



# Training Showcase: Challenge Driven Innovation – a programme run by Sweden's innovation agency

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[www.rri-tools.eu](http://www.rri-tools.eu)

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<b>Note</b>	

### Summary

Challenge Driven Innovation is a research and innovation funding programme that has been developed by Sweden's innovation agency, Vinnova, to fund collaboration in research and innovation that address societal challenges, involving consortia of partners from different parts of society. This showcase looks at the approach that Vinnova took to develop the programme as well as the nature of the programme itself.

The programme was developed and launched in 2011, in response to a new strategy at Vinnova, to be better aligned with the mission of the agency, namely to promote sustainable growth by funding needs-driven research and innovation. It was decided to focus Vinnova's work around four societal challenges: Future healthcare; Sustainable attractive cities; Competitive industries; and Information society.

Consultations and workshops with stakeholders identified three principles upon which the funding model would be based:

- Policy issues must be prioritised (and a challenge-oriented approach adopted).
- Subject areas and sectors should be intermixed (a multi-disciplinary approach rather than a traditional focus on separate disciplines).
- The user perspective must be the starting point for innovation.

A cross-agency team was given only six weeks to launch the programme. CDI consists of a three-stage process: Initiation; Collaboration; Implementation, whereby projects are rigorously evaluated between each stage and a declining number of projects are selected to receive funding for each subsequent stage.

Continuous evaluation has led to the refinement and development of the programme based on experience gained over time. This has also resulted in a number of **learning outcomes** at different levels: both for the programme management and for the organisation as a whole.

CDI demonstrates RRI criteria in a number of ways, for example:

The aim of the programme is to **address societal challenges** and to create sustainable growth by investing in research and innovation. Project consortia must take a problem-oriented approach that involves different disciplines and sectors and address the full value chain, from production to consumption.

**Diversity and inclusion** are particularly strong due to the requirement to include all the necessary stakeholders and disciplines in the consortia in order to be able to address the selected challenges. These include academia, industry, the public sector as well as end users, who are a main focus in the programme. Issues of gender balance in the consortia are also considered by the evaluators. Vinnova has also put considerable effort into finding ways of attracting new types of applicants, through its marketing campaigns as well as different application methods.

The programme itself is continuously evaluated and changed in order to better align to the overall vision, and thus strongly demonstrates **responsiveness and adaptive change**. For example, this has included refinement of the programme and evaluation criteria to attract more applications that appropriately respond to the challenge-oriented approach. In addition, funded projects are required to undertake ongoing consultations and dialogue with stakeholders. Activities, such as programme conferences, provide an opportunity for project stakeholders to share experiences.

**Anticipation and reflection** is built into the programme description through its focus on societal challenges. It is the consortia themselves that define a specific challenge and how to tackle it. They must take a systems perspective of the problem and develop an impact logic model that looks at the long-term outcomes of the project. Market research is undertaken between each stage to identify any changing external factors that may affect the project. End users are a main focus and all stakeholders' needs, values, and opinions are taken into account from the start of the project.

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## 1 Introduction

Sweden's innovation agency, Vinnova, has the mission to promote sustainable growth by improving the conditions for innovation, as well as funding needs-driven research. During the last few years, the agency has moved from working with a focus on different technical disciplines to a more challenge-oriented and cross-disciplinary approach. One reason was the introduction of the programme Challenge Driven Innovation, which funds collaboration in research and innovation within consortia of partners from different parts of society. The cross-disciplinary, cross-sectorial and challenge-oriented model introduced by the programme has resulted in new working methods across the agency as a whole.

The programme has been evaluated by the RRI Tools project and been found to correspond well to many of the aspects included in the RRI concept. The aims are to address societal challenges with research and innovation by building consortia involving all relevant stakeholders and the full value chain. The consortia themselves define a specific challenge and how to tackle it. There are three funding stages in the programme: In the first stage, funding is given for the initiation, development of the idea and the consortium, or for a technical feasibility study (approx. 8-9 months). Selected consortia get funding for a second stage to support collaboration, development and integration, restricted testing, and user involvement (approx. 2.5 years). Finally, some projects are selected for a final third stage that supports implementation, full-scale tests in real environments, demonstrations, and user involvement (2 years).

This showcase describes how the programme has developed, from vision to implementation, and how the entire organisation has changed as a result.

[www.vinnova.se/cdi](http://www.vinnova.se/cdi)

## 2 The CDI programme – development and effects

### 2.1 The development of the idea

Since Vinnova was set up in 2001, the agency's mission has been to promote sustainable growth in Sweden by funding needs-driven research and innovation. In 2007, it recognised the need to innovate, and a group of people at the agency was tasked with introducing a new strategy. This group noticed that they were working in silos i.e. they mainly worked in individual areas such as transport, ICT, health, etc. There was very little exchange between these disciplines or areas. Any collaboration that did take place in projects, mainly took place just between industry and academia. Public authorities, which under the triple-helix model should also be involved, contributed primarily to projects as funding partners. Moreover, the projects funded were largely technical in nature, and the starting position of the concept of sustainability was generally economic sustainability. The societal and ecological aspects were of secondary importance.

The group saw that the outside world increasingly referred to societal challenges, such as urbanisation, climate, demography, etc. and, at the same time, realised that the agency's approach for addressing these challenges was inadequate, meaning that it was therefore most likely not fulfilling its mission. The group questioned whether it was possible to redefine Vinnova's strategies and principles in order to put societal challenges at the top of the agenda. However, in internal discussions, they discovered that views differed widely. Not everyone was in agreement and it was not the right timing to change their ways of working. Instead, they chose to continue working as before.

### 2.2 2009: The Lund Declaration on the Grand Challenges and a new Director General

During the Swedish EU presidency in 2009, the conference on 'New World – New Solutions' resulted in the Lund Declaration, which stated that *Europe must focus on the grand challenges of our time*. In the same year, Vinnova got a new Director General, Dr Charlotte Brogren. The Lund Declaration and the new DG brought a new momentum and the DG

appointed an internal group of strategists from all the specialist areas to explore the prerequisites for prioritising the societal challenges. The DG had a background in industrial research and was clear that processes within the agency had to develop more quickly than they had done previously. The outside world, even politics, is a competitive environment and, therefore, Vinnova had to take the lead, she said. This driving force became a clear guiding principle for the strategy group's work.

The strategy group started the process with a lot of discussions and disagreements, but after a year's work, worked out a way to realign their work according to the societal challenges. Four areas were identified and agreed upon that were both relevant to Sweden and for which there were good prospects for developing profitable innovations:

1. Future healthcare.
2. Sustainable attractive cities.
3. Competitive industries.
4. Information society.

This enabled a challenge-oriented approach to be combined with Vinnova's expertise. It was agreed that these ideas would form the basis of a new funding programme and the CDI was born.

### **2.3 Workshop with stakeholders**

To anchor their ideas, the group held hearings and workshops with stakeholders, mainly from research and industry, from both universities and research institutes as well as small and large companies. One workshop per challenge area was run, but regardless of the area, the same conclusions were reached in all four workshops:

- Policy issues must be prioritised.
- Subject areas and sectors must be intermixed.
- The user perspective must be a starting point for innovation.

These three principles then became the foundation of the programme.



## 2.4 'Launch the programme in six weeks!'

Based on the vision of prioritising the societal challenges, the three principles that had been developed in consultation with stakeholders, and a funding model with three stages, it was decided to launch the programme in 2011. No other requirements were imposed in the first funding round. To not precisely define the framework was a conscious approach as it reduced the risk that good project ideas would be missed.

Under the programme requirements, all of the stakeholders in the consortium had to be equal partners, and public authorities, which had mainly been involved as funders in previous projects, would now be active project partners. However, it was the applicants who had to identify which stakeholders needed to be involved, and the applicants also were required to break down their vision into processes.

The funding model meant that a large number of projects received some money in the first stage, and the most promising projects from the first stage would receive further funding in a second stage. Subsequently, the best of those received a large amount of funding in the third and final stage to implement their innovations. This model had several advantages: it gave a large number of projects the opportunity to test their ideas in practice, and it would also make it easier to bring new stakeholders into the collaborations, who had previously not been reached. A lot more risks could be taken in the first stage and, as they progressed, projects could be developed further and move to more of a focus on assuring quality.

After the strategy group had agreed on their approach, Margareta Groth, Head of the Industrial Technologies Department, was asked to put together a working group to develop the programme in a short amount of time; they wanted to publish the call within six and a half weeks. "My manager called me to ask me about doing it and the next day I had the meeting with the DG who said that I could have all the resources I needed and whichever officers I wanted. So I put together a dream-team of officers from each of the subject departments, and also an administrator, and then we got started. We had to work fast, but had great support from the strategy group" said Margareta Groth.

## 2.5 Marketing campaign for new stakeholders

The working group managed to deliver the call to meet the deadline, and once it was published, it was heavily marketed. Information meetings were held in different parts of the country, which were webcast and recorded to give everyone access to them, regardless of where they lived or which stakeholder group they belonged to. The funding model with three stages and the requirement to involve different disciplines and stakeholders was new to everyone applying for funding. In addition, it was the first major call in several years, so they expected a lot of interest and a large number of applications. As they wanted to reach new and more stakeholders than in previous calls, the marketing campaign was particularly important, and at the same time a great challenge.

In addition to the information meetings, all of the staff at the agency were tasked with spreading information about the programme at other meetings in connection to their ordinary work. Despite this, a large proportion of the record number (650) of applications that were submitted did not meet the challenge-oriented requirement, but were structured as traditional collaborative projects focused on individual sectors.

Many projects did not fulfil the challenge driven requirement because of their focus on a certain process or technique rather than on the challenge, or because the challenge was limited to a certain company or municipality, and therefore did not have relevance for society as a whole. Some projects also were too theoretical, with no specific customer or end user. The outside world was simply not ready yet: to be cross-sectorial and interdisciplinary was something completely new. “No one had done anything challenge driven before that, we were first in the whole of Europe as far as we know,” said Margareta Groth. “We were asked to brief people working on the Horizon 2020 programme about how we had gone about it, because despite written references to the challenges, we were the first to work with the challenges in this way.”

## 2.6 Learning by doing

After the first call in 2011, the programme description has been subsequently rewritten over the years to more clearly attract projects that are challenge driven and clarify what is not. The new, more specified requirements are based on experiences from the projects that had already received funding. Funded projects have been continually evaluated to help further define the programme and evaluation criteria. Now applications match the programme objectives in a much better way, the criteria are clearer and fewer people are applying incorrectly. As an increasing number of successful projects enter the different stages, these can also serve as examples of what a CDI project is. In early 2016, two of the projects completed stage three and a few more were in the third and final stage. The fact that more and more projects have gone through the programme means there are more opportunities to evaluate what impact the various projects have had in society, in terms of innovations, skills development among the participants and spin-off effects.

Examples of successful projects in each of the programme areas to date are:

1. *Smedpack*, a project that aims to prevent counterfeit medicines from entering the legal distribution chain, through the development of secure pharmaceutical packaging concepts. **(Future healthcare)**.
2. *School for everyone, from the first day in the new country*, which is developing a digital, multilingual resource for newly arrived refugees **(Information society)**.
3. *C/O City*, which aims to enhance the ecosystem services in cities **(Sustainable attractive cities)**
4. *The Operator of the Future*, which is developing ICT tools for the process and manufacturing industry, in order to enhance flexibility and speed **(Competitive industries)**

In order to write descriptions that express the aim of the programme in a more effective way, 'not' criteria rather than criteria have started to be introduced. As the call descriptions are so open and it is up to consortia to organise themselves and decide which challenges to address, this approach works better than trying to be specific about what they must do. The three basic criteria, which were included in the first call description, have, over time, been

complemented with sub-criteria, but care has been taken to maintain the vision and the underlying principles.

Since 2013, a programme advisory board has been set up consisting of external people, who contribute to the strategic development of the programme. The advisory board consists of representatives from industry, academia, and the public sector. Proposals are reviewed by both internal and external experts, and the programme advisory board gives its recommendations before a decision is taken on which projects will receive funding. The programme advisory board has also helped to set up a calendar for activity related to the programme throughout the year, moving from an ad hoc timetable to having scheduled annual calls for proposals and procedures for interaction between the advisory board and programme officers.

The selection process for the evaluators has also improved over the years, from being a simple Excel template and many time-consuming meetings between all the evaluation groups to a more refined and coordinated evaluation process. Different evaluation groups at the agency previously worked in different ways, but the evaluation process has been standardised as part of the CDI framework, for example, the way the evaluation criteria and deadlines are set.

Furthermore, experience gained from *funded projects* has provided input on how the programme should be described, and experiences have been systematically shared *between projects* at experience-sharing conferences organised by CDI. Examples of topics discussed at these conferences include the concept of sustainable growth, how the economic aspects should be incorporated into the projects, and what it takes to get funding for the next stage.

Examples of how the programme and its processes have been systematically evaluated:

- Evaluation of the final reports produced by the projects.
- Questionnaires for projects that complete stage 1, as well as for those who applied but were not successful at stage 1.
- In-depth interviews for projects that complete stage 2.

- Discussions with project members at programme conferences.
- External advisory boards who review and provide feedback.
- Feedback on the process by external evaluators (who come in the process directly before the programme board).
- Internal analysis of the programme conducted by Vinnova's evaluation department, who are not actively involved in the programme.
- External analysis conducted by SICS Swedish ICT and Stockholm School of Economics Executive Education, who evaluate the management of this type of project and what distinguishes it from more traditional types of projects.

### 2.7 Implementation first

The entire work to develop CDI has been internally initiated, not stipulated by the government, although the government has been informed about the programme. The agency has had great freedom to develop its own strategies and design the programme in its own way. "As an expert authority, we have a freedom of action that is unique to Sweden," said Margareta Groth. The good results produced by the programme over time have transformed it from an experimental activity to an established programme, and it has also been allocated greater resources.

The experiences gained from CDI and the development work undertaken by the agency, have retrospectively been incorporated in governmental research and innovation bills, and, in this way, has become more explicit in the agency's official mandate.

### 2.8 Learning outcomes in the organisation

In parallel to the introduction of CDI, working practices at Vinnova have changed as a whole, largely as a result of the programme. "CDI has been the driver for standardising practices in our internal change processes," said Daniel Rencrantz, the Programme Manager of CDI.

Examples of changes are that dialogue and collaboration between officers in various departments has increased and that challenge perspective has been more or less embraced throughout the organisation. The range of stakeholders, who receive funding from Vinnova,

has widened from being mainly from industry and research to increasingly including the public sector, such as public authorities. Furthermore, there has been a move from an unspoken focus on technical innovations to a much broader concept of innovation. In 2015, a social innovation programme was launched for the first time, in which the public sector has an important role, and where civil society can be involved to a greater extent than in other projects. Civil society is even involved in CDI but the type of partners that can form part of the consortia depends on the challenges and approaches.

One effect of including stakeholders other than those from academia and industry is that proposal submission requirements need to be clearer and easier. Many CSOs do not have the resources and experience of writing traditional applications and can easily fall short of satisfying formal criteria, even though the ideas are basically good and should get funding. For that reason, Vinnova has started looking at different ways to widen their reach and capture good ideas. For example, video pitching of ideas is being trialled as an alternative to written proposals. “This is a way for us to reach parts of Sweden, which don’t represent our traditional target groups,” said Joakim Tiséus, Director and Head of Societal Development.

### **2.9 Success factors**

Some of the factors that helped Vinnova to implement change and launch a completely new programme based on the societal challenges are:

- A clear vision.
- Strong leadership.
- Courage to change ingrained structures and working methods.
- Freedom of action, a mandate to carry out internal change.
- An iterative approach, where it is allowed to make mistakes and try again.
- Support gained from stakeholders.
- Commitment of staff.

### **2.10 Transferability to other countries**

In Sweden there is a great reliance on social systems and international standards, and little corruption. Collaborative models have always been praised, and that is the reason why is has

been relatively easy to initiate collaboration across different sectors and disciplines. How easy would it be to set up and implement a similar programme in other countries?

“Although the level of trust is often lower in other countries than in Sweden, my message is that cross-sectorial collaboration breeds trust,” said Joakim Tiséus. “So if you get off to a good start, you can create an upwards spiral. What is required first and foremost is the courage to change. However, there must always be a win-win situation and positive effects for all involved stakeholders. It should be profitable for the business community and it should also be of benefit to society. If any of these benefits are missing, it won’t work. Furthermore, if you mix expertise from different areas, you challenge prejudices, and this creates positive synergies. The synergies are the greatest benefits of the projects, a greater benefit than the actual results of the project”.

In addition, as projects need to demonstrate results and concrete plans to reach the next stage of the programme, there is time for trust to be built before large amounts of money is allocated to the project.

### 3 Challenge driven innovation from an RRI-perspective

This showcase demonstrates many of the RRI components defined by the RRI Tools project. Some examples on how it meets the RRI criteria particularly well are:

- The aim of the programme is to **address societal challenges** and to create sustainable growth by investing in research and innovation.
- **Diversity and inclusion** are particularly strong due to the requirement to include all the necessary stakeholders and disciplines in the consortia in order to be able to address the selected challenges.
- The programme itself is continuously evaluated and changed in order to better align to the vision, and thus strongly demonstrates **responsiveness and adaptive change**.
- The continuous evaluation and development of the programme results in **learning outcomes** at different levels: both for the programme management and for the organisation as a whole.

The following sections will reflect on the CDI programme from the perspective of the RRI process requirements developed within the framework of RRI Tools.

#### 3.1 Diversity & inclusion

As the CDI calls are problem-oriented, there are no restrictions on which stakeholders, sectors, research topics, disciplines are to be involved, but rather a requirement for ALL necessary stakeholder groups to be involved in order to be able to address the selected challenges. End users are the starting point for innovation and therefore must be involved, which also encourages an awareness of diversity and gender issues.

The calls are open to all types of stakeholders and, to encourage those who traditionally have not responded to calls to apply, a number of different marketing approaches and ways of applying have been adopted. In addition, a linguistic analysis of text written about the project on the web and in calls for proposals is being carried out to find whether the choice of language could lead to the inclusion or exclusion of certain stakeholders. As the



programme has been running for several years now, the types of challenges, stakeholders, etc., that have been included so far can be analysed, and outreach work and targeted calls can be carried out to target any types of projects, stakeholders, and perspectives that are lacking.

The gender balance within the consortium is also reviewed during the evaluation of the projects and the evaluators will ask the consortium to address any imbalances.

When setting up the initial team to develop the CDI programme, representatives from all the specialist departments across the organisation were involved and a diverse range of stakeholders consulted. In addition, a programme advisory board was set up in 2013 that consists of representatives from industry, academia, and the public sector.

Awareness of social diversity is included in the challenge on socially sustainable growth. Many of the projects include this challenge: it has been an important focus in at least 30% of the projects. Examples include projects on urban farming, getting more people into the labour market, making socially deprived areas more attractive and creating meeting places.

### **3.2 Openness & Transparency**

A lot of effort has gone into tailoring and refining information about the programme to ensure it is accessible to all stakeholder groups. The programme description has been rewritten over the years to provide clearer criteria to attract projects that are challenge driven and clarify what is not. As a result, the number of inappropriate applications has declined. Input from stakeholders, such as civil society organisations, has highlighted a need for proposal submission requirements to be clearer and easier and resulted in the introduction of video pitching in addition to standard written applications. Information meetings are webcast and recorded to give everyone access.

Guidelines have also been developed for internal and external project communication and this is also a parameter used for evaluation. The aim is to use different channels and means

of communication to reach and inform different audiences, for example through information folders, the internet, video clips, information meetings, conferences, and dialogue meetings, where potential stakeholders can test their ideas.

As more and more projects go through the programme, the number of examples of successful projects that demonstrate good communication increases. However, as no projects have completed the third and final step of the programme (May 2016), there are no concrete examples of final dissemination activities.

### 3.3 Anticipation & Reflection

The CDI programme supports a problem-oriented and demand-driven approach that necessitates anticipation and reflection. This is built into the project description; *the challenges are outlined and there is reflection on the type of innovations that will be needed in order to address them, such as social, technical, or a combination. The programme also requires that the consortia work in a cross-sectorial and multi-disciplinary manner. All stakeholders' needs, values, and opinions including end users, are analysed and taken into consideration right from the start of the project.*

*There is a requirement for each consortium to take a systems perspective to the problem and to create an impact logic model for the project, which outlines the expected short- and long-term outcomes of the project. These are evaluated in every project and the consortium is expected to start taking ownership of the expected outcomes during the project. For example, one project outcome might be the implementation of certain regulatory changes. In this case, the project must start talking to policy makers early on in the project to ensure that the law and the project outcome go hand in hand. The programme is divided into three parts and, prior to the start of each new project phase, stakeholders must review and update their impact logic model. On a programme level, rather than defining specific goals that the projects must fulfil, the programme primarily focuses on developing the work processes and project's impact logic model.*

### 3.4 Responsiveness and adaptive change

The 3-stage process ensures rigorous evaluation of the projects, providing valuable feedback and that can be incorporated into the next stage. In addition, between each step in the 3-stage process, the consortium must undertake new market research and refine the problem description and impact logic model to ensure that new conditions and changing external factors are taken into account.

The programme itself is also continuously refined and developed in response to evaluation and consultations with stakeholders in order to better align to the vision. Programme conferences provide an opportunity for projects to meet and share experiences and there are a number of mechanisms for project managers to provide feedback. In response to the needs of project managers, a number of supporting tools have been developed. For example, a model that can be used to analyse stakeholder complexity on a general level and a checklist document for project managers.

### 3.5 Learning outcomes

In the working definition developed by the RRI Tools project, three categories of outcomes are described:

1. Learning outcomes: Engaged Publics, Responsible actors, Responsible institutions.
2. Research and Innovation outcomes that are ethically acceptable, sustainable, and socially desirable.
3. Solutions to societal challenges, such as the seven Grand Challenges formulated by the EU.

Outcomes no. 2 and 3 are at the core of the CDI programme, but **learning outcomes** from the programme are also visible at different levels:

Within the funded projects, a range of societal actors and researchers from different disciplines in each consortium are required to communicate, negotiate, and collaborate with each other in order to develop solutions to the challenge they have defined. This fosters mutual understanding and responsiveness. Many of the projects run scenario workshops, where they anticipate future opportunities and risks connected with the selected challenge.

Even the projects that do not receive further funding for a consecutive project stage, report that they have gained new insights and collaboration partners that are beneficial for future projects or development. The CDI programme hence fosters **responsible actors**.

The continuous evaluation and development of the programme has resulted in learning outcomes both for the programme management and for the organisation as a whole. Both the programme description and the evaluation criteria are continuously reviewed and improved. As an example, all texts have been analysed to identify how different disciplines are being addressed, e.g. research within social sciences and the humanities. Moreover, the challenge-oriented focus, the transdisciplinary approach, and the involvement of new societal actors has led to new working routines, which has inspired the organisation as a whole. Other funding programmes have adopted a more challenge-oriented focus and officers in different departments of the organisation have increased their internal collaboration. The outcome category **responsible institutions** is therefore particularly well achieved in the programme.

## 4 Ideas for workshop exercises

This showcase may be used in different ways for training purposes, depending on target group and the aim of the training. At the start of the training workshop a plenary session is recommended to introduce the concept of RRI to the participants. The different components of RRI developed in the project will be presented and explained: the RRI outcomes, process requirements and the aim to address the societal challenges (see the RRI Tools policy brief with the working definition of, *RRI Tools – towards RRI in action*).

### 4.1 OPTION 1: Read and reflect

After the presentation of the RRI concept, the participants either read the showcase 'Challenge Driven Innovation' individually, or it is presented by the workshop moderator. After that, they discuss what they think about the programme, and how it relates to their own practices.

The target group should primarily be policy makers, especially research funding organisations, but other stakeholder groups can also benefit from the discussion, e.g. researchers, industry, and CSOs.

Suggested topics to discuss:

- To what degree does the CDI programme and/or the evolution of the programme correspond to the RRI criteria?
- What can be learned from the practice that can be beneficial for their own practice, or vice versa?
- Is CDI transferable to their own country? Why/why not? If not, what obstacles need to be tackled?
- How could the CDI programme benefit different stakeholders, e.g. researchers, industry, or civil society? What opportunities and challenges would it bring about?

Time	What	Who	Comment
30 min	Presentation of RRI, as described in the RRI Tools policy brief.	Group	
30 min	Presentation of the showcase OR individual reading of the showcase.	Group/Individual	Preparation before start of the workshop.
15 min	Individual reflection regarding some of the suggested topics.	Individual	Preparation before start of the workshop.
45 min	Discussion about some of the suggested topics.	Group	Positive and negative points of the case.
30 min	Discussion about how the attendee's practices can be improved as a result of what is learned from the showcase.	Group	Including insight in and understanding of own CSP.

## 4.2 OPTION 2: Simulation

After the presentation of the RRI concept, the moderator presents the beginning of the story, from the development of the idea to the Lund Declaration and the recruitment of the new Director General. The attendees are then divided into groups and discuss how they would start working as a funding agency to promote sustainable growth and focus on the grand challenges. After that, they have a general discussion of the ideas. As a final step, the programme is presented by the moderator, and is compared to the ideas that have risen from the group discussions.

The target group should, as in option 1, primarily be policy makers, especially research funding organisations, but other stakeholder groups would certainly benefit from the discussion, e.g. researchers, industry, and CSOs.

Suggested topics to discuss in the final discussion:

- To what degree does the CDI programme and/or the evolution of the programme correspond to the RRI criteria? Compare to the ideas arisen from the group discussions.
- What can be learned from the practice that can be beneficial for their own practice, or vice versa? Compare to the ideas arisen from the group discussions.
- Is CDI transferable to their own country? Why/why not? If not, what obstacles need to be tackled? Compare to the ideas arisen from the group discussions.
- How could the CDI programme benefit different stakeholders, e.g. researchers, industry, or civil society? What opportunities and challenges would it bring about?

Time	What	Who	Comment
30 min	Presentation of RRI, as described in the RRI Tools policy brief.	Group	
15 min	Presentation of the beginning of the showcase. Divide into smaller groups, give them the task to come up with ideas on how to promote sustainable growth by focusing on societal challenges, as an RFO.	Group	Preparation before start of the workshop.
45 min	Group discussions, development of ideas on how to tackle the challenge.	Small groups	Preparation before start of the workshop.
30 min	The small groups present their ideas.	Group	Positive and negative points of the case.
15 min	Presentation of the rest of the showcase.	Group	Including insight in and understanding of own CSP.
45 min	Compare the ideas developed during the group discussions with the CDI programme. Discussion of some of the suggested topics.	Group	
30 min	Discussion about how the attendee's practices can be improved as a result of what is learned from the showcase.	Group	



## 5 Additional material

(1) The CDI at the Vinnova web site:

[www.vinnova.se/en/Our-activities/Cross-border-co-operation/Challenge-driven-Innovation/Challenge-driven-Innovation/](http://www.vinnova.se/en/Our-activities/Cross-border-co-operation/Challenge-driven-Innovation/Challenge-driven-Innovation/)

(2) A programme description explaining how Vinnova works with challenge driven innovation (2016):

[www.vinnova.se/upload/dokument/Verksamhet/UDI/CDI-program\\_description\\_160329\\_eng.pdf](http://www.vinnova.se/upload/dokument/Verksamhet/UDI/CDI-program_description_160329_eng.pdf)

(3) Shorter information material in English, brochure:

[www.vinnova.se/upload/EPiStorePDF/vi\\_15\\_11.pdf](http://www.vinnova.se/upload/EPiStorePDF/vi_15_11.pdf)

(4) Information about stage 1 and list of granted projects (in Swedish):

[www.vinnova.se/sv/Ansoka-och-rapportera/Utlysningar/Effekta/Utmaningsdriven-innovation---Steg-1-Initiering-2016/](http://www.vinnova.se/sv/Ansoka-och-rapportera/Utlysningar/Effekta/Utmaningsdriven-innovation---Steg-1-Initiering-2016/)

(5) List of granted projects, stage 2 (in Swedish):

[www.vinnova.se/sv/Ansoka-och-rapportera/Utlysningar/Effekta/Utmaningsdriven-innovation---Steg-2-Samverkans\\_projekt/](http://www.vinnova.se/sv/Ansoka-och-rapportera/Utlysningar/Effekta/Utmaningsdriven-innovation---Steg-2-Samverkans_projekt/)

(6) List of granted projects, stage 3 (in Swedish):

[www.vinnova.se/sv/Ansoka-och-rapportera/Utlysningar/Effekta/Utmaningsdriven-innovation---Steg-3-Foljdinvesteringar/](http://www.vinnova.se/sv/Ansoka-och-rapportera/Utlysningar/Effekta/Utmaningsdriven-innovation---Steg-3-Foljdinvesteringar/)

(7) **Film:** [www.youtube.com/watch?v=2kd51kMMOHI](http://www.youtube.com/watch?v=2kd51kMMOHI)

## **Training Showcase: Challenge Driven Innovation – a programme run by Sweden’s innovation agency**