

Method Format for Experience Vision

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Abstract. The “Experience Vision: Vision Centered Design Method” is a comprehensive method which makes it possible to propose new and innovative products, systems and services that are currently unavailable, as well as proposing advances for those that currently exist. It encompasses the entire HCD (Human Centered Design) process, and presents a new vision with experiential value for both user and business from an HCD viewpoint.

This paper discusses a set of eight formats developed as a practical design tool for implementing this method. They include Goal setting of the project, Intrinsic user value, Policy of business value, Persona, Value scenario, Activity scenario, Interaction scenario and Experience vision (summary). Case studies showed effectiveness and usefulness of the formats as a design tool for this method.

Keywords: experience vision, vision centered design method, structured scenario.

1 Introduction

In the present day, product development for matured markets requires a research method of user needs that even users do not yet anticipate. In order to create attractive experiential value, it is necessary to develop products, systems and services not from the viewpoint of technology, but from the viewpoint of value to be provided.

Under such circumstances, it often happens that the problem solving design approach for existing products, systems and services no longer works sufficiently, and therefore a new design approach is expected as a complement. This is a vision

centered design approach that can create new products, systems and services which propose new visions from the viewpoint of HCD (Human Centered Design) and are sure to be introduced and attractive to people and society in general. Since 2007, the authors organized a working group within the Ergonomic Design Research Group of the Japan Ergonomics Society. In 2012, we completed development of the “Experience Vision: Vision Centered Design Method”, a comprehensive design method which consistently allowed for the introduction of HCD into the design process [1][2][3].

In this paper, the formats prepared for this method are first explained, and then the effectiveness of the formats are confirmed by showing examples in which the formats have been used.

2 Framework for Vision Centered Design Method and Formats

The following eight formats are available within the vision centered design method and can be utilized in the design processes.

1. Goal setting of the project
2. Intrinsic user value
3. Policy of business value
4. Persona
5. Value scenario
6. Activity scenario
7. Interaction scenario
8. Experience vision (summary)

By superimposing each format on the relevant component of the framework for the vision centered design method, the location of each format can be illustrated (Fig. 1). Proceed with processes from the left side of the framework to the right side using the formats, and the information to be used in the investigation of user requirement documents and business planning documents can finally be output. Each format will be explained in detail hereinafter.

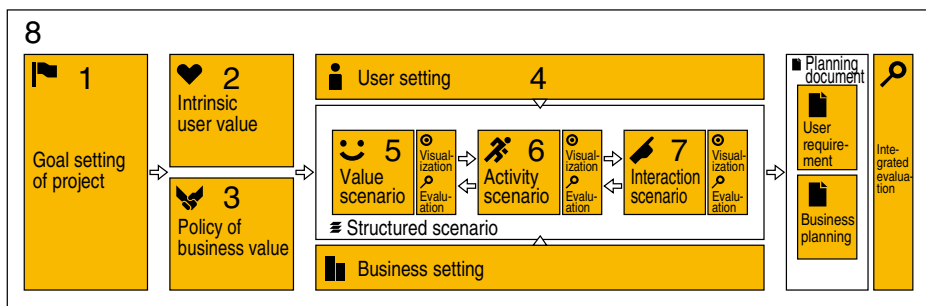


Fig. 1. Framework for Vision Centered Design Method and formats

items for each piece of information. These items are to provide general viewpoints for investigation, and therefore it is acceptable to make a choice or study other items depending on each project. The policy of business value is described in the lowest field of the format (Fig. 4).

2.4 Persona

Set up the persona from the user information. The persona should finally be developed by elaborating the image of the intended users step-by-step from the list of users and stakeholders, the cast and then to persona.

In addition to the goal of the persona, basic information, characteristics, roles and preferences should be described in the format while considering the relationship with the project theme. To promote understanding of persona by members of the development team, enter a key phrase which simply illustrates characteristics and the goal of the persona in the upper field of the format. Furthermore, to imagine a visual understanding of the persona, a photograph or an illustration should be inserted. When using images and graphic content, it is important not to infringe on any copyrights and portrait rights.

The persona format is especially prepared for the development of the persona, however, it can also be utilized in the cast phase by changing the degree of detail of user information (Fig. 5).

Policy of business value		Created	Date	Rev. No.
Title				
Business information:				
Business domain				
Business conditions (opportunities and threats)				
Politics and economics				
Social situation				
Technical innovation				
Legal restrictions				
Customers				
Competitors				
etc.				
Management resources (strong points and weak points)				
Merchandise				
Technology				
Sales				
Business hub				
Brand				
Financial affairs				
Talented people				
etc.				
Business strategy				
Policy of business value				

Fig. 4. Policy of the business value format

Persona		Created	Date	Rev. No.
Title				
Persona				
Keywords expressing the features and the goal in a single phrase				
User goal				
Illustrating the intention of users and the goal in a single phrase				
Illustrating what users want to be achieved (goal) / by means (methods, systems and services)				
Basic information:				
Name				Photograph/ Illustration
Sex, Age				
Address				
Families				
Corporate name				
Corporate profile				
Section, title				
Occupation				
Characteristics				
Briefly describe appearance, culture, personality, interests, skills, knowledge, etc.				
User role				
Illustrating what sort of person the user is and relationships there are with other customers and competitors in relation to the products, systems and services.				
Brand Preference				
Illustrating what sort of preference the user has and relationships there are with other customers and competitors in relation to the products, systems and services.				

Fig. 5. Persona format

Value scenario		Date	Ref. No.
Title			
List of users and stakeholders Persons involved in products, systems and services to be developed.	Cast Candidates Persona for the products, systems and services to be developed.		
Intrinsic user value Intrinsic user value determined by the significance of needs based on the user's perspective.	Value scenario Choosing the values to be provided from both user and business aspects. Create a new value and describe a user image and concepts on products, systems and services.		
Policy of business value Policy of business value based on the business information.	Scene Scene envisioned from a value scenario.		
Evaluation			
Scenario check	Evaluation viewpoint	Comment	
<ul style="list-style-type: none"> Whether or not Project goal has been achieved Intrinsic user value has been filled Policy of the business value has been confirmed to Cast is reflected 	User side <ul style="list-style-type: none"> ① Attractiveness ② Novelty ③ Understandability ④ Efficiency Business side <ul style="list-style-type: none"> ① Strategy ② Marketability ③ Business potential ④ Sustainability ⑤ Profitability ⑥ Sociality 		
Total comment			

Fig. 6. Value scenario format

Activity scenario		Date	Ref. No.
Title			
Persons		ID	
Goal (activity)		Name	Photograph/ Illustration
		Characteristics	
Scene Scene to be investigated in activity scenario.	Activity scenario Description of the activity from an activity of the Persons in each scene in accordance with the target of the Persons.		
		Tasks List of activity described in the activity scenario.	
Evaluation			
Scenario check	Evaluation viewpoint	Comment	
<ul style="list-style-type: none"> Whether or not Project goal has been achieved Value scenario (scene) can be realized Persons is reflected 	User side <ul style="list-style-type: none"> ① Attractiveness ② Novelty ③ Understandability ④ Efficiency Business side <ul style="list-style-type: none"> ① Strategy ② Marketability ③ Business potential ④ Sustainability ⑤ Profitability ⑥ Sociality 		
Total comment			

Fig. 7. Activity scenario format

2.5 Value Scenario

The value scenario illustrates the images of users and concepts on products, systems and services by focusing on the values. In the upper field of the format there is the area to be used for investigation on intended users. Enter elaborated content along with the project theme in the sequence of the list of users and stakeholders and cast from the left. On the middle left side of the format there is the field for the intrinsic user value of the user aspect and the policy of business value of the business aspect. The respective content studied in the previous processes should be transcribed and checked. Based on this input information, derive a value scenario for both user and business viewpoints. Specific user images and ideas for products, systems and services should not be described here as they have yet to be materialized in this phase. This is in order to prevent any restrictions which could happen in the subsequent idea generation phase. Once the value scenario has been fixed and described in the center field, study for envisioned scenes and describe them in the field at the right end.

Evaluate the value scenario from both user and business aspects using the evaluation field at the bottom of the format. The user aspect evaluation puts an emphasis on satisfaction for the HCD, and thus attractiveness and novelty become important viewpoints (Fig. 6).

2.6 Activity Scenario

The activity scenario describes the affectivity flow and emotion of the persona in relevant scenes based on the goal of the persona. First, transcribe the scene to be investigated from the value scenario format into the field at the left end of the format. Next, narrow down the essential points of the persona for the scene from those in the persona format, and then describe them in the upper persona field. Here, the goal of the persona should be described in a form of activity level. Based on the input information, create and fill in the activity scenario which describes what sorts of activities are utilized for the persona to achieve the goal in the relevant scene. Here again, specific products, systems and services are not to be described as they are still in a stage prior to the creation of ideas. Subsequently, extract the tasks from the activity scenario as parts of the activities, and then enter them in the task field at the right end. The user aspect evaluation of the activity scenario should be emphasized on effectiveness of HCD (Fig. 7).

2.7 Interaction Scenario

The interaction scenario shows the interaction between the persona and product, system and service. First, transcribe the tasks abstracted from the activity scenarios to be investigated in the right end field of the format. In the upper part of the persona field, a persona which is the same as the activity scenario format is normally described. Here, the goal of the interaction should be specified. Describe the interaction scenarios chronologically in detail by considering the interaction which occurs in the course of the utilization of products, systems and services by the persona in accordance with tasks. Within this, specific products, systems and services, as well as ideas of the interaction, are expressed, therefore, technical factors required for the specifications is also identified. For a more detailed investigation without missing descriptions, investigate using features of hardware, software and human-ware. Abstract requirements for tangible specifications from the described interaction scenarios, and then enter them in the field of comments for specifications at the right end. The user aspect evaluation of the interaction scenario should be emphasized on efficiency of HCD (Fig. 8).

2.8 Experience Vision (Summary)

The contents studied using the seven formats so far are summarized in the experience vision format. Transcribe each item of the format by phase or after the completion of all phases. For the last, fill in the user requirements and the business plans in the planning document field at the right end of the format. The experience vision format is used to overview the entire field and to confirm and investigate the proposed experience vision. This is also effective not only to study one proposal but to study and compare multiple numbers of proposals (Fig. 9).

Value scenario		Scenario	Date	Ref. No.
		Yes	Washing for young people living alone	
List of users and stakeholders	Cast			
Persons related to products, systems and services to be developed. Users, Housing builders, Contractors, laundries, Detergent makers	Candidate Persons for the products, systems and services to be developed. Young people living alone			
Intrinsic user value	Value scenario	Scene		
Intrinsic user value attributed by the perception of users based on the user value.	Describing the values to be provided from both user and business aspects. Focus on the values and describe a user image and concepts on products, system and service.	Scene envisioned from a value scenario.		
Want to: -wash by myself, -wash using high quality services, -look neat, -use time effectively.	Young people living alone can take care of their own clothes easily and conveniently so that they can wear clean clothes every day, even having little knowledge or experience in washing.	1) Wash a jacket at home, after coming back in the evening. 2) On a day off, wash the laundry accumulated from the previous days. 3) Wash special types of clothing with lace or leather decoration.		
Policy of business value	Professional laundry services can be simply ordered for items difficult to wash at home.			
Supporting all laundry needs using products and services combining new technology and sales networks of housing builders.				
Evaluation				
Scenario check	Evaluation viewpoint	Comment		
Whether or not: - Project goal has been achieved. - Intrinsic user value has been shared. - Policy of the business value has been confirmed by. - Cost is reflected.	User side	<input checked="" type="checkbox"/> Attractiveness Attractive and easy to use value. <input checked="" type="checkbox"/> Usability Newly introduced professional services. <input type="checkbox"/> Flexibility No special knowledge or experience necessary.		
	Business side	<input checked="" type="checkbox"/> Priority Supporting all laundry needs complements the business strategy. <input checked="" type="checkbox"/> Feasibility Needs exist among young population. <input type="checkbox"/> Interoperability Difficult to evaluate. <input type="checkbox"/> Security Environmental impact difficult to evaluate.		
Total comment				
Although it is appealing to users, examination of concrete business models and products is required from the business viewpoint. Can be investigated as a comprehensive brand of washing.				

Activity scenario		Scenario	Date	Ref. No.
		Yes	Washing a jacket at home	
Persona	Activity scenario			
Goal (activity) Wishes to look well dressed and groomed without too much bother. Doesn't want to spend time doing his laundry.	Name: Yusuke Oyama Characteristic: Working in sales, sloppy by nature, but wants to look neat.			
Scene	Activity scenario	Tasks		
Scene for the investigation of activity scenarios.	Description of the activity flow and efficiency of the Persona in each scene in accordance with the target of the Persona.	List of activity described in the activity scenario.		
1) Wash a jacket at home, after coming back in the evening. 2) On a day off, wash the laundry accumulated from the previous days. 3) Wash special types of clothing with lace or leather decoration.	Yusuke came back to his studio apartment late at night, after enjoying after-work dinner and drinks with his colleagues. "There is a bad cigarette smell on my jacket. I will wash it." Yusuke placed his jacket and necktie in it, and set up for the washing. The procedure was similar to just putting away clothes, finding it easy and convenient. The next morning, he took out his cleanly washed jacket with no cigarette smell on it. He was happy, feeling that he could make a good impression with customers. However, he became aware of a stain on his necktie that couldn't be removed with the usual washing procedure. He thought he could use an outside laundry service. He was relieved he found the stain before wearing it.	1) Places laundry 2) Sets up for the washing. (wash) 3) Removes the laundry 4) Learns that not all stains can be removed. 5) Takes procedure to use an outside laundry service.		
Evaluation				
Scenario check	Evaluation viewpoint	Comment		
Whether or not: - Project goal has been achieved. - Value scenario (person) can be realized. - Persona is reflected.	User side	<input checked="" type="checkbox"/> Attractiveness Uses same procedure as hanging clothes. <input checked="" type="checkbox"/> Usability Washing and only dry but also used. <input checked="" type="checkbox"/> Flexibility Automatically corrects human error.		
	Business side	<input checked="" type="checkbox"/> Priority Integrates human capital and automated laundry service complements business strategy. <input checked="" type="checkbox"/> Feasibility Realizes user's washing habits in a practical way. <input type="checkbox"/> Interoperability Difficult to evaluate. <input type="checkbox"/> Security Universal design requires no design.		
Total comment				
User's activity is attractive because washing is so easy. Products and systems which make use of the sales networks of housing builders should be investigated further.				

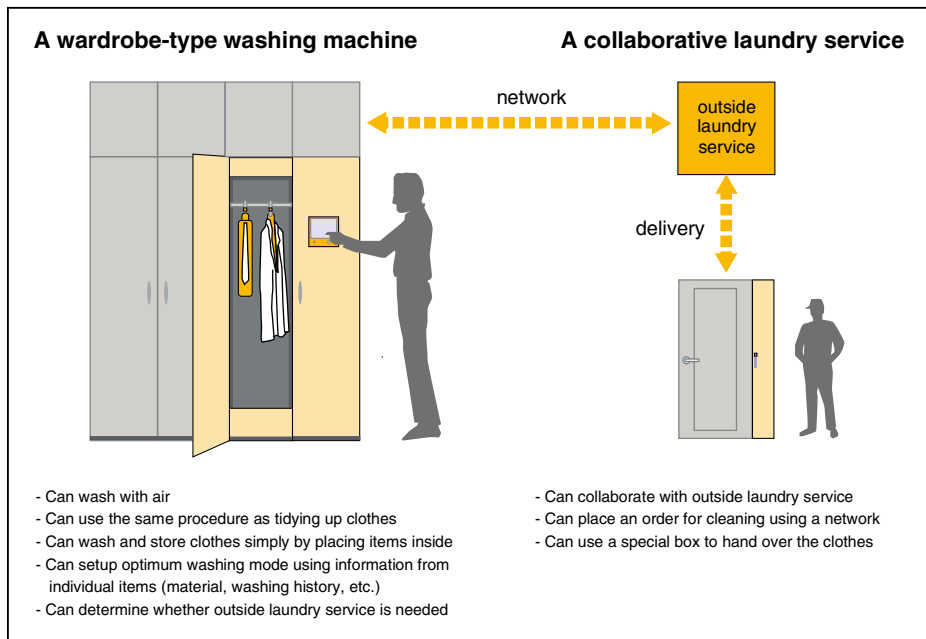


Fig. 11. Completed formats and an image of the product, system and service created by the case example

The interfaces for these three scenarios are scenes and tasks. The specification comments which are output at the end are the link between the structured scenario and the next planning document.

There is a field for the evaluation of derived scenarios below each scenario format. The Vision Centered Design Method emphasizes evaluation from both user and business aspects including four viewpoints of the user aspect and five viewpoints of the business aspect as general evaluation viewpoints. Utilize these viewpoints by marking their boxes considering the theme and goal for the project. It is also possible to add new viewpoints along with each project theme and goal. The evaluation viewpoints can be weighted and scored. Enter comments for each evaluation viewpoint in the comment field, fill in the total comment and then move to the next phase.

4 Application of the Method and the Formats

The case example shown here is created to verify usefulness and effectiveness of the formats. In this case example, the new experience values are created from the intrinsic user value and the policy of business value relevant to the theme “Washing,” and then “A wardrobe-type washing machine using an air washing function and a collaborative laundry service” are proposed as an idea for a definite product, system and service in accordance with user activities and interactions (Fig.11).

5 Summary and Future Work

In this paper, eight different types of formats developed as practical tools for the vision centered design method have been illustrated. In addition to this, a case example using these formats showed usefulness and effectiveness of the formats. We continue our activities to advance this method and its formats through a wide range of practices including practical workshops intended for business and academic parties and information exchanges.

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