



# HELPING DENMARK'S FIRST RESPONDERS TO PROTECT THE PUBLIC

BUILDING, OWNING AND OPERATING DENMARK'S NATIONWIDE TETRA NETWORK



Picture courtesy of [www.politi.dk](http://www.politi.dk)

## DENMARK'S NATIONWIDE TETRA NETWORK

DBK, a subsidiary business of Motorola Solutions, won a competitive tender released by the Danish government for a dedicated public safety communications network. DBK recommended the network design, build and integration of a nationwide TETRA network, which it would own and operate. The network now spans 43,000 km<sup>2</sup> with approximately 500 base stations and provides communications coverage for all Danish emergency services. DBK has integrated more than 21,000 public safety personnel onto the system. The majority of police teams have already moved across to the network. And in due course all agencies with a public safety remit are expected to use DBK's network. The Danish government (National Police) leases access to the network with DBK's contract spanning ten years from completion of the network rollout.

The network delivers highly resilient, continuous and secure communications with the scalability to ensure public safety teams can efficiently respond to major events and crises. For instance, during the COP15 Climate Change Summit held in Copenhagen in 2009, the network coordinated over half a million group calls in ten days. On the day US President Barack Obama attended the summit, 61,666 group calls were made. During the successful operation, first responders had continuous access to communications to help them protect dignitaries, the public and themselves.

## CUSTOMER PROFILE

### Organisation

Danish Public Safety agencies

### Location

Denmark

### Industry

Public Safety

### Motorola Solutions' equipment/services

- Dimetra IP TETRA network (six zones) with geographical redundancy
- Construction and the 24x7 operation of a dedicated Network Operations Centre (NOC)
- Approximately 500 base station sites providing coverage across 99.5 per cent of the country
- 14,500 TETRA terminals (both portable and mobile)

## CASE STUDY

### DENMARK'S NATIONWIDE TETRA NETWORK

**“Denmark’s nationwide Motorola TETRA network, which we operate, provides first response teams with the dedicated, highly resilient and secure communications they need to protect themselves and the public. Because we designed and built the network to meet strict performance criteria and measures, the agencies can focus on their core roles and trust that communications are always available. From a commercial perspective, the operating model ensures that the Danish government’s investment is reduced, optimised and protected.”**

Bo Wassberg, CEO, Dansk Beredskabskommunikation (DBK)



## CHALLENGE

The Danish government convened a panel of academic and industry experts – the Radio Communications Committee – to review the country’s public safety communications systems.

It found that around 100 separate analogue networks provided communications regionally for paramedics and firefighters. The Danish police had access to a nationwide network but this was based on legacy technology.

The committee recognised that the technological limitations experienced by Denmark’s first response agencies as a result of outmoded communications equipment were likely to impede effective crisis response. It therefore advised that the government issue a tender for a dedicated nationwide communications system tailored to the unique demands of first responders.

## SOLUTION

Following the release of its tender the Danish government selected the proposal from DBK to build a nationwide network based on Motorola’s Dimetra IP TETRA technology. The award of the contract recognised the technical ability of TETRA to provide a secure and resilient countrywide service. In its proposal, DBK recommended an innovative commercial structure; with the support of Motorola Solutions’ network engineering resources, technical and maintenance skills and deep domain expertise, DBK offered to design, build, own and operate the network.

Deployed on time and budget, the system covers 99.5 per cent of Denmark and is managed 24x7 from a dedicated Network Operations Centre (NOC). Built and run by DBK, the NOC monitors service performance, responds to network alarms and provides a help desk for users. DBK is responsible for delivering services to predefined service level agreements relating to network resilience, coverage and capacity. It also provisions all agencies and users onto the network as they retire their old analogue

systems and move users to the digital TETRA network. This includes preparing contingency talk groups to allow first response teams to communicate on the same channel in the event of a crisis.

## RETURN ON INVESTMENT

No public money was required to build the network. Also all operations, maintenance and network upgrade costs are managed and financed by DBK. The only cost the government incurs, therefore, is a monthly fee to lease access to the network for public safety teams.

The agreement gives the government clear visibility of its financial liability over the decade-long term of the agreement.

The operating model delivered by DBK reduces the Danish government’s capital expenditure, allowing it to manage its operational expenditure more effectively while delivering the most value to the Danish public purse. In addition, DBK provides services within the boundaries of strict service level agreements. This ensures that the risks associated with any large infrastructure project are significantly reduced.

By consolidating public safety and other government agencies onto a single nationwide communications system, crisis response has also been improved with intra-agency communications and collaboration now possible.

The network is also clearly demonstrating its ability to provide highly resilient, continuous and secure communications during major events. This was illustrated during the COP15 Climate Change Summit held in Copenhagen in 2009, where over half a million group calls were made over a ten-day period. The load on the network peaked during the visit of US President Barack Obama. On this one day 43 group calls a minute were made with 61,666 group calls in total. Between 9am and 10am traffic peaked at 5,133 calls.

## Key benefits for agencies, users and the government

- **No capital investment:** DBK delivers the network as a managed service in return for a monthly fee
- **Reduced risk:** DBK adheres to strict service level agreements spanning reliability, capacity and resilience
- **Optimised network availability:** All maintenance and upgrades to the network are the responsibility of DBK
- **Enhanced mission critical performance:** First responders can now communicate one-to-one or as part of a talk group, and between agencies. Users also have access to secure and continuous voice and data services nationwide to optimise productivity and help safeguard themselves and the public

For more information on Motorola Solutions’ integration, support and managed services, please visit us at [www.motorolasolutions.com/services](http://www.motorolasolutions.com/services) or access our global contact directory at [Motorola.com/Business/XU-EN/Contact\\_Us](http://Motorola.com/Business/XU-EN/Contact_Us)

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