

The transformation towards low-carbon housing for low-income households in Mexico

PhD research:

“Decarbonizing low-income housing initiatives at city scale in Mexico”

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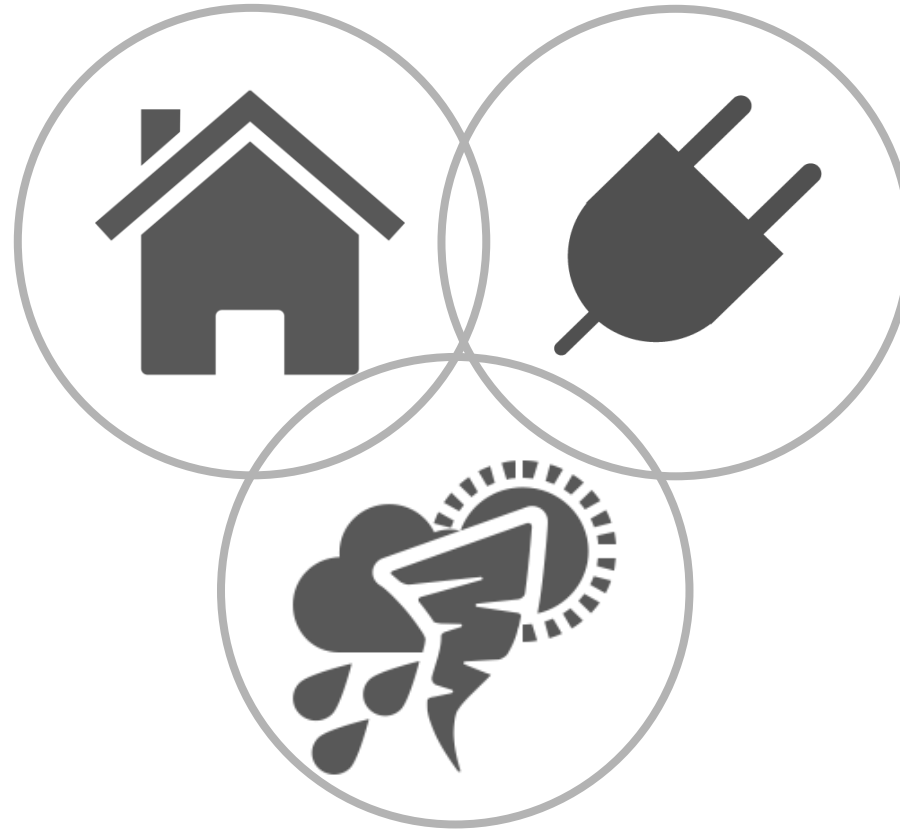
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Outline

- The challenge
- Focus and methodology
- Case study
- Initiatives to reduce energy demand
- Framework for analysis
 - Niche building activities
 - The urban scale
- Conclusions

The Challenge

Housing



Energy

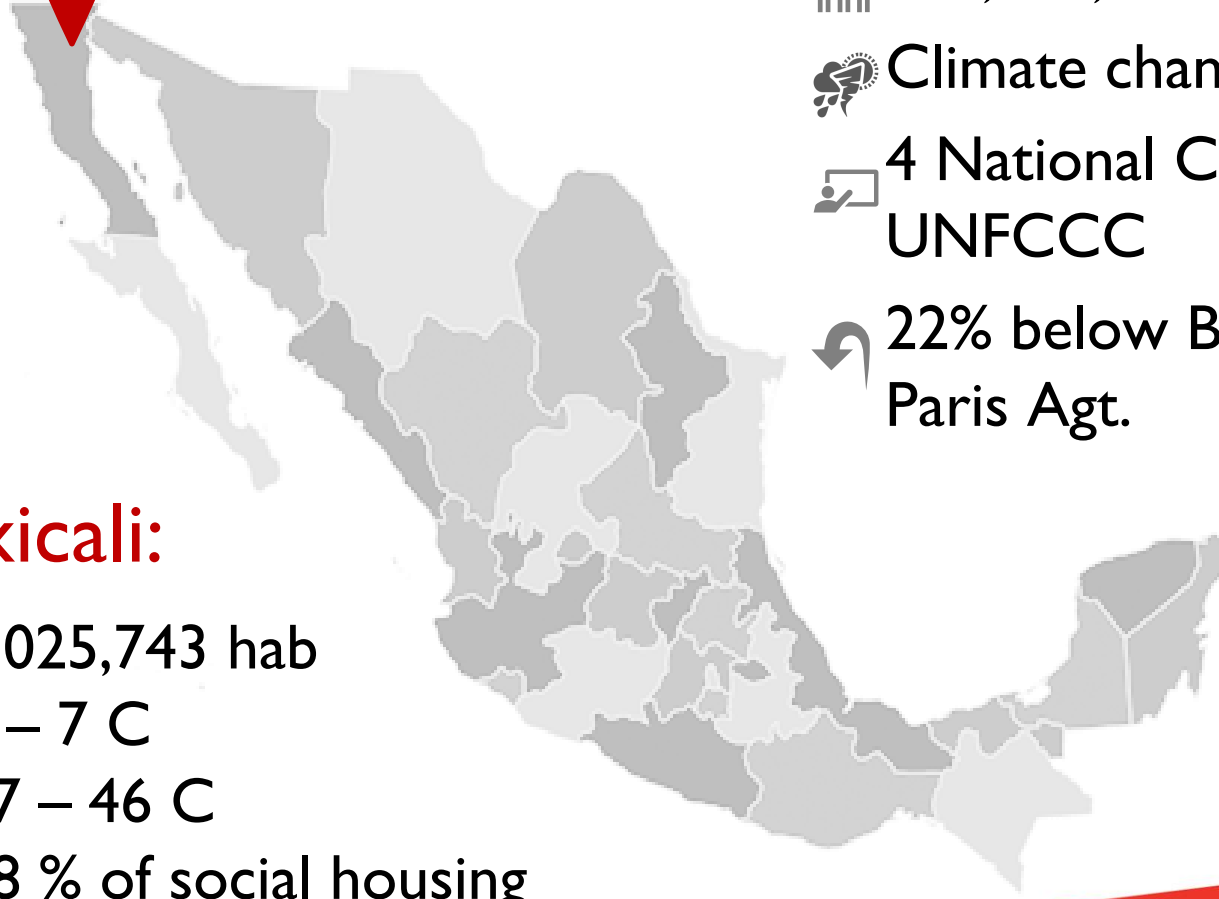
Climate Change

Main research question:

What urban initiatives are emerging in Mexico to support the uptake of energy efficiency for the low-income residential sector as response to climate change?

- Semi-structured in depth interviews with relevant actors
 - 1st phase: national level actors (some local)
 - 2nd phase: local level actors (deepen research)
- Analysis of secondary documents

Mexico - Mexicali



Mexico:



119,530,753 hab



Climate change law 2012



4 National Communications
UNFCCC



22% below BAU (2013 baseline),
Paris Agt.

Mexicali:



1,025,743 hab



5 – 7 C

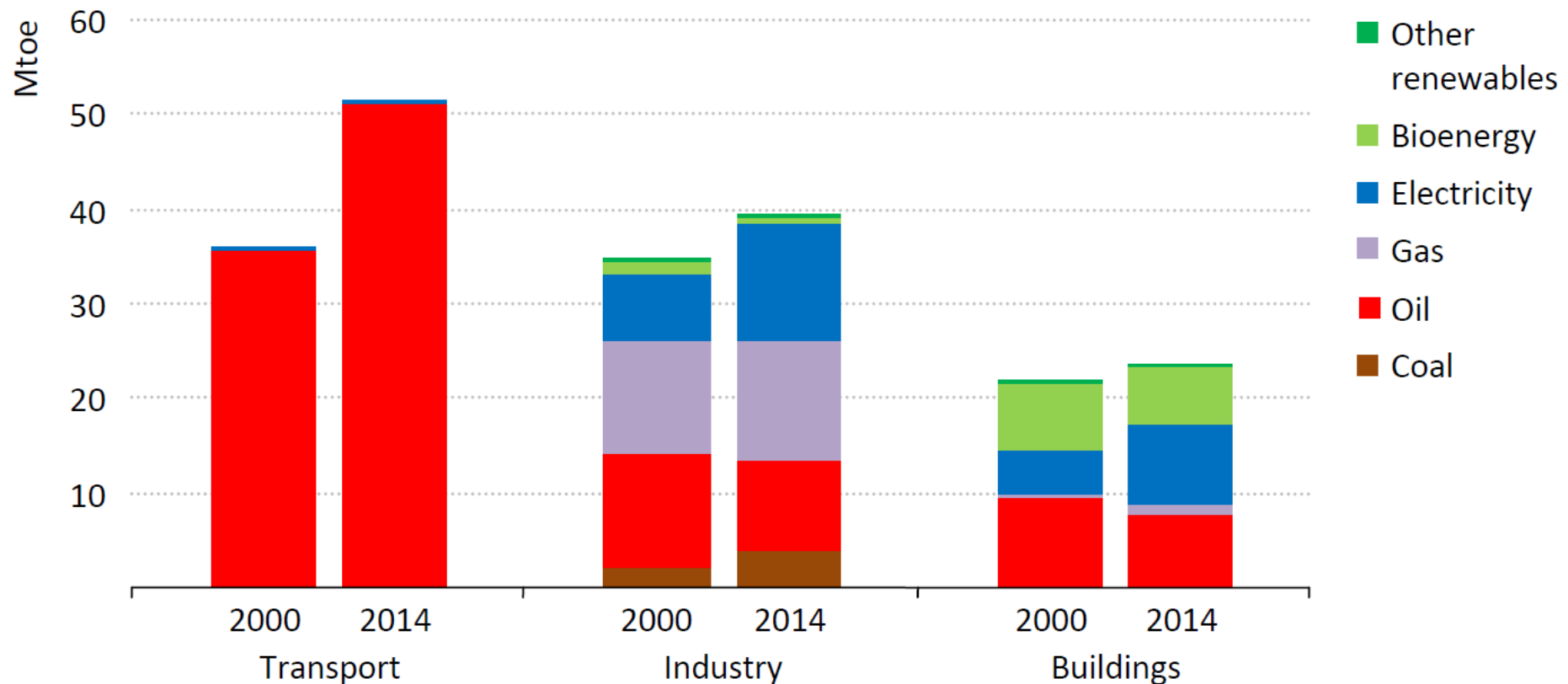


37 – 46 C



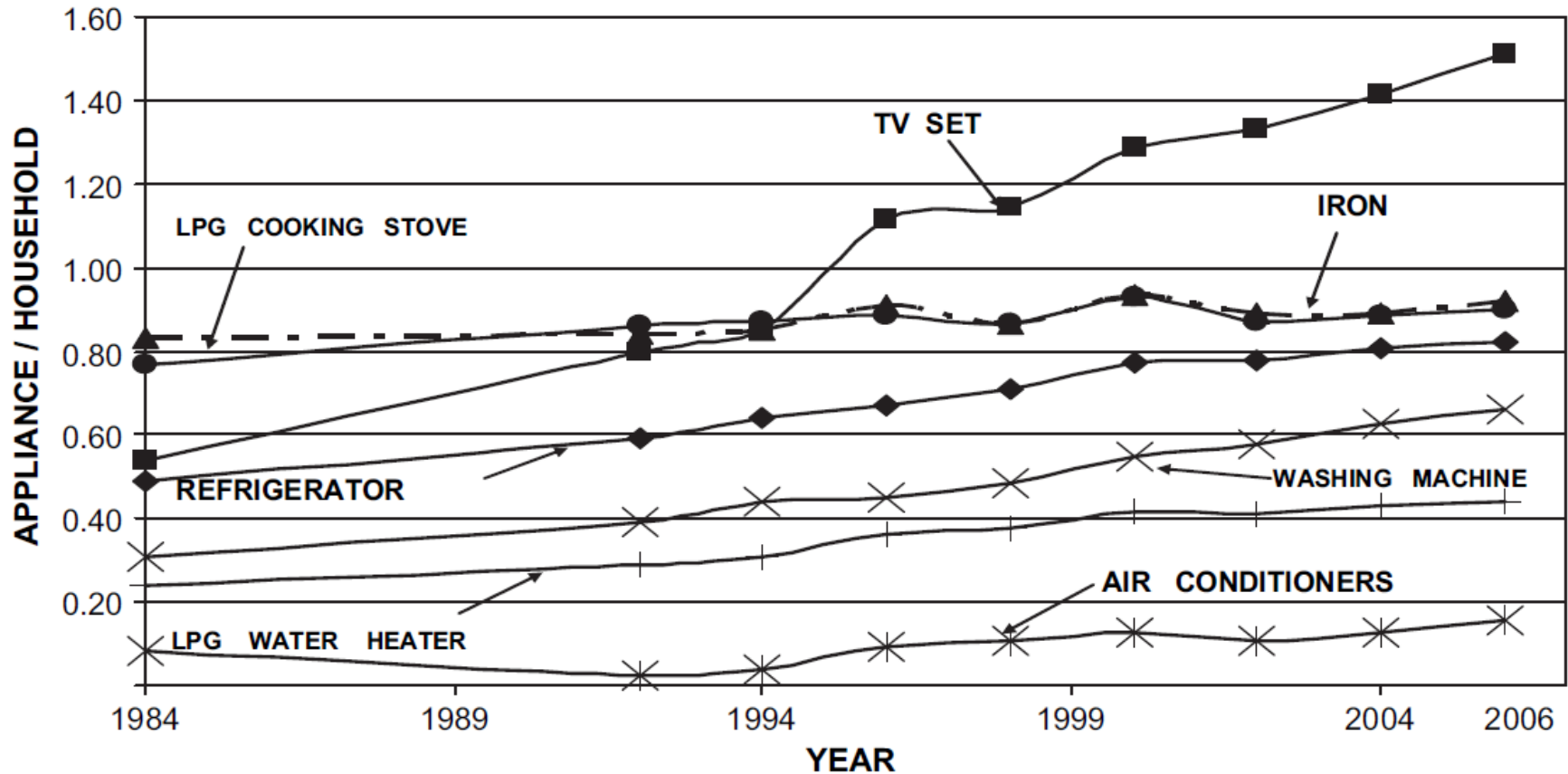
38 % of social housing

Energy demand in Mexico



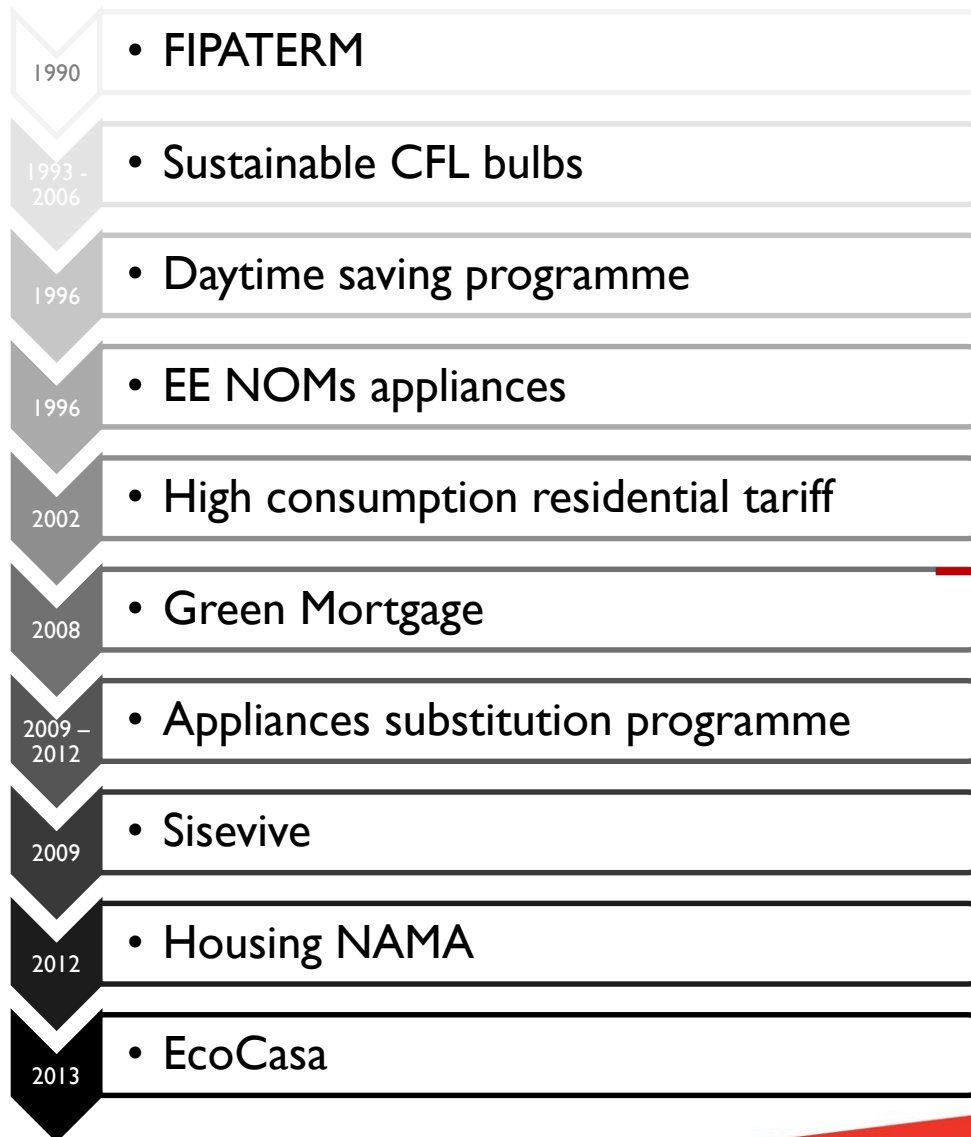
Energy demand by fuel in selected
end-use sectors in Mexico
(IEA 2016)

Household energy use



Saturation of the main electrical appliances in Mexican households (Rosas-Flores 2010)

Initiatives to reduce energy demand

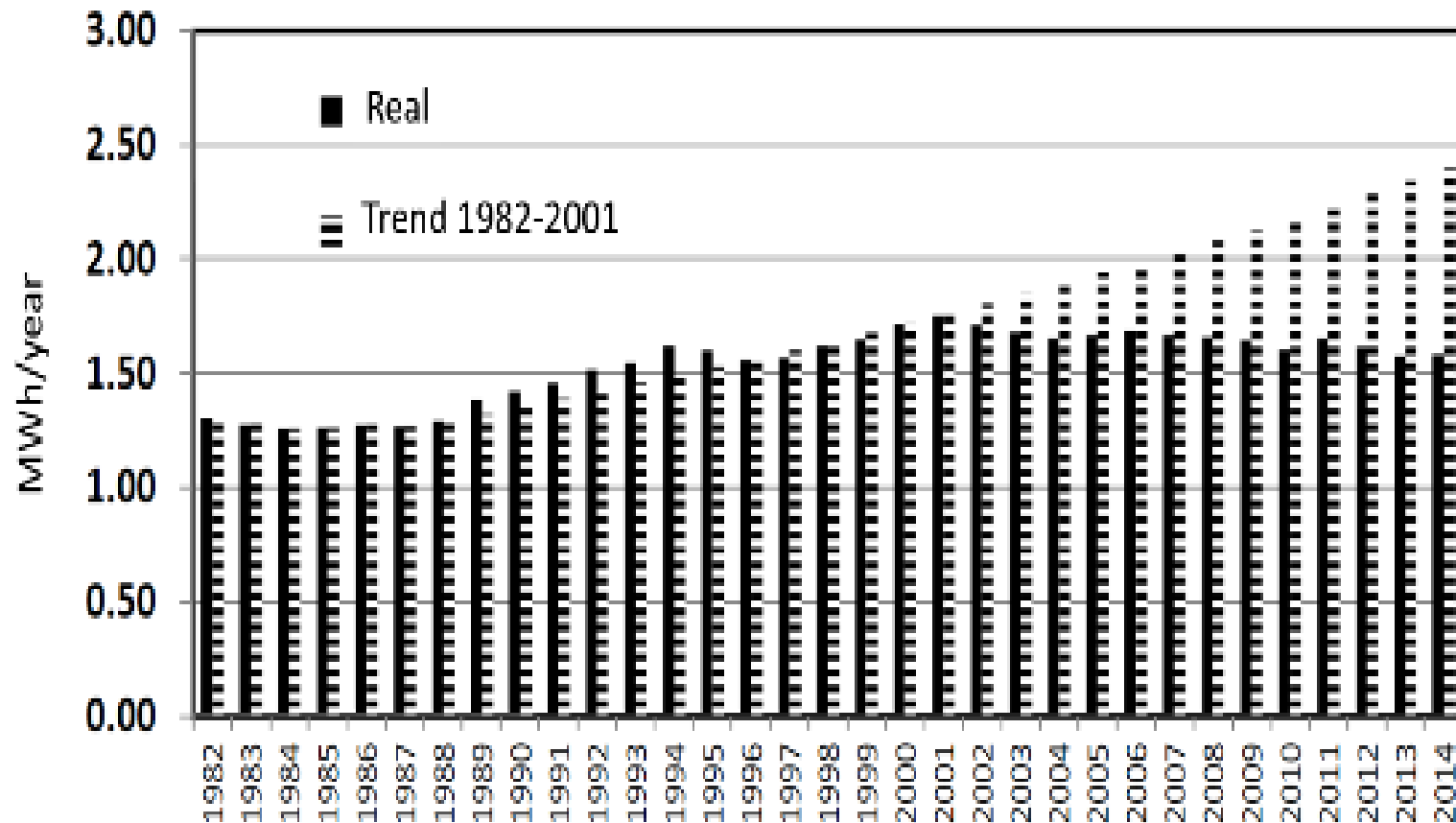


Sustainable housing
presidential mandate

Housing specific initiatives

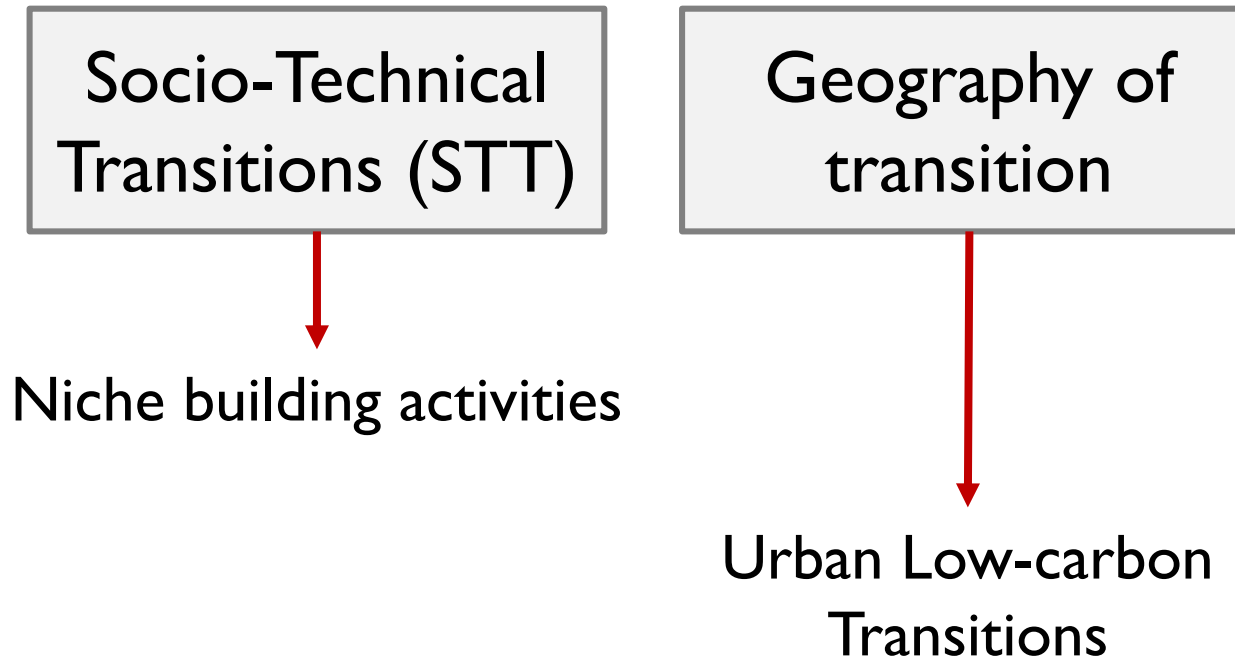


Impact of initiatives

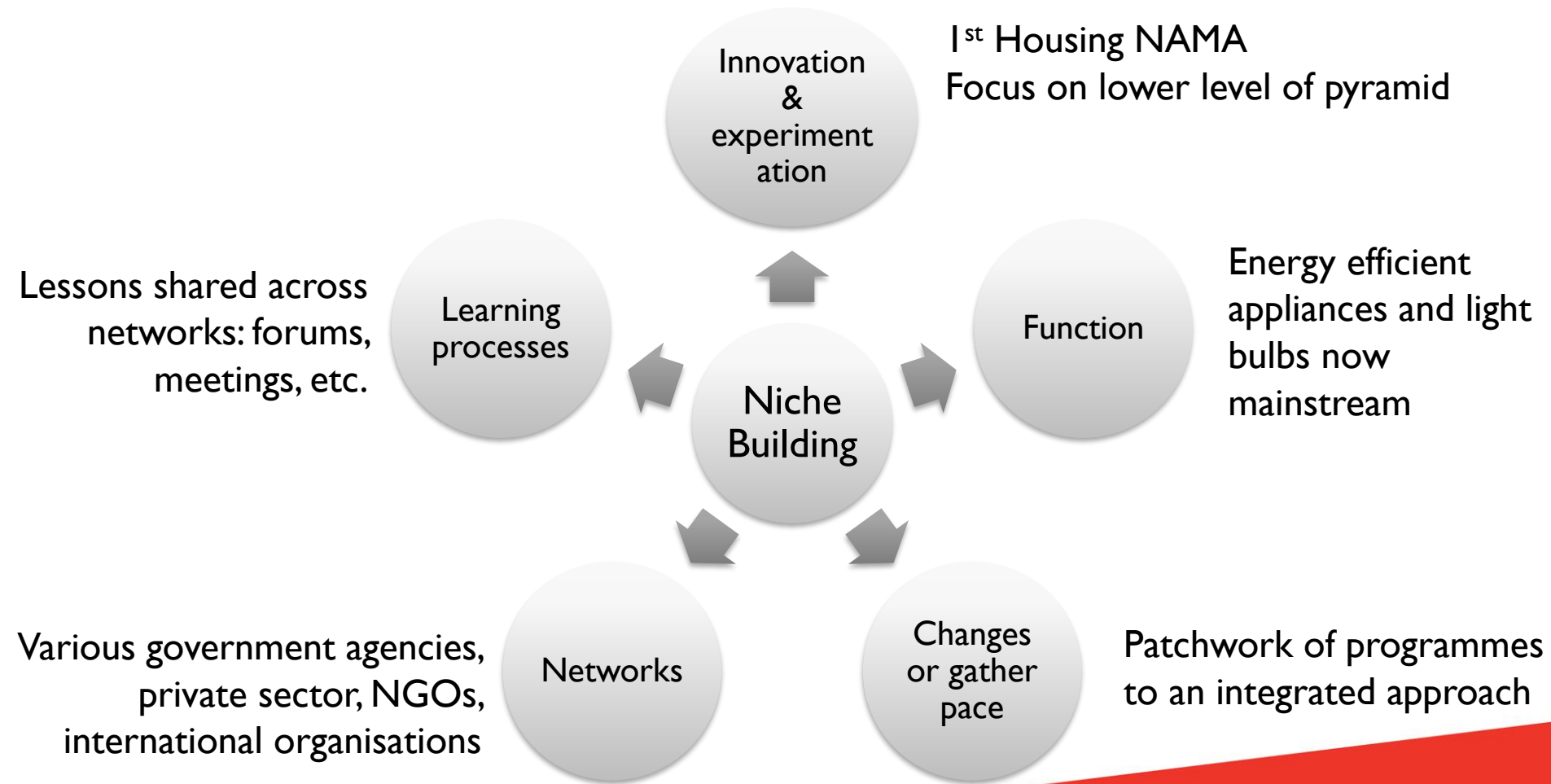


Residential average consumption
(CONUEE, 2016)

Framework



Evidence of Niche Building – LCH in Mexico



At urban level

Mexicali City



FIPATERM – Finance mechanism
for thermal insulation



Energy efficient housing
pilot project



Upgrade local building
construction codes



Challenges at urban level

- Implementation national agenda at local level
- Limited resources



But, **networks of actors** have help 'anchor' progress

Key concluding points (so far)

- Socio-Technical Transitions (western) theories may explain Mexico's transformation towards low – carbon housing
- Evidence of niche building activities
 - Transformations taking place mainly at national level → limited and/or green transition at local level
- The role of Mexican cities in low-carbon transition is key.
 - But the implementation at local level is a persistent challenge.

Questions? Comments?

Thank you!

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