

How Finance Built their own Reporting and Dashboarding Suite using KNIME

This Day5 Analytics' customer is a global leader in integrated facility management (IFM) solutions, entrusted to manage the real estate finances of various Corporate Real Estate (CRE) clients. It plays an important role in its clients' innovation and success. The Operations Finance team partners with clients to budget, monitor spend, provide financial insights, and drive innovative cost-efficient solutions for clients' real estate portfolios.

Removing dependencies on legacy systems, siloed data, and adding value where it matters most

The Finance department is a critical support department that underpins most organizations' longevity. Several challenges come with fiscal responsibility, including 1) the ability to deliver accurate, timely financial reporting and actionable insights, 2) the need to nimbly respond to business needs and changes, and 3) the aptitude to innovate, regardless of technological or resource budget restrictions. Finance staff typically work long hours, primarily during month-end and budget seasons, which can lead to increased stress, disengagement, and turnover. Many Finance teams depend entirely on Financial ERPs for data, and Excel – which has been the only feasible spreadsheet tool for decades – for modelling. The combination of Excel with legacy systems, containing siloed and large volumes of transactional data, leads to a risk of repetitive manual work, and a shift away from value-adding activities. This can be both time consuming and demotivating, preventing Finance professionals from moving the needle in their roles.

Prior to discovering KNIME, Finance staff would regularly blend and augment data from different systems using Excel. For those bold enough to venture past the standard Excel spreadsheets, VBA, Access, and Power BI presented opportunities to perform data transformation and consolidation work. However, these tools are inherently complex due to their coding requirements, which is a specialized skill that Finance professionals do not generally possess. Consequently, the use of these tools by those brave innovators resulted in continuity issues, as most staff could not manage the complex coded models that were created previously.

As Finance reports can be complex, many operational and management staff were unable to extract insights from large Excel reports. This resulted in clarification questions back to the team, which exacerbated work demands. Further, with limitations of spreadsheets in terms of data volume, reports had to be aggregated at a high-level, resulting in missed opportunities for deeper insights. It was therefore important to create consumable, user-friendly dashboards, which would enable operations and leadership to visually see the results and dive deeper to understand the drivers.

Bringing the best of KNIME, PowerBI, and Microsoft Teams together for deploying automated financial reporting

With the sudden onset of COVID-19 and the immediate refocus to sustain operations, IT teams were redeployed to mission-critical tasks. This did not, however, prevent the Finance team from innovating themselves using KNIME Software. The team automated and deployed financial reporting, with drill-through capability – leveraging KNIME for automating processing of data from raw sources, PowerBI for visualization, and Microsoft Teams for deploying dashboards to end-users.

Raw data files were downloaded from existing Finance and Operational ERP systems into a few designated folders, from where these files were read and consolidated securely by KNIME. The transactional data volume was roughly 3 million rows per year. After the raw data was collected, several mapping tables added further intelligence

Company

Day5 Analytics executes on data analytics consulting projects and provides KNIME training to clients' Finance, Operations and Analytics departments. With KNIME as a core platform, Day5's goal is to accelerate clients through the data evolution cycle, promoting existing infrastructure and forward-looking solutions to achieve future-readiness. Day5 prides itself on understanding the intricacies of clients' businesses, creating solid data foundations, and deploying custom solutions.

Customer: Our customer is a multinational Integrated Facility Management (IFM) solution provider. Globally, the customer manages over 30,000 facilities totaling more than 340 million square feet across several markets including Government, Higher Education, Utilities, Telecommunications, Financial Services, Oil & Gas, Healthcare and Cloud Enterprise.

Solution highlights

Creating a custom-built solution in **less than 4 months** and **saving thousands per year** in commercial licenses.

Real Estate

Finance

Reporting and Dashboards

and business-friendly terminology. For example, by mapping transaction dates to fiscal calendars, transactions could be categorized appropriately by period, and by mapping identifying codes to real business terms, the dataset would be more business focused and less technical. Such mapping exercises are the equivalent of "VLOOKUPS"; in this case, Excel would not be able to handle the data volumes.

Once all the raw data was processed using KNIME, this transaction-level information was written out to a database. As the processed data remained transactional, no detail was lost. The team then developed Power BI dashboards, which took the transformed data from the database and presented insights in visually compelling ways for end-users who were not as comfortable with spreadsheets. Users were empowered to drill down to transaction-level and investigate drivers of variances themselves. This enabled them to control their budgets and helped inform spend decisions. These dashboards were securely made available to appropriate staff using Microsoft Teams, which allowed everyone to be on the same page with each update. As the processes are automated, each refresh requires a simple click of a button in KNIME to run and update the dashboards.

Identifying risks and opportunities faster and forecasting with accuracy

Financial reporting is now completed earlier and with less staff, allowing business users to identify risks and opportunities and respond faster than ever before. Reporting has empowered users to leverage visual dashboards and drill-down to sources of issues more easily than with Excel. As the models can be run on-demand at the click of a button, re-forecasting is done more frequently, and with increased accuracy. The Finance team was able to build a replica of an existing commercial offering, without IT support, and in less than four months. This innovation took place during the first wave of the COVID-19 pandemic – a time when many companies froze IT spending and investment – demonstrating how Finance professionals can successfully innovate with KNIME themselves.

KNIME-enabled innovation allows staff to create a suite of products independently, contributing to a turnover reduction of 40%

Since KNIME has become embedded in the team's operations, employee engagement and motivation has increased. The satisfaction of being able to create a suite of products independently and completely customized to a CRE client's requirements has elevated motivation and passion. The efficiencies gained allowed the team to focus on value-add, and headcount could be reassigned to other projects – resulting in savings for the IFM customer and its CRE clients. The IFM customer believes that innovative new processes enabled by their adoption of KNIME have contributed to the reducing turnover from 45% to 5% over the year. Members of the team involved in this digital transformation using KNIME won the internal "Inspiring Excellence" award – the first time a Finance department won the award in many years. The success of rapid KNIME-enabled Business Intelligence reporting has sparked renewed interest in self-service automation across the company, and departments beyond Finance are realizing the potential.

"KNIME has completely transformed the way the Finance team works with data. Individuals are moving away from data crunching, and to delivering value. They are motivated to learn new ways of working with the data and dive into it more frequently. Rushing to meet client deadlines has become a thing of the past; delivering increased value is the new normal."

Director, Operations Finance

Why KNIME?

As Finance and Accounting professionals live in a world of numbers, they understand data and logical sequences needed to transform raw data into valuable financial insight. KNIME caters perfectly to such mindsets. Due to KNIME's simple drag-and-drop interface, it is more appropriate for Finance staff to build automation workflows than tools such as VBA, Access, PowerBI DAX calculations or code-based programming languages.

KNIME was introduced to the IFM customer in 2019 through a custom designed, in-depth training program, available commercially through Day5 Analytics. Though KNIME's roots are from data science, it is leveraged as a self-service automation tool in Finance. KNIME is now leveraged by more than 200 Finance professionals, who have themselves created and deployed over 50 automation models into their daily routines.

The openness of KNIME enables users to seamlessly integrate existing tools that they work with. KNIME pairs well with other tools in the customer's IT stack, including PowerBI, Snowflake, and the ERP SQL

databases. This results in the team using a suite of connected tools, which in the marketplace are only available via expensive commercial licenses. Venturing into a new tool, the open source, free desktop licensing made the costs of a pilot low-risk – considering similar data tools cost thousands of dollars per user, per year. With a successful pilot, use of KNIME could grow unrestricted by budgets, allowing it to be used extensively across the department.

As KNIME workflows provide easy-to-follow, visually documented processes, knowledge silos are prevented and continuity is ensured. KNIME workflows can be easily shared and leveraged by other staff without having to build models from scratch.

An unexpected outcome of implementing KNIME has been the ease in hiring and onboarding new graduates, many of whom receive training in such technologies in school. This positions the customer as an attractive employer that presents opportunity for innovation and growth.



Day5 Analytics, a KNIME Partner, advocates for business data self-sufficiency, and supports acceleration of clients' data evolution through KNIME training and custom solutions. Day5 offers customized KNIME training to guide clients to achieve analytical innovation in Finance, Operations, Marketing, and other data-driven departments. Visit Day5 Analytics (www.day5analytics.com) to learn more.