

## Ferrovial launches Infraverse as part of its commitment to infrastructure digitalization and virtualization

- Infraverse represents a further step in digitalizing Ferrovial's infrastructure
- Ferrovial is exploring and combining metaverse technologies to achieve competitive advantages across the entire infrastructure lifecycle.
- The company is implementing more than ten projects in this area in its various business units

**Madrid, 27/09/2022.**– Ferrovial has unveiled Infraverse, a pioneering initiative in the infrastructure sector that reinforces the company's position as a leader in innovation. As part of this initiative, the company is implementing more than ten projects that combine technologies such as virtual reality and digital twins to strengthen its competitive advantage while fulfilling the goals of its Horizon 24 plan – to become a more agile, efficient and innovative company.

Infraverse also represents further progress in its commitment to the digitalization and virtualization of its infrastructures and fulfills the dual objectives of improving the user experience and accelerating efficiencies in the full asset cycle. In order to successfully scale this initiative, and in line with its open innovation strategy, Ferrovial is building an innovative ecosystem in partnership with leading companies in the technology and video game sector, such as Microsoft and Unity, which are advanced users of the metaverse.

“For the first time, we are combining advanced visualization technologies and virtual gaming environments with the operation of real transportation and energy infrastructures. Immersive environments that combine the real world and virtual reality enable interaction between the two and have direct applications in the company's everyday activities. This interaction affords Ferrovial a strong degree of flexibility in design as well as efficiency in asset management and operation, and it also improves safety for workers and users,” said Rafael Fernández, Innovation Director at Ferrovial.

“In combination with other advanced technologies such as artificial intelligence and 5G connectivity, we are driving a new generation of sustainable transport infrastructures to offer our clients efficient solutions as well as achieving advanced operation throughout the asset life cycle,” concluded Fernández.

### Immersive infrastructures

The metaverse has numerous applications in Ferrovial's business, providing operational improvements in areas such as design and on-site decision making. This translates into potential cost efficiencies. It also offers opportunities to enhance user services and experience, and the health and safety of employees and asset users.

The use of **digital twins**, i.e., digital representations of physical assets and processes, with other immersive technologies enables the company to create simulations using real data to improve operations throughout the asset life cycle.

Ferrovial is also creating immersive **collaborative environments** within this framework. Using a combination of virtual reality, 3D models and artificial intelligence, the company has established a network of laboratories in cities such as Madrid, London and Austin. These collaborative environments make up the **Infraverse Lab Network**. Devices such as touch screens and HoloLens make it possible for people in different locations to collaborate on projects simultaneously in real time, and to make remote site visits.

This area also offers many opportunities in the field of health and safety. Using virtual reality goggles, Ferrovial can provide virtual training for dangerous situations in a way that is practically identical to reality. The **VR Training Awareness** initiative offers training courses that apply virtual reality across all types of

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risk environments. Virtual reality enables trainees to experience real risk situations and acquire the necessary knowledge to stay safe.

Simulation is the basis for multiple use cases, and it forms the basis for the use in Infraverse of applied behavioral science. Analysis of user behavior coupled with this technology enables Ferrovial to assess whether decisions made during the design phase have a positive impact on infrastructure operation and safety, enabling early modifications to be made to asset designs that would otherwise be impossible or extremely costly.

### **Metaverse**

The metaverse is a digital environment that functions as a reflection of the real world, in which human beings interact both socially and economically through avatars. It promises to definitively eliminate the increasingly blurred line between the real and virtual worlds.

There is a range of definitions of the metaverse and related applications, and investment in the field is expected to expand in the coming years, enabling the construction of 3D virtual spaces in which immersive experiences can be shared with other people, performing everyday activities such as working, playing, meeting with friends, and attending concerts and sporting events. In short, it's a new world in which to live.

### **About Ferrovial**

Ferrovial, a leading global infrastructure operator, is committed to developing sustainable solutions. It is a member of Spain's blue-chip IBEX 35 index and included in the Dow Jones Sustainability Index and FTSE4Good; all its operations are conducted in compliance with the principles of the UN Global Compact, which the company adopted in 2002.

