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Deloitte Analytics

Intelligent Information Hub

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The growing world of data

Data has undoubtedly become the fuel for competitive advantage in the 21st century.

The capability to integrate data from different sources and application systems has emerged as a crucial means to leverage the available information assets.

The huge amount of data led to both big opportunities and challenges, therefore those companies who want to exploit it to succeed will face some business issues:

- Different data sources, running on disparate platforms and supporting several business processes;

- High level of data redundancy causes inefficiencies, due to the insufficient integration and consistency across repositories;

- Missing a single trusted source of truth to meet real-time operational reporting needs;

- Absence of standardized data storage and data access protocols, which creates performance issues, increases Operation and Maintenance costs, negatively affecting the time to deliver of new features required to meet business needs.

Organizations are facing the problem of managing their growing big data sets, such as ERP, e-commerce systems, log files, sensor data, social media and more, which are driving to new implementation approaches of large scale systems.

A correct data integration process is essential to create operational efficiency, improving the capability to describe and analyze all business concepts. It also consolidates information and reporting from various systems and helps enabling data governance.

Why Information Hub

Data Driven strategy need an efficient and unified approach from the companies in order to integrate and distribute information across the organization:

The Information Hub key capabilities are:

- *Data Consolidation*
  Organizations can consolidate operational data as well as departmental data silos into a single and extensible repository that removes useless redundancies and administration overheads;

- *Data Quality*
  It allows real-time data quality checks on input sources, ensuring the data propagation;

- *Data Integration*
  It centrally integrates different system interfaces to obtain a corporate view on data;

- *Data Governance*
  It is designed to store ALL data, which could be public data, personal data or even regulated data. Roles and access permissions have to be defined and centrally managed.

- *Master Data*
  Mastership of Client and Product data through MDM.
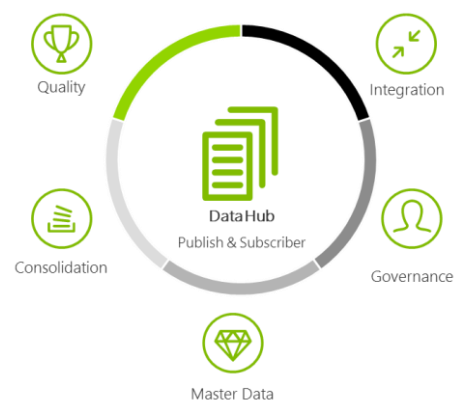
Business doesn't need to extract data from one system, transform it into the required format and then load it into another system for analysis or other business purposes: analytics and data mining tools are

Information Hub Architecture

An Information Hub applies the hub-and-spoke approach to data integration, with data physically acquired, verified and then sent to a different system. Similarly to Data Lakes, data are ingested as much as possible close to the raw form without enforcing any restrictive schema, with the Information Hub adding discovery, indexing and analytics capabilities.

From an architectural point of view, the core features of Information Hubs are the following:

- *Publish-Subscribe paradigm*
  It coordinates the pushing and pulling of data by recognizing when a publisher is ready to publish and informing a subscriber when data is available; The publishing approach tends to promote only really useful data instead of the "take all" approach of traditional data lakes;

- *Integrated MDM*
  It manages the master data that is stored in the database and keeps it synchronized with the transactional systems that use those data;

- *Message Hub*
  In addition to batch data movement, Information Hub also manages the integration of data that is contained in real time (or near-real time) messages flowing through any kind of middleware;

- *Flexible Persistence Layer*
  Published data can be retained either until all the consuming applications have received it, or its retention period has expired, or even for long-term storage.

Information Hubs must also have support for moving data between cloud and on-premises systems seamlessly, also integrating with a broad set of SaaS sources and targets, including Salesforce, Microsoft Azure, AWS, NetSuite, Workday and others. This flexible hybrid architecture boosts data agility in terms of productivity and manageability.

Information Hub Architectures are designed to guarantee decoupling source and target systems depending on exchange mode (full vs delta), interfaces, and refresh frequencies.

Intelligent Information Hub

Information hubs are increasingly empowering any user to become a data scientist and leverage the true power of data intelligence in the fastest, easiest, affordable, scalable

and most natural way, thereby delivering data democracy in any organization.

Deloitte vision focuses on the use of an Information Hub without constraints in size of data and the ability to run massively parallel analytics, to unlock value from unstructured, semi-structured and structured data to build end-to-end IoT, fraud detection, financial alerts, or other analytics solutions.
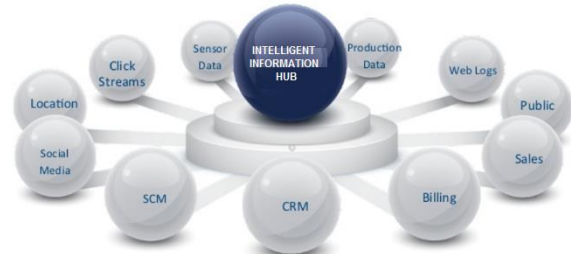
We help Clients integrating large amounts of data sources, also enabling them to run data transformation and processing programs in R, Python, U-SQL and other tools over petabytes of data, in order to:

- Drive the most effective marketing and service communications through actionable insights;

- Capture and process large marketing audiences;

- Forecast risk over much larger datasets and improve the accuracy of predictions, in a cost-efficient way.

Deloitte Analytics and tools

Deloitte Analytics has gained a deep knowledge of the main tools and platforms for data management and data integration and established effective partnerships with vendors.

Deloitte Analytics has also developed a strong experience with the main advanced analytics tools and platforms:

Why Deloitte Analytics

Like other companies, we can help our clients to capture, manage and analyze internal and external data.

But only *Deloitte Analytics* has the deep industry expertise, advanced analytics capability, and understanding of decision-makers' roles to maximize its value – turning everyday information into useful and actionable insights.

Deloitte Analytics can help clients addressing complex business issues that can be defined by business outcomes and not just technology requirements

Additionally, Analytics can provide services and solutions tailored to the specific market segment your enterprise belongs to:

- **Financial Services**
- **Consumer & Industrial Products**
- **Energy & Resources**
- **Technology Media & Telecommunications**
- **Public Sector**

The Deloitte Difference:
Exceptional People and Powerful Assets

Deloitte helps our clients address these issues through the people and offerings of its Deloitte Analytics practice. Our national team of over 200 professionals has proven experience in structuring, managing, and delivering Enterprise Information Management strategies and implementation services. Through the collective experience of local practice and leveraging assets and best practices of our global WW Deloitte Analytics team, we have serve our customers with a broad array of toolkits, accelerators, models, leading-edge practices, diagnostics, and governance approaches to accelerate and improve the quality of EIM projects and ensure a focus on value creation.

For more information, please contact:

Alfredo Maria Garibaldi
Partner
Leader of Deloitte Analytics
✉ agaribaldi@deloitte.it
in https://www.linkedin.com/in/amgaribaldi

Alberto Ferrario
Director
Deloitte Analytics
✉ alferrario@deloitte.it
in https://www.linkedin.com/in/albertoferrario/

Daniele Bobba
Partner
Deloitte Analytics
✉ dbobba@deloitte.it
in https://it.linkedin.com/in/danielebobba

Marco Leani
Partner
Deloitte Analytics
✉ mleani@deloitte.it
in https://it.linkedin.com/in/mleani

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