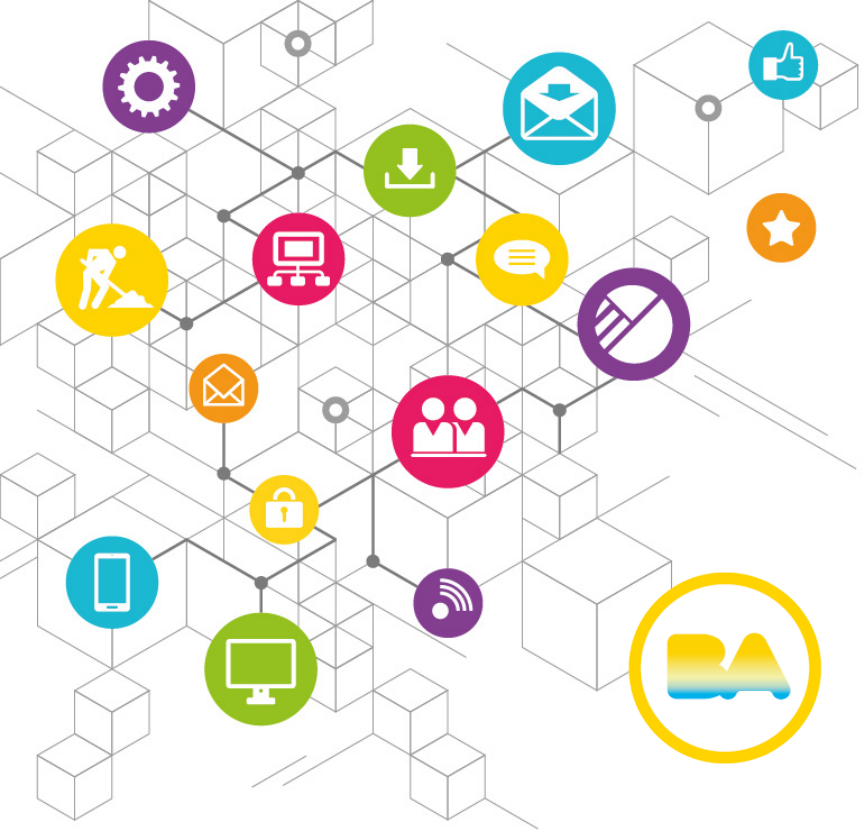
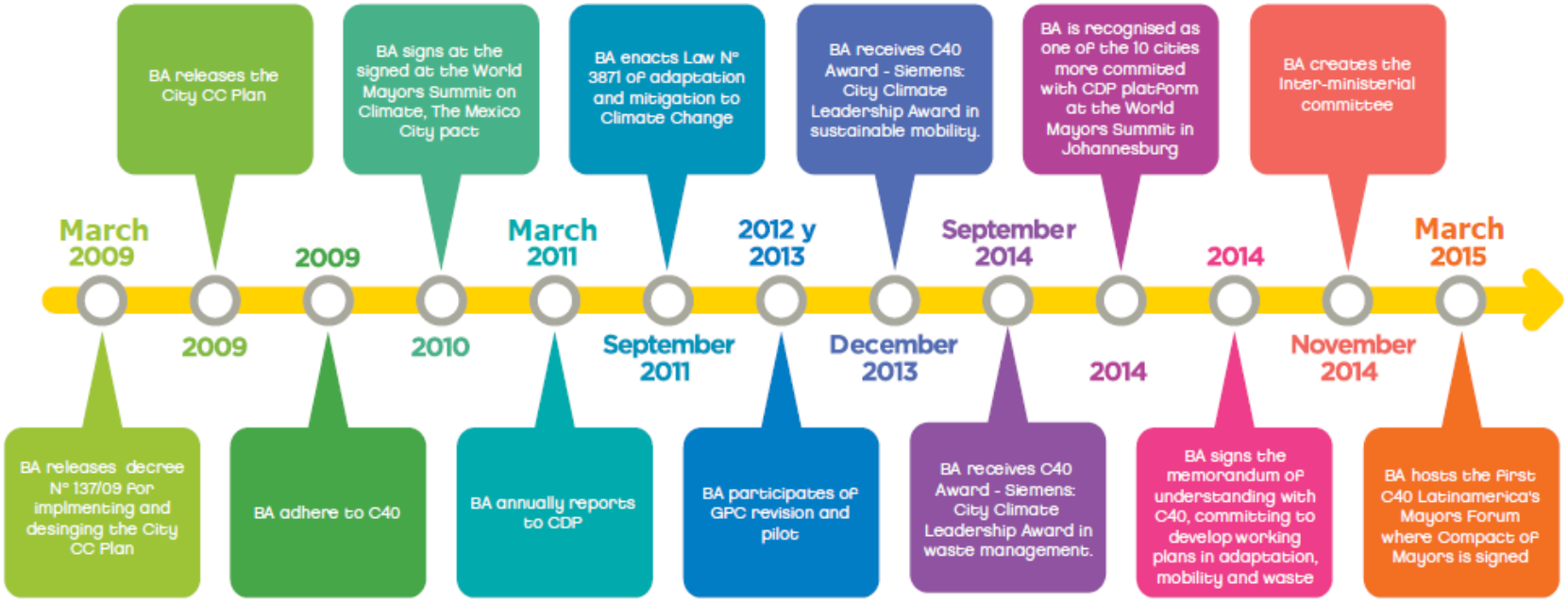


Growing Smart Energy Cities

Smart Cities in Buenos Aires

1 Buenos Aires climate change action plan

Smart way into the City...

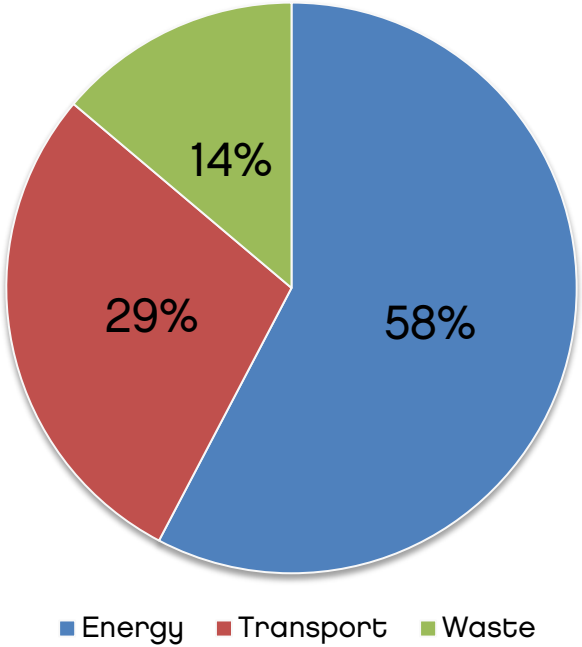


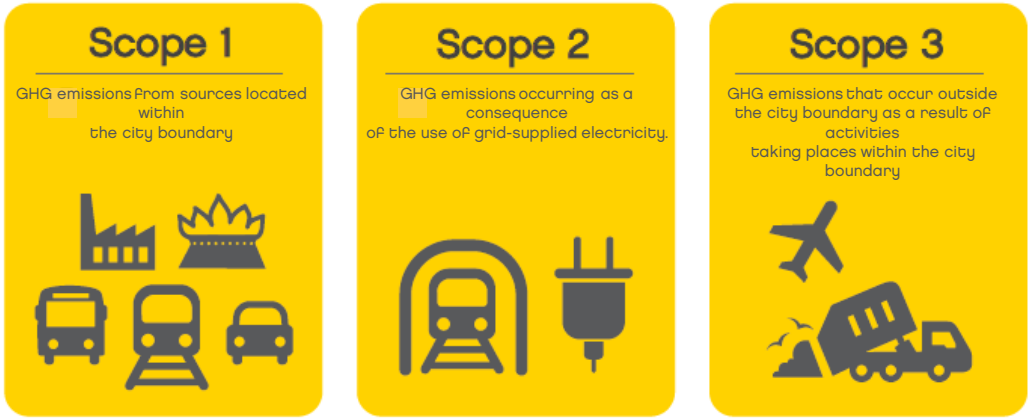
Buenos Aires overview

Area	203 Km^2
Citizens	2.9 M
Greater Buenos Aires commuting	3.4 M
Vehicles	1.5 M
Vehicles entering the city	1.1 M
Bus fleet	10 k
Subway (6 lines)	58,8 km
BRT	53,9 km
Cycle lanes	160 km
Urban solid waste	1.2 M tn/year

2 Greenhouse Gases Inventory

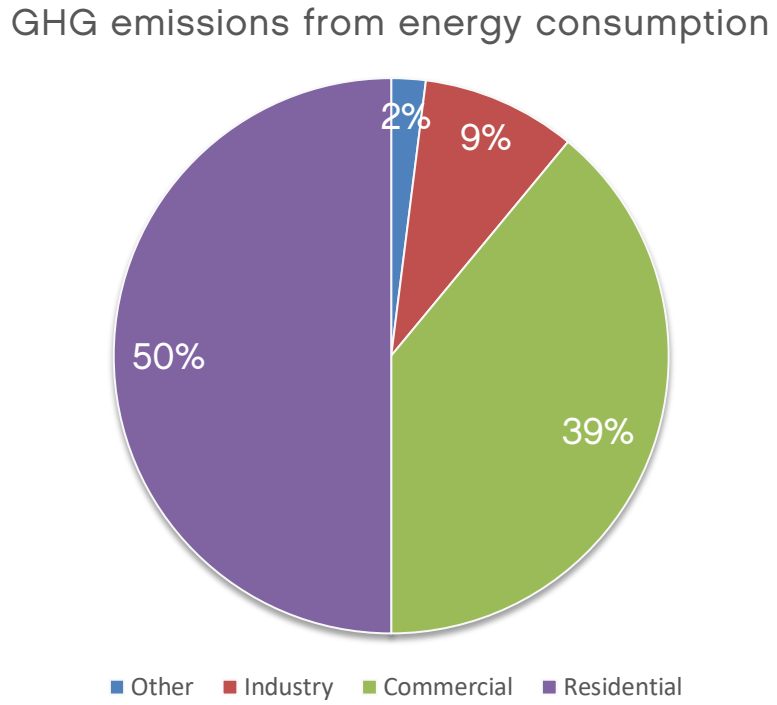
GHG Inventory (2014)





Energy	7.5 M tCO_{2eq}
Transport	3.7 M tCO_{2eq}
Waste	1.8 M tCO_{2eq}
Total	12.9 M tCO_{2eq}

GHG Inventory (2014)



Consumption in BA

12% of National Consumption

BA City
14.000
GWh/year

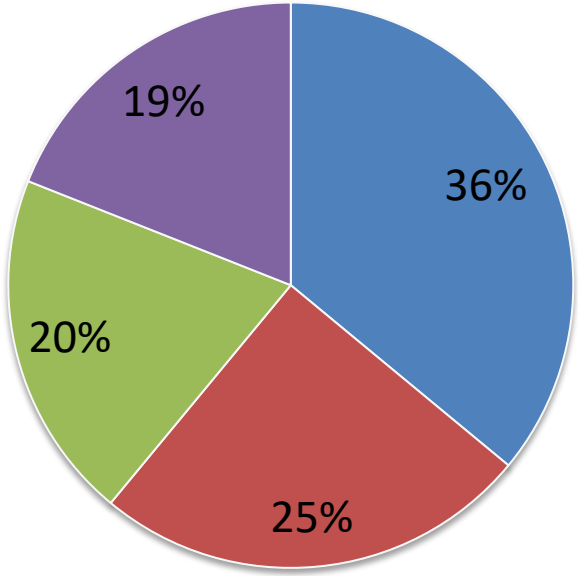
EDESUR
9.000
GWh/year

+

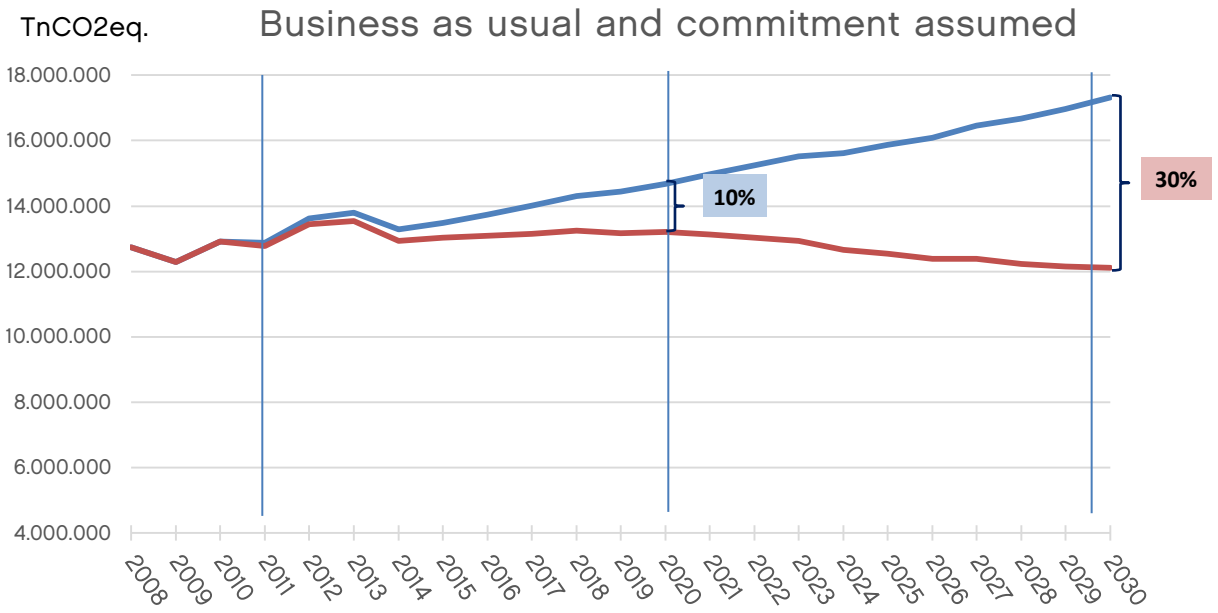
EDENOR
5.000
GWh/year

7% of BA City

Government Consumption
1.000
GWh/year



GHG emissions reduction commitment



2020 ↓ **10%**

2030 ↓ **30%**

BA Overview – Sustainability

Energy Efficiency

Achieve in Buenos Aires City, throughout public policies, programs and projects, a responsible and smart way of consumption so as to sustain citizens living standard.

Renewable Energy

Transform Argentina's energy grid throughout the implementation of renewable energies in Buenos Aires city.
Carry out iconic projects to show BA citizens different options in renewable energies and how the access to them is possible.

Transport

Move quickly, safely and organized within the city contributing to a better environmental quality.

Universally Generated Special Residues

Provide integral solutions to environmental mishandling of special residues.

3 EE & RE Strategy

Creation of Energy Management Department

Promote energy usage in a responsible way

Implement EE & RE programs and projects

Regulate EE & RE laws

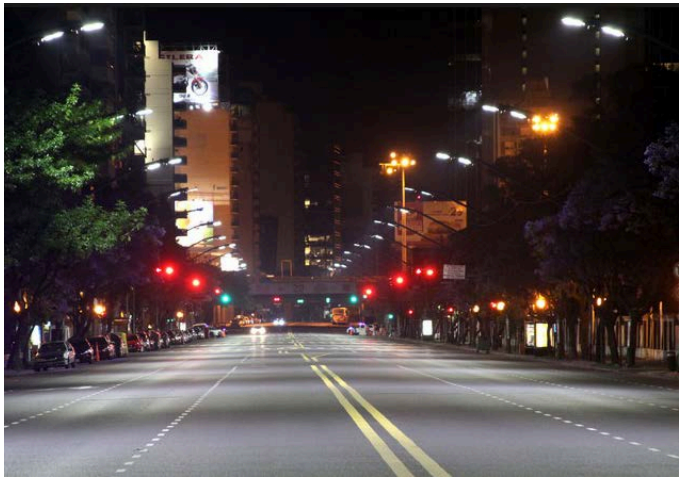
4 Mitigation Iniciatives

Energy Efficiency Implemented Programs

1) Street lighting retrofit program

Almost 100.000 Sodium luminaries replaced by LED.
Program iniciated in 2013.
180 GWh saved so far.

32.900 homes



2) Traffic lights retrofit program

100% of traffic lights signals replaced by LED technology (93.000)
64 GWh saved so far

11.700 homes

3) Residential lighting retrofit program

LED bulbs replacement against delivery of non-efficient bulbs.

Energy Efficiency Programs in progress

4)) Public Buildings lighting retrofit program

1M non-efficient lighting replacement for LED techonolgy in every BA city's PB .

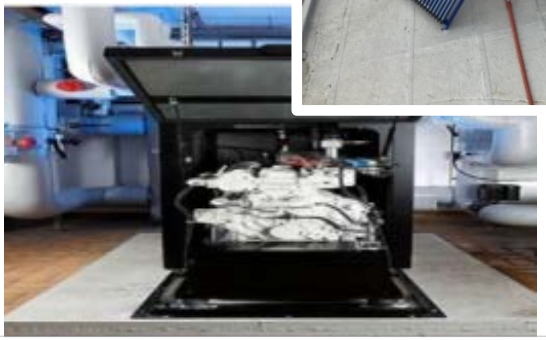
11.600 Homes

5) Solar thermal collectors installed at humble neighborhoods

80% savings in natural gas consumption.
Neighbors are being trained in the use of this technology.

6) Cooperation agreement between Buenos Aires city and Berlin

Installation of a gas co-generator in a public hospital to reduce electricity and hot water consumption



Renewable Energy projects in progress

- **CIFA Project**
- 40 kWp of PV installed, equal to 60,5 MWh/year
- Energy power displacement of AR$ 78.650

- EE measures (LED lighting retrofit) save approximately 30 MWh/year (12,5% of total consumption)
- AR$ 54.600 anual savings

36 Homes

Transport improvements

1) Bus Rapid Transit

- 54 kms of BRT to date and still developing new routes
- 1M citizens benefited with 50% time reduction while commuting

2) Bicycle lane

- Extension of 160 km
- + 165k citizens benefited

Transport improvements

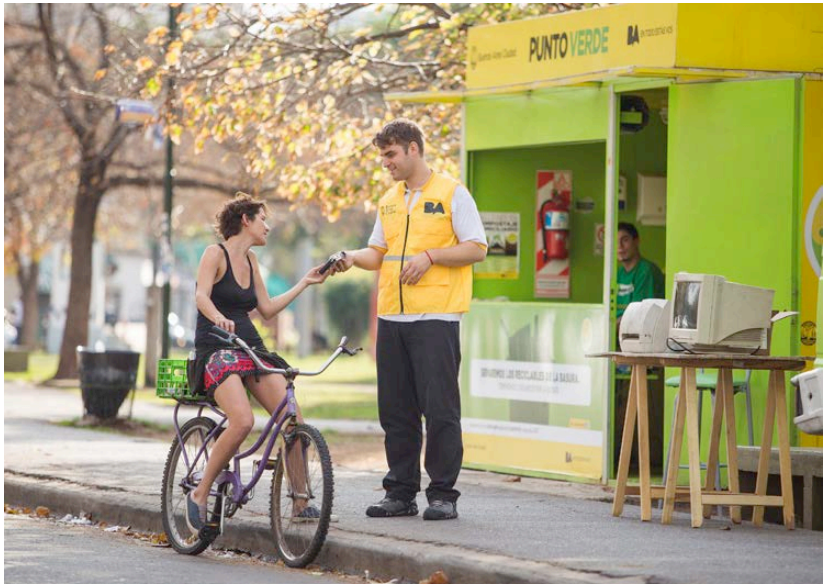
3) New subway stations

- Line H - 2 new stations inagurated in 2016
- +75k passengers benefited

Waste management

1) Recycling recolection points and recycling centers

9 recycling centers



39 recolecction points

Waste management

2) Recycling Center in Florencio Varela

- PET treatment plant
- Organic waste treatment plant
- Green waste from gardens & parks composting plant
- Solid waste treatment plant

Other projects

CIFA – Energy diversification

Sustainable Puerto Madero

C40 Clean Energy Network Workshop

Renewable Energy at BA harbor

Renewable energies at BTR

German embassy energy exhibition

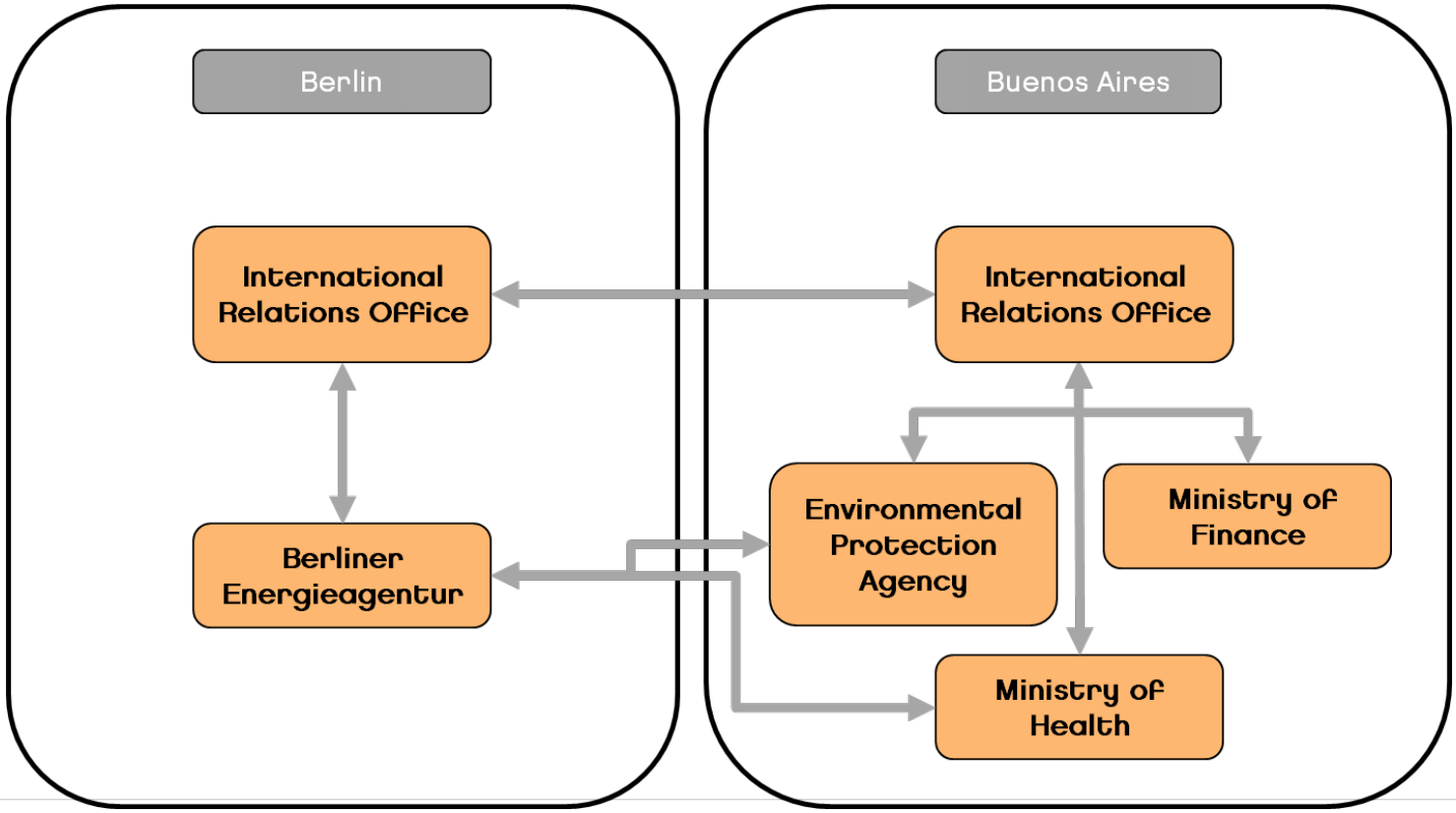
PV energy at BA city airport

BA city data management

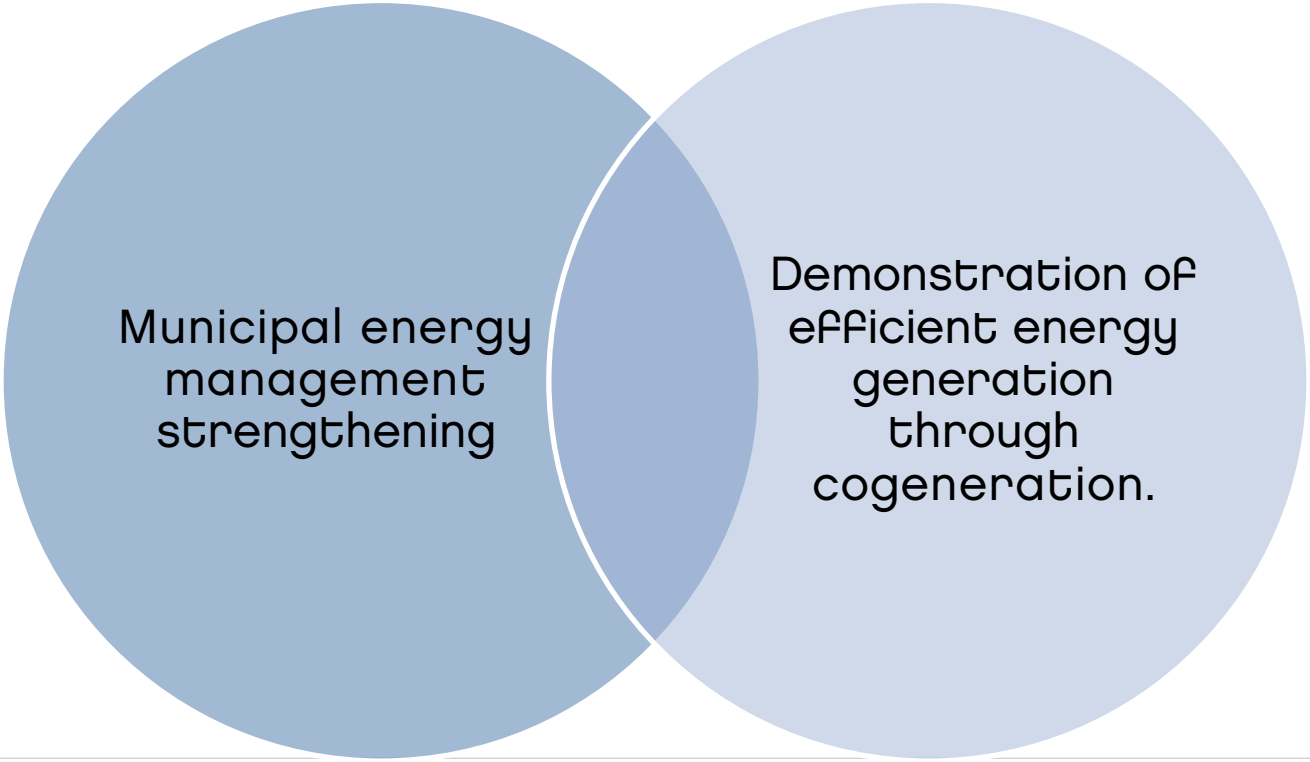
BMS in Public Buildings

National and City laws - Regulation & Adherence

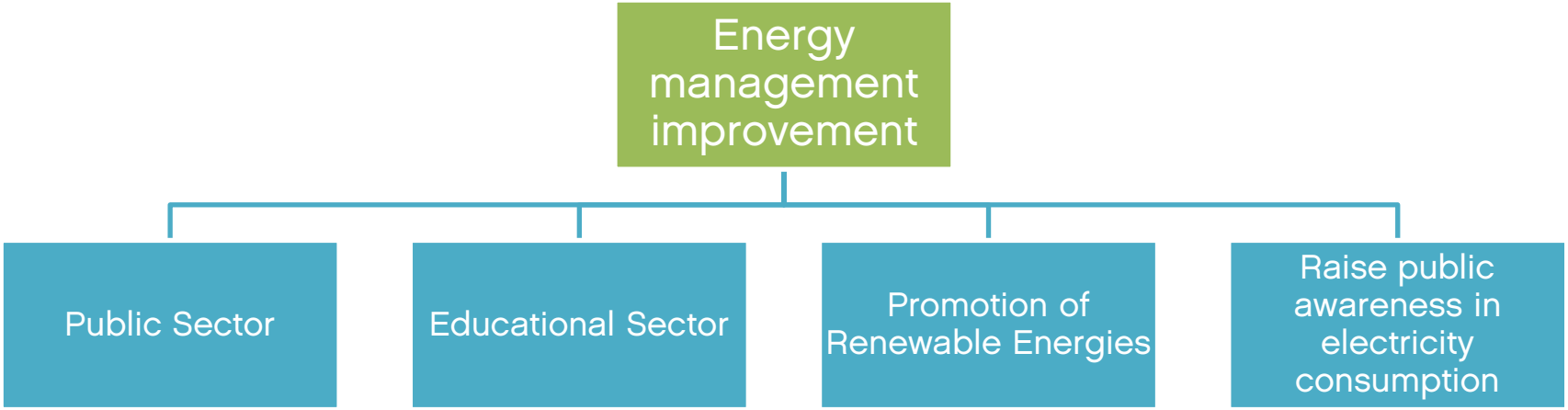
Climate Partnership



Cooperation approach



Action Plan


Energy management improvement
Public Sector
Educational Sector
Promotion of Renewable Energies
Raise public awareness in electricity consumption

Conclusions

1. Favorable environment to structure programs at competitive rates and short-term returns of;
   - Energy Efficiency in BA.
   - High power Renewable Energy in Argentina.
   - Transport network extension (BRT, subway y cycle lane)

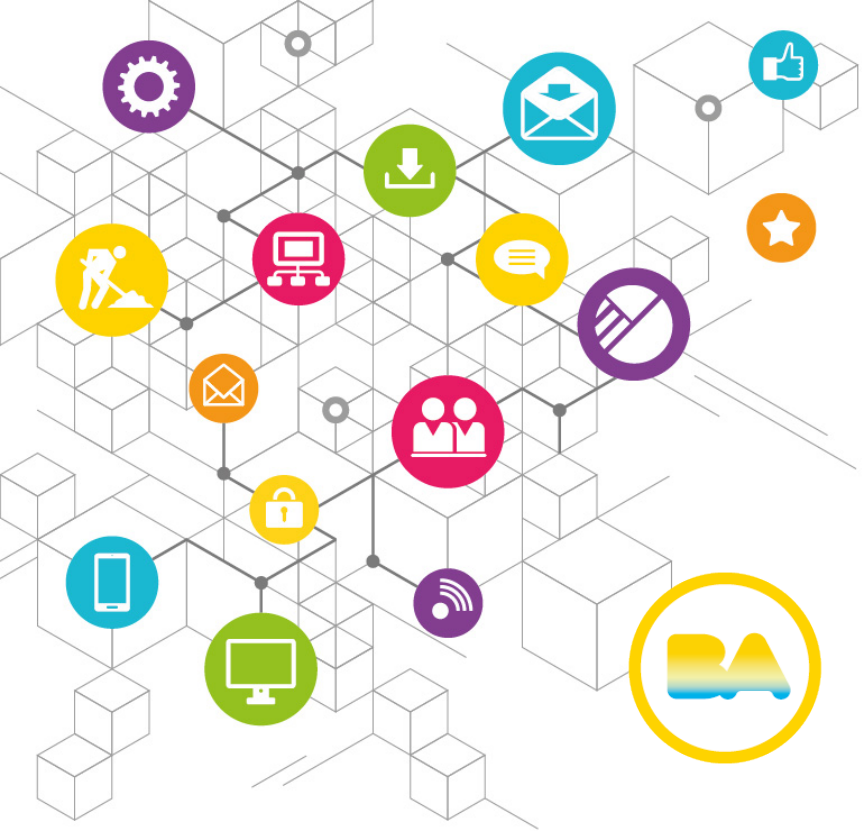
2. Electricity tariffs still low for ER projects profitability.

3. Culture change towards waste source separation, reusable market bags, used vegetable oil disposal, between others.

4. Coordinate with different areas to comply with Climate Change international agreements.

5. Cities most important role fighting against climate change. 70% of emissions originated by them.

6. International focus on zero-carbon.



¡Thank you!