WRITEN BY

ALEXANDER ZAGNETKO
Consulting, Data Management
and Digital Transformation
KPMG in Slovakia

KPMG

NAVIGATING THROUGH TURBULENCE

Three years have passed since the world entered an era of instability. For companies and organizations, this ultimately means that the ability to collect and use data correctly determines business survival.

What does turbulence mean in terms of data analysis and decision-making approaches? Ultimately, its main consequence is that most of our experience, statistics, and practices quickly become obsolete and depreciate.

The value of data and effective tools for its analysis and enrichment in the digital economy is enormous. On the other hand, in conditions of uncertainty, when it is often unclear even which sources and approaches are trusted, stakeholders frequently tend to be very skeptical about any quantitative methods or digital tools. However, it is imprudent to rely only on intuition and a 'business as usual' philosophy when making decisions.

WHAT CHALLENGES DO ORGANIZATIONS FACE AND HOW THEY CAN ADDRESS THEM?

A modern business cannot be efficient without a set of data collection, exchange, and processing solutions that allow you to consolidate, control and manage all processes and assets, as well as quickly connect required external resources.

Collection, analysis and use of data are key components of any strategy. In times of instability, new data carry much more weight than previously collected data. However, data are of no value unless policies are in place to verify its reliability, relevance, and completeness. Until now, many companies lack the basic principles, tools and frameworks for working with data. There are certain measures to mitigate risks and gain competitive advantage in a disruptive environment.

- Forecasting horizons and intervals for checking correctness of previously made assumptions should be significantly reduced. Testing of hypotheses needs to be more frequent. To be able to quickly formulate assumptions about how demand is changing, to develop effective methods for interacting with a highly volatile market, and to perform rapid prototyping are of great importance.
- The fail fast philosophy that makes it possible to quickly verify the viability of new ideas (with the subsequent scaling of successful approaches for wide use) is used more and more often.
- Responsiveness to change has to increase drastically. This, first of all, means changes in approaches to data processing. Organizations often need tools and methods for real time analytics; policies for data cleansing, normalization, and structuring; computational capabilities augmentation, for example, with public cloud platforms.
- All data models should be tested on practical tasks. Especially when it comes to "black boxes" – systems based on algorithms whose complete description is not available or is too complicated.
- Rapid integration and scaling of data processing systems as well as connection with external sources and platforms are impossible without API.
- B2B and B2C services based on machine learning (ML), DaaS platforms (data-as-a-service), and industry cloud solutions help businesses quickly fill the gaps in their own resources and expertise.
- Creation of risk matrices covering, inter alia, changes in the economic environment, production costs and demand patterns, disruptions in supply chains and access to key production assets are becoming essential.
- Cybersecurity and data protection issues, which also cannot be resolved without monitoring tools, anomaly detection and predictive analytics, are also of great importance.
- Full factor analysis ceases to be effective due to lack of time and relevant data. Ad hoc and heuristic models can be a temporary solution, but they must be constantly reviewed in the light of new information.
- An abrupt change in multiple indicators can generate erroneous assumptions about causal relationships. Do not forget the well-known thesis: correlation does not imply causation.

Currently, many developers, vendors, leading IT corporations offer powerful tools for collecting, analyzing, and applying data in business processes.

It goes without saying that it is extremely important to understand which ones are right for you. The choice of the right solution depends on many factors. Before implementing any enterprise system, it is necessary to develop a digital strategy, data policies, as well as target data architecture, considering requirements and characteristics of your organization.

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Customization plays a key role today. The ability to offer a product / service that best suits the needs of a particular user, to produce, if necessary, products in batch size 1 format, in many cases will determine the fate of a business.

In turn Digital Transformation is a continuous process by which enterprises adapt to or drive disruptive changes in their customers and markets by leveraging digital competencies to innovate business models, products, and services. This phenomenon impacts and involves every organization, even those that renounce to develop their data strategy or implement new digital tools and techniques.

Successful companies started their digital transformation with business goals and a digital strategy definition as a first step towards an information-centric organization or digital-native enterprise.

Comprehensive data management is the next step in this journey. The overall goal is to ultimately enhance the value of data and information to support regular and new business operations as well as decision-making.

When digital/data strategies and practices are in place, AI/ML allow to sharply increase the efficiency of processes, bringing the business to the next level.

While digital divide is growing, many organizations are still reluctant to perform digital maturity assessments, vulnerability and gap analysis; fail in development of data security and business continuity programs aligned with a digital/data strategy. They also don't know how to measure the value of data, implement advanced data management, build transparent and actionable reporting and planning procedures. Most of them struggle with digital literacy, as well as KPI selection and benefit cost analysis.

In a calm market this means a significant loss of revenue; in an era of turbulence, it can cast doubt on the future prospects of the business as a whole, not only in the long term but in the here and now.