



## Briefing Note

### Background, Company & Staff

Sabisu is a software platform developed and operated by Argent & Waugh Ltd (A&W), a UK company wholly owned by the founders and funded by customer sales. Most customers and users know the organisation as ‘Sabisu’.

Sabisu was set up 7 years ago in Teesside and has been focused on the process industry from the start. The original team was recruited from Teesside University and now occupies senior technical positions, with almost all employees being under 30 years of age and fluent in the latest computer and data science techniques.

A&W/Sabisu revenues are split equally between repeating license revenue and services, providing a solid basis for operations and continued investment in the product. Sabisu has been cash-flow positive since it was founded, growing thanks to sales only and without external investment. It is wholly owned by the CEO and founders.

Since 2014 a research partnership with Manchester University has supported the incorporation of advanced, predictive analytics and machine learning into the platform.

### Reference Sites

SABIC UK & Europe	Management of site improvement initiatives across Europe. Predictive maintenance and asset optimisation. Corporate & operations risk capture, workflow & analytics. Plant mobile deployment across 5 plants, 300 users. Conformance monitoring and operator advisories. Variable cost reduction & executive KPIs.
CropEnergies AG	Risk management with particular focus on SHE / EHSS data capture, analytics and reporting. Analytics to flag production issues early & alarm system flood/cascade risk. Integration of process data into shift workflow & SOC /conformance monitoring.
Shell	Platform for tactical management of capital projects of all sizes in Australia, US, Kazakhstan. Expanding into operational analytics and governance.
Huntsman	Conformance monitoring and operator advisories. Variable cost reduction & executive KPIs.
LDAR	Leak detection and remediation data capture, analytics and direct transfer of climate change data to client.

Sabisu has around 6,000 users distributed globally.



## Background on Sabisu Technology

Sabisu recognized that the process industries suffered from manual & inefficient reporting, intermittent collaboration, disjointed processes and working with disconnected silos of data.

The team developed a scalable platform which connects to enterprise and process data sources, analysing and visualising information which then flows into an easy to configure workflow and collaboration engine.

Sabisu was designed to be easy to use, so that end-users could get value from the platform without relying on expensive or time-consuming development services.

As a result users combined data from scheduling, ERP, cost estimation, process historians and maintenance systems, or defined workflows for many different needs, such as;

- Ensuring major capital projects deliver on commitments
- Executives tracking performance against commitments, e.g., Unit Development Costs, CSU targets.
- Action tracking, compliance and workflow performance, e.g., Compliance Management, Logistics.
- Process conformance monitoring
- Intrinsically safe 'plant mobile' devices deployed to field technicians
- Asset availability optimisation and predictive maintenance

Although the Sabisu team have limited process expertise, working closely with customers over the last 7 years has allowed the team to rapidly create solutions that can then be reused widely. This releases the maximum value in the minimum time.

Sabisu provides a range of reporting and visualizations which enable rich assemblies of relevant content, attractive to users. This is supported by an architecture designed with scalability and performance in mind, using distributed and parallel processing techniques throughout.

Underpinning all such solutions is vendor agnostic connectivity. Sabisu is often the only way to integrate solutions from different vendors into one place (e.g., Primavera P6, SAP, risk management systems, process historians, control systems).

MS Excel is also a valuable source of data. Sabisu Go is a popular tool which processes spreadsheets into the Sabisu databases. Users then benefit from analytics, collaboration and from gathering expert knowledge in one place.

If data is critical to decision making, workflow is critical to executing those decisions.

Risk management, action tracking and technician routines are good examples of workflow, where Sabisu displays relevant steps in the workflow and can provide guidance on relevant work practices at each step, improving data quality and process compliance.

As with analytics, configuring workflow in Sabisu is entirely self-service. Users can create and adapt workflows as their business requires it without expense or delay.



## Sabisu & the Cloud

The cloud is increasingly important in many of the latest analytics capabilities, e.g., project risk analysis, predicting project recovery, predictive maintenance.

Sabisu was designed from the outset with cloud deployment in mind anticipating the elastic compute and storage requirements of machine learning and statistical analysis techniques.

Sabisu has substantial experience operating in the cloud with production environments based on Amazon Web Services and Microsoft Azure, scaling to successfully to multiple petabytes – equivalent to every capital project in progress today.

Sabisu has various options for integrating enterprise data (e.g., SAP), acting as a data concentrator to send data to the Sabisu enterprise data historian in the cloud. If required on-premise deployments are available.

A multi-tenant micro-service and service-oriented architecture provides allows new projects to be quickly on-boarded with the distributed/parallel storage and compute capability required to deliver performance at scale.

The infrastructure is now a mixed Microsoft (configuration & sparse data) and Hadoop (time series, data-lake, file objects) environment.

To successfully use this data to deliver value to customers the team uses distributed processing and machine learning techniques underpinned by the Hadoop ecosystem.

## Key Capabilities Developed by Sabisu/A&W

- Sabisu is designed to perform at scale and has been tested far in excess of likely customer requirements.
- Sabisu is highly user-focused, with active user groups and weekly release cycles ensuring customers benefit from emerging best practice.
- Sabisu's SaaS model means that users are provisioned with new updates on a weekly basis, meaning Sabisu can react very quickly to customer requirements.
- This necessitates an agile development approach which has been refined over the years. Time to market for new features is extremely fast with close relationships to end-user customers and modern development methodologies being optimized to support this, e.g., DevOps.
- This model also necessitates a product focus on self-service reducing reliance on implementation services to allow customers to generate more value without more outlay.
- Sabisu leads the market in advanced project controls, with statistical and machine learning techniques available to all users.