

THE FUTURE OF CREATIVE WORKSPACES



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**An examination of the evolving morphology of creative workspaces, using
Minervahaven as a case-study.**

Master Urban and Economic Geography, Economic track.

28th of June 2024

Number of words: 20355 (excluding reference list and appendices)

Morphology

noun

1. The study of the form and structure of organisms or objects, and the patterns and processes that shape them.
2. The branch of biology that deals with the form and structure of organisms without consideration of function.
3. The study of the structure and form of words in language (linguistic morphology).
4. The study of the form and structure of urban areas (urban morphology).

Etymology. Derived from the Greek words *morphē* (μορφή), meaning "form" or "shape," and *logia* (λογία), meaning "the study of" or "the science of." (Oxford, University Press, n.d.).

Preface

I am pleased to present the final product of my master's thesis. This research has been a rewarding and insightful journey, which began when I started looking for a research internship in December 2023. Eventually, I started my internship at SITE Urban Development, where I conducted my own research project. My research evolved from an assignment at SITE Urban Development and I prepared and collected the data with the support of my colleagues. Now, a few months later, I can confidently say that I am very pleased with the final result. Working on this thesis has provided me with invaluable insights and I hope that readers will find these insights equally engaging and informative.

I would like to extend my sincere gratitude to SITE Urban Development for providing me with this valuable opportunity. Their support and resources were instrumental in the completion of this work. I am also deeply thankful to all the interviewees who generously shared their time, insights, and expertise. Their contributions were vital to the depth and quality of this research.

A special thank you goes to my thesis supervisor, Martijn Smit, for his guidance and feedback throughout this process. His expertise and encouragement have been crucial to the successful completion of this thesis. Additionally, I would like to thank my father, brother and Rogier for helping me along the way, both in giving me advice and providing the necessary (emotional) support.

All figures and photographs in this thesis were created or captured by me, unless stated differently.

Tess de Vries

Amsterdam, June 2024

Abstract

This research examines the evolving morphology of creative workspaces, using Minervahaven as a case study. Employing a mixed methods approach with a qualitative focus, this study combines observations, expert viewpoints and user experiences to address critical concerns regarding the status and future development of creative workplaces. The primary objectives include understanding the current state of creative workspaces in Minervahaven, exploring how experts define the concept of the 'creative sector,' analyzing the impact of the 15-minute city concept on creative clusters, identifying key success factors in the redevelopment of mixed-use creative clusters and assessing user perceptions of Minervahaven. Firstly, Minervahaven is characterized by a mix of creative businesses, with the area of research divided into two distinct sections: Minervahaven Noord-B and Minervahaven Zuid-B. Minervahaven Noord-B is known for its high-rise office buildings that house knowledge-intensive industries, including major fashion and media companies. In contrast, Minervahaven Zuid-B features low-rise buildings and former warehouses repurposed for creative use, fostering a more tranquil and artisanal environment. Secondly, experts in spatial planning define the 'creative sector' as encompassing both traditional artistic professions and economically oriented industries such as media, marketing and technology. This broad and evolving definition underscores the complex character of creativity, which includes cultural, economic and social dimensions. The distinction between applied and independent creative activities further refines this definition, with applied work being market-oriented and utilitarian, while autonomous work emphasizes cultural expression. Thirdly, the 15-minute city concept, which advocates for the localization of vital services within a 15-minute walk or bike ride, has a substantial impact on urban development and the functioning of creative clusters. Integrating creative clusters within this framework is crucial for enhancing urban vitality, promoting engagement and fostering collaboration among creative groups. However, caution is needed in its implementation, as the 15-minute city concept can potentially reinforce socioeconomic divisions within cities. Next, key success factors in the redevelopment of mixed-use creative clusters include balancing residential and commercial functions, fostering innovation and incorporating circular economy principles. Flexibility and adaptation are essential, with a trend towards shared and co-working spaces accommodating both individual and collaborative work. The rise of remote work driven by digitalization reduces the need for traditional physical workstations, necessitating flexible environments. Affordable creative spaces supported through innovative arrangements, such as blended use structures, are vital for maintaining vibrant creative clusters. Finally, user

perceptions of Minervahaven indicate satisfaction with the area's facilities but emphasize the need for enhanced community engagement. While the proximity to well-known companies is attractive, the lack of venues for social interaction outside of office settings hinders a sense of community.

These findings offer insights into the dynamic interplay between physical structures and evolving definitions in the creative sector. Reflecting on the concept of morphology in creative workspaces reveals that these environments are shaped by both architectural design and evolving cultural, social, and economic definitions. This dual consideration underscores the importance of tangible and intangible factors in the development and functionality of creative workspaces. The inherently fluid structure of the creative sector, continuously shaped by interactions and contributions from various stakeholders, highlights the need for further studies to support thoughtful urban design and policy initiatives that address these multifaceted aspects.

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Chapter 1: Introduction

The city of Amsterdam finds itself at a pivotal crossroad, transitioning from its renowned status as the Dutch capital to embracing the identity of a global metropolis (Gemeente Amsterdam, 2021). However, the city's aspiration is faced with the pressing issue of rapid urban expansion within a limited amount of space, bringing the Haven-Stad area into the spotlight. This vast industrial district is designated for a large-scale development project that will create almost 70,000 new residences and 58,000 workspaces (Gemeente Amsterdam, 2021). The tapestry of Haven-Stad is rich and diverse, incorporating many sub-areas such as Sloterdijk, Minervahaven, Noordelijke IJ-oever and Cornelis Douwes, each adding a unique character to the overall urban narrative. The districts of Haven-Stad will be planned in accordance with the '20-minute neighborhood' approach, which assures that daily necessities including restaurants, groceries, schools, parks and more are within a 20-minute walk (Gemeente Amsterdam, 2021). This approach is inspired by the 15-minute city concept, a topic that has garnered significant attention in urban redevelopment strategies over the last few years. This concept, coined by Moreno et al. (2021), describes an ideal scenario where inhabitants can access their daily requirements within a 15-minute walk, bicycle ride, or public transit ride from home. Its widespread popularity stems from its ability to solve urban, social justice and climate concerns by promoting local social and economic connections.

1.1 Minervahaven as a 'Creatieve wijk'

Considering these redevelopment plans for Haven-Stad, the municipality wants to transform Minervahaven from a traditional industrial working area into a vibrant, mixed-use district that integrates creative workspaces and residential areas (Gemeente Amsterdam, 2021). The area serves as a critical link between Hemknoop, the recently developed residential area Houthaven and the industrial zones of Coen-en Vlothaven (see figure 1). In recent years, Minervahaven has rapidly evolved into a highly desirable location for businesses in the creative sector, leisure and hospitality. After 2029, the municipality plans to incorporate residential housing, aiming to develop Minervahaven into a mixed-use area where workers from the creative sector live alongside residents (Gemeente Amsterdam, 2021). Gemeente Amsterdam (2021) conceptualizes such a 'creatieve wijk' as an extension of the central Amsterdam environment, characterized by a blend of residential areas with commercial spaces ranging from 100 to a maximum of 5000 square meters. These spaces are envisioned to host office-like concepts from the creative, knowledge and innovation economy sectors. Minervahaven, designated as such an

area, has already become a hub for fashion designers and creative companies, showcasing its burgeoning role in the city's creative landscape (Gemeente Amsterdam, 2021).

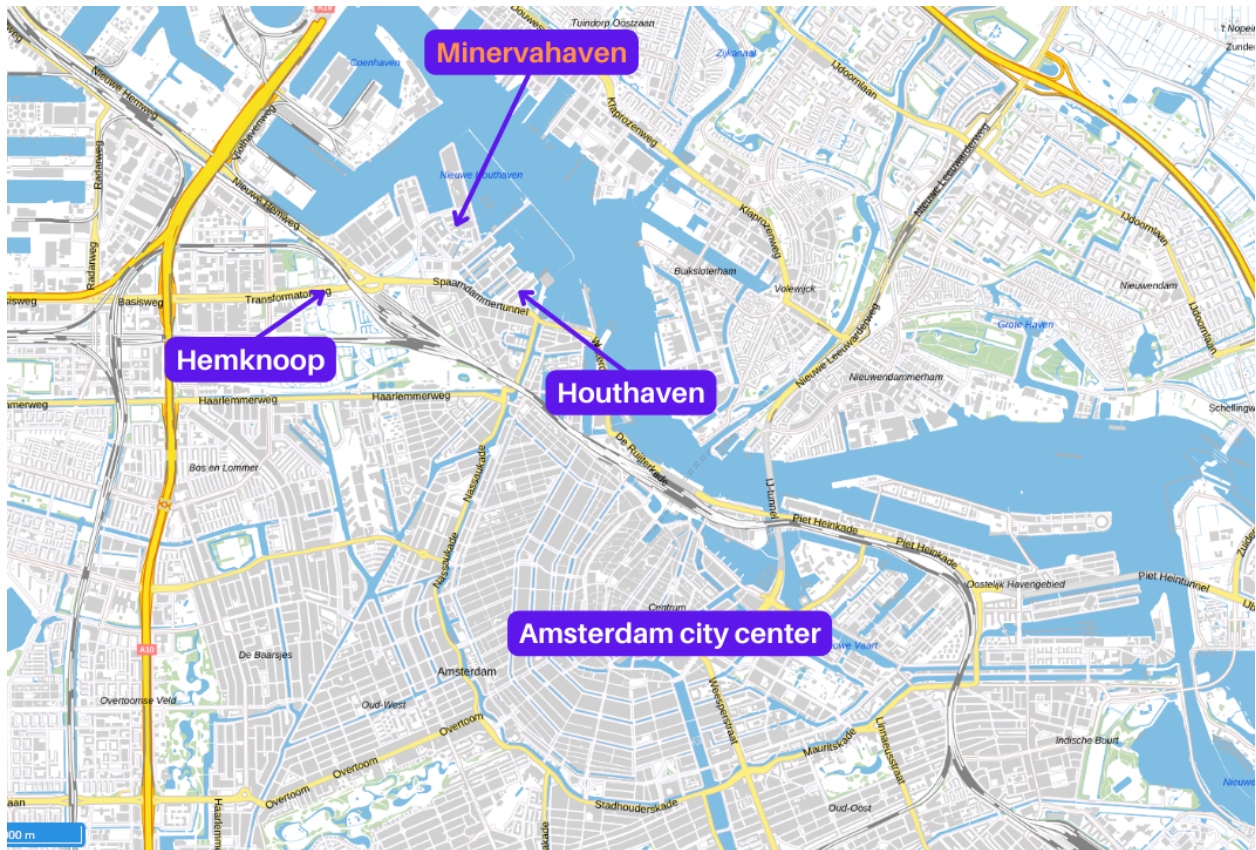


Figure 1: The location of Minervahaven in relation to Hemknoop and Houthaven, situated to the west of the center of Amsterdam. Base map from Atlas Plabeka (2024).

The background of Minervahaven, as outlined by Wiegmans & Louw (2011), highlights the area's strategic development as a 'transition zone' bridging the port and the city of Amsterdam. This transformation from port-related activities to urban city functions, especially in creative industries, marks a significant shift in the area's economic landscape. Although Minervahaven remains a modestly sized business area of 7 hectares, its future no longer includes port companies, effectively resizing the port's footprint and integrating the district more closely with the city's urban core. This shift aligns with Amsterdam's compact city policy, emphasizing residential development within or adjacent to existing built areas, a strategy evident since the 1980s with significant housing projects in former port areas like the Eastern Docklands and IJ-Banks (Wiegmans & Louw, 2011). Recent years have seen parts of Minervahaven rapidly transform into a sought-after location for creative sector enterprises, leisure activities and a

hotel. After 2029, housing developments are expected to further enhance Minervahaven as an attractive mixed-use area, combining living and working spaces. Specifically, Minervahaven Noord A, influenced by the new Hemknoop metro station, will see developments for mixed-use living and working at higher densities. This area's distinctiveness is further augmented by the re-excavation of the Houtveemkanaal, aiming to create a unique island environment. Meanwhile, the character of Minervahaven Noord B has largely been defined by recent construction and Minervahaven Zuid B is anticipated to feature the new Westbrug over the IJ. Additionally, the inclusion of significant green spaces, like the Zonnehoek allotment garden and the planned Haparandapierpark, will contribute to the district's appeal (Wiegmans & Louw, 2011).



Figure 2: Map of Minervahaven divided into Noord-B and Zuid-B. Base map from Atlas Plabeka (2024).

This research will focus on Minervahaven Noord B and Minervahaven Zuid B, as these are areas where many creative businesses are currently located.

1.2 'Creative City' policies

The transformation of Minervahaven reflects a broader shift from port-bound activities towards a creative and urban use of space, as shown by the relocation of creative sector businesses to

the Danziger pier and Moermansk pier. This evolution underscores the diminishing role of direct goods handling at the docks, symbolizing the broader transformation of Minervahaven into a dynamic, creative district within Amsterdam's urban landscape (Gemeente Amsterdam, 2021). These plans are consistent with a larger trend in urban redevelopment initiatives, in which governments seek to recruit workers from the creative sector through the implementation of 'Creative City' policies. In recent decades, the notion of the 'Creative City' has evolved as an important urban development approach for rejuvenating metropolitan areas and stimulating economic growth. Cities throughout the world are rapidly recognizing the importance of attracting and maintaining professionals from the creative sector, which encompasses businesses like design, media, technology and the arts (Florida, 2005). These sectors not only contribute significantly to economic production but also play an important role in promoting innovation, cultural variety and dynamic urban life. The 'Creative City' strategies were heavily influenced by the writings of researchers such as Richard Florida (2003, 2005), who argued that the existence of a creative class might boost economic growth and urban redevelopment.

Recent studies have highlighted the creative sector's considerable significance in the Dutch economy, including its contributions to economic development, employment and innovation (Media Perspectives, 2023). While the Dutch economy grew 3.4% per year from 2019 to 2022, the creative sector developed at a faster rate of 4.2%, underscoring its importance in economic development. The sector's overall added value was approximately 21 billion euros in 2022, highlighting the economic importance of maintaining creative businesses in metropolitan areas. However, the same study shows that major cities are becoming less appealing to the creative sector (Media Perspectives, 2023). Historically, cities like Amsterdam dominated the creative sector. However, there is a noticeable migration of creative professions to smaller cities and other areas of the Netherlands. For example, the Monitor Creatieve Industries 2023 notes that major cities' traditional benefits, such as concentrations of talent and resources, are gradually becoming drawbacks. High living expenses and a lack of cheap working spaces are forcing creative workers away from cities. With the future of creatives in the city in peril, what implications does this hold for the future of Minervahaven as a mixed-use creative area? What are certain trends and processes that might affect the future of the creative sector in terms of work activities? Given that the term 'creative sector' is broad and has evolved significantly over time (Boterman & Bontje, 2016, van Aalst et al., 2013), it is reasonable to assume that creative workspaces are shaped not only by their physical structures but also by the evolving definitions

and perceptions of those who use and design them. The term 'morphology' effectively captures the dynamic interplay between tangible aspects—such as architectural design, spatial organization, and infrastructure—and intangible elements, including cultural, social, and economic factors attributed to these spaces. Therefore, this research will examine the evolving morphology of creative workspaces, using Minervahaven as a case study. Specifically, this research aims to address the following sub questions:

1. What is the status of creative workspaces in Minervahaven?
2. What do various experts in spatial planning mean by the term 'creative sector'?
3. How do experts perceive the concept of the 15-minute city in urban development and to what extent does the concept contribute to the formation and functioning of creative clusters?
4. What do experts identify as the key success factors in the redevelopment of mixed-use creative clusters, particularly regarding creative workspaces and the future of work in urban settings?
5. How do the users of Minervahaven perceive the neighborhood in terms of connection to the area and relationships with other businesses?

The structure of this thesis is organized as follows: Initially, several key concepts from the literature will be explored, including the definition of the creative sector and creative clusters, the future of work in creative clusters and the 15-minute city concept. This comprehensive framework will provide the theoretical foundation for the study. Following this, an in-depth explanation of the research methods employed in this study will also be provided, outlining the data collection and analysis techniques used to address the research questions. The subsequent chapters will present the empirical findings, structured around the main sub-questions of the research. Each chapter will systematically review and interpret the results, providing insights into the current state of creative workspaces in Minervahaven and the prospects of creative clusters. Finally, the thesis will conclude with a thorough conclusion and discussion, summarizing the key findings, addressing the research questions and offering recommendations for future research.

Chapter 2: Theoretical framework

This research aims to identify the evolving morphology of creative workspaces. Therefore, this theoretical framework shifts from a worker-based to a cluster-based viewpoint, explaining the relationships between employees, employers and third parties. The nature of workspaces has evolved significantly over time. Traditional employment paradigms, typified by concentrated firms such as factories or offices with employees living nearby, have given way to more adaptable and hybrid workspaces. This transition has been primarily driven by digitization and other transformational processes (Eni et al. 2023; Kolade & Owoseni, 2022). As a result, this literature review will investigate the many processes that influence these changing dynamics.

The literature review starts with gaining a deeper understanding of the heterogeneity within the creative sector, with a focus on the critical role of creative clusters in fostering innovation. The examination then turns to the expansion of the gig economy and freelancer culture, as well as the consequences for creative workers. Furthermore, the spatial distribution of creative clusters and their implications for urban development are examined. This includes an investigation of how creative workers use non-traditional workspaces (cafes, co-working spaces e.g. third spaces) to contribute to thriving urban economies. The concept of the 15-minute city is proposed to demonstrate how closeness and accessibility in urban settings can meet the demands of the creative class, resulting in sustainable and innovative communities.

2.1 Definition of the Creative Sector

The creative sector is made up of a diverse array of businesses that operate primarily in the creative industries. These industries are distinguished by their use of creativity, cultural knowledge and intellectual property to produce goods and services with cultural, artistic, or entertainment value. Creative businesses can vary significantly in size, scope and function: ranging from individual artists and designers to large media companies and architectural firms (Hearn, 2020, Florida, 2005). Florida's (2005) analytical framework, employing occupational analysis, delineates the workforce into three primary classes: the Creative Class, the Working Class and the Service Class. The Creative Class engages in knowledge-intensive activities, the Working Class performs physical labor, and the Service Class provides routine services. Further, Florida (2005) segments the Creative Class into 'the super-creative core' and 'creative professionals'. The super-creative core encompasses individuals and entities directly involved in innovative processes, including those in computer and mathematical occupations, architecture

and engineering, the sciences, education, arts, design and media. In contrast, creative professionals utilize creativity within conventional roles across various knowledge-intensive industries, such as financial services, business management, high-tech sectors and legal and healthcare professions. These professionals leverage complex knowledge bases to address specific challenges, creatively navigating within their field's frameworks (Florida, 2005). The 'super-creative core' primarily focuses on problem-finding, whereas the 'creative professionals' prioritize problem-solving. Put simply, the creative professionals implement the ideas of the super-creative core. Van Aalst et al. (2013) use a definition based on a selection of skills used to perform either of these activities, the so-called 'narrow Dutch definition'. Jobs involved in research are classified into two categories: jobs that are involved in art and design are assigned to problem-finding, while jobs involved in consultancy, government and management were assigned to problem-solving. Even though this definition is more specific than the one used by Florida (2005), 487 professional activities could still be allocated to the creative class in the Netherlands (van Aalst et al., 2013). Florida (2003) also categorizes creativity into three domains: technological innovation, economic entrepreneurship and artistic-cultural creativity (see figure 3). He posits these domains as interdependent, each reinforcing and stimulating the others, thereby fostering an environment conducive to entrepreneurship. However, Florida (2017) later reflected critically on his earlier notions, acknowledging that his perspective was overly optimistic. He recognized that the emphasis on the creative class contributed to rampant gentrification, which he now sees as problematic. Relying solely on the creative class for urban revitalization fails to create a more inclusive and equitable urbanism (Florida, 2017).

Several critics push for a more fine-grained classification of workers to define the broad notion of the creative class. It is unclear if a 'creative class' exists, whether it is a single 'class' or a diverse group of sub-categories with varied residential tendencies and to what degree its members differ from other higher-educated workers. Many scholars argue that even though Florida (2005) differentiates the 'creative class' into two sub-categories, the differences in residential preferences or lifestyles between the two categories remain underexplored. To investigate the residential preferences of the creative sector, Boterman and Bontje (2016) conducted a study examining the housing choices of employees in technical and creative firms. The findings show that higher-educated workers had distinct home choices in four major areas: dwelling type, residential milieu, relative location and the value of certain facilities. The study validates part of the initial premise about the creative class's urban preference. Specifically,

creative professionals prefer metropolitan areas and place a higher value on closeness to the city core than technical workers. Technical professionals place a higher value on accessibility and closeness to the workplace than other worker groups do. When it comes to balancing home qualities, technical workers are more likely than creative workers to select a large suburban house over a smaller urban flat. The value of various facilities is another important consideration. The results also show substantial disparities between the two groups in this regard (Boterman & Bontje, 2016). Creative professionals value cultural amenities like theaters, cafés and museums more than technical workers. This differentiation highlights the distinctive residential and lifestyle preferences of the higher-educated workers, which mirror the unique requirements and values of the creative and technical industries.

In summary, creative businesses constitute a crucial segment of the creative economy, embodying a confluence of arts, culture and commerce. Despite their diversity, these enterprises share core attributes of innovation, cultural expression and the generation of economic value through intellectual property (Florida, 2003; Florida, 2005; Hearn, 2020). However, Florida (2017) later acknowledged the repercussions of overemphasizing attracting the creative class to cities, including gentrification and urban inequality. Critiques and studies, such as those by Boterman and Bontje (2016), highlight the need for more complex categorization. Their findings show that creative and technical professionals have significant different home preferences and lifestyle choices, demonstrating that the creative class is not homogenous. These studies emphasize the creative class's unique lifestyle and residential choices, which highlight the need for further study on the formation of creative clusters.

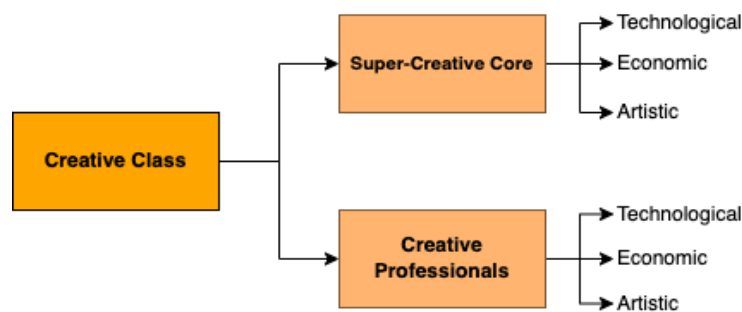


Figure 3: Division of Florida's (2005) Creative Class into two categories: the Super-Creative Core and the Creative Professionals, together with the categorization of both domains into three subdivisions of creativity.

2.2 Creative clusters

The integration of creative individuals within local communities, as well as their connectivity to professional networks, are critical in driving social and cultural advancement. Urban creative spaces are important in these settings, positing that their vibrancy fulfills the needs of the creative class (Florida, 2005). Similarly, the spatial attributes of creative production neighborhoods are critical, providing both symbolic and material resources essential for creative endeavors (Martins, 2017). The size and design of buildings create suitable environments for work, related activities and living. A fundamental aspect of the synergy between creative production and spatial dynamics is the centrality of social activities within the creative work process, which unfold not only within formal workplaces (such as offices) but also across semi-public and third spaces (Martins, 2017). Venues such as cafes, bars and restaurants serve multifaceted roles, contributing to a thriving and diverse economy that invigorates street life with dynamism and diversity. These settings are recognized not merely as social hubs but also as strategic sites for professional interactions, where cafes emerge as dense, accessible and cost-effective locations that blur traditional boundaries (Martins, 2017). The influence of physical locales on the distribution of skills and economic outcomes across cities and metropolitan areas is further underscored by Mellander and Florida (2021). The creative class is drawn to certain places because of the availability of amenities, high quality of life, academic institutions and diverse populations. These locales consequently transform into epicenters of innovation and economic vigor, underscoring the intrinsic link between creative talents and the spatial context in which they operate (Mellander & Florida, 2021). Theories that underscore the role of culture in shaping urban landscapes, especially within the idea of the 'Creative City', have gained prominence in urban redevelopment since the 1990s and into the early 21st century (Segovia & Hervé, 2022). The cultural dimension of urban environments is receiving heightened attention, with numerous cities and regions formulating policies to nurture this domain. Even though the concept of the 'Creative City' is widely accepted in urban policies, the precise definition remains unclear (Chapain & Sagot-Duvaroux, 2020; Kong, 2014; Segovia & Hervé, 2022).

Much research has been done on the concepts Cultural/Creative Quarters/Clusters/Districts (CCC) as strategies for local development over the past three decades (Chapain & Sagot-Duvaroux, 2020). These terms refer to specific areas within cities where cultural and creative industries are concentrated, leveraging local culture and expertise for economic and social benefits. 'Cultural or Creative Districts' often refer to the Italian industrial district model of the

1970s, which depicts a network of small enterprises in similar industries linked by local culture and expertise. These areas serve as hubs for one-of-a-kind commodities based on creativity and intellectual property, with businesses including film, industrial design and museum services. They are distinguished by physically marked borders inside metropolitan centers, a diverse range of cultural organizations and the incorporation of public art, all of which contribute to long-term economic benefits through the collaboration of private and public sectors (Chapain & Sagot-Duvaroux, 2020; Santagata, 2002). Like cultural districts, 'cultural quarters' set themselves apart with their physical territory or administrative limits. These quarters are dedicated to cultural undertakings and often include a mix of production and consumption spaces. This colocation promotes economic diversity and cultural vibrancy, resulting in dynamic urban landscapes that serve both the community's economic and social needs. 'Creative Clusters' cover a larger range of definitions and interpretations. Some adhere to Porter's (1998) economic cluster theory, emphasizing agglomerative economies and value chains while primarily addressing the production element of cultural and creative sectors. Nonetheless, the term 'Creative Cluster' is also applied to urban revitalization initiatives that include cultural components, thereby blurring the lines between geographical and urban planning dimensions and the broader notion of cultural quarters, which embrace both cultural production and consumption alongside economic, cultural and social dynamics (Chapain & Sagot-Duvaroux, 2020). Although some clusters and quarters emerge organically, many are products of public, top-down initiatives. While certain scholars concur on these notions, others employ them divergently, often without elucidating their choice of terminology, leading to ambiguity and overlap. This variation may stem from different academic disciplines (such as geography, urban planning, or economics), geographic origins, or the specific locales under study, further complicating the discourse surrounding CCC (Chapain & Sagot-Duvaroux, 2020).

In the same light, the complexity of the interchangeability of 'cultural' and 'creative' industries (the 'creative turn') has been highlighted in academic research (Kong, 2014). Over the years, urban policies have been framed differently in terms of the creative turn. Originally defined by the Frankfurt School, the 'culture industry' concept emphasized standardized cultural products serving capitalist interests. Over time, this evolved into 'cultural industries,' recognizing a broader range of sectors involved in cultural production. In the late 1990s, the UK government popularized the term 'creative industries,' expanding the concept to include sectors like entertainment and design (Kong, 2014). Researchers have criticized the overly broad and somewhat uncritical embrace of the term 'creative industries', highlighting specific issues that

require attention, including the difficulty of defining and measuring the economic impact of creative industries, the risk of undervaluing genuine creativity and culture, the commodification of culture and the precarious nature of creative labor (Kong, 2014). The phrase 'creative industries' lacks theoretical soundness, posing practical obstacles to policy implementation. Thus, research calls for a return to the idea of 'cultural industries' to better understand and support the cultural sector (Kong, 2014).

2.3 Impact of creative clusters

The scholarly discourse extensively recognizes the significant role of creative clusters in contributing to innovation and economic prosperity (Florida, 2003; Dellisanti, 2023; Santagata, 2002; Madudová, 2017; Mellander & Florida, 2021). Research claims that creativity serves as an indispensable element for research and development (R&D), underscoring the intricate complexities of modern production chains that necessitate innovative approaches. In this context, creativity serves as a catalyst for innovation in products or processes, creating a mutually beneficial relationship where we conceptualize innovation as the concrete expression of creative efforts (Dellisanti, 2023). Innovation encompasses the introduction of novel processes, products, managerial techniques and market expansions, fundamentally revolving around the ideation of novel solutions within the product and process value chain. Consequently, creativity and innovation are often perceived as concurrent phenomena, reinforcing each other in the continuum of idea generation and application (Dellisanti, 2023). Crucially, culture has a crucial role in shaping creativity, suggesting that cultural contexts significantly influence cognitive processes and, by extension, the nature of innovation. This perspective aligns with Santagata's (2002) assertion that innovation within creative clusters is inherently rooted in cultural dynamics, implying that sectors characterized by profound cultural affiliations are more predisposed to innovation. Noteworthy sectors within creative clusters include book publishing, cinema, music, radio, television and newspapers, which synergize various cultural elements across music, performing arts, digital technologies and literature. These sectors contribute to the cultural landscape, potentially altering societal perceptions and anticipations through influential cultural productions such as music, literature and film (Dellisanti, 2023).

The examination of the impact of creative clusters extends to the spatial concentration of creative industries into regional clusters (Mellander & Florida, 2021). Such clustering facilitates

informational exchanges and collaborative synergies, thereby augmenting economic vitality within these domains. The impetus behind these clusters includes adaptability, creative collaboration and networking, underscoring the strategic importance of attracting and retaining creative talent for fostering innovation and economic advancement. This necessitates investments in enhancing living standards, promoting diversity and developing infrastructure that caters to the requisites of the creative demographic (Mellander & Florida, 2021). Madudová (2017) also posits that cultural and creative enterprises act as catalysts for innovation across various sectors, primarily due to their propensity for collaboration. The landscape of cultural and creative industries is predominantly marked by a plethora of small-scale enterprises and a significant presence of self-employed professionals, rendering collaboration an indispensable factor for organizational success. This collaborative ethos is particularly advantageous when creative entities engage in extensive networks, fostering robust partnerships with suppliers, clients and other stakeholders within the demand and supply chain (Madudová, 2017). From a business strategy perspective, comprehending the value chain dynamics of local or regional creative industries emerges as crucial (Horng et al., 2015). The value chain construct, encompassing primary activities of business operations such as logistics, operations, marketing and sales, alongside supportive endeavors like infrastructure and human resource management, serves as a lens through which the generation of value within an enterprise can be analyzed. This analytical journey spans from the genesis of products and their creators through distribution channels, culminating in consumer engagement (Horng et al., 2015). Nevertheless, the application of this conventional model encounters limitations when transposed to the creative and cultural industries (CCIs). Initially, CCIs bear resemblance to the service economy and are frequently typified by relatively small organizational sizes. In contrast to manufacturers of tangible goods, which depend on physical inputs and substantial capital investments, service-oriented firms emphasize human capital as the cornerstone of value creation. Moreover, the traditional value chain paradigm inadequately captures the nuanced roles and interrelations prevalent within CCIs, wherein cultural products embody both symbolic and material dimensions. Additionally, it is imperative to acknowledge that technology, while instrumental, does not solely drive the proliferation of cultural commodity production. The notion that value generation is exclusively the purview of frontline creative personnel overlooks the significant inputs from upstream activities in CCIs, such as digital content production and specialized knowledge, which are integral to the knowledge-based economy (Horng et al., 2015). After analyzing three businesses from different sectors in the creative industry, Horng et

al. (2015) suggest a culture-based value chain (figure 4) that includes six important components for creating value: culture, ideation, design, production, branding and channel. The first two components serve as the framework for the next four value activities, which produce value for consumers. Culture and Ideation are support activities, whereas Design, Production, Branding and Channel are key activities.

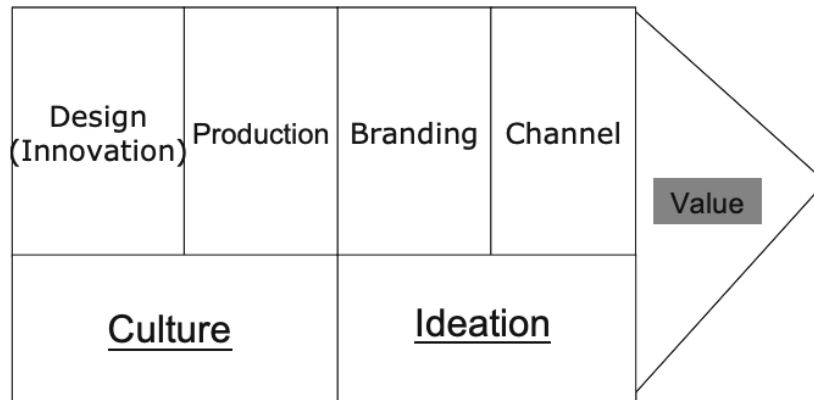


Figure 4: Visualization of Culture's Creative-Based Value Chain by Horng et al. (2015).

These subchapters emphasized the critical importance of creative clusters in promoting innovation and economic growth through cooperation, networking and idea sharing (Florida, 2003; Dellisanti, 2023; Santagata, 2002). The concentration of creative businesses in regional centers promotes these synergies, resulting in a thriving creative ecosystem (Mellander & Florida, 2021). Furthermore, the relationship between cultural surroundings and innovation emphasizes the need for measures that promote creative clusters and ensure their long-term economic contribution (Santagata, 2002). Thus, understanding the value chain dynamics—which include culture, ideation, design, manufacturing, branding and channels—is critical for organizations in the creative industries to maximize their potential (Horng et al. 2015).

2.4 Future of work in creative clusters

As mentioned before, the interaction between creative production processes and space transcends the confines of traditional workspaces, extending to (semi)public spaces and third spaces (Martins, 2017). The advent of sophisticated technology that facilitates mobility in work practices has amplified the frequency and diversity of work activities executed across varied

geographical locales. This development suggests that conventional work tasks may increasingly integrate production within urban spaces, which implies a rethinking of what defines labor and an expansion of the creative workplace (Martins, 2017; Hearn, 2020).

In general, the expansion of the gig economy and freelancer culture has necessitated a shift in traditional work and employment paradigms. A gig economy is a labor market that focuses primarily on temporary and part-time work performed by independent contractors and freelancers rather than full-time permanent employees. This has resulted in changing management practices within these new labor market dynamics, including the surge of platform work and freelance talent dependency (Eni et al. 2023). Digital technologies, particularly Industry 4.0, have also influenced the changing labor market (Kolade & Owoseni, 2022). The rise of the gig economy and flexible work arrangements is part of Industry 4.0, which has transformed jobs in a variety of industries by requiring new skills and modifying responsibilities. This has indicated a shift away from traditional employment structures. As we get closer to Industry 5.0, the critical significance of evidence-based policy in addressing disparities in digital transformation may intensify (Kolade & Owoseni, 2022). These new ways of organizing labor have also had spatial impacts, notably in the development of co-working spaces. The urban gig economy has changed the physical landscape of workspaces in cities, making occupations more available to a broader spectrum of individuals, for example through app-based employment (Friedman, 2023). Furthermore, organizations such as Open University have pioneered distance learning, thereby increasing access to higher education and numerous vocations in the digital world. The COVID-19 epidemic established the viability of remote work and learning from home, disrupting traditional concepts of workplaces because of the fast change to internet platforms (Friedman, 2023). This digital change has shifted work choices, increasing the demand for coworking spaces and extensive options for remote working. Despite the benefits of remote work, physical coworking spaces remain popular for their social and collaboration benefits. These places provide remote workers, independent freelancers and company owners with the social connection and productivity benefits that home offices frequently lack. Different professions have different preferences for coworking, but these places successfully mix the advantages of typical office surroundings with the freedom of remote work. Physical closeness improves cooperation and efficiency and many people like developing new ties with coworkers (Friedman, 2023).

Coworking spaces are favored by the creative sector because they foster collaborative and innovative ecosystems (Martins, 2017). These spaces benefit from being near other workers from the creative sector, creating synergies that enhance their productivity and creative output. As Coll-Martínez and Méndez-Ortega (2023) demonstrated in Barcelona, co-working spaces are predominantly concentrated in central areas. These locations provide greater opportunities to interact with consumers and suppliers, offer proximity to metropolitan amenities and are associated with a distinct place-image. Furthermore, they tend to collaborate with businesses in the creative industries, particularly those that rely on symbolic and synthetic knowledge (Coll-Martínez and Méndez-Ortega (2023).

When looking at the future of work and how it is reshaping the creative sector, digitalization and the expansion of intangible capital appear to be prominent in this process. The digital drivers of future technological evolution include not only purely digital elements like software, platforms, applications, machine learning, artificial intelligence (AI) and chatbots, but also digitally enabled mechatronic agents like 3D printing, drones, autonomous camera systems and robots (Hearn, 2020). These advancements impact all stages of the creative economy supply chain, from product design and production to consumer attraction and consumption management (branding and channel, see figure 4). The process of change in creative work is multifaceted, involving technological progress alongside significant social, institutional and cultural shifts. This complexity affects the types of organizations that will host creative work in the future. Different sectors within the creative economy, such as cultural output and creative services, consist of various organizational constellations that influence the nature of work—whether formal, informal, or portfolio-based. The trend towards casualization and contract-based work is emerging as an alternative to permanent positions due to digitalization. At the same time, some creative firms are leveraging permanent roles to attract and retain high-value talent. While autonomous systems may reduce the need for human labor in routine production tasks, they simultaneously increase the demand for labor to develop, create and operate these systems (Hearn, 2020).

This subchapter examined the evolving nature of work in the creative sector, highlighting the significant impact of digitalization and the gig economy on employment practices. The increasing integration of advanced technologies and the rise of co-working spaces have transformed traditional workspaces, fostering collaborative environments that are particularly

beneficial for creative industries. Studies indicate a shift towards flexible, contract-based work, with creative professionals favoring urban areas rich in cultural amenities (Coll-Martínez & Méndez-Ortega, 2023; Hearn, 2020; Martins, 2017)

2.5 15-minute city and creative clusters

In addition to increasing digitalization and the expansion of the gig economy, the concept of the 15-minute city has also influenced the debate on the future of workspaces (Di Marino et al., 2023). The 15-minute city concept, based on the work of Moreno et al. (2021), proposes that individuals should be able to access six essential urban functions—living, working, education, commerce, entertainment and healthcare—within a 15-minute walk or bike ride from their homes. The feasibility of the 15-minute city is defined by four essential pillars: density, diversity, proximity and digitalization (see figure 5).

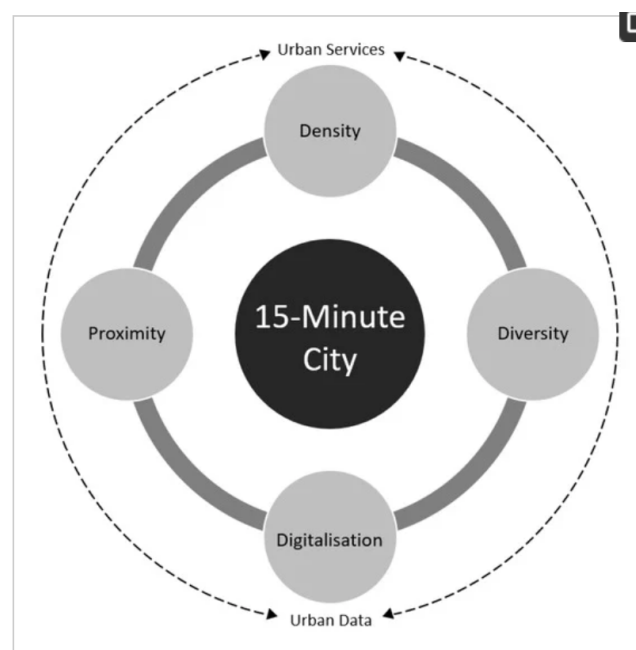


Figure 5: Visualization of the 15-minute city concept by Moreno et al. (2021).

Historically, urban design frequently entailed segregating workplaces from residential areas. This modernist paradigm divided urban activities into four different zones: habitation, employment, leisure and movement. Recently, the COVID-19 pandemic has triggered the planning debate, and the concept of merging work and residential areas has gained traction (Pozoukidou & Chatziyiannaki, 2021). The pandemic has underlined the need to localize workplaces, making them as accessible as other critical urban services. This move is critical

because commuting from home to work is a long and often inflexible daily activity. The pandemic-enforced shift to remote digital working has transformed traditional office functions and inflexible workspaces into a variety of hybrid work patterns tailored to individual tastes and requirements. In this new setting, urban planners are looking at methods to design spaces that abolish the home-office boundary. This transition might entail adding new working spaces (NWS), establishing co-working hubs, or reworking existing office spaces to better serve the community's requirements, resulting in a more integrated and sustainable urban living environments (Pozoukidou & Chatziyiannaki, 2021).

Living and working within a 15-minute radius can have a significant impact on routines, mobility patterns and the use of urban areas, including non-traditional workplaces within creative clusters. Creative clusters, which bring together various creative industries in a concentrated area, benefit from the principles of the 15-minute city, as they thrive in environments that are accessible, diverse and densely populated with amenities that support creative work. However, from a planning perspective, there is limited knowledge about the integration of the 15-minute city concept with creative clusters and new working spaces, such as coworking spaces and third spaces that provide both formal and informal work environments. Di Marino et al. (2023) address this issue in the context of two European cities: Lisbon and Oslo. Their study found that the distribution of new working spaces was uneven across both cities, potentially hindering the realization of the 15-minute city principle, which emphasizes the importance of living and working within the same neighborhood. For the 15-minute city concept to be effectively implemented in creative clusters, urban development strategies must consider the role of new working spaces. This includes fostering environments where creative clusters and new working spaces can thrive in various neighborhoods, thus supporting the concept of living and working in the same area and enhancing urban vitality (Di Marino et al., 2023). By ensuring that creative clusters are well-integrated into the 15-minute city framework, cities can promote sustainable and vibrant communities that cater to the needs of the creative sector.

While the goals of the 15-minute city are admirable, recent criticism has pointed out that in most cities, only a small percentage of already wealthy urban inhabitants have the chance to live in such areas. The influence of age-related and temporal changes on walking accessibility landscapes exacerbates the problem. A study by Willberg et al. (2023) found that age, day- or nighttime and seasonal fluctuations greatly restrict walking access, both alone and in combination. Short walks to everyday utilities may become impractical at times or completely

out of reach for certain groups of urban inhabitants, notably for the elderly. This study, conducted in the Helsinki Metropolitan Area, represents a context with a relatively high modal share of sustainable travel and good accessibility, like Amsterdam. Koljensic (2022) researched whether Amsterdam could be considered a 15-minute city. To analyze this, he calculated a 15-minute index that divided the city into small areas of 100 by 100 meters and measured how quickly essential services can be reached by walking or biking (see figure 6). First of all, residents in the center of Amsterdam benefit the most from the 15-minute city idea because of the density and range of services available in their area. Cyclists, in particular, have access to a large selection of services within the 15-minute window. However, the situation is very different for residents in the outskirts of the city and residents with non-Western backgrounds, which is also visible according to the difference in the colors of figure 6. These groups confront significant obstacles, with many unable to get basic services within 15 minutes. These findings highlight the limitations of the 15-minute city concept in meeting the needs of all urban dwellers. Overall, the research finds that socioeconomic criteria, such as age and background, impact accessibility considerably. When compared to other groups, elderly inhabitants and those from non-Western origins access fewer amenities within 15 minutes. Furthermore, geographic differences also have an important influence. The 15-minute city concept is less efficient on Amsterdam's outskirts, where key services are less easily accessible by foot or bike. The study's findings resonate with criticisms of the 15-minute city concept, suggesting it may exacerbate existing urban inequalities. Koljensic (2022) highlights that while the concept promotes sustainability and accessibility, it also risks reinforcing socio-economic disparities if not carefully implemented.

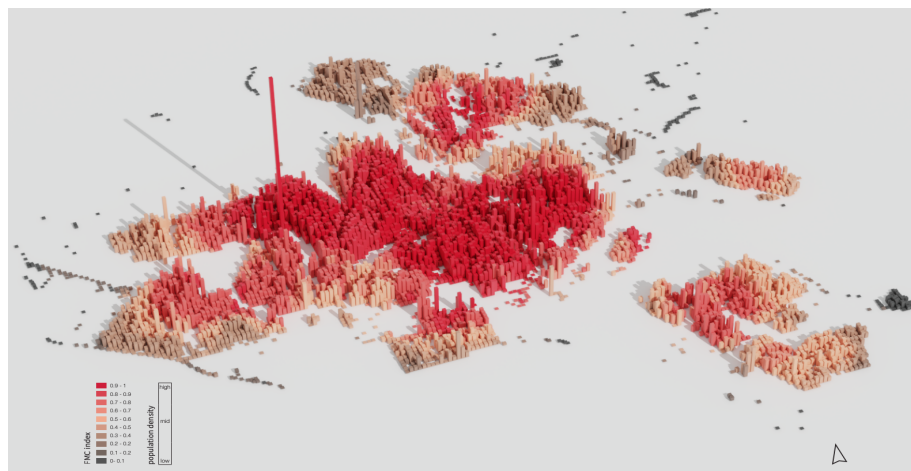


Figure 6: The 15-minute city index for every square 10000 m2 in Amsterdam. Source: Koljensic (2022).

2.6 Conceptual model

Based on the concepts explained in the theoretical framework and the objective of this research, the following conceptual model was made:

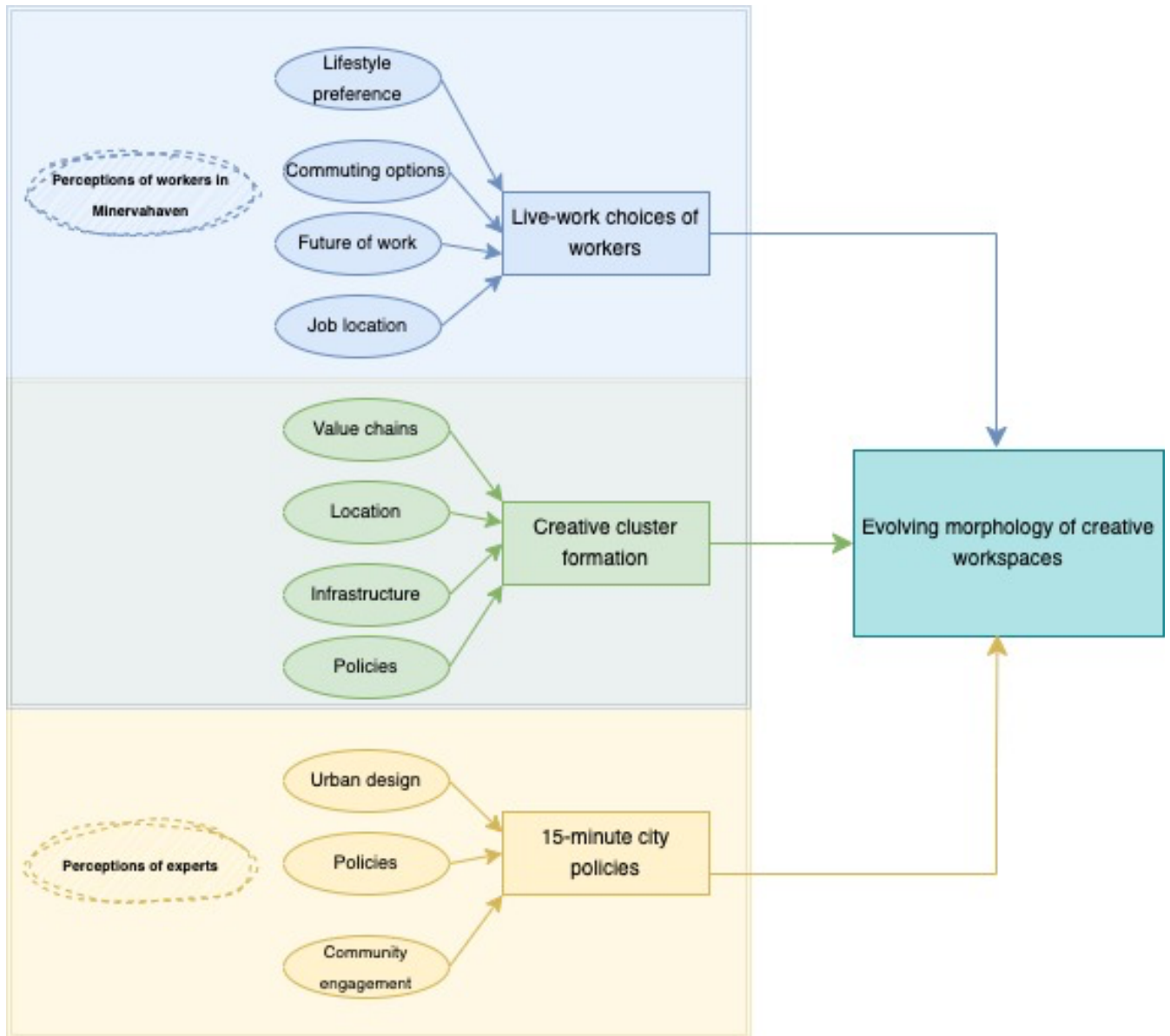


Figure 7: Conceptual model.

The evolving morphology of creative workspaces is based on three important pillars: the live-work choices of workers, creative cluster formation and 15-minute city policies. The first pillar, the live-work choices of workers, can be operationalized through lifestyle preferences,

commuting options, future work plans and job location. These factors all influence the choices of workers as to where to live with respect to their work location. The second pillar, creative cluster formation, can be operationalized through the value chains of the cluster, location, infrastructure of the location and policies by municipalities that influence innovation in clusters. These factors influence the extent to which businesses geographically concentrate in specific areas. The third pillar, 15-minute city policies, can be operationalized through urban design (mixed use development for example), policies that incentivize businesses to locate in a certain area and the engagement of the community in creating healthy and dense urban areas.

The live-work choices of workers can be defined through the perceptions of workers in Minervahaven (blue) and 15-minute city policies can be defined through the perceptions of experts (yellow). However, as creative cluster formation is defined both through the perception of workers in Minervahaven and through the perception of experts, the color of that pillar is green.

Chapter 3: Research design and methodology

The objective of this research is to examine the evolving morphology of workspaces within the creative sector, using Minervahaven as a case study. Based on the literature review and the background study of Minervahaven, the following sub-research questions have been formulated:

1. **What is the status of creative workspaces in Minervahaven?** This will involve assessing the existing work environments and facilities available to creative professionals in the area.
2. **What do various experts in spatial planning mean by the terms 'creative sector'?** This will explore definitions and interpretations of the creative sector from the perspective of various experts in the field of spatial planning and creative redevelopment.
3. **How do experts perceive the concept of the 15-minute city in urban development and to what extent does the concept contribute to the formation and functioning of creative clusters?** This will evaluate the potential impact of the 15-minute city model on the development and operational dynamics of creative clusters.
4. **What do experts identify as the key success factors in the redevelopment of mixed-use creative clusters, particularly regarding creative workspaces and the future of work in urban settings?** This will focus on identifying the elements that contribute to the successful development of future mixed-use creative clusters.
5. **How do the users of Minervahaven perceive the neighborhood in terms of connection to the area and relationships with other businesses?** This will gather insights from the people working in Minervahaven about their sense of business environment and inter-business relationships.

By analyzing these sub questions, this research will provide a comprehensive understanding of the current appearance of creative workspaces in Minervahaven, the evolving definition of the creative sector, the perceptions of local users and the implications of the 15-minute city concept on urban development and creative clusters

3.1 Research design

This research uses a mixed-methods methodology to present a thorough investigation of the evolving morphology of workplaces in the creative sector, with a particular emphasis on

Minervahaven. The study design uses both qualitative and quantitative methodologies, such as observations, results from a survey and expert interviews. The triangulation of data sources contributed to the robustness and validity of the results reached.

3.2 Methodology

1. Observations

The main goal of conducting observations at Minervahaven was to get firsthand knowledge of the area's physical and social dynamics, namely its role as a creative cluster. Systematic observations were conducted at Minervahaven Noord B and Minervahaven Zuid B. These observations sought to comprehend the various sorts of companies there, the physical layout, relationships between businesses and the overall environment of the area. Field notes and images obtained during the observations were thematically examined afterwards to discover important patterns and insights about the operation of Minervahaven as a creative cluster. This investigation contributed to a better understanding of the geographical and social arrangements that promote creative activity.

2. Survey

In addition to the observational data, a survey was conducted to acquire data on the attitudes and experiences of workers from Minervahaven. The target audience was made up of people from various creative firms in Minervahaven. With a sample size of 24 replies, the poll asked questions about how companies feel their connection to the region, their partnerships with other businesses and their perceptions of Minervahaven as a creative hub. This technique enabled us to quantify the cluster's degrees of connectedness and collaboration, resulting in a more comprehensive knowledge of its social and economic networks. The questions of the survey and the responses can be reviewed in Appendix 1.

3. Expert interviews

To acquire detailed qualitative insights into trends associated with creative redevelopment strategies, as well as the influence of the 15-minute city concept in these strategies, several in-depth interviews were conducted with experts within the field of urban planning. The interviews were conducted with 18 professionals, including

specialists in innovative redevelopment, urban planning and the creative industries. They focused on best practices for establishing creative clusters, the impact of digitization and other developments in structuring creative workspaces and the practical implementation of the 15-minute city idea in urban regeneration. These interviews gave useful insights into the strategic and operational elements of developing creative clusters. The interview questions can be reviewed in Appendix 2. All interviews conducted for this research were recorded with the explicit consent of the interviewees, solely for academic purposes. The names of the interviewees are documented in the transcripts; however, to ensure their privacy, these names are not used in the thesis. The written survey responses were analyzed using Atlas-ti, a qualitative data analysis program, to discover recurring themes and patterns in how companies see their connection to the area and their interactions with other businesses. This program made it easier to code and categorize data, allowing for a more systematic study of survey findings. Similarly, the interviews were transcribed and analyzed using Atlas-ti to identify common themes and insights on creative environment redevelopment and the 15-minute city idea. The analysis focused on gathering expert viewpoints on best practices and problems in building creative clusters, resulting in a thorough grasp of the subject topic. All quotes obtained from the survey and interviews were translated into English. These quotes are used across the chapters to support the findings while keeping the interviewees' identities. To distinguish amongst responders, only their occupations are stated.

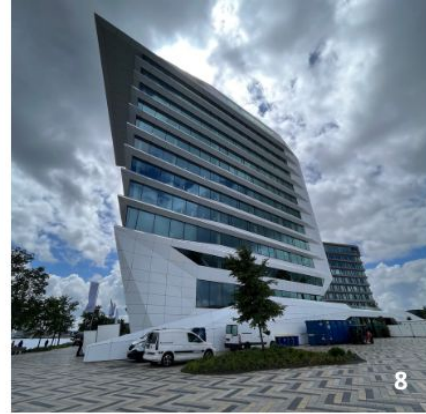
Chapter 4: Current use of creative workspaces in Minervahaven

This chapter evaluates Minervahaven's existing layout using data firsthand observations and interviews. The purpose is to investigate the types of businesses in the neighborhood and the nature of their workplaces. Minervahaven is a location where a wide range of creative sectors are situated, including marketing, media, design and fashion. The area is divided into various parts, each with its own unique qualities and types of enterprises. Minervahaven Zuid-B is known for its eclectic mix of old warehouses refurbished for creative companies (see picture 5). In contrast, Minervahaven Noord-B consists of more typical office layouts and newer buildings, which results in a distinct form of business contact and street-level ambiance (see pictures 8 and 9).

Expanding upon this preliminary background analysis, observations were carried out on several days in the period from March to June. Numerous high-rise fashion enterprises have their headquarters in the densely populated Minervahaven Noord-B neighborhood (see pictures 8, 11 and 12). Barts and Fabienne Chapot are among the labels housed in the same building as Calvin Klein and Tommy Hilfiger. On the other hand, Minervahaven Zuid-B is less populated and has many low-rise office and storage facilities (see pictures 2 and 3). Minervahaven's physical layout is mostly car-centric, which makes it difficult for walkers and bikes to navigate (see picture 1). The majority of Minervahaven's current structure is made up of offices, workplaces and storage areas; the first residential buildings are in the nearby Houthaven neighborhood.



1. Physical layout of the Danzigerbocht.
2. Low-rise warehouse buildings in Minerhaven Zuid-B, located at the Danzigerbocht.
3. Bridge connecting entries of businesses at different levels.
4. Festival agency located in a former warehouse at Danzigerbocht.
5. Restaurant Borisov located at Rigakade.
6. Billboard advertisement for local cafe and club Yellow House.



7. Front view of business complex Salt.
8. Front view of PVH Europe.
9. Street view of Danzigerkade.
10. Distinction between buildings in Noord-B (left) and Zuid-B (right).
11. Front view of a business complex in Minervahaven Noord-B.
12. Front view of Barts office at Moermanskkade.

4.1 Observational findings

Observations revealed that big-name fashion brands and media companies dominate the business environment at Minervahaven Noord-B, with its densely packed semi-high-rise buildings (see pictures 8 and 12). The office buildings are all relatively new and middle high-rise, giving it a touch of a corporate feeling like Zuidas (see pictures 7 and 8). Furthermore, the lack of people walking around during the day reinforced the assumption that many of the firms in this area were internally focused on their work activities. On the other hand, Minervahaven Zuid-B fosters a more transparent and participatory atmosphere with its low-rise buildings and converted warehouses (see pictures 2,4 and 5). Numerous architecture and design firms are based in this area, making use of the adaptable rooms to facilitate creative work. It was striking that there were more billboards advertising a nightclub in Minervahaven in this area, whereas there was nothing promoted in Noord-B (picture 6).

4.2 Interview findings

Interviews with several employees in Minervahaven indicated that the boundary between Zuid-B and Noord-B greatly affects their impressions and experiences of the region. The corporate atmosphere and absence of common areas, which restricts contact between various enterprises, were mentioned by employees of a consultancy firm in Noord-B. On the other hand, an employee of a design firm in Zuid-B valued the innovative environment as well as the chances for cooperation and interaction with the neighborhood:

'Well, on that side, you have more of those new construction blocks. They often include technical features like ground-level parking garages or entrances to underground parking. In contrast, this street is lined with old warehouses now occupied by creative companies, creating a vibrant atmosphere at ground level. This area is very much defined by its address, so to speak.' (employee of design firm in Minervahaven Zuid-B, 2024)

'The Danzigerkade and the Harparandaweg consist of typical office buildings. By office buildings, I mean places where people arrive at nine o'clock, take the elevator to their workspace, spend eight hours working, perhaps take a short walk during lunch and then at five o'clock, take the elevator down, get in their car or on their bike and go home. This represents the traditional office setup, in my opinion.' (employee of consultancy firm in

Minervahaven Noord-B 2024).

Chapter 5: Defining the Creative Sector

Using expert interviews, this chapter explores multiple viewpoints on the definition and classification of the creative sector. The goal of talking to various experts about their definition of the sector is to gain a better understanding of how the creative sector manifests itself in contemporary urban development.

5.1 Perspectives on the Creative Sector

According to several interviewees, the creative sector is closely linked to culture and society, with art being a major component. This perspective starts with traditional artists but also covers professions in the marketing, media and fashion industries. However, some interviewees raise concerns about whether big businesses, like law firms, truly belong in the creative sector unless they have a distinct creative and inventive element. According to an alternative interpretation, the creative sector includes not just conventional 'makers' like designers and artists, but also businesses and people that use creativity to advance product innovation. This expanded definition of the creative sector includes workers at computer businesses who create novel solutions:

'My understanding of the creative economy is much broader than Richard Florida's definition. It is not just my perspective, but also that of many economists in the Netherlands. It encompasses any company where innovative thinking is applied to product development. For example, at Philips, known for its light bulbs, there are numerous innovative individuals. This type of activity also falls under the creative economy. It is not limited to artists and performers, as is typically perceived. Creative individuals are present in various sectors. We are all creative makers because we are constantly engaged in contributing new ideas to the economy. It is about what we can create intellectually.' (employee of Municipality of Amsterdam, 2024)

'For me, the creative sector is a profession engaged in design or creation, involving experimentation and testing, which encompasses a wide range of activities. This includes theater makers and graduates and students from the Design Academy, which is a significant group here in Eindhoven. It also includes photographers and, generally, a broad category of

professionals.' (urban planner with own firm, 2024).

'Now, as I mentioned earlier, it could be a law firm. Or consider Minervahaven, with all due respect. There are also many large companies located there. My architectural firm, with which I frequently collaborate, is situated there and employs 50 people. Is that considered part of the creative sector? The area hosts media, fashion and indeed, a significant amount of marketing. Yes, there is a substantial presence of marketing. Can this be classified as the creative sector? In my definition, the creative sector is more aligned with cultural and societal contributions, encompassing arts and similar domains.' (real-estate developer, 2024).

'What you mentioned is indeed something people can debate for ages. For me, creation involves making something truly new. It's about creating and there must always be an element of novelty involved. Otherwise, if you're just replicating something that has already been done, you're not truly being creative. In that case, you're merely reproducing existing work. I'm not sure if there's a better term for that.' (owner design firm in Minervahaven, 2024)

'However, when I look at Eindhoven, I refer to architectural firms. I am still uncertain whether we are considered a part of the creative sector. We are not makers in the traditional sense; we operate more as an office. Nonetheless, we regard ourselves as a creative enterprise. This includes furniture makers, Dutch media graphic designers, contract designers, material researchers, identity researchers and, of course, artists and autonomous creators.' (architect with own firm, 2024).

Additionally, a key distinction between applied and independent creative activity is highlighted. While applied work is more utilitarian and market-focused, autonomous work is typically created by artists. The distinction between creative firms and creative studios further impacts the sector's definition. The interviewees emphasize the distinct work environments of creative businesses, such as low-rent incubators or temporary offices. Moreover, based on the type of work (tangible versus intangible), a contrast is drawn between the 'clean' and 'dirty' creative sectors. It is also highlighted that, despite sometimes modest salaries, creative occupations support the economy through innovation and the creation of new products. The creative sector,

which includes a broad spectrum of occupations from novelists and photographers to small-scale atelier operators, is recognized as a significant economic and social force.

'Yes, there are many different classifications. I believe two factors are particularly important. First, when considering the maker's side, is the work autonomous or applied? Autonomous work is more aligned with artists, whereas applied work is more creative and functional. This distinction is crucial for me.' (financial advisor in creative entrepreneurship, 2024).

'And then, we notice that within our experience in various locations, we tend to differentiate between the 'dirty' and 'clean' sectors of the creative sector. This distinction, which I did not originate but was taught to me through my professional associations, is quite significant. For instance, the 'dirty' sector requires facilities such as spray booths and sawing stations, emphasizing the necessity for physical, hands-on work. Conversely, the 'clean' sector comprises individuals who can work behind a desk, such as environmental psychologists I recently encountered in a creative hub.' (architect with own firm, 2024).

5.2 Conclusion

The diverse perspectives underscore the multifaceted nature of the creative sector. The respondents gave a variety of definitions, from narrowly cultural and artistic to more broadly economic and inventive. The following is a summary of the main findings:

1. Broad and Varied Definitions: The creative sector encompasses both conventional artistic mediums and cutting-edge commercial techniques.
2. 'Clean' versus 'Dirty': There is a difference between creative occupations that produce intangible work (knowledge) and tangible work (artwork).
3. The spatial and structural characteristics of creative enterprises are typically determined by their workplace, which may include low-rent or incubator premises.
4. Innovation and Creativity in Traditional industries: If traditional industries use innovative techniques, they may also be regarded as creative.

5. Impact on the Economy and Society: Despite frequently having modest salaries, the creative sector employs a wide spectrum of professionals and makes a major contribution to the economy.

The primary conclusion of this research question, the diversified and dynamic nature of the creative sector, is consistent with Hearn's (2020) and Florida's (2005) definitions. Both references emphasize the diversity of the creative sector, which covers a wide range of activities and sectors. However, most respondents stated that the creative sector is inextricably linked with culture and society. This is consistent with Florida's (2005) classification of the Creative Class, particularly the super-creative core, which comprises artists, designers and media professionals. Florida (2005) also underlined the importance of the creative sector in terms of economic activity and social importance, despite the modest salaries of the workers, which also frequently appeared in the interview results. Furthermore, Florida (2005) and Hearn (2000) both support the inclusion of established sectors that use innovative methodologies, defining creative people as those who use sophisticated knowledge bases to meet unique difficulties. The dichotomy between the two types of work by the creative sector ('clean' versus 'dirty') is also relevant to Florida's (2005) distinction between 'creative professionals' and 'the super-creative core'. The applied work corresponds to creative professionals who apply creativity in traditional professions, whereas the autonomous work relates to the super-creative core that directs innovative processes. The emphasis on low-cost incubators and temporary workspaces for creative firms is consistent with Boterman and Bontje's (2016) research on the home and workplace choices of creative people. According to their findings, creative professionals place a high value on accessibility to urban centers and cultural facilities, which are frequently present in such flexible and affordable work environments.

Chapter 6: The 15-Minute City concept in urban development

This chapter investigates the diverse viewpoints of experts on the relevance and application of the 15-minute city idea in urban development. By examining a range of perspectives, this chapter aims to deepen the understanding of how the concept is perceived and its implications for spatial planning and community well-being.

6.1 Perspectives on the 15-Minute City

One expert points out that, while the 15-minute city is sometimes promoted as a novel foreign notion, many Dutch cities have traditionally followed similar principles. However, newer communities, such as Almere, may have departed from this paradigm, as they lack multifunctional urban designs that combine critical services in proximity. Another expert stated that the 15-minute city is being pushed as a novel concept, pointing out that this method should have always been standard practice in urban design. The concept that important services should be widely accessible has long been accepted as a basic requirement, especially in communities attempting to reduce automobile dependency. The expert advocates for a context-specific application of the concept, taking into consideration each neighborhood's unique needs and demographics, such as elderly residents who may require more accessible services. Another viewpoint emphasizes the role of human preferences and job positions in the feasibility and appeal of the 15-minute city. Individuals with young families rely heavily on work accessibility and key services to efficiently manage professional and personal duties. However, some individuals prefer a clear demarcation between work and home life, often achieved through extended commutes. Another expert mentioned that they did not feel attracted to working close to home as they have been working for a long time in the same sector. They stated that younger workers would prefer to work in the same environment as their homes, closer to various amenities. This diversity in tastes implies that, while the 15-minute city may be excellent for some, it may not be appropriate for everyone's lifestyle. In a similar vein, a different interviewee emphasizes the need for setting realistic expectations and being flexible while executing the 15-minute city concept. For example, in Rotterdam, some areas face 'travel poverty,' making it impossible to achieve the 15-minute threshold universally. The notion can be effective as a marketing tool, but it must be based on inhabitants' actual demands and the appropriate mix of living and working areas. This viewpoint highlights the significance of adapting urban design to the unique surroundings and communities of each city.

'Well, it is essentially an international concept that we already partially implement in the Netherlands. If you think about it, many cities are already organized this way. However, in newer cities like Almere, this has somewhat been overlooked, resulting in multifunctional setups that do not adhere to the 15-minute city concept and heavily rely on connectivity to Amsterdam, which is not ideal.' (real-estate developer, 2024).

'I find the concept of the 15-minute city quite peculiar. I thought this was something we already understood—ensuring that essential services are available within 15 minutes. It frustrates me that this has suddenly become a new theory, praised as a fantastic discovery by urban planners. This was simply your job, something you should have already implemented. You allowed things to deteriorate and now someone suddenly realizes that having essential services within 15 minutes is a good idea. It really irritates me, especially in a city that claims to prioritize reducing car dependency. How else do you expect people to manage?' (entrepreneur in area-development consultancy, 2024).

'I support the creation of human-scale neighborhoods, but not everything needs to be reachable within 15 minutes. For example, in Rotterdam, there is significant travel poverty in Zuid and it is unrealistic to expect every neighborhood to meet this standard. While the concept of the '15-minute city' can serve as an effective marketing tool, it is crucial to focus on the actual needs of residents and the balance between living and working.' (entrepreneur in area-development consultancy, 2024).

'If you are ever less mobile, try navigating this city—it's nearly impossible. It should be a standard practice to design cities this way. You need to consider the specific needs of each community, as they are not the same everywhere. What does this community need within 15 minutes? If a neighborhood is more car-dependent, it might require a different layout. The same goes for different demographics, such as elderly residents.' (entrepreneur in placemaking, 2024)

6.2 15-Minute Cities and the Creative Sector

The 15-minute city concept influences the creative sector, fostering interactions and collaborations within creative communities and in turn, creative individuals and the functioning of creative clusters also enhance the implementation of the 15-minute city concept in urban settings. One expert emphasizes the need to establish clusters with tiny offices and common areas to stimulate interactions between specialties. However, they warn that meaningful contact necessitates workers leaving their secluded work settings. They point out that while certain firms, such as Tommy Hilfiger, provide elegant offices, this does not always foster true community development. Instead, there should be more emphasis on creating common areas that promote cooperation and creativity. Another viewpoint emphasizes the importance of varied, inclusive communities that support a wide range of creators, whether they are officially classified as part of the creative sector or not. This covers not just artists and designers but also practical occupations such as tailoring. The expert advocates for a comprehensive approach to urban planning in which everyone, regardless of professional status, has a place and can contribute to the community's vitality. This inclusion is critical to sustaining a dynamic and supportive atmosphere in which creative and non-creative professions may coexist and prosper.

'However, for meaningful interaction between different disciplines, companies need to step out of their silos. At companies like Tommy Hilfiger, employees are pampered, but to foster genuine interaction, there should be less emphasis on luxury and more on community building. Nonetheless, the municipality has limited influence over how companies design their workspaces.' (entrepreneur in placemaking, 2024).

'A maker, whether creative or not, contributes in various ways and has different needs. Depending on the type of maker, you need a diverse range of people in your neighborhood. Artists, for instance, operate from a sense of wonder and the essence of creation. You cannot aspire to be a city of museums and art without supporting artists in local communities. The same applies to tailors—it is beneficial to have a variety of professions available. While a tailor repairing clothes might not seem creative, there are also creative tailors. It's about perspective. [...] If someone needs a workspace and feels connected to the community's vibe, they should be welcome. This approach is more about personal inclusivity rather than

professional necessity.' (entrepreneur in area-development consultancy, 2024)

6.3 Conclusion

The implementation and effectiveness of the 15-minute city idea in urban development, particularly in creative clusters, bring both potential and obstacles. Experts point out that, while the 15-minute city is frequently marketed as a revolutionary concept, numerous Dutch communities have long used similar ideas. Experts also emphasize the need of context-specific application, considering each neighborhood's distinct requirements and demography, a viewpoint shared by Di Marino et al. (2023), who emphasize specialized urban development plans. Furthermore, while the 15-minute city model is appealing to some, it may not be suitable for everyone's lifestyle, as stated by Willberg et al. (2023), who found substantial effects of age-related and temporal differences on accessibility. For example, the practicality and desirability of the 15-minute city differ greatly; young families may benefit from closeness to work and important amenities, while others prefer a clear separation of work and family life.

In terms of the creative sector, the 15-minute city concept can have an impact on engagement and collaboration among creative industries. However, difficulties persist, such as 'travel poverty' in cities like Rotterdam, making it impossible to reach the 15-minute criterion generally. This approach emphasizes the need of tailoring urban design to each city's distinct surroundings and communities (Di Marino et al., 2023). Furthermore, Koljensic (2022) emphasizes that, while the 15-minute city enhances sustainability and accessibility, it also risks exacerbating socioeconomic gaps if not correctly implemented. Residents in central Amsterdam benefit the most from the 15-minute city because of its dense and diversified amenities, especially bikers. However, people on the outskirts and inhabitants from non-Western origins face considerable barriers to receiving essential services within 15 minutes. These findings emphasize the need to take socioeconomic factors into account when developing an urban area.

Chapter 7: Success factors in the redevelopment of future creative clusters

This chapter delves into the various success criteria for establishing creative clusters in the future, based on expert input. The chapter is structured into several parts. First, it reviews the challenges of integrating different functions in urban areas in general, drawing on insights from various experts. This is followed by an examination of several examples of successful creative mixed-use developments, which will be illustrated with a diagram. Finally, the chapter discusses the future of workspaces within creative clusters.

7.1 Mixing Functions in Urban Development

Overall, experts emphasize the importance of combining residential and commercial use in metropolitan regions to create thriving mixed-use neighborhoods. However, experts mentioned several challenges related to mixed functions, such as recognizing and understanding the socio-economic characteristics of an area, balancing residential functions with creative activities, the diversity of the creative sector, sectoral thinking in urban planning and risk aversion in municipalities. One expert highlights that combining living and working places is typically practical and good, in line with the concepts outlined by urbanist Jane Jacobs. This viewpoint emphasizes the historical effectiveness and practicality of combining several roles within metropolitan regions. However, the expert underscores the importance of exercising extreme caution when merging creative activities with residential environments. In the context of projects like Minervahaven, it is critical to consider how diverse roles, such as residential, occupational and recreational activities, may be combined to create the best balance. The integration of certain creative work functions, for example, does not always result in the required amount of vibrancy within the urban environment since employees frequently leave the region after working hours. Furthermore, an expert underscored the diversity of the creative sector, emphasizing the need to carefully consider the variety of job activities and schedules when incorporating supplemental duties to create a well-balanced environment. Another expert critiques conventional sectoral thinking in urban planning, which frequently ignores the demands of existing enterprises when designing residential areas. The expert contends that, while residential projects are frequently favored due to their higher profitability, there is a growing realization of the need to balance this with commercial areas. The challenge is to keep inexpensive offices available for firms, particularly in redevelopment zones. This emphasizes the need to include workstations in urban designs from the start, rather than leaving them as an afterthought.

'Mixing residential and workspaces occurs frequently and is generally very beneficial, as argued by Jane Jacobs and others. However, when there is a creative sector involved, it is essential to consider how this can be integrated effectively. If residential spaces are added in Minervahaven, for example, workspaces should accommodate living arrangements above them. This concept also applies to communities. Take the Tramkade area as an example, where hospitality venues are introduced. How do we distribute tranquility, activity and noise across those 26 hectares? It is important to look beyond the physical layout and consider the types of users you want in the city. Do these groups integrate well with the existing activities in the neighborhood?' (trailblazer in Nijmegen, 2024).

According to a different expert, the municipality's persistent risk aversion may impede mixed-use integration due to concerns about future conflicts, such as noise complaints from new residents. They contend that a balanced approach is required, in which citizens are aware of and can live alongside the existence of creative enterprises. Eindhoven's Strijp-S serves as a successful example of merging creative activity and residential living, demonstrating that effective planning and community awareness can foster the creation of dynamic, mixed-use districts.

'You are likely familiar with Jane Jacobs, who argued that the monofunctional approach to urban planning is outdated. Instead, we need mixed-use urban neighborhoods where various functions coexist, but this must be balanced. A good example is Strijp-S in Eindhoven, where Piet Hein Eek purchased a property that combines creative businesses and residential spaces. The residents there are aware of the presence of businesses and the potential noise disturbances. However, there is still a significant amount of risk aversion among municipalities, which I find frustrating. In Rotterdam, for instance, clubs are prematurely removed because people might eventually move in and potentially complain. What are we actually trying to achieve here?' (entrepreneur in placemaking, 2024).

In a similar vein, a different expert emphasizes the necessity of recognizing each neighborhood's distinct traits and demands when designing mixed-use complexes. They suggest that what and how to blend functions are highly influenced by the area's distinct circumstances. For example, Amsterdam's development plan aims to build more self-sufficient districts that can meet the different demands of their citizens. However, this necessitates careful consideration of the local spirit of the place as well as what is attainable within that setting. They underline that planning must go beyond just allocating physical space and consider the area's socioeconomic characteristics.

'Mixing is also a point of confusion. What exactly do you want to mix? The answer to this question, I believe, depends on both the spirit of the place, which you mentioned earlier and what you aim to create and what is feasible. Feasibility is crucial because it grounds the plans in reality. The municipality's new development strategy for Amsterdam, which focuses heavily on building neighborhoods, emphasizes this balance. The goal is to transform existing neighborhoods into fully-fledged districts where residents can fulfill all their needs locally. [...] The municipality's ambition is to see if each neighborhood can develop its own unique vibe and genius loci, or spirit of the place. This involves a combination of guided and perhaps more spontaneous development, fostering an ecosystem where different elements support each other. To achieve this, it is necessary to assess the current resources and attributes of an area, align them with the municipality's ambitions and determine what should be preserved.' (entrepreneur in area-development, 2024).

7.2 Examples of successful mixed-use creative developments

Another expert cites successful examples such as Strijp-S in Eindhoven, which combines residential and creative businesses. These mixed-use developments demonstrate how several roles may be combined while remaining harmonious. However, the expert emphasizes that risk aversion among municipalities might impede successful function mixing owing to worries about potential conflicts. During the interviews, their perspective on different creative clusters was asked:

'In Rotterdam, for example, there is the Wasserij, a hub for the fashion industry. It hosts makers and recent graduates from art academies, as well as agencies that sell products worldwide. They coexist in this space because it fosters an interesting cross-pollination of ideas. However, it is important to note that these more established entities pay higher rents than the newcomers. I believe it is crucial to distinguish between autonomous and applied practices and to recognize the difference between individual practitioners and companies. Applying a chain approach is also interesting, keeping in mind the various stages and positions of the involved parties.' (financial advisor in creative entrepreneurship, 2024).

'Currently, Sectie C is indeed a breeding ground for creativity, with people working internationally. Initially, we thought it had excellent neighborhood amenities where people could freely walk. However, this is not the case. They mainly come once a year for the Dutch Design Week and otherwise, they don't feel welcome because there's a gate at the entrance. Despite their claims of openness, it's quite an elitist area. If you are 'one of them,' you are welcome; otherwise, you have no business there. For instance, you can't even walk your dog there.' (architect, 2024).

'Piet Hein Eek is situated in a residential area, which fosters a creative environment. Despite being somewhat on the outskirts, Piet Hein Eek organizes monthly neighborhood gatherings to connect with the community. In these gatherings, workers and residents, who live and work side by side, get to know each other. This demonstrates a different dynamic.' (urban planner, 2024).

'We have designed a CPO project for residential use here on the site [NRE terrein]. In the final phase of the site's development, we also created a proposal involving residents and entrepreneurs, resulting in a mixed CPO project with four buildings featuring a wide variety of programs. These buildings house creative entrepreneurs of all kinds, alongside our own office, our architectural firm and ... We currently operate within this business complex, which includes various collective facilities. This has been a unique experience, providing valuable insights into what drives creative entrepreneurs and how they think about their housing needs.' (architect, 2024).

Interview about Lloydkwartier in Rotterdam: *'Well, I always appreciate it when an area,*

especially one with workspaces, is mixed and diverse in terms of disciplines. It shouldn't just be filled with internet designers or marketing offices. It's beneficial to have various professions mixed in. It makes the area more enjoyable and vibrant. This is a major issue in Rotterdam and indeed in every major city, where artists often struggle the most. [...] No, it's not very lively [Lloydkwartier]. There is a lot happening, but we are close to Delfshaven, which includes Koolhaven island. That area is, of course, much poorer.' (artist located in Lloydkwartier, 2024).

'NYMA: Pioneering (4.5 years from vision to the sale of buildings, involving actual physical transformation). The success lies in achieving the goal of bringing the vision to reality. The buildings were deteriorating and needed to be revitalized to bring the area back to life. Infrastructure was laid out and relevant parties were involved. The project succeeded because several key elements aligned: Entrepreneurs from the nearby Honigterrein, who had to relocate, were willing to participate. Potential users showed interest. There was also temporary use of the site. A small group had already presented a manifesto to the municipality. The municipality recognized early on that to develop this area (with a focus on culture and creativity), it was necessary to take these initiatives seriously and give them a significant place at the table. A critical factor is that within the same municipality, when I receive mixed assignments, I always want the municipality to organize itself well internally and prioritize the project. Prioritizing often means having direct contact with administrative and executive officials to collectively determine the project's direction. Municipal-initiated projects can become murky without clear leadership.' The entire area needed redevelopment. We communicated to the market that if they had a solid plan, they could obtain and redevelop a building. The best initiators would collaborate with us to shape the area.' (trailblazer in Nijmegen, 2024).

Based on insights gained from interviews about different examples of creative clusters, the following figure was made:

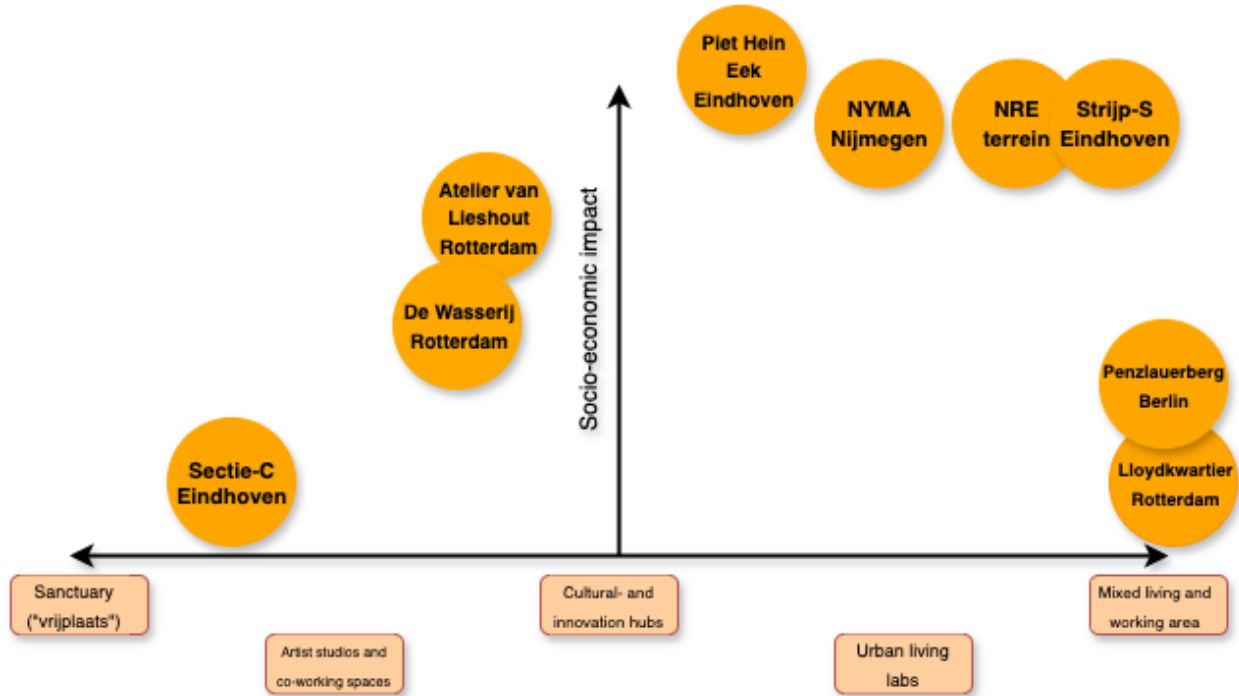


Figure 8: Visualization of the socio-economic impact of different creative mixed-use environments and clusters.

The figure illustrates various examples of creative mixed-use environments and clusters, plotted on a graph where the y-axis represents the socio-economic impact of a cluster, and the x-axis displays the gradation of creative clusters.

Axes description

- Y-Axis (Socio-Economic Impact): This axis measures the impact of each cluster on socio-economic factors, such as innovation, economic growth and community development.
- X-Axis (Gradation of Creative clusters): This axis shows the progression from a 'sanctuary' (broedplaats) to a mixed living and working environment.

Gradation of creative clusters:

1. Sanctuary (Broedplaats):
 - Description: These clusters are typically used for bottom-up artistic and creative activity. They act as safe havens for artists and makers, offering studio spaces and co-working

places that encourage creativity and artistic expression without the immediate pressure of financial success. The rent prices are generally low.

- Examples: Sectie-C Eindhoven.

2. Cultural and Innovation Hubs:

- Description: These hubs combine cultural events and innovation-driven projects. They frequently host a mix of artists, designers and technology innovators, encouraging cooperation across disciplines to generate socioeconomic impact.
- Examples: Atelier van Lieshout Rotterdam, de Wasserij Rotterdam.

3. Urban Living Labs:

- Description: These are experimental urban spaces where innovative urban solutions are explored and developed. They combine residential, commercial and creative uses to create dynamic, adaptable urban environments.
- Examples: Piet Hein Eek Eindhoven, NYMA Nijmegen, Strijp-S Eindhoven.

4. Mixed Living and Working Environments:

- Description: These environments seamlessly blend residential living spaces with working areas. They are designed to accommodate a diverse range of activities, promoting an integrated neighborhood that combines professional and personal life within the same urban area.
- Examples: Lloydkwartier Rotterdam, Penzlauerberg Berlin.

Socio-economic impact:

1. High Impact Clusters:

Interviewees saw Piet Hein Eek Eindhoven, NYMA Nijmegen and Strijp-S Eindhoven as creative hubs with significant socioeconomic influence. They observed that these clusters made a substantial contribution to their communities and surrounding areas.

The mix of entrepreneurs and enterprises was very successful, either fitting nicely within the same network or being varied enough to foster intriguing collaboration and a lively environment. Furthermore, these clusters were primarily formed by bottom-up initiatives, which boosted their feeling of community and inventiveness.

2. Moderate Impact Clusters:

Interviewees described the changes of Atelier van Lieshout in Merwedevierkwartier as having a minor socioeconomic impact. Currently, the neighborhood encourages a lot of innovation and start-ups. Atelier Van Lieshout has a clear vision for the region, which includes not just nurturing these enterprises but also building homes to support a mixed-use area. Interviewees stated that their complete approach, awareness of what they want in the region and tactics for achieving this goal all contribute considerably to the area's cultural activities, as well as its vibrant living and working environments. However, the level of socio-economic impact is still moderate as it still needs to be realized or it only has impact in a single sector, such as de Wasserij, which only provides workspaces for individuals in the fashion industry.

3. Low Impact Clusters:

Clusters such as Sectie-C Eindhoven, Penzlauerberg and Lloydkwartier are positioned lower on the y-axis, indicating a less significant, but nevertheless beneficial, socioeconomic impact centered on providing creative places for artists. Interviewees reported that Sectie-C is a cluster that is particularly turned inward, with little interaction with the surrounding community. This inward emphasis restricts the cluster's overall socioeconomic influence, since it stays relatively separated from the greater population. Despite this, Sectie-C remains an essential hub for creativity, providing specialized facilities for artists and cultivating a strong internal community. Penzlauerberg, on the other hand, is a mixed working-living neighborhood that has seen major gentrification. Gentrification has significantly altered the region, which was once a thriving creative hub. The rise of lofts and flats has displaced many of the original creatives, lowering the area's artistic energy. Interviewees stated that, while Penzlauerberg preserves certain aspects of its artistic heritage, these modifications have diluted its socioeconomic influence. Similarly, Rotterdam's Lloydkwartier is evolving into a Penzlauerberg-like situation. Interviewees reported that it is becoming increasingly difficult to recognize the creatives who originally lived in the neighborhood, as they have been displaced by larger residential buildings. The transition to high-end lofts and flats has eclipsed Lloydkwartier's artistic beginnings, reducing its significance as a creative hub.

7.3 Creative clusters and the future of workspaces

In general, the future of workplaces is defined by a requirement for flexibility and adaptation. Experts observe an increasing trend toward shared and co-working environments that may support both solo and collaborative work. These locations frequently contain a combination of high-end and cheap choices to accommodate a varied range of enterprises. The influence of digitization on creative workspaces is considerable among the interviewees. Experts point to the growing trend of remote work, in which creatives may work from anywhere using a laptop. This trend diminishes the need for traditional physical workstations while increasing the demand for flexible, adaptive environments that can accommodate both remote and in-person work. According to one expert, the necessity for physical workstations may decrease with time, with a greater emphasis on flexible facilities that can suit a variety of working patterns. Experts emphasize the need to develop affordable locations for creative companies using novel funding methods. One expert envisions a 'sweet and sour' strategy (see interview quote below) in which high-rent venues fund lower-rent rooms for cultural institutions and artists. This architecture provides a comprehensive set of functionalities and makes creative workplaces more accessible to a wider variety of users. Another expert endorses this strategy, arguing that high-end functions can finance lower-end activities to get the best mix and affordability within creative clusters. In addition, experts underline the necessity for mixed-use locations where varied enterprises, including law firms and tiny startups, coexist. Such spaces promote community interactions and learning opportunities for many sorts of enterprises, increasing the workspace's overall energy and dynamism.

'The increasing importance of digitalization of the workspace has had its impacts on the classic office spaces - CBRE often writes about it. The office sector is having a hard time.'
(professor at Fontys Hogeschool, 2024).

'The physical, hands-on artists are an exceptional breed. I might have been one of the first who didn't create anything myself at the academy but had everything made. This trend is becoming more common. Artists like Joep van Lieshout still exist, but they are becoming fewer. Nowadays, artists like Daan Roosgaarde say, 'My home is where my laptop is.' You can work from anywhere, whether it's Canguu, Amsterdam, or the Achterhoek. This trend will

continue to grow. Consequently, the demand for traditional workspaces might be less than it used to be. (owner of firm that makes art in public spaces, 2024).

'What they do is operate a multi-company building for arts, culture and related activities. Essentially, they follow a sweet and sour principle. They rent out some spaces, for example, to companies like Sissy-Boy and they rent other spaces at a discount to cultural institutions and studios because they are a foundation. This allows them to lower prices and create a very interesting mix of functions. It is more like a business complex for arts and culture.' (real-estate developer, 2024).

'We had the idea to allocate half of the spaces to higher-end functions, which would subsidize and support the lower-end functions. This would allow us to charge lower rents and achieve an optimal mix. For example, in this section, we placed the more expensive tenants at the front and created a passageway to the interior, which is a communal garden. We added the less expensive functions around this garden. This approach ensures a balanced mix within the area.' (real-estate developer with own firm, 2024)

Experts unanimously agree on the vital significance of innovation in the modern economy. One expert adds that cities have always required creative people to survive, since these individuals contribute fresh ideas and create face-to-face contacts that are crucial for creative processes. The existence of a diverse population in cities provides the necessary climate for exchanging and developing these ideas, making urban environments ideal for creative clusters. Another expert emphasizes the growing relevance of creativity as artificial intelligence and automation technologies evolve. As regular jobs become automated, the necessity for creative problem-solving and imaginative thinking will grow. This transition highlights the necessity for conditions that encourage innovation, not just in creative domains but also in applied solutions to social concerns.

The incorporation of circular economy ideas is seen as a promising aspect in the formation of creative clusters, as evidenced by the frequency with which it was mentioned in interview replies. According to one expert, the circular economy, which is becoming increasingly prevalent in modern cities, requires inventive solutions for efficient implementation, a requirement that the

creative sector can significantly address. The key difficulty is finding space-efficient ways to adapt these techniques to urban settings. However, there are issues regarding the viability of combining some types of circular economy firms in metropolitan environments. For example, some circular economy enterprises require large locations and may have major environmental consequences despite their sustainable focus.

'Manufacturing companies are making a comeback! In the future, you won't be able to simply discard your broken laptop; instead, long-term thinking about the circular economy will be essential. There is increasing evidence that much of the circular waste needs to be processed close to the city. Space is needed for circular waste processing operations. This space is required for all circular materials, potentially forming a construction hub. This also applies to refurbished iPhones, involving designers. The creative sector includes not only professional designers but also students of sculpture who will contribute their skills to this effort.' (professor at Fontys Hogeschool, 2024).

'The circular economy is very important and also very challenging. For this, the creative economy is essential to devise effective and space-efficient solutions. Cities have always needed creative individuals and this has always been the case. However, creativity has now become a decisive factor in the economy, attracting a large number of people to cities. Creatives also need the city because they want to share their ideas and connect with others. Face-to-face interactions are crucial for creatives.' (financial advisor in creative entrepreneurship, 2024).

This presents a challenge for urban planners, who must weigh the environmental advantages of circular activities against the realities of urban space limits. Furthermore, it is necessary to develop new types of workplaces tailored to the demands of both traditional crafts and modern creative industries. For example, clean rooms for high-quality production procedures are becoming increasingly crucial. However, constructing such specialized places inside urban contexts offers logistical and geographical obstacles. Another expert is skeptical about the viability of creative start-ups. While there is enthusiasm and initial investment for these initiatives, many fail to sustain long-term success. This emphasizes the need for supported infrastructure and regulations that might help creative companies thrive beyond their first phases.

'I also think that students who are working hard to devise these kinds of solutions and start their own companies face significant challenges. They often begin with great enthusiasm, securing subsidies and start-up funds, but then I often see these companies quickly disappear. So, I am uncertain if these ventures are being sustained. Perhaps they are, but I have no clear sense of that.' (owner of firm that makes art in public spaces, 2024).

Ownership is recognized as an important aspect of the success of creative workplaces. One expert highlights the necessity of giving creatives the opportunity to own their workspaces. Offering inexpensive 'casco' (shell) areas that may be modified by the tenants encourages a sense of ownership and loyalty. This method may increase the identity and appeal of the place, leading to more investment and community participation. The relationship between public and private areas is also underlined. Providing smooth transitions between these areas develops a sense of belonging and responsibility among the residents, which is critical for developing lively and sustained creative clusters. The notion of clustering—grouping creative enterprises and artists in close proximity—is considered crucial for encouraging cooperation and creativity. One expert discusses the progression from isolated 'cloisters' (*kloosters*) to more open 'clusters' that foster contact and common use of utilities. For example, incorporating social spaces like cafés, galleries and meeting places into creative buildings may shift the dynamics, leading to more community participation and joint ventures.

'I think it is interesting. I'm referring to property ownership, which can be effectively incorporated into a development project. For instance, you can offer a property to someone, delivering it as a shell. We believe that providing an affordable shell could be very appealing to many creative entrepreneurs. We aim to accommodate a wide range of sizes, creating business spaces between 150 and 2400 square meters, or shells that can house spaces of that size. It is important to consider how these buildings interact with public spaces and derive their identity from the street—whether they have a street address. If they are not directly on the street, how does the entrance connect from the street through a shared internal street, courtyard, atrium, or other means? This creates a shared address for multiple businesses and can include shops or companies within.' (architect, 2024).

'It is also worth considering that if the transition between public space and business space is well designed, it fosters a sense of ownership for both residents and entrepreneurs. This ownership extends beyond their front doors to the street, courtyard, atrium, or park they are connected to, generating significant commitment and value in terms of experience. A better experience makes the location more attractive, enhancing its value, both in terms of appeal and monetary worth.' (urban planner, 2024).

'Over the years, I have noticed a shift towards more 'clusters' rather than 'cloisters'. In Rotterdam, 'cloisters' refer to buildings where everyone works individually with minimal interaction, focusing solely on their work. However, there is a growing demand for 'clusters' aimed at fostering interaction. These clusters may share facilities and are often more open to the neighborhood. Even in cloister-like settings, changes can occur. For example, there was an artist studio building in Rotterdam with 50 artists, who mostly kept to themselves. The studio organization added a café, gallery and common room on the ground floor. While the upper floors remained a cloister, a new dynamic emerged. Artists began to interact more, leading to community projects like improving the square. This development of clusters and sharing of spaces is becoming more prevalent.' (financial advisor in creative entrepreneurship, 2024).

Many experts support the adaptive reuse of old structures to create creative workplace spaces. Instead of dismantling these historic structures, reusing them may provide distinctive and culturally rich locations for creative pursuits. However, many experts have noted that such unoccupied spaces are becoming increasingly uncommon in metropolitan settings, prompting the conversion of current mixed-use spaces to more flexible usage arrangements. Hence, the extension or modification of business complexes, which house many firms inside a single facility, is an important part of adaptive reuse. This method not only protects the historical and cultural importance of buildings, but it also promotes a dynamic and adaptable urban landscape. These complexes allow multiple firms to coexist, encouraging collaboration and innovation. Businesses that share resources and places can profit from synergies and foster a lively, integrated community. This common environment may dramatically boost the socioeconomic impact of creative clusters by encouraging interaction and collaboration across disciplines.

Space availability and expense were recurring themes in the interviews, as they remain key restraints for creative workplaces today. The high cost of urban real estate is a hurdle for creative businesses seeking suitable and inexpensive sites. One expert emphasized the strain on metropolitan regions, which influences the availability and pricing of office space for creative professionals. This emphasizes the need for innovative financial structures and supporting legislation to ensure that creative firms may survive in urban settings. Another topic that came up frequently throughout the interviews was 'blended use,' which refers to the most efficient use of space by mixing diverse purposes across time. For instance, an expert described the diverse activities that take place in his office space after regular business hours (9–17). On Monday nights, a yoga instructor from the Houthaven utilizes the facility to offer classes and on Wednesdays, a brass band practices there. On weekends, the workplace also functions as a pop-up restaurant. This multipurpose use of space not only encourages spontaneous relationships between diverse groups of people, but it also promotes sustainability by eliminating the need to construct new structures. Another expert used the blended-use approach by assigning separate time slots to different groups in his workplace, cutting rental costs and increasing space efficiency. However, for this technique to be effective, it must be closely coordinated with an external entity.

'Blended use, in its most basic definition, involves assigning a secondary, tertiary, or even quaternary function to a space when its primary function is not in use. For example, an office typically operates from nine to five, mostly on Tuesdays and Thursdays these days. During the off-peak hours, what else can be done with that space? This is the most fundamental form of blended use. What this approach achieves is a reduction in the need for additional construction, as buildings are utilized more effectively, promoting sustainability. More importantly, it facilitates interactions between different groups. For instance, when an office space also serves another function, the secondary users often overlap with the primary users, leading to encounters and conversations. We've seen numerous examples of these interactions. People from different 'bubbles' meet and engage with each other, which is a primary objective of blended use.' (owner of a design firm in Minervahaven, 2024).

'I strongly support the municipality of Amsterdam's initiative to preserve as much artisanal

industry within the city as possible. This sector is part of the creative sector and risks being pushed out if not carefully managed. This issue arises in various areas such as Sloterdijk 1 and Zuid, which are also parts of Haven-Stad. The municipality encourages the preservation of these areas, sometimes mandating the creation of specific spaces for certain types of businesses, which I view positively. It is important, however, to ensure affordability in rental prices, keeping them sustainable so that these spaces remain accessible. This affordability is crucial for maintaining a successful mix of businesses.' (entrepreneur in placemaking, 2024)

'I am a housing advisor for Lifeskills, an organization based in Zuidoost that guides young people between the ages of 10 and 18 towards higher education. These young people often receive less support at home, particularly regarding societal matters. Lifeskills is active from 12 to 7. In another project on Havenstraat, I wanted to accommodate them by saying, 'Okay, you operate from 12 to 7, but during other times, other groups can use the space.' This is why I can offer you a lower rental rate. This approach is also a form of blending, aiming to use spaces as efficiently as possible, even in terms of rental arrangements. Therefore, I believe that having an organization or entity to oversee this coordination is essential. What SITE has done here, functioning as a multi-company building and bringing in various parties, is necessary. It doesn't need to be extremely professional, but it does need some level of coordination.' (real-estate developer, 2024).

7.4 Conclusion

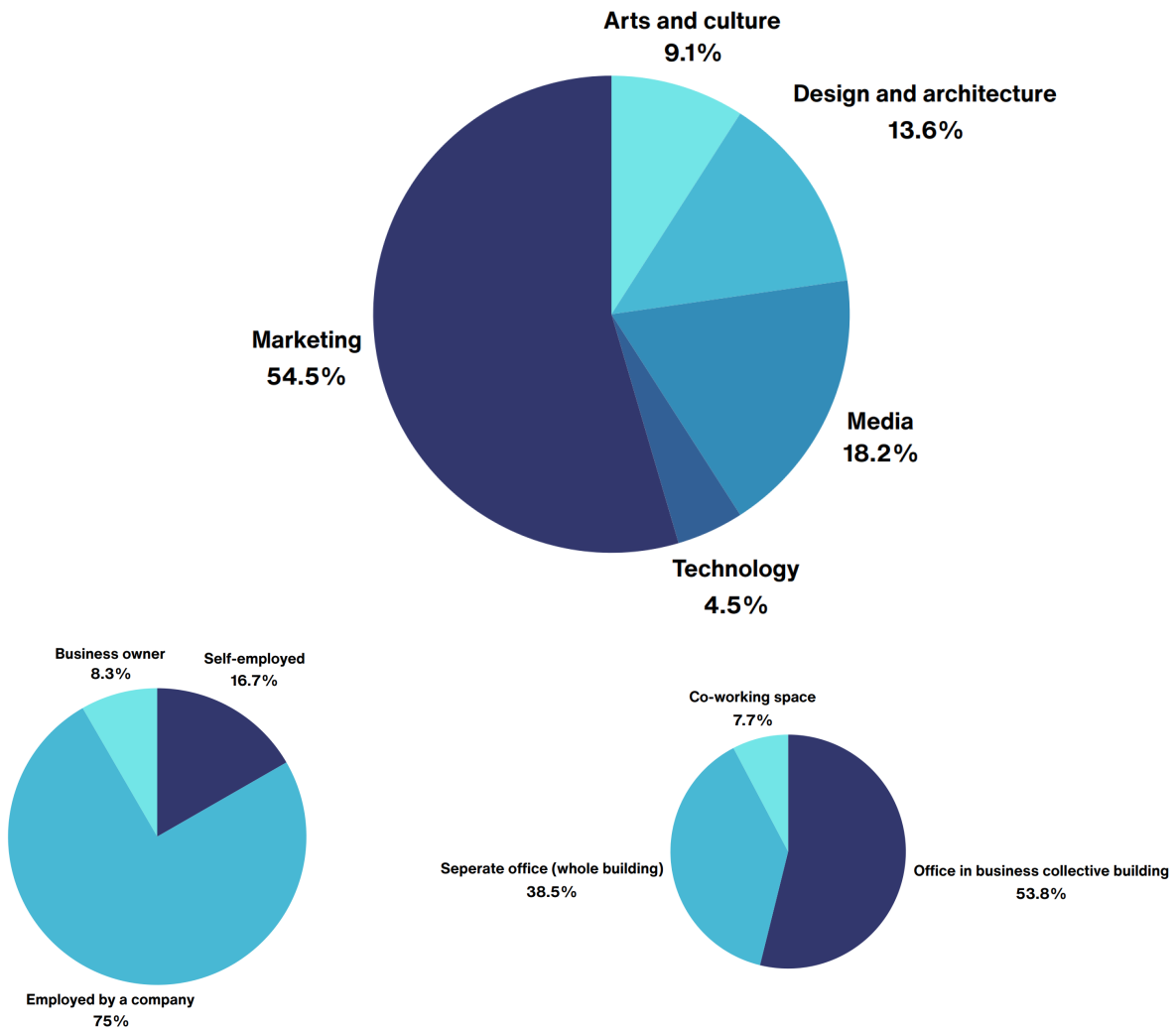
Experts have identified numerous critical success criteria for rebuilding mixed-use creative clusters. Integrating creative clusters into urban surroundings is consistent with Martins' (2017) understanding of the relationship between creative production processes and urban space. Emphasizing creativity and innovation is consistent with the views of Kolade and Owoseni (2022) and Hearn (2020), who emphasize the vital role of creative professions in driving economic growth and adapting to digital change. The inclusion of circular economy principles, as highlighted by Eni et al. (2023), emphasizes the need for sustainable practices in urban design. Furthermore, building flexible and adaptable workplaces is critical, as emphasized by Friedman (2023) and Eni et al. (2023), who emphasize the necessity of flexibility in responding to the changing nature of work.

A balanced strategy that incorporates residential and commercial uses is critical for successful redevelopment, as noted by Martins (2017) and Friedman (2023) in their studies on mixed-use sites. To create successful creative clusters, special attention must be paid to the distinctive demands of creative enterprises as well as ensuring affordability and environmental sustainability, according to the findings of Kolade and Owoseni (2022) and Eni et al. (2023). The concept of blended-use spaces aligns with Friedman's (2023) and Coll-Martínez & Méndez-Ortega's (2023) research on the benefits of flexible, multi-use environments that promote spontaneous connections and sustainable urban development.

Chapter 8: Perceptions of workers in Minervahaven

This chapter discusses the findings of a survey and interviews conducted with individuals working in the creative sector in Minervahaven, with an emphasis on their opinions of the neighborhood, connection to the area and interactions with other companies. The study aims to obtain information on working environments, levels of satisfaction and whether people value being part of Minervahaven as a creative cluster. The interviews were performed to gain a more in-depth understanding of people working in various areas of Minervahaven. The findings provide useful information for understanding the current state and potential future developments of workplaces for creative firms in this urban environment.

8.1 Sector and employment



The figures above show the distribution of creative workers in Minervahaven, their employment status and their working settings. The largest category, marketing, includes workers engaged in advertising, market research and public relations. The two biggest categories after that are design, architecture and media. Workers within design and architecture include graphic, industrial, interior and fashion designers. Workers within media include professionals in broadcasting, publishing and film. Workers within arts and cultures include artists, musicians, performers and artists. Workers in technology, the smallest category, include those who are active in software development and computer programming.

Overall, 73% of respondents are pleased with their present workspace. The location of Minervahaven, office design and facilities and flexible work options all play important roles in their satisfaction. Furthermore, 27% of respondents emphasized the value of community and networking possibilities (see Appendix 1).

8.2 Being part of a Creative cluster

When asked how essential it was for them to present in Minervahaven for their creative job or business, 40% said it was somewhat significant, while 33% said it was not very important. The comments show a diversity of opinions (see Appendix 1):

- Some respondents value being surrounded by creative people, but they do not consider it necessary for their job, especially in professions where contact with clients and partners is mostly online.
- Some people valued the networking possibilities and stimulating environment that co-working facilities provided.
- Others appreciated the ease of seeing familiar faces at other organizations, as well as the accessibility of staff and customers.

These responses are consistent with interviews conducted with employees working in Minervahaven, particularly those from a marketing consultant business. An interviewee stated that the key reason for their company's initial decision to settle in Minervahaven was the availability of subleasing opportunities. Furthermore, the presence of well-known firms like Media Monks and Tommy Hilfiger in the neighborhood was an appealing feature, implying that proximity to these 'prominent names' was regarded as advantageous (see interview quote

below). However, the interviewees did not consider themselves to be part of a creative cluster because their organization does not engage in creative activities such as design but instead completes work for customers. A worker also mentioned the existence of non-creative enterprises, such as construction firms, which distract from the neighborhood's creative nature.

'It is unique to be located here in the port, especially with the presence of the prominent names [Media Monks, Tommy Hilfiger] established here.' (employee in Minervahaven Noord-B, 2024).

'There are no specific services or facilities in the area that we utilize. As a consultancy firm, we simply need a desk and a workspace for our tasks. We are not a creative agency that relies on or seeks collaboration with other companies.' (employee in Minervahaven Noord-B, 2024).

'In this building, we have no connection with the other companies. The only shared feature is the front door; otherwise, everyone has their own work and meeting spaces.' (employee in Minervahaven Noord-B, 2024).

On the contrary, a different interviewee did agree with the idea that Minervahaven functions as a creative cluster, especially when compared to more traditional business districts like Zuidas or Zuidoost. He acknowledged that while Minervahaven is seen as a creative cluster, there might be other areas with even higher creative density.

8.3 Use of public and third spaces

Respondents expressed different levels of interaction with Minervahaven's public and third spaces, including cafés and bars. While 40% visit these areas rarely, 27% do so monthly. Comments on the significance of these venues in their work or creative process include (see Appendix 1):

- Some respondents saw the utility in having work lunches or occasional food and beverages during their breaks.
- For some, these places offer a feeling of camaraderie and a respite from the workplace atmosphere, making them ideal for strategic meetings or client meetings.

- Others pointed to the absence of cafés and green places as a drawback.

In a similar vein, one interviewee stated that their consulting business does not use any specific facilities or services in Minervahaven. The corporation requires basic office space rather than creative or collaborative features that may be beneficial to other sorts of organizations. He observed that many businesses have attractive structures and amenities, such as rooftop terraces, but these are not shared, which may indicate a lack of community integration and collaboration. Other employees said that there is little interaction or collaboration with other firms in their building. The entrance door is the only shared element, with each firm having its own individual work and conference areas.

8.4 Impact of remote work

Professional demands and workplace preferences have shifted as the ability to work remotely has grown. According to respondents, 36% prefer workplaces with both quiet areas for concentrated work and communal areas for social contact (see Appendix 1).

- 29% prefer a flexible workspace that allows for in-person and remote work.
- Another 29% have a stronger desire for technology that enables efficient remote cooperation.
- 21% reported a lower demand for typical office space.
- 14% indicated no substantial changes in their professional demands or workplace preferences because of remote employment.

8.5 Additional comments and suggestions

Respondents made a variety of proposals for the future development of Minervahaven (see Appendix 1). There is a demand for greater public transit links and more services like cafés and sandwich stores within walking distance.

- Some respondents said that increased communication and knowledge about the firms in the region would help to encourage collaboration.
- The distinction between work, living and recreational activities was observed, with some choosing to meet in the city center rather than Minervahaven.

8.6 Conclusion

In conclusion, workers within the creative sector in Minervahaven revealed a range of emotions regarding their connection to the community and their relationships with other businesses. Many respondents enjoy the region and neighborhood, but they do not feel especially attached to a creative cluster. This is consistent with the results of Chapain and Sagot-Duvaroux (2020), who argue that effective creative clusters require coherent and integrated community dynamics, which are currently lacking in Minervahaven, according to the respondents.

The current facilities and infrastructure offer some satisfaction, notably in terms of location, office design and flexible work alternatives that meet the demands of the creative class, as stated by Florida (2005) and Martins (2007). However, there is significant room for improvement to strengthen these connections even more. This includes improving public and third spaces, which are critical for encouraging the social and professional contacts required for a thriving creative cluster (Martins, 2017; Dellisanti, 2023).

Overall, Minervahaven workers are satisfied with their distinct workspaces and the accessibility of the location, supporting the notion that quality of life and facilities are important attractants for creative people (Mellander & Florida, 2012). However, they do not feel driven to interact with other businesses in the area, nor do they have a strong connection to the community. This shows that enterprises need to improve their integration and collaboration, which might be accomplished through strategic urban planning and community-building activities (Chapain & Sagot-Duvaroux, 2020; Di Marino et al., 2023).

Remote work has also had an impact on professional expectations and workplace preferences, with a large proportion of respondents choosing flexible and technology-enabled workspaces (Eni et al., 2023; Friedman, 2023). This shift emphasizes the importance of creating workspaces that support both remote and in-person work, promoting a hybrid model that can accommodate a wide range of working styles and requirements.

Hornig et al. (2015) suggested the culture-creative-based value chain and the findings are consistent with this. This strategy consists of six critical components for producing value: culture, ideation, design, production, branding and channels. The survey and interview findings emphasize various components of this value chain in the context of creative companies in Minervahaven:

1. **Culture and Ideation as Support Activities:**

- **Link:** The presence of creative firms and the appeal of Minervahaven's environment for ideation reflect the importance of cultural and creative settings in supporting the initial stages of the value chain. The need for more vibrant public and third-party spaces where creatives can interact and exchange ideas aligns with the role of culture and ideation in fostering innovation.

2. **Design, Production, Branding and Channel as Key Activities:**

- **Link:** Respondents' satisfaction with office design and flexible work options underscores the importance of a well-designed workspace for productive creative work. The focus on branding and channels is evident in the emphasis on proximity to well-known firms and the strategic advantages this provides. The feedback on the need for better infrastructure and amenities also ties into the channel component, highlighting the importance of accessible services in the creative value chain.

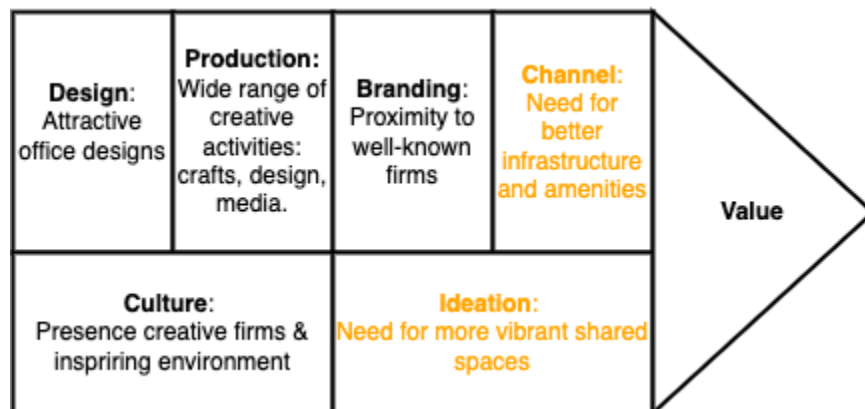


Figure 9: Generalization of value chain components of companies in Minervahaven, based on Horng et al. (2015).

Chapter 9: Conclusion and analysis

The aim of this research was to examine the evolving morphology of creative workspaces, using Minervahaven as a case study. Through a comprehensive examination of observations, various expert perspectives and user experiences, this study sought to address the following sub questions:

1. What is the status of creative workspaces in Minervahaven?
2. What do various experts in spatial planning mean by the term 'creative sector'?
3. How do experts perceive the concept of the 15-minute city in urban development and to what extent does the concept contribute to the formation and functioning of creative clusters?
4. What do experts identify as the key success factors in the redevelopment of mixed-use creative clusters, particularly regarding creative workspaces and the future of work in urban settings?
5. How do the users of Minervahaven perceive the neighborhood in terms of connection to the area and relationships with other businesses?

This chapter will focus on providing answers to the sub-questions of this research while also analyzing the outcomes to shed light on the overarching research objective:

9.1 Current status of creative workspaces in Minervahaven

Minervahaven is home to a varied mix of creative businesses, notably knowledge-intensive ones. The region is separated into two different sections: Minervahaven Noord B and Minervahaven Zuid B, each having its own set of building styles and ambiance. This physical and functional division within Minervahaven reflects the diverse nature of the creative sector, accommodating both high-rise, knowledge-intensive companies and low-rise, artisanal firms.

Minervahaven Noord B is characterized by new, high-rise office buildings that house companies from the knowledge-intensive creative sectors. This part of the area is home to major media companies like PVH and others. The high-rise environment of Noord B reflects a more corporate and formal atmosphere, catering to businesses that thrive on knowledge-intensive activities and require modern office infrastructure.

In contrast, Minervahaven Zuid B is a low-rise area featuring former warehouses repurposed for creative use. This part of Minervahaven has a distinctly different atmosphere, fostering a more tranquil and artisanal environment. It accommodates a variety of creative firms, particularly those in design, architecture and other artisanal creative industries. The adaptive reuse of warehouses provides flexible spaces suited to the needs of smaller, hands-on creative enterprises that value open, collaborative environments over traditional office settings.

9.2 Definition of 'Creative Sector'

The term 'creative sector' refers to a wide range of creative subsectors and workplace characteristics. Experts in spatial planning define the creative sector as including both traditional artistic professions and increasingly economically oriented industries such as media, marketing and technology. This variation reflects the complex character of creativity, which includes cultural, economic and social aspects. Experts point out that the creative sector encompasses not just artists and designers, but also firms and individuals that employ creativity to drive product innovation. This enlarged definition emphasizes the importance of creative labor across a variety of businesses, including those not normally connected with the arts. For example, architecture companies are frequently described as paradigmatic creative enterprises.

Furthermore, the difference between applied and independent creative activity is critical. Applied work is market-oriented and utilitarian, whereas autonomous work is usually created by artists with an emphasis on cultural expression. This distinction affects the classification of creative enterprises and studios, altering the definition of the creative sector. The physical and structural aspects of creative businesses, such as low-rent incubators or temporary offices, also have a big impact on the sector's environment.

9.3 Perceptions and impact of the 15-Minute City concept

The 15-minute city concept, which promotes the localization of vital services within a 15-minute walk or bike ride, has a substantial impact on urban growth and the operation of creative clusters. Experts concur that, while the approach is frequently viewed as unique, many Dutch cities have traditionally used comparable concepts. The integration of creative clusters with new working spaces is critical to boosting urban vibrancy. Cities can foster sustainable and dynamic communities that meet the demands of the creative sector by ensuring that creative clusters are adequately incorporated into the 15-minute city framework. The 15-minute city implementation

has an impact on the creative sector by encouraging engagement and collaboration among creative groups. Creative individuals and creative clusters, in turn, improve the execution of the 15-minute city concept in urban contexts. During the interviews, the need to establish clusters with small offices and shared areas to encourage interactions between specialists was emphasized. However, it was also cautioned that genuine engagement demands people leave their work environments. It was argued that while certain companies provide lovely offices, this does not necessarily promote meaningful community development. Instead, there should be a greater emphasis on developing shared spaces that encourage collaboration and innovation.

Experts' perceptions of the 15-minute city concept vary, notably in terms of general preferences or job positions. Individuals with young families rely greatly on workplace accessibility and critical services to effectively manage professional and personal responsibilities. Other people, however, prefer a clear separation between work and home life, which is frequently achieved by longer commutes. Some specialists, particularly those in more senior positions, prefer not to reside near their offices and are comfortable with lengthy commutes. They appreciate the separation of work and home life, which is frequently accomplished by residing further away from their workplaces. Younger workers, on the other hand, choose to live closer to their jobs, benefiting from the convenience and reduced commute time that the 15-minute city provides. This age preference discrepancy shows that, while the 15-minute city may be excellent for some, it may not be appropriate for everyone's lifestyle.

9.4 Success factors in the redevelopment of future creative clusters

Experts highlight numerous critical success criteria in the reconstruction of mixed-use creative clusters, with a focus on creative workspaces and the future of work in cities. The combination of residential and commercial functions is critical for developing healthy mixed-use communities. Moreover, combining living and working areas is consistent with the ideas of the 15-minute city, which prioritize accessibility and sustainability.

With respect to the impact and functioning of creative clusters, experts agree on the importance of innovation in the economy, highlighting the role of creative individuals who offer new ideas and encourage critical face-to-face contacts in urban areas. Cities are good for creative clusters because their diverse populations encourage the exchange and development of ideas. As artificial intelligence and automation technologies advance, so does the demand for creative

problem-solving and innovative thinking, emphasizing the necessity of creating settings that foster innovation not just in artistic fields but also in resolving societal challenges. The incorporation of circular economy ideas into creative clusters emerged as a potential element, necessitating innovative methods for efficient implementation despite space and environmental constraints in urban contexts.

Furthermore, flexibility and adaptation are essential for the future morphology of creative workspaces. There is a noticeable trend towards shared and co-working settings that enable both individual and collaborative work, with a combination of high-end and low-cost choices to suit a wide range of businesses. The development of remote work, driven by digitalization, diminishes the need for traditional physical workstations, raising the requirement for flexible, adaptable settings. Experts urge inexpensive creative spaces sponsored through novel arrangements, such as high-rent venues funding low-rent cultural organizations. Mixed-use areas where many businesses coexist can boost community engagement and general liveliness. The adaptive reuse of existing structures for creative workplaces is highly favored since it protects cultural heritage while encouraging a vibrant and adaptable urban landscape. However, the scarcity of vacant spaces in urban areas demands the conversion of existing mixed-use sites. Blended-use techniques, in which venues fulfill numerous functions across time, are also lauded for their capacity to encourage spontaneous encounters and promote sustainability. This strategy not only increases the efficient and sustainable use of existing space, but it also encourages spontaneous connections and community involvement. For example, office buildings that offer yoga sessions, music practices and pop-up eateries show how multifunctional usage may boost a neighborhood's life. This model enables numerous businesses to share resources and places, promoting cooperation and innovation. The high cost of urban real estate remains a fundamental limitation, demanding novel financing methods and supporting legislation to maintain the viability of creative businesses in urban areas.

These findings on experts' assessments of creative clusters and their future evolution give a thorough picture of the benefits and constraints associated with redeveloping these mixed-use regions. Creative clusters are dynamic entities that constantly evolve to fulfill the changing needs of the creative sector. As mentioned before, the increased incorporation of automation and artificial intelligence within businesses will ensure that the demand for creative problem solving and imaginative thinking will grow. This shift may result in the integration of more 'dirty'

activities, such as manufacturing and industrial processes, in the creative sector. The definition of the creative sector may broaden to include a wider range of activities that reflect the diverse and ever-changing nature of creative activity. This might result in the increased integration of businesses involved in circular production within the creative sector. This process supports sustainability by increasing resource reuse and efficiency. However, experts warn that adopting these ideas in urban environments is difficult, particularly given space constraints and potential environmental implications. The creative sector's capacity to innovate and develop space-saving solutions will be critical in meeting these issues. The emphasis on sustainability and environmental responsibility is expected to increase, impacting the design and operation of creative clusters. Besides that, an important aspect of the future of creative clusters will be dependent on ownership. As experts pointed out, ownership and community integration are critical to the development of creative clusters. Giving creatives the opportunity to own and modify their workspaces promotes a sense of belonging and loyalty, which may lead to higher investment and involvement. Smooth transitions between public and private spaces promote a sense of community and responsibility among inhabitants. Clustering creative businesses and including social areas such as cafés and galleries may boost collaboration and creativity.

9.5 Perceptions of workers in Minervahaven

Workers in the reactive sector located in Minervahaven demonstrate a detailed awareness of the neighborhood's strengths and flaws. While many users like the area's active culture and convenient location, they lack a strong sense of belonging to a coherent creative community. The current facilities and infrastructure give some satisfaction, but there is substantial space for development to encourage stronger linkages between firms.

Survey and interview data show that proximity to well-known companies such as Media Monks and Tommy Hilfiger is enticing, but this does not always translate into a strong sense of community. Many respondents like their office buildings and Minervahaven's accessibility, but they also point out the lack of venues to gather outside of office settings, such as cafes or other third spaces. Interestingly, roughly 47% of respondents work in business collective buildings with all required amenities, which presents a unique challenge: these extensive facilities may deter workers from leaving the facility. Business collectives are intended to be self-sufficient, providing a variety of services and facilities to suit the everyday requirements of their residents.

This convenience might unwittingly contribute to a sense of isolation, with workers having little reason to investigate their surroundings or interact with a larger society.

The primary question is whether improving the neighborhood's amenities would attract employees to mingle outside their buildings. To deal with this, various variables must be considered:

1. Self-sufficiency of business collectives: Minervahaven's business collective buildings are outfitted with everything workers want, including eating and leisure facilities. This level of self-sufficiency minimizes the need for employees to leave the premises. However, the presence of diverse and appealing third places in the neighborhood may give a compelling cause for workers to venture outside, perhaps leading to enhanced social interactions and a better feeling of community.
2. Nature of work and production processes: Some businesses, particularly those that engage in specific manufacturing processes, have a natural inward orientation. These businesses may demand restricted workplaces with limited external contacts. Even the availability of local facilities may have no impact on these enterprises' inward inclination. As a result, any strategy for improving third places must consider the various types of enterprises and their operational requirements.
3. Potential for increased interaction: The inclusion of more third-party locations might function as a spur for community involvement. Workers that do venture out might use these places as hubs for networking, informal gatherings and socializing, resulting in a more vibrant and connected community. This is especially important for younger employees and those in creative fields who desire collaborative and participatory settings.
4. Balancing internal and external spaces: While corporate collectives offer convenience, combining them with appealing external choices may improve the entire work-life experience. Creating a varied selection of third places within walking distance might promote a healthy work-life balance, hence increasing well-being and productivity.

Overall, user views in Minervahaven highlight several ideas for the area's overall improvement. While commercial collective buildings have several advantages, a lack of exterior facilities hinders community cohesion and social engagement. By creating more third places,

Minervahaven may inspire workers to get more involved in the area, resulting in a stronger, more lively community. However, each company's individual demands and operational activities must be considered to ensure that any amendments are consistent with the various features of the businesses inside Minervahaven.

Chapter 10: Synthesis and implications

This final chapter will provide a synthesis of the research findings and discuss their implications with some personal reflections. Furthermore, future recommendations for research will be offered and some limitations of this research will be acknowledged. The integration of creative businesses into areas like Minervahaven exemplifies both accomplishments and problems. Mixed-use strategies tend to enhance the livability of areas; however, careful planning is required to guarantee that creative pursuits live peacefully in residential environments. This is because there is no single, defined definition of the creative sector: it is developing in parallel with wider societal developments, needing new forms of innovation. Traditionally dominated by media and fashion companies, the emphasis is turning to enterprises that are actively contributing to societal reform, particularly those engaged in circular economies. This movement is more than just a trend; it is a fundamental realignment that reflects the rising importance of sustainability and innovation in modern urban planning.

The evidence from Minervahaven suggests that a lot of effort is required to develop it into the innovative mixed-use area envisioned by the municipality. Just adding residential functions is insufficient. It may even be more profitable to completely omit household purposes and instead invest in housing for smaller creative companies that require greater assistance in obtaining workspace. This targeted investment might create a livelier and more supportive environment for the creative industry. One pressing issue kept returning throughout this research: the affordability of future cities. Experts kept emphasizing the necessity of realizing affordable workspaces to build dynamic communities. Strijp-S in Eindhoven exemplifies the possibilities of well-planned mixed-use buildings. Such areas not only benefit creative enterprises, but they also strengthen the social fabric by stimulating connection and collaboration among various groups.

10.1 Future recommendations

When reflecting on the journey of this research, it is striking how diverse the creative sector's landscape is. Reflecting on the concept of morphology in relation to creative workspaces, it becomes apparent that these environments are not only defined by their physical structures, but also by the evolving definitions and perceptions held by those who inhabit and design them. The term 'morphology' aptly captures the dynamic interplay between tangible elements—such as architectural design, spatial organization and infrastructure—and the intangible aspects,

including the cultural, social and economic definitions attributed to these spaces. By focusing on the evolving morphology of creative workspaces, this research acknowledges that the structure of the creative sector is inherently fluid, shaped continuously by the interactions and contributions of various stakeholders. This dual consideration of physical and definitional aspects provides a comprehensive framework for understanding how creative workspaces develop and function, highlighting the importance of both concrete and conceptual factors in their evolution. This assumption and the research results led to the creation of figure 10, which illustrates the evolving life cycle of workspaces in creative clusters. Starting at the top right corner, the figure shows the initial phase where workers lived close to factories but work and living environments were divided. After 2000, the first mixed creative environments emerged inspired by the work of popular urbanists at the time, such as Jane Jacobs. However, if this mixing of functions is exploited, gentrification may occur, as seen in areas like Penzlauerberg in Berlin. The top left corner of the figure depicts the potential future scenario, where there is more room for "dirty," circular companies, integrating manufacturing and creative functions.

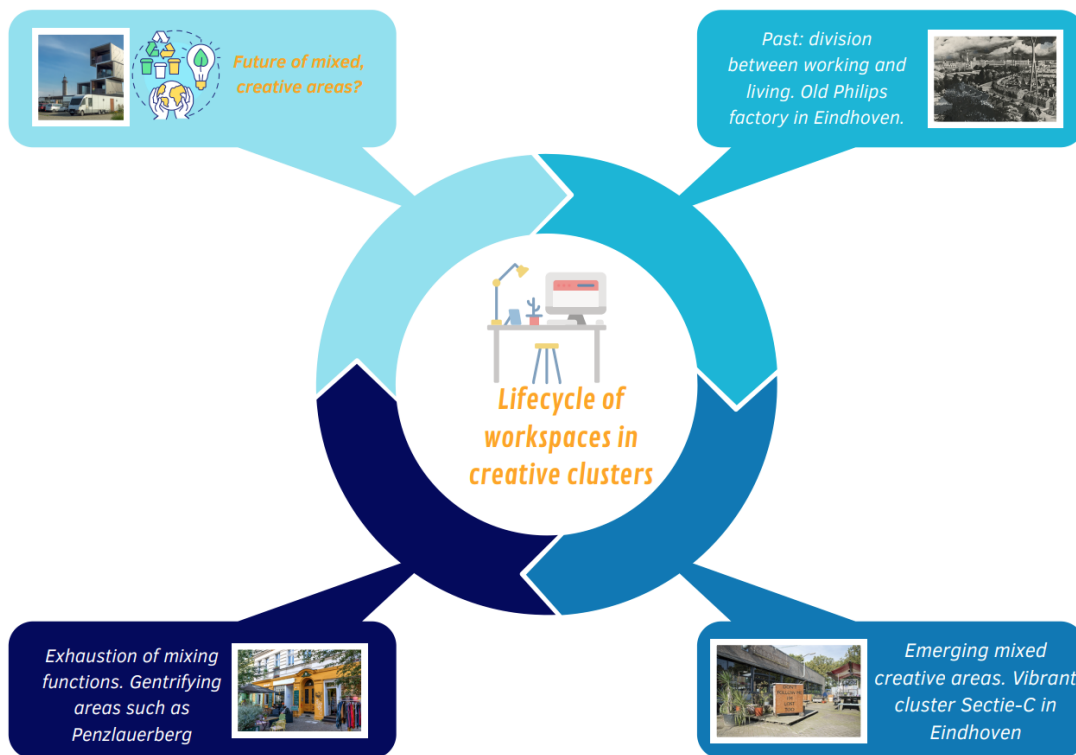


Figure 10: Lifecycle of workspaces in creative clusters. Visual interpretation of the results.

Personally, I find the transition to circular economies and sustainable business practices quite motivating. This progression indicates a deeper involvement with societal concerns, linking artistic activities with larger aims of sustainability and social effect. However, there is too little academic research on this topic. Thus, future academic research should focus on the existence and relevance of the manufacturing industry in urban areas. As cities expand, knowing how manufacturing may coexist with creative sectors and other urban activities will become increasingly important. More extensive research might look at bigger samples and other geographic regions to gain a better understanding of these processes. Furthermore, studying the long-term effects of incorporating circular economy ideas into creative clusters might provide useful insights. This research might help to shape policy decisions and urban planning plans, ensuring that the creative industry thrives and contributes positively to societal progress.

10.2 Limitations of the research

This research has several limitations that warrant consideration. Firstly, the study's scope is restricted to a single area, which may limit the generalizability of the findings to other contexts. Secondly, predicting future trends within the creative industry is inherently challenging due to its dynamic nature, making it difficult to ascertain which trends will persist over time. Furthermore, financial and time constraints have limited the breadth and depth of this research.

The balance between qualitative and quantitative components in this study is also uneven. Although a mixed-methods approach was utilized, the limited number of survey respondents calls into question the extent to which the research can genuinely be classified as mixed methods. This imbalance may have implications for the overall findings, as the disparity between the volume of interview data and survey results could skew the interpretation of results. Additionally, the qualitative aspect of the research inherently involves a degree of subjectivity. While qualitative methods provide deep insights and rich data, they are not entirely impartial and may be influenced by the researcher's perspectives and interpretations. This subjectivity, combined with the limited sample size, might affect the robustness and reliability of the conclusions drawn. Moreover, the dynamic and evolving nature of the creative sector further complicates the research. The fluid definitions and continuously changing landscape of creative workspaces add layers of complexity that are challenging to capture fully within the constraints

of this study. As a result, the findings should be interpreted with caution, considering these contextual and methodological limitations.

In summary, while this research offers valuable insights into the evolving morphology of creative workspaces, it is important to acknowledge these limitations. Future research should aim to address these constraints by expanding the scope, increasing the sample size, and striving for a more balanced integration of qualitative and quantitative methods to enhance the validity and applicability of the findings.

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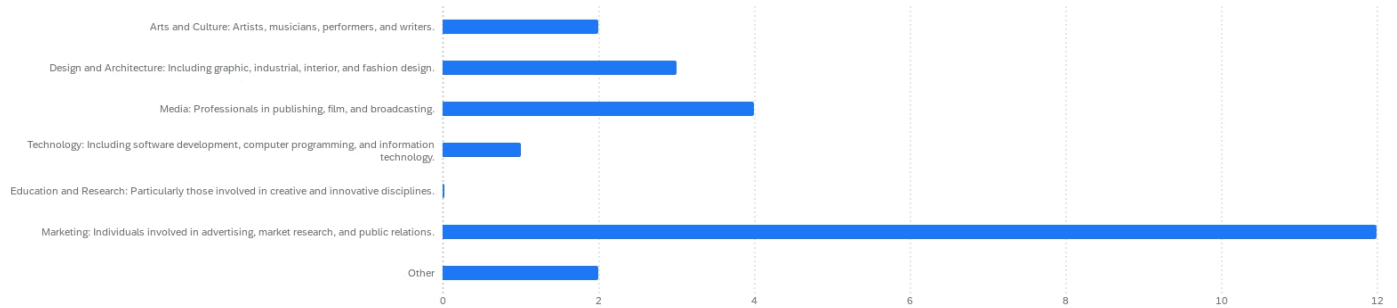
Appendix 1: Survey questions and responses

Page 1

Future of workspaces for creative businesses in Minervahaven

May 27, 2024 3:35 AM

What is your profession/industry within the creative sector? 24 ⓘ



What is your profession/industry within the creative sector? 24 ⓘ

Q1 - What is your profession/industry within the creative sector? - Selected Choice	Percentage	Count
Arts and Culture: Artists, musicians, performers, and writers.	8%	2
Design and Architecture: Including graphic, industrial, interior, and fashion design.	13%	3
Media: Professionals in publishing, film, and broadcasting.	17%	4
Technology: Including software development, computer programming, and information technology.	4%	1
Education and Research: Particularly those involved in creative and innovative disciplines.	0%	0
Marketing: Individuals involved in advertising, market research, and public relations.	50%	12
Other	8%	2

What is your profession/industry within the creative sector? 24 ⓘ

What is your profession/industry within the creative sector?	Average	Minimum	Maximum	Count
Arts and Culture: Artists, musicians, performers, and writers.	1.00	1.00	1.00	2
Design and Architecture: Including graphic, industrial, interior, and fashion design.	2.00	2.00	2.00	3
Media: Professionals in publishing, film, and broadcasting.	3.00	3.00	3.00	4
Technology: Including software development, computer programming, and information technology.	4.00	4.00	4.00	1
Education and Research: Particularly those involved in creative and innovative disciplines.	-	-	-	0
Marketing: Individuals involved in advertising, market research, and public relations.	6.00	6.00	6.00	12

What is your profession/industry within the creative sector?: Other ⓘ

Event industry

Rockets

Are you: 24 ⓘ



Are you: 24 ⓘ

Q2 - Are you: - Selected Choice	Percentage	Count
Self-employed / freelancer	17%	4
Employed by a company / organization	75%	18
Business owner	8%	2
Other	0%	0

Are you: 24 ⓘ

Are you:	Average	Minimum	Maximum	Count
Self-employed / freelancer	1.00	1.00	1.00	4
Employed by a company / organization	2.00	2.00	2.00	18
Business owner	3.00	3.00	3.00	2
Other	-	-	-	0

Are you: Other ⓘ

No data found - your filters may be too exclusive!

If comfortable, please specify the company or organization you are currently working with. (Optional) Please note: Providing the name of your company is completely optional and will be treated with the utmost confidentiality. This information will only be used to add context to the survey responses and will not be shared publicly or used for any purpose outside of this academic research. ⓘ

Havas Lemz

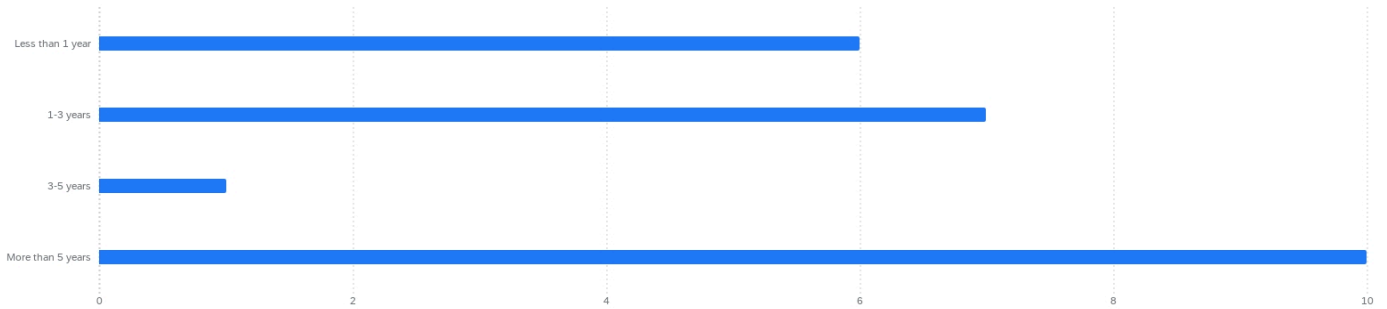
World of nix

SITE

Theater Amsterdam

PR Mansion

How long have you been working within the creative industries? 24 ⓘ



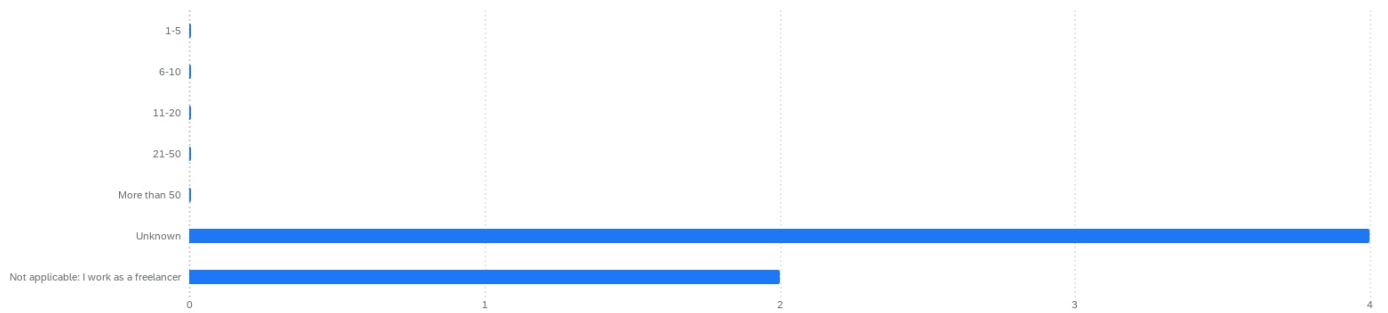
How long have you been working within the creative industries? 24 ⓘ

Q4 - How long have you been working within the creative industries?	Percentage	Count
Less than 1 year	25%	6
1-3 years	29%	7
3-5 years	4%	1
More than 5 years	42%	10

How long have you been working within the creative industries? 24 ⓘ

How long have you been working within the creative industries?	Average	Minimum	Maximum	Count
Less than 1 year	1.00	1.00	1.00	6
1-3 years	2.00	2.00	2.00	7
3-5 years	3.00	3.00	3.00	1
More than 5 years	4.00	4.00	4.00	10

How many people does your workplace/organization employ in Minervahaven? 6 ⓘ



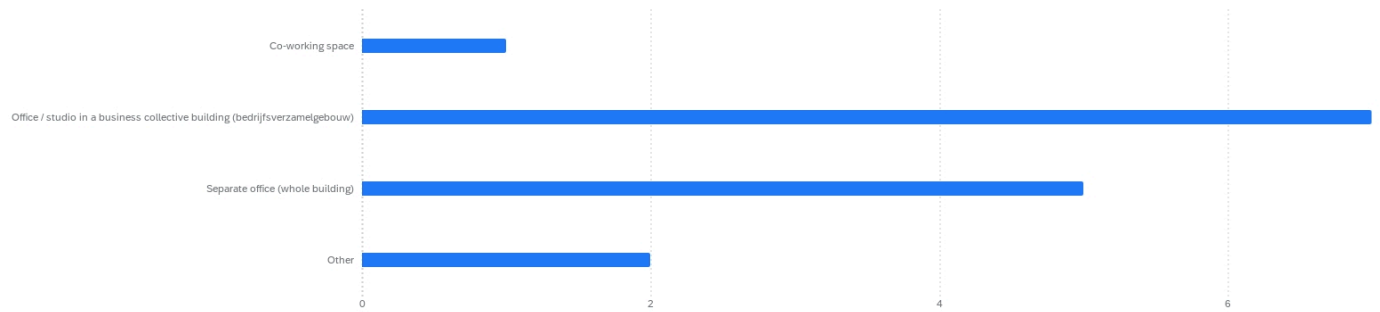
How many people does your workplace/organization employ in Minervahaven? 6 ⓘ

Q5 - How many people does your workplace/organization employ in Minervahaven?	Percentage	Count
1-5	0%	0
6-10	0%	0
11-20	0%	0
21-50	0%	0
More than 50	0%	0
Unknown	67%	4
Not applicable: I work as a freelancer	33%	2

How many people does your workplace/organization employ in Minervahaven? 6 ⓘ

How many people does your workplace/organization employ in Minervahaven?	Average	Minimum	Maximum	Count
1-5	-	-	-	0
6-10	-	-	-	0
11-20	-	-	-	0
21-50	-	-	-	0
More than 50	-	-	-	0
Unknown	6.00	6.00	6.00	4
Not applicable: I work as a freelancer	7.00	7.00	7.00	2

Which of the following options best describes your current primary workspace in Minervahaven? 15 ⓘ



Which of the following options best describes your current primary workspace in Minervahaven? 15 ⓘ

G6 - Which of the following options best describes your current primary workspace in Minervahaven? - Selected Choice	Percentage	Count
Co-working space	7%	1
Office / studio in a business collective building (bedrijfsverzamelgebouw)	47%	7
Separate office (whole building)	33%	5
Other	13%	2

Which of the following options best describes your current primary workspace in Minervahaven? 15 ⓘ

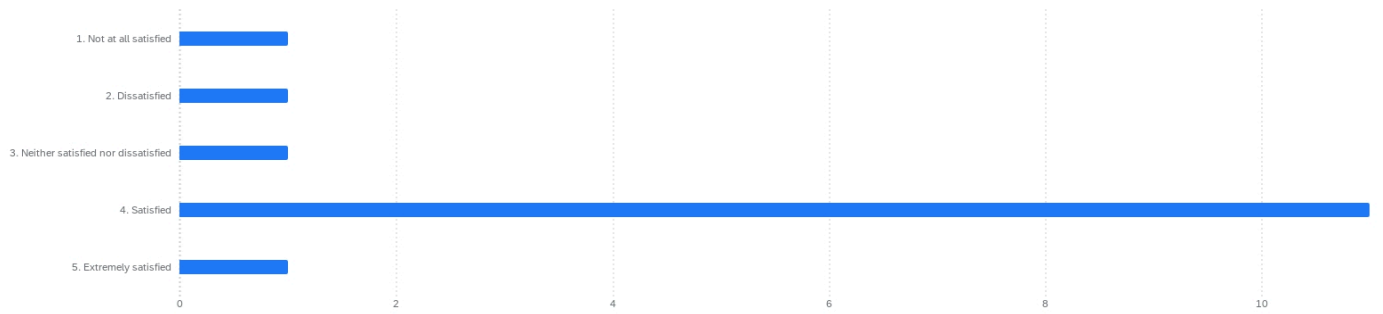
Which of the following options best describes your current primary workspac...	Average	Minimum	Maximum	Count
Co-working space	1.00	1.00	1.00	1
Office / studio in a business collective building (bedrijfsverzamelgebouw)	2.00	2.00	2.00	7
Separate office (whole building)	3.00	3.00	3.00	5
Other	4.00	4.00	4.00	2

Which of the following options best describes your current primary workspace in Minervahaven?: Other ⓘ

We share the building

Not in minervahaven

How satisfied are you with your current workspace? (1 = Not at all satisfied, 5 = Extremely satisfied) 15



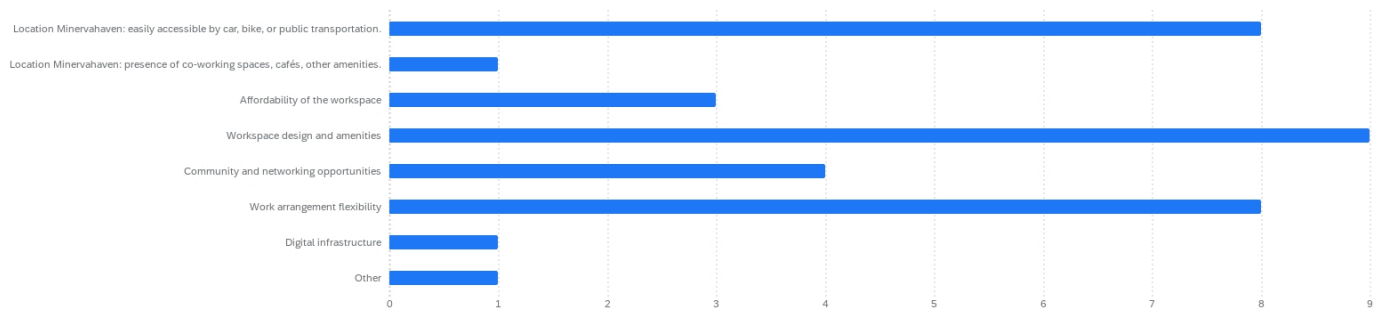
How satisfied are you with your current workspace? (1 = Not at all satisfied, 5 = Extremely satisfied) 15

Q7 - How satisfied are you with your current workspace? (1 = Not at all satisfied, 5 = Extremely satisfied)	Percentage	Count
1. Not at all satisfied	7%	1
2. Dissatisfied	7%	1
3. Neither satisfied nor dissatisfied	7%	1
4. Satisfied	73%	11
5. Extremely satisfied	7%	1

How satisfied are you with your current workspace? (1 = Not at all satisfied, 5 = Extremely satisfied) 15

How satisfied are you with your current workspace? (1 = Not at all satisfie...	Average	Minimum	Maximum	Count
1. Not at all satisfied	1.00	1.00	1.00	1
2. Dissatisfied	2.00	2.00	2.00	1
3. Neither satisfied nor dissatisfied	3.00	3.00	3.00	1
4. Satisfied	4.00	4.00	4.00	11
5. Extremely satisfied	5.00	5.00	5.00	1

What are the most significant factors in your satisfaction or dissatisfaction? (Select up to 3) 15



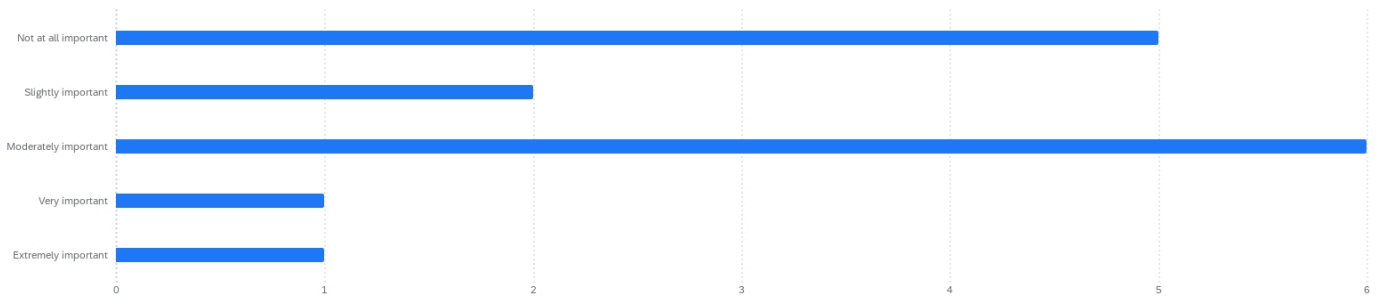
What are the most significant factors in your satisfaction or dissatisfaction? (Select up to 3) 15 ⓘ

Q8 - What are the most significant factors in your satisfaction or dissatisfaction? (Select up to 3) - Selected Choice	Percentage	Count
Location Minervahaven: easily accessible by car, bike, or public transportation.	53%	8
Location Minervahaven: presence of co-working spaces, cafés, other amenities.	7%	1
Affordability of the workspace	20%	3
Workspace design and amenities	60%	9
Community and networking opportunities	27%	4
Work arrangement flexibility	53%	8
Digital infrastructure	7%	1

What are the most significant factors in your satisfaction or dissatisfaction? (Select up to 3): Other ⓘ

Not being in minervahaven

How important is being part of a creative cluster in Minervahaven to you and your creative work or business? You will be asked to elaborate on the benefits and challenges you experience in Minervahaven, and how these impact your creative output and business success. 15 ⓘ



How important is being part of a creative cluster in Minervahaven to you and your creative work or business? You will be asked to elaborate on the benefits and challenges you experience in Minervahaven, and how these impact your creative output and business success. 15 ⓘ

Q9 - How important is being part of a creative cluster in Minervahaven to you and your creative work or business? You will be asked to elaborate on the benefits and challenges you experience in Minervahaven, and how these impact your creative output and business success.	Percentage	Count
Not at all important	33%	5
Slightly important	13%	2
Moderately important	40%	6
Very important	7%	1
Extremely important	7%	1

How important is being part of a creative cluster in Minervahaven to you and your creative work or business? You will be asked to elaborate on the benefits and challenges you experience in Minervahaven, and how these impact your creative output and business success. 15 ①

How important is being part of a creative cluster in Minervahaven to you an...	Average	Minimum	Maximum	Count
Not at all important	1.00	1.00	1.00	5
Slightly important	2.00	2.00	2.00	2
Moderately important	3.00	3.00	3.00	6
Very important	4.00	4.00	4.00	1
Extremely important	5.00	5.00	5.00	1

Please elaborate on the benefits and challenges you experience with being situated in Minervahaven, and how these impact your creative output and business success. ①

Het is fijn om tussen creatieve mensen te zitten in dezelfde branche maar niet essentieel voor mijn werk (film-editor) omdat communicatie met producers etc meestal online gaat en/of de regisseur komt langs in de studio

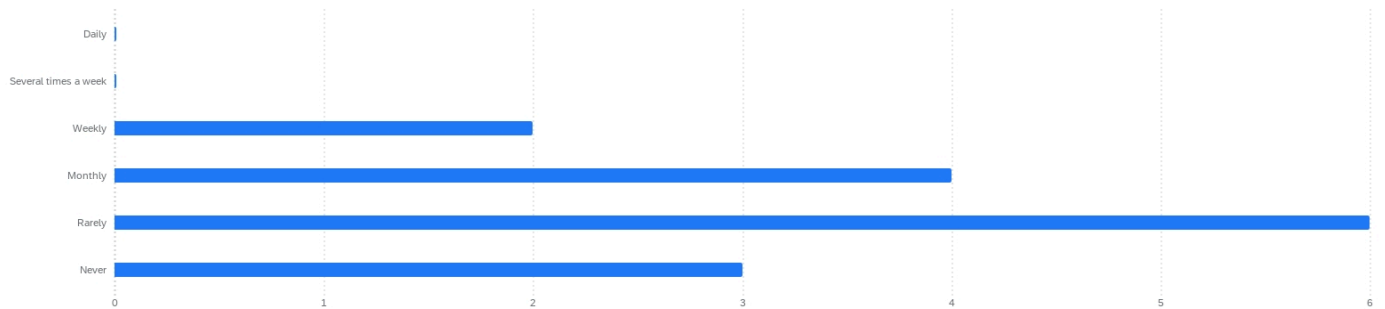
Networking Opportunities: Co-working spaces like Minervahaven often host a diverse community of professionals, entrepreneurs, and freelancers. Also inspiring Environment: Co-working spaces are designed to be dynamic and inspiring, with modern aesthetics, comfortable work areas, and shared amenities. This environment can boost creativity and motivation compared to traditional office spaces.

It gives an aura of being part of the industry

Being able to meet up with people I know at other agencies, easy accessible for staff and clients: more live meetings

Better public transport connections.

How frequently do you visit cafés, bars or other public areas in Minervahaven for work-related activities? 15 ①



How frequently do you visit cafés, bars or other public areas in Minervahaven for work-related activities? 15 ①

Q11 - How frequently do you visit cafés, bars or other public areas in Minervahaven for work-related activities?	Percentage	Count
Daily	0%	0
Several times a week	0%	0
Weekly	13%	2
Monthly	27%	4
Rarely	40%	6
Never	20%	3

How frequently do you visit cafés, bars or other public areas in Minervahaven for work-related activities? 15 ⓘ

How frequently do you visit cafés, bars or other public areas in Minervahav...	Average	Minimum	Maximum	Count
Daily	-	-	-	0
Several times a week	-	-	-	0
Weekly	3.00	3.00	3.00	2
Monthly	4.00	4.00	4.00	4
Rarely	5.00	5.00	5.00	6
Never	6.00	6.00	6.00	3

What value do these spaces add to your work or creative process? Please describe your experiences. ⓘ

lekker lunchen met klantjes

Look at the answer at 'the benefits...' business succes'.

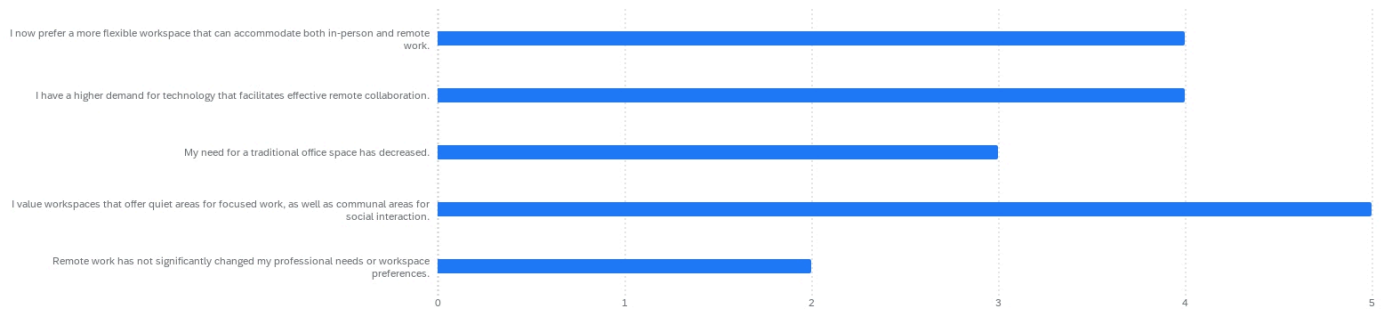
Not that much, its more for personal use

Nice to able to have food and drinks somewhere occasionally

Gives me a feeling that I come to this area not only for work

Business lunches

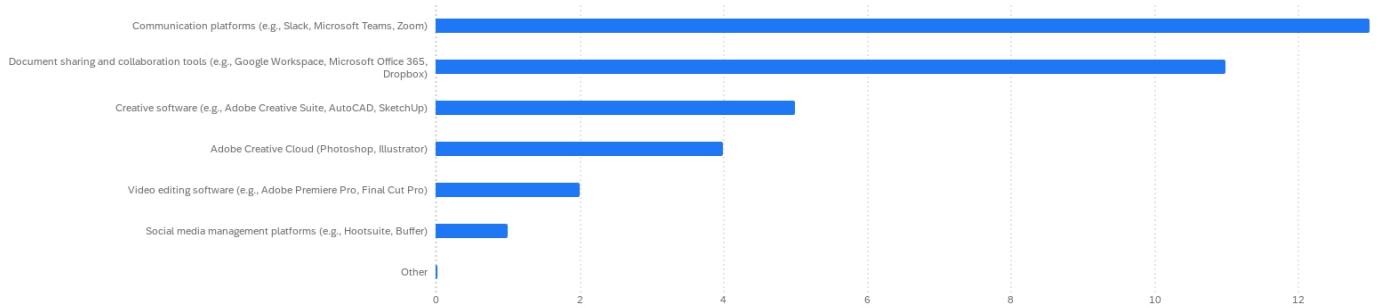
How has the increased flexibility to engage in remote work influenced your professional needs and workspace preferences? 14 ⓘ



How has the increased flexibility to engage in remote work influenced your professional needs and workspace preferences? 14 ⓘ

Q13 - How has the increased flexibility to engage in remote work influenced your professional needs and workspace preferences?	Percentage	Count
I now prefer a more flexible workspace that can accommodate both in-person and remote work.	29%	4
I have a higher demand for technology that facilitates effective remote collaboration.	29%	4
My need for a traditional office space has decreased.	21%	3
I value workspaces that offer quiet areas for focused work, as well as communal areas for social interaction.	36%	5
Remote work has not significantly changed my professional needs or workspace preferences.	14%	2

What (digital) tools or platforms are essential for your work? 13 ⓘ



What (digital) tools or platforms are essential for your work? 13 ⓘ

Q14 - What (digital) tools or platforms are essential for your work? - Selected Choice	Percentage	Count
Communication platforms (e.g., Slack, Microsoft Teams, Zoom)	100%	13
Document sharing and collaboration tools (e.g., Google Workspace, Microsoft Office 365, Dropbox)	85%	11
Creative software (e.g., Adobe Creative Suite, AutoCAD, SketchUp)	38%	5
Adobe Creative Cloud (Photoshop, Illustrator)	31%	4
Video editing software (e.g., Adobe Premiere Pro, Final Cut Pro)	15%	2
Social media management platforms (e.g., Hootsuite, Buffer)	8%	1
Other	0%	0

What (digital) tools or platforms are essential for your work?: Other ⓘ

No data found - your filters may be too exclusive!

Do you have any other comments or insights you would like to share about the future of workspaces for creative industries in Minervahaven? ⓘ

Work en living - en bijbehorende uitgaansmogelijkheden zijn nogal gescheiden van elkaar, ik spreek toch eerder in de stad af dan in de houthavens

better public transport

Maybe be more informed about the companies around me. I drive by them every day but never know exactly what I can find in this area and some might be even useful for my own work.

Maybe a place where you can get a sandwich/coffee on a walking distance. The Anne & Max is to far for a quick walk so everybody orders there lunch in.

Sounds like a great place!

Appendix 2: Expert-interview questions

English

1. Introduction
 - a. Can you introduce yourself? Name, job function and company.
 - b. Maybe also elaborate on your relation or expertise within creative redevelopment processes or the creative industry.
2. Creative industries
 - a. How do you define a 'creative company,' and what characteristics distinguish it from other types of companies?
 - b. Can you explain how you measure or assess creativity or innovation within a company?
3. Trends and redevelopments of creative clusters
 - a. In your opinion, what are the most influential trends in the redevelopment processes of creative workspaces in urban areas, specifically regarding live-work districts?
 - b. Can you provide examples of successful and less successful redevelopment projects of creative workspaces? What were the key factors for their success or failure?
4. Impact of remote working (focus within digitalization)
 - a. How has the rise of remote working, in your view, changed the nature and function of physical workspaces for creative companies?
 - b. What are your predictions for the evolution of workspaces for creative companies in light of increasing remote working?
5. Case of Minervahaven
 - a. *Briefly highlight some findings from the survey.* Based on the survey feedback, why do you think employees do not feel connected to Minervahaven as a creative cluster?
 - b. What could be effective strategies to transform Minervahaven into a more integrated creative workplace?
6. 15-minute city concept
 - a. How do you see the '15-minute city' concept being integrated into the planning and development of workspaces for creative companies?

- b. In what ways can creative businesses contribute to the development of urban areas as '15-minute cities'?
- 7. Closing
 - a. Do you know any other people that are linked to creative redevelopment processes (are expert worthy enough for an interview)?

Dutch

- 1. Introductie
 - a. Zou je jezelf kort kunnen introduceren? Naam, waar je werkt, hoe lang je hier al werkt..
 - b. Eventueel: relatie tot creatieve industrie / creatieve herontwikkeling / toekomst van werken.
- 2. Algemeen
 - a. Hoe definieert u een 'creatief bedrijf' en welke kenmerken onderscheiden deze van andere soorten bedrijven?
 - b. Kunt u uitleggen hoe u de creativiteit of innovatie binnen een bedrijf meet of beoordeelt?
- 3. Trends en Herontwikkeling
 - a. Wat zijn volgens u de meest invloedrijke trends in de herontwikkelingsprocessen van creatieve werkruimtes in stedelijke gebieden, specifiek met betrekking tot woon-werkwijken?
 - b. Kunt u voorbeelden geven van succesvolle en minder succesvolle herontwikkelingsprojecten van creatieve werkplekken? Wat waren de sleutelfactoren voor hun succes of falen?
- 4. Impact van remote werken (toespitsing van digitalisering)
 - a. Hoe heeft de opkomst van remote werken volgens u de aard en functie van fysieke werkplekken voor creatieve bedrijven veranderd?
 - b. Wat zijn uw voorspellingen voor de evolutie van werkplekken voor creatieve bedrijven in het licht van toenemend remote werken?
- 5. Case study specifieke vragen over Minervahaven
 - a. *Kort toelichten van aantal bevindingen uit enquête*. Gebaseerd op de feedback van de survey, waarom denkt u dat medewerkers zich niet verbonden voelen met Minervahaven als een creatief cluster?

- b. Wat zouden effectieve strategieën kunnen zijn om Minervahaven te transformeren in een meer geïntegreerde creatieve werkplek?
- 6. 15-minute concept
 - a. Hoe ziet u het concept van de '15-minute city' geïntegreerd worden in de planning en ontwikkeling van werkplekken voor creatieve bedrijven?
 - b. Op welke manieren kunnen creatieve bedrijven bijdragen aan de ontwikkeling van stedelijke gebieden als '15-minute cities'?
- 7. Afsluiting
 - a. Zijn er mensen in je werkomgeving die wellicht ook interessant kunnen zijn voor dit onderwerp?