Challenge Based Innovation (CBI)

IdeaSquare student programs
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• CBI in a nutshell
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• Examples of student projects
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• Student courses in 2019
Shaping future innovators

- CBI is a project course focusing on societal challenges. Many of the courses use UN Sustainable Development Goals (SDGs) as a framework for the challenges.
- Partner universities are in charge of organizing the courses. IdeaSquare provides the space, facilitates collaboration with CERN staff, and organizes inspirational lectures and visits at the CERN site.
- CBI courses are often multidisciplinary, end user-driven (as opposed to technology-driven), and hands-on (as opposed to theoretical).
- The courses are also intensive, with 1 teacher per 4.2 students on average.
World
Virtual

Country
CBI Italy, CBI Med / Barcelona (3 universities)

Institute
CBI@Tampere

?
IDEASQUARE
The Small Human Collider
The length of the course may vary from a few months to 6 months

http://www.cbi-course.com/
Engagement with CERN

• Working with CERN tutors
• Exploring CERN technologies, working with Knowledge Transfer
• Inspiration
• Communicating open science with the public
FACTS & FIGURES
IdeaSquare has hosted over 600 students since 2015

*2013-2014 data on IdeaLab, preceding IdeaSquare
In 2018, IdeaSquare hosted a total of 225 students

Engineering 34%

Design 20%

Business 38%

Other 8%

52% female students

4 CBIs +

6 other courses:

Innovation for Change (50 students)
öBot (33 students)
Laurea BootCamp (20)
CREA Geneva (16)
CESP: CERN Entrepreneurship Student Programme (10)
ATTRACT Young (6 students)
In 2018, 4 CBI courses with a total of 89 students

- Engineering: 38%
- Design: 28%
- Business: 16%
- Other: 18%

52% female students

12 Universities:
- ESADE Business School
- IED Barcelona
- Universitat Politècnica de Catalunya
- Pace University New York
- Swinburne University of Technology
- Instituto Politecnico do Porto
- Hochschule Mannheim
- Tampere University of Technology
- UPV/EHU University of the Basque Country
- University of Bologna
- University of Ferrara
- University of Modena e Reggio Emilia

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Hello all! We’ve had a few questions on how students could showcase their CBI experience on LinkedIn. Here is one example by yours truly from a few years ago (back then it was called the "Master innovator" diploma, nowadays it’s not). ...see more
EXAMPLES OF STUDENT PROJECTS
HELPING CHILDREN IN THE AUTISM SPECTRUM TO COMMUNICATE

https://www.youtube.com/watch?v=w5S8vSHH_XA
Connecting lonely elderly people with students over lunch
PREVENTING HIP INJURY FROM INVOLUNTARY FALL
Monitoring chronic asthma to prevent asthma attacks
Your fridge sending a message when food is ripe to eat *for you*
STUDENT COURSES IN 2019
### CBI and Design the Future (DTF)

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<thead>
<tr>
<th>CBI Approach</th>
<th>DTF approach</th>
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<tr>
<td>Focus on the needs of society today (need finding)</td>
<td>Focus on the needs of society in the long term (scenario building)</td>
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<td>Approaches (technology/design) solutions from the perspective of feasibility, viability</td>
<td>Technology feasibility and viability are not an issue since technology breakthroughs occur. Focus more on what transformative aspect technologies must have for enabling social changes.</td>
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<td>Practical and realistic (hands-on) prototyping is essential</td>
<td>Prototypes should be conceptual since many envisioned technologies do not exist today</td>
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<td>Focuses on concrete societal cases in need of solution</td>
<td>Focuses on a holistic view of society</td>
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12 CBI & Similar Courses under planning for 2019

- On-going courses looking to continue: Barcelona, ER, A^3, Tampere & Basques (Design the Future – possibly with UNCTAD participation)
- **New CBI under planning**: Frisian Design Factory (Netherlands)
- Other courses planned: öBot, CREA, CESP, I4C, RCA, Laurea BootCamp
- **New concept pilot**: CERN-HPD Summer School
CERN-HPD
Summer School

Unleash the potential of state of the art CERN technologies!

A multi-disciplinary program consisting of 8 preparatory evening lectures at TU Delft and 3 weeks intensive summer school at CERN.
Questions? Comments?

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