

## From concept to reality in just 72 hours



*Rosti's digital innovation lab in Suzhou, China.*

Developing a tooling, based on a customer's design, used to take weeks – even in some of the world's most sophisticated and high-tech facilities. However, recent advances in 3D printing and other additive manufacturing technologies have reduced the time it takes. Included among those sophisticated and high-tech companies is Rosti, a global plastic injection moulding and contract manufacturing company. Rosti has opened a new, state-of-the-art digital innovation laboratory in Suzhou, China, that turns a concept into reality in just 72 hours.

### Rosti's history

In 2009, Rosti launched an innovation center offering its global customers access to design analysis and optimisation. Through the innovation center, customers would receive final moulded parts in six to eight weeks. This time frame reflected industry standards available at that time in terms of manufacturing technology. Since its inception, the innovation center consistently offered customers quality components and finished products.

However, in 2019, Rosti combined its years of design experience and new technology to create its Digital Innovation Lab, forever changing what the company can offer its customers in terms of product development.

### The Digital Innovation Lab

Rosti's Digital Innovation Lab now makes it possible for the company to deliver all of the services it has been consistently offering its customers over its 75-year history, but now in just a fraction of the time. The lab allows Rosti to support its customers through the concept and design phase of creating new products, and providing optimised solutions and scenarios for product development.

The 72-hour “from concept to reality” process begins as soon as the Rosti Digital Innovation Lab receives computer-aided design (CAD) plans from the customer. A team of dedicated Rosti engineers conducts detailed design analysis and digital flow analysis of the customer's design.



*Figure: The 72-hour process.*

On the state-of-the-art equipment, the team prints prototype components and core and tooling inserts to enable moulding in design intent resins on the lab's dedicated moulding machine. Moulded components are then 3D scanned and compared to customer master CAD data for dimensional stability. Within 72 hours, customers can arrive at the Digital Innovation Lab and see their components being moulded and measured, ready for functional product testing.

### Benefits of the Digital Innovation Lab

There are several benefits to be gained for customers using Rosti's Digital Innovation Lab. One benefit is that the lab enables design freedom. Traditional prototype tooling is typically expensive and time-consuming, both of which make exploring new design possibilities cost-prohibitive. Designers and brand owners are encouraged to explore many design possibilities – much quicker and cheaper than with traditional subtractive manufacturing processes. If any of the designs fail, new parts and components can be made quickly and easily until optimal designs are achieved and all design requirements are met.

Another advantage customers experience using Rosti's Digital Innovation Lab is that the moulded parts are in the actual material used in the final product. This means that designers and brand owners can test the final product's design in the appropriate material. Additive manufacturing prototypes will always have a place in the development cycle but when critical to function testing is needed there are always unknowns. By getting design intent material components for such testing as early as possible in the development cycle, Rosti solves that problem.

Perhaps the most critical of the benefits offered under Rosti's Digital Innovation Lab is the 72-hour turnaround time. From start to finish, the quick turnaround times surrounding design optimisation, prototyping and moulding enable Rosti's customers to enter the market faster with novel products.

### The future

The Digital Innovation Lab enables Rosti to be both flexible and agile, which are both key to the success of the company. From the customer success stories in China, the plans are already in motion for a European Innovation lab in Bialystok, Poland, to better serve its European customers. Karl Stillman, Rosti's regional director of sales believes that the Digital Innovation Lab will benefit both new and existing customers.

*“Rosti has always partnered with its customers as early in the design process as possible. This has proven to be successful time after time, and now being able to offer customers access to our digital innovation lab and the new technologies within it, really catapults us further up the supply chain, enabling us to be seen as a trusted advisor, as opposed to a manufacturing partner.”* Karl Stillman, Rosti’s regional director of sales Asia

## About Rosti Group

With its Digital Innovation Lab, Rosti Group offers the world’s leading manufacturers – in the packaging, medical, consumer, industrial and technical products – solutions in the shape of single components, plastic moulding and even finished goods at every point along the supply chain.

For 75 years, Rosti has met its customers’ and potential customers’ innovation needs throughout the manufacturing process by bringing their designs to life with cutting-edge solutions. The company also guides them through the design and ideation phases, eventually offering optimisation solutions for those new products along with development scenarios.

Owned by Swedish family-controlled investment company Nordstjernan, Rosti has eight manufacturing facilities in Europe and Asia and its head office is in Malmö, Sweden. For more information on the Digital Innovation Lab, go to the Rosti [website](#).