

transformative  
social innovation  
theory

# Living Knowledge Narrative

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## About TRANSIT:

TRANSIT is an international research project that aims to develop a theory of Transformative Social Innovation that is useful to both research and practice. It is co-funded by the European Commission and runs for four years, from 2014 until 2017. The TRANSIT consortium consists of 12 partners across Europe and Latin America. For more information, please visit our website: <http://www.transitsocialinnovation.eu/>.

## About this Document/ Disclaimer:

This report provides a very short summary of a full case-study report that includes in-depth case-studies of the Living Knowledge Network and two of its local manifestations - Science Shop DTU and InterMEDIU Romania. Both, the full case reports and this summary, were guided by four empirical research questions based upon a preliminary conceptual framework of the TRANSIT-project. The four questions concern:

1. the overall development of the local cases and the transnational network(ing);
2. how they relate to different types of change and innovation (incl. social innovation, system innovation, game- changers, narratives of change and societal transformation);
3. how actors are empowered and/or disempowered in and by the local cases and the transnational network(ing), including topics such as governance, learning, resourcing and monitoring;
4. what are other relevant emergent issues with regard to understanding the dynamics of transformative social innovation.

This summary document focuses on the first three questions. It presents – in a highly reduced and generalised format – the interpretations of the researchers, and does not necessarily reflect the views and nuances of the initiatives and respondents themselves. For a full account of each transnational network and local case, including interview quotes and expressed nuances by respondents, we refer to the full case report, which is available via [communication.transit@ihs.nl](mailto:communication.transit@ihs.nl). Both the full case report, as well as this summary document, are the basis for future research activities and publications.

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## 1 The Living Knowledge Development

### **From science shop movement to Living Knowledge**

The science shop movement started in the late 70'ties at Dutch universities, and gradually spread to other northern European countries, and Science Shop (ScS) DTU was established in 1985 as a pilot project, becoming a permanent part of the university in 1987. During these years science shops were also opened at other major Danish universities in Copenhagen, Roskilde, Aalborg and Odense, and a loose national network was running for some years focused on the publication of a magazine. Science shops were in this period also opened across northern Europe i.e. Germany, Netherlands, the UK, Belgium, Austria etc. The 90'ties can in some ways be seen as the golden era of science shop, as the movement was spreading continuously, and a Danish informant talks about a positive and open-minded attitude to their mission – helping disadvantaged groups through access to research. The international level is conspicuously absent at this stage, and mostly consisted of different individuals visiting local initiatives to get inspiration, but around the mid to late 90'ties the international collaboration picks up speed. The Romanian science shops are started through a project grant by the Dutch foreign ministry in 1997-98, and some Dutch, Danish, and German science shops at the same times starts talking about formalizing the international collaboration. In this period, the late 90'ties or early 00'oes, the movement also expanded internationally with new science shops in Malaysia, China, South Africa, South Korea etc. The increased interest in international collaboration coincides with the interest of an officer in the EU who urges the movement to apply for a project, which ends up being SCIPAS, the first international science shop project. The project as part of its objectives formalizes the science shop movement as the Living Knowledge network in 2001. Most of the science shops outside Europe – Malaysia, China, South Korea etc., were short lived though, so the Living Knowledge network is now mostly restricted to Europe, although it is affiliated with like-minded networks on other continents.

### **The decline of the old countries**

Around the turn of the millennia, not long after the network was formalized, the situation changed. It is hard to pinpoint exactly as it happened at different times and in different ways depending on context, but the old science shops generally went into decline i.e. northern/western Europe. Many science shops were anchored within the natural sciences, focusing on environmental challenges in different ways as a response to societal transformations at the time they started (70-80'ties). However, the numbers of students in the natural sciences declined. In Denmark the decline happened within a few years in Environmental & Energy Engineering, going from 60 students to 15. This means less manpower, as Science Shops in general rely on students to conduct projects. In Science Shop Groningen, in the Netherlands, the drop in students directly resulted in budget cuts for the science shop. Declining interest from students in the areas where science shops often were focused is only part of the answer. Increased demands and focus on research and publications from the mid 90'ties gradually took away time available time to do “charity” work for researchers at the university, taking away important resources for the science shops. The same development happened in Romania just several years later, and to some degree seems to be general in Europe. New Public Management and the commercialisation of universities, especially in the Danish context, removed support in management and focus from helping disadvantaged groups. Some actors also refer to the professionalization of CSO, which now have paid staff and fund raising activities, as well as a general decrease in volunteer activities in the population. There is some discussion among the informants if this is true, and if it stems from a decreasing ideological commitment or simply a lack of spare

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time to spend on such activities. These different aspects all gradually removed the core funding allowing the science shops to operate, but also reduced other crucial resources like students and supervisors.

## New tide rising in the south and east

At the same time that the old science shop countries were in decline, new science shops

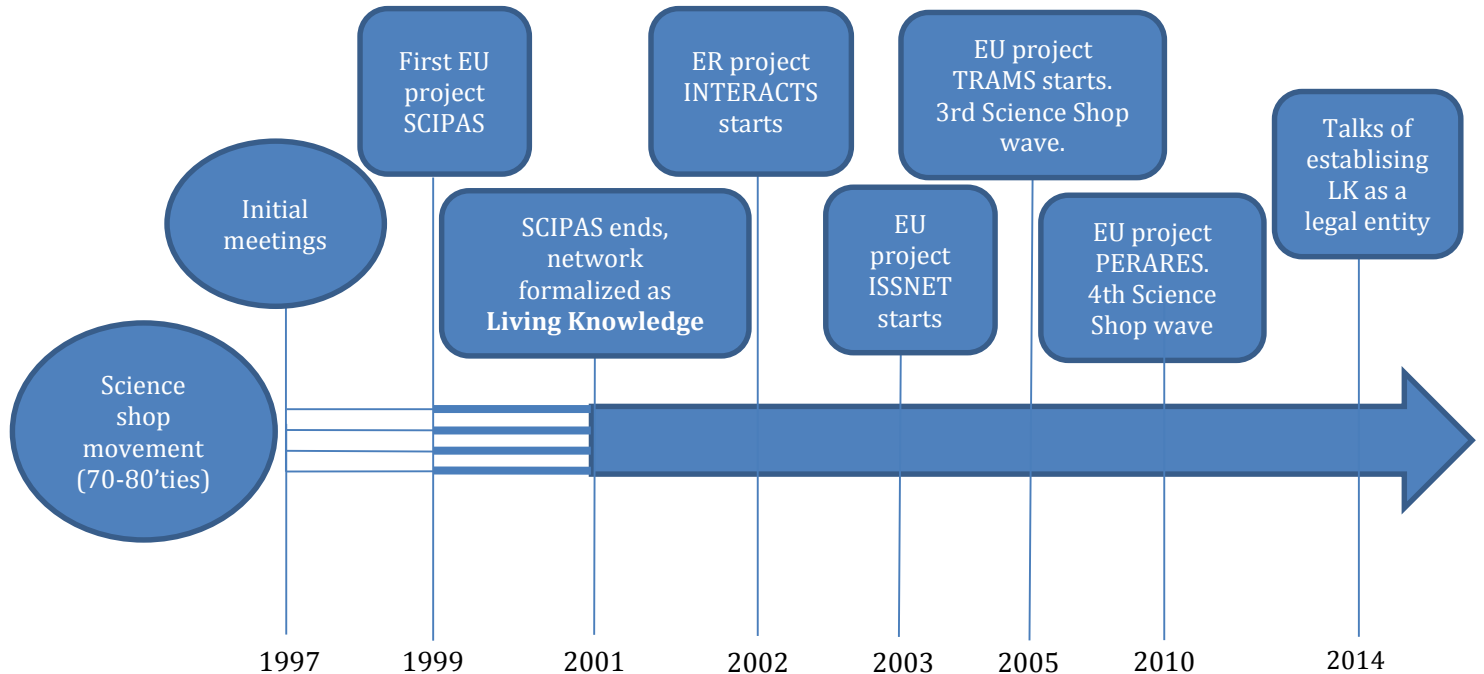


Figure 1 - LK network timeline

were opening especially in southern and Eastern Europe. One of the principal informants in the network talk of different waves of new science shops, were the 3<sup>rd</sup> and 4<sup>th</sup> wave (earlier waves predate the formalisation) were facilitated by EU projects run within the Living Knowledge framework during 2005-2008 and 2010-2014. Some of these new initiatives received funding from the EU projects, while others started independently. Regrettably there was no time in the case study to visit or do any extensive research on these new initiatives, but informants from 8 new successful or failed initiatives were interviewed. It seems that universities in southern Europe have a greater focus on the responsibilities the university have to society, where the new initiative in Cyprus used this part of the official mission of their university to make their science shop an integral part of the organisation. In Lyon the science shop likewise have received permanent funding. The initiatives on Crete and in Estonia have met limited success due to lack of funding in their context, both from universities and at national level. A conjecture could be that some of the southern and eastern contexts are on the same type of trajectory as the old science shop countries, just at an earlier stage where there still is a focus on the social responsibility of the universities, albeit with less financial resources available than the old science shops during their golden age. However, the information we have is much too sparse to say anything definite about the general development trajectories of initiatives.

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## **Science Shop in Romania – the InterMEDIU network**

The Romanian Science Shops have a bit different trajectory, as they were never established as permanent funded entities, but remained as volunteer organisations, and as such aside from an initial Dutch funded project never reached the same activity level as the old Science Shops. The Romanian ScS's are still operating though, and there have been a slow increase in ScS's in Romania since their inception. Their focus are usually narrow, with InterMEDIU Iasi mostly conducting research on water, and InterMEDIU Bucharest organising educational events for students and kids. The Romanian Science Shops also face challenges due to their communist past, according to themselves, which manifests in lack of transparency in public and private organisations, distrust or scepticism towards participatory methods, lack of focus on environmental issues etc. The situation is slowly improving, for instance InterMEDIU Bucharest get their events featured on the university webpage and other media, i.e. the university management are getting more interested in the initiative. However, InterMEDIU Iasi who are formally the leader of the national network do not have the resources to keep a very high level of activity, and they mostly use the network for informal research activities with one or two of their colleagues.

## **The rise and fall of Science Shop DTU**

During the initial three years, Science Shop DTU developed their own model that entailed a constellation where the Science Shop became part of a trans-disciplinary centre. This centre acted as an incubator for research areas inspired by science shop projects, and in this way anchored challenges and developments in society in research and courses at DTU. In the late 80'ties and early 90'ties especially areas like cleaner production, ecological cities, and bio-food production where important new areas, developed in response to societal transformations at the time. The initiative were independent of specific departments or educations, unlike the Dutch science shops, but had an environmental focus due to the profile of the coordinator and staff in the shop. Besides the core funding from the university, the science shop received funding from various sources to conduct projects, and in the early 90'ties had 10-15 staff in the form of PhD's, student helpers, and academic personnel. During the 90'ties and the new millennia there are various mergers of departments, and the interdisciplinary centre is merged into a new department and gradually disappears, leaving the science shop as an individual activity. As part of general budget cuts, the science shop loses funding, and eventually in the second half of the 00'oes there are only two staff left. In some of the period funding from EU projects within Living Knowledge is the main source of funding for retaining one of the staff members. In the later years projects on helping disabled and handicapped groups increases, while environmental projects remain an important area. A new engineering education on Design & Innovation is a source of students for projects especially for the area on disadvantaged groups.

The other Danish science shops gradually closes down or changes into other entities like career centres and match making offices for companies during the new millennium, and the collaboration in the national network is ceased in 2006. It was a general change in focus and collaboration with society that became synonymous with company contact.

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While Science Shop DTU operates more or less in the same way during its lifetime, the staff gradually becomes more proactive in conducting projects and research on their own initiative. While the main coordinator of the science shop see most of his work and projects as within the framework of the science shop, and all meant to help civil society in some way, the border between his work as staff in the science shop and more generally his research as a professor at the university become more indistinct, and his boss and colleagues increasingly does not identify it with the science shop. Science Shop DTU eventually closes down in 2012 as the staff relocate to new jobs at Aalborg University.

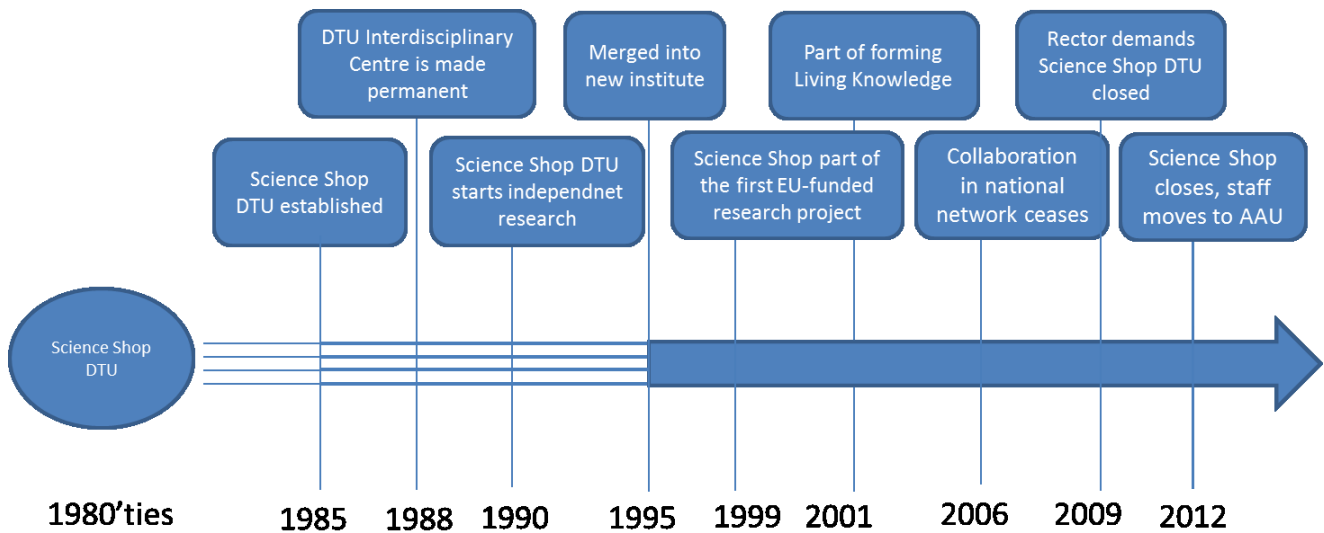


Figure 2 - Science Shop DTU timeline

## State of affairs

The core and platform of Living Knowledge is the webpage, and the mailing list is an informal membership list. Internally, among the members, the webpage mostly acts as an archive with documents from past EU projects and other sources, and keeping the members up-to-date on various activities. To the outside it serves as a contact point, and in a way strengthens the legitimacy of the movement and its activities, and serves as advertising for starting new local initiatives. I should be noted that the network is not a legal entity (yet), and has no staff, offices, or funding. All activities are run by various members, financed by EU projects, or through volunteer work outside project periods. There is a core group of science shops that have participated in all EU projects, and two individuals who generally are looked to externally as representatives of the network.

The Science Shop at DTU is closed, but the same research areas, methods and projects continues in the centre for Development, Innovation, and Sustainable Transition (DIST), where both of the staff members are now employed. The difference though is the lack of an open door, society do not know they can come and ask for help, and there are no formalized procedures or funding for handling requests. In some ways, DIST resembles the InterMEDIU centres, which do not have funding or a formalized open door, but conducts projects within specific areas meant to help civil society through participatory research methods.

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## 2 Aspect of innovation and change (3 pages)

### Understanding in and among the initiatives

The general understanding in the movement is that ScS's open up the universities to society and "provides independent, participatory research support in response to concerns experienced by civil society", and the traditional Dutch model as well as the majority of ScS's are part of universities or very closely related. The innovation, in the 70'ties and 80'ties, was this opening up of the "ivory tower" that was the universities. In general there is an understanding that ScS's facilitate change in 3 areas:

- Innovative solutions to challenges experienced in civil society
- Facilitating change inside the university, opening the ivory tower
- Enhance the transferable skills and knowledge of students + partners in society

Some of the initiatives identify participatory research methods as the unifying characteristic and innovation in the network, while other focus more on the open door. There are also many individual innovations at local initiatives, like ScS DTU that saw their specific constellation with an interdisciplinary centre as an incubator for new research areas as very innovative compared to the traditional Dutch model. An example from Romania, at the ScS in Iasi, is how science shop activities are equated with all activities using participatory research methods. This new research method was in the Romanian context seen as an innovation, and the population are only slowly getting used to it. Besides the general innovation that the science shops have facilitated especially in their systems, the individual projects carried out with civil society may facilitate innovations in many and various forms, which by Science Shop DTU are divided into three area:

- 1.) Knowledge production
- 2.) Perspective change
- 3.) Documenting

Lastly, it differs how involved the ScS's are in the projects after the initial start, and how proactive they are in their use of the project results. ScS DTU see science shops as either using a *mediation approach* or being *impact seeking*. The impact seeking model requires that the Science Shop besides acting as mediator between CSO and university maybe also need to get involved in the interpretation of the data and facilitation in relation to the use of the results when the CSO tries to obtain influence on the issue in focus. The mediation approach on the other hand only facilitate the contact between civil society and students/supervisors interested in the issue, and helps develop appropriate research questions. Faced with budget cuts some of the old science shops in Northern Europe went from being impact seeking to using a mediation approach.

Another aspect of the self-understanding is the generally loose affiliation of the Living Knowledge network. There is no criteria, manifest or codex that members have to keep, and even though the concept is named Science Shop in applications, literature, and other texts there many initiatives that use other names, like the Romanian network that calls initiatives InterMEDIU centres.

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## **Understanding of the case researcher**

Especially within system innovation the science shops have worked for a change, opening the ivory tower, trying to take advantage of resources in the system and opening it more for civil society. Science Shop DTU as such did not initiate societal transformations, but responded to them and empowered CSO to answer these changes by incubating them as new research areas at the university. At some level though the staff had an ideal view on how society should be, and tried to empower for instance trade unions to get the influence they thought they should have. To uncover if societal transformations occurred due to specific projects would require more research in deeper details than has been possible in the case study. Lastly aspects of social innovation is present as well, as new social relations and practices are part of the system change, as students and supervisors work more closely with “real life” challenges, and the organisational capabilities of an CSO may be enhanced with new services, products etc.

## **Contributions to innovation and change – social transformation in society**

As Science Shop DTU incubated new research areas, this also entailed courses and supervisors within this new area, and by extension new engineers with skills and knowledge about areas like cleaner production and bio food production. This is a very tricky impact to measure and track though. An example is the FINE research group at Aalborg University and the Integrated Food Studies education, which stems from a student helper and later staff/PhD at ScS DTU (the interdisciplinary centre). If the student and now professor had not been employed and funded through ScS DTU it is hard to say if he would have been engaged in the area, and if it would have become a successful research group and education. There is an important aspect of individuals, intangible human capital, that in many cases have been instrumental in how initiatives have developed. Other specific examples are a kindergarten that started to use bio food and had a special storage solution designed, which was later expanded to all kindergartens in the local city, or a local agenda 21 centre that were taught how to facilitate student projects, and now have several working relationships with Danish and foreign student groups. The open door to the university was in itself an innovation as well. Students are given the option to make projects in the “real world”, which especially in the early period could not be found in other places. An example of societal change through students is a more general increase of knowledge and experience of students in areas of interest to civil society, through courses affected or created by ScS's.

In Romania, the innovations are more specific, as all Romanian science shop bar one are focusing on environmental issues. ScS Iasi that has been one of the most prominent are doing research mostly within water management, and have done project mostly with local authorities and public water management companies. There of course have been an impact, as many of these actors would not be able to afford lab tests, but it is hard to measure the impact for society or the local communities. ScS Bucharest are working mostly within education, and are conducting many volunteer activities like science fairs and a yearly symposium, teaching kids and parents what natural science is about. They have little or no research activities, but likely have an impact on the science understanding in the community and how many kids become interested in studying natural sciences.

The Living Knowledge network as an entity works mostly at the global level, and have contributed to a societal change by putting CSO, science shops, and civil society in general on the map in relation to the European commission. The last 10 years these groups have increasingly been mentioned in and been the target of project calls.



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## 3 Aspects of (dis)empowerment

There are different aspects of empowerment as ScS's interact with many different types of actors. Civil society projects results in innovation in the three areas mentioned previously, of which Knowledge production typically empower through increased organisational capacity to carry out different tasks. A CSO might have been taught how to carry out research on their own, or they know better how to engage students and facilitate projects. Perspective. Documentation typically empower CSOs in a specific situation or discussion, where the CSO now have scientific evidence backing up their arguments (if there turns out to be scientific basis for the arguments, which is not always the case). Following the closure of ScS DTU, a local authority that used to work with them comments that they see their current relations (new projects with other parts of DTU) as evolved from the relationship started with the science shop. Another former client in a CSO say that they now lack such a partner, and do not think they can find or access the same resources elsewhere.

Students are mostly affected more than being empowered as such, but the science shops may enable them to work within an area they would otherwise not have been able to access. In general, if you have interest in helping civil society, ScS's enable you to follow your interest. In the Romanian case it was especially the possibility of working in an international project, involved with Dutch ScS's, that the students saw as empowering them, and for instance increasing their job possibilities both in private and academic career tracks.

The last area, actors inside the university, are empowered in different ways. There are the actors financed by the ScS's and the EU projects running within the Living Knowledge framework, enabling some actors to work with an area they are interested in, where they would otherwise would have had no funding. Two former staff at ScS DTU now have academic careers in areas of relevance – food science and design for disadvantaged groups & developing countries – and it is hard to say if that would have been possible without ScS DTU. Another form of empowerment, dependent on the education system in the context, is how supervisors need to spend less time on finding projects for courses and theses, as these can be supplied by the ScS's.

Empowerment specifically related to Living Knowledge as a network, can be divided into services for the members, and empowerment of external actors. The members are empowered in their ability to apply for funding, especially from the European framework programs and Horizon 2020, by appearing as a larger and more active entity, and by more easily finding relevant partners. The general communication keeping the members up-to-date on activities and events also have some importance, although it is hard to define. For external partners, who are interested in starting their own initiative, the LK network acts as a contact point for finding relevant mentors in the network, which has generally been seen as the most important aspects for new initiatives. At DIT in Dublin the funding enabled them to move much faster through the possibility for mentoring and funding travels so they could meet other science shops face-to-face, and a period of increased staff to anchor the initiative.

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In some cases the documentation from earlier experiences and projects have also been deemed invaluable for new ScS's, where a new science shop in Lyon based their model on the tool box developed through an earlier EU project. It is also speculated that the network gives legitimacy to new initiatives, where they can go to their university management and say that they are not "alone", but part of an international network. However, this aspect has been hard to find data on. However, the contact point coordinator comments how activities of the Living Knowledge network, like the biennial conference, convinces external actors like the EU commission of the validity of what is going on.

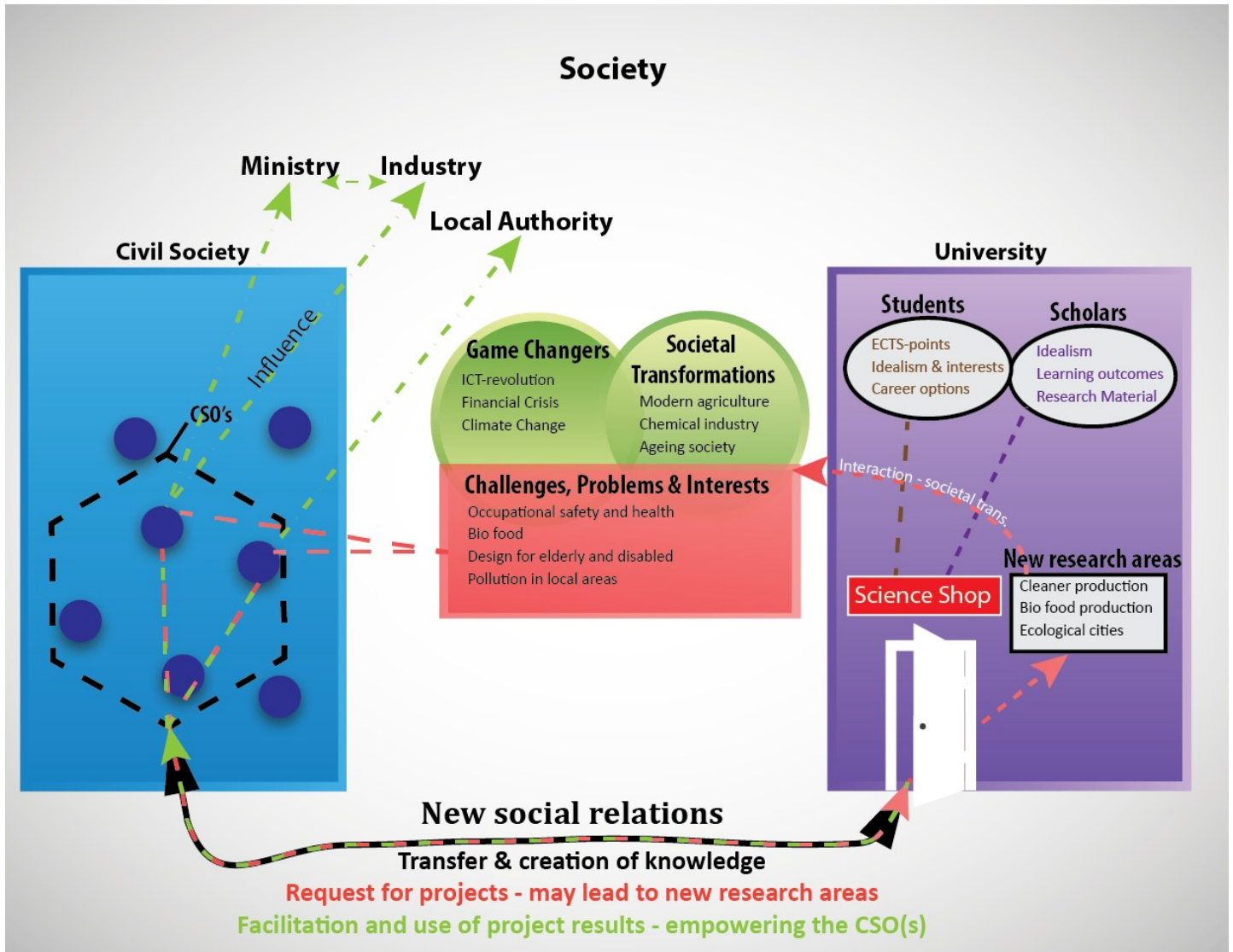


Figure 3 - Examples of innovation and empowerment processes

## Explanatory text – Figure 3

The primary areas of interest to the science shop is civil society and the university/education system. Civil society can ask for help related to challenges and problems, which may or may not stem from societal transformations or game changers, at the university through the science shop, which is illustrated by the red line. The science shop projects and the knowledge they produce may then empower CSOs, or other relevant actors in civil society, to influence other actors in society like local authorities, government, industry etc. Results may also be concrete products.

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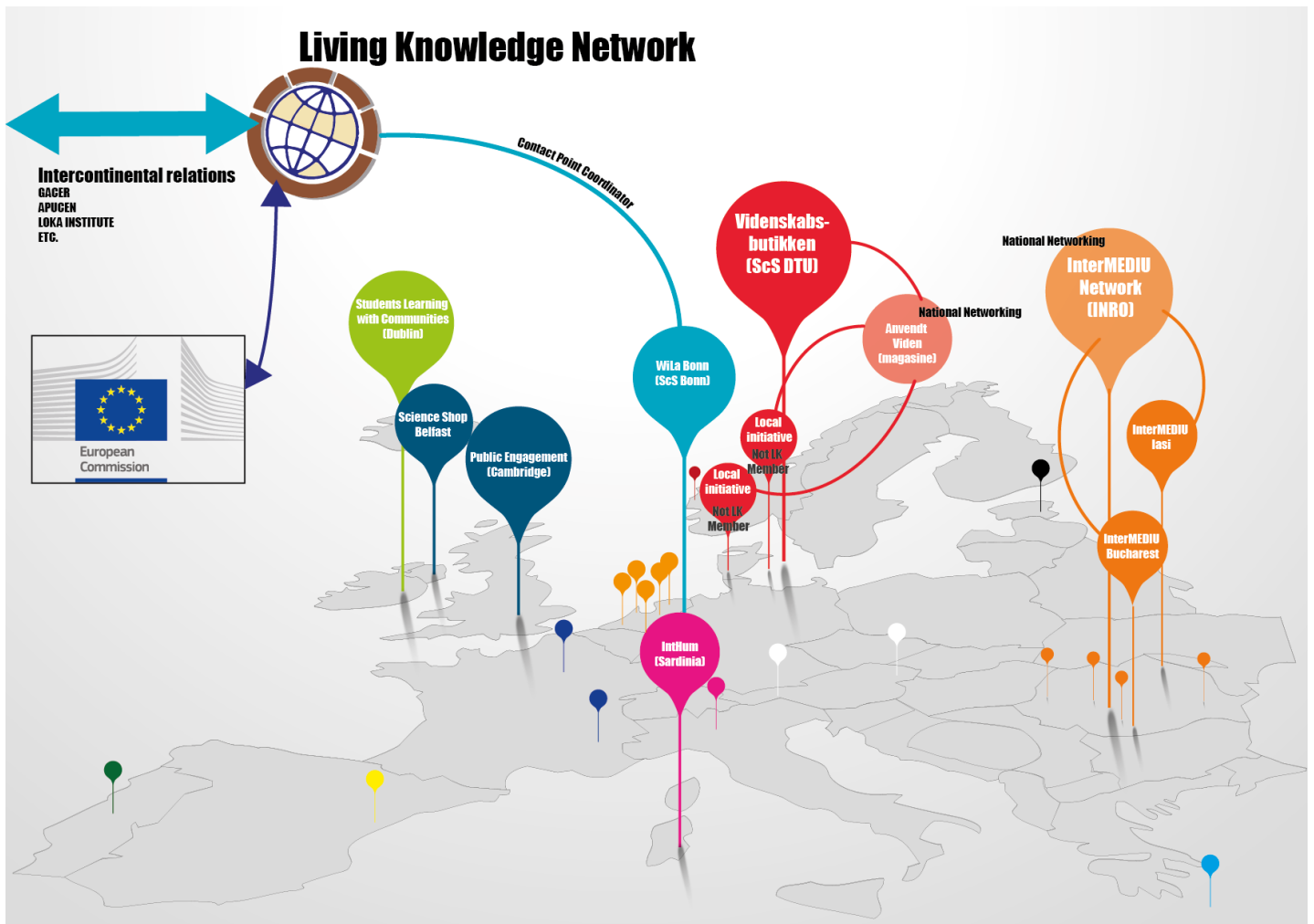


Figure 4 - Living Knowledge network illustration

## Explanatory text – Figure 4

*This only shows examples of local science shops and are by no means a complete plot of all members. The network has a low degree of formalization, and there are different levels of interaction. Some countries have national networks or collaboration, like Denmark and Romania, which are not necessarily affiliated with the LK network. Likewise, not all local science shops are LK members, like in Denmark where only Science Shop DTU were a member. Moreover, as can be seen, the names used are various. Some use science shop in their national language, while others are seen and called as the public engagement department of the university. The modes of operation as just as diverse, but in this case study the traditional model was in focus.*