

Swiss Section

Technical visit to Verkehrsbetriebe Zürich (VBZ) – Zürich Public Transport

Report by Chris Glättli



It took some effort for the Swiss Section to schedule a technical visit to the VBZ into the director's busy agenda, but the visit was worth the wait. Marco Lüthi, then a director of VBZ, and Member of the IRSE Swiss Section, welcomed everyone and provided an excellent tour of the operations centre, the yard, and the central workshop.

Zurich is among the top 10 cities in the world with the best public transport and VBZ, with its tram, bus and funicular services, provides close to 1 million passenger journeys per day. The 259 trams operate on a 123km long network covering 14 lines, while the 231 buses serve 60 lines on a 388km network.

Today, three generations of trams, the Cobra, Flexity from Bombardier, and the older Tram 2000, are driving on the city network. A very high 98 per cent of traffic lights give priority to the trams and buses, and VBZ employs around 2,500 people including 1,700 tram drivers, termed 'pilots' by the company.

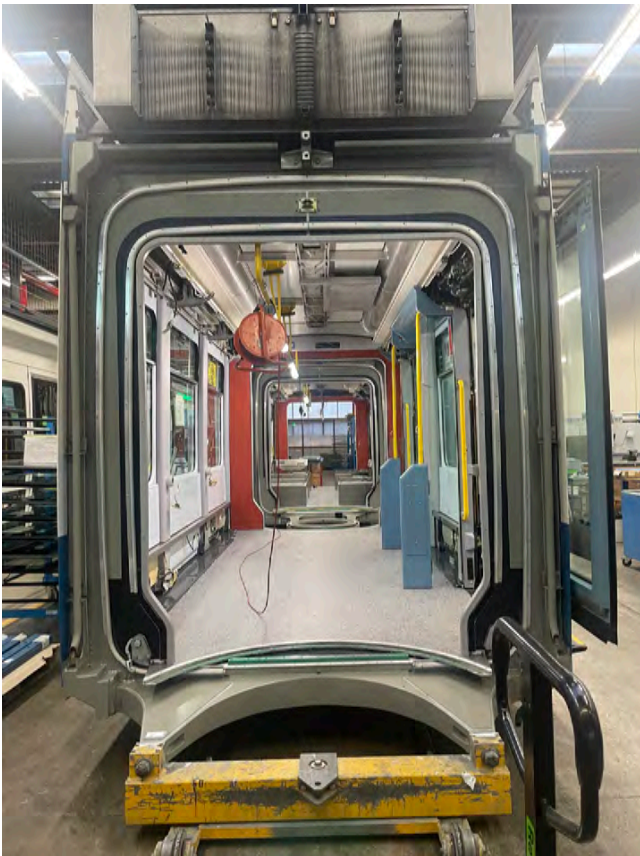
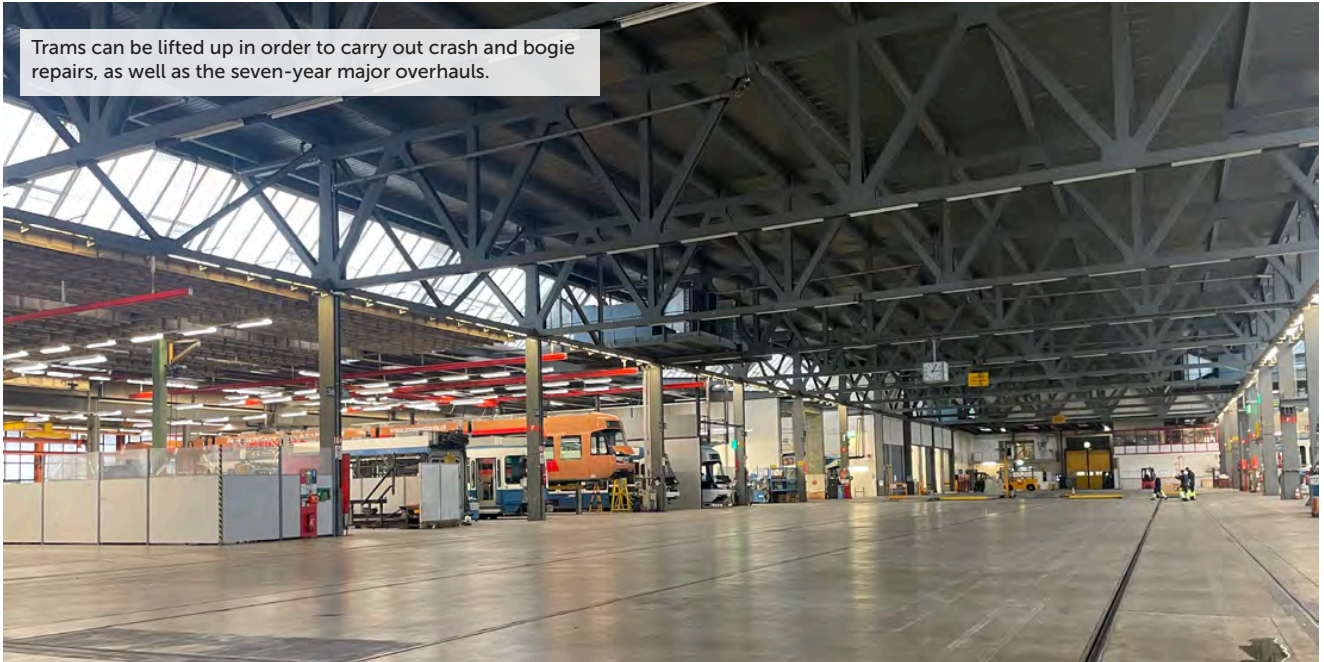
The central workshop maintains all the trams and buses, including major overhauls of the trams. These undergo a complete revision approximately every seven years or 150,000km. Typically, an overhaul takes 21 days, with most of the parts being in stock and produced internally, and crash repair is one of the main competencies of the workshop.

The 50-year-old building also has to cater for all the generations of trams, including the modern longer trams. Where the Tram 2000 was 20m long, the Flexity is close to 43m long. To transport the trams from the entrance to the workshops, the 'ferry dolly' had to be creatively extended to accommodate the long trams thanks to a curved design.

In the operations centre, it was clear that the centre benefits heavily from the advantages of what is now known as the 'Zürich model', where trams and buses have their own, separate, lanes with traffic light priority to avoid congestion, and incident management via the operations centre. This produces Swiss punctuality of -1, +2 minute service accuracy for 85 per cent of the services, shorter travel times, and greater timetable stability.



Trams can be lifted up in order to carry out crash and bogie repairs, as well as the seven-year major overhauls.



These separated lanes lead to quicker accident recovery, and combined with passenger announcements about any unavailable services, passengers can make informed decisions on their further travel.

VBZ deals with around 10 mishaps per day, and when these occur the focus moves from driving punctuality to driving at regular intervals. The entire network revolves around the complexity of the main train station, Zürich Hauptbahnhof, also known as Zürich HB, where 160 tram services are provided every hour.

In the control room, multiple screens display a dynamic network of lines and services, resembling a big wheel in motion. Each late-running service is highlighted in a distinct colour, enabling operators to quickly identify and prioritise their attention on coordinating recovery of the affected services. We could sense the commitment to both maintaining order and addressing unexpected challenges first-hand. The team's dedication to resolving and managing unforeseen situations was palpable. Many thanks to Marco and team for providing the tour.