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CLIMATE LEADERSHIP GROUP

Ironbark Sustainability

An Introduction to GPC Accounting for Local Governments

3rd May 2018

ICLEI Local Governments for Sustainability

CITY OF MELBOURNE

Agenda

1. Introduction
2. Community Emissions
3. GPC – Fundamentals
4. GPC – A Functional View
5. Next Steps

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Introduction

Welcome!

- Introductions
- Who's in the room
- Today's session
- Informal
- Ask questions along the way

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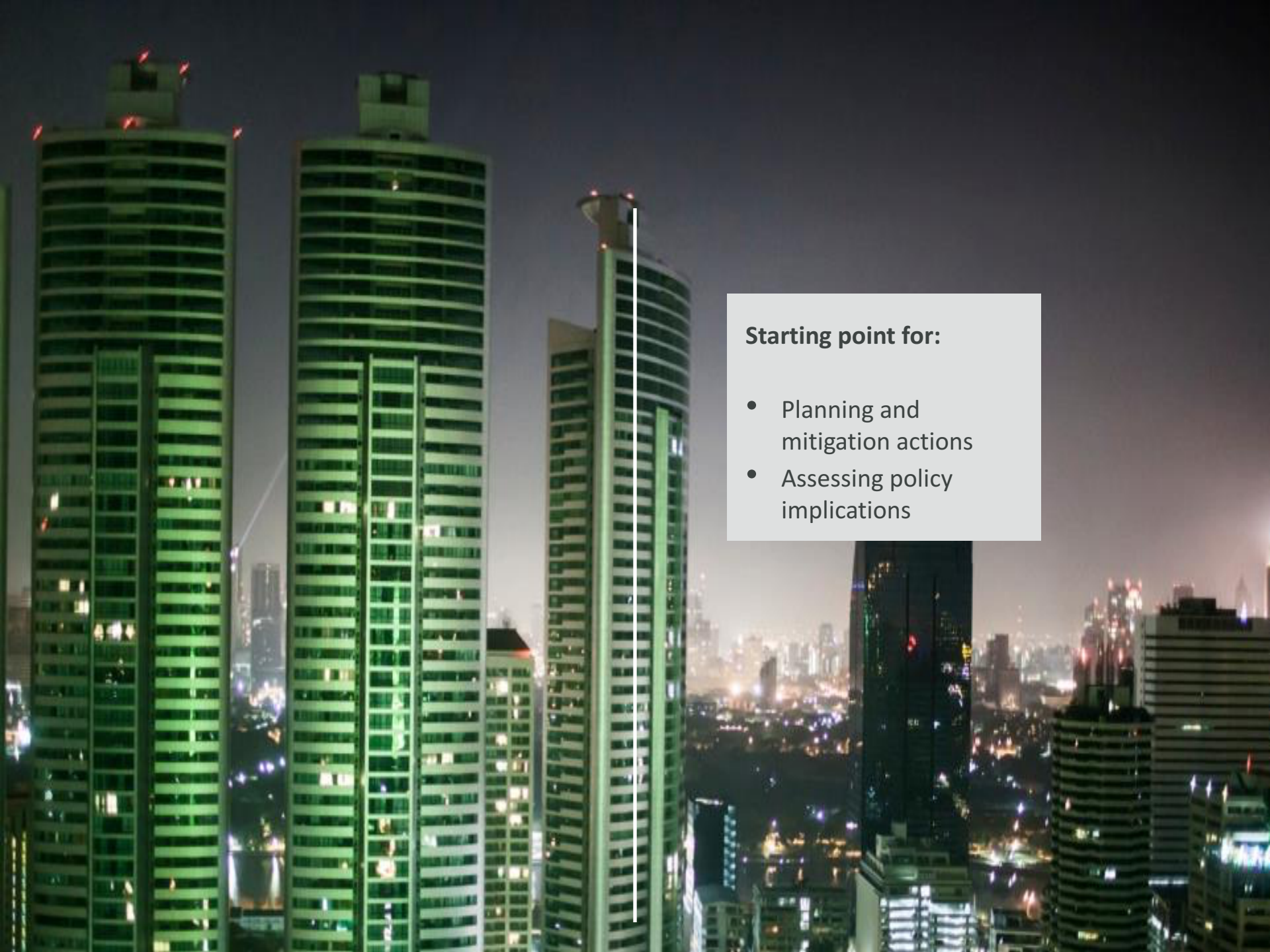
ABOUT C40


GLOBAL EMISSIONS
CITY ACTION CAN DELIVER 40% OF THE PARIS GOAL
2100



Starting point for:

- Planning and mitigation actions
- Assessing policy implications

More details

Local Government Climate Change Professional Development Program

Introduction to GPC Accounting
Deep dive into GPC
Technical workshop on GPC
Peer-to-Peer Learning Programme

Metropolitan wide GPC inventory

Individual Action Plans
Technical assistance for Local GPC development
Case study and more

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Melbourne Collaborative agreement

City of Melbourne hosts major cities networks and programs.

One of the actions in the agreement is the metropolitan Melbourne Zero Nett Emissions capacity building action where the Local Government Climate Change Professional Development Program is supported by partners.

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RESILIENT MELBOURNE

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Links with programs

Many metro councils now involved in Global Covenant of Mayors. GPC is the first step in compliance and performance.

Council may choose to opt into reporting identified in the Victoria Climate Change Act in 2020 - GPC may be a measurement standard.

Most councils have pledged via TAKE2. The GPC can be used as a community greenhouse inventory action.

Local and regional actions including this C40 - Melbourne metropolitan emissions accounting program link together.

GLOBAL COVENANT of MAYORS for CLIMATE & ENERGY

TAKE2 Victoria's climate change pledge

Sustainability Victoria

VICTORIA State Government

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GPC – A Conceptual View

GREENHOUSE GAS PROTOCOL

Global Protocol for Community-Scale Greenhouse Gas Emission Inventories

An Accounting and Reporting Standard for Cities

WORLD RESOURCES INSTITUTE

C40 CITIES

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GPC

C40 – ICLEI partnership

World Resources Institute

Released in 2014

Standard for Global Covenant of Mayors compliance

Aggregated GPC reports- aligns and contributes to UNFCCC process (CoP & Paris agreement)

GREENHOUSE GAS PROTOCOL

Global Protocol for Community-Scale Greenhouse Gas Emission Inventories (GPC)

A GHG protocol standard for cities created by World Resources Institute, C40 Cities Climate Leadership Group and ICLEI.

COMPACT of MAYORS

RESILIENT COMMUNITIES FOR AMERICA

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UCLG CGLU

R20 REGIONS OF CLIMATE ACTION

GLOBAL CITIES COVENANT ON CLIMATE
THE MEXICO CITY • PACT

EARTH HOUR CITY CHALLENGE

MICHAEL R. BLOOMBERG | UN Secretary-General's Special Envoy for Cities and Climate Change

UN HABITAT FOR A BETTER URBAN FUTURE

WWF

EcoMobility ALLIANCE

dac durban adaptation charter

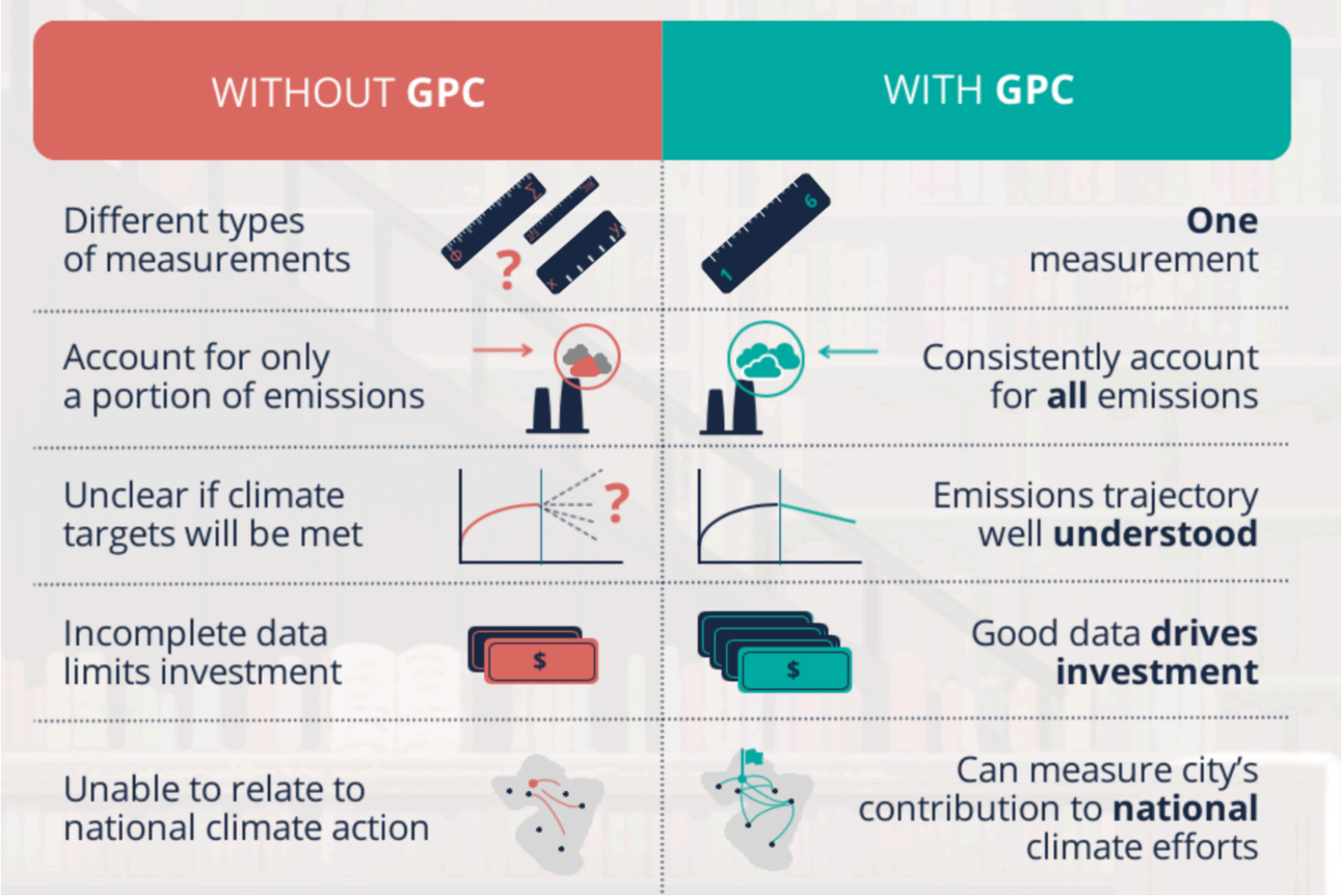
COMPACT OF STATES AND REGIONS

carbonn Climate Registry Japan Project

PACMUN Plan de Acción Climática Municipal

URBAN LEDS
URBAN LOW EMISSION DEVELOPMENT STRATEGIES

Benefits of GPC



GPC accounting principles

GREENHOUSE GAS PROTOCOL

Global Protocol for Community-Scale Greenhouse Gas Emission Inventories

An Accounting and Reporting Standard for Cities

GPC versatility - Local to Global

GPC for local use and replication

GPC to share within regional alliance

GPC as measurement action for TAKE2

GPC to develop as a Metro wide inventory *

GPC as a methodology for reporting in Vic CC Act

GPC as first step in commitment to Global Covenant

GPC as a means to report local contributions nationally

GPC as the standard for community scale reporting to UNFCCC

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Some fundamental questions

- Why GPC?
- Why development an inventory at all?

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What is GPC Good For?

Collaboration

- Compare with other entities
- Aggregate across regions
- Apples-with-apples comparisons
- Lowering the hurdle for adoption, improving learning and better directing activity

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What is GPC Good For?

Key areas to consider

- Interpreting results
- Tracking year on year
- Communicating to others
- Setting of targets
- Planning actions

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What is a GPC-type profile less appropriate for?

Basically this:

- Being used as a method of verification of Council-specific actions

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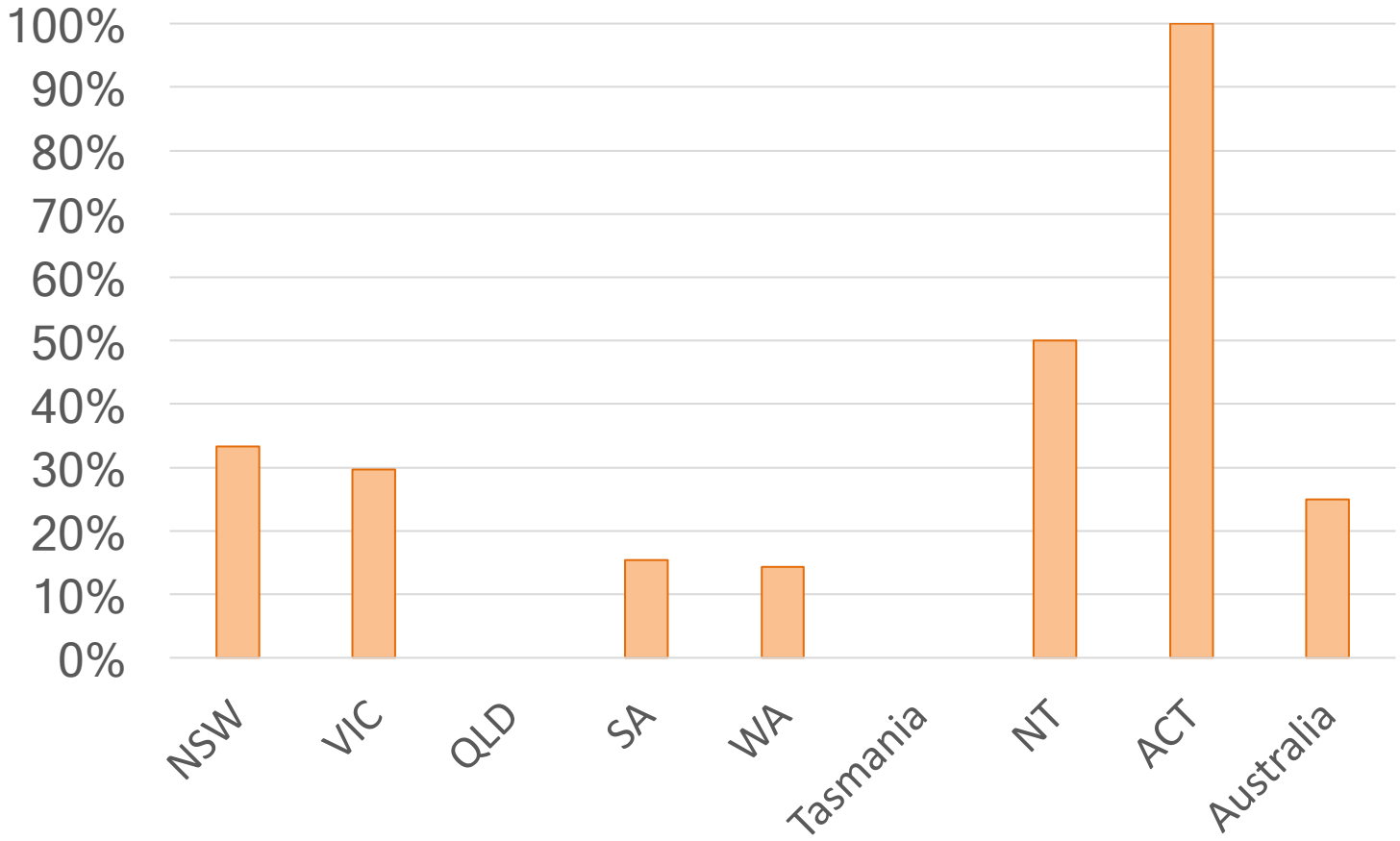
GPC: A Functional View

Who Has a Community Inventory Today?



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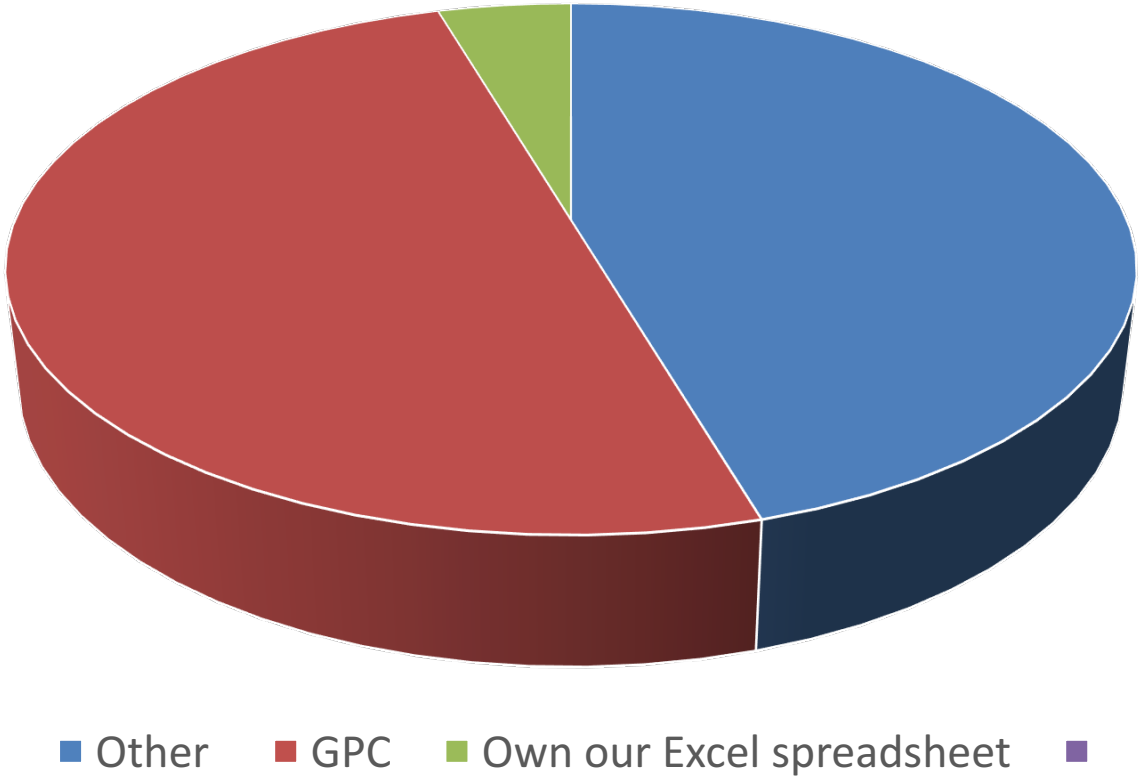
What are we using to calculate emissions?



Community Emissions

A community inventory

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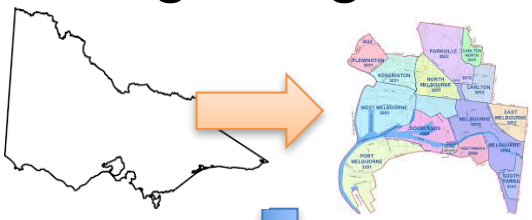
Process of creating profiles

Scope of sources

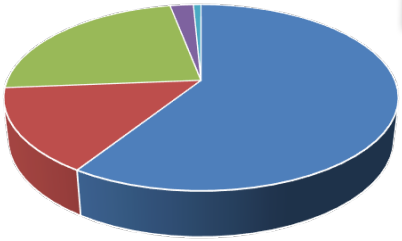
Activity data
Kl, kWh, tonnes

Methods
scaling to region



Methods
Conversion to emissions
kWh -> t CO2e

Inventory



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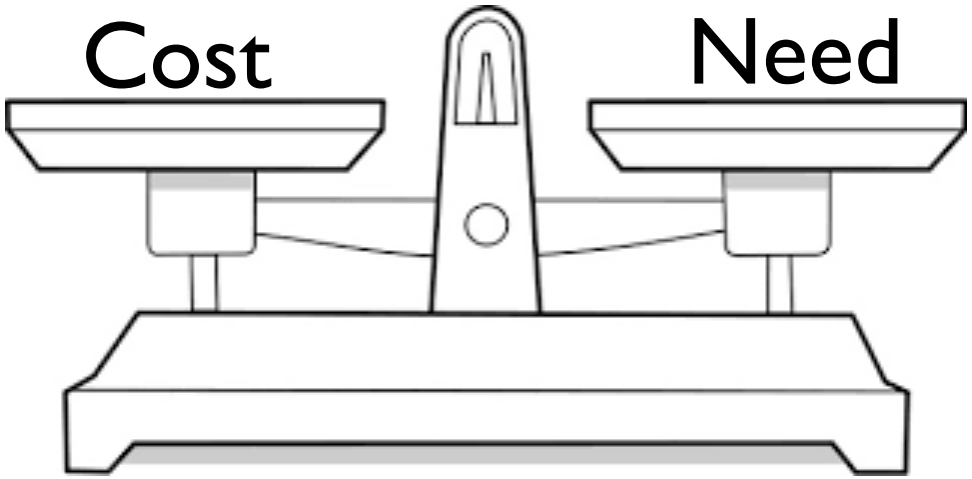
The role of accuracy

Accuracy should be matched to the requirements of the decision being made

"Accuracy is only as valuable as the decision it influences"



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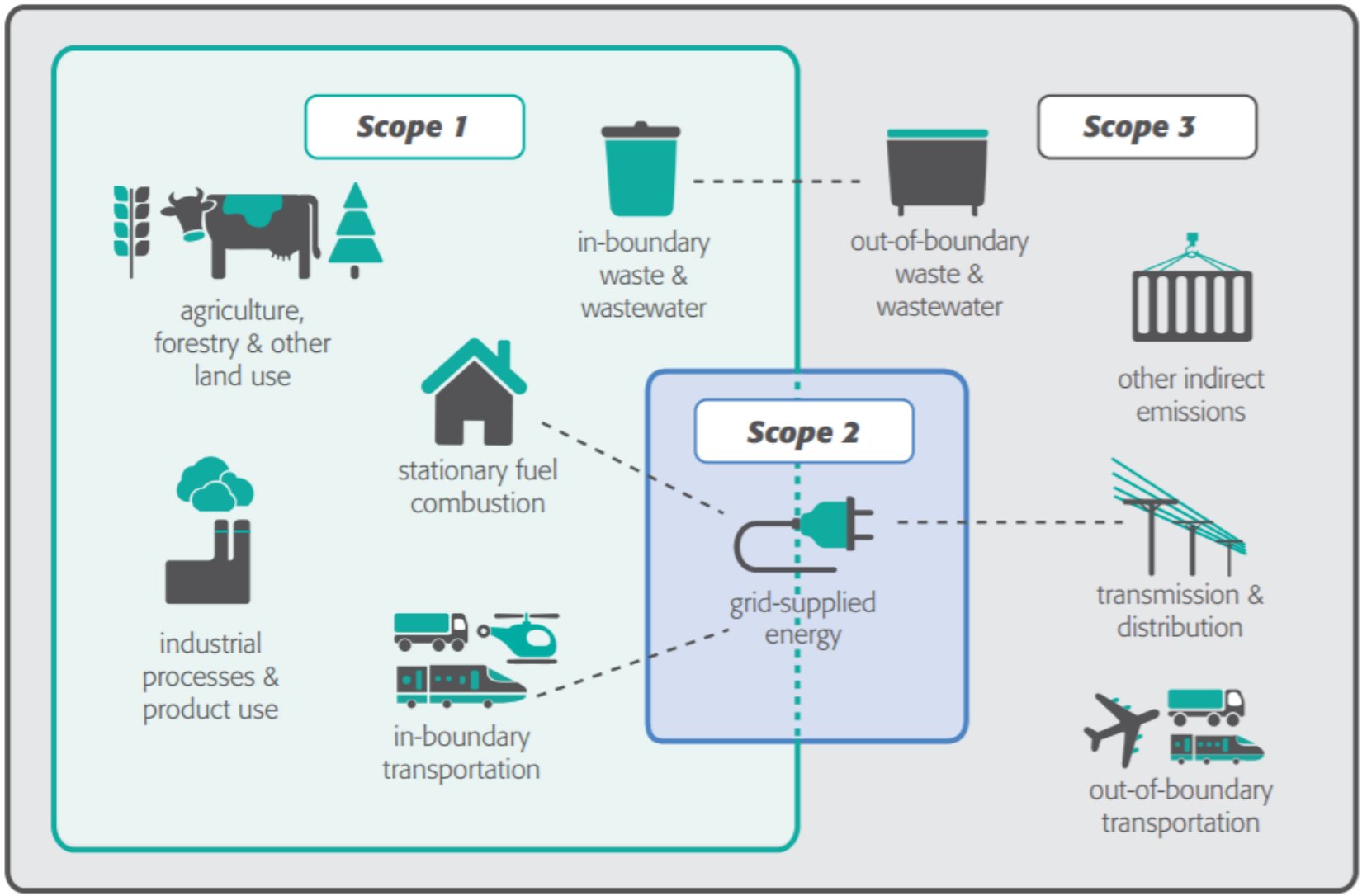
Emissions Scope Boundaries



What is BASIC?

GREENHOUSE GAS PROTOCOL

GPC provides the framework for making assessments

GLOBAL COVENANT of MAYORS for CLIMATE & ENERGY

BASIC/BASIC+ are specific applications of this framework

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BASIC and BASIC+

BASIC

Stationary Energy

Transport

Waste

BASIC+

IPPU

AFLOU

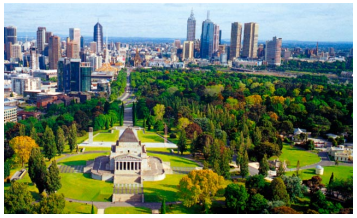
GPC Criteria

Scopes and sources

Sectors and sub-sectors	Scope 1	Scope 2	Scope 3
STATIONARY ENERGY			
Residential buildings	✓	✓	✓
Commercial and Institutional buildings and facilities	✓	✓	✓
Manufacturing industries and construction	✓	✓	✓
Energy industries	✓	✓	✓
Energy generation supplied to the grid	✓		
Agriculture, forestry, and fishing activities	✓	✓	✓
Non-specified sources	✓	✓	✓
Fugitive emissions from mining, processing, storage, and transportation of coal	✓		
Fugitive emissions from oil and natural gas systems	✓		
TRANSPORTATION			
On-road	✓	✓	✓
Railways	✓	✓	✓
Waterborne navigation	✓	✓	✓
Aviation	✓	✓	✓
Off-road	✓	✓	
WASTE			
Disposal of solid waste generated in the city	✓		✓
Disposal of solid waste generated outside the city	✓		
Biological treatment of waste generated in the city	✓		✓
Biological treatment of waste generated outside the city	✓		
Incineration and open burning of waste generated in the city	✓		✓
Incineration and open burning of waste generated outside the city	✓		
Wastewater generated in the city	✓		✓
Wastewater generated outside the city	✓		
INDUSTRIAL PROCESSES AND PRODUCT USE (IPPU)			
Industrial processes	✓		
Product use	✓		
AGRICULTURE, FORESTRY, AND LAND USE (AFOLU)			
Livestock	✓		
Land	✓		
Other agriculture	✓		
OTHER SCOPE 3			
Other Scope 3			

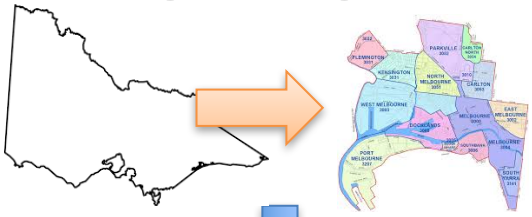
Getting the data

Scope of sources



Activity data
Kl, kWh, tonnes

Methods
scaling to region



Methods
Conversion to emissions
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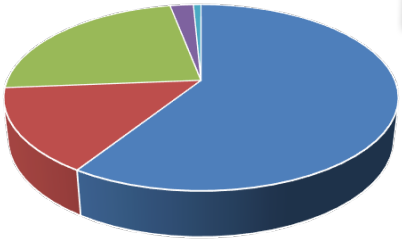
Inventory



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Where does the data come from?

Notation methods

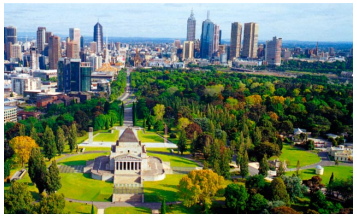
IE
Included elsewhere

NO
Not occurring

NE
Not estimated

Applying the methods

Scope of sources



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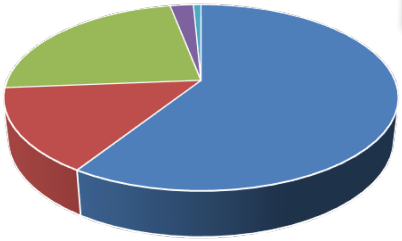

Methods – example of activity tool

Electricity consumption for state			
	Residential	Commercial	Other
State Electricity consumption (GWh)	10,939	16,867	22,231

Scaling - Spatial	Residential	Commercial	Other
Scaling factors	1.8%	2.2%	2.3%
Municipal Electricity consumption (MWh)	192,176.1	378,327.1	502,339.7
Corrected Municipal Electricity	192,176.1	295,421.3	372,821.6
Scaling - Temporal	**Residential (pop.)**	**Commercial (GRP)**	**Industrial (GRP)**
Data year	2013.5		
Data year value - Municipal	103,148	$ 85,917	$ 85,917
Inventory year value - Municipal	109,640	$ 85,423	$ 85,423
Scaling factor - Municipal	106.3%	99.4%	99.4%
Electricity consumption - Municipal (GWh)	204,271.4	293,724.4	370,680.2
Data year value - State	5,850,612	$ 2,905,283	$ 2,905,283
Inventory year value - State	6,244,976.5	$ 2,982,098	$ 2,982,098
Scaling factor - State	106.7%	102.6%	102.6%
Electricity consumption - State (GWh)	11,676.2	17,312.6	22,818.3

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Putting it all together

CIRIS

CITY INVENTORY REPORTING and INFORMATION SYSTEM

Scope	Notation keys	CO2	CH4	N2O
Residential buildings				
1		105322.91	204.91	61.47
2		219463.37	321.37	828.37
3		20351.11	13147.99	76.70
Commercial and institutional buildings and facilities				
1		38435.55	74.78	22.43
2		315569.15	462.11	1191.13
3		29230.47	4830.03	110.29
Manufacturing industries and construction				
1		82017.04	159.57	47.87
2		398248.19	583.18	1503.20
3		36898.53	10269.43	139.19
Energy industries				
1	NO	0.00	0.00	0.00
2	NO	0.00	0.00	0.00
3	NO	0.00	0.00	0.00
1	NO	0.00	0.00	0.00

GLOBAL COVENANT *of* MAYORS *for* CLIMATE & ENERGY

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Putting it all together

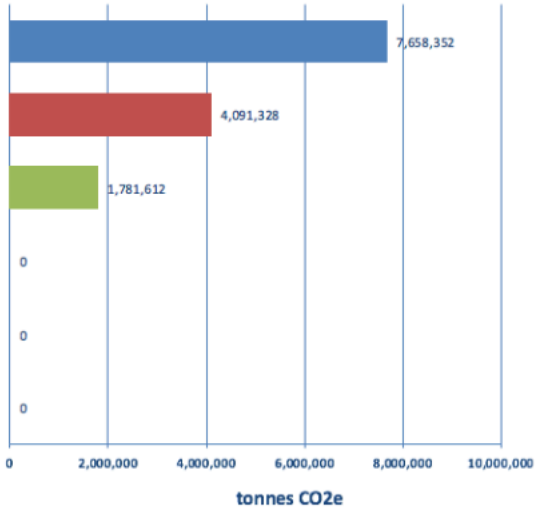
CIRIS

Introduction	Set-up	Inventory	Calculators	Results	Notes
Summary	Graphs	Overview	Analysis	Net emissions	

SUMMARY

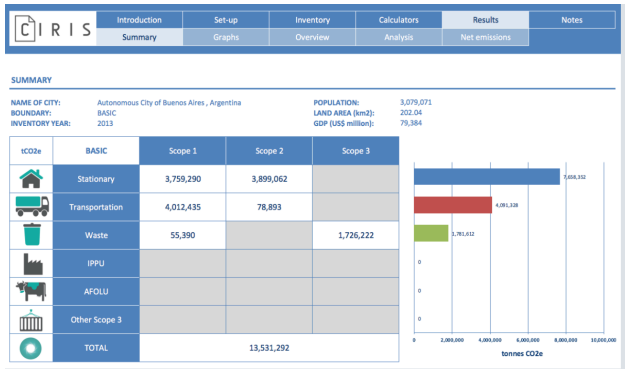
NAME OF CITY:	Autonomous City of Buenos Aires , Argentina	**POPULATION:**	3,079,071
BOUNDARY:	BASIC	**LAND AREA (km2):**	202.04
INVENTORY YEAR:	2013	**GDP (US$ million):**	79,384

tCO2e	BASIC	Scope 1	Scope 2	Scope 3
	Stationary	3,759,290	3,899,062	
	Transportation	4,012,435	78,893	
	Waste	55,390		1,726,222
	IPPU			
	AFOLU			
	Other Scope 3			
	TOTAL	13,531,292		



CIRIS is the adopted workbook to streamline activity data input for local reporting or into the Climate registry platforms.

What does what?



carbonn Climate Registry

CDP
DRIVING SUSTAINABLE ECONOMIES

Carbonn Climate Registry

CDP Cities

GLOBAL COVENANT of MAYORS for CLIMATE & ENERGY

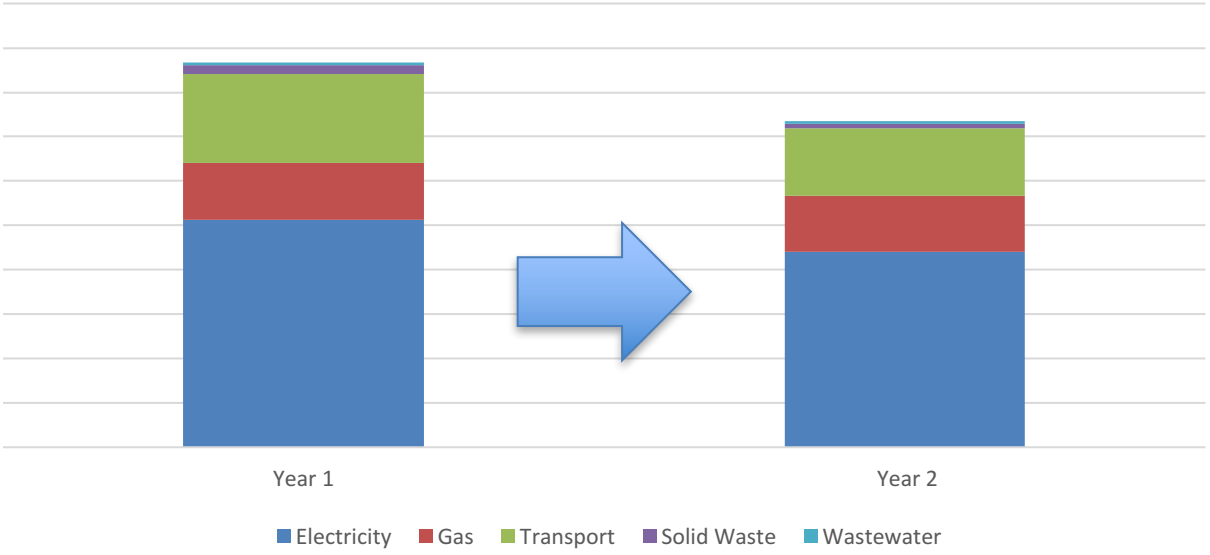
NAZCA portal for non state actor reporting

NB. We are here to help!

Ongoing work

Maintenance of documentation

- Methods
- Repeatability of process
- Sources



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What comes next

Next Steps

- Working with C40 and City of Melbourne on the Metropolitan Melbourne Inventory
- 2 Future Training Sessions
- On-going Support
- GPC for each council
- Peer learning programs

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New draft Framework for the Global Covenant of Mayors

Consultation now open

Survey, webinars, focus group

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Thanks