



# NORDIC MOMENTS THAT MATTER

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**CAD & CONTROL ROOM SOLUTIONS**  
CONTROL CENTRE EVOLUTION

AUGUST 31<sup>ST</sup> 2021

# QUESTIONS?



Phone lines are  
muted



Type questions in the  
“Questions” area on the  
webinar control panel



Raise your hand if  
you prefer to ask in  
your own voice



Session is being  
recorded

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# AGENDA

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## Introduction - 10:00

**Jerry Nachmann**

Regional Marketing Manager

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## CAD & CONTROL ROOM SOLUTIONS - 10:05

CONTROL CENTRE EVOLUTION

**Yann Marston**

Software Consultant Control Rooms

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## Q&A - 10:25



# WE HELP PEOPLE BE THEIR BEST IN THE MOMENTS THAT MATTER

We provide the solutions that connect those in need to those who can help.  
To find efficiencies, prevent crises, save lives.

# MISSION-CRITICAL ECOSYSTEM

Video Cameras, Recorders, Encoders  
Body Worn Cameras  
In-Car Video  
Access Control  
Unusual Motion Detection  
Appearance Search  
License Plate Recognition

MISSION-CRITICAL  
COMMUNICATIONS

CUSTOMERS  
CITIZENS

VIDEO  
SECURITY &  
ANALYTICS

COMMAND  
CENTER  
SOFTWARE

MANAGED &  
SUPPORT SERVICES

24/7 Network Ops Management  
Cybersecurity Monitoring  
Service Continuity  
Risk Management  
Multi-technology Integration  
Comprehensive Disaster Preparedness  
Outcome-based Service Levels

TETRA  
APCO P25  
Digital Mobile Radio  
Public Safety LTE Networks  
Purpose-built Broadband Devices  
Broadband Push-to-X  
LMR/LTE Interoperability

Emergency Call Management  
Voice and Computer Aided Dispatch  
Command & Control  
Field Response & Reporting  
Records and Evidence Management  
Analysis and Investigations  
Community Engagement

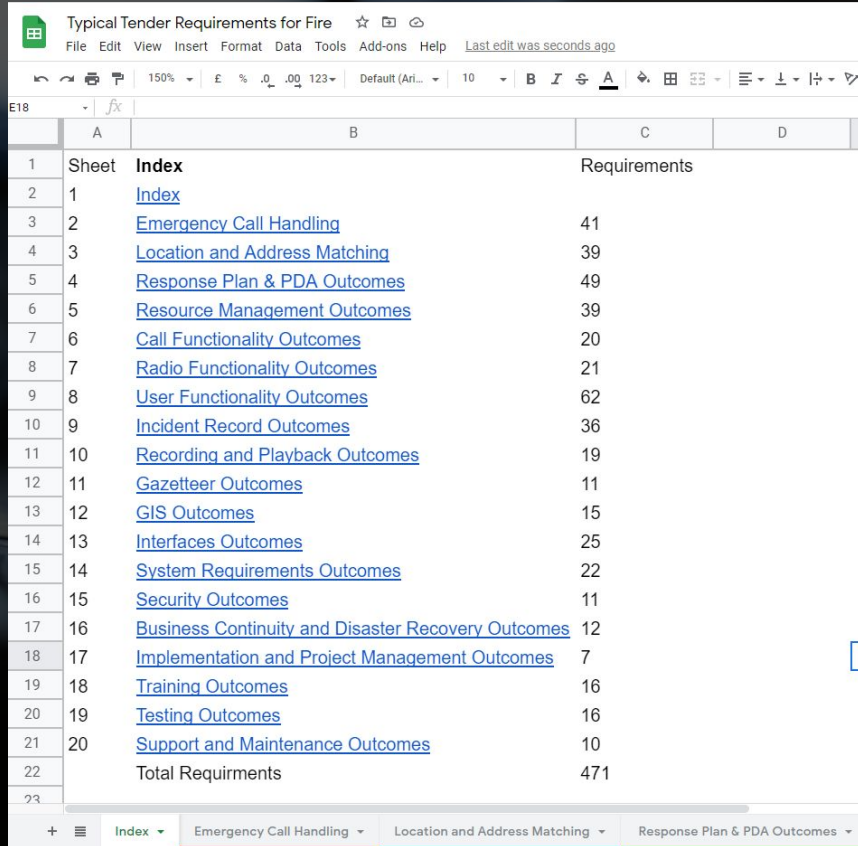


# CONTROL CENTRE EVOLUTION

Yann Marston  
Software Consultant Control Rooms



# A MODEL TENDER FOR CONTROL ROOMS



The screenshot shows a Google Spreadsheet with the following data:

	A	B	C	D
1	Sheet	Index		Requirements
2	1	<a href="#">Index</a>		
3	2	<a href="#">Emergency Call Handling</a>	41	
4	3	<a href="#">Location and Address Matching</a>	39	
5	4	<a href="#">Response Plan &amp; PDA Outcomes</a>	49	
6	5	<a href="#">Resource Management Outcomes</a>	39	
7	6	<a href="#">Call Functionality Outcomes</a>	20	
8	7	<a href="#">Radio Functionality Outcomes</a>	21	
9	8	<a href="#">User Functionality Outcomes</a>	62	
10	9	<a href="#">Incident Record Outcomes</a>	36	
11	10	<a href="#">Recording and Playback Outcomes</a>	19	
12	11	<a href="#">Gazetteer Outcomes</a>	11	
13	12	<a href="#">GIS Outcomes</a>	15	
14	13	<a href="#">Interfaces Outcomes</a>	25	
15	14	<a href="#">System Requirements Outcomes</a>	22	
16	15	<a href="#">Security Outcomes</a>	11	
17	16	<a href="#">Business Continuity and Disaster Recovery Outcomes</a>	12	
18	17	<a href="#">Implementation and Project Management Outcomes</a>	7	
19	18	<a href="#">Training Outcomes</a>	16	
20	19	<a href="#">Testing Outcomes</a>	16	
21	20	<a href="#">Support and Maintenance Outcomes</a>	10	
22		Total Requirements	471	

## Real Market Requirements:

- 18 months of research
- 15 different control room tenders
- 1000's of individual requirements

## Analysed and Consolidated into:

- A **Model Tender** spreadsheet
- 471 Outcomes based requirements
- 20 Subject areas
- 5 emerging trends
- 3 emerging strategic goals

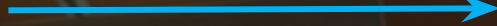
Freely available to download

Email: [Yann.marston@motorolasolutions.com](mailto:Yann.marston@motorolasolutions.com)

# 5 SHIFTS IN THE CONTROL ROOM REQUIREMENTS



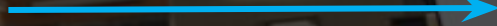
FIXED CAPACITY WITH  
STANDBY CONTROL  
ROOMS



DYNAMIC CAPACITY AND  
MUTUAL AID ARRANGEMENTS



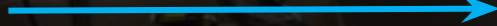
PHYSICAL COMMAND &  
CONTROL ROOM



VIRTUAL CONTROL ROOMS WITH  
FLEXIBLE ACCESS FROM  
ANYWHERE, FROM ANY DEVICE



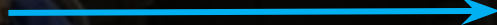
VOICE-ONLY  
PUBLIC CONTACT  
CHANNEL



SEAMLESS INTEGRATION ACROSS  
MULTIPLE DIGITAL CHANNELS



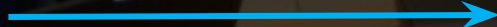
PREDICTABLE GROWTH  
IN DEMAND FOR SERVICE



EXPONENTIAL DEMAND, MULTIPLE  
CHANNELS OF COMMUNICATION



BEST OF BREED POINT  
PRODUCTS - S.I.A.M



INTEGRATED PLATFORM WITH  
SEAMLESS WORKFLOWS







## THE “NEW NORMAL” HAS STRAINED EXISTING RESILIENCE PLANS

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In-person on-site technical support reduced due to lockdown and social distancing measures

Control rooms faced challenges in maintaining staffing and service levels when staff were ill or needed to self-isolate after exposure

Enabling remote working for emergency call takers was not possible for most emergency services during the COVID-19 pandemic due to inflexible system architectures.

*Source: EENA*



### CASE STUDY

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At the height of COVID-19 pandemic, control centre staff was reduced to a minimum, home-work opportunities expanded, and duty rosters created around assigned teams to ensure only one team would have to be replaced in case of infection.

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*Source: Notruf Niederösterreich  
Emergency Command and Control  
Centre, Lower Austria*

# EUROPEAN ELECTRONIC COMMUNICATIONS CODE (EECC)



DIRECTIVE (EU) 2018/1972 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 11 December 2018 establishing the European Electronic Communications Code

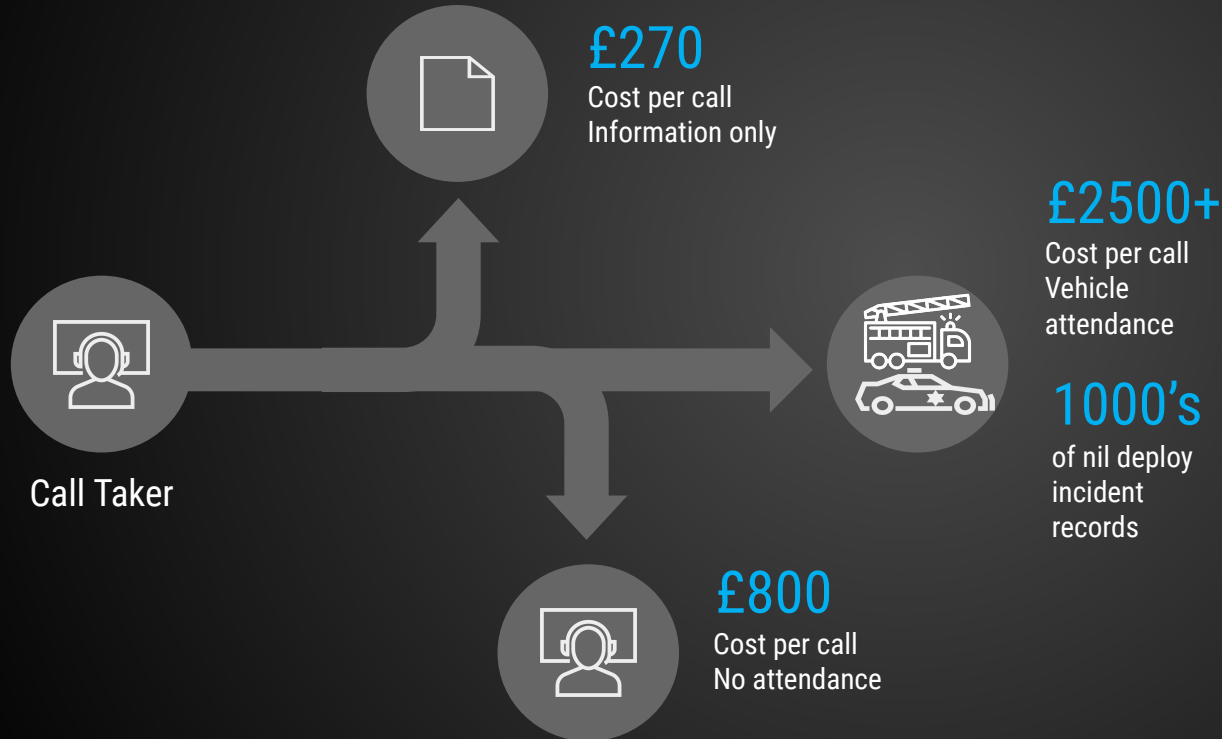
- Aligning protections, including security requirements, for end-users of OTTs with those of traditional telecoms providers
- Requiring maximum harmonisation in relation to consumer protection provisions, which means that member states may not impose more, or less, stringent provisions than those set out in the EECC
- Specifying that bundles of services that include an internet access service or publicly available NB-ICS must apply certain consumer protection provisions to the whole bundle
- Enhancing user rights during the switching of internet access services and the porting of phone numbers
- Establishing a universal service ensuring availability and affordability of both broadband and voice communications
- Strengthening protection of citizens in emergency situations

**EQUALITY OF ACCESS TO EMERGENCY SERVICE REGARDLESS OF PHYSICAL ABILITY**

## THE RISE OF **OMNI-CHANNEL** COMMUNICATIONS

# THE REAL COST OF MANAGING DEMAND

## CASE STUDY



# 190%

Increase in the number of incidents resolved without requiring officer attendance over a 2-year period through application of THRIVE risk assessment for routine/non-attendance calls

Source: Force  
Management Statement  
Metropolitan Police (UK)

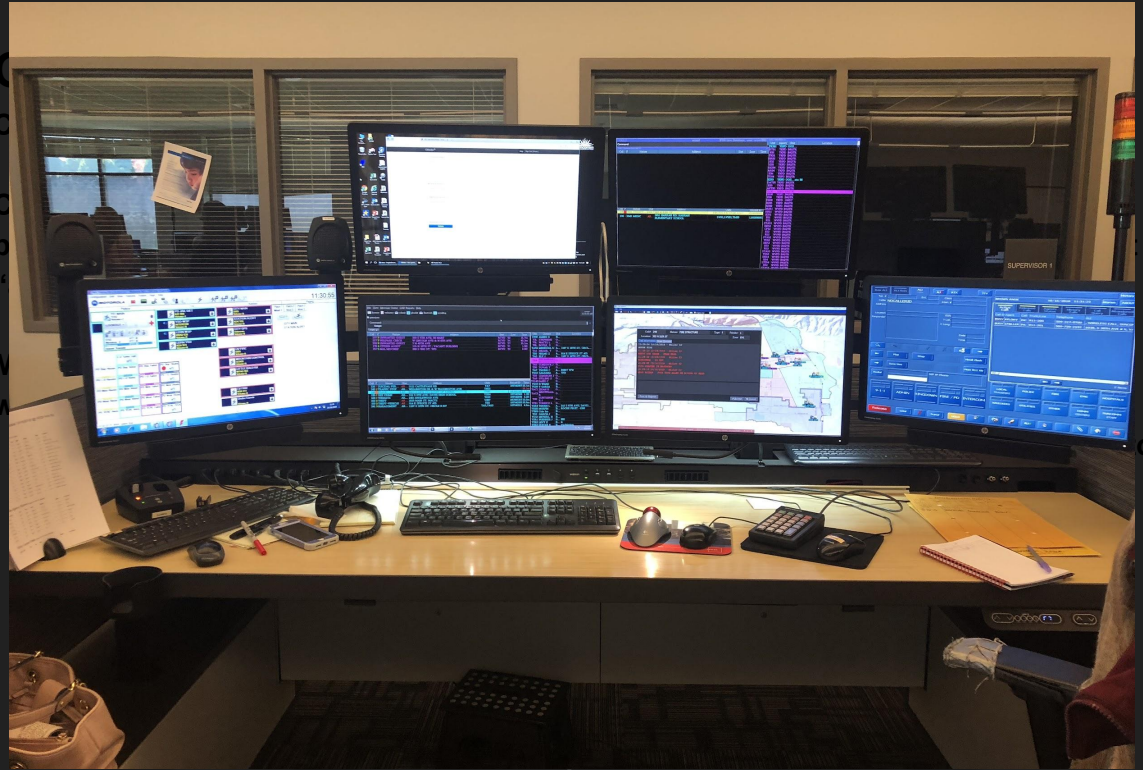
# GENERATION ONE - SEPERATE SYSTEMS

## Gen 1: Point Systems

Capability = System

User forced to learn and interact with multiple disparate systems; data not shared across systems

More systems means more complex workflows



# 3 STRATEGIC OUTCOMES OF A NEW CONTROL ROOM



## STREAMLINED WORKFLOWS

Accelerated workflows through a unified data environment and intuitive user experiences, combine with intelligent assistance for better decision-making



## WORKPLACE MOBILITY

Flexible architecture enables staff to work from any location and across different devices



## SIMPLIFIED EVOLUTION

Access to the most current features available at any time without experiencing downtime and operational disruption

# GENERATION TWO - INTEGRATED PLATFORM

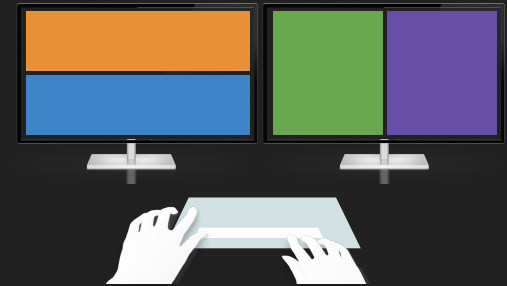


## Gen 2: Platform

Capability = Modules

Consistent UI, user select modules to “assemble” their workflow.

**INTEGRATED** capabilities **SIMPLIFY** complex workflows.



# COMMANDCENTRAL

**MISSION-CRITICAL COMMUNICATIONS**

**CUSTOMERS**

**CITIZENS**

**VIDEO SECURITY & ANALYTICS**

**COMMAND CENTER SOFTWARE**

**MANAGED & SUPPORT SERVICES**

# COMMANDCENTRAL COMPONENTS

LIFECYCLE  
ROLES  
MODULES



Operations teams



LTE



AVIGILON



DEVICES



TETRA

PRONTO MOBILITY APP

BODY WORN VIDEO  
IN-CAR VIDEO  
CCTV & DRONES

## INCIDENT AWARENESS

## INCIDENT MANAGEMENT

## POST-INCIDENT RESOLUTION

COMMUNITY  
ENGAGEMENT  
MODULE



Public

Submit & Populate Forms  
Submit Multimedia via QR  
Code

COMMANDCENTRAL  
CRS



Call  
Taker

Telephone & Radio  
Communications and  
Contact Management

COMMANDCENTRAL  
CAD



Dispatcher

Command  
& Control

COMMANDCENTRAL  
AWARE



CCTV or  
Operational  
Command

Real Time & Historical  
Playback of Live Video

COMMANDCENTRAL  
VAULT



Digital Asset  
Manager

Ingest, Correlation,  
Storage and Sharing of  
Digital Multimedia

COMMANDCENTRAL  
RMS



Records Investigator

Events, Records and Links to  
Multimedia Assets

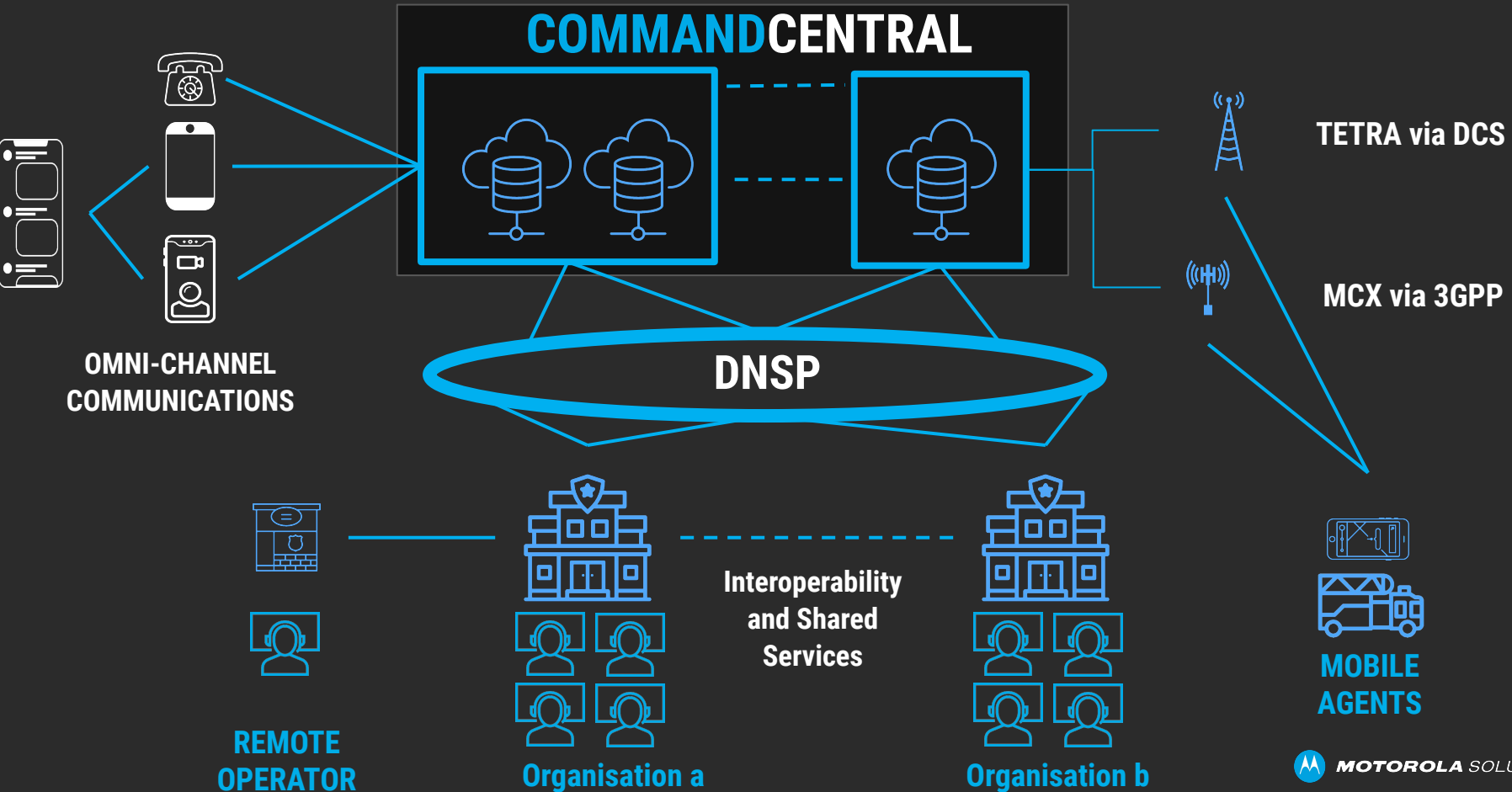
Cloud Hosted & Storage  
Unified digital assets including, communication & collaboration

# COMMANDCENTRAL

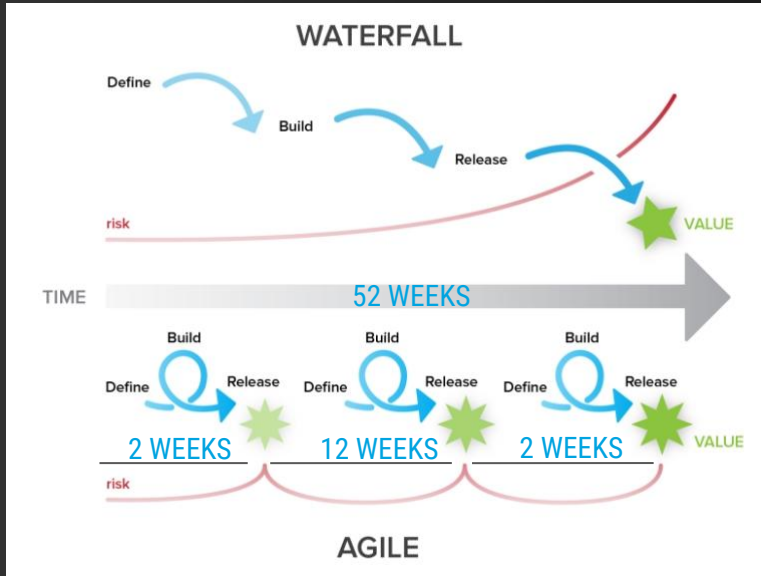
Centralised Access to Interfaces  
Analytics & Artificial Intelligence



# DELIVERING FLEXIBILITY, MUTUAL AID AND RESILIENCY



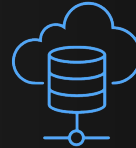
# COMMANDCENTRAL EVOLVES USING AGILE DELIVERY



## ADVANTAGES OF AGILE OVER WATERFALL

- CUSTOMER FOCUSED DEVELOPMENT
- REGULAR FEATURE ENHANCEMENTS DELIGHT CUSTOMERS
- CAN REACT QUICKLY TO NEW HIGH PRIORITY REQUIREMENTS
- KEEPS PACE WITH MARKET REQUIREMENT - NO LEGACY

DEVELOPMENT ENVIRONMENT



DEVELOPERS  
**DEFINE**  
BACKLOG  
WITH USERS

**DEFINE**

SAND BOX ENVIRONMENT



DEVELOPERS  
**BUILD**  
SOLUTIONS  
WITH USERS


**BUILD**

PRODUCTION ENVIRONMENT



DEVELOPERS  
**RELEASE**  
FEATURES ON  
LIVE PLATFORM

**RELEASE**

A close-up photograph of a person wearing tactical gear, including a black vest with an American flag patch and a Motorola radio. The person is wearing a black tactical glove and holding the radio. The background is blurred, showing an outdoor setting with some greenery and a building.

# Thank You!

## Questions & Answers



EVERYTHING WE DO COMES  
BACK TO OUR PROMISE

WE INNOVATE TO  
MOBILIZE AND  
CONNECT PEOPLE  
IN THE MOMENTS  
THAT MATTER

# NEXT IN NORDIC MOMENTS THAT MATTER

SEP 14TH 10:00 CEST

**WAVE PTX  
APPLICATIONS**

SEP 28TH 10:00 CEST

**MXP600 & M-RADIO  
CONTROL APPLICATION**

OCT 12TH 15:00 CEST

**DEPLOYABLE LTE "TACTICAL  
BUBBLE" SOLUTIONS**

**WE WANT TO ADDRESS TOPICS THAT ARE OF INTEREST AND RELEVANCE TO YOU,  
PLEASE DO NOT HESITATE TO REACH OUT WITH AN IDEA FOR A SESSION.**

Contact Anders Ljunggren : [anders.ljunggren@motorolasolutions.com](mailto:anders.ljunggren@motorolasolutions.com) , or  
Laust Michaelsen : [laust.michaelsen@motorolasolutions.com](mailto:laust.michaelsen@motorolasolutions.com) , with topic suggestions, question or comments.

# PREVIOUS SESSIONS IN NORDIC MOMENTS THAT MATTER

- MAKE THE RADIO WORK FOR YOU - MXP600 ACCESSORIES
- VIDEO IN THE MISSION CRITICAL ECOSYSTEM
- TETRA AND MISSION CRITICAL BROADBAND ON COLLABORATION AND EVOLUTION
- THE CONNECTED FIRST RESPONDER
- NEXT GENERATION CONTROL ROOMS
- APPLIED BODY-WORN VIDEO
- VIDEO ANALYTICS, IT'S NOT ALWAYS ABOUT CAMERAS
- MANAGED SERVICES - NØDNETT UNWRAPPED
- WAVE PTX BROADBAND PTT & EVOLVE LTE HANDHELD

REPLAYS AVAILABLE ON THE NORDIC MOMENTS THAT MATTER WEBSITE

[https://www.motorolasolutions.com/en\\_xu/communications/nordic\\_moments.html](https://www.motorolasolutions.com/en_xu/communications/nordic_moments.html)

Hosted by Laust Michaelsen and Anders Ljunggren

Operated by Amanda Clifford

Design, production and promotion by Matthew Hetherington, Oliver Zuber and Jerry Nachmann