Provisional White Paper

Analysis

Human civilization is continuously trying to pursue the improvement of its conditions through science and technology. In a pre-digital society, centralized institutions played a key role in associating talents and resources. However, it could only accommodate for a thin layer of actors who could access high-end education, the relevant social network and opportunities. In a digital society where information knows no bound, where prototyping is faster and cheaper, and where social interactions have no geographical limitations, education, talents, resources, and opportunities don't need to be centralized and exclusive anymore. Moreover, when information becomes open, it favors the development of higher orders of collective and distributed intelligence which can overcome the solving power and efficiency of centralized institutions.
In a world where inequalities are still massive and where unprecedented crises are emerging on a global level, we can't rely anymore solely on Academia and the Big Tech world. On the one hand, in academia, professional scientists (0,1% of Humanity) work in and career-centric organizations to produce knowledge, tools, and methodologies. In addition, public institutions lack the agility to explore emerging subjects and fast-prototype projects. On the other hand, start-up companies are agile but need to focus on high-margin markets. There is a big gap between what public institutions and companies can do. It is mostly filled by emerging fields of research, problems affecting people who can't really pay for a solution, challenges that require interdisciplinary approaches and, often, a critical mass of participants.
In order to move beyond centralized organizations, new types of infrastructures are necessary to accommodate both the distributed nature of the multitude and the cost of breaking existing social boundaries based on jobs (like between installed researchers and professional amateurs). If successful, such infrastructures should multiply by at least 10 the number of contributors working on solving the most urgent and important problems on our planet.

Vision

Just One Giant Lab (JOGL), is the first research and innovation laboratory accessible to anybody, operating as a distributed, open and massive mobilization platform for volunteer-based, IP-free task solving. JOGL helps sync humanity onto solving our most urgent and important problems using Open Science, Responsible Innovation and Continuous Learning. JOGL partners with academic labs, companies, schools, startups, foundations, NGOs and public services to create massive mobilization on distributed and participatory research programs for understanding and solving Health, Environmental, Social and Humanitarian issues.

Research and Innovation need a new deal
To call forth the power of communities, theses are the core JOGL values:

Missions

1. Help the creation of open knowledge, tools, and methodologies to understand and solve our most important and urgent problems
2. Give everyone a chance to challenge themselves and learn in the process
3. Sync humanity for long-term impact through collaboration
4. Go beyond the traditional academic and corporate frameworks
5. Provide legitimacy and opportunities to leaders and contributors around the world
6. Give contributors direct access to the doers of the world
7. Make research and innovation more inclusive, accessible and responsible
8. Offer a public window to the world of inventors and doers, their passion, their struggling, and their achievement
9. Focus on the 17 sustainable development goals that are defined by the United Nations

Ambition

By making the process of contributing to solving important challenges accessible and valorizing for anyone, we want to multiply the number of contributors by 10 (from 5 million to 50 million) in 10 years, while making all produced knowledge, tools and methodologies universally open for use and adaptation.

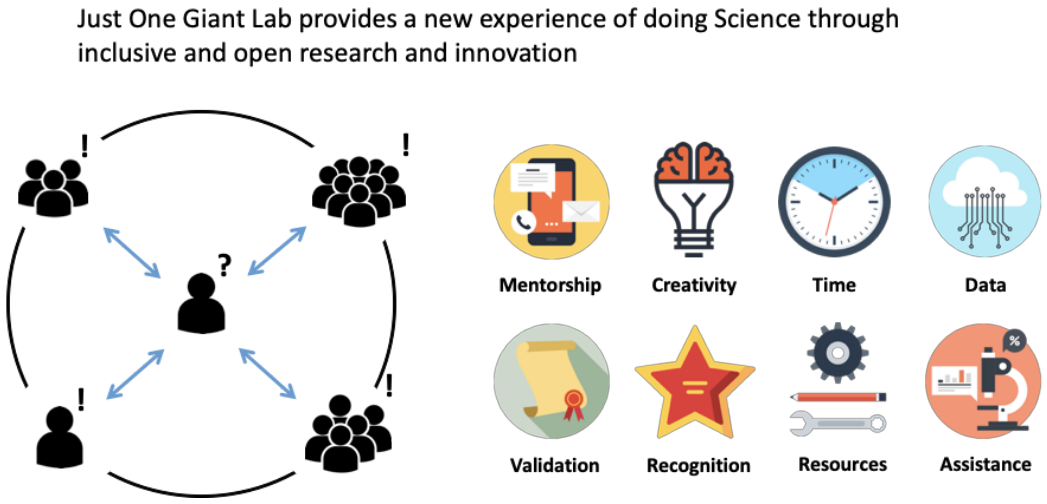
Basic platform architecture

JOGL needs to solve a complex challenge: it needs to provide an attractive tool that easily onboards inexperienced or novice technology users while providing powerful functionalities to handle dynamic project management. Moreover, it aims at becoming a reference for publishing open science and innovation. Bringing those two sides together in the same piece of technology requires carefully crafted UX. Finally, because a lot of knowledge will be stored on JOGL, it will need to be efficiently searched and displayed. To this end, we will bring the power of Artificial Intelligence and data visualization to link and understand published data.
In order to be versatile, and iterate quickly, we decided to have an object-oriented approach. Each object can be connected to another object according to different types of connections (author of, parent of, following, etc). Thus, this allows for changes to be made on parts only, quickly and easily (reduced collateral effects). Moreover, this

approach allows us to map and study the landscape of knowledge, collaborations, and organization in a meaningful way using network theory.

We decided to focus on the following core objects:

- Feed: Follow and share updates, news, results and opportunities about your project to various communities
- Challenge: Aggregates project and allow for communities to solve ambitious goals.
- Project: A defined initiative with specific goals, needs, opportunities and leadership.
- User: Defined by its interests, skills, activities.
- Organization: Moral entity (company, non-profit,...) existing in the physical world.
- Community: A network of users, projects, organizations, resources, needs and opportunities.
- Needs and resources: Special objects used by JOGL to match people, projects and organizations together
- Notifications: Be aware of what happens around you
- Direct messaging: You can contact anyone on JOGL directly.



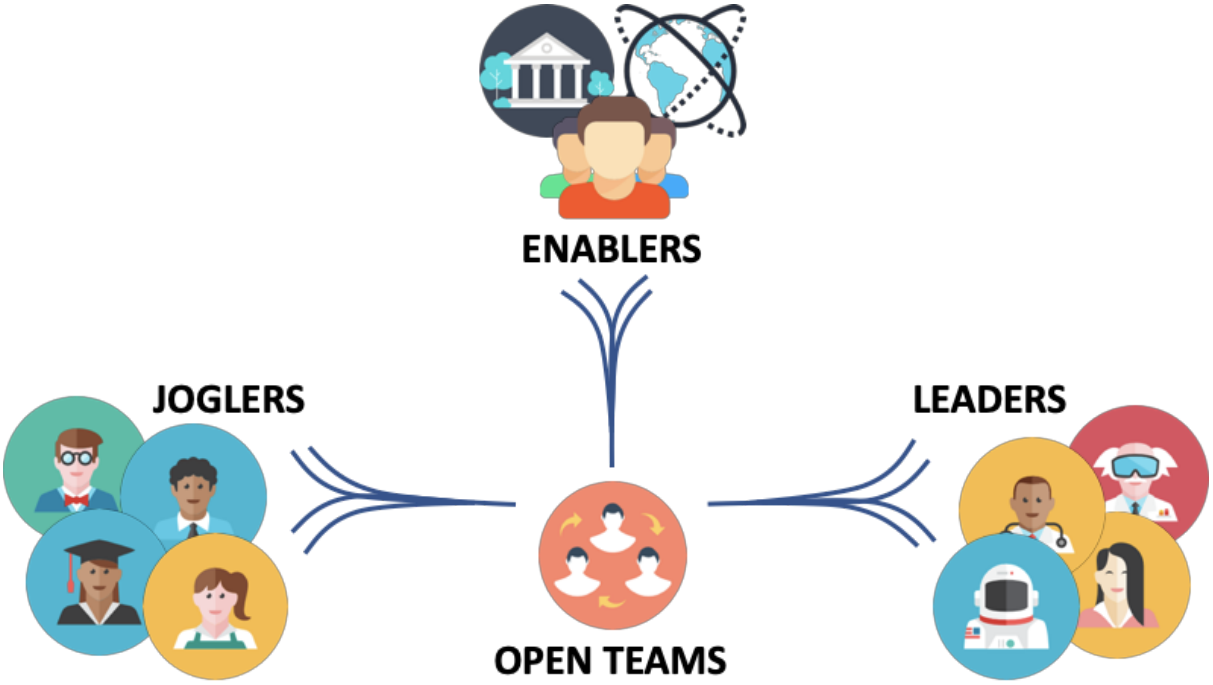
Modus Operandi

Our experience working with communities and distributed projects has given us an understanding of the key role of "**Trust**" to make collaborations fruitful. In order to establish a trustful relationship between contributors who don't necessarily know each other, we will introduce roles within JOGL that will state a set of responsibilities for each of them. Succeeding in facing those responsibilities will make you more trustworthy within your community and the global JOGL community. Failing them will however have the opposite effect.

Here are the three roles that we will implement at first within JOGL:

- **Leader**: A legitimate (group of) person who has for responsibility to bring a project to completion or to a given milestone. A leader is expected to have experience, time, resources to make the project successful. A leader can be for example a researcher, an entrepreneur, a project director within an NGO or public institution.
- **Contributor** (Jogler): Any person who wants to commit to helping a project on a given need. A contributor's responsibility is to do what he/she committed on. A contributor is expected to have relevant experience, time and autonomy. A contributor can be for example a professional, a student, an amateur or any person capable of matching the level of difficulty of the need.

- **Enabler**: An organization who seeks to provide resources and opportunities to impactful projects or who wishes to organize a challenge to birth new initiatives. An enabler's responsibility is to deliver the resources it promised. An enabler can be a foundation, a research/innovation fund, a big or small company, a non-profit. It can provide tools (software/hardware), skills (pro bono), workspace, free services, visibility and/or funding.



Matching needs, resources and opportunities

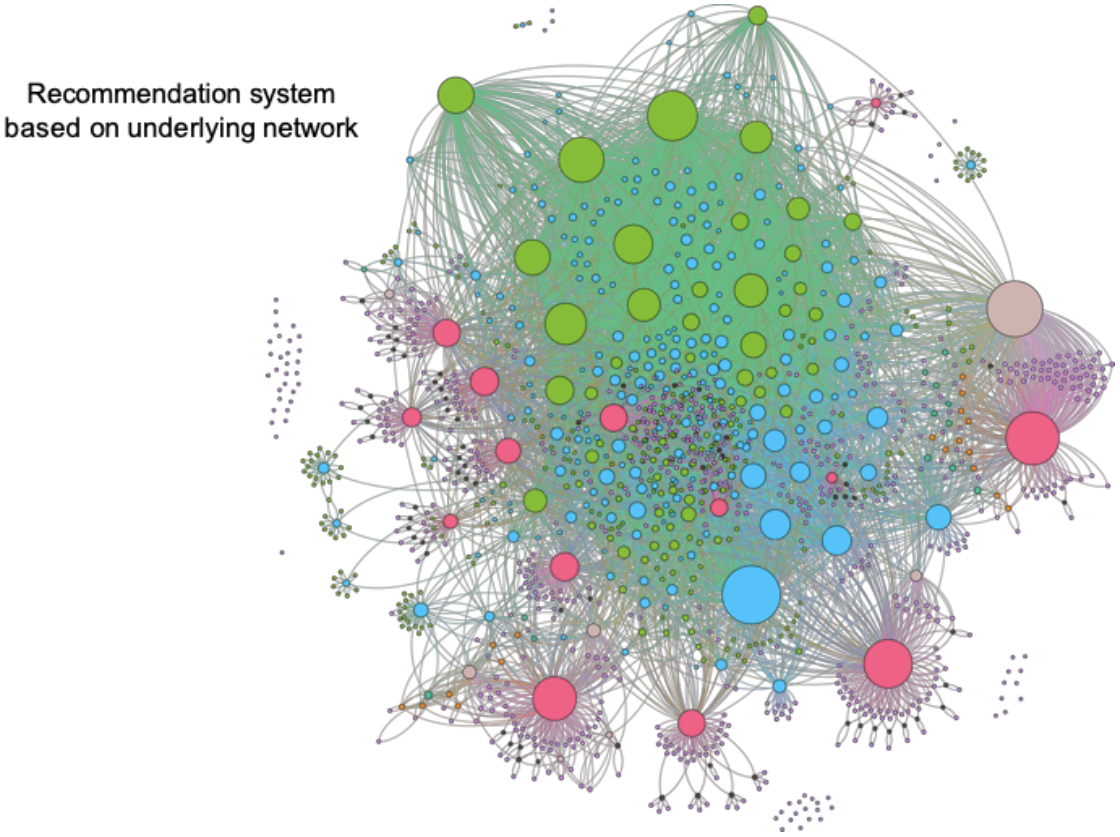
While JOGL can be used autonomously by any person, projects or organization, the complex networks of stakeholders that surround specific social/environmental problematics or research subjects are hard to navigate, even for the most professional and experienced organizations. At JOGL, we wish to offer a focusing lens to enable the synchronization of a large number of talents, ideas, resources and stakeholders through the organization of challenges that remains open until a solution is proposed and tested and validated.
It consists in providing incentives through opportunities to gain legitimacy and resources to an existing or new project, thanks to a college of enablers (organizations providing resources), with the help of the larger community of JOGLers. Because the value to gain is higher than with any single project alone, challenges are more ideal to recruit partners and collaborators around a specific problem to solve.

In order to synchronize large communities, JOGL needs the support of AI to smartly sift through the extensive user data generated and recommend useful content and actions for the benefits of the projects. The objective is to help people and communities to efficiently find what they need to achieve their research goals, provide all possible incentives to support projects and challenges. The smart compiler ("Brain") provides such a solution to recommend content and actions for continuous learning, efficient project management, redundancy reduction and maximizing impact at the individual or group scale.

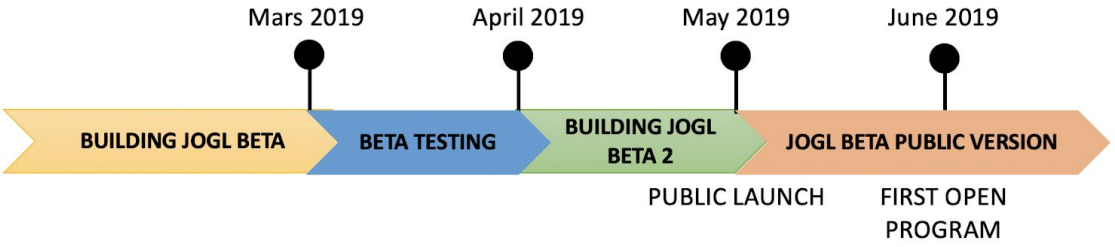
The Brain will take as input the current network of users, tasks, projects, results existing on the platform as input, and use predictive modeling to recommend new links in this network, providing the user with a prioritized list of relevant objects:

- Users to follow
- Projects to follow/participate in
- Tasks / Opportunities to solve
- Resources / Data to use for their own project
- Content to explore

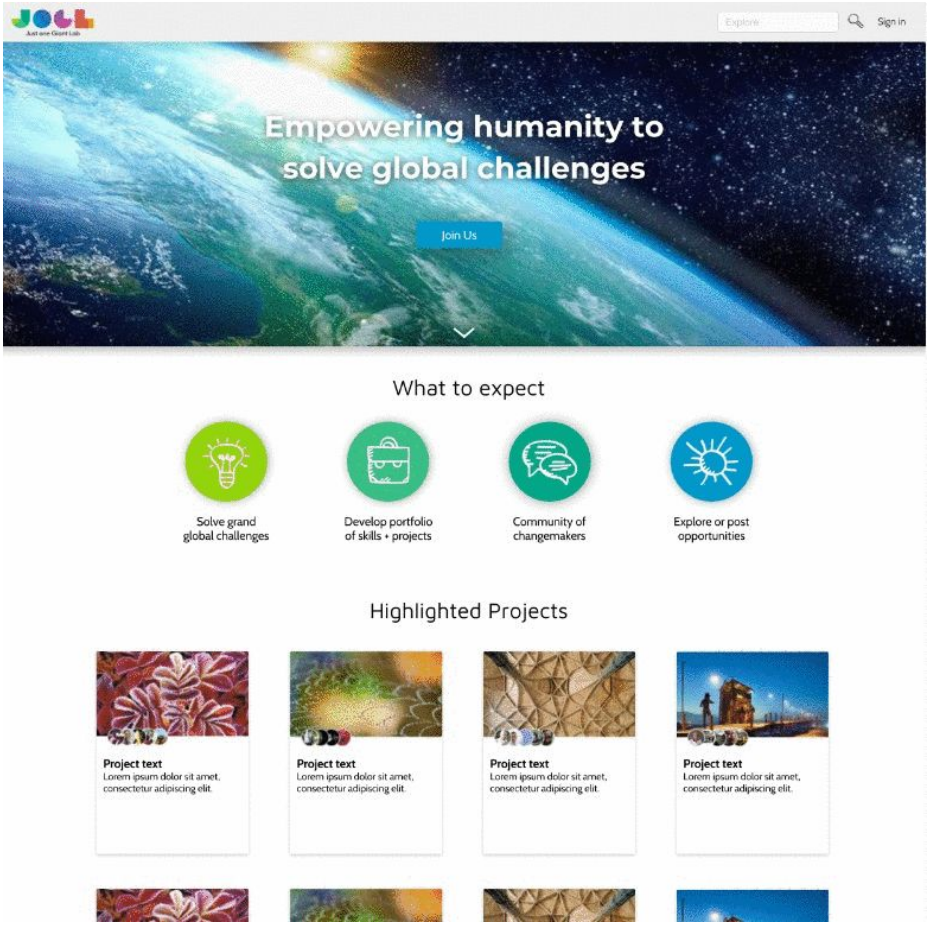
Finally, the Brain will learn from user behavior through machine learning, using both usage data (user accepted this recommended task) as well as micro-surveying (button “not for me / not interested” to express lack of interest for a task/person to follow etc)



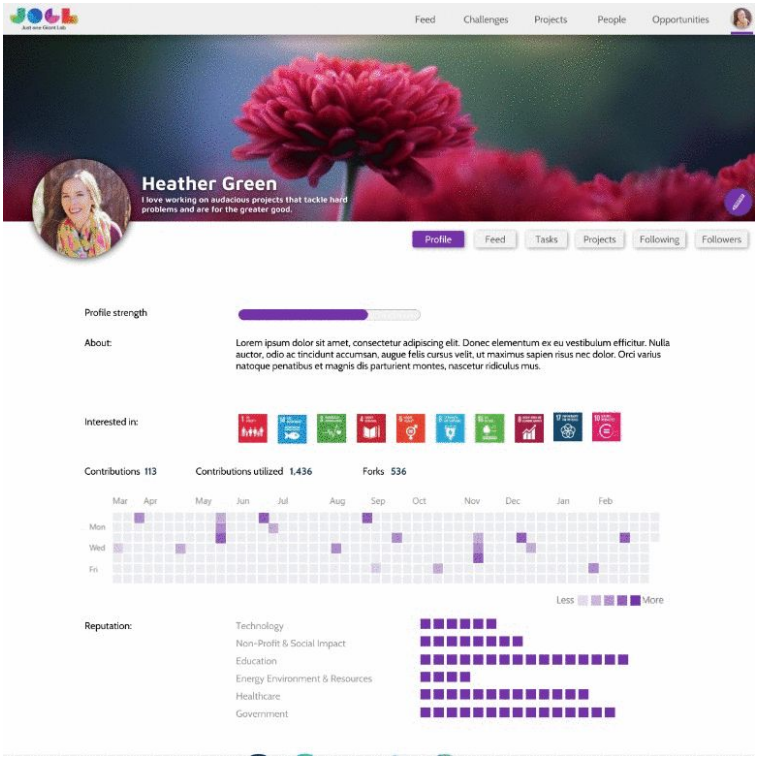
Timeline



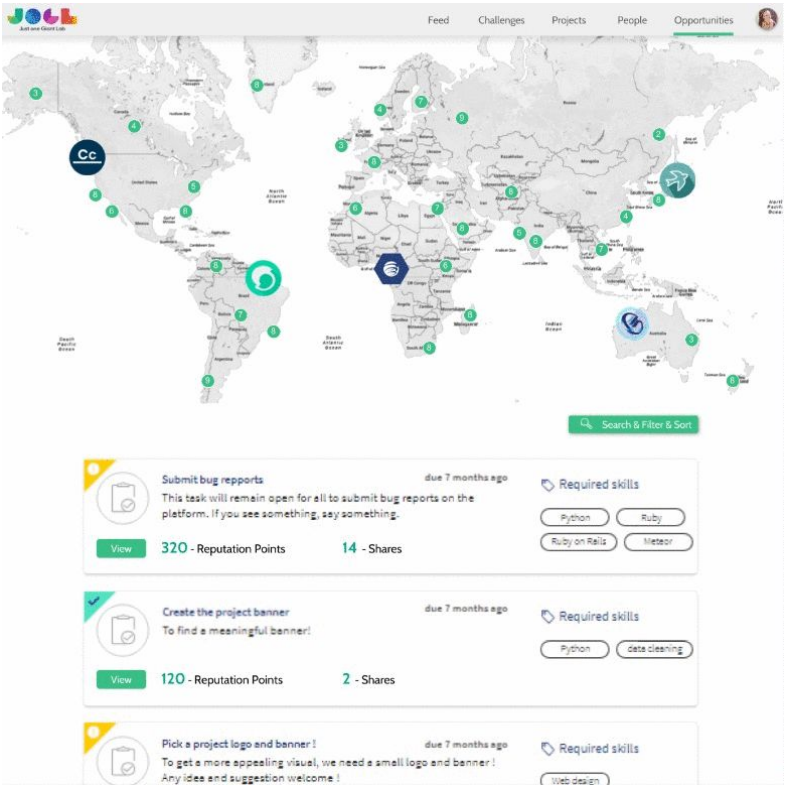
Example of features (will not necessarily look like that in the end)



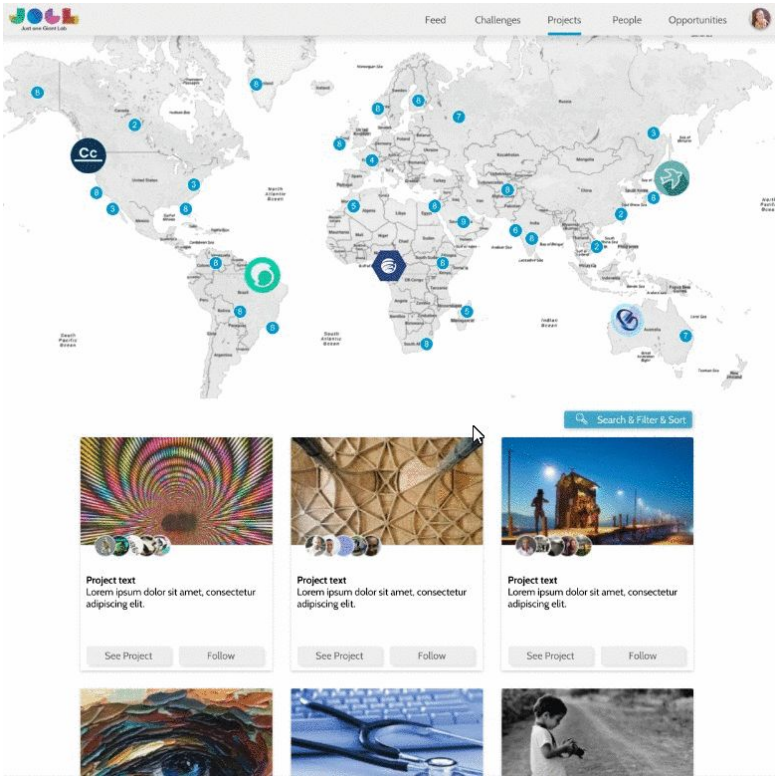
- Explore global challenges
- Find interesting projects working to solve them
- Find people passionate about making a change.



- Get recognized! Build the strength of your profile by contributing to solutions
- Gain reputation, badges, and 21st century skills
- Showcase a portfolio of projects



- Explore opportunities and tasks
- Earn reputation and shares by completing them
- Work is validated through peer-review



- Explore the community
- If you find a project or an innovation that is useful, copy it
- As you do, shares are awarded to those that created it,
- Everyone is rewarded, as the sum becomes greater than the parts.