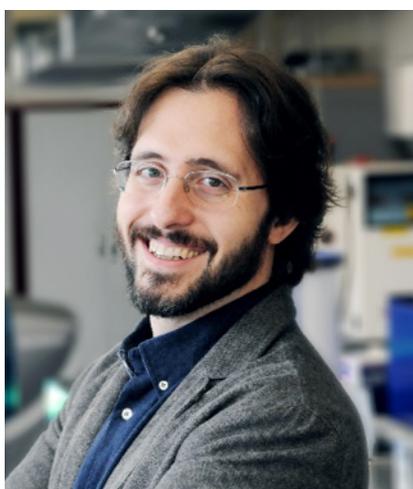


SUPSI

SFERAPLAST project

Axis 3 – Innovative products and processes

Interview with Andrea Castrovinci, head of the SFERAPLAST project



What initial results have been obtained?

The project ended in December 2017 and achieved the expected objectives: we managed to develop an initial ferromagnetic sphere prototype that was able to meet all the requirements. The spheres constructed ensure an adequate response to the magnets, a fundamental feature of GEOMAGworld games. They also have sufficient resistance to breakage and good level of scratch resistance, in order to ensure safety and lifespan.

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

Definitely the excellent teamwork between the partners in the project, which, in addition to GEOMAGworld (TI), involved our group from DTI and Swiss

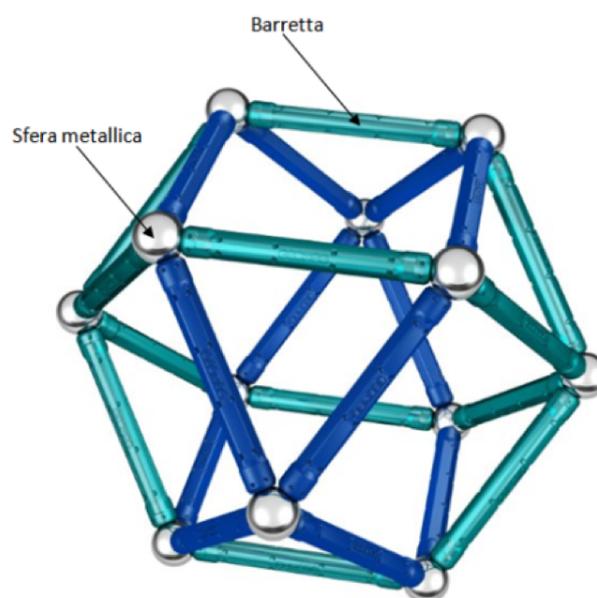
Industrial Promotion SA (GR) working together, merging the various areas of expertise. All this was made possible by the co-financing provided by KTI (now Innoswiss), which supported our work, allowing us to work together with industrial partners in developing a well-aimed solution.

In the course of work, we had to tackle a series of significant challenges, associated with both producing the polymeric mixture, and also with forming the compound in the final mould. Thanks to the experience of our industrial partners, these phases were managed without ever becoming worryingly critical.

Tell us briefly about the Sfera Plastica Ferromagnetica - SFERAPLAST project, starting with the problem tackled.

In GEOMAGworld (GW) toys, magnetic bars and ferromagnetic metallic spheres are used to make constructions of very many different geometric forms and dimensions.

Making spheres in ferromagnetic plastic increases the number of potential design solutions, because it is also possible to construct items with complex forms, by means of transformation processes of plastic materials. Thanks to the use of appropriately formulated polymeric compounds, it is possible to eliminate substances forbidden by the increasingly strict legislation on environmental safety and protection. All these features make the product constructed from these polymeric compounds more suitable to be used by children of pre-school age (2-5 years old).



A construction's example

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

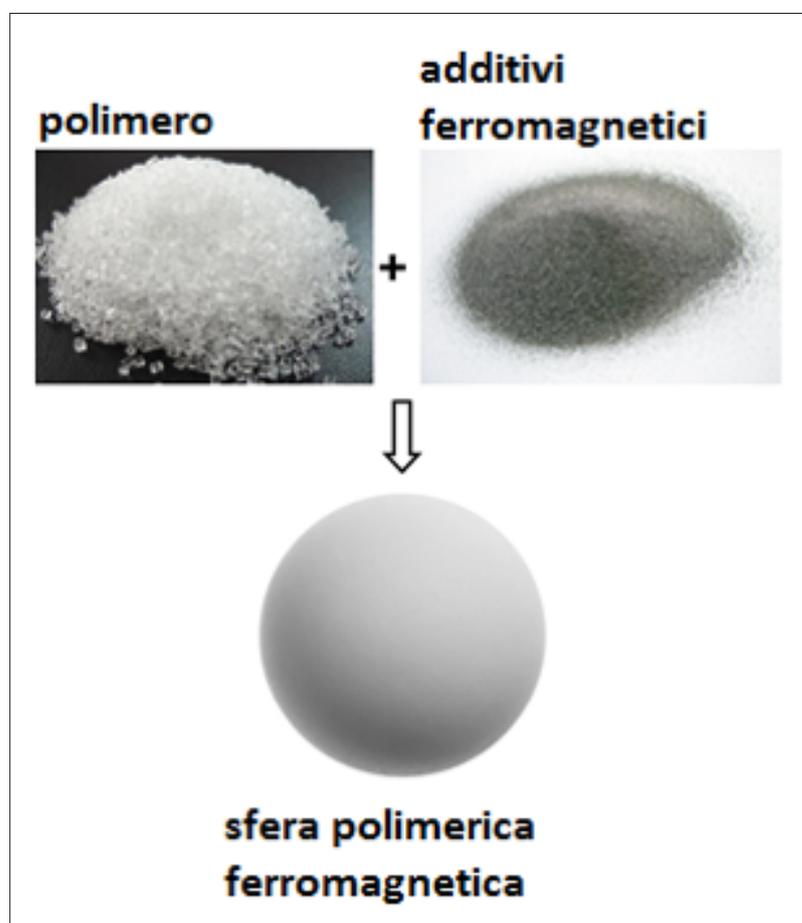
Definitely when KTI had to test the product, the meeting with the expert for the GO/NO GO. We held the meeting at GEOMAGworld. At the start of the meeting, the expert immediately broke the ice, saying that his house was full of GEOMAGworld toys, and that his children played with them a lot. This brief, friendly statement was a good starting point for discussing the more technical aspects with him.

Could other projects develop from this one?

I hope so, the project group worked well and the results obtained tempt us to tackle challenging, new projects.

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

The DTI representative working on the project was Marco Spaggiari, researcher, who monitored the various phases meticulously, working closely with the staff from the industrial partners.



An example of ferromagnetic plastic sphere

Project type: Progetto CTI

Financial bodies: CTI and industrial partners

Project partner: GEOMAGWorld (TI) – partner principale, www.geomagworld.com/it – e SIPsa(GR), www.sipsa.ch