

Production Management system

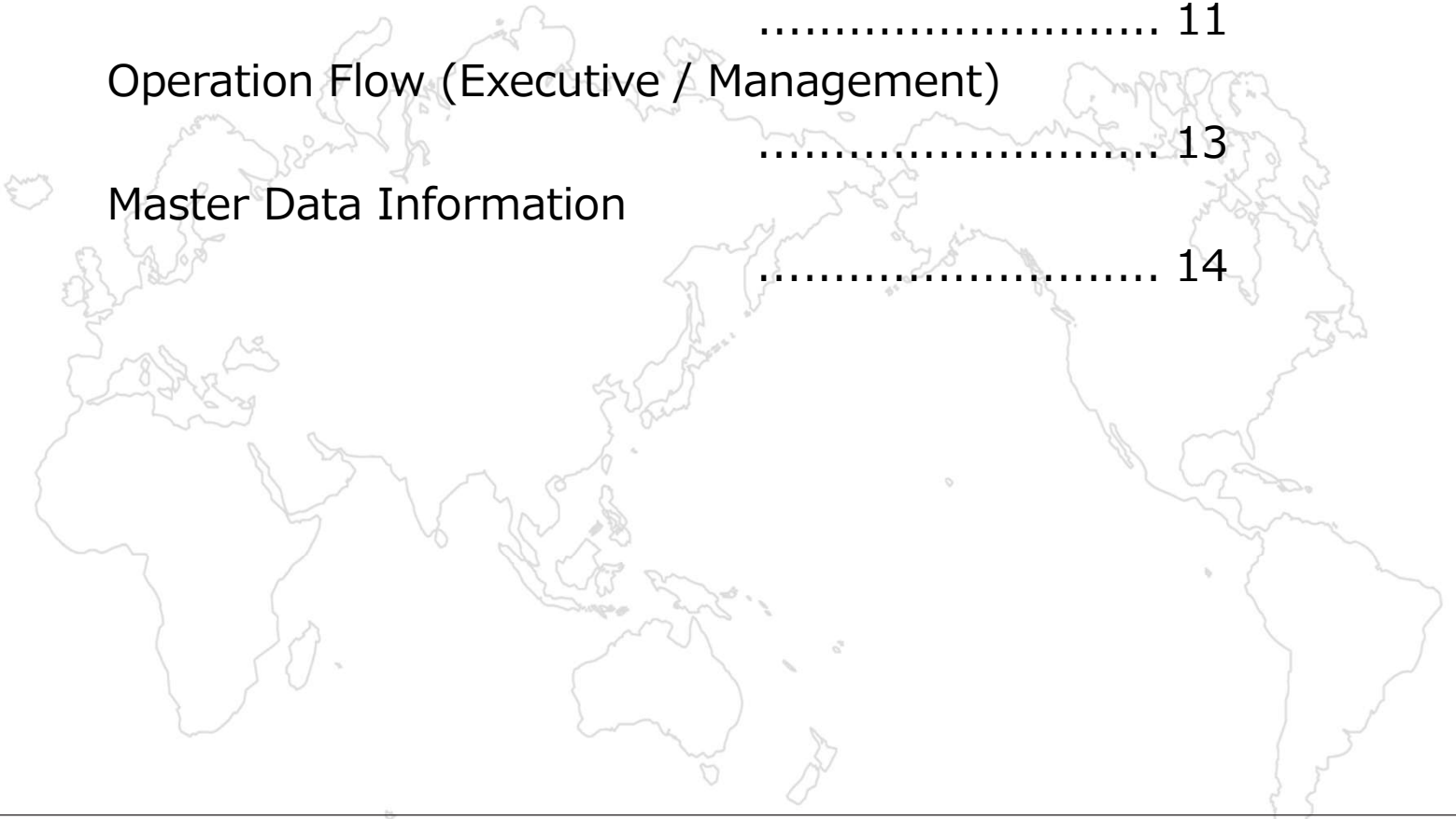
**gb-ERP**

---

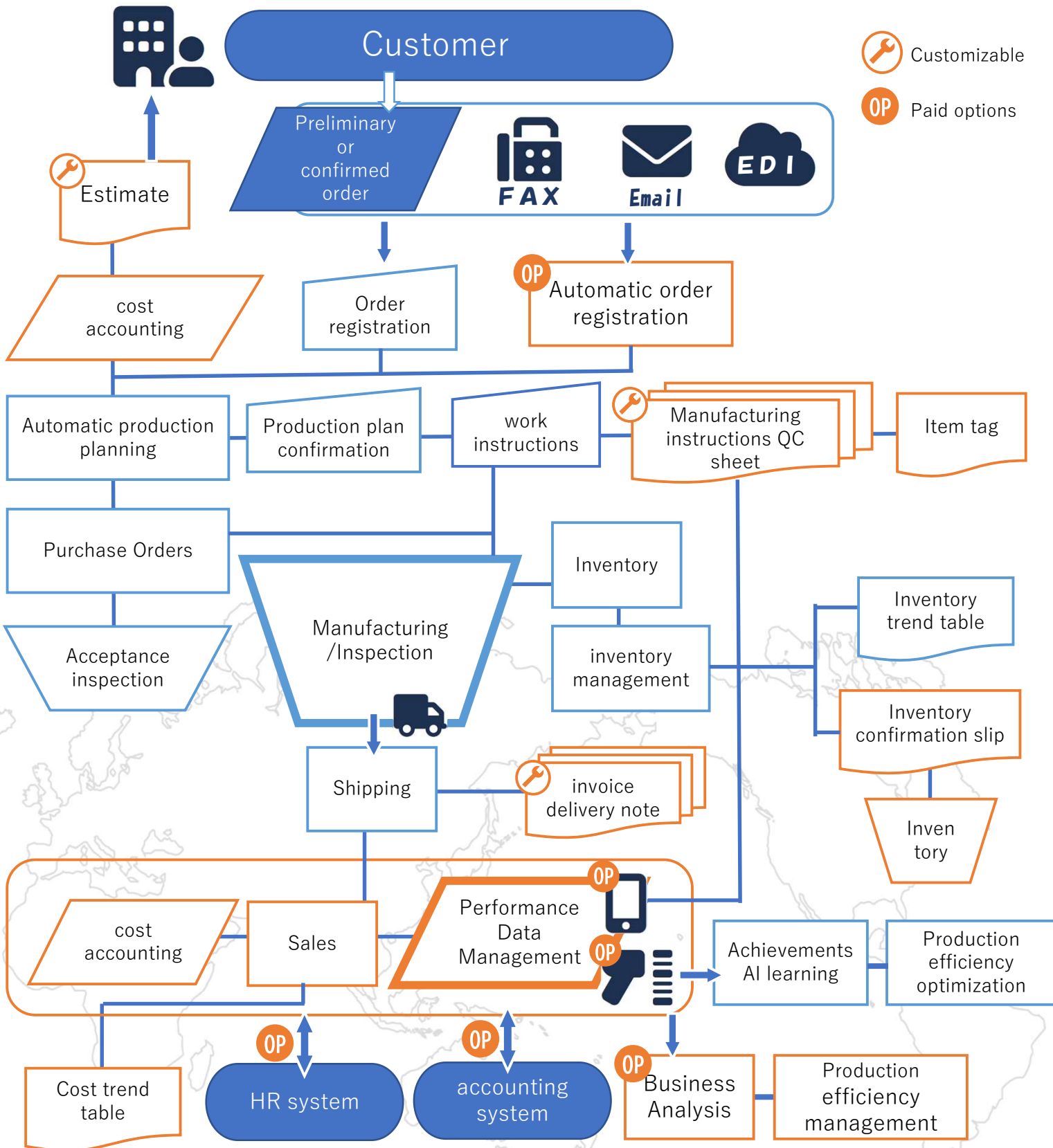
**greemin-bigwell Co.,Ltd.**

# Table of contents

gb-ERP Workflow Diagram	3
List of Key Features	4
Screenshots of Key Features	5
List of Output Reports	9
Sample Reports	10
Operation Flow (On-site Staff / Production Manager)	11
Operation Flow (Executive / Management)	13
Master Data Information	14



# gb-ERP Workflow Diagram



## List of Key Features

1. Order/Purchase Order/Shipping Management
2. Equipment/Personnel Operation Status Management
3. Lot Management
4. Production Planning
5. Performance Management
6. Inventory Management
7. Drawing Number Management
8. Master Data Management
9. Cost Management (v2)
10. Various Report Output (v2)
11. Business Analysis (v2/OP)
12. Interconnection with Other Systems (v2/OP)
13. Multilingual Support (v2/OP)
14. Barcode Issuance for Invoices (v2/OP)

# Screenshots of Key Features(Order)

- You can register orders by selecting Confirm Order/Unofficial Order.
- You can issue quotes from the order management screen (you can also customize the report layout).

## ▼ Order List

The screenshot shows a sidebar menu on the left with options like Dashboard, 製品管理, 生産管理, リワーク管理, 受注管理, 受注リスト, 受注入力, 発注管理, 出荷管理, 在庫管理, リソース管理, 取引先管理, 管理者メニュー, and ログアウト. The main area is titled '受注リスト' and contains a search form with a 'キーワード' field, a '区分' section with checkboxes for '受注' and '内示', and a 'Show' dropdown set to '10' with a '検索' button. Below the form is a table of orders with columns for '顧客', '受注番号', and '受注日'. Each row includes '編集' and 'コピー' buttons. A pagination bar at the bottom shows page 1 of 3.

顧客	受注番号	受注日	編集	コピー
取引先5	NO-2	2021-05-11	編集	コピー
取引先11	NO-3	2021-05-31	編集	コピー
取引先7	NO-9	2021-06-06	編集	コピー
取引先134	NO-4	2021-08-11	編集	コピー
取引先134	NO-5	2021-08-11	編集	コピー
取引先135	NO-6	2021-08-16	編集	コピー
取引先135	NO-8	2021-08-16	編集	コピー
取引先1	NO-10	2022-04-15	編集	コピー
取引先4	NO-16	2022-04-18	編集	コピー
取引先4	NO-14	2022-04-18	編集	コピー

## ▼ Order registration

The screenshot shows the '受注基本情報' (Order Basic Information) form. It includes fields for '受注タイプ' (Order Type) with a dropdown menu showing '受注' and '内示', '受注番号', '受注日' (2021/05/31), '顧客' (取引先11), '納品先の拠点' (拠点16), '納品書宛先の拠点' (拠点16), and '受注総額' (13172000). To the right is the '品番検索' (Part Number Search) section with a 'キーワード' field, '区分' (加工, 製造, 製造販売) checkboxes, and a '検索' button. Below this is a table of search results with columns for '品名', '製造区分', '生産区分', '図番', and '追加' buttons. At the bottom is the '詳細部' (Details) table with columns for '製品名', 'Ver', '出荷ロット', '出荷予定日', '納期', '数量', and '小計'.

品名	Ver	出荷ロット	出荷予定日	納期	数量	小計	追加
製品1514	1		2023/01/09	2023/01/09	50	1562500	追加
製品1514	1		2023/01/09	2023/01/09	50	1562500	追加

\*The screen is under development and may differ from the actual specifications.

# Screenshots of Key Features(production planning)

- Create production plans that match operating conditions. By accumulating performance data, you can calculate plans with higher production efficiency.
- Leaving some leeway between processes allows you to handle rush orders. The amount of leeway can be freely set.

\*The screen is under development and may differ from the actual specifications.

## ▼ Production planning screen

スケジュールFix	親ロット番号	品名	製造数量	引当数量		
Fix	temporal-4	部品135	40			
スケジュールFix	子ロット番号	工順	工程名	製造数量	使用リソース	開始期限/終了予定
	210603-7629	1	部品68	40(40)		2021年12月3日 12時59分 ~ 2021年12月3日 12時59分
Fix	temporal-25	2	工程131	40(40)	M-93(model-93),作業者73	2023-05-13 08:43 2023-05-13 08:52
	210531-130	3	購入品130	40(40)		2021年11月30日 18時36分 ~ 2021年11月30日 18時36分
	210531-6	3	購入品6	40(40)		2021年11月30日 18時36分 ~ 2021年11月30日 18時36分
Fix	temporal-28	3	工程132	40(40)	M-143(model-143),作業者73	2023-05-16 08:26 2023-05-16 08:31
Fix	temporal-29	4	工程133	40(40)	作業者68	2023-05-18 13:01 2023-05-18 13:45
Fix	temporal-30	5	工程134	40(40)	作業者68	2023-05-20 15:04 2023-05-20 15:13

- Propose inventory allocation for in-stock parts
- Propose combinations of machines and people with high production efficiency based on past performance
- Allocate personnel with consideration for overtime

Considering materials, people, and machines

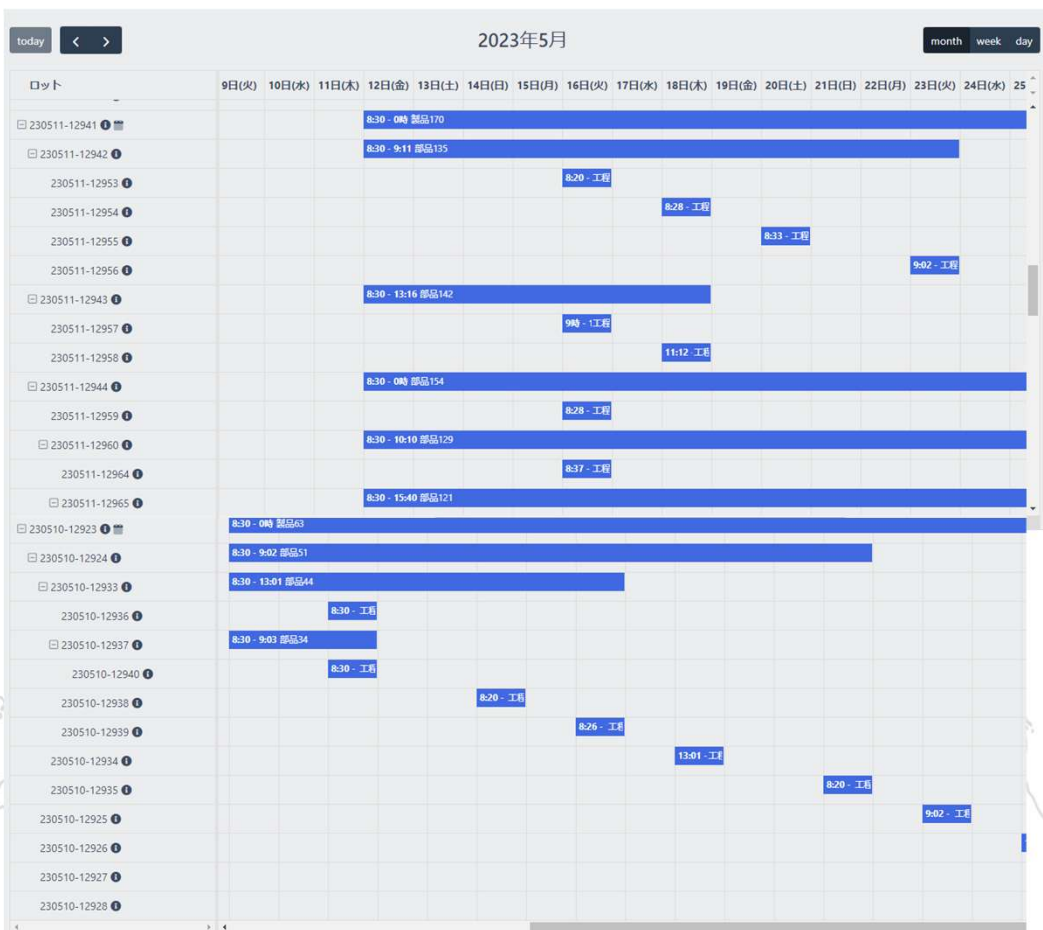
- Propose a work schedule that takes into account operating status and lead times

Super-fast scheduler

# Screenshots of Key Features(Lot)

- Manage schedules down to the smallest detail, including parent, child, and grandchild lots.
- By dividing lots into smaller parts, you can trace down to the smallest detail.
- Toggle the display with a "+/-" key.
- You can also search for delivery dates and product names.

▼ Lot List      \*The screen is under development and may differ from the actual specifications.



Lot Serch →

ロット状況検索

ロット

品名

納期 (From/To)  年/月/日  年/月/日

# Screenshots of Key Features(Cost)

- When making a quote, you can set the product, quantity, unit price, and delivery date to simulate the cost and profit margin. By checking these figures, you can consider the price and quantity that matches the profit margin during negotiations.
- Using a list of past transactions, you can compare the actual costs against the costs set at the time of the quote. Analyzing the variance in incurred costs can help improve management.

## ▼ Estimate Simulation

見積シミュレーション

製品名 Ver 出荷ロット 出荷予定日 納期 単価 税区分 数量 小計 原価 原価率

製品711 1 20 2023/08/04 2023/08/07 525.5 税 10 200 105,100 413.0 78.6 %

スケジュール基本条件

プロセス開始日時 2023-05-16 08:30

モファクター 4.0

スケジュール修正 フォルセット

スケジュール	子ロット	工場	工程名	製造数量	使用リソース	開始/終了予定
Fix	210617-10859	1	購入品8991	650(650)		2021年12月17日 14時26分 ~ 2021年12月17日 14時26分
Fix	temporal-2	2	工程4097	13(13)	M-1(model-1)作業部43	2023-05-20 08:30 2023-05-20 22:48

製品43 1 20 2023/08/04 2023/08/07 6,300 税 10 15 94,500 4,863.6 77.2 %

ロットスケジュール

小計	税	合計	売上総利益	利益率
199,600	19,960	219,560	64,006	29.15

内容修正  
この内容でロット再建

## Past Transaction List ▶

取引一覧

キーワード

区分  受注  内示

Show 40 検索

顧客	受注番号	受注日	予算原価率	実際原価率	利益率
取引先5	NO-2	2021-05-11	4.11 %	3.32 %	40.65 %
取引先11	NO-3	2021-05-31	7.33 %	3.46 %	73.77 %
取引先7	NO-9	2021-06-06	6.03 %	7.13 %	39.36 %
取引先134	NO-4	2021-08-11	2.56 %	7.53 %	75.12 %
取引先134	NO-5	2021-08-11	5.74 %	3.19 %	74.72 %
取引先135	NO-6	2021-08-16	2.35 %	7.68 %	68.12 %
取引先135	NO-8	2021-08-16	4.07 %	4.71 %	71.70 %
取引先1	NO-10	2022-04-15	4.00 %	2.37 %	42.86 %
取引先8	NO-13	2022-04-18	7.79 %	6.15 %	65.02 %
取引先4	NO-14	2022-04-18	3.10 %	2.41 %	51.13 %
取引先4	NO-16	2022-04-18	5.22 %	5.48 %	58.09 %
取引先5	NO-12	2022-04-18	7.96 %	6.33 %	71.61 %
取引先135	NO-18	2022-06-07	5.28 %	0.38 %	63.46 %
取引先135	NO-28	2022-06-07	2.68 %	1.76 %	54.14 %
取引先135	NO-17	2022-06-10	3.66 %	3.81 %	56.93 %
取引先1	NO-21	2022-07-28	5.37 %	6.31 %	61.87 %
取引先1	NO-22	2022-07-28	6.04 %	0.11 %	46.55 %
取引先7	NO-27	2022-07-28	6.52 %	0.73 %	52.89 %
取引先4	20220926	2022-09-26	5.63 %	1.13 %	65.38 %
取引先4	20220927	2022-09-27	4.50 %	3.65 %	66.20 %
取引先4	20220927	2022-09-27	2.86 %	3.62 %	46.99 %
取引先10	20230510	2023-05-09	2.56 %	7.92 %	66.31 %

\*The screen is under development and may differ from the actual specifications.

# List of Output Reports

	Output form	Screen check (csv output)
Ordering/acceptance management	purchase order	Order list
Order management	Estimate	Order list
inventory management	Inventory inventory confirmation slip	Inventory schedule / Parts inventory inquiry / Monthly inventory inquiry / Inventory adjustment list / Monthly product inventory list by customer / Customer supply inventory list / Long-term slow-moving inventory list
Shipping management	Delivery note/invoice	Shipping schedule/Shipping list/Annual shipping results by product
Job management	Work instructions/QC sheets/ Work performance report/item slip	Lot list
cost management		Sales list / Monthly sales list / Standard cost list / Sales table by customer (monthly) / Purchase list by supplier / Processing list by subcontractor / Annual shipping performance table by product

# 1. Operation Flow (On-site Staff / Production Manager)

## From sales orders to work instructions

The screenshot displays a web application interface for order management. On the left is a navigation menu with options like 'Dashboard', '製品管理', '生産管理', 'リワーク管理', '受注管理', '受注リスト', '受注入力', '発注管理', '出荷管理', '在庫管理', 'リソース管理', '取引先管理', '管理者メニュー', and 'ログアウト'. The main area is divided into several sections:

- 受注基本情報 (Order Basic Information):** Contains fields for '受注タイプ' (Order Type), '受注番号' (Order Number), '受注日' (Order Date) with a calendar icon, '顧客' (Customer), '納品先の拠点' (Delivery Location), '納品書宛先の拠点' (Invoice Destination Location), and '受注総額' (Total Order Amount).
- 品番検索 (Part Number Search):** Includes a search bar and a list of parts with columns for '区分' (Division), '部品名' (Part Name), and '部品番号' (Part Number).
- 基本情報 (Basic Information):** A table showing details for a selected order, including '顧客' (Customer), '受注番号' (Order Number), '社内ロット番号' (Internal Lot Number), '出荷ロット番号' (Shipping Lot Number), 'SMRC・レーザーマーキング番号' (SMRC/Laser Marking Number), '図番' (Drawing Number), 'サイズ' (Size), '品名' (Product Name), '品番' (Part Number), '材料' (Material), '発注履歴' (Order History), and '製造指示数' (Manufacturing Instruction Count).
- 工程 (Process):** A table showing production schedule details for various parts and processes.

Red circles highlight specific elements: '1' is on the '受注日' field, and '3' is on the '基本情報' table.

工程	社内ロット番号	工程	数量・作業指示書	構成分類	製造指示数(引当数)	開始(予定)	終了(予定)	リソース(予定)	開始(実績)	終了(実績)	リソース(実績)	良品数	不良数
1	210531-84	購入品84	購入品		(100)	11/30 18:36	11/30 18:36		11/30 18:36	11/30 18:36			
1	210531-83	購入品83	購入品		(100)	11/30 18:36	11/30 18:36		11/30 18:36	11/30 18:36			
1	210531-82	購入品82	購入品		(100)	11/30 18:36	11/30 18:36		11/30 18:36	11/30 18:36			
2	210610-9547	工程85	工程		100	12/14 09:00	12/14 10:50	ユーザ44					

\*The screen is under development and may differ from the actual specifications.

### ① Order registration

Register the order information in the system. (Optional: automatic registration)

### ② Production planning

The production schedule is automatically generated based on the order information and lot status.

By considering the 3M factors (Man, Machine, Material) during allocation, a higher-quality production plan is created.

### ③ Work instructions

Work instructions are issued.

Production data is also linked to allocated inventory items, allowing for easy traceability in the event of a defect and contributing to improved quality.

### ④ Manufacturing/Inspection

Manufacturing is carried out according to the work instructions.

The inspection and acceptance process is also included in the work instructions.



# Operation Flow (Executive / Management)

## Cost Management

\*The screen is under development and may differ from the actual specifications.

The screenshot displays a software interface for cost management. At the top, there's a header '見積シミュレーション' (Estimate Simulation). Below it, a table lists product details for '製品711' (Product 711). The table includes columns for '製品名', 'Ver', '出荷ロット', '出荷予定日', '納期', '単価', '税区分', '数量', '小計', '原価', and '原価率'. The '原価' (Cost) for Product 711 is highlighted in yellow as 413.0. Below the table, there are sections for 'スケジュール基本条件' (Schedule Basic Conditions) and 'スケジュール' (Schedule) with various input fields and buttons. At the bottom, a summary table shows '小計' (Subtotal) as 199,500, '税' (Tax) as 19,960, '合計' (Total) as 219,560, '売上総利益' (Gross Profit) as 64,006, and '利益率' (Profit Margin) as 29.15. The '原価' for '製品43' (Product 43) is also highlighted in yellow as 4,863.6.

**Manufacturing Cost (Direct Manufacturing Cost)**

**Material Cost** (e.g., purchased components)

**Labor Cost** (wages for workers)

**Overhead Cost** (e.g., machine depreciation expenses)

$$\text{Gross Profit} = \text{Sales} - (\text{Cost} \times \text{Quantity})$$

$$\text{Gross Profit Margin (\%)} = \text{Gross Profit} \div \text{Sales} \times 100$$

### ① Master Registration

Register the product structure information, unit prices for purchased items, worker wages, machine depreciation costs, and other related data. Based on this information, the direct manufacturing cost is calculated.

### ② Cost Estimation

By setting the quantity and unit price for a product, the cost and profit margin can be calculated. (This functions as a cost estimation simulation.)

You can use the optimal production volume and pricing—derived from the profit margin—as negotiation materials.

A quotation can be generated directly, and an order (or preliminary order) can be registered.

### ③ Cost (List / Trends)

The variance between actual and planned profit margins can be displayed in a list by product or by transaction.

# Master Data Information

- **Product Information**
  - ↳ Products / Purchased Items / Outsourced Processing / Processes
- **Business Partners**
  - ↳ Customers / Suppliers
- **Resources**
  - ↳ Personnel / Machines / Personnel Groups
- **Inventory**
  - ↳ Planned Production / Planned Usage / Physical Stock / Pending Inspection
- **Lots**
  - ↳ Quotation / Pending Lot Number Issuance / In Production / Pending Shipment / Shipped / Delivered
- **Others**
  - ↳ User Permissions / Calendar

**The above items are examples of master data.**

Through comprehensive traceability in gb-ERP,

you can easily track *“who produced it, when it was made, and with which materials.”*

By collecting a wide range of additional data, the system continues to evolve into a more accurate and advanced production management platform.

Furthermore, since all input logs are stored, even if an issue or data corruption occurs, recovery is possible.