A Call for Value Literacy in Port City Transitions

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A Call for Value Literacy in Port City Transitions

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ABSTRACT

Over the last decades, values have been re-addressed in planning, policies, businesses, heritage and education. While these fields seem to agree on the importance of values, it is often unclear what actors mean by values, and how they use these values to shape decisions. A decade after a global financial crisis, in the midst of a global pandemic, and on the eve of global climate emergencies, difficult choices need to be made to safeguard a sustainable future. These choices call for value-driven deliberations, especially in the globally connected, multi-problem environment of the port city. To do that, however, stakeholders need to know what they mean when they talk about values, and how to deliberate them. In other words: they need to be *value literate*. In this article, we study the concept of value and values in the context of port cities in the past, present and future. After an analysis of historical uses of values in port cities, we assess six projects that explicitly and implicitly deal with values in port cities, to explore methods or strategies that can help to elicit values in different phases of decision making processes.

KEYWORDS
Value Literacy; Methodology; Transitions; Port City Eco-system; Complexity

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Why Values Matter in Port Cities

Port city territories are characterized by a multiplicity of stakeholders with varying interests. Within this multiplicity, conflicts over the use of space and resources are inevitable. At the basis of these conflicts lie not only clashing interests, but also a variety of conflicting beliefs and values. Whereas ports often focus on economic development, technological innovation and industrial development, cities tend to interpret economic success more broadly, taking into account citizen wellbeing and liveability. Both sets of interests are valid, but they often do not align into a single shared approach towards the spaces of and in the port. To move forward at a time of multiple urgent challenges (such as sea level rise, urbanization, energy transition), port cities need ways to identify and analyze the values and interests that lie at the core of these challenges to be able to deliberate and formulate common goals.

Moving forward in such a complex context requires a new skill that lets stakeholders look beyond polarized viewpoints and seemingly dichotomous interests (such as progress and clean air, or wellbeing and wealth). In the current article, we refer to this particular skill, as 'value literacy'. After defining the concepts of values and literacy, we give a historical overview of values in port cities. In the second part of this article, we present six case studies that have been developed in the context of Delft Design for Values (DDfV, an interfaculty project at Delft University of Technology) and the PortCityFutures research group of the Leiden Delft Erasmus university collaboration. Through these case studies, we explore two things: first, the complexities of the context of port cities, and second: the act of teaching and learning as a tool to develop **value literacy**. Differently put, these case studies do not only refer to education projects as a safe space to learn, but also they also illustrate how decision making processes are dealing with values, knowledge and skills that help acknowledge the existence of different values and subsequently take them into account for value-based design.

What are Value(s), What is Literacy?

The noun *value* (a number, a monetary price or worth), the verb to *value* (to appraise and consider something as important) and the plural noun *values* ("the beliefs people have, especially about what is right and wrong and what is most important in life, that control their behaviour") mean a myriad of different things.[1] Whereas the different meanings and uses of the word value may be confusing, they do share linguistic roots and, as anthropologist David Graeber argues: "the fact that we use the same word to describe the benefits and virtues of a commodity for sale on the market [...] and our ideas about what is ultimately important in life [...], is not

1 Based on and quoted from the lemma *Value* in the Cambridge Dictionary.

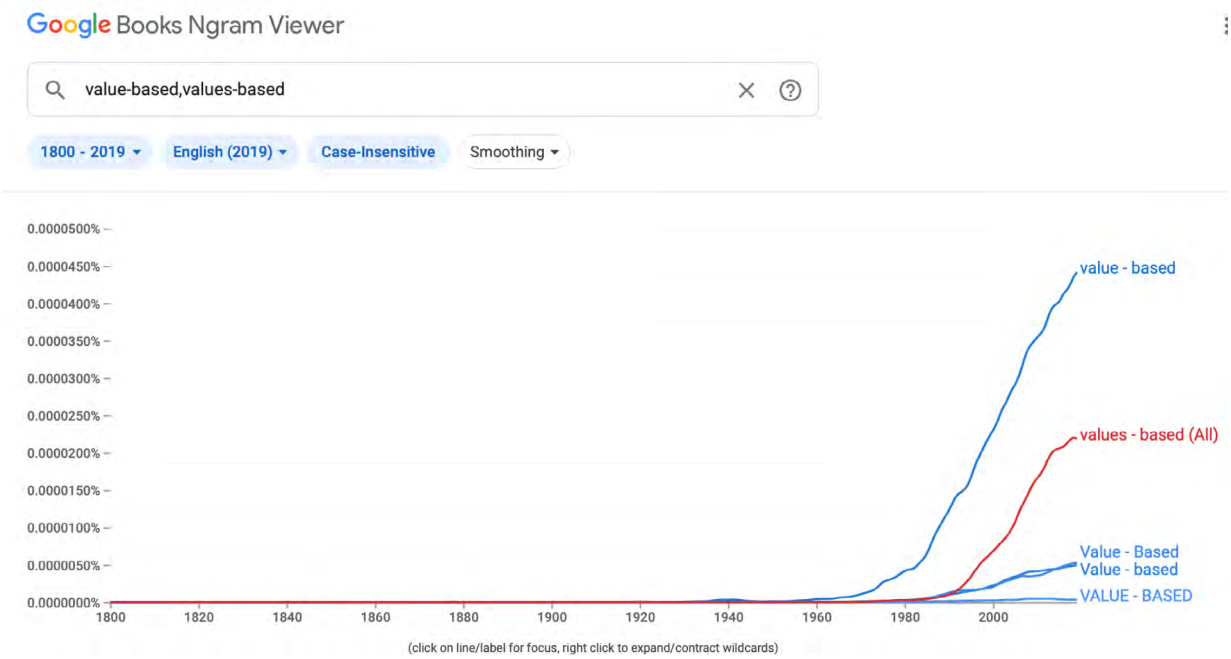

FIG. 1 A Google N-Gram search shows a rapid increase in use from the 1980s onward for the word 'value-based', and from the 1990s onward for 'values-based' (in the Google Books English language repository).

a coincidence. There is some hidden level where both come down to the same thing."[2] What coincides within these different meanings has to do with the act of valuing or adding value, as a means of production. The production of monetary value and personal values (such as beauty and well-being, but also the value of domestic work, for example), Graeber argues, has become separate only since the industrial revolution. His statement that it is "value that brings universes into being", alludes to the imagination of groups and individuals: through their values, they imagine what their environment is and what it should or could be.

Over the last three decades, value-based or value-driven techniques saw an increased popularity, for example in discussing necessary measures to mitigate the consequences of climate change. Here, values are often linked to education: they can be 'shared' in the sense of teaching or educating, or 'shared' in the sense of having something in common. This led, for example, to slogans like UNESCO's *Change minds not the climate*, implying that to stop climate change, human agency is required to deal with large, structural changes. Businesses (re-) discovered values in the 1990s, with 'value-based' or 'values-based' corporate strategies and identities, such as IKEA **[Fig. 1]**.[3]

These relatively new uses of values are not without challenges. Questions on *whose* values are dominant, and which power structures are behind

2 David Graeber, "It Is Value That Brings Universes into Being," *HAU: Journal of Ethnographic Theory* 3, no. 2 (June 2013): 219–43.

3 See for example Bo Edvardsson, Bo Enquist, and Michael Hay, "Values-based Service Brands: Narratives from IKEA," Managing Service Quality: An *International Journal* 16, no. 3 (May 2006): 230–46, https://doi.org/10.1108/09604520610663471.

them come to the rise when values are used within decision making processes. Connected to such criticisms is an approach of science, policies and designs according to the idea "that social, ethical, and political values should have no influence over the reasoning of scientists, and that scientists should proceed in their work with as little concern as possible for such values".[4] Several scientists from various fields have argued, however, that this 'value-freedom' is problematic for several reasons. Heather Douglas, for example, argues for a 'value-neutral objectivity', a position that is "balanced or neutral with respect to a spectrum of values".[5] Economist Lans Bovenberg sees a "simultaneous advocacy" for values that are less dominant in public discourse as the basis of a good economy. Shared values create trust, and trust is crucial for relational economics that create value, rather than transactional economics that subtract value elsewhere: "By voluntarily committing to the ethical value of the simultaneous promotion of interests, decision makers create wealth rather than destroy value by robbing others." Simultaneous advocacy, according to Bovenberg, is an ethical value in itself.[6]

Another way of negotiating values was proposed in the world of design in the 1990s under the moniker of 'Value Sensitive Design' (VSD). Whereas this method also endured criticism, Janet Davis and Lisa P. Nathan argue for a pluralistic stance: that VSD should not recommend any position on the universality or relativism of values, but rather leave VSD researchers and practitioners free to take and support their own positions in the context of particular projects.[7] Yet, in order to be sensitive to values, it is necessary to recognize them when discussing or deliberating within a certain project or process. Since values are tacit and intangible, however, this can be difficult. In her work on tacit knowledge in design processes, Elise van Dooren addresses this difficulty.[8] She connects the sensitivity of values to the contextuality of knowledge in general: what someone knows, or what they think they know, greatly affects their position within a discussion or deliberation. This is also the case with values, which are often even more tacit: they can be of a personal, professional or cultural nature, ranging - in the case of the architect - from what is good architecture to what is morally good.[9] Van Dooren argues that while those values to the individual feel 'obvious' and are often unconscious, in the process of teaching, designing,

4 Heather E. Douglas, *Science, Policy, and the Value-Free Ideal* (Pittsburgh: University of Pittsburgh Press, 2009), 1, https://doi.org/10.2307/j.ctt6wrc78.

5 Ibid., 123.

6 Lans Bovenberg, "Where is the Love, over Waarde en Waarden" (Rotterdam: Erasmus University Rotterdam, 2019), https://pure.uvt.nl/ws/portalfiles/portal/45904877.

7 Janet Davis and Lisa P. Nathan, "Value Sensitive Design: Applications, Adaptations, and Critiques," in *Handbook of Ethics, Values, and Technological Design*, ed. Jeroen van den Hoven, Pieter E. Vermaas, and Ibo van de Poel (Dordrecht: Springer, 2015), 1–26, https://doi.org/10.1007/978-94-007-6994-6_3-1.

8 Elise Van Dooren, "Anchoring the Design Process," A+BE | *Architecture and the Built Environment*, October 17, 2020, https://doi.org/10.7480/ABE.2020.17.5351.

9 Ibid., 36.

or deliberating, these values need to come to the surface to be able to properly discuss them. The ability to do so requires knowledge about the tacitness of values, and skills to make them explicit.

This set of knowledge and skills is central to what we call 'value literacy'. The concept of literacy - literally the ability to read and write - has recently been more broadly interpreted as competence or "knowledge of a particular subject", for example in the concepts of 'digital literacy' or 'financial literacy'.[10] In this article, however, we stay closer to the original meaning of the word literacy as a language-based skill that allows social interaction and embeddedness, or as the Canadian institute for Education in Alberta defines it: "...the ability, confidence and willingness to engage with language to acquire, construct and communicate meaning in all aspects of daily living."[11] Value literacy, then, is the knowledge of one's own tacit values, and the ability to identify and phrase these values in a conversation. Moreover, in line with Graeber's definition of values as shapers of our imaginaries, value literacy enables someone to imagine their environment and deliberate or negotiate their future.

This notion of imagining in order to shape possible futures based on values is particularly important, because the dominance of current spatial imaginaries can lead to individual inertia. Even when a stakeholder attaches value to, or is emotionally involved with the outcome of a project, when they feel they have no sufficient agency within the matter, they tend to withdraw or shut down.[12] Furthermore, while fearful images of the future might attract attention to problems, they are not sustainable ways to engage stakeholders, argue Saffron O'Neill and Sophie Nicholson-Cole.[13] They do, however, state that images "imagery and icons that link to individuals' everyday emotions" can make a claim to someone's value system, and activate them.

Changing Values in Port Cities

The need to make implicit, unconscious, tacit or seemingly 'obvious' values to the fore is especially important in port cities, which we often associate with tangibility, toughness and materiality. In ports, we can measure the value of the standard unit of containers, TEU (Twenty Foot Equivalent Units), and profits per shipped container. Values such as inclusiveness, health and environment might seem 'obvious', but in reality need to be

10 Cambridge Dictionary.

11 "What Is Literacy?," Alberta Education, accessed December 16, 2021, https://education.alberta.ca/literacy-and-numeracy/literacy/everyone/what-is-literacy/.

12 See, for example, Susan D Moeller, *Compassion Fatigue: How the Media Sell Disease, Famine, War, and Death* (New York: Routledge, 1999).

13 Saffron O'Neill and Sophie Nicholson-Cole, "'Fear Won't Do It': Promoting Positive Engagement With Climate Change Through Visual and Iconic Representations," *Science Communication* 30, no. 3 (March 2009): 355–79, https://doi.org/10.1177/1075547008329201.

deliberated and negotiated, often after the damage is done. Port governing systems, moreover, often hold dominant narratives about the importance of economic growth for the wealth of citizens.

Port cities do have long traditions of value-based networks, which are often related to port interests or a 'maritime mindset': in order to maintain their position in the global maritime network, they had to quickly and decisively adapt to political, economic, social or technological transitions.[14] Historically, private and public stakeholders built coalitions to address these shared problems. This was possible because these actors had shared interests (maintaining transnational trade), but also values that went beyond their mutual competition, and were rooted in, for example, faith-based communities, philanthropy, or informal clubs and networks.[15] An example is the Hamburg-based *Versammlung Eines Ehrbaren Kaufmanns zu Hamburg*, the VEEK. The VEEK has existed since 1517 to promote consistency, cosmopolitanism and reliability. The group has built on long-standing traditions to practice contemporary economic ethics: such as fairness, working on time, and correctness.

Port cities have also been at the front of value conflicts: especially after the industrial revolution and toward the end of the 19th Century, the low wages of port workers and raising awareness of inequalities resulted in social unrest, strikes, and organization into unions. This powerful push-back caused elites in power to re-evaluate their values and - sometimes on their own initiative, sometimes forced by legislature - to raise wages and improve labor conditions. The *Scheepvaartvereniging Zuid*, a Rotterdam-based employers network, for example, issued rules and laws based on values of 'good employeeship', doing for the workers "that which is not required by law."[16]

In the second half of the twentieth century, these close-knit networks - in which port and city were entangled - dissolved, or at least lost their power within the public realm. Containerization and globalization caused companies to lose touch with their cities of origin, while democratic movements protested the power of elites that had strong ties to big business. Values such as 'communication' and 'transparency' aimed to open up negotiations on the future of the port city to the interests of citizens as well, rather than relying on the profits that were made in the port to trickle down to the

14 Carola Hein, "Temporalities of the Port, Waterfront, and the City," in *City on Water,* ed. Guenter Warsewa (Wroclaw: Association of European Schools of Planning, 2016), 36–45.

15 Robert Lee, "The Social Life of Port Architecture: History, Politics, Commerce and Culture," in *Standentwicklung Zur Moderne - Urban Development towards Modernism*, ed. Frank Pieter Hesse (Berlin: Hendrik Baesslerverlag, 2012), 33–52, https://journals.ub.uni-heidelberg.de/index.php/icomoshefte/article/view/20425; Carola Hein and Dirk Schubert, "Resilience, Disaster, and Rebuilding in Modern Port Cities," *Journal of Urban History* 47, no. 2 (March 2021): 235–49, https://doi.org/10.1177/0096144220925097.

16 Matthijs Dicke, Paul van de Laar, and Annelies van der Zouwen, *In het belang van de haven: een eeuw Scheepvaartvereniging Zuid* (Zutphen: Walburg Pers, 2007).

city. New coalitions gave voice to disenfranchised groups challenging port pollution and expansion.[17]

Technological and economic arguments, however, remained at the core of the port city rationale, and do so up until the present day. In part, this is because of path dependencies in the large institutions that are part of port city governance, as Paolo De Martino argued in his 2021 dissertation for the case of Naples and Carola Hein and Dirk Schubert for Rotterdam, London and Hamburg.[18] Crucial here as well, however, are the tacit and implicit values and interests within port city decision making that are representative of the port city reality, but also performative of what some call the *spatial imaginary*: "stories and ways of talking about places and spaces that transcend language as embodied performances by people in the material world".[19] These stories and ways of talking can inform and influence strategic narratives, but also the thinking of citizens and their agency within processes regarding their living environment.

New Negotiations, New Values?

In order to take up the multifaceted challenges that port cities face, it is important to be aware of the tacit knowledge and implicit values that inform decision making processes. Traditional value conflicts in port cities, such as the conflicts between profit and livability or between global connectedness and local wellbeing, are still very much relevant for port city deliberations. New conflicts, such as profit in the short term and climate safety in the long term, further complicate decision making processes. Yet, deliberations of values among a broad spectrum of stakeholders are far from common practice in the development of port city areas.

With many challenges facing port city regions - from the production of fossil free fuels to rising sea levels, and from housing shortages to poor labor circumstances of seafarers and truckers - we argue that processes of development in port cities can benefit from making tacit values (that may be obvious to some but unknown to others) explicit. Here, we do not argue that value deliberations should be used to let all stakeholders agree to a certain preordained plan or strategy. Rather, we follow ethnographer David Mosse's argument that in order to implement good policy, the process needs to include the right amount of stakeholders and

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17 Dirk M. Koppenol, *Lobby for Land: A Historical Perspective* (1945-2008) *on the Decision-Making Process for the Port of Rotterdam Land Reclamation Project Maasvlakte 2* (Amsterdam: Uitgeverij Boom, 2016).

18 Paolo De Martino, "Land in Limbo," A+BE | *Architecture and the Built Environment*, 2021, https://doi.org/10.7480/ABE.2021.09.5813; Carola Hein and Dirk Schubert, "Resilience and Path Dependence: A Comparative Study of the Port Cities of London, Hamburg, and Philadelphia," *Journal of Urban History* 47, no. 2 (March 2021): 389–419, https://doi.org/10.1177/0096144220925098.

19 Josh Watkins, "Spatial Imaginaries Research in Geography: Synergies, Tensions, and New Directions: Spatial Imaginaries," *Geography Compass* 9, no. 9 (September 2015): 508–22, https://doi.org/10.1111/gec3.12228.

skilled, open-minded project leaders who recognize the diverse values and interests and know how to implement them in deliberation processes. He argues that values need to be translated and brokered, that goals and interests need to be visited and revisited: "The differentiation of practical interests around 'unifying' [...] project designs is a consequence of successful enrolment, and a condition of stability and success. But it also requires the constant work of translation (of policy goals into practical interests; practical interests back into policy goals), which is the task of skilled brokers (managers, consult ants, fieldworkers, community leaders) who read the meaning of a project into the different institutional languages of its stakeholder supporters."[20]

This process of back and forth is not linear or even circular but rather fuzzy. In this article, we benefit from a selection of existing educational and research projects that are part of our interdisciplinary research group PortCityFutures, as illustrations of possible strategies toward value literacy. We revisit these projects and analyse their discourse to see in which ways they already, implicitly or explicitly, address values in their process. In doing so, we have two objectives: first, to identify and analyse the tools that are already available to approach values as part of a port city culture or mindset, and second, to assess these tools as possible steps toward teaching and learning value literacy. These steps, in theory, account for the identification of values in different phases of the process, whether that process is a design, a policy or a (development) project. In the next section, we motivate our approach.

Five Steps towards Value-Based Processes in Port Cities

Being part of two larger interdisciplinary programs (Delft Design for Values and PortCityFutures), we take stock of different experiences of developing value-based design methodologies, and of exploring questions of space, society and culture through the lens of port cities. In a selection of projects we have assessed their capacity to contribute to value literacy in different phases of the respective (design or policy) process. Because values are often implicit, we untangle the process into diverse value-related stages: arguing that values need to be identified and collected, visualized and/or conceptualized, and discussed or negotiated, to inform the next step of a value-based process. For each project, we identify the following:

- Which phase(s) within a process does this project represent?
- Who is the object and who is the subject, or: who learns and who teaches?

20 David Mosse, "Is Good Policy Unimplementable? Reflections on the Ethnography of Aid Policy and Practice," *Development and Change* 35, no. 4 (2004): 639–71, https://doi.org/10.1111/j.0012-155X.2004.00374.x.

- What is the topic? Is value literacy a means or an end?
- How can we improve these diverse approaches to increase value literacy?

1 - Identifying and collecting values

A value-based approach needs to start with identifying the values that are embedded in the physical spaces and in the minds of the people who occupy these spaces. There are multiple approaches/methodologies to identify and collect values. Within PortCityFutures, for example, we often use rather classic ways of identifying, with anthropologists gleaning values through interviews and fieldwork, and historians identifying values in archives or primary literature.

An example of a research project with an anthropological or ethnographic approach is from anthropology graduate Sarah Sannen, who interviewed inhabitants of Pernis, a village that is surrounded by the port.[21] Whereas many people in Pernis still work in the port, Sannen states that what they value about their town is not only about livelihood. Rather than having "...a working relationship with the port [...] the relationship with the harbour is centred around ideas of beauty and progress." While these values or feelings may not be measurable or tangible, Sannen argues that they are there in the minds of port city dwellers, workers, policy makers and visitors. They therefore shape urban imaginaries and narratives, but also the built reality of the city.

To identify the values that have landed in this built reality can be a next step in a value-based process. Here, the perspective of the researcher changes from personal stories to objects through observing the built environment. In his teaching, Maurice Jansen organized an *Instawalks* project for the minor Port Management & Logistics at the Erasmus University Rotterdam. Accommodating students with diverse academic backgrounds (economy, business or law), the minor aims to "make the connection between the past and the present in such a way that the younger generation gets engaged and finds a future in the port-city ecosystem". Based on specific themes (like entrepreneurship, cranes, cruise ships, or people's traces through time), each team created an Instagram account, walked around the port city to take related photos, and posted these with an explanatory caption. This way, over three years, 36 accounts have been created that identify how maritime values are represented in public space, and collected them in a publicly accessible place.[22] A photo-ethnographic

21 Sarah Sannen, "Maritime Mindsets of Rotterdam's Port Communities," portcityfutures, April 23, 2020, https://www.portcityfutures.nl/news/maritime-mindsets-of-rotterdams-port-communities-0.

22 Maurice Jansen, "Port-City Instawalk, an Educator's Approach on Port-City Relationships," *AIVP* (blog), January 15, 2021, https://www.aivp.org/en/newsroom/port-city-instawalk-an-educators-approach-on-port-city-relationships/.

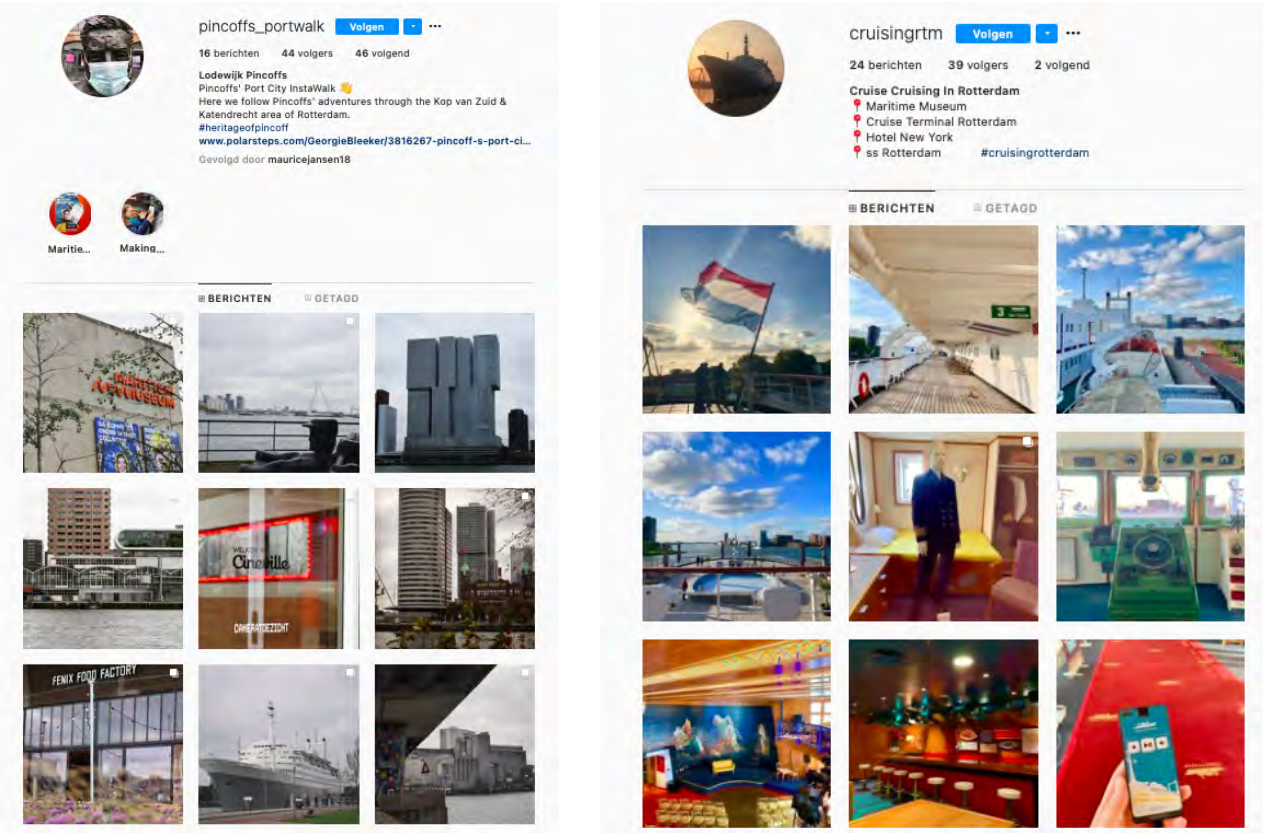

FIG. 2-3 Two examples of Instagram feeds of *Instawalks* in Rotterdam from Jansen's project (https://www.instagram.com/pincoffs_portwalk/ and https://www.instagram.com/cruisingrtm/).

approach like *Instawalks* therefore can serve as a tool not only for students, architects and urbanists, but also for policy makers to recognize the existing qualities in a place - particularly one that is related to maritime activities - in order to effectively and appropriately analyze, visualize and debate them. In other words, this can serve as a foundation for developing value literacy among students, but also as a tool to help designers, researchers or policy makers identify values in the built environment **[Figs. 2-3]**.

2- Conceptualizing and/or visualizing values

Because values are open for multiple interpretations, and the demarcation between interest and value is not always clear, it is relevant to reach a certain abstraction and agree on the meaning of a concept with the other stakeholders involved. Besides agreeing on a concept, stakeholders can also come to an abstraction in a more playful way: by drawing. Mental mapping is a relatively easy way to capture a stakeholder's spatial imaginary and therefore the context of their values. While well-known representations of a city (such as paintings, films, or photographs) shape the imaginary of citizens, similarly, the mental images of citizens and decision-makers provide insight into the perception of urban dwellers of their built environment. Kevin Lynch famously defined the image of the city as an overlap of many individual images, and this series of perspectives

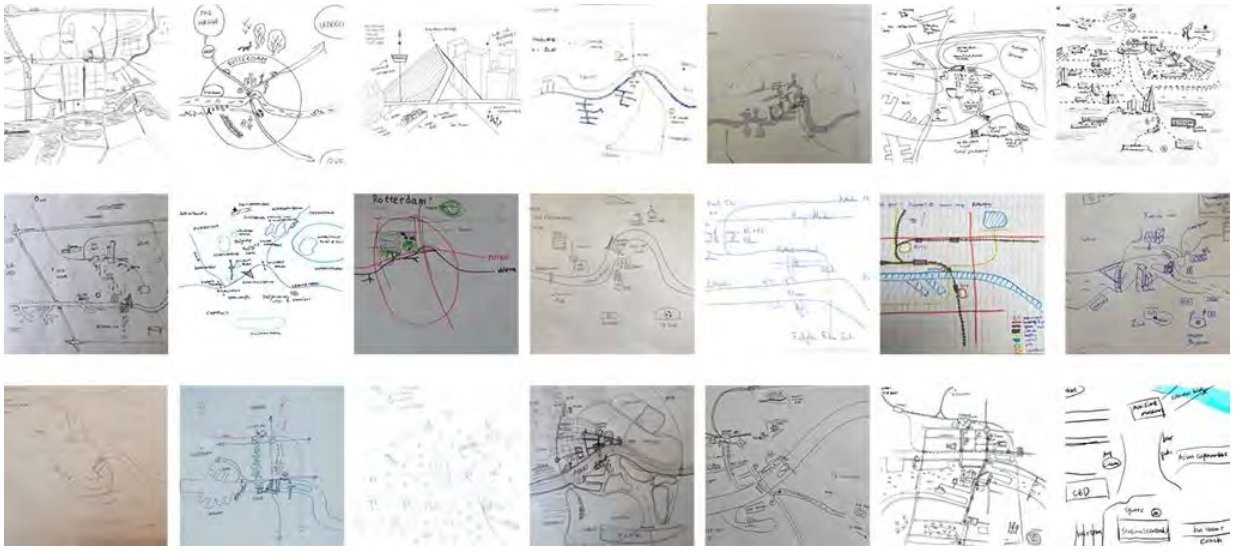

FIG. 4 Selection of the mindmaps of Rotterdam from Harteveld's course. ©Maurice Harteveld.

subsequently provides insight into collective identities of a site **[Fig. 4]**.[23]

In line with this approach, PCF's Maurice Harteveld[24] asked students to draw mental maps of the city of Rotterdam.[25] They often drew port-related icons on those maps, like large chimneys and oil tanks, but generally stayed away from shipping based artefacts and buildings, or people in the city. In his course, Harteveld used mental mapping as a means of connecting histories of cities to future making and "...as a continuation of participatory approaches in urban planning and policies for development".[26] What students discover in the maps reflects both the biases and the values of their makers, which makes mental mapping an important tool in identifying and visualizing tacit knowledge and values within development processes.

3 - Discussing and negotiating values

Once the stakeholders in a certain project or process have identified values, tacit or obvious knowledge, and conscious or unconscious biases, the third step in the process is to discuss and negotiate. Here, they decide upon shared or core values, or indicate which values and interests are conflicting. The LDE PortCityFutures group developed an online pilot deliberation with Delft Design for Values (Klara Pigmans, Virginia Dignum, Jordi Bieger) and Tino Mager, to study the opportunities and challenges

23 Kevin Lynch, *The Image of the City* (Cambridge, Mass.: MIT Press, 2005).

24 Maurice Harteveld, "In the Minds of People. Port-City Perspectives, the Case of Rotterdam," *The European Journal of Creative Practices in Cities and Landscapes* 4, no. 2 (2021): 60-81.

25 Maurice Harteveld, "Mapping Maritime Mindsets: Mental Maps," *PortCityFutures* (blog), July 28, 2020, https://www.portcityfutures.nl/news/mapping-maritime-mindsets-mental-maps.

26 Harteveld refers to Sarah Banks et al., eds., *Managing Community Practice* (Second Edition): *Principles, Policies and Programmes*, 2nd edition (Bristol: Policy Press, 2013); Tal Berman, *Public Participation as a Tool for Integrating Local Knowledge into Spatial Planning: Planning, Participation, and Knowledge* (Cham: Springer, 2018), https://doi.org/10.1007/978-3-319-48063-3.

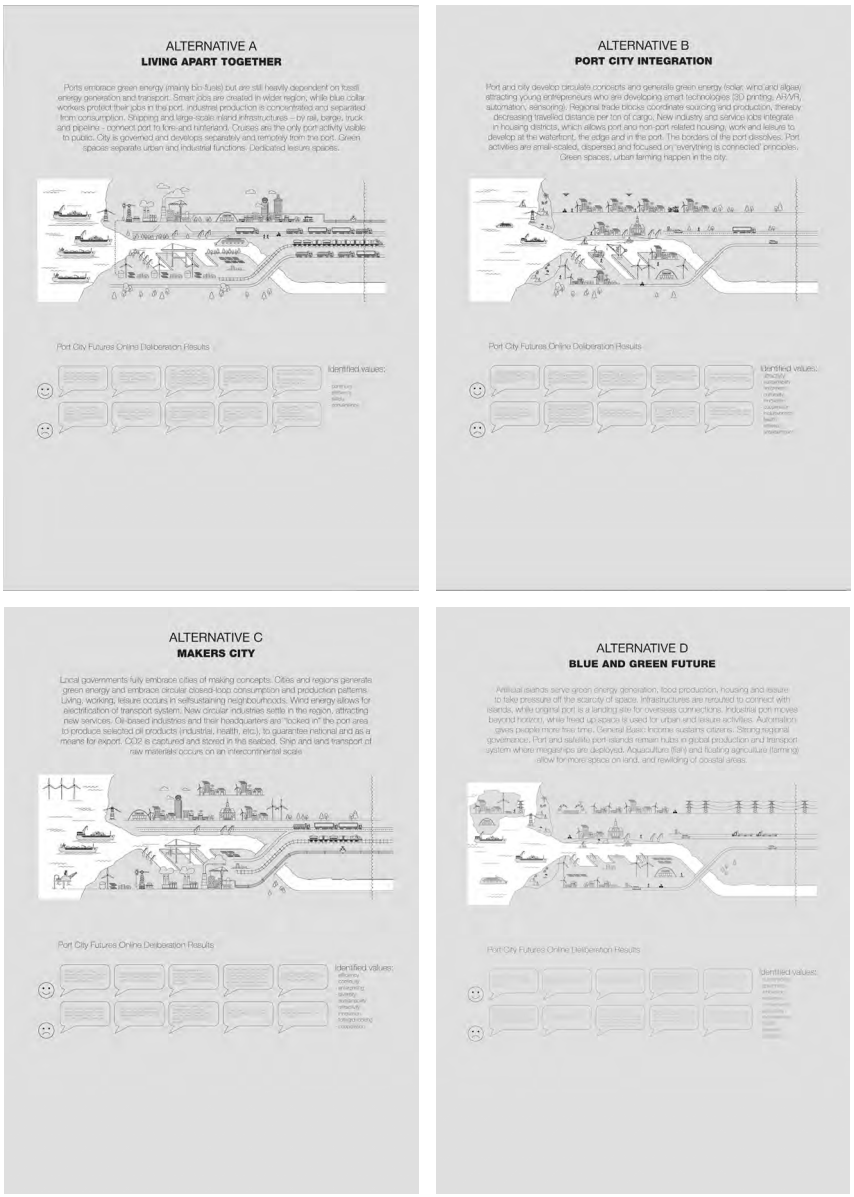

FIG. 5 Alternatives A-D: Four scenarios developed for the pilot value deliberation. The alternatives proposed to participants focused on the future relationship between ports, cities and their regions.

of four scenarios for port city regions in 2050 **[Fig. 5]**. The drawings tentatively visualized different possible developments and helped stakeholders grasp the choices and their complexities. They also demonstrated the ways in which architecture and urban design can interpret complex interactions and, through visualization, facilitate decision-making. The online tool allowed 42 representatives from port authorities, municipalities and institutions from Rotterdam, Naples, Gdansk, Hamburg, Riga, Bremen, Dublin, Savannah and Philadelphia to participate in the process regardless of their location or time zone. Referring to the developed scenarios, the project's aim was to facilitate the identification of values relevant per scenario and to increase mutual understanding of the various perspectives **[Fig. 6]**. This way, stakeholders were able to take a step back from concrete conflictual problems, and focus on shared values as they related to select scenarios.

Alternative A assumed separate development for port and city with the port as the main driver of change, embracing green energies for the functioning of the port, but continuing its dependence on fossil energy generation and transport for its customers. Participants in the value deliberation associated Alternative A with values of continuity, efficiency, safety and convenience. They pointed out that this scenario was particularly interesting for port authorities that could continue to work independently of neighboring areas. Others noted that such a scenario could not be sustainable in the long-term as port authorities would need to be better connected to their neighboring cities.

Alternative B envisaged collaboration and integration and shared leadership of ports and cities or their regions. Values associated with such a development included sustainability, innovation, cooperation and health. A focus on circularity and green energy could allow non-port functions to be integrated in some parts of the port area. Such a scenario would, however, mean a loss of port activity and a loss of central functions and headquarters for the port city. Participants pointed out that this would facilitate synergy between port and city, but they feared a loss in economic power.

Alternative C assumed leadership in the energy transition from the city side. The emergence of makers' districts would lead to changing consumer patterns. Such a scenario would ultimately change the functioning of the port. In the meantime, the port would remain locked into the business of transporting and transforming fossil fuel. Participants recognized both continuities and forward-looking sustainable patterns. They saw this as a realistic alternative for the future, but criticized the absence of a true integration between port and city.

Alternative D was the most futuristic. It proposed new developments by the sea to host all the functions that could not find a place in the densely built port city region. New energy generation, food production and housing could all be located on new islands. Such a proposal was in line with green and sustainable development and innovation values. Participants were hesitant about whether this was an opportunity building on the current "flows of goods, energy and waste" or, whether such a proposal required investments that were too high and added little value as megaships were separated from the port.

FIG. 6 Alternatives A-D: Four scenarios developed for the pilot value deliberation. The alternatives proposed to participants focused on the future relationship between ports, cities and their regions.

4 - Elaborating and reflecting on values

After deliberating - for example the scenarios for the port in 2050 - it is important to reflect back to present day value deliberation. An example of the step of reflecting and elaborating is PortPlay, an interactive table designed to support the variety of stakeholders in a port ecosystem to rethink their collaborative futures. It helps participating stakeholders to articulate values and motivate future ideas and thoughts to collaboratively explore future innovation strategies. On the table, stakeholders 'play' with nautical components laser-cutted from wood. It has a chalkboard layer, enabling the participants to sketch a future port. Figure 7 illustrates PortPlay in use, in a setup on a table where stakeholders stand around. PortPlay can be seen as a collaborative play where through the articulation of values, new knowledge is co-constructed and builds capacity during use [Fig. 7].[27]

PortPlay is an example of the increasing use of 'serious gaming' in port city relations. The technique can serve as a simulation tool to advance understanding of how a port, city or region functions and to increase participation of diverse stakeholders. Port authorities, such as in Quebec and in Rotterdam, have taken the initiative to develop serious games, often with local players, schools and universities. These games can be used to educate children or adults, but also to help professionals gain insight into the long-term effects of their decisions. Master's degree students at Delft University of Technology have designed games to shift values as part of their course assignment, and in doing so design students often take a normative stance, for example by exploring collaboration rather than

27 Garmt Nieuwsma and Ingrid Mulder, "Strategic Innovation Tools Enabling Nautical Stakeholders to Shape a next Level Port," *The Design Journal* 20, no. sup1 (July 28, 2017): S2789–2802, https://doi.org/10.1080/14606925.2017.1352790.

FIG. 7 PortPlay innovation tool in use ©Nieuwsma and Mulder, 2017.

competition. In this phase, the goal is to reach shared objectives and develop a shared set of values.

5 - Design and intervene in a transition strategy

Before actually designing a new process, or intervening in an existing process, all stakeholders ideally have accounted for values within several stages. The next step is designing with values, whether that design is a decision-making process or an actual architectural interference. Designing future scenarios, we argue, can both help visualize values and activate stakeholders towards new imaginaries based on shared values.

Translating the value deliberations into projects can happen through the development of scenarios or design fictions, but also in the design of concrete processes and projects. Once the values in these processes are visualized, they can be further discussed and evaluated in relation to values in different contexts. In the Master course Architecture and Urbanism Beyond Oil in 2019, for example, students were asked to first study the historically changing relationship between port and city, to then identify relevant port city spaces and their variety of values, and ultimately to design a transition strategy for the Port of Rotterdam beyond oil taking these values into account. The students explored the current state of the port, highlighting existing potentials and possible strategies. They concluded by developing a port vision in a chronological phased plan (2030, 2050 and 2080), showing how the port may adapt to achieve a future beyond oil. Following the overall vision, five projects outlined practical solutions to how this may be accomplished in key areas of the port: Energy landscapes, Ecological frameworks, Remediation strategies & Social dynamics **[Fig. 8]**.[28]

28 Carola Hein, "Beyond Oil: Designing the Transition," in *Circulariteit: Op weg naar 2050?, ed. Peter Luscuere* (Delft: TU Delft Open, 2018), 79–85, https://books.bk.tudelft.nl/press/catalog/book/isbn.9789463660549.

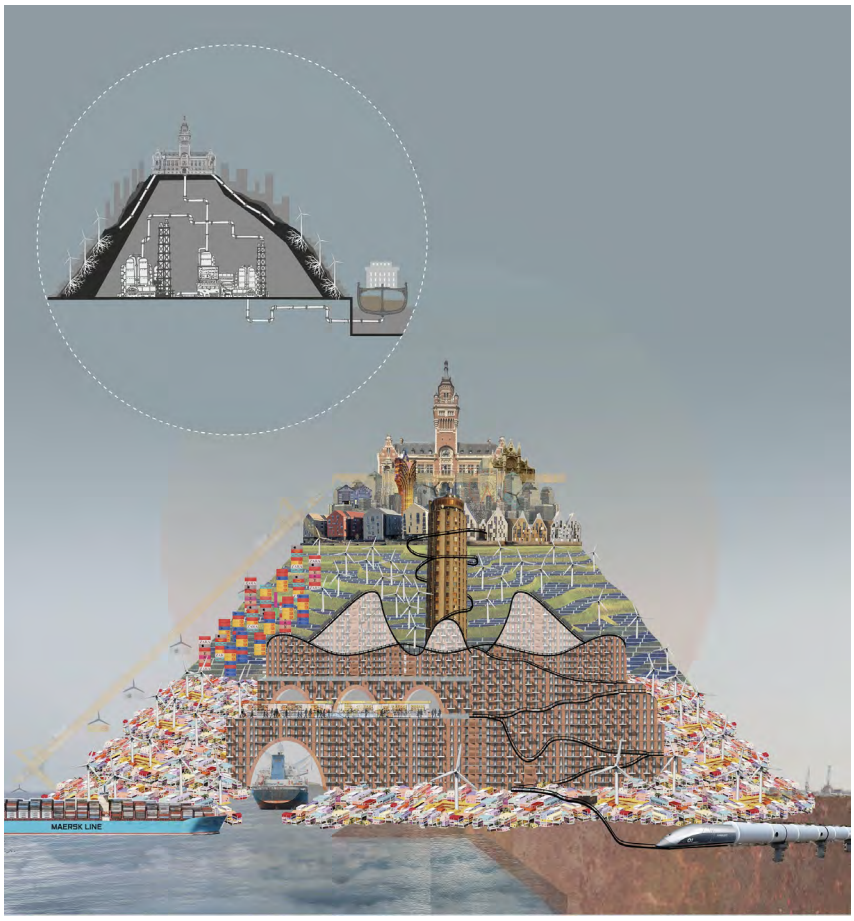

FIG. 8 Example of a scenario beyond oil: design fiction for port and city of Dunkirk. ©Rashid Ayoubi.

The previous examples connected to five steps that, together, can form a comprehensive value deliberation process. However, because processes are hardly ever linear, in the next paragraphs we offer examples of value deliberations within ongoing multi-stakeholder projects, where we intervene to make participants act and reflect on values within their own ongoing (design) process.

Designing a Process for Adaptive Strategies Based on Enhanced Value Literacy

Within the broader context of scientific research, NWO piloted a call entitled *Research through Design* to clarify distinctions and characteristics of design research in relation to the more established fields of science in order to further strengthen research in the creative industry. *Research through Design*, briefly, refers to research where designing is used as the way to produce new knowledge.[29] Following the call criteria, awarded RTD projects are expected to add a reflective element via an artifact; in

29 For the Research through Design process, see Pieter Jan Stappers and Elisa Giaccardi, "Research through Design," in *The Encyclopedia of Human-Computer Interaction*, ed. M. Soegaard and R. Friis-Dam (The Interaction Design Foundation, 2017), 1–94, https://www.interaction-design.org/literature/book/the-encyclopedia-of-human-computer-interaction-2nd-ed/research-through-design.

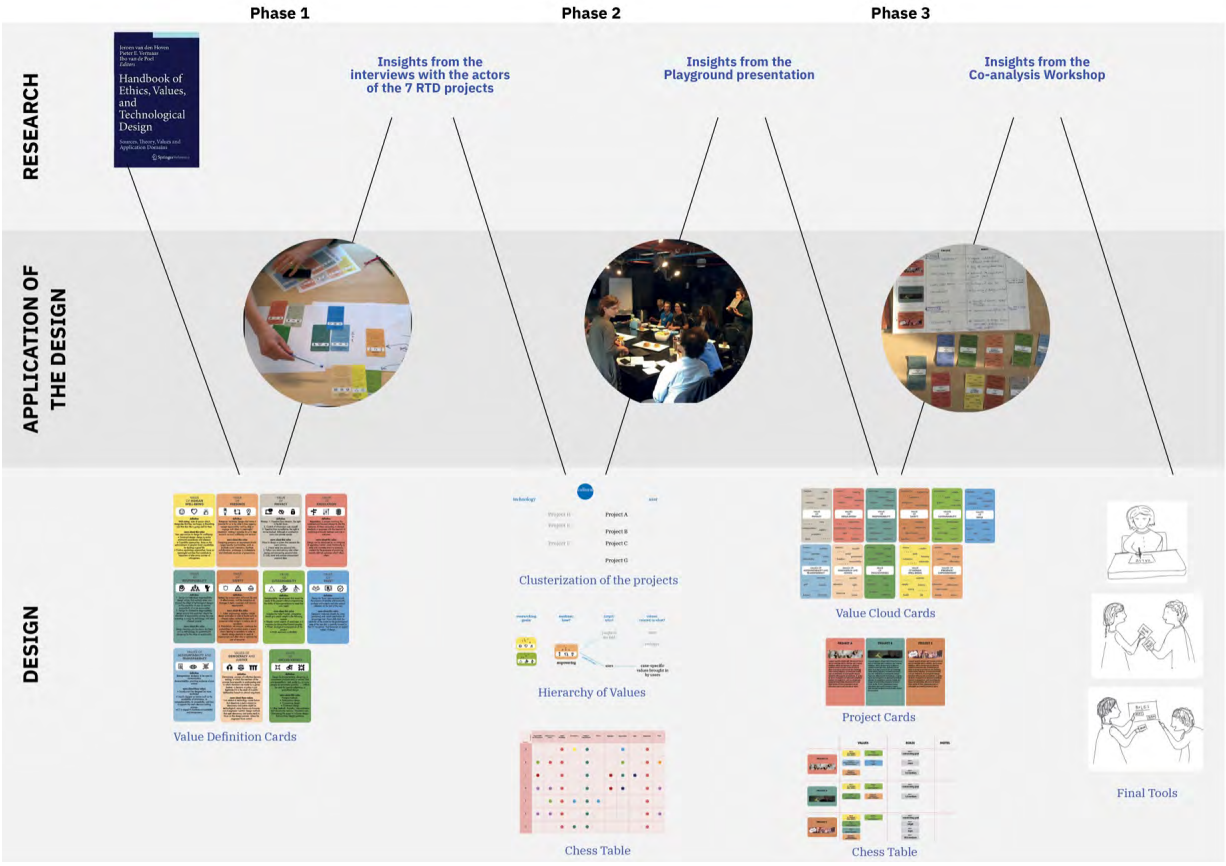

FIG. 9 Process overview for *Research through Design for accounting Values in design. ©Conversano et al., 2019.*

addition to exploring new technological possibilities they focus on creating and transforming social meaning, public and cultural values, and aesthetics. In other words, the artifacts that are studied and developed during the awarded projects do generate explicit and tacit knowledge, and are a promising resource to make public and cultural values explicit. Consequently, within the context of Delft Design for Values, the project *Research through Design for Values* was born to demonstrate that the adoption of a kaleidoscopic Research Through Design (RTD) approach can act as a catalyst that generates knowledge and insights to stimulate the debate on accounting for values in design research.[30]

Hereto, the RTD for values project selected seven ongoing RTD projects that were awarded in the NWO call, as a unit of analysis. These selected RTD projects lasted for about two years, and worked in multidisciplinary consortia of at least two universities, one or multiple designers, and at least four user parties (such as municipalities). The selected projects including their RTD process and developed artifact are studied to explore to what extent the explicit and tacit knowledge generated enabled various actors to make public and cultural values explicit. The elaborate RTD process of

30 Irene Conversano, Livia del Conte, and Ingrid Mulder, "Research through Design for Accounting Values in Design," in *Proceedings of the Fourth Biennial Research through Design Conference (RTD 2019) "Method & Critique – Frictions and Shifts in Research through Design"* (Science Center, Delft & Het Nieuwe Instituut, Rotterdam, 2019), https://doi.org/10.6084/M9.FIGSHARE.7855865.V2.

the RTD for values project distinguishes three phases of research that differ in their focus: 1) understanding the values involved in the RTD projects; 2) share insights to steer peer debate on Research on Values, and 3) co-analyse the data and generate further insights.[31] For each step, value techniques have been developed, enabling the participation of the project members of the seven RTD projects to articulate and negotiate values to generate future insights [Fig. 9].

Value Definition Cards

The first phase aimed to elicit the values that were at hand in the various RTD projects and to understand which roles the values did play. To do so, Conversano et al.[32] developed a set of eleven Value Definition Cards that depicted the "moral values of users and society at large".[33] Each card held a definition and a set of three selected icons, to understand the values involved in the seven RTD projects. The aim of these cards was to support the participants in identifying which values were included in their projects, and subsequently in relating them to different key moments and/or roles in their RTD process.

Participants circumscribed the given definition of the values on the value cards with other possible meanings than the specific ones derived from the handbook. In other words, the original definition cards asked for appropriation: some participants felt the need to redefine the meaning of the values so as to be more in keeping with their own perception. In the first interview, for example, the Value of Presence was renamed as Value of Empowerment. This modification to the card encouraged the following interviewees to do the same and to challenge the provided definitions. Next values are visualised in order to identify hierarchy of roles and values as well as common patterns and specificities among the various projects.

Value Cloud Cards

The Value Cloud Cards did not provide participants with a given definition, but with the name of the value. A cloud of associated words meant to trigger the participants to question their perception of the eleven values. The value dialogue was then further facilitated with project cards including a written description and an image of three chosen RTD projects. These sets of value techniques demonstrate that intervening in the three moments generated insights and contributed to a reflective attitude of the participants and value literacy, such as:

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31 Ibid.

32 Ibid.

33 Jeroen van den Hoven, Pieter E. Vermaas, and Ibo van de Poel, eds., *Handbook of Ethics, Values, and Technological Design* (Dordrecht: Springer, 2015), 1, https://doi.org/10.1007/978-94-007-6970-0.0/0/00 0:00:00 AM

1. *Personal interpretation of values*. The fact that the participants felt the need to redefine the value definition when provided with a specific one, showed that giving space for personal reflection on values interpretation adds explicit relevance and deeper consideration to values
2. *Enrichment of values definition.* The fact that the participants were considering others' interpretations of the values at stake, seemed to broaden the individual perception of the values and brought forward a variety of nuances to the initial meanings.
3. *Alignment of different stakeholders* regarding the roles that values play within the same project. The fact that the participants were invited to point out which roles the values played within the projects, helped them to better articulate values that helped them define a better project vision.

Conclusion

Through the examples in this article, we aimed to identify different uses of values in design processes, and argued that using and integrating different steps can be a promising approach to better align interests and values from different stakeholders in port cities. Whereas the results do not lead to a unified methodology, we have found that there is a need for clearer definition of values, for a smaller scale of exploration (than the port city region), for using concrete examples, and for developing specific design proposals. We are convinced that in order to tackle multifaceted challenges, tacit and implicit knowledge and values need to come to the fore. Once they are identified and visualized, they can drive design processes. Such an approach, however, requires awareness of values from the first moment of research. In other words, it requires stakeholders to become literate in recognizing and identifying values, and in deliberating them with other stakeholders. We argue that a value driven approach to design is not linear, but needs to contain frequent evaluations or feedback loops, so that values are questioned on a continuous basis before they are implemented.

The humanities, social sciences and design-based research can help develop new participatory practices to engage with diverse groups of citizens in a port city region. So-called soft values have long been an important part of port city relations. Historically, economic and spatial port development has been interconnected with the socio-cultural interests of the city, the region and its citizens. Values related to maritime mindsets can help establish the foundation for future-oriented and creative policy and development needed to address the current challenges in port city regions, and for the development of engaged citizens.

Politicians, academics, and citizens in many cities around the world have started to pay close attention to technological innovations and economic

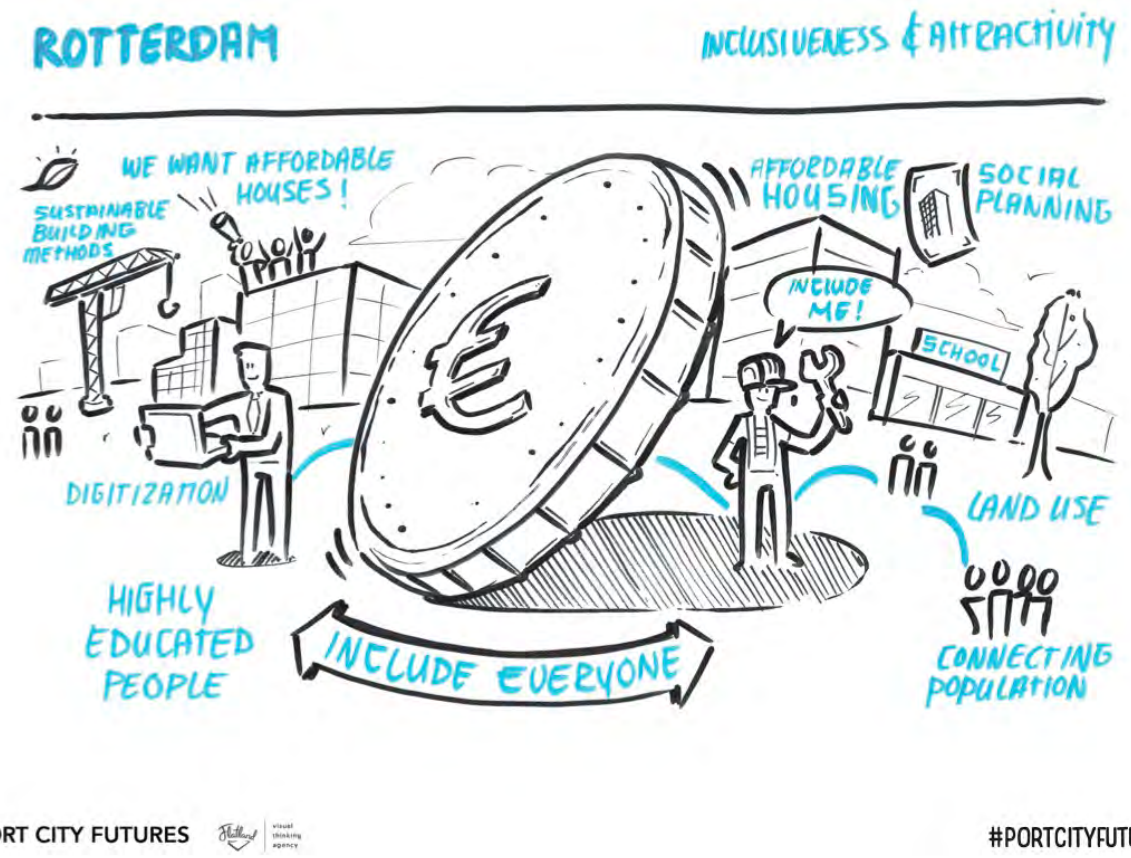

FIG. 10 Visual report of a value deliberation process during the first PortCityFutures conference in December 2018. Made by Flatland Visual Thinking Agency for PortCityFutures.

aspects of ongoing energy and digital transitions; they generally pay less attention to soft values, such as governance structures, spatial forms or culture. Buy-in from local stakeholders is necessary to facilitate the construction of hard infrastructures needed to improve ports' functioning and to address the side effects of port operations (noise, security, emissions), but also to develop skill sets and technologies for the ports and port cities of the future. We argue that we need to pay more attention to the social, cultural and spatial dimension of port city regions and to that end we opted to develop a pilot value deliberation on the future of port–city relations. A value-based circle of design can be developed into a more generic approach to help facilitate transition processes [Fig. 10].

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References

Alberta Education. "What Is Literacy?" Accessed December 16, 2021. https://education.alberta.ca/literacy-and-numeracy/literacy/everyone/what-is-literacy/.

Banks, Sarah, Hugh Butcher, Andrew Orton, and Jim Robertson, eds. *Managing Community Practice (Second Edition): Principles, Policies and Programmes*. 2nd edition. Bristol: Policy Press, 2013.

Berman, Tal. *Public Participation as a Tool for Integrating Local Knowledge into Spatial Planning: Planning, Participation, and Knowledge.* Cham: Springer, 2018. https://doi.org/10.1007/978-3-319-48063-3.

Bovenberg, Lans. "Where is the Love, over Waarde en Waarden." Rotterdam: Erasmus University Rotterdam, 2019. https://pure.uvt.nl/ws/portalfiles/portal/45904877.

Conversano, Irene, Livia del Conte, and Ingrid Mulder. "Research through Design for Accounting Values in Design." In *Proceedings of the Fourth Biennial Research through Design Conference (RTD 2019) "Method & Critique – Frictions and Shifts in Research through Design."* Science Center, Delft & Het Nieuwe Instituut, Rotterdam, 2019. https://doi.org/10.6084/M9.FIGSHARE.7855865.V2.

Davis, Janet, and Lisa P. Nathan. "Value Sensitive Design: Applications, Adaptations, and Critiques." In *Handbook of Ethics, Values, and Technological Design*, edited by Jeroen van den Hoven, Pieter E. Vermaas, and Ibo van de Poel, 1–26. Dordrecht: Springer, 2015. https://doi.org/10.1007/978-94-007-6994-6_3-1.

De Martino, Paolo. "Land in Limbo." A+BE | *Architecture and the Built Environment*, 2021. https://doi.org/10.7480/ABE.2021.09.5813.

Dicke, Matthijs, Paul van de Laar, and Annelies van der Zouwen. *In het belang van de haven: een eeuw Scheepvaartvereniging Zuid*. Zutphen: Walburg Pers, 2007.

Douglas, Heather E. *Science, Policy, and the Value-Free Ideal*. Pittsburgh: University of Pittsburgh Press, 2009. https://doi.org/10.2307/j.ctt6wrc78.

Edvardsson, Bo, Bo Enquist, and Michael Hay. "Values-based Service Brands: Narratives from IKEA." *Managing Service Quality: An International Journal* 16, no. 3 (May 2006): 230–46. https://doi.org/10.1108/09604520610663471.

Harteveld, Maurice. "In the Minds of People. Port-City Perspectives, the Case of Rotterdam." *The European Journal of Creative Practices in Cities and Landscapes* 4, no. 2 (2021): (2021): 60-81.

———. "Mapping Maritime Mindsets: Mental Maps." *PortCityFutures* (blog), July 28, 2020. https://www.portcityfutures.nl/news/mapping-maritime-mindsets-mental-maps.

Hein, Carola. "Beyond Oil: Designing the Transition." In *Circulariteit: Op weg naar 2050?*, edited by Peter Luscuere, 79–85. Delft: TU Delft Open, 2018. https://books.bk.tudelft.nl/press/catalog/book/isbn.9789463660549.

———. "Temporalities of the Port, Waterfront, and the City." In *City on Water*, edited by Guenter Warsewa, 36–45. Wroclaw: Association of European Schools of Planning, 2016.

Hein, Carola, and Dirk Schubert. "Resilience and Path Dependence: A Comparative Study of the Port Cities of London, Hamburg, and Philadelphia." *Journal of Urban History* 47, no. 2 (March 2021): 389–419. https://doi.org/10.1177/0096144220925098.

———. "Resilience, Disaster, and Rebuilding in Modern Port Cities." *Journal of Urban History* 47, no. 2 (March 2021): 235–49. https://doi.org/10.1177/0096144220925097.

Hoven, Jeroen van den, Pieter E. Vermaas, and Ibo van de Poel, eds. *Handbook of Ethics, Values, and Technological Design*. Dordrecht: Springer, 2015. https://doi.org/10.1007/978-94-007-6970-0.

Jansen, Maurice. "Port-City Instawalk, an Educator's Approach on Port-City Relationships." *AIVP* (blog), January 15, 2021. https://www.aivp.org/en/newsroom/port-city-instawalk-an-educators-approach-on-port-city-relationships/.

Koppenol, Dirk M. *Lobby for Land: A Historical Perspective (1945-2008) on the Decision-Making Process for the Port of Rotterdam Land Reclamation Project Maasvlakte 2*. Amsterdam: Uitgeverij Boom, 2016.

Lee, Robert. "The Social Life of Port Architecture: History, Politics, Commerce and Culture." In *Standentwicklung Zur Moderne - Urban Development towards Modernism*, edited by Frank Pieter Hesse, 33–52. Berlin: Hendrik Baesslerverlag, 2012. https://journals.ub.uni-heidelberg.de/index.php/icomoshefte/article/view/20425.

Lynch, Kevin. *The Image of the City*. Cambridge, Mass.: MIT Press, 2005.

Moeller, Susan D. *Compassion Fatigue: How the Media Sell Disease, Famine, War, and Death*. New York: Routledge, 1999.

Mosse, David. "Is Good Policy Unimplementable? Reflections on the Ethnography of Aid Policy and Practice." *Development and Change* 35, no. 4 (2004): 639–71. https://doi.org/10.1111/j.0012-155X.2004.00374.x.

Nieuwsma, Garmt, and Ingrid Mulder. "Strategic Innovation Tools Enabling Nautical Stakeholders to Shape a next Level Port." *The Design Journal* 20, no. sup1 (2017): S2789–2802. https://doi.org/10.1080/14606925.2017.1352790.

O'Neill, Saffron, and Sophie Nicholson-Cole. "'Fear Won't Do It': Promoting Positive Engagement With Climate Change Through Visual and Iconic Representations." *Science Communication* 30, no. 3 (March 2009): 355–79. https://doi.org/10.1177/1075547008329201.

Sannen, Sarah. "Maritime Mindsets of Rotterdam's Port Communities." portcityfutures, April 23, 2020. https://www.portcityfutures.nl/news/maritime-mindsets-of-rotterdams-port-communities-0.

Stappers, Pieter Jan, and Elisa Giaccardi. "Research through Design." In *The Encyclopedia of Human-Computer Interaction*, edited by M. Soegaard and R. Friis-Dam, 1–94. The Interaction Design Foundation, 2017. https://www.interaction-design.org/literature/book/the-encyclopedia-of-human-computer-interaction-2nd-ed/research-through-design.

Van Dooren, Elise. "Anchoring the Design Process." A+BE | *Architecture and the Built Environment*, October 17, 2020. https://doi.org/10.7480/ABE.2020.17.5351.

Watkins, Josh. "Spatial Imaginaries Research in Geography: Synergies, Tensions, and New Directions: Spatial Imaginaries." *Geography Compass* 9, no. 9 (September 2015): 508–22. https://doi.org/10.1111/gec3.12228.

Alberta Education. "What Is Literacy?" Accessed December 16, 2021. https://education.alberta.ca/literacy-and-numeracy/literacy/everyone/what-is-literacy/.