

# Using data to reduce Climate Change

# The session in a nutshell

What (specific activity)	When (length in minutes)	Who (which speaker)
Introduction to the theme of data and reducing Carbon – also a quick overview of ZCC, Urb en Pact and Vilawatt	10 minutes	Ian
Metropole Rouen Normandie will explain how they use data to engage citizens and civil society especially helping them understand complicated global information such as the IPCC or working on concrete actions such as Earth hour to show the benefits	5 minutes	Agnès
Bistrita focus on a small scale example i.e. air quality data and how it is used to communicate with citizens then more strategic with their strategic Climate Budget	5 minutes	Iulia
Tampere bringing in the work that they did on their Carbon Budget using a different methodology	5 minutes	Silva
Q&A and interaction with participants to bring out key findings from the three presentations	10 minutes	Ian
Villedécans – the transfer of key data from one city to 3 other cities at the European level	5 minutes	Sonia
Conclusion - Manchester having done a lot of work on Carbon budget in 2018 with data but then needing concrete projects to show what really needs to be done to achieve figures - so the need to link real projects with strategic projections	5 minutes	Sean
Q&A with participants with leading questions and discussion with key findings and conclusions on use of data and climate change	15	Ian

Using data to reduce Climate Change

# VILAWATT UIA (URBAN INNOVATION ACTION) UTM (URBACT TRANSFER MECHANISM)



March 2021 – September 2022

[Sonia DOMINGUEZ](#) – Vilawatt UTM Project Coordinator,  
City of Viladecans



# VILAWATT UIA (URBAN INNOVATION ACTION) UTM (URBACT TRANSFER MECHANISM)

Transferring the Vilawatt experience to 3 EU cities:

- Seraing – Belgium
- Nagykanizsa – Hungary
- Trikala – Greece



# VILAWATT UIA (URBAN INNOVATION ACTION)

## UTM (URBACT TRANSFER MECHANISM)

OBJECTIVES AND RESULTS

**Objectives:**

To transfer Vilawatt UIA to 3 European cities

**Results:**

Each city will have to develop an Investment Plan to define how they will transfer the Vilawatt locally. Viladecans will have to develop a Springboard Plan to adapt Vilawatt to new context.

Using data to reduce Climate Change



Sean MORRIS - Manchester Climate Change Agency

Iulia-Ramona POPÂRȚAC - International relations officer at European Integration Department, Bistrita Municipality





## What is the Zero Carbon Cities Project?



## The Cities



MANCHESTER  
(LEAD PARTNER)



BISTRITA



FRANKFURT



MODENA



TARTU



VILVOORDE



ZADAR

[urbact.eu/zero-carbon-cities](http://urbact.eu/zero-carbon-cities) [@zero\\_cities](https://twitter.com/@zero_cities)

## The Experts

ENERGY CITIES

MANCHESTER CLIMATE  
CHANGE AGENCY

ANTHESIS

TYNDALL CENTRE





## What is a Carbon Budget

Zero Carbon Cities, an URBACT Action Planning Network, aims to help cities use “science-based” targets to make the transition to zero carbon.



A carbon budget is the total amount of CO<sub>2</sub> that can be emitted over a specific period of time in order to be compliant with the 2015 Paris Agreement. By signing this Agreement, Governments have committed to keep the increase in global average temperature to well below 2°C and if possible below 1.5°C.

**Carbon budgeting is one way of measuring how we do this.**

[urbact.eu/zero-carbon-cities](http://urbact.eu/zero-carbon-cities) [@zero\\_cities](https://twitter.com/@zero_cities)



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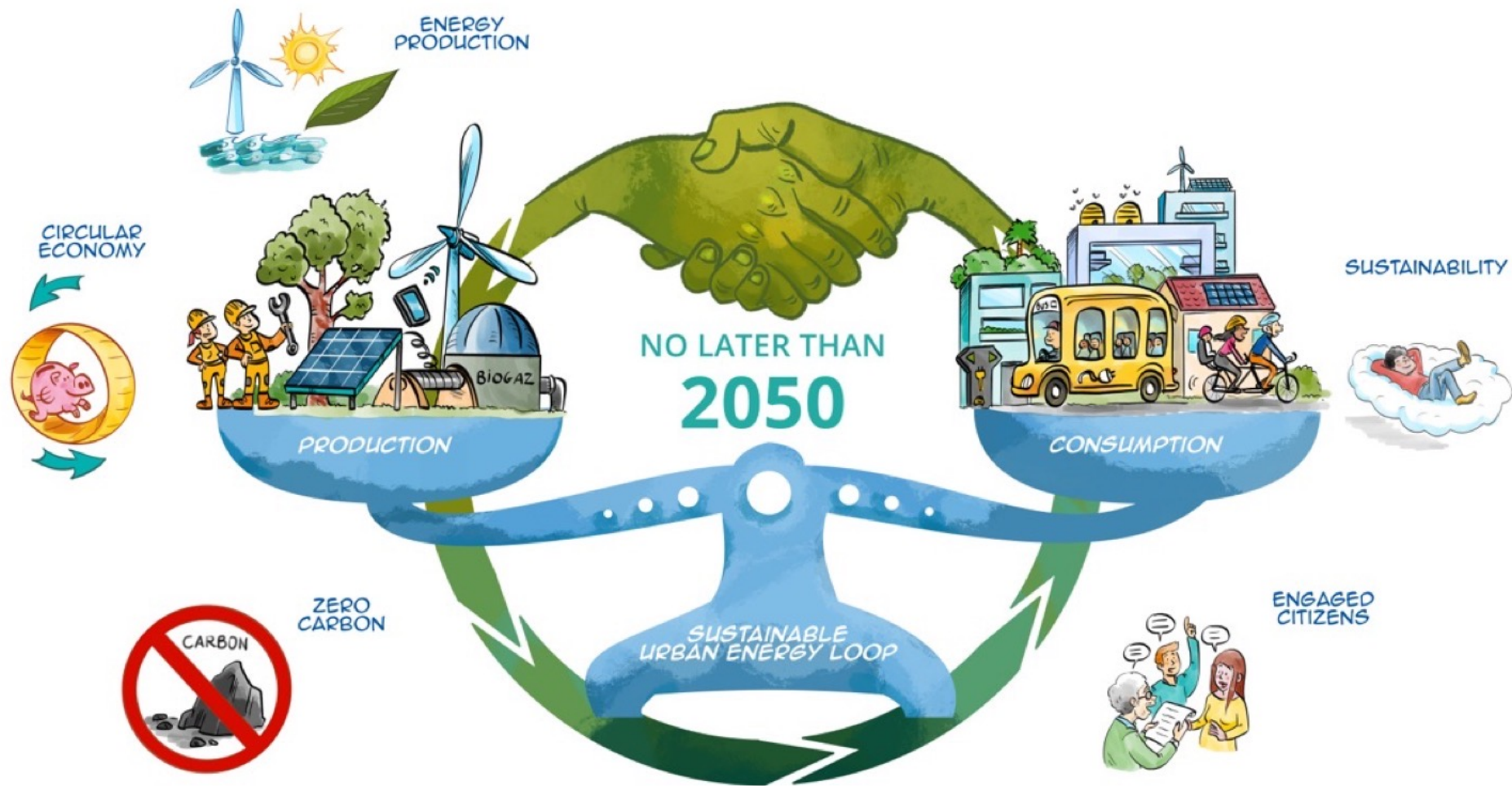
Agnès GRANDOU - Local COP21 project manager and transition policies coordinator – Métropole Rouen Normandie



Silva VUOPPONEN - Project Manager, EcoFellows Ltd., City of Tampere



Using data to reduce Climate Change



## NETWORK OBJECTIVES

### **BECOMING NET-ZERO ENERGY TERRITORIES BY 2050**

- Reduce energy consumption and carbon emissions
- Increase local renewable energy production, and increase low carbon energy sources
- Balance energy production and consumption to achieve net zero energy territory status



## EIGHT EUROPEAN PARTNERS

- **Lead Partner** – Clermont Auvergne Métropole – France
- **Bialystok Functional Area** – Poland
- **Palma di Montechiaro** – Italy
- **CIM Alto Minho** – Portugal
- **Métropole Rouen Normandie** – France
- **Galati** – Romania
- **EcoFellows** – Tampere – Finland
- **Elefsina** – Greece



# Thank you for your attention!

# Métropole Rouen Normandie



Avec la participation de

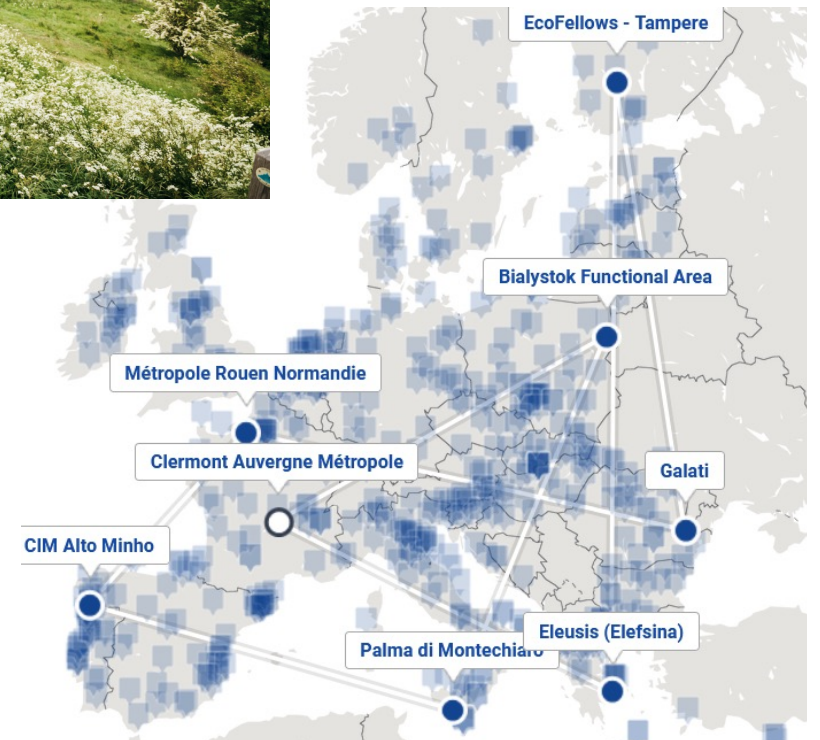


**#URBACTfest**



# Métropole Rouen Normandie

71 municipalities  
500 000 inhabitants  
250 000 employed  
40 000 students







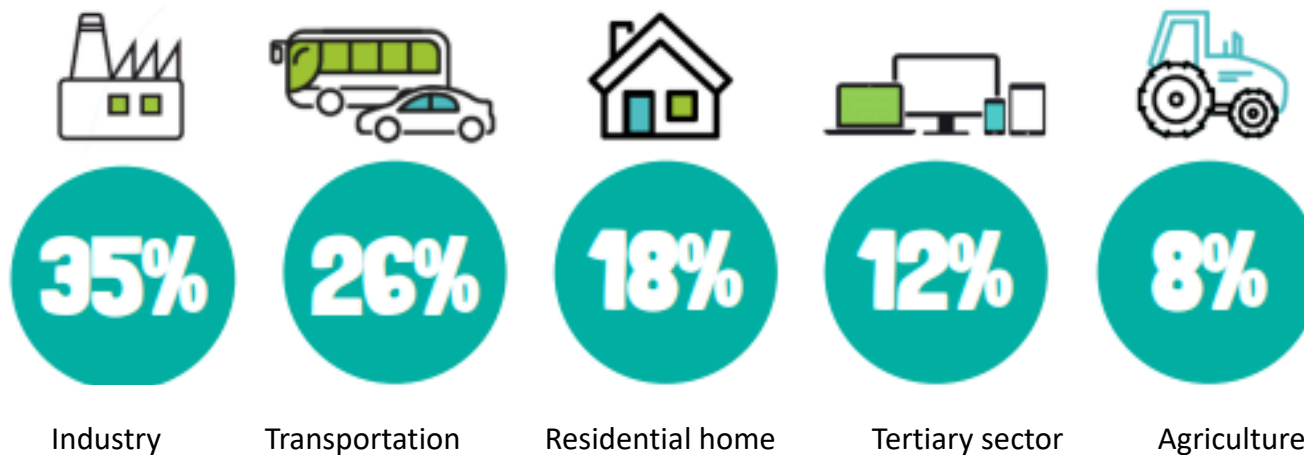
# Local COP21

## An innovative initiative to engage stakeholders



# Reducing greenhouse gases emissions

## Everyone is concerned !



✓ Direct emissions on the territory  
**2,94 MteqCO<sub>2</sub>**

✓ Emissions due to  
Métropole Rouen Normandie  
**0,192MteqCO<sub>2</sub>**

✓ Indirect emissions  
**8,42MteqCO<sub>2</sub>**

# Local COP21

## Engaging all stakeholders

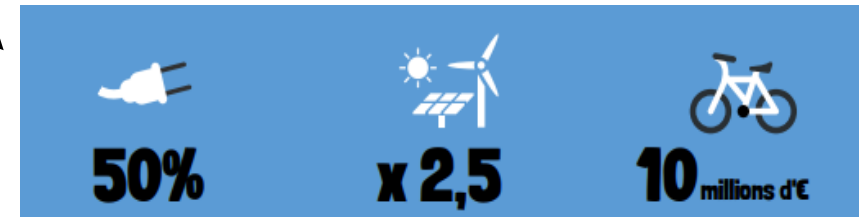
Cities and administrations



Citizens



Companies

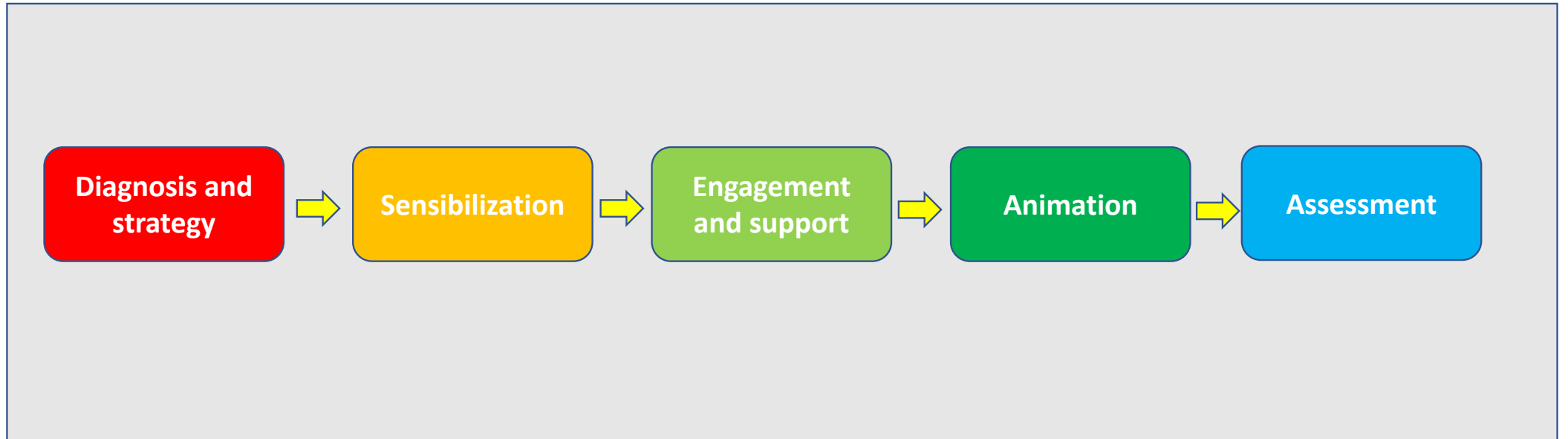


Energy  
consumption  
reduction

Renewable  
energy  
production

Annual budget  
for cycling  
policies

# A process of territorial animation with a scientific base



# Local group of experts – « IPCC »

## 15 local experts and scientists



# Local group of experts – « IPCC »

## 10 topics

- Climate
- Water supply
- Social psychology
- Agriculture
- Biodiversity
- Air
- Health
- Town planning and architecture
- Mobility
- Energy
- Economy



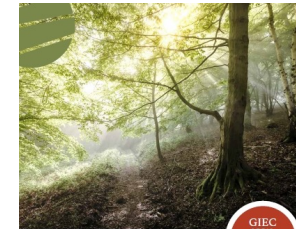
Évolution du climat à l'échelle de la Métropole Rouen Normandie



La ressource en eau et le risque inondation dans la Métropole Rouen Normandie : CONSTAT ET ANALYSE PROSPECTIVE DANS UN CONTEXTE DE CHANGEMENT CLIMATIQUE



Représentations et attitudes des populations locales vis-à-vis du changement climatique



Les forêts de la Métropole Rouen Normandie face au changement climatique



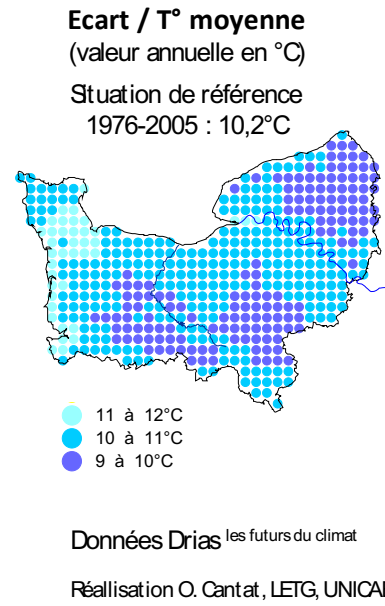
L'impact du changement climatique sur la qualité de l'air dans la Métropole Rouen Normandie



Les enjeux de santé publique dans un contexte de changement climatique à l'échelle de la Métropole Rouen Normandie

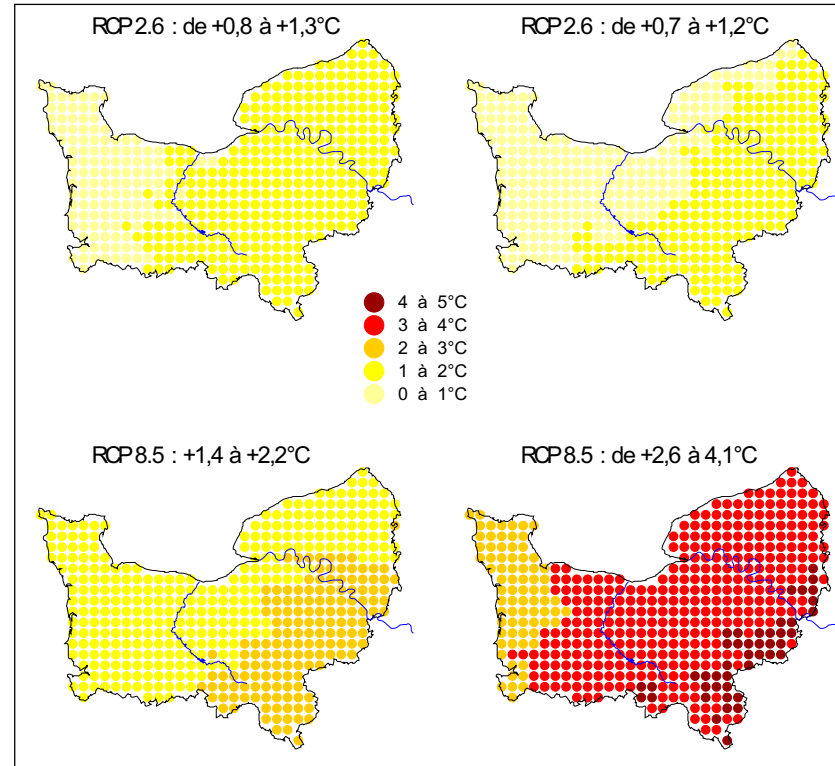


# Local group of experts Results



Horizon moyen 2041-2070

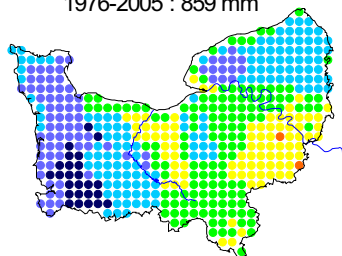
Horizon lointain 2071-2100



Evolution of annual average atmospheric temperatures : medium and long term

# Local group of experts Results

**Ecart / précipitations**  
(valeur annuelle en %)  
Situation de référence  
1976-2005 : 859 mm



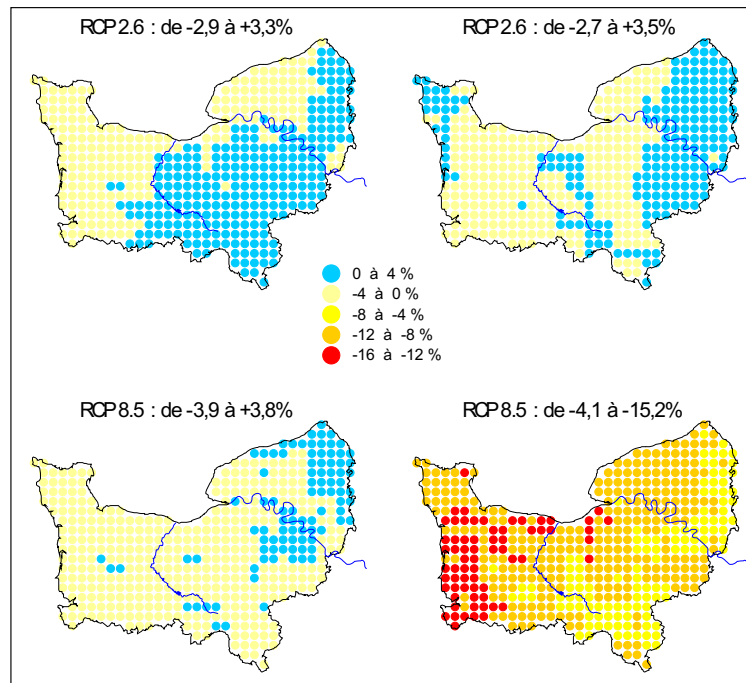
1050 à 1200 mm  
950 à 1050 mm  
850 à 950 mm  
750 à 850 mm  
650 à 750 mm  
550 à 650 mm

Données Drias les futurs du climat

Réalisation O. Cantat, LETG, UNICAEN

Horizon moyen 2041-2070

Horizon lointain 2071-2100



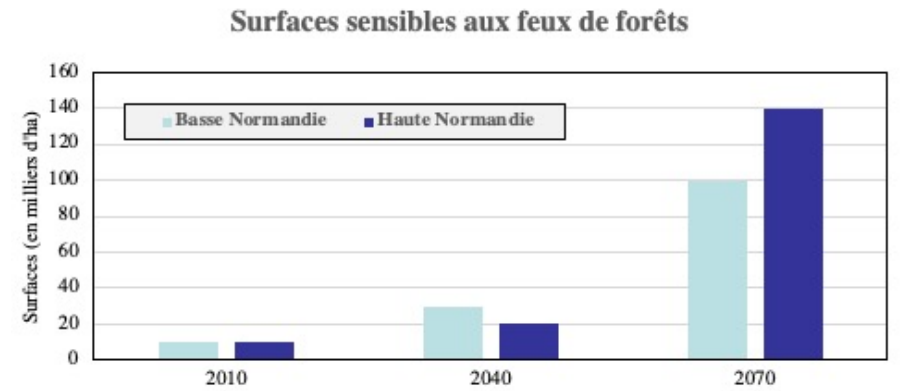
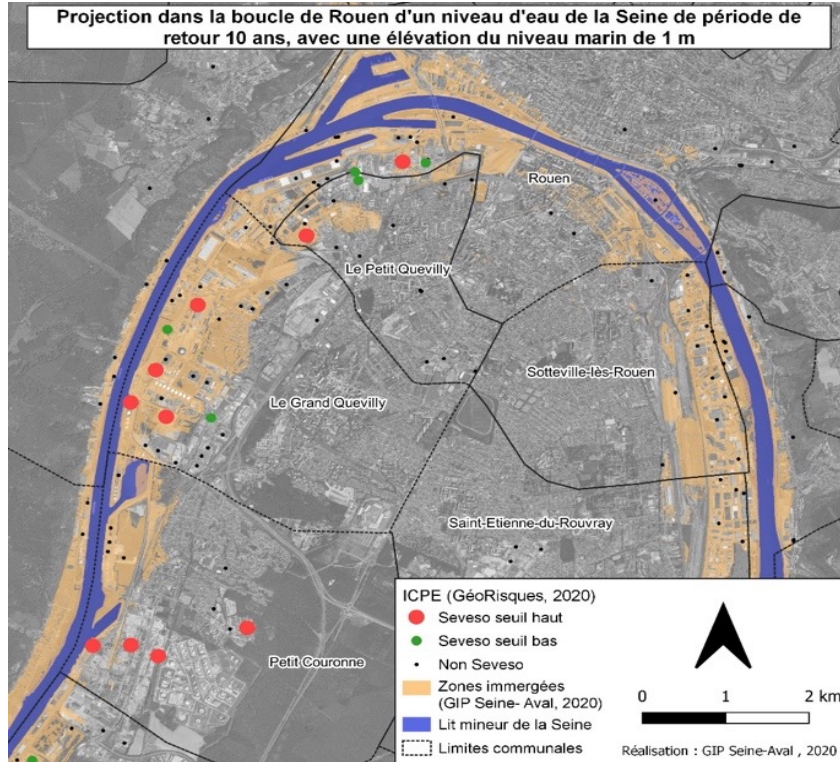
Steady  
-29 à +31 mm  
-2,7 à +3,5%

Deficit  
-33 à -163 mm  
-4,1 à -15,2%

Difference in cumulative annual precipitation : medium and long term



# Local group of experts Results



Source: Rapport de la mission interministérielle "Changement climatique et extension des zones sensibles"

Increased risk of flooding and of forest fire

# Shocking datas

## From sensibilization to act



**1 million plastic bottle  
sold every minut (world)**

**5g of plastic ingested per week (world)**



# Shocking datas

## From sensibilization to act



# Animation to action

## Earth hour



**J'ÉTEINS LA LUMIÈRE**  
**JE M'ENGAGE POUR LA PLANÈTE !**

**SAMEDI 26 MARS 20H30**

[www.notrecop21.fr](https://www.notrecop21.fr)

  #NotreEarthHour

# Animation to action

## Assessment process

- Street and public buildings lighting off



	Number of municipalities	Definitive	Experimental
2018	41	21	20
2019	56	38	18
2020	NC	NC	NC
2021	59	50	9
2022	59	50	9

# Assessment participatory process

## Assessment council



30 members working on :

- Targets/results
- Resilience
- Social effects of policies

# Thank you for your attention!



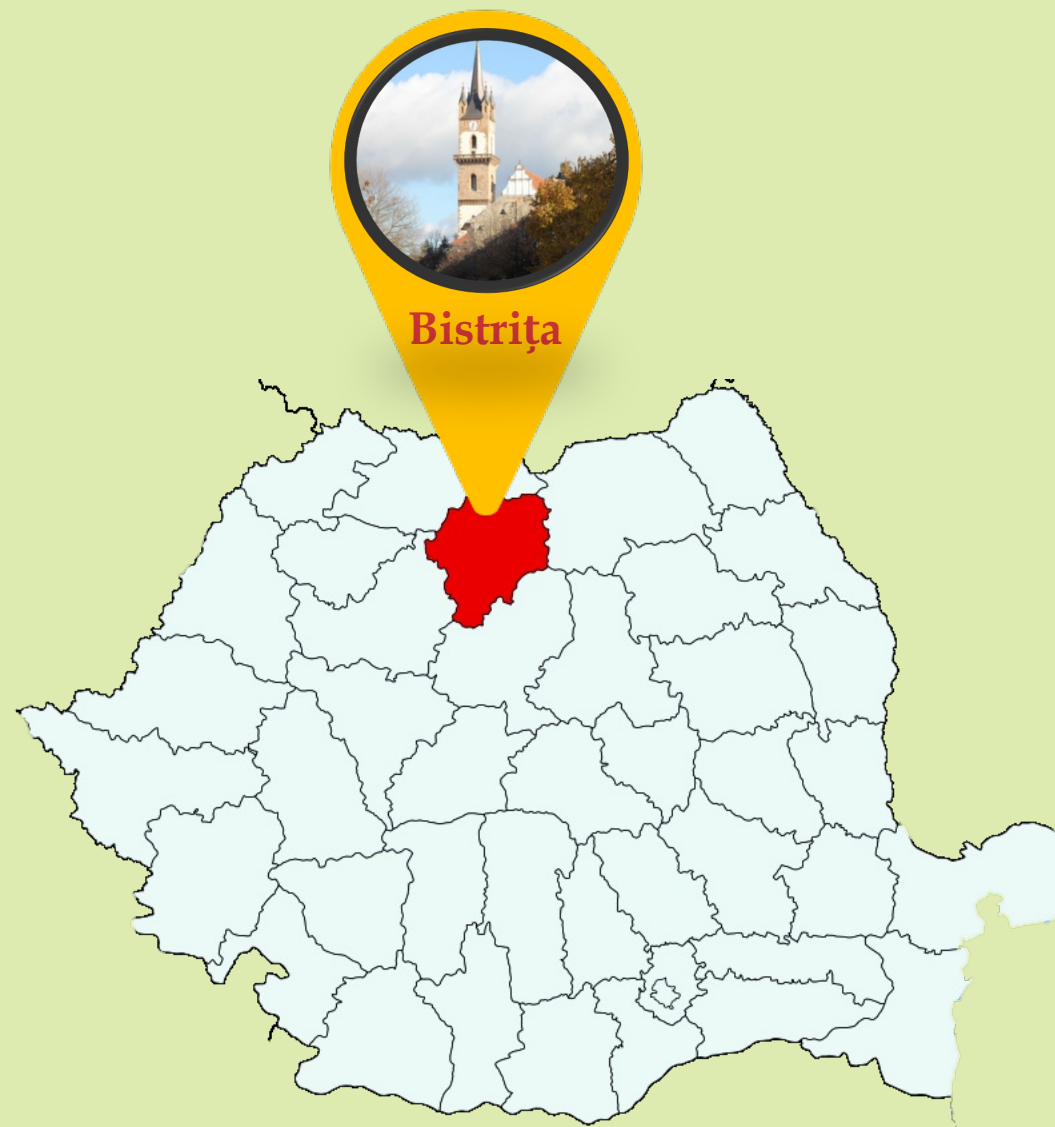
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# Bistrita





URBACT  
CITY  
FESTIVAL  
2022



EUROPEAN UNION  
European Regional Development Fund



#URBACTfest



Covenant of Mayors  
for Climate & Energy  
EUROPE



CiViTAS  
Cleaner and better transport in cities



THE CIVITAS INITIATIVE  
IS CO-FINANCED BY THE  
EUROPEAN UNION



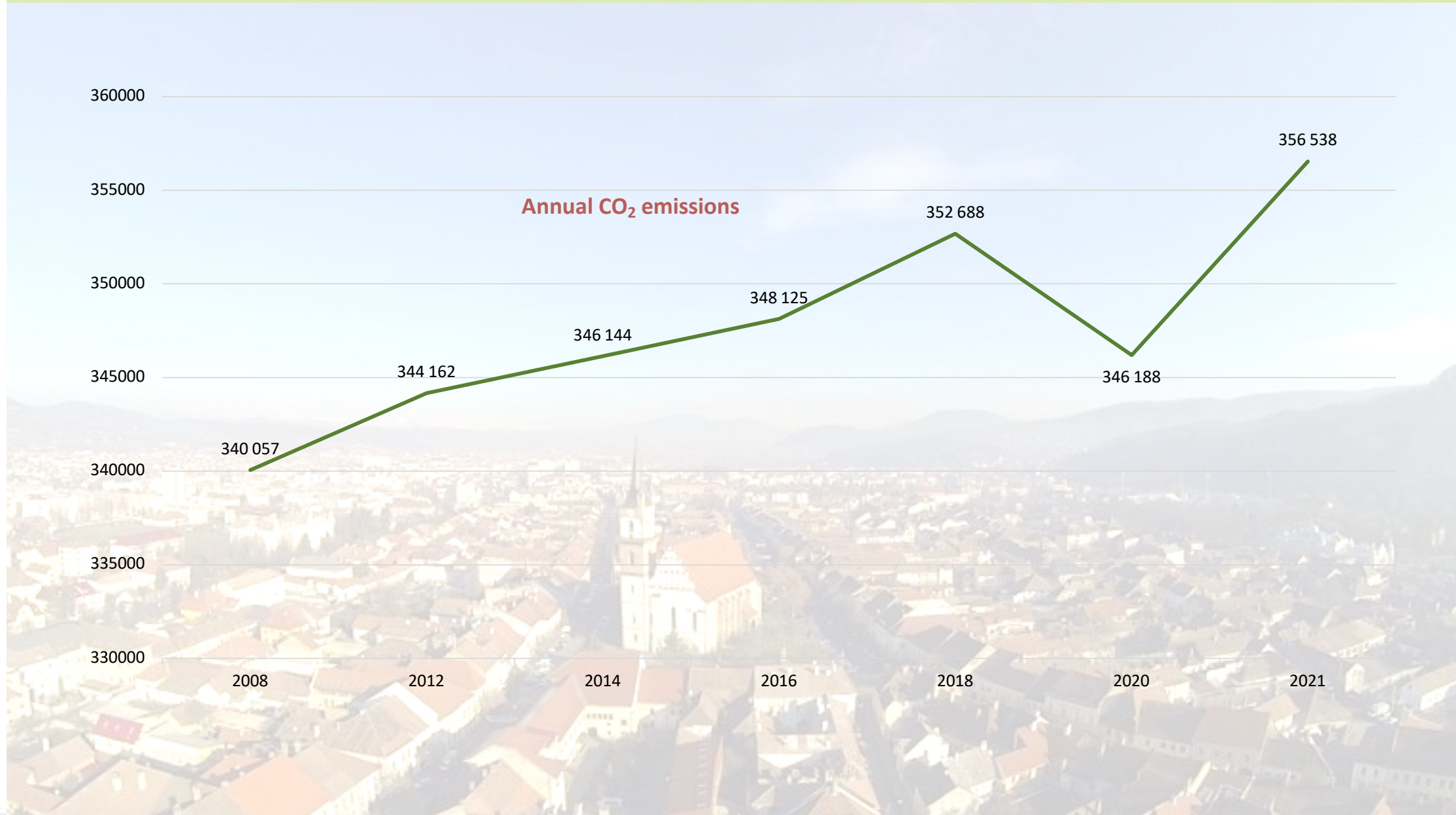
EARTH HOUR



Zero Carbon Cities

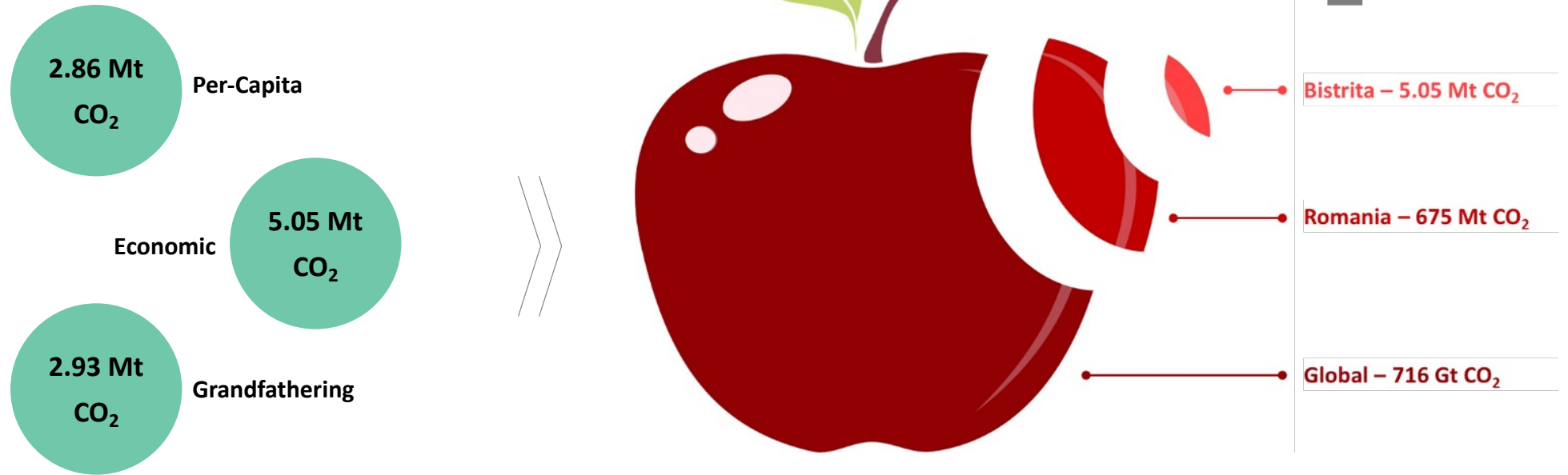


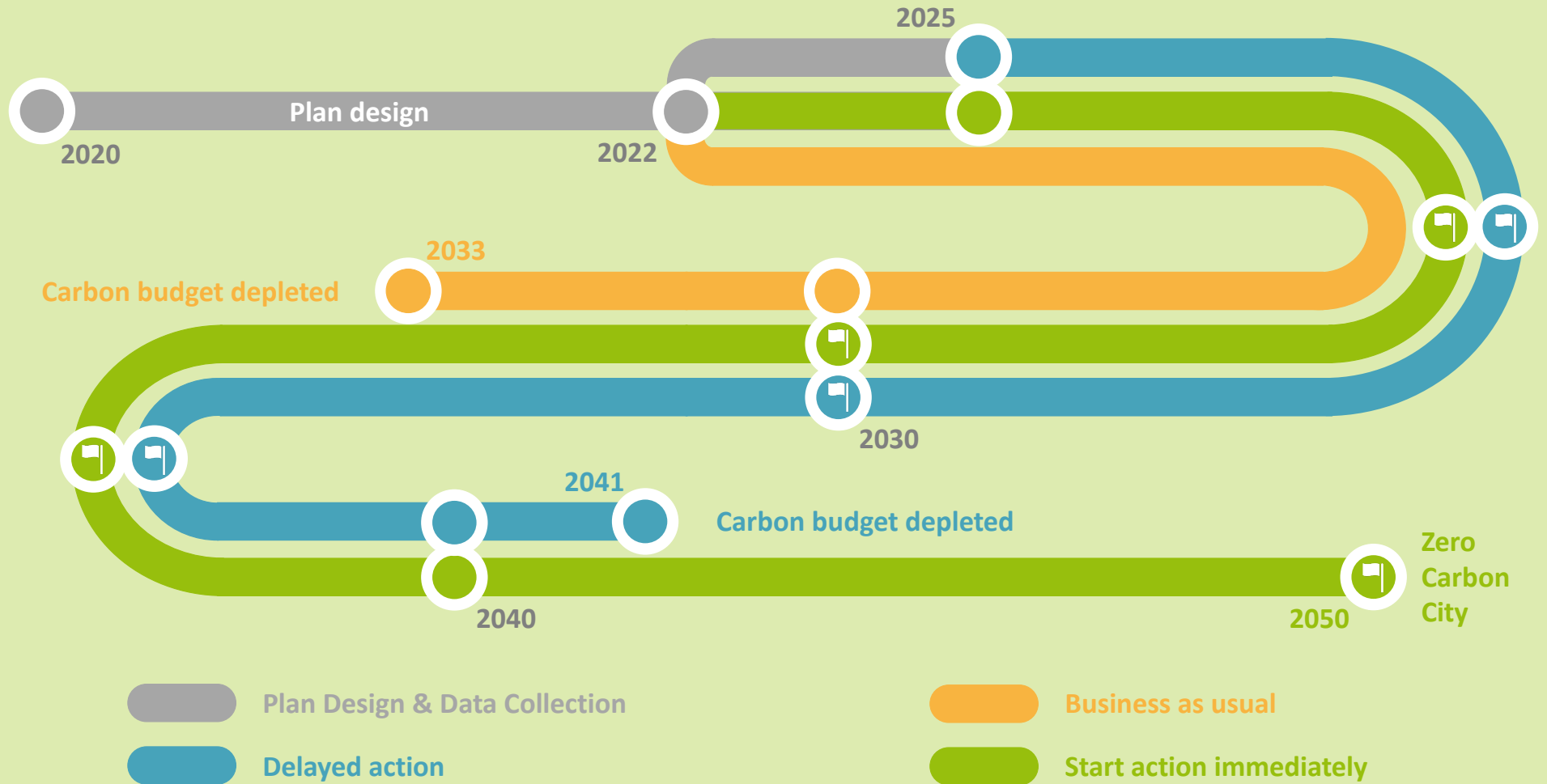
European Union  
European Regional Development Fund





## Carbon Budget for Bistrita







CITIZENS

SCHOOLS AND  
UNIVERSITIES

ECONOMIC  
AGENTS

PUBLIC  
AUTHORITIES

TRANSPORTERS

ENERGY

PRODUCERS AND  
DISTRIBUTORS



Implement  
actions

Identify  
questions  
and  
problems

Collect and  
analyse  
data

Decision  
based on  
results

Transport  
30.2% budget

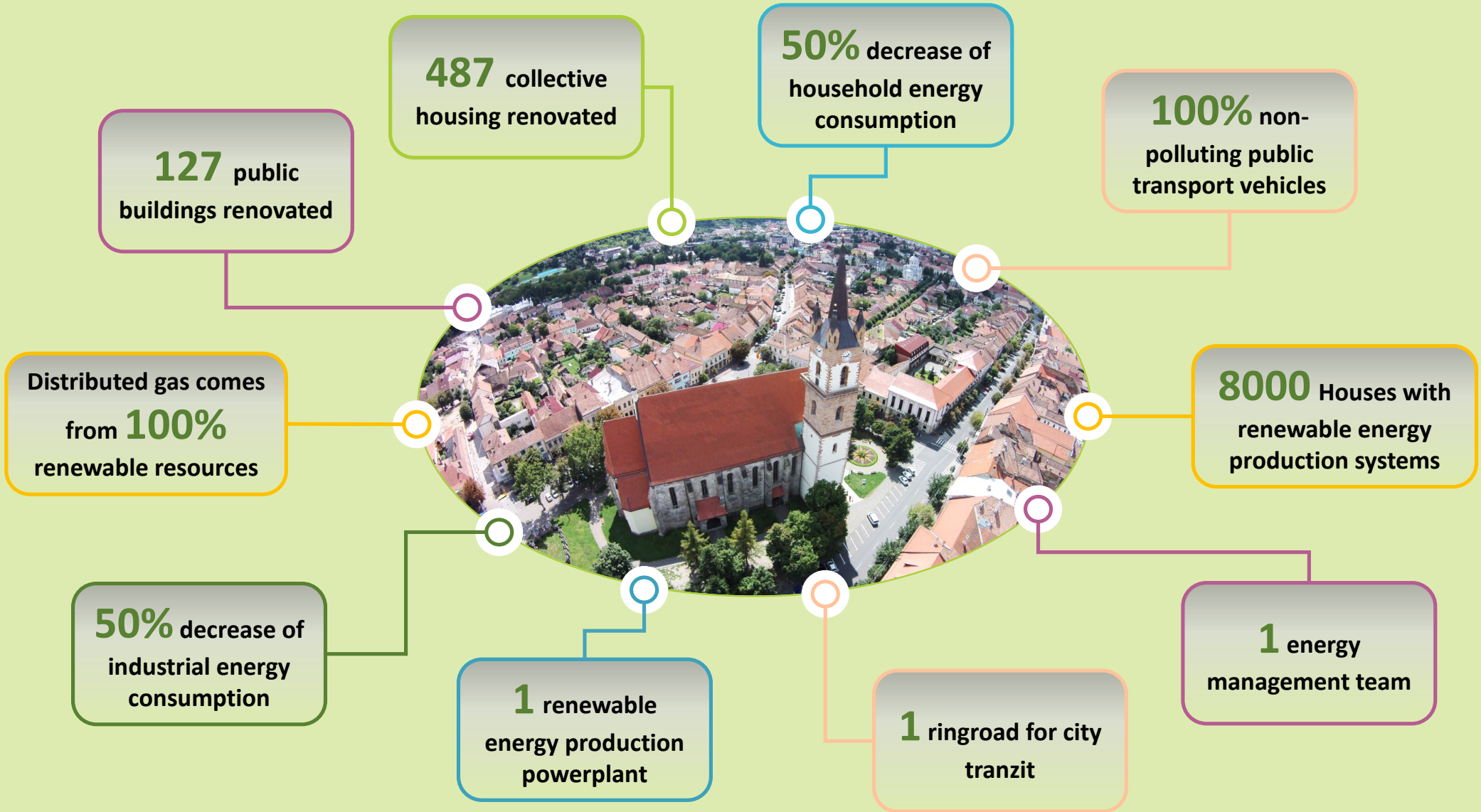


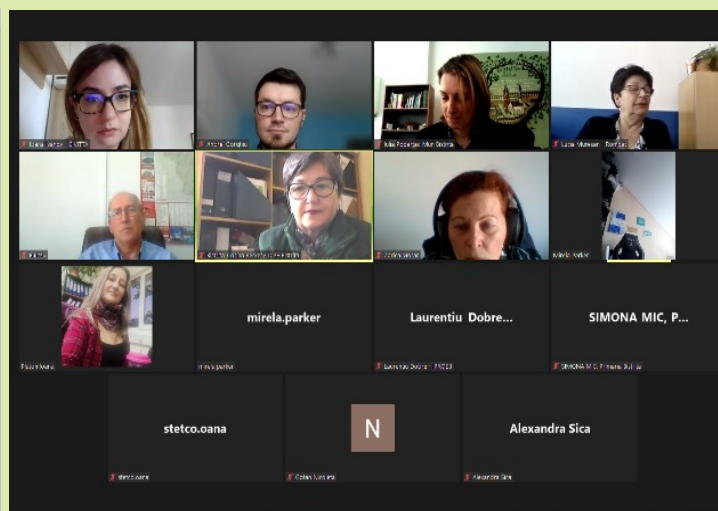
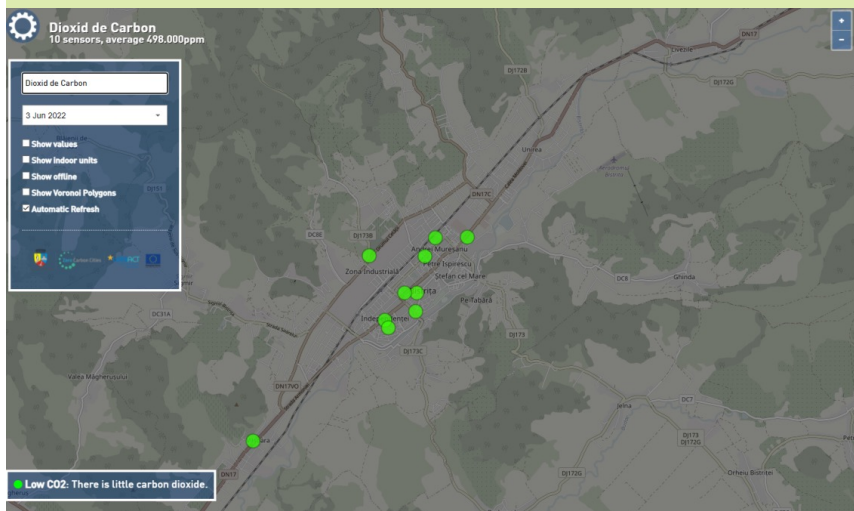
Complementary actions  
5.4% budget



Energy efficiency  
64.4% budget

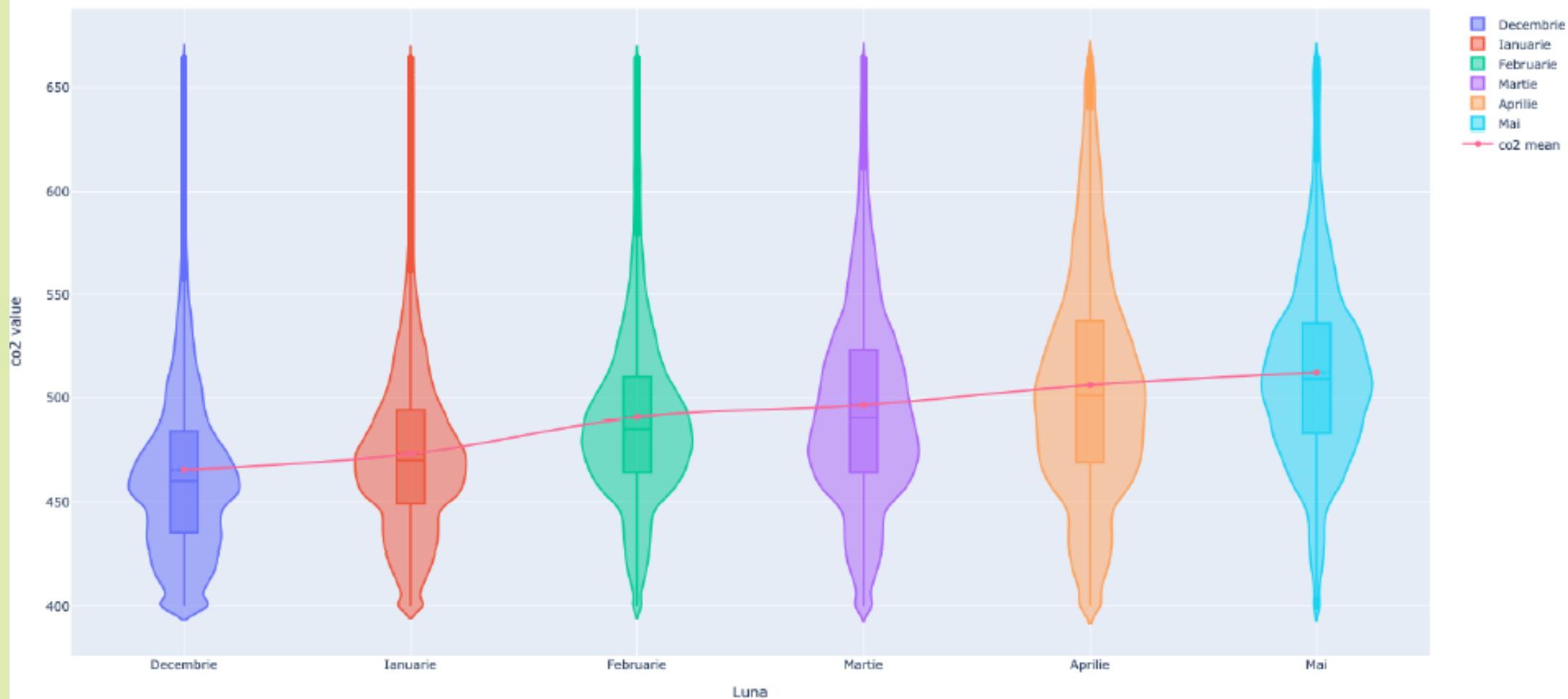


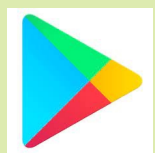






Evoluția co2 la nivelul lunilor din intervalul studiat





# Thank you for your attention!



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# Tampere



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# CITY OF TAMPERE

Images: Visit Tampere / Laura Vanzo



# CARBON-NEUTRAL Sustainable Tampere 2030

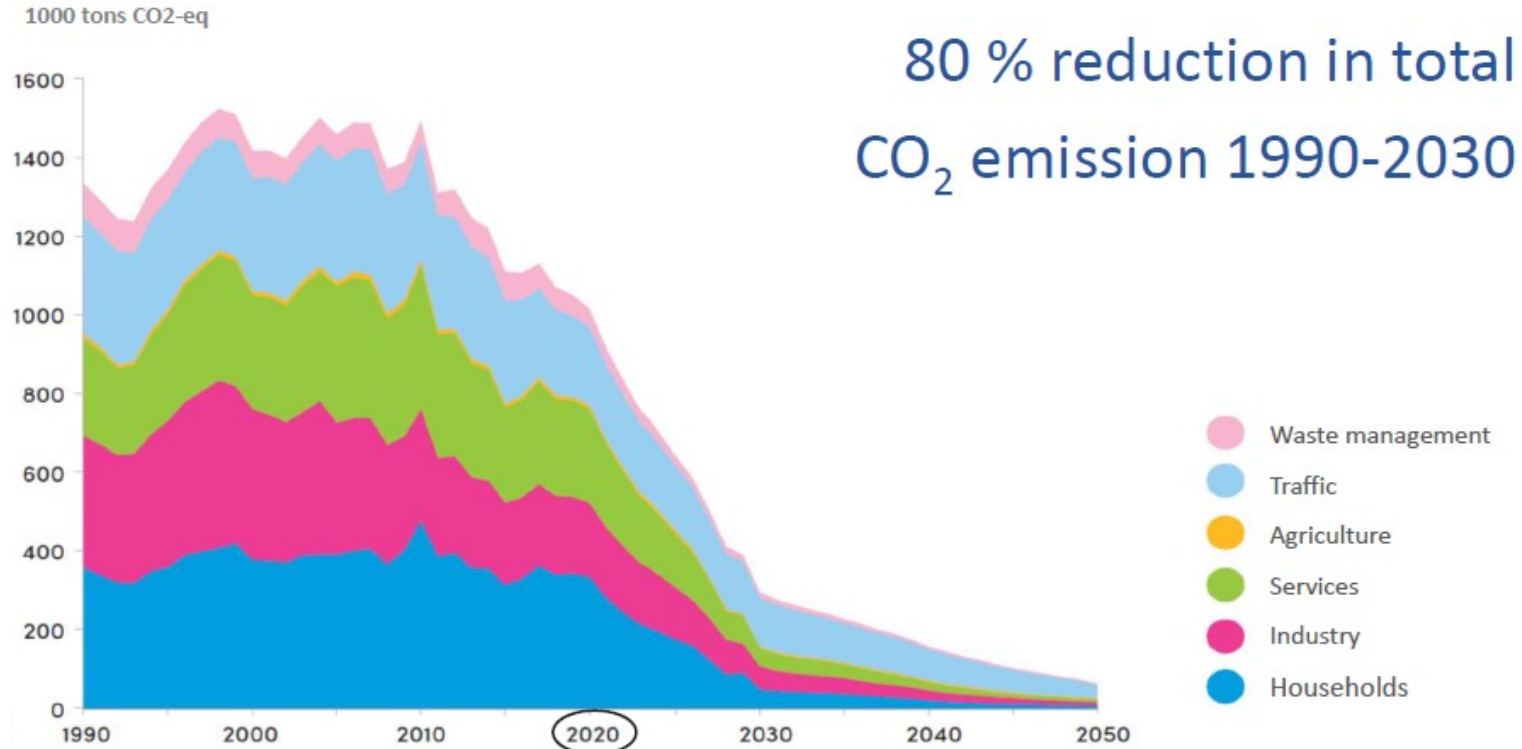


Image: Visit Tampere / Laura Vanzo

13.6.2022

2

# Roadmap

THEME 4 SUSTAINABLE ENERGY

Measure package 4.4.	Giving up oil heating	Timetable in council terms	Responsibility
<b>DESCRIPTION</b> The city will give up oil heating and encourage oil heaters to switch to renewable energy	161. Oil heating hubs in housing will be identified in order to encourage and guide the change in heating methods more effectively. An operating model will be established to support the change of heating system in detached homes using oil heating. Efforts will be made to make use of government subsidies.	2020-21 2021-25	Sustainable City, Ekokumppanit Oy, Building Control Department
	162. Oil heating will be given up in the city's own buildings by 2025. Efforts will be made to make use of government subsidies.	2020-21 2021-25	Real Estate and Energy Policy, Tampereen Tilapalvelut Oy
<b>Emission reduction</b>	●●●●○		
<b>Cost estimate</b>	●●○○○		
<b>Other benefits</b>	<ul style="list-style-type: none"> <li>Increased energy self-sufficiency</li> <li>New services and business models</li> <li>Decreased local emissions</li> </ul>		

EXAMPLES AND IMPACT ASSESSMENTS

162. Estimated emissions and costs: Abandoning oil heating in city properties

DEVELOPMENT TRAJECTORIES TO BE REVIEWED:

Scenario	Definition
Business as usual	In city properties, oil heating will be replaced by water to air heat pumps, 5% per year.
KT2030 scenario	City properties will replace oil heating with water to air heat pump systems by 2025.



RESULTS OF THE REVIEW OF KT2030 SCENARIO COMPARED TO CURRENT DEVELOPMENT:

KT2030 scenario	Result												
<b>Cost impact in the programming period</b>	The cost savings for the programming period for abandoning oil heating in city properties are EUR 100,000. Taking into account the life cycle of the investments, and when they are only partially evaluated for the programming period, the net present value of the measure is EUR -900,000. The measure is therefore financially viable.												
<b>Emissions reduction in 2030</b>	620 tCO <sub>2</sub> e												
<b>Cost of emission reduction</b>	EUR -170 per tCO <sub>2</sub> e												
	<table border="1"> <thead> <tr> <th></th> <th>Investments (EUR 1,000)</th> <th>Operating expenses (EUR 1,000)</th> <th>Total (EUR 1,000)</th> </tr> </thead> <tbody> <tr> <td>Measure 162</td> <td>1,500</td> <td>-1,600</td> <td>-100</td> </tr> <tr> <td><b>Total</b></td> <td><b>1,500</b></td> <td><b>-1,600</b></td> <td><b>-100</b></td> </tr> </tbody> </table>		Investments (EUR 1,000)	Operating expenses (EUR 1,000)	Total (EUR 1,000)	Measure 162	1,500	-1,600	-100	<b>Total</b>	<b>1,500</b>	<b>-1,600</b>	<b>-100</b>
	Investments (EUR 1,000)	Operating expenses (EUR 1,000)	Total (EUR 1,000)										
Measure 162	1,500	-1,600	-100										
<b>Total</b>	<b>1,500</b>	<b>-1,600</b>	<b>-100</b>										

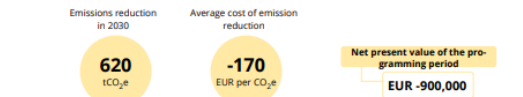
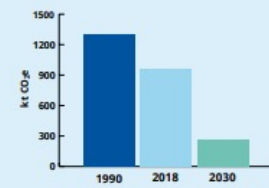


Figure 55: Investments and operating expenses of abandoning oil heating under KT2030 scenario during the programming period, emission reductions in 2030 (tCO<sub>2</sub>e) and the average cost of emission reductions (EUR per tCO<sub>2</sub>e) compared to current development. The discounted net present value of the measure for the programming period is also presented. The calculation was made in the City of Tampere's Sustainable Development Unit, and initial values for the calculation were received from Tampereen Tilapalvelut Oy.

SUMMARY



Tampere greenhouse gas emissions in 1990 and 2018. Target 2030.

Six themes: urban planning, mobility, construction, energy, consumption, nature. 236 measures.



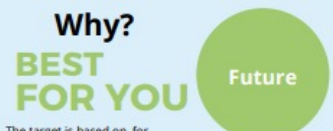
We created the roadmap together with the city's service areas and units. We also need all residents, businesses and communities to be involved.



We use indicators and results to develop and update the roadmap.



Reduction of greenhouse gas emissions 80%. Carbon sinks or compensation 20%.



The target is based on, for example: the Tampere Strategy 2030, the Sustainable Tampere 2030 Guidelines, the Covenant of Mayors for Climate and Energy, and the UN 2030 Agenda for Sustainable Development.

Climate change mitigation and sustainable development are vital for a secure future.



With the city's measures described in the roadmap, we can achieve an emission reduction of around 72% by 2030. The full impact of all measures cannot be assessed yet. The carbon-neutrality goal can only be achieved through cooperation between the city, its residents, businesses and communities.





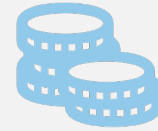
Image: Visit Tampere / Laura Vanzo

# Climate budget

The climate budget  
combines climate work  
with the **city's budget** and  
**financial statements**



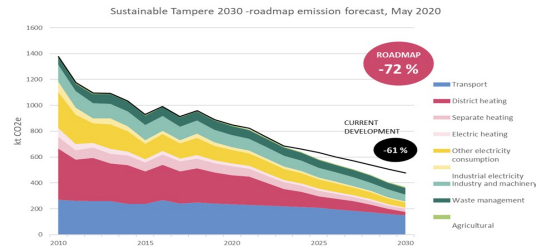
# Climate budget consists of two parts



*The climate emissions  
budget*



*The financial plan for climate  
actions*



monitors the progress of the carbon neutrality target



information for decision makers



increases the weight of climate action in economic planning



transparency for local residents



Image: Visit Tampere / Laura Vanzo





requires a willingness on the part of budget drafters but also decision-makers important and new choices in the long run

Image: Business Tampere / Mirella Mellonmaa



Image: Alexas Fotos/Pixabay



Oslo's climate budget has been the starting point

developed piece by piece and started very simply

The mayor stands firmly behind the climate budget



Image: Elle Nurmi, Talouselämä

6/13/22

8

8



Experts from the Climate and Environment Policy Unit compile the budget in cooperation with the financial department



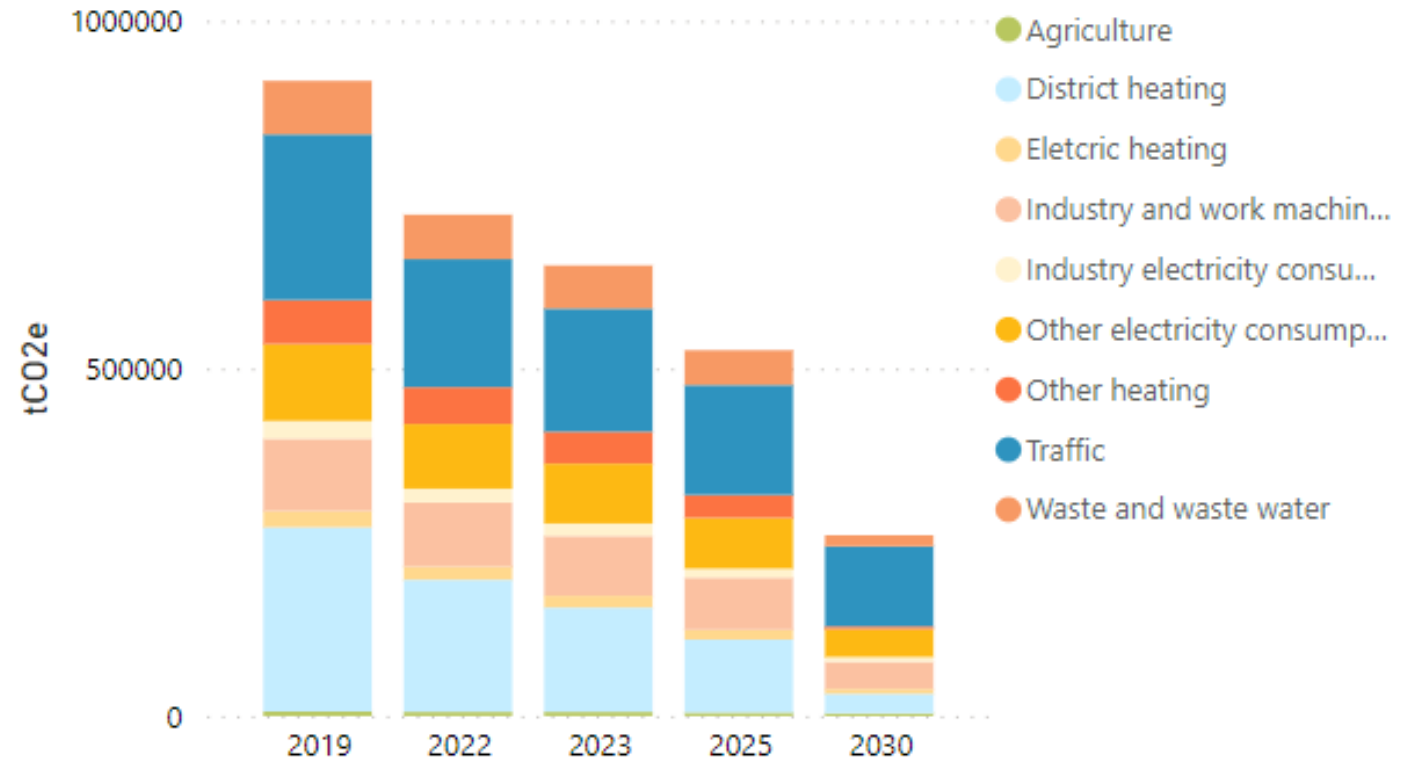
City units are asked for information about the measures



Image: Business Tampere / Mirella Mellonmaa

# Emissions budget

Actual emissions 2019 and emissions budget for 2022, 2023, 2025 ja 2030



Emission sector	2019	Annual need for change	2022	2023	2025	2030
Other heating	63300	-5400	53000	46000	33000	4000
Waste and waste water	76900	-5500	64000	62000	50000	16000
District heating	265000	-21500	190000	150000	105000	28000
Traffic	238200	-11200	184000	177000	158000	115000
Electric heating	23300	-1500	19000	17000	14000	7000
Agriculture	6500	-200	6000	6000	5000	4000
Other electricity consumption	110500	-6400	93000	86000	73000	40000
Industry electricity consumption	25700	-1700	20000	18000	13000	7000
Industry and work machines	104000	-5900	92000	86000	75000	39000
<b>Sum</b>	<b>913400</b>		<b>721000</b>	<b>648000</b>	<b>526000</b>	<b>260000</b>

# Financial plan

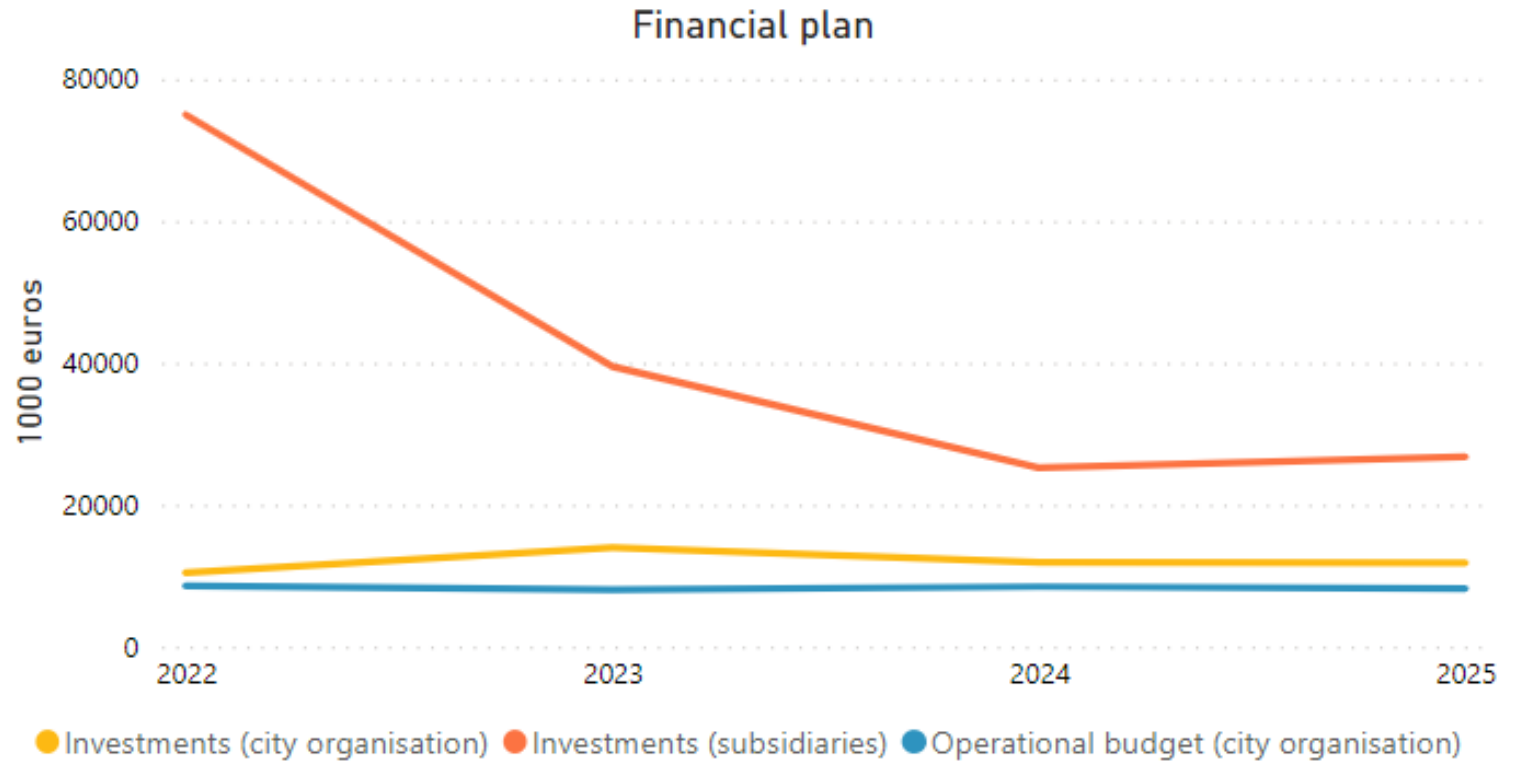




Image: Visit Tampere / Laura Vanzo

# Operating economy

## Investments



13.6.2022

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## Tips for creating climate budget



Image: <https://interactioninstitute.org/networks-for-change-collaboration-and-cooperation/>



Image: [Top Tips for Change Request Management | Wrike](#)



# Thank you for your attention!



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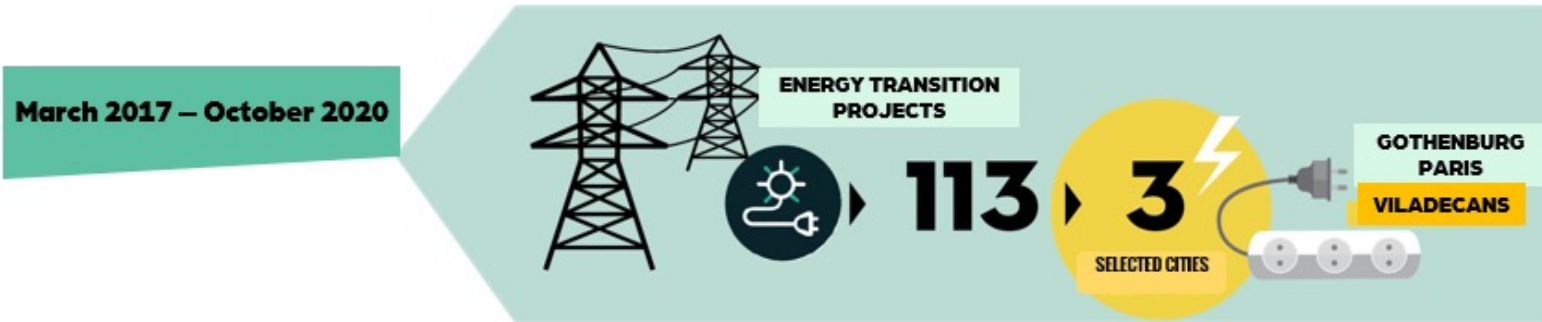
# Viladecans

2022

## THE VILAWATT UIA

### 1st UIA call - Innovative projects

VILAWATT



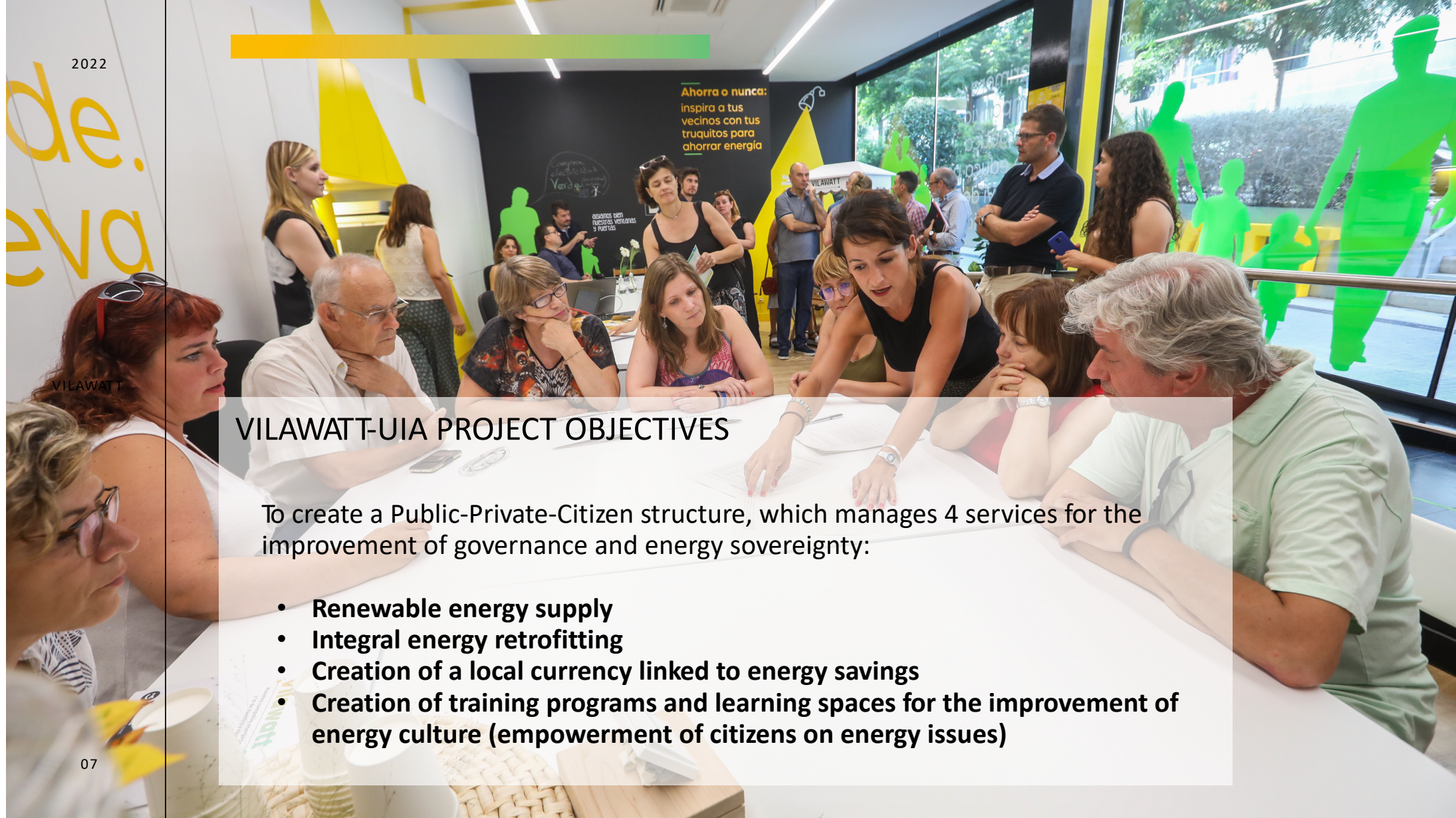
Global cost of the project: **5'3 M€**

UIA financing: **80%**

**378**  
PROJECTS SUBMITTED

**18** SELECTED CITIES

04



VILAWATT

## VILAWATT-UIA PROJECT OBJECTIVES

To create a Public-Private-Citizen structure, which manages 4 services for the improvement of governance and energy sovereignty:

- **Renewable energy supply**
- **Integral energy retrofitting**
- **Creation of a local currency linked to energy savings**
- **Creation of training programs and learning spaces for the improvement of energy culture (empowerment of citizens on energy issues)**

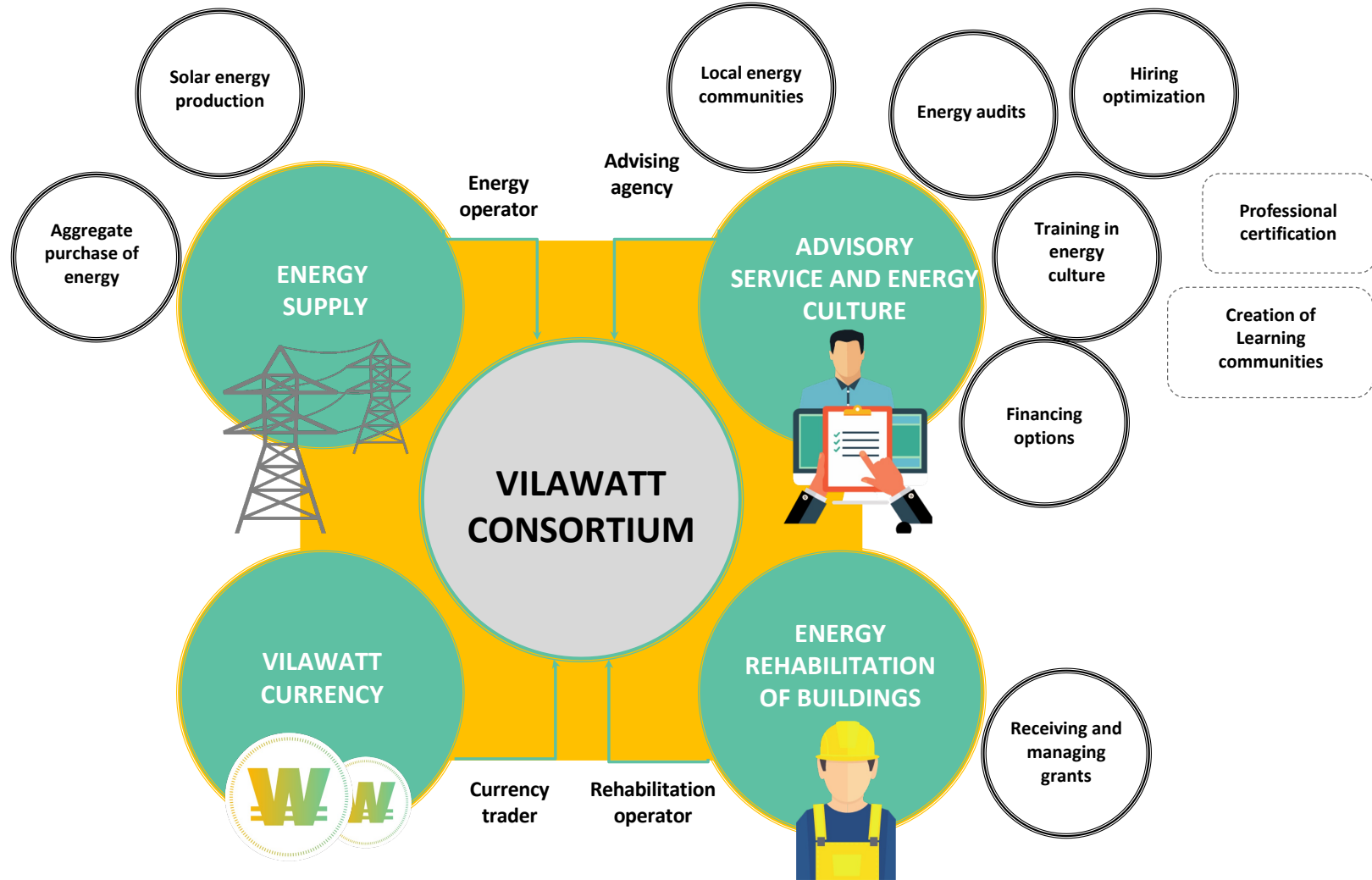


## THE PUBLIC-PRIVATE STRUCTURE: THE CO-GOVERNANCE FORMULA

### The Vilawatt Consortium

- **Barcelona Metropolitan Area (15%)**
- **Viladecans City Council (65%)**
- **Associations 20%**
  - **Citizen Association for Energy Transition**
  - **Companies & businesses Association for energy transition**

## MAIN SERVICES PROVIDED BY THE VILAWATT CONSORTIUM



2021

TRANSFERRING THE VILAWATT EXPERIENCE



VILAWATT

VILAWATT UIA – UTM (URBACT TRANSFER MECHANISM)

Seraing – Belgium

Nagykanizsa – Hungary

Trikala - Greece



06

2021

## OBJECTIVES AND RESULTS

VILAWATT

### Objectives:

To transfer Vilawatt UIA to 3  
European cities

### Results:

Each city will have to develop an  
Investment Plan to define how they will  
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new context.

15



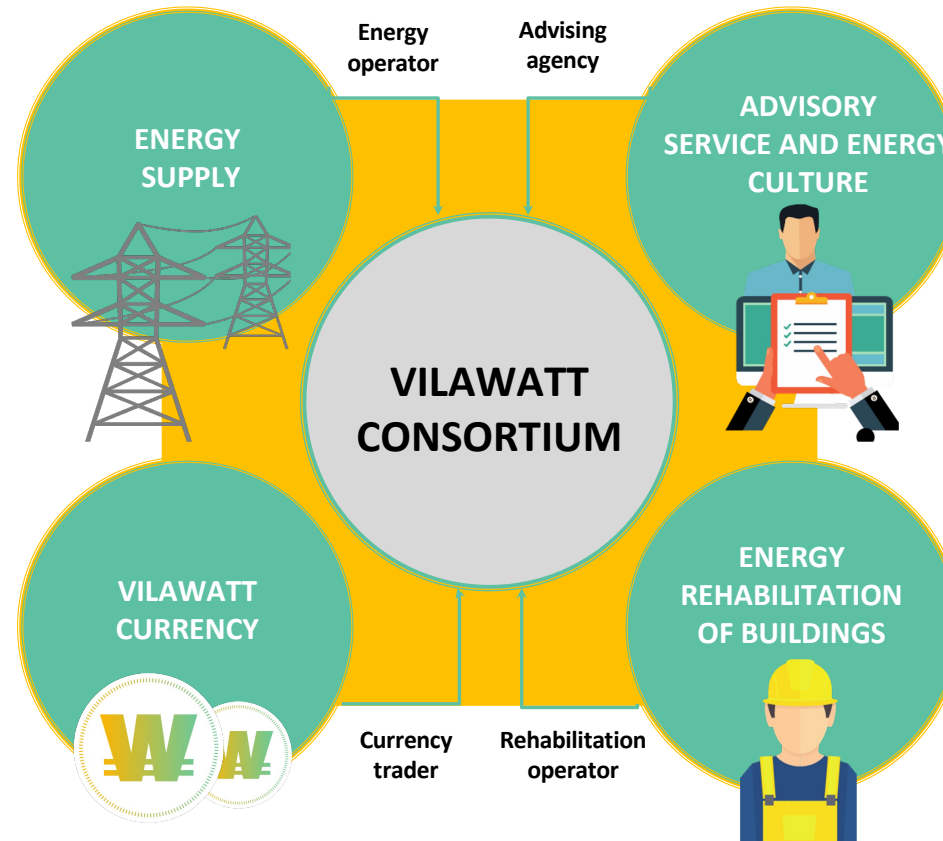
## HOW IS THE TRANSFER PLANNED?

UNDERSTAND

ADAPT

PREPARE IMPLEMENTING

VILAWATT



### UNDERSTAND PHASE:

- DEEP DIVE
- MODULLING (5 PILLARS)
- SCORECARD

## THE SCORECARD

- ✓ Tool developed by Donal O’Herlihy, Vilawatt UTM expert, to help monitor the transfer process among partners. It is based on Vilawatt UIA project Deep Dive and desk review during the UNDERSTAND PHASE
- ✓ It operates as a guide for self-appraisal that provides a **baseline** for partner cities’ initial positioning and, during the transfer process, **progress monitoring** of the partner cities.
- ✓ The scorecard identifies a set of criteria that profiles the strength of each partner’s “positions” with respect to adopting each of the Vilawatt pillars.
- ✓ It is composed of 5 tables, one for each pillar.

# THE SCORECARD – EXAMPLE OF SUCCESS FACTORS – LEARNING COMMUNITIES PILLAR

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## THE SCORECARD – EXAMPLE TABLE LEARNING COMMUNITIES PILLAR

Each pillar has 6-8 criteria against which a city’s positioning can be rated. There is detailed supporting documentation that describes the criteria and why they were selected – this encourages consistent scoring.

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Learning Communities Scorecard											
	1	2	3	4	5	6	7	8	9	10	
We have no resources (money, people or time) to implement intensive communication campaigns, run workshops, develop and deliver games etc											We have the resources (money, people or time) to implement intensive communication campaigns, run workshops, develop and deliver games etc
We have no links to existing associations specialising in energy transition – or have no such organisations											We have strong links to existing associations specialising in energy transition – or have many such organisations
We have no ability to mobilise ANY of the 11 stakeholder groups listed above to enable them to participate											We have existing measures in place to mobilise ALL of the 11 stakeholder groups listed above to enable them to participate
Professional Bodies are not open to accrediting Continuous Professional Development from anyone else											Professional Bodies are very open to accrediting Continuous Professional Development from anyone else
For key stakeholders, we have no means to engage with them – they will not participate											For key stakeholders, we are engaged with them and they will participate
We have no way of identifying who within the key stakeholder groups might create an association or help them to do so											We have identified key people within the key stakeholder groups who will create an association and can help them to do so (legal support etc)

## THE SCORECARD – HOW DOES IT WORK?

Partners are requested to score the questions at the template several times during the project:

- The partners scored themselves at the start of the project (May 2021),
- During Transnational Meeting 4 (March 2022)
- And will complete a final assessment at the end of the project.

### CITIES TEST SCORECARD



Sering



## THE SCORECARD – PROGRESS

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Learning Communities Scorecard											
	1	2	3	4	5	6	7	8	9	10	
We have no resources (money, people or time) to implement intensive communication campaigns, run workshops, develop and deliver games etc			●								We have the resources (money, people or time) to implement intensive communication campaigns, run workshops, develop and deliver games etc
We have no links to existing associations specialising in energy transition – or have no such organisations		●									We have strong links to existing associations specialising in energy transition – or have many such organisations
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Professional Bodies are not open to accrediting Continuous Professional Development from anyone else								●			Professional Bodies are very open to accrediting Continuous Professional Development from anyone else
For <u>key stakeholders</u> , we have no means to engage with them – they will not participate	●										For <u>key stakeholders</u> , we are engaged with them and they will participate
We have no way of identifying who within the key stakeholder groups might create an association or help them to do so	●										We have identified key people within the key stakeholder groups who will create an association and can help them to do so (legal support etc)

Example 1st score - May 2021

## THE SCORECARD – PROGRESS

VILAWATT

Learning Communities Scorecard										
	1	2	3	4	5	6	7	8	9	10
We have no resources (money, people or time) to implement intensive communication campaigns, run workshops, develop and deliver games etc			●	→		●				
We have no links to existing associations specialising in energy transition – or have no such organisations		●	→		●					
We have no ability to mobilise ANY of the 11 stakeholder groups listed above to enable them to participate	●	→		●						
Professional Bodies are not open to accrediting Continuous Professional Development from anyone else								●		
For <u>key stakeholders</u> , we have no means to engage with them – they will not participate	●	→		●						
We have no way of identifying who within the key stakeholder groups might create an association or help them to do so	●	→		●						
We have the resources (money, people or time) to implement intensive communication campaigns, run workshops, develop and deliver games etc										●
We have strong links to existing associations specialising in energy transition – or have many such organisations										●
We have existing measures in place to mobilise ALL of the 11 stakeholder groups listed above to enable them to participate										●
Professional Bodies are very open to accrediting Continuous Professional Development from anyone else										●
For <u>key stakeholders</u> , we are engaged with them and they will participate										●
We have identified key people within the key stakeholder groups who will create an association and can help them to do so (legal support etc)										●

### Example of 2nd score

● Score May 2021 - ● Score in March 2022  
Single ● on row = no change in position

15

## THE SCORECARD – CONCLUSIONS

- The Scorecard provides a baseline positioning for each Transfer Partner vis a vis work on technical elements and the practical know-how and knowledge required for adapting it.
- The Scorecard facilitates the discussion among project partners and among project partners and project experts on the transfer process.
- It allow partners to have a better understanding (quite visual) of their positioning in the transfer process.



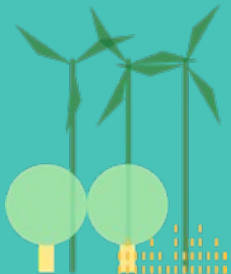
# Thank you for your attention!

# Using carbon data FOR CUTTING CO2 EMISSIONS – The Manchester experience

# MANCHESTER AND GREATER MANCHESTER

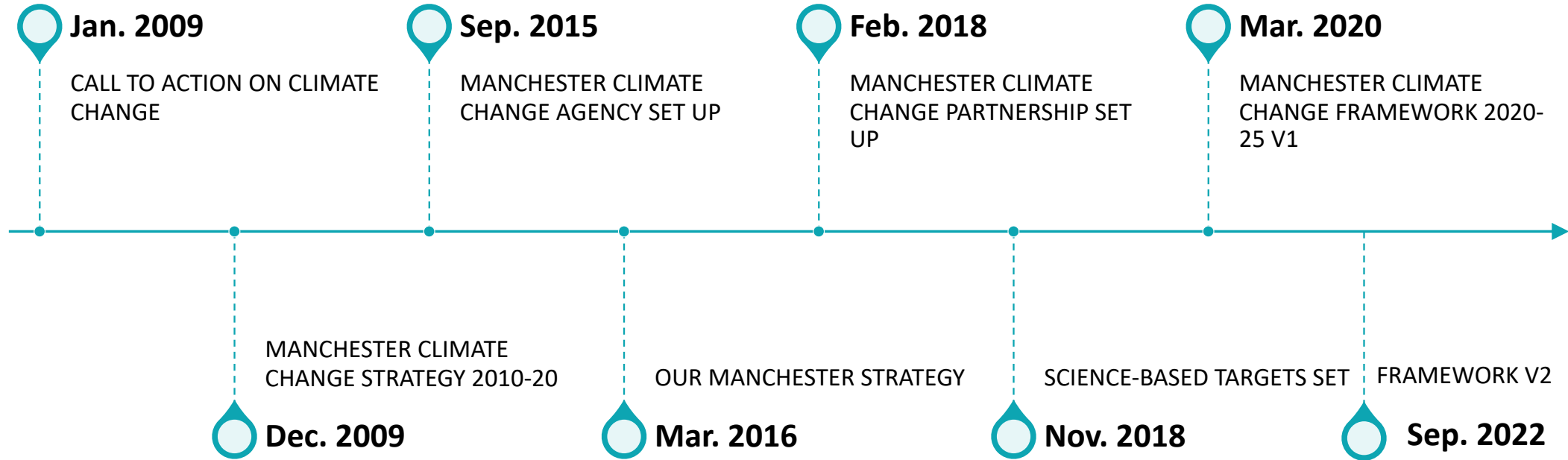


- SECOND LARGEST CITY REGION ECONOMY IN UK
- MANCHESTER CITY COUNCIL AT THE HEART OF IT
- MANCHESTER GVA £19.7 BILLION
- 22,360 BUSINESSES IN MANCHESTER



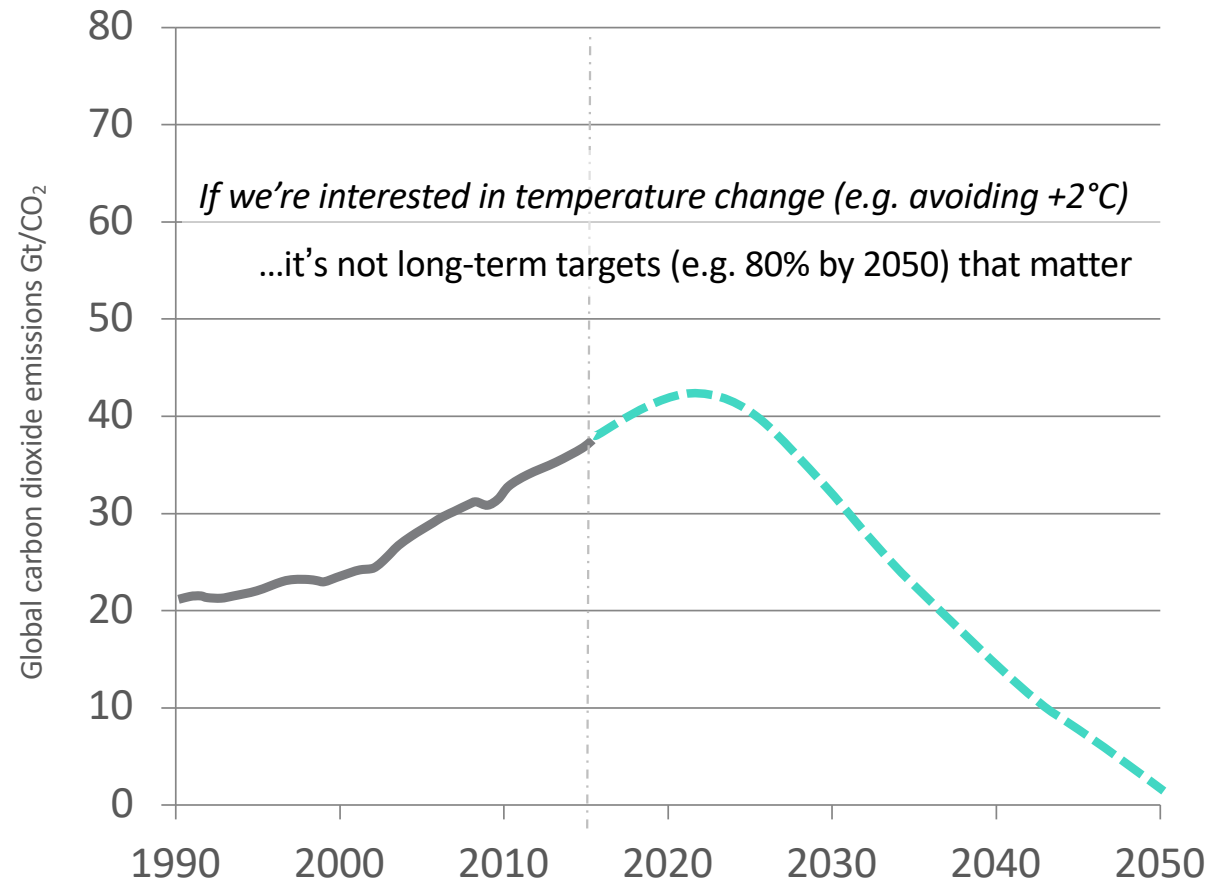
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# BACKGROUND AND CONTEXT

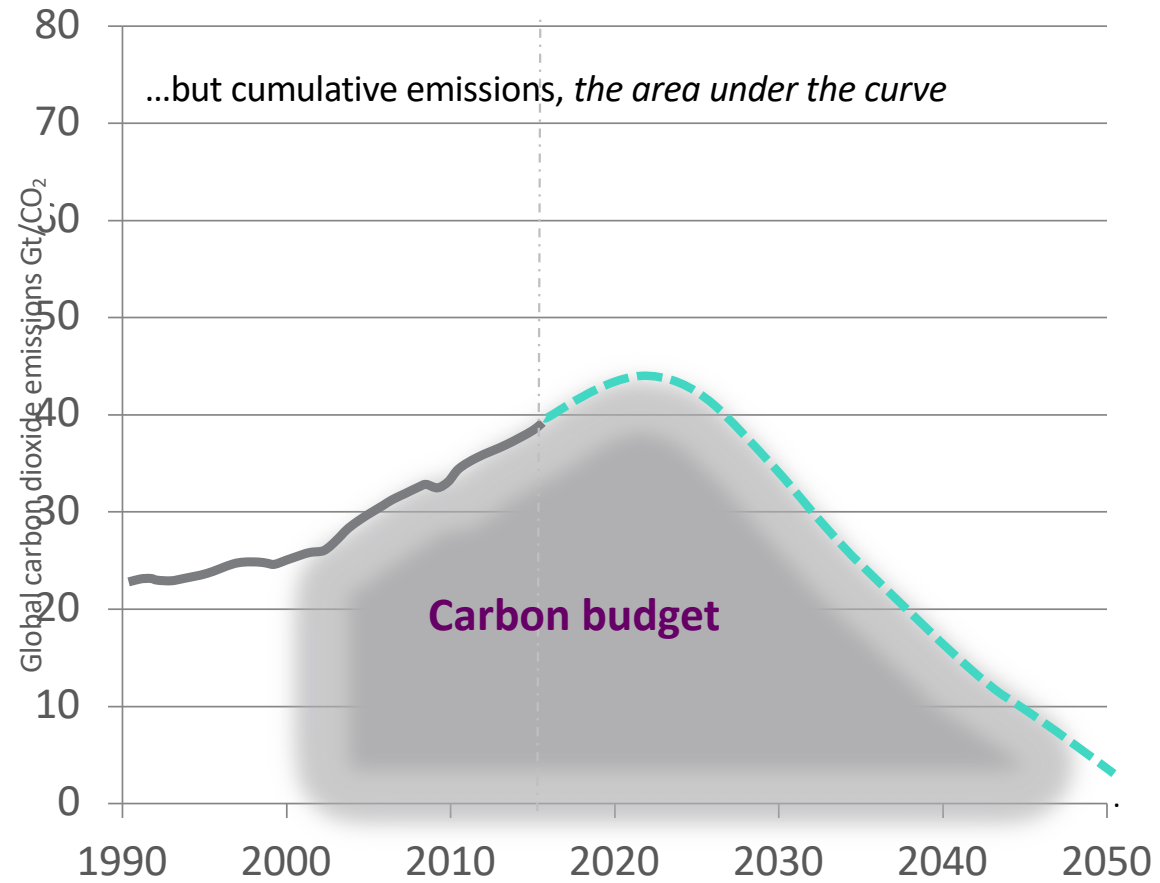


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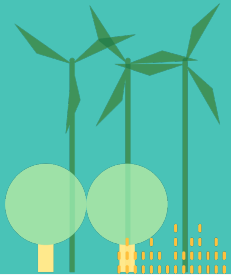
## BACKGROUND



# CARBON BUDGETS



# FAIR SHARE (CARBON BUDGET) OF THE PIE FOR ALL...



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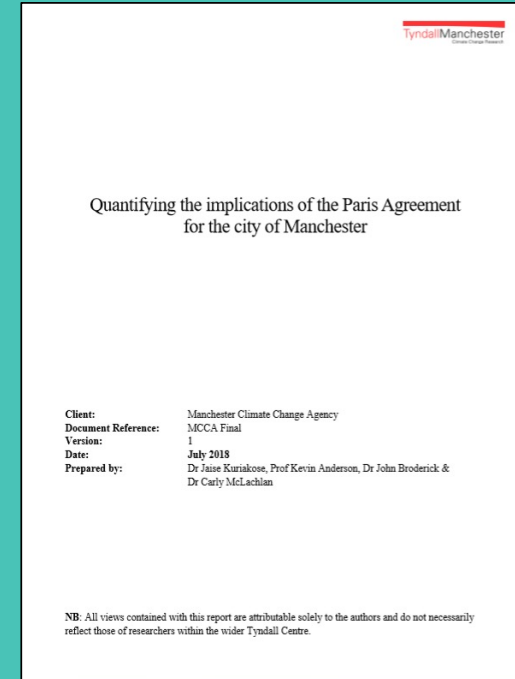
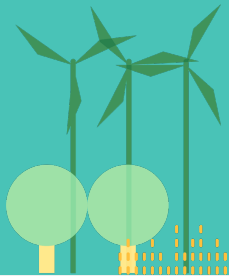
# WHAT WAS RECOMMENDED FOR MANCHESTER?

Recommended carbon budget for  
Manchester City (2018-2100) -  
**15 MtCO<sub>2</sub>**

Average annual reduction rate - **13%**

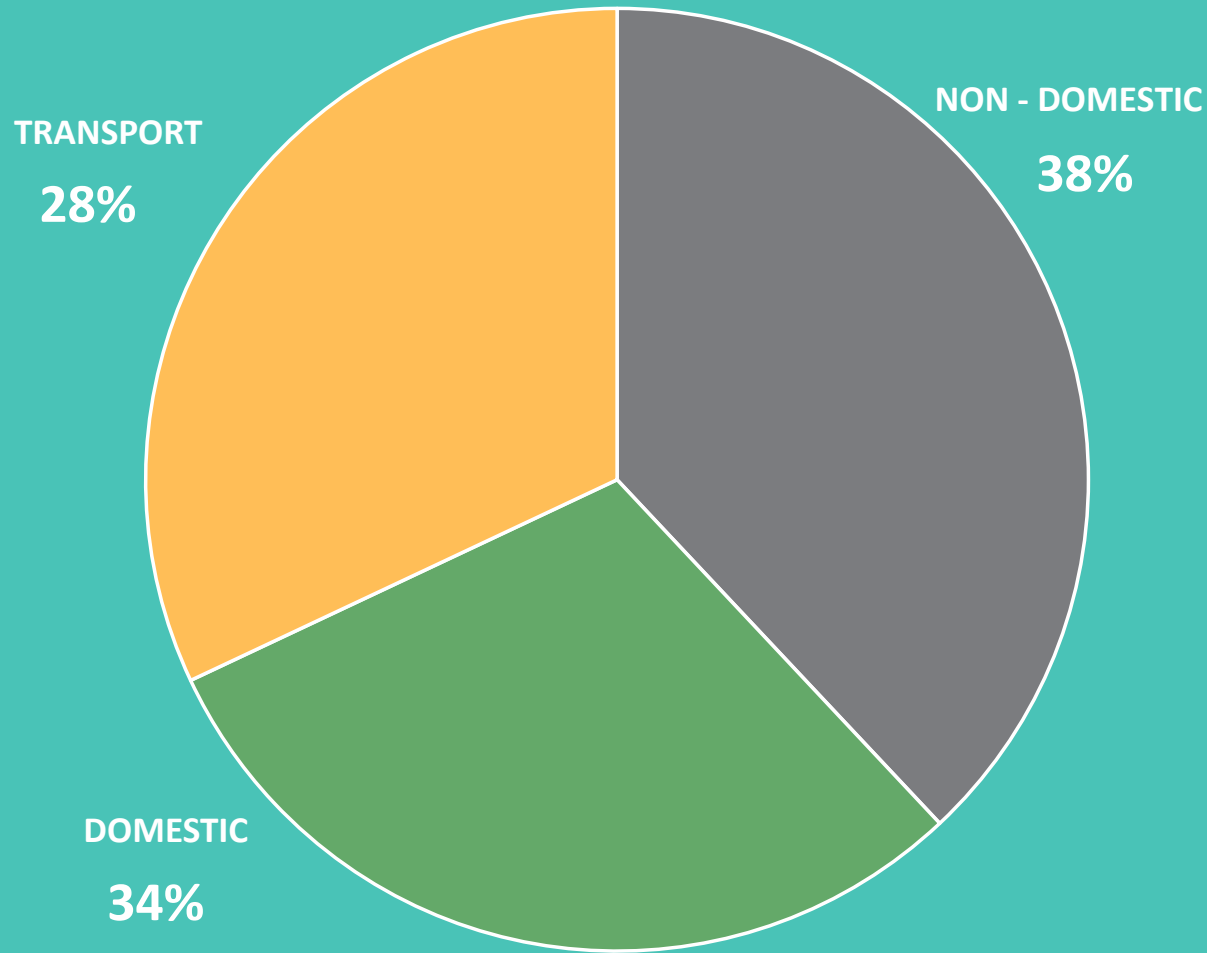
UK carbon budget (2018-2100) - 1907 MtCO<sub>2</sub> + aviation & shipping

NB: Recommended budget for Manchester City is the central value of the six apportionment regimes



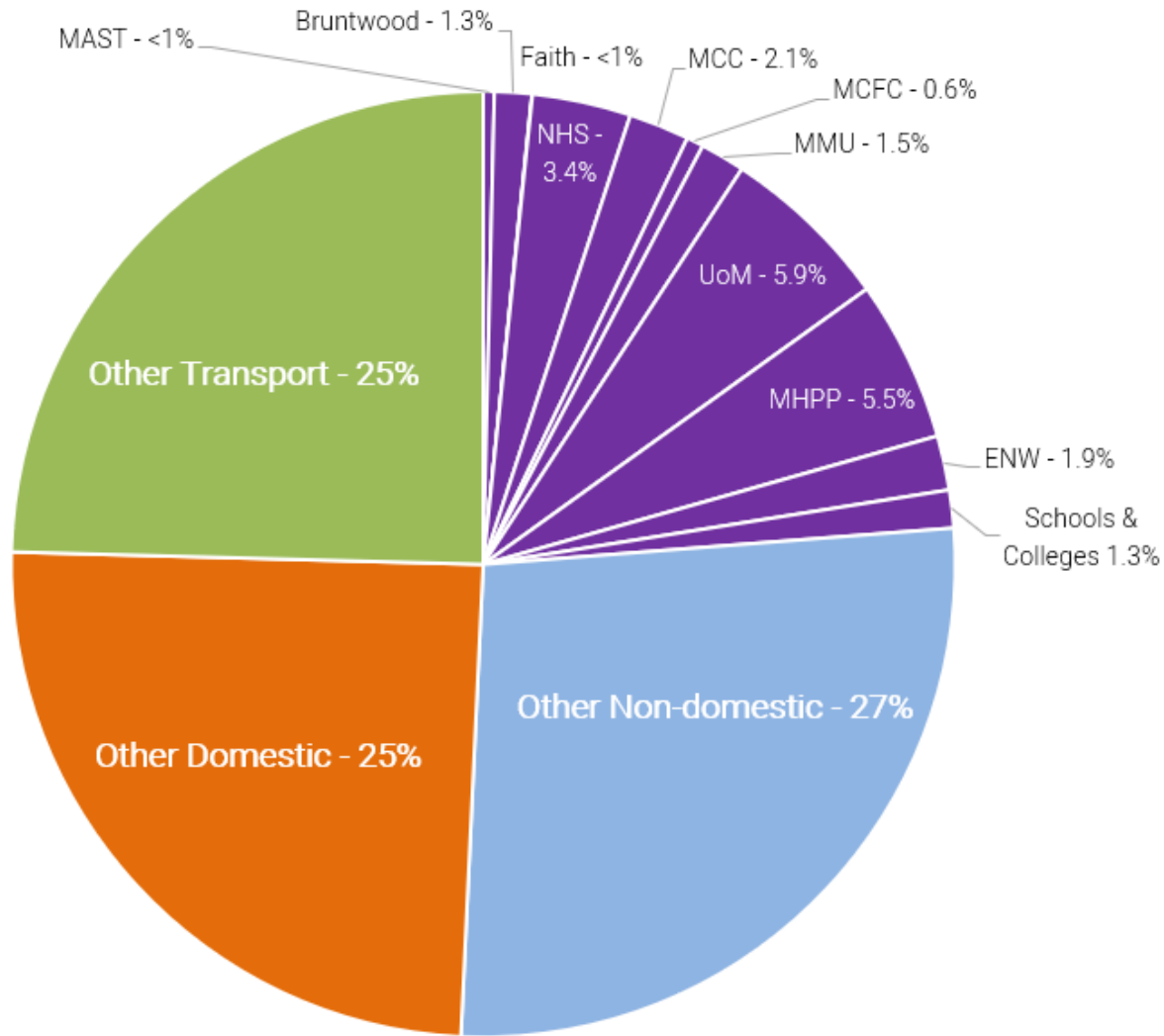
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## BREAK DOWN OF MANCHESTER'S CO2 EMISSIONS BY SECTOR

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# MANCHESTER CLIMATE CHANGE PARTNERSHIP

- RESPONSIBLE FOR 20% OF MANCHESTER'S CARBON EMISSIONS
- HAVE AN INFLUENCE IN THE CITY OVER ENCOURAGING REDUCTION WITH THE OTHER 80% OF EMISSIONS

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# MANCHESTER CLIMATE CHANGE FRAMEWORK 2020-25

Our strategy towards making Manchester a  
thriving, zero carbon, climate resilient city.

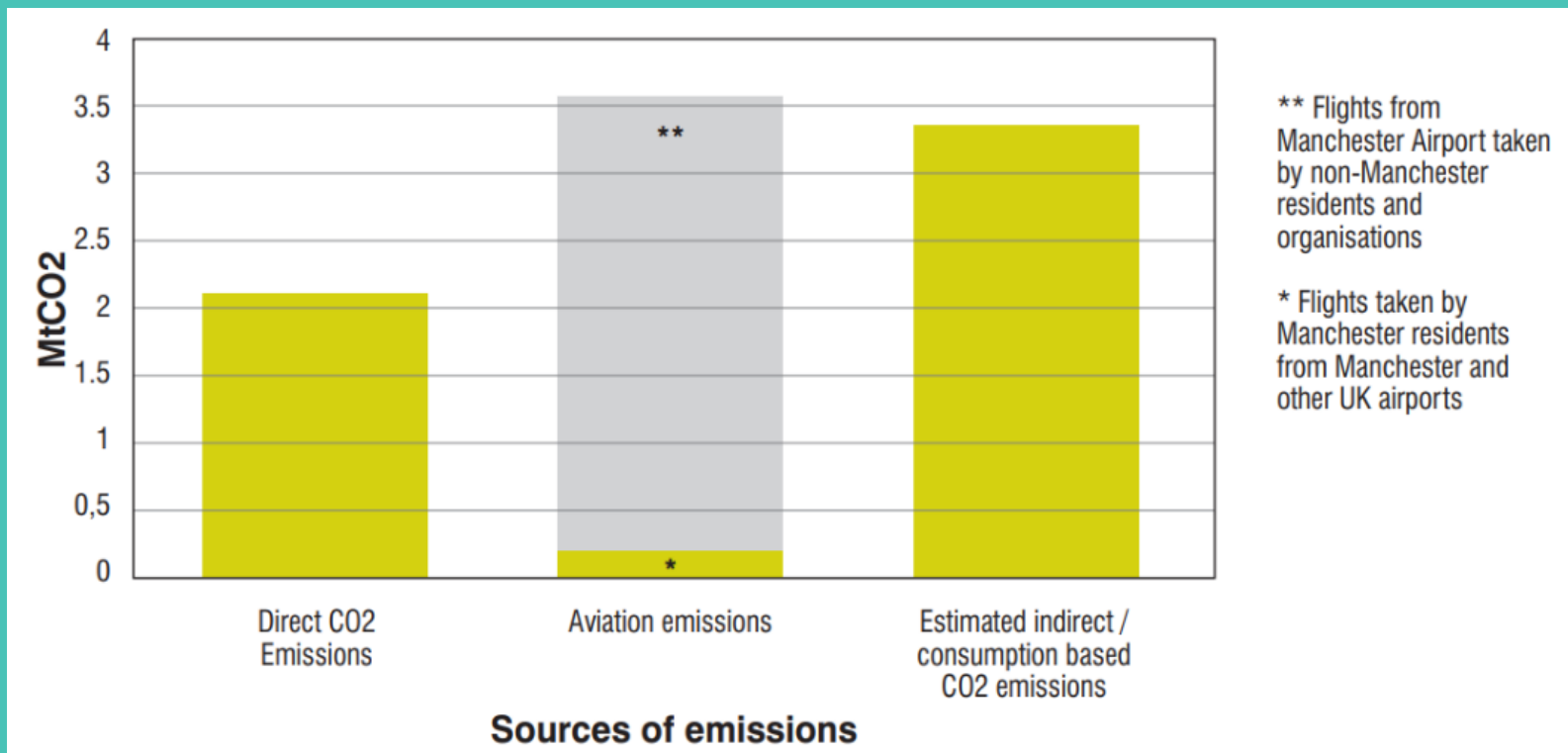
Version 1.0  
February 2020

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# MANCHESTER CLIMATE CHANGE FRAMEWORK 2020-25

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## OUR CO<sub>2</sub> EMISSIONS

Manchester is responsible for three main types of CO<sub>2</sub> emissions:

- Direct CO<sub>2</sub> emissions
- Aviation CO<sub>2</sub> emissions
- Indirect / consumption-based CO<sub>2</sub> emissions

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# DIRECT EMISSIONS SUB-OBJECTIVE

Manchester's direct CO<sub>2</sub> emissions sub-objective:  
To emit a maximum of 15 million tonnes CO<sub>2</sub> from 2018 – 2100  
Allocated around 5 year carbon budgets aiming at zero carbon target by 2038

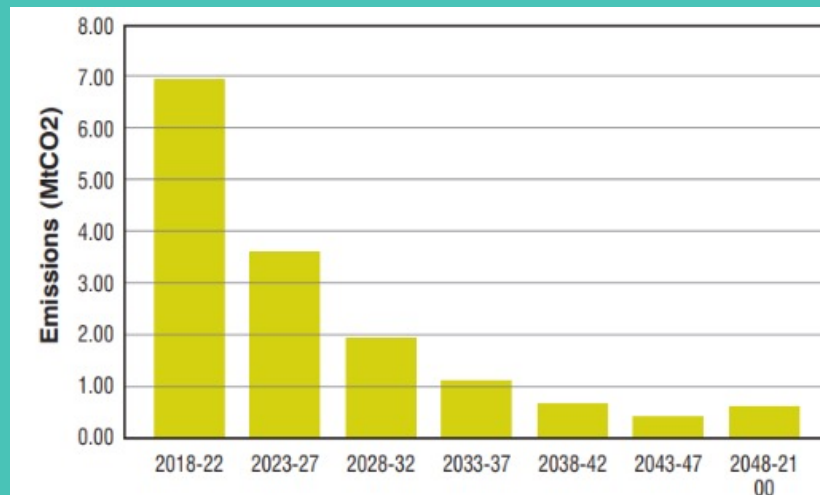
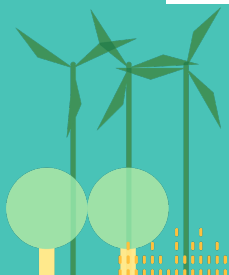


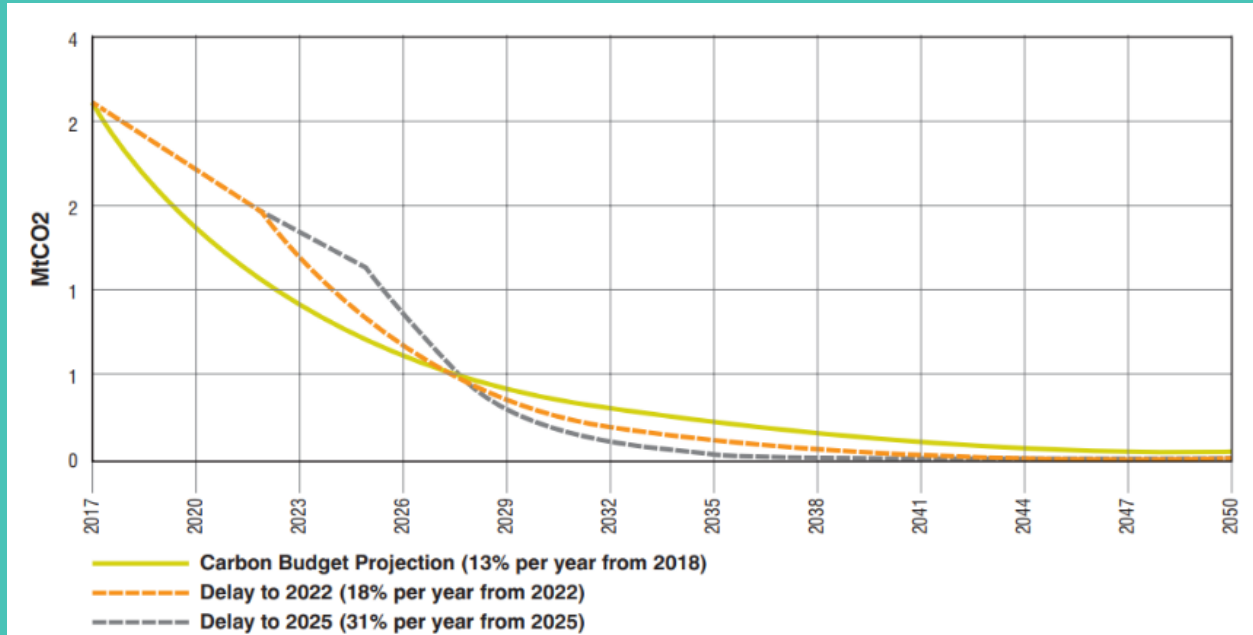
Figure 4: Emissions projections consistent with the 15 MtCO<sub>2</sub> budget – starting from common year (2017)

Time Period	CO <sub>2</sub> budget (MtCO <sub>2</sub> )
2018-22	6.93
2023-27	3.59
2028-32	1.95
2033-37	1.10
2038-42	0.64
2043-47	0.38
2048-2100	0.59
<b>Total</b>	<b>15.17</b>

Table 2: Manchester's 15 MtCO<sub>2</sub> budget by time period



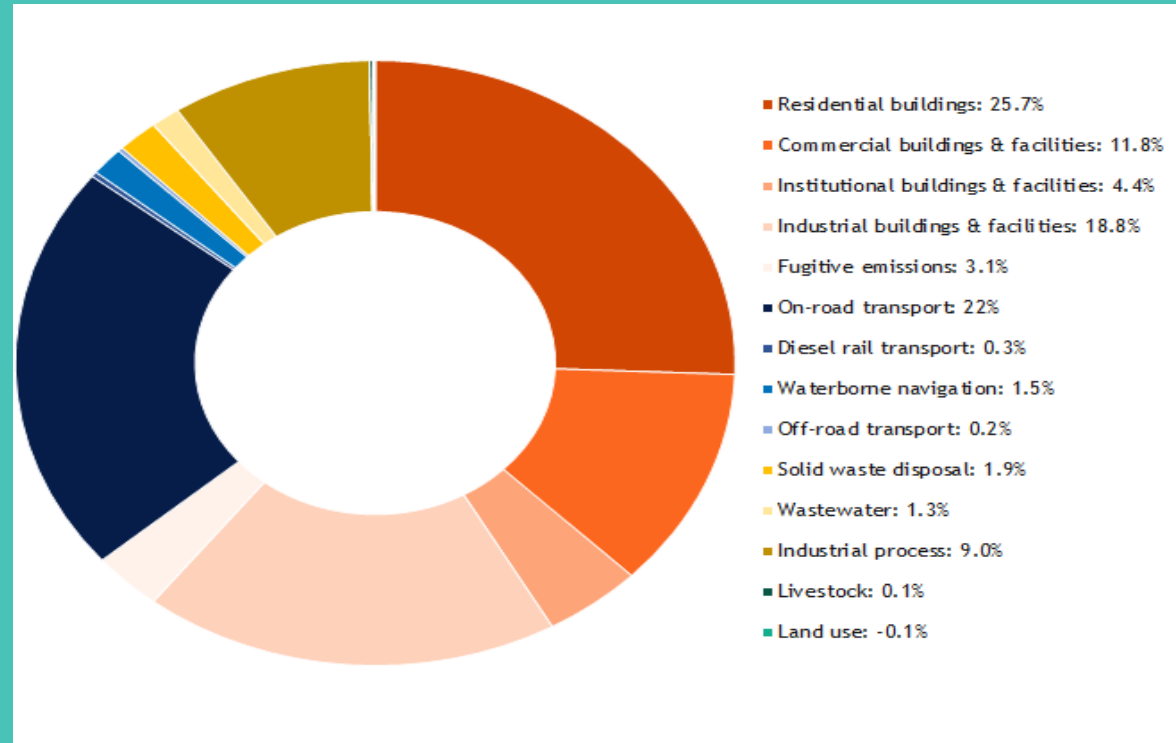
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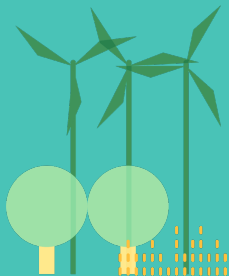
## STAYING ON BUDGET

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# FRAMEWORK 2 – SCALING UP ACTION TO MEET TARGETS

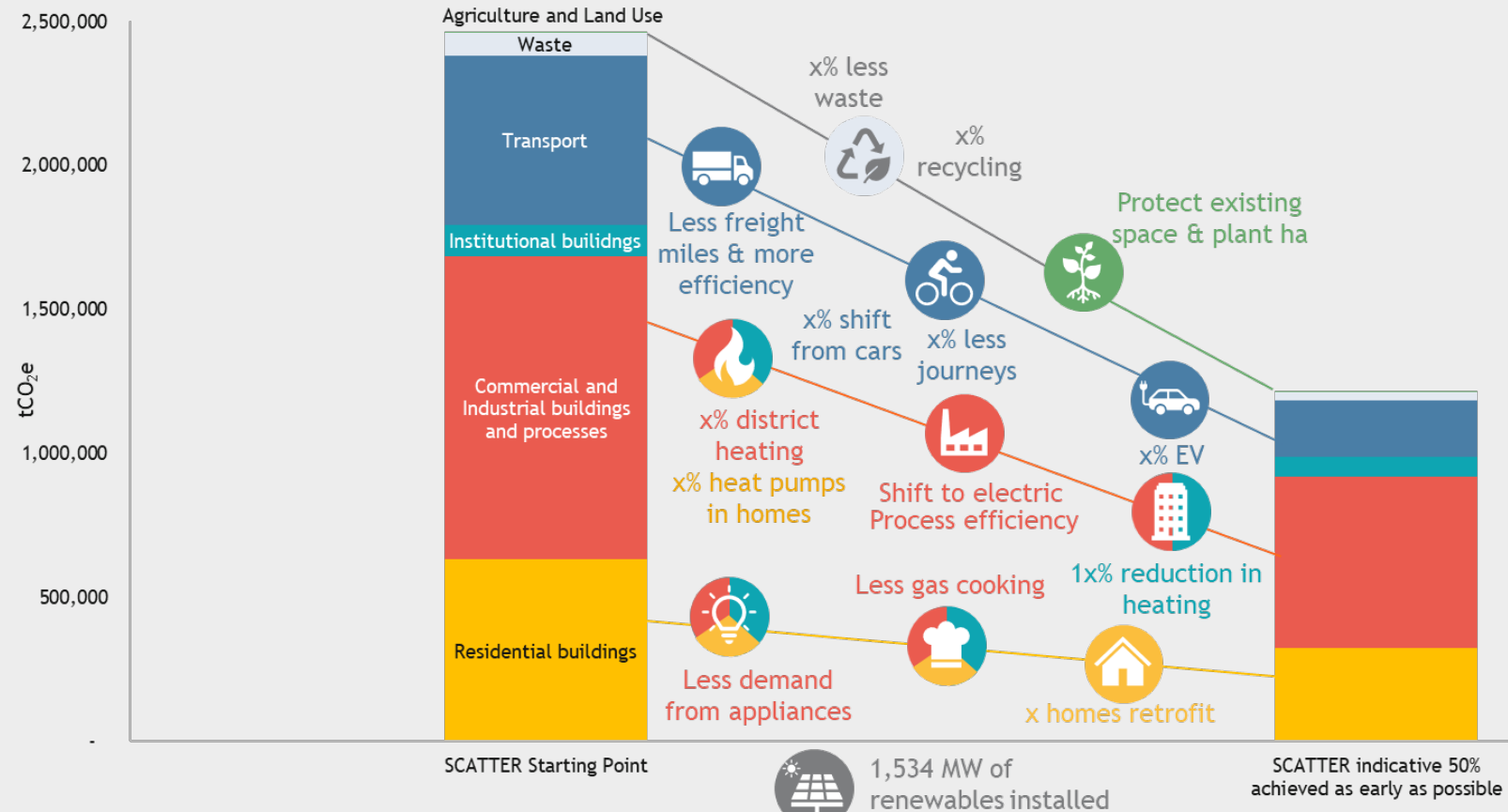


1. ANTHESIS SCATTER DATA IS SHOWING MANCHESTER IS NOT KEEPING TO ITS CARBON TARGETS
2. THE CITY NEEDS TO URGENTLY UPSCALE ACTION TO PUT IT BACK ON TRACK



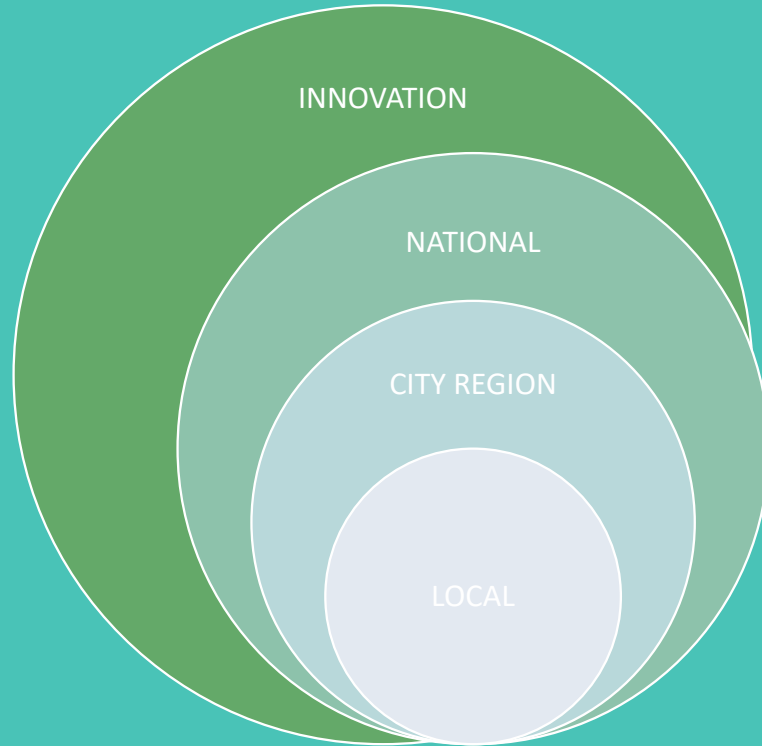
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# SHOWING THE SCALE OF CLIMATE ACTION



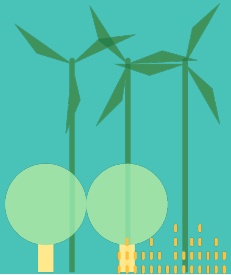


# THE 4 AREAS OF SCALED-UP CLIMATE ACTION



**BOTTOM-UP:**  
ENGAGING AND MOBILISING STAKEHOLDERS

**TOP-DOWN:**  
REMOVING BARRIERS



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## FURTHER INFORMATION

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MANCHESTER CLIMATE CHANGE FRAMEWORK 2020-25  
[www.manchesterclimate.com/framework-2020-25](http://www.manchesterclimate.com/framework-2020-25)

CONTACT MCCA:  
[sean.morris@manchesterclimate.com](mailto:sean.morris@manchesterclimate.com)



# Thank you for your attention!



Avec la participation de



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