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It is a no-brainer that the better connected and communicating the units of a business, the more competitive, agile and successful it is. Yet, when it comes to enterprise data integration, the value of connectivity often remains overlooked, leaving the immense potential of business records interconnectedness dormant.

(Not) Joining the Data Pieces of a Business Puzzle

Managing enterprise data properly is crucial for assembling the complete picture of a business puzzle. However, collecting, storing and retrieving data is many times done in a way that hinders their efficient use across the organization.

During the different stages of its development, a business needs to solve ever-changing challenges and, as a result, various systems are built on the go. The trouble with this is that these systems address each problem ad hoc. The vendor-specific solutions serve a short-term need while, in the long run, make the generated data incomprehensible to every other new system that is added.

Inevitably, more and more challenge-specific solutions are accumulated, the data integration of which becomes a challenge by itself. Scattered across different departments in a different format, data pieces are hard to manage and nearly impossible to extract useful information from. This makes the organization unaware of what it knows. Something more, data is locked in silos and knowledge storage, access and retrieval are impeded.

Agile Data Integration: Completing the Picture on an Abstract Level

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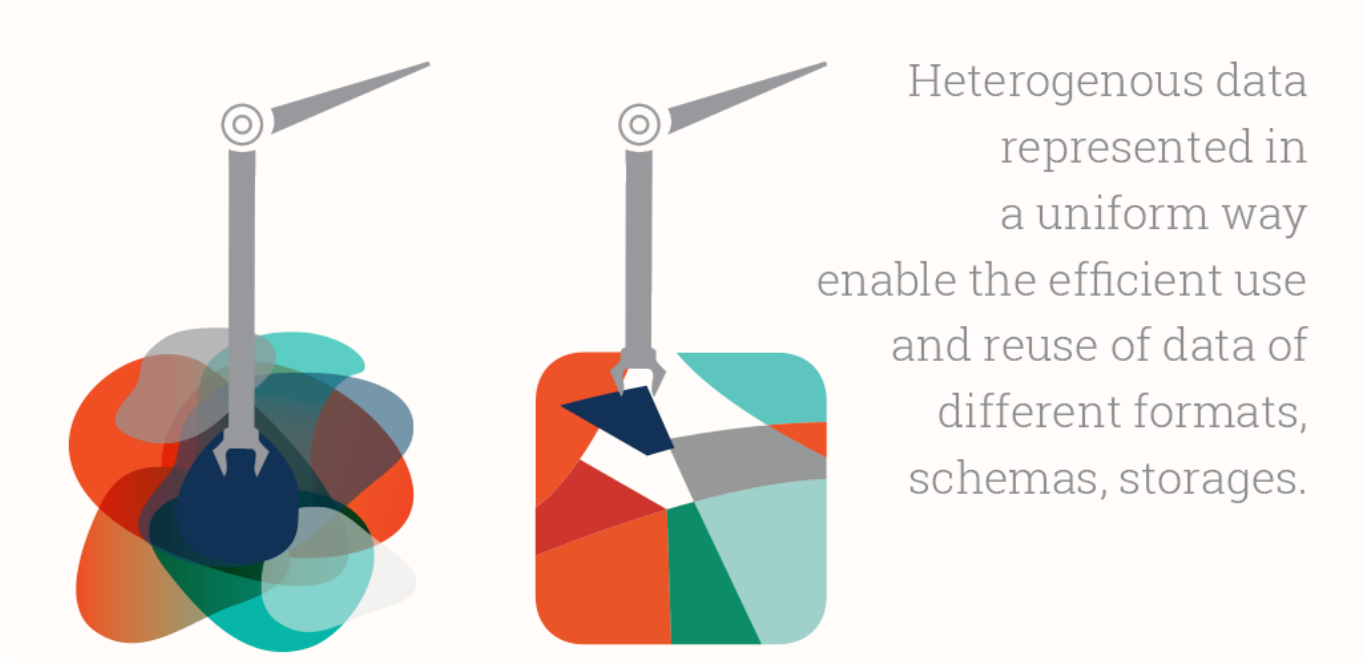

Attempting to gain a 360-degree view of a business using data in different formats and from disparate sources becomes very much like trying to assemble a jigsaw puzzle from various vendors – the picture to be completed is the same, yet pieces can't interlock as their formats are different.

Such a task might look daunting but only if the solution is sought within the task itself. Outside this challenge, lies a simple solution: representing each piece with a virtual standard format piece and using these universalized replicas to assemble the puzzle virtually.

In the case of business information (usually stored in different data formats), the solution is similar. Heterogenous data chunks are represented in a uniform way and made ready to be integrated and further used in countless combinations. This approach uses "a set of best practices for publishing and connecting structured data" called Linked Data.

Lean is Linked Data Spelled Wrong

> "… when you connect data together, you get power"

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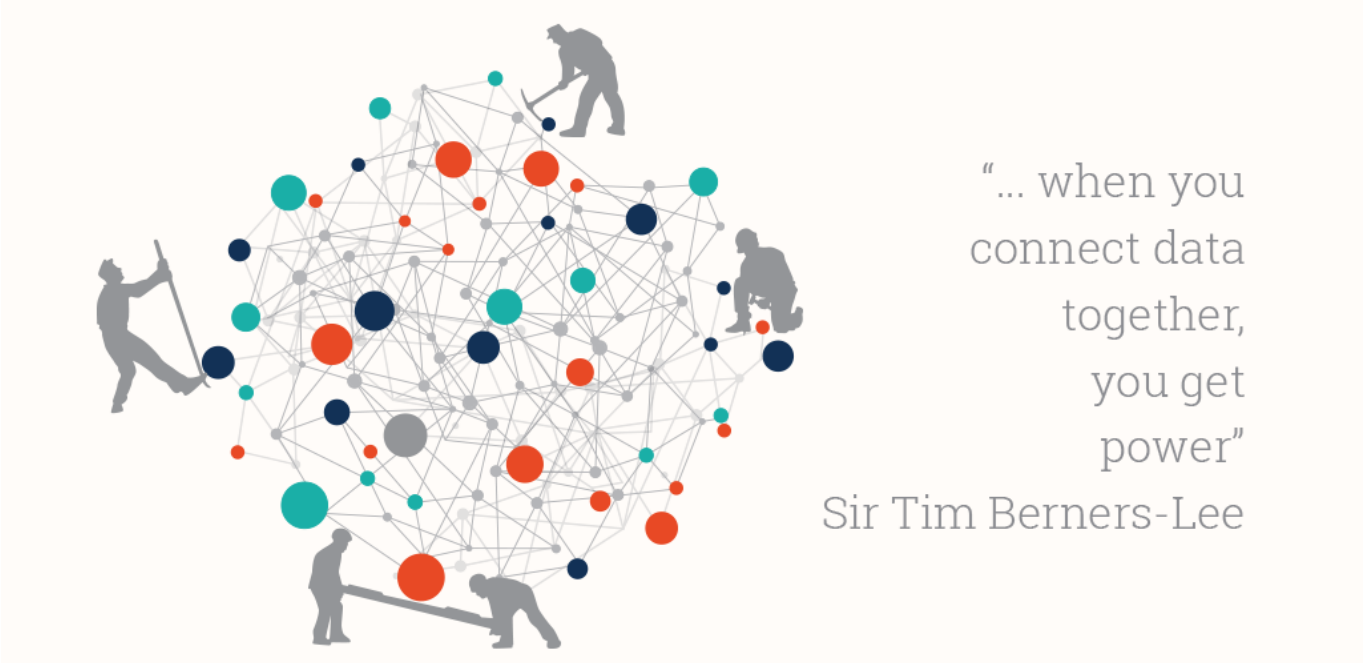
(cit. Tim Berners-Lee The next web)

Linked Data is a simple yet robust solution for consolidating data from disparate sources and in different formats. All technicalities aside, Linked Data principles are about representing and accessing data in a standard format.

On the Web, as a collection of interrelated datasets, Linked Data is used for integrating of and reasoning on data. For enterprise use, the standardized, vendor neutral-technologies behind Linked Data are powerful tools for enabling connectivity across databases and satisfying the growing need for integrated (read efficient) data management. Share on X

Linked Data principles hold the potential to combine enterprise data (from both internal and external data sources) into a coherent whole, addressing data integration without the need to replace existing systems. The integration is done by building a meta-layer of uniform data representation through which the datasets from the systems are joined and a single entry point is created for accessing, using and reusing data of different formats.



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Key Benefits of Representing Enterprise Data in a Standard Format

Linked Data for enterprise data integration opens up multiple perspectives on what a business “knows” and opens the doors for lean information management and robust business intelligence.

In practice, this means enabling the information to flow unobstructed across all enterprise departments: the CMS of the sales department easily exchanges data with the DAM of the marketing department and/or the ERP of the financial department.

Representing information with a standard data format provides interoperability not only within the organization but also outside it, when data is to be shared and/or integrated with other enterprises. Share on X

Representing data in a standard format makes for neatly classified, annotated and interlinked datasets that are easy to access, query and combine. Enhancing the information exchange across departments, well-organized enterprise data saves time and resources.

Data streams outside the enterprise also benefit immensely from a Linked Data approach. In the first place, standard format data are future-proofing enterprise data, making them ready to enter endless types of relationships with various data-fed agents such as applications, devices, platforms, search engines, etc.

Secondly, adding a meta-layer to enterprise siloed data (RDF-izing it, to use the data practitioners’ lingo) means tapping into the potential of enriching in-house data with readily available external data – both from public data sets and from proprietary ones.

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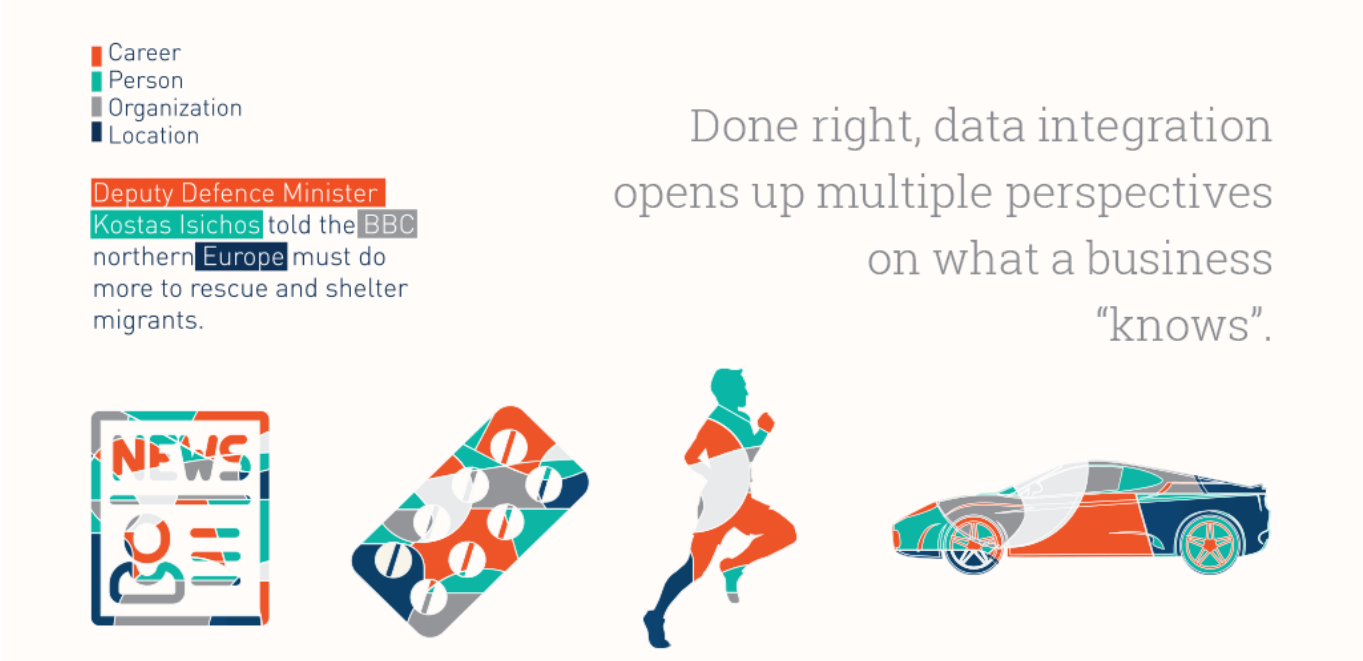

Looking at Enterprise Data from Many Possible Perspectives

As a case in point for using Linked Data principles for enterprise data integration, consider the following situation. A company's financial department "knows" (has records and expertise) that doing business in country A is cheaper than doing business in country B.

On the other hand, the marketing department "knows" (has acquired data) that the number of clients the company has in country A and country B are very high. Now, let's say the company management want to explore where to open a new office. For sure, having the integrated information from all the different departments at their fingertips will save them time and resources when it's time to choose.

What's more, their decision making can be enhanced even further if the data available is enriched with external data. In our imaginary situation, this is linking the internal data for countries A and B to a public dataset mapping, for example, the road infrastructure or to a proprietary dataset containing key information about office rentals.

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From Business Records to Actionable Insights

By and large, with Linked Data technologies data enrichment opportunities are limitless. Having all that unified, standardized and interlinked data augments your business records, letting you access them through various perspectives and turn the interconnected information into actionable insights to serve your organization's objectives.

The flexibility of representing enterprise data with a standard format makes a semantic layer on top of existing systems well worth considering. Allowing you to look at your data from many possible perspectives, Linked Data technologies set the stage for smarter and faster decision making, coherent understanding of business processes and needs, together with a holistic approach to recognizing opportunities or spotting bottlenecks.

Being able to access all your systems via a single entry point helps you get a comprehensive understanding of the context in and outside the enterprise, without the need for yet another costly, complex ad hoc solution. For in an environment, inundated by data, building an agile business is about recognizing the power of information interconnectedness and further using that understanding to integrate, interpret and ultimately make sense of data.

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