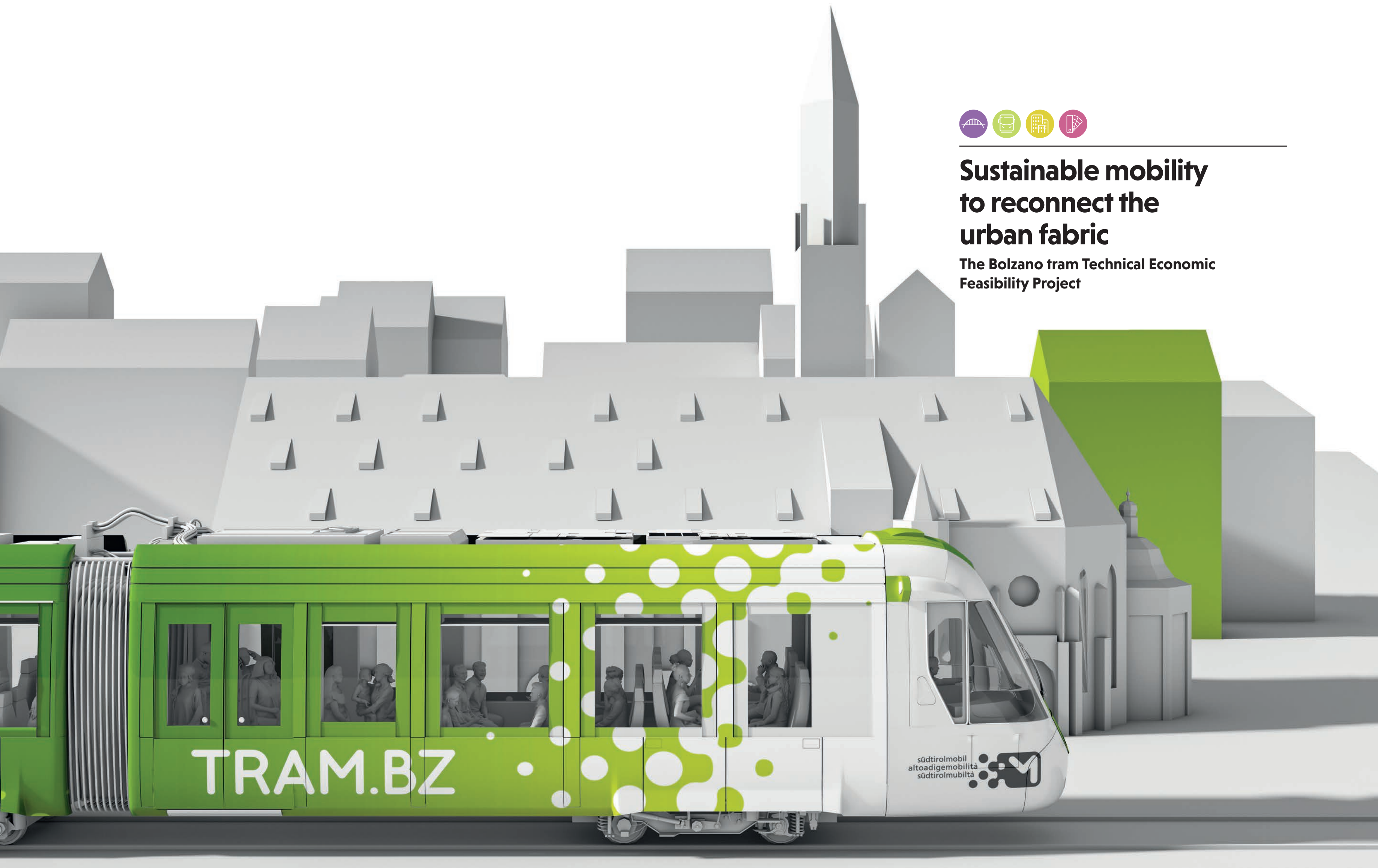




Sustainable mobility to reconnect the urban fabric

The Bolzano tram Technical Economic
Feasibility Project



TRAM.BZ

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In 2019, in the Avviso di presentazione istanze per accesso alle risorse per il trasporto rapido di massa (Notice to present applications to access resources for mass rapid transport), the Ministry of Infrastructure and Transport (MIT) advised administrations of the opportunity to benefit from a grant for the design and construction of mass rapid transport systems, assisting their efforts towards more and more sustainable development of areas. Bolzano seized the opportunity offered by the MIT and planned the creation of a new tramway. The Technical Economic Feasibility Project curated by NET Engineering is intended to define the aims and features of the operation through the indication and analysis of all the possible alternative design solutions.

The project, consistent with the basic criteria and choices indicated in the Urban Sustainable Mobility Plan, is configured with two lines that overlap for most of its length and which fork at the Bivio Merano stop, Line 1 going north towards the hospital and Line 2 going south towards Ponte Adige, thus ensuring the best service in view of modal movements towards public transport. The design plan consists of an integrated infrastructural corridor able to valorise the identifying elements of the city, reconnect the urban fabric and promote the redevelopment of the existing context in the suburban areas of the city, connecting them more effectively with the historic centre and its services. The tram crosses key points of the city (station, historic centre, the Court, Viale Druso and hospital), serves many types of users and, from time to time, adapts to the contexts so that it, too, becomes a promoter of spatial transformation and redevelopment.

The study imagines the new line as an infrastructural, technological and services platform for the whole of the Bolzano urban area which can ensure:

- **A highly accessible intermodal transport system referring to:**

An operational model that minimises change times with a view to improving the user experience;

Integration with the railway system in correspondence with the Ponte Adige terminal through the reorganisation of the spaces and connection with the future interchange car park planned beyond the river, guaranteed by a new pedestrian walkway over the River Adige;

Realizzazione di nodi di interscambio per gli spostamenti di tipo "last mile" con l'utilizzo di servizi di micromobilità e sharing mobility;

- **A traffic monitoring system connected to the traffic light regulation system,**(Urban Traffic Control) and that



Stop at the train station: 3D simulation



Miglioramento della qualità ambientale e rigenerazione urbana



Coinvolgimento attivo della Cittadinanza



Ottimizzazione della rete del trasporto pubblico e privato



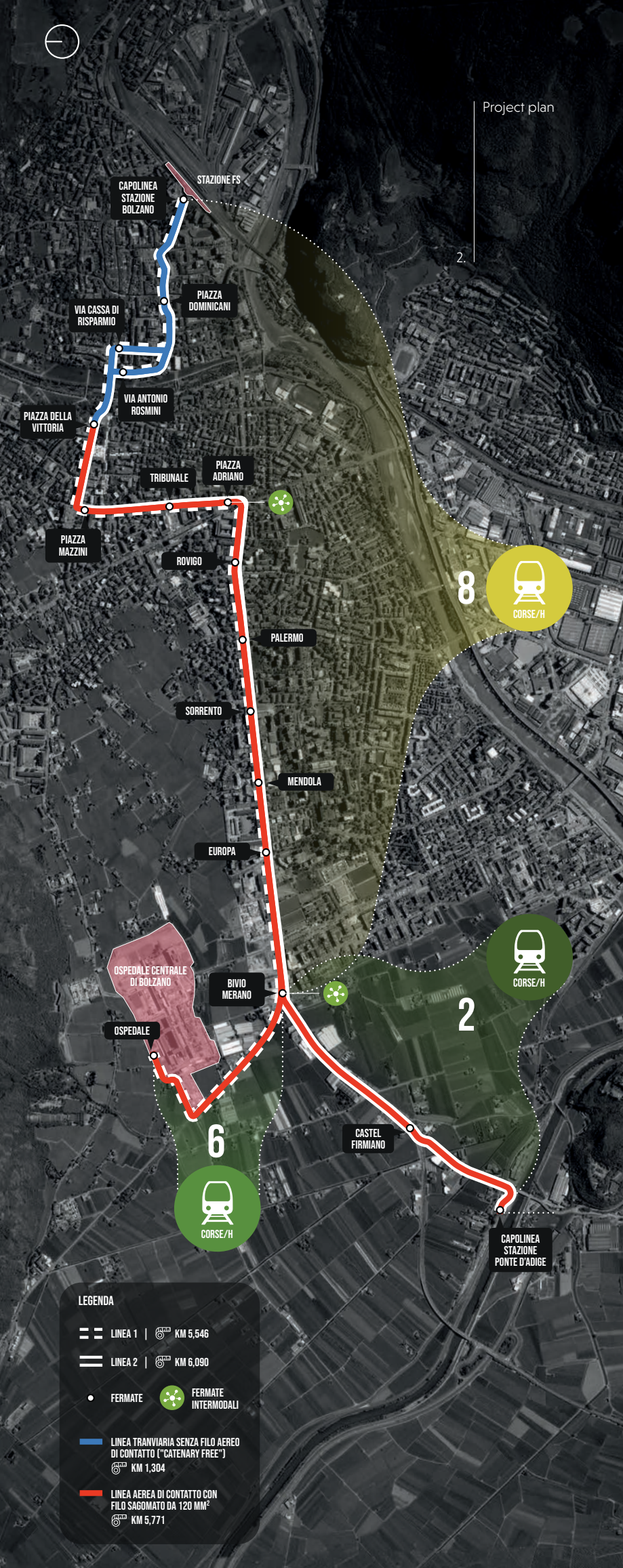
Corridoio infrastrutturale integrato e riorganizzazione dello spazio stradale



Accessibilità alle attività commerciali



Riduzione dei disagi dei cantieri



of public transport stops;

- A traffic control system based on the traffic lights infrastructure, which allows the implementation of private traffic and public transport regulation policies. The tram will be supported by a signalling system which will always ensure precedence at traffic lights, i.e. manage the traffic light system along the project corridor so that the tram will always have priority respecting road safety.

Sustainability and area

The tram does not run with the catenary system in the section from the station at Ponte Talvera, over a distance of about 1.3 km, but is battery powered (catenary-free technology) to preserve the historic centre area as much as possible and minimise the impact of the line in areas of great architectural and landscape value.

The architectural concept of the stops and depot for the rolling stock is **oriented to modern sustainability criteria and inclusion in the area context**. As a result, the creation of a green roof and the use of local materials, easy to maintain and very durable, were planned for the depot. **The environmental impact of such an important work as the tram was carefully assessed, also in terms of the acoustic-vibrational impact and electro-magnetic compatibility.**

The Bolzano tram project was a unique opportunity to also think of a **functional architectural redesign of some spaces in the city** to make them really usable by citizens and ensure better operation of the road system for both public and private transport.

Simulations of insertions in the context of Old Town

