LUCIAD PRESENTATION

Oman Geospatial World Forum 2017

KEEPING UP WITH DATA:SMART CITIES IN 3D

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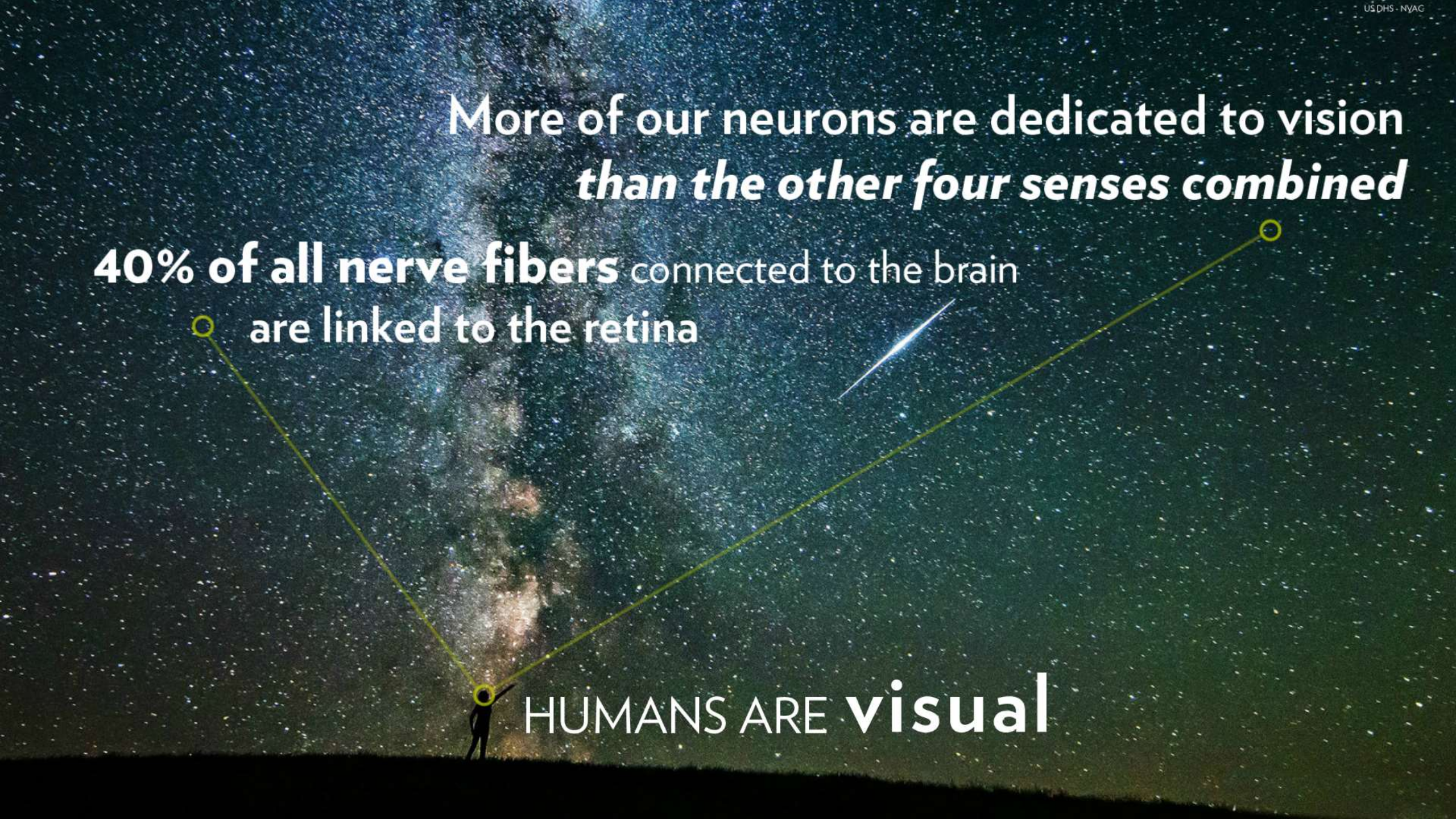
CONNECT • VISUALIZE • ANALYZE • ACT

HUMANS ARE visual


US DHS - NVAC
More of our neurons are dedicated to vision
than the other four senses combined
40% of all nerve fibers connected to the brain
are linked to the retina
HUMANS ARE **visual**

Interactive visualization

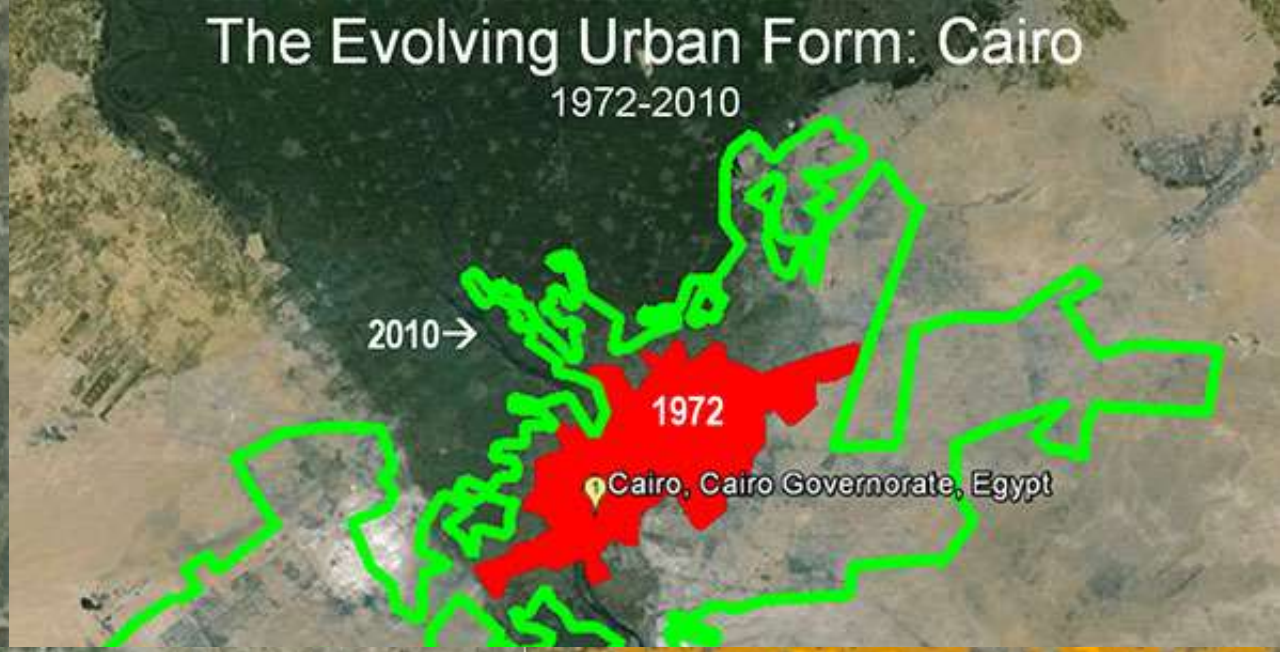
is one of the main challenges

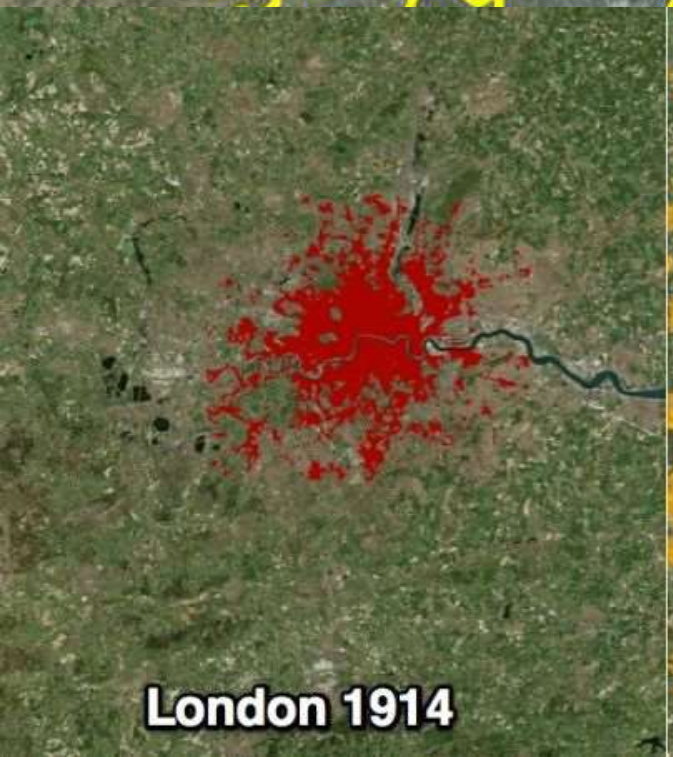
to gain insight into

BIG DATA

-Gartner

The Evolving Urban Form: Addis Abeba
1972-2010
Addis Ababa, Ethiopia
1972→
2010→


The Evolving Urban Form: Cairo
1972-2010
2010→
1972
Cairo, Cairo Governorate, Egypt

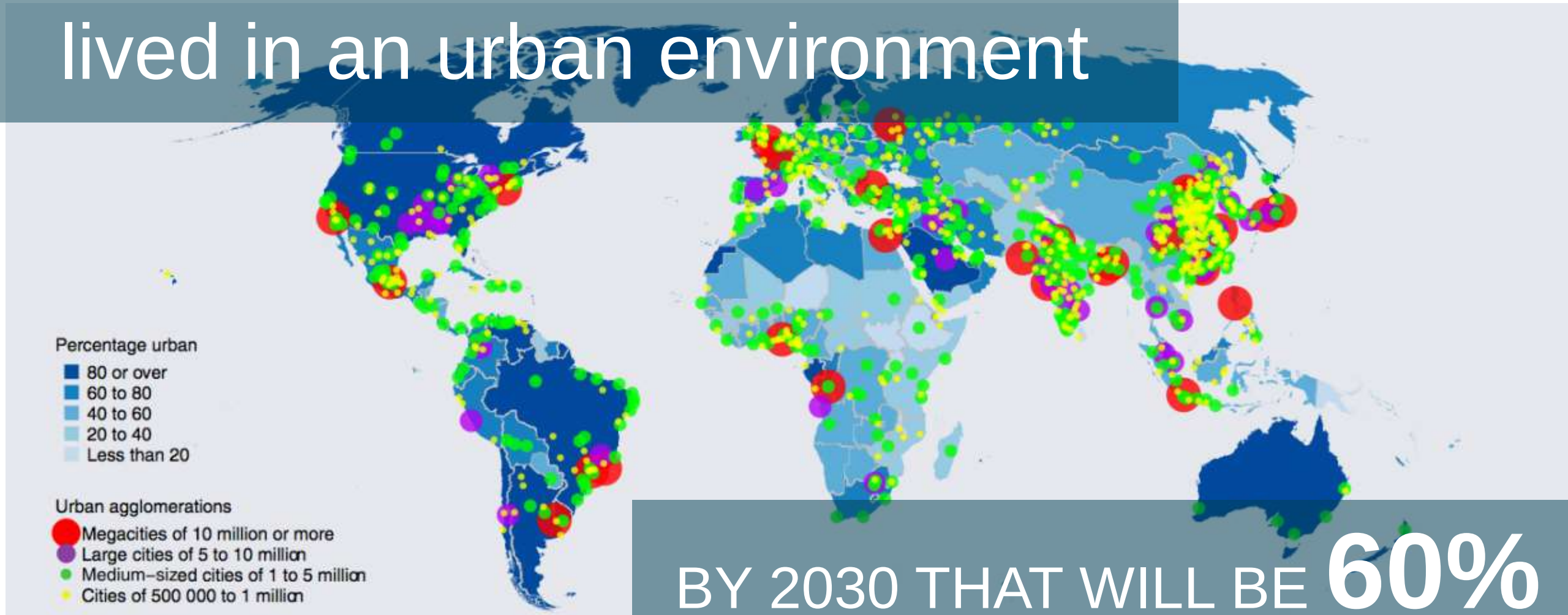

London 1914

London

Mexico City 1910

Mexico City Today

In 2016, 54% of the world's population lived in an urban environment



BY 2030 THAT WILL BE **60%**

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IOT is in fact

TOTAL CITY NETWORK CONNECTIVITY

- → Street Lights
- → Energy Grids
- → Video
- → Water
- → Utilities

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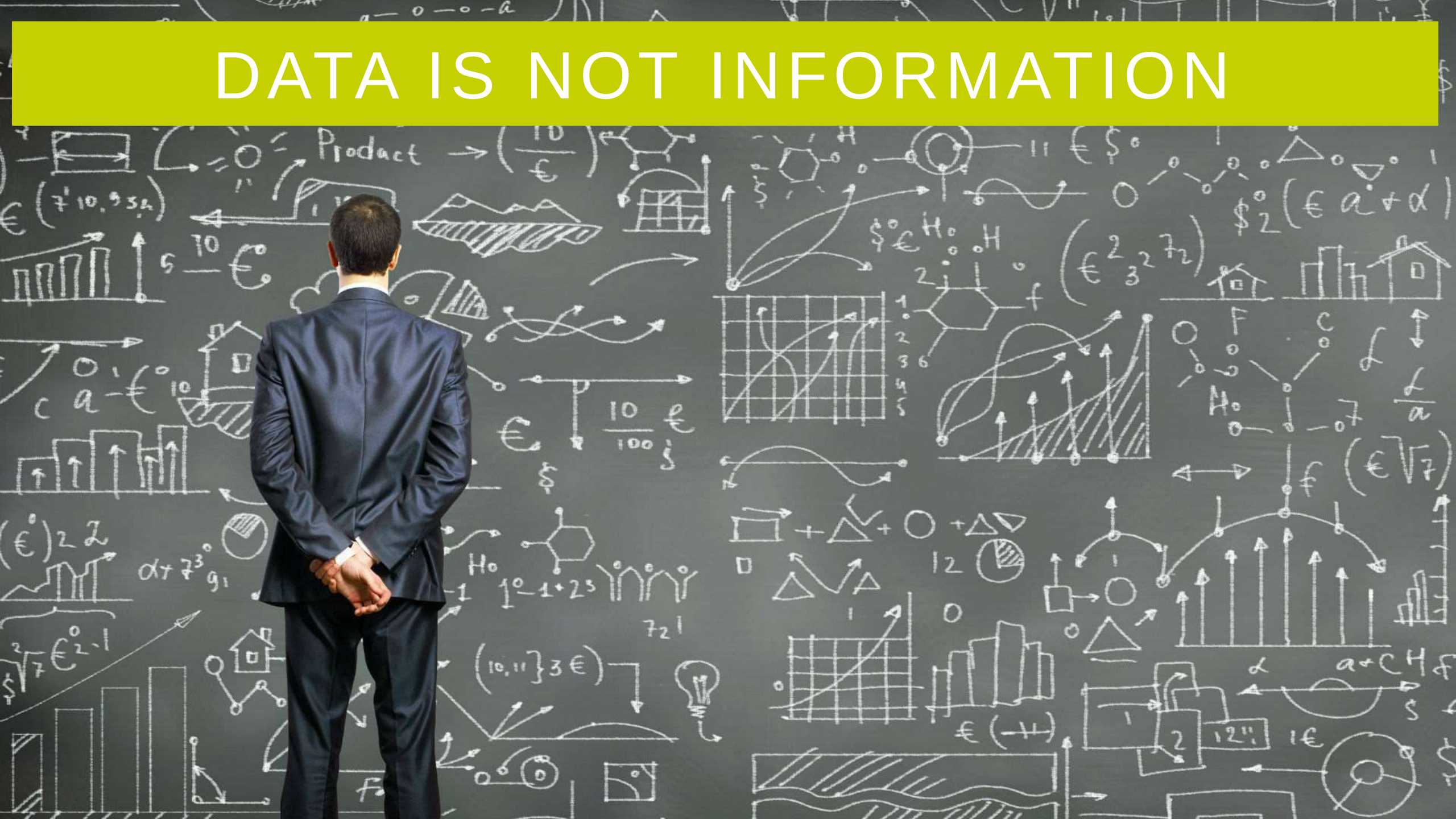
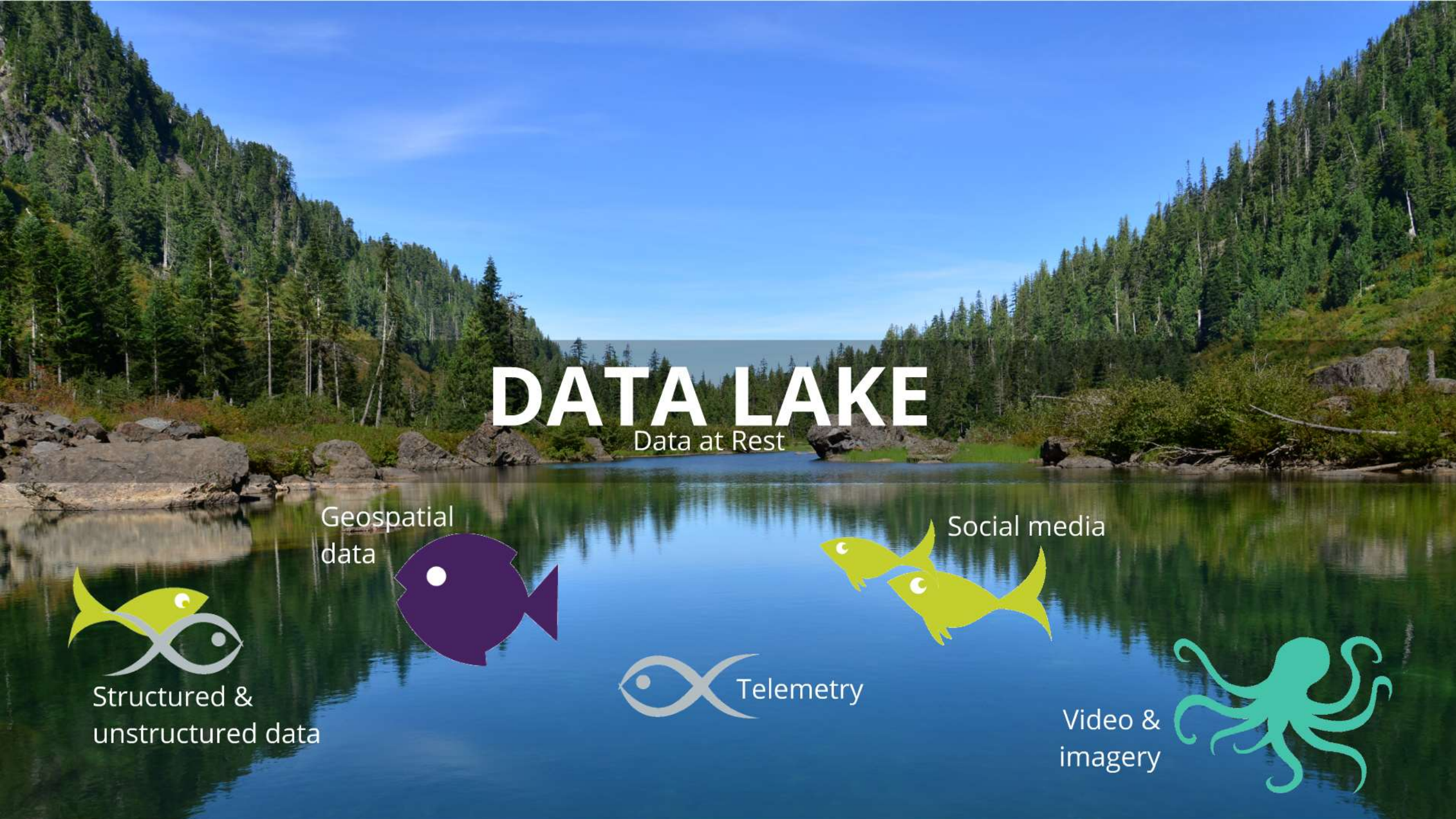
DATA IS NOT INFORMATION




DATA LAKE
Data at Rest
Geospatial data
Social media
Structured & unstructured data
Telemetry
Video & imagery

CHALLENGES OF **SMART CITY DATA**

- → Data sources
- → Accuracy of data
- → Choosing correct references
- → Choosing correct scales
- → Speed of change and volumes of data

CITY OF BERLIN – 3D CITY MODEL

Implemented on Oracle with 3DCityDB

→ 565,000 buildings, reconstructed from 2D cadastre and LIDAR data

→ Textures extracted from oblique aerial photography

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ORACLE SMART CITY PLATFORM – THE BIG PICTURE

Typical application scenarios

- → Improved Citizen Services
  - Better Public Transport
  - Social Media Interaction
- → Improved Citizen Security
  - Predictive Policing
  - Social Media Analytics
- → Improved City Operations
  - Streamlined Process Management
  - Optimized Field Service

ORACLE

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THE NEXT STEP, FROM OUTSIDE TO INSIDE…

Layers
People flow
Floor plan
VELOCITY
TIME

THANK YOU!

Glyn Arthur

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