The Nile City is a 900-km-long continuous urban corridor. Because of its exceptional geographical character as a river-based oasis in a desert, the Nile City is a linear city without planning – a linear city formed by chance. Today the Nile City seems like the intersection of two urban systems: a modern infrastructural city and an incredibly dense, informal, rural one consisting of large villages, fields and canals.
The issues of the Nile city can be represented as an equation with the following variables: X-water consumption, Y-agriculture and Z-population. A second series of elements gravitates around this delicate equilibrium: education, energy, mobility. They might help to progressively unlock the actual condition.
Nine machines are developed and attempt to influence the variables of the equation. Each machine alone does not solve the equation but participates to an accumulative strategy generating direct qualities and bigger effects transcending their size.
In order to increase the efficiency of water use in the Nile Valley, the entire irrigation system should shift from a total individualized irrigation system to a more collective one. The collective pump system combines a meeting place and a pump room, built above a tertiary canal at the junction of several mesqas. This astride position allows one pump system to irrigate a hundred of properties, situated on both sides of the canal. While saving 20% of current irrigation water use, the collective pump system stimulates and operates the exchanges in the Nile City.
In the valley it is not easy to find clean water. Fertilizers and detergents put pressure on the water quality. As the scarcity of clean water increases in the future, its practical and symbolic value will rise. This spiral low-tech system produces clean water using a natural filtering and phyto-purification principle. Part of the water canal is diverted to create a square where several uses can be put in place. The effect of this system is low but while waiting for an efficient water treatment plant, it makes the effort visible and creates new spaces of technological innovations.
On the newly reclaimed land in the desert only a few specific agricultural methods are used and the majority of the agriculture is based on traditional irrigation or water from non-renewable ground reserves. Highly productive and climate controlled greenhouses using gravitational, drip-drop, sprinkler irrigation systems are implemented in desert areas and on free spaces of desert cities. Through ventilating humidity to create a cooler micro-climate downwind of the greenhouses, it might be possible to influence the nature of urbanization along the desert edges.
In the Nile City people move slowly but with increasing frequency. The bus station /pit stop / market assembles the productive aspect of the fields with collective and individual transportation in an efficient and public condition encouraging exchange, both of goods and traffic. It can be situated along main roads, in the middle of the fields, at the village gates or at strategic connection nodes. This machine articulates the territory and the small scale taking the totality of the Valley as a city.
Reyner Banham, his bike and the desert.

Mission research project – 5th International Architectural Biennale of Rotterdam – 2012

Place Egypt – Rotterdam

Team Baukuh, Atelier Kempe Thill, GRAU, Lola, Stefano Graziani, Bas Princen, Giovanna Silva, Saverio Pesapane, Angelo Boris Boriolo

Client IABR

Partners Assiut University, Berlage Institute, Studio Basel, El Monshah Markaz, Embassy of the Kingdom of the Netherlands in Cairo, Sohag Governorate, TRT Trasporti e Territorio S.p.A., UNISG

Credits Photo 1 © Stefano Graziani, photo 2 © Tim Street-Porter

Link 900kmnilecity (http://www.900kmnilecity.org/)