

European Partnership on Innovative SMEs Innowwide

Example of a funded project proposal

Important note for applicants

This is a model example of an application funded through Innowwide call 3 in 2024.

Please note:

- This model application is for guidance only.
- Sections have been summarised and grouped, so these do not always match the application form.
- The application form template is available in the [Innowwide library](#).
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Your application must be submitted through our SmartSimple platform by the call for projects deadline.

Project title and acronym: Introducing Industry 5.0 Solutions to Factories in India (TITANX)

From Netherlands to India

Funded through Eureka Innnowwide call 3 (2024)

Project summary: The automotive, fast-moving consumer goods and broader manufacturing sectors face a critical challenge in implementing flexible manufacturing systems for efficient machine reconfiguration and reduced downtime. This lack of adaptability results in significant financial losses, reaching up to 100 million euro annually per production facility.

Since its foundation in 2021, AGMAH has specialised in AI-driven industrial automation. It develops tailored solutions with its Industry 5.0 Ecosystem. AGMAH's mission is to make industrial automation and robotics accessible, affordable and approachable for factories wishing to boost productivity and revenue.

Technology aspects: To address low manufacturing efficiency and machine downtime, AGMAH has developed a first-of-its-kind AI-powered supervisory control and data acquisition (SCADA), internet of things (IoT) and digital twin ecosystem. Already deployed in the Netherlands, it has demonstrated the potential to substantially reduce downtime and factory expenditure.

India, with over 800,000 factories and a rapidly growing manufacturing sector, presents a significant opportunity; the industry 4.0 market size is projected to grow substantially, with the segment relevant to our scope expected to reach 29 billion euro by 2029.

Co-creation strategy: The most effective strategy for overcoming common market entry barriers would be to develop a partnership with a well-established local company. In 2024, AGMAH collaborated with IEC Air Tools, a leading fastening and assembly solutions provider in India, to co-create an IoT-enabled plug-and-play solution (CMS-IoT), which is already deployed in multiple factories.

With support from Innnowwide, AGMAH wants to pilot the introduction of its Industry 5.0 Ecosystem in the Indian market by integrating its SCADA platform within the CMS-IoT. Close collaboration with IEC Air Tools will combine innovation with local expertise to maximise impact.

Throughout the six-month project, a demonstrator will be created to showcase the solution, which has already attracted significant interest from early adopters. Following user feedback, the innovation will be refined for scalability and commercialisation. By leveraging IEC Air Tools' market access to over 1,600 factories, AGMAH aims to acquire valuable insights into the technological and commercial landscape for its offerings and establish itself in India's fast-growing manufacturing landscape.

Pitch

WHAT

Integrate the SCADA platform within the CMS-IoT system in India, introduce new features and showcase the benefits of AGMAH's Industry 5.0 Ecosystem. This is aimed to ultimately fill the gap for cost-effective and sustainable automation solutions in the Indian market.

The project aims to capture significant market share and export potential through strategic partnerships and a customer-centric approach.

WHY

Revolutionize India's manufacturing landscape by addressing the needs of production line managers and operators.

As the industry moves towards smart production, this innovation can reduce costs, downtime and labour displacement.

HOW

AGMAH will combine its expertise in AI, robotics, IoT and more, with IEC Air Tools' understanding of the Indian manufacturing landscape.

Resources and facilities are allocated strategically, encompassing mechanical, electrical and software engineers, and aligning with a detailed work plan over the six months that includes technology development, market research, compliance checks, business prospection and risk analysis.

Excellence summary

Objectives, ambitiousness and degree of innovation

The project will pilot the introduction of AGMAH's Industry 5.0 Ecosystem in the Indian market, acquire valuable insights into the technological and commercial landscape for its offerings and enhance existing innovations with our local partner, IEC Air Tools.

Together, AGMAH and IEC Air Tools have developed a solution (CMS-IoT) that combines AGMAH's proprietary hardware and IEC Air Tools' fastening controller. The primary goal is to integrate CMS-IoT with SCADA, which will allow on-the-fly reconfigurability, remote deep data traceability and monitoring.

The demonstration of AGMAH's platform will enable a soft entry into the Indian market through IEC Air Tools' network of over 1,600 customers. It will position AGMAH within a manufacturing hub of over 800,000 factories, representing a total addressable market of 2.1 billion euro and a 15% compound annual growth rate until 2029.

The project will also facilitate technology transfer and exports from the EU to India, stimulate economic growth in India and help Indian manufacturers meet sustainability goals.

The key expected results are:

1. Demonstration of Industry 5.0 Ecosystem as an add-on to IEC Air Tools' solutions and onboarding early adopters
2. Refinement of AGMAH's market entry strategy and marketing approach
3. Understanding of end-customer sentiment on the supply chain, payment methods and deployment expectations

The next phase for the existing CMS-IoT solution involves integrating AGMAH's software platform into CMS-IoT to improve it with features such as data traceability, remote reconfigurability, supervisory-control and monitoring. This integration will need validation and demonstration in an operational environment. As such, we expect CMS-IoT, with this integration, to reach technology readiness level seven by the end of the project.

Competitive advantage

Our solution distinguishes itself in the market because of its compatibility with any electric or non-electric fastening tool. While competitors focus on data acquisition and condition monitoring, we go further by integrating remote reconfiguration and supervisory control, reducing downtime by 40% and delivering average annual savings of 1.2 million euro per factory.

Moreover, our retrofitting approach eliminates costly tool replacements, further enhancing value for manufacturers. By manufacturing components locally in India, we provide this solution at half the price of our competitors, ensuring a return on investment in under six months compared with two years for competitors' solutions. This combination of lower upfront investment, cost savings and high performance sets our solution apart.

Alignment with SME's overall business strategy

India, with more than 800,000 factories and a projected compound annual growth rate of 9% between 2022-2028, is one of the fastest-growing manufacturing hubs worldwide. This project serves as a strategic entry point for AGMAH into the Indian market in keeping with AGMAH's global expansion strategy. The project also aligns with an Indian government agenda that promotes industry 4.0 and digitisation within the manufacturing industries. Our project not only supports current national priorities around Industry 4.0 but also prepares the manufacturing sector for the next phase of innovation and competitiveness (Industry 5.0).

Collaborating with IEC Air Tools, a company with over 10% of the market share in India's fastening and assembly solutions sector, minimises the risks and costs associated with sales and marketing in India. The timing for entry is ideal, as evidenced by an MPI Group study which highlights the growing demand for AGMAH's solutions in the manufacturing sector.

Co-creation or technology adaptations in the target market

This project will facilitate co-creation between AGMAH and IEC Air Tools by integrating two distinct yet synergistic solutions: AGMAH's Industry 5.0 Ecosystem and IEC Air Tools' CMS-IoT.

Both mature products have been tailored to their respective markets. However, CMS-IoT requires technological upgrades to meet industry 5.0 standards.

We aim to leverage the cost-effectiveness of both AGMAH's and IEC Air Tools' products and demonstrate frugal innovation. This approach will maximise value whilst minimising costs, which is essential for the Indian market where affordability and accessibility are critical factors.

To adapt this collaborative solution to the target market, the following strategic steps will be taken:

1. Cultural sensitivities will be incorporated into the user interface.
2. Affordability and accessibility will be ensured for the solution to work efficiently with varying levels of infrastructure and connectivity across different regions in India.

Impact summary

Market size

The Industry 4.0 and automation solutions market size for the manufacturing sectors—covering automotive, electronic appliances, white goods, and FMCG—in the target region is valued at €2.5 billion, with an expected annual growth rate of 15%.

In the short term, the projected impact includes €500 million in net savings over two years, achieved by reducing revenue losses across 50 factories. In the long term, the strategy is to scale these initiatives to 250 factories, with the goal of achieving €2.5 billion in net savings over four years through sustained efficiency improvements and loss reduction.

End-users

The target end-users for our solution are production line managers and operators in four key manufacturing segments:

- automobile and motorcycle manufacturers
- electric vehicle industries
- electronics
- white goods

IEC Air Tools is already supplying to more than 1,600 companies, and the co-developed CMS-IoT has been deployed in multiple factories working in these sectors.

The identified needs of production line managers include deep data traceability, error-proofing features and solutions that reduce (re)configuration downtime without replacing existing tools and systems. For operators, the primary need revolves around an approachable system, i.e. something simple to interact with, which they can use with their current skill set and enhances their work efficiency.

Our solution addresses these needs by offering deep data traceability, remote data access and machine (re)configurability and interconnectivity, reducing configuration time by 40%. It seamlessly integrates with existing systems, improving uptime and reducing energy consumption.

Additionally, the SCADA platform has a no-code programming interface, allowing operators and production line managers to modify processes on the go. This makes the solution user-friendly and adaptable to real-time production needs.

Market access and risk

Our commercialisation strategy begins with selecting early adopters from IEC Air Tools' network of over 1,600 customers, prioritising scalable companies that are feedback-ready and have upselling potential. This targeted and data-driven approach will refine our solution's market fit and strengthen our go-to-market strategy.

We have identified three revenue streams:

1. Sale of a proprietary hardware module.
2. A platform as a service model with integrated software as a service module.
3. Customised solutions with tailored service level agreements.

In the first year, IEC Air Tools will act as the master distributor. By the second year, additional distributors will be onboard to accelerate growth across India. Our long-term strategy includes deployment in 15 companies by the end of the first year and expanding to South Asia and Europe within two years, leveraging the existing partnerships of AGMAH and IEC Air Tools.

The Indian manufacturing market has several barriers, including low market acceptance of startups, complex vendor registration processes and strong competition from multinational corporations. Cultural differences and a shift towards electric tools further complicate entry.

To mitigate these challenges, partnering with an established and trusted vendor offers credibility and streamlines market access. Additionally, the project will identify other pre-registered distribution partners to accelerate market penetration.

AGMAH's Industry 5.0 Ecosystem is owned by AGMAH. IEC Air Tools will use components of its fastening ecosystem that it holds intellectual property (IP) for. The CMS-IoT is a co-developed solution jointly held by AGMAH and IEC Air Tools. Any new IP generated as a result of this project will jointly belong to AGMAH and IEC Air Tools.

Contribution to UN SDGs

The project aligns with several UN Sustainable Development Goals (SDGs), including:

- **SDG 9: Industry, innovation and infrastructure.** The project promotes industrial innovation by introducing frugal smart manufacturing technologies that enhance production efficiency and reduce downtime.
- **SDG 12: Responsible consumption and production.** The project supports sustainable production practices by enabling factories to use fewer resources thanks to automation and process optimisation.
- **SDG 17: Partnerships to achieve the goal.** The collaboration between the partner companies in the Netherlands and India exemplifies international cooperation and knowledge transfer to achieve shared sustainability goals.

Social and environmental risks

This project or its results will not create any new negative social and environmental effects. On the contrary, it aims to reduce existing risks. The goal of this project is to improve production efficiency and promote sustainable practices in the manufacturing industries.

Quality and efficiency of implementation summary

Capacity and role of the applicant SME and main subcontractor: complementarity and benefits of collaboration

AGMAH in the Netherlands possesses a diverse range of expertise and extensive experience in both technical and business domains. The technical team comprises professionals with in-depth knowledge in AI, robotics, IoT technologies, frontend and backend development. The business team has a collective experience of 30 years in sales/business development in the European and Indian markets. Furthermore, the leadership team brings a wealth of experience in managing successful projects within similar domains.

IEC Air Tools boasts a comprehensive research and development department, state-of-the-art manufacturing facilities and a sales/marketing team that has an in-depth understanding of the Indian manufacturing landscape. Their technical team is composed of highly skilled mechanical and electrical engineers. Furthermore, they have a proven track record of successfully scaling and commercialising multiple products.

AGMAH and IEC Air Tools form a highly complementary collaboration. IEC Air Tools can enhance the AI-powered Industry 5.0 Ecosystem with over 50 years of manufacturing expertise, a trusted network of over 1,600 clients and local market knowledge in India. This will enable AGMAH to accelerate market entry, build customer trust and simplify vendor registration.

In return, IEC Air Tools gains access to advanced industry 5.0 technologies, enriching the co-developed CMS-IoT solution and aligning it with local affordability needs. The partnership is expected to double IEC Air Tools' market share within three years while allowing AGMAH to scale its product across broader industrial applications.

The partnership is set to evolve into a long-term distribution and innovation alliance, with both companies planning to sign a joint development agreement to co-own IP and support commercialisation. IEC Air Tools would become a certified distributor for AGMAH's solutions across broader industrial segments, while jointly developing new technologies. As Indian factories transition to electric tools, the collaboration will enable both companies to expand into this segment by combining IEC Air Tools' domain expertise with AGMAH's adaptable ecosystem.

Availability of resources

AGMAH has the necessary personnel and leans on the support of IEC Air Tools to understand the Indian manufacturing landscape, as well as for facilities and equipment. Some services, including legal, accountancy and cyber security, will be outsourced.

Gender dimension

The project's design and methodologies incorporate gender dimension through inclusive training approaches, adaptable interfaces, and flexible learning modules to accommodate different user needs and learning styles.



In India—the target country for this project—both local and federal governments are actively encouraging greater participation of women in the manufacturing sector. Supporting this mission, our innovation enables all individuals, regardless of gender, to upskill, expand their knowledge, and reduce training time in manufacturing-related contexts.

Methodologies include gender-neutral language and usability testing with both women and men. We will collect and analyse sex-disaggregated data to track differences in participation, engagement and outcomes as to ensure the tools are equally effective across genders.

Project planning

The six-month work plan integrates technology development, market research, compliance checks, business prospection and risk analysis to achieve the project's results and prepare for challenges.

Summary of the work plan:

- **Technology adaptation:** Adapt the solution's features to the target market, evaluate its market integration strategy and onboard early adopters.
- **Market positioning, technology scouting and novelty verification:** Strengthen our value proposition based on the results of a competitor analysis and feedback from early adopters, and examine the innovative nature of the solution in India.
- **Analysis of potential partners for distribution:** Analyse and match with potential local companies, including in the context of hosting workshops, along with finalisation of a licensing strategy.
- **Qualitative analysis:** Identify users' payment preferences and initial deployment expectations; obtain insight into the impact of emotion-based decision-making.

Deliverables

- Small scale proof of concept of the integrated platform and CMS-IoT
- Market readiness roadmap
- Competitor analysis
- Novelty verification
- Identification of key potential partners
- Workshop with potential partners and summary report
- Memorandum of understanding with potential partners
- Supply chain strategy in line with customer preferences

Budget:

- Direct costs:
 - Personnel costs: €X
 - Subcontracting costs: €X
 - Purchase costs:
 - travel and subsistence (€X)
 - equipment depreciation (€X)
 - other goods, works and services (€X)

- Indirect costs, calculated as 25% of direct costs, excluding subcontracting: €X
- Total budget: €X

Risks for each work package are identified and contingency measures are described.