intertrust®

Secure data exchange and collaboration for smart city planning

Industry
Smart city infrastructure

Solutions
Intertrust Platform™
Intertrust PKI for IoT

Introduction

A smart city is an urban area that uses different types of Internet of Things (IoT) sensors to collect data. Insights gained from that data can then be used for efficient management of assets, resources, and services, as well as for improvements to city-wide operations. This includes data that is collected from citizens, devices, buildings, and assets. The data is then processed and analyzed to monitor and manage traffic and transportation systems, power plants, utilities, water supply networks, waste management, crime detection, information systems, schools, libraries, hospitals, and other community services. Choosing a scalable and manageable smart city platform is very much a data management challenge.
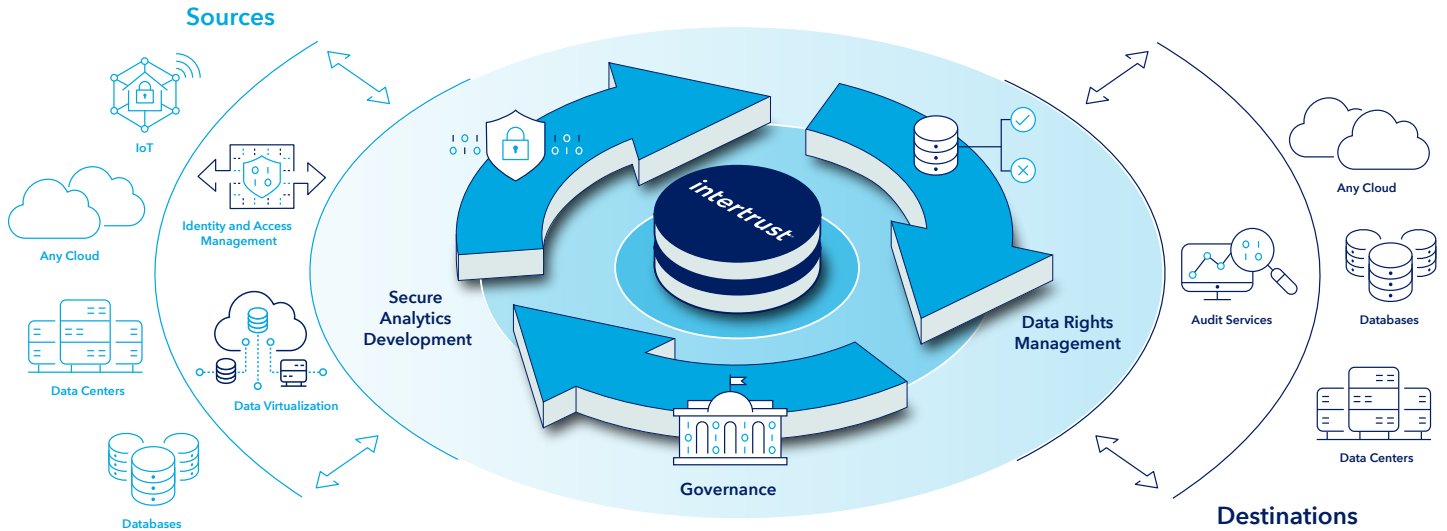
The challenge

Major technological, economic and environmental changes have generated an increased interest in smart cities, including climate change, economic restructuring, coronavirus, the move to online retail and entertainment, ageing populations, urban population growth, and pressures on public finances. Collecting, blending, filtering, and analyzing data from millions of sensors— while keeping it secure from hacking and copyright infringement—is often the first real challenge. It requires precise deployment of the right data management technologies, with easy-to-use data visualization and collaboration tools on the backend.

This also requires a massive amount of collaboration and co-creation services, as third-party analytics providers need to create the value-added services that derive the insights from all these disparate data stores and sources.

Intertrust provides several solutions to plan and deploy optimized smart city infrastructure projects. The Intertrust Platform can be deployed in the cloud or on-premises to:

- Collect, blend, and aggregate business, environmental, geospatial, real-time operational, or time series data from multiple devices or sources

- Authenticate, authorize, and set governance rules and access control policies on all this data and their users

- Provide secure environments to share the datasets, with fine-grained access control rights, for multiple stakeholders inside or outside the organization

- Implement unparalleled security by always protecting data through a chain of custody and other risk management techniques, and making it verifiable through immutable activity logs

The Intertrust Platform facilitates secure data exchanges and collaboration between businesses and partners, allowing them to secure, govern, and monetize their data, across any cloud service or infrastructure.

Sources

IoT

Any Cloud

Data Centers

Databases

Identity and Access Management

Data Virtualization

Secure Analytics Development

Governance

Data Rights Management

Destinations

Any Cloud

Databases

Data Centers

Audit Services

Intertrust Platform is an interoperability layer that provides secure links for diverse smart city datasets and devices—from edge to cloud.

The solution

Intertrust has developed and productized a secure and highly scalable data management service for smart cities. This includes the virtualization, aggregation, and governance of data required for planning for the electrification of transportation (e.g., charging infrastructure for cars, trucks, and buses), studying potential for renewable energy, new traffic concepts via telematics data, smart city street lighting, sustainability tracking, and more. Intertrust helps municipalities and their internal or external partners share data securely and collaborate efficiently with one another. In Germany, Intertrust is working with DigiKoo, a subsidiary of E.ON, to deliver this solution to cities and municipalities.

Intertrust Platform™

The Platform leverages container orchestration technologies such as Kubernetes and Docker to make deployments cloud-agnostic.

Identity and access management
Device and user identity, authentication, and authorization; maintains platform objects and their relationships.

Data virtualization
Data object definitions, permissions, restrictions. Provides data interfaces, manages DBs and virtualized datasets.

Intertrust PKI for IoT

In addition to the Platform, Intertrust offers a scalable certificate authority and managed PKI service enabling IoT devices to securely participate in trusted ecosystems.

Secure execution environment
Secure network-isolatable environments for workload execution and controlled, interactive data exploration.

Time series database
Scalable, efficient, high performance database designed for time series data.

The results

Smart city planners and officials are turning to Intertrust to help create a trusted data exchange ecosystem that can allow secure data collaboration, visualization, and governance tools. The Intertrust Platform acts as a secure data virtualization, data aggregation, visualization, and data collaboration layer for many different data sources and formats, regardless of location.

Using Intertrust, smart city planners and their partners in energy utilities, automotive dealerships and EV automakers, and EV charging station operators can easily work together to:

- Implement secure and efficient data orchestration
- Work across hundreds of data silos and clouds securely
- Ensure complete data governance and maintain data privacy protection

intertrust®

Building trust for the connected world.

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