

# Enabling Data Driven Decision Making



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# Data Driven Decision Making (DDDM)

## Definition

**DDDM** is the practice of making data-driven decisions instead of just trusting your intuition or observations to influence your decisions.

## Focus

DDDM is focused on **collecting, analyzing, and interpreting data** to gain insights into manufacturing processes and operations.

## Adoption


It **requires a strategic shift in organizational culture and processes.**

## Requirements

It **requires a robust process** for collecting data and transforming that data into actionable insights.



# Key Business Drivers

- 
- **Increased Efficiency:** Automating processes and optimizing operations.
  - **Enhanced Agility:** Becoming more responsive to changes.
  - **Improved Quality:** Utilizing data and analytics to ensure higher quality products.
  - **New Business Models:** Enabling new ways of operating.
  - **Data and Connectivity:** Making data available to drive analytics and enhance human-machine interaction.

# Six Characteristics of a Data Driven Enterprise

1. **Data is embedded** in every decision, interaction, and process.
2. **Data is processed and delivered in real time.**
3. **Flexible Data stores deliver ready-to-use data.**
4. **Data operating models treats data like a product**
5. **Data ecosystem membership is the norm**
6. **Data Management is prioritized and automated**



# Benefits of DDDM

## Improved Efficiency

Employees can identify bottlenecks and inefficiencies in the production process.

## Enhanced Product Quality

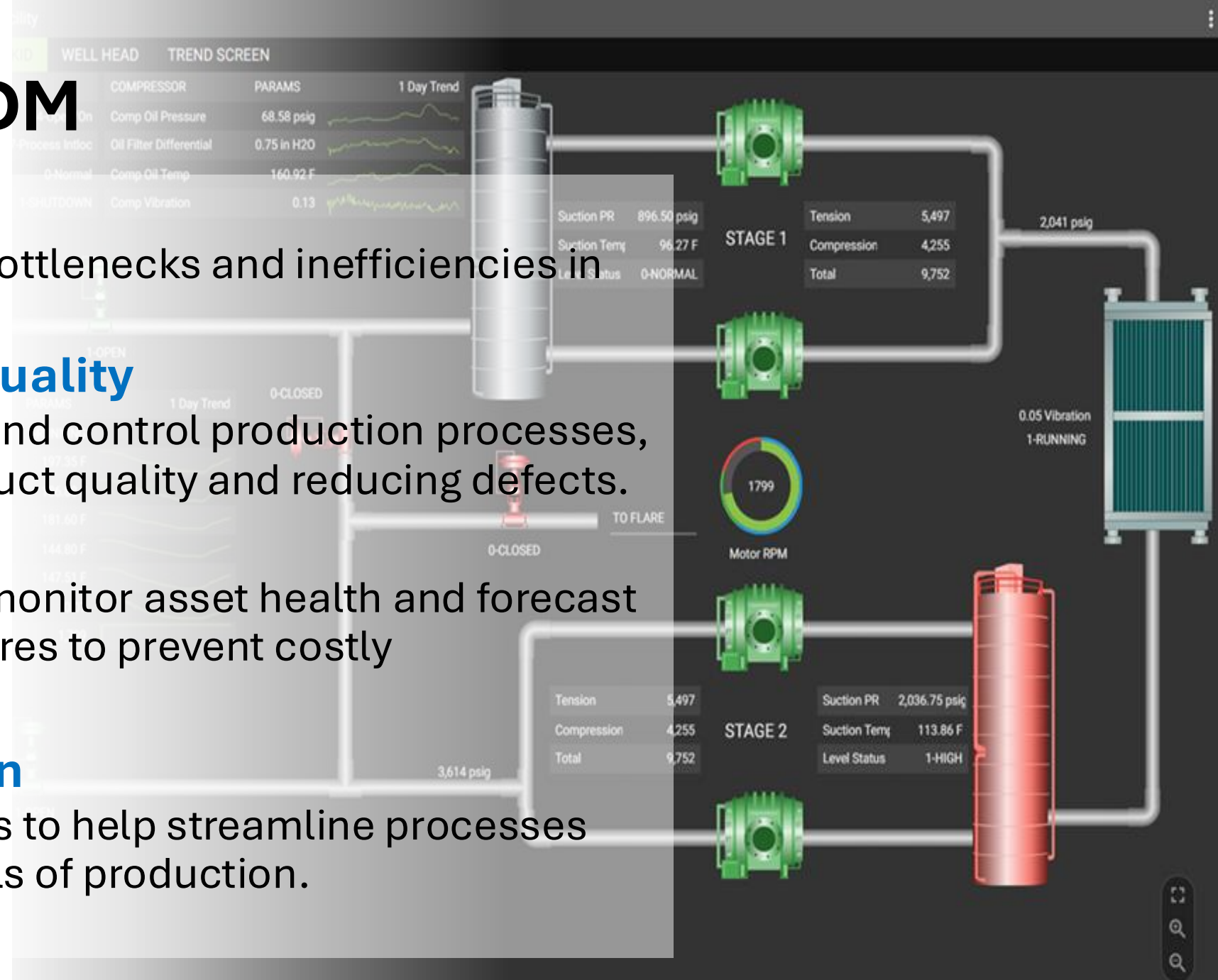
Employees can monitor and control production processes, ensuring consistent product quality and reducing defects.

## Equipment Uptime

Analytics and KPI's help monitor asset health and forecast potential equipment failures to prevent costly breakdowns.

## Process Optimization

Analysis can offer insights to help streamline processes and achieve optimal levels of production.



# Challenges

## Data Quality

Data accuracy and consistency is crucial for reliable decision-making.

## Data Integration

Integrating data from various sources can be complex.

## Data Interpretation

Properly interpreting data requires some expertise.

## Confirmation Bias

Selectively interpreting data to support preconceived notions.

## Poor Communication of Insights

Inability to effectively communicate and present data to drive appropriate actions.

# Getting Started

## Data Strategy

Develop a clear data strategy that aligns with the organization's goals and objectives.

## Data Literacy

Empower employees with the skills to understand, interpret, and act on data insights through training and resources.

## Analytical Tools

Invest in modern tools and platforms to facilitate data analysis and visualization.

## Data Accessibility

Ensure employees have access to relevant and accurate data, making it easily accessible for analysis and decision-making.

## Democratize Data

Empower all employees to utilize data, fostering a culture of shared responsibility and ownership.

## Data Governance

Establish clear data standards, policies, and procedures to ensure data quality, integrity, and compliance.

## Continuous Improvement

Foster a culture of experimentation, learning, and continuous improvement.

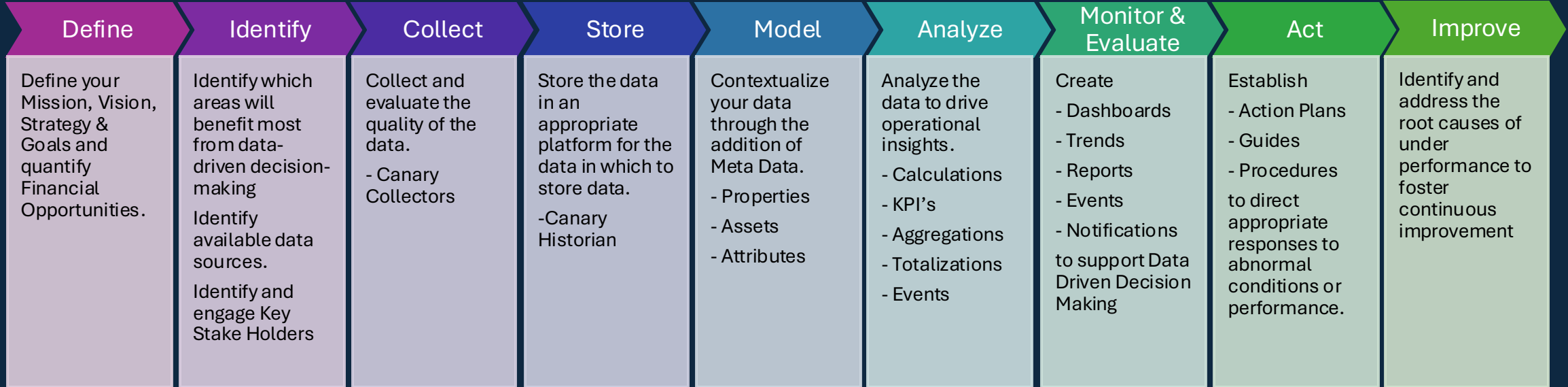
## Collaboration

Encourage cross-functional collaboration to break down silos and foster a shared understanding of data and its value.

## Performance Metrics

Align performance metrics and incentives with data-driven decision-making to encourage and reward data-informed actions.

# The DDDM Process





# Building a Data Driven Culture



# Vision

## 1. Define the Purpose

- Start by articulating why data-driven decision-making is important for your organization.

## 2. Set the Strategic Goals

- Outline what you aim to achieve through data-driven decision-making.

## 3. Envision the Future State

- Describe what success looks like when the vision is realized.

## 4. Identify Key Enablers

- Highlight the foundational elements needed to support the vision.

## 5. Create Vision Statement

- Craft a concise and inspiring vision statement that can be shared across the organization.

## 6. Align with Organizational Values

- Ensure the vision supports your broader mission and values, such as integrity, collaboration, or customer-centricity.







# Leadership

- ✓ Identifying, developing, and retaining talent.
- ✓ Motivating and empathizing with team members.
- ✓ Setting clear goals and holding the team accountable.
- ✓ Balancing data with heart-centered empathy and a focus on team well-being.
- ✓ Mastering data literacy and embracing organizational change.
- ✓ Strategizing with precision and building scalable ecosystems.



# Collaboration



## Involve Stakeholders

- Engage stakeholders in the data-driven journey by seeking their input and feedback.

## Storytelling

- Present data-driven insights in a clear and understandable way, using data storytelling techniques to make the information accessible to everyone.

## Continuous Monitoring and Feedback:

- Continuously monitor the effectiveness of data-driven initiatives and seek feedback from stakeholders to make improvements.

# Communication



## Explain the "Why"

- Clearly communicate the benefits of a data-driven approach and how it will improve decision-making and outcomes.

## Create a Data Governance Framework

- Establish a clear data governance framework outlining data collection, storage, usage, and security policies.

## Define Data Use and Policies

- Make sure everyone understands how data is collected, used, and protected, and what their rights are.

## Provide Feedback

- Provide regular updates on data-driven initiatives, their progress, and the impact they are having.



# Ensure Data Quality

## Identify Data Sources

- Identify required data sources and implement solutions to collect and store the data for use and analysis.

## Assure Data Quality

- Implement robust data quality checks and validation processes to ensure data accuracy and reliability.

## Define Data Standards

- Establish clear data standards and formats to ensure consistency and comparability across the organization.

## Add Data Context

- Develop rich context around the available data to increase its value and useability.







# Maintain Security & Privacy

## Strong Data Security Measures

- Implement robust security measures to protect sensitive data from unauthorized access and breaches.

## Compliance Checks

- Conduct regular compliance checks to ensure adherence to relevant data privacy regulations and industry standards.

# Assess and Define Training Needs

## Assess Current Data Literacy

- Conduct surveys or assessments to understand existing skills.
- Identify gaps in knowledge across departments.

## Tailor Training by Role

- **Leaders:** Strategic use of data, KPIs, and dashboards.
- **Managers & Supervisors:** Data interpretation, team performance metrics.
- **Engineers and Analysts:** Advanced analytics, data visualization, storytelling.
- **General Staff:** Basic data literacy, Excel, and Using Dashboards & Reporting applications

## Core Training Topics

- **Data Literacy Fundamentals:** Understanding data types, sources, and quality.
- **Data Tools & Platforms:** Training on tools like Excel, Power BI, Tableau, SQL, or Python.
- **Data Governance & Ethics:** Privacy, compliance, and responsible data use.
- **Data Storytelling:** Communicating insights effectively.
- **Decision-Making with Data:** Case studies and simulations.



# Training Delivery

## Delivery Methods

- Workshops & Seminars
- E-Learning Modules
- Mentorship & Peer Learning
- Certifications

## Embed Data in Daily Work

- Encourage use of dashboards and reports in meetings.
- Set data-driven KPIs and OKRs.
- Recognize and reward data-informed decisions.
- Regularly update training materials.

## Continuous Learning & Feedback

- Collect feedback to improve the program.
- Offer advanced training as employees grow.





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