

VIRVE Day, 2nd March 2011

The Operations Model: Authority Radio Network in Denmark

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- What does SINE mean:
- In Danish: SikkerhedsNEttet
- In English: The Safety Network

Agenda

- Who is the SINE Agency
- What are the expectations from the SINE Agency towards 'Dansk Beredskabskommunikation' (the SINE Network operator, abbreviated DBK) and the users
- How does the SINE Agency operate
- Special operations by the SINE Agency
- Challenges we are looking into

Who is the SINE Agency?

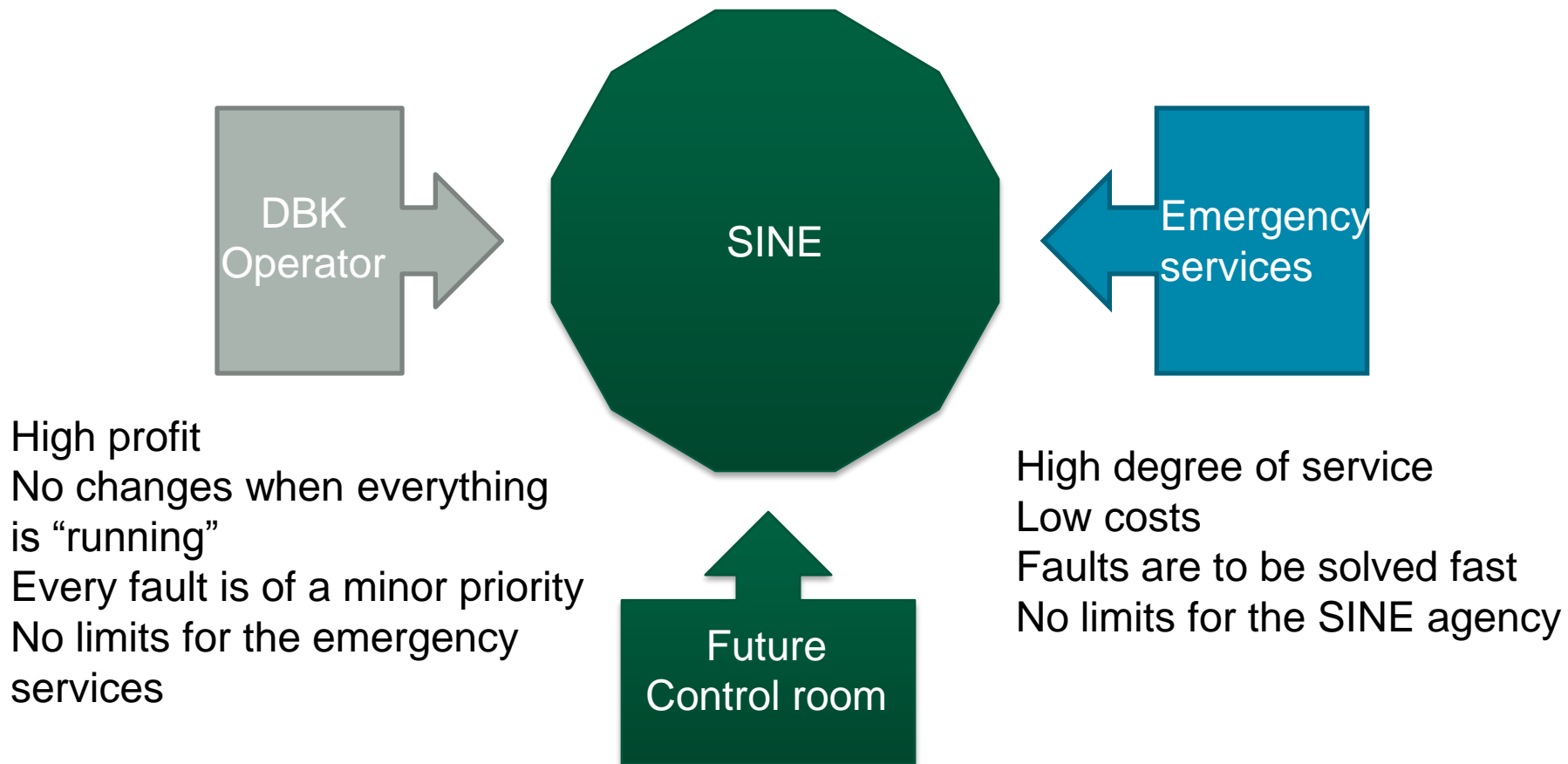
- The SINE Agency is a part of the Danish National Police
- It is stated by the Danish Law that all emergency services are obligated to use SINE
- Today, the SINE Agency has 24 well-educated employees
- Our main responsibilities are to control and verify that the deliverables on the:
 - Control room and
 - The Tetra networkare aligned with the content of the contracts
- This means that the SINE Agency is buying a service from the operator, DBK

- SINE is the ***most*** important communication tool for all emergency services in Denmark
- SINE ***must never*** fail, even under very difficult conditions

High expectations are not always fulfilled



High expectations are not always fulfilled



What are the expectations to the SINE Agency's operator, DBK

- Providing a high stability in the SINE network
- Providing a high degree of service in the SINE network
- Problems which have an influence on stability and service are to be solved quickly
- That in the lifetime of the SINE network (10 years), the network will continuously be optimized
- That DBK has a high technical insight in the network and the radios used on the network
- That answers coming from DBK are detailed
- Good day-to-day relations

What are the expectations to the users

- That education is provided to so-called super users, who then can educate the rest
- That they are educated in using the radios
- That the super users report on malfunctions
- That the SINE Agency is informed every time the users intend to implement new equipment or applications
- That new equipment is only implemented when it is certified by DBK
- That they only use as much capacity as agreed with the SINE Agency
- Good day-to-day relations

How does the SINE Agency operate

- The SINE Agency is a “kind of interface” between the operator, DBK, and the emergency services (the Police, Special Forces, the Fire Brigades, the Ambulance Services, Rescue, Danish Armed Forces and others)
- During the implementation of SINE, it became more and more clear that the SINE Agency had to take more and more responsibility for
 - the roll-out and the use of the network, radios and
 - for policing the network from within



Capacity control and policing by the SINE Agency

- All emergency services have the same service level in the SINE network, **everybody is equal**
- However emergency calls and smoke divers in the fire brigades have the highest priority in the SINE network
- The SINE Agency specifies for each user organisation:
 - How many SDS they are allowed to send
 - How often the organisation is allowed to send a position and
 - How often they are allowed to send a status report from the units
- The SINE Agency is policing on:
 - What kind of services the user is going to implement
 - User behaviour and data flow - not online, but will be in future
 - SDS and Data Channel usage - not online, but will hopefully be in future



Daily operations with DBK

- Decision-making committee
- Contractual meetings every month
 - Requirements for Change
 - New features
- Monthly reporting on performance of the SINE network
 - Status reports on the network
 - Follow-up on faults
- Technical meetings on everyday matters, ad hoc

Who are the main emergency services on SINE

The Police	Fire Brigades	Ambulance Services	Armed Forces	DEMA
<p>12 divisions 10,000 users 1,200 cars</p>	<p>98 municipalities 14,800 users 1,600 cars</p>	<p>5 regions 400 cars</p>	<p>400 users 34 helicopters 40 ships</p>	<p>5 regions 1,000 users 1,600 cars</p>
<p>6 divisions out of 12 are using SINE</p>	<p>93 municipalities out of 98 are using SINE</p>	<p>All 5 regions are using SINE</p>	<p>Have begun implementing SINE but has not been rolled out completely yet</p>	<p>SINE in daily use</p>
<p>Education target, twice a year</p>	<p>Education by super users</p>	<p>Education by super users</p>	<p>Education by super users</p>	<p>Education by super users</p>

Daily operations with the emergency services



Each Region has representatives from:

- The Police
- The Fire Brigades
- The Ambulance Services
- DEMA

Each Region meets every 2nd month

- Everyday business
- Status on roll-out
- New requirements
- User cases, best practice

SINE and the users, daily operations

TOAS
Cross agency
communication

Members from the
5 big emergency services
200 emergency talk groups

POAS

Police
Communication
Talk groups

ROAS

Ambulance
Communication
Talk groups

KOAS

Fire
Communication
Talk groups

EOAS

Special units
Communication
Talk groups

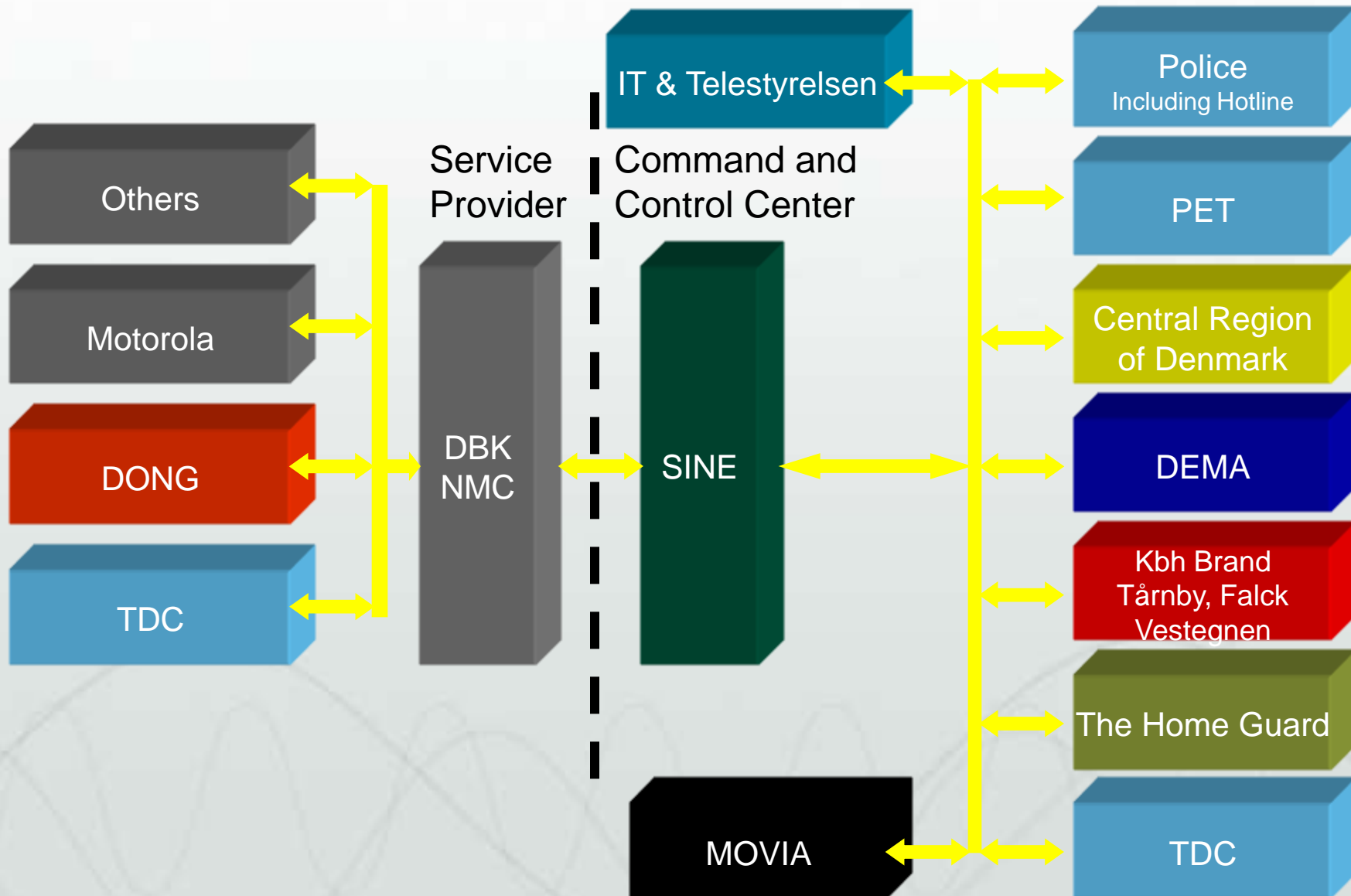
Special operations by the SINE Agency

- SINE passes it's first major exams and proves it's value
 - SINE - the new Tetra network was rolled out in all of Copenhagen during the autumn of 2009
 - IOC congress held in October 2009: approximately 3,000 users
 - COP15 in December 2009: approximately 6,000 users for 11 days
 - Users from: Police, Rescue, Fire, Army, Danish Emergency Management Agency
 - Full scale airplane crash – rehearsal in the Copenhagen airport September 2010
- A few numbers regarding COP15
 - In total there was about 500,000 group calls
 - In 7 of the 11 days during COP15, there was between 41,000 and 61,000 calls
 - A lot of these calls where during a short period of time

SINE operations before and during COP15

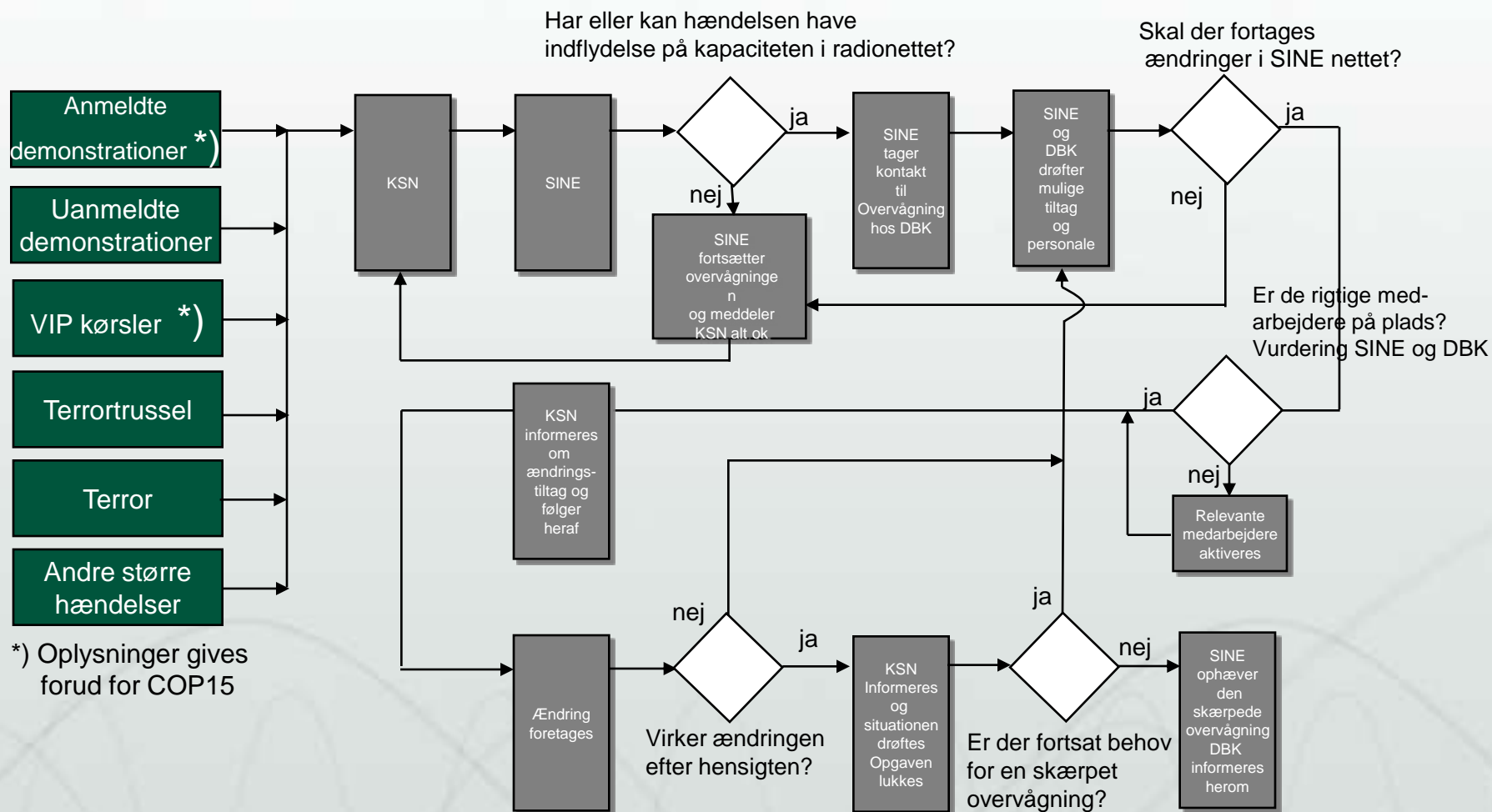
- Expanding capacity in the SINE network
- Working out processes for making changes during COP15
- Working out a toolbox for making online changes during COP15
- Working out working schedules for the SINE Agency's employees
- Setting up systems to check the capacity in the SINE network
- Making back-to-back agreements with different agencies
 - National IT and Telecom Agency
 - Danish Emergency Management Agency
- During COP15, we were used as supervisors for the users
- We controlled the capacity in the network
- We took decisions, when changes in the network had to take place

Communication path between users and DBK (Tetra network operator)



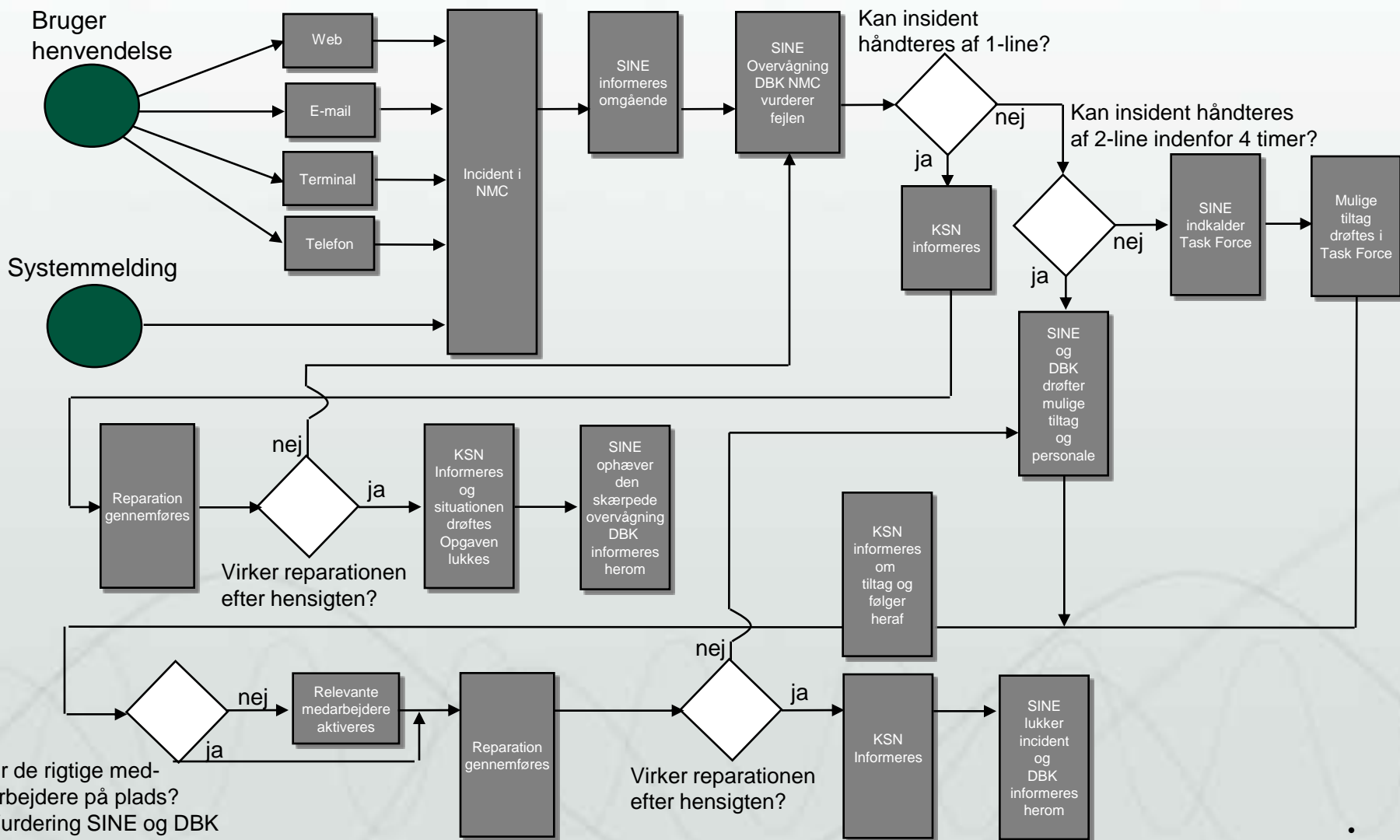
Decision flow by smaller incidents

COP15 relaterede hændelser, skærpet overvågning



Decision flow by major incidents

Incident i SINE-nettet, fejl som berører vitale dele af COP15 infrastrukturen



Is it an easy job to get all emergency services on the SINE network?

- In the very beginning we had some very high mountains to climb. It has taken quite a lot of talking, good arguments and action to get to where we are now.



- Now, the spirit is that together we will be able to solve many issues and future problems.
- We have managed to convince the users that we are on their side

- Questions???

Questions

- Do you think it is best to buy a Tetra service from an operator or to be owner of the Tetra network to have high reliability in the network?
1. A bought service from an operator will give the highest reliability of the network
 2. As being the owner and operator of the network, we will always be able to give the best service to the users

Questions

- Do you think, that it is necessary to control and adjust the SDS and PacketData (PD) traffic in the network?
1. We have enough capacity in our Tetra network. We do not need any control of the SDS and PD traffic
 2. Our capacity in the network will at times reach its limits but it is ok with a little delay or a short interruption in the speech
 3. Our capacity in the network will at times reach its limits, and because of that we will actively adjust the SDS and PD traffic

Questions

- Do we need any limits concerning the number of positioning messages send from vehicles of the emergency services to the control room via the Tetra network?
 1. We have to have a position less then every 5 seconds or every 10 meters distance
 2. We have to have a position at least every 15 seconds or every 300 meters distance
 3. We need a position of the vehicles when they reach the target
 4. We never need a position

Questions

- Does it make any sense to have a “communication officer” between the users and the operator during big operations?

1. Not relevant for us

2. No, there has to be a direct line between the users and the operator

3. No, we do not want to change anything during a big operation

4. Yes, this will make it possible for the users to focus on the operation