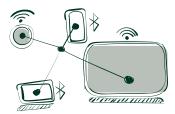


Almende is a Dutch SME based in Rotterdam, with over 20 years participating and leading R&D projects around the topics of self-organization and complex systems. Our expertise is in software architecture and development, AI, and data analytics.

## **Digital, Industry and Space**

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



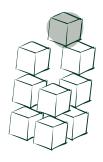
1. Distributed Sensor Networks; through our subsidiary Crownstone and several leading R&D projects we have gained deep understanding into all aspects of distributed sensor networks. The hardware and software, the intelligence to use the readings and all aspects of networking and distribution of the necessary calculations. Applications in care, home, office and industry setting have been tested successfully. We look to extend our knowledge in this area.



2. Industry 5.0; Almende has successfully played key roles in multiple industry 4.0 projects where we integrated early scientific or industrial results into demonstrators that showed the new state of the art of the project. Our holistic, bottom up, approach serves very well in creating robust deliverables.



**3. Collaborative Robotics**; our interest in cooperative robotics started ten years ago and we have made significant advancements to swarm behavior and distributed control. Our current goal is to make robotics equally flexible as software engineering by massive application of simulation technologies. Our open designs and focus on open source makes us an easy partner to collaborate with.



**4. Modular Artificial Intelligence**; the focus in our artificial intelligence practice is on early applications of novel learning algorithms. Currently we see a lot of promise in imitation learning where the resulting small, stackable AI modules show promise in replacing large, hard to verify, neural networks. Currently we apply this to robotics, but we are interested in broadening that scope.

## Collaboration

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



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CALL	TITLE	TOPICS
HORIZON-CL4-2021-TWIN- TRANSITION-01-01	Al enhanced robotics system for smart manufacturing	2
HORIZON-CL4-2021-TWIN- TRANSITION-01-08	Data-driven Distributed Industrial Environments	2
HORIZON-CL4-2021-TWIN- TRANSITION-01-12	Breakthrough technologies supporting technological sovereignty in construction	2
HORIZON-CL4-2022-TWIN- TRANSITION-01-01	Rapid reconfigurable production process chains	2
HORIZON-CL4-2022-TWIN- TRANSITION-01-03	Excellence in distributed control and modular manufacturing	3
HORIZON-CL4-2022-TWIN- TRANSITION-01-09	Demonstrate the use of Digital Logbook for buildings	2
HORIZON-CL4-2022- RESILIENCE-01-02	Monitoring and supervising system for exploration and future exploitation activities in the deep sea	4
HORIZON-CL4-2022- RESILIENCE-01-16	Building and renovating by exploiting advanced materials for energy and resources efficient management	etc*
HORIZON-CL4- 2021-DATA-01-01	Technologies and solutions for compliance, privacy preservation, green and responsible data operations	1
HORIZON-CL4- 2021-DATA-01-05	Future European platforms (Operating Systems) for the Edge: Edge Operating System and Platforms	1
HORIZON-CL4- 2022-DATA-01-02	Cognitive Cloud: AI-enabled computing continuum from Cloud to Edge	1
HORIZON-CL4- 2022-DATA-01-03	Programming tools for decentralised intelligence and swarms	1
HORIZON-CL4- 2022-DATA-01-04	Technologies and solutions for data trading, monetizing, exchange and interoperability	1
HORIZON-CL4-2022- DIGITAL-EMERGING-01-07	Increased robotics capabilities demonstrated in key sectors	3
HORIZON-CL4-2022- DIGITAL-EMERGING-01-26	Open source for cloud-based services	4

CALL	TITLE	TOPICS
HORIZON-CL4-2021- HUMAN-01-01	Verifiable robustness, energy efficiency and transparency for Trustworthy Al: Scientific excellence boosting industrial competitiveness	4
HORIZON-CL4-2021- HUMAN-01-04	Trust & data sovereignty on the Internet	1
HORIZON-CL4-2021- HUMAN-01-05	Trustworthy open search and discovery	etc*
HORIZON-CL4-2021- HUMAN-01-14	eXtended Reality for All – Haptics	4
HORIZON-CL4-2021- HUMAN-01-26	Workforce skills for industry 5.0	etc*
HORIZON-CL4-2022- HUMAN-01-01	AI for human empowerment	1
HORIZON-CL4-2022- HUMAN-01-03	Internet architecture and decentralised technologies	etc*

<sup>\*</sup> topics marked as 'etc' do not correspond directly to our current research topics, but do align with work we have done in the past.