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Lessons learned at the first Ideas Lab in Austria

Observations of the Selection process of Research Groups on Mental Health for Children and Adolescents
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Introduction

In 2015/16, Technopolis conducted a study on how the public sector could enhance its support for research and innovation with a view to increase opportunities for innovative research that may in turn lead to radical innovations.¹ The underlying hypothesis of the study was that the relationship between public research and fostering innovative research might involve both a higher degree of freedom in research and linked to that, more readiness to risk-taking. The study was mainly based on two workshops in which stakeholders from the Austrian research and innovation funding community presented and discussed international experience from various angles. In such a setting, the Research Council of Norway presented its experience with sandpits as selection process for most innovative and collaborative research projects. The Ludwig Boltzmann Society was particularly interested and engaged a network of specialists in such processes, facilitating a similar workshop one year later in May 2017.

The first ideas lab was held in Austria following the call for projects in the domain of "Children of mentally ill parents: The hereditary and environmental conditions of disease outcomes". The following box refers to the information provided for the call for ideas:

Call information:

The Ludwig Boltzmann Gesellschaft (LBG) is an independent research funding organisation with a major focus on the health sciences. With its 18 research institutes and clusters and approximately 600 employees, it conducts world-class research with the aim of generating innovations for society. The LBG is convinced that innovation is also the result of openness, multidisciplinarity, internationality, and a clear focus on quality.

A full 27 percent of all diseases in Western societies are already attributable to mental disorders meaning that more than 83 million people are affected by mental illness (WHO, 2015. In an Open Innovation project unique to Europe, dubbed "Tell us!", the LBG brought patients, family members and healthcare professionals into the effort of generating research questions in the field of mental health. Thousands of visitors contributed to the online platform, from more than 80 countries and with 400 high- quality inputs – that is the result of this crowdsourcing initiative. The submissions were analysed and clustered, rated by the crowd and a jury of experts, and then developed into research approaches. Securing mental health for children and adolescents crystallised from the analysis as the highest ranked issue.

Therefore, LBG announces a seven years funded multidisciplinary research programme focusing on mental health of children and adolescents. In particular, as the children of mentally ill parents have a higher risk of developing mental illnesses themselves, the initiative has a specific focus on: *Children of mentally ill Parents. The hereditary and environmental conditions of disease outcomes.*

In order to facilitate the successful start of excellent research projects, LBG plans to host an interactive and free thinking workshop event, called the Ideas Lab. During the Ideas Lab a selected group of scientists, from a diverse range of disciplines, will come together to immerse themselves in an exciting collaborative thinking process. In this creative environment, the Ideas Lab aims to uncover innovative solutions to meet the defined research challenges.

Our aim is that the Ideas Lab will enable researchers to perform transformative research on mental health for children and adolescents that will have a strong societal benefit, potentially taking revolutionary approaches to the complex challenges in this area.

It is expected that in total EUR 1 to 1.5 Mio. per year will be available to fund up to three multidisciplinary groups of Principal Investigators arising from this Ideas Lab over a period of up to seven years. The Principal Investigators (with an agreed on speaker and a co-speaker) together with further recruited researchers, a liaison officer and technical and administrative staff will form and run the Ludwig Boltzmann Research Groups on Mental Health for Children and Adolescents.

The research groups will be placed at Austrian Universities. It is expected that the multidisciplinary research groups will build strong ties with the Austrian scientific community and will work closely together with key stakeholders such as patients organizations, professional associations, user-crowds etc.

Source: Ludwig Boltzmann Gesellschaft

I was invited to support the LBG as a coach in the preparation prior to and during this event, and to provide my observations and feedback. My tasks were in particular to provide support in final drafting of official documents such as call documents, to accompany the process during preparation and the ideas lab itself, and to provide a room for reflection all over the process.

 $See \ http://www.w-fforte.at/fileadmin/Redaktion/Studien/2016 Radikal Innov_Endbericht_barriere frei.pdf$

¹ Katharina Warta, Tobias Dudenbostel (2016): Radikale Innovationen – Mehr Freiraum für innovative und risikobehaftete Forschung. Technopolis: Endbericht.

This report is based on the observations of this process and summarises the points I find most remarkable.

1 The dimensions of risk-taking concerning content and outcome

Starting a new thing can be risky. This holds true for researchers and innovative actors in business and society, but also to research funding organisations. Taking the risk makes sense as long as it opens an opportunity for some benefit that would not be possible to achieve in a perfectly secure and foreseeable environment. We therefore underline three dimensions of risks that have been taken by LBG, that are linked to an increased potential of entering new fields of research. Section 2 will then discuss the conditions to keep this risk under control.

1.1 Radically bottom up

The first aspect of the actions implemented by LBG with associated risks was the way the thematic field of the call was defined, namely an open crowd sourcing process, based on bottom-up suggestions of researchers and stakeholders in the field, i.e. patient's associations. There was no top-down intervention in the decision, i.e. from the LBG board or from the governance of potential host institutions. This made it possible to come up with a programme that seems unlikely under other circumstances. Incumbents in leading positions would probably not have dedicated a program of similar size to children of mentally ill parents, for simple reasons of power: Within medicine, psychiatry does not seem to be positioned as the supreme discipline². Within psychiatry, the specialisation on children is rather recent and again, probably less recognised in the medical corps than psychiatry of adults. Finally, children of mentally ill parents are potential clients or patients, that don't even have their own diagnosis! Putting such a powerless minority in the focus of one of the most generous thematic research activities is courageous and promissing.³

1.2 Young researchers get a big chance in a non-hierarchical setting

The call addressed "experienced researchers with up to 8 years of post-doctoral experience or equivalent qualifications (the Principal Investigators shall have been awarded their first $PhD \leq 8$ years prior to 1 January 2017, i.e. after 1 January 2009)". This condition puts the programme in line with some of the most prestigious and competitive grants for young researchers. Comparable funding for researchers at this career stage in Austria and Germany are the Vienna Research Groups for young investigators of the Vienna Science and Technology Fund (WWTF), the Emmy Noether Programme of the Deutsche Forschungsgemeinschaft (DFG) or the Sofja Kowalewskaja Programme of the Alexander von Humboldt Foundation (AvH). In contrast to the LBG call, all of these programmes entail one single key researcher receiving funding to build up his or her research group. The Ideas Lab is different as nobody knows at the outset who will be leader (Principal Investigator) and who will participate (Co-Investigator) in the project at the end. Indeed, roles have changed during the Ideas Lab, and only towards the very end, the PI of each proposal was defined.

To a certain extent, this characteristic of the programme thwarts classical hierarchical structures in research. In practice, it neutralizes 'the Matthew effect'. As an observer, I remember a very particular moment when it seemed uncertain whether the participants at this Ideas Lab would be able to think "big enough" and to commonly select an individual to take a leadership position. At this very moment, the risk was perceptible. Mentors reflected on the right way to react, to support teams without introducing a bias in supporting one team more than the other. They shared the concern, some feedback presented commonly within all groups: Individual researchers felt particularly tired or stressed, the moderators had experienced this often enough and seemed confident. At this very moment however,

² We suggest that a comparison of income of top surgeons and top psychiatrists could support this observation, as well as a comparison of congress venues in different medical disciplines.

³ It is well known that bottom-up processes or open consultations are often used primarily to inform decision makers, but not to define the final decision.

we knew: every time, it's different. This time, funding was particularly important. The final part of the Ideas Lab was three hours shorter than usual and most researchers seemed to be less experienced in managing big projects than in other calls. This moment of insecurity followed an optimistic phase, nourished by the observation of so many smart and open minded people engaged in the process. The moment of insecurity appeared some 24 hours before submission of proposals, I could not precisely say how long it lasted. I would underline however, that it is inherent to risk taking, and apparently, stimulates humans to give their best, to work more than ever, to skip sleeping hours and to engage in the experience.

At the end of the Ideas Lab, two projects were selected and it was impressive to see that solid and ambitious endeavours could be designed in such a short timeframe, with strong commitment by participants, without the well-known "single-star" culture.

1.3 The amount of risk: Costs and visibility

Risk means that there is something at stake. What happens, what is lost, if something goes wrong?

Ultimately, the question will be whether something new and relevant has been achieved by the funded research groups. For the time being, we can only refer to the selection process, that pertaining to the risk that no project might emerge from the Ideas Lab good enough to receive the approval of the selection committee.

Today we know that by the end of the Ideas Lab, everything went fine, as two research groups have been selected to submit a full proposal. But what was at stake? Firstly, the entire process was costly, this financial investment has to be considered, and would be lost. Secondly – and this seems even more important – this very first Ideas Lab in Austria has a high visibility, at least in the research funding sector. If it went wrong, the probability of being given the opportunity to try it a second time would be very low. This could even have had secondary effects on the entire Open Innovation activity of the LBG.

The LBG was ready to take this risk and increase visibility by inviting interested stakeholders from other funding organisations to the event, to meet the moderation team and the evaluators. Learning beyond institutional frontiers did not seem a threat, even though the outcome was not guaranteed.

2 Keeping control over the process

A counterpart of openness to unexpected results is a clear and coherent setting, consciously maintaining specific aspects under control: Risk needs to be managed, in line with the compliance to an organisations' rules. The following five elements helped to manage risk, by controlling the process without reducing the space for unforeseeable outcomes.

2.1 Sufficient upfront investment in the LBG team and knowledge acquisition

LBG invested in a new team with one person entirely in charge of this process who was hired just before the opening of the call for ideas. This person was in charge of the process both in preparing and in accompanying selected teams once they start research activities. One of the team members had participated at an ideas lab abroad. They started early to collect relevant information on international experience, both related to the selection process (ideas labs) and to the research domain (children of mentally ill parents).

2.2 Regular information loops with the executive level (CEO, board) of the LBG

The 2 person team in charge of preparing and managing the process benefitted of a high degree of freedom in defining the process, selecting the various actors (moderators, mentors and the coach) and defining selection criteria. Still, there was transparent communication to the decision makers at the executive levels. This is of utmost importance if an organisation decides to engage in a new process or

project: the autonomy of the operative level has to be accompanied by feedback loops with the executive, to avoid the any unnecessary risk of "bad surprises".

2.3 Professional moderation

LBG worked with most professional and experienced moderators of ideas labs. In this sense, they avoided any risk as they would not, for example opt for a local team experimenting within this setting. The moderator team was accompanied by one of the developers of the setting from UK national research council. The moderators have been very appreciated by the participants, which is certainly due to their communication capacities and cooperation with each other. They had a concept, they were funny, and caring. After a first day of introduction, the exercises for participants became increasingly demanding. Moderators insisted that participants should have confidence that this process works well and that this 'investment in confidence', based on professionality, experience and guidance is key for risky projects.

2.4 Regular meetings with the mentors/evaluators group

One particularity of ideas labs is the unconventional role of mentors: A group of six experts, one of them leading the committee, accompanies the process with changing roles. They start as evaluators of initial proposals, on a written basis. Based on these evaluations, the president of the committee and two other experts together with one representative of the LBG then select the candidates that are invited to the Ideas Lab.

During the workshop, until the submission of projects, their role changes to that of mentors for researchers. They participate in the ideas finding process, provide feedback to researchers, and ask questions that might help clarifying ideas and concepts.

Only at the very end, once the research groups have submitted their proposals, their role switches back to that of evaluators, assessing the project proposals based on a written proposal and a 10 minutes presentation.

This work is demanding, and again, it has been well prepared. Regular skype meetings introduced the mentors to the nature of this exercise, to their tasks and created a team long before they really met.

2.5 Coaching

Finally, the team engaged myself as a coach, defining a space for regular reflection. We used these moments to go through achievements, based on written documentation prepared by the team.

3 Multidisciplinarity

Ideas labs are spaces where researchers define research questions that are relevant to a given problem in society, in the world, independently of the scientific discipline. While research on mental illness of course calls for some core disciplines, the call explicitly invited other disciplines and even persons who are not researchers to submit their ideas and candidate for the Ideas Lab. This kind of "open invitation" is not uncommon. The difficulty is to go beyond the invitation of "unusual" submissions, by defining selection criteria in a way that they get a real chance to succeed.

In this particular case, the selection committee proceeded as follows:

First, proposals were categorised in three groups: core disciplines, linked disciplines and distant disciplines.⁴ Second, they were assessed by three to four experts each. On this basis, around 50 proposals

⁴ Core distiplines are pediactric psychology, child sociology, pediatric neuroscience, and pediatric psychiatry. Linked disciplines are public health, nursing, nutrition, sociology, social work, immunology, medical biotechnology, psychotherpia, medical physics, genetics/molecular biology, alternative medicine. Distant disciplines are photography/art, poetry, dance, theatre, communication science, network science, system theory educational science, computer science, e-health, media art, philosophy.

were submitted to a selection committee to choose the projects to be invited to the Ideas Lab. Proposals on the top end didn't need further discussion and perhaps unsurprisingly, these candidates all came from "core disciplines".

The crucial point was that in the selection of the remaining candidates, a priority was given to heterogeneity of disciplines. The selection took into consideration the potential benefit of the discipline represented by that individual to the Ideas Lab process. As a consequence, "outsiders" had the opportunity to join the Ideas Lab, and "insiders" had the opportunity to face new approaches to research.

4 The involvement of the target group

The call text explicitly refers to the aim of a "strong societal benefit" and the expectation that research groups will "work closely together with key stakeholders such as patients' organisations, professional associations, user-crowds etc."

As with multidisciplinarity, the aim to support research relevant to society is common to many funding programs. Again, we want to underline the concrete intervention that strengthens this emphasis sufficiently to make a difference compared to other bottom up, quality based funding programs.

Most importantly the LBG employs a liaison officer, namely the person currently in charge of organising the call and the selection process. This person has established preliminary contacts with stakeholders and patients' organisations and will support research groups in networking.

Secondly, the relevance of including target groups became visible at the outset of the Ideas Lab, when two concerned women, both daughters of mentally ill mothers and members of a patients' organisation, presented their experience.

5 The setting and delivery of the ideas lab

The ideas lab itself took place in a large and comfortable setting, at a prestigious hotel in the Vienna Woods. People worked hard, and this setting showed respect for this effort.

Five phases can be distinguished in the delivery of the lab:

- 1. **Opening:** The lab started with guest speakers both from the LBG and from outside, as well as some information on the organisational settings. The presentations were chosen to introduce everybody both to the theme of the lab, and to each other.
- 2. **Ideas ideas!** In the second phase, which lasted 1.5 days, participants were stimulated and requested to generate ideas: many ideas, very quickly, in permanently changing group configurations. This phase more or less forced participants to open up their minds. Moderators had an important role as they were the only ones who knew what was to come next. By and by, the wall was covered with Post-it notes. With the support of the mentors, ideas have been clustered. At the end, people were surprised by the amount of ideas, but also irritated by their vagueness.
- 3. **Forming of groups and projects:** In this phase of excitement and insecurity, participants were invited to start forming groups and projects. People were allowed to change groups, but this was up to the participants. It took about 24 hours to consolidate the groups, and to transform them into research teams in competition with each other.
- 4. **Proposal drafting:** 24 hours before the deadline for submission of proposals, five competing teams started drafting a proposal and preparing their presentation. This phase started with a first presentation of teams and project ideas to the plenum followed by individual feedback to the teams by the mentors group and ended with the submission of the proposal and a 10 minute presentation of the proposals.

5. Selection: The selection committee consisted of the mentors, evaluating the projects along a list of list of five criteria and a 20 point-scale. Two projects were selected. Participants were informed about the decision immediately in the final plenary meeting.

The two winning teams have then been invited to submit a full proposal for funding, which will be submitted to the LBG and provide the basis for negotiation with host institutions.

6 Conclusions

In Autumn 2016, the LBG decided to engage in a new type of selection process to identify research groups on Mental Health for Children and Adolescents with a focus on children of mentally ill parents. These research groups should be formed by Principal & Co-Investigators arising from an Ideas Lab that was held in May 2017 next to Vienna, with a potential to receive a 4 year funding up to EUR 3 Million per group. Funding objectives addressed societally relevance, the development of novel structures for scientific R&I, interdisciplinary and translational research approaches and strong ties with communities involving patients, family member and end users.

Observing several phases of this selection process leads us to the following lessons learned:

- 1. The strength of this programme is the thematic focus, that has been defined in a broad consultation process by researchers, stakeholders and target groups. Throughout the process, it was clear that this focus makes sense, and that it calls for a multidisciplinary and multistakeholder approach.
- 2. A consistent set of selection criteria set the framework to come up with projects in line with the programs objectives. Any organisation providing funding to scientific research has to consider the criterion of scientific quality. In this case, next to scientific quality, relevance (and linked to that, the involvement of stakeholders and target groups) as well as interdisciplinarity (and linked to that, the involvement of disciplines that are apparently distant) have guided the entire selection process.
- 3. The ideas lab has shown to be an appropriate setting for this kind of program, given its (financial) scope and the underlying goal to stimulate a new way of doing research, in closer interaction with the target groups: It was designed to "bring together a unique mix of expertise from various disciplines to form research teams that produce high quality research proposals. The emphasis will be placed on a cross-disciplinary approach to foster new collaborations and bring new thinking to the research challenges."5
- 4. Engaging in new ways of research can be risky. A professional design and management of the process help to control the risk and considerably increase the chances to succeed. The LBG engaged a small but competent staff in-house and worked together with most experienced moderators, consultants, and a high-level group of mentors/evaluators. The collaboration with these external contributors started well before the ideas lab, so that roles and tasks have be clarified in a general climate of confidence and mutual knowledge.
- **5.** The generous premises and hosting of the ideas lab provided a favourable background: An ideas lab is an intensive process that leads participants through various phases, starting with a broad opening, followed by an intense ideas generation which step by step turns into project definition and finishes in a more competitive environment. This implies increased levels of stress and excitement of participants a comfortable environment is important to provide space and time for this demanding and rewarding exercise.
- 6. Given the novelty of this approach, ongoing stakeholder communication is a key to further success: The overall institution (in the case at hand, the LBG) has to understand the advantages of the concept of Ideas Labs and to integrate it into their overall policy and portfolio. Communication shall continue with the relevant institutional environment, thus research organi-

 $^{{}^{\}scriptscriptstyle 5}$ See http://www.ideaslab.lbg.ac.at

sations / universities (including host organisations), respective researchers, research funding organisations, to learn the pros and cons of research defined and funded by using the Ideas Lab.

There are some aspects where we see room for improvement, mainly concerning the transparency of the process and the framework during the Ideas Lab. Some key elements such as the agenda and the final requests related to the submission of the proposal could have been presented at the beginning and pinned in the room, to reduce stress. Indeed, stress resistance certainly helped to the teams to work efficiently in the end, but it is not clear to what extent this should be a criterion of success. Secondly, there was some uncertainty related to the role of Principal Investigators and Co-Investigators, and the possibilities to change initial preferences. Again, written rules on the wall would have helped to cope with insecurity and reduce stress. Finally, it would have been helpful to present the mentors with their (changing) roles at the outset, as well as that of the Liaison officer. Presentations in the plenary sessions were limited to 3-5 minutes' buddy presentations. The expertise of each of these persons might have been solicited more intensively if it was better known.

It is too early to assess the success of this process, as the research groups have not yet started their work. However, we can assess the result of the selection process: The two teams that have been selected have defined unconventional and interdisciplinary projects. The teams are international, linking the Austrian research landscape to more advanced centres in the domain of research on children of mentally ill parents. In both teams, a full time Principal Investigator will work in Austria, in one of the groups, this researcher is Austrian, in the other, she will move to Austria from the USA. The outcome of this selection process therefore seems most promising, both in content of the research projects and in the design of the research groups within a broader network of actors. Important ingredients for this was the clear definition of priorities of the LBG and the confidence in their partners in this process.

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