

## Objectives, Values

The network "ROBONOM - Autonomous Service Robots" is an expert platform for professional mobile robots. The close links in the network are intended to create strategic partnerships; the development of intelligent, mobile robot systems and developments along their value chain are to be promoted. Through the internationalization of the network, long-term international cooperations are to be established.

The main focus of the network is the development of new products and processes around professional, wheel-driven service robots with a focus on "Industrie 4.0". However, upstream and downstream developments along the value chain are also more than welcome.

Based on these objectives, the activities of the network focus on the following 4 innovation areas:

- Focus 1: Mobile, wheel-driven robot systems for new fields of application | Focus: mobile manipulators
- Focus 2: Security | Human-Machine Interaction
- Focus 3: Cognitive Robotics | Artificial Intelligence | Software for Robots | Cloud | IoT | Navigation
- Focus 4: Energy supply for mobile robots

It is currently planned that the Swiss and the German ecosystem work together more closely in the coming future. However, other international start-ups and SMEs can also apply to join the network. To this end, the tasks of the national ZIM-Network will be expanded accordingly. The internationalisation of the ROBONOM network should offer considerable added value to both German and international partners.

Specifically, the following objectives will be pursued:

- Implementation and exchange of mutual expertise,
- Development and implementation of R&D projects at the international level,
- Acquisition and management for funding at the EU level with emphasis on the Horizon 2020 program,
- Development of transnational, strategic partnerships
- If desired by the network partners, joint coordination for legal and approval requirements,
- If desired by the network partners, joint coordination for norms and standards requirements.

The internationalization of the ROBONOM network should offer considerable added value to both German and international partners.

The possibility of closer cooperation between EurA AG's ROBONOM network and Sparksense's Europe-wide network offers the opportunity to significantly accelerate the development of autonomous robots. Key tools to achieve these goals will be joint networking and corresponding project meetings / webinars and video conferences. The network management is available to all partners for all matters concerning financing, R&D projects and individual matching as contact person.

## Work Packages

The following work packages will be executed by EurA on the German side with assistance from Sparksense on the Swiss side, that have signed the annexes 8a (Germany) or 8c (Switzerland) respectively.

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|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Work package 1 | Individual counselling interviews with partners of the international networks. The interviews will be executed by EurA/Germany with assistance from Sparksense/Switzerland. Evaluation of the individual scientific, technical and market-related objectives and demands of the network partners. |
| Work package 2 | Assistance of the partners at the cooperation within the network and at the preparation of R&D-projects. Moderation and Coaching of the coordination within the network.                                                                                                                          |
| Work package 3 | Identification of possible application scenarios. Inclusion of stakeholders and further governmental and non-governmental institutions.                                                                                                                                                           |
| Work package 4 | Collection and evaluation of R&D project ideas. Initiation, conceptual design and realisation of funded R&D-projects. Assistance for the partners at the application and management for funds.                                                                                                    |
| Work package 5 | Development of a cooperative international marketing and public relation strategy. Conceptual design of promotional material (flyer, web, brochure) and events.                                                                                                                                   |
| Work package 6 | Promote inclusion of new partners in the cooperation, companies, R&D-Institutions and stakeholders. This includes further internationalisation beyond the current partners in Germany and Switzerland                                                                                             |
| Work package 7 | Project-Controlling, documentation                                                                                                                                                                                                                                                                |

## Milestones

The following milestones will be achieved within the 36 month of phase 2

Milestone	Definition	Topic	Date
1	WP 1	Coordination of R&D activities	2021-07-31
	WP 2	1 application and 1 project outline have been submitted	
	WP 3	A network meeting was held in Zurich/Switzerland	
	WP 4	Public relations, development of contacts with international partners	
	WP 5	Identification of potential new network partners, accession talks were carried out.	
	WP 6	Three important users from the fields of intralogistics, construction and agriculture were involved in projects applied for as user advisory boards or for new projects.	
2	WP 1	Coordination of R&D activities	2022-07-31
	WP 2	1 application and 1 project outline have been submitted	
	WP 3	Outlines of ideas for further projects are presented and discussed with the network partners to clarify participation Another network meeting was held	
	WP 4	Further technology/user workshops held (planned: construction, inspection/maintenance, intralogistics)	
	WP 5	Preparation and implementation of events / web meetings	
	WP 7	Prospective users were identified, further development of the network concept, analysis is available	
3	WP 1	Coordination of R&D activities	2023-07-31
	WP 2	1 application and 1 project outline have been submitted Products from R&D projects are marketable Marketing concept including DL-funding for R&D projects created.	
	WP 3	Two further network meetings were held.	
	WP 4	Technology roadmap created for the post-project phase	
	WP 5	Further development of network concept completed Contracts for phase 3 have been drawn up ready for signature, and the concept for continuation has been agreed with the partners.	
	WP 6	Final report has been prepared	

## Network-Members

ROBONOM-Members	Weblink
Erler GmbH	<a href="http://www.erler-gmbh.de">www.erler-gmbh.de</a>
EVO Informations-systeme GmbH	<a href="http://www.evo-solutions.com">www.evo-solutions.com</a>
Fraunhofer IOSB	<a href="http://www.iosb.fraunhofer.de">www.iosb.fraunhofer.de</a>
HENKEL + ROTH GmbH	<a href="http://www.henkel-roth.com">www.henkel-roth.com</a>
Hochschule Karlsruhe	<a href="http://www.hs-karlsruhe.de">www.hs-karlsruhe.de</a>
Hochschule Mainz	<a href="http://www.i3mainz.de">www.i3mainz.de</a>
Innok Robotics GmbH	<a href="http://www.innok-robotics.de">www.innok-robotics.de</a>
Jennewein Metall-technik GmbH & Co. KG	<a href="http://www.jennewein-metalltechnik.de/">www.jennewein-metalltechnik.de/</a>
measX GmbH & Co. KG	<a href="http://www.measx.com">www.measx.com</a>
PlanB GmbH	<a href="https://www.planb.net/">https://www.planb.net/</a>
SSI Software Services GmbH	<a href="http://www.ssidecisions.com/de/">www.ssidecisions.com/de/</a>
Technische Hochschule Ulm	<a href="http://www.servicerobotik-ulm.de">www.servicerobotik-ulm.de</a>
Technische Universität Ilmenau	<a href="http://www.tu-ilmenau.de/de/biomechatronik">www.tu-ilmenau.de/de/biomechatronik</a>
WESOUND GmbH	<a href="http://www.wesound.de">www.wesound.de</a>

International ROBONOM-Partners	Weblink
Bota System AG, Zürich/CH	<a href="https://www.botasys.com/">https://www.botasys.com/</a>
Sevensense AG, Zürich/CH	<a href="https://www.sevensense.ch/">https://www.sevensense.ch/</a>
Sparksense Consulting Flutto (sparksense.co), Zürich/CH	<a href="https://sparksense.co/">https://sparksense.co/</a>

Associated partners	Weblink
WSA Automation GmbH	<a href="http://www.ws-a.de">www.ws-a.de</a>
VRI GmbH Batterie Technik	<a href="http://www.vri-gmbh.de">www.vri-gmbh.de</a>
Wiferion GmbH	<a href="http://www.wiferion.com/">www.wiferion.com/</a>