

**Equipment sanitary design and food safety****Dimitri Tavernarakis**

TOMRA, New Zealand

Food safety legislation around the world is changing fast, by implementing emerging technologies in order to adapt to an increasing demand of consuming civilization. Also, food scientist and biotechnologists have become more familiar with enhanced detection protocols and as a result we observe increasing rates of outbreaks and recalls. At the same time the regulatory requirements for equipment remains the same and vague, without the proper guidance to engineers. As a result, the equipment manufacturing sector of the food industry create products that may differ from one another in terms of design principles to maintain the design for hygiene food products. At TOMRA food sorting, having been challenged for global compliant equipment, we have been investigating the industrial requirements from the different points of view of the design engineer, the end use and the regulator and have managed to establish a practical approach that creates a standardize framework for equipment deliverables that ensures the best possible compliance scheme and equipment that fit for purpose. But the industry needs further action and probably update the standards for development, providing more straight forward and easily applicable interpretation of the compliance requirements. Within this work we go over the food safety requirements for the food processing equipment in conjunction the regulatory requirements and at the same time we elaborate our understanding and the benefits of clarifying the compliance requirements and applied standards.



**Figure 1:** A typical layout of a lane sorting machine, showing the challenge of complexity and compliance.

**Biography**

Dimitri Tavernarakis holds a Bachelor's Degree in Industrial and Mechanical Engineering; Master's Degree in Mechatronics. He has extensive background developing compliant equipment for the industry and especially the food sector following based on the requirements of the directives of the European Union for hygienic equipment and food safety. At TOMRA he works as a Food Safety Engineering Leader. His work is to communicate with the market and the developer engineers to provide guidance for developing efficiently equipment that fit the application in a holistic approach by bringing together the required knowledge from different disciplines of the industry. He has been actively participating in the International Organization of Food Protection. He is currently the Vice-Chairman of "Equipment and Facility Sanitary PDG", TOMRA. The TOMRA Group continues to innovate and provide cutting-edge solutions for optimal resource productivity within two main business areas: Collection Solutions (reverse vending and material recovery) and Sorting Solutions (recycling, mining and food sorting).

Dimitri.tavernarakis@tomra.com