

Reducing Time to Market

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In a highly competitive market, being able to deliver a machine quickly can be the difference between winning the customer's business and seeing it go to a competitor. End customers are taking longer to make the tough decision to add or upgrade a machine. When they reach the decision they want the machine delivered quickly so that they can start making a return on their investment.

Machine builders are looking for solutions that help them to meet the rapid demand cycle by making it easier to envision the machine, design it and realize the result in the shortest possible time.

How is the machine automation system affected when build times are reduced?

Compressed build times means less time to learn new hardware, software and new integration requirements. This competes head-on with the need to be able to offer a differentiated machine that separates the machine builder and the customer from the competition.

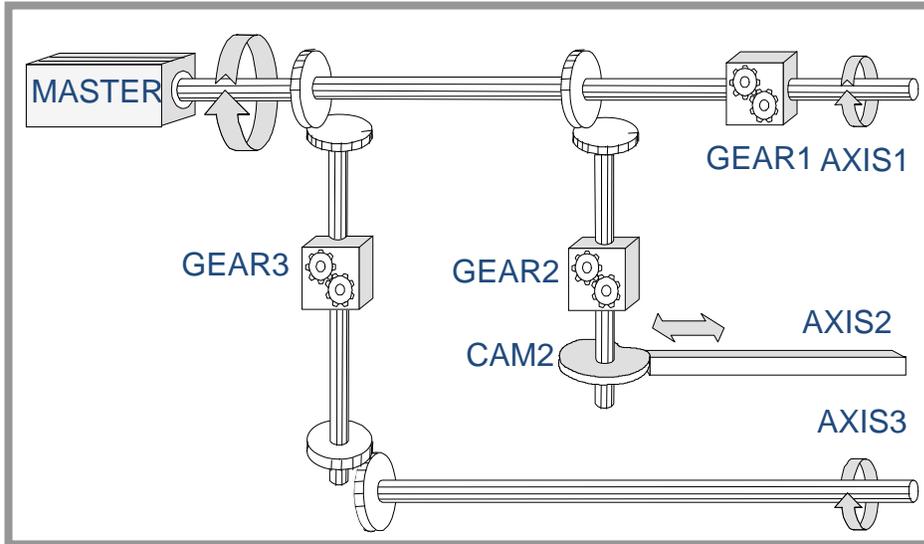
The machine builder needs a solution that facilitates reduced development time and ease of integration, while also enabling them to build a differentiated machine that offers the needed improvements such as higher throughput, higher quality product, less downtime and reduced scrap rates.

How does a superior machine automation system contribute to quicker build times?

There are several important facets to a machine automation solution contributing to quicker build times:

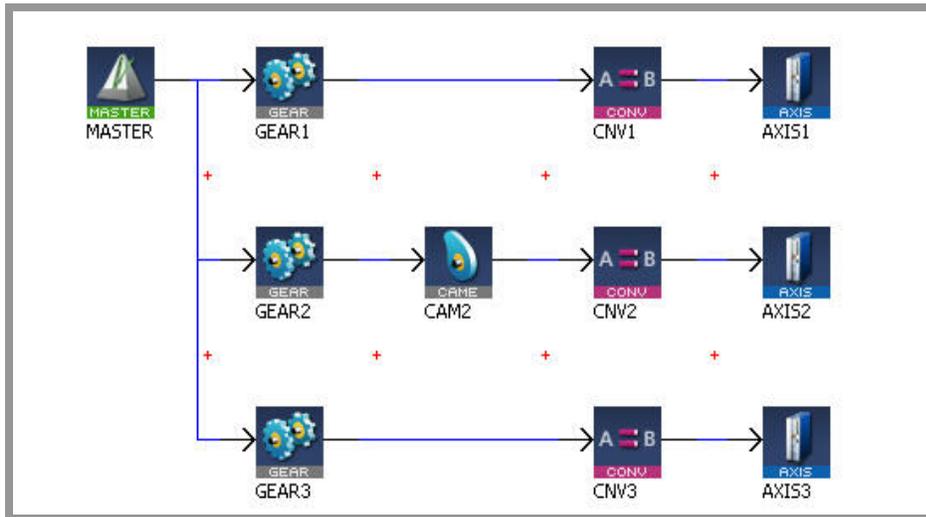
- Software that takes advantage of industry standards such as IEC61131-3 and PLCopen means machine builders can learn concepts one time, and readily apply them across different platforms
- Integrated Development Environments that combine the machine programming, motion programming and setup of key hardware elements such as drives, I/O and HMI functions into a single environment save time by eliminating the need to open multiple different programs and transfer information between them. Additionally, because the machine builder is working in one environment they don't have to learn and remember aspects of multiple programs.
- Pre-selected and integrated components let the machine builder work with combinations of components that are known to work together. By working with a supplier that offers an extensive array of these components, the system build time can be significantly reduced. The machine builder has one point of contact that can assist in the selection, delivery, application, start-up and support.
- New concepts that use drag-and-drop programming for multi-axis synchronized motion provide a way for machine builders to translate mechanical systems into their software equivalent solution quickly and easily.

As an example, such programming is illustrated below for the Kollmorgen Automation Suite™ Pipe Network™:



Mechanical System

- Main drive moves mechanical system
- Speeds and movements are adapted with mechanical elements, like gear boxes and cam discs



Pipe Network Concept

- Main drive is replaced by a virtual master
- Mechanical elements are copied by logical blocks with same function
- One-to-one replacement of the mechanical system

Are there downsides of cutting time to market when building machines and their automation systems?

The reality of the marketplace is that there will continue to be pressure to reduce time to market. The potential downside for the machine builder is trying to develop a machine solution that delivers more results in less time using methods and products they already know (saves time), but doesn't offer improvements in the machine.

For the machine builder the main challenge is finding the right partner that can help them reduce time to market while still being able to offer differentiated solutions that speak to the customer needs. The right partner can offer the products and services that provide ease of integration and use while still being able to create the value-add the end customer wants.

With the right partner, potential downsides are eliminated in favor of opportunities, as the machine builder can promote rapid delivery that supports the end customers need for achieving fast return on their investment with a high-performance solution.

How are machine builders using Kollmorgen automation systems to reduce time to market?

The three most significant ways in which machine builders are using our automation solution, [Kollmorgen Automation Suite](#), to reduce time to market are by:

- 1) Taking advantage of our Integrated Development Environment (IDE) to create the PLC, HMI and motion control programming in a single environment. The IEC61131-3 soft PLC engine is widely understood and easy for most users to work with. Because all of the core functions are done in one environment the process is faster to complete and errors are reduced. Users can choose to do the motion programming in [PLCopen](#) for motion, an industry standard that many are already familiar with, or use our advanced [Pipe Network](#) for complex multi-axis applications.
- 2) Utilizing the Pipe Network concept shown above to dramatically simplify the programming of complex multi-axis systems with extensive gearing and camming requirements. Many of our customers are looking for significant improvements in machine throughput (20-50%). These requirements often lead to complex motion control that is difficult and time consuming to program with conventional software tools. The drag-and-drop approach of the Pipe Network, along with its intuitive ability to relate the mechanical system to the resulting software solution, has proven to really accelerate time to completion for these applications.
- 3) Using [pre-selected components](#) - our software, controllers, HMI's, I/O, drives, motors and other elements are made to work together. Our System Designer tool is used to build the application model and select the components. It validates correct selection so that it is known in advance that, for example, the right gearhead has been selected for the motor, the right drive for the motor, and even the right system cables. Since they are tested for compatibility they can be connected and will auto-recognize and auto-configure. The combination of the System Designer tool on the front-end, along with the known compatibility of the components, lead to faster system development and implementation.

ABOUT KOLLMORGEN

[Kollmorgen](#) is a leading provider of motion systems and components for machine builders around the globe, with over 60 years of motion control design and application expertise.

Through world-class knowledge in motion, industry-leading quality and deep expertise in linking and integrating standard and custom products, Kollmorgen delivers breakthrough solutions unmatched in performance, reliability and ease-of-use, giving machine builders an irrefutable marketplace advantage.

For more information visit www.kollmorgen.com, email contactus@kollmorgen.com or call 1-540-633-3545.