NEC

Inter-Agency Collaboration **Today** for Safer Cities **Tomorrow**

Prompt Actions for Safer Cities

Data — Information Governance

Alert — Safety Awareness Network

Situation — Geo Spatial Analytics

Inter-Agency Collaboration (IAC)

is an advanced and flexible public safety solution that comprises 3 technology pillars:

Information Governance (IGS)

- Allows information and raw data secure sharing through the authorization and execution of governance policies

- Supports the monitoring of the integrity status of all sensors (fixed, mobile or ad hoc), nodes and servers within the organization

- Data is effectively enforced with role based access control (RBAC) for authorized access to data & information

Benefits:
Supports the Evidence Act that can be presented in courts. Digitally Signed Sensors' content ensures non-repudiation as device/node integrity is enforced

Safety Awareness Network (SAN)

- Integrates & controls various sensors and content stores, collects & analyses the meta data through numerous/multiple analytics engines with optimized resources utilisation to eliminate performance bottlenecks

- Supports machine-to-machine (M2M) capability that allows its network of sensors to discover new devices deployed within its network without human intervention

- Supports the display of information to the public on a timely basis, based on scenarios such as evacuation route during an emergency

Benefits:
Provides a scalable platform for analytics engines to be plugged in such as Biometrics, Face Recognition, License Plate Recognition, crowd density/counts and others

Geo Spatial Analysis (GSA)

- Receives event and meta data information from multiple sources, and performs aggregation, consolidation, processing and reasoning of these massive collection of data and events

- Presents semantic information to the end-user in an intuitive way to enhance situational awareness perception

Benefits:
Provides right information to the right people at the right place and the right time

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IAC is an end-to-end solution that analyzes sensor data and triggers geo-spatial alerts, to enable various stakeholders make sense of a situation in a collective state. IAC offers:

1-> N Scalability — to manage the projected proliferation of sensors, devices and analytics
Sensor Fusion — to confirm the occurrence of an event
Small Brain/Analytics — to plug in various analytics engines
Big Brain/Reasoning — to perform sense making based on various pre-defined ontology
Situation Awareness — an intuitive display of perception of the environment critical to decision makers in a growing complex & dynamic world
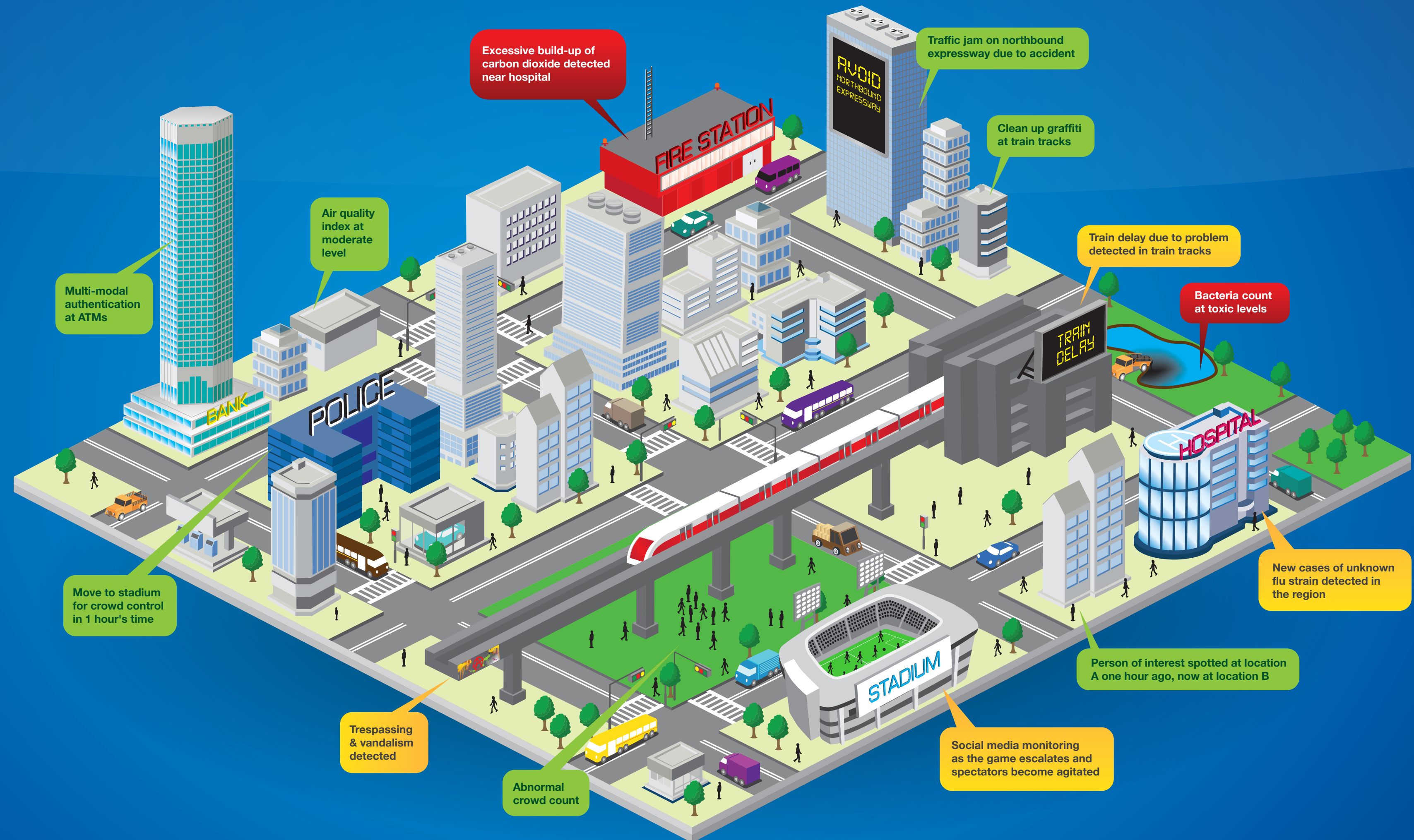
Applications

Multi-modal Authentication

- Replaces user password authentication as the future of banking
- Enables the new generation of biometric passports
- Safeguards election integrity

Sensor Fusion

- Improves surveillance by combining sight, sound, smell and other information such as crowd monitoring to verify the data collected
- Provides aggregation of multiple alerts to confirm a situation
- Monitors social media

Situation Awareness

- Delivers real-time alerts based on mapped coverage at the right place, right time
- Enhances decision-making through the interplay between the entities of People Objects Location Event (POLE)

Excessive build-up of carbon dioxide detected near hospital

Traffic jam on northbound expressway due to accident

Clean up graffiti at train tracks

Air quality index at moderate level

Multi-modal authentication at ATMs

Train delay due to problem detected in train tracks

Bacteria count at toxic levels

Move to stadium for crowd control in 1 hour's time

New cases of unknown flu strain detected in the region

Person of interest spotted at location A one hour ago, now at location B

Trespassing & vandalism detected

Abnormal crowd count

Social media monitoring as the game escalates and spectators become agitated

FIRE STATION

AVOID NORTHBOUND EXPRESSWAY

TRAIN DELAY

POLICE

BANK

HOSPITAL

STADIUM

About NEC Global Safety Division

NEC Global Safety Division, a business division within NEC Corporation, spearheads the company's public safety business globally. The Division is headquartered in Singapore and offers solutions in the following domains: Citizen Services & Immigration Control, Law Enforcement, Critical Infrastructure Management, Public Administration Services, Information Management, Emergency & Disaster Management, Inter-Agency Collaboration. Leveraging on its innovative solutions, the Division aims to help government and business make cities safer.

Vision
To be the leading Public Safety Solutions Provider in the world

Mission
To help government and business use technologies to build a safer environment for life and work

Purpose Statement
We Make Cities Safer

WE MAKE CITIES SAFER
Using technologies to safeguard lives and property

▶ Citizen Services & Immigration Control ▶ Law Enforcement
▶ Critical Infrastructure Management ▶ Public Administration Services
▶ Information Management ▶ Emergency & Disaster Management ▶ Inter-Agency Collaboration