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**Partner search**

**Date (DD-MM-YY)**

* **(\*) Indicate numbers of relevant topics for Green Deal call:**

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| **LC-GD-9-1-2020 : European Research Infrastructures capacities and services to address European Green Deal challenges**  **Also**  **LC-GD-1-2-2020: Towards Climate Neutral & socially innovative cities**  **LC-GD-4-1-2020 : Building and renovating in an energy and resource efficient way** |

* **Quick description of the project**

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| **(describe the objectives, activities, partners requested and their skills)** |

* **(\*) Do you intend to apply as ? :**

**Coordinator: No**

**Participant: Yes**

**(\*) Either Description of the expertise requested (up to 1000 characters) - *specify which points of the "expected impact" of the call you are targeting***

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**Or Description of the expertise proposed (up to 1000 characters) - *specify which points of the "expected impact" of the call you are targeting***

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| **Expertise:**  **ELI Beamlines as a large laser infrastructure can offer expertise in laser physics. In addition their expertise covers the areas of big data management, fuel cell development, photovoltaics, and aerosol science.**  **Expected Impact:**  **For Climate neutral cities**   * **We could use expertise in the handling of big data to reduce “the negative externalities of urban and peri-urban transportation: congestion, pollution and road collisions”**   **For Building and renovating in an energy and resource efficient way**  **We could contribute to**   * **Reduction of greenhouse gas emissions** * **Reduction of air pollutants**   **For European Research Infrastructures in particular to support clean energy storage technologies and**  **We would aim to provide “easy and seamless access to the most advanced scientific infrastructure available in Europe…** **enabling breakthrough research and innovation in energy storage systems and related materials” We would aim to generate “impact” through**   * **The development of synergies among research infrastructures in different disciplinary areas.** * **Provision of integrated and efficient access to a world leading research infrastructure.** * **The development of new skills and a new generation of researchers ready to optimally exploit the most advanced and essential instruments and resources for research and innovation addressing Green Deal challenges.**   **+key words : Laser, Materials** |

**Organisation information**

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| **Organisation and country:**  **ELI-Beamlines, Institute of Physics – Czech Republic** |
| **Type of organisation:**  **□ Enterprise □ SME □ Academic x Research institute □ Public Body □ Other: Association** |
| **Former participation in FP European projects?**  **x Yes □ No** |
| **Web address:**  <https://www.eli-beams.eu/> |
| **Description of the organisation:**  The Institute of Physics (IoP) is the largest research institute of the Academy of Sciences of the Czech Republic. The main mission of the IoP is to carry out scientific research in physics and to further develop the arising research results to enable their applications. The present research programme of the Institute encompasses physics of elementary particles, condensed systems, solid state, plasma physics, classical and quantum optics, laser and laser-plasma physics. Institute of Physics ASCR, v. v. i., has thirty years of experience in the development, operation and applications of high‐power lasers and laser driven X-ray sources.  The IOP runs the Czech pillar of the ESFRI ELI-Beamlines project, the ELI Beamlines centre, which focused on providing users sources of energetic particles (photons, electrons and ions) and extreme density and temperature matter conditions for basic research. These are all driven by three state of the art laser systems: L1 system with 1 kHz and 100 mJ pulses, L3 system providing 1 PW peak power at 10 Hz repetition rate, and the L4 system providing 10 PW pulses with up to 1 Hz repetition rate.  The IOP also runs the Centre for Innovation and Technology Transfer (CITT) provides an effective system of technology transfer of ELI Beamlines’ research applicable outcomes. These activities include IP management, its protection by the industrial law at the national, regional and global level and implementation of the proof-of-concept techniques, i.e. offering commercially exploitable solutions to industrial partners by providing a license for use the created IP. The principal fields are proton and ion cancer treatment techniques, material research, femtochemistry and pharmacy. They manage contract research with industry for ELI Beamlines |

**(\*) Contact details**

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**(\*) –Mandatory**