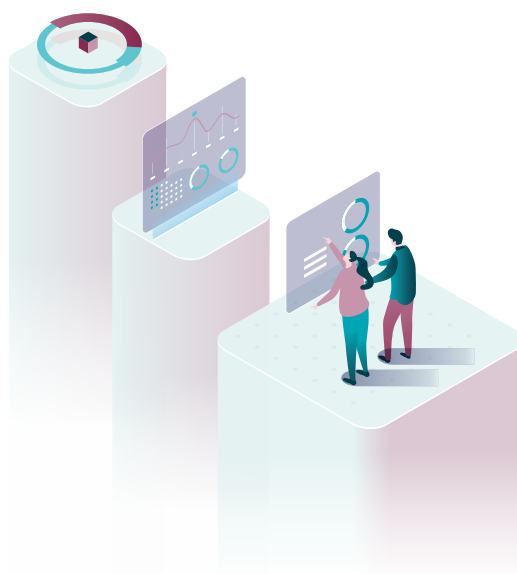


Maximize the Value of Your Data: What to Know and Where to Start

They say data is the gold rush of the digital age, the new oil. Whatever you may call it, data plays a key role in digitally transforming businesses. Becoming a data-driven business can help companies prepare for the digital challenges ahead. Launching a successful data strategy requires attention to various elements in the organization and data lifecycle. How can you help your organization accomplish this? Keep reading to learn how your team can develop a culture of data before launching a comprehensive data strategy. We're sharing our tips for where to start and what to avoid.

Overcoming the core data challenges

In working with clients across industries to strengthen their data capabilities, we've seen that companies face many challenges on the way to becoming data-driven businesses. These blockers include poor quality data, unmanageable data silos, insufficient technologies, lack of specialized skills or talent, and difficulty building a company culture that values this commodity. The key to a successful data strategy is overcoming all of these challenges.



Don't rely solely on technology

While technology is essential to the success of any data strategy, it is not a golden ticket to success.

In order to scale, your company needs sufficient data storage and processing capabilities, robust communication and analytics tools, and artificial intelligence or cognitive technologies to drive new

insights and value. However, technology is not a one-size-fits-all solution to your data challenges.

Technology, while important, is only a small piece of the puzzle and additional elements should be considered before a successful strategy can move ahead.

Develop a culture of data

In today's digital world, proprietary data is one of the most valuable assets your company owns. The insights found in this unique information is the key to differentiating yourself from the competition.

The challenge is ensuring your organization understands and believes that, starting with the leaders and decision makers. Business leaders need to direct the company's data strategy by communicating its importance throughout the organization, from the top down. This requires a shift in thinking, where leaders embrace the unfamiliar and prepare the company for significant, but worthwhile, changes.

Trust is key to creating this culture, because leaders often struggle to rely on insights from unstructured data. Developing this trust takes time and motivation, along with the talent and skills necessary to improve the quality and reliability of the data.

Bridging the gaps between departments is also essential in reducing the negative impacts of isolated or messy data, such as duplication, lack of transparency, and difficulty sharing information. Department heads should work towards the same goals, ensuring that their efforts complement those of their peers—the alternative is high associated costs later down the line.

Ensuring that the value of data is absorbed by everyone will make it part of the company's DNA, helping to drive better business decisions throughout the organization.

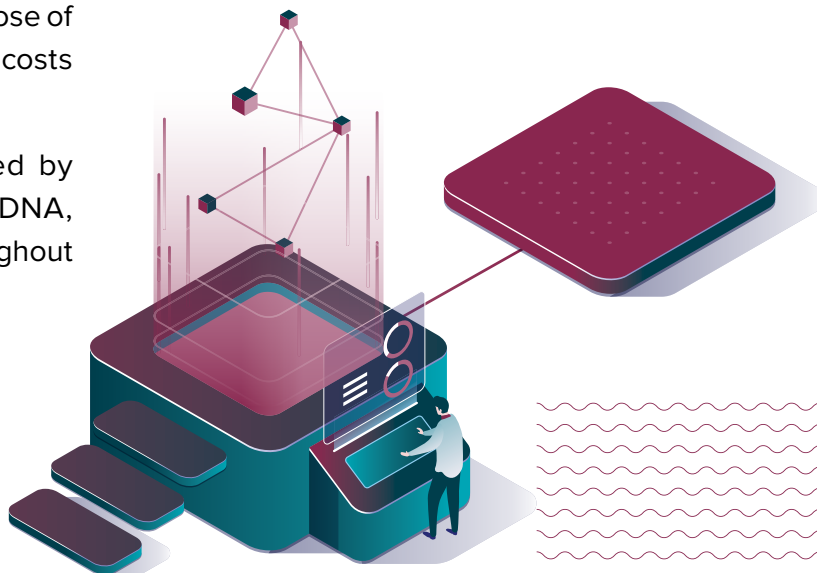
Get your data in order

While culture and technology play their part in the data-driven business strategy, they are less impactful if the data is poor quality.

Without polished, normalized data, associated technologies can become useless. Poor quality data can lead to unhappy customers and makes it difficult to execute an actionable data strategy without expert support.

For digital companies today, the cost and effort to improve the quality of data is lessened, as their business models often consider this from day one. However, for more established companies that didn't start with a digital crystal ball, the issue becomes more expensive and laborious to resolve.

According to the Harvard Business Review, an average of 47% of newly-created data records have at least one critical error. Considering just how much companies rely on data to operate effectively, getting the data in order is a critical first step.



Hire the right talent or outsource the right skills

Getting the data to a place where you can extract value from it requires implementing the right data infrastructure and hiring the right skills. Data science encompasses everything from cleaning or normalizing data, to employing predictive models to gain insights. A data team can include data engineers, data analysts, and data scientists.

Data scientists need access to high-quality data to work their magic, and that's where data engineering comes into play. Data engineers build pipelines and frameworks that transform the data into patterns data scientists can work with. At smaller organizations, data

engineers handle some data infrastructure capabilities and responsibilities, such as ramping up and operating platforms such as Spark, Hadoop, and Hive. At a larger organization, data engineering is a formal role that manages more robust data infrastructure needs. Together, these data engineers and scientists can also advise on how to gain business advantages through data, resulting in new benefits and increased profits.

Without the right level of support, your business will be hard pressed to launch an efficient data strategy and start seeing the value from your investment.

DATA ROLE CHEAT SHEET



Data Analyst



Data Scientist



Data Engineer

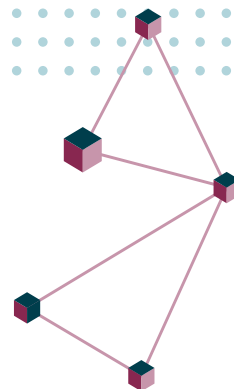
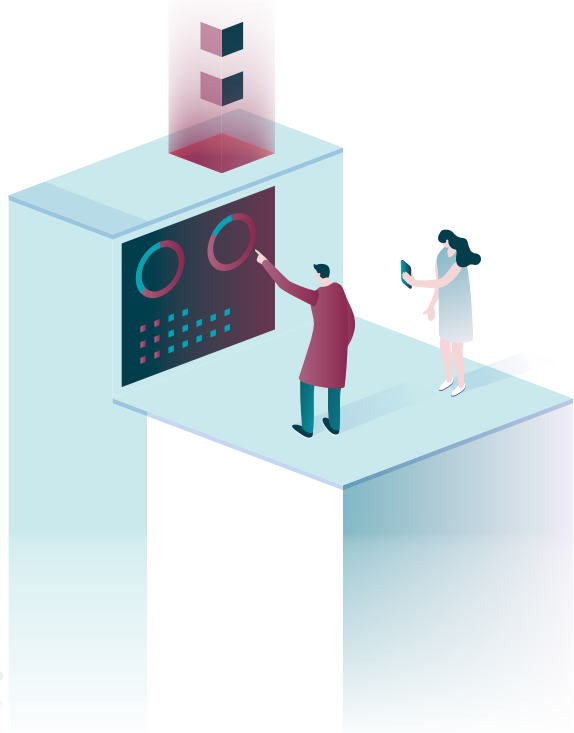
Data analysis	Data analysis through Machine Learning	Data ETL through code
Reporting	Visualization/Reporting	Distributed data processing
Data interpretation, communication of insights	Communication of insights	Data management through code
Should have a good understanding of classic statistical algorithms	Should have a good understanding of general machine learning algorithm	Expected to create ETLs and automation at high scale
Expected to have a good understanding of the particular field that the data represents, such as Finance or Business Operations	Expected to work with medium to large datasets	Expected to program distributed applications
	Can work with non-relational data	Shares data management and system design responsibilities with software engineers

Leverage multiple skills

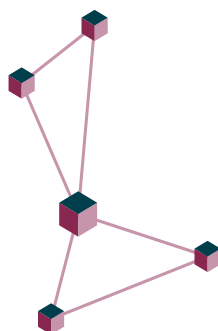
And on the topic of talent, data scientists and engineers are not the only necessary links in the data chain.

Business leaders must also take the reins when it comes to a data-driven strategy, leading their teams toward the same goal and ensuring that everyone is on the same page. You need people who can extract valuable data from old legacy systems and modernize business processes. This is further supported by experts who can create predictive insights from the data—the equivalent to finding a gold-bearing vein in the Wild West.

Then there's security, or "defense." This involves keeping data protected while following relevant laws and regulations, such as GDPR. The act of data defense is by no means profitable, but this level of security and knowledge is required to prevent issues down the line, saving time and money. Ensuring that you have the right experts on board to cover these considerations is vital.



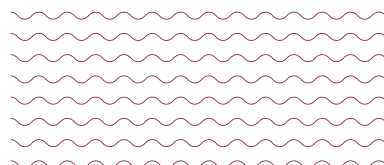
“You need people who can extract valuable data from old legacy systems and modernize business processes.”



Bringing it all together

A lot of effort is required to make a data strategy work: leaders should plan how to train the whole organization, managers should prepare for change, engineering departments need to find and integrate the right technologies, and security professionals must create policies to protect the company.

Becoming a data-driven business is not merely a case of going digital or installing the latest plug-in solution; it's about following a deliberate plan that encompasses multiple teams and steps along the way.



Maximizing Value

Once you've got a data strategy in place, you can start generating more value from your databases. The following advice should provide a headstart in that process.

Research shows that roughly 2.5 quintillion bytes of data are created globally every single day. This staggering statistic reveals the potential for profitable returns, but only if your business can utilize the mass amounts of information its collecting.

Don't Hoard Your Data, Use It

According to InformationWeek's 2018 State of Infrastructure Study, most companies have increased their storage by up to 99 terabytes in the last two years, and expect to repeat that level of growth by 2020. The thing is, most of that data is gathering dust and providing no value.

Many companies are failing to utilize their growing databases in a valuable way. Why? In part, due to a lack of a solid data-driven business strategy, and secondly, an inability to clean, analyze, and act on the information they collect.

By first identifying business goals that will bring value, your company can begin to set objectives that will direct the overall data strategy, revealing which of the data is useful enough to be leveraged for profit. This approach lays the foundation for further exploration of the database.

For example, if the business goal is to improve customer loyalty by personalizing communications, then it is vital to target the information that relates to that goal, such as personal customer records,

purchase history, and prior communications. This helps narrow down the search from the offset, aligning the most valuable data with the end goal.

With this approach, you can avoid the risk of your databases becoming intimidating, unusable, and losing their value altogether.



Consolidate and Optimize for Consistency

If your company is using a number of different storage locations, you will encounter issues with consistency—maybe the sales department is storing customer purchase history in one database and marketing has behavioral insights in another, for example. This is often a direct result of an organization operating across independent silos, so it is easy to anticipate in most cases. However, each database may also have a unique structure, or have messy, incomplete, or duplicate data, creating a time-consuming and expensive obstacle in the cleanup process.

Maintaining a database that is clean and reliable requires time and commitment to start generating real long-term value.

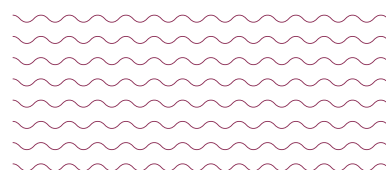
Good Analytics = Actionable Insights

Even with well-defined business goals and clean databases, there is often confusion about how to act on the insights generated by the data.

Data scientists may uncover interesting information from analyzing raw data, only to discover that it doesn't help guide action towards the business goals. For instance, if the data reveals a surge in employee dissatisfaction, but the goal is to boost market visibility, then there is a misalignment with the analytics team and the company objectives.

While there are analytics and reporting tools to help with this, the challenge lies in applying any resulting insights to the business in a practical, impactful way. This requires making analytics a core competency of the company, rather than relying on out-of-the-box software or transactional vendors.

With a combination of cloud platforms like Amazon Web Services or Google Cloud Platform, reporting tools, and experts who can translate the insights into valuable business strategies, companies can start uncovering actionable insights that align with their overall objectives.





Leadership Buy-in is Essential

As you can see, generating value from data is a complex task, which is why some business leaders avoid it altogether and “let the experts handle it.” This is always a mistake.

Leadership must understand that data is a fundamental issue that impacts the entire business. Executives should stay educated on the insights being generated by their tools or experts, while also working to build a culture around data and preparing the whole company to take action on what they learn.

Value is driven by the performance of a company’s data, not just the algorithms put in place by data scientists, or the organized structure of the database. In the end, that performance hinges on leaders’ ability to put data at the front and center of their business.

Understanding the Data Lifecycle

At Wizeline, we have experience building enterprise-grade solutions. We are a multidisciplinary team that can see a solution and thinks about how to integrate the data solutions into the whole backend, how to build web apps with analytics, and how to integrate our data team to deliver a more complete or future-proof product or solution.

Step 1

Analytics workshop. We work to identify your data sources and design business processes, with careful consideration of your business needs, to achieve your organizational or product goals.

Step 2

Data infrastructure. Now that you know what to expect, it's time to gather the data, sort, and refine it. This is a necessary step before the magic can happen.

Step 3

Data insights. This step usually doesn't require complex modeling, but can paint a picture of what your future business can look like.

Step 4

Predictive tools. Some of the data science applications we discussed above come into play and we apply advanced modeling techniques. Here, the data begins to speak for itself, instead of someone having to really understand the intricacies of your business.



"We are a multidisciplinary team that can see a solution and thinks about how to integrate the data solutions into the whole backend."



AWARENESS

01. ANALYTICS WORKSHOP

- Identify data sources.
- Design business processes (AI - First)
- Visualize data through business processes.



MONITORING / VISUALIZING

02. DATA INFRASTRUCTURE

- Create, implement and connect data sources.
- Design and build data pipeline and infrastructure.
- Design and create dashboards.



INTELLIGENT INSIGHTS

03. DATA INSIGHTS

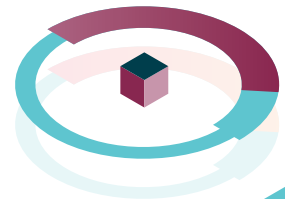
- Analyze business outcomes through data.
- Enable data - driven decisions across the company.



DATA DRIVEN BUSINESS

04. PREDICTIVE TOOLS

- Predict business outcomes automate decision making improve data and result using Machine Learning.



If you are interested in getting started on your data strategy, but need support in overcoming the challenges we just reviewed, our team is here to help. Contact us to learn more and talk to one of our data experts. Reach out to consulting@wizeline.com or visit wizeline.com/data

www.wizeline.com

