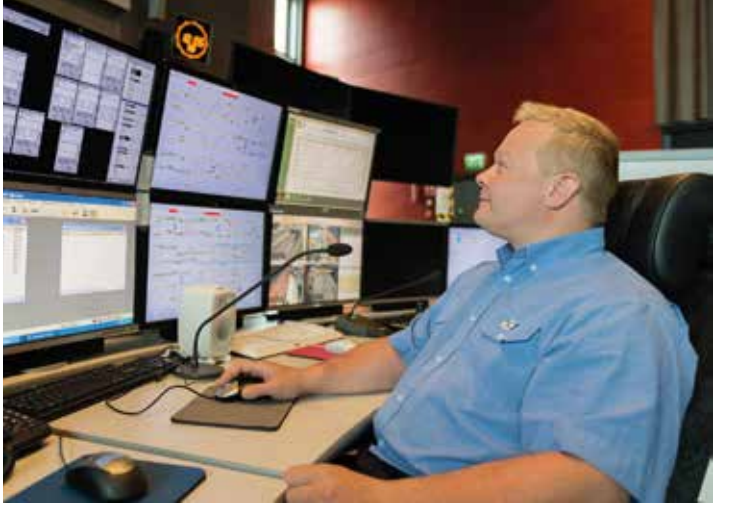
On the right track

In buzzing capitals such as Oslo and Helsinki, smooth public transportation makes all the rush hour difference. Adopting TETRA as their mission-critical communication system has helped these two cities to take care of the commuting business.

A metro transport system is an essential element of any big city's infrastructure. Especially during morning and after-work rush hours, it can rightfully be described as the veins of the city. It delivers "the cells" to where they need to be at any given time so that "the body" can function to its best capabilities.

The metro also reflects strongly and immediately if something goes wrong. A city's commute infrastructure is, even during an ordinary workday, more or less like a house of cards. A little mishap is all it takes to cause big problems and massive delays, if not an outright chaos all around the city.

That is why reliable communications solution is absolutely essential. And that is why Oslo and Helsinki have adopted TETRA networks and radios – to make sure that under all circumstances, people can be reached and information spread efficiently.



Markku Kari, the Chief Operator at Helsinki City Transport's metro control center.

Wide use means wide benefits

"For us, safety was clearly the most significant driver for choosing TETRA", says Tor Ole Aasen, Preparedness Adviser, Safety and Security for Oslo Metro Control Center. "Stability is essential – we have to be able to count on getting in touch with train drivers, maintenance people, guards and so on, even if they are in the middle of a tunnel."

The metro train drivers use their TETRA devices "all the time", Tor Olav Hjelleset, Technical Manager, telecommunications and automation, emphasizes.

"They report to the dispatch center at the start of the day, then report any suspicious activity they see – forgotten stuff, holes in the fence, even people on the rail. It is amazing how much can fit into a perfectly normal day of driving a metro train."

Markku Kari, the Chief Operator at Helsinki City Transport's metro control center, agrees and adds:

"TETRA is extremely flexible and versatile way to communicate."

Going underground

With its 101 stations, the Oslo metro network is the largest in Scandinavia. The need for reliable, accurate communications is constant. To ensure that the Metro Control Center currently has more than 700 TETRA terminals in use. The network, set up by local operator TC Connect, is their own closed system. Jan-Erik Sandbaek, the ICT Coordinator, says that the metro professionals in Oslo are very pleased with the way the network is operating.

"From the safety point of view, when you go underground the network reliability is even more critical. Deep in the tunnels, network coverage typically weakens. Our previous network was able to cover only 70 per cent of the tunnels at best. TETRA's coverage is as close to perfect as it can get. Furthermore, maintenance has been greatly organized. Anything happens, we simply report it to TC Connect and they take care of it. All in all, TETRA network has

proven very reliable, and we are extremely satisfied with it."

Group calls improve communications

Besides safety and reliability, TETRA also stands out with special features – the group call function being one of them. Markku Kari says that the earlier radio system in Helsinki did not feature group calls, so also in that sense TETRA improves communications.

To make communication even more efficient, the metro drivers in Oslo have their own groups based on the direction they are driving. Group calls are an excellent way to deliver a message of any unexpected incident such as a holdup at a station. The following trains are notified before they approach, which makes travel safer and smoother.

"Thanks to their convenience and efficiency, group calls are the most common form of TETRA communication in the Metro Control Center", Tor Olav Hjelleset mentions.

Developing the opportunities

Now that Oslo Metro Control Center has successfully adapted to using TETRA network and radios, they intend to take full advantage of the opportunities.

As the network can conveniently be updated and upgraded, it is viewed as an investment for long term. The feedback has been positive and TETRA is becoming an integral part of metro's daily operations.

"I think we ended up with a system that is stable and secure, and user-friendly as well", Tor Olav Hjelleset says. "And we hope it will develop in the future as well."

In Helsinki, Markku Kari says TETRA was "a natural step forward" in mission-critical communications. Compared to previously used mobile phones, matters can be handled a lot more efficiently. Furthermore, TETRA provides a multi-authorities talking group to get in touch with other authorities such as rescue department and the police. That is not yet an opportunity in Norway – but definitely a direction the men at the Oslo Metro Control Center want to proceed.

TETRA can indeed provide a comprehensive communication system to build on. At the same time, it can help organizations such as Oslo Metro Control Center to assume new roles and responsibilities, should they so decide. The needs to ensure stable and safe commute for the city's inhabitants may evolve, but TETRA's role as the mission-critical system will remain as such. As the three TETRA musketeers from Oslo put it:

"If our communication system goes down, the metro simply stops."

You really can't get more mission-critical than that.

From left tor right: ICT-koordinator Metro Control Center Jan-Erik Sandbæk, Preparedness Adviser, Safety and Security Tor ole Aasen and Technical manager telecommunications and automation Tor Olav Hjelleset

Watch on video how Helsinki metro is using TETRA: vimeo.com/179432802