U7+ Intergenerational Roundtables

Part Three: Science and Technology Innovation for a Sustainable Future
Co-hosted by École Polytechnique (France) and Osaka University (Japan)
Convened by Northwestern University (United States) and the U7+ Student Leaders Board

The COVID-19 pandemic is the latest crisis facing the world, but unless humans release their grip on nature, it won't be the last, according to a new report by the United Nations Development Programme (UNDP).

In the short term, the crisis accelerated the technological transition and brought about years of change in the way people and organisations in all sectors and regions work.

In the long term, it has made clear that we must harmonize our relationship with the planet — to make energy and material consumption sustainable, and to ensure every young person is educated and empowered to appreciate the wonders that a healthy world can provide.

Although humanity has achieved incredible progress, we have taken the Earth for granted, destabilizing the very systems upon which we rely for survival. The question thus becomes how can we create a new economy in which value is derived from human and planetary health rather than exploitation? What is at stake is not only technological redesign and innovation but imagining new ways of organizing society and pursuing everyday life that people can accept emotionally. This transition will change and challenge industrial organization and labor markets, as well as the personal and professional development of workers, students, and the schools and universities that train them.

Innovation — which gave humans many of the tools to influence Earth systems — can be harnessed to ease planetary pressures. Beyond advances in science from multiple disciplines that can support capturing energy from the sun and closing material cycles, innovation should be understood here also as a social process of change, resulting from advances in science and technology that are embedded in social and economic processes. Moreover, innovation is more than science and technology; it includes the institutional innovations that ultimately drive social and economic transformations.

Discussion Questions:

1. What sort of science and technology do we need to design, if we are to survive this planetary crisis?

2. What sort of society can and should be built upon and with this new form of science and technology?

3. How can universities, regardless of the field of study, best prepare students for the technological revolution/digital transformation and how can we go one step further by creating a sustainable and technological ecosystem?