Sparking data literacy with KNIME and making better decisions.

Empowering business users worldwide

Continental is committed to increasing the data literacy of the entire organization by empowering users in business functions (with no IT or programming background) to work more efficiently and effectively with data and, ultimately, discover new insights with that data.

Microsoft Excel used to be the go-to tool for business users handling data at Continental. Today, it is perfectly enriched by KNIME Analytics Platform for standard workflows, bigger data volumes, or data discovery. For example, repetitive tasks, such as certain forecasting processes, are now automated in KNIME Analytics Platform. Until recently, this was either done via complex spreadsheets or Visual Basic for Applications Macros (VBA, the programming language built into Excel). However, Continental began experiencing maintainability and performance issues for medium-sized data volumes.

There are thousands of Excel users at Continental, all working in diverse business functions: controlling, tax, HR, R&D, production planning, etc. The need to give these users a tool which can automate mundane data processing and reporting tasks resulted in a company-wide initiative to roll out KNIME Analytics Platform.

A global, low barrier, roll-out

The roll-out of KNIME at Continental started out as a pilot project in Chassis & Safety (C&S), a €9.6bn sales division of the corporation, and was led by Dr. Arne Beckhaus (Head of Big Data and Digital Transformation C&S). The very first use case emerged in the Brake System R&D Department, where KNIME was used to generate Kanban boards based on data exported from the issue tracking system.

An agile setup of starting small and expanding quickly had a positive response. It was quickly clear just how much business users loved using KNIME and how much data processing power was gained. The roll-out was made easier by positive word of mouth and a high, bottom-up demand for trainings on how to use KNIME.

Many processes across the entire organization have now achieved higher levels of automation. For example, production planning, reporting (controlling, logistics, etc.), various project management tasks such as Kanban boards and deadline tracking, supply chain warnings, and so on. Data integration and data wrangling are now mostly done by business users in KNIME, and, in many cases, this step alone yields the promised data insight or process automation. Sometimes KNIME is used for an intermediate data preparation step before the data can be exported to visualization tools such as PowerBI, Tableau, and MicroStrategy. Continental also uses Amazon Web Services for long-running workflows (or workflows which are RAM or CPU hungry).

Company

Continental develops pioneering technologies and services for sustainable and connected mobility of people and their goods. Founded in 1871, the technology company offers safe, efficient, intelligent, and affordable solutions for vehicles, machines, traffic and transportation. In 2018, Continental generated sales of €44.4 billion. Continental has approximately 2,000 users of the open source KNIME Analytics Platform worldwide and also uses KNIME Server for collaboration amongst power users.

Solution highlights

80%

time savings in our pilot projects

Automotive   Manufacturing
Data Literacy

"Since rolling out KNIME at Continental, we're making better decisions, everywhere. We're also able to back these decisions on stronger data, faster. We're gaining more insights from data, and freeing human capacity from mundane data processing and reporting tasks."

Dr. Arne Beckhaus - Head of Big Data and Digital Transformation C&S at Continental

Better decisions, more insights, huge resource savings

And there's a lot more potential for using KNIME throughout the organization. *"One indicator for the high adoption of KNIME is the rising demand for in-house trainings"* Arne continues. "It is great to see that we can serve this huge bottom up momentum with a very small central team". The next steps will entail creating more user-specific training content for users in different departments, enabling a more institutionalized roll-out, and realizing and standardizing knowledge sharing across teams and departments. Due to high interest by external parties who want to learn from Continental's data transformation journey, the decision was even made to offer data services to external clients using KNIME. Continental Engineering Services is now an official KNIME Partner and able to offer these services.

Significant time savings of over	**Lead time eduction from 2 days to**	**Run an entire plant budgeting process at a**	**Serial number traceability to R&D, plant, and quality users as a self-service tool - providing answers in minutes rather than an entire day.**
80 %	**30** min	**10** fold	
in pilot projects.	of month-end controlling tasks .	precision level.	

Why KNIME?

KNIME was chosen primarily for its business user friendliness but also due to speed, data volume, breadth of functionality, and state-of-the art data wrangling and data science features

> *"From a business perspective, the open source model was the only commercially feasible option to rapidly spread data analytics competence throughout the organization".* Dr. Arne Beckhaus - Head of Big Data and Digital Transformation C&S at Continental

A long tail of infrequent users would have made the license fees too expensive and a flat, company-wide license would have slowed everything down due to the initial investment. Typical commercial business models simply would not have enabled such rapid dissemination. KNIME Server is now also used on selected projects at Continental, enabling teams to collaborate on KNIME workflows and share amongst colleagues.

KNIME is easy to maintain long term and can be enhanced with custom extensions, which are built and developed by Continental. Examples include extensions to enable custom formatting in Excel reports, or to parse third party PDF documents with text position information for automatically analyzing contract information. From an IT perspective, KNIME is easily installed on client PCs worldwide. Continental can pre-package a customized installation and deliver it as a standalone software application - making it easy for KNIME to be included in the official software distribution process.

Lastly, rolling out KNIME to business departments has helped raise the awareness of analytics and artificial intelligence (AI) at the management level. They now understand the advantage of finding answers to problems by effective data wrangling and the necessity of good quality data for applying data science algorithms in KNIME. The result? Increased data literacy across the organization, more efficient, automated processes, new insights from data without blind application of AI, and better decisions everywhere.