- WORK IN PROGRESS -

Leren van "Place Values" - een eerste stap in de integratie van infrastructuur en ruimtelijke planning

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Samenvatting

Place Values zijn de waarde die mensen toewijzen aan het menselijke en sociale aspect van een bepaalde locatie. In dit paper onderzoeken we hoe Place Values van een gebied kunnen worden gebruikt in geïntegreerde planningsprocessen om meer kennis en begrip te krijgen van de belangrijkste waarden in een gebied als er planning zijn hier ruimtelijke ontwikkeling plaats te laten vinden. Waar hebben we het dan eigenlijk over in het gebied? Om de sleutelwaarden van een gebied te kunnen begrijpen is het van belang om de potentiële waarde van dat gebied voor belanghebbenden te kunnen identificeren. Met behulp van Social Representation Theory (SRT) leggen we de *perceptie* en *context* van belanghebbenden bloot door middel van de Place Value Identifier. In de Place Value Identifier geven respondenten aan welke plekken in hun leefomgeving ze waarderen door middel van het plaatsen van markers op een digitale kaart. Vervolgens verdelen ze punten over de twaalf thema's van de door Rijkswaterstaat ontwikkelde Omgevingswijzer om de mate van belang aan te geven. Hierna wordt een potentiele waardeverandering van een plek geïntroduceerd door een hypothetische ontwikkeling te introduceren die zorgt voor aantasting van de een gemarkeerde plekken. De geïntroduceerde ontwikkelingen zijn gerelateerd aan People (woningbouw), Planet (een zonneweide), Profit (snelweg). De vijf fasen van de SRT beschrijven de reactie op deze potentiele waardeverandering: bewustwording, interpretatie, evaluatie, omgaan met, en handelen. De eerste twee fasen gaan over *perceptie*: het bewust worden van eventuele (toekomstige) veranderingen en interpretatie van de bijbehorende implicaties. In de derde fase evalueren mensen de verandering (in hun *context*) als positief, neutraal of negatief. Na deze beoordeling tonen mensen 'coping responses' die worden gevangen in een verandering van waardering. In het laatste stadium tonen mensen gedragsreacties om verandering van hun Place Values te herzien of accepteren. Deze aanpak kan besluitvorming omtrent toekomstig grondgebruik informeren over de (af)wegingen van waarden op plekken met en zonder geplande ruimtelijke ontwikkelingen. De aanpak verduidelijkt hoe sleutelwaarden van een gebied kunnen worden gebruikt in geïntegreerde planningsprocessen.

Key words: Place Value, integrale gebiedsontwikelling, transport infrastructuur, waardeverandering

1. Introduction

New demands for spatial quality, asks for a redefinition of the scope, resistance and other negative outside events that can affect the course, quality and results of a spatial plan, are often overlooked or seen as causes for cost overruns and delays (Van Buuren, et al., 2010). A central issue in this planning process of a spatial plan is the lack of understanding of *key values* in an area. Because the plan initiative often becomes a starting point, the focus is often more on fitting a plan initiative than on the inclusive potential and value of the area. This is hardly surprising, because values of an area are hard to grasp and difficult to assess.

In different fields of study, research has been conducted on valuation related to locations. For example: citizen's value assessment (Stolp, 2006), social impacts of plans (Vanclay, 2003), social costs and benefits related to locations (Geurs, et al., 2009), biodiversity related values (Groot, et al., 2010), sustainability related principles in the SPeAR methodology (ARUP, sd), economical values, landscape values (Zube, 1987) and unpriced values (Sinden & Worrel, 1979). More related to nature, the so-called Hotspotmonitor (HSM) was developed to measure social landscape values at different spatial scales (Vries, et al., 2013) (Sijtsma, et al., 2012) (www.hotspotmonitor.eu). The HSM is an example of participatory mapping, a refined means of capturing spatial information on social landscape values (Bijker & Sijtsma, 2017). Citizen Value Assessment (CVA) was developed to make a stronger differentiation between citizens' values and expert judgements in perceived impacts on the environment (Stolp, 2006). According to Stolp (2006), Citizen Value Assessment is an assessment of "the potential impacts of planned interventions in the environment from the perspective of those citizens who are potentially influenced by them" (Stolp, 2006), because "the values individual citizens attach to particular environmental characteristics often differ (partly) from expert judgements" (Stolp, 2006). The Sustainability Check (SC, in Dutch: Omgevingswijzer; (RWS, 2014) (Heeres, et al., 2015)) responds to infrastructure planning's efforts to include all facets of sustainability (people, planet, profit) in the planning process. It is being applied by national, regional and local governments as well as private actors (Sjauw En Wa & Arts, 2016). Moreover, the Ministry of Infrastructure and the Environment is now including the instrument in its planning process.

According to Heeres (2017), a primary strength of instruments with such characteristics is their capacity to include a broad range of themes. The broad qualitative assessment that is presented makes it possible to include primary and ancillary costs and benefits of alternatives in an equal manner. This appears difficult for conventional instruments, whose main strengths often lie in providing detailed and precise information at the network scale. This information is found to be more difficult to use in interactive processes. Secondly, in early planning stages, where ideas still have to crystallize, it is difficult, or even impossible, to provide 'detailed information' using conventional instruments.

The aim of this paper is to examine how key values of an area can be used in integrated planning processes. We therefore propose an approach to identify Place Values both with - and without a plan initiative, because this link is often missing. People are place-makers: we differentiate place from space by attaching meaning and *values* to space (Brown & Weber, 2012). The places we identify become "centers of felt values" (Tuan, 1977) that emerge through experience and are influenced by culture. The values that humans associate with place are central to individual and collective decisions about

appropriate and desirable land use at multiple scales. The empirical study of place has been examined using different approaches. For example, geographers have commonly taken a phenomenological approach to place, sociologists a social constructionist perspective, and psychologists a cognitive approach (Davenport & Anderson, 2005). Regardless the approach, place values have been treated as emergent qualities of place attachment or sense of place, but not directly measured and spatially quantified. Because place values are intersubjective, they can be contested. Those differing place values may lead, as Brown and Weber (2012) state, to a conflict or a change of land use over time. Those conflicts need to be regulated in a plan-making process, which will finally end into change of 'space' (Brown & Weber, 2012).

In this paper, we will use 'place values' to define values that are related to a location. Place values are what Gieryn (2000) describes; "the value that co-constitutes 'place' out of 'space', or in other words, the values that people assign to the human and social aspect of a certain location" (Gieryn, 2000). By using this broad definition, all knowledge available on the relation between different human values within space, regardless the name-tag that it is given, could be combined to further enforce the research on the essence of place-making and investigate in further detail the reason why conflicts occur in spatial planning. But, what is this (place) value exactly and how is it constituted, and by what is it influenced? In the following paragraph, we will elaborate on these questions by using Social Representations Theory.

2. Theory

In Social Representations Theory (SRT) Devine-Wright (2009), Devine-Wright and Clayton (2010) propose five stages of psychological response to place change: becoming aware, interpreting, evaluating, coping and acting. The first two stages are about personal perception: become aware of upcoming or past place change and interpreting the implications. In the third stage people evaluate change as positive, neutral or negative. After this assessment people show coping responses such as denial, resignation or emotional reactions. People may even have feelings of grief upon loss of a place that is important to them (Fried, 2000) (Morgan, 2010). In the final stage people show behavioral responses to resist change or accept it.

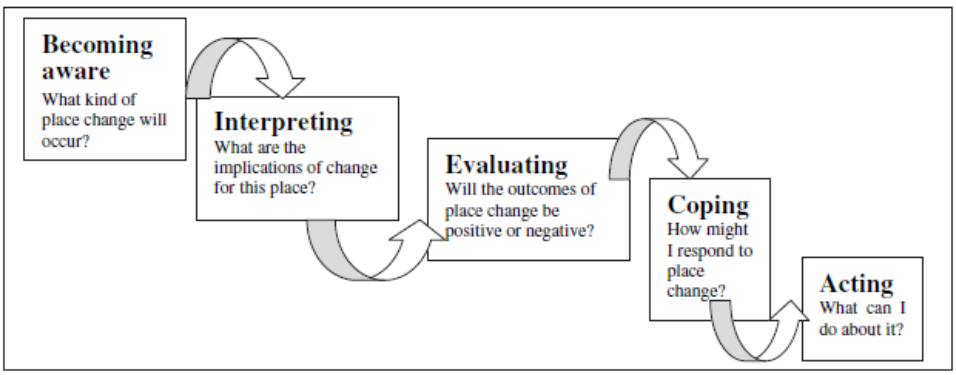

Figure 1: Stages of psychological response over time to place change (Devine-Wright, 2009)

In the following paragraphs, we will elaborate on these stages from the perspective of the *perception* (experiences, expectations, current use, time of life (other desires and

needs)), and the *context* (plan-making, group dynamics, changes of landscape) of place values.

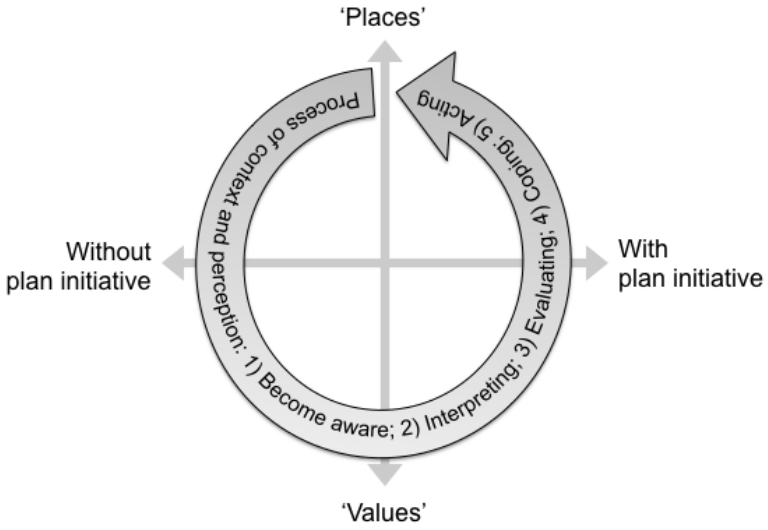

Figure 2: The process of context and perception on place values

2.1 Place Values: Perception

Not surprisingly, the perception of places is not universal within a given population or area, and differs per person and culture (Hall, 1966; Downs, 1970). Place is implicated in *becoming aware* of and interpreting change. As Gieryn (2000) states: places are not static: "places are processes" (Gieryn, 2000, pp. 468-473), and may even be regarded as individual or collective projects (Gustafson, 2001). In an attempt to conceptualize the social construction of space, cultural geographers (Holloway and Hubbard, 2001) have embraced the notion that people and communities live in a physical reality that they socially construct, selecting, ignoring and highlighting elements relevant to their purpose. According to Van Dijk (2011), to some extent they reproduce other people's constructions of a place by adopting aspects of the information that other people produce. In this communicative interpretive process concerning places, people produce representations using texts, images and maybe even other art forms. "These three phases – construction, reproduction and representation – interact, such that people constantly negotiate and revise their perception of place" (Dijk, 2011, p. 133). According to Stedman (2003), places are social constructions only to a certain extent. Places objectively differ in terms of their environmental, social and economic characteristics and these will open up or close down the possibilities open to individuals and groups to interpret proposed place changes (Van der Horst, 2007).

'Place Value' is therefore being seen as a relative term and is often used as part of a hierarchy or scale. As mentioned by Zube, 'the value of something' increases by the growth of the desire or the need for a thing (Zube, 1987). Furthermore, values can have a hierarchy and are related to each other. A value could be seen as a level of importance (Groot, et al., 2010). This level of importance is led by a greater desire or need. Those desires and needs are an essential part of cultures and are also valid for place values (Zube, 1987). The influence of desire and needs on the valuation of places could be enlarged by the experience a person has with the area. A need can be different, but at the same time valued similarly, or vice versa. Also, perceived value on a project could

change over time. When details are more known, this could change the valuation of the project (Sweeney & Soutar, 2001). For example, the presence of a new road could be valued more useful than expected.

The reality of integrated planning and decision-making also illustrates that most actors have their own specific perception of reality. These perceptions are based on beliefs. Sabatier (1988) discerns three types of beliefs: deep core beliefs, policy core beliefs and secondary aspects. Deep core beliefs contain basic assumptions about reality. Assumptions about human nature or epistemological beliefs, for example, are part of deep core beliefs. Policy core beliefs are the assumptions of actors about the content of the policy that has their interest. Secondary aspects are more interchangeable aspects of the policy that actors easily adjust during the process. Sabatier (1988) poses first that deep core beliefs are rarely changed as a result of negotiation of actors. Secondly, he poses that policy core beliefs are also rarely changed; nevertheless, policy core beliefs are changed more often than deep core beliefs. Secondary aspects, however, are changed and accepted more easily during the process of negotiation.

As stated before, diverging values can lead to conflicts. But what will people do in case of a conflict resulting from conflicting values? Hamersma (2017) explains that when people are dissatisfied with their current household, people: 1) remain living in the same house and accept the situation, 2) change their location preferences and thereby diminish the feeling of dissatisfaction, 3) decide to protest and try to change the location (plans) itself, or; 4) move to a new location which better fits their location preferences. So a conflict would not always lead to protests, but it could lead to a lower appreciation of the environment, and even moving of people to other places. In planning, the focus is mostly on the third group, the group of people that protest. But, the 'silent minority' of unsatisfied people or people who mitigate their preference or location is often ignored (Firth, 1998).

The framework presented in figure 1 does not presume that attachment automatically leads to resistance to change – the outcome of evaluation can be positive or negative, depending upon whether change is regarded as enhancing or disrupting a place. It is the symbolic meanings that people adopt when interpreting change, about the specific changes proposed and how compatible they are with the existing place, which are critical in shaping evaluation and ultimately, the likelihood of opposition or supportive behavior. To fully grasp the process of interpretation, it is necessary to go beyond a rather individualistic socio-cognitive approach to place (e.g. (Stedman, 2002)). Plan-making, story-telling, designing plans or future visualizations are not only focused on changing the perception of the future, but also the perception of the current state of the landscape and therefore change how people value certain areas (Dijk, 2011).

2.2 Place Values: Context

Moreover, place values are a main driver in spatial plan-making and should be taken into account in order to prevent financial and political losses (Firth, 1998). Similarly, Charles Hoch (2007) presents a critique of the rational definition of plan-making and attempts to reconnect the theory of plan-making with cultural prophecy or sentiment, emotional attachment or institution, and other sources of judgement that are considered to be irrational or non-rational. He emphasizes the intentionality typical of the human capacity to devise plans and act accordingly, confronting Bratman's (1987) emphasis on practical reasoning in the formation of intentions with the selective focus on

the logical and the rhetorical by Hopkins (2001) and Innes and Booher (1999), respectively.

Whether Place Value necessarily leads to negative evaluations of place change is contingent upon the form and intensity of attachment, as well as the interpretation of change (Devine-Wright, 2009). The type of attachment is also relevant. Where the object of attachment is perceived more social than the physical context (Hidalgo & Hernandez, 2001) - that is, a feeling of belonging with the local community rather than attachment to the local environment per se - interpretation about whether the project will directly enhance the local community, rather than its environmental impacts, will predominantly influence public responses.

Tuan (1977), in this sense, describes the context of places as what people make from this space through time. For example, a castle as a thing that consists of stones, wood and patina, but by knowing it was probably the castle where Hamlet have lived, it becomes a different castle. "None of this should be changed by the fact that Hamlet lived here, and yet it is changed completely. (…) The courtyard becomes an entire world, a dark corner reminds us of the darkness in the human soul, we hear Hamlet's 'To be or not to be'." (Tuan, 1977, p. 4). The experience resulted in a transformation (through time) of a space into an area filled with stories, feelings and attachment: a place.

Referring to Brown and Weber (2012), assigned values change more rapidly than general values and beliefs. Zube (1987) underlines the importance of those values, stating that if a spatial plan is fitting into a person's value orientation, it is likely that this person is supportive towards potential future land use change. The question is why, how and when those place values change. The environment of a place could change, for example by building a new road. This could have benefits, as well as drawbacks. But in both cases it will change the value of a place.

In literature on place attachment, the term *place disruption* is being used for what we, in this paper, mean with value change of a place. Disruption to place is characterized by extent, rapidity and control, and unfolds over time as individuals make sense of what has happened or is about to happen, and attempt to cope accordingly (Devine-Wright, 2009). In terms of temporal unfolding, both Brown and Perkins (1992) and Inhalan and Finch (2004) propose three-stage models of place disruption, distinguishing between predisruption, disruption and post-disruption phases hinging on a particular event. According to Brown and Perkins (1992), pre-disruption can involve a person preparing for change by anticipating possible futures, for example by imagining the act of departure in cases of voluntary migration. The second stage is the disruptive event itself, triggering the negative emotional consequences typical of disruption such as anxiety, grief and loss (Fried, 2000; Fullilove, 1996). The third stage involves coping with change by seeking to form new place attachments, for example following temporary or permanent relocation.

3. Approach

In our approach, we want to know how a living environment is being valued (place values) from different contexts and perceptions by the various stakeholders. We divide this process of context and perception in two phases: 1) Identify place values without plan initiative (as a 'zero measurement'), and we use the stages of the Social Representations Theory to; 2) Identify place values with plan initiative. The process starts with 'becoming aware' of place and ends with 'acting'(/modify) the 'place'.

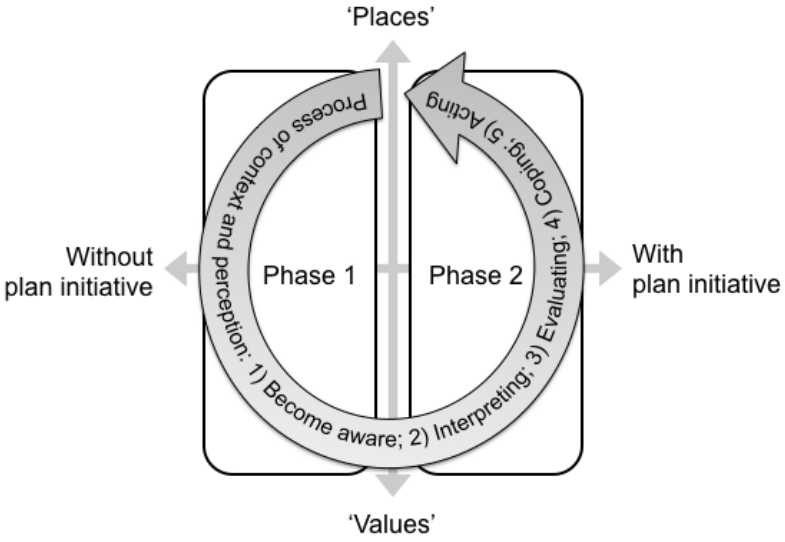

Figure 3: Two phases in the process of context and perception

3.1 Phase 1: Identifying Place Values without plan initiative

In the first phase, place values will be identified without any (mentioned) plan initiative by: 1) Marking three digital representing 'place values' in their living environment on a web map, and 2) Distribute 100 points over twelve sustainability themes to indicate priorities and degree of importance to each theme. These sustainability themes are adapted from the Sustainability Check, that aims at gaining insight into the potential for sustainable area developments around transport infrastructure initiatives (RWS, 2012; 2014; see also (Heeres, et al., 2015)). As mentioned in the introduction, the Sustainability Check is being applied by national, regional and local governments as well as private actors (Sjauw En Wa & Arts, 2016). The twelve themes represent a broad perspective on sustainable development and can be linked to the People-Planet-Profit (PPP) pillars of the triple bottom line (Elkington, 1997). The theme 'investments' was adapted to 'development potential' in order to have twelve positively formulated themes.

The web based tool (Place Value Identifier) consists of an opening screen for the participant to read the context and purpose of the survey, followed by a screen with questions on sex, role (citizen or expert (read: project manager), age and zip code), and then a Google Maps application that allows the participant to drag and drop three digital markers representing 'place values' in their living environment onto a web map.

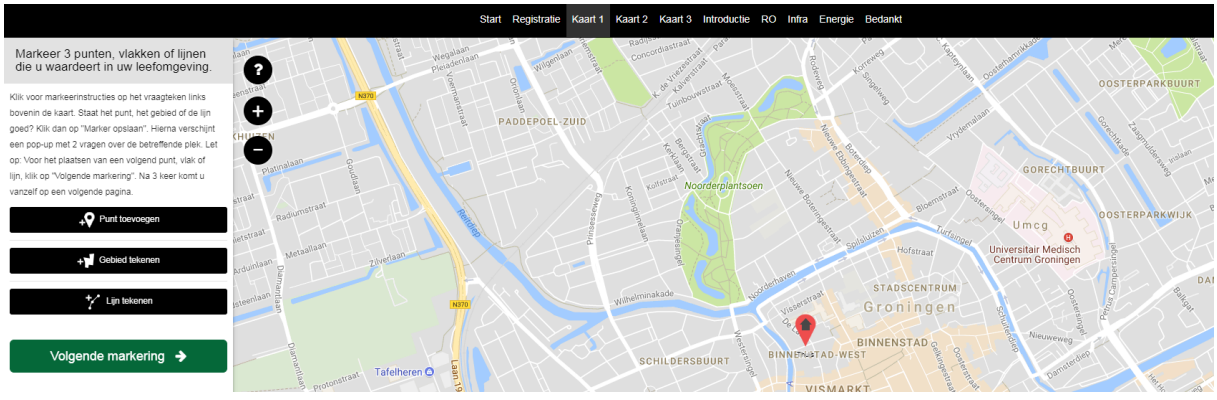

Figure 4: Digital marker representing 'place values' in living environment onto web map

The instructions request the participant to "mark three places (points, areas or lines) you value in your living environment. Click on a marker and drag it onto the relevant map location". After placing a marker, participants were asked to give a description of the marked place and indicate whether they think the place should be maintained, strengthened, improved or linked (Ministry of Infrastructure and the Environment, 2015) and why. The differences between these four options is being presented in the figure below:

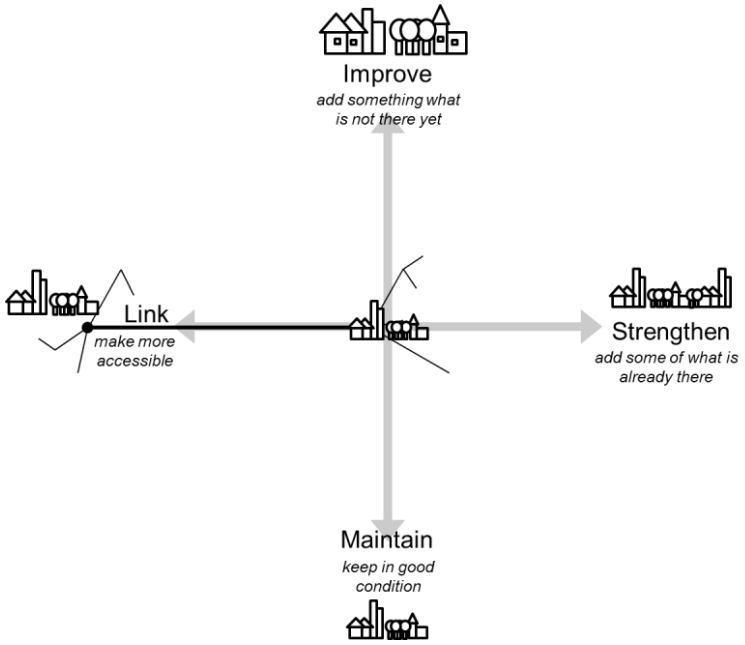

Figure 5: Difference between the four indications

The different types of markers (point, line/route or area) placed and their spatial locations were recorded for each participant. Following completion of the mapping activity (placing markers), participants were directed to a new screen and provided with the twelve themes from the Sustainability Check. Here, the respondent distributed 100 points over the twelve themes to indicate priorities and degree of importance to each theme. The data of this first step is being labeled as the ´zero measurement´ of (place) values.

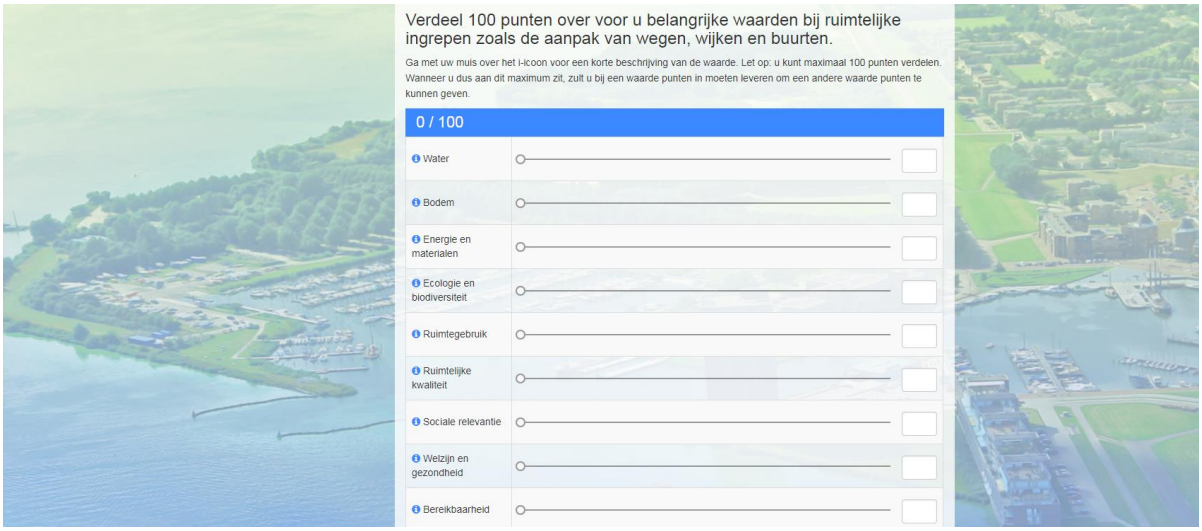

Figure 6: Distribution of 100 points over the twelve themes to indicate degree of importance

3.2 Phase 2: Identifying Place Values with plan initiative

In the second phase, the stability of the place values which are identified in the first phase will be tested by introducing a plan initiative. Here, the respondent gets the possibility to change the distribution of the 100 points over the twelve themes.

First, to meet the first 'becoming aware' phase of the SRT, a video is being presented about the Environment and Planning Act (Ministry of Infrastructure and the Environment, 2017). In the video, the respondent is being informed about weighing frameworks and how citizens can also use these frameworks to influence spatial quality. After seeing this video, the second 'interpreting' phase of the SRT is being tested by presenting three scenarios of a plan initiative (related to People, Planet, Profit: 1) The government wants to build a new road or a road widening (Profit); 2) The government wants to develop an energy park (Planet); 3) The government wants to develop a new housing facility (People)). In this approach, strategic normative focus could be the drive to a robust, sustainable alliance in the original Brundtland meaning of the word; that is, focusing on profit (i.e. economically sound), people (i.e. social support) and planet (i.e. spatial and environmental embeddedness). Also is mentioned that a marked places could be affected. Here, the participant starts to interpret the presented implications. Then, as the third stage of the SRT, the participants are being asked to evaluate the presented 'change' as positive, neutral or negative. To meet the fourth 'coping' stage of the SRT, the participant is asked: 'Would you like to change your distribution of the 100 points over what you see as important aspects in spatial interventions?'. To meet the fifth 'acting' stage of the SRT, on the next page of the survey, the participant is being asked whether he or she want to modify the three marked places. Here, the participant can replace up to three markers by another valued place.

Data collection concluded with participant completion of the survey questions. Study participants had the option to return to the website later to adjust previously-placed markers. The website will be available to participants for approximately three months. The survey will first be conducted in the Netherlands.

4. Issues for discussion

The Place Values that we have identified in the literature assists in our understanding of the importance of Place Values in the area and the infrastructure network. Place Values are related to each other and can have a hierarchy: a Place Value could be seen as a level of importance. Also, the findings of this paper have a number of practical implications which are already being recognized by Rijkswaterstaat.

The presented approach is a first stage in a series of experiments: a three stage evaluation process through time towards improvement of informed decision-making in integrated planning (see figure 7 below). The introduced approach is stage 1 of this evaluation process: Intelligence, where we work towards an understanding of key values of an area and criteria on which to evaluate plans by identifying place values.

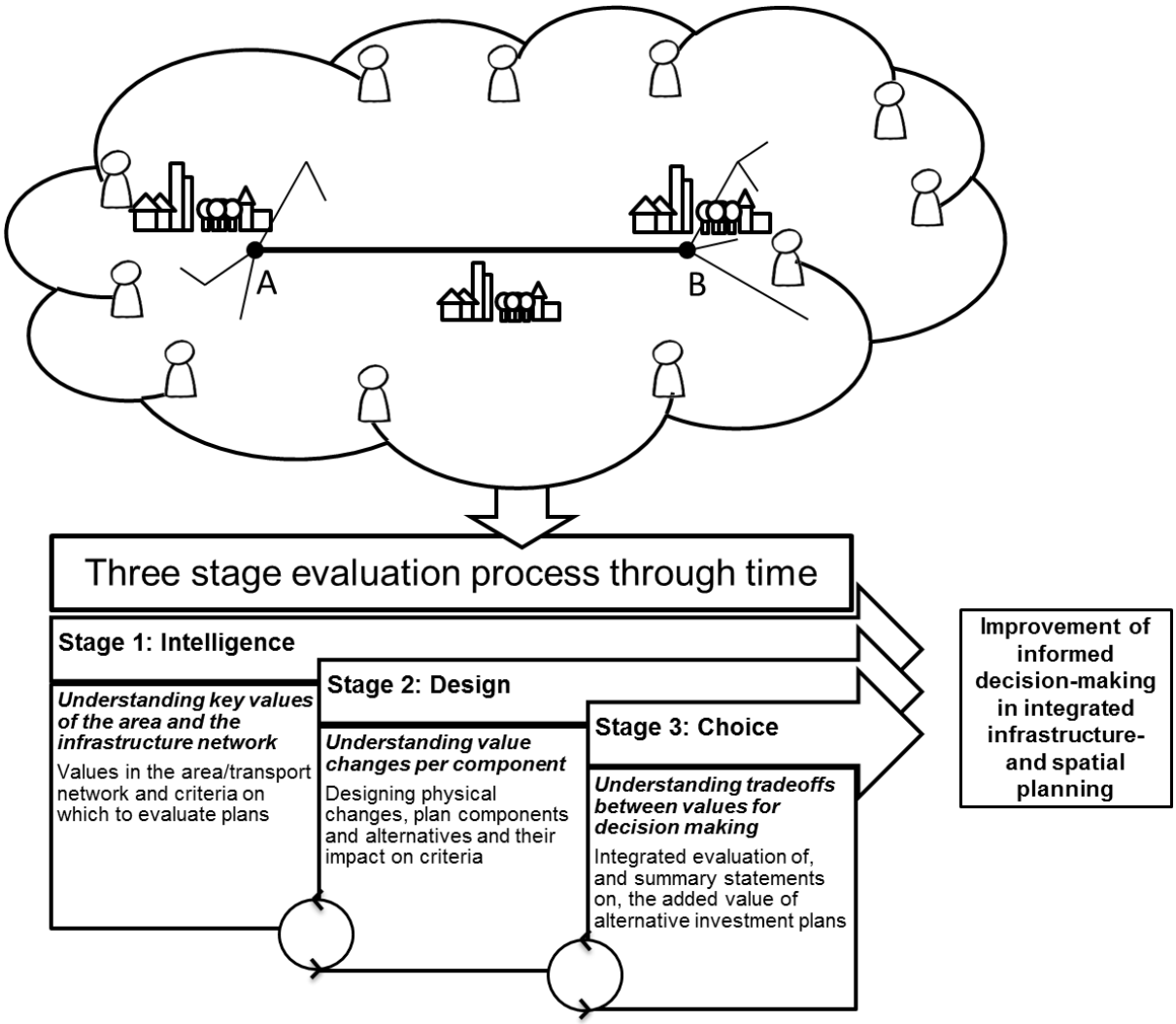

Figure 7: Towards improvement of informed decision-making in integrated planning

The approach presented in this paper uses two ways of identifying these place values to get a handle on value in order to match policy decisions. We found some issues for discussion on this approach. First, both citizens and experts (read: project managers) are being asked to fill out the survey. What kind of difference can we expect and how can we interpret these differences? Second, how can these insights on place values being generalized towards development potential for prospective land use allocation or management decisions? Third, how do we interpret the trade-offs and potential consequences of (place) value changes? Fourth, how is this approach helping us to reach improvement of informed decision-making and consensus on synergies in integrated planning?

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