

SUPSI

# Manutelligence

*Axis 3 – Innovative products and processes*

Interview with Donatella Corti and Alessandro Fontana,  
heads of the Manutelligence project



**Tell us briefly about the Manutelligence project, starting with the problem tackled.**

The idea for the project grew from the awareness that today's industrial sector has two, increasingly commonplace requirements: the need to provide solutions consisting of products and services, rather than simply a product; and the pursuit of design approaches and software tools that can help companies to develop solutions, reducing the time-to-market while still ensuring that client needs are met throughout the entire life cycle of the product/service.

In this area, the objective of Manutelligence is to design, develop and test a platform enabling the integrated design of a product/service, and facilitating a more fluid form of collaboration between the various company departments involved.



**What initial results have been obtained?**

The first two years of the three-year project have just come to an end, and we feel that the most important result has been the internal development of an LCA (Life Cycle Assessment) tool, which we have called MaGA (Manutelligence Green Ap-

plication), based on software that we had designed previously in other research projects. The prototype from which we began has been significantly improved in terms of both functionality and user interface. At present, we have already utilised the software in order to assess the environmental performances of a number of products that were 3D-printed by a Barcellona fablab. It was precisely one of these products, a lamp, that gave us the idea of creating the showcase promoting management engineering at SAMB (Bellinzona Scuola d'Arti e Mestieri – Bellinzona School of Arts and Trades). The topic presented was that of designing and assessing the environmental impacts exemplified precisely by the lamp made in Manutelligence. We are also utilising MaGA to calculate the impacts of a wooden house made by our Swedish project partner, and we are considering its implementation in a thesis that will instead focus on ecological houses built by a company operating in the local territory.



**What are the strong points of the project? And the problems?**

The first strong point consists of the demonstrations conducted on the premises of our industrial partners, particularly Ferrari, which, despite its prestigious history, has taken up the challenge, believing in the innovative potential of Manutelligence. Another significant aspect of the project is the pronounced emphasis on effective results implementation. In particular, for SUPSI it is extremely interesting to be able to apply MaGA directly to complex cases, such as that of a house made from wood. On the other hand, we have encountered some difficulties in terms of implementing the product/service concept in companies that are strongly product-focussed.

**Do you remember anything interesting, amusing or unusual that occurred during the project?**

In comparison with other European projects, Manutelligence stands out for the collaborative and participatory atmosphere created between all the partners;

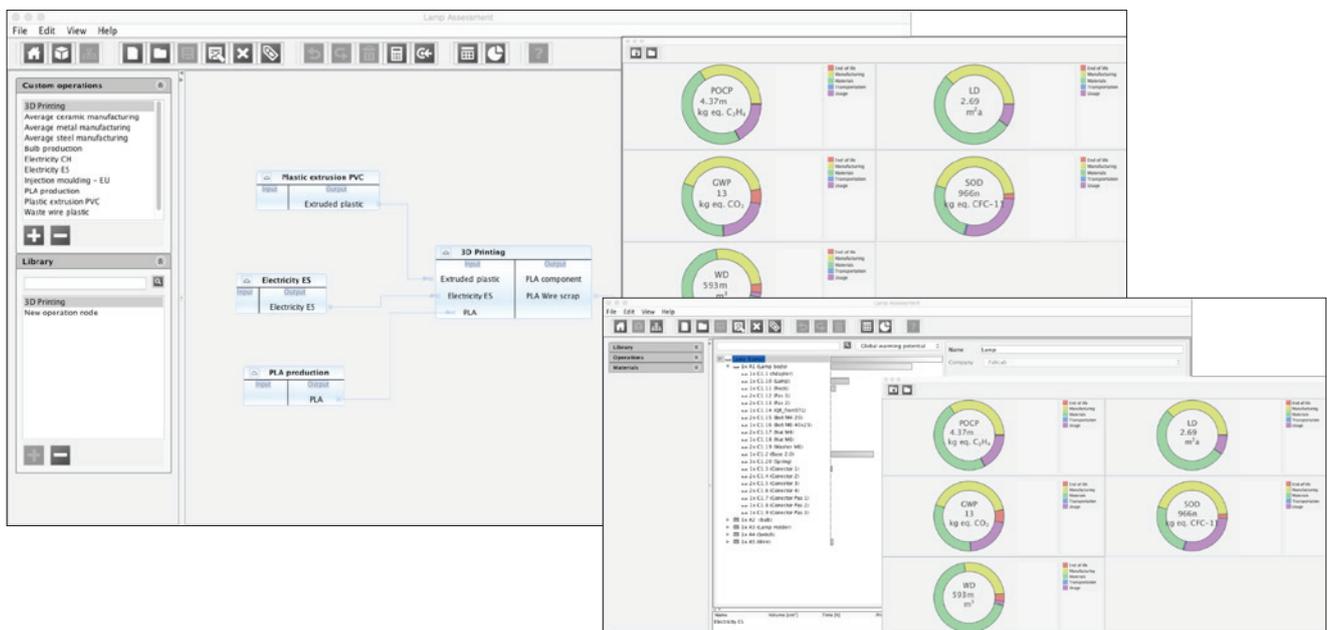
this came about partly thanks to the initiatives planned by those organising the project meetings, with the aim of introducing foreign colleagues to local customs. The event that we certainly remember with most pleasure was the trip to a Swedish island, when we were welcomed into the family home of one of the project partner team members.

**Could other projects develop from this one?**

The design sustainability oriented design on which Manutelligence focuses is of primary importance in the industrial world: the expertise and tools developed by the SUPSI team can be applied to various sectors and scaled to companies of various dimensions. So we believe that there is definitely potential for developing the results and extending them further, applying them to other European project proposals, and also to projects targeted at local companies.

**Apart from you, who else was on the project team?**

In the Laboratory of Systems and Technologies for Sustainable Production we work as a team on the Manutelligence project, fulfilling the requirement that activities assigned to SUPSI involve complementary skills. The following software engineers also work together with us: Marino Alge, Marco Cinus and the assistants Patrick Innocenti and Marco Dal Lago.



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