precisely   **helvetia**
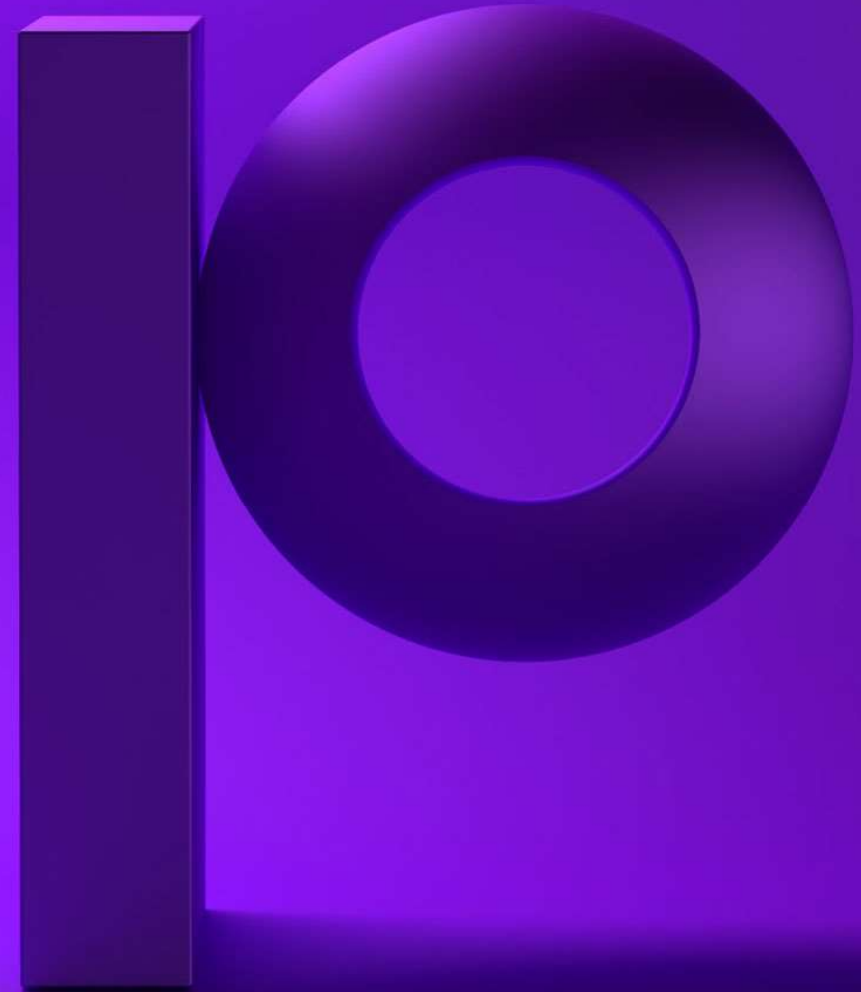
How an Insurance Leader Transformed Analytics and AI with Location Data

Karsten Nordick | Head of AI and Geo Analytics | Helvetia Insurance Switzerland

Ralf Krämer | Senior Account Executive | Precisely
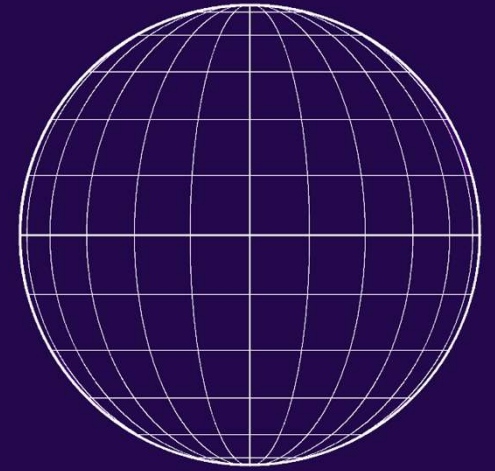
Measure the World - Locate and Describe

Claudius Ptolemäus
(ca. 100–ca. 170)
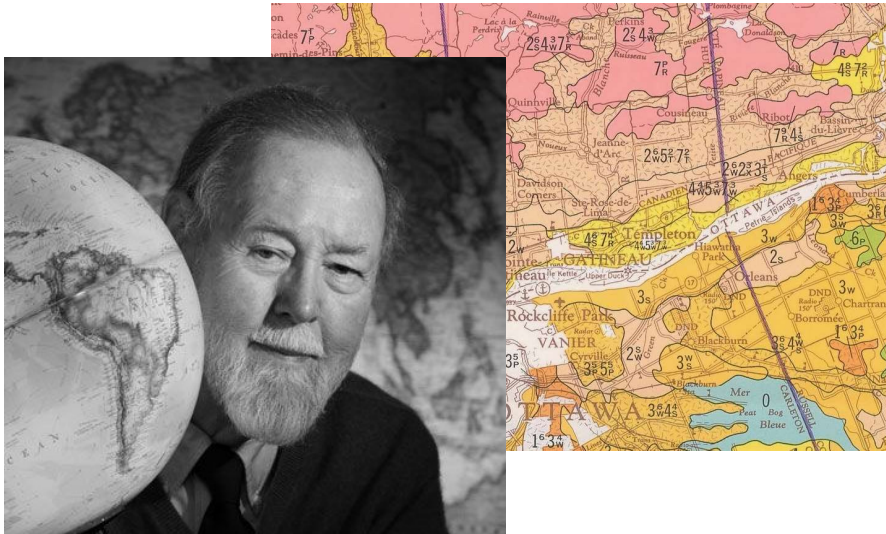
Geographia

Muhammad al-Idrisi
(1100–1165/1166)

Tabula
Tabula Rogertana (1154)

Gerhard Mercator
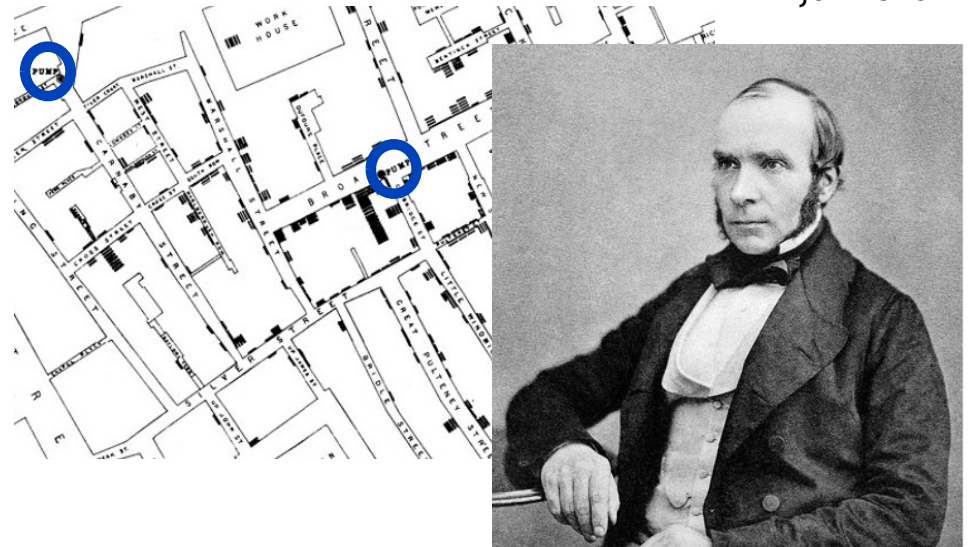(1512–1594)

Weltkarte
(Mercator Projektion, 1569)

Further Evolution – GIS & Location Intelligence

First Geographical Information System (GIS)
1963: Canada Geographic Information System (CGIS)
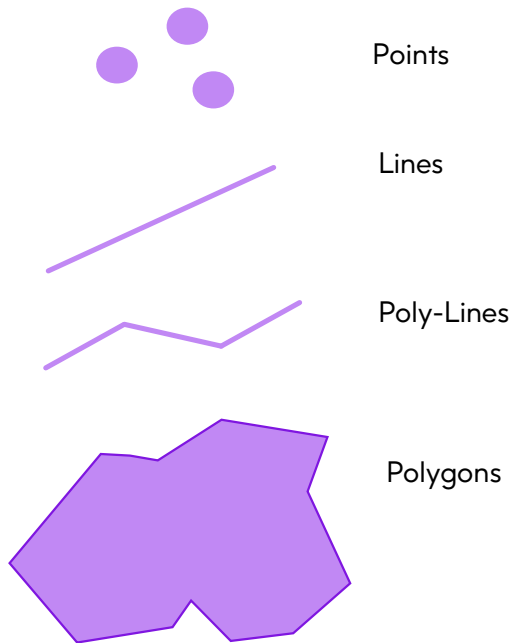Roger Tomlinson

First Location Intelligence concepts
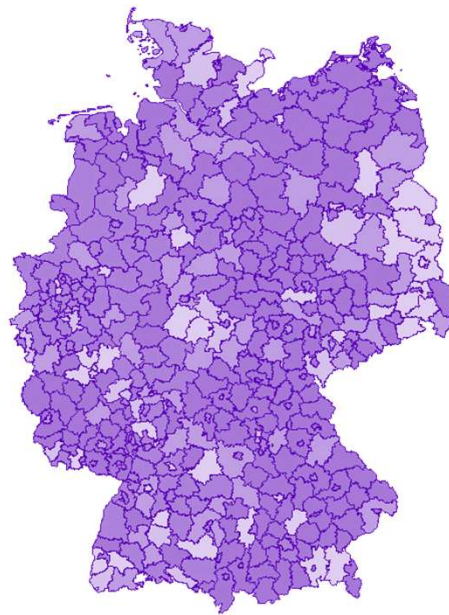1854: Cholera Map
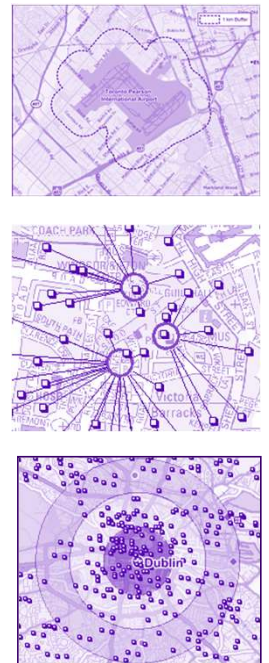John Snow

Build a Model of the Reality

Spatial Geometry

- Points
- Lines
- Poly-Lines
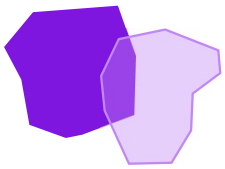- Polygons

Single Layer
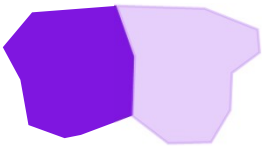
Multiple Layer

Complex Maps

Spatial Queries and Operations
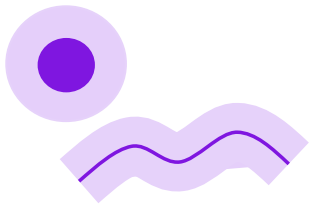
Intersection/Overlapping

Adjacent

Point in Polygon

Distance to...

Buffers/Catchments

Geographic Information System (GIS)

A Geographic Information System (GIS) is a conceptualized framework that provides the ability to capture and analyse spatial and geographic data. GIS applications (or GIS apps) are computer-based tools that allow the user to create interactive queries (user-created searches), store and edit spatial and non-spatial data, analyse spatial information output, and visually share the results of these operations by presenting them as maps.

Location Intelligence (LI)

In business intelligence, Location Intelligence (LI), or spatial intelligence, is the process of deriving meaningful insight from geospatial data relationships to solve a particular problem.

It involves layering multiple data sets spatially and/or chronologically, for easy reference on a map, and its applications span industries, categories and organizations.

https://en.wikipedia.org/wiki/

Location data is everywhere

Addresses

Boundaries

Demographics

Places

Properties

Streets

Risks

Imagery

Devices

Risk Assessment

Retail & Food Chain Expansion

Emergency & Disaster Management

Sales

LOCATION DATA

Infrastructure Planning

Marketing

Maintenance

Customer Service

Regulatory & Compliance

Logistics

67% use location data in business-critical use cases

2025 Data Integrity Trends & Insights Report

Source: Precisely and Drexel University LeBow College of Business – 2025 Data Integrity Trends and Insights
https://www.precisely.com/resource-center/analystreports/lebow-report-2024

Location data is an enterprise asset

Customer Satisfaction

Deliver personalized products and services through accurate, location-based insights

Operational Efficiency

Move fast and reduce costs with real-world context around physical locations

Minimize Risk

Identify vulnerabilities, predict impacts, and inform proactive location-based decisions

Trusted location data is essential to accelerate confident decision-making and growth

Helvetia Switzerland – leading position as an all-line insurer in Switzerland

1.3 Mio.+
customers in Switzerland have placed their trust in us

100+
locations in Switzerland, and close to you too

250'000+
trees planted in forest protection projects

160+
years of insurance expertise since 1858

3'700+
employees in Switzerland

100%
of electricity from renewable sources

Basel
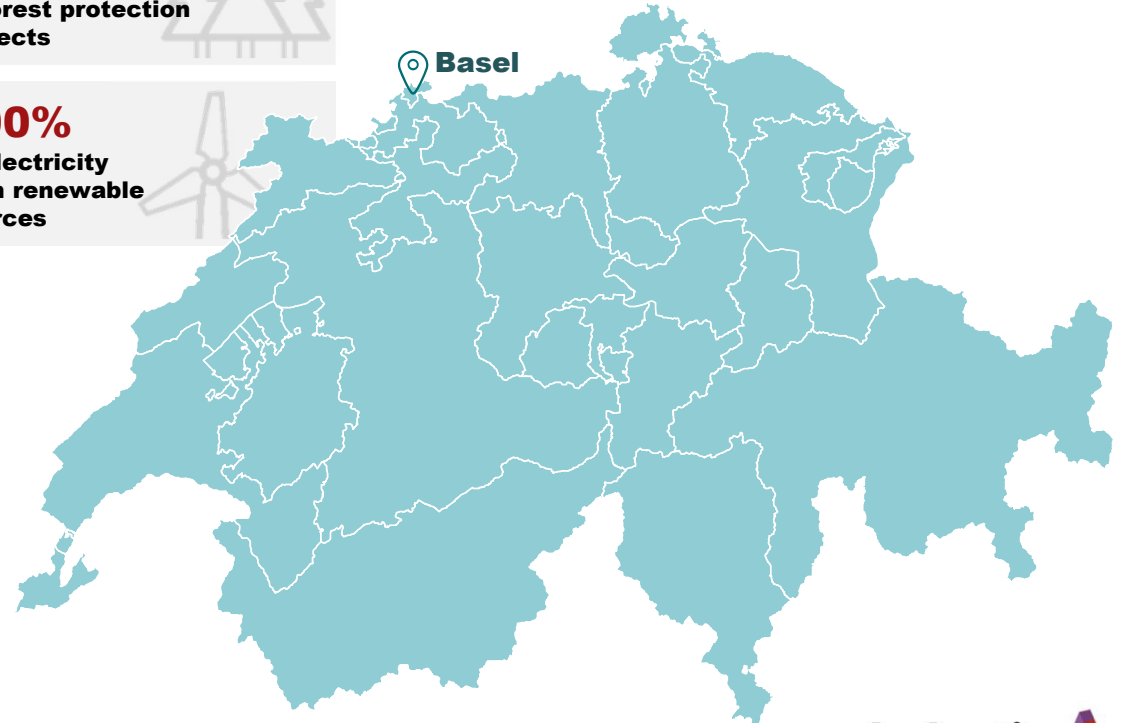
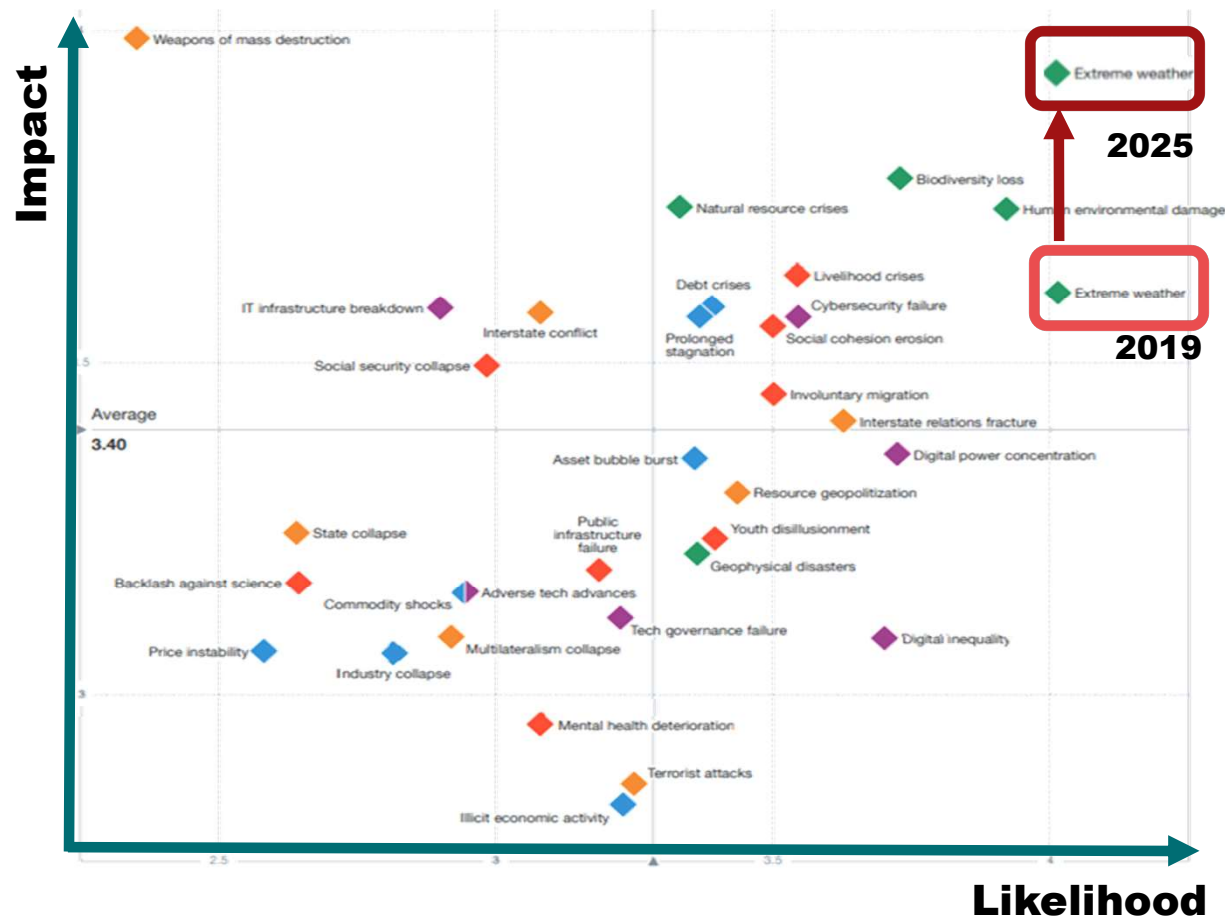**Business volume by segment '22**

Non-life 38%

Group life 43%

4'652
CHF million

Individual life 19%

8

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Your Swiss Insurer
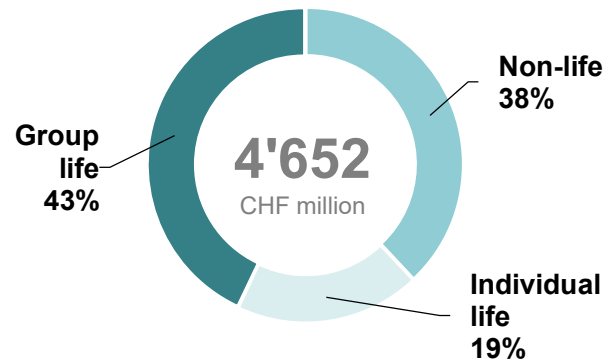
Extreme weather events & climate change as major risk for insurance

17.09.2025

Source: WEF

helvetia

Reimagining underwriting process with geodata

Illustrative example: building insurance with use of external data

Reducing customer input to mobile photo

Identification via geocode of the photo

Easier closing

Enrichment with external data for risk scoring

Geodata
Hazard map, proximity to highway / border, lime content of water, surrounding buildings, subsoil, etc.

Further external data
Data from the 'Home' ecosystem, **meteorological**, sociodemographic, **sensor**, credit rating data, etc.

Internal data
Building data, damage data, customer data, etc.

Better insights into the insured property, person and risks

Calculation of sum insured, pricing and underwriter decision

Estimate of replacement value (cost of replacement)

Risk assessment, pricing and UW decision

More accurate pricing and underwriting

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Old world: differentiation lags between high and low risks with manual processes & less precision

Process complexity

The process is **complex** and requires effort. **Manual checks** are needed on cantonal websites.

Address lookup

Each address requires an **individual search**, and geocoding is sometimes done via a third-party website.

Risk scoring

Buildings within a postal code get identical risk scores due to **outdated tariff model**.
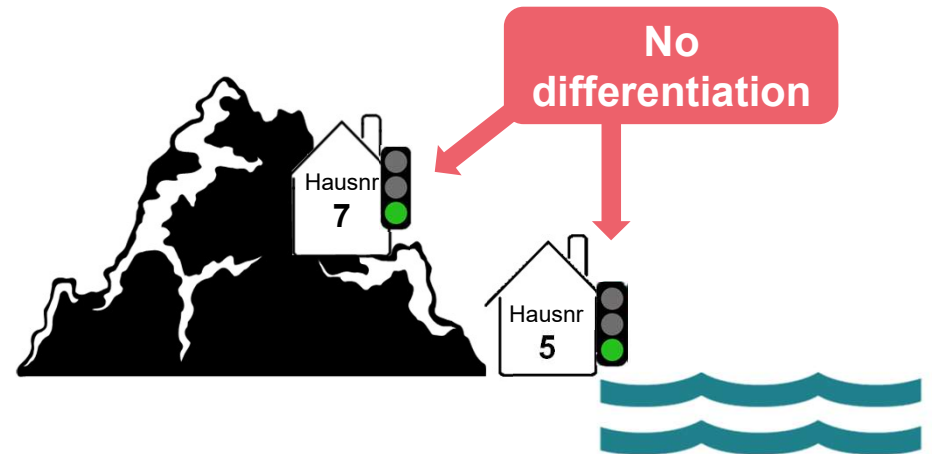
Comparability

No uniform data model, leading to **lack of comparability** among swiss states due to the **lack of a uniform data model**.

Determination of the risk category via claims history per canton

No differentiation

Hausnr 7

Hausnr 5

helvetia

New world: external data allows precise differentiation & automated processes.

End2End automation

Fully **automated** process, integrated into many Frontend Systems without manual steps.

External data

Integration and usage of many **external data sources** to enrich address and support tariff models

Scalability

Designed for **mass volume** and **further risk categories**. Easy to integrate due to **standard interfaces**

Precision

A precise, **address-based risk assessment** enables fair pricing and high-resolution risk mitigation.

Determination of the water risk category based on **address**

Accurate Pricing

Hausnr 7

Hausnr 5

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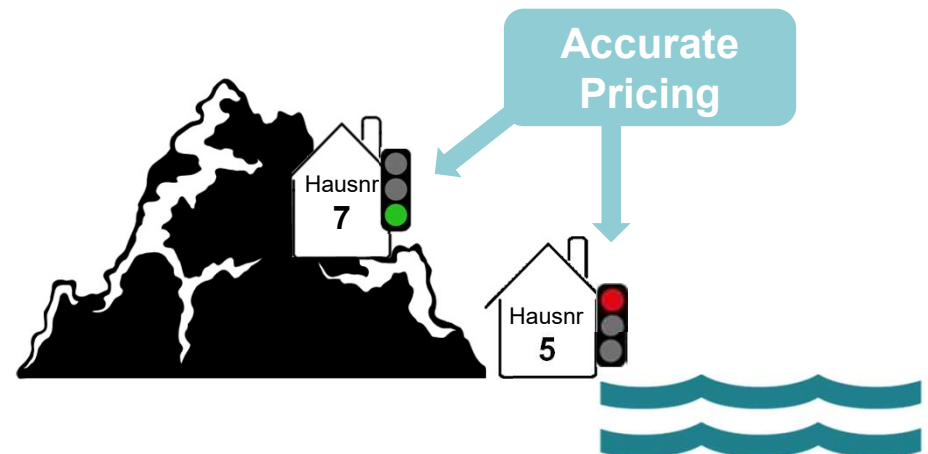
In combination: various data sources merged by their location

- Not in danger
- Residual hazard
- Slight
- Mean
- High

- Number of floors
- Apartment area
- Number of rooms
- Apartment status
- Year of construction
- …
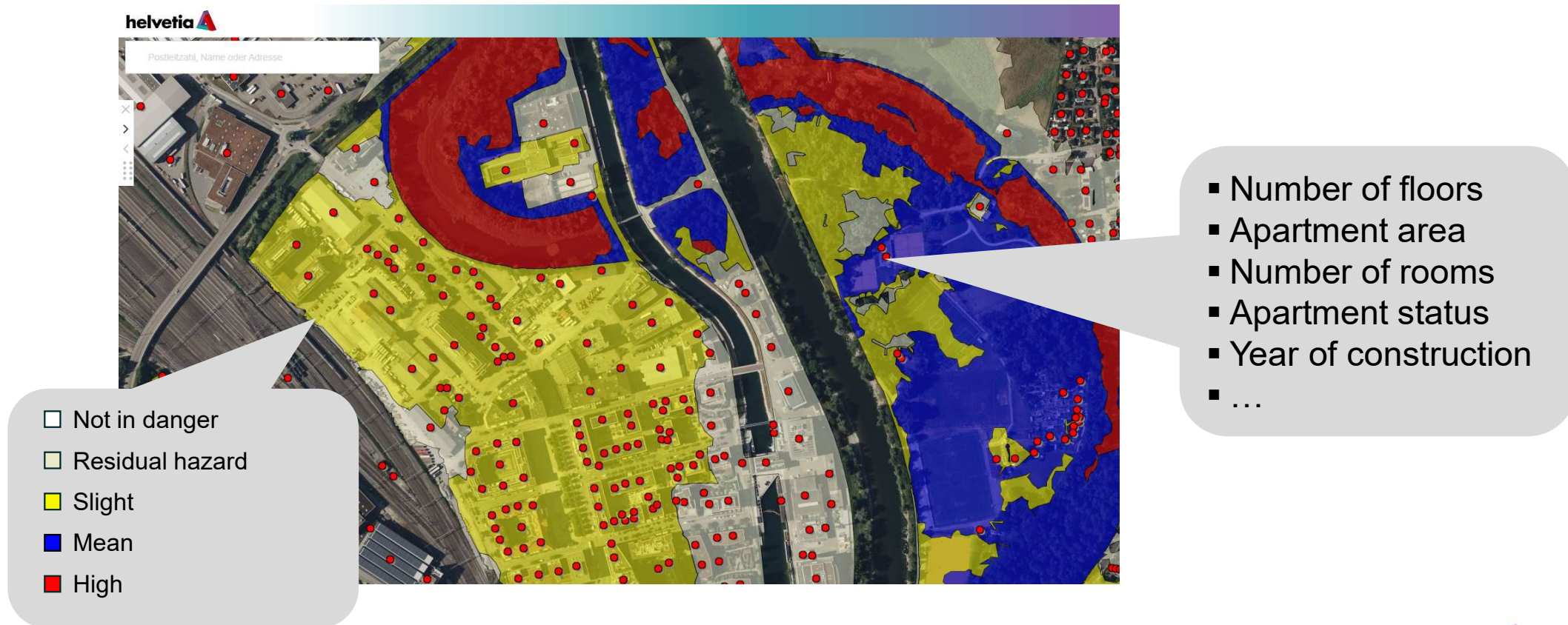
Solution design
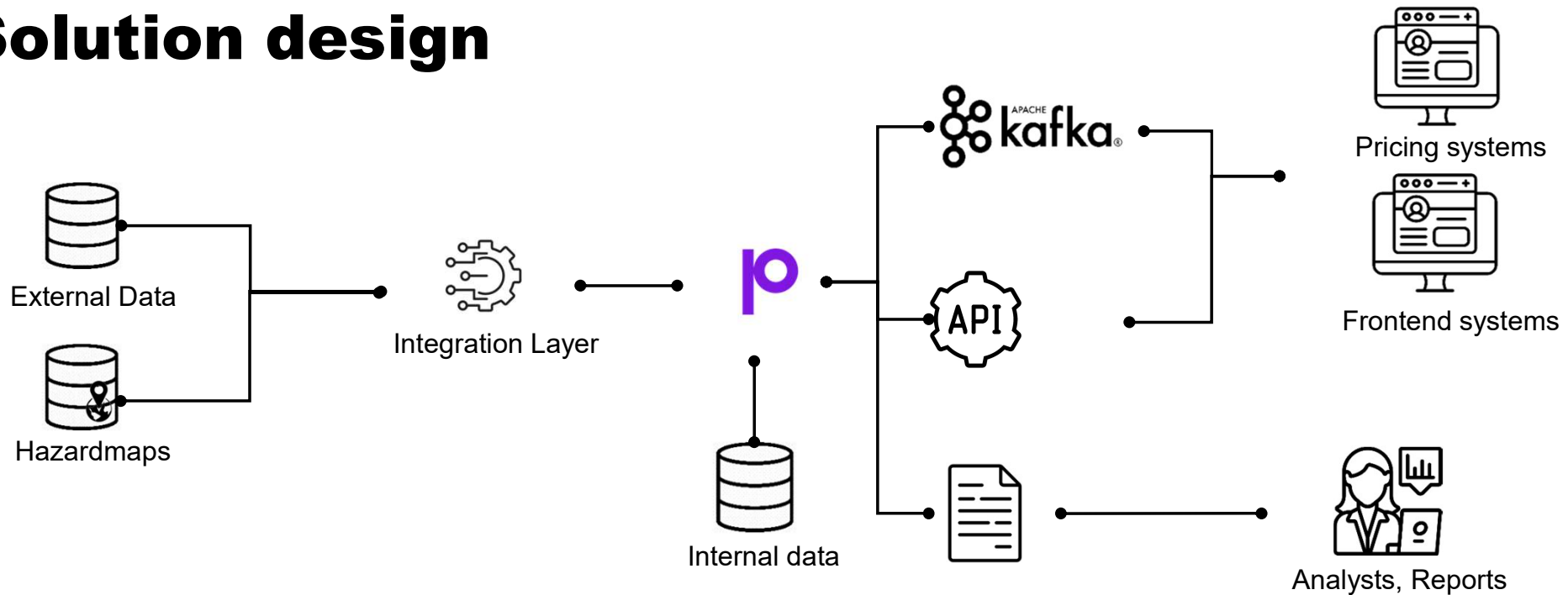
Key attributes

- Combining internal and **external data**
- **Geocoding, enrichment**, examination and data modelling
- Adapting data to **comply with business rules**
- **Distribution of data** for business utilization in frontend systems

  (e.g., pricing and underwriting)

Key benefits

- **Scalable** and **extendable** for additional external data integration
- Capable to manage **large data volumes**
- Entirely **automated** end-to-end process
- Simple integration due to **standardized** interfaces
- Synchronous and asynchronous

Turning vision into milestones - reflecting on our successes

A brief recap of our achievements

Reducing customer input to mobile photo

Identification via geocode of the photo

Easier closing

Enrichment with external data for risk scoring

Geodata
Hazard map, proximity to highway / border, lime content of water, surrounding buildings, subsoil, etc.

Further external data
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Risk assessment, pricing and UW decision

More accurate pricing and underwriting

17.09.2025

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Paving the way - expanding our impact

Platform
Facilitating the integration of geodata for internal processes

Efficiency at core
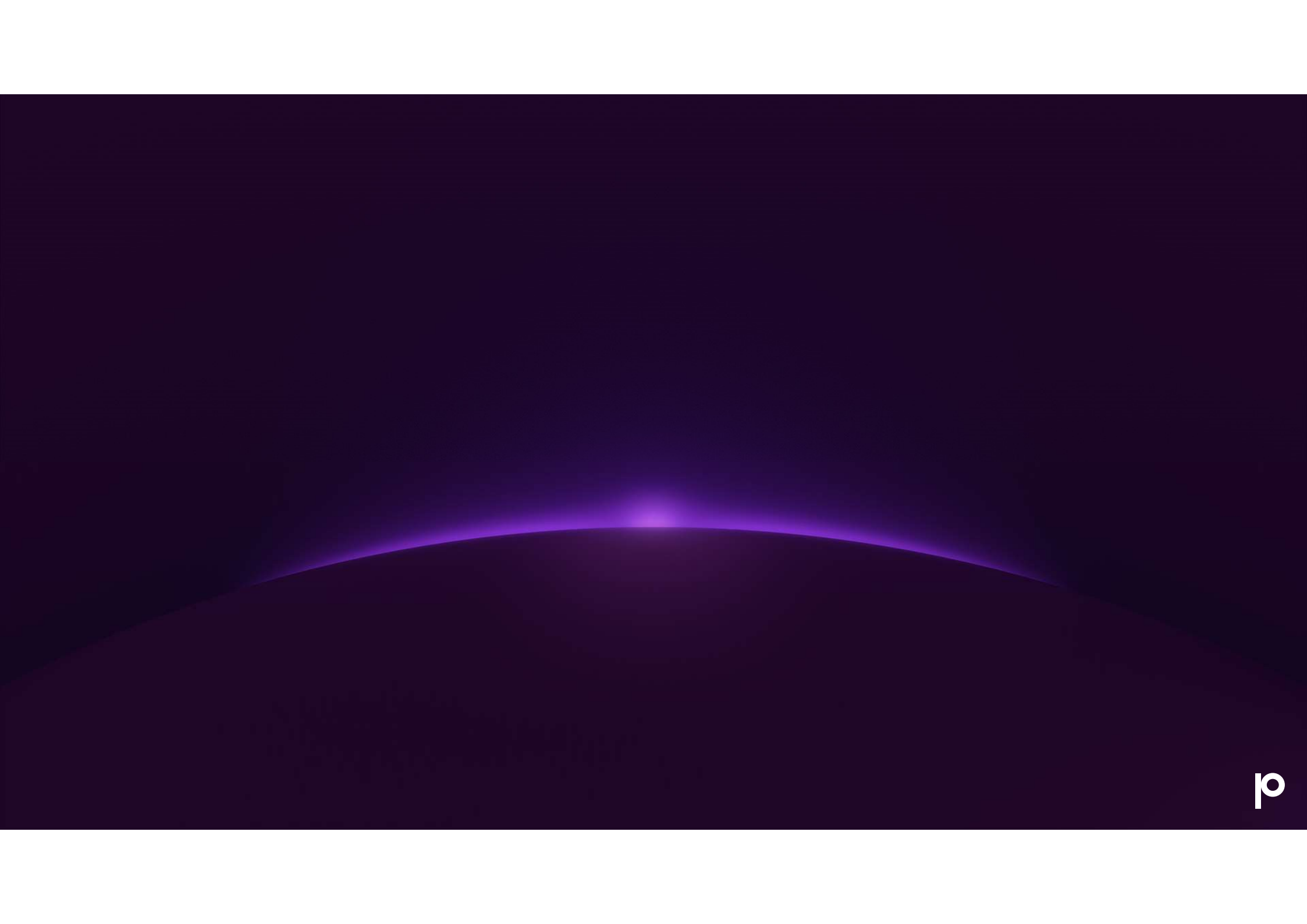Ability to link more data sources with minimal effort

Demonstrated value
Benefits and improvements

Collaboration
Established partnerships with geodata providers (e.g. weather data)

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Location is key to solving complex, real-world challenges

FINANCIAL SERVICES

- Financial crimes & compliance
- Customer insight & personalization
- Branch location analytics
- Real-time fraud detection

INSURANCE

- Risk assessment & underwriting
- Claims processing & fraud detection
- Pricing optimization

TELECOMMUNICATIONS

- Network optimization & 5G deployment
- Churn prediction & customer retention
- Location based marketing
- Predictive maintenance of network infrastructure

RETAIL

- Customer behavior prediction
- Retail location analytics
- Inventory optimization with location-based demand forecasting

GOVERNMENT

- Infrastructure & public works management
- Urban planning & smart cities
- Emergency response & public safety
- Transportation & mobility management

REAL ESTATE

- Property valuation & pricing models
- Market forecasting & investment risk analysis
- Disaster risk & resilience modeling

ADVERTISING

- Hyper-local targeted advertising
- Geofencing for real-time campaigns
- Audience segmentation & behavior prediction

eCOMMERCE

- Hyper-personalization & product recommendations
- Optimized last-mile delivery & logistics
- Location-based dynamic pricing

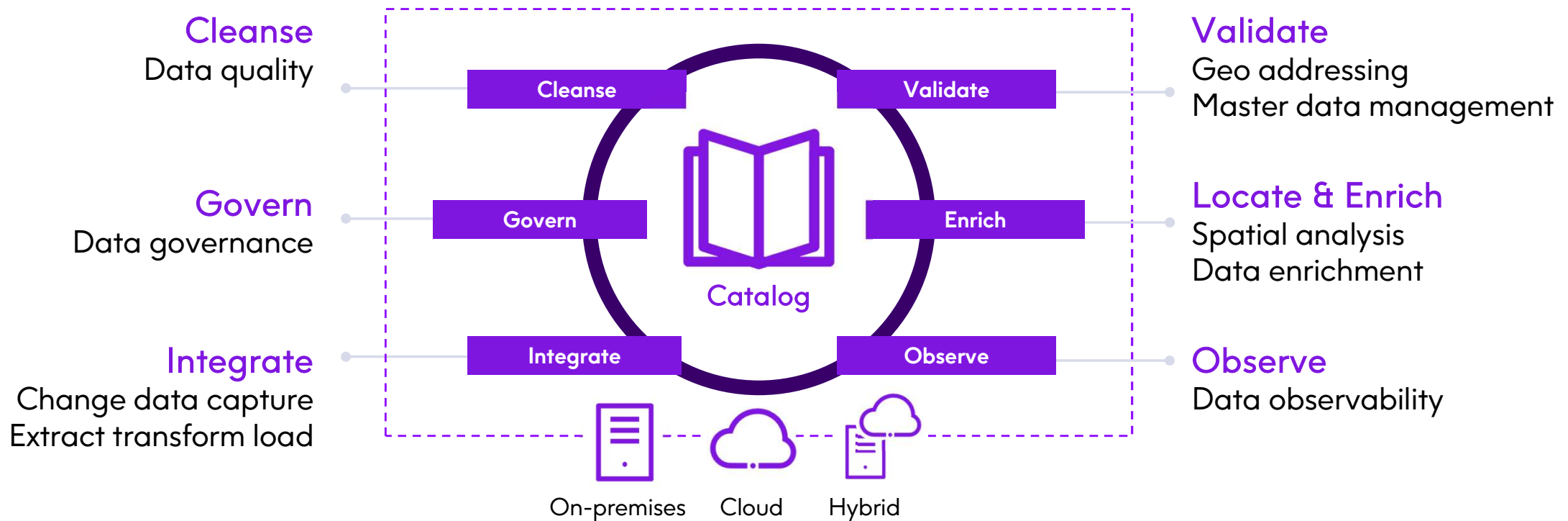# Location Intelligence has become a differentiator

Data enrichment and location intelligence have emerged (+ 62% growth) as differentiators among organizations aggressively seeking innovation, operational efficiencies, and competitive advantages in the marketplace

2025 Data Integrity Trends & Insights Report

Source: Precisely and Drexel University LeBow College of Business – 2025 Data Integrity Trends and Insights
https://www.precisely.com/resource-center/analystreports/lebow-report-2024

Precisely builds trust in enterprise data

Cleanse
Data quality

Govern
Data governance

Integrate
Change data capture
Extract transform load

Validate
Geo addressing
Master data management

Locate & Enrich
Spatial analysis
Data enrichment

Observe
Data observability

Cleanse · Validate · Govern · Enrich · Integrate · Observe

Catalog

On-premises · Cloud · Hybrid

Trusted data is critical to successful AI & Analytics

Integrate all relevant data to mitigate bias

Ensure quality and governance to minimize risk

Locate & Enrich with context to increase relevance

Incorporate location intelligence into your AI & Analytics Data Strategy

Interested in more?

Explore additional resources on achieving data integrity!

See a demo

Visit booth #

precisely