

Description of the Lab's Role and Activities

The Urban Form Lab at Cairo University serves as a dynamic platform for critical and creative engagement with contemporary urban challenges, particularly those intersecting with sustainability, heritage, and social equity. As a research and service lab, it contributes significantly to academic, applied, and community-based activities within the Faculty of Engineering. Through its integration with the Pro-Green LABs project, the lab has expanded its capacity to address the environmental, social, and spatial dimensions of sustainable urban development.

The lab supports a diverse set of activities including academic research, applied projects, student mentoring, training workshops, and community engagement initiatives. It offers a space for interdisciplinary collaborations among students, researchers, professionals, and local communities, aiming to generate impactful and context-sensitive urban design solutions. Projects range from historical urban morphology studies and infill design in heritage settings, to the formulation of sustainable urban development guidelines and the enhancement of public space design in residential neighborhoods.

The lab actively incorporates green competencies by promoting environmentally responsible design approaches, enhancing the quality of the built environment, and supporting projects that address urban health and climate responsiveness. It serves as an incubator for proposals that integrate socio-environmental sustainability with local identity and context, while fostering capacity-building among students and young professionals in the fields of urban design and planning.

Through its mission, the Urban Form Lab contributes to embedding research and practice within the architectural curriculum at Cairo University and enhances the institution's role as an active contributor to regional and international urban sustainability dialogues.

The lab actively organizes local and international workshops and engages in research projects and all its activities are announced periodically through the Urban Form Lab Channels of communication including the official website and the social media accounts:

Website: <https://ufl.eng.cu.edu.eg/en/>

LinkedIn: <https://www.linkedin.com/company/101050893/admin/dashboard/>

Facebook: <https://www.facebook.com/urbanform.lab/>

Instagram: <https://www.instagram.com/urbanform.lab/>

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Co-funded by
the European Union

PRO GREEN LABS

Cairo University
URBAN FORM LAB



CAIRO UNIVERSITY

Project Partners



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Thematic Focus

The Urban Form Lab is a service laboratory, and a Center for Urban critical and creative thinking, teaching, research and practice in Architecture, Urban Form and Urbanism. The lab was founded in 2021 and is currently being upgraded through Pro-Green LABs project. The lab is located on the fourth floor at the Department of Architecture, Faculty of Engineering, Cairo University.

The lab aims to engage in and collaborate with undergraduate and postgraduate students, researchers, academic and professional partners, local communities, local authorities and international partners to address and investigate issues related to cities and urban areas. The lab seeks to monitor, extrapolate, and reach better understanding of urban spaces, places and settings, and to propose appropriate solutions to urban problems through detailed analysis of its physical and non-physical contexts; together with the closely related historic, environmental and cultural aspects and influences. The lab seeks to undertake studies, formulate and develop; contextual and environmental, economic and socially sustainable proposals. In this regard, the lab adopts and deploys urban design and community design methodologies and approaches in addressing; research studies, projects, and urban issues, problems and challenges – this enables the lab to effectively contributing to and enhancing; urban design and community design knowledge and practices and to integrate research studies, projects, practice, and products, into architectural education and learning process, for the undergraduate and postgraduate levels at the Department, the Faculty and the University.

Projects, research and applied studies, closely related to the aims and objectives of the Urban Form Lab, include the following realms:

- Urban Design (various scales and levels),
- Formulating, developing, and proposing; architectural and urban Development Control Guidelines and Regulations for existing and new urban areas,
- Urban Identity and Character of Historical and Heritage areas (conservation, protection, and control),
- Infill Design in urban Historic, Heritage and Areas of Value,
- Urban Form and Morphology studies,
- Design and development of Urban, Open Spaces and Places.
- Urban Health, Quality of Life, and Quality of the Built Environment,
- Design and development of Public Spaces in Residential areas,
- Urban Design and Development studies.

Mission and Vision

The lab adopts and deploys urban design and community design methodologies and approaches in addressing; research studies, projects, and urban issues, problems and challenges – this enables the lab to effectively contributing to and enhancing; urban design and community design knowledge and practices and to integrate research studies, projects, practice, and products, into architectural education and learning process, for the undergraduate and postgraduate levels at the Department, the Faculty and the University.

Lab Equipment

Name	Model	PRE-EXISTING	DELIVERED USING PGL FUNDING	PURCHASING IN PROGRESS USING PGL FUNDING
PCs	Various Models	✓		
Cameras	NIKON Z6			✓
Camera Lens	NIKKOR Z DX			✓
Camera Lens	NIKKOR Z			✓
360 photo camera	Insta360		✓	
2 x 3D Printer	3D Printer Neptune 4 Max		✓	
2x 3D Printer	3D Printer Neptune 4 Max			✓
2x Desktop PC	Dell Optiplex		✓	
Reality Capture	Reality Capture Software			✓
Tripod	Manfrotto Aluminum Tripod		✓	
Smart Interactive Display	Samsung WAD			✓
2 x Laser cutting machine	Laser Cutting Robota 3040		✓	
2 x Laser cutting machine	Laser Cutting Robota 3040			✓
3D Camera	Matterport MC250 Pro2 Professional 3D Camera + Back Bag		✓	
4 x AC Stabilizer (4x)	PlusEnergy (SVC-D3K)			✓
2 x Security Camera	HIKVISION			✓
4 x Flexible Magnetic Bed	Bell Tech			✓
NAS backup system	Synology DiskStation® DS923+			✓
4 x HDD Hard disks	Synology Plus Series 3.5" SATA HDD			✓

Lab Photos

