

# Empowering the Future.

Bridge the gap between data and decision making with Power BI

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The aim of this seminar is to give an introduction to the Power BI (Business Intelligence) tool and its importance for EFACEC SA, one of the most important Portuguese companies. It will be presented few implementations at EFACEC and the consequents performance improvements. In the context of Industry 4.0 Analytics and Business Intelligence (BI) Platforms are needed to boosting the decision making in even more complex productions systems.

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# Introduction to Business Intelligence (BI)

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## Introduction to Business Intelligence (BI)

### What are Business Intelligence (BI) Tools?

A modern analytics and BI platform supports IT-enabled analytic content development. **It is defined by a self-contained architecture that enables nontechnical users to autonomously execute full-spectrum analytic workflows from data access, ingestion and preparation to interactive analysis and the collaborative sharing of insights** (Gartner, 2021).

Note: *Gartner was founded in 1979 as a research and advisory company, with a revenue of \$4.2B.*

**Business intelligence (BI) tools are types of application software that collect and process large amounts of unstructured data from internal and external systems, including books, journals, documents, health records, images, files, email, video, and other business sources.** While not as flexible as business analytics tools, BI tools provide a way of amassing data to find information primarily through queries. These tools also help prepare data for analysis so that you can create reports, dashboards, and data visualizations. The results give both employees and managers the power to accelerate and improve decision making, increase operational efficiency, pinpoint new revenue potentials, identify market trends, report genuine KPIs, and identify new business opportunities (Microsoft, 2021).

## Why use Business Intelligence (BI) Tools?

First off, data discovery, which used to be limited to the expertise of advanced analytics specialists, is now something everyone can do using these tools. And not only that, these tools give you the insights you need to achieve things like growth, resolve issues that are urgent, collect all your data in one place, forecast future outcomes and so much more (Erin Gilliam Haije, 2019).

Note:

*Erin Gilliam Haije, Content Marketer at Mopinion, has a background in international business and digital marketing.*



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# Introduction of Power BI

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# Introduction of Power BI

## Position of Power BI in the Market

Figure 1: Magic Quadrant for Analytics and Business Intelligence Platforms



Source: Gartner (February 2021)

## Introduction of Power BI

# Why Power BI (by power BI)

### Put BI in everyone's hands—economically

Because Power BI Desktop is free to use and Power BI Pro is available for a low monthly price per user, you can cost-effectively offer everyone BI and analytics capabilities to drive a data culture across your org.

### Unify self-service and enterprise analytics

Meet both your self-service and enterprise data analytics needs on a single platform. Access powerful semantic models, an application lifecycle management (ALM) toolkit, an open connectivity framework, and fixed-layout, pixel-perfect paginated reports.

### Get rapid, user-driven innovation

Receive weekly and monthly updates that improve Power BI features and capabilities—based on thousands of ideas submitted annually from a community of more than half a million members worldwide.

### Accelerate big data prep with Azure

Simplify how you analyze and share large volumes of data. By using a no-limits Azure data lake, you'll reduce the time it takes to get insights and increase collaboration between business analysts, data engineers, and data scientists.

## Introduction of Power BI

# Why Power BI (by power BI)

### Find answers fast with industry-leading AI

Take advantage of the latest advances in Microsoft AI to help non-data scientists prepare data, build machine learning models, and find insights quickly from both structured and unstructured data, including text and images.

### Get unparalleled Excel integration

Anyone who's familiar with Microsoft 365 can easily connect Excel queries, data models, and reports to Power BI Dashboards—helping to quickly gather, analyze, publish, and share Excel business data in new ways.

### Improve publishing efficiency and accuracy of BI content

Quickly identify differences and move content from development and testing to production with confidence using the simple visual cues in deployment pipelines.

### Turn insights into action

Go from data to insights and insights to action with Microsoft Power Platform—combining Power BI with Power Apps and Power Automate to easily build business applications and automate workflows.

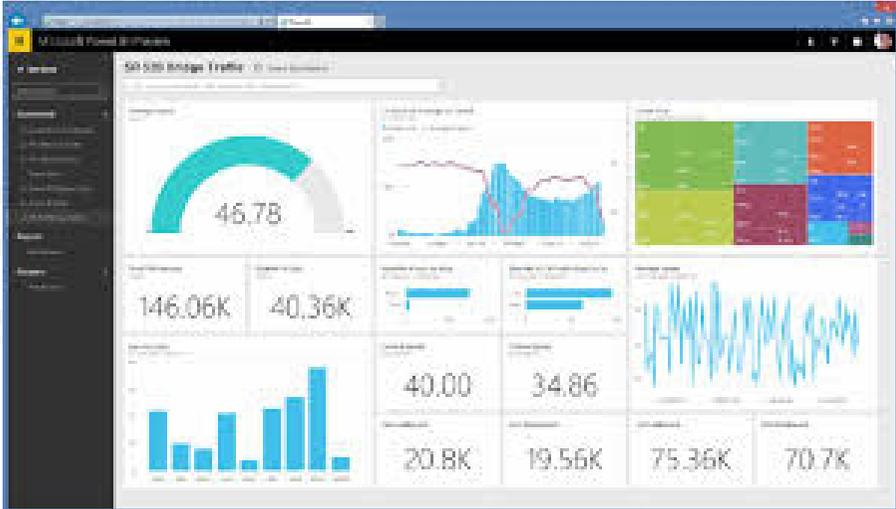
# Introduction of Power BI

## Why Power BI (by power BI)

### Stream analytics in real time

Know what's happening now, not just in the past. From factory sensors to social media sources, get access to real-time analytics so you're always ready to make timely decisions.

### Create data dashboards and visualizations in minutes



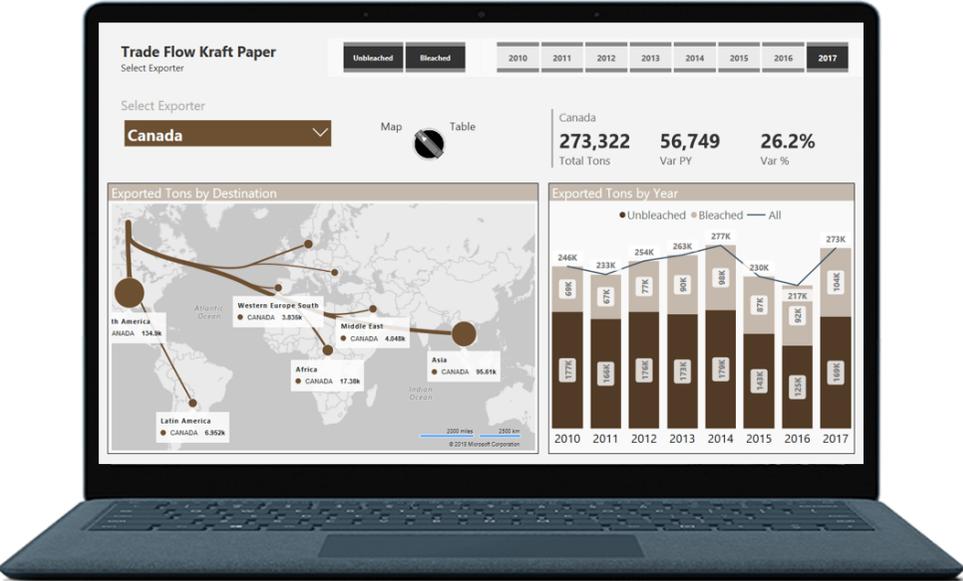
# Introduction of Power BI

Power BI report Examples (<https://excellab.at/power-bi-report-samples/>)

English Premier League Stats 2000-2018



Trade Flow Sack Kraft Paper



# Introduction of Power BI

## Power BI report Examples (<https://excellab.at/power-bi-report-samples/>)

### Tourism in Austria



<https://excellab.at/power-bi-report-samples/>



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# Efacec Presentation

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# Continuous Improvement at Efacec



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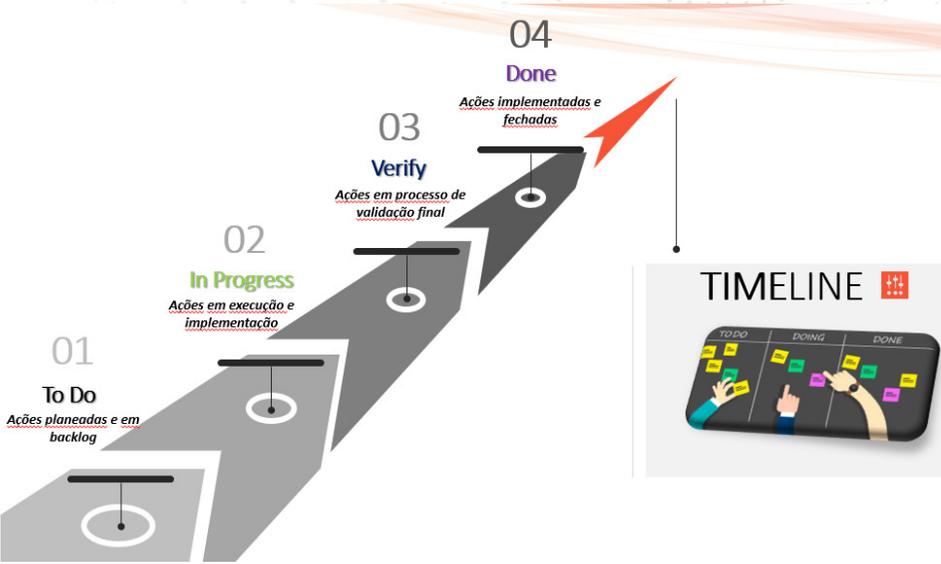
# Continuous Improvement

Continuous Improvement Is Not Stable, and due to this, it is necessary that the processes are well dominated and controlled.

The monitoring of AS\_IS - Understanding well where we are and where we want to go, it is critical

The Implementation of TO\_BE - Only after realizing how we are, can we act and improve the new process

Operational Control of Initiatives - Without any kind of control it is impossible to measure the performance of initiatives and turn back, if is necessary





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# Case studies at Efacec

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# Case studies at Efacec

## 1 - Monitoring of initiatives (Structure requests from various users in order of importance)

Act in a structured manner;

Implement effective action plans;

Performance indicator where the order of ranking **is checked**;

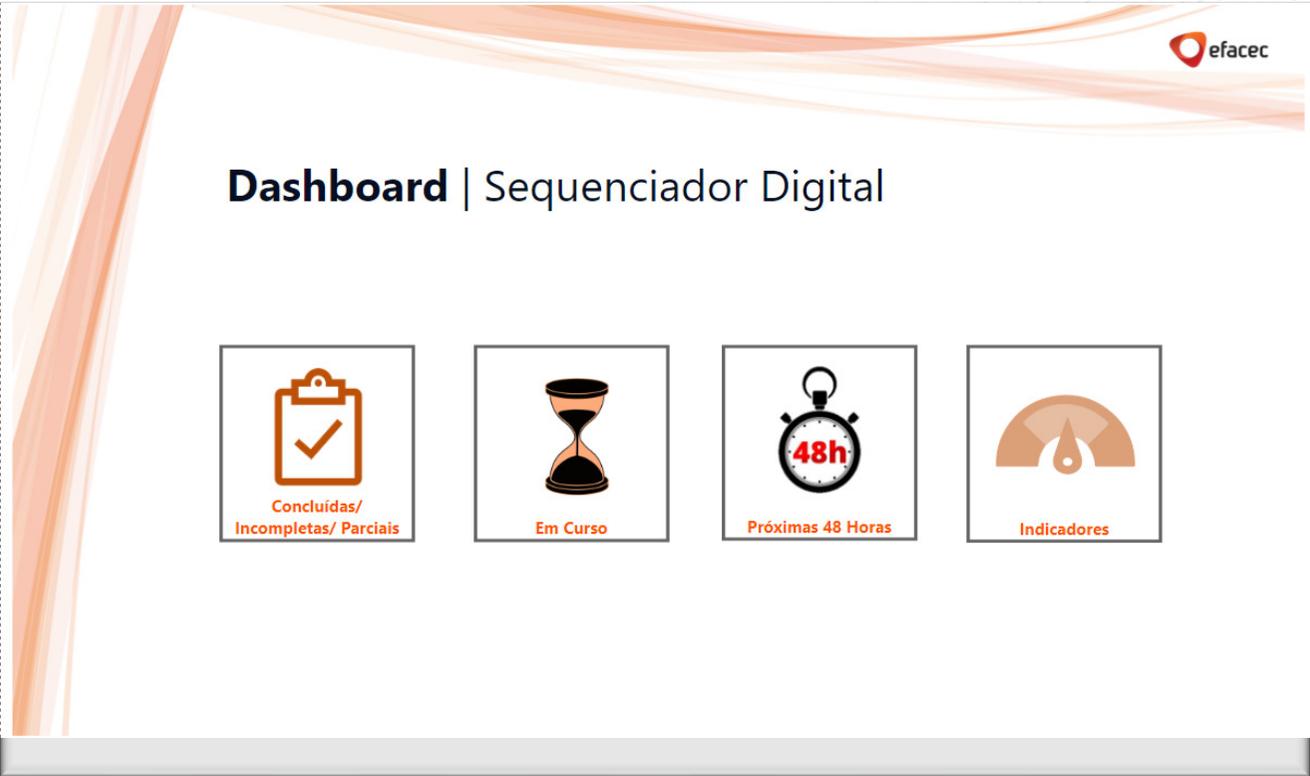
- Ongoing start
- On hold or
- Already Initiated



KPI = Number of Initiatives done / Number of Initiatives requested



# Case studies at Efacec



## 2- Logistics department

Work done in Logistics, where the monitoring of employees' performance, had to be evaluated.

To know precisely, which Orders of Manufacture the logistic operators have assembled, the materials for and how long they have done (to see if the materials are well located, tidy and easily accessible)

Whether, the delivery of the items to production is always delivered within a short time (less than 48 hours).

KPI = Closed Orders Manufacture / Open Orders Manufacture

# Case studies at Efacec



With the help of Power Bi you can easily monitor the number of open, closed and ongoing Manufacturing Orders.

With the help of Power Bi it is easy to monitor which production area, where the need for more logistics operators, is greater in terms of resources.

With the help of Power Bi, it is easy to monitor whether or not, there are weeks behind in the delivery of materials to production.

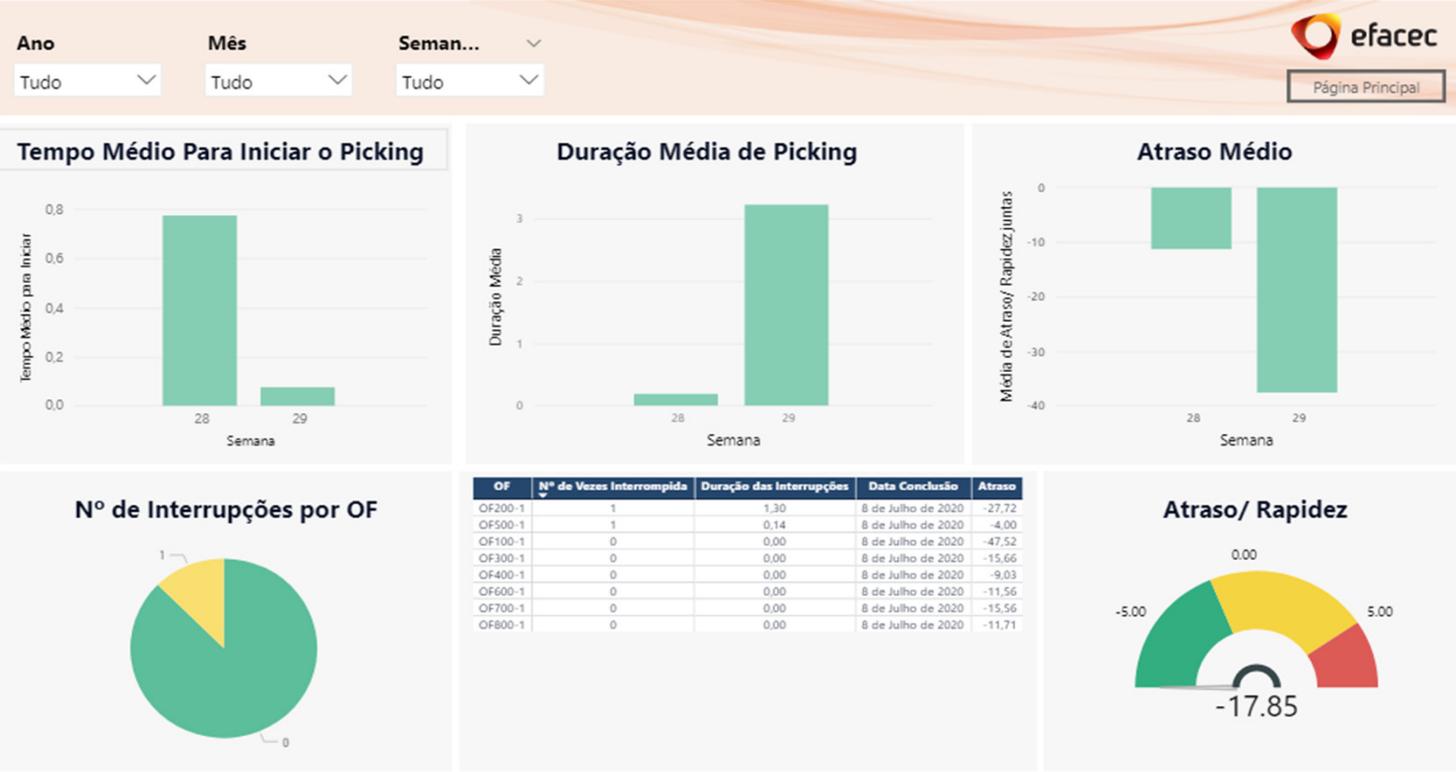
# Case studies at Efacec



With the help of Power Bi, logistics stops are easily monitored and it is possible to see, whether or not, the requested Manufacturing Orders were correctly inserted in an ERP system.

With the help of Power Bi it is easy to see if the KPI = number of days required (Objective) / Number of days Expected is achieved

# Case studies at Efacec



It is easy to see, that through a click, it is possible to the top management to understand the state of the operations and to act in agreement, if so desired.

Without realizing in detail the process and only with the visual help of colours, we realize how and where to act in a celere way.



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# Conclusions

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## Conclusions

Power Bi is a powerful tool that provides through a click a list of KPI.

This is the reason it is easy to understand the current state of the processes (Green, Yellow and Red) and also the areas that need immediate improvement.

After the application of Power Bi and according to these 2 examples, the response time of logistics operators increased more than **40%** and, the organization of initiatives reduced the email garbage in more than **10 daily emails** or appointment of meetings on the subject.

Regarding the students involved in this projects, with a high level of:

- Dynamism
- Highly trained and industry-oriented focus
- Solid knowledge of the challenges posed

Power BI brought performance advantages for Efacec, in the line with what had hapened with others companies

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# Thank You!

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