

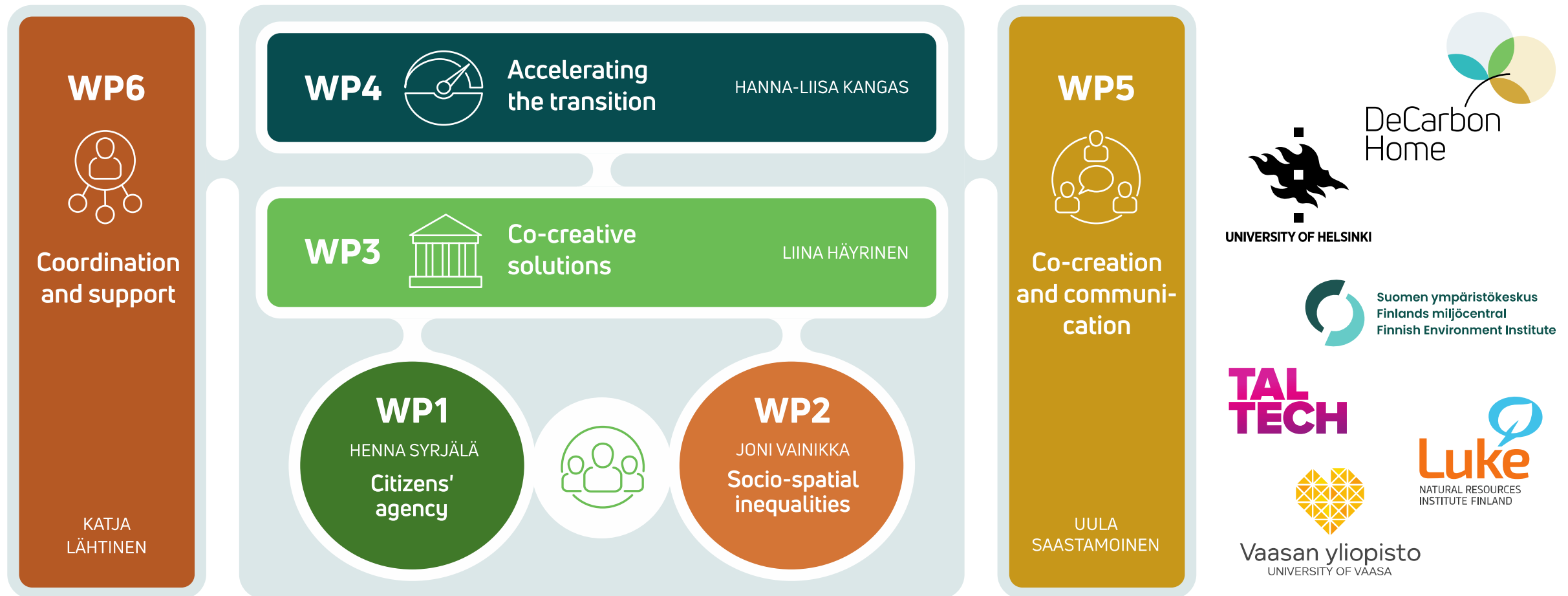
The role of municipalities in creating climate-wise housing

– how can local authorities foster decarbonizing the home, the house and the housing/construction sector

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Research for sustainability transformations in municipalities
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Decarbonizing suburban and rural housing – citizens as agents of change (Decarbon Home) funded by the Strategic Research Council



1A Role of municipalities in sustainability transition

- Municipalities are autonomous entities with local democracy, planning and service responsibilities
- Key areas: land use, housing, transport, energy efficiency, citizen engagement
- Guided by laws like Local Government Act, Land Use and Building Acts, Climate Act
- Work involves collaboration with regional/state actors and private sector
- Urban planning and infrastructure are critical tools for transition

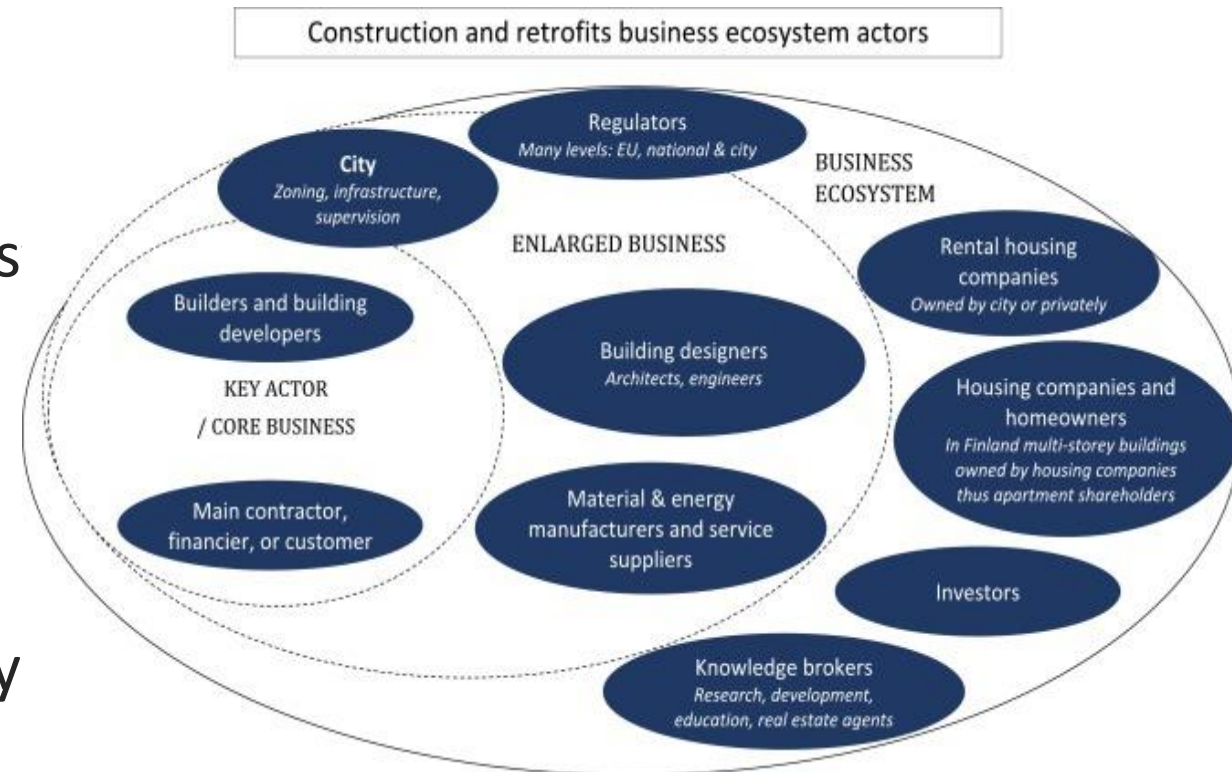
1B Challenges in achieving sustainability

– governance & resources

- Fragmented governance and coordination difficulties across municipal levels
- Conflicting goals: growth orientation vs. ecological sustainability
- Limited financial and human resources, especially in small municipalities
- Discontinuity from political shifts; lack of long-term policy commitment
- Political leadership in sustainability issues?
- Dependence on external funding (state, EU) complicates local autonomy

1C Housing sector & collaboration challenges

- Sustainability in housing depends on cooperation with ARA, Ministry of Environment, private actors
- Public-private partnerships can create tension between profit and public interests
- Municipal land use powers must balance affordability and ecological goals
- Implementation gaps in regulation and enforcement of sustainability standards
- Market dynamics and resource inequality affect local progress



1D How do municipalities see their future?

Future assumptions 2035	Description	Sentiment
Goals achieved	Our city is carbon neutral. The carbon handprints of buildings are positive (incl. building materials).	Positive
Innovative and versatile	All housing construction projects are innovative. Housing construction is diverse, everything for all residents. An innovative business ecosystem must be formed.	Positive
Information and support	The city educates everyone in environmental wisdom – > is spreading. Cities effectively support the sustainability transition.	Positive
Stricter regulation	E.g. A carbon tax at the national level will solve the issues. The terms and conditions for plot assignment will become stricter.	Neutral
Demand is changing	No one wants to buy fossil fuels in 2035. Residents can choose low-carbon housing and consumption.	Neutral
Slow change	The building stock is changing slowly, and energy saving and renovation solutions are of the same type as today.	Neutral
The city is growing	The volume of housing production is large and the number of residents is expected to grow continuously. Managing this sensibly is a challenge.	Negative
Future risks	Adaptation to climate change. The quality of the buildings, will it last for decades? Will the climate goals be achieved?	Negative
Limited resources	Financial scarcity leads to energy savings and renovations, moderate living spaces, a decrease in multi-location living, and the recycling of materials. The next generations will be poorer and non-materialistic.	Negative

2A CASE: Solutions for carbon-wise housing



- **Purpose**
Solutions that support low-carbon living are urgently needed
- **Aim**
To identify and develop holistic, feasible and acceptable solutions that support decision-making or planning in case municipalities related to carbon-wise housing (living, renovating)
- **Approach**
 - Housing as a service
 - Residents as citizens, consumers, customers, users
 - Multi-actor co-design process (researchers, practitioners and other stakeholders)

Municipal walks 2021-2024



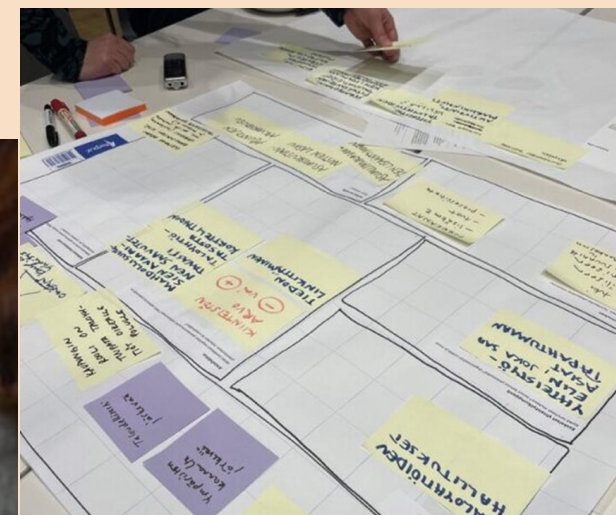
Strategic documents of cities 2021-2025



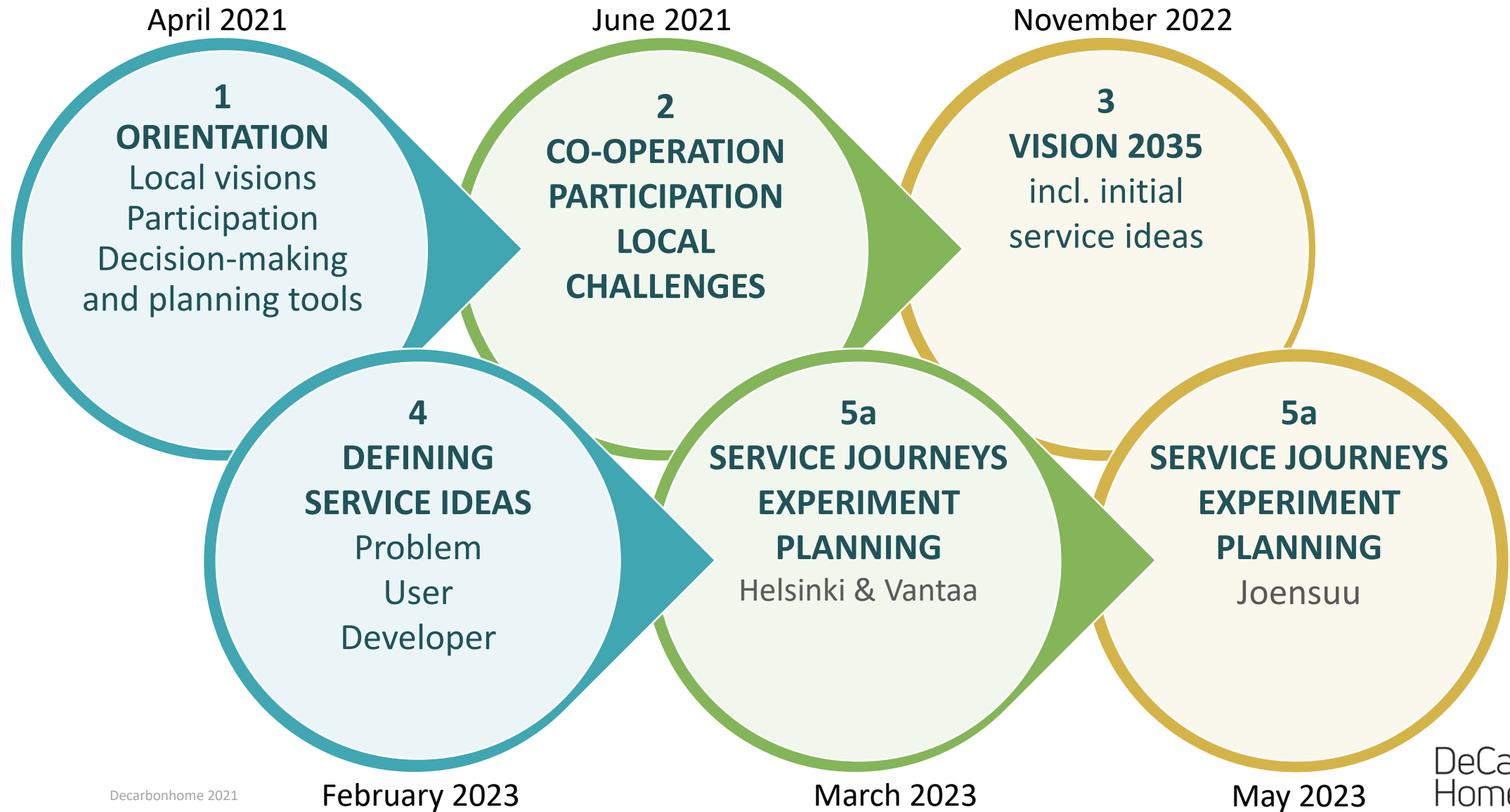
Interviews and diaries of citizens 2021-2023



Municipal workshop series 2021-2023-



2B Municipality workshop series



2E Common challenges faced by municipalities in working towards low-carbon housing

- **Global challenges**

- Changes in demographics (age structure), regional segregation, housing and energy prices, opportunities for participation → EQUALITY

- **Challenges related to energy solutions**

- reducing overall energy consumption (e.g. by improving energy efficiency)
- encouraging regional/property-specific solutions (geothermal heat, solar panels, etc.)

- **Challenges related to construction solutions**

- Wood construction, quality of new construction, material efficiency, recycled materials
- Flexible change of use, material recycling, energy renovations

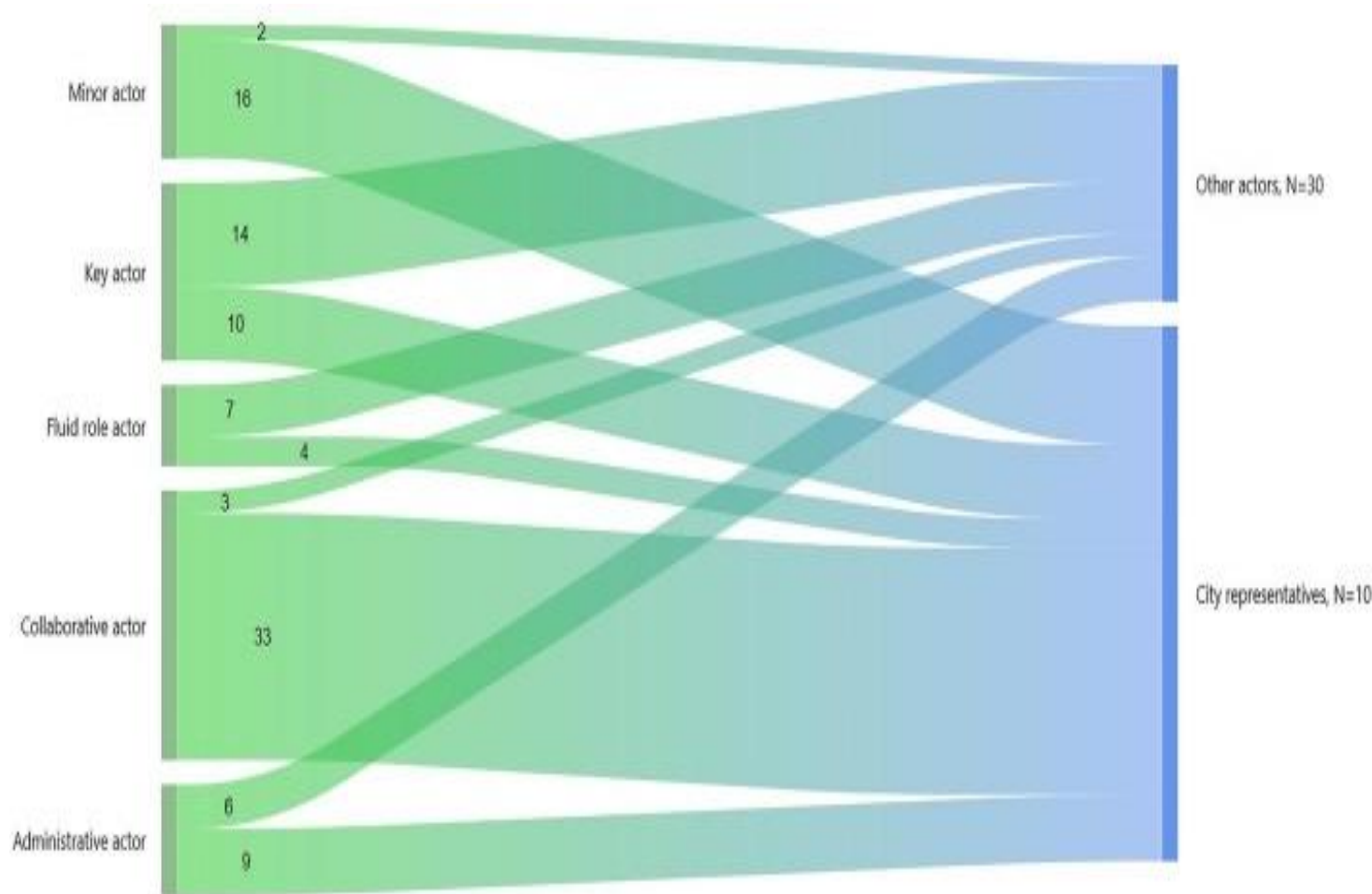
- **Challenges related to housing solutions**

- Residents' climate-smart choices and opportunities (consumption solutions)
- Regional availability and accessibility of services
- Cross-sectoral service solutions (carbon wisdom as a service)



3A Further challenges: multi-actor cooperation

- Municipalities in multi-actor cooperation
 - Households, resident communities
 - Enterprises, including financing
 - Public sector – political will
 - Organisations, unions
 - + new (?) intermediary organizations (space between the municipality and the resident)
 - The municipality as an enabler or as a driver?
- Carbon neutrality and other goals for municipalities
 - Carbon-smart housing as part of a sustainable lifestyle
 - Social justice?
- Municipalities' view on collaboration vs. others' views



3B Further challenges: multi-actor cooperation (2)

Households and communities	Private sector(companies, business)	Public sector	Third sector	Intermediaries, brokers
Residents: -homeowners -tenants -right-of-occupancy residents	Construction companies, developers, consultants, designers, architects, suppliers of building materials	Ministry of the Environment	Kiinteistöliitto	Unspecified actors/chain between the municipality and the rest of the local actors (business ecosystem, society, residents, etc)
Housing companies	Renovation companies	The EU and the state (forms of support)	Isännöintiliitto	Taloyhtiöklubi
House owners	Owners of buildings and plots	Housing Finance and Development Centre of Finland (ARA)	Rakennusteollisuus (RT)	Municipally-owned companies (e.g. Energy, rental building, environmental services)
Boards of directors of housing companies	Energy advice	Local politicians	Marttaliitto	Motiva
Local communities (e.g. village associations, neighbourhoods)	Rental housing companies	Centre for Economic Development, Transport and the Environment (ELY Centre)	Suomen luonnonsuojeluliitto	Research and educational institutions
Blocks, residential areas	Real estate agents	Other municipalities and cities	Pyöräliitto	Regional Business Services
	Property managers	Other units in your own municipality	Suomen Kylät HELKA	Networks of urban planners
	Maintenance and regional maintenance companies			Local newspapers and media
	Financier/ bank			
	Local energy and electricity network companies			

4 The roles of the municipality needed for supporting carbon-wise housing (?)

Producer of information/ advisor

Residents lack information about e.g. What could be done better? The overall effects of repairs? Data-based monitoring of one's own housing

It is difficult to find reliable information: Information in an easily accessible and understandable format, also for the elderly and linguistic minorities;

Residents' ideas on ways to share information: events, personal letter, follow-up applications, home visiting advisor/"house inspector"

Enabler/ Encourager

Communal housing solutions

Nurturing a relationship with nature

Steering of housing companies

Financial incentives

Residents' habits and changes take time and are cumbersome, "but if it were easy..."

Support provider

Traditional tasks: public transport, waste management and local services as part of housing services

(Renovation) construction supervisor/supervisor: construction quality and material choices; Reliability of operators

Urban planning: Dense construction (saving nature)

Preparing for climate change in construction



Towards decarbonized homes!

Thank you!



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