



Ain Shams University
Egypt

*Integrated urbanism
& Sustainable Design*
(IUSD)

Education for a Sustainable future

Reflections on the experience of IUSD

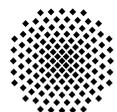
Presented by:

Dr. Marwa AbdelLatif

IUSD – ASU Programme Coordinator

On behalf of IUSD Team

Cairo Climate Talks
15 September 2015



Universität Stuttgart
Germany

DAAD
Deutscher Akademischer Austausch Dienst
الهيئة الألمانية للتبادل العلمي



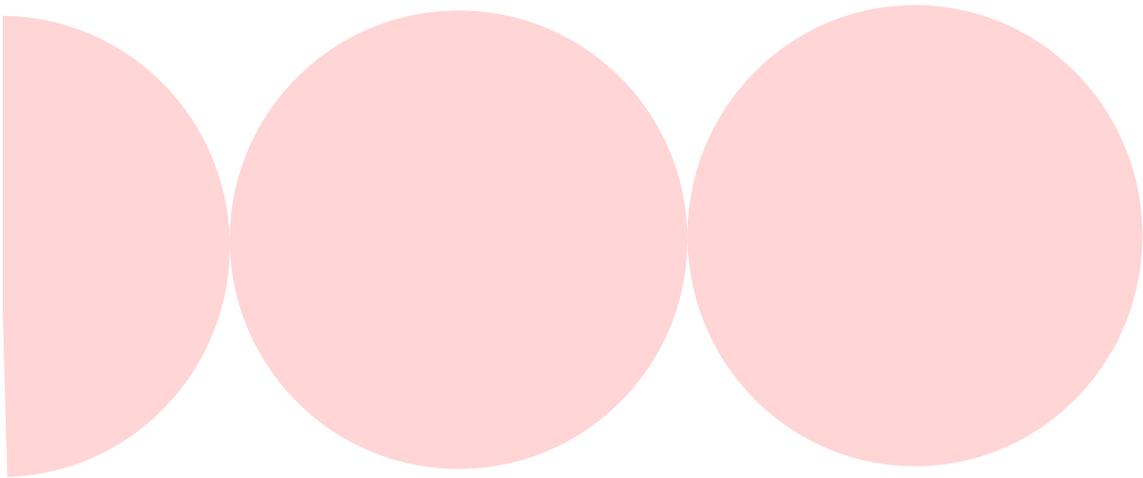
Ministry of Higher
Education and State
for Scientific Research



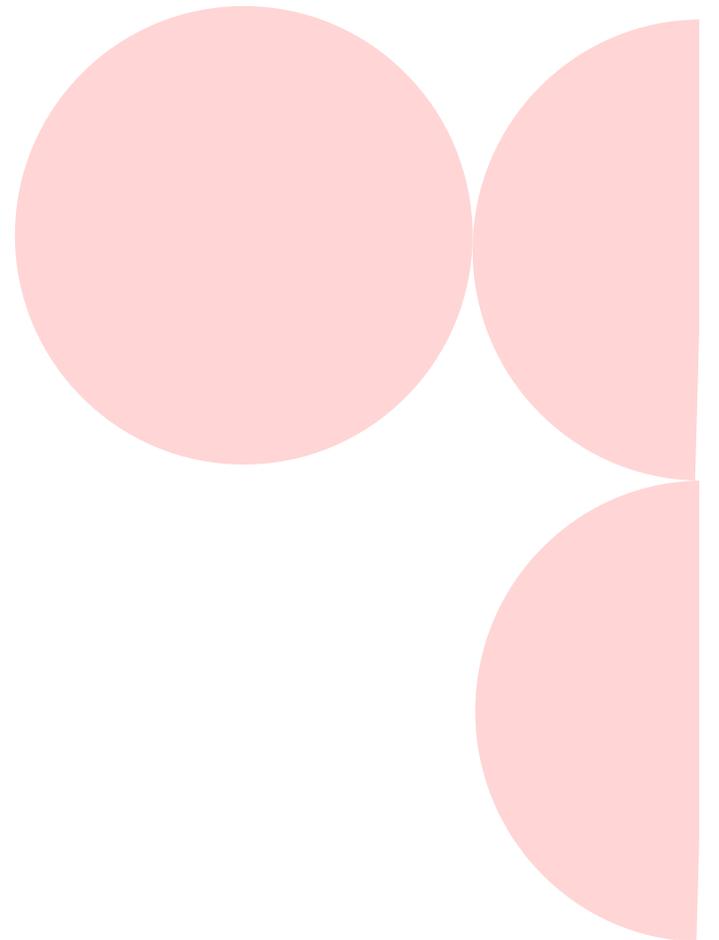
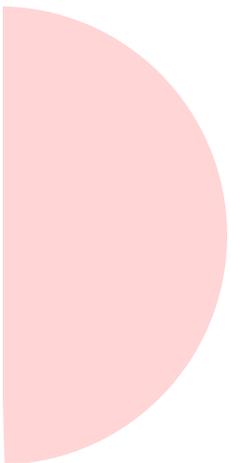
Federal Ministry
for Economic Cooperation
and Development



Federal Ministry
of Education
and Research



Prologue





Prologue

- Obviously, there is a consensus, both global and local, on the importance of sustainable development.
- Despite the fact that there is no one pathway and that there is no one size fit all solutions to achieve sustainable development;
- Education is regarded as a key factor for building a sustainable future.



Education for sustainable development

* UN Decade of Education for Sustainable Development
2005 - 2014

Education is considered a tool that ...
“allows every human being to acquire the **knowledge, skills, attitudes** and **values** necessary to shape a sustainable future” (UNESCO)**.

In this context, Higher Education Institutes could be regarded as “a **unique interface** between **education, science, and policy making**” (HESI)**.*



*** **HIGHER EDUCATION SUSTAINABILITY INITIATIVE**



*<http://unesdoc.unesco.org/images/0014/001416/141629e.pdf>

** <http://www.unesco.org/new/en/education/themes/leading-the-international-agenda/education-for-sustainable-development/>

***<https://sustainabledevelopment.un.org/sdinaction/hesi>

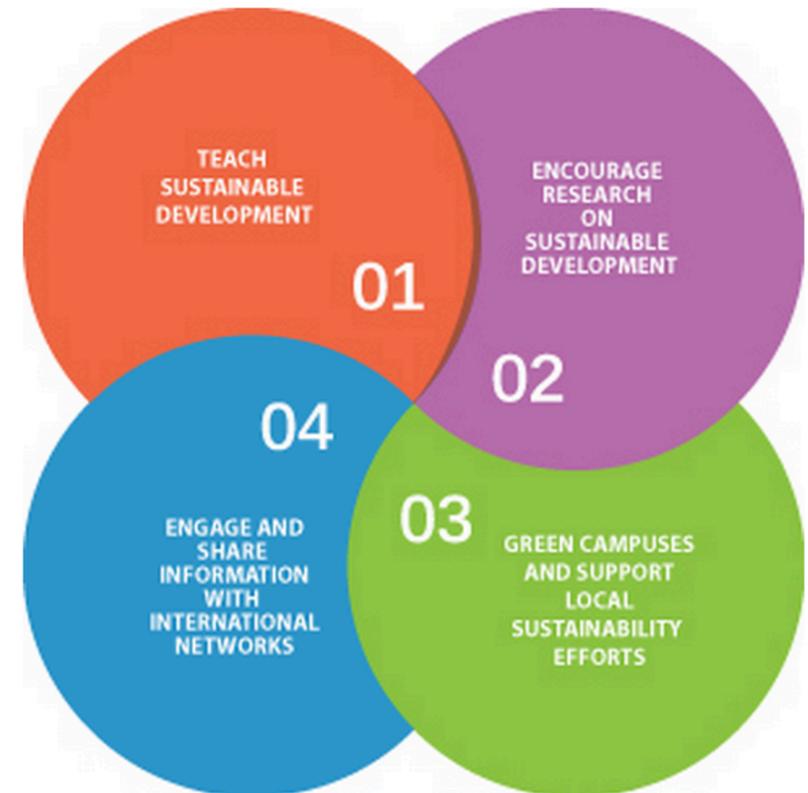


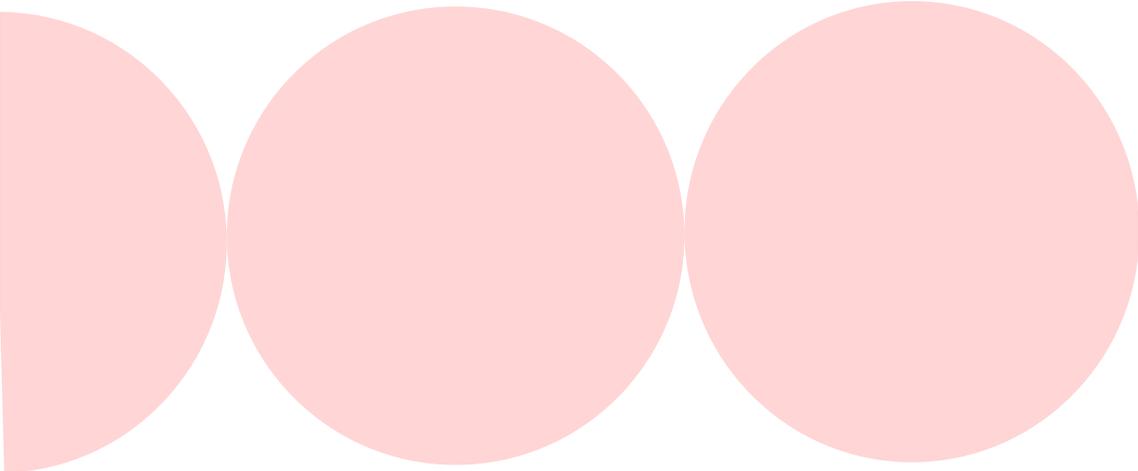
Education for sustainable development

Therefore,

To deliver an education for sustainable development; institutes would generally attempt to:

- Provide interdisciplinary education;
- Encourage research on sustainable development;
- Support local initiatives and;
- Share information with international networks.





Addressing Urban Challenges

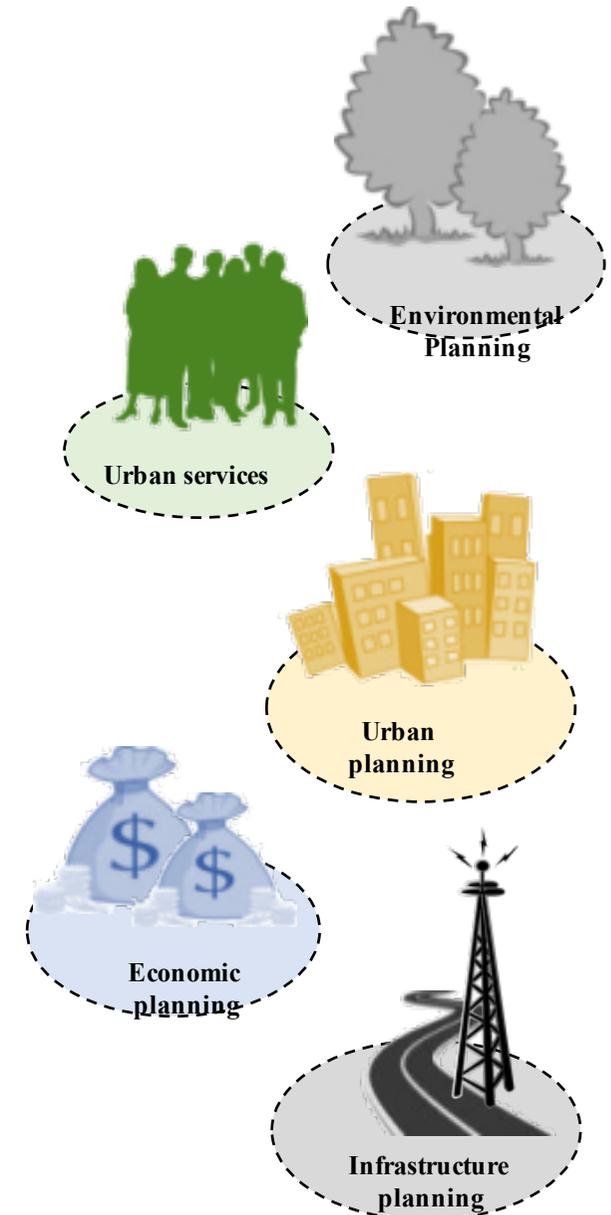




Traditionally,

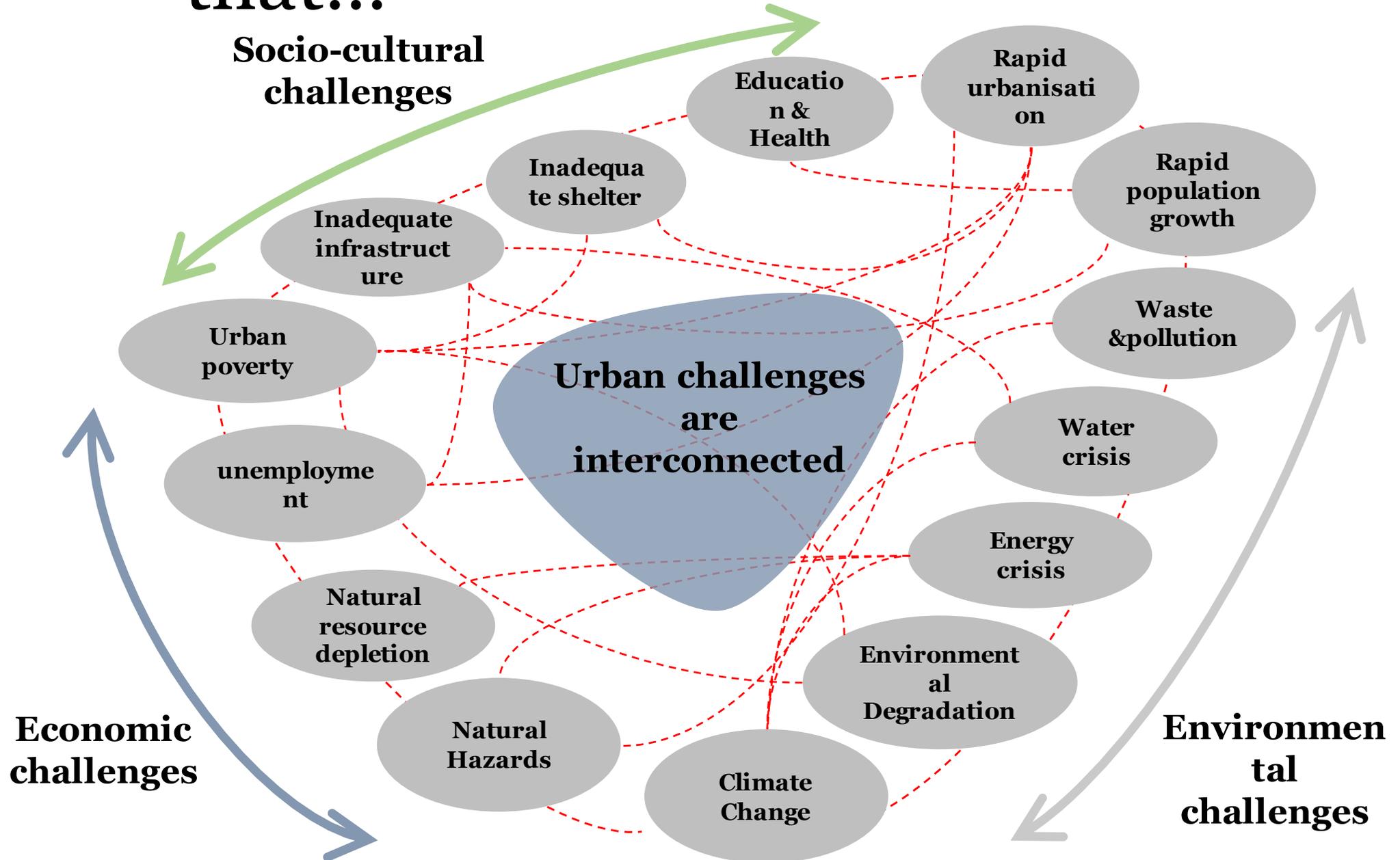
urban challenges, such rapid urbanisation, lack of services..etc, have been addressed in a fragmented way.

- Plans for development sectors, such as economic development, health and education were usually prepared at the central level of the government.
- Challenges are commonly discussed fragmentally in different disciplines.





However, a Closer Look shows that...





To solve wicked environmental problems,

... we need to take an ***interdisciplinary approach***, which:

- requires a '***synthesizing mind***' which enables us to set things differently so we can understand,
- translating and synthesising insights from a ***variety of disciplines*** and;
- ***integrating the insights*** to create a more sophisticated solution than would be possible from a single disciplinary perspective.

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Reflections on IUSD



IUSD – Programme

- The Integrated Urbanism and Sustainable Design is an International Interdisciplinary Programme at Ain Shams University (ASU), located at the campus of Faculty of Engineering, ASU.
- IUSD began as double-degree Master's programme organised by Ain Shams University and the University of Stuttgart.



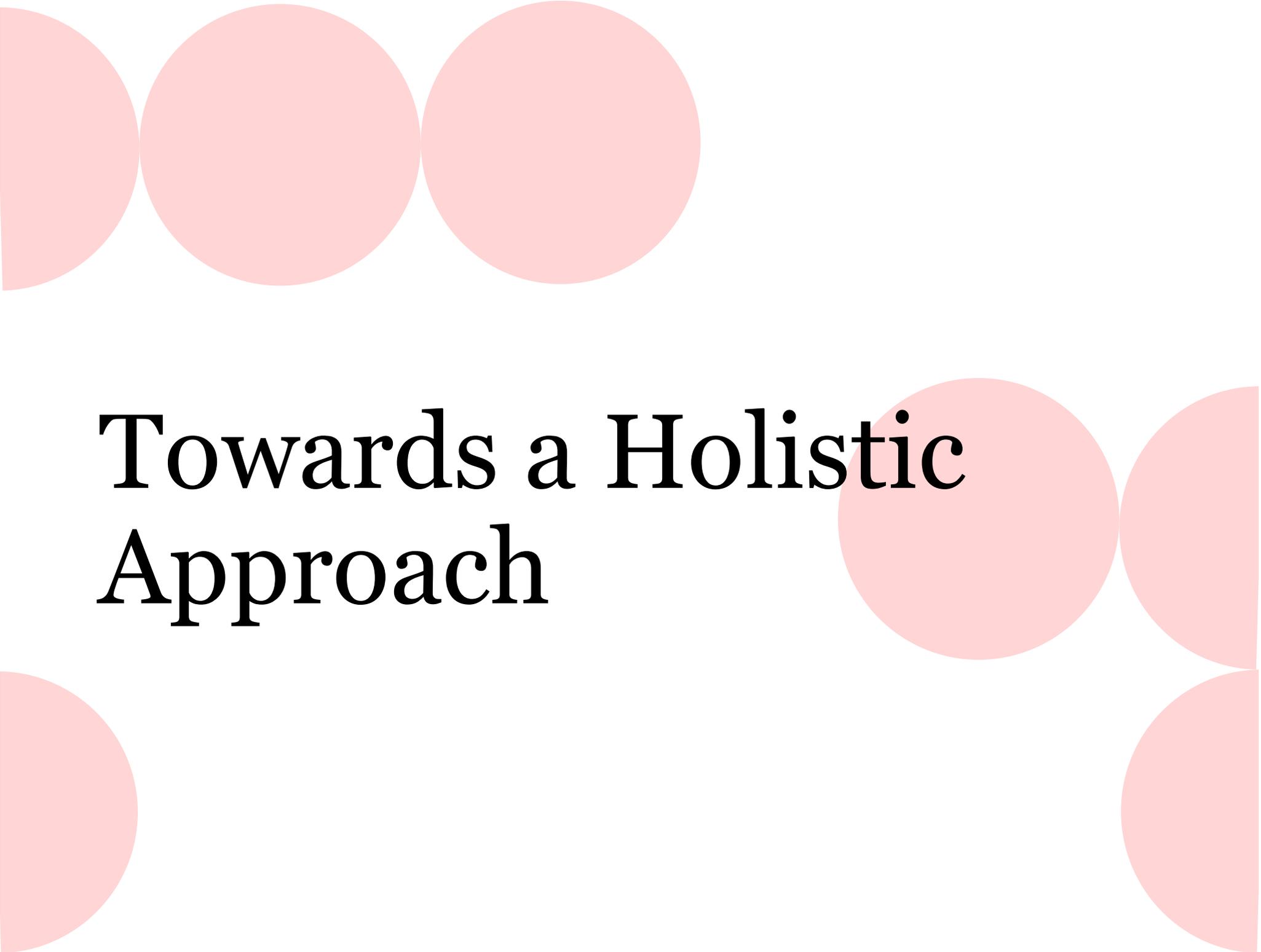


Seeking a sustainable future,

IUSD Programme aims at ...

- Training a **new generation** of urban practitioners and decision-makers.
- **Integrating** ecological and social approaches to engineering, to design and planning of landscapes, cities and buildings.
- Developing the **efficiencies of cities**, supporting political decision makers in respect to sustainable urban development.
- Strengthening **the link** between academia, international organizations and industry in the field of planning and design.
- Creating **beneficial research skills** and capabilities for similar public-private partnerships projects.



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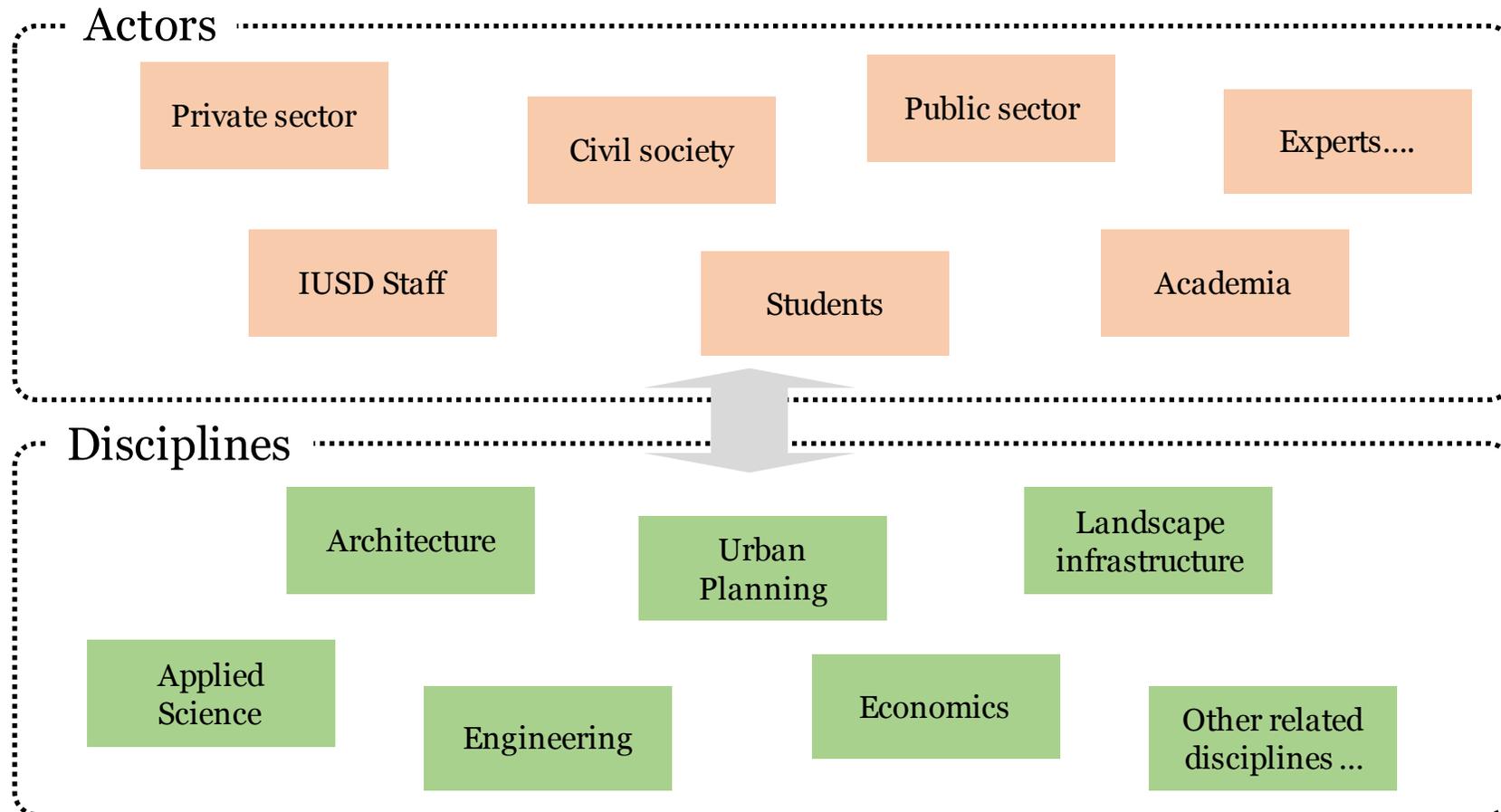
Towards a Holistic Approach



Towards a Holistic Approach

To achieve our objectives, we attempt to build a model for education for sustainable development.

- Generating knowledge for sustainable development

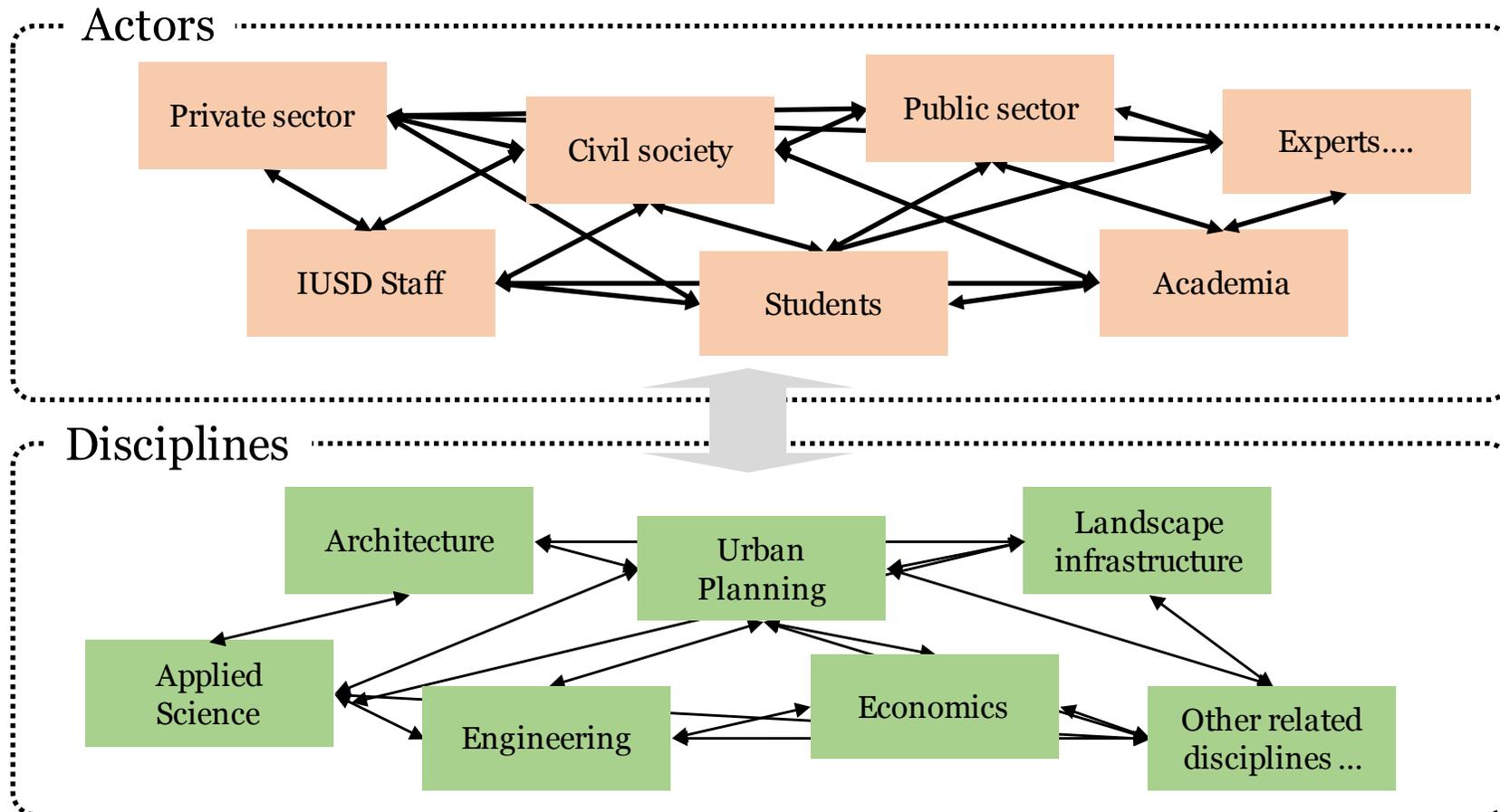




Towards a Holistic Approach

To achieve our objectives, we attempt to build a model for education for sustainable development.

- Developing skills and attitudes for sustainable development





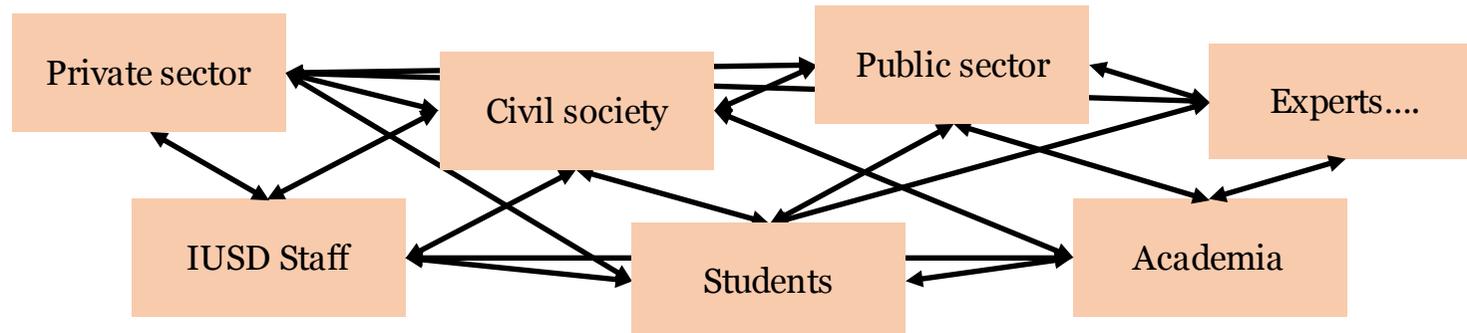
Towards a Holistic Approach

To achieve our objectives, we attempt to build a model for education for sustainable development.

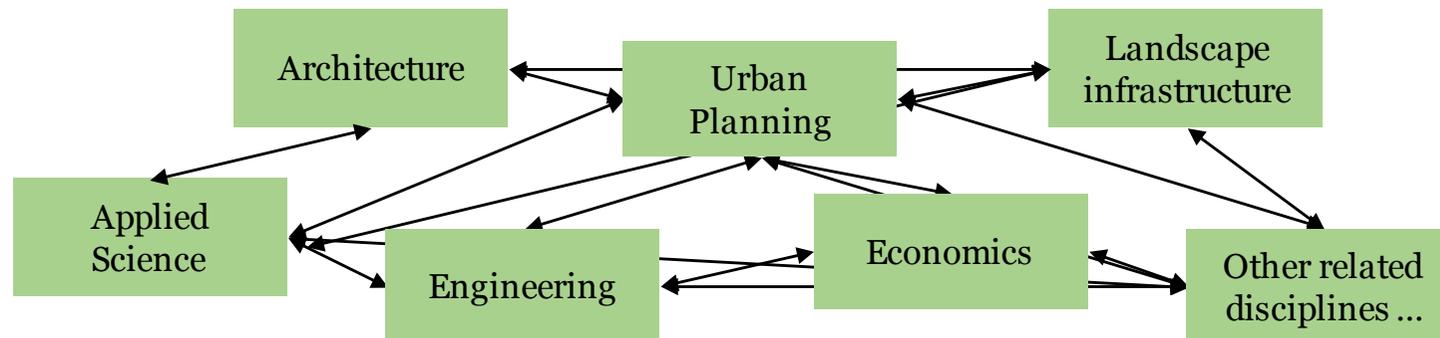
- Embracing institutional values for sustainable development

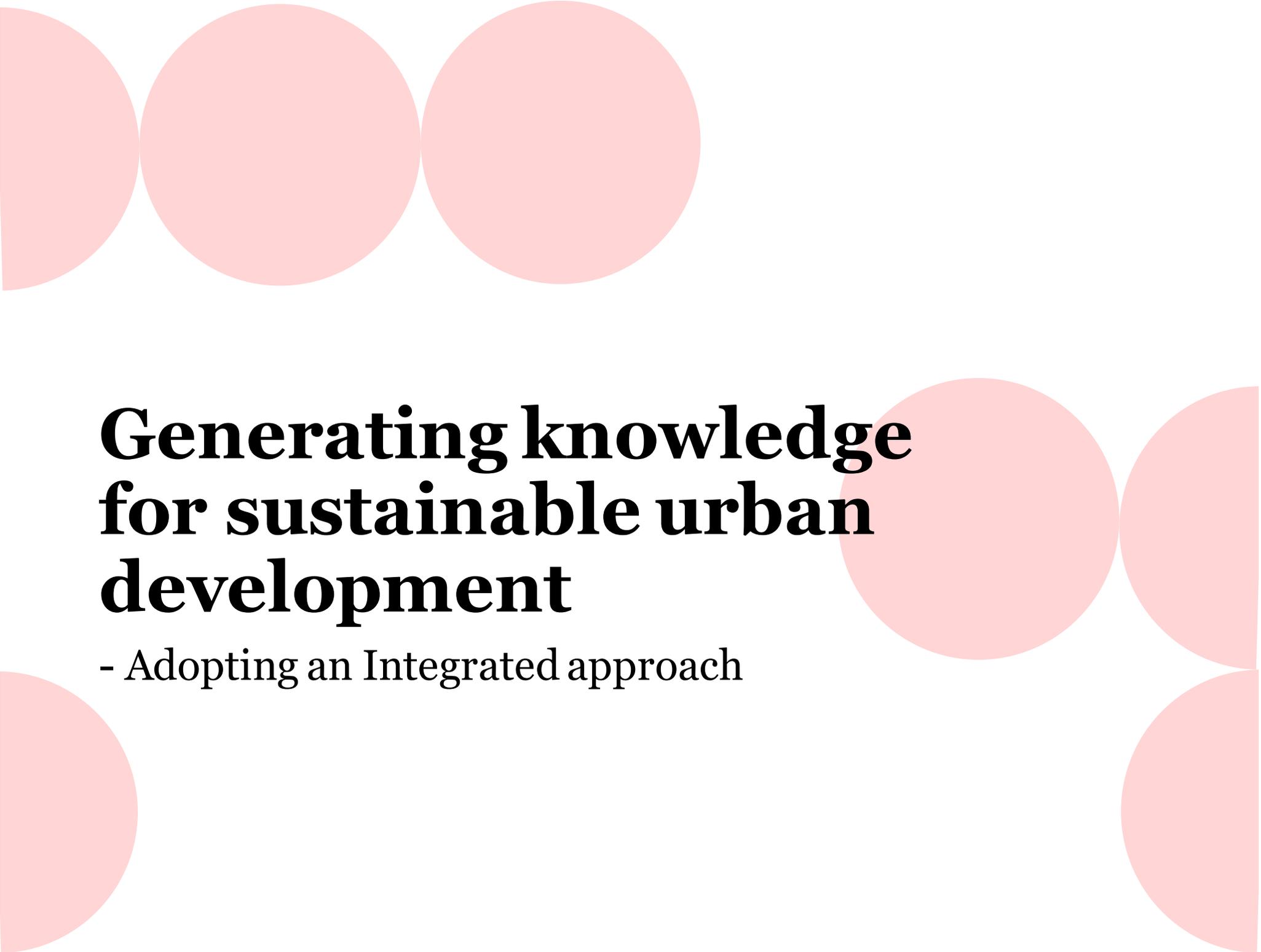
IUSD System Boundaries

Actors



Disciplines



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Generating knowledge for sustainable urban development

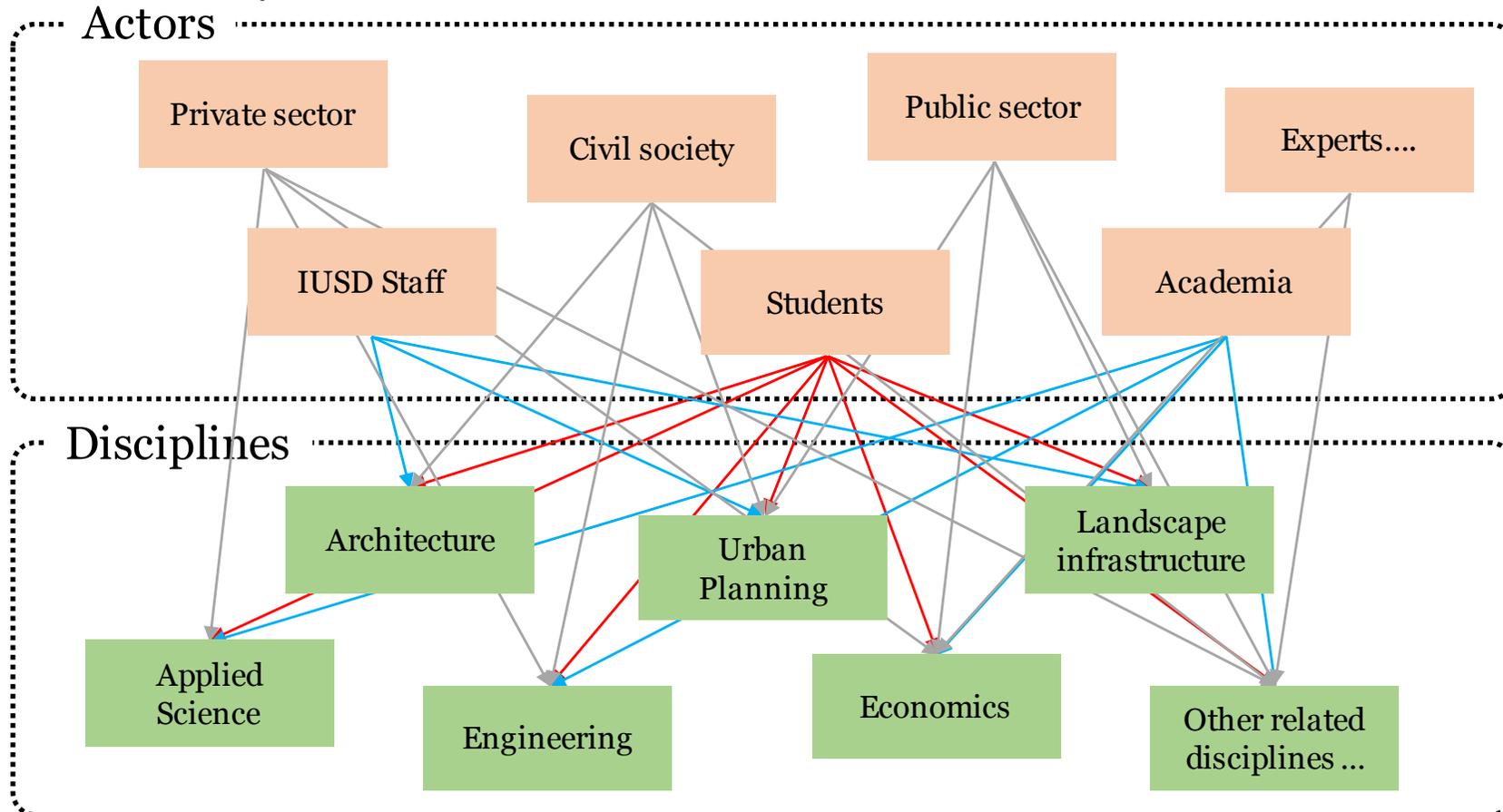
- Adopting an Integrated approach



Towards a Holistic Approach

Generating knowledge for sustainable development

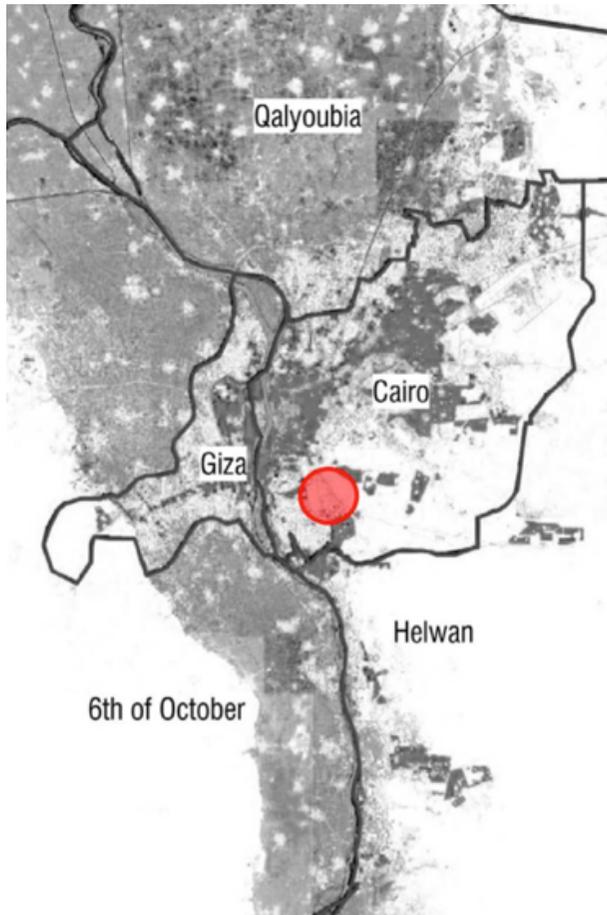
- IUSD accepts applicants from all relevant academic disciplines.
- IUSD staff and ASU Academic staff cover a wide range of disciplines
- IUSD actively engages the public sector, private sector and civil society.



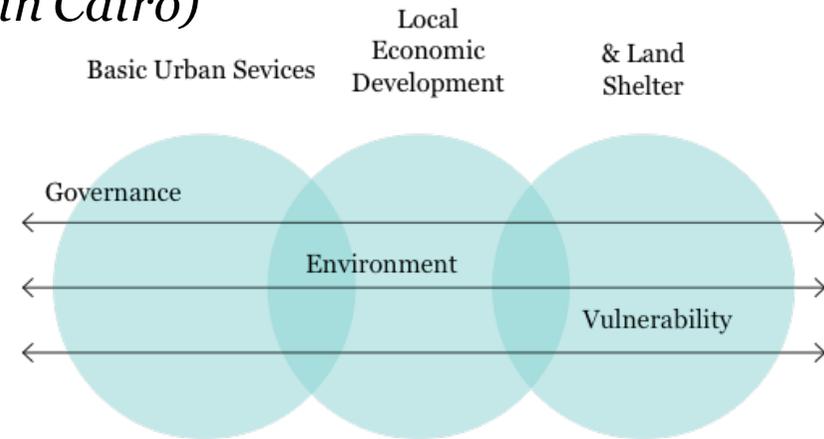


Integration in action...

IUSD students worked to produce development interventions For Ezzbt Al-Nasr (informal Settlement in Cairo)



During their work, students used various tools to study the area in an interdisciplinary approach.



- Thematic analysis (*integrating sectors*)



- Knowledge café (*Integrating knowledge/disciplines*)



Integration in action...



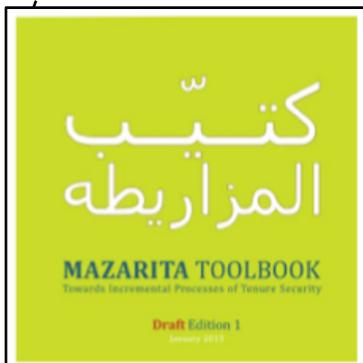
The fast track interventions developed, aiming at an integrated development of the study area – Ezzbt Al-Nasr



Al-Ezzbal Asly
Promote the local craftsmen and establish a more positive image of the neighbourhood
Type: Capacity building



Children as Design Partners
Enhancing streetscape in front of a school through involvement of school children
Type: Capacity building



Mazarita Toolbook
A tool book developed with participation of the residents of Mazarita; advocating the resident's occupancy rights
Type: procedural



Trash Becomes Cash
Installation of the first 5 biogas units with participation of the residents
Type: Capital investment

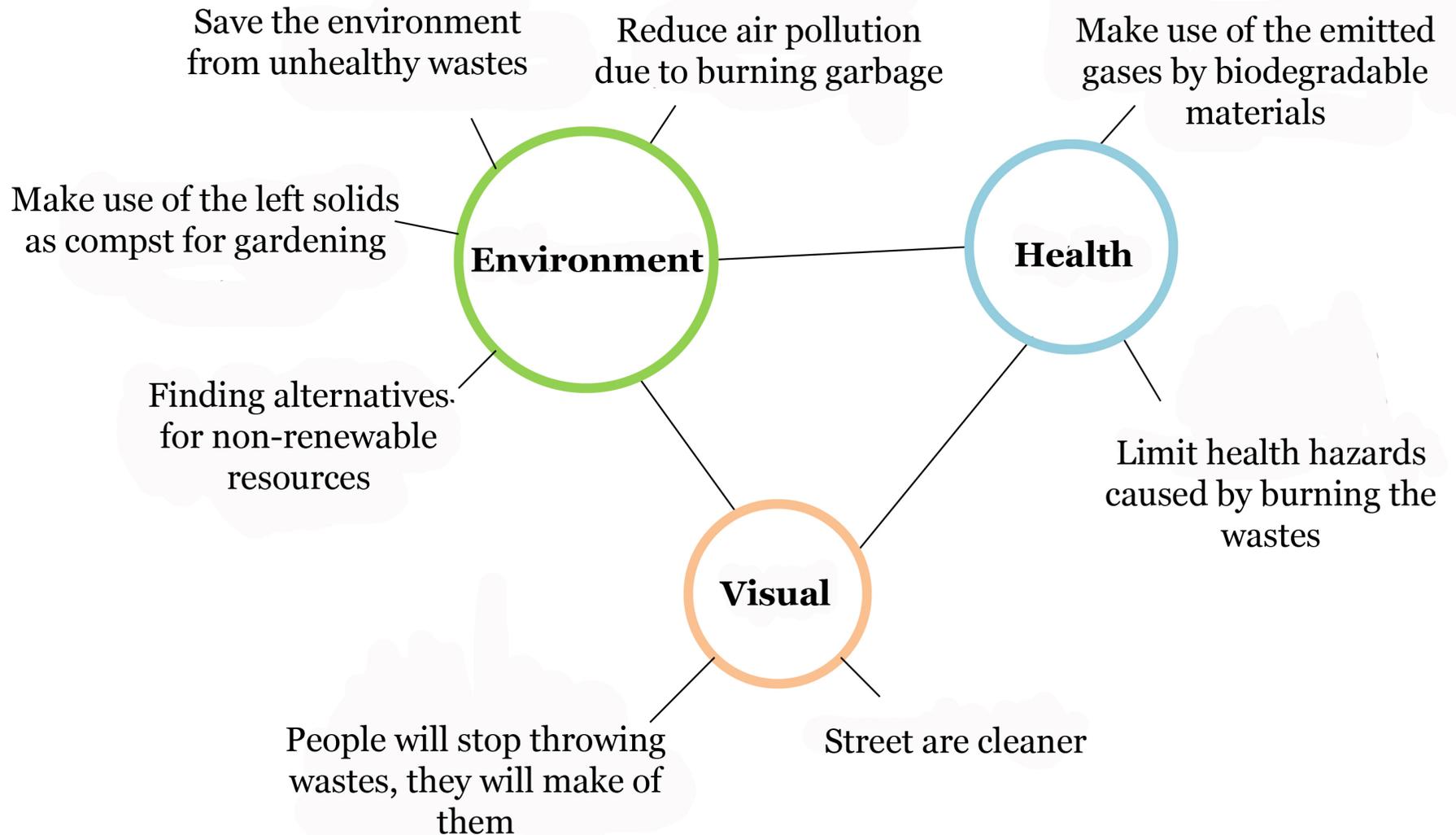


Integration in action...

Incorporating the objectives of sustainable development

- Intervention: **Trash Becomes Cash**

Expected impacts of the intervention

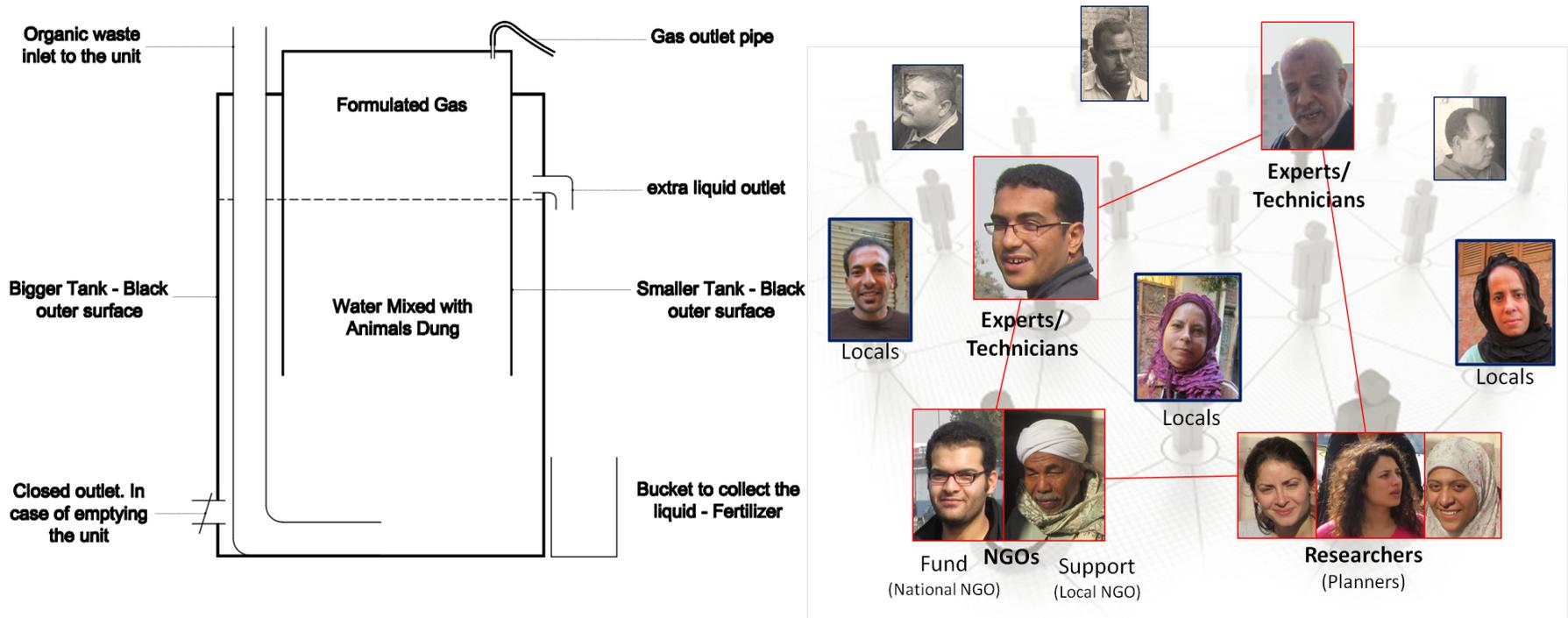




Integration in action...

Incorporating interdisciplinary approach to develop the solution

- Intervention: **Trash Becomes Cash**



Applied science tools

Social science tools

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Skills and attitudes for sustainable development

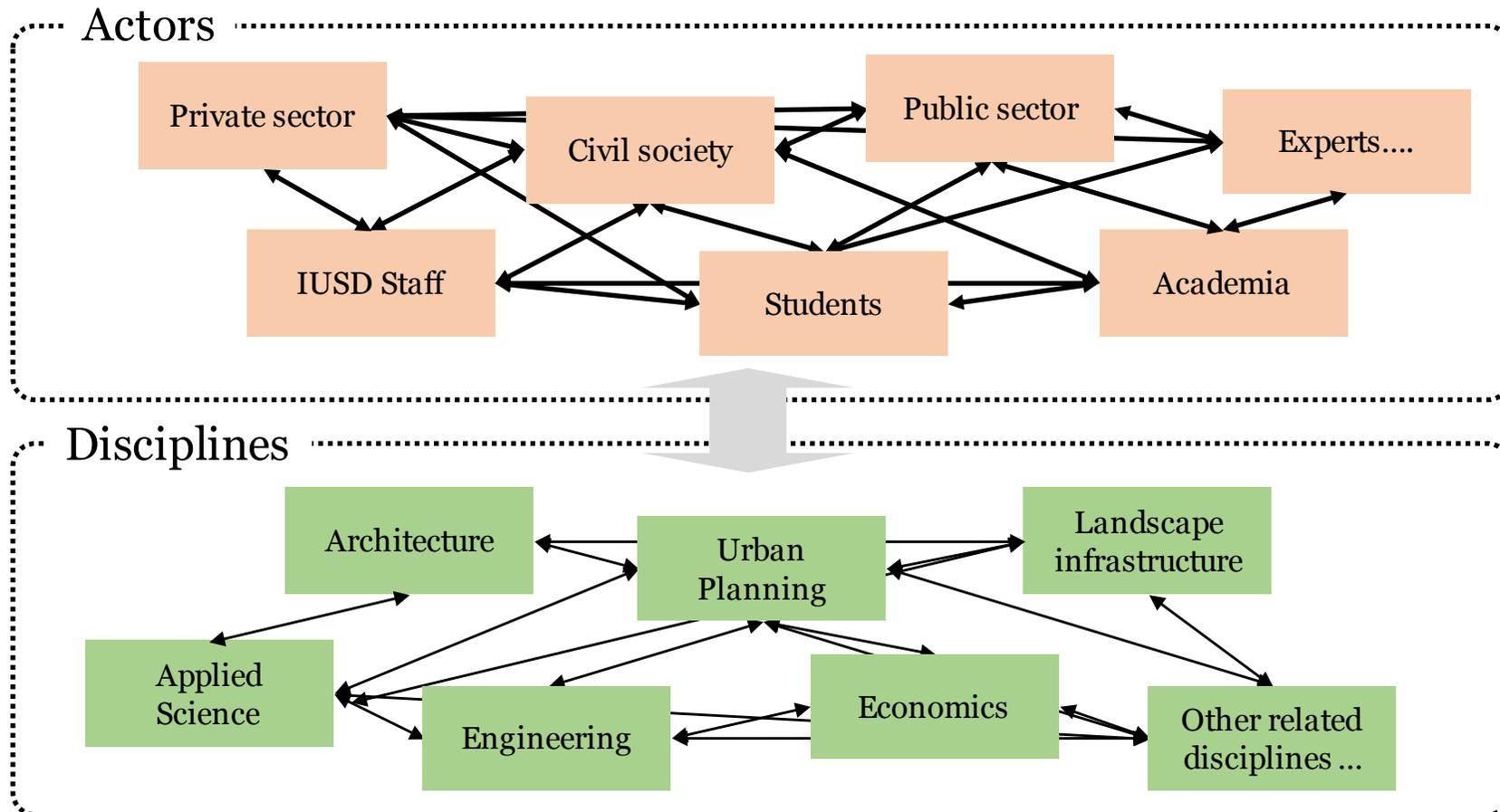
- Developing active educational model



Towards a Holistic Approach

Developing skills and attitudes for sustainable development

- IUSD staff develops student-focused pedagogies, bringing students at the centre of the curriculum.
- Staff and students are regarded as co-learners.





To induce change in attitude,

IUSD regards students:
active agents, students,
re-capturing knowledge
from the environment in a
systematic approach
which are then put together,
discussed, and analysed, to
produce new knowledge
about the context.





Learning , Teaching and Research

*For
the students*

- Learning is a process of acquiring a 'body' of knowledge.

- Learning is a transformative process of generating 'own' knowledge.

Passive

Active

Learning – Teaching – Research Relationship*

Weak

Strong

*For
the staff*

- Teaching involves 'transmitting' that body of knowledge and ensuring that students have 'absorbed' it

- Teaching involves engaging students with knowledge(s) and preparing them to become independent learners.

- Research is a process of 'exploration' and 'discovery' which occurs at the 'frontiers' of knowledge.

- Research is a process of constructing new forms of understanding, interpretations, and making connections.

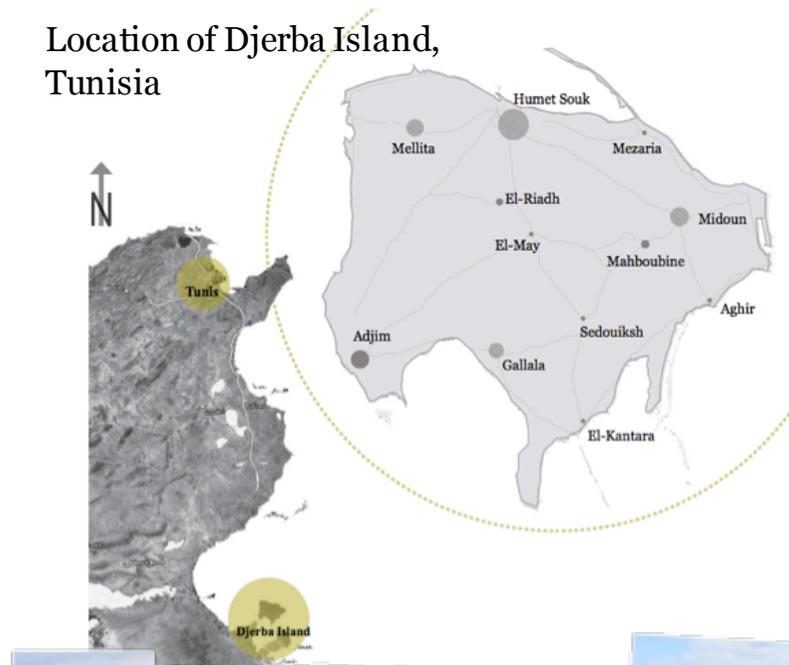


Active Education in action...

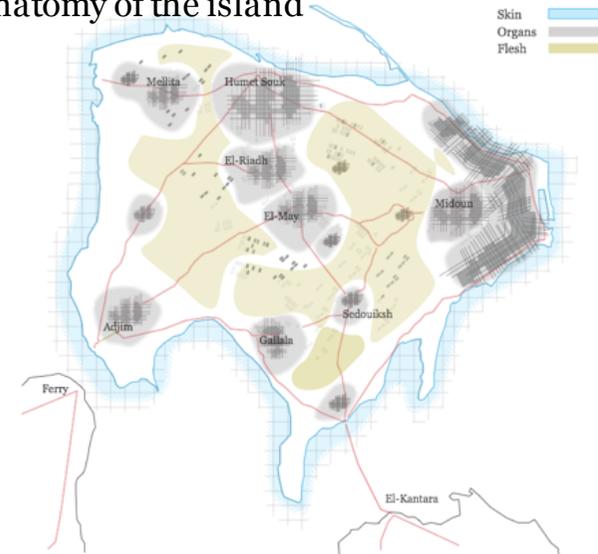
IUSD students conducted a module on Djerba Island.

Using an exceptional learning approach, the staff and the students together with the local community refined the objectives of the module.

Location of Djerba Island, Tunisia



Anatomy of the island



Djerba in dichotomies: A Collection of Collages and sketches were produced to capture the soul of the island.

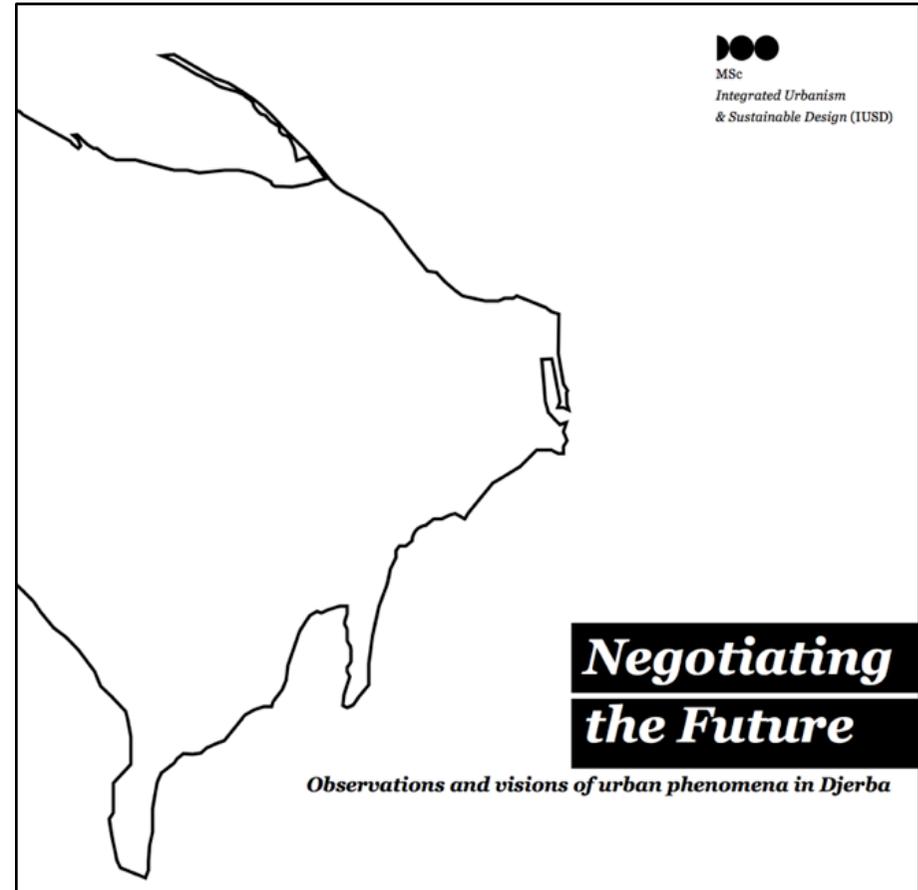


Active Education in action...

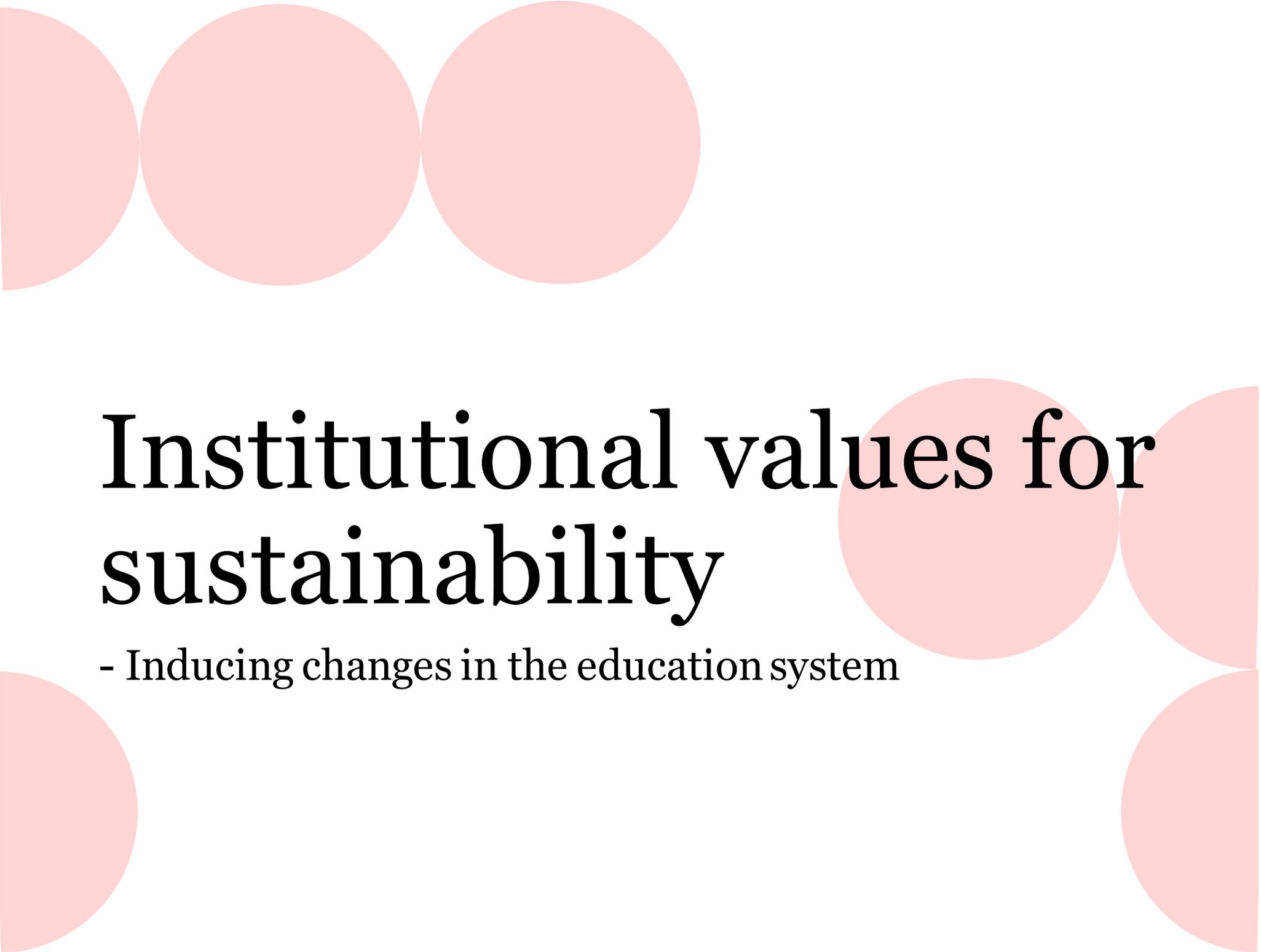
To address **pressure of Tourism Development**, students developed a tool to trigger local community to think about and negotiate the future of development on the Island.



**Problematizing dichotomies
Postcards**



**Negotiating the Future
Catalogue**

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Institutional values for sustainability

- Inducing changes in the education system



Towards a Holistic Approach

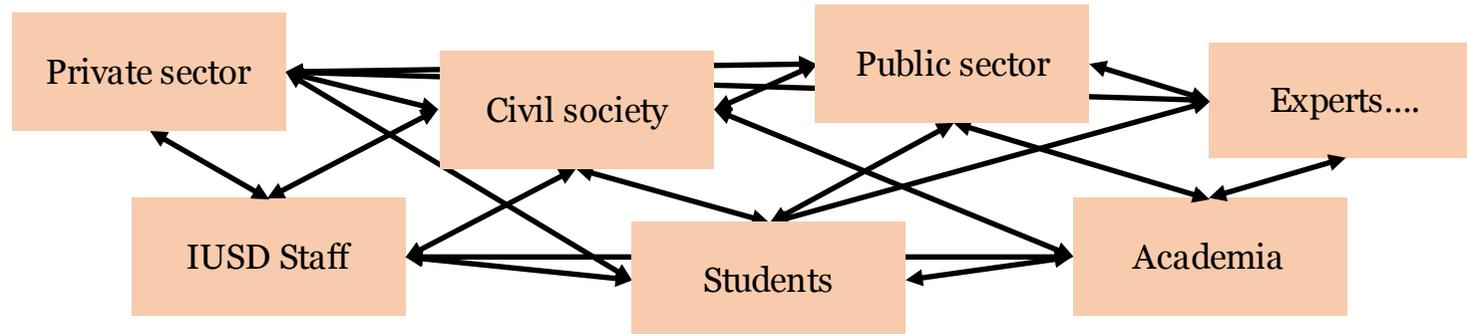
Embracing institutional values for sustainable development

IUSD fosters interdisciplinarity in higher education.

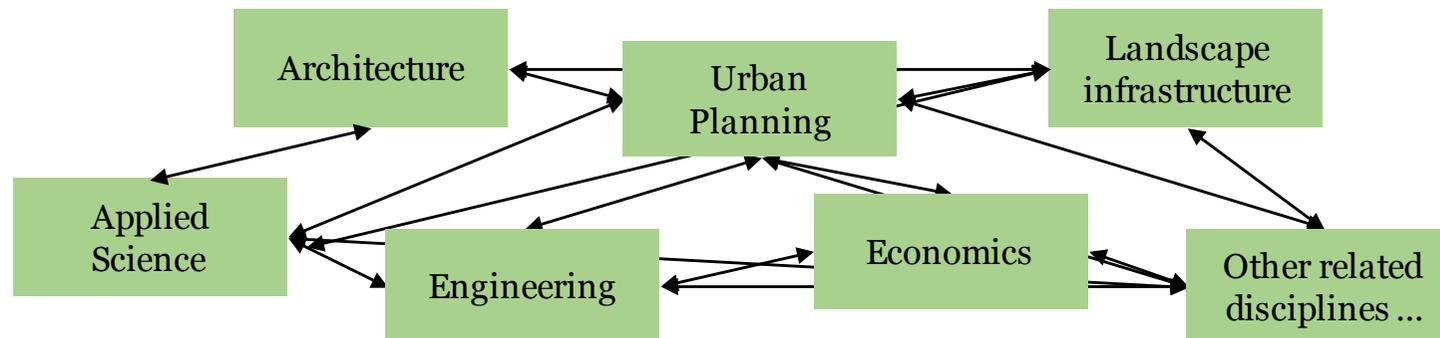
IUSD builds a research platform.

IUSD System Boundaries

Actors



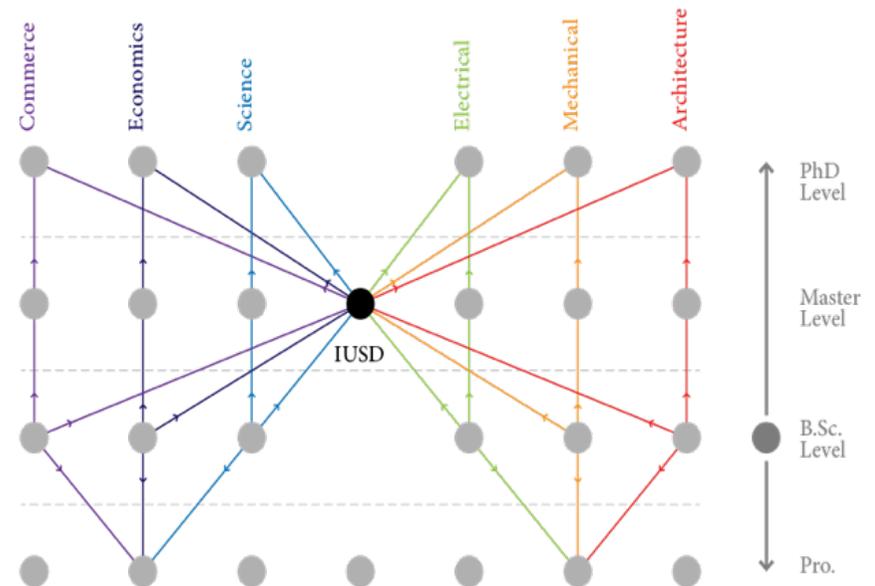
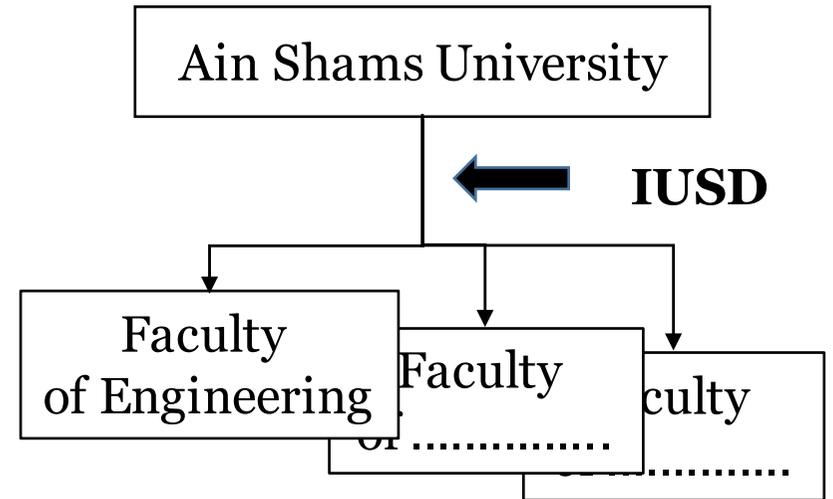
Disciplines





IUSD Interdisciplinary Degree

- IUSD accepts applicants from all relevant academic disciplines.
- IUSD offers a MSc Consecutive degree leading to PhD degree.
- IUSD introduced 'INT' as new academic code.
- IUSD Introduced the specialty of integrated planning and design.
- IUSD is successfully established, marketed and networked as an interdisciplinary program in Germany, Egypt and the MENA region.



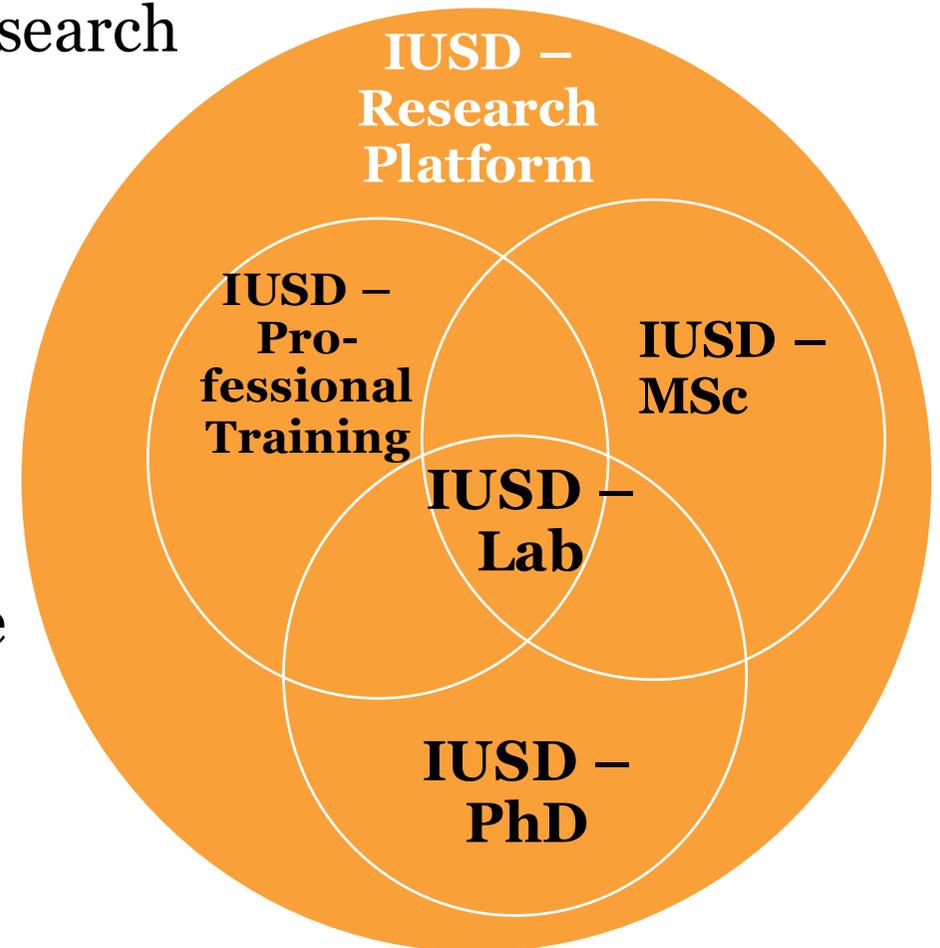


IUSD Research Platform

to ensure a sustainable future for the programme and to induce change in higher education, IUSD is regarded as a research platform, which consists of:

- IUSD – MSc Programme
- *IUSD – PhD Programme*
- *IUSD – Professional Training*

The interlinked programmes create the environment for IUSD – Lab Cairo.





IUSD – Lab Cairo Activities

IUSD – Lab Cairo together with IUSD – MSc Programme organises various activities such as:

- **Student Workshops and Summer Schools:**

providing opportunities for student exchange

- **IUSD Salons and Lectures:**

providing opportunities for knowledge exchange and networking

- **Strategic Workshops and Symposia:**

providing opportunities for staff exchange, knowledge sharing and building networks for future collaboration with academics and practitioners





IUSD – Lab Cairo Projects

IUSD – Lab Cairo focuses on Integrated Sustainable Development. The Lab is engaged and works on applying to international research projects (EU Horizon 2020) with European, Arab and African partners. The Lab is currently working on:

- **Energy-Efficient and Sustainable Building Design and Construction in Egypt, 2013-2016**

Funded by: Academy Of Scientific Research and Technology Egypt

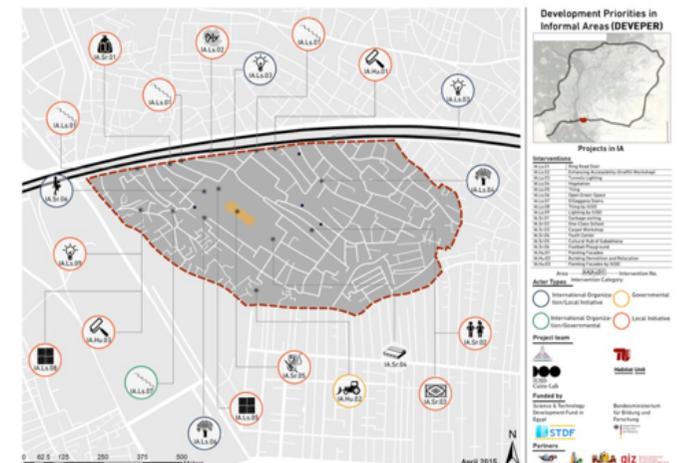
- **Development Priorities in Informal Areas: Planning, Realization and Local Perceptions 2015-2017**

In Cooperation with TU-Berlin

Funded by: German Egyptian Research Fund



*Working with local materials, Siwa 2014



*Mapping Development Initiatives, 2015



Overall,

In IUSD, we believe that our role as an institute is to induce deep-rooted change towards sustainability in the education and society.

we attempt to build a model for education for sustainable development by:

- **Generating knowledge for sustainable development**
- **Developing skills and attitudes for sustainable development**
- **Embracing institutional values for sustainable development**

And we keep learning ...



Education for a Sustainable future

Reflections on the experience of IUSD

Thank you

On behalf of IUSD Team:

Dr. Marwa Abdellatif

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