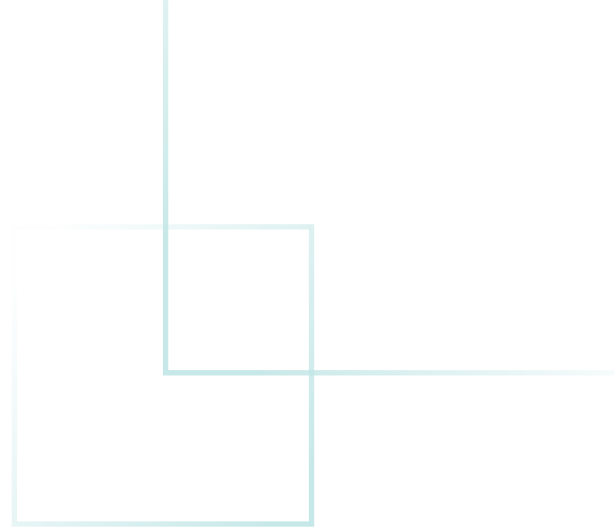# cepheo

Go from data to insight to action

How to lay the foundation for data-driven decision-making processes.

Go from data to insight to action

It has been said many times, but has never been more true than it is now. Your most valuable business asset is your data.

A better, more accurate and consistent ability to make decisions is a goal for many companies and organizations. It drives them to become data-driven and to identify and understand the data analytics components and processes that enable them to improve their decision-making processes and outcomes.

Making data the foundation for decisions across the company isn't simple. The amount and variety of data generated by companies every day increases exponentially, and that fact alone is a challenge. At the same time, it's necessary to look across your business components and processes to achieve the your potential.

Data only has value when it's used to create insight. Insight only has value when users trust the data on which it is based and actively use and share that insight. Shared insights only have value when used to foster collaboration, so you can reap the value of the insights you have.

So what steps do you need to take to create the foundation that will help your company on the journey from data to insight to action? Read on to learn more

You will find definitions of common data-related terms and concepts at the end of each section and relevant examples of solutions and technologies from the Microsoft ecosystem throughout this brochure.

Take control of your data

The increasing volumes of data can be transformed to form the basis for decision-making processes that are based on insights rather than gut feelings and pure intuition.

To do this across your company, a structured and strategic approach to data sources, data collection and **data standardization** is needed.

In all likelihood, you and your company don't need more data, but better data that is validated, reliable and managed. Better data can be a combination of **structured** and **unstructured data**, as modern data collection, management and storage systems, such as data warehouses and data lakes, are able to work with different types of data in an efficient and practical way.

A centralized data platform such as **Microsoft Azure** and well-defined workflows are also essential to ensure data quality, IT governance, compliance and security.

It's also crucial that your business strategy and goals drive your approach to data, so that data is not collected blindly, but instead enables and supports the processes and initiatives that will drive your company forward.

Database, data warehouse and data lake – what is the difference?

Databases work best when there is only a single source of structured data.

Data warehouses can accept data from multiple sources, but still only structured data.

Data lakes can accommodate data from both structured and unstructured sources.

Data lakes can be more cost-effective than maintaining multiple databases or data warehouses in silos, as it allows you to store and process data in a more flexible and scalable way.

For data to ultimately make a difference, you need people across the organization to trust the data itself and the conclusions derived from that data. Without trust in shared data, people will resort to alternative, manual tools like Excel sheets that are personalized or only shared internally in small teams or departments.

At best, decentralized data processing and analysis will allow some employees to make decisions based on insights and data, but when insights are not shared across the company, it limits the full value the company can derive from them.

At worst, your employees will make poor decisions that they wouldn't have made if they had access to a more accurate and complete data set. Having a consistently high level of data quality and **data hygiene** requires, first and foremost, that you have the right systems in place to create the types of behaviors that match your ambitions with data.

But systems can't do everything. It is, therefore, crucial that current and future employees are integrated into the right **data culture** that ensures an understanding of the value of data and how the right use of systems can benefit all employees in both the short and long term.

Once you have a data platform in place that enables broad – but controlled and secure – access to the most important data sources, the next task is to transform this raw data into a powerful resource that can be explored, analyzed and extrapolated to power everyday decision-making.
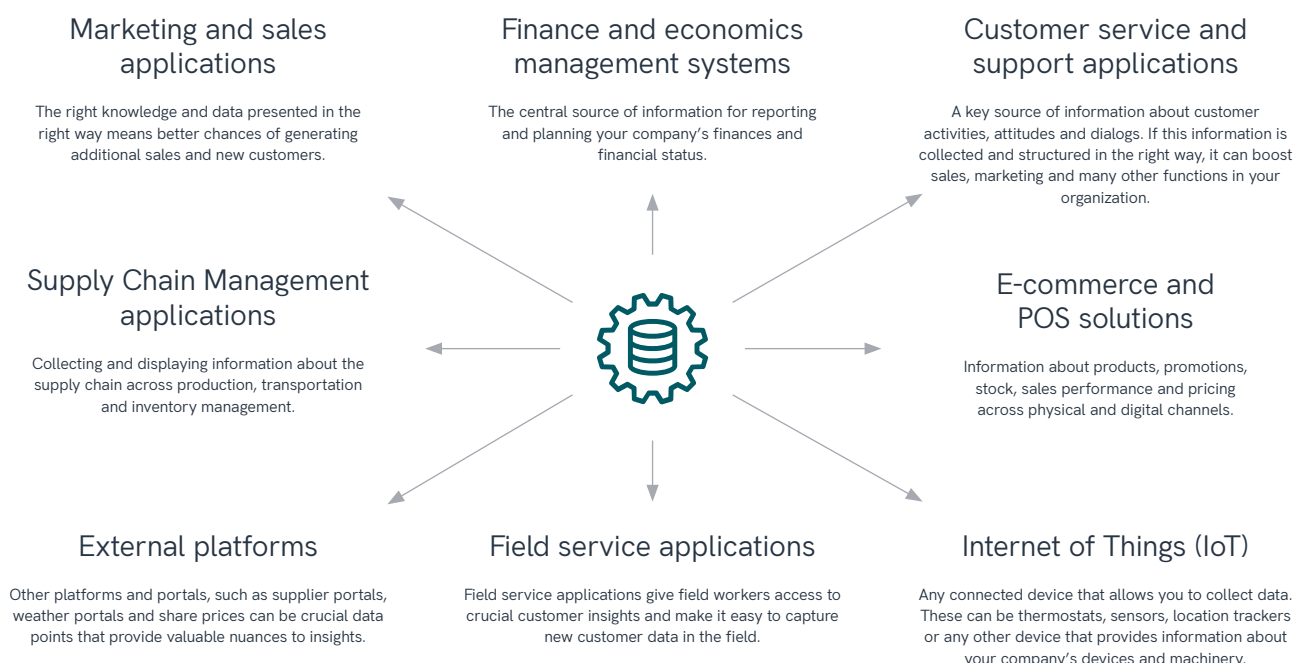
What are Microsoft's Common Data Model and Dataverse?

Microsoft's Common Data Model is a collection of standardized, extensible data schemes with entities, attributes, semantic metadata and relationships.

Microsoft Dataverse, formerly known as Microsoft Common Data Service, is a cloud-based storage service and data management solution used in the Microsoft ecosystem of applications and Microsoft Dynamics 365 applications.

For example, Dataverse can be used as a data lake together with Microsoft Power Apps. Dataverse is based on Microsoft's Common Data Model and is built on Microsoft Azure SQL.

Key data sources for your company

Marketing and sales applications

The right knowledge and data presented in the right way means better chances of generating additional sales and new customers.

Finance and economics management systems

The central source of information for reporting and planning your company's finances and financial status.

Customer service and support applications

A key source of information about customer activities, attitudes and dialogs. If this information is collected and structured in the right way, it can boost sales, marketing and many other functions in your organization.

Supply Chain Management applications

Collecting and displaying information about the supply chain across production, transportation and inventory management.

E-commerce and POS solutions

Information about products, promotions, stock, sales performance and pricing across physical and digital channels.

External platforms

Other platforms and portals, such as supplier portals, weather portals and share prices can be crucial data points that provide valuable nuances to insights.

Field service applications

Field service applications give field workers access to crucial customer insights and make it easy to capture new customer data in the field.

Internet of Things (IoT)

Any connected device that allows you to collect data. These can be thermostats, sensors, location trackers or any other device that provides information about your company's devices and machinery.

> "We see considerable potential in consolidating an organization's data on a common platform that facilitates the linking of data inputs, giving employees and AI the best opportunities to convert data into insights."

Christian Koch-Bentzen
Go To Market Lead: Dynamics 365 & Power Platform,
Microsoft Denmark

Azure

Microsoft's cloud platform for IT systems. Files and applications can be placed on an Azure server from which the applications can be run directly.

Data hygiene

Ensuring that stored data is accurate and up-to-date, which is crucial for trust in data, insights and the decisions that are based on them.

Data culture

Attitudes and actions of employees in relation to data. Crucial factors for data culture are whether all employees know and understand the value of data, as well as the importance of data hygiene and how to enforce it.

Data standardization

Ensure consistent representation of information to create coherent IT systems in the organization.

Structured and unstructured data

Structured data often comes from ERP or CRM systems where the data generated has been structured and systematized so that it is easily searchable. A spreadsheet in which each column and row contains very specific data sets is also structured data.

Unstructured data is social media news feeds, images, videos, emails and the like.

Go from data to insight

Once you have your basic data platform and data sources under control, you can start converting this data into insights.

The analysis ladder (see figure below) illustrates different degrees of analysis and the types of insights they can generate.

The value of getting to the next rung on the ladder is an increased ability to use data to make more sophisticated and informed decisions, and to shift focus from simply diagnosing past performance by using analytics tools to make projections and predict future trends and opportunities. This can help companies achieve their business goals.

So you can move from traditional enterprise reporting and business intelligence that supplied answers to the question "what happened?" to a more detailed analysis of historical data with better predictive reporting and anticipatory "what if?" scenarios.

Using **artificial intelligence** and **machine learning** will allow you to move on to prescriptive analytics, which will suggest next actions by analyzing different choices and known parameters to help you answer the question: "How can we make it happen?".

"As data quality and insights continue to improve, we can move away from retrospective data usage and reporting to support the value creation and risk minimization of the company moving forwards."

Christian Koch-Bentzen
Go To Market Lead: Dynamics 365 & Power Platform, Microsoft Denmark

The analysis ladder

4. Prescriptive analysis	How can we make it happen?	Suggests the next best action by analyzing different options and known parameters.
3. Predictive analytics	What's going to happen?	Explores what can happen by using algorithms on historical and external data.
2. Diagnostic analysis	Why did it happen?	Find out why something happened by looking at historical data. Usually via a BI tool such as Microsoft Power BI.
1. Descriptive analysis	What happened?	Analyze what happened by looking at historical data.
0. Data foundation	One data truth	Data warehouse or data lake depending on what you want to do.

Moving up the analysis ladder requires a solid and structured approach to data collection and standardization. Every step brings new value and new opportunities. With a strong and optimistic data culture, an organization will be better and faster at reaping the rewards of becoming data-driven by moving higher up the analysis ladder.

Employees are especially important. If there is a willingness and curiosity to evolve, the journey up the ladder will be much easier. It is, therefore, crucial to know your employees and how to increase data skills and understanding among employees and management.

Understanding where employees are on the change curve (see figure below) is crucial to help them move forward. As you move forward as a company, it changes the questions you are able to answer. From being able to answer "how did we do last quarter?" you will be able to ask "where were we most profitable?" and actually get an answer.
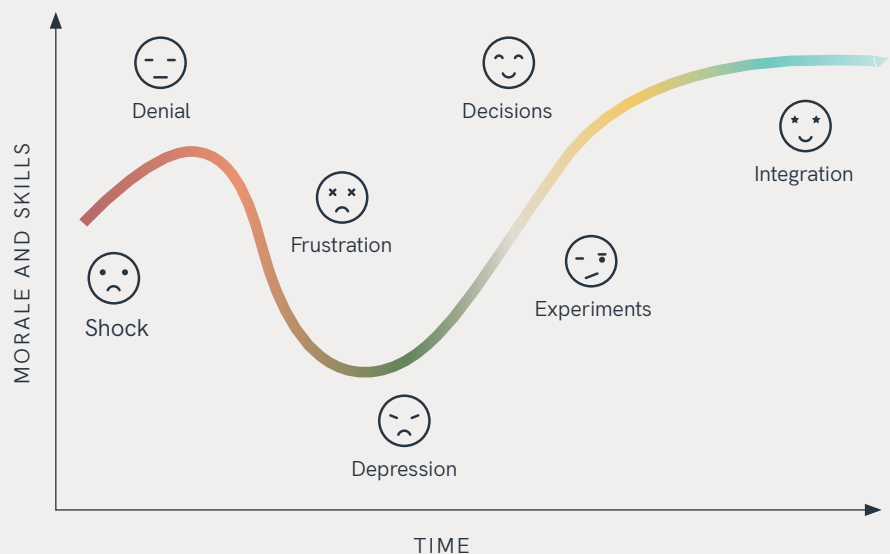
On the rungs of the ladder you will be able to answer "what can we expect the next quarter to look like?" and later "what will the next quarter look like if...?".
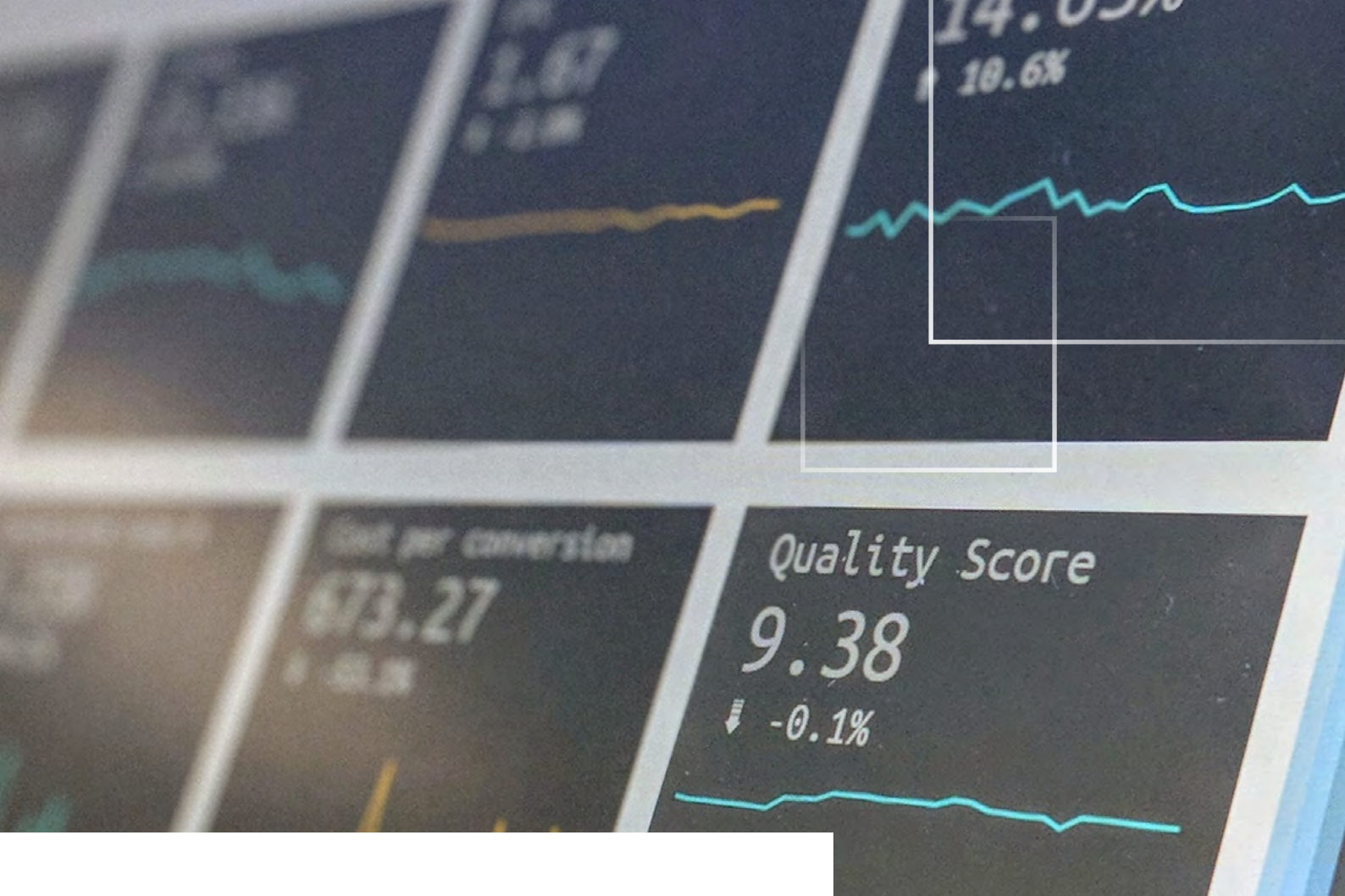
Once you've turned data into insight, the next task is to ensure that insight is shared and actively used throughout your organization.

Even though different departments have different focus areas, they need to work together to achieve the business goals that formed the original plan for the data strategy.

The change curve

The change curve was created by the Swiss-American psychiatrist Elisabeth Kübler-Ross in 1969. The curve can be used to understand the emotional unrest an employee experiences as a result of a change initiative in the workplace, e.g., a new software implementation or a business process improvement.

MORALE AND SKILLS

Denial

Decisions

Frustration

Integration

Shock

Experiments

Depression

TIME

What exactly is the difference between artificial intelligence and machine learning?

Artificial intelligence and machine learning are related concepts that are often confused.

Artificial intelligence is the creation of intelligent systems that can simulate human thinking and behavior.

Machine learning is a specific application of artificial intelligence that enables a system to learn from input data to improve its performance without programming.

"Fewer than 25% of front-line employees say they have the right tools to do their job."

Microsoft

Microsoft examples of analytics tools

- **Azure Synapse Analytics** is an analysis service that brings together data integration, data warehousing and big data analytics.

- **Microsoft Power BI** is an interactive data visualization software program developed by Microsoft with the primary focus on business.

Create action and value from your insights

The right use of analytics and collaboration platforms can make data and insights accessible and easier to access throughout the company.

By allowing everyone to create reports, make decisions and share knowledge based on the same data, you get closer to having a common frame of reference for decisions across the organization.

Common reporting and shared KPIs based on real, relevant business goals give everyone the opportunity to dig deeper to gain insights that enable better decisions and to work together towards common goals.

The right components allow you to share relevant data with business and supply chain partners, arming employees from sales and service departments with data that they can use to work more effectively with customers, suppliers and partners.
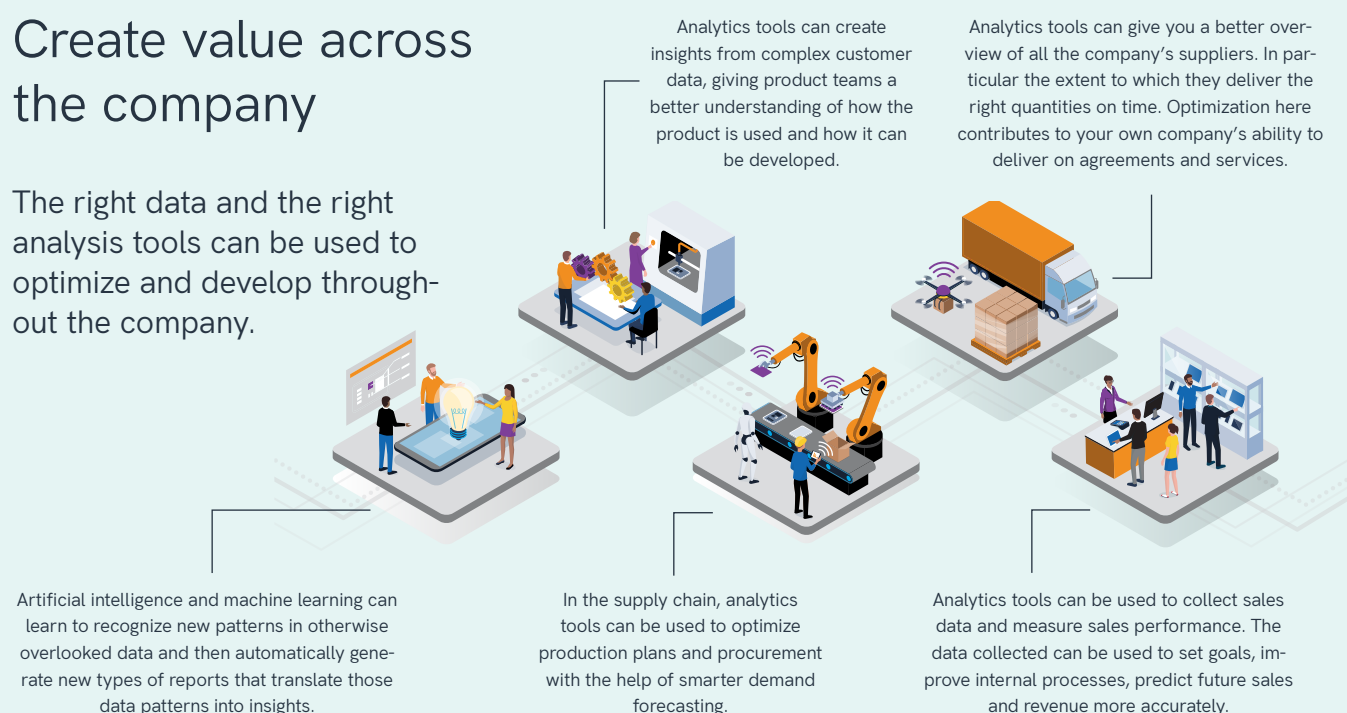
Automated and/or data-driven planning of resources, activities and operations will enable increased collaboration between departments, functions and employees.

Structured archiving, information sharing and documentation will increase individual and team productivity and learning from past activities.

Instead of simply optimizing existing collaboration processes, modern collaboration solutions can redefine them, so that your way of working is future-proof and efficient.

Create value across the company

The right data and the right analysis tools can be used to optimize and develop throughout the company.

Analytics tools can create insights from complex customer data, giving product teams a better understanding of how the product is used and how it can be developed.

Analytics tools can give you a better overview of all the company's suppliers. In particular the extent to which they deliver the right quantities on time. Optimization here contributes to your own company's ability to deliver on agreements and services.

Artificial intelligence and machine learning can learn to recognize new patterns in otherwise overlooked data and then automatically generate new types of reports that translate those data patterns into insights.

In the supply chain, analytics tools can be used to optimize production plans and procurement with the help of smarter demand forecasting.

Analytics tools can be used to collect sales data and measure sales performance. The data collected can be used to set goals, improve internal processes, predict future sales and revenue more accurately.

Examples of collaboration tools

Cepheo Collaborate

A pre-packaged knowledge sharing tool for organizations looking to streamline and structure business processes that require document management, email tracking, change logging, archiving and sharing across applications and user groups.

ERP, CE, and logistics systems

These are not collaboration tools in the traditional sense, but with shared access for the right groups to the same data and insights, these systems are the foundation for better, more informed and more effective collaboration throughout the company.

Microsoft SharePoint

A system for document management and file storage. SharePoint can also be used as a corporate intranet with centralized access to company information and applications.

Microsoft Teams

Central to modern collaboration, Microsoft Teams brings people, content and tools together so your employees can collaborate and share knowledge much more effectively.

Dialogs and groups in Teams can be integrated with data sources inside and outside the Microsoft ecosystem, so relevant information can be found directly in Teams without having to open other systems.

"Even the best data strategy, with a perfect standardized data base and high quality data hygiene is not enough. You will only benefit when data culture is anchored and insights can be shared freely in the organization."

Christian Koch-Bentzen
Go To Market Lead: Dynamics 365 & Power Platform, Microsoft Denmark

Getting started and moving ahead

Data is your most valuable business asset. But as explained in the introduction, data only has value when used to create insights. Insights only have value when shared. Shared insights only have value when used to foster collaboration.

You can only achieve this if you ensure your company has data and insights that employees and management trust enough to base decisions on. That's why you need platforms that enable you to feel the operational impact of these decisions – and the benefits they deliver – in every corner of your organization.

Modern technologies and solutions make this possible for all companies. As such, the extent to which data is used in your company is increasingly a critical factor in strengthening competitive advantage and customer loyalty to drive more growth.

In Cepheo, you get a partner who understands your company first and foremost and can choose the right IT solutions from Microsoft and other third-party vendors and help you move from data to insight to action.

> "Never underestimate the change management process and make sure the right framework is created to give your employees the opportunity to collaborate within the organization."

Christian Koch-Bentzen
Go To Market Lead: Dynamics 365 & Power Platform, Microsoft Denmark

Read more on **cepheo.com**

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Cepheo empowers businesses to adapt and succeed in a changing world. With locations across the Nordics, and decades of experience in implementing and evolving industry-specific solutions powered by the Microsoft platform, we help our customers use technology and data to make more informed decisions, optimize daily operations and bring out the very best in their people. Learn more at cepheo.com.

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