IDC PeerScape

IDC PeerScape: European Success in Building a Data Culture

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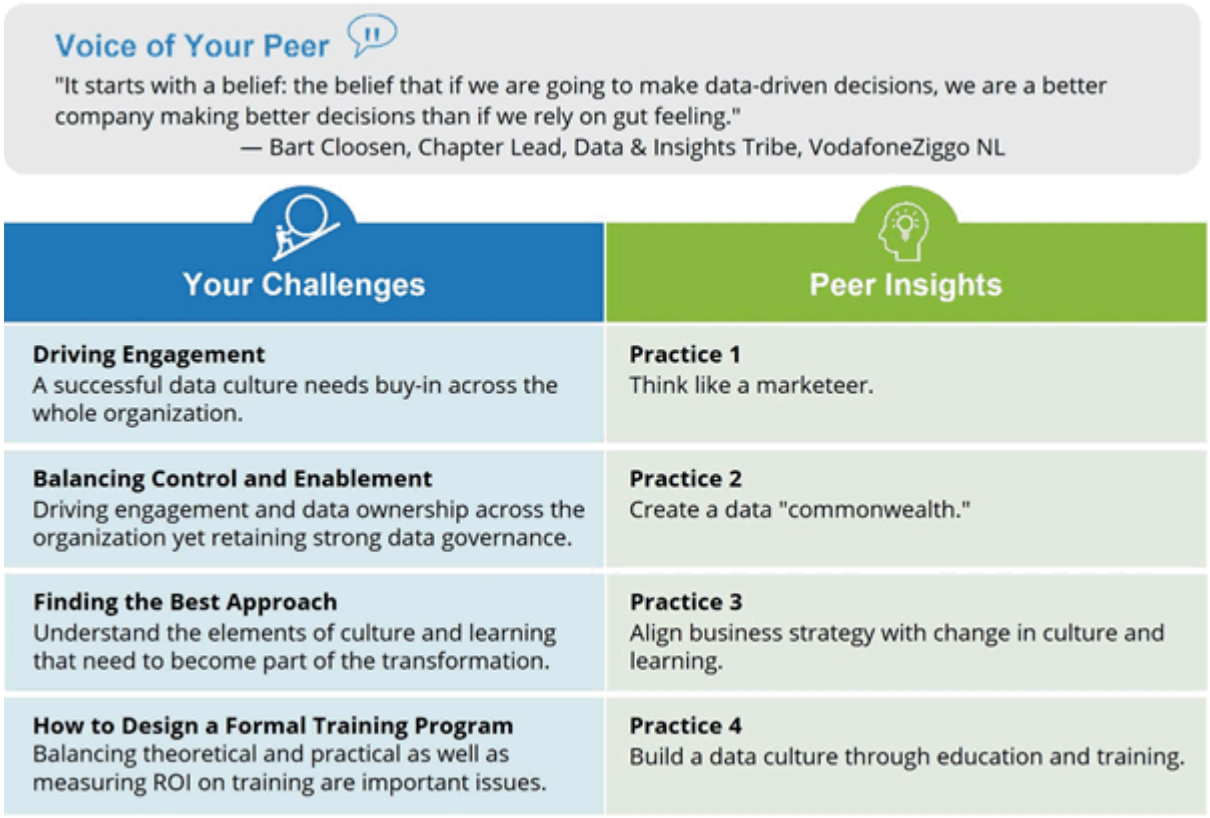
IDC PEERSCAPE FIGURE

FIGURE 1

IDC PeerScape: European Success in Building a Data Culture



Source: IDC, 2022

EXECUTIVE SUMMARY

An IDC survey in 2020 found that 83% of companies want to be more data-driven, but only 30% currently use data and analytics routinely as a key factor in their decision making. The need is widely felt, as it is recognized that this is essential in becoming a digital-first business. IDC data shows that more than 85% of European organizations are achieving economic and/or business benefits from data-driven innovation. Driving data analytics usage improves return from the company's data assets and improves business performance.

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There are various elements to an organization's quest to becoming more data driven, but one of the most important is cultural – getting staff to want to use data in their decision making, rather than relying on gut feel. There are many aspects to creating a data culture, and our research has shown this is a key challenge for many data/analytics executives.

IDC interviewed some leading European companies that had seen success in building a data culture to examine the practices that helped them on their path to a data culture.

"Becoming a data-driven organization is an aspirational goal for many European organizations, and rightly so," said Philip Carnelley, AVP for Data and Analytics Research in Europe. "IDC research shows that being data driven is highly correlated with better company performance. However, only a minority have truly managed to make serious headway in achieving this. An important part of the journey to data-driven is creating a data culture widely across the organization. From recent interviews with European companies, we have identified four best practices in achieving a data culture."

PEER INSIGHTS

Practice 1: Think Like a Marketeer

Challenge

Telco is one of the most competitive markets in the world, but the fight for customers is particularly intense in the Netherlands, where the dense population and extremely high coverage rates are contested by many players.

Against this backdrop, executives at VodafoneZiggo (one of the Netherlands' most prominent telecoms and entertainments providers) wanted to improve its ability to deliver enjoyable customer experiences, become an employer of choice, and accelerate sales growth.

A major barrier to the company's data ambitions was the complex environment that the merger had created, with many legacy tools, different techniques, and processes. Spreadsheets were widely used, and there were many versions of the truth, with over 10,000 regular reports.

Example

In 2016, Vodafone and Liberty Global's Ziggo unit joined forces to form VodafoneZiggo (VZ). The merger combined Ziggo's fiber-rich broadband network with Vodafone's market-leading mobile operations to create a strong, converged player for the Dutch market.

The company's CEO and senior management adopted "becoming data driven" as a mission and strategy. They believe that otherwise, it would lose to its competition. VZ wants all its staff to base decisions on sound data analysis and not gut feelings. Importantly, it views all its employees as decision makers.

VZ has embarked on an initiative to make analytic applications based on a single data lake for reporting, analytics, and artificial intelligence (AI), with a strong focus on self-service analytics. These applications are available to, and actively used by, all its 8,000 employees – a key touchstone of enabling a data culture. The company transformed from 10,000 independent reports to around 1,000 reports and 300 apps using a single version of the truth.

Bart Cloosen is chapter lead for VZ's data and insights tribe (the company is using agile methods and terminology) who is responsible for reporting and visualization, and thus for driving the data culture across the organization. The tribe in which he works is part of the strategy and integration business unit that reports directly to the CEO, the sponsor of the initiative.

Cloosen remarks that the key approach he has adopted is to "think like a marketeer." He aims to "market" the analytic apps that his organization builds for its potential customers (i.e., business users) across VZ. The reports and applications are actively used by over 5,500 people — 3,000 using the analytic applications, and 2,500 using embedded analytics. A successful "sale" is for a user — the customer within the business — to adopt and actively use an analytic application to guide their decisions. Key tactics to get to this point have included:

- Identifying "heroes" and sponsors — enthusiastic and frequent users — and using them as references to encourage others in adopting the apps. Cloosen's experience is that as many as 10% of staff can be seen as heroes.
- Self-service and supported training for all users.
- Ensuring apps are attractive and useful through collaborative design that understands customer journeys and seeks to leverage data employees wouldn't generally see through their standard operational systems. Cloosen remarks it's key to find out customer "triggers" to use the system.
- Monitoring usage and reporting to managers on usage — measuring and maintaining a record of success in "marketing" campaigns.
- Open sessions such as brown bag lunches in which people can voluntarily jump in and the team can demo new apps, plus a quarterly innovation learning week in which people can sign up for all kinds of trainings.
- A development and training program, including a learning program for regular users and a data leadership game (the team enrolled the top 400 managers on a 2-day program). As a result, in addition to pitching the apps, the VZ team educated colleagues on adopting a broader data-driven mindset.

Cloosen's plans for 2022 — again, taking a marketing mentality — include monitoring customer satisfaction and Net Promoter Score among users, further driving popularity and therefore adoption. The vision is to also build in more power and intelligence (e.g., predictive models for items such as customer churn, built by VZ's data scientists) into the analytical applications for business users to leverage, without having to understand how to build those models for themselves.

Guidance

When building a data culture, "build it and they will come" does not work. Even getting buy-in from company execs and even the CEO — although important — is not sufficient. Getting widespread usage of a company's data assets requires a change of mindset to get buy-in across the company and drive behavior change.

Thinking like a marketeer to sell the idea of data-driven decision making across the business is therefore essential to driving widespread data analytics adoption to improve return from the company's data assets and improve business performance.

Practice 2: Create a Data "Commonwealth"

Challenge

Large organizations in particular struggle to balance the need to place controls around the ways important data are collected, stored, and processed, and the importance of enabling individual business teams (which may be highly distributed, each operating according to their own priorities and with their own peculiar IT environments) to manage and use data in ways that make sense to them. Shifting too much to a position of centralized control over data creates risks that business teams becoming very disillusioned with the situation and creating "shadow" practices.

By contrast, shifting too much to a position of federated responsibility over data management and usage creates risks that platform, tool, and process investments will be duplicated, data lineage will be difficult to trace, and outcomes will be difficult to trust.

Example

ENGIE's Common Data Hub is Built Around "Bottom Up" Contributions

ENGIE (created from the merger of Gaz de France and Suez) owns and manages energy infrastructure across the globe and is a utility provider in France. It supplies electricity in 27 countries in Europe and 48 countries worldwide. Outside of France, it is a highly decentralized organization, acting as a holding company for its various regional energy businesses.

ENGIE's business model features decentralized assets, a distributed workforce, and a decentralized global customer base. Its customers were asking for the group to drive data management of their assets, leading to a steady stream of new data assets to manage. In addition, the introduction of networks of large numbers of Internet-of-Things (IoT) sensors across both customers and ENGIE's own assets further compounded the need to modernize its data strategy. Challenges included traditional monolithic legacy applications, siloed data, proprietary technology, a lack of scalability, and poor service levels.

In 2018, ENGIE decided to create a new IT ecosystem to support distributed value creation — a "data garage" in which data science and architects could explore the viability of new data-based use cases and scale innovative ideas through a shared data repository it called the Common Data Hub. Initially, it explored the idea of creating a central data lake at a global level, enabling local business units to maintain their own individual data management tools. However, this approach was dismissed because it would have required each business unit to create its own copy of key data, creating risks of inconsistencies and wasted time and money.

Instead, the company elected to create a common data repository that it could implement at both a global level and within multiple localized implementations. Crucially, it decided that to succeed, the central team designing this approach had to bring local data and IT teams into the process right from the start. It created a network of local data officers, each in charge of defining the data strategies of their local business units, the data governance approach, and the use cases they would try to address. They were also given freedom to develop a Data Garage team, made up of an operational team of data scientists and architects in charge of developing use cases. At the same time, these local data officers formed a peer community that collectively developed a standardized operating model to be used everywhere.

To unlock the true potential of the large data volumes that existed across internal and customer assets, ENGIE realized that it needed to evolve its approach to data ownership. No longer would data be guarded by individual regional business units — data was to be understood as the company's "commonwealth."

To facilitate adoption, ENGIE developed a range of templates and documentation explaining the value of the common systems and tools provided. These assets are managed in a content management system, alongside the Common Data Hub, and this system provides the platform for what is now a global community of over 300 data officers and contributors across 22 business units.

Guidance

Building a successful data culture relies on everyone, everywhere having a consistent experience of how data use and management are governed. Building one centralized "master" data management platform is not often organizationally or politically possible, regardless of how technically tempting. Building a common data and analytics playbook, designed collaboratively by experts across the business and providing common templates and processes that can be replicated across a complex organization, is a great way to scale innovation and insight from individual data and analytics use cases.

Practice 3: Align Business Strategy With Change in Culture and Learning

Challenge

According to IDC research, 89% of European CEOs are under increasing pressure to digitally transform their organizations. At the same time, internal challenges and the inability to get acceptance have become major hurdles in this transformation. Driving cultural change has become the second most prioritized investment area to drive digital transformation – 26% of European organizations put this as their highest priority, following technology investments (30%), for DX initiatives.

Improving data analysis in an organization is typically seen as a technology challenge, but examples throughout Europe show that when the move toward a data-driven organization becomes important enough, the alignment between the business strategy and the cultural change and learning strategy of the organization becomes imperative for success. The challenge for organizations in which data analysis has become important enough is to understand the elements of culture and learning that need to become part of the transformation.

Example: European Pharmaceutical Company

A global life sciences company, headquartered in Europe with worldwide operations including 24 countries in Europe, has been on a digital transformation journey over the past three to four years. Its vision is for a future of personalized healthcare, driven and informed by science and data, and aimed at substantially improving the outcomes for patients and healthcare systems worldwide. Core to the company's approach is that its business strategy and its digital strategy is one and the same. The company focuses on the discovery, development, and commercialization of prescription medicine in biopharmaceuticals and oncology.

The life sciences industry generates an increasing amount of data and consumes a massive amount of external data. Enabling intelligence and an ability to draw conclusions from vast amounts of data generated by several different sources, are emerging as key competitive factors in life sciences. Life sciences companies generate and have access to more data than ever before, a quantity expected to grow exponentially. But according to IDC survey data, only 29% of European life sciences organizations had adopted Big Data/analytics and artificial intelligence solutions in 2020, while 26% were planning to adopt and 23% were evaluating adoption.

To the company, it became clear that to stay competitive, its entire research, production processes, and operations would come to depend on data analysis and the ability to use data in the development and production of new products. It had to undertake a significant cultural change program across the organization, aiming to empower all employees to combine knowledge and experience with the power of data and technology, creating a "digital" mindset in the organization to drive business transformation.

The first step was to create a digital leadership bootcamp that aims to get the top management and leadership of business areas to understand how digital technologies would impact the organization and understand the possibilities this could bring. The next step was to implement new ways of working with design thinking and agile to not just take the old processes and make those digital, but also rethink how technology could make processes smarter and more adaptable as well as to apply automation and AI where possible. This aim was also to bring agility and change readiness into the organization. An element in this step was to create a company-specific lexicon to ensure all employees would use the same language around the technologies.

The company then established an enterprisewide Digital and Data Academy with a comprehensive Digital Awareness Hub (hosted in its learning management system) that offers practical, quality education and access to experts. The Hub has three main aims:

- To develop enterprisewide digital literacy, data, and analytics capability
- To showcase the company's digital strategy, case studies, and people to help align around the digital innovation happening across the organization
- To provide access to digital experts and peer networks for sharing and collaborating on digital activities

The company has seen a growing network of digital pioneers that are drawing on Digital Awareness Hub resources across initiatives. These resources include regional workshops, learning hackathons, and mapping out employee training needs against learning during/for capability assessments.

One of the key objectives for the company was to triple the amount of clinical data available for reuse. It is also adding chemistry and biologics data, imaging, real-world data, and multi-omics (biological analysis in which the data sets are multiple "-omes" — genome, proteome, transcriptome, epigenome, metabolome).

Part of the reason for the data-driven digital transformation was also to improve R&D. In 2020, the company reported a record number of new drugs progressing through the pipeline. The number of new drugs in the pipeline were up 63% from the previous year.

Guidance

As digital transformation becomes more than technology, it leverages and profoundly impacts the human capital of the organization. To stay competitive, the life sciences company had to transform toward data-driven processes throughout the company. Consequently, cultural change, skills sourcing, and skills development strategy had to become an integral part of the transformation program and business strategy.

Many organizations are facing the challenge of becoming more data driven. Most organizations implementing data analysis — aiming to support lines of business with improved decision support — understand the need of user experience and training, but our research clearly shows a disconnect between the technology implementation of data science and data analysis on one hand, and the business strategy and the need for cultural change and learning on the other. The life sciences company understood that the cultural strategy had to emerge from and become part of the business strategy. It had no choice — the transformation was very profound to the business itself, but the alignment between business change, cultural change, and learning strategy was the most important success factor in that transformation.

Data proficiency needs to be developed, both as a skill and as a part of organizational culture at all levels, including top management and in all lines of business that are in any way affected by the program.

Practice 4: Build a Data Culture Through Education and Training

Challenge

As economies continue to digitalize, companies are called upon to become data driven — to put data at the heart of their business operations and decision making and to instill a data culture throughout their organizations. But it is not obvious how to achieve this, what steps to take, in what order to take them, and what a data culture means in practical terms.

Example

Orange Business Services is the global enterprise services division of France-headquartered telecom provider Orange. It has 28,500 staff in over 100 countries providing network, communications, security, cloud, and data services and solutions.

Being a provider of data solutions to enterprises, Orange Business Services (or simply Orange) has an external, customer-facing view of data as well as an internal, operational view. These two views inform each other — the solutions that the company develops drive requirements for its own data operations, and Orange's own data journey manifests indirectly and directly in customer engagements.

While it had a small existing data professional services capability, Orange Business Services kick-started its major push into data with the acquisition of French data consultancy Business & Decision (B&D) in 2018, and this acquisition has played a central role in the company's data strategy from an internal and external perspective. Orange started working on its own data journey a little before it acquired B&D, when it realized that its ambition to become a network-native digital services provider relied on it becoming a data-centric organization. In turn, this relied on creating a data culture through the company to secure commitment from senior management; foster an open, collaborative approach to data sharing across business units; and develop the skills required to generate value from data for itself and its customers.

To create this organizational data culture, Orange has focused on developing skills via training/education and talent management. Its aim is for all employees and managers to be educated about data and how to use it, data governance, regulation, protection, ethics, and Orange's own data operations and heritage, and that data skills are built into HR recruitment and career development processes.

Training modules and learning paths are targeted at different roles and levels of expertise within the company under the "L'Ecole Data" umbrella. Online video courses delivered via the Orange Learning portal that raise awareness of data and basic operations are targeted at a wide range of non-specialist employees. In-depth training that provides academic and professional certification is targeted at specialists and experts and is provided by Orange (Ecole de la data Business & Decision, and Orange Campus Space for Data & AI) and external training partners (Coursera, Google Cloud Platform, Microsoft AI School, and Ecole Polytechnique Executive Education).

In addition to formal training, Orange runs an internal program — Community DATA AI — that brings together experts to organize data-related events, share information, mentor employees, and work on data projects covering a range of use cases. For its enterprise customers, Orange Business Services provides training to complement its data services and solutions. The Business & Decision University platform — with learning modules on data architecture, security, governance, AI, and data science — was created partly in response to customers requesting the same training for themselves that Orange consultants had taken.

Orange has created several HR processes aimed at managing data skills and talent in recognition of their importance to the company and their scarcity in the market. Data-related job descriptions and profiles are defined consistently, and data-related career paths with related training are mapped out for new hires and existing employees looking to reskill.

To date, around 1,200 Orange Business Services employees have taken internal data training and 600 have taken external data modules from Coursera. As a result, Orange has seen several positive outcomes:

- Business and IT teams are working together on ways to enable and accelerate access to data and development of new use cases.
- Customer experience has improved as greater use of data is enabling a shift in measurement from product-related metrics to experience-related metrics.
- The company has developed tools to track and manage interactions with customers based on gathered data.

Orange will continue to develop its data training resources and initiatives, and plans to:

- Add new training courses to its platform, for example on data governance
- Streamline data governance across the company
- Define a process to take new data use cases from inception through POC to industrialization with minimal lead time
- Create a value measurement framework to quantify the value delivered by data use cases in terms of revenue uplift, operational efficiency gains, cost saving, cost avoidance, etc.
- Automate the process of recommending new training to employees based on the needs of Orange Business Services' strategy and employees' personal interests
- Develop course content so it integrates better with employees' workflow

In building its data strategy and associated data culture, Orange saw several successes. Most importantly, it succeeded in securing commitment at the highest level for its strategy and the required organizational transformation. It has also achieved a high level of quality and experience in its course trainers who are also practitioners in the field, with customers imparting valuable knowledge beyond the technology and adapting the training to individuals.

Orange has identified areas for further work. These include the level of supervision and feedback during training — Orange found it difficult to quantify outcomes in terms of increased knowledge and competence because of unsupervised self-training. In hindsight, it was also difficult to scale up and assess the ROI of its data initiatives in the early stages.

To continue its data journey, Orange Business Services intends to:

- Scale up use cases and develop the handover process between pilot/small-scale operation and production environment, including the cultural aspects and changes needed within operational teams
- Continue and accelerate the transition from a technology-driven to a data-driven culture
- Provide easy access to data throughout the organization to drive overall data maturity
- Reinforce data-driven leadership by helping business leaders demonstrate data skills and data-driven decision making.

Guidance

Orange Business Services highlights lessons learned and recommendations for companies on their own data journeys:

- **Involve HR.** Participation of HR is essential in fostering and codifying data culture, skills transformation, and corporate culture as well as addressing the ethical aspects of data and AI.
- **Training.** Orange recommends that companies start with a broad data awareness campaign contextualized to all parts and levels of the business. Training should be varied, employing a mix of resources in a hybrid learning approach to maintain engagement. Courses should strike a balance between theory and practice. Orange has found that the optimal training regime in terms of ROI for roles such as data engineer and data scientist covers 25% theoretical and 75% practical work, spread over three months.
- **Data curation.** While choice of tools and platforms is vital, ensuring data quality is more important. Do not underestimate the effort to achieve accurate, usable, and consistent data. In addition, Orange asserts that companies should rethink their data value chains end-to-end to maximize the value of internal data assets.
- **Culture.** While much ideation and activity will come from business units and individuals, the vision and strategy needs to come from the top of the organization to drive companywide commitment and consistency. A data champion should be appointed who is part of — or close to — the C-suite (e.g., Chief Data Officer).

Orange believes the benefits achieved from its data initiatives are in large part due to its attention to data culture development through education and training. Developing such a culture is regarded as having equal or greater importance to long-term success than immediate concerns such as choice of technology, platforms, or partners.

About IDC

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