



**1Point2**

# Setting up a new machine in the manufacturing industry

SUCCESS STORY N° 15

## ⇒ ISSUES:

- Replacing manual operations by automated operations.
- Choosing the appropriate technology.
- Maximizing efficiency.
- Minimizing investments.

## ⇒ SOLUTION:

- IPoint2 simulated the new machine within the workshop environment.
- IPoint2 tested various solutions to find the best combination of factors.

## ⇒ ADVANTAGES:

- Assistance for choosing the supplier and the most efficient technology.
- Buffers sizing

**A sub-contractor in the automotive industry chose IPoint2 and ExtendSim to simulate an automated machine for a finishing operation on metallic parts — before duplication to other workstations.**

Replacing a manual workstation by an automated workstation is not the simplest decision.

- Which technology is preferable?
- Which capacity for robots and conveyors?
- How to adapt the size of buffer stocks to avoid interrupting upstream production?
- Where to place the containers being filled with finished parts?

All these questions (and many others) can be answered thanks to a simulation model.

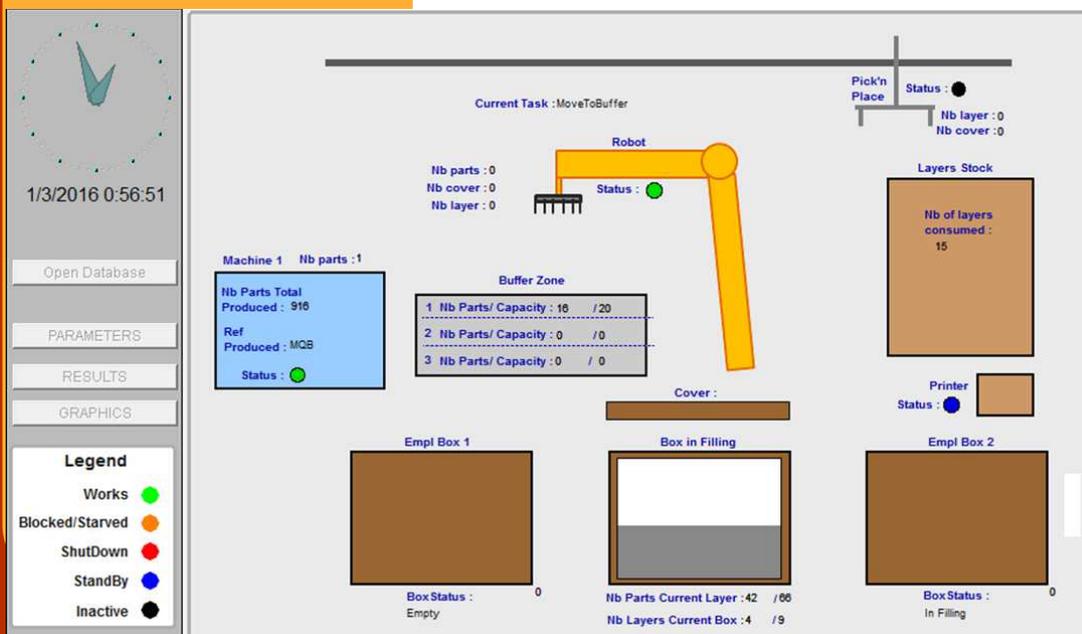
The model built with ExtendSim allowed to take into account all the parameters involved in these choices so as to find a solution that was compared to numerous others, and integrated all the characteristics of the new machine.

Among these characteristics, the duration of all singular operations, the configuration time when changing the type of product and the scheduled maintenance.

Developing this kind of flexible and customizable models was an opportunity for IPoint2 to develop a specific expertise in the field of manufacturing industry.

- Equipments sizing
- Setup optimization
- Estimation of buffers capacity
- Contextual study with real production schedules

With models easy to understand and a quick simulation execution, it took little time to experiment a large number of scenarios and determine an optimized configuration.



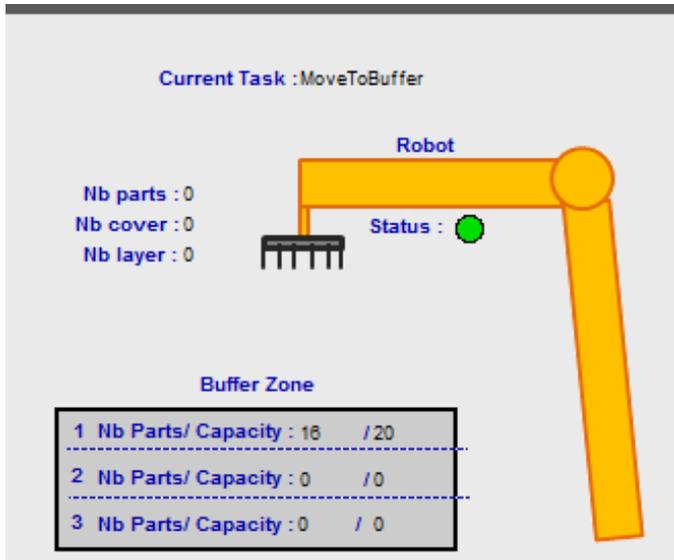
## They trust us:

Airbus,  
Procter & Gamble,  
Hitachi, Sony,  
ThyssenKrupp,  
Johnson & Johnson,  
Euramet,  
Kongsberg  
Automotive,  
Saint Gobain...

# The words of the customer:

**Manufacturing Manager:** “We had pre-selected 4 feeding concepts for the machine that differed according to the size and position of the buffer and with the optional presence of a crossbar. The model enabled us to justify the technological decisions towards the workshop and the suppliers. Getting familiar with the model was very intuitive and this, combined with a short execution time, made the validation step flawless while not affecting the project planning. We feared that in

real-life settings, more circumstances of upstream blockage and under-used downstream machines would appear. We hope now to extend this simulation experience to other manufacturing sites.”



Simulation is one of the most powerful tools used to

analyze complex systems. The advantages often go beyond the initial objectives. For example:

- ◆ **Understanding the system's dynamics.** What is the size of the upstream buffer after eight hours of production? Where and when a station is likely to suffer from shortage in the case of an upstream failure?
- ◆ **Anticipating** the operation of a new system or **improving** the functioning of existing systems. Simulation allows to avoid making small or big mistakes!



## 1Point2

5 rue de la Poste  
38170 Seyssinet-Pariset - France

Std: +33 4 76 27 77 85  
Fax: +33 4 76 27 24 67  
infos@1Point2.com

For more information,  
visit our website:  
<http://www.1Point2.com/>

We support industry managers with simulation to assist them in their decision-making process. Trained in industrial simulation in the United States and in France, the 1Point2 team has been providing services, quality software and training in the simulation field since 1987.

1Point2 is the exclusive distributor of ExtendSim in France, Belgium, Italy, Spain, Portugal and Greece.

Guillaume LAGAILLARDE  
glagailarde@1point2.com