INNOVATION IN ARCHITECTURAL EDUCATION (SDGs) Practice Examples

Anna Rubbo

Center for Sustainable Urban Development
The Climate School, Columbia University, New York
October 28 2022 UIA Webinar

WHAT is INNOVATION?

2 among many definitions

(the use of) a new idea or method (Cambridge dictionary)

Innovation is the process of creating value by applying novel solutions to meaningful problems. (Digital Intent)

INNOVATION in ARCHITECTURAL EDUCATION?

'creating value' - for who, what, how?

> for people , the planet, next gen professionals?

'novel solutions' - out of the box thinking

> Inclusive and resilient communities.

'meaningful problems' – inequality, climate change environmental, social, economic impacts of design

What are your architectural education innovation priorities?

my ATTEMPTS at innovation in architectural education

with MDGs (2000-2015) and SDGs in mind

2005-12: Global Studio

Istanbul, Vancouver, Johannesburg, Bhopal (educating to support MDG, goal 7) 600+ students, 35 countries, 60+ universities, 12 disciplines; many communities of the urban poor

2013-15: People Building Better Cities

Traveling exhibition, 10 countries, 18 cities

2019-: Accelerating the SDGS and the Local Project Challenge

Survey, conference, call for projects, publication

2022- 2030: SDGs Local Studio

UN MILLENIUM PROJECT 2002 - 2004

10 TASK FORCES established in 2002 to develop policies & strategies to achieve the Millennium Development Goals

UN EXPERTS GROUP

MILLENNIUM PROJECT JEFFREY SACHS, DIRECTOR

TASK FORCE 1 TASK FORCE 2 TASK FORCE 3 TASK FORCE 4 TASK FORCE 5 Poverty and **Education** and Child Health and Hunger HIV/AIDS Malaria, economic **Gender Equality** Maternal Health TB, Access to development **Essential Medicines** TASK FORCE 8 TASK FORCE 6 **TASK FORCE 7** TASK FORCE 9 TASK FORCE 5 Environmental Water and Improving the Open, Rule-based Science, Sustainability Lives of Slum **Trading Systems** Sanitation Technology, and Dwellers Innovation

Task force 8 Report: A Home in the City - www.unmillenniumproject.org

SDGs and NUA: overall, encourage interdisciplinary approaches in design







































EXPAND THE PARAMETERS FOR DESIGNERS- provide innovation opportunites

SDGs (2015-30)

SDGs built on MDGs

193 countries signed on to SDGs

Agenda 2030 for Sustainable Development

17 SDGs + 169 targets

Which goals matter most to designers?

Goal 11 – cities?

Goal 13- climate action?

Goal 10 – reduced inequalities?

Goal 16 - peace, justice, strong institutions?

Goal 3 - health and well being?

NEW URBAN AGENDA (2016)

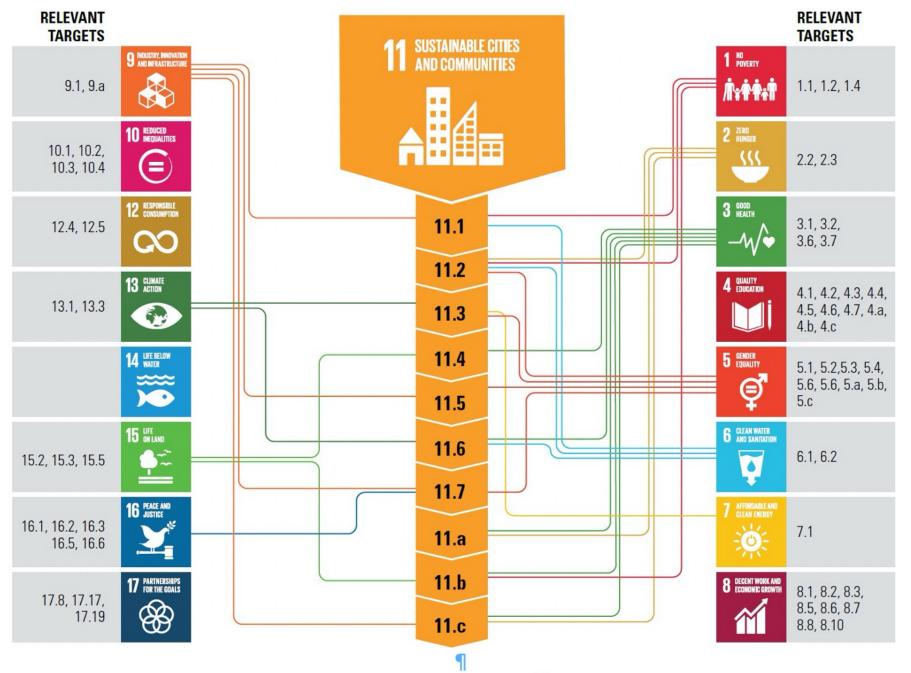
167 countries signed on NUA

NUA works as SDGs accelerator, especially SDG 11

11: 'Make cities inclusive, safe, resilient & sustainable'.

NUA helps provide a spatial framework for SDGs delivery in cities.

Innovation
opportunities exist
in connecting &
addressing various
SDGs



Source: UN-Habitat⁶

PROJECTS – reflecting on innovative aspects

Global Studio (2005-2012)

Address meaningful problem "urban professionals don't listen" in a novel way and create value- for all

Innovation issues: reciprocity, decolonization; listen, earn trust, "people as partners"

People Building Better Cities traveling exhibition (2013-15)- 10 countries , 18 cities

Address meaningful problem that academic knowledge (aka publications) can be exclusionary & often has limited impact.

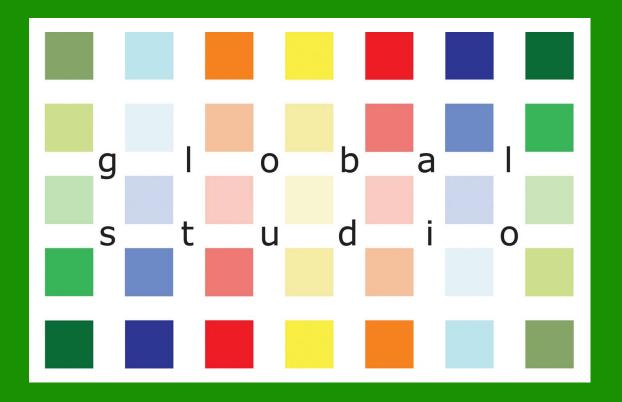
Innovation issues: communicate beyond the university; stimulate dialogue on local concerns

Accelerating the SDGs (2018 -)

Address **meaningful problem/ question** How are the SDGs traveling in your world? Follow survey up with **LOCAL PROJECT CHALLENGE** to **create value** in **novel way.**

Innovation issues: combine research + action; engage broadly (students, educators, the professions AND civil society.

www.theglobalstudio.com



A PROJECT INITIATED BY THE UNITED NATIONS MILLENNIUM PROJECT TASK FORCE
ON IMPROVING THE LIVES OF SLUM DWELLERS IN 2004
& DEVELOPED BY
UNIVERSITY OF SYDNEY, COLUMBIA UNIVERSITY, UNIVERSITY OF ROME

Adopting a participatory process, design professionals can partner with communities.

Global Studio uses a nonlinear process— developed with students, academics, urban practitioners, and community partners— to create action planning, participatory practices, and partnership building, always adapting to a specific context.

LISTEN, OBSERVE AND ASK

What do people like/dislike about where they live?

What would improve their lives?

What physical changes could help improve their lives?

What is the political, developmental, and historical context?

Does the community have a vision for the future?

and

Will the project build capacity?

Will it generate income or create jobs?

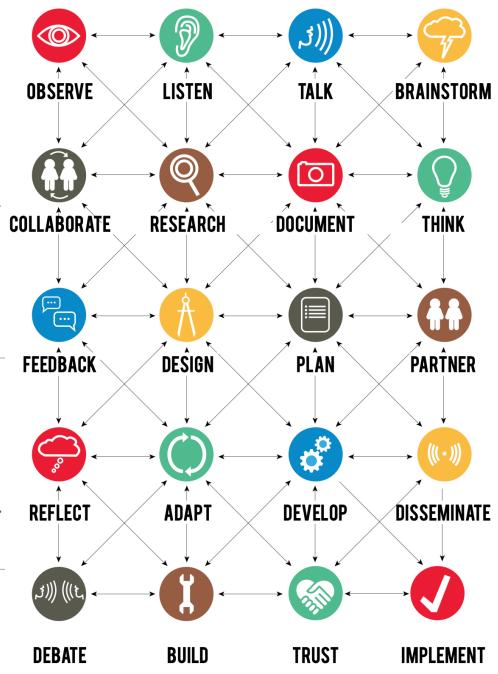
Will it build community confidence?

Will it build partnerships?

Is it something people want?

CAN DESIGN MAKE A DIFFERENCE?

No project is too small. One size does not fit all.



GLOBAL STUDIO Inclusivity and Education

GLOBAL STUDIO educates urban professionals, in place, to promote inclusive, equitable cities.

PEOPLE AS PARTNERS

Rethinking architectural practice and education

Global Studio is a design and planning "think and do tank" spearheaded in 2004 by the United Nations Millennium Project Task Force on Improving the Lives of Slum Dwellers.

The focus of Global Studio's efforts has been international and interdisciplinary, involving work with disadvantaged communities, NGOs, and local governments. Global Studio offers conferences and symposia to disseminate knowledge and encourage understanding across diverse platforms.

To date there have been over 600 participants from 66 universities, more than 30 countries, and 10 academic disciplines.

Istanbul (2005), Vancouver (2006), Johannesburg (2007, 2008, 2009), Bhopal (2012)





Five keys to educating for resilient, equitable, inclusive and sustainable cities

















PRINCIPLES AND PRIORITIES

- WORK with, and learn from, disadvantaged communities.
- DEVELOP participatory design and planning skills to support community-driven change.
- EMPOWER participants; be driven by local needs; promote social entrepreneurship and on-going action.
- COMMUNICATE outcomes to communities, local government, organizations, and general public.
- CREATE global networks of professionals, educators, students, and communities.
- ONTRIBUTE to knowledge production, build bridges between communities and institutions and deliver innovative, proactive solutions.
- ENCOURAGE development of the "citizen scholar" and "citizen professional."
- CONTRIBUTE to the implementation of the Millennium Development Goals, especially "environmental sustainability," improving "the lives of slum dwellers," and developing "an international network for development."

CREATE Public Space

Two proposals for public "commons"

A PEDESTRIAN-CYCLIST FRIENDLY LAKE FRONT

Cantilevered pedestrian walkway

Provides safe pedestrian access to the lake front promenade.

Generates health and environmental benefits: cleaner air for pedestrians; water-cleansing plants.

Floating pontoons

Resolve pedestrian congestion and connect to strategic points along the lake front.







FLOATING PONTOONS CONNECT TO KEY PUBLIC BUILDINGS ON THE LAKE FRONT





PARI GHAT PARK

Unlocks social, economic, and environmental opportunities through a public park at Pari Ghat, creating a space for children's play; creative and commercial activities; and urban agriculture.



GVE People a 'Voice'

"WE ARE BHOPAL" FESTIVAL AT PARI GHAT

"We are Bhopal," was a Global Studio event that promoted connectivity amongst residents, and involved speakers, musicians, and participatory activities. The event provided Global Studio with an opportunity to present and receive feedback on its urban design proposals.





COLLABORATE DISSEMINATE









ENGAGING THE COMMUNITY

The festival provided an opportunity to present the master plan for the lake front and Pari Ghat to the local community and visitors, and gather their feedback.

Children, youth, and adults were encouraged to illustrate their own visions for the Ghat. **USE ACTION AND RESEARCH** TO DISCOVER ISSUES AND **ENGAGE PEOPLE.**

CONSULT LOCAL EXPERTS.

USE SOCIAL MEDIA TO INCREASE OUTREACH AND GATHER FEEDBACK.

PROVIDE FUN PUBLIC **EVENT THAT PROVIDES** A PLATFORM FOR COMMUNITY CONSULTATION.

PRESENT OUTCOMES TO LOCAL COMMUNITY.

For more information and resources on this topic -Use your smart phone's QR Code reader.















































Diverse modes of communication



GLOBAL STU



disadvantaged...

BROWSE THIS CHANN

TURKEY 2005

Global Studio Istanbul (2005)

SOUTH AFRICA 2007-09

New Mindsets (2007)

Small Change, Big Difference (2007)

A student made film about insulating shacks

SABC (South African Broadcasting Corporation) (2007)

Academic Acupuncture (2008)

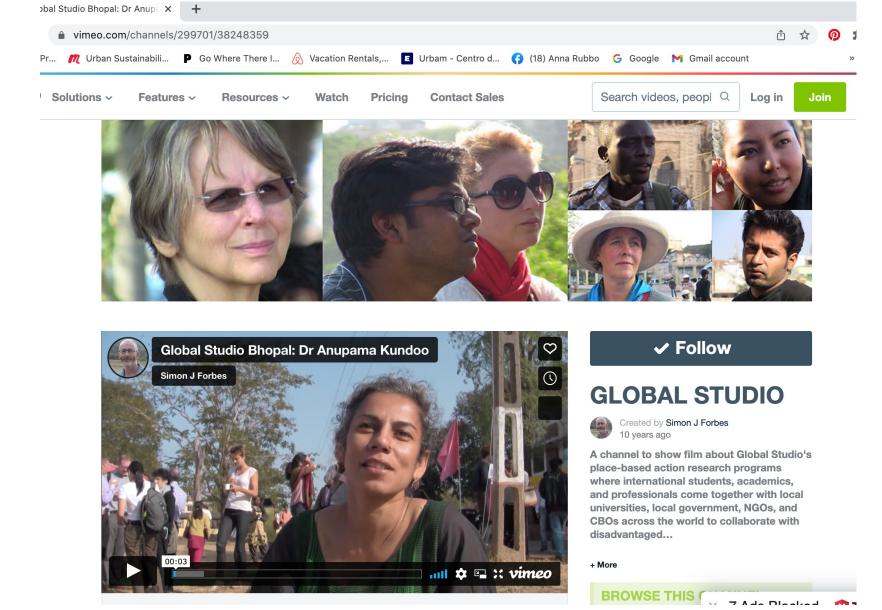
Diep Salute (2009)

A student film made to promote hip hop artists

INDIA 2012

Short films and interviews with "Reimagining Inclusive Urbanization" conference speakers and Global Studio participants.

http://peoplebuildingbettercities.org/globalstudio/



Films made by Global Studio http://peoplebuildingbettercities.org/globalstudio/

PEOPLE BUILDING BETTER CITIES





About People Building Better Cities

Exhibition Schedule

Join the Conversation

Resource Platform

http://peoplebuildingbettercities.org

BANGKOK

NAIROBI

un. 5 - Jul. 7, 2013

CHENNAI1

Oct. 8 - Oct. 22, 2013

MEDELLIN

Apr. 5 - Apr. 11, 2014

CHENNAI 2

Sep. 24 - Dec. 24, 2014

RIODE JANEIRO

Sep. 20 - Oct. 5, 2013

Nov. 7 - Nov. 20, 2013

DURBAN

Aug. 3 - Aug. 7, 2014

Feb. 16 - Feb. 17, 2015

SYDNEY

Apr. 12 - May. 19, 2013

BEIJING

Sep. 28 - Oct. 20, 2013

SHANGHAI

Nov. 24 - Dec. 6, 2013

MELBOURNE 1

Aug. 19 - Aug. 29, 2014

CHRISTCHURCH

Jul. 28 - Aug. 29, 2015

JOHANNESBURG

May. 18 - Jul. 26, 2013

DELHI

Oct. 4 - Oct. 18, 2013

NEW YORK

Dec. 3 - Jan. 4, 2014

BRISBANE

Sep. 1 - Oct. 1, 2014

ANN ARBOR

Oct. 2 - Oct. 23, 2015



























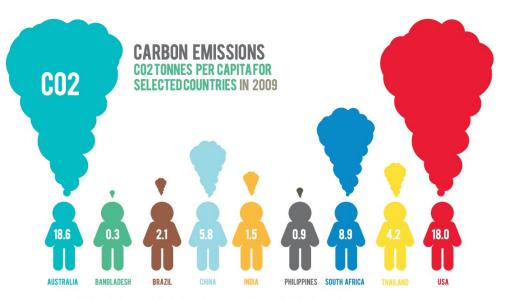




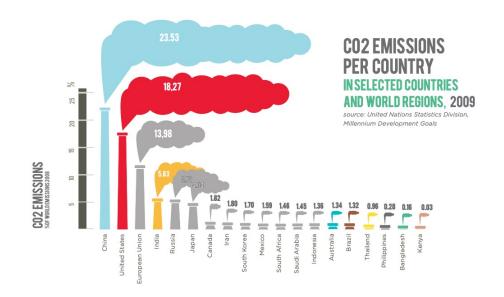








CO2 emission contribute to extreme weather and global warming. source: World Bank Development Indicators



WHERE CAN MITIGATION AND **ADAPTATION STRATEGIES BE** APPLIED, AND HOW?

URBAN FORM

AND STRUCTURE

Increase density to decrease sprawl; increase public space; upgrade vulnerable areas; build in safe areas only; provide for wetlands and urban agriculture.

URBAN INFRASTRUCTURE

Implement city-wide renewable energy systems; capture landfill gas; recycle waste; provide basic services to all residents.

CARBON SEQUESTRATION

Plant trees and increase urban forests

TRANSPORT

Decrease car dependence; expand clean technology public transit for all socio-economic groups; accommodate cyclists and pedestrians.

BUILT ENVIRONMENT

Incentivize energy-efficient design, materials and technologies; retrofit existing buildings; harvest water and solar power.

"The biggest contributors to global emissions in 2011 were China (28%), the United States (16%), the European Union (11%), and India (7%)."

-Global Carbon Project, 2012

CLIMATE CHANGE: SOME SOLUTIONS

Urban agriculture



Urban agriculture in Havana contributes to food security and carbon segestration and lowers transportation emissions. photo sourced from Inhabitat: Design Will Save the World

Bicycles



Bicycles provide efficient and zero-emission transport worldwide. An estimated one billion people cycle daily. Regular cycling can help manage or prevent many diseases. photo source: Global Studio: Bhopal

Green Building



The building sector contributes about 30% annual greenhouse gas emissions and consumes up to 40% of all sequestration program to increase New York's urban forenergy. Council House 2, Melbourne (2006) is an example ests by 20%. photo sourced from Hunter College- CUNY of how local government can lead the way. photo sourced from City of Melbourne

Mass Transit



BRTs have social, environmental and economic benefits in many cities: e.g. Bogota, Curitiba, Jakarta, Guangzhou, Ahmedabad. BRT comfort and convenience discourage private car use. photo source: Rail for the Valley

Density



False Creek, Vancouver has social mix and mixed use, good public spaces, and well served by public transport. photo sourced from Cyberdave.blogspot.com

City Greening



Million Trees NYC is a city wide public/private carbon

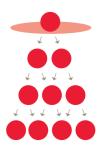




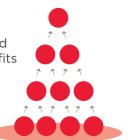
- **1 ENCOURAGE** development of the "citizen scholar" and "citizen professional."
- **(1) CONTRIBUTE** to the implementation of the Millennium Development Goals, especially "environmental sustainability," improving "the lives of slum dwellers," and developing "an international network for development."

Why action planning? Recause top down
Microsoft PowerPoint planning and design have not best served the urban poor well. 21st century professionals require new skills.

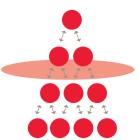
Top-down planning and design put urban professionals in the driver's seat.



Bottom-up planning does the reverse, and loses the benefits of professional expertise.



Working together in multidisciplinary teams makes 'top-down meet bottom-up.' Effective action planning becomes possible.



Action planning provides new opportunities.

Learning to work with communities should start in universities, and professional silos broken down.

information and resources on this topic -Use your smart phone's QR Code reader











































An action research project to engage:

- academics, students, researchers
- urban professionals
- civil society

ACCELERATING THE SDGs (2018-)

Stage 1: City Maker Survey (1147 responses)

Stage 2: Local Project Challenge (111 projects)

Stage 3: Dissemination

PROFESSIONAL Projects: some examples

STAGE 2: ACCERERATING THE SDGs (2018-)





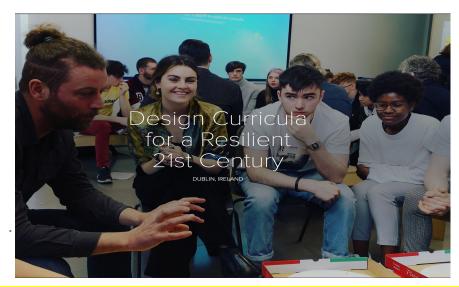
Los Angeles, USA: Koning Eisenberg Architecture (4 SDGs, 4 targets)

Palmira, Colombia: ARUP and AEV Arquitectos (4 SDGs, 4 targets)





Gibson Desert, Australia: Kaunitz Yeung Architecture (5 SDGs, 4 targets)

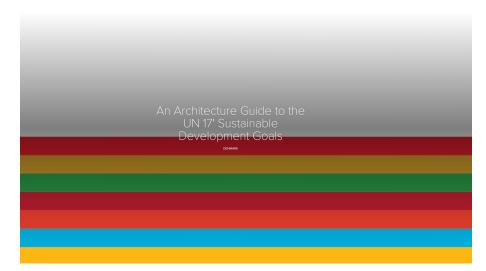


Engaging with Māori Decolonising the
professions

Ireland: Dublin School of Architecture (6 SDGs, 5targets)

New Zealand: University of Auckland & Ako Aotearoa (3 SDGs , 3 targets)





USA: Public School 54 Brooklyn (4SDGs, 5 targets)

Denmark: Danish Academy of Fine Arts (17 SDGs, 5 targets)





louise@gehlpeople.com

WEBSITE

https://gehlpeople.com/

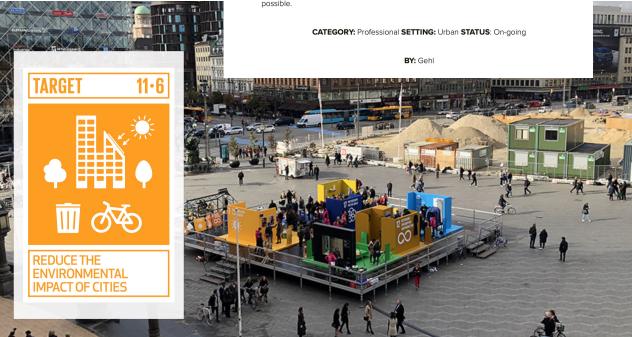
REPRESENTED IN THIS PROJECT

Action research	Architecture	Community development	Construction / Making	Design / Arts
Health / Well being	Landscape architecture	Planning	Place making	Public space
Research	Trades	Transportation	Urban agriculture	Urban design

SUSTAINABLE DEVELOPMENT GOALS



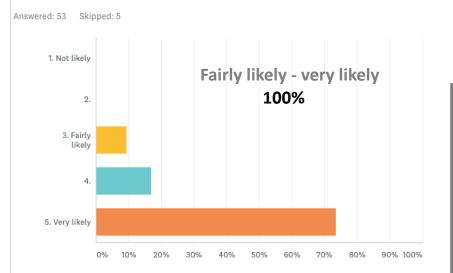
PROJECT OVERVIEW: To achieve the UN's SDGs everyone will have to take action. However, translating the goals into our everyday lives, routines and habits can be confusing - where to start? What actually makes a difference? To overcome this, the "Your Sustainable Life" Pavilion was designed to illustrate how simple choices and actions can add up to have a big impact. The pavilion mimics an apartment with each room dedicated to a different goal. Participants can get informed, experience and test everyday solutions through physical and digital interactions. An online calculator accompanies participants, estimating and recording the effect of pledged actions against the magnitude of global challenges. The pavilion is modular, allowing it to travel to different events, reaching as many people as possible.



40% 50% 60% 70% 80% 90% 100%

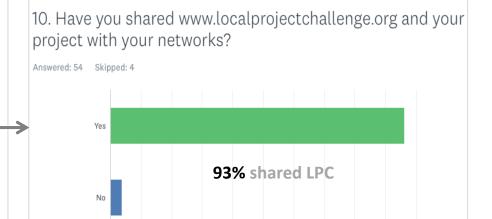
LOCAL PROJECT CHALLENGE Feedback

21. On a scale of 1 to 5, in the future, will you be likely to consider the SDGs and their targets?



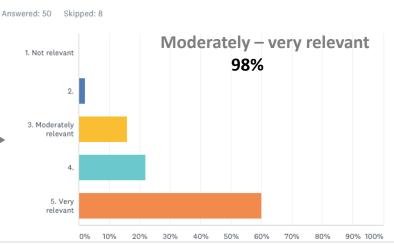


- Take-up of SDGs in future work
- Spread /sharing of LPC
- Usefulness of SDGs post pandemic



25. On a scale of 1 to 5, do you think that the SDGs will be relevant and /or useful in helping recreate (physically and mentally) healthy, resilient, and equitable cities AFTER the pandemic?

30%



LISTEN, OBSERVE AND ASK

What do people like/dislike about where they live?

What would improve their lives?

What physical changes could help improve their lives?

What is the political, developmental, and historical context?

Does the community have a vision for the future?

and

Will the project build capacity?

Will it generate income or create jobs?

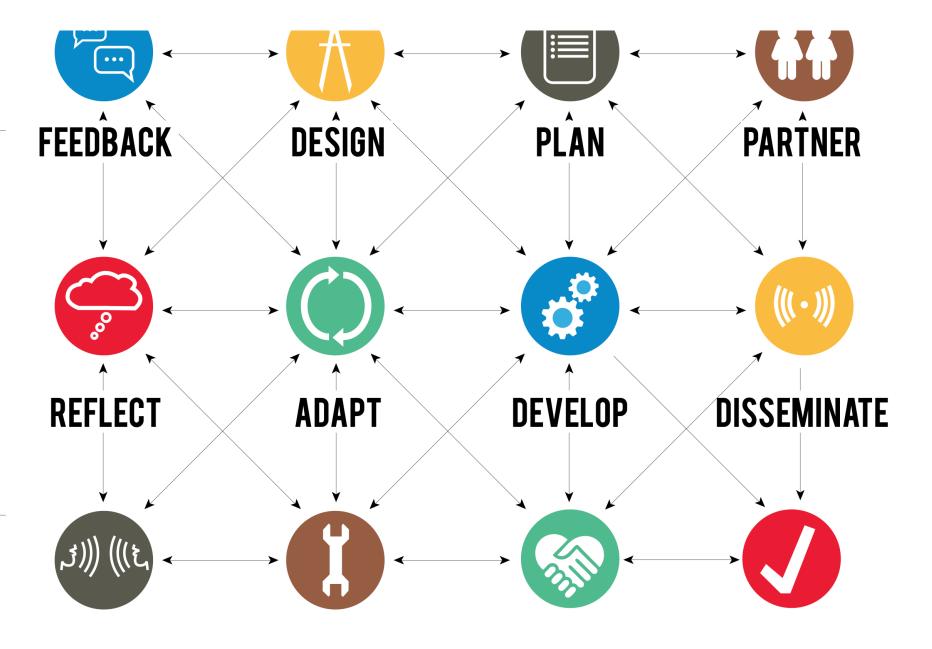
Will it build community confidence?

Will it build partnerships?

Is it something people want?

CAN DESIGN MAKE A DIFFERENCE?

No project is too small. One size does not fit all.



SDGs LOCAL STUDIO 2023-2030

- An invitation to design schools worldwide to offer local Studios that address SDGs
- 4 cycles to be showcased at UN Habitat Forums 2024, 2026, 2028, 2030
- Knowledge building/sharing website
- **Publications**, symposia etc.

Aims

- Increase awareness of depth and breadth of SDGs
- Build critical capacity in next gen professionals
- Share knowledge, build north-south, south-south, north-north networks.
- Achieve 'out of the box 'impacts: for participants, communities, architectural practice

No pics, no logo, but watch this space!

- * meaningful problem!
- *novel solution!
- * create value!



3.7 ARCHITECTURAL **EDUCATION IN A GLOBAL HABITAT**

UNESCO's 2022 report, Knowledge-driven actions:transforming higher education for global sustainability, advocates the take-up of the SDGs across higher education institutions. How can design and planning educators best utilize the SDGs framework?

Could the adaptation or integration of the SDGs provide the interdisciplinary knowledge and tools required to address issues of resiliency and inequality, as well as the ability to work collaboratively with communities? Past, present, or projected initiatives- studios, coursework, built projects or research - that demonstrate how the inclusion of the SDGs, the Green New Deal or other resilience strategies might throw light on these questions, are encouraged

SCIENCE PANELS

The 17 UN SDG's will be split into six different panels, with various subjects and framing. Each panel focuses on an overarching challenge faced by architecture in the 21st

THE SIX PANELS							
Panel 1 Design for Climate Adaptation	Panel 2 Design for Rethinking Resources	Panel 3 Design for Resilient Communities Communities are people, and people create communities. Architects can positively impact the lives of millions, even billions, by building for the future, and creating communities that last.					
Architecture faces a grave challenge in a world struck by climate change. The built environment must adapt to changing weather patterns, higher temperatures and flooding.	Resources are getting scarcer, and architects need to address this issue. By using novel materials and recycling on a much greater scale, architecture can change its approach to resources.						
DESIGN FOR CLIMATE ADAPTATION →	DESIGN FOR RETHINKING RESOURCES →	DESIGN FOR RESILIENT COMMUNITIES →					
Panel 4 Design for Health	Panel 5 Design for Inclusivity	Panel 6 Design for Partnerships of Change					
Healthy living takes place in healthy environments, and architects can help improve public health through careful planning, building and consideration.	A sustainable world is one with room and consideration for all people. Architects must design with inclusivity in mind, and take care to understand the needs of the many different people that inhabit the globe.	Architects must foster partnerships, and work across many different professions and skills to create a sustainable and inclusive future.					
DESIGN FOR HEALTH →	DESIGN FOR INCLUSIVITY →	DESIGN FOR PARTNERSHIPS OF CHANGE →					

