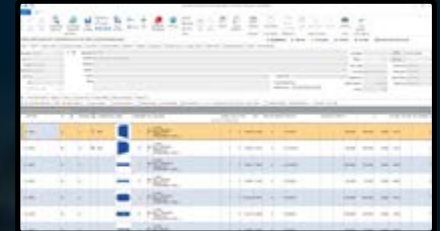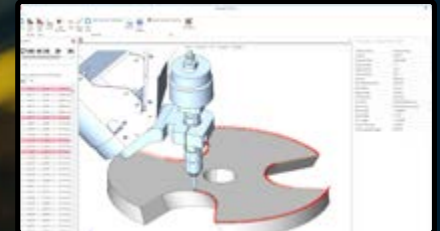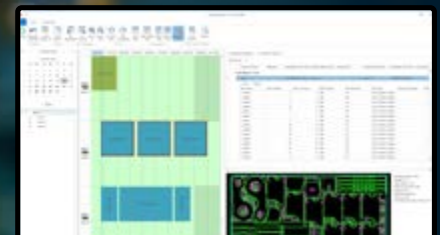# End-to-End Workflow Solutions



**+** Import & Quote



**+** Plan & Program



**+** Fabricate & Track

# Integrated End-to-End Efficiency

The SigmaNEST software suite gives fabricators a scalable workflow solution from quote to production to delivery. Our integrated platform accelerates your workforce with the timely accurate data needed to make informed decisions.

SigmaSUITE boasts a robust toolset with industry leading SigmaNEST at its core. Starting with the all-in-one launcher, our single-source solution provides a consistent user interface that helps reduce the learning curve of technology and boost your productivity step by step throughout your business.

## Business Integration

Our smart solutions link any ERP/MRP system to all stages of fabrication — quoting, scheduling, programming, production, logistics, invoicing — based on accurate manufacturing data.

## Advanced CAD/CAM

Features programming efficiencies such as batch processing and part recognition. Superior nesting paired with superior motion to drive your machine–laser, plasma, punch, router, waterjet, knife, pressbrake or tube.

**Business Integration**  **Advanced CAD/CAM**  **Shop Floor Control**
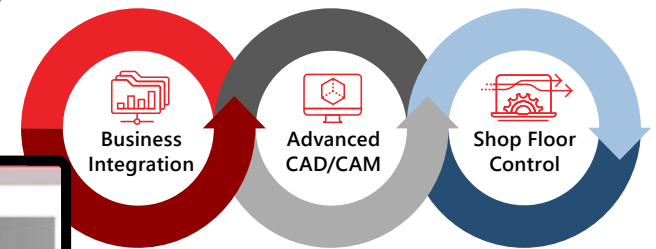
## Shop Floor Control

Manage the fabrication workflow with real-time machine feedback to track progress, ease part handling and logistics, and to ensure the entire job is 100% accurate.

# 1. Import & Quote

Order Entry/ERP

Inventory

Delivery/VAT

**Request for Quote** → **Initiate Quote** → **CAD/Nest** → **Nested Cost** → **Profit Review** → **Quote to Customer**

Import/Draw Parts

Allocate Materials

Shop Floor Data

Secondary Ops
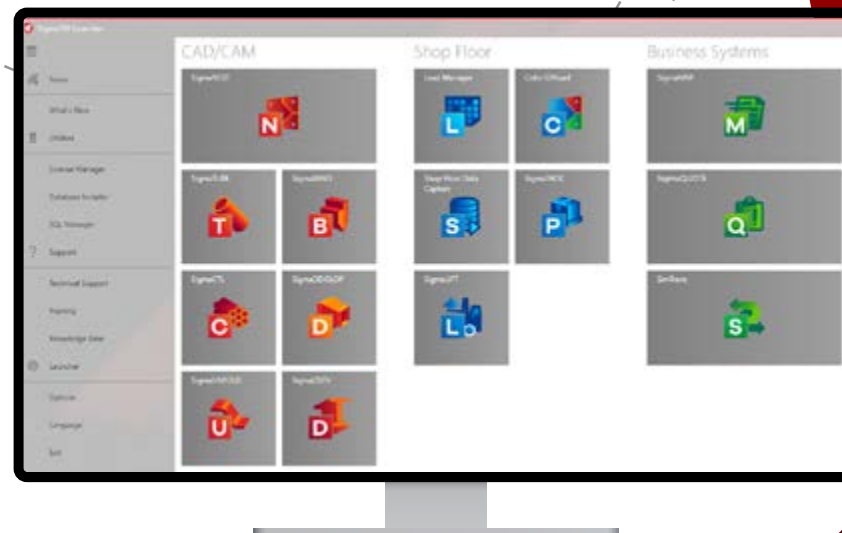
## ERP/MRP Linking & SimTrans

- SimTrans connects to your existing data systems to autonomously execute part and order creation

- Direct ERP/MRP link eliminates redundant data entry and manual errors

- CAD and part data are autonomously imported into SigmaNEST

- SigmaNEST can connect to your business systems with SimTrans Data Translator or full-featured SigmaMRP Resource Manager

## Importing & SigmaNEST

- Diverse file import quickly assesses real costs based on your operations

- 2D and 3D features including drill holes and bevels are automatically recognized

- Material, quantity, grain, and all key data transfers to SigmaNEST

- Multi-body processing and flat pattern extraction accelerate the import process

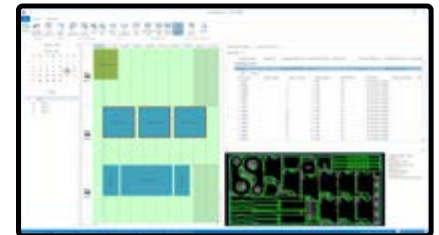- Batch processing increases automation and eliminates repetitive effort

## Costing & SigmaQUOTE

- SigmaQUOTE gathers and stores comprehensive data about necessary inventory, processing times, and actual machine run-time

- Both nested and part costs are calculated using actual NC and material usage

- Shop floor data and secondary operation cost are captured and applied

- Calculate actual materials and logistics, along with VAT/Exemption and client history for true profit margin
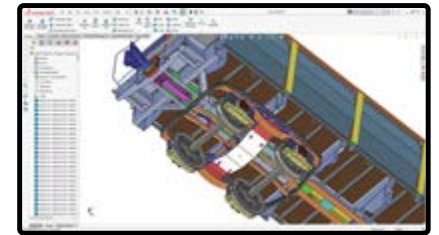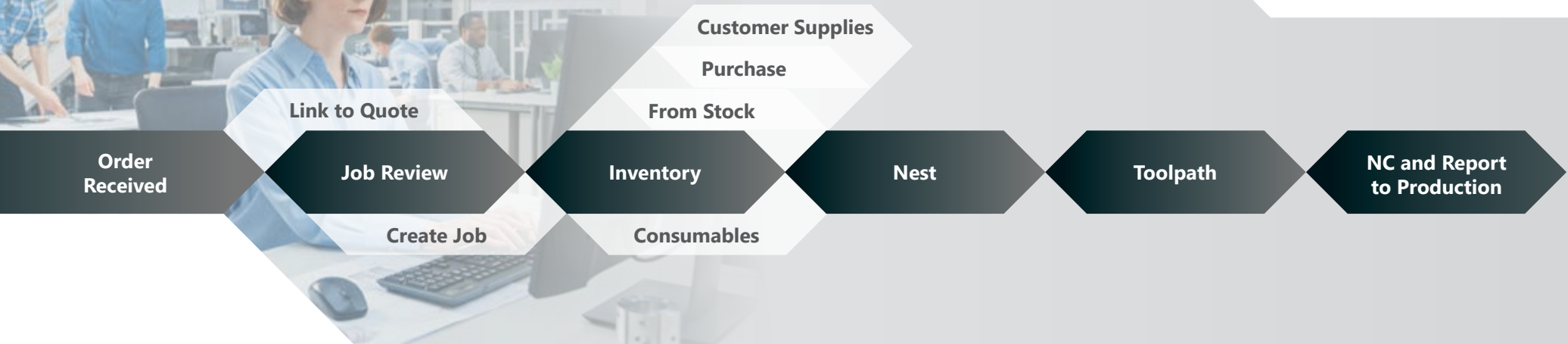


**Accurate & Fast Quoting**
True geometry and custom part mapping transfers data accurately from customer files into SigmaNEST to reduce data entry and manual errors.

# 2. Plan & Program

**Order Received** → **Job Review** → **Inventory** → **Nest** → **Toolpath** → **NC and Report to Production**

Job Review:
- Link to Quote
- Create Job

Inventory:
- Customer Supplies
- Purchase
- From Stock
- Consumables

## Work Orders & SigmaMRP

- Fully-integrated SigmaMRP creates quotes and jobs, manages production, and controls inventory

- SigmaMRP expedites customer approval with easy revisions for project requirements, and converts to full work orders in seconds

- Automatically account for both customer supplied and purchased inventory for job

- Blend work order nests on compatible materials to save on concurrent jobs

## Nesting & Inventory

- Customize your material costing model by weight, age, or other inventory factors

- Confidently nest on remnants with full record of geometry for shears, skeletons, and dropouts

- Robust programming for specialized materials like composites, grating, and coil

- Automatically finish each sheet as a ready-to-nest remnant

- Comprehensive reporting for inventory contents and value
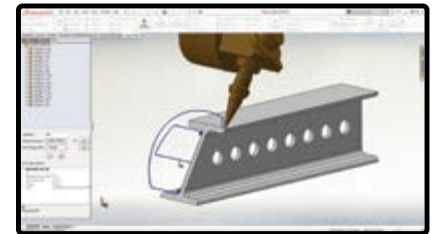
## Better NC & Reporting

- SigmaNEST creates optimal intelligent NC for virtually any machine while reducing machine time and waste

- Chaining, bridging, common line, tabbing, and prepiercing just a click away

- Effortless multi-torch nesting and toolpathing

- Robust auto-tooling for turret punch features patterns and smart sorting

- Comprehensive customizable part and nest reporting includes PDF eReports
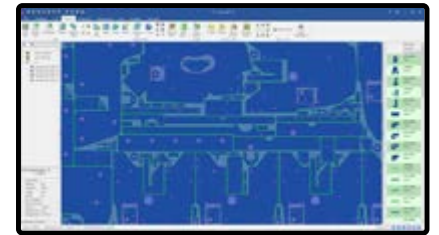
**A Bigger Toolbox**
The SigmaSUITE provides a wide toolset with smart technology that accelerates your process and produces a better quality product.

# 3. Fabricate & Track

**Punch/Combo**

**Routing/Drilling**

**Cutting**

**Report to ERP**

| Production Planning | Cutting / Fabrication | Secondary Operations | Shop Floor Data Capture | Invoicing | Delivery to Customer |
|---|---|---|---|---|---|

**Load Manager**

**Bend/Weld/Paint**

**Tracking**

**Delivery**

## Timelines & SigmaSCHEDULE

- Accurately schedules projects with nested programs to account for multiple sheet assignments and primary/secondary operations

- Preschedule jobs during the quoting process to ensure delivery dates can be met before accepting the order

- Schedule forward (as soon as possible), or backward from a due date (just in time)

- Timelines are maintained based on job priority and machine capacity

## Assigning Work & Load Manager

- Real-time load balancing divides the work efficiently for machines and secondary operations, while identifying sequence dependencies with the timeline

- Quickly view and adjust scheduled machine capacity, employee hours, or machine maintenance

- Resolve current day's schedule on demand to compensate for machine downtime or other disruptions in order to ensure job priorities are met

## Managing the Shop Floor

- Manage part-by-part time, resources, and status for cutting, bending, welding, painting, and more, with real-time data feedback

- Color code nests for easy visual sorting on any touchscreen according to work order, routing, or more

- Re-queue faulty parts back to programming to ensure a perfect work order

- Browser-based apps receive inventory, track & ship parts, and update project status



**Eyes on the Shop Floor**

Shop Floor Data Capture gives flexible and detailed oversight of every logistical aspect from forklift routing to loading completed parts onto the delivery truck.

# SIGMANEST

ADVANCED SOFTWARE SOLUTIONS FOR FABRICATORS
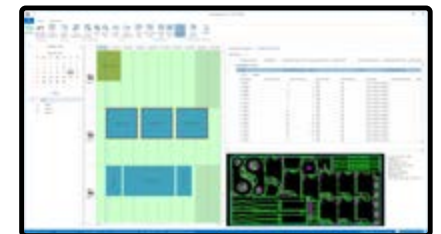
# Empower Your Workforce

Help your team be their best with a software solution engineered to increase ROI by optimizing material utilization, machine motion, manpower, and data management.

Our OEM partnerships give us the unique ability to program all major laser, waterjet, oxyfuel, plasma, punch, router, knife, press brake, and tube machines, and integrate with a wide range of business systems.

With more than 35,000 installations worldwide, SigmaNEST software solutions are backed by a global team of experienced product experts here to serve you.

**Manage**
Greater insight and control of operations through shared data

**Material**
Smart nesting saves 4% average on new and remnant use

**Motion**
Faster cutting times to increase capacity and efficiency

**Machines**
Central control gives you more flexibility and simplicity

**Manpower**
Faster programming and automation to empower your team

## CAMBRIO

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