

## Application for Simulation Technologies in a Food Factory for Packing Meat and Fish



**BOLTON Alimentari S.p.A.**

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BOLTON Alimentari S.p.A. is an Italian leader in the food sector, specialized in conserves of meat and fish. It is a society part of the BOLTON Group; an international company specialized in manufacturing and marketing a wide range of high quality branded consumer goods worldwide.

### Manufacturing scenario description

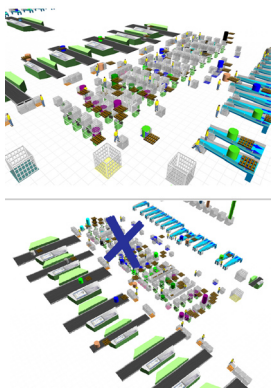
Among the different processes and activities present in the company, the focus of the work carried out was on the canning process of the tuna fish. The final objective was to reduce the machines in the production process maintaining the same level of output, introducing some constraints in the production mix and production plans. In particular, the company wanted to simulate the production process of 33000 large baskets of semi-finished goods halving the autoclaves. A simulation tool has been used in order to simulate the new production process and fix the necessary constraints to reach the production level.

### Approach and results with simulation technologies

The simulation tool used was Flexsim4. Initially the real system has been modelled and simulated, then the restrictions have been introduced. All the necessary parameters were given in input to the simulation tool (working hours of the resources; efficiency of all the production lines; failures; availability of the resources; production data: mix, shifts, processing time).

The real system has been modelled and validated, the output of the real system has been compared to the output of the model and it has been verified that they were quite similar. Achieved this first objective, the new simulation model has been used to reach the final objective of the company.

The input parameters have been accordingly modified to the needs. In order to make the simulation real, there is the need to plan all the changes in management and production planning. The reduction on the number of autoclaves will be done at various times, eliminating one autoclave per time. Then the simulation model will be validated concurrently in order to maintain a precise control on the production.



## **Benefits for the Company**

- It is possible to still produce the same quantity working on three shifts instead of two
- There is a need of low variability of the production mix
- Keep attention to complex production planning
- Revision of the weekly production plans
- Introduce predictive maintenance in order to reduce failures

## **Key Success Factors**

- FlexSim4 as an powerful tool for modeling, analyzing, visualizing, and optimizing any imaginable process - from manufacturing to supply chains, abstract examples to real world systems, and anything in between
- Utilization of real process information and parameters like working hours, processing time, efficiency, etc....