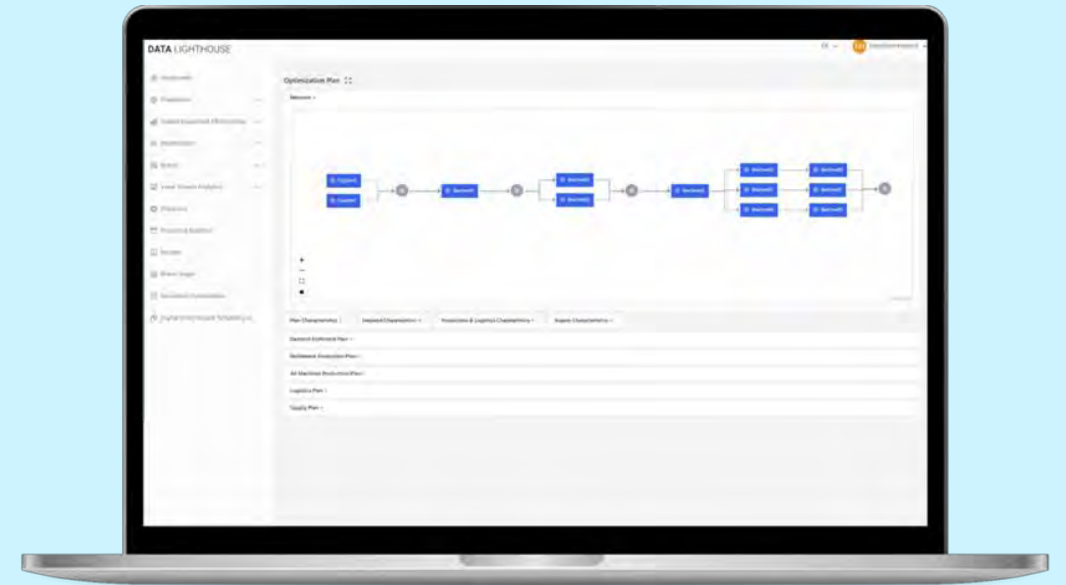


# Enable better planning for production & logistic networks

A publicly funded [R&D project](#) with the University of Hamburg and Data Lighthouse.



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## The Problem with traditional APS-Tools

Traditional advanced planning & scheduling (APS) methods fail to consider the multitude of variables that can impact a production process.

This results in **suboptimal production schedules** that are not only inefficient but also inflexible to adapt to real-time changes.



High governance cost



Plan to reality deviation

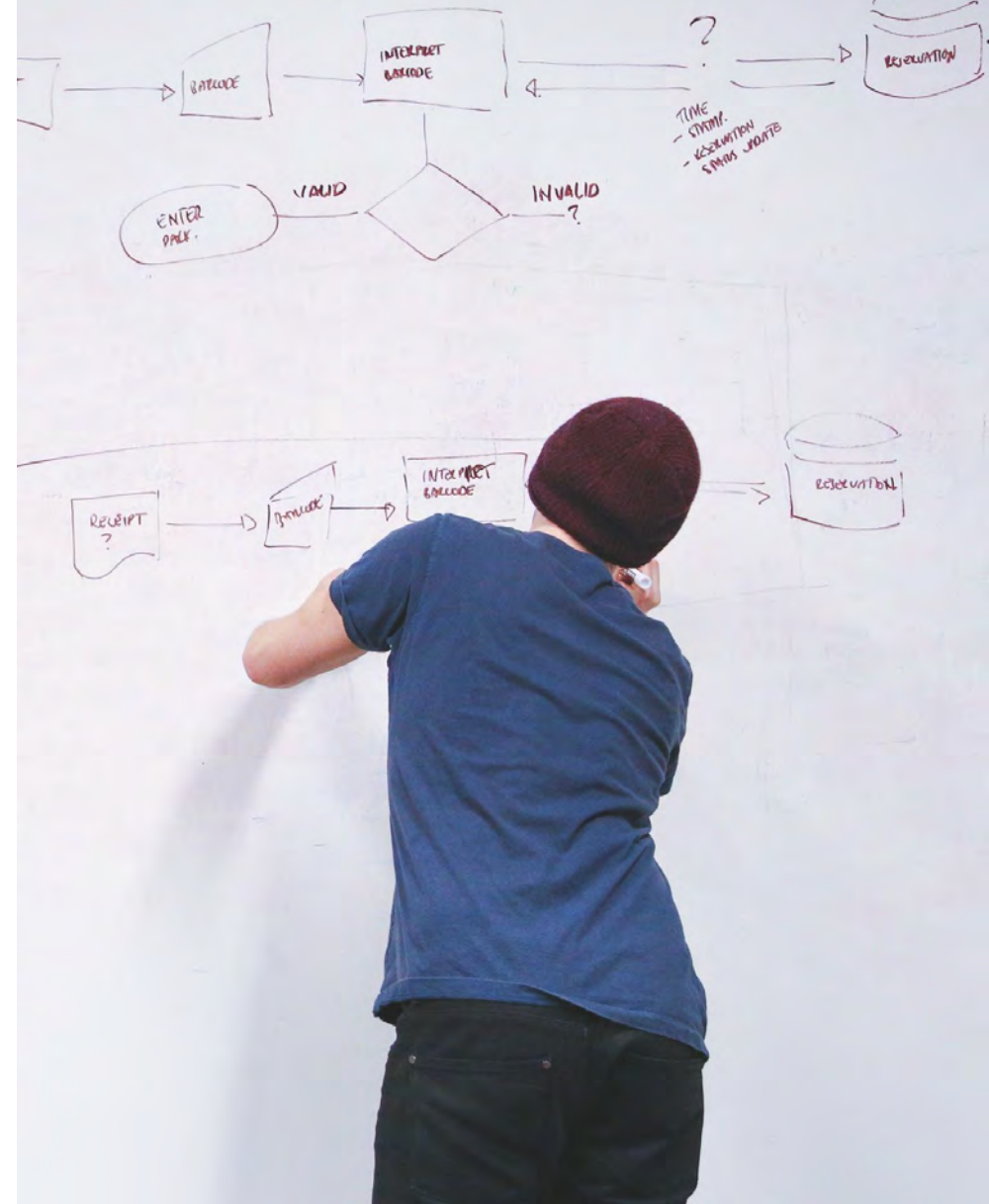


Slow reaction times

## The need for a new technology

We wanted to overcome the typical limitations of traditional APS tools.

This required an entirely new technological approach. The starting point for our publicly funded R&D project – and Smart Flows AI Planner.





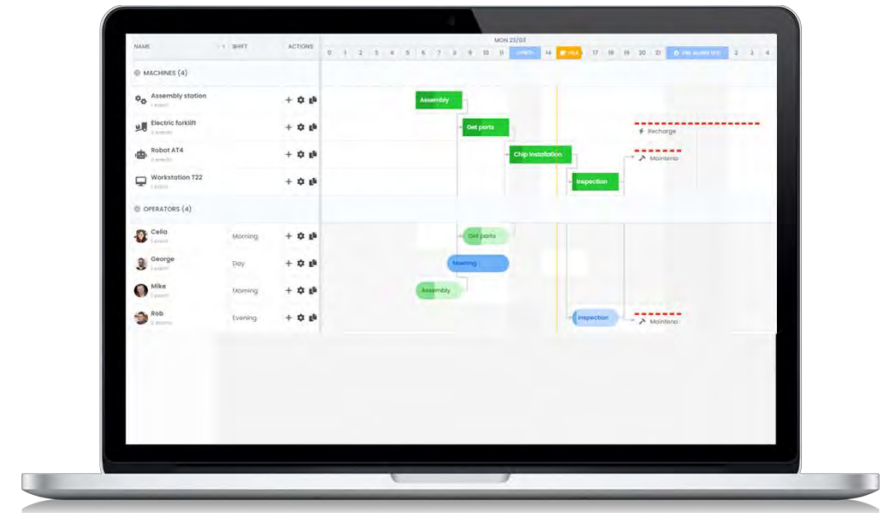
## Smart Flows AI Planner

This new tool is an innovative **production planning solution** designed to optimize manufacturing processes by intelligently considering customer orders, current inventory levels, ordered supplies, the state of machinery and your logistical dependencies.

*‘This new technology is capable to create the most realistic, applicable and efficient plans of all APS tools.*

# User Flow

- ➔ Upload your customer demands.
- ➔ Configure your optimization goals.
- ➔ Receive ready to use production plans.



Made for complex tasks – always improving:  
A new AI tool for production & logistic networks.

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# Milestones

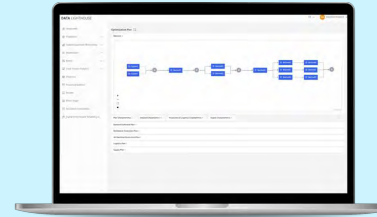
## Technological Feasibility



Phase 1

Technological approach proven and dev roadmap created.

## AI-Planer Prototype



Phase 2

Simple prototype creates 10.2% more efficient, applicable plans than SAP.

## Operational Pilot



Phase 3

Looking for collaboration partner to test prototype in operations.

Currently initiating Phase 3.



# We need your help to drive this technology.

## **Create an interface with the user**

The UI is crucial for connecting users with the technology.  
To create the best experience and ensure ease of use,  
we aim to develop this part collaboratively with real users.



## **Solve open research questions**

We currently face a few critical technical decisions that require careful consideration. By actively engaging in the field and exploring various possibilities, we can ensure that our decisions are well-informed and aligned with the ultimate objective.

# What awaits you?

To elaborate if a collaboration is suitable to all parties, we want to conduct

**ideation sessions with three goals:**

1

Present our technology and its capabilities. A crash course to our AI, digital twins and how to use these technologies to your advantage.

2

Understand your company, your business, challenges, digitization state and strategic goals.

3

Identify and create a value-adding pilot scope – for all of us!

Only after we have achieved these three goals, we will decide together if a collaboration is preferable for all of us.

Just so you know: If we work together, we don't want to replace current workflows – we want to deploy our solution as smoothly as possible alongside existing workflows to improve our “optimizer” based on real-world challenges. But of course, we will point out potential for improvement when our solution identifies them.



# DATA LIGHTHOUSE

Want to join or see a demo?  
Contact us!

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# DATA LIGHTHOUSE

## Executive Summary

### Digital Twin based Supply Chain Simulation & Optimization

Value Stream networks have been growing heavily complex, making it impossible to plan, control or optimize them with conventional abstract methods.

### USP

Building on cutting edge technology, our solutions

- work with a probabilistic digital twin model,
- can effectively navigate complex solution spaces, considering multiple objectives and constraints simultaneously,
- learn and improve over time and usage.

### Our Approach



Create a digital twin model including probabilistic behavioral patterns of all supply chain elements.



Using AI, we explore the entire solution space for optimal solutions like production plans.



Provide fully simulated & optimized plans for entire supply chains in real-time.

### Use Cases



Real-Time  
Scheduling



AI-based  
S&OE



Portfolio  
Optimization



Network  
Optimization

### What you get

*In real-time created and optimized production plans tailored to perfectly work with your unique supply chain.*