

# ENGINEERING CHANGE



## Providing the tools to optimize cost-effective product changes

High tech environments and prototype product designs are not the only cases where changes to bills of materials will frequently occur. Almost any environment that is affected by technological advances, quality issues, price erosion, product failures, changing consumer demands, or fluctuations in the availability of components & raw materials can be flooded with engineering changes.

Given this situation, it is essential that you have the tools to respond quickly and effectively. Choosing the fastest and most cost-effective solution for your business is vital. GLOVIA G2 provides a flexible system that lets you simulate and analyze the effects of introducing that proposed change into the manufacturing business.

### Critical and Non-critical Changes

Where the timing of an Engineering change introduction is not critical, GLOVIA G2 Engineering Change can be used to identify the best timing for minimizing the impact on production orders and inventory holding, and therefore minimize the cost of the change.

Where an Engineering Change requires immediate implementation GLOVIA G2 Engineering Change provides immediate visibility into all existing inventories, released orders, Work in Progress and planned production and purchased supplies orders so the cost impact of that change can be immediately assessed.

Once the ramifications of the Engineering change are understood, an effective start date for the change will be decided upon, the change will be approved and the Engineering Change can be processed so that the product's configurations reflect the changes that will come into effect and when.

The integrated nature of the GLOVIA G2 applications mean that multiple applications including the planning processes and production and purchase order capabilities always use the engineering change information to correctly identify the effective materials to buy and use.

### Managing the Change Process

Upon recognizing a potential change with an item, an Engineering Change Notice (ECN) is submitted. To facilitate, review and move forward, the Engineering Change application provides a series of simple, class-driven procedures that prompt you to identify solutions and approve changes before releasing the ECN. While that change is being analyzed, all impacted structures in demand, supply or planning can be triggered to give an early warning message that there is an 'ECN pending' for that product.

### "What-If" Simulations

To help identify the best solution, the system provides a "What-If" tool that lets you simulate the timing and cost impact of various operational schedules. You enter the proposed change(s), and the system searches the database and identifies the status of all impacted areas.

An interactive reporting capability provides the means for reviewing the cost-effectiveness of alternative solutions.

### The Engineering Change Process



## Flexibility

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When you have determined how to best move forward with the ECN and approved it, you have the option to execute specific changes, group changes, or mass changes for all areas affected by the ECN. This allows you to selectively execute any or all impacted structures. For open or “in process” orders affected by the ECN, the system generates a detailed report so that you can make the necessary adjustments and take the appropriate corrective actions.

A single ECN may be associated to multiple products and items. This is critical when the necessary changes relate to the same cause. Perhaps the failure or inadequacy of an electronic component means that multiple items on multiple different products need to be replaced, but they all trace back to that single reason and single ECN.

ECN introduction can be based on an effective calendar date or Seiban number.

## Status Tracking / History

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You can track open or closed ECNs either by item number or by ECN (with multiple items associated with the same ECN). This flexibility allows you to analyze ECN patterns and review historical information from a change-driven and item-driven perspective.

By entering an ‘effective date’, when maintaining or viewing engineering information the effective product structure on that specific date in the past or future will be displayed.

## Change Impact Analysis

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- Interactive simulation analysis to determine “solution” prior to execution of change.
- Review costs implications based upon planned effective date and the impact to inventory holding, and existing and production and purchase orders.
- Impact of Changes to product structures for Production items, Engineer-to-Order and Prototype/pre-production items.

## The Engineering Change Notice Application Directly integrates with:

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- Engineering
- Inventory
- Work orders
- Purchase orders
- Purchase requisitions
- Installation orders
- Estimating (local structures)
- Service orders
- Material supply
- Pro form hierarchies
- Customer site registers
- PRP / MPS / MRP
- Contract demand
- Sales orders

## Tracking Facility

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- Historical ECN record tracking
- Open ECN tracking
- ECN pending notifications
- Track ECN through simulation and approval process
- Identification by item number or by ECN
- Detail of all changes made, item(s), ECN and BOM
- Inclusive ECN History of user and system maintained changes

Fujitsu Glovia, Inc.  
2250 East Imperial Highway, Ste. 200  
El Segundo, CA 90245-3457  
Tel: +1 800 223-3799  
+1 310 563-7000  
Fax: +1 310 563-7300  
Email: [marketing@glovia.com](mailto:marketing@glovia.com)  
[www.glovia.com](http://www.glovia.com)