

TUUKKA TOIVONEN, EMMA NORDBÄCK, VILLE TAKALA

SPARKING SOCIAL INNOVATION THROUGH **CHALLENGE PRIZES**

– Evidence on Teams, Ideas and Incubation from Finland

COMPILED FOR SITRA, THE FINNISH INNOVATION FUND

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Sitra Studies 133

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Evidence on Teams, Ideas and Incubation from Finland**

ISBN 978-952-347-051-4 (paperback)

ISBN 978-952-347-052-1 (PDF) www.sitra.fi

ISSN 1796-7104 (paperback)

ISSN 1796-7112 (PDF) www.sitra.fi

More information on Sitra publications: julkaisut@sitra.fi

Illustrations: Iines Reinikainen, Avidly

Erweko, Helsinki 2018

SITRA STUDIES is a series of publications reporting the results of Sitra's future-oriented work and trials.



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Tuukka Toivonen, Emma Nordbäck, Ville Takala

September 2018

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SITRA - A FUND FOR THE FUTURE

Sitra is a future fund that collaborates with partners from different sectors to research, trial and implement bold new ideas that shape the future. Our aim is a Finland that succeeds as a pioneer in sustainable well-being.

Introduction

People often emphasise how complicated the problems facing society are. Phenomena that underlie societal problems often develop in ways that cannot be predicted. Complicated societal problems also tend to shirk definitions and solutions; when everything is intertwined there is a danger that a problem is never broken down into smaller pieces that are more easily managed. A challenge prize competition is one way to break down problems facing society into pieces that individuals and communities can grasp.

As the name suggests, a challenge prize competition involves putting forward a challenge to be openly solved. A competition makes it easier to find new ideas for solutions while offering a possibility for their development. In Sitra's Ratkaisu 100 challenge prize the teams developed their solutions during an incubator phase. The competition offered these 15 selected teams a place to develop their solutions and their own skills and knowledge.

This study clarifies how the incubator program affected the work of the teams during the competition. The report focuses on the underlying creative processes rather than on the details of the solutions that emerged as a result. This relatively open-ended report is based on data derived from the incubation period that concluded the Ratkaisu 100 challenge prize competition. So, while we hope that the report will be of interest to diverse readers interested in challenge prizes, the scope of this study focuses on ideational and team-related processes here that unfold in the context of "competitive incubation"

There has been active debate on the benefits of such competitions in recent years on the pages of the Stanford Social Innovation Review, and by Nesta, Deloitte, and McKinsey, among others. This research will bring a new point of view to this discussion by examining the impact of the challenge prize competition on the development of a solution on the team level. We believe that this point of view offers practical possibilities for applications and advance the theory of social innovation.

Although challenge prize competitions help in solving societal problems in different ways (by creating debate in society or breaking problems down to a solvable size, among other things), the key aim of any competition is to give rise to new innovations. The key to new innovations are the teams taking part in the competition and their ideas.

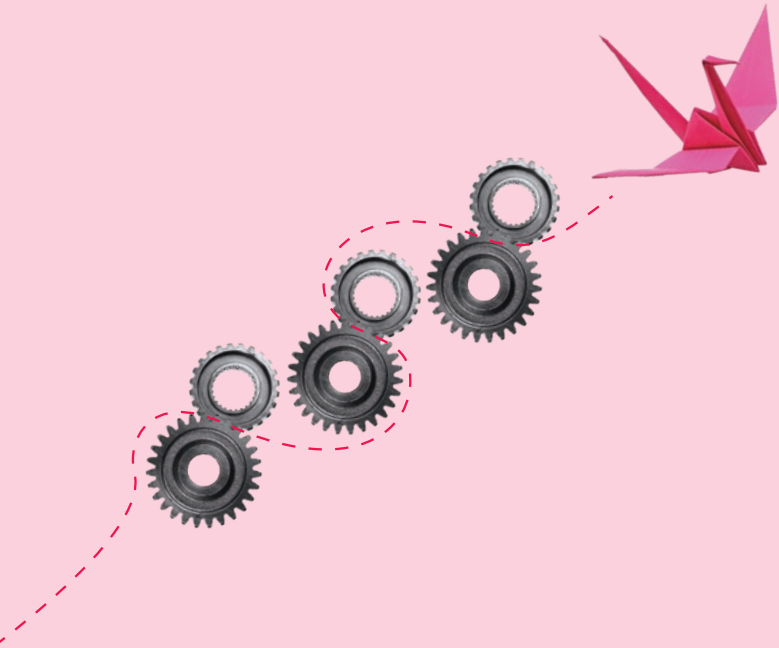
Shared development, learning, and creativity play key roles in the emergence of new solutions as the teams grab on to complicated problems facing society and we strive for innovations to improve how society functions. The study you are holding in your hands shows that a well-planned challenge prize competition can support teams while encouraging the emergence of new solutions.

We would like to thank the writers of the report - researchers Tuukka Toivonen, Emma Nordbäck, and Ville Takala – for rewarding discussions and their input into the development of challenge prize competitions. Thanks are also in order to Sanna Kaisa Seppänen and Jonna Hjelt, who assisted in the coding of the interview material. Above all, we send our great thanks to the teams of the Ratkaisu 100 challenge prize competition who eagerly participated in the interviews conducted by the researchers while taking part in the fast-paced development work. Without these interviews we would not be able to learn from the past and develop the future.

Helsinki, 7.5.2018

Kalle Nieminen
Leading specialist, Sitra

Riina Pulkkinen
Leading specialist, Sitra



Challenge prizes

can be a powerful driver in engaging innovators to solve wicked problems.

Foreword

As demonstrated in this report – in the right circumstances – challenge prizes can be a powerful driver in engaging diverse innovators to solve wicked problems.

If carefully designed and executed well challenge prizes can engage a much more diverse community of problem solvers, creating solutions that are better quality, sustainable and impactful, pushing frontiers and advancing society.

Challenge prizes are a method for innovation. They can be used to solve problems in almost any field by incentivising innovators to develop new solutions to neglected problems.

The formula is apparently simple: offer a financial reward for the first or best solutions, attract the best innovators, and give them the support they need to compete. Prizes specify a problem to be solved but incentivise solvers anywhere.

But getting this formula right needs fine tuning and carefully crafted design. Prizes are as much about the idea journey as they are about the end and the winning solution. This report explains how the journey is erratic: teams from different backgrounds and at different points on the journey need very varying support and develop at different speeds. Successful prizes are as much about the acceleration and incubation as they are about the prize itself and as this report shows the key here is flexibility.

This report points to the difficulty of encouraging collaboration in a competitive environment. This is not unique to challenge prizes. Indeed, many open grant programmes insist on collaboration as a criteria of funding as though this was an end in itself and thus force it to happen in ways which are usually unsatisfactory.

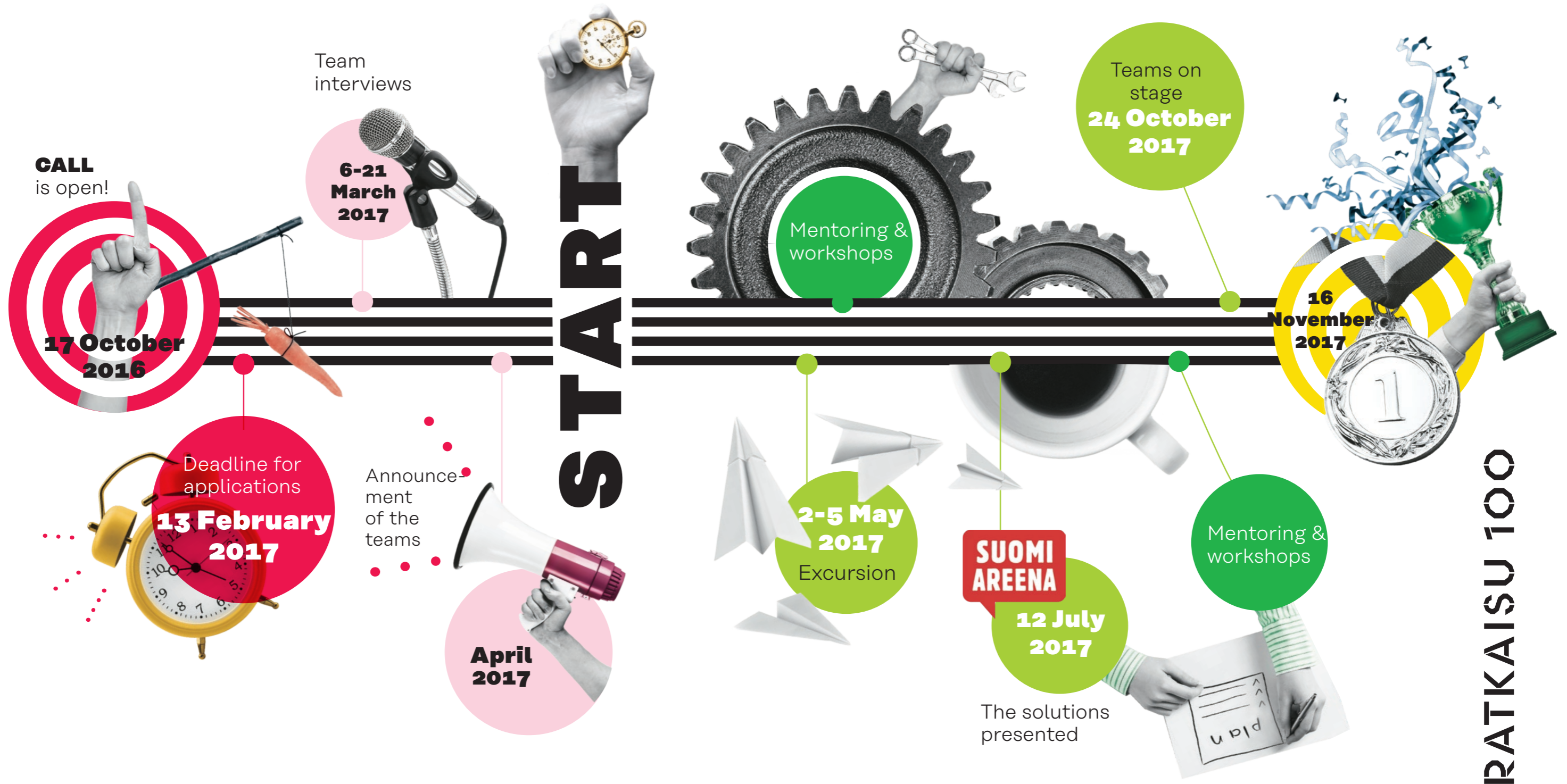
Prizes which are aiming at further along in the development journey – that set clear goals for success around level of maturity and scale – are more successful at encouraging collaboration. Here teams often need to join forces to beat the competition. But successful collaboration can only be encouraged and enabled through creating connections.

Challenge prizes solve problems differently by opening a problem up to the widest possible pool of innovators far beyond the usual suspects. It makes sense then that we are also open about asking what the problem is in the first place.

The topics of prizes vary but asking the public to frame the challenge prize as with Ratkaisu 100 and with our own Longitude Prize is a model which I think could be adopted more broadly. The public are rarely consulted on the direction of innovation funding which is strange when they are often the people that are most effected. If we don't want people to shrug or turn their shoulders at innovation but instead view it positively and engage with it, then this surely a model which should be employed more.

London, 27.9.2018

Tris Dyson
Executive Director
Challenge Prize Centre
Nesta



WHAT IS RATKAISU 100?

Even the most complex of problems can often be solved by simple solutions, which are realised, above all, through co-operation. Through a challenge competition like Ratkaisu 100, anyone can strive to create new innovations and make a real impact.

Ratkaisu 100 challenge prize sought solutions to key future challenges in the spheres of education and work. It was organised by Sitra, the Finnish innovation fund in 2016 and 2017 in celebration of Finland's centennial. The competition called for social innovations that could catalyse the effective identification and utilisation of people's expertise and abilities in a context where human resources and knowledge frequently move across boundaries.

The two winning teams, Positive CV and Headai were granted a total of one million euros to implement their ideas. The winners were chosen by an independent, seven-person jury. The jury assessed the effectiveness, innovativeness and feasibility of each solution.

Over the two-year period, Ratkaisu 100 progressed through three stages. First, members of the general public were asked what they thought was the most important social challenge affecting the whole of Finland (generating the above problem formulation). Next, Sitra launched a public call for teams with diverse backgrounds who were motivated to create innovative solutions. The call was open for anyone to submit their proposal. In the last stage, the teams received incubation support while competing to develop the most promising social innovation. The illustration above outlines the incubation journey of the 15 teams selected for the competition.

TEAMS

LifeLearn

“ The change in work requires a new type of learning. In LifeLearn - the social media of learning, learning is flexible, agile and communal and money can be made by teaching. LifeLearn is targeted for private users and organizations that engage reaching. Learning takes place in communities through discussions, pictures and videos, for example. Users from around the world can learn and teach one another new skills.

Headai

“ As the world and labour market undergoes radical change, it is difficult to know what types of expertise will be in demand in the future. Headai harnesses artificial intelligence to map the expertise of a company or an entire country. It is developed for companies as a tool for strategic management and ministries to support education planning. Artificial intelligence, which understands natural spoken language, produces expertise maps from open, existing online data, such as learning curriculums.

Positive CV

“ The Positive CV is a broad, personal record of expertise that children and young people can use to recognise their strengths. The expertise of children is not sufficiently highlighted using current methods and Positive CV is built to solve this lack. The model includes a digital platform, learning materials and teacher training.

OK App

“ The problem with some Finnish schools is their lack of appeal. OK App is an application that helps people recognise the optimal moments for inspiration and learning and cherish them. The goal for the application is to recognise motivation and social-emotional skills, provide feedback and develop them. After the optimal moments of inspiration are recognised the teacher can assign developmental supplementary tasks and the student's self-knowledge improves. OK App is for students and their teachers.

MunStepit (MySteps)

“ MunStepit intervention programme prevents young people from falling behind as soon as they leave comprehensive school. A personal resource coach travels with young people and provides support at a crucial crossroads in life. The programme prevents the social exclusion of young people. Students obtain mental resource education and the MunStepit coach is always available. The Programme lasts five years and is directed for young people, starting in the seventh grade.

Made in Empatia

“ In a more complex world, empathy is a civic skill that no one should live without. Made in Empatia wants to make Finland the most empathetic country in the world. Made in Empatia is a societal platform that brings together empathetic thinking and promotes learning empathy as a skill. It highlights and shares best practices and makes the effects of empathy more visible. The network platform brings participants together, inspires and informs.

Tsampo.

“ Researchers are the world's largest community of experts, but their expertise is not being utilised. At the same time, researchers' time is spent on funding applications and bureaucracy and not on research. Tsampo aims to solve this problem. Researchers are not well known and their expertise is not put to general use. Decision-makers and reporters often have difficulty finding the best expert on each topic. Researchers, in turn, spend an unreasonable amount of time preparing funding applications and completing administrative tasks, which reduces the time they have for research. Tsampo is for researchers, funding providers and those seeking to make use of knowledge.

Skillhive Next

“ Skillhive Next is a digital marketplace for expertise, which makes buying and selling expertise easy. It is directed for experts who want to work flexibly. Experts create a profile for the expertise platform and the service locates the right people to buy the expertise.

Osaamisbotti (The Learning Bot)

Job applicants can bid farewell to completing forms and let Osaamisbotti uncover latent skills. It functions so that the job applicant clicks on a link that adds a contact in Skype called Osaamisbotti. The applicant and Osaamisbotti engage in a text chat. The bot asks questions and the applicant responds. Finally, the bot uncovers applicant's abilities. Osaamisbotti helps applicants and simultaneously saves time for employment services. Osaamisbotti is created for job seekers and employers.

GoCo

Work and expertise are fragmented, gaining employment is difficult for many and the meaningfulness of work is eroding. GoCo network platform wants to extend careers by bringing together work projects and prospective participants. GoCo enables companies to make best use of all in-house expertise. GoCo functions so that the buyer of the work introduces the task to be completed and willing participants sign up for the task. The scope of the work is defined together, which also builds trust and the team. GoCo is for anyone who sells their expertise, those looking to have work completed and organizations who want to organize their internal work.

Mentoristit (The Mentors)

Peer mentoring platform Mentoristit brings mentoring to the digital era, making it agile and available to anyone. Mentoristit is a digital meeting place for people who want to develop and help others through mentoring. It works so that the user creates a personal profile in the digital service and the service matches the user with a suitable mentor or mentee.

Ura-Avain (The Career-key)

Ura-Avain helps those with disabilities find employment in the right companies. It improves the inclusion of people with disabilities, companies gain employees and society saves money. Ura-Avain is a workshop model that increases the inclusion of people with disabilities. In

Ura-Avain, tutors referred to as "special forces" run operations, find jobs and handle the bureaucracy and support those with disabilities at work. The workshop model is for people with disabilities and companies that employ them.

Sinä osaat! Tytöt ja teknologia (You can! Girls and technology)

Girls and young women have enormous potential and talent in mathematics and natural sciences, but they do not capitalise on it. The "Sinä osaat!" team wants to change this. Sinä osaat! Tytöt ja teknologia is the Center of Excellence, which inspires girls to work with technology. It organises events, training sessions and has a digital platform. It is targeted for young girls, young women, teachers and parents.

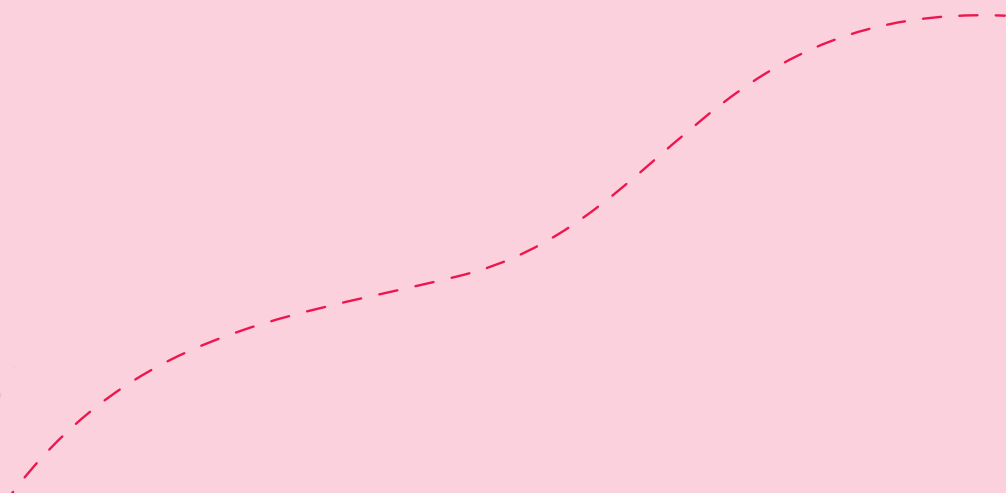
Integrify

The slow integration of immigrants erodes the national economy and human self-worth. Programming school Integrify speeds up the integration into Finnish society. Integrify is created for educated immigrants who speak English. Students who are accepted into the programme are taught programming full-time for six months. After this, they are able to work in IT companies.

Haaste.io (Challenge.io)

Haaste.io helps prevent social exclusion by helping schools recognise everyone's talent. Haaste.io is a mobile application that allows young people to learn future skills by completing challenges. Schools, communities and companies are able to create challenges in the mobile application, which are then completed by young people to collect merit badges. Haaste.io is for educational institutions as a teaching tool and for companies as a tool for targeted recruitment.

AUTHORS



TUUKKA TOIVONEN PhD (Oxon.) is an expert on creativity in entrepreneurship, collaborative spaces and social innovation. After completing his doctorate at the University of Oxford in 2009, Tuukka worked in global academia for a decade, becoming Senior Lecturer in Social and Economic Innovation at UCL in 2016. He currently heads Creative Friction Ltd, a research agency that specialises in the creative process, innovation programmes and coworking. He also serves as an Honorary Senior Lecturer at UCL STEaPP and maintains links with several other leading academic institutions. Tuukka's empirical creativity research has been funded by the ESRC, the Skoll Foundation, think tanks as well as several university funds. He draws inspiration from a prior life in music, from fashion and design, sustainable life-styles, Japanese culture, as well as life in Hackney. Tuukka regularly mentors social entrepreneurs as well as graduate students.

EMMA NORDBÄCK works as a post-doctoral researcher in the International Design and Business Management Programme at the Aalto University School of Business. She conducts research into virtual teamwork and shared leadership, specialising in globally distributed teams as well as emerging forms of work that bridge boundaries. She also investigates technologies that advance innovation and promote an empowered workforce. Emma is a Master of Science in Technology and is due to receive her Ph.D. from Aalto University in 2018. She is passionately interested in exploring whatever the future of work has in store.

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Summary of findings

In this report, we examine the role of challenge prize competitions as generators of social innovations, paying particular attention to the underlying creative process. The report is based on the Ratkaisu 100 challenge prize competition organised in Finland by Sitra in 2016-2017 and on the extensive empirical data we amassed during the associated incubation programme (April-September 2017)¹. Our account focuses on describing and analysing the diverse ways in which the participating teams benefited from the support offered. We hope that our findings will prove useful for the leaders of a range of open innovation processes, including (but not limited to) the organisers of social innovation competitions, as well as for teams that participate in such initiatives across the globe.

Examining innovation at the team level is of particular importance at the present moment because solutions to complex social problems are overwhelmingly created by teams and through their collaborations with other teams. This fact notwithstanding, teams and their idea journeys have been examined in the field of social innovation only rarely (even creativity research has predominantly focused on individual-level processes). As our key analytical framework, we apply the four-stage idea journey model of Perry-Smith and Mannucci (2017) while also drawing on relevant organisational creativity research (for example, Hargadon and Bechky 2006). One reason for choosing the idea journey model was our interest in empirically observing and comparing the progress made by the participating teams. Our study therefore differs from the existing literature on challenge prizes that has mainly focused on different competition formats and other design issues as seen from the perspective of programme organisers.

THE FOLLOWING IS A SHORT SUMMARY OF OUR KEY FINDINGS.

- 1. Challenge prize competitions remain a promising vehicle for generating social innovations. They help attract new qualified people to work on a shared challenge, shape the direction of emerging innovations² while also accelerating their development.** From a wider point of view, challenge prize competitions generate networks at the intersection of professions, organisations and sectors that normally do not work together, fostering and enabling innovative activities that benefit society (and that take into account the multidimensional nature of complex challenges).
- 2. Challenge prize competitions with an integrated incubation element can support the progress of the participating teams' idea journeys in multiple ways.** They provide opportunities for diverse creative interactions that are required for the elaboration of emerging ideas. Also, they offer useful structures, sources of emotional support and access to critically important networks. However, it cannot always be guaranteed that the support provided meets the specific needs of all teams in appropriate ways – *the devil is in the details and organisers need to remain alert as well as highly responsive throughout, possibly with the help of impartial observers (e.g. researchers).*

¹In line with Casanovas and Bruno (2013), we contend that social incubators focus more on the development of core ideas, business models and initial plans as opposed to scaling strategies and activities. The latter are the focus of social accelerators. Ratkaisu 100 offered a special type of social incubation programme that was not only set in the context of a competition but also open to a wide range of citizens who would not identify as social entrepreneurs as such. ²See Mazzucato (2017) on the central importance of considering not just the rate of innovation, but its direction, not only within the domain of social innovation but in the economy more generally.

- 3. Significant differences can often be seen in the development of social innovation teams' idea journeys.** Investigating Ratkaisu 100, we found that the idea journeys that had already reached the so-called elaboration stage—i.e., the stage at which a focal idea is being sharpened, tested and subjected to feedback from a range of other people—by the beginning of the competition had a clear head start (compared to teams that were still generating or defining new ideas). Further, a solution-orientation was confirmed as advantageous: teams that focused on crafting and perfecting their solution ideas were far less likely to “get stuck” in their development process compared to teams preoccupied with problem definition and analysis.
- 4. Diverse interactions and conversations play an important role in the development of innovative solutions.** We used an online questionnaire to collect data on a total of 342 conversations that Ratkaisu 100 participants engaged in during the development of their ideas. The greatest total number of “useful” conversations were conducted within the participating teams rather than between them. While many other types of conversations (e.g. those with mentors) were frequently found to be useful, we found scant evidence of in-depth collaboration or co-operation between the participating teams even after 14 rounds of online questionnaires. This points to certain serious—though not necessarily insurmountable—challenges with competitive incubation settings.
- 5. Qualitatively different teams benefit in divergent ways.** Based on the extensive empirical evidence gathered, we found – perhaps unsurprisingly – that the teams that most benefited from Ratkaisu 100 were the ones

that had a relatively well-defined problem and an idea for solving it from the very start. These teams were able to get on the “right track” from the beginning of the fast-paced competition. Also, teams with more time and cognitive resources at their disposal as well as teams exercising shared leadership had a head start. Other advantageous factors included a vision that extended well beyond the limits of this particular competition and a focus on developing solutions (as opposed to dwelling on problem analysis and definition). However, a key point to note is that all teams—even those that struggled—benefited from Ratkaisu 100 in significant ways, demonstrating that challenge prize competitions do not need to exclusively favour those that win prizes.

- 6. In conclusion, we offer six critical questions and associated recommendations to the organisers of future challenge prize competitions and social innovation incubators.** We propose that challenge prize competitions should pay considerable attention to differences in the developmental stages and idea journey characteristics of participating teams, so that the support offered can be targeted in the most useful ways possible. This does not mean that only one type of team – for example, those that are entrepreneurially-minded or those that have already reached a degree of success – should be favoured. Rather, the strengths and weaknesses of diverse types of teams need to be considered and supported more flexibly. We also propose that, when they do succeed, challenge prize competitions create social value not only in the form of high-quality solutions, but also through giving birth to novel networks and forms of collaboration between different societal actors. Finally, we highlight a tricky dilemma: what, if anything, can challenge prize organisers do to ensure that a genuine collaborative community really does arise between competing teams?

BACKGROUND AND THEORY



Guiding questions and **empirical data collection**

What forms of incubation support – and more specifically, what kinds of interactions – most benefit the creation of new social innovations in the context of challenge prize competitions? We examined this issue through approximately 100 in-depth interviews with the Ratkaisu 100 teams and 14 rounds of online questionnaires.

The purpose of this report is to examine the role of challenge prize competitions as producers of social innovations and to offer new perspectives that may benefit the organisers and participants of such competitions in the future. Our study is based on the Ratkaisu 100 challenge prize competition organised in Finland by Sitra in 2016-2017, particularly on the incubation period that began in April 2017 and ended in October the same year. **The basic research questions that guide this report are:**

- What forms of incubation support – and more specifically, what kinds of interactions – most benefit the creation of new social innovations in the context of challenge prize competitions?
- What kinds of teams most benefit from participating in a particular competition? Why do certain teams derive more benefits than others?

We believe that our findings challenge certain key assumptions related to innovation competitions and we hope that this report will show how such competitions can be further improved in the future.

Our study is based on an extensive set of empirical material. We carried out a total of approximately 100 interviews, typically

comprising six in-depth interviews with each of the 15 participating teams, as well as several interviews with the organising team from Sitra. The goal of this data collection was to help us form a dynamic and sufficiently granular picture of the teams' and their ideas' development process. The interviews were recorded and professionally transcribed. The material was then coded and analysed using the MaxQDA software.

One of the most important objectives we set for our study was to open the “black boxes” of the creative idea development process, particularly in relation to the interactions and innovative steps that unfolded during (and as a result of) Ratkaisu 100. In each interview, we surveyed the state of the social innovation idea of the team concerned; the team's definition of the relevant social problem; relevant interactions as well as episodes of collaboration with partner organisations; and many other items. To examine potentially important conversations from another perspective, we also asked the teams to respond to a total of 14 online questionnaires. The purpose of these questionnaires was to survey the useful and relevant conversations that the teams had engaged in during a given week (and that

One of the most important objectives we set for our study was to open the **“black boxes” of the creative idea development process.**

they therefore still remembered well). In addition, our research team participated in half of the face-to-face events that were organised by Sitra during the incubation period. We made observations about their main outcomes, the nature of mentoring conversations, the teams’ progress as well as their attitudes towards the competition

At the same time, we had monthly conversations with Sitra to understand the organisers’ own observations and points of view as the competition progressed.

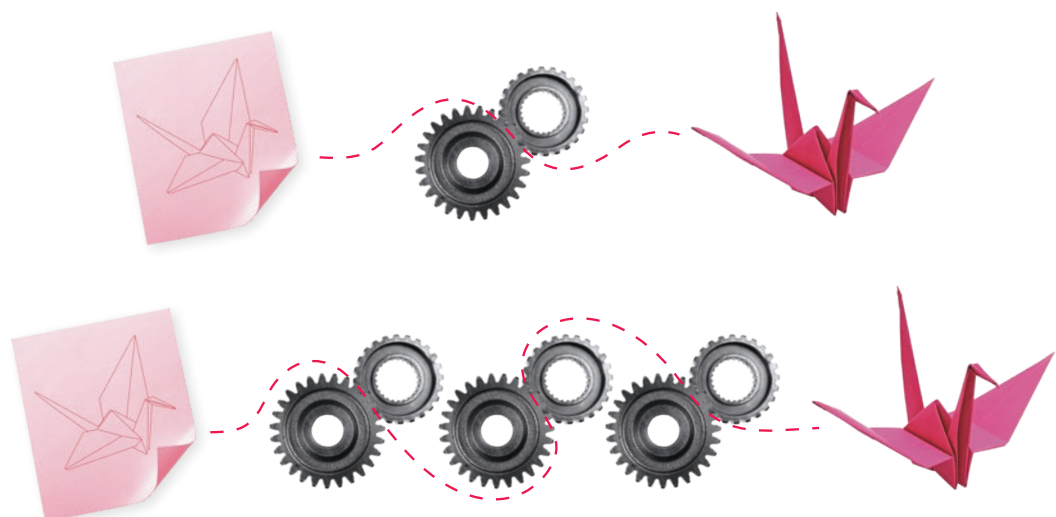
In developing our research approach, we applied the concept of networked creativity (Toivonen and Sørensen 2018). Accordingly, we contended that because creative processes are no longer restricted within the walls of one specific organisation researchers must monitor, across different contexts and as comprehensively as possible, the chain of creative interactions and the associated transformation of ideas (Figure 1). Without this kind of empirical methodology that focuses attention on the tracing of both interactions and ideas, it is simply not possible to form an adequate picture of the

innovation taking place in modern teams, which are by their very nature flexible, mobile and networked.

This framework guided us to pay attention not only to internal interactions within teams and between the participants of Ratkaisu 100, but also to (potentially important) events and activities external to the competition. The framework provided a basis for forming a more realistic and granular picture of the impacts of the competition. One of the restrictions of our methodology is that it was difficult for some of the participating teams to recall, in the interview situation, the details of the diverse conversations they had engaged in. This complicated the examination of the relationship between some of the facilitated conversations and the changes that took place in the teams’ ideas. However, we are nevertheless convinced that our material is comprehensive and detailed enough for us to draw valuable conclusions on how different teams and ideas benefit from challenge prize competitions and how these benefits can be increased in the future.

FIGURE 1. INNOVATIVE IDEAS DEVELOP THROUGH DIVERSE CONVERSATIONS ACROSS VARIOUS ORGANISATIONS AND CONTEXTS.

Source: Toivonen and Sørensen 2018.



A look at the creative benefits of **challenge prize competitions**

Previously, challenge prize competitions have been examined from the perspective of the organisations that run them. Research has rarely focused on the development of participating teams and their ideas. In this study, we focus specifically on how ideas develop and how challenge prize competitions can support creative team-level processes.

Challenge prize competitions tend to (at least in theory) favour teams and proposals in which knowledge and skills are combined **across sectoral, field-specific and scientific boundaries.**

Over the past few years, the popularity of challenge prize competitions has increased within both the private and the public sectors. In parallel with their proliferation, an active debate has ensued on the potential benefits and possible harmful effects of such competitions (for example, see McKinsey and Company 2009; Nesta 2014; Starr 2013; Young 2013; Nieminen and Zappalorto 2017; Dehgan and Walji 2013; Patel 2013). A frequently asserted benefit of challenge prize competitions is their ability to reach out to a large group of potential problem-solvers through an open application process and to motivate participation with monetary prizes. Multidisciplinarity is said to be another strength of such initiatives, as challenge prizes are typically designed to generate solutions to so-called wicked problems that cannot be addressed from narrow starting points. Challenge prize competitions tend to (at least in theory) favour teams and proposals in which knowledge and skills are combined across sectoral, field-specific and scientific boundaries.

The operating practices of the public sector and the (conventional) worlds of policy-making as well as academic research are often offered as counterpoints to challenge prizes. Their ability to generate new innovative ideas is argued to be limited due to the presence of silos, narrow interests and bureaucratic obstacles. Advocates posit that challenge prizes offer a promising set of methods to overcome precisely such barriers and generate solutions that elude current institutional structures.

At the same time, more critical voices have begun to question the challenge competition format. According to Kevin Starr (2013), one of the main critics of challenge prize competitions, “unreasonable risks” are involved in such competitions from the point of view of participating individuals and teams: the odds of winning are, on average, extremely slim and therefore taking part in a competition is potentially a waste of time for the many “losers”. The competition format can also be regarded as restricting or even preventing collaboration (a point to which

we will return in subsequent sections). Furthermore, critics point out that competitions tend to overwhelmingly reward the generation of new ideas instead of their elaboration, implementation or long-term impacts.

Where most of the above-mentioned contributions discuss the pros (and cons) of challenge prize competitions largely from the perspective of their organisers, this report focuses on their effects on the development of participating teams and their ideas. **At the moment, team-level analyses are particularly needed because solutions to complex social problems are invariably created within teams and through the collaboration of multiple teams (Bertolotti et al. 2015).** In spite of this, teams and their idea journeys have only rarely been studied in the field of social innovation. We are interested especially in how challenge competitions such as Ratkaisu 100 (that incorporate an incubation

period) support the work of diverse teams and catalyse the emergence of ideas that are novel and useful, thereby producing “creative added value”.

In this section, we offer a brief theoretical overview of the potential effects of challenge prize competitions on the creative process at the team level. Subsequent sections of this report analyse how the teams that took part in Ratkaisu 100 benefited from this particular competition in practice and how the benefits varied depending on the characteristics of the teams and their idea journeys. Finally, in the concluding section of the report, we discuss how the organisers of challenge prize competitions can amplify the creative benefits of their activities and resolve some of the tensions related to developing solutions to “wicked” problems – that are difficult to define and require long-term solutions – in the context of competitive incubation.

How do challenge prize competitions support problem-solving and the creative process? Opportunities and pitfalls

At their best, challenge prize competitions that incorporate an incubation dimension or similar support measures catalyse the generation and elaboration of new impactful ideas, potentially also driving their advancement and implementation in the real world. Challenge competitions can indeed nurture all stages of the creative process rather than just its beginnings (although this is more common). Drawing on organisational creativity research, we propose that the positive effects of competitions come in the following forms:

– Interactions that deepen and accelerate problem-solving activities and the creative process:

Participants of challenge prize competitions can benefit from a wide variety of conversations with mentors, experts, users, stakeholders and other competitors as well as competition organisers. At best, these conversations can

be highly creative and generative, opening up new points of view, clarifying the participants’ thinking and revealing alternative solutions (Hargadon and Bechky 2006). Consequently, a great deal of the “creative added value” of challenge competitions is derived specifically from such conversations. The role of creative conversations should therefore be closely and systematically examined in relevant studies.

At the same time, the competition format may disrupt the generation of creative value by limiting participants’ willingness to talk about their ideas with other contestants in particular (Amabile 1998). Also, it cannot be guaranteed that the nature of all conversations held with, for example, experts from key sectors is sufficiently challenging, informative or constructive (Scandura 1998). The effectiveness of mentoring depends on factors such as mentors’ backgrounds, conversation techniques and the ability of individuals or groups to receive feedback appro-

priately and in a manner that evolves in line with the creative process (Harrison and Rouse 2015). Challenge prize organisers need to be aware that some brainstorming or mentoring discussions can be downright counterproductive and harmful.

– Structures supporting problem-solving and creativity: At best, face-to-face events, timelines and deadlines can pace the work of participants, enacting a context that can give direction to and accelerate the development of new solutions. Such structures constitute a form of shared leadership that can support creativity and progress at the team level (Hoch 2013). However, excessive time pressure can prove detrimental where it is not possible for participants to concentrate sufficiently on their work and undergo a complete, well-rounded development process (Hewitt and Nurmi 2018).

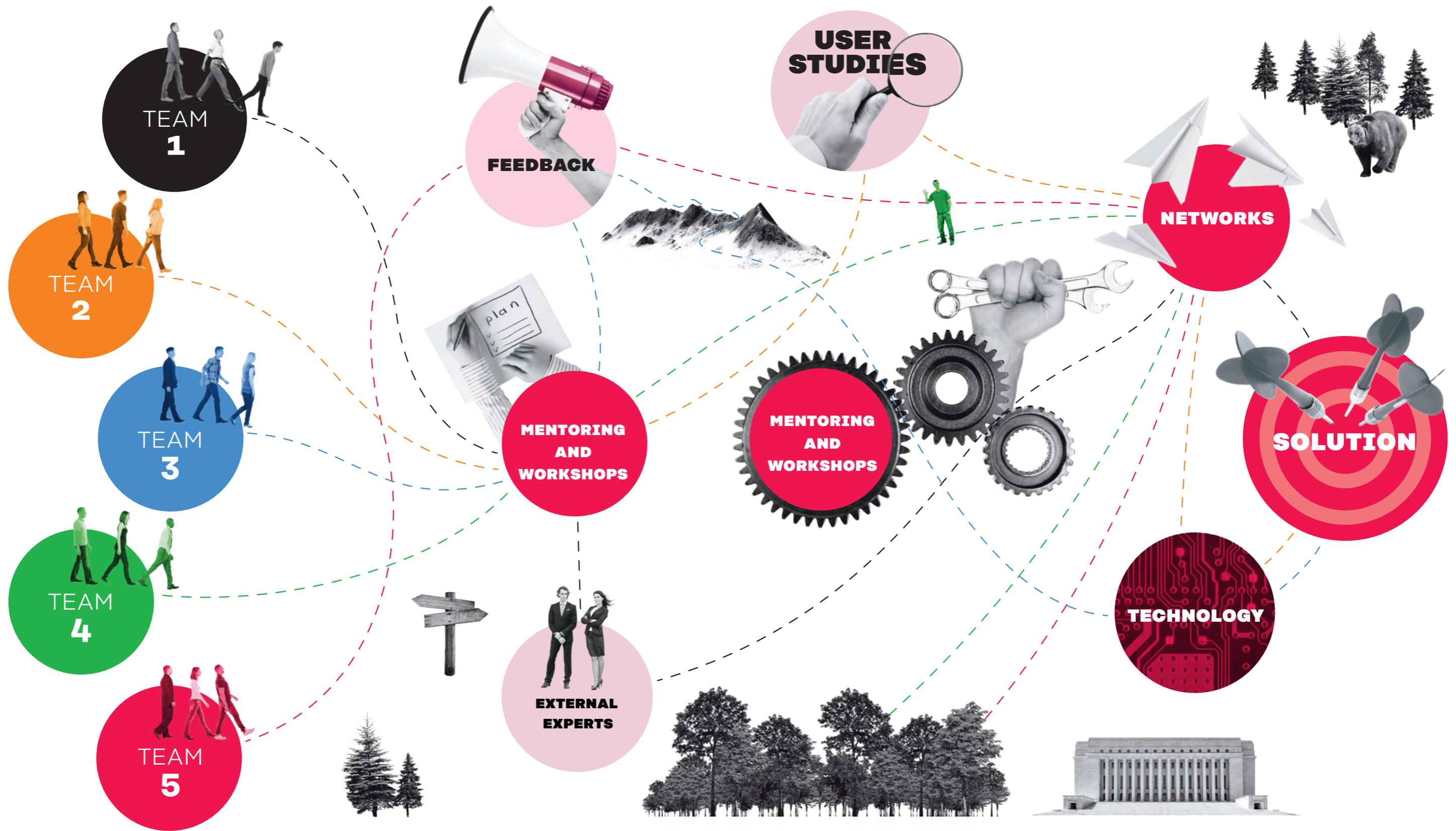
– Emotional support and encouragement: Challenge prize competitions can boost the work of participating individuals and groups by producing a strong “team spirit” and a culture of mutual support. This may help speed up participants’ work and strengthen their confidence. Research on organisations has shown that emotional interactions feed creativity indirectly when they create a positive atmosphere and directly when they generate positive emotional states (Amabile et al. 2005). Occasionally the impact of certain interactions and moods on participants’ and teams’ emotions may also be negative, which is to some extent unavoidable. Even negative affect may serve innovation by directing the attention and energy of individuals towards critical but previously neglected problems. Still, persisting negative moods and emotions, negative relationships or feelings of exclusion rarely support creative activity.

– Networks: Challenge prize competitions that incorporate an incubation or acceleration element can improve the quality and feasibility of emerging solutions by opening up new networks and contacts with important user, stakeholder and sponsor groups. In this respect, they resemble more mainstream business accelerator programmes (Pauwels et al. 2016). Also, research has shown that participation in competitions with a technological element can help teams gain access to sophisticated technological knowledge they were previously unfamiliar with (Kay 2012). These factors may significantly shape the

creative process at the team level. Heterogeneous networks formed through competitions can feed the development of the solutions through so-called weak ties (Perry-Smith 2006), even long after a given competition ends. However, it is far from guaranteed that the organisers of challenge prizes (and incubation programmes) possess the “right” network ties to benefit every competitor equally – especially when the ideas being developed are diverse and linked to multiple fields – with implications for the creative process and chances of success.

– Legitimacy: Participation in a challenge prize competition often increases participants’ legitimacy in the eyes of the media and various social groups, especially when the relevant competition carries a measure of prestige. The fact that a particular team has been selected for a well-recognised challenge prize competition may strengthen its credibility vis-à-vis various stakeholder groups and gatekeepers, supporting the implementation of its solutions down the road. This may be the case even when, from a more objective standpoint, the competition does little to enhance the quality of a given team’s ideas as such.

– Other considerations: Challenge prize competitions may have several other benefits from a team perspective and the ways in which these benefits are accessed can vary. One of our assumptions is that benefits materialise both through what organisers explicitly offer and through teams’ efforts to actively search for support and feedback that suit their strategic and creative aims (De Stobbeleir et al. 2011). Also, we are fully aware that the complexity of the factors explored above should not be underestimated. For example, mentoring alone is a nuanced phenomenon on which a huge amount of research has been conducted. The complexity of each potential effect indeed makes it difficult to understand their interactions and synergies. In this report, our aim is to nevertheless form a (limited) overarching picture of the key benefits offered by Ratkaisu 100 – with a focus on teams, ideas and social interactions – through utilising the four-stage idea journey model of Perry-Smith and Mannucci (2017). This allows us to detect key patterns in terms of how the teams that participated in Ratkaisu 100 benefited from this unique opportunity and where they struggled.



Unpacking idea journeys

The journey of each new idea, however unique in its details, passes through certain recognisable stages and exhibits familiar patterns. By researching innovation teams through examining their idea journeys, we reach new insights on how novel solutions develop and how this process can be best supported.

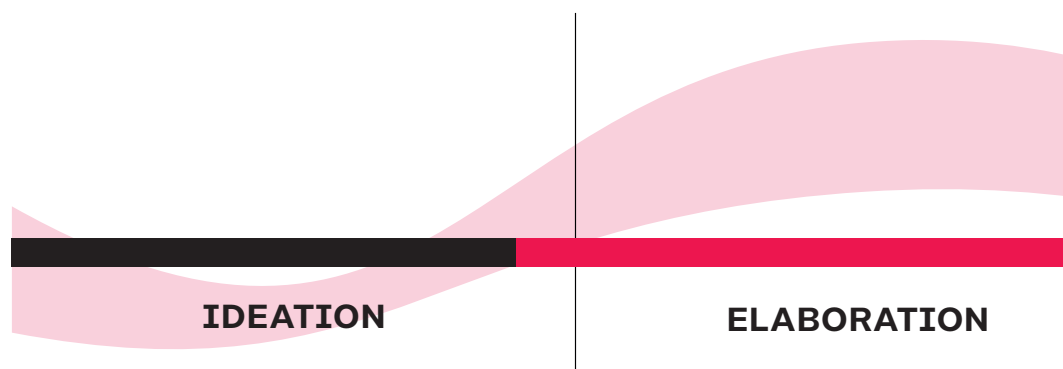
The creation of socially and economically important innovations is rarely a straightforward process, even when supported through challenge prize competitions or other systematised interventions. The process of

giving birth to a new idea often involves uncertainty regarding the potential of the new idea (felt by the inventor and other contributors such as investors); numerous trials and failures; the abandonment of

FIGURE 2. FOUR PHASES OF A TYPICAL IDEA JOURNEY.

The pink colour highlights the developmental stages of the teams participating in the Ratkaisu 100 competition. Most teams were in the elaboration phase during the incubation phase although they also carried out tasks linked to the championing phase (e.g. attracting external partners and other supporters).

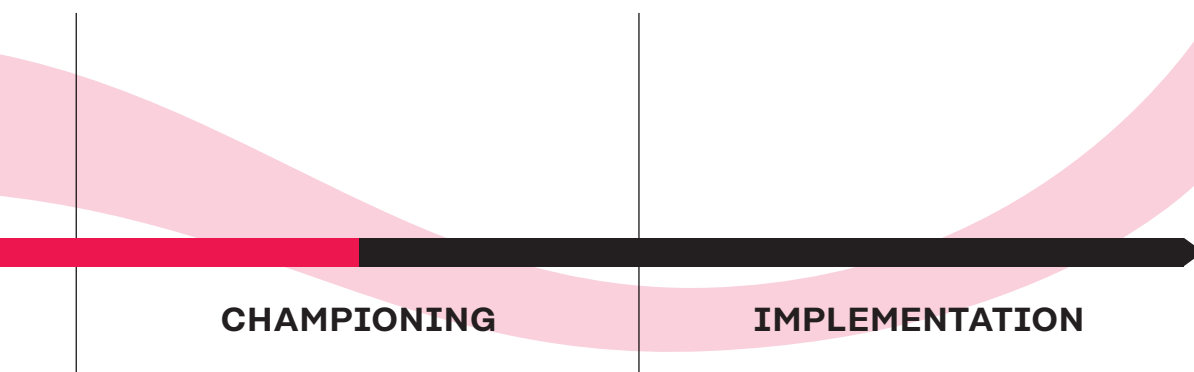
Source: Perry-Smith and Mannucci 2017.



certain innovative elements and the rediscovery of old ones; and many other surprising turns of events (Harrison and Rouse 2015). However, while the journey from a tentative idea to a credible proposal and a successful innovation is complicated and necessarily uncertain, it is possible to observe frequently occurring stages and features in the development of new ideas. The concept of the **idea journey** – in other words, the developmental path of a new idea from inception to implementation – is the key concept we apply in this report (Perry-Smith and Mannucci 2017). We use it to understand the efforts, advances and struggles of the teams examined and to elucidate the benefits provided by Ratkaisu 100. The concept of the idea journey helps us trace the development of the 15 social innovation ideas supported by Ratkaisu 100, viewed from the outside, and based on empirical data. Our fundamental intention is therefore not to recommend a certain innovation model or practice (such as IDEO's five-stage design thinking process; see for example Brown and Katz 2009), but to conduct empirical organisational research and shed light on actual developmental trajectories.

Creativity and network researchers Perry-Smith and Mannucci (2017) propose that a **TYPICAL IDEA JOURNEY CONSISTS OF FOUR GENERAL PHASES:**

- 1. IDEA GENERATION (or ideation):** generating and defining several potentially novel and useful ideas and choosing the most promising one;
- 2. IDEA ELABORATION:** evaluating and developing the original tentative idea into a more concrete proposal or prototype with the help of feedback and trials etc.;
- 3. IDEA CHAMPIONING:** actively promoting the idea, e.g. through introducing it to potential stakeholders, users and investors whose support is considered necessary for the successful implementation of the idea;
- 4. IDEA IMPLEMENTATION:** converting the idea into a tangible activity, product and/or service that can be diffused or scaled and more widely adopted (Figure 2).



The idea journey lens also **helps us see** where projects “get stuck” and where they take substantial leaps forward.

As these developmental stages progress, the needs of the associated idea developers also transform when it comes to important support networks and other resources. Although Perry-Smith and Mannucci (2017) illustrate the concept of idea journeys with reference to examples from the world of research, advertising agencies as well as musicals and screenwriting, there is reason to assume that developers of social innovations go through a similar general process (Mulgan 2006). However, it is not always obvious how challenge prize competitions shape this process (in practice) through the myriad interactions they facilitate and the structures they enact.

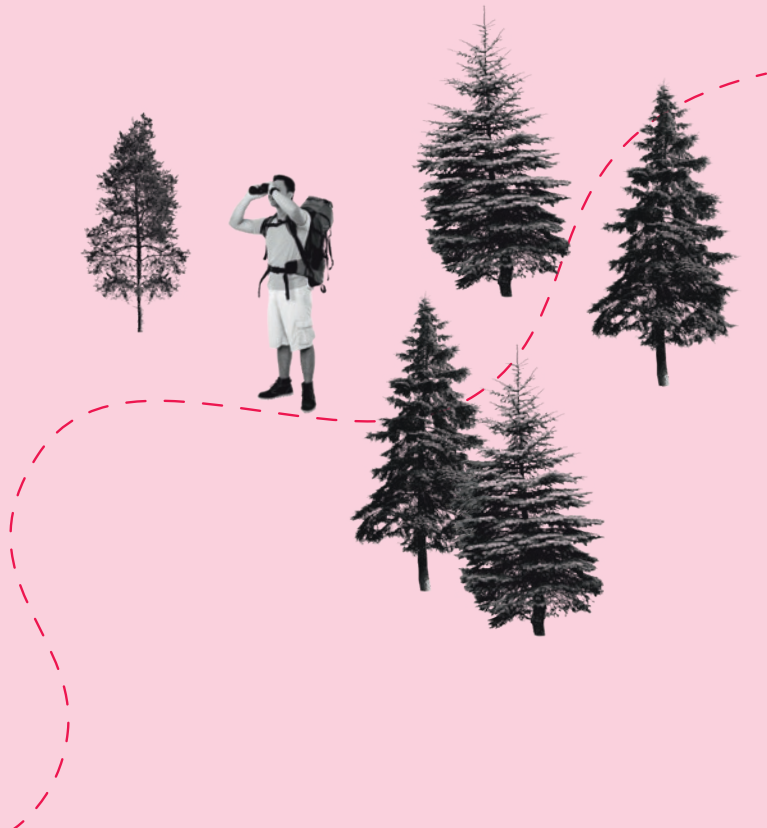
The framework of the idea journey encourages us to look at the different development phases of the Ratkaisu 100 teams at the beginning, middle and end points of the competition. It sensitises us to differences in the “maturity” and growth trajectories of the ideas of the 15 participating teams. The idea journey lens also helps us see where projects “get stuck” and where they take substantial leaps forward. We do not, of course, expect idea journeys to proceed in a strictly linear fashion, or that the four phases outlined above exhaustively explain the details of each individual journey or variations across cases – they do not. Rather, the concept of the idea journey serves merely as a loose framework that invites us to pay attention to regularities as well as differences in the development of new social innovations in relation to incubation support strategies.

Indeed, we seek to utilise the idea journey framework to explore synergies and potential tensions between the developmental stages of the participating teams and the various forms of support offered through the Ratkaisu 100 programme. Did the evolving needs of the teams coincide with the support made available? Was the design of the competition flexible enough to serve teams at

different stages of their respective journeys? Did Ratkaisu 100 overwhelmingly benefit teams that had already clearly defined their solution ideas (at the outset of the competition) and that could therefore focus their energies on fine-tuning as well as obtaining wider support and improving the practical feasibility of their idea? Or were there also opportunities for early-stage teams to carry out further ideation and develop the innovativeness, effectiveness and clarity of their ideas? Did teams at such an earlier phase in their idea journeys benefit tangibly from the creative support offered, even if winning the competition was not feasible for them?

Seen from another perspective, the concept of the idea journey helps us to better comprehend and articulate the “creative added value” of Ratkaisu 100. We are interested in examining how such value was generated through concrete interactions – workshops, mentoring sessions and many other types of feedback interactions – that potentially contributed to the teams’ idea journeys, as well as by certain structural and leadership elements. Our assumption is that the majority of pertinent interactions were linked specifically to the elaboration and championing phases of the idea journey. We found, through our interviews and participant observation, that the nature of the conversations facilitated by Ratkaisu 100 could be very creative indeed: they did not only include positive or negative appraisals of the quality of a given idea, but led also to the identification of entirely novel ideas, interpretations and frameworks. **By also employing online questionnaires as an additional data collection method, we aimed to discover where, when and with whom the most influential or significant interactions took place so as to further reveal the creative value produced by Ratkaisu 100.**

RESULTS



How the participating teams' **idea journeys evolved during the competition**

The idea journeys of the 15 teams participating in Ratkaisu 100 varied dramatically. Through offering five narratives, we demonstrate how the teams benefited differently from the supportive activities, conversations and structures provided through this competition.

The concept of the idea journey refers to four general phases (ideation, elaboration, championing and implementation) that virtually all innovators—whether individuals or teams—must pass through. In this section we examine the nature of the participating teams' individual idea journeys as they unfolded during Ratkaisu 100, exploring

how these journeys interacted with aspects of this challenge prize competition.

Originally, our empirical study of Ratkaisu 100 started from three simple assumptions: (1) The idea journeys of the participating teams would differ from each other considerably in many respects so that (2) certain types of idea journeys would benefit

FIGURE 3. AN ITERATIVE IDEA JOURNEY, DEVELOPED SIMULTANEOUSLY AT THREE LEVELS.

Source: Perry-Smith and Mannucci's (2017).



significantly more from the support offered, (3) resulting in greater success within the time constraints and criteria set by the competition. The basic criteria against which solutions were evaluated against by judges were innovativeness, expected social impact and practical feasibility. In conducting our interviews, we adopted a semi-structured approach and posed a series of open-ended questions that focused on team activities, changes to emerging ideas and influential conversations.

First, largely as expected, our study revealed that the teams' idea journeys differed markedly when compared with one another. The most striking differences concerned the following dimensions:

– Phases of the idea journey:

Although all teams had described their preliminary solution ideas (i.e., social innovations) in a seemingly concrete manner in

their original applications, the proposals of some teams were still in reality at the level of ideation (i.e., in a highly nascent phase) as the competition began. By contrast, certain other teams were much further into their elaboration or championing phases. The teams in the latter category were, unsurprisingly, in a better position in relation to the parameters of the competition: for them, six months provided just enough time to demonstrate the feasibility and expected social impacts of their respective solutions. However, the early-stage teams that were still merely sketching out their solutions and analysing the societal challenges they wished to address simply ran out of time. Their ideas would have required substantially more time to mature. That said, early-stage idea journeys nevertheless benefited from Ratkaisu 100 and took a comparatively longer leap forward (even if they could not “catch up” with the other teams' journeys, in terms of maturity and clarity, within the timeframe of the competition).



IMPLEMENTATION

CHAMPIONING

At least one team adopted a strongly iterative development style in which the team moved back and forth between the development stages of the idea journey. In other words, it managed to advance its idea journey simultaneously at three different levels (Figure 3). Although such a development style requires agility, adopting it might have accelerated the progress of the idea journeys of other teams, too.

– Emphases along the idea journey:

Some Ratkaisu 100 teams were highly focused on analysing and defining the societal problem they wished to address. Others, by contrast, dedicated their time mainly to designing their respective social innovations or attended to both dimensions at the same time. Although social challenges related to education or employment – the broad focus of the competition – are no doubt complex and require in-depth investigation and analysis, the strict timeline of Ratkaisu 100 simply did not allow for exhaustive analytical work where it detracted from the development of tangible solutions. The idea journeys that emphasised analysing a pertinent challenge therefore got “stuck” in this phase (in the context of the competition): it was difficult for such journeys to proceed to the elaboration and championing phases through bespoke trials, for example.

– The diverse role of conversations:

Active conversations had a strong effect on the idea journeys we observed. It was clear that certain idea journeys benefited from a larger number of diverse conversations than other journeys. The conversations often validated the direction of a developing idea or specified its focus. Certain discussions highlighted critical challenges, leading to significant changes in the choice of target groups and business models, for instance.

The “creative added value” of Ratkaisu 100 was in fact most clearly

evident in situations where such observable changes took place.

At the same time, we noted that teams struggled to obtain genuinely useful feedback when an interlocutor misunderstood the developmental stage of the pertinent idea (typically, mentors expected the teams to have relatively well-defined ideas and did not necessarily tailor their feedback to the needs of very early-stage idea journeys or make it open-ended enough). We will discuss benefits derived from conversations and associated problems in more depth in the following sections and will also identify the sources of the most important conversations.

– The pacing of idea journeys:

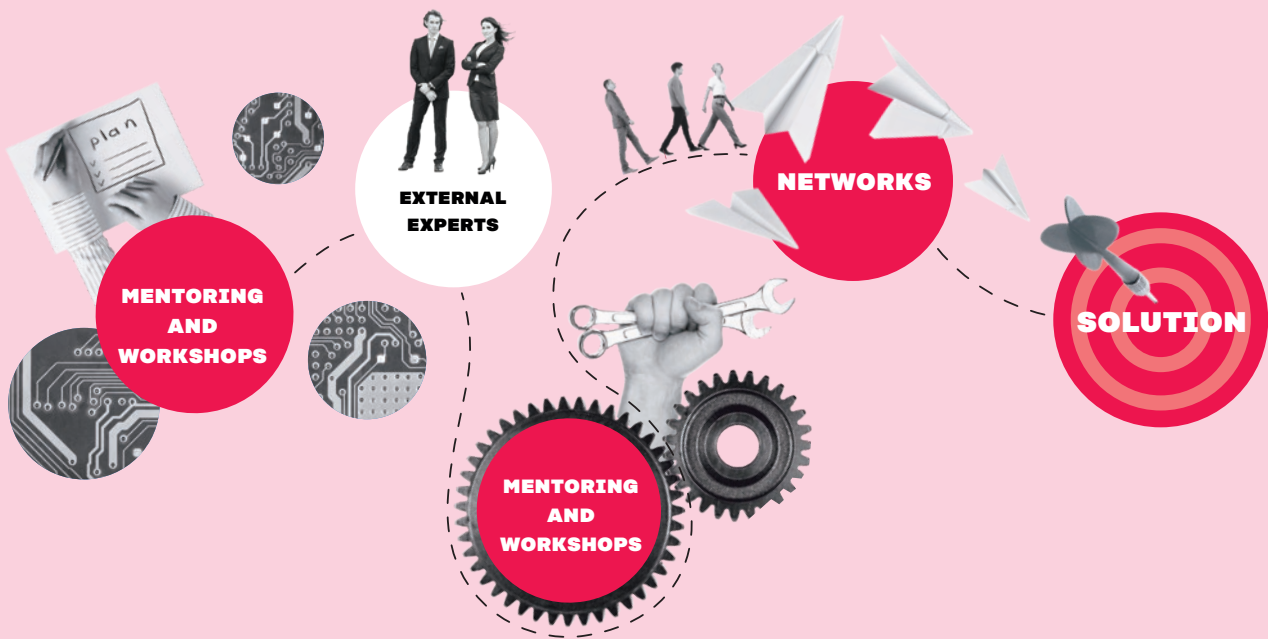
The programme structure of Ratkaisu 100 (starting with an orientation in April 2017 that was followed by an excursion to Amsterdam in May, leading up to several workshops and a three-day bootcamp in August) served to pace the participating teams’ idea journeys. This meant that certain issues or themes were most intensively considered by the teams in connection with relevant events. For instance, most teams began to seriously conceptualise the expected social impacts of their ideas only during the late-August bootcamp that focused on impact and its measurement. (Some teams openly regretted that this central topic was foregrounded at a late stage of the incubation programme). Nevertheless, there were marked differences in the pacing of the teams’ idea journeys: some began to search for partners and conduct experiments in the very first months of the competition, whereas others invested their time in internal team conversations and analytical work. The idea journeys of the former (comparatively faster) group were exposed to a greater volume of external feedback during the competition and they had more opportunities to improve in terms of feasibility.

We will next offer **five**
anonymised
narratives³ that illustrate
the development of actual idea journeys
during the last five to six months of
Ratkaisu 100.

³These narratives have been made anonymous as per the original research protocol and as agreed with the teams participating in Ratkaisu 100 (all of whom agreed to be interviewed for this study on the condition of anonymity). Future publications may introduce the ideas and journeys of certain teams without anonymisation.

CASE 1

An iterative journey built on strong technological expertise



GENERAL FEATURES OF THE TEAM:

This was a diverse team, strategically formed to include complementary fields of expertise. In this team, every member showed initiative and took action to co-develop the team's solution idea.

During this iterative idea journey, a pre-existing AI-focused technological solution came to be reframed in a way that was appropriate for Ratkaisu 100. This team's conversations with external experts—both in Finland and overseas—led to a change in the definition of the societal work and skills-focused challenge the team wished to address. This, in turn, produced a change in the solution idea itself and led to a revised target group. The team interacted with a large number of both foreign and Finnish experts, especially at the beginning of the incubation period (April-June). It also presented its ideas actively to potential customers and partners from the outset.

The team demonstrated strong initiative by concurrently participating in other challenge prize competitions. It expressed openness towards (potentially) collaborating with the other Ratkaisu 100 teams. The team felt its greatest challenge was related to how it could make its solution easier to understand (also by non-technologists). It was able to leverage the various events organised by Sitra to repeatedly test and improve the way its core solution was formulated and communicated. During the competition, the team was frequently questioned about who it most wished to serve (i.e., about the foremost target group[s] of the social innovation it was devising).

Perceived benefits of the competition

Although the team emphasised from the very beginning that it was committed to developing its innovation regardless of Ratkaisu 100, the competition proved an important motivating factor and source of extra visibility. Notably, the competition pushed the team to condense its multi-dimensional technological solution into one well-defined product. Furthermore, the large scale of the competition and the prospect of winning a considerable money prize (of up to one million euros) encouraged the team to develop its solution more ambitiously than it

had done before, leading it to envision a comprehensive ecosystem instead of a less connected, stand-alone product. The competition's strong emphasis on social impact provided a new, inspiring frame for the team members who were accustomed to operating within the world of conventional (digital) startups and businesses. The competition also enabled the team to become acquainted with a number of partners that it hoped would become customers in the future.

“...the competition has been an enormously useful vehicle and motivator for speeding up the development of our solution and for gaining wider visibility. We have talked a lot about how Sitra makes a different kind of public visibility possible for us in Finland compared to what we could achieve ourselves. Still, the core development work is something we are committed to seeing through in any case [regardless of this competition].”

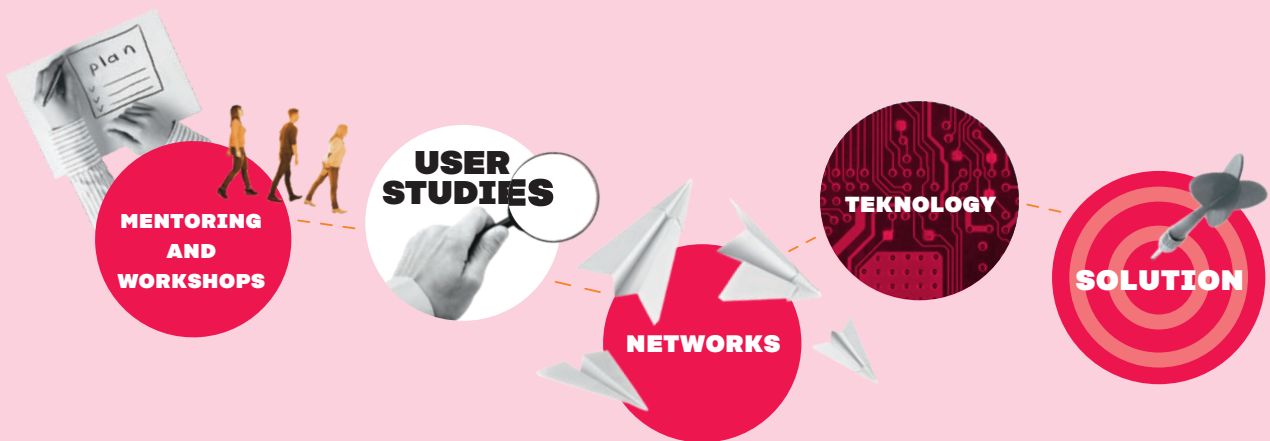
“...we have had to, or we have been given the opportunity to, really condense and define our idea better than before. As a result, a new product has emerged. Artificial intelligence is such an extensive field that our company could in theory work with a very wide range of possibilities, but we've been encouraged to really reflect on what would be the one product that we should offer. And it seems to be taking off very nicely. We have been able to accelerate the develop this product and take it through a proper product development cycle.”

“And then there is this social impact thinking that makes us consider the broader effects of our work. This has been a wonderful process that I've come to like very much; the point is we are developing a social programme as well as a business.”

The competition's strong emphasis on social impact provided a **new, inspiring frame** for the team members.

CASE 2

A linear idea journey with evolving technological questions



GENERAL FEATURES OF THE TEAM:

The team consisted of leading Finnish experts in relevant fields (including education). This existing pool of expertise gave the team a deep understanding of the intended target group and its needs from the very outset of the competition. The team members had collaborated with one another previously, although not with the same exact line-up. All team members possessed considerable prior consulting-related expertise, which undoubtedly contributed to the team's ability to pitch and sell its ideas.

During the competition process, the team's original (not necessarily very clearly articulated) core idea **grew considerably more tangible, elaborate and operationalisable.**

The second team we wish to highlight began to craft its solution based on a pre-existing idea that had for years been brewing in its members' minds in the context of their paid work. This original idea maintained its basic form throughout the competition; however, the team engaged in intense discussion (and some development work) focusing on the role that technology and digital platforms might play in the delivery of its social innovation. Although the team's understanding of relevant technological possibilities and limitations was greatly improved during the Ratkaisu 100 incubation period – thanks to a series of conversations with diverse technological experts – the issue was not entirely solved. One key addition to the original idea was the team's decision to strive to integrate it with the “standard arsenal” of the Finnish welfare state (by getting existing institutions to deliver it in practice). Various user tests played an important part along the team's idea journey, generating knowledge on the appropriateness of the solution and on how well it would match the needs of the actual users.

Perceived benefits of the competition

The team found Ratkaisu 100 to be a highly beneficial experience. In particular, it gained substantially in terms of networking.

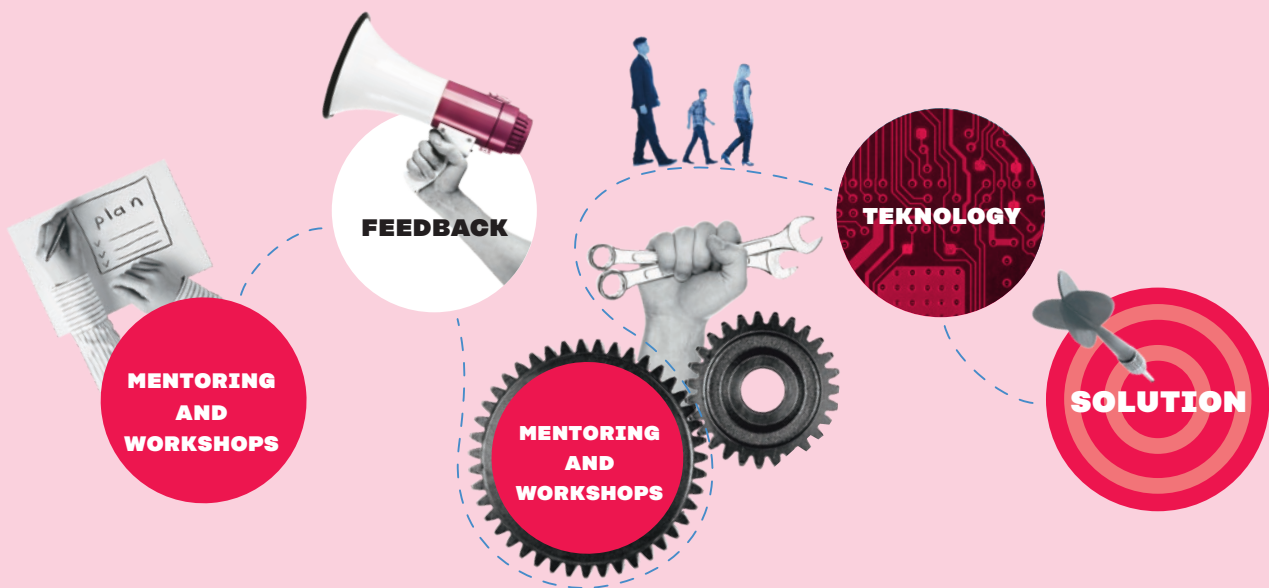
Although the team possessed existing contacts with several (prospective) partners, participating in Ratkaisu 100 provided it with additional legitimacy that helped attract further key partners. During the competition process, the team's original (not necessarily very clearly articulated) core idea grew considerably more tangible, elaborate and operationalisable.

“ Many of the prospective partners we are now in contact with had previously known or heard about one or two of our team members, and they were already familiar with what we do, so that's positive. However, it is definitely this initiative by Sitra [Ratkaisu 100] that gives these people the enthusiasm to really get involved.”

“ ..however, my own view is that our core idea has grown significantly more tangible [through Ratkaisu 100]. It is no longer merely a dream in our heads, but something that everyone knows about.”

CASE 3

A model case of co-creation with public sector actors



GENERAL FEATURES OF THE TEAM:

The team was set up specifically for the Ratkaisu 100 competition. Several of its members met each other for the first time as the team was established. The team was made up of experts whose diverse fields of expertise complemented one another. Although their backgrounds were extremely diverse, the team members said they got along very well with each other.

This shows how the team members, though coming from business backgrounds themselves, had grown more sensitive to opportunities **for creating social value** during Ratkaisu 100.

In this co-creation-focused case, the team secured a mission-critical partnership at the very start of the incubation period. Soon thereafter, it began to co-develop its solution to closely meet the partner's needs. The fact that the team found a partner in the public sector (even though it was originally oriented towards the private sector) considerably affected the direction of its journey.

The team continued to develop its technology—an AI service platform—throughout the competition. In the final months, it carried out a successful pilot project to test its product together with the partner. The emerging social innovation attracted wide interest from municipalities in Finland, suggesting its suitability for different types of contexts and needs. The team members were fully invested in Ratkaisu 100 and their stated future plans extended well beyond the end of the competition. A few times during the competition, the team received strongly negative feedback from business-focused mentors that criticised their innovation's limited economic prospects. However, the team noted the relative narrowness of such criticisms and chose not to be discouraged. This shows how the team members, though coming from business backgrounds themselves, had grown more sensitive to opportunities for creating social value during Ratkaisu 100.

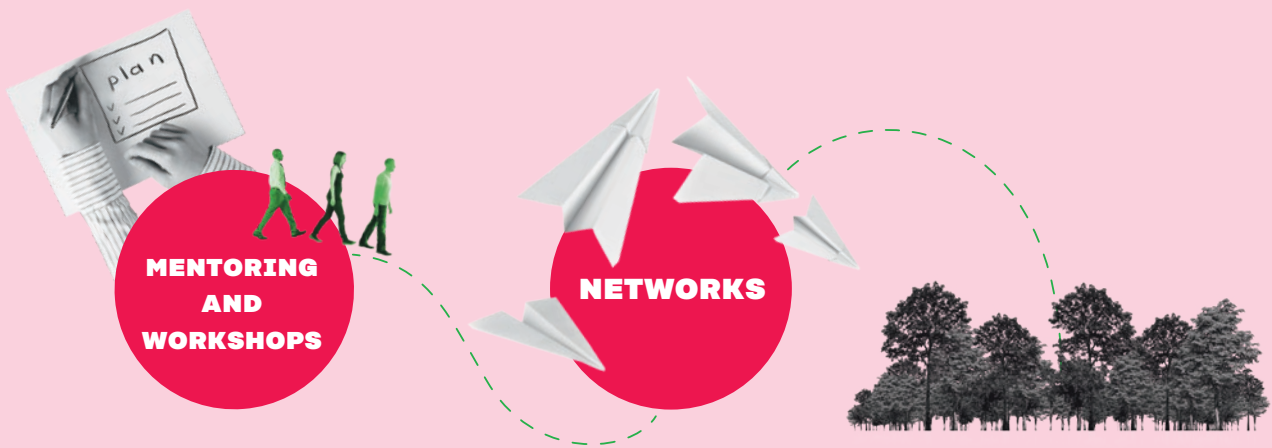
Perceived benefits of the competition

Participation in Ratkaisu 100 provided the team with a valuable dose of credibility even as product development was still in its early stages. It is worth noting that the team was able to attract the above-mentioned public sector partner thanks to the visibility generated by the competition. At the same time, the fact that this partnership was struck up in the course of a challenge prize competition made the partner somewhat concerned about the continuity of the co-development work beyond the end of the competition (especially if the team failed to win prize money to support further work). As the competition drew to a close, the team acknowledged that it would scarcely have been able to elaborate and advance its idea without the various forms of support it could access via Ratkaisu 100.

” ...Realistically, I don't think we could have developed our project without this competition. Even supposing we had already had the same idea, I don't think we would have really got started in any comparable way.”

CASE 4

An action plan for integration with existing public services



GENERAL FEATURES OF THE TEAM:

Except for one team member, the team consisted of members from very homogenous professional backgrounds. It approached the competition with an open-ended attitude and without pre-existing proposals ("let's just come up with a good idea for this competition and find a way to participate!"). The team members knew each other prior to the competition, though not necessarily very well. The team was analytical and strategic in orientation. If anything, it remained somewhat detached during the competition and exhibited a limited degree of involvement in shared activities.

Ratkaisu 100 made it possible for the team **to establish a dialogue with a set of important partners** who would otherwise have been very difficult to reach.

Our fourth case comprises a social problem-focused idea journey. The central aim of the relevant team, in this case, was to launch an operating model (rather than a product) for integration into existing public services and administrative structures. Unusually, the team added a new member towards the end of the incubation period who contributed a novel innovative element that ultimately became central to the team's social innovation.

As the competition progressed, the team developed a sharper understanding of the kinds of partners they would have to attract to turn their proposal into a success. Partly due to the negative feedback the team received from several mentors, it began to think that Ratkaisu 100 was “excessively startup-minded” and not necessarily an appropriate context for developing their particular social innovation. The team also felt that it simply ran out of time in terms of demonstrating the feasibility of its idea (through prospective pilots etc.). The members of the team did not warm up to invitations to collaborate with other teams, and they were not necessarily keen to share their ideas with others during the incubation programme.

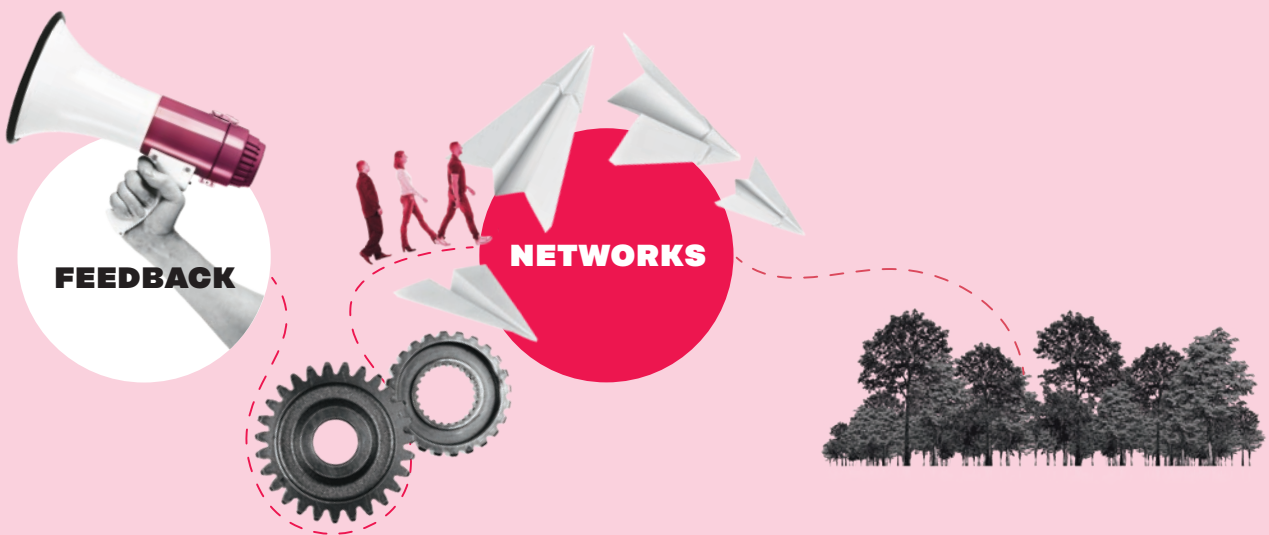
Perceived benefits of the competition

Although the team found Ratkaisu 100 to be out of alignment with the kind of solution it wished to develop, it nevertheless benefited substantially from the competition. For instance, Ratkaisu 100 made it possible for the team to establish a dialogue with a set of important partners who would otherwise have been very difficult to reach. The media visibility generated by the competition also dealt a positive surprise to the team. It quickly learned how to utilise this attention to highlight the social injustices and issues it found important. The team acknowledged that various competitive formats were also becoming a key element of grant funding in the world of academic research (the professional domain which all but one of the team members belonged to). Participation in Ratkaisu 100 thus enabled the team to gain knowledge and skills that might subsequently turn out to be beneficial in the course of their pre-existing careers.

W ...We have learned about many things that the world of research does not deal with very much. Pitching and all the other things related to communications and being in the spotlight and visible in the media – these are all invaluable and will soon spread to the realm of academic research too”.

CASE 5

Problem-focused idea journey



GENERAL FEATURES OF THE TEAM:

The team members knew each other from having worked on topics and projects related to the solution they chose to develop for Ratkaisu 100. The backgrounds of the team members were not complementary in any obvious sense, and the team did not necessarily develop strong leadership (whether shared or centralised). In terms of group style, the team enjoyed having long conversations together to reflect on its ideas and experiences.

A key benefit the team derived from Ratkaisu 100 was the significant **positive feedback and the motivational boost** it received through developing its solution together with future users.

In this (second) problem-focused idea journey, a substantial chunk of time was invested in defining the core social problem to be addressed and in its fine-grained analysis. The team's ambition was to bring about a relatively large shift in Finnish culture and institutions. It soon realised that advancing change at this level would require long-term work and that several existing structural and attitudinal factors would pose serious obstacles along the way. For these reasons, the team's idea journey progressed slowly and the team struggled to actively and strategically take advantage of what Ratkaisu 100 had to offer. The team did independently organise several trials with its target group (that it found an inspiring experience) and it skilfully networked with high-level public and political actors who offered encouraging feedback on the social innovation idea it was advancing.

Perceived benefits of the competition

A key benefit the team derived from Ratkaisu 100 was the significant positive feedback and the motivational boost it received through developing its solution together with future users. The team was delighted about the new knowledge and skills it acquired during the competition process and it was also appreciative of the new relationships it successfully developed.



...my thoughts still go back to the time when we interviewed these fifth- and sixth-graders and their teacher gave us feedback afterwards on just how much those young people had benefited from the opportunity. It was apparently a huge thing for them. The teacher was enthusiastic to collaborate more widely on our project and said other colleagues would be too."

Conclusions from the five cases

The idea journey cases presented in this section reflect some of our initial assumptions. First, significant differences were discovered among the idea journeys analysed. Second, the journeys that had already progressed to the elaboration phase at the beginning of the competition had a clear head start. Compared to ideas that had had less time (or were given fewer opportunities) to mature, pre-developed ideas could be sharpened and otherwise improved more quickly to meet the competition criteria. Also, journeys where the development of tangible solution ideas were prioritised (perhaps unsurprisingly) progressed faster compared to journeys where a large share of time was invested in defining and analysing a focal societal challenge. Obtaining appropriate feedback seemed more difficult for analytical and problem-focused teams because mentors and others found it hard to comment on social innovation concepts that had not yet been well formulated. These issues notwithstanding, virtually all teams – including those not directly discussed in this section – found that Ratkaisu 100 gave them

additional visibility and legitimacy in important networks. This may have contributed to a stronger ability to advance a social innovation even after the competition (regardless of a given team's formal competition outcome).

Interestingly, feedback interactions seemed to have had both positive and negative effects in the course of the idea journeys we analysed. Feedback helped one team to delineate a more precise focus and make various changes to their idea, enhancing its appeal (case 1). By contrast, another team we analysed wound up regretting that it had incorporated the feedback given by a particular mentor. This speaks of just how complicated feedback-giving/receiving and related communications can be (Harrison and Dossinger 2017) and how there may be “cultural differences” between mentors and teams. For example, researcher-led and impact-focused teams taking part in Ratkaisu 100 often found the mentoring too business-oriented (cases 3 and 4), signalling differences not only in personalities and priorities but in underlying institutional (public/private/third sector) logics.

In the next section,
we move on to a closer examination of
**the role of diverse
conversations**
in challenge prize competitions and in
the course of idea journeys.

On the role of conversations, Sitra's facilitation work and **competitive incubation**

The effects of challenge prize competitions and associated incubation programmes are intimately bound up with the conversations they facilitate. In the case of Ratkaisu 100, the participating teams found that the diverse conversations they engaged in amounted to a key benefit of the competition.

A central assumption of this study is that the benefits and effects of challenge prize competitions are closely linked to the conversations they facilitate (whether directly or indirectly). Alongside the quantitative volume of conversations, their various qualitative properties are likely to matter a great deal. While formally organised pitch events, lectures, workshops and coaching interactions constitute a major part of many incubation programmes, face-to-face discussions in small groups or pairs serve as another essential channel for shared moments of creativity. **Such interactions may unfold in the context of mentoring relationships, within teams, between peers or spontaneously in some other setting.** Mindful, focused interactions can cause emerging ideas to be configured in new ways, combined with fresh elements or placed in alternative frames of reference. Such generative interac-

tions produce new versions of emerging ideas that would not have materialised without this social dimension (Hargadon and Bechky 2006).

For these reasons, we placed conversations at the centre of our methodological approach: in our monthly interviews with Ratkaisu 100 participants, we asked the teams to describe their most recent conversations and their effects on the development of their respective idea journeys. We also probed into any idea changes that we noticed during the interview period so as to better understand how particular interactions – or strings of interactions – might have fed into them. In addition to interviews, we asked the teams to fill in a weekly digital questionnaire, the aim of which was to shed light on the wider pattern of conversations during Ratkaisu 100, focusing on the question of with whom the most important conversations took place.

TABLE 1. VERY USEFUL, CHALLENGING AND EDUCATIONAL (IDEA OR KNOWLEDGE-RICH) CONVERSATIONS.

TYPE OF CONVERSATION	Conversations brought up in the survey	The conversation was found to be very useful	The conversation greatly challenged the team	The conversation brought up new ideas or knowledge
With a team member (Ratkaisu 100)	125	49	35	35
With a member of a stakeholder group related to my team's solution (other than user groups)	41	27	17	20
With a person I met through Ratkaisu 100	36	26	13	23
With a member of a user group related to my team's solution	30	23	11	20
With a colleague not related to the competition	31	14	6	6
With some other person	28	14	7	10
With a family member or friend	30	7	2	4
With a person I met in an event outside the competition	14	4	3	5
With another Ratkaisu 100 team	7	3	1	3
TOTAL	342	167	95	126

We received a total of 392 responses to our 14 weekly digital questionnaires. An average of 38 per cent of the Ratkaisu 100 participants (individuals as opposed to teams in this case) responded to our questionnaire each week. We were able to utilise 342 of the responses received for analysis.

The data gathered makes it possible to examine which conversations were found to be most useful, challenging, or fruitful in terms of gaining new knowledge during Ratkaisu 100. Table 1 summarises how frequently different categories of conversations (i.e., conversations categorised according to interlocutor type) were brought up in the responses and how many of them were found to be very useful, greatly challenging or generative of new knowledge. The fact that a conversation was brought up at all

quite possibly correlates with its perceived usefulness, which points to certain methodological limitations that need to be addressed in future work.⁴

In any case, out of all conversation types captured in our survey, internal team conversations were mentioned most frequently. Of such abundant conversations, 30 to 40 per cent were found to be very useful, greatly challenging or generative of new knowledge or ideas. By comparison, well over half of the conversations that were held with stakeholder groups, users or other persons the respondents had met through Ratkaisu 100 were considered very useful or generative of new ideas and knowledge.

In our interviews, the Ratkaisu 100 teams repeatedly emphasised the importance of time spent on internal conversations:

⁴However, this is not always the case: for example, conversations with family members were mentioned somewhat frequently even though they were not often found to be useful, challenging or generative of new knowledge. It is possible that such conversations nevertheless played an important role – e.g., as a source of psychological support – even if they were not judged to be directly useful from the point of view of developing a focal idea.

“An internal team-level workshop we held ahead of [the August] bootcamp was decisive for us. You could say we were somewhat terrified at the time, feeling uncertain about how we could take our idea up to the required level and how we could make the most of it. Until now we have been doing all this work alongside our existing jobs and other tasks, but now we finally feel confident that will be able to succeed.”

“...For once, we had the chance to sit down properly for a few days with the team to focus on some tangible work [during the August bootcamp]”.

Somewhat surprisingly, Ratkaisu 100 therefore played an important role in catalysing internal team conversations through events such as workshops and bootcamps.

In fact, some of the participating teams gathered face-to-face in connection with such events only—they never met each other separately from the competition. By structuring and facilitating team-level activities in this vital way, it can be said that Ratkaisu 100 provided a means to carry out shared leadership.

Teams also found the majority of conversations with external experts that were mediated by Sitra to be useful or extremely useful. In our interviews, the teams brought up several relevant occasions, including breakfast meetings with experts, that generated valuable conversations and ideas.

Conversations with mentors (introduced via Ratkaisu 100) often generated concrete development proposals which the teams took on board:

“...[person x] was mentoring and coaching us over breakfast and we had a very good meeting indeed. We were treated to several new points of view relating to the person's area of research expertise. This gave us a

new sense of perspective regarding the people who might use our service. We found these ideas good and decided to build on them when developing our work further.”

“One person we met over breakfast was an expert who helped us gain insight into key statistics showing just how common social exclusion is in Finland. It was new for us to discover how the risk of exclusion among immigrants is many times higher compared to the mainstream population. We got some useful figures from this.”

On the other hand, some events organised during the competition served mainly as sources of inspiration:

“What stayed with me [after the learning expedition to Amsterdam at the start of the incubation period] was perhaps the generally very enthusiastic atmosphere. Everyone seemed to be there to make the world a better place, in a big way.”

Unsurprisingly perhaps, conversations with other persons not directly related to the Ratkaisu 100 competition were mentioned infrequently in our surveys and interviews. Such conversations included interactions with existing colleagues and other people encountered outside the competition in the course of family life and other work activities.

Finally, it is striking that conversations with other Ratkaisu 100 teams – brought up only seven times (within a sample of 342 entries) – were considered to be the least useful. This can only be interpreted to mean that the competition struggled to create in-depth exchanges between the teams, perhaps specifically because of its competitive nature. In other

words, it seems that Ratkaisu 100 did not necessarily manage to enact a knowledge community or ecosystem in which the diverse types of knowledge held by the participants could have been brought together and shared. The competitive element seemed to limit the participants' enthusiasm vis-à-vis sharing and testing their ideas with other teams, though other kinds of helpful interactions were not absent. The following excerpts illustrate this dilemma, pointing to significant unused potential:

“Sure, there were some opportunities for us to talk to the other teams. For example, when we went out for meals in the evening [during the excursion to Amsterdam], there was always another team at the same table, so we could converse informally. Everyone, or at least some teams, talked quite openly, but I am not convinced yet whether it is necessarily a good thing to share your idea with everyone like they [the organisers] urge you to do.”

“Now that we are in the middle of the competition, I don't think they [the other teams] are very open about explaining everything that they do. And we are not prepared to tell them [all about our work] either, because the winner is decided through a paper-based process, after all [without any reference to how teams might have contributed to each other's work].”

“It has also been important to have open conversations, especially now that we are in the early stages [of idea development] because there are simply so many very clever people in the same room. We have had this heuristic strategy that we should go and have conversations with the other teams about their own ideas because that's what they like speaking about and this would also give us new ideas.”

Some teams found conversations with other teams more useful than others. Such teams often did not perceive others as a threat and found that shared conversations provided them with important cues in terms of the importance and feasibility of their own idea.

“So, we do find that this [communicating between teams] has been very useful because it has given us the opportunity to receive peer support, to reflect on things and to grow in all kinds of ways throughout this process.”

“Although this discussion [with another participating team] did not reveal anything that was strictly new to me, it somehow clarified and refined our thoughts, reminding us again about certain vital things. It gave us further confidence in relation to just how important it is to talk aloud and boldly about these “soft issues” [i.e., social problems], and it confirmed how great a role our solution could play in the lives of young people.”

It was generally evident that the impact and importance of the above conversations varied depending on the competition stage and the team type. Sometimes the conversations led to an immediate, even significant change of direction while at other times, feedback was digested more slowly. The teams often found that conversations opened up useful points of view even if they did not lead to significant changes in the final idea. Conversations gave a feeling of continuity for some teams, although it was sometimes difficult to reconcile the different opinions of the mentors they encountered. All in all, the diversity of conversations they were able to engage in was felt by the teams to be a key benefit of the competition.

What kinds of teams **gained the most from incubation support?**

The teams that benefited the most from the incubation support offered through Ratkaisu 100 stood out in three ways: they focused predominantly on developing their social innovation idea (as opposed to concentrating on analysing the problem they wished to address); secured enough time and resources for their development work; and possessed a clearly delineated idea kernel from the very start of the competition. It became evident that, as flexible as its design was, the Ratkaisu 100 format was not necessarily ideal for every kind of team.

Teams that partook in Ratkaisu 100 were relatively diverse in terms of their members' backgrounds **indicates high potential for group-level creativity.**

For challenge prize organisers, a central question concerns the kinds of teams that should be selected to partake in a given competition so as to achieve the most promising and creative results (Nesta 2014). Much of existing research on creativity has focused on the creativity of individuals while less attention has been paid to the dynamics of group creativity (see George, 2007, for an excellent review of the organisational creativity literature). In recent studies, however, it has been proposed that the creativity of groups is linked to both their composition as well as their wider context (for example, see Zhou and Shalley 2003). For instance, it has been suggested that certain kinds of diversity are associated with a higher degree of creative output, since diverse skills and perspec-

tives can feed the creation of new ideas (Mannix and Neale 2005; Hargadon and Bechky 2006). It has also been posited that the creativity of groups may be connected to a positive “team spirit” and sense of security (George and King, 2007).

The fact that the teams that partook in Ratkaisu 100 were relatively diverse in terms of their members' backgrounds (with a few exceptions) indicates high potential for group-level creativity. Compared with one another, the teams were also diverse in terms of their respective creative idea journeys: while some had entered the competition with as-of-yet undeveloped (early-stage) ideas, others were already nearing the stages of championing and implementation. Bearing in mind both of these important aspects,

in this section we ask: what kinds of teams benefited the most from participating in the challenge prize competition and why?

A clearly defined problem and solution

The teams that had entered Ratkaisu 100 with a clearly (pre-)defined problem and a well-delineated idea for solving it were, in general, well-positioned to gain from the competition (see the five cases presented earlier in this report). Such teams had already taken a conscious step from early-stage idea generation towards more advanced stages in their idea journeys, and they knew what they wanted from the competition. Some had invested a considerable amount of time in idea generation long before the competition launched. The idea journeys of such teams already had momentum and they could immediately take advantage of the offerings of Ratkaisu 100. They actively searched for specific types of help and knowledge from mentors, users and partners from the very beginning. Also, they were better able to assess the usefulness of the feedback they received. Teams whose ideas had not been defined as clearly at the outset found it much harder to both receive feedback and assess its usefulness. Teams whose ideas had become sufficiently sharpened and clearly articulated – and teams that were prepared to openly present their ideas to others – made the most of feedback interactions.

Intuitively, one might think that early-stage teams (whose ideas tend to be poorly defined and developed at the beginning of the competition) would benefit the most from additional, diverse feedback during a challenge prize competition and an incubation process. In the case of Ratkaisu 100, the opposite was true: the early-stage teams experienced greater difficulty with getting their development process “on the right track”, which is something they needed to achieve rapidly considering the strict time limits. Thus, teams without a

clear idea and direction found themselves lost and unable to properly navigate the competition, which led to a failure to take full advantage of the support offered.

On this basis, it would seem fair to conclude that the relatively fast-paced format of Ratkaisu 100 was not necessarily ideal in terms of supporting teams that were in the early phases of their respective idea journeys. Such teams might have benefited from an additional ideation phase in which they could have focused on (pre-)defining their solutions, or core concepts, before the actual competition began. This might have brought such teams forwards to the “same” starting line with the more advanced teams. This issue of time and the maturation of the teams’ ideas was reflected in some of our interviews. For instance, one team stated as follows:



“I’d say our core idea developed as much as was realistically possible within the time frame and other limitations of Ratkaisu 100. Quite simply put, a certain amount of time was required for us to get to this point – our idea could not have matured any faster.”

PROPOSAL → Challenge prize competitions should carefully analyse the status of their applicants’ idea journeys to ensure that the applicants chosen can be offered maximally appropriate support and that the support is appropriately targeted. When sufficient alignment between the participants’ idea journeys and the support offered is lacking, the catalytic impacts of incubation are likely to be limited.

Time and cognitive resources available for teams

In the case of Ratkaisu 100, a second factor affecting how particular teams benefited from the competition concerned the amount of time they could dedicate to relevant

Teams whose ideas had become **sufficiently sharpened and clearly articulated** – and teams that were prepared to openly present their ideas to others – made the most of feedback interactions.

activities. As a rule, teams that benefited the most had at least one member who could concentrate on development activities on a full-time basis. The most successful teams often had several members who were able to set aside a significant part of their normal (unrelated) paid work duties for the duration of the competition.

A common denominator among the teams that were less successful (in terms of their final Ratkaisu 100 scores) was a lack of time resources, or a relatively lower prioritisation of competition activities. Such teams found it difficult to release much-needed extra time for Ratkaisu 100-related development work. The unsurprising result was that teams in this category derived fewer benefits from the diverse types of incubation support offered. In our interviews, members of such teams often lamented that “everyone was just too busy all the time” and that they were so exhausted from their (pre-existing) work duties that they “weren’t able to take in new knowledge and ideas”. The data we collected made it amply clear that such lack of time resulted in a sense of pressure and stress among the teams affected, possibly contributing to narrower ways of thinking and unfulfilled development potential. While earlier research does suggest that a certain amount of pressure can be useful in terms of creativity, excessive stress is harmful when it weakens cognitive processing (Amabile, Hadley and Kramer 2002; Hewitt and Nurmi 2018). Put another way, although all teams undoubtedly had considerable creative potential, some possessed more time and other resources to fully exploit their creativity.

PROPOSAL → Teams and citizens selected for intensive incubation programmes linked to challenge prizes should be asked to demonstrate their willingness and ability to sufficiently commit to their development process. Competition organisers should explore ways to temporarily relieve certain participants from their

pre-existing duties (in a way that would not impose undue costs or risks on the individual). Such support would be particularly valuable from the perspective of participants with full-time jobs who do not possess the sort of flexibility that some entrepreneurs might enjoy.

A vision that extends beyond the competition and an action-oriented mindset

A third feature of the teams benefited the most from Ratkaisu 100 was – somewhat paradoxically – a vision that extended beyond the boundaries of this particular competition. In practice, this manifested as an action-oriented way of thinking, based on which certain teams could progress efficiently and in a determined manner. Teams of this type “got down to business” without delay, proceeded to test their core idea, took to forming partnerships, made efforts to pitch their idea to relevant companies, prototyped their concepts together with external organisations and sometimes even accepted new team members to compensate for any strategic weaknesses. Many such teams energetically sought out other sources of support and financing (alongside the prize money they aimed to secure through Ratkaisu 100). By no means were they ignoring the opportunities provided by the Ratkaisu 100 organisers; however, they seemed prepared to think broadly and “go the extra mile” from the very beginning of the competition. Teams in this category always remained open to alternative routes to faster progress and their action-oriented mindsets were expressed through statements such as these:



We have a couple of team members who are committed to developing our idea into a business regardless of our success in this competition. It would, of course, be a real plus if we did win funding [through Ratkaisu 100].”

Conversely, teams that were less successful and gained less from Ratkaisu 100 tended to not possess an action-oriented mindset. They were more analytical and many found themselves “stuck” at the ideation phase. They also were relatively preoccupied with the formal competition criteria and struggled to look beyond them. They tended to share the belief that it would only be possible to “properly set to work” to test and implement their solution after (ideally) winning the competition. This arguably led to various blockages and slower progress along their idea journeys.

The action-oriented teams gave others the impression that they were fully invested in their respective projects, investing all of their energies in their development regardless of what the final competition result might turn out to be. In more abstract terms, such teams could be described as possessing entrepreneurial attitudes and a high degree of intrinsic motivation. Well-known research (Ryan and Deci, 2000) proposes that creative innovation activity is strongly shaped by the presence of intrinsic motivation. Intrinsic motivation refers to engaging in an activity primarily for its own sake, for instance because a person or team finds it interesting and enjoyable. Conversely, researchers have found that extrinsic motivation – linked to factors such as external money prizes and feedback – may in some cases have a positive effect on creativity (Amabile et al. 1996; Cameron et al. 2001). Based on our own observations of Ratkaisu 100, extrinsic motivational factors did not seem to amount to a sufficient motivational driver for participating teams – the most successful teams possessed a sense of intrinsic motivation and commitment to taking an idea forwards regardless of external factors (i.e., the outcome of the competition in particular).

To summarise, in the context of challenge prize competitions, a team’s success may require a vision that extends beyond the limits of a particular competition, an entrepreneurial attitude, and at least one team

member who is prepared to fully dedicate himself/herself to developing the team’s idea.



A strong intrinsic motivation and a vision of broad societal impacts were the key things propelling us forward.

PROPOSAL → Challenge prize organisers would do well to attract teams with a high sense of intrinsic motivation and an entrepreneurial attitude for whom winning the relevant competition is not (paradoxically) the only, and not even the most important, medium-to-long-term objective.

Team member roles and leadership issues

The way in which roles and leadership duties were allocated within a team also shaped how different teams gained from Ratkaisu 100. In short, teams that were able to share leadership duties and tasks could make more of their members’ respective areas of expertise. One team expressed this orientation in the following way:



Getting through this properly and producing a good solution [social innovation] is our shared passion. In our team, everyone is a leader, in their own domain.”

In the teams that exercised shared leadership, each member led the team independently in relation to their own field of expertise. However, in some teams, there was a clearly defined leader for the group as a whole; in others, a general lack of leadership prevailed (pertaining to both the group as a whole and to particular domains). It is important to note that, alongside this internal leadership dimension, the Ratkaisu 100 competition and incubation programme also provided the teams with a sense of structure, direction, some (positive) pressure and additional motivation. To a certain extent, the competition could therefore (externally) compensate for a lack of (internal) leadership within

In more abstract terms, such teams could be described as possessing **entrepreneurial attitudes** and a high degree of **intrinsic motivation**.

participating teams. In this sense, it can be said that important leadership duties were divided, in various ways, between the participating teams and the Ratkaisu 100 organising team.

The ways in which Ratkaisu 100 facilitated the participating teams' ideation and reflection processes offer a case in point. Such facilitation, as described in the following excerpt, was experienced by many teams as highly useful:

W That minimum viable product exercise at our previous meeting [organised by Sitra] was a good one. [...] Everyone was allowed to reflect for a moment and then express their thoughts aloud [...]. There were many things we hadn't discussed thoroughly within our team, partly because we are a bunch of friends who have done things together for years. We had never really tried to structure our team or our team work in any explicit way, so it's great that Sitra is giving us some structure."

Still, the support provided by the competition could not entirely compensate for the lack of internal leadership in some teams. In the teams with a low level of internal leadership, the idea development process was more confused and appeared to come to an abrupt end when the competition finished.

PROPOSAL → Challenge prize competitions should find ways to test (prospective) teams' leadership capabilities and their ability to share leadership duties. Furthermore, it would be beneficial to provide lectures and workshops on team-level leadership as this can greatly shape the progress of social innovation teams.

Competition strategies and knowledge-sharing

Finally, the Ratkaisu 100 teams differed considerably in terms of their openness, with implications for how they could benefit from this competition (and indeed for how they could benefit others). While some shared their ideas with other teams relatively gener-

ously, others were far less open. The less protective teams presented their recent ideas and advances in great detail during Ratkaisu 100 events and during our research interviews. By contrast, the less open teams kept their most valued ideas to themselves and only revealed them at the very end of the competition (in their final paper-based formal submissions to the panel of judges).

The teams that were oriented towards global problems and opportunities tended to express their openness to collaboration more frequently (although this did not necessarily lead to actual collaborations in practice). Such teams took the position that the feedback and ideas they received from other contestants was an important way of benefiting from the Ratkaisu 100 challenge prize competition. One team expressed its attitude in relation to sharing its ideas as follows:

W Even though this competition is indeed based in Finland, the problem we are addressing is global. The more synergies we find with the other participating teams the better."

In practice, such synergies were rarely realised during Ratkaisu 100 and collaboration remained at the level of conversations (and as shown previously, conversations between teams were rarely found to be very useful). It is possible to speculate that the competition setup made tangible collaboration and in-depth exchanges seem less meaningful than might have been the case in a less competitive context. We return to this issue in the concluding section of this report.

PROPOSAL → Challenge prize organisers should take the assumption that all participants will openly share knowledge and feedback with one another with a grain of salt. Through further experimentation, it may be possible to identify competition configurations and designs that make sharing knowledge and feedback meaningful for teams. In some cases, it may be possible to create (secondary) collective prizes and incentives to facilitate open collaborative strategies.

WRAP- PING UP

Six Critical Questions





How should challenge prize competitions take into account differences in the way that participants' idea journeys unfold?

Ratkaisu 100 provided three related lessons that future challenge prize competitions should take into account.

FIRST, the data we gathered on Ratkaisu 100 indeed revealed important differences in the idea journeys of participating teams. For one, the teams entered the challenge prize competition with ideas of varying degrees of maturity. The ideas that had not yet undergone much specification would have required additional time to reach their full potential. However, the design of Ratkaisu 100 did not necessarily recognise this problem. While the incubation support offered was quite extensive, it did not match the needs of the most early-stage teams in this respect. The teams that had already reached the elaboration phase at entering the competition were best served by the support offered.

This is, of course, far from an unsurmountable dilemma: future challenge prize competitions will be able to tailor their support with (subtle and significant) developmental differences in mind (or, alternatively, they may choose ideas with a very similar developmental status). For example, teams at the early ideation phase are most likely to benefit from mentoring and feedback that is open-ended and non-prescriptive. Teams at the elaboration stage, on the other hand, may benefit more from concrete proposals that help to clarify their (already established) direction further. One way of tailoring incubation support is to analyse the teams at the beginning of the competition, making it possible to divide them into appropriate groups.

SECOND, competition organisers may wish to reflect on what types of idea journeys should be rewarded at the end of a competition. Is it enough to reward and fund those ideas that have reached the highest (perceived) level of feasibility? Or, might it make sense to also reward ideas that have progressed the most during the competition period or an associated incubation programme? From the viewpoint of fairness, recognising participants on the basis of “distance travelled” (and not just “destination reached”) may be justified when teams that are at different development stages are admitted to a given competition. It would also offer a way to reward individuals and teams for their ability to learn and recognise ideas that have not yet met their full potential but nevertheless show great promise.

THIRD, monitoring qualitative differences in the idea journeys of participants may allow organisers to offer support that compensates for certain weaknesses or inclinations. For instance, some of the Ratkaisu 100 teams “got stuck” with defining their focal social problem and held only limited conversations with external experts and stakeholders (even though these groups were potentially available for consultation). Targeted additional support could well have helped these teams to progress further within the time limits of the competition. To be fair, idea journeys are by nature iterative and unique in their details. Still, systematically observing how particular journeys unfold and the needs that arise in their course can make challenge prize competitions more efficient as well as fruitful from a participant perspective (leading, ultimately, to better solutions to social, economic and ecological challenges).

Future challenge prize competitions will be able **to tailor their support** with (subtle and significant) developmental differences in mind

2

Do challenge prize competitions generate ideas and projects with real potential to transform society?

The competition successfully promoted **participants' capability to change** society through their ideas and activities.

Such competitions frequently focus on the ideation and elaboration phases of idea development as opposed to implementation. It is therefore very difficult to predict the extent to which the novel ideas that emerge ultimately change society in a desired fashion. The real test comes when the solutions generated meet a society's multi-layered structures, processes, practices and wicked problems in practice. In the case of Ratkaisu 100, almost all teams made considerable progress along their own idea journey, enhancing the models and strategies underpinning their social innovation. In this respect, it is possible to suggest that the competition successfully promoted the participants' capability to change society through their ideas and activities, although this does not guarantee any final impacts. Only after several years will it be possible to empirically examine whether the assessments of the judges predicted the actual impacts of the solutions generated (and even so, such an examination will not be exempt from many biases, one of which concerns the reputational effects of a challenge prize competition on its "winners" and "losers").

In the absence of a time machine, it is equally important to pose questions about the emphases and time horizons of particular challenge prize competitions. Does a certain competition aim to generate minor, incremental innovations or major transformations? Does it prioritise tangible but narrowly focused services and products that work in the "here and now", driven by user-friendly apps, for instance? Or does it value bolder visions and ecosystems that are

difficult (at least in the beginning) to express through concrete practices or digital platforms and that may take decades to develop? To give just one example, public day-care services amount to a tangible social innovation, yet they were preceded by a long-standing international discussion on gender equality and the invention of the welfare state. A social innovation typically becomes possible precisely because some other factor has already shifted society in the right direction.

At least in theory, the organisers of challenge prize competitions can avoid such binary decisions by recognising and rewarding both solutions that aim for minor changes and those that envision major transformations. However, this may obviously be quite difficult to accomplish within the scope of a single competition. Organisers may approach this dilemma by assessing participating teams' ability to commit themselves to developing and implementing their ideas over several years – regardless of their success in a particular competition – and their ability to build a larger community around their focal idea. One equally tricky question is whether competition judges' views and (often subtle) assumptions on social change should be assessed and influenced in some way. Judging the potential impact of an emergent social innovation – always a task fraught with difficulty – requires not only consistency in terms of referring to a robust set of competition criteria, but also a holistic understanding of the dynamics of social change in a complex era.

3

Are challenge prize competitions necessary for all kinds of teams?

Ratkaisu 100 offered **all teams** a unique and rare opportunity (in the Finnish context) to participate in social innovation and adopt new methods for strategy-building and impact measurement.

The critics of challenge prize competitions suggest that such competitions have a strong tendency to reward teams and individuals that already possess a wealth of resources, experience and appeal – success breeds success (Starr 2013). Do challenge prize competitions inevitably give most support to teams that need it the least?

In the case of Ratkaisu 100, this concern proved largely unfounded. The teams that did well certainly possessed pre-existing networks and business experience. Also, a handful of the participating teams took part in other challenge prizes or applied for funding from several sources in parallel with Ratkaisu 100. However, our interviews revealed that even the teams that did well in the final results concluded that their ideas could not have been developed without the support and acceleration provided by Ratkaisu 100, at least not in the same form. Ratkaisu 100 offered all teams a unique and rare opportunity (in the Finnish context) to participate in social innovation and adopt new methods for strategy-building and impact measurement.

Even the teams that were less successful (in terms of judges' assessments) insisted that they benefited from Ratkaisu 100 in

myriad ways. Importantly, the competition catalysed the formation of new teams (at the application stage) and provided opportunities for serious engagement in innovative activities, network development, experimental work and reflection on further developmental steps. Teams that had never engaged in such activities before made even more progress with their idea journeys, relative to their respective starting positions, compared to more experienced teams (although they could not make it quite far enough during the competition period itself). In the months falling between the formal end of Ratkaisu 100 and the publication of this report, several non-awardee teams have secured significant amounts of funding. Encouragingly, any sense of disappointment that non-awardee teams may have experienced at the end of the competition has not, it appears, translated into a permanent loss of motivation. In the coming months and years, it will be informative to continue following the participants to better understand how Ratkaisu 100 may have shaped the subsequent idea journeys and careers of the partaking teams. Follow-up surveys can produce new perspectives on the long-term effects of challenge prize competitions.

4

How important is the role of challenge prize organisers?

The competition organisers also set up **structures, rhythms and practices** through which they could exercise shared leadership.

The success of challenge prize competitions depends directly on their organisers' investments in the planning and production of a given competition. Through offering incubation support after soliciting and short-listing applications, organisers have the opportunity to support the teams' work from up a closer range.

In the case of Ratkaisu 100, Sitra's organising team adopted a highly active hands-on approach during the incubation phase: it repeatedly reminded teams of the ultimate purpose of the competition and the events that comprised it; explained (and re-explained!) the competition criteria and key objectives; introduced relevant qualified experts and prospective partner organisations to the participants; and did its best to respond adequately to various requests from the competing teams. The organising team arguably also served as a source of inspiration and motivation. Its enthusiasm was evident to the contestants who said they respected the organisers' willingness to engage directly with the participants, challenging their ideas and mindsets in constructive ways. The participating teams praised the efforts of the organisers throughout the competition (we believe, sincerely) and felt that they were given the best possible support to solve Finland's most significant social problems. The organisers, while confident, also exhibited a willingness to

learn and adapt as the competition progressed. Indeed, they had incorporated mechanisms of continuous learning into the competition process (which included monthly exchanges with the authors of this report).

As noted earlier, the competition organisers also set up structures, rhythms and practices through which they could complement the teams internal leadership. It is clear that this helped the participating teams focus more intensively on idea elaboration and other core developmental tasks. Viewed more broadly, we can see that the organisers practiced a new form of public sector leadership through Ratkaisu 100, promoting collaboration at several different levels and between diverse actors. Sitra's team played three distinctive roles: 1) it invited actors who do not normally work together to participate in a shared innovation process (acting as a convener); 2) it supported and accelerated collaboration between these actors (serving as a facilitator); and (3) provoked participants to think more creatively and develop their solutions far more boldly than they were used to in their normal work situations (acting as a catalyst; Sørensen and Torfing 2011).

In this sense, what the organising team delivered went well beyond the boundaries of incubation and acceleration, as conventionally defined.

5

How should the value of challenge prize competitions be understood in the future?

In international discussions, criticisms have typically been directed at challenge prize competitions that do not include an incubator period or other types of substantial feedback or support mechanisms. For this reason, some have argued that preparing applications for and participating in such competitions is a waste of time, since only a tiny fraction of applicants win and gain tangible benefits. We have challenged this view by showing how the teams selected for Ratkaisu 100 benefited from the support they received in various ways. While it may have been the more solution-focused, entrepreneurial teams that were able to make the most of this support, other teams (including those that were more analytical, problem-focused and homogenous) also benefited from the feedback, attention, additional legitimacy and facilitative structures generated by the competition. We therefore recommend that important differences in competition formats are taken into account when challenge prize competitions are evaluated, and that sufficient empirical attention is paid to how diverse teams benefit in practice.

It should be noted that challenge prize competitions that incorporate an incubation period provide value particularly at the elaboration phase of the idea journey. Idea elaboration is a critical but often neglected and underestimated phase – without it, solutions do not evolve from tentative ideas into appealing innovations that attract support from partners and funders. In the case of Ratkaisu 100, almost every team admitted that their idea would never have “grown” or taken off without the support provided by this competition. The critics of challenge prize competitions believe that

such competitions focus too much on seeking and rewarding new ideas at the expense of their implementation; surely the elaboration phase should also be more strongly emphasised as a necessary bridge between ideation and implementation.

Finally, writers who are sceptical about challenge prize competitions do not usually take into account the benefits of such competitions in a wider time-frame or in a broader social context. Their long-term impacts relate to the quality and feasibility of the ideas competitions produce, as well as their ability to bring different sectors together to build new solutions. Research shows that networks, teams and joint projects of diverse participants have the ability to produce considerable public innovations and social value (Sørensen and Torfing 2011; Ansell and Torfing 2014). Innovation work at the intersection of various sectors is not yet a common practice even in Finland, which is why competitions such as Ratkaisu 100 have a unique and especially valuable role as catalysts of social innovations. One alternative way to measure the value produced by challenge prize competitions is to survey the growth of the networks and communities created by them (Toivonen 2016). Because of deeply rooted cultural and institutional differences, the creation of such cross-cutting networks and communities is not easy, but it is productive (when successful) because these networks and communities provide shared frameworks for collaboration and problem-solving across boundaries (that may persist even after the conclusion of a particular competition). This is one important way to strengthen society’s capacity to face new kinds of complex challenges.

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6

Do challenge prize competitions generate collaborative and creative communities?

Innovative individuals and teams have the opportunity to grow into genuine creative collectives that have valuable conversations, share feedback generously and solve wicked problems together (Hargadon and Bechky 2006). Such interactions cannot be taken for granted – they require shared norms that value help-giving and make it meaningful. The Achilles' heel of challenge prize competitions is related to this specific requirement because their competitive setup conflicts fundamentally with the principles of sharing and help-giving. This is why it may be difficult for incubation programmes linked to challenge prize competitions to create a genuine and functioning collaborative community (at least while the competition process is ongoing).

Unfortunately, these assumptions were partly realised in the case of Ratkaisu 100, in spite of the organisers' active efforts to promote collaboration. Although the 15 collaborative workshop days offered plentiful opportunities for interactions between the teams (and although the teams held many friendly and supportive conversations throughout the incubation period), we could not find evidence of any in-depth collaboration between the teams through our study. Of the 342 conversations surveyed by our online questionnaire only seven were conducted between teams and only three of these were found to be "extremely useful". It is therefore difficult to claim that this particular challenge prize competition generated an internal creative community that shared its most valuable information and held in-depth conversations about the problems and topics that were most important to its participants. (This does not mean,

of course, that other forms of peer support did not materialise during Ratkaisu 100.)

In the future, one possible method for promoting tangible collaboration between teams is to emphasise that collaboration will be rewarded. For example, a decision could be made that a given competition will reward two winners, one of which must be a project linked to genuine collaboration between teams (this resembles the funding rules of certain universities that promote collaboration). Another possibility is to decide that additional funding can be gained through collaborative innovations. In a challenge prize competition that seeks to address a specific large-scale social problem, it could be assumed that vital synergies would form when the strengths of the different teams are combined, as long as this combining takes place organically. These advantages cannot materialise if the teams strictly compete against each other during the duration of the whole competition. This dilemma was evident also in the case of Ratkaisu 100, as the (expected) impact of many teams could have grown considerably as a result of collaboration.

A contrasting way to approach the issue of collaborative communities is to look at individual teams and the wider external communities or "ecosystems" they enact. Challenge prize organisers who adopt this point of view may decide that the strength of the community internal to the challenge prize competition or incubation programme is not a very important factor at all – what is much more vital is that multidisciplinary support networks across sectoral boundaries develop around participating teams working on their solutions. This point of view is quite

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justifiable, but on the other hand it does not by itself conflict with or preclude the parallel creation of an internal community between challenge prize contestants.

It is also possible that creative collaboration between contestants accelerates once the competitive setup evaporates (following the conclusion of a particular competition), provided teams still recognise and value each

other's knowledge and skills. Whether such collaboration is realised is likely to also depend on the efforts and strategies of challenge prize organisers, among other factors. Clearly, the dynamics of collaboration in competitive social innovation and incubation settings remains an interesting and important topic for further exploration.

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