D4.1 Report on Science Shop pilots and exchanges

Jozefien De Marrée

Vrije Universiteit Brussel

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Introduction

The Enhancing Responsible Research and Innovation through Curricula in Higher Education (EnRRICH) project aims to improve the capacity of students and staff in higher education to develop knowledge, skills and attitudes to support the embedding of RRI in curricula by responding to the research needs of society as expressed by civil society organisations (CSOs). One work package within EnRRICH, WP4, supports incorporation of RRI in higher education curricula through Science Shops and other similar community knowledge exchange mechanisms. Therefore, new Science Shops were set-up and mentored, while already established ones are supported. EnRRICH WP4 members have exchanged and piloted good Science Shop practices in curricula across different countries. In this report, the outcomes are evaluated, in order to test Science Shops as mechanisms to integrate RRI in curricula.

The target audience of this report are Science Shop staff members, intermediaries between science and society, people active and interested in community based research, participatory action research, service-learning and all other approaches that can be used by Science Shop-type structures. Although they may or may not call themselves a ‘Science Shop’ - depending on their cultural context and language, this report uses the title of Science Shops for the broader field described above.

While Science Shops have a crucial function as RRI/Public Engagement hubs in higher education institutions, to provide training and support and build institutional cohesion, as well as managing relationships with CSOs and academic staff, and between them, previous projects like PERARES (GA n° SiS-CT-2010-244264) concluded that Science Shops often are understaffed and are in a continuous struggle to keep on surviving. This is why an international community of Science Shop practice was set-up within EnRRICH, as part of which it supported the set-up of three brand new European Science Shops in Barcelona, Vilnius and Budapest. The 11 participating Science Shops – see their logos on the next page – shared their passion, interacted on their work and in that way taught themselves and others how to do it better. The following report gives an overview of the activities and results of this interactions, in order to open up the EnRRICH Community of Practice and share their learning about Science Shop sustainability, but also about how to set up and interact within a Community of Practice on this.
Participating Science Shops within EnRRICH project

1. Science Shop – Queen’s University Belfast (QUB)
2. Community-Academic Research Links (CARL) – University College Cork (UCC)
3. Living Lab for Health - IrsiCaixa Institute for AIDS Research Barcelona (IrsiCaixa)
4. Laboratorio FOIST per le Politiche Sociali e i Processi Formativi – University of Sassari (UNISS)
5. Science Shop Vechta/Cloppenburg – University of Vechta (Vechta)
6. Wetenschapswinkel Brussel – Vrije Universiteit Brussel (VUB)
7. Wetenschapswinkel Wageningen – Wageningen University & Research (no own logo) (WU)
8. Science Shop – Corvinus University Budapest (no own logo) (CUB)
9. Science Shop – Vilnius College of Technologies and Design (no own logo) (VTDK)
10. Boutique des Sciences – University of Lyon (Lyon)
11. Students Learning With Communities – Dublin Institute of Technology (DIT)
Share case studies and learning through a Community of Practice (CoP)

CoP set-up

Within EnRRICH, a Community of Practice (CoP) was set-up to exchange and pilot good Science Shop practices. At the start, WP leader VUB sketched what a CoP is and what it could look like. After a small literature review the definition of Lave & Wenger (1991) was used, the scope was marked out, topics, goals, expectations of members, meetings etc. identified, supported by “How to... build communities of practice” of the British National Co-ordinating Centre for Public Engagement – NCCPE, represented in the EnRRICH Advisory Board.

“A community of practice (COP) is a group of people who share an interest. The group may evolve naturally because of the members’ common interest in a particular topic, or it can be created specifically with the aim of developing knowledge around a common concern. It is via the process of sharing information and experiences within the group that the members learn from each other, and have an opportunity to develop their own knowledge and skills.” (Lave & Wenger, 1991)

1) ‘practice’ or topic: starting and experienced Science Shops in the frame of the 4th work package of the EnRRICH project

2) initial goal and a time period for review: setting up a Community of Practice (CoP) on curricular embedding of science shops (November 2015- March 2018).

3) who is going to be involved initially and what will be the expectations of members: EnRRICH WP4 members are expected to actively contribute on a regular basis, based on their Science Shop needs and challenges:

<table>
<thead>
<tr>
<th>Experienced Science Shops</th>
<th>New &amp; starting Science Shops</th>
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<tr>
<td>VUB</td>
<td>UNISS</td>
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<td>QUB</td>
<td>Lyon</td>
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<td>DIT</td>
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<td>WU</td>
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<td>IRSiCaixa</td>
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4) Who is going to convene the CoP: work package 4 leader VUB

5) How we are going to meet:
   a. Physical meetings:
      i. during biannual consortium and/or WP leader meetings
      ii. during the Living Knowledge conference in June 2016
      iii. during mentoring visits
   b. Virtual meetings/conversations:
      i. through mail
      ii. through an interactive platform
      iii. through biannual webinars
Subsequently, the biggest challenge was to find a way to register interactions and information within the CoP. Using a closed part of the EnRRICH website for that purpose turned out to be impossible for technical reasons. Work package leader VUB compared different interaction systems (like Lefora, Slack, Facebook, Wiggio...) and decided to start an online community on Wiggio in March 2016, which was also recommended by the external evaluator of the EnRRICH project. Although the Wiggio platform was easy to use and very suitable for these kind of interactions – see screenshot below, at the end of October 2017 Wiggio officially closed down their free service, which forced the end of online registration of CoP activities. Luckily all the interactions and information that was hosted on the platform could be saved.

![Wiggio screenshot](image)

All interactions between CoP partners were registered and documented on the platform, including face-to-face meetings, online/telephone meetings and webinars.

To make the best use of limited resources, as far as possible mentoring face-to-face meetings took place alongside peer evaluation visits/activities in other EnRRICH work packages and/or during conferences or other scheduled meetings and visits. Erasmus+ staff exchange grants were also used by partners VUB and VTDK to have face-to-face meetings with EnRRICH colleagues. 22 mentoring visits took place within the project, almost on a monthly basis. Those visits were combined with EnRRICH related events within the host institution to have as much local impact as possible, for example with a Science Week, RRI workshop, conference... An overview of mentoring meetings can be found in Appendix I.
Simultaneously, 10 mentoring sessions beyond the consortium took place, at institutions that were no part of EnRRICH but were interested in learning more about our Science Shop approach - also listed in Appendix I. Since there was no budget provided within EnRRICH for this kind of mentoring, those visits were funded by the welcoming institution or other projects. Furthermore, mentoring has taken place at the Summer School of the Living Knowledge Conference (see below) and other conferences of related projects and institutions, like the annual NCCPE conference in Bristol and at the Universitat Oberta de Catalunya (UOC) in Barcelona.

Moreover, around 25 mentoring discussions – mostly through phone or Skype were done within the project consortium, combined with peer evaluation talks within the EnRRICH evaluation work package if possible, see Appendix I. EnRRICH also tested webinars as a way to stimulate exchange and support Science Shops. Four webinars on different topics were hosted, based on the issues that were expressed within the Community of Practice: start-up issues, how to engage lecturers, a combination of several challenges, and sustainability – see Appendix I.

Through all these interactions, a wide variety of topics were discussed and many resources shared among the members of the Community of Practice, including the following resources:

- Living Knowledge Toolbox (was revised and tidied up during EnRRICH project too)
- PERARES project outcome/brochure to develop policy & strategy, for both new and experienced science shops
- "Supporting new Science Shops, Report describing the implementation phase of the local Public Engagement with Research action plans, mentoring and advisory activities, and Summer Schools"
- UNESCO chair CBR resources: training on CBR
- PERARES project evaluation toolkit
- LERU paper on societal impact of universities
- A CBPR guide to ethical principles and practice
- Ethics in community based participatory research

Details of specific questions discussed are listed in Appendix II, and these covered the following topics:

- Stakeholder relations/procedures (students, researchers/lecturers, civil society organisations)
- Digitization
- Promotion
- Project evaluation/impact
- Ethical issues
- Science Shop models/evolution
- Networks
- Good practices/case studies
- Staffing models/recruitment/competences
- Influencing strategy
- Building RRI/CBR into the curriculum
- Governance
- Sustainability/resources
- Legal dimension of research agreements
Evaluation of CoP interactions

“All mentoring was very useful, insightful, inspirational and meant a lot.” – EnRRICH project partner

Overall, EnRRICH partners were happy to be part of the Community of Practice because they felt supported and learned a lot from the mentoring and exchanges that have taken place. When they were asked which mechanism(s) were most useful to them, face-to-face meetings were mentioned by all of them. In joint second place were online mentoring meetings, supported by Skype for example, and webinars, supported by a teleconferencing system like Vidyo – the one consortium partner UCC is hosting and could be used during the project. Only three out of eleven partners found the Wiggio platform useful to exchange within a Community of Practice. Please find some of their comments listed beneath, followed by an overview of the resulting recommendations on page 11.

Wiggio platform

“We did not participate a lot: following another new platform proved to be rather demanding and we did not have time to meaningfully participate. Via the other forms of mentoring we enjoyed the advantage of being pre-set, focused, structured.”

“I have hard time in working with on-line platforms that ask for materials to be uploaded or discussion lists to be dealt with.”

“I don’t really connect with static forums. I like live conversations because of the opportunity it provides to clarify things and ask questions. I found Wiggio forced and felt I was box-ticking by adding messages to it.”

“Although it in general is very useful for the practice community in order to feel European context, to get some new ideas, to feel what’s happening in other Science Shops”

“useful too, because it creates a platform to share background documents and it informs me about the meetings and activities going on.”

“very easy to use and was a great space to sound out ideas, and challenges as I was sure I would get support/advise from colleagues on the project. It was also a good space to get oversight and catch up on events and projects project partners were involved in.”

“Might have been good if there was a platform that allowed for face-to-face online interaction but where a record of any resources and a summary of the discussion could also be kept”

“Less direct answers to questions or obstacles. Especially since I was told not to make all our science shop obstacles visible for the partners (by my home university), it was easier to just talk about them, than to have written evidence that could be held against me.”

face-to-face mentoring meetings

“... very useful. ... Really good to meet with the project coordinator before a big consortium meeting to get further insights into the science shop network and the project. Being new in a big consortium would
probably have been really overwhelming and intimidating otherwise. Even informal talks with partners apart from official mentoring were very helpful. It was good to learn that others have the same struggles in getting sustainability for their science shop and how they deal with it.”

“Face to face is always best for me.”

“…were most inspiring and it gave ample opportunity to ask questions and clarifications.”

“… worked very well as they are a good way to build trust with colleagues on an inter-personal level, which I find makes working and sharing ideas together easier. This worked well for the overall EnRRICH meetings and for the mentoring work.”

Summer School for new Science Shops
Sixteen people from all over Europe attended the EnRRICH Summer School on June 20th and 21th 2016, before the Living Knowledge Conference at Dublin Institute of Technology. It aimed specifically at those with little or no experience in, or knowledge of, Science Shops or Community-Based Research Offices. The workshop was given by Science Shop coordinators with long experience, from the EnRRICH consortium and advisory board. After the Summer School, participants could follow this up by attending the Living Knowledge Conference, where they met many more Science Shop staff from all around the world. A description of the EnRRICH Summer School can be found in Appendix II.

online mentoring meetings
“During one-to-one mentoring meetings, either online or face-to-face, it was easier to discuss in depth particular questions (for example regarding the evaluation of our projects) rather than in a conference call with all partners or posting messages.”

“but still at current stage the most useful were personal mentoring meetings (online or face-to-face). During these conversations, it was possible go into deep and discuss some particular cases.”

“Skype calls also worked well as a way to keep mentoring processes and relationships going between face-to-face meetings.”

webinars
“…extremely useful to share good practices and exchange opinions.”

“webinars with set topics and time to prepare the background regarding that certain topic were very useful. This way I got the possibility to collect information, obstacles and problems that could be mentored in that area with my colleagues beforehand. Additionally, webinars gave the opportunity to review important national policy texts beforehand and get all of the terms right. Because of English not being my native language and all of the different policy backgrounds of all partners this was really fruitful.”
“very good in so far as, even without in person interaction, they enable talking and listening directly with people.”

“I did not check the webinar box, although I think it can be useful, the technology was not really supportive and because of that it was frustrating me. And this caused a mismatch between time input and useful output.”

What we learned

► Check at the CoP set-up how your participants would like to interact (face-to-face, online platform, Skype, phone, mail, webinars…) and how much time they would like to dedicate to CoP interactions

► Online meetings/registration:
  o Prefer one platform that allows to register all kinds of interactions and their topics, because fragmentation of platforms will hamper clear overview and efficiency of contributions
  o Webinars are a good way to discuss within a CoP, on the conditions
    ▪ Technical conditions are positive
    ▪ The topics are limited and well defined (also in time)
    ▪ The topics are communicated a week in advance, so participants are able to prepare themselves and their questions
  o Build in one-to-one Skype/telephone calls as an in-between of webinars/online platforms and face-to-face meetings

► Face-to-face meetings
  o Combine mentoring meetings with local events and meetings involving your institutional colleagues, so the CoP is being extended institutionally
  o Mentoring meetings need well-defined agendas, agreed by all parties
  o Provide funding for face-to-face meetings between individual partners and the whole CoP, since they are a crucial aspect of CoPs, albeit complemented with online exchanges
  o Build in dedicated time slots for face-to-face and informal meetings during consortium meetings

► Create a safe environment with mutual understanding and trust, in which CoP members are able to speak openly about insecurities and issues they experience in their own local context
  o CoP hosts should take their time to get to know participants individually, with their interests and sensitivities and to introduce them in the topic and the way of CoP work.
  o Keep in mind the ‘social desirability’ aspect of CoPs, try to overcome them by creating a safe environment.
Starting new Shops, sustaining ongoing ones

Profiles

All 11 involved Science Shops follow more or less the same way of work but have their own local and individual character. For example, they operate under different names. Almost a quarter of them doesn’t use the name Science Shop or a translation of it, their alternatives are: Community-Academic Research links (UCC), FOIST Laboratory for Social Policies and Educational Processes (UNISS), Students Learning With Communities (DIT) and Living Lab for Health (IrsiCaixa).

Concerning staff numbers there also are some differences but overall, Science Shops are rather small units, located in different departments. Their staffing ranges from 0,5 to 5,5FTE but once over 2 FTE, most Science Shops focus on other activities, in addition to Science Shop work.

Most of the university based Science Shops are based in central departments, such as Directorate of Student Development (DIT), Research & Development (VUB, Vechta), Strategic Development Department (VTDK), Centre for Educational Development (QUB), Department of Value Creation (WU), service Sciences et société (Lyon). Others are in faculties: School of Applied Social Studies (UCC), Department of Humanities and Social Sciences (UNISS), Dean’s Office of Corvinus Business School (CUB). Science Shops in faculties are more likely to be academic led, those in central services are more likely to be administrator led – at least in the EnRRICH project.

Although most Science Shops have been open for collaborations within all scientific domains during EnRRICH, social sciences are far more represented. Some Science Shops (like the ones in Vechta, Wageningen and Dublin) do touch on physical sciences too, like biology, agrotechnology and chemistry. Popular fields are for example sustainability/environmental science, social work, business, health.

Concerning the level of students they are working with, all involved Science Shops except VTDK (which is a professional college and doesn’t have Masters programmes) collaborate with Master students. Five of them also involve bachelor programmes (and some of them also PhD students), and the Living Lab for Health (IrsiCaixa) even includes secondary school students. During EnRRICH, the aforementioned eleven Science Shops have worked with approximately 240 civil society organisations in around 550 groups and individual projects, with around 220 supervisors. There are big differences in the amounts of projects and collaborating partners between all EnRRICH Science Shops – even the experienced ones. The oldest and most experienced Science Shop located at Queen’s University Belfast (QUB) for example worked on 150 projects with 45 CSOs and 20 supervisors, whereas the experienced Brussels Science Shop collaborated with 16 CSOs and 10 supervisors on 30 projects during EnRRICH. These differences may be directly related to the different sizes of their science shop staff bases, which is 2,2FTE in Belfast but only 0,5FTE in Brussels. Also differences between fledgling Science Shops are considerable: the one in Vilnius for example has limited numbers (8 CSOs and 15 supervisors in 13 projects), whereas the Budapest one already collaborated with 24 CSOs and 5 supervisors in 36 projects.
## Examples of Science Shops projects to occur during the EnRRICH project

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<tr>
<th>Project</th>
<th>Institution</th>
<th>Description</th>
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<td>1</td>
<td>Queen’s University Belfast</td>
<td>‘Preventing Reed Beds from Freezing’ – The cold winters of 2009-2011 led to CSO concerns about the long term viability of their reed beds in sustained low temperatures. A Mechanical Engineering Masters student developed a design solution to ensure the continued operation of the reed beds during extreme winter weather conditions. After analysing the reed bed in terms of biology, chemistry, environmental conditions and the geography of the site, the student developed a design solution that utilised a foam glass material to act as a floating insulator, encased in modular lightweight moveable grid matrices. It was calculated that if this design was installed with a small aerator, the reed bed could be prevented from freezing even if exposed to temperatures of around -15°C for a period of two months. The CSO partner now has bought the equipment so it’s available during the next bad winter.</td>
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<td>2</td>
<td>University College Cork</td>
<td>Influence of disturbance on shorebird behaviour. This study investigated how anthropogenic and natural disturbances are affecting birds at two estuarine sites. Differences in how species responded to disturbance and their foraging rates were also monitored. Data was collected by behavioural observations of the birds at multiple stations within each site. Species abundances during the study, details of disturbance events, and scans of feeding rates of the focal species were all recorded. Curlews were the species most significantly affected by disturbance events. The study highlighted their vulnerability to increasing levels of anthropogenic disturbance at important shorebird habitats. Identifying and protecting such habitats is a vital part of conservation and management of shorebird populations.</td>
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<td>IrsiCaixa Institute for AIDS Research Barcelona</td>
<td>‘Healthy Minds’ is a project for the design and implementation of health interventions for emotional well-being with and for secondary school students in collaboration with educators, researchers, patient associations and policy makers. The methodologies follow the RRI quality criteria and are inspired by Science Shops and Living Lab models, including community-based participatory research (CBPR), open innovation and participatory governance. The project started with students conducting an analysis of their needs. They chose the topic of stress and depression and collectively prioritized their main interests in the subject area. In the second phase, to respond to these interests, various CBPR projects were designed and implemented. This resulted in recommendations on how to promote emotional well-being, which were presented on a final congress. These principles were defined jointly with the participation of policy makers and patients’ associations.</td>
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<td>4</td>
<td>University of Sassari</td>
<td>A Masters student in Social Work and Social Policies worked in a disadvantaged neighbourhood in the city of Sassari within a larger social inclusion programme ran by the local municipal social services. On the basis of their experiences, the student developed a CBR programme along with concerned social workers. The</td>
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<td>Programme initially involved a small group of clients of social services to engage with their community. Group work led to a larger programme that is presently running and is most promising: over time the initial group was integrated with several other people which keep meeting and working together for community empowerment. Further developments are expected.</td>
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<td>Vechta University</td>
<td>A CSO representing local farmers was interested to learn more about the buying behavior in Vechta, especially when it comes to regional products and animal welfare labels. The main interest was to find out if it would be beneficial for their members to apply to the standards of animal welfare labels or if the local population does not mind about those labels because they base their buying decision on other aspects. Therefore, the student group did a field study and interviewed people on their buying behaviors. In this way, they not only gained valuable information for the CSO but they also stimulated a thinking among their interviewees in relation to ethical standards for animal welfare.</td>
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<td>Vrije Universiteit Brussel</td>
<td>Despite their active policy to prevent alcohol use in their organization, Flemish youth organisation Chiro receives complaints about alcohol abuse within their community. They asked the Science Shop to analyse the prevalence of alcohol use, the knowledge their youth leaders have of the guidelines concerning alcohol use and what they think about alcohol use within Chiro, in order to adapt their alcohol policy where needed. A VUB student in Healthcare Management and Policy did an exploratory cross-sectional investigation presenting an online survey to all youth leaders age 16 to 24. She found e.g. that 96.6% of the leaders consumed at least one glass the past year, they have their first glass when they are 14.7 years and 23% of them at a Chiro event. The majority has limited knowledge about the alcohol guidelines. They believe that alcohol use in Chiro should be allowed, but not in the presence of members.</td>
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<td>Wageningen University &amp; Research</td>
<td>For more than 40 years, the Municipality of The Hague’s outdoor centre has been hosting nature weeks for over 100 primary schools. To gain a better understanding of what influence the nature week has on the children the centre asked for a study. This study combined research into the short-term and long-term influences to obtain an understanding of the immediate effects and the effects later in the participants’ lives. It is a valuable addition to previous research because few studies have been done in the Netherlands into the short-term and long-term effects of multi-day outdoor programs. In the project 3 students, 3 researchers, and 4 experts worked together.</td>
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<td>Corvinus University Budapest</td>
<td>One of the groups worked with a From Street to Home Association (ULE) to generate funding for building mobile homes for those people who are homeless. Such homes serve as interim solution between a shelter and regular home fully maintained and financed by its habitant(s). ULE’s long term goal is to provide evidence that this solution not only has a large positive social impact but is at the same time a cheaper alternative overall to the current social care system. Students therefore gathered and analysed financial data,</td>
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looked into similar domestic and foreign examples, and put those into a financial plan. To make the outcome more accessible and useful, they also created an “investment calculator” as a tool that ULE can use to attract investor for their piloting after the science shop project.

|   | Vilnius college of Technologies & Design | Traffic safety at the Vilnius crossroads. This study aimed to examine the organization of traffic in the 10 most problematic Vilnius crossroads. Students had to identify problems, analyse requirements of normative documents and offer measures for possible improvement. The project resulted in 15 posters and 1 conference presentation. |
|   | University of Lyon | How to reach all teenagers in a diverse population? This experimental mentored project involved a Master class (approximately 20 students). The involved Civil Society Organisation sought to communicate about a short film festival intended for teenagers (film realisation and diffusion in a cinema) but they experienced difficulties in working with a disadvantaged population. Students produced a communication plan and recommendations. |
|   | Dublin Institute of Technology | The Salvation Army, a charity which supports and works with teenage residents, wanted to work with DIT students to develop interior design proposals for meeting and recreation rooms used by the young adults. 1st year, BA Interior Design & Furniture students as part of their Colour and Perception module, worked in collaboration with the organization to research and develop designs in response to their brief. |

### Science Shop Challenges

Several challenges occurred during the EnRRICH Science Shop work, leading to recommendations for new and ongoing Science Shops listed at the end.

#### Budget/Staff cost

Science Shops match societal needs with student theses topics. In this way, civil society organisations expressing those needs are provided with scientifically correct data, free of charge. So, no one is paying nor being paid for or by Science Shop work. Within EnRRICH some fledgling Science Shops report on the fact that there isn’t any particular budget allocated to cover staff costs for Science Shops, nor lecturers’ engagement in projects. For example in Vechta, the limited resources to pay staff resulted in the having too little time to get to know Science Shop work, which made it difficult to sustain a young Science Shop, within the project but also within the University. The EnRRICH CoP exchanges revealed that all participating Science Shops are suffering from sustainability issues. This is the reason why a dedicated webinar was set-up on this topic (on 24/04/2017). The CoP members do mention face-to-face and skype meetings as having been really helpful in this respect, in order to learn from colleagues how they are managing to survive.

- Allocate funding for Science Shop staff (not necessarily academics) if possible
- Be clear about the fact that a Science Shop needs dedicated time from academics as part of their core duties without additional payment
Build a Community of Practice or network with Science Shops in your own region and beyond, so Science Shop staff members have colleagues to rely on and exchange with

Responsible Research & Innovation (RRI)

Responsible research and innovation (RRI) is an approach that anticipates and assesses potential implications and societal expectations with regard to research and innovation, with the aim to foster the design of inclusive and sustainable research and innovation (https://ec.europa.eu/programmes/horizon2020/en/h2020-section/responsible-research-innovation). At the start of the EnRRICH project (July 2015), the umbrella concept of RRI was relatively new and unknown in academic environments. Nevertheless, the main aim of EnRRICH was to incorporate RRI in curricula. The lack of awareness of, and training on, the RRI concept among higher education/academic staff was a barrier for some Science Shops to convince lecturers to take part in participatory initiatives with CSOs. For example, to raise awareness on RRI, IrsiCaixa has facilitated courses on RRI in different universities in Spain. This was also the case for DIT Science Shop staff, who mentioned that they needed to figure out and define exactly what RRI might mean within their context, and for QUB who also found recognition of the concept of RRI relatively low in the UK context, where 'public engagement' was much better understood as a concept. Some academics were already doing 'RRI proof' projects but were not identifying them in that way. So the challenge was in attempting to use the RRI concept to shine a light on existing projects in order to see where they could be developed towards a more RRI approach. The Science Shops name the Wiggio platform within EnRRICH as a good support resource throughout the project to sound out ideas and hear how other people were dealing with challenges.

Tie RRI into existing agendas while making academics aware of the fact that it’s an umbrella term/name for what they’re probably already doing and it’s not another new requirement they have to fulfil.

Innovation in Science Shops

Within EnRRICH, participating Science Shops were stimulated to start new collaborations, try new models etc. These innovations often proved to be challenging within existing structures. For some partners, a new Science Shop meant “giving birth to a new institution”, within a given system with its own rules and dynamics, which also proved to be a great challenge. For the Hungarian Science Shop this is a continuous learning process, as they are finding their way in setting up the Science Shop ready to cope with the cultural, social embeddedness within their Business School, University, and Country - where concepts on strengthening the civil society are at a different stage of development. Similar challenges count for the Vilnius Science Shop. Their biggest mission was to form an initial team of teachers to pilot projects and to figure out the most suitable and sustainable Science Shop model for their needs. To build a team, they were constantly organising meetings/discussions and sharing best practices. Also, in order to improve the knowledge and motivation of lecturers, visits to 3 experienced Science Shops within EnRRICH in the UK, Ireland and Belgium were organised. Their next challenge is to establish strong and stable relations with CSOs in order to form a solid generation of interesting problems. Linking to engaged teachers/researchers, finding the most suitable working model and establishing CSO relations appeared to be ongoing tasks for all Science Shops, regardless of their level of experience.
Take your time to review institutional/regional/national priorities and try to link the Science Shop with as much internal/regional/national policy documents as possible, e.g. university mission, strategic plan, third mission of higher education...

Missing links between teaching & research departments
There is an ongoing debate about whereabouts in a higher education institution a Science Shop is better based. For example, one of the original Science Shops in the EnRRICH project, the one at Queen’s University Belfast (QUB), has variously been hosted in an academic department, in the central research office and within teaching and Learning (at different times in work placement and in educational development). Three other EnRRICH Science Shops (UCC, WU, VUB) report on the missing links between educational departments and other departments hosting Science Shop structures within their institutions, which made it harder to embed Science Shop work into curricula. For example, UCC EnRRICH members are not directly employed as UCC Science Shop staff but support its activities. UCC EnRRICH staff, and the UCC Science Staff are all located in different parts of the university, which make it challenging to remain close to Science Shop activities. However, the EnRRICH staff saw this as an opportunity to raise the profile of CARL and to share their successes with colleagues when doing EnRRICH tasks. Also in WU, the EnRRICH people were in teaching & learning and not directly working for the Science Shop. This caused challenges to develop activities in collaboration with the WU Science Shop. They have solved this by setting up meetings and continuous discussions with the Science Shop coordinators. So, in the end the EnRRICH project brought those people and their work closer. Also at VUB, the EnRRICH project has built a bridge between the educational department – which hosts all VUB courses – and the research department – which hosts the Science Shop. It wasn’t easy to launch the project and to find the right people to work with, but in the end it paid off and the collaborations are still ongoing. For example, the VUB Vice-rector of Education spoke during the EnRRICH policy meeting at the European Parliament in January 2018, marking this a significant support of Science Shop activities (in the research department) on behalf of the educational department.

Remember the importance of building networks across the higher education institution – both academic and administration domains. A wide network can be very beneficial in terms of sustainability and collaborations.

Science Shops based outside higher education
Two of the EnRRICH Science Shops were not based in a higher education institution – IrsiCaixa and Science Shop Bonn (the latter chose not to participate in WP4 given the focus on higher education institutions in the project). Both found it quite challenging to connect their projects with higher education. The one within a research institution (IrsiCaixa) mentions for example calendar constraints of higher education students, which hindered their enrolment in Science Shop projects.

In order to have direct access to curricula, Science Shops ideally are hosted within higher education institutions
Sustainability of Science Shops

The EnRRICH project funding guaranteed Science Shops could keep on existing for the duration of the project. But this doesn’t ensure Science Shop sustainability on the longer term. What will happen with the Science Shops after March 2018?

All Science Shops involved in EnRRICH will survive, thanks to institutional funding or other approved projects. Some Science Shops are core funded by their host institution (like the ones in Belfast and Wageningen), others rely on project funding to continue EnRRICH work (like the ones in Vechta and Brussels). VUB for example, wrote a successful proposal for Erasmus + funding that involves project partners WU and VTDK. But EnRRICH has been useful in other ways too. Their project work has helped to expose colleagues from across the university to RRI (UCC), for example, and they hope to continue to run the work beyond EnRRICH which will continue to attract a new audience to their Science Shop work. In other cases the Science Shop is quite well embedded in policy, although staffing levels are low (e.g. DIT). In the case of DIT, at least one PhD project on RRI which was started under EnRRICH will be continuing for the next few years, and there is a good cohort of lecturers who run Science Shop projects with their students every year, along with a solid community partner cohort. This is the same for several Science Shops: during the project they have been able to impact policy agendas in the institutions, regions, countries etc. resulting into their increased sustainability. The Corvinus Science Shop for example, was established during EnRRICH as part of the Dean’s Office of the Corvinus Business School (CBS-CUB), hence it is now a permanent organisational unit as part of the university’s effort to better serve its “3rd mission”. Its activities are already embedded in relevant programs (Faculty Research Week, Science Cafés for faculty members, Researchers’ Night), in the 5-year strategy of Corvinus University, the 3-year strategy (2018-2020) of CBS and supported by university-wide grants for organising events, such as thesis fairs in the coming three years. During the lifetime of the project, the QUB Science Shop has managed to move from the University’s Work Placement unit into the Centre for Educational Development. This move was partly motivated by their work on EnRRICH to develop curriculum spaces (alongside working directly with students, CSOs and academics) and means that they are in a better position to support the development of curricula which is specifically designed to enable students to work on applied research projects.

Furthermore, all Science Shops are continuing to collaborate with EnRRICH colleagues, and those relationships will keep on existing long after EnRRICH. Some Science Shops also express the wish to consolidate their work in a broader context/platform. The Living Lab for Health, for example, would like to become a platform that proactively identifies local societal challenges and links CSOs, researchers, industry, etc. to find responsible solutions collaboratively: an intermediary R&I platform to tackle societal challenges. Similarly the Brussels Science Shop would like to become the reference point for collaborations with society and known as “Living Lab” for collaborations between science and society. Also the Lyon Science Shop is planning to evolve into a “Social innovation laboratory” - a reflection process to define what that will be is ongoing.

At the end of 2017, the sustainability of one Science Shop, the one of Vechta University, was threatened. It looked like it was going to disappear at the end of EnRRICH, due to lack of funding. However, a few months later though, a solution was proposed thanks to funded projects. This German Science Shop will only be able to survive if new projects are continuously proposed. The inclusion of the Science Shop model in policies of the university is a good way to create pressure on the institution.
to keep it alive. Because of the integration of Science Shop work in the curriculum and its undeniable impact on the university's third mission, the presidential board is forced to think about how to keep the Science Shop going without funded projects. Although the Vilnius Science Shop started in the same position, there is reasons to believe it will remain beyond EnRRICH. First of all, their Science Shop model is based on projects embedded in existing curricula, so it does not require a lot of extra time from lecturers. Secondly, the visibility of the Science Shop inside the institution is increasing, lecturers are becoming familiar with the concept and starting to adopt it as a part of their teaching and learning process. And finally: Deans of faculties view the Science Shop as a good opportunity to fulfill ‘the third mission’ of the universities.
Appendix I: overview of mentoring

1) Visits within the consortium

- QUB/DIT co-mentoring meeting (November 2015)
- WP4 session during WP Leader meeting Bonn (January 2016)
- QUB to IrsiCaixa (March 2016)
- QUB to CUB (April 2016)
- WU to VUB (May 2016)
- WP4 session during consortium meeting Dublin (July 2016)
- QUB/DIT mentoring (August 2016)
- Co-Mentoring DIT/QUB (November 2016)
- DIT to VTDK (December 2016)
- VUB to Vechta (December 2016)
- WP4 session during consortium meeting Barcelona (January 2017)
- UCC to UNISS (Jan-June 2017)
- UCC to IrsiCaixa (February 2017)
- UCC to Lyon (February 2017)
- QUB to DIT (March 2017)
- DIT to VTDK (April 2017)
- CUB to DIT (May 2017)
- CUB to QUB (May 2017)
- QUB to VTDK (May 2017)
- VUB to VTDK (June 2017)
- UCC to Vechta (June 2017)
- DIT to VTDK (December 2017)

2) Visits outside the consortium

- Groningen University (Henk Mulder, EnRRICH Advisory Board) to Vechta (May 2016)
- QUB to Agora Scienza Italy (June 2016)
- DIT - mentoring Engagement PVC and staff from University of Melbourne (Oct 2016)
- DIT - mentoring engagement staff from University College Dublin (Sept 2016)
- DIT mentoring National University of Ireland Maynooth (December 2016)
- QUB and VUB held a seminar with Universtat Oberta de Catalunya (Jan 2017)
- QUB mentoring CEU Budapest (Feb 2017)
- DIT hosted Irish Network for Community-Engaged Research and Learning meeting (peer-mentoring, March 2017)
- QUB mentoring Universtat Oberta de Catalunya (May 2017)
- Vechta to Groningen University (June 2017)
- QUB mentoring Reading University UK (June 2017)

3) Mentoring talks through phone/skype
- VUB to VTDK (September 2015)
- QUB to CUB (January 2016)
- Lyon to Vechta (January 2016)
- VUB to Vechta (April 2016)
- VUB to IrsiCaixa (April 2016)
- VUB to VTDK (April 2016)
- VUB to Lyon (May 2016)
- UNISS to IrsiCaixa (May 2016)
- QUB/DIT mentoring skype (August 2016)
- UCC mentoring DIT (September 2016)
- QUB to Vechta (September 2016)
- VUB to Vechta (September 2016)
- DIT mentoring skype CUB (October 2016)
- DIT to VTDK (Oct 2016)
- DIT to VTDK (Nov 2016)
- DIT to CUB (Dec 2016)
- QUB mentoring DIT (Feb 2017)
- DIT mentoring CUB on LK8 (Feb 2017)
- QUB/DIT co/peer mentoring discussion (Feb 2017)
- Lyon mentoring IrsiCaixa (March 2017)
- QUB/Vilnius planning mentoring visit (April 2017)
- Evaluation session: Sinead (DIT), and Ana & Jonas and 3 students from VTDK (May 2017)
- DIT to VTDK (May 2017)
- CUB interviews VUB on Science Shop (June 2017)
- VTDK and CUB (July 2017)

4) Webinars

- 22/01/2016: webinar hosted by advisory board member Henk Mulder for starting science shops (short version of the Science Shop summer school he also was hosting at the Living Knowledge Conference in Dublin in May 2016)
- 16/11/2016: Webinar on engaging lecturers to run science shop projects (hosted by DIT)
- 27/03/2017: Webinar hosted by DIT on Dilemmas/challenges/problems
  - how to support the process of relationship-building and creating a sense of trust between community partners, academics and students at project set-up meetings
  - challenges around exploring partnerships (internal/external)
  - managing time needed to set up, run and follow up a CBR project connected to a teaching course
  - managing community partners’ expectations
  - to live up to expectations of several institutions
- 24/04/2017: Webinar on Science Shop sustainability
Appendix II: EnRRICH Summer School

www.livingknowledge.org/lk7/programme/summer-school/

Program

MONDAY 20 June: 13.00 Introduction

- Science Shops in the context of Public Engagement/RRI
- General overview Science Shops operation (university based and non-university based)
- Impact of Science Shops for various stakeholders
- Examples of Science Shops & projects

14.30 Working with CSOs:

- Identifying CSO needs
- From Societal Needs to Research Needs (intake, articulation)
- From Research Needs to Research Questions (reframing)
- Products and follow-up after the research (science shop’s involvement)

16.00 Working with Higher Education:

- Doing Projects in curricula – including EnRRICH output

Questions and Answers

17.30 End

TUESDAY 21 June: 9.00 Operational Options to design your Science Shop

- Operational Models & Funding
- Job descriptions (role of coordinators; the mediation process)
- Establishing and distributing Responsibilities in partnership projects;
- Evaluations (Evaluating and being evaluated)
- Strategies to start Science Shops (networking)
- Living Knowledge Network/EU support
- Practical Resources (toolbox for Science Shops)
- Getting started back home

12.30 Q &A all remaining questions, discussions on strategies, networking support

Certificates for participants

13.00 end
Appendix III: CoP exchanges

- “How might we engage with more staff to encourage them to get involved in civic engagement work?”
- “Has anyone used digital learning environments as part of their EnRRICH pilot? Or is anyone aware of someone who has done so? Any thoughts very welcome!”
- “Do you have ideas on the promotional Science Shop booklet? What are your suggestions, ideas, requirements... concerning this deliverable? What format, content...would be most useful for your Science Shop?”
- “Does it make sense to start a Science Shop database with only 3 open questions? In case your institution does have a database – how did you make it visible? How did you introduce it to students and researchers? How often is it used? One of our problems is still the visibility inside the university, especially on the side of the students, therefore I’m quite concerned if a database would work for us, or if the questions maybe would not be answered and/or seen at all. Or do you know other ways to help getting answers and especially empirical data for the partners?”
- “What is the working procedure of your Science Shop supervisory/advisory board? At the start of every project a supervisory board is established. Members of this board are among others the commissioner (problem owner), student(s), researcher(s), coordinator of the science shop and the project leader of the science shop. The board has various tasks and roles as explained in the attached document.”
- “I’m wondering if you have any experience with enthusiastic, dedicated lecturers in leadership positions who promise more than they can take but then would not delegate projects to colleagues? Any suggestions how to keep them enthusiastic, involved and get those projects going at the same time?”
- Story of the Science Shop, benefits and opportunities of this kind of structures
- “How to implement the evaluation of the impact that CBPR projects had on participants?”
- “About engaging lecturers to take part. We also discussed how to get partners from outside the university and the option to set up a project database and the requirements for that.”
- “How to deal with Science Shop ethical issues?”
- “Have you ever had a situation where a lecturer worked on a project for the first time with a CSO and you got really negative feedback from the CSO, who said they wouldn’t work with the lecturer again (although they were happy with the work done by the students)?”
- “Do your CSOs (particularly those working with children) have requirements for police vetting of students or staff working with them to be completed before they can start work on projects? If so, how do you manage the inevitable delays that this causes?”
- “One program I’m struggling with finding projects for is the MA in International Business. (...) I can definitely see these fit with topics from some of our CSOs but we are lacking the necessary international dimension. My question is, would anyone be interested in collaborating on this? Does anyone have community based projects that might fit?”