

# How MLG Used KNIME Data Apps to Streamline Mining Operations in the Australian Outback



## Challenge:

Rapid growth and dispersed operations left MLG with siloed, spreadsheet-based data management

Limited IT resources and remote locations made data integration and visibility difficult

Lack of real-time insight strained financial reporting and operational decision-making

## Solution:

Implemented KNIME for ETL, reporting, and interactive data apps

Replaced error-prone spreadsheets with customized, site-specific data apps for data capture

Migrated from KNIME Server to KNIME Business Hub for scalability and governance

## Results:

Cut manual spreadsheet maintenance by several days per month

Improved data quality, operational visibility, and cash flow

Empowered non-technical staff to self-serve through data apps

Enabled resilience and agility during the COVID-19 pandemic

## Challenge: Siloed Data in Remote Locations and Excel-Heavy Systems

When [MLG](#) — a mining services and resource asset management company based in Western Australia — found itself doubling in size in just a few years from 650 to 1,400 employees. The systems underpinning its operations couldn't keep up.

**"MLG, in the four years that I have been with the business, has doubled its revenue. It's doubled its headcount... The information architecture couldn't keep pace."**

**Rhys Meakins, Head of Technology, MLG**

With over 1,400 employees operating across some of the most remote regions in Australia, MLG needed a data infrastructure that was resilient, flexible, and above all, scalable. The company turned to KNIME, supported by consulting partner [Forest Grove Technology](#), to help modernize how they captured, integrated, and leveraged mining production data — starting with ETL pipelines, and evolving into use of KNIME data apps.

MLG struggled with siloed, spreadsheet-based systems that couldn't scale with its rapid growth. Each mining site operated with its own manual Excel processes to track "physicals" — the daily haulage and production activity MLG performs for clients.

**"Up until we introduced a KNIME process, those physicals were being recorded in Excel — with one spreadsheet for every site operation, approximately thirty spreadsheets."**

**— Rhys Meakins, Head of Technology, MLG**

Coupled with difficult terrain and historically unreliable communications infrastructure, it was nearly impossible for MLG's head office to get real-time insights on haulage and production activity that could inform planning and forecasting. Back office teams were overstretched, and crucial data for invoicing and operational decision-making was in inconsistent formats.

### Solution: KNIME Business Hub and Data Apps

MLG began with a modest proof of concept using the KNIME Analytics Platform and quickly saw results. This led to the purchase of KNIME Server in late 2021, and later a migration to KNIME Business Hub — with guidance from KNIME partner Forest Grove.

While KNIME initially served as an ETL tool feeding Power BI dashboards, it was KNIME Data Apps that unlocked huge additional value for MLG.

Rhys and his team collaborated with Forest Grove to assess whether a KNIME data application could effectively replace their existing paper-based and Excel-dependent workflows. The analysis involved evaluating how the KNIME platform could streamline and automate their processes, providing a more efficient, digital solution for their operations.

Critically, the solution had to provide for an increasing degree of automation over time; starting with manual data entry and later leveraging IoT API connectors.

Within just four months, without a dedicated dev team, MLG replaced its clunky Excel tracking system with a suite of custom-built KNIME data apps deployed on KNIME Business Hub.

**3+ days/month  
saved by accountants  
at month-end**

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**KNIME supported 2x  
growth in revenue  
and headcount  
with scalable data  
infrastructure**

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“Chris, our Senior IT Engineer, is not a developer by trade... without a dedicated team, we were able to build and commence rollout in the space of four months, which was mind-blowing.”

Rhys Meakins, Head of Technology, MLG

These apps now:

- Pull asset and personnel data from business systems (like Pronto and Microkeeper)
- Enforce data integrity and site-specific filters
- Capture daily production and safety data via a modern web UI
- Generate reports and billing inputs automatically
- Provide a single source of truth across operations

Rhys and his team faced minimal internal resistance because the data app design mimicked the familiar spreadsheet layout — while introducing rigorous backend controls and validation, which Excel sheets never had.

**First data app  
deployed in just  
4 months with no  
dedicated dev team**

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## Results: Tangible Time Savings and Intangible Impact

The transformation delivered tangible and intangible benefits to MLG, helping a traditional industry modernize and launch a digital transformation initiative quickly during a difficult period.

“We had competitors who didn’t make it to the other side of the COVID-19 pandemic... Our managing director credited this data app with giving us much greater insight and helping us weather that storm.”

Rhys Meakins, Head of Technology, MLG

### Tangible impact

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- **3+ days/month saved** by qualified accountants at month-end
- **Half a day/week saved** by finance team maintaining spreadsheets
- **Faster invoicing**, leading to improved cash flow
- **Real-time reporting** for operations and finance

### Intangible impact

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- **Previously unattainable visibility** into daily production across remote sites
- **Data governance** and consistency through centralized master data
- **Supporting resilience through crisis:** KNIME was credited in a major Western Australian news publication as a factor in MLG’s successful navigation of COVID-19 disruptions

## Next steps: From Master Data to Machine Learning

Since the initial success, MLG has continued expanding KNIME usage, deploying data apps for:

- **Master Data Management:** Finance and HR teams use apps to clean, map, and maintain their own data
- **Integrity Checks:** Cross-verifying GPS telemetry with ERP records to catch mismatches
- **Purchase Compliance:** Auditing purchase records against contracted rates via KNIME
- **Custom Data Exports:** Replacing Power BI with filterable, user-friendly Excel downloads

MLG is also actively exploring KNIME's machine learning and generative AI integrations, with forecasting models already embedded into data apps, and ongoing testing of LLMs for future use.

**"We've packaged a forecasting model in a data app that lets users retrain the model and compare versions... We're also exploring LLMs with OpenAI and DeepSeek."**

Rhys Meakins, Head of Technology, MLG

**"We needed a solution that would grow with us. KNIME has done that."**

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## KNIME Business Hub at MLG

As MLG moves forward, the KNIME Business Hub provides a scalable, governed foundation to support new use cases across the business — all without requiring heavy developer resources or costly third-party platforms.

**"We needed a solution that would grow with us. KNIME has done that."**

Rhys Meakins, Head of Technology, MLG

MLG was supported by Forest Grove Technology during their KNIME digital transformation process. You can learn more about [Forest Grove's services here](#).