



Enabling Scalable Enterprise Workflow Automation and Data-Driven Decision Making

Engtek Group | Delivered by Nutworkz



About Engtek Group

Founded in 1974 by the late Dato' Teh Ah Ba, Engtek Group has grown from a small workshop into a leading international manufacturer of precision engineering components. Today, Engtek serves a broad base of local and multinational customers across high-technology and advanced manufacturing sectors.

Decades of engineering expertise, combined with an unwavering commitment to quality, have underpinned Engtek's sustained global growth and operational excellence.



ENGTEK



Customer Testimonial

"Redstone iPaaS provided a structured and scalable platform for us to standardize and automate workflows across the group. We have successfully deployed it in many use cases across core functions: Finance, HR, IT, Sales & Marketing and Operations. Compared to our previous setup, it offers much better scalability, rapid development turnaround, and clear governance. It has become our core platform for ongoing digitalization."

Teh Tze Huai

Corporate Manager, Group IT & DX - Engtek Group

The Challenge

To support day-to-day operations, Engtek historically relied on legacy SharePoint-based forms to manage internal processes such as Purchase Requisition, Document Control, IT & HR Helpdesks. As the organisation expanded across multiple manufacturing sites, this approach became increasingly difficult to scale.



Process Agility and Governance

- Slow turnaround for process changes
- Growing technical debt and operational risk
- Limited scalability as transaction volumes increased



Group-Wide Visibility Across Manufacturing Sites

- Heavy reliance on stored procedures, making the system difficult to scale and maintain
- Poorly structured and non-reusable data models, limiting flexibility for integration and future enhancements
- Manual consolidation for reporting
- Limited real-time, group-wide visibility
- Inconsistent metrics across sites
- Long data refresh cycles, impacting Power BI dashboard performance
- Lack of data versioning, governance, and control mechanisms across data pipelines



The Solution: Redstone iPaaS

Redstone iPaaS was introduced as a modern, low-code integration platform to replace legacy SharePoint form capabilities, enabling structured and scalable business-driven workflow automation. Instead of replicating existing designs, workflows were standardised and rebuilt with clearer and dynamic approval logic and governance. This allowed the IT team to develop and maintain workflows more consistently in collaboration with business users.

In addition, the platform was also used to support integration of ERP data across multiple sites through ELT workload, enabling more consistent and visibility through Power BI.

Implementation Approach

01

Workflow Modernisation

Nutworkz replaced legacy SharePoint-based forms with modern, low-code workflows built on Redstone iPaaS.

02

ERP Data ELT and Analytics

Nutworkz implemented a group-wide ERP data integration layer, connecting multiple on-premises sites into a centralised data warehouse for reporting and analytics.

Workflow Modernisation

Approach

- Identified high-impact operational and approval processes for initial modernisation
- Re-designed workflows using standardised approval logic and governance controls
- Enabled business functions to define requirements, review workflows, and support ongoing improvements through structured training and templates, while the IT team continues to develop and maintain the workflows.
- Established a scalable framework to support additional workflows over time

Outcome

- Business-aligned digital workflows with faster IT delivery turnaround
- Elimination of single-person IT dependency through broader IT team enablement and governed support
- Consistent, auditable approval processes
- A flexible platform that scales with operational demand

ERP Data ELT and Analytics



Connect

Connected on-premises MSSQL ERP databases across all six manufacturing sites via Redstone iPaaS



Extract, Load, Transform

Adopted an ELT approach to preserve raw transactional data



Harmonise

Standardised and harmonised ERP data centrally to ensure consistent business definitions



Deliver

Delivered executive and operational dashboards through Microsoft Power BI

Why ELT: By transforming data after loading, Engtek gained flexibility to evolve reporting logic, add new metrics, and scale analytics without re-engineering data pipelines—supporting both current and future insight needs.

Business Outcomes

Faster, Business-Owned Operational Workflows

Approval workflows were fully automated and standardised

Reduced Operational Risk and Technical Dependency

Reduced single-person IT dependency by enabling the wider IT team to develop, maintain, and support workflows with clear business input.

Group-Wide Visibility Across a Complex Manufacturing Footprint

Near-real-time Power BI dashboards for leadership and operations

Scalable Digital Foundation Spanning Processes, Systems, and Data

Solutions scaled seamlessly from an initial use case to dozens of workflows and data pipelines without performance impact

By connecting execution with insight, Engtek strengthened operational resilience, improved management decision-making, and positioned the organisation for sustained global growth.

Business Benefits

Legacy System Modernisation

Replaced outdated SharePoint form infrastructure with a modern, cloud-ready digital workflow platform built on Nutworkz's Redstone-based framework.



End-to-End Workflow Automation

Approval processes and rules-based workflows are standardised and automated, improving consistency, traceability, and operational control.



Operational Resilience

Reduced key-person dependency through governed processes and reusable integration patterns embedded in Nutworkz's framework.



Data ELT Enablement and Analytics Readiness

ERP data from multiple on-premises sites is securely consolidated using a Nutworkz ELT framework, producing consistent, analytics-ready datasets for Power BI.



Cost Efficiency

Lower reliance on manual reporting, external consultants, and specialised administrators through reusable, platform-based capabilities.



Business-Led Innovation

Business functions define needs, while the IT team delivers scalable workflows using reusable, governed templates, significantly reducing IT dependency and speeding up process changes.



Scalable Platform Architecture

Solutions scaled seamlessly from an initial use case to dozens of workflows and data pipelines without performance impact.



Training and Empowerment

The IT team gained the skills and autonomy to manage workflows and data integrations confidently in-house, with business teams actively supporting process definition and validation.



Improved Management Visibility

Leadership now has access to reliable, standardised dashboards with group-wide visibility across manufacturing sites.



Future-Ready Digital Foundation

A secure, extensible framework on Redstone iPaaS that supports ongoing workflow expansion, data growth, and broader digital transformation initiatives.



Why Redstone iPaaS

Redstone iPaaS delivers more than workflow automation—it provides a long-term modernisation platform for organisations moving beyond legacy systems. By enabling scalable integration, low-code automation, and business ownership, Redstone empowers teams to innovate faster while maintaining governance, resilience, and control.

In addition to workflow modernisation, Redstone iPaaS also supports data ELT workloads, enabling secure, scalable ingestion and consolidation of enterprise data from distributed systems. This allows organisations to preserve raw data, standardise analytics models, and deliver reliable, analytics-ready insights—forming a future-proof foundation for enterprise reporting and decision-making.