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AI DRIVEN INSIGHTS

DistrictNex

Product Overview

Mega Trends in Digitizing Cities & Real Estate

The City Assets and Real Estate world is rapidly transitioning to a **digital-centric future** scaling from Real Estate developments to Districts to entire Cities.
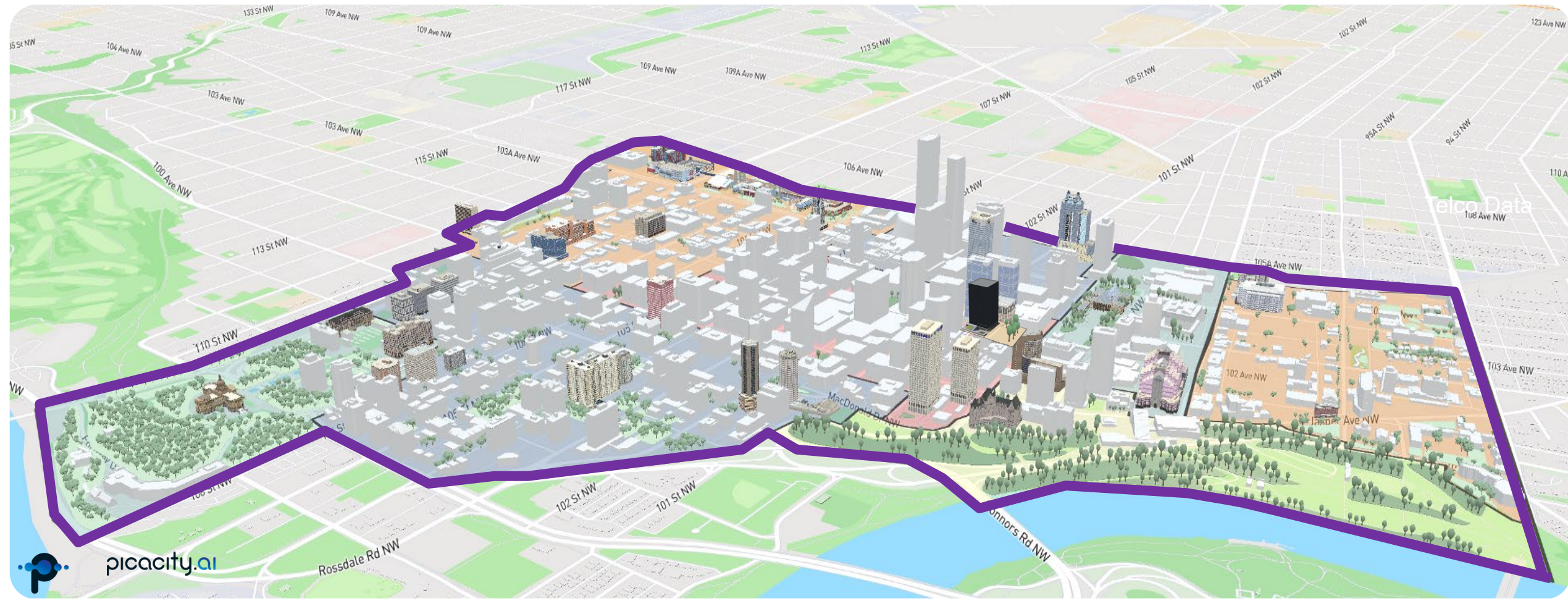
Various **Mega trends** are now a need to have vs. a nice to have within New Greenfield Developments and older Brownfield Transformation Projects.

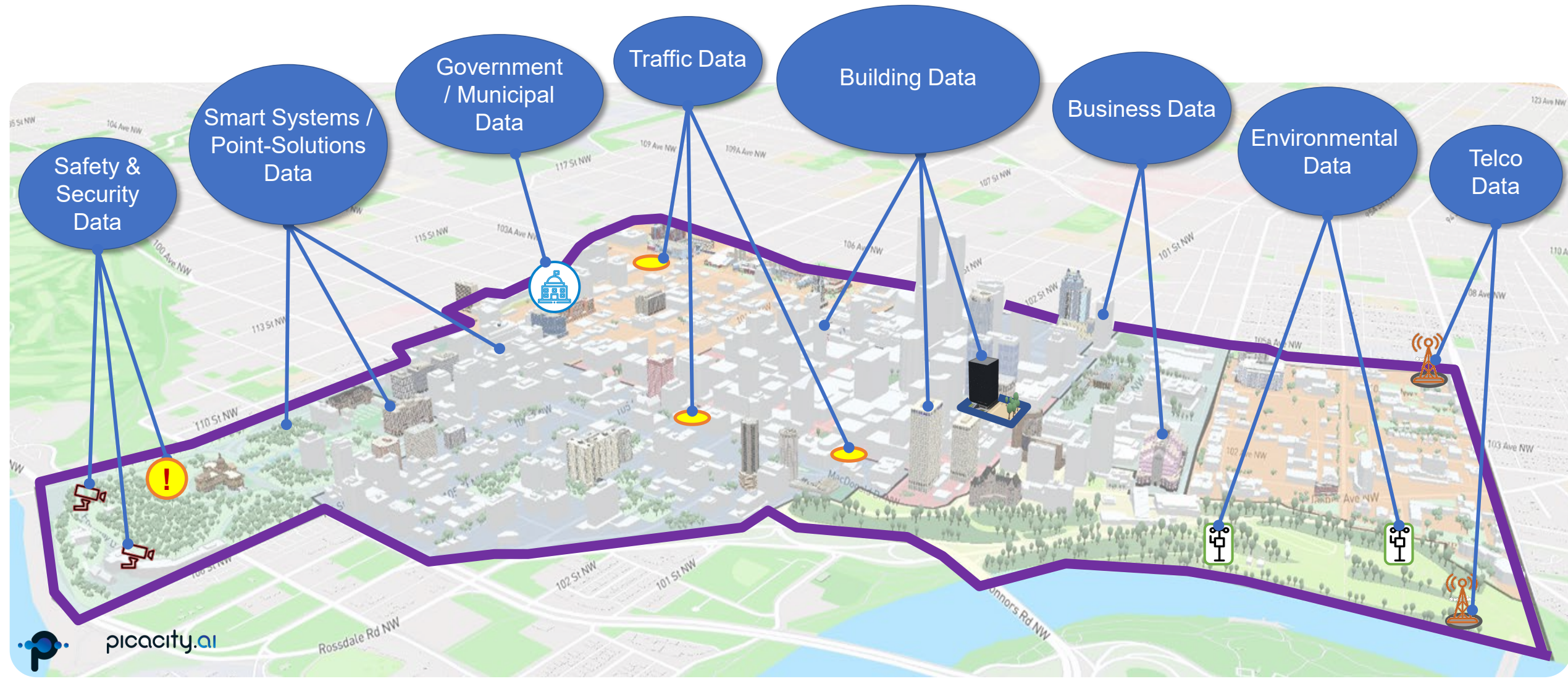These Mega Trends are the driving forces behind this transformation.

DistrictNex, our leading-edge **City AI as a Service** digital Platform directly addresses and helps our customer deliver the outcomes related to these Mega Trends.

SUSTAINABILITY

SAFETY & SECURITY

HYBRID WORKING

DIGITAL CORE

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DATA-DRIVEN INSIGHTS

MOBILITY

ASSET EFFICIENCY

WELLNESS

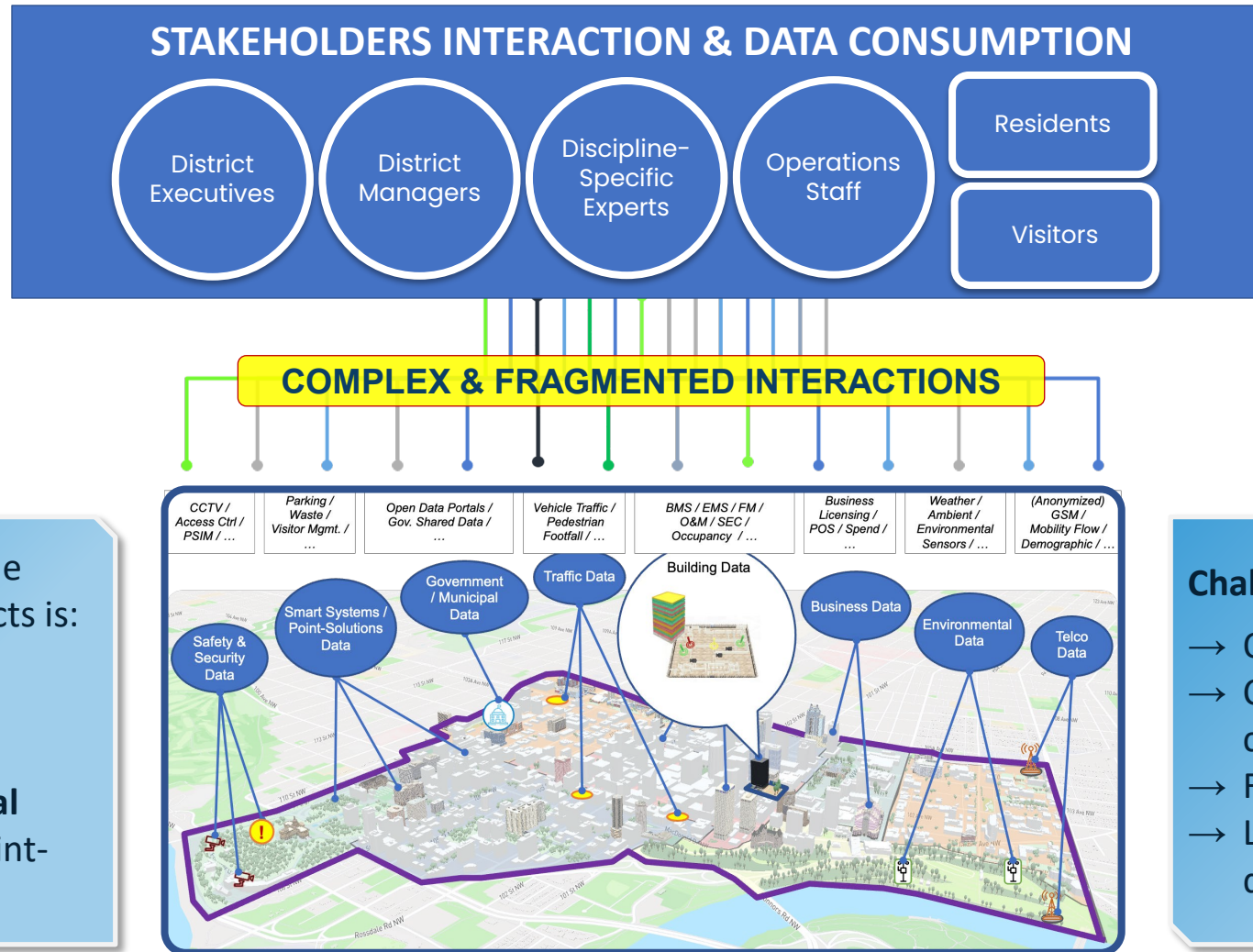Corporate Profile

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Data, Systems, and Stakeholders –
across Smart Sustainability, Security, Mobility, Living, …

Data, Systems, and Stakeholders –
across Smart Sustainability, Security, Mobility, Living, …

CCTV / Access Ctrl / PSIM / …

Parking / Waste / Visitor Mgmt. / …

Open Data Portals / Gov. Shared Data / …

Vehicle Traffic / Pedestrian Footfall / …

BMS / EMS / FM / O&M / SEC / Occupancy / …

Business Licensing / POS / Spend / …

Weather / Ambient / Environmental Sensors / …

(Anonymized) GSM / Mobility Flow / Demographic / …

Government / Municipal Data

Traffic Data

Building Data

Smart Systems / Point-Solutions Data

Safety & Security Data

Business Data

Environmental Data

Telco Data

Data, Systems, and Stakeholders –
across Smart Sustainability, Security, Mobility, Living, …

Stakeholders have different needs and interests when it comes to decision making and day-to-day operation

STAKEHOLDERS INTERACTION & DATA CONSUMPTION

- District Executives
- District Managers
- Discipline-Specific Experts
- Operations Staff
- Residents
- Visitors

COMPLEX & FRAGMENTED INTERACTIONS

CCTV / Access Ctrl / PSIM / … — Parking / Waste / Visitor Mgmt. / … — Open Data Portals / Gov. Shared Data / … — Vehicle Traffic / Pedestrian Footfall / … — BMS / EMS / FM / O&M / SEC / Occupancy / … — Business Licensing / POS / Spend / … — Weather / Ambient / Environmental Sensors / … — (Anonymized) GSM / Mobility Flow / Demographic / …

Safety & Security Data · Smart Systems / Point-Solutions Data · Government / Municipal Data · Traffic Data · Building Data · Business Data · Environmental Data · Telco Data

Data that is relevant to the **insightful operation** of districts is:

Vastly heterogenous
+
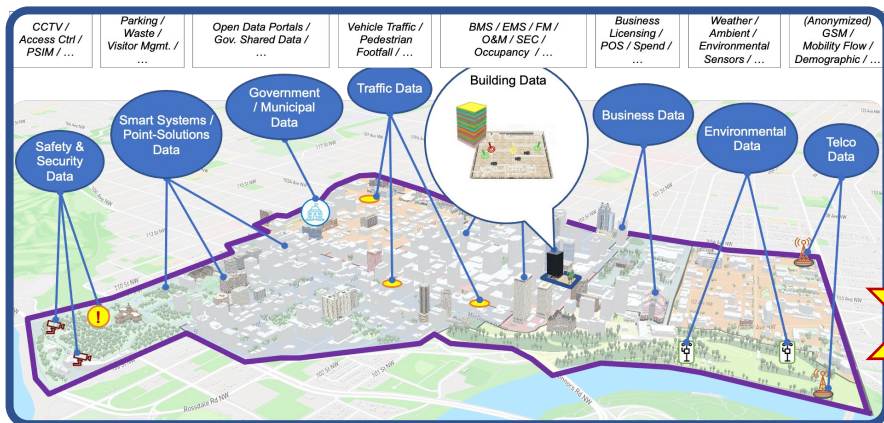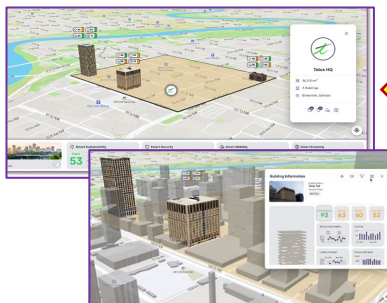Typically resides in **several systems** and associated point-solutions

Challenges Posed:

→ Operational Silos
→ Complex and/or manual data collection & reporting workflows
→ Fragmented analytics use-cases
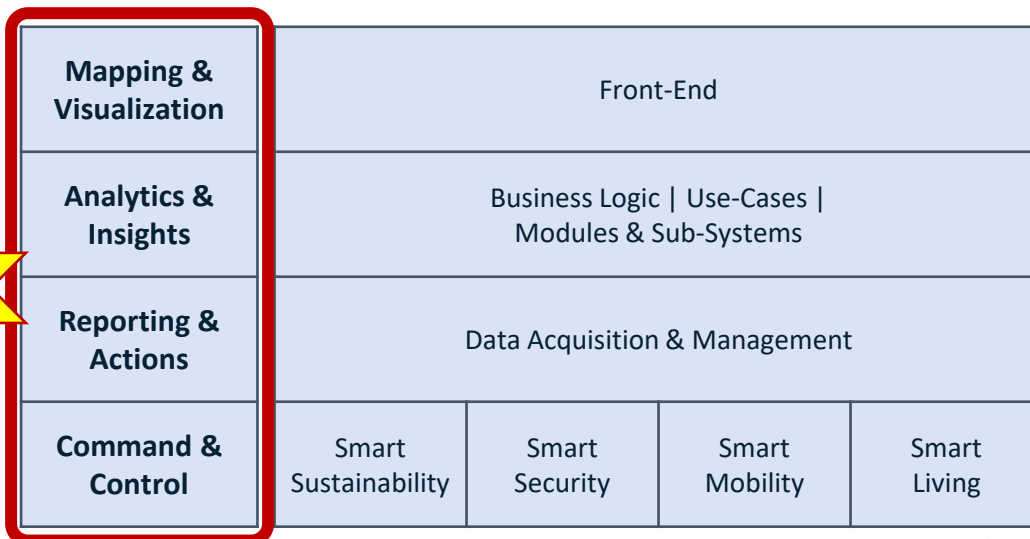→ Lack of timely, comprehensive data for decision support

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End-Users

- District Executives
- District Managers
- Discipline-Specific Experts
- Operations Staff
- Residents
- Visitors

- Current and historical view of District performance.
- Cross-system business intelligence and decision-support insights.
- Operational data, KPIs, and performance Indices across Smart Dimensions.
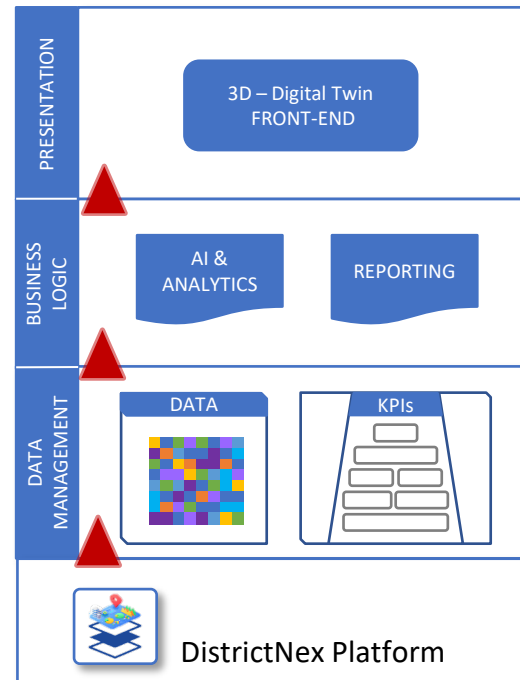- Command & Control operational integration.

districtnex Platform

Mapping & Visualization	Front-End			
Analytics & Insights	Business Logic | Use-Cases | Modules & Sub-Systems			
Reporting & Actions	Data Acquisition & Management			
Command & Control	Smart Sustainability	Smart Security	Smart Mobility	Smart Living

Data Management Services

Cloud Infrastructure

CCTV / Access Ctrl / PSIM / …

Parking / Waste / Visitor Mgmt. / …

Open Data Portals / Gov. Shared Data / …

Vehicle Traffic / Pedestrian Footfall / …

BMS / EMS / FM / O&M / SEC / Occupancy / …

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Government / Municipal Data

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Telco Data

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dıstrıctnex – 'Smart-City as a Service'

Buildings

Open-Areas

Roads / Intersections

Remote Sites

DistrictNex Platform

| Mapping & Visualization |
| Analytics & Insights |
| Reporting & Actions |
| Command & Control |
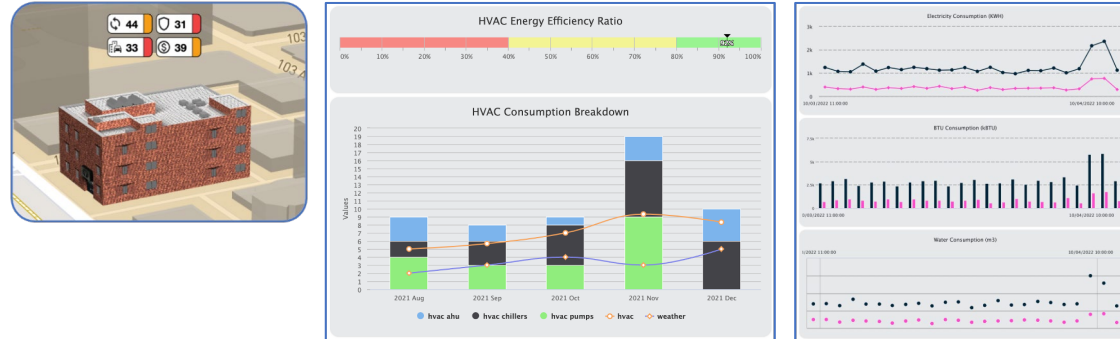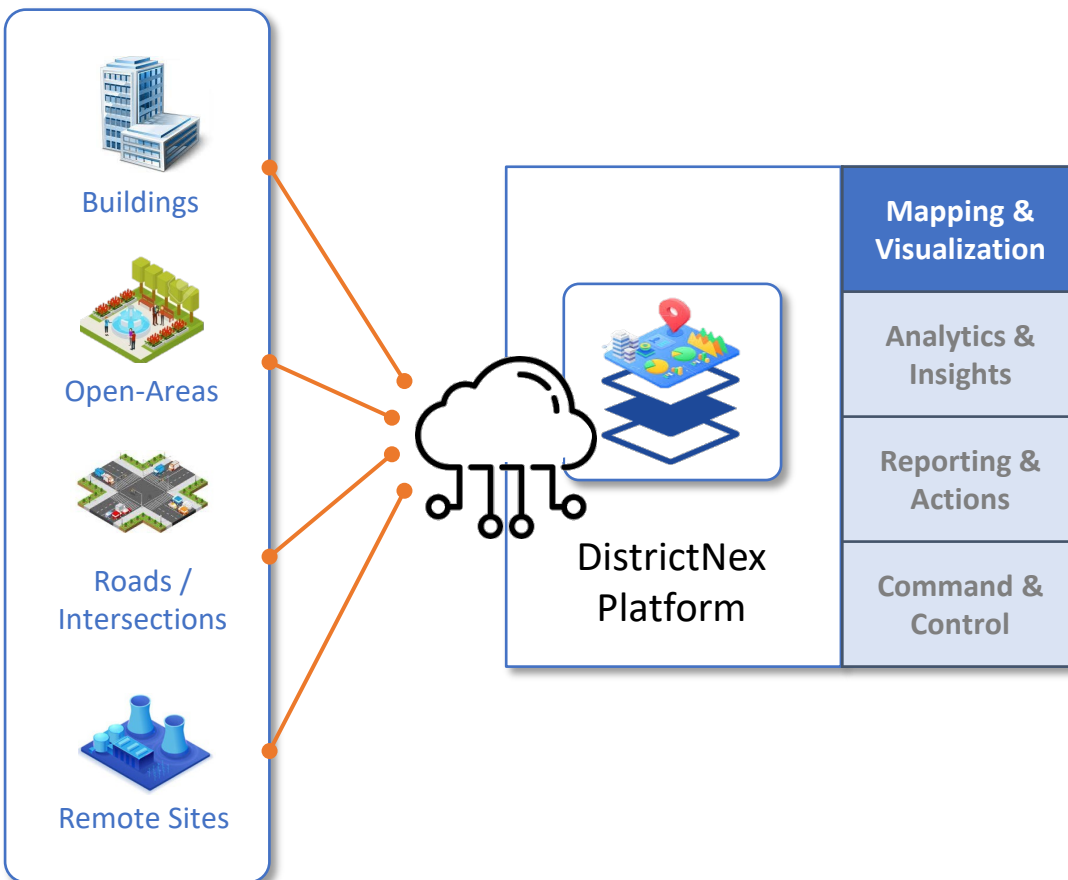
➢ *3D Digital Twin visualization, navigation, and drilldown across regions, cities, and sites.*
➢ *Geospatial significance and hierarchy for all data*
➢ *Intuitive presentation, visual consumption of current and historical data.*

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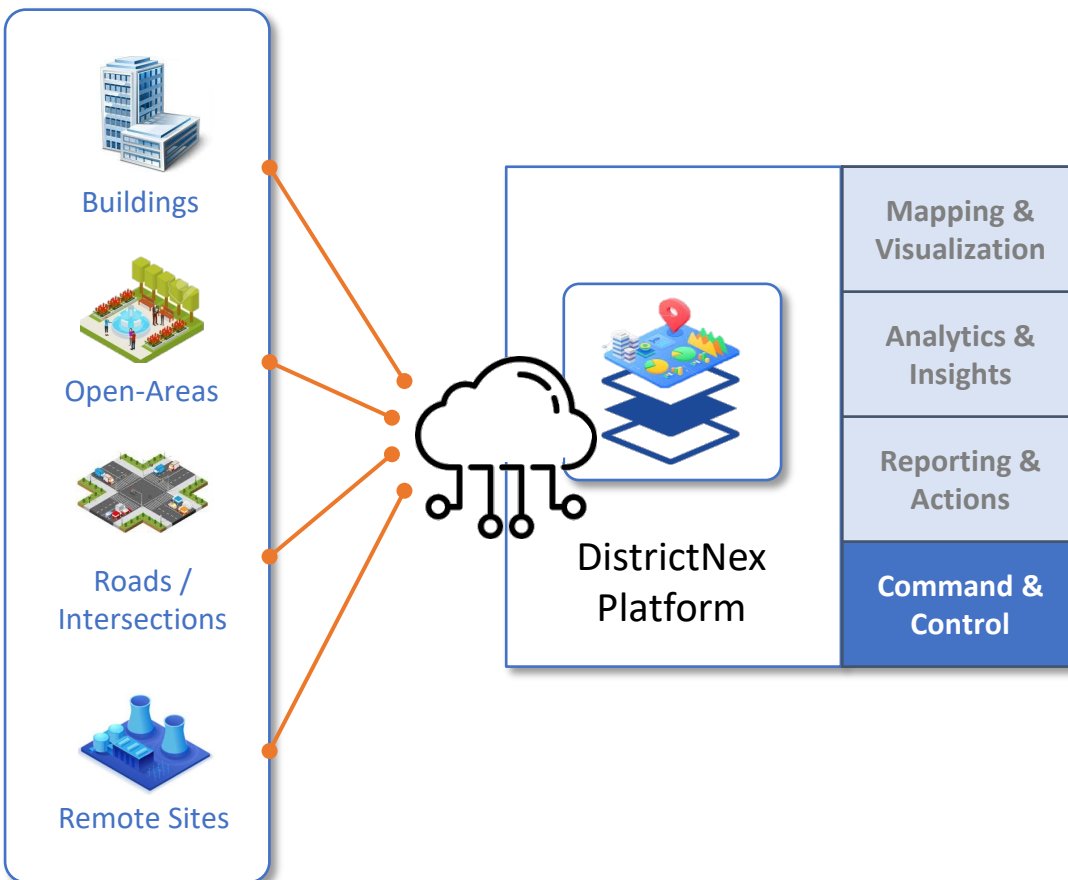# districtnex – 'Smart-City as a Service'
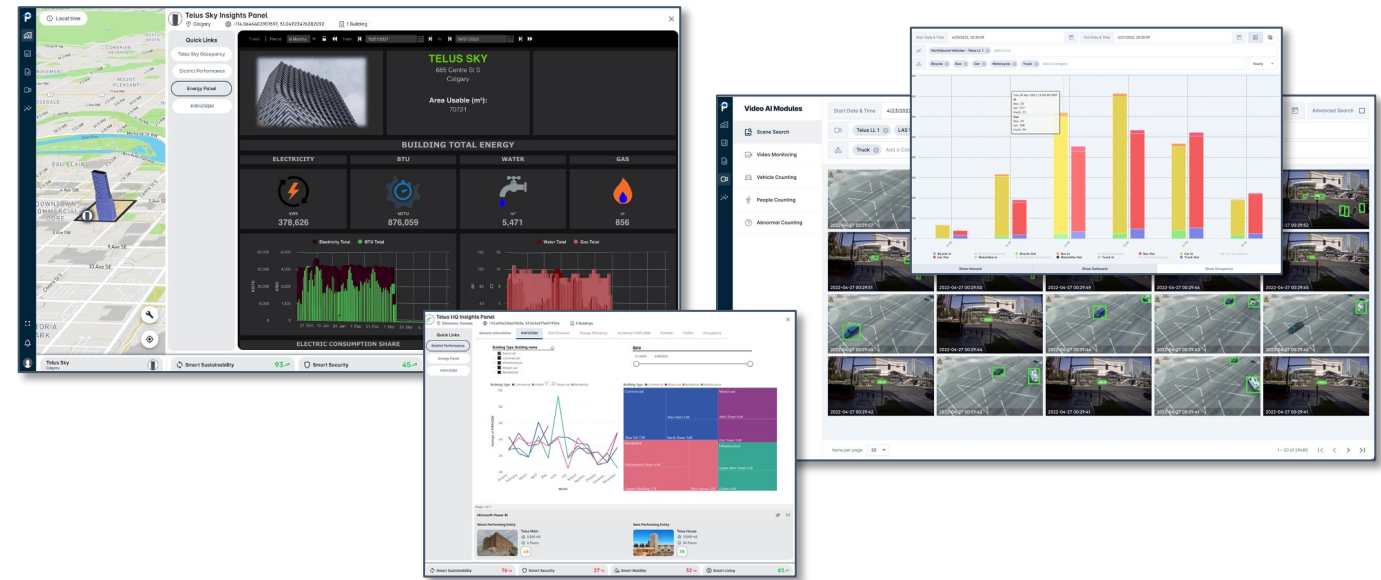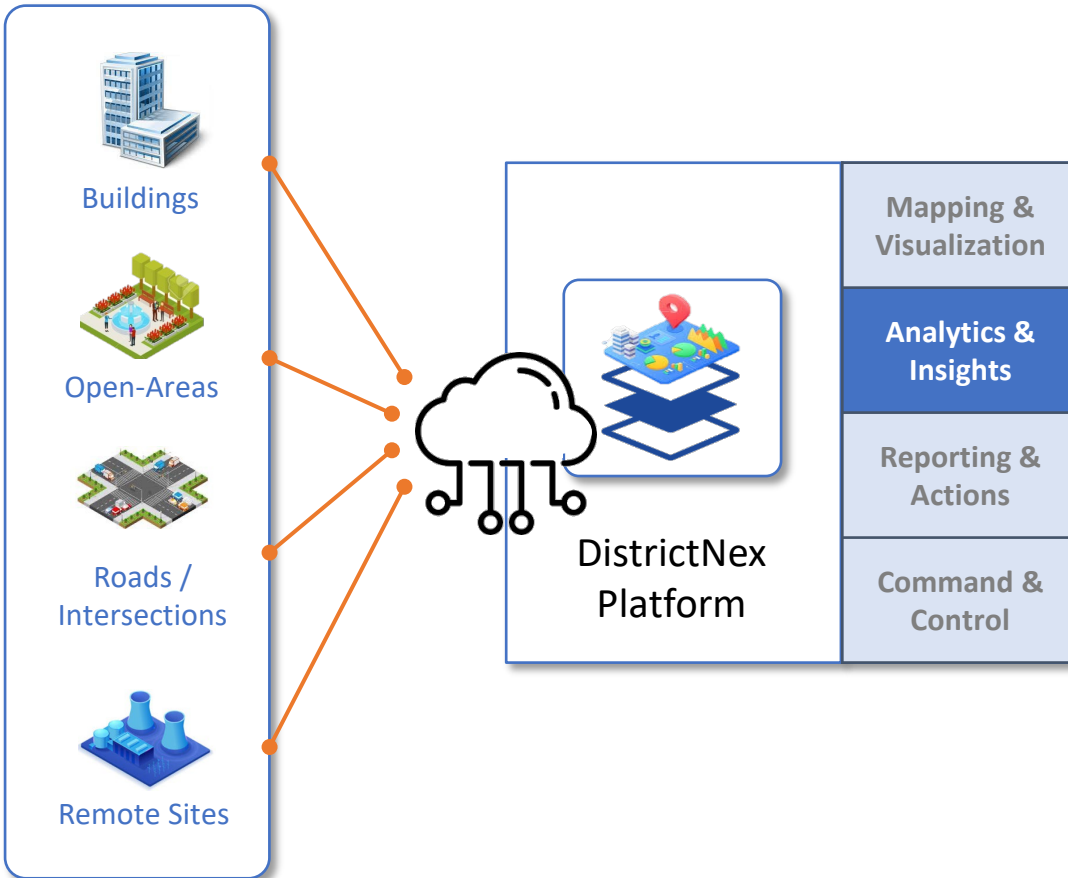
- ➤ *Data Model with horizontal integration of heterogeneous systems and data-sources, across smart dimensions.*
- ➤ *Data Model hierarchy that mimics the geospatial hierarchy, from buildings & floors, to sites, cities, and regions.*
- ➤ *Broad span of analytics use-cases, with trending, comparative, correlation, anomaly detection and predictive insights.*

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districtnex – 'Smart-City as a Service'
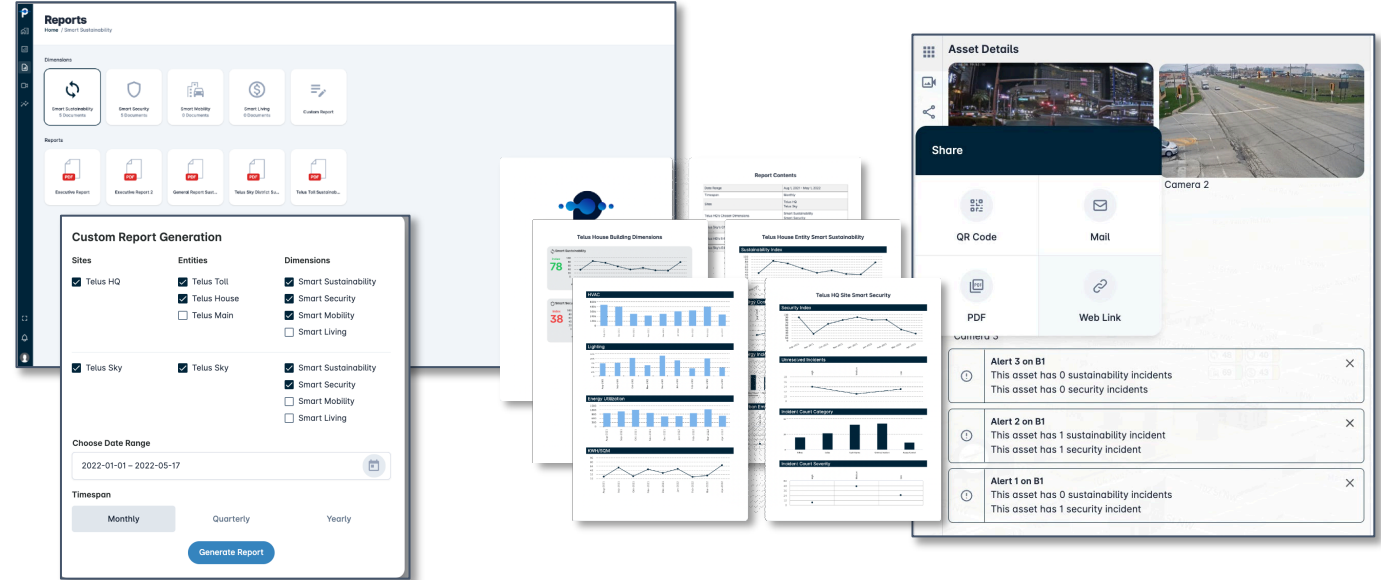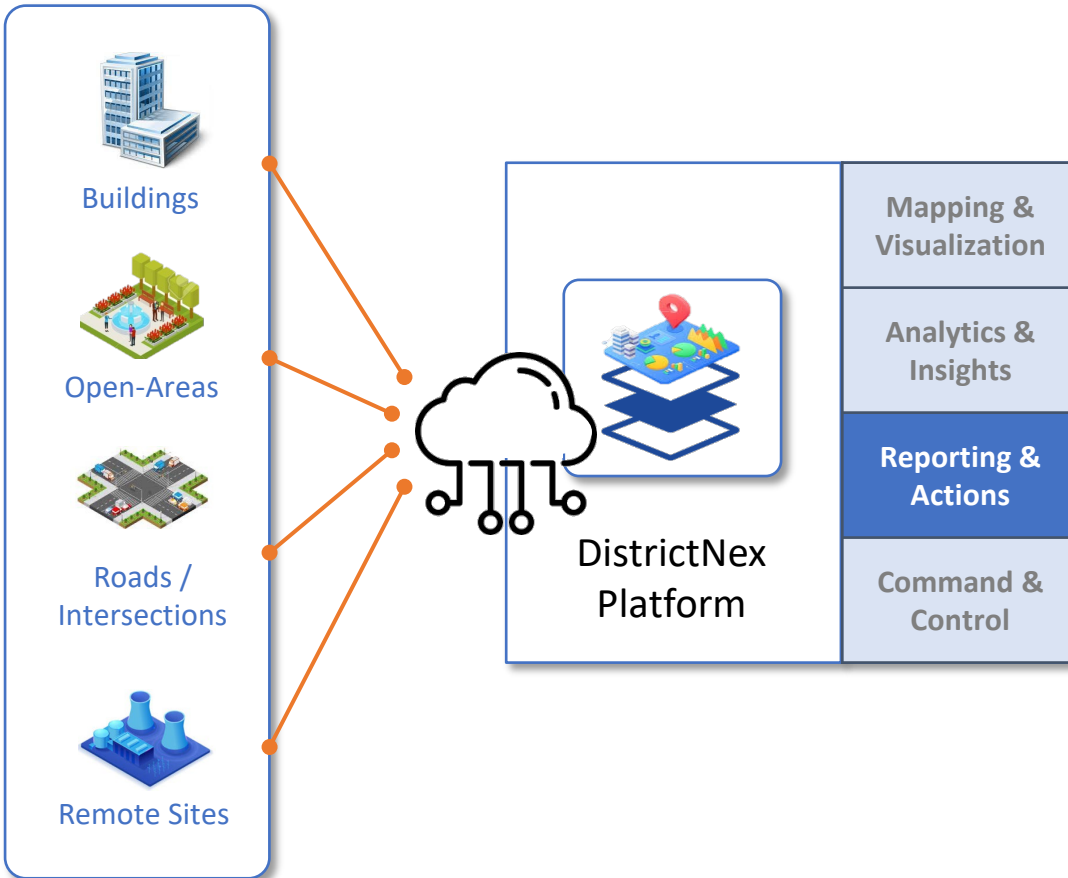
- ➢ *Pre-built reports.*
- ➢ *Custom-report generation function.*
- ➢ *Seamless sharing of both reports and situational information to concerned stakeholders, for a clear action / outcome.*

districtnex – 'Smart-City as a Service'

Buildings

Open-Areas

Roads / Intersections

Remote Sites

DistrictNex Platform

- Mapping & Visualization
- Analytics & Insights
- Reporting & Actions
- **Command & Control**

> *Integration of discipline-specific command-and-control for a two-way interaction with systems and assets.*
> *Consolidated, streamlined operation across sites.*

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districtnex – 'Smart-City as a Service'

Buildings

Open-Areas

Roads / Intersections

Remote Sites

DistrictNex Platform

Mapping & Visualization	Front-End		
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Reporting & Actions	Data Acquisition & Management		
Command & Control	Smart Sustainability	Smart Security	Smart Mobility	Smart Living

Data Management Services

Cloud Infrastructure

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Mapping & Visualization

Analytics & Insights

Reporting & Actions

Command & Control

END-USER

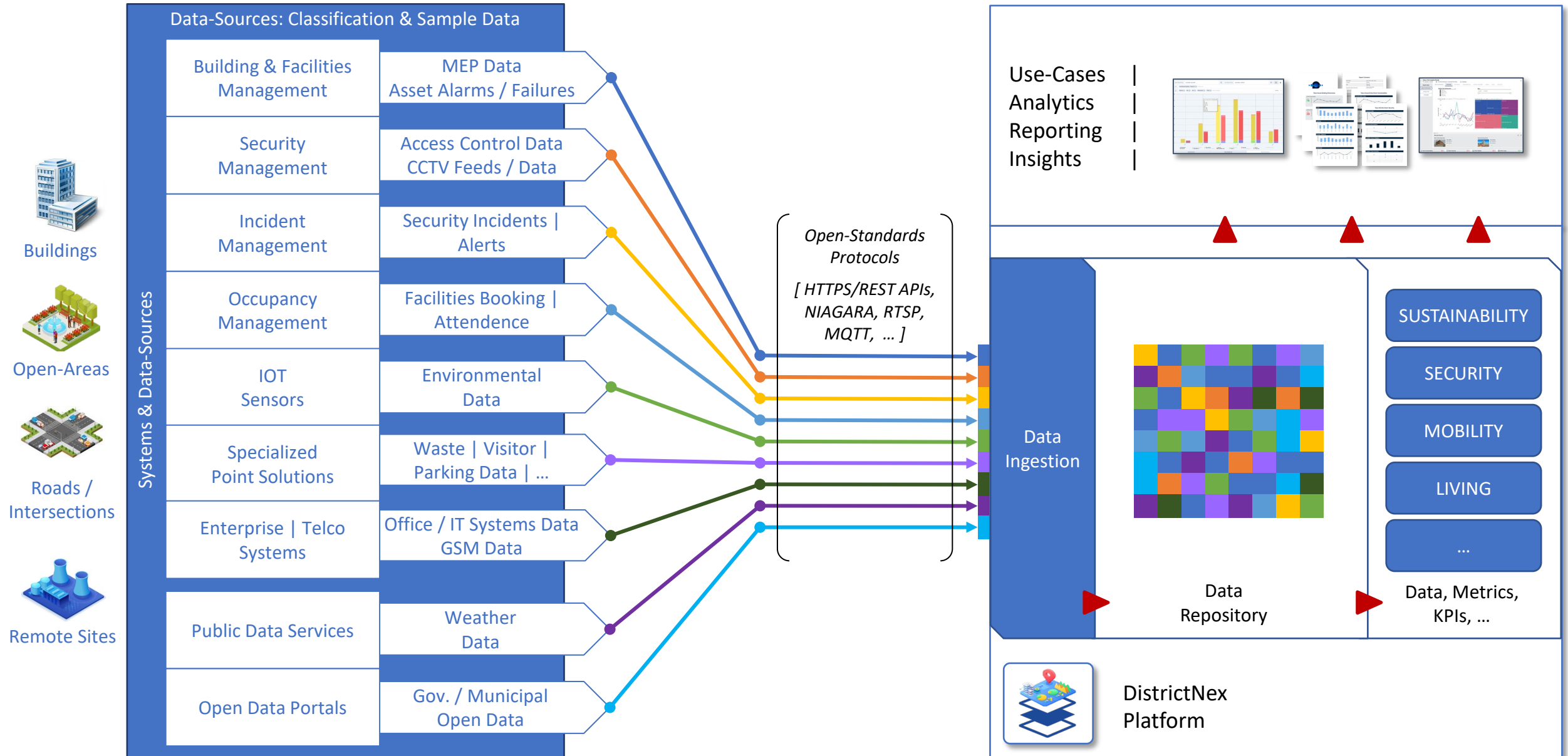**End-User Devices**

EXECUTIVE:
❖ Insights & Decision Support

MANAGER:
❖ Situational Awareness
❖ Performance Mgmt. & Reporting
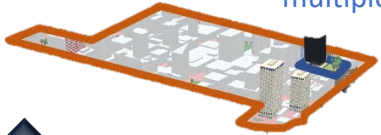
OPERATOR:
❖ Operational Efficiency

Command & Control Center

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Buildings

Open-Areas

Roads / Intersections

Remote Sites

Data-Sources: Classification & Sample Data

Systems & Data-Sources

Building & Facilities Management	MEP Data Asset Alarms / Failures
Security Management	Access Control Data CCTV Feeds / Data
Incident Management	Security Incidents	Alerts
Occupancy Management	Facilities Booking	Attendence
IOT Sensors	Environmental Data
Specialized Point Solutions	Waste	Visitor	Parking Data	...
Enterprise	Telco Systems	Office / IT Systems Data GSM Data
Public Data Services	Weather Data
Open Data Portals	Gov. / Municipal Open Data

Open-Standards Protocols

[HTTPS/REST APIs, NIAGARA, RTSP, MQTT, ...]

Use-Cases |
Analytics |
Reporting |
Insights |

Data Ingestion

Data Repository

SUSTAINABILITY

SECURITY

MOBILITY

LIVING

...

Data, Metrics, KPIs, ...

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- Abstraction of raw data into key metrics
- Normalization of data
- Data model that projects onto, and scales with the physical world

OVERALL PORTFOLIO

REGIONS

CITIES

AREAS (geofence of multiple adjacent sites)

DISTRICTS

SITES (geofence of a combination of Buildings, Open Areas, and other objects)
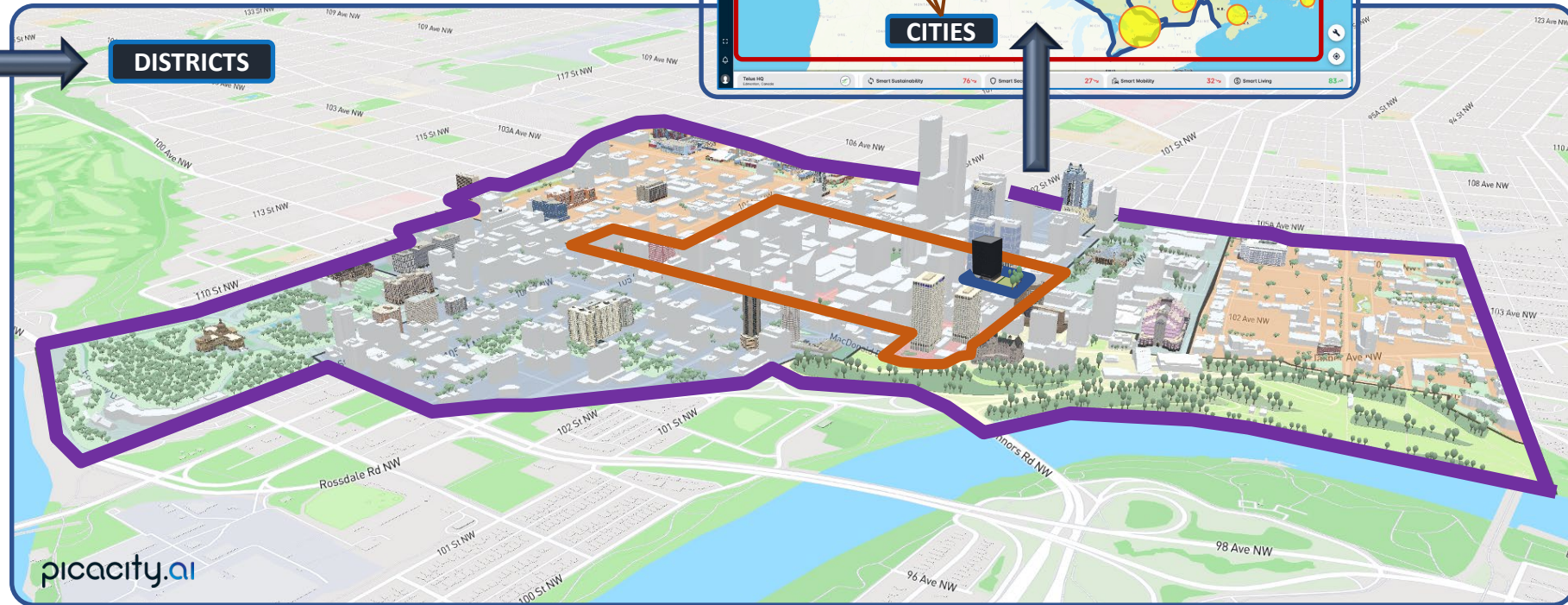
FLOORS / BUILDINGS

OPEN AREAS

Space 1   Space 2

Space 3

Space 4

Space 5   Space 6

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SPACES (Geospatial Tiles)

Space 1   Space 2   Space 3   ...   Space n

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USE-CASES: Deliver on BUSINESS OBJECTIVES

HOLISTIC ASSET WIDE DATA DRIVEN INSIGHTS	SUSTAINABILITY / WELLNESS	SAFETY / SECURITY	MOBILITY
Asset Efficiency Analysis	Energy Consumption Analysis	Security Management Reporting	People Movement
Asset Cost / Productivity	Equipment Performance	Incident Management / Oversight	Occupancy / Space Utilization
Predictive Scenarios	CO_2 Emissions	Video Management/ Video AI	Mobility Flow Analytics
Comparative Performance	ESG Reporting	Alerts / Failures	Vehicle / Parking Management
…	Air Quality	…	…

- Improved Planning and Decision Making Through Insightful district(s) wide information
- Improved Operational Efficiency Through Enhanced Control/Visibility of all Assets
- Potential Cost Savings (10-15% Reduction in operating cost)
- Reduced Resource Consumption (15-20% Reduction in energy cost)
- Optimized Sustainability, Security, Mobility and Living
- Potential Revenue Generation

END-USER

End-User Devices

EXECUTIVE:
- ❖ Insights & Decision Support

MANAGER:
- ❖ Situational Awareness
- ❖ Performance Mgmt. & Reporting
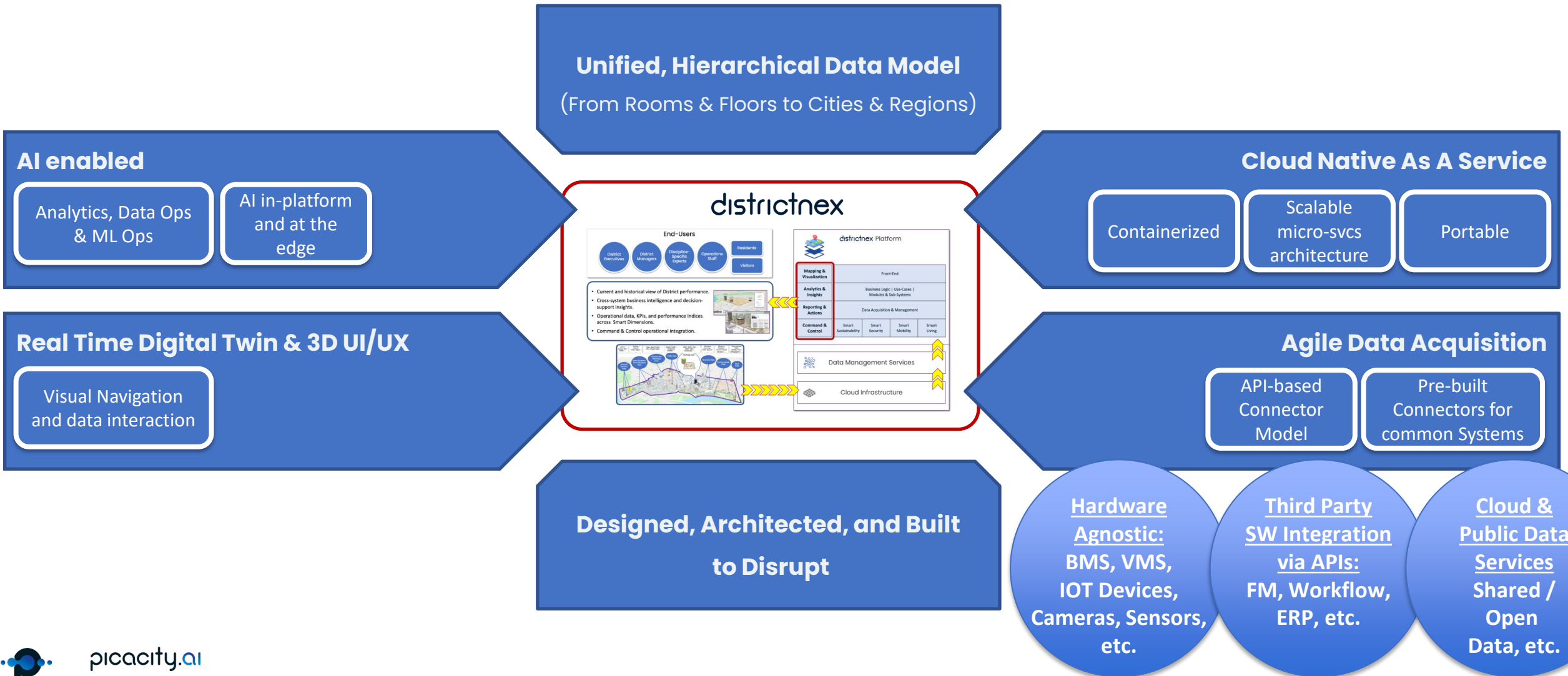
OPERATOR:
- ❖ Operational Efficiency

Command & Control Center

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districtnex – Summary

Delivering: **_Data Driven Insights, Sustainability, Safety/Security, Mobility, Wellness, and Operational Efficiency..._**

Unified, Hierarchical Data Model
(From Rooms & Floors to Cities & Regions)

AI enabled

- Analytics, Data Ops & ML Ops
- AI in-platform and at the edge

Cloud Native As A Service

- Containerized
- Scalable micro-svcs architecture
- Portable

Real Time Digital Twin & 3D UI/UX

- Visual Navigation and data interaction

Agile Data Acquisition

- API-based Connector Model
- Pre-built Connectors for common Systems

Designed, Architected, and Built to Disrupt

Hardware Agnostic:
BMS, VMS, IOT Devices, Cameras, Sensors, etc.

Third Party SW Integration via APIs:
FM, Workflow, ERP, etc.

Cloud & Public Data Services
Shared / Open Data, etc.

THANK YOU

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