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A PROJECT BY FEST



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*Author:*

**Demitriana Minassian MSc**

FEST Lead & Research Engineer  
Fraunhofer Project Center  
at the University of Twente

**T**he Fraunhofer Project Center Expertise Student Team (FEST) have undertaken a project with international pizza conglomerate Domino's, which required the team to come up with creative ideas to facilitate an innovative pizza-making process. Domino's has been at the forefront of innovation throughout their history, regularly adopting promising new methodologies in their ordering, cooking, and delivery systems. Domino's brief to FEST included using tailor-made technologies and solutions to improve the process of making pizzas.

Domino's defined the project's specific goals:

- improve efficiency
- ensure consistency and traceability
- increase focus on hygiene, and
- minimise errors and food waste at Domino's locations.

To improve productivity, Domino's sought to introduce Industry 4.0 solutions, using innovation through novel technologies.

FEST analysed current operations and innovations within the food industry and used the knowledge gained as a foundation to develop tailor-made concepts for Domino's. Innovations in the food industry follow similar processes as do many other industries, who use industrialisation, Industry 4.0, and robotics to reduce processing time, prevent errors and ensure standardised product quality.

In the initial stages of the project, the team accumulated a broad spectrum of ideas, ensuring that all aspects of the pizza-making process at Domino's were addressed in a creative, non-limiting approach. The resulting ideas ranged from simplified in-line weighing to fully automated ingredient mixing. Domino's pride themselves on delivering traditional hand-made pizzas. This is a major part of their branding and market appeal. They needed to maintain their ability to hand-make the dough and slice the pizza by hand. During discussions with Domino's, it became apparent that there were four key areas of focus for FEST: cheese topping, ingredient dispensing, sliceable meats and storage.

The best concepts from each of the four parts of the project were selected and the solutions were presented to Domino's. These were an automatic cheese waterfall, an automated meat slicer and applicator, an internally weighing topping dispenser, and a smart storage system. All concepts focused on precision in the pizza-making process, resulting in improved consistency, fewer errors, and reduced waste. For the purposes of efficiency and economics, it was important to ensure that the speed in which a pizza

is currently made was either improved or unchanged, because lowering speed results in less efficiency. The concepts therefore concentrated on automating the process to deliver the product as quickly and efficiently as possible.

In exploring innovative industrial environments in the commercial field and undertaking the management of this long-term project, FEST members gained valuable experience in customer communication, learning how to determine client objectives and goals. They

devised methods of selecting team members in accordance with the project's requirements and timeline and formed a multidisciplinary team, with each member learning adaptability, tolerance and co-operation when working with different disciplines. They were able to recognise user experiences and customer perspectives as helpful tools, allowing them to identify different interdependencies and priorities. More importantly, the team learned the value of identifying and understanding all factors that can influence innovation in companies.



## DOMINO'S:

*"We needed a fresh look into our pizza-making process to see how we might integrate different kinds of technology. This is where the students from FEST came into the picture.*

*We liked the way their team looked into this project, gathering all the information they got from us and looking into our stores. This gave them the opportunity to have good understanding and insight into the project. They came up with a good summary and clearly understood our process. FEST provided us with a solid plan on how they wanted to manage the project from start to finish, made a clear separation of the different components, and provided us with realistic concepts within the scope and given time-frame."*

### DOMINO'S PIZZA NETHERLANDS B.V.

**Ronald Dekker**

Head of Brand Design Europe

**Stephanie van der Sluis**

Head of Store Development