AppliediT

Data democratization: The key to a more competitive company

Introduction

Can you imagine a world where information flows freely and everyone has the power to make data-driven decisions?

Today, data has become the new oil. Companies that know how to use it effectively have a significant advantage in the market. However, this information is inaccessible to most employees.

The aim of data democratisation is to change this reality. It is about putting the power of data within everyone's reach, regardless of their role or technical knowledge.

In this ebook we will explore in depth the concept of data democratization. We will see what it means, why it is important, how it is implemented and what are the great benefits after its implementation.

1. What is data democratization?

Data democratization is a transformative concept that is changing the way organizations approach data access and use.

In other words, data democratization is the process of making data accessible and understandable to all members of an organization, regardless of their role or technical level. It relies on breaking down the barriers that have traditionally limited access to information, such as technical complexity, data silos, and high costs.

But that's not all, this concept is important because it allows:

• **Have greater agility in decision-making:** Having access to up-to-date and relevant information enables faster decision making. Accessibility to real-time data enables organizations to respond quickly to market changes and customer needs.

• **Increase innovation:** By encouraging data exploration, new business opportunities can be identified.

Through comprehensive data analysis, organizations can identify patterns and trends that could lead to new products, services, or business models.

• **Improving organizational culture:** Data democratization fosters a data culture where information is valued and used to drive growth.

By sharing a common data-driven vision, organizations can align all their employees around common strategic objectives.

• **Reduce costs exponentially:** By eliminating the need to search for information across different silos, employees can spend more time on value-added tasks.

Today, businesses generate a huge amount of data on a daily basis. However, many organizations still face challenges in managing and leveraging that information. **The main obstacles are:**

- **Data isolated in silos:** Information is scattered across different systems and departments, making integration and analysis difficult.

- **Lack of tools and skills:** Not all companies decide to invest in having tools and trained personnel to manage and analyze large volumes of data.

- **Security and privacy concerns:** Data protection is a priority, and many companies are cautious about sharing sensitive information.

Despite these challenges, companies now recognize the value of data and implement strategies to democratize its access and use.

In summary, data democratization is a trend that is transforming the way businesses operate. By making data accessible to everyone, organizations can make smarter decisions, drive innovation, and improve their performance.
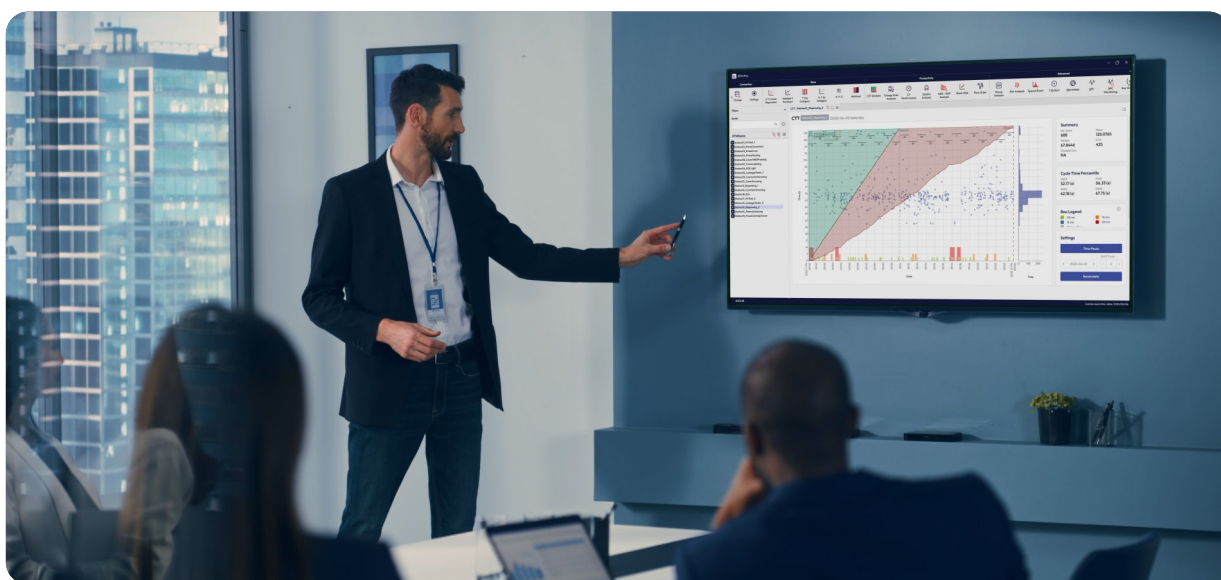
2. Data collection and the preparation of predictive analytics

Today, data has become the new oil of the digital economy. But what makes data so valuable? The answer lies in its intrinsic value and how it can be used as a strategic asset.

What is the intrinsic value of data?

The intrinsic value of data lies in its ability to:

- **Generate knowledge:** By analyzing large volumes of data, we can identify patterns, trends and correlations that allow us to make more informed and strategic decisions.

- **Personalize experiences:** Evaluate the data available within the organization and look for external sources that can expand the information.

- **Innovate:** Data is the raw material of innovation. By analysing it, we can discover new business opportunities and develop disruptive products and services.

- **Optimize processes:** Data helps us identify inefficiencies in processes and optimize them, reducing costs and increasing productivity.

## The democratization of data and its impact on intrinsic value

The democratization of data – the availability of vast amounts of data at ever-decreasing costs – has exponentially expanded its intrinsic value. By making data more accessible, it can be used by more people and organizations, generating more knowledge, innovation and value.

Why is data a strategic asset?

- **Relative scarcity:** Although there is a large amount of data available, high-quality and relevant data is scarce and valuable.

- **Durability:** Data can be stored and reused over time, making it a lasting asset.

- **Scalability:** The value of data increases as more data is accumulated and new technologies are developed to analyze it.

- **Competitive differentiation:** Companies that make the most of their data can gain a significant competitive advantage.

In conclusion, data is a fundamental strategic asset in the digital economy. Its intrinsic value lies in its ability to generate knowledge, personalize experiences, innovate and optimize processes. The democratization of data has further expanded its value, making it increasingly important for organizations to understand and leverage this resource.

To fully realize the value of data, organizations must: Invest in data infrastructure, foster a data culture, collaborate with data experts, and protect data.
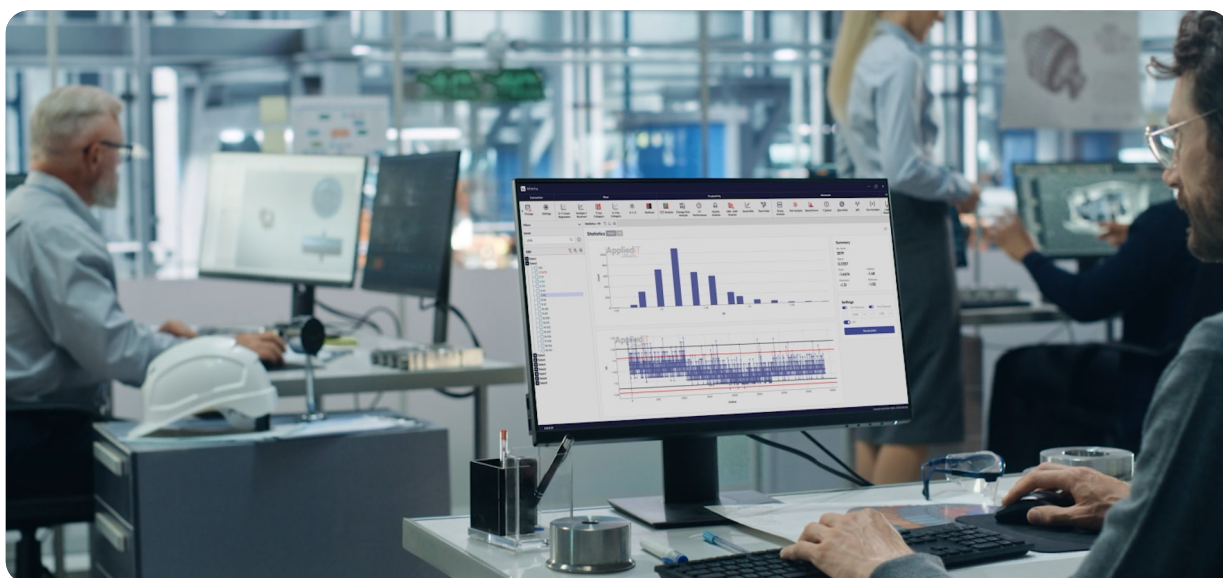
3. Implementing data democratization

Data visualization tools play a critical role in simplifying complex data sets and making them easily understandable to everyone in the organization.

Through visually appealing charts and dashboards, users are empowered to explore and analyze data on their own, without the need for specialized technical skills.

At AppliediT, we have developed RTM Pro, a digital platform, used by large industrial companies around the world, that allows you to obtain a complete view of your factory in real time, from production to maintenance and quality. As well as quickly identify areas for improvement and take corrective measures to increase efficiency and productivity.

You will be able to predict and prevent problems before they affect your production and optimize the use of your resources to reduce costs.

Unlike other data analysis software, RTM Pro allows you to start with just 3 basic elements to reveal valuable insights for your business: a part identifier, a timestamp, and a performance indicator.

RTM Pro allows you to assess the OEE of an entire production line. Even the smallest companies with limited resources can start tracking and improving their production efficiency with our software.

Training employees in data use is a strategic investment that generates multiple benefits for both employees and the organization as a whole.

By empowering employees with the skills to harness the power of data, businesses can make smarter decisions, improve processes, and achieve greater success.

4. Benefits

Implementing data democratization policies is a generator of great benefits such as:

Increased agility in decision making

With access to accurate and up-to-date information, employees can make more informed and faster decisions, streamlining processes and reducing response times.

Collaboration increases

By sharing a common data-driven view, collaboration increases across teams and departments.

Empowering workers

By providing the right tools and knowledge, employees are empowered to be more proactive and autonomous in their work.

Better understanding of the customer

By analyzing customer data, businesses can gain deeper insights into their needs and preferences, allowing them to offer more personalized products and services.

5. The future of data democratization

The democratization of data has revolutionized the way organizations make decisions and generate value. However, this process is constantly evolving, presenting new trends and challenges that are essential to understand.

Emerging trends

- **Artificial Intelligence as a Catalyst:** Artificial Intelligence (AI) is positioned as a key driver in the democratization of data. By automating complex analysis tasks and providing actionable insights, AI will enable an ever-wider audience to extract value from data.

- **Real-Time Data and Business Agility:** The demand for informed decisions in real time will drive the development of technologies that can process and analyse large volumes of data instantly. This will enable organisations to adapt more quickly to market changes.

- **Data Ethics and Privacy:** As data democratization expands, the need to ensure privacy and ethical use of data becomes more pressing. Regulations and ethical standards will play a key role in this context.

- **Democratizing Data Science:** Data science will become more accessible thanks to the proliferation of open source tools, online learning platforms and process automation. This will allow a greater number of professionals to contribute to the generation of knowledge.

- **Data as a Strategic Asset:** Data will be consolidated as a strategic asset for organizations, promoting collaboration and the exchange of information through open data ecosystems.

Challenges to overcome

- **Skills Gap:** The democratization of data requires the development of new digital skills in the workforce. Training and talent development will be crucial to closing this gap.

- **Data Quality:** The proliferation of data poses the challenge of ensuring its quality and reliability. Data quality management will be a determining factor in making sound decisions.

- **Data Security:** The democratization of data increases the attack surface, requiring the implementation of robust security measures to protect sensitive information.

- **Data Biases:** AI algorithms can perpetuate biases present in training data. Techniques need to be developed to identify and mitigate these biases and ensure fairness in outcomes.

- **Data Governance:** Data management and governance are becoming increasingly complex. Organizations will need to establish robust governance frameworks to ensure regulatory compliance and responsible use of data.

The democratization of data represents a milestone in the information age, radically transforming the way organizations operate and make decisions. By making data accessible to a broader audience, teams are empowered to generate valuable insights, foster innovation, and develop more effective solutions.

However, this democratization requires careful and strategic management, ranging from the definition of clear policies on access and use of data to investment in tools and training to ensure its quality, security and privacy.

In an increasingly competitive world, organizations that manage to effectively harness the potential of their data will position themselves as leaders in their respective sectors. Data democratization is not just a trend, but a strategic imperative for success in the digital age.

Data is the new oil, but only if it's refined. Invest in democratising data to drive innovation and efficiency. By providing intuitive and accessible data analytics tools, you'll be empowering your teams to identify patterns, predict trends and optimise processes.

Are you ready to take control of your data?
contact@applieditweb.com

AppliediT

AppliediT combines a multidisciplinary team of expert IT engineers, data analysts and software developers to offer operational excellence, data engineering and application development services for data analysis in the industrial environment.

Our goal is to transform the data generated in the industrial environment by people, processes, machines and information systems (ERP, CMS...) into knowledge to improve data-driven decision making, increase efficiency, save costs and optimize production times.

For more information, visit applieditweb.com