

## IM@IT ABSTRACT

### 1. Vision

IM@IT intends to become the catalyst that accelerates interactions between large-scale facility (LSFs) specialists and a wide range of potential users in academia and industry, enabling the community to take full advantage of the very significant Italian investments in LSFs and optimize the return on these investments, which at present are not fully geared to support Italian national priorities. Our key intuition is that there is a natural hierarchy of need/productivity in which one starts becoming familiar with implementations of techniques at small research facilities (SRF), before progressing to more complex medium-range facilities (MRF), and finally becoming LSF expert users, if this is needed to tackle questions that cannot be otherwise answered. This hierarchy applies not only to progress in any given research question, but also to training and educating novice users in effectively using the more advanced and more expensive methods.

### 2. 'Mission' (how do we get there?)

IM@IT has accumulated a unique and rather exceptional experience in promoting industrial access along the aforementioned lines of progression. *The focus for the next 2 years' activities will be to capitalize and build on this expertise.* In this, IM@IT responds to the growing need of the Italian production system, in particular of SMEs. Unlike large corporations, SMEs usually have limited resources and skills to access and exploit the most advanced tools, which are nonetheless essential for understanding, developing and improving their "productive fabric". In the IM@IT 'vision', the industrial and academic user who is not an LSF expert is accompanied and led along this path to the point of becoming independent and able to propose their own experiments or, in the case of industry, to buy machine time for 'proprietary research'. Our 'case studies' have been designed precisely to provide successful exemplars of this journey. Since the funding we expect to raise is necessarily limited, our efforts will focus on the current national priorities, with the specific aim of supporting and enhancing Italian competitiveness in key sectors. Another aspect of IM@IT that, we believe, is truly innovative is the pursuit of new approaches to access LSFs through the construction of a network of alliances with international LSFs and the deployment of targeted funding for specific types of access. More broadly, all components of the IM@IT (provisions of SRFs and MRFs linked through a common user-access platform, as well as the projection towards LSFs) are functional to achieve a better alignment of Italian infrastructure funding with national priorities. IM@IT will: i) enrich its portfolio of research, skills and tools for addressing challenges relating to complex materials and interfaces; ii.) strengthen its units distributed throughout the national territory, with the goal of turning each of them into a catalyst for a more effective involvement of local SMEs; iii.) strengthen and extend its provisions for training and support of users for accessing the network of instrumentation at SRFs and MRFs, as well as the national and international LSFs.

### 3. Actions

The highest priority for IM@IT is to continue seeking funding from public institutions (FOE-MUR, POR-FESR, PON, Horizon Europe, European Innovation Council, European Institute of Innovation & Technology) and from its private stakeholders to realise its mission described above.