


## Article

# Applying Values-Led Communication Design to Engage Stakeholders in Developing Dementia-Friendly Visitor Destinations

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**Abstract:** Developing dementia-friendly visitor destinations (DFVDs) has been acknowledged as essential for maintaining quality of life for people with dementia (PwD) and carers. While research has identified the lack of sufficient information as one of the major barriers in DFVD development, this study argues that the underlying problem comes from poor communication promoting this social vision. Values have a significant impact on stakeholders' communication. By working with values, the stakeholders may uncover latent issues through an authentic dialog, helping them shape meaningful design directions and find ways of working together. Accordingly, this study proposes a  $3 \times 3$  matrix of values-led communication design and presents an action research. The results suggest that the vertical axis, negotiation for values, can act as agonistic space for stakeholders to uncover values and make appropriate decisions. The horizontal axis is constituted by a systematic communication process of design for value proposition, design for value-in-context, and design for value constellation to facilitate stakeholders in integrating their core competences and construct the value creation system for DFVD development. Through these two axes of values-led communication design, the stakeholders can transfer their knowledge and assets into new social practice, usage, and dissemination, thereby increasing societies' ability to act.

**Keywords:** action research; dementia-friendly visitor destination; participatory design; stakeholders' communication; values led



**Citation:** Wu, C.-S.M.; Sung, T.-J.D. Applying Values-Led Communication Design to Engage Stakeholders in Developing Dementia-Friendly Visitor Destinations. *Sustainability* **2021**, *13*, 4504. <https://doi.org/10.3390/su13084504>

Academic Editors: Lucia Corsini and James Moultrie

Received: 27 February 2021

Accepted: 14 April 2021

Published: 18 April 2021

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## 1. Introduction: Dementia-Friendly Visitor Destination Development as an Emerging Issue in Social Innovation

Due to the increases in life expectancy and aging populations worldwide, dementia has increased in importance as a global health condition in recent years [1]. According to Alzheimer's Disease International [2], 50 million people worldwide were living with dementia in 2018, and the numbers are expected to triple to 152 million by 2050. Dementia encompasses a complex range of symptoms that may reduce capability in elderly people and impact their interaction with others [3,4]. The most common symptoms of dementia are a considerable loss of memory, orientation problems, impaired communication skills, depression, behavioral changes, and confusion [5]. Since there is no known cure for dementia, long-term care for people with dementia (PwD) has focused on their quality of life [4,6].

Travelling experience has been proved to lead to a healthy lifestyle for older people [7,8]. Especially for PwD and their carers, being able to go on a holiday within a destination can contribute to their social inclusion by spending quality time with others and improve mental well-being by experiencing intellectual stimulation [7–9]. In addition, it can keep them physically active and improve their mood [10]. Nevertheless, due to the symptoms of dementia mentioned above, there are potential barriers that may prevent PwD and carers from engaging in tourism activities, thereby impacting on the freedom

of individuals to participate, excluding this group from many activities they previously engaged in [11]. Consequently, a growing number of studies [6,8] have advocated that visitor destinations play a key role in developing dementia-friendly visitor destinations (DFVDs), where barriers PwD and their carers might face in accessing places and services are removed.

However, as shown in the research [8,9,12], while many governments have promoted the concept of DFVDs to visitor destinations, few have taken concrete actions. Connell et al. [12] pointed out that whereas research has highlighted the lack of information as a critical challenge for visitor destinations to embark on the journey of DFVD development, the underlying problem might be associated with ineffective communication. This is because the information related to dementia is complex, and expecting people working in visitor destinations to gain the full knowledge and skills in a limited of time is impractical [12]. In addition, as companies have not placed social values as a necessity a priori, it is difficult to engage them to achieve social challenges [12,13]. Thus, to drive actions for DFVD development, it is crucial to convince visitor destinations of their roles with key messages and to pursue stakeholders from related fields to support projects [14]. It is worth noting that stakeholders can be separated into two groups [15]: (1) direct stakeholders (people who will cause effects on the interactions of DFVD directly, such as PwD and their carers, staffs of visitor destinations, dementia experts) and (2) indirect stakeholders (people who will not affect the experiences of DFVD directly but nonetheless may be influenced by the development of DFVD, such as managers of the visitor destination, governments). However, to realize specific design solutions, such as DFVD, it is important to identify key stakeholders and involve them to support the development [16]. This argument is similar to Connell's and Page's [8,17] contention that the development of DFVD is one of the emerging issues in social innovation that requires partnerships and collaboration to find solutions and build up capabilities to enact societal challenges. Nevertheless, the needs and interests of direct stakeholders and indirect stakeholders can be varied, when communication cannot help stakeholders to establish common goals, share knowledge, and learn each others' perspectives in effective manners, the information may fail to drive actions due to misunderstanding or misinterpretations [18]. Further, the findings from Saji and Ellingstad [19] have emphasized that words and communications are important for the negotiation of the strategies that are beyond business and to drive stakeholders to engage in social innovation. Thus, to shed light on DFVD development and achieve this ambition, this study aims at exploring possible approaches that can facilitate effective communication among stakeholders.

Values can serve as a driving force to lead people's motivations and behaviors [20]. Friedman et al. [15] (p. 70) consider that "a value refers to what a person or group of people consider important in life." When people can properly prioritize various and conflicting values, values can become motives that drive people to make particular choices for a more sustainable way of living [21]. Thus, studies [15,16,21] have emphasized that human values should be embedded into the design to promote implementation and usage. Especially for those open-ended social challenges, when asking the stakeholders to take time and effort, it is important to create opportunities for them to negotiate different types of values (e.g., social justice, influential, pleasure) to allow motivations to emerge [22–24]. However, studies [25,26] in participatory design (PD) have emphasized that values are implicit and dynamic. Simply involving stakeholders for investigation (e.g., survey, questionnaire, interview) does not guarantee that their values will be fully expressed, perceived, or discussed [27]. Iversen et al. [27] emphasized that communication among the stakeholders should, rather, be designed to empower them to collaboratively cultivate, nourish, and mold values; in other words, through a dialogical process, the stakeholders may collaboratively uncover values that are worth tackling. Moreover, values are created through interaction rather than delivered unidirectionally [28]. Thus, as Pera, Occhiocupo, and Clarke [23] argued, to realize value creation reciprocally, a formal design process to enhance

communication is needed to facilitate the stakeholders to identify their strategic roles and new ways of utilizing their resources.

In sum, whereas previous investigations have showed that the lack of information is a critical gap to promote DFVD development, this study agrees with Connell et al. [12] that the knowledge related to dementia is complicated and effective communication is required to deliver key messages. Thus, this study aims at addressing the effective communication process by working with values to engage visitor destinations and stakeholders such that their motivations and commitment for the development of DFVD are enhanced.

Accordingly, to understand how values can be applied to enhance stakeholders' communication in DFVD development, this study conducted action research based in Taiwan. Leofoo Village Theme Park (hereafter, Leofoo Park) was chosen as an exploration base. Stakeholders from five different domains (the government, PwD and their carers, dementia experts, tourism industry, and long-term care industry) were involved in the design process. After 19 months, a new commercial DFVD package, named FreeDay [29], and new policies for long-term care were initiated. The findings support the argument of Connell et al. [12] that dementia is a hidden medical condition rather than a disability, so the key to DFVD development should put more emphasis on enabling PwD and carers to enjoy the service and have fun, in whatever form that takes. This implies that the development of DFVD should be considered as an open-ended process instead of a regulation to comply with; in other words, there is room for stakeholders to explore possible ways for visitor destinations to design engaging journeys for PwD and carers. Therefore, as the stakeholders are attracted and motivated by "social values (i.e., the aspirations for longer-term, humanistic, and sustainable ways of living)", a systematic process of communication is needed to facilitate stakeholders to negotiate different types of values (e.g., experience values, economic values) to identify their strategic position in DFVD development and develop appropriate journeys for PwD and carers.

Below, this study first discusses why stakeholders' communication is a critical challenge in DFVD development through a literature review. Secondly, it explores how values can be applied in communication to enhance stakeholders' engagement in DFVD development. Thirdly, the process of the action research is explained to illustrate how a systematic process of communication can be organized to facilitate the development of DFVD. Finally, a conceptual model of communication and future research is proposed.

## 2. Literature Review

### 2.1. Stakeholders' Communication as a Critical Challenge in DFVD Development

Overcoming barriers to creating DFVD remains a challenge for the tourism industry. Although many visitor destinations have witnessed a growing number of PwD, few have taken action on DFVD development [12]. Based on the six-phase DFVD transition model [12], Connell and Page [8] showed that most of the visitor destinations are in phase 2 and that challenges are mostly related to the lack of information. For example, the stigma of dementia has caused some of the visitor destinations to hesitate to become DFVD, as they worry that a negative impression may impact on their brand; additionally, the dearth of DFVD transition practices or business cases makes it difficult for visitor destinations to evaluate the required resources or design business plans.

However, Connell et al. [12] pointed out that, while the lack of information seems a critical gap for DFVD development, the underlying problem might be associated with communication—many owners and managers are too busy to receive voluminous material, and effective communication is needed to convey key messages. Dementia is a complex issue and involving people as partners from various domains, such as managers and staff of visitor destinations, dementia organizations, government, PwD, and carers, to provide suggestions and support is perceived as a crucial element of DFVD development [14]. However, essential to this is good communication with businesses to convince partners to identify the strategic importance to their business of engaging in social issues, such as DFVD [19]. For example, if the suggestions to become dementia friendly are mainly focused

on caring support or safety, the visitor destinations might be discouraged as they cannot link this to their business strategy or find their significant roles in DFVD development [8]. Thus, several studies [19,30,31] have raised the importance of strategic conversation to engage business in social issues—rather than being goodwill driven, the stakeholders need to know the strength of each partner and seek to leverage partners' core competencies related to their business in solving the social problem.

Furthermore, DFVD is still an open-ended social challenge that requires stakeholders to constantly explore, innovate, and adapt [8]. This implies that DFVD is an ongoing development process through which new opportunities or latent issues might be continuously uncovered [11]. Thus, the resources, directions, and decisions may inevitably change throughout the process and have impacts on the existing touchpoints and the roles of stakeholders [17]. For example, the promotion channels and collaboration strategies with partners may change occasionally according to the reactions from the market; the services and activities may need to modify to adapt the needs of PwD and their carers. However, Butt et al. [18] stated that if latent issues and required changes do not negotiate in time or sufficiently, negative impacts may cause distrust and impede stakeholders' collaboration.

Building upon these reflections, this study has highlighted a critical challenge of DFVD development: the lack of effective communication may impede stakeholders to deliver, interpret, and uncover important messages, thereby causing negative effects on collaboration and engagement. As PD practitioners involved in the issue of DFVD development, we are particularly interested in exploring how communication can be designed to enhance engagement. To do so, we attempt to outline an emerging notion in design, the values-led approach. The next section will discuss how the values-led approach can be applied to communication to enhance stakeholders' engagement in DFVD development.

## 2.2. Values-Led Approach to Enhance Stakeholders' Communication in DFVD Development

From a broad view, values include moral values (e.g., right to privacy) and nonmoral values (e.g., aesthetic preferences) [15]. According to Schwartz [20], values can induce motivations as well as guide the selection or evaluation of behavior, people, and events. Accordingly, Howell [21] argues that, in order to engage people in certain issues, it is important to uncover the recognized values such that the motivations are mobilized. Similarly, when facing the challenge of managing the quality of partners' collaboration, Pera et al. [23] considered that exploring the underlying values is still the key to drive them to engage with. As values embody ideas and qualities that people find worth pursuing, studies (e.g., [25]) related to PD consider that involving stakeholders in negotiating values is a democratic way to shape a better future.

Friedman et al. [15] have proposed value-sensitive design (VSD), which is a well-known approach that accounts for human values in a principled and comprehensive manner throughout the design process. The theory of VSD posits a design outcome can influence humanity by the features of its design, the context in which it is used, and the people involved in its use. Thus, a tripartite methodology of VSD is composed as: (1) conceptual investigations, (2) empirical investigations, and (3) technical investigations. Moreover, one of the essential concepts that can be extracted from VSD investigation is the recognition of direct stakeholders and indirect stakeholders—interactive systems can influence the lives of users and non-users of the system [32]. Through these investigations and identifications, Friedman et al. [15] assumes that a better design direction can be defined by identifying questions, such as what values are implicated, who are the key stakeholders, and how should we engage in trade-offs among competing values. However, recently, studies [26,27] have found values are not constant but can emerge and change through interaction. This argument has pointed out that simply involving people to have a say may not guarantee the essence and quality of participation. As Halloran et al. [26] contended, successful PD should facilitate the participants to uncover and bring the values to the table and to define their roles and responsibility within the collaboration throughout the process. In other words, negotiating values through PD is not simply a process of

identifying values and then designing for them, but a process of values reformulation. Accordingly, Iversen et al. [27] proposed the concept of values-led PD and suggest PD practitioners should orchestrate negotiation for values, which includes three iterative steps of emergence of values, development of values, and grounding of values, to enable stakeholders to reflect, cultivate, and mold new values and thereby construct meaningful outcomes. Through these steps, multiple values can fully emerge, and be questioned and conceptualized, creating an authentic PD process by which stakeholders can negotiate design directions [33]. Especially in the open-ended issues, such values reformulation processes can enhance communication by engaging stakeholders to rethink their roles, mediating conflicts, and explore problem areas worth tackling [25,34]. It is worth noting that as the values reformulation process is dynamic, the required roles of stakeholders may inevitably change; thus, it explains why identifying whose values should be taken into account (i.e., key stakeholders) is difficult as mentioned in Yoo [35].

To further emphasize the notion that values emerge and are developed through the interactions of stakeholders, studies [22,36–38] have argued that values are not delivered unidirectionally but are generated within a value creation system—a network constituted by stakeholders and allowing them to share, access, and utilize their resources to fulfill a specific goal. This entails a significant shift in roles and responsibilities such that all the stakeholders should act as both contributors and receivers in the values creation system. Thus, the value creation system should be negotiated and shaped by all the stakeholders. To fulfill this purpose, certain themes need to be embedded in the communication. For example, to align the multiple stakeholders' goals and establish their relationships, Frow and Payne [33] focused on communication to facilitate them to negotiate the vision, values, and the resources of integration. Additionally, to maintain a long-term relationship, Chandler and Vargo [36] emphasized communication to construct the contexts (i.e., a set of unique actors with unique reciprocal links among them) for values creation. Moreover, as networking has been described as a solution to overcome difficult problems and diffuse outcomes, Corsaro et al. [37] mentioned the importance of configuring a network of values to link different stakeholders. These works pointed out that communication should facilitate stakeholders not only to uncover their needs, but also to explore why and how they can benefit and contribute within the value creation system. Nevertheless, whereas Pera et al. [31] emphasized that formalized practices are needed to orchestrate the communication to allow stakeholders to understand the status and goals during the development of such a value creation system, few articulated a clear framework for practitioners to follow. Thus, building on these works, this study outlines three overarching notions that needed to be embedded in the communication in sequence: (1) value proposition, (2) value-in-context, and (3) value constellation.

Firstly, Ballantyne et al. [36] mentioned that value propositions can be seen as enablers of value creation, with potential for communication that brings resources exchange activities, relationship development, and knowledge renewal. By communicating with value propositions, the stakeholders are empowered to exchange knowledge, learn others' core competences, and identify collaboration opportunities, so they become aware of their relationships, the meaning of engagement, and how they can integrate their resources for collaboration [37].

Secondly, Chandler and Vargo [39] mentioned that values are created through interactions among the stakeholders by playing their roles in specific contexts. Based on this argument, value-in-context can be seen as a communication goal to allow stakeholders to collaboratively configure the contexts to realize the value proposition [40,41]. By constructing such specific interaction contexts, the stakeholders are able to experience personally how values are created and thereby lead to reconfiguring roles and behaviors [39].

Thirdly, as there is growing attention on social challenges, people have realized that uncovering the disconnects between goals and motivations to build up a network is needed to tackle these kinds of issues [42]. To achieve this goal, the notion of value constellations can be applied to illustrate how multiple stakeholders are linked to achieve shared goals



while creating mutual benefits [43]. Through co-constructing the value constellation, the stakeholders may stabilize their relationships and promote the dissemination of innovation.

Building upon these notions, a process of communication for a value creation system from learning, constructing, aligning, examining, stabilizing, and diffusing is established. Through this process, the stakeholders may find their roles in the engagement. In addition, the steps of negotiation for values are critical to enable stakeholders to reform values and shape design direction. Consequently, to engage stakeholders to identify their strategic roles and take actions for social challenges, such as DFVD development, this study proposes the concept of values-led communication design, which combines the process of value creation system establishment and the steps of negotiation for values. To describe our attempts of the communication approach mentioned above, an action research project was conducted, presenting the first experimentation of applying values-led communication design for DFVD development.

### 3. Action Research Project: Applying Values-Led Communication Design in DFVD Development

Action research allows practitioners or researchers to learn and explore possible approaches to actual problems [44]. Especially, in the social context, it is widely employed to investigate and enhance a specific approach [45]. Since the development of DFVD is one of the emerging social issues, applying action research to observe and improve values-led communication design is highly appropriate for this study.

Accordingly, we conceived and developed a project of action research that set out to engage visitor destinations for DFVD development. The project was held in Taiwan and supported by the Taiwan Ministry of Economic Affairs, 5% Design Action (a social innovation platform in Taiwan), and Lefoo Tourism Group (<http://www.lefoo.com.tw/en/>, accessed on 13 March 2019) (hereafter Lefoo), a leading tourism company in Taiwan.

#### 3.1. Context and Problem Setting

With the rising population of PwD, Taiwan's Ministry of the Interior [46] has advocated that industries should engage in the creation of dementia-friendly environments. However, while the Taiwan Alzheimer Disease Association [47] started to take PwD and carers to travel, they found that there is a lack of awareness of dementia friendliness in tourism in Taiwan. Additionally, due to the fear of getting lost, many people believe that outdoor activities are not suitable for PwD [47]. This stigma had discouraged many visitor destinations from considering DFVD development as a business opportunity.

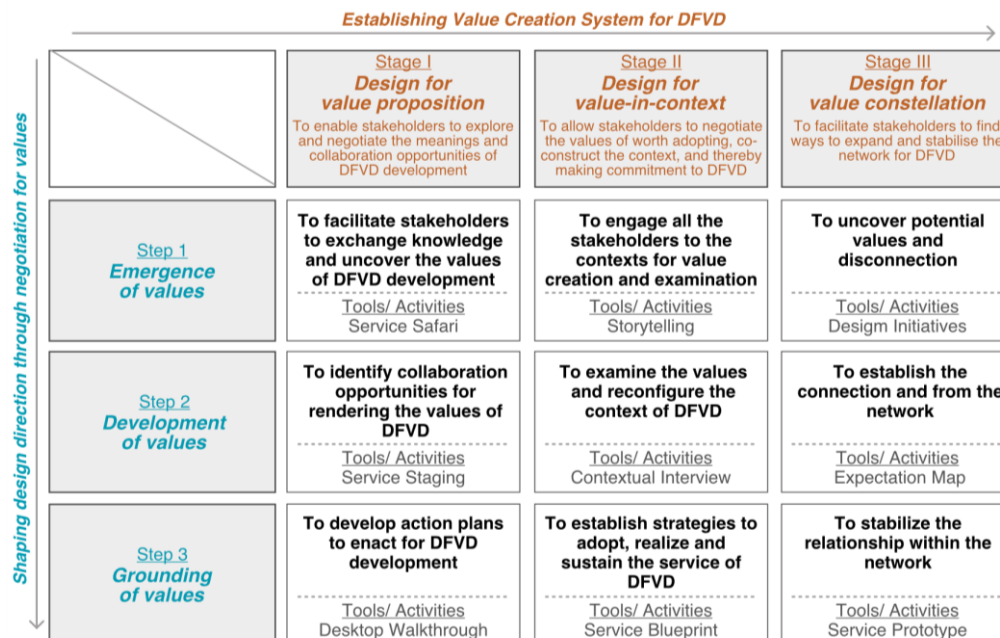
Lefoo is an example of such a visitor destination. Although Lefoo were willing to make contribution to social issues, they did not have enough confidence to claim that their services are suitable for PwD and carers. Especially, having little experience of working with dementia organizations, Lefoo did not know where to find partners or how to collaborate with them. However, with the support from the Taiwan Ministry of Economic Affairs and the connections from 5% Design Action, some representative dementia organizations were interested in being involved in the DFVD development project. These sources of support had gradually encouraged Lefoo to uncover the opportunities of DFVD development. Since Lefoo Park had already been certificated as an accessible environment and is also a well-known visitor destination in Taiwan, it was selected as an exploration base to initiate a DFVD development project.

#### 3.2. Structure of the DFVD Development Project

The DFVD development project took 19 months (June 2018–January 2020). As shown in Figure 1, the values-led communication design applied in the DFVD development project was organized as a  $3 \times 3$  matrix. The horizontal axis represents a three-stage communication process for a values creation system, which includes: (1) design for value proposition, (2) design for value-in-context, and (3) design for value constellation. In each of the stage, a three-step negotiation for values, including emergence of values, development of values, and grounding of values, are applied as the vertical axis to organize suitable

participatory tools or activities [42,48,49] to enable the stakeholders to shape the design directions. Detailed descriptions of the matrix are as follows:

1. Design for value proposition: the goal in this stage is to enable stakeholders to know each other and build up the share value proposition for DFVD development such that they feel meaningful to engage with and actionable. To achieve this goal, the steps of negotiation for values are organized to allow stakeholders to exchange knowledge and uncover the values of DFVD development from different perspectives, identify collaboration opportunities to render the values, and develop action plans to enact for DFVD development. To support this goal, the tools and activities applied in the three steps of negotiation for values include Service Safari, Service Staging, and Desktop Walkthrough.
2. Design for value-in-context: the goal in this stage is that stakeholders engage with their roles within the interaction of values creation, so they can decide whether to commit resources to sustain DFVD development. Accordingly, the steps of negotiation for values are planned to engage all the stakeholders to the contexts to examine value creation, reconfigure the contexts, and establish strategies to adopt and sustain DFVD. The tools and activities used to support this goal within the three steps of negotiation for values include Storytelling, Contextual Interview, and Service Blueprint.
3. Design for value constellation: the goal in this stage is to expand the network and integrate resources for DFVD development. Based on this idea, the steps of negotiation for values are orchestrated to allow the stakeholders to link potential values and disconnection, which are then connected to form the network and stabilize the relationship within the network. The tools and activities employed to the three steps of negotiation for values in this stage include Design Initiatives, Service Ecology Map, and Service Ecology Prototype.



**Figure 1.** The matrix of values-led communication design for DFVD development (Source: Authors).

The core team (the profiles are shown in Table 1) was established in the beginning of the DFVD project. The members of the core team were from different organizations and domains; the organizations that participated in this study are all leading figures in their domain in Taiwan. Moreover, to facilitate the tasks of values investigation, examination, and dissemination, other participants were invited in different stages. All the participants involved in each stage of the DFVD project are listed in Table 2.

**Table 1.** Profiles of the core team members of the DFVD development project.

| Member | Background/Titles of Members in the Organization                       |
|--------|--|
| A1     | Leofoo manager/CEO   |
| A2     | Leofoo manager/Service design director                                 |
| A3     | Leofoo manager/Program design director                                 |
| A4     | Leofoo manager/Zookeeper   |
| A5     | Dementia Experts/Caregiver of a homecare service company               |
| A6     | Dementia Experts/Animal-assisted therapist of therapy organization     |
| A7     | Dementia Experts/Art therapist of therapy company                      |
| A8     | Dementia Experts/Manager of a homecare service company                 |
| A9     | Government officer/Senior manager of Taiwan's Ministry of the Interior |
| A10    | Designer/Design director of a social innovation platform company       |

**Table 2.** The participants in each of the stage of the DFVD development project.

| Stage                          | Participants   |
|--------------------------------|--|
| Design for value proposition   | <ul style="list-style-type: none"> <li>• The core team</li> </ul>  |
| Design for value-in-context    | <ul style="list-style-type: none"> <li>• The core team</li> <li>• 6 families with PwD</li> </ul>   |
| Design for value constellation | <ul style="list-style-type: none"> <li>• The core team</li> <li>• 2 families with PwD</li> <li>• 5 government officers from health bureau of local government</li> <li>• 6 caregivers from long-term care companies</li> <li>• 4 therapists from occupational therapy companies</li> <li>• 4 managers from organizations of visitor destination</li> </ul> |

The data were collected mainly using three approaches: (1) participatory observations; (2) research diaries; (3) interviews. The following will present the process developed to set up and run in each stage. For each stage, this study will introduce the main goals and how the tools were used to drive DFVD development project in progress.

### 3.3. Stage I: Design for Value Proposition

By introducing dementia experts to Leofoo managers, this study was supposed to form a collaborative team. However, in the beginning of the project, as the participants had not realized others' roles, they did not find out how to leverage the resources of each other for DFVD development. Most of the collaboration opportunities proposed in the beginning were superficial. Furthermore, since the dementia experts mainly raised the issues related to the designs of the signs and facilities to improve PwD's accessibility, the Leofoo managers could hardly identify how they would benefit through these modifications and became less interested in DFVD development. A number of examples are given below:

1. 'Maybe I can conduct animal-assisted therapy at Leofoo Park to provide a special fun day for PwD and carers (A6)'—the animal-assisted therapist has not fully uncovered the potential resources of Leofoo Park that can benefit PwD, so she could only propose ideas from her first impression—using the environment in Leofoo Park to organize a one-day activity.
2. 'These suggestions are more like rules, which should be established by the government and apply to all the visitor destinations. I hope our efforts can focus on using our strength to create unique experiences for PwD and open up new market (A2)'—the Leofoo managers considered the collaboration should create values for all the stakeholders and allowing them to identify their strategic roles.

Frow and Payne [37] mentioned that knowledge sharing, which is the basis of value propositions establishment, can help the participants focus on building the ability to work



with other parties in an open, honest, and symbiotic manner. Thus, the goal of design for value proposition was applied to facilitate the participants' learning from each other and thereby identify meaningful collaboration opportunities. The following will explain how the tools were applied to support the stage of design for value proposition.

### 3.3.1. Applying Service Safari to Explore Participants' Core Competences

The tool of Service Safari was conducted to facilitate participants' learning of the core of each other. Firstly, the Leofoo managers led the dementia experts to experience all the services in Leofoo Park, while the dementia experts were asked to reflect on the values related to dementia (Figure 2). Then, the dementia experts arranged for the Leofoo managers to experience one-day volunteering in a daycare center to interact with PwD. Rather than telling suggestions directly, Service Safari supported knowledge sharing and values exploration through experiences and reflections, so the participants were inspired to interpret their experiences into ideas and opportunities.



**Figure 2.** Conducting Service Safari at the Leofoo Park (Source: Authors).

Based on the different types of values as proposed in Schwartz [20], this study analyzed the negotiations among the participants and uncovered several values and the related motivations as shown in Table 3. The participants were all agreed on allowing PwD and carers to have rights to go out for travelling, so the related values are social justice, equality, and safety. However, this study found that some of the motivations triggered by each value was found to differ per stakeholder. For example, capable and creativity consisted for dementia experts of using their skills to create new service, and for Leofoo managers of finding opportunities to relate their core competences to social values. Therefore, through the negotiation of the values and motivations, they identified the shared goal of applying the core competences of Leofoo Park to create new service for DFVD. Since this goal can meet their values and motivations, the participants were united and became a collaborative team.

**Table 3.** The emerging values and motivation extracted from the negotiations among the participants.

| Values                                  | Motivation  | Evidence   |
|---|---|--|
| Social justice<br>Positive public image | Allowing PwD and carers to have freedom to enjoy travelling as other people                             | “Many elderly people have visited Leofoo Park when they were young, so I hope we can welcome our customer and gave them pleasure again” (A1)   |
|   | Uncovering valuable resources of Leofoo Park to explore innovative ideas for PwD and cognitive training | “Some of the activities in ecology safari service of Leofoo Park are similar to cognitive trainings . . . We can take this as a new challenge to redesign these services to provide fun cognitive training” (A5) |
| Capable<br>Creativity                   | Finding opportunities to link their core competences with DFVD  | “I am looking forward to using our core assets to design new services for PwD . . . if it is possible, then we might be able to create a new business model” (A2)  |
|   | Exploring opportunities to leverage resources of others to address PwD’s needs                          | “Since the experience of interacting with mild PwD is similar to the interaction with kids, I think the dementia experts can help up redesign our core services for PwD” (A3)                                    |
| Partnership                             | Feeling connected, open minded, willing to make contribution for PwD                                    | “I am really appreciated that the Leofoo Park opened this opportunity to try something different . . . this project can be an example to promote our efforts on innovation” (A8)                                 |

This result shows that social values are important for aligning the visions of people from different domains, but conflicts may occur due to other values and the related motivations. To overcome this problem, facilitating participants to negotiate the values and explore the shared goals to meet different motivations is crucial.

### 3.3.2. Conducting Service Staging to Render the Emerging Values

As the participants had determined potential values for collaboration, the designers selected Service Staging as a tool to facilitate the development of those values. Based on the emerging values, the dementia experts collaborated with the Leofoo manager and staff to develop a new service concept. Then, Service Staging (Figure 3) was applied to allow dementia experts and the Leofoo manager to negotiate how the core services of Leofoo Park can be redesigned and experienced through the interaction of role play. By conducting these activities, the ideas to render the values for DFVD development became more vivid, so the participants were engaged and detailed in their responses, including raising the controversial issues and proposing alternative solutions.

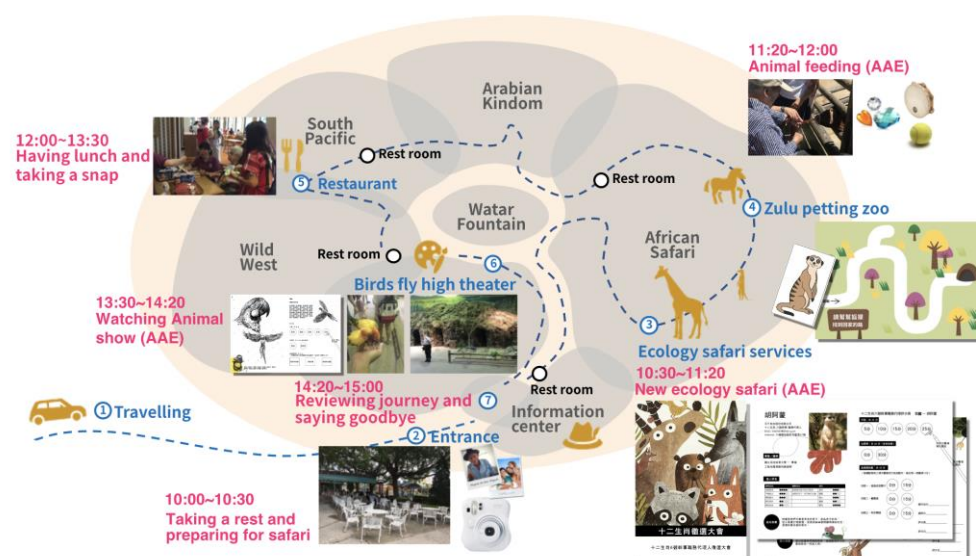


**Figure 3.** Conducting Service Staging to experience the values at the Leofoo Park (Source: Authors).

The controversial issues occurred between the ideas and the motivations of different stakeholders. For example, while the Service Staging demonstrated a scenario that the dementia experts expected to use the animal within the safari service of Leofoo Park to support animal-assisted therapy (AAT), the Leofoo managers (A4) had different opinions: ‘since AAT involves animal training, it may challenge the core beliefs of Leofoo to maintain the nature of animals.’ However, receiving the experience from the Service Staging, Leofoo managers understood the underlying values and motivations (to develop new cognitive trainings by integrating travel experience); thus, rather than remain in a non-negotiated status, they were willing to interpret the suggestions and propose options with similar purposes from the existing activities and tools, such as redesigning their kids’ animal education tools. This reflection was appreciated by the dementia experts and inspired them to suggest animal-assisted education (AAE) (i.e., an intervention delivered for specific educational goals without directly interacting with the animal) as a guidance for the redesign of the safari service. This negotiation enabled the core team to find new ways of using Leofoo Park resources for PwD in a proper way, so the outcome became relevant and practical to the Leofoo Park. As a result, the core team were realigned and established the value proposition as followed: integrating the elements of AAE with Leofoo Park services to provide fun and healthy cognitive training travel experience for PwD and carers.

### 3.3.3. Using Desktop Walkthrough to Identify Unique Experience and Action Plan

The Desktop Walkthrough was applied to facilitate the core team to negotiate concrete actions to ground the emerging values. This tool allowed the core team to negotiate the new customer journey (Figure 4) for PwD from both holistic and detailed views to ensure all the values are grounded. For example, based on the concept of AAE, the core team selected the animals that are related to traditional Chinese stories to redesign a new ecology safari service with the suggested route and related tools; thus, they can identify the overall unique experiences for PwD and the attractions of Leofoo Park from a holistic view. Additionally, by identifying the route of the new customer journey, the core team could carefully organize schedules, reserving places for PwD and carers to take rests, and conduct environment inspections (e.g., indicators design) to ensure a safe journey. As a result, the Leofoo managers gained confidence to tackle the issue of DFVD development and collaborate with dementia experts to develop the new services for PwD and carers.



**Figure 4.** The new customer journey for PwD and carers at Leofoo Park (Source: Authors).

### 3.4. Stage II: Design for Value-In-Context

The purpose of design for value-in-context is to facilitate stakeholders to configure their roles, which can realize value creation and adoption. Since Leofoo Park is a business sector, one of the criteria for adoption is to explore whether PwD and carers will perceive and appreciate the values. To fulfill these works, the core team planned to recruit PwD and their carers to participate in the project to examine the values. The following sections explain how the tools and activities were organized to support the communications in design for value-in-context.

#### 3.4.1. Using Storytelling to Allow PwD and Carers to Explore Values

In order to explore how the values are created and perceived, the plan was to engage PwD and carers in the new customer journey. However, this was found to be difficult in the beginning. During the recruitment section, most of the carers of PwD were excited about the journey; nevertheless, without knowing the values of AAE or having experiences of travelling with PwD, when asked about details of their needs, they only mentioned rather than excitement. One of the carers said, ‘I really missed the days travelling with my father; nevertheless, I am not sure whether he will engage in these activities.’ Some of the carers were worried about the caring support at Leofoo Park, such as ‘do they have hot water?’ and ‘is there any place for my father to take a nap during the trip?’ These examples were in line with the contention by Innes et al. [6] that the carers’ perception of the ability of the PwD to engage with activities and the unfriendly experiences may discourage carers to travel with PwD.

In order to enhance the communication such that carers’ understanding of DFVD is increased and their motivations triggered, storytelling was applied to interpret the value proposition into compelling narratives. In this study, caregivers from dementia experts’ organizations were found as promising interpreters, since they are close to carers and PwD. The caregivers could introduce the customer journey of DFVD based on the preferences of the carers and PwD to facilitate them to identify values and trigger motivations. The values and motivations that emerged in this step are shown in Table 4. For example, one of the caregivers knew a PwD was a biologist who possessed a great amount of knowledge of ecology. Thus, she introduced the journey to the family by asking the PwD to share the knowledge of animals with his grandsons using the redesigned tools in Service Safari; additionally, as she knew what the carers worried about, she articulated the journey in detail. As this narrative was meaningful to the PwD and carers, the family could uncover



values, such as empowered, capable, pleasure, healthy, etc. Thus, they became motivated to participate in the journey.

**Table 4.** The emerging values and motivation extracted from the negotiations from the families with PwD.

| Values                                   | Motivation   | Evidence   |
|--|--|--|
| Empowered<br>Independent<br>Honor Elders | To allow PwD have active roles and unique experiences            | “This journey seems fun to me, because I really hope to tell some interesting story about this animal to my grandson”—one of PwD<br>“This journey gave my father an active role, so he will not just stand aside and watch us to play”—one of the family carer |
| Safety                                   | To ensure a safe trip  | “The design of the schedule and the suggested route are thoughtful. They have considered the needs of PwD.”—one of the family carer  |
| Pleasure                                 | To create memory of family interaction                           | “All the family members are looking forward to go travel with our mother”—one of the family carer  |
| Healthy                                  | To motivate PwD to go out for social interaction                 | “Travelling is a really great incentive for me to ask my father to out. Especially, when he finds that he can interact with his grandson, he becomes really excited”—one of the family carer   |
| Equality                                 | To find others starting to recognize and welcome family with PwD | “Finally, there is someone who knows our needs. I have been searching for suitable activities for our family since my mother suffered from dementia”—one of the family carer   |

### 3.4.2. Conducting Contextual Interviews to Examine Value Creation

Then, the PwD and their carers were invited to experience the new customer journey in Leofoo Park. In order to assess their interactions in each activity, the contextual interview was introduced. The designer collaborated with dementia experts to develop a semi-structured questionnaire using a 5-point Likert scale, covering PwD’ engagement, family engagement, and carers’ stress. Additionally, the participants of PwD and their carers were allowed to freely make decisions (e.g., rest, use facilities) like other tourists during the journey, so the core team could uncover details during the interaction that might have been overlooked through the questionnaire.

The results demonstrated that the PwD and carers were fully engaged in the journey (Figure 5), and the mean scores in all activities were over 4.5 points. Additionally, the experiences enabled them to examine the values. For example, the responses, such as ‘the new ecology safari service motivate my mother to interact with other family members, which gave us a great memory’, examined the values of creating pleasure moments for the families with PwD. On the other hand, whereas some of the family carers had thought they

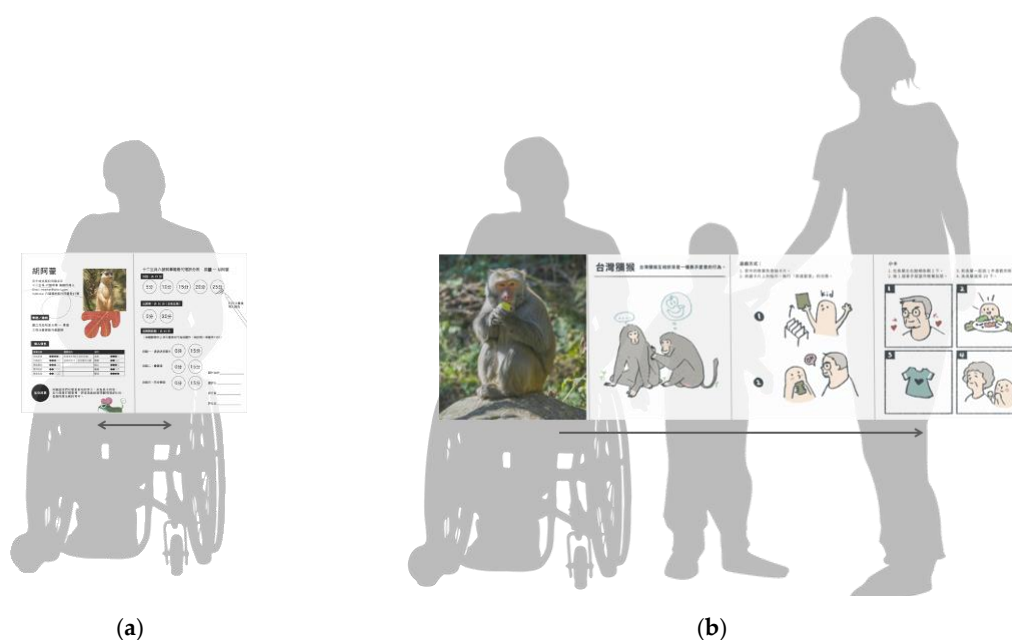


would be stressed throughout the journey, responses, such as ‘the organized schedule and caring support had made me relaxed’, made them surprised and uncovered the expectation of relieving stress.



**Figure 5.** Conducting a contextual interview in Leofoo Park (Source: Authors).

By examining value creation in the real context, the carers and PwD were enabled to provide constructive feedback for DFVD development. For instance, regarding the new ecology safari service within the Leofoo Park, the PwD and carers considered that the activities had engaged the families to interact freely with each other while experiencing cognitive training. However, as the tools were designed to facilitate the interaction of the family with PwD, the interfaces (e.g., size) should support multiple (rather than just single) users. Thus, based on the reflection, the core team changed the design of the tool from the style of an ordinary book (Figure 6a) to a concertina-fold book (Figure 6b), so this tool can support the family to interact with each other in the AAE activity.



**Figure 6.** The tool design to support AAE activities in the DFVD journey of Leofoo Park: (a) design for PwD; (b) design for the interaction of family with PwD (Source: Authors).

Moreover, while some of the carers claimed that the organized schedule allowed them to relieve stress and fully engage in the interaction, others considered the execution of the schedule should be more flexible to allow sufficient time for relaxation. This feedback was further elaborated by the dementia experts as they considered that to provide better services for family with PwD, it is important to build up the abilities of observation and improvisation based on their reactions. The animal-assisted therapist (A6) stated that, “since there are various of situations may happen during the interactions with PwD, it is impossible to provide a standardized service; instead, we need to uncover the relationship of the family members and PwD’s reactions, and thereby adjust the activity to improve the effectiveness of the therapy.” This pointed out that the staff should learn how to observe the subtle characteristics (e.g., face expression, family intimacy, habits) of the family with PwD, and be empowered to adjust the services. On the other hand, regarding the difficulties during the recruitment, the reactions of PwD and carers showed that professional advice, personalized messages, and caring support can encourage carers to travel with PwD; thus, the dementia experts uncovered their new roles of being persuasive channels. Finally, based on these reflections, the PwD, carers, and the core team modified the values proposition as allowing family with PwD to enjoy the moment of precious gathering without stress, so they named the service of DFVD ‘FreeDay’.

However, due to the high costs of caring for PwD, some of the carers reflected that they could not afford extra activities, such as travelling frequently. This feedback revealed that affordability might become one of the potential barriers for market growth, which reminded the core team to negotiate the conflicts between monetary values and social values. As the participant A2 claimed, ‘although the social values created in Leofoo Park had increased our interest to develop DFVD, the market size of DFVD has not grown up. Thus, we need to evaluate the resources, funding and construct strategies from a holistic perspective.’ This finding can support Friedman et al. [15] that the values of direct stakeholders and indirect stakeholders can be different yet should all be considered in the design process.

### 3.4.3. Establishing Service Blueprint to Evaluate the Values of Implementing DFVD

To facilitate the Leofoo managers and dementia experts to construct an actionable plan, the Service Blueprint was found as a useful tool. By establishing the Service Blueprint of FreeDay, the Leofoo managers and dementia experts could review the whole structure of the service (including the frontstage, backstage, and supporting system), so they could evaluate the values and discuss the required resources in detail. This step made DFVD development actionable and valuable for Leofoo. For example, rather than removing all the barriers in Leofoo Park, by focusing on the touchpoints within the service blueprint of FreeDay, the Leofoo managers could realize the journey of FreeDay within available resources, including the tools to support AAE, the services and the accessibility facilities. In addition, from business consideration, the Leofoo managers recognized it as a great opportunity to invite the dementia experts to give training courses for their staffs to improve the skills to interact with families, so they can understand how to observe certain subtle characteristics from the reaction and adjust the services. This expectation was not only for DFVD development, but also to improve the overall services in Leofoo Park to provide unique experiences for family customers.

These outcomes demonstrated that the establishment of the service blueprint facilitated the Leofoo managers and the dementia experts to negotiate the collaboration and the resources (including backstage preparation, promotion, caring support, etc.) in detail by defining the required roles and tasks in each touchpoint. Through this thorough evaluation, the Leofoo managers and the dementia experts were convinced that it is worthwhile to adopt FreeDay as one of their business deliveries to tackle this new market as well as promote their reputation to society. In mid-2019, Leofoo launched the FreeDay [29] on the market and claimed it as one of their efforts at corporate social responsibility (CSR).

### 3.5. Stage III: Design for Value Constellation

Due to the barriers of affordability, the Leofoo managers and dementia experts pointed out that the strategy in this stage should focus on promotion and finding the link of the disconnected of resources and values to support PwD and their carers to travel, thereby expanding the market size.

#### 3.5.1. Applying Design Initiatives as Seeds to Uncover Values

The first step of establishing a value constellation is to make connections with more people through values. To fulfill this purpose, the core team applied design initiatives as seeds to raise interest and enroll potential stakeholders. This idea is in line with Manzini [50] that design initiatives can be seen as triggers to start new social conversations and connect people to make things happen. Therefore, the core team started to develop tools and activities, such as videos (<https://www.facebook.com/watch/?v=2263151497287846>, accessed on 13 March 2019) and exhibitions (an example shown in Figure 7), to present how the FreeDay works and what impacts it can create. These tools and activities were aimed at enhancing connections and enabling negotiation of values with a larger audience of relevant roles. Interested people can freely leave a message through email or Facebook. Moreover, the members of the core team made a commitment to share the knowledge of FreeDay when they had opportunities to speak to their audiences. For example, while the dementia experts were assigned to promote to the domain of long-term care and family with PwD, the Leofoo managers were assigned to promote to the tourism industry. Thus, the core team were able to initiate conversation to deliver the concepts and benefits of DFVD development more effectively with potential future partners.



**Figure 7.** Exhibition of Free Day in LIFE IS CREATIVE at Design and Creative Center Kobe (Source: Authors).

Through these design initiatives, some potential partners were manifested along with the emerging values as shown in Table 5. For example, an occupational therapist identified values of achievement and ambitious as he felt that by integrating travelling activities with different visitor destinations, it is possible to improve the acceptance and quality of the therapy services. He mentioned that ‘travelling with family is an activity that worth integrating into a care plan, since it helps me encourage PwD to stay active.’ Other values, such as influential, were uncovered by a government official, as he saw the benefits

to link tourism and long-term care industries to make impacts on both economy and society. In addition, for people in the tourism industry, they saw the potential advantages of developing various kinds of DFVDs along with the specific attractions of each visitor destination rather than following certain regulations (e.g., accessibility facilities).

**Table 5.** The emerging values and motivation extracted from visitors of the exhibitions.

| Values  | Motivation  | Evidence   |
|---|---|--|
| Social Justice<br>Equality<br>Democracy<br>Honor elders | To facilitate people to change the impression of living with PwD  | “I have learned that it is possible to enjoy the life of living with my father . . . I really hope to support this kind of service and to change people’s impression of living with PwD”- a family carer<br>“This is a great story for our magazine . . . the idea to welcome everyone to enjoy healthy life is same with our magazine, and we would like to promote on our issues ”- the senior manager of a healthy magazine company |
| Influential   | To trigger industries to engage into social challenges            | “FreeDay has demonstrated the potential that the integration of tourism and long-term care can not only lead to the improvement of their services and business model, but also the well-being of the society”- the government officer  |
| Achievement<br>Ambitious                                | To improve the acceptance and the quality of the existing service | “travelling with family is an activity worth integrating into a care plan, since it helps me encourage PwD to stay active.”- an occupational therapist<br>“FreeDay has inspired me to find new ways other than accessibility facilities to improve our services for disables or PwD”- the manager of a visitor destination   |

The results of these design initiatives can support Ceschin [51] in that promotion of the project outcome is particularly crucial to stimulate changes in people’s behavior and routines; thus, it is possible to engage more people to make change.

### 3.5.2. Applying an Expectation Map to Render the Connection

Through the design initiatives mentioned above, potential resources related to DFVD development were uncovered; however, the underlying connection remained unknown. Thus, the designers held a workshop and invited people from the government, tourism, and long-term care industry to discuss possible linkage. However, conflicts arose regarding objectives and priorities. The participants from the long-term care industry proposed using financial subsidies under long-term care policy to improve affordability. Nevertheless, the government pointed out that resources for long-term care are mainly assigned for health rather than entertainment.



To overcome the conflicts, the participants were asked to reflect on their expectations and write down the values they agreed or disagreed on. This reflection helped the participants identify the shared goal, which is to lower the threshold for PwD and carers, so they can have the right to participate in travelling to achieve the value of equality. In addition, the participants negotiated the values worth engaging with personally. For example, for the participants from the long-term care industry, they considered it as bringing great opportunities to develop new services for PwD by working with people of different domains; for the participants from the tourism industry, they hoped to learn from the Leofoo Park case to find how the existing resources can be redesigned. Thus, these values had motivated all the participants in this stage to deal with the controversial issues (e.g., legality).

After a month of collaboration, the participants developed a solution by integrating the elements of the outdoor reablement program (under the government's long-term care policy) into the services of visitor destinations. Since this solution can respond to the values of health, the government officer considered it is possible to use financial subsidies. Ultimately, the solution could fulfill all the values, so the participants became connected and formed the pilot network of this new reablement program.

### 3.5.3. Conducting Service Prototype to Promote Network

In order to promote the network, the core team, the government officer, long-term care service company, and Yingge Ceramics Museum conducted Service Prototype of the new reablement program. Two groups of PwD and their carers were invited and successfully applied the subsidy with the new reablement program. This result became a seed to promote the network, per the government officer's claim that 'since the new program follows current regulation, we can integrate this idea into regular practices and promote this idea to others.'

At the beginning of 2020, the government took this prototype as a reference to redesign the reablement policy to attract more stakeholders to engage in the network. At that time, the new program had not only attracted a growing number of PwD and carers to participate, but also received an award from the Health Promotion Administration of Ministry of Health and Welfare in Taiwan [52].

Table 6 summarizes the negotiated values and the outcomes in each stage. This result support that values are not constant [26]. Especially in the context of social innovation, in which the issues often remain open-ended and the process may include different kinds of stakeholders, the design process should focus on facilitating stakeholders to identify and reform the values to shape the design direction they feel is worth tackling. The following sections will discuss how and why value-led communication design is crucial to DFVD development.

**Table 6.** An overview of the outcomes of the negotiation of values in each stage.

| Stage               | Design for Value Proposition  | Design for Value-In-Context   | Design for Value Constellation   |
|---------------------|---|---|--|
| Emergence of values | <ul style="list-style-type: none"> <li>• Social justice</li> <li>• Positive public image</li> <li>• Capable</li> <li>• Creativity</li> <li>• Partnership</li> </ul> | <ul style="list-style-type: none"> <li>• Equality</li> <li>• Safety</li> <li>• Empowered</li> <li>• Independent</li> <li>• Honor Elders</li> <li>• Pleasure</li> <li>• Healthy</li> </ul> | <ul style="list-style-type: none"> <li>• Achievement</li> <li>• Ambitious</li> <li>• Influential</li> <li>• Social Justice</li> <li>• Equality</li> <li>• Democracy</li> <li>• Honor Elders</li> </ul> |



Table 6. Cont.

| Stage                 | Design for Value Proposition   | Design for Value-In-Context  | Design for Value Constellation   |
|-----------------------|--|--|--|
| Development of values | <ul style="list-style-type: none"> <li>Exploring the application of AAE concept to modify the existing services as an opportunity to meet all the values</li> <li>Establishing the shared value proposition</li> </ul> | <ul style="list-style-type: none"> <li>Verifying the values creation within the contexts</li> <li>Modifying the tools of AAE to support the values</li> <li>Improving staffs' skill to interaction with customer</li> <li>Uncovering the values of affordance as a potential risk to open up the market</li> </ul> | <ul style="list-style-type: none"> <li>Discovering the outdoor reablement program as a possible solution to solve controversial issue and meet all the values</li> </ul>         |
| Grounding of values   | <ul style="list-style-type: none"> <li>Constructing the customer journey to ensure the realization of value proposition</li> </ul>   | <ul style="list-style-type: none"> <li>Establishing service blueprint to evaluate the values of DFVD development</li> <li>Changing the strategy from operation for profit to CSR</li> </ul>  | <ul style="list-style-type: none"> <li>Prototyping to ensure the concept follow the regulation</li> <li>Constructing the value constellation to promoting the network</li> </ul> |

#### 4. Discussion

While past studies [8,17] have emphasized that the lack of evidence or incentives for visitor destinations to become dementia friendly, this study has demonstrated, through an action research project, how values-led communication design can enable the stakeholders to explore the values step by step. Based on the observation and reflection, this study finds that the concept of 'values-led' can serve as a principle to remind PD practitioners to place values as the essences of communication and participation. The following will discuss the insights to propose a model of values-led communication design for future research.

##### 4.1. Facilitating Participants to Stand in Others' Shoes to Create Meaningful Communication

Connell et al. [12] stated that dementia is a hidden medical condition rather than disability. This study supports this argument and considers that the development of DFVD is not a regulation for visitor destinations to follow with; instead, the key to DFVD development should emphasize enabling visitor destinations to improve their services to enable PwD and carers to have their own unique experiences. Thus, involving dementia experts' support is an effective approach to help visitor destinations understand how to interact with PwD and redesign the services to achieve DFVD [14].

However, the findings have revealed that simply involving dementia experts to provide suggestions or support as mentioned in the past research [14] may not sustain the DFVD development. This study considers that when communication fails to facilitate the participants from different domains to uncover and perceive the values of the collaboration, conflict may occur and impede DFVD development. For example, when the dementia experts mainly focused on the safety and access of the environment, the suggestions may neglect the considerations of visitor destinations (e.g., market differentiation, service operation). This may result in difficulty in convincing visitor destinations to find their benefit and take actions for DFVD development. Therefore, as past research [12,19,30] concluded, to pursue people to become partners and engage in social innovation, such as DFVD development, it is important to allow them to find their strategic roles. Additionally, this study agrees with Pera et al. [23] that while the engagement of users (e.g., PwD and carers) is driven by the motives of use experiences, stakeholders are strategically task-oriented in their expectations towards the collaboration. As A2 pointed out, "DFVD development should be embedded into routine services rather than one-time activity; thus,

other than the needs of PwD and their carers, we need to consider the values and meanings to our company.” This argument is particular meaningful in that it reminds PD practitioners who wants to involve in DFVD development need to put more effort into facilitating the stakeholders to stand in others’ shoes to explore strategic roles for others.

In addition, the findings in this study supports Sanders and Simons [22] that in the fuzzy front-end of social innovation, the stakeholders might not be able to articulate clear goals and values that are worth engaging with. As a result, this study argues that the way of working with values as mentioned in VSD may fail to identify values and key stakeholders through investigation. Instead, the development process should be designed as a dialogical process to allow the stakeholders to collaboratively explore the meaning of the engagement. Thus, to facilitate the participants to stand in others’ shoes to leverage others’ resources and explore common goals, the steps of negotiation for values, including emergence of values, development of values, and grounding of values, were found as promising guidance for PD practitioners to improve the quality of participation. Table 7 summarizes the applied tools and the effects in the three stages of the DFVD development project. For example, since Service Safari can help people to understand the values of a service [48], it was selected to facilitate the participants to reflect and emerge how the core competences among them can be integrated for DFVD development. Through this step, the participants started to work as a team and became willing to use others’ strengths to improve the collaboration. On the other hand, as PwD and carers might not envision their expectations and needs in detail, the storytelling and contextual interview tools were applied to facilitate the exploration of values. By engaging PwD and carers in the process, the values of DFVD became more vivid, so the core team could learn how the design and strategy should be modified.

**Table 7.** Summary of the applied tools and their effects in value-led communication design.

| Stage                        | Challenge   | Tools/Activities     | Effects   |
|------------------------------|---|----------------------|---|
| Design for value proposition | <ul style="list-style-type: none"> <li>The participants do not understand each other</li> <li>The communication among them is insufficient to instigate their collaboration</li> </ul>                  | Service Safari       | To find potential opportunities to leverage others’ core competences for DFVD development   |
|                              |   | Service Staging      | To enable reflection, controversial issues, and re-alignment through values rendering   |
|                              |   | Desktop Walkthrough  | To ground the values of DFVD from both holistic and detailed views  |
| Design for value-in-context  | <ul style="list-style-type: none"> <li>The perceptions of carers limit their willingness to participate in travelling</li> <li>The conflicts occur between monetary values and social values</li> </ul> | Storytelling         | To motivate PwD and carers with meanings  |
|                              |   | Contextual Interview | <ul style="list-style-type: none"> <li>To enable PwD and carers to examine and negotiate the values for DFVD development</li> <li>To enable Leofoo managers and dementia experts to find their roles for values creation</li> </ul> |
|                              |   | Service Blueprint    | To facilitate Leofoo Park to evaluate the values from different aspects and make strategy for adoption  |

Table 7. Cont.

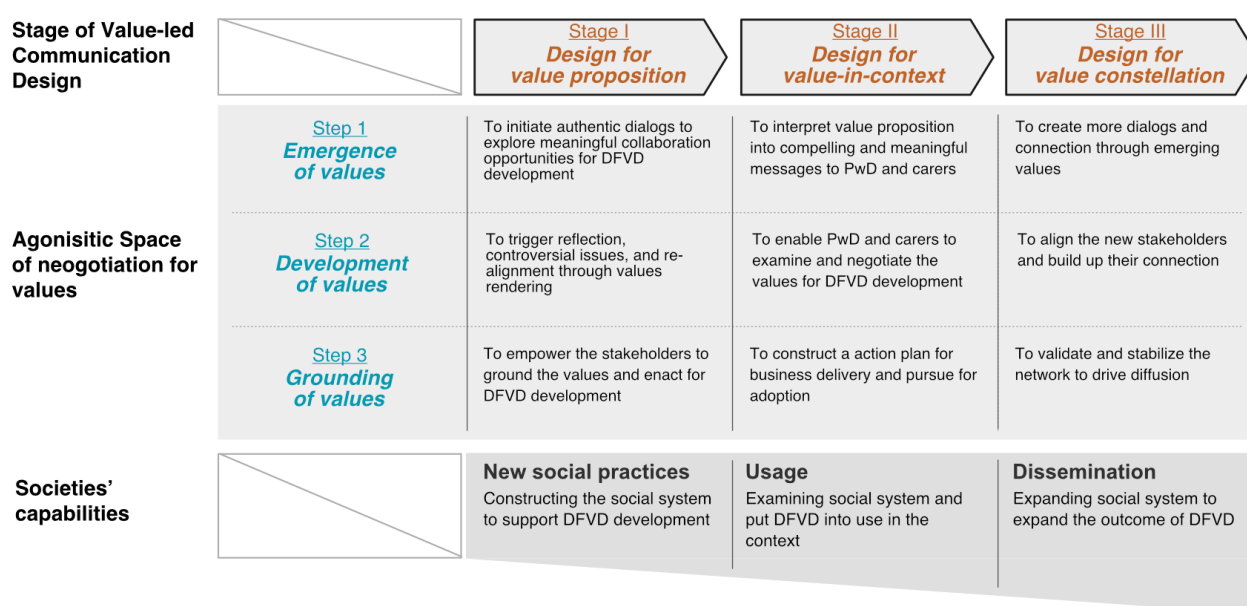
| Stage                          | Challenge   | Tools/Activities   | Effects  |
|--------------------------------|---|--------------------|--|
| Design for value constellation | <ul style="list-style-type: none"> <li>The issue of affordability may impede PwD and carers seeking to participate in travelling</li> <li>Lack of sufficient evidence or incentives to engage more resources to promote DFVD development</li> </ul> | Design Initiatives | To create more dialogs and connections through emerging values |
|                                |   | Expectation Map    | To align the new stakeholders and build up their connection    |
|                                |   | Service Prototype  | To validate and stabilize the network to drive diffusion       |

#### 4.2. Values-Led Communication Design as a Process to Increase Societies' Capabilities to Act

Based on the discussion mentioned above, research (e.g., [53]) from social innovation might provide further insights to elaborate on the importance of engaging stakeholders to negotiate their strategic roles. Due to the complexity of social issues, the essence of social innovation is to increase the capabilities of society to act [54]. In other words, social resources, such as cultures, commitment, and relationships, should not be neglected. Therefore, to realize the ideas of social innovation, it is important to facilitate stakeholders to find how their knowledge and resources can be transferred into new social practices that can be accepted, adopted, and disseminated [53].

While studies [19,55] have mentioned that social values are important drivers for collective actions, this study considers that the idea of the 'universal values' proposed in VSD [15] can be considered as a first step to trigger stakeholders' motivations. However, this study argues that other types of value should also be included. For example, the response from A7, 'since the design direction had reflect the importance of our skills and knowledge, it is easier for others to recognize the resources we claimed for the collaboration', shows the importance of allowing the stakeholders to negotiate why and how by demonstrating the potential values (e.g., improving the skills of the staff, reputation) for their organization. By exploring the values from social, economic, and cultural perspectives, the stakeholders can be engaged by various motivations. This argument is in line with past studies [19,30,31] that to engage businesses in social issues, it is important to facilitate them to uncover their values and link to their strategies; thus, rather than being goodwill driven, the business could know why and how to use their strength to support social innovation. As such, this study proposes a model (Figure 8) to illustrate a systematic process of values-led communication design to increase society's capability for DFVD development.

Firstly, social practices, which include the elements of roles, relationships, norms, and values, are the structures that embody in social systems [53]. Since the creation of these new elements may instigate different patterns of social activities (e.g., acting in new roles, connecting to new organization), the development of new social practices can be seen as the first step in triggering social change [56]. Therefore, because the stage of design for value proposition provides interactive dialogs for the stakeholders to share implicit knowledge and uncover latent issues, it enables them to stand in others' shoes to negotiate how the social and cultural values can be created through the collaboration. Accordingly, the stakeholders are able to identify their critical roles and relationships for DFVD development to create new social practices to initiate the action for DFVD development. It is important to notice that the aims of this stage should focus not only on developing new services for dementia, but also on organizing the activities of communication to facilitate the stakeholders to build up new roles, relationships, norms, and values to shape the new social practices.



**Figure 8.** Values-led communication design as a process to increase society's capability for DFVD development (Resource: Authors).

Secondly, establishing new social practices of DFVD development is not enough to make an impact on society if some of the roles are not put into use [53]. However, the decisions of acceptance and adoption are affected by different layers of factors, such as individuals' ability and cultures [57]. In other words, the social practices should be adjusted to embed into the specific contexts. While the goal of design for value-in-context is to allow stakeholders to examine and communicate whether their roles can support the value proposition and create values within the context, it gives them spaces to reflect the required roles, tasks, skills, touchpoints, etc. Therefore, this stage creates opportunities for stakeholders to collaboratively reconfigure their strategic roles and position within the context, and thereby promote acceptance and adoption.

Thirdly, the main purpose of diffusion is to spread ideas and make an impact. Especially, in this study, since affordability was found as a barrier that limits the growth of market size, diffusing the outcomes of DFVD development became an important strategy to explore possible resources. Thus, the stage of design for value constellation seems a promising approach to find the link for the disconnected resources [43]. This finding can further explain Manzini [46] in that the aims of conducting design initiatives should focus on negotiating values. As the values emerge, people may start to find why they should engage with and discuss how they can collaboratively make impact [23,30]. Thus, this study considers that by creating these dialogs of negotiation for values, it is possible to explore new resources to expand the value creation system with a wide variety of stakeholders (e.g., governments, NPOs) and increase society's overall capability for DFVD development.

Lastly, it should be noted that values-led communication design is not intended to entrap people to adopt something; instead, values led means embedding values with suitable tools to enable stakeholders to negotiate values through various kinds of 'language' (e.g., experiences, prototype, visualization) and to inform design direction [27]. To further enhance this argument, this study considers that negotiation for values can create 'agonistic spaces' [58] to allow multiple values to be tabled, understood, and discussed, so the stakeholders are able to raise controversial issues or uncover latent needs. As a result, for PD practitioners, the steps of negotiation for value have provided practices to establish infrastructure to enable stakeholders to continuously support and evolve the outcome of DFVD.

## 5. Conclusions and Future Research

DFVD development is an emergent topic. However, the key to achieve this ambition is beyond accessibility. The development of DFVD should put more emphasis on how they can enable PwD and carers to enjoy the travel experiences, in whatever form that takes. While most of the visitor destinations considered that they need to span the knowledge gap, this study argues that the DFVD development requires effective communication to motivate values and enhance stakeholders' engagement. This argument is different from simply involving dementia experts to provide suggestions [12,14] or conducting an investigation to identify values [15], but facilitates the stakeholders to explore values that are worth engaging with through a dialogical process. Through this process, the stakeholders may identify values step by step to explore new possibilities. Moreover, since the realization of social values requires active engagement of people from different fields [22], this study suggests a value-led communication design process, including design for value proposition design for value-in-context, and design for value constellation, to facilitate stakeholders to negotiate different types of values and construct a value creation system for DFVD development.

In addition, as values are often implicit [27], this study considers the steps of negotiation for values (emergence of values, development of values, and grounding of values) can serve as agonistic space to facilitate stakeholders to comfortably explore latent issues and uncover implicit values. Through the emergence of values, it is possible to dig out the disconnection and the key stakeholders. However, compared to Holloran et al. [26] and Iversen et al. [27], who applied values as resources to engage stakeholders, this study argues that negotiation for values has the merit of increasing the capabilities of society for DFVD development. By embedding the negotiation for values into each stage of the communication process for value creation system, the stakeholders may find it is meaningful to engage in the DFVD development, and thereby be willing to build up new social practices, put them into usage, and promote dissemination.

This study has demonstrated how values-led communication design can facilitate DFVD development and propose a model for society's capacity enhancement. The results correspond to Friedman et al. [15,16] in that values refer to what people consider important in life. This raises an important issue that values vary in kind, and how to facilitate the negotiation for values with proper tools or activities may require further research. Moreover, due to limited time and resources, the model established in this study requires further validation. Especially, as values are varied in different countries, the culture issues cannot be neglected [55]. This is in line with Connell et al. [12], who contends that the actions and outcomes of DFVD development should not be considered as universal. Therefore, future research should be conducted in different countries to explore other important values for DFVD development.

**Author Contributions:** Conceptualization, formal analysis, investigation, methodology, project administration, visualization, and writing—original draft preparation, C.-S.W.; supervision, writing—review and editing, T.-J.S. All authors have read and agreed to the published version of the manuscript.

**Funding:** This research received no external funding.

**Institutional Review Board Statement:** The study was conducted according to the guidelines of the Declaration of Helsinki. This study has provided the material to participants with everything they need to know to make an informed decision of participating in our research. Also, this study has obtained all the participants' informed consent statement before interacting with them.

**Informed Consent Statement:** Informed consent was obtained from all subjects involved in the study.

**Data Availability Statement:** Not applicable.

**Acknowledgments:** We would like to express our sincere gratitude to the support given from Taiwan Ministry of Economic Affairs, Lefoo Tourism Group, 5% Design Action as well as the all the participation in this research for their great effort in supporting the survey, design, and



implementation. Also, we sincerely appreciate all the valuable comments and suggestion from all the reviewers, which helped us improve the quality of this paper.

**Conflicts of Interest:** The authors declare no conflict of interest.

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