

Trusted Data Collaboratives

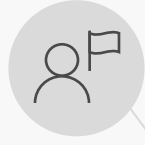
Bill Mitchel
Sr. Director
Microsoft Worldwide Industry &
Public Sector

May 18th, 2017





Economic development



Disaster resilience



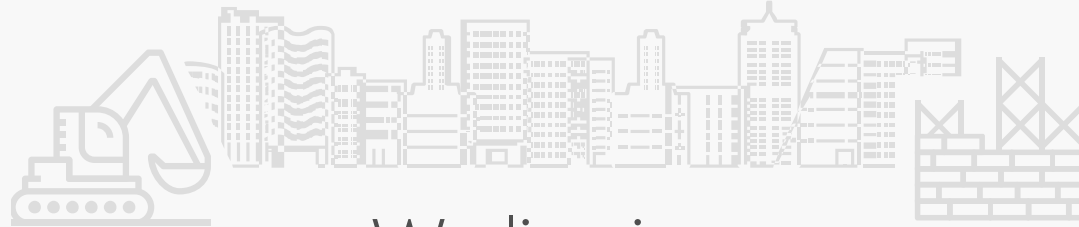
Urban mobility



Personalized health



Public safety



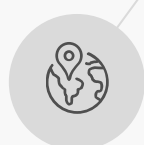
We live in a **complex** world



Social sentiment



Water & energy optimization



Pandemic management



Workforce development

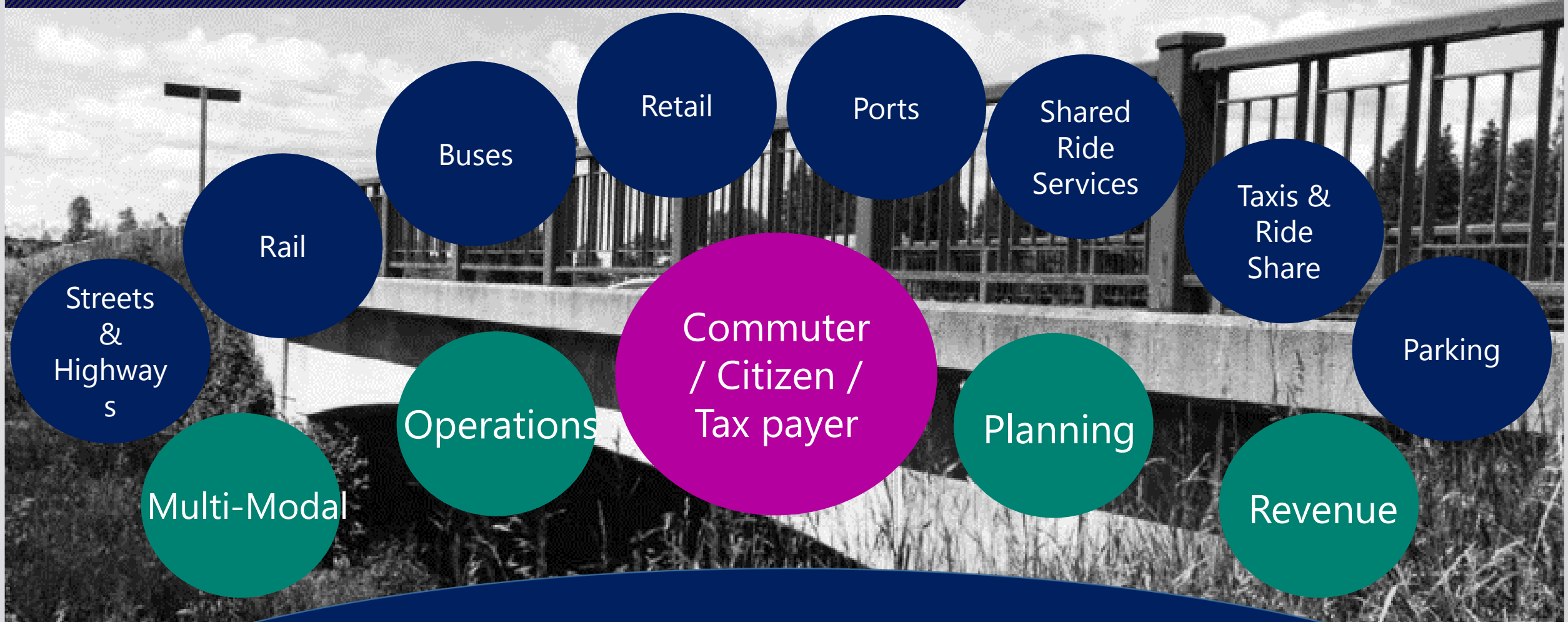


Student Performance

An aerial, black and white photograph of a cityscape. A prominent feature is a large, multi-lane elevated highway that curves through the scene. In the background, a dense urban area is visible, including a tall, distinctive skyscraper with a pointed top. The sky is filled with dramatic, layered clouds. The overall tone is professional and modern.

SOLVING TODAY'S COMPLEX CHALLENGES
REQUIRES GREATER **ACCESS TO DATA**

Transportation Dynamics – So Many Siloes!



The Goal: CONNECTED + INTELLIGENCE

WHAT MAKES DATA SHARING **CHALLENGING**?



INACCESSIBLE
DATA



AVAILABLE DATA IS
DIFFICULT TO USE



UNCONTROLLED
USE



DATA ASSET VALUE
IS UNDETERMINED



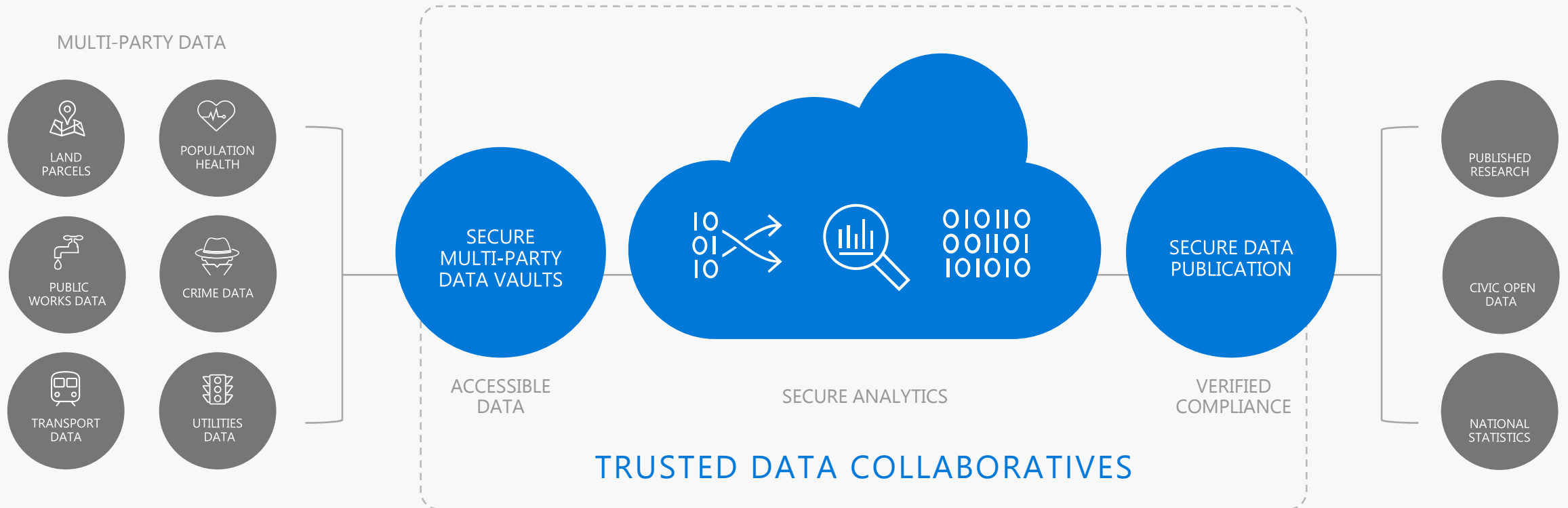
INADEQUATE
BUSINESS MODELS



TRUSTED DATA COLLABORATIVE

A secure place to exchange protected and open data, analyze complex systems and create meaningful solutions for societies most pressing challenges

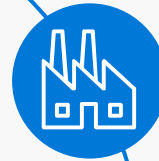
A TRUSTED DATA PLATFORM



TYPES OF DATA COLLABORATIVES

RESEARCH COLLABORATIVE

Academic research projects using externally sourced multi-party data



INDUSTRY COLLABORATIVE

Multi-party data sharing via a neutral third-party industry consortium

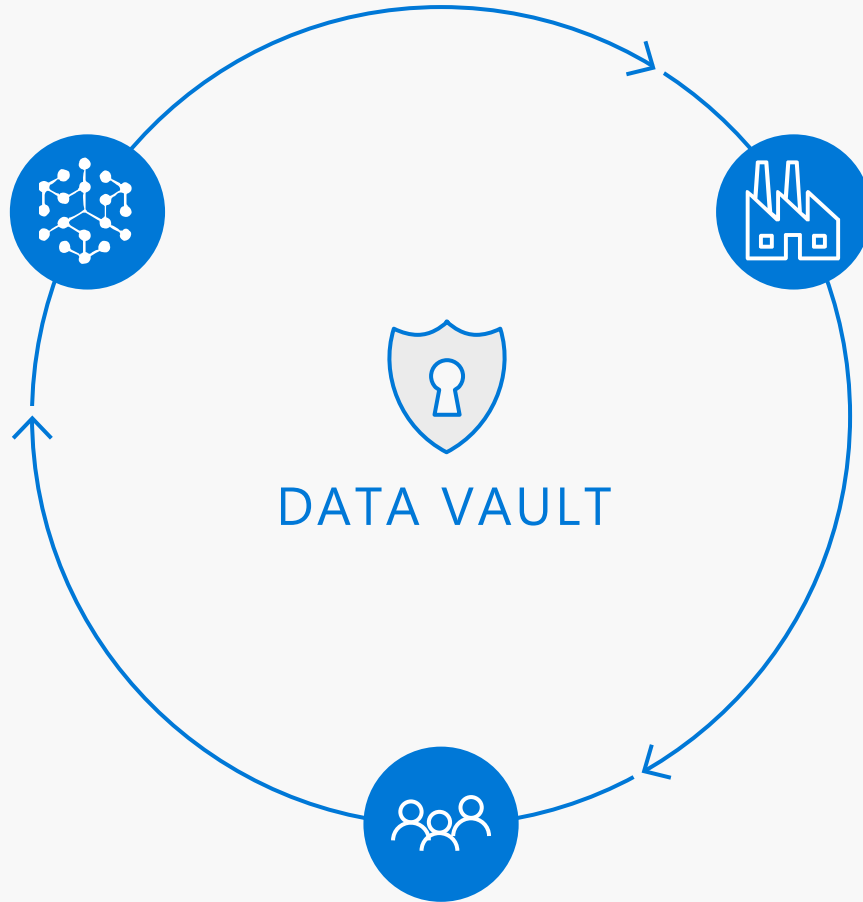


DATA VAULT



PRIVATE DATA COLLABORATIVE

Private organizations securely sharing private data internally





WATER AND ENERGY CONSERVATION (an example)

UC DAVIS CENTER FOR WATER ENERGY EFFICIENCY

Motivation

- Facilitate collaboration across multiple stakeholders to drive water-energy conservation

Unique challenges

- Sourcing public and private protected data
- Datasets required have different sets of rules
- Water-Energy network data is classified (DHS)
- Rules around data sharing continue to change

Actionable Insights (California)

- 20% of electricity use is embedded in water
- 30% of natural gas is embedded in water
- 100M t. CO₂ is generated throughout the water cycle

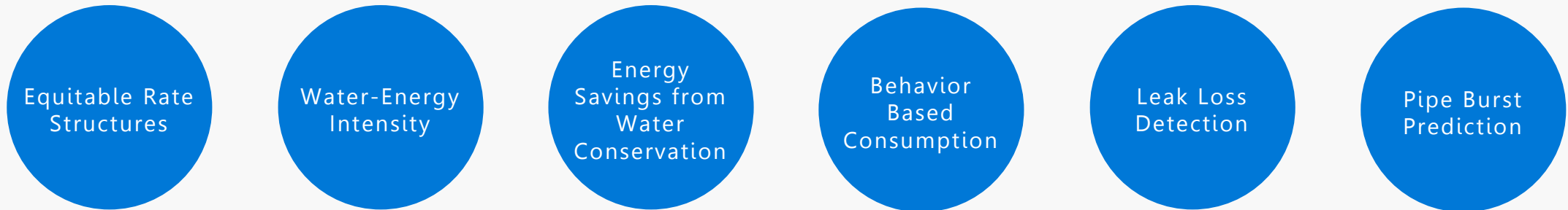


A partnership between the public utilities companies of California and the University of California



UC DAVIS CENTER FOR WATER ENERGY EFFICIENCY WITH THE **MICROSOFT CLOUD**

KEY SCENARIOS



COMMON DATA SOURCES

** Protected data*

ENTERPRISE

- Rate structures
- Capital planning
- Budgeting
- Workforce management

CUSTOMER

- Customer types and location
- Water Meter Data
- Energy Meter Data
- Billing Data
- Water conservation programs
- Outreach and communication

INFRASTRUCTURE

- Network Data:
 - Network design
 - Asset attributes
- Time series data:
 - On/off, open/closed
 - Flow and pressure
 - Energy consumption
 - Water quality

THREE PRINCIPLES FOR TRUSTED DATA COLLABORATIVES

1

TRANSPARENCY

Each party must be transparent in their motivations, policies and regulatory constraints regarding data: collection, storage and retention, sharing, use and publication.

2

ACCOUNTABILITY

Encourage broad data sharing whilst protecting the rights and interests of Data Subjects and Data Owners via controls that maintain data provenance, chain of custody and algorithmic/analytical transparency.

3

FAIR VALUE EXCHANGE

The collaborative usage of data demonstrates a fair value exchange between data providers and data consumers

*These three principles form the basis of an operational **Data Collaborative Trust Framework**.*



THE MICROSOFT COMMITMENT TO **YOU**



SECURITY



PRIVACY & CONTROL



COMPLIANCE



TRANSPARENCY

Microsoft mission

Empower every person and every organization on the planet to achieve more

