Evidence-based design

Victoria Delbridge

Common biases in decision making

How often do you or others:

➢ Make decisions based on what others think/decide

➢ Prefer to maintain the status quo than risk trying something new

➢ Favour options that confirm prior beliefs

➢ Choose smaller immediate rewards, rather than larger future rewards

➢ Choose to avoid losses, rather than seeking gains

How can using evidence help?

Measuring the city

Improved targeting and allocation of resources

Forecasting future demands for public services

Determining the best policy option

Reviewing best practice across other contexts

Conducting a feasibility for the given context

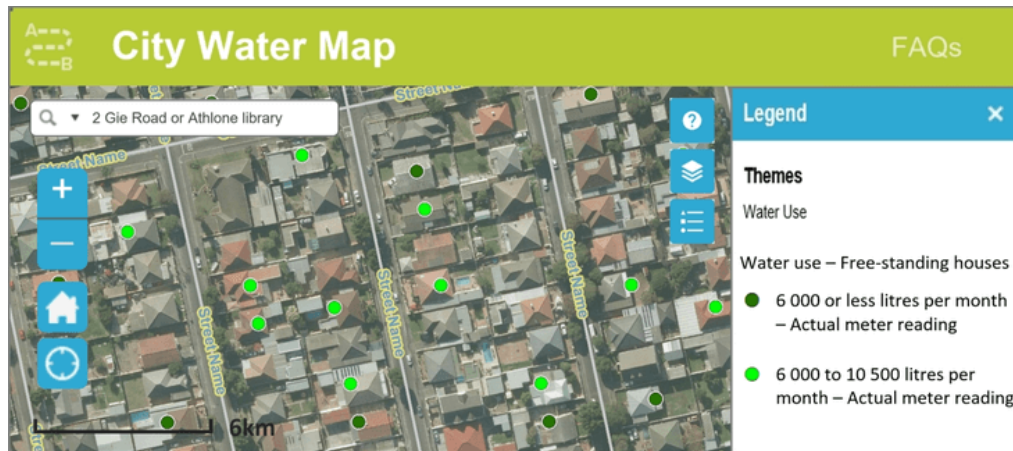Policy experimentation and evaluation

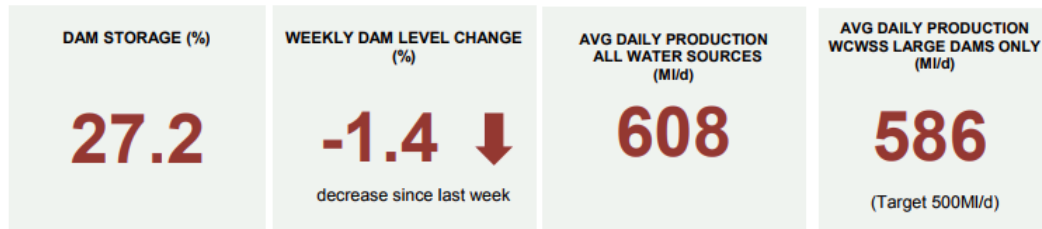# Measuring the city

Targeting and allocating water in Cape Town

How do we reduce water consumption?

- **Digitisation** of water data allowed advanced water management and leak detection.

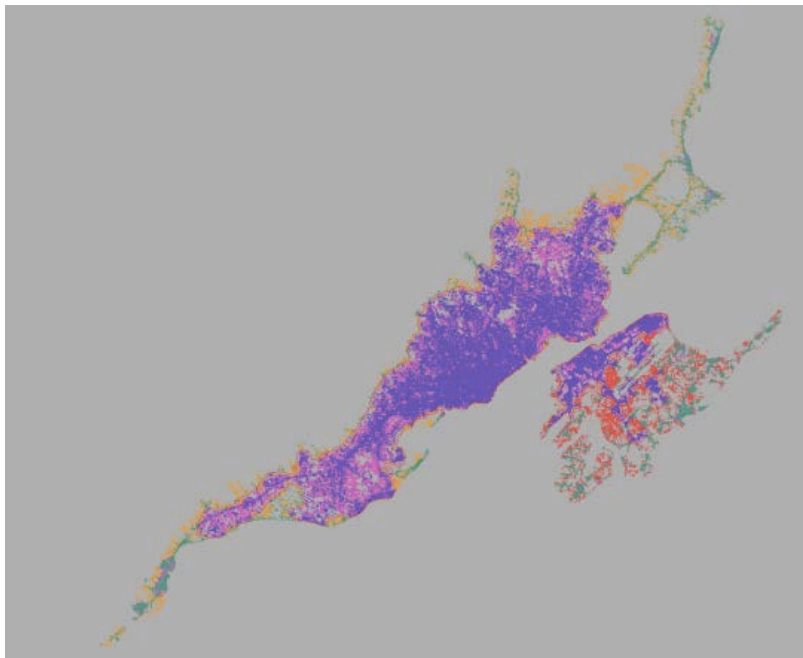- Data on water usage made **publicly available** for behavior change.

City Water Map   FAQs

Q ▾ 2 Gie Road or Athlone library

6km

Legend   ✕

Themes

Water Use

Water use – Free-standing houses

● 6 000 or less litres per month – Actual meter reading

● 6 000 to 10 500 litres per month – Actual meter reading

CITY OF CAPE TOWN
ISIXEKO SASEKAPA
STAD KAAPSTAD

City of Cape Town: Water Dashboard

22 January 2018

DAM STORAGE (%)	WEEKLY DAM LEVEL CHANGE (%)	AVG DAILY PRODUCTION ALL WATER SOURCES (Ml/d)	AVG DAILY PRODUCTION WCWSS LARGE DAMS ONLY (Ml/d)
27.2	**-1.4** ⬇	**608**	**586**
	decrease since last week		(Target 500Ml/d)

Forecasting future needs with the Atlas of Urban Expansion

Where and how is urban expansion taking place in Cebu?

- Use of satellite imagery and analysis to show infill (pink), extension (yellow), leapfrog (red) and inclusion (green)

- Past trends to forecast future infrastructure and service delivery

Source: http://atlasofurbanexpansion.org/cities/view/Cebu_City

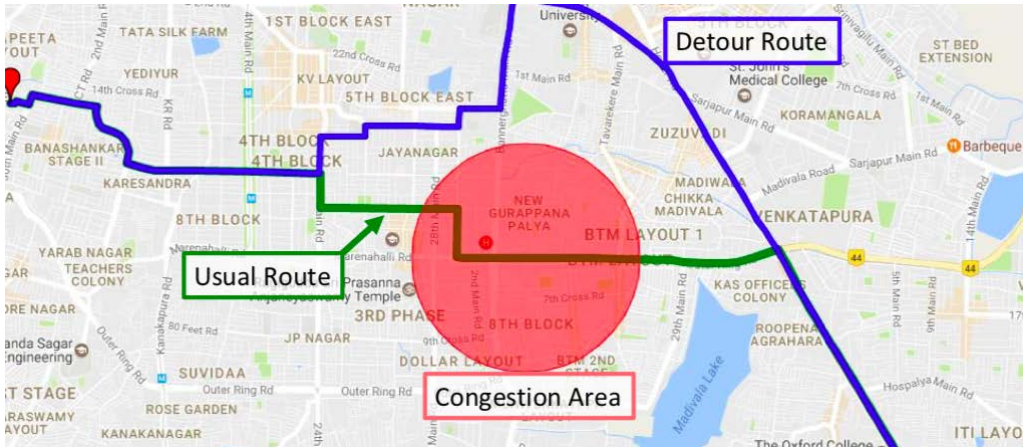# Determining the best policy option

Reviewing the stock of evidence

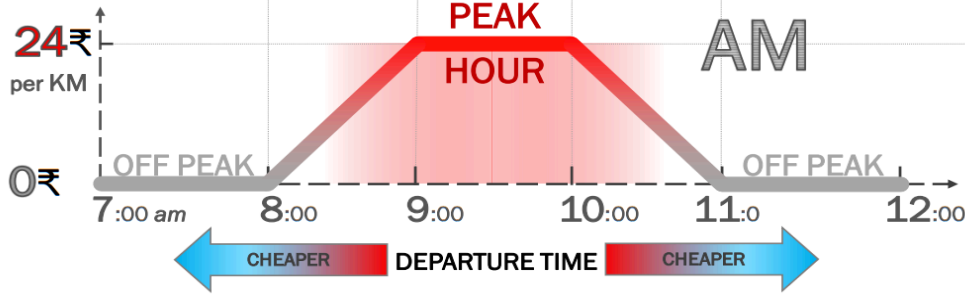**What has worked elsewhere in informal settlement upgrading?**
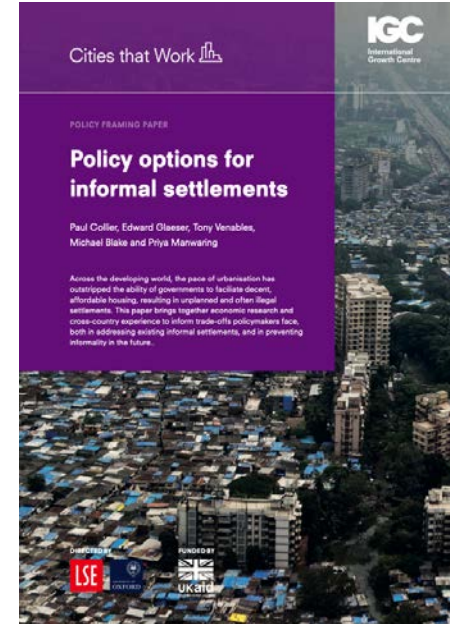
Source: Kriendler (2018)

Experimenting with road congestion pricing in Bangalore

Will congestion pricing change commuter behavior?

- Participants charged either on **departure time** or taking a **detour route.**

- Use of car **GPS devices** and **license plate reading cameras**.

- While people change their behavior, welfare gains from re-allocating trips away from peak times are negligible.

## Evaluating Bogota's TransMilenio Bus Rapid Transit (BRT) system

How did the BRT impact location choices of firms and residents?

- Combined **national census data** and **representative city data** on commute times, land markets, and residential and employment locations – before and after the intervention.

- BRT has resulted in **increased employment and city in-migration**; but zoning restrictions have inhibited full benefits.
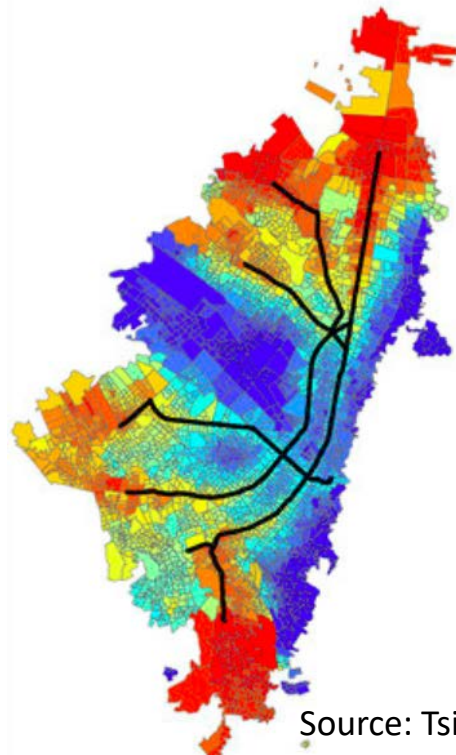
Residents   Firms
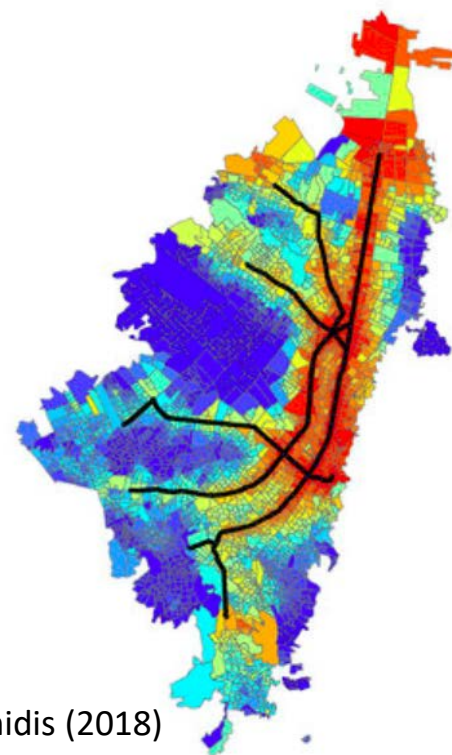
Source: Tsivanidis (2018)

Caution on evidence-based policy

➢ Not all evidence is equal

➢ Collection of data needs to be guided by a specific policy question

➢ More data is not always preferred to less

➢ An evidence-based approach requires strong institutions and capacity to implement

POLL

Thinking about your city, and on a scale to 1 (bad) to 5 (good), to what extent:

➢ Do the governance arrangements facilitate inter-departmental collaboration?

➢ Are decisions taken based on robust evidence?

➢ Do you share data between departments?

➢ Do you make effective use of data?

➢ Does data help you to deliver better services outcomes?