Digital manufacturing for automotive suppliers
What is the connection between digital manufacturing and business predictability?

- Solutions for the complete management of automotive supplier manufacturing operations and information.
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Webster’s Dictionary defines:

- **Predictability** – The ability to foretell on the basis of observation, experience or scientific reason

A mutual fund manager, consistently able to predict or foretell what is going to happen in the financial markets, would obviously be highly successful. Still, predictability in the financial markets, even with a plethora of experience and scientific analysis, is far from attainable.

Is it any more realistic for an automotive supplier to predict margins over the lifecycle of a given program? Is it “black magic” or is there truly a way to increase an automotive suppliers’ “predictability quotient”? And, if so, what would it mean to competitive standing, profitability and ability to lead the margin dance with its global OEM customer base?

**Predictability quotient: a self-evaluation**

Please take a moment to do a quick self evaluation:

<table>
<thead>
<tr>
<th></th>
<th>Least</th>
<th>Most</th>
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<tbody>
<tr>
<td>How accurately do our anticipated quote margins hold up one year into production?</td>
<td>1 2 3 4</td>
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<tr>
<td>What are our actual launch costs vs. budget?</td>
<td>1 2 3 4</td>
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<tr>
<td>How accurately can I see my existing capacity when making capital decisions?</td>
<td>1 2 3 4</td>
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<tr>
<td>What are our global manufacturing “best practices”, and how successful/efficient are we at re-using them globally?</td>
<td>1 2 3 4</td>
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<tr>
<td>If a key OEM relationship required me to compress cycle time in half, could we and how would we accomplish this?</td>
<td>1 2 3 4</td>
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<tr>
<td>How successful are we at staying ahead of the OEM rebate demands in our operations?</td>
<td>1 2 3 4</td>
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After averaging your score, which quadrant do you fit in?
Digital manufacturing is the ability to “virtually” design, optimize, simulate and then execute a manufacturing process with a high degree of predictability. Digital manufacturing is also the ability to closely couple the product design function (CAD/PDM) to the process design function. This enables companies to move the process development curve to the left, as illustrated below – providing for a much improved “predictability quotient” in the early stages of an OEM program.
Where does digital manufacturing fit into automotive suppliers’ “customer-to-customer” process?

Typical automotive supplier product launch process ensures that what the OEM wanted ends up being delivered.

What are the critical capabilities required to gain a sustainable competitive advantage through digital manufacturing?
About Tecnomatix

Tecnomatix™ for Automotive Suppliers is a modular set of solutions for the complete management of supplier manufacturing operations and information. These solutions address suppliers’ critical need to more effectively quote, launch and execute manufacturing processes as part of maintaining successful OEM relationships.

Most automotive supplier processes today are sequential in nature, and work is performed in “silos.” The result is unpredictable launch cost. Tecnomatix for Automotive Suppliers enables concurrent product and process development – reducing cost and time. The solution covers all supplier manufacturing stages:

- Propose
- Design
- Verify design
- Validate production
- Launch
- Execute and deliver

In every step of the supplier’s “customer-to-customer” process, digital access to global manufacturing capability and capacity is key to achieving predictability. Tecnomatix provides a central repository of information that enables traditionally separate departments to collaborate. Results of such collaboration include:

- **Sustain quoted profit margins**: store, access, validate and collaborate on manufacturing “best practice” processes for use in the propose phase
- **Reduce launch costs**: validate (simulate and optimize) process capability early and often in the verify-design and validate production phases
- **Re-use existing capacity**: “see” and manipulate your operation-by-operation capacity geographically, often in the propose phase
- **Re-use best practices**: globally identify, document, store and access operation-level best practices
- **Compress cycle time**: combine product design tools with digital manufacturing tools regularly throughout the process, in a capable “process model” collaborative environment
- **Continuously improve**: in-plant monitor key process indicators in real time, and simulate “what ifs” dynamically. Feed any outcomes to product designers and manufacturing engineers

UGS provides the world’s leading product lifecycle management (PLM) solutions for the automotive, electronics, aerospace and other manufacturing and processing industries. Our Tecnomatix solutions for digital manufacturing enable the design, simulation and execution of production processes and provide real-time control and visibility throughout shop-floor operations. More than 5,000 companies worldwide are using UGS Tecnomatix solutions to reduce operating costs, accelerate product introductions and shorten time-to-volume – while maintaining high levels of product and process quality.

Key OEMs have used UGS solutions for over 20 years.

Our offering is aligned to the automotive supplier process.
About UGS

UGS is a leading global provider of product lifecycle management (PLM) software and services with nearly 4 million licensed seats and 46,000 customers worldwide. Headquartered in Plano, Texas, UGS’ vision is to enable a world where organizations and their partners collaborate through global innovation networks to deliver world-class products and services while leveraging UGS’ open enterprise solutions, fulfilling the mission of enabling them to transform their process of innovation. For more information on UGS products and services, visit www.ugs.com.

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