

Bart Ramaekers
Carma Police

PSCR 2024 - UAS Portfolio Workshop



February 7-8, 2024
Gaithersburg, MD, USA

Peter Monnens, Inspector
Bart Ramaekers, Superintendent

BART RAMAEKERS

SUPERINTENDENT

28 YEARS OF SERVICE

10 YEARS OF UAS PILOT

7 YEARS TRAINING EXPERIENCE

SENIOR LECTOR PLOT LIMBURG



Positioning of **Belgium** in Europe

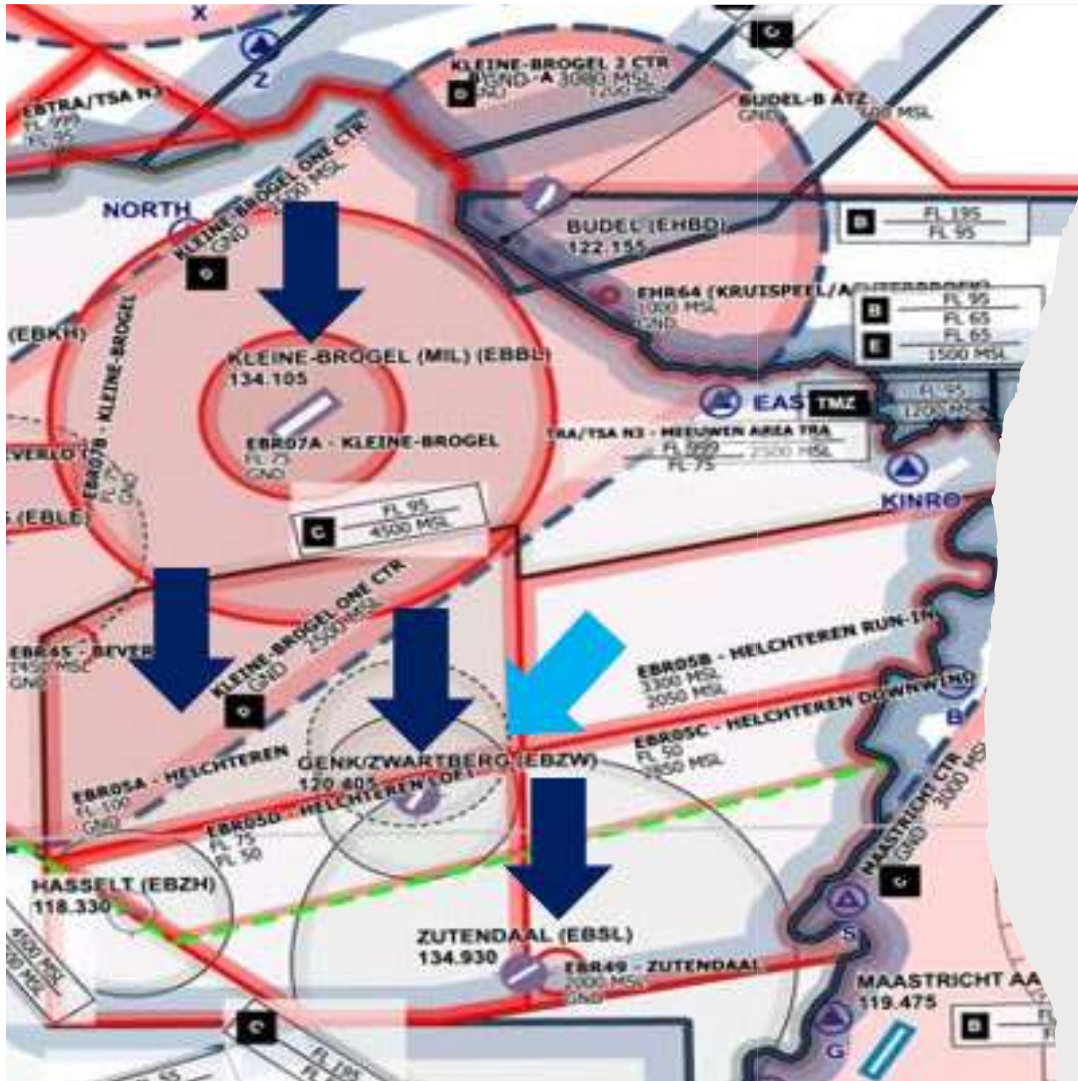


Positioning of Province **Limburg** in Belgium





Positioning of Police **Carma** in Limburg

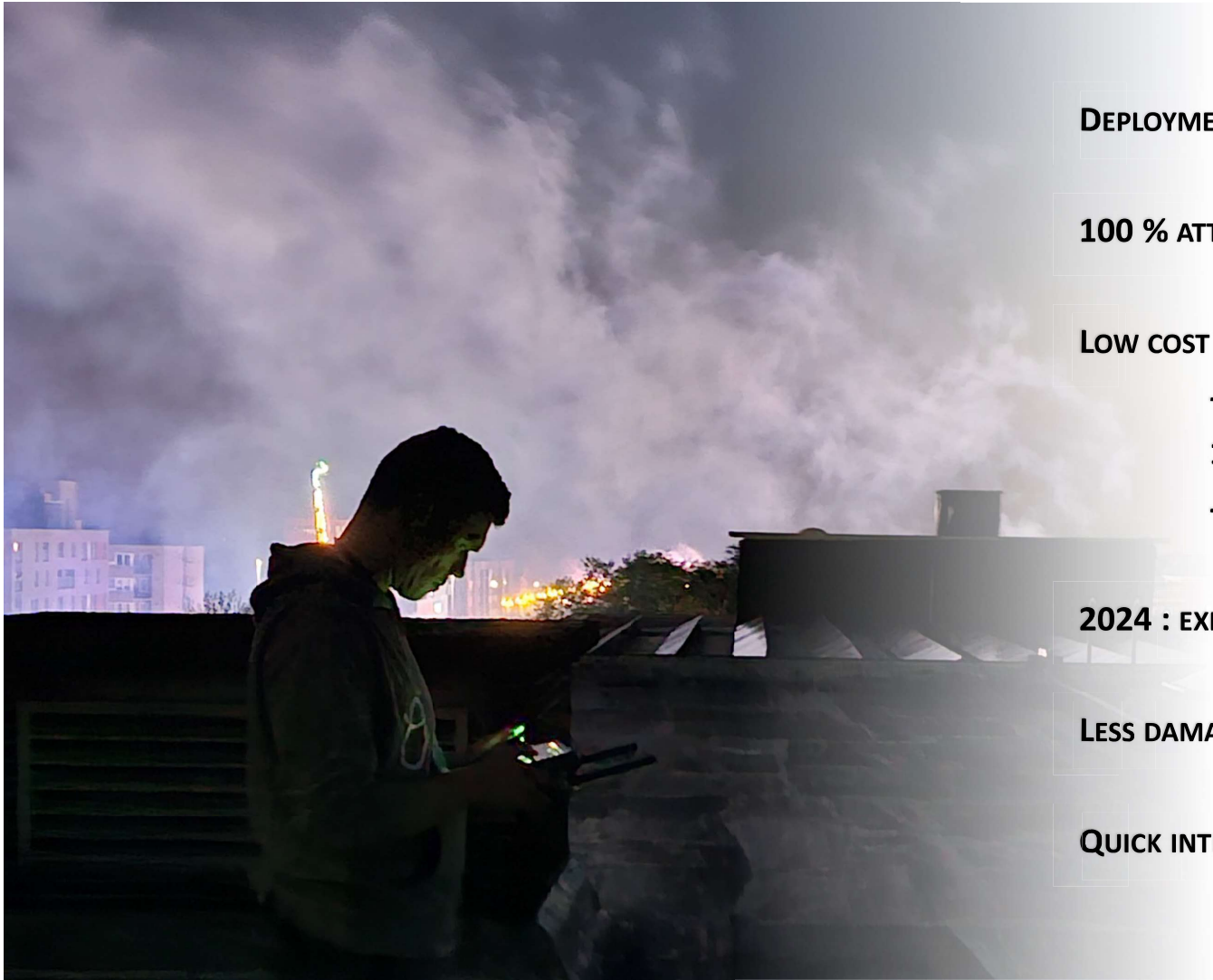


Live feed : CP-Ops + civil teams

BVLOS : 5 km (3,1 mi)

2 devices (DJI M30T – DJI M3T)

Mobile pilot



DEPLOYMENT WITHIN 15 MIN.

100 % ATTENDANCE

LOW COST

- € 25,000/YEAR CFR. HELICOPTER
- 120 EVENTS/YEAR
- MORE THAN 1200 SINCE 2011

2024 : EXPECTING + 300 DEPLOYMENTS

LESS DAMAGES AND INJURIES

QUICK INTERVENTION ACCORDING STANDARDS

UAS in Europa

- 01/01/2021 : Introduction of European drone legislation

- Geozones : Specific rules for certain zones in each Member State





UAS use in Belgium – UAS State Operator

Ministerial circular from the Minister of the
internal affairs

Police departments, fire brigades and civil
protection

UAS use in policezone Carma

General

- GDPR (General Data Protection Regulation)
- DPIA (Data Protection Impact Assessment – Data Protection Officer)
 - Processing of the images
 - Purposes
 - Legal basis
 - Proportionality
 - Guarantees to avoid violations of fundamental rights
 - remedial measures



UAS use in
policezone Carma

Constitution

art. 15 Immunity of the property

- > Recording of the images
- > Making pictures
- > No in-flight recording
- > **Unless necessary for the assignment !**
Cfr. tracking of person/vehicle





UAS use in
policezone Carma

Police Act

Visible use of a camera (CCTV,
Drone, Picto)

Non-visible use of a camera

Processing of data

UAS use in Policezone Carma

Camera Act

Only filming of the intervention
(cfr streaming/recording)

inform staff in advance (briefing)

no police staff:

->only real-time images under
supervision (events, joint dispatch)

only aimed at gathering information

->**NO**: racial or ethnic origin, religious or
political background, trade union
membership, sexual orientation, health status



UAS use in police zone Carma - risk mitigation



Before each flight

- Flight plan
- Risk analysis of the flight
- Permission (gouvernement/prosectors office)

During the flight

- Only UAS State Operator pilots
- Education and training
- Observing the sky
- Using the camera correctly/recording
- Live feed at CP-Ops/smartphone

After the flight

- Removing Micro-SD from the drone
- Saving images on a separate server
- Formatting Micro-SD
- Completing registers and flight logbooks

UAS use in police zone Carma - risk mitigation

Fleet

- DJI Mini 3 pro
- Dji Mavic 2 enterprice (2)
- DJI M210
- DJI Mavic 3T
- DJI M30T

Geopolitical sensitivities

! Updates!

- delete data from device
- return to factory settings
- perform update

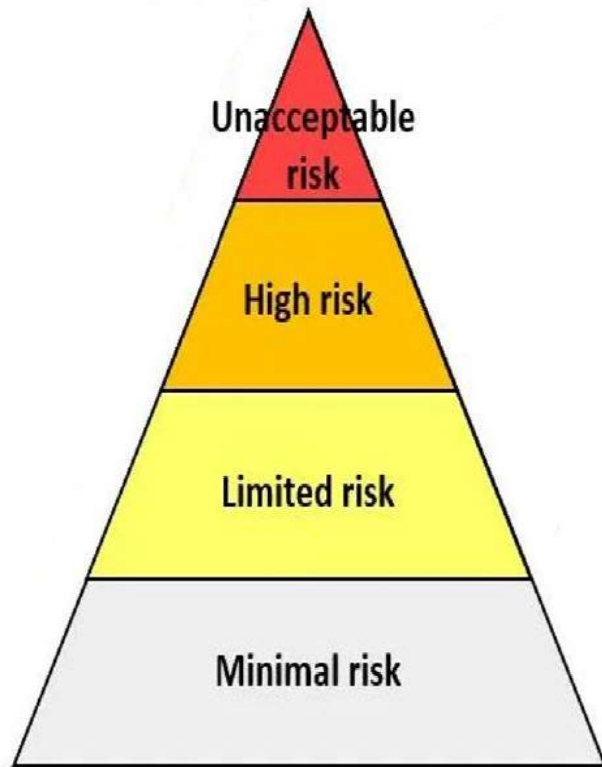


AI ACT Regulation

AI ACT
REGULATION



EU Artificial Intelligence Act: Risk levels



EU AI ACT Cheat Sheet

Understand the world's first comprehensive AI law

THE BASICS

- **Definition of AI:** aligned to the recently updated OECD definition
- **Extraterritorial:** applies to organisations outside the EU
- **Exemptions:** national security, military and defence; R&D; open source (partial)
- **Compliance grace periods** of between 6-24 months
- **Risk-based:** Prohibited AI >> High-Risk AI >> Limited Risk AI >> Minimal Risk AI
- **Extensive requirements** for 'Providers' and 'Users' of High-Risk AI
- **Generative AI:** Specific transparency and disclosure requirements



PROHIBITED AI



- **Social credit scoring** systems
- **Emotion recognition** systems at work and in education
- AI used to **exploit people's vulnerabilities** (e.g., age, disability)
- **Behavioural manipulation** and circumvention of free will
- **Untargeted scraping of facial images** for facial recognition
- **Biometric categorisation systems** using sensitive characteristics
- Specific **predictive policing** applications
- **Law enforcement use of real-time biometric identification in public** (apart from in limited, pre-authorised situations)

HIGH-RISK AI



- **Medical devices**
- **Vehicles**
- **Recruitment, HR and worker management**
- **Education** and vocational training
- Influencing **elections and voters**
- **Access to services** (e.g., insurance, banking, credit, benefits etc.)
- **Critical infrastructure** management (e.g., water, gas, electricity etc.)
- **Emotion recognition** systems
- **Biometric identification**
- **Law enforcement, border control, migration and asylum**
- Administration of **justice**
- **Specific products** and/or **safety components** of specific products

KEY REQUIREMENTS: HIGH-RISK AI



- **Fundamental rights impact assessment** and **conformity assessment**
- Registration in **public EU database** for high-risk AI systems
- **Implement risk management** and **quality management** system
- **Data governance** (e.g., bias mitigation, representative training data etc.)
- **Transparency** (e.g., Instructions for Use, technical documentation etc.)
- **Human oversight** (e.g., explainability, auditable logs, human-in-the-loop etc.)
- **Accuracy, robustness and cyber security** (e.g., testing and monitoring)

GENERAL PURPOSE AI



- Distinct requirements for **General Purpose AI (GPAI)** and **Foundation Models**
- **Transparency** for all GPAI (e.g., technical documentation, training data summaries, copyright and IP safeguards etc.)
- Additional requirements for **high-impact models with systemic risk**: model evaluations, risk assessments, adversarial testing, incident reporting etc.
- **Generative AI**: individuals must be informed when interacting with AI (e.g., chatbots); AI content must be labelled and detectable (e.g., deepfakes)

PENALTIES & ENFORCEMENT



- Up to **7% of global annual turnover** or €35m for prohibited AI violations
- Up to **3% of global annual turnover** or €15m for most other violations
- Up to **1.5% of global annual turnover** or €7.5m for supplying incorrect info
- **Caps on fines for SMEs and startups**
- **European 'AI Office' and 'AI Board' established** centrally at the EU level
- **Market surveillance authorities** in EU countries to enforce the AI Act
- **Any individual can make complaints** about non-compliance

Based on publicly-available information following the political agreement reached by the EU institutions on 8 December 2023



Implementing AI Police Carma

Command Prom

ChatGPT

Counting participants

Recognizing patterns in the crowd

Recognizing suspicious circumstances

Recognizing criminal acts

'The scary thing about the future... there will be tiny cameras everywhere, and they'll be flying around like mosquitoes and drones. That will be bad. Drones are scary. You can't reason with a drone.'

Matt Groening





PETER MONNENS

INSPECTOR OF POLICE

36 YEARS OF SERVICE

12 YEARS OF UAS PILOT

7 YEARS TRAINING EXPERIENCE

SENIOR LECTOR PLOT LIMBURG



The Future is ours

‘CARMA strives to maintain and strengthen its leading position in the dynamic (police) landscape by continuing to take on the role of innovator in a search for the use of new technologies and tactics in our police environment.’



PROOF OF CONCEPT – PZ CARMA – GENK - BELGIUM

Legal obligations

- Formating DPIA and SORA cfr. European laws
- Cooperation DGLV (Belgian FAA)
- Corps directives
- Contracts with suppliers



POC policezone Carma – Genk 2024

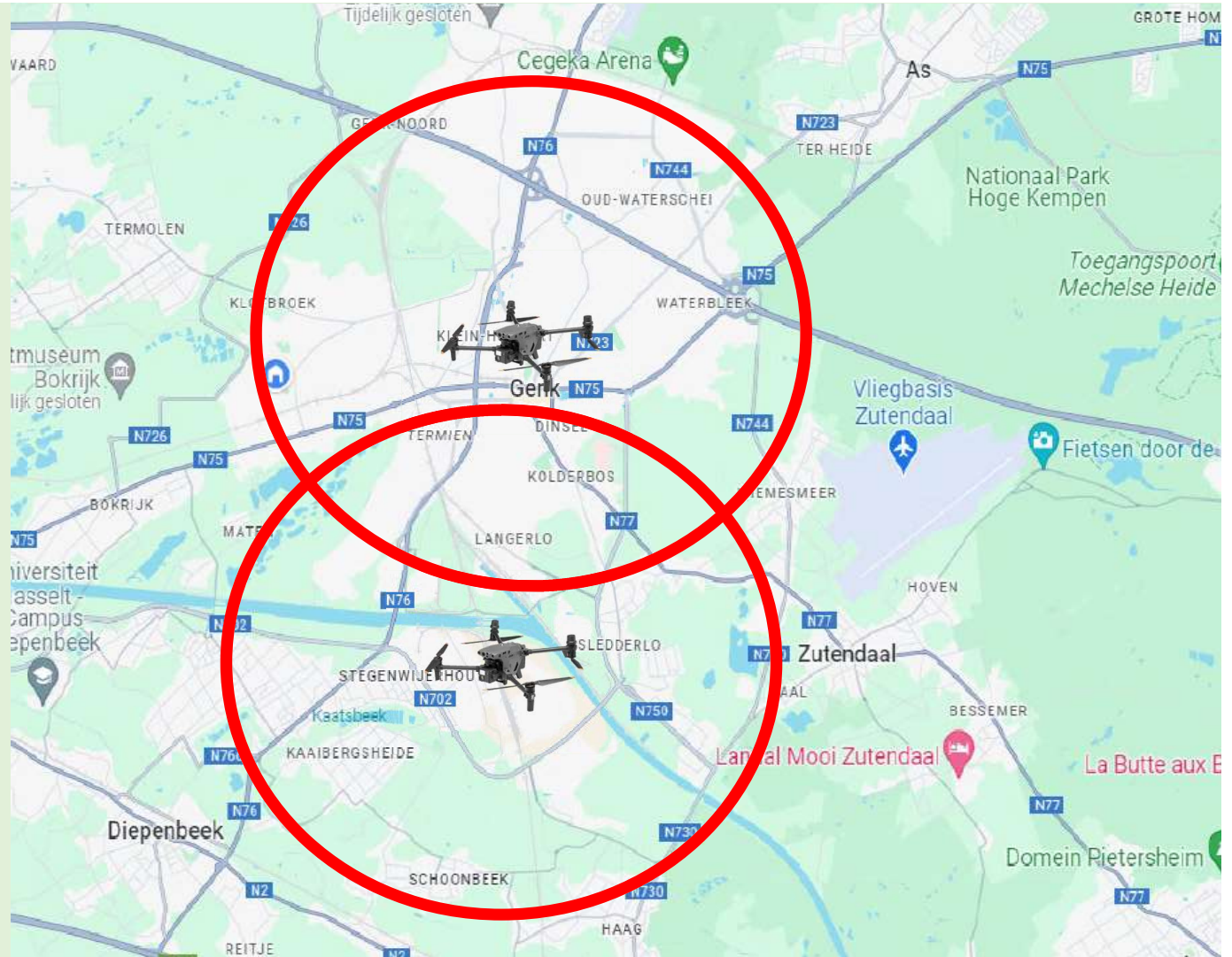
2 test setups

2 DJI Drone in a box,
type M30T

Control from 1 central
point

AI input

Evaluation August '24



POC policezone Carma – Genk 2024 - ...



8 setups

2 DJI Drone in a box,
type M3T

Control from 1 central
point

AI input

Our entire Province ?





PARTNERS



Thank you !

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