Challenge 6: Innovation for social and environmental benefit

While innovations cannot by themselves solve each and every challenge people face in cities, they can be a useful tool in a varied array of topics - from fighting the climate crisis up to broadening possibilities for civic participation in urban life. While most innovations are technological, they also may be also social or governance ones.

A smart city uses innovative data collection and assimilation systems (earth observation, ground sensors, geographic information systems) as well as information and communication technologies (ICT) for better resource use, less emissions of greenhouse gases and improved air quality, smarter urban transport networks, upgraded water supply and waste disposal facilities and more efficient ways to light and heat buildings. It also means a more interactive and responsive city administration, safer public spaces and meeting the needs of an ageing population.

Attention needs to be given to the fact that innovation alters status quo and therefore can create, if inappropriately used, social unease, for instance in the case of ride-hailing apps, autonomous cars or the use (and abuse) of personal data. To get the most out of the virtues of innovation we must not only be open to experimentation, but also to democratic control over open, public data.

Keywords: innovation, smart city, information and communication technologies, data, carbon footprint, internet of things

Proposed discussion points:
- Do you use any apps having a positive impact on the environment? In what way do they improve quality of life?
- Can you name an innovation that has both positive environmental and social impact, especially at the city scale? What is the role of earth observation in particular?
- What makes a city "smart" in your view? Is technology the only sphere where "smartness" occurs?
- Can you name technologies which make cities smarter for better resource use, less emissions of greenhouse gases and improved air quality?
- How can data help in promoting local sustainable development in your area? What data on the state of your city you find lacking or hard to reach?
- Do you see a risk of "data overload" limiting the scope of comprehension of people? If so, how would you address this problem?

Exemplar Science Team's project:

Innovative eco-city. How to help our city to grow green with use of modern technologies? – Science Teams investigate what kind of innovations of both positive environmental and social impact (technologies, apps, social innovations etc.) have been implemented in their city so far – what is the purpose of their implementation? How do they help the residents? What are the areas which are not covered yet? What are the needs of local communities which can be fulfilled by new technologies? Afterwards, Science Teams look for new possible solutions to help their city grow green (they can initiate 'green hackathon' in their city or develop some simple apps by themselves?). They interview experts. Students are looking for specialists dealing with technologies for innovative cities and promising start-ups in this subject. Then they organize a meeting at the invitation of which experts answer questions from young people.

Resources to find out more about this Challenge:

- Smart Cities – Smart Living Policy https://ec.europa.eu/digital-single-market/en/smart-cities;
- European resources on smart cities idea https://ec.europa.eu/info/eu-regional-and-urban-development/topics/cities-and-urban-development/city-initiatives/smart-cities_en.

Linked to Sustainable Development Goals (SDGs):