

## Annex - TA for target-specific Case Studies

### Preamble

For many decades, all Large-Scale Facilities (LFS) in Europe have adopted similar approaches to granting access to academic and industrial researchers. In general, researchers with different national affiliations enjoyed different levels of non-proprietary (academic) access to a given facility, depending on the contribution of their 'home nation' to the budget of that facility. To be specific, a distinction was made between the following groups:

- Researchers affiliated with the facility's host country (for national facilities) or of associate/scientific member nations (for international facilities or national facilities with international agreements) could obtain beamtime up to a total that roughly correlated with the contribution of their 'home nation' to the facility.
- Researchers not so affiliated could access the facility only based on exceptionally strong scientific cases.

These principles were applied via a single proposal system: researchers of any national affiliation applied to the system in the same way, and proposals were evaluated and ranked by facility access panels (FAPs) purely based on their scientific merit. Subsequently, the facilities' directors 'normalised' the highest-ranked proposals so that they approximated the 'national quotas' and granted a small amount of 'discretionary beamtime' outside the quotas and to non-affiliated researchers. One specific feature of it is that the facilities acted as funding agents for accessing a very expensive commodity (their beamtime), privileging purely scientific considerations, and sidestepping central efforts to tension different research strands against each other based on national research and technology priorities.

### A possible approach for small stakeholders

The strongest argument in favour of the system described above is that it ensures the best scientific return on investment for the large stakeholders (e.g. CNR in Italy). Conversely, the system appears rather inflexible for 'small' stakeholders, which may be more interested in accessing specific elements of the facility's portfolio for very specific non-proprietary purposes. Yet another case may be that of a country that sponsors a certain fraction of 'general TA' for its community but would like to provide additional access that is targeted to specific national research priorities. In Italy a case in point is related to the opportunities provided by funding lines relating to specific research and development strands, i.e specific areas of societal challenges within the national's science priorities within thematic areas. A

pertinent question for Italy and possibly other players is therefore: can the access mechanisms described in the preamble be minimally modified to account for these requirements? One obvious approach would be for proposals falling within these national priorities to be ‘flagged’, so that they can bypass national quotas, since they would attract additional funds for the facility, should beamtime be granted to them. Although details will need to be ironed out, allowing for this type of access does not appear to require major modifications, as outlined in the example here below.

- Flagged and unflagged proposals will be submitted in the same way; flags will not be known to the FAPs.
- Proposals to a given instrument will be considered in order of scientific merit, starting from the top proposals. ‘Unflagged’ proposals will be granted beamtime up to the national quota for general access (if any).
- ‘Flagged’ proposal lower down the list will be allocated beamtime if any is remaining on that instrument when their come up for consideration.
- The appropriate national authority will be billed for all ‘flagged’ proposal that received beamtime.

### **An innovative approach for TA to LSF via IM@IT for target-specific Case Studies**

Should this type of access be approved by a LSFs, the next question is how ‘flags’ would be granted at national level. It would clearly be in the interest of the funder that ‘flagged’ proposals are a) of outstanding scientific quality and b) aligned with the funder’s priorities. This is where the IM@IT infrastructure plays a decisive role. For example, IM@IT:

- Facilitate the formation of Case Studies targeting specific problem of ‘small’ stakeholders of national relevance.
- Share expertise on best practice in proposals writing.
- Award flags on specific proposals based on a separate evaluation, which would be done by IM@IT-MAP, following best practices based those adopted by LSF.

Most proposal applications for TA for target specific Case Studies shall be assessed scientifically and technically within the framework of the IM@IT MAP and ISIS FAPs on the same basis as all other applications. Priority will be given to proposals that have exploited the suite of MRF instrumentation available at IM@IT to fully prepare and support the need for ISIS beamtime and the implementation of ISIS. These proposals will prioritise the participation of pools of industry, including SMEs, and of new users.

## **The IM@IT role and the euMATERIA role**

**IM@IT role** – It is a matter of selecting the best proposals associated with the infrastructure IM@IT from the national quota (through CNR), and funding them separately. This produces the following effects:

- IM@IT funds its own best proposals.
- There is no change in ranking compared to the FAPs, as the order of the panels is strictly respected.
- Consequently, no Italian or non-Italian proposal would lose access in favor of less valid proposals.
- IM@IT does not spend money uselessly, as if the IT proposals accepted by the FAPs are less than the national quota, IM@IT would not pay anything.
- The system is relatively easy to administer, as it is simply a matter of ‘tweaking’ the national quotas.

The disadvantage from the LSF point of view would be that there would be no certainty of income. Alternatively, the directors may wish to treat IM@IT as if it were a separate ‘scientific member’ (to use an ILL term).

**eu.MATERIA role** – In view of eu.MATERIA perspective, this system needs to be adapted since in this case we are dealing with proposals coming from different countries some of which may not have a separate agreement with the LSF. So, if the LSF accept, the principle of treating eu.MATERIA as a scientific member with a separate agreement seems better and simpler to describe in the ESFRI proposal.