I'm truly honored to join the company of the esteemed individuals who have contributed to the Global Vision lecture series, a group that includes leaders of industry, giants of philanthropy and fellow educators. Each of us speaks from our own experience and offers our own reflections, but all of us do so based on a belief that a better world is possible through partnership and innovation.

It's no small thing to make a better world, but Tsinghua University is among the few institutions with the power, purpose and scale to do so. The University of Washington is proud to be Tsinghua's partner in the Global Innovation Exchange, "GIX", because we share not only those core values that shape our respective universities, but also the rare privilege of being able to turn those values into action and impact.

Almost two years ago, President Xi Jinping honored us with the gift of a dawn redwood tree to commemorate our universities' landmark partnership. It will be planted at the new GIX facility in Seattle, which we will officially open this September. We look forward to welcoming this very special tree to its permanent home.

Dawn redwoods are fascinating trees, as it turns out. They are an ancient species, near relatives of the redwoods that shared our planet with the dinosaurs. They came very close to being wiped out altogether, until a few were discovered in Lichuan County in the mid-20th century. Seeds from that small grove were sent around the world to arboreta and universities for growth trials. As a result, the dawn redwood escaped the threat of extinction. And this tree has another remarkable characteristic: when it falls, it doesn't die. It sends up new limbs from the fallen trunk and eventually, those limbs become trees in their own right.

From these facts, I take two lessons:

The first: Through partnership, change is possible. When thoughtful people come together in a shared mission to do something worthwhile, we have the power to advance the best of our civilization. Even one seed, or one idea, preserved and cared for, can make a huge difference.

And second: innovation lies at the heart of progress. The dawn redwood survived for millennia – through ice ages, droughts and every imaginable natural disaster – because that greatest of innovators, evolution, devised a means to turn catastrophe into renewal.
The partnership between our two great universities, and the special relationship on which it is built, has this power. We can bring about change through the collaboration and good will of our people. The creativity that our students will unleash on the great challenges humanity faces is truly boundless.

Right now, our world is facing truly tremendous challenges. We know this in part because we now have the ability to see and understand the scale of those challenges with unprecedented accuracy and clarity.

Some threats are global, even existential. Climate change is rapidly altering our relationship with the natural world; its impacts are felt across every ecosystem from melting polar ice caps to desertification in Sudan.

Epidemic diseases have always been with us, but technological advances have revealed more about the global burden of disease than ever before. We now understand the impact of unsafe drinking water on child mortality; every day, roughly 2,000 children die from diarrheal diseases. We know that indoor and outdoor air pollution is killing millions of people each year, primarily women and children.

In the United States, as in China, economic growth continues. But not everyone gets the same opportunity to benefit and participate. And this growth sometimes has unanticipated consequences, penalizing the most vulnerable among us.

None of these challenges – or the countless others that compete for our attention – are confined to a single culprit. They are multifaceted – economic, cultural, political, medical, and environmental. And their solutions will be as interdisciplinary as their origins.

The dawn redwood was brought back from the brink because scientists worked to understand and create the conditions in which it could thrive. Our task is similar: understand and create conditions that foster the interdisciplinary, global collaboration that will lead to improvements in health, sustainability and social equity.

The phrase “the adjacent possible” has been used by biologists to connote the world of possibility, or how fertile the conditions are for certain kinds of discovery. Thirteen centuries ago, the Tang Dynasty gave rise to China’s Golden Age; an era of great innovations in art, commerce and technology. Today, the adjacent possible extends as far as neighboring star systems and as close as our own DNA. Our species’ collective knowledge is huge, and growing. But to harness that knowledge in service of humanity, we must cultivate those fertile conditions.

The soon-to-open GIX facility may look like a new building. But it's really a garden for all that is possible. In this garden, we are tilling the soil for innovation. Together, we will germinate new ideas, enable brilliant multi-dimensional doers from our respective institutions to mingle, and bring up the next generation of thinkers and makers who will sow still more seeds in this garden.

It's said that necessity is the mother of invention, but in a complex world, invention needs more than mere necessity to push it along. It needs the sustained will of people and organizations united across cultural and geographic lines in the name of a shared vision.
The GIX is unique in transcending traditional boundaries. As the first Chinese university to have a presence on U.S. soil and a founding partner, Tsinghua joins the UW to lead a new era in international collaboration and cross-pollination. But GIX also breaks down barriers beyond geography – barriers that have historically existed among academic disciplines and between industry and academia. With GIX, we will be able to more closely connect inquiry to impact as entrepreneurs, industry leaders, academic experts and students work together.

Our first cohort of students, some of whom are here today, are an extraordinary group. In their own words, they described what drew them to this unique degree program: Xu described GIX as “a place where I can one day make a difference” and a place “to explore and make something new.” Zhang Rong wrote, “I believe that the future needs people and leaders who can both master skills of cutting-edge technology and utilize capital and markets to push technology forward.” But maybe Lin Zhibin put it best when he wrote, “I’m born to be an innovator, so I joined GIX.”

Tsinghua University and the University of Washington have many synergies. Beyond our size and reach, we share deep expertise in fields of research that hold the key to addressing some of those existential challenges I described earlier. Alternative forms of energy, bioengineering, medical devices and mobile medicine are just a few of the areas where we both have tremendous strengths.

Here at Tsinghua, researchers in the School of Environment are exploring the use of nanowire-technology to more efficiently purify drinking water. At the University of Washington, a new testing facility accelerates the clean energy innovation cycle, speeding the process of getting new technology from the prototype stage to the marketplace.

In March, Tsinghua inaugurated the Global Health Drug Discovery Institute, with support from the Bill & Melinda Gates Foundation and the city of Beijing. This non-profit, independent institute will develop accessible, innovative drugs and treatments for developing nations. At the UW, electrical engineers and computer scientists have developed a mobile application that uses a smartphone camera to screen for anemia, potentially transforming healthcare in the developing world.

Likewise, both of our institutions are deeply connected to our respective innovation economies, with strong ties to the private and public sectors. Our partners range from technology pacesetters like Microsoft and Boeing in Washington, to Chinese industrial giants like Baosteel Group and China Telecom. Our shared preference for collaboration and the ability to do it well and at a large scale gives our partnership the opportunity to not just change but transform whole systems.

But just as important as our similarities are the differences we bring to the table. By bridging our differences, we have the greatest opportunity to learn from each other. For example:

The University of Washington is a world leader in the field of social work, addressing questions of economic justice, human welfare and quality of life with deep academic rigor. At the School of Social Work’s Indigenous Wellness Research Institute, we work with local tribes to ensure that Native culture and voices shape the work intended to benefit their communities. The tribes of the Pacific Northwest are a long way from Beijing – but what lessons from our engagement with the tribes might inform social welfare work in rural China?
Tsinghua University is a global leader in agricultural engineering, expanding our understanding of how technology can stabilize food production and distribution. With Wal-Mart and IBM, you’re using digital tracking technology to enhance food safety and reduce the risk of food contamination for China’s 1.3 billion people. Imagine how this work could be extended to combat the hundreds of thousands of deaths from foodborne illness worldwide every year.

Through GIX, we can blend the best of both our universities and our nations in the spirit of cooperation and exploration, and we can model this kind of deeply integrated, global partnership for the rest of the world.

A little over a year ago, I announced the launch of the Population Health Initiative. This multi-decade project’s audacious goal is to create a world where all people can live healthier, more fulfilling lives. Because countless factors affect our health and the health of our communities, our definition of population health is intentionally broad. Health isn’t determined just by freedom from disease, but also by the environmental conditions in which a person lives, and by the effects of poverty and social inequality on individuals and communities. Population health seeks to understand the intersection of those things: For example, how climate change impacts people’s health, and which groups of people are feeling the effects most severely — and why.

Like GIX, this initiative can only succeed through collaboration – across nations and academic disciplines, across the public and private sectors, and among the vast constellation of researchers, educators, philanthropists and health advocates working on these challenges around the world. Our vision for the initiative is to create spaces — literal and figurative — for these collaborations. We want to make it easier and more likely for serendipitous synergies to occur. The initiative is about focusing on all the factors that influence health and giving those synergistic “ah-ha!” moments the nutrients they need to grow.

A former director of the Peace Corps, also a psychologist, once said, “Who must do the hard things? Those who can.” To which she added: “Who must do the impossible things? Those who care.”

With the Population Health Initiative, our message is that we “can” and we “care.” Our University has extraordinary capacity to understand and address the threats to human health – from the microscopic to the macroeconomic. But even that capacity would not be enough on its own. We believe that change at a global scale is possible only in collaboration with our many partners, both back home in Seattle and here in Beijing.

Like the University of Washington, Tsinghua “can” and Tsinghua “cares.” With the opening of the GIX facility and the launch of the new degree programs, we will be building the very skills and experiences most critical to the success of the Population Health Initiative: technology development, design, entrepreneurship and a global perspective. Students and faculty will apply these skills to the most pressing problems — and most promising solutions — to issues affecting health, sustainability and social equity.

And this work has already begun. In just a few weeks, the finalists for this year’s GIX Innovation Competition, with a theme of connected devices, will be selected. The six finalist teams will present their prototype devices in September. Last year, the competition received almost 300 entries — that’s nearly 300 ideas for ways to use connected to devices to make the world better.
GIX is bringing together faculty, professionals and students from around the world who share a desire to innovate to improve people’s lives. They will generate new ideas in fields like mobile health, with its incredible potential to diagnose and prevent disease in the developing world. They will lead clean and sustainable energy innovation, working to slow climate change and mitigate its most damaging effects. And they will lead in social equity strategies as cities increase their density and the need to bridge social and economic divides becomes even more urgent. Vikram Jandhyala, co-executive director of GIX described innovation as “applying knowledge in ways which are not obvious with a goal toward scalable impact.” Many things are not yet obvious. But through GIX, the “adjacent possible” will expand, helping those who care grow into those who can.

I began by saying that it’s no small thing to dream of making the world a better place, especially when the challenges we face are so large. But we know that extraordinary change is possible. In 1980, after less than 30 years of a global immunization campaign led by the World Health Organization, smallpox was eradicated. In the United States, the Endangered Species Act has saved species like the gray wolf that teetered on the brink of extinction. Here in China, the “barefoot doctors” program reduced the infant mortality rate dramatically in just three decades. Collaboration, invention and ambition drove these remarkable advances, and our capacity to make change on this scale will only grow as our technology and understanding evolves.

Our two nations and our two universities possess unlimited potential for innovation and together, we are standing on the cusp of an endeavor that can truly change the world. Microsoft President Brad Smith described the GIX as “the only project I’ve ever worked on where we put together a plan by looking a century ahead.” A hundred years is a long time, but that’s the scale of this vision we share because thinking on that scale is essential for the future we all want to create.

The Global Innovation Exchange began with the seed of an idea. Together, we have nourished it, and this fall, when the doors open and our initial cohort comes together, we will see the first shoots of our partnership. Those shoots will become saplings, the saplings will become trees, and one day, we will find that we have seeded a forest of discovery, invention and impact.

Together, we will do great things.

Thank you.