

GLOVIA G2

ERP Driving
Industry 4.0



Dashboard Overview

| Category | Status | Value |
|---------------|---------|-------|
| Production 1 | OK | 100% |
| Production 2 | Warning | 85% |
| Production 3 | OK | 90% |
| Production 4 | Warning | 70% |
| Production 5 | OK | 95% |
| Production 6 | Warning | 60% |
| Production 7 | OK | 80% |
| Production 8 | Warning | 50% |
| Production 9 | OK | 75% |
| Production 10 | Warning | 40% |

Summary Statistics

| Metric | Value |
|--------------------|------------|
| Total Production | 1000 units |
| Defect Rate | 2% |
| Energy Consumption | 150 kWh |
| Machine Uptime | 99.9% |

GLOVIA G2, the ERP suite for the discrete manufacturing sector

Industry 4.0 requires a strong platform that continuously connects innovations. GLOVIA G2 is the ERP solution that provides that connection, specifically for the discrete manufacturing industry.

GLOVIA G2 ERP

More than 1,000 installations worldwide run on GLOVIA G2. FUJITSU GLOVIA's ERP platform streamlines internal and external business processes and shortens the distance to customers and suppliers. The suite provides more transparency, insight and control in the areas of engineering, purchasing, planning, production, sales, fulfillment, installation, service and support. GLOVIA G2's extensive suite of more than 70 modules connect seamlessly and work closely together, greatly simplifying the management of companies, divisions or individual factories.

The suite is built on two main pillars: real-time insight and ease of use.

1. Real-time insight

Business processes in the discrete manufacturing industry are intrinsically intertwined. GLOVIA G2 was developed to optimize these production environments with real-time support by monitoring all business activities as they happen, including:

- Orders that come in
- Raw materials and semi-finished products that are consumed
- Goods that are delivered and shipments that go out the door

What you see on the screen in GLOVIA G2 exactly mirrors the work on the shop floor.

2. Ease of use

The power of GLOVIA G2 lies in the number of capabilities offered. But its simplicity is what makes the solution unique. The screens and dashboards shown in GLOVIA G2 are fully adapted to the user's needs. Management information and KPIs are displayed by means of grids and alerts and can be built up via a work list, in which all exceptions are shown. GLOVIA G2 empowers employees to operate more efficiently than ever before, with dashboards tailored specifically to their responsibilities, allowing them to quickly become familiar with their own GLOVIA G2 environment.

Developed by the manufacturing industry, for the manufacturing industry

GLOVIA G2 was developed from a unique vantage point. As part of Fujitsu, the seventh largest IT group in the world with 130,000 employees, FUJITSU GLOVIA has developed its software with direct access to many of the factories that use it. Fujitsu is the only ERP supplier with its own factories worldwide. The Japanese parent produces servers, laptops and air conditioners, among other products. In addition, it is developing new Industry 4.0 solutions such as Augmented Reality, Artificial Intelligence and Robotic Process Automation. The ERP platform is constantly tested and expanded with new, advanced solutions, making it perfectly suited to the manufacturing industry.



3

Great Benefits

1. Applicable to all common production concepts

All FUJITSU GLOVIA solutions are suitable for small to medium-sized companies in the discrete manufacturing industry. Thanks to many decades of engineering and production experience, FUJITSU GLOVIA delivers standard capabilities that perfectly fit your business while requiring a relatively short implementation time. GLOVIA G2 capabilities are suitable for project-driven companies, as well as companies using any common production concept, such as Make to Stock (MTS), Make to Order (MTO), Assemble to Order (ATO), Configure to Order (CTO) and Engineering to Order (ETO). GLOVIA G2 also works great for a combination of concepts.

2. Versatile ERP and SCM functionality

GLOVIA G2's capabilities support manufacturers and incorporate lean manufacturing concepts, such as electronic Kanban, Seiban, customer-owned inventory and vendor-managed inventory. Able to support all manufacturing methods, from repetitive manufacturing to make-to-order production, the ERP suite guarantees a seamless connection to any production environment. GLOVIA G2 automatically performs functions such as mutual deliveries, multisite schedules and full financial reconciliation, enabling multisite companies to realize the significant benefits of streamlining and integrating business units.

3. International expertise

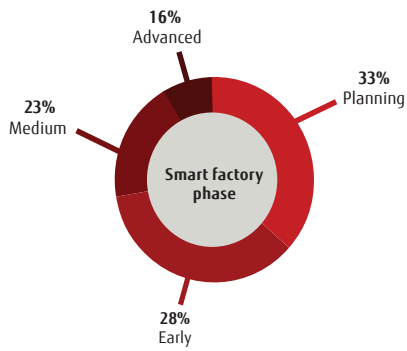
FUJITSU GLOVIA operates globally but offers local flexibility on all continents. Companies can continue to make full use of GLOVIA G2, even after any strategic changes or developments. Above all, choosing GLOVIA G2 means choosing the experience and know-how of IT specialists and logistics experts. Customers immediately benefit from the experience and valuable Industry 4.0 insights of the seventh largest ICT company in the world.



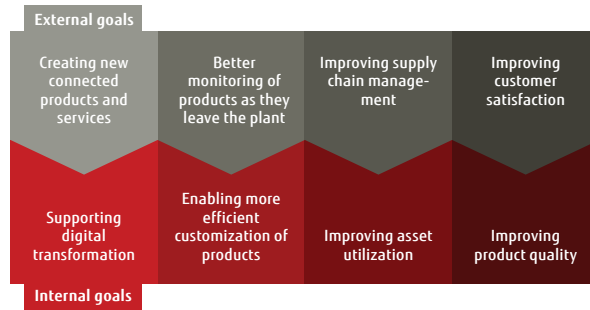


Teknowlogy Group Survey:

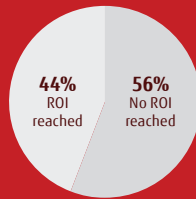
Smart Factory investments often leads
to positive ROI within 3 years



While 67% of US manufacturers have already embarked on Smart Factory initiatives, another 33% are planning them.

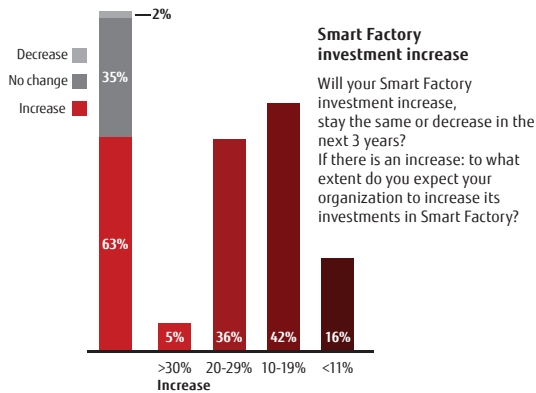


While the biggest internal goals of Smart Factory is **improving product quality**, the biggest external goal is **improving customer satisfaction**. In the era of Smart Factory initiatives, the customer, it seems, comes first.

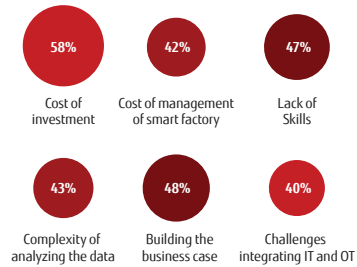


While 56% are in early stages and have not yet delivered an ROI, of those that have seen an ROI, 97% achieved it inside three years.

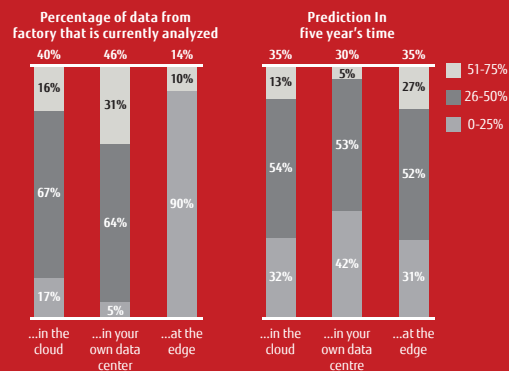
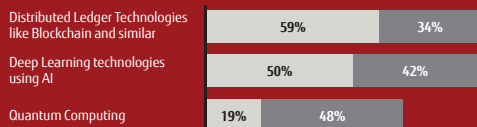
Time before Smart Factory projects deliver ROI



What are the biggest challenges with your Smart Factory projects?



Which of these will be relevant to Smart Factory in future?



The survey shows that most companies invest more in Smart Factory initiatives and that some initiatives are already used enterprise-wide. Most respondents indicate that Smart Factory is an important part of their strategy. In fact, they see a high degree of automation as an essential competitive advantage for the future. The biggest challenges are managing costs, making a business case, developing skills and performing data analysis. Almost half of the respondents say they have achieved a positive ROI within three years of starting their Smart Factory projects.

Source: Survey Teknowlogy Group & Fujitsu (2019)

Basic Capabilities and Modules

GLOVIA G2 consists of 11 basic capabilities and over 70 modules:

1. Product Management

Asset Lifecycle Management | Configurator | Costing | Engineering | Engineering Change | PDM Integration | Tool & Gauge

Helps define and manage products. Allows manufacturers to respond to customer needs without unnecessarily disrupting the production process. Provides maximum control over product costs, budgets and configurations and supports progressive engineering. Helps to shorten the market launch time of new products.

2. Manufacturing Management

Inventory | MPS | MRP | Physical Inventory | Quality Manufacturing | Repetitive Manufacturing | Work Orders

Provides control over all aspects of production planning and material management. Supports the implementation of Lean Manufacturing with GLOVIA G2 lean functionality, such as Kanban, Seiban, Vendor Managed Inventory and Customer Owned Inventory. The modules have powerful shop floor functionality to closely monitor and manage every step in the production process.

3. Financial Management

Accounts Payable | Accounts Receivable | AP Automation | Billing | Cash Management | Contracts Agreements | Expense Rep & Processing | Financial Integr. Mngt | Fixed Assets | General Ledger

Provides powerful, fully integrated solutions to make financial management efficient and profitable. Supports different currencies and complex corporate structures with multiple locations around the world. Helps capture, consolidate and analyze financial data and provides a complete overview of transactions across the enterprise.

4. Customer Management

Bid Process Management | Contract Management | CRM | Customer Portal | Customer Releasing | Estimating | Sales Orders | Sales Quotes

Provides complete and effective support in managing all business processes involving customers, from acquisition and product development to order intake, tracking and shipping. Provides reliable insight into delivery times, thanks to the powerful Factory Planning Tool. Customers can easily configure products online, place orders and check their status.

5. Supplier Management

Contract Purchasing | Materials Supply | Purchase Orders | Supplier Portal | Supplier Quotes | Supplier Releasing

Ensures inventory levels are managed and improves supplier relationships. Supports the entire purchasing process, including creating and closing out supplier contracts, managing purchase orders, coordinating suppliers' shipments and outsourcing activities. Supports various Vendor Management Inventory strategies.

6. Projects Management

Program Cost Accounting | Project Accounting | Project Definition | Project Management Integration | Project Resource Planning

Facilitates the management of complex production processes that have long lead times. Seamlessly meets the specific needs of Engineer-to-Order manufacturers. Contributes to the profitability of complex projects by enabling co-engineering, overseeing resources and activities and sharply monitoring costs and budgets.

7. Service Management

Call Center | Field Service | Installation Management | Service Orders | Service & Repair

Provides targeted functionality for all after-sales activities and service processes. Fully integrated to support preventive maintenance, service contract management, spare parts inventory management and warranty management. Provides real-time, complete visibility and overview of all service activities, applied parts, statuses and life-cycle costs.

8. Supply Chain Management

Distribution Requirements Planning | Factory Planning | Forecasting | Sequencing | Supply Chain Planning

Provides comprehensive, integrated capabilities for efficient communication through electronic messaging and portals, on both the customer and supplier sides. Creates a detailed and visually intuitive plan that continuously synchronizes group-wide demand with the real-time status of production on the one hand and vendors' current supply on the other.

9. Connectivity

Application Adapters | Electronic Data Interchange | E-RMS | External Interface Facility | Transform Foundation Server | XML Framework | XML Transaction set

Offers a complete set of web-based e-business applications to organize and automate processes, link different systems together and enable internal and external collaboration.

10. Business Intelligence

Ad-hoc Analysis | Business Metrics | Enterprise Search | Workflow

Enables manufacturers to increase supply chain visibility and transparency, decrease response times and automate key business processes. The ERP integration solution, based on an open XML platform, allows manufacturers to exchange information across disparate systems easily, whether internal or external.

10. MES

Barcode Scanning | eKanban | Kanban | Machine Integration | Package Handling | Shop Floor Control | Shop Floor Dispatch

Allows manufacturers to easily manage and utilize their GLOVIA G2 extended ERP system investment. Efficiently records what happens within plants. Increases data integrity and security. Reduces total cost of ownership. Provides real-time data visibility, allowing the user to make the best decision possible.

11. Tools & Technologies

Audit Manager | Debugger | Security Manager | Shop Floor Data Transactions | Version Control

Provides a complete set of tools for managing the GLOVIA G2 software and solutions.



Realizing a competitive advantage with an Industry 4.0 Platform

FUJITSU GLOVIA closely follows technological innovations and market developments. Together with other companies, we are actively involved in numerous Industry 4.0 projects. Thanks to the continuous flow of new insights and our strong focus on manufacturing, we have built a flexible Industry 4.0 platform with advanced solutions. We help our customers grow, develop their vision for the future and achieve a competitive advantage.

These Industry 4.0 projects include:

Factory production line simulation and assembling simulation FJGPS / FJGP4D

FJGP4D is a powerful application that visually sets up a process. By simulating the movements of people and materials, you can optimize existing or new production lines and implement changes efficiently. FJGPS offers 3D CAD data and the ability to create 3D and animated operational manuals that employees can use as a reference to reduce the risk of assembly errors. The final product can then be called directly in GPS in the web-based project management software GP4D.

Factory Planning and Dashboard

Factory Planning is a flexible solution designed to meet all planning needs. The memory-resident planning tool generates an optimized production plan based on the limitations of capacity, planned inventory, tools and skills. Factory Planning supports advanced optimization algorithms that shorten setup times and improve the flow of complex processes. In a live environment, the application can re-optimize the production plan in response to machine failures or unexpected inventory shortages. In a simulation environment, multiple plans can be executed and compared to find the best solution for balancing inventory levels with actual planned operations. You can run multiple what-if scenarios, based on overarching production planning forecasts to identify and handle potential production bottlenecks and capacity constraints before they impact production.

COLMINA V2.0

COLMINA V2.0 is an Intelligent Dashboard that visualizes factory and company-wide optimizations. It consolidates views of critical data and smart analytics for reports, alerts and forecasts based on quality, production, energy and machine statistics. COLMINA connects various types of digital production information, such as design, maintenance, the location of people and products, details and output of machines and data that emerge during the production process and in the supply chain. The smart solution consists of three parts:

- 1. Fujitsu Manufacturing Industry Solution COLMINA Service**
The ERP platform streamlines internal and external business processes and shortens the distance to customers and suppliers. The suite provides more transparency, insight and control in the areas of engineering, purchasing, planning, production, sales, fulfillment, installation, service and support.
- 2. Fujitsu Manufacturing Industry Solution COLMINA Edge**
A solution that collects and processes sensor data, including machine operations, staff actions and product location.
- 3. Fujitsu Manufacturing Industry Solution COLMINA Platform**
The place where COLMINA Service and COLMINA Edge meet.



Digital Annealer

Fujitsu Digital Annealer is the world's first quantum-inspired digital architecture capable of performing parallel, real-time optimization calculations at high speed and with great precision at scale. The Annealer is an alternative to quantum computing technology. Using a digital circuit design inspired by quantum phenomena, the Digital Annealer focuses on quickly solving complex optimization problems, without the constraints and high costs that characterize quantum-computing methods. The Digital Annealer enables organizations to adopt new problem-solving approaches and explore methodologies for a wide range of potential real-world applications. Potential applications include portfolio optimization, drug discovery, factory optimization and inventory management.

Fujitsu Advanced Image Recognition (F|AIR)

F | AIR consists of a framework and services for the application of AI Deep Learning to achieve a higher degree of automation for inspection processes. F | AIR revolutionizes all operations that require visual inspection for defect identification. An audit records all findings and quality control decisions and collects the data along with defect images in a PDF report. F | AIR improves the quality and consistency of inspections with exceptionally high accuracy. This further accelerates adaptation to changing needs. The resulting efficiency improvements can lead to cost savings of more than 80%. The image recognition platform can be deployed on-premise or in the cloud. Using an API, it can be integrated with existing production systems and tailored to specific environments.

Robotic Process Automation (RPA)

RPA helps production companies to automate repetitive tasks and create a (robot) connection with legacy applications that do not allow a direct connection/interface. RPA is available 24/7 and guarantees unprecedented productivity and efficiency. Producers can greatly improve their business operations by automating repetitive, rule-based tasks. Examples include implementing operational processes, monitoring inputs and work queues, updating system records, creating incident logs and continuously improving business processes. RPA advantages range from cost savings to increased error reduction and a shortened time-to-market. Equally important is RPA's positive effect on employee satisfaction. Without daily, repetitive processes, employees have more time for interaction, innovation and delivering added value to customers.



About Fujitsu & Fujitsu Glovia

FUJITSU GLOVIA is the leading provider of ERP solutions for the discrete manufacturing industry. The ERP solution GLOVIA G2 offers complete functionalities for a wide range of industries, including machine & equipment construction, industrial products & projects, automotive, electronics and aviation & defense. Complete sector-specific solutions are available within GLOVIA G2. The suite's extensive capabilities enable manufacturing companies to manage the full life cycles of their products, from design, production and delivery to installation, maintenance and support.

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Fujitsu Group

Number 1 ICT company in Japan.
Number 7 ICT company in the world.
Active in 154 countries.
130,000 employees.
Active in the IT industry since 1954.
Research & development: USD 1.8 billion per year.

Fujitsu Glovia

International Headquarters: Los Angeles, US.
Headquarter EMEA: Eindhoven, Netherlands
Target group: SMEs in the discrete manufacturing industry.
Solution: on-premise and on-demand ERP
Implementations: Worldwide approximately 1,000 (Europe approximately 180, Benelux approximately 75).
Active participant in innovative ecosystems, such as Industry 4.0, Digital Transformation, Co-creation



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