

Guide

Digital Transformation of
Planning & Logistics at

BASF Chemical Production Plant

USE CASE:

**Digitalization & optimization
of the planning and logistics
systems at a BASF's chemical
production plant.**

Challenges & Objectives

This project centered on one of BASF's chemical plants in Catalonia, where the existing manual system relied on physical boards and printed documents to manage workflows.

- **Challenges:**

- Inefficiencies caused by manual processes, including excessive paperwork.
- Difficulty in tracking tasks and delays across multiple production and bottling lines.
- Lack of real-time visibility and data for decision-making.

- **Objectives:**

- Eliminate paper-based processes.
- Digitize planning and logistics systems.
- Enhance operational visibility and decision-making capabilities.

How the implementation started?

BASF uses Businessmap (formerly Kanbanize) to digitize and optimize its planning and logistics processes in chemical production plants. The implementation began with their facility producing agrochemical products and was later expanded to another BASF site.

Who runs the implementation?

IThinkUPC is the consulting and advanced digital services company of the Universitat Politècnica de Catalunya, specializing in digitalisation, analytics and optimization for diverse industries.

Sergi Sales, Analytics and Artificial Intelligence Specialist at IThinkUPC.



Teams
working with
Businessmap

Production & Logistics Teams

● Production Team:

- Manages tasks related to the manufacturing and bottling of chemical products.
- Focuses on reducing delays and streamlining production line activities.

● Logistics Team:

- Handles storage, provisioning raw products for the production line, and loading finished goods onto trucks.
- Ensures seamless task transitions from production to distribution.



What processes does BASF manage with Businessmap?

● Production Line Operations:

- Digitization of manual processes previously managed through physical boards (Heijunka boards) and paper.
- Integration with SAP to import production schedules and transform them into visual tasks (cards) in Businessmap.
- Automated task creation using templates for recurring production activities, such as heating, mixing, bottling, and cleaning.

● Real-Time Task Management:

- Operators visualize tasks through digital boards, execute them, and mark progress in real time.
- Push system to fill digital boards with the orders needed to be produced during the shift through Businessmap API.
- Pull system implementation to prioritize and manage tasks effectively.

● Bottling and Storage:

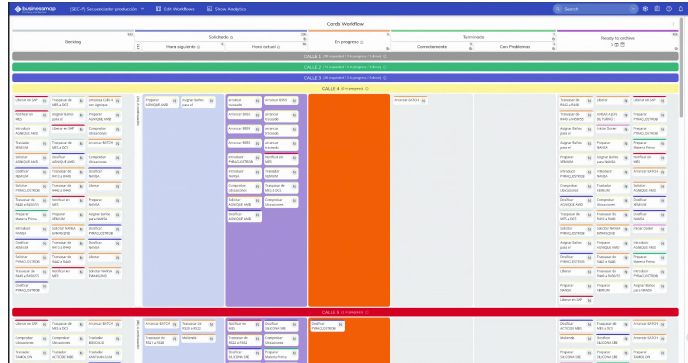
- Custom workflows for managing bottling processes and storing finished products.
- Automated inventory reservation and task assignments for loading trucks.

● Performance Tracking:

- Development of KPIs to monitor production delays and efficiency.
- Visualization of metrics and bottlenecks using tailored dashboards integrated with Businessmap.

Implementation Details

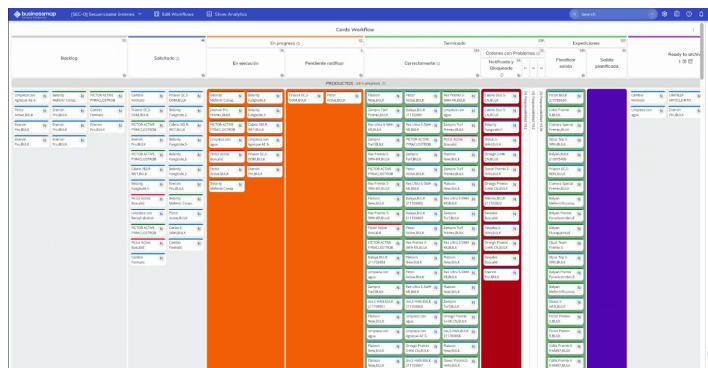
Tools & Integration



The project leveraged Businessmap as the core platform for visual task and workflow management.

Integration with BASF's SAP system provided automated data flow, updated as needed via Excel uploads.

Process Optimizations

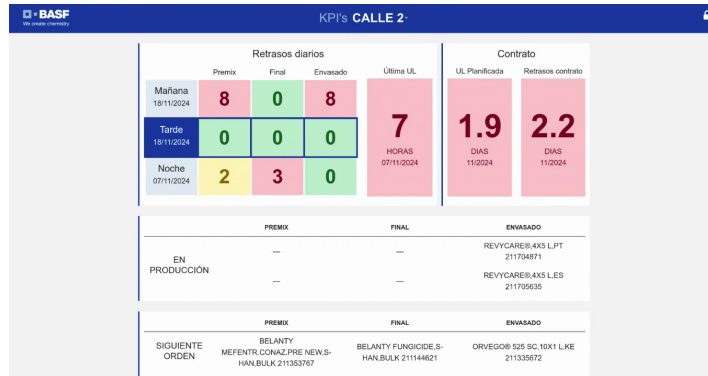


Digital Boards: Replaced physical boards, offering real-time visualization of production tasks, bottlenecks, and delays.

Custom Wizards: Guided operators in managing tasks, ensuring accurate and efficient workflow execution.

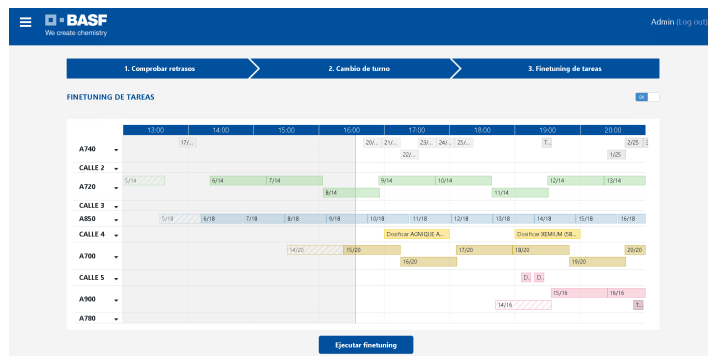
Implementation Details

Process Optimizations



KPI Dashboards: Developed tailored dashboards to display performance metrics such as delay tracking and production efficiency.

Phases and Timeline



Template-Based Card Creation: Streamlined task generation for production processes, ensuring consistent and efficient task tracking.

The initial implementation phase took 5–6 months, focusing on replacing manual systems with digital tools and ensuring smooth integration with SAP.

That digitization implementation started in 2017 and has improved significantly since the 7 years running.

Additional phases at other BASF facilities incorporated lessons learned to refine processes further.

Key Results

Operational Impact



20%

Reduction in administrative and bureaucratic tasks.



100%

Elimination of paper-based workflows.



TWICE

More accurate real-time insights and metrics.

Employee Empowerment



Operators transitioned seamlessly to digital tools after gaining familiarity with manual lean systems.



Improved collaboration between teams through transparent workflows and data access.

Scalability



The solution supports over 1,000+ tasks daily, scaling seamlessly to meet the plant's production needs.



Initial success led to deployments in other BASF plants, adapting the system for diverse operational contexts.

Digitalizing All Workflows in Less Than 6 Months



Benefits



Paper and many manual and bureaucratic tasks have been eliminated, significantly reducing the associated indirect costs.



Solving incidents and anomalies a lot faster than before, real-time management.



Adaptability to change and increase in production efficiency.



Change management and process improvement.



Delay indicators of production come at once at every shift change.



Improved communication between departments.



Visualization of real-time data in the control room and on the shop floor.

Lessons Learned & Next Steps

Lessons Learned

1

PHASED TRANSITION TO DIGITIZATION:

Introducing manual lean systems before digitization allowed employees to internalize key principles, ensuring smoother adoption of digital tools.

2

SAP INTEGRATION CHALLENGES:

Establishing a robust interface for seamless data flow between SAP and Businessmap required careful planning and iterative improvements.

3

SUSTAINABILITY:

Eliminating paper usage aligns with BASF's commitment to sustainability and operational excellence.

4

FUTURE FOCUS:

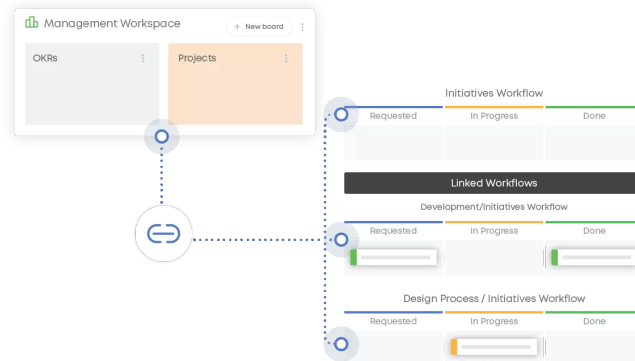
Continuous improvement of digital tools and workflows, leveraging the enhanced API capabilities of Businessmap to further optimize operations.

Why This Case Matters

The digitization project at BASF exemplifies the transformative potential of combining lean principles with cutting-edge digital tools like Businessmap. It demonstrates how tailored solutions can enhance productivity, reduce waste, and empower employees, setting a benchmark for the chemical manufacturing industry.

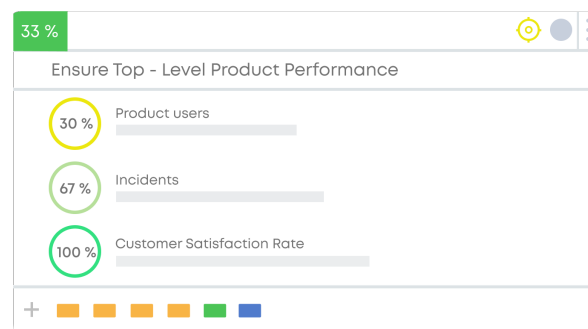
What is Businessmap? One Software To Replace 3 Tool Categories.

Project & Portfolio Management



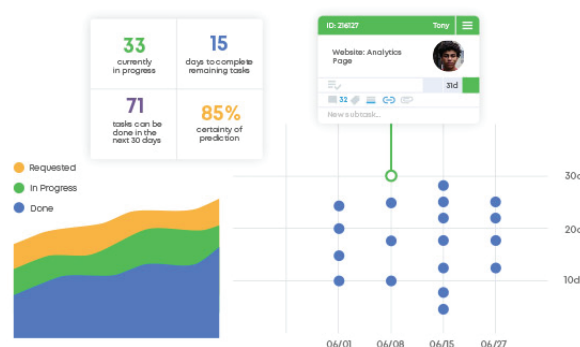
Managing multiple project portfolios makes it difficult to understand what's going on in the organization. That's why we help you visualize all moving parts on interconnected Management and Team boards, break down projects, and track work across teams.

Goals Management through OKRs



Enterprise agility comes from aligning the work you do with the business strategy. To do this, we give you a central place to manage your goals through Objectives & Key Results (OKRs) and connect them to the daily work activities.

Work Management



Our software improves your work management by visualizing all work processes on flexible kanban boards. By collecting historical completion data, we focus on data-driven planning, so you can deliver faster to your customers.

Solutions Designed for Evolving Companies



Unmatched Affordability

Prices that help you scale

Businessmap has the growth and prosperity of your organization in mind. We are priced in a way that helps you achieve an incomparable Return on Investment.

Choose the plan that is right for you at www.businessmap.io/plans-pricing



Support & Training

How we support you on your journey

To serve the unique needs of your enterprise, we tailor our solutions and complement them with our multifaceted support system. Ensure lasting value and exceptional ROI with exceptional resources including:

- Support and Implementation Packages
- Video training portal
- Comprehensive knowledge base
- Customer Success Team
- Technical support with unbeatable response times
- New software releases every month
- Regular webinars and online workshops



Testimonials

What our customers say about us

“ The software's user-friendliness and support have empowered our team to be more autonomous, leading to increased problem-solving capabilities. In fact, the team is now actively seeking new ways to leverage the software.

Project Leader
BASF Tarragona



“ The software has created a new environment centered around communication and transparency in a visually appealing way that we haven't seen before.

Ben Jackman
Logistics Supervisor at BMW Constructors



“ Initially, I just want to track my deliverables, but mapping the workflow had a completely unintended, yet amazing effect: the team built a common understanding of how work gets done.

Benoît Guillaud
Project Leader at GE Aviation

Enterprise Grade Security

Keep your operations safe with our robust security features, designed to protect your data.

- ISO 27001 and GDPR compliance
- PCI 2.0 Compliance
- Regular penetration testing
- Security assessment certificate
- High Availability (HA of 99.98%)
- Encryption of data at rest
- Transport encryption TLS 1.2
- SSO with IdPs via SAML 2.0S
- SCIM Provisioning
- 2FA
- Multi-region data centers
- IP Whitelisting
- Strong Password Policies
- Security & Audit Logs
- Roles and team authorization
- API custom restrictions



ISO/IEC 27001:2022



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