FREQUENTIS

COMMUNICATION AND
INFORMATION SOLUTIONS
FOR A SAFER WORLD

CASE
STUDY

dsb Directorate for Civil Protection and Emergency Planning

dNk Direktoratet for nødkommunikasjon

INTEGRATED COMMUNICATION FOR PUBLIC SAFETY

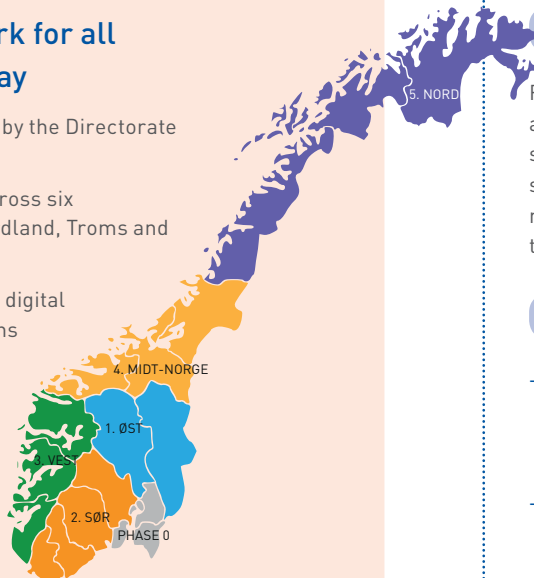# IMPROVED RESPONSE TIMES AND RESOURCE MANAGEMENT FOR NORWAY'S FIRE SERVICES

Norway's new digital TETRA network (Nødnett) is designed to improve communication between the major emergency services. But it has an additional benefit for fire and rescue services: greater cooperation and shared resource use between independent municipal fire departments.

"Before Nødnett there were several different radio communication systems", recalls Øyvind Arntzen, Head of Vestviken Fire Control Centre in Drammen. Now service borders are less of a barrier to efficient communication and incident management, thanks to Nødnett and Frequentis control centre technology: the Frequentis solution integrates the company's own ICCS 3020 communication system with VISION computer-aided dispatch (CAD) from partner Capita.

WHAT IS NØDNETT?

A secure, digital radio network for all emergency services in Norway

→ Complex, 6+ billion NOK project led by the Directorate for Emergency Communication

→ Nationwide roll-out (2011 – 2015) across six geographical regions, ending in Nordland, Troms and Finnmark

→ Delivery & operation of a nationwide digital TETRA network by Motorola Solutions and some 40,000 TETRA radios by various suppliers

→ Delivery of about 800 control centre working positions by Frequentis, based on the company's ICCS 3020 communication system

5. NORD
4. MIDT-NORGE
1. ØST
3. VEST
2. SØR
PHASE 0

"When you have to drive for 20 minutes to an incident, the first unit on scene can now give all units all the information needed before arrival at scene."

Øyvind Arntzen, Head of Vestviken Fire Control Centre

CUSTOMER PROFILE

Directorate for Civil Protection
http://www.dsb.no

Directorate for Emergency Communication
http://www.dinkom.no

BUSINESS SITUATION

Norway's Directorate for Emergency Communication (DNK) is charged with development and operation of the new digital TETRA radio network (Nødnett) for the emergency services. Priorities for the required fire control centres, represented through the Directorate for Civil Protection (DSB), were support for multiple cross-agency talk groups, improved communication quality, adaptability to local needs, and a visual CAD solution implemented using VISION.

SOLUTIONS

Frequentis worked with DNK to develop a custom Nødnett specification of its state-of-the-art ICCS 3020 communication system. This was adapted to DSB requirements, e.g. through the requested integration with the VISION CAD solution.

IMPACT

→ Faster response times: the system automatically identifies the nearest available resources across all fire services.

→ Improved collaboration: shared talk groups and harmonised workflows improve coordination with neighbouring fire services, the police and emergency health services.

→ Enhanced situation awareness: these talk groups allow quicker distribution of critical incident information.

→ Superior audio quality: together with rapid connections, the new system ensures clarity of communication to avoid delays and misunderstandings that could compromise safety.

FROM LOCAL SINGLE-AGENCY OPERATIONS TO A MULTI-AGENCY, CROSS-BOUNDARY APPROACH

TECHNOLOGY DRIVES COOPERATION

Local authorities are responsible for Norway's 375 fire and rescue services and 18 regional fire control centres. In the past, each service used its own radio communication system, so emergency communications with other fire and emergency services were quite limited: "We really first got to speak to each other at the incident site itself", says Øyvind Arntzen, Head of Vestviken Fire Control Centre.

It's no surprise then that the fire and rescue services welcomed the national Nødnett initiative: a digital TETRA radio network (supplied by Motorola Solutions) for all emergency services with associated reequipping of command and control centre facilities. Each new or refurbished fire control centre uses a Nødnett version of the Frequentis ICCS 3020 communication system with full turnkey integration of the VISION computer-aided dispatch (CAD) system from Capita. These new, integrated systems accelerate emergency communication and responses through features like automated, rapid call-out alerts to fire and rescue service personnel.

CONFIGURABILITY A DOUBLE-EDGED SWORD

Although all control centres share the same basic system, each is configurable to local needs. So, for example, a control centre can create a special incident category for a local chemical factory. However, says Arntzen, "Too much local configuration can take us back to some of the problems of separate systems". A new configuration group initiative aims to ensure greater consistency, for example, of on-screen call code colours. This will also help staff adapt faster to local systems.

FASTER, MORE EFFICIENT RESPONSES

The main benefits of the new system lie in improvements to incident responses. The computer-assisted dispatch, for example, gives controllers a visual overview of available resources. It uses incident type and location to identify and alert the nearest resources, with the choice no longer limited to the local region: operators can call out and coordinate resources from other areas, too. "It doesn't matter which fire brigade gets the emergency call", says Arntzen. Further measures are now needed to increase utilisation of the solution, in the light of operator and fire service feedback.

While Nødnett has improved operational communication between fire departments massively, local autonomy still makes know-how transfer across regions a challenge. According to Geir Jahrsengene, roll-out project manager for the Directorate for Civil Protection (who manage the Nødnett project for fire and rescue services at a national level), a next step is therefore to further optimise cooperation between Nødnett operators across neighbouring control centre areas.

Photo: Vizpro.no

KEY FEATURES OF THE FREQUENTIS ICCS 3020 SOLUTION:

General features:
→ Scalability, resilience and centralised maintenance
→ Rich telephony and radio talk groups functionality
→ Messaging services (SMS, SDS, email)
→ Radio GPS positioning
→ Full utilisation of TETRA voice and data services
→ Intuitive, fully-configurable user interface (touchscreen)

Through integration of VISION:
→ Full callout functionality
→ Automatic suggestion of best available resources for an incident (across all fire departments)
→ Full support for integration with 3rd-party automatic fire alarm systems (AFA)

IMPROVED CROSS-AGENCY COLLABORATION

Perhaps the most important benefit of the new system is multiple customisable talk groups, which can include the other emergency services. At the Vestviken control centre in Drammen, for example, a standardised set of questions ensures callers to any emergency service also provide the information needed by the other services. Cross-agency coordination now begins with the emergency call, not at the incident site: "You just push a button and call the police and health service at the same time. With colour coding on operator screens they know it's a call they have to take", says Arntzen.

"It's easier for the operators and the sound quality is very good."

Øyvind Arntzen

FREQUENTIS