IoT in Action

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#IoTinActionMS
Partner case studies

Michael Kuptz
GM America Device Experiences - IoT
Microsoft
Harnessing IoT for safer, smarter cities

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Genetec
Genetec City IOT Engagements

**Smart Buildings**
Connected Buildings
Connected Unmanned Infrastructure

**Public Safety**
Investigators
First Responders
Crime Intelligence

**Mobility**
Transporters
Arterial Infrastructure

**Parking**
Off/on street parking
Pricing | Citation | Appeals
City of Chicago PD
Strategic Decision Support Centers

Case study #1 – Sensemaking with Citigraf
City of Systems – Standardize for Collaboration

- Hospitals
- City Parking Garages
- City Attractions & Parks
- Transit
- Universities

- Intelligent Lighting
- Parking Enforcement
- ITS / Toll Management
- City Fleets
- Housing Authorities
- Schools

Street Cameras
However, there is too much data.
Citigraf – Strategic Decision Support

Citigraf Insights

MSFT Azure Cloud

Citigraf Grid
- Disaster recovery
- ALPR
- Correlation
- Search

Citigraf Command Auto Mobile

On-Prem

CAD Shot Detection ALPR ACS VMS COMMS INTRUSION GIS Database
Handheld
Chicago SDSC
Smart Policing Initiative

Improved response time

by 30%

Reference: Chicago Police Department (Office of Emergency Management and Communications)
Chicago SDSC
Smart Policing Initiative

Reduced the # shooting victims by 18%

Reference: Chicago Police Department (Office of Emergency Management and Communications)
Chicago SDSC
Smart Policing Initiative

Reduce the # of murders city wide by 20%

Reference: Chicago Police Department (Office of Emergency Management and Communications)
Our Goal – expand participation to include both large and small stakeholders.
City of Detroit
Project Green Light

Case study #2 – Community Connect
How the program works

PROJECT GREEN LIGHT DETROIT

On January 1st of 2016, the Detroit Police Department (DPD) partnered with eight gas stations that have installed real-time camera connections with police headquarters as part of a ground-breaking crime-fighting partnership between local businesses, the City of Detroit and community groups called “Project Green Light Detroit.”
Cloud based video as a service

Microsoft Azure

Authenticate

Video Business A

Video Business B

Business A

Business B

Local Monitoring

Mobile Device

Web Browser

Local Monitoring

Mobile Device

Web Browser

Police SDSC

Monitor

Investigate

Respond

Mobile Device

Web Browser

Web Browser
Perfect for Public/Private Partnerships

- Individually owned/operated
- No hardware other than camera
- Federated to PD
- Zero cost to city
- Does not impact FOIA (open records management)
Number of participating businesses more than 500
Violent crime @ participating locations down more than...
Car jackings over two year period down...
Revenue @ participating locations up more than... on average
What people are saying

“My employees and customers feel safer, less loitering takes place and there has been a significant decrease in crime and increase in business …”
- Participating business

“Thanks to the commitment of these Detroit gas station owners, Project Green Light Detroit will give our officers immediate access to video and information that might otherwise take hours to gather.”
- Mayor Mike Duggan

“Community safety is key to the revitalization of the neighborhoods we work in,”
- Alice Thompson
President of Detroit nonprofit
City of San Diego Smart Node Deployment

Case study #3 – Access, manage, retain and disseminate digital media in a responsible manner
STARTING WITH
Universal Intelligent Nodes for All Street Lights.
Multi-sensor Hub | Extensible thru OTA Upgrade | Sensor Fusion for Neighboring Devices
Citizen Safety:

Genetec™ Streaming video from intelligent fixtures creates more effective law enforcement and faster emergency response.

The benefits:

• Improve interdepartmental collaboration to improve incident response
• Streamline operations and maximize technology investment

The Connection
The Detection
The Implication

Ubiquitous citywide video coverage can provide situational awareness, event surveillance and enable effective incident response.

Intelligent nodes with optical sensors inside Current Evolve™ IQ LED Intelligent Street Lights stream data to Genetec Video Management System.

Events of interest can trigger actionable alerts for city officials, and edge storage enables retrieval of high-resolution video and images on demand.

• Leverage existing security infrastructure for better benefits
• Implement and uphold privacy policies to protect citizens' best interests
Genetec Clearance™
Collaborative Investigation Management

Genetec Clearance™ helps speed up investigations by allowing you to securely collect, manage and share digital evidence from different sources.
## Maintain chain of custody

## Track user activity with audit trails

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<th>DATE/TIME</th>
<th>ACTIVITY</th>
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<td>Modified value of Department, Granted 'Manage' permission level to group (ID: 1), Removed user (<a href="mailto:dsmith@genetec.com">dsmith@genetec.com</a>) (id: 3) from access policy, Removed user <a href="mailto:cmolin@genetec.com">cmolin@genetec.com</a> (id: 4) from access policy, Removed group (id: 128) from access policy</td>
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Tracking of action taken by user, including name, email and time stamp with counter.
Security & Privacy

Keep your data secure at all times

Single Sign On with Multi-Factor Authentication leveraging Active Directory

Communications are encrypted through TLS

All data is stored redundantly and protected against loss and physical damage

CJIS Compliant Cloud dedicated to US Gov and public sector organizations
Protect privacy

Conceal people’s identity

Smooth redaction tool glides across screen
Collect, Manage, Analyze, Collaborate in a Smart City

LE Cameras

Community Connect

City Stakeholders

Investigate Video Files

Video Files to Collect, Manage, Analyze, Collaborate in a Smart City
In summary...

Expand Your Network
Citywise.

Sense Making
Citigraf

Public-Private Partnerships & IoT
Community Connect

Distribution of Information
Clearance
Key take away messages

City stakeholders share a common goal to **improve public safety** and livability.

Improved collaboration will **strengthen bonds** in the community.

Efficient and responsible access to information will lead to better decision making.
Thank You