

EBC Working Group on Cities and Communities

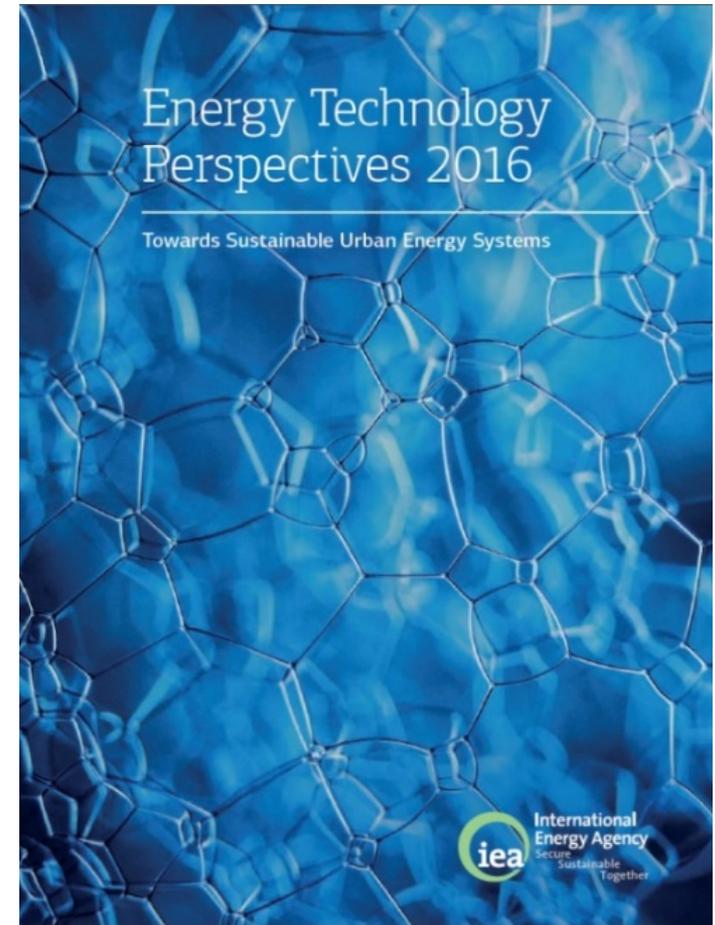
**EBC Webinar: The Science and Communication of Energy-Efficient Indoor
Environments**

10th November 2020

Helmut Strasser

Towards Sustainable Urban Energy Systems

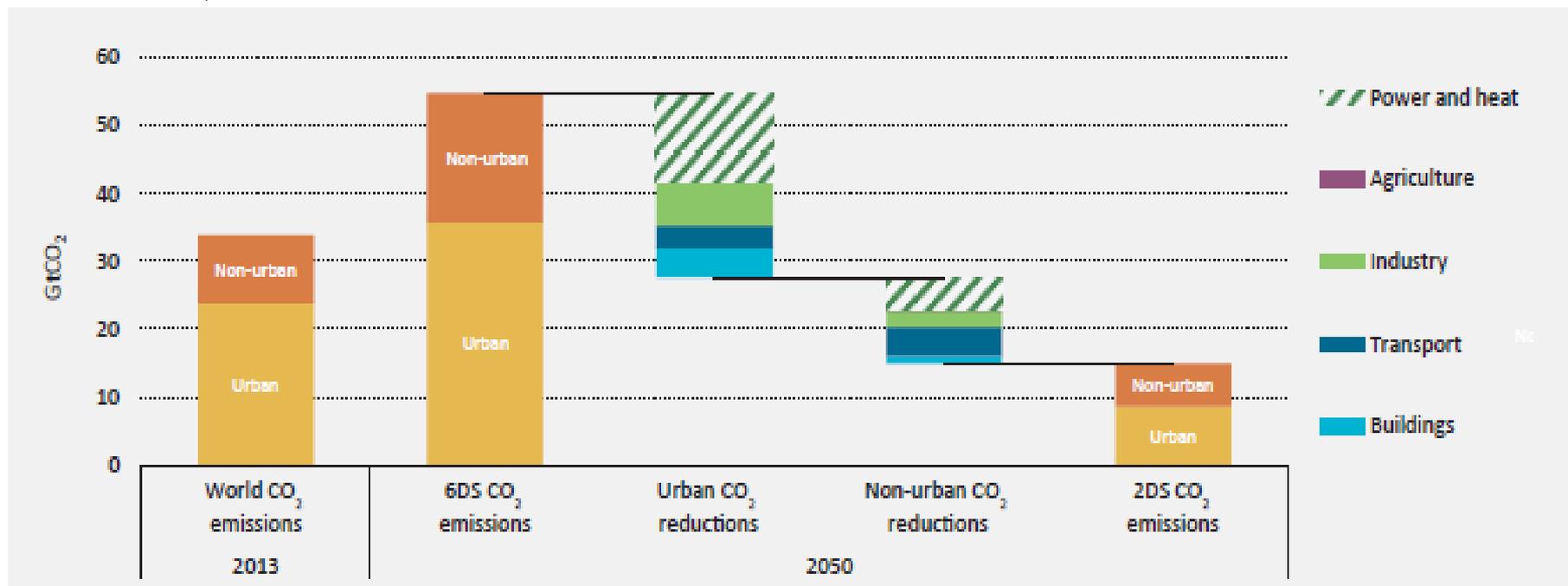
“Cities are at the heart of the
decarbonisation effort”



(IEA, ETP 2016)

Towards Sustainable Urban Energy Systems

Carbon emissions reductions in the buildings and transport sectors, 2013-50



© OECD/IEA Energy Technology Perspectives 2016, IEA Publishing. Licence: www.iea.org/t&c

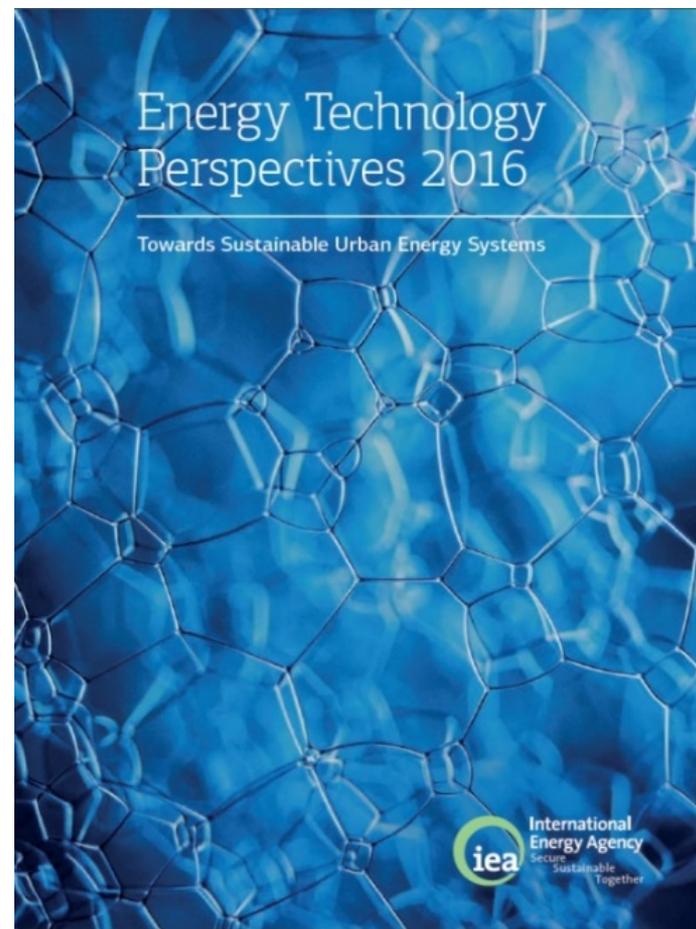
Towards Sustainable Urban Energy Systems

- "Cities are at the heart of decarbonization efforts" , but ...
- decarbonization is **often not yet a top priority** in cities
 - it is **unclear how** to approach and achieve decarbonization
 - decision-making for decarbonization is a **complex task** and requires an integrated approach
 - decarbonization is **often only associated with technological advancement** and solutions
 - decarbonization requires sufficient appropriation of **financial resources**

Towards Sustainable Urban Energy Systems

“Cities are at the heart of the decarbonisation effort”

“Mobilizing the urban sustainable energy potential requires strong support from national governments to local policy makers”



(IEA, ETP 2016)

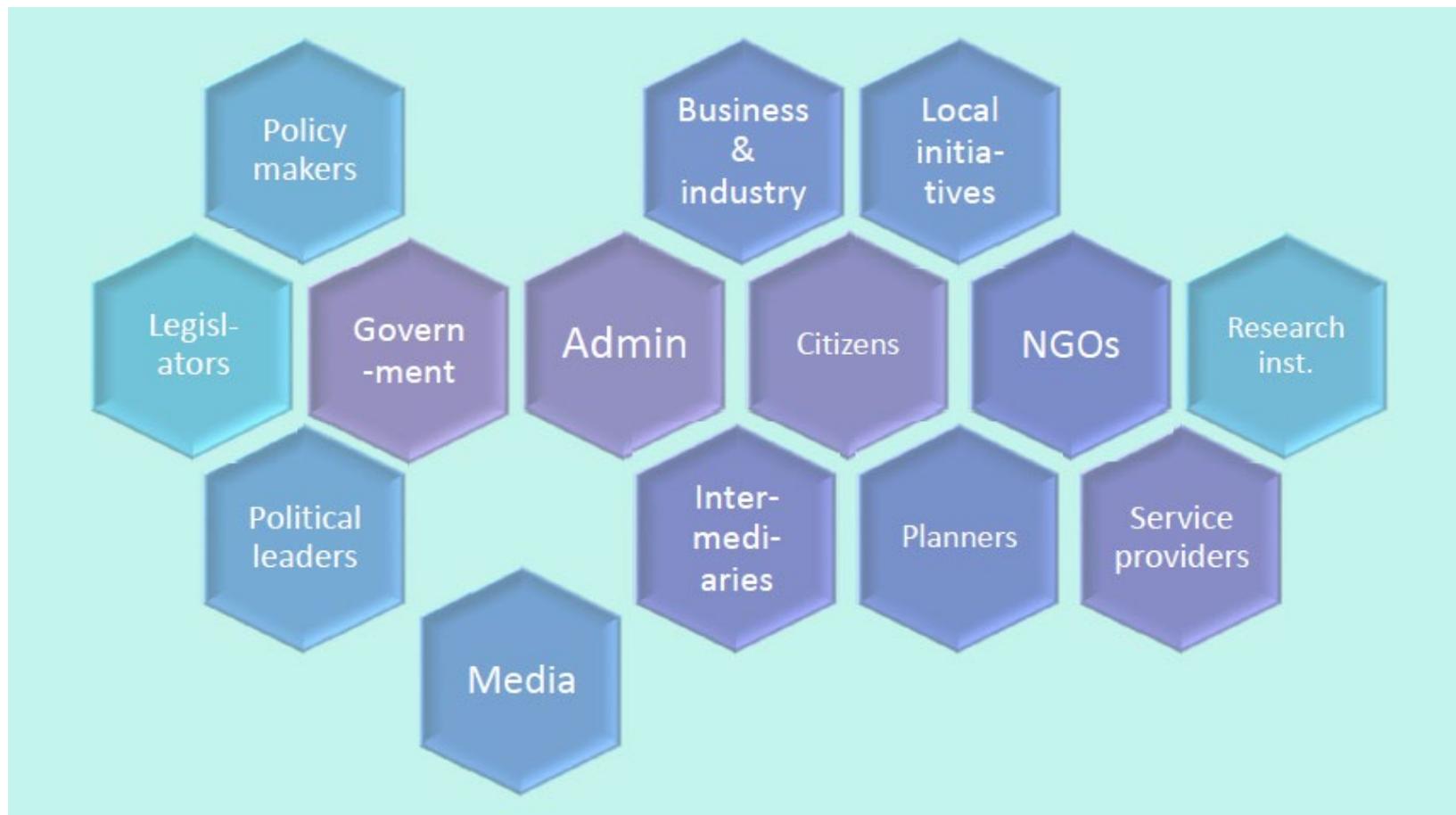
Working Group on Cities and Communities

- provide a structure for **information and experience exchange**
- identify bottlenecks that lead to **specific research questions**
- directly communicate with cities on their **needs**
- support **system integration** of relevant technologies and the linking of technologies in cities

Working Group on Cities and Communities

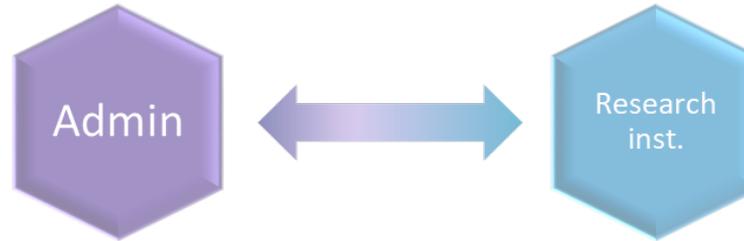
- 59 experts / 13 countries
- workshops, discussions and exchanges
- along three thematic priorities
 - Subgroup 1: Technologies ... for decarbonization
 - Subgroup 2: Strategies ... integrated planning
 - Subgroup 3: Data, tools and methods

Cities' needs



Cities' needs

Challenges ...



Funding

Not implementation oriented

Targeting research institutions

Legal restrictions for cities as lead partners

Framing conditions

Research questions driven not problem driven

Time scales - project vs. construction

Goals - Publication vs. Implementation

Communication

Lack of exchange

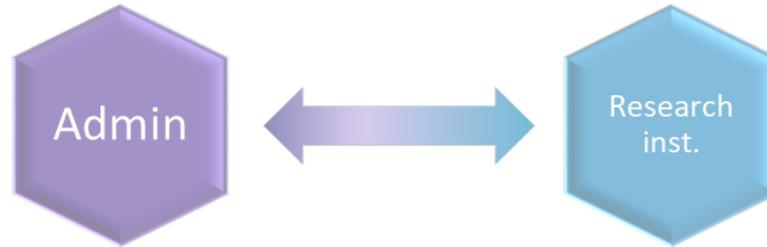
Lack of eye-level discussions

LOI / LOC partner

Lack of awareness

Cities' needs

Approaches ...



Funding

Participation in
consultation processes

Interface between
funding agencies and
cities

Framing conditions

Intermediaries

Awareness raising

Joint development
processes driven by cities

Communication

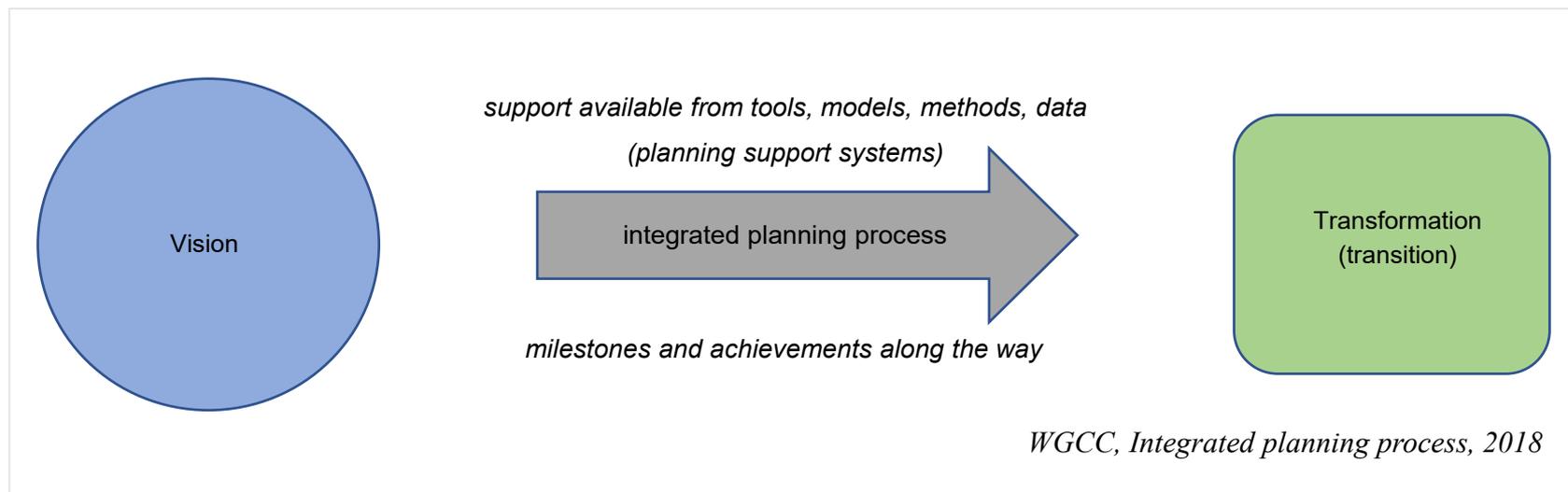
Knowledge exchange and
integration

“Translation”

Technologies

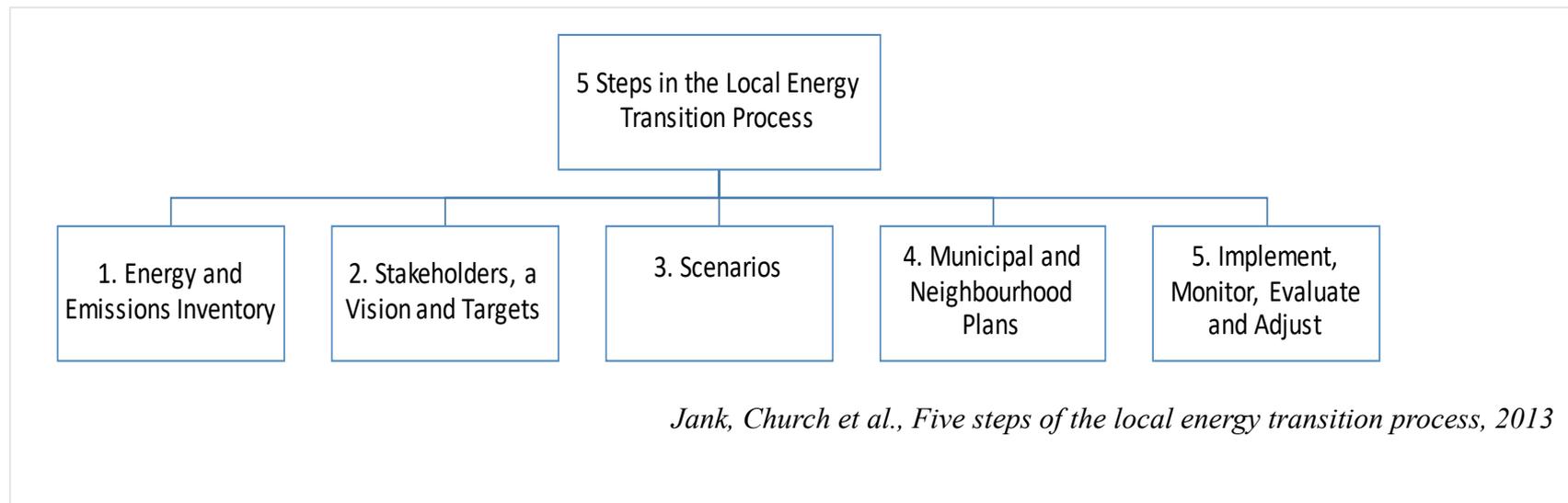
- several decarbonisation technologies available which contribute to the transformation of cities' energy systems.
 - high attention to heating and cooling systems needed
 - development of technology-systems for decarbonisation in cities is not just a matter of research on technologies and technology-systems
- Including non-technological aspects such as legal framework conditions, social aspects, etc.
- regular exchange with cities on their options, needs and challenges leads to evidence-based solutions

Strategies



- pending question: how do integrated planning processes fit between vision and transformation?
- all stages of a formalized process are necessary to change organizational structures and foster decarbonization in cities

Data, tools and methods



- already a lot of research on data in Annexes exists
- identified gaps and research questions
- most suitable selection process to support planning and implementation and ways of integrating knowledge into existing planning instruments (translation of information)

Lessons learned

We need technological/social innovation – “mission driven innovation”

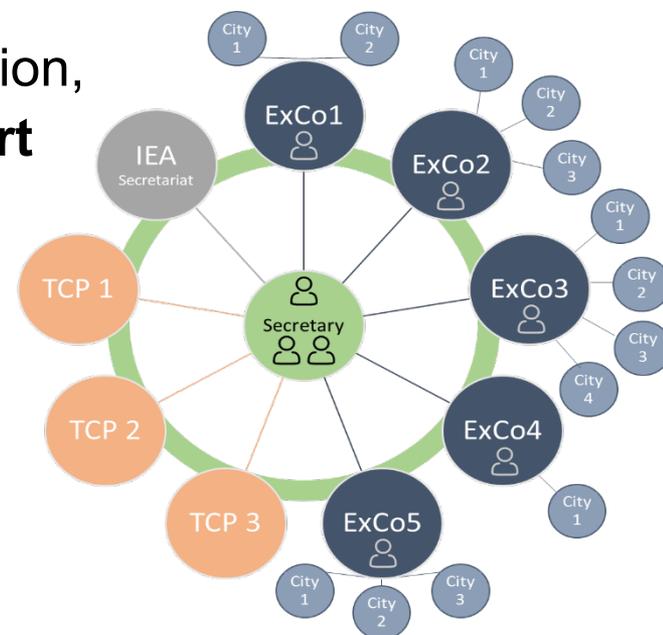
- How can we broadly transfer existing knowledge (research and models) to cities?
- How can we help cities prepare for and embrace emerging "mission-driven" innovation?
- How can cities deal with rebound effects?
- What is the role of the different levels of the government (national, regional, local)?
- How can we better deal with multiple scales, time, and space?
- How can local strategies contribute to the overall (national) goals?
- How can we successfully link the nationally and regionally-specific strategies with appropriate technologies?
- How does decarbonization relate to other goals (e.g. sustainability goals, smart city, circular economy, etc.)?
- How can we incorporate uncertainties (risk) in local decision-making?
- etc.

www.iea-ebc.org/working-group/cities-communities

Decarbonization of Cities and Communities

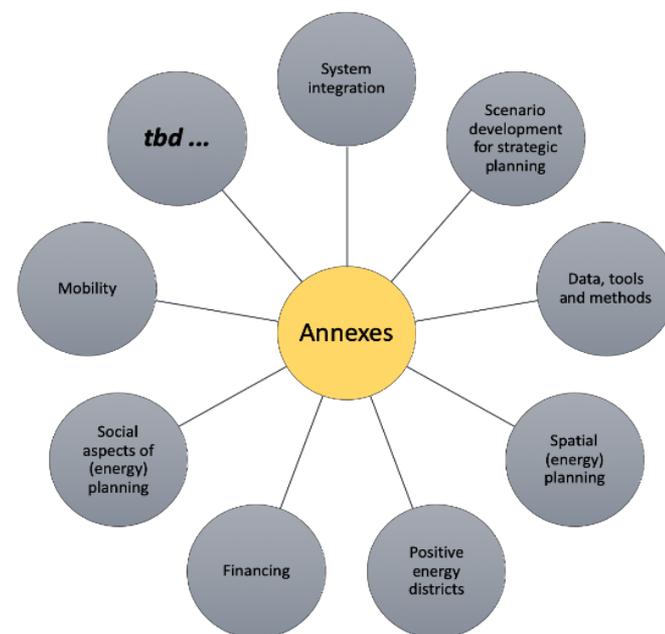
Proposal for a **new TCP** within the IEA, which aims to provide

- scientific and evidence-based information, tools, and recommendations to **support urban decarbonization efforts**
- an **international forum and communication channel** for research and innovation-related projects on urban energy and mobility system transformation and the **exchange between TCPs** to share innovation in each field as well as **between TCPs and practitioners** to share best practices and to pool resources



Decarbonization of Cities and Communities

- Decarbonization requires the simultaneous coordination and consideration of a multitude of technological as well as non-technological aspects
- Topics on the right are regarded as the fundamentals for strategic and well-coordinated transition and decarbonization



Decarbonization of Cities and Communities

– Documents are available

– Next step:

Web-Meeting of representatives of interested countries / CERT members, invited by Austrian ministry BMK:

- clarify the various national positions
- discuss next steps
- develop a joint proposal for the CERT

ANNEX 2	
PROGRAMME OF WORK	
1. INTRODUCTION	
The D4CC TCP will perform its activities under the IEA Framework for International Energy Technology Cooperation and in accordance with the D4CC TCP legal text. To facilitate a focused technical collaboration in the D4CC TCP, the members of the EBC Working Group on Cities and Communities agreed in April 2020 on the renewed Programme of Work for the D4CC TCP and its mandate.	
2. R	
Conse in cities a vision a viable generi energ under energy techni At the largest admini techni the co to imple These cities to the D4CC inhabit Curre linked cities which	
ANNEX 1	
STRATEGIC PLAN	
IMPLEMENTING AGREEMENT FOR A TECHNOLOGY COLLABORATION PROGRAMME ON DECARBONIZATION OF CITIES AND COMMUNITIES (D4CC)	
This strategic plan outlines the background, scope and tasks of the Implementing Agreement for a Technology Collaboration Programme on Decarbonization of Cities and Communities. 'D4CC TCP' is the short name for this Technology Collaboration Programme (TCP).	
1. INTRODUCTION	1
1.1 CURRENT SITUATION, BARRIERS, AND CHALLENGES	1
1.2 THE WORKING GROUP ON CITIES AND COMMUNITIES	2
2. VISION AND MISSION	3
3. OBJECTIVES, SCOPE, AND DELIVERABLES	3
3.1 Objectives	3
3.2 Scope	4
3.3 DELIVERABLES	7
3.3.1 ANNEX 1- STAKEHOLDER, KNOWLEDGE, AND COMMUNICATION	8
3.3.2 ANNEX 2- DATA POOL	8
3.3.3 ANNEX 3- FINANCING INNOVATIVE BUSINESS CASES FOR DECARBONIZATION IN CITIES	9
3.3.4 ANNEX 4- NON-TECHNOLOGICAL ASPECTS OF POSITIVE ENERGY DISTRICTS	10
4. ORGANISATIONAL STRUCTURE	10
4.1. The Executive Committee (ECoC)	11
4.2. The TCP SECRETARY	12
4.3. SYNERGIES AND DISTINCTIONS	13
4.3.1 IEA SECRETARIAT	13
4.3.2 Other TCPs and IEA COMMITTEES	13
4.3.3 Other INITIATIVES	15
5. BUDGET AND FEE STRUCTURE	16
6. GLOSSAR	16

Decarbonization of Cities and Communities

Interested in this new TCP?

helmut.strasser@salzburg.gv.at

+43 662 623455 26

ANNEX 2
PROGRAMME OF WORK

1. INTRODUCTION
The D4CC TCP will perform its activities under the IEA Framework for International Energy Technology Cooperation and in accordance with the D4CC TCP legal text.
To facilitate a focused technical collaboration in the D4CC TCP, the members of the EBC Working Group on Cities and Communities agreed in April 2020 on the renewed Programme of Work for the D4CC TCP and its objectives.

2. R
Conse
in city
a slow
a vari
generi
emerging
under
energy
techni
At the
largely
admini
techni
the co
to im
These
cities
to the
D4CC
inhabi
Curre
linked
cities
which

ANNEX 1
STRATEGIC PLAN
IMPLEMENTING AGREEMENT FOR A TECHNOLOGY COLLABORATION PROGRAMME ON DECARBONIZATION OF CITIES AND COMMUNITIES (D4CC)
This strategic plan outlines the background, scope and tasks of the Implementing Agreement for a Technology Collaboration Programme on Decarbonization of Cities and Communities. "D4CC TCP" is the short name for this Technology Collaboration Programme (TCP).

1. INTRODUCTION	1
1.1 CURRENT SITUATION, BARRIERS AND CHALLENGES	1
1.2 THE WORKING GROUP ON CITIES AND COMMUNITIES	2
2. VISION AND MISSION	3
3. OBJECTIVES, SCOPE, AND DELIVERABLES	3
3.1 Objectives	3
3.2 Scope	4
3.3 DELIVERABLES	7
3.3.1 ANNEX 1- STAKEHOLDER, KNOWLEDGE, AND COMMUNICATION	8
3.3.2 ANNEX 2- DATA POOL	8
3.3.3 ANNEX 3- FINANCING INNOVATIVE BUSINESS CASES FOR DECARBONIZATION IN CITIES	9
3.3.4 ANNEX 4- NON-TECHNOLOGICAL ASPECTS OF POSITIVE ENERGY DISTRICTS	10
4. ORGANISATIONAL STRUCTURE	10
4.1 THE EXECUTIVE COMMITTEE (E4CC)	11
4.2 THE TCP SECRETARY	12
4.3 SYNERGIES AND DISTINCTIONS	13
4.3.1 IEA SECRETARIAT	13
4.3.2 OTHER TCPS AND IEA COMMITTEES	13
4.3.3 OTHER INITIATIVES	15
5. BUDGET AND FEE STRUCTURE	16
6. GLOSSAR	16