

BUSINESS INTELLIGENCE (BI) SOLUTIONS WHITE PAPER

TRANSFORM DATA INTO VALUE

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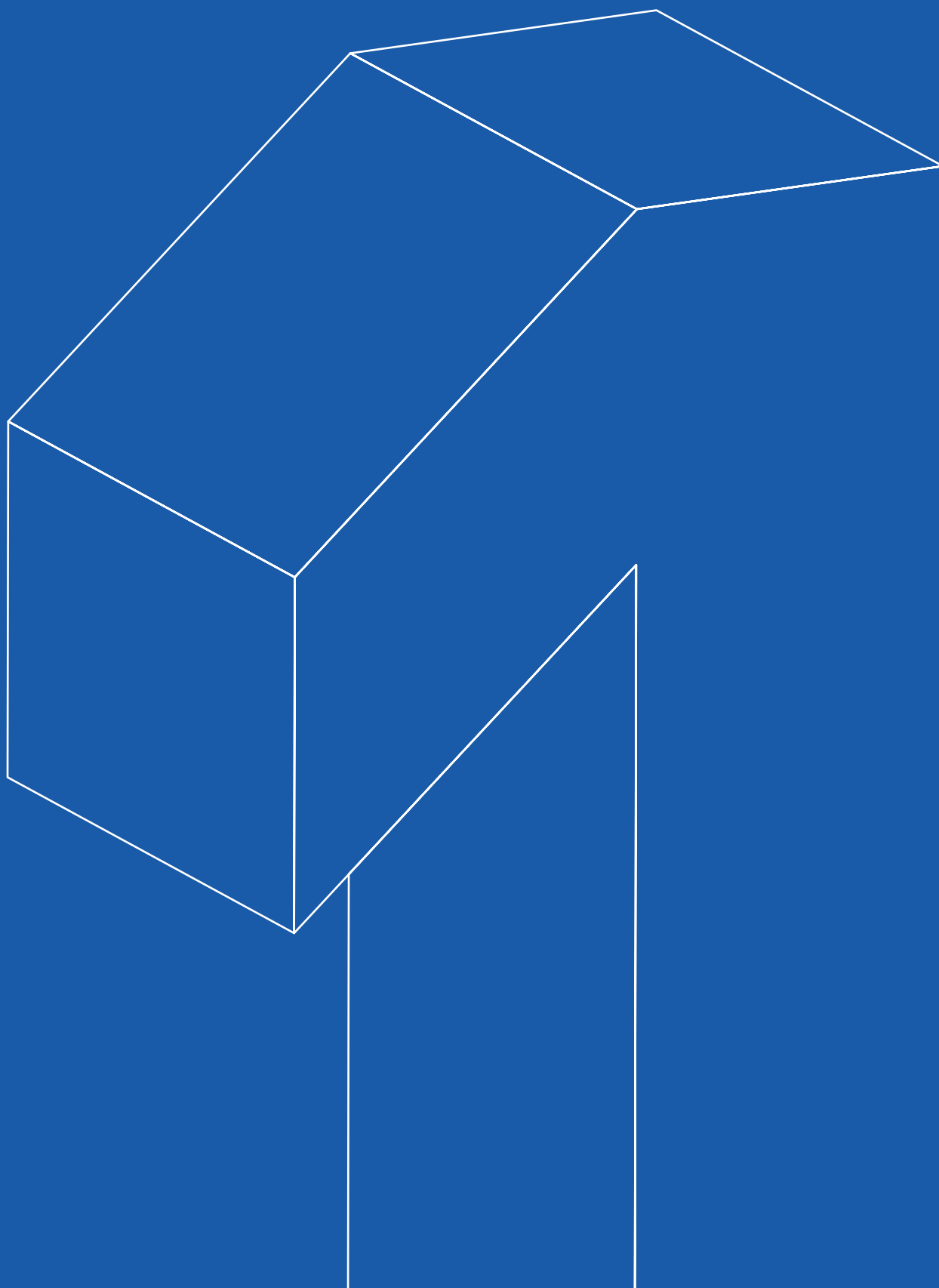
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BI SOLUTIONS FOR ALL INDUSTRIES

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MANUFACTURING INDUSTRY



GLOBAL MANUFACTURING OUTLOOK

From the dawn of the Industrial Revolution to the current Industry 4.0 era, every wave of technological innovation has driven profound transformations in the manufacturing sector. Today, advancements in 5G, artificial intelligence, big data, cloud computing, IoT, and blockchain are enabling a shift from mere human-machine interaction to collaborative decision-making, heralding the age of intelligent production.

However, this era is marked by a lack of comprehensive and standardized procedures and methodologies. The absence of mature business systems in the early and mid stages of infrastructure development has further hindered enterprises from fully capitalizing on data applications. As a result, large-scale projects often stall, making it difficult to achieve meaningful outcomes.

To overcome industry challenges, FanRuan has introduced the Smart Manufacturing Value Scenarios concept. This strategic framework assists clients in identifying key entry points to navigate obstacles, ultimately enabling the development of an integrated management platform for enterprise-level data analytics.

For manufacturers, successful digital transformation hinges on identifying and addressing critical internal challenges through scenario-based data applications tailored to real-world needs. Additionally, learning from proven external cases minimizes trial and error, making the transformation process more efficient and cost-effective.

By focusing on data analytics, business system integration, and management platform development, FanRuan's Smart Manufacturing Value Scenarios provide a comprehensive pathway for manufacturers to achieve meaningful and sustainable digital transformation.

PAIN POINTS IN MANUFACTURING DATA UTILIZATION

Effective management goes beyond design and execution; it requires continuous monitoring and improvement to integrate process-based and result-based management. Key challenges include:

Lack of Goal Coordination:

Without a unified platform, the management and breakdown of goals can become disjointed and chaotic.

Data Silos:

Manufacturing data is often fragmented across different systems, hindering comprehensive integration and holistic analysis.

Data Quality:

Inconsistent, incomplete, or inaccurate data undermines reliable analysis and decision-making.

Scalability:

Managing and processing large volumes of data from diverse sources becomes increasingly challenging as operations scale.

Legacy Systems:

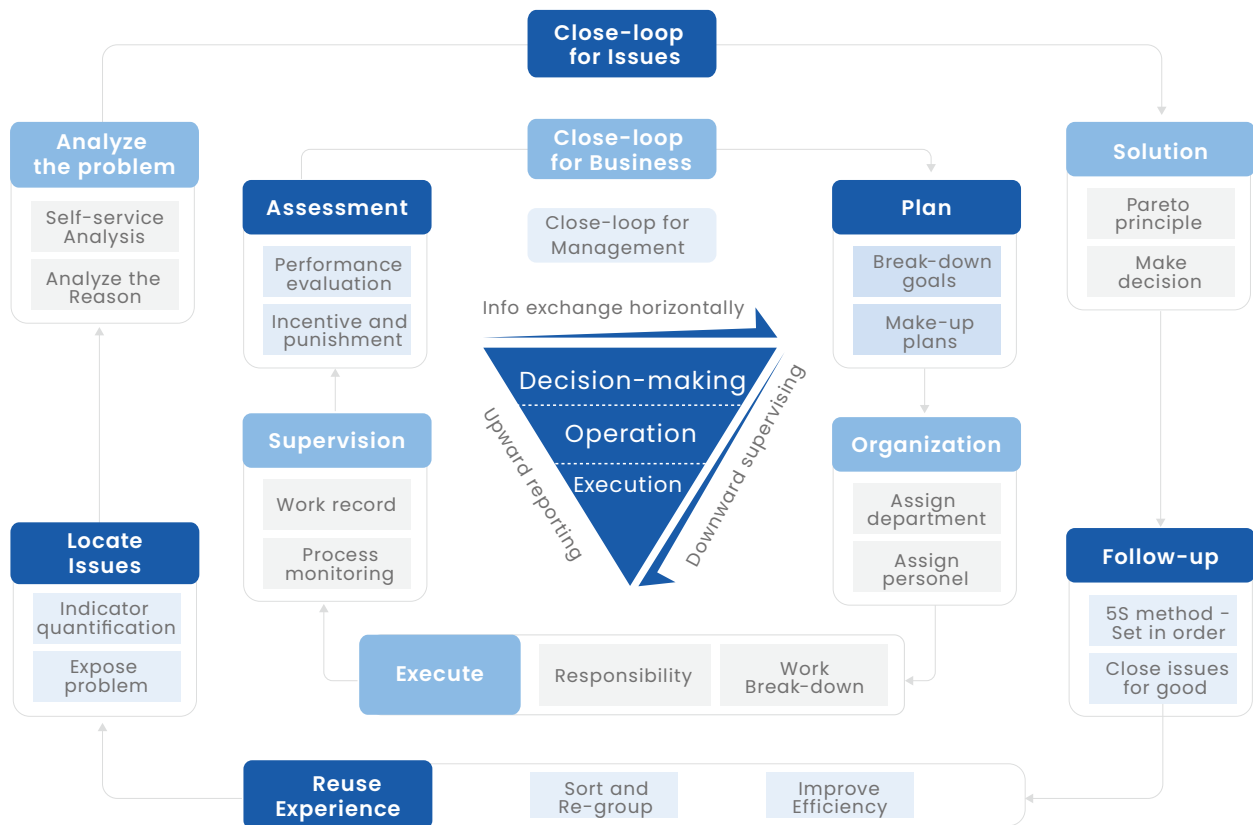
Outdated systems in many manufacturing operations are incompatible with modern data analytics tools, creating integration barriers.

Real-Time Processing:

Achieving real-time data processing and analytics for timely decision-making is often hindered by existing infrastructure limitations.

MANUFACTURING SOLUTIONS BY FANRUAN

1. System: Build an Integrated Digital Platform



FanRuan's solution delivers comprehensive services that enhance intelligent operations, decision analysis, and early risk warning. By integrating multi-tier architecture data and conducting in-depth, multi-dimensional analysis, the solution provides insights into past events, current operations, and future trends. It quantifies key production metrics such as capacity utilization, critical processes, work-in-progress (WIP), equipment effectiveness (OEE), production efficiency, first-pass yield, and unit cost.

This approach transitions management from relying on human judgment to a data-driven decision-making process.

Core Functionality



Supervisory Level

Focuses on analyzing operational goals, monitoring processes, and evaluating quality metrics and cost indicators to quickly identify and address deviations.



Management Level

Provides comprehensive company-wide business analysis, including project progress, quality assessment, cost evaluation, order tracking, financial analysis, HR analysis, and risk monitoring.



Operational Level

Concentrates on equipment, production lines, and workshops, with an emphasis on production progress, personnel status, equipment condition, material availability, and process quality.

2. Services: Consulting and Implementation

FanRuan offers tailored solutions for key scenarios within the manufacturing industry, addressing challenges in operational management, production management, supply chain, and sales management.

Our integrated approach through FanRuan Smart Manufacturing encompasses three critical aspects: data integration, paperless operations, and data visualization. This comprehensive framework addresses practical issues faced by manufacturers, enabling them to use data more flexibly and efficiently—from backend data transmission to frontend visualization.

Digital Platform					
Alert Push		Mobile		Management Report	
Business Topics	Marketing and Sales	After-sales Service	Financial Expenses	Factory Operations	Sales Rebate
Analysis Module	Red and Black List	Spare Parts Management	Travel Expenses	Sales Analysis	Rebate Policy
	Region Report	Extended Warranty	Reimbursement Expenses	Procurement Analysis	Rebate Calculation
	Week Report	Output Value Management	Rules Reporting	Inventory Analysis	Rebate Analysis
Indicator System	Product Sales Volume	Process Unit Price	Total Travel Expenses	Sales Volume Trend	Discount Amount
	Competing Products Sales Volume	Cash Completion Rate	Amount of Change	Total Procurement Amount	Account Balance

Data Model	Sales Data	After-sales Data	Expense Data	Production Data	Financial Data
Data Source	ERP	MES	DMS	WMS	SRM