

Chapter 14 Open Calls and Pilot Projects

Lukáš Kačena, Jana Hamrlová, and Jan Hajič

Abstract We describe the two ELG open calls for pilot projects, the objective of which was to demonstrate the use and the advantages of ELG in providing basic LT for applications and as a basis for more advanced LT-based modules or components useful to industry. Our main goal was to attract SMEs and research organisations to either contribute additional tools or resources to the ELG platform (type A pilot projects) or develop applications using Language Technologies available in the ELG platform (type B pilot projects). We start with the detailed description of the submission and evaluation processes, followed by a presentation of the open call results. Afterwards we describe the supervision and evaluation of the execution phase of the projects, as well as lessons learned. Overall, we were very satisfied with the setup and with the results of the pilot projects, which demonstrate an enormous interest in ELG and the Language Technology topic in general.

1 Introduction

To demonstrate the advantages of ELG (Rehm et al. 2021) in providing LT for applications and as a basis for more advanced LT-based modules or components useful to industry, the ELG project set up a mechanism for using close to 30% of its budget for small scale demonstrator projects ("pilots") through two open calls. The calls were prepared using the ICT-29a call specification, making use of the Financial Support to Third Parties (FSTP) scheme according to the ICT Work Programme 2018-2020 (European Commission 2017). In total, we provided 1,950,000€ to the selected projects as FSTP with an awarded amount of up to 200,000€ per project. We established a lightweight submission procedure and a transparent evaluation process, in which external evaluators participated as reviewers.

The main objective of the open calls was to attract SMEs and research organisations to either contribute tools and services to ELG (type A projects) or develop

Lukáš Kačena · Jana Hamrlová · Jan Hajič

Charles University, Czech Republic, kacena@ufal.mff.cuni.cz, hamrlova@ufal.mff.cuni.cz, hajic@ufal.mff.cuni.cz

applications using Language Technologies available in the ELG platform (type B projects). The results of the pilot projects are included in the ELG platform for dissemination, testing and external evaluation by other entities or the public.

2 Organisation of the Open Calls

2.1 Management Structure and Organisation

While agile, simple and lightweight from the proposers' point of view, the organisation of the two open calls was an internally complex procedure requiring close collaboration of three different teams (management team, technical team, Pilot Board) with support from a broad panel of external evaluators.

2.1.1 Pilot Board

The Pilot Board (PB) was set up for the supervision of the pilot projects. While the management team took care of the organisation and handling of the open calls and the execution of the pilots, the PB provided a forum so that the ELG project could discuss the progress of the pilots, their feedback and results. The PB was meant to be the main technical and strategic interface between the pilot projects and the ELG project proper, so that ELG could maximise its benefits from supporting the pilots and to make sure that the pilot projects benefit from ELG.

The PB operational procedures were drafted by the management team and approved by the ELG Steering Committee. Afterwards, seven PB members were nominated and approved. The operational procedures defined the main responsibilities of the PB as follows: approval of the open calls and related documentation; pilot project selection process; supervision of pilot project execution, including progress monitoring, evaluation of results and approval of the phased payments.

2.1.2 External Evaluators

An independent panel of experienced external evaluators ensured an open, transparent and expert-evaluation based selection process. The pool of evaluators was created using a separate open call. The evaluators were responsible for evaluating the project proposals and worked remotely using the web interface of the ELG Open Calls Platform. They were selected from the pool, avoiding any conflicts of interest. All evaluators were asked to sign a non-conflict of interest declaration and a confidentiality agreement before being accepted to perform the task.

2.1.3 Management Team

The management team organised the whole Open Calls process, including managing and directing the technical team. In line with Annex K of the Work Programme (European Commission 2017) and other relevant sections of the Rules for Participation, the management team prepared all prerequisites and procedures: the Open Calls Platform, web content, informational materials, forms, contract templates, presentation and reporting forms and templates, submission procedure, hiring and selection of external evaluators, call management structure, internal auditing and project results evaluation procedures. In the initial setup phase, the management team tapped the legal and financial expertise of the Technology Centre of the Czech Academy of Sciences, which is charged by the Czech government to host the National Contact Point (NCP) and other experts related to the preparation, execution and evaluation of EU framework programmes and projects.

2.1.4 Technical Team

An essential task was to set up the ELG Open Calls Platform for the proposal submission, evaluation and reporting process. We decided to develop the platform in-house to ensure that it fit our needs.¹ The technical team was responsible for developing the platform and for support during each phase of the process.

2.2 Timeline

Figure 1 shows the open calls execution timeline. After the announcement, each call was open for submissions for two months, followed by an evaluation procedure of approx. two months. After signing the contracts with the selected projects, the execution phase started. The expected project duration was 9-12 months. Four projects asked for a short extension of one or two months (which was accepted), mainly due to COVID-19 related delays of dissemination activities.

2.3 Communication with Stakeholders

Prospective applicants were targeted through various channels, e. g., the open calls website, a survey for stakeholders and other communication and dissemination activities carried out by all ELG consortium members.

From early 2019 onwards, the open calls were presented on the ELG website.² The content was regularly updated, starting from basic information including the

¹ https://opencalls.european-language-grid.eu

² https://www.european-language-grid.eu/open-calls

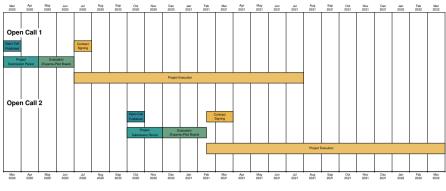


Fig. 1 Open Calls overall timeline

timeline and key parameters at the beginning of the project, followed by the call for evaluators³ and complete information regarding the open calls⁴.

We first monitored the interest in the open calls using a survey, which ran from May 2019 until June 2019. A total of 108 respondents participated. The result showed significant interest in the open calls and also a high demand for more information. Five months before the first call announcement, a second survey was prepared. We disseminated this survey during the first annual ELG conference META-FORUM 2019 in October 2019 in Brussels and collected answers from 47 respondents, 84% of which expressed an interest in taking part in the open calls.

The open calls were promoted through social media (Twitter, LinkedIn), various e-mail distribution lists, internal networks and collaborators, through the META-FORUM conference and through other means whenever an opportunity arose.

2.4 Submission Process

As explained in the previous section, in the preparatory period the overall open call procedure was set up, including all related documents and the development of the online platform for the management and evaluation of submissions. After the official announcement of one of our two open calls, applicants could then prepare and submit their project proposals. There was a continuous need for support, mainly answering questions we received by the participants via email.

With regard to the call announcement, we paid special attention to a well-prepared call documentation, which provided all necessary information for applicants, and a user-friendly submission platform. The documentation was prepared as an easy-to-understand document. It contained several annexes: Guide for Applicants, Third Party Agreement, Project Proposal Template and Evaluation Criteria.

³ https://www.european-language-grid.eu/open-calls/call-for-evaluators

⁴ https://www.european-language-grid.eu/open-calls

In the "Guide for Applicants" the management team showed, using screenshots, how to submit a project proposal through the platform, i. e., how to create an applicant account, how to log in and manage the account, how to create a new project proposal, fill in the forms and finally submit the proposal. We also maintained a list of (expected) frequently asked questions, for example "Who can apply for a pilot project?", "How much money is allocated for the pilot projects?", and "Does Brexit have any implications on eligibility?".

The Open Calls Platform was developed using the open source Content Management System Drupal with the guiding principle to keep the submission and evaluation process easy and straightforward for the participants and manageable for the call organisers. The platform runs under the ELG domain⁵, while physically residing with the technical team to ensure quick reactions to any technical problems.

2.5 Evaluation Process

2.5.1 Preparation of the Evaluation Process

The most important part of the preparation of the evaluation process was the selection and specification of evaluation criteria that match the objectives to be achieved by the calls. At the same time, the criteria ought to be clear for the external experts evaluating each proposal.

The criteria were defined and described in detail in the call documentation. First, the submitted proposal should fulfill formal requirements (language, submission date, declaration of honor, legal status, eligible country, number of submitted proposals per applicant and no conflict of interest) which were checked by the management team before any further evaluation. Then, three independent evaluators checked the binary eligibility criteria: uniqueness, relevance for ELG, and whether the proposal contains all the required phases (experiment, integration, dissemination). These were followed by the graded and ranked evaluation criteria: objective fit, technical approach, business, integration and dissemination plan, budget adequacy, and team.

In order to identify evaluators with experience in language technologies and evaluation, a call for evaluators was published in February 2020. All relevant information (description of tasks, eligibility of candidates, selection criteria, contact email for questions, and a link to the registration form on the Open Call platform) was published on the ELG website as well as on the European Commission Funding and Tender portal. In addition, ELG consortium members disseminated the call through various channels. Potential evaluators were asked to fill in a registration form, through which contact information, CV, and professional experience related to evaluation and LT were collected. From about 156 applications, the management team selected 64 evaluators (a total for both project open calls) with relevant expertise in both the subject field(s) and in evaluating projects of at least similar size.

⁵ https://opencalls.european-language-grid.eu

Before assigning projects to evaluators, we sent instructions via email and we organised webinars in which the evaluation process and criteria were explained.

All evaluators signed a contract with the ELG project. The contract included a clause to keep in strict confidence any technical or business information about the evaluated projects, as well as a no-conflict-of-interest declaration.

2.5.2 Execution of the Proposal Evaluation Process

Each proposal was evaluated by three independent external experts to ensure an transparent selection process. The evaluators were carefully assigned to the proposals by the management team. We also paid attention to gender (at least one female evaluator per proposal) and country of residence of the evaluator, avoiding at the same time possible personal or nationality-based conflicts of interest. The whole process was monitored by the Pilot Board. Each proposal was assigned to one of the PB members. These project coaches checked and confirmed or rejected the selection of evaluators with special regard to conflict of interest.

After the evaluation, the project coaches prepared summary reports for each proposal assigned to them. In these summaries, the coaches first reviewed the three reports by the external evaluators. They also suggested potential budget adjustments and changes of the total number of points (the maximum was 300 points, i.e., 100 points from each evaluator) in range of at most 30 points (open call 1) or 45 points (open call 2) up or down, where applicable. According to the evaluation criteria, project proposals by SMEs developing applications using LT available in ELG (B type projects) received 30 bonus points. Finally, the project coaches reviewed the eligibility criteria (uniqueness, relevance for ELG and project phases) as checked by the evaluators and suggested their decision on their fulfilment if the evaluators differed in opinion. The coaches also assessed the performance of the evaluators and quality of the reports. After all summary reports had been submitted by the coaches, a Pilot Board meeting was convened, in which the final ranking and selection was decided. All proposals were ranked by the total sum of points assigned. The ranked list was cut at the maximum available financial support (1,365,000€ for open call 1 and $585,000 \in$ for open call 2).

3 Results

3.1 Open Call 1

3.1.1 Overview

The first call was opened on 1 March 2020 and closed on 30 April 2020 in accordance with the timeline (Figure 1). We accepted a total of 110 project proposals for evaluation from 103 applicants.

Submitted by	Туре А	Туре В	Total
Research organisation	43	5	48
SME	36	26	62
Total	79	31	110

Table 1 Proposals submitted to the first open call and accepted for evaluation

Seven applicants (five SMEs and two research organisations) submitted two proposals (one type A and one type B). Regarding the type of project, 79 submitted proposals were of type A (contribute resources, services, tools, or datasets to ELG) and 31 proposals were of type B (develop applications using language resources and technologies available in ELG), see Table 1. We received proposals from 29 different countries, including eligible countries outside the EU (Iceland, Israel, Norway, Serbia, South Africa, Switzerland, Turkey, United Kingdom). The total amount of financing requested by the submitted projects was $16,900,000 \in$. One project requested 283,000 \in , which was over the limit of $200,000 \in$ per project, and the lowest requested amount was $50,000 \in$. The average amount requested per project was $153,000 \in$.

At the end of June 2020, the results of the first open call were announced on the ELG website, including the list of projects selected for funding.⁶ The two projects from the reserve list were informed that they might be selected for financial support if any of the selected projects rejected the financial support. The remaining projects were informed that they were not selected. In July 2020, contracts with all selected projects were signed, and the first payments were made (half of the awarded financial support), in line with the approved call documentation and procedures. All projects had started their execution phase by August 6. Furthermore, at the end of July 2020, abridged versions of the summary evaluation reports were provided to all applicants through the Open Calls Platform.

3.1.2 Selected Projects

The projects selected in open call 1 are listed in Table 2. All supported organisations are from the EU – three from Finland, two from Austria, Germany and Italy, and one from Spain. The awarded budget varies from $87,445 \in to 167,375 = t$

Although we obtained more proposals from SMEs than from research organisations, there are three SMEs and seven research organisations among the selected projects. Similarly, although B type projects from SMEs were preferred, only two B type projects were accepted for financing which probably reflected the fact that the ELG platform was still being developed at the time of the first open call. Thus, it appeared to make more sense to create missing resources or tools rather than build applications using resources and tools available in ELG.

⁶ https://www.european-language-grid.eu/open-calls/open-call-1

Organisation	Pilot Project	Туре	Country	Funding
Fondazione Bruno Kessler	European Clinical Case Corpus	А	IT	139,370€
Lingsoft, Inc.	Lingsoft Solutions as Distributable Containers	А	FI	140,625€
Coreon GmbH	MKS as Linguistic Linked Open Data	А	DE	167,375€
Elhuyar Fundazioa	Basque-speaking smart speaker based on Mycroft AI	В	ES	117,117€
Universita' Degli Studi di Torino	Italian EVALITA Benchmark Lin- guistic Resources	Α	IT	126,125€
University of Helsinki	Open Translation Models, Tools and Services	А	FI	154,636€
University of Vienna	Extracting Terminological Con- cept Systems from Text	Α	AT	132,977€
University of Turku	Textual paraphrase dataset for deep language modelling	А	FI	166,085€
Weber Consulting KG	Virtual Personal Assistant Proto- type	В	AT	87,445€
FZI Research Centre for Information Technology	- Streaming Language Processing in Manufacturing	А	DE	132,160€

Table 2 List of pilot projects selected for financial support in the first open call

Four of the eight A type projects aimed to enrich the ELG platform with language resources and six of them planned to provide various language tools (i. e., two of the projects provide both resources and tools). The two B type projects promised speech applications – a smart speaker and a digital twin based on real-time language translation and analysis. The projects in general often dealt with underrepresented languages such as Basque, the Nordic languages, and European minority languages.

Technologically, the projects targeted a diverse set of goals and areas. There are projects targeting important interdisciplinary areas (medical informatics, manufacturing), modern technologies relating to language and semantic as well as world knowledge (Linked Open Data, paraphrasing) and core scalable technologies (distributable containers). Evaluation platforms as well as advanced and scalable machine translation still are and will be relevant issues for Language Technologies. Finally, the two speech-oriented applied projects broaden the portfolio of the usual Language Technologies in the desired direction, too.

3.1.3 Feedback provided and Survey for Proposers

With the goal of evaluating and improving our open call procedure, we conducted several surveys with everyone involved in the first open call. We started with the

project proposers. After the evaluation process we also conducted a survey among all evaluators. The last survey was conducted among the Pilot Board members.

Two short surveys were designed for those who submitted a proposal (proposers) and those who uploaded an initial draft but did not submit a final version (non-proposers). The survey consisted of 15 questions, some open and some multiple choice. The survey topics were clustered into three sections: "motivation", "project proposals", and "your organisation". The information was collected anonymously.

The surveys were conducted in May 2020. Of the proposers, 73 out of 110 (66%) responded, and of the non-proposers, 6 out of 17 (35%) responded. The main conclusions from the proposers' survey that were relevant for the setup of the second open call: Almost 70% of respondents were interested in ELG because of both (functional) services and datasets. Slightly more than two thirds of the respondents preferred smaller, agile calls over large, consortium-based calls.

There was a demand for more detailed documentation (e.g., in the form of a webinar) that allows proposers to better interpret the strategic goals of ELG and get better information on already existing services in ELG. More details about the ELG API integration and about the infrastructure for working with data, applications and possibly also workflows were requested. Some improvements of the Open Calls Platform and its user-friendliness were made (e.g., limited space).

3.2 Open Call 2

The second open call was launched in October 2020 and experience from the first open call was reflected in its organisation.

3.2.1 Changes made between Open Call 1 and Open Call 2

The basic parameters, specified in the ELG Grant Agreement, remained the same for the second open call. Based on the lessons learned from open call 1, we implemented the following changes in the call documentation and the open call procedure:

- We improved the explanation of the strategic goals of ELG and the goals of the open calls. Links to an overview of ELG, its history and context and to an overview of the ELG platform were provided in the call documentation.
- We also improved the technical documentation of the ELG infrastructure and provided an easy-to-find list of currently available services this was done with the launch of ELG Release 1 (June 2020).
- We organised a webinar, which took place during the submission period, on 12 November 2020. We explained the goals of the open call and presented the call documentation. The second part of the webinar was dedicated to questions and a discussion. A recording was made available to all applicants.
- The documentation, annexes, templates, and forms along with the Open Calls Platform were further improved.

- In the proposal template, budget breakdowns were requested in a fixed structure as well as a more detailed budget justification.
- New evaluators were recruited and added to the current group, with the aim to attract more experienced evaluators.
- It was decided that the second open call, like the first open call, should have no specific thematic focus.

3.2.2 Overview

The second call was opened on 1 October 2020 and closed on 30 November 2020 in accordance with the open calls timeline (Figure 1). We accepted 103 project proposals in total for evaluation.

Submitted by	Type A	Type B	Total
Research Organisation	38	5	43
SME	28	32	60
Total	66	37	103

 Table 3 Proposals submitted to the second open call and accepted for evaluation

Five applicants (four SMEs and one research organisation) submitted two proposals (one type A and one type B). Regarding the project type, 66 proposals were of type A, and 37 project proposals were of type B. A total of 43 applicants who submitted a proposal in the second open call indicated that they had submitted the same or a similar proposal in the first open call. We received applications from 28 different countries, including eligible countries outside the EU (Iran, Israel, Norway, Serbia, Switzerland, Turkey, United Kingdom). The total amount of financing requested by the submitted projects was 13,257,919. The average amount requested per project was 129,000, which is less than in the first open call (153,000).

In February 2021, the results of the second open call were announced on the ELG website.⁷ All applicants were informed about the results. In February and March 2021, contracts with all selected projects were signed, and the first payments were made (half of the awarded financial support), in line with the call documentation and procedures. All projects had started their execution phase by 1 April 2021. Furthermore, in March 2021, abridged versions of the summary evaluation reports were made available to all applicants through the Open Calls Platform.

⁷ https://www.european-language-grid.eu/open-calls/open-call-2

3.2.3 Selected Projects

The projects selected for financial support in open call 2 are listed in Table 4. The supported organisations are from five EU countries and the awarded budget varies between 85,421 and 137,227.

Organisation	Pilot Project Name	Туре	Country	Funding
Institute for Bulgarian Language	Multilingual Image Corpus 2021	А	BG	110,960€
EDIA BV	CEFR Labelling and Assessment Services	В	NL	137,560€
University of West Bohemia	Motion-Capture 3D Sign Lan- guage Resources	A	CZ	85,421€
Sapienza University of Rome	Universal Semantic Annotator: A Unified API for Multilingual WSD, SRL and AMR		IT	113,228€
Sign Time GmbH	Sign language explanations for terms in a text	В	AT	137,227€

Table 4 List of pilot projects selected for financial support in the second open call

Although we obtained more project proposals from SMEs than from research organisations, there are two SMEs and three research organisations among the selected projects. Similarly, only two B type projects were accepted for financing.

Three A type projects aimed at providing tools to enrich the ELG platform. One project contributed multilingual annotated data, tools and services for image processing whilst the second one aimed at improving the ELG offer of linguistic tools by proposing a unified service powered by state-of-the-art neural models for carrying out annotations on three Natural Language Understanding tasks, i. e., Word Sense Disambiguation, Semantic Role Labelling and Semantic Parsing, in around 100 languages. The third A type project expanded the portfolio of language resources available in ELG by adding a dataset and search tool for Czech sign language. Regarding the B type projects, one of the projects also dealt with sign language. Its goal was to simplify text comprehension for deaf people by linking words and phrases to a sign language encyclopedia. The other project aimed to develop a set of tools, datasets, and services to enable automatic classification of the reading difficulty of texts on the Common European Framework of Reference.

3.2.4 Survey for Proposers to the Open Call 2

Just like for the first open call, a survey with 15 questions was designed for those who submitted a proposal. The survey had three sections: "motivation", "project proposals", "your organisation". In total, 39 out of 103 proposers (38%) responded. Regarding the motivation to submit a proposal, contributing services or resources

to ELG to make them available to the ELG community and further development of an existing software or data project were the most frequent reasons reported by the respondents. The main expectations toward ELG were that the platform increases the visibility of the applicant's organisation on the European level and to get access to a large repository of tools and datasets. Also, almost all respondents think that more EU-funded activities dedicated to Language Technology and Languagecentric AI are needed, preferably in the form of agile calls (with short proposals and quick evaluations, 9-12 months project run-time). Regarding the specialisation of respondents, most frequently they specialised in text analytics, machine translation or speech recognition. Respondents reported more than twenty domains that they specialise in (most frequently health sector), one fourth of all respondents have no particular specialisation.

4 Pilot Project Execution

Once the pilot projects were selected and the contracts signed, the continuous support from the ELG consortium started so that the projects could start their execution. The first opportunity where the newly selected pilot projects could become more familiar with ELG were the online meetings with the Pilot Board and other members of the ELG consortium. During these meetings, basic information about ELG and its technology as well as guidelines for project execution were presented.

Project execution (Figure 2) consisted of three phases: Phase 1 - Experiment; Phase 2 - Integration; Phase 3 - Dissemination. After finishing Phase 1, reporting from the applicants was required, and then the Pilot Board decided whether the project was allowed to continue execution (and consequently, whether the next payment, 35% of the awarded support, is made). After finishing Phase 3, a final report was required, and the Pilot Board evaluated the whole project and decided whether the project receives the final payment (15% of the awarded financial support).

As mentioned, each project was supervised by a project coach who was responsible for training the project team, collecting and answering questions during project execution, collecting reports, and guiding the team through the project phases.

To advertise them to a wider public, the pilot projects were presented at two annual ELG conferences, i. e., META-FORUM 2020 and META-FORUM 2021, in dedicated pilot project sessions in which all projects could present their main approaches and goals. In addition, workshops and training events organised by the ELG National Competence Centres (NCCs) were also used as opportunities to present certain pilot projects in the respective countries and regions.

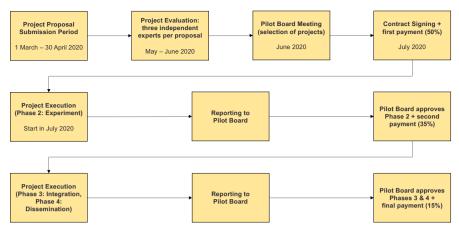


Fig. 2 Project execution scheme for pilot projects from the first open call

5 Conclusions

The results of the two open calls demonstrate an enormous interest in the European Language Grid and the Language Technology topic in general. The interest also indicates that the setup, including documentation, proposal template, platform etc., was easy to follow. In total, we received 213 project proposals from 156 different institutions (86 SMEs, 70 research organisations) in 32 different countries (including nine eligible countries outside the European Union); 15 projects were selected for funding, ten in the first open call and five in the second. The total amount requested was approx. 30 mil. ϵ , while the available funding amounted to only 1.95 mil. ϵ (an oversubscription of more than 15 times).

In the following we briefly summarise the main lessons learned, as gathered through the different surveys (see Sections 3.1.3 and 3.2.4):

- We aimed at a simple and light-weight procedure which led to a high number of submitted proposals. At the same time, the simplicity of the proposal template may have led to a higher number of low-quality proposals that were not adequately described or thought through. In both calls this rather high number of proposals required more person days and increased the costs related to the external evaluators.
- The quality of evaluation reports submitted by external evaluators was not entirely stable and, in some cases, could have been more profound. This was usually balanced by the project coach or Pilot Board.
- It was a good decision to develop the Open Calls Platform internally. Among others, it provided us with more flexibility, control over deadlines and quick and reliable support from the technical team.
- In the ELG project budget, the costs for the Open Calls Platform and for the proposal evaluation should have been planned more carefully.

Overall, we were very satisfied with the open calls setup and with the results of the pilot projects. While the results improved the ELG offering in terms of data, tools and services, and the applications developed using the ELG provided mutual benefit to the developers and ELG, we consider the overwhelming interest in the open calls an extremely important, albeit non-technical result: it demonstrates that Language Technologies are of tremendous interest to both researchers and commercial companies. It also shows that the open calls setup, as designed and implemented, was very attractive and can be considered as a model in similar undertakings in the future.

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