THE DATA-DRIVEN ENTERPRISE

What flawed projects and pandemic disruption have in common

And what you can do to survive them both

▪MarkLogic®

Introduction

Just imagine for a second this unthinkable scenario: all barbershops are closed, your favorite restaurant is only taking orders online, and your children are at home being tutored through video conferencing.

In that bizarre, post-Apocalyptic lockdown scenario, someone in your company is spending their government-imposed isolation to craft yet another business case for some groundbreaking project. Let's call her Tanya.

Tanya is frantically meticulous when it comes to data-analyses, and her project calculations are famous for their accuracy. But this afternoon, she'll make that one mistake she's always feared that might wreck her reputation for good. While her daughter barges into her study, complaining all of her friends are allowed to play outside so she too should be granted that basic human right, Tanya is about to overlook a tiny detail in a nastily small disclaimer.

Small comfort as it may be to Tanya, it happens all the time, and for various reasons. Seemingly small details make for flawed business cases causing projects, mergers and growth strategies to deliver disappointing returns. Tanya's mistake though is only half the problem. Disaster becomes inevitable only after the business case is accepted and confirmed. And that happens when factchecking every case is an impossible task.

Use historical data to build on

The best way to tackle flaws and weaknesses in business cases and most economically advantageous tenders (MEAT) is undoubtedly by preventing them from slipping in. Data mining offers the possibility to simplify complex cases like these because they can be pre-filled with data from countless sources that have previously been used to compile such documents. In the traditional fact-finding process on which, the risk-analysis is based, there is enormous potential to accelerate this and improve the quality of the information collected. Everything that is known within the company about the parties and variables involved, from risk assessments to delivery conditions, can be used to complement or test new analyses. By incorporating external sources, owned

data can be enriched with just about any information source to provide even more context for further insights. This saves a lot of time that is currently spent on collecting sources and conducting interviews, resulting in a faster, smoother and more solid process.

As a result, validating a complex business case can also be substantially improved using the same technology. Business cases are stitched together from huge amounts of data, collected and stored in countless separate sources. Manually examining the underlying information is virtually impossible and hardly ever provides a trustworthy result. Fortunately, that process can be automated in a data hub, and provide new, valuable insights.
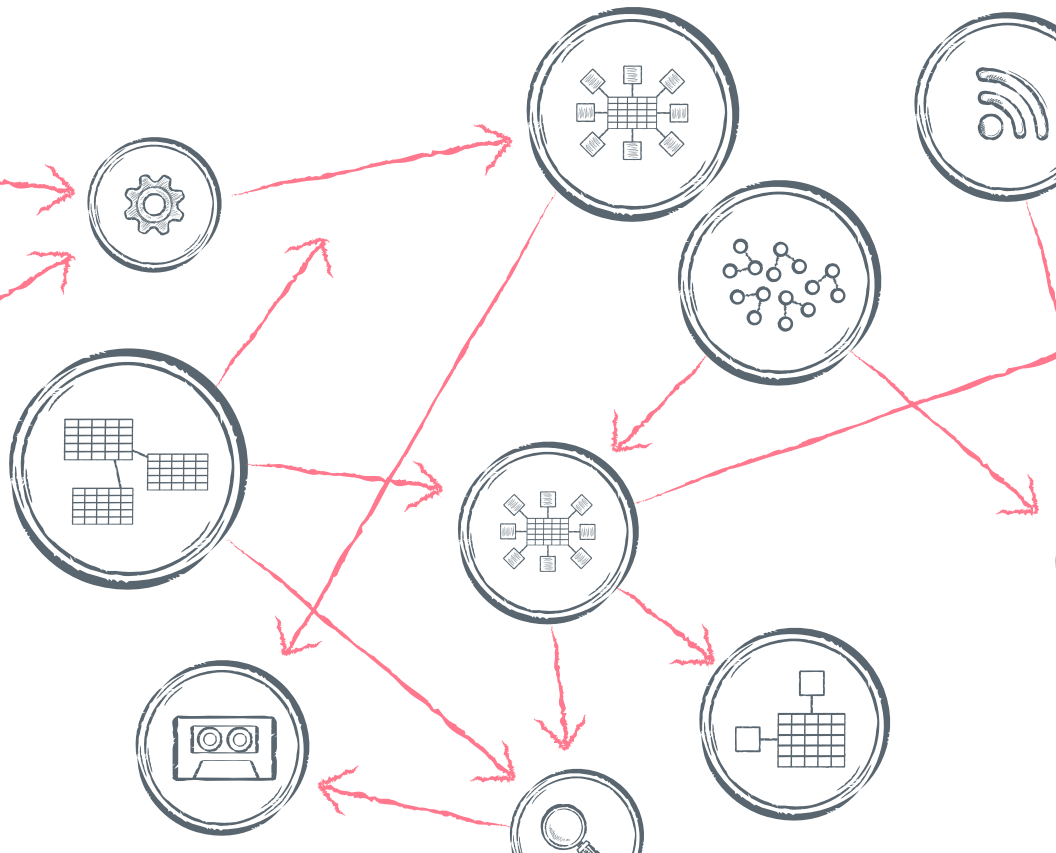
Realtime, automated analysis

The trick is to compare a new case, as it is being built, with all similar cases and their past results, in real time. In this way it is possible to compare apparently valid, promising calculations with actual returns in comparable situations. In practice, this does two things: questionable business cases will be adjusted or even discarded in the process, and the cases that do reach the finish line will end up painting a picture that is much more realistic and way closer to the final outcome.

It's probably good news to many boards in boardrooms around the world, that we have found a solid way to do all this – and have been practicing and perfecting it since one of our our first project in the wake of 9/11 for the U.S. It's the same solution that a growing number of the largest companies around the world are enthusiastically embracing to reduce lead-times, recalls and operational cost in general, achieve true operational excellence and increase health and safety for employees and customers. Something that is valuable in times (like now) where the entire world is searching for ways to keep the economy going without putting lives at risk. MarkLogic was founded to be an answer to the vast disruption of the world's largest terroristic attack and can be just as meaningful today in overcoming what is undoubtedly the most disrupting event ever since the last world war – the COVID-19 pandemic.
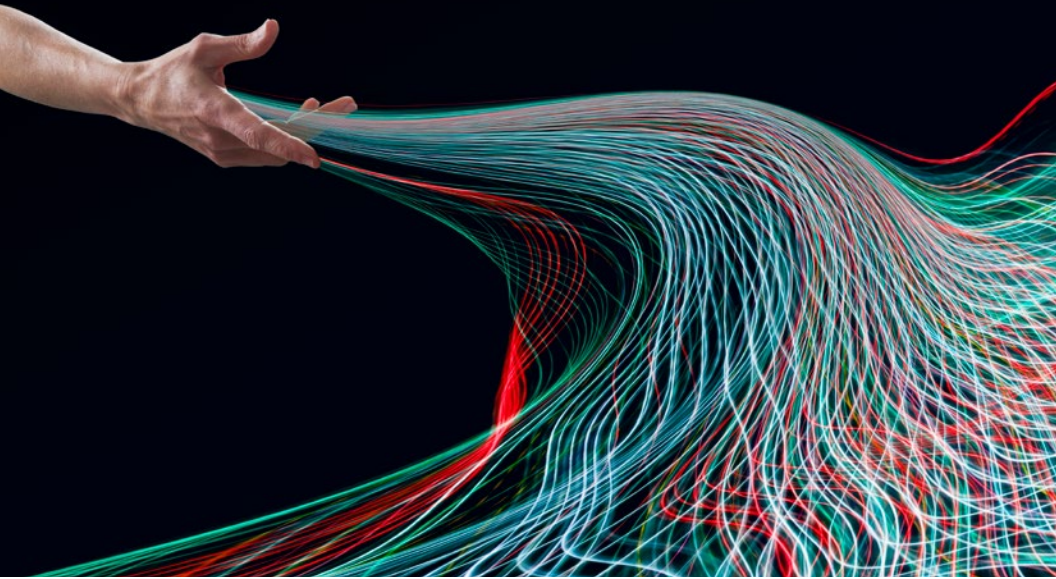
Disruption can also be a pandemic

These are unquestionably strange times. Alarming, one might say. While a serious pandemic threatens people's lives around the globe, only companies that have a digital product, and those who can produce their product largely digitally, have relatively little to fear. You won't find a better example of disruption than COVID-19. And this is what disruption does: it changes the economy. Organizations that can't adapt in a timely way, simply won't survive. Disruption in the form of a coronavirus is now forcing companies to evolve into a digital organization even faster than before. And the key to adaptation, is to own your data.

CASE STUDY

How Chevron tackled operational excellence

At Chevron, employee safety is a major thing. Extracting oil and gas from the ground and moving them thousands of miles to facilities where they are being converted into fuels and finished products is serious business, and many of the thousands of processes of which it is comprised, are not without risk to people.

To prevent them from harm the second largest oil company in the world uses Smart Mastering Strategy and Execution. What that means is that they basically know everything about any asset they have in the world. It designates all available and significant information about everything, collected from all their numerous processes and systems, whether it be the shape of a drill bit in Alaska, or the mileage on a crane cable in the port of Rotterdam. The value of bringing all these tiny pieces of information together cannot be overstated. It improves the effectiveness of every process, predicts maintenance and reduces risks to co-workers in the oilfields to an absolute minimum.

THE ROAD TO ZERO INCIDENTS
The advantages of such a 360-degree view are obvious, as well as very tangible. The company reached an all-time low for incidents in 2015, setting a record Days Away From Work-rate (DART) for employees and contractors at 0,018 per 200.000 work-hours. DART is designed to track any recordable workplace injury or illness that results in time away from work, restricted job roles, or an employee's permanent transfer to a new position. What that means is that Chevron is pretty much nearing its staggering company target of zero incidents.

APPROACH TO THE MAGICAL 360-DEGREE VIEW

So, if the advantages of a 360-degree view on anything are so clear, why don't we all implement it? The answer depends largely on who you ask. Since we're talking data here, the IT-guy is likely to answer first. The amount of data is unimaginable, structured in numerous different ways and locked away in far too many systems that all have their unique ways to handle that data. Silos, he may call them. He sees data as objects to handle, and the way to handle them is structuring, categorizing and filing. But the data-scientist will have a different view.

THE SCIENTIFIC WAY OF LOOKING AT DATA

The data-scientist distinguishes between transactional data and master data, the first representing events, and the second representing things that provide context for these events. For example, an event can be a shipment, and the things that describe this event can include anything from the time of arrival, the cargo content, the number of the offloading dock, and so on. Because all this information can come from a great variety of sources, a data-scientist will label them, rather than try to structure them to fit into one model. By applying meaningful relations between all sorts of labels that events and things can have, the scientist adds another layer to the data that will provide context

and logic for everything else that comes afterwards, like reports, charts, forecasts, predictions, prescriptions, and even to feed machine learning algorithms.

In short, the IT-guy will say it can't be done, while the data-scientist will ask when she can start. Chevron went with the scientist, discovered MarkLogic's Data Hub, and now has a global system that offers flawless data reliability and integrity, and allows Chevron to conduct proactive maintenance on facility equipment to reduce risk, downtime, and overall costs. And at an incredible speed too: Chevron can onboard new data sources in as little as 2 weeks, and guarantee the quality of its data so data scientists can make definitive decisions.

We wouldn't say of course that a data hub can solve a pandemic. But what we can promise is that with our technology, we can digitally transform your organization into a company where data is a core asset, and not, as in the vast majority of companies, the domain of IT, or a product of the automation of strictly separate departments. When your processes are digital and data-driven, you have the flexibility to drastically change your course when circumstances so require. And to offer your employees the proper protection in the extremest of circumstances, by adapting the daily operation to new circumstances.

The data-driven enterprise

Some call that digital transformation. We prefer to call it the data-driven enterprise, but it all boils down to one simple truth: if you know everything that happens in your company when it happens, as well as everything that has ever happened in the past, you're less likely to make mistakes, so you are pretty well set up to keep improving your organization until close to perfection.

Looking at it this way, company information is your core asset. You just have to find a way bring it all together and discover the meaningful relations to compose as many possible versions of truth. The philosophers' stone that will turn basic facts and events into the god-perspective any decision maker would die for.

Of course, a data-driven enterprise is not the goal itself. What it is though, is a way to liberate your organization from all constraints that prevent it from reaching that maximum potential you know is there. The way to become a knowledge-based company: efficient, pro-active, customer centered, innovative and agile. And all it takes, is for you to free your data, because if you don't do it, nobody will.
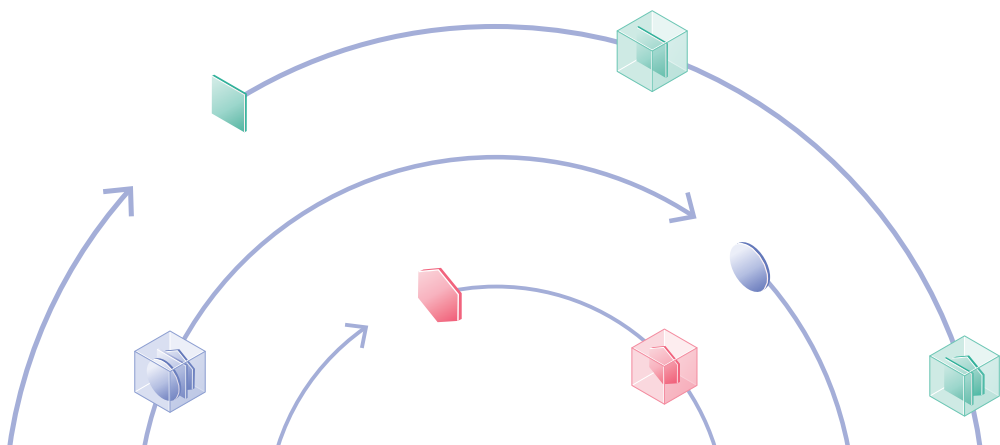
Want to know more?

Read about some of our cases

- ABN AMRO Selects MarkLogic for Trade Store to ensure compliance with upcoming legislation.

- MarkLogic to provide the database for Schiphol's real-time data on the logistical activities of departing and arriving aircrafts, parking spaces and ground movements.

- DHL Parcel Benelux selects MarkLogic for rapid-response consumer Track & Trace System.

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Or talk to our local hero

By all means, do get in touch with Jurriaan Krielaart, our Director Emerging Technologies & Territory Director for Northern Europe. Despite being a data wiz, Jurriaan also speaks your language, so don't hesitate to give him a call.

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About MarkLogic

By simplifying data integration, MarkLogic helps organizations gain agility, lower IT costs, and safely share their data. Headquartered in Silicon Valley, MarkLogic has offices throughout the U.S., Europe, Asia, and Australia.

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