Using Data Analytics, Machine Learning, and KPIs for Urban Planning and Design

ICSO INTELLIGENT COMPUTING SYSTEMS OPTIMIZATION

UNIVERSITAT POLITÈCNICA DE VALÈNCIA

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- Bachelor Degree in Economics

Universidad Zaragoza

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UNIVERSITAT POLITÈCNICA DE VALÈNCIA

SUSTAINABILITY

SUSTAINABILITY

CARBON NEUTRALITY

SUSTAINABILITY

CARBON NEUTRALITY

JUST TRANSITION

SUSTAINABILITY

CARBON NEUTRALITY

JUST TRANSITION

SMART CITIES

Puerta del Sol, Madrid

Puerta del Sol, Madrid

STOP

Which is the problem?

Predisposition on the part of society.

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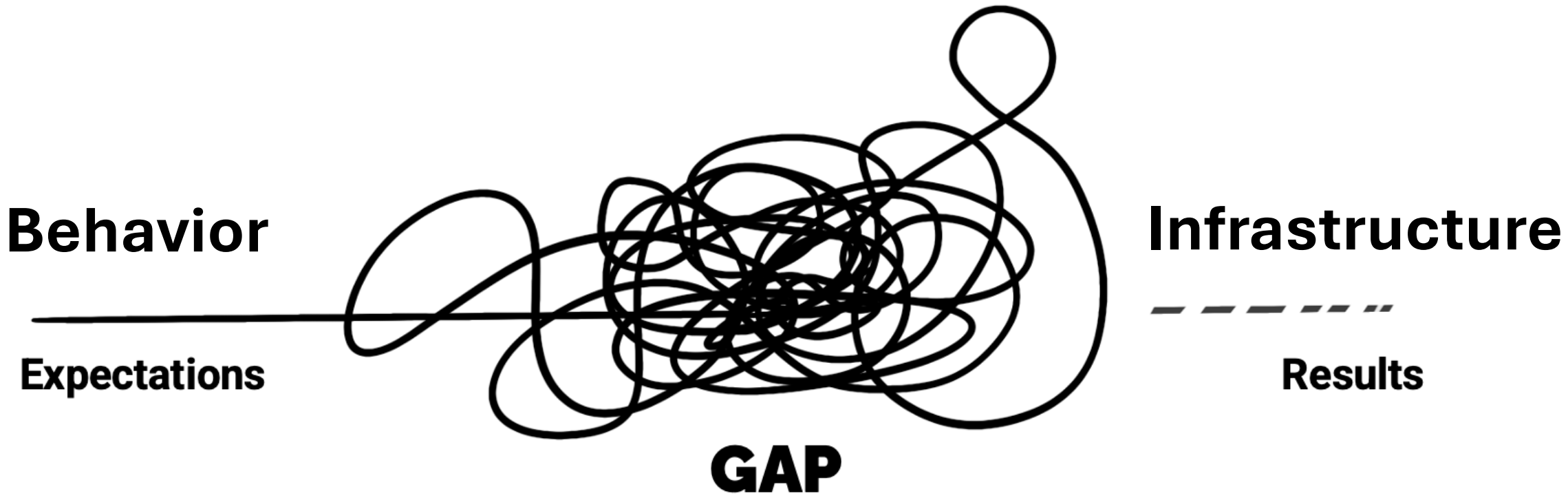
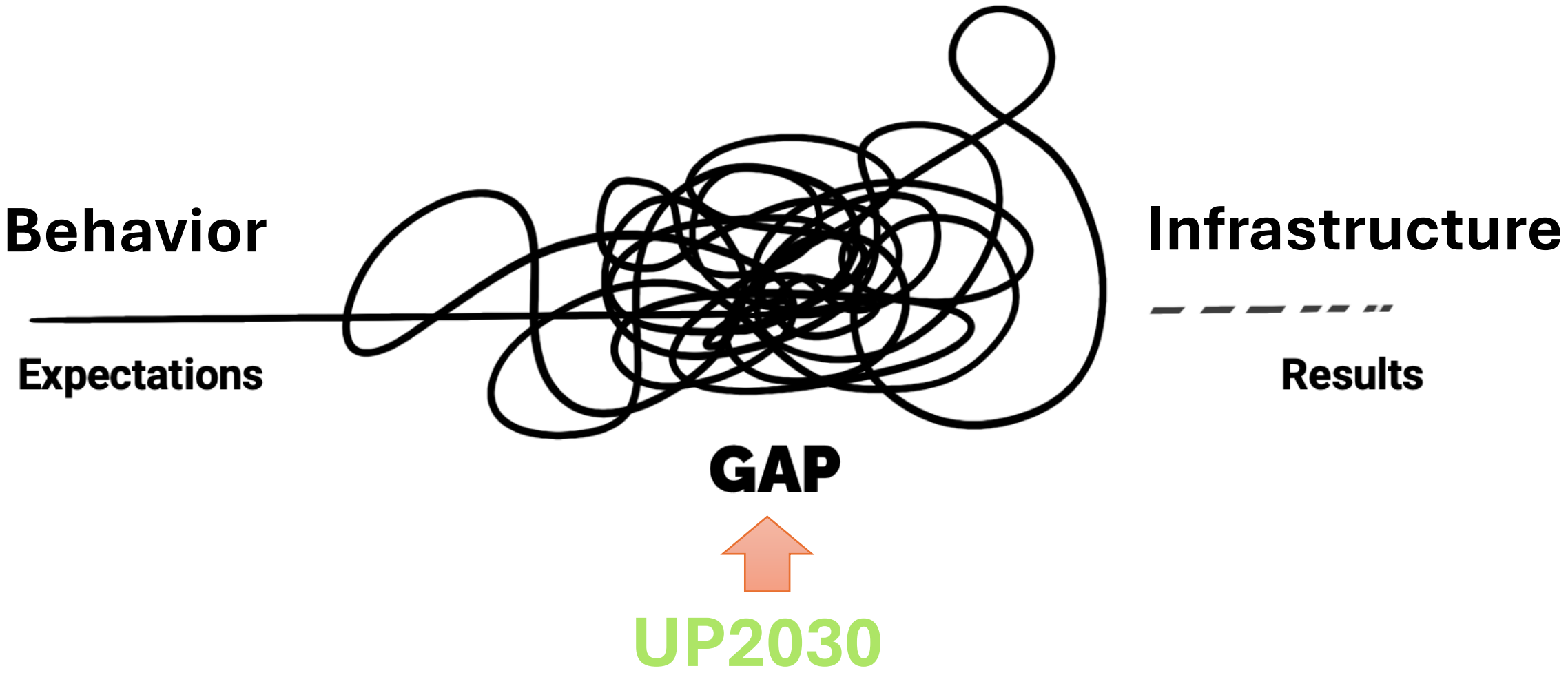
Predisposition on the part of society.

Lack of infrastructure on the part of the administrations.


Behavior
Infrastructure
Expectations
Results
GAP


Behavior
Infrastructure
Expectations
Results
GAP
UP2030

KPI

KPI
KPI

KPI
KPI
KPI

KPI
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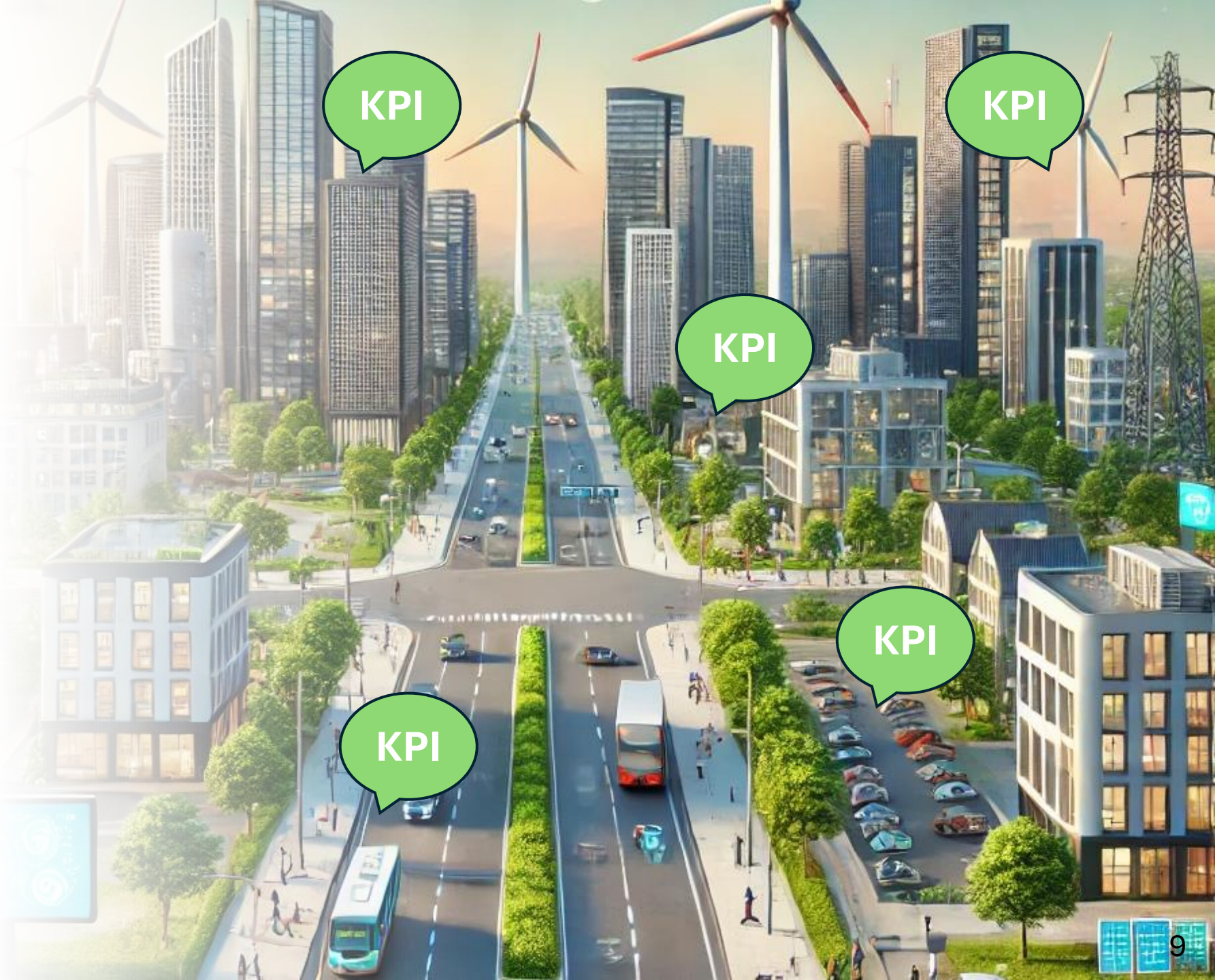
KPI
KPI


KPI
KPI
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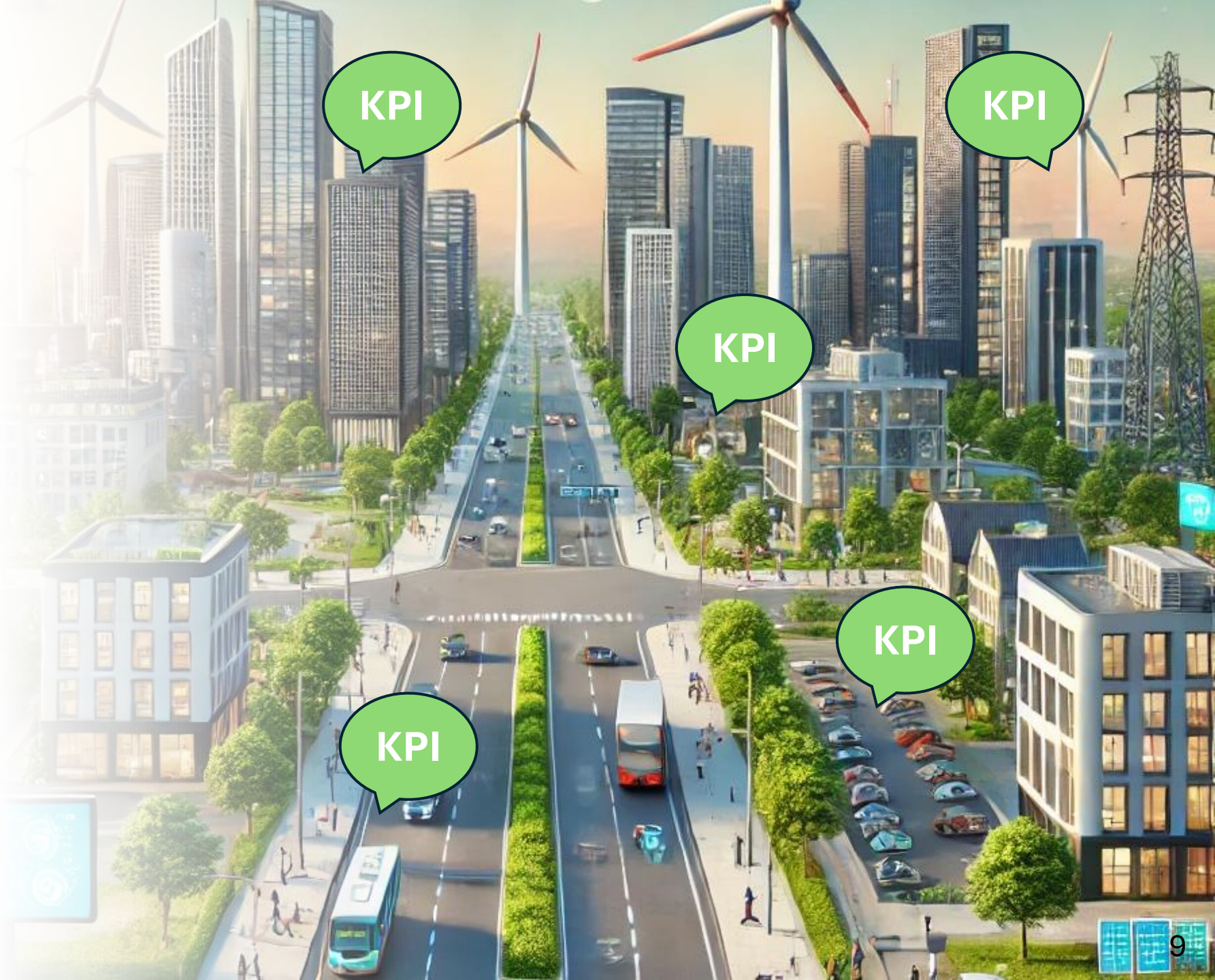
KPI

Data collection

↓

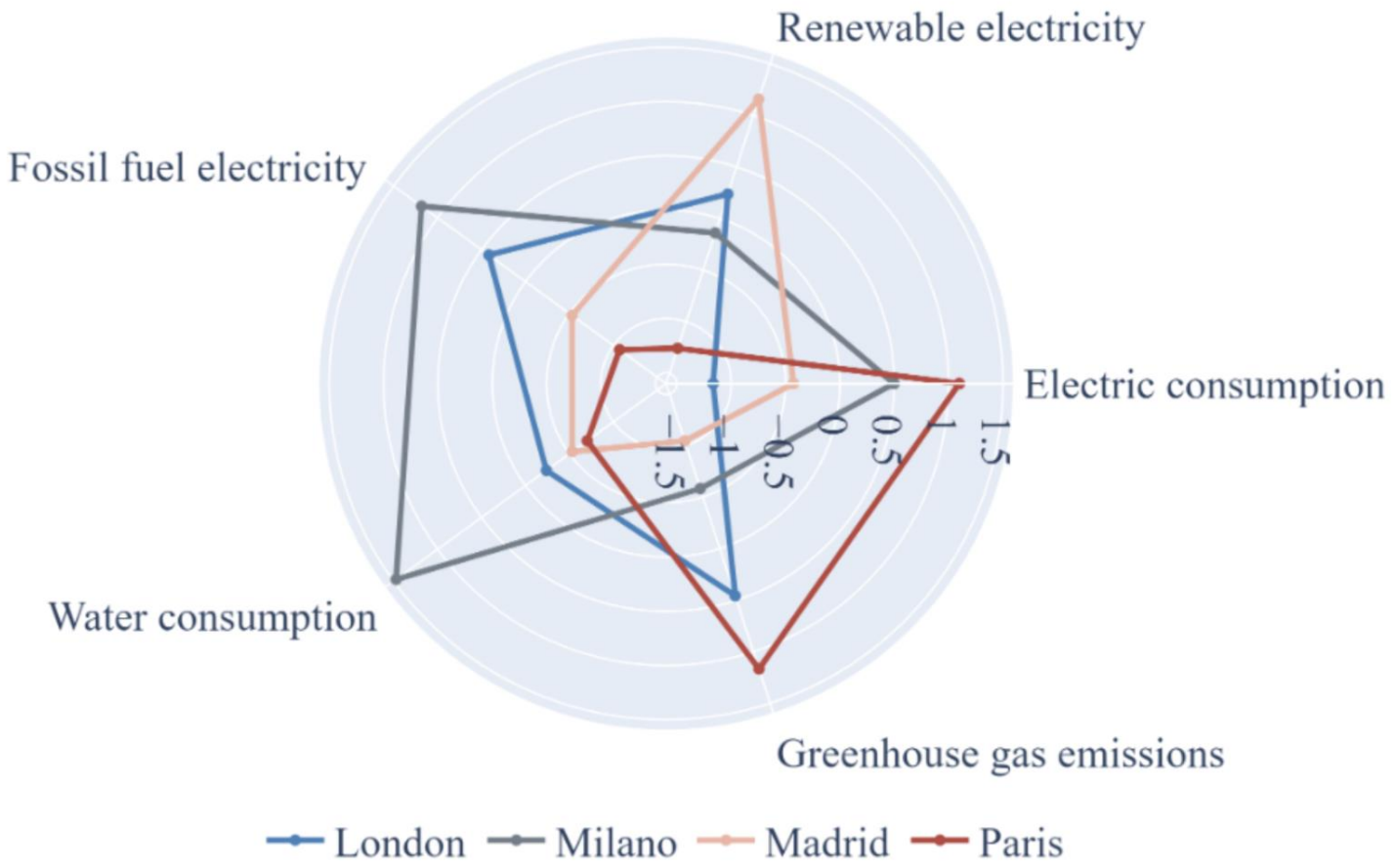
Descriptive and

prescriptive analysis



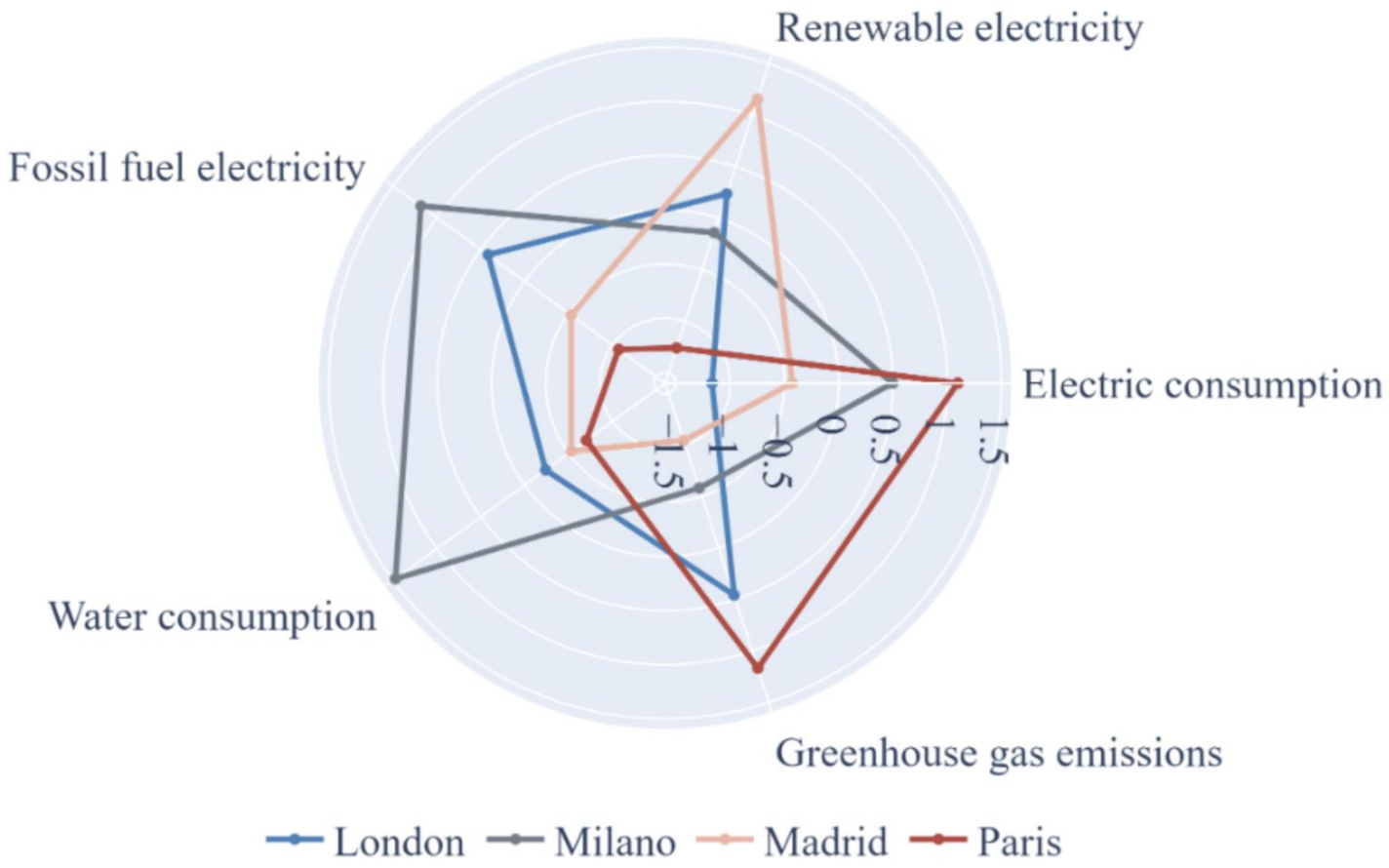
Descriptive analysis

- Promote best practices.



Descriptive analysis

- Promote best practices.
- Identify policy failures in order to adjust them.



Descriptive analysis

- Promote best practices.
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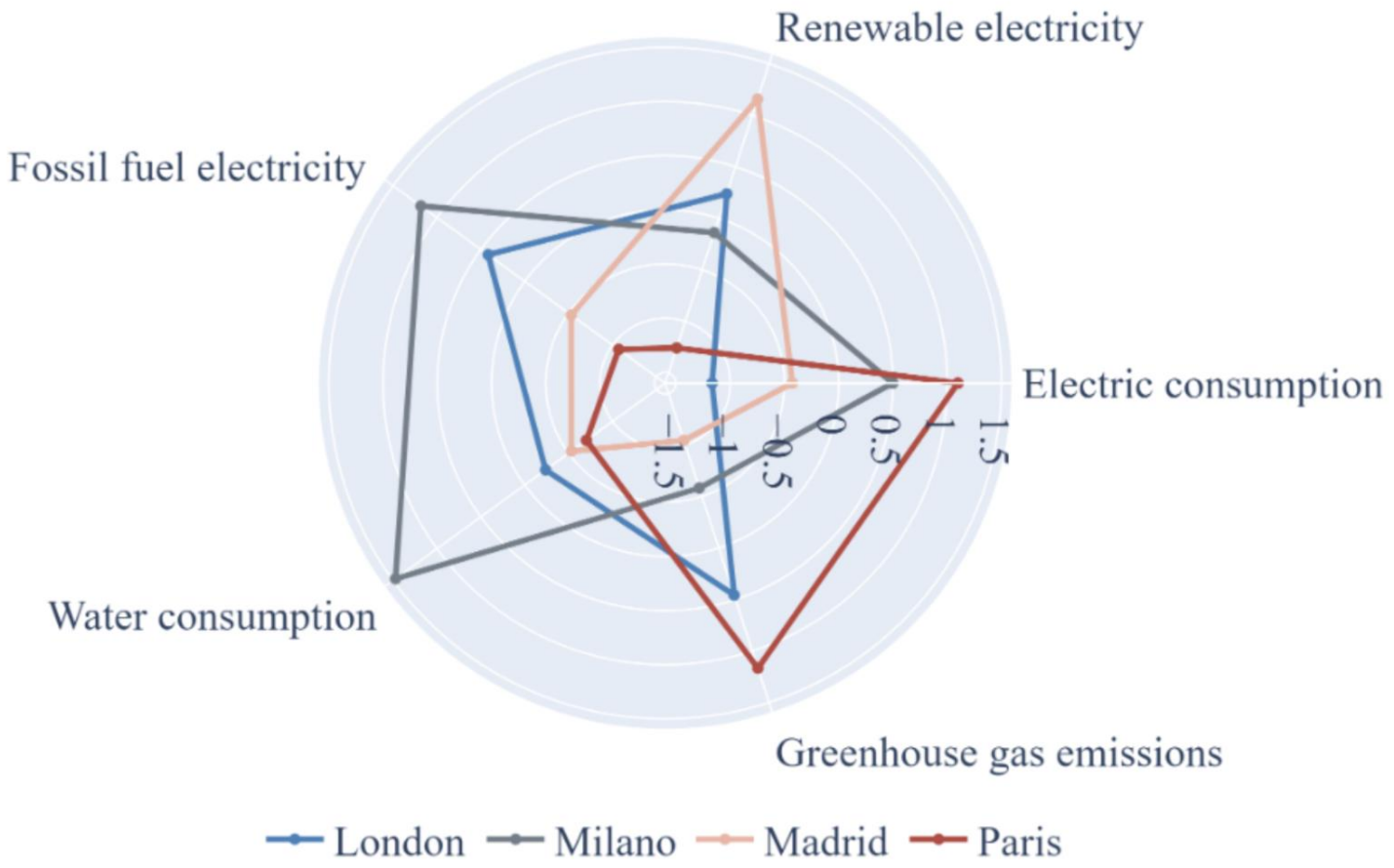
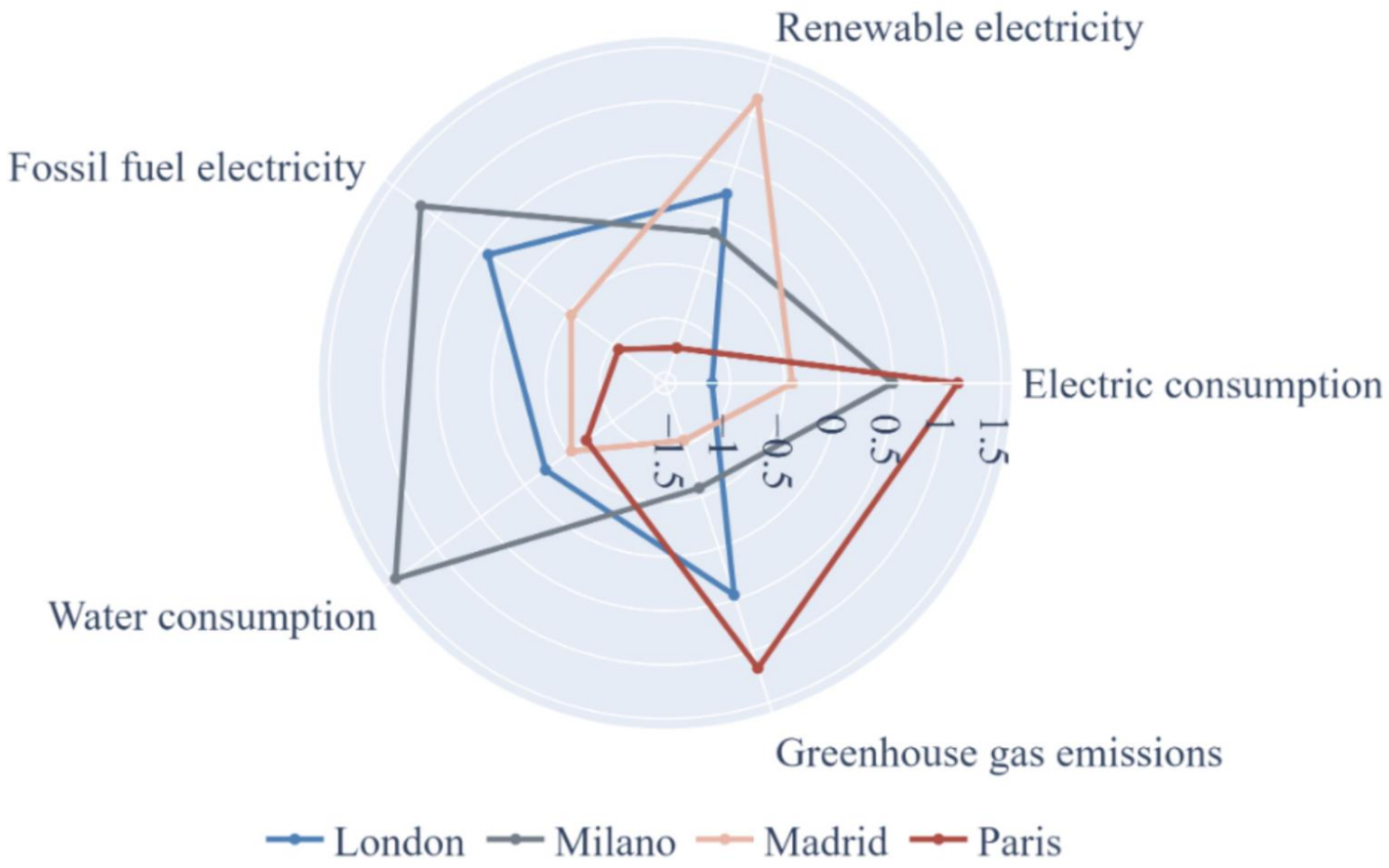
- Overcome shared obstacles.



Descriptive analysis

- Promote best practices.
- Identify policy failures in order to adjust them.
- Overcome shared obstacles.
- Share knowledge among stakeholders.

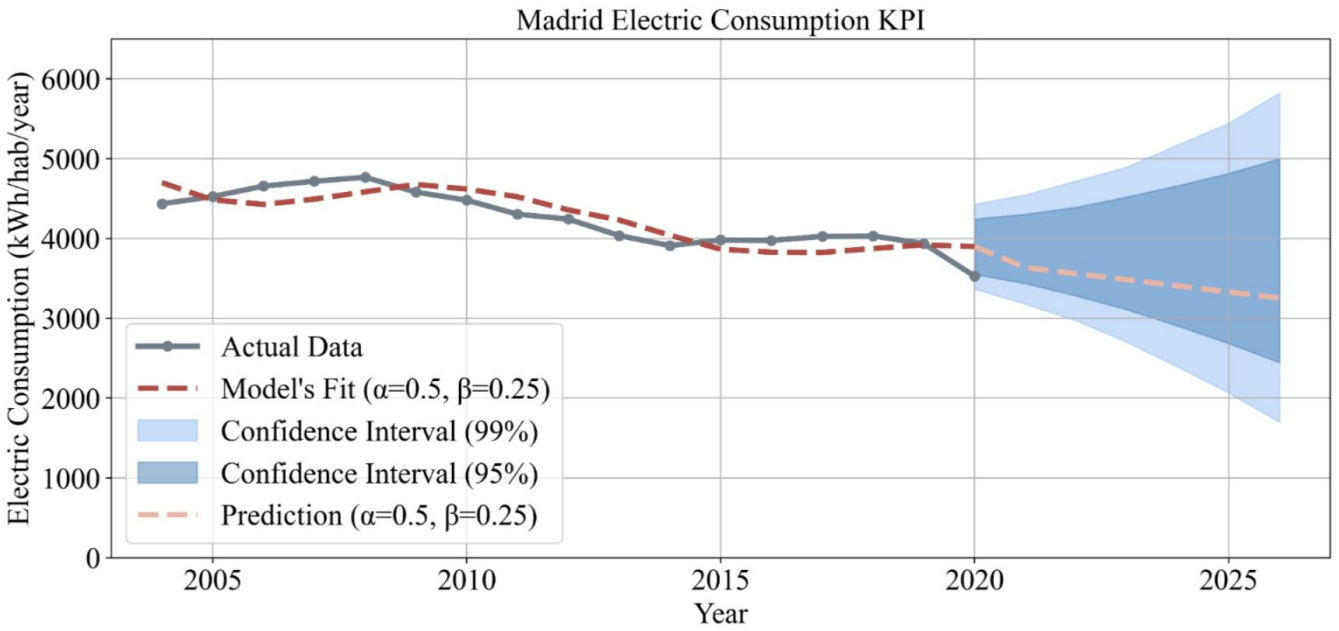


Prescriptive analysis

EFFECTIVENESS OF ACTIONS

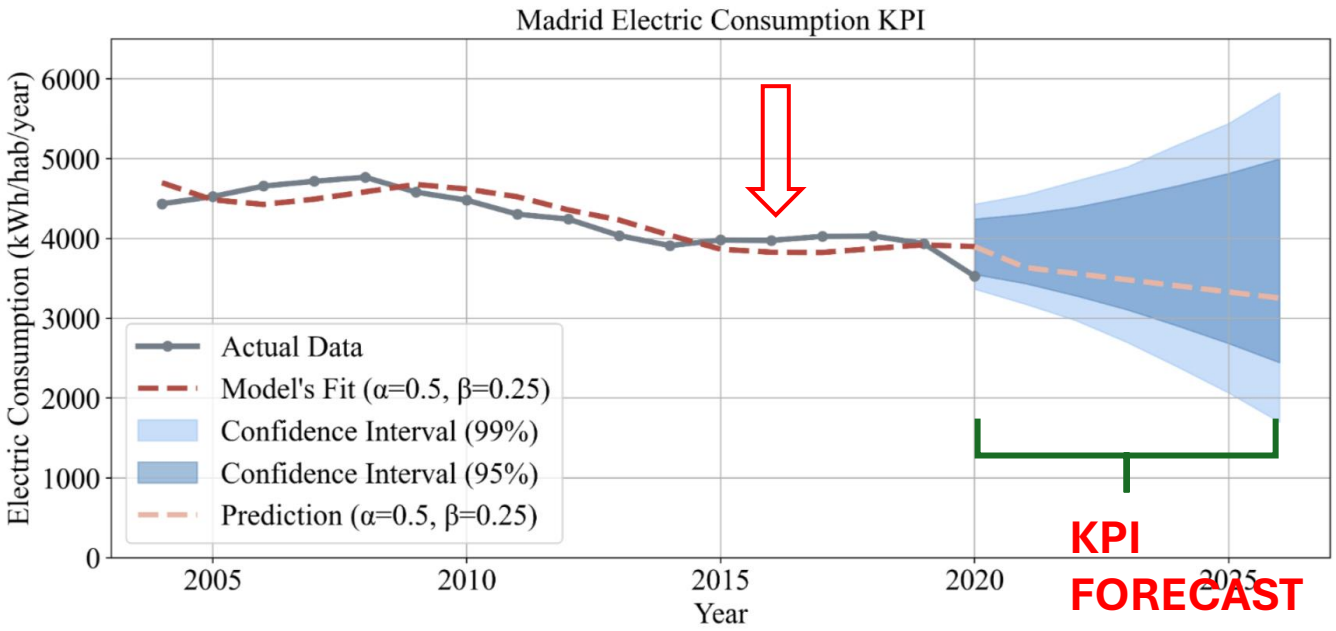
Prescriptive analysis

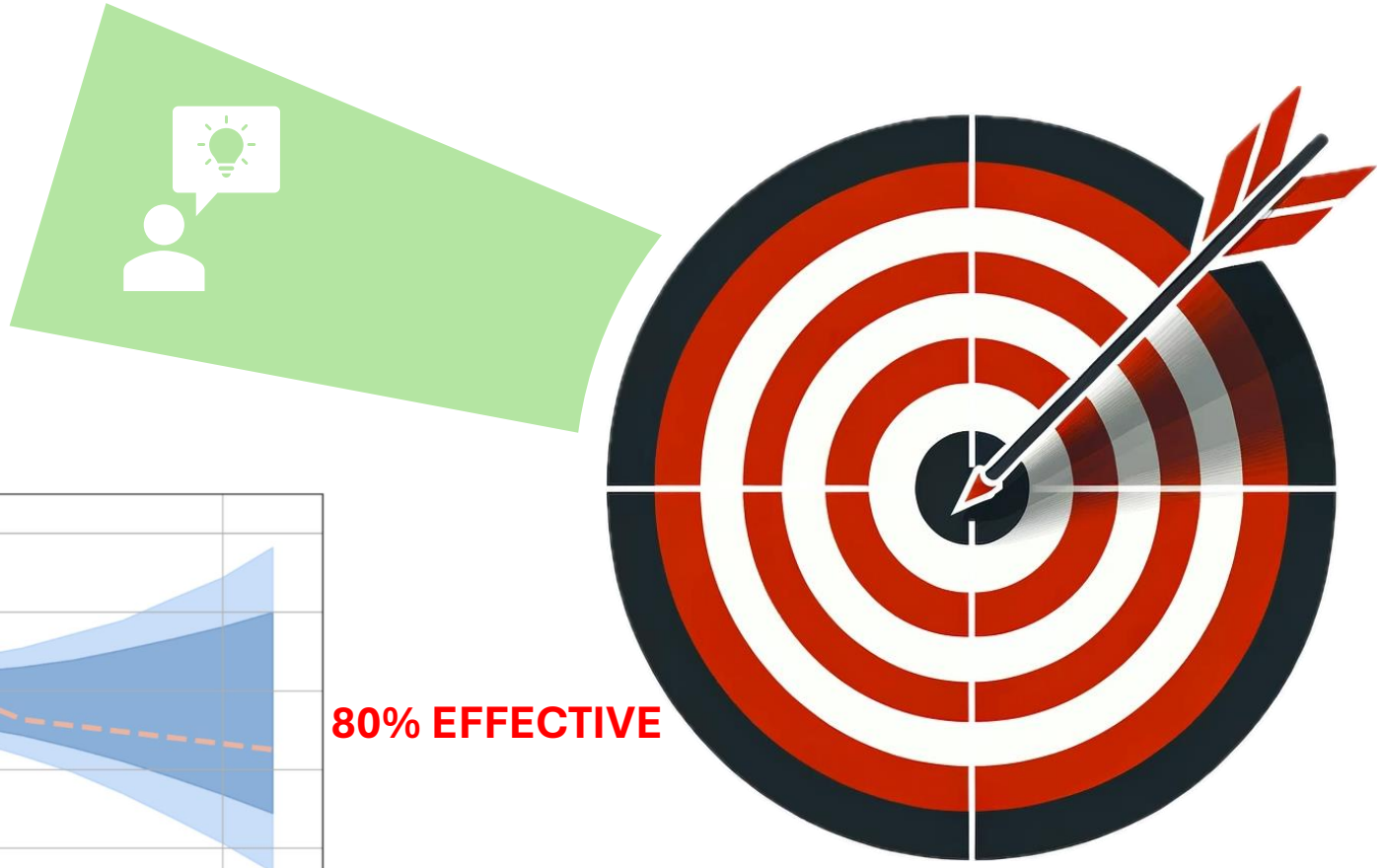
EFFECTIVENESS OF ACTIONS



Prescriptive analysis

EFFECTIVENESS OF ACTIONS





80% EFFECTIVE

Prescriptive analysis

EFFECTIVENESS OF ACTIONS

RESOURCE MANAGEMENT

Prescriptive analysis

EFFECTIVENESS OF ACTIONS

RESOURCE MANAGEMENT

ECONOMIC FORECAST

Prompt adjustments in resource management based on future **predictions**.

Conclusions

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Proactive and **informed decision making**: Combines analysis of current, historical data, and future predictions to **guide** the sustainable development of the city.

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*Adjust **policies** based on past successes or failures.*

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Conclusions

Prompt adjustments in resource management based on future **predictions**.

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Proactive and **informed decision making**: Combines analysis of current, historical data, and future predictions to **guide** the sustainable development of the city.

Understanding **patterns** to **anticipate** changes in resource demand and urban needs.

THANK YOU VERY MUCH FOR YOUR ATTENTION

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LLEIDA TECH

ARTIFICIAL INTELLIGENCE & OPTIMIZATION CONGRESS