

## EUR21\_29 – DIGITAL TWIN (DTW) WHAT IS THIS ANIMAL?

Authors: Cécile Gaudeaux (Air Liquide), Jean-François Rauch (Air Liquide), Jean Guilhem (2B1st Consulting)

**Abstract** - Digital twin (DTW) is today a buzzword in the industry and everyone has a different understanding, comprehensive definition of what it is and what it is for. The purpose of this article is to explain/define what is a digital twin, to introduce the different types of DTW, with some illustration (aerospace & building). In a second part, the prerequisites in an engineering organisation to reach the maturity of being able to do a DTW are described (integrated tools, data driven organisation...) and how to manage DTW during a project execution (from front end engineering to hand over to operation, with the added complexity of change orders). In a third part, the document will focus on digital twin usage for industrial operation:

- What are the customers/operation expectations from engineering: easy single access to the complete project documentation (3D, 2D, process and technical specifications, operational manual, maintenance data and PM linked to MMS...), and to the process simulation part,
- What needs to be done for the real time process modeling part (with real time data acquisition and real time data reconciliation)