

LINKING THE IMAGE AND IDENTITY OF CITIES IN POLYCENTRIC REGIONS

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August 2018



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Linking the image and identity of cities in polycentric regions

Master thesis submitted to Delft University of Technology
in partial fulfilment of the requirements for the degree of

MASTER OF SCIENCE

in **Complex Systems Engineering and Management**

Faculty of Technology, Policy and Management

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To be defended in public on August 24th 2018

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I. PREFACE

In May 2017, I started a six-month internship in Madrid at Bloom Consulting, a company specialised in place branding. At that time, the domain of branding places was completely new to me. During the internship, I became fascinated by the idea of shaping places and images. After all, the decisions we make are greatly influenced by the information and emotions we hold. Whether it is about choosing a place for your holiday, for studying, or maybe even to build up a new life. Altering these images is a largely uncontrollable process, but it can be steered in the right direction. Therefore, I consider place branding to be a governance strategy that touches upon the domain of psychology. Adding a technological design component makes this research a perfect topic for the master's programme *Complex Systems Engineering & Management*.

When it was time to choose a topic for my thesis, I stumbled upon a research project at my faculty, named "City branding in polycentric regions". I contacted the researchers involved, hoping they were still looking for a student to perform a graduation project. From that moment on, my research began. Interestingly, the eventual focus of this thesis was the direction I started with. Several dead-end sideways were needed to understand the value of performing a study into the image and identities of cities.

It was an intense process, with many ups and downs, crucial for my personal development. Now that my thesis report is finished, I can gladly state to be satisfied with the result. Of course, I want to thank my graduation committee as a whole. They provided me with many refreshing ideas and they were able to trigger my motivation during each meeting. I also greatly appreciate all my fellow students that supported me during this period, for being able to discuss our obstacles and for the relaxing breaks.

II. SUMMARY

This research revolves around the positioning of cities in a regional context, also referred to as city branding practices in polycentric regions. A polycentric region can be seen as a way of looking at the arrangement of cities in a region. Polycentric regions are defined as “clusters of historically and administratively distinct but proximate and well-connected cities” (Meijers, Hoogerbrugge, & Cardoso, 2017, p. 2). The occurring interplay of competition and cooperation between cities makes the polycentric region an interesting domain for study. The integration of cities into one metropolitan area offers the potential of synergy. In light of this metropolisation process, creating a regional identity is one of the challenges. Such an identity belongs to the domain of place branding, a governance strategy that revolves around how the place is perceived, how the place wants to be perceived, and what the place actually is. In this sense, a regional identity can be established by coordinating the individual city branding practices, or even branding on a regional level.

THE RESEARCH OBJECTIVES

Although the domains of polycentric regions and place branding show overlap, research does not combine these objects regularly. More specifically, a knowledge gap exists on the relation between city branding practices within a polycentric region. The image and identity of places are two of the most recurring themes in place branding literature. The relation between image and identity within polycentric regions forms the main subject of this research. The main research question becomes the following: *What is the relation, both from a theoretical and empirical point of view, between image and identity in a polycentric context?*

To understand the relation between the topics of image and identity in a polycentric context, the conceptual confusion has to be addressed first. A theoretical relation thereby needs to be established with a conceptual framework, which constitutes the first research objective. Subsequently, an empirical relation can be established by operationalising, measuring, and analysing the image and identity of cities in a polycentric region.

Therefore, the development of an analytical tool is the second objective of this research. Finally, for illustrative purposes, the developed method is applied to a case study.

IMAGE AND IDENTITY

Scholars in the domain of place branding seem to agree that the place image is the perception or impression people hold of a place. More specifically, the place image is defined as the associations about a place in the mind of an individual or group. The image possesses several dimensions, such as the strength and truth of the image. The main elements that comprise the city image are affective, cognitive, and conative components. A person's image consists of both affective associations, the emotions or feelings, and cognitive associations, the knowledge or information of a place. Additionally, the cognitive element concerns the behavioural intentions. The identity of the city is divided into two concepts: brand identity and place identity. The brand identity refers to how the place owners want the place to be perceived, and is defined as the intended or desired image in the consumer's mind. The formulated brand identity aims to differentiate a place from other destinations. The elements that shape and support the brand identity are mission, vision, values, personality, distinguishing preferences, and benefits, as proposed by Konecnik Ruzzier and De Chernatony (2013). The identity of a place basically refers to what the place really is. More specifically, the place identity is the ongoing interplay between people and place, shaped by materiality, social interactions, institutions, and place image. These four components are recognized by Kalandides (2011) as the elements that constitute place identity.

THE THEORETICAL RELATION

Based on the conceptualisation and several other frameworks in place branding literature, a conceptual framework is made that contains the place image, brand identity, and place identity. The place image is held by the people, which influences their practices within a certain place, their participation in public processes, and communication among people. The brand identity or desired image is held by public entities, and has an impact on the communication towards people and on interventions in the physical environment. Place identity is not directly visible in the framework, but is certainly a part of it. The four elements that constitute place identity can be found individually. Place image and

practices are respectively part of and performed by people. The institutions shape the context of people and public entities, as opposed to the physical context, in which materiality is what constitutes a place. Figure I represents the theoretical relation between image and identity in the context of places.

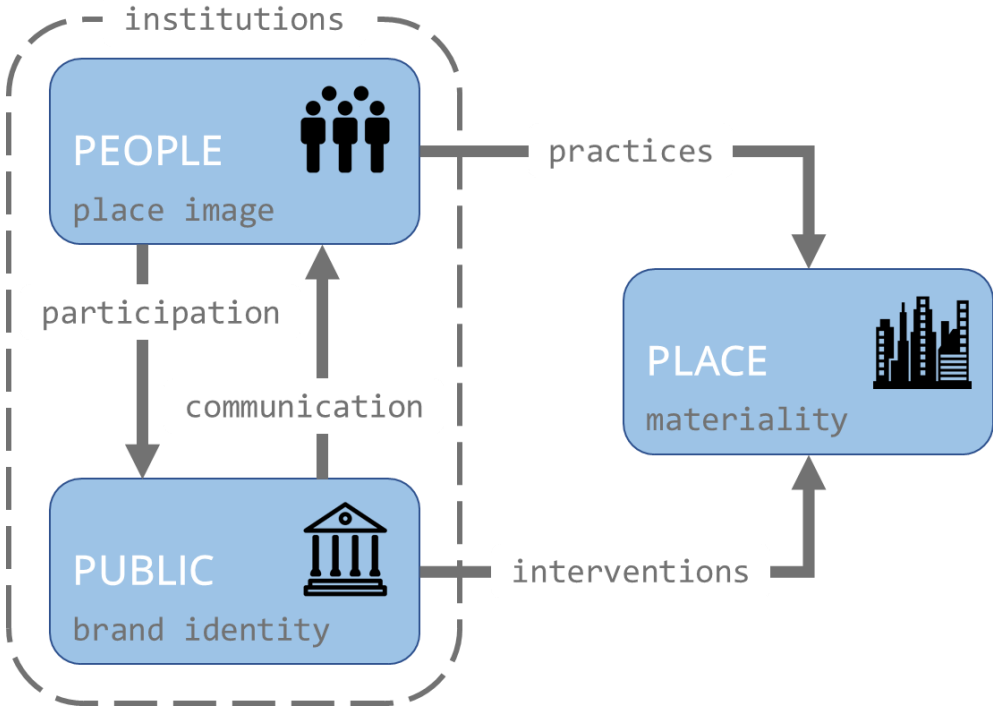


Figure I. Interplay between people and public in place and its identity

The main conclusion to be drawn from this framework concerns the impact of two main features: place image and brand identity. Together they influence the four activities by the people and the public entities. Place image is at the basis of the practices people perform in the physical world and participation in the formation of a brand identity. Moreover, the brand identity influences the promotional communication from the public towards people in general or specific target audiences. The brand identity also intends to guide public interventions in the physical environment. Through communication and interventions, public entities able to shape the image into their desired image.

THE EMPIRICAL RELATION

The place image and brand identity are identified as the two concepts to be measured and analysed. They are operationalised as cognitive and affective associations that are verbally expressed and related with cities and each other in a network structure.

Furthermore, the associations should be general (as opposed to place-specific) and should have a positive or neutral connotation (as opposed to negative).

The selected method to measure the place image and brand identity is the brand concept map (BCM), developed by John, Loken, Kim, and Monga (2006). Based on the traditional stages of concept mapping, the measurement takes place in three consecutive stages: elicitation, mapping, and aggregation. Elicitation is about obtaining a list of associations that are relevant for the specific study. In line with the operationalisation, they should be generally applicable, positively or neutrally connotated, and divided into affective and cognitive components. The mapping stage is concerned with collecting response from the target groups. The elicited associations are presented to the respondents, from which they can choose those that are part of their (desired) image. The next stage is aggregation, which comes down to combining the answers into a dataset for the polycentric brand concept map. A set of rules is used to select first-order associations and establish links between them. Finally, a fourth analysis stage is added to the traditional process. The analysis covers two steps, namely: visualisation of the maps and calculation of metrics. After this final stage, the polycentric brand concept map is created and ready to be compared both in a visual way and through the calculated metrics. Figure II summarizes the process to create a Polycentric brand concept map (P-BCM).

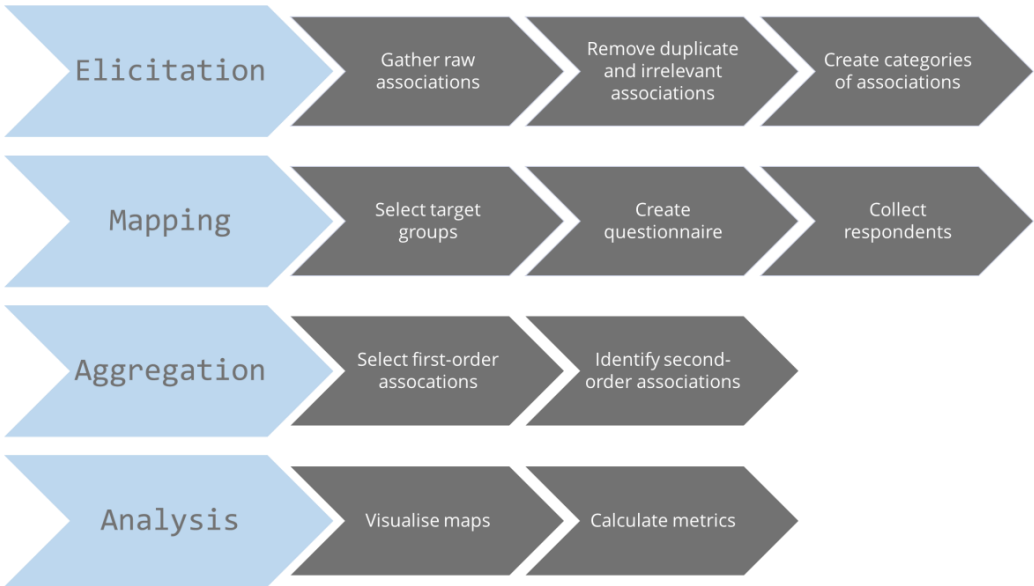


Figure II. Process of the Polycentric brand concept map

CONCLUSION

To conclude, the image and identity have a complex relation. This can be simplified by looking at the image in relation with the brand identity, also known as the desired image. Both concepts are at the core of the practices and interventions performed by both people and public institutions in the physical environment of cities. They can be considered the main drivers of communication about the place as well. The idea is that ultimately, the place image is completely in line with the brand identity. The polycentric context adds an interesting dimension to the story. Influenced by the way the region evolves into one metropolitan area (incorporation-mode or fusion-mode) and the degree of integration (combination of functional, cultural, and institutional integration), a region is able to form a regional identity. In this way, the cities can take steps to find an integral branding strategy to position the cities and the region as a whole that guides future development accordingly. The strategy either takes the form of a homophonic or polyphonic set of brand identities, thereby being respectively harmonious and similar or complementary and unique. The analytical tool P-BCM, which stands for polycentric brand concept map, aims to support strategic decisions into regional collaboration based on the measurement of image and identity in a regional context.

Keywords

city branding;

polycentric regions;

place identity;

brand identity;

place image;

brand concept map

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1. INTRODUCTION

“Hong Kong is looking for an identity” (De Boer, 2018). The title of this newspaper article is interesting in two ways. First, it considers Hong Kong as a single entity doing something, almost as being a person. It is a practical simplification, but in reality a city is obviously a much more complex concept. A city is a unique and continuously changing system of people and physical characteristics, bounded to a geographic location in a context of many institutional layers. Performing actions as such a system is therefore a seemingly challenging process. Especially from a governance point of view, coordinating a city is a relevant subject. A second observation is the notion of a search for an identity. This process sounds as the spiritual quest of people trying to answer the question: who am I? However, the article “an” suggests the availability of several identities, and therefore, the question may become: who do I want to be? Probably, there is no easy answer to these questions. Hong Kong looking for an identity implies a fascinating case, touching upon the domains of governance as well as psychology. In fact, the content of the article is closely related to the description above. The author describes the complicated situation Hong Kong finds itself in. The city state is uncertain of its role, especially in relation to the surrounding and rapidly developing cities in China, such as Shenzhen and Guangzhou.

The positioning of cities in a regional context is the core subject of this thesis report, also referred to as **city branding in polycentric regions**. One research domain is city branding, part of the wider topic place branding (Braun, 2011). Bear in mind that place branding should not be confused with the promotion or marketing of places, a notion that will be addressed later on. This particular field of research has gained more and more attention over the last two decades, paralleled by an increasing amount of city branding practices and consulting services. The second main research domain concerns polycentric regions, which basically connotes the presence of two or more cities in close proximity. Polycentric regions are characterized by both competitive and cooperative relations between the main nodes. Though the branding of cities shows great potential in the context of polycentric regions, most research is limited to either one of these domains.

This introductory chapter starts with a problem exploration in the fields of both place branding and polycentric regions. The second section presents the main knowledge gap as identified during the problem exploration, followed by the objective of this research in the third section. Section four addresses the main research question with several corresponding sub-questions. The concluding section discusses the research methods that are applied to answer the research questions.

1.1. Problem exploration

Cities play a huge role in modern society. As centres of social and economic development, they account for a large share of the global population, energy consumption, and carbon emissions, despite covering a small surface on the earth (United Nations, n.d.). Currently, the urban population makes up for just over half of the world's total population, which is even set to increase to two-thirds by 2030 (UN-Habitat, 2016). These places provide us opportunities to live, to work, to visit, and to do business. Considering the ever-increasing globalization, people are able to explore the world, both online and offline. Therefore, cities find themselves competing for the likes of visitors, residents, investors, and companies. Simultaneously, cities may attempt to ignite synergies by working together with other cities in the region. Below, the domain of place branding is examined through a literature study, as well as the two most important concepts: identity and image. Subsequently, the domain of polycentric regions is explored to create a better contextual understanding.

1.1.1. Place branding

Similar to consumer products, cities often apply promotional efforts to attract their target groups. They promote themselves with the use of specific labels like 'smart', 'green', or 'liveable', distinctive logos, attention on social media, and advertisement campaigns. Communication about cities and their offers is definitely relevant, but it is not the same as place branding, neither is marketing.

Here, a distinction is made between three approaches: place promotion, place marketing, and place branding. Unfortunately, they are often used synonymously by scholars and

practitioners (Boisen, Terlouw, Groote, & Couwenberg, 2017). For example, place branding is sometimes seen as an element within place marketing (see for example Eshuis, Klijn, and Braun (2014); Zenker and Jacobsen (2015)), whereas others argue that marketing is part of place branding (see for example Baker (2012); Hanna and Rowley (2011)). A recent paper by Boisen et al. (2017) attempts to distinguish and relate these concepts. First, they argue that place promotion is only about generating attention for a place and doesn't require interventions in the physical space. The authors consider it 'supply-driven'. Place marketing is concerned with communication too, but also calls for the ability to adjust the place itself. By providing cultural events, public parks, or other facilities, cities try to better fit the needs of selected target groups. This makes place marketing more 'demand-driven'.

Lastly, place branding can be explained as a long-term strategic activity (Baker, 2012; Hankinson, 2010), holistic and 'identity-driven' (Boisen et al., 2017). Here, place branding is viewed as the most comprehensive concept of the three, with place marketing and promotion as possible elements thereof. The broadest definition of place branding is provided by Eshuis and Klijn (2011), who see it as a very broad governance strategy (Vuignier, 2017). More specifically, Oliveira (2014, p. 22) states that place branding *"aims to make a country, a region, a city or tourism destination stand out in the complex and changing marketplace, enhance the place reputation and image to the outside and inside worlds alike, and contribute to social and economic development"*. Similarly, it is the *"process of building a brand for a place that is based on the place's identity and on the formation of a positive image in the minds of stakeholders"* (Kladou, Kavaratzis, Rigopoulou, & Salonika, 2017, p. 3). In short, place branding revolves around aligning how the place is perceived, how the place wants to be perceived, and what the place actually is (Clouse & Dixit, 2017).

Figure 1.1 shows the interrelatedness of place promotion, marketing, and branding, in combination with place development. The arrows demonstrate that place branding requires influence over place marketing, place promotion, as well as place development, which is concerned with creating or improving the place offerings (Boisen et al., 2017).

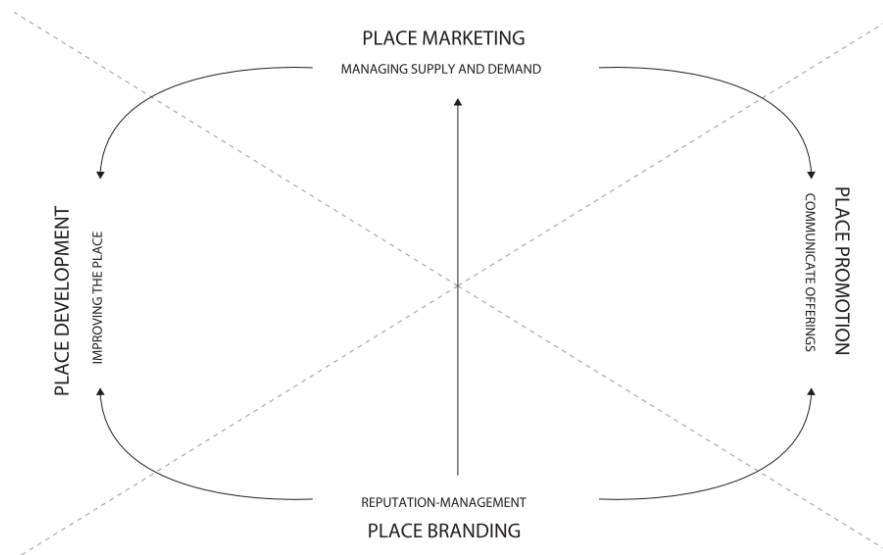


Figure 1.1. *“Place promotion, place marketing, place branding and place development.”*(Boisen et al., 2017, p. 5)

In the place branding descriptions, two concepts are linked inextricably: identity and image. Vuignier (2017) even identified identity and image as two of the most recurring themes in place branding and the place marketing literature. Starting with identity, this term is often applied to persons or groups, and related to their distinctiveness, essence, or uniqueness. Similarly, this concept is used in the place branding literature and practices as the essence of a place or brand. A critical observation is that the identity of a place and the identity of a brand are two different concepts. Brand identity is the essence of the brand (Hanna & Rowley, 2013), the clearly and distinctively expressed core concept of the ‘product’ (Anholt, 2007), and how the owners want the brand to be perceived (Boisen, Terlouw, & Van Gorp, 2011; Lu, de Jong, & Chen, 2017). As a supply side of place branding (Acharya & Rahman, 2016), the brand identity is an essential part of the branding process. The place identity is a rather complex concept. Kavaratzis and Hatch (2013) recognize two approaches in the literature, a static view and a more dynamic view on a place’s identity. The static perspective views the identity of a place as defined or fixed, which can be discovered and communicated to the world. Using this approach, Kavaratzis and Hatch (2013) argue, limits place branding to a promotional tool to merely convey the identity to others. Actual place branding asks for a more dynamic view of places and identities, meaning they change over time, deliberately or not. Place identity is thus continuous (Kalandides, 2011; Kavaratzis & Hatch, 2013), a process of becoming (Dormans, van

Houtum, & Lagendijk, 2003). Chapter 2 offers a more comprehensive explanation of identity in the context of place branding.

Scholars in the domain seem to agree that the place image is the consumer's perception or impression of a place (Anholt, 2007; Boisen et al., 2017; Kavaratzis, Warnaby, & Ashworth, 2015; Vanolo, 2008). Through a variety of activities, place branding practices aim to establish and maintain a positive image (Vanolo, 2008). The place image can be analysed using several dimensions. For example, the image can be aligned or conflicting among all consumers (Kavaratzis & Hatch, 2013). Moreover, the image can be divided into internal and external perceptions, referring respectively to the stakeholders that are inherent to the place, and those that are not (yet) (Vanolo, 2008). The place image can be strong when a majority shares similar associations, and is positive if the associations are considered favourable (Boisen et al., 2017). Chapter 2 offers a more detailed explanation for the concept of image as well.

1.1.2. Polycentric regions

In 1999, around the same time that place branding attracted scientific interest, polycentricity was defined as a key policy aim in the European Spatial Development Perspective (ESPON, 2005). Polycentric urban structures were hoped to *"contribute to a more balanced regional development, to reducing regional disparities, to increasing European competitiveness, to the fuller integration of European regions into the global economy, and to sustainable development"* (ESPON, 2005, p. 3). Moreover, EU policy aims not only at economic and social cohesion, but since the Lisbon Treaty in 2007 also on territorial cohesion (Meijers, Hoogerbrugge, & Hollander, 2012). It becomes clear that polycentric regions are not just describing an emerging form, but they are a desirable structural form of cities as well (Ren & Berg, 2014). According to Meijers et al. (2012), using conservative standards, almost half of the European urban population lives in polycentric metropolitan areas. The polycentric region is a dominant urban form, especially in advanced economies (Kloosterman & Musterd, 2001).

Meijers et al. (2012) mention three approaches to polycentric development in the research domain: as a normative planning strategy, as a spatial process, and as a spatial outcome

of this process. So, polycentricity can be prescriptive as a form of urban or spatial development, descriptive about the process, or descriptive about the spatial configuration. Here, just as the aforementioned authors, the latter approach is applied. Thus, polycentric regions are a way of looking at the arrangement of cities within a region.

So what exactly is a polycentric region? Polycentricity connotes a plurality of centres (Parr, 2004) that are, from a governance point of view, formally independent of each other (Ostrom, Tiebout, & Warren, 1961). Polycentric regions refer to the spatial application of polycentricity, with cities functioning as the centres. Generally, polycentric regions are defined as *"clusters of historically and administratively distinct but proximate and well-connected cities"* (Meijers et al., 2017, p. 2). Other definitions also stress that none of the cities should be particularly (economically) dominant (Goess, de Jong, & Meijers, 2016). The definition in ESPON (2005) even adds the aspects of a functional relation and complementarity between the cities, which is similar to some of the conditions set by Parr (2004) about the interaction between centres and the need for specialization. In line with Meijers et al. (2012), this research does not consider it necessary for a region to interact or specialize to be labelled polycentric.

In fact, the potential for interaction and specialization to arise, is what makes polycentric regions an interesting domain for study. Two driving forces can be identified behind these characteristics: competition and cooperation. Competition between cities may induce specialisation and complementarity (Cuadrado-Roura & Rubalcaba-Bermejo, as referred to in Goess et al., 2016, p. 2039), whereas cooperation between cities strengthens the functional character of the region (Goess et al., 2016). A polycentric region results in a certain balance between competitive and cooperative elements.

There are two distinct ways in which a polycentric region comes into existence (Meijers et al., 2012). One way is the incorporation mode, where dominant cities gradually extend their influence over surrounding smaller cities. Examples are the regions around London and Paris. The other way is the fusion mode, where several independent cities merge into a balanced settlement system. Main examples mentioned are the Dutch Randstad and the Flemish Diamond. Figure 1.2 shows the phases in which these regions evolve.

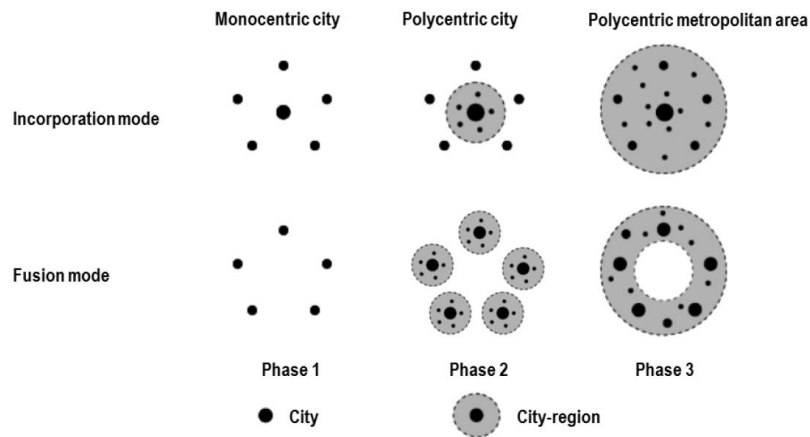


Figure 1.2. "The evolution of polycentric metropolitan areas"(Meijers et al., 2012, p. 15)

Besides the mode of evolution, another way of looking at polycentric regions is the degree of integration. Meijers et al. (2012) distinguish between functional, cultural, and institutional integration. Functional (or spatial) integration is driven by specialisation and good infrastructural and transport systems. Cultural integration requires regional identification and attachment from the involved stakeholders, such as politicians and residents. Institutional integration concerns the presence of regional governance and supporting administrative bodies. The authors stress that these dimensions are strongly linked and have a positive influence on each other, like an upward spiral (see Figure 1.3). In this way, the polycentric region is able to function as one large city network. The process of improving the three dimensions of integration is referred to as metropolisation.

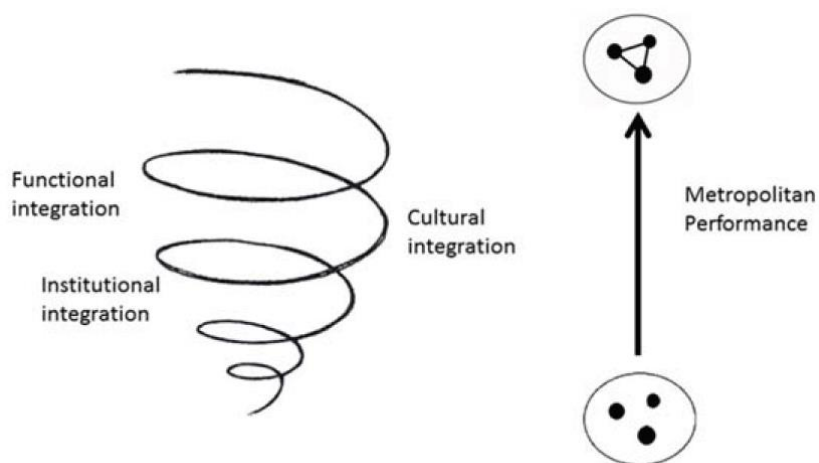


Figure 1.3. "The process of metropolisation"(Meijers et al., 2012, p. 13)

Ren and Berg (2014) performed a study on the consequences of polycentricity for city branding. An essential statement is the following: *“The very nature of polycentric mega-cities, consisting of very different cities with their own profiles, is counter to the main idea in city branding, which advocates a uniform expression of the city to be seen and heard in the world”* (Ren & Berg, 2014, p. 38). In other words, polycentricity revolves around variety and complementarity, whereas city branding stresses the need for uniformity and harmony. Branding a polycentric region in a coordinated effort therefore seems to create tension. Considering these circumstances, Ren and Berg (2014) identify two types of brand ‘portfolios’ for a polycentric region: homophonic and polyphonic. A brand homophony refers to a harmonious or similar set of brand identities among the cities. The objective in this case is consonance. This would greatly stimulate cultural integration of the region, as a clear regional identity is created. A homophonic branding process would demand institutional integration as well, to support or even lead the coordinated regional branding efforts. Alternatively, a brand polyphony allows for a wide variety of brand identities in which individual elements amplify each other. The objective of a brand polyphony therefore can be described as resonance. Apart from the need to coordinate the brand identities, the cities remain rather independent. The cultural and institutional integration are limited.

1.2. Knowledge Gap

The first part of this chapter discussed the two research domains of place branding and polycentric regions. Place branding is a topic that has emerged from the marketing and tourism domain, whereas polycentric regions originated from a spatial development focus. It is not surprising to see that research does not combine these subjects on a regular basis (exceptions are Ren and Berg (2014) and Goess et al. (2016)). However, place branding as well as polycentric development do have strong links with particular matters, especially in the field of governance. Place branding studies regularly stress the need for a coherent vision, based on identity and image, that should result in policies and place development. Research into polycentric regions often emphasises the potential benefits of a coordinated effort towards municipal or regional governance.

An ESPON report identified regional branding as a key issue for regional polycentric development (ESPON, 2005). Regional branding forms a part of place branding research and is also labelled as co-branding (Cai, 2002) or network branding (Pasquinelli, 2015). These studies focus on the creation of brand strategies for regions as a whole, just as the homophonic or polyphonic branding of a region, as discussed by Ren and Berg (2014). By the time of writing, Goess et al. (2016), noted that no studies had previously analysed individual city branding practices within a polycentric region. A knowledge gap thus exists on the relation between different city branding efforts in a regional context. The two main concepts in the place branding literature, identity and image, are thereby particularly relevant to consider. The first step in a city branding process is to determine the current image of the city (Gilboa, Jaffe, Vianelli, Pastore, & Herstein, 2015; Luque-Martínez, García, Ibáñez-Zapata, & Rodríguez-Molina, 2007). It is then important to be aware of a potential gap between the image and the identity of a place (Baxter & Kerr, 2010). However, Ci and Choi (2017) speak of a lack of methods to compare the identity and image of places. Kavaratzis and Hatch (2013) stress the need to better understand the relationship between place identity and image. Thus, the main knowledge gap identified for this research is the relation between the identity and image of cities in a polycentric region.

This knowledge gap is scientifically relevant, but has also societal relevance. Ideally, from the perspective of a place branding manager, the place image becomes aligned with the constructed brand identity, the desired image. For example, place branding can be problematic if city brands show discrepancy (Ločmele & Moustén, 2016), lack credibility (Vanolo, 2015), or are too general (Hospers, 2004). In these cases, it all comes down to the notion that the visions or brand identities are not able to reflect a city's actual identity or image. This practical knowledge gap mainly applies to cities individually. Looking at a regional context, a study into image and identity can provide valuable insights for collaboration. According to Meijers et al. (2012), polycentric development is hampered by a lack of functional, cultural, or institutional integration. Cultural integration requires a strong regional identity or image and a corresponding branding strategy (Meijers et al., 2012). The potential for complementarity and specialisation, as part of a joint branding effort (Ren & Berg, 2014), can be examined and created from an image and identity perspective.

1.3. Research Objective

In line with the knowledge gap, the main research objective is to relate the identity and image of cities in a polycentric context. This objective is achieved through a combination of a purely theoretical foundation and an empirical approach. The theoretical relation is established through a literature review that examines the existing research into the topics of image and identity. This results in a conceptual framework that combines the concepts of image and identity with other related concepts in the field of place branding. Thereafter, an empirical relation between image and identity is established, based on the observation of those phenomena. In order to do so, the concepts of image and identity should be operationalised, measured, and analysed. This results in an analytical tool that is able to relate the image and identity based on empirical evidence, thus requiring a more practical approach. The analytical tool is subsequently illustrated with a case study of a polycentric region, thereby relating the image and identity of several cities in a regional context. The objectives of this research are visualised in Figure 1.4. In the next part, the objective is translated into a main research question and several sub-questions.

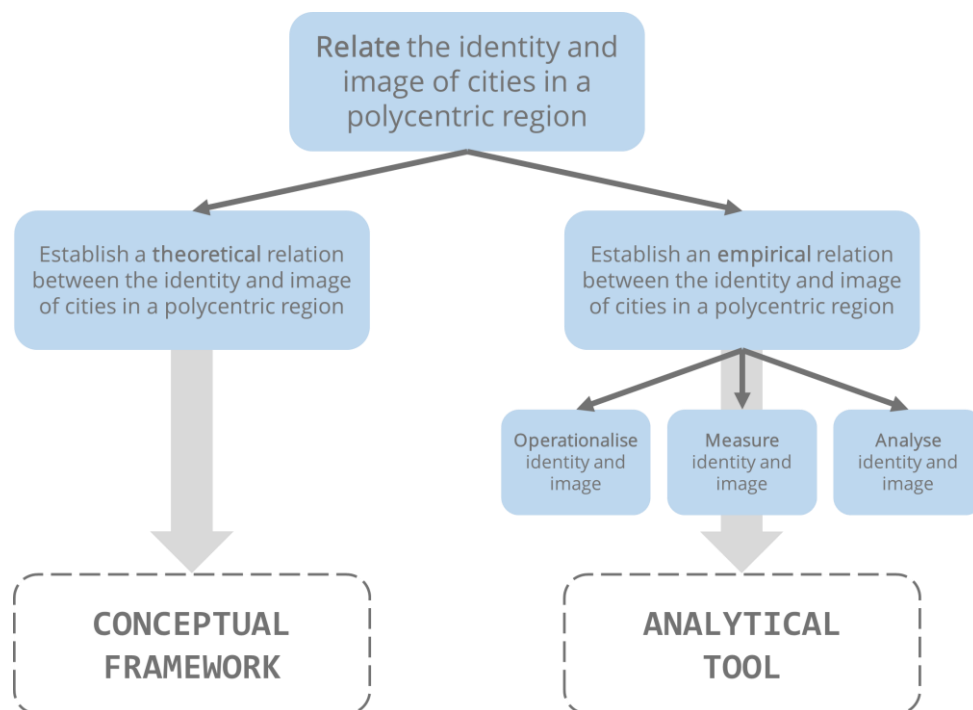


Figure 1.4. Research objectives

1.4. Research Question

1.4.1. Main research question

Based on the problem exploration of city branding and polycentric regions, the knowledge gaps, and the research objective, the following research question is formulated to examine the outlined situation: *What is the relation, both from a theoretical and empirical point of view, between image and identity in a polycentric context?*

1.4.2. Sub-questions

The main research question is divided into several sub-questions in order to provide conclusions and to guide the research accordingly. The sub-questions are divided into three parts: the conceptual framework, the design of the analytical tool, and the illustrative case study.

Part I – Conceptualization of image and identity

- a) *What is the image of the city?*
- b) *What is the identity of the city?*
- c) *What is the theoretical relation between image and identity?*

Part II – Design of analytical tool

- d) *How can identity and image be operationalised for a city?*
- e) *How can identity and image be measured for a city?*
- f) *How can identity and image be analysed for a city?*

Part III – Illustrative case study

- g) *What are the characteristics of the case study as a polycentric region?*
- h) *What are the identity and image of the selected cities?*
- i) *What are the commonalities and differences within the polycentric region?*
- j) *What is the empirical relation between image and identity, based on the case study?*

1.5. Methodology

In order to provide an answer to the sub-questions, a specific set of methods is used. Part I focusses on the **theoretical framework** and requires a literature review on place branding. Based on the findings, a framework is developed which relates identity and image in a spatial context.

Next, part II of the research considers the development of an analytical tool. Besides a focus on literature, this part has a strong **design** component. The literature review provides input for operationalizing the concepts of identity and image in the context of place branding. This results in a theoretical relation between the identity and image of cities. To establish a relation in practice, a requirement is the comparability of both identity and image of cities in a polycentric region. Therefore, a method is designed that is able to actually measure the operationalised concepts. The design in part II results in the measurement method.

Part III of the research puts the analytical tool into practice as an illustration and to be able to improve the tool. The case study is a polycentric region, including several cities to be analysed. This method is called an **embedded case study**, as it concerns a single case study with several embedded subunits (Yin, 2003). The case study must cover a polycentric urban region, including several cities. Moreover, following the definition from Goess et al. (2016), the cities to be selected for the case study must be characterized as follows: politically and administratively distinct, comparable dominance, located in reasonable proximity, and well-connected through infrastructure.

1.6. Structure of the report

The structure of the report is illustrated in Figure 1.5. Part I is dealt with in the first chapter on conceptualisation. First, image and identity are conceptualised, based on a literature review, followed by a conceptual framework. Part II focusses on the design of the analytical tool, which is the subject of the third chapter. Consecutively, image and identity are operationalised, the method of analysis is described, and the design steps are laid out. Part III, the illustrative case study, is the main focus of chapter 4. The case study is briefly

introduced, after which the four stages of the analytical tool are followed. The chapter concludes with an evaluation of the case study. Chapter 5, the final chapter, provides a discussion, based on the three research parts. Conclusions, limitations, and further research are discussed.

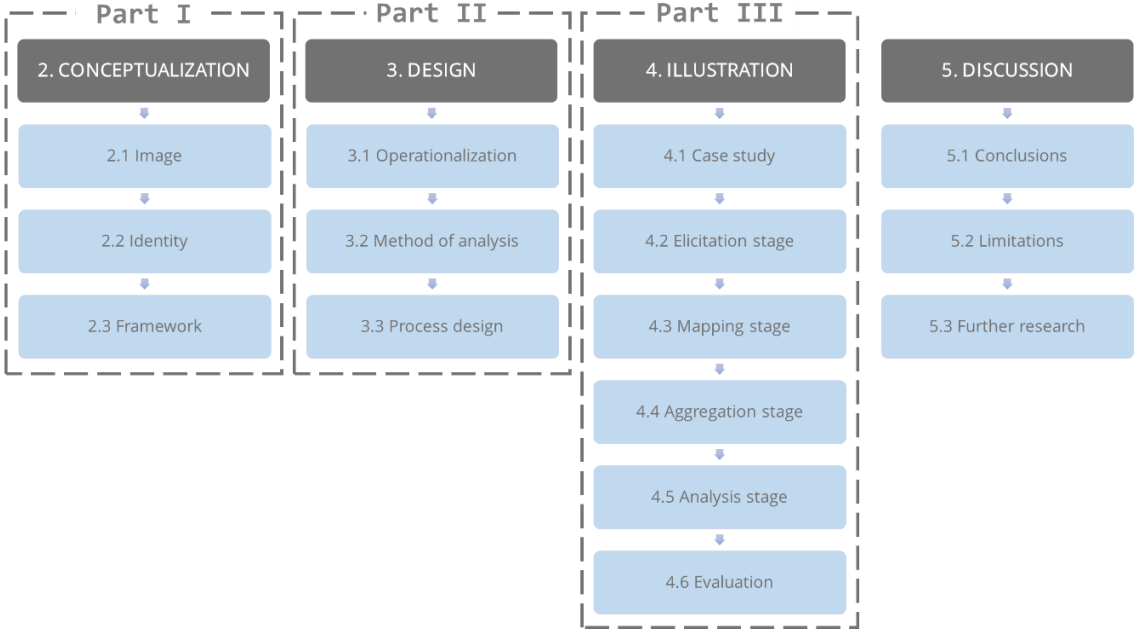


Figure 1.5. Structure of the report

2. CONCEPTUALIZATION OF IMAGE AND IDENTITY

Chapter one introduced the topic of place branding, including a brief description of its two main research themes: identity and image. This chapter aims to develop a more comprehensive theoretical foundation that can aid the rest of the research. First, the concepts of identity and image in the context of cities are discussed separately. Thereafter, several frameworks from place branding literature are discussed. The chapter concludes with the theoretical framework on image and identity.

2.1. Image

With his book 'The Image of the City', Lynch (1960) put the place image on the research agenda. From the perspective of urban design he emphasized the importance of a city's image (Braun, Eshuis, & Klijn, 2014). Essentially, his main contribution is the idea of a mental map of the city: a collective and consensual image, based upon several urban elements. This so-called imageability is supposed to be a guiding principle for the development of cities. Currently, the city image is primarily linked to the domain of place branding. Vuignier (2017) identified image as one of the most recurring themes in place branding and place marketing literature. Hankinson (2015) positions place image as one of seven concepts that are central to the place branding construct. Similarly, the various definitions of place branding show that the image is fundamental to the domain.

Place branding research is often criticized for its lack of conceptual consensus. However, the place image (also brand image) appears to be an exception. Scholars in the domain seem to agree that the place image is the consumer's perception or impression of a place (Anholt, 2007; Boisen et al., 2017; Kavartzis & Kalandides, 2015; Vanolo, 2008). An explanation is provided by Gertner and Kotler (2004, p. 50): *"A place's image is defined here as the sum of beliefs, ideas and impressions that people have of that place. Images represent a simplification of a large number of associations and pieces of information connected with a place. They are a product of the mind trying to process and frame huge amounts of data about a place into a small set of manageable ideas"*. The definition of place image contains two important notions. First, it concerns a construct in the mind of people; thereby, it is something that cannot be observed by the bare eye. Secondly, the

construct contains associations established by an individual in relation to a specific place. The definition of place image as applied in this research is the following: the associations about a place in the mind of any individual or group (see also Table 2.1).

To gain a comprehensive understanding of the image as a concept, several dimensions are discussed in the place branding literature. First of all, there is a difference between **personal and collective** images. An image is formed by an individual, which makes the place image a personal construct. The associations held by one person may significantly differ from another person's image. A collective or shared image thereby refers to the wide set of perceptions or associations held by the public in general or a specific stakeholder group. These may overlap, complement, or contradict each other. Naturally, collective images provide more insight. A second dimension differentiates between **strong and weak** images. If a majority of the consumers shares similar associations, this indicates a strong image (Boisen et al., 2017). A third division identified is between **positive and negative** images, which concerns the favourability of the image (Boisen et al., 2017). This is rather subjective, while an association can be considered positive by one person and negative by another. For example, a quiet city can be boring for a young student, but attractive for an elderly couple. Additionally, an image can be evaluated as neutral as well, thereby being neither positive nor negative. Another dimension found in literature is the distinction between **true and false** images. This is found to be subjective as well, or even controversial, considering that it is difficult to decide whether an image truly reflects a city. Lastly, a division can be made between **internal and external** images. The internal image is perceived by the local actors of a city, whereas the external image concerns perceptions from those positioned outside of the city (Vanolo, 2008). Presumably, from a brand owner perspective, the ideal collective image is strong, positive, and true amongst both the internal and external stakeholders. Table 2.1 presents these five different dimensions.

There are many ways in which the associations are categorized. For example, Laaksonen, Laaksonen, Borisov, and Halkoaho (2006) classify the city image into three perceptual levels: observation, evaluation, and atmosphere. The observation level covers perceptions (divided into four themes: nature, built environment, culture, and industry), the evaluation

level adds attitudes to these perceptions, and the atmosphere level refers to the affective impression of the city. Unfortunately, the authors do not attempt to make a clear distinction between the last two levels. Closely related, yet different, is the most common typology based on cognitive and affective associations. Many authors (Balencourt & Curado, 2012; Bomfim & Pol, 2005; Cai, 2002; Clouse & Dixit, 2017; Luque-Martínez et al., 2007; Richards & Wilson, 2004; Stachow & Hart, 2010) use this typology, often in combination with a third dimension of place image: conative. This classification stems from behavioural sciences, where it is referred to as the 'trilogy of mind' (Hilgard, 1980). **Cognitive** associations revolve around a person's knowledge or information about a topic or object, whereas **affective** associations are a person's feelings or emotions. The **conative** dimension comprises the behavioural intentions (Clouse & Dixit, 2017), influenced by the associations it holds. In other words, conation drives a person to act.

There are several concepts closely related to the place image. Interestingly, a common definition of the **place brand** shows great similarity with the place image: *"a network of associations in the consumers' mind based on the visual, verbal, and behavioural expression of a place, which is embodied through the aims, communication, values, and the general culture of the place's stakeholders and the overall place design"* (Zenker & Braun, 2010, p. 3). To avoid confusion, the term 'place brand' itself is not referred to or even used in this research. Other concepts related to image are place reputation, brand awareness, resident satisfaction, place attachment, sense of place, brand preference, and place loyalty. The **place reputation** is closely related, yet slightly different. Instead of associations, the reputation reflects people's attitude towards a place (Braun, Eshuis, Klijn, & Zenker, 2017). Whereas the place image can change regularly, the reputation is less volatile (Braun et al., 2017). Moreover, the reputation stimulates a normative judgement or emotional response about a place (Boisen et al., 2017). **Place or brand awareness** is the degree to which consumers are aware of a place's features (Zenker & Jacobsen, 2015). **Resident satisfaction** is the degree to which citizens are satisfied with living in their city, which is found to have a strong causal relationship with city image (Luque-Martínez et al., 2007). **Place attachment**, also known as topophilia, is the *"affective bond or link between people and specific places"* (Hidalgo and Hernandez, 2001, p. 274, as cited by Warnaby & Medway, 2015, p. 42). **Sense of place** revolves around the experiences on sensory,

emotional, cognitive, and subjective levels (Campelo, 2015), which makes people attached to a place (Kavaratzis & Hatch, 2013). **Place preference** refers to a consumer’s choice between two or more places based on a cognitive judgement and positive affective feelings (Gómez, Fernández, Molina, & Aranda, 2016). Therefore, preference for a city results from a person’s image of that city. **Place or brand loyalty** is indicated by an enduring preference for a specific place, as well as commitment to recommend the place to others (Gómez et al., 2016).

Table 2.1. Conceptualization of place image

Place image	the associations about a place in the mind of any individual or group	
Dimensions	personal	- collective
	strong	- weak
	positive	- negative
	true	- false
	internal	- external
Elements	affective cognitive conative	
Related concepts	place brand place reputation place or brand awareness resident satisfaction	place attachment sense of place place preference place or brand loyalty

2.2. Identity

Whereas the image is quite clear in terms of conceptualization, the identity is not. In general, identity can be described as *“the fact of being who or what a person or thing is”* (“Identity [Def. 1],” n.d.). In the context of place branding, this would become ‘the fact of being what a place is’. This does not make the conceptualization of identity any clearer. As discussed in the previous chapter, it makes sense to differentiate between the identity of a brand and the identity of a place. In short, the distinction made here is that brand identity is selected and designed on purpose, whereas place identity is fluid and pluralistic (Kerr & Oliver, 2015). The following parts elaborate on this difference in more detail.

2.2.1. Brand identity

If a city wants to establish a strong and positive place image among its target groups, it needs to be differentiated through a unique brand identity (Kavaratzis & Ashworth, 2005). Therefore, in the place branding process, it is essential to formulate a brand identity that differentiates the city from other destinations (Konecnik Ruzzier & De Chernatony, 2013). As one of the main steps in the systematic process of city branding, building a city brand identity includes the identification of a vision and goals (Oguztimur & Akturan, 2015). Hankinson (2015) identified the brand identity as one of seven concepts that are central to his place branding construct, whereas Hanna and Rowley (2013) see it as the central aspect of the branding process. However, even though the brand identity is a dominant theme in practice and literature, a robust conceptualisation is missing according to a literature review by Acharya and Rahman (2016). The subsequent part shows that the definition of brand identity is an exception to this notion.

From a definition point of view, the brand identity is quite clear. In marketing terms, it is known as the clearly and distinctively expressed core concept of the 'product' (Anholt, 2007). The brand identity thus refers to some form of deliberate expression about the essence of the product, with a city being a product in this case. In the context of place branding, the brand identity basically refers to how the place owners want the place to be perceived (Boisen et al., 2011; Hanna & Rowley, 2013; Kavaratzis & Ashworth, 2005; Ločmele & Moustén, 2016; Lu et al., 2017). The 'owner' in the case of a city is the local government, as they are responsible for governing the city. The sense of ownership, however, cannot be described as individual property. Other similar definitions of the brand identity give a description with reference to an image. Steven Pike (2007) views brand identity as the designed and desired image in the consumer's mind. More specifically, the brand identity can be seen as *"an image that creates a sustainable advantage by differentiating the brand from other competitors through the positioning statement"* (Runyan and Huddleston, 2006, as referred to in Balakrishnan, 2009, p. 618). Especially the following definition shows great resemblance with the place image: *"a unique set of brand associations that the brand strategist aspires to create or maintain"* (Aaker, 1996, p. 68, as cited by Cai, 2002, p. 722). Similarly, the intended image is mentioned by Baxter and Kerr (2010), who refer to it as what the organisation wants

others to think about the organisation. In this case, the organisation can be a city as well. Based on the definitions above, it can be concluded that the brand identity is not the actual image, but the intended or desired image in the consumer's mind. The definition can be found in Table 2.2 as well.

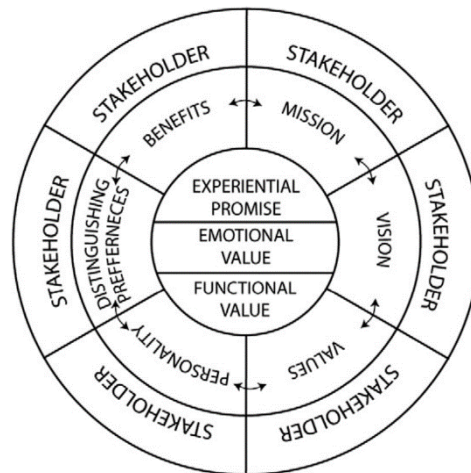


Figure 2.1. "Destination brand identity model" (Konecnik Ruzzier & De Chernatony, 2013, p. 48)

A useful conceptualization of brand identity is offered by Konecnik Ruzzier and De Chernatony (2013), who noticed that no widely supported model of place brand identity was available. Based on several conceptual models, they propose six elements that continuously interact to create an 'experiential promise' through emotional and functional values. The six elements of the brand identity model are: mission, vision, values, personality, distinguishing preferences, and benefits. Both mission and vision are concerned with guiding a place's future direction. **Mission** refers to a statement of purpose that distinguishes a place from other places. **Vision** is a statement of purpose as well, but focusses on envisioning the future environment of a place based on specific values. These **values** are intended to be shared among the place's stakeholders and based on its cultural, historical, and geographical background. **Personality** refers to the personality of the internal stakeholders, for example the residents of a city, and includes their main traits and ways of life. **Distinguishing preferences** are a place's unique attributes, which can be tangible or intangible. **Benefits** are the rewards as a result of experiencing the place and its distinguishing attributes. Figure 2.1 depicts the six brand identity elements in relation with the aforementioned experiential promise and emotional and functional values, as well as with the stakeholders. More than once, Konecnik Ruzzier

and De Chernatony (2013) stress the importance of participation by both the internal and external stakeholders in the process of designing a brand identity.

There are several other concepts related to brand identity. One is the **competitive identity**, which is the main theme in the book 'Competitive Identity: The New Brand Management for Nations, Cities and Regions' (Anholt, 2007). It is referred to as *"the synthesis of brand management with public diplomacy and with trade, investment, tourism and export promotion"* (Anholt, 2007, p. 3). Alternatively, Kerr and Oliver (2015) view the competitive identity as a selection from a set of revealed associations, which subsequently can be used to design a brand identity. Whereas Anholt (2007) sees competitive identity as an approach to place branding, opposed to the marketing or promotion of places, Kerr and Oliver (2015) consider competitive identity merely as input for the brand identity. Another related concept is the **brand strategy**, defined by Boisen et al. (2017, p. 4) as a *"framework of core values, emphasizing the identity of the place"*. Brand strategy thereby shows close resemblance to the 'value' element in the model by Konecnik Ruzzier and De Chernatony (2013). A third related concept is the **brand purpose**. To explain the concept, Anholt (2007) compares it with 'corporate culture' or the internal brand image. Basically, the brand purpose is the set of brand values shared by the employees of a company. In the case of place branding, brand purpose refers to the alignment of values among place owners, which are the city officials. **Brand positioning** is also related to brand identity, and is described as communicating the differentiating brand values or competitive advantage to target groups (Boisen et al., 2011; Janiszewska & Insch, 2012; Kavaratzis & Ashworth, 2005; Ločmele & Moustén, 2016). Similarly, brand positioning is the designation of a unique image in the consumer's mind as compared to competitors (Gómez et al., 2016; Hankinson, 2015). Brand positioning is supposed to be the follow-up of brand identity in the place branding process (Janiszewska & Insch, 2012; Ločmele & Moustén, 2016). In order to position a city in the consumer's mind, they often apply **city labels**. These are generic labels for promotional purposes, such as a green or smart city (De Jong, Joss, Schraven, Zhan, & Weijnen, 2015). A final concept related to brand identity is the **brand promise**, previously referred to as the 'experiential promise' in the model by Konecnik Ruzzier and De Chernatony (2013). This promise is the expectation of a place held by

people, and is created by the communicated brand identity, brand positioning, or city label. The elements and the related concepts can be found in Table 2.2.

Table 2.2. Conceptualization of brand identity

Brand identity	the intended or desired image in the consumer’s mind	
Elements	mission	personality
	vision	distinguishing preferences
	values	benefits
Related concepts	competitive identity	brand positioning
	brand strategy	city label
	brand purpose	brand promise

2.2.2. Place identity

After clarifying the concepts of place image and brand identity, the third to be conceptualized is the place identity. From all the terms applied in place branding literature, the place identity has the biggest conceptual confusion. For example, Kavaratzis and Hatch (2013) describe a static and dynamic view, whereas Kalandides (2011) even identified six different uses of the term place identity. The aim of this part is to provide insight in the wide variety of definitions and clarify the concept for the remainder of this research.

The identity of a place basically refers to what the place really is. So far, this has been agreed by most of the scholars in the domain of place branding. However, the application of place identity is characterized by ambiguity. Kalandides (2011, p. 30) distinguishes six variations in the use of place identity in place branding literature:

1. *“place identity as part of individual (human) identity;*
2. *place identity as formative of group identity;*
3. *mental representations of place by an individual;*
4. *group perceptions of place;*
5. *identification of a group with a territory; and*
6. *place identity as [...] “character”, “personality” and distinctiveness.”*

The first and second use of place identity concerns the influence it has on **individual or group identities**. Interestingly, the third and fourth application of place identity show great

resemblance with the place image. Mental **representations or perceptions** about a place, held by individuals or groups, are in line with the definition of place image as applied in this research. **Identification with** a place, the fifth type, relates to people belonging to a place. For example, people may describe themselves as being typically 'Dutch' or a real 'Rotterdammer' (someone from the city of Rotterdam). The sixth variation revolves around the **distinctive features** that give the place a certain personality or character. The first five applications are inherently connected to people, whereas the sixth is concerned with the material dimension of the place.

Similarly, Weichart, Weiske, and Werlen (2006) differentiate between three processes of place identity: **identification of, being identified as, and identification with**. Identification of a place is connecting associations with the place (Kalandides, 2012). This is related to the third and fourth type of application. Being identified concerns the ways in which people are recognized as being part of a place, which is similar to the first and second type of application. The identification with a place is equivalent to application number five. Again, the sixth type of application appears to be a peculiar case, as Weichart et al. (2006) claim that the place identity cannot be independent of people. The features of a place are therefore only a constituent of place identity in relation to its users.

As discussed in the introductory chapter, there are two views towards the place identity: **static and dynamic** (Kavaratzis & Hatch, 2013). The static approach assumes that the identity can be defined, manipulated and communicated. In line with this view, Kerr and Oliver (2015, p. 61) state that *"revealing and selecting a place identity should be at the base of place branding and marketing strategies"*. Subsequently, this place identity should be representative of the place characteristics and forms the content of promotional communication. The essential assumption underlying the static view is that the place identity is a fixed concept. As opposed to the static assumption, Kalandides (2011) argues that the place identity itself is a continuous process rather than an outcome. This characterizes the dynamic view on place identity. His line of reasoning is based on several ever-changing elements that supposedly constitute place identity: materiality, practices, institutions, and representations (Kalandides, 2011; Kavaratzis & Hatch, 2013). **Materiality** concerns the physical features of a place, such as buildings, streets, and squares, and is

the central element of place identity. The **practices** refer to the structures of social interaction of people within the physical environment. It includes the *“production, use and appropriation of materiality”* (Kalandides, 2011, p. 34). The **institutions** are the organisations and regulations in place, as well as the social norms. These institutions control the relation between the people and the place. This view of institutions shows similarities with the institutional layers by Williamson (1998). Lastly, the representations consist of the mental associations with a place, also known as the **place image**. To avoid confusion, the term place image will be used instead of representations.

Based on the above analysis of place identity, a definition can be derived. However, it is hard to find a definition that suits all of the ambiguous conceptualizations that are described by scholars in the domain of place branding. Based on the convincing argumentation by Kalandides (2011) and Kavaratzis and Hatch (2013), the dynamic approach is adopted in this research. Therefore, a place’s identity is viewed as an ongoing process and thus *“any attempt to define it will always be futile”* (Kalandides, 2011, p. 37). Furthermore, place identity is believed to be an interplay between people and place, touching upon the domains of the social and physical environment. This place identity process is shaped by the four elements of materiality, place image, institutions, and social interactions. The definition and the four elements are summarized in Table 2.3. No other relevant concepts have been found to be discussed in relation to the place identity.

Table 2.3. Conceptualization of place identity

Place identity	The ongoing interplay between people and place, shaped by materiality, social interactions, institutions, and place image	
Elements	materiality institutions	practices place image
Related concepts	n.a.	

2.3. Framework

It has become clear that place image, brand identity, and place identity play a significant role in place branding theory and practices. To show the role of these concepts, many scholars in the domain provide a conceptual framework. The frameworks often include one or more of the three concepts of place image, brand identity, and place identity. This section aims to show several frameworks in place branding research, and subsequently present a new conceptual framework. It encompasses the theoretical foundation on image and identity combined with insights from models from place branding research.

2.3.1. Frameworks from literature

Several authors in the field of place branding have established relations between image and identity. Often, many of the related concepts from the previous section are included as well. This part discusses five theoretical frameworks from the field of place branding.

One of the first and also most used frameworks adapted in place branding literature is the city image communication model by Kavaratzis (2004). Figure 2.2 displays three forms of communication that shape the city image as held by people. Primary communication is the result of interventions by the local authority. The author divides the interventions into four areas: landscape strategies (e.g. urban design, architecture, green spaces), infrastructure projects (e.g. accessibility, cultural centres, conference facilities), organisational and administrative structure (e.g. citizen participation, public-private partnerships), and behaviour (e.g. financial incentives, services, events). Secondary communication concerns the formal and intentional communication through promotional practices. It often includes the use of advertising campaigns with slogans and logos. Tertiary communication is the word of mouth between people, reinforced by the media. As opposed to primary and secondary communication, this third type is not controllable by the city. Therefore, a goal of place branding is to evoke positive tertiary communication. Kavaratzis (2004) stresses that the three types of communication need to be harmonious with each other and with the 'reality' of the city.

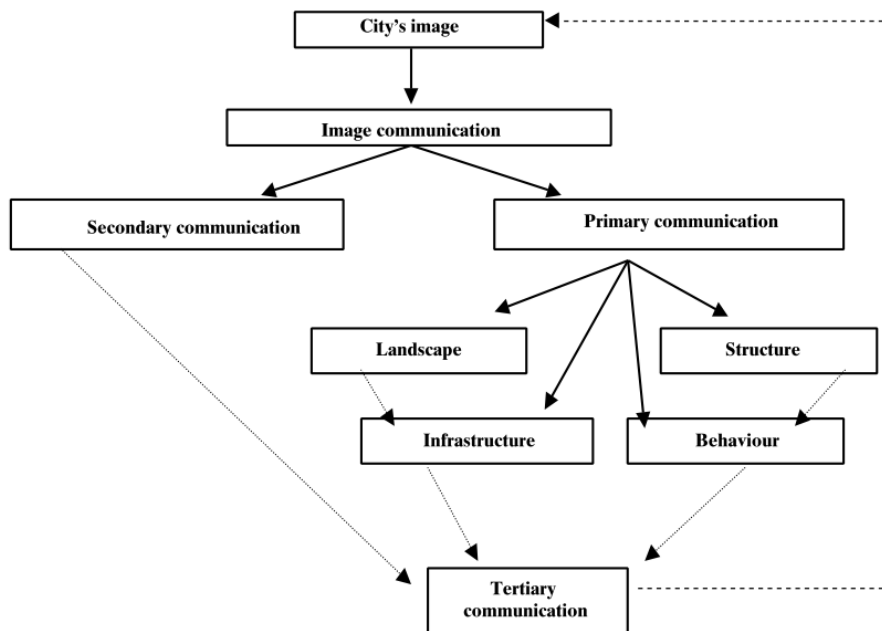


Figure 2.2. "City image communication" (Kavaratzis, 2004, p. 67)

Acharya and Rahman (2016) performed an extensive literature review and created Figure 2.3, relating various concepts that are associated with place branding. The place brand identity and place brand image are both visible in their "Nomological Network of Constructs", whereas place identity appears to be absent. The place brand image is considered to be indirectly (and partly) determined by the place brand identity through communication. Ideally, from a city point of view, all consumer's brand images align with the brand identity that was created. What seems to be missing in this framework is an explanation of the (causal) relations between the various concepts.

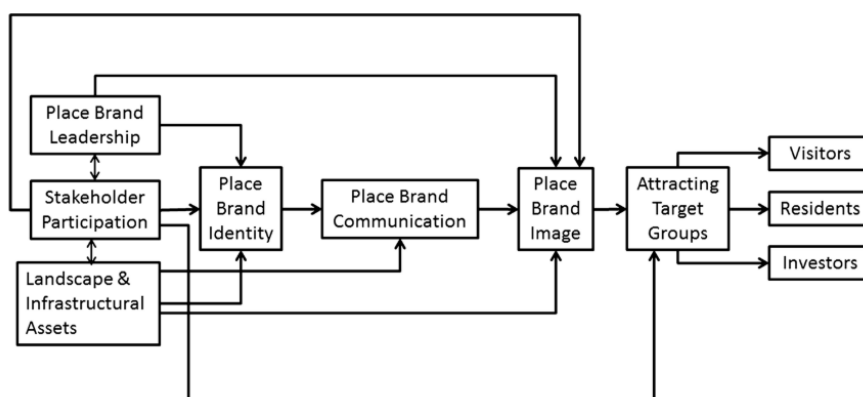


Figure 2.3. "Nomological Network of Constructs" (Acharya & Rahman, 2016, p. 18)

A third framework is developed by Campelo, Aitken, Thyne, and Gnoth (2013). It aims to show how the physical attributes (location, landscape and weather) interact with social attributes (people and history) in order to create sense of place constructs (time, ancestry, landscape and community). An interesting feature that could be used for this research, is the separation between the physical and social environment of a place.

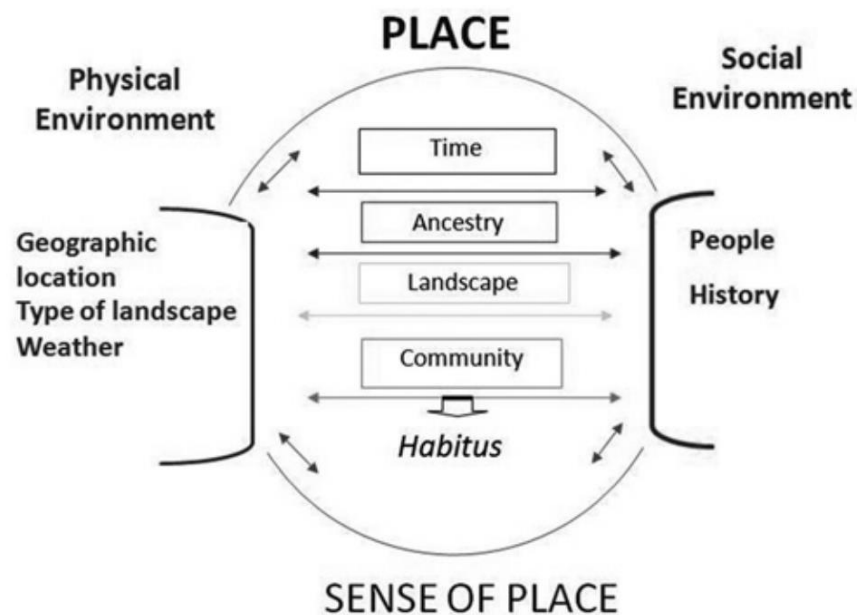


Figure 2.4. "Sense of place model"(Campelo et al., 2013, p. 161)

The strategic place brand-management model (SPBM) is a fourth framework, developed by Hanna and Rowley (2011). Based on earlier research into place branding models, they created this model to "support managers in embracing a holistic approach to place brand management" (Hanna & Rowley, 2011, p. 458). In Figure 2.5 the brand identity is represented as one of the core components of the model. It is created through stakeholder engagement and the tangible and intangible attributes of a place and is represented by the brand articulation, the verbal and visual identity of a place. This model does not suggest that the brand identity influences the development of a place, which is an essential guideline of place branding theory. However, an evaluation is used to guide the stakeholder engagement and attributes of a place. The authors stress the importance of measuring the development of place image and the effectiveness of place branding in general.

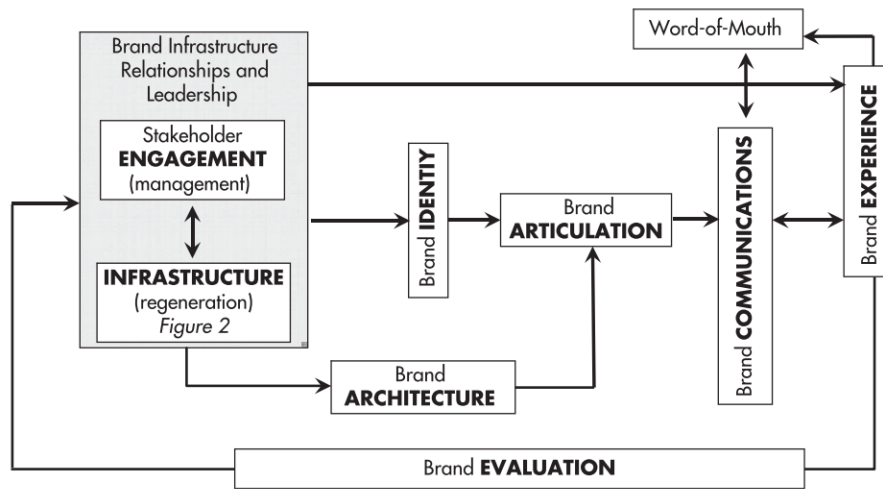


Figure 2.5. "Strategic place brand-management model"(Hanna & Rowley, 2011, p. 463)

Another framework, revolving around the concepts of place identity and place image, is created by Kavaratzis and Hatch (2013). The model aims to depict the dynamics of place branding. Basically, it describes place identity as a dynamic process consisting of four sub-processes with the elements of culture and image. The idea is that *"culture is the context of internal definitions of identity, while image is the site of external definitions of identity, and how these two definitions influence each other is the process of identity"* (Kavaratzis & Hatch, 2013, p. 77). Therefore, image and culture seem to be inherent to a place's identity. The authors summarise that *"effective place branding [...] expresses the place's culture, leaves impressions on others, mirrors these impressions on the identity, and reflects the changes evoked back into the place culture"* (Kavaratzis & Hatch, 2013, p. 82)

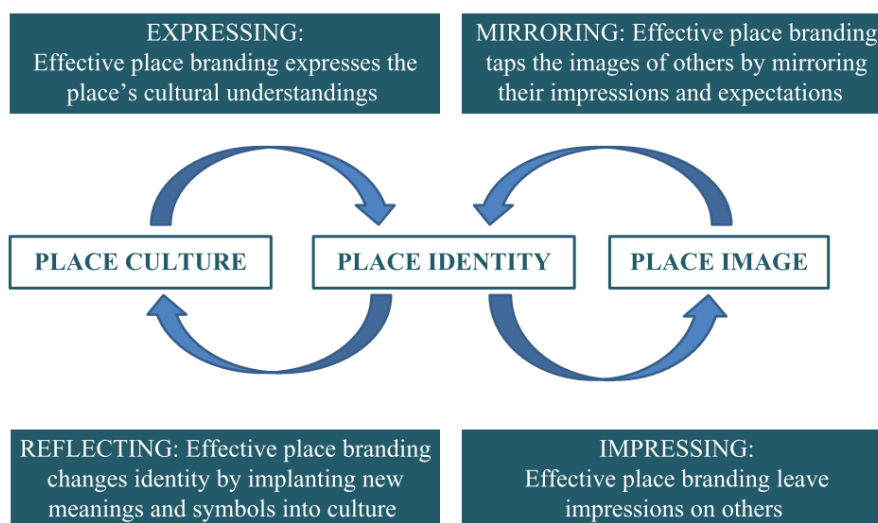


Figure 2.6. "How place branding shadows the identity process"(Kavaratzis & Hatch, 2013, p. 80)

2.3.2. Constructed framework

Based on the in-depth literature review, a wide variety of important concepts, elements and frameworks has been identified in relation to identity and image. To summarize and support the remainder of this research, an attempt is made to combine them into a conceptual framework. The result can be seen below, in Figure 2.8. The central components are people, public, and place. The people include the (potential) residents, visitors, and investors or entrepreneurs. The public concerns the governmental organisation with administrative authority over a certain territory, e.g. a municipality in case of a city. Together, the people and public are part of the institutional environment, which also consists of cultural norms and values, other organisational structures, and regulations. The place is the physical environment in which daily practices happen. All of them possess unique features, respectively a place image, a brand identity, and materiality.

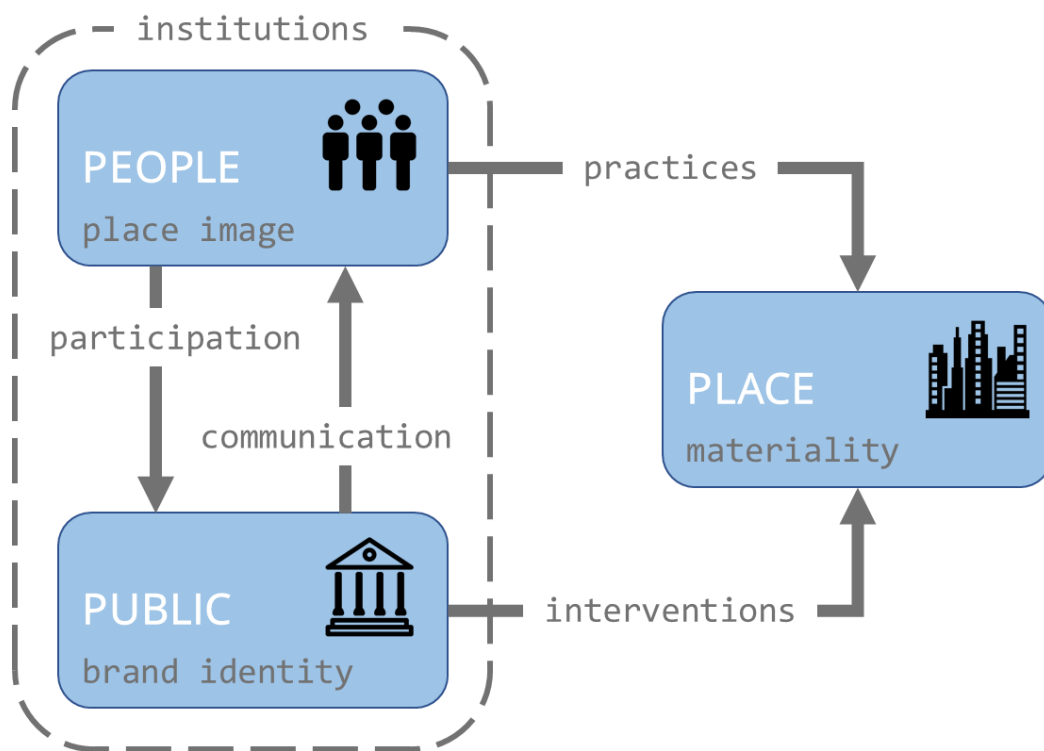


Figure 2.8. Interplay between people and public in place and its identity

In the conceptual framework, the place image and brand identity are both present, whereas the place identity seems to be absent. However, a close look shows that all four elements of place identity, as identified previously in this chapter, are part of the

framework. The materiality constitutes a place's physical aspects, such as buildings, streets, and parks. The place image is held and created by people, following. Furthermore, the institutions serve as the wider context of people and public. The fourth element, practices, establishes the relation between people and place. As described previously, the practices are social interactions like the production, use, and appropriation of the physical environment. Therefore, the ongoing process between these elements indicates the presence of place identity in the conceptual framework. Next to the four place identity elements (including place image) and brand identity, three other relations have been identified in the framework. First, public institutions, like municipalities, intervene in the place directly through developmental projects. Moreover, the public intervenes indirectly by establishing guidelines for the human practices, for example with spatial plans and permits. The final two relations are between the people and the public: participation and communication. Participation refers to the involvement of people in public processes, such as citizen participation or public-private partnerships. Amongst others, Konecnik Ruzzier and De Chernatony (2013) stress the importance of involving both internal and external stakeholders in designing a brand identity. In the reverse direction, communication is the way in which public organisations inform people about their places. This can be considered a purely promotional activity.

This conceptual framework indicates the relation between identity and image in place branding theory. The city image communication model by Kavaratzis (2004) serves as the foundation of this framework. The place image as held by people is shaped through their practices within a place (primary), public communication about the place (secondary), and word of mouth between people (tertiary). In short, the conceptual framework consists of three core components: people, public, and place. Each of them possesses an essential feature, respectively: place image, brand identity, and materiality. The three components interact with each other through four types of activities: practices, interventions, participation, and communication. Finally, as opposed to the physical environment of place, the people and public operate in an institutional context. In addition, the framework reflects three components that constitute place (Agnew, 1987, as referred to by Warnaby & Medway, 2013, p. 348): location, locale, and sense of place. Location refers to the geographical area of a place, local is the context in which informal and institutional

relations are situated, and sense of place, as discussed before, is a subjective and emotional feeling that attaches people to a place. Location is at the level of the whole framework, including all components. Locale refers to the institutional context-level on the left side of the framework. Sense of place, is situated at the level of people, as a concept related to place image. Thus, interestingly, the figure does not only relate image and identity, but also depicts the broader concept of place.

The main conclusion to be drawn from this framework concerns the impact of two main features: place image and brand identity. Together they influence the four activities by the people and the public entities. Place image is at the basis of the practices people perform in the physical world. Based on a certain place image, the (potential) visitors, entrepreneurs, and residents decide to visit a city, or even settle in the city. The place image may also have an impact on participation by people, but this notion remains an assumption. Especially people that have settled down in a city, such as residents and local enterprises, could have very good reasons to participate. For example, it can be suggested that a positive place image creates a stronger place attachment, which can motivate people to participate. Otherwise, negative associations might also motivate people to become involved in public processes, as they can have a strong desire to change current practices. Moreover, the brand identity influences the promotional communication from the public towards people in general or specific target audiences. The brand identity also intends to guide public interventions in the physical environment. Whether this actually happens in a consistent way, remains a point of discussion in practice. Through communication and interventions, the public is able to shape the image into their desired image.

3. DESIGNING A METHOD

Whereas the previous chapter mainly focussed on a theoretical foundation, this chapter aims at designing a method to measure place image and brand identity. First, both concepts are made more tangible in the section on operationalisation. This is followed by a section on the method of analysis: the brand concept map. The chapter concludes with the process design of the measurement tool. All stages are described in detail, so the next chapter is able to illustrate the tool.

3.1. Operationalisation

The conceptualization of image and identity has shown that place image and brand identity are at the core of place branding. As opposed to place identity, these two concepts belong to a specific stakeholder group. The place image is held by the people, whereas the brand identity is held by the responsible government. Now that they have been identified, the next step is operationalisation. This allows both concepts to be measured in a later phase.

The place image consists of the associations about a place in the mind of any individual or group. The brand identity is the intended or desired image in the consumer's mind. Thus, both concepts revolve around the associations in the consumer's mind. This section therefore aims to operationalise the associations, using theory from place branding literature on place image. There is one important requirement that has to be kept in mind: comparability. The aim of the analytical tool is to compare images with each other. This may concern comparing the actual and desired image of one city, as well as comparing the images between cities.

As discussed in the second chapter, the city image has affective, cognitive, and conative components. The first two revolve around the associations in a person's mind, whereas the conative component drives a person to act. When considering the brand identity or the desired image, it has to be considered that the conative dimension is irrelevant. Local authorities intend to drive people towards action, to actually attract people towards their place. In other words, the conative component of the desired image is known by

definition. A comparison between the conative dimension of place image and brand identity is therefore not relevant. Therefore, the focus here will be on operationalizing the (desired) **affective and cognitive** associations. If the study would focus on measuring the image only, the conative part can be included as well.

In the literature on place branding, there have been several attempts to operationalise the associations. In general they can be divided into two categories: verbal and visual. Using words, people are able to verbally describe the associations they hold towards places. In most place image studies, associations are expressed verbally. Alternatively, a visual approach allows people to visualize their associations through images, such as drawings and photos. Laaksonen et al. (2006, p. 212) and Bomfim and Pol (2005) applied a combination of visual and verbal methods to measure the city image. A major drawback of visual images is that they are difficult to interpret by researchers. Therefore, both studies used drawings or visual collages as a means to elicit verbal expressions from respondents. For the sake of interpretation, associations have to be measured in a **verbal** manner.

So far, place image and brand identity are operationalised as verbal descriptions, where we can distinguish between affective and cognitive associations. A final element, as identified by scholars in the domain, is that city image associations exist in a **network** (Kavaratzis & Kalandides, 2015; Luque-Martínez et al., 2007). Instead of merely a sum of isolated elements, they are believed to be mutually dependent and activated. Using a network to relate verbally expressed associations indicates a semantic network (Sevin, 2014). A network offers the possibility of network analysis, in which metrics can be calculated such as the centrality or uniqueness of associations. What is more, differences between place image and brand identity can be quantified with network analysis (Ci & Choi, 2017). The next sections will elaborate into more detail about the analysis of place image networks.

Comparing the place image with brand identity has another implication: negative associations fall out of the scope of study. Logically, local authorities only define associations with a **positive**, or at least **neutral**, connotation. Associations with a negative

connotation are not part of the brand identity. In order to improve the comparability of the place image and brand identity, negative associations cannot be part of the network structures.

The last part of the operationalisation concerns the uniqueness of place associations. As stressed before, comparability of the image networks is an essential requirement. Therefore, unique assets of places cannot be included in the measurement. Assets like iconic landmarks, a music festival, or even people, are unique to a city. It makes sense to include these in individual city image studies, but they are less applicable when comparing associations between cities. Instead, the analytical tool should only focus on more **general**, comparable associations. These can, in theory, apply to multiple cities, or even all of them.

The outcome of the above is that place image and brand identity are operationalised as cognitive and affective associations that are expressed and related with cities and each other in a semantic network structure. Furthermore, the associations should be general (as opposed to place-specific) and positively or neutrally connotated (as opposed to negatively). The composition and data collection method need to account for this operationalisation.

3.2. Method of analysis

Now that the associations for place image and brand identity have been operationalised, it is time to choose a method for analysis. This section deals with choosing a method to represent and analyse the associations. As became clear from the previous part, this method should allow a verbal expression of associations in a network structure. Several options are therefore not possible. For example, a simple table presenting associations and their frequencies, as mentioned by respondents, is unable to represent the associations in a network structure. A more graphic component, showing relations between elements, is required. Meanwhile, because the associations are operationalised as verbal expressions, a visual collage or drawing is not an option either.

One specific method has been identified in city image research (see Appendix A) that shows great potential: the brand concept map (BCM). It was introduced by John et al. (2006, p. 549) as a method to elicit the *“the core brand associations that define the brand’s image and show which brand associations are linked directly to the brand, which associations are linked indirectly to the brand, and which associations are grouped together”*. The authors refer to the BCM as a new consumer mapping approach. As opposed to the unstructured measurement technique of concept maps, the BCM is supposed to incorporate more structure into the stages of concept mapping (John et al., 2006). Figure 3.1 shows an example of a BCM concerning consumer associations belonging to the Volkswagen Beetle.

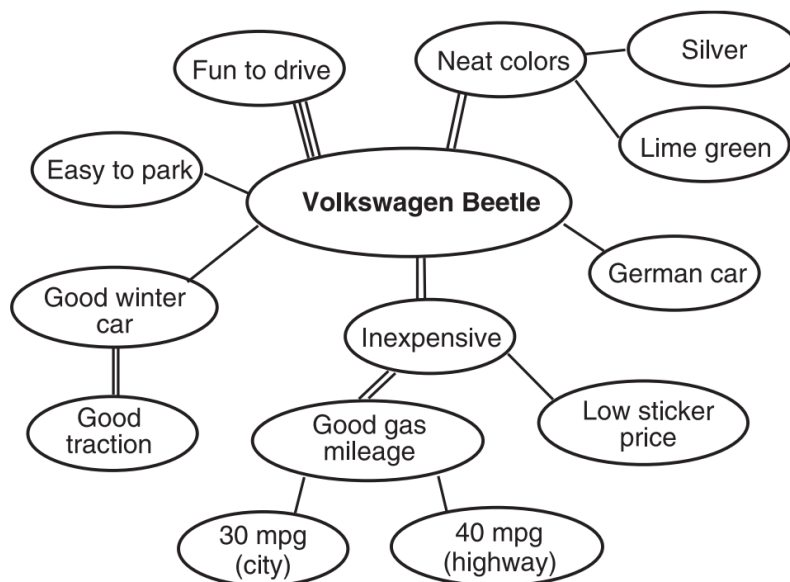


Figure 3.1. “BCM Example”(John et al., 2006, p. 553)

First applied in the domain of marketing, the brand concept map has been used in place branding research as well, albeit incidentally. Brandt and de Mortanges (2011) apply the BCM method to study the perceptions of students about university towns. Later, the BCM is used by Zenker and Beckmann (2013) to measure the impact of flagship projects in Hamburg on the place image. Additional research by Zenker (2014) resulted in a slightly new approach: the advanced BCM (aBCM). The aBCM approach includes information about the favourability and importance of the associations. Favourability concerns the respondent’s evaluative judgement of single associations, whereas importance is about the importance of single associations in the respondent’s ‘purchasing’ decision.

Favourability and importance are able to represent (at least part of) the conative component of place image. However, a significant drawback is the need for extra input from respondents, while questions about the favourability and importance of every single association need to be included as well. The most recent research that applies the BCM in a place branding context is performed by Ci and Choi (2017). They use the BCM to compare place image with the brand identity for the city of Seoul.

3.3. Process design

Consumer mapping techniques typically cover three stages: elicitation, mapping, and aggregation (John et al., 2006). The elicitation stage aims at eliciting a list of the most important associations for the branded object from consumers. Salient associations are generally gathered from existing research as well as from consumer interviews. The second stage collects individual maps from respondents, based on the predetermined list of associations. Respondents are asked to draw a map themselves, containing the associations and the relation between them. The third stage, aggregation, combines the individual maps into a consensus brand concept map. In the BCM method by John et al. (2006), a set of predetermined aggregation rules is used to create the consensus maps.

This section discusses the three stages to create a BCM, and adds a fourth pivotal stage to the process: analysis. The analysis of image and identity is included in one of the research questions from part II. The brand concept map is a network of nodes, containing cities and associations, and edges between the nodes, indicating the strength of the relation as well. Such a network provides an excellent base for network analysis. The main reason to apply network analysis is the possibility of quantifying certain metrics, which can be used to compare different maps. Figure 3.2 presents the four stages to create the map for a polycentric region, which is named a Polycentric brand concept map (P-BCM).



Figure 3.2. General process of the Polycentric brand concept map (P-BCM)

3.3.1. Elicitation stage

The amount of affective and cognitive associations that are potentially relevant for the concept maps is immense. However, *“considering many different dimensions causes problems for an individual when framing an overall opinion about an object”* (Baron and Byrne, 1974, as referred to in Laaksonen et al., 2006, p. 212). The wide variety of associations should therefore be limited to a small, ‘tangible’ set of associations. A tangible set comprises around twenty-five associations, as this amount is seen as an optimum between manageability and complexity (John et al., 2006; Zenker & Beckmann, 2013). John et al. (2006) suggest two ways of eliciting associations: previous research and stakeholder interviews. This section adds a third source of input: promotional documents and websites.

Other studies into place image are able to provide associations from previous case studies. This can be considered the first source of input for the list of associations. Stakeholder interviews are a second source, through which (potential) residents, visitors, and investors can provide associations that are part of their place image. This can be done through rather unstructured in-depth interviews, amongst others applied by Ci and Choi (2017) and Zenker and Beckmann (2013). A more structured approach is the triadic method, part of the personal construct theory by George Kelly (Hankinson, 2004). A personal construct is a characteristic that several elements may have in common, but are different from other elements. In this case, the elements are cities and the constructs are associations that may be part of the place image. The triadic method presents three cities and asks the respondents to indicate ways in which two of them are alike and different from the third city. The triadic method thereby provides insight into the way individuals differentiate between objects and subsequently results in a list of salient associations (S. Pike, Kotsi, & Tossan, 2018). The third source of input for the list associations are the official city promotion documents and websites, aimed at attracting target groups. The terms used to describe the city provide a wide variety of associations that can be presented to respondents. Logically, the associations are primarily positive and subjective.

After collecting associations through the three sources of input, the first step, they can be combined into one list of all associations found. This list needs to be reduced in size for both the cognitive and affective component of image. The second step is to remove duplicates, because presumably, the list contains several duplicates (including plural forms and alternative spellings). This action is rather straightforward and does not need specific knowledge or guidelines. Furthermore, the irrelevant associations should be removed. Irrelevant in this sense means that the words are not applicable to cities, are vague, or are too general or comprehensive. The following examples provide an idea of associations that should be excluded from the list: climate or language (not applicable to cities in a regional context), interesting or local (too vague), and attractive or good (too general and comprehensive).

The third and final step is most difficult due to its subjectivity. In this step, the associations should be combined into 'similar' categories of associations. Based on own insight, using a dictionary of synonyms, and verification of experts, the associations can be classified into groups. The label of such an association group does not have to be represented by a single word. Multiple associations are able to describe the group collectively, without having to choose for one representative association. Figure 3.3 displays the steps of the elicitation stage.

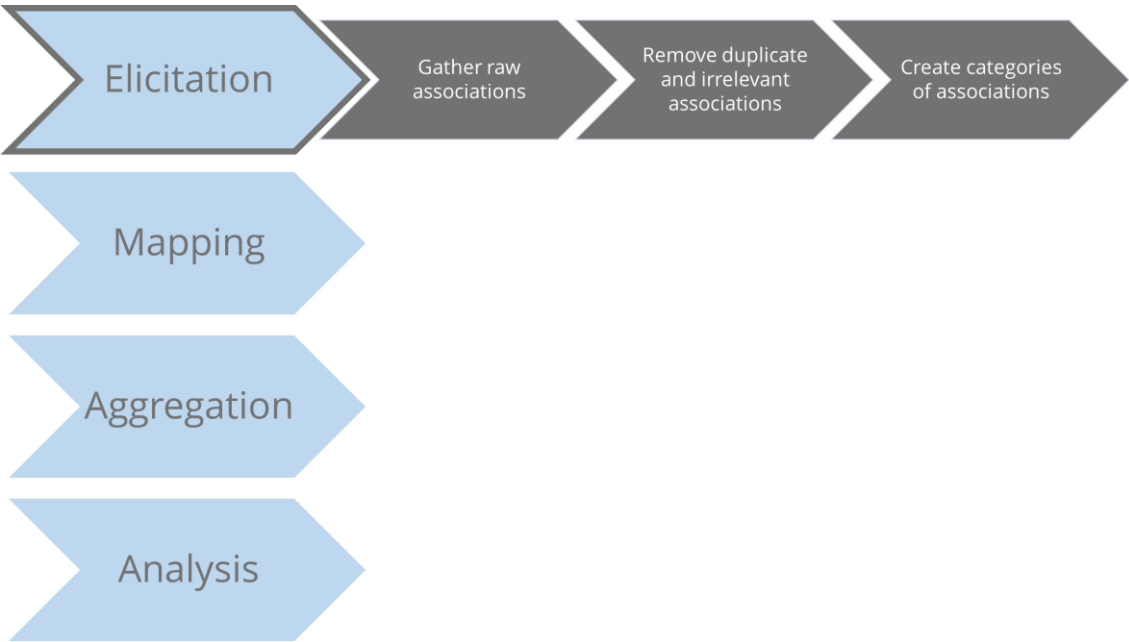


Figure 3.3. Process of the Polycentric brand concept map (elicitation stage)

3.3.2. Mapping stage

Once the main associations are identified, they can be presented to respondents. The traditional method for collecting data from respondents for a BCM is individual mapping. Participants are asked to create an individual map based on the elicited associations. The steps in the mapping stage for creating a BCM is described by John et al. (2006). First, specific participants are selected from relevant target groups, for example residents. Response is then collected in one-on-one interviews or in group sessions. In the second step, the mapping session starts by explaining the method and providing an example of a BCM (such as the Volkswagen BCM from Figure 3.1). Next, the respondent is provided with cards containing the image associations as identified in the first stage. He or she is asked to create the individual map, containing the subject, relevant associations, and links between those elements. Basically, the respondent has to evaluate the following for each of the associations: whether it has a link to the brand, whether it has a link to other associations, and the strength or weight of these links. In the fourth and final step in the mapping stage, the respondent is asked to indicate their feelings about the brand and their experiences with the brand. John et al. (2006) note that the procedure takes about fifteen to twenty-five minutes.

There are several concerns with the mapping stage as described before. First of all, the procedure takes quite a long time. It is questionable whether there are many respondents willing to spend such an amount of time. Second, the sessions are conducted in person, meaning that meetings have to be arranged with the respondents. Again, it is questionable if respondents are willing or able to be present at a session. Both the first and second limitation imply that it might be difficult to reach a large group of respondents. Third, the session requires instructors to explain the method to participants and guide the process. Resources need to be available to train and fund the instructors. Therefore, in the concluding section of their paper, John et al. (2006, p. 563) admit that *“modifications of the BCM mapping procedure could be developed to make data collection even easier and more flexible”*. They suggest that computer-aided data collection could be very useful to reach large groups of respondents. Based on the disadvantages of the traditional mapping stage in creating a BCM, this research applies an alternative approach for data

collection: questionnaires. Typically, questionnaires have the advantage of reaching a large group of respondents with relatively limited resources (Baarda & De Goede, 2009).

Applying questionnaires, instead of individual interviews or group sessions, has several implications for the traditional mapping stage. The first step, selecting target groups, can be maintained. Next, in the second step, a questionnaire needs to be created. In the traditional mapping, participants are expected to draw a BCM by themselves. However, drawing concept maps through surveys is quite complicated. Therefore, alternatively, respondents can be asked to indicate their associations with cities through multiple-choice style questions. For example, the respondent can be presented with the list of elicited associations and the list of cities. Using checkboxes or answer scales, the respondent can indicate whether or to what degree each association applies to each city. Other questions concerning the demographic characteristics of respondents and their relation with the cities should be included as well. This is in line with the fourth step of the traditional mapping stage. Other questions can be incorporated as well, such as open questions concerning top of mind associations to check for additional associations. Finally, as a last step in the mapping stage, the respondents should be collected. Based on the target groups' population, the sample size can be calculated (Baarda & De Goede, 2009). To increase the number of respondents, the survey could be conducted online.

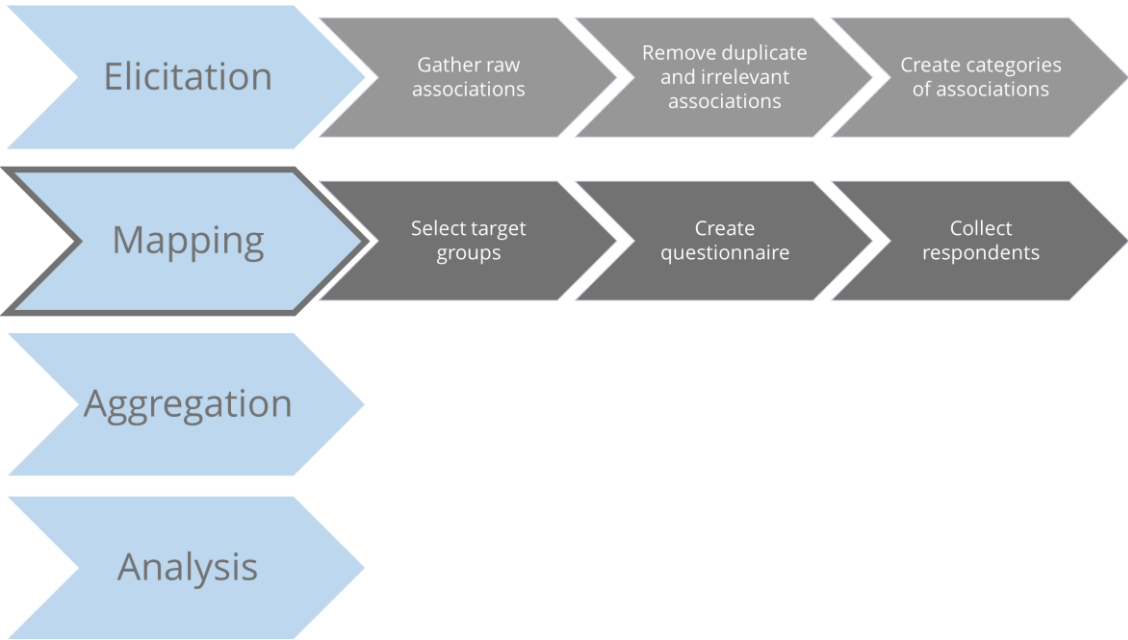


Figure 3.4. Process of the Polycentric brand concept map (mapping stage)

Normally, the BCM procedure takes about fifteen to twenty-five minutes, because the participant has to evaluate many associations for the city and possible links between associations. Considering a BCM for multiple cities requires even more time. Therefore, the size of the questionnaire should be reduced. The associations that are linked directly to the brand (first-order associations) are more essential compared to the associations that are only linked indirectly (second-order associations). In order to keep the questionnaire manageable, the questions should be limited to first-order associations only. Thereby, the respondent only has to indicate the relation between associations and cities. To make the questionnaire even more manageable, the answer could be limited to 'yes' or 'no', or a check or not. In this case, the respondent only has to indicate whether there is a relation between an association and a city in his personal city image. A final measure to keep the questionnaire manageable is to control the amount of associations and cities. As pointed out before, a number of around twenty-five associations is seen as manageable (John et al., 2006; Zenker & Beckmann, 2013). This research comprises both affective and cognitive associations, which can be evaluated apart from each other, using separate questions. Therefore, both questions can present around twenty-five associations to the respondent. In total, for both association types, the respondent should indicate whether or not there is a link with one of the cities. Each additional city thereby adds fifty evaluations to the questionnaire. Note that the concerns above mainly apply to the questionnaire for the city image, as the respondents for the brand identity only have to evaluate the desired image for their city. However, to be consistent, the type of questions should remain similar.

3.3.3. Aggregation stage

The aggregation stage is the final step in the traditional process of creating a concept map. Individual responses from the mapping stage are to be combined into a consensus map. But first, the response has to be processed. Relevant associations and links between them need to be selected in order to create a consensus map. This part aims to provide several rules to apply when preparing data for the P-BCM. Note that the aggregation stage applies to the maps for the place image as well as for the brand identity.

John et al. (2006) describe several steps through which the individual maps are combined into a BCM. The first rule is the selection of core brand associations, meaning those

associations that are mentioned most frequently. John et al. (2006) suggest the rule of including the associations that are mentioned by at least 50% of the respondents. A problem with selecting associations according to this rule is that associations with a strong link to only one of the cities could be left out. Associations that are strongly connected to one of the cities should be included in the P-BCM. Therefore, this rule can be improved for the analytical tool by selecting the strongest links instead of associations. To clarify: the more people indicate if an association applies to a city, the stronger the link. The question then arises: which links should qualify as strong enough? First, percentiles are able to rank the strength of links. The 75th percentile, for example, gives the value below which 75% of the links are found. The question then becomes: which percentile can be used for the selection of links between cities and associations? The underlying argumentation should be based on the usefulness of the BCM as a result of the amount of links and associations, in total and per city. If all associations and all links were to be processed in the P-BCM, the result would be a completely chaotic network. On the other hand, too few associations and links in the P-BCM shows little to no information about the images. A balance has to be found between the clarity and overview. This balance can be chosen by calculating the amount of associations in total and per city for all percentiles. The boundaries, in which a balance should be sought, are set by the amount of associations for each of the cities (maximum percentile) and the amount of associations in total (minimum percentile). Thus, the first rule becomes: *select a percentile for the amount of links, based on a balance between the maximum amount of associations in total and the minimum amount of associations per city*. For example, one might choose a balance within a maximum of 50 associations in total and a minimum of 3 per city. This limits the choice for a percentile to the range 0,60-0,65 (between the 60th and 65th percentile). It may even exclude all possibilities, which indicates that the boundaries should be widened. Note that the same value indicating the strength of links should be used for both surveys to maintain a fair comparison.

In the second step, a selection takes place of first-order brand associations, meaning those that are directly linked to the branded object (John et al., 2006). Since all associations from the first rule are first-order associations, this step is already accounted for. In the third and fourth step, links are made between core brand associations, first-order

associations, and non-core brand associations. In light of the P-BCM, this comes down to establishing links between the first-order associations that are included by the first rule, but also with associations that were not yet included, so-called second-order associations. Even though the respondents are not asked to evaluate the relation between associations, links can be based on high correlations. As a rule of thumb, a correlation below 0.4 is considered to be weak or very weak, between 0.4 and 0.6 moderate, and strong or very strong if it is higher than 0.6 (Ci & Choi, 2017). Only (moderately) strong correlations are to be included, which would be a correlation of 0.5 or higher. Therefore, the following rule can be applied: *if the correlation is higher than 0.5, a link can be established between associations*. The fifth and final step from John et al. (2006) concerns the strength of links, by applying single, double, or triple lines. From a network analysis point of view, simplifying the connection to three categories means a loss of information that could be valuable. From a visualisation perspective, it is not deemed necessary to simplify the connection through classification. A simple rule can be used to indicate the strength or weight of a link: the higher the frequency of associations selected for a city or the higher the correlation, the stronger the link. No calculations have to be made for the strength, so it will not be included as a step in the process of the P-BCM, see Figure 3.5.

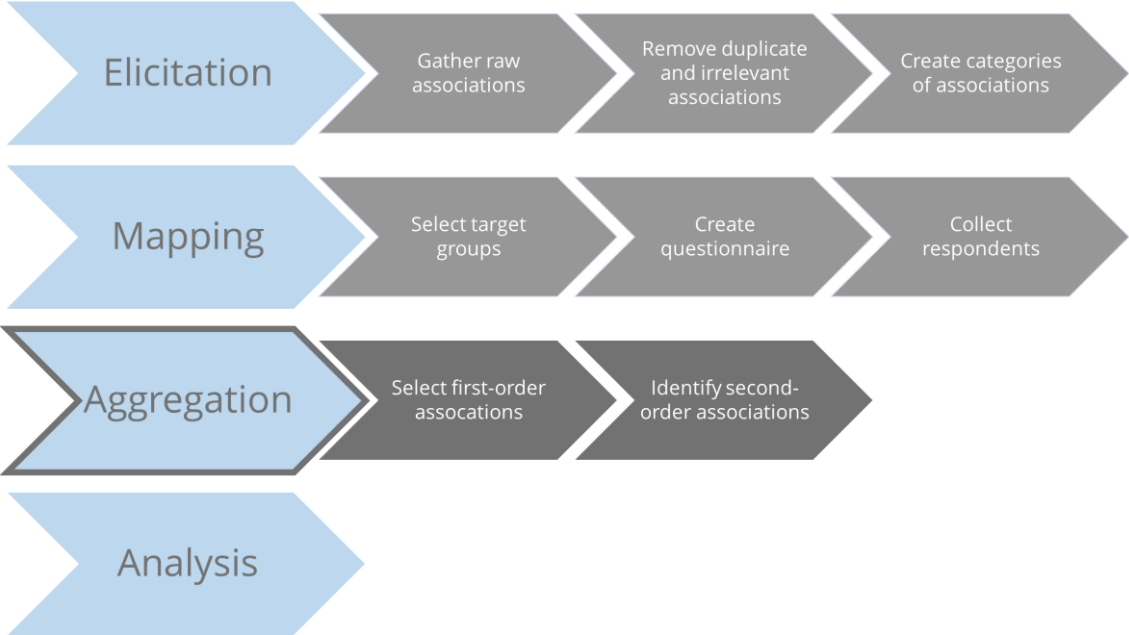


Figure 3.5. Process of the Polycentric brand concept map (aggregation stage)

3.3.4. Analysis stage

After collecting the data for the P-BCM, we need to think about the way the data is analysed. Knoke and Kuklinski (1982) identified several levels of analysis for network systems. The simplest level is the egocentric network, in which an individual node (a city or association) is highlighted. This is the main level of analysis in the BCM studies in place branding so far. With an egocentric level of analysis, each city is described using its number and frequency of links with associations. At the other side of the spectrum, the most comprehensive level of analysis is the complete network in which information about the network as a whole is used. The level of a complete network resembles the regional context of our polycentric map. In line with the research objective, this stage also focusses on the analysis of the Polycentric brand concept map on the complete network level. First, analysis can be done qualitatively with a visual representation of the network. Next, a more quantitative approach is based on the calculation of metrics.

The first step of the analysis stage is the visualisation of the Polycentric brand concept map. Visualisation helps to compare the different maps for city image and brand identity qualitatively. First of all, software is needed that is able to visualise a network containing nodes (cities and associations) and edges (links between the nodes). Moreover, for the second step of this stage, the tool should be able to perform network analysis by calculating metrics. For this research, Gephi is used, an open-source software for graph and network analysis (Bastian, Heymann, & Jacomy, 2009). Gephi is able to visualise networks and calculate metrics.

Figures 3.6 to 3.8 provide three examples of the visualisation of a brand concept map, which are used as sources of inspiration for this step. Ci and Choi (2017) make use of arrows differing in thickness and labels denoting the strength of an edge. Zenker (2014) uses different colours for the nodes to denote a positive or negative connotation. Dirsehan and Kurtuluş (2018) also use different colours of nodes and thickness of edges, and vary in size of nodes as well. This research uses the visual properties from the brand maps and aims to improve the visualisation.

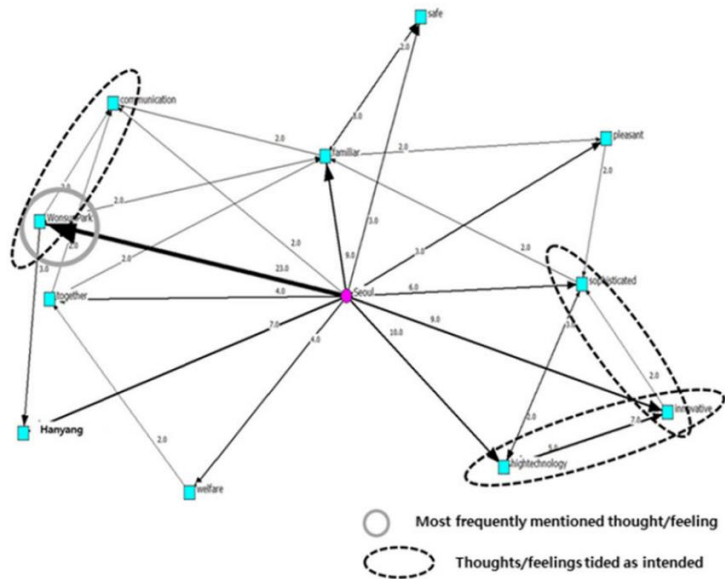


Figure 3.6. Seoul's image (Ci & Choi, 2017, p. 2450)

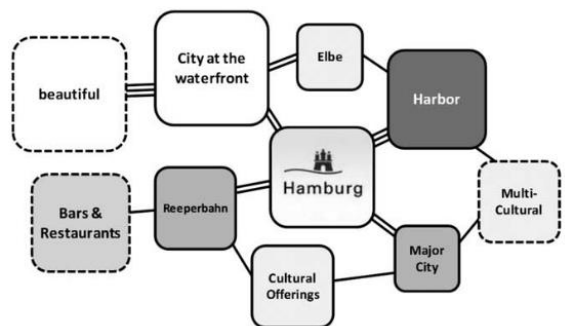


Figure 3.7. aBCM example of the city of Hamburg (Zenker, 2014, p. 160)

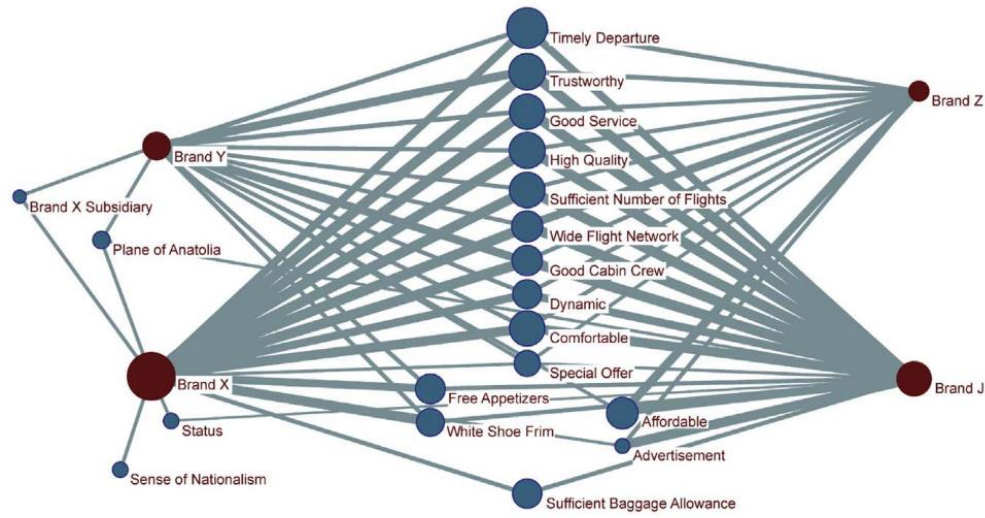


Figure 3.8. Aggregated concept map for airline brands (Dirsehan & Kurtuluş, 2018, p. 92)

The aggregation phase needed rules to select associations (or nodes) and links (or edges). In the case of visualisation, several guidelines can be used to create the P-BCM. The output from the previous stage is a matrix containing all the selected links between cities and associations. At first, this data is visualised as a chaotic mess of nodes and edges. So, the first thing to do in the visualisation step is to change the layout of nodes. Gephi provides several ways to adjust the layout through designed algorithms. ForceAtlas 2 is one of them, a so-called 'force-directed' algorithm (Bastian et al., 2009). After applying the ForceAtlas 2 algorithm, the layout of the network becomes much better interpretable. Other layouts can be used as well, as long as the application takes place in a consistent manner throughout the research. This should keep the maps visually comparable. As a finishing touch, the layout can be manipulated manually to minimize the overlapping of edges.

Furthermore, Gephi provides several ways to adjust the colour and size of nodes and edges, and their labels. First, the thickness of the edges is automatically based on the percentage count or correlation. This can be adjusted slightly, to emphasise the differences in the strength of links. Next, the colour of nodes and edges can be made dependent on clusters in the network. A modularity algorithm in the statistics section of Gephi can be used to detect so-called communities. Knoke and Kuklinski (1982) refer to them as 'cliques': strongly connected subsets within the network. In most cases, it will detect each city and its strongest associations as a separate cluster. As a final adjustment to the network visualisation, the size of nodes is made dependent on the weighted degree. This is the sum of all the weights of the edges connected to a node. In other words, it is the sum of all frequencies and correlations related to an association or city. Naturally, the cities tend to be big in size.

Visualisation makes it easier for people to draw conclusions and compare different maps qualitatively. However, because of the numerical foundation of the networks, a quantitative analysis can take place as well. Based on the data gathered in the previous stages, it is possible to calculate metrics. Three categories of metrics have been identified to compare the network maps: degree, correlation, and centrality.

The degree is determined for individual nodes, at the egocentric level, and values can be averaged for the network as a whole. Calculating the degree comes down to counting the amount of edges connected to each node. If the edges between nodes have a certain direction, it is possible to calculate the in- and out-degree, respectively the number of edges towards and from a node. In this research, the edges are supposed to be undirected. A second metric, the average weight of degrees, indicates the average strength of links from a certain node. The strength or weight of an edge is based on the frequency of an association for a city or the correlation between associations. The third metric in the degree-category is the weighted degree, which sums the weight of all edges connected to a node. Thereby, it combines the degree and average weight of degrees.

The degree-metrics apply to all nodes in the network, both cities and associations. However, comparing the degrees only makes sense between the same type of nodes. The absolute degree of cities tells something about the amount of associations that are part of a city's image or brand identity. A city node with a high degree means that many associations are connected to it, indicating a large set of associations, which is called a rich image. Some might refer to a rich image as being diffused or diluted, as opposed to being concentrated or focussed. A high average weight of degrees for a city indicates a strong image, because those associations that are connected, have been associated rather frequent. If both the absolute degree and average weight of degree are high, the weighted degree must be high as well. This means that the city image is both strong and rich, as it contains many associations that are strongly connected to the city. For associations, a high degree means it is connected to many cities and other associations, showing it is highly connected within the network. A high average weight of degree indicates a high level of cohesiveness. If an association is both highly connected and cohesive, it might be referred to as embedded with the regional image network. Figure 3.9 depicts the interpretation of the degree-metrics on an egocentric level, in which the 'N' can be seen as a city or association and 'n...' as another type of node. Reading the Figure from left to right, the richness of the image or connectivity of an association develops. From top to bottom, the strength of the image or cohesiveness of an association changes.

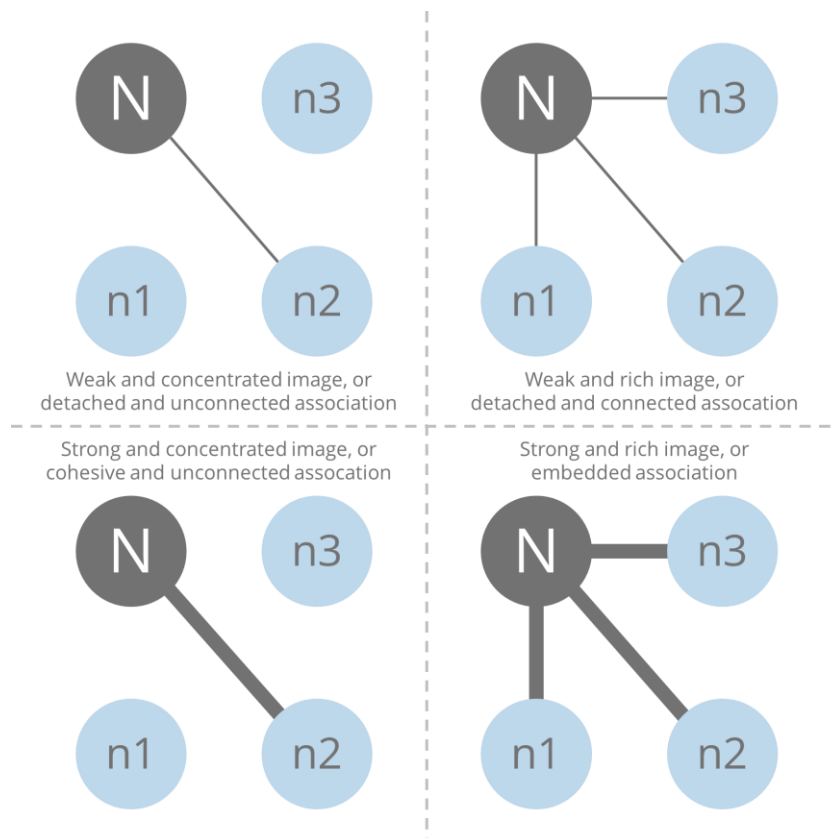


Figure 3.9. Interpretation of the degree-metrics on an egocentric level

On a network level, the degree-metrics provide valuable insights for the region as a whole. The metrics therefore need to be averaged over the amount of associations, in order to make fair comparisons. The average degree of all nodes indicates the density of the network. If all nodes have the highest degree possible, this means that all nodes are connected to each other and the network is very dense. A lower average degree means a more sparse network structure. The average of all the average weights of degrees represents the average weight all edges, the strength of all links. Naturally, a high value indicates a network with strong links. If these two metrics are combined into the average weighted degree, it becomes clear to what extent the network is dense with strong links. Figure 3.10 depicts the interpretation of the averaged degree-metrics on a network level. From left to right, the density of the network changes, and from top to bottom the strength of the links.

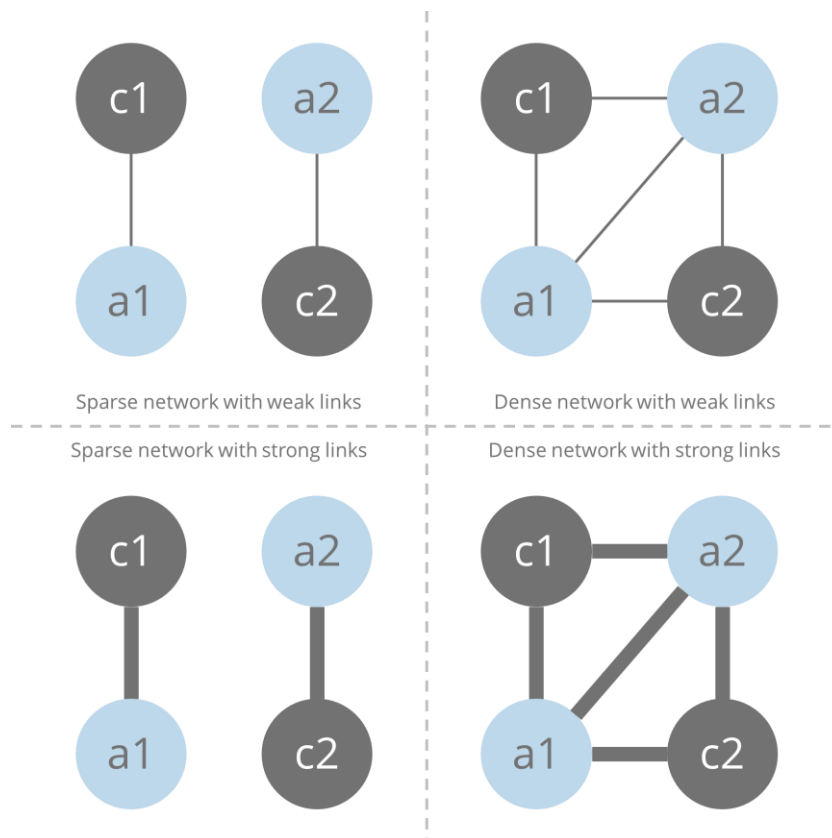


Figure 3.9. Interpretation of the degree-metrics on a network level

The second category of metrics revolves around the centrality of nodes in the network maps. The higher the value, the more central a node's position, and the closer it is to other nodes. Henderson, Iacobucci, and Calder (1998) differentiate between several types of centrality, of which one is used for the interpretation of the P-BCM: closeness centrality. The closeness centrality is the average distance from a given starting node to all other nodes in the network. Even though a distance does not seem particularly relevant for the image network, it is a good index for the importance of nodes, especially in combination with the degree of nodes. After all, the degree is only able to provide information about its direct connections, not about its position in the network. If a node has high values for the degree-metrics and for the closeness centrality, more can be concluded about the importance of that node for the image network. The values for the closeness centrality lie between 0 and 1, with a higher value indicating a greater centrality. The maximum value of 1 for a node on the closeness centrality implies a star network (Knoke & Kuklinski, 1982). Such a network has one central node where all edges are connected to the central node and its surrounding nodes. Most likely, this will not be the case for a polycentric region, as the cities have different associations.

Correlations indicate the statistical relationship between the values of two variables. Note that the correlations between associations are part of the aggregation stage. In light of this stage, these variables can be the cities or the region as a whole. The correlation is determined with the frequencies of all associations. There are three different types of correlations for the P-BCM with their own use. The first analysis is the correlation between cities within one network. This is relevant from a regional point of view, as it indicates whether there are cities with a similar image or desired image. It shows the presence of overlapping and complementary associations. The second correlation is between the place image and brand identity of cities, a metric used by Ci and Choi (2017) as well. This comes down to calculating the correlation between the cities in two different networks. It is a very relevant metric for city officials concerned with measuring the gap between the desired image and the actual image. Moreover, correlations could be discovered between the image of one city and the desired image of another. A positive correlation would indicate that a city desires to be seen as a neighbouring city, whereas a negative correlation indicates the opposite. A final correlation concerns the relation between complete networks, for example the correlation between the place image network for residents living in or close to the region and others.

Table 3.1 provides an overview of the interpretation of all metrics. Note that the closeness centrality is not applicable on a network level, because it concerns normalised values within the network. The centrality of a node is relative to the centrality of another node, so an average would not provide valuable insights on a network level.

Table 3.1. Interpretation of metrics

Metric	Egocentric level		Network level
	City	Association	P-BCM
Degree	Richness of image	Connectivity	Density
Avg. weight of degree	Strength of image	Cohesiveness	Strength of links
Weighted degree	Strength and richness of image	Embeddedness	Density and strength of links
Closeness centrality	Centrality	Centrality	n.a.
Correlation	Similarity	Relation in network	Similarity

The steps of the final stage of the P-BCM, visualisation of maps and calculation of metrics, are depicted in Figure 3.11.

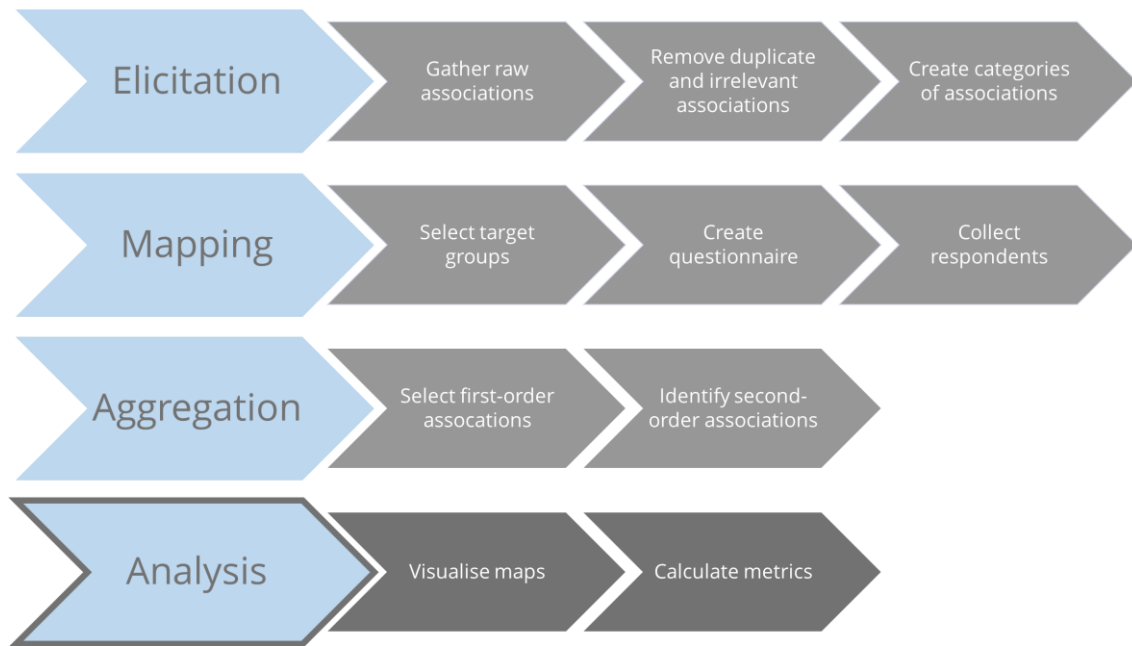


Figure 3.11. Process of the Polycentric brand concept map (analysis stage)

4. ILLUSTRATING THE POLYCENTRIC BCM

The fourth chapter is all about illustrating the measurement tool Polycentric brand concept map (P-BCM), as developed in the previous chapter. It starts with an introduction to the selected case study. The following sections each describes one of the four stages of the tool: elicitation, mapping, aggregation, and analysis.

4.1. Introducing the case study

The case study selected is the Metropolitan region Rotterdam The Hague, or in Dutch the 'Metropoolregio Rotterdam Den Haag' (MRDH). The region is situated in the Dutch province of South-Holland and consists of 23 local authorities. The former city regions of Rotterdam and Haaglanden were dissolved and combined in December 2014. Since then, they work together on two challenges: improving the accessibility and economic business climate of the region (MRDH, 2018).

Before applying the analytical tool P-BCM to the case study, the polycentric characteristics of the region are analysed. Additionally, an interview is conducted with city officials either concerned with city branding or marketing, or with regional and economic development. Through these interviews, a profile is created for each of the four cities, covering the following themes: city branding practices, image and identity, and regional collaboration in the MRDH. The following sections discuss the polycentricity of the MRDH and the results from these interviews and thereby provide context for the rest of the case study.

4.1.1. Polycentricity of the MRDH

A polycentric region consists of *"clusters of historically and administratively distinct but proximate and well-connected cities"* (Meijers et al., 2017, p. 2). As the name of the region gives away, the main cores of the MRDH are Rotterdam and The Hague, covering a large part of the population and jobs in the region. Furthermore, there are three other municipalities with over a hundred thousand inhabitants: Zoetermeer, Westland, and Delft. Zoetermeer and Delft are actual cities, whereas the municipality of Westland covers many small towns and settlements. Even though Zoetermeer and Delft are relatively small

cities and considerably less dominant than Rotterdam and The Hague, they are included in this case study for illustrative purposes.



Figure 4.1. Metropolitan region Rotterdam The Hague (source: innovationquarter.nl)

As a part of their 'strategic knowledge and research agenda on polycentric metropolitan areas', Meijers et al. (2012) analysed the MRDH. The aim of this case study (and several others) is to gain insight in the challenges and knowledge needs for the region. Therefore, interviews were held with key stakeholders in the metropolitan region, such as policy advisors at the main municipalities. The theoretical framework used is the degree of integration, divided into functional, cultural, and institutional components. First of all, the authors conclude that the region is functionally integrated on the topics of labour market, housing market, business relations, and amenities. Looking at cultural integration, the authors identified some activities within the region aimed at national and international promotion of the region. However, the identities of the cities Rotterdam, The Hague, and Delft are considered very distinct, thereby preventing a single identity for the region as a whole. A symbolic, yet powerful action to support a joint regional identity is the renaming of Rotterdam Airport into 'Rotterdam The Hague Airport'. The institutional integration of the MRDH is developing from collaboration on specific issues to cooperation on a wider scale. The authors warn for the dangers of bureaucratic and inefficient decision-making and advise to focus only on important topics for the region.

When considering the way in which a polycentric region evolves, there are roughly two ways to distinguish: the incorporation mode and the fusion mode (Meijers et al., 2012).

Incorporation does not apply in the case of the MRDH, as there is not a single dominant city that includes surrounding smaller cities. The MRDH does show clear signs of the fusion mode of evolution, in which multiple independent cities could be combined into a balanced settlement system.

The MRDH mainly focusses on improving the business climate of the region and thereby the region aims at attracting (international) companies and investors. Since the MRDH is not much involved in attracting tourists and residents, this case study can be interesting to analyse the potential for regional integration to target these groups. A focus will therefore be on a city image and brand identity from a tourism and residential perspective.

4.1.2. Insights from the interviews

The interviews covered three topics: city branding practices, image and identity, and regional collaboration. For all four cities, the first two topics are shortly discussed. Thereafter, insights are shared about the potential and willingness to collaborate in the MRDH. For the interview format, see Appendix G.

Starting with **Delft**, this city adopted a slogan roughly twenty years ago: 'Delft Kennisstad' (translated as Delft Knowledge city). From that moment, the city began to develop city marketing and branding. Now, the practices are organised in three groups with a different target audience: residents, visitors, and companies. The residents are targeted through the communications department, with intensified campaigns since 2007. The aim of this department is to make the residents feel proud of their city. The local tourism office transformed into the Delft marketing foundation ('stichting Delft Marketing'), which still focusses on attracting visitors to the city. To attract companies, the city of Delft cooperates with the University of Technology Delft through the organisation of Delft Technology Partners (DTP). All three departments operate from a shared image: the story of Delft. During the interview, questions were asked about this presumable image of Delft. The image is presumed to revolve around the canals and historic centre (containing big churches) as cognitive associations. The feelings around Delft are presumably easy-going and calm, but at the same time vibrant and cosy due to the young population. Strong

brands affiliated with Delft are the TU Delft, Delftware, and the painter Vermeer. On the topic of brand identity, the city of Delft has four core values: technology, innovation, creativity, and history. The desired image is to become the high tech capital of the Netherlands or even Europe. Delft wants to challenge people to come and make an impact with technology. This is especially aimed at companies, while it is difficult to use this image for visitors. The residents are supposed to be the ambassadors, so inclusiveness is an important value for Delft in the branding of the city. Everyone that is part of the city should render pride and solidarity.

The second interview was performed with a strategist from the city marketing department of **Rotterdam**. In 2004, Rotterdam started a campaign under the slogan: 'Rotterdam Durft' (translated as Rotterdam Dares). Later on, the city put more emphasis on collaboration with organisations; together with the port of Rotterdam the slogan (this time in English) became 'Rotterdam. World Port, World City'. Nowadays, within the municipality, only a small group is concerned with the strategy and direction of the city marketing. Other departments are more content-oriented, such as tourism or housing policies. An external organisation (Rotterdam Partners) is occupied with the execution of the city marketing, in other words: the promotion of the city. Thereby, Rotterdam makes use of the so-called brand mentality 'Rotterdam. Make It Happen', which is strongly related to the first slogan. It implies a multifaceted profile, based on the city's DNA, that needs to be signified through two themes: innovation and talent development. To support the mentality and profiling, a brand alliance was made between the municipality and many organisations in the city. The city marketing department within the municipality has a steering role. The main target groups for the city are residents, visitors (touristic and business), students, and companies/investors. Concerning residents, the city focusses on highly educated people, attracting those that just graduated. The touristic profile is the front-runner, the early adapter, people who like to discover a place on their own. For the companies and investors, the city focusses on economic sectors that are strongly represented: health and life sciences, maritime, food, IT, and cleantech. The profile of front-runner also applies to this group, the pioneers among the entrepreneurs. The main features people would image about Rotterdam are the port and water with a lot of space, both physically and

mentally, to experiment and to initiate. The city supposedly has a raw image, like Berlin and New York.

The third city with which an interview was conducted is **The Hague**. Since 2004, the city undertook measures to create an integral city marketing strategy, expanding the focus to target groups beyond tourists. Five years later, a complete department for city marketing was created, which currently operates under the name Bureau Citybranding. The city explicitly made the switch from city marketing to city branding, thereby acknowledging the influence it has or should have on the development of the city. The execution of strategies takes place through an external marketing organisation, comparable with Rotterdam. Even though The Hague is a big city, choices have to be made concerning what features are at the core of the city brand. The city differentiates between brand values and brand elements, comparable with respectively the affective and cognitive components of the desired image, as part of the brand identity. Associations concerning the brand values include amongst others personal, sincere, challenging, convincing, unlimited, and influential. The Hague's differentiating brand elements are the sea, peace and justice, and to a lesser extent political centre, royal city, and leading companies and institutions. However, there is a gap between this desired image and the actual image. Often, The Hague is seen as a somewhat boring or cold city, filled with civil servants. Many people, mostly from outside of the province of South-Holland, do not associate The Hague with the beach and sea. Supposedly part of the image is that The Hague has many contrasts. For example, The Hague contains both the poorest and wealthiest neighbourhoods of the Netherlands. The city converts this into a certain mentality where everything is possible and you can take your chances. To conclude, the target groups for The Hague are young talents, start-ups and companies that aim to better the world, visitors in general, and business tourists.

The last city to be discussed is **Zoetermeer**. For quite some time, the city did not work on its image. Now that the city is ambitious to grow and stimulate the economy, a shift took place on the topic of city marketing. Whereas before, the focus was on the promotion of its assets, it shifted towards a branding approach in the last two to three years. Policies and projects need to align with the positioning and desired image, instead of the other

way around. A recent development is promising: the new branding strategy is an inherent part of the agreements made by the local council. The image of Zoetermeer was measured and unsurprisingly appeared to be that of a sleepy city. However, this was for older aged people. Generations under the age of 40 had a mostly blank image of Zoetermeer. Other presumed associations are central, new and young, affordable, and green. In the past, Zoetermeer promoted itself as the centre of leisure and applied innovation. This image appeared to be hard to realise and was therefore adjusted. Currently, the desired image of Zoetermeer is an active city with a lot of leisure facilities. Moreover, the city wants to position itself as an innovative part of the most innovative region of the Netherlands: the MRDH. In line with the desired image, a brand filter is developed. It should both help and steer the policymaking processes. The brand filter consists of three core brand values: 'maakbaar' (translated as makeable, the ability to create the city), active, and playful. The city is currently looking for ways to translate these values into projects and a certain business climate.

As final part of the context-setting for the case study, the state of regional collaboration in the **Metropolitan region Rotterdam The Hague** (MRDH) is discussed. The MRDH was created to stimulate the economy of the region and therefore has a strong focus on the regional business climate. This is executed by the InnovationQuarter, an organisation fully focussed on improving the business climate, providing capital for investments, and attracting international companies. Furthermore, the MRDH has become a legal authority for public transportation in the region. Powers were thereby transferred from the province to the MRDH. Considering these core tasks, the MRDH focusses mainly on businesses and partly on residents, but not at all on tourism. Coordination of tourism from a regional perspective is completely absent. Incidentally, some collaborations take place, for example between The Hague and Delft on the topic of Vermeer. Looking at the three types of integration (cultural, functional and institutional), the region is mostly functionally integrated, but only on topics with short-term benefits for all municipalities. Urging developments could strengthen the need for more functional integration, for example with the energy transition or new ways of transportation. Institutional integration has been increased due to the transfer of legal powers. Moreover, the presence of an executive board, headed by a secretary-director, shows the formal

institutionalisation of the MRDH. However, political will is missing to further increase the institutionalisation of the MRDH. Cultural integration is lacking far behind, as there is no sense of regional identity at all. Only on the topic of business climate, promotional activities take place. It is probably one of the main challenges for the region to acquire a regional identity. This is strengthened by the fact that metropolisation of the MRDH develops according to the fusion mode, meaning the presence of multiple centres with a strong individual identity. As Meijers et al. (2012) concluded with their case studies, it is easier to create a regional branding strategy in a polycentric region where one city particularly dominates the area. Fusion-type regions like the MRDH need *“a strong and historically institutionalised regional government”* to overcome this (Meijers et al., 2012, p. 141). This would imply far-reaching institutional integration, which is hampered by political factors. This case study hopefully provides valuable insights into the (desired) images of the four main cities in the MRDH, thereby providing ground for the positioning of the cities and the region.

4.2. Elicitation stage

To be able to create a brand concept map through a survey, a list of associations is needed to present to the respondents. Therefore, associations are elicited with the use of three sources: place branding literature, a construct elicitation session, and promotional documents and websites. The three methods provide a huge list of raw associations, many of which are similar or irrelevant. In order to create a smaller, more tangible list for the surveys, this list needs to be reduced in size. This section first describes how raw associations are elicited from the three sources, followed by the process of creating association categories.

Because the focus of this case study is not on companies and investors, the associations related to them will not be included in the list of associations. During the first step, business-related associations are left out.

4.2.1. Step 1: Gather raw associations

Appendix B explains the way in which associations have been gathered from literature on place branding. A total of twenty papers was found containing lists of place-related associations. Together, they provide a raw list of 138 associations. These associations can be divided into cognitive and affective words. Similar associations are classified into so-called first-order categories. Moreover, the negative affective associations were removed, leaving only positive and neutral ones. This resulted in a list of 34 cognitive and 50 affective associations, thus 84 in total.

Appendix C describes a construct elicitation session, in which the triadic method was applied to extract personal constructs about Dutch cities. Among these are the four cities of the case study. In short, the triadic method revolves around showing three different cities to the respondents, for which they have to identify ways in which two of them are alike and different from the third. The resulting associations are quite similar to the ones identified in literature and several new associations were found as well. In total, the construct elicitation session resulted in a list of 80 cognitive and affective associations. Again, similar associations are grouped into first-order categories. In the end, this resulted in a list of 24 cognitive and 26 affective associations, which make a total of 50.

Appendix D shows the way in which associations from promotional documents and websites have been gathered. For fifteen Dutch cities, including the four cities of the MRDH, official visitor websites and promotional documents are analysed for the associations they contain. In total, 192 unique associations, both affective and cognitive, have been identified. In the same way as with the previous sources, the associations are grouped into first-order categories. This resulted in 142 categories, of which 72 are affective and 70 cognitive.

4.2.2. Step 2 & 3: Process elicited associations

The previous section discussed the first step of the elicitation stage in which place branding literature provided 84 first-order association categories, the triadic method 50, and promotional documents 142. Combined, they form a list of 276 categories. After removing the duplicates and irrelevant associations, a list of 199 unique categories

remains, with 95 cognitive and 104 affective. The third and final step of the elicitation stage covers the classification of the remaining first-order categories into a manageable list of around twenty-five categories for both the cognitive and affective associations. So, the list of approximately a hundred first-order categories is reduced by a factor of four. Similar associations are grouped into categories. If necessary, the label of such categories is represented by several associations. The intention is to prevent the loss of relevant associations during this process. For example, the cognitive associations 'Parks' and 'Gardens' are rather similar and can thus be combined into the category 'Parks and gardens'. Another example: 'International' and 'Cosmopolitan' are combined into the category 'International', while the meaning of both associations is almost identical in this context.

This step was executed mainly using personal logic and a dictionary of synonyms. Preferably, the process should be supervised or validated by an expert in the field, such as a place branding manager or even a linguist. Appendix E shows the process of the second and third step, in which irrelevant associations are removed and the remaining categories are combined into two lists of around twenty-five association categories. Table 4.1 shows the remaining associations that are used in the upcoming stages.

Table 4.1. List of associations from the elicitation stage (translated from Dutch)

Affective		Cognitive	
Accessible and central (ACC)	Open, warm and hospitable (OPN)	Architecture (ARC)	Politics (POL)
Affordable (AFF)	Pure and authentic (AUT)	Arts and culture (ART)	Port/harbour (HRB)
Charming, intimate and picturesque (CHA)	Relaxing and peaceful (RLX)	Biking (BIK)	Public services (PUB)
Compact (CMP)	Rugged, wilful and raw (RAW)	Business (BSN)	Recreation and relaxation (RCR)
Cosy, pleasant and friendly (CPF)	Safe and clean (SAF)	Canals (CAN)	Restaurants and bars (RES)
Creative, cultural and inspiring (CCI)	Smart and educated (SMR)	Conferences (CON)	Royal (ROY)
Culinary (CUL)	Sober, direct and innocent (SDI)	Design (DES)	Science and university (SCI)
Diverse, unique and surprising (DIV)	Sophisticated and impressive (SOP)	Events (EVE)	Shopping (SHO)
Enterprising (ENT)	Strong (STR)	Hiking (HIK)	Sports (SPO)
Historic and traditional (HST)	Sustainable and green (SUS)	Historical heritage (HIS)	Squares and markets (SQR)
Innovative and progressive (INN)	Thriving (THR)	Industry (IND)	Technology and innovation (TEC)
Known internationally (INT)	Undiscovered and mysterious (UND)	Nature (parks, gardens, green) (NAT)	Transport and infrastructure (TRA)
Majestic, chic and proud (MAJ)	Vivid, atmospheric and cheerful (VIV)	Nightlife (NGH)	Water (river, lake, sea) (WTR)
Modern, young and hip (MOD)			

As can be seen in the list of elicited associations, not many of them are related to business. To keep the size of the list manageable, around twenty-five associations for both the affective and cognitive component, many had to be grouped or even left out. There were many associations from a business perspective revolving around economic sectors, such as IT or financial services. The amount of sectors as found in promotional documents was substantial, and was therefore excluded from the elicitation stage. This choice has implications for the target groups to be selected in the mapping stage, as will be discussed hereafter.

4.3. Mapping stage

The second stage of the analytical tool, mapping, is about collecting response from individuals about their (desired) city images. As described in chapter 3, a survey is used to collect data about city image associations. Two surveys have to be created: one for the city image and one for the brand identity. Each survey has a different target group, but the content of the questionnaire is rather similar.

4.3.1. Step 1: Select target groups

The first step of the mapping stage is to select the target groups for which the (desired) city image will be created. As discussed in the last part of the previous stage, the list of associations does not cover economic business sectors. Therefore, a focus on companies and investors is not particularly relevant. It must be considered, however, that many investors and company directors are residents somewhere and presumably tourists occasionally. Meanwhile, the MRDH mainly focusses on improving the business climate of the region and thereby the region aims at attracting (international) companies and investors. The MRDH is not involved in attracting tourists and residents for the region. This case study can be interesting to analyse the potential for regional collaboration to target these groups.

Based on the above, the focus of the city image survey will be on tourists and (potential) residents. In theory, the entire world population is either a current resident, or a potential tourist and resident. The scope will be limited to the Dutch population, since the list of

associations will be presented in Dutch. A distinction can be made between residents and non-residents. In this way, both the internal and external city image can be measured, as discussed in the conceptualisation of image in chapter 2. When considering the survey about the brand identity, the obvious target group consists of city officials working for the four selected cities. To narrow it down, they should be involved in city branding or marketing, the communications department, public affairs, or other advisory work related to a desired image for the city.

4.3.2. Step 2: Create questionnaire

Now that the list of associations has been compiled and the target groups selected, the questions of the survey can be formulated. The questionnaire for the city image typically starts with the demographic characteristics of the respondent. These features can be used to check whether the group of respondents is representative of the target group population. Moreover, the features can be used to compare the city images of different groups, for example men versus women or old versus young people. The characteristics chosen for this case study are: gender, age, and province of residence. More questions could be included, but for the illustrative purpose of this case study, three demographic characteristics are considered enough. Next, it is important to find out what the relation is between a respondent and one of the cities. Again, this may be used to compare groups with different relations towards the cities. Questions cover the following topics: whether one of the cities is the respondent's place of residence, how well the respondent is familiar with (the offerings of) the city, and their attitude towards the cities. For the latter two questions, a scale can be used. The familiarity can be divided into four incremental categories: poor, moderate, good, and excellent. Note that the familiarity cannot be neutral and thereby forces respondents to choose a 'side'. The attitude can be neutral, so the possibilities on a five-point scale are: very negative, negative, neutral, positive, very positive. The characteristics for the brand identity questionnaire are slightly different, since the target groups are only divided into the four cities. Thus, the main question at the start of the questionnaire is: which municipality do you work for? Additional questions, to verify whether the right people have been targeted within the municipality, concern the department and position of the respondent.

So far, the questions are rather easy and straightforward. The remainder of the questionnaire asks for more consideration, as the respondent is required to reveal its (desired) city image. As discussed in the process design of the P-BCM, the respondent is required to select affective and cognitive associations for cities from the list as depicted in Table 4.1. To prevent that people are forced to choose from the list, it is possible to not select any associations for one or more of the cities. After all, respondents might have a completely blank city image. To make the question more manageable, the question is divided into two parts: one with all the affective associations, and one with all the cognitive. The difference between the two survey types, is that in case of the brand identity, the respondent only has to evaluate the associations for his or her city.

A final component of the questionnaire is included to reveal any additional associations that are not included in the list. For the place image survey, the respondent is asked to indicate a top-of-mind association for each of the four cities, prior to the list of associations. The form of the question is open, so the respondent is allowed to answer whatever he or she thinks is relevant. Answers to this question are not mandatory. A similar question is used for the brand identity survey. The city officials have the option to indicate any additional associations to the list presented. This question comes after their evaluation of the association list.

After creating the surveys, they should be tested on manageability. This means that they shouldn't be too long or too difficult. To test the survey, several students were asked to complete the questionnaire. The average time needed to fill in the place image survey is approximately 6 minutes. For the brand identity survey this amounted to only 4 minutes. This is considerably less than the time required for an individual or group session in the traditional mapping stage, which is fifteen to twenty-five minutes (John et al., 2006). Considering difficulty, the test-respondents did not come across any major problems while completing the survey. Two minor remarks were made: it should be stressed that respondents can select multiple associations, and the explanation on cognitive and affective associations could be improved. The feedback is very much appreciated and applied to the surveys. The final surveys for place image and brand identity can be found in Appendix F.

4.3.3. Step 3: Collect respondents

The final step of the mapping stage comes down to collecting response from the selecting target groups. Normally, the sample size should be big enough to represent the population of the target groups. However, due to the illustrative purpose of this case study, a smaller sample size is sufficient. In addition, respondents from the province of South-Holland are targeted, to collect respondents that live close to or within the region of the MRDH. The target groups for the place image survey were reached via an online panel of respondents. In return for completing the questionnaire, they receive a small compensation.

The following results are collected for the place image. In total, 272 respondents are collected for the place image survey, of which 143 men and 129 women. There are at least 20 respondents for all age groups between 18 and 80 years, with an emphasis on the age groups 51-60 and 61-70. When looking at the province of residence, all Dutch provinces are present amongst the respondents. A substantial part (73 respondents) comes from the province of South-Holland. This group is assumed to be living nearby to the four cities in the MRDH and are therefore more likely to have a richer set of associations than respondents living outside of South-Holland. In the analysis stage, this group is compared to the other respondents. A similar comparison can be made between men and women and between age groups. Figure 4.2 shows an overview of these demographic characteristics.

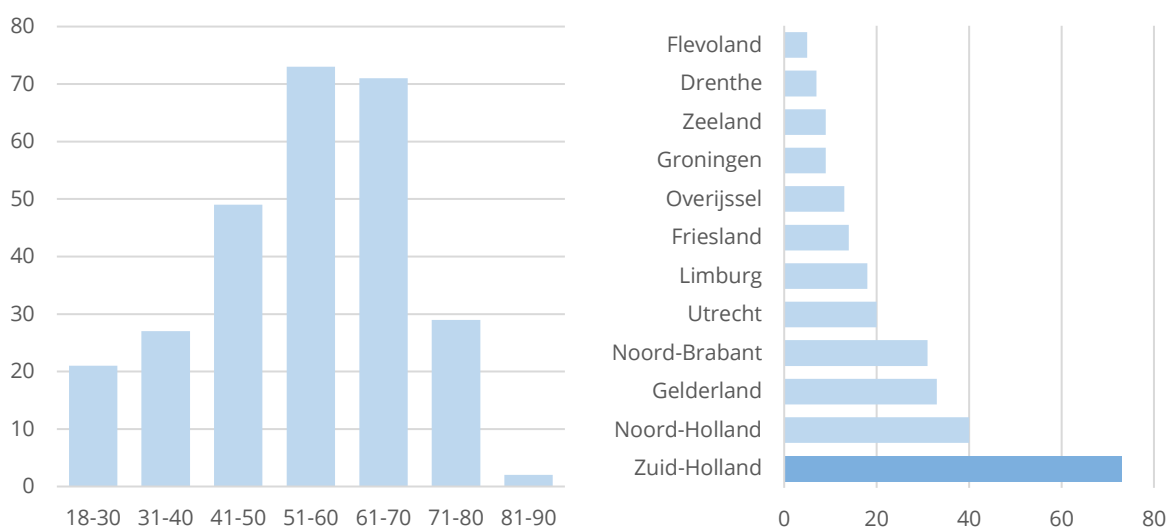


Figure 4.2. Age (left) and province distribution (right) of respondent group (place image)

Next, the respondents provided insight into their familiarity with and attitude towards the four cities of the MRDH. Concerning the familiarity, it strikes that most of the respondents are poorly familiar with the offerings of Delft and especially Zoetermeer, respectively 47.1% and 61.8%. Furthermore, Delft and Zoetermeer share a similar distribution for the other three categories, although the group of respondents are more familiar with Delft than with Zoetermeer. The familiarity with Rotterdam and The Hague is very similar and is rather equally distributed among the categories poor, moderate, and good. Moreover, for both cities, almost 50 respondents have an excellent familiarity. When looking at the attitude of respondents, the first thing that can be noted is that the attitude of respondents is centred around neutral for Zoetermeer, namely 62.5%. Delft is also often confronted with a neutral attitude, while most of the other respondents have a positive attitude. Again, Rotterdam and The Hague share a similar attitude distribution, mostly concentrated around neutral and slightly positive, as well as quite some respondents with a very positive attitude. An overview of these statistics can be found in Figure 4.3.

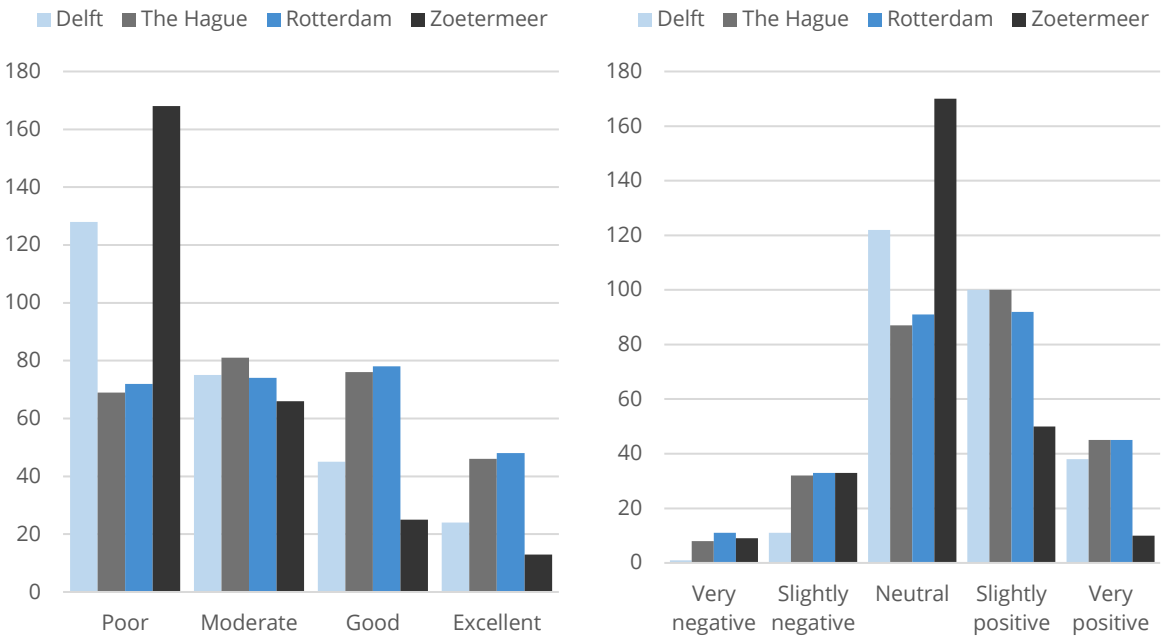


Figure 4.3. Familiarity (left) and attitude (right) of respondent group (place image)

Before presenting the list of associations to the respondents, the respondents are asked to indicate the word that first comes to mind when thinking about each of the four cities. Interestingly, just over half of the respondents indicated affective or cognitive

associations. This implies that these types of associations have a central role in people’s image, thereby justifying the use of these types in the measurement of image. On the other hand, almost a third of the respondents provided associations that are specific to places, such as ‘Feyenoord’ for Rotterdam or ‘Binnenhof’ for The Hague. Furthermore, some of the respondents associated specific persons to the cities, such as the painter Vermeer for Delft. Other respondents indicated a relational association, for example if the respondent used to live in the city. It indicates the importance of adding these associations in the place image as well. Lastly, many respondents were not able to provide associations, especially for Zoetermeer. This implies that a city image can be blank as well and does not always have to contain associations. Figure 4.4 shows the response categories.

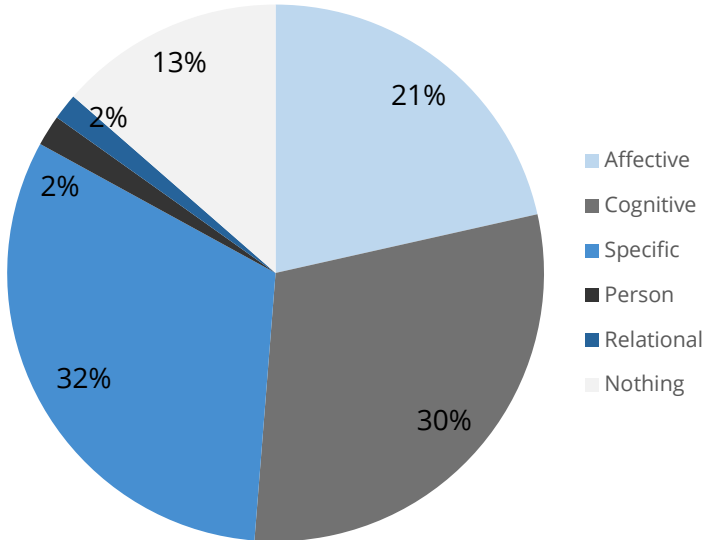


Figure H4. Top of mind associations, divided into categories

The last part of the place image survey revolves around the two lists of associations. Respondents evaluate all 53 associations for each of the four cities and indicate which apply as part of their city image. In total, all respondents indicated 18.785 associations for the four cities. On average, the respondents indicated 17 associations per city. Looking at the affective associations, respondents provided on average 9 associations for the cities of Delft, The Hague, and Rotterdam, compared to just below 5 for Zoetermeer. Looking at the cognitive associations, the respondents indicated just over 12 associations for The Hague and Rotterdam, which is considerably more than the 8 associations for Delft and 4 for Zoetermeer. The above indicates that the respondents’ city image consists of more

associations for The Hague and Rotterdam than for Delft and Zoetermeer, especially concerning cognitive associations. An overview of the average amount of associations per type per city can be seen in Figure 4.4. For an overview of all output from the questionnaire for place image, go to Appendix H.

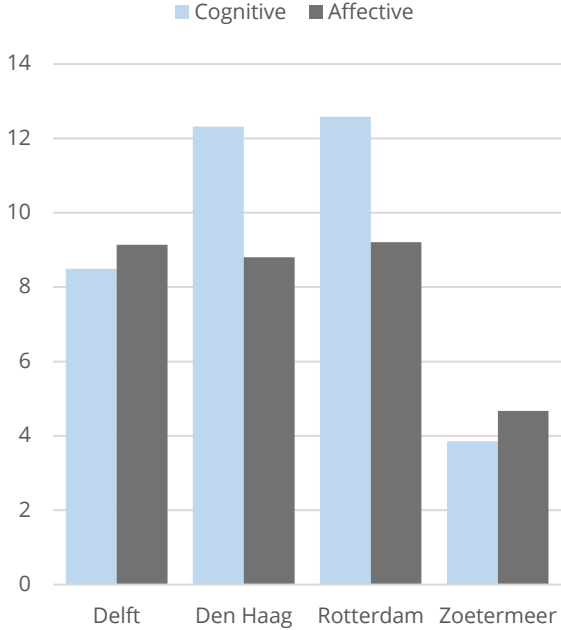


Figure 4.4. Average amount of associations per respondent (place image)

For the brand identity survey, a smaller sample size is needed, since the population of relevant city officials is quite restricted. Moreover, the desired image should be shared amongst the city officials, as the brand identity is formulated by the local authority as a whole. Therefore, it is expected that the set of associations selected per city does not vary widely. To collect respondents for the brand identity survey, the contacts from the interviews were pretty convenient as they were able to spread the questionnaire amongst colleagues.

In the end, a total of 27 respondents is collected, distributed over the four cities. Most respondents were collected from The Hague and Zoetermeer, with respectively 9 and 10. From Delft and Rotterdam, 4 city officials completed the questionnaire. For the brand identity survey, no demographic characteristics were included, as they do not provide relevant additional insights into the brand identity. Furthermore, the respondents were

asked to indicate their department and position within the municipality. Most of the respondents work at the departments of communication and city branding or -marketing. Furthermore, some work at the sections economic and public affairs. The position of respondents is mostly comprised of (strategic) advisors and managers.

The main part of the survey is the evaluation of associations that comprise the brand identity. On average, the city officials identified 8 associations per category for their city. There are no considerable differences between the amount of associations per city or per category. Figure 4.5 displays the average amount of associations per respondent for each of the four cities and two categories. For all results from the brand identity survey, go to Appendix I.

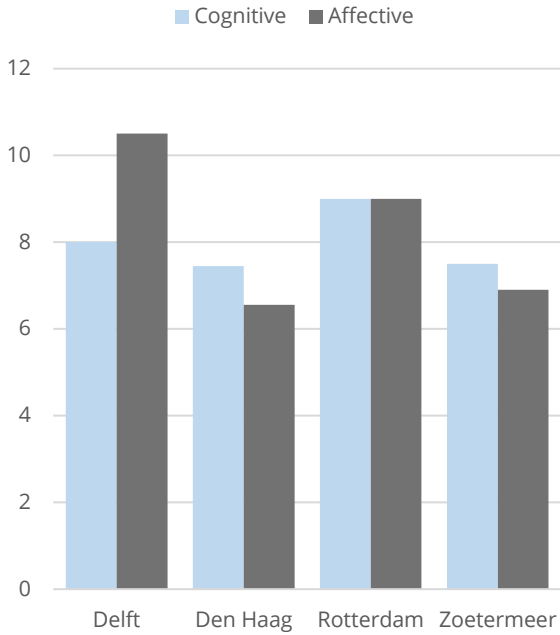


Figure 4.5. Average amount of associations per respondent (brand identity)

Before creating the brand concept map, we can already gain valuable insights by looking at the first results from the surveys. Appendices H and I provide tables with the frequencies for each association per city. For place image, it shows that respondents strongly connect the cognitive associations *Port/harbour*, *Industry*, and *Transport and infrastructure* to the city of Rotterdam. These associations appear to be limited to Rotterdam only, making them unique to this city in the region. Furthermore, Rotterdam is

believed to be *Known internationally*, just as The Hague. Three associations that have a strong link with The Hague only, are *Politics*, *Royal*, and *Conferences*. Delft is mostly related to the associations *Science and university*, *Historical heritage*, *Canals*, and *Historic and traditional*. The most frequently mentioned associations for Zoetermeer are *Biking*, *Nature (parks, gardens, green)*, *Sustainable and green*, and *Affordable*; the latter two seem to be fairly unique among the four cities.

When looking at the table for brand identity, we can see that most mentioned are *Historical heritage*, *Science and university*, *Technology and innovation*, and *Innovative and progressive*. This seems to overlap with the image of Delft, as the first two also came up on top in the place image. For The Hague, the main associations that form the desired image are *Politics*, *Majestic*, *Chic and proud*, and *Water (river, lake, sea)*. The first association is also strongly present in the place image. Looking at Rotterdam, the city officials all indicated the four associations *Known internationally*, *Architecture*, *Rugged, wilful and raw*, and *Enterprising*. Only the first association is also part of the place image. City officials from Zoetermeer all mentioned that *Recreation and relaxation* is part of their desired image. Other strong desired associations are *Sports*, *Accessible and central*, *Nature (parks, gardens, green)*, and *Sustainable and green*. Especially the latter two were indicated by respondents from the place image survey.

4.4. Aggregation stage

Next up is the aggregation stage, which comes down to selecting the core brand associations and identifying links between associations. Chapter 3 formulated the rules to apply in both steps. The steps are applied to the survey results for both place image and brand identity.

4.4.1. Step 1: Select first-order associations

The rule for the first step is as follows: *select a percentile for the amount of links, based on a balance between the maximum amount of associations in total and the minimum amount of associations per city*. This means that first-order associations are selected based on the strength of links. In Appendices H and I the results from the place image and brand identity surveys can be found. It shows the number of times a respondent indicated

one of the associations for each of the cities. Now, based on these frequencies, a selection of first-order associations can be made. As discussed in chapter 3, this first step requires the calculation of the total amount of associations and per city for a range of percentiles.

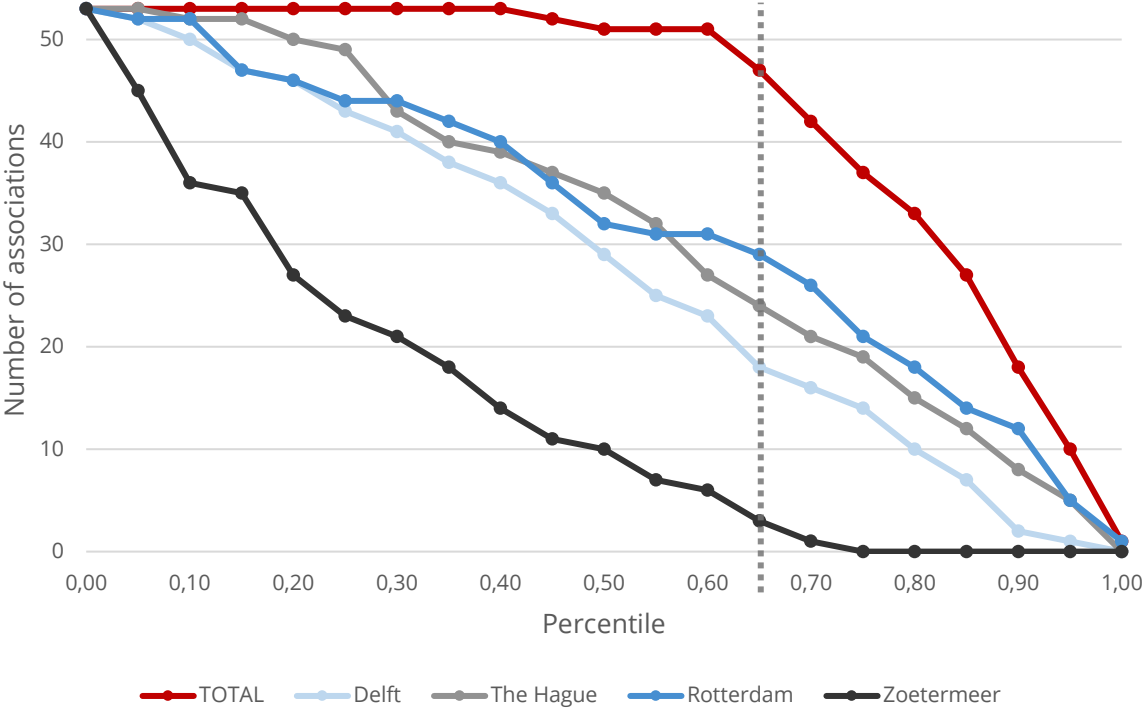


Figure 4.6. Amount of associations for a range of percentiles (place image)

Figure 4.6 displays the amount of associations that would be included in the P-BCM for a certain percentile. For the first 60 percentiles, almost all associations are included in the P-BCM. Increasing the percentile gives a steep decline until the 100th percentile, in which only the most frequently mentioned association is still included. At the same time, we can see that the associations for the city of Zoetermeer are rather weak and the amount therefore declines quickly. The range in which a percentile has to be chosen, lies before the 75th percentile, as the amount of associations for Zoetermeer at that point is exactly 0. Furthermore, the amount of associations in total only starts to decrease after the 60th percentile, making it a lower boundary for the range. The range in which a balance can be found thus lies between the 60th and 75th percentile. A choice is made to use the 65th percentile for selecting the first-order associations. The minimum strength of a link is thereby 0,38, meaning that at least 38% of the respondents should have picked an association for a city. In this case, the amount of associations in total is 47 and for

Zoetermeer specifically it is 3. Applying the first rule to the place image survey results in the list of Table 4.2. Note that all cognitive associations are selected, whereas six affective associations are excluded.

Table 4.2. List of first-order associations (place image)

Affective		Cognitive	
Accessible and central	Open, warm and hospitable	Architecture	Politics
Affordable	Pure and authentic	Arts and culture	Port/harbour
Charming, intimate and picturesque	Relaxing and peaceful	Biking	Public services
Compact	Rugged, wilful and raw	Business	Recreation and relaxation
Cosy, pleasant and friendly	Safe and clean	Canals	Restaurants and bars
Creative, cultural and inspiring	Smart and educated	Conferences	Royal
Culinary	Sober, direct and innocent	Design	Science and university
Diverse, unique and surprising	Sophisticated and impressive	Events	Shopping
Enterprising	Strong	Hiking	Sports
Historic and traditional	Sustainable and green	Historical heritage	Squares and markets
Innovative and progressive	Thriving	Industry	Technology and innovation
Known internationally	Undiscovered and mysterious	Nature (parks, gardens, green)	Transport and infrastructure
Majestic, chic and proud	Vivid, atmospheric and cheerful	Nightlife	Water (river, lake, sea)
Modern, young and hip			

For the brand identity survey, the same analysis is performed as for the place image. However, instead of finding a percentile to use for the selection of associations, we can use the value as identified for the place image. In this way, a fair comparison can be made. Thereby, a minimum strength of 38% of all respondents forms the boundary. Strength in this case refers to the percentage of respondents indicating the association for a city. Using this same value, a total of 47 associations remains. This is the same amount as for the place image, however, the associations excluded are found in both the affective and cognitive domain. In both surveys, the association *Undiscovered and mysterious* is excluded in the first step, which might indicate that this association is not applicable to the four cities in the region. The lowest amount of associations for a city is 14 for The Hague. All cities therefore have a considerably rich desired image. The list of selected associations is depicted in Table 4.3.

Table 4.3. List of first-order associations (brand identity)

Affective		Cognitive	
Accessible and central	Open, warm and hospitable	Architecture	Politics
Affordable	Pure and authentic	Arts and culture	Port/harbour

Charming, intimate and picturesque	Relaxing and peaceful	Biking	Public services
Compact	Rugged, wilful and raw	Business	Recreation and relaxation
Cosy, pleasant and friendly	Safe and clean	Canals	Restaurants and bars
Creative, cultural and inspiring	Smart and educated	Conferences	Royal
Culinary	Sober, direct and innocent	Design	Science and university
Diverse, unique and surprising	Sophisticated and impressive	Events	Shopping
Enterprising	Strong	Hiking	Sports
Historic and traditional	Sustainable and green	Historical heritage	Squares and markets
Innovative and progressive	Thriving	Industry	Technology and innovation
Known internationally	Undiscovered and mysterious	Nature (parks, gardens, green)	Transport and infrastructure
Majestic, chic and proud	Vivid, atmospheric and cheerful	Nightlife	Water (river, lake, sea)
Modern, young and hip			

4.4.2. Step 2: Identify second-order associations

The two lists of associations for the place image and brand identity surveys comprise all first-order associations, meaning those that are directly linked to the cities. This step identifies links between all associations, even between those that are not included in first instance. The strength of links is based on the correlation between the associations. Note that the correlation does not indicate to what degree associations are similar, but only if they are mentioned often together (or not) for one of the cities. Appendices H and I present the correlation matrices for both surveys.

As discussed in chapter 3, the rule for the second step is: *if the correlation is higher than 0.5, a link can be established between associations*. Applying this rule to the place image survey results in a total of 21 new links. Only one of them is related to an association that was not included yet: *Safe and clean*, showing a correlation of 0.56 with *Relaxing and peaceful*. The strongest correlation found is 0.64 for *Royal-Politics*, most likely because both are strongly present for the city of The Hague only. Other strong correlations around a value of 0.6 are *Port/harbour-Industry*, *Business-Enterprising*, and *Historical heritage-Historic and traditional*. All of these correlations do not come as a surprise.

Table 4.4. List of first-order and *second-order* associations (place image)

Affective		Cognitive	
Accessible and central	Open, warm and hospitable	Architecture	Politics
Affordable	Pure and authentic	Arts and culture	Port/harbour
Charming, intimate and picturesque	Relaxing and peaceful	Biking	Public services
Compact	Rugged, wilful and raw	Business	Recreation and relaxation
Cosy, pleasant and friendly	<i>Safe and clean</i>	Canals	Restaurants and bars
Creative, cultural and inspiring	Smart and educated	Conferences	Royal
Culinary	<i>Sober, direct and innocent</i>	Design	Science and university
Diverse, unique and surprising	<i>Sophisticated and impressive</i>	Events	Shopping
Enterprising	Strong	Hiking	Sports
Historic and traditional	Sustainable and green	Historical heritage	Squares and markets
Innovative and progressive	Thriving	Industry	Technology and innovation
Known internationally	<i>Undiscovered and mysterious</i>	Nature (parks, gardens, green)	Transport and infrastructure
Majestic, chic and proud	Vivid, atmospheric and cheerful	Nightlife	Water (river, lake, sea)
Modern, young and hip			

The correlations for the brand identity survey also need to be calculated. A total of 57 associations has a correlation higher than 0.5. It has to be noted that the number of respondents is quite low, and the number of strong correlations may therefore be high. Nevertheless, some new associations to be included have been found, as well as some very strong correlations. New associations are *Thriving*, *Culinary*, and *Undiscovered and mysterious*, all of which are affective associations. This means that only cognitive associations are to be excluded from the P-BCM. Interestingly, the place image selection only excluded affective associations, which could imply that the brand identity has a stronger focus on feelings and emotions, whereas the place image revolves more around knowledge and information. Most likely to be mentioned together (or not at all), with a very strong correlation of 0.82, are *Politics* and *Majestic, chic and proud*.

Table 4.5. List of first-order and *second-order* associations (brand identity), cont. on next page

Affective		Cognitive	
Accessible and central	Open, warm and hospitable	Architecture	Politics
Affordable	Pure and authentic	Arts and culture	Port/harbour
Charming, intimate and picturesque	Relaxing and peaceful	Biking	Public services
Compact	Rugged, wilful and raw	Business	Recreation and relaxation
Cosy, pleasant and friendly	Safe and clean	Canals	Restaurants and bars
Creative, cultural and inspiring	Smart and educated	Conferences	Royal
<i>Culinary</i>	<i>Sober, direct and innocent</i>	<i>Design</i>	Science and university
Diverse, unique and surprising	<i>Sophisticated and impressive</i>	Events	Shopping
Enterprising	Strong	Hiking	Sports
Historic and traditional	Sustainable and green	Historical heritage	Squares and markets

Innovative and progressive	<i>Thriving</i>	Industry	Technology and innovation
Known internationally	<i>Undiscovered and mysterious</i>	Nature (parks, gardens, green)	Transport and infrastructure
Majestic, chic and proud	Vivid, atmospheric and cheerful	Nightlife	Water (river, lake, sea)
Modern, young and hip			

4.5. Analysis stage

The last stage of creating the Polycentric brand concept map concerns the analysis of the aggregated survey results. As described in chapter 3, this stage follows two steps: visualisation of maps and calculation of metrics. Both provide room for analysis, with the former step being qualitative and the latter as more quantitative.

4.5.1. Step 1: Visualise concept maps

The first step in the final stage is to visualise the P-BCM with the data from the previous stages. In the network analysis software Gephi, data can be imported as a matrix, depicting the relations between all elements. For the table, only the selected links from the previous stage should be used. This means that links between cities and associations should be made by at least 38% of the respondents, whereas links between associations should have a correlation of at least 0.5. Once these matrices are imported in Gephi, the visualisation can start. From now on, cities and associations will be referred to as nodes and links between them as edges.

Gephi allows several ways to arrange the layout of the nodes and edges in networks. One of them capable to cluster cities in a neat way, is ForceAtlas 2. For example, Figure 4.7 shows how the place image data initially presented by Gephi can be transformed into a clear network overview. Automatically, the layout presents several clusters of nodes.

The same can be done for the results from the brand identity. Figure 4.9 shows the eventual P-BCM for the brand identity, in which labels are added and colours and sizes are adjusted. Clearly, there are differences between the place image and brand identity of the cities in the MRDH. Zoetermeer seems to have many more associations connected to its node, whereas the cluster around The Hague is rather small. An interesting feature is the additional cluster of two correlated associations, *Undiscovered and mysterious* and *Conferences*, that are somehow separately clustered from the rest of the brand concept map.

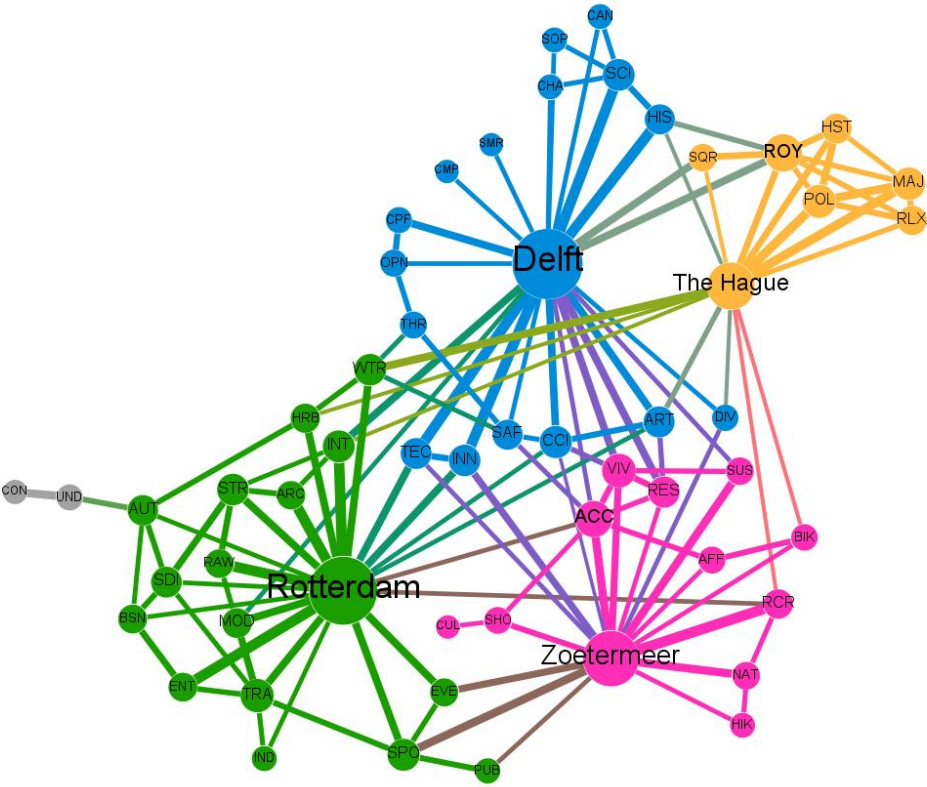


Figure 4.9. The Polycentric brand concept map (P-BCM) for brand identity

So far, two maps are created: one for the place image and one of the brand identity. These two are at the core of this research and illustrative case study. Based on the results gathered from the surveys, it is possible to dive deeper into the concept of place image by creating maps for specific groups. For example, a comparison can be made between the place image as held by men and women, old and young people, or those living nearby and further away. For illustrative purposes, one comparison will be made in this section based on the place of residence. Therefore, two maps are created in this step: one for respondents living in the province of South-Holland and one for respondents living

elsewhere in the Netherlands. Figures 4.10 and 4.11 display the maps created, following the rules from the aggregation stage as well. At first sight the maps seem to be quite similar, with Rotterdam and The Hague as biggest nodes, closely followed by Delft. The respondents from South-Holland have a richer place image of Zoetermeer than the other respondents from the Netherlands, with five associations linked directly opposed to three. Another interesting difference is the relation of associations: people from South-Holland appear to have more correlations, especially when looking at the nodes around Delft and Rotterdam.

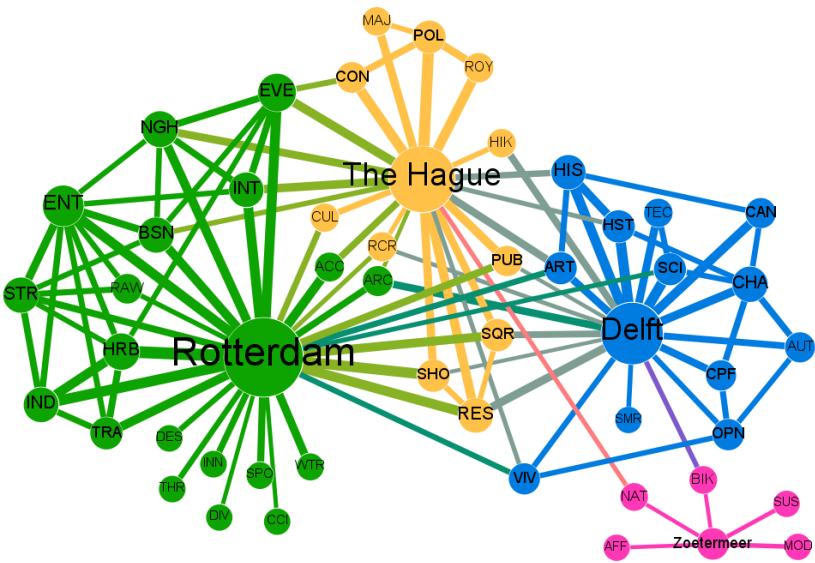


Figure 4.10. The P-BCM for place image [province: South-Holland]

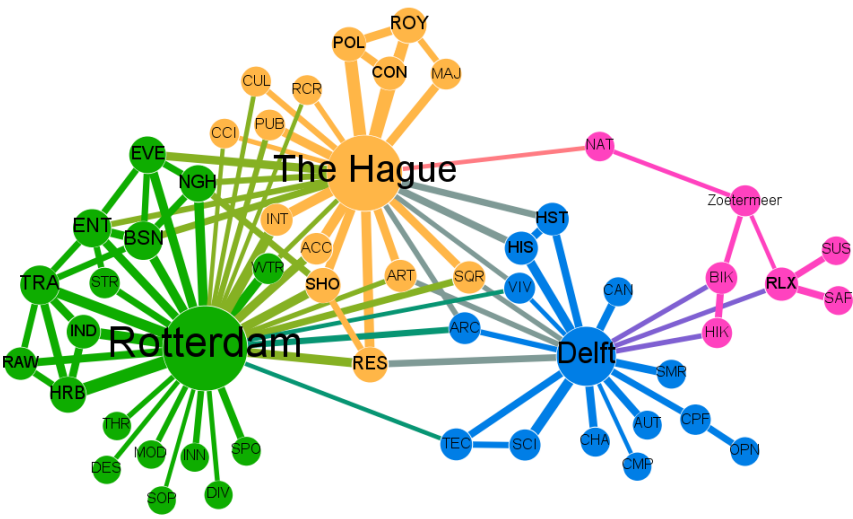


Figure 4.11. The P-BCM for place image [province: Other]

As a final remark to this section of the analysis stage, the usefulness of the aggregation stage can be shown. Figures 4.12, 4.13 and 4.14 present the visualisation of the image networks if other rules were applied. It aims to show that the current rules provide a right amount of data to keep the visualisation of the networks both clear and insightful. Note that Figure 4.14 is very similar to the P-BCM for place image, but lacks useful information on the relation between associations.

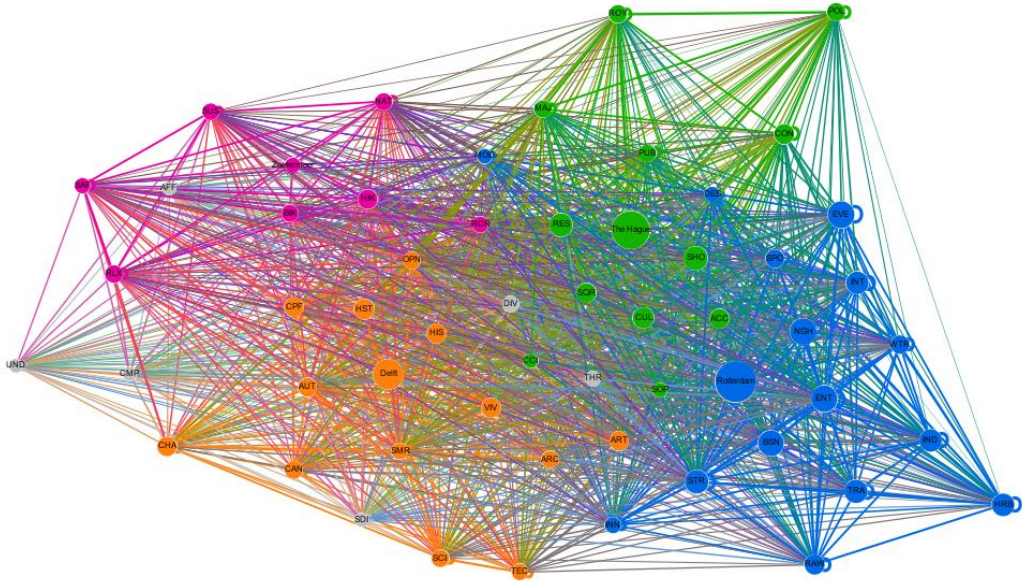


Figure 4.12. Map of place image showing all relations between nodes

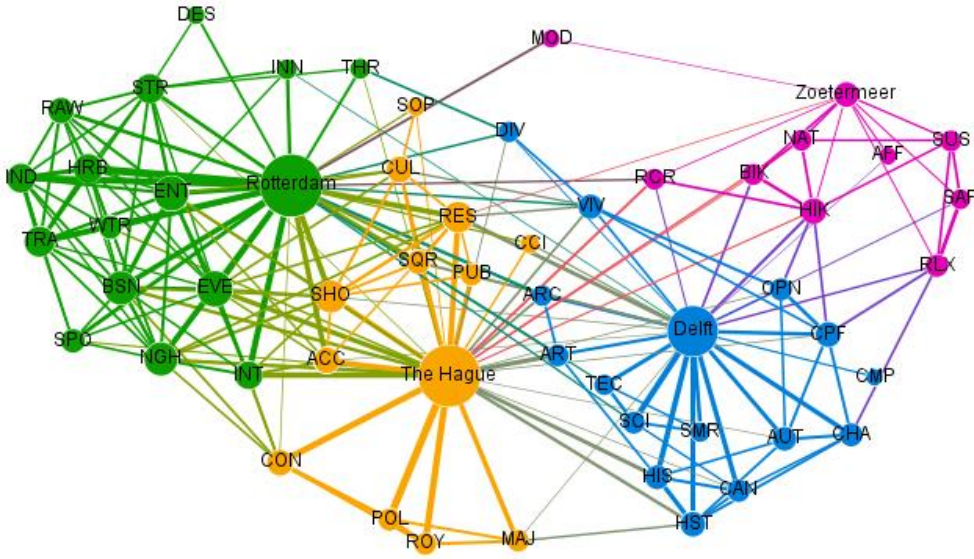


Figure 4.13. Map of place image showing a lower limit for correlations (> 0.4)

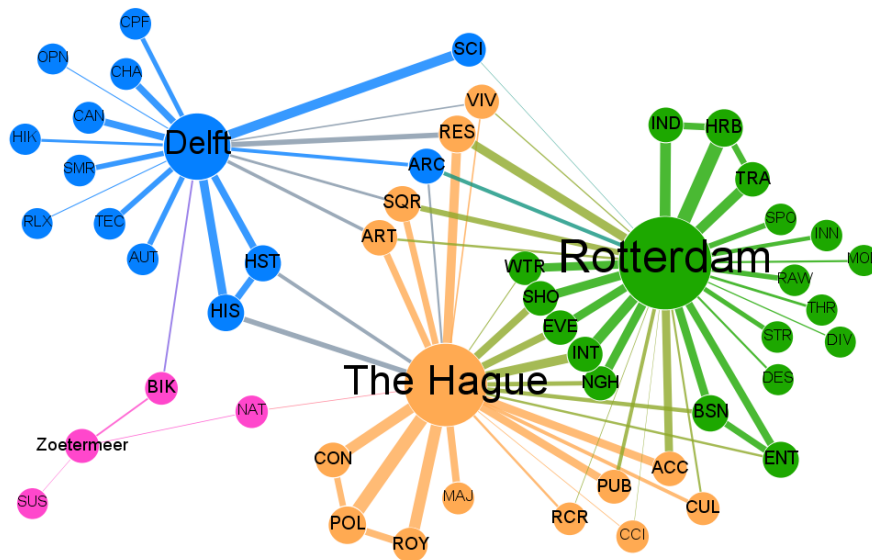


Figure 4.14. Map of place image showing a higher limit for correlations (> 0.6)

4.5.2. Step 2: Calculate metrics

The first metrics to calculate are the degree and the weighted degree of nodes. Table 4.6 presents the degrees for each of the four cities for both surveys. Additionally, the average weighted degree is presented, which is the average weight of an edge connected to the city. We can see that for the place image, The Hague and Rotterdam both have a high (weighted) degree. This indicates a rich place image for the two cities. Delft has less associations, with a similar average strength of links. Zoetermeer has a considerably smaller set of associations connected, expressed in both total and weighted degree. Moreover, those associations that are connected to Zoetermeer have a small weight, indicating a relatively weak set of associations. When looking at the brand identity, we see a different idea. The Hague has the smallest total degree and weighted degree, as well as the lowest weight per degree. Zoetermeer ranks just above The Hague with moderately higher degrees. Delft and Rotterdam have the biggest set of associations and the highest weighted degrees. This might be caused by the low amount of respondents from these two cities, making it more likely that they share the same desired image.

The second category of metrics concerns the closeness centrality, presented in Table 4.6 as normalised values. Looking at closeness centrality for place image, we see that Rotterdam has the highest value, followed by The Hague and Delft at some distance. Zoetermeer has a relatively low value for closeness centrality, indicating that Zoetermeer

is quite far positioned from most associations. Assessing the closeness centrality for the brand identity study, we can see that Delft is the most central node with the highest value. Rotterdam follows closely, whereas The Hague and Zoetermeer share a relatively low centrality.

Combining the degree and centrality of the cities, we can conclude that for the place image network, Rotterdam has the highest values for almost all metrics. The Hague follows closely with very similar values. This indicates that the two main cities of the metropolitan region have the richest, strongest, and most central image. This conclusion may not come as a surprise. However, when looking at the brand identity network, Zoetermeer shows a relatively strong image, with a similar centrality value as The Hague. It makes sense that the city officials from Zoetermeer desire a richer set of associations for the city image and want it to play a more central role in the region. Unfortunately, the desired situation is still far removed from the current situation.

Table 4.6. Degree and centrality of the cities; [P]=place image, [B]=brand identity

	Degree	Avg. weight of degrees	Weighted degree	Closeness centrality (N)
Delft [P]	18	0.55	9.9	0.455
The Hague [P]	24	0.59	14.1	0.505
Rotterdam [P]	29	0.58	16.9	0.531
Zoetermeer [P]	3	0.40	1.2	0.307
Delft [B]	23	0.67	15.5	0.519
The Hague [B]	14	0.58	8.1	0.439
Rotterdam [B]	21	0.70	14.8	0.500
Zoetermeer [B]	17	0.64	10.8	0.435

The same metrics can be calculated for the other nodes in the network: associations. The complete table with the degree and centrality metrics for all nodes can be found in Appendix H for place image and in Appendix I for the brand identity. The main insights are shortly discussed in this section. For the place image, the associations with the highest degree and weighted degree are *Business* and *Enterprising*. As can be seen in the P-BCM for place image (Figure 4.8), they are both strongly associated with Rotterdam and have correlations with other nodes as well. Therefore, these associations can be considered strongly embedded in the regional image network. If we consider associations with a high average weight of degrees, this gives a list of associations that are strongly cohesive in the

aggregated place image of the region. The strongest are *Known internationally*, *Royal*, *Politics*, and *Conferences*. All of these are mainly connected to The Hague. The association with the highest closeness centrality is *Restaurants and bars*, with values comparable with the centrality of The Hague. This indicates that this association is close to most of the nodes in the place image network for the MRDH. When looking at the brand identity results, there are clearly two associations with a high overall and weighted degree: *Accessible and central* and *Royal*. The associations that are most cohesive in the brand identity network, based on the average weighted degree, are *Conferences* and *Innovative and progressive*. When considering the centrality metric, the association *Accessible and central* comes out on top again. It appears to be a pivotal characteristic for the desired image of all four cities.

The third metric category is the correlation on a city level and on a regional level. The correlation between cities is calculated with the frequencies of associations per city (as percentage of the total response). Table 4.7 provides the correlations between the cities using results from both the place image and brand identity surveys. We can see there is a moderate relation between the cities' images and brand identities, ranging from 0.44 to 0.59. This indicates that the alignment of place image and brand identity of cities is not great. The Hague has the lowest correlation, Rotterdam the highest. Another insight is the moderately negative correlation, and thus low similarity, between the place image of Delft and both the place image and brand identity of Rotterdam.

Table 4.7. Correlations between the cities; [P]=place image, [B]=brand identity

	Delft [P]	The Hague [P]	Rotterdam [P]	Zoetermeer [P]	Delft [B]	The Hague [B]	Rotterdam [B]	Zoetermeer [B]
Delft [P]	1,00							
The Hague [P]	-0,07	1,00						
Rotterdam [P]	-0,39	0,17	1,00					
Zoetermeer [P]	0,06	-0,26	-0,25	1,00				
Delft [B]	0,54	0,07	-0,04	-0,21	1,00			
The Hague [B]	0,08	0,44	-0,23	-0,12	0,04	1,00		
Rotterdam [B]	-0,41	-0,09	0,59	-0,14	-0,01	-0,16	1,00	
Zoetermeer [B]	-0,03	0,04	0,14	0,56	0,08	-0,10	0,18	1,00

On a network level, the degree metrics can be averaged into values for the place image and brand identity networks as a whole. As discussed in the third chapter, this indicates

the density and the strength of links in the network. Table 4.8 presents the values for each of the three averaged degree-metrics. It shows that the density of the brand identity network is much larger than the density of the place image. A conclusion to be derived from these values is that the associations are more interconnected and less clustered in the brand identity network. The visualised brand concept maps (Figures 4.8 and 4.9) support this conclusion. Considering the strength of the links, the brand identity has a slightly higher average. If the city officials would reach a higher degree of consensus on the desired image, the weight of the degrees would be higher and this would increase the difference. Naturally, the average value for the weighted degree is higher in the case of the brand identity. Overall, the brand identity has a more dense network and stronger links than the place image network. Referring back to the two ways for branding a region, a homophonic or polyphonic set of brand identities, the first seems more likely based on the desired images, whereas a polyphonic set is suggested by the place image. In other words, a harmonious set of similar associations can be found in the brand identity network, whereas a complementary set of unique associations can be created based on the place image map.

Table 4.8. Average of the degree-metrics for place image and brand identity

	Degree	Avg. weight of degrees	Weighted degree
Place image	3.65	0.55	2.07
Brand identity	4.80	0.61	3.01

When the frequencies of the previous analysis are combined into results for place image and results for brand identity, it is possible to calculate the correlation between the two maps. The resulting correlation between the place image and brand identity frequencies is **0.48**, which is in line with the moderate correlations between the cities from Table 4.7. It is still difficult to attach meaning to this value, further case studies are able to provide more context. Additionally, the correlation is calculated between the place image network by respondents from South Holland and respondents from other Dutch provinces. This results in a correlation of 0.94. This value clearly represents great similarity and it can thus be concluded that high correlations between maps are not unlikely to occur.

5. CONCLUSIONS AND DISCUSSION

The fifth and final chapter provides the conclusions of this research and various points of discussion. The conclusion section aims to answer the research questions and address the knowledge gaps as identified in the first chapter. The final section discusses the societal value, scientific contributions, limitations of this research, and possibilities for further research.

5.1. Conclusions

The first section of the fifth and final chapter deals with the conclusions based on the case study of the MRDH. Thereafter, the research sub-questions are addressed, followed by an answer to the main research question.

5.1.1. Case study of the MRDH

One of the objectives for this research is the development of an analytical tool, which has been named the Polycentric brand concept map (P-BCM). In the fourth chapter, this measurement method is illustrated with a case study of the Metropolitan region Rotterdam The Hague (MRDH). This section draws several conclusions based on the case study.

First, interviews were conducted with city officials from the four cities of Delft, The Hague, Rotterdam, and Zoetermeer. This provided a great starting point as it created the context of the case study. Results from the image networks are easier to interpret once insight is gained from the city perspective. For example, knowing that Zoetermeer recently increased its branding efforts, explains a possible gap between the image and the brand identity. The talks with the city officials made clear that all are greatly involved in branding their city, despite their different organisational structures. The most common form appears to be a branding department within the municipality which steers an external marketing bureau. Furthermore, research is regularly performed to extract the image people hold of the city. This indicates the strong desire to find out exactly how people see the city and subsequently adjust their branding strategy to it. The results from the case study aim to provide additional insights into these images in a network context. Moreover,

conclusions may be drawn in relation to the other cities in the region. The remaining results from the illustrative case study are discussed in the next section, in the answers to part III of the research questions.

5.1.2. Research questions

The first set of sub-questions belongs to part I of the research, as dealt with in chapter 2. This chapter is purely theoretical and has the theoretical objective to conceptualize image and identity and create a framework. The three sub-questions are:

- a) *What is the image of the city?*
- b) *What is the identity of the city?*
- c) *What is the theoretical relation between image and identity?*

Question a) and b) are considered in the conceptualization of image and identity. Image refers to the place image, which can be defined as the associations about a place in the mind of any individual or group. It possesses several dimensions, such as the strength and truth of the image. The main elements that comprise the city image are affective, cognitive, and conative components. A list of several related concepts is identified to clearly differentiate between the place image and for example the place reputation, attachment, or preference. The second question concerns the identity of the city, which is divided into two concepts: brand identity and place identity. The brand identity is the intended or desired image in the consumer's mind. The elements that shape and support the brand identity are mission, vision, values, personality, distinguishing preferences, and benefits, as proposed by Konecnik Ruzzier and De Chernatony (2013). Several related concepts are identified for brand identity as well, amongst others the brand strategy, city label, and brand purpose. The place identity is the ongoing interplay between people and place, shaped by materiality, social interactions, institutions, and place image. These four components are recognized as the elements that constitute place identity by Kalandides (2011). An overview can be found in Table 5.1.

Table 5.1. Conceptualization of place image, brand identity, and place identity

	<i>IMAGE</i>	<i>IDENTITY</i>	
	Place image	Brand identity	Place identity
Definition	the associations about a place in the mind of an individual or group	the intended or desired image in the consumer's mind	The ongoing interplay between people and place, shaped by materiality, social interactions, institutions, and place image
Dimensions	personal – collective strong – weak positive – negative true – false internal – external	n.a.	n.a.
Elements	affective cognitive conative	mission vision values personality dist. preferences benefits	materiality institutions practices place image
Related concepts	place brand place reputation place or brand awareness resident satisfaction place attachment sense of place place preference place or brand loyalty	competitive identity brand strategy brand purpose brand positioning city label brand promise	n.a.

The third sub-question of part I is about the theoretical relation between image and identity. Based on the conceptualisation and several other frameworks in place branding literature, a conceptual framework is made that contains the place image, brand identity, and place identity. The place image is held by the people, which influences their practices within a certain place, their participation in public processes, and communication among people. The brand identity or desired image is held by public entities, which has an impact on the communication towards people and on interventions in the physical environment. Place identity is not directly visible in the framework, but is certainly a part of it. The four elements that constitute place identity can be found individually. Place image and practices are respectively part of and performed by people. The institutions shape the context of people and public, as opposed to the physical context, in which materiality is what constitutes a place. Figure 5.1 represents the theoretical relation between image and identity in the context of places.

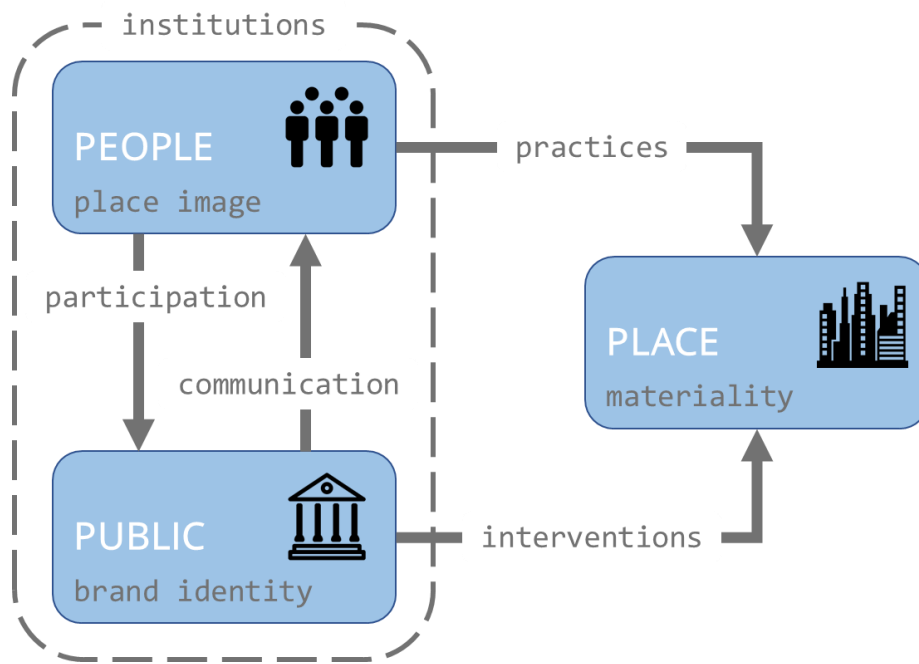


Figure 5.1. Interplay between people and public in place and its identity

The sub-questions from part II are tackled in chapter 3. This chapter focused on the process design of the analytical tool, and covers the following sub-questions:

- d) *How can identity and image be operationalised for a city?*
- e) *How can identity and image be measured for a city?*
- f) *How can identity and image be analysed for a city?*

The first section of chapter 3 deals with the operationalisation of place image and brand identity. The outcome is that place image and brand identity are operationalised as cognitive and affective associations that are verbally expressed and related with cities and each other in a network structure. Furthermore, the associations should be general (as opposed to place-specific) and positively or neutrally connotated (as opposed to negatively).

Sub-questions e) and f) are about the measurement and analysis of place image and brand identity. Both need to account for the operationalisation of the concepts. Based on the traditional stages of concept mapping, as described by John et al. (2006), the measurement takes place in three consecutive stages: elicitation, mapping, and aggregation. Elicitation is about obtaining a list of associations that are relevant for the

specific study. In line with the operationalisation, they should be generally applicable, positively or neutrally connotated, and divided into affective and cognitive components. The mapping stage is concerned with collecting response from the target groups. The elicited associations are presented to the respondents, from which they can choose those that are part of their (desired) image. The next stage is aggregation, which comes down to combining the answers into a dataset for the Polycentric brand concept map. A set of rules is needed to select first-order associations and establish links between them. Finally, a fourth analysis stage is added to the traditional process in order to answer sub-question f). The analysis covers two steps, namely: visualisation of the maps and calculation of metrics. After this final stage, the Polycentric brand concept map is created and ready to be compared both in a visual way and through the calculated metrics. Figure 5.2 summarizes the process to create the P-BCM.

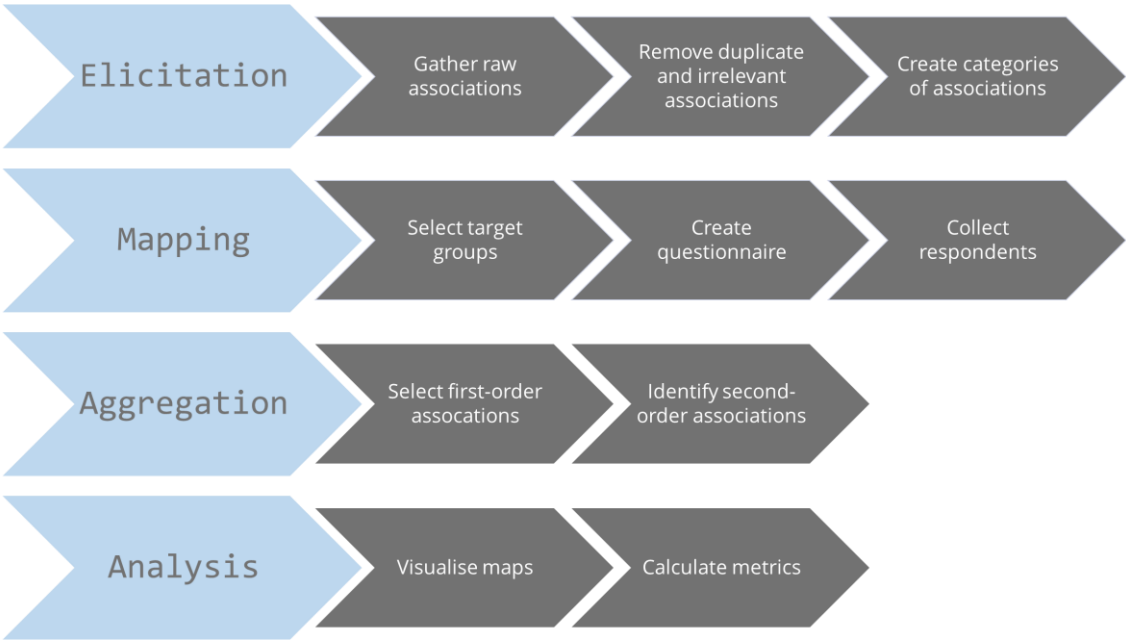


Figure 5.2. Process of the Polycentric brand concept map

Part II of the research provides the analytical tool with which an empirical relation can be established between the identity and image of cities in a polycentric region. This empirical relation is by definition case specific and may differ per region. To illustrate how the tool can be applied to relate the image and identity empirically, an illustrative case study is performed in chapter 4. The following research questions apply to this third part of the research:

- g) What are the characteristics of the case study as a polycentric region?*
- h) What are the identity and image of the selected cities?*
- i) What are the commonalities and differences within the polycentric region?*
- j) What is the empirical relation between image and identity, based on the case study?*

Sub-question g) concerns the polycentricity of the case study. The Metropolitan region Rotterdam The Hague (MRDH) is selected for the illustrative case study, comprising the four cities of Delft, The Hague, Rotterdam, and Zoetermeer. Two characteristics are evaluated in the case study: the type of metropolisation and the degree of integration. The type of metropolisation can be divided into two: incorporation mode and fusion mode. The first implies one dominant centre of the region, whereas the latter means a more balanced system of cities. Rotterdam and The Hague are two equally dominant cores of the MRDH (as the name of the region already implies). Therefore, the region can be considered to develop according to the fusion mode. The degree of integration is analysed using three dimensions: functional, cultural, and institutional. As indicated by all interviewees, the MRDH is purely functional, with a strong focus on the topics of public transport and business climate. The institutional integration is progressing, with legal powers transferring from the province to the region, but is far from an advanced stage. It is uncertain whether this will improve, as political factors greatly influence the support for institutionalisation of the MRDH. Cultural integration and a corresponding regional identity is missing. The presence of strong, individual cities with an own image and identity hampers the commencement of a regional identity.

Sub-questions h), i) and j) relate to the identity and image of the four cities of the MRDH. Using the developed analytical tool P-BCM, two maps were created depicting the place image and brand identity of the four cities in a regional context. Figures 5.3 and 5.4 respectively show the place image and brand identity as a result from the visualisation step in the analysis stage. The image of Delft focusses on associations like history, canals, science, charming, and cosy. Delft shares the historical associations with The Hague, which has a strong image concerning politics, royal, and conferences. Furthermore, just as Rotterdam, The Hague is known as international and accessible and known for its

restaurants, events, shopping, and public services. The image of Rotterdam has the largest set of associations, which could be called either rich or diluted. It contains associations such as the harbour, business, enterprising, transport and industry, and water. On the other hand, Zoetermeer has a rather weak, but focussed image revolving around biking, nature, and a sustainable and green environment.

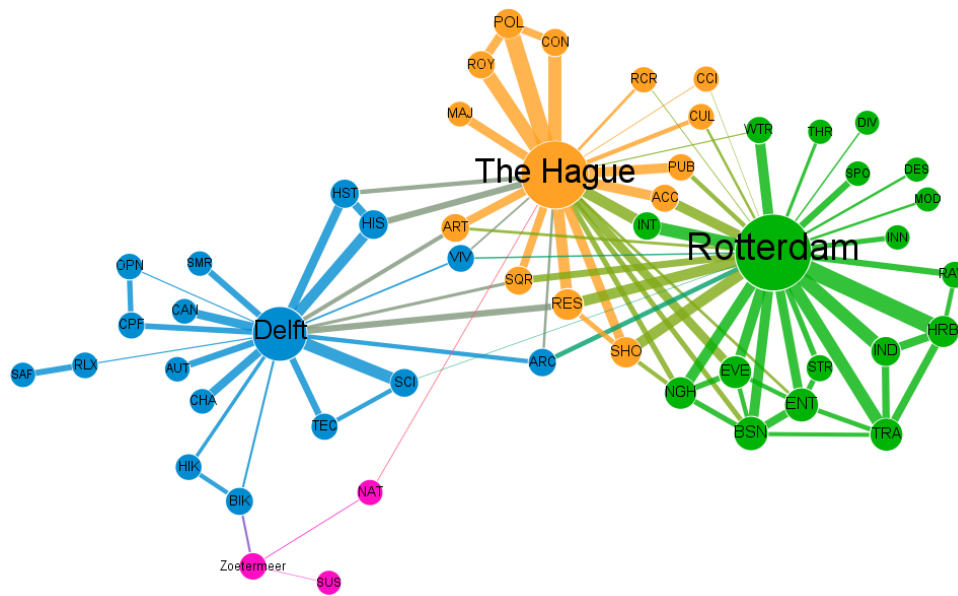


Figure 5.3. The Polycentric brand concept map (P-BCM) for place image

Looking at the map for brand identity gives another impression of the four cities in the MRDH. What strikes is that Rotterdam and The Hague do not share a similar brand identity, only the association of water is strongly connected to both cities. Again, the image network of Rotterdam is quite diverse, including many different associations. This can be considered in line with the place image. The Hague on the other hand has a strong focus on a couple of interrelated associations including royal, politics, history, and majestic. Furthermore, it shares some associations with Delft, Rotterdam, and Zoetermeer, such as arts and culture, recreation, squares and markets, and biking. Especially these shared associations do not appear to be in line with the actual image held by the Dutch population. In contrast with the place image map, Delft and especially Zoetermeer have a far richer set of associations. Delft shows similarity with its place image, due to the focus on history, science and technology. The same goes for Zoetermeer, with its focus on recreation, nature, and sustainability. These widely varying brand identities might indicate that the desired image is not yet clearly defined within the municipality. To conclude, a

central theme in the brand identity map is the accessible and central position (ACC) of the cities.

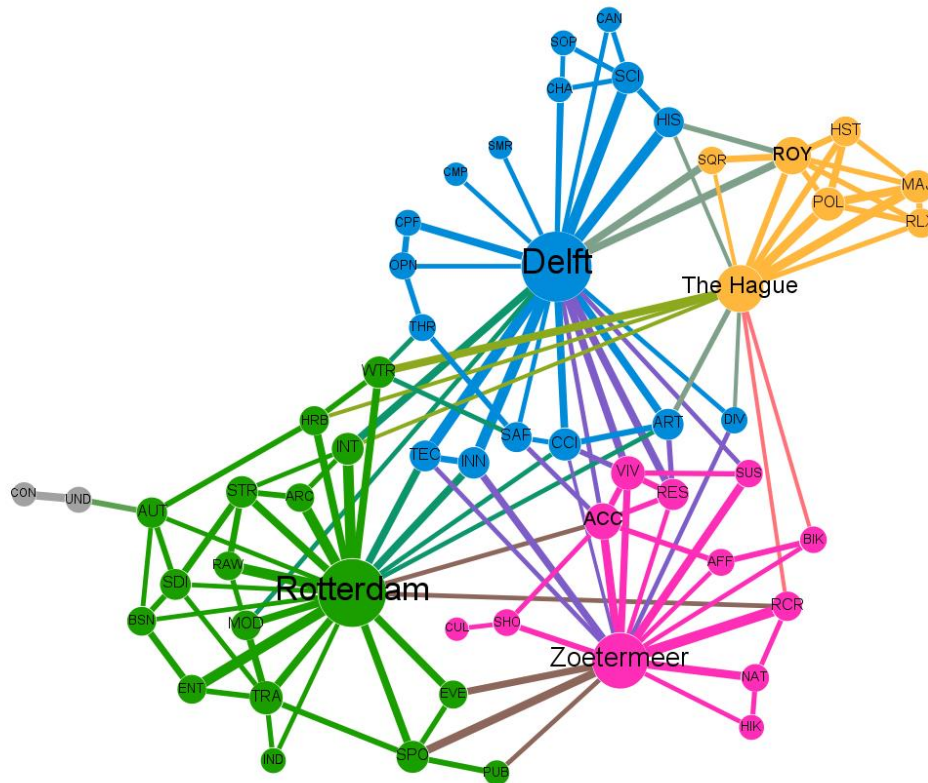


Figure 5.4. The Polycentric brand concept map (P-BCM) for brand identity

In addition to the visualisation, several metrics have been calculated to support the statements from the qualitative analysis and provide new insights. Metrics have been calculated in the following categories: degree, centrality, and correlation. The values for the metrics for each node (both associations and cities), can be found in Appendices H and I. One of the most interesting conclusions is based on the correlation metrics. It shows the correlation between cities' image and their brand identity. Only Rotterdam shows a moderately high correlation between its brand identity and place image, indicating that most place images do not align greatly with the brand identities. Furthermore, the place image of Delft has a relative strong negative correlation with the brand identity of Rotterdam. This implies that Rotterdam wants to be seen very different than the actual image of Delft. Finally, the correlation coefficient between the two maps as a whole comes down to 0.48, which is a moderate similarity.

Having dealt with the sub-questions of this research, we now come back to the main research question:

What is the relation, both from a theoretical and empirical point of view, between image and identity in a polycentric context?

To synthesise the conclusions from the sub-questions, the image and identity have a complex relation. This can be simplified by just looking at the image in relation with the brand identity, also known as the desired image. Both concepts are at the core of the practices and interventions performed by both people and public institutions in the physical environment of cities. They can be considered the main drivers of communication about the place as well. The idea is that ultimately, the place image is completely in line with brand identity. Most likely, the brand identity will always be ahead of the place image, as cities will aspire to be more than they are seen as at the moment. The polycentric context adds an interesting dimension to the story. Influenced by the way the region evolves into one metropolitan area (incorporation-mode or fusion-mode) and the degree of integration (combination of functional, cultural, and institutional integration), a region is able to form a regional identity. In this way, the region can take steps to find an integral branding strategy to position the cities and the region as a whole and guide future development. The strategy either takes the form of a homophonic or polyphonic set of brand identities, thereby being respectively harmonious and similar or complementary and unique. The analytical tool P-BCM, which stands for Polycentric brand concept map, aims to support strategic decisions into regional collaboration based on the measurement of image and identity in a regional context.

5.2. Discussion

The second part of this chapter concerns the discussion of the research. First, the societal value and scientific contributions are discussed, followed by the limitations and directions for further research.

5.2.1. Societal value

On a city level, image research is an essential part of branding. The conducted research and the resulting analytical tool can be used by place branding practitioners to check

whether their place image matches with the created brand identity. Not only in a qualitative way, but also quantitatively, using metrics. If the gap is large, place branding managers may adapt their strategy or even the brand identity. If the image shows a high similarity, the branding strategy can be considered successful (or it was not ambitious enough). Moreover, cities can use place image insights to create a new brand identity, in which they select their unique and strong associations.

However, the performed research is one of many studies into the image of places. The contribution and main added value of this research is to relate image and identity in a polycentric context. It is argued that the image and identity have an impact on the potential for regional collaboration between cities. In case of highly similar images of the cities in a region allows for a brand homophony, in which a single regional identity can be pursued. With this cultural integration of the region, the metropolisation process is empowered. On the other hand, strongly differentiating images may indicate the development of a brand polyphony, in which the brand identities complement and amplify each other. Cities can position themselves within the region and combine their branding practices in a co-branding effort. Thereby, this research and the resulting analytical tool P-BCM is able to contribute to both the individual and regional efforts of place branding.

5.2.2. Scientific value

Next to the societal contribution, this research contributes to the scientific field on several topics. The application of city branding in polycentric regions is identified as a general knowledge gap. Therefore, this study focusses not on the efforts for regional branding, but on the individual city branding practices. More specifically, the research concentrates on the image and identity of the individual cities, as they are the two main concepts in place branding literature.

Being the two central concepts in place branding, image and identity were subject to a literature review. The conceptualisation showed that many authors are surprisingly consistent on the topics of place image and brand identity, whereas place identity bears a lot of conceptual confusion. To connect these concepts, a framework is created. It shows

the theoretical relation between several core concepts in the field of place branding. Place image and brand identity are two main drivers of city branding practices, for people and local authorities respectively. By improving the understanding of the relationship between place identity and image, the framework advances the theory of place branding (Kavaratzis & Hatch, 2013).

To further improve our understanding of city branding practices in polycentric regions, an empirical relation between place image and brand identity is established. However, Ci and Choi (2017) detected a lack of methods to compare the identity and image of places. The brand concept map is used to measure and analyse image and identity. Previous BCM studies applied it to a single city, collected data through interviews or group sessions, and resulted in a map that can be only interpreted visually. This research adds three essential features to the traditional method. One is the application of the BCM in a polycentric context. By combining the maps of multiple cities, it is possible to measure the image and brand identity of more than one branded object. Another feature is the data collection method. John et al. (2006), who developed the BCM in the first place, called for improvement of the mapping procedure, where especially computer-aided data collection is seen as valuable. With the use of online questionnaires, data can be collected faster and on a larger scale, with less resources. A third feature is the quantitative analysis of the BCM with network analysis. This research adds an analysis stage to the traditional stages of concept mapping (elicitation, mapping, and aggregation). Thereby, network analysis has become an integrated part of the P-BCM method. Ci and Choi (2017) also applied network analysis on a BCM for brand identity and place image, but their analysis is limited to correlations. The P-BCM adds two more categories of metrics: degree and centrality.

5.2.3. Limitations

Looking back on the research performed, a limitation can be detected in the fact that a polycentric region is more than just the sum of its cities. A bottom-up approach is applied to analyse the image and brand identity of the cities and thereby the region as a whole. A top-down approach to measuring the image and identity of polycentric regions presumably results in other insights. This is due to the fact that smaller municipalities and even the rural hinterland are an integral part of the region as well. They are able to

contribute to the image and identity of the region too. For example, the municipality of Westland has a substantial agricultural sector which is of international importance. Smaller municipalities may have an impact on individual and regional branding practices. It is unknown to what extent this has an impact on this research.

Other limitations are concerned with the developed analytical tool P-BCM. Associations for a city are evaluated relatively to the other cities. Using a different set of cities might result in other associations. For example, The Hague was often evaluated as an international city. However, if the other cities in the study were New York, London, and Hong Kong, the results might be completely different. Thus, the results of the P-BCM should be primarily interpreted in a regional context, in which the image associations for one of the cities are relative to the other cities. Results from one case study are thereby problematic when comparing it with other P-BCM case studies.

If we look more specifically into the stages of the P-BCM, several other limitations were detected during the illustrative case study. Starting with the elicitation stage, the list of associations shows limitations from several perspectives. Many business-related associations were excluded during the elicitation stage, because otherwise the list would have become too substantial for respondents. A separate study can be performed in which companies and investors are targeted to elicit their associations. From a linguistic perspective, a limitation is that some associations may have a completely different meaning for some than for others. This was partly solved by creating groups of associations, in which multiple words create a sense of the associations. Finally, the classification of associations took place via own logic and with help from an online dictionary of synonyms. However, additional support from an expert is lacking. An expert (in marketing or linguistics) is able to verify the steps taken in the classification of associations. The impact of an incomplete or inaccurate list of associations is fairly serious because it forms the content of the questionnaire. As a result, associations that might be part of the city image or brand identity are not included.

In the mapping stage, a standardized set of answers was provided to the respondents. Risks of such a limited set of answers are ambiguity or lack of clarity or completeness. Moreover, the questionnaire is only able to elicit superficial answers. There is no

possibility to go deeper and ask follow-up questions. A third downside of the questionnaire is that response cannot be controlled. Not all respondents provide valid answers, which can be derived from the fact that some answers do not make sense. In other words, the nature of questionnaires makes it hard to elicit the true image from people. This limitation is in general quite acceptable, but further actions can be undertaken to mitigate the impact.

In the last stage, analysis, the focus is on visualisation and network analysis. One important step is missing: validation. The current process of the P-BCM does not check whether the created maps are valid or not. Without validation it is impossible to generalise results, making this a limitation with great priority for further research.

5.2.4. Further research

There are still many limitations, but there are even more directions for further research. Based on the conceptual framework, other components besides the image and brand identity can be analysed as well. For example, the relation between place image and public participation: does a more positive place image drive participation? Other research could be performed to analyse whether interventions and communication are in line with the brand identity. Another topic, already touched upon in the field of place branding, is the influence of public participation on the brand identity. How can civilians be included in the place branding process?

As can be concluded from the limitations described before, the P-BCM has room for improvement. Further research could apply the tool to more cases to test and improve it. The set of associations from the elicitation stage is a very useful basis for further case studies. Another interesting application of the P-BCM is to apply it multiple times to the same region over a period of time. In this way, the dynamics of the images can be analysed. For example, a timeline might show whether the place image is evolving in the direction of the brand identity. In order to do so, the same questionnaire can be used and distributed among a group of respondents, for example every two years.

Two main groups of associations are excluded intentionally from the study: negative and specific. However, the results from the place image survey indicated that both can be a main part of an individual's place image, with place-specific associations mentioned by almost a third of all respondents. Specific people or buildings that are often associated with cities can be linked to the general associations that have been elicited. For example, Delft Blue is probably related to history or to art. For the negative associations, scales can be included with a positive description on one side and a negative on the other. Furthermore, the conative component of city image is also excluded deliberately from the tool. However, as illustrated by Zenker and Beckmann (2013), an evaluative component can be implemented in the BCM. Especially for brand managers, evaluating the conative component of place image provides useful insights. By evaluating associations, the overall favourability of a certain image can be evaluated. Especially for brand managers, this provides useful information.

In the final stages of the P-BCM, more analysis can be performed into different target groups. For example, comparing young and old people, men versus women, high-income versus low-income. Due to time limitations, these analyses were not included in the illustrative case study, even though a lot of information is available.

Further research could also look into the development of more metrics with which the maps can be evaluated. The current set of metrics, consisting of degree, centrality, and correlation, can be expanded. Among others, Knoke and Kuklinski (1982) provide several other metrics that could be relevant for more extensive network analysis.

An essential step for validation needs to be included in the final analysis stage of the P-BCM. Two possible methods are provided by John et al. (2006): split-half reliability and nomological validity. The first comes down to testing whether similar maps are created if the data set is divided into two. Nomological validity tests whether there are significant differences between two groups, for example between residents and non-residents.

Lastly, the P-BCM can be used in a different context than polycentric regions. Within the domain of place branding, the P-BCM can be used to create a benchmark between several cities, for example international competitors. Moreover, the P-BCM can be used for other

branded objects than cities, such as products or companies. Further research can test the application of the P-BCM in other domains. After all, cooperation is an interesting direction within the marketing domain too, known as co-branding.

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APPENDICES

Appendix A – Place image studies

Table A1 presents an overview of eight different studies into the measurement of place image. As we can see, many different methods were applied, ranging from qualitative methods (such as descriptions and drawings) to more quantitative (such as semantic scales and the brand concept map). Three types of data collection are identified: questionnaires, interviews and focus groups.

Table A1. Overview of papers and their method of measuring image

Author(s)	Method	Data collection	Topic
Baxter and Kerr (2010)	Semantic-differential scale	Questionnaire	Meaning and measuring of place identity and place image
Bomfim and Pol (2005)	Drawings	Questionnaire	Residents' images of São Paulo from residents
Brandt and de Mortanges (2011)	Brand concept map	Interview	Students' images of Liege
Ci and Choi (2017)	Brand concept map	Focus groups	City image and brand identity of Seoul
Coshall (2000)	Repertory grid method	Interview	Tourists' images of museums and art galleries in London
Laaksonen et al. (2006)	Visual collages and metaphors	Focus groups	City image of Vaasa
Stachow and Hart (2010)	Descriptive	Focus groups	Town centre image
Zenker and Beckmann (2013)	Brand concept map	Focus groups	Effect of flagship projects on place image in Hamburg

Appendix B - Image associations from literature

The following table presents the raw associations as mentioned by the authors of nineteen papers. Note that they are not divided into affective and cognitive.

Association	#	(Balakrishnan, 2009)	(Balencourt & Curado, 2012)	(Baxter & Kerr, 2010)	(Bomfim & Pol, 2005)	(Brandt & de Mortanges, 2015)	(De Jong et al., 2015)	(De Noni et al., 2014)	(Dornas et al., 2003)	(Fok & Law, 2018)	(Gilboa et al., 2015)	(Hankinson, 2004)	(Laaksonen et al., 2006)	(Luque-Martínez et al., 2007)	(Merrill et al., 2013)	(Richards & Wilson, 2004)	(Roth & Diamantopoulos, 2014)	(Sevin, 2014)	(Stylidis et al., 2017)	(Zenker & Beckmann, 2017)
Nature	10	X		X	X	X				X	X		X		X				X	X
Culture	9	X	X					X	X	X	X		X				X			
Economy	9	X	X					X	X		X	X		X			X			
Safe	8			X		X		X		X	X				X	X			X	
Cultural	7				X	X				X					X	X			X	X
Education/University	7	X	X					X	X					X	X				X	X
Environment	7					X		X			X	X		X			X		X	X
Shopping	7					X			X	X	X				X	X			X	
Accessible	6	X		X		X					X	X							X	
Architecture	6			X		X			X				X	X		X				
Entertainment and nightlife	6	X				X					X				X	X				X
Historical heritage	6	X							X		X	X		X					X	
Clean	5			X	X	X									X				X	
Tourism	5		X					X	X			X							X	X
Climate	4	X															X		X	X
Industry	4	X							X			X	X						X	
Infrastructure	4					X					X			X					X	
International	4	X						X						X		X				
Multicultural	4				X										X	X				X
Recreational activities	4	X							X		X				X					
Vibrant	4			X					X				X					X		
Beautiful	3				X														X	X
Business	3											X		X	X					
Cosmopolitan	3			X						X										X
Landscape	3								X	X							X			
Leisure	3		X		X							X								
Medical facilities	3							X			X				X					
Old	3			X						X	X	X								
Open-minded	3			X					X											X
Peacefulness	3			X	X												X			
Pleasant	3			X	X								X							
Quality of life	3	X					X			X										
Restaurants	3	X									X								X	
Social facilities	3							X				X			X					
Business tourism	2	X										X								
Cold	2			X	X															
Dirty	2			X	X															
Diverse	2				X					X										
Dynamic	2									X							X			
Events	2	X															X			
Freedom	2									X										X
Friendly	2			X															X	
Green	2						X			X									X	
Healthy	2	X		X																
Innovative	2			X						X										
Interesting	2			X	X															
Likeable and helpful people	2	X																		X
Lots to discover	2	X														X				
Modern	2			X								X								
New	2			X						X										
Parks	2					X					X									
Pretty	2			X	X															
Proud	2			X					X											
Resilient	2			X			X													
Rugged	2			X														X		
Services	2										X			X						
Smart	2			X			X													
Sport city	2	X																		X
Sport facilities	2					X					X									
Unpleasant	2			X									X							
Water	2																X			X
Welcoming	2			X	X															
Working city	2			X												X				
Accommodation	1																		X	
Affordable	1	X																		
Amenities	1																		X	
Attractive	1				X															
Beaches	1																		X	
Boring	1			X																

Association	#	(Balakrishnan, 2009)	(Balencourt & Curado, 2012)	(Baxter & Kerr, 2010)	(Bomfim & Pol, 2005)	(Brandt & Mortanges, 2015)	(De Jong et al., 2015)	(De Noni et al., 2014)	(Dornas et al., 2003)	(Fok & Law, 2018)	(Gilboa et al., 2015)	(Hankinson, 2004)	(Laaksonen et al., 2006)	(Luque-Martinez et al., 2007)	(Merrill et al., 2013)	(Richards & Wilson, 2004)	(Roth & Diamantopoulos, 2014)	(Sevin, 2014)	(Stylidis et al., 2017)	(Zenker & Beckmann, 2017)
Caring	1			X																
Cheerful	1				X															
Colourful	1				X															
Competence	1																	X		
Conferences	1											X								
Connected	1								X											
Conservative	1																	X		
Cosy	1															X				
Creative	1			X																
Declining	1			X																
Digital	1						X													
Down to earth	1			X																
Eccentric	1			X																
Eclectic	1			X																
Ecological	1						X													
Educated	1			X																
Enterprising	1								X											
Excellence	1								X											
Financial	1								X											
Gastronomic	1								X											
Harbor	1																			X
Harmonious	1			X																
High status	1			X																
Honest	1			X																
Housing	1									X										
Innocent	1			X																
Innovation	1												X							
Intelligent	1						X													
Isolated	1			X																
Laidback	1			X																
Lazy	1			X																
Low status	1			X																
Markets	1														X					
Mysterious	1				X															
Noisy	1			X																
Non-tourist	1										X									
Opportunities	1				X															
Overcrowded	1			X																
Pleasure	1				X															
Politics	1																X			
Poor	1				X															
Quiet	1			X																
Religion	1	X																		
Rich	1				X															
Romantic	1			X																
Self-serving	1			X																
Serious	1				X															
Sleepless	1								X											
Sleepy	1											X								
Social problems	1												X							
Sophisticated	1			X																
Sparse	1			X																
Stagnant	1			X																
Strong	1			X																
Sustainable	1						X													
Technology	1																	X		
Thriving	1			X																
Traditional	1			X																
Transport	1													X						
Ubiquitous	1						X													
Uncaring	1			X																
Uneducated	1			X																
Unfriendly	1			X																
Unhealthy	1			X																
Unpretentious	1			X																
Unsophisticated	1			X																
Value for money	1																			X
Watersports	1																			X
Wise	1			X																

Appendix C – Construct elicitation session

To identify relevant associations, a structured construct elicitation session was held with fellow students. The aim of this session is to come up with associations that are additional to the ones already found in literature and policy or promotional documents. Moreover, it is useful to generate associations that are specifically relevant for cities in the Netherlands.

The technique applied in the brainstorm session is construct elicitation, which is part of the personal construct theory by George Kelly, as discussed in chapter 3. A personal construct is a characteristic that several elements may have in common, but are different from other elements. In this case, the elements are cities and the constructs are associations that may be part of the place image. The attendants are presented with several cities and are asked to come up with associations for them. In principal, there are two methods to structure the elicitation: the minimum context form and the full context form (Hankinson, 2004). The minimum context form, also called triadic method, requires three cities to be shown to the respondents. The question will be: in what way are two of the cities alike and different from the third? By definition, this results in a personal construct or association for cities. The full context form shows the respondent a complete list of cities. The question then becomes: in what way are groups of cities alike and different from others? Respondents thereby create groups of cities themselves for which they come up with constructs.

In this brainstorm session, the triadic method is applied. The structure of the session is as follows. Four respondents are invited to the session, where they form two groups of two. On beforehand, a list of fifteen Dutch cities is selected, varying on geographical location and population size (see Table A1). All cities are written down on paper cards and shuffled. From the stack of cards, three cities are randomly picked and presented to the two groups. Subsequently, the groups are asked the following question: in what ways are two of the cities alike and different from the third? The respondents are given several minutes to discuss and come up with their personal constructs. It is assumed that discussion between the respondents within their group leads to more output. Once they are finished

with writing down their answers, the output is briefly discussed between the two groups and the facilitator. This could lead to more constructs for the three cities. All output is written down and the session continues with three new randomly picked cities. The respondents thereby need to come up with new constructs on top of the ones already identified. This process is repeated until the respondents are unable to come up with new constructs and a final list of associations is thereby created.

Table C1. Cities for the construct elicitation session (*CBS, per December 2016)

Cities	Province	Population*
1 Almere	Flevoland	200.764
2 Amsterdam	North Holland	845.112
3 Breda	North Brabant	182.338
4 Delft	South Holland	101.477
5 Eindhoven	North Brabant	226.921
6 Groningen	Groningen	201.923
7 The Hague	South Holland	525.148
8 's-Hertogenbosch	North Brabant	152.452
9 Leiden	South Holland	123.711
10 Maastricht	Limburg	123.054
11 Nijmegen	Gelderland	173.672
12 Rotterdam	South Holland	634.771
13 Tilburg	North Brabant	214.096
14 Utrecht	Utrecht	342.995
15 Zoetermeer	South Holland	124.759



On May 9th 2018 a construct elicitation session was held with a group of four fellow students. The session lasted almost two hours and provided valuable insights. The triadic method required only little explanation and was easily understood. A total of five rounds was played with a wide variety of random city triads. During the session, it was decided to regularly switch the respondents within the groups. In this way, the students were able to discuss with others as well. The city triads that were discussed during the session can be found in Table A2.

Table C2. Randomly selected city triads

Round	City triads		
1	Amsterdam	Eindhoven	Den Haag
2	Groningen	Utrecht	Delft
3	Leiden	Rotterdam	Breda
4	Eindhoven	Tilburg	Nijmegen
5	Almere	Rotterdam	Zoetermeer

During the session, no examples of associations were given to avoid any form of influence. After these five rounds a point of saturation was reached and the session was ended. A list of all personal constructs can be found in Table A3. Additionally, it must be noted that the original list contains Dutch constructs.

Table C3. List of first-order categories from the construct elicitation session

Affective		Cognitive	
Accessible	Excellent	Business	Polycentric
Attractive	Helpful	Canals	Port
Authentic	Industrial	Capital city	Promoted
Big	Innovative	Green	Recreation
Character	Liveable	High-rise	Rural
Connected	Local	Historical	Second tier city
Cosmopolitan	Modern	Housing	Shopping
Cosy	Multicultural	Infrastructure	Sports
Cultural	New	Language/accent	Student city
Direct	Proud	Location	University
Diverse	Rich	Low-rise	Urban
Educated	Well-known	Nightlife	Women
Enterprising	Young		

Appendix D - Image associations from content analysis

The following overview presents the associations (in Dutch) as found on the cities' promotional websites and in promotional city guides. Some of the cities show a wide variety of associations, such as Delft, The Hague, Rotterdam, and Utrecht. Note that Zoetermeer is not included, because no official promotional website or other documents were found at the time of writing.

Delft	The Hague	Rotterdam	Almere	Amsterdam	Breda	Eindhoven	Groningen	's-Hertogenbosch	Leiden	Maastricht	Nijmegen	Tilburg	Utrecht
Oranjestad	Vrede	Haven	Natuur	Bruisend	Eigentijds	Creatief	Cultuur	Dynamisch	Historie	Historie	Historie	Creatief	Terrassen
Kerken	Recht	Natuur	Winkelen	Interessant	Monumenten	Krachtig	Kamperen	Cultuur	Musea	Winkels	Natuur	Verrassend	Kroegen
Monumentaal	Strand	Strand	Culinair	Open	Water	Levendig	Fietsen	Historisch	Theaters	Warenhuizen	Wandeling	Musea	Historisch
Rondvaart	Winkels	Architectuur	Jong	Tolerant	Groen	Energiek	Bruisend	Gezellig	Gezellig	Boetiekjes	Ontspannen	Winkels	Oude binnenst
Water	Paleizen	Kunst	Architectuur	Geschiedenis	Terrassen	Plezier	Studentenstac	Hip	Wandelen	Culinair	Boetiekjes	Historisch	Bruisend
Romantisch	Chique	Cultuur	Veilig	Grachten	Station	Innovatief	Jong	Restaurants	Natuur	Cafés	Gezellig	Sfeervol	Kastelen
Grachten	Hip	Shoppen	Fietsen	Rondvaart	Evenementen	Technologie	Geschiedenis	Boetieks	Kunst	Terrassen	Winkelen		Horeca
Gezellig	Cultuur	Eten	Vooruitstreve	Musea		Design	Lef		Cultuur	Pleinen	Terrassen		Gezellig
Gastvrij	Autoluw	Drinken	Cafés	Shoppen		Kennis	Architectuur		Hofjes	Restaurants	Parken		Cafés
Horeca	Historie	Uitgaan	Terrassen	Markten		Eigenzinnig	Universiteit		Molens	Charmant	Musea		Hip
Slenterstraatje	Camping	Jong	Pleinen	Kunst		Winkelen	Water		Kerken	Knus	Wellbeing		Winkels
Pleinen	Festivals	Dynamisch	Levendig	Horeca		Eten	Nuchter		Stadsporteen	Natuur	Studenten		Restaurants
Hip	Musea	Wereldstad	Evenementen	Concerten		Industrieel	Relaxed		Monumenten	Boottocht	Evenementen		Multicultureel
Trendy	Fietsen	Wolkenkrabbe	Ontspannen	Theaters		Sport	Veilig		Water	Concerten	Festivals		Archeologie
Koffietentjes	Grachten	Indrukwekken	Wandelen	Restaurants		Cultuur	Shoppen		Grachten	Wandeling	Levendig		Levendig
Cafés	Wandelen	Hip	Zakelijk	Actie		Musea	Historie		Singels	Architectuur	Strand		Muzikaal
Restaurants	Parken	Restaurants	Bereikbaar	Relaxed		Film	Natuur		Rondvaart	Kleurrijk	Cultuur		Cultureel
Lunchen	Binnentuinen	Food markets	Groeiend	Architectuur		Markten	Evenementen		Muziek	Traditioneel	Cabaret		Dynamisch
Shoppen	Pleinen	Musea		Fontein		Horeca	Fietsen		Toneel	Mysterieus	Dans		Musea
Evenementen	Antiekmarkt	Festivals		Groen		Recreatie	Varen		Dans	Onontdekt	Musical		Galerieën
Theater	Internationaal	Vernieuwend		Parken		Business	Golfen		Cabaret	Uitdagend	Concerten		Monumenten
Muziek	Kunst	Modern		Tuinen		Onderwijs	Actief		Sfeervol	Werelds			Burchten
Overnachten	Muziek	Markthal		Start-ups		Stoer	Wandelen		Winkels	Festivals			Forten
Fietsen	Technologie	Water		Levendig		Zacht			Bereikbaar	Exposities			Divers
Wandelen	Koninklijk	Industrieel				Puur			Feesten	Luxe			Theater
Groengebiede	Sfeervol	Dierentuin				Authentiek			Festivals	Intiem			Film
Bereikbaar	Boetieks	Historisch				Bruisend			Horeca	Romantisch			Concerten
Uitvalsbasis	Flagshipstores	Strand				Gevarieerd			Evenementen	Cultureel			Toneel
Robotica	Sport	Parken							Bruisend	Ondernemend			Exposities
Prachtig	Excursies	Galleries							Studenten				Parken
Historisch	Concerten	Theater							Universiteit				Tuinen
Hedendaags	Restaurants	Dans							Varen				Hofjes
Eigentijds	Cafés	Muziek							Fietsen				Wandelen
Studentenstac	Theater	Warenhuizen							Galleries				Sporten
Hofjes	Film	Boetieks											Knus
Terrassen	Bos	Uitvalsbasis											Sfeervol
Uniek	Duinen	Stoer											Pleinen
Eigenzinnig	Culinair	Bourgondisch											Varen
Galleries	Literatuur	Creatief											Kleurrijk
Centrale liggin	Uitgaan	Innovatie											Grachten
Modern	Trendy	Handelsgeest											Warm
Kunst	Authentiek	Fietsen											Smart
Cultuur	Architectuur												Centraal
Musea	Tuinen												Excellent
Pittoresk	Groen												Inspirerend
Boogbruggen	Vrijheid												Werelds
Wetenschap	Natuur												Charmant
Techniek	Zee												Compact
Bioscoop	Opera												Kindvriendelijk
Botanische tu	Statig												Innovatie
Natuur	Bruisend												Creativiteit
Koninklijk	Shoppen												
Markten	Prettig												
Authentiek	Persoonlijk												
	Werelds												
	Open												
	Conferenties												
	Compact												

The following sources were used for the fourteen cities:

- Delft: www.delft.com and the local city guide by the VVV
- The Hague: www.denhaag.com and www.merkdenhaag.nl
- Rotterdam: www.rotterdaminfo.nl
- Almere: www.vvvalmere.nl and the local city guide by the VVV
- Amsterdam: www.iamsterdam.com
- Breda: www.visitbrabant.com
- Eindhoven: www.visitbrabant.com and the local city guide by Eindhoven365
- Groningen: www.visitgroningen.com and www.toerisme.groningen.nl
- Den Bosch: www.visitbrabant.com
- Leiden: www.visitleiden.nl
- Maastricht: www.bezoekmaastricht.nl
- Nijmegen: www.visitnijmegen.com
- Tilburg: www.visitbrabant.com
- Utrecht: www.bezoek-utrecht.nl and www.investutrecht.com

Appendix E – Step 2 and 3 of the elicitation stage

The following tables show all elicited Dutch associations from the three sources, categorized into first-order, second-order, and final third-order categories. The overview is divided into affective and cognitive associations.

Source	Type	Categories (3rd order)	Categories (2nd order)	Categories (1st order)	Raw associations (Dutch)
Literature	Affective	Bereikbaar en centraal	Bereikbaar	Bereikbaar	Bereikbaar
Session	Affective	Bereikbaar en centraal	Bereikbaar	Bereikbaar	Bereikbaar
Promotion	Affective	Bereikbaar en centraal	Bereikbaar	Bereikbaar	Bereikbaar
Session	Affective	Bereikbaar en centraal	Bereikbaar	Bereikbaar	Bereikbaarheid
Promotion	Affective	Bereikbaar en centraal	Centraal	Centraal	Centraal
Promotion	Affective	Bereikbaar en centraal	Centraal	Centraal	Centrale ligging
Promotion	Affective	Bereikbaar en centraal	Centraal	Centraal	Uitvalsbasis
Session	Affective	Bereikbaar en centraal	Centraal	Verbonden	Verbondenheid
Literature	Affective	Betaalbaar	Betaalbaar	Betaalbaar	Betaalbaar
Literature	Affective	Betaalbaar	Betaalbaar	Betaalbaar	Waar voor je geld
Literature	Affective	Bloeiend	Bloeiend	Bloeiend	Bloeiend
Promotion	Affective	Bloeiend	Bloeiend	Groeiend	Groeiend
Promotion	Affective	Charmant, pittoresk en intiem	Charmant	Charmant	Charmant
Promotion	Affective	Charmant, pittoresk en intiem	Intiem	Intiem	Intiem
Promotion	Affective	Charmant, pittoresk en intiem	Intiem	Persoonlijk	Persoonlijk
Promotion	Affective	Charmant, pittoresk en intiem	Pittoresk	Pittoresk	Pittoresk
Literature	Affective	Charmant, pittoresk en intiem	Romantisch	Romantisch	Romantisch
Promotion	Affective	Charmant, pittoresk en intiem	Romantisch	Romantisch	Romantisch
Session	Affective	Charmant, pittoresk en intiem	Romantisch	Saai	Saai
Promotion	Affective	Compact	Compact	Compact	Compact
Literature	Affective	Creatief, cultureel en inspirerend	Creatief	Creatief	Creatief
Promotion	Affective	Creatief, cultureel en inspirerend	Creatief	Creatief	Creatief
Promotion	Affective	Creatief, cultureel en inspirerend	Creatief	Creatief	Creativiteit
Literature	Affective	Creatief, cultureel en inspirerend	Cultureel	Cultureel	Cultureel
Session	Affective	Creatief, cultureel en inspirerend	Cultureel	Cultureel	Cultureel aanbod
Promotion	Affective	Creatief, cultureel en inspirerend	Inspirerend	Inspirerend	Inspirerend
Promotion	Affective	Culinair	Culinair	Culinair	Culinair
Literature	Affective	Culinair	Culinair	Gastronomisch	Gastronomisch
Literature	Affective	Divers, uniek en verrassend	Divers	Divers	Divers
Promotion	Affective	Divers, uniek en verrassend	Divers	Divers	Divers
Session	Affective	Divers, uniek en verrassend	Divers	Divers	Diversiteit van mensen
Literature	Affective	Divers, uniek en verrassend	Divers	Divers	Eclectisch
Promotion	Affective	Divers, uniek en verrassend	Divers	Gevarieerd	Gevarieerd
Literature	Affective	Divers, uniek en verrassend	Excentriek	Excentriek	Excentriek
Session	Affective	Divers, uniek en verrassend	Multicultureel	Multicultureel	Immigranten
Literature	Affective	Divers, uniek en verrassend	Multicultureel	Multicultureel	Multicultureel
Session	Affective	Divers, uniek en verrassend	Multicultureel	Multicultureel	Multicultureel
Promotion	Affective	Divers, uniek en verrassend	Multicultureel	Multicultureel	Multicultureel
Promotion	Affective	Divers, uniek en verrassend	Uniek	Uniek	Uniek
Promotion	Affective	Divers, uniek en verrassend	Verrassend	Lef	Lef
Promotion	Affective	Divers, uniek en verrassend	Verrassend	Verrassend	Verrassend
Literature	Affective	Duurzaam en groen	Duurzaam	Duurzaam	Duurzaam
Literature	Affective	Duurzaam en groen	Groen	Groen	Ecologisch
Literature	Affective	Duurzaam en groen	Groen	Groen	Groen
Promotion	Affective	Duurzaam en groen	Groen	Groen	Groen
Promotion	Affective	Duurzaam en groen	Groen	Groen	Groengebieden
Promotion	Affective	Eigenzinnig, stoer en rauw	Eigenzinnig	Eigenzinnig	Eigenzinnig
Session	Affective	Eigenzinnig, stoer en rauw	Industrieel	Industrieel	Industrieel
Promotion	Affective	Eigenzinnig, stoer en rauw	Industrieel	Industrieel	Industrieel
Literature	Affective	Eigenzinnig, stoer en rauw	Rauw	Rauw	Rauw
Promotion	Affective	Eigenzinnig, stoer en rauw	Stoer	Stoer	Stoer
Literature	Affective	Gezellig, aangenaam en vriendelijk	Aangenaam, bescheiden en	Aangenaam	Aangenaam
Session	Affective	Gezellig, aangenaam en vriendelijk	Aangenaam, bescheiden en	Behulpzaam	Behulpzaamheid
Literature	Affective	Gezellig, aangenaam en vriendelijk	Aangenaam, bescheiden en	Bescheiden	Bescheiden
Literature	Affective	Gezellig, aangenaam en vriendelijk	Aangenaam, bescheiden en	Harmonieus	Harmonieus
Literature	Affective	Gezellig, aangenaam en vriendelijk	Aangenaam, bescheiden en	Niet-toeristisch	Niet-toeristisch
Promotion	Affective	Gezellig, aangenaam en vriendelijk	Aangenaam, bescheiden en	Prettig	Prettig
Literature	Affective	Gezellig, aangenaam en vriendelijk	Aangenaam, bescheiden en	Vriendelijk	Aardige en hulpzame mensen

Literature	Affective	Gezellig, aangenaam en vriendelijk	Aangenaam, bescheiden en	Vriendelijk	Vriendelijk
Promotion	Affective	Gezellig, aangenaam en vriendelijk	Aangenaam, bescheiden en	Zacht	Zacht
Literature	Affective	Gezellig, aangenaam en vriendelijk	Aangenaam, bescheiden en	Zorgzaam	Zorgzaam
Promotion	Affective	Gezellig, aangenaam en vriendelijk	Bourgondisch	Bourgondisch	Bourgondisch
Session	Affective	Gezellig, aangenaam en vriendelijk	Gezellig en knus	Gezellig	Gemoedelijk
Literature	Affective	Gezellig, aangenaam en vriendelijk	Gezellig en knus	Gezellig	Gezellig
Session	Affective	Gezellig, aangenaam en vriendelijk	Gezellig en knus	Gezellig	Gezellig
Promotion	Affective	Gezellig, aangenaam en vriendelijk	Gezellig en knus	Gezellig	Gezellig
Session	Affective	Gezellig, aangenaam en vriendelijk	Gezellig en knus	Gezellig	Zuidelijke gemoedelijkheid
Promotion	Affective	Gezellig, aangenaam en vriendelijk	Gezellig en knus	Knus	Knus
Promotion	Affective	Historisch en traditioneel	Historisch	Historisch	Geschiedenis
Promotion	Affective	Historisch en traditioneel	Historisch	Historisch	Historie
Promotion	Affective	Historisch en traditioneel	Historisch	Historisch	Historisch
Promotion	Affective	Historisch en traditioneel	Historisch	Historisch	Oude binnenstad
Literature	Affective	Historisch en traditioneel	Oud	Oud	Oud
Literature	Affective	Historisch en traditioneel	Oud	Stilstand	Stilstand
Literature	Affective	Historisch en traditioneel	Traditioneel	Traditioneel	Conservatief
Literature	Affective	Historisch en traditioneel	Traditioneel	Traditioneel	Traditioneel
Promotion	Affective	Historisch en traditioneel	Traditioneel	Traditioneel	Traditioneel
Promotion	Affective	Hoogwaardig en indrukwekkend	Hoogwaardig	Excellent	Excellent
Literature	Affective	Hoogwaardig en indrukwekkend	Hoogwaardig	Hoogwaardig	Excellent
Literature	Affective	Hoogwaardig en indrukwekkend	Hoogwaardig	Hoogwaardig	Hoogwaardig
Session	Affective	Hoogwaardig en indrukwekkend	Hoogwaardig	Hoogwaardig	Sophistication
Promotion	Affective	Hoogwaardig en indrukwekkend	Indrukwekkend	Indrukwekkend	Indrukwekkend
Promotion	Affective	Innovatief en vooruitstrevend	Innovatief en vooruitstre	Innovatie	Innovatie
Promotion	Affective	Innovatief en vooruitstrevend	Innovatief en vooruitstre	Innovatie	Innovatief
Literature	Affective	Innovatief en vooruitstrevend	Innovatief en vooruitstre	Innovatief	Innovatief
Session	Affective	Innovatief en vooruitstrevend	Innovatief en vooruitstre	Vernieuwend	Vernieuwend
Promotion	Affective	Innovatief en vooruitstrevend	Innovatief en vooruitstre	Vernieuwend	Vernieuwend
Promotion	Affective	Innovatief en vooruitstrevend	Innovatief en vooruitstre	Vooruitstrevend	Vooruitstrevend
Session	Affective	Internationaal bekend	Bekend	Bekend	Allure
Session	Affective	Internationaal bekend	Groot	Groot	Omvang
Promotion	Affective	Internationaal bekend	Internationaal	Internationaal	Internationaal
Literature	Affective	Internationaal bekend	Internationaal	Werelds	Alomtegenwoordig
Literature	Affective	Internationaal bekend	Internationaal	Werelds	Hoog aanzien
Literature	Affective	Internationaal bekend	Internationaal	Werelds	Internationaal
Literature	Affective	Internationaal bekend	Internationaal	Werelds	Werelds
Promotion	Affective	Internationaal bekend	Internationaal	Werelds	Werelds
Session	Affective	Internationaal bekend	Internationaal	Werelds	Wereldstad
Promotion	Affective	Internationaal bekend	Internationaal	Wereldstad	Wereldstad
Promotion	Affective	Levendig, sfeervol en vrolijk	Dynamisch	Dynamisch	Dynamisch
Promotion	Affective	Levendig, sfeervol en vrolijk	Energiek	Actief	Actie
Promotion	Affective	Levendig, sfeervol en vrolijk	Energiek	Actief	Actief
Promotion	Affective	Levendig, sfeervol en vrolijk	Energiek	Energiek	Energiek
Promotion	Affective	Levendig, sfeervol en vrolijk	Levendig en bruisend	Bruisend	Bruisend
Promotion	Affective	Levendig, sfeervol en vrolijk	Levendig en bruisend	Burchten	Burchten
Literature	Affective	Levendig, sfeervol en vrolijk	Levendig en bruisend	Levendig	Dynamisch
Literature	Affective	Levendig, sfeervol en vrolijk	Levendig en bruisend	Levendig	Levendig
Promotion	Affective	Levendig, sfeervol en vrolijk	Levendig en bruisend	Levendig	Levendig
Literature	Affective	Levendig, sfeervol en vrolijk	Levendig en bruisend	Levendig	Slapeloos
Promotion	Affective	Levendig, sfeervol en vrolijk	Plezier	Plezier	Plezier
Promotion	Affective	Levendig, sfeervol en vrolijk	Sfeervol	Sfeervol	Sfeervol
Promotion	Affective	Levendig, sfeervol en vrolijk	Vrolijk en kleurrijk	Kleurrijk	Kleurrijk
Literature	Affective	Levendig, sfeervol en vrolijk	Vrolijk en kleurrijk	Vrolijk	Kleurrijk
Literature	Affective	Levendig, sfeervol en vrolijk	Vrolijk en kleurrijk	Vrolijk	Vrolijk
Session	Affective	Modern, jong en hip	Hip en trendy	Hip	Hip
Promotion	Affective	Modern, jong en hip	Hip en trendy	Hip	Hip
Promotion	Affective	Modern, jong en hip	Hip en trendy	Trendy	Trendy
Promotion	Affective	Modern, jong en hip	Jong	Jong	Jong
Session	Affective	Modern, jong en hip	Jong	Jong	Yuppers
Literature	Affective	Modern, jong en hip	Jong	Nieuw	Nieuw
Session	Affective	Modern, jong en hip	Jong	Nieuw	Uitwijksteden
Session	Affective	Modern, jong en hip	Jong	Nieuw	Vinex
Promotion	Affective	Modern, jong en hip	Modern	Modern	Eigentijds
Promotion	Affective	Modern, jong en hip	Modern	Modern	Hedendaags
Literature	Affective	Modern, jong en hip	Modern	Modern	Modern
Promotion	Affective	Modern, jong en hip	Modern	Modern	Modern

Session	Affective	Nuchter, direct en onschuldig	Direct	Direct	Directheid
Literature	Affective	Nuchter, direct en onschuldig	Eerlijk	Eerlijk	Eerlijk
Literature	Affective	Nuchter, direct en onschuldig	Nuchter	Nuchter	Nuchter
Promotion	Affective	Nuchter, direct en onschuldig	Nuchter	Nuchter	Nuchter
Literature	Affective	Nuchter, direct en onschuldig	Onschuldig	Onschuldig	Onschuldig
Literature	Affective	Onontdekt en mysterieus	Mysterieus	Mysterieus	Mysterieus
Promotion	Affective	Onontdekt en mysterieus	Mysterieus	Mysterieus	Mysterieus
Promotion	Affective	Onontdekt en mysterieus	Onontdekt	Onontdekt	Onontdekt
Literature	Affective	Onontdekt en mysterieus	Onontdekt	Veel te ontdekken	Veel te ontdekken
Promotion	Affective	Open, warm en gastvrij	Open, warm en gastvrij	Gastvrij	Gastvrij
Promotion	Affective	Open, warm en gastvrij	Open, warm en gastvrij	Open	Open
Literature	Affective	Open, warm en gastvrij	Open, warm en gastvrij	Open	Ruimdenkend
Literature	Affective	Open, warm en gastvrij	Open, warm en gastvrij	Open	Verwelkomend
Literature	Affective	Open, warm en gastvrij	Open, warm en gastvrij	Open	Vrijheid
Promotion	Affective	Open, warm en gastvrij	Open, warm en gastvrij	Tolerant	Tolerant
Promotion	Affective	Open, warm en gastvrij	Open, warm en gastvrij	Vrijheid	Vrijheid
Promotion	Affective	Open, warm en gastvrij	Open, warm en gastvrij	Warm	Warm
Session	Affective	Puur en authentiek	Authentiek	Authentiek	Authentiek
Promotion	Affective	Puur en authentiek	Authentiek	Authentiek	Authentiek
Promotion	Affective	Puur en authentiek	Puur	Puur	Puur
Literature	Affective	Relaxed en vredig	Relaxed en vredig	Vredig	Relaxed
Literature	Affective	Relaxed en vredig	Relaxed en vredig	Vredig	Slaperig
Literature	Affective	Relaxed en vredig	Relaxed en vredig	Vredig	Stil
Literature	Affective	Relaxed en vredig	Relaxed en vredig	Vredig	Vredig
Literature	Affective	Slim en opgeleid	Slim en opgeleid	Competent	Competent
Session	Affective	Slim en opgeleid	Slim en opgeleid	Opgeleid	Laagopgeleid
Literature	Affective	Slim en opgeleid	Slim en opgeleid	Slim	Intelligent
Literature	Affective	Slim en opgeleid	Slim en opgeleid	Slim	Opgeleid
Literature	Affective	Slim en opgeleid	Slim en opgeleid	Slim	Slim
Literature	Affective	Slim en opgeleid	Slim en opgeleid	Slim	Wijs
Promotion	Affective	Slim en opgeleid	Slim en opgeleid	Smart	Smart
Promotion	Affective	Statig, chique en trots	Chique	Chique	Chique
Promotion	Affective	Statig, chique en trots	Chique	Luxe	Luxe
Literature	Affective	Statig, chique en trots	Chique	Rijk	Rijk
Session	Affective	Statig, chique en trots	Chique	Rijk	Rijke mensen
Literature	Affective	Statig, chique en trots	Serieus	Serieus	Serieus
Promotion	Affective	Statig, chique en trots	Statig	Statig	Statig
Literature	Affective	Statig, chique en trots	Trots	Trots	Trots
Session	Affective	Statig, chique en trots	Trots	Trots	Trots
Promotion	Affective	Sterk	Sterk	Krachtig	Krachtig
Literature	Affective	Sterk	Sterk	Sterk	Sterk
Literature	Affective	Sterk	Sterk	Sterk	Veerkrachtig
Literature	Affective	Veilig en schoon	Schoon	Schoon	Gezond
Literature	Affective	Veilig en schoon	Schoon	Schoon	Schoon
Literature	Affective	Veilig en schoon	Veilig	Veilig	Veilig
Promotion	Affective	Veilig en schoon	Veilig	Veilig	Veilig
Session	Affective	Zakelijk en ondernemend	Zakelijk en ondernemend	Ondernemend	Denkers-doeners
Promotion	Affective	Zakelijk en ondernemend	Zakelijk en ondernemend	Ondernemend	Handelsgeest
Literature	Affective	Zakelijk en ondernemend	Zakelijk en ondernemend	Ondernemend	Ondernemend
Session	Affective	Zakelijk en ondernemend	Zakelijk en ondernemend	Ondernemend	Ondernemend
Promotion	Affective	Zakelijk en ondernemend	Zakelijk en ondernemend	Ondernemend	Ondernemend
Promotion	Affective	Zakelijk en ondernemend	Zakelijk en ondernemend	Zakelijk	Zakelijk

Literature	Cognitive	Architectuur	Architectuur	Architectuur	Architectuur
Promotion	Cognitive	Architectuur	Architectuur	Architectuur	Architectuur
Literature	Cognitive	Architectuur	Architectuur	Gebouwde omgeving	Gebouwde omgeving
Session	Cognitive	Architectuur	Architectuur	Hoogbouw	Laagbouw-hoogbouw
Session	Cognitive	Architectuur	Architectuur	Laagbouw	Laagbouw-hoogbouw
Promotion	Cognitive	Architectuur	Architectuur	Wolkenkrabbers	Wolkenkrabbers
Literature	Cognitive	Architectuur	Woningen	Woningen	Accommodatie
Session	Cognitive	Architectuur	Woningen	Woningen	Beschikbaarheid woningen
Literature	Cognitive	Architectuur	Woningen	Woningen	Woningen
Session	Cognitive	Architectuur	Woningen	Xenofoob	Xenofoob
Promotion	Cognitive	Business	Business	Business	Business
Literature	Cognitive	Business	Business	Economie	Economie
Literature	Cognitive	Business	Business	Financieel	Financieel
Session	Cognitive	Business	Business	Zakelijk	Professionele voorzieningen
Session	Cognitive	Business	Business	Zakelijk	Zakelijk
Literature	Cognitive	Business	Business	Zaken	Werkstad
Literature	Cognitive	Business	Business	Zaken	Zaken
Promotion	Cognitive	Business	Start-ups	Start-ups	Start-ups
Promotion	Cognitive	Conferenties	Conferenties	Conferenties	Conferenties
Literature	Cognitive	Conferenties	Conferenties	Zakelijk toerisme	Conferenties
Literature	Cognitive	Conferenties	Conferenties	Zakelijk toerisme	Zakelijk toerisme
Promotion	Cognitive	Design	Design	Design	Design
Literature	Cognitive	Evenementen	Evenementen	Evenementen	Evenementen
Promotion	Cognitive	Evenementen	Evenementen	Evenementen	Evenementen
Promotion	Cognitive	Evenementen	Evenementen	Feesten	Feesten
Promotion	Cognitive	Evenementen	Evenementen	Festivals	Festivals
Promotion	Cognitive	Fietsen	Fietsen	Fietsen	Fietsen
Literature	Cognitive	Haven	Haven	Haven	Haven
Promotion	Cognitive	Haven	Haven	Haven	Haven
Session	Cognitive	Haven	Haven	Haven	Havenstad
Promotion	Cognitive	Historisch erfgoed	Historie	Archeologie	Archeologie
Session	Cognitive	Historisch erfgoed	Historie	Historisch	Historie
Session	Cognitive	Historisch erfgoed	Historie	Historisch	Historieloos
Session	Cognitive	Historisch erfgoed	Historie	Historisch	Historisch
Session	Cognitive	Historisch erfgoed	Historie	Historisch	Nostalgisch/historisch/chauvinistisch
Literature	Cognitive	Historisch erfgoed	Historisch erfgoed	Historisch erfgoed	Historisch erfgoed
Promotion	Cognitive	Historisch erfgoed	Kastelen, forten en paleizen	Forten	Forten
Promotion	Cognitive	Historisch erfgoed	Kastelen, forten en paleizen	Kastelen	Kastelen
Promotion	Cognitive	Historisch erfgoed	Kastelen, forten en paleizen	Paleizen	Paleizen
Promotion	Cognitive	Historisch erfgoed	Kastelen, forten en paleizen	Stadspoorten	Stadspoorten
Promotion	Cognitive	Historisch erfgoed	Kerken	Kerken	Kerken
Promotion	Cognitive	Historisch erfgoed	Molens	Molens	Molens
Promotion	Cognitive	Historisch erfgoed	Monumenten	Monumenten	Monumenten
Literature	Cognitive	Historisch erfgoed	Religie	Religie	Religie
Literature	Cognitive	Industrie	Industrie	Industrie	Industrie
Promotion	Cognitive	Koninklijk	Koninklijk	Koninklijk	Koninklijk
Promotion	Cognitive	Koninklijk	Koninklijk	Koninklijk	Oranjestad
Literature	Cognitive	Kunst en cultuur	Cultuur	Cultureel aanbod	Cultuur
Promotion	Cognitive	Kunst en cultuur	Cultuur	Cultuur	Cultureel
Promotion	Cognitive	Kunst en cultuur	Cultuur	Cultuur	Cultuur
Promotion	Cognitive	Kunst en cultuur	Film	Film	Bioscoop
Promotion	Cognitive	Kunst en cultuur	Film	Film	Film
Promotion	Cognitive	Kunst en cultuur	Kunst	Exposities	Exposities
Promotion	Cognitive	Kunst en cultuur	Kunst	Galeries	Galerieën
Promotion	Cognitive	Kunst en cultuur	Kunst	Kunst	Galeries
Promotion	Cognitive	Kunst en cultuur	Kunst	Kunst	Kunst
Promotion	Cognitive	Kunst en cultuur	Kunst	Literatuur	Literatuur
Promotion	Cognitive	Kunst en cultuur	Musea	Musea	Musea
Promotion	Cognitive	Kunst en cultuur	Podiumkunsten (theater, dans)	Dans	Dans
Promotion	Cognitive	Kunst en cultuur	Podiumkunsten (theater, dans)	Muziek	Concerten
Promotion	Cognitive	Kunst en cultuur	Podiumkunsten (theater, dans)	Muziek	Muziek
Promotion	Cognitive	Kunst en cultuur	Podiumkunsten (theater, dans)	Muziek	Muzikaal
Promotion	Cognitive	Kunst en cultuur	Podiumkunsten (theater, dans)	Opera	Opera
Promotion	Cognitive	Kunst en cultuur	Podiumkunsten (theater, dans)	Theater	Cabaret
Promotion	Cognitive	Kunst en cultuur	Podiumkunsten (theater, dans)	Theater	Musical
Promotion	Cognitive	Kunst en cultuur	Podiumkunsten (theater, dans)	Theater	Theater
Promotion	Cognitive	Kunst en cultuur	Podiumkunsten (theater, dans)	Theater	Theaters
Promotion	Cognitive	Kunst en cultuur	Podiumkunsten (theater, dans)	Theater	Toneel

Promotion	Cognitive	Markten en pleinen	Markten	Markten	Antiekmarkt
Promotion	Cognitive	Markten en pleinen	Markten	Markten	Food markets
Literature	Cognitive	Markten en pleinen	Markten	Markten	Markten
Promotion	Cognitive	Markten en pleinen	Markten	Markten	Markten
Promotion	Cognitive	Markten en pleinen	Markten	Markten	Markthal
Promotion	Cognitive	Markten en pleinen	Pleinen	Pleinen	Pleinen
Session	Cognitive	Nachtleven	Nachtleven	Nachtleven	Nachtleven
Promotion	Cognitive	Nachtleven	Nachtleven	Uitgaan	Uitgaan
Promotion	Cognitive	Natuur (parken, tuinen, groen)	Kamperen	Camping	Camping
Promotion	Cognitive	Natuur (parken, tuinen, groen)	Kamperen	Kamperen	Kamperen
Promotion	Cognitive	Natuur (parken, tuinen, groen)	Natuur	Bos	Bos
Session	Cognitive	Natuur (parken, tuinen, groen)	Natuur	Groen	Groenere omgeving
Literature	Cognitive	Natuur (parken, tuinen, groen)	Natuur	Natuur	Natuur
Promotion	Cognitive	Natuur (parken, tuinen, groen)	Natuur	Natuur	Natuur
Literature	Cognitive	Natuur (parken, tuinen, groen)	Parken en tuinen	Parken	Parken
Promotion	Cognitive	Natuur (parken, tuinen, groen)	Parken en tuinen	Parken	Parken
Promotion	Cognitive	Natuur (parken, tuinen, groen)	Parken en tuinen	Tuinen	Binnentuinen
Promotion	Cognitive	Natuur (parken, tuinen, groen)	Parken en tuinen	Tuinen	Botanische tuin
Promotion	Cognitive	Natuur (parken, tuinen, groen)	Parken en tuinen	Tuinen	Hofjes
Promotion	Cognitive	Natuur (parken, tuinen, groen)	Parken en tuinen	Tuinen	Tuinen
Promotion	Cognitive	Ontspanning en recreatie	Ontspanning	Ontspanning	Ontspannen
Promotion	Cognitive	Ontspanning en recreatie	Ontspanning	Ontspanning	Relaxed
Promotion	Cognitive	Ontspanning en recreatie	Ontspanning	Ontspanning	Wellbeing
Literature	Cognitive	Ontspanning en recreatie	Recreatie	Amusement	Amusement
Literature	Cognitive	Ontspanning en recreatie	Recreatie	Amusement	Vermaak
Promotion	Cognitive	Ontspanning en recreatie	Recreatie	Dierentuin	Dierentuin
Promotion	Cognitive	Ontspanning en recreatie	Recreatie	Excursies	Excursies
Literature	Cognitive	Ontspanning en recreatie	Recreatie	Recreatie	Recreatie
Promotion	Cognitive	Ontspanning en recreatie	Recreatie	Recreatie	Recreatie
Session	Cognitive	Ontspanning en recreatie	Recreatie	Recreatie	Recreatiemogelijkheden
Literature	Cognitive	Ontspanning en recreatie	Recreatie	Recreatie	Vrije tijd
Literature	Cognitive	Ontspanning en recreatie	Toerisme	Toerisme	Toerisme
Literature	Cognitive	Politiek	Politiek	Politiek	Politiek
Literature	Cognitive	Publieke voorzieningen	Medische faciliteiten	Medische faciliteiten	Medische faciliteiten
Literature	Cognitive	Publieke voorzieningen	Publieke voorzieningen	Publieke voorzieningen	Diensten
Literature	Cognitive	Publieke voorzieningen	Publieke voorzieningen	Publieke voorzieningen	Sociale faciliteiten
Literature	Cognitive	Publieke voorzieningen	Publieke voorzieningen	Publieke voorzieningen	Voorzieningen
Promotion	Cognitive	Restaurants en cafés	Restaurants en cafés	Drinken	Drinken
Promotion	Cognitive	Restaurants en cafés	Restaurants en cafés	Eten	Eten
Promotion	Cognitive	Restaurants en cafés	Restaurants en cafés	Eten	Lunchen
Promotion	Cognitive	Restaurants en cafés	Restaurants en cafés	Horeca	Cafés
Promotion	Cognitive	Restaurants en cafés	Restaurants en cafés	Horeca	Horeca
Promotion	Cognitive	Restaurants en cafés	Restaurants en cafés	Horeca	Koffientjes
Promotion	Cognitive	Restaurants en cafés	Restaurants en cafés	Horeca	Kroegen
Promotion	Cognitive	Restaurants en cafés	Restaurants en cafés	Horeca	Overnachten
Promotion	Cognitive	Restaurants en cafés	Restaurants en cafés	Horeca	Restaurants
Promotion	Cognitive	Restaurants en cafés	Restaurants en cafés	Horeca	Terrassen
Literature	Cognitive	Restaurants en cafés	Restaurants en cafés	Restaurants	Restaurants
Promotion	Cognitive	Singels en grachten	Rondvaart	Rondvaart	Boottocht
Promotion	Cognitive	Singels en grachten	Rondvaart	Rondvaart	Rondvaart
Promotion	Cognitive	Singels en grachten	Rondvaart	Varen	Varen
Session	Cognitive	Singels en grachten	Singels en grachten	Grachten	Gracht
Session	Cognitive	Singels en grachten	Singels en grachten	Grachten	Grachten
Promotion	Cognitive	Singels en grachten	Singels en grachten	Grachten	Grachten
Promotion	Cognitive	Singels en grachten	Singels en grachten	Singels	Singels
Session	Cognitive	Sport	Sport	Sport	Goede voetbalclubs
Promotion	Cognitive	Sport	Sport	Sport	Golfen
Session	Cognitive	Sport	Sport	Sport	Profvoetbal
Promotion	Cognitive	Sport	Sport	Sport	Sport
Promotion	Cognitive	Sport	Sport	Sport	Sporten
Literature	Cognitive	Sport	Sport	Sport	Sportfaciliteiten
Literature	Cognitive	Sport	Sport	Sport	Sportstad
Session	Cognitive	Sport	Sport	Sport	Voetbalkampioen
Literature	Cognitive	Sport	Sport	Sport	Watersporten
Literature	Cognitive	Technologie en innovatie	Technologie en innovatie	Innovatie	Innovatie
Promotion	Cognitive	Technologie en innovatie	Technologie en innovatie	Technologie	Robotica
Promotion	Cognitive	Technologie en innovatie	Technologie en innovatie	Technologie	Techniek
Literature	Cognitive	Technologie en innovatie	Technologie en innovatie	Technologie	Technologie
Promotion	Cognitive	Technologie en innovatie	Technologie en innovatie	Technologie	Technologie

Promotion	Cognitive	Transport en infrastructuur	Bruggen	Bruggen	Boogbruggen
Session	Cognitive	Transport en infrastructuur	Infrastructuur	Infrastructuur	Autostad
Literature	Cognitive	Transport en infrastructuur	Infrastructuur	Infrastructuur	Infrastructuur
Promotion	Cognitive	Transport en infrastructuur	Stations	Station	Station
Literature	Cognitive	Transport en infrastructuur	Transport	Transport	Transport
Promotion	Cognitive	Wandelen	Wandelen	Slenterstraatjes	Slenterstraatjes
Promotion	Cognitive	Wandelen	Wandelen	Wandelen	Wandelen
Promotion	Cognitive	Wandelen	Wandelen	Wandelen	Wandeling
Promotion	Cognitive	Water (rivier, meer, zee)	Strand en zee	Duinen	Duinen
Promotion	Cognitive	Water (rivier, meer, zee)	Strand en zee	Strand	Strand
Literature	Cognitive	Water (rivier, meer, zee)	Strand en zee	Stranden	Stranden
Promotion	Cognitive	Water (rivier, meer, zee)	Strand en zee	Zee	Zee
Promotion	Cognitive	Water (rivier, meer, zee)	Water	Fonteinen	Fonteinen
Literature	Cognitive	Water (rivier, meer, zee)	Water	Water	Water
Promotion	Cognitive	Water (rivier, meer, zee)	Water	Water	Water
Promotion	Cognitive	Wetenschap en universiteit	Wetenschap en universiteit	Kennis	Kennis
Promotion	Cognitive	Wetenschap en universiteit	Wetenschap en universiteit	Onderwijs	Onderwijs
Literature	Cognitive	Wetenschap en universiteit	Wetenschap en universiteit	Onderwijs	Onderwijs/universiteit
Promotion	Cognitive	Wetenschap en universiteit	Wetenschap en universiteit	Studenten	Studenten
Promotion	Cognitive	Wetenschap en universiteit	Wetenschap en universiteit	Studenten	Studentenstad
Session	Cognitive	Wetenschap en universiteit	Wetenschap en universiteit	Studentenstad	Studentensfeer
Session	Cognitive	Wetenschap en universiteit	Wetenschap en universiteit	Studentenstad	Studentensteden
Session	Cognitive	Wetenschap en universiteit	Wetenschap en universiteit	Universiteit	Alpha-Beta
Session	Cognitive	Wetenschap en universiteit	Wetenschap en universiteit	Universiteit	Universiteit
Promotion	Cognitive	Wetenschap en universiteit	Wetenschap en universiteit	Universiteit	Universiteit
Promotion	Cognitive	Wetenschap en universiteit	Wetenschap en universiteit	Wetenschap	Wetenschap
Promotion	Cognitive	Winkelen	Winkelen	Winkelen	Boetiekjes
Promotion	Cognitive	Winkelen	Winkelen	Winkelen	Boetieks
Promotion	Cognitive	Winkelen	Winkelen	Winkelen	Flagshipstores
Promotion	Cognitive	Winkelen	Winkelen	Winkelen	Shoppen
Promotion	Cognitive	Winkelen	Winkelen	Winkelen	Warenhuizen
Literature	Cognitive	Winkelen	Winkelen	Winkelen	Winkelen
Session	Cognitive	Winkelen	Winkelen	Winkelen	Winkelen
Promotion	Cognitive	Winkelen	Winkelen	Winkelen	Winkelen
Promotion	Cognitive	Winkelen	Winkelen	Winkelen	Winkels

Appendix F - Place image and brand identity surveys

The following five sections are part of the place image survey (in Dutch):

IMAGO VAN STEDEN

*Required

Demografische kenmerken

Wat is uw geslacht? *

Man
 Vrouw

Wat is uw leeftijd? *

Your answer _____

In welke provincie woont u? *

Choose ▾

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IMAGO VAN STEDEN

*Required

Relatie tot de steden

Dit onderzoek betreft het imago van vier steden in de Metropoolregio Rotterdam Den Haag (MRDH). De onderstaande vragen gaan over uw relatie tot de vier steden Delft, Den Haag, Rotterdam en Zoetermeer.

In welke gemeente woont u? *

In Delft
 In Den Haag
 In Rotterdam
 In Zoetermeer
 Anders

Hoe goed bent u bekend met (het aanbod van) de vier steden? *

	Slecht	Matig	Redelijk	Goed
Delft	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Den Haag	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rotterdam	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Zoetermeer	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Wat is uw gevoel over de vier steden? *

	Zeer negatief	Enigszins negatief	Neutraal	Enigszins positief	Zeer positief
Delft	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Den Haag	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rotterdam	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Zoetermeer	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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IMAGO VAN STEDEN

Top of mind

Deze sectie gaat over uw eerste associatie bij elk van de vier steden.

Welk woord schiet u te binnen als u denkt aan Delft?

Your answer _____

Welk woord schiet u te binnen als u denkt aan Den Haag?

Your answer _____

Welk woord schiet u te binnen als u denkt aan Rotterdam?

Your answer _____

Welk woord schiet u te binnen als u denkt aan Zoetermeer?

Your answer _____

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IMAGO VAN STEDEN

Cognitief imago

Cognitieve associaties zijn kenmerken die te maken hebben met uw kennis of informatie over een bepaald onderwerp of object.

Welke van de volgende cognitieve associaties omschrijven het best uw beeld van de vier steden? Selecteer de kenmerken die het meest van toepassing zijn per stad. Als u geen associaties heeft met een stad, laat u de betreffende vakjes leeg.

	Delft	Den Haag	Rotterdam	Zoetermeer
Architectuur	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Singels en grachten	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wetenschap en universiteit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Kunst en cultuur	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water (rivier, meer, zee)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Restaurants en cafes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wandelen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sport	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Technologie en innovatie	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Industrie	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ontspanning en recreatie	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Haven	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Evenementen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Publieke voorzieningen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Historisch erfgoed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fietsen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Design	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Markten en pleinen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nachtleven	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Conferenties	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Koninklijk	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Transport en infrastructuur	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Business	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Natuur (parken, tuinen, groen)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Winkelen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Politiek	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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IMAGO VAN STEDEN

Affectief imago

Affectieve associaties zijn kenmerken die te maken hebben met uw gevoel of emotie bij een bepaald onderwerp of object.

Welke van de volgende affectieve associaties omschrijven het best uw beeld van de vier steden? Selecteer de kenmerken die het meest van toepassing zijn per stad. Als u geen associaties heeft met een stad, laat u de betreffende vakjes leeg.

	Delft	Den Haag	Rotterdam	Zoetermeer
Veilig en schoon	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Levendig, sfeervol en vrolijk	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bereikbaar en centraal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Betaalbaar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gezellig, aangenaam en vriendelijk	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Creatief, cultureel en inspirerend	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Compact	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Historisch en traditioneel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nuchter, direct en onschuldig	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ontdekt en mysterieus	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Puur en authentiek	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Innovatief en vooruitstrevend	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Modern, jong en hip	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Open, warm en gastvrij	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Internationaal bekend	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Zakelijk en ondernemend	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hoogwaardig en indrukwekkend	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Duurzaam en groen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Relaxed en vredig	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Statig, chique en trots	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bloeiend	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Eigenzinnig, stoer en rauw	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Slim en opgeleid	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Divers, uniek en verrassend	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sterk	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Charmant, pittoresk en intiem	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Culinair	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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The following five sections are part of the brand identity survey (in Dutch):

GEWENSTE IMAGO VAN STEDEN

*Required

Demografische kenmerken

Voor welke gemeente bent u werkzaam? *

Choose ▾

Bij welke afdeling bent u werkzaam? *

Your answer _____

Wat is uw functie? *

Your answer _____

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GEWENSTE IMAGO VAN STEDEN

*Required

Gewenst cognitief imago

Cognitieve associaties zijn kenmerken die te maken hebben met de kennis of informatie over een bepaald onderwerp of object. Het gewenste imago betreft het beoogde beeld van de stad onder bezoekers, bedrijven en bewoners dat via city branding en marketing wordt geprobeerd te realiseren.

Selecteer de cognitieve associatie(s) die het best het gewenste imago van uw stad omschrijven. (meerdere antwoorden mogelijk) *

- Haven
- Industrie
- Water (rivier, meer, zee)
- Wandelen
- Business
- Restaurants en cafés
- Design
- Winkelen
- Fietsen
- Evenementen
- Conferenties
- Politiek
- Koninklijk
- Markten en pleinen
- Sport
- Historisch erfgoed
- Publieke voorzieningen
- Ontspanning en recreatie
- Singels en grachten
- Kunst en cultuur
- Architectuur
- Nachtleven
- Natuur (parken, tuinen, groen)
- Wetenschap en universiteit
- Transport en infrastructuur
- Technologie en innovatie

Mist de voorgaande lijst belangrijke cognitieve associaties?

Ja
 Nee

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GEWENSTE IMAGO VAN STEDEN

*Required

Aanvullende cognitieve associaties

Cognitieve associaties zijn kenmerken die te maken hebben met de kennis of informatie over een bepaald onderwerp of object. Het gewenste imago betreft het beoogde beeld van de stad onder bezoekers, bedrijven en bewoners dat via city branding en marketing wordt geprobeerd te realiseren.

Welke aanvullende cognitieve associaties zijn gewenst vanuit uw stad? *

Your answer _____

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GEWENSTE IMAGO VAN STEDEN

*Required

Gewenst affectief imago

Affectieve associaties zijn kenmerken die te maken hebben met het gevoel of emotie bij een bepaald onderwerp of object. Het gewenste imago betreft het beoogde beeld van de stad onder bezoekers, bedrijven en bewoners dat via city branding en marketing wordt geprobeerd te realiseren.

Selecteer de affectieve associatie(s) die het best het gewenste imago van uw stad omschrijven. (meerdere antwoorden mogelijk) *

- Creatief, cultureel en inspirerend
- Sterk
- Nuchter, direct en onschuldig
- Historisch en traditioneel
- Gezellig, aangenaam en vriendelijk
- Modern, jong en hip
- Duurzaam en groen
- Bloeiend
- Relaxed en vredig
- Zakelijk en ondernemend
- Culinair
- Eigenzinnig, stoer en rauw
- Compact
- Charmant, pittoresk en intiem
- Divers, uniek en verrassend
- Hoogwaardig en indrukwekkend
- Puur en authentiek
- Open, warm en gastvrij
- Statig, chique en trots
- Veilig en schoon
- Levendig, sfeervol en vrolijk
- Onontdekt en mysterieus
- Betaalbaar
- Bereikbaar en centraal
- Slim en opgeleid
- Innovatief en vooruitstrevend
- Internationaal bekend

Mist de voorgaande lijst belangrijke affectieve associaties? *

- Ja
- Nee

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GEWENSTE IMAGO VAN STEDEN

Aanvullende affectieve associaties

Affectieve associaties zijn kenmerken die te maken hebben met het gevoel of emotie bij een bepaald onderwerp of object. Het gewenste imago betreft het beoogde beeld van de stad onder bezoekers, bedrijven en bewoners dat via city branding en marketing wordt geprobeerd te realiseren.

Welke aanvullende affectieve associaties zijn gewenst vanuit uw stad?

Your answer

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Appendix G – Interview format MRDH city officials

Interviews were conducted with city officials from four cities in the Metropolitan region Rotterdam The Hague (MRDH): Delft, The Hague, Rotterdam, and Zoetermeer. The interview is semi-structured and divided into three parts. The first topic comprises questions about the city branding practices and organisational structure. The second topic is about the image and identity of the city. The third and final topic is the regional collaboration with other cities in the MRDH. This appendix shows the questions that were asked to the city officials. Because the interview is semi-structured, sometimes additional questions were asked to gather more information about a certain topic. Transcripts of the interviews are not available. The useful insights from the interviews are processed into section 4.1.2.

At the beginning of the interview, an introduction was provided, explaining the objective of the interview and the content of this research. Furthermore, several concepts are explained during the interview, such as the three types of integration.

Part I: City branding and marketing practices

1. What is the state of the current branding and marketing practices in the city?
2. What is the organisational structure behind these practices?
3. Which target groups are identified? Companies, visitors and/or residents?
4. How did this develop from the past?

Part II: Image and identity

5. How do you think the city is seen by others? What is the image of the city?
6. How is the city seen compared to other cities in the region?
7. Which cities have a similar image?
8. What is the identity of the city?
9. How does the city want to be seen? What is the desired image?
 - a. Which specific cognitive associations are part of this desired image?
 - b. Which specific affective associations are part of this desired image?
10. What is the role of the desired image in the branding and marketing of the city?

11. Do you think there is a gap between the actual image and desired image?

Part III: Regional collaboration in the MRDH

12. What is the current state of collaboration in the MRDH?

13. Is this focussed on companies, visitors and/or residents?

14. Can we speak of cultural, functional and/or institutional integration?

15. Is the presence of a regional identity (as part of cultural integration) important?

16. On which type of integration should the MRDH focus?

17. What is the future direction of collaboration in the MRDH?

The interviews conclude with a request to fill in the brand identity survey, as well as a request for further relevant documents or contact persons.

Appendix H - Place image survey results

A total of 272 respondents were collected for the place image survey. Figures H1 to H... provide statistics about the respondents. Table H1 shows the frequency (as a percentage) of all associations as indicated by the respondents. The next three Figures show the correlations between all associations, based on the individual responses. The appendix concludes with an overview of the values for all metric categories.

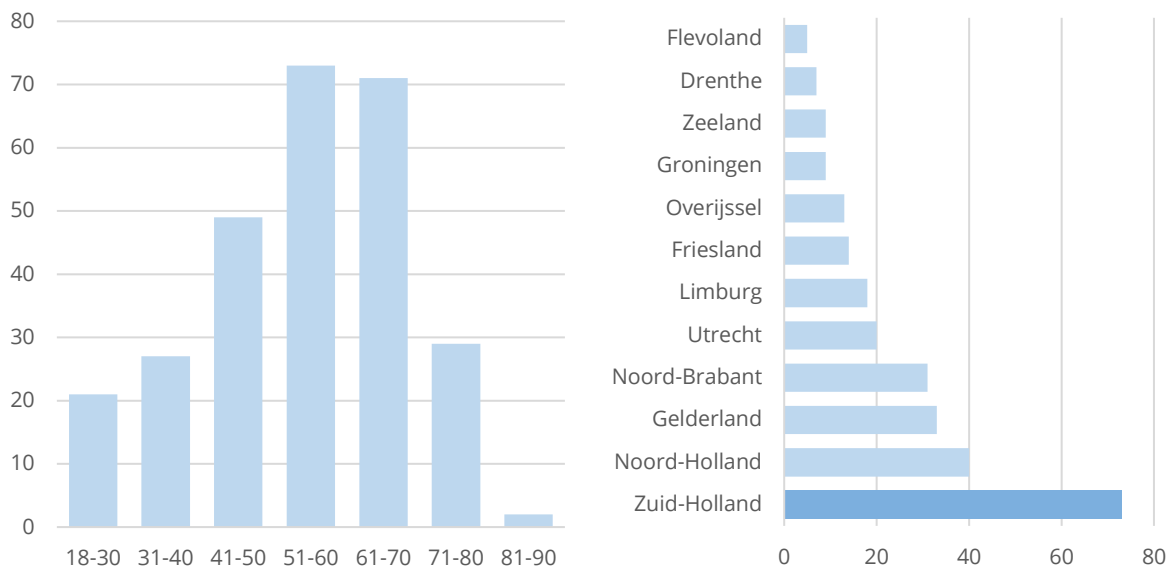


Figure H1. Age (left) and province distribution (right) of respondent group

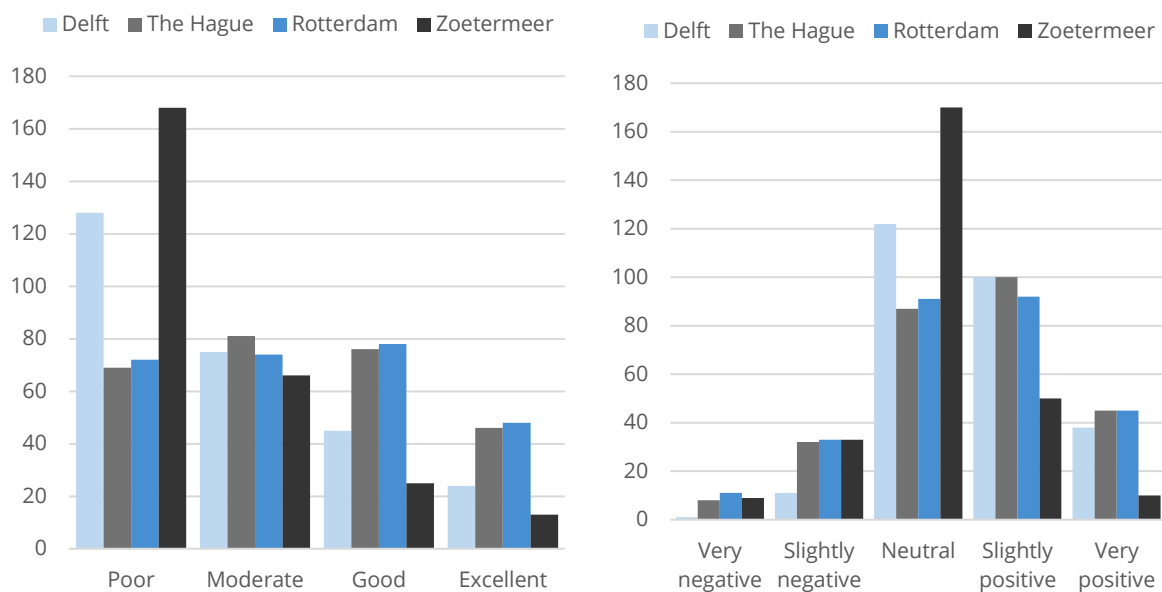


Figure H2. Familiarity (left) and attitude (right) of respondent group

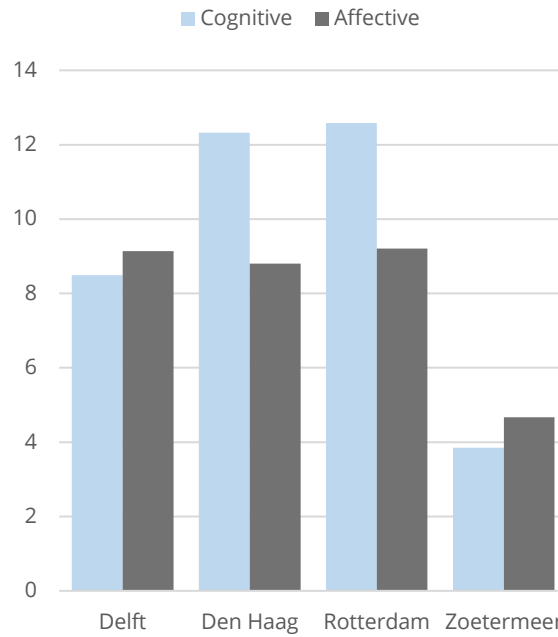


Figure H3. Average amount of associations per respondent

Figure H4 shows the response to the open question from the survey, asking the respondents for their top-of-mind association with each of the cities. The values indicate that more than half of the respondents provided a cognitive or affective association. The other half consists mostly of specific associations, such as *Delfts Blauw* or *Feyenoord*. Many respondents were unable to provide an association, especially for Zoetermeer.

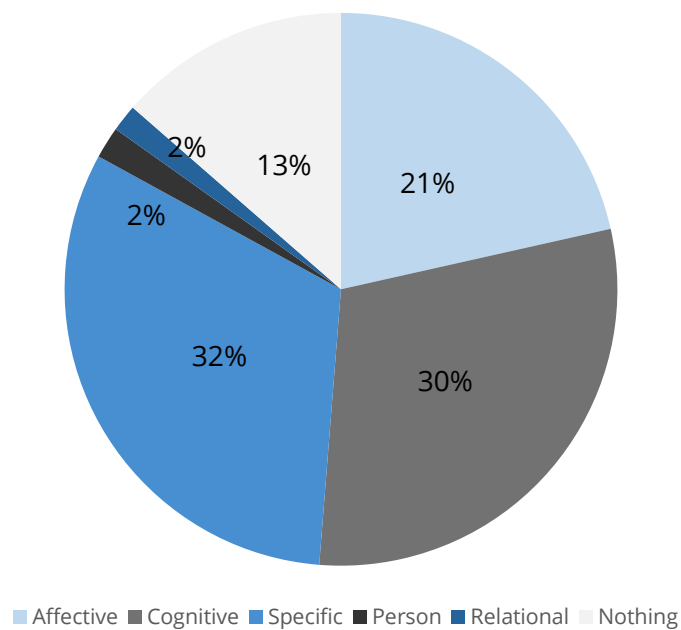


Figure H4. Top of mind associations, divided into categories

Table H1. Frequency of associations mentioned per city (place image)

%	Delft	The Hague	Rotterdam	Zoetermeer
Architecture	0,51	0,45	0,52	0,12
Business	0,14	0,53	0,68	0,13
Conferences	0,07	0,78	0,31	0,05
Design	0,20	0,27	0,45	0,12
Events	0,13	0,65	0,69	0,07
Biking	0,44	0,34	0,24	0,44
Port/harbour	0,05	0,07	0,90	0,01
Historical heritage	0,70	0,57	0,23	0,05
Industry	0,09	0,16	0,78	0,11
Royal	0,26	0,80	0,03	0,00
Arts and culture	0,50	0,63	0,46	0,05
Squares and markets	0,47	0,62	0,59	0,20
Nightlife	0,19	0,54	0,70	0,04
Nature (parks, gardens, green)	0,27	0,40	0,24	0,40
Recreation and relaxation	0,36	0,46	0,40	0,32
Politics	0,03	0,88	0,08	0,02
Public services	0,32	0,67	0,51	0,27
Restaurants and bars	0,57	0,72	0,70	0,32
Canals	0,64	0,31	0,19	0,03
Sports	0,13	0,37	0,58	0,18
Technology and innovation	0,58	0,17	0,38	0,05
Transport and infrastructure	0,09	0,24	0,75	0,11
Hiking	0,48	0,37	0,27	0,34
Water (river, lake, sea)	0,15	0,41	0,69	0,14
Science and university	0,74	0,18	0,39	0,02
Shopping	0,32	0,66	0,71	0,23
Accessible and central	0,30	0,68	0,68	0,21
Affordable	0,29	0,15	0,20	0,36
Thriving	0,26	0,32	0,47	0,18
Charming, intimate and picturesque	0,63	0,15	0,09	0,13
Compact	0,38	0,17	0,14	0,23
Creative, cultural and inspiring	0,37	0,40	0,39	0,11
Culinary	0,27	0,51	0,45	0,11
Diverse, unique and surprising	0,34	0,33	0,42	0,15
Sustainable and green	0,24	0,19	0,11	0,39
Rugged, wilful and raw	0,04	0,22	0,57	0,07
Cosy, pleasant and friendly	0,55	0,32	0,24	0,24
Historic and traditional	0,64	0,51	0,22	0,04
Sophisticated and impressive	0,20	0,34	0,38	0,04
Innovative and progressive	0,32	0,24	0,53	0,13
Known internationally	0,28	0,72	0,76	0,02
Vivid, atmospheric and cheerful	0,43	0,43	0,42	0,16
Modern, young and hip	0,18	0,19	0,45	0,30
Sober, direct and innocent	0,23	0,12	0,28	0,21
Undiscovered and mysterious	0,23	0,12	0,10	0,26
Open, warm and hospitable	0,41	0,32	0,27	0,20
Pure and authentic	0,58	0,30	0,19	0,11
Relaxing and peaceful	0,41	0,14	0,09	0,34
Smart and educated	0,57	0,28	0,26	0,08
Majestic, chic and proud	0,30	0,65	0,14	0,06
Strong	0,17	0,31	0,55	0,07
Safe and clean	0,34	0,15	0,09	0,35
Enterprising	0,11	0,46	0,66	0,11

	Architecture	Business	Conferences	Design	Events	Biking	Porn/horbour	Historical	her industry	Royal	Arts and cult	Squares and Nightlife	Nature (park)	Recreation	at Politics	Public service	Restaurants	Canals	Sports	Technology	Transport	an Hiking	Water (river,	Science and	Shopping	
Architecture	1.00																									
Business	0.28	1.00																								
Conferences	0.24	0.44	1.00																							
Design	0.31	0.35	0.23	1.00																						
Events	0.27	0.51	0.45	0.31	1.00																					
Biking	0.19	0.12	0.10	0.16	0.06	1.00																				
Porn/horbour	0.21	0.44	0.08	0.31	0.42	-0.08	1.00																			
Historical	0.38	0.13	0.25	0.17	0.17	0.22	-0.11	1.00																		
Industry	0.22	0.47	0.14	0.32	0.38	0.06	0.63	-0.04	1.00																	
Royal	0.20	0.15	0.48	0.27	0.25	0.05	-0.22	0.38	-0.16	1.00																
Arts and Culture	0.45	0.27	0.37	0.21	0.25	0.19	0.15	0.28	0.36	0.24	0.39	1.00														
Squares and markets	0.39	0.35	0.32	0.24	0.38	0.24	0.19	0.33	0.23	0.29	0.40	1.00														
Nightlife	0.29	0.34	0.42	0.33	0.35	0.10	0.45	0.18	0.41	0.17	0.34	0.39	1.00													
Nature (parks, gardens, green)	0.20	0.13	0.18	0.15	0.41	-0.01	0.18	0.04	0.12	0.13	0.26	0.08	1.00													
Recreation and relaxation	0.24	0.27	0.21	0.25	0.29	0.10	0.22	0.19	0.15	0.28	0.36	0.24	0.39	1.00												
Politics	0.11	0.24	0.61	0.27	0.33	0.00	-0.15	0.24	-0.09	0.64	0.30	0.21	0.23	0.11	0.13	1.00										
Public services	0.25	0.34	0.35	0.23	0.37	0.24	0.15	0.25	0.24	0.25	0.29	0.39	0.31	0.26	0.33	0.31	1.00									
Restaurants and bars	0.33	0.37	0.31	0.27	0.43	0.25	0.20	0.38	0.48	0.45	0.27	0.35	0.20	0.41	0.20	0.41	1.00									
Canals	0.30	0.04	0.11	0.10	0.07	0.17	-0.05	0.49	-0.05	0.22	0.29	0.24	0.12	0.08	0.20	0.05	0.14	0.20	1.00							
Sports	0.20	0.44	0.27	0.28	0.42	0.20	0.38	0.07	0.42	0.03	0.23	0.30	0.43	0.19	0.27	0.12	0.34	0.34	0.03	1.00						
Technology and innovation	0.25	0.18	0.05	0.18	0.14	0.17	0.17	0.31	0.21	0.04	0.26	0.17	0.20	0.07	0.14	-0.10	0.14	0.22	0.31	0.17	1.00					
Transport and infrastructure	0.26	0.50	0.18	0.34	0.40	0.04	0.61	-0.01	0.69	-0.06	0.17	0.27	0.45	0.08	0.21	0.02	0.24	0.30	-0.03	0.43	0.19	1.00				
Hiking	0.30	0.12	0.15	0.23	0.12	0.51	-0.02	0.32	0.05	0.13	0.26	0.34	0.12	0.45	0.45	0.06	0.26	0.30	0.84	0.17	0.18	1.00				
Water (river, lake, sea)	0.24	0.38	0.27	0.28	0.36	0.09	0.47	0.06	0.44	0.07	0.26	0.31	0.40	0.17	0.31	0.11	0.27	0.33	0.08	0.36	0.14	0.42	1.00			
Science and university	0.33	0.14	0.03	0.14	0.08	0.13	0.14	0.34	0.12	0.03	0.29	0.22	0.17	0.06	0.17	-0.13	0.11	0.20	0.40	0.12	0.51	0.14	0.21	0.13	1.00	
Shopping	0.28	0.45	0.34	0.31	0.48	0.19	0.31	0.21	0.36	0.18	0.34	0.46	0.50	0.24	0.38	0.22	0.44	0.53	0.13	0.37	0.12	0.33	0.25	0.35	0.11	1.00

	Architecture	Business	Conferences	Design	Events	Biking	Porn/horbour	Historical	her industry	Royal	Arts and cult	Squares and Nightlife	Nature (park)	Recreation	at Politics	Public service	Restaurants	Canals	Sports	Technology	Transport	an Hiking	Water (river,	Science and	Shopping		
Accessible and central	0.27	0.37	0.31	0.23	0.41	0.13	0.28	0.15	0.34	0.18	0.24	0.35	0.38	0.17	0.28	0.27	0.35	0.40	0.09	0.33	0.11	0.31	0.19	0.34	0.08	0.44	
Affordable	0.06	-0.02	-0.03	0.20	-0.03	0.23	0.03	0.01	0.02	-0.08	-0.02	0.09	-0.03	0.25	0.21	-0.10	0.07	0.09	0.26	0.34	0.11	0.31	0.24	0.25	0.25	0.16	0.34
Thriving	0.33	0.35	0.19	0.30	0.30	0.21	0.24	0.16	0.30	0.07	0.23	0.28	0.31	0.23	0.32	0.09	0.26	0.34	0.11	0.31	0.24	0.31	0.25	0.25	0.16	0.34	
Charming, intimate and picturesque	0.22	-0.10	-0.10	0.08	-0.08	0.25	-0.15	0.40	-0.12	0.10	0.18	0.16	-0.05	0.13	0.18	-0.10	0.03	0.14	0.42	-0.06	0.31	-0.10	0.37	-0.09	0.37	0.01	
Compact	0.10	0.00	-0.03	0.06	-0.06	0.22	-0.06	0.17	-0.02	0.06	0.06	0.08	-0.02	0.17	0.11	-0.05	0.05	0.07	0.21	0.03	0.15	0.00	0.24	-0.03	0.16	0.02	
Creative, cultural and inspiring	0.31	0.24	0.24	0.29	0.28	0.21	0.15	0.29	0.20	0.18	0.35	0.30	0.26	0.20	0.32	0.14	0.28	0.29	0.22	0.27	0.20	0.20	0.26	0.22	0.23	0.28	
Culinary	0.29	0.38	0.32	0.28	0.43	0.21	0.19	0.28	0.25	0.23	0.35	0.43	0.40	0.24	0.32	0.25	0.36	0.44	0.15	0.31	0.15	0.29	0.30	0.23	0.15	0.47	
Diverse, unique and surprising	0.32	0.27	0.19	0.29	0.32	0.21	0.17	0.22	0.24	0.12	0.25	0.31	0.26	0.24	0.29	0.07	0.27	0.31	0.22	0.29	0.25	0.21	0.33	0.23	0.21	0.34	
Sustainable and green	0.07	0.03	0.03	0.12	-0.01	0.34	-0.11	0.08	-0.03	-0.02	-0.01	0.10	-0.02	0.41	0.27	-0.04	0.10	0.10	0.08	0.09	0.03	-0.01	0.41	0.02	0.05	0.07	
Rugged, wild and raw	0.17	0.40	0.19	0.27	0.41	0.01	0.51	-0.02	0.46	-0.03	0.13	0.15	0.38	0.02	0.13	0.03	0.18	0.20	-0.04	0.31	0.21	0.49	0.03	0.32	0.09	0.26	
Cosy, pleasant and friendly	0.24	0.05	0.06	0.20	0.06	0.32	-0.07	0.34	-0.01	0.16	0.21	0.28	0.11	0.29	0.32	0.03	0.17	0.29	0.27	0.13	0.22	0.05	0.44	0.10	0.24	0.20	
Historic and traditional	0.31	0.07	0.19	0.10	0.12	0.19	-0.09	0.62	-0.06	0.36	0.40	0.30	0.11	0.11	0.22	0.23	0.19	0.26	0.45	0.07	0.24	-0.02	0.28	0.07	0.33	0.20	
Sophisticated and impressive	0.27	0.32	0.28	0.32	0.34	0.12	0.24	0.22	0.27	0.19	0.28	0.29	0.32	0.17	0.23	0.17	0.25	0.29	0.15	0.25	0.20	0.28	0.22	0.19	0.29	0.29	
Innovative and progressive	0.27	0.35	0.15	0.33	0.26	0.18	0.31	0.11	0.38	-0.01	0.21	0.24	0.29	0.14	0.19	-0.02	0.17	0.25	0.14	0.34	0.36	0.38	0.17	0.24	0.31	0.26	
Known internationally	0.32	0.42	0.43	0.29	0.50	-0.02	0.38	0.22	0.34	0.30	0.39	0.38	0.48	0.08	0.20	0.36	0.36	0.36	0.12	0.33	0.14	0.38	0.08	0.38	0.14	0.43	
Vivid, atmospheric and cheerful	0.29	0.28	0.23	0.27	0.31	0.21	0.13	0.28	0.18	0.18	0.31	0.37	0.30	0.22	0.31	0.12	0.28	0.41	0.24	0.29	0.23	0.21	0.34	0.22	0.24	0.37	
Modern, young and hip	0.15	0.24	0.11	0.31	0.19	0.20	0.24	-0.04	0.26	-0.08	0.09	0.12	0.22	0.17	0.15	-0.06	0.16	0.18	0.21	0.26	0.15	0.30	0.17	0.13	0.10	0.22	
Sober, direct and innocent	0.16	0.16	0.06	0.22	0.08	0.23	0.14	0.05	0.19	-0.08	0.08	0.13	0.13	0.22	0.22	-0.07	0.09	0.13	0.05	0.17	0.12	0.19	0.29	0.14	0.13	0.13	
Undiscovered and mysterious	0.06	0.00	-0.02	0.07	-0.03	0.24	-0.04	0.06	-0.01	0.02	-0.03	0.04	-0.01	0.19	0.15	-0.05	0.01	0.02	0.09	0.05	0.09	-0.02	0.26	-0.01	0.05	-0.03	
Open, warm and hospitable	0.25	0.15	0.13	0.27	0.17	0.32	0.01	0.31	0.08	0.13	0.23	0.29	0.14	0.28	0.34	0.06	0.17	0.29	0.24	0.17	0.22	0.12	0.44	0.12	0.24	0.23	
Pure and authentic	0.28	0.07	0.07	0.16	0.06	0.28	-0.05	0.43	-0.01	0.19	0.26	0.22	0.11	0.19	0.21	0.02	0.13	0.25	0.36	0.09	0.30	0.02	0.38	0.07	0.35	0.15	
Relaxing and peaceful	0.08	-0.06	-0.08	0.04	-0.10	0.37	-0.15	0.16	-0.05	0.00	0.03	0.10	-0.09	0.30	0.25	-0.11	0.04	0.05	0.15	0.02	0.14	-0.07	0.38	-0.04	0.17	-0.02	
Smart and educated	0.25	0.11	0.11	0.19	0.09	0.22	0.00	0.37	0.05	0.16	0.25	0.23	0.12	0.17	0.19	0.02	0.16	0.21	0.33	0.14	0.41	0.06	0.26	0.07	0.46	0.14	
Majestic, chic and proud	0.27	0.19	0.39	0.17	0.24	0.15	-0.09	0.39	-0.03	0.50	0.34	0.29	0.21	0.21	0.20	0.48	0.27	0.26	0.21	0.15	0.09	0.02	0.24	0.10	0.10	0.25	
Strong	0.32	0.47	0.23	0.40	0.41	0.10	0.40	0.11	0.44	0.07	0.25	0.28	0.40	0.15	0.23	0.10	0.25	0.30	0.08	0.35	0.25	0.46	0.18	0.34	0.21	0.33	
Safe and clean	0.07	-0.04	-0.06	0.07	-0.07	0.32	-0.15	0.11	-0.07	0.00	0.01	0.06	-0.10	0.35	0.24	-0.09	0.07	0.07	0.11	0.01	0.05	-0.04	0.33	-0.05	0.08	0.04	
Enterprising	0.29	0.62	0.38	0.36	0.51	0.08	0.44	0.08	0.59	0.11	0.26	0.32	0.49	0.15	0.28	0.19	0.22	0.37	0.04	0.38	0.16	0.52	0.15	0.37	0.14	0.45	

	Accessible and Affordable	Thriving	Charming, Int Compact	Creative, cult Culinary	Diverse, uniq Sustainable, Rugged, wifl, Cosy, pleasr, Historic and Sophisticated, Innovative al Known Intn Vnid, Atmos Modern, you Sober, direct Undiscovered, Open, warm Pure and aut Relaxed and Smart and re/Majestic, chn Strong	Pure and aut Relaxed and Smart and re/Majestic, chn Strong	Safe and clea Entprising																				
Accessible and central	1.00																										
Affordable	0.07	1.00																									
Thriving	0.27	0.13	1.00																								
Charming, intimate and picturesque	0.00	0.20	0.17	1.00																							
Compact	0.01	0.25	0.11	0.38	1.00																						
Creative, cultural and inspiring	0.30	0.14	0.29	0.26	0.18	1.00																					
Culinary	0.38	0.10	0.37	0.15	0.08	0.39	1.00																				
Diverse, unique and surprising	0.28	0.19	0.44	0.28	0.18	0.39	0.36	1.00																			
Sustainable and green	0.10	0.36	0.20	0.27	0.29	0.19	0.12	0.19	1.00																		
Rugged, wild and raw	0.30	0.04	0.28	-0.07	0.01	0.19	0.22	0.26	0.02	1.00																	
Cosy, pleasant and friendly	0.20	0.24	0.31	0.47	0.32	0.29	0.27	0.32	0.32	-0.01	1.00																
Historic and traditional	0.17	0.03	0.17	0.46	0.21	0.35	0.30	0.27	0.07	-0.02	0.33	1.00															
Sophisticated and impressive	0.30	0.08	0.36	0.16	0.15	0.35	0.41	0.33	0.16	0.26	0.19	1.00															
Innovative and progressive	0.26	0.14	0.39	0.15	0.18	0.26	0.29	0.32	0.16	0.34	0.25	0.13	0.33	1.00													
Known internationally	0.47	-0.04	0.29	-0.03	-0.02	0.33	0.36	0.31	-0.07	0.33	0.10	0.23	0.37	0.28	1.00												
Vivid, atmospheric and cheerful	0.31	0.19	0.36	0.30	0.17	0.38	0.40	0.48	0.20	0.16	0.43	0.28	0.39	0.55	0.28	1.00											
Modern, young and hip	0.15	0.20	0.32	0.07	0.19	0.22	0.22	0.24	0.25	0.30	0.19	-0.02	0.28	0.56	0.17	0.26	1.00										
Sober, direct and innocent	0.12	0.27	0.27	0.24	0.23	0.23	0.15	0.28	0.38	0.25	0.30	0.10	0.21	0.26	0.06	0.23	0.28	1.00									
Undiscovered and mysterious	-0.01	0.19	0.15	0.26	0.27	0.13	0.08	0.22	0.29	0.07	0.21	0.13	0.10	0.10	-0.06	0.13	0.18	0.28	1.00								
Open, warm and hospitable	0.23	0.28	0.31	0.39	0.27	0.33	0.35	0.38	0.33	0.33	0.07	0.54	0.30	0.27	0.29	0.47	0.19	0.32	0.20	1.00							
Pure and authentic	0.14	0.17	0.26	0.50	0.30	0.33	0.27	0.30	0.24	0.04	0.47	0.45	0.28	0.18	0.12	0.36	0.10	0.27	0.28	0.43	1.00						
Relaxed and peaceful	0.00	0.34	0.16	0.43	0.31	0.16	0.09	0.20	0.44	-0.05	0.45	0.20	0.10	0.09	-0.08	0.21	0.18	0.34	0.31	0.35	0.36	1.00					
Smart and educated	0.08	0.11	0.27	0.36	0.25	0.24	0.22	0.27	0.19	0.08	0.36	0.32	0.27	0.35	0.15	0.28	0.17	0.19	0.14	0.29	0.34	0.22	1.00				
Majestic, chic and proud	0.22	0.03	0.23	0.22	0.15	0.26	0.35	0.25	0.12	0.02	0.28	0.41	0.34	0.14	0.31	0.28	0.09	0.09	0.08	0.25	0.30	0.13	0.25	1.00			
Strong	0.36	0.11	0.40	0.08	0.05	0.33	0.37	0.39	0.09	0.47	0.22	0.20	0.38	0.44	0.40	0.32	0.28	0.29	0.06	0.29	0.18	0.07	0.23	0.24	1.00		
Safe and clean	0.03	0.36	0.13	0.33	0.33	0.16	0.11	0.19	0.45	-0.03	0.38	0.15	0.11	0.10	-0.12	0.19	0.18	0.34	0.29	0.33	0.26	0.56	0.19	0.11	0.07	1.00	
Enterprising	0.40	0.04	0.37	-0.09	-0.01	0.26	0.40	0.31	0.06	0.49	0.07	0.07	0.34	0.40	0.45	0.28	0.29	0.20	0.02	0.17	0.07	-0.03	0.15	0.18	0.54	-0.02	1.00

Table H2. Network analysis results: cluster, degree and centrality (place image)

Label	Association (English transl.)	Type	Cluster	Degree	Weighted Degree	Avg. w. degree	Closeness centrality
Delft	Delft	City	0	18	9,85	0,55	0,455
Rotterdam	Rotterdam	City	2	29	16,85	0,58	0,531
The Hague	The Hague	City	1	24	14,13	0,59	0,505
Zoetermeer	Zoetermeer	City	3	3	1,23	0,41	0,307
ACC	Accessible and central	Affective	1	2	1,36	0,68	0,405
AUT	Pure and authentic	Affective	0	1	0,58	0,58	0,315
CCI	Creative, cultural and inspiring	Affective	1	2	0,79	0,40	0,405
CHA	Charming, intimate and picturesque	Affective	0	1	0,63	0,63	0,315
CPF	Cosy, pleasant and friendly	Affective	0	2	1,09	0,55	0,317
CUL	Culinary	Affective	1	2	0,96	0,48	0,405
DIV	Diverse, unique and surprising	Affective	2	1	0,42	0,42	0,349
ENT	Enterprising	Affective	2	6	3,31	0,55	0,418
HST	Historic and traditional	Affective	0	3	1,77	0,59	0,411
INN	Innovative and progressive	Affective	2	1	0,53	0,53	0,349
INT	Known internationally	Affective	2	2	1,48	0,74	0,405
MAJ	Majestic, chic and proud	Affective	1	1	0,65	0,65	0,338
MOD	Modern, young and hip	Affective	2	1	0,45	0,45	0,349
OPN	Open, warm and hospitable	Affective	0	2	0,95	0,48	0,317
RAW	Rugged, wilful and raw	Affective	2	2	1,08	0,54	0,352
RLX	Relaxing and peaceful	Affective	0	2	0,97	0,49	0,319
SAF	Safe and clean	Affective	0	1	0,56	0,56	0,243
SMR	Smart and educated	Affective	0	1	0,57	0,57	0,315
STR	Strong	Affective	2	2	1,09	0,55	0,378
SUS	Sustainable and green	Affective	3	1	0,39	0,39	0,236
THR	Thriving	Affective	2	1	0,47	0,47	0,349
VIV	Vivid, atmospheric and cheerful	Affective	0	3	1,28	0,43	0,495
ARC	Architecture	Cognitive	0	3	1,48	0,49	0,495
ART	Arts and culture	Cognitive	1	3	1,59	0,53	0,495
BIK	Biking	Cognitive	0	3	1,39	0,46	0,329
BSN	Business	Cognitive	2	6	3,38	0,56	0,418
CAN	Canals	Cognitive	0	1	0,64	0,64	0,315
CON	Conferences	Cognitive	1	2	1,39	0,70	0,340
DES	Design	Cognitive	2	1	0,45	0,45	0,349
EVE	Events	Cognitive	2	5	2,91	0,58	0,415
HIK	Hiking	Cognitive	0	2	0,99	0,50	0,323
HIS	Historical heritage	Cognitive	0	3	1,89	0,63	0,411
HRB	Port/harbour	Cognitive	2	4	2,65	0,66	0,357
IND	Industry	Cognitive	2	3	2,01	0,67	0,354
NAT	Nature (parks, gardens, green)	Cognitive	3	2	0,80	0,40	0,354
NGH	Nightlife	Cognitive	2	5	2,83	0,57	0,415
POL	Politics	Cognitive	1	3	2,13	0,71	0,342
PUB	Public services	Cognitive	1	2	1,18	0,59	0,405
RCR	Recreation and relaxation	Cognitive	1	2	0,86	0,43	0,405
RES	Restaurants and bars	Cognitive	1	4	2,52	0,63	0,500
ROY	Royal	Cognitive	1	2	1,44	0,72	0,340
SCI	Science and university	Cognitive	0	3	1,64	0,55	0,447
SHO	Shopping	Cognitive	1	4	2,40	0,60	0,451
SPO	Sports	Cognitive	2	1	0,58	0,58	0,349
SQR	Squares and markets	Cognitive	1	3	1,68	0,56	0,495
TEC	Technology and innovation	Cognitive	0	2	1,09	0,55	0,370
TRA	Transport and infrastructure	Cognitive	2	5	2,98	0,60	0,386
WTR	Water (river, lake, sea)	Cognitive	2	2	1,10	0,55	0,405

Appendix I - Brand identity survey results

A total of 27 city officials provided response for the brand identity survey. Figures I1 and I2 provide statistics about the respondents and their response. Table I1 shows the frequency (as a percentage) of all associations as indicated by the respondents. The next three Figures show the correlations between all associations, based on the individual responses. The appendix concludes with an overview of the values for all metric categories.

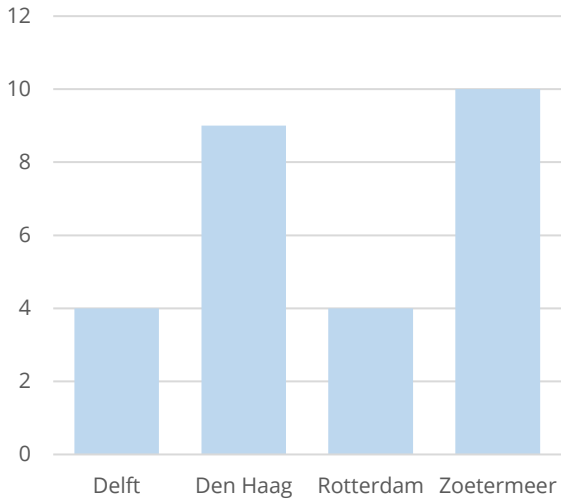


Figure I1. Distribution of respondents over the cities

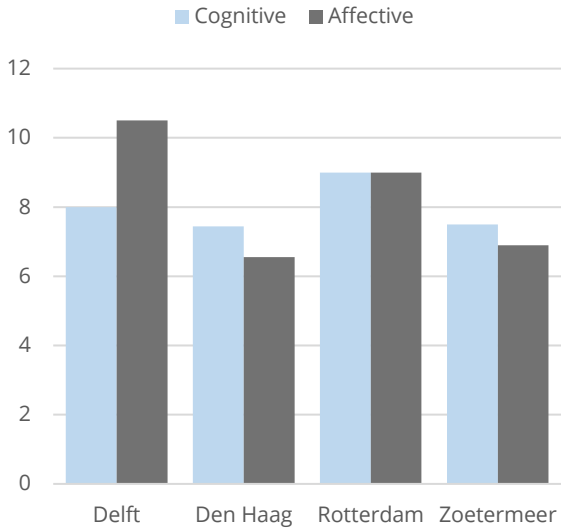


Figure I2. Average amount of associations per respondent

Table I1. Frequency of associations mentioned per city (brand identity)

%	Delft	Den Haag	Rotterdam	Zoetermeer
Architecture	0,25	0,33	1,00	0,10
Business	0,25	0,11	0,50	0,10
Conferences	0,00	0,22	0,25	0,00
Design	0,00	0,11	0,00	0,00
Events	0,25	0,33	0,75	0,70
Biking	0,00	0,44	0,25	0,50
Port/harbour	0,00	0,44	0,75	0,00
Historical heritage	1,00	0,44	0,00	0,00
Industry	0,00	0,00	0,50	0,00
Royal	0,75	0,67	0,00	0,00
Arts and culture	0,75	0,56	0,50	0,20
Squares and markets	0,75	0,44	0,25	0,10
Nightlife	0,00	0,00	0,00	0,00
Nature (parks, gardens, green)	0,00	0,33	0,25	0,80
Recreation and relaxation	0,25	0,44	0,50	1,00
Politics	0,00	0,89	0,00	0,00
Public services	0,00	0,00	0,25	0,50
Restaurants and bars	0,75	0,33	0,25	0,50
Canals	0,50	0,00	0,00	0,00
Sports	0,00	0,11	0,75	0,80
Technology and innovation	1,00	0,00	0,75	0,50
Transport and infrastructure	0,00	0,00	0,75	0,30
Hiking	0,00	0,00	0,00	0,50
Water (river, lake, sea)	0,25	0,78	0,75	0,30
Science and university	1,00	0,22	0,00	0,00
Shopping	0,25	0,22	0,00	0,60
Accessible and central	0,50	0,22	0,50	0,80
Affordable	0,00	0,11	0,25	0,50
Thriving	0,25	0,22	0,00	0,30
Charming, intimate and picturesque	0,50	0,00	0,00	0,00
Compact	0,50	0,33	0,00	0,20
Creative, cultural and inspiring	0,75	0,22	0,50	0,40
Culinary	0,25	0,11	0,00	0,10
Diverse, unique and surprising	0,50	0,44	0,25	0,50
Sustainable and green	0,50	0,22	0,25	0,80
Rugged, wilful and raw	0,25	0,11	1,00	0,20
Cosy, pleasant and friendly	0,75	0,22	0,00	0,30
Historic and traditional	0,25	0,67	0,00	0,00
Sophisticated and impressive	0,50	0,11	0,25	0,00
Innovative and progressive	1,00	0,11	0,75	0,70
Known internationally	0,75	0,44	1,00	0,00
Vivid, atmospheric and cheerful	0,75	0,22	0,25	0,70
Modern, young and hip	0,50	0,00	0,75	0,20
Sober, direct and innocent	0,00	0,00	0,50	0,00
Undiscovered and mysterious	0,00	0,11	0,25	0,00
Open, warm and hospitable	0,50	0,11	0,00	0,30
Pure and authentic	0,00	0,33	0,50	0,00
Relaxing and peaceful	0,00	0,56	0,00	0,10
Smart and educated	0,50	0,33	0,00	0,20
Majestic, chic and proud	0,00	0,89	0,00	0,00
Strong	0,25	0,00	0,75	0,00
Safe and clean	0,50	0,33	0,25	0,30
Enterprising	0,25	0,11	1,00	0,30

Table 12. Network analysis results: cluster, degree and centrality (brand identity)

Label	Association (English transl.)	Type	Cluster	Degree	Weighted degree	Avg. w. degree	Closeness centrality
Delft	Delft	City	0	23	15,50	0,67	0,519
Rotterdam	Rotterdam	City	2	21	14,75	0,70	0,500
The Hague	Den Haag	City	1	14	8,10	0,58	0,439
Zoetermeer	Zoetermeer	City	3	17	10,80	0,64	0,435
ACC	Accessible and central	Affective	3	8	4,60	0,58	0,500
AFF	Affordable	Affective	3	3	1,67	0,56	0,383
AUT	Pure and authentic	Affective	2	5	2,78	0,56	0,375
CCI	Creative, cultural and inspiring	Affective	0	6	3,36	0,56	0,491
CHA	Charming, intimate and picturesque	Affective	0	2	1,03	0,52	0,346
CMP	Compact	Affective	0	1	0,50	0,50	0,344
CPF	Cosy, pleasant and friendly	Affective	0	2	1,38	0,69	0,348
CUL	Culinary	Affective	3	1	0,50	0,50	0,273
DIV	Diverse, unique and surprising	Affective	0	3	1,44	0,48	0,429
ENT	Enterprising	Affective	2	3	2,24	0,75	0,340
HST	Historic and traditional	Affective	1	4	2,60	0,65	0,340
INN	Innovative and progressive	Affective	0	4	3,10	0,78	0,474
INT	Known internationally	Affective	2	5	3,22	0,64	0,466
MAJ	Majestic, chic and proud	Affective	1	5	3,45	0,69	0,342
MOD	Modern, young and hip	Affective	2	4	2,49	0,62	0,435
OPN	Open, warm and hospitable	Affective	0	3	1,70	0,57	0,355
RAW	Rugged, wilful and raw	Affective	2	3	2,18	0,73	0,372
RLX	Relaxing and peaceful	Affective	1	4	2,39	0,60	0,340
SAF	Safe and clean	Affective	0	5	2,64	0,53	0,419
SDI	Sober, direct and innocent	Affective	2	5	2,89	0,58	0,348
SMR	Smart and educated	Affective	0	1	0,50	0,50	0,344
SOP	Sophisticated and impressive	Affective	0	2	1,03	0,52	0,346
STR	Strong	Affective	2	5	3,16	0,63	0,394
SUS	Sustainable and green	Affective	3	3	1,85	0,62	0,394
THR	Thriving	Affective	0	3	1,66	0,55	0,346
UND	Undiscovered and mysterious	Affective	4	2	1,39	0,70	0,277
VIV	Vivid, atmospheric and cheerful	Affective	3	6	3,82	0,64	0,432
ARC	Architecture	Cognitive	2	3	2,12	0,71	0,388
ART	Arts and culture	Cognitive	0	5	2,98	0,60	0,474
BIK	Biking	Cognitive	3	3	1,54	0,51	0,370
BSN	Business	Cognitive	2	4	2,27	0,57	0,346
CAN	Canals	Cognitive	0	2	1,03	0,52	0,346
CON	Conferences	Cognitive	4	1	0,80	0,80	0,218
EVE	Events	Cognitive	2	3	2,01	0,67	0,378
HIK	Hiking	Cognitive	3	2	1,03	0,52	0,307
HIS	Historical heritage	Cognitive	0	4	2,64	0,66	0,391
HRB	Port/harbour	Cognitive	2	4	2,35	0,59	0,406
IND	Industry	Cognitive	2	2	1,03	0,52	0,338
NAT	Nature (parks, gardens, green)	Cognitive	3	3	1,86	0,62	0,355
POL	Politics	Cognitive	1	5	3,64	0,73	0,342
PUB	Public services	Cognitive	2	2	1,10	0,55	0,338
RCR	Recreation and relaxation	Cognitive	3	4	2,47	0,62	0,429
RES	Restaurants and bars	Cognitive	3	5	2,99	0,60	0,432
ROY	Royal	Cognitive	1	8	5,03	0,63	0,403
SCI	Science and university	Cognitive	0	5	3,22	0,64	0,362
SHO	Shopping	Cognitive	3	3	1,62	0,54	0,372
SPO	Sports	Cognitive	2	5	3,31	0,66	0,383
SQR	Squares and markets	Cognitive	1	3	1,86	0,62	0,388

TEC	Technology and innovation	Cognitive	0	4	2,90	0,73	0,474
TRA	Transport and infrastructure	Cognitive	2	6	3,68	0,61	0,391
WTR	Water (river, lake, sea)	Cognitive	2	5	3,14	0,63	0,432