Unleash the **Power of Geospatial Information** in the Intelligent Enterprise
Simplify access to geospatial information

What if your business could take all kinds of geospatial information – regional boundaries, points of interest, road networks, earth observation data, drone images - and easily combine it with business data? What if you could use it to predict business outcomes and automate new business processes? What if you could visualize it to reveal previously unseen relationships?

What if you could do all of this without the need to invest in complex infrastructure and hire scores of data scientists and field experts?

The opportunities presented by geo-referenced data are endless. When you know the location, you bring context to everything from customer buying habits to supply chain management to risk assessment.

For example, combining information about human activities – construction, transportation, and education – with a location’s natural features – water quality and soil type – can allow better targeting for new business developments. Other datasets, such as weather forecasts, vegetation, and the movement of cargo ships around the world can be applied to predict crop yields and devise supply chain strategies.

Yet it still often remains a challenge to find the right people to add that ‘where’ dimension to your everyday business operations.

Until now.
Leverage ready-to-use geospatial services for faster results

SAP HANA® spatial services add the missing geospatial detail you need for the insights you want. This cloud-based offering runs on powerful infrastructure managed by SAP and intuitively helps you access, combine, and process different geo-referenced data. It also allows you to use the results of this processing through standard APIs, so that you can use geospatial information together with business data inside your applications, adding the “where” dimension to your processes.

SAP HANA spatial services gives you everything you need to develop location-aware business solutions quickly. It is optimized for processing large amounts of geo-referenced data, accessing, collecting, and processing your satellite and drone data together with data from multiple providers. Data is automatically prepared and harmonized for you so that valuable information can be derived and easily correlated with your business data.

You can also take advantage of ready-to-use services to perform a variety of tasks. For example, you can use the Surface API to get aggregated information about the earth’s surface for a specific index – such as the Normalized Differential Vegetation Index (NDVI) – by area, and timeframe. Or, if you prefer to apply your own band arithmetic to satellite or drone imagery, you can choose the Band Modeler service instead.

Leverage ready-to-use geospatial services
Choose the amount of detail you need
Build location-aware business solutions easily
Choose the amount of detail you need

Additional sophisticated services are available through SAP HANA spatial services to provide tailored information for specific business use cases.

For example, if you were to create a wildfire hazard map, you would need a custom index that takes into accounts characteristics and enablers of wildfires. This is exactly what the Wildfire Index service does for you. It takes a range of input parameters and utilizes machine learning to generate a risk index based on expected environmental and land changes over the next 15 days.

All provided services are available in SAP Cloud Platform cockpit and accessible via REST APIs.

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Build location-aware business solutions easily
Figure 1. SAP HANA spatial services application for visualizing services.

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Build location-aware business solutions easily
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Timely delivery of innovation is critical for your business and location-aware innovation is no different. Ready-to-use cloud-based services can help you achieve results faster but what happens when you have unique business needs that require a customized solution?

SAP HANA spatial services include an intuitive modeler tool to customize SAP-provided services or create your own services.

In the wildfire hazard map example above, an insurance company might need to determine its financial exposure from areas at high-risk of wildfire. To do so, it could develop a predictive model to correlate its customer data with results generated by the Wildfire Index service, using the advanced analytics capabilities of its on-premise SAP HANA installation. Moreover, to support decision making, the insurer could decide to create a risk map to visualize the results.

To simplify the visualization of geospatial-data – in applications, websites, and GIS systems – SAP HANA services include a visualization application and a choice of REST services – such as the Drone and Object Detection services.

Also, to help you throughout the entire development process, SAP Cloud Platform Cockpit provides you access to the full description of the available services, the link to the visualization application, and tools to monitor your processing requests.

Leveraging geospatial-data across your business has never been easier or faster to do.

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Figure 2. SAP HANA spatial services in SAP Cloud Cockpit. New services will be added frequently.

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Adopt advanced spatial capabilities without barriers

- Rely on state-of-the-art cloud-based infrastructure and SAP’s business and technology expertise to make your business location-aware, without the need for large financial investments or deep geospatial in-house knowledge.
- Propel your spatial projects forward easily by accessing and processing sophisticated georeferenced data.
- Leverage an ever-growing portfolio of spatial services designed to solve tangible business problems in a variety of industries.
- Combine the capabilities of SAP HANA cloud services with the powerful advanced analytical processing of the SAP HANA business data platform and connect geo-referenced data to live business transactions. This means your business users can take actions based on live spatial intelligence at each interaction point along a business process – whether they need to dispatch field personnel in real time to an outage, choose the supplier with the most valuable crops for the upcoming season, or determine the most effective distribution route.
- Take advantage of all kinds of geospatial data and easily combine it with business data to predict business outcomes, automate new business processes, and deliver vivid visualizations to uncover relationships so that your developers and architects can now support your business transformation goals at the pace your business needs.
Summary
SAP HANA spatial services runs in the cloud on powerful infrastructure managed by SAP that helps you intuitively access, mashup, and process different geo-referenced data. It also allows you to use the results via standard APIs so that you can use geospatial-information together with business data inside your applications and analytic solutions. It is available in all major public clouds – Amazon Web Services, Google Cloud, and Azure.

Objectives
• Enrich business data with spatial data to give it context
• Lower the level of investment and expertise needed to leverage geo-referenced data
• Leverage state-of-the-art infrastructure and SAP’s business and technical expertise

Solution
• Intuitive cloud-based solution to access, mashup, and process different geo-referenced data - including raster and vector data
• Ready-to-use spatial services accessible via REST APIs, visualization application, and modeling tool to create custom logic
• Services’ data output can be easily processed through SAP HANA together with business data

Benefits
• Plan, act and react with real-time spatial intelligence
• Create location-aware business applications faster
• Adopt advanced spatial capabilities without barriers

Learn more
To find out more, call your SAP representative today or visit us online at www.sap.com.