

ISTRC Call for White Papers for Required Research Infrastructures

2021-2022 (תשפ"ב)

The Israeli Smart Transportation Research Center

Call publication: January 3, 2022

Final submission: February 15, 2022

BACKGROUND

The Israeli Smart Transportation Research Center (ISTRC) at the Technion, in collaboration with Bar-Ilan University, was jointly established in 2020 by the Smart Mobility Initiative of the Israel Prime Minister's Office and the Council for Higher Education. Our mission is to enhance research, development, and entrepreneurship in the field of smart mobility in Israel. For more information, please visit the [ISTRC website](#).

Smart transportation, which is interdisciplinary by nature, requires collaboration between researchers and developers from a range of fields, departments, and institutions, as well as ongoing discourse between experts and decision makers from academia and the industry.

ISTRC makes great efforts to connect between academic communities, R&D experts, and stakeholders – to initiate, promote, and leverage interdisciplinary and intersectoral research activities that will contribute to smart, efficient, and green transportation, while positioning Israel as a world leader in the field.

ISTRC VISION

Our vision to achieve **Zero Transportation Externalities** serves as a core value for all ISTRC activities and is comprised of the following three dimensions:

- **Zero casualties:** Generating a safe and resilient system that will optimally respond to safety and security failures, while considering all road users (e.g., mixed traffic, non-motorized and new modes of transportation, and automatic and manual vehicles); striving towards zero fatalities and serious injuries through cutting-edge technologies and mechanisms in the fields of automation and connectivity.
- **Zero delays:** Creating an efficient and equitable transportation system that ensures optimal levels of service, tailored to the mobility needs of the entire population and with no delays. The system must be based on transit-oriented development,

environmentally friendly land use, and mobility as a service – optimally reflecting the inherent opportunities of motorized and non-motorized transport modes, as well as public and shared transportation, with various levels of automation.

- **Zero environmental harm:** Preventing all types of environmental externalities, including emission and noise, by developing, adopting, and conserving clean and renewable energy, while promoting sustainable transport modes and behavior.

The ISTRC collaborates with a large range of academic and research institutions in Israel to promote cutting edge research and insights and empower and develop human capital in the field.

While the rapidly evolving smart transportation domain presents a great deal of opportunities, it also poses numerous significant challenges. In order to deal with and resolve these short-term and long-term challenges, varied and comprehensive research infrastructures are necessary.

OBJECTIVES

The aim of this call is to generate white papers, including supporting marketing materials such as videos or presentations. These must present the need for promoting agile research infrastructures that are designed to serve populations across Israel, while boosting state-of-the-art research and innovation in the field of smart transportation, in line with the “**Zero Transportation Externalities**” vision.

Focuses of this call

- Addressing upcoming challenges that stem from the various driving forces in the field
- Dealing with inadequate multidisciplinary research infrastructure
- Effectively maximizing dedicated resources (both human capital and financial investments) for research and development purposes
- Providing individuals and organizations with a higher starting point, based on accumulative state-of-the-art knowledge / experience / 360° perspectives
- Offering a one-of-a-kind opportunity that leads to research excellence

The White Paper of the required research infrastructure should include:

- Background: Needs and mapping of existing solutions and national competitive advantages
- Suggested solution: The proposed infrastructure
- How this solution addresses the need (potential beneficial research studies and their importance)

- Work plan, including required resources (HR and budget) and timeline (duration and milestones)
- Feasibility, obstacles, opportunities, and challenges
- Target audiences of the suggested research infrastructure
- Stakeholders and potential funders

We welcome all types of infrastructure proposals that could contribute to the field of smart transportation research and which support the “Zero Transportation Externalities” vision. These initiatives must propose an alternative to existing infrastructures or offer new ones, subject to the dynamic nature of the domain and its multidisciplinary characteristics. Moreover, the resulting white paper could serve decision makers for promoting the proposed infrastructure.

Funding scope and duration

The ISTRC will allocate up to 200,000 NIS through this call.

Each white paper grant could be up to 50,000 NIS (including creating a video and/or presentation for marketing purposes) for the duration of 3-4 months.

Eligibility criteria

- The applicant (PI) must be a faculty member in an academic institution in Israel (universities and colleges)
- Any person may be a Co-PI. (If you wish to apply yet are not acquainted with a relevant academic expert for collaborative purposes, please check the [ISTRC researchers database](#) or consult with the ISTRC team)
- A PI may only submit one white paper grant proposal for this ISTRC call

APPLICATION PROCEDURE

Complete applications must be submitted by February 15th, 2022, through this [EasyChair link](#)

Submission specifications

The full application must include the following:

- 1) **1st page:** The suggested Research infrastructure title; name of PI and institution; names of all Co-PIs and their affiliated organizations; keywords; a short abstract (up to 200 words).
- 2) **White Paper Proposal** that includes:

- Background (the need)
- Goals
- Work plan

White paper proposals must be written in English, Times New Roman 12-point font size, 1.5 line spacing, not exceeding 3 pages in total. This page limit does not include references, which can be presented in subsequent pages as needed.

- 3) **Short CV for all researchers and initiators:** CVs must be written in English, Times New Roman 12-point font size, 1.5 line spacing, not exceeding 3 pages per CV.
- 4) **Budget plan:**
 - Up to 50,000 NIS (including about 10,000 NIS for creating a marketing video/presentation)
 - The grant will fund customary direct costs, including research assistants and other expenditures, at the ISTRC's discretion. The grant funding cannot be used for paying the salaries of faculty members or researchers in an overseas' institution, or for any devices.
 - The budget plan must include institutional overhead and VAT as required by law (these must be included in the maximum grant amount mentioned above.)
- 5) **Approval and signatures:** Applications must be signed by the PI's affiliated Research Authority.

Submissions must include all these above-mentioned items. Incomplete applications or applications received after the deadline will not be reviewed.

Following the submission of an application, the PI may be asked to provide additional details and clarifications regarding the proposed research infrastructure during the evaluation stage of the application.

PROPOSAL ASSESSMENT

Eligible proposals will be reviewed by a Review Committee established by ISTRC, comprised of faculty members from different institutes in Israel, as well as industry / public sector or NGO representatives.

Assessment criteria:

1. **Relevance** to smart transportation research infrastructure, with an emphasis on the ISTRC's vision of "Zero Transportation Externalities" – threshold criteria.

2. **Looking ahead** to the upcoming challenges that may stem from a variety of driving forces in the smart transportation domain.
3. **Response to an existing void / urgent need for a multidisciplinary research infrastructure** that will support smart transportation research and promote the “Zero Transportation Externalities” vision.
4. **Potential of the suggested infrastructure:**
 - **Cost effective** – Maximizing dedicated resources for research and development
 - **Improved starting point** – Providing individuals and organizations with a better starting point, based on accumulate state-of-the-art knowledge / experience / 360° perspective / needed infrastructure
 - **Research Excellence** – Delivering a one-of-a-kind opportunity for achieving research excellence
5. **Overall quality** that clearly presents the clarity and pertinence of the concept, objectives, and credibility of the proposed methodology.
6. **Potential impact level** on the smart transportation domain, from both an academic and a practical point-of-view, including technology transfer; encompasses the potential to serve a wide array of researchers from various disciplines; holds the potential for achieving further funding from additional sources (such as Horizon).
7. **Qualifications and experience** among the research team members.

APPLICATION INFORMATION

The information you share in the process of the application will only be used by ISTRC reviewers for the purpose of evaluation of your application.

The title of the proposed research and names of the researchers selected will be published by ISTRC.

To the extent that research proposals include unique knowledge, the applicant undertakes to protect the rights arising from it in a timely manner. ISTRC will not be responsible for this.

ISTRC is working under the terms and conditions of the Council for Higher Education Call.

ISTRC is not and shall not be liable to the content of any research proposal, to the performance of any research that has received funding from the ISTRC and for any implementation or use of the results generated in such research, either by the applicant or by any third party.



REPORTING

For applicants who are approved the receipt of funding through this ISTRC call:

- A white paper written in English, 10-30 pages long, including the marketing presentation/video, must be submitted to ISTRC within four months of the date issued on the Budget Commitment Letter (Times New Roman 12-point font size, 1.5 line spacing).
- The grant will be allocated to the academic institute after receiving an Expenditures Budget Report, signed by the Finance Manager of the PI's affiliated academic institute.
- ISTRC will publish the researchers' names and topics of the research infrastructure proposals that are approved through this call, as well as the white paper report, on the ISTRC website and its related publications.
- All publications generated from the white paper must include an acknowledgment of ISTRC funding ([see here](#)).
- Researchers may be asked to present their white paper at ISTRC workshops and conferences