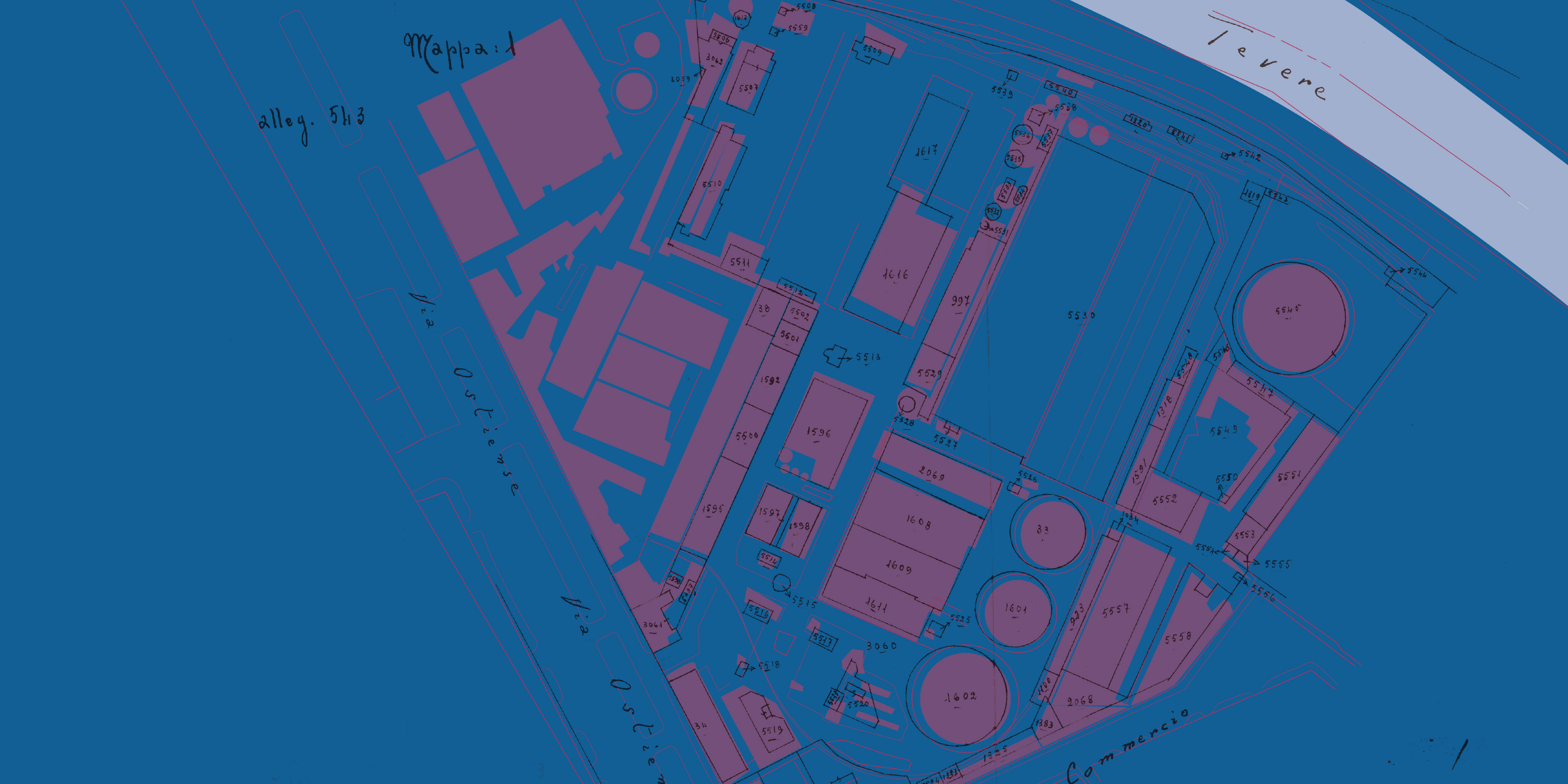
2024-2025 REPORT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01

INTRODUCTION

“The future of ROAD is a shared future, built on alliances, expertise and vision.”

Claudio Granata
ROAD Chairman

ROADS THAT BUILD THE FUTURE

In the heart of the Ostiense district, within the **industrial area of the Gasometer**, in 2023 seven major companies joined forces to transform this iconic site of twentieth-century Rome into a hub for sustainable innovation. This is how **ROAD**, **the ROme Advanced District**, was born.
In this space - once a source of energy for the city- we now test new technologies, collaborative models and solutions to tackle the challenges of the ecological and digital transitions.
We all strongly believe in the need to bring together the public and private sectors (corporates, SMEs, startups, institutions, universities and research centres) to foster a **process of cross-fertilisation** through an integrated value chain approach, and to create a place that is open to all, a forge of talent, a centre for advanced knowledge and research, and a community hub where engineers, designers and scientists can work together to develop solutions for a sustainable future.
Over the course of 2024, our District has become fertile ground for the development of major initiatives that fully reflect ROAD’s mission.

The **Job Transition Book** (JTB) has mapped out a new model to support companies and workers in identifying emerging professional profiles.

With the **Respiro** device (Real-time Environmental Sensing for Personal Intelligent Risk Optimization), the first major outcome of our District, we have shown how technology can serve both the environment and human health, providing an advanced air quality monitoring system to improve people’s safety and well-being.

The **Digital Twin** has made available a virtual laboratory to test a new idea of the city, one that can interact with the real world.

The **ROAD Academy** has trained 20 young talents, building connections between companies, districts and new professionals.

These are just a few examples of how ROAD is becoming a vibrant, collaborative space where the value of co-creation has a tangible impact on local communities, people and businesses.

An open, experimental, hands-on approach.
For us, every project we deliver is a building block in the creation of a shared future made of alliances, expertise and vision.

02

WHO WE ARE

THE IRON GIANT:
history and redevelopment

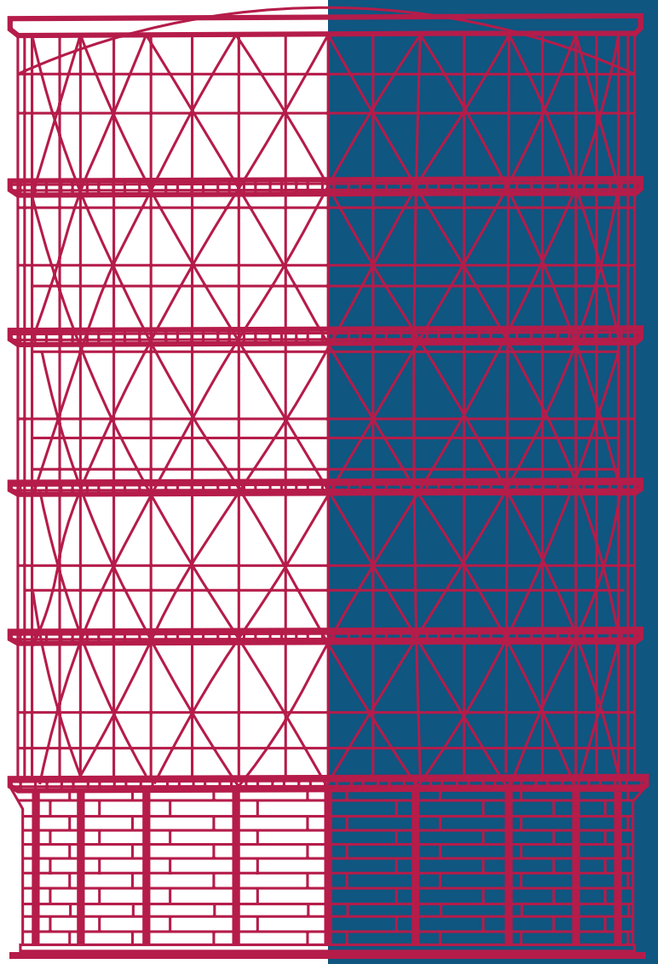
The roads that meet in Rome do not only cross space, but also time. The past, the present and the future intersect at a very specific point in the eternal city: the area which is home to the former **Gasometer** in the **Ostiense** district. Here, the past is still clearly visible in the remains of what for around half a century during the twentieth century was **the energy hub of the capital**. Trains loaded with coal arrived at now-decommissioned plants and facilities, from which gas was extracted to power the city.

In 1909, at the initiative of Mayor Ernesto Nathan, the first of the four current Gasometers was built, along with the gasworks that would later become the headquarters of Italgas.

Between 1910 and 1912, the first three relatively small Gasometers with a total capacity of 110,000 cubic metres of gas came into operation.

Then, in 1936, the great "iron giant" with a capacity of 200,000 cubic metres was built with the help of the Genoese company Ansaldo. At that time, it was the largest in Europe.

Since 2006, the area around the Gasometer has been undergoing major **urban regeneration and restoration**. In the same year, the Municipality of Rome, in collaboration with Eni, launched one of the first redevelopment projects in the area with the creation of the artwork “Luxometro”. This regeneration effort transformed the Gasometer from an industrial symbol into a **cultural and artistic icon** of the city of Rome.



1935-1937
YEAR OF CONSTRUCTION

2,800mq
SURFACE AREA

2,000mc
CAPACITY

90mt
HEIGHT

65mt
CIRCUMFERENCE

CO-FOUNDERS

Eni is an integrated energy company committed to the energy transition with concrete actions towards carbon neutrality by 2050.

Acea supports citizens by providing essential services and improving their daily lives, aiming for ever higher quality through efficient infrastructure management and investments in technological innovation.

Autostrade per l'Italia is committed to making mobility increasingly sustainable, safe, innovative and efficient, responding to the current and future needs of society and communities.

Bridgestone is one of the global leaders in tyres and sustainable mobility. It provides solutions for vehicle equipment and products related to tyre processing.

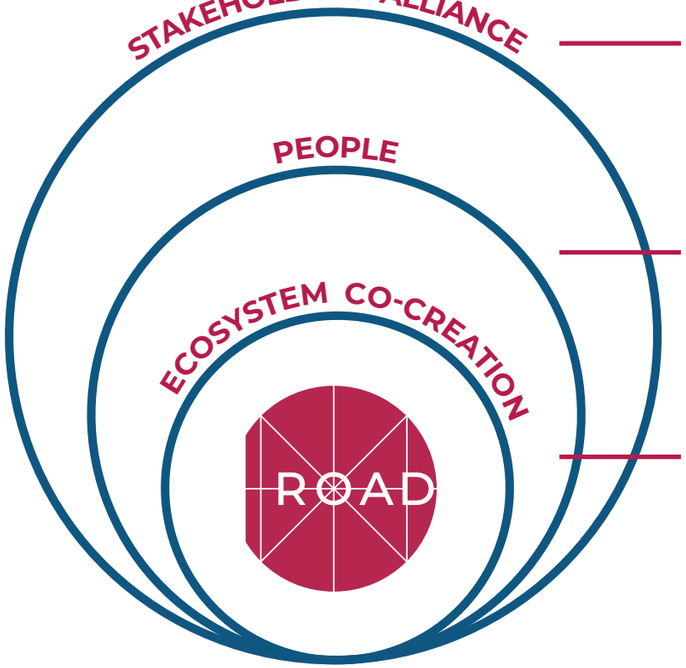
Cisco is a world leader in networking and information. It inspires the creation of new applications, secures data, transforms infrastructure and provides people with tools to collaborate and build an inclusive future.

The FS Group is one of the country's largest industrial enterprises. It promotes safe, comfortable and efficient mobility, actively contributing to progress through innovative and sustainable solutions.

NextChem is the company operating in the field of green chemistry and technologies supporting the energy transition. It belongs to Maire S.p.A., a leading company in the transformation of natural resources.

THE OPERATIONAL MODEL

The operational model of **ROAD** is designed to foster the creation of a technological innovation district through an integrated approach. At the core is a strategic alliance between companies, institutions and research centres, which work together to develop and test new technologies.



COLLABORATIONS

Building a network of national and international partners by activating collaborations with innovation districts.

CULTURE

Developing initiatives to enhance the skills of future talents and leaders of the ecological and digital transition.

INNOVATION

Research, technology transfer and experimentation initiatives with companies, startups, innovation centres and SMEs.

THE ORGANISATIONAL MODEL

COMMON MANAGEMENT BODY

It has decision-making power and acts on behalf of ROAD.

SCIENTIFIC COMMITTEE

It provides strategic guidance and advisory opinions.

OPERATIONS MANAGER

CHAIRPERSON

elected by

PROJECT MANAGEMENT OFFICER

He executes tasks through ROAD resources, monitoring time and costs.

INNOVATION COMMITTEE

It encourages the development of projects and initiatives.

ECOSYSTEM & CO-CREATION

PEOPLE

STAKEHOLDERS ALLIANCE

THE ECOSYSTEM

03

HIGHLIGHTS

ROAD IN NUMBERS

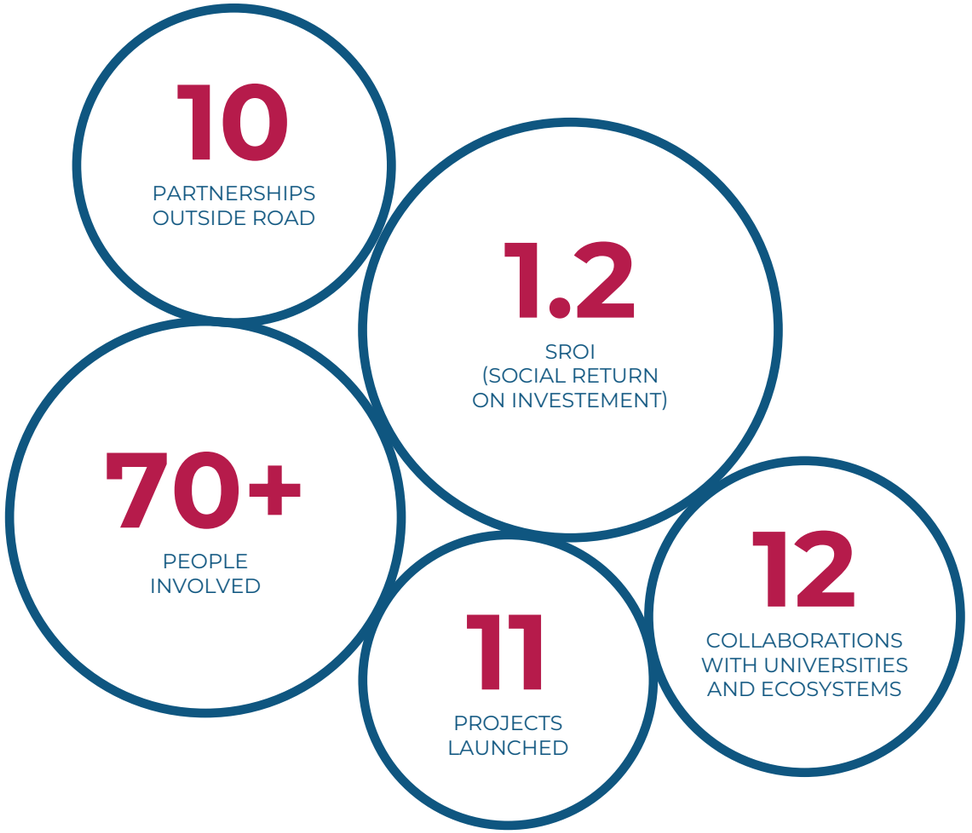
Since its foundation in 2023, **ROAD** has continued to grow and develop projects through collaborations with universities, technology districts and industrial partners.

In its first two years, 11 projects were launched, 10 partnerships were signed with leading companies such as Google and Accenture, and 12 collaborations were established with universities and ecosystems. ROAD is now **a key innovation hub**, ready to evolve further in the years ahead.

The impact of the District's initiative **is positive**: for every euro invested, it generates €1.20 in social, environmental and economic benefits (SROI – Social Return on Investment) for the ecosystem. This result has been made possible thanks to the more than 70 people involved and actively engaged in ROAD's activities.

"An ecosystem is built by combining ideas, visions, skills and courage."

Mattia Voltaggio
ROAD Project Management Officer



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WHAT WE DO

FROM IDEA TO IMPACT

At ROAD, innovation takes shape through projects designed to address the challenges of the **ecological and digital transition**, transforming ideas and technologies into concrete solutions.

ROAD's commitment focuses on four strategic areas. The first is **resilient infrastructures**, where the integration of advanced technologies allows critical networks to be monitored and maintained safely, improving their operational efficiency. **Mobility** is another key area, with projects dedicated to intelligent traffic management, the development of autonomous driving and telemetry optimisation for more sustainable transport.

On the environmental front, the District is working to improve **air quality** and optimise the management of **water resources**, contributing to urban resilience and the well-being of the population. Finally, at the heart of the ecosystem are **people**, with training initiatives and reskilling programmes to prepare professionals and **talents** for a changing labour market.

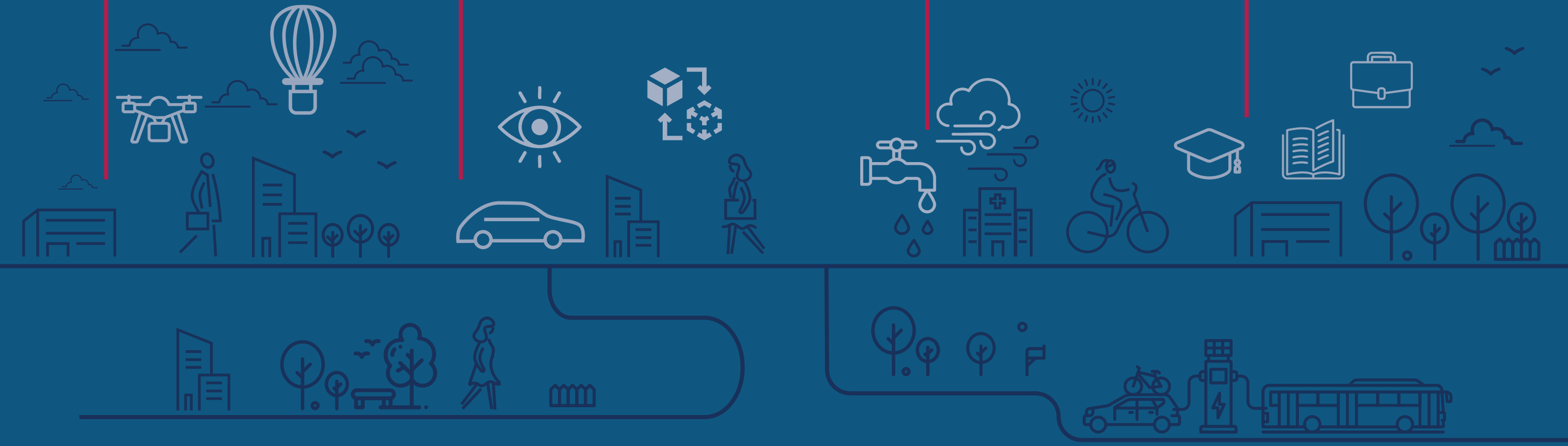
PROJECT AREAS

RESILIENT INFRASTRUCTURES

SMART MOBILITY

ENVIRONMENT AND HEALTH

HUMAN CAPITAL



RESILIENT INFRASTRUCTURES

Safety and **efficiency of infrastructures** are essential for the functioning of cities. ROAD is developing innovative solutions for the **monitoring and maintenance of critical networks**, exploiting advanced technologies to prevent failures, reduce risks and optimise operational management.

URBAN DRONES

BALLOONS

"Critical infrastructures is one of the most important elements in terms of reliability and safety. Through ROAD we work on innovative technological solutions for real-time monitoring."

Massimiliano Garri

Chief Technology, Innovation & Digital Officer of the FS Group

URBAN DRONES

The Urban Drones project uses **automated drones** to monitor traffic, infrastructure and emergencies in cities in real time, contributing to safer and more efficient management of the **urban environment**.

Thanks to their ability to operate continuously and promptly, drones offer **innovative solutions** to address daily challenges in safety and urban management, enabling rapid deployment when needed and improving the surveillance of **critical infrastructures**.

FOCUS

TRAFFIC CONTROL
Optimisation of urban traffic management through constant surveillance and dynamic monitoring.

MONITORING OF INFRASTRUCTURES
Real-time monitoring of the condition of critical infrastructures, such as bridges, roads and railways.

EMERGENCY MANAGEMENT
Ability to respond rapidly to unexpected events, improving the responsiveness of emergency operations and reducing response times.

TIMELINE

STAKEHOLDERS INVOLVED

eni
autostrade per l'Italia
NEXTCHEM

BALLOONS

ROAD, in collaboration with the startup Balloon Tech Co., is developing a project that involves the use of balloons to **monitor critical infrastructures** in non-urban areas and to observe large land surfaces using high-resolution imagery.

Thanks to their ability to operate in difficult and inaccessible environments, balloons represent a solution for ensuring more **effective and safer infrastructures management** across the territory.

FOCUS

ENVIRONMENTAL ASSESSMENT
Use of balloons to collect environmental data and assess the impact of infrastructures on health and surrounding ecosystems.

IOT AND COMMUNICATION
Use of IoT technologies to ensure real-time communication between balloons and centralised monitoring systems.

ASSET MONITORING
Continuous surveillance of critical infrastructures, identifying possible damage or malfunctions at an early stage.

SAFETY AND EMERGENCY MANAGEMENT
Implementation of solutions to monitor infrastructures security and respond quickly in emergencies, improving the response and management of critical situations.

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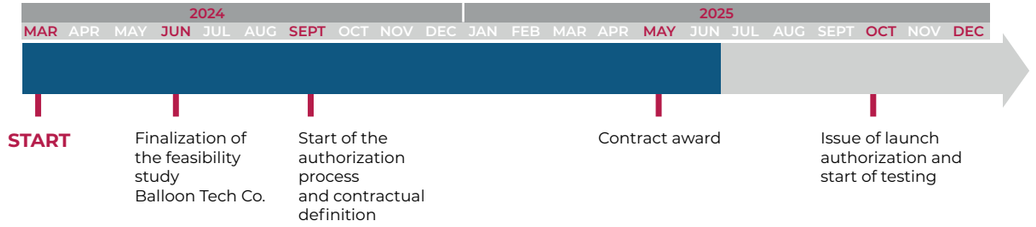
TIMELINE



STAKEHOLDERS INVOLVED

FERROVIE DELLO STATO ITALIANE

eni

Balloon Tech Co.

SMART MOBILITY

The evolution of urban mobility depends on technological innovation. ROAD is testing innovative solutions for **increasingly efficient**, **safe and sustainable transport**, with the aim of reducing environmental impact and improving quality of life in cities.

DIGITAL TWIN

AUTONOMOUS DRIVING

ADVANCED TELEMETRY AND END-OF-LIFE TYRE RECOVERY

"The mobility challenges of the future can be met only through cross-fertilisation between highly innovative companies. At ROAD we are observing how these contaminations can multiply the effects of our investments."

Lorenzo Alleva

Director of Digital Lab
Bridgestone Mobility Solutions

DIGITAL TWIN

The Rome Ostiense Innovation District will be a concrete example of a **neighbourhood of the future**, thanks to a 3D replica of the area created through the Digital Twin project. Integrating a wide range of data, advanced scenarios can be simulated to **optimise urban mobility** and provide a detailed and dynamic view of the urban environment.

A digital replica that not only allows you to **test solutions in real time**, but is also a powerful tool for improving planning and management of urban resources.

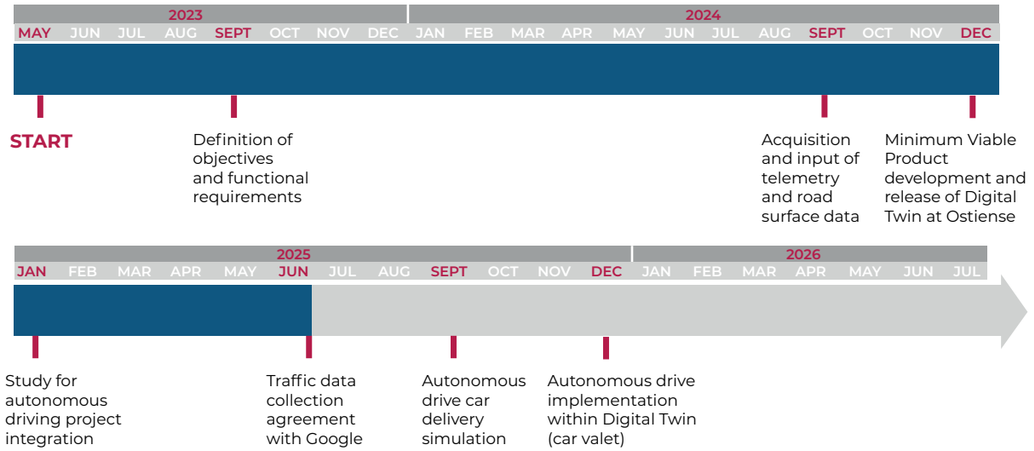
FOCUS

TRAFFIC MANAGEMENT
Optimisation of road traffic through vehicle flow simulations and intelligent traffic management solutions.

NAVIGABILITY OF THE TIBER
Assessment of the river's navigability potential, with the aim of improving waterborne mobility and integrating the project into urban transport solutions.

EVOLUTION OF DIGITAL MAPPING
Continuous updating and refinement of the city's digital map, to create an increasingly accurate and useful representation of the urban layout and its transformations.

TIMELINE



STAKEHOLDERS INVOLVED

eni
autostrade per l'Italia
BRIDGESTONE
Google
accenture

AUTONOMOUS DRIVING

With the Autonomous Driving project, ROAD, in collaboration with MOST (the National Centre for Sustainable Mobility), is developing the **first living lab** dedicated to autonomous driving in a controlled urban environment. The FULL-ROAD project involves simulating a **road circuit** that replicates real driving scenarios through interactions with sensors and the use of artificial intelligence.

This enables the testing of innovative solutions and **improves the safety** and operational efficiency of autonomous driving systems.

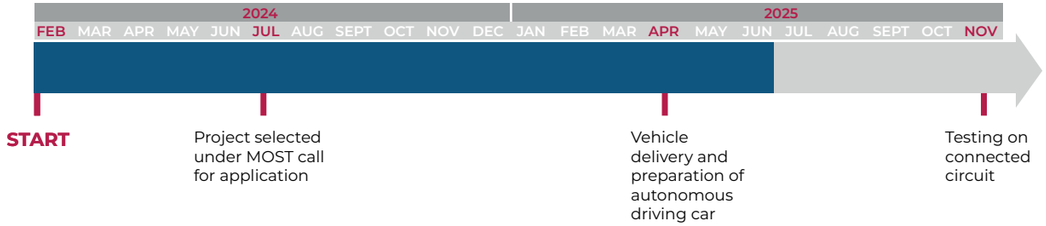
FOCUS

LOWER DEVELOPMENT COSTS
Reduction of costs associated with the development of autonomous driving technologies by simulating real scenarios in a controlled environment.

GREATER SAFETY
Enhanced safety of autonomous vehicles through rigorous testing of interactions between vehicles, sensors and the surrounding environment.

MAINTENANCE OPTIMISATION
Simplified maintenance operations by continuously monitoring vehicles and autonomous driving systems under realistic conditions.

TIMELINE



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MOST

ADVANCED TELEMETRY AND END-OF-LIFE TYRE RECOVERY

ROAD, in collaboration with Bridgestone and Enjoy (Eni's car sharing company), is experimenting with the application of advanced telemetry to fleet vehicles. By installing **telemetric sensors** inside the vehicle cabin, it is possible to monitor road surface conditions in real time and carry out **predictive maintenance** promptly.

In parallel, innovative solutions for recovering End-of-Life Tyres (ELTs) and transforming them into materials for **sustainable paving and noise barriers** and thus contribute to the development of a circular economy model for mobility are being tested with startups Moove and Hatko.

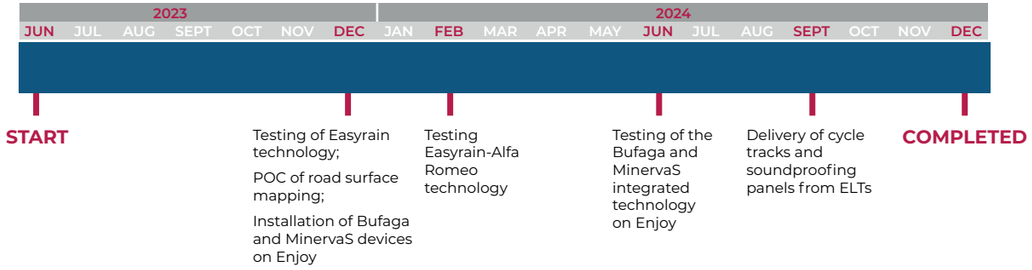
FOCUS

DATA COLLECTION
Installation of sensors for data collection.

REAL TIME MAINTENANCE
Optimisation of roadworks thanks to continuous telemetry analysis.

CIRCULAR ECONOMY
Promoting the reuse of ELTs for sustainable infrastructure solutions.

TIMELINE



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ENVIRONMENT AND HEALTH

Sustainability is at the heart of urban transformation and will play a crucial role in shaping the cities of the future. In this context, ROAD is working on the development of systems for **air quality monitoring** and **the sustainable management of water resources**, contributing to the improvement of public health.

WATER MANAGEMENT

AIR QUALITY

"Intelligence and Robotics together to rethink critical infrastructure for water, environment and energy. Together for sustainable cities and a higher quality of life for all citizens."

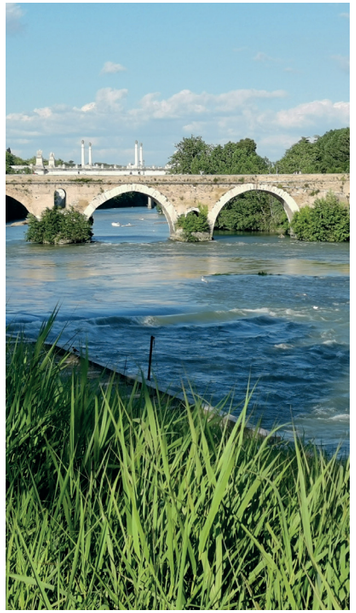
Enrico Resmini

CEO/General Manager AQuantum

WATER MANAGEMENT

ROAD is developing innovative solutions for sustainable water management, addressing the challenges posed by climate change. The project introduces new technologies for the **recovery and reuse of rainwater and wastewater**, integrating smart sensors for water quality monitoring and automated systems based on artificial intelligence.

This optimises the use of water resources and enhances the **resilience of urban infrastructures**, promoting a more sustainable approach to water management.



FOCUS

WATER EFFICIENCY
Reducing waste and optimising urban water resources.

RESILIENCE OF URBAN INFRASTRUCTURES
Implementation of smart solutions for safer and more sustainable water management.

TIMELINE

STAKEHOLDERS INVOLVED

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NEXTCHEM

AIR QUALITY

ROAD, in collaboration with MUSA and Bicocca University, is testing innovative solutions for **air quality monitoring in cities**. The project, named RESPIRO (Real Time Environmental Sensing for Personal Intelligent Risk Optimisation), uses **low-cost mobile sensors** to detect the concentration of particulate matter, making it possible to estimate individual exposure to air pollutants.

This technology not only improves the collection and analysis of environmental data, but also supports health studies aimed at understanding the **impact of pollution on public health**. It thus contributes to the development of more effective strategies for pollutant mitigation.

FOCUS

DATA COLLECTION
Acquisition of detailed information on air quality.

POLLUTION MONITORING
Analysis to identify critical issues and develop response strategies.

TIMELINE

STAKEHOLDERS INVOLVED

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UNIVERSITÀ DEGLI STUDI DI MILANO BICOCCA

MUSA

HUMAN CAPITAL

The digital transformation and ecological transition require new skills. ROAD is investing in training through programmes dedicated to **talent development** and the reskilling of professional roles. The goal is to create **new opportunities** and support companies and workers through change, building an inclusive and collaborative innovation culture.

ROAD ACADEMY

JOB TRANSITION BOOK

FUTURE OF WORK

"At the dawn of the Artificial Intelligence era, at ROAD people are the true heart and driving force of the fast-moving sustainable digital transformation."

Gianpaolo Barozzi

Chief Innovation and Technology Officer CISCO

ROAD ACADEMY

ROAD Academy is the advanced training programme promoted by the innovation district to prepare professionals for global challenges. Developed in collaboration with Accenture, Kilometro Rosso, Experis and WTW, the programme combines **high-level training with hands-on experience** on real projects, creating a bridge between universities, companies and innovation districts.

The initiative not only enhances company resources, but also attracts new talent, strengthening the **link between training and the world of work**. ROAD Academy is a driver of growth and co-creation, helping to develop strategic skills for the future.

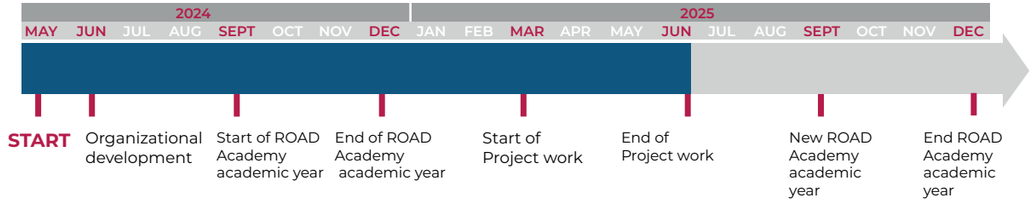
FOCUS

TALENT DEVELOPMENT
Training on key skills for the digital and energy transition.

ATTRACTION
Engaging young professionals and students in innovative projects.

RETENTION
Creating growth opportunities for employees of partner companies.

TIMELINE



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JOB TRANSITION BOOK

The Job Transition Book (JTB) is a tool developed by ROAD to guide companies through the **professional transformation** required by the ecological and digital transition.

By mapping knowledge and skills, the JTB helps to build **new professional profiles** and reskill existing ones. The model is based on three pillars: methodology and architecture; knowledge mapping; development of profiles and skills.

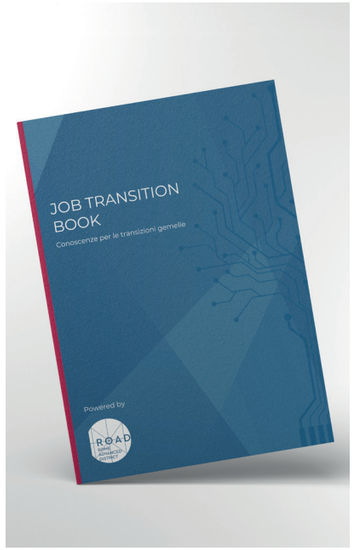
A concrete support to face change and promote a **culture of innovation and sustainability** in the world of work.

FOCUS

KNOWLEDGE ANALYSIS
Development of the methodology for mapping knowledge.

KNOWLEDGE MAPPING
Organising knowledge into areas aimed at building job descriptions and planning training and reskilling.

CREATION OF PROFILES AND SKILLS
Using the tool to support the transformation processes of the labour market, companies, and society as a whole, by developing new professional profiles and adapting existing ones.



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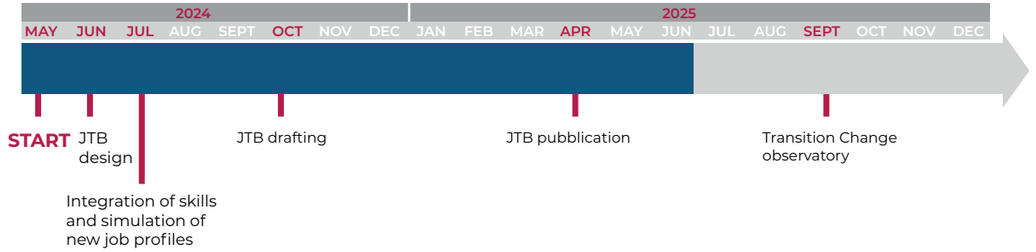

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FUTURE OF WORK

The Future of Work project was created to rethink **workspaces and working methods** in an innovative way. The goal is to create an attractive, inclusive and technologically advanced environment, capable of meeting the **needs of individuals** and organisations, with a focus on the younger generation.

By using open technologies, advanced digital infrastructure and intelligent systems that connect people and spaces, the project aims to **foster well-being**, collaboration and engagement, transforming the workplace into a true hub of connection and experimentation.

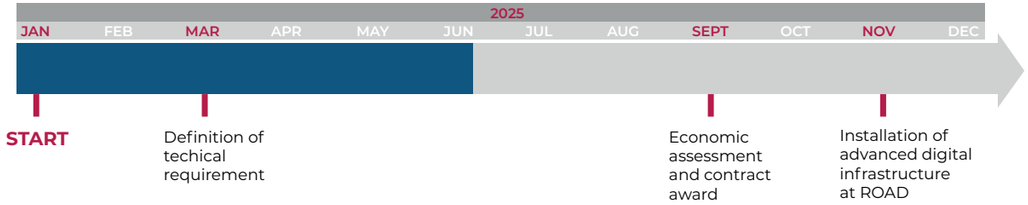
FOCUS

HUMAN-CENTERED DESIGN
Rethinking spaces and technologies starting from the real needs of their users.

ENGAGEMENT AND COLLABORATION
Promoting inclusiveness, interaction and a sense of community.

SMART WORK ENVIRONMENT
Integrating digital infrastructures and sensors to improve the everyday working experience.

TIMELINE



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THE IMPORTANCE OF CONNECTIONS

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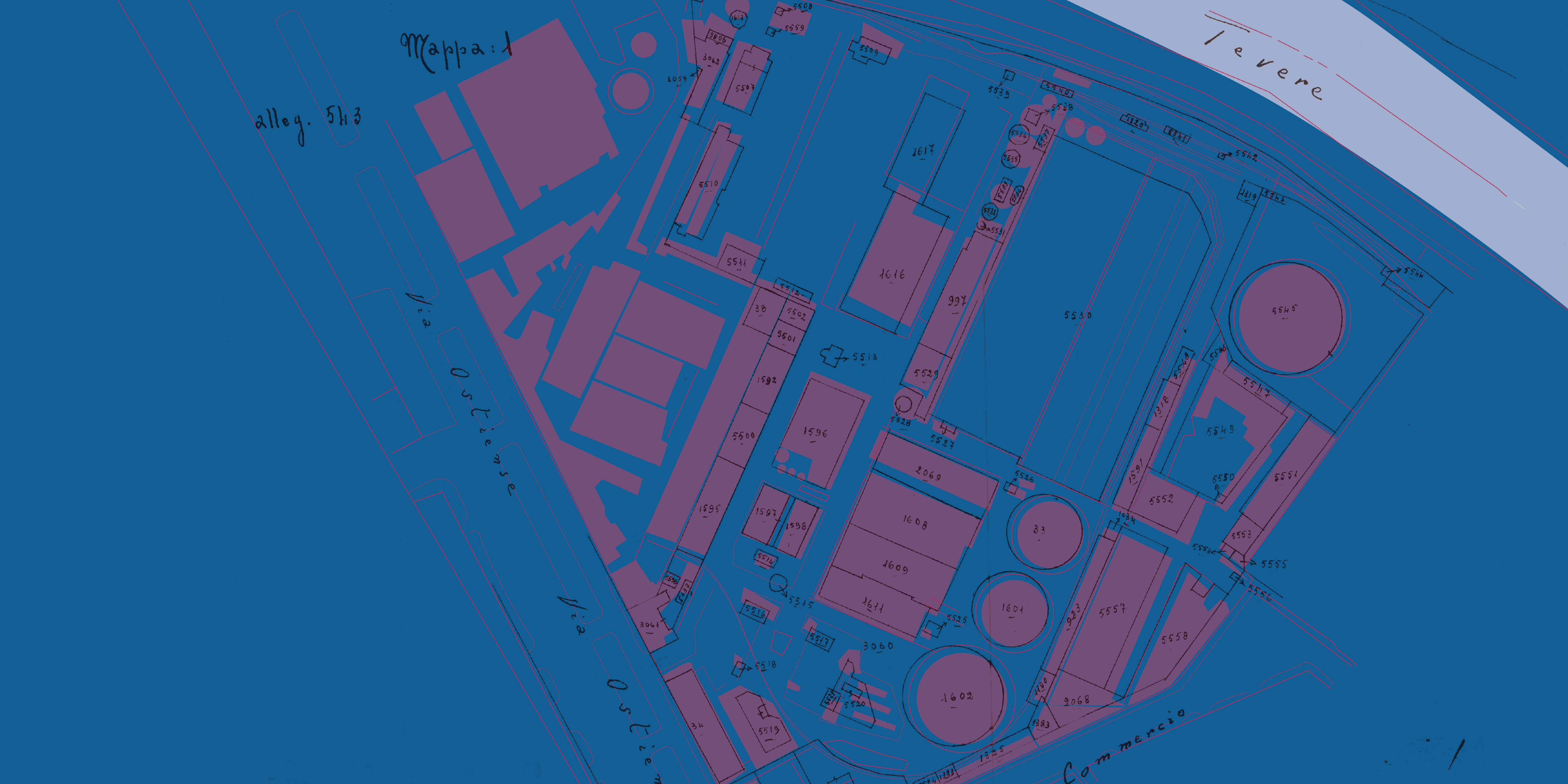

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