

“From Temporary to Permanent; A Circular Approach for Post-disaster Housing Reconstruction ”

Rand Askar

Ana Luisa Rodrigues

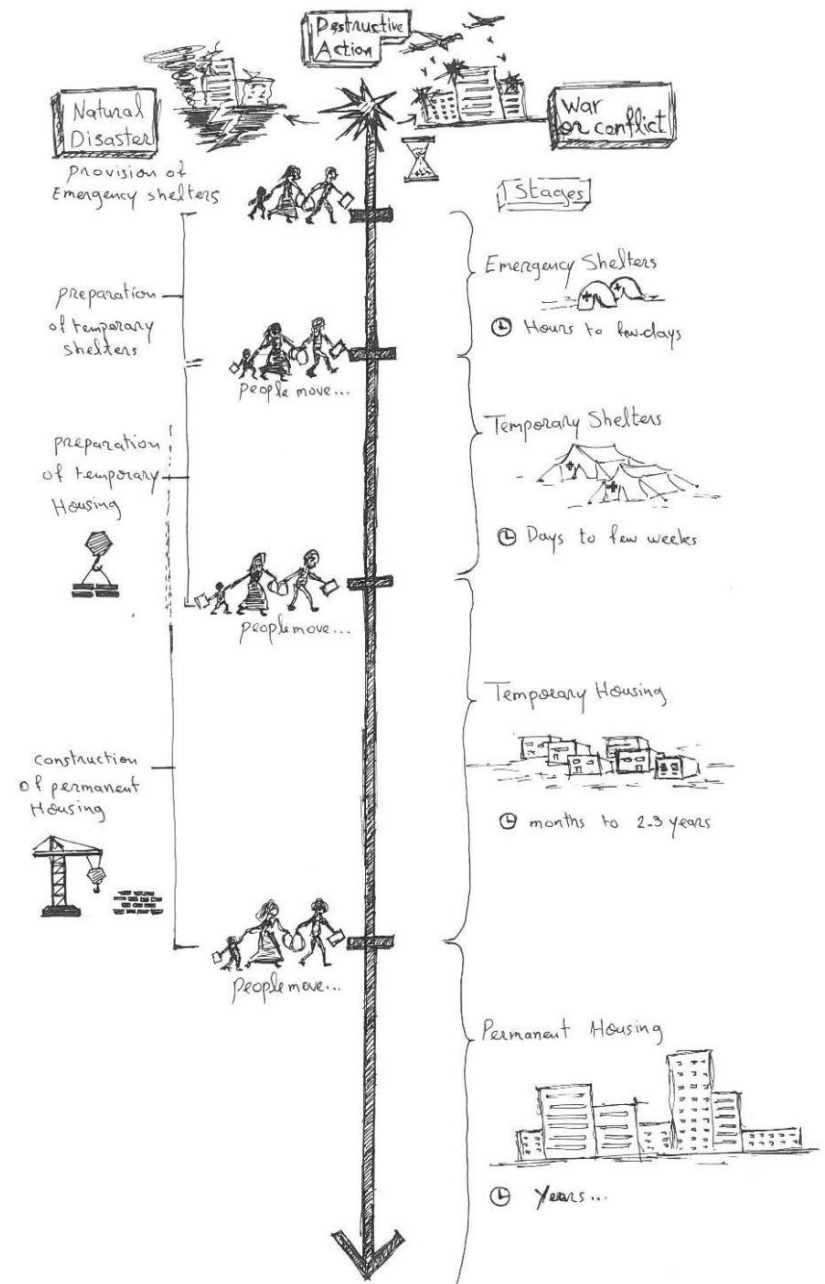
Luis Bragança

Daniel Pinheiro

University of Minho

RECONSTRUCTION PROCESS FOLLOWING A DISASTER OR CONFLICT:

EMERGENCY SHELTERS
 TEMPORARY SHELTERS
 TEMPORARY HOUSING
 PERMANENT HOUSING



SBE19 Brussels - BAMB-CIRCPATH



05-07 February 2019



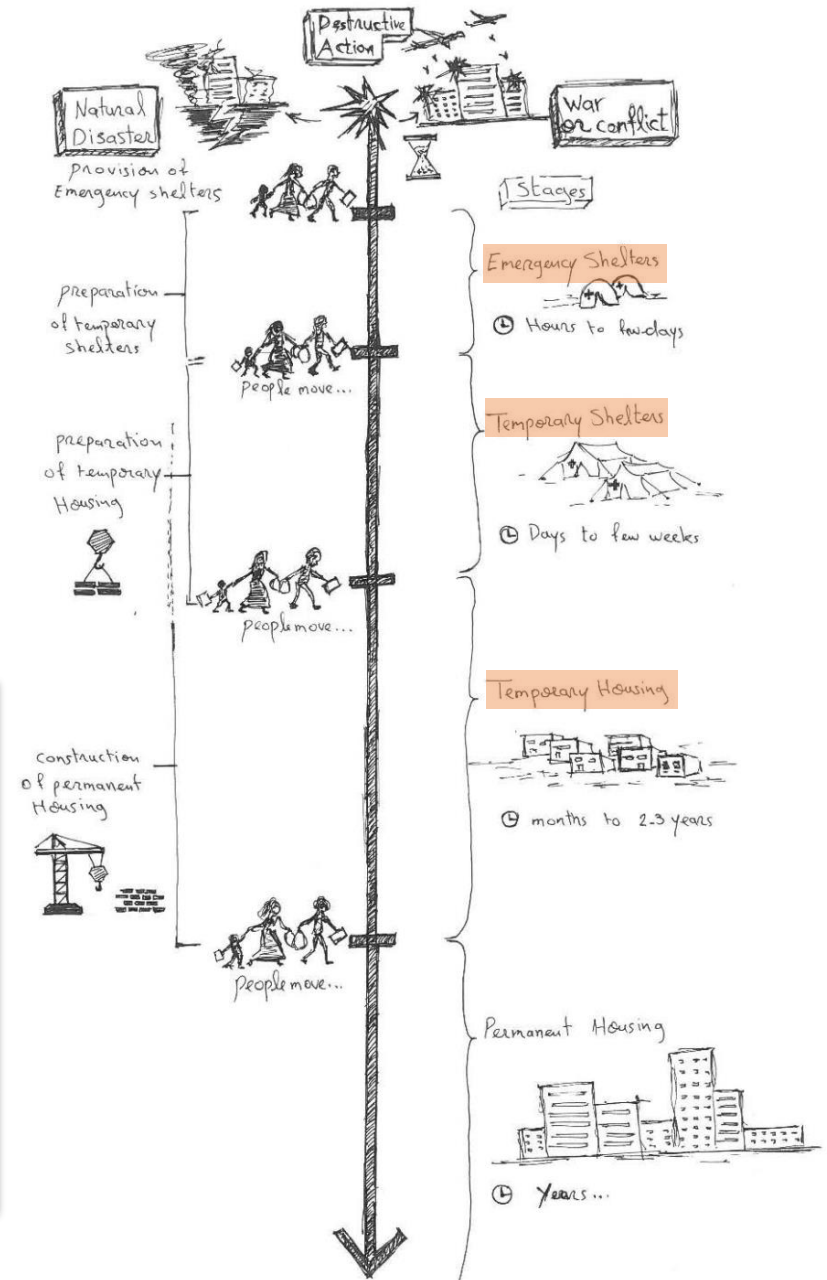
This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 642384.

RECONSTRUCTION PROCESS FOLLOWING A DISASTER OR CONFLICT:

- EMERGENCY SHELTERS
- TEMPORARY SHELTERS
- TEMPORARY HOUSING
- PERMANENT HOUSING

TEMPORARY ACCOMMODATION ALTERNATIVES

MOBILE HOMES

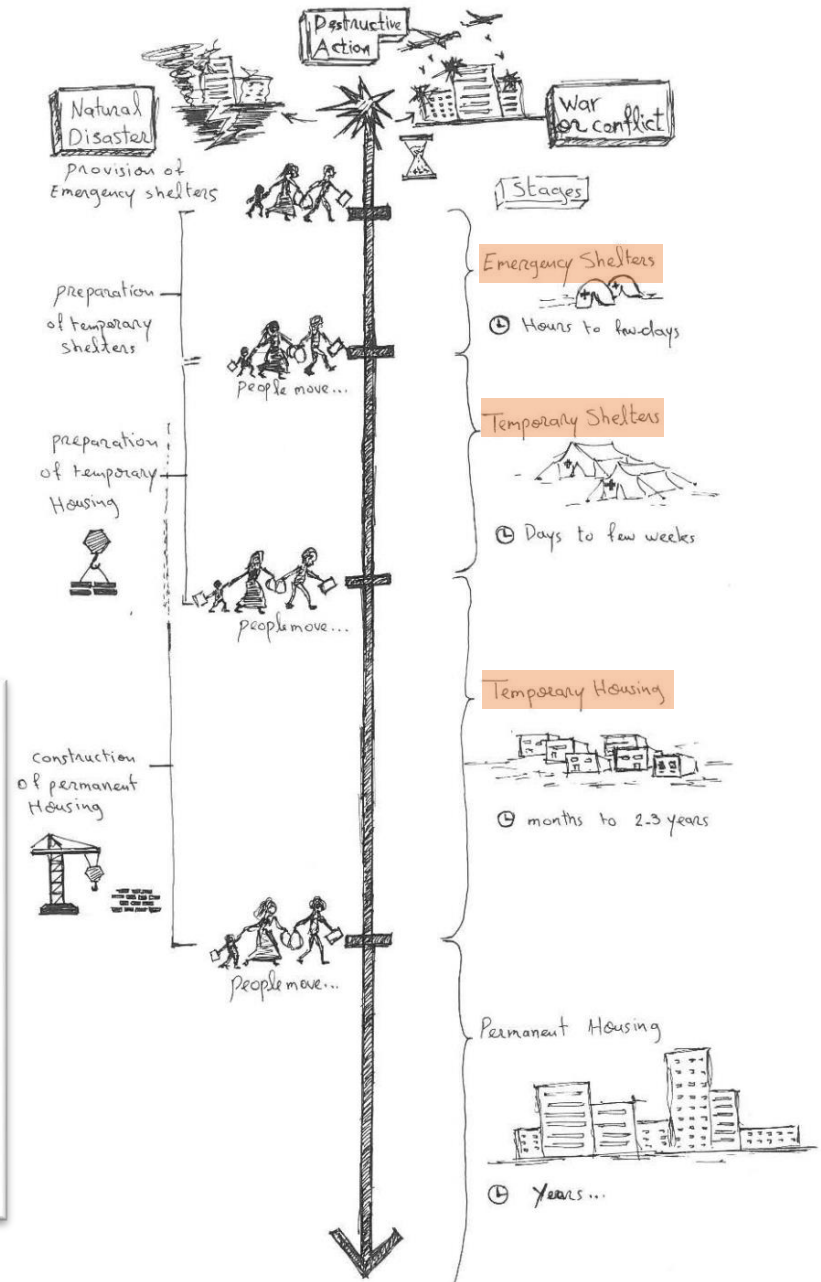


RECONSTRUCTION PROCESS FOLLOWING A DISASTER OR CONFLICT:

- EMERGENCY SHELTERS
- TEMPORARY SHELTERS
- TEMPORARY HOUSING
- PERMANENT HOUSING

TEMPORARY ACCOMMODATION ALTERNATIVES

PAPER SHELTERS

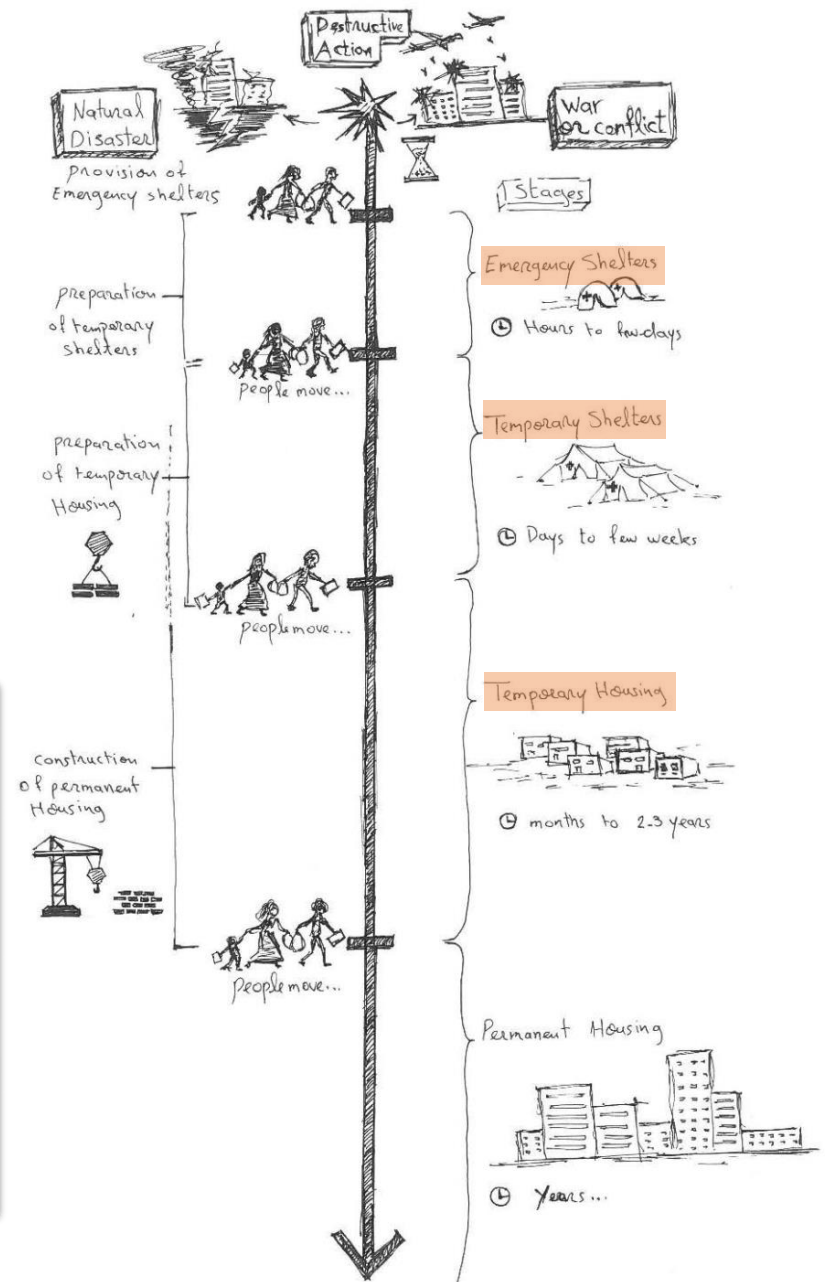


RECONSTRUCTION PROCESS FOLLOWING A DISASTER OR CONFLICT:

- EMERGENCY SHELTERS
- TEMPORARY SHELTERS
- TEMPORARY HOUSING
- PERMANENT HOUSING

TEMPORARY ACCOMMODATION ALTERNATIVES

SELF-BUILT SHELTERS

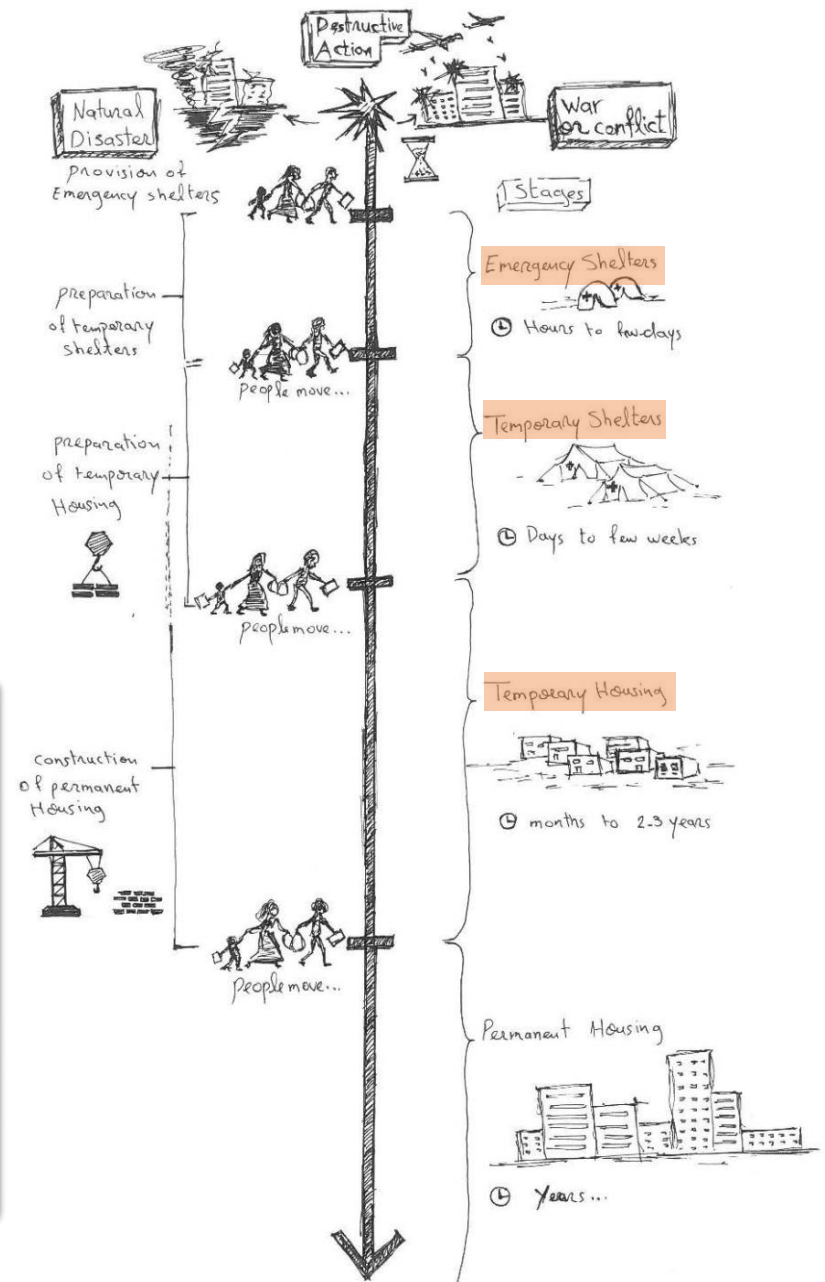


RECONSTRUCTION PROCESS FOLLOWING A DISASTER OR CONFLICT:

- EMERGENCY SHELTERS
- TEMPORARY SHELTERS
- TEMPORARY HOUSING
- PERMANENT HOUSING

TEMPORARY ACCOMMODATION ALTERNATIVES

WINTERIZED TENTS

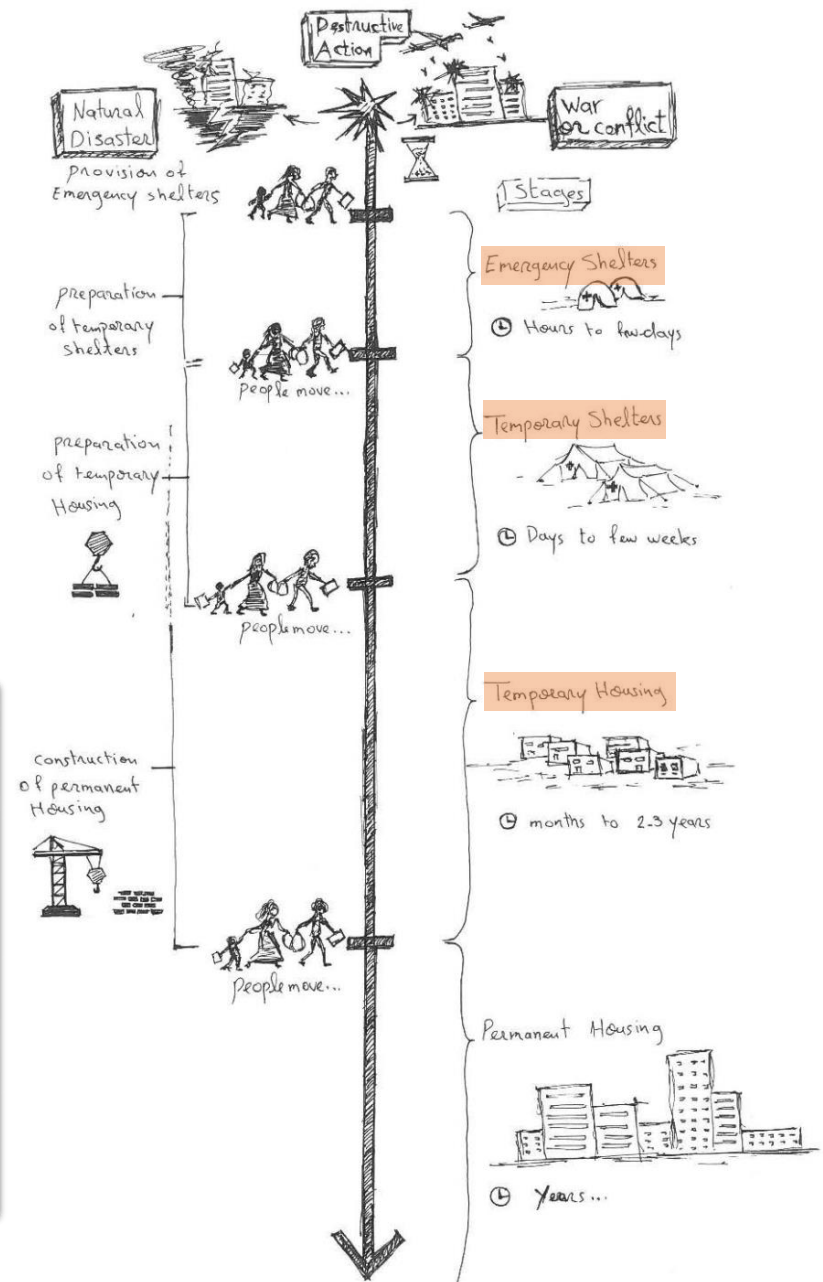


RECONSTRUCTION PROCESS FOLLOWING A DISASTER OR CONFLICT:

- EMERGENCY SHELTERS
- TEMPORARY SHELTERS
- TEMPORARY HOUSING
- PERMANENT HOUSING

TEMPORARY ACCOMMODATION ALTERNATIVES

UNFINISHED BUILDINGS



THE DESTINY OF TEMPORARY DWELLINGS

What to do with the left units and how can they perform in responding to the community needs?

Demolition, relocation, selling, different usages, upgrading to be permanent, storing for future use and renting, could all be possible scenarios to the eventual end use for temporary structures.





TEMPORARY DWELLINGS: PROBLEMS AND FAILURES

ECONOMICAL SUSTAINABILITY PROBLEMS

ENVIRONMENTAL SUSTAINABILITY PROBLEMS

SOCIAL SUSTAINABILITY PROBLEMS

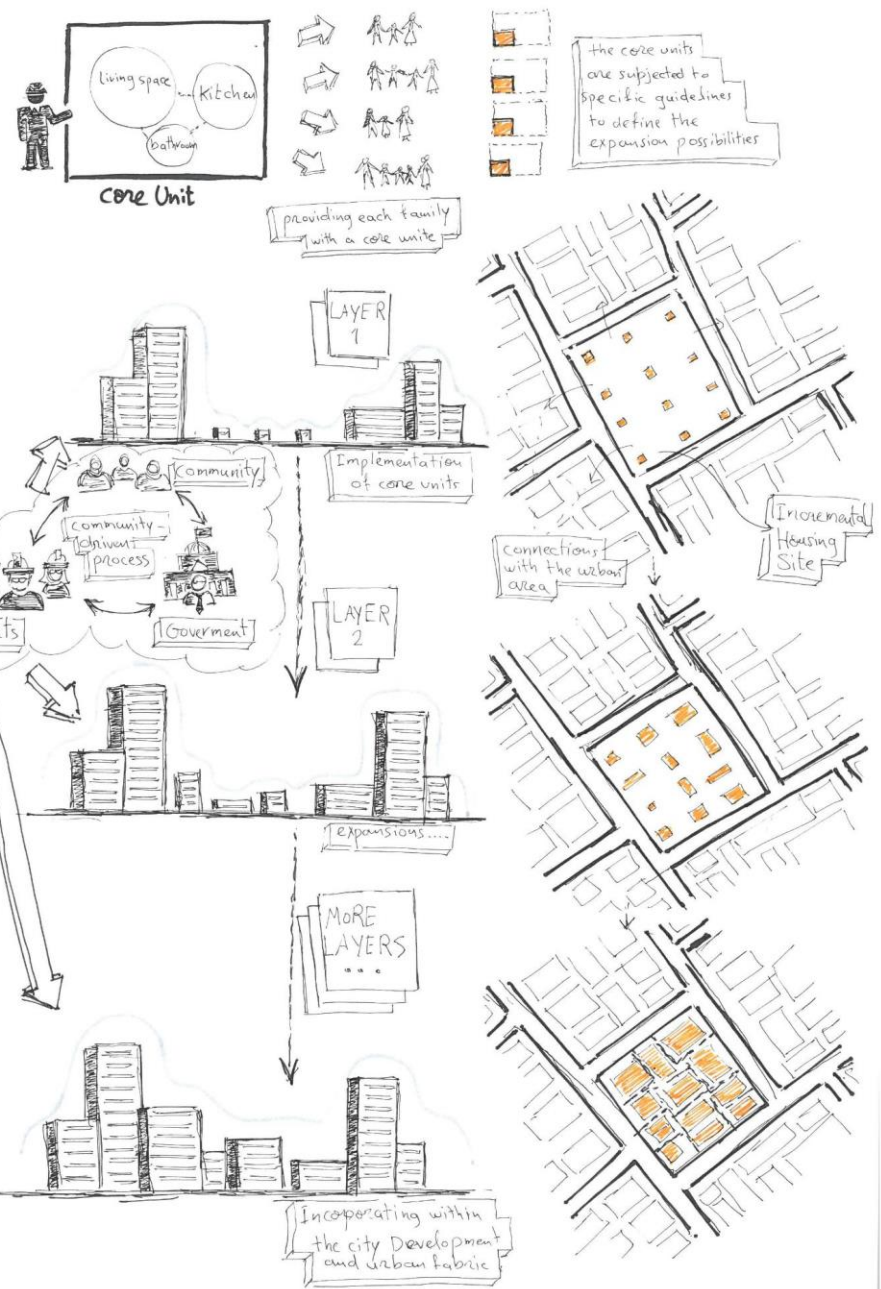
INCREMENTAL HOUSING SOLUTION

DEFINITION

Incremental architecture is a manner of construction which draws on the gradual evolution of the housing unit. Which could be advantageous in some cases where it is considerably complicated to construct instant structures straight away.

INCREMENTAL METHODOLOGY

Incremental strategy relies on the adaptation of each construction step with the local capacities and allows the evolution and expansion simultaneously with the community growth and development.



INCREMENTAL CASE STUDIES

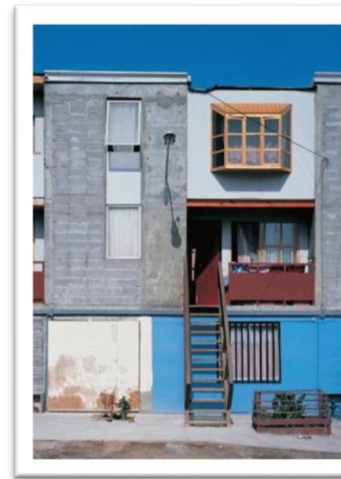
ALEJANDRO ARAVENA, QUINTA MONROY

The target site was in the centre of the city, known as “Quinta Monroy”, and occupied an area of 54,000 sq ft (5,017 m²). (Fig. 59). It was home for 100 families settled in informal dense clusters with poor qualities of life.

Building a half proper house in terms of size, location, and qualities rather than a complete small house

The delivered half houses were two-storied with a space left between houses for expansions

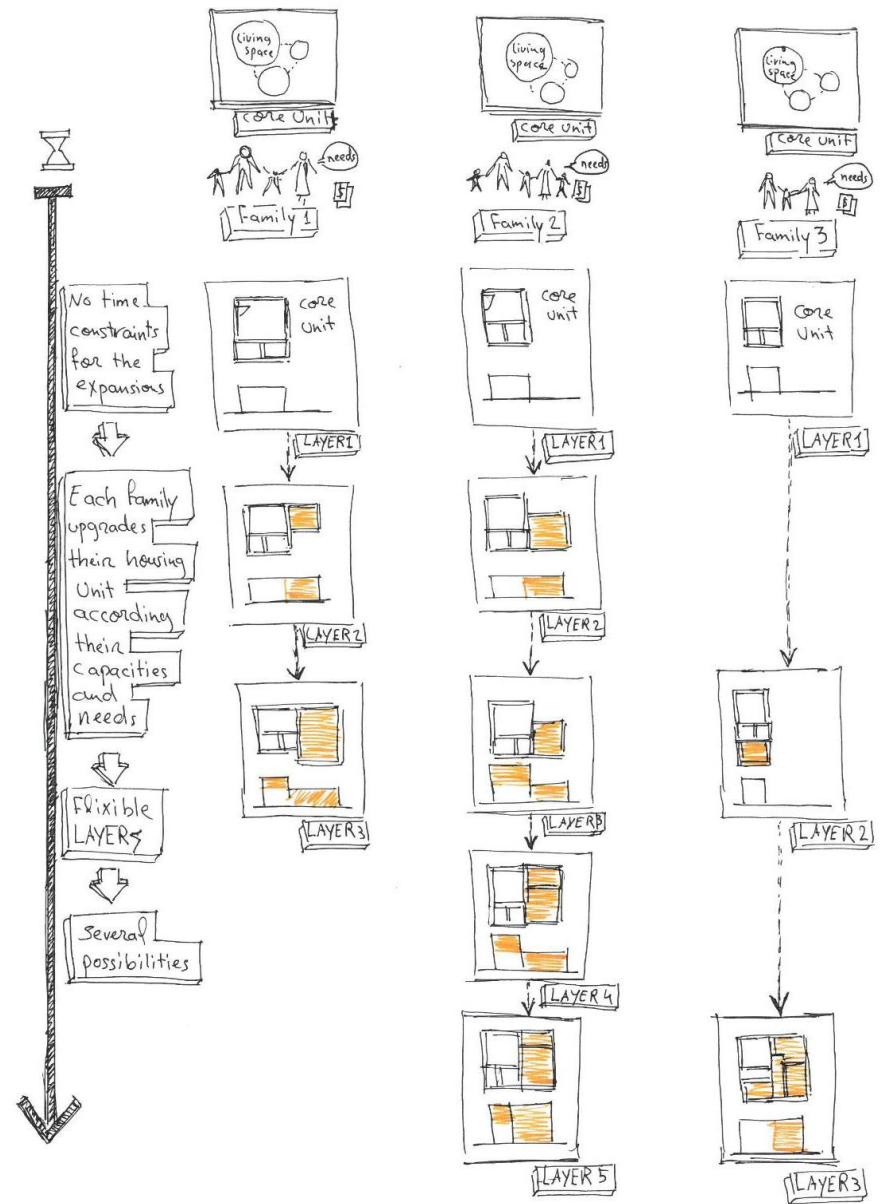
In conclusion, Aravena used the budget as an investment rather than an expense of house



INCREMENTAL KEY ASPECTS

A NARRATIVE OF FLIXIBLE INCREMENTS

A FURTHER METHOD OF CONSIDERATION:
PERMANENCY IS THE NEW TEMPORALITY



INCREMENTAL KEY ASPECTS

A NARRATIVE OF FLEXIBLE INCREMENTS

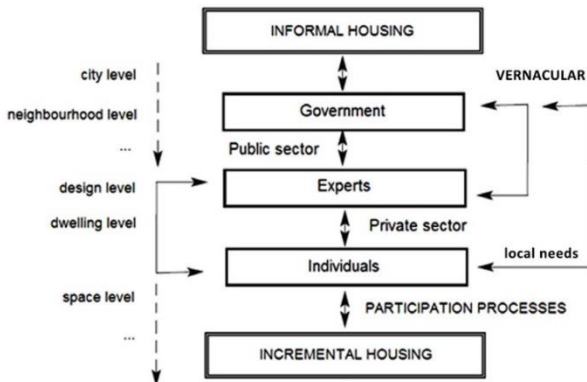
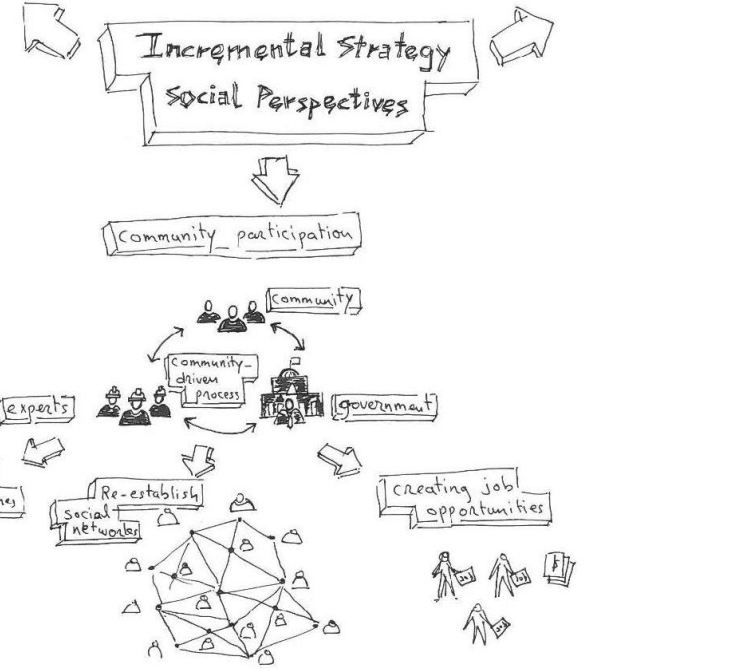
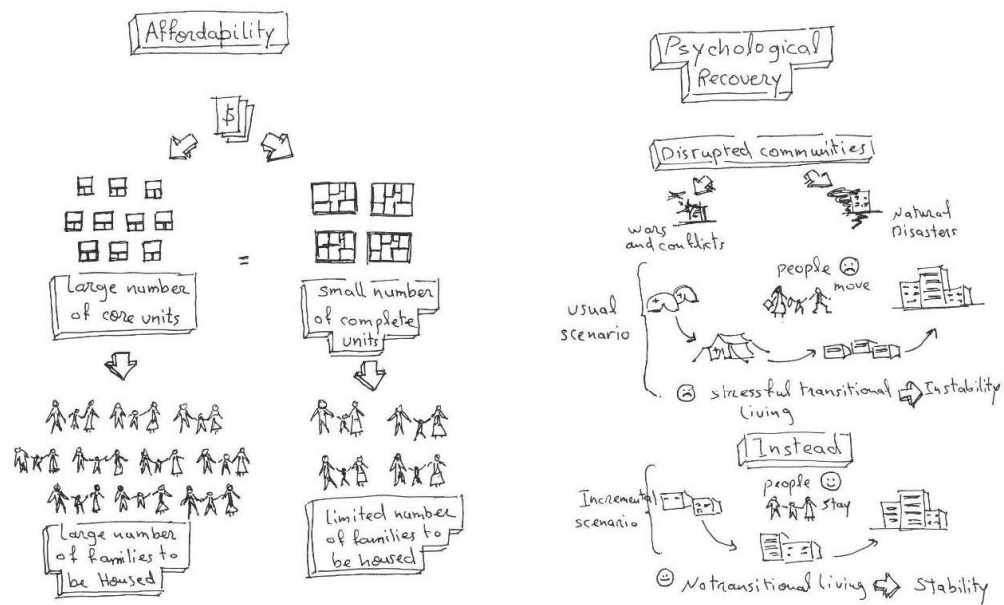
A FURTHER METHOD OF CONSIDERATION:
PERMANENCY IS THE NEW TEMPORALITY

SOCIAL PERCPECTIVES

- Affordability for low-income communities
- Psychological recovery
- Guided community participation

ORGANIZED INFORMALITY

TOWARDS SUSTAINABLE DEVELOPMENT AND CIRCULAR ECONOMY



An aerial photograph of a city in ruins, showing extensive rubble and the skeletal remains of buildings. The scene is dark and somber, with the text "THANK YOU" overlaid in the center.

“THANK YOU”