

APS FEDRA

*Factory Planning, Easy, Dynamic,
Realistic, Adaptive*



Planning processes must be easy, dynamic,
realistic and adaptive in the **Smart Factory**.

You need the **right software** for it!



Motivation

FEDRA is an **Advanced Planning and Scheduling System**.

With the system you can flexibly plan **simple operations** and also **complex production orders**.

FEDRA can be operated as a **stand-alone** solution or **in combination with other systems** like an ERP or an MES like HYDRA.

APS FEDRA is based on the **Manufacturing Integration Platform (MIP)**.

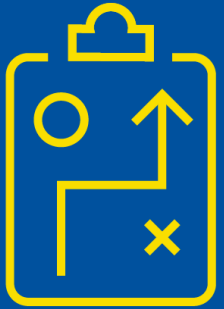


FEDRA

A decorative graphic element at the bottom of the slide. It features a thick blue wavy line that rises from left to right. A thin red line follows the top contour of the blue wave, with two white circles placed on it. One circle is on the left, and the other is on the right, with a vertical red line extending down from the right circle to the text 'And this is FEDRA'.

And this is FEDRA

Suitable for one or more plants - even across different sites



... plan
easily



... plan
complex scenarios



... plan
automatically

With FEDRA You Can...



Targeted scheduling of orders and workforce in production

You can make optimum use of resources and **react immediately to customer inquiries**

With FEDRA, you improve **on-time delivery** and reduce **throughput times**

Easy Planning



Multiple resource planning

Plan **primary resources** like machines or workplaces

Plan **secondary resources** such as tools or personel

With FEDRA, you can plan your **multi-stage production orders** in no time

Plan Complex Scenarios



New type of planning that is also based on **artificial intelligence**

Implement **complex planning scenarios** quickly and flexibly at the push of a button

With **Reinforcement Learning**, an established AI method, you can perfectly allocate a variety of operations to your resources

Plan Automatically



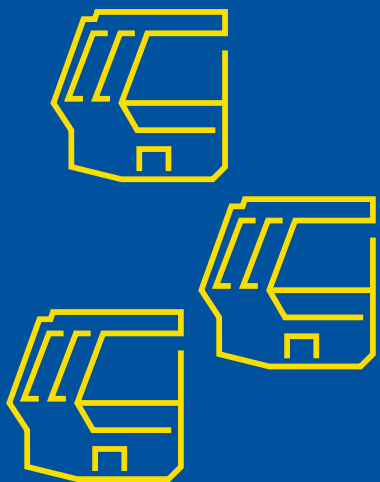
Plan **multiple plants or locations** all at once.

Plan your **supply chain** across several continents - **times zones** are factored in.

Any changes are **instantly displayed at all locations**.

You **decide** how detailed you want to plan.

Plan For All Sites



Improve
production planning



Simplify
work preparation



Optimize
capacity utilization



Combine
workforce scheduling
and order planning

Your Benefits



**Reduce
setup costs**



**Reduce
lead times**



**Improve
on-time delivery**



**Synchronize
planning**

Your Benefits



Features of APS FEDRA

APS FEDRA consists of **various functions available as mApps**.

mApps can be **combined as required**.

FEDRA can be **extended at any time**.

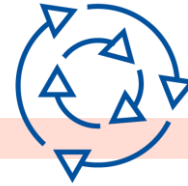
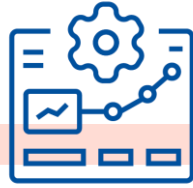
This makes FEDRA a **scalable planning solution for your production**.

FEDRA uses a variety of **interfaces** provided by the MIP to **communicate** with the ERP or the MES.



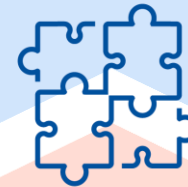
APS FEDRA

Detailed Scheduling



Advanced Scheduling and Optimization

Workforce Planning

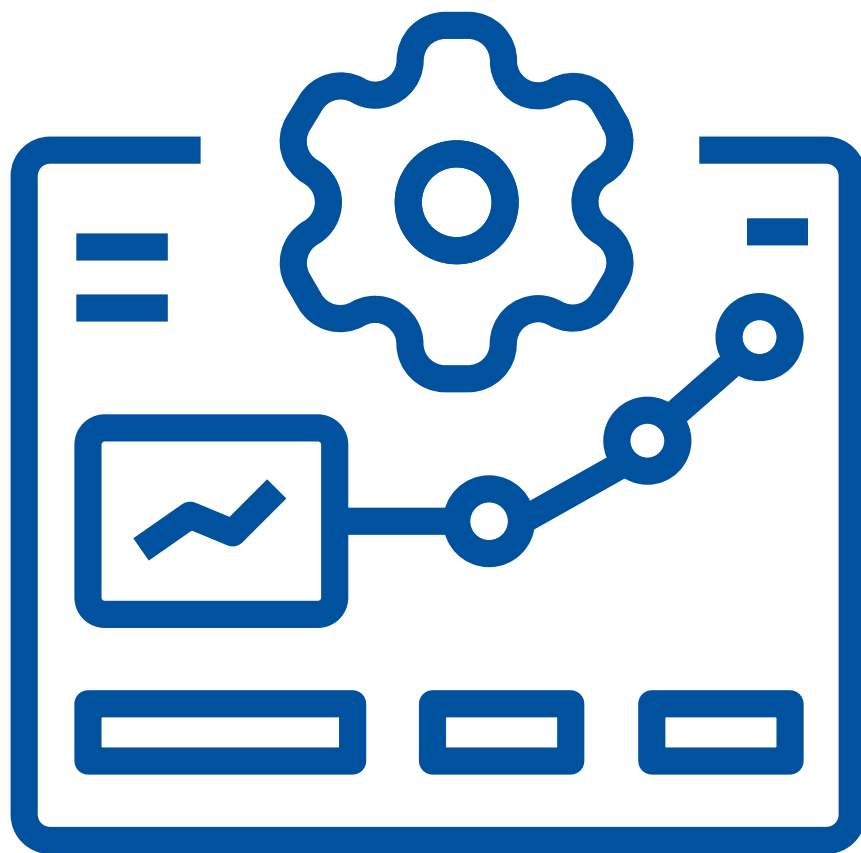


Advanced Process Modeling

Advanced Resource Planning



Features



Basic functions to plan operations,
workforce and machines

Generate **efficient planning scenarios**

Support functions for simple planning

Transparent capacity utilization by using
graphic displays

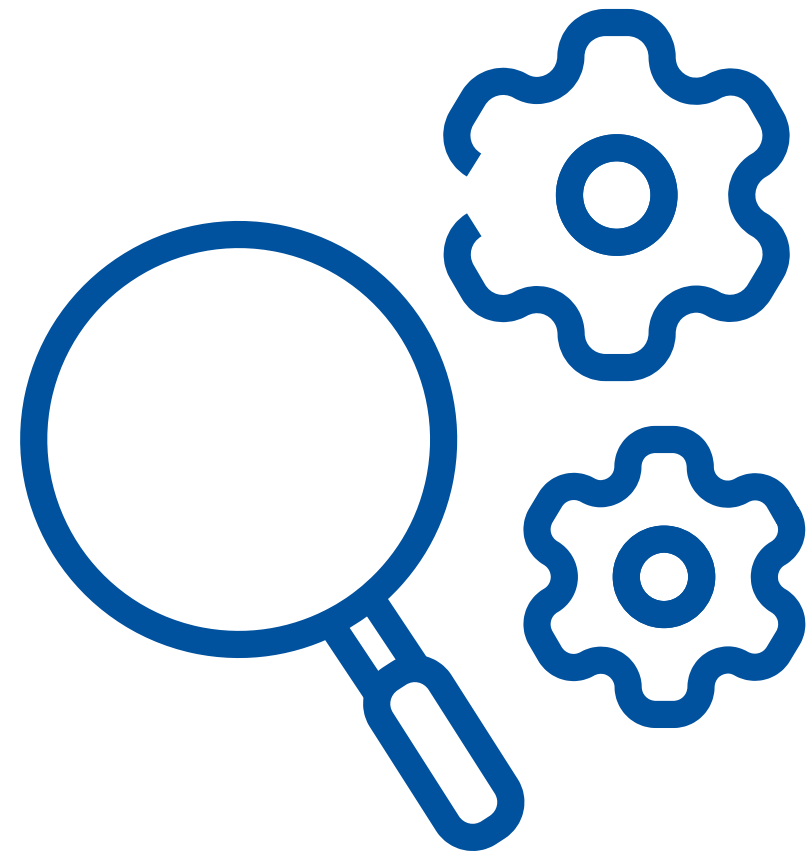
Detailed Scheduling

Plan additional resources like tools, materials and energy

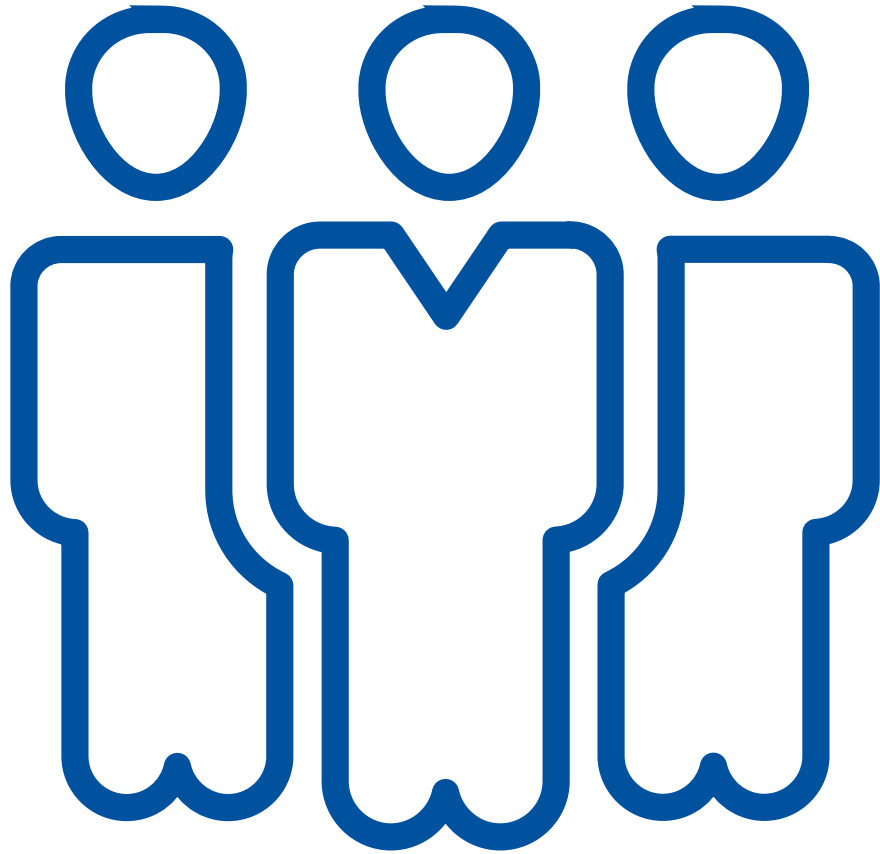
Integrate indirect **order dependencies** by checking material interaction

Increase transparencies

Balance peak loads and avoiding penalties by planning energy demands



Advanced Resource Planning



Integrated **workforce planning**

Include and verify **qualifications** of the employees

Schedule several **employees** on one **workplace** and one employee on several workplaces - incl. **job rotation**

React to **variable workforce requirements** due to special demands of scheduled jobs

A red line graph with a white circle marker on a blue background. The line starts at the bottom left, curves upwards to the right, and then levels off. A white circle is placed on the line, with a vertical red line segment extending downwards from it to the text 'Workforce Planning'.

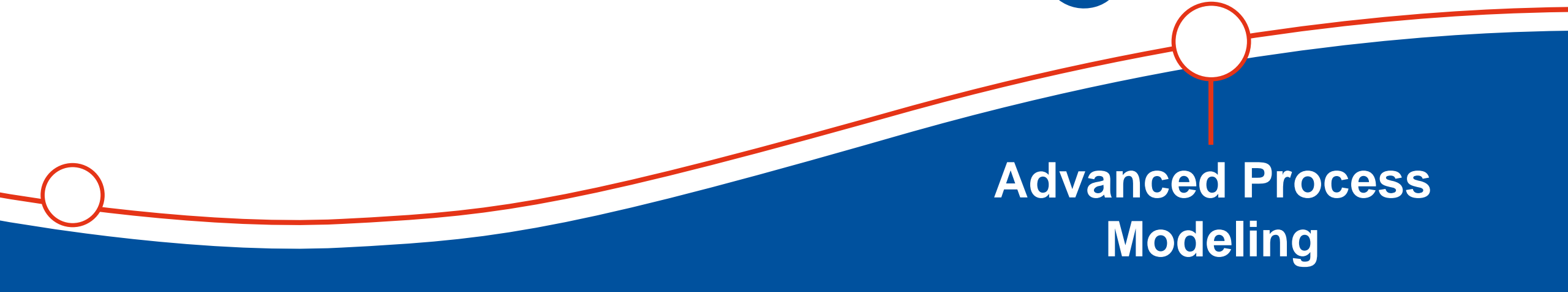
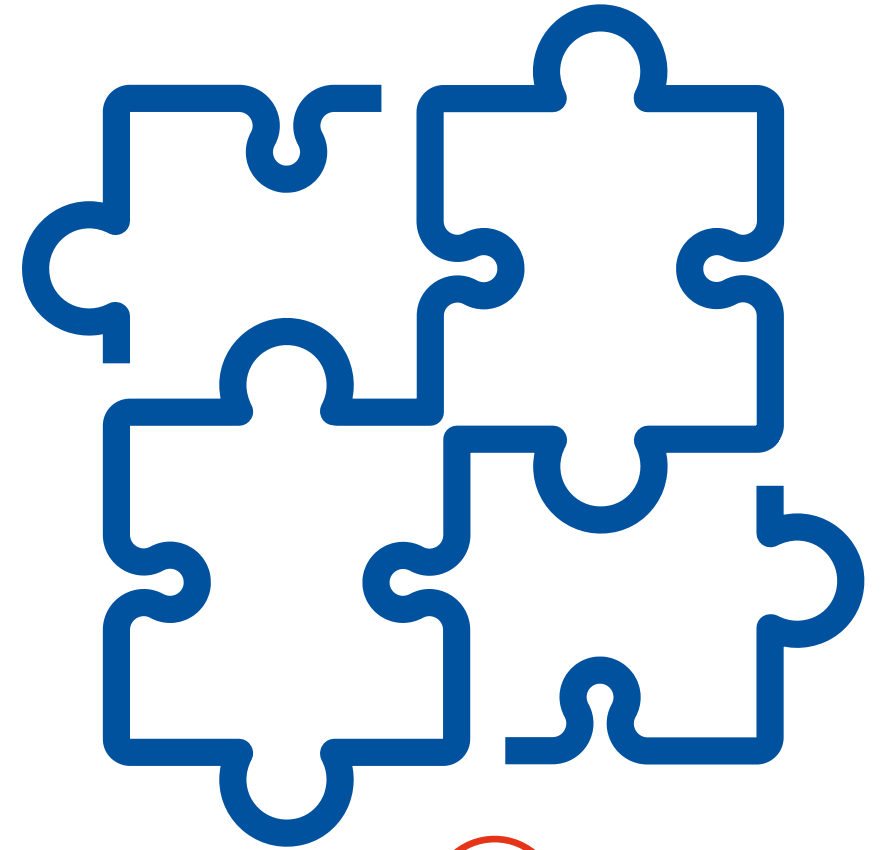
Workforce Planning

Reduction of setup costs thanks to a **perfect sequence** of operations

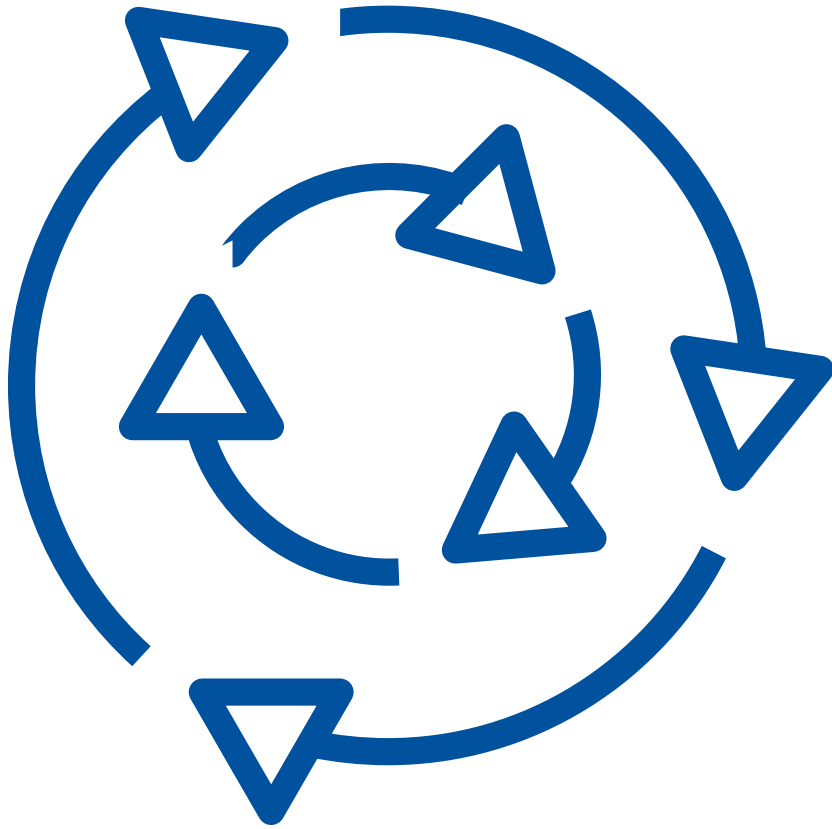
High machine utilization due to **parallel assignment** of several operations

Realistic planning based on specific production requirements

Including **dependencies across all orders**



**Advanced Process
Modeling**



Production planning **across all areas**

Automatic planning with **configurable planning rules** or based on **AI**

Create planning scenarios during **production operation**

Simulate different scenarios



**Advanced Scheduling
and Optimization**



Use APS FEDRA even more efficiently



In this analysis we **define together** what you want to achieve in planning, show possible processes and potentials and discuss **expected benefits**.

As a result, you receive a **documentation** of existing and new processes relevant for planning as well as a **compilation** of necessary mApps.

FEDRA Potential Analysis

Coaching: Detailed Scheduling

This coaching focuses on your planning rules and how they can be implemented in APS FEDRA.

Coaching: Advanced Resource Planning

Use APS FEDRA to get a complete view of all your resources.

Coaching: Advanced Process Modeling

We will show you how to map your specific requirements with APS FEDRA.

Coaching: Advanced Scheduling & Optimization

Make the most of your planning with APS FEDRA.

Coaching: Workforce Planning

Optimize your workforce planning with APS FEDRA.



FEDRA Coachings



Detailed Scheduling

Introduction to APS FEDRA to optimize planning and control of production incl. workforce deployment - 3 days

Advanced Scheduling

Get to know advanced functions and use the available planning and information functions in APS FEDRA - 2 days



FEDRA Application Training

With **APS FEDRA** you can plan your resources **more efficiently** and make the most of your **Smart Factory**.

A red line graph on a blue background. The line starts at the bottom left, dips slightly, and then curves upwards to the right. There are two white circular markers on the line. A vertical red line extends from the first marker down to the text 'Profit Now!'.

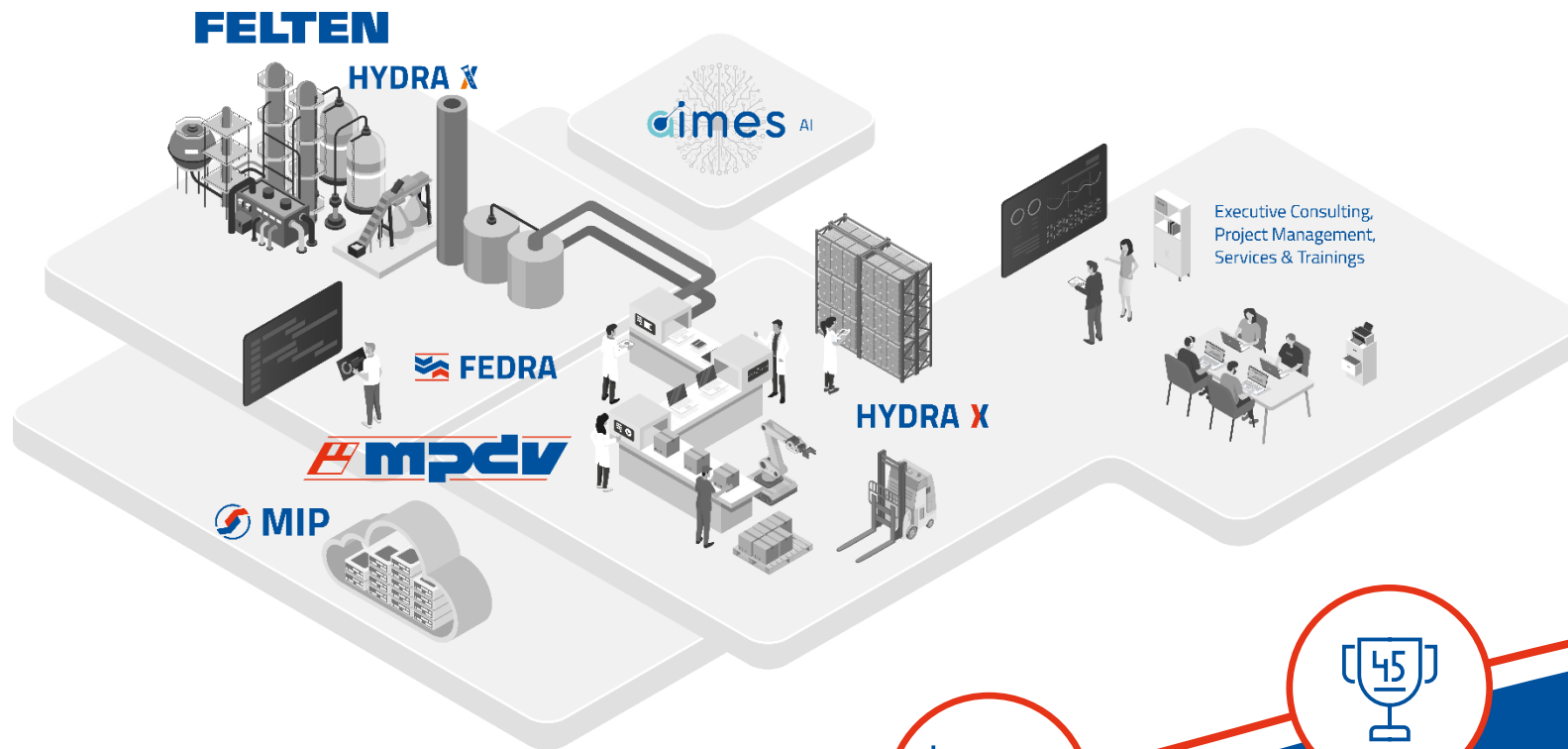
Profit Now!

A photograph of a modern industrial building complex. The main building is white with blue accents and multiple windows. To the right, a taller building has a blue facade with the MPDV logo. In the foreground, there is a small pond and a paved area. A red line with a white circle at the end is overlaid on the image, pointing towards the text box.

About MPDV

WE CREATE SMART FACTORIES



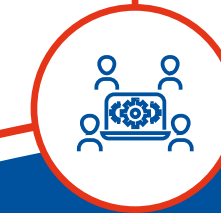


people work with our
solutions every day

1.485.000

installations in all
industries

2.430



13

locations worldwide



530

employees



80 Mio.

euros
group turnover



45

years in the market &
market leader for
manufacturing IT

You want to realize easy, dynamic, realistic and adaptive planning?



WE CREATE SMART FACTORIES



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