



**SHIELD**  
4CROWD



# OPEN MARKET CONSULTATION

## Webinaire en français

Projet SHIELD4CROWD

3 avril 2024

# Sommaire



| Heure         | Sujet                                       | Présentateur |
|---------------|---|--------------|
| 10:00 - 10:20 | <b>Introduction au projet S4C et au PCP</b> | SNCF et MIOM |
| 10:20 - 10:40 | <b>Présentation des 3 cas d'usage</b>       | SNCF         |
| 10:40 - 10:50 | <b>Présentation de l'état de l'art</b>      | SAFE         |
| 10:50 - 11:05 | <b>Objectifs et activités liés à l'OMC</b>  | SNCF         |
| 11:05 - 11:20 | <b>Questions ou remarques</b>               | Tous         |
| 11:20 - 11:30 | <b>Conclusion</b>                           | SNCF         |





## SHIELD4CROWD

Établir une **base solide pour préparer un PCP** qui permettra de stimuler les achats de solutions innovantes dans l'écosystème européen porté sur la sûreté et de tirer parti des synergies grâce à des activités de dissémination relative à la gestion des foules.

SHIELD4CROWD met en relation les acteurs de la sûreté à travers l'Europe afin d'identifier les menaces et vulnérabilités communes qui posent des risques pour la **protection des espaces publics**. Grâce à un processus itératif, le projet classera par ordre de priorité les défis et les menaces, en établissant les besoins et lacunes technologiques et en évaluant l'écosystème du marché dans chaque domaine.

Le résultat sera l'identification de la menace critique et la préparation d'un environnement permettant aux contributeurs de **mener à bien un futur PCP**.



# Introduction au projet S4C

## Parties prenantes



### Observateurs (UOG)

**FRANCE** 



**BELGIQUE** 



**ESPAGNE** 



**PORTUGAL** 

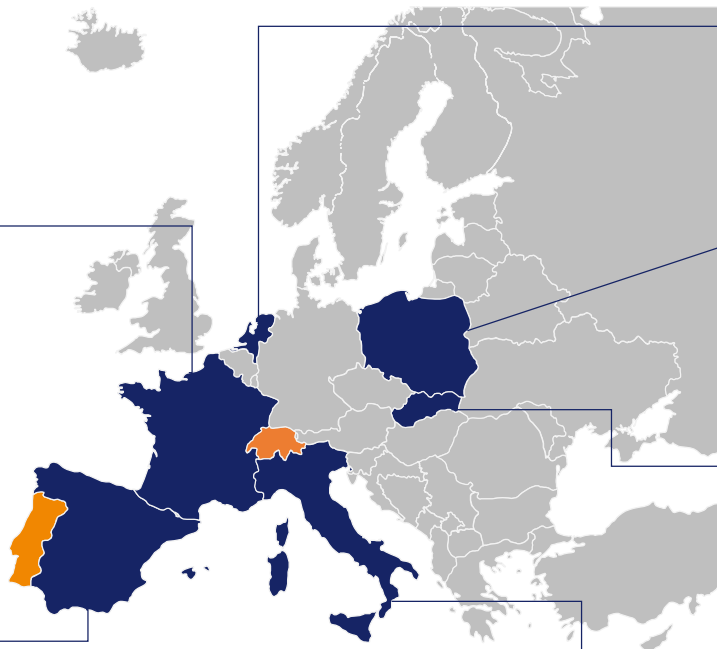


### Membres

**FRANCE** 



**ESPAGNE** 



### Membres

**NETHERLANDS** 



**POLOGNE** 



**SLOVAQUIE** 




**ITALIE** 



### Observateurs (UOG)

**POLOGNE** 

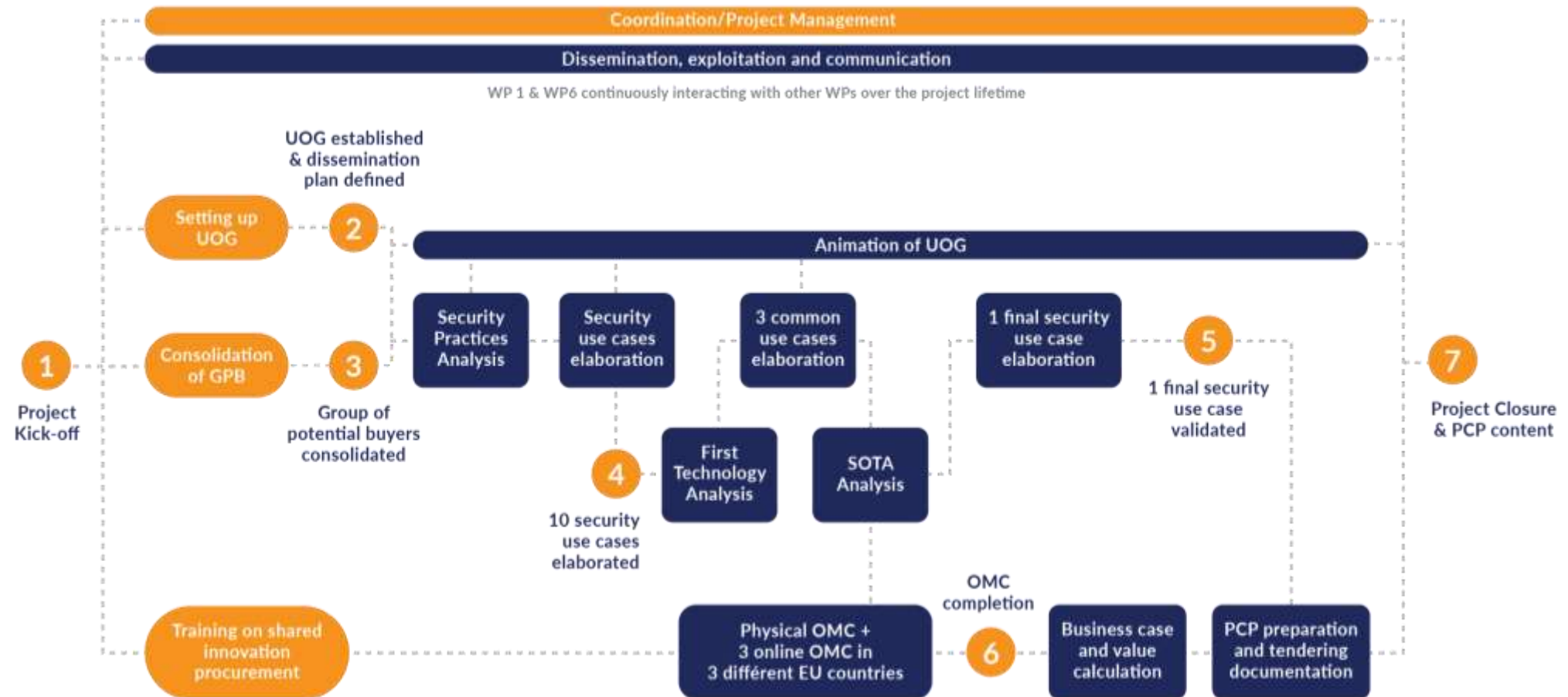


**SUISSE** 



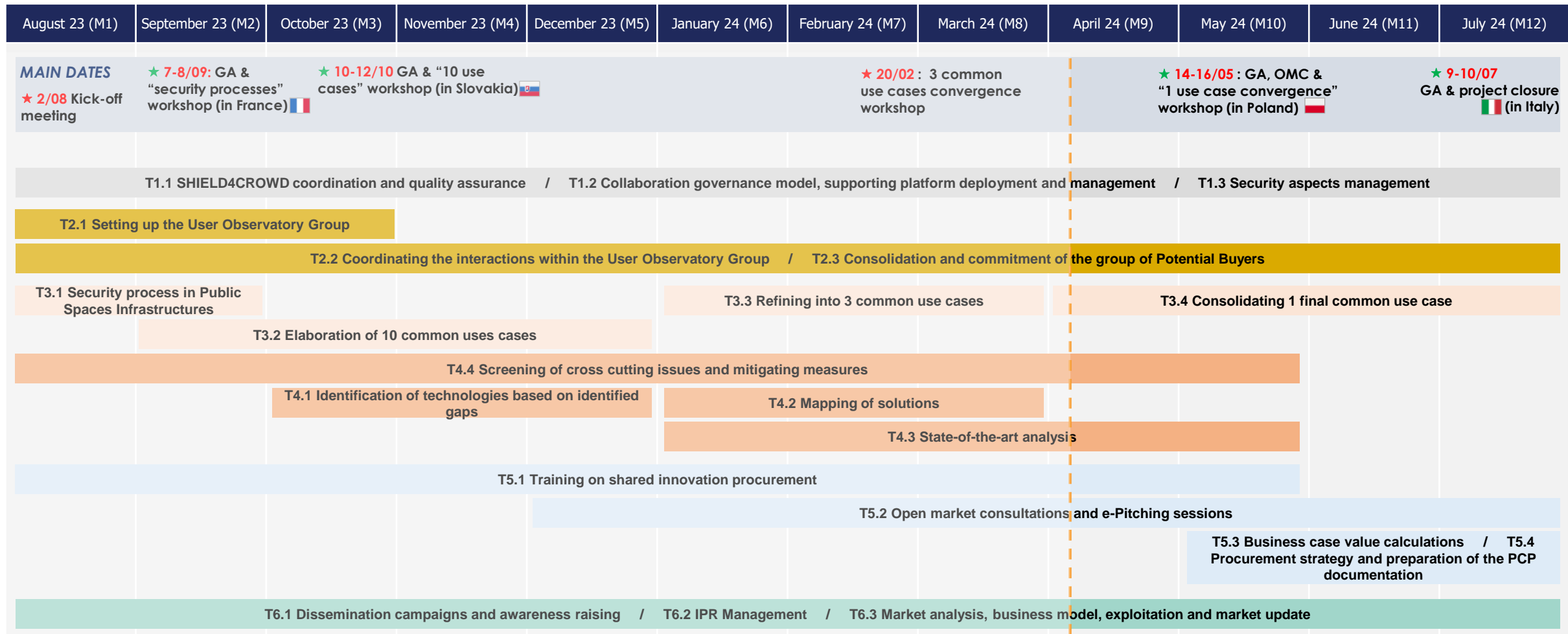
# Introduction au projet S4C

## Plan de travaux



# Introduction au projet S4C

## Planning du projet – Vue globale

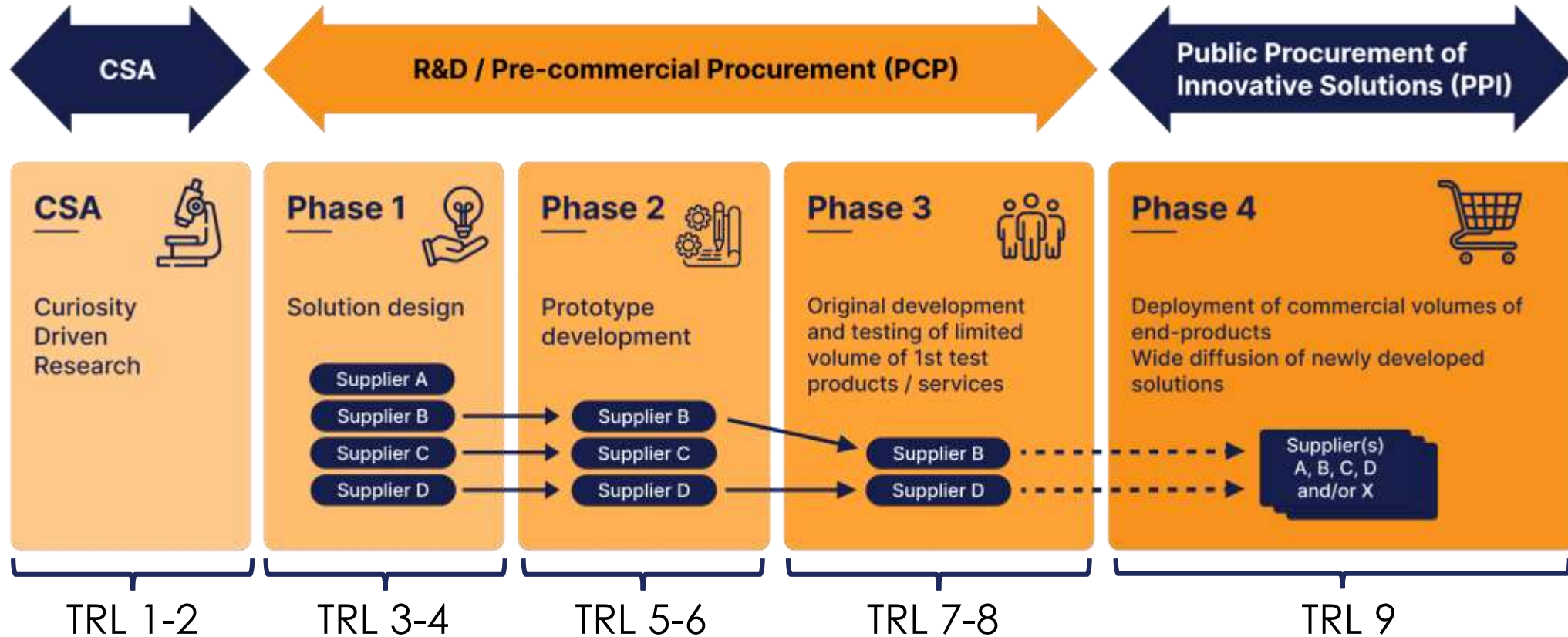


|                |                    |   |   |
|----------------|--------------------|---|---|
| <b>CAPTION</b> | ★ Online meeting   | WP1 : Coordination / Project Management         | WP4 : Technology analysis (legal, societal, ethical and environmental considerations) |
|                | ★ Physical meeting | WP2 : End users group set up and outreach       | WP5 : Pre-commercial procurement preparation  |
|                |                    | WP3 : Common security threats and needs mapping | WP6 : Dissemination, exploitation and communication                                   |





# Pre-Commercial Procurement (PCP)



# Les avantages du PCP



## Pour les autorités contractantes

Améliore la **qualité et l'efficacité des services publics**.

Aide à atteindre le degré d'interopérabilité souhaité dès le départ et **réduit le risque de dépendance envers un fournisseur**.

Permet d'obtenir des produits de **meilleure qualité à des prix plus bas**.

**Réduit le risque d'échec** dans les achats PPI ultérieurs.

**Utilisation de licences gratuites pour les acheteurs**.

Les acheteurs publics peuvent demander des **licences** à des fournisseurs tiers. |



## Pour les fournisseurs

**Accélère le processus** de mise sur le marché des résultats scientifiques.

**Raccourcit les délais** de mise sur le marché des produits et services innovants

**Facilite l'accès de nouveaux acteurs innovants** (start-ups et PME) aux marchés publics.

**Stimule la croissance des entreprises et attire les investissements privés.** |



## Pour la société

Meilleure utilisation de l'argent des contribuables, permettant d'acheter des **produits innovants qui améliorent la qualité et l'efficacité de la protection des espaces publics**.

Aide à surmonter les **défis environnementaux et sociaux** grâce à des pratiques nouvelles et innovantes.

Crée des emplois à **forte valeur ajoutée** en Europe et contribue à une croissance économique durable. |





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# Présentation des 3 cas d'usage

SNCF

# Cas d'usage #1

## Coordinated bomb and CBRN attacks



Saturday, 1/10, 13:00

**1** This is the day of the commencement of a significant sporting event, **drawing 80 000 persons**. The event involves a **high-profile soccer match** that starts to welcome supporters at 16:00 for a start of the match at 19:00. However, during lunch hours, terrorists have placed two suitcases in advance at two different train stations : the **central station (1)** and the **one closest to the stadium (2)**.

**6** Despite efforts to mitigate the threats, tensions persist, leading to **arrests and detainment of troublemakers**. The coordination of security forces and emergency services remains crucial in ensuring the safety of all affected individuals. **Public transportation services are temporarily suspended** as authorities conduct thorough investigations and implement enhanced security measures to prevent future incidents. The suspects who planted the bombs **are not instantly found**.



Saturday, 1/10, 18:00



Saturday, 1/10, 15:00

**2** People gradually start to accumulate in the transportation network **to arrive early at the stadium**, and a **suspicious suitcase similar in apparencey to an explosive engine** is identified by security staff **at station 1, leading to panic**. The evacuation of station 1 is declared, but handling it proves difficult, resulting in numerous injuries. Emergency medical services are arriving. A suitcase containing explosives is confirmed, and simultaneously, there is an **explosion at the nearby stadium station (2)**. Some of the **security personnel and police forces**, strategically positioned to welcome the supporters, **are mobilized to take preventive actions within the stadium**, checking for any suspicious packages and providing assistance to injured individuals at the station near the stadium.

**5** Upon **confirmation of a chemical threat related to the drone's droplets**, decontamination protocols are implemented at the entrance of the stadium, ensuring the safety of evacuated individuals before allowing their departure. Investigations are launched to find the drone and its pilot. Meanwhile, **anti-riot units intervene to disperse violent clashes** and restore calm to the street. At the transportation hubs, authorities work continue to provide **medical assistance to the injured**, and initiate investigations into the coordinated bomb attacks.



Saturday, 1/10, 16:00



Saturday, 1/10, 15:02

**3** As supporters from both teams gather at the stadium entrance, **they hear the explosion, which intrigues the fans and creates a sense of panic**. While access to the stadium is **still not permitted**, security personnel detect a **suspicious drone releasing unidentified liquid droplets over the crowd**. Tensions escalate between supporters, **each blaming the other for the situation, resulting in clashes**. Reports of spectators suffering from skin irritation and respiratory distress are received, sparking concerns of a **chemical attack**. Panic ensues, with attendees fleeing in confusion. **The drone leaves the stadium area**.

**4** Reinforcements and efforts are **focused on establishing perimeters and cordons to contain the situation around the exploded station**. Meanwhile, **emergency medical services** are mobilized to assist the injured, and **police strive to maintain order** and prevent further violence despite **limited manpower** in the clashes. Measures are taken to secure areas affected by the bomb blasts, evacuate civilians, and assess the damage. The arrival of **bomb disposal teams** on-site relieves pressure, secures the stadium and its surroundings to ensure no additional CBRN threats are present.



Saturday, 1/10, 15:15



# Security process – UC1 – Coordinated bomb and CBRN attacks

Analysis of needs and technologies examples



Anticipate Crowd Management

Real-time Event Mapping

Detect the threat: CBRN; drone; bomb

Operational Command Centre: identify perpetrators; suspicious groups...

Clear communication between security forces

Clear communication with the crowd

Monitoring the crowd movements

Communication with SS, crowd and SM

Handling and evacuate people in complete safety

Neutralize the threat rapidly

Data collection

Facilitate the access back following chemicals usage

Learn and enhance

NEEDS



3D modelization tool of crowd movement in relation to different events

CBRN Sensors for air and ground scans

Thermal imaging technology for a real-time image of the crowd

Hypervision tool that will enable different stakeholders to easily connect and communicate with each other

AI tool that could map the current threats, their location, severity, etc. and propose intervention plans with the number of human forces required, etc.

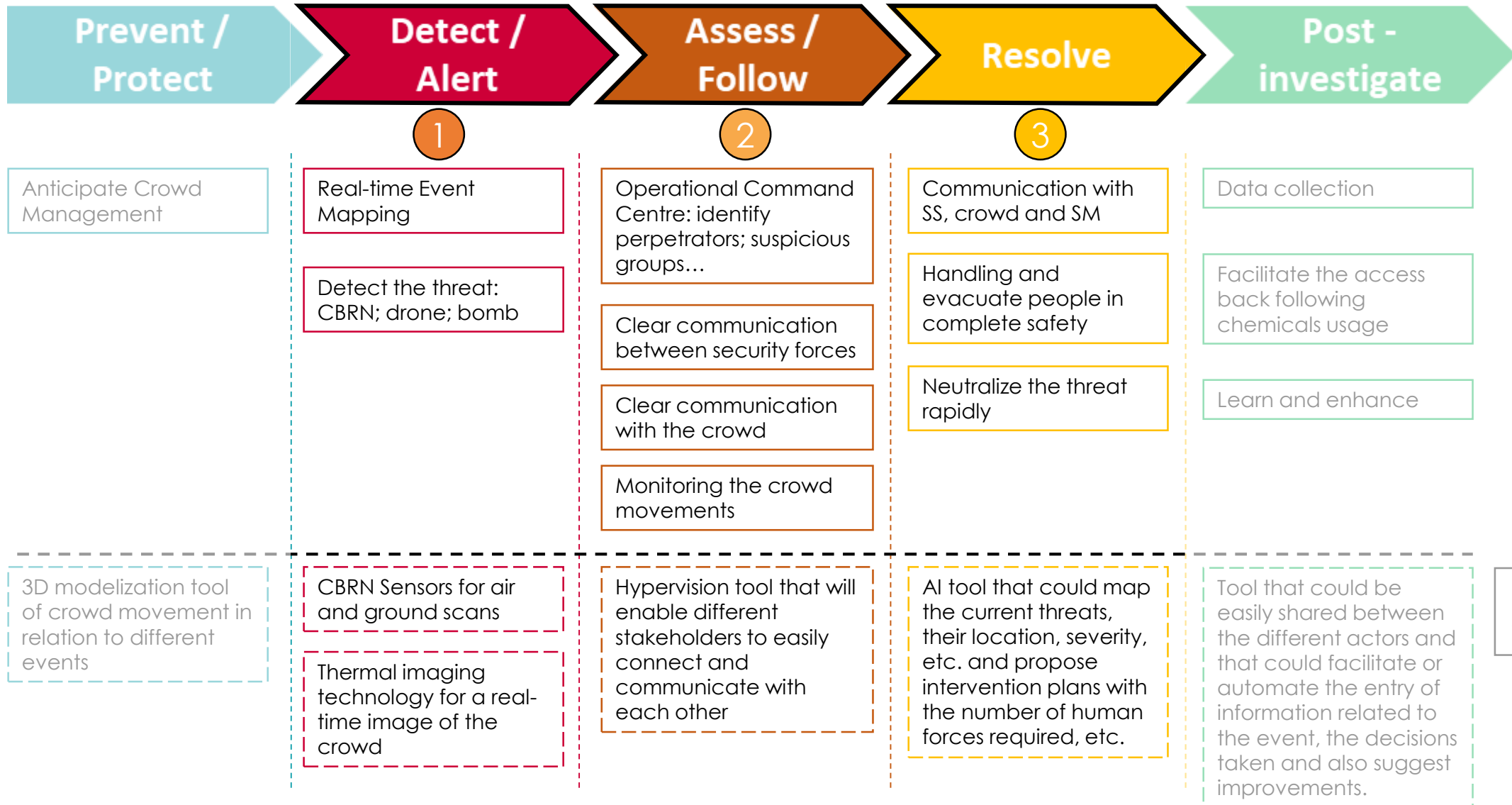
Tool that could be easily shared between the different actors and that could facilitate or automate the entry of information related to the event, the decisions taken and also suggest improvements.

Examples of technologies



# Security process – UC1 – Coordinated bomb and CBRN attacks

Analysis of needs and technologies examples



NEEDS



Examples of technologies



# Cas d'usage #2

## Concert venue chaos: disinformation-induced panic



Friday, 5/7; 12:00

**1** A **highly anticipated concert** featuring a renowned rock band is **scheduled to begin at 17:00**, with official entry **starting at 14:00** and will take place at a large stadium in the heart of the city and is gathering **80 000 persons**. However, rumours begin circulating on **social media about a potential bomb threat**, sparked by a report of suspicious discussions overheard on public transportation earlier in the day. Despite efforts to verify the credibility of the threat, panic spreads among concertgoers as uncertainty mounts. **Meanwhile, the Pride Walk, a tolerance march** organized by the LGBTQ+ community, is set to traverse the city, with approximately **6,000 participants** anticipated to join.

**6** Following the concert's **uneventful continuation**, a sense of **relief gain the crowd**, though tempered by the recognition of disinformation's potential consequences. The crisis fosters a renewed commitment to vigilance and cooperation, highlighting community resilience in adversity. Stakeholders reaffirm their dedication to ongoing vigilance against disinformation, emphasizing the necessity of collaboration to ensure public safety and security.



Friday, 5/7; 17:40



Friday, 5/7; 13:30

**2** Outside the stadium, **tensions rise as misinformation spreads**, resulting in confrontations **between security personnel and anxious attendees fuelled by the fact that no official information is shared**. Opportunistic **troublemakers** take advantage of the chaos to **harass and provoke concertgoers**, sparking fights and attempting unauthorized entry. Meanwhile, **counter-protesters**, including right-wing extremists **near the concert venue**, try to obstruct the Pride Walk route. The situation **escalates into confrontation**, leading to clashes between the two groups.

**5** After another escalation of tension upon the arrival of the Special Anti-Riot Units, **the situation quickly returns to normal**. Regarding the bomb threat, following a thorough investigation, **authorities confirm that the reports were unfounded**, dispelling rumours throughout the venue. **Accurate information is disseminated to reassure attendees and address concerns**. Lessons from the incident are documented, leading to improved security protocols and communication strategies for future events.



Friday, 5/7; 16:20



Friday, 5/7; 13:40

**3** As **tensions escalate, detonations occur**, triggering panic among both concertgoers and attendees of the march. People **shout about gunfire sounds**, causing the **crowd to panic** and scatter in all directions. In the chaos, individuals are trampled and injured as they attempt to flee. The **escalating tension leads to further violence**, with counter protesters throwing rocks and Molotov cocktails.

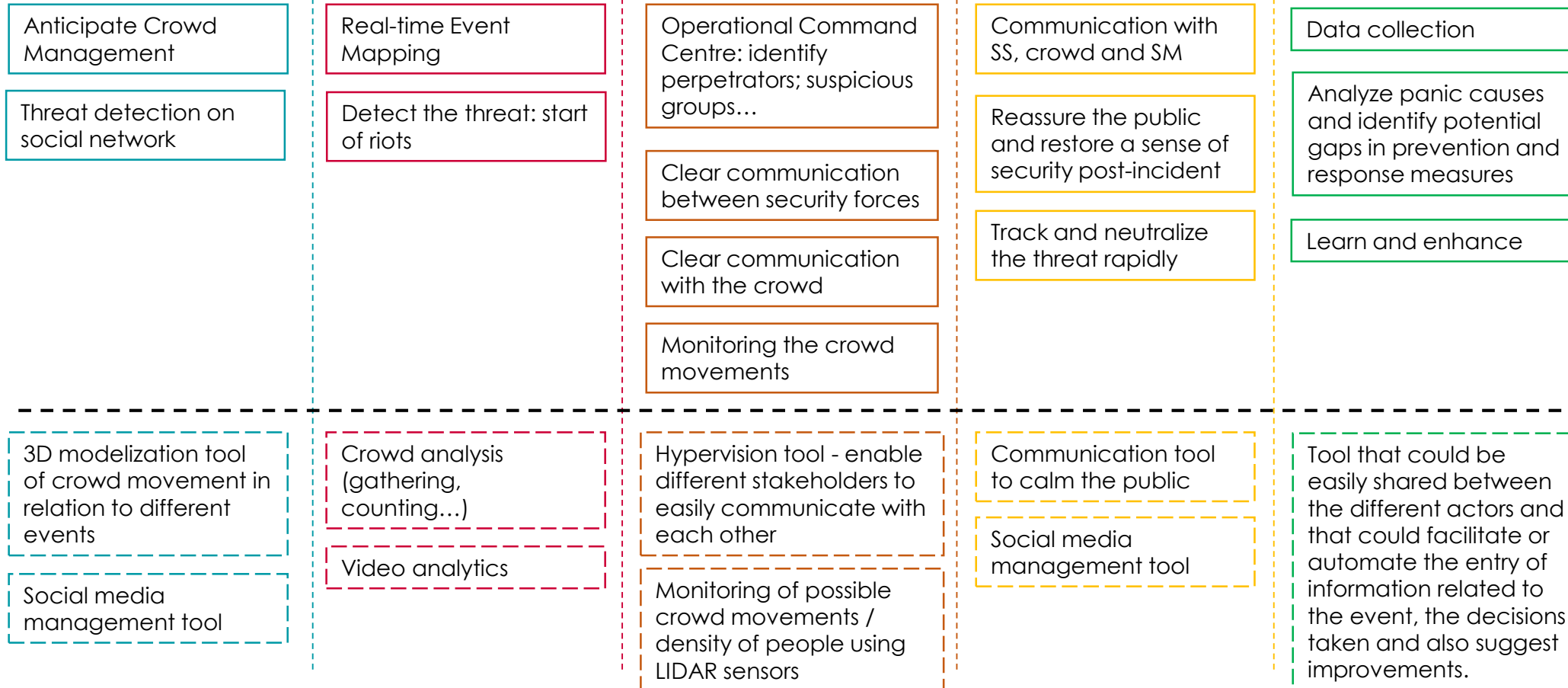
**4** Security and police forces work diligently to **restore calm and ensure safety**. Special anti-riot units are deployed to separate the conflicting groups. **At the same time Specialized units conduct thorough stadium scans** for potential threats while medical personnel tend to the injured. Outside, **panicked individuals seek refuge in nearby establishments, leading to chaotic scenes as crowds sprint through streets**, overturning tables, and trampling others. Amidst the turmoil, **security forces** remain focused on mitigating the crisis's impact.



Friday, 5/7; 14:00

# Security process – UC2 – Concert venue chaos: disinformation-induced panic

Analysis of needs and technologies examples



NEEDS

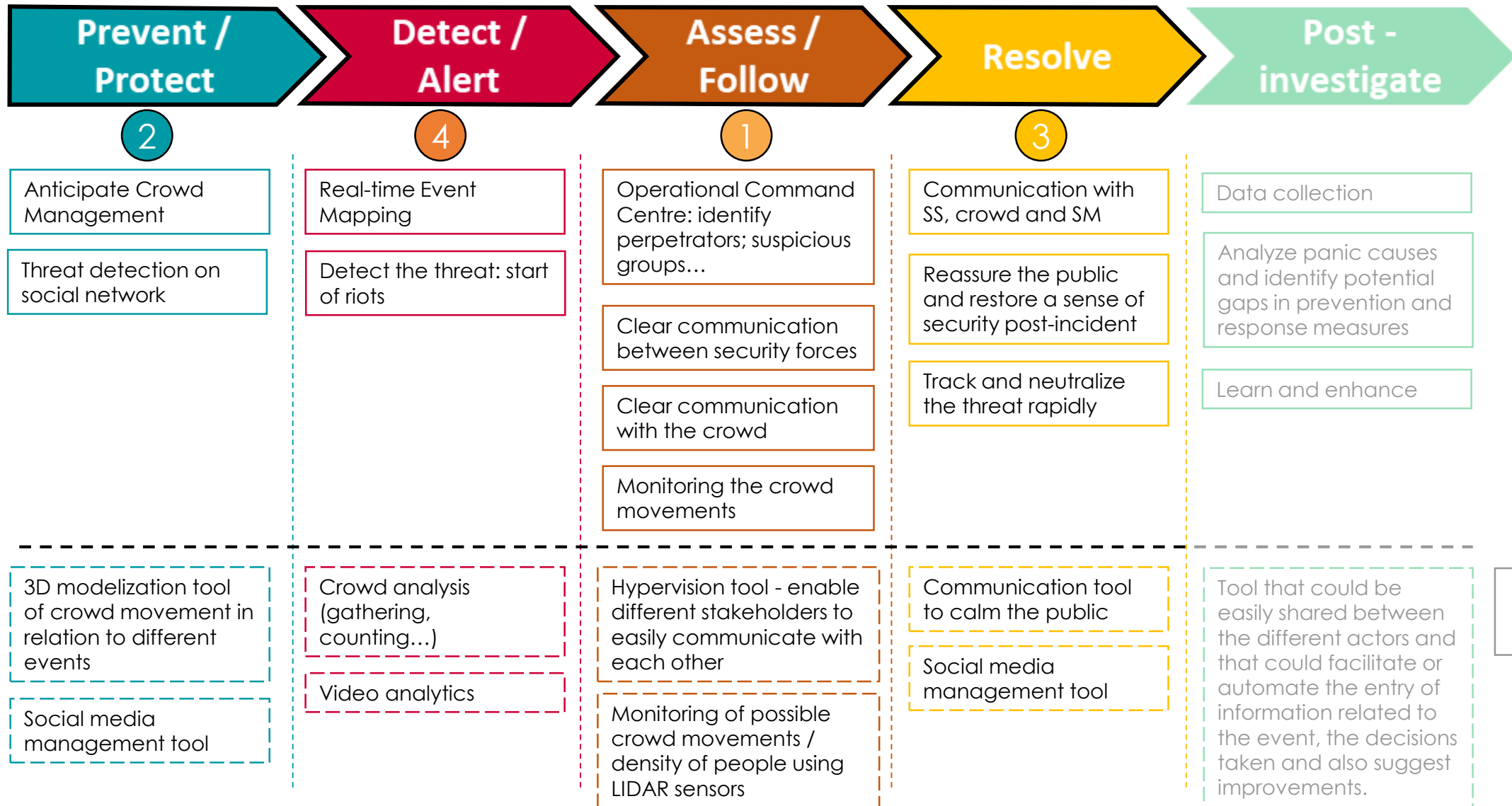


Examples of technologies



# Security process – UC2 – Concert venue chaos: disinformation-induced panic

Analysis of needs and technologies examples



NEEDS



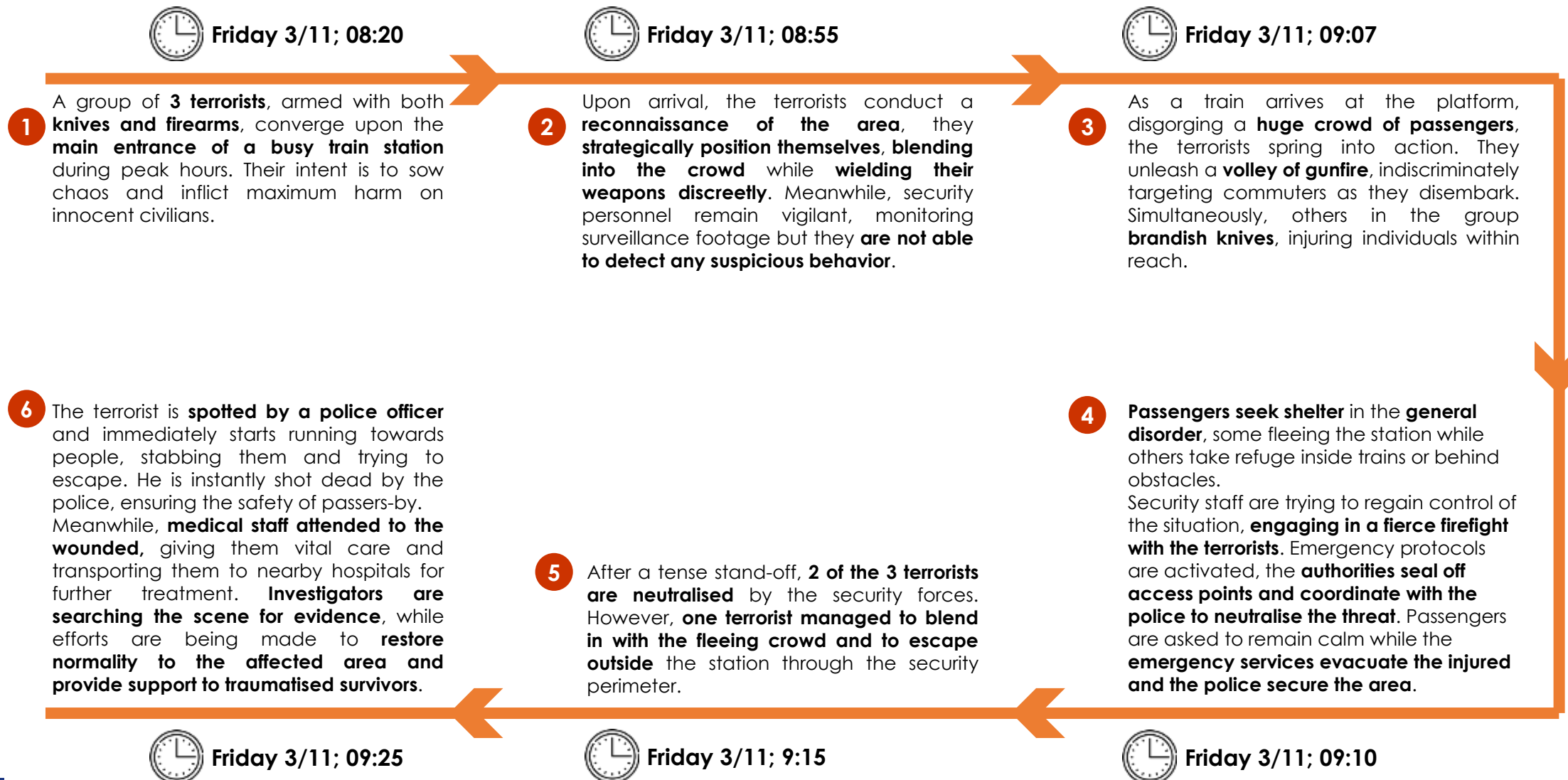
Examples of technologies





# Cas d'usage #3

## Terrorist attack at train station and surrounding area



# Security process – UC3 – Terrorist attack at train station and surrounding area

Analysis of needs and technologies examples



Anticipate Crowd Management

Training to detect suspicious behaviours

Threat detection on social network and dark web

Real-time Event Mapping

Detect the threat: suspicious behaviours detection

Detect the threat: weapons detection

Operational Command Centre: identify perpetrators; tracking; suspicious groups...

Clear communication between security forces

Clear communication with the crowd

Monitoring the crowd movements

Communication with SS, crowd and SM

Handling and evacuate people in complete safety

Track and neutralize the threat rapidly

Data collection

Learn and enhance

NEEDS



3D modelization tool of crowd movement in relation to different events

Social network and dark web screening tools

Millimetric waves sensors

Video analytics to detect suspicious behaviours and weapons

Hypervision tool that will enable different stakeholders to easily connect and communicate with each other

Tracking tools (facial recognition, etc..)

AI tool that could map the current threats, their location, severity, etc. and propose intervention plans with the number of human forces required, etc.

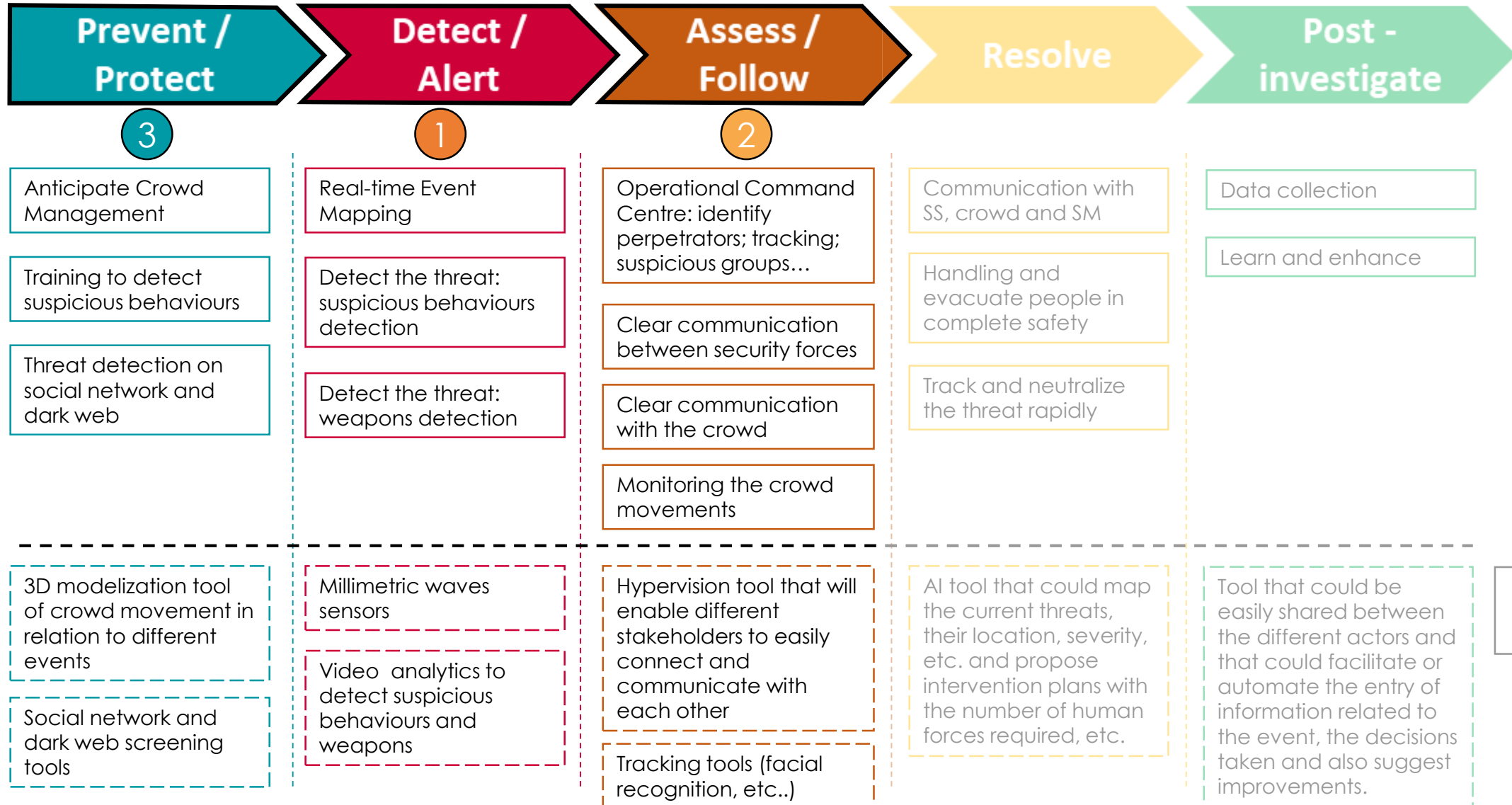
Tool that could be easily shared between the different actors and that could facilitate or automate the entry of information related to the event, the decisions taken and also suggest improvements.

Examples of technologies



# Security process – UC3 – Terrorist attack at train station and surrounding area

Analysis of needs and technologies examples



NEEDS



Examples of technologies





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# Présentation de l'état de l'art

SAFE

# Etat de l'art



Afin de répondre aux exigences du PCP:

- Le consortium recherche des solutions répondant aux besoins et aux cas d'usage
- Un appel à manifestation d'intérêt a été lancé pour recenser les solutions matures ou en cours de développement





# Catalogue des solutions



**SHIELD4CROWD**

**CATALOGUE OF SOLUTIONS**

PROTECTION OF EU PUBLIC SPACES

SHIELD4CROWD is an EU-funded project that focuses on enhancing the protection of public spaces in EU cities against security threats related to crowd management. The project is led by SNCF, French railway operator and 9 other partners, among which 3 ministries of Interior from 3 EU Member States (France, Slovakia and Spain), 2 security practitioners, and several end-users involved as User Observatory Group (UOG).

contact@shield4crowd.eu | https://shield4crowd.eu/

**SHIELD4CROWD 10 scenarios**

To enhance the protection of public spaces in EU cities against security threats related to crowd management.

- 1 Coordinated Attacks
- 2 Drone & CBRN Threats
- 3 Public Panic Situations in planned major event
- 4 Overcrowded Area threats
- 5 Unplanned incidents threats

**HOLOGARDE**

Paris-Val-de-France, France

**About Hologarde**

Hologarde, a subsidiary company of Groupe ADP, is a leading french company in counter-drone and management of collaborative drone, multi-domain and multi-environment offering scalable, agile and adaptable systems.

**Description**

Hologarde's expertise is applied to the most sensitive sites. It is the only proved and operational device used by the French Forces. The software is sensor agnostic and scalable, as it constantly adapts to new technologies. It is disruptive because it is the only system to combine anti-drone and collaborative drone management at the same time. HOLOSAFE can be multi-redirected several applications for example, the use of sensors for drone control can also be used for perimeter protection.

**Solution**

**HoloSafe**  
Hologarde offers a software solution for detecting, identifying, classifying and neutralizing unwanted drones, while facilitating the planning, deconflicting and real-time tracking of foot-occurred drone flights.

**TfL of the technology**  
TRL 9

**Commercial strategy**  
Hologarde develops airspace protection, drone management, anti-drone solutions, and perimeter control. It designs, operates, Command & Control software, providing real-time situational awareness and precise drone positioning.

**Scenarios**  
Scenario 2: Multi-site hypersonic capability: the C3 can be stepped and can broadcast tactical information in real time.

**Innovation**  
1- It is the only system that has been operational and proven in the French Armed Forces since 2019.  
2-Hologarde ensures IAD security at France's most sensitive sites.  
3-Hologarde manages collaborative drones in Paris airspace.  
4-Hologarde is the only system to combine IAD and UTM.  
5- Multi-environment.

infos@hologarde.com | timothée.bouquie@hologarde.fr

**IANUS CONSULTING**

Larnaca, Cyprus

**About Ianus Consulting**

IANUS conducts research, develops innovative solutions and provides consultancy and management services to its clients in both the public and the private sector.

**Description**

IANUS has developed the solution **MAESTRO - Incident Management Platform**, to address freedom threat. MAESTRO stands at the forefront of innovation in incident management and public safety, revolutionizing the landscape with its comprehensive and adaptive approach. One of its key innovations lies in seamlessly integrating real-time data from diverse sources, including IoT devices, sensors, and social media feeds, creating a dynamic and holistic understanding of incidents. The advanced geospatial visualization tools further elevate MAESTRO, providing a live map interface for enhanced situational awareness.

**Solution 2**

**MAESTRO**  
IANUS, an in-house developed incident management platform, designed to address diverse and dynamic scenarios in real-time.

**TfL of the technology**  
TRL 8

**Commercial strategy**  
Features like real-time data integration, geospatial visualization MAESTRO excels in facilitating seamless coordination, communication, and response across various scenarios. Its geospatial visualization tools enable IANUS to have a global view of the field while supporting peer-to-peer information exchange in all steps of a mission.

**Scenarios**  
Scenario 1: IANUS in-house developed incident management platform, designed to address diverse and dynamic scenarios in real-time.

**Innovation**  
The platform enables swift incident reporting for fast responses, coordinating responses by security personnel. Intelligent categorization ensures efficient resource allocation. MAESTRO's app enhances on-site-go communication, optimizing response times.

www.ianus-consulting.com | g@ianus-consulting.com

**94 manifestations d'intérêt** ont été reçues de la part de fournisseurs de technologies basés en Europe  
**94 solutions** compilées dans un catalogue, donnant une représentation équitable du marché dans l'UE




# Types de solutions reçues

## Catalogue de solutions



**SHIELD4CROWD**



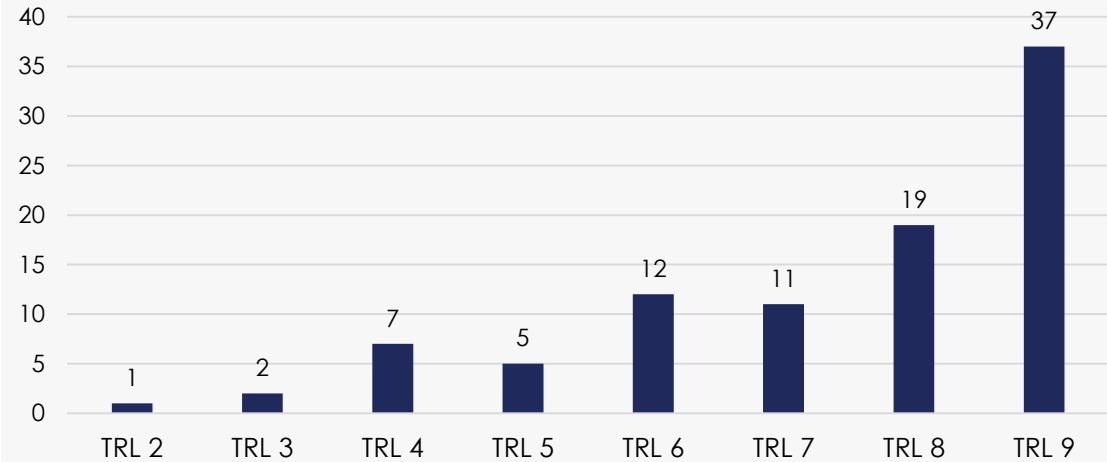
**CATALOGUE  
OF SOLUTIONS**

PROTECTION OF EU PUBLIC SPACES

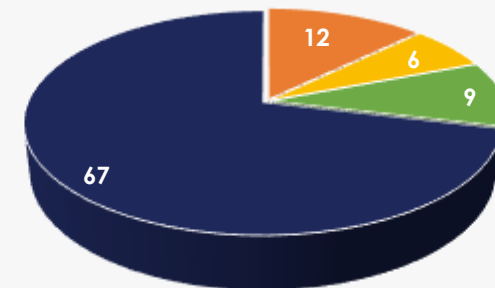
SHIELD4CROWD is an EU-funded project that focuses on enhancing the protection of public spaces in EU cities against security threats related to crowd management. The project is led by SNCF, French railway operator and 9 other partners, among which 3 ministries of Interior from 3 EU Member States (France, Slovakia and Spain), 2 security practitioners, and several end-users involved as User Observatory Group (UOG).

[contact@shield4crowd.eu](mailto:contact@shield4crowd.eu) <https://shield4crowd.eu/>

Numbers of solutions received ordered by TRL



Types of applicants



Large company Mid-cap RTO SME





# Application Map Shield4crowd



|                  | 1 <sup>er</sup> pays | 2 <sup>nd</sup> pays |
|------------------|----------------------|----------------------|
| <b>Chypre</b>    | 3                    |                      |
| <b>Danemark</b>  | 1                    |                      |
| <b>Espagne</b>   | 10                   |                      |
| <b>France</b>    | 59                   | 3                    |
| <b>Allemagne</b> | 3                    |                      |
| <b>Grèce</b>     | 5                    |                      |
| <b>Italie</b>    | 5                    |                      |
| <b>Pologne</b>   | 5                    | 1                    |
| <b>Portugal</b>  | 5                    |                      |
| <b>Lituanie</b>  | 1                    |                      |
| <b>Suède</b>     | 1                    |                      |
| <b>Pays-Bas</b>  | 1                    | 1                    |



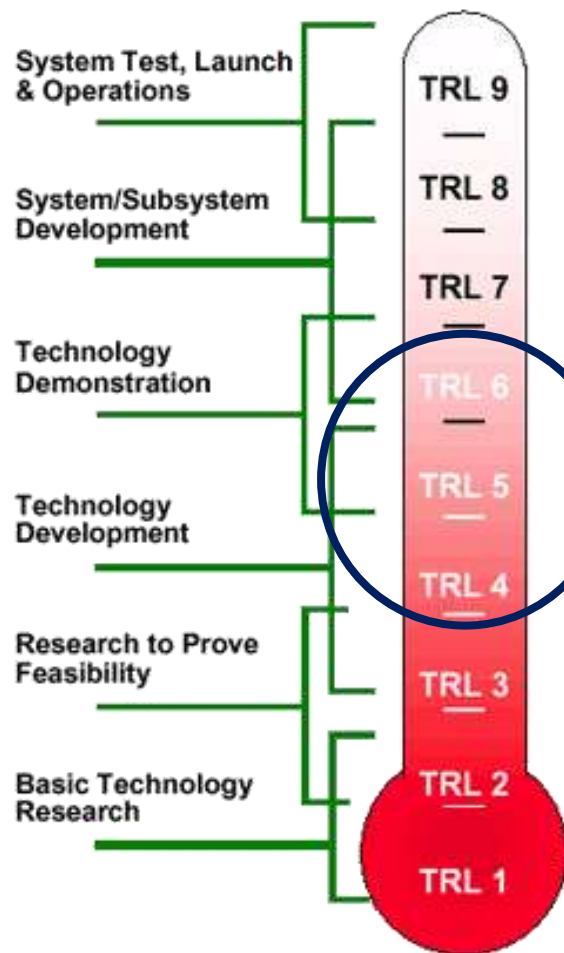
# Composantes technologiques



| Video and Software solutions            | Autonomous systems | Physical security     | CBRN Technologies               | Miscellenaous                | CYBER         |
|---|--------------------|-----------------------|---------------------------------|------------------------------|---------------|
| Video analytics                         | Drone              | Physical barriers     | CBRN imaging technology         | Electronic devices tracking  | Cybersecurity |
| Crowd analysis (gathering, counting...) | C-UAS              | Body scans            | RN detection                    | Weapon detection/Tracking    |               |
| Tracking                                | Balloon            | Biometric solution    | Biological & Chemical Detection | Modules platform on vehicles |               |
| Detection of abandoned objects          | Robotics           | Umbrella (protection) |                                 | Communication + share        |               |
| Fire or smoke detection                 |                    | Protective Suit       |                                 |                              |               |
| Human & objects identification          |                    | Ballistic protection  |                                 |                              |               |
| Hypervision platform                    |                    | Metal detector        |                                 |                              |               |
| Thermal imaging technology              |                    |                       |                                 |                              |               |
| Simulation Software                     |                    |                       |                                 |                              |               |
| Sound analysis                          |                    |                       |                                 |                              |               |
| Cartography                             |                    |                       |                                 |                              |               |

**Toutes les solutions ont été segmentées en fonction des composantes des technologies.**

# Que recherchons-nous ?



Le PCP, en tant que première étape dans l'achat de produits innovants, part d'un niveau de maturité technologique (TRL) relativement bas.

L'acheteur public achète des services de R&D pour un produit ou un service qui est encore loin du marché.

Le PCP est divisé en trois phases : conception de solutions (TRL 3-4), développement de prototypes (TRL 5-6) et développement d'un volume limité de produits/services (TRL 7-8).

**Focus sur les solutions avec un TRL de 4 à 6**

# Qu'attendons-nous des fournisseurs de technologie ?



## SHIELD4CROWD recherche :

Une solution qui répond à l'un des besoins d'amélioration de la protection de l'espace public et de la gestion des foules

Une solution à faible TRL qui doit encore être développée

Une solution fournie par un fournisseur de technologie basé en Europe

**Présentez votre solution lors des sessions prévues les  
15, 16 et 17 avril 2024 !**



→ Réservez votre place ici : [Lien](#)





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# Objectifs de l'OMC

SNCF

# Objectifs de l'OMC



Valider les résultats de l'analyse de l'état de l'art (SOTA) et échanger sur la viabilité des fonctionnalités techniques et provisions financières.



Sensibiliser le secteur et les parties prenantes concernées (y compris les autres utilisateurs) au prochain PCP.



Recueillir des informations auprès du secteur et des parties prenantes concernées (y compris les utilisateurs) afin d'affiner le cahier des charges de l'appel d'offres.

# Activités de l'OMC



| Date             | Event   |
|------------------|---|
| 20 December 2023 | Publication of the Prior Information Notice (PIN) on TED  |
| 22 March 2024    | Publication of the OMC documents on the project's website: <a href="http://www.shield4crowd.eu">www.shield4crowd.eu</a><br>Publication of the EU Survey questionnaire |
| 2 April 2024     | OMC Event in English (online) (10:00 – 11:30 CET)   |
| 3 April 2024     | OMC Event in French (online) (10:00 – 11:30 CET)  |
| 4 April 2024     | OMC Event in Italian (online) (10:00 – 11:30 CET)   |
| 4 April 2024     | OMC Event in Slovakian (online) (12:00 – 13:30 CET)   |
| 5 April 2024     | OMC Event in Spanish (online) (10:00 – 11:30 CET)   |
| 15 May 2024      | OMC Event in Warsaw, Poland (hybrid) (9:00 – 16:00 CET)   |
| 30 May 2024      | Deadline for the submission of questions via the OMC questionnaire (17:00 CET)  |
| 10 June 2024     | Publication of the OMC findings, including all questions and answers to the OMC questionnaire.  |
| 11 June 2024     | Closure of the OMC  |

**Aidez-nous à valider nos résultats en remplissant ce petit questionnaire !**

<https://ec.europa.eu/eusurvey/runners/shield4crowd>







# Questions ou remarques ?



# Merci de votre attention !



[contact@shield4crowd.eu](mailto:contact@shield4crowd.eu)



[www.shield4crowd.eu](http://www.shield4crowd.eu)



[www.twitter.com/shield4crowd](https://www.twitter.com/shield4crowd)



[www.linkedin.com/company/shield4crowd](https://www.linkedin.com/company/shield4crowd)

