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> Knowledge is knowing that tomatoes are fruits; wisdom is knowing not to put them in fruit salads.

So said the late British columnist Miles Kington. What's knowledge and what's wisdom in the information age? How can we leverage information to create knowledge and then scale that knowledge up to the wisdom of smart decisions and actions?

Up to The Peak

The path to wisdom begins at the data campsite, winds up the mountain of information and knowledge and finally reaches the wisdom peak, which gives climbers a clear view of the area around them.

Going up the slope requires taking steps to turn data into information, information into knowledge, and knowledge into wisdom. In the information age, creating links between data, inferring new knowledge out of existing facts and applying predictive models and taking data-backed business decisions is crucial for organizations.

Linked Data and Semantic Technology help us do that by smoothly integrating heterogeneous data from various sources and applying universal standards for usage. Semantic technology, the semantic graph database (also known as RDF triplestore) in particular, is able to infer new relationships out of existing facts, giving context and meaning to the links from many disparate sources.

Having obtained that new knowledge, organizations gain a competitive advantage and support business decisions with facts, which their semantic graph database has revealed to them.

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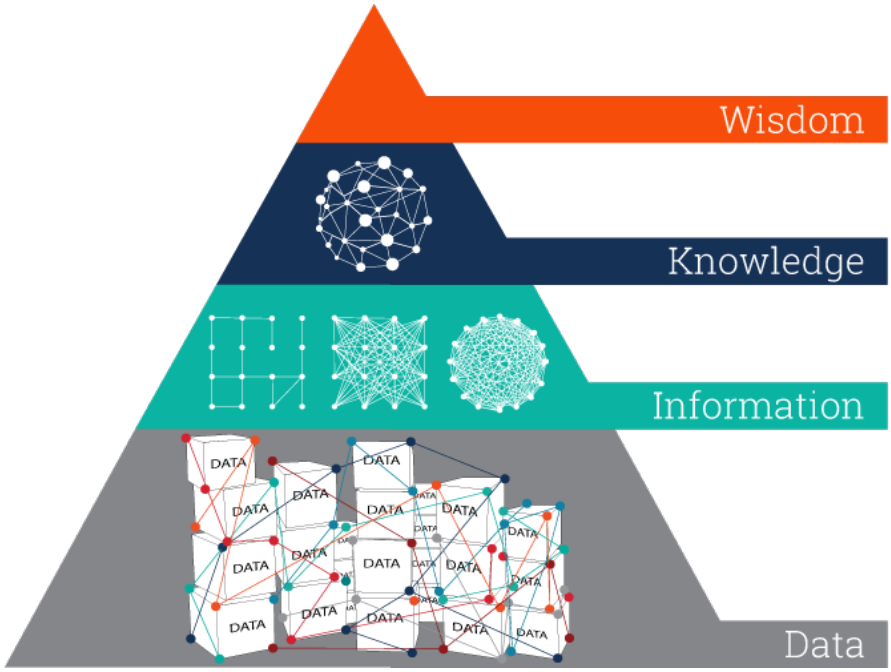

Now let's break the DIKW (Data, Information, Knowledge, Wisdom) hierarchy down to its building blocks and follow the scaling up to the wisdom peak step by step.

Data

Data is our base building block and the starting point of every wisdom value chain. Data represents the raw sources and resources, facts expressing the world around us in the form of words, numbers, signs and signals. Data loads and datasets are enormous and most disparate and unstructured. They are surely valuable, being the primary resource but what's more valuable is their analysis, processing and linking.

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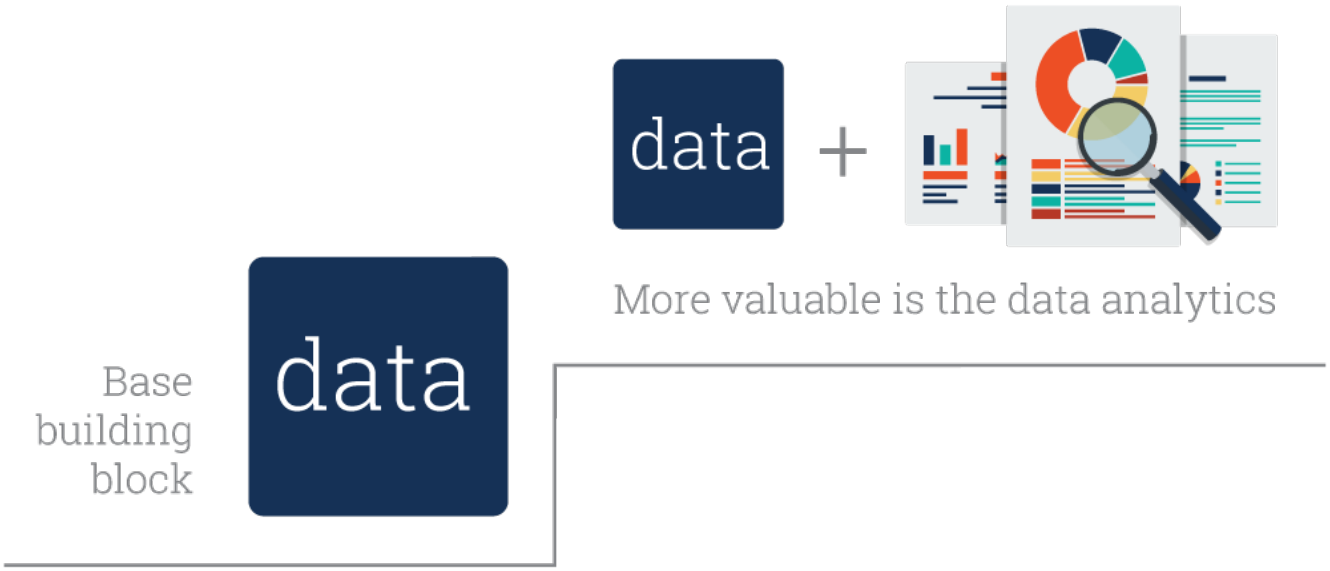

Information

That leads us to information: the processed and analyzed data that adds meaning to datasets. For example, enlisting Google's closing prices on the stock market in the past ten trading days is data. Drawing a chart to show the trend in Google's stock market price of the past ten days is information.

At this second building block of our pyramid, Linked Data helps organizations get a clearer picture of their data. This allows them to easily store, search and retrieve the information they need.

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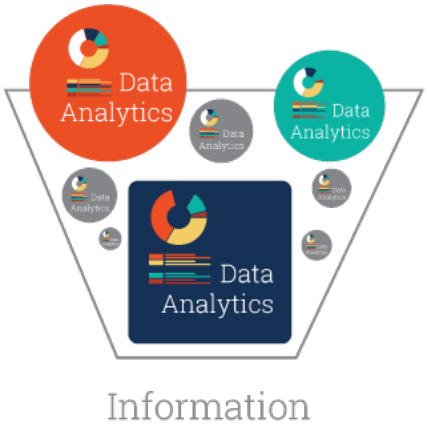

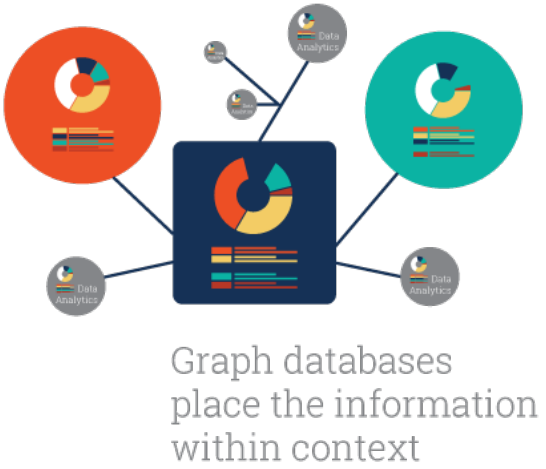

Knowledge

The storage and use of Linked Data and Linked Open Data (LOD) are being done in a graph database where inference is applied in order to create knowledge by revealing hidden relationships, which were not included in the original dataset.

For example, if the original dataset contains the statement ‘Flipper is a dolphin’ and an ontology defines the concept ‘every dolphin is also a mammal’, semantic technology ‘learns’ to make that connection which has been logical only to humans and thus discovers the relationship ‘Flipper is a mammal’, which was not in the original dataset.

Extracting knowledge moves us up the value chain of data and information. The organizations that gain new insights out of their datasets and out of Linked Open Data are a little further up the path towards the wisdom peak than enterprises that rely on just crunching the numbers.

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Wisdom

Once organizations have gained insights, they have more resources and options to make data-driven decisions and employ predictive models proactively. Here, we've reached the wisdom peak.

Whereas data and information are gathering and learning, a kind of look to the past, knowledge and wisdom are associated with 'doing now' and a look to the future. Share on X

Knowledge, in terms of Linked Data and Semantic Technology, is creating meaningful connections, which the competitors may not have. Wisdom is determining what outcome a decision based on that knowledge may have and what value it would add to the business.

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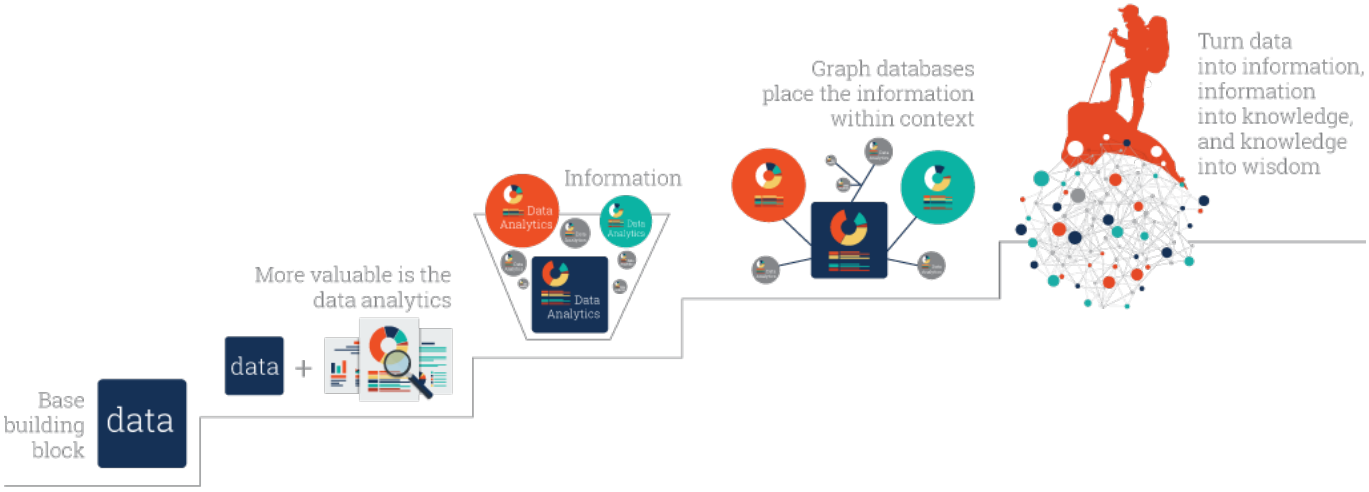

Wisdom for the Greater Good

Smart cities using and promoting Open Data are an example of wisdom for the greater good. Opening up city datasets boosts public services efficiency and increases transparency and citizen control. Giving users and developers the opportunity to work with Open Data creates new business models and spurs innovation, thus adding value to the knowledge economy.

For instance, Transport for London has released Open Data for developers to use in their own software and services. TfL is encouraging developers to use the feeds, and they have, creating hundreds of apps, including such as for Tube travel news updated every minute or personalized journey planning tools for public transport.

The New York City Fire Department uses a predictive analytics model to track which NYC buildings are at the highest risk of fire. The smart analytics model creates scores for buildings based on an algorithm of around 60 factors – including the age of a building, electrical issues, the number of sprinklers and the presence of elevators. Based on the score, the NYC Fire Department targets inspections to buildings with the highest risk of fire.

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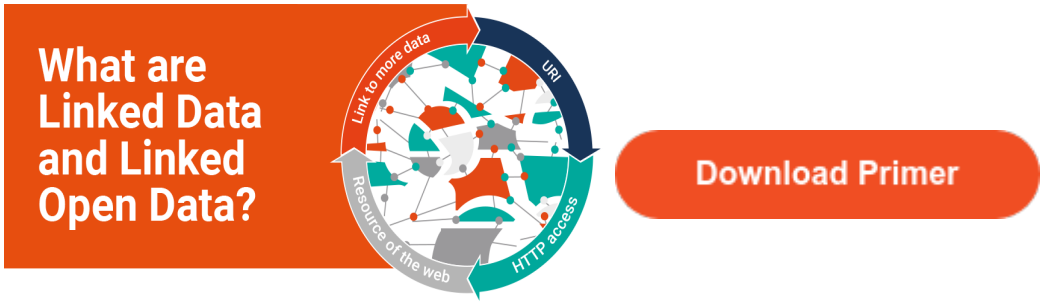
What is Best

To sum it up, we can say that data and information answer the questions of ‘who’, ‘what’, ‘when’ and ‘where’. As we go up the mountain of wisdom, context and understanding increase. Knowledge holds the answer to the ‘why’ question, while wisdom is about ‘how to’, ‘what comes next’ and ‘what is best’.

So, you’ve learned that tomato is a type of fruit because of its characteristics of a plant but you predict it will not go well with bananas and apples in a fruit salad.

Applied to business in the information age, the analogy goes like this: We’ve had the facts, we’ve crunched the numbers, we’ve created links and inferred new knowledge and, therefore, we have a vision for an action that will be advantageous for the future.



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