increased as well. Within 25 years the ridership climbed from around 100 million passengers per annum to around 170 million passengers per annum. This was the result of the continuous implementation of new attractive tram-train-routes in the region around Karlsruhe.



RESCUE FROM CLOSURE: KRAICHGAU RAILWAY (KRAICHGAUNBAHN) KARLSRUHE (GERMANY)



COMPANY

Albtal-Verkehrs-Gesellschaft mbH (AVG).

CHALLENGE(S) TACKLED

Railway operated by diesel, old infrastructure, few stops, no barrier-free.

OBJECTIVE(S)

- To start of the “Karlsruhe Model”
- To increase availability
- To reduce travelling time
- To expand operation
- To attract new passengers
- To modernise the stations.

TYPE OF SERVICE

Tram-Train – Karlsruhe Model.

TYPE OF INITIATIVE

The agreements for leasing of the DB-Route were made in 1990 by request of the management to start the Karlsruhe Model.

CAMPAIGNS AND PUBLIC ACCEPTANCE

The public consulted was very positive, high increase of traveller numbers.

TIMELINE

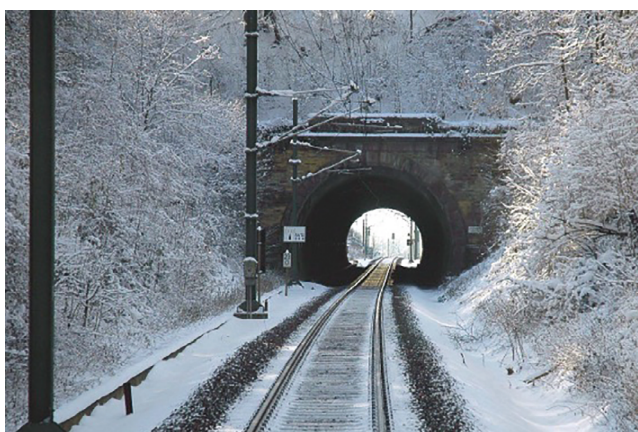
1990 – Present (main building works ended 1992).

FINANCING

The budget was €44 million: 60% of the eligible costs covered by the federal government, 25% by the state of Baden-Württemberg, 15% by the county and the municipalities.

SUCCESS

- Instead of an average of 1,800 travellers, in 1993 8,500 passengers used the train between Karlsruhe and Bretten every day
- High density and short distances through the construction of the stations, which tap into the town centre, schools, commercial areas and housing estates optimally
- Some platforms are barrier free
- Some stops are equipped with a park & ride.



► Gölshausen tunnel, the track was moved to the centre for electrification



► New station “Bretten Stadtmittel”

TRANS REGIO – KOBLENZ (GERMANY)



COMPANY

Transdev GmbH.

CHALLENGE(S) TACKLED

Trans Regio, subsidiary of Transdev, operates the rail line along the left bank of the Rhine River, connecting the cities of Cologne, Koblenz and Mainz since 2008 through a 15-year contract with local PTAs until 2023.

After a highly competitive process, Trans Regio has been awarded in 2021 the contract to operate for 10 additional years from December 2023 with option for prolongation for up to 3.5 years.



OBJECTIVE(S)

To renew the contract in a highly competitive environment where four bids were finally submitted with price as the key.

TYPE OF SERVICE

Regional rail line linking the cities of Cologne, Bonn, Koblenz and Mainz. This line is of interest for commuter passengers as well for tourist passengers due to the attractive locations such as castles and palaces along the line.

TYPE OF INITIATIVE

Operation & Maintenance gross contract with local PTAs subsidising the service for 10 years starting in December 2023.

CAMPAIGNS AND PUBLIC ACCEPTANCE

The PTAs have reacted to the increased passenger demand and increased the service volume to be provided from December 2023.



TIMELINE

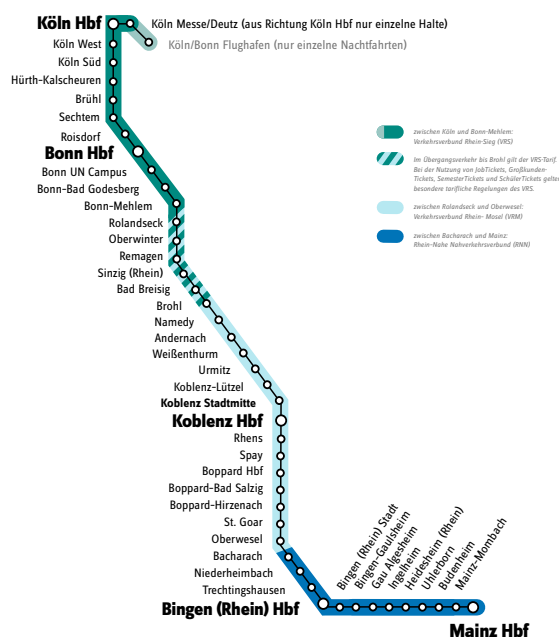
The tendering process of the Mittelrheinbahn ran from September 2020 to April 2021 and was awarded to Trans Regio in June 2021. Commissioning of the new contract will take place in December 2023.

FINANCING

Trans Regio is remunerated by the PTAs for operation. The remuneration is based on the offer price submitted by Trans Regio.

SUCCESS

The vehicles will get an extensive redesign program. This includes, above all, the renewal of the seating area and the modernisation of the passenger compartment, provision of WLAN and retrofitting of sockets on the seats to improve the customer comfort.



Map of the route

BALATON 24/72 TRAVELCARD LAKE BALATON AREA (HUNGARY)



COMPANY

MÁV-START Railway Passenger Transport Co. in co-operation with VOLÁNBUSZ Transport Company Ltd. (bus public transport provider).

CHALLENGE(S) TACKLED

Lake Balaton is the largest lake in Central Europe and one of the region's foremost tourist destinations. Tourist often travel by car to be able to visit the Balaton. Therefore, these are the challenges addressed:

- Strong mobility along the coast
- In summer, more than 500,000 trips between stations at Balaton
- 0-24 train service, nightlife
- Lack of opportunity to buy train tickets at many stations (no ticket office or vending machine), non-efficient onboard ticket sales

OBJECTIVE(S)

- To allow visitors to move freely using passenger transport services and one travelcard for buses and trains.
- To promote Balaton Travelcards, valid for an unlimited number of trips within the indicated timeframe, on dedicated lines

TYPE OF SERVICE

Touristic (public service).

TYPE OF INITIATIVE

Own initiative.



CAMPAIGNS AND PUBLIC ACCEPTANCE

Promotion initiatives have been carried out in different ways including posters at stations, on-board promotion (PIS), Appearance in local newspapers, touristic brochure, Press releases. The product was highly successful.

TIMELINE

2020 – Present.

FINANCING

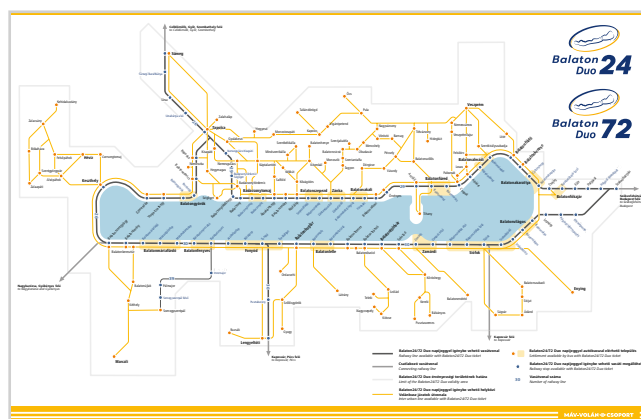
The introduction of the Travelcard was supported by the Ministry for Innovation and Technology (financer); increase in passenger numbers offsets obligations (difficult to measure).

SUCCESS

Summer of 2020: 16,033 Balaton travelcard purchased.

Summer of 2021: 25,105 Balaton travelcard purchased.

The initiative was highly appreciated by the public. As a result of this success, there has been a higher utilisation of public transport instead of individual car use, boosting passenger traffic on public transport, and improving the access to attractions.



► Map of routes around the lake

GREEN LINE CAPACITY ENHANCEMENT (GLCE) AND GREEN LINE INFRASTRUCTURE UPGRADE (GLIU) DUBLIN (IRELAND)



COMPANY

Transport Infrastructure Ireland (TII).

CHALLENGE(S) TACKLED

The Green Line was operating at capacity during peak hours meaning passengers were unable or unwilling to board between the busiest stops.



► Launch event of the extended LRVs

OBJECTIVE(S)

- To cater for future demand along the Green Line corridor
- To ensure optimal use of existing infrastructure in advance of other major public transport investments

TYPE OF SERVICE

Light Rail System.

TYPE OF INITIATIVE

Joint initiative of the National Transport Authority (NTA) and TII in line with the 'NTA Transport Strategy for Greater Dublin 2016-2035'.

CAMPAIGNS AND PUBLIC ACCEPTANCE

The scheme was appraised using the common criteria involving; Economy, Safety, Environmental, Accessibility and Social Inclusion, and Integration.

This project was very well received in terms of public engagement and acceptance as issues with capacity were being addressed.

TIMELINE

2016 – 2021.

FINANCING

Capital funding from the Department of Transport via the NTA.

SUCCESS

The project was delivered ahead of schedule and within the agreed budget despite disruption to all supply chains that was caused by the COVID-19 response measures. The 8 new Citadis 502s and the extensions of the 26 Citadis 402s to become 502s facilitate an increase of capacity on the LUAS Green Line from 6,500 to 8,000 passengers per hour per direction.

This corresponds to a 23% increase of capacity on the LUAS Green Line and this will optimise efficiency of the transport network by making public transport more attractive to potential users and reducing overcrowding on the LUAS. It will also improve safety for transport users and reduce carbon emissions and congestion. The upgrade provides flexibility of departure and arrival times for those living in disadvantaged areas along the Green Line and for those with mobility and/or sensory impairment.



► Delivery of LRV modules to the depot

AUTOMATED METRO LINE M5 OPERATED BY AZIENDA TRASPORTI MILANESI MILAN (ITALY)



COMPANY

Azienda Trasporti Milanesi S.p.A.

CHALLENGE(S) TACKLED

- Construction and operations of Milan's first fully automated metro line
- Increase connectivity across the city
- Contribute to urban regeneration of surrounding areas

OBJECTIVE(S)

- To improve public mobility share in the city
- To reduce the use of private cars

TYPE OF SERVICE

Urban metro system.

TYPE OF INITIATIVE

Project financing.

CAMPAIGNS AND PUBLIC ACCEPTANCE

The opening of the line in 2013 was widely advertised. City users were involved in the official opening which turned out to be a great success. The acceptance level was very high since the very beginning.



► Line M5

TIMELINE

2004 – 2015.

FINANCING

Approximately 52% of the initiative was financed by public contribution, the remaining part by private funds, including bank financing.

SUCCESS

The M5 improved the quality of life of its users, providing an excellent, safe and inclusive public transport service, fully integrated with innovative, environment-friendly mobility solutions, in line with the evolution of the customers' needs and the development of the local community.

The project also improves people mobility to Milan Stadium for football matches, concerts and major events with the "San Siro Stadio" station being designed to manage special events and high people flows.



► San Siro Stadio Station

The project envisaged 130,000 passengers/day on weekdays, but ridership eventually increased up 180,000 passengers/day (pre-COVID-19 data). From its opening to 2019, line M5 has experienced growth rates equal to 12-15 % per year. Average customer satisfaction level has been very high for 99% of the interviewees in all surveys carried out in the latest five years.

H2 TRAIN PROJECT IN VAL CAMONICA. LOMBARDY (ITALY)



COMPANY

FNM – Ferrovie Nord Milano.

CHALLENGE(S) TACKLED

- Replace diesel trains with zero emission Electrical Multiple Units (EMUs).
- Design a maintenance workshop for the new fleet.

OBJECTIVE(S)

To develop knowledge and professional skills for Green transport in Italy and Europe.

TYPE OF SERVICE

Regional/Suburban.

TYPE OF INITIATIVE

Funded by FNM which through its Rolling Stock Company, will lease the H2 trains to Trenord.

CAMPAIGNS AND PUBLIC ACCEPTANCE

The initiative was communicated by Press releases and several press articles.

Presentation to Railway sector was performed to AS-STRA, UITP etc.

TIMELINE

2020 – 2026 (first 6 trains delivered 2024, 8 more in 2026).

FINANCING

FNM own fundings.

SUCCESS

This is not only a transport project but an integrated system to create circular economy in the Val Camonica Valley. Passengers will benefit of a zero-emission transport and moreover is expected the development of an innovative Know how for green Hydrogen locally produced.



► Hydrogen transport to be provided in Val Camonica

EXPANSION AND REFURBISHMENT PROJECT OF ARROIOS STATION LISBON (PORTUGAL)



COMPANY

Metropolitano de Lisboa.

CHALLENGE(S) TACKLED

- Complete an overhaul of Arroios station (opened to the public in 1972)
- Extend the platform to allow the operation of longer trains

OBJECTIVE(S)

- To extend the station's platform from 70 to 105 meters allowing operations of six-car trains
- To refurbish the station's lobbies, including an overhaul of the operation support areas
- To introduce lifts providing access to people with reduced mobility

TYPE OF SERVICE

Urban.

TYPE OF INITIATIVE

Own Initiative.

CAMPAIGNS AND PUBLIC ACCEPTANCE

To reduce the negative effects of construction on the surrounding area, residents and shopkeepers, were kept up to date with information about the progress via letters, status reports, close contact with those impacted and improved lighting.

The completion of the project and the addition of surface works providing more space for pedestrians allowed Lisbon Metro to reverse the image crisis caused by the negative impact of the construction works in the routines of residents and shopkeepers of the area.

TIMELINE

2017 – 2021.

FINANCING

Financed by Lisbon Metro and approved by the supervising Government bodies.

SUCCESS

The metro service quality has greatly improved by this project, which benefits thousands of passengers on their daily travels and, especially, the residents of the Arroios quarter, who no longer need to walk all the way to Alameda or Anjos to take the metro. Local shops and services also benefit from this refurbishment project which is reviving and improving the area.



► Before and After: Arroios Station Ticket Hall

DAVANA: REDUCING COSTS AND IMPROVING RELIABILITY BARCELONA (SPAIN)



COMPANY

Transports Metropolitans de Barcelona (TMB) in collaboration with Thinking Forward XXI.

CHALLENGE(S) TACKLED

Reducing the cost and complexity of the Maintenance of trains and infrastructure.

OBJECTIVE(S)

To increase the availability of Rolling Stock and Infrastructure by using Big Data, AI and IoT technologies.

TYPE OF SERVICE

Urban metropolitan services (Metro).

TYPE OF INITIATIVE

Led by TMB and executed with a former start-up company which was funded through TMB's Open Innovation initiative.

CAMPAIGNS AND PUBLIC ACCEPTANCE

While the project is not necessarily known to the customers, the results of the project have been well received as there is an increased service.

TIMELINE

2007 – Present.

FINANCING

The project was financed with own resources and public grants.

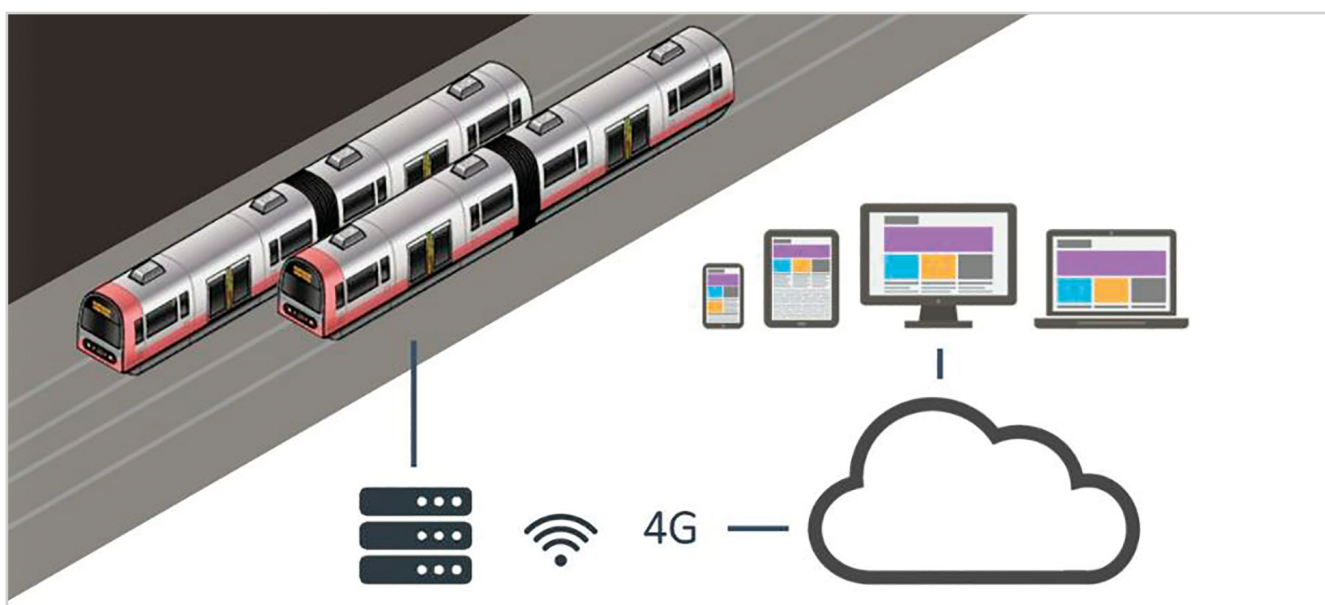
SUCCESS

Overall costs of metro maintenance have decreased dramatically while the reliability and availability of trains and infrastructure has increased. The result can be seen in the offer of service that can be provided for the customer.

The main goals of the DAVANA Project are:

- Productivity Improvement through
 - Efficiency improvements
 - Increase network availability
 - Boost interdepartmental cooperation
- Cost Reductions through
 - Maintenance rationalisation
 - Increase the assets lifecycle
 - Automate processes
- Support for making better decisions through
 - Condition based maintenance
 - Automatic reports generation
 - Artificial intelligence

This solution is open and (based on a SAAS (OPEX) model), flexible and adaptable to the needs of any TMB employee, whether they are managerial positions, engineers or maintenance or operation workers – thereby promoting a holistic approach.



► DAVANA digital train

ACCESSIBILITY AND INCLUSION PLAN MADRID (SPAIN)



COMPANY

Metro de Madrid.

CHALLENGE(S) TACKLED

Metro de Madrid is a metro network with stations that date back to 1919 – the first lift was installed on the network in 1994. By 2007 over 50% of stations were accessible.



OBJECTIVE(S)

To enable full autonomy for those with reduced mobility and/or sensory/cognitive difficulties by installing lifts and the improvement of complementary measures.

TYPE OF SERVICE

Regional Public Transport.

TYPE OF INITIATIVE

Own initiative.

CAMPAIGNS AND PUBLIC ACCEPTANCE

Presentations and press releases as well as posters in the station are prepared for each new installation of a lift.

Acceptance for this type of initiative has increased from 6.88 to 7.40 between 2016 to 2019. In a survey about accessibility, the area that was found to be of most concerned was architectural barriers for people with reduced mobility.

TIMELINE

2016 – 2028 (Plan for 2016-2020 approved in 2016. Plan for 2020-2028 currently being drafted).

FINANCING

Community of Madrid and European funds (European Regional Development Fund ERDF).

SUCCESS

An example of the success of the project can be seen with the work that was carried out at Tribunal Station, a station that was opened in 1919 and is part of the first metro line. A total of seven lifts were installed to provide access between two line of the network (1 and 10).

The station shas also been completely modernised with other measures also having been implemented such as tactile-visual flooring, induction loops, automatic doors, non-slip strips on stairs, braille and high-relief signage, as well as lifts.



► Diagrams and images of the works carried out at Tribunal Station



COVID CAPACITY PLAN MADRID (SPAIN)



COMPANY

Metro de Madrid

CHALLENGE(S) TACKLED

Adapting the service to the exceptional circumstances caused by COVID-19 to provide an essential public service with the best safety conditions for passengers and employees, in compliance with the measures adopted by authorities.

OBJECTIVE(S)

- To ensure the safety and mobility of citizens given the situation created by COVID-19
- To use Big Data and simulation software to create a station capacity control plan to control numbers of customers in the station
- To create a real time communication plan to inform travellers about the situation of each station

TYPE OF SERVICE

Regional public transport.

TYPE OF INITIATIVE

Metro de Madrid own initiative.



► Example of the application showing station occupancy

CAMPAIGNS AND PUBLIC ACCEPTANCE

The Project was announced by the press and on social networks. It was also included on digital screens and announcements in the Metro de Madrid network.

TIMELINE

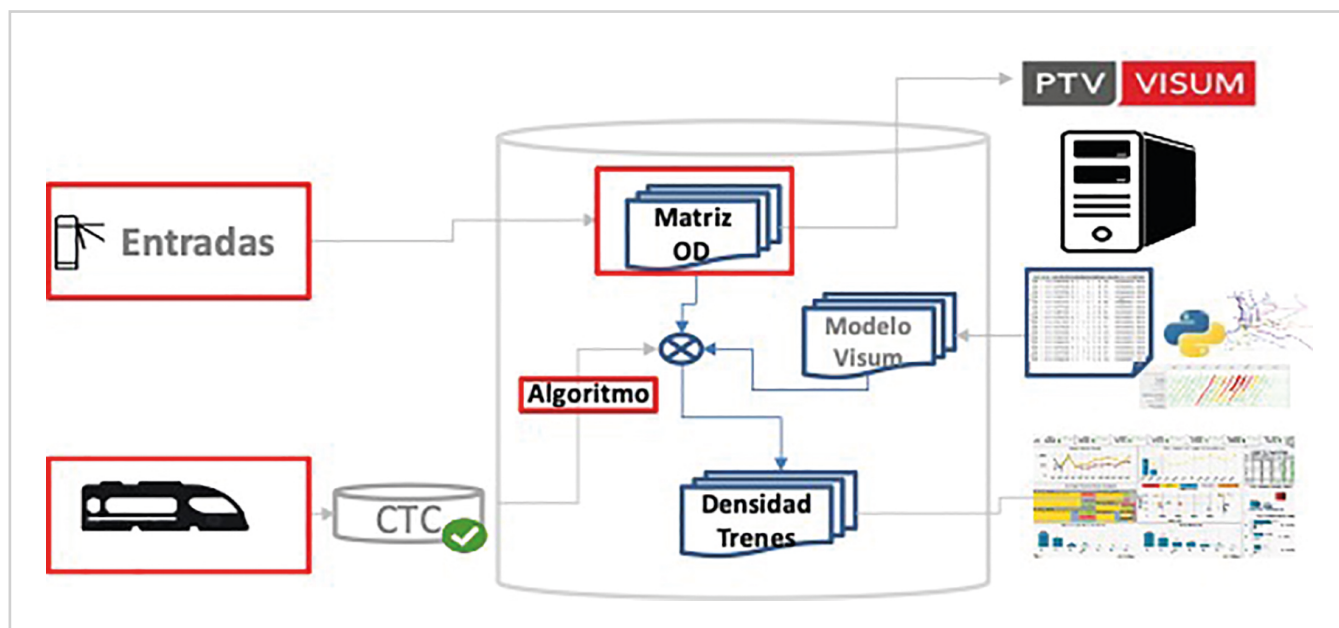
2020 – Present.

FINANCING

Metro de Madrid own resources.

SUCCESS

The Spanish Association for Standardisation and Certification (AENOR) has endorsed Metro de Madrid's good practices for controlling COVID-19.



► How the system works

DIGITISATION OF OPERATIONS MADRID (SPAIN)



COMPANY

Metro de Madrid.

CHALLENGE(S) TACKLED

Digitalisation of Metro de Madrid in order to optimise functioning within the company.

OBJECTIVE(S)

- To improve data, optimise processes, reduce paper consumption, and improve internal communication between operational employees and their managers.
- To make information more accessible

TYPE OF SERVICE

Regional public transport.

TYPE OF INITIATIVE

Metro de Madrid own initiative.

CAMPAIGNS AND PUBLIC ACCEPTANCE

To ensure success and uptake of initiatives staff are heavily involved from the beginning with working groups, regular meetings, direct and rapid support and continuous information.

TIMELINE

2018 – Present.

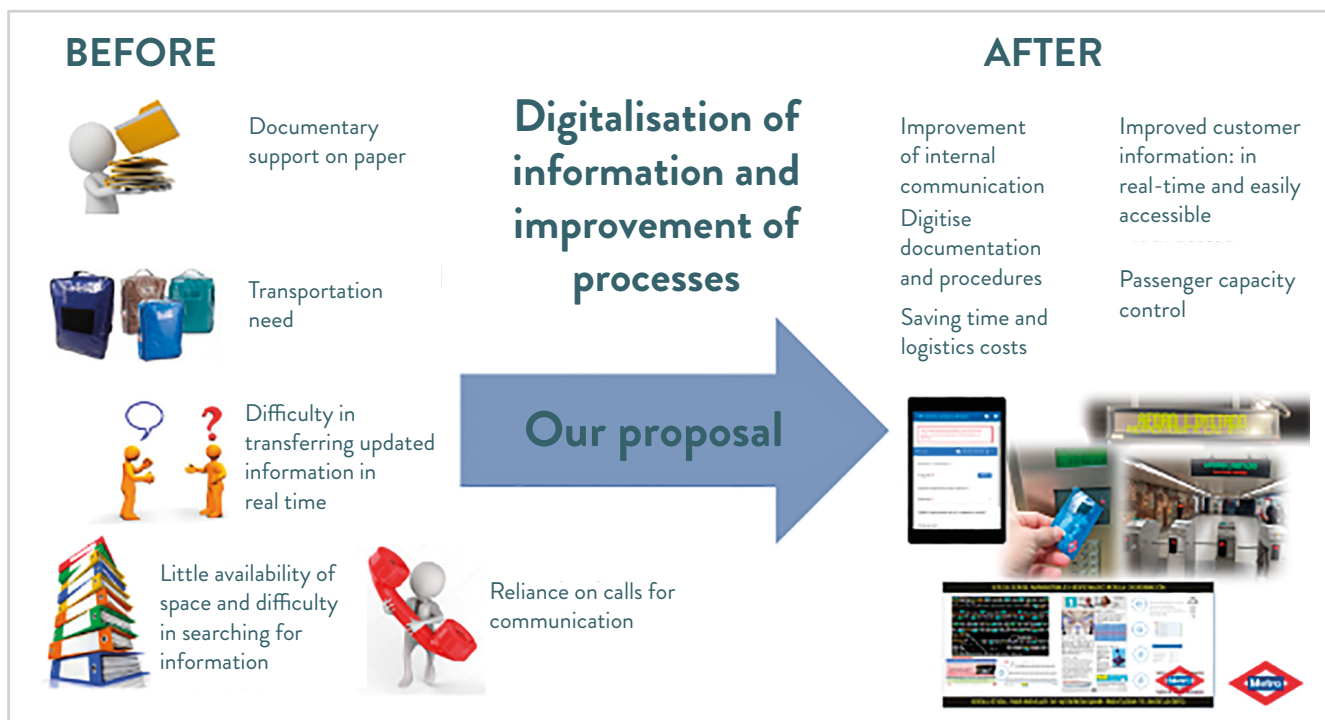
FINANCING

Various funding sources depending on the product.

SUCCESS

The success of the award-winning project can be measured by how it has been received by those impacted by its introduction:

- External Clients – in line with Metro de Madrid's commitment to the environment, improved efficiency including in incident monitoring, providing more support and real time information to customers
- Staff – more agile and reliable, reduction in time spent on the phone, increased information, reduction of errors and psychosocial risks related to the workplace.



► Before and after the digitalisation process

ENERGY MANAGEMENT MADRID (SPAIN)



COMPANY

Metro de Madrid.

CHALLENGE(S) TACKLED

Energy management in Metro de Madrid.

OBJECTIVE(S)

- To reduce energy consumption using Big Data and Industry 4.0
- To make ventilation smarter, so that each fan is individually controlled
- To install reversible cells to allow for use of energy from regenerative braking

TYPE OF SERVICE

Regional public transport.

TYPE OF INITIATIVE

Metro de Madrid own initiative.

CAMPAIGNS AND PUBLIC ACCEPTANCE

The initiatives have been shared by Metro de Madrid on various communication media including social media as well as at meetings for collaboration.

TIMELINE

2016 – Present .

FINANCING

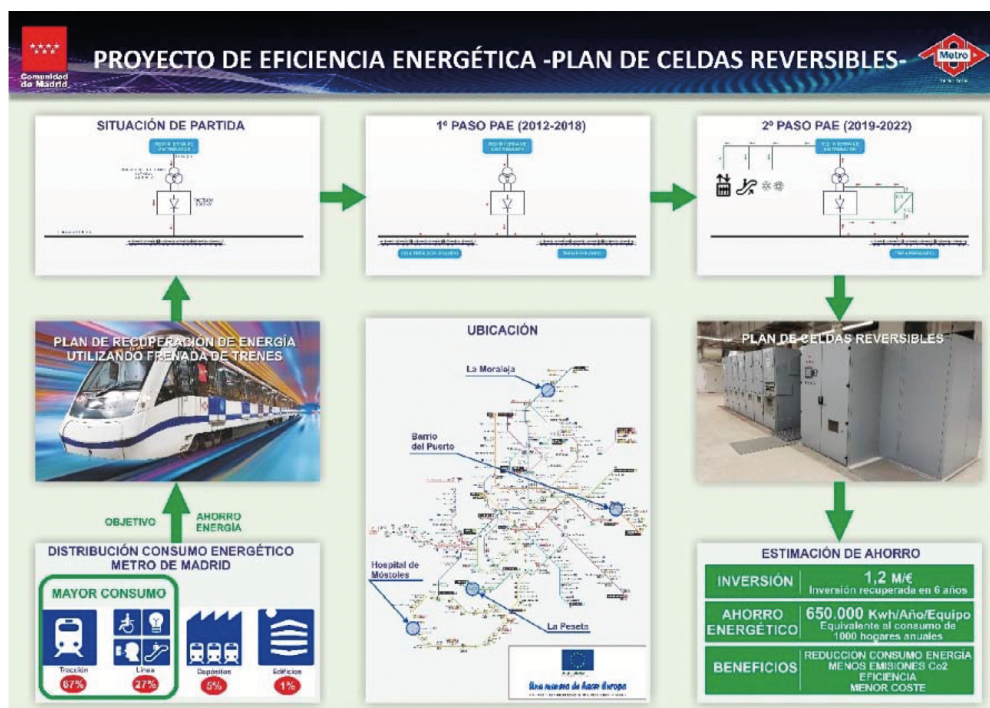
The Smart Ventilation Management System was financed by Metro de Madrid own means.

Reversible cells were granted with financing from FEDER European funds.

SUCCESS

- Both projects have resulted in a reduction of energy consumption:
 - Reversible energy cells have recovered 422.490kWh

The smart ventilation has reduced consumption by 19.6% and improved comfort ranges by 4%.



➤ Reversible energy cells

L.A.R.A. (LÍNEA DE APOYO PARA EL REFUERZO DE LA AUTONOMÍA SUPPORT LINE FOR THE REINFORCEMENT OF AUTONOMY) MADRID (SPAIN)



COMPANY

Metro de Madrid

CHALLENGE(S) TACKLED

Increasing the accessibility of the Metro de Madrid system in first phase to 73% of the the network as fully accessible.

Ensure that the system is accessible to everyone by improving accessibility, including those who might not feel comfortable navigating by themselves.

OBJECTIVE(S)

- To promote and monitor compliance with the Accessibility and Inclusion plan
- To make the network a driver of inclusive mobility
- To enable autonomous use of the network by all
- To promote the normalisation of people with disabilities
- To enable social and work inclusion



► The innovative game to help with wayfinding

TYPE OF SERVICE

Regional public transport.

TYPE OF INITIATIVE

Metro de Madrid own initiative, with the advice and support of Plena Inclusión Madrid, the Madrid Federation of Organisations of People with Intellectual or Developmental Disabilities.

CAMPAIGNS AND PUBLIC ACCEPTANCE

Internal and external communications were carried out including alliances and collaborations with bodies specialised in the field.

Information and products were created such as an easy-to-read user guide, support materials, 10 golden rules for staff, and a game to help with wayfinding in the network.

TIMELINE

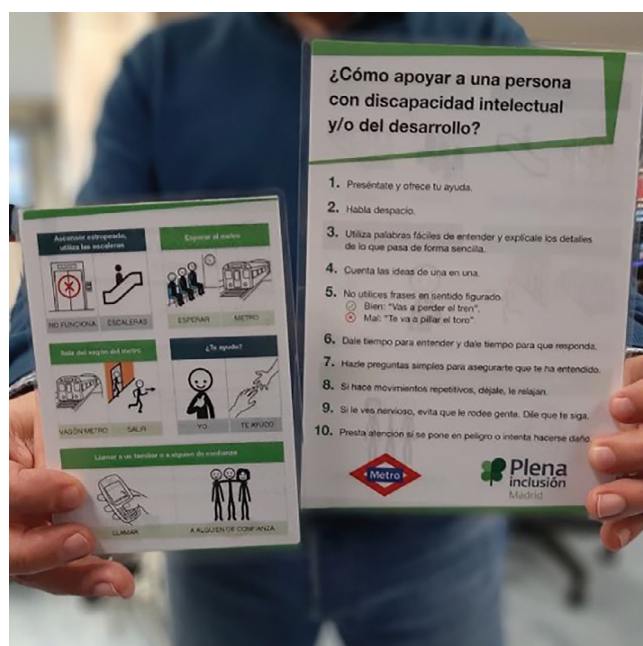
2016 – Present.

FINANCING

Funded using own resources.

SUCCESS

The greatest example of success is all those who have been part of the project. The press has covered the project and it has been presented at several specialised forums.



► The 10 golden rules for staff

MEASURES ADOPTED TO MINIMISE THE IMPACT OF SNOWSTORM FILOMENA MADRID (SPAIN)



COMPANY

Metro de Madrid.

CHALLENGE(S) TACKLED

Face the challenges of a prolonged snowstorm and keeping the network running as the only remaining mode of transport in the region.

OBJECTIVE(S)

To guarantee the mobility of citizens during the snowstorm by staying open 24/7.

TYPE OF SERVICE

Regional Public Transport.



► Laguna Depot during the snowstorm

TYPE OF INITIATIVE

Metro de Madrid own initiative.

CAMPAIGNS AND PUBLIC ACCEPTANCE

As Metro de Madrid was the only means of transport in the region in the first couple of days of the snowstorm, the reputational impact was very positive.

TIMELINE

8 Jan 2021 – 18 Jan 2021.

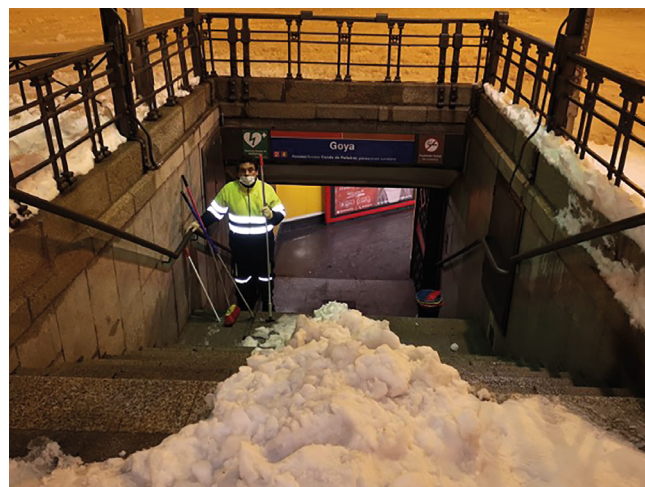
FINANCING

Internal resources from the operations division (10,700 extra hours) and municipal collaboration with the Firefighters of Madrid .

SUCCESS

Metro de Madrid was able to maintain services on almost all lines ensuring the safe running of trains and clearing facilities.

Metro de Madrid was also able to recover full capacity shortly after the storm.



► Goya station access cleaning

PROMOTING EQUALITY MADRID (SPAIN)



COMPANY

Metro de Madrid.

CHALLENGE(S) TACKLED

The most representative user of Metro de Madrid is a women aged between 35 and 44 years old, but this is not reflected amongst the staff.

OBJECTIVE(S)

- Externally: to promote a culture of equal treatment through a series of actions promoting egalitarian values such as non-discrimination, gender equality and the fight against gender violence
- Internally: to achieve a greater degree of inclusion and gender equality and promote equal treatment and opportunities

TYPE OF SERVICE

Regional Public Transport.

TYPE OF INITIATIVE

Own initiative in collaboration with the Community of Madrid.



▶ Station art for International Women's Day 2020

CAMPAIGNS AND PUBLIC ACCEPTANCE

- Externally: Various campaigns such as events on International Women's Day, Women on the Move Forum and the Miramos por Ellas [We Look after them] campaign



▶ 2020 Women on the move forum

- Internally: New Equality plan which will review and provide guidelines on how to improve equality and Progres a CEOE Grants which seeks to provide the tools and skills to women with high potential

TIMELINE

2020 – Present.

FINANCING

Metro de Madrid.

SUCCESS

- Externally: Campaigns undertaken in the Metro system have a potential impact on the 1.1 million users and further online via social media. As well as participation in several events
- Internally: The number of women working at Metro de Madrid has increased by 7 points since 1990. Today, 25.37% of the workforce are women (74.62% are men). In addition, women represent 25% of the Management Committee and 40% of the Board of Directors

VÍA-MÓVIL – METROTENERIFE'S APP FOR TRAVELLING USING PUBLIC TRANSPORT TENERIFE/CANARY ISLANDS (SPAIN)



COMPANY

Metropolitano de Tenerife, S.A. (Metrotenerife).

CHALLENGE(S) TACKLED

Upgrading the older ticketing system that was based on paper tickets and vending machines.

OBJECTIVE(S)

To improve the Public Transport experience by offering a more comprehensive ticketing system making tickets easier to buy.

TYPE OF SERVICE

Regional.

TYPE OF INITIATIVE

Own Initiative.

CAMPAIGNS AND PUBLIC ACCEPTANCE

Several communications campaigns were launched to promote the new app and new brand for public transport ticketing in Tenerife.

97% of users of the application would recommend its use to a relative or friend.

TIMELINE

2013 – 2021.

FINANCING

Self-financed and grant.

SUCCESS

To date more than 40 million journeys have been made using Via-Movil. 23% of Tenerife Tram rides and 16% of all rides on the island are made using this app.

The system does not require on-board equipment and can be adapted to any transport operator. Via-Movil is a user friendly and intuitive app, accessible to those with any type of visual impairment (using Voiceover).

Currently, Via-Movil is being used by three transport operators on Tenerife.



► Old ticket validators and the new Via-Movil/ten+ application

TRANVÍA DE ZARAGOZA ZARAGOZA (SPAIN)



COMPANY

SEM Los Tranvías de Zaragoza, S.A.

CHALLENGE(S) TACKLED

Redefining public transport in Zaragoza, a city of 700,000 inhabitants and upgrading urban areas as well as reducing traffic and promoting walking and cycling.

OBJECTIVE(S)

To construct a tramline on a north-south route through the city centre in order to connect all parts of the city.

TYPE OF SERVICE

Urban.

TYPE OF INITIATIVE

Public Private Partnership (City Council 20% - Consortium of CAF, Tuzsa, TIIC2 Acciona and FCC 80%).

CAMPAIGNS AND PUBLIC ACCEPTANCE

Construction had a large impact on the city with about 50% of the public being against the project but after opening public opinions drastically changed as it was clear that the tram was so beneficial for the city.

Since beginning commercial service customer satisfaction has increase every year.

TIMELINE

2009 – 2013 (Construction).

FINANCING

Syndicated loan, and Investment financed from four different sources

SUCCESS

Tranvía de Zaragoza is the tram line with the highest demand in Spain with more than 100,000 passengers per day in a city of 700,000 inhabitants.

The tram line has also allowed for extensive pedestrianisation and 15% fewer cars across the city (30% fewer in the city centre) increasing air quality.



REGIONAL TRAIN SERVICE IN SKÅNE SKÅNE REGION (SWEDEN)



COMPANY

Skånetrafiken (regional public transportation authority in Skåne region, Sweden).

CHALLENGE(S) TACKLED

Decline of the regional train system in Skåne since the end of the 1970's.

Aging vehicles and not plan for renewal.

OBJECTIVE(S)

- To secure new vehicles
- To present an improved timetable
- To expand the number of stations

TYPE OF SERVICE

Regional train service.

TYPE OF INITIATIVE

The initiative came from a regional political body. The old system was managed by the State.

CAMPAIGNS AND PUBLIC ACCEPTANCE

Launched in 1983 with 12 stations, the network has grown to 80 stations as have the number of passengers – from three million in 1983 to close to 50 million in 2021.

TIMELINE

1983 – Present.

FINANCING

Via tickets and regional taxes.

SUCCESS

The regional system has changed the geography of the region of Skåne. Today it is important to live near a railway station. The development of rail services has had a strong impact on the real estate market, as houses are much more expensive if they are located in areas served by rail. In parallel, commercial activities in the larger cities tend to be located around the railway stations.



► Rooftops of Helsingborg in the Skåne Region

SNÄLLTÅGET: CROSS BORDER NIGHT TRAINS SWEDEN



COMPANY

Transdev Sweden.

CHALLENGE(S) TACKLED

- Technical challenges including different signalling systems in all three countries which requires the change of locomotive
- Regulatory challenges, such as the different authorisations required to operate in each country and the need to find partners to operate the trains in Denmark and Germany
- Linguistic challenges: staff must be able to speak Swedish, Danish and German according to regulations.

OBJECTIVE(S)

- To replace the old night train offered by Snälltåget
- To offer a sustainable and affordable way of travelling between Sweden and Germany - without any subsidies

TYPE OF SERVICE

Long distance cross-border train in open access.



► Route map of the night train

TYPE OF INITIATIVE

Snälltåget is an own initiative from Transdev in full commercial risk, without any subsidy.

CAMPAIGNS AND PUBLIC ACCEPTANCE

A full communication campaign was launched in Swedish, Danish, German, English, and French with media interviews, social media content, and several events linked to the departure of the first train.

There has been a lot of interest from groups passionate about night trains and from local politicians.



► Example of a cabin

TIMELINE

June 2021 – Present.

FINANCING

Financed by Transdev itself.

SUCCESS

- This project allows the passengers to travel without any train change from Stockholm, Malmö, Copenhagen to Hamburg and Berlin in both directions.
- The coaches have been refurbished with different interior layouts and different comfort levels are offered
- A full restaurant coach is available during the trip between Stockholm and Malmö
- The service has made it possible to reduce the number of flights and car trips between Sweden, Denmark and Germany.

FEEDER BUS NETWORK TO THE LÉMAN EXPRESS SUBURBAN TRAIN GREATER GENEVA (SWITZERLAND AND FRANCE)



COMPANY

Transports Publics Genevois (tpg) in association with the Canton of Geneva and the Swiss Federal Railways (SBB-CFF-FFS).

CHALLENGE(S) TACKLED

- Historical reasons have limited the development of the rail network in Geneva as compared to Zurich.
- Planning and construction of an underground rail link
- Strong cooperation between local and regional transport

OBJECTIVE(S)

- To connect urban transport (tpg) with the new regional lines
- To increase ridership on local trams and buses
- To reach a rate of 75% of connections between buses and trains (i.e. bus not later than 3 mins compared to the schedule)

TYPE OF SERVICE

Regional & Urban mobility / multi-operator transport chain.

TYPE OF INITIATIVE

Joint initiative with the Canton of Geneva.

CAMPAIGNS AND PUBLIC ACCEPTANCE

A coordinated communications campaign was launched about the new rail network with tpg, as the main entity to attract customers. Public acceptance was very high as fares were not raised in the local area, some diverted bus routes did however receive some pushback, but did not impact the overall acceptance.

TIMELINE

2002 – 2019

FINANCING

- Infrastructure: the rail link was financed by various Swiss and French government entities
- Operations: tickets cover approximately 45%, with the remaining amount covered by local authorities

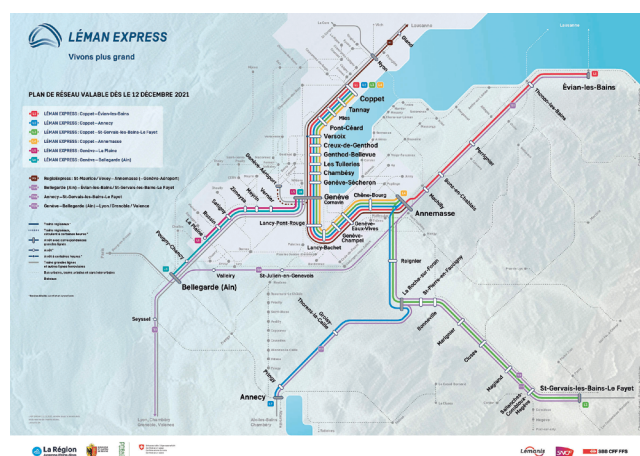
SUCCESS

Opening was huge success and ridership goals were almost reached by the second month of service before COVID-19.

Enhanced wayfinding, new travel apps and extended ticketing were introduced at the same time as beginning of service on the Léman Express.



➤ Lancy Bachet station showing the integration between services



➤ Map of the Léman Express network

TRANSBORDER TRAMWAY NETWORK EXTENSION SCHEME – GREATER GENEVA (SWITZERLAND AND FRANCE)



COMPANY

Transports Publics Genevois (tpg) in association with the Canton of Geneva and the local authorities in neighbouring France.

CHALLENGE(S) TACKLED

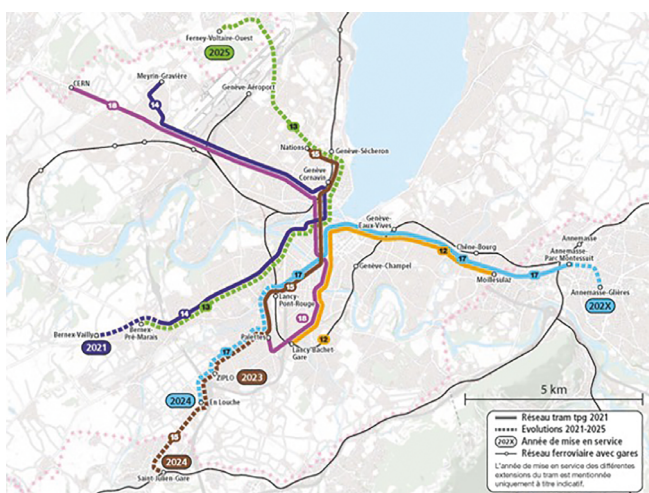
- Increasing the length of tracks from 33km to 50km - an increase of 50%
- Dealing with additional ridership on one of the most crowded light rail systems in the world

OBJECTIVE(S)

- To increase the modal share of public transport for the transborder commuters from neighbouring France to Geneva
- To increase the share of electric traction in substituting diesel buses with the tram

TYPE OF SERVICE

Regional & Urban mobility.



► A possible future for the network

TYPE OF INITIATIVE

The tram network extension scheme is a joint initiative between the Canton of Geneva and the local authorities in neighbouring France.

CAMPAIGNS AND PUBLIC ACCEPTANCE

The tram extension projects are subject to large public consultation. Conferences and workshops are organised by the different local authorities to foster the public appropriation.

The excellent public acceptance could be verified as two of the seven projects were launched in 2019 (Annemasse) and 2021 (Bernex).

TIMELINE

2019 – 2025.

FINANCING

- Infrastructure: the local authorities of the respective regions
- Operations: fares cover 45% of expenditure, with the remaining amount covered by local authorities

SUCCESS

- Line 17 showed high ridership from the first day of operation
- The tram extension between Geneva and Annemasse doubled the public transport modal share compared to the previous bus route



► Opening of the first extension linking Geneva to Annemasse

SHEFFIELD TRAM TRAIN PILOT: SOME LESSONS LEARNED, THE LEARNING HUB AND NEXT STEPS SOUTH YORKSHIRE (UK)



COMPANY

Network Rail Infrastructure Ltd.

CHALLENGE(S) TACKLED

- To deliver a tram train trial that provided a structured system of lessons learned to be shared with the industry in order to simplify future schemes
- To connect Rotherham and the Parkgate Shopping Centre to the Supertram network and open up new journey opportunities

OBJECTIVE(S)

- To understand the changes to industry costs, changes to technical standards and practical issues of operating a light rail vehicle on the national network
- To gauge passenger perception and acceptance of a light rail Tram Train service

TYPE OF SERVICE

Urban intermodal.

TYPE OF INITIATIVE

The trial has been a collaboration between Network Rail, South Yorkshire Passenger Transport Executive (SYPT), South Yorkshire Supertram Ltd (SYSL) and the Department for Transport with additional engagement from Northern Rail in the early stages.

CAMPAIGNS AND PUBLIC ACCEPTANCE

Public consultations as well as a communication campaign were launched before service began and a major launch event was held to introduce the service.



▶ Tram train launch, October 2018

TIMELINE

2009 – Present.

FINANCING

Direct funding from UK Department for Transport.

SUCCESS

Passenger and Staff satisfaction surveys are currently running at around 96% satisfaction.

However, the Tram Train Pilot has demonstrated that tram train has real potential to provide an additional rail-based transport option for the UK urban railway network, particularly where a tramway already exists.



▶ Tram passing at Rotherham Central

REGION IN FOCUS:

INDIA



BOOSTING DELHI METRO RAIL FOR COMMUTERS. DELHI (INDIA)



COMPANY

Delhi Metro Rail Corporation Limited.

CHALLENGE(S) TACKLED

Before the introduction of the Metro in Delhi, the city was largely dependent on public buses and private vehicles for commuting which resulted in significant traffic jams and rapid expansion of the city was only going to make this worse.

OBJECTIVE(S)

To provide a world-class public transport system, which can effectively address the mobility needs of Delhi-National Capital Region.

TYPE OF SERVICE

Urban Mass Transit Project.

TYPE OF INITIATIVE

The Delhi Metro Rail Corporation Limited (DMRC) is a fully government owned company with equal equity participation from the Government of India and the Government of National Capital Territory of Delhi.

CAMPAIGNS AND PUBLIC ACCEPTANCE

To carry out the construction smoothly, Delhi Metro needed cooperation from the residents living near construction sites. To achieve this, Delhi Metro adopted interactive/proactive communication strategies. Community Interaction Programmes with senior officials have been organised to address the grievances of locals and their suggestions were taken into account for naming the stations.

TIMELINE

1998 – Present.

FINANCING

Funded by the Governments of India and Delhi and loans such as from the Japan International Cooperation Agency (JICA).

SUCCESS

Today, the Delhi Metro is the lifeline of Delhi-NCR with around 6 million passenger journeys per day (pre-COVID). Metro is the most preferred mode of transport in Delhi-NCR.

In construction, Delhi Metro maintains high standards and safety is given top-most priority. Some of the best practices initiated by Delhi Metro, such as barricading the sites, dust control mechanism, traffic management around the sites, community interaction programme, regular flow of information and effective monitoring for timely completion of the project, have become standard norms in the field of construction.



► Chattapur Metro Station



► Pink Line at Anand Vihar Metro Station

REGION IN FOCUS: MENA



ALGIERS METRO: IMPROVING MOBILITY ALGIERS (ALGERIA)



COMPANY

Entreprise Métro d'Alger (EMA).

CHALLENGE(S) TACKLED

Large increases in demographics showed the need for a metro but financial difficulties and national conflict slowed down construction.

OBJECTIVE(S)

To construct a metro to serve the city of Algiers.

TYPE OF SERVICE

Urban, Intermodal (tram, cableway, bus, suburban rail via intermodal stations).

TYPE OF INITIATIVE

Own initiative/project Owner: The Algiers Metro Company (EMA). EMA was created in 1984, as delegated contracting authority of the Ministry of Public Works and Transport, to ensure the studies and construction of the metro (and other urban transport projects by rail and cable).



CAMPAIGNS AND PUBLIC ACCEPTANCE

Metro is primarily used by professional and “business” users, but also for services, shopping and leisure. Students use it with relatively low frequency due to the reduced number of university infrastructures served by the metro.

TIMELINE

2003 - 2011.

FINANCING

Algerian Government.

SUCCESS

The metro has a strong symbolic charge: it represents the entry into modernity of the Country and the hope of a reform of the entire transport system.

Even though the metro is relatively short, it was able to transport 46 million passengers per year before COVID-19.

During construction some archaeological remains were uncovered and put on display in stations to allow the citizens of Algiers to connect with their heritage.



► Archaeological remains on display in station

ROUTE 2020 DUBAI REGION (UNITED ARAB EMIRATES)



COMPANY

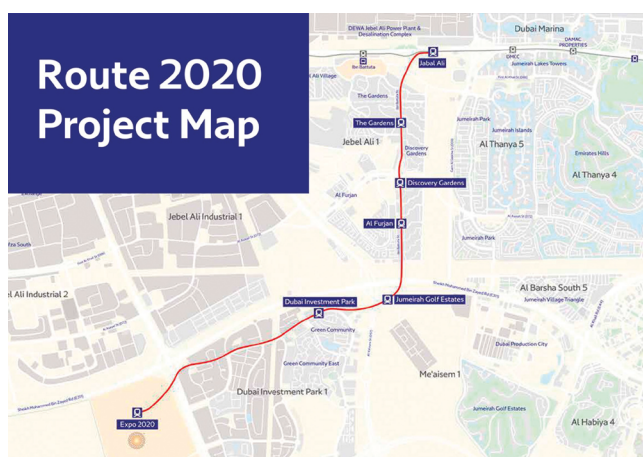
Roads and Transport Authority, Dubai.

CHALLENGE(S) TACKLED

- Ensuring safe operation of existing Red Line during the construction of Route 2020
- Developing a construction schedule and integration approach that minimised impact on Red Line
- Minimise the interface with Roads Projects
- Traffic management at the busy Sheikh Zayed Road/ highway (Viaduct Tie-In) location
- Maintain passenger movement across the Tie-in location (portion of viaduct demolished).

OBJECTIVE(S)

- To connect the existing Dubai Metro Red Line to serve EXPO 2020 site. EXPO 2020 (1 October 2021 - 31 March 2022) is one of the biggest global events undertaken in the city
- To reduce the overall traffic congestion in the project area
- To produce CO₂ emissions thereby reducing pollution
- To provide, through Route 2020 line extension, connections to Al Maktoum International Airport



► Route 2020 Project Map

TYPE OF SERVICE

Urban.

TYPE OF INITIATIVE

Route 2020 is an own initiative of Roads and Transport Authority Dubai necessitated out of the need to connect EXPO 2020 site to Dubai's existing metro.

CAMPAIGNS AND PUBLIC ACCEPTANCE

The public was informed about the commencement, timeline, progress status, features of the project and the opening date etc. through the print and audio-visual media.

TIMELINE

2016 – 2021.

FINANCING

Partly financed by the Government of Dubai (DoF) and partly through Export Credit Agencies (ECAs).

SUCCESS

Route 2020 enabled transit connectivity for the neighbourhoods along the line with the wider Dubai public transit network. This resulted in increased travel comfort, saving travel time and costs, reducing pollution and congestion.



► Expo2020 Station

REGION IN FOCUS: NORTH AMERICA



EXPO LINE: HIGH-CAPACITY RAPID TRANSIT IN LOS ANGELES (UNITED STATES OF AMERICA)



COMPANY

Los Angeles County Metropolitan Transportation Authority (LA Metro).

CHALLENGE(S) TACKLED

Streetcar service between downtown Los Angeles and Santa Monica had ceased in 1953. As a result, there was no rail service in this corridor for over half a century, until LA Metro opened the Expo Line in two phases in 2012 and 2016, respectively.

OBJECTIVE(S)

To provide high-capacity rapid transit between Los Angeles and Santa Monica, and an alternative to driving on the I-10 (Santa Monica Freeway), one of the most chronically congested roads in the North America.

TYPE OF SERVICE

Light rail transit.

TYPE OF INITIATIVE

The project was funded and built by public agencies.

CAMPAIGNS AND PUBLIC ACCEPTANCE

LA Metro promoted the opening of both phases of the Expo Line through traditional news releases as well as the agency's blogs and social media streams. Public interest was high due to the Expo Line being the first rail transit to operate on the Westside of the LA. area since the early 1950s and the great need for transit alternatives in the area.



► Opening weekend on the Expo Line's second phase at Downtown Santa Monica Station, 2016

TIMELINE

1998 – 2016

FINANCING

Local transportation sales taxes and state funds.

SUCCESS

By summer 2017, one year after the first phase had opened, ridership had doubled to 64,164 average weekday boardings, exceeding forecasts and demonstrating the pent-up demand for an alternative to driving and long bus trips in this corridor.

The Expo Line exceeded ridership expectations and continues to be popular. The line provided crucial links between downtown LA, the University of Southern California, the museums and sports stadiums of Exposition Park, residential neighbourhoods in South Los Angeles, downtown Culver City (and Sony Studios), West Los Angeles and downtown Santa Monica. From the station, it's a very short walk to the beach and world-famous Santa Monica Pier. The end-to-end travel time of 46 minutes is very competitive with driving at peak hours and significantly faster than traveling by buses that must navigate busy streets.

LA METRO MOBILITY ON DEMAND (MOD) PILOT, METRO MICRO, FOOD & ESSENTIAL GOODS DELIVERY PILOT LOS ANGELES COUNTY (UNITED STATES OF AMERICA)



COMPANY

Los Angeles County Metropolitan Transportation Authority (LA Metro).

CHALLENGE(S) TACKLED

LA Metro's Mobility on Demand (MOD) pilot was an on-demand, first/last mile rideshare service connecting to major, fixed-route transit stations providing first/last mile options.

In April 2020, Metro also launched a Food & Essential Goods Delivery pilot to deliver to food insecure families in 14 vulnerable communities across the County.

OBJECTIVE(S)

MOD

- To align with existing and planned transit service
 - To ensure equal access is provided for all
 - To provide easy methods of payment
- Food & Essential Goods Delivery
 - To strengthen families, communities, and social systems during a time of need
 - To keep individuals with at-risk health conditions sheltered in place
 - To explore whether food delivery can provide additional efficiencies and improved access to economic opportunities

TYPE OF SERVICE

- MOD – on demand rideshare service – now Metro Micro
- Food & Essential Goods Delivery: a delivery service for food insecure recipients



► Wheelchair boarding with operator assistance in a Metro Micro ADA vehicle

TYPE OF INITIATIVE

MOD was a public/private partnership between LA Metro and Via Transportation. The Food & Essential Goods Delivery pilot continues as a public/private partnership between LA Metro and Via.

CAMPAIGNS AND PUBLIC ACCEPTANCE

Metro and Via developed a comprehensive communication and marketing plan to drive awareness of the service, promote the service, and educate the public on how to use the service.

The Food & Essential Goods Delivery pilot does not do any marketing because the programme is already over-subscribed.

TIMELINE

2019 – 2023.

FINANCING

Federal Transport Administration and local funding.

SUCCESS

MOD met or exceeded every KPI over the course of its two-year service life. The outbreak of COVID-19 decreased ridership in the MOD pilot but fully recovered by the final months of service.

REGION IN FOCUS: LATIN AMERICA



CONTACTLESS PAYMENT AT METRÔRIO RIO DE JANEIRO (BRAZIL)



COMPANY

MetrôRio.

CHALLENGE(S) TACKLED

A more convenient ticketing solution was required for clients to be able to use the system.

OBJECTIVE(S)

- To improve customers' journey
- To contribute to a seamless transition between modes of transportation
- To reduce the cost of sales

TYPE OF SERVICE

Urban rail.

TYPE OF INITIATIVE

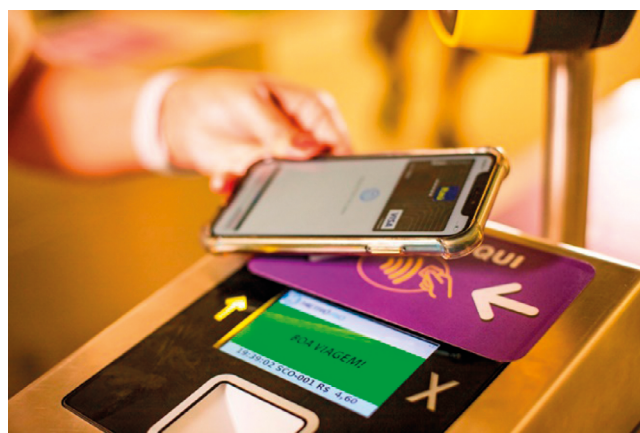
A joint initiative with VISA.



► Contactless payment to access MetrôRio's network

CAMPAIGNS AND PUBLIC ACCEPTANCE

MetrôRio was the first Brazilian subway operator to accept contactless payment, in 2019. Back then, this technology wasn't widely known in the country, so it was necessary to launch an informative campaign, explaining to the public how it worked. Over the last two years, NFC has become more popular, and banks have been issuing more and more cards with this technology.



TIMELINE

2019 – Present.

FINANCING

VISA made the initial investments, with MetrôRio making necessary investments since.

SUCCESS

Contactless payments options allow customers to skip queues and pay for their journey with their bank card. Around 15% of ticket sales now come from contactless payments.

MetrôRio, as early adopter of contactless payments, has helped to promote and disseminate the technology, both locally – since clients have learned how to use it daily – and nationally. The project has received a lot of attention in the press.

DEVELOPMENT OF URBAN MOBILITY - THE TRANSFORMATION THAT CAME FROM THE RAILS ON SALVADOR'S METRO SALVADOR DE BAHIA (BRAZIL)



COMPANY

CCR Metrô Bahia.

CHALLENGE(S) TACKLED

The challenges in Salvador were:

- To restore the image of the metro system, an unfinished project characterised by abandoned tunnels and stations and bad reputation
- To complete the project within the tight deadlines set
- To make massive constructions works without creating complications to a densely populated area
- To make stations and vehicles accessible

OBJECTIVE(S)

- To improve people's life improving urban mobility through humanised services and operational excellence
- To provide a safe, reliable, comfortable, accessible and predictable public transportation
- To minimise environmental impacts in urban mobility
- To promote social inclusion by income generation, diversity, and region development at all ESG and economic perspectives
- To act ethically and with integrity with customers, partners and all other stakeholders



► 2000 Series train

TYPE OF SERVICE

Urban public transportation system - Metro.

TYPE OF INITIATIVE

CCR Metro Bahia is responsible for the construction, maintenance and operation of the Salvador and Lauro de Freitas Metro Rail System.

CAMPAIGNS AND PUBLIC ACCEPTANCE

Ridership jumped from 11 million passengers in 2016 to 107 million in 2019, transporting 428,000 people per working day, and 9.9 million per month. It is one of the most successful rail cases in the country, with a customer satisfaction and reputation over 90% and a Net Promoter Score (NPS) over 75, which considers the service provided as a level of excellence.

TIMELINE

2013 – 2020.

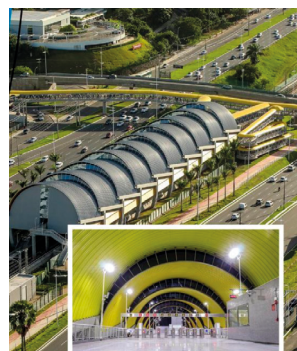
FINANCING

Metro Bahia is a PPP Project in with investment of US\$ 1.2 billion, 30% from the State of Bahia and 70% from CCR.

The concessionaire obtained a long term project financing from the National Development Bank (BNDES).

SUCCESS

Several of the success factors are the improvement of integration within the city, quality of life for people by improving traffic and urban spaces and income generation providing thousands of direct and indirect jobs. It is also a proponent of technology and safety using CBTC, responsible towards the environment by reducing emissions and being socially responsible and accessible.



► Imbuí Station

TRANVIA DE AYACUCHO: BUILDING A METRO CULTURE MEDELLÍN (COLOMBIA)



COMPANY

Metro de Medellín LTDA.

CHALLENGE(S) TACKLED

Regular public transport did not satisfy demand which can lead to an imbalance of resource distribution, lack of space also made reaching certain areas a challenge.

OBJECTIVE(S)

- To implement a medium-capacity intermodal transport corridor for the eastern central zone of the city of Medellín
- To solve the future challenges of mobility, urban growth, sustainable economic development and climate change, providing a universally accessible urban passenger transport service
- To generate a service with high quality standards, ensuring shorter travel times, helping to reduce polluting gas emissions, accidents and generate urban renovation and improved public spaces



► San Antonio Station

TYPE OF SERVICE

Urban/Intermodal.

TYPE OF INITIATIVE

Joint Initiative Metro de Medellín LTDA and Municipio de Medellín.

CAMPAIGNS AND PUBLIC ACCEPTANCE

Due to the project, an improvement in quality of life has been observed, together with better safety, appropriation of the “metro” culture, increased utilisation of public spaces.

Users have benefited from the reduced travel times and transport costs thanks to the integration with other modes.

TIMELINE

2009 – 2016.

FINANCING

Cooperation credit with AFD (Agence Française of Développement) and resources of municipality.

SUCCESS

The Tram has transformed the mobility of 350,000 inhabitants in the east of the city. Since the beginning of the commercial operation, it has transported over 60 million passengers (31 March 2021, 5 years after the start of commercial operation).



► Calle Ayacucho con Junín

REGION IN FOCUS: TURKEY



KONAK TRAM – İZMİR (TURKEY)



COMPANY

İzmir Metro A.Ş.

CHALLENGE(S) TACKLED

High numbers of passengers in the city centre and environmental damage.

OBJECTIVE(S)

To reduce traffic congestion by reducing the use of private vehicles.

TYPE OF SERVICE

Urban.

TYPE OF INITIATIVE

Own initiative.

CAMPAIGNS AND PUBLIC ACCEPTANCE

All developments of construction were shared with the public on advertisement boards. The project was quickly accepted by the public.

TIMELINE

2016 – 2018.

FINANCING

The project was completed using external credit.

SUCCESS

- Traffic density and environmental pollution decreased
- The use of private cars in the city centre decreased
- Students in particular started to travel safely and quickly to many schools on the line
- Social life of people improved due to the areas created around the line
- A 71.4% reduction in carbon dioxide has been achieved as a result of the reduced road congestion
- A total of 345,911 kg of carbon dioxide emissions per year are eliminated in İzmir Metro and Tramway operation. This is equivalent to 15,373 trees
- 1,033 trees and thousands of bushes have been planted on the same route, replacing 731 trees and shrubs that were removed and moved to other areas due to the manufacturing works on the Konak Tram line
- New roads have created for pedestrians; lighting, signalling and pedestrian crossing manufacturing have been implemented
- A colourful urban landscape has been created in harmony with the local vegetation along the line



► Examples of areas around the line

ENERGY-EFFICIENT DRIVING PROJECT KAYSERİ (TURKEY)



COMPANY

Kayseri Ulasim Inc.

CHALLENGE(S) TACKLED

In order to fulfil the responsibilities towards the environment and the nature, areas where energy consumption can be saved have been explored and determined.

The regions where savings will be achieved with the driving technique on the tram line have been determined.

OBJECTIVE(S)

To save energy by using energy in the most efficient way, without sacrificing service quality and comfort, in rail system vehicles where electrical energy is used most intensively.

TYPE OF SERVICE

Public Transport.

TYPE OF INITIATIVE

Kayseri Ulasim Inc Own initiative.

CAMPAIGNS AND PUBLIC ACCEPTANCE

This initiative is not directly visible to passengers, but it is a project that indirectly contributes to the protection of the environment and nature. The starting and ending points of the regions where efficient driving is performed throughout the line have been determined.

102 markings were made at 51 points. Energy savings were achieved by providing training to machinists/drivers on efficient driving zones.

TIMELINE

2017 – Present.

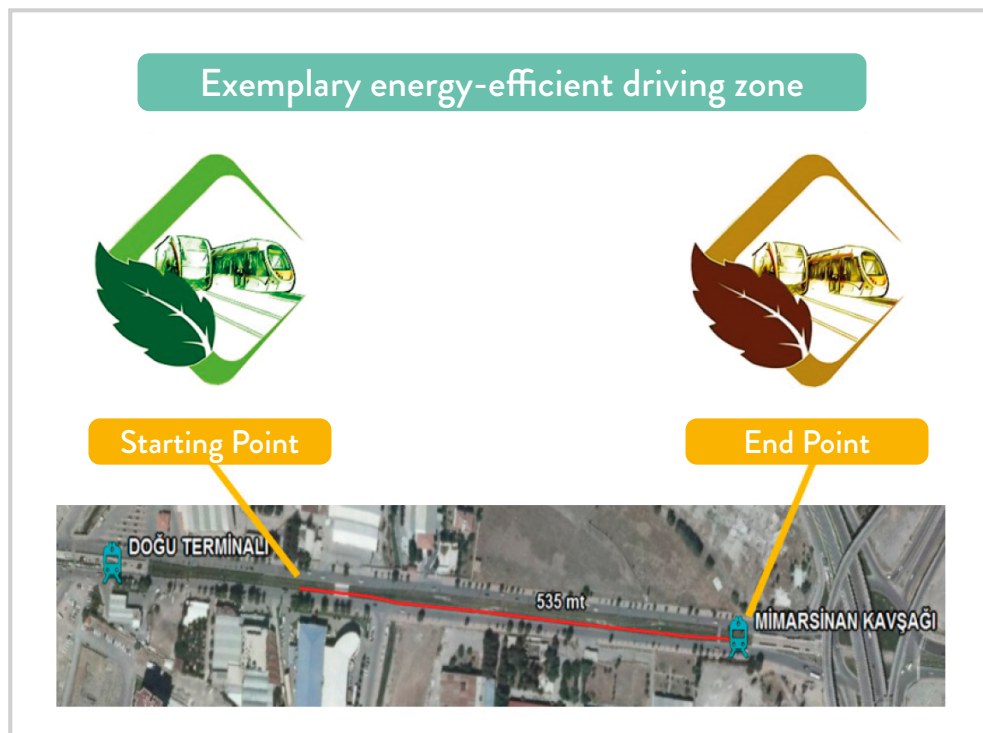
FINANCING

Financed by Kayseri Ulasim Inc.

SUCCESS

Success can be seen in the following statistics:

- Normal driving energy consumption: 83.3 kWh
- Efficient driving energy consumption: 80.0 kWh
- Efficiency: 3.96%.



KAYSERİ ULASIM SERVICE QUALITY IMPROVEMENT PROJECT KAYSERİ (TURKEY)



COMPANY

Kayseri Ulasim Inc.

CHALLENGE(S) TACKLED

- Some actions identified in the project, in order to improve the service quality in urban public transport, require long periods of time
- Creation of documentation that specifies all stages of urban public transport service detail.
- Adoption of the EN 13816 passenger transportation service quality management approach by all personnel in the company.

Equipment and infrastructure costs required to provide services in accordance with EN 13816 standard.

OBJECTIVE(S)

- To improve all end-to-end activities of the transportation service provided by Kayseri transportation company with rail system lines
- To bring the quality of service offered to passengers in line with international standards



▶ Passenger information screens at Stations

TYPE OF SERVICE

Urban.

TYPE OF INITIATIVE

Kayseri Ulasim's own initiative.

CAMPAIGNS AND PUBLIC ACCEPTANCE

While no specific campaigns for publicity were launched as part of the programme, the positive attitudes towards the results of the project can be seen in the customer satisfaction surveys.

TIMELINE

2017 – 2021

FINANCING

The investments required for the project were financed from the company's own budget.

SUCCESS

The number of justified customer complaints per million decreased for three consecutive years. Passenger satisfaction regarding the attitude and behaviour of staff and general satisfaction increased for three consecutive years.



▶ Standardised passenger information at a station

OPERACENTER – KAYSERI (TURKEY)



COMPANY

Kayseri Ulasim Inc.

CHALLENGE(S) TACKLED

Getting the right KPIs is important, but there are many parameters like trip cancellation ratio, trip latency, un-timely departure ratio and executive evaluation to be considered. Railway managers need to measure the service however the data that is collected must be consistent, neutral and automated, but there is no program that is able to collect and manage this aspect. Employee performance is critical in railway firms.

OBJECTIVE(S)

- To develop OperaCenter, a module for measuring the performance of the railway crew operation
- To record all the data along a trip in a computer system from a SCADA system
- To allow supervisors and dispatchers are able to identify the performance of the machinist/driver clearly

TYPE OF SERVICE

Urban.

TYPE OF INITIATIVE

Kayseri Ulasim Inc's own initiative.

CAMPAIGNS AND PUBLIC ACCEPTANCE

OperaCenter is not only a module for following real-time duties-trips, but also a tool to make satisfaction surveys in order to assess dispatchers' and supervisors' performance. To get machinists' overall acceptability, OperaCenter produce tickets in anonymous format and shows only overall scores of superiors and dispatchers. After five years of experience with the OperaCenter module, the company is now able to handle neutral, automated data and use it to make the best employee-focussed decisions.

TIMELINE

2016 – 2018

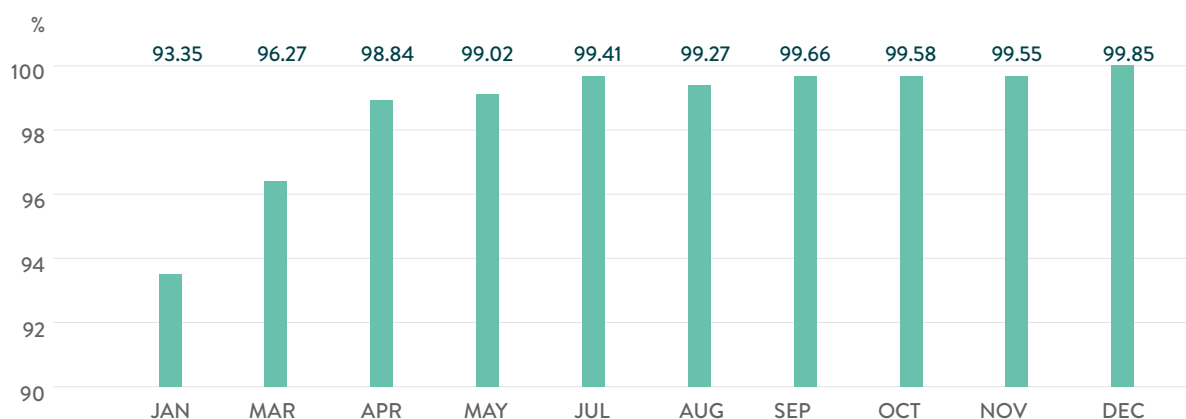
FINANCING

OperaCenter was financed by KayseriUlasim Inc.

SUCCESS

After the installation of the OperaCenter, reliability of timetable improved. Increased punctuality levels caused the customers satisfaction scores to improve significantly. Employees are assessed objectively using trip time measures, executive assessment, and dispatcher surveys.

Duty Data Input Performance - 2016



► Results after starting the OperaCentre

UNHINDERED ACCESS PROJECT KAYSERİ (TURKEY)



COMPANY

Kayseri Ulasim Inc.

CHALLENGE(S) TACKLED

Even systems that are to the highest standards of accessibility might still cause difficulties for some travellers, the situation becoming more significant in busy stations. Therefore, in addition to the services such as announcements and direction signs, an assistant service makes travel even easier.

OBJECTIVE(S)

To guarantee all passengers a comfortable and safe journey, employees dedicated to their assistance are located in the busiest stations.

TYPE OF SERVICE

Public Transport for Disabled Passengers.

TYPE OF INITIATIVE

Kayseri Ulasim Inc's own initiative. The project was carried out with university students who work part-time, whose are paid by Kayseri Ulasim Inc.



► Members of the team from 2017 helping passengers

CAMPAIGNS AND PUBLIC ACCEPTANCE

The project has received positive feedback from the very beginning from not only passengers with reduced mobility (PRM), but also from elderly passengers.

PRM passengers are mainly assisted during boarding and alighting - the station where they get on and the station where they will get off are notified by the control centre.

Additionally, the project provides part time employment to university students.

TIMELINE

2017 – Present

FINANCING

Financed by Kayseri Ulasim Inc.

SUCCESS

The main focus of this project is to assist PRM and elderly passengers and to increase customer satisfaction. It has also been seen to contribute to the increase of overall satisfaction.

General satisfaction survey results:

► 2018 ► 74.0%

► 2019 ► 74.8%

► 2020 ► 77.9%.



CONCLUSIONS

The rail success stories presented confirm that rail is and can become the backbone of transport systems. Despite the challenges in the years to come, rail is already the heart of the mobility system in territories and cities worldwide. This was particularly true if we consider the key role rail played during the COVID-19 pandemics all around the globe from February 2020 onwards, and how it contributed to keep ensuring essential services to cities and territories.

The virtuous examples presented in the Report, promoting the efficient and effective ways to tackle important challenges and developing successful rail services, constitute a great demonstration of the disruptive potential rail can have in shaping the future of the transport system; be it metro, light rail or regional and suburban railways. It also showcases how similar challenges have been tackled and successfully overcome in different places, acting as a collection of recommendations and lessons learnt

for those who want to replicate similar initiatives, delivering excellence in the services to customers, citizens, commuters and societies at large.

Change is a complicated process and the success stories presented prove that this process is not taking place automatically. Time is needed to plan it, particularly due to the long “time to market” that characterises investments and developments in the rail sectors. But also cooperation among actors is needed as well, in order to maximise the quality of service for the final users.

Additionally, the involvement of these users and of local communities from the very initial phases of the projects proved once again to be a key success factor that tremendously contributes to increase the acceptance and boosting the collaboration with the local stakeholders, adding value for the whole territory.



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