

10 Worthy Future Trends in Data

The perfect book to guide you through the data trends of the next decade

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Introduction

It is always a good time to sit down, take a look at our progress, and **prepare our businesses for what is coming next in the future**: in terms of external environmental factors, competitors, industry trends, and innovations.

And when we look around, there is **one major factor, which importance has grown** tremendously in the past few years.

What is more, it has been transformed from a senseless resource into a main tool for business planning, development, and success. **Data**.

Exactly, for this reason, it is key that we motivate our curiosity and learn more about the **New Data trends that are coming up in the next decade**.

And in this Ebook, you will not find anything about the already mainstream Big Data.

Here, we are all about the innovations that will change the way organizations manage their businesses:

The 10 future trends in Data.





01. Dark Data Integration

Dark Data is usually defined as the **information assets organizations generate during regular business activities but generally fail to use for other purposes.**

It is usually characterized as unstructured, scattered, overwhelming, non-stored, and incomplete.

It may sound surprising, but **Dark data accounts for 90% of all data generated by business entities.** In other words, nowadays, **most of the companies are letting 90% of their data resources go,** without taking advantage of them.

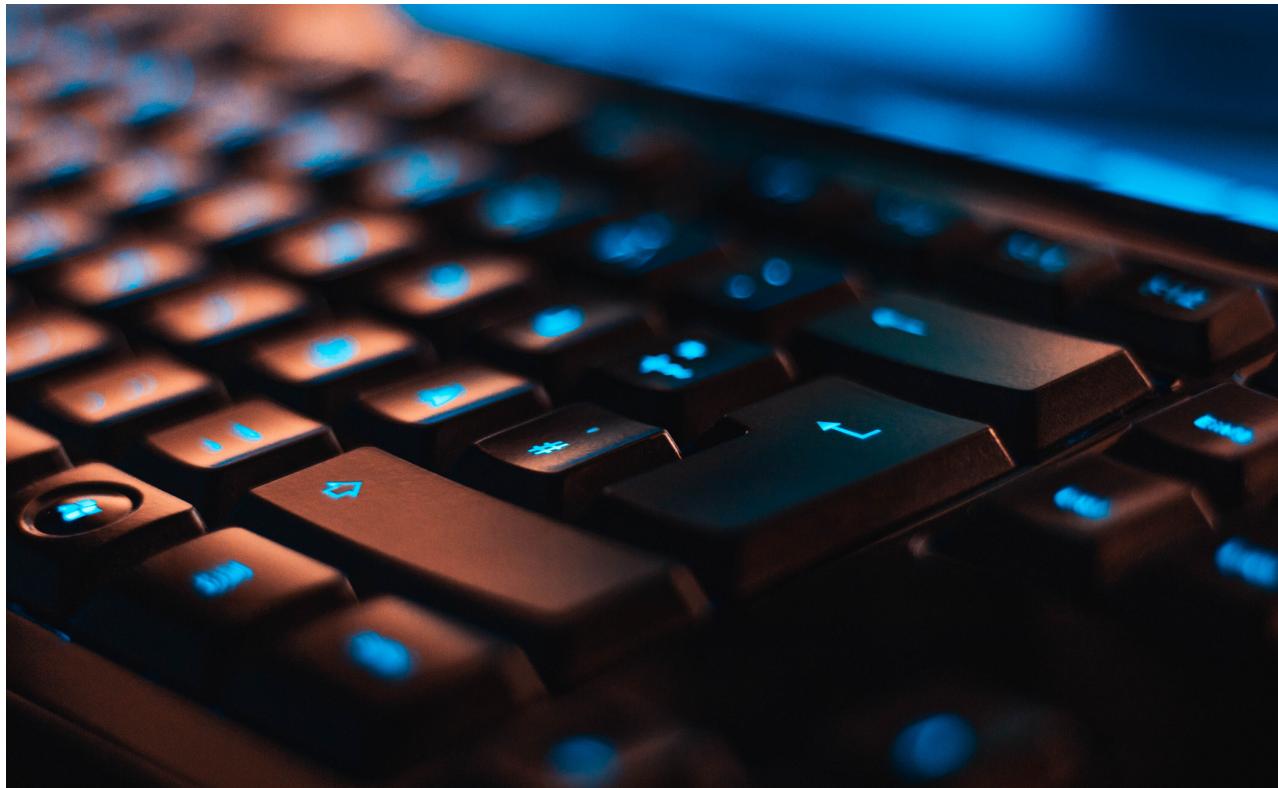
But in the next decade, this will change.

Until recently, the technology was not sufficiently advanced to harness such an enormous amount of data and to access more sophisticated data sources. **Today, the situation has drastically changed -** we live in an era of innovation and digitalization.



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The increasing number of companies take advantage of valuable Dark Data, for it **provide new insights, create new revenue opportunities, develop new partnerships, and shift businesses into the data-driven century.**

The data available at an organization represents an **essential intangible asset** that can be exploited for decision making, both on operational and strategic levels.

Data-derived insights have a significant economic impact and value when leveraged correctly and promptly.

Using data-derived insights allows us to **move from decision making based on intuition to make informed and sound decisions.**

Leveraging data analytics for decision making can make the difference and set a company ahead of its competitors.



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1.1. The value of Dark Data

Dark Data is valuable because it **tends to provide information that is not available in any other format.**

It helps the companies to **make efficient decisions in the future** based on the analysis of the insights originating in the past.

In the end, by exploring hidden datasets, we will be able to **nourish our intelligence with new and better insights**, and that will become a critical competitive advantage for our business.

Dark Data has the potential to create new revenue sources, streamline processes, and reduce costs. It helps to **understand the relationships between apparently unrelated pieces of information.**

By exploring the Dark Data and experimenting with in-depth analysis, various insights can be found on businesses, consumers, which may not be possible from data currently in their possession.

With **access to better data sources and more information, the quality of analytics improves dramatically.**

1.2. How to take advantage of Dark Data?

Dark Data is different for each industry and individual company, but common examples include **network transactions, distributed databases, industrial networks, WiFi technologies, etc.**

Overall, it's data that's left behind from processes and is scattered across every level of a business.

So, how can a company make better use of this sensed data? Well, **it's all about identifying what data can be relevant for our business** and putting in place data capturing technologies that allow us to collect these data for processing and transforming it.

So, in the end, we need to **implement the ETL process to these data**, to make it ready to nourish our data lakes, BI systems, or advanced analytic tools.

That way, we will enlighten this new and highly valuable data stream.



02. Augmented Analytics

This new trend **combines ML** (machine learning) **with NLP** (natural language processing) in order to improve the quality of the analytics, make them more detailed, consistent, understandable, clear, and meaningful to the business entities.

In the practice of Augmented analytics, **data is being treated just as humans would, but automatically, on a larger scale, and with increased pace.**

And in a more scientific formulation, according to WonderFlow, "**AA is the use of statistical and linguistic technologies to enhance data management performance.**"

This specific tool is expected to become a key future trend because of its core value of using technology to **assist and effectively support human work** in terms of decision-making, risk assessment, micro and macro-environmental analysis, and others.



Augmented analytics is the new era of machine learning



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2.1. Three reasons why you need AA

- Help employees deal with complex data

AA helps the businesses to **transform their big, voluminous sets of collected data into smaller “more digestible” pieces**, which are more understandable, insightful, and valuable to the working units of the organization.

This allows a **data-driven decision-making process throughout all of the hierarchy levels** in the company.

Besides, as AA uses NLP to present the data-based feasible business recommendations, the **analytics are easily understandable by every level of working units in the organization**.

This stimulates the usage of **data in planning and decision-making**, as the employees are not “scared” to make use of the analytics because of any lack of comprehension or skills to “read the data.”

- Take the best out of the data and save time

This tool **prepares the data in order to bring Business Intelligence** and facilitate the managers and workers to **make efficient use of their data resources**, thus, to interpret them in the best way and make the most out of them.

What is more, until now, analytics have usually been prepared by a **data scientist, who would spend 80% of his time extracting and preparing data, and only 20% interpreting the data sets to derive business insights and develop business recommendations**.

With Augmented analytics, we **can receive an automatic and quick action plan for business development and success**, supported with charts and graphs, which are derived instantly from the latest available business data resources.



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This way, we **don't use old, irrelevant data and don't waste time manually extracting, processing, integrating, and interpreting data.**

As a result, the organizations are provided with a great competitive advantage in **quickly meeting the changing and evolving customer demands and responding adequately to market changes.**

- Enjoy errorless data analytics

Another benefit of AA comes in terms of data veracity. When it is manually manipulated, the chance of making a mistake in the interpretation of data sets is significantly higher than in the case when we use an automated system for the same purpose.

What is more, **the AI used diminishes the risk of situational bias.** Any data scientist is biased by his own way of processing data, the way he makes decisions, his routine tasks and habits in terms of the process.

Because after all, every human has his own way of understanding and conducting tasks.



But what companies neglect is the fact that this **cognitive bias can result in outliers, incomplete, or “short value” data analytics reports.**

With the implementation of augmented analytics tools, organizations benefit from transparent and **non-biased data processing, high-quality results in terms of trustworthy analytics, closely related business recommendations, and aligned action plan to achieve excellence and success.**



03. Data Fabric

Data fabric is a **relatively new term**, which started gaining popularity yet in 2018.

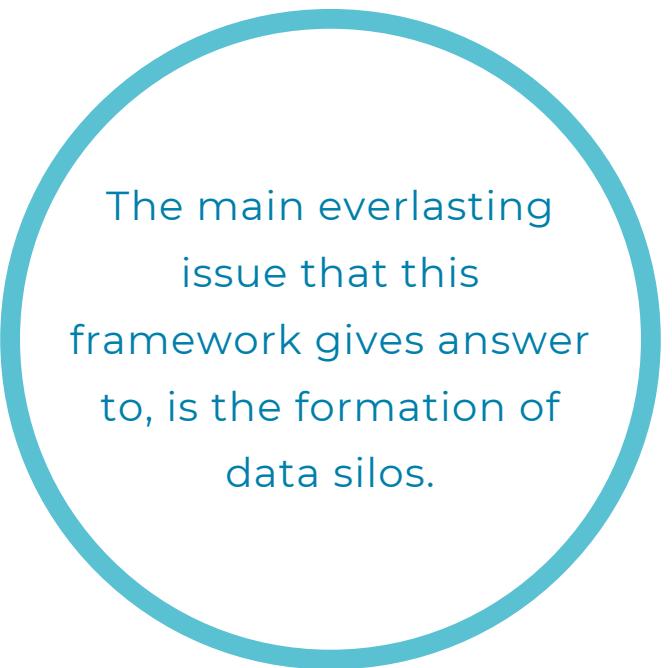
But as it **gives a smart solution to a very complex problem** that data-driven organizations face in their day-to-day operations, **its popularity is about to emerge in the upcoming years**.

3.1. The issue with data silos

When the generated data in a certain company is siloed, **it is unusable and isolated**.

The reason for this is the fact that **data gives real value to the organizations only when it is consistent, linked, meaningful, and purposeful**.

In that sense, data silos create two major problems:



The main everlasting issue that this framework gives answer to, is the formation of data silos.



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- Duplication of data

The existence of silos **ensures uneven distribution of data throughout the organization's departments**, as well as duplication of data-sets. This leads to **inconsistency and lack of coordination between the different data silos**.

The reason for the duplication is the fact that the different databases in the business entity **collect, process, store, and organize data in different ways**.

As a result, the **data format varies across silos and diverse locations**, as it can be outdated, incomplete, faulty, or with insufficient quality.

All these factors disable the employees to have access to the right information at the right time.



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- Inefficient decision-making

Data-driven insights from all organizational departments are the main catalyst for high-quality decision-making.

But in order to obtain those insights, **the company should have access to integrated operational and customer data, stored in one location, and available to all the departments to both add and extract data-sets.**

In this sense, the problem which data silos create is related to the fact that **they prevent integrated data availability across the departments, and this causes difficulty in the creation of united strategy and objectives.**

On the other hand, having **segregated, decentralized, unevenly distributed data results in an inability to build a 360-degree company view**, limiting the decision-making, planning, and risk assessment process.

Because when data don't give us trustworthy information about the financial and operational performance of the business entity, we cannot make efficient decisions to drive growth and success.

3.2. How can data fabric help?

In fact, data fabric is very **closely related to data governance**. It is a consolidated framework, which **protects, manages, and moves data sets from distinct sources and silos**, which are incompatible with each other.

In other words, **it is the data governance tool**, which takes care of **the data resources of companies that generate inconsistent data with different formats through multiple and diverse access points.**

And exactly for this reason, this framework is **extremely needed by companies that currently use distinct data management system across the organization itself.**



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- Data availability

Such data management system **gathers all sources of metadata, including primary sources, data lakes, data warehouses, error systems**, and others, into a responsive, structured framework available to workers from all organizational levels.

Data Fabric allows companies to **efficiently manage complex data sets**, as well as to improve their navigation experience through the collected data.

This way, the organization has more **clarity on what kind of data is available, where it is stored, what is the quality of these data, are there any outliers or unnecessary sets.**

Besides, Data fabric ensures structured and transparent databases that guarantee instant identification of outliers in the data sets, as well as no missing or lost data (throughout collection, processing, or transaction processes).

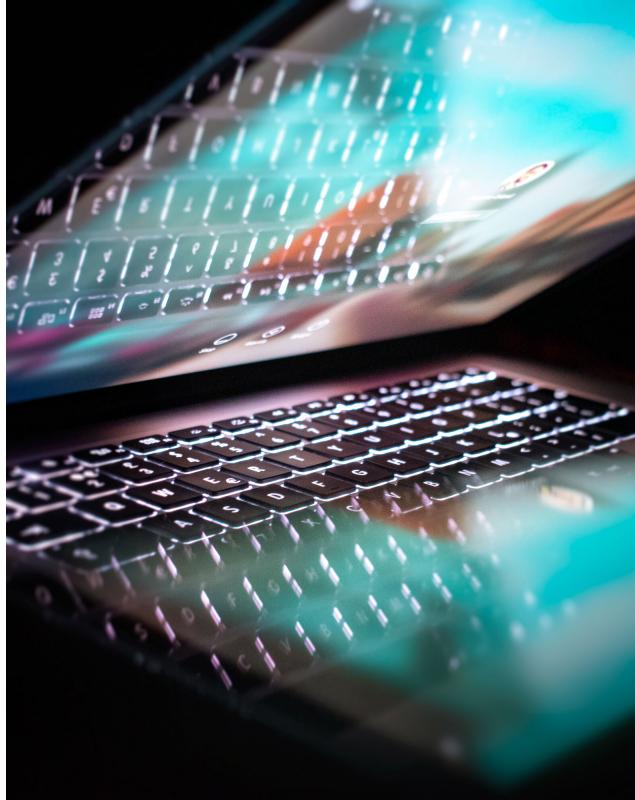
This opportunity for automated real-time error identification and quick access to all kinds of data, helps the organizations to **immediately intervene and solve any occurred issue**, ensuring high-quality data-driven insights generation, as well as a smooth flow of operations.

Data fabric acts like an imaginary cloth that covers all our data sources and access points to ensure their quality, consistency, availability, and security. Thus, it breaks down data silos and tackles the issues that they create.



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- Trustworthiness

Data fabric **syncs organizational data**.

And as data is accurate across all departments, operational transparency is achieved.

This ensures all the employees and management have **full trust in the data quality, architecture, and reliability**. As a result, data fabric provides a **great opportunity to always use relevant data, and make operational decisions entirely based on trusted, high-quality data-analytics**.

What is more, by breaking down the silos, the business entities benefit from **better collaboration** between departments and increased data trustworthiness, visibility, accessibility, and readability.

Also, proper data management provides a **holistic view of the customers** and drives **better business insights**, opportunities, decision-making, strategy building, and performance.

- Security

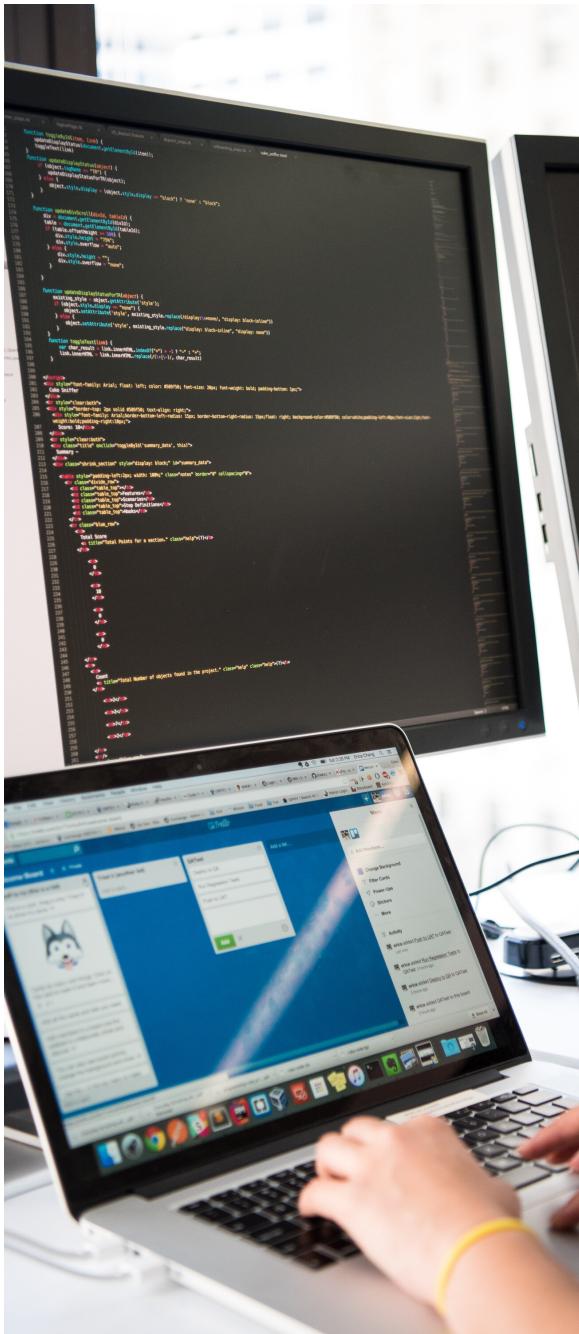
Adopting a data fabric framework **prohibits public or unauthorized access to data sets**.

This way, the organization knows the starting and endpoint of any data transaction, diminishing the risk of direct and indirect malicious data-set manipulation.

What is more, it prevents any faulty processing of data between source and analytics, which **contributes to the level of data security in the company**.



04. Data Streaming



Businesses are evolving with an impressively fast pace day by day, motivated by the **changing demands, needs, and desires of the customers.**

But in such a quickly developing world, **real-time data is key for continuous success and growth:** no matter the sector of operations.

Data streaming is not only about **processing and integrating big loads of data** with the purpose of being used for planning, decision-making, and risk assessment processes in the future. It is the **tool that enables businesses to gain access to real-time data from distinctive sources**, and use them to gain instant insights and make immediate data-backed up decisions.

If we look closely into any business operations, their **success is measured by three core criteria: pace, quality, and process simplicity.**



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In other words, any lucrative business task should be time and process-optimized, and the end product: impeccable (and in accordance with the clients' requests).

The collection, analysis, and interpretation of real-time data contribute not only to sustainable and optimized business operations, but also to **higher quality products, better decision-making process, planning, risk evaluation, cost and carbon footprint reduction, employee and customer satisfaction**, and, as a result, stable profits in the long run.

- Track and trace

One particular example of the importance of real-time data streaming is in terms of the companies' **ability to track and trace goods in their live location** to ensure effectiveness of the organizational activities in cross-industry operations: retail, hospitality, logistics, warehousing, travel.

Being able to detect the actual location of assets, allows the **management to have control over the business processes, and immediately intervene if any sudden problems occur**.

As a result, **better planning and decision-making are achieved**, and delays can be efficiently avoided.

- Quality check

On the other hand, **streaming real-time data enables a live quality check of products and services**.

This way, any possible defects or quality issues are immediately identified and can be effectively tackled.

And as a result, any duplicated tasks are forgone, and **operational and financial losses are minimized**.

- Enhanced performance of tangible assets

The operations of every company are based on **three crucial factors**: human capital, financial capital, and tangible capital.



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Buildings, machines, devices, vehicles, networks, and many other representatives of this third type of capital are crucial assets for the organizations because, without them, the business processes simply cannot be conducted.

However, **such "equipment" is often very expensive to be both purchased and fixed** if any issue occurs.

Connecting those operational assets to real-time data collector allows the business entities to **prolong their life, optimizing their usage** (by avoiding over or under capacity), and as a result, **preventing fast depreciation**, which has a direct reflection on the financial statements.

Direct access to live information from each operating appliance enables the companies to **notice any changes and malfunctions in the devices**, and act before any operational or financial damage is caused due to delays or shutdowns.

Data about the condition of both software and hardware, battery life, electricity usage, and working time of machinery and vehicles **give tons of useful insights about performance trends and patterns, which facilitate the planning process.**



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4.1. Real-time data for sustainable operations

Sustainability is forecasted to be the **first priority of modern businesses in the following decade.**

But sustainable operations do not only mean a smooth flow of activities and continuous profits but also reduced energy usage and diminished environmental footprint.

And real-time data streaming can contribute to all those three pillars.

Having **up-to-the-minute information** about everything that is going on in the business entity allows **better outlining and optimization of operating activities:** how to organize supply chain flow, departmental tasks, quality control, etc.

When all those processes are monitored, the **risk of disruptions decreases tremendously, and the quality of CX increases steadily.**

On the other hand, great planning and scheduling **reduces the number of unnecessary tasks conducted by employees** and increases their satisfaction levels.

Last but not least, the environment. According to research conducted by IHS and OSIsoft:

“The real-time data is helping the engineers to optimize processes and minimize utility usage during product changes and down times.

Changes to processes and behavior alone have resulted in savings of over \$100M in 3 years, with little or no additional capital cost.”



05. Master Data Management

This trend is closely connected to the **adoption of high-quality data governance policy.**

But as **data-governance is an ever-green trend**, we will emphasize on the importance of the relatively new popular term in the business environment: **Master Data Management**.

It relates to the **creation of a uniform and consistent set of business-linked core domains, which to be used as a reference source for all critical business data.**

This may sound as a regular DG framework, yet there is one big difference:

Master data is not transactional, but only acts as a master file to describe transactions and business-related data in terms of both internal and external domains.

In other words, the master data refers to the objects, assets, customers, locations of a business entity.





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However, let's have an example to clear any misunderstandings:

The usual Master data file consists of all the data which a specific company has available in terms of **customers, products, suppliers, locations, and other business domains derived from various IT systems** (including external ones).

The data domains used are different for every industry of operation, as for instance, a **manufacturing company would include raw-material purchases, machine serial numbers, and others, which would not be relevant to companies from other verticals.**

And if we take the **customers domain, the master file would include dates and numbers of purchases, names, addresses, IDs, purchase specifications, item numbers, etc.**

But why would we need such a master file in the following decade?

Well, below you will find **all the benefits which MDM adoption brings to the business entities.**

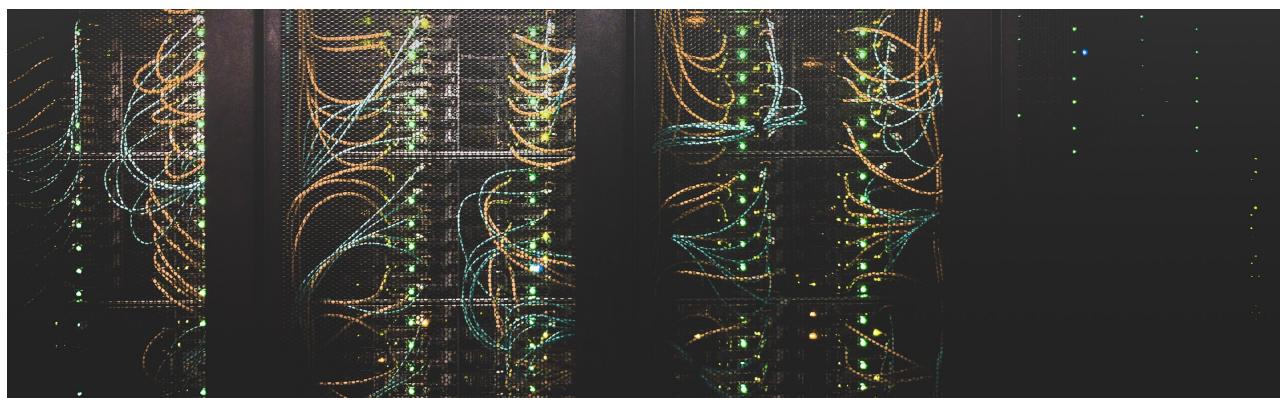


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5.1. Benefits of MDM

- Master file can be **used for both analytics and operational referencing**, improving performance and day-to-day tasks.
- MDM is the key that **helps us to comply with regulatory mandates and laws**, such as GDPR. Thus, helps you to **improve data security** and forego any penalty related costs.
- Motivates the **creation of a clear view over the core business data**, without mixing those with data processed in domain transactions.
- Enables the **consolidation of different format data domains** into one consistent and **centralized source system**. This improves decision-making and risk assessment processes.
- Enhances the **data domain quality and trustworthiness**, as the data is joint together through consolidation processing and alignment (thus, it is checked for outliers, errors and inconsistencies).
- Enables **data sharing between systems**, for example between two partnering companies.
- Prevents any **operational errors**, such as sending promotional emails to the wrong customers, purchasing the wrong type of supplies or equipment, etc.





06. Relationship Analytics

According to IDC, **companies spend on average about \$187 billion on data analytics in 2019.**

And the trend for those types of investments is growing steadily upwards.

But analytics is a very broad term, which gathers **plenty of factors and data domains.**

In fact, one **particular sector of data analytics offers the organizations the potential to have an enormous competitive advantage in the next decade: Relationships.**

Relationships not only with customers, but also with employees, partners, stakeholders, and general social audience.

Those analytics help organizations to build meaningful relationships with their stakeholders by **identifying what is the best approach to engage with them.**



It is important to emphasize on the great number of companies that are already focusing their analytics on relationships and people.



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6.1. Why to become relationship-focused?

Nowadays, companies' **growth is motivated by emerging technologies, constantly evolving customer behaviors, demands, and criteria, new business concepts, contemporary tendencies, and state-of-the-art products and services.**

However, **at the center of all that stand the organizations' internal and external stakeholders**, and the relationships between them and the company.

And if we focus on how to improve those and "**work with the people in mind,**" we bear great potential to achieve a **higher level of customer and employee satisfaction, improved productivity, sustainable profits, and optimized workflow.**

Besides, we can take advantage and become a people-centered company.



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Now, let's see **how relationship analytics boost our corporate performance** in terms of the two main stakeholder groups: customers and employees:

- Customers

In 2019 outbound business strategy is old news.

What comes next is the **adoption of inbound business strategy**, where our company attracts customers through customized content creation.

The personalized content is specifically directed to a particular target group and is focused on the stage in their customer journey.

But how to know we provide our customers with relevant content?

Relationship analytics give us the advantage of knowing more about the customers' needs, wants, desires and expectations, and provide them with not only tailored messages and offerings but also with customized products, services, and pricing according to their desires.

What is more, by using this type of analytics, **companies gain knowledge about the most effective promotional channels** through which they can reach their clients.



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When the customers see that the businesses start following the trends, which they set, the **clients feel delighted, empowered, and listened to.**

As a result, the chance of converting prospects into buyers, and existing customers into loyal ones increases tremendously.

- **Employees**

Contrary to the old business models' way of thinking, **the satisfaction of the employees is crucial for the company's success** and the smooth flow of its operations.

Adopting relationship analytics helps the business entities to **understand the needs of the employees better** and enables them to work towards making them happier in the workplace.

As a result, **relationship based analytics facilitate the organizations to provide better working conditions, ensure both professional and personal fulfillment**, which translates into higher productivity, and lower employee turnover rate, and better work-life balance.

This **enhances the level of employee satisfaction**, making them more motivated, productive, and engaged.



07. Deep Learning

Traditional Machine Learning, by itself, is on the edge of becoming mainstream.

Nonetheless, one specific approach in Machine learning is about to **change the way companies conduct their business: Deep learning.**

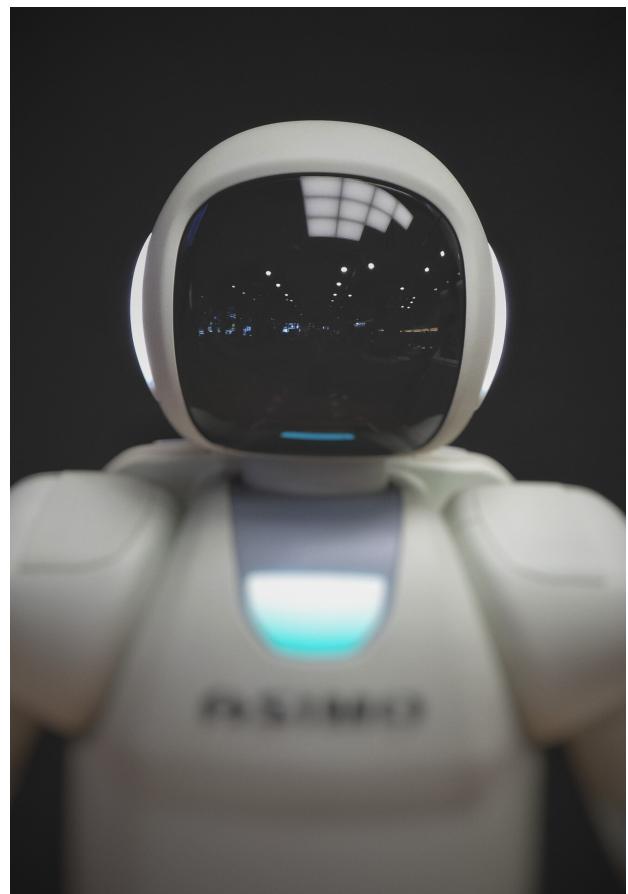
This future trend is a **special kind of AI that uses artificial neuron networks** in hierarchical order to gradually process data in a non-linear approach with the aim to **imitate the work of the human brain.**

It has the ability to **conduct unsupervised learning** by using unstructured and unlabeled data.

This particular characteristic makes **end-to-end learning** possible by **accessing primary sources** of raw, voluminous, and complex company data and **converting them into information to bring BI to the organizations.**

What is more, every hierarchical level of the deep learning mechanism takes the information extracted from the previous layer and enriches it, thus, **it evolves and improves with the increasing volumes of data** that are continuously generated.

Just like the human brain





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7.1. Advantages of deep learning

- DL is far **more sophisticated than traditional ML**
- Specializes in processing data to create patterns which **to be used in decision-making**.
- Has the ability to **create patterns from any data transaction**.
- DL has the ability to **build-up on previous results of Machine learning**.
- **Gives ML practical usability:** It is applicable in number of sectors: **automated cars** (to detect risks, signs, pedestrians, etc), **industrial operations** (ensure safety of workers by detecting people and objects), **defence** (identify safe and unsafe warzones), **medicine** (recognize cancerous cells), **society** (translate hearing and speech), **entertainment** (movie recommendation), **banking** (identify possible fraud), and **many others**.

Starting in the next decade, **deep learning is expected to become a true trend**.

In fact, the expected number is **\$80 million – The estimated size of the US deep learning software market by 2025**.

And on a world scale, **even greater hype can be forecasted**, including the discovery of **new smart uses for DL**, and its application in new industries.



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08. IoT Data

Motivated by the altering needs of the clients, the **business entities develop and expand with a thundering pace year by year.**

However, if you think about it, the quickly changing desires, requirements, and demands of the customers stimulate the different industries to follow and **adapt to new trends on an ongoing basis.**

Because **happy and satisfied customers lead to socially and economically sustainable business operations.**

It may be surprising, but an extremely effective and innovative way to contribute to the level of customer satisfaction in cross-industry businesses is implementing a **system of IoT devices.**

According to a study conducted by CSG in 2018, **94% of the businesses that have implemented IoT solutions have experienced a significant return on their initial investment.**

And even though a number of media platforms insist that this trend has already become mainstream, in fact, the year 2019 experiences the peak of the IoT wave.

According to an official research, conducted by Microsoft, this tendency will continue to grow in 2020, as by 2021 it is expected that 94% of the companies will start using such networks.

“ IoT growth shows no signs of slowing: adoption is projected to increase by 9 points over the next two years, meaning 94% of businesses will be using IoT by the end of 2021. ”



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8.1. The value of IoT

Internet of Things, helps the organizations to use data and offer more intelligent services, thus to enhance the levels of customer satisfaction and employee productivity.

But that is not all: Such systems improve the decision-making and risk management processes, lower the cost of day-to-day operations, and minimize the losses.

What is more, IoT enable the business entities to provide tailored products and services to its customers, thus, enhancing the quality of CX and the level of their satisfaction.

For example, in the hospitality sector, integrating hotel appliances with the personal gadgets of the guests is one of the aspects of IoT that offers the most convenience, comfort, and satisfaction in the hospitality industry.

Such data exchange between devices enables the businesses to provide tailored, luxurious experience to their clients.

On the other hand, the integration of personal gadgets with hotel devices allows businesses to remember the preferences of their guests, based on the collected data.



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This way, if the same customer stays in the same hotel multiple times, the services will be customized to his desires.

The businesses can also analyze the collected data to **identify certain trends in the customers' tastes, and later use the findings for decision-making, planning and prioritizing goals.**

Nonetheless, the power of IoT in terms of customization can be applied to every other industry of operation.

One other aspect of IoT is that it **can contribute to greener day-to-day operations: by reducing the carbon footprint.**

Integrating **utility-meter sensors** in machines, vehicles, buildings, assembly lines, devices, appliances or other tangible capital assets, enable real-time monitoring of utility usage, which allows businesses to **evaluate their electricity and water consumption, make changes, and estimate future costs.**

This gives **clarity and transparency** to the management and contributes to a better decision-making process.

What is more, the “waste” of energy and water is prevented, by **optimizing the work capacity and working hours.**

As a result, the businesses benefit from **reduced costs of energy bills** and have the opportunity to use the saved money for other purposes and investments.

The companies that have implemented IoT can also **become “greener” by repairing and prolonging the life of their machines and appliances.**

Adopting such a network enables the entities to receive **up-to-date, real-time information about the state of the whole network of connected devices.** This includes warning signs for potential problems, deterioration, depreciation, loss of function, changes in location and condition.

As a result, if any problem occurs with the devices, the **staff can act quickly to solve it**, and this way to **reduce any potential tangible asset losses.**



09. Edge Computing

Cloud Computing has now become broadly adopted, but the number of companies **facing the limitations of this centralized approach is continually increasing.**

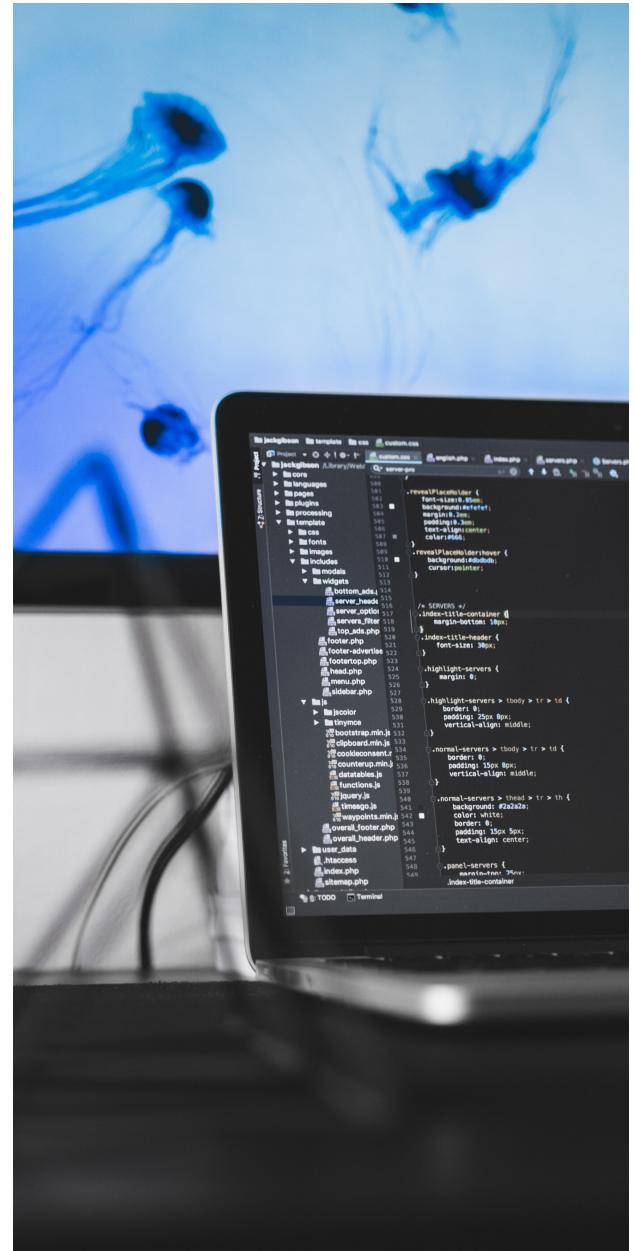
New technologies require a time of response super fast (real-time in most of the cases), IoT devices are spreading around, and the expected final experience from clients and users has changed.

All these three factors are **leading the computation towards a distributed and new approach: edge computing.**

Edge computing moves the power of processing **closer to the source or next to the last-mile network connection to the data source.**

Data no longer need to travel to a centralized computational node to be processed.

As a consequence this trend offers a new and robust solution for all the applications requiring response times of less than a second.





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By having the computational power close to the edge, we reduce latency drastically and accelerate the processing.

Edge Computing is managing to solve some of the toughest challenges.

This new distributed model allows a wide variety of interactions and communication paradigms including peer-to-peer networking, edge-device collaboration, distributed queries across data stored in devices, and distributed data management.

9.1. Why Edge Computing?

- Latency reduction

Edge computing reduces significantly the latency times associated with centralized cloud systems.

Nowadays, every second matters and reducing time means cutting costs and optimizing tasks.

In the long run, this benefit translates into improved business performance, trustworthy analytics, more productive employees and, as a result, happy customers.

- Security from the source

Edge Computing can be effectively managed from all the different layers of data.

The entire data lifecycle is covered: from the hardware to the communication.

This then allows to improve the compliance of relevant security regulations and to better admin certifications and security patches in each distributed node.



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- Quality of service

Having each distributed device and source of data clearly identified and **remotely managed reduces the risk of an overall system failure** significantly and allows to timely detect an issue in a particular source.

- Quality of Analytics

Having data collected from the source allows **analyzing data faster**, as it comes to the analytical platform previously processed at the edge.

- Interoperability

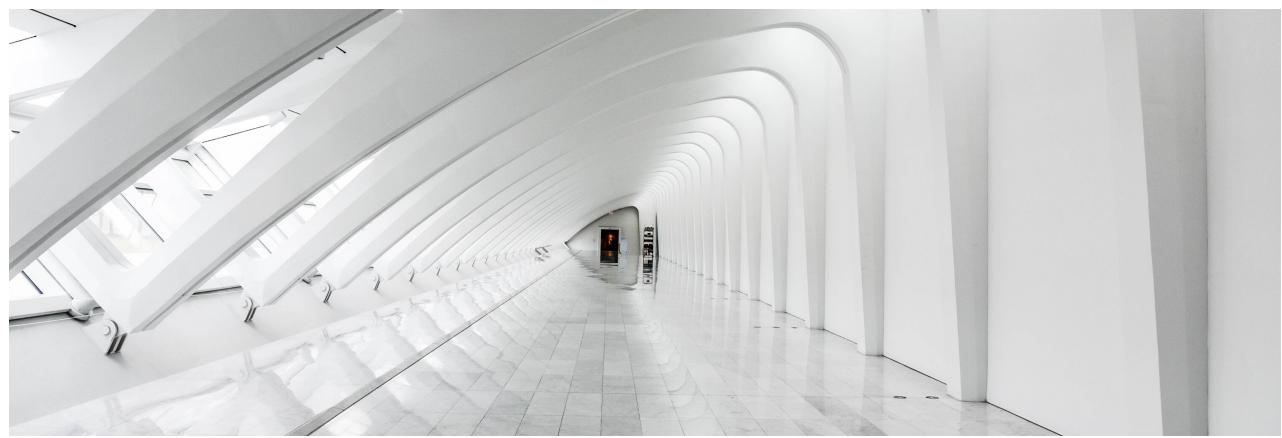
The interoperability between distributed IIoT devices is easier to manage to have edge computing in between.

- Cost

The operational costs are reduced because the data that is finally sent from the device to storage has been previously processed, which means that **it will require less network wideband and less storage space**.

- Increased operational efficiency

Effective and faster access to data enables more impactful analysis that enhances **better operational decision-making**.

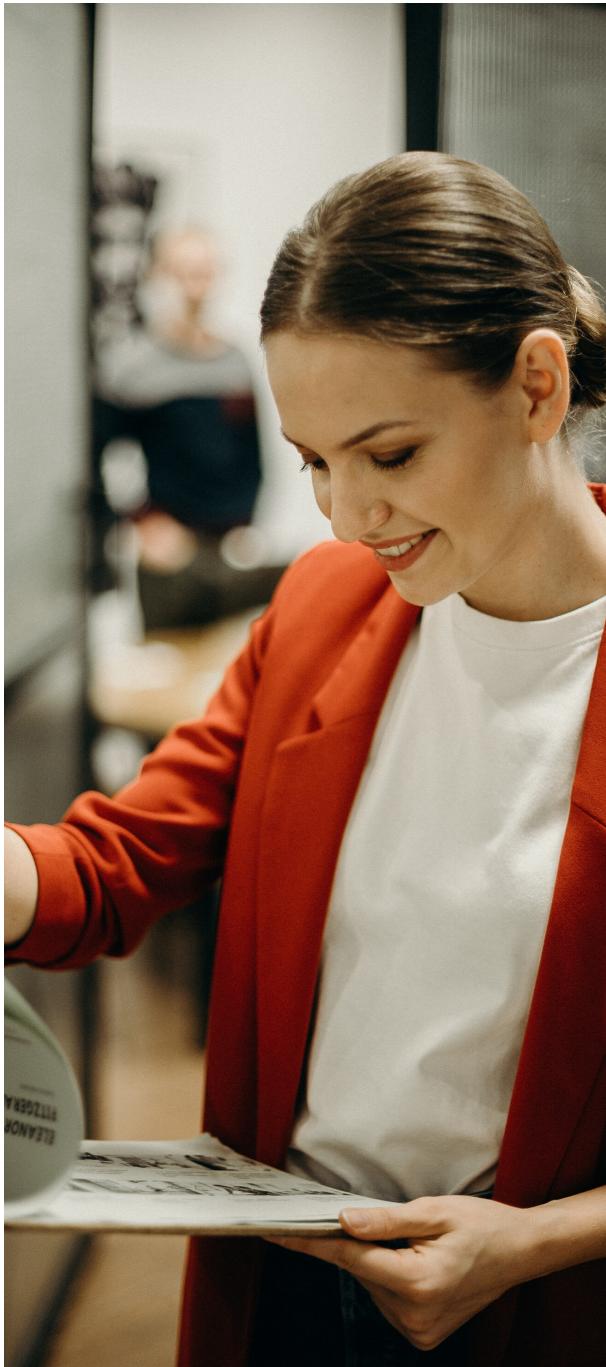




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10. Data Culture



In 2019 the process of data analytics has already established itself as an **irreplaceable tool for achieving organizational success.**

However, to accomplish our goals, it is not enough only to collect, store, and analyze data, **it is key to know how to deal with it, manage it, how to take the best out of it and use it to our advantage.**

Nonetheless, according to a survey conducted by CapGemini Consulting in 2017, on average, 6 out of 10 cross-industry employees consider culture as the number one obstacle for digital transformation.

And in 2019, on average, 43% of the employees lack such digital skills.

Those troubling statistics set a trend for data-driven companies to **adopt data culture and acquire the knowledge on how to effectively work with the data resources they have available.**



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The real data-driven, measurable growth, and development come with the establishment of such data culture.

It actively **uses data resources as a primary asset to make smart decisions and ensure future growth.**

What is more, having the knowledge of how to utilize data as the foundation of the corporate strategy helps to **boost profit and sales, increase both employee and customer satisfaction, enhance productivity, establish a strong corporate culture and ensure efficient decision-making, planning, and risk assessment processes.**

But in order to experience those benefits, we have to **educate and train the employees on all organizational levels** about the value, purpose and power of our data assets.

10.1. How to adopt Data culture?

There is one particular corporate role that has the potential and ability to facilitate the managers in transforming the companies` business culture from data-ignorant to data-educated: those are **Chief Data Officers**.



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It is crucial for the managers and CDOs to **act on a departmental and even employee-unit level**.

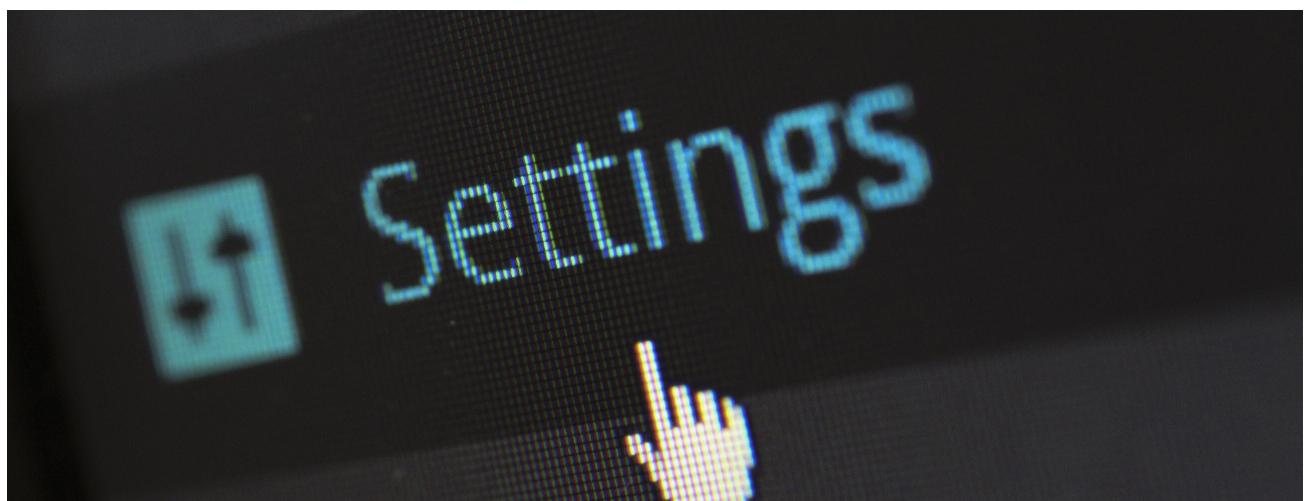
The reason for this is the fact that **no effective change can be made if the data culture spread starts from the top and ends at the bottom** of the organizational hierarchy pyramid.

However, this does not mean the corporate strategy should be set for last.

On the contrary: **the goal is to achieve data-driven strategic decision-making on every organizational level** as soon as possible.

There are several effective actions, which have the potential to facilitate the experts in **tackling the difficulty of driving the data-culture forward**.

Separate or together, those actions **motivate and inspire the employees to embrace the digital culture and take advantage of its benefits**.





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- Establish data democratization.

Any data-driven company should adopt data-driven decision-making processes at all organizational levels, **including departmental, team, and managerial level.**

To achieve this, the available **data resources should be accessible to, and readable by everybody** in a particular company: in other words, the business entity should establish data democratization, naturally keeping legal limitations in mind.

Such practice **facilitates the planning processes, ensuring transparency** in data management, **limits the occurrence of any misunderstandings, eases communication, prevents any duplication of tasks, and as a result, saves time and optimizes jobs.**

Another benefit is that data democratization **breaks down data silos.**

It allows every employee and department to have access to joint data resources and make decisions based on the particular data they need.

Moreover, it **contributes to a better understanding of the work of the various other departments and the organization as a whole.**

- Invest in digital skills training.

This way, the employees will **gain know-how on dealing with data** and will learn about the opportunities it may bring to the company's growth, development, and prosperity.

As a result, they will **become empowered to take advantage of the digital transformation.**



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- Design Key Performance Indicators (KPIs), which to stimulate the adoption of data culture.

Those KPIs act as criteria for the departments and encourage the usage of data and data analytics as a key tool for achieving high-quality task results.

What is more, those give clear idea to the C-level managers in regards to the progress that the company has made in dealing with its data assets.

- Lead by example.

Corporate managers` and CDOs` positioning as a field experts, professional role models, and a true personal and professional leaders is crucial.

This motivates the real change in the mindset of the employees to perceive them as valuable trendsetters.

This stimulates them to follow the example of this specialists whom they admire.

- Stimulate collaboration.

Leveraging skills and know-how does not only improve the communication within the company, but it also facilitates the symbiotic growth of the departments in terms of adopting new practices, models, and frameworks.

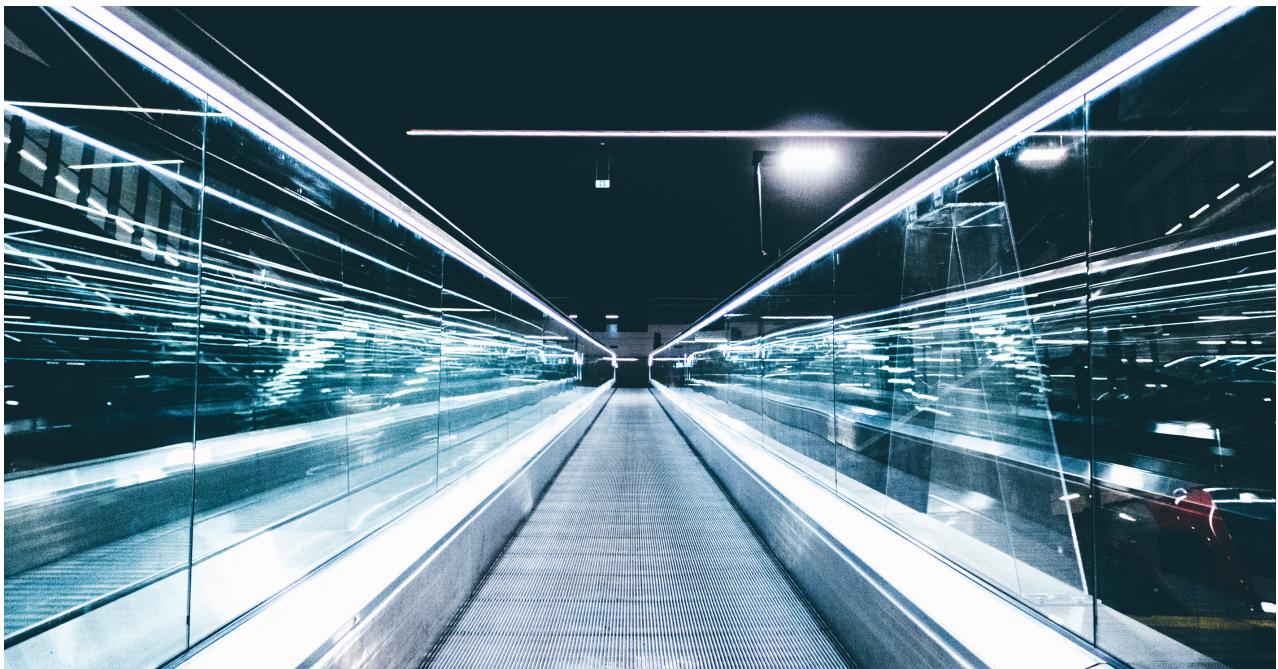
The same applies to digital change. If three out of five departments have embraced the digital transformation, the other two would have to adopt it, in order to work efficiently with others and achieve consistent end-results.



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Conclusion



Being up-to-date with the trends in your industry of operation is key to the achievement of competitive edge and high-quality business performance.

And when your company is data-driven, **it is a MUST to have the ability to follow the innovations, new approaches, framework, and smart solutions** that are being integrated into the business world.

We are now in a new decade.

And we should all be prepared to understand and embrace the changes that come next.



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