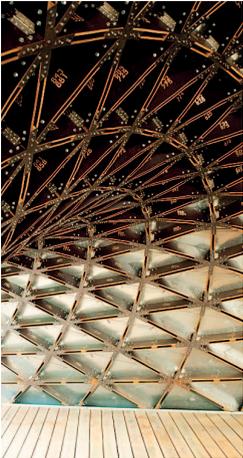
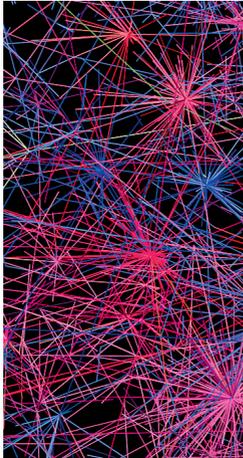


SUTD-MIT INTERNATIONAL DESIGN CENTRE (IDC)



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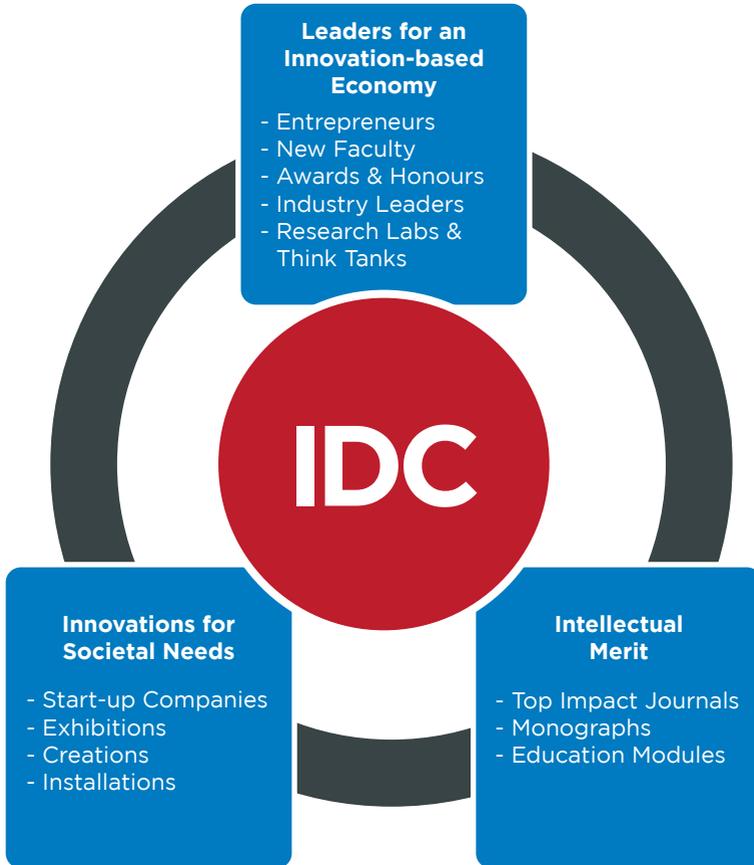
Undertake the impossible. Design the unexpected



SINGAPORE UNIVERSITY OF
TECHNOLOGY AND DESIGN

Established in collaboration with MIT

The IDC is a world premier scholarly hub for technologically intensive design, research and practice. The IDC is built upon the development of the following foundations:



The IDC is a multi-million dollar centre based in Singapore at SUTD, and Cambridge, MA, USA at MIT, with academic and industrial partners from around the world. The IDC seeks to leverage their environment and partnerships to create the next generation of technically-based leaders, world-class scholarship, and entrepreneurship as part of an innovation ecosystem.

- **Leaders for an Innovation-based Economy**

The IDC research is tightly integrated with SUTD’s curriculum. For instance, the undergraduate education experience incorporates design experiences, facilitated by the IDC, throughout the entire degree programme. At the same time, the IDC is a source of new ideas for design education, methodology, tools and practices. By interacting with the curriculum, the IDC is catalysing pedagogical innovation and experimentation and developing technically grounded leaders.

- **Innovations for Societal Needs**

The IDC faculty, staff and students work together to design devices, systems and services that address strategic needs of Singapore, the region and the global community. The IDC has identified three Grand Challenges: Sustainable Built Environment, Design with the Developing World, and ICT-enabled Devices for Better Living.

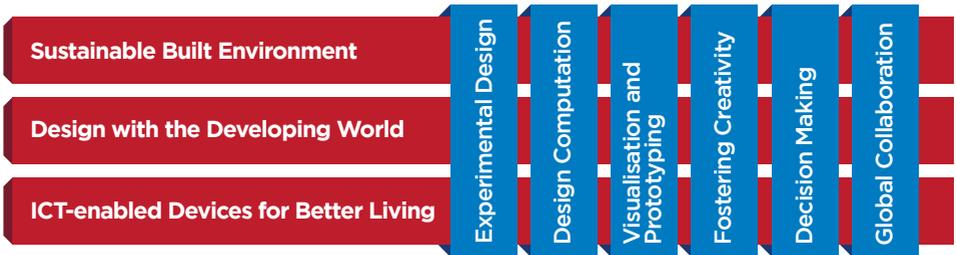
The Grand Challenges inspire project-based design experiences, the development of new technologies, and the deployment of design for the needs of society.

- **Intellectual Merit**

The IDC is revolutionising design science research. Scholars in the IDC study all aspects of technical systems and design processes, and develop new tools and methods for cutting-edge design practice and education. The IDC research is organised around six Design Research Thrusts: Experimental Design, Design Computation, Visualisation and Prototyping, Fostering Creativity, Decision Making, and Global Collaboration.

These research thrusts advance the principles of design thinking across multi-disciplinary boundaries.

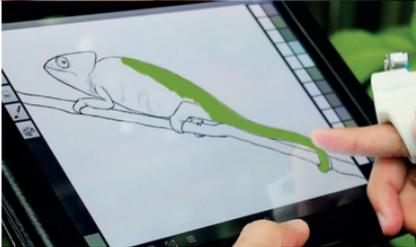
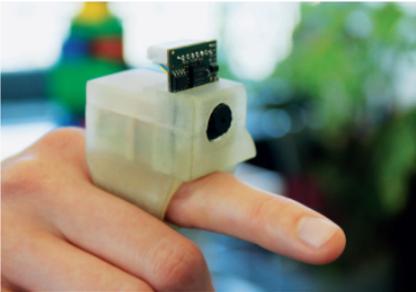
“Grand Challenges” >>>



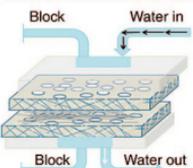
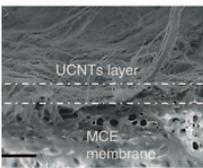
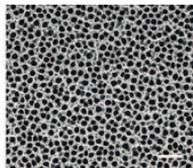
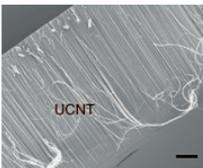
Design Research Thrusts >>>

Research efforts within the Grand Challenges and Design Research Thrusts interact to simultaneously advance design research, technology, and practice.

Examples of Key Contributions



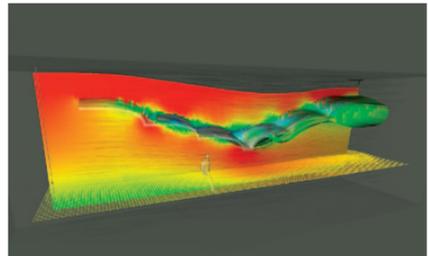
ICT-enabled Devices for Better Living / Fostering Creativity (EyeRing and FingerDraw): A wearable intuitive interface that allows a person to point to an object to see or hear information about it. It can be used to upload colours and textures from the surroundings to enhance a tablet-based drawing tool.



Design with the Developing World / Fostering Creativity (Water Desalination by Carbon Nanotubes): Nanomaterials as low energy and low cost water purification and desalination devices.



Sustainable Built Environment / Visualisation and Prototyping (Very Large Scale Prototyping): Optical reconstruction and rapid prototyping are interactively integrated, illuminating a new area for reverse engineering design science.



Sustainable Built Environment / Design Computation (CFD-Arch): Making computational fluid dynamics understandable and accessible to the architecture community. CFD was used in the initial stages of the design of a passive cooling canopy for a bus shelter.

Potential Collaboration Opportunities

1. Consortium membership.

- Subscription and partnership.
- Benefits
 - Participation in IDC events such as Industry Day, workshops and talks.
 - Continual update of research and project results.
 - Preview of IDC research and technologies.
 - Contribution of input on future research (IDC Summit, Consortium Projects).

2. Sponsorship of student projects.

3. Attachment of researchers to the IDC through joint projects.

4. Companies' establishment of research labs at the IDC.

5. IDC researchers located with companies.

6. Process assessment, workshops, professional development, such as innovation processes and ideation techniques.

7. Sponsorship of directed projects connected to the companies.

IDC Leadership:

Kristin Wood, Co-Director (SUTD)
John Fernández, Co-Director (MIT)
Christopher Magee, Co-Director (MIT)
Kevin Otto, Associate Director (SUTD)

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