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Living Labs for innovating relationships: the CoSMoS tool

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Introduction

Living Labs have emerged across Europe to foster experimentation and testing of new solutions in public administration (Dekker et al, 2020). There are many variations, but core features include real-life settings and cooperation between multiple stakeholders (Dekker et al, 2020). The Living Lab in Newcastle (led by authors Wilson, Martin and Jamieson) is an approach to innovating relationships between stakeholders in multi-agency, cross-sector collaboration contexts. It does this through the representation of projects and programmes using a range of visualization and modelling techniques supported by a suite of open source and creative commons tools. The Co-creation of Service Innovation in Europe (CoSIE) project applied Living Labs to support pilots with meeting their goals of service innovation and co-creation through the innovation of relationships.

As the project progressed, the Living Labs approach in CoSIE evolved in response to practical challenges of working with multiple stakeholders across diverse sociopolitical, linguistic and technical contexts, as well as variations in levels of maturity (Jamieson and Martin, 2022). Constraints caused by the COVID-19 pandemic also put a halt to face-to-face interactions as originally envisaged. The evolved approach was to build an interactive digital platform which included both a representation of models created within the CoSIE project and others borrowed from outside the project. These were deployed along with tools to allow for the curation of evidence – websites, images and files, social media, and open data sources – which can be used to inform wider discussions. The platform – CoSMoS – was designed so that

stakeholders could be engaged either offline, individually, within a workshop or in a real-time or asynchronous environment (Martin et al, 2019; Jamieson et al, 2020a; 2020b). The outputs can be shared with a range of involved stakeholders, and then compared and used to enhance discussions regarding aspects of service and social innovation (Jamieson and Martin, 2022). This provided a set of templated models which produced – and produces – a map of the roles and relationships and a representation of the local service development and/or delivery processes (Jamieson and Martin, 2022).

In this chapter we present an initial generic co-creation model followed by a series of four analytic models, each of which links to the practical challenges associated with co-creation. Then we illustrate how the models were adopted and used in practice in two contrasting CoSIE sites, in Greece and Hungary. We conclude with reflections on how the CoSMoS tool supports both practitioners and participants in realising and communicating co-creation within their own environments as part of reflective, emergent and evaluative engagements.

Living Labs in the context of the Co-creation of Service Innovation in Europe project

'Living Labs' is an elastic concept and has a broad appeal to a range of disciplines including those working in service and social innovation projects involving co-creation with users (Schumacher and Feurstein, 2007). From this, it is easy to see how open innovation and participation have come to be closely related with the Living Lab concept (Leminen, 2013; Schuurman and Tonurist, 2016). Hakkareinen and Hyysalo (2016) contest the idea that Living Labs will automatically lead to more (and better) collaboration and propose ways the daily challenges in Living Lab practices are overcome. They suggest that the activities taking place in Living Labs among their stakeholders and intermediaries are not fixed but evolve, and roles of stakeholders are also malleable and change over time. A recent literature review of Living Labs concludes that there is much work to do in the relationship of 'living labs' to the challenges of innovation and partnership with users, recommending a shift to a more co-creative stance (Hamed et al, 2020). Another recent paper talks about the difficulties that Living Lab produced innovations have moving from the niche to the mainstream (Greve et al, 2021). Indeed, after many years of enthusiasm for service and social innovations (Mulgan et al, 2007; European Commission, 2013), experiments in service transformation have demonstrated that the innovation of services is much more difficult in practice (Brandsen et al, 2016). Even successful projects or demonstrators have often failed to be sustainable or to scale beyond the environment where they were initially designed and/or implemented (Brandsen et al, 2016; 2018; Meijer and Thaens, 2020). Despite these challenges, the deployment

of 'Living Labs' as an overarching methodology has been expanding in public service contexts (Schuurman and Tonurist, 2016; Gascó-Hernández, 2017; Dekker et al, 2020).

One of the objectives of the CoSIE project was the application of Living Labs approaches in the context of relational public services and welfare to support local activities with addressing the challenges of social innovation and co-creation. Work in these areas by the authors of this chapter and others indicates that key to carrying out such activities in a scalable and sustainable fashion is using theoretical models to create reflective, collaborative stakeholder engagement through the innovation of relationships (McLoughlin and Wilson, 2013; Wilson et al, 2013; Jamieson and Martin, 2022). The real-time provision of interactive representations through modelling can take several forms. These include online meetings using common tools such as Zoom augmented with Miro boards as well as more traditional face-to-face deliberations using tools such as Rich Picture methods, sticky notes and whiteboards. We characterize the Living Lab approach promoted and adopted in CoSIE as one of mutual sense-making, design and learning supported by the co-construction and discussion of models as 'boundary objects' (Bowker and Star, 1999). Boundary objects enable dialogue across organizational and professional divides. They can take many forms (for example pictures, artefacts, stories); the important thing about them is that they are meaningful across various communities yet can accommodate dissent between them (Bowker and Star, 1999). The result is that evolving, co-created models act as 'mirrors' and 'windows' between stakeholders to promote more focused and mutually informed debates (Hesselgreaves et al, 2021).

Developing and applying the CoSMoS tool in the Co-creation of Service Innovation in Europe social innovation pilots

Starting up: developing an initial model through co-creation

To enable and promote sense-making and reflection about how reallocations and participations were being undertaken across each pilot, we required each pilot team, as part of their collaborative work allocation, to co-create shared models of – and with – the local actors, organisations and conversations. The intention was for each pilot to model the processes and occasions in which they have undertaken their local developments including their service definitions and deployment processes. These models were used in local Living Lab engagement sessions in each of the pilots, to stimulate reflection and deliberation.

The intervention of Living Labs in the model-making process itself was somewhat conducted at arm's length. This was due to the usual resource constraints and to the fact that all the actors were pressing ahead with their

local developments. Many, but not all, of the pilots adopted the aspects of the representational style which was introduced in initial models. In particular, the approach in the work involved making organizational relationships explicit in ways that supported their abstraction and the recomposition of roles and responsibilities. This allowed for an initial generic service co-creation model to be developed (Figure 10.1) which enabled a lens through which each project could be viewed and explained. This generic model was later incorporated into a new online Living Lab platform which is also described in detail in what follows.

As we can see in Figure 10.1, the service objectives and contexts of the CoSIE pilots are varied. We discovered, however, that all can be characterized in terms of aspects of needs and opportunities associated with some combination of:

- a target demographic or socioeconomic grouping;
- place or locale, ranging from a residential estate to a town or entire region;
- a set of specific legislative or policy initiatives or responses.

In each of the pilots there has been, or continues to be, contexts and occasions where deliberations take place about the identification of needs and opportunities for service innovation. The design of which is a response in the shape of a service or set of services which has been or is being initiated by particular actors. In the different pilots we see examples of this initiation at all the different levels of the administrative system: bottom up (micro), middle out (meso) and top down (macro). They operate on a spectrum which varies from consultation about policies and designs that have already been decided above to participative explorations of needs and opportunities with many variations between.

Such deliberations result in (or confirm) identifications and definitions of the intended beneficiaries, of the intended benefits or service outcomes and an identification of the combinations of agents who will provide the service. Services imply the use and consumption of resources and facilities and the source of these in the CoSIE pilots is a public administration who is usually the sponsor and the commissioner of the service.

Finally, it is a feature of all the CoSIE pilots that there are individuals who were the initiators, facilitators, enablers and nurturers of the service co-creation processes and the instigators of the moral reordering that this implies. These are not necessarily the initiators, but, like them, can belong to any level within the local system or be external to it. The relationships between all of these elements take the form of participations and conversations which may be direct contacts and deliberative occasions but also may take the form of communications by other media and mechanisms. In particular, the link

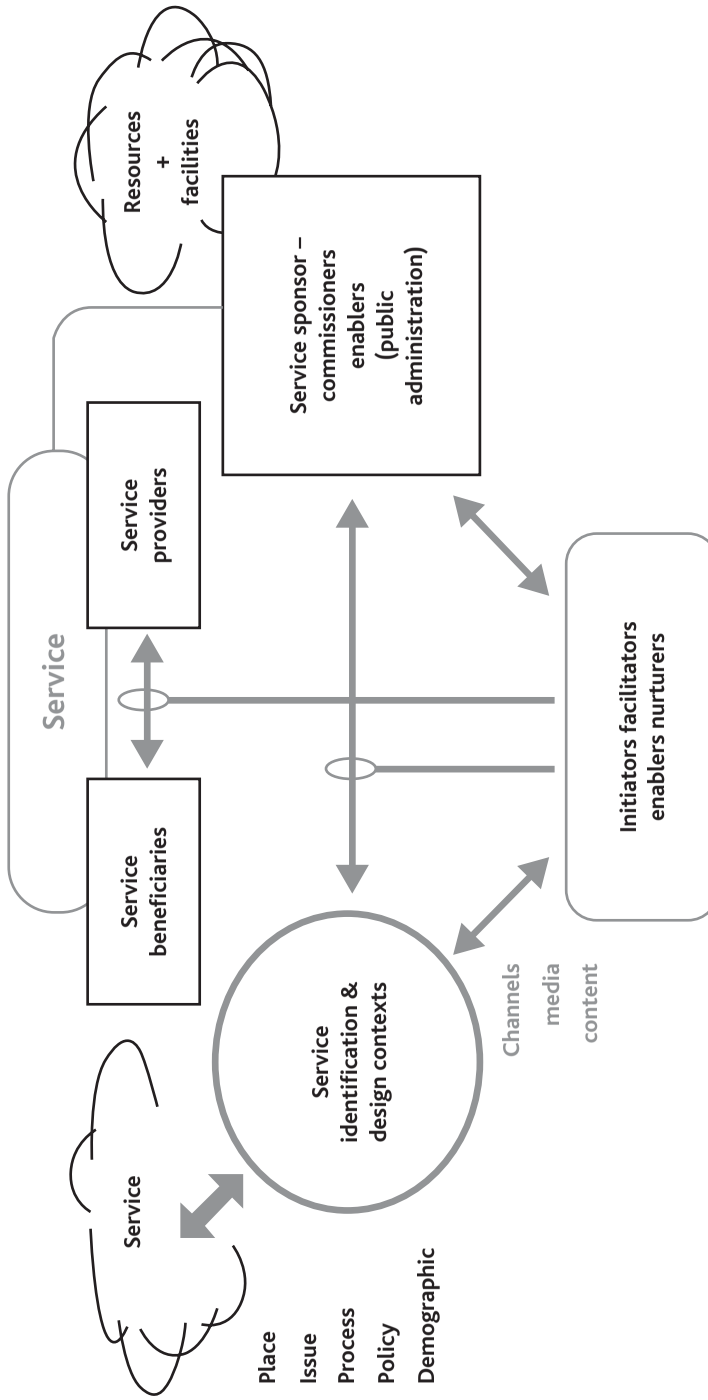


Figure 10.1: Generic service co-creation model

between the service context and the service creation occasions often takes the form of advertising and publicity as well as social occasions.

We now present models that represent the set of core concepts and factors that have emerged from the observation of, and interactions with, the pilots from this perspective. We will complete this section with an outline of the theory of the architectural discourse of sociotechnical systems which underpins the modelling methods and frameworks we are using.

Next steps: developing the Living Lab models

The initial models which were developed through co-creation workshops with the local pilots were a combination of developments in response to the experience of the Living Lab team. Our starting premise was that each model might help to draw out the similarities and differences across the co-creation processes, social innovations and developments of the project.

Four analytic models were developed through this process, the penultimate of which comprises three smaller probe models for the direct analysis of the conversational maps. The models are as follows:

- intervention theory and concept of human wellbeing;
- governance and moral ordering;
- analysis of innovation conversations;
- a platform for the co-creation process.

In making use of these models, we were formulating a series of questions to be addressed in a context where the pilot models and the analytic models were presented side by side. The purpose of this approach is to generate emergent conversations to innovate the relationships between stakeholders: it is therefore the process, rather than the product, of an finalized model, that represents the value.

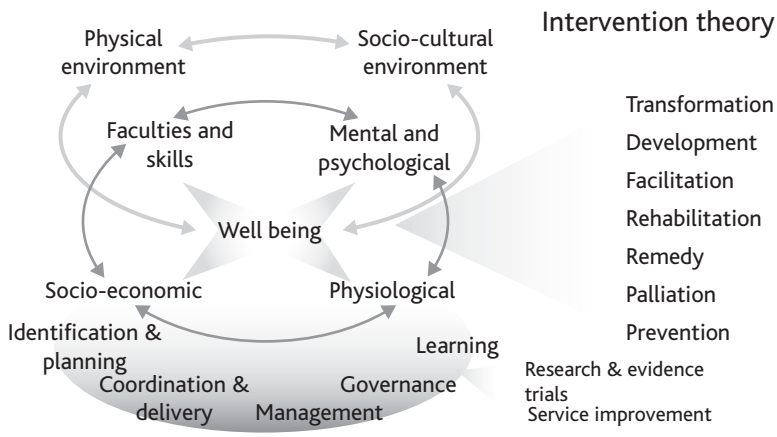
Identifying the intention of the social innovation pilot

Our first model is an initial attempt to create a representation of the multidimensional complexity of human wellbeing because this is the 'space' in which the social innovations and co-creation processes of CoSIE pilots are taking place (Figure 10.2).

The model presents three perspectives – or projections – of wellbeing:

- A structural one which distinguishes between the internal and the environmental and between the different sorts or areas of wellbeing.
- The range of intentions or purposes of an intervention or service where a care plan may consist of a number of these at the same time or in sequence.
- A process and learning perspective.

Figure 10.2: Intervention theory and the concept of human wellbeing



Based on our analysis of the local contexts, four major sub-domains or perspectives of human wellbeing were identified. These are:

- physiological wellbeing;
- mental and psychological wellbeing;
- wellbeing associated with faculties and capabilities; and
- socioeconomic wellbeing.

Each of these contain many facets which interact with each other and there are strong couplings between the four domains. These interdependencies can create catastrophic cascades of positive feedback, self-maintaining loops and deadlocks as well as sustainable coping and development. All of these are affected by, and interact with, external elements of the physical environment and the sociocultural environment which also interact in complex ways.

In most of the CoSIE contexts, what is being addressed is a complex combination of multiple challenges of the organisational, practice and client contexts. In these complex situations, remedy and rehabilitation are not the only concerns; we must also consider the wider need for palliative and the habilitative or facilitative components in a complex care response. The former approaches make symptoms bearable, without addressing their cause, while the latter bring the capacities of the service user/client up to the expected or required level to achieve and maintain some level of stability or coping.

The wellbeing service elements we have considered so far have all been concerned with addressing some failure or lack; this does not exhaust the spectrum of care responses. We must also consider developmental and

transformational aspects of care, which are concerned with realising and maximising potential or creating completely new possibilities and potentials. Note that we are characterising this spectrum of interventions in terms of intentionalities what *they are trying to achieve, rather than how, and on what, they operate*.

We can complete our representation of the scope of human wellbeing by including the process-oriented perspective, which is characterised by the operational logics of identifying needs, planning, coordination and delivery, management, governance and learning, all of which operate at the level of the individual case, whether this is episodic or continuing, and also at the level of the population in service provisioning. To complete our projections of wellbeing service processes we must also include research and development, trailing and the service improvement processes of a 'Learning Care System' or 'Learning Wellbeing System' in which development and innovation take place.

The questions this model begins to raise both at the general project level and individual pilot level are:

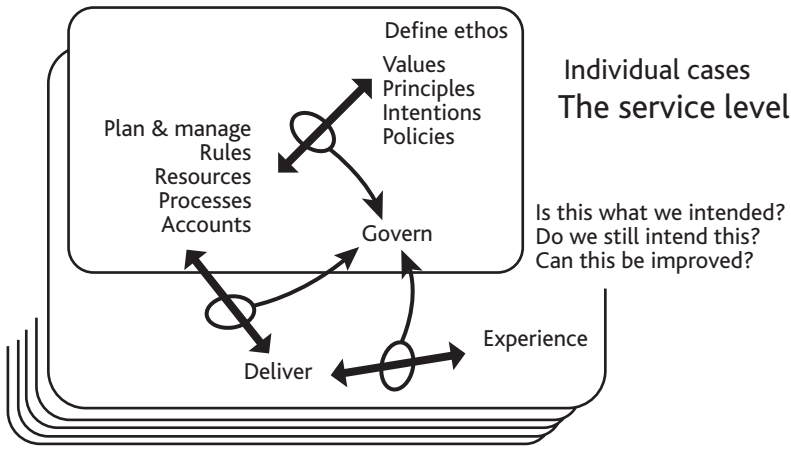
- Which aspects of human wellbeing and of the environment are relevant to your service? Are some more significant than others?
- What are the intentionalities of your service?
- What aspects of the service life-cycle are important regarding your innovation and change?

Model of governance and moral ordering

The selection and implementation of social innovations implies moral judgements or stances on the part of those enacting the activity. Also, it does not presuppose that these 'moral ordering' processes are straightforward or uncontended (either implicitly or explicitly) or that all stakeholders have good intentions. Our initial 'moral ordering' model distinguishes between the contexts and occasions (or stages in a life-cycle of a social innovation) when different types of conversations, which are conventionally associated with the vertical or hierarchical structure of an organisation, take place (see Figure 10.3). These include:

- When the *ethos* of a social innovation is defined/reflected on and the pilot activity initiated/reviewed. (The discussion about values, principles and objectives of a pilot.)
- The *management* which plans, monitors and reports and the process of doing of the pilot activity of delivery and the experiences of stakeholders in relation to the new innovative process. (Discussion about planning, measuring, accounting, evaluating a pilot.)

Figure 10.3: Governance and moral ordering model



- Discussions about *feelings and experiences* of a social innovation from the perspective of the pilot activity but also the context of social innovation.

Our model then positions the *governing* process as the contexts and occasions when three key questions about the relationships between these processes are examined and evaluated. The questions this model begins to raise both at the general project level and individual pilot level are:

- Identifying the different occasions (times and places) where the following activities/conversations/reflections took/take place.
- In terms of the co-creation processes questions of who was/is involved, how were/are they recorded, what happens to the learning and how does it lead to changes or improvements?
- The presence of documentation that represent the ethos and principles of the social innovation and/or the pilot and indicators that these changed over time. Ability of stakeholders to articulate their relationship to and identify the owners, editor, publisher of these documents or texts.

Innovation conversation analysis model

All of the contexts require a sequence of organisational structures and processes which span policy making, the configuration and management of service resources and front-line delivery. Further, in some contexts there may be tensions and even conflicts of interest and value along this chain. One dimension of understanding co-creation processes should be concerned with how power and participation are distributed. The questions here to be

addressed concern the identification the micro, meso (may be multiple) and macro levels in the conversational model and the examination of participation within and between them among all the actors in the pilots.

In the engagements with the local places and the evaluation elements of the project we observed both elements of locally developed, imported and blended intervention theory models which had been published and used in other contexts being appropriated, adapted and adopted. We also observed discussions about the attitudes adopted by actors at different phases of the creation and delivery of the pilot. In some cases, meso-actors were attempting third order interventions on micro-level actors who initially positioned themselves as victims and adopted a stand at the right-hand end of the attitude spectrum. Sometimes this configuration is observed in the relationship between the macro and meso levels. These last three models represent probes to assist in establishing an account through the development of reflexivity of the context of social innovation in a local area when applied to the specific conversational maps (intervention theory and moral ordering).

The model presented in Figure 10.4 emerged from an analysis of the CoSIE contexts and is an attempt, on the one hand, to identify the core internal elements that are common to all the various approaches of the pilots and, on the other, to make certain key external elements and factors – which are relevant to any service environment – explicit if it is to be sustainable. It represents an attempt to present and interrelate a number of terms and categories to provide the basis for a common language and framing of the CoSIE place-based activities.

Co-creation of service model

Our final model, the 'co-creation of service model' presented in Figure 10.5, denotes a set of structural relationships and occasions. Each pilot can populate some or all of these processes with the identities of actual participants. For example, as we have seen, in some cases, policy has represented an external input to which the pilot has had to respond, whereas in others, policy was generated internally.

The service life-cycle processes are distributed over, and supported by, a service definition and development platform and a service delivery platform. These correspond to the support of the processes identified and interrelated in detail in Figure 10.5. For example, in the Estonian context, the social hackathon (see Chapter 3) represented such a definition and development platform. The nature of the delivery platform for any service or service set defined in a hackathon is one of the outputs of the co-creation process. In the case of Spain, the business development support facility has been both service definition and development as well as the delivery platform.

Figure 10.4: Innovation conversation analysis model

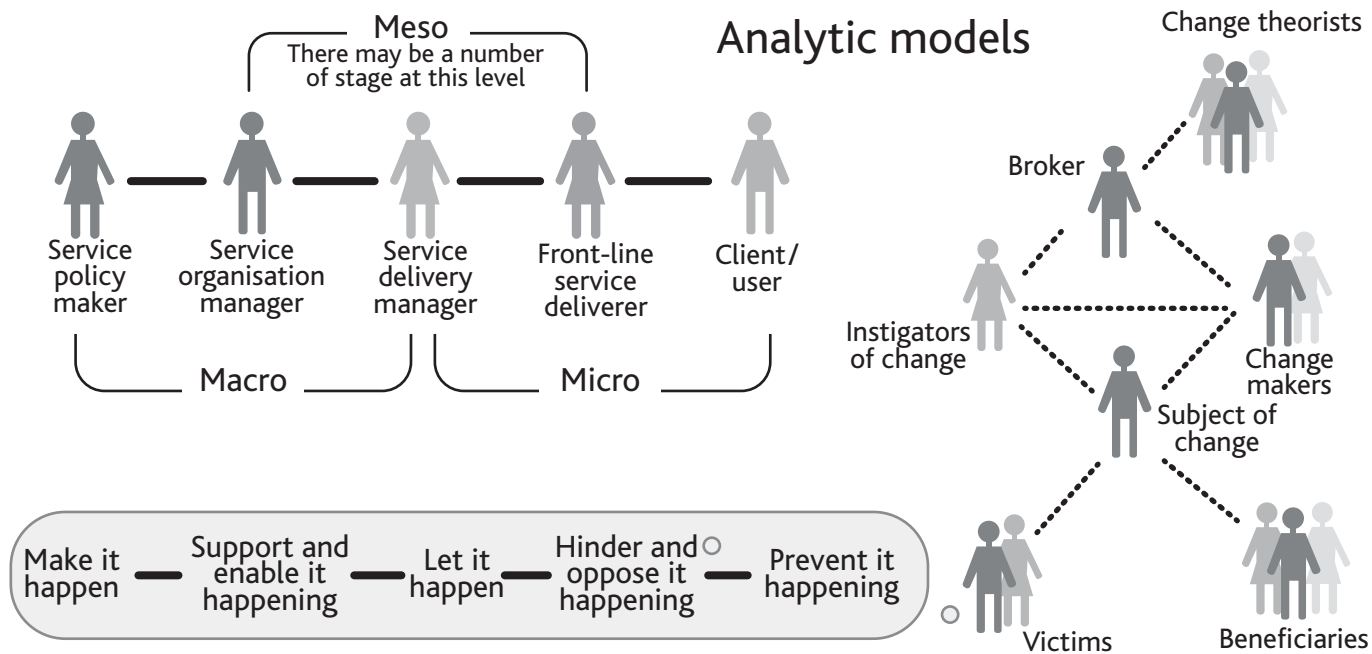
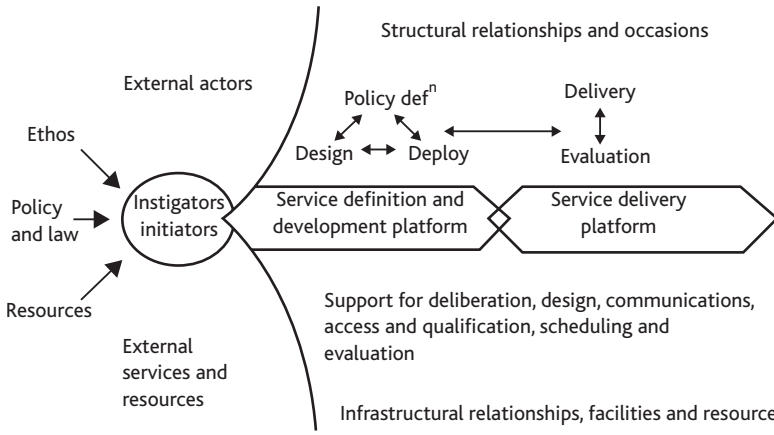


Figure 10.5: Co-creation of service model



The reason for introducing these concepts is to encourage discussion about reusable infrastructure which can support and sustain successive initiative in co-creative service development which is an important element of sustainability through growth and diversification. Having identified an abstract, generic model of co-creation and of service, we have created the opportunity for shared resources between co-creation initiatives and services. Thus, below the platform we have a space in which to locate infrastructural capacities to support deliberation, design, communications, the means of access to different sorts of services and service components, and for the processes of qualification, scheduling and evaluation. The precise shape and nature of these resources will vary from pilot to pilot but there are some universal elements that are common requirements in many classes of wellbeing and developmental services. Many of these are concerned with the support of information management and communication, such as publication channels, registration services by which new actors and resources which join the service environment can be given identifiers and locators, catalogue publication and management, and recording and profiling tools.

The description so far has covered the right-hand part of the model in Figure 10.5. This represents elements that are within the co-creative ethos of a pilot's actions. The left-hand side of the model represents relevant external elements that are part of the initiation of such a process or have some ongoing impact on it.

First, we consider the instigators and initiators who may be driven by a combination of innate ethos and values, external matters of top-down policy or law or may be responding to opportunities created by local availabilities and resources.

Corresponding to the structural and infrastructural domains of the right-hand side, we have relevant external actors and agencies and relevant (and reusable) external services and resources which have an impact on the development and delivery processes. This model was designed to encourage its users to put their local initiative into a wider structural and infrastructural context and to consider the ongoing relationships between the activities they have undertaken and associated relevant external considerations. We now examine two of the contexts where the models were deployed to show how they were applied in practice – and using the CoSMoS tool: Hungary and Greece.

Case in point: the Hungarian pilot

The Hungarian pilot aimed to innovate the activation of the rural population in Hungary in the context of local food production. This was to be achieved via local government organisation and co-creation of new approaches to the economic activities of the citizens, moving rural communities from a service-oriented approach to a more entrepreneurial one (Csoba and Sipos, 2022). (See Chapter 3 for more information about this pilot.) The focus of the activity, linked to the national Social Land Programme, was to revive the culture of household economy by enabling families to utilise their own resources. The work took place in ten rural settlements drawing on grassroots initiatives within traditional communities, with the understanding that no two are same, by seeking improved engagement with local democratic mechanisms to improve resilience and contribute to sustainability. The Hungarian activity was both an early influence and an early adopter of the CoSMoS tool. Work undertaken in one village, Szolnok, intended to communicate the intentions of the Living Lab work package became the initial co-creation of service model. Figure 10.6 shows application of the model in this pilot. Subsequently, CoSMoS was used as a focal point for engagements inside the local context and to assist in the communication of reflection inside the pilots and we can see the mapping of the innovation environment was used through a range of co-creation activities to inform and animate stakeholder engagement.

The modelling process helped the Hungarian pilot bring stakeholders together to work with socially disadvantaged people to engage in conversations around the social innovation process. In Hungary, small-scale, domestic agricultural production is done within the framework of the family, usually in the backyard of private houses. The most important outcome of the project was the redistribution of power and authority among the actors in managing the social risks related to the household economy. For this reason, in executing the pilots, the main question is not 'what' was obtained through the pilot, but rather 'how' the pilot was conducted. One of the

Figure 10.6: Application of the co-creation of service model in the Hungarian pilot

main goals of the various projects is to change working routines during the formation and implementation of services: 'with the user' not 'for the user' but at the same time creating a balance between the actors and not leaving all the responsibility to the user. For the facilitators of the activity in Hungary the outcome was to innovate relationships to improve stakeholders' readiness to solve problems together and eventually evolve operating practices, professional codes and traditional paternalistic intervention models, which had represented the sociopolitical orthodoxy for many years. The CoSMoS activity helped the local programme to reflect on the scalability of activities to extend and sustain its service development and delivery platform.

Case in point: CoSMoS in the Greek test site

The Community Gardens pilot was a social innovation aimed at creating an alternative intervention in the depleted urban environment of the city of Aghios Dimitrios. It was not one of the original ten pilots but intended as a test site in which to trial tools and learning resources developed through the three 'waves' of CoSIE (see Chapter 1). Although many urban community garden initiatives exist worldwide this was a very new and innovative application in the Greek context, especially for local authorities. Aghios Dimitrios is a municipality situated about five kilometres from Athens city centre. It is densely populated with a significant lack of green spaces. The garden occupies an area of 2.5 acres that belongs to the municipality. This was unexploited land and outside the city urban plan, located in a fairly degraded neighbourhood on the edge of the urban area. The municipality of Aghios Dimitrios has set a priority for planning, organisation and exercise of innovative and inclusive social policies. The aim of the community gardens initiative was primarily to enable low-income households to gain access to fruit and vegetables. Longer-term goals were to improve the environment, enhance respect for nature and promote environmental education.

The emerging modelling method of CoSMoS was co-produced through engagement with the CoSIE pilots. The first meeting orientated the Greek pilot team to the tool, the final models and setting them up as users. The second meeting, based on the team reflecting on their situation in the pilot, covered questions about the potential applications and specific questions about the use of the functions of CoSMoS. The third and fourth meetings were discussions regarding the application of the CoSMoS tool to the emerging Greek pilot activity, which was significantly constrained by the local COVID-19 lockdown situation. However, the affordances of the CoSMoS tool were a significant support in the development of the pilot and the engagement of stakeholders unable to meet each other in the traditional way. The capabilities of the tool allowed a range of interactions, including synchronous interactive completion of models with stakeholders,

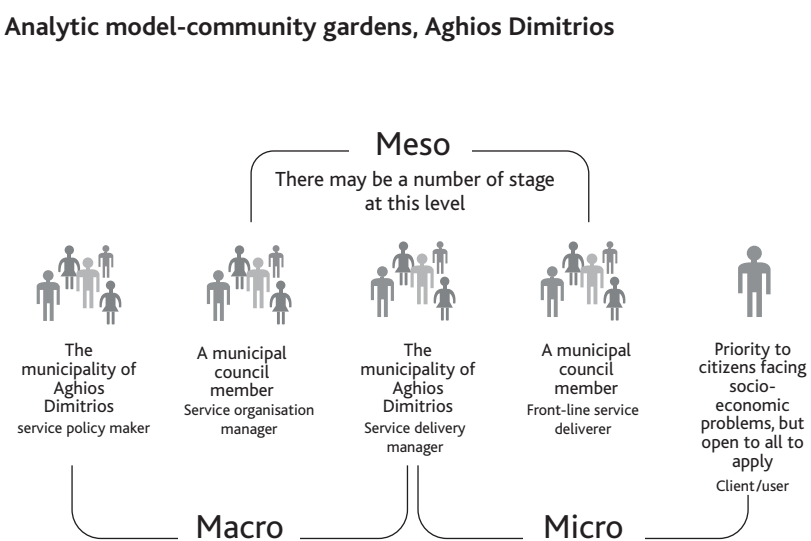
asynchronous summaries to be completed of elements of the project based on online meetings and other co-creation actions (summarising the key results of the Community Reporting) and the basic linking of the pilot together for the local animateurs including the social media activity.

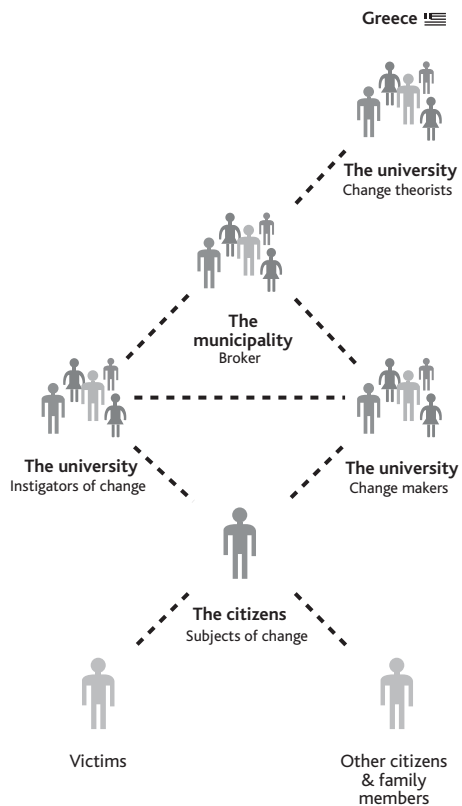
Within the Greek pilot, the community gardens project made extensive use of CoSMoS. By completing several models, the pilot has successfully integrated CoSMoS into the co-creative processes when developing and structuring delivery. The deployment of the models within CoSMoS was used to observe the co-creative inputs from a range of stakeholders. In the first workshop that was organised, the initial feedback was 'positive from the [participants] part – they thought this could be something that could be implemented in other occasions, not just this one'. It was noted that additional training could be implemented to support the completion of the models inside the application along with training and guidance around the theoretical underpinning of the models. The participants in the meetings comprised several members of the municipality, including the vice-mayor responsible for the project, a person responsible for the community gardens, a volunteer, and several social services representatives.

The co-creation of service model was completed remotely using web conferencing tools, screen-sharing and facilitated by the Greek pilot team. The use of the model helped to iteratively clarify the structure of the Community Gardens pilot, and explore preconceptions around the project. The process revealed that the full range of the interaction between the stakeholders assisted with the wider understanding and communication of the intentions of the project, including the relationships to the policy that underpinned it. The model was revisited and revised to ensure that, as it was discussed and revealed, stakeholders understood the project, its purpose and position. The use of the model allowed for a range of stakeholders to present their perspective as well as allowing for the space and occasion to discuss the project from each perspective.

The application of the analytical model for the community gardens pilot (Figure 10.7) made the relationships within the innovation explicit and easier to understand. This increased the transparency and openness of the innovation while allowing for an improved presentation to a wide variety of stakeholders in a political environment that is not ordinarily 'bottom-up'. The intervention theory model was used to verify the input of the range of stakeholders throughout the municipality in terms of the aims of the pilot intervention bringing together with the perspective and feedback from the intended beneficiaries of the project. Additional perspectives of the beneficiaries were captured – and inserted into the model – to assert and assist with this. One of the more useful models for the innovation, the intervention theory model was effective in understanding the rich value identified in conversation with the beneficiaries and understanding how

Figure 10.7: Application of the analytical model for the community gardens in the Greek test site





this was realised by them through the project, as one member of the project observed about their application of the model: "I think it's very interesting because the purpose of the model is, to, if you like, layout the complexity of human wellbeing … so [there is a] match between the nature of [the] service and the utility of this model."

Conclusion

The modelling method of CoSMoS – with its origins in Living Labs – supports the concept and practice of co-creation. It offers a significant potential for stakeholders, service designers and participants to jointly improve their understanding of their environment, service provision and possible service platforms. This approach begins to address some of the weakness identified in the literature by means of an abstract modelling engagement which supports the necessary technical, management, governance and social processes required in the collaborative design and implementation of a service innovation. It achieves this by responding to the opportunity that the online cost-efficiencies and availability of multimedia-rich interactions offer to provide a more sustainable means of creating value in new forms of producer–consumer collaboration (see the call from Prahalad and Ramaswamy [2004] for new building blocks for co-creation).

CoSMoS emerged from the challenges of working with service innovation pilot projects that varied in terms of their sociopolitical, linguistic, technical and service contexts. It was an attempt to derive visual models that were sympathetic to various stages of maturity and co-creation approaches of the service and innovation environments, and to raise awareness of key external elements and factors that are relevant in any service development life-cycle. This type of deployment of a Living Lab approach, which seeks to improve collaboration in new ways, is challenging – particularly as such developments are often highly focused, tightly resourced and pragmatic. However, we see emerging evidence that the sort of modelling approach (exemplified in CoSMoS) scaffolds a wider range of collaborative possibilities between stakeholders involved in the co-creative process in relation to complex public service areas. It thereby makes these often short-lived yet cherished social innovations potentially more sustainable and scalable.

We reached the end of the project with a stable CoSMoS tool that provided the full range of CoSIE models and resources in the form of an interactive digital platform. The main outcome of our activities was firstly to position the CoSMoS tool as a source of co-creation-based reflective development activities for those seeking to innovate in heterogeneous complex social and welfare contexts. Moreover, it was clear that the models themselves represented a powerful way of mapping the stakeholders and comparing apparently very different settings and initiatives. The moral

reordering, which is implicit in the shift to a co-productive approach, was evident and recognised by the project in both the conversational models and the transformation process models of the initial pilots. The models also provided a potentially very powerful framework for the organisation of and access to community storytelling (including the Community Reporting presented in Chapter 7). CoSMoS brought outputs from different sources together to provide a channel for the publication and dissemination of the learning that was taking place. Overall, the models within the CoSMoS tool enabled, supported and guided the many discussions that are required to identify and strengthen participation in the co-creation processes of service innovation in context. The provision of the range of models in the form of an interactive digital tool offers the means to apply explicit modelling processes in co-creation activities across diverse spatial, governance, practice and technical domains.

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