

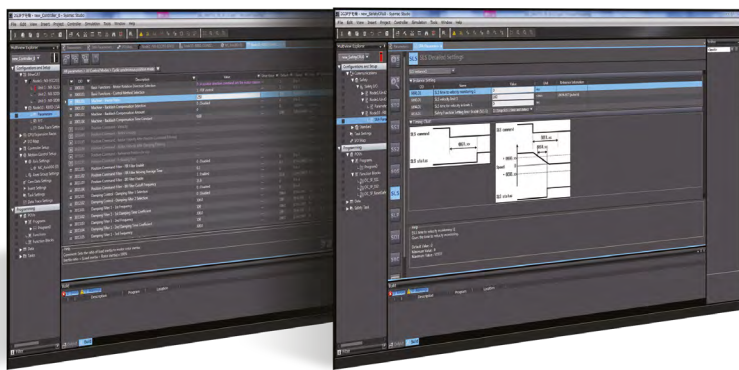
5 questions to ask when selecting motion & safety for your machine



Designing motion into a machine practically always means designing safety into it too. Once you're moving an axis, the risk assessment and the controls architecture follow together. The question is: How cleanly will they work together, and what kind of benefits does that bring? Here are five things to double check.

1. Find out if motion and safety can be programmed with the same software.

Many vendors have a portfolio that covers both motion and safety. Only some enable programming both in the same project, with the same tool, by the same engineer. Separate programming environments for safety logic and motion logic mean separate workflows, separate debugging sessions, and more room for something to fall through the cracks. Ask whether your controller's Integrated Development Environment (IDE) handles PLC logic, motion, safety PLC and I/O configuration in one place.

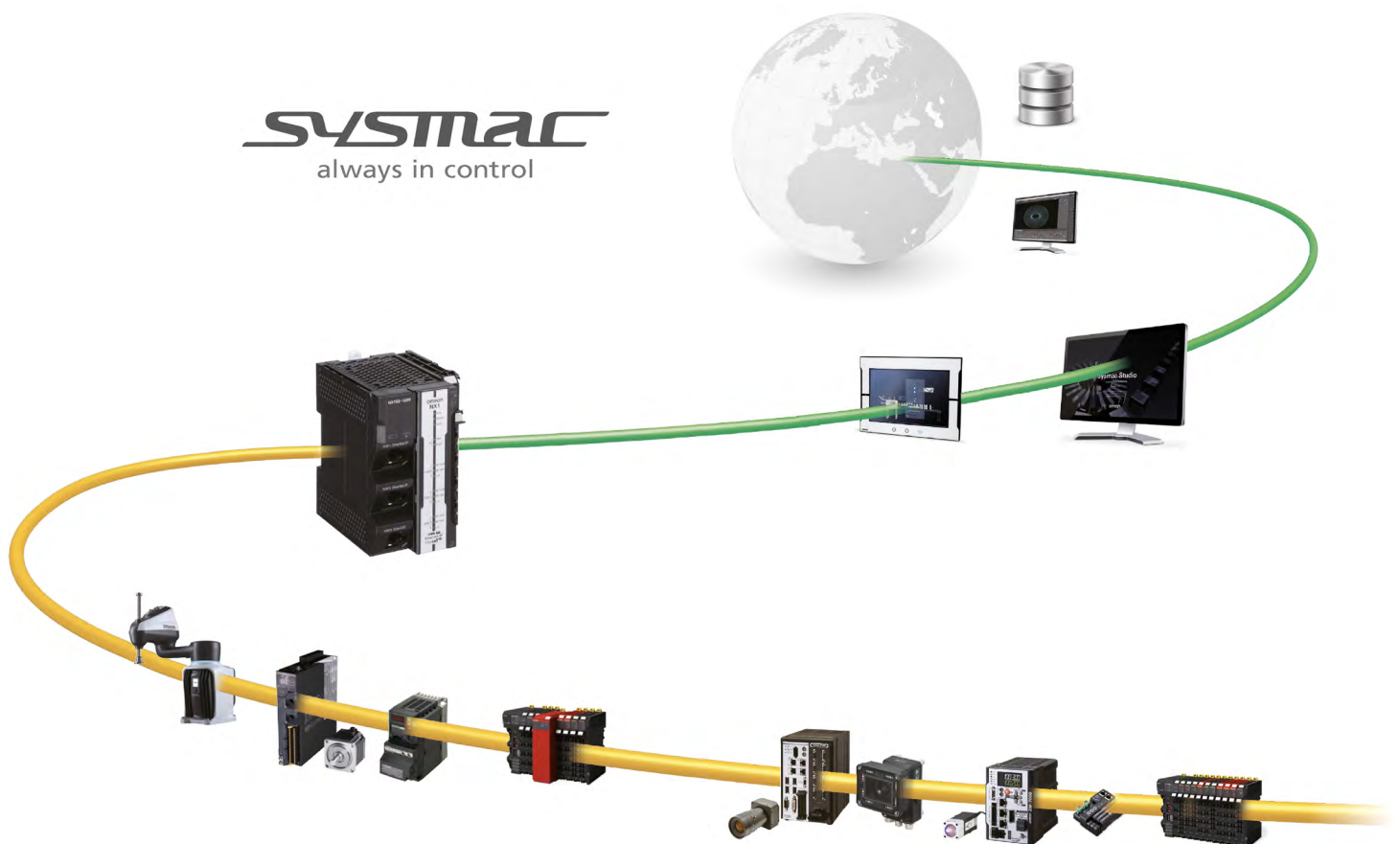


#MakeitOMRON

#MakeItEasy

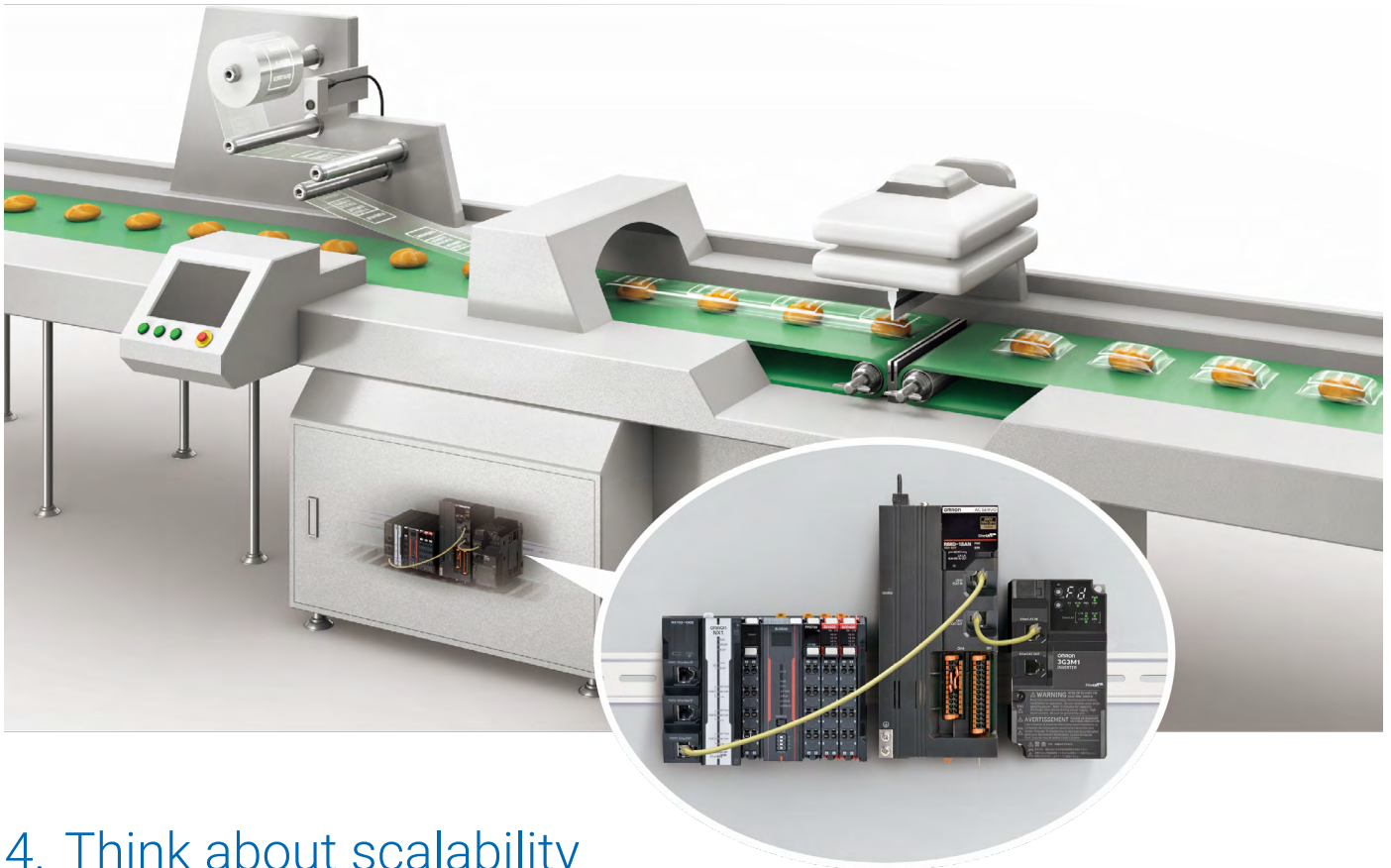
2. Add up the real cost of your current vendor setup.

If you work with one vendor for servos, another for safety components, and a third for the controllers, the real cost is probably in the integration hours. Fragmented automation stacks are a cost driver in manufacturing: every vendor boundary is a potential point of miscommunication, and the people who have the integration knowledge can be hard to find or replace. Check how much of your existing engineering work can carry over.



3. Design safety in from the start.

When designing a new machine, start with a risk assessment, before finalizing your automation architecture. Identify the hazardous motion scenarios and machinery operating modes first. Those answers should drive your product selection. Once you know what safety functions are needed, you can specify the right components, drives, safety I/O, and controllers, and program everything in a single environment. Machines designed this way are faster to commission and simpler to maintain over their lifetime.



4. Think about scalability across your machine range.

Machine builders rarely build just one machine variant. A compact version for one customer, more axes for another, different safety requirements for a third. If your motion profiles, safety logic, and function blocks have to be rebuilt every time the machine spec changes, that's engineering time you're paying for on every variant. Check if a platform can maintain one project template and configure machine-specific options, including safety, at runtime, for scaling up or downtuning for a simpler variant.

5. Ask how much specialized expertise is needed for programming.

Safety design requires qualified expertise, either in-house or through your automation partner. The question worth asking is how much of that burden your platform vendor can share with you, through application support, pre-validated function blocks, and guided tools that reduce the time a safety specialist needs to spend on your project.

How can OMRON help?

OMRON's Sysmac platform with a single programming environment covers logic, motion, safety, vision, sensing, robotics and HMI, using EtherCAT as the machine network and EtherNet/IP for factory-level connectivity. The same software, the same function blocks, and the same project structure work across your full machine range, from compact machines to complex multi-axis lines. For more information, visit: <https://industrial.omron.eu/en/products/sysmac-studio>

For more information about OMRON's safety product, please visit: <https://industrial.omron.eu/en/products/safety>