

THE HAGUE INNOVATORS CHALLENGE 2022

# **Reprex: Big Data for All**

Submission for the Second Phase: Realization of Innovative Concepts and Projects for a Better World



## **Purpose**

Reprex is the Hague-based impact startup that develops decentralized, modern, web 3.0compatible data observatories. Our mission is to fulfill a part of the SDG 16 & 17 goals: based on the open collaboration method of open-source software development and open knowledge management, we would like to enable impact makers to contribute to other SDG goals by making AI and big data work for them and ensure their access to public information for organizations who cannot employ data engineers and data scientists.

**"Big data for all."** As the authors of the famous <u>Data</u> <u>feminism</u> book authors eloquently argued, big data creates inequalities. Only the world's biggest global corporations, best-endowed universities, and strongest governments can maintain long, welldesigned, global data collection programs and build huge data lakes. This gives them a seemingly unbreakable advantage in machine learning, testing and deploying AI, to protect themselves from the negative outcomes and biases of algorithms, and to provide evidence in policy debates or litigation concerning gender equality, responsible consumption, or climate action.

We want to fight the injustice of big data with open collaboration and open tools. We offer open, collaborative data platforms and access to open data so that our partners reach the critical mass of data for their work. Using open data, open science, open source software, and open linked data, we make them ready to embrace the semantic web 3.0. We are particularly targeting organizations that need to fight giant corporations or data monopolies without the means to fund an entire data engineer and data science team. Organizations that had built large and expensive databases in the past quickly became costly legacy systems that they regretted starting. We offer them the ability to link into global databases, and knowledge graphs, and we build them smart applications related to education, gender equality, decent work, responsible consumption, and climate action

More than 60 EU, UN, or OECD-recognized data/social science observatories exist worldwide. They are public-private partnerships between businesses, consultancies, policy- and knowledge organizations, NGOs, and academic research institutes. Cities are competing to settle them into their innovation ecosystems. Reprex and its partners claim that we do this best: we offer optimal data ecosystem growth and the best value for money, because we use a **future-proof, decentralized, web 3.0 architecture.** It is resilient to legal, and organizational changes and manages in the best possible conflicts of interest with flexible changes of permissions, joins, and separations—the issues that usually hamper data ecosystem growth and fill up a data lake from multiple sources.

We are already established in the Hague. We entered into this competition because we hope to build one or more public-private partnerships to serve as knowledge hubs, or centers of new "knowledge graphs" in the web 3.0 parlance in the Hague connected to various SDG goals. Reprex, as a company, aims to service about 10% of the global data observatories from the Hague. This place the Hague as a city and its economy is in a pole position to settle the core organization of these data PPPs in our city.

We have recently won the right to build a prototype for the long-planned European Music Observatory in a highly competitive Horizon Europe Research and Innovation tender. This observatory-similarly to its 'nearest kin', the European Audiovisual Observatory, will eventually employ about 20-30 people, becoming a pan-European, or even global, knowledge hub. We already work with 20 organizations, and our observatory has, at a very early stage, 20 (not fulltime) data curators outside the Reprex team. This observatory is a good fit for the city's musical and digital heritage organizations, just like the earlier stage CCSI Data Observatory, where Europeana (who have supported us in this competition with a letter of recommendation), and the EU's Hague-based cultural heritage umbrella organization.

We think that it is realistic that our research automation and data science services will provide 10% of the work input of these data PPPs, and by teaming with the Hague, we can bring **ten additional jobs to the city for each job that we can keep here.** Placing several data observatories in the Hague would make the city an important global center of web 3.0 (the next world wide web where databases are linking and connecting automatically like websites linked to each other in web 1.0.) The Hague was already awarded the 'smartest city' title, and making it the global web 3.0 center related to sustainable development, peace, and justice would cement its leading position for inter-governmental and nongovernmental organizations in the world.

## Product and competition overview

- 1.Our data observatories (platform products) cover our R&D and platform costs while giving us access to an expanding range of prime clients. We use 21st century open-source data engineering solutions, a decentralized data governance method, and web 3.0 technologies to avoid conflicts of interest and prevent the data Sisyphus of error-prone human data wrangling. There is little competition on this service level (there are about 60 UN/EU/OECD recognized data observatories, and almost all of them are managed by a different operator.) This layer is **already monetized**, and we have proven success. Our unique advantage is a combination of legal and technological skills: understanding legally open data, web 3.0, and data modeling, and the ability to participate in the open-source statistical /scientific software creator community.
- 2. We create open-source software applications that fuel our data observatories with unprocessed, open, linked data. We create software for the R statistical environment, which is used in both official statistics and in many business and academic organizations. The production of R software components is a competitive field, but we believe that our position is strong: the vast majority of R packages are lightly or not at all serviced because of the lacking revenues to sustain the development. Our other services provide stable financing to keep our R software packages continuously among the best peer-reviewed software libraries in this software ecosystem.
- 3. We provide bespoke analytics solutions to our institutional partners in our data observatories. Such bespoke solutions iterate over our existing software components, helping us design better applications within an ever-expanding ecosystem.

Providing tailored data-science services would require a large organization without a clear focus. We provide these services on an ad-hoc basis only among institutional partners and users of our data observatories. In these circles, which are often prime clients, we face little or no competition because we are trusted partners and data and solution providers. This is a key to our revenue and market growth.

4. We develop high-value software-as-service applications that leverage our data observatory assets and our software solution into a novel, commercially valuable uses. Our applications are built around our family of open-source software and generalize our bespoke analytics solutions. We are in a late prototype phase where we already have some revenue and are trying to prepare for scaling up at the correct price with three of our applications. All of our applications are entering into highly competitive market segments. We are building on our unique advantage that we are bundling our solutions with data that is not accessible to competitors, and we can test them in the protected ecosystems of our observatories.

## **Feasibility and Team**

Reprex combines open-source data and **web 3.0** technology with in-house, high-quality open-source software products. The advantages of our open source approach are

- We do not depend on any technological vendors and enjoy a very high technical readiness level, our platform and core offering at **TLR level 7-8**, and our new applications, at least on TLR 4-5. (Open source applications reuse components and gain a high level of technical readiness very soon.)
- We participate in the collaborative work of <u>rOpenGov</u> and <u>ROpenSci</u>. This way, we can source talent from all over the world in a flexible and fast way for software development, testing, and debugging, and we are present on global platforms with our solutions.
- Because we are *not* a software licensing company, our ecosystem growth is not hampered by the capital and human resource costs of providing guarantees and customer support.

Reprex combines unique expertise in data curation and data management with a specialization on legally open data (in the context of the **Open Data Directive** and **GDPR**), data sharing, and data altruism (in the context of the European **AI Act** and **Digital Governance Act**), open- source programming, data science, and engineering know-how.



Daniel Antal, CFA

Daniel Antal, CFA co-founder has a long track record of proven excellence in managing complex data integrations across legal, language, and organizational borders. He has a demonstrated experience in pooling data and data users and accessing rare and high-value data in transport, energy, music, films, and various functional business areas. Daniel has a background in management consulting and high-level public administration, mainly focusing on our business strategy and ecosystem growth. He is the author of four globally used statistical software packages: iotables, regions, retrohamornize, and statcodelists (the experimental dataset in under scientific peer-review.)



Andrés García Molina, Ph.D.

Andrés García Molina, Ph.D., is a senior data scientist, and he holds a Ph.D. in ethnomusicology from Columbia University. Andrés has a background in humanities as well as computer science and programming. He mainly focuses on the stability of our operations and understanding the needs of users who are usually better in "soft skills."



Borbala Dömötörfy

Borbala Dömötörfy, Ph.D. has more than ten years of experience in competition law, data privacy, and legal research, and she is also a trained UX designer. Her role is to ensure we exploit the technical possibilities provided by big data and trustworthy AI within the ethical limits of the European and national laws. She is creating data ontologies cross-cutting across our statistical, algorithmic, legal, and cultural heritage object digital assets to make them work together.



Botond Vitos, Ph.D., is our open-source data engineer, and he has a proven track record of managing various open-source, cloud-based APIs and connecting databases. Like the other team members, Botond holds a doctorate from a humanities field and works proficiently with programming and engineering.



Gabija Liaugminaitė,

Gabija Liaugminaitė, MA is our junior team member. With a background in classical music and filmmaking and a trained economist, she is an invaluable member of our team in translating our technology to the stakeholders of our music and creative observatories. She plans to enter a Ph.D. project with one of our R&D partner universities.

We think that Rerpex is a very hard-to-replicate startup. Repex grew from a fast-growing data sharing and exploitation project of 12 countries' music organizations, CEEMID, that started in 2014. We started operations in 2021 after successfully participating in the Yes!Delft Al+Blockchain Product/Market Fit Validation Lab in 2020. We realized that our experts could give us an excellent position in the global music industry, which is usable in many areas. We have many years of experience in reusing valuable data assets from government servers (such as anonymized tax data and government satellite sensory data) and turning them into commercially viable alternatives or complementing the data offering of big market research companies like Kantar or Nielsen. We have ten years of experience in 14 countries, joining datasets for use among business users with conflicting interests. We have a user base of several thousand data specialists globally who use our software that cannot be exploited commercially by anybody else. With a track record of working with high-value and sensitive data, we have a very hard-to-replicate capital of the trust.

## Target audiences & market connection

- **1.Our data observatories platform products** target established sectoral needs (music, culture) while simultaneously integrating them into new, crosssectoral data ecosystems (ESG reporting, competition). Data observatories are public-private partnerships concentrated around particular EU, UN, OECD, and World Bank institutions. We have a track record in this environment and are globally recognized. We aim to have a 10% global market share in 5 years in managing and curating such data platforms. The observatories give us a large and fast-growing prime client base for higher-value services.
- 2. The audience of our **open-source software libraries** is the data scientist community. The opensource community provides us with fast-paced development and a user base that may partially turn into a buyer for our high-value offerings. Our user base is growing exponentially (see later.)
- **3.** The target audiences for our **bespoke services** primarily entail (but are not limited to) the institutional partners of our data observatories. The most important reason for building or taking over data observatory management is to gain access to these **valuable, knowledge-driven clients** (NGOs, international organizations, universities, consultancies, and large law firms.) We believe that the 16.10 Ensure public access to public information, and 16.3 Promote the rule of law and ensure equal access to justice, 16.7 Ensure responsive, inclusive and representative decisionmaking are distant dreams even in the most developed OECD countries because of the data inequalities caused by big data and AI. As we have

shown in many cases (see blog post), even in the most developed nations most legally open data is not processed in a form that is downloadable, let alone usable without significant investments. Our open-source software offering makes such data, which for the least developed nations often can be found in the (inter-)governmental data warehouses of the EU or its member states, usable without the help of in-house statisticans, computer or data scientists to provide the legally open but unprocessed data usable for small companies, NGOs, civil society organizations.

- **4.**The target audience for **our applications** is the current and potential user base of our open-source software components and data observatory data assets, which far exceeds the institutional membership of our data observatories. We do not aim at retail distribution.
- Listen Local, our music application is distributed via national umbrella organizations for music rights management or music information.
- > Eviota, our ESG application family, will be licensed to one or more big four companies.
- Surveyharmonies, our (data) harmonization application, is intended for large market research (surveying) companies and research archives.

**Our data observatories** (listed on the next page) as data ecosystems have an extensive user base: **knowledge organizations**, NGOs, international organizations, libraries, university research institutes, and research companies (consultancy, legal). What connects them is that they work with problems that require far more data than their organization can collect or process. Any observatory participant can access, share, or exchange data in our systems. We also provide data for third parties who are not permanent partners.



Creating a trusted data platform that complies with the requirements in the spirit of the new European Data Governance Act by fostering the re-use of public sector information and increasing the interoperability (integration capacity) of public and private data is already valuable for our partners—we already have dedicated revenues for this service. Most of the partners and users of these observatories, however, do not need data but also metadata and information: they want to take action based on our evidence, for example, change the price of their music offering, or select a more sustainable supplier.

Our value-added service offerings, if the user needs are significant enough, maybe bespoke or can be offered as individual software-based services. They are particularly appealing to those observatory partners and users who do not have a developed data engineer and data science team and often not even a dedicated IT department. Or, in other words, organizations that do not have hundreds of thousands of repeating transactions would justify in-house building databases. Generally, the annual HR and other costs of maintaining a dedicated data team with engineers, scientists, and access to high-value data are at least one million euros per year. This makes medium-sized companies and research organizations natural targets. We will show some examples after the enumeration of our observatories.

Reprex is developing four interrelated data observatories to benefit from the existing synergies and the economies of scale and scope. Our data observatories aim to be the:

- go-to point for the decentralized music and broader cultural and creative sector and industry data (with characteristics making them hard-to-get and difficult-to-process information sources);
- support the realization of the European Green Deal by providing resources enabling evidence-based policymaking, and KPIs for business and policymakers alike with truly usable open science and open governmental data
- improve the efficiencies—including allocative, productive and dynamic efficiencies—of markets and enhance the level of consumer protection by supporting the enforcement of competition law.

The data observatory concept arose from the needrecognized by international organizations (IGOs) such as the EU, UN, and OECD-to better leverage data to set and realize beneficent policy goals. Most existing data observatories are initiated or recognized by such organizations and usually serve to measure IGO and civil society efforts to envision systematically and progressively create a better world. Specifically, most data observatories closely align with the UN SDG agenda and the relevant and overlapping EU or OECD agendas. Our data observatories share this raison d'être, establishing direct connections to numerous, often overlapping, SDG goals.



## **Digital Music Observatory**

- The <u>Digital Music Observatory</u> already has more than 16 institutional users, and more than 20 external curators.
- With the help of a significant 3-million-euro grant to develop this into a permanent European Music
   Observatory vying for official recognition of the EU.
- > Has a track record to solve complex problems, e.g., valuing and pricing music, providing evidence on piracy (contributing to SDG 8—improving decent working conditions for precarious creative workers), predicting audiences, and finding algorithmic biases against small-country artists and womxn (SDG 4, 5—AI, metadata, data problems in music education and bias against womxn)
- In a partnership with the Hague and the Dutch music institutions in our city, we could bring about 20 jobs to the town and make it one of the most important knowledge hubs on music worldwide



#### Cultural & Creative Sectors and Industries Observatory

- We realized in 2021 that most of the hard-to-get and difficult-to-process information sources of music are identical or very similar to those in film, gaming, books, and even fashion. We created a consortium with some of our partners in the music observatory (notably, the Institute for Information Law Research or the University of Amsterdam, and Europeana, the EU's cultural heritage harmonization body) to launch a broader data observatory for the cultural and creative sector.
- We want to use our PPP funding consortium experience, data governance experience, and excellent EU tendering track record of building a broader sister observatory for our music observatory.
- Like every one of our observatories, contributes to the SDG 16 & 17 goals: based on the open collaboration method of open-source software development and open knowledge management, we would like to enable impact makers to contribute to these and other SDG goals by making AI and big data work for them and ensure their access to public information for organizations who cannot employ data engineers and data scientists. We

contribute to policy coherence and significantly increase the availability of high-quality, timely, and reliable data disaggregated by income, gender, age, race, ethnicity, migratory status, disability, geographic location, and other characteristics relevant to national contexts.

> Our data coverage already includes some of the least developed countries.



## **Competition Data Observatory**

The European music industry is made up of about 100,000 micro- and small enterprises. Global, non-European data monopolies manage almost all their data, like YouTube (Google), Facebook, Spotify, and Apple. Most of our paid applications have a connection to providing legal evidence partly on a competition law basis. With the Center of Competition Policy, one of the biggest global hubs in the UK, we are conceptualizing a computational antitrust observatory that brings our expertise, mainly developed in the music and film industry setting to a broader, sector-agnostic audience.

- Our <u>Competition Data Observatory</u> developed with the <u>Centre for Competition Policy</u> is a natural extension of our work with music industry partners who had been fighting giant corporations in court for creative workers' precarious pay with our evidence on a competition law basis for years. We want to generalize our approach to create machinegenerated or validated documentary evidence for fair competition.
- A UNCTAD Secretary-General Mukhisa Kituyi said: "Healthy competition in both national and international markets ensures that the private sector makes better products at lower prices affordable to more people, and this will be important in achieving the SDGs".
- Our existing use cases that we generalize are connected to SDG 5, the development of trustworthy and legally compliant AI algorithms (i.e., solving the data feminism problem.)
- SDG 8, as effective competition is a prerequisite to promote sustained, inclusive, and sustainable economic growth, full and productive employment and decent work for all, particularly to creative workers who enjoy no typical labor contracts and the protection of labor laws or trade unions.,
- SDG 12 Ensure sustainable consumption and production patterns, and SDG 16 (access to justice by providing documentary and data evidence to fight greenwashing or providing small creative enterprises with complaints and claims automation against data giants like Google (YouTube), Spotify, Apple, and Amazon.



## **Green Deal Data Observatory**

- The <u>Green Deal Data Observatory</u> was our first test to bring our information management, data access, and processing know-how to new data sources (such as environmental satellite data, hydrological data, etc.)
- Due to the mainstreaming of SDG and ESG reporting, many features are developed with our music partners, and overlap with the Competition Data Observatory.
- We are looking for reliable data that can be processed into computational antitrust and policy evidence in relationship with SDG 11 to enhance inclusive and sustainable urbanization, SDG 12 to ensure sustainable consumption and production patterns, SDG 13 to take urgent action to combat climate change and its impacts within the partnership approach of of SDG 17 to ensure public access to information in a usable form (SDG 16.10).



## Social Sustainability Data Observatory

Our Social Sustainability Data Observatory is in a very early conceptual phase. Our Green Deal Data Observatory will mainly be used for ESG, i.e., environmental, social, and governance sustainability reporting. Compared to environmental reporting, for example, accounting for carbon or water footprints, social sustainability reporting is far more challenging to connect to exciting company accounts. We see a great opportunity for our survey harmonization technology in this field. We concentrate first on making scaleable measurements of gender inequality, measurements of decent work conditions, and various forms of corruption perception with robust methodologies that can be deployed even in the least developed countries. Our very early-stage experiments are aiming to harmonize data with the Arab Barometer and Afrobarometer survey programs.

All the above aims are based on the same technology and the parallel development of the observatories is the feasible and reasonable solution due to the significant overlaps. From a broader perspective, our company motto is big data that works for all. This motto is grounded on the realization that bigger is not always better: if not carefully balanced by civil society and SME efforts, big data can be leveraged by large private-sector players to aggravate, rather than mitigate, inequality. Data inequalities can hinder smaller organizations' competitiveness, as well as their ability to fight the ethnic and gender biases of Al, and participate in the fight against greenwashing.

## **Revenue model & Competition**

Platform monetization: More than 60 EU, UN, or OECD-recognized data/social science observatories currently exist worldwide, and our market research (which included about 20 abandoned data observatories) shows that these organizations recognize or initiate 3-5 new observatories per year. Many of these organizations have several decades of operational history, and employ legacy data governance, collection, and data engineering practices from the 20th century or the first years of our century. We believe that we can realistically win the creation of 1 new observatory per year and take over the management of the data governance of at least one existing observatory each year. We do not see any competitor specialized in data observatories-they are all individually designed and managed, often seemingly without adhering to modern data science principles. The management costs of observatories vary between €0.1-3 million euros per year, and work is tendered for 3-7 years. We will receive about €300,000 for the Digital Music Observatory in 2023 and secure funding till 2025.

#### Open source software component monetization: Our

open source software is all part of the R ecosystem, and we work closely with rOpenGov and recently with ROpenSci to improve the quality and reach of our software products. Open-source software creation, education, and deployment have established revenue streams—such as payments for deployment, education, and training; atypical licensing, or private or public grants for development. While our software products have a user base of several thousand experts, we treat the software products that can convert into users of our applications or partners in our observatories. In the future, we will increasingly tap into these revenue sources. Our main goal is to use the open-source community for quality assurance and access to the talent base and to build further our user base, who convert into paying users of our valueadded, software-supported services. (The left-hand chart shows cumulated downloads from the Comprehensive R Archive Network. Existing users download the new version when we make a new software release. While this inflates our user numbers, it remains our KPI because, eventually, only loyal users download the latest version.)

## Our analytics solutions within the ecosystem of our observatories follow a traditional open-source monetization model: we offer consulting or deployment of our assets in the context of user needs. While the combination and deployment of open-source software solutions is a relatively competitive market, we believe that we have almost no competition within the ecosystems of our observatories. The creation of the observatories are user groups, even though it is a monetized activity in itself, can be seen as a tie-in to these analytics solutions. In 2022 this is the source of our organic growth, making us a long-term viable company. We do not offer any such services outside our shielded observatory ecosystems.

Licensing fees and blanket licensing for softwaresupported services: The source of our potential exponential growth, for which we seek investment, is based on the applications that we offer outside of the safe havens of our observatory ecosystems for a broad user base. Every one of our observatories has large, established partners with a vast service distribution network. We offer them highly automated software-supported services on a B2B basis. While our applications appear to be diverse they are different reconfigurations of our existing open-source software components and the various open, shared, or licensed data in our observatories.

#### Reprex software use Cumulative downloads from CRAN



Cumulative LinkedIn pages







In our cash-flow projections, we are confident in our ability to gain funding for our data observatory platform services and ad-hoc services to the observatory partners. We have an impeccable tendering record, in the last 12 months, we won 1 out of 1 €3 million tender with our partners for managing and developing an observatory, 1 out of 2 €0.1-1 million tenders, and 3 out of 3 tenders under €100,000. These segments grow organically and we see a growing partner interest, and growing demand, and we are very optimistic bout their future. We believe in exponential growth with our applications, which are in different minimum viable product or early market adoption phases, but these cash-flow projections are very speculative. In every case, we are working with large organizations with a network of hundreds, or thousands of potential users to re-sell our highly automated service components as part of their services (for example, music rights management organizations, or financial/sustainability reporting and audit companies.)

## **Application list**



#### **Smart Reporting Resources**

With the the <u>Smart Reporting Resources</u> application family we help automate scientific, regulatory, financial, and sustainability reporting by turning partners' document templates (regulatory forms, newsletter templates, annual report templates) from **files to web 3.0 resources**. This means that we are creating files that automatically update their legal and data references, re-draw their tables, and visualizations, update the bibliographic reference and automatically palace themselves in the web 3.0 of global libraries, and repositories. This way we reduce the boring, usually not-credited, error-prone documentation, metadata creation, data/visualization updating work of repeating, high-value documents. We provide such upgraded template files for observatory partners only and we have not found a way to create a broader-appeal application yet, but technologically this is an easily scaled work.



#### Listen Local

The <u>Listen Local family</u> offers metadata health checks, algorithm bias testing, and alternative, goalbased recommendations on global music platforms. We are testing their scaled-up provision via national rights management agencies and national music information centers that can re-offer our automated solutions to hundreds or often thousands of creative enterprises and workers in each country. Listen Local is in different stages of business testing in Lithuania and Slovakia, and we will start market tests in the Netherlands, Belgium, Bulgaria, Czechia, Estonia, and Hungary in the coming months. We are testing a  $\xi$ 50 licensing fee per creative person, possibly partly paid by public funds, and hope to roll out at least several hundred licenses per country.

Our Listen Local application is easily adaptable for book publishing, and various film industry uses. We are testing the feasibility of adopting our Listen Local family for various digital cultural objects, particularly in the film and fashion industries.



## Eviota apps

The <u>Eviota application family</u> offers data integration for connected financial and sustainability reporting and sustainability data benchmarks.

- > We are creating a prototype for SMEs and testing it till February 2023 in Bulgaria, the Netherlands, Lithuania, and Malta (in various reporting languages.) We seek to provide service below €500 per company using automation (the current servicing cost is around €10,000 per company.) We are talking with two of the big four assurance/auditing companies to roll out or service as part of their offering at a viable scale.
- We are building a prototype that connects bank accounting and credit risk management systems with a value bank and seeks approval in a regulatory sandbox. This approval would open the banking market in all EU countries. We are discussing the B2B expansion of this product with two of the big four companies. In this case, our offering will be

bundled with the offering of financial advisory firms, and we will seek a revenue share.

Many startups are developing similar solutions, and we seek investment to remain competitive in this market valued to be an annual €4 billion market by the European Commission.



#### Surveyharmonies

Surveyharmonies is a new service concept that links various open-source tools developed by the German state archive, the World Bank, and Reprex. We are testing the ability to license our software connected to surveying and survey recycling with <u>SINUS-Institut</u>, an innovative German survey company.

Surveyharmonies is based on our retroharmonize software package, a core element of all our data observatories. While <u>retroharmonize</u> will remain freely available, we envision it to be used as a component of crucial survey-based software tools for larger market research companies. We did not make any cash projection for Surveyharmonies, and included our hoped revenues in the 'partners' revenue. After testing with our partners, the first commercial beta test of this service with clients in at least two countries using different language questionnaires is scheduled to January-February 2023.

## Value for Hague as ImpactCity

Our message is simple: doing business and doing good for the city of the Hague means a vote for Reprex. We would like to win The Hague Innovators Challenge 2022 because we believe we could multiply our growth in partnership with the Hague. We have a significant budget to develop our observatories, and our company is already located in the Hague, in Apollo 14—but most of our team members, not to mention the observatory's non-data personnel are not based in our beautiful and smart city. The observatories are important platforms for our growth, and they could create a lot more jobs and impact in the city than in our startup company. Should we win the prize, we would spend the €25,000 on one thing: to develop our observatories into a real public-private partnership in the Hague, with a permanent office in **Apollo 14** or the **Hague Humanity Hub**.

- Organize an open data hackathon on <u>Open Data</u> <u>Day 2023</u> to find potential new civil society, individual, or small creative enterprise partners for our observatories.
- In partnership with the Hague, open a project office for the future European Music Observatory (a future Europeana-like EU body, for which our Digital Music Observatory is an official prototype supported by the EU from 1 January 2023) and make sure that the entire PPP will be permanently placed in our city and within the ImpactCity ecosystem, multiplying Reprex's direct contribution to the Hague economy by a factor of 10.
- Create a web 3.0 application from the prize money to connect the <u>PAARD</u>, <u>DEN</u>, and an organization of ImpactCity's choice via Europeana with the rest of the world.
- Offer our <u>Smart Reporting Resources</u> to social enterprises in the ImpactCity ecosystem for nominal contributions to become our ambassadors of fighting big data inequalities.
- Increase our team presence in the Hague, and if conditions permit, move our entire team to the Hague.
- Organize workshops, meetups, and or conferences together with ImpactCity and the municipality to discuss the possibilities with international organizations for permanently settling the <u>CCSI</u> <u>Data Observatory</u>, the <u>Green Deal Data Observatory</u>, or the <u>Competition Data Observatory</u> in the Hague. These are in an earlier stage than the music observatory.

Project/organization title:

Name of submitter:

- Telephone number submitter:
  Email address submitter:
- Company Name:
- Company business address:
- Postcode & place of business:
- VAT number:
- Intention to be established in the Hague:

Reprex: Big Data For All Direct contributions to SDG 16&17, and indirect contributions to SDG 4, 5, 8, 11, 12 Daniel Antal, CFA +31 615 058460 daniel.antal@reprex.nl Reprex bv Granaathorst 369 2592TA 's-Gravenhage NL 861587893B01 We are established in the Hague