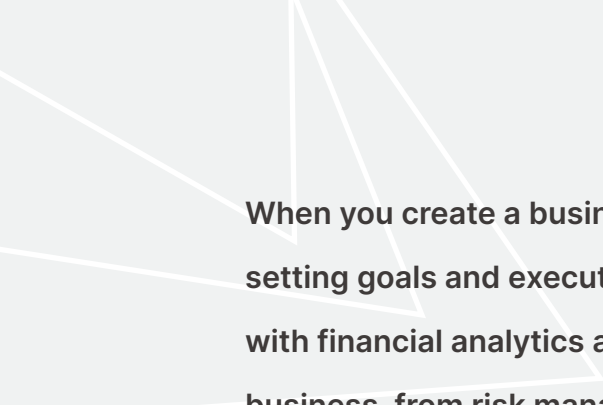


How KNIME Helps Finance Departments Automate and Optimize FP&A Work

Learn how you can increase revenue,
save time, and improve efficiency





When you create a business plan, it involves more than just setting goals and executing strategies. It is deeply intertwined with financial analytics and impacts every aspect of your business, from risk management to customer satisfaction.

Leading a finance department, therefore, comes with unique challenges that require balancing attention to detail with a clear overall strategic vision.

Navigating complex regulatory environments and intricate financial systems adds to the demands and stresses of ensuring both compliance and efficiency. The pressure to deliver accurate financial reports, maintain transparency, and drive strategic financial decisions—often while managing budget constraints and resource limitations—can be overwhelming.

Recognizing these pressures means that, as an accountant, an FP&A analyst, or an auditor, you often find yourself digging through piles of spreadsheets from various departments, manually tracking down the latest versions, consolidating the data within them, and transforming it to meet your reporting requirements month after month.

KNIME helps finance teams work faster, more effectively, and without errors

To reduce this burden, finance teams often graduate beyond spreadsheet-only environments to low-code tools, such as KNIME Analytics Platform that allow them to work with and combine various data sources, such as Excel spreadsheets, bank statements, ERP systems, CRM databases, external market data, and more.

KNIME Analytics Platform is a visual, user-friendly tool that anyone in your organization can learn and use, no matter how much or how little analytics experience they have.

On the one hand, data scientists can build reusable solutions that financial analysts can access to perform complex analyses or simply automate repeat data work.

On the other hand, it's intuitive enough for financial analysts to create the analytic workflows themselves, visually and without any coding.

KNIME's low-code, visual workflows allow your team to collaborate on existing data workflows and add domain expertise where needed, without them needing to be experts in coding or scripting languages.

In this guide, you'll find three examples of the many KNIME use cases in FP&A that illustrate how KNIME could help you drive business growth efficiently and enable self-service analytics.

How BGIS saved \$420K annually with automated work order parsing

“KNIME has generated a new-found excitement and change in approach towards self-service ETL and data science. This has resulted in significant time savings, improved audibility, and centralization of information via other projects.” Paras Gupta, Director, BI & Advanced Analytics

BGIS manages large capital projects for its clients, some involving a targeted optimization of building systems and equipment to drive efficiency, aligning with the company’s sustainability focus.

Problem

BGIS faced the challenge of analyzing a large amount of work order descriptions around 30,000 entries generated during a large-scale lighting retrofit project. The traditional approach would require someone to manually read through work order problem descriptions and subjectively categorize them. These work orders contained a mix of unstructured text and numerical data, making it difficult to analyze the data accurately and efficiently.

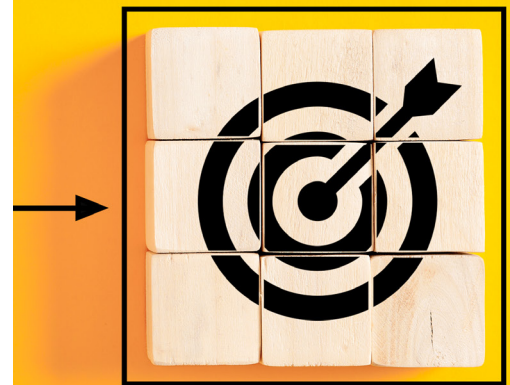
The primary goal was to quantify cost savings and operational efficiency gained from the retrofit, but analyzing this data was highly manual and hence labor-intensive, prone to errors, and lacked consistency, leading to inefficiencies.

Solution

BGIS used KNIME workflows to automate extracting and categorizing information from their work order descriptions, specifically using topic modeling, an unsupervised natural language processing (NLP) technique. The workflow reads through all work orders' descriptions and resolutions to understand what issue occurred, and what work was performed at the site.

This technique objectively categorizes service calls, providing statistics to dive deep into the topics to ensure accuracy. This helped to systematically analyze and classify the unstructured text and numerical data in the work orders transforming the manual process into a streamlined, efficient workflow.

This allowed BGIS to objectively quantify the impact of the retrofit by identifying and analyzing relevant patterns and categories in the work orders. When compared to non-retrofit sites, it became further apparent that the retrofit resulted in cost reductions. Topic modeling allowed BGIS to attribute these savings to the particular type of light bulb that was replaced under the retrofit.



Outcome

By automating the work order analysis with KNIME, BGIS achieved significant financial benefits. The result was substantial annual savings of \$420K in maintenance and repair costs and a \$35K monthly reduction in work order costs. This automation not only justified the project costs but also provided a clear, data-driven foundation for future retrofits, helping BGIS optimize its operations and maximize savings continuously. Since KNIME can integrate seamlessly with existing tools like Access, SQL, and Tableau, it provides reassurance and a smooth learning curve within BGIS, ensuring continued value delivery to clients.

KNIME helps you implement automation for greater efficiency and accuracy

Automation is a key driver in enhancing efficiency and accuracy across various industries. You can automate various financial analysis processes using KNIME Analytics Platform, saving you time, creating repeatable processes, and reducing error. It is easy to use and it is even easier to start from a pre-packaged example and customize it to your own data and business.

Here are some tasks that you can automate with reusable examples:

- **FP&A**: budgeting, monitoring revenues and costs, and measuring returns of investments
- **Accounting**: bank reconciliation, dunning management process, profit-loss comparison

- **Tax**: sales tax reporting, transfer price recharge
- **KPI**: customer churn, employee turnover, market share
- **Audit & Compliance**: fraud detection techniques — DBSCAN, isolation forest, random forest

By automating repetitive and complex tasks such as reporting, invoice checking, cash reconciliation, and data imports, your business can significantly reduce the time spent on manual processes and minimize the risk of human error. In contexts where large volumes of data must be processed, such as work order management, automation can streamline the entire process, providing faster, more reliable results.

For instance, FP&A teams can automate the analysis of work orders, drastically cutting down the time required to parse and categorize data, which traditionally would be a labor-intensive task. Your business can uncover actionable insights more efficiently, leading to substantial cost savings and more accurate resource allocation. Here is a booklet: KNIME, Automation, and AI: **The KNIME for Finance Collection** with a collection of jump-start workflows for common operations in finance departments.

Paras Gupta, Director, BI & Advanced Analytics at BGIS went from “having zero experience to being an advanced user in under two weeks.”

TATA Steel's journey to enhanced data accuracy and 95% time savings

TATA Steel is a global steel production conglomerate reporting a total annual revenue of \$113 billion. In Europe, TATA Steel is one of the largest steel producers serving multiple markets worldwide including construction and infrastructure, automotive, packaging, and engineering.

Problem

To improve processes, TATA Steel Europe took different areas within the company where data analytics were being applied. Their goal was to maximize the use of available data and shift reporting away from the labor-intensive and error-prone Microsoft Excel.

TATA Steel Europe identified three use cases where they faced inefficiencies and errors while using Excel: contract management, sales price analysis, and product master data quality.

The challenge with contract management was that employees of contractors could perform jobs at multiple locations in a single day, which made it difficult to see when an employee started and ended their

working day. Sales price analysis revealed that prices were not always invoiced correctly, leading to frequent customer complaints, a complex pricing structure, and various order fulfillment challenges. Additionally, a legacy system made it difficult for sales staff to accurately determine whether sales orders and prices were recorded correctly. Finally, the product master data consists of a large number of very different product specifications including dimensions, tolerances, and mechanical and chemical properties.

For TATA Steel it ultimately came down to cultivating a data-driven culture, this was essential because non-experts can independently use the available data, enhance control procedures, and turn insights into business value.

Solution

TATA Steel addressed all three use cases with KNIME workflows. For contract management, timesheet data was imported and combined to identify employees with long working days — some with over 20 hours. Auditors can now identify other errors due to incorrect surcharges for overtime, weekend/night shifts, and public holidays. This streamlined its process for detecting anomalies in timesheets.

A sales price analysis was conducted by taking extracts of all sales orders and invoices raised within a given period. Prices between previous periods and prices of similar products were compared and price corrections and provisional pricing were also considered.



For the identified potential erroneous prices, the root causes were identified by the sales staff, and controls were enhanced. In creating this solution, the majority of the time was used to extract new data and check for any new inconsistencies. Considerable time was saved by reusing the same analysis in other sales sectors.

TATA Steel performed a traditional audit and a sample of twenty sales orders was manually tested, which uncovered several inconsistencies. By performing an extensive reconciliation of the product master data for all orders KNIME was able to connect and extract data from existing and legacy systems using a single workflow.

Outcome

Switching to KNIME led to 95% time savings and uncovered several data issues in Excel reports that were then solved with KNIME. The automation reduced manual labor and enhanced accuracy, improving overall process efficiency and reliability. Having reusable and shareable workflows reduced the need to recreate tasks from scratch for every single project.

Repeated steps such as mundane pre-processing tasks can be captured as a component and used in other workflows or by other colleagues. Configuration changes can also be programmed to update across all components if needed – guaranteeing consistency in business processes. All KNIME workflows are self-documenting, meaning knowledge is stored in the workflow itself and not in the mind of an employee.

By using KNIME, TATA Steel saved time, created consistency in business processes, and upskilled non-technical auditors along the way to contribute meaningfully to data analytics in their work.

KNIME helps you save time and reduce bottlenecks by optimizing your financial planning

Bottlenecks and inefficiencies often plague financial planning and analysis processes due to reliance on outdated tools and manual data handling. By moving away from traditional spreadsheet-based methods, you can reduce the time spent on data entry and analysis resulting in significant time savings and a smoother workflow.

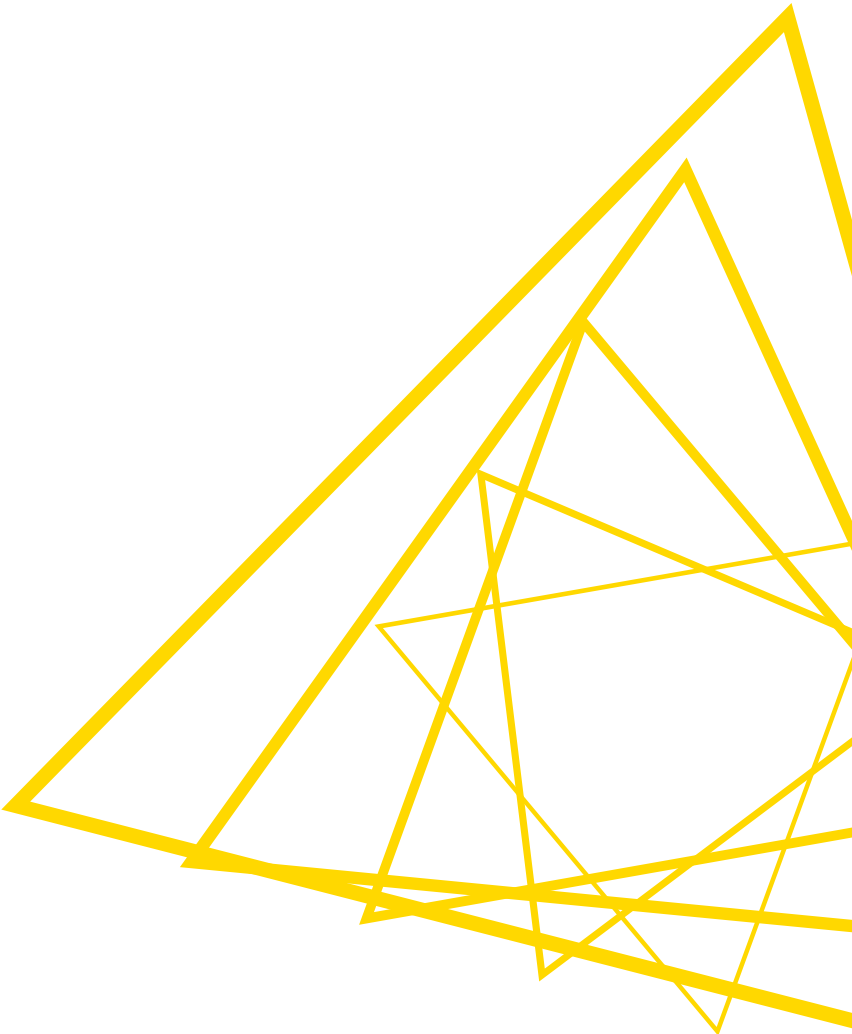
Here are some limitations of a spreadsheet-only finance department you might have encountered:

- Time-consuming to use and work with
- Repetitive and manual cycles of data cleaning
- High risk of errors or inconsistent data cleaning processes
- Difficult to collaborate and maintain version control
- Transparency and explainability issues

Here is a comprehensive [guide](#) where we cover these limitations in more detail.

You can overcome these limitations by adopting a low-code data analytics platform that enhances data integration, automates workflows, and offers sophisticated analytical functions, improving accuracy, reducing errors, and providing deeper insights for better decision-making and financial management.

This can free up resources to focus on higher-value tasks, like strategic planning and financial forecasting.



How Day5 Analytics centralized and automated 500 financial processes

Day5 Analytics' customer is a global leader in integrated facility management solutions, entrusted to manage the real estate finances of various Corporate Real Estate (CRE) clients, providing comprehensive services such as financial accounting, budgeting, innovation, and reporting.

“With its no-code visual interface, logical flow, and Excel-synonymous functions, professionals can easily leverage KNIME to automate their spreadsheet processes. KNIME provides an opportunity for Finance staff to build analytical automation tools without IT support while remaining nimble to changes in business.” ~Director, CAS Finance

Problem

Day5 Analytics managed over 500 financial processes for their clients. Many of these involved heavy data manipulation and reporting tasks that were previously decentralized and manually done in Excel. This way of managing processes was inefficient, error-prone, and did not scale well. This manual process involved downloading CSV files from the financial ERP, converting them to Excel, and performing several sequential calculations to determine the accrual amount.

Each account team would apply its own specific business logic to ensure accruals were relevant to the specific CRE client. These processes were carried out in standalone Excel models and were disconnected from one another.

Consequently, the methods deviated substantially from a standard process. Once these individual account accruals were generated by finance, they would be reviewed and approved by the operations teams, and uploaded to the financial system.

Solution

Using KNIME Analytics Platform, Day5 Analytics automated and centralized these financial processes. As multiple account teams were repeating the same procedures each month, with slight differences, this process happened hundreds of times a year. Therefore, any improvement in efficiency to the core process could be delivered across each account.

The CAS team consolidated the cost accrual process across 20 accounts by exploring customized accrual processes, defining global and account-specific business rules, and automating the accrual generation process with KNIME. Finance ERP reports are now automatically downloaded into a single folder.

KNIME reads through each of the files and applies business rules, tailoring accruals to each CRE client's nuances. The generated accrual is then reviewed by operations staff, who ensure the cost aligns with the actual work delivered. KNIME then consolidates the input received from operations and creates upload-ready templates for the financial ERP system.

Result

Using Excel to perform all the necessary financial processes used to take around 2.5 days each month.

By centralizing this task with KNIME, the process is now completed in under half a day each month – resulting in a time-saving of about 5 weeks per year. The time saved by centralization is recovered by each account team at the most stressful time of the month: month-end close. This process scales to support more account teams without a proportional increase in headcount and with additional value-added work.

KNIME reduced the manual workload, minimized errors, and provided more reliable and timely financial reporting. It allowed for more focused testing and efficiency in the annual audit process. As a primary venture into self-service automation, this project sparked interest in further automation and drove centralization across the department, increasing Day5 Analytics' capacity to take on other work and speeding up the delivery of work to clients substantially.

Over 600 individual processes are managed for various account teams every month – including accrual uploads, account reconciliations, expense card reviews, budget uploads, and more.

Keeping track of such a large volume of critical deliverables is not feasible using spreadsheets.



To ensure delivery and accuracy in client commitments, the CAS team created a transaction scheduling solution in KNIME. With the no-code visual interface, logical flow, and Excel-synonymous functions, you can easily leverage KNIME to automate your spreadsheet processes. KNIME provides an opportunity for finance staff to build analytical automation tools without IT support while remaining agile to changes in their business.

KNIME helps you transform FP&A through unified processes

The first step in building an effective FP&A department involves integrating various financial activities into a single, cohesive system. This can help you ensure that data flows smoothly between departments, reducing the risk of errors and improving the quality of financial insights. KNIME Analytics Platform has over 300+ built-in connectors to access any data. You can connect to:

- Databases
- Cloud services
- Various file formats
- ERP systems
- CRM software
- Web resources

- Web resources
- Big data platforms
- LLM model providers

KNIME can also handle data of any size or type — numerical data, categorical data, text, images, time-series data, or even network data. Here are two cheatsheets that you might find helpful: [Connectors with KNIME Analytics Platform](#) which covers connections to external tools and data sources and [KNIME for Finance](#) which highlights the most important nodes and verified components you need to know when it comes to using KNIME for finance.

You can clean and blend your data by handling missing values, removing duplicates, detecting outliers, converting data types, filtering, sorting, aggregating, and grouping data for summarization and restructuring. Additionally, you can combine multiple sources and formats to efficiently prepare your data.

At the same time, KNIME is capable of handling large datasets and workflows of any complexity. Whether you are working on multiple complex financial processes or scheduling and automating report generation, KNIME scales with your needs, providing consistent performance and reliability.

Finance and governance go hand in hand. In KNIME Analytics Platform, the step-wise execution and visual interface can always ensure that you have an audit trail of your data. You can inspect the results of each step individually and trace back to its original data, to understand the changes, and modify them if needed.

Why KNIME for Finance?

KNIME is the end-to-end data science software that enables companies to operate more efficiently and make sense of data at scale.

- Automate your financial analytics workflows so you can make quicker decisions and spend your time on higher-value tasks.
- Overcome manual data aggregation and eliminate errors
- Easily access data from any system, and with its low-code interface, finance teams can immediately start automating repetitive tasks while gradually upskilling to more advanced modeling, without any coding.
- Provide forward-looking insights that contribute to shaping the business strategy.

If you want to hear more about all the ways you can use KNIME to improve your finance department, take a look at our [KNIME for Finance](#) workflow collection.

Alternatively, get in touch with [customer care](#) for assistance with any questions you have about KNIME Software licensing and pricing. Receive a personalized implementation plan and recommendations for existing processes that could be taken care of with KNIME.



Benefits of KNIME software:

- **Intuitive interface** – Easily retrace steps in your analysis with visual workflows that let you quickly spot and fix errors.
- **Self-documentation and versioning** – Ensure regulatory compliance by making each analysis auditable and explainable to others.
- **Low-code environment** – Build a workflow once, save, then reuse and share with others to automate tedious data processing and see faster time to insight.
- **Flexible and extensible** – Consolidate, cleanse, and process data from all new and legacy sources in a single platform.
- **Analytic depth** – Build sophisticated models to quickly identify fraudulent transactions, calculate accurate credit scores, predict cash flow, anticipate customer needs, and more.
- **Open source community** – Access solutions and blueprints for fraud detection, risk scoring, ledger entry and reconciliation, and more created by other data science experts in the banking field.

About KNIME

KNIME helps everybody make sense of data.

Its free and open-source KNIME Analytics Platform enables anyone—whether they come from a business, technical, or data background—to intuitively work with data, every day.

KNIME Business Hub is the commercial complement to KNIME Analytics Platform and enables users to collaborate on data science and share insights across the organization.

Together, the products support the complete data science lifecycle, allowing teams at all levels of analytics readiness to support the operationalization of data and to build a scalable data science practice.

Finance departments love KNIME because it helps teams automate time-consuming data processing, build advanced models that detect fraud or predict cash flow, and deploy these complex workflows to financial analysts and other business users via interactive data apps.

Take the first step towards transforming your financial analysis workflows by downloading **KNIME Analytics Platform** and start building solutions immediately, or speak to a **Customer Care Team Member** to learn more about bringing KNIME to your organization.