EUROPEAN LANGUAGE GRID

D7.8

Sustainability Plan (Progress Report)

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AI	Artificial Intelligence
AISBL	Association internationale sans but lucratif
BMC	Business Model Canvas
CLARIN	Common Language Resources and Technology Infrastructure
EEA	European Economic Area
EEIG	European economic interest grouping
ELG	European Language Grid
ERIC	European Research Infrastructure Consortium
e.V.	eingetragener Verein (registered association)
gGmbH	gemeinnützige GmbH (not-for-profit private limited company)
GmbH	Gesellschaft mit beschränkter Haftung (private limited company)
LT	Language Technology
MDSM	Multilingual Digital Single Market
NCC	National Competence Centre
SCE	Societas cooperativa Europaea (European cooperative)
SE	Societas Europaea (European Public Limited Company)
SLA	Service Level Agreement
SME	Small and medium-sized enterprises
SPE	Societas privata Europaea (European private limited company)

Abstract

This deliverable, D7.8 "Sustainability Plan", is the first of two interconnected deliverables (D7.8 and D7.9) that focus upon the sustainability of the European Language Grid project and platform. Deliverable D7.8 reports on the progress made in Task 7.5. It documents the current state of play with regard to developing a plan for the sustainability of ELG and the business and operation models currently under consideration to sustain the EU project after its official runtime has come to an end. The first 15 months of the ELG project have shown an overwhelming amount of positive feedback from various stakeholders. After the successful META-FORUM 2019 conference with the first public ELG demo, we experience, at the time of writing (April 2020), an extremely high level of interest in the Open Calls for Pilot Projects, which also validates ELG's overall approach and direction.

In this deliverable we report on the progress regarding the sustainability of the ELG project, i.e., the progress with regard to the discussion of potential business and operation models of the ELG legal entity, which will be established in the last year of the project (2021). It is important to point out that the LT and AI landscape can be characterised as highly dynamic right now.[1] Precise predictions of where the field is headed in Europe with a scope of, say, two or three years cannot be made right now. Especially considering the impact of the Covid-19 pandemic, it remains to be seen what the development concerning Digital Europe Programme and Horizon Europe will be and how the LT/AI-related situation in the different European countries will develop.

For this initial deliverable it was a conscious decision not to present a fully specified sustainability plan that sets out exactly what ELG's legal entity and setup will look like in detail for the timeframe of 2022 onwards. Instead, the deliverable shows where the project partners currently stand in their discussion and what the possible options are. The final sustainability plan will be presented in M28 (Deliverable D7.9).

1 Introduction

The most significant challenge the European Language Grid aims to address is the fragmentation of the European Language Technology landscape, both with regard to industry and research. ELG responds to this problem by bringing together all stakeholders, currently scattered all over Europe, under one common umbrella platform, i.e., the European Language Grid. However, the efforts taken within the ELG project can only be translated into a large-scale success if the European Language Grid platform and initiative continues to exist beyond the project runtime. This is why it was foreseen already in the ELG project proposal to develop a corresponding sustainability plan during the project and to transfer ELG into the legal entity in the last year of the project.

[1] See Georg Rehm, Katrin Marheinecke, Stefanie Hegele, Stelios Piperidis, Kalina Bontcheva, Jan Hajic, Khalid Choukri, Andrejs Vasiļjevs, Gerhard Backfried, Christoph Prinz, José Manuel Gómez Pérez, Luc Meertens, Paul Lukowicz, Josef van Genabith, Andrea Lösch, Philipp Slusallek, Morten Irgens, Patrick Gatellier, Joachim Köhler, Laure Le Bars, Dimitra Anastasiou, Albina Auksoriūtė, Núria Bel, António Branco, Gerhard Budin, Walter Daelemans, Koenraad De Smedt, Radovan Garabík, Maria Gavriilidou, Dagmar Gromann, Svetla Koeva, Simon Krek, Cvetana Krstev, Krister Lindén, Bernardo Magnini, Jan Odijk, Maciej Ogrodniczuk, Eiríkur Rögnvaldsson, Mike Rosner, Bolette Pedersen, Inguna Skadina, Marko Tadić, Dan Tufiș, Tamás Váradi, Kadri Vider, Andy Way, and François Yvon. "The European Language Technology Landscape in 2020: Language-Centric and Human-Centric AI for Cross-Cultural Communication in Multilingual Europe." In Nicoletta Calzolari, Frédéric Béchet, Philippe Blache, Christopher Cieri, Khalid Choukri, Thierry Declerck, Hitoshi Isahara, Bente Maegaard, Joseph Mariani, Asuncion Moreno, Jan Odijk, and Stelios Piperidis, editors, Proceedings of the 12th Language Resources and Evaluation Conference (LREC 2020), Marseille, France, 2020. European Language Resources Association (ELRA). This paper is available in the annex of this report.

The EU-funded phase of the ELG project runs for at least 36 months; a short extension of up to six months due to the Covid-19 pandemic is currently being discussed in the consortium. Nevertheless, the initiative is meant to be a sustainable, long-term activity with the overarching goal of strengthening, harmonising and bringing together the European LT business and research community, which is why preparing and putting into practice a long-term sustainability and business plan is mission-critical for the success of the EU project.

Within the ELG project, we work on various strategic aspects. As detailed in preceding deliverables (D7.1, D7.3), these comprise the definition of the marketplace, innovation and communication plans and the sustainability plan. These activities are closely interconnected and should be considered as a holistic approach rather than be viewed in isolation. Deliverable D7.8 is the first version of the final sustainability plan (D7.9), to be provided in M28. Figure 1 illustrates the interdependencies of the individual deliverables in WP7 and WP8:

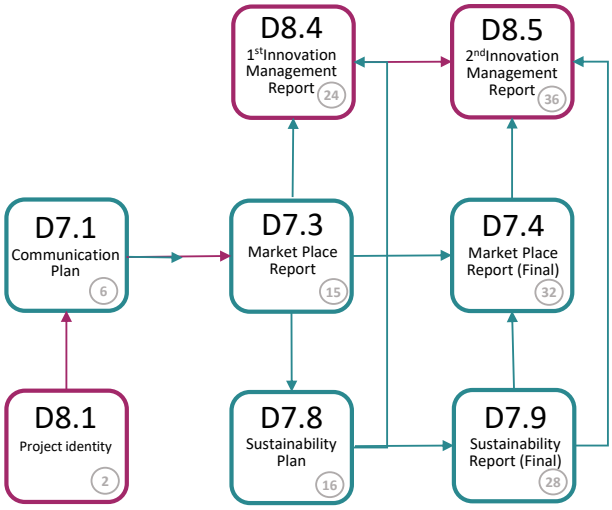

Figure 1: Relationship of the various strategic deliverables in WP7 and WP8

The present deliverable describes the current state of planning with respect to the sustainability of the ELG. Furthermore, it describes possible business and operation models that have been examined during the discussion process in order to assess if they are suitable as a blueprint for the ELG legal entity.

2 Towards a Sustainable ELG Business and Operation Model

In our context, a "… project is sustainable when it continues to deliver benefits to the project beneficiaries and/or other constituencies for an extended period after the Commission's financial assistance has been terminated."[2] In other words, a project is sustainable if it lasts beyond the actual duration of the project and continues to work efficiently afterwards. In order to maximise the long-term impact of a project like ELG, the preparation of the sustainability plan is key. With regards to ELG, this means that a plan for setting up a legal entity

[2] European Commission DG Education and Culture (2006) "Sustainability of international cooperation projects in the field of higher education and vocational training – Handbook on Sustainability". Luxembourg: Office for Official Publications of the European Communities.

must be drawn up for the period after the end of the project so that the ELG platform can be operated, maintained and further developed when the initial funded phase as a European project is over.

A sustainability plan describes how the goal of a project to become self-sustainable after its runtime can be reached. In ELG, we want the ELG platform to continue and we want to expand its functionalities further in order to serve and adapt to evolving user needs even better and to fulfil its mission for the European LT community. Therefore, commercial and non-commercial ways of exploitation are discussed and specified.

In a broader and more abstract context, the sustainability concept comprises three main areas of activity: Economy, Environment and Society (Figure 2).

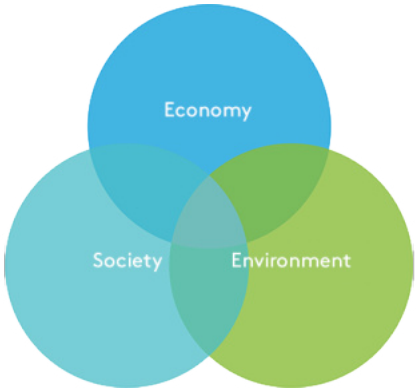

Figure 2: Main areas of sustainability in a broader sense

While all three areas are crucial for the well-being and reputation of an organisation, for the purposes of this report, we focus upon financial, operational, organisational and community aspects of the ELG legal entity.[3]

2.1 Considerations for ELG

Our vision and long-term goal is to establish ELG as the primary platform and marketplace for commercial and non-commercial LTs. Stakeholders from the European LT community will be able to upload their own services, tools and data sets and to make them available and deploy them via the grid. On the other hand, interested parties will be able to connect with and make use of services, data sets and resources made available by others.

In order to achieve the required scale that makes it the preferred marketplace, the ELG cloud platform must have very high availability and also high performance, service level agreements (SLAs) need to be put in place for services that are applied in production environments, mechanisms for billing need to be implemented and technical support needs to be set up. Implementing and operating these – and several other – components of the platform and initiative incurs various system-relevant costs. Correspondingly, Figure 3 shows the project's implementation timeline.

[3] The aspect of environmental sustainability, e.g., with regards to energy consumption of data centres and their collective carbon footprint, will become relevant when the ELG platform is fully operational and populated with large amounts of services and data sets. We will monitor the environmental aspect of sustainability closely but also realise that the ELG project or legal entity is unable to solve the issue of extremely high energy consumption of modern data centres and their impact on the global climate.

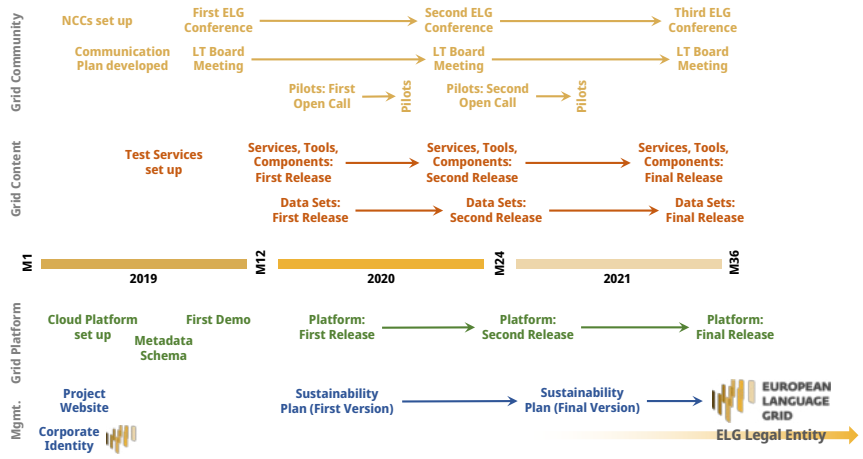

Figure 3: The ELG project timeline

2.1.1 Mission of the European Language Grid

In order to achieve the vision of becoming the primary platform for European LT, ELG follows an overall mission that creates impact that goes beyond the creation of the platform itself.

Support the Multilingual Digital Single Market (MDSM): ELG will strengthen the commercial European LT landscape by establishing a pan-European platform and marketplace. Offering powerful multilingual, cross-lingual and monolingual technologies, ELG will contribute to the emergence of a truly connected, language-crossing MDSM. European companies can showcase and offer their LTs to customers on the ELG's digital marketplace.

Grow a vibrant community and help coordinate all European LT activities. ELG is an initiative *from* the European LT community *for* the European LT community, including industry, innovation and research. It can only be successful if, ideally, the whole community makes active use of the platform and contributes data sets and services. We are growing a vibrant community by collaborating with many related projects and initiatives, issuing open calls and through our 32 National Competence Centres (NCCs).

Create a powerful and scalable LT platform: ELG's novel technological approach enables innovations and synergies between commercial and non-commercial LT providers, buyers and users. ELG designs, develops and deploys a unique LT platform, based on the principle of encapsulating services in containers. This approach tackles and solves some of the issues of the hard problem of technical interoperability. By applying virtualisation to LT services, ELG enables providers to deposit their services in, and to deploy them through the ELG.

2.1.2 Added Value for Stakeholders

The implementation of this mission in the form of the ELG platform provides added value for all stakeholders, as follows:

- Ability to attract participants (i.e., customers, buyers, users, providers etc.)
- Ability to create demand economies of scale
- Benefit of reduced time-to-market (especially reduced time from lab to market)
- Standardised quality
- Ease of doing business
- Coherent ELG technology exploitation ecosystem

Traditional, linear value chains are focused on a one-way process of value creation: for example, raw materials are used and manufactured into products, which are then distributed and used by the consumer, until they are disposed of (linear process from production to the final consumer).[4]

For ELG we foresee reciprocal and two (multi)-way value creation. As a digital platform, ELG will maintain an "ecosystem of reciprocity". LT providers, LT consumers, ELG stakeholders and the ELG community help to generate two-way and reciprocal value, resulting from the combination of resources of its participants, cost benefits (demand economies of scale) and network effects. As such, marketplace participants will create value by tapping into resources and capacities that they do not have to own themselves. In addition, marketplace participants will enjoy cost benefits and positive compound effects, arising from demand aggregation, from efficiencies in networks and from technological improvements on the demand side. Third, there is value within the network itself: growth via network effects will lead to market expansion for each of the members of the ecosystem. New participants (buyers and suppliers) will enter the marketplace, because they are attracted to the ELG by the growing number of participants who are also part of the network. That way, value is created in a reciprocal, multi-sided (almost infinite) way.[5]

2.2 Different Options for the Selection of the Type of Legal Entity

For the creation of a dedicated legal entity with a European scope, several different legal entity types can be considered. Generally, it has to be decided if the entity is supposed to be a for-profit or a not-for-profit organisation. For ELG, other options can be explored as well such as a professional association or a foundation.

Each EU country has its own set of different types of business entities as part of their legal system. These include, for instance, cooperatives, partnerships, limited liability companies etc. For example, if we consider establishing a not-for-profit company in Germany, a **gGmbH** (a not-for-profit private limited company) or an **e.V.** (registered association) would be two obvious options. Another alternative that enjoys some popularity especially with EU-funded projects is the Belgian Association without lucrative purpose (**AISBL**).[6] As the ELG consortium does not have any partners in Belgium or Luxembourg, the AISBL option can be ruled out for reasons of efficiency. Generally, all national legal entity types have their own specific sets of rules.[7]

Moreover, there are several types of legal entities on the level of the European Union, as follows.

EEIG: The European Economic Interest Grouping is part of the European Corporate Law which was created in 1985. It is designed to make it easier for companies in different countries to do business together. Its activities must be ancillary to those of its members, and any profit or loss is attributed to its members. It is liable for VAT and social insurance of its employees but it is not liable to corporation tax and it has unlimited liability. Several thousand EEIGs exist and are active in various fields such as agricultural marketing, legal advice, research and development.[8] This legal entity only applies to companies; it excludes research institutions.

SE: Another option for ELG would be to create a European Company – also known as SE (Societas Europea). This type was established in 2001 by an EU Regulation (SE Regulation) and has been growing in popularity ever

[4] Grunet, Klaus. (1982). Linear processing in a semantic network: An alternative view of consumer product evaluation. Journal of Business Research. 10. 31-42.
[5] For a detailed discussion of the impact of the ELG marketplace see Deliverable D7.3 (Market place report – Setup and progress report).
[6] https://en.wikipedia.org/wiki/Association_without_lucrative_purpose
[7] https://en.wikipedia.org/wiki/List_of_legal_entity_types_by_country
[8] https://en.wikipedia.org/wiki/European_economic_interest_grouping

since. A SE can be considered as a type of public limited-liability company. It allows an organisation to operate its business in different European countries under the same rules. A European Company offers many advantages such as easily setting up Europe-wide subsidiaries as well as an international holding company. The company headquarters can be relocated easily and the SE legal form conveys a strong European image. However, this company form comes with strict foundation criteria, such as the requirement of high initial capital, that need to be considered in the decision process.[9]

SCE: The European Cooperative Society (Societas cooperativa Europaea) is a European type of cooperative company established in 2006; the SCE is related to the SE. An SCE can be established and can operate throughout the European Economy Area.[10] This entity type was created to remove the need for cooperatives to establish a subsidiary in each EU Member State in which they operate, and to allow them to move their registered office and headquarters from one EU Member State to another. No matter where they are established, SCEs are governed by a single EEA-wide set of rules and principles which are supplemented by the laws on cooperatives in each Member State.[11]

SPE: On the European level, the European private limited company (Societas privata Europaea) corresponds to an Ltd in the Anglo-Saxon countries or a GmbH in Germany, Austria and Switzerland. This legal entity type has been a European Commission proposal for more than ten years. As of now, it still does not exist.

Entity Type	Level of Legislation	Appropriateness for ELG
EEIG	EU	low
SE	EU	low
SCE	EU	medium
SPE	EU (still at EC proposal stage)	high
gGmbH	Germany	high
e.V.	Germany	high
AISBL	Belgium	low

Table 1: Appropriateness of selected legal entity types for ELG

The decision as to which legal form an organisation should take depends, on the one hand, on the legal situation in the country where its headquarters are located. For ELG, an important requirement is that the selected solution provides flexibility, agility and the ability to ramp up the operation of the legal entity in a careful way. On the other hand, the decision must be made on the basis of financial considerations, i.e., it must be determined which products or services can be offered to generate which profit. Whereas the first question will be examined in detail with the help of legal experts, the question regarding revenue streams is part of the business plan. It will be developed further with the help of experienced experts and business developers.

The ELG consortium is, supported by the advice of legal experts and external expertise, in the process of determining the key components of the legal entity's business and operation plan. These aspects are discussed in more detail in Section 3 below.

[9] https://europa.eu/youreurope/business/running-business/developing-business/setting-up-european-company/index_en.htm
[10] https://en.wikipedia.org/wiki/European_Economic_Area
[11] https://en.wikipedia.org/wiki/Societas_cooperativa_Europaea

2.3 Expected Operation Costs

The operation of a business or organisation creates costs. Even if there is no manufacturing in the strict sense and even if no profits must (or may) be made, costs incurred from operating an organisation must be covered. ELG's main "product" is the actual ELG cloud platform, but in order to reach its vision to become the primary platform for European LT, ELG has to create many components in addition to the platform. The ELG legal entity needs a director and a small team to take care of operations, maintenance and further development of the platform and associated tools (e.g., mobile apps). In order to cover all incurred costs, a steady revenue stream is needed. The main cost items are as follows.

Staff: Labour costs represent the largest share of the organisation's expenses. Even a minimal team includes employees for operations, development, marketing, support, and management. It might not be necessary to hire full-time employees for each of these areas from the very first moment but in order to run a successful organisation, a stable team is essential.

Cloud hosting: To enable the legal entity to operate the fully functional ELG cloud platform, a state-of-the-art cloud infrastructure (including CPU, GPU, RAM, SSD and bandwidth) must be rented from a cloud service provider. Alternatively, the ELG legal entity could start setting up its own data centre including hardware and connectivity; this option, however, would come with a very high initial investment and substantial costs for administration and maintenance.

Overhead: This refers to costs like rent of office space, hardware like workstations and printers, furniture, electricity, heating, etc. Even if remote and part-time work might reduce some of these costs, e.g., because there is no need to rent large office spaces, overhead accounts for part of the fixed costs of a business.

Legal: Especially in the ramp-up phase of an organisation, comprehensive and sound legal advice is crucial. Inappropriate legal decisions can very quickly lead to the end of an organisation. The ELG legal entity will have to draw up a large number of model contracts and service level agreements to get the organisation up and running (building upon the work done in the EU project, of course). Moreover, advice on GDPR, tax legislation and human resources issues is needed. At the beginning, the ELG legal entity will not have the capacity for an in-house legal expert, which is why legal services will be outsourced to external experts.

In order to get an idea of the necessary cash flow, we compiled a first draft of estimated costs. The numbers shown in Table 2 are preliminary and indicative. They illustrate the foreseen soft start of the legal entity, which is separated in three phases in Table 2 for the sake of simplicity. The gradual soft start is meant to go from a small team with partial contracts (Phase 1) to a team of 8-10 full-time employees (Phase 3).

Cost item	Phase 1 (start)	Phase 2 (ramp-up)	Phase 3 (stable)
Staff	5,000€	25,000€	100,000€
Cloud hosting	5,000€	10,000€	20,000€
Overhead	500€	2,500€	7,500€
Legal	1,500€	2,500€	10,000€
Total	**12,000€**	**40,000€**	**137,500€**

Table 2: Estimated monthly costs in three phases (numbers are preliminary and indicative)

3 Towards a Business and Operational Model for the ELG

Given the vast number of options on the table and decisions to be made, the challenge is to arrive at a consensual approach that enables a stable and successful continuation of the ELG platform and initiative without putting too much financial pressure on the emerging organisation, which would increase the risk of failure, putting the sustainability of the whole project in jeopardy. In order to identify a common approach and to draw up a plan that has broad support, a discussion on this subject was opened in the ELG consortium in late 2019.

3.1 Methodology and Relevant Input

In December 2019, two virtual meetings within the ELG Steering Committee were held. The meetings were entitled "European Language Grid – Towards a Legal Entity"[12] and their goal was to discuss different options of a business model, the different "ingredients" of a sustainability plan and to look more closely at other organisations that might serve as potential blueprints or, in the opposite, as examples that would not work for ELG. The virtual meetings were meant as preparatory meetings for a later face-to-face workshop-style meeting.[13]

The opinions and input of our SME partners was especially important and fruitful during the discussions in the meetings. While the first meeting served primarily to exchange opinions and gather ideas, the second focused on possible models and on the production and discussion of the Business Model Canvas (BMC) for ELG.[14] The later evaluation of these meetings, the consolidation of the ELG BMC and the subsequent discussion in e-mails and other consortium meetings formed the basis of the present deliverable.

Another source of input for the discussion process was the "LTI Cloud Business Model Report". This document describes the business model of the LTI Cloud, a plan that was conceptually similar to the ELG, but with quite some differences in terms of scope and setup.[15] The report was produced by the EU project MLi.

3.2 Expectations towards ELG: The SME Perspective

Before we started the discussion, we wanted to get an assessment of the SME consortium partners. The ELG partners Sail Labs, Expert System and Tilde as well as ELDA were asked to describe their expectations towards the ELG legal entity. A summary of the most important aspects of their considerations follows.

Sales channel: ELG is, first and foremost, understood as a channel to promote and to sell the SME's products and services. ELG should stir interest and convince potential buyers to spend money on LT. This applies also for governmental bodies, the European institutions and NGOs. We should reach the point where interested parties and stakeholders look at ELG first in their procurement processes for LT. For that, ELG needs to either fulfil or maybe even establish certain quality and security standards as well as some kind of quality seal.

Strategy and collaboration: Europe has strengths in certain areas and language combinations but new business opportunities can only be reached by joining forces and combining the offers with those of other European players. Missing or needed tools and services from others will help expand one's own tools and services.

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[12] The agendas of the two meetings are included in the annex of this document.
[13] This workshop was supposed to be held in the spring of 2020. Due to the Covid-19 crisis, the planned face-to-face meeting had to be postponed. Currently, we hope to be able to hold this meeting later in 2020.
[14] https://en.wikipedia.org/wiki/Business_Model_Canvas
[15] MLi Deliverable D4.3, LTI Cloud Business Model Report (April 2016); produced by the EU project MLi – Towards a Multilingual Data & Services Infrastructure (Runtime: November 2013 until April 2016)

Buy-in from the whole community: It is seen as important that ELG is positioned in the right way with regard to other platforms and infrastructures such as CLARIN. A controlled transition from META-SHARE to ELG should be achieved but organisations that have put trust in META-SHARE must not be left behind.[16] Furthermore, ELG also needs to be backed by national centres and institutions. In terms of the governance model, all stakeholders should be able to have their say, yet dominance must be avoided. ELG can also provide a channel to the EU Member States so that the results of their funding programmes are disseminated internationally.

Information channel: ELG needs to become the primary European platform, mainly for industry, perhaps also for research. To achieve this, the understanding of LT and its benefits for companies of all sizes needs to be increased. ELG could function as a means to keep stakeholders informed by serving as a low-threshold information source and matchmaker for buyers and suppliers (marketplace approach).

Interoperability: The expectation is that ELG will become part of a larger AI/LT platform ecosystem, with a clear business model description. LT providers need to understand what the requirements are and why using ELG is beneficial for them. ELG needs to be compatible with the stakeholder's existing business and should not duplicate systems that exist. Since many companies already operate their own cloud platforms, it is important to ensure platform interoperability in a way that ELG complements existing or emerging clouds rather than appearing like a competitor that cannibalizes their market. Moreover, ELG is expected to create synergies with the AI4EU platform. ELG can become the language branch of the AI4EU platform, which will open up much larger markets. In the same way, ELG needs to collaborate with other EU infrastructure projects that are currently in the planning phase. ELG has to avoid creating the impression of being yet another collection of data or tools but rather emphasise the ability to combine different services and resources from different companies.

3.3 Potential Business Model Blueprints

Which type of legal entity is most suitable in which country? Which options exist for a European model that can be applied cross-nationally? To get a clearer idea of the possible options and also to inspire the process and serve as food for thought, we had a closer look at relevant other organisations.

A number of organizations that either consortium partners are part of or which they know about due to their own experience or business relationships were selected. They all have in common that they operate in the sphere of IT and/or LT and/or AI. Some are spin-offs of earlier research projects or innovation actions. However, in size and setup, these organisations are very diverse, and the similarities with ELG in terms of their starting point and their target groups also vary considerably. The discussed organisations include[17] DBpedia Association, World Wide Web Consortium (W3C), Industrial Data Spaces (IDS), LT Innovate, OpenAIRE, CLARIN ERIC, BDVA (Bid Data Value Association), Translation Automation User Society (TAUS), ELRA/ELDA and GATE Cloud[18]. Table 3 provides an overview of these organisations.

Organisation	Legal Form	Headquarters	Membership	Main Income	Organisational Structure

[16] The transition from META-SHARE to ELG has been discussed in a phone conference with the main META-SHARE nodes in April 2020. In that meeting it was agreed to migrate all of the 20+ META-SHARE nodes either to ELG or to the CLARIN infrastructure.
[17] Brief descriptions of the company profiles can be found in the annex.
[18] Gatecloud was presented using the initiative's website: https://gatecloud.net

DBpedia	Registered not-for-profit association (e.V.)	Leipzig (Germany)	Yes (different membership types and benefits)	Membership fees	Board of Trustees, Executive Team, several committees
W3C	Not a legal entity but a brand, four host organisations; legal entity currently under development	Four host countries (US, France, Japan, China); MIT in the US is the main host	Yes (organisations, based on revenue)	Membership fees	Members are associated with one of the four host organisations, depending on where the headquarter of the respective member is
Industrial Data Spaces (Fraunhofer)	Registered not-for-profit association (e.V.)	Dortmund (Germany); legal office in Berlin	Yes (organisations, based on revenue)	Membership fees, project funding	Executive Board, Steering Committee; various hubs, work groups and task forces
LT innovate	Association, operated by a company	Brussels (Belgium)	Yes (organisations)	Membership fees, project funding, contracts	General Assembly: all paying members, Board of Directors: elected by General Assembly, Chairman: elected by Board of Directors, Executive Director: designated by Board of Directors
OpenAire	Not-for-profit organisation	Athens (Greece)	Yes (organisations)	Project funding (for the time being)	Steering Committee, Executive office
CLARIN ERIC	EU legal entity, European Joint-Venture	Depends on organisation; CLARIN ERIC based in NL	Yes (EU Member States; can be full members or observing members)	Funding from Member States, project funding	Board of Directors General Assembly, National Coordinators Forum, Technical & other committees
BDVA	Industry-driven and self-financed international not-for-profit organisation under Belgian law (AISBL)	Brussels (Belgium)	Yes (organisations)	Membership fees, project funding	Board of Directors, General Assembly, Task Forces
TAUS	Initially established as part company (TAUS) and part association (TAUS DATA), now fully private company	Amsterdam (Netherlands)	Yes (individuals and organisations)	Fees for APIs for own tools and data, services, conferences, community events, trainings, membership fees	Director
ELRA/ELDA	Not-for-profit association with an operational arm (ELDA), which is its own legal entity	Paris (France)	Yes (institutions and individuals, global)	Sales and licensing of resources, resources production and packaging, project funding, membership fees, conferences	Governance: GA, Board (elected for two years, three terms)
GATE Cloud	Not a legal entity, just a brand	Sheffield (UK)	No	Sale of consultancies and maintenance (to cover costs)	n.a.

Table 3: Legal entity types and setups used in selected relevant organisations

Some of the discussed organisations could be excluded with regard to their legal entity type right away. For instance, an ERIC[19] has some advantages but requires a complicated and lengthy procedure to establish.

While discussing and getting to know these organisation, we noticed that despite some similarities, none of them could serve as a real 1:1 model for ELG, i.e., an actual blueprint for an ELG legal entity currently does not exist. However, we could derive some important questions from this comparison that need to be answered in order to identify a consensus.

3.3.1 Cornerstones and Main Pillars of the ELG Legal Entity

To stimulate the identification of the cornerstones and main pillars of the emerging ELG legal entity, we discussed the following basic questions.

Should the ELG legal entity become a not-for-profit organisation or a for-profit company?

There was a broad consensus in the December 2019 meeting that the future ELG legal entity should be a not-for-profit organisation. A registered not-for-profit association, like the "Eingetragener Verein" (e.V.) in Germany or the German gGmbH, could be appropriate entities. The EEIG (European Economic Interest Grouping) was designed to facilitate forming a pan-European joint business in a larger group of initiatives or consortium partners (mainly companies, though). It remains to be seen if this model can be applied to the ELG legal entity.

With regard to the not-for-profit vs. for-profit discussion, we also need to take into account the overall approach of ELG as an initiative *from* the European LT community *for* the European LT community. One of the core values of the ELG project and initiative is the belief and ambition that we can make a difference in terms of supporting the European LT landscape by developing and putting in place a joint umbrella platform that benefits all stakeholders. Moving into the for-profit direction would constitute a significant change of plan that would not be compatible anymore with the goal that the project set itself at the beginning. Effectively, this would compromise the initiative's independence and ability to be seen as neutral and non-competitive. A for-profit organisation would, furthermore, jeopardise the initiative's political standing with national and international administrations and funding agencies. It must be noted that the vast majority of already established infrastructures such as OpenAIRE and CLARIN are not-for-profit organisations as well. While there are several other reasons to move into the not-for-profit direction (for example, tax exemption, better conditions when participating in EU-funded projects etc.), one of the key questions is if there is a realistic possibility to generate enough income *on top of* other organisations' commercial services to sustain and grow a for-profit company. Finally, due to the intense impact of the Covid-19 pandemic on the global economy, it currently seems rather unlikely that a for-profit ELG legal entity would be able to attract any venture capital investors for itself.

Will the ELG team be located centrally or distributed?

Due to the fact that the ELG consortium is a distributed team and that the staff and parts of the technical infrastructure is spread across different European countries, it makes a lot of sense for the time being to maintain this distribution and build the team virtually rather than in one place. Given today's telecommunication opportunities and that distributed teams are very common in business nowadays, this is an obvious conclusion if a

[19] https://ec.europa.eu/info/research-and-innovation/strategy/european-research-infrastructures/eric_en

meaningful communication structure is applied. It might make sense though, to place the headquarter centrally and in close proximity to the cloud service provider but this is not a conditio sine qua non.

Better start small or think big?

Given that developments in both the AI/LT field and in Europe as a whole are very dynamic, we do not think that it makes sense at present to draw up a detailed ten-year plan. A large organisation with a rigid top-down structure is an obstacle in such a situation. Instead, we opt for a flexible, agile and lean setup that can react flexibly to changes and new framework conditions. However, the organisation must be large enough to ensure that the existing infrastructure can be continued in a meaningful way and that growth is possible. We currently assume an organisation size of 10-15 employees for Phase 3 (see Table 2).

Will the transition be abrupt or gradual?

The ELG project ends on 31 December 2021; a short extension of up to six months due to the Covid-19 pandemic is currently being discussed in the consortium. By then the new legal entity needs to exist to take over maintenance and operation. As a not-for-profit organisation, the ELG legal entity does not have to be profitable, but recurring sources of income must be identified so that the running costs can be covered.

Will ELG be a membership organisation?

There are good reasons for having a membership structure, especially because it provides a constant, reliable source of income from the membership fees. On the other hand, the fee needs to be low enough to make sure interested parties are not deterred from the very outset. This question has not yet been finally settled.

3.3.2 Potential Revenue Streams

The ELG legal entity can benefit from a number of potential income and revenue streams. An initial set of these is the first step for putting together a budget structure of the legal entity and also pricing model of the services. Table 4 lists the income and revenue streams compiled and discussed so far.

Revenue Stream	Description	Revenue Potential
LT as a Service (LTaaS)	The most promising revenue stream for ELG is the hosting of LT services, models and data sets. This is an interesting service for companies that develop LT to extend their reach, open up new markets and use ELG as a primary or secondary promotion and distribution channel. In such a setting, ELG can function as a broker for commercial services and charge the service owner who sells via ELG a small share of the price. Another target group in this setting are research and innovation projects. For them, ELG can function as an additional dissemination and exploitation channel for their research results to attract industry and funding agencies.	high
LT Platform as a Service (PaaS)	ELG provides the LT platform functionality for customers to develop, run, and manage applications without having to build and maintain their own infrastructure. This can be an option for combining existing ELG services into workflows, or for combining ELG services with new developments.	high
Repository as a Service (RaaS)	ELG functions as a hosting service for whole repositories of services and/or data sets. Customers can use RaaS to host a larger collection of services and/or data sets, enjoying a set of premium services.	high

Usage fees[20]	ELG charges its users a general fee for using it. This could work as usage per call or as a flat rate for a given timeframe (weekly, monthly, annual).	high
Subscription fees	In the subscription pricing model, a customer pays a recurring price at regular intervals for access to the ELG. This model is common but often perceived as inflexible. It might shy away customers when they have to commit to paying for a product or service for a longer period of time.	medium
Membership fees	Membership also relies on the customers' commitment for a longer period of time. Membership usually implies that the user belongs to a "club", which can, on the one hand, raise the interest to be part of it, but, on the other, have a negative effect on some users.	medium
Consulting service fees	Uploading services into the ELG is supposed to be easy to handle for LT providers. Still, there will be ELG staff needed to help with the integration process and to show how providers can customise, integrate and implement components to get the most of their services in ELG. For this, ELG specialists could offer consultancy services. This is a small but likely revenue stream that will probably have high acceptance on the user side.	low
Regular ads	Putting advertisements on a website is common practice but often perceived as annoying. It is important to tailor ad content to the target groups. When relevant companies, services, conferences are advertised it could also add to the informative character of the platform.	low
Sponsored content	There can be a fee for a particularly featured service, data set, company or any other sponsored catalogue entry that is presented as the first result of a search (needs to be clearly marked as "sponsored").	low
Training events, tutorials, webinars	Similar to consulting fees, this can be a lower-level offer for first access and at lower price. One could think of charging commercial players, and having a free option for academia.	low
Conferences	Good opportunity of combining a revenue stream with dissemination and community building. Event registration fees is common practice, and sponsorship packages for companies are widely accepted among companies and, to a certain extent, also academia.	low
Project grants	As a legal entity, ELG itself could apply for project grants published by international as well as national funding agencies. Participating in projects helps staying on top of developments.	medium

Table 4: Potential revenue streams for the ELG legal entity

These revenue streams are currently under discussion. The list is not exhaustive. Decisions as to which of these revenue streams and pricing models will be applied in ELG are still pending.

3.3.3 ELG as a National LR/LT Platform

Recently, in April 2020, ELG was approached by an innovation organisation of an EU Member State that is in the process of setting up a legal entity that is meant to serve as a national LT platform. Their idea is to connect supply (LT developers) with demand (matchmaking, creation of resources etc.). This legal entity will fulfil a quite similar role on its respective national level as ELG will on the European level. In a constructive first conference call, various options to engage in a collaboration were discussed, which will be further elaborated upon in follow-up calls in May 2020. ELG and the other party discussed the question if there is an interest in a service

[20] In order to show what ELG is and what users can do with it, the try-out functionality will be improved in the future. These try-out versions of the services will remain free of charge. They are an important means to attract users to the platform.

that packages part of the ELG platform in such a way that ELG can serve as this country's National LR/LT Repository (including an adapted design, localizing the ELG GUI into the respective language etc.). This suggestion from ELG towards the other party was met with huge interest and will be explored in upcoming calls. Hence, ELG sees a promising revenue potential in offering countries the technical infrastructure for the purpose of supporting emerging national LT platforms. Especially for smaller countries it is challenging to develop their own elaborate technical platform all by themselves. For these, having their National LR/LT Repository hosted as a Service, can be an attractive offer, potentially even as a combined package that consists of Repository as a Service and Platform as a Service. For ELG, in return, this appears to be a very interesting financial pillar to operate such national platforms while charging, for example, an annual hosting fee.

3.3.4 ELG as a General Contractor for Integration and Consulting Services

Another potential revenue stream could be for ELG to act as a general contractor for companies that want to integrate LT services into their own systems. ELG staff could take over such integration projects directly, however, this would potentially deprive other integrators who may be participating in ELG as well and offer such services themselves, of potential business opportunities and cannibalise their business. This aspect will be discussed in more detail in the future.

3.4 Towards a Business Model Canvas for the ELG Legal Entity

The Business Model Canvas (BMC) is a template that is used in strategic management for the development or documentation of existing or new business models. It serves as a framework for the visualization and structuring of business models. It helps to bring all essential elements of a successful business model into a scalable system. The BMC consists of a visual chart with the necessary elements of an organisation or company. These elements describe the organisation's value proposition, infrastructure, customers, and finances, etc. The idea is that a company or startup recognizes their potentials and weaknesses and understands where to align their activities by illustrating potential trade-offs.[21] The nine "building blocks" of the business model design template that came to be called the Business Model Canvas were initially proposed in 2005 by Alexander Osterwalder based on his earlier work on a business model ontology.[22] It outlines nine segments for the business model in a simple one-page canvas. The canvas allows inspecting segments of a model alongside each other. The segments are: 1) Key Partners, 2) Key Activities, 3) Key Resources, 4) Value Proposition, 5) Customer Relationships, 6) Channels, 7) Customer Segments, 8) Cost Structure and 9) Revenue Streams.

In the two online meetings mentioned above, all partners of the ELG consortium brainstormed their first ideas for the potential ELG legal entity and then prepared one-page drafts of the BMC individually.[23]

The following sections explain each of the nine segments and summarize the main facts and ideas suggested by the ELG partners. A dedicated workshop to discuss the specifics of this first BMC is foreseen for the second half of the project. Beforehand, three or four experts from the wider Language Technology field with experience in establishing their own companies will be invited for a consultation round.

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[21] https://en.wikipedia.org/wiki/Business_Model_Canvas
[22] Osterwalder, Alexander et al.: "The business model ontology: A proposition in a design science approach." (2004); Osterwalder, Alexander, and Yves Pigneur: *Business Model Generation – A Handbook For Visionaries, Game Changers, And Challengers.* Wiley, 2010.
[23] The individual versions of this one-page draft can be found in the annex.

3.4.1 Segment: Key Partners

This first segment answers the questions “Who are the key partners/suppliers?” and “What are the motivations for the partnerships?”.

One key partner in the ELG business model are LT service providers, both commercial and non-commercial ones. These can be providers with or without their own cloud platform. Equally important are Language Resource data providers that own existing data sets and repositories. These two key partners contribute to the thriving of the ELG platform. Their motivation is not only to use available services and resources, but they can also offer their own services and resources and create value and/or profit for their own businesses.

Another essential key partner is the ELG community, including the ELG consortium, the 32 National Competence Centres, the national language communities, all currently running EU projects in the field of LT, e.g., the other ICT-29-2018 projects that started in January 2019. This core ELG community consists mainly of academic and research partners that need multilingual data sets and services for their research. Projects and initiatives with a wider scope such as AI4EU and the LT Council, initiated by ELG, can also help significantly in disseminating the ELG platform as the primary marketplace for European LT. Equally important for raising awareness are the European Commission and the European Parliament as well as national institutions such as ministries and funding agencies and other established networks and associations (such as META-NET, LT Innovate etc.).

The ELG cloud provider also plays a substantial role, ensuring that the ELG system is protected. Besides, advertising companies doing PR, influencers, academia and venture capitalists were also mentioned as key players.

3.4.2 Segment: Key Activities

This segment answers the questions “What key activities does the value proposition require?” and “What activities are the most important in distribution channels, customer relationships, revenue stream, etc.?”.

The most crucial key activity is the development, maintenance and operation of the ELG platform, growing it into the primary marketplace for European LT. The platform needs to provide an interesting and relevant offering in order to grow a critical mass of members and users and gain popularity in the whole European LT community and maybe even beyond. The regular posting of content and other outreach activities (such as events, tutorials, papers, industry meetups etc.) are essential to generate visibility and create a strong reputation. All communication and dissemination activities have to be treated with the highest priority to retain already existing users and keep attracting new members. A key activity is to create incentives for participation in order to attract a substantial number of high-profile users. Leveraging existing communication networks and sales channels can support this process and will be further explored. Impeccable customer service and support are needed to strengthen customer relationships. Best practises for SaaS regarding integration, validation, helpdesk, consultancy, etc. will be studied beforehand. Licensing and billing models need to be developed. Smooth maintenance and management of cloud storage and computing for running services has to be ensured.

3.4.3 Segment: Key Resources

This segment answers the questions “What key resources does the value proposition require?” and “What resources are the most important ones in distribution channels, customer relationships, revenue stream etc.?”.

The most important key resource is the ELG platform itself with all its functionalities. ELG can be regarded as a set of seed technologies, services and components that will be extended over time. Any kind of customer feedback can be seen as a useful resource as well. Feedback can come in many different forms such as evaluation from market data or helpdesk and user support feedback.

As important as functioning technology is a dedicated ELG team that is committed to not only maintaining existing technology, but growing it and promoting the importance of ELG on an international level. A deep and wide network with good standing is a key resource for that. The consortium combines vast experience and intellectual property in the field, good knowledge of ongoing trends and access to numerous networks in academia and industry, but also on the European level. Customer data from networks and community will be leveraged, respecting GDPR and making sure individuals stay anonymous at all times.

3.4.4 Segment: Value Proposition

This segment answers the questions “What core value is delivered to the customer?” and “Which customer needs are being satisfied?”.

ELG is envisioned to become the primary LT platform for Europe and to function as a kind of one-stop-shop, offering a rich portfolio of LT services, tools, data sets. One of its core values is the availability of state-of-the-art services which are fast, effective, robust and high quality. Another special attribute is the fact that ELG has been designed and conceptualised “made *in* Europe, *for* Europe”. This strong branding inspires trust and confidence and ensures that the system is compliant with European regulations, security constraints and ethics. For more customer satisfaction the platform needs to be customisable, cover niches, address verticals and offer direct access to providers. Furthermore, all solutions should come with a high level of usability and should be easy to integrate. Stakeholders who are familiar with the European LT landscape are aware of the fragmentation of the community which impairs an effective exchange of resources. ELG is committed to tackle this existing fragmentation. Competitive pricing is another value making ELG more attractive for customers. Unique about ELG is that it offers a new or additional channel for service providers and consumers. Suppliers can gain more visibility, easy portability between providers will be guaranteed through joint standards. Workflow functionalities will be integrated to combine services from different providers and even their own clouds.

ELG can also offer benefits to academia. It allows users to use services and data and offers easy comparison between systems on the same data or different data on the same system. ELG will even act as a broker for European LT and as a catalyst to boost innovation and create new jobs in the field that would make both the European industry LT sector and academic institutions an attractive employer for young high-potentials.

3.4.5 Segment: Customer Relationships

This segment answers the questions “What relationship that the target customer expects are you going to establish?” and “How can you integrate that into your business in terms of cost and format?”.

The ELG brand is intended to be a quality seal for customers that guarantees state of the art services, a high level of security and compliance with EU regulations. Customers will use the ELG primarily using the web UI including code samples and libraries. High quality guidelines and a user-friendly design should make processes intuitive. However, support through a service helpdesk will be offered. Technical onboarding and support packages will also be offered. A fine-grained customer relationship model needs to be developed once all other

costs and formats have been agreed upon. Besides general customer management, a dedicated personal assistance and sales and customer retention management for service providers will be put in place.

Essential for targeting customers is strong brand building. Related marketing activities (such as newsletter, blog etc.) need to be tailored to different audiences and distributed regularly. While retaining customers is essential, new potential customers can be attracted through different training events, tutorials, webinars and conferences. A brand that has earned people's trust can also create a need for other customer services such as consulting services around ELG and language-centric AI.

3.4.6 Segment: Channels

This segment answers the questions "Through which channels do customers want to be reached?" and "Which channels work best? How much do they cost? How can they be integrated into customers' routines?".

Customers will be reached through a variety of channels. Events, both established and new ones, will play an important role. These can include events especially targeted to one stakeholder group such as a specific industry domain. Dedicated networking sessions, conferences and presentations are also foreseen. Online advertising campaigns will accompany all events. Since ELG builds on an already existing network of different stakeholders, email marketing and campaigns have proven to be a successful means of reaching out to the community and potential customers. Presence on social media channels such as Twitter or LinkedIn can help to promote events and maintain customer relationships. The ELG platform itself is a channel through which customers can retrieve information, not only about available services and data sets, but also about the community and events. Cloud platforms that are either currently being built in other EU or national projects as well as existing commercial platforms can also act as channels to point potential customers to the ELG platform. SEO is good for social promotion of the ELG website since users trust search engines.

The ELG consortium members and the NCCs will play an active role in promoting all existing channels and providing feedback on which channels are most effective for different groups. For instance, the commercial pilot projects will be actively promoted by the project as well as the NCCs and shared through various channels.

3.4.7 Segment: Customer Segments

This segment answers the questions "For which segment are values being created?" and "Who is the most important customer?".

The ELG platform offers value to different customer segments. LT providers, both commercial and non-commercial ones, can use the platform to offer their LT services and data sets. Academic research organisations can benefit immensely from the wide offer. Customers from industry that demand LT (including big companies, SMEs, startups etc.) represent an essential customer segment that contributes to turning the ELG into a flourishing marketplace. The European Commission and other intergovernmental institutions, public administrations and NGOs can also integrate ELG services into their current solutions. The same holds true for funding agencies and policy makers, advertising companies etc. Other EU project consortia as well as project consortia on the national level can benefit from the value created by ELG.

3.4.8 Segment: Cost Structure

This segment answers the questions "What are the highest costs?" and "Which key resources/ activities are most expensive?".

The highest costs are created by the human resources and the IT infrastructure. As for the infrastructure cloud storage, hardware, maintenance, security etc. contribute to the overall costs. Personnel costs need to be allocated to the team running ELG in order to cover daily operations. This includes the further technical development of the platform as well as support and customer service (helpdesk etc.), but also community building work that requires marketing and communication activities. Further resources need to be assigned for the management and administration work that includes budgeting, accounting (billing, licensing, invoicing, membership) etc. All kinds of activities in the legal domain (SLAs, contracts, GDPR etc.) will be outsourced to specialists. Other miscellaneous costs might include the rent of office space, the purchase of workstations etc.

3.4.9 Segment: Revenue Streams

This segment answers the question “For what value are customers willing to pay?”.

Part of the overall revenue will be generated by usage fees and/or subscription fees, licensing and brokerage fees. The turnover will be supplemented by money earned from regular ads that are relevant and of interest and can, for instance, advertise companies, services, conferences etc. Sponsored content, services, data sets, companies etc. present another revenue stream as well as seller provisions.

As discussed above, the following licensing and delivery models are feasible:

- LTaaS – LT as a Service: hosting of services, models, data sets
- PaaS – LT platform as a Service: combine ELG services into workflows
- RaaS – Repository as a Service: hosting service for whole (national?) repositories

In addition, paid training events, tutorials, webinars etc. can be offered to commercial stakeholders. Conferences (event registration fees; sponsorship packages for companies) are also an opportunity to generate income as well as general consulting services around ELG and language-centric AI.

3.4.10 Consolidated ELG Business Model Canvas

For many segments of the BMC, there was broad agreement among the consortium partners. With regard to key partners, key activities and key resources, there was a high degree of congruence in all BMC drafts. Also, in value proposition, customer relationships and channels the answers were largely similar.

The customer segments are quite heterogeneous, which may make a targeted approach more difficult. As far as the cost structure is concerned, there are few deviations. The only thing to clarify is how “big“ the legal entity of ELG should start – this applies in particular with regard to the team size.

The answers are most diverse in the case of revenue streams, where a consensus has yet to be reached in terms of price structure and realistic income opportunities. What needs to be further discussed when setting up a cost model are the questions “For what and how are customers willing to pay? In what intervals would they prefer to pay?” and “How much does every revenue stream contribute to the overall revenues?”

Figure 4 shows a consolidated version of the ELG Business Model Canvas that is based on the various BMCs provided by the ELG consortium partners.

Business Model Canvas: ELG Legal Entity (numbers in parentheses indicate the number of mentions of this item from the ELG partners)

Key Partners	*Key Activities*	*Value Proposition*	*Customer Relationships*	*Customer Segments*

• LT service providers (commercial and non-commercial; with and without their own cloud platforms) (6)
• LR (data) providers (6):
  ○ Dataset owners
  ○ Existing repositories
• ELG community (4):
  ○ NCCs and the national language communities
  ○ EU projects
  ○ ICT29b projects
  ○ AI4EU
  ○ LT Council etc.
• ELG cloud provider (4)
• EU institutions (3):
  ○ EC
  ○ EP
• National institutions:
  ○ Ministries
  ○ Funding agencies
• ELG project partners (3)
• Initiatives, networks, associations from research and industry (META-NET, LT Innovate etc.) (2)
• Advertising companies and PR (2)
• Influencers
• Academia
• Venture capitalists
• Funding agencies
  ○ International (EC): HE, DEP
  ○ National
	• Develop, maintain and operate a LT/LR platform for production use (5)
	• Provide an interesting, relevant offering to grow a critical mass of members and gain popularity in the LT community (4)
	• Generate visibility and strong reputation by posting content regularly (4)
	• Service and support (3)
	• Communication, dissemination, networking through events, tutorials, papers, industry meetups etc. (3)
	• Incentives for participation and attraction of high-profile users (2)
	• SaaS (integration, validation, helpdesk, consultancy, etc.) (2)
	• Licensing and billing (2)
	• Leverage on existing communication networks and sales channels
	• Maintaining, managing and monitoring cloud storage and computing for running services
	• Provide a marketplace for European LT
		• One stop shop: provide comprehensive overview of services, tools, datasets (5)
		• State of the art services: fast, effective, robust, high quality (5)
		• "Made in Europe, for Europe" (compliant with European regulations, addressing fragmentation of the LT space, ethics etc.) (4)
		• Primary LT platform for in Europe (rich portfolio, customisable, niches, competitive price tag, address verticals (vs. Google etc.), direct access to providers (vs. IBM Watson), easy to integrate) (4)
		• Usability (4)
		• A new/additional channel for service providers and consumers. (3)
		• Visibility for suppliers
		• Easy portability between providers
		• For academia – easy comparison between systems on the same data or different data on the same system
		• Workflow functionality (combine services from different providers, maybe even clouds)
		• Broker for European LT
		• Security
		• Create new jobs and boost innovation
			• Quality seal (4)
			• Largely self-service via web catalogue and code samples and libraries (4)
			• Support through service helpdesk (4)
			• Onboarding and support package (2)
			• Dedicated personal assistance and sales and customer retention management for service providers (2)
			• Brand building
			• Marketing (newsletter, blog etc.)
			• Training events, tutorials, webinars, conferences
			• Consulting services around ELG and language-centric AI
				• LT providers (5)
				• Academic research organisations (5)
				• LT demanding customers from industry (big, SMEs, startups etc.) (4)
				• EC and institutions (4)
				• Public administrations and NGOs (4)
				• B2B users
				• Funders and policy makers
				• Advertising
				• EU project consortia (DEP, HE)
				• National project consortia

	Key Resources
	• ELG platform itself (3)
	• Set of seed technologies, services, components (3)
	• Customer feedback (evaluation from market data) and effective helpdesk and user support (3)
	• Dedicated ELG team (3)
	• Wide and rich network with good standing (2)
	• Existing knowledge and customer data from network and community (2)
	• Intellectual property (2)
	• Infrastructure (2)
			Channels
			• Events: Industry, networking, conferences, presentations (4)
			• Online advertising (3)
			• Email (3)
			• Social media etc. (3)
			• ELG platform (2)
			• Other cloud platforms
			  ○ EU projects
			  ○ Commercial
			• SEO (2)
			• ELG members and affiliates (2)
			• ELG community (NCCs)
			• Commercial pilot projects	

Cost Structure
• IT infrastructure (cloud, hardware, maintenance, security, etc.) (6)
• Team and personnel costs:
  ○ Operations
  ○ Development
  ○ Accounting (billing, licensing, invoicing, membership)
  ○ Marketing and communication
  ○ Support and customer service (helpdesk etc.),
  ○ Management (5)
• Legal (SLAs, contracts, GDPR etc.)
• Misc. (rent, workstations, office space etc.)
		Revenue Streams
		• Usage fee, subscription fees, licensing, brokerage fees (5)
		• Regular ads (for companies, services, conferences etc.) (5)
		• Sponsored content, services, data sets, companies etc. (5)
		• Seller provisions (3)
		• LTaaS – LT as a Service: hosting of services, models, data sets (hosting of services or large models creates costs; publicly funded research results to be made available Open Access; difference between industry and research; costs need to be covered) (3)
		• PaaS – LT platform as a Service: combine ELG services into workflows (3)
		• RaaS – Repository as a Service: hosting service for whole (national?) repositories (3)
		• Training events, tutorials, webinars (for a fee for commercial players) (3)
		• Conferences (event registration fees; sponsorship packages for companies) (3)
		• General consulting services around ELG and language-centric AI (3)
		• Customer and market data
		• Tools, services, components, data sets developed and offered by the ELG entity itself (?)	

Figure 4: Consolidated ELG Business Model Canvas

4 Towards a Legal Entity for the European Language Grid

It is ELG's ambition to develop the primary platform for LT in Europe. We see it as crucial to address the whole European LT community but emphasise industry and industry-relevant research. In the first 15 months of the project, we have seen a lot of interest in the overall concept and we have received a lot of approval. We understand that the European LT community is very interested in the overall setup but, still, we see a reluctance in accepting LT services as actual *services* that cost money. It will be crucial to thoroughly explain the concept and pricing models, once developed. The pricing model, to be prepared in the next months, needs to be simple and

easy to grasp to make sure users understand and accept it. Quality and security aspects will play a crucial role and can become the unique selling proposition as opposed to providers of LT services from the US or Asia.

In terms of commercialization and financing the legal entity, we expect a mixed model to emerge that can include, among others, shared revenue streams (shared with LT provider companies that deposit services in the ELG), sponsored activities, tech expos or training events (participation for a fee), consulting services (also for a fee), commercial ads on the ELG platform, mobile apps with paid features (in-app purchasing) and others.

4.1 Next Steps: Business and Operation Model for the ELG Legal Entity

In the second half of 2020, we aim to reach a consensus within the consortium on the open questions described above concerning the legal entity. In order to determine whether our assumptions and considerations, developed in the Business Model Canvas, stand up to external verification, external industry experts will be consulted. The final business and sustainability plan will be completed in the first quarter of 2021. We aim to establish the legal entity for ELG in the third quarter of 2021 at the latest.

4.2 Next Steps: Business and Exploitation Models for Users of the ELG Legal Entity

ELG does not only have to finalize its own business model in the remaining project runtime. Moreover, several related, albeit more abstract, business and exploitation models must be developed that define how exactly third parties can benefit from ELG as a marketplace, broker, dissemination and exploitation channel including their own demand for an effective sustainability solution. These business and exploitation models are relevant in scenarios in which ELG supports others, for example, research partners with their projects and innovation actions. It must be determined what ELG's value proposition is towards these partners and how the partners will be able to actively benefit and profit from the European Language Grid financially. For this purpose, suitable pricing models and Service Level Agreements must be specified. The key idea is to prepare the ELG platform and offering in such a way that ELG will function as a full-fledged exploitation platform for LT research projects. In other words, we want to prepare and enhance the ELG platform and offering so that research projects can concentrate on their actual research work while fully relying on ELG as the primary dissemination and exploitation channel for the projects' research results. In order to prepare a convincing and flexible offering, several different target groups need to be taken into account:

- Individual commercial partners (mainly SMEs)
- Individual non-commercial partners (mainly research)
- SME consortia
- Research consortia
- Mixed consortia

Exploiting the ELG platform as the primary dissemination and exploitation channel for multiple research projects would have the significant benefit that all participating research projects could fully concentrate their resources on the actual research work without a need for developing potentially complicated exploitation plans on their own because they can fully rely on ELG for this purpose. This approach would increase the general visibility of European research results massively.

Of course, the more attractive and efficient these business models are for these partners, the more success they promise for ELG. It is therefore advisable to anticipate a variety of scenarios at an early stage.

As described at the beginning of this document, there are still several uncertainties whose further development will have a direct impact on our future activities with regard to planning the ELG legal entity. Some of the factors and development strands that will significantly determine the next steps with regard to planning the sustainability of ELG are shown and summarized in the following box.

- **Current situation characterized by strong dynamics**
- **More and more collaboration between the language-centric AI (= LT) community and the general AI community in Europe on the European level**
- **A lot of interest from various stakeholders who also express a huge demand for the ELG platform**
- **Excellent project start, initial feedback regarding the first public ELG demo very positive**
- **Overwhelming interest in the Open Calls for Pilot Projects**
- **Situation in the different European countries highly dynamic but also promising (see, e.g., Finland)**
- **Importance and relevance of the language-centric AI (= LT) topic in relation to Digital Europe Programme and Horizon Europe unclear as of yet (including the impact of Covid-19 on DEP and HE)**
- **Global disruption of the European and global economy caused by the Covid-19 pandemic and its impact on the field of AI and LT (generating new opportunities for AI/LT in the domain of healthcare especially with regard to text analytics and conversational agents)**

A. Agenda of the December 2019 Sustainability Meeting

Agenda

EUROPEAN LANGUAGE GRID

- **09 December 2019 – Monday, 14:00-16:00:**
  - Ideas, needs and requirements of our SME partners
  - Recap of the Sustainability presentation at META-FORUM 2019
  - Discussion: Key pillars of the future legal entity of ELG
  - Other organizations as potential (!) models – known examples: DBpedia Association, LT Innovate, ELRA/ELDA, Gatecloud, CLARIN ERIC, World Wide Web Consortium (W3C), Industrial Data Space, OpenAIRE, LDC
  - Homework for the session on Tuesday: (a) components of a Business Model (Canvas); (b) other organisations
- **10 December 2019 – Tuesday, 15:00-17:00:**
  - Closer look at other organizations or spin-offs (to be assigned on Monday – see list above)
  - Discussion of "homework assignment"
    - Any examples that could be a good match to our own case in ELG?
    - Discussion of ideas and components for the ELG business model
  - Take-aways for a possible face-to-face meeting in Q1

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Figure 5: Agenda of ELG sustainability meetings (December 2019)

B. Potential ELG Blueprint Organisations

World Wide Web Consortium (W3C)

- W3C has never been a legal entity but only a brand to the outside world.
- W3C was formed through an agreement between the four (initially three) host organisations (in the US, Europe, Japan, China).
- W3C is a membership organisation: members pay fees based on their revenue, divided into a small number of brackets; fees of very big members are very high (small for them)
- Members are associated with one of the four host organisations, depending on where the headquarter of the respective member is
- W3C team members are formally affiliated with one of the four host organisations
- This setup creates an immense administrative overhead, e.g., when calculating the overall budget of the organisation (different currencies involved)
- However, this setup is also transparent, open, balanced etc.

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Figure 6: Profile World Wide Web Consortium (W3C)

DBpedia Association

- "The DBpedia Association was founded in 2014 to support DBpedia and the DBpedia Community. Since then we are making slow, but steady progress towards professionalizing DBpedia […]. The DBpedia Association is currently situated in Leipzig, Germany and affiliated with the non-profit organisation Institute for Applied Informatics (InfAI) e.V."
- Charter of the DBpedia Association – link on https://wiki.dbpedia.org/dbpedia-association

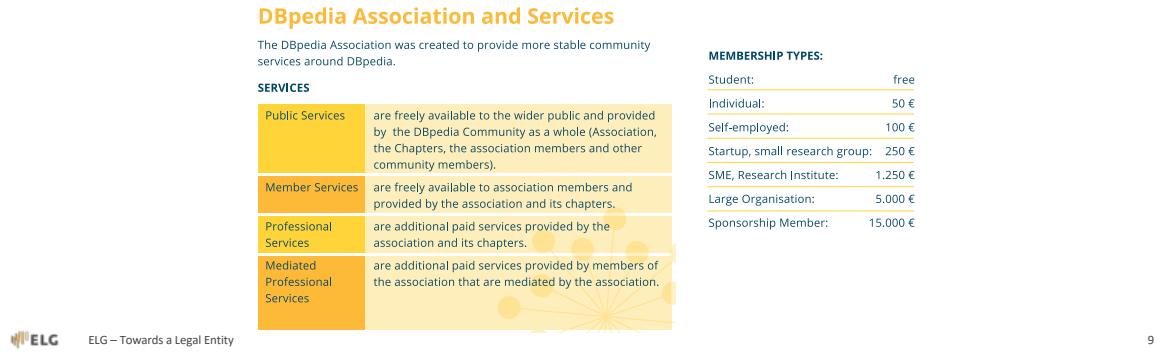

Figure 7: Profile DBpedia Association (1/2)

DBpedia Association

Figure 8: Profile DBpedia Association (2/2)

Industrial Data Space(s) (IDS)

- IDS seems to have approx. 10-15 FTE
- They have many heavyweight industry members.

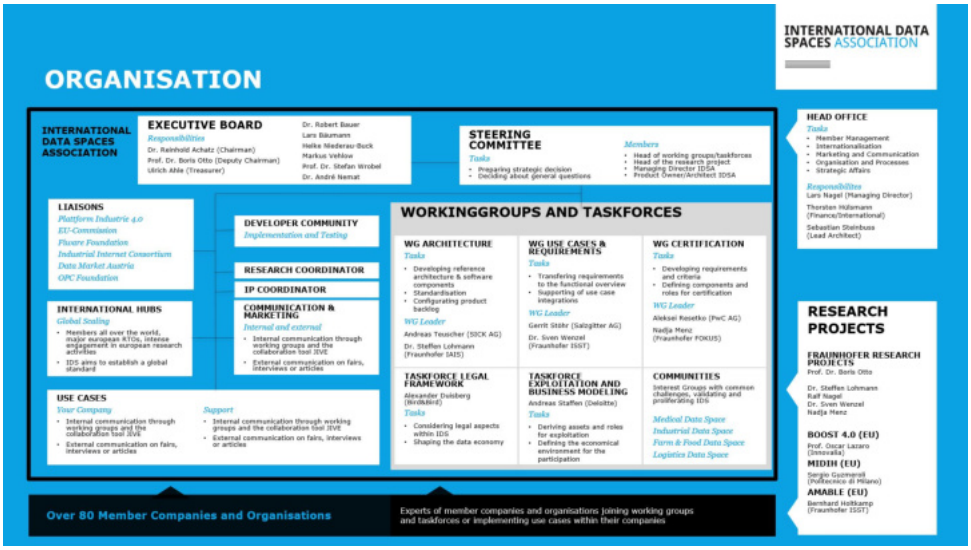

Figure 9: Profile Industrial Data Spaces (IDS) (1/2)

Industrial Data Space(s) (IDS)

HEAD OFFICE

Our central office is located at Fraunhofer Institute for Material Flow and Logistics IML in Dortmund. Here, you will finde your contact partners.

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10178 Berlin

Associaton register number VR 34791 B, Amtsgericht Berlin-Charlottenburg

Board

Chairman of the Board:
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GET INVOLVED IN DESIGNING THE INTERNATIONAL DATA SPACE

Form of organisation	Yearly turnover (Mio. EUR) (group related)	Annual fee (EUR)
Company	From 10,000	35,000
	From 2,500 to under 10,000	25,000
	From 500 to under 2,500	15,000
	From 50 to under 500	7,500
	Under 50	2,500
Universities, non-commercial institutions, associations, etc.	---	1,000

Figure 10: Profile Industrial Data Spaces (IDS) (2/2)

LT Innovate

- **What worked well?**
  - Despite the fragmentation of the European LT-market LTI established a comprehensive organisation and all-encompassing industry platform and lobby with power of impact (internationally and in Brussels)
  - Joint punch and total turnover of all members together has a leverage effect and weight
  - Common voice, pooling of resources and articulation of suggestions and wishes for policy making and design of future actions
  - Excellent networking and relations with EU authorities
  - Strategic location (office in Brussels)
  - Knowledge advantage for members (current and future market trends, EC-regulations, subsidies, local peculiarities, etc.)
  - Wide range of advisory services (guidance and professional knowledge for LTI-members) which would not be feasible or affordable if purchased individually (especially for smaller companies)
  - Comprehensive catalogue of LT companies and their services in one place
  - Scalable membership fees (student, simple members, board level membership fees, deductions for small businesses)
- **Work in progress**
  - To convince EC to provide uninterrupted funding for LT-industry
  - To bring all European LT companies under one roof
  - To establish a global heavyweight with regard to LT
  - To foster a structured dialogue at a global level with other (non-European) initiatives
  - Expand connection/focus to AI
  - Higher visibility as a brand

Non-profit association
Membership fees, no other income
Used to be a UK entity, moved to Brussels

Comprehensive network but some members still missing
Membership numbers are increasing
But, nonetheless, not all European LT companies on board just yet
Many one-person shows from the translation side of things (LSPs)
Mix of technology companies and LSPs

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Figure 11: Profile LT-innovate

OpenAIRE

- Non Profit Organisation (A.M.K.E)
- Registered in Athens, Greece
- The mission of OpenAIRE Legal Entity shall be to establish, maintain and operate an **open and sustainable scholarly communication infrastructure** and provide the necessary, **services, resources and network** for supporting a common European e-science environment.
- AIMING at ensuring the operation of such an OpenAIRE infrastructure, network and services through the contribution of EU institutions, Member States or other sources of funding and ensuring that contributions remain proportional to the role and capacity of the OpenAIRE members
- OpenAIRE shall work with research and education communities in order to:
  - Implement Open Science Policies in Europe
  - Contribute to the European Open Science Cloud
  - Foster Innovation on Open Research Results
  - Connect Europe to the Global Open Research
  - Support the vision of Open Science Partnership

Infrastructure runs in the HPC centre in Posnan
Maybe an interesting approach for ELG as well?

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Figure 12: Profile OpenAIRE (1/2)

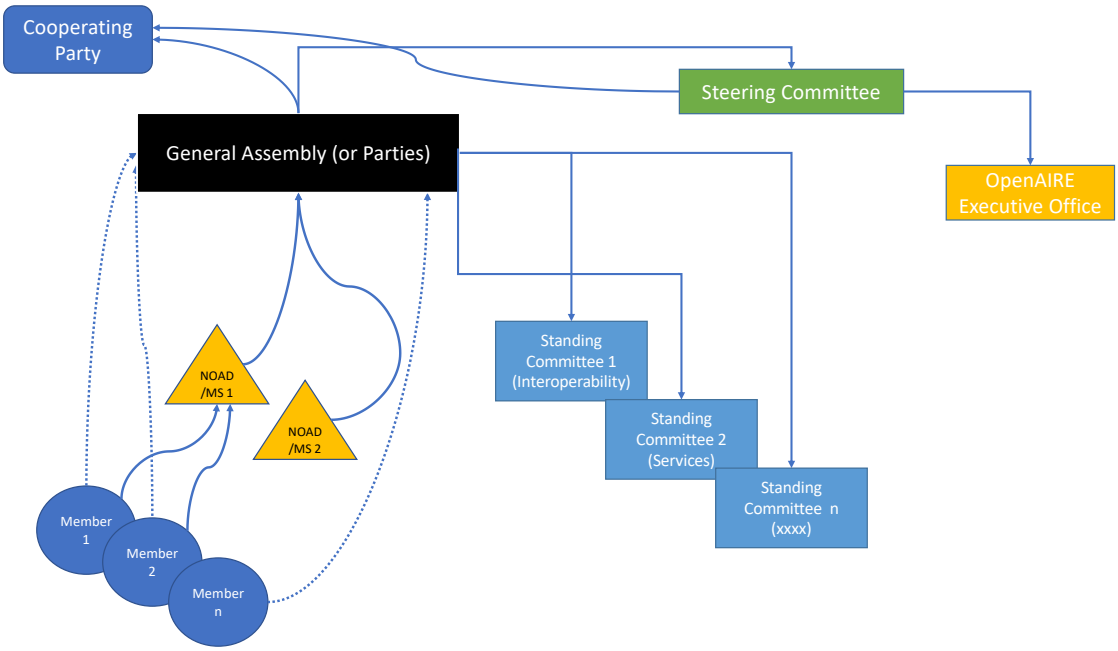


Figure 13: Profile OpenAIRE (2/2)

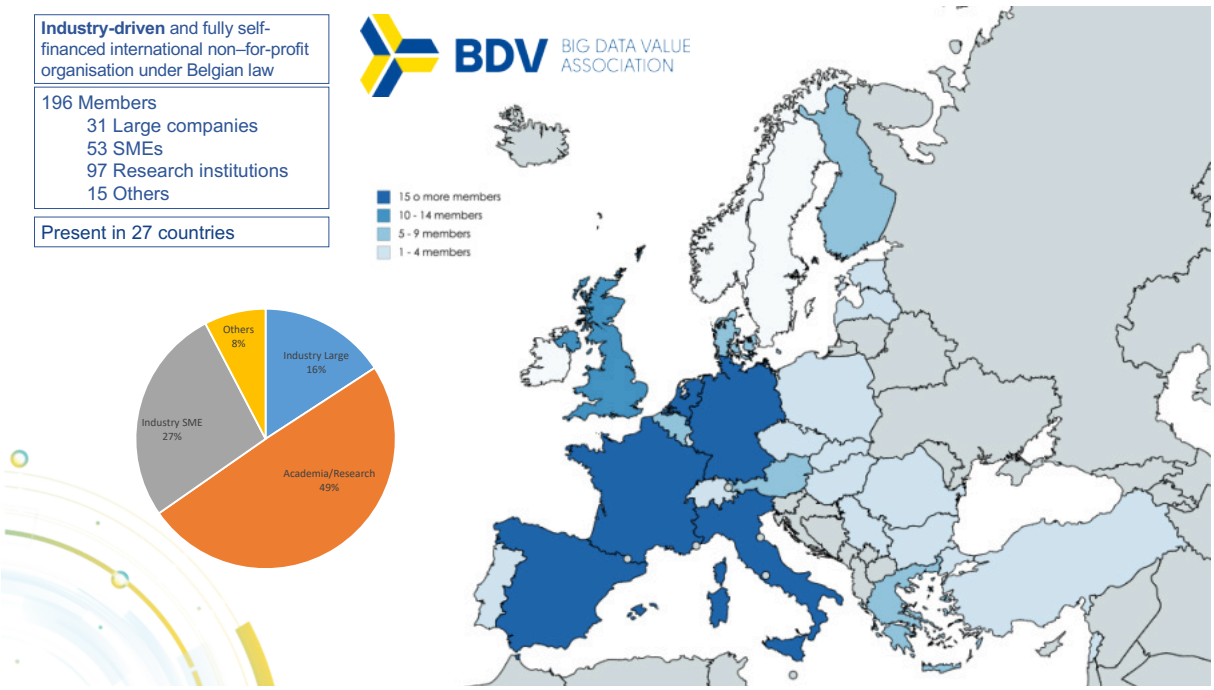


Figure 14: Profile Big Data Value Association (BDVA) (1/3)

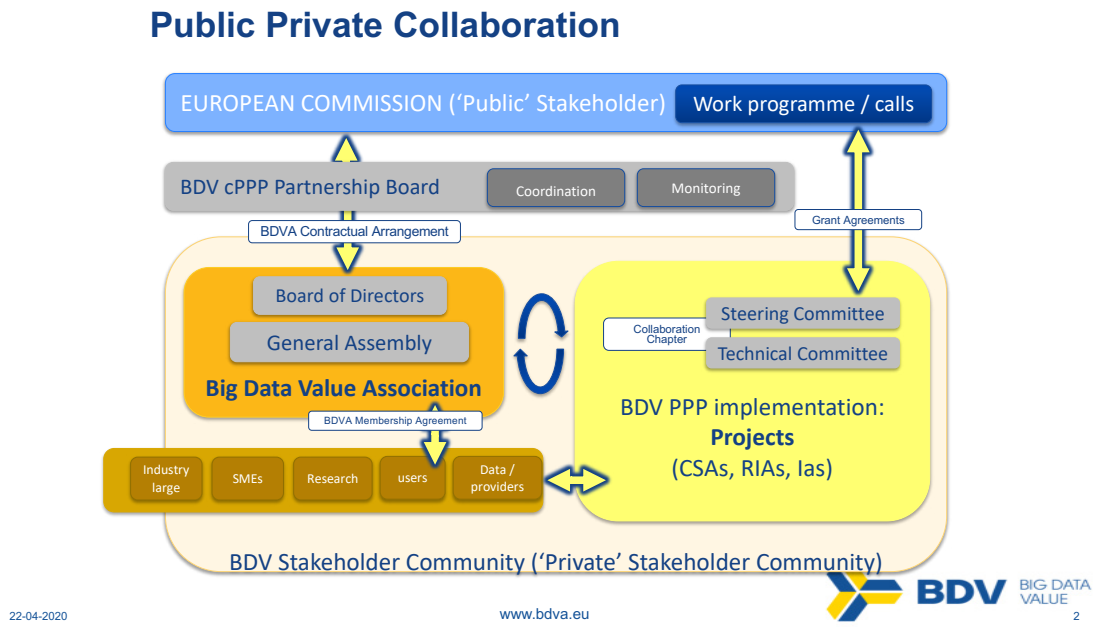


Figure 15: Profile Big Data Value Association (BDVA) (2/3)

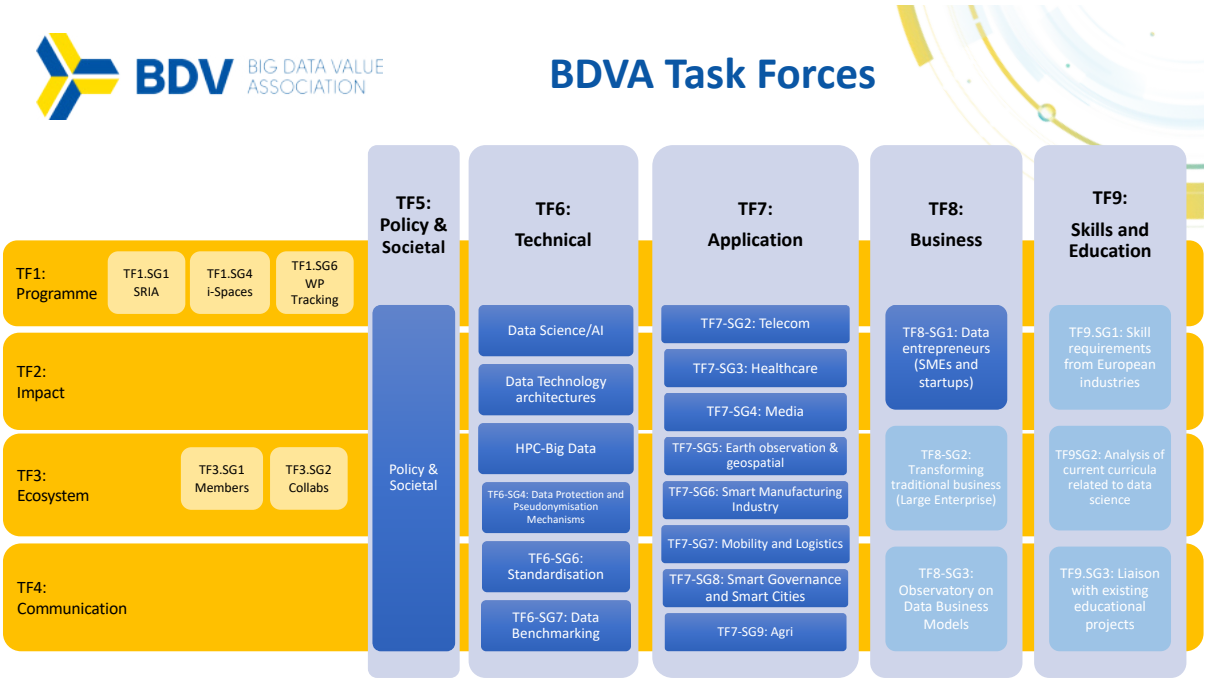


Figure 16: Profile Big Data Value Association (BDVA) (3/3)

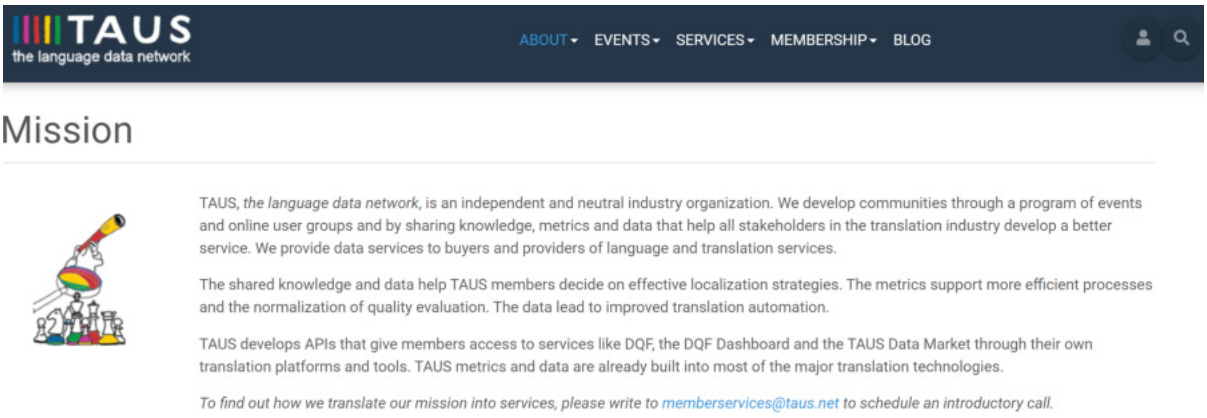


Figure 17: Profile TAUS (1/2)

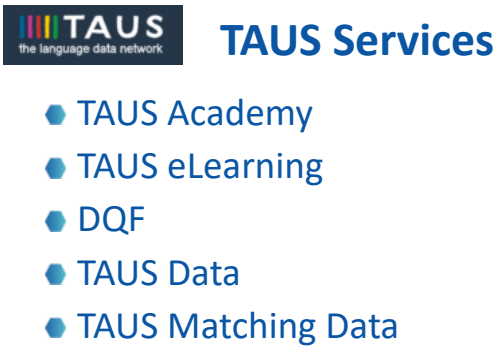


Figure 18: Profile TAUS (2/2)

ELRA's Foundation & Mission:

A Sustainable infrastructure for Data sharing & Technology evaluation

- An (not for profit) Association of Users of Language Resources for Technology (institutions/individuals), 1995
- Members= Institutions, Individuals, votes restricted to Europe (50 institutions/1000 individuals)
- Membership fees /year for institutions ; 2 years (e.g. LREC) for individuals
- Governance: GA, Board (elected for two years, 3 terms, 9 members (8+1))
- Main rationale: bring into focus the need for a mutual exchange and use of LRs
- A Repository Center:
  - **Identification/distribution/sharing of LRs, Production, Validation,**
  - **Commercial issues (prices, fees, royalties)**
  - **Legal issues (IPR/Licensing, Personal Data)**
  - **Information Dissemination**
- Catalogues: ELRA Catalogue, Universal catalogue (crawl/harvest/share_your_LRs), LRE-Map
- Infrastructure for the evaluation of Human Language Technologies providing resources, tools, methodologies, logistics, Exit strategies / Capitalization on evaluation packages
- *Operational body: ELDA, permanent staff (over 15), eligible to EU funding,*
- *Revenues from projects, resource distribution, services*
- *LREC*
- *SIGs (including joint ones)*
- *JLRE (Springer)*
- *Partnership with other data centers*

Figure 19: Profile European Language Resources Association (ELRA) (1/3)

The European Language Resources Association (ELRA)

Identification and distribution of language resources

- ELRA Catalogue: http://catalogue.elra.info/
  - 1200 Language Resources available through ELRA (off the shelf)
  - All modalities (text, speech, video, sign, OCR, etc.), numerous languages
  - About 30% are free of charge
- Universal Catalogue: http://universal.elra.info/
  - Information on Language Resources identified world wide
  - >2000 identified Language Resources world wide
  - Access can be negotiated on-demand
- LRE Map: http://lremap.elra.info/
  - Information on the use of 7000+ Language Resources and Language Tools
  - Mechanism created to monitor the use and creation of Language Resources
  - Part of submission process to main NLP conferences (LREC, Interspeech, COLING, etc.)

Figure 20: Profile European Language Resources Association (ELRA) (2/3)

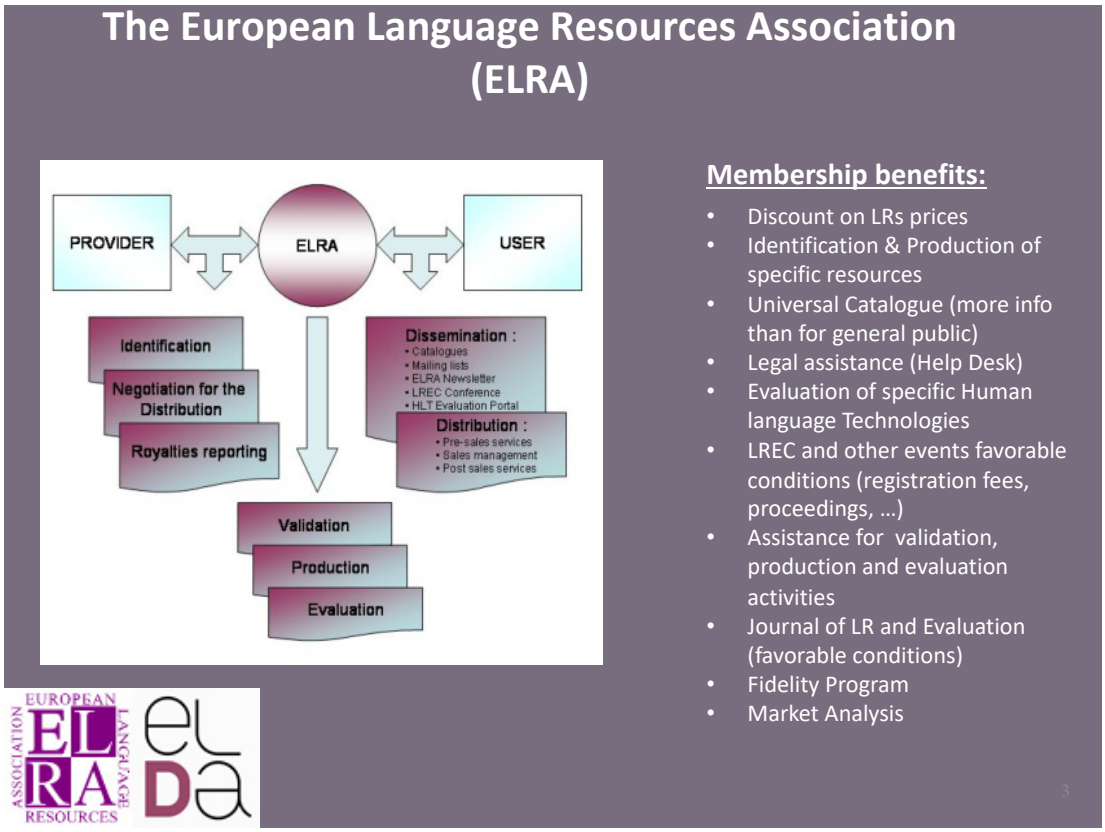
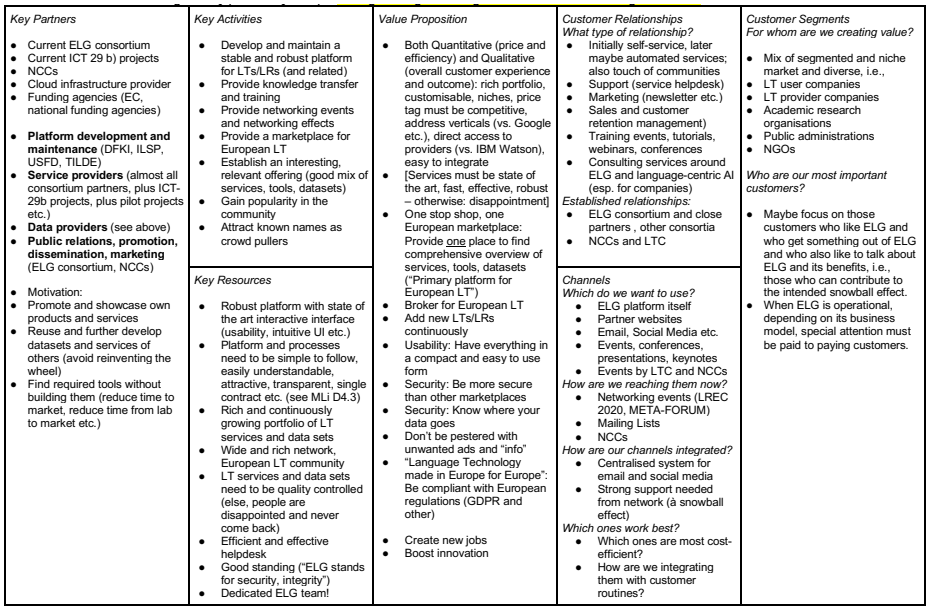


Figure 21: Profile European Language Resources Association (ELRA) (3/3)

C. Partner-specific Versions of the Business Model Canvas

DFKI 1/2



Key Partners	Key Activities	Value Proposition	Customer Relationships	Customer Segments
• Current ELG consortium • Current ICT 29 b) projects • NCCs • Cloud infrastructure provider • Funding agencies (EC, national funding agencies) • **Platform development and maintenance** (DFKI, ILSP, USFD, TILDE) • **Service providers** (almost all consortium partners, plus ICT-29b projects, plus pilot projects etc.) • **Data providers** (see above) • **Public relations, promotion, dissemination, marketing** (ELG consortium, NCCs) • Motivation: • Promote and showcase own products and services • Reuse and further develop datasets and services of others (avoid reinventing the wheel) • Find required tools without building them (reduce time to market, reduce time from lab to market etc.)	• Develop and maintain a stable and robust platform for LTs/LRs (and related) • Provide knowledge transfer and training • Provide networking events and networking effects • Provide a marketplace for European LT • Establish an interesting, relevant offering (good mix of services, tools, datasets) • Gain popularity in the community • Attract known names as crowd pullers *Key Resources* • Robust platform with state of the art interactive interface (usability, intuitive UI etc.) • Platform and processes need to be simple to follow, easily understandable, attractive, transparent, single contract etc. (see MLi D4.3) • Rich and continuously growing portfolio of LT services and data sets • Wide and rich network, European LT community • LT services and data sets need to be quality controlled (else, people are disappointed and never come back) • Efficient and effective helpdesk • Good standing ("ELG stands for security, integrity") • Dedicated ELG team!	• Both Quantitative (price and efficiency) and Qualitative (overall customer experience and outcome): rich portfolio, customisable, niches, price tag must be competitive, address verticals (vs. Google etc.), direct access to providers (vs. IBM Watson), easy to integrate • [Services must be state of the art, fast, effective, robust – otherwise: disappointment] • One stop shop, one European marketplace: Provide <u>one</u> place to find comprehensive overview of services, tools, datasets ("Primary platform for European LT") • Broker for European LT • Add new LTs/LRs continuously • Usability: Have everything in a compact and easy to use form • Security: Be more secure than other marketplaces • Security: Know where your data goes • Don't be pestered with unwanted ads and "info" • "Language Technology made in Europe for Europe": Be compliant with European regulations (GDPR and other) • Create new jobs • Boost innovation	*What type of relationship?* • Initially self-service, later maybe automated services; also touch of communities • Support (service helpdesk) • Marketing (newsletter etc.) • Sales and customer retention management) • Training events, tutorials, webinars, conferences • Consulting services around ELG and language-centric AI (esp. for companies) *Established relationships:* • ELG consortium and close partners , other consortia • NCCs and LTC *Channels* *Which do we want to use?* • ELG platform itself • Partner websites • Email, Social Media etc. • Events, conferences, presentations, keynotes • Events by LTC and NCCs *How are we reaching them now?* • Networking events (LREC 2020, META-FORUM) • Mailing Lists • NCCs *How are our channels integrated?* • Centralised system for email and social media • Strong support needed from network (à snowball effect) *Which ones work best?* • Which ones are most cost-efficient? • How are we integrating them with customer routines?	*For whom are we creating value?* • Mix of segmented and niche market and diverse, i.e., • LT user companies • LT provider companies • Academic research organisations • Public administrations • NGOs *Who are our most important customers?* • Maybe focus on those customers who like ELG and who get something out of ELG and who also like to talk about ELG and its benefits, i.e., those who can contribute to the intended snowball effect. • When ELG is operational, depending on its business model, special attention must be paid to paying customers.

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Figure 22: Business Model Canvas – DFKI (1/2)

DFKI 2/2

Cost Structure *Key costs*	*Revenue Streams*

• Cloud hosting (CPU, GPU, RAM, SSD) and bandwidth
• Team:
  ◦ Operations
  ◦ Development
  ◦ Accounting
  ◦ Marketing
  ◦ Support (e.g., service helpdesk)
  ◦ Management
• Legal (SLAs, contracts, GDPR etc.)
• Misc. (rent, hardware, electricity etc.)
	• Regular ads (for companies, services, conferences etc.)
	• Sponsored content (first result of search/catalogue, marked as "sponsored")
	• Sponsored services
	• Sponsored data sets
	• Sponsored companies
	• Other sponsored catalogue entries
	• Training events, tutorials, webinars (for a fee for commercial players, free for academia)
	• Conferences (event registration fees; sponsorship packages for companies)
	• General consulting services around ELG and language-centric AI (esp. for companies)
	• Membership fees (if we decide to establish an association or similar)
	• Project grants (international as well as national projects)
	• LTaaS – LT services: hosting of services, models, data sets (hosting of services or large models creates costs; publicly funded research results to be made available OA; difference between industry and research; costs need to be covered)
	  ◦ For companies that develop LT – as a primary or secondary dissemination channel, to extend their reach, to open up new markets etc.
	  ◦ Brokering of commercial LT services (for a fee, split between service owner and ELG)
	  ◦ For R&D project consortia – as an additional dissemination and exploitation channel for industry-relevant research results
	• PaaS LT platform functionality: combine ELG services into workflows
	• RaaS – Hosting service for whole repositories
	• LT marketplace: matchmaking fee for connecting a buyer with the right supplier

Figure 23: Business Model Canvas – DFKI (2/2)

EXPSYS 1/2

Business Model Canvas

Designed for:	Designed by:	Date:	Version:
ELG	ESI	10/12/2019	0.1

Key Partners
Who are our Key Partners?
Consortium partners, ICT29b projects, AI4EU, LT-Innovate, LT-council, European Commission

Who are our key suppliers?
Expected: Pilot participants, wider industry and academic players

Which Key Resources are we acquiring from partners?
Tools, resources, components, services

Which Key Activities do partners perform?
Platform development, establishment of platform business model and self-sustainable ecosystem

MOTIVATIONS FOR PARTNERSHIPS: Optimization and economy, opening up new distribution channels, reduction of risk and uncertainty, access to resources, technology and skills

Key Activities
What Key Activities do our Value Propositions require?
Robustize platform, create success stories, enrich content, tools and services, establish licensing and billing models

Our Distribution Channels?
Pilot calls, reach out to early adopters, access to future funding, grow a critical mass of members

Customer Relationships?
Events (meta-forum), tutorials and papers (LREC). How about industry encounters, e.g. LT Summit?

Revenue streams?
Membership, fee, subscription, pay as you go.

CATEGORIES:
Platform/Network, tools, services, resources

Key Resources
What Key Resources do our Value Propositions require?
Infrastructure (CPU, GPU, etc.), staff: devops, ambassador, board.

Our Distribution Channels?
The ELG platform itself.

Customer Relationships
Revenue Streams?
Same as above

Value Propositions
What value do we deliver to the customer?
A platform and market place for the provisioning and consumption of LTs.

Which one of our customer's problems are we helping to solve?
Addressing fragmentation of the European LT space through concentration in the platform

What bundles of products and services are we offering to each Customer Segment?
LT tools, services and resources

Which customer needs are we satisfying?
A new channel for providers to offer their services and for consumers to have access to them. Roles are reversible. Emphasis on composition.

CHARACTERISTICS:
Newness, Customization, Opportunity and Market augmentation, Cost Reduction, Risk Reduction, Service accessibility, Convenience

Customer Relationships
What type of relationship does each of our Customer Segments expect us to establish and maintain with them? Which ones have we established? How are they integrated with the rest of our business model? How costly are they?

Channels
Through which Channels do our Customer Segments want to be reached?
ELG platform

How are we reaching them now?
Collaboration meetings at the EC level, dedicated events (META-FORUM), conferences (LREC)

Customer Segments
For whom are we creating value?
SMEs
Academia
LT providers (not big players, they are usually from USA and have their own channels)

Who are our most important customers?
Same as our providers

Is our customer base a Mass Market, **Niche Market**, **Segmented**, **Diversified**, Multi-sided Platform

Figure 24: Business Model Canvas – ExpSys (1/2)

EXPSYS 2/2

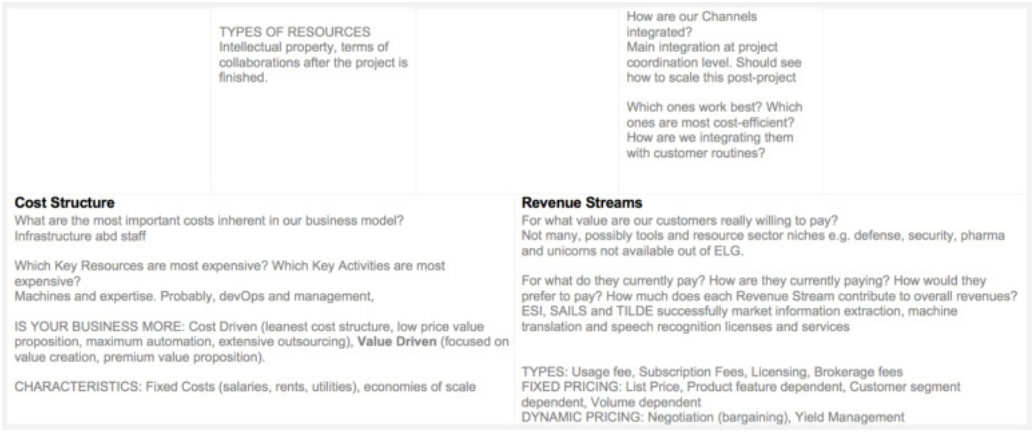

Figure 25: Business Model Canvas – Canvas (2/2)

ILSP

Key Partners	Key Activities	Value Proposition	Customer Relationships	Customer Segments
Data providers: describe (and deposit) their resources, ensure proper licensing *Service providers: describe their services, ensure proper licensing, integrate their services* *Cloud infrastructure provider(s)*	*Maintain a repository and catalogue of data, services, providers, etc.* *Licensing and billing* *Maintaining, managing and monitoring Cloud storage and computing for running services* *Operations for LTs (integration, validation, helpdesk, consultancy, etc.)* **Key Resources** *ELG platform* *cloud infrastructure* *LT specialized personnel*	*platform for announcing/searching for/connecting/running LT in Europe and beyond: data and services, as well as potential LT providers* *Tight and loose integration of services* *Potentially: functionalities to combine atomic services into composites (workflows)* *Brokering services* *Overview of trends, requirements, gaps, etc.*	*Mostly automated services* *Dedicated personal assistance for service providers* **Channels**	*Commercial and public organisations searching for LT and LT related data and services to either use as is or integrate in other services* *Academic and commercial organisations in need of promotion and higher visibility, discoverability and commercialization of their data and services* *Funders and policy makers monitoring their investments and future trends*

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Figure 26: Business Model Canvas – ILSP

SAIL

SAIL stresses that our key resources are extremely valuable!

Main value prop: one-stop shop

Key Partners	Key Activities	Value Propositions	Customer Relationships	Customer Segments
• LT-Suppliers (MT, ASR, translation services, etc.) • ELG Community (NCCs, other stakeholders,..) • Academia • Advertising companies • EC and institutions • Pilots • **Influencers** • Hosting, cloud organisations • **Venture capital donors**	• Generate reputation and visibility (top language technology and components • Functional efficiency and transparency • Establish visibility and popularity of the ELG • Leverage on existing communication networks and sales channels (ELG community and beyond) • Motivation and incentives for participation • Service quality **Key Resources** • Existing knowledge and customer data from metanet and the EC (other related projects like AI4EU, and EC-communication networks, expert groups, etc.) • High quality technologies, services, components (TSCs) • Consortium members (market intel., distribution channels, technology, etc.) • Relations and networks (PR; advertisement, search engines,..) • Access to experts • Market data from pilots and pre-tests (customer feedback and contact info)	• Towards the Primary Platform for Language Technologies in Europe • *The* marketplace for high quality technologies, services, components, resources and expert knowledge • **One-stop-shop (ease of use, continuous quality improvement, price savings)** • Visibility for suppliers	• Brand building • Service quality • Single point of contact • Quality seal • Webinars, forum • Take anxiety away • Personal ?? (something like "Prime") • Onboarding **Channels** • ELG members and affiliates • Partner initiatives and projects • Commercial Apps • Search engines	• Industry (LT demanding customers: MT, ASR, translation services, localization, etc.) • Academia • Advertising • EC and institutions

Cost Structure	Revenue Streams
• IT & infrastructure (hosting, cloud, HW, maintenance, security, rent, etc.) • Administration (of members, administration, update of information (yellow pages, data hygiene, etc.) • Accounting (billing, licensing, invoicing, membership) • Support and customer service (for the grid and single components, forwarding of requests, ticketing) • Personnel costs • Market expansion and PR (marketing, communications, events,..)	• TSCs • Ads • Seller provisions • Language data and models • Customer and market data

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Figure 27: Business Model Canvas – SAIL

TILDE

Key Partners	*Key Activities*	*Value Proposition*	*Customer Relationships*	*Customer Segments*
Consortium partners LT/data providers Research and industry associations EU project consortiums EC DGT, EC CNECT AI4EU AI PPP National LT funding bodies	SaaS Regular CMS content creation *Key Resources* Infrastructure LT services coverage Existing network & community Platform software	Single access point for European LT services/data/tools	Marketplace/ Meeting point *Channels* SEO Conferences Specialized media Social networks Mass mailing	Main: LT Providers Integrators/users of LT tools/services: – Academic researchers – Industry big – Industry SME – Startups – Public administrations

Cost Structure	*Revenue Streams*
Infrastructure Administration costs Cost of customer support CMS new content creation SEO, ads Marketplace related costs	Paid services Ads on platform Paid trainings Consultations

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Figure 28: Business Model Canvas – TILDE

USFD

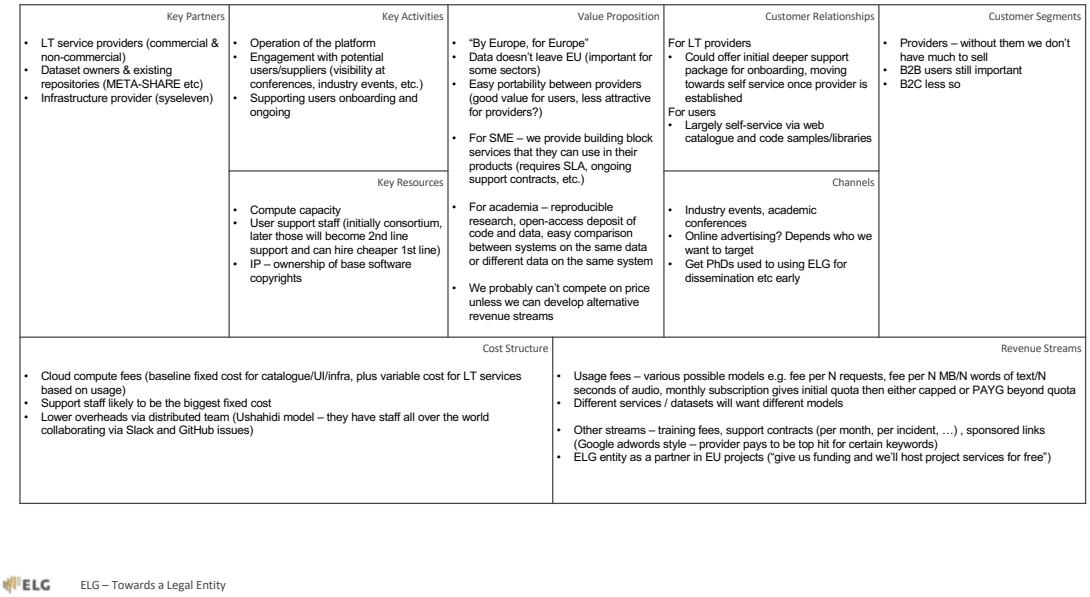

Figure 29: Business Model Canvas – USFD

D. LREC 2020 Paper on the Current State of AI/LT in Europe

As mentioned in the main part of this deliverable, the situation in Europe with regard to AI and LT is highly dynamic with a large number of activities on various levels, both nationally and internationally. Back in September 2020, the ELG project initiated the collaborative preparation of a paper in which ELG compiled the current state of play together with representatives from other relevant activities including AI4EU, ELRC, HumanE-AI, CLAIRE and BDVA. The reference of this paper and also the full text are included below.

Georg Rehm, Katrin Marheinecke, Stefanie Hegele, Stelios Piperidis, Kalina Bontcheva, Jan Hajic, Khalid Choukri, Andrejs Vasiļjevs, Gerhard Backfried, Christoph Prinz, José Manuel Gómez Pérez, Luc Meertens, Paul Lukowicz, Josef van Genabith, Andrea Lösch, Philipp Slusallek, Morten Irgens, Patrick Gatellier, Joachim Köhler, Laure Le Bars, Dimitra Anastasiou, Albina Auksoriūtė, Núria Bel, António Branco, Gerhard Budin, Walter Daelemans, Koenraad De Smedt, Radovan Garabík, Maria Gavriilidou, Dagmar Gromann, Svetla Koeva, Simon Krek, Cvetana Krstev, Krister Lindén, Bernardo Magnini, Jan Odijk, Maciej Ogrodniczuk, Eiríkur Rögnvaldsson, Mike Rosner, Bolette Pedersen, Inguna Skadina, Marko Tadić, Dan Tufiș, Tamás Váradi, Kadri Vider, Andy Way, and François Yvon. "The European Language Technology Landscape in 2020: Language-Centric and Human-Centric AI for Cross-Cultural Communication in Multilingual Europe." In Nicoletta Calzolari, Frédéric Béchet, Philippe Blache, Christopher Cieri, Khalid Choukri, Thierry Declerck, Hitoshi Isahara, Bente Maegaard, Joseph Mariani, Asuncion Moreno, Jan Odijk, and Stelios Piperidis, editors, Proceedings of the 12th Language Resources and Evaluation Conference (LREC 2020), Marseille, France, 2020. European Language Resources Association (ELRA).