Avaya Smart City Solutions

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Executive Summary

- **City administrators** need a smart city strategy for more sustainable development, wiser resource management, enhanced quality of life, citizen safety, and increased economic opportunities.
- At the heart of this strategy is **people and communication.**

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Intelligently Connecting Citizens and Employees of the City Administration Through a Smart City Ecosystem

The Dual Core of Avaya's Smart City Solutions:

1. Real-time situational awareness for faster reactions to urban events
2. Omni-channel citizen engagement anytime, anywhere on any device

Business Outcomes:

- **Faster** and more efficient **problem resolution**
- More relevant, meaningful **engagement with preferred forms of communication** for citizens to interact with smart city services
- **Real value** derived from data-driven insights
- **Seamless and contextual connections** between machines, humans and LOB applications

Ensuring the **right information** is in the **right place** at the **right time**, maximizing business outcomes.

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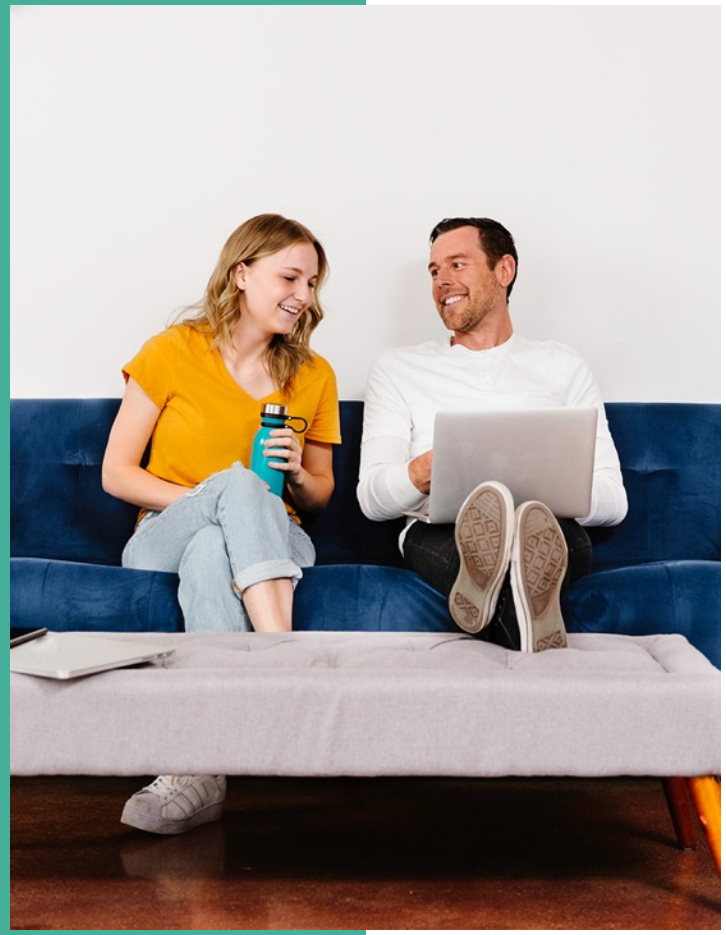

Key Points

- Service and workflow **automation**
- **Actionable IoT** and ecosystem data
- **Contextual processing** of Ecosystem data
- **AI** and analytics
- **Proactive ecosystem monitoring** and citizen engagement
- **Real-time omni-channel** mass notifications
- **Agile workflows** for more efficient business outcomes

Uniquely automating processes and seamlessly connecting citizens and employees city-wide

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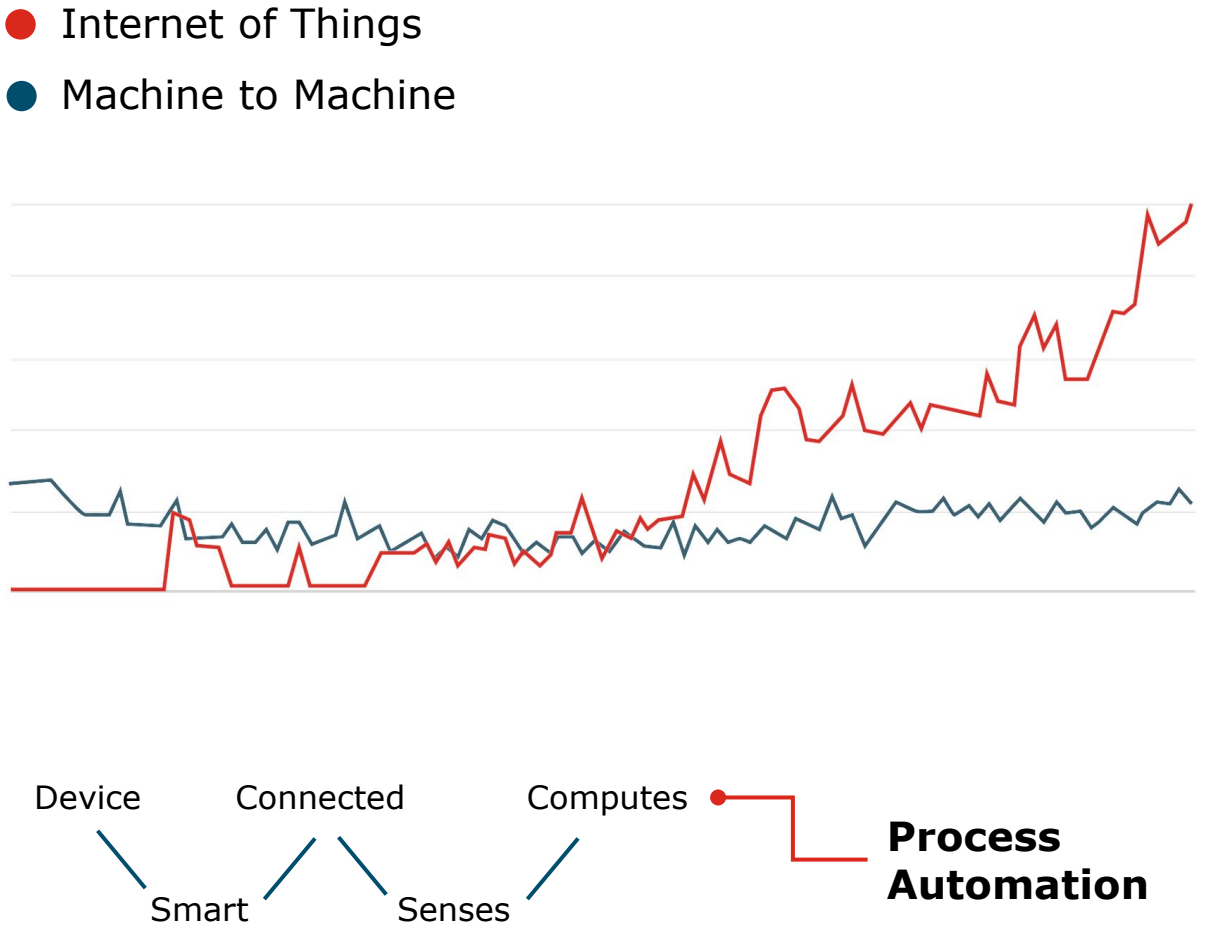
IoT-enabled Ecosystem

- Interconnecting devices, systems and processes
- IoT as an enabler of the smart city infrastructure, **gathering** and **analyzing** key data
- **Real value** derived from data-driven insights
- Opens the door for new, compelling use cases across key city areas (i.e. healthcare, municipal services, public safety)

Trends



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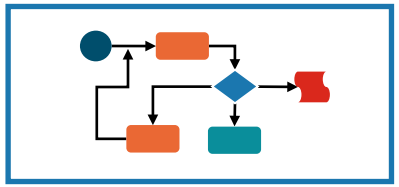
“If This Then That” 2.0 For Organizations

1

Detect business event

2



Use Case - Workflow Processing

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Snap-in

Contextually aware processing

3

Applications
Integrate enterprise application

Humans
Send real-time notifications for citizen engagement

Machines
AI or machine integration

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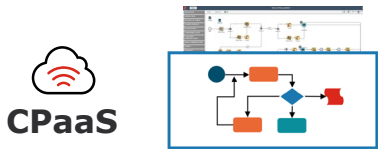
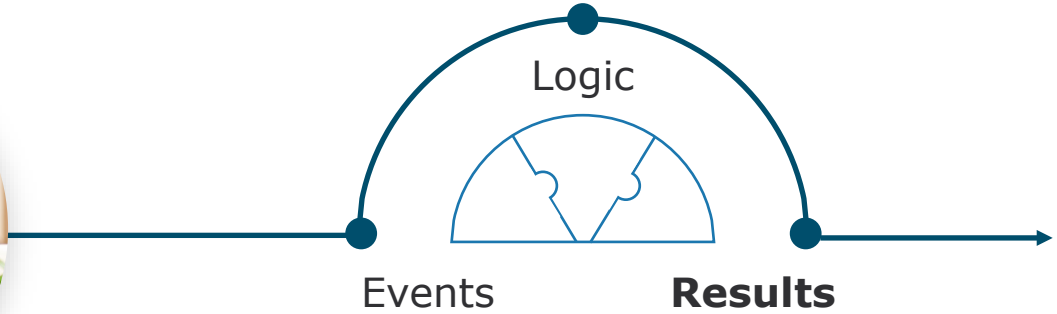
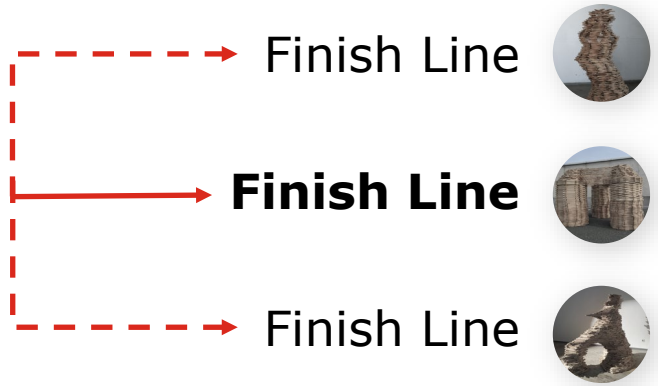
Service Automation & Orchestration

Open and Agile by Default







Discovery Workshop | **Definition Use Case** | **Value Proposition** | **Implementation** | **Design for Change**

Quick and flexible implementation

Agile

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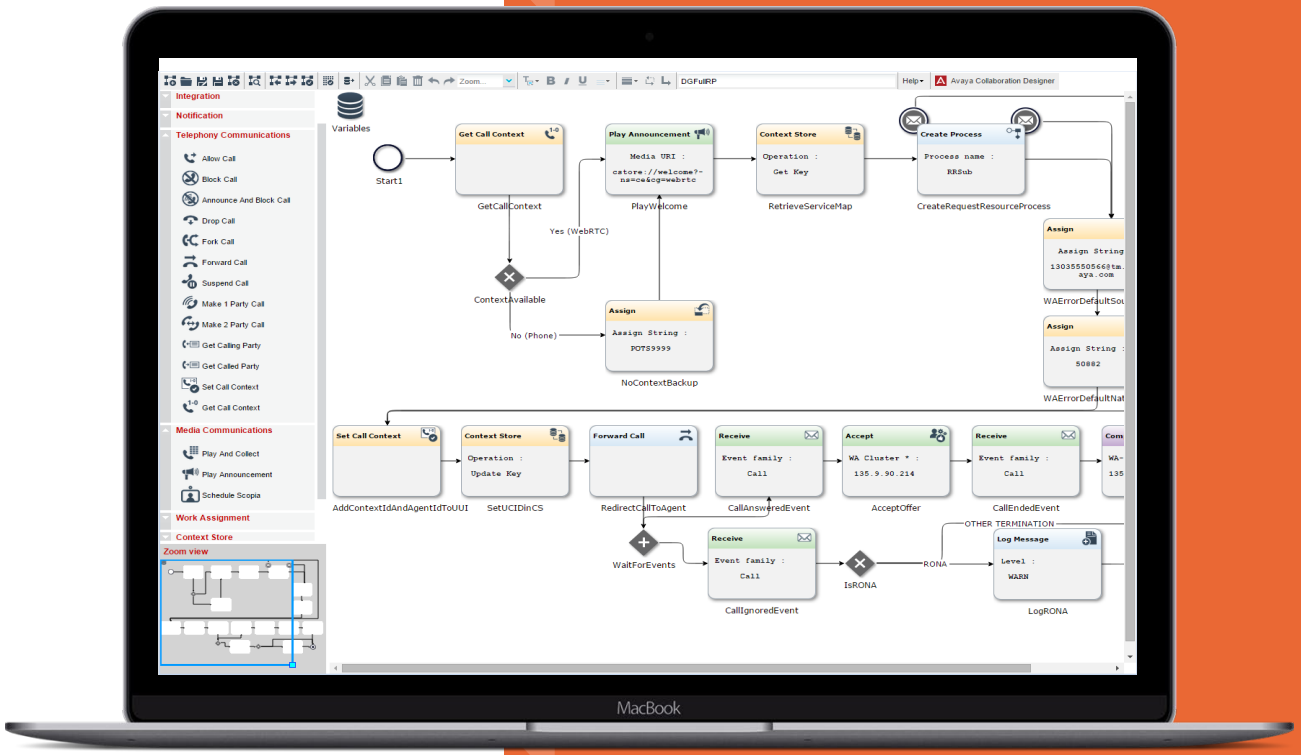
Create and Customize Workflows

Avaya Engagement Designer

Browser-based visual designer for workflow design and automation

- Quickly **create applications** with **minimal programming experience**
- Seamless integration into **IoT, AI and LOB Applications**
- **Create your own task types** and dynamically incorporate them into the palette
- **Visual, drag-and-drop model** for tailoring and customizing workflows



Simplify how you create and control your business processes

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Avaya & IoT

Smart Communications for Smart Engagement

Delivers Intelligent Outcomes

Contextually-aware Processing

Agile **Workflow Automation**

Actionable **IoT Data**

Open Ecosystem for Smart Communication

Seamless and contextual connections between machines, humans and LOB applications

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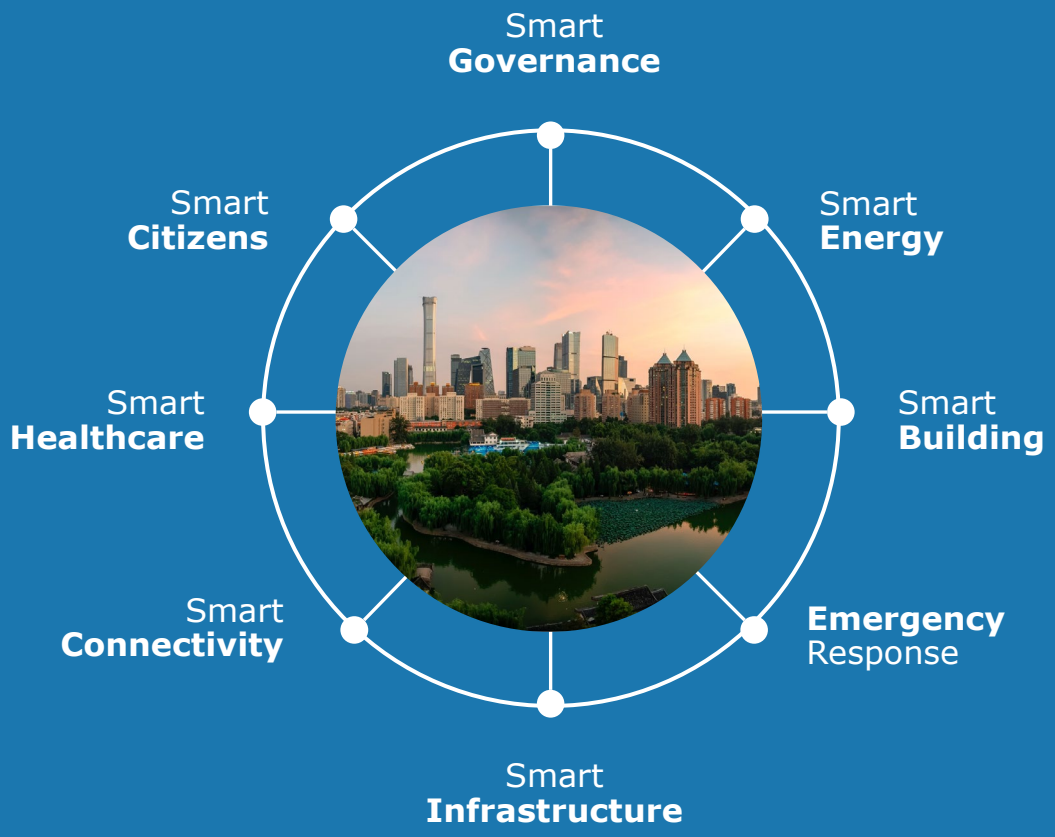
What Defines a Smart City



Smart Solutions

E-Governance and Citizen Services

1. Public Information, Grievance Redressal
2. Electronic Service Delivery
3. **Citizen Engagement**
4. Citizens – City's Eyes and Ears
5. Video Crime Monitoring

Energy Management

13. Smart Meters & Management
14. Renewable Sources of Energy
15. Energy Efficient & Green Buildings

Waste Management

6. Waste to Energy & fuel
7. Waste to Compost
8. Waste Water to be Treated
9. Recycling and Reduction of C&D Waste

Urban Mobility

16. Smart Parking
17. Intelligent Traffic Management
18. Integrated Multi-modal Transport

Water Management

10. Smart Meters & Management
11. Leakage Identification, Preventive Maint.
12. Water Quality Monitoring

Waste Management

19. Tele-Medicine & Tele Education
20. Incubation/Trade Facilitation Centers
21. Skill Development Centers

ILLUSTRATIVE LIST

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Intelligent Engagement

The Foundation of a Smart City

Driving more intelligent outcomes by **uniquely automating processes** and **connecting citizens and employees** through a smart city ecosystem

Delivering value in **the way it matters most:** across the public services that citizens **consume and rely on.**

The dual core of our smart city solutions: **real-time situational awareness** for **faster reactions to events** and **omni-channel citizen engagement.**

Improved quality of life and safety for all citizens

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The Power of an Open Ecosystem

Complete Integration for Continuous Innovation

Waste Management

Noise Pollution

Any-choice (anytime, anywhere, any-device, any-channel) citizen engagement

Senso detection and proactive engagement

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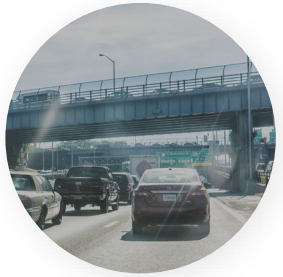
Multi-Agency coordination and response

Break down information silos

Smart Parking



Environmental Protection

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Smart Cities - Smart Parking

Save on Time, Fuel Costs and Emissions

City Council

Smart Parking Service

Any
Modality
Language
Phrase

2 **Internet of Things** Platform

AVAYA

Modality

1 IBM Watson

Detects language and Translates Message

Analyzes the message and assigns it to an intent

3 **Available parking spots** in requested area. Option for booking

3 **Booking confirmation** and parking spot location map SMS

4 **Activation of visual** reservation signal

Area A

Area C

Smart City

Area B

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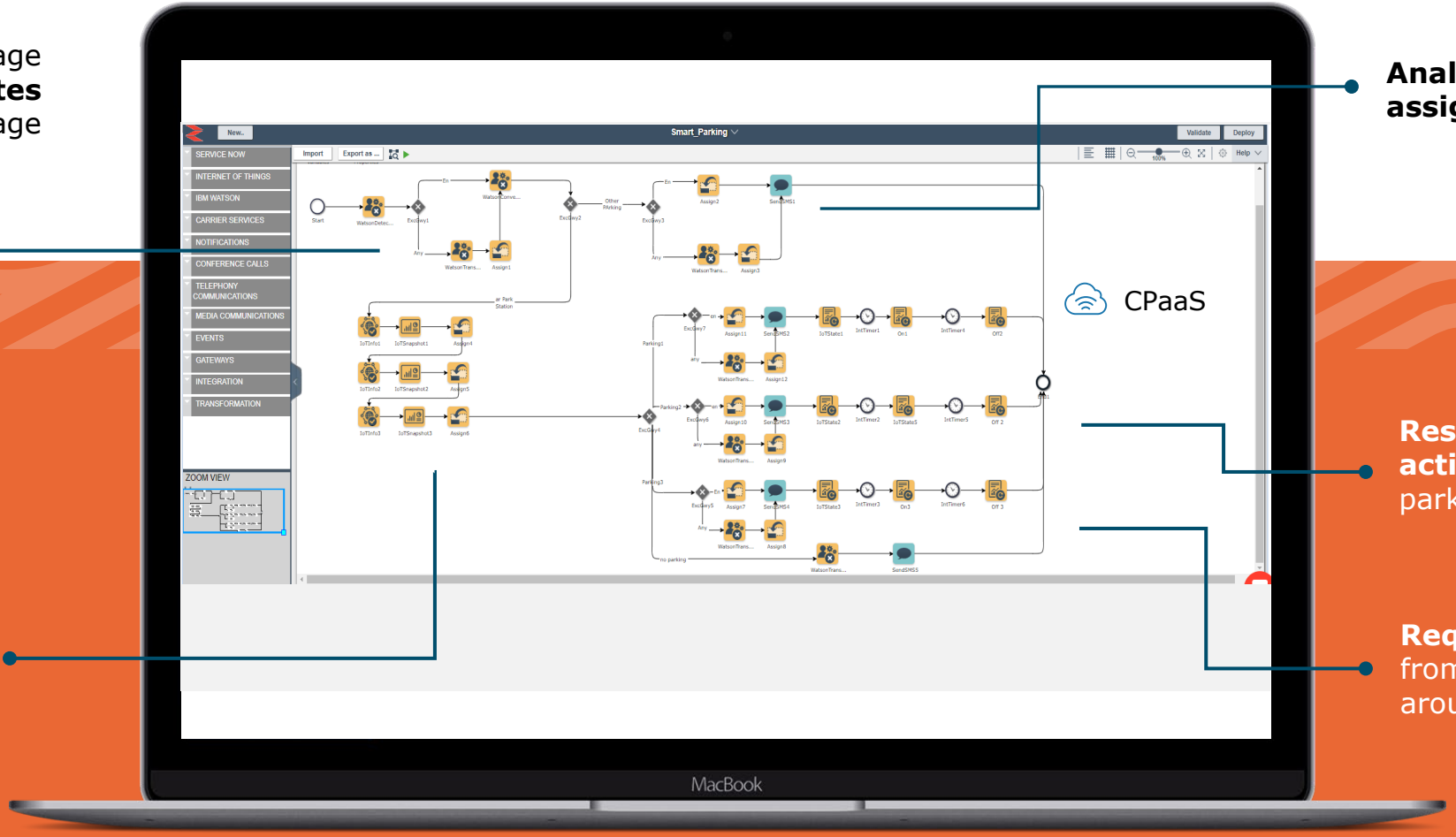
Smart Parking – Automated Workflow

Avaya Communications Platform-as-a-Service (CPaaS)

Detects language and **translates** message

Requests sensor info from all parking spaces around the station



Analyzes the message and **assigns** it to an intent

Reservation signage activated at booked parking space

Requests sensor info from all parking spaces around the station

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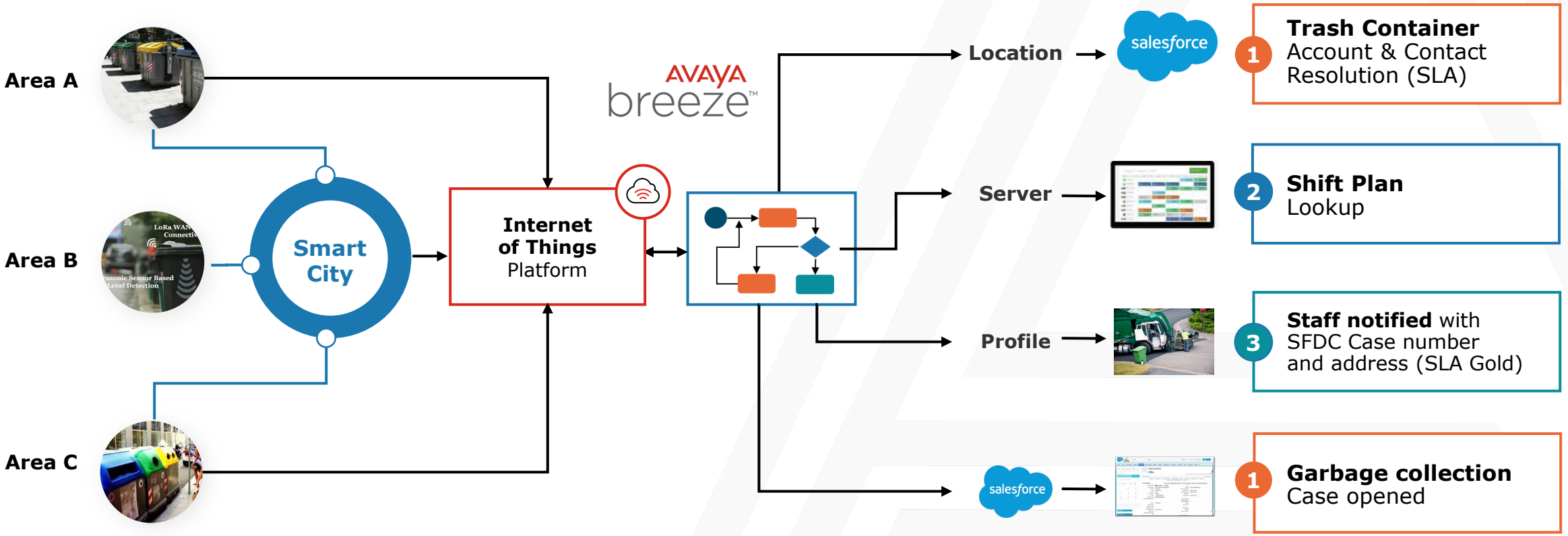
Smart Cities - Waste Management

Situational Awareness for Faster Response Time



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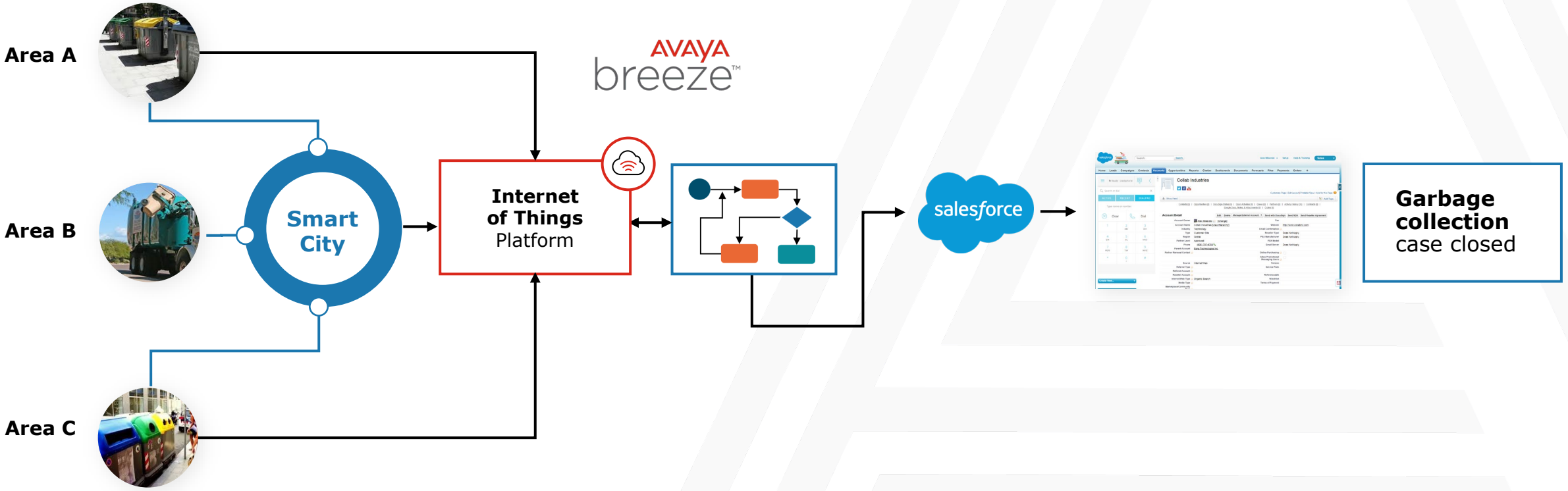
Smart Cities - Waste Management

Situational Awareness for Faster Response Time



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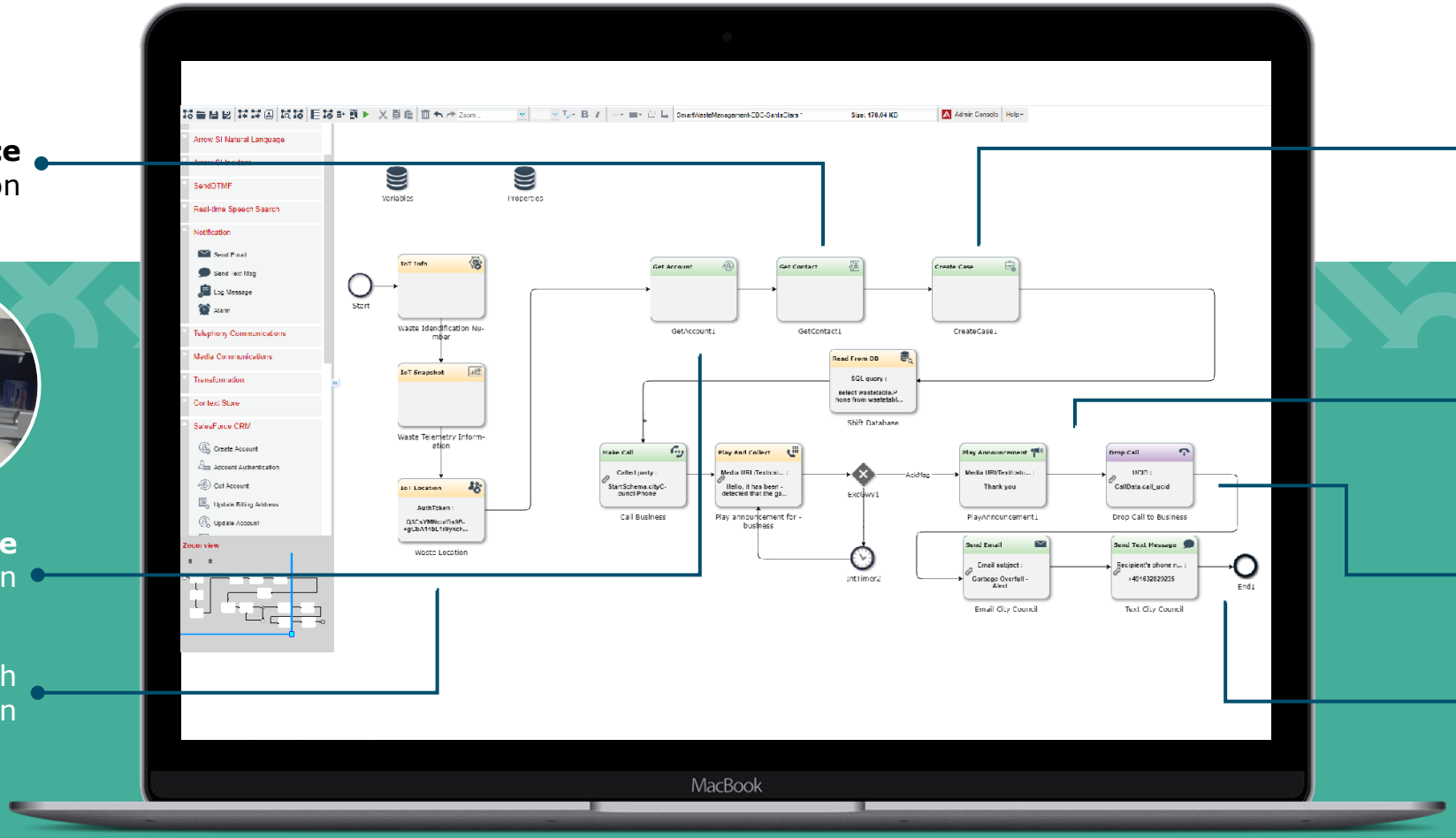
Waste Management – Automated Workflow

Avaya Breeze

Salesforce contact resolution

Salesforce Account resolution

Requesting trash level and location



Create Salesforce case

Shift plan database lookup

Staff notification of new case with SLA

Text message with case and location

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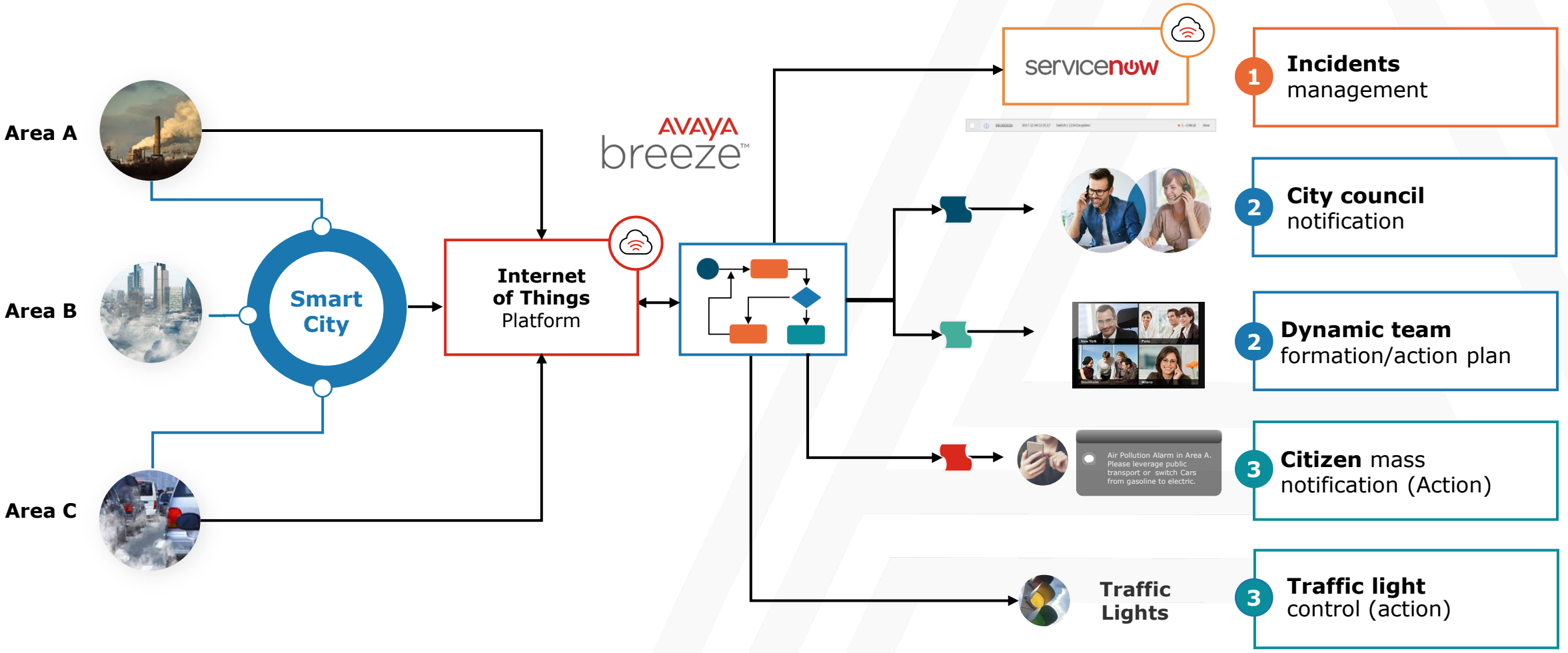
Smart Cities – Air Pollution

Situational Awareness for Faster Response Time



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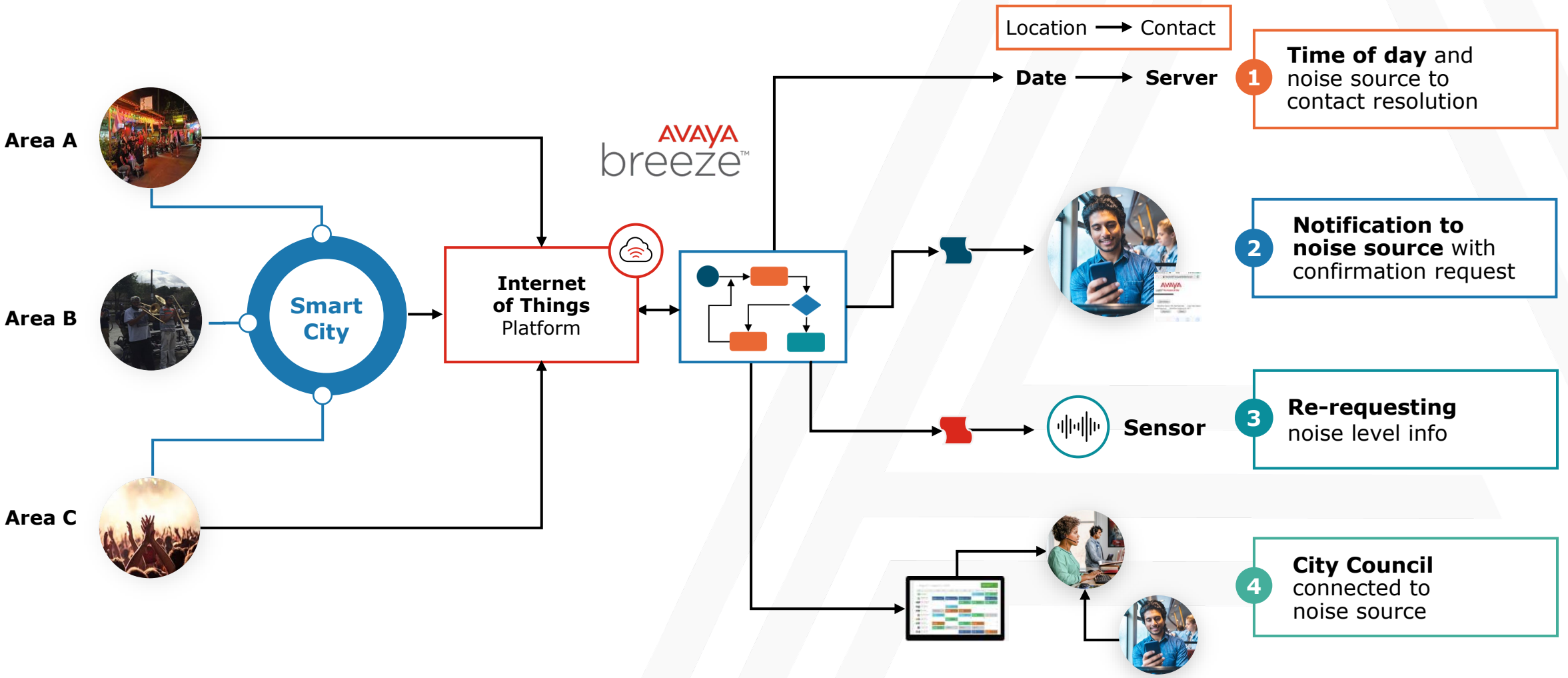
Smart Cities – Urban Noise Monitoring

Situational Awareness for Faster Response Time



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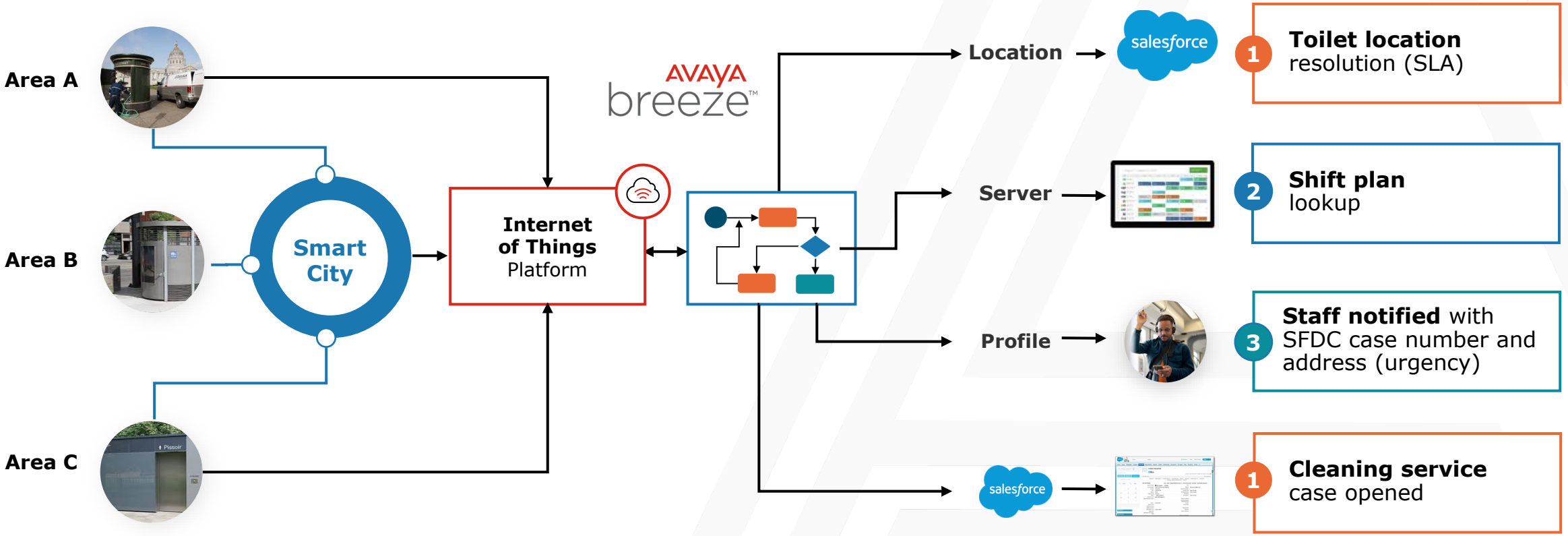
Smart Cities - On-demand Cleaning Services

Situational Awareness for Faster Response Time



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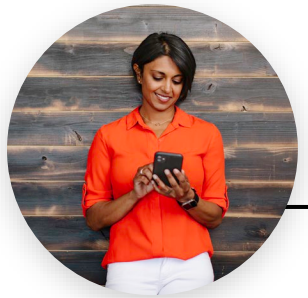
Smart Cities - Smart Metering

Creates a Win-win with IoT Data Insights

Customer transparency on energy consumption

Smarter decisions on energy usage (adjust habits)

Any
Modality
Language
Phrase



Transparency

AVAYA breeze™

1 **Internet of Things** Platform

Temperature

Smart Meter

Smart City

Area A

Area C

Utility Bill

2 **Automatic billing** and customer notification

1 IBM Watson

Analyze grid conditions in real-time

Detects language and translates message

Analyzes the message and assigns it to an intent

Stay **fully informed** about the daily energy use and trends

Individual grid management combining smart home & meters to magnify energy efficiency

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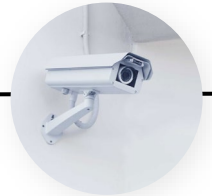
Blending Digital Into The Physical Experience

Seamless Integration of Stand-alone Technologies

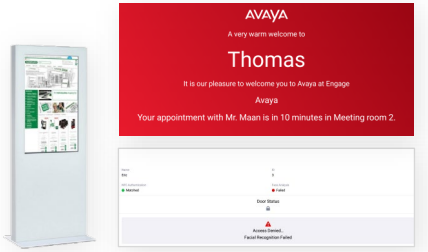
- **Event**
- **Queue** management
- **Occupancy**
- **Smart access** control
- **Demographics**

Microsoft Azure
Cognitive services

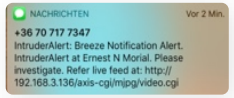
AVAYA breeze™



2 **Digital** signage



3 Call, chat, SMS and email



4 Team formation and **conference scheduling**

1 Information from **IoT devices**
e.g. Noise Level

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Avaya Smart City Framework

Analytics

Voice / IVR | Social | Web | Email | Video | Mobile/ SMS

Citizen Self Service | **Citizen Help Desk**

Smart Surveillance

Smart Parking

Smart Healthcare

Garbage Disposal

Analytics

Avaya Automation Platform

Scalability | Security | Virtualization | Reliability | Serviceability | Management

Avaya Applications

AVAYA aura

Communication Manager | Call Center Elite / ACCS | Session Manager | System Manager | Media Server

Command & Control Platform

Avaya Cloud Notification Service

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Smart City = Smart Communications

Multiple Inputs

City Ecosystem

Citizens

App, Voice, Web, SMS, Social, Video, Email

Business Needs

Citizen service, effective response, team formation, notification

Emergency Notification | Smart Parking | Garbage Collection | Smart Healthcare | Smart Surveillance

Avaya Automation Platform (Breeze/CPaaS)

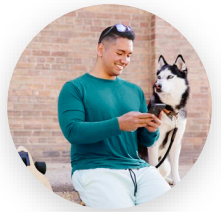
Citizen Self Service | Citizen Helpdesk | IoT Analytics | AI/Applications

Helpdesk agents

City Ecosystem

Control Center

Results



- Efficient **citizen engagement**
- Higher process **efficiency**
- Better **dispatch** decisions
- **Situational** awareness

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The Kiosk for the Citizen

Self Service

- **Self help for citizens** at strategic city locations
- **Extend service** at the branch and the home
- Video **self-help**, **wait-treatment**, **two-way collaboration**

Two-Way Conference Video

Agent shares:

Video

Documents

Web Pages

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Smart Notification

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Threat Detection & Omni-Channel Mass Notification

Weather Alerts

Sensors

- Wind
- Rain/Flood
- Fire/Smoke
- Chemical
- Radiation
- Landslide
- Gunshot Detectors

Gunshot Detection Sensor

ACNS Controller

Notifications

Outdoor

- Outdoor Sirens
- Mobile Sirens
- Outdoor Digital
- Signage

Indoor

- Access Panels
- Speakers and
- Strobes
- Message Boards
- Fire Alarm Panels
- Avaya IP Phones

Personal

- Phone
- Smarphones & Tablets
- Text & SMS
- Pager
- Pop-ups
- Email
- RSS
- Social Media

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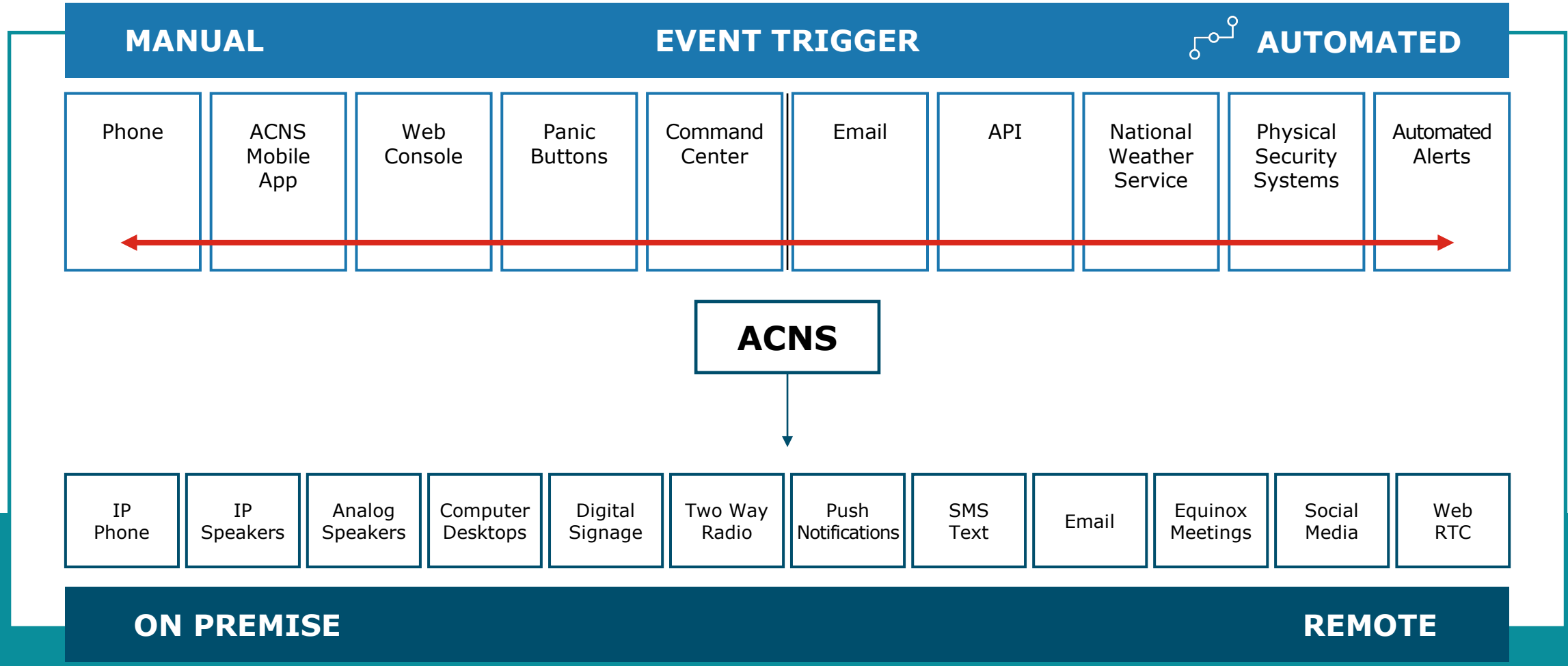
Avaya ACNS - Omni Channel Notification -



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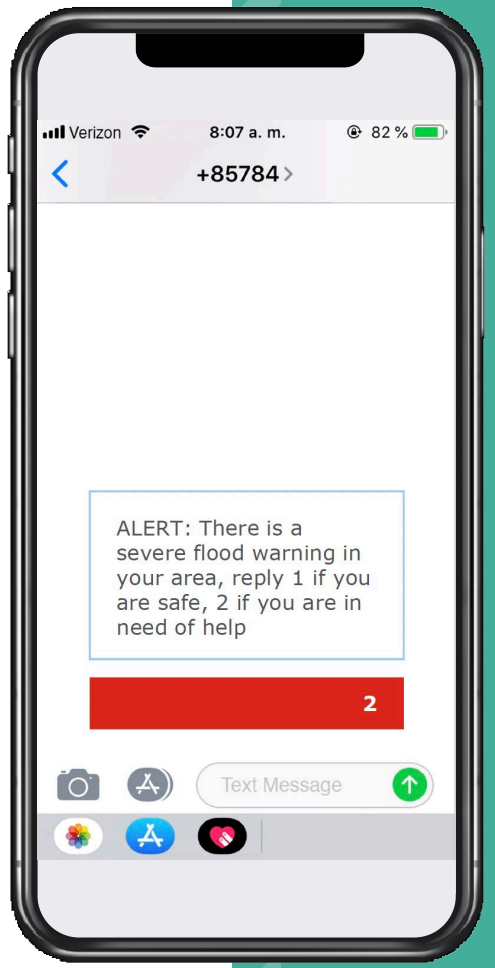
Safety Status and Location

Advanced Mission-critical Interaction During an Emergency

- Triggered by premise equipment or manually
- Location services
- Output to emergency services
- Real-time awareness
- No app install necessary



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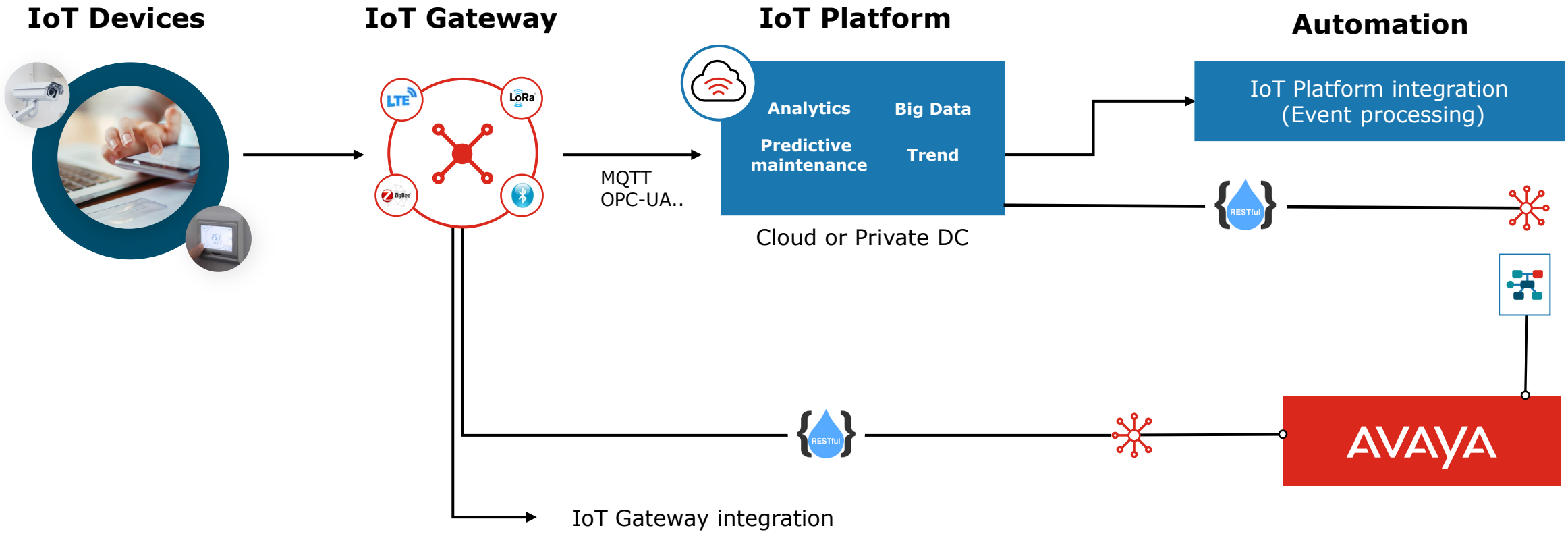
Avaya IoT Reference Architecture

Open by Default



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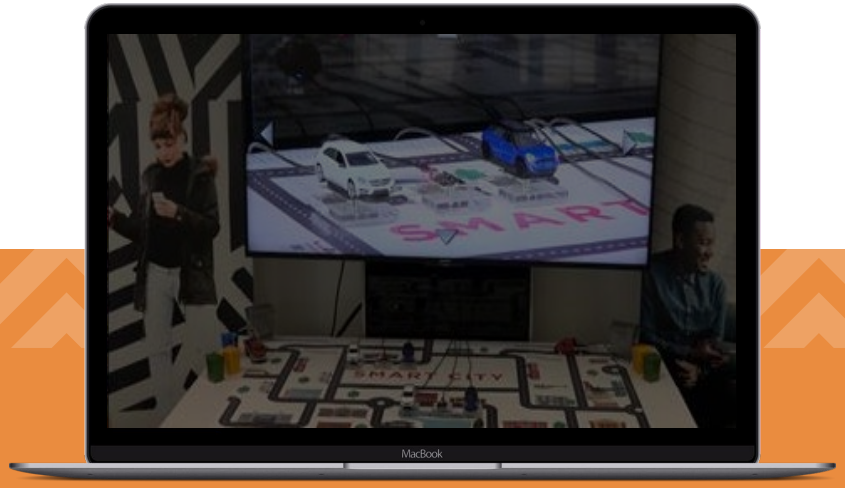
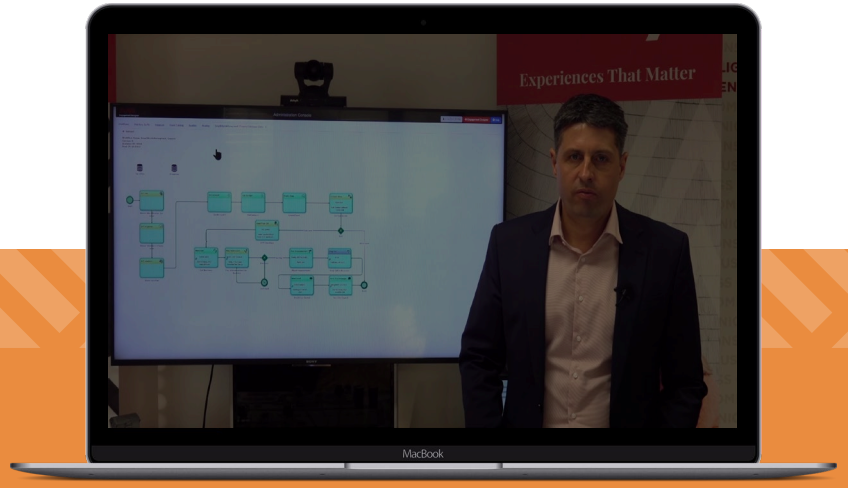
YouTube Demo Videos



Smart Parking

https://www.youtube.com/watch?v=rd267Nwn-M0



Smart Waste Management

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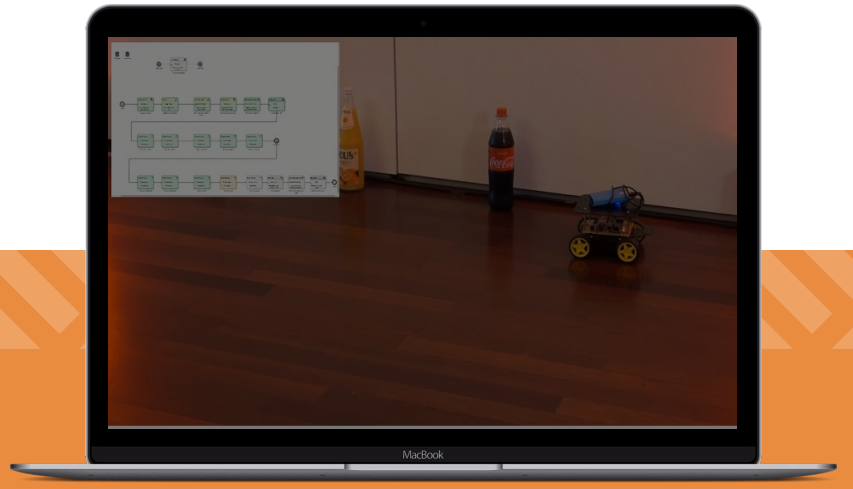
YouTube Demo Videos

Cops & Robbers

https://www.youtube.com/watch?v=Pu1ror6r0BQ

https://youtu.be/24qBOciIOd4



Smart Ordering

https://www.youtube.com/watch?v=sKgdi5IXv7w

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Recap

City administrators can drive more intelligent outcomes by **uniquely automating processes** and **seamlessly connecting citizens and employees** through a smart city ecosystem.

Avaya's Smart City Solutions intelligently connect and automate processes between people, machines, devices and LOB applications to ensure the right information is in the right place at the right time, maximizing business outcomes.

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Avaya provides the ability to seamlessly enable **IoT ecosystems** to communicate with any user or device **with the right information, in the right place at the right time.”**

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Experiences
That Matter

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