

Life events as an approach for service ecosystem design: lessons learned from the Finnish public services

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Abstract

Life event services have emerged worldwide as an approach for designing public services by addressing significant transitions in life and building an ecosystem around them. We study this approach as an opportunity to engage the ecosystem in a novel manner. Empirically, we investigated three digital public service cases in Finland that leverage the life events approach.

Life transitions make gaps between systems visible to the large and complex network of value-creators. Life events is a unifying term for public administrations, cross-sector organisations, and communities involved as providers. Whilst this approach uncovers an underserved set of actors and situational motivations, it provides the service ecosystem with a shared purpose. Our analysis establishes four demands for designing service ecosystems around life transitions: semantic interoperability, ecosystem governance, segmentation model and purpose-driven approach.

Keywords: Life events, service ecosystems, service design, digital services

Introduction

Value creation in modern society has been largely built on interrelated networks of varied stakeholders, often referred to as ecosystems. Ecosystem-based value creation allows the integration of resources, competences, and knowledge beyond traditional industry boundaries (see, e.g. Jacobides, Cennamo & Gawer, 2018; Adner, 2017; Baldwin, 2012). This is a relevant approach, especially in digital services. Designers increasingly adopt human-centred perspectives to re-think and re-organise the scattered public service provision into efficient and seamless citizen



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experiences. In this context, the so-called life event services have emerged worldwide, with examples in the public sector in Australia, Canada, Denmark, Finland, New Zealand and the United Kingdom.

Examples of life events include having a baby, moving countries or the death of a loved one, among many other momentarily or permanently life-changing events. Although the importance of the human-centred and ecosystem-based view to jointly address large-scale societal problems is well-documented (Vargo et al., 2016; Baldwin, 2012), less is known about how the value co-creators systemically address critical moments in everyday life and, more importantly, what is required for the disperse actors to be aligned. Alignment is essential in life transitions as these make gaps between systems visible to the large and complex network of value creators. Thus, the life events approach view can ease the difficulties in designing for life transitions in joint collaboration.

Digital services and emerging technologies present a unique opportunity for public and private services to address gaps between systems jointly across sectors.

In this paper, we aim to understand what the term life event services mean and explore their potential as an approach for ecosystem design, specifically in the context of life transitions. Our research question asks: *How does the life events approach add value to digital service ecosystem design?* Empirically, we anchor this study in the life event service developments in the Finnish public services by analysing three cases developed between 2002 and 2022.

The findings presented in this paper are based on process data consisting of four interviews and an archival dataset. In the findings section, we map our findings on a timeline that shows the evolution of the approach in four categories: semantic interoperability, ecosystem governance, segmentation model and purpose-driven innovation. Building a historical timeline motivated us to view these categories as chronological steps towards adopting a life events approach in service ecosystem design.

From now on, the paper is structured as follows. We will first go through the literature that informs and guides our empirical investigation, introduce our study design and cases. Thereafter we present our preliminary findings, possible practical and theoretical contributions, as well as steps for the future.



Theoretical background

We will briefly go through the theories that underpin our empirical investigation. We first discuss innovation as an ecosystem activity and an alternative way to organise outside dyadic or triadic service transactions. Thereafter we review some of the literature on ecosystem governance and multilevel service design that is needed for value creation in ecosystems.

Service ecosystems driven innovation

Value creation is increasingly building on innovating novel sources of value (Ahuja, Lampert, & Tandon, 2008) and engaging different stakeholder groups such as customers, partners, and varied providers (Shipilov & Gawer, 2020) that hold necessary resources and capabilities for integrated value creation. Thus, innovation, especially in service-based exchange, is no longer seen as a dyadic or even a triadic encounter but involves a more comprehensive network of actors often referred to as an ecosystem (see, e.g. Vargo et al., 2017; Chandler et al., 2019).

In ecosystem-based exchange, stakeholders seek to engage their customers and other resource and capability holders to participate in concurrent and tightly integrated value creation (Bridoux & Stoelhorst, 2016; Chesbrough, Lettl, & Ritter, 2018). A high degree of alignment and complementarity among the participants is needed for these ecosystems to succeed. Service-based value creation requires knowledge sharing, tight integration of processes, shared goals, and synchronised activities and cooperation.

In this study, we approach ecosystem governance as an effort of coordination rather than cooperation or collaboration to emphasise voluntary participation in value exchange. Thus, we recognise and acknowledge the phenomena where digital service ecosystems tend to steer towards a so-called “winner takes it all” structure (see, e.g. Inoue, 2019; Van der Aalst et al., 2019) that is seen as non-beneficial given the innovation ability for future. In the winner takes it all settings, value creation is formed around one central player that dominates the value creation and especially capture. While these systems are often efficient, there is emerging evidence that the network effects that lead to winner takes it all logic can also work in reverse and destroy value at explosive speed (Evans & Schmalensee, 2016). Thus, we aim to study how ecosystems can be governed towards more democratic structures that allow coordination without enforcement. Next, we will review some service design literature that could benefit our aim.



Multilevel service design

Service design research has largely focused on planning activities that arrange resources, infrastructures, communication, and material components to improve service quality (Blomkvist et al., 2010). In many studies, the level of analysis has been on the customer-provider dyad. Yet, as explained previously, service design is now challenged to search for models that consider multiparty value creation. In the table below, we show examples of these models and some limitations that these can present in addressing multi-level dimensions and value co-creation. We categorised these models based on the type of experience they frame, as described by Polaine et al. (2013) and the service design level each model aims to tackle, according to the multilevel service design process (Patrício et al., 2011).

Model	Type of experience (Polaine et al., 2013)	Service design level (Patrício et al., 2011)	Limitations
Service blueprint (e.g. service experience blueprint)	Customer experience	Designing the service delivery process	“The Service Experience Blueprint focuses on lower levels of multi-interface integration and offers no support for designing the service concept.” (Patrício et al., 2011, p.183) Risk of losing the customer focus as the process is led by inward organisational perspectives of many internal processes. (Kurtmollaiev et al., 2008).
Customer journey (e.g. journey mapping)	Customer experience User experience	Designing the service encounter	Service delivery network perspective is lacking (Tax, McCutcheon, and Wilkinson, 2013)
Value network (e.g. actor network map,	Consumer experience	Designing the service concept	Criticism is connected to the Actor–Network theory in that conception of agency does not presuppose intentionality. (Whittle, A. & Spicer, A., 2008).



service ecology map or value constellation map)

“Service ecologies can grow infinitely large, and if you do not focus on the results, you are looking for, you can end up having mapped the whole world and not know what to do with it. It is important to define the boundaries of the map, so you do not continue forever.” (Polaine et al., 2013, p.83)

Jobs to be done	Consumer experience	Designing the service concept	A common mistake is to focus on activity or task analysis (Activity Theory), instead of understanding progress for the customer through new systems. (Klement, 2018)
	Human experience		

Table 1. Examples of service design models and limitations.

Most of these models show a predominant dyadic view of the service, focusing on identifying the service needs of single individuals, one at a time as a user, customer or consumer. Whereas these models assist organisations in designing customer-led services, it fails to accommodate a broader perspective for a multiparty and multisystem view that could also serve customers' aspirations more holistically. The limitations of current design models are identified, for example, in the single firm focus on customer journeys and service blueprints or a problem-solving centred around individuals' tasks in value network maps and jobs to be done (see Table 1).

Although relevant, service design models often lack the human type of experience that is more holistic and would benefit from the ecosystem ideology. This perspective has the potential to recognise the ecosystem of the receiver and, thus, to decentralise it from the individual-led response. Likewise, the broadening would enable engaging the diverse network to participate in value-creation activities.

Thus, despite the theoretical and practical pressures to increase the ecosystem-level value system design, little is known about designing ecosystems for human type of experiences. The aim of the empirical study that we present next is to analyse the existing cases, that we have identified to have experimented with the life events approach, as a basis for building common principles for enabling ecosystem-driven service exchange.



Methods

Study context

Our study design is inspired by the process theory perspective that perceives phenomena as a moving, evolving, and dynamic construct in which time plays a crucial role (Langley et al., 2013). To understand the meaning and potential of life event-based services as an approach for ecosystem design, we analysed three cases in the Finnish public services that emerged at different times, the *Suomi.fi* (2002), *AuroraAI* (2018) and *Death of a loved one* (2019). With the selected cases, we aim to build an understanding of how the approach evolved over time by uncovering critical historical events and strategic choices (Langley et al., 2013).

We have chosen a multicase design instead of one case to allow multiple settings and to access the in-depth knowledge of the service ecosystem in special situations, as what the life-events approach represents (Eisenhardt, 1989). We trust that this case setting allows fruitful context for theory building as they offer alternative value ecosystem design mechanisms that we have access to analyse.

We next introduce the three cases in our study.

Suomi.fi

We divide this case into three development events:

- *Suomi.fi* web portal (2002): a single point interface for citizens and businesses that aims at simplifying service paths. On this web portal, life events are used as a structure to present service information based on life situations instead of a list of service provider offerings.
- *Finnish Service Catalogue (FSC)* (2011): a mandatory, centralised, open data repository in which municipalities, the central government and the private sector describe their services. To date, the database has 22373 service descriptions from 300 municipalities and 766 organisations. Organisations describe their services through a life-event-based list (Figure 1), connecting service information to the citizen's worldview.





Figure 1. Screenshot of the life events list as shown in the *FSC*

- *Service guides (2021)*: In 2018, a new content design approach was introduced in *Suomi.fi*. This followed a co-creation process orchestrated by the Digital and Population Data Services Agency (DVV) that involved engaging organisations in the content creation of service guides by forming and coordinating life-event-based working groups.



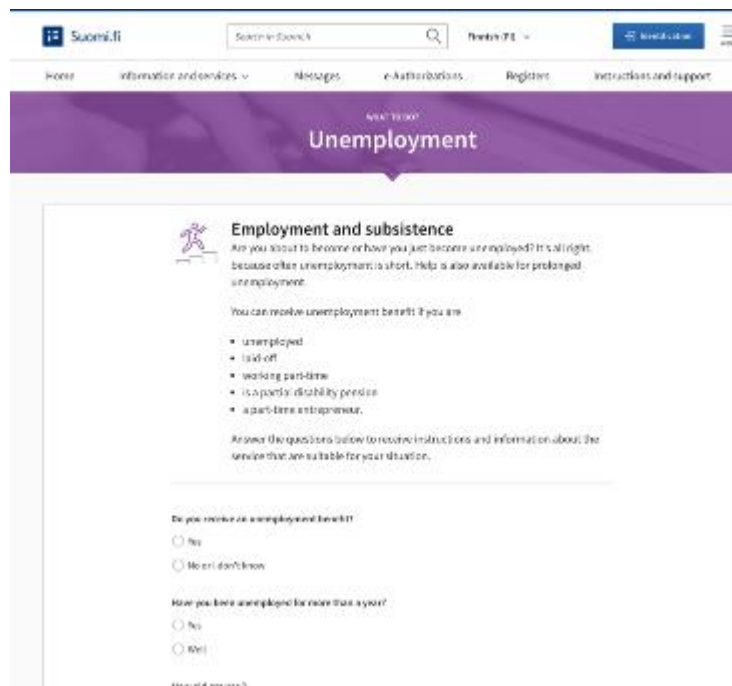


Figure 2. Screenshot of the “Unemployment service guide” in the Suomi.fi web portal.

AuroraAI

The *AuroraAI* is a visionary programme led by the Ministry of Finance that explores an AI-based operational model for future service provision. The model is governed by the *AuroraAI network*, an AI-generated network of service providers created ad-hoc to match service offerings to specific life event situations. *AuroraAI* is at a conceptual stage with several iterations, including implementations of the “moving to a place of study” in the cities of Tampere and Turku. In the *AuroraAI*, life events are used to segment markets and incentivise open Public-Private-People-Partnerships around life events.



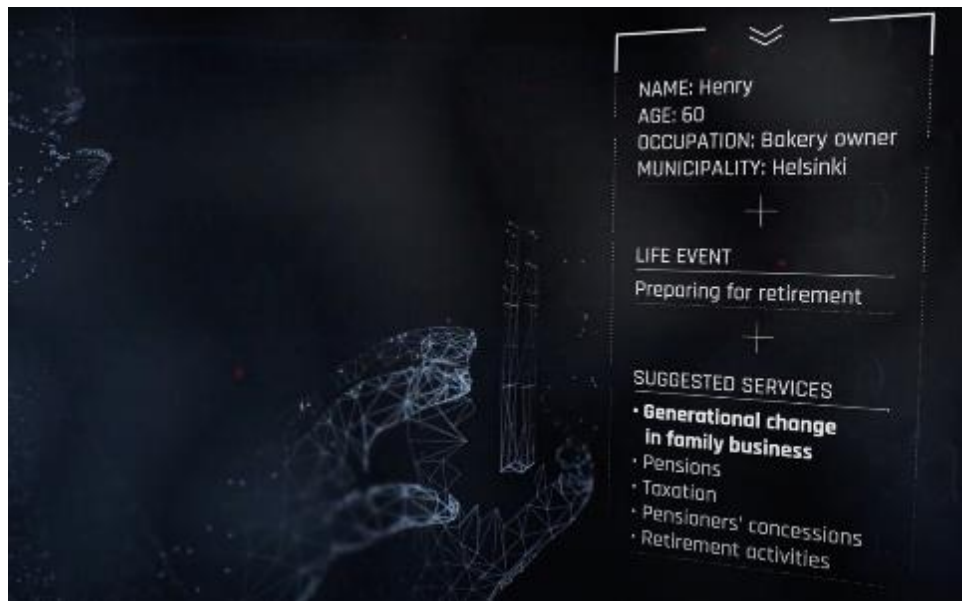


Figure 3. Conceptual image of the AuroraAI. Credits: Ministry of Finance Finland.

Death of a loved one

Death of a loved one is a project that gathered 40 organisations involved in service provision. This followed a co-creation process orchestrated by the DVV teams. The participating organisations were divided into four working groups of shared interest: burial services, laws and regulations, the finance sector and government agencies. The project resulted in an early-stage concept called *MyLife* (Figure 4), a digital platform that simplifies access to data and services in the situation of the death of a loved one. This case is an example of life events as a purpose-driven approach.

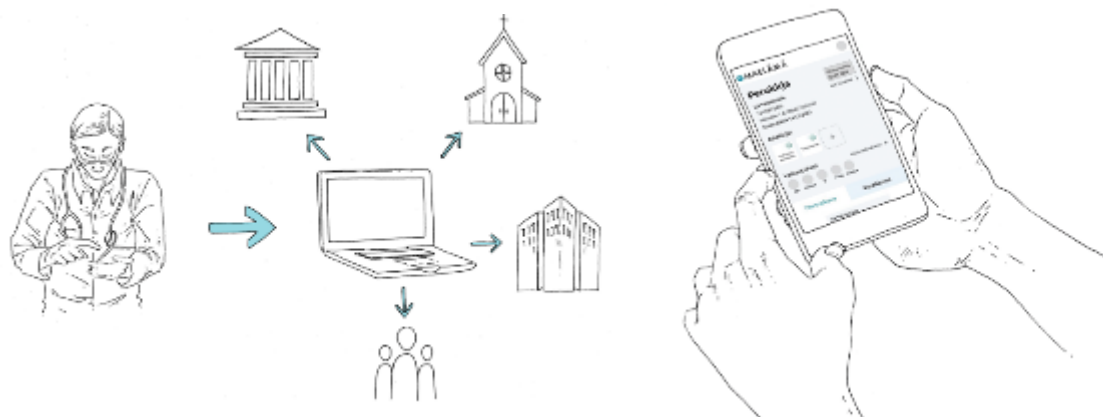


Figure 4. Conceptual illustrations of *MyLife* concept.
 Credits: Digital and Population Data Services Agency (DVV).



Selection criteria

In selecting these cases, we considered their prolonged development stage to allow us to collect and analyse process data retrospectively. Even though the three cases are very different, the intention of including them is to add several temporal observations to “examine recurrences and accumulation of progression” (Langley et al., 2013). In Table 4, we present the findings chronologically across the three cases.

Within the population of life event services worldwide (e.g., Canada, Denmark, New Zealand), we categorise the three cases as typical. However, within the broader context of public services, the selected cases should be considered as having extreme value or outlier cases.

Finland features many favourable or least likely conditions for designing life event services. For example, Finnish public services are founded on welfare state values, and there is a high maturity in digital governance – top two in the world (United Nations, 2022) – a high trust and satisfaction in democratic institutions (OECD, 2021) or the non-hierarchical organisational culture facilitating cross-sectoral cooperation. Although these can be considered unique factors that hinder generalisation, with unique cases, we adopt an exploratory and open-ended approach as a first entrée into the subject (Seawright & Gerring, 2008).

Data Collection

Following the above-mentioned approach, we have collected process data combining a semi-structured extensive data repository (608 pages in total), on time interviews (2) and retrospective interviews (2).

All our interviewees work in the Finnish public organisation Digital and Population Data Services Agency (DVV). In our selected cases, DVV played a role of both orchestrator and instigator of these developments. The roles and years of experience of our informants allowed us to uncover a significant historical timeline of this phenomena (see Tables 2 and 3).

In preparation for the interviews and after the discussions, we have collected project documentation provided by the research participants and publicly available online to triangulate our findings and preliminary insights. Additionally, we built on service innovation ecosystems literature to situate and analyse the phenomena in more depth and in relation to previous knowledge. This study is ongoing and designed as longitudinal. Thus conversations with critical informants continue, and we aim to interview more informants through a snowball mechanism (Raworth et al., 2012).



	Organisation and role	Years in the organisation	Interview date	Interview length
Participant 1	DVV, Director of <i>Suomi.fi</i>	25 years	23.08.2022	1h 29 Mins.
Participant 2	DVV, Business owner <i>Suomi.fi</i>	3 years	23.08.2022	1h 29 Mins.
Participant 3	DVV, Trends and future analysis Head of the <i>AuroraAI</i> ethics board	19 years	30.08.2022	1h 48 Mins.
Participant 4	DVV, Service designer	3.5 years	05.09.2022	1h 35 Mins.

Table 2. Interview participants.

	Suomi.fi	AuroraAI	Death of a loved one
Interview participant roles	Participant 1 Web team 2005-14. Service development team since 2014. Participant 2 Service guide business owner Participant 3 Web team 2003-17. AuroraAI Head of ethics board since 2018	Participant 3 Ethics board member	Participant 4 Service designer

Table 3. Interview participant roles in the three cases.

Data Analysis

We recorded all the interviews, transcribed them, conducted thematic coding, and organised them into first and secondary-order quotes, which we then aggregated into four main categories. We have also started thematic analysis to get an initial idea of the basic concepts that are emerging from the larger dataset. As we continue the study, we will then apply the Gioia method for further analysis (e.g. Gioia et al., 2013;



Gehman et al., 2018) with an intention to find categories across cases or alternatively approach data with a narrative approach to investigate and analyse the quantitatively hard to capture benefits of the life events approach.

Analysing process data requires conceptualising events by combining historical data collected through the analysis of documents and retrospective interviews with current data collected in real time. While the first type of data is sparse and synthetic, focusing on memorable moments and broad trends, the second is richer and finer-grained.

Findings

In our selected cases, life events is an approach for designing service ecosystems around specific situations, with a particular focus on the upper levels of the service system and the service concept (Patrício et al., 2011).

In our multicase analysis, combining the four interviews and archival data with an abductive process, four categories emerged: semantic interoperability, ecosystem governance, segmentation model and purpose-driven approach. In line with process theory, we mapped these categories in a chronological sequence (see Table 4) to analyse the evolution of the approach. In Table 4, we included a description of the life events approach for each case, their benefits and the most illustrative quotes supporting the findings. The four groups of findings will be discussed next.



	2002	2011	2018	2019	2021
Case	<i>Suomi.fi</i> (Web portal)	<i>Suomi.fi</i> (Finnish Service Catalogue)	<i>AuroraAI</i>	<i>Death of a loved one</i>	<i>Suomi.fi</i> (Web portal Service guides)
Findings category	Semantic interoperability	Semantic interoperability	Segmentation model Purpose-driven approach	Ecosystem governance Purpose-driven approach	Ecosystem governance
Application of life events approach	Common interface to present service information to citizens and businesses.	Common lexicon and structure for the service descriptions database.	Market segmentation, identify relevant actors and prioritise change centred around life events.	Ecosystem alignment, identify relevant actors and prioritise change centred around life events.	Ecosystem alignment, identify relevant actors and prioritise actions for integrated service delivery.
Benefits	Decrease in customer service contacts.	Shared vocabulary and streamlined semantics across administrative level workers.	Incentivise partnerships and new service ecosystems around life events, reduce the cost of service.	Process efficiency, time savings, cost control, customer experience satisfaction, service innovations.	Made visible current gaps and actions needed to develop digital service paths further.
Illustrative quotes	<i>“The aim [of the suomi.fi] is to actually get rid of some unnecessary calls and contacts to different kinds of organisations in a situation where the user doesn’t understand... So the idea is to help the citizens, [so that they] would understand more clearly what they do first</i>	<i>“The service database describes customer-oriented services that have customers, not all tasks of the organization or their processes.(...) In this way, service information is basically situation-oriented and customer-oriented.”</i>	<i>“AuroraAI is an evolving service model that helps organisations to connect their operations and smart services to human-centric service markets that are centred around selected life-events and business activities.” (AuroraAI report)</i>	<i>“I think the framing of life events has been something we have adopted over the past couple of years. And it stems from the frustration that, okay, if we try to solve this tiny problem, we don't see any progress in the customer experience... So, let's not</i>	<i>“Guides are produced for citizens and companies. The topics are based on life situations and involve transactions in the services of several different organizations (...).The Suomi.fi web delivery assembles a content network around</i>



instead of trying to ask everywhere.” (Participant 1)

“The end-user sees the data as consistently presented service data, regardless of the web page or the context where it is used. The end-user can easily find the service related data by using ontology-based keywords, regardless of the organisation providing the service. For the end-user it is important that the data can be trusted and that the services have been described based on the needs of the customer and their situation.” (Interoperable Europe website)

(Suomi.fi service database)

“(…) our way of separating a service, a conceptual and sometimes legal entity, from various types of real-world service channels (location, web, phone) was incomprehensible to them.” (Participant 3)

“In the future, co-development and cooperation with the private and third sectors as well as with citizens should be based on new types of models that are centred around life events and business activities. Cooperation across sectoral boundaries provides a basis for joint commitment to difficult changes and reforms.” (AuroraAI report)

invest in very small incremental stuff only, but think about the larger changes that we need to see at some point.” (Participant 4)

“Instead of individual organizations optimizing services from their own starting points, the service network should be viewed as a whole from a human perspective. In this case, it is possible to create seamless and people-oriented service packages that do not unnecessarily burden people in the middle of a difficult life situation.” (Impact assessment)

“Organisations realise quickly what the gaps are” (Participant 1)

each topic.” (Service guides introduction)

“(…) earlier they may have been thinking only their own services and own part, and then they realised that these are not functioning together at all, these paths for the customers.” (Participant 2)

“(…) the different organisations understand taking part of this content process that ‘Oh my gosh, this is complex. How about we make this thing together? Should we develop this part, and it already helps this much!’” (Participant 1)

Table 4. Table of findings organised chronologically across the three cases.



Semantic interoperability

In 2011, following the digitalisation efforts of governments worldwide, Finland introduced an open data directory mandatory for all organisations to fill in, *the Finnish Service Catalogue (FSC)*. In this database, there is a list of life events for organisations to classify their services according to life situations. The structure of the life events list would enable systems to integrate better (interoperability) and provide a shared meaning (semantic) to unite the scattered service provision with a relatable citizen-centred architecture.

Moreover, embedding a user-led language in the database exposed vocabulary ambiguities and conceptual discrepancies beyond the computer systems. As Participant 3 recalled, the process of defining the life events classification opened-up internal discussions about the meaning of *service* at different levels of public administration:

“We had to vote, and by just one vote it was decided [that] there would not be a student’s target group but [that] there would be a beginning full-time studies life event... For example, we had a long and bloody debate with the City of Helsinki over the Finnish Service Catalogue during the planning stage of the catalogue. In their world, each, say, high school and the lines of specialisation in particular schools were hanging from a hierarchical service tree, where everything was treated as a unit with its own fixed place in the branches of the tree. Also, our way of separating a service, a conceptual and sometimes legal entity, from various types of real-world service channels (location, web, phone) was incomprehensible to them.” (Participant 3)

This discussion highlighted that establishing compatible semantics and lexicon through life events was an essential first step in designing digital service ecosystems for life transitions. When analysing the three cases as sequential developments, we identified that semantic interoperability is the starting point. This was evident, especially in *Suomi.fi* developments, in which life events were first introduced at the data architecture level, and later, in 2021 *Suomi.fi service guides* it was adopted as an approach for ecosystem governance.

Semantics brought other benefits too in *Suomi.fi*. Participant 1 explained that the life events term clarified service information presented to citizens and businesses and reduced the operational costs of referring users to other services.

“The aim [of the suomi.fi] is to actually also get rid of some unnecessary calls and contacts to different kinds of organisations in a situation where the user doesn’t understand... So the idea is to help the citizens, [so that they] would understand



more clearly what they do first instead of trying to ask everywhere.” (Participant 1)

Ecosystem governance

This category explains the life events approach in governing new cross-sectoral networks as an essential step in designing service ecosystems. We now draw conclusions from the *Suomi.fi* and *Death of a loved one* cases. We omitted the *AuroraAI* case in this category, which unique AI-generated mechanism will be explained through the segmentation model category. The *Suomi.fi service guides* and *Death of a loved one* cases adopted a co-creation approach with life events at the core of network governance.

Firstly, the life event topic eased the recognition of the network of participants with a shared interest. Participant 1 explained that the process of creating service guides, for example, in the “Coming to Finland” guide, started by identifying the organisations whose descriptions in the *FSC* matched that life event. Furthermore, in *Death of a loved one*, Participant 4 explained that the selection process was made through an open call following a recent scandal that pushed the public agenda for organisations to participate.

“Guides are produced for citizens and companies. The topics are based on life situations and involve transactions in the services of several different organizations (...). The Suomi.fi web delivery assembles a content network around each topic.” (Service guides introduction)

Secondly, in both cases, participants confirmed that the life events approach crystallised gaps between systems and the business benefits of prioritising them in joint cooperation.

“Organisations realise quickly what the gaps are.” (Participant 1)

“What I’ve seen in this life event discussions in general, [is] that usually all the parties are very happy... So, it takes the load from their customer service or from their instructions away... There’s usually some benefit that they can see right away, ‘this way we can serve our customers better, they can find somewhere else the information they need, they can use self-service.’ So, usually there’s some kind of business benefit to each of the organisations.” (Participant 4)

Thirdly, the understanding that life transitions are gaps with no single ownership put all participants in an equal starting position. Moreover, the uncertainty and lack of end-to-end knowledge of the life situation united the group. As Participant 4 explained, the first workshops with the network shared the mission



“You cannot say it in the beginning that this is now this organisation’s responsibility. And that’s [in] part why it is difficult and [in] part of also why you are able to look at the problem from more neutral way. And also actually create the co-creation feeling because you are like ‘we are in this together, we don’t have answers, none of us owns this thing’. So, we are just trying to understand what we need together, what’s everybody’s perspective and what we could achieve with doing something different. So, I think maybe it is part of the process not to be able to give the ownership right away to some organization.”

(Participant 4)

As described by Participant 4, the life events approach steered the network towards a common goal. The focus around a specific transition moment brought the network closer towards the citizen, their needs and hopes for value enabling user experience centrality. Thus, with the timeline perspective, coordination becomes easier after the stage of semantic interoperability.

Lastly, in both cases, the life events approach informed strategic action. In the case of *Suomi.fi service guides*, life events clarified actions for integrated development. In the *Death of a loved one*, the *MyLife* concept was set to push transformational change in the government agenda.

“This way of working with content design tools has helped also the organisations to see that earlier they may have been thinking only their own services and own part, and then they realised that these are not functioning together at all, these paths for the customers.” (Participant 2)

“How complex is the process when you want to apply for the guardianship of your parent! When we make it so visible through these guides it also sort of impacts on the actual development of the actual digital service path as well. So, the different organisations understand taking part of this content process that ‘Oh my gosh, this is complex. How about we make this thing together? Should we develop this part, and it already helps this much!’” (Participant 1)

“In order to get funding and the attention this theme needs in a sufficient way, and in order to make it happen the idea is to try to get this to the next government priorities list... And also it sends a very strong message to all the parties involved that this is something we want to actually solve even though is not simple.”

(Participant 4)



Segmentation model

In this category, we explain how understanding life events as a segmentation model assists in designing service ecosystems around transition moments, especially in the context of technology-led and proactive services. We now draw conclusions from the *AuroraAI* case, which unique AI-generated mechanism will be explained next.

Currently, at an iterative conceptual stage, the program envisions the user interacting via a chatbot or a “How am I doing?” platform. Based on this interaction, the AI would generate an ad-hoc service ecosystem, the *AuroraAI* network, including public, private and third sector organisations. AI would select the network participants matching the specific life events and jointly respond with a personalised service at the individual level. We first discuss the matching mechanism and then the individual service response.

In the documentation reviewed, the leaders criticised the lack of incentives and decision-making processes in bidding, which hinder cross-sectoral collaborations that tackle the well-being of society. The program leaders, therefore, envisioned life-based ecosystems as an incentive to promote Public-Private-People-Partnerships for a well-being economy.

“Investment-thinking changes when organisations plan their operations in cooperation with all relevant stakeholders. The life-event approach provides organisations with a new framework for investment.” (AuroraAI Report)

In order to achieve this, life events are presented as a framework to segment markets. Dividing significant contexts instead of service needs would remove the service-provider relationship and incentivise the diverse network to co-create value around these contexts instead.

“AuroraAI is an evolving service model that helps organisations to connect their operations and smart services to human-centric service markets that are centred around selected life-events and business activities.” (AuroraAI report)

However, the non-transparent selection process of the “AuroraAI Network” is highly contested. Among other concerns, Participant 3, head of the ethics board of the *AuroraAI*, pointed out the risks of hyper-individualised models of service response. First, targeting the individual at a micro-level would require greater energy consumption than larger segments. And secondly, the limitations of AI predictive capabilities when making predictions at the individual level. Our participant suggested that a macro-level segmenting model targeting larger populations instead, such as life events segmentation, could be better suited.



“Predictive AI is useful when we talk about bigger scales, if we are talking about entire populations or entire nations or climate change or stuff that has a massive scale because individual anomalies are not meaningful when you are working at a huge scale. When you come down to a smaller and smaller scale the details become more meaningful.” (Participant 3)

Purpose-driven approach

In this finding, we draw from the *Death of a loved one* and *AuroraAI* cases. This category explains how the life events approach steered designing service ecosystems for specific purposes.

As described in the ecosystem governance category, in the *Death of a loved one* case, the innovation ecosystem worked as an organisational entity with the life event as the shared purpose of innovation — the life event being the service outcome (Edvardsson & Olsson, 1996). As the service designer involved in the project suggested, working at the level of life transitions led the group towards imagining radical types of innovation, a strategy that DVV recognised adopting to tackle transformational change in public services.

“I think the framing of life events has been something we have adopted over the past couple of years. And it stems from the frustration that, okay, if we try to solve this tiny problem, we don't see any progress in the customer experience... So, let's not invest in very small incremental stuff only, but think about the larger changes that we need to see at some point.” (Participant 4)

Similarly, in the archival data, leaders described the goal of the “AuroraAI network” to attract new alliances to mitigate the scarcity of public services and the well-being economy. They argued that this requires a paradigm shift, in which life events thinking can assist. They referred to the old paradigm as *customer focus*, and the future preferred one as a *human-centred view*.

“People are seen as ‘customers’ of particular services rather than individuals living their lives needing different services in different situations and events in life.” (OECD AuroraAI)

“The human-centric approach materialises through life-event-based thinking, which informs service design and provision and enables people to support their own welfare and that of their loved ones through various life stages.” (AuroraAI Report)

In these documents, life events as “thinking” was used to denote a shift in the design approach of service ecosystems from service needs to purpose-driven.



“As a mechanism for steering the service markets, the focus needs to be on people’s life-events and business/third sector activities that require a holistic view of welfare instead of focusing on narrower topics.” (AuoraAI report)

In both cases, the ecosystem adopted a purpose-driven approach; the life event as the shared problem to be solved and to co-create value.

Discussion

Life events help to frame what needs to be done for people in specific situations. Although framing life situations is not the solution, the gaps that hinder them become visible, and the ecosystem can be aligned towards a shared purpose for solving them.

Compared to other models with a dyadic focus, the life events approach adopts a non-service-related perspective, similar to the human experience type (Polaine et al., 2013); the life situation becomes the purpose for innovation instead of a list of service tasks that are disconnected. The three cases analysed illustrate life events as an approach to designing ecosystems with a specific purpose.

Rather than individual needs, a purpose-driven approach is suitable for radical transitions that are generalisable. Our research finds that to successfully design ecosystems for these transitions, the first step is to establish life events semantic interoperability not only in data systems but also as a shared lexicon for individuals and interfaces. Next, incentivise ecosystem alliances of diverse actors by segmenting markets around these transitions. These combined aligns the ecosystem to produce service concepts around a specific purpose that are clear and concise for all the ecosystem members.

Our analysis identifies critical life event-based service design elements as requirements for systematic ecosystem governance (Bridoux & Stoelhorst, 2016; Chesbrough, Lettl, & Ritter, 2018). We, however, add to the ecosystem governance discussion by offering an alternative approach to governance through a service design approach that emphasises joint agency that can be achieved as aiming towards shared purpose through a life event approach. We trust that the approach suggested here could enable self-control and voluntary cooperation as a substitute or alternative to formal structures and centralised steering designed to achieve the same ends (Meyer, 1982).



In this study, we explored life events as a purpose-driven design and built on the limited amount of data and interviews. We recommend that future studies focus on other contexts of transitions with similar features. As future avenues for life transition research, we recommend conceptualising life event services in current literature and an experiment design study that investigates the effects of life event services on well-being.

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