

## THE URBAN FABRICATION LABORATORY

by Paolo Cascone, AA-MA, PhD-Eng

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Dakar, Ghana, Marrakech (Africa), Naples (Italy)

*Paolo Cascone, AA-MA, PhD-Eng, walks us through the Urban Fabrication Laboratory, from Italy to Africa, which aims to redefine the role of urban designers.*

*"Technology is the answer... but what was the question?" -Cedric Price*

After a decade of engagement in both professional and academic practices around the world, I have started to investigate the opportunity of redefining the role of urban designers in order to bridge technological and social innovation. These investigations started when I took the strategic decision of developing part of my undertakings between Africa and my hometown of Naples in Italy. For many years I had travelled between London and Paris, where I have founded my own company, COdesignLab, after years of collaboration with big architectural and engineering firms, which were eventually devastated by the economic crisis.



*The African Fabbers project in Marrakech*

The crisis of course wasn't just economic, it was also cultural. Subsequently the production process has lost a lot of creativity. Moving south confronted me with more extreme economic conditions; but still I had the aim of finding alternative ways of design and building new architectural and urban solutions within a participatory process. As Mohsen Mostafavi pointed out in his book 'Ecological Urbanism': "The fragility of our planet could be an opportunity for *speculative design innovations* rather than *technical legitimization for conventional solutions*". With this cultural assumption, the Urban Fabrication Laboratory wanted to become a platform for innovators where both advanced technologies and participatory processes could eventually transform public spaces into spaces of production and vice versa, developing new economic dynamics. Therefore we have strategically set our Laboratory as an itinerant initiative that proposes a research and teaching methodology for sharing knowledge through the realisation of site-specific community projects. With this aim we decided to surpass the brandished rhetoric of the traditional so-called 'fablab', concentrating our interest in the urban impact of self-organised construction initiatives bridging vernacular and advanced technologies. Wherever public institutions are not able to respond to site-specific collective needs, self-organisation becomes the driver for generating urban micro-infrastructures.

In fact we started to build the first transportable *fablab* in Naples by transforming an abandoned container into a digital fabrication laboratory within the local science centre after had fire affected it.

We have developed the project involving Arup (Italy) teaching local students to design and fabricate a wooden flexible skin for the laboratory activities. Meanwhile we have developed the African Fabbers project with two interesting case studies in Marrakech and Dakar.



*The Urban FabLab in Naples*

The project participated with both art biennales in 2014. In Marrakech we transformed an abandoned industrial space, close to the medina, in a temporary school of digital fabrication for local artists and artisans.

In Dakar we designed and built the extension of the first Senegalese *fablab* called *delko ak niep*. The project was made through a series of collaborative workshops with the local community of artisans in the Sicap neighbourhood. The Marrakech project also explored the possibility of using local clay for 3D printed post-vernacular dwellings, while in Senegal we orientated the project on contextual algorithms in order to teach students how to optimise local materials when developing wooden structures for the micro-infrastructure project.



*The African Fabbers project in Marrakech*

The open-air lab was the result of a project in which the people of the neighbourhood were facilitated to explore the use of new technologies with free access. After these experiences, the urban fabrication laboratory is now opening two "schools for architectural fabrication", within a more permanent framework, as factories for novel urban projects. One will be developed in Italy, transforming an abandoned bags factory in the historic centre of Naples. This project was born after a number of workshops on digital fabrication and self-construction that gave me the opportunity to meet a group of talented students of architecture.



*The African Fabbers project in Dakar*

There was no space in town for collaborative design and fabrication so we decided to create one. The aim will be to develop different types of urban ecologies projects to improve the use of public spaces in the neighbourhood.

### HACKING GOMORRA



*The hacking gomorra's project*

The second will be in Ghana in collaboration with the NK Foundation with the aim to design and build local community projects exploring high-tech design and low-tech construction processes. Where in Naples we had just launched a provocative project for the rehabilitation of the Gomorra neighbourhood through digital fabrication and self-construction specific interventions, the African challenge will deal with customised dwelling projects.



*The Atelier Paolo Cascone project in Burkina Faso*

The construction of both schools will be financed by the organisation of specific self-construction workshops that will be launched next month.

For more information:

[COdesignLab](#)

[Urban Fablab](#)