
*How might we design local solutions
to help address global challenges?
How might we ensure communities
are coming together to cultivate new
and healthier ecosystems?*

Project Summary

FUTURE WAYS OF LIVING 2018 – PRESENT

Currently, the Institute without Boundaries is in its fourth year of the Future Ways of Living project. Future Ways of Living is both a research method and a call to action developed to foster anticipatory design.

As a research method, it aims to investigate and visualize the past and present forces shaping society, which inform an understanding of potential futures. This approach encourages the development of tangible design outcomes for the present, which contribute to more responsible, humane, sustainable, democratic, and resilient futures. Future Ways of Living will be investigating pressing global issues ranging from climate change and mass migration to automation and artificial intelligence to digital exclusion and illiteracy that are challenging our existing socio-economic constructs and transforming our daily lives. These changes are having both positive and negative impacts on our human experiences. As designers we have an opportunity to anticipate these forces rather than react to them in order to achieve our collective aspirations as how we wish to live moving forward.

DESIGNING CLIMATE READY COMMUNITIES

The climate crisis has been fostered by the human disregard of the environment generated by our urban settlements and by the pollution of the natural and rural environments that support them. Over time, this has resulted in the destruction of habitats and environments for both animals and humans. The result of these negative activities is eradicating species and forcing patterns of migration that grow out of the “desertification” or “inundation” of once habitable places. People and wildlife have begun to migrate seeking places of refuge to survive and to continue living.

One of the many impacts of climate change is environmental migration where people move from one part of the region to another or to a new country as a result of severe natural disasters. How will we manage the dual emerging crisis of climate change and human migration which may go well beyond the migrations of the 19th and 20th century, when rural populations moved to cities? Will we attempt to reverse negative impacts of human activity to avert a climate crisis? Will we build barriers to protect ourselves and our lifestyle condemning others to poverty and desperation? Will we reimagine places that mend or regenerate “broken” environments? How can we enact global change through local, grassroots initiatives?

In 2021-22 the Institute without Boundaries (IwB) will reimagine local solutions to help communities mitigate or adapt to the many impacts of climate change including but not limited to environmental migration. The Institute will focus on key communities in Europe, Canada, and Latin America as case studies for how grassroots action can create systemic change, revive decaying cities, diversify economic development, and cultivate new and healthier ecosystems.

Project

Background

Climate Change has emerged as one of the most pressing challenges of the 21st century and has had observable effects on the environment (climate.nasa.gov). These include loss of sea ice, rise of sea, more intense heat waves, and the migration of animals and humans. Global temperatures are expected to rise for decades to come due to greenhouse gases produced by human activities with an expected temperature rise of 2.5 to 10 degrees Fahrenheit over the next century (climate.nasa.gov). However, scientists predict that the extent of climate change effects on individual regions will vary depending on their societal and environmental systems and how they are able to mitigate or adapt to change. These long term effects will result in changes in precipitation patterns, more droughts and heat waves, hurricanes, rise in sea levels, an ice-free arctic and impact our food, health, housing, education and social systems (climate.nasa.gov).

In addition to these environmental changes, climate migration is one of the many consequences of climate change. In 2019 alone, 24.9 million people globally were newly displaced as a result of natural disasters in 140 countries and territories (Gulf News, 2021). As a result, “the number of people displaced by natural disasters is now three times higher than the number of people leaving their homes due to violent conflicts” (Gulf News, 2021). According to a series of reports by the New York Times, currently 1% of the world is a barely livable hot zone and by 2070, this portion could go up to 19% (nytimes.com).

These lands are home to billions of people who rely on the environment to cultivate food and survive. From Guatemalans fleeing to the United States, to nearly 8 million South Asians moving towards the Middle East, Europe, and North America, droughts and unpredictable monsoon rainfall is causing widespread crop failures and pushing these populations to cities or coasts (nytimes.com). If this pattern of migration continues at the level predicted by scientists, “it will amount to a vast remapping of the world’s populations” (nytimes.com).

While many migrants might be moving to nearby countries, others are moving internally. For instance, Sub-Saharan Africa, South Asia, and Latin America could see more than 140 million people move within their countries’ borders by 2050 (worldbank.org) due to the slow onset impacts of climate change resulting in decreasing crop productivity, shortage of water and rising sea levels.

These patterns of migration will impact the social, political, economic, and environmental systems in regions across the world. It is critical for countries to plan and prepare for both internal and cross-border migration. A 2018 World Bank study with external contributions analyzed the nexus of climate change, migration, and development in Sub-Saharan Africa, South Asia, and Latin America in terms of internal migration and concluded that the number of climate migrants could be reduced by tens of millions if there is a global action to reduce greenhouse gas emissions and if governments conduct future planning for development (Groundswell, 2018).

As a result of these effects and the evolving patterns of migration, it is important for cities and communities to design solutions that will mitigate or adapt to the change. One of the ways in which communities can prepare is through participating in a movement called Transition. Transition began in 2005 and is a way for communities to address global challenges through local initiatives and crowd-sourcing solutions (transitionnetwork.org). In this way, communities can “nurture a caring culture, one focused on supporting each other, both as groups or as wider communities” (transitionnetwork.org). This approach helps communities to promote economic development, entrepreneurship, reskilling and creating a web of connection and support that takes place in towns, villages, cities, Universities, and schools (transitionnetwork.org).

In 2021–22, the Interdisciplinary Design Strategy students will embark on a year-long investigation to understand how local solutions could help solve some of the challenges associated with climate change and climate related migration. This will include an investigation into technologies, products, services, and environments that could help address various consequences of climate change. As interdisciplinary designers, the IDS faculty and students will focus on designing local solutions and strategies for small, medium, and large sized communities. The IDS team will explore case study cities and communities in Europe, Canada and Latin America to propose an integrated design strategy that could apply on to various scales and systems.

GOALS

The goals of the 2021–22 academic year is to understand:

- How might we reimagine structures and systems that are actually making things worse for the environment?
- How might we design equitable systems that are life-centered as opposed to human-centered?
- How might we design environments, products, and services that could result in systemic change and make communities more adaptive to migration?
- How can we change perceptions around climate migration and use it as an opportunity to improve economic development?

OUTCOMES

The year-long investigation into Designing Climate Ready Communities will result in:

1. Communication Platforms

- A research publication outlining core insights including case study analysis of countries and regions that will be most impacted by climate change. The research publication will highlight existing systems and how they will change by 2050 including strategies and solutions that could help communities adapt.
- A series of presentations, events and exhibitions to communicate these insights to faculty, staff and external stakeholders/partners.
- A digital resource serving as the repository of information and resources for researchers and designers.

2. Design Strategy and Proposals

- The IDS students will use their research insights to propose a design strategy and series of local solutions including environments, products and services that could systematically help communities adapt through grassroots development. These will focus on key regions in Europe, Canada, and Latin America.

Project Plan

Below is an overview of the phases of the academic project:

Summer 2021: Meeting with Partners and Stakeholder Committee members to determine project priorities and curriculum objectives.

August 23 – December 17, 2021: Through the core Major Project course in the Interdisciplinary Design Strategy program (IDS), the IDS students will investigate Climate related initiatives around the world with a focus on Europe, Canada, and Latin America. This will include case study analysis, information design including researching and mapping the systems related to climate change and migration, existing data and future scenarios. Research will be guided by the Faculty, Partner Committee members, and expert stakeholders that are engaged throughout the academic year. Simultaneously, three dedicated client-based project modules will focus on Communication, Products, Systems and Services, and environmental design. Students will summarize their insights in a research report in first semester and a research publication in semester 2.

January 10 – March 11, 2022: The core academic module will continue into 2022. The lWB team will reflect on and synthesize work completed during the first semester to create a series of project briefs in collaboration with key partners and stakeholders. The projects identified will shape the framework for the International Charrette in February 2022. Students will summarize all research conducted in semester one of the program, outlining research approaches, key insights, and the beginning of a design strategy that can act as the framework for local, grassroots solutions for communities. This report will include visualizations, precedents, primary and secondary research outcomes.

March 11 – May 27, 2022: The lWB team will work toward the completion of an integrated design strategy, which will incorporate three distinct projects identified in collaboration with various Partners in alignment with research insights. Based on feedback from project partners and faculty, the students typically create a design strategy and propose three projects that demonstrate their vision for the future. Projects will respond to real challenges identified in collaboration with partners, advisors and stakeholders.

Project Development

Students will complete their work through academic modules and charrettes to create a variety of design interventions that address the overall project challenges. Below is a breakdown of the core academic modules and charrettes that will be completed throughout the year:

SEMESTER ONE

Major Project September 7 – December 17, 2021

Through the Major Project Course, students will explore the main topic through design research and development. During this course the students will develop research insights and strategies to address the main research questions.

Communication Design September 13 – October 1, 2021

The Communication Module will be connected to the Major Project, and will focus on designing a compendium of stories related to climate change and Migration. Students will work on documenting their research, developing the design and communicating the outcomes in a clear and effective format to the faculty and the Partner Committee.

Products, Systems and Services Design (PSS) October 4 – November 26, 2021

The PSS Module will divide the students into three teams to develop products, systems and services addressing climate change and migration.

Environment Design November 29 – December 17, 2021

The Environment Module will be dedicated to the conceptual design of a city district that includes best practices to mitigate or adapt to climate change.

SEMESTER TWO

DesignTO Festival January 21, 2022

The IwB students will design an exhibition showcasing their research insights and mid-year proposals as part of the DesignTO Festival. The students will use this as an opportunity to receive feedback on their work from the general public.

International Charrette February 22 – 28, 2022

The project's committee members will select 10-15 project challenges for investigation at the International Charrette in February 2022. These projects will be defined in a detailed project brief that acts as a framework for conceptual design during the charrette process. Each charrette team will investigate and develop design solutions in response to one project challenge. Teams will be led by IwB students, but will include students from across GBC and from international universities such as Politecnico di Milano (Italy), KEA (Denmark), ECV (France), and OTIS (US). This multidisciplinary charrette will include a total of approximately 150 students. Faculty and stakeholder advisors will also be engaged to provide expert guidance to the teams throughout the process to inform project outcomes. This will culminate in 10-15 project proposals that offer insight into schematic design direction.

Production Charrette April 25 – May 13, 2022

IwB students will be joined by students from various programs within GBC's Centre for Arts, Design & Information Technology to help prototype the three designs that are selected by the committee during the International Charrette. This is the final push to develop design assets, and digital and physical prototypes required to successfully communicate the final projects.

Major Milestones

The capstone deliverables are outcomes of the academic modules (Semester 1), Major Project Development (Semester 2) and Major Project Communication (Semester 2) courses. The content of the capstones is generated through research, analysis and synthesis done in these courses, as well as the modules and charrettes.

Fall Charrette **October 18 – 22, 2021**

The charrette theme and projects will be co-developed in collaboration with project partners and committee members. The IWB will engage with its network of partners such as Huges, Fjord, Urban Strategies, Deloitte and Daniels to act as advisors during the charrette.

Research Report **December 10, 2021**

Summarizing all research conducted in semester one of the course, outlining research approaches, summary of key insights, and the beginning of a design strategy that can lead local and grassroots solutions for communities across Europe, Canada, and Latin America to mitigate and/or adapt to climate change and migration. This document typically includes visualizations, precedents, primary and secondary research outcomes.

International Charrette Report **March 14, 2022**

Students will deliver a summary document and presentation highlighting the results of the International Charrette. The report will highlight key insights and propose three projects to further develop in the semester. The Partner Committee will be responsible to review the report and offer feedback on the project direction.

Digital Publication **May 27, 2022**

The final integrated design strategy will be designed as a digital publication that outlines the research, design strategy and solutions.

Final Presentation/Exhibition (virtual or in-person) **May 27, 2022**

Various elements of the final integrated design strategy proposal and design prototypes created will be showcased in a multimedia and interactive exhibition.

Project

Deliverables

Research Report

The first semester will produce a research report that details the findings and explores the critical themes that will support the second semester's project development. This will include:

- Compilation of case studies, information design and primary research
- Definition of climate change and migration
- Research insights and conclusions
- Research plan and design briefs, guidelines and objectives for forthcoming design projects
- A formal presentation of final research outcomes

Design Proposals and Implementation Strategies

Prototypes will be developed over the course of the second semester that will see the insights from the research report leading to a number of design proposals. These design proposals will be created as an outcome of the charrettes and curriculum projects. Each proposed concept will address project themes and when appropriate will include:

- Design drawings (images, videos, schematics, site plans, etc.)
- Budget for individual projects
- Business model for individual projects
- Implementation strategy
- Impact evaluation
- Overall system strategy

Project process and results will be promoted and shared as public exhibitions, presentations and publication drafts. Exhibition, publication, and website will communicate the details of the project and share the information developed over the year with key partners, stakeholders and the public.

COST

The estimated cost for the charette participation is **1.475,00 euro** (*The cost will be confirmed at the time of the final payment due to the Euro-Canadian Dollar exchange rate, airport taxes/fuel surcharges*) and the fee include:

- participation at the workshop (*studio supplies, program fees, keynote lectures, five lunches, opening and closing receptions*)
- intercontinental flights tickets, checked baggage included
- overnights in hotel, rooms for 2 people (2 beds), including breakfast & WIFI
- transfers from / to the airport
- Medical insurance
- excursions to the area of Niagara: Visit of Niagara on the Lake, Jackson Triggs Winery by KPMB Architects (*the first design winery in Canada*) and Niagara Falls. Lunch at Niagara Falls
- tickets for public transport in Toronto

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