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In an environment of data-driven everything, there is a resource waiting to be tapped into and this is the resource of Open Data.

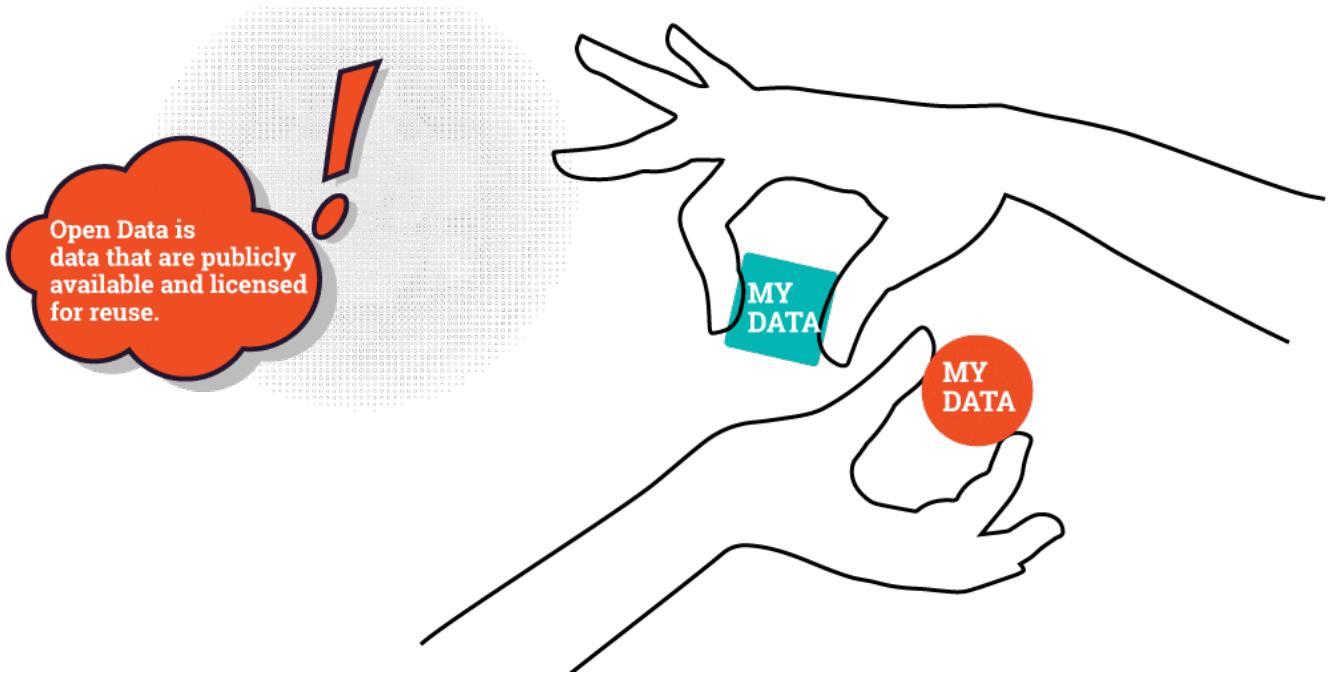
Open Data has the potential to be part of smart solutions to data problems, thriving collaborations between organizations, and innovative products and services.

But what exactly are Open Data and why are they so promising?

Open Data: Data with a Mission

By definition, Open Data are data published on the Web to be freely used, reused and redistributed.

As Joel Gurin writes in his book Open Data Now, Open Data are data with a mission. These data, designed to provide free, open, transparent data are poised to change the way we live and work.



Publicly available for everyone to access and tap into their potential, Open Data are not open only because of their free availability. What matters is also the convenient form in which they

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have been published for open access. Putting data online in a format that can be easily read and manipulated by computers allows the real potential of Open Data to unfold.

Why is Open Data Such an Exciting Opportunity?

The premise of Open Data is simple:

> If groups make information they hold available for everyone, it can be used for all sorts of things by all sorts of people. Whether it's about government spending, new scientific research or even the 'danceability' of tracks for your next house party playlist.
>
> Cit. What is 'open data' and why should we care?

Being accessible to the public, Open Data have the potential to empower people, organizations and businesses alike. Especially when they try to solve complex problems, building bridges between domains and creating innovative products and services.

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The fact that huge datasets are becoming public comes with many benefits (and challenges), which are worth considering when trying to stay in the vanguard of digital change:

The Benefits of 5-star Open Data At a Glance

As a consumer, you can:

✔ You can look at it.

✔ You can print it.

✔ You can store it locally (on your hard drive or on a USB stick).

✔ You can enter the data into any other system.

✔ You can change the data as you wish.

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✔ You can share the data with anyone you like.

As a publisher:

✔ You make your data discoverable.

✔ You increase the value of your data.

✔ Your own organisation will gain the same benefits from the links as the consumers.

The list above was originally published at http://5stardata.info/en/ and pertains to 5-star Open Data.

Learn more about Linked Open Data in our fundamental: What are Linked Data and Linked Open Data?

Why are Open Data Important for Businesses?

The ODI

With more and more information about businesses, the population, and government becoming visible, accessible, and usable, the opportunities for the private sector are innumerable.

Open Data have become a key tool for driving real change across enterprise behavior and operations. Share on X

Companies worldwide use Open Data as a resource to fuel their businesses and to create entirely new solutions in serving their customers. Businesses from all sectors of the economy such as healthcare, education, transportation, energy and finance are successfully leveraging public datasets with weather, agriculture, housing and real estate data, to mention just a few.

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Two are the major ways a business can take advantage of Open Data: either as a publisher – by publishing data, or as a consumer – by using already published data. The Open Data Institute (ODI), Co-founded by Sir Tim Berners-Lee and Sir Nigel Shadbolt, provides anyone interested in the whys and hows of opening private sector data with a detailed write-up in How to make a business case for Open Data.

Let's take a moment and look at Open Data from the perspective of Artificial Intelligence and the publishing industry.

AI and Open Data

In his book *Designing Agentive Technology: AI That Works for People*, Christopher Noessel

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describes how the advances in narrow Artificial Intelligence make it possible for machines acting on our behalf to do things directly for us. For example, he talks about a thermostat being able to lower the temperature in the room or a system that can alert us when a certain word on the Web has been mentioned.

Peaking into such a (not so distant) future from the perspective of Open Data, it is obvious that publicly available data of all kinds will impact the quality of the experience AI technologies would be able to bring. Come to think of it, such agentive technologies will be fed with data that would serve as a basis for their behavior or the mechanisms that regulate it. And very likely, AI technologies will not rely on internal data only. As they are increasingly becoming part of greater ecosystems, they would need more and more context in order to function the way we expect them to.

This is where Open Data come in to help us better build these ecosystems and use the advantage of connections. Without data, Open Data even more so, AI would never reach its full potential. As ODI people explain:

> At the ODI, we believe that fostering AI innovation requires an open approach that includes open data, open source code and open culture. This is essential because algorithms in autonomous and machine learning systems need large quantities of high-quality data to perform well. We must focus on making data openly available where possible, and in formats that are machine-readable.

Cit. Using artificial intelligence and open data for innovation and accountability.

Publishing and Open Data

Another example of businesses using Open Data to drive innovation and increase the quality of the services provided to their customer base is Springer Nature**.**

What Springer did was to create a rich database for scientists to work together, enriching its existing super valuable content with Open Data (more precisely with Linked Open Data, proudly powered by Ontotext's GraphDB). Thanks to SN SciGraph, the company entered the

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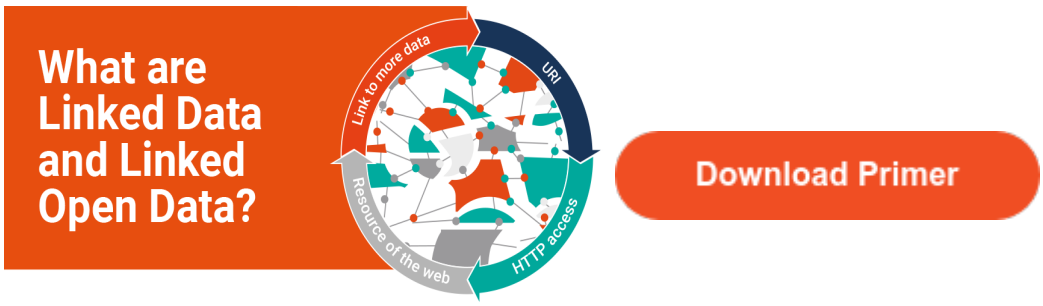
vanguard of Linked Open Data providers, assuming a leading role among Open Data publishers and open research supporters.

SN SciGraph is a great example of how existing data in an organization can benefit immensely from adding the “knowledge” from so many available LOD sets to their corporate data.

Not That There Aren’t Any Challenges…

Although the supply of Open Data is big enough, there are still challenges that need to be taken into account when considering an Open Data driven strategy.

Like any public resource, Open Data have to be managed, taken care of and invested in. Currently, as the AVUXI team wrote in their article *The problem with Open Data*, the issues with Open Data are related to heterogenous formats, availability of updates to the datasets, lack of standardized international comparison and lack of accuracy.

But even though Open Data pose some challenges and sometimes call for pushing the envelope, more and more businesses are taking advantage of the opportunities this resource offers to bring value, improve operations and generate economic, social and environmental impact.