



Eindhoven Engine WhiteBook

Version for OpenCall 2022

Mission and vision

The mission of Eindhoven Engine is to accelerate innovation in the Brainport region to an exponential rate in order to provide new and timely technology-based solutions for the societal challenges that our generation and environment are facing. Our vision is that we can achieve this by discovering our collective intelligence in excellent science, technology, humanities and business. It is envisaged that this potential can be unleashed at yet another level when organizational barriers are lowered, and *interpersonal exchanges* and *combinations of ideas and skills* are actively stimulated. For this, inspiring and challenging 'moon shot' goals with associated deadlines are essential. Furthermore, the dedicated selection and coaching of team members, collaborating in an inspiring work and meeting space, is a key ingredient. Co-location stimulates and facilitates the joint execution of innovation projects, including the exploration of market potential.

Starting point, present situation and next steps

Eindhoven Engine has received a grant from Regiofond's Brainport B.V. to pursue its mission. A jump start has been made through the 2019 funding of project initiatives around innovation topics supported and executed by consortia with key industrial and knowledge partners, followed by three OpenCalls. As a result, there are projects that started in 2018, 2019, 2020 and 2021. The execution of these projects by the involved team members takes place at a dedicated Eindhoven Engine Building on the TU/e campus (extensively renovated in 2020). For the upcoming call 2022, the criteria that these consortia should meet, the topics around which they are formed and the goals which they should achieve are described in the next paragraphs. Practical aspects are addressed in the Work Plan OpenCall 2022 document.

Oriented towards providing new solutions for societal challenges

Projects executed by consortia that are part of the Eindhoven Engine community will have a clear focus on technological options for providing new solutions to the main challenges that our society is facing. The consortia will therefore *address accelerating innovations for tackling societal issues in the field of Health, Energy, Mobility, AgriFood and Safety*. The project scope and goals are examples of '*a dream with a deadline*', being both challenging as well as feasible and providing game changers and quantifiable impacts when successful. Societal relevance in the innovation objectives is guaranteed and enhanced by interactions with specific stakeholders and outreach to the broader public during the definition and/or execution phase.

Based on the technology signature and competences of the Brainport region

Building on existing strengths and the joint execution of innovation projects in multi-partner teams (with a substantial participation of talented students at a central location) make the essential difference compared to other collaboration examples. In view of this, Eindhoven Engine consortia will have a technology signature and will be formed around *core partners which have their roots and home base in*



the Brainport region. Through this approach, combinations of leading positions in the field of high-tech systems and enabling materials technology, data science, design and human-technology interactions form the backbone of Eindhoven Engine consortia, which cooperate through co-location of the team members at the Eindhoven Engine workspace. Wherever considered necessary to achieve the final goals, complementary knowledge, technology positions and key infrastructure from partners with key positions in these areas but who are located elsewhere can be incorporated.

Providing new, visible and iconic applications

Based on the technology position of the Brainport region described before, new developments addressing societal challenges have already emerged in the last decade. Examples like care robotics, photonic chips, equipment enabling energy storage, truck platooning, city farming and smart lighting grids provide practical examples of how Eindhoven Engine developments will lead to *additional new and iconic applications*. Next to their intrinsic value, they illustrate to the general public and political stakeholders how Eindhoven Engine funding is transformed into visible and credible impacts for society.

Growing human capital: the Eindhoven Engine Academy

Eindhoven Engine is built on the conviction that more innovative power can be unleashed by bringing together the right people from various backgrounds and generations – facilitating both students and experienced employees in using, sharing and developing available and new skills in order to achieve inspiring audacious goals for the benefit of society. Working at a joint co-location is an important prerequisite for this but is not enough in itself and will be accompanied by additional specific attention to community-building, team-building and the staffing of project teams. Team members from the participating organizations can be supported in order to gain insights into their motivations and technical as well as interpersonal skills. Based on this, dedicated personal and team coaching can be provided by the Eindhoven Engine Academy in order to optimize individual growth, team performance and the resulting output and impact.

Eindhoven Engine community of practice

In extension of working on co-location the project members will be engaged in the Eindhoven Engine community of practice, based on the shared passion for radical innovations. Eindhoven Engine will facilitate the infrastructure to support this community of practice characterized by its organic, spontaneous and informal nature and culture. Eindhoven Engine community acts as an instrument for accelerating innovation. It can support strategy, excite business model innovations, solve wicked problems and attract new talent. It is a place where people are empowered to connect with peers and people from different backgrounds, domains or businesses, complementing the existing organizational structures and radically invigorate co-creation, sharing best practices, learning, and change.

The Eindhoven Engine mindset

For the projects and its members to be successful in the Eindhoven Engine ecosystem an open mindset is essential. Looking at the core projects and its members: they must have the drive to create commonalities from diversity. There should be an intrinsic curiosity for interdisciplinary ways of working, the freedom to embrace and build upon radical ideas created by others and yourself, and the sense of urgency to act accordingly. Our core values are entrepreneurial, value driven, adaptive, transparent and inspiring. Hence, participants of the Eindhoven Engine community embrace the fact that interdisciplinary working is a and get energized by and bring energy to the community of practice. All this to accelerate innovation, together.

Prerequisites for Eindhoven Engine proposals and consortia

In view of the considerations described above, new proposals and consortia requesting funding from Eindhoven Engine must address all of the following goals:

1. Oriented towards providing new solutions to tackle societal issues in the field of Health, Energy, Mobility, AgriFood and Safety, which can be communicated to stakeholders as new iconic applications.
2. Formed around core partners with a home base in the Brainport region, providing team members with access to leading positions in the field of high-tech systems, enabling materials technology, data science, design and human-technology interactions.
3. Having a strategic recognition of the co-location and coaching facilities provided by Eindhoven Engine and an ambition to benefit from them.

An extensive overview the call specific criteria for Eindhoven Engine project proposals is described in the Eindhoven Engine WorkPlan OpenCall 2022 and the Eindhoven Engine BlueBook contains the overall General Regulations.
