



Notice for Expression of Interest - DARE Project Crowdfunding Solution

ANNEX I - TECHNICAL SPECIFICATIONS

In order to enable submitters to assess the scope of the solution required, the objective of this document is to:

- **provide information regarding the technology and specifications required for integration,**
- **provide information regarding the functionality already developed in BiPart,**
- **define the minimum essential elements/requirements needed for successful integration**

THE BIPART PLATFORM

COMPONENTS

The elements that characterize CF in BiPart are as follows:

1. **wallet:** the credit available to each user to spend on financing proposals on the ballot; today, the credit is entered by the organization's backend for running simulations, without being matched by real currency;
2. **donate:** a field in the proposal tab, configured and activated by the backend and through which each enabled user can enter the amount to be donated for the proposal;
3. **donate:** the amount the proposal has collected from user donations;
4. **minimum amount:** the minimum amount that can be donated to proposals on the ballot;
5. **maximum amount:** the maximum amount that can be donated to proposals on the ballot;
6. **ranking:** the ranking of proposals by amount raised.

Currently, crowdfunding, although used for simulation purposes, only works in Euro currency.

OPERATION

In the BiPart platform, crowdfunding is designed as a voting system that can be associated with proposals. Therefore, it lends itself to be managed within a participatory path where funding no longer has to depend only on reaching a quorum (the required budget) but also simply on a ranking that orders projects by donation amount (and, in the future, by number of donors and percentage of co-funding to project cost). Moreover, crowdfunding can also interact with other voting systems, opening up unexplored scenarios that correlate co-funding with democratic preferences. As with the preference voting system, crowdfunding can also be so configured by optionally setting a minimum and maximum donation that can be made for each proposal. To date, crowdfunding functions as a simulation through which a user registered in BiPart can use a credit in his or her wallet and can use it to fund proposals where crowdfunding voting is active. Donations can be editable, or multiple. Thus, there is no limit to the number of donations that can be made on each proposal, but only relative to the amount of the amount. This system is used not only to simulate crowdfunding, but can be used to experiment with token voting systems, i.e., giving citizens the opportunity to distribute their budget among the proposals on the ballot.

FUTURE IMPLEMENTATIONS

The development roadmap also includes the configuration of:

- a maximum total individual donation threshold for each participatory process,
- a maximum number of projects that can be funded,
- as well as the possibility of ordering the ranking of proposals:
- by number of donors,
- by percentage of co-funding to project cost,
- in relation to other active voting systems (combined ranking).

ADDITIONS

PROCESS & PROPOSAL DATA

In order to ensure interoperability between the two platforms, BiPart will create a specific layer of APIs in read exposing special endpoints with authenticated access (through a dedicated account on the crowdfunding platform) capable of returning useful general data/information related to the participatory process and crowdfunding-related proposals. This will allow the crowdfunding platform to freely evaluate what solutions to offer to improve integration, also taking cues from the suggestions below. The information returned by the BiPart API will include the IDs (identifiers) of the relevant proposals, which are necessary for mapping them to the corresponding crowdfunding projects and invoking the detail API for the individual proposal.

Improvement assumptions by the crowdfunding platform will also be evaluated in light of the commitment required from BiPart in terms of additional interventions on the platform and their feasibility.

CROWDFUNDING DATA & PROJECTS

At the same time, BiPart will create a dedicated data structure for integration with the crowdfunding platform within its model and a specific layer of in-write APIs that will expose special endpoints (again with authenticated access as described above) capable of receiving, from the crowdfunding platform, the most significant data related to the CF campaign, starting with:

1. the total donations raised for each project,
2. the total number of donors for each project.

The data should be sent at each update of the same. This will make it possible to display the real-time progress of the crowdfunding campaign with the most important information about it, so as to invite participating users to contribute on the CF platform itself. Through said APIs, the crowdfunding platform will then have to ensure that the projects uploaded to it are linked to the corresponding proposals in BiPart. The suggested solution is to allow the proposer to enter the ID of the proposal published in BiPart within the crowdfunding platform (typically at the configuration panel of the relevant project), so as to ensure that invocations performed by the CF platform to the endpoints exposed by BiPart always include the correct reference to the linked proposal, thus ensuring the required interaction.

USERS

In order to facilitate future cross-platform operations as well, it is proposed to implement a feature that allows users of each platform to be able to clone their account and profile - newly created or existing - in one and/or the other platform, either during registration or after login, thus avoiding annoying repetitions of the registration procedure (and thus of the related activity of manual entry of profile data), limited to the email confirmation procedure and acceptance of the privacy policy and terms of use, which are not necessarily the same between the two platforms.

For example, a flag could be displayed stating "I also want to register in BiPart/CF's platform" through which the user would consent to the registration data entered being transferred to BiPart/CF's platform as well, with the benefits outlined above.

Editor's note: BiPart uses the 12-round Bcrypt hashing algorithm for user password encryption. Using the same algorithm would also allow asynchronous registration to CF's platform from BiPart's proposal board, i.e., to BiPart from CF's platform project board.

API

As an example, the most significant interchange data between BiPart and the crowdfunding platform follow.

BIPART API

1. process ID (to be associated with projects to define donation limit)
2. participatory process title
3. process url
4. title voting/crowdfunding phase.
5. url voting/crowdfunding phase.
6. start date of voting
7. end date of voting
8. proposal id
9. proposal title
10. proposal description
11. detail description
12. attachments (images and documentation)
13. preferences collected from the proposal
14. comments collected (first name, last name, date/time, comment)
15. final evaluation

16. detailed evaluations
17. proposal page url

A detailed description of the portion of the BiPart data model of interest can be provided upon request.

API CROWDFUNDING

1. ID space where to find projects
2. budget to be raised (which may be different from the cost of the project)
3. mode of raising (all or nothing, etc.)
4. campaign start date
5. end date of campaign
6. remaining time of the campaign
7. project ID
8. project title
9. project description
10. rewarding list (donation value, rewarding amount, title, short description)
11. budget raised so far
12. number of donations
13. outcome of collection and thus project status (funded, unfunded, ...)
14. url of the project page
15. comments collected (first name, last name, date/time, comment)