
Empowering Operations with Geographical Intelligence

Integrated grid asset & work management

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Empowering Operations with Geographical Intelligence

Agenda

Introducing Atos

Geo Integrated Asset & Work Management

Case History

Innovation – Q/A

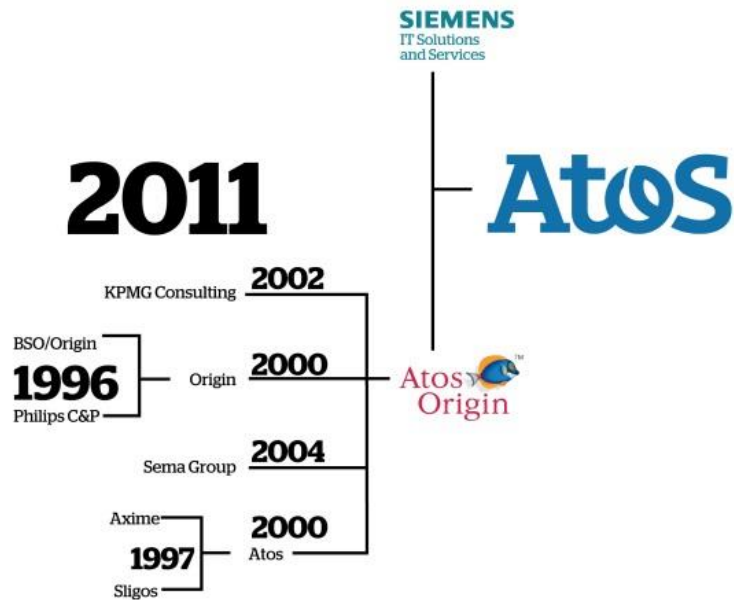


Introducing Atos

Our Heritage

"We are technologists with business and industry expertise"

- ▶ Our strong European heritage gives us the understanding and the flexibility to adapt easily to our clients' culture and way of working wherever they are in the world.
- ▶ Everything we do (advising, designing, implementing, integrating, coordinating and managing) we do with a unique talent for technology and a deep understanding of our clients' business.
- ▶ We orchestrate successful business ecosystems that add value to our clients.



Introducing Atos

Markets & Figures

€ 8.6 billion
Revenues in 2013

76,300
business technologists

52
countries

**Manufacturing,
Retail &
Services**



**Public Sector,
Healthcare
& Transport**



Consulting and Professional Services

Systems Integration

Managed Services



**Financial
Services**



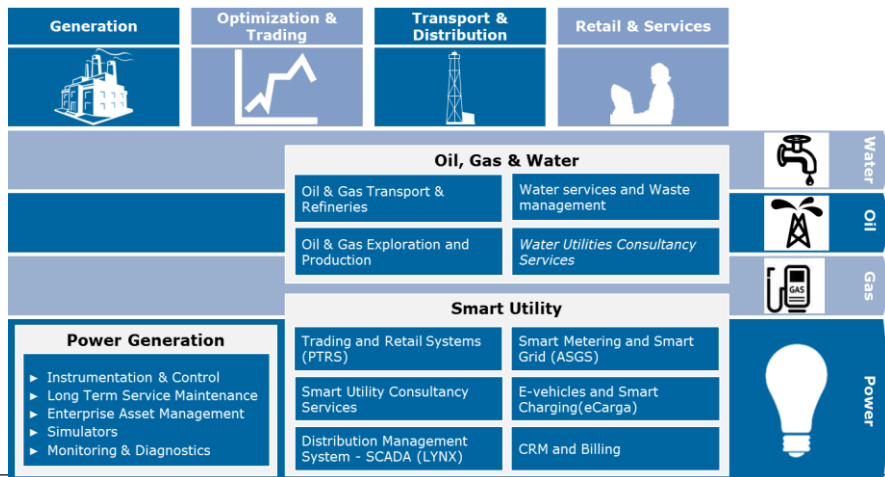
**Telecom,
Media &
Utilities**



Introducing Atos

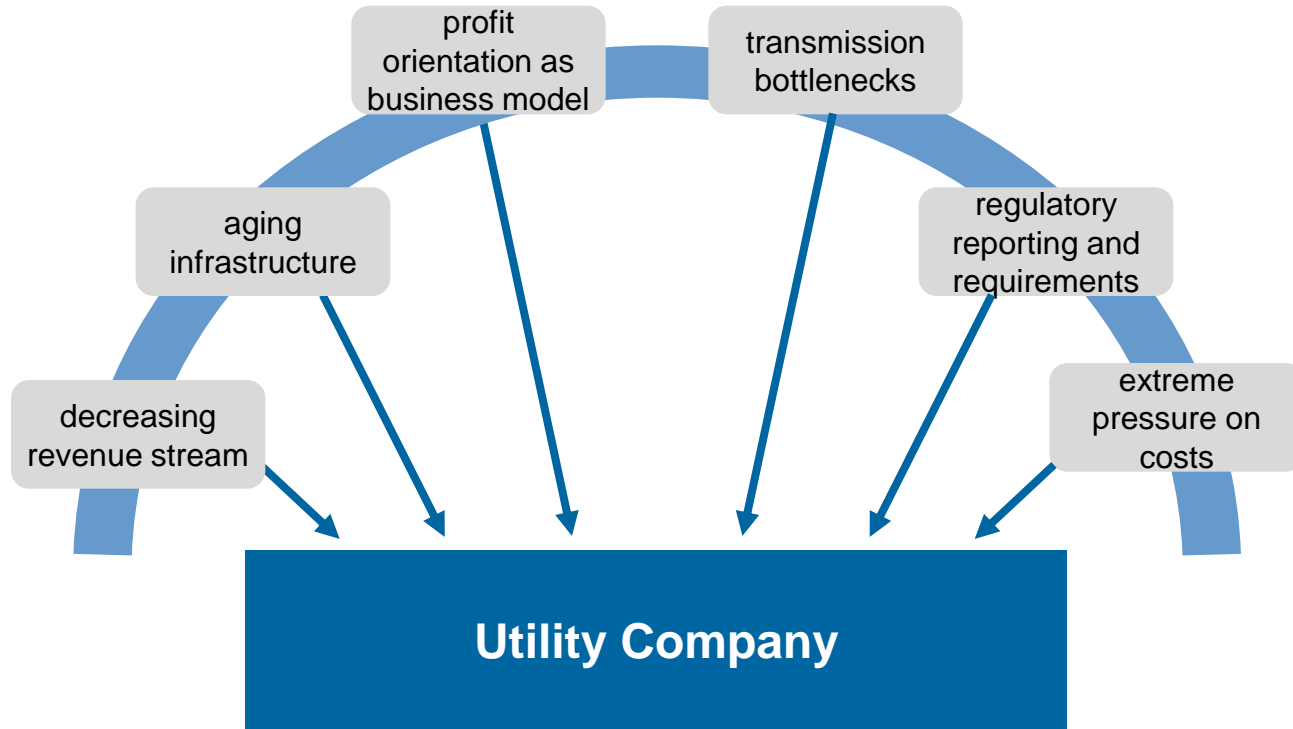
Adding Value to E&U: Atos Worldgrid

- ▶ **Atos Worldgrid** is the "Global Solution" of Atos Group for the **Energy & Utility** companies across the value chain, from production, transportation, distribution, in the energy, water, gas and oil industries
- ▶ **Atos Worldgrid** is the center of excellence for the Energy & Utilities market, with more than **1,600 professionals**, **>400** operating in **Italy**, more than 30 years of experience in more than 15 countries in the world.



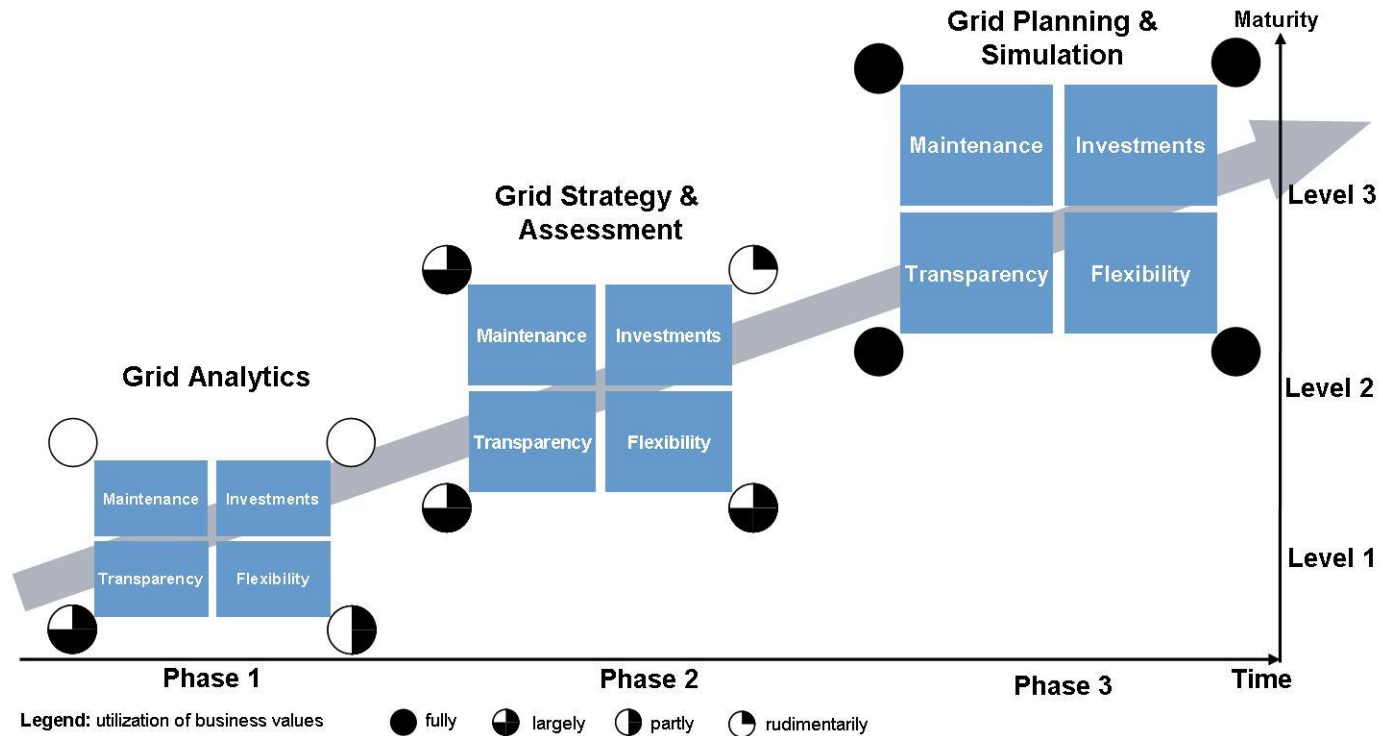
Integrated Asset & Work Management

Challenges for the Utility Industry



Integrated Asset & Work Management

Strategic Grid Management: Maturity Level Roadmap



Integrated Asset & Work Management

The central Role of GIS for empowering E&U Operations

► Reduce the risks of failure and accident

- Increase staff and equipment safety
- Avoid equipment damage

► Reduce maintenance costs

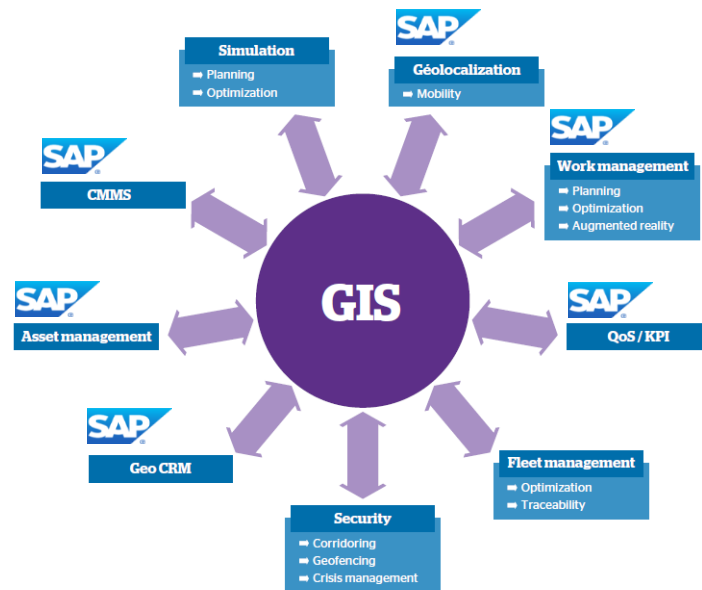
- Improve knowledge of the grid/asset behavior
- Increase inspection effectiveness

► Reduce outages and MTTR

- Improve knowledge of the grid/asset history
- Improve crew dispatching and work managing
- Improve quality of service

► Increase asset and plant productivity

- Increase asset lifetime
- Increase asset reliability and availability



"Energy and utility companies have the most extreme and complex geographic asset distribution of any sector - not surprisingly, GIS becomes a cornerstone of operational excellence."

Hera Case History

A leading Italian Multi-Utility



8.500



Established in 2002 from the merger of eleven public utility companies in the Italian Region Emilia-Romagna, Hera Group has been continuing its territorial growth over the years providing public services in over **280 Municipalities in 5 Regions**

Vendite 2013 (mln €)

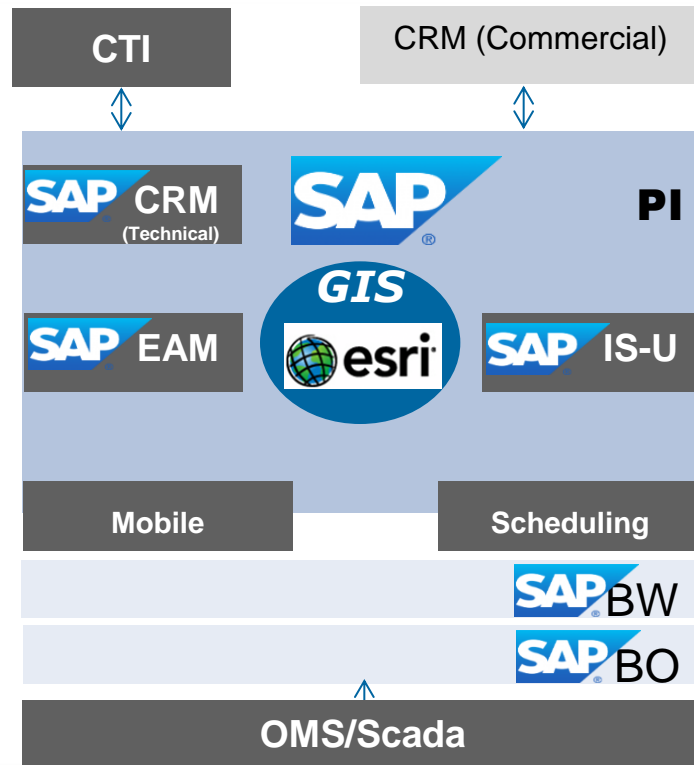


Hera Case History

A comprehensive program targeted towards operational excellence

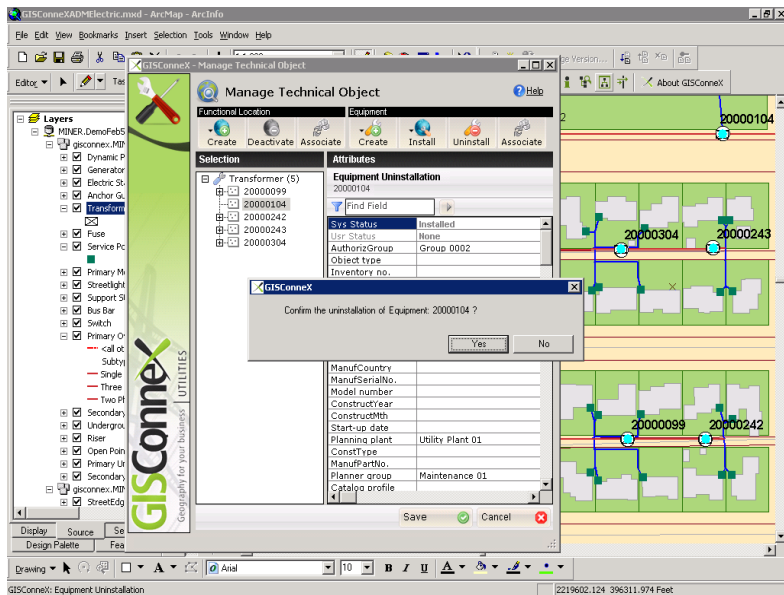
Starting from years ago, **Hera** managed to pursue a set of initiatives in the frame of a **comprehensive program** targeted towards operational excellence:

- ▶ GIS as efficiency enabler in a multi-service network management
 - Allowing a holistic vision of networks & plants
- ▶ GIS acts in all business key processes allowing a smooth integration with the operational systems:
 - Asset Management
 - Work Management
 - Mobile Work Management
 - Outage/Emergency/Trouble Call Center



Hera Case History

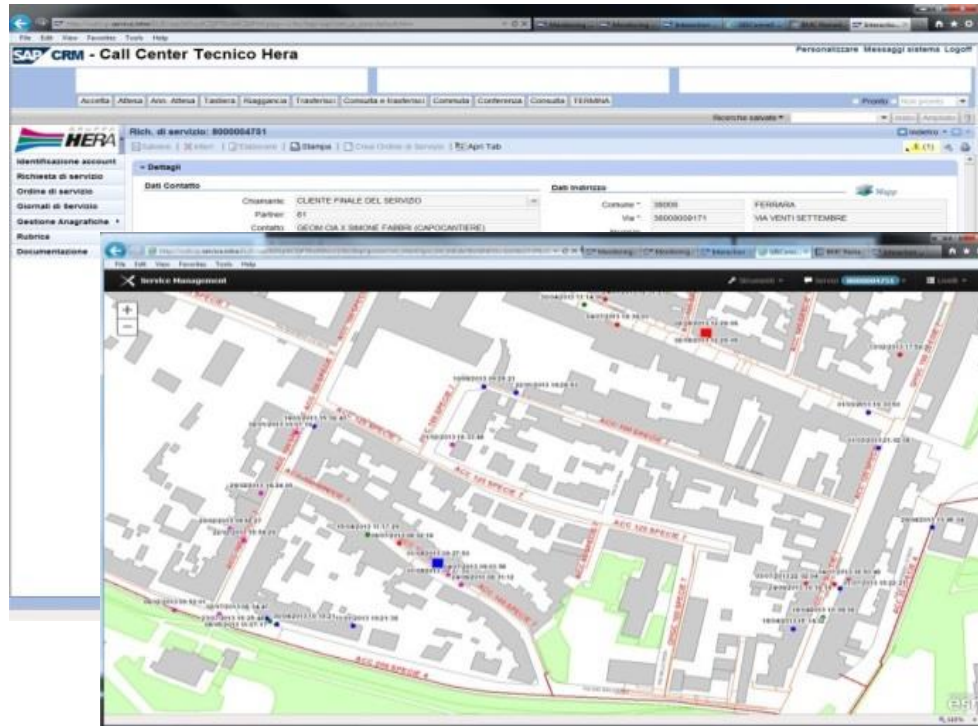
Geo-Integrated Asset Management



- ▶ **Common data model** for both GIS and SAP
- ▶ **Native integration** of ESRI ArcGIS with SAP PM through SAP PI
- ▶ **Managing** the process of network data **within the GIS** and their **transfer to SAP** in near-real-time
- ▶ **Minimal data redundancy** (keys and a subset of mirrored attributes)
- ▶ **Automatic alignment** between GIS and EAM for preserving data consistency
- ▶ **Extended** asset management functionalities using location intelligence
- ▶ **Direct access to** asset data from the GIS and SAP GUIs

Hera Case History

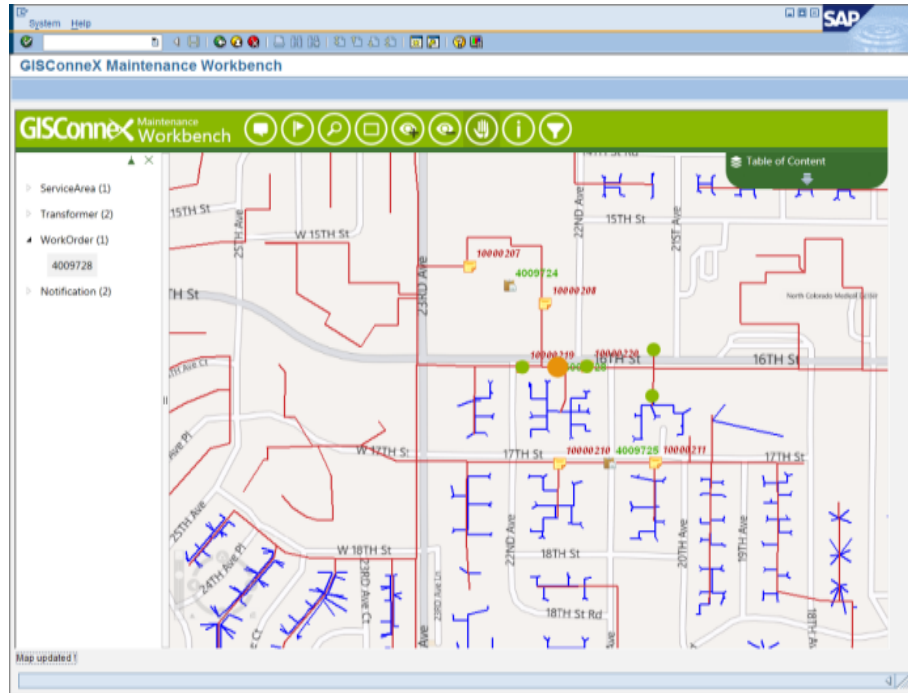
Geo Integrated Trouble Call Center



- ▶ Integrated multi-business management of **Trouble Call Center** for Emergency Management
- ▶ **Integrated SAP-CRM GUI** including map visualization; immediate geo-enabling of service calls and work order; live analysis of the local situation
- ▶ **Integration** with CT for caller identification through phone number, as well as with SCADA alarms
- ▶ **Mapping application** to locate and update service requests, maintenance notifications and work orders
- ▶ **Dynamic linkage** of SRs and WOs to the involved assets for the ex-post geospatial analysis
- ▶ **Compliance** with Authority regulations and service levels

Hera Case History

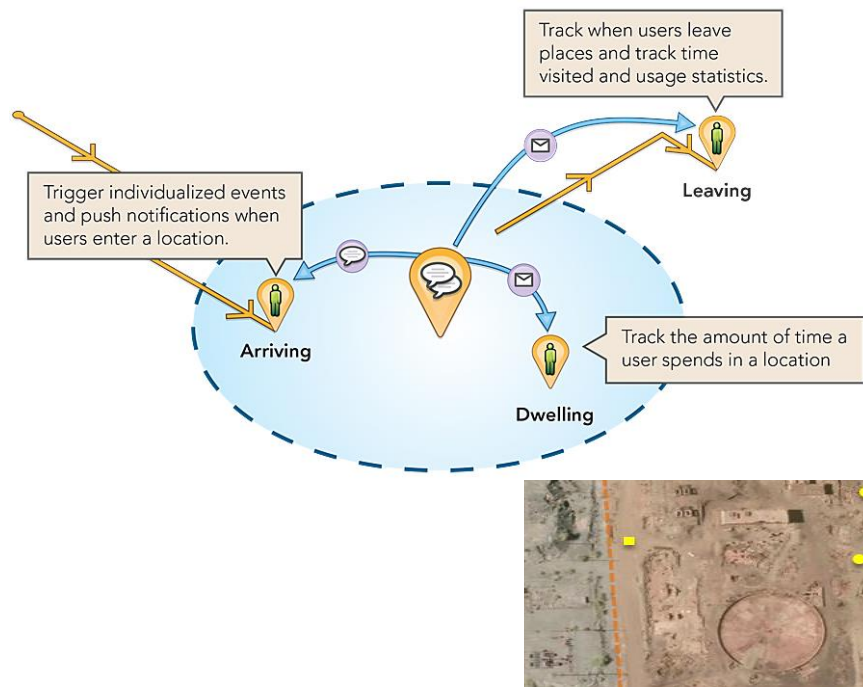
Geo-Integrated Work Management



- ▶ **Integrated multi-business** Work Management with GIS for geo-referencing of SAP Notifications and Work Orders
- ▶ **Native integration** of ESRI ArcGIS with SAP
- ▶ **Immediate geo-enabling** of notifications and work orders and analysis of live situation on the territory using one single integrated and geo-enabled GUI within SAP
- ▶ **Automatic geo-integration chain** for (calls-) notifications-work orders-assets for an integrated and geo-enabled treatment
- ▶ **Web GIS publishing** and geospatial ex-post maintenance analysis

Innovation: What's New in GIS?

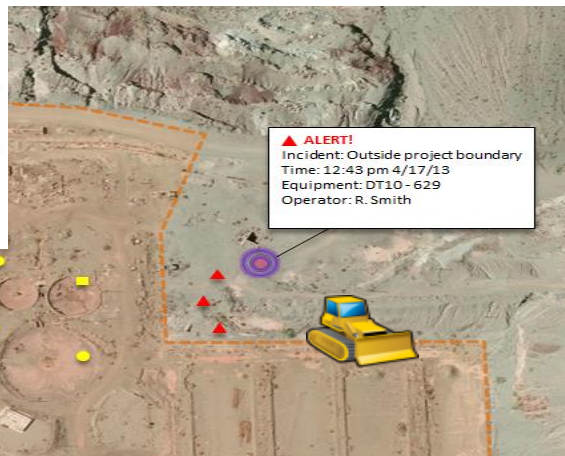
Shaping the future GIS as a window on a new “cyborg anthropology”



A **geofence** is a virtual perimeter representing a geographical area of the real world

A **geotrigger** is an action performed when entering or leaving a geofence

Such information can be made available on both central control room and mobile devices

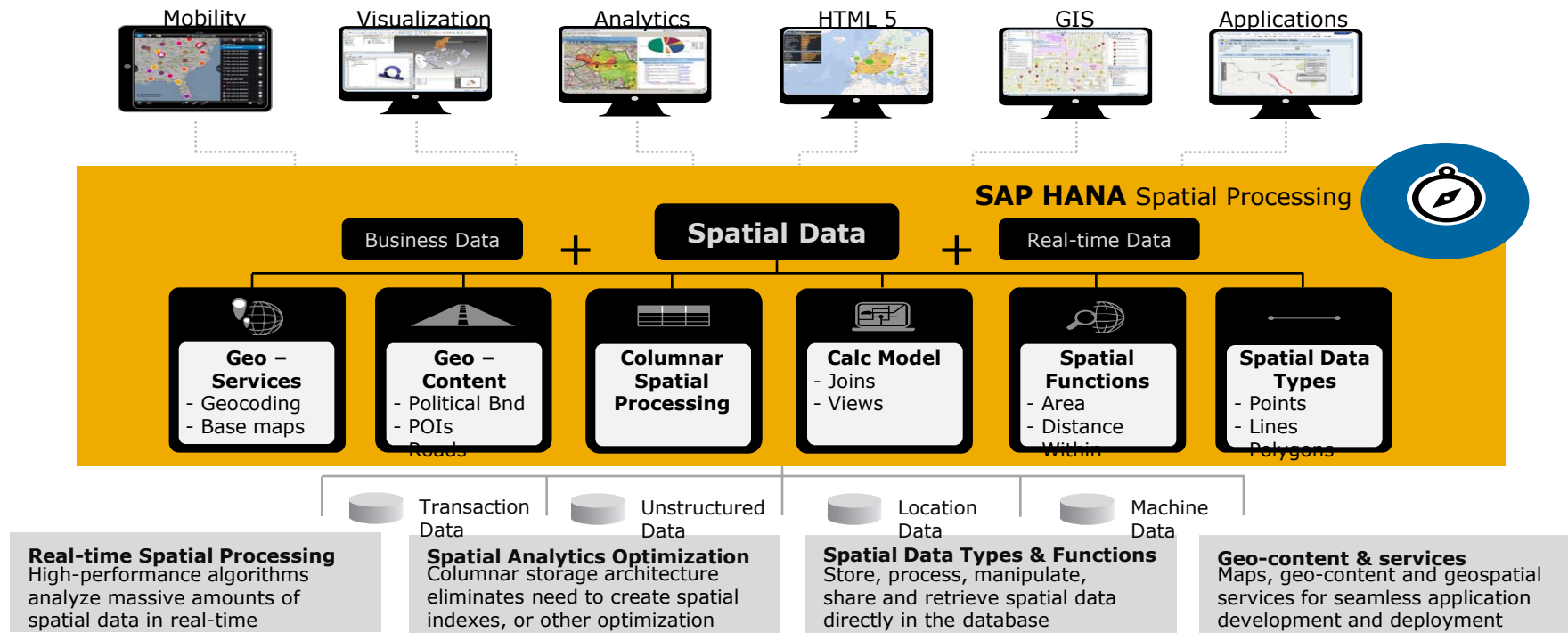


Cyborg Anthropology takes the view that most of modern human life is a product of both human and non-human objects.



Innovation: Spatial Processing with SAP HANA

Gain advantage by uncovering new insights with native spatial processing



Innovation

Esri Query Layer Support for SAP HANA

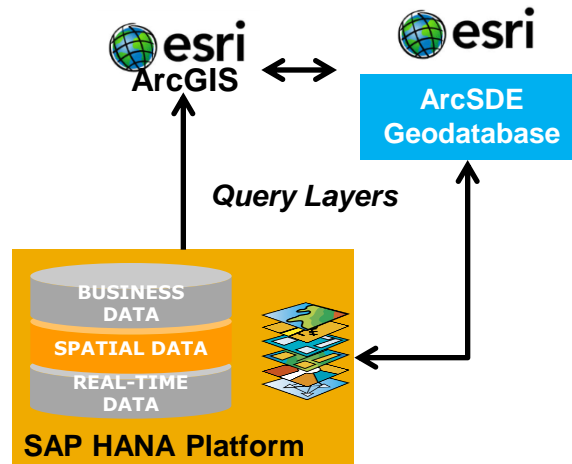
Combining the power of the Esri ArcGIS suite with the native spatial processing from SAP HANA for high-performing location analytic capabilities (available with SAP HANA SPS 08 and Esri ArcGIS 10.3)

Query Layer Support for SAP HANA

- ▶ Seamlessly connect Esri ArcGIS directly to SAP HANA
- ▶ Provides direct, read-only access to spatial and non-spatial data & functions in SAP HANA
- ▶ Allows spatial & non-spatial data to be stored and processed in SAP HANA and easily accessed with Esri ArcGIS front-end tools
- ▶ GIS analysts now have direct access to enterprise data in the high-performing SAP HANA platform

Benefits

- ▶ Simplified and direct method to connect and process layers within SAP HANA from Esri ArcGIS tools
- ▶ High-performing, real-time, and powerful analysis by pushing complex spatial & non-spatial analytic processing into the SAP HANA platform
- ▶ Lower maintenance and TCO by reduced data movement – only retrieve the processed and filtered layer results from SAP HANA
- ▶ Integrated access to enterprise spatial & non-spatial data in SAP HANA from Esri ArcGIS front-end tools for the GIS analyst



Example above depicts SAP HANA in an analytic 'side-car' architecture deployment to an existing Esri ArcSDE Geodatabase (where maps are created, edited, and published). SAP HANA provides the platform for high-performing location analytics on enterprise spatial and non-spatial data

Thank you

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