**The what, how and who of social service design**

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Services are an important type of intervention used to address complex societal problems such as chronic health problems and climate change. Social services are defined as services that have a social purpose, and are based on high-quality social interactions between service deliverer and service consumer. This paper shows through three case studies what we are designing, how we design, and who designs when designing social services. The case studies show that while some are focused on the interface between service deliverer and consumer, an important type of intervention is a ‘social infrastructure’, which is a structured way of bringing service deliverers together to incrementally redesign their own service. Practices that support the design of social services include: developing a deep understanding of the needs of both service consumers and service deliverers, using design expertise to frame complex problems, and playing an active role in prototyping and implementing the intervention.

keywords: service design; co-design; social infrastructures; complexity

**Introduction**

The world is increasingly confronted with complex societal challenges such as climate change, poverty, crime, chronic health issues and an ageing population. Public and social sector organisations play a key role in developing interventions that address these issues. An important type of intervention in this context is the development of services. Examples include traditional services such as childcare, community health services, elderly care and social work, and more novel services such as Ozharvest – an Australian non-governmental organisation (NGO) that provides meals for people in need, prepared from ‘rescued’ surplus food (OzHarvest, 2017) -, and the service provided by the Dutch organisation Humanitas, that lets students live for free in elderly nursing homes to address elderly people’s loneliness (Carter, 2015).

Many of these services are characterised by high quality interactions between human beings. A service deliverer – for example a care provider – delivers the service to a service consumer – for example an elderly person – through interactions that require high-level social skills. (note that the roles of provider and consumer are often overlapping, such as in the Humanitas case study). These social services do not just have a social *purpose*; they are also based on social *interactions*. This is in line with what Cipolla and Manzini (2009) call ‘relational services’, which are services that are deeply and profoundly based on the quality of interpersonal relations between participants. In this paper I will discuss the design of such social services for complex societal problems.

*What are we designing when designing social services?*

The first objective of this paper is to discuss *what* we are designing, when designing social services. For this purpose it is relevant to look at the developments in the service design field. Secomandi and Snelders (2011) state that this field is rapidly evolving. In their paper on ‘the object of service design’ they analyse and discuss various concepts and theories found in literature. This study shows that scholars agree that services are intangible and that the service emerges in co-production between service consumer and service provider. Without the customer, there is no service. But if a service is intangible, then how do we design it? To answer this question the service design literature distinguishes between the interface of the service and the infrastructure of the service (ibid).

The service interface consists of those aspects of the service that are directly available to consumers, and the infrastructures are the resources that are indirectly available, also called front office and back office. For example, if we look at a teacher as a service deliverer, the interface is the social interaction between teacher and student, while the infrastructure consists of the classroom, teaching materials, smart board, the organisational structure of the school, the way the school teachers interact with each other and the principal, the school’s educational philosophy etc.

Many scholars contend that since the service interface is intangible, design efforts should be focused on the service infrastructure. Edvardsson and Olsson (1996) for example argued that service design is about creating the right prerequisites for the service, including the resources of the service system – staff, organisational structure, physical/technical environment – that are within control of the organisation. However, Secomandi and Snelders (2011) argue that the focus on service infrastructure has neglected what is essentially the core of the service, the service interface, and claim that this should be the object of service design. In this paper I will contribute to this discussion by showing through three case studies what the object of service design is in the context of social services that rely on high quality interactions between service deliverer and service consumer.

*How do we design social services, and who designs?*

A second objective of this paper is to discuss the ‘who’ and ‘how’ of social service design. Over the past decade, design has become increasingly popular in the public and social sector. Dorst (2015) advocates that the new open, complex, dynamic and networked problems of our time require a radically different response, and that design can contribute to this as expert designers deal with the new types of problems in their professional field without too much trouble. The application of design outside the traditional design domain is often called ‘design thinking’. In their publication on design for public good the UK design council states that ‘design thinking is the way to overcome common structural flaws in service provision and policymaking’ (UK Design Council, 2013).

One of the key elements of the adoption of design thinking in the public and social sector is co-design, also referred to as co-creation or participatory design, in which users and other stakeholders are given an active role in the design process (Ehn & Sjogren, 1991; Muller & Kuhn, 1993; Steen, Manschot, & De Koning, 2011). As the focus of the paper is on services that are delivered through high quality interactions, it is particularly relevant to look at if and how service deliverers are involved in the design process. Co-designing services with service deliverers is important, as the design will likely have a large impact on their work as it often results in changing the nature of the job. This is in line with the original democratic ideal of the participatory design movement that started in Scandinavia (Ehn & Sjogren, 1991).

This paper describes and compares three case studies that provide insight into design practices for social services. The practices will show what is designed, how it is designed and who designs. In the next section I will introduce the research objective and research method, followed by a description of each of the three case studies. In the subsequent section I will compare the three case studies based on what is designed, how this was designed and who designs. I will conclude this paper with a discussion of the complex nature of social services, the challenges of social service design, and opportunities for improvement of social service design practices.

**Research objective & methods**

The objective of this research is to understand the who, how, and what of social service design practices. A case study approach was adopted in line with the explorative nature of this question. This allows the study of real-world contemporary events which do not require control over behavioural events (Yin, 2009, p8).

Case study one and two are part of a larger group of retrospective case studies to study the innovation practices of agencies working in the public and social sector, which address complex societal problems. To conduct the case studies we interviewed members from the design team as well as their clients in the public or social sector, and we analysed design documentation provided by the teams.

The third case study is a project conducted by a design and research team led by the author of this paper for an Australian NGO. Although the research method was different for this case study, it was added to this paper as it provides some interesting perspectives on social service design. The following section describes each of the three developed interventions, the approach taken by the design and research team, and the design rationale.

**Case studies**

*Speed sharing event*

The first case study is a project executed by MindLab (a Danish cross-governmental innovation unit) for the municipality of Odense. MindLab was asked by the municipality to help them design interventions for primary school teachers who needed to adjust their teaching practice in line with a reform that was introduced by the education ministry. The reform required teachers to deliver the same quality of education with less preparation time (see also Nygaard and Reynolds (2015)).

The MindLab team used provocative prototypes, inspired by practices from other industries, and various co-design sessions with eight teachers and one staff member from the municipality to explore different types of interventions. An initial design proposal was a box with ‘ingredients’ for lessons (inspired by an ‘Årstiderne-box', a meal-kit which contains ingredients and recipes to prepare a meal). In a next iteration MindLab invited teachers to help design and prototype the ideal content of this box. However, teachers did not accept this idea because they thought the box was too static. Rather than copying a complete lesson, they were looking for inspiration when developing their own lesson. This eventually led to the design of a more successful proposal, a ‘speed sharing’ event (based on the metaphor of speed dating).

Speed sharing is an event, facilitated by the municipality and/or schools, in which teachers share ideas about lessons around a specific theme, for example physical education. Teachers were very enthusiastic about speed sharing. The speed sharing event was prototyped and tried out by the participating teachers in their own school. This led to the design of two successful pilots in which the municipality offered the speed sharing service to schools. The initiative was subsequently further disseminated, on the one hand through facilitation of speed sharing events by a municipality staff member, and on the other hand through the design and implementation of guiding materials that schools could use to facilitate their own speed sharing events.

*Kudoz*

The second case study is a project executed by InWithForward (an international social innovation agency) for a consortium of NGO’s in Vancouver, Canada, that each provide services for people with a cognitive disability. The initial purpose of the project was to address the social isolation of this target group. InWithForward applied a staged research and design approach. Stage 1 consisted of a three-month indepth ethnographic study into the lifeworlds of people with a cognitive disability. Two staff members from the service providers were seconded into the design research team. One conclusion from this study is that the adults with a cognitive disability were not just isolated from other people, they were isolated from learning and purpose.

Based on these insights several prototypes were developed in a second stage. One of these prototypes was ‘Kudoz’, a learning platform on which volunteers – hosts - share their passion or interest in a specific topic with people with a cognitive disability – ‘Kudoers’ – through one-hour experiences. For example, a volunteer interested in photography would be supported to develop a session to introduce photography to a Kudoer (Kudoz, 2015).

Interactions like these are specifically designed to get closer to five outcomes including Better mental health, Meanigful employment and Reduced Stigma.

One of the inspirations for Kudoz came from a ‘positive deviant’ family. This was a family that participated in the ethnography and that was doing very well in comparison to other families. To tutor their sons, they would try out and hire different kinds of people through Craigslist and their own networks. The design team was furthermore inspired by several social theories. They used Ryff and Singer (2008)’s theory about human flourishment to shape the research and questions. Later, when they started prototyping, they found the theory of ‘social cognitive career theory’ that further helped to develop how Kudoz could help people choose careers.

Most interactions in Kudoz were prototyped through dozens of iterations. In the first iteration the IWF team would take the role of hosts themselves. When they found that learning experiences indeed provided value to the Kudoers, they started a second iteration in which they recruited community volunteers as hosts to provide Kudoz experiences. The IWF team would deliver coaching and logistical support to hosts through a new role, the ‘host curator’. . In a next iteration the IWF team would step back further, and hire a team to take on these support roles. This new ‘Kudoz-team’ combines delivery of the service with continuous improvement of their own roles, systems and touchpoints. For example, the online catalogue used to help people select experiences was improved using UX design.. A new role that was successfully introduced, is the ‘Taster’, an experienced Kudoer who tests new experiences developed by hosts before they are added to the catalogue.

In a further implementation stage of the initiative, the team built more internal touchpoints to support the growth of Kudoz, including a knowledge management system, front-end and back-end technology, as well as processes for measuring impact and training staff. Figure 1 presents an overview of the different roles developed for the Kudoz initiative. InWithForward started with prototyping the roles at the top (the interface) and gradually added, prototyped and implemented the supporting roles below (the infrastructure).



*Figure 1: an overview of the different roles developed for the Kudoz initiative.*

*A coaching team*

The third case study is a project conducted by a design and research team led by the author of this paper for an Australian not for profit organisation. The client organisation was funded through a federal government initiative that was aimed at developing a systems reponse to support people with a severe mental illness. The project was aimed at the problems that arise from the fact that many service providers are currently involved when people with a severe mental illness acutely need help when they are very unwell, for example when they are psychotic, severely anxious, and/ or suicidal. The current collective service response is very traumatising for these people, while there are also many conflicts between different service providers.

In this project we applied the frame creation methodology developed by Dorst (2015). We used various methods to identify the needs and interests of the various stakeholders of this case, including interviews, cultural probes and various participatory design sessions. In line with the frame creation approach we used principles of hermeneutic phenomenology to analyse ‘themes’ and develop frames and solution proposals. The term ‘theme’ is derived from phenomenology (van Manen, 1990) and based on the work of Dorst (2015) on how insights into themes support the creation of frames, the ability of designers to create new approaches to problems. Themes are defined as ‘the structure of an experience’ and are closely related to human values. This is further illustrated through the following example.

One of the themes we identified in this case study is that all the people in the service system had a strong *drive to make a difference*. For example, an ambulance paramedic mentioned: *“there’s no better feeling than saving someone’s life”*. One of the patterns in the experience of the theme ‘drive’ is that it can be sustained through feedback. For example, when cooking a meal for friends, observing that they are enjoying the meal can give the cook a sense of achievement which in turn can sustain their drive to keep inviting friends for dinner parties. Feedback is also required for ‘growth’ or ‘learning’ (figure 2). If the invited friends honestly provide feedback on what they did not like about the meal, the cook learns and can try to improve that a next time.

The need for feedback to sustain the drive is exactly what was missing in the problem context of an acute mental illness response. Police officers for example indicated a sense of futility and frustration*: ‘If we do not hear from the person again, there is an assumption that one of three things happened to them: 1) they got better, 2) they moved away, 3) they died. We are essentially feeding our efforts into a ‘cone of silence’ that does not speak back.’*

To develop new frames, new ways of looking at this problem, we subsequently looked for other contexts where collective drive and growth is better supported and found that the mental health system is like a ‘sports team’ where each of the players is in the field at a different time, and has a different coach. We then designed a cross-organisational ‘coaching team’ consisting of team leaders who collectively reflect on what is happening on the metaphorical field through an ‘observer’. The observer collects stories from the only persons that have a complete view on the playing field: the people with a mental illness going through an episode and their carers. The coaching team subsequently uses these stories to coach and provide feedback to the people on the ground.

The client organisation and participating stakeholders were initially enthusiastic about this idea and started a pilot to implement the coaching team without the further involvement of the design team. However, the implementation was unfortunately not successful. One of the reasons that the client organisation mentioned was that when they tried to implement this intervention, the service providers did not recognise how this ‘coaching’ was different from what they were already doing.



*Figure 2: the structure of the experience of the themes ‘drive to make a difference’ and ‘growth’*

**A cross-case study comparison**

Without claiming to be complete, the three case studies show some interesting results with regard to the questions about what we design, how we design, and who designs social services.

*What we design in social service design*

With regard to the service interface and service infrastructure, we can see that case studies one and three (the speed sharing event and coaching team) were focussed on the infrastructure, while case study two (Kudoz) focused initially on the service interface between host and Kudoer and later designed the infrastructure to support these interactions.

What is interesting about the speed sharing event and the coaching team, is that they are both infrastructures that allow service deliverers to improve their own interactions at the interface of the service. The speed-sharing event provides teachers with the opportunity to create their own teaching practices, while the coaching team provides the mental health service providers with a structure to improve their collaboration and to improve the service for the person with a mental illness. Just like the service interface, these service infrastructures rely on high quality interactions between people. In a previous publication I have referred to these types of infrastructures as ‘social infrastructures’(van der Bijl - Brouwer, 2016).

Social infrastructures are different from more traditional ‘top-down’ infrastructures that are popular in the public sector, such as protocols and scripts that describe in detail how service deliverers should behave. These types of infrastructures are helpful in predictable situations such as a call centre, where customers often call with the same kind of problems, and call center staff members can be instructed in detail how to respond to each of those problems. However, in more complex situations they are less useful. In the discussion section I will further reflect on the complexity of service organisations.

As Kudoz was essentially a completely new service, it is not surprising that the focus was first on the service interface. The team first had to find out whether their idea to provide new experiences to people with a cognitive disability had the intended effect, before they could design the required infrastructure. The infrastructure that was subsequently developed also includes elements of a social infrastructure that is focussed on continuous improvement of the service at the interface level. This is achieved through engaging hosts on a regular basis to make their learning experiences better, for example through peer2peer conversations, coaching conversations,feedback from Kudoers, and ‘open experiences’ where hosts take part in a learning experience as a learner.

*How we design*

There are some differences and similarities between the three case studies with regard to the design process. In this section I will particularly focus on the practices used to frame the problem, and the use of prototypes.

In all three case studies there was a clear (re-) framing of the problem. MindLab made extensive use of provocative prototypes, to seek inspiration from other parts of society through metaphors to develop new perspectives on ‘sharing knowledge’. In the third case study we similarly used metaphors to develop new perspectives on the problem of collective growth and drive to make a difference. The frame creation approach provides a structured method to develop frames through the analysis of themes (Dorst, 2015). Although the MindLab case initially appeared less structured than the frame creation approach, the team implicitly used an understanding of the theme ‘sharing knowledge’ to develop their provocative prototypes. This practice does reflect Dorst’s (2015) findings that the explorations that designers engage in to be able to reframe problems are a subtle process of analysis that is very *close to* the analysis of themes through hermeneutic phenomenology. The MindLab team was clearly expert in a continuous framing and reframing of the problem, by using inspiration from other industries, and carefully involving the teachers in this iterative process. In the Kudoz case study the framing of the problem resulted from their in depth ethnography while also using various social theories in a ‘designerly way’:

*[team member InWithForward]: “So one thing that we did during the ethnographic research part is that we used quite a few different articles but without like specifically choosing for one or another. There was a stage where we just took what we thought resonated or was inspiring and then we tried it out in a design research tool and then we were trying like does this make sense. Is it something that helps our understanding of the population group or not?”*

The Kudoz initiative was further inspired by ‘a positive deviant’, a family in the population group that was doing really well, compared to others. Working with positive deviance is an idea derived from community development and social change, which states that rather than experts driving change from outside of a context, a more successful way to support change is by identifying people within a community who follow uncommon, beneficial practices (Kimbell, 2014, p83). The positive deviant, social theories, and prototypes were combined and integrated in an iterative process, which eventually led to the development of the current Kudoz initiative and theory of change.

The use of the social theories for Kudoz, and the use of themes in frame creation in case study three, are both deep explorations of the underlying needs of stakeholders, where Kudoz is more focused on the service consumer – Kudoer -, and case study three was more focused on the service deliverer – the mental health professional. Both perspectives seem relevant, and both case studies suggest that these deep explorations contribute to the framing of the problem and intervention.

The case studies differed with regard to the extent that the service was prototyped. The Kudoz case included a carefully staged prototyping process from service interface to service infrastructure. The prototyping stage then flowed through to a piloting stage which included the development of an ‘impact measurement model’ that showed through evaluations what the impact of the initiative was on the chosen outcomes for people with a cognitive disability and community. The speed-sharing event developed by MindLab was also prototyped and subsequently tested in two pilots before further dissemination. In the third case study we failed to prototype the designed ‘coaching team’ and the client organisation went straight on to an unsuccessful piloting stage. This suggests that prototyping and experimentation is – just like in any design process – essential in the design of social services. In the discussion section I will further reflect on the need to bridge design and implementation.

*Who designs?*

All three case studies included a form of co-design or co-creation. The MindLab team involved teachers, principals and municipality staff members in the design process. The InWithForward team involved staff from the service providers in their team from the start, and in a later stage they also involved Kudoers in the design of experiences. In the third case study we organised eight co-design sessions including both service deliverers and consumers. We also set up a ‘design team’ within the client organisation with three staff members to help design the initiatives.

All case studies included a form of capability building which provided the service provider organisations with design capability. One municipality member at MindLab for example mentioned “We like to participate in these kinds of collaborations, but I also think we [developed a] mindset so we can do it more and more on our own”, while another staff member mentioned “I can feel that I changed my way of thinking in two other projects based on what I learned in this project”.

In the Kudoz case study one of the intentions of the secondments was capability building in the social service providers, and as such making the learning flow back into the organisation. As this did not happen as much as intended, a more elaborate capability building was implemented called the ‘Fifth space’ to build-in social research and development as a continuous function in their organisations. In this initiative staff members from different levels at each of the three service organisations learn about co-design and prototyping through working on projects for one day a week.

What is interesting then in this context, is what the required design expertise is for a social service project, and to what extent service providers would be able to do this on their own. This was discussed in the MindLab case, where the municipality staff member mentioned

*“We need both. We are not as good as we want to be in this thinking. […]. The teachers came up with the initial ideas, but they did not call it speed sharing. They had help from MindLab. […] We would not have ended up with speed sharing without the MindLab thinking”*

And later added:

*“[we needed MindLab because] we could not solve it in another way. We needed a different approach.”*

This suggests that external expert designers might be required to tackle complex problems. At the same time, the speed sharing event and coaching team can be considered ‘incremental’ design processes in itself, where the service delivers continuously improve their own practice without the involvement of expert designers. This was nicely described by the municipality staff member in the MindLab case:

*“In a way we have not solved the problem with this. But we have developed some very new ways of thinking about sharing knowledge. I think in many countries in the world, we have the same options and ideas about how teachers work. They have always done it in this way. Now, in a way, this project will help teachers to see that [they] can do it in another way. We have some very concrete methods, such as speed sharing, but also something about their mindset. I could see teachers were thinking in another way. Not in this stereotype way of how teachers work.”*

This suggests that external design expertise, such as MindLab’s, might be required in complex problems, while incremental innovations may be executed by service deliverers themselves. To be able to execute these incremental innovations, the service deliverers need to develop this capability, and a structure has to be set up in the system that allows service deliverers to innovate. One of the possible explanations of why the coaching team failed to be implemented in the third case study is that we had not provided the intended staff members of the coaching team with the capability to redesign their practice based on the stories that would be collected by the observer.

**Discussion & conclusion**

This paper presented the what, how, and who of social service design through comparing three case studies. In this section I will firstly discuss what we can learn from these case studies in terms of the way we perceive social service organisations and what that means for the involvement of employees in the design of services. Secondly I will briefly discuss the need to bridge design and implementation in social service design

*Top-down versus bottom-up development of social services*

The social infrastructures that were developed in case study one and three, the speed-sharing event and coaching team, can be considered a bottom-up approach to improving the social service. By implementing an initiative like this, the service organisation managers show that they trust service deliverers to finetune, and create change from within. As discussed above, this is fundamentally different from a top-down approach in which protocols and scripts prescribe in detail how the service deliverers should behave. This is in line with Cipolla and Manzini (2009)‘s view that service scripst are not applicable to relational services. “People are personally involved, they are not representing someone else or operating to a definite plan” (ibid p49).

This top-down view of services is inappropriate for the social services described in this paper, because of the unpredictability of the service situation. In (author, 2016) I showed that the top-down view that is prevalent in the public sector, is based on the view that organisations can be managed in a linear way. In the Cynefin framework developed by Snowden and Boone (2007), this way of thinking relates to either simple or complicated contexts, where in the former situation problems can be categorised, and standardised responses can be developed (such as with the call centre case described above), and in the latter situation problems can be analysed by experts and responses can be developed based on evidence. In both cases the underlying idea is that the effect of a certain response can be predicted. However, the types of social services that are presented in this paper are neither simple nor complicated. For example, a teacher might be supported through their training, guidelines, and a school philosophy, but what happens in the classroom cannot be completely predicted or controlled. Even a very prepared teacher often has to improvise based on the behaviour of children on a particular day. And children’s behaviour is influenced by factors outside the school (and outside the control of the teacher and educational institution), including their parents, siblings and peers. Furthermore the teacher’s work is influenced by outside factors such as changing educational policies and procedures, new technology, societal developments etc. Controlling the teacher’s behaviour would not be effective, because it cannot be predicted which specific teaching intervention is required in each specific instance of interaction between teacher and student. In the Cynefin framework this situation would be categorised as ‘complex’, where the relations between cause and effect can only be identified in hindsight, and the appropriate response is to ‘probe, sense, and response’ (ibid, p72). In other words, experimentation is essential to develop solutions. A further understanding of the complexity of organisations can be provided through Stacey’s theory of complex responsive processes which states that “organisations are not actually existing things called systems but, rather, are on-going, iterated *patterns of relationships between people”* (Stacey, 2006, p39). He rejects the view that organisations are systems that can only be understood (and controlled) from outside that system and instead argues that creative action can come from interactions between individuals within the organisation. The social infrastructures presented in this paper are in line with these views: change comes from within and continuous experimentation contributes to the evolution of the service.

A second reason why a bottom-up view might be preferred over a top-down view is that it fails to make use of the intrinsic motivation of employees to make a difference. The MindLab case study showed that the project changed teachers’ mindsets about how they could start improving their own work environment. This is in line with what Bason (2010, p119) calls employee-driven innovation:

 *‘An innovative work environment is also an environment with a high degree of job satisfaction. Still, many innovation efforts in government are markedly top down. Although top management must take responsibility for championing and enabling innovation, innovation is in practice essentially a bottom-up process’*

*Bridging the design – implementation gap*

In the third case study the coaching team was not implemented, because there was no prototyping stage and the pilot stage was unsuccessful. We did not prototype the coaching team, because we were not invited to support this part of the process, and the client organisation was not familiar with prototyping and the difference with piloting. This is not uncommon in the public sector, where there is a strong focus on evaluation through pilots (Bason, 2010). These evaluations need to be summative, to provide the evidence that is required to justify funding of the initiative. However, this focus on pilots results often in neglecting the importance of formative evaluations through prototypes. Experiments with prototypes are aimed at refining the design of the initiative, rather than generating evidence for implementation. In an advise to the public sector in their publication on ‘Design for Public Good’, the UK Design Council (2013) therefore promotes iteratively testing solutions to prevent expensive and risky pilots. However, this issue does not only require a different stance from public sector organisations, designers also need to take their responsibility when it comes to the successful implementation of interventions and should negotiate an active role in this stage. As Norman and Stappers (2015) argue, designers cannot stop at the design stage: they must play an active role in implementation, and develop solutions through small, incremental steps.

**Conclusion**

In this paper I presented and discussed the what, how, and why of social services. Without claiming to be complete, the results present some interesting insights into *what* we are designing when designing social services, which includes the design of social infrastructures. The paper furthermore identifies some opportunites for how we might design better social services, including:

* Using deep explorations of the needs of both service consumers and deliverers to help frame the problem, through for example social theories, or hermeneutic phenomenology
* Developing social infrastructures that allow service deliverers to redesign and improve their own services continuously
* Involving service deliverers in the design of these social infrastructures
* Applying high level design expertise to frame and design for complex problems
* Playing an active role in prototyping and implementation
* Explaining the difference between prototypes and pilots to participating public and social sector organisation

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