

### 3.7 COMPARED - TEXT MINING SOLUTION TO SUPPORT THE EVALUATION PROCESS OF RESEARCH GRANT APPLICATIONS (2018.07)

#### 1.1.1 IDENTIFICATION OF THE ACTION

|                     |         |
|---------------------|---------|
| Service in charge   | JRC.I.3 |
| Associated Services | RTD     |

#### 1.1.2 EXECUTIVE SUMMARY

Public funding agencies are investing billions of Euros in research and innovation (R&I) projects every year. Funding mechanisms can be improved to reach higher funding efficiency e.g. by aiming at the reduction of unnecessary duplication or overlaps between research proposals, increasing the quality of incoming proposals and decreasing the number of submitted R&I projects. There is also no doubt that the process of evaluating research proposals should be based as much as possible on scientific evidence. One way funding agencies could work towards this is by facilitating the sharing to other agencies of data related to public funding of research in Europe. But not all funding agencies have sufficient expertise in data analytics to act on this issue and the European context, with many funding mechanisms at regional, national, or European levels, does not help. This diversity of funding mechanisms is an asset but also a burden as it makes connecting funding schemes together difficult.

Through the development of a semantic similarity platform that would select documents relevant to the evaluation process, COMPARED aims at supporting evidence-based decision-making in the field of public funding of R&I. The project aims to achieve data interoperability but not interoperability of IT systems. Indeed, overall interoperability does not hinge on data availability of funded research alone and actually depends on systems design, processes and rules, which are context specific and therefore legitimately localised. By giving funding agencies, applicants and other stakeholders access to a semantic platform for the assessment of research proposals, the project aims to contribute at reducing unnecessary research duplication, reducing scientific overlap between funded projects, and at increasing the quality of R&I proposals while reducing the number of incoming proposals. Recent publications have identified these issues as key to maximise the impact of publicly-funded R&I<sup>1,2,3</sup>. This was also confirmed in a recent report by an independent high-level group recommending the European Commission to align national and EU R&I investment schemes, establish synergies with other funding programmes in Europe, and increase the impact of publicly-funded research in Europe<sup>4</sup>.

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<sup>1</sup> *Concentrating on the Fall of Labor Share; CEP Discussion Paper No. 1476; Grell, Kevin Berg – Marom, Dan – Swart, Richard (2015): Crowdfunding, The Corporate Era, Elliott and Thompson, London, 218 p.*

<sup>2</sup> *Funding agencies urged to check for duplicate grants, Nature, January 2013, volume 493.*

<sup>3</sup> *The Economic Rationale for Public R&I Funding and its Impact, European Commission DG Research & Innovation, ISBN: 978-92-79-65270-7*

<sup>4</sup> *"Lab-Fab-App, investing in the European future we want", Report of the independent high level group on maximising the impact of EU research & innovation programmes. European Commission DG Research & Innovation, ISBN: 978-92-79-70069-9*

Applicants to publicly-funded research programmes could also benefit from means to verify how similar their proposal is to funded R&I projects and other documents (e.g. scientific publications or patents). This would help applicants submit more original projects or help justify why research has to be duplicated, and will contribute to increasing the quality of research proposals entering the evaluation process at public funding agencies. Another benefit of giving access to grant data to applicants would be to reduce the incoming number of grant applications for funding agencies, as applicants would receive indications on similar projects already funded. This reduction of incoming proposals would have been a significant added value for funding agencies as it could reduce operational costs related to grant evaluation. In addition, as most of R&I today is privately funded, making some parts of COMPARED publically accessible would also allow private actors of R&I (companies, investment firms) to use the platform to reduce duplication in R&I investments and overlap between research projects.

The first phase of the project (2018-2019) delivered a pilot platform, the first version of the database containing grants data and a report containing a set of recommendations for possible further extension and full deployment of the system. Building on this, the JRC aims now at extending the scope of the Compared tool by further consolidating the platform, by collecting data from R&D funding agencies in Member States to enrich the database of grant data and by disseminating the tool and promoting its use in Member States. Compared aims at supporting grant evaluators in funding agencies throughout all of Horizon Europe, the new framework programme for research of the European Commission starting 1<sup>st</sup> January 2021 and lasting for 7 years. A certain level of sustainability is therefore expected and will be ensured mainly through IT support (see below).

The Joint Research Centre of the European Commission has a solid expertise in text and data mining in which it is active for more than 15 years<sup>5</sup>. The present project will be located in the Text Mining Competence Centre recently launched by JRC to serve the Commission with text mining solutions.

### 1.1.3 OBJECTIVES

The overall objective is to further consolidate and develop the Compared tool and promote its use by R&I funding national agencies.

1. Consolidate and further develop the Compared web application that evaluators of R&I proposals can use to obtain similar documents relevant to the evaluation process. Among other things, the translation mechanism will be consolidated, etc.
2. Enrich the database containing the grant data needed for the semantic comparison of research proposals. Data will be collected from R&D funding agencies in Europe (National funding agencies but also at European level).
3. Reach out to users of the platform to promote its use. In addition to the benefit of using the platform, the creation of a community of practice will foster the exchange of best practices on the use of modern text mining and scientometrics techniques to support evaluation of research proposals.

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<sup>5</sup> Check <http://emm.newsbrief.eu> and <http://www.timanalytics.eu> for concrete examples of IT solutions.

### 1.1.4 SCOPE

This project aims to support the decision-making process in evaluation of R&I grant proposals with more evidence e.g. information about similar proposals submitted or grant awarded in the past. The IT platform where users can retrieve documents semantically similar to the proposal they are evaluating at the time and the text mining techniques will be further developed. A community of practice will be created to foster the use of text mining and scientometrics techniques in the evaluation of research proposals. It should be noted that the semantic similarity platform does not aim to replace IT systems used to perform evaluation of proposals, neither does it aim to harmonise evaluation processes for research proposals throughout Europe or data standards. Rather, it aims at complementing processes operated in Member States by creating a bridge between evaluation processes and connecting stakeholders together.

### 1.1.5 ACTION PRIORITY

#### 1.1.5.1 Contribution to the interoperability landscape

| Question   | Answer   |
|--|--|
| <p><i>How does the proposal contribute to improving interoperability among public administrations and with their citizens and businesses across borders or policy sectors in Europe?</i></p> <p><i>In particular, how does it contribute to the implementation of:</i></p> <ul style="list-style-type: none"><li><i>the new European Interoperability Framework (EIF),</i></li><li><i>the Interoperability</i></li></ul> | <p>The project aims at data interoperability in a field where a real need for more cross-border collaboration exists, but for which there are no IT solutions yet. Some initiatives like the Lead Agency Model offer models for cross-border collaboration but there exists today no means to compare R&amp;I grants at a European scale. The first benefit of the project will be to establish data interoperability between funding agencies in different member states. This will be done with minimum disturbance to processes operated today by funding agencies: there will be no direct impact of the COMPARED platform on IT systems operated by public funding agencies.</p> <p>The project is in line with 2 ERA priorities<sup>6</sup> and with a recent report by an independent high-level group delivered to DG Research and innovation, which encourages the European Commission to align national and EU R&amp;I investment schemes, to establish synergies with other funding programmes in Europe, and to increase the impact of publicly funded research in Europe<sup>7</sup>. The project will also contribute to opening up access to grants data, which is common practice in</p> |

<sup>6</sup> "More effective national research systems that include increased competition within national borders and sustained investment in research" and "Transnational cooperation and competition which define and implement common research agendas on challenges, raise quality through Europe-wide open competition, and construct and run key research infrastructures on a pan-European basis".

<sup>7</sup> "Lab-Fab-App, investing in the European future we want", Report of the independent high level group on maximising the impact of EU research & innovation programmes. European Commission, DG Research & Innovation, ISBN: 978-92-79-70069-9

| Question   | Answer   |
|--|--|
| <ul style="list-style-type: none"> <li>• <i>Action Plan and/or the Connecting European Facility (CEF) Telecom guidelines</i></li> <li>• <i>any other EU policy/initiative having interoperability requirements?</i></li> </ul> | <p>some countries but not in all. Dissemination and access to data will be royalty-free, but restricted to non-profit activities.</p>  |
| <ul style="list-style-type: none"> <li>• <i>Does the proposal fulfil an interoperability need for which no other alternative action/solution is available?</i></li> </ul>  | <p>There are today no IT solutions for addressing the lack of informed decision-making when it comes to the evaluation of research project proposals. Some local solutions exist, however they cannot work in isolation. The real issue is related to the fragmentation of the funding mechanisms in Europe and the difficulty to gather the relevant corpus of data, combined to the possibility for project applicants, organised in consortia, to submit grant proposals across borders. An EU-wide approach including grant data from R&amp;D funding agencies in Member States, from the Framework program and ERC program of the EU would guarantee a meaningful volume of data.</p> |

#### 1.1.5.2 Cross-sector

| Question  | Answer   |
|---|--|
| <p><i>Will the proposal, once completed be useful, from the interoperability point of view and utilised in two (2) or more EU policy sectors? Detail your answer for each of the concerned sectors.</i></p> | <p>Should the project be successful, it could contribute to enhanced evidence-based decision making and provide some elements for more cross-border collaborations in that field. Data interoperability (and not system interoperability) would be achieved through collecting data from the different funding mechanisms in Member States via the COMPARED platform. Funding of research projects by public organisations is a cross-sector activity. Once implemented, the IT solution proposed here will contribute to more informed decision-to-fund in various policy fields like energy, environment, ICT, health, transport, and many more.</p> |

### 1.1.5.3 Cross-border

| Question  | Answer  |
|---|---|
| <i>Will the proposal, once completed, be useful from the interoperability point of view and used by public administrations of three (3) or more EU Members States? Detail your answer for each of the concerned Member State.</i> | <p>1) Administration to Administration.<br/>Once completed, the platform will be used by as many funding agencies of Member states as possible, ideally by agencies in all Member States, as well as in other countries. The project will establish close interaction with National funding agencies and with Science Europe (gathering funding agencies from many Members States), with the goal to involve the final users as soon as possible in the project. We will also aim for a maximum of these funding agencies to contribute to COMPARED with data about grants. The main advantage for funding agencies will be to obtain information about prior research projects funded in other Member States. Funding agencies will also gain from sharing best practices in the evaluation of research proposals and of their impact.</p> <p>2) Administration to citizens &amp; administration to business.<br/>Whenever possible, COMPARED will be publically accessible allowing applicants to R&amp;D funding to build more innovative proposals and investment funds or companies to better evaluate requests for R&amp;I funding.</p> |

### 1.1.5.4 Urgency

| Question   | Answer   |
|--|--|
| <i>Is your action urgent? Is its implementation foreseen in an EU policy as priority, or in EU legislation?</i>  | Although there is as such no urgency, evidence-based decision-making in the funding of R&I projects by public agencies is critically needed. Evaluators of grants have no means of knowing if a particular research project has already been funded elsewhere, or if the research has already been performed. Experts use their vast knowledge and experience to evaluate the originality of projects, but there are no actual systematic prior art searches being performed as part of the evaluation process. Knowing more about the past will help evaluators to assess the quality of research proposals and justify their decision on more factual elements. Ideally the platform should be fully operational for the start of FP9 in 2020. |
| <i>How does the ISA2 scope and financial capacity better fit for the implementation of the proposal as opposed to other identified and currently available</i> | This project fits with the ISA <sup>2</sup> interoperability goals. There are no other identified available sources of funding for this project.   |

|                 |  |
|-----------------|--|
| <i>sources?</i> |  |
|-----------------|--|

### 1.1.5.5 Reusability of action's outputs

|   |   |
|---|---|
| Name of reusable solution to be produced (for new proposals) or produced (for existing actions) | COMPARED platform   |
| Description   | The platform will be accessed through a web application and will therefore be re-usable by any additional funding agency or other entity wishing to use it, subject to certain limitations related to ownership of data. No personal data will be needed for the project. |
| Reference   |   |
| Target release date / Status  | Re-use is part of the project. Platform accessible and available as the project evolves and on request.   |
| Critical part of target user base   | Funding agencies.   |

|   |  |
|---|--|
| Name of reusable solution to be produced (for new proposals) or produced (for existing actions) | COMPARED data  |
| Description   | To the extent that is possible, the dataset on which the platform will rely will be made available to funding agencies and possibly other stakeholders, with the condition that the data can be exclusively re-used for non-profit activities. |
| Reference   |  |
| Target release date / Status  | Re-use is part of the project. Data will be made available from the onset, depending on specific legal or data protection issues.  |
| Critical part of target user base   | Funding agencies, scholars in the field of scientometrics, economics, innovation and research management.  |

|   |  |
|---|--|
| Name of reusable solution to be produced (for new proposals) or produced (for existing actions) | COMPARED code  |
| Description   | JRC code will be made available through licensing schemes without royalty compensations. EUPL could be envisaged but choosing the adequate licence scheme requires in depth analysis of the developed code. Should licensing be envisaged, JRC will follow the recommendations of the Central IP Service of the Commission that will run a thorough analysis of the software and its various components. |
| Reference   |  |
| Target release date / Status  | Re-use is part of the project. JRC code will be made available as much as possible as the project evolves and on requests.   |

|                                   |                                      |
|-----------------------------------|--------------------------------------|
| Critical part of target user base | Developers of text mining solutions. |
|-----------------------------------|--------------------------------------|

#### 1.1.5.6 Level of reuse of existing solutions

| Question  | Answer  |
|---|---|
| Does the proposal intend to make use of any ISA2, ISA or other relevant interoperability solution(s)? Which ones? | EUPL whenever possible.<br>PM <sup>2</sup> .<br>Synergies with other actions will be actively sought. |

#### 1.1.5.7 Interlinked

| Question  | Answer   |
|---|--|
| <i>Does the proposal directly contribute to at least one of the Union's high political priorities such as the DSM? If yes, which ones? What is the level of contribution?</i> | Contribution to "Boosting competitiveness through interoperability and standardisation". Less duplication of research means more original research funded, hence some impact on competitiveness. |

#### 1.1.6 PROBLEM STATEMENT

|                                |  |
|--------------------------------|--|
| The problem of                 | The difficulty to perform prior art search before evaluation of grant proposals  |
| affects                        | The amount of evidence useful to assess whether a particular proposal should be funded or not.   |
| the impact of which is         | No evidence-based decision-to-fund.  |
| a successful solution would be | Provide a semantic similarity platform that will automatically deliver to the evaluator a set of documents similar to the proposal under evaluation. |

|                                |  |
|--------------------------------|--|
| The problem of                 | Variety of local IT legacy systems.  |
| affects                        | Technical interoperability   |
| the impact of which is         | Difficult to link systems together and exchange data   |
| a successful solution would be | A centralised repository for data on grants, accessible through a semantic web application easy to integrate or embed in existing processes, with data exchange using RSS format and specific semantics and syntactic. |

|                |  |
|----------------|--|
| The problem of | Heavy workload related to processing of research projects. |
| affects        | Efficiency of funding agencies.                            |

|                                |  |
|--------------------------------|--|
| the impact of which is         | Reduced capacity for sound decisions and to accompany applicants.  |
| a successful solution would be | Give access to a semantic platform to applicants may help in reducing the number of proposals for funding. |

|                                |  |
|--------------------------------|--|
| The problem of                 | Limited access of applicants to data on previously funded research projects or to other relevant scientific documents.                                     |
| affects                        | The quality and novelty of research projects.  |
| the impact of which is         | Proposals entering the evaluation process are of lower quality and novelty than expected, which has an impact on competitiveness and innovation potential. |
| a successful solution would be | Give access to a semantic platform to applicants may help in increasing the quality and novelty of proposals for funding.                                  |

|                                |  |
|--------------------------------|--|
| The problem of                 | High fragmentation of many funding schemes operating in Europe.  |
| affects                        | Cross-border collaboration, which is low, and exchange of data, which is rare, and therefore the capacity to detect multiple funding of research and overlap of research grants. |
| the impact of which is         | Lack of novelty in proposals, overlap between research grants, and duplication of research.  |
| a successful solution would be | Give access through a semantic platform to a corpus of data on research projects funded in EU Member States, at EU level, or outside.  |

## 1.1.7 IMPACT OF THE ACTION

### 1.1.7.1 Main impact list

| Impact                        | Why will this impact occur?  | By when? | Beneficiaries                               |
|-------------------------------|--|----------|---|
| (+) Savings in money          | Detection of overlaps in research projects (scientific and financial) and subsequent reduction in overlaps and research duplication.   | Q1 2020  | Funding agencies (Member States and others) |
| (+) More innovation           | More innovative R&I projects.  | Q2 2020  | Member States                               |
| (+) Interoperability          | There is no interoperability in this field.  | Q4 2020  | Funding agencies (MS and others)            |
| (-) Integration or usage cost | Any new tool is associated to some costs: training, integration in IT, licensing, data exchange... But costs will be limited, as the platform will consist in a web application. Impact on agencies will be minimal, in particular because the use of the platform will have no impact on the IT systems in operation locally. | Q1 2020  | Funding agencies (MS and others)            |

| Impact                                     | Why will this impact occur?   | By when? | Beneficiaries                    |
|--|---|----------|----------------------------------|
| (+) More evidence-based funding decisions  | Evaluators would have access to prior art documents retrieved through a semantic process. | Q1 2020  | Funding agencies (MS and others) |
| (+) Open access to data on research grants | Catalyse open access to grant data and provide a central access point                     | Q4 2020  | All innovation stakeholders.     |

### 1.1.7.2 User-centricity

Users are at the core of the project. They have accompanied the project since its inception. User requirements have been collected prior to starting the development and will be continuously collected to maximise the usefulness of the tool. A panel of experts, specialised in grants evaluation process accompanies the project (e.g. experts from Science Europe). The community of practice will ensure that future developments stay in line with user requirements and will help with the dissemination and use of the platform.

### 1.1.8 EXPECTED MAJOR OUTPUTS

Outputs are described in section "Reusability of action's outputs"

### 1.1.9 ORGANISATIONAL APPROACH

#### 1.1.9.1 Expected stakeholders and their representatives

| Stakeholders   | Representatives | Involvement in the action   |
|--|-----------------|---|
| Hungarian Innovation Agency (NKFIH)                                      |                 | Member of the advisory board, providing expertise in the evaluation process of research proposals, test pilot platform, provide data. |
| Spanish foundation for science and technology (FECYT) + funding agencies |                 | Member of the advisory board, providing expertise in the evaluation process of research proposals, test pilot platform, provide data. |
| Science Europe   |                 | Member of the advisory board, providing expertise in the evaluation process of research proposals                                     |
| Joint Research Centre  |                 | Member of the advisory board, providing IT expertise (text mining, data, ...)   |
| RTD  |                 | Ensure alignment to RTD grant policies + provide data   |
| ERCEA  |                 | Member of the advisory board, providing expertise in the evaluation process of research proposals, test pilot platform, provide data. |

### 1.1.9.2 Identified user groups

Public R&I funding agencies in Member States  
Public R&I funding agencies in H2020 Associated States.  
R&I agencies at international level.  
Applicants to R&I grants.  
Private funding agencies.

### 1.1.9.3 Communication and dissemination plan

The key to getting Compared used by evaluators is to create a community of practice. This will be facilitated by the existing network of Science Europe (partner of the project), which brings together 40 national funding agencies from all Member States. These agencies are the primary users of Compared and will be approached through Science Europe. Presentation of the tool to the Science Europe working group on grant evaluation took place in Q4 2019 and the working group recommended the scaling-up and wide adoption.

Dissemination will also be done through the ESOE conference 2020, where JRC will have a 450m<sup>2</sup> dedicated to technology transfer and the funding of research. ESOE is a major scientific event in Europe where researchers and administrators of science will be present. Further dissemination will be done via the funding agencies themselves. Simple online presence will be ensured. ISA<sup>2</sup> communication channels (e.g. ISA<sup>2</sup> website, ISA<sup>2</sup> Newsletter) will also be used to reach potential users of the platform. Corporate dissemination via the ISA<sup>2</sup> network of Member States coordinators will also be considered as a means to disseminate.

### 1.1.9.4 Key Performance indicators

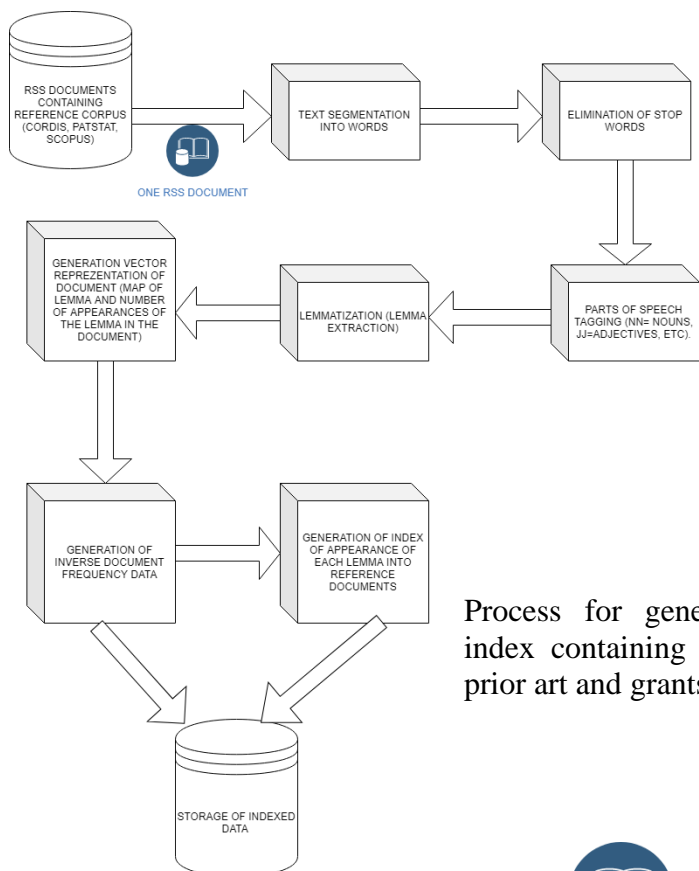
| Description of the KPI     | Target to achieve                                    | Expected delivery (months after k-o) |
|----------------------------|--|--------------------------------------|
| Meetings with the partners | 2 meetings   | +M1, +M11                            |
| Platform                   | New developments will be added to the platform.      | +M12                                 |
| Users                      | 10 funding agencies using Compared in the first year | +M12                                 |
| Community of practice      | 1 workshop to exchange best practices                | +M12                                 |
| Data                       | At least 3 new datasets of grants in the first year  | +M12                                 |

### 1.1.9.5 Governance approach

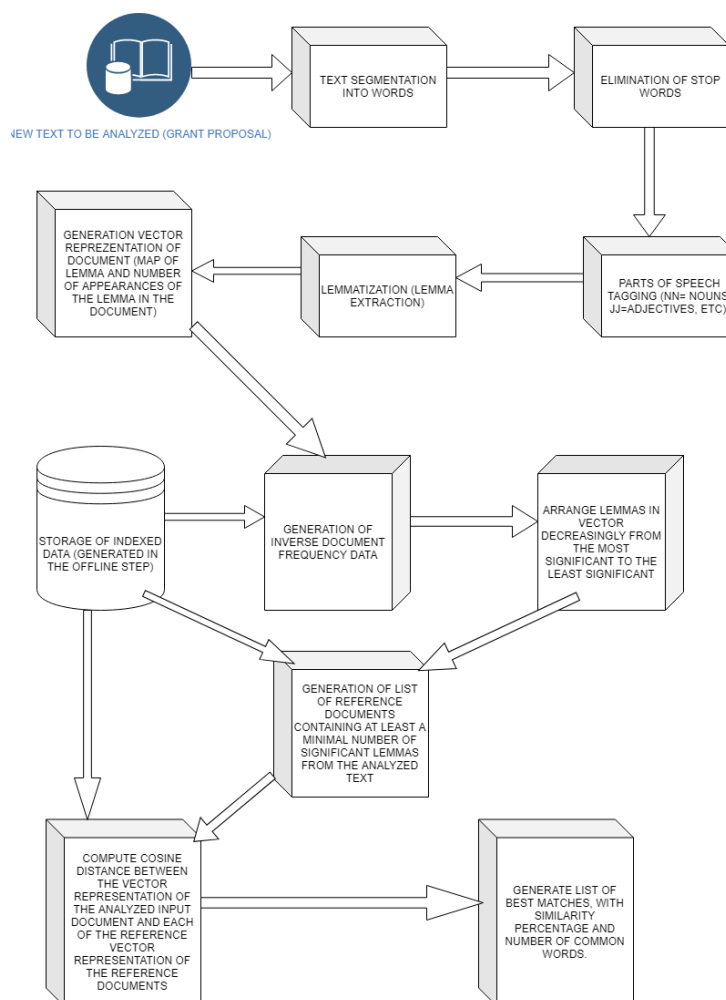
To limit the cost in case of project failure, COMPARED was designed as a two-phase project. As the pilot phase 2018-2019 was completed successfully, the project is now entering its full operation phase. Experts will be involved throughout the whole pilot project by monitoring and driving the developments. The project will be managed by JRC which will consult and rely on an advisory board composed of representatives from JRC, the Hungarian Innovation Agency (NKFIH), the Spanish foundation for science and technology (FECYT), and Science Europe. Compared will be sustainable if the user requirements are continuously

monitored and taken into account and if grants data are updated regularly. This means that, irrespective of where the Compared servers are hosted, there will always be a cost related to software maintenance and data updates. This cost can be estimated to 1.5 full time equivalents of IT experts (~210k€/year), for the whole duration of the Horizon Europe programme. Needless to say, a review of the project after the 1<sup>st</sup> year of the scaling up phase will take place to decide on a go/no go.

## 1.1.10 TECHNICAL APPROACH AND CURRENT STATUS



Process comparing incoming proposal documents to the index containing data about prior art and grants.



IT development for the full operation phase is scheduled to start as soon as funding is made available. Some developments are already foreseen following recommendations and needs expressed by the expert group. Adapting modules developed in other JRC projects (TIM, EMM) will be considered in priority to avoid duplication of work.

#### 1. Automatic Detection of Authors, Title, etc of the Proposal

- Develop AI module to "understand" the structure of a grant proposal and to extract authors, organisations, title, etc. This will prevent manual work of the users/evaluators of the grants. A specific GUI will be developed to allow users to verify the result of this step and make corrections if needed.
- Automatically match authors of proposals to existing companies, universities, etc to which they belong.
- Develop algorithms to detect conflict of interests between authors of grant proposals and evaluators.

#### 2. Dictionaries / Data indexing

- Implement utilization of acronyms.
- Implement utilization of N-words (currently only one single word/lemma is used for TF-IDF).
- Implement utilization of synonyms and adapt similarity computation to take into account this aspect.
- Optimization of search. Optimization in the algorithm used for similarity detection (which can be slow/computationally intensive for some requests like plagiarism detection).
- Ability to easily and seamlessly incorporate other Reference Corpus (such as additional database of granted research projects from different National Authorities).

#### 3. Translation

- Implement JRC solution for translation ( EMM translation system).
- Flexibility in deployment - full autonomous/on premise with EMM translation versus general deployment with Internet connection to allow usage of different translation tools - Google, Microsoft, IBM, etc).

#### 4. Authentication / Authorization

- Implement ECAS identification system.
- Flexible Authentication/Authorization configurable (between ECAS and own protocol - existing).
- Own protocol of Authentication/Authorization - user management - ability to create/update/delete users - in process of being implemented.
- Implement monitoring tool for user activities.

#### 5. Usability

- develop features to enable centralized management of all proposals:
- ability of a "manager" to assign grants to different evaluators
- ability of a "manager" to audit the activity of a certain evaluator - see what similarity tests the evaluator had performed, what were the results, corroborate similarity results with the general conclusion of the evaluator (suggest to finance or not), etc.
- asses activity of evaluators, for reference / history and subsequent activities.

## 6. Integration with TIM environment

- further developments based on current modern microservices architecture and closely integrate with the already existing powerful TIM search environment, such that to offer users an enlarged set of functionalities drawn from both programs.
- develop a relevant GUI to offer users this united set of functionalities from one single place, with minimal user input/number of mouse/keyboard clicks.

## 7. Sustainability

Compared aims at supporting evaluators in funding agencies throughout all of Horizon Europe, starting 1<sup>st</sup> January 2021. Sustainability of Compared during this period will be ensured by paying attention to the quality and freshness of data. Collections will be updated regularly (frequency will vary from funding agencies) and made readily available through the platform. It will also be essential to regularly collect requirements of Compared users to update front-end and back-end components. Sustainability and relevance will be at that price. The cost of this can be estimated to 1.5 FTE IT expert, but this estimation will have to be reviewed Q4 2020.

## 1.1.11 COSTS AND MILESTONES

### 1.1.11.1 Breakdown of anticipated costs and related milestones

| Phase                   | Description of milestones reached or to be reached  | Anticipated Allocations (KEUR)                       | Budget line            | Start date | End date   |
|-------------------------|---|--|------------------------|------------|------------|
| Initiation and planning | Kick off meeting  | 10k€ IT + 1man month JRC                             | ISA <sup>2</sup> - JRC | Jan 2020   | Jan 2020   |
| Execution               | <ul style="list-style-type: none"> <li>- Logistics (meetings, missions)</li> <li>- IT developments.</li> <li>- Data collection, gathering, formatting, storage, integration, indexing.</li> <li>- Setting up of the community of practice.</li> <li>- Interface with funding agencies and business analysis (IT requirements, data requirements, legal issues related to data access and sharing, etc.).</li> </ul> | 270 k€ IT +10k€ missions-logistics + 2 man month JRC | ISA <sup>2</sup> - JRC | Jan 2020   | April 2021 |
| IT supervision          | IT supervision and architecture   | 30k€ IT  | ISA <sup>2</sup>       | Jan 2020   | April 2021 |
| Overall supervision     | Overall supervision of the project  | 2 man month JRC                                      | JRC                    | Jan 2020   | April 2021 |

| Phase | Description of milestones reached or to be reached | Anticipated Allocations (KEUR) | Budget line | Start date | End date |
|-------|--|--------------------------------|-------------|------------|----------|
|       | <b>Total</b>                                       | <b>320k€</b>                   |             |            |          |

### 1.1.11.2 Breakdown of ISA<sup>2</sup> funding per budget year

| Budget Year | Phase             | Anticipated allocations (in KEUR) | Executed budget (in KEUR) |
|-------------|-------------------|-----------------------------------|---------------------------|
| 2020        | Deployment year 1 | 320€                              |                           |

### 1.1.11.3 Historical costs and related milestones

#### Fundings by ISA<sup>2</sup>

| Budget Year | Phase       | Past costs (in KEUR) |
|-------------|-------------|----------------------|
| 2018        | Pilot phase | 250€                 |
| 2019        | Pilot phase | 160k€                |

#### Total past costs

| Phase:                     | Description of milestones reached or to be reached   | Anticipated Allocations (KEUR)                              | Budget line               | Start date     | End date      |
|----------------------------|--|---|---------------------------|----------------|---------------|
| Initiation and planning    | - Kick off workshop<br>- User requirements document  | 30k€ experts<br>+ 32k€ IT                                   | ISA <sup>2</sup><br>JRC   | April 2018     | May 2018      |
| Execution                  | - Logistics (meetings, missions)<br>- Platform design, customisation, testing.<br>- Data collection, gathering, formatting, storage, integration, indexing.<br>- Setting up of a network of funding agencies from Member States<br>- Setting up of network of expert evaluators<br>- Interface with funding agencies and business analysis (IT requirements, data requirements, etc.)<br>- Exploration of legal issues related to data access and sharing.<br>- Hardware | 339k€ IT<br>+10k€ missions-<br>logistics<br>+ 15k€ hardware | ISA <sup>2</sup> -<br>JRC | April 2018     | May 2019      |
| IT supervision             | IT supervision and architecture  | 25k€  | JRC                       | September 2018 | November 2019 |
| Closing and Final decision | - Testing of platform.<br>- Closing meeting<br>- Final go / no-go for full deployment.   | 30k€ experts<br>+ 32k€ IT                                   | ISA <sup>2</sup> -<br>JRC | April 2019     | November 2019 |
|                            | <b>Total</b>   | <b>513k€</b>  |                           |                |               |