

Almende is a Dutch SME based in Rotterdam, with over 20 years participating and leading R&E projects around the topics of self-organization and complex systems. Our expertise is in software architecture and development, AI, and data analytics.

## **Civil Security for Society**

We are looking to collaborate in projects around the following topics:



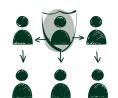
1. Realtime Tracking, Monitoring and Data Analysis; in recent years, tools based on satellite images, smart dust, low-power communication hubs and dynamic ad-hoc topologies of ruggedized network and edge computing devices have been gaining ground for situational awareness. These can run into problems when working in crowded areas and/or disaster environments where the infrastructure is compromised. Almende would like to investigate combining the different solution elements in a self-organizing fashion to combat these challenges.



2. Adaptive Disaster Management; the disaster management of the future requires new paradigms based on our vision on self-organisation: anchored in day-to-day operation to ensure a seamless operation when crisis situations arise; applying adaptive protocols and schemes for swift ad-hoc team formation and workflow management; and incorporating customized orchestrations of technological tools and solutions on-demand. Almende seeks for opportunities to combine these ingredients into one holistic framework.



**3. Community-supported Incident Detection;** the final ingredient in providing resilient solutions for civil security consists of enabling communities of citizens in general or professionals in various fields. There is a great untapped potential in the collection and use of data by citizens, through sensors installed around the home or wearables worn on the body for informed detection and perhaps even prediction of incidents. Of course, such applications should be effectively combined with well-managed personal data vaults to ensure privacy and GDPR compliance.



**4. Network- and community-based cybersecurity strategies;** the topics above are not just limited to the physical domain - cybersecurity is a concern addressed by us in the domain of DevOps, blockchain and secure digital identity. We want to utilize the same decentralized approaches in the virtual space as well, to increase digital security and resilience.

## Collaboration

The table on the next page shows the concrete calls that we have identified within the Horizon Europe Framework Programma - Cluster Civil Security for Society, which match with our ideas. Beyond these, we are nonetheless open to other collaborations as well.



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CALL	TITLE	TOPICS
HORIZON-CL3-2022- CS-01-01	Improved monitoring of threats, intrusion detection and response in complex and heterogeneous digital systems and infrastructures	1, 4
HORIZON-CL3-2022- CS-01-02	Trustworthy methodologies, tools and data security "by design" for dynamic testing of potentially vulnerable, insecure hardware and software components	4
HORIZON-CL3-2022- CS-01-04	Development and validation of processes and tools used for agile certification of ICT products, ICT services and ICT processes	1, 4
HORIZON-CL3-2022- DRS-01-01	Enhanced citizen preparedness in the event of a disaster or crisis-related emergency	2, 3
HORIZON-CL3-2022- DRS-01-02	Enhanced preparedness and management of High-Impact Low-Probability or unexpected events	1, 2, 3
HORIZON-CL3-2022- DRS-01-03	Improved quality assurance / quality control of data used in decision-making related to risk management of natural hazards, accidents and CBRN events	1, 2, 3
HORIZON-CL3-2022- DRS-01-05	Improved impact forecasting and early warning systems supporting the rapid deployment of first responders in vulnerable areas	2,3
HORIZON-CL3-2022- INFRA-01-02	Autonomous systems used for infrastructure protection	1, 3, 4
HORIZON-CL3-2022- SSRI-01-04	Social innovations as enablers of security solutions and increased security perception	1, 3, 4