



Thareendra
Kalpage

Microsoft



Know

What
World

We
are

Living
in



In
2003

We were talking about
Connected World



In
2003

NO
Facebook

Twitter
Was a
sound

Cloud
Was still in
the Sky

4G was
parking
Place

Applications
were what
send to Jobs

Big Data
was Rap
Star

The World Has Changed

2005



2013



What Do We Do?



In
2015

Hyper Connected World

By
2050...

34%

Growth in
population, 9.1
billion people



80%

Growth within
cities, 6.3
billion people



70%

Will live
in cities,
up from
50% today



Our population is rapidly increasing

This Means large amounts of data.



Internal systems



Social channels

i	Time	Event
▶	5/6/05 5:59:59.000 AM	2005-05-06 06:59:59 102 45.17.17.200 200 TCP_NC_MISS 385 152 GET http badgeTypes=Conference&location=Expo%2520Cashier - DIRECT admin.intero Business/Economy - 192.16.170.44 SG-HTTP-Service - none - host = chuvakin source = /export/cav_data/chuvakin/bluecoat_proxy_big/Demo_log_all.log
▶	5/6/05 5:59:59.000 AM	2005-05-06 06:59:59 102 45.17.17.200 200 TCP_NC_MISS 385 152 GET http badgeTypes=Conference&location=Expo%2520Cashier - DIRECT admin.intero Business/Economy - 192.16.170.44 SG-HTTP-Service - none - host = chuvakin source = /export/cav_data/chuvakin/bluecoat_proxy_big/Demo_log_all.log
▶	5/6/05 5:59:49.000 AM	2005-05-06 06:59:49 233 45.17.17.200 200 TCP_NC_MISS 385 152 GET http badgeTypes=Conference&location=Expo%2520Cashier - DIRECT admin.intero Business/Economy - 192.16.170.44 SG-HTTP-Service - none - host = chuvakin source = /export/cav_data/chuvakin/bluecoat_proxy_big/Demo_log_all.log
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▶	5/6/05 5:59:39.000 AM	2005-05-06 06:59:39 93 45.17.17.200 200 TCP_NC_MISS 385 152 GET http badgeTypes=Conference&location=Expo%2520Cashier - DIRECT admin.intero Business/Economy - 192.16.170.44 SG-HTTP-Service - none - host = chuvakin source = /export/cav_data/chuvakin/bluecoat_proxy_big/Demo_log_all.log
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▶	5/6/05 5:59:33.000 AM	2005-05-06 06:59:33 18 10.0.1.7 200 TCP_CLIENT_REFRESH 372 247 GET ht /UpdateLocation/ProxyAV/McafeeAntivirusEngineLocation ? - DIRECT www. "Mozilla/4.0 (compatible; ProxyAV)" PROXIED Computers/Internet - 192.16.170.44 SG-HTTP-Service - none - host = chuvakin source = /export/cav_data/chuvakin/bluecoat_proxy_big/Demo_log_all.log
▶	5/6/05 5:59:33.000 AM	2005-05-06 06:59:33 16 10.0.1.7 200 TCP_CLIENT_REFRESH 388 248 GET ht /UpdateLocation/ProxyAV/McafeeAntivirusPatternLocation ? - DIRECT www. "Mozilla/4.0 (compatible; ProxyAV)" PROXIED Computers/Internet - 192.16.170.44 SG-HTTP-Service - none - host = chuvakin source = /export/cav_data/chuvakin/bluecoat_proxy_big/Demo_log_all.log

Telemetry and logs

It is sometimes difficult to create valuable insight.

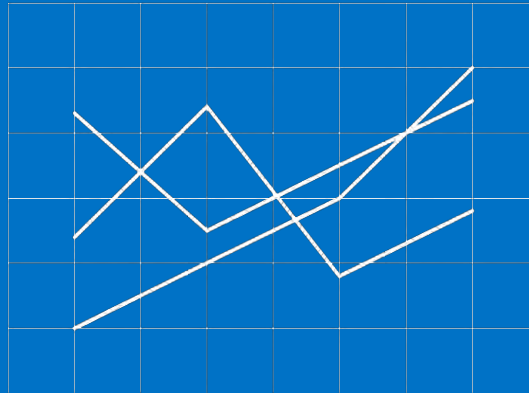
But what if you could:

1



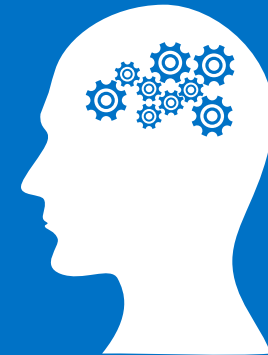
Gather insight about your business from any source?

2



Visualize that data and create new insights?

3



Use this insight to drive better decisions?

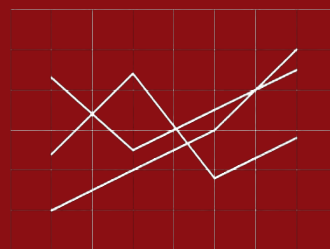
1

CLOUD



2

BIG DATA



3

YOU



Big Data Strategy in the Cloud and Applications

Not just *Smart City* but the *Better City*

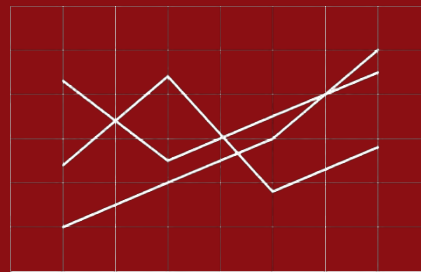


Not just *Smart City* but the *Better City*

CLOUD



BIG DATA

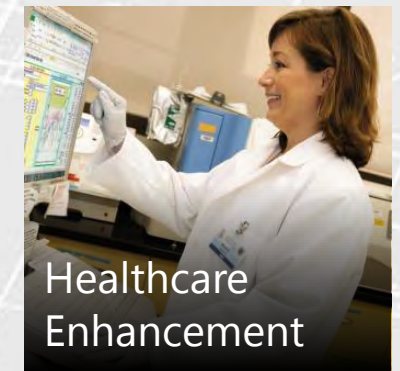
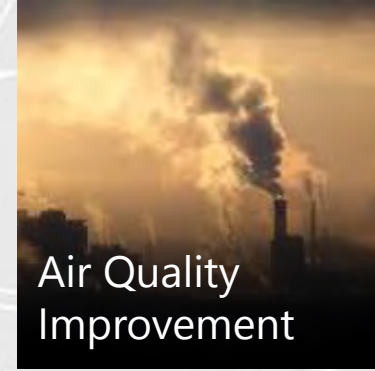
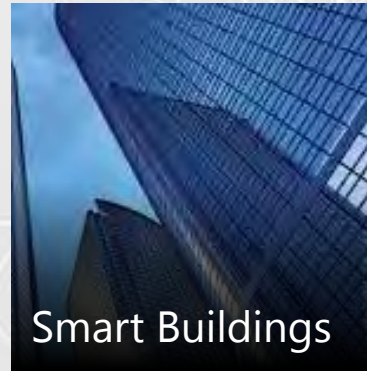


YOU



[illegible]

New Questions Asked by City Leaders



Building Cities of the Future: Intelligent & Sustainable

Economy

- Increased local prosperity and competitiveness
- Productivity
- Entrepreneurship
- Ability to transform

People

- Enhanced Social and human capital
- Creativity
- Cosmopolitanism/Open-mindedness

Governance

- Active citizen participation and engagement
- Transparent governance

Health

- Intelligent delivery of medical services and care
- Health and longevity of citizens

Environment

- Sustainable resource management
- Pollution
- Environmental protection

Mobility

- Sustainable, innovative and safe transport system
- Availability of ICT-infrastructure

Infrastructure

- Intelligent management of infrastructure
- Resource preservation
- Sufficiency of city infrastructure

Living

- High quality of life of citizens
- Individual safety
- Social cohesion
- Touristic attractiveness

All Connected





Gov't

Business

Citizens



Education



Health & Social Services



Public Safety & Justice



Buildings, Infrastructure, Planning



Tourism, Recreation, Culture



Government Admin.



Energy & Water

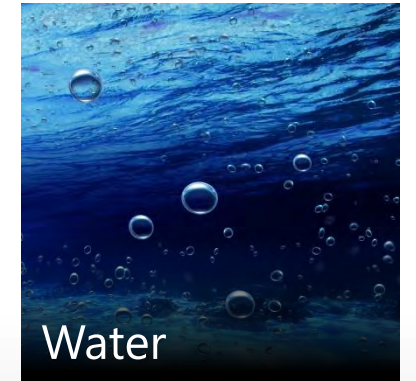
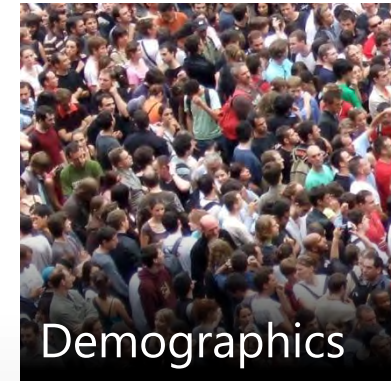
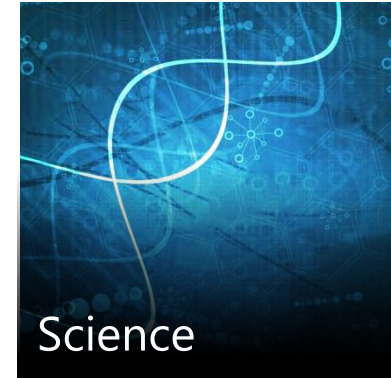
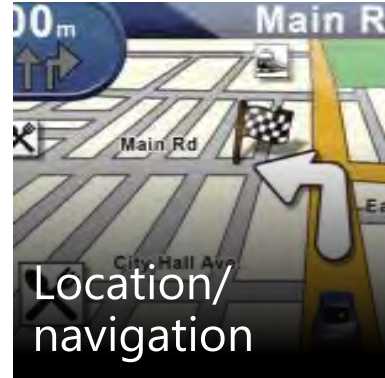


Transportation

The Availability of Public Data is Increasing

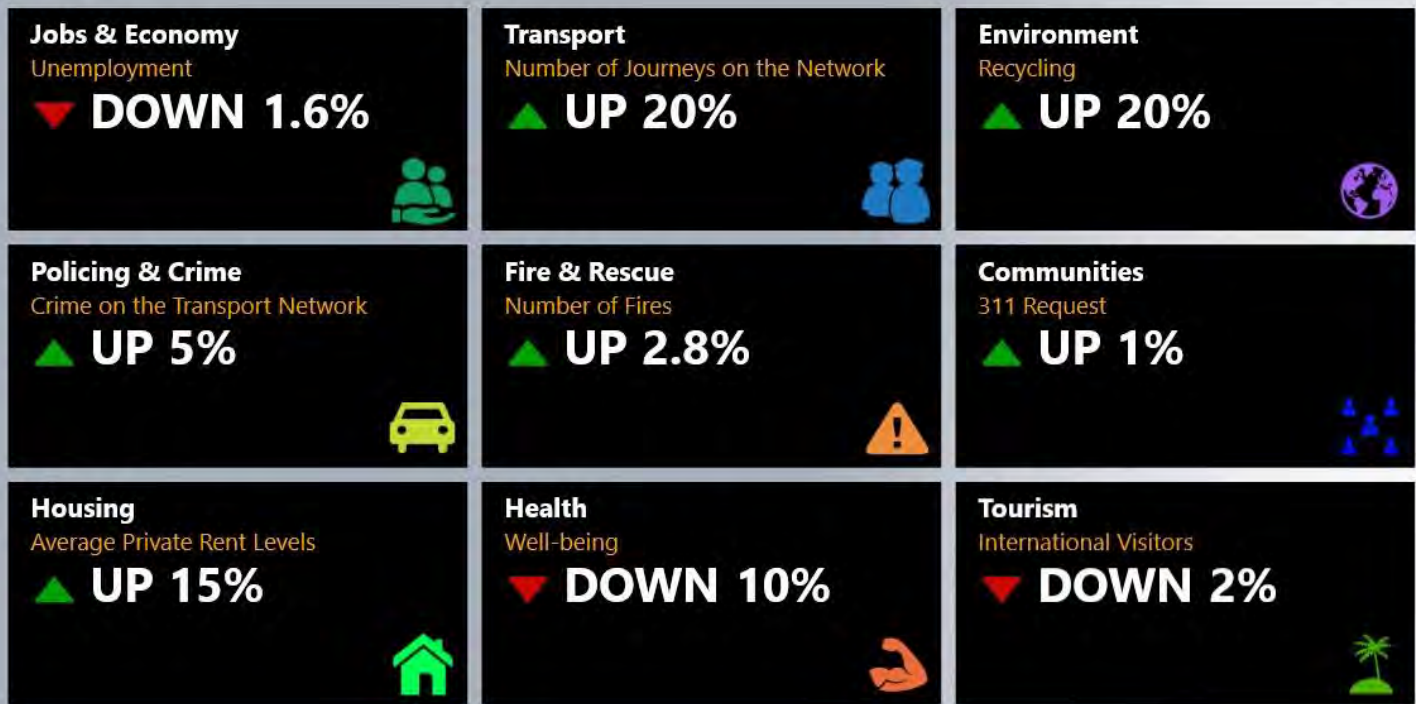
Enhancing the usefulness of private data

- ▶ Financial
- ▶ Security
- ▶ Occupancy
- ▶ Performance
- ▶ Supply Chain
- ▶ Manufacturing
- ▶ Distribution
- ▶ On-site generation
- ▶ Resource Usage
- ▶ Waste
- ▶ GHG Emissions
- ▶ Etc...



City Dashboard

KPIs



Favorites



Emergency Situational Awareness Dashboard



The four cornerstones

An integrated platform allowing for data and service sharing across domains

Enhanced solutions for:

- City big data
- City analytics
- City service integration



A modular architecture that allows cities to deploy smart city solutions with minimal investment and quick deployment

An enterprise-level solution accelerator backed by the best-of-breed big data ecosystem



- Big data-driven approaches will help cities bring innovative solutions to citizens, workers and leaders.
- Successfully addressing the challenging issues related to city big data modeling, management, analytics, service integration and insight dissemination will be key to achieving this.
- Microsoft CityNext Big Data Solution Accelerator can deliver effective solutions to address these challenges and help cities reach the goal of becoming intelligent cities.

Cities face a wide variety of data originated from many different sources. Managing diverse data is a key challenge in cities' big data endeavor.



Data Ingestion

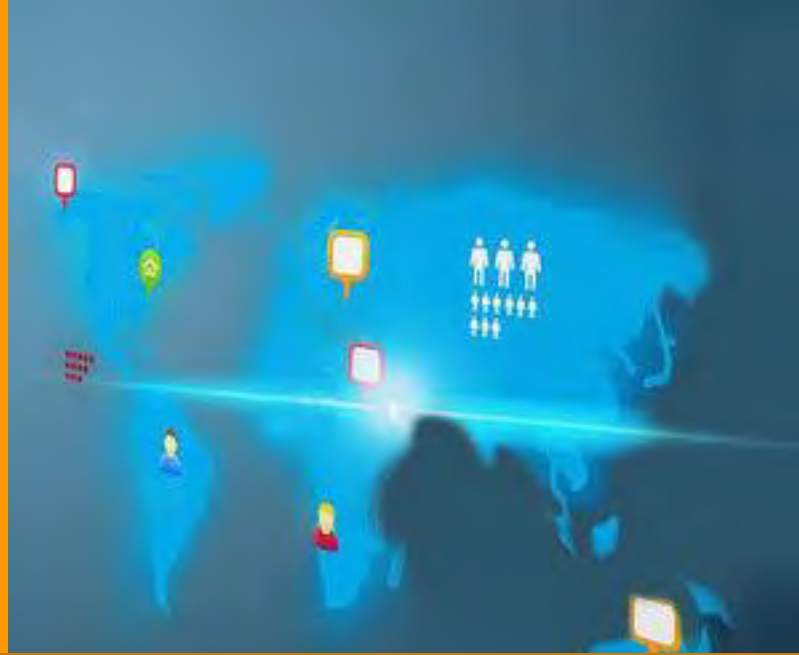


Pioneers the Data First, Schema Later approach to simplify data source management and ingestion operations

Provides extensive channel and format adaptors to ingest any type of data efficiently

Manages data sources and processes raw data into desired formats

Vast amount of city data offer opportunities for innovative analytics solutions, yet supporting diverse analytics jobs and users can be challenging.



Analytics



Offers a versatile engine for data exploration and analytics for both self-serve BI and urban research

Supports a wide range of tools (e.g. Power BI, Wind32, CEP, etc.) for executing analytics jobs and managing results

Publishes result sets and makes them available for analytics and services

City data, insights and services are hard to be discovered causing low usage and long development cycles.



Service
Management



Offers a delivery and integration framework for city data and big data-enabled services

Enhances data and service discoverability and reusability

Retains and shares knowledge across domains

Currently, cities have limited capabilities to communicate the right information to the right person at the right time.



Information Access

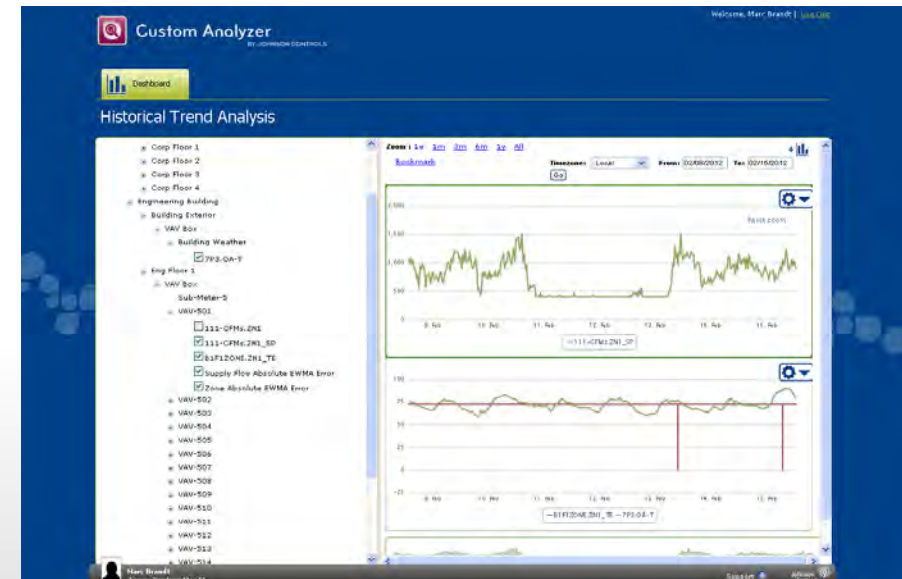
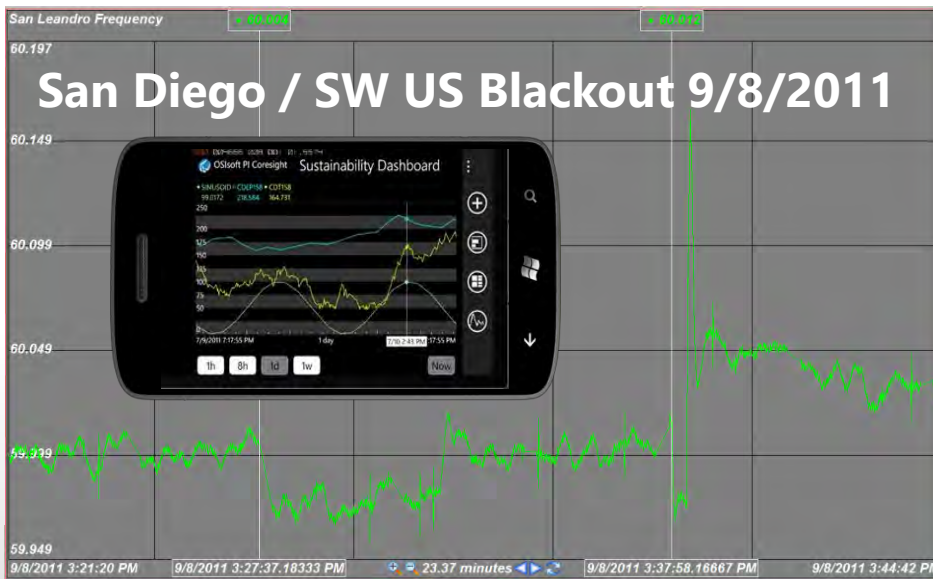
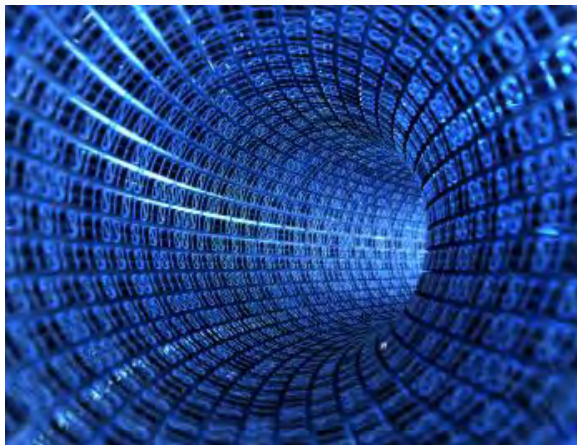


Automated routing and broadcasting of critical information

Supports a wide range of channels to reach users, apps and devices

Enables city governments to validate and control information dissemination requests

Data Drives More Informed Decisions and Actions



The Microsoft logo is centered in the upper half of the image, rendered in its characteristic white, italicized sans-serif font. The background is a panoramic view of a city skyline at night, with numerous skyscrapers and buildings illuminated by warm yellow and orange lights. The city is situated along a body of water, which reflects the lights from the buildings. The sky above the city is a deep blue, filled with large, dark, and textured clouds. The overall composition is horizontal, with the city skyline spanning the width of the frame.

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