

## U7+ Intergenerational Roundtables

Part Three: Science and Technology Innovation for a Sustainable Future

Co-hosted by École Polytechnique and Osaka University

Convened by Northwestern University and the U7+ Student Leaders Board

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To conclude the three-part series, students, faculty, and staff from 10+ different universities in nine countries came together virtually for the third and final U7+ Intergenerational Roundtable to discuss [scientific and technological innovation for a sustainable future](#). This roundtable was co-hosted by École Polytechnique and Osaka University, and convened by Northwestern University and the U7+ Student Leadership Council.

The U7+ alliance is a network of global universities (40+ institutions) whose presidents met for the first time in Paris in 2019 and then again virtually last year. The idea for a series of three U7+ intergenerational roundtables was conceived by student leaders within the U7+ who participated in the [U7+ 2020 Global Student Forum](#) last year. This idea was endorsed by university presidents at the U7+ Summit in November 2020.

The U7+ Intergenerational Roundtable began with presentations from the general perspectives of faculty and students from the co-hosting universities. One of the presenters, Shayan Khan, is an alumnus of École Polytechnique and a member of the U7+ Student Leadership Council. "For me, the starting point is the students. While a student can't learn everything and they're not necessarily 100% prepared for real-world applications (because you're learning as you go), but maybe there are some things we can do to help them" he said.

Next, all participants broke into small groups of four to six people to have discussions moderated by U7+ student leaders. Finally, all participants regrouped to share a summary of each of the small discussions. Here are some takeaways and recommendations from the third intergenerational roundtable:

- **We have a responsibility to educate and inform the public about climate change.** In Professor Thierry Rayna's presentation, he mentioned that our responsibility in this regard is enormous, as we must ensure that the public's attitude of neglect and disbelief towards global warming changes. Students reflected on knowledge translation by stating that "people who do science are often members of an elite. So how can they better communicate their findings to the public?"
- **The media has a role to play in scientific value and discussion.** In particular, social media has an important role in sharing information with the public. Students agreed that "many people don't give science the big stage it deserves and raise more political issues about it."
- **It's not just the technology, but the system in which the technology operates that really makes the difference.** In Shayan Khan's presentation, he mentioned how we move at such a rapid pace that we often forget the social implications of technology that can occur. Participants reflected on the social impacts of science and technology in several dimensions: (a) Workforce change (e.g., increased electrification - is it for fuel or for other things)? (b) Labor issues (e.g., lithium mining); (c) Values and work ethic (e.g., social values of net zero waste); (d) Who or what is causing climate change (e.g., everyone or rather the largest corporations).
- **The transition to a sustainable economy requires not only new technologies, but also a transformation in the way people live.** In Professor Atsuro Morita's presentation, he emphasized that infrastructure is deeply embedded in the fabric of our social life. As a result, many infrastructures to date have shaped our lifestyles towards energy-intensive mass consumption. One alternative to mass consumption is the FAB city project led by the global community of [FABlabs](#) around the world. This is a local experiment in self-sufficiency consisting of small factories or workshops run by citizens. From there, the students questioned existing laws regarding private property and individualism stating that "if the law is set in our society to be individualistic, then how can we have a very sustainable society in the future?"
- **We need to consider the cost of technology and infrastructure.** Participants reflected on how the cost is often offloaded onto poor and less economically developed countries. "We need to think not only about those of us in the developed world, but also about the role we will have in third world countries. It's a real eye-opener that it's not just about big houses, but basic infrastructure," the students said.
- **Recommendation to promote diversified local production, self-sufficiency and local use, according to regional specialization or characteristics.** Émile St-Pierre presented his research in Hokkaido, Japan. Hokkaido, known for its milk production, relied on its biogas capacity to meet local energy needs. Curiously,

in talking to farmers, he discovered that the advent of biogas didn't start with wanting more local development, but rather on managing the waste from expanding farms that created unbearable pollution in the 2000s. The students understood this and delved into their thoughts on "farming practices and how they fit into larger systems such as crop insurance, climate smart aggregation practice in Kenya, etc."

- **Universities need to better equip their students to make interdisciplinary connections.** Students tend to specialize in their field of study, but this can lead to a lack of communication between disciplines. We need more of what Professor Rayna calls "T-shaped people": they have a very deep knowledge of a particular field and they are actually able to make connections to related subjects.
- **People should be more engage more in lifelong learning.** Indeed, existing information is constantly being updated and improved for the better. Students agreed that "we can learn from each other."

This three-part series was a success thanks to the organizers and all the students, faculty and staff who participated in and shared their perspectives from different universities around the world.

