

The New Finnish Dream Home?

Townhouse Living from a Resident's Perspective



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Hannu Huttunen Eija Hasu Jukka Hirvonen Anne Tervo Tina Ullrich



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Edited by: Anne Tervo and Eija Hasu

Research project director: Hannu Huttunen

Authors: Hannu Huttunen, Eija Hasu, Jukka Hirvonen, Anne Tervo and Tina Ullrich

Layout and graphic design: Anna Ratia

Publication series graphic design: Caroline Moinel

Cover art: Anna Ratia

Translation: Lingsoft Oy

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1. Introduction

1. Introduction

1.1 Foreword

The townhouse concept has been part of the Finnish discussion on urban planning and housing design for more than a decade. Although getting a new type of house to complement the relatively narrow typology of residential buildings has attracted, in particular, city planners in the Helsinki Metropolitan Area, the townhouse as a building type was highlighted in the nationwide Ministry of the Environment "Dense and low-rise" programme, which was launched by the Ministry at the beginning of the 2000s. The objective of the programme was to promote urban detached housing and small-scale urban environments.

Various projects in which the townhouse type of housing was either highlighted or included as part of the project were launched in both the Helsinki Metropolitan Area and other cities. This type of residential building has seen a variety of iterations over the past few years, but it has also encountered a great deal of difficulty. The integration of the townhouse typology into Finnish housing culture and residential construction has not been as simple and seamless as was perhaps hoped. Because a considerable number of typologies are introduced to the Helsinki Metropolitan Area urban structure and housing production through ongoing zoning projects and city plans already approved and implemented, the Aalto University Department of Architecture became interested in examining townhouses and their various features in greater depth.

Compactness and ecological efficiency are often used as justifications for the townhouse typology, particularly when comparing urban structures using this type of housing with other residential areas dominated by single-family homes, including areas comprised of detached homes.

The rich, small-scale and distinctive cityscape provided by townhouses as well as the integral, active relationship of housing with the urban structure are also seen as desirable features. These features are characterised by European versions of the typology, particularly in Holland, from which models have been adopted for use also in Finland. However, less attention has been given to examining under what conditions and in what form a new solution differing from the traditional Finnish model might find its place in the Finnish construction and housing culture. In other words, where can both the developer and user be found? Is there a real demand for townhouses?

This report, *The New Finnish Dream Home? Townhouse Living from a Resident's Perspective*, explains how the features of the townhouse typology could meet the preferences and needs of potential residents, homebuyers or private home builders as well as what should be taken into consideration in developing the typology in order for it to offer a real alternative to the selection of Finnish housing options – a townhouse for everyone and anyone in Finland. I would like to thank the agencies which participated in the City of Helsinki research project, representatives of the Housing Finance and Development Centre of Finland (ARA) and Innovative City programme, who contributed their invaluable perspective in the project steering group through discussion. In addition, the study would never have been possible without the survey respondents and workshop participants. I would also like to express my sincere gratitude to all the active, enthusiastic citizens who shared with us their own opinions and ideas on what constitutes good living.

Helsinki, 01/06/2015

Hannu Huttunen

Professor, Housing Design
Head of the research project



Figure 1. The Finnish Dream House study was presented at the City Planning Fair on 13–18 April 2015.

1.2 Finnish Dream Home study in Aalto University

In 2013, the Aalto University Department of Architecture launched an extensive multidisciplinary research project on townhouses, "Habitat Components – Townhouse", which examined the townhouse as a building type, its European history and modern-day applications as well as its suitability for Finnish housing culture and residential construction. The aim of the Townhouse study is to conduct an interdisciplinary analysis of the possibilities offered by this type of housing in as multifaceted a way as possible, searching for answers to which direction housing should be developed so that it can tackle the major issues to be faced in the future: the pressures of urbanisation, the development of a sustainable urban structure, meeting the diversifying housing preferences, and energy efficiency. Productised townhouse concepts will be developed based on the results obtained in the next phase of the study.

"Habitat Components – Townhouse" is part of Innovative City Partnership programme between Aalto University and the City of Helsinki, which is financed by the City of Helsinki Innovation Fund. The study is divided into three separate research sections. In addition to these, the study is linked to the separate, interdisciplinary Energy Efficient Townhouse project, which is funded by the Aalto Energy Efficiency Research Programme (AEF). The project examines the townhouse as a building type and the possibilities it offers an urban structure from an energy efficiency standpoint (Energy Efficient Townhouse 2014). In a certain way, the Energy Efficient Townhouse project serves as a fourth research section within the overall scope of the townhouse typology study.

The Dream House study is the first and foremost research section of the Habitat Components – Townhouse project. Its objective is to map how and what features of the townhouse typology and the living environment it creates correspond with the housing preferences of Finns as well as define the core issues to be taken into consideration when planning new townhouse areas or developing Finnish townhouse concepts. Housing preference research will continue as part of the Energy Efficient Townhouse project by means of the Finnish housing and environmental attitudes survey, which is also referred to as the Townhouse Envi survey (Finnish housing, energy and environmental attitudes). The Envi survey will provide a more in-depth resident perspective, thus increasing the understanding of energy and living environment attitudes.

1.3 Background

Extensive ongoing and planned zoning projects in Helsinki and other Helsinki Metropolitan Area municipalities form the basis for the housing preferences research on the townhouse typology. The projects aim to increase the diversity of housing solutions by means of the townhouse typology. Considered as an urban form of living, townhouse, or similar type of dense and low-rise urban housing etc. has been planned for both new and already developed areas. The most important area where the planned quantitative

percentage of the townhouse typology and its various applications will be high is in Östersundom, which is slated for construction in 2020–2070. This new, rail-connected extension of Helsinki, which will be home to 70,000 residents and 15,000 jobs, is included in the city plan draft for the area. At the time of this writing, the Östersundom area is in the city plan phase. Zoning progress has been slow due to a raft of problematic issues involving land use. Östersundom, and the possible realisation of the area, play an extremely important role with regard to development of a small-scale, urban-style house typology, and further, to apply the developments into traditional Finnish building.

Seen from the standpoint of the Helsinki region's net migration and regional competitiveness, the townhouse typology is examined in relation to the ideal of a detached, single-family house. Indeed, the typology is a desirable alternative, particularly to families with children who dream of owning a detached home. The status of families is also highlighted in a study charting the possibilities of the townhouse typology (Jalkanen et al. 2012). It is, after all, vital to offer alternatives, because owning a detached house is out of many people's reach (Strandell 2011).

Efforts have previously been made to meet the housing needs of a growing urban population and, in particular, families with a dense, low-rise typology. The principle of decentralisation for city planning in the 1940s played a key role in the proliferation of row-house areas. A private yard and an immediate connection with nature were the trump cards of growing row house areas. (Nikula 2015.) However, the row house areas differ from the new and planned townhouse areas in that the townhouse rows are situated directly adjacent to the street space, thus emphasising the urban nature of these areas.

2. Framing the research

2. Framing the research

2.1 Purpose of the study

Townhouse living from a resident's perspective

The main purpose of this study was to include the residents' perspective in development of the townhouse typology. Although townhouses have been available, most notably in the Helsinki region, the demand for them has been difficult to forecast for the time being. The high price of units has resulted, in many cases, in weak demand. Multistorey floorplans could also be seen as a detriment to the typology. The same applies to the image of a long, narrow yard. If, according to preconceptions, the most likely residents of the townhouse typology are families with children who want to own a single-family home, then a unit that is expensive due to the large number of square metres and that offers only a narrow patch of yard might not be the house of choice for the presumed target group. This is why the residents' perspective calls for a more detailed analysis of potential target groups as well as a deeper understanding of the housing needs and capabilities of these groups.

Lifestyles as part of housing research

Where townhouse living is concerned, the target group approach involves dividing the housing market into certain resident groups, from which the residents with the greatest potential and compatibility are selected for a townhouse unit. Typically, resident groups are categorised and analysed based on sociodemographic factors. When the residents' stage of life and age are known, it can be inferred whether they would most likely live in an apartment block in the city centre or are newcomers of the more peaceful row house area, particularly if factors such as education, income level, prior residence, etc. are included in the analysis.

It has, however, long been known that housing preferences and behaviour are also based on factors other than these rather clearly quantifiable background factors. Dutch researcher Silvia Jansen suggests that even households with very similar backgrounds can choose very different housing solutions. Jansen uses the term lifestyles to explain this. (Jansen 2012.) The definition of lifestyles is varied: they can be "sets of practices and attitudes that make sense

in particular contexts" (Chaney 1996) that steer and serve as the motivation for our choices (Antonides 1996). In a city planning context, they are "the way of life related to residence associated with the consumption of time, space and money" (Ge & Hokao 2006) – housing choices and the motives behind them.

Lifestyles comprise a dimension that is becoming a permanent part of housing research. In Finland, Marketta Kyttä and her research team have developed pairs of claims for measuring housing dimensions. These made it possible to classify residents, among others, according to their attitudes toward the neighbourhood and a longing for nature (addressed in greater detail in, for example, Kyttä et al. 2010a; 2010b). Construction companies such as SRV and YIT have used the approach for customer profiling (Hasu & Staffans 2014; Talouselämä 2014). A majority of the lifestyle profiling done in Finland, however, focuses on residential area type or analysis of a certain stage of life. For example, in the *Urbaani elämäntapa* (Urban lifestyle) project, the lifestyles of citizens under the age of 45 were examined. Five different lifestyle groups were identified for young adults under 30 years of age: Deep Green, Superficial Shopper, Greenish Citizen, Standout and Online Citizen. (Mustonen & Lindblom 2013.)

In international research, lifestyles have been included as part of housing research for a longer period of time. Thorkild Ærø (2006) of Denmark used the lifestyle concept in his research on housing preferences in residential areas of varying densities. However, he noticed that, in reality, many residents had only one opportunity to make a choice – it was therefore not entirely clear whether the choices were steered by lifestyle or the other way around. When making housing choices, the whole must be kept in mind: even though beliefs, conceptions and experiences influence choices, wealth and life situation also have an impact (cf. Clapham 2005).

When assessing housing possibilities, every effort should be made to outline several different factors, all of which affect the housing choices. This is also precisely what this study on townhouse living and the townhouse typology attempts to do.

Lifestyles as 'sets of practices and attitudes that make sense in particular contexts'

(Chaney 1996, 15)

'the way of life related to residence associated with the consumption of time, space and money'

(Ge and Hokao 2006, 167)



Figure 2. View of a mixed-use street lined by townhouses. Gilmour Road, Cambridge, Alison Brooks Architect.

2.2 Research questions

The primary objective of the Dream House study, which emphasises lifestyles and varying housing preferences, a shrinking of household size and new types of housing from a resident's perspective, is to determine on what terms the townhouse typology could meet the housing preferences of different resident groups in the Helsinki Metropolitan Area instead of using a family-centred approach.

In addition to the resident's perspective, factors affecting the design and zoning of the typology are highlighted in focused research questions and themes:

1. Conceptions of the townhouse typology at the housing preferences level (e.g. what factors slow the proliferation of the typology).
2. The specification and profiling of different resident groups: the aim is to identify how the townhouse typology can meet divergent housing needs.
3. What does adaptability mean to the resident?
4. Individualised solutions for indoor and outdoor spaces.
5. The significance of outdoor spaces in relation to both resident profiles and the nature of the residential area.

5. Conceptions related to the townhouse typology at the design and production level (group builders, independent contractors and construction companies).

2.3 Previous research

Beginning in the early 2000s, townhouse living has been examined in numerous reports and studies. In targets specified in the Ministry of the Environment **Tiivis ja matala (Dense and low-rise) project** (2002–2005) and the Helsinki Housing Programme 2004–2008, the townhouse typology was found to effectively meet the need for promoting the construction of small-scale, diverse urban environments. The typology had not been researched in Finland previously. In their report **Tiivistä ja matalaa Helsingin seudulle (Dense and low-rise for the Helsinki Region)**, Manninen and Puustinen (2002) identified Helsinki, Espoo, Vantaa and rail-served municipalities as being ideal for dense, low-rise and urban construction. According to the researchers, new single-family house solutions with efficient land use require giving attention to cooperation, among other things. Close cooperation between building design and city planning, the roles of coordinators and involving different building contributors in the different phases of planning are examples of taking the report into consideration, which



Figure 3. Townhouse living in the Netherlands. Borneo-Sporenburg, Amsterdam.

also have a direct link to today's townhouse issues, not forgetting to leave some room for the housing designer's and resident's creativity.

Townhouse, kytetty omatonttinen pientalo kaupungissa – Lähtökohtia ja tavoitteita (Townhouse – Attached single-family house with a private plot: Starting points and objectives) Manninen & Holopainen (2006), was the Helsinki City Planning Department's first publication on the townhouse typology. The report examined the historical development of the attached urban single-family home as well as application of the typology in Helsinki. Young adults, experimentally-inclined people, cosmopolitans and urban residents with families were identified as being potential townhouse pioneers. City of Helsinki Real Estate Department report **Malminkartanon kaupunkipientalot (Malminkartano townhouses)** addressed the construction of the first attached single-family houses, following Kaj Fogelholm's report on the Säteri site in Leppävaara (Fogelholm 2003). Although the building phases of the

Vuorenjuuri site in Malminkartano were comprehensively documented, there was little feedback gathered from residents. (**Malminkartano 2005.**)

The feasibility of the townhouse typology and the challenges facing its execution were examined from a variety of perspectives as part of the Aalto University **URBA** research project (2007–2010). The Townhouse working group compiled, distributed and refined the townhouse knowledge of designers, researchers, experts and construction professionals who participated in the work and examined the experiences of townhouse residents (Mälkki 2010; Hasu 2010). The results emphasised the role of developer consultants, finding that consultant-led group construction might tackle the biggest challenges of townhouse construction.

In 2010, the City Planning Department commissioned the **Vetovoimainen esikaupunkiasuminen** (Attractive Suburban Living) target group report in connection with the Suburban Renaissance project. The report examined

the attitudes of Helsinki families with children and senior citizens toward townhouse living. The report was based on data collected by means of a questionnaire and group interviews. The questionnaire was filled out by 211 respondents with families and 417 senior citizen respondents. Three group interviews were conducted with both target groups. Only five people participated in the group interviews for people with families: Two residents from Vuorenjuuri in Malminkartano and three from Lamputilantie in Maunula. Residents from Hiisikuja in Tapanila did not respond to the group interview invitation. Senior citizen participants were invited from two service homes and the Loppukiri service home in Arabianranta. A total of 22 residents were interviewed. Potential residents were asked what expectations they had regarding their housing solutions. The target group of the report was comprised of families with children wanting to live in a detached, single-family house as well as persons 55–85 years of age who were already living in suburbs and planned on change residences. The report findings revealed both interest in the suburbs as a place to live and a great deal of interest among families with children in new types of unique urban detached houses. The senior citizen participants were found to value functional local services, accessibility and opportunities for recreational activities within their own residential area. The various forms of community living also interested senior citizens. However, there was a desire to live in one's own residence for as long as possible. Nearly all those filling out the questionnaire stated that they wanted their own yard or a combination of their own yard and a shared housing cooperative yard. The results do not provide a detailed idea as to what factors would indicate the preferences for a yard. Smooth-running public transportation and carefully planned suburban environments were also emphasised. Over half of the respondents (n = 628) felt that the townhouse was a possible choice for a residence. (Ruotsalainen et al. 2010.)

In 2009, Eija Hasu completed her Master's thesis at the Aalto University School of Science and Technology titled **Koti pihalla. Kodin ulkotilat yksityisestä julkiseen. Asukkaiden kokemuksia asumisesta ja asumisen laadusta. (Home with a yard – Outdoor home spaces from private to public. Resident experiences with living and the quality of living.)** The thesis, which emphasises the resident's perspective, discusses the relationship between detached houses in a low-rise, dense urban structure and the broader living environment. The thesis describes, among other things, that the advantages and disadvantages of living in a detached house situated directly on the street are only revealed to the residents through actual experience. It is difficult for residents to determine the degree of privacy and security they will have in a residence immediately adjacent to the street space. This is why the detailed plan plays such a key role. If an adequate buffer is indicated between the residence and street space, the residents have a more effective sense of control over their home space. (Hasu 2009.)

The following year, attached urban single-family house models suitable for Helsinki's urban environment and housing culture were presented in the **Helsinki Townhouse** architectural competition held by the City

Planning Department (Sjöroos & Jalkanen 2010). Two years after publishing the results of the competition, architectural firm Arkkitehtitoimisto Heikki Muntola drafted a compilation of the competition results for the City Planning Department that listed the various solution models for the typology. The compilation approaches the townhouse from the perspective of a single residence. It also makes a statement on the flexibility of the typology and the possibilities for expansion it offers. (Muntola 2012.) Inspired by the competition, Eeva Saarelainen wrote her Master's thesis **Helsinki Townhouse – saavutettavuus kaupunkipientalossa** (Helsinki Townhouse – accessibility in a townhouse), which discusses townhouses from an accessibility standpoint (Saarelainen 2010).

In 2012, the City Planning Department continued defining the features of the townhouse typology as well as examining the requirements for its realisation in its extensive **Townhouserakentaminen Helsingissä** (Townhouse construction in Helsinki) report. The townhouse is addressed in the report primarily as a form of family housing. The basis of the report is fulfilling the preferences of families wanting to live in a single-family house in the Helsinki Metropolitan Area. (Jalkanen et al. 2012.)

The **Vuosaaren Jasmiinin kaupunkipientalot** (Townhouses in Jasmiini, Vuosaari) follow-up study was done as an interview survey for residents of the site (n = 15). The results of the study, which was commissioned by the Helsinki Housing Production Department ATT, showed that residents had a positive attitude toward the three-storey plans of their row houses. Dividing the living spaces among multiple floors was considered to make the residence distinctive as well as organise activities performed on each floor. The downside of the three-storey plan was the amount of space taken up by the stairs. Depending on the respondent, going up and down the stairs was considered either a positive or as being tiring. Small entrances raised conflicting views: on one hand the entrance was widely seen as poorly designed, while on the other, residents did not want to devote living space to an entrance. Where storage space was concerned, walk-in closets as well as unit-specific storage cages and outdoor sheds received praise. Floor plans in which the entryway, kitchen and bathroom are located on the first floor and the living room on the second floor were considered to be lacking in functionality: people wanted the living room to be connected or in close proximity to the kitchen. There was a desire for the adaptability of room space. There was a dissatisfaction with courtyard areas, which were not considered suitable for relaxing or promoting a sense of community. Conversely, private outdoor areas, private entrances, balconies and patios were considered pleasant. This relatively small study actually turned out to be revelatory where the development of design solutions for the townhouse typology is concerned. In terms of administration, right-of-occupancy residences offer an interesting additional dimension to townhouse living. (Gaudia 2013.)

Published in 2014, the report **Pientalokaupunki. Östersundomin yhteinen yleiskaava** (City of

Townhouses, Östersundom City Plan) and its draft version published in 2011, **Östersundom ja kaupunkipientalo** (Östersundom and the townhouse), examined the nature of an urban townhouse city and its feasibility, specifically from the perspective of city planning for Östersundom. One of the area visions is city living in a detached house, which makes family housing at an affordable price possible. (Pulkkinen 2014; Pulkkinen 2011.)

The first research report of the Aalto University Energy Efficient Townhouse research project is **Energiatehokas townhouse – Taustat ja mahdollisuudet** (Energy Efficient Townhouse – Background and Possibilities), which was published in 2014. The report provides an overview of the current situation in townhouse construction and examines the potential of the townhouse, particularly from an energy efficiency and ecological standpoint. (Energiatehokas townhouse 2014.)

Townhouse models from other countries

A City Planning Department report refers to a movement originating in the United States – the New Urbanism movement – which is modelled after the features of traditional European cities (Pulkkinen 2014; Pulkkinen 2011). In her Master's thesis **Herenhuisesta kaupunkitaloksi** (From herenhuis to kaupunkitalo – A study of applying Dutch townhouse typology to Finland) Emilia Ellilä examined the long tradition of townhouses in the Netherlands and, based on the results of her research, developed diagrammatic models of townhouses in various sizes which would be suitable for Finland. One purpose of the thesis is to serve as a design tool: it offers the residents, for example, a plan of various townhouse functions and their placement on different floors. (Ellilä 2014.)

In her Master's thesis **Saksalainen kytketty kaupunkipientalo inspiraation lähteenä** (German townhouse as a source of inspiration – A study from the traditional Bürgerhaus to present-day townhouse building), Tina Ullrich examines the history of the German urban terraced house and modern-day townhouse construction. The opinions and experiences of townhouse residents are presented in the form of resident interviews. The end of the thesis contemplates what we here in Finland can learn from German urban terraced house construction. (Ullrich 2014.). Both Ellilä's and Ullrich's theses are results of the above-mentioned Aalto University townhouse study. In his thesis **Why townhouses?**, Timo Hämäläinen looked at why the townhouse has come to both Sweden and Finland and what social factors were behind this phenomenon (Hämäläinen 2013).

Urban terraced house models for use in Finnish city planning have been sought from abroad, because Finland does not have a strong enough tradition in building attached single-family houses: the Finnish tradition of densely built wooden cities was lost with the changing aesthetics of modern city planning (Kuittinen & Ullrich 2014). However, the results of townhouse studies conducted in various cultural contexts can only be applied to a limited extent in Finnish conditions. From a city planning standpoint, it is virtually impossible to adopt models from countries

where the cities have had plenty of time to evolve and grow over the centuries. It is still a good idea to be cognizant of the social and economic factors that made the Central European townhouse narrow, deep-framed and tall. There is no real shortage of available plots in Finland that would lead to a similar situation. Recognising this fact gives designers the freedom to develop the typology and provides an opportunity to take the residents' perspective into consideration more effectively.

Linked to urbanisation, growth in the popularity of city living and the attendant changes in housing preferences can be widely seen in the urban development of different countries in Europe. However, housing culture and building methods differ from one country to another. Building legislation varies so widely between different European countries that construction models cannot be copied. A good example of this is accessibility. Even though the 2008 UN Convention on the Rights of Disabled Persons steers building legislation in all EU member states (UNA 2012), country-specific differences can be found. German legislation allows, for example, the construction of a three-storey low-rise apartment block without a lift; this would not be possible in Finland.

2.4 What is a townhouse?

The history of the townhouse typology is long and wide-ranging. Townhouses can be found in a wide variety of cultures and time periods. However, reference is generally only made to Western buildings. Dutch, British, North American and German examples are most commonly used. The term itself is related to an English-language tradition and is used particularly in North America. However, the term's origins are found in Great Britain. The accelerated urbanisation following on the heels of the Industrial Revolution motivated the upper class to seek quieter, more bucolic places to live out in the countryside. A city residence, whose ownership required a concentration of social and economic power in the cities, were simply called "town houses". The term distinguished the townhouse from the estate held out in the countryside, which was called the "country house". Many other terms were used in addition to townhouse. In Great Britain, "row house" and "terraced house" often refer to structures that barely differ from those called townhouses. (Hämäläinen 2013; Friedman 2012; Manninen & Holopainen 2006.)

The recent Energy Efficient Townhouse study, which examines the attached single-family house from an energy efficiency standpoint, aptly points out that although the townhouse can be easily identified, it is more difficult to define. In the Finnish discussion, a townhouse typically refers to a deep-framed, single-family house of 2–4 floors that is usually connected to a similar house by a common sidewall and is contained in a row of at least three units. (Huttunen & Kuittinen 2014.)

Its relationship with the street space is one of the more established features of the townhouse. By situating them directly on a street or offsetting them by a front yard buffer, townhouses form a spatially distinctive dense and low-rise

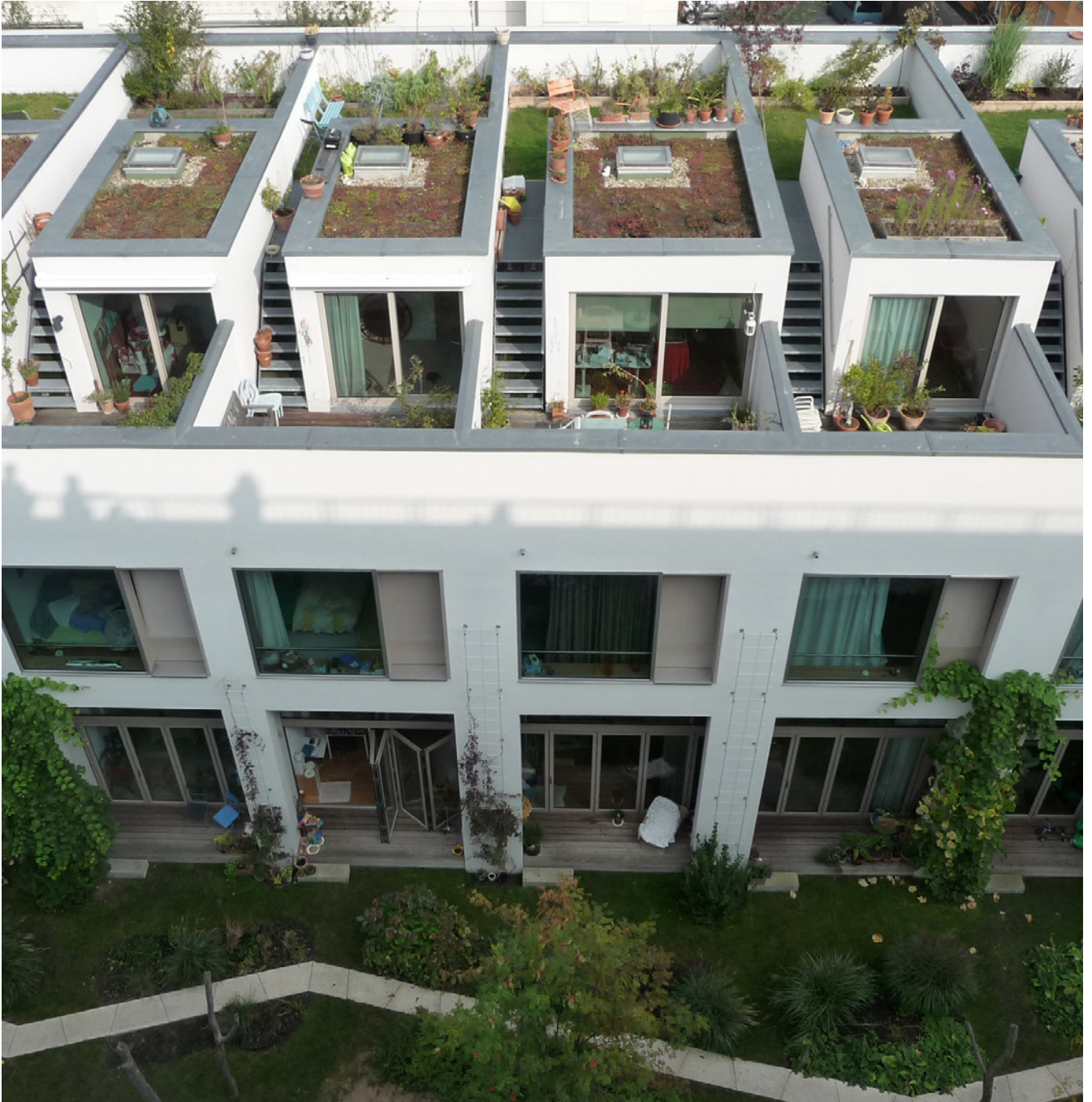


Figure 4. A glimpse from the back yard. BIGyard, Zelterstrasse Berlin, Zanderroth Architekten.

urban structure. The typology generally includes a private back yard. Common yard areas can also be part of housing cooperation -type townhouses. (Huttunen & Kuittinen 2014.) The type of administration and location influence the parking solutions used for the townhouse typology. Underground parking is primarily considered for inner city locations.

The method of execution and type of administration largely determine the features of a townhouse. Plot ownership allows for personalised design solutions reflective of the cityscape, much in the same way as with single-family houses. However, the type of administration can also be a housing cooperation, in which case a row of townhouses can resemble a conventional row house (Huttunen &

Kuittinen 2014). In older sites, the type of administration used is seen as being the distinguishing factor between the Finnish row house and townhouse (Manninen & Holopainen 2006). Newer sources do not consider the type of housing cooperative to be defining factor of the townhouse definition (cf. Jalkanen et al. 2012). Indeed, the definition of townhouse does seem to be evolving naturally. The type of administration and personalised design solutions are also reflected in the daily lives of residents: sense of community is thought to decline when residents manage their own plots and residences (Nikula 2015).

The need for a townhouse definition is becoming increasingly linked to Finnish legislation, which sees the typology as being somewhere between a detached house

and apartment block, depending on the interpretation. Finding a definition when dealing with quarters that combine various typologies is particularly difficult. Definitions also vary by municipality and are linked to the typology stated in the detailed plan. The different detached house and apartment block accessibility regulations affecting designers and residents are, however, a good example of the importance of a townhouse definition. Attention must also be given to the fact that the Housing Finance and Development Centre of Finland (ARA) has made a decision in principle to only provide funding to accessible solutions (Huttunen & Ullrich 2014). The townhouse definition is also related to the divisibility of the typology. According to the City Planning Department, townhouses may also include, to a minimal extent, residences stacked on top of each other (Jalkanen et al. 2012). In practice, according to the interpretation of current legislation, stacked townhouses are actually considered an apartment block, which involves, for example, the fire compartmentalisation of each unit.

Why is the English term "townhouse" used?

The term "townhouse", which generally refers to the Central European tradition of dense, small-scale building, has been used in Finland. There is currently no equivalent term in Finnish: for example, the terms *kaupunkitalo* (city house), *kaupunkirivitalo* (city row house) or *kytketty kaupunkipientalo* (attached single-family house) have not been adopted for broader use. Thus far, there has been a desire in Finland to keep the term townhouse wide open. Many houses built in Finland, even those completed recently, would be very aptly described by the term *single-family row house* (Huttunen & Kuittinen 2014).

The language issue was addressed in the Helsinki Townhouse competition programme, which decided that the term townhouse should be translated as *kaupunkipientalo*. However, there is a risk of the confusing the typology with the "Helsinki Type House", which is a detached single-family house (Sjöroos & Jalkanen 2010; Manninen & Holopainen 2006). A Finnish translation of the term townhouse was sought at the Townhouse? seminar held in June 2014. The term proposals requested from the general public clearly show how varied the typology really is: *kadunvarsitalo*, *katurivitalo*, *kantakaupunkitalo*, *esi-kaupunkitalo*, *kaupunkikototalo*, *pienkerrostalo*, *likitalo*, *lähitalo*, *alankotalo*, *citytalo*, *taunhausi*.

In Finland, the term townhouse has been, at least for the time being, kept very open, suggesting that use of the English term leaves room for the imagination. It may also be that, at this stage, a small-scale building typology is being sought for local conditions, thus making this an issue that is far broader than simply the establishment of one particular typology in Finland. In this respect, the townhouse functions more as a tool or symbol, as the goal is to expand what has been considered a one-sided typology. In the future, the Finnish townhouse will continue to evolve in terms of its form and definition.

3. Research framework and methods

3. Research framework and methods

3.1 Design understanding of living environments in the study

Housing preferences research, whose objective is to identify key factors for the proliferation of the townhouse typology and townhouse living, is an example of a research framework that emphasises the design understanding of living environments. When the research subject is a typology that is unknown to the general public, not established in our housing culture and lacks a clear definition, it is of the utmost importance that researchers identify the limitations and possibilities of the typology as a whole. Thus, the research frame of reference would be comprised of the cultural practices and legislation involving housing, building design, zoning, city planning and construction. More broadly, the research framework describes the contribution of architects and landscape architects to qualitative research that emphasises the importance of putting research results into practice.

3.2 Research in three phases

The Finnish Dream House study made use of several different sources: expert interviews, surveys and workshops. The research process was steered by the cumulative understanding and knowledge gained from one data collection phase to another. This was therefore a question of "method triangulation", i.e. collecting research data by means of several different channels in cases where it is not possible to develop a sufficient understanding of a phenomenon using a single data collection method (Eskola & Suoranta 1998).

3.2.1 Expert interviews

"The townhouse is hard, but it's just so darn nice!"

In October 2013, we interviewed architects, city planners, researchers and other experts (n = 11) working with the townhouse typology. The aim of the interviews was to ensure that we were examining the right aspects that are key to the development of the townhouse typology.

The interviews dealt with the townhouse typology definition, location, residents, design solutions, outdoor spaces, proliferation of the typology and building methods. Furthermore, the interviewees were asked to suggest any other aspects they experienced in their own work that they felt were significant. The interviews took 1–1.5 hours and were recorded and transcribed. The interview outline has been appended to this report.

Expert interviews provide a comprehensive view of the challenges related to the townhouse typology, living and building. In the interviews, the typology definition raised

questions on type of administration, appearance and typology. Typologies with various structural attachments, high-rise and lower rise buildings, hillside solutions following terrain contours, solutions reminiscent of small apartment blocks but using an urban bungalow type of structure were all considered interpretations of the townhouse typology. The ability to enter the residence through the front door directly from the street was also considered a key feature of the typology. The importance of having distinctive, individualised townhouse façades was demonstrated in relation to, for example, Hilding Ekelund's Sahamäki row houses. Private yards and neighbours were also addressed: *"Yes, I'm sure it's that there's direct contact with your own yard – the association type doesn't affect that; there are individuals – a neighbour might be just as hostile in their own yard or the neighbour's yard."* From a zoning standpoint, the definition placed an emphasis on small-scale, urban space. A need for a *"context sensitive"* definition was also identified, as the townhouse areas in the suburbs and city centres are, in and of themselves, different. In light of the interviews, it is appropriate to consider whether the townhouse is a new typology or perhaps a generic name for a highly adaptable dense and low-rise typology, in which multiple floors, private yard areas and house-specific façade solutions are, ultimately, the only features set in stone.

The fact that townhouse floor areas are easily getting excessively large and relatively high building costs were identified in all interviews. Where the ability to divide the residence into separate apartments is concerned, Finnish construction legislation and, in particular, unit-specific fire compartmentalisation sparked discussion: for example, in Denmark and Holland, stacked units comprise a single fire compartment. Karin Krokfors' Kellokas (Arabianranta, Helsinki) was considered a good example of a semi-detached type of townhouse. In addition to keeping construction costs under control, the need for townhouse divisibility was combined with shrinking household size and, in particular, the development of housing solutions for one-person households.

Accessibility regulations were seen as the reason for increases in floor area and, in turn, building costs: *"Well, if someone wanted to build a really low-cost townhouse, then I'd think: what's the point? It's quite a jigsaw puzzle to get a lift and everything else into place so that the lift will actually be useful for people in wheelchairs."* The survival floor enjoyed unanimous support, but dimensioning for a 1500 mm diameter was considered unnecessary, for example, in upper floor corridors, particularly when the house is built on an owned plot and not as part of a housing cooperation. It was also found that a large percentage of persons with reduced mobility use a cane as a mobility aid and, for them, large distances can be more unpleasant. Accessibility was also examined in relation to zoning: *"If*

the plan doesn't say to put it right on the street and it needs to be 50 centimetres higher than the street, then it's fun to come up with an accessibility solution. Everywhere that this has been done was done either through the carport or garage, through the yard by raising the ground or some other way through the yard, because when the building instructions say that there is room for a rise, it's not really the case – it shouldn't be done like that." A few of the interviewees felt that passage through the garage is a functional solution from an accessibility standpoint and in terms of house maintenance and use. The "fully detached" townhouse, in which a uniform street façade could, if necessary, be achieved by, for example, placing carports in between the houses was also discussed.

The challenges of group construction, such as harmonising the various schedules of the involved parties, financing and other aspects of project management, had become familiar to both permit authorities and architects working on the townhouse projects. However, group construction was seen as an opportunity for a significant decrease in building costs, particularly if multiple townhouses shared the same lead designer and completion schedule. Plot ownership often associated with the townhouse typology was seen as being difficult from a construction standpoint. Attached construction was considered a special feature, which, in its most extreme form, requires easement agreements for the building of a firewall as well as a shared fence and maintenance on plot boundaries. The responsibilities of a developer consultant also raised some questions. Many of the interviewees felt that townhouse construction does not interest larger developers. Prefabricated townhouses were wanted on the market. Many felt that an obstacle to the proliferation of the townhouse typology was the building costs, which are higher than for single-family houses, and the low profile of the typology. However, the conditions for reasonably priced building should exist, because plots are smaller and there are fewer exterior walls to contend with.

Townhouse construction was considered to be well-suited to the consolidation of suburbs and humanising their scale. Interviewees were reminded that private yards and parking solutions were tied to the nature of the area. Inner city deck solutions were out of the question where suburban townhouses were concerned. Parking in front yards and along the street changed the nature of the street space. For example, a child-friendly mixed-use street and street parking could be a dangerous combination.

Even large front yards were thought to fit in well with Finnish housing culture. Examples were taken from as far afield as the borough of Brooklyn in New York City: *"They're usually these kind of flowery front yards, with plantings, fruit trees and that sort of thing. That combined with the tight urban surroundings was just so amazing."* The nature of entrances sparked the most discussion: *"When there are private entrances, you have to understand the nature of public space and then there is some hierarchical need on how the door should open, whether it should be set into the house – that recess is a seriously private space."* The difference with row houses can be found in the relationship between the townhouse and a mixed-used street. *"Sure, it's important that the residence itself is part of the street space and it might have its own yard to some extent."* The

same preferences regarding the construction of new urban residential areas was examined critically, keeping in mind that, in and of itself, a typology that is considered urban does not increase the number of essential urban services or smooth public transportation connections.

The ability for residents to make personal design choices, such as is possible with single-family houses, was emphasised as a key attractiveness factor in nearly all the interviews conducted. None of the interviewees felt that this was a question of an easy design, housing or construction method. The need for a resident survey was highlighted in several interviews: *"Like, in my opinion, the whole thing should definitely be based on a preliminary survey to determine needs – not just that I come up with some kind of plan and hope it has takers."* Townhouse living was considered a marginal housing alternative that is poorly suited to the needs of senior citizens. Couples with healthy incomes and families with children were repeatedly mentioned in conversation, even though the percentage of families in Helsinki's population is relatively low.

The conservative nature of housing choices was combined with the existing building stock. Indeed, the construction of pilot sites using different, open-minded design solutions in both the inner city and suburbs were identified as preconditions for proliferation of the typology. In a couple of the interviews, reference was also made to the need for experimenting with a "cubic plan" for townhouses, where residents are relatively free to make design choices, although with certain limitations. The possibility of using solar power for a narrow house in a certain coordinate system was considered minimal. House-specific waste management as well as the challenges posed by runoff water and snow were considered unresolvable problems.

3.2.2 Design and execution of the housing preferences survey

Collection of survey data and its representativeness

Survey data was collected using three distribution channels. In that way, the feasibility of various distribution channels and collection methods was also tested.

Primary data was comprised of web panelist respondents, in which a quota based on the type of household was set for people 24–59 years of age: this made it possible to divide the approximately 1,000 respondents into roughly equal representative groups of single, couple and families with children. A quota of 200 respondents was also set for people 60–80 years of age. The goal was to obtain a representative cross-section of the adult population in the Helsinki Metropolitan Area. A total of 1,214 respondents filled in the survey. This data allowed for multifaceted internal comparison and analysis.

The second channel was offering people looking for a residence an opportunity to take the survey on the real estate website, etuovi.com. This resulted in only 81 responses, which considerably less than expected and did not allow for a proper analysis. This distribution channel

DIAGRAM 1.
RESPONDENTS ACCORDING TO HOUSING TYPOLOGY IN TWO DATA SETS

Survey respondents' current housing typology

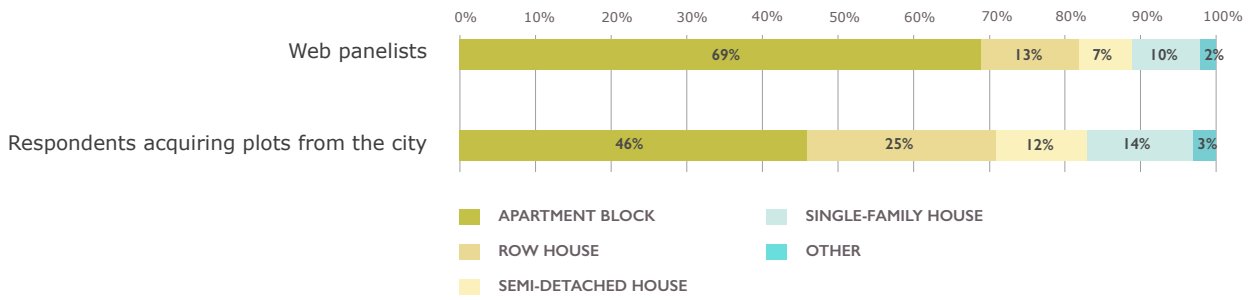


DIAGRAM 2.
RESPONDENTS ACCORDING TO HOUSING TENURE TYPE IN TWO DATA SETS

Survey respondents' housing according to tenure type

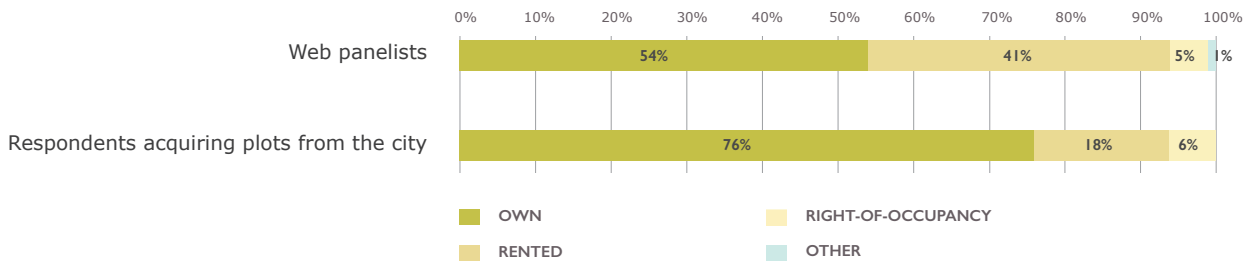


DIAGRAM 3.
RESPONDENTS ACCORDING TO HOUSEHOLD TYPE IN TWO DATA SETS

Respondents according to family type

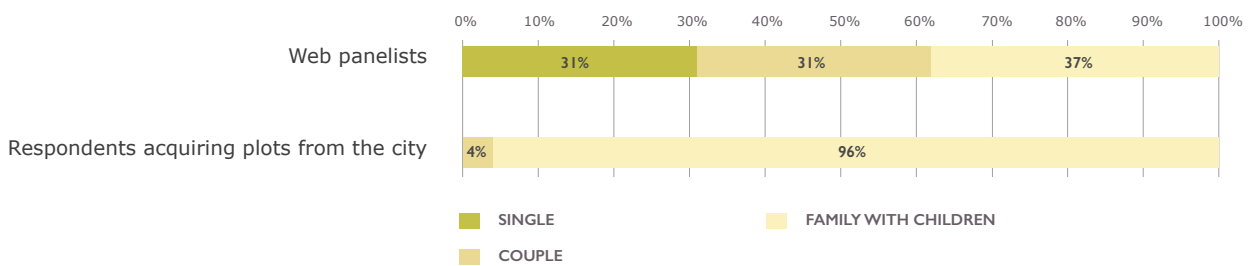


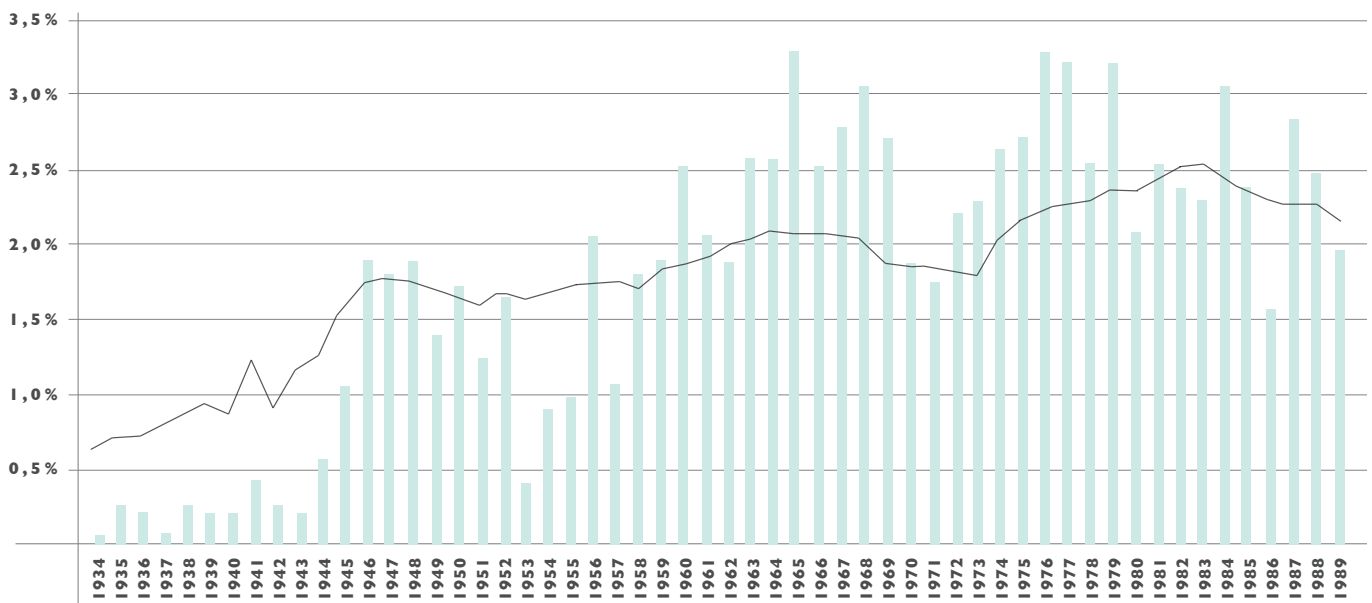
TABLE 1.
RESPONDENTS ACCORDING TO GENDER IN TWO DATA SETS

	Female	Male	Total
Web panelists	55%	45%	100%
Respondents acquiring plots from the city	51%	49%	100%

DIAGRAM 4.

WEB PANELIST RESPONDENTS AND TOTAL HELSINKI METROPOLITAN AREA POPULATION BY BIRTH YEAR
(% OF ALL THOSE BORN IN 1934–1989)

Age distribution comparison: web panelists (blue bars) and total regional population (line).



did not turn out to be effective for this type of survey, so the data obtained has not been used in this report.

In the third distribution channel, the survey was sent to an email list of people looking to purchase plots from the City of Helsinki. A total of 603 messages were sent out and received. 122 people responded to the messages. The response rate was 20%. Despite the small number of respondents, the sub-data obtained was important: prospective plot buyers can be seen as a key segment, which is dedicated to the building of their own residence.

The web panelist data revealed that approximately 70% lived in apartment blocks and approximately 30% in detached houses. Because 75% of the housing stock in the Helsinki Metropolitan Area is found in apartment blocks, detached house residents were only slightly overrepresented there. Conversely, data on plot seekers revealed that detached house residents accounted for roughly half of the total, i.e. they were overrepresented compared to the rest of the total regional population. People seeking to acquire plots from the city were therefore primarily households already resident in detached houses (Diagram 1).

In the web panelist data, the administration type distribution corresponded very closely to the distribution of occupied residences throughout the Helsinki Metropolitan Area (rental 42%, own 52%, right-of-occupancy 3%). This can be considered significant because renters were often underrepresented in questionnaires on housing. Plot seekers were clearly emphasised among residence owners, accounting for three out of every four (Diagram 2). Men and women were roughly equal in both sets of data (Table 1).

A quota was set for the response data of web panelists according to household type and, in part, age, thus allowing

for a rather equal distribution of household types among the respondents. Those seeking to acquire plots from the city, on the other hand, consisted almost entirely of families with children (Diagram 3).

Where the web panelists were concerned, it was possible to compare a precise distribution of birth years with the distribution of the Helsinki Metropolitan Area as a whole (Diagram 4). Although there was some random variance in the individual age groups of respondents, when comparing the primary age distribution of web panelist respondents to the average population, the oldest age group – 70 years and up – were underrepresented, while younger age groups were generally well represented. In general, the online survey method tends not to reach older people as effectively as a mail survey.

Assembling the question frame: choosing content questions

The Townhouse survey "New Finnish Dream House" was made using expert interviews, background literature and design understanding. Expert interviews revealed concerns regarding, for example, the challenges posed by multiple-storey floor plans as well as the suitability of the typology in complementary construction. Literature reviews, including prior townhouse interviews (Hasu 2010), emphasised the relationship that townhouse residents have with their living environment, particularly at the block level (Jalkanen et al. 2012; Friedman 2012). In the same way, there was an emphasis on families with children where townhouse living is concerned in both expert interviews and background literature (e.g. Mälkki 2010; Jalkanen et al. 2012).

The survey was built by theme as follows: *Background questions* also included a question on the net income of the respondent and the maximum amount

TABLE 2.
WORKSHOP PARTICIPANTS

		Female	Male	Total
		32	29	61
Type of household	Single residents	12	7	19
	Couples	8	8	16
	Families with children	12	14	26
Age	Under 30	1	-	1
	30–39	4	6	10
	40–49	10	8	18
	50–59	7	9	16
	60–69	8	6	14
	70+	2	-	2

they would be willing to pay in living costs: this helped in assessing how realistic the housing preferences might be.

Present and prior housing provided information on the resident's housing experiences as well as whether they had more than one residence at their disposal (Hasu 2012, Ærø 2006).

Housing preferences got the respondents to consider what their ideal residence would be and what factors would affect its selection. Claims made regarding the selection of residential area were taken largely from Kytä et al. (2010b) and the Residents' Barometer 2010 (Strandell 2011), while being aware of the preconceptions held regarding typologies. With this mind, it would be good to reiterate Kimmo Lapintie's admonishment concerning housing preferences: "*Getting to the bottom of the basic concepts of housing choices (single-family house, apartment block, city living, etc.) is therefore important if it cannot be assumed that housing preferences focus only on these concepts, but rather on the meaning structures that are behind them (or related to them) and, on the other hand, the actual residences and their environment. Should the nature, administrative relationships, design and execution of single-family houses, row houses and apartment blocks be exactly as they happen to be right now? Couldn't all types of housing be developed to more effectively fulfil the preferences of people?*" (Lapintie 2008, 31). In the survey, residence features were differentiated by typology – respondents were asked about residence features without any connection to a certain type of residence.

Daily living and residence functionality asked questions about accessibility, yard use and the need for an office/workspace as part of one's own residence. Residents were also asked about parking solutions. The questions were primarily based on resident and expert interviews as well as observations made regarding residence and yard design.

In the section *Residence types and possibilities*, respondents were asked to put themselves in different types of residences: living in a housing cooperative, and a house facing the streetscape. They were also asked about the importance of having multiple floors in a residence as well as their adaptability.

Attitudes on building and housing preferences examined the respondents attitudes toward different building methods – particularly in expert interviews, there was an emphasis placed on the importance of different building methods, both where the end result and managing costs were concerned. This section also allowed the respondent to freely explain whether their prior residence left something to be desired, what kind of residence did they dream of and what was preventing them from realising their dream.

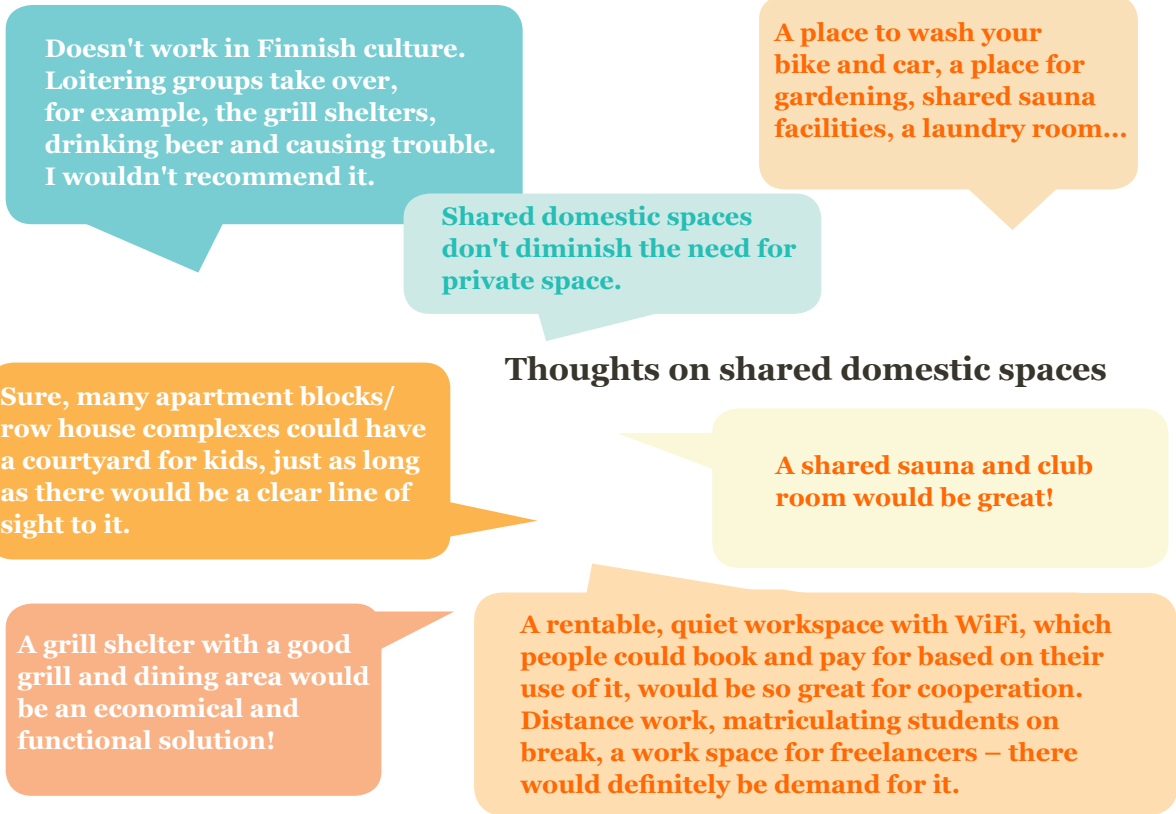
It was not until the last page that the respondents were asked *Would you be interested in a new type of house – a townhouse?* The question was followed up with a definition of townhouse, after which the respondents were asked whether they found the townhouse typology suitable for them/their families. At this point, the respondents had, in other words, been given an opportunity to consider housing from a variety of perspectives and, for example, the positive and negative aspects of having multiple floors, without having to answer the question without prior knowledge about the key features of the townhouse. According to our interpretations, the responses given could therefore be considered as being quite accurate.

The structure of the survey was steered by two principles: on one hand, it should be simple and quick (target completion time: 15 minutes); on the other hand, there was a desire to find an inquiry approach that made it possible to find out what was behind conventional housing preferences based on the type of residence. We decided to break down residence into subfactors, whose meaning was examined in relation to design. This is why we did not ask, for example, whether the resident preferred city living or suburban living. Instead, we asked them what they would prefer to see outside their window:

When looking out my window, I would like to see a vibrant cityscape.

I would not want to live in a house without a nice green view from the window.

In other words, the claims were designed to describe the end result of design, while reflecting the experiential nature



Comments from respondents on shared domestic spaces.

of housing. The survey gave the respondents a chance to think about their own housing needs and limitations, as they were able to supplement their responses with free-form comments. The survey was also used as a way to recruit workshop participants; indeed, many did sign up for the workshops.

3.2.3 Workshops

The third townhouse study data collection phase, workshops, was carried out based on expert interviews and an understanding brought about by the study. Workshop participants were primarily reached through the Finnish Dream House survey. At the end of the survey, respondents were asked if they would be willing to participate in workshops, which would be held at a later time. A total of 221 workshop candidates from three different distribution channels stated that they were interested and possibly interested. All in all, 104 participants signed up for the workshops.

Participants signed up for the workshop by responding to a workshop schedule enquiry. Those wanting to participate were given an opportunity to sign up for four of seven possible workshop times that suited them best. The workshops were held in February–March 2015 in mornings and evenings.

It was generally possible to assign participants either the most suitable or second-most suitable workshop time. In addition, participants were allowed to cancel their participation, as there was no separate compensation being paid for the workshops. However, only one person who

had signed up for a workshop cancelled for this reason. Although the winter flu season and changing schedules of those who had signed up further reduced the number of participants to 61, this turned out to be an extremely comprehensive number for providing new perspectives on the possibilities offered by townhouse living (Table 2).

An effort was made to assemble workshop groups so that each workshop participant would be placed with a partner or in a group of residents from the same household type. As it was not possible to do this in all workshops, the participants worked in mixed groups. In these cases, the workshops dealt with, for example, issues related to the use of shared domestic spaces.

Workshop participants were divided rather equally along gender lines. Naturally, the division of groups and cancellations resulted in changes to the group composition: some of the working groups with 2–3 people were made up of women only, some were men only, but in most cases both genders were represented. However, a factor with a much greater impact on planning than the gender make-up was whether the workshop participants had their own children or, for example, grandchildren. Having a socially active lifestyle, i.e. did participants customarily invite friends or family over for visits, influenced their needs for the use of space. Observations support the importance of lifestyle groups identified in the survey as part of the choice criteria used for housing.

Age also played a role. Senior citizens were especially reserved about townhouse floor plans with multiple storeys, but the inclusion of a lift completely changed

opinions. Many senior citizens or those contemplating their eventual senior status stated at the close of the workshops that townhouse living was "accessible housing for senior citizens who drive". In addition, the plans of groups made up of people who live alone turned out to be extremely interesting.

Each 2,5-hour workshop session was kicked off with a brief discussion of the townhouse study, survey results and workshop theme. For example, areas of concern and opportunities noted in the survey concerning shared domestic spaces were discussed. The advantages and disadvantages of ownership led participants to think about the functionality of daily living and what role design plays in this regard. The orientation task was followed by a more specific assignment based on a chosen theme (these themes are described on pages 31–35). The group work was divided into 2–4 work phases, with a total duration of approximately 1,5 hours. At the beginning of the work, the group was to decide on their reference resident – for whom were they designing? These reference residents reflected the group members' own experiences and life situations. The lifestyles, hobbies and daily routines of the reference residents were considered as the design progressed: Do they get around by car or bicycle? What kind of storage space do they need? How are challenges posed by having multiple floors solved? The results of the workshops are presented in sections 4.2 and 5.1–5.2.

Lastly, the group members filled out "closing forms", in which five sales arguments that would sum up the best aspects of the townhouse design solution were written. The form was also used to evaluate the relationship of the townhouse with more commonly known typologies, i.e. single-family house, row house and apartment block. In addition, the group described why its townhouse design would be suitable for them and why it would not be. One common item for consideration was the townhouse location – many wanted lush green surroundings and close proximity to nature in their design, just as long as there were extensive, functional public transportation

connections nearby. Unnecessarily close quarters were not seen as being desirable – there had to be a clear justification for dense building and narrow yards.

The workshops ended with the residents' presentations – each group discussed their designs. This round ultimately convinced both participants and workshop organisers alike that the townhouse could take many different forms!

Workshop themes

A total of four themes related to townhouse living and based on the survey results were addressed in seven workshops. The four themes were: outdoor spaces, typology, shared domestic spaces and adaptability. Perspectives related to the design and planning of the townhouse typology and areas were emphasised in dealing with the themes.

The main elements of the five first workshops dealing with outdoor spaces (workshops 1 and 2), with typology (workshop 3) and housing and shared domestic spaces (workshops 4 and 5) were prepared before the workshop phase began. The progress of the last workshop was purposefully left open. The data collection method was based on a method, which is best described as a learning approach. A special feature of this method was the ability for participants to respond to the data being collected during the data collection process. This method also required the constant analysis of the data being collected. As a result of this, the last two workshops examined the themes covered in the other workshops in greater depth and detail. For example, the need to more closely examine the theme of the sixth workshop, which is design solutions for street space, front yards and entrances, arose from the preceding workshops. Likewise, with an emphasis on the instructive nature of data collection, the method in which adaptability was examined in the seventh workshop was crystallised as data was collected. Below, we will present the themes and assignments for each workshop. The game boards refer to either a block with a courtyard or a mixed-use block, which are discussed later in this chapter.



Figure 5. In workshops, townhouses were designed and built according to varying themes.

WS1 and WS2 / Private outdoor spaces and a courtyard



Figure 6.



Figure 7.

Assignment WS1: Design a 3 to 4-storey townhouse as well as shared domestic spaces and a courtyard

Game board: Block with a courtyard

Assignment WS2: Design a street-level residential floor, front and back yard, an outbuilding and a courtyard

Game board: Mixed-use block

At the beginning of the assignment, group-specific reference residents and the size of the ground floor at two different depths (10 m and 13 m) were selected. The front and back yard entrances, interior staircase and other optional housing functions were placed on the ground floor.

In the second phase, the front yard and entrance were discussed: How does one enter the house? Where are bicycles and cars parked? Should there be a carport or separate shed? Is waste management house-specific or collective in a certain location? Private yard areas are usually minimal where townhouses are concerned. Can a block courtyard be used in the placement of the above-mentioned functions?

The third sub-assignment focused on back yards: a suitably sized outbuilding was chosen (from among four alternatives) and placed in the back yard. Appropriate functions were planned for the shed using model examples. The back yards open out into the courtyard. Also in the phase, participants were reminded of the possibilities offered by a courtyard.

In the fourth sub-assignment, thought was given to which function were to be put in one's own yard and correspondingly in the block courtyard.

A sense of community and neighbours were addressed in the fifth sub-assignment (only WS2). How are privacy and community realised in the group's design? How does use of the courtyard suit the reference residents? What about the need for an outbuilding to be shared by residents? Also in this assignment, group discussion explaining motives for design solutions, were more significant for the analysis than actual finished design solutions.



Figure 8.

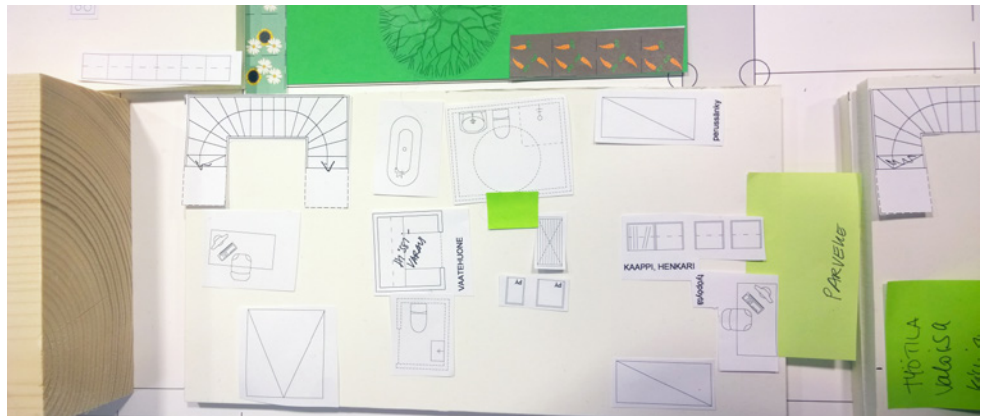


Figure 9.

Assignment WS3: Design a 3–4-storey townhouse.

Game board: Mixed-use block

The assignment was begun in the normal manner, by profiling the reference residents, who are the focus of the design. Also, in the first sub-assignment, the living functions were initially placed on floors 3 and 4. It was also possible to define or change these choices as the assignment progressed, just like in all other workshop phases. A few questions and perspectives were also given as tips. Access to the front and back yards is from the first floor. Which living areas would you like to connect with outdoor spaces? Does the visual connection between the house and mixed-used street affect the design solutions? Which upper floor spaces are connected to balconies and roof terraces? What would be the residents' favourite areas in the house? What happens (or does not happen) in the favourite area? How do social life, family, friends and acquaintances fit into the different floors and spaces of the house?

In the second sub-assignment, the placement of spaces and functions were tested using furnishing symbols. Stairs and a lift, furniture, wet spaces (toilet, laundry room, bathroom and sauna) and storage spaces were placed on the ground floor. Participants were also told that they could make the floors smaller.

In the third sub-assignment, living spaces placed on each floor were examined in relation to the outbuilding in the back yard. Participants were asked to choose a suitably sized outbuilding, place it in the back yard and think about its purpose. Does the outbuilding change the choices made in the main house?

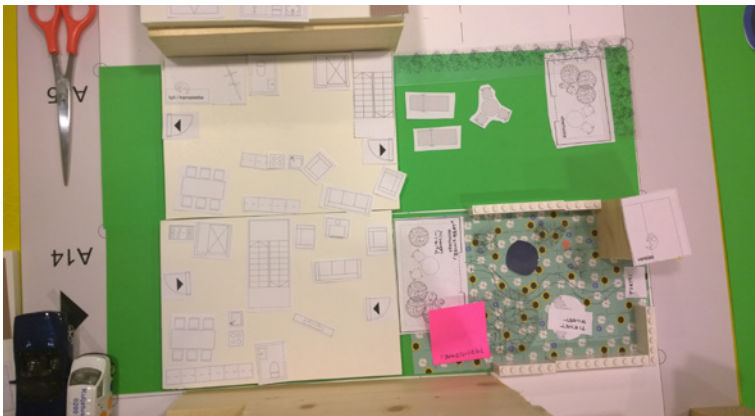


Figure 10.

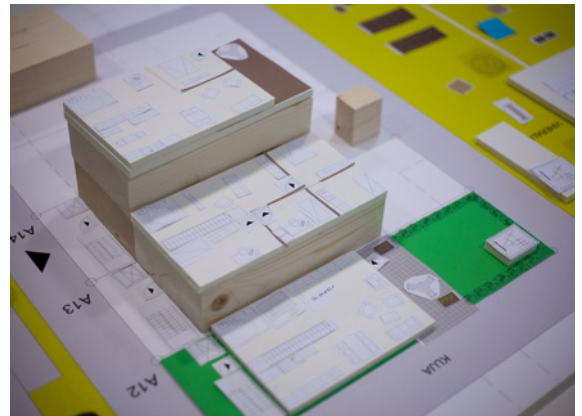


Figure 11.

Assignment WS4 & WS5: Design a street-level residential floor, front and back yard and an outbuilding

Game board: Mixed-use block

The assignment was begun in the normal manner, by choosing the group-specific reference residents. Because the game board was block with a courtyard referring to the importance of neighbour relationships and community living, the reference residents were to be sociable and outgoing citizens interested in a variety of hobbies. The reference residents in WS5 were chosen based on the experiences of the participants, describing the challenges of housing in the future: blended families and three-generation housing.

Because the first workshop dealing with the typology had proven to be a relatively demanding task from a time consumption standpoint, we gave the groups three similar pre-designed floor plans right at the beginning of the assignment. The participants were tasked with checking the designs from the perspective of the reference residents' needs and, if necessary, make changes to them. The purpose of the pre-designed floor plans was to get the design assignment off to a faster start. Questions taken from the preceding workshop (WS3) were also given at the beginning of the assignment to help the participants.

WS5 made reciprocal use of the neighbour references from the previous day. The residents would be able to freely copy the designs of the neighbouring residence. However, both groups decided to design residences for their chosen reference residents "from scratch": the designs from neighbouring residences were used primarily for the outlining and comparison of fictitious cost levels.

The use and nature of the block house and courtyard was addressed in the second sub-assignment: What block house spaces would you want to use together with the neighbours? What kind of spaces could you consider booking for private use by your family and friends (e.g. sauna)? The courtyard was designed together with the block house. This phase was also outlined with questions: Under what conditions would you want to use shared domestic spaces? How would the reference residents spend relaxing days off in the block house and courtyard? And what new dimensions could a block house offer for a normal weekday, such as in the form of hobby rooms? It was stated that the costs incurred by the shared domestic spaces would be part of the living expenses (e.g. a housing cooperation management charge)

In the third sub-assignment, participants designed their own back yard, a connection from the back yard to a courtyard and an outbuilding to be placed between the back yard and courtyard. Attention was given to, for example, the degrees of privacy and partitioning of the courtyard according to activities and environments.



Figure 12.



Figure 13.

Assignment WS6: Design an entrance and mixed-use street

Game board: Mixed-use block

At the beginning of the assignment, photos of various mixed-used streets, lanes between house rows and entrances. Entrance examples corresponded to the plot entrances on the game board: entrance in the front yard, inset entrance and semi-detached house entrance

The reference residents were chosen for the first time from among seven given resident profiles, which reflected the lifestyles of the participants. In addition to the age of the residents, their occupations, hobbies, areas of interest and other factors important to housing and mobility were also included in the resident profiles. In the previous workshops, it was noticed that setting the role for reference residents did not come naturally to all participants, and assignments were planned based on one's personal perspectives, because the participants might have trouble imagining what the reference residents they had chosen were really like. Pre-defined reference resident descriptions helped participants give broader consideration to housing needs. Even if personal housing experiences were a strength of the participants, refining a common task was more effective in groups, in which the needs of the reference residents helped in defining choices and making decisions. In addition to the reference residents, the most attractive alternative of the entrance examples suitable for the plot on the game board was selected during the first phase.

In the next phase, the entrance and front yard were designed with an eye toward the selected entrance example. For example, the wide range of hobbies of blended family Lahti-Kallio served as the inspiration for the entrance and gear storage in the carport near the front yard. The street-level accounting office of the mother, Salla, steered the design solutions for the front yard. The participants came up with a detailed solution, in which attention was given to the areas around the front door, both inside and out. In the workshop, seasonal changes, entrance functionality and usability of the office/workspace attached to the residence were addressed when considering the interface between indoor and outdoor spaces. Furthermore, participants examined the relationship of windows opening out to a mixed-used street with the availability of natural light and the privacy of the residents. Space for bicycles, waste management and snow also had to be accounted for on the plot or a mixed-used street. Thought also had to be given to visitor/customer parking.

In the third sub-assignment, the focus was placed on the nature and functions of the mixed-use street. Participants were asked to come up with ideas for shared resident activities suitable for the mixed-used street.



Figure 14.



Figure 15.

Assignment WS7: Design two floors for living and an unfinished floor

Game board: Mixed-use block

The last workshop focused on townhouse adaptability. The approach used for this was "flexible living". The work was outlined in connection with defining the resident profile at the beginning of the assignment, when participants were told that the residents worked from home. In the first assignment sub-assignment, participants had to make a preliminary decision as to which floors would serve as the living floors (living room, kitchen and bedroom) and which floor would be unfinished.

The second sub-assignment began with a twist. The group was told that the unfinished space would have to be rented out to another household or business. How would the house function in this new situation? Which floor would be best suited for rental? How should the unfinished space be designed? How would the stairs and lift work? Who would have access to the back yard and rooftop terrace?

In the third sub-assignment, an outbuilding fitted with a kitchenette and toilet facilities was designed in relation to the choices made in the two preceding phases: Should the outbuilding be reserved for work or living? Who would have access to the outbuilding? The entire design was also fine-tuned.

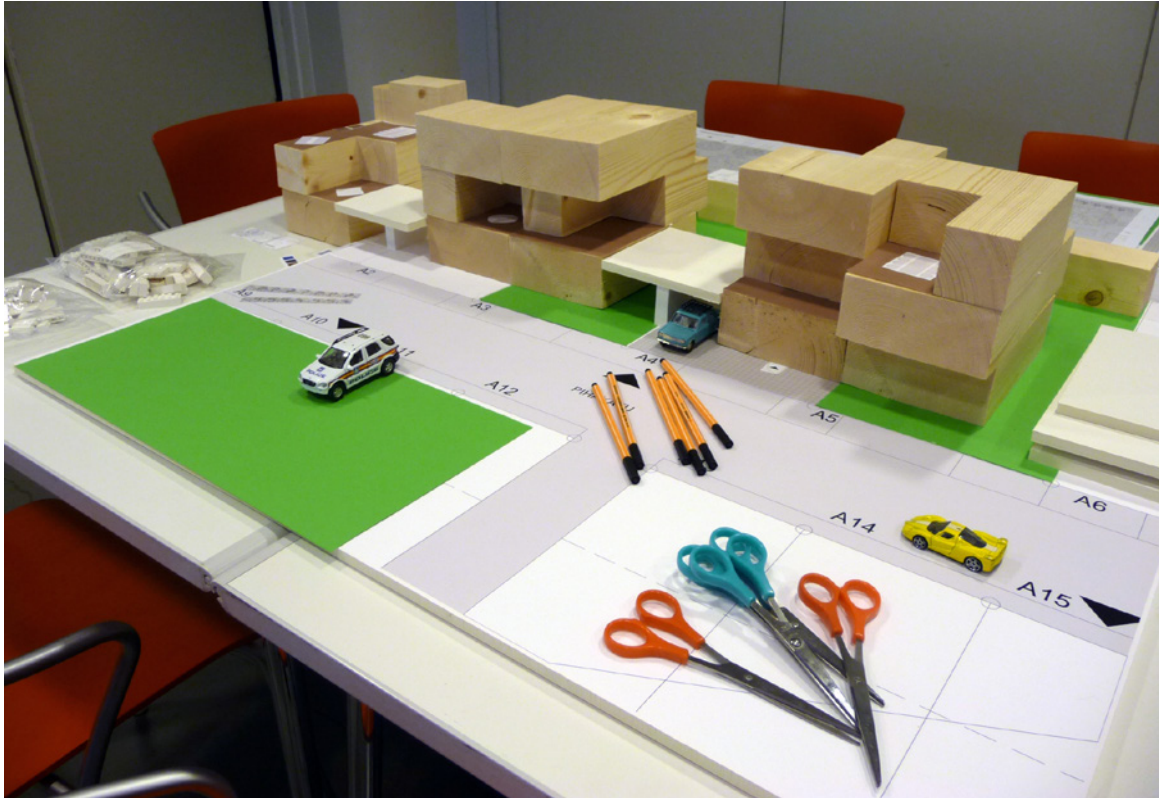


Figure 16. Townhouse workshop at Laituri: HATTU game materials.

3.3 Townhouse game and its development

Workshop themes were discussed and refined in the Townhouse game, which was developed for workshops. With regard to game play, we wanted to activate the workshop participants, getting them enthusiastic about this rather unknown typology while augmenting and deepening their understanding of the possibilities offered by townhouse living gained from the housing preferences survey. We also wanted to find an approach that we could use to examine four key themes identified in interviews and the survey: **(1) possibilities for outdoor spaces and, in particular, yards; (2) the relationship between private and public space, including shared domestic spaces; (3) typology; and (4) adaptability.**

HATTU game activates

The objective was to develop a workshop method for townhouse living research in which features (such as adaptability and shared domestic spaces) that were often far-removed from daily life and evoked even strong opinions would be easily approached and understandable. After some trials and discussions, we decided on using a game-based approach. Called HATTU, our townhouse game makes it possible to test various types of living situations and try on different "resident hats". Indeed, HATTU combines many of the characteristics found to be effective in housing as well as workshop activities: the game can be adapted to different situations, its assignments can be defined and it actively engages the workshop participants. Sometimes the participants sit, sometimes they stand, cut,

arrange, try, test, discuss and advise – each person is able to find the most suitable way to participate.

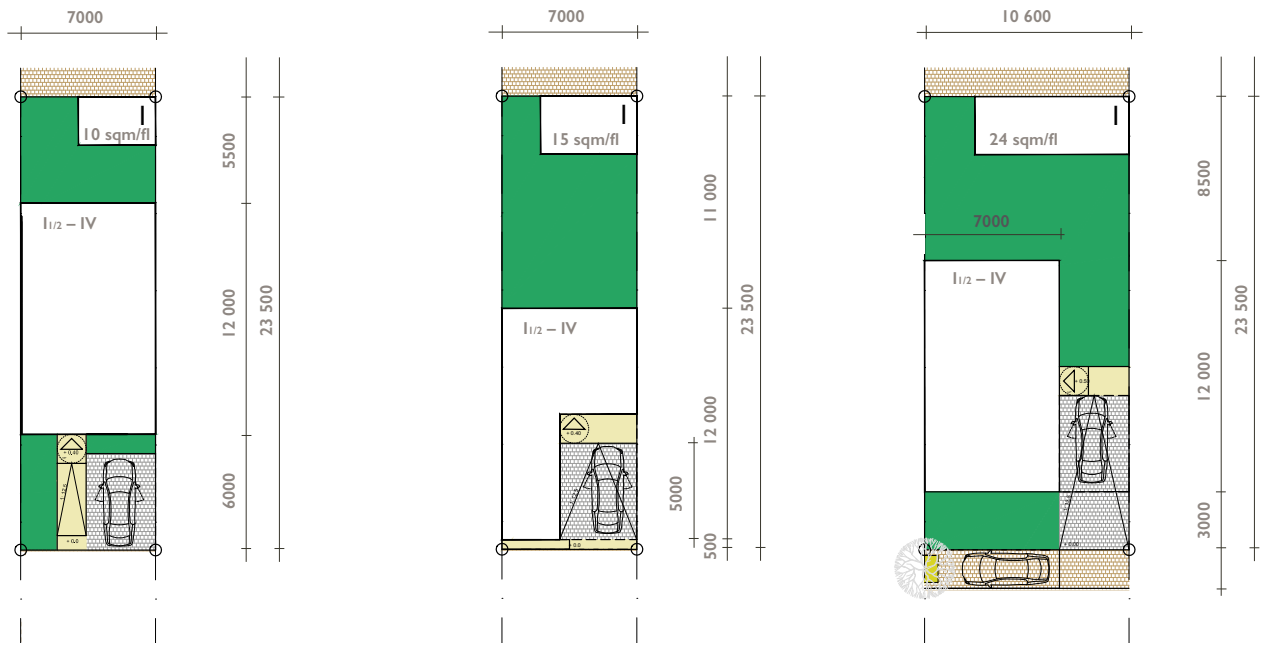
Townhouse game and its development

The game consists of eight game boards: two block-level plans at a scale of 1:200 and six townhouse plot-level plans at a scale of 1:50. In addition to the game boards, the game pieces consist of wood blocks representing townhouses and other building materials, such as Legos and platforms representing townhouse floors on which the designs are made. The game also includes a wide variety of paper cut-outs representing furniture, vegetation and surface materials for use in both house and yard design. Supplementary game pieces include toy cars and other items to help illustrate scale and functions.

Specification of the floor area and building size

The game uses a townhouse floor area of 7 x 10 metres, which can be increased by three metres, thus making the floor area 7 x 13 metres or 91 m². In some houses, the garage reduces the total floor area. Floor area is merely a point of departure: In workshops, the amount of living space was reduced by sectioning the house with, for example, conservatories and terraces. Conversely, depending on their purpose, outbuildings also increased the amount of living space beyond the confines of the townhouse itself. The floor plan dimensions were based on earlier studies conducted on the average floor area of townhouses in the Helsinki Metropolitan Area (Takano & Verma 2014).

The number of floors also affects the size of the townhouses. In the workshops, 2 to 3-storey structures were most often



Townhouse with front yard

Inset townhouse

Townhouse semi-detached.

used, even if the game did allow the design of houses with more floors. Indeed, the use of a moderately-dimensioned floor plan is in line with desired size of a residence – under 120 m² – revealed in the survey. Having three floors is also in line with the number of floors specified in the proposed Östersundom city plan (Pulkkinen 2014) as well as that used in existing sites in the Helsinki Metropolitan Area (Takano & Verma 2014). The above-mentioned parameters made it possible to offer an adequately wide range of variation in floor areas: depending on the solutions employed, floor area could range from 100 to 250 square metres.

Plot size

A plot size of 7 x 23.5 m (approx. 165 m²) was used for all plots. An exception to this was semi-detached house plots on a mixed-use street model (houses A1–A7), which were three metres wider than the standard plots (total area of 235 m²). According to previous studies, the floor area of sites in the Helsinki Metropolitan Area was approximately 60–75% of the plot size (Takano & Verma 2014). The floor area to plot size ratio used in the workshops corresponds to this.

Plot-specific solutions

Three plot solution models were developed: **townhouse with front yard**, **inset townhouse** and **semi-detached townhouse**. An earlier townhouse study addressed the distribution of the suburban townhouse and urban model in the Helsinki Metropolitan Area. An effort was made to use this distribution in the various workshop typologies. A comprehensive study of townhouse front

yards was done prior to development of the game (see section 3.3.1). As wide a variety of plot-specific solutions as possible were chosen based on the study.

In a townhouse with a front yard, there is a 6-metre deep front yard between the house and plot boundary line on the street. A parking space or carport can be placed on one's own plot. The front yard represents front yard model *offset maximum C3* (see section 3.3.1).

The inset model represents an urban solution, which has a small front yard between the townhouse and street space. The street-level floor is an inset space, in which a carport or garage can be put. This solution is a combination of a 0.5 metre front yard and inset parking space (carport or garage B3 + offset minimum C1 (see section 3.3.1).

The semi-detached townhouse is two townhouses attached to one another. Parking spaces and shelters can be placed in between the units. In terms of cityscape, this solution offers a uniform row of townhouses. Other types of shelters and terraces can also be used as connecting elements. The semi-detached townhouse model is the solution preferred by the Helsinki City Planning Department in its own reports. The positive attitude toward the semi-detached townhouse is based on experiences with existing sites, such as the detached townhouses in Malminkartano. The Real Estate Department's Land Division site documentation explains what kind of problems can arise with the independent construction of townhouses (Malminkartano 2005). These problems are seen as being less of an issue with semi-detached models, because the houses can be built in different phases, the



Figure 17. Residents actively involved in development of the townhouse typology. Photo of the Townhouse workshop at Laituri.



Figure 18. Yards in a densely built townhouse area are separated by a narrow lane. Rummelsburger Bucht, Berlin, Germany.
 Figure 19. Gates provide a measure of privacy in the lanes running between back yards. Lützwowstrasse, Berlin.

foundations are easier to install and are contained within their own plots.

Of the models used in the workshops, the solution where two townhouses are attached to one another corresponds most closely with the housing preferences of Finns. A fully free-standing house with its own yard is still considered the ideal type of housing by Finns (Sanaksenaho 2013). Having a fully free-standing house is deeply ingrained in the Finnish psyche. As Otto Iivari Meurman once taught: "The Finnish man wants to walk every corner of his homestead before turning in for the night" (Nikula 2015, 102).

The semi-detached townhouse model selected for use in the workshops had a medium-depth front yard and was not directly bordering the street space. The reason for using this model was to emphasize its similarity to owning a single-family house and its spaciousness compared to the other plot alternatives used in the game.

Area definitions

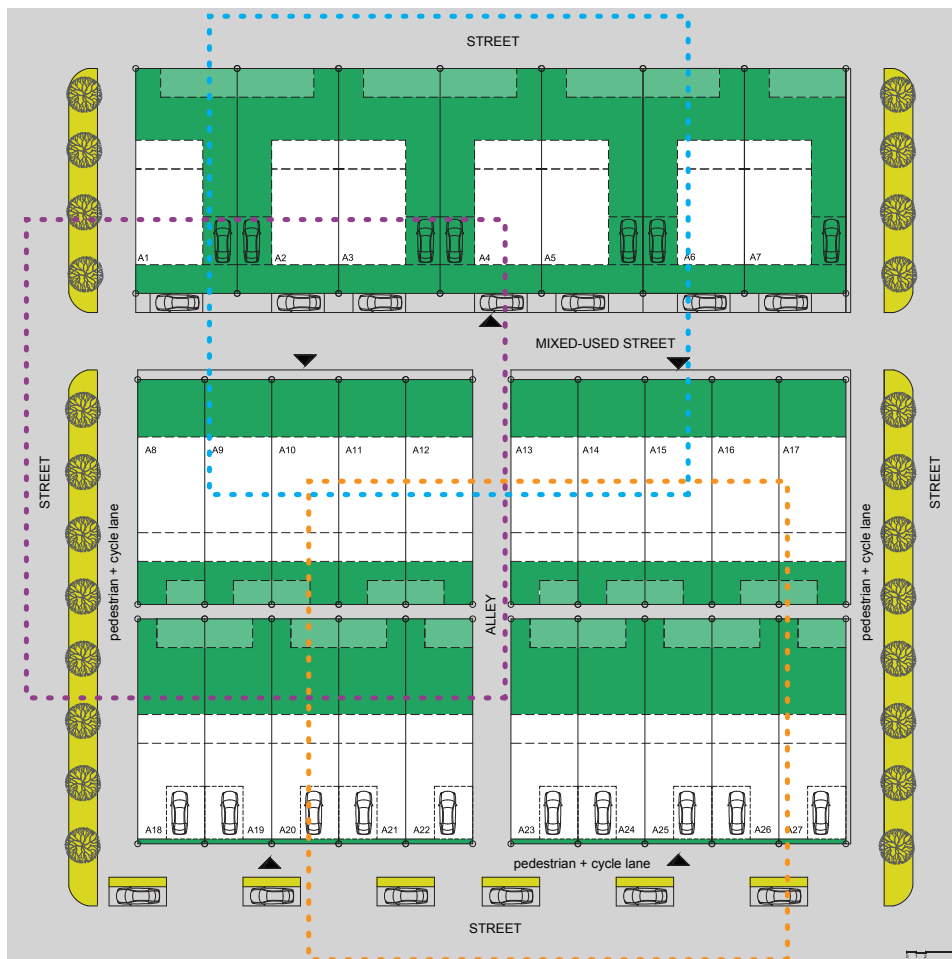
The themes selected for the workshop, such as the relationship between private and public spaces, excluded the possibility of a game alternative that focused only on the structure or a townhouse plot. After all, the workshops dealt with an entire townhouse area, which included not only the townhouse plots, but also street and green areas. Including the street space in the game was justified also because there are positive associations with areas based on a townhouse typology as having a small town atmosphere.

Due to its topicality, the distribution of construction in the proposed townhouse area of the Östersundom city plan,

which encompasses areas in Helsinki, Vantaa and Sipoo, was used as the dimensioning principle for density in the block area. The construction distribution is thought to follow that used in Östersundom, where 60% of the land goes to building areas and block plots, 20% to traffic areas and 20% to parks and green zones (Östersundom 2014). The materials used during development of the HATTU game state that the housing density in Östersundom is 20–40 residences per hectare (Pulkkinen 2011). This density was also used as the dimensioning principle for blocks in the game. Because the workshops were only intended for studying the townhouse typology, the block areas in the game were made for this typology alone. Another possibility would have been a so-called hybrid block, which contains different typologies. Even if the relationship between townhouse and apartment block living would make for an interesting topic, it was excluded from this study due to the limited number of workshops. Eventually, two different area models were developed for the workshop game boards – **the mixed-use street model** and **courtyard model**.

Mixed-use street model

A densely built residential area does not necessarily offer area residents natural gathering places. Whereas modern city planning led to a diversification of street space (Manninen & Holopainen 2006), the **mixed-used street** is tied to the idea of the street as an "arena for social life". A mixed-used street conjures up images of a street area, where cars drive at walking speed, children are playing safely and meeting up with neighbours is a natural occurrence. An attachment to the community and sense of security are also enhanced. (Gehl 2006.)



Mixed-use street model.

The game area was set at 100 x 100 m, with the mixed-use street serving as the basis for the sample area. Area collector streets, with their green medians and light traffic routes line the entire area. The area densities and street dimensioning principles used led to a block solution, in which there would be approximately 10 townhouses along the street. Long street rows of townhouses bring to mind the townhouse areas in Amsterdam and estate houses in Great Britain that have become so well-known.

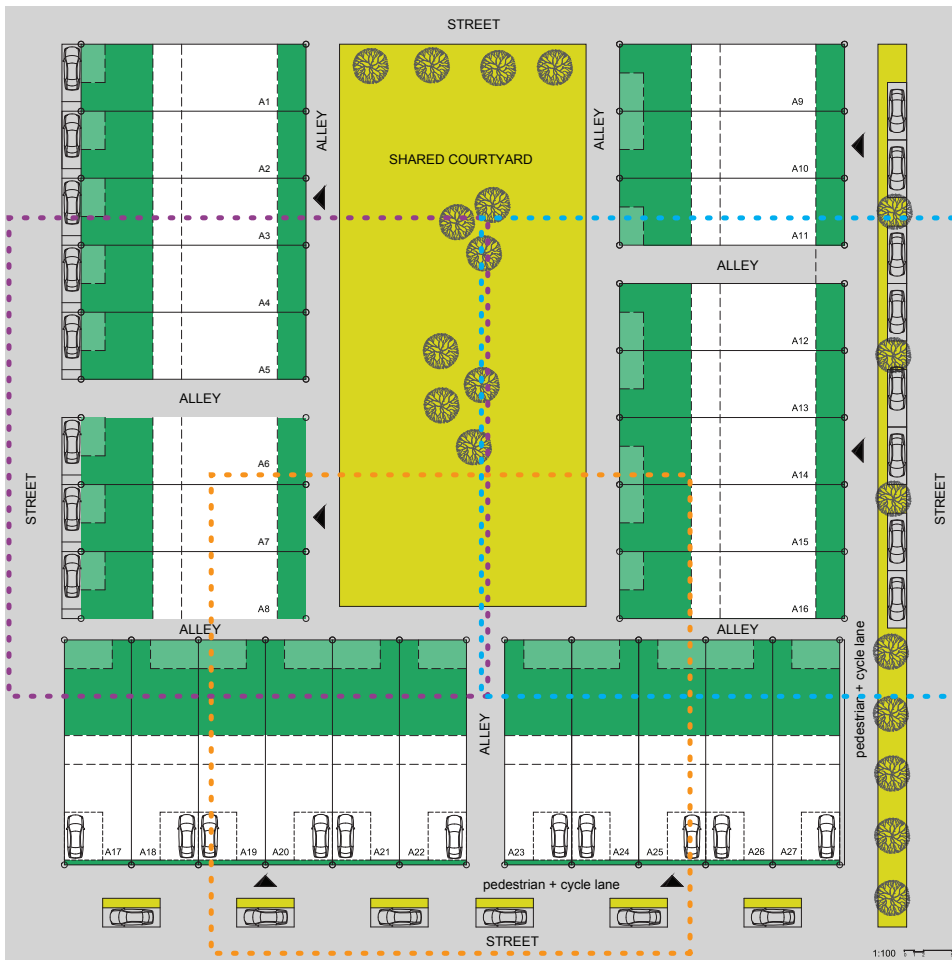
The inset model, the most urban of the available solutions, was placed on a busy collector street (houses A18–27), with the main entrances facing a light traffic route. The front yard of the townhouses is only 0.5 m wide. Based on experience, a house grouping of 4–5 plots is considered a very feasible unit (Malminkartano 2015). This is the reason that the townhouse row was broken up every five houses, with a 4-metre wide lane placed between the two rows to facilitate internal movement and allow emergency services and moving vehicles closer access to the houses. A lane approximately 1.5 metres wide was placed between the inset model and the adjacent row of houses. On an excursion to Germany, researchers became familiar with a method of placing a lane or path behind the row of houses. Because it is common for residents to install a fence around their own townhouse plot in order to maintain privacy, the lane provides an access route as well as a way to move from

one back yard to another, if the neighbours so desire. When two rows of back yards facing one another are bisected by a lane, it forms a route for the block itself, thus increasing safety for children moving about. The lane can also be used as an exit route (see Figures 18 and 19).

In the next rows (houses A8–17), the main entrances of townhouses with front yards open onto a mixed-use street. Semi-detached townhouses (houses A1–7) with a 3-metre deep front yard, also open onto a mixed-use street. The combination of semi-detached townhouse and mixed-use street were considered the most urban solution and, for this reason, should be used together. The aim was to create situations for the game board that clearly differed from one another in terms of the degree of urbanity and which could be used to discuss the various features of townhouse living.

Shared courtyard model

Alongside the mixed-used street model, a question was raised: Would it be possible to achieve the same plot density and same number of houses with parking spaces in a block structure whose focal point was a courtyard? The idea for a courtyard was brought up in a publication on the Östersundom area (Pulkkinen 2014) as well as a presentation referring to the “shared domestic space” philosophy (Pulkkinen 10 June 2014). In addition to



Courtyard model.

these, we visited a residential area called Gohlis in Leipzig, Germany that was a functional example of the courtyard model. The Germany excursion was made in the autumn of 2014 in connection with the Aalto Energy Efficient Townhouse project.

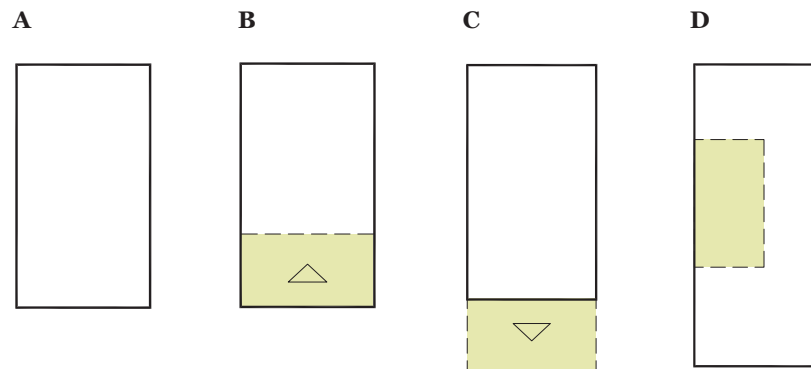
In this model, an inset townhouse was also placed on a busy collector street. Because a semi-detached townhouse requires a larger plot, it was completely omitted – the aim for this model was to have a spacious, private green area for use by all residents. The placement of a two-unit row of townhouses with a front yard differs in relation to a courtyard and street space. In one row, the yard opens out to the courtyard, while the other contains a small front yard and the main entrance. It was also here that we wanted to create slightly different situations, which could be used for discussion in the workshops.

In the workshops, participants alternated between the mixed-use street and courtyard game boards. However, only one of the two basic models was to be used during a workshop in order to help in defining and interpreting the assignment.



Figure 20.
Townhouse area courtyard. Leipzig-Gohlis, Germany.

3.3.1 Front yard typology



Front yard types

The development of workshop sample area was preceded by a phase that examined the front yard typology. The importance of the front yard is emphasised particularly in densely built environments: in many cases the townhouse typology is associated with an immediate connection to the street space, where there is no front yard in front of the house. We wanted to examine how the different front yard solutions would be applied in Finnish conditions. This examination also included a comparison of how solutions used in Finland and abroad varied between suburban and dense, urban areas.

Townhouse front yards can be divided into three types:

- A No front yard**
- B Inset**
- C Offset**

Those comprising their own group:

- D Inner yard**
- E (Roof)terrace**

In type A, the townhouse is immediately adjacent to the public space, such as a street or plaza. There is no front yard or similar area in front of the house within the plot.

In type B, the first floor of the townhouse is inset into the building, thus forming a semi-private or private space. This type also has no plot area in front of the house and the house is built directly against the plot boundary.

In type C, there is a front yard in front of the house. There is a wide range of elements, from walls to plantings, that can be used for front yard design solutions.

In addition to these three front yard solutions, an additional solution, type D, was identified. In type D, both the front and back yards are moved into the mass of the building. Instead of a front and back yard, an inner yard and (roof) terrace can be used. Type D has been excluded from the scope of this study, because it does not have a front or back yard - in this study, private outdoor spaces have been identified as an important feature of townhouse living.

A – No front yard



A – No front yard

A solution in which there is no front yard occupied by the resident produces dense street space. The facade in the row of houses bordering the street stays unbroken, nor are there any elements accentuating privacy in front of the houses. The street space and façades are emphasised. In terms of cityscape, this model is a way to create a uniform appearance for a townhouse street.

Having no front yard requires minimal differences in grade or raising the street space until it is level with the ground floor. In Finland, the general construction practice of raising the surface of the entry floor no less than 300 mm above grade (Building Code C2) requires design solutions, in which the differences in grade are addressed by means of stairs or a ramp in order to ensure accessibility at the entrance.

If a shelter is desired at the entrance, the detailed plan must allow the installation of structural elements that protrude into the street area. Attention must be given to the shelter's runoff drainage solutions. If the runoff must be directed into the plot, a runoff pipe may be permitted to pass through the street area.



FIGURE 21. STEIGEREILAND, IJBURG, AMSTERDAM, NETHERLANDS.

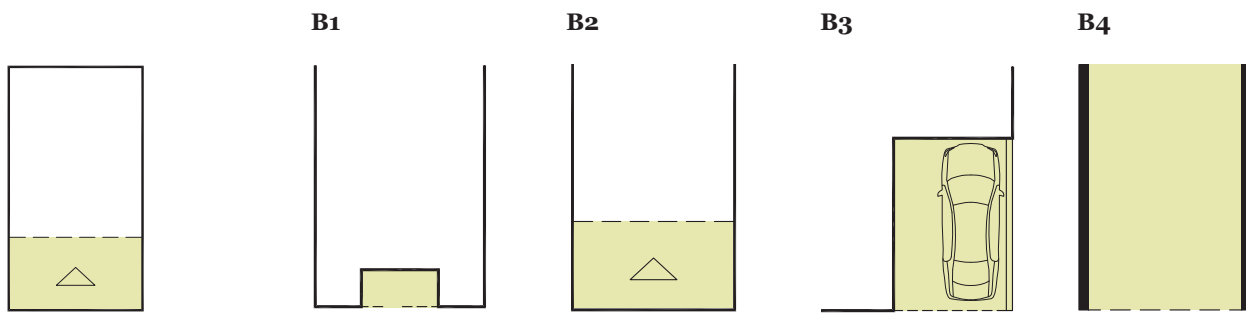


FIGURE 22. STEIGEREILAND, IJBURG, AMSTERDAM, NETHERLANDS.



FIGURE 23. LORETTO-AREAL, TÜBINGEN, GERMANY.

B Inset



B Inset

Type B, where the front yard is moved underneath the house, can be divided into four subgroups:

- B1 Inset minimum**
- B2 Inset medium**
- B3 Inset carport or garage**
- B4 Inset maximum**

B1 Inset minimum

There is a small inset space between the street space and house.

B2 Inset medium

Usually the width of the entire façade, an inset space larger than found in B1 between the street space and house.

B3 Inset carport or garage

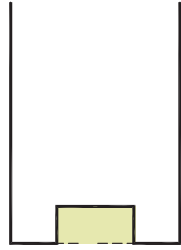
In this model, there is a space the size of a parking space set within the house frame and facing the street. This can be either closed (garage) or open (carport). An open space can also be extended to run through the house, thus creating access to the backyard.

B4 Inset medium

The ground floor is completely open, outdoor space. There is a direct connection between the street and back yard, thus reducing the level of privacy in the backyard: street noise will travel to the back yard, which can also be seen from the street.

Solutions B3 and B4 can be good alternatives for areas where there are no or few social gathering places and do not allow for front yards. In such cases, the resident must be sociable by nature: the only private spaces are found inside the house.

B Inset



B1 – Inset minimum

In this model, the house entrance is semi-private space, which falls within the territory of the house residents. The covered area provides shelter from rain and provides some degree of privacy. As with the model above, this solution allows for dense building. The street façade remains uniform and the appearance of the street space is controlled. In terms of cityscape, a small inset provides structure to the façade bordering the street. The inset is approximately 300–1000 mm.

The inset may contain elements such as stairs, a bench, storage box or plants. The solution also makes it possible to install shelters, drainage, lighting or a mailbox within one's own plot. Even though the space is small in size, it can be an important way for the resident to create identity, making it possible for them to personalise their home. The small space can also promote social contact.

This model's approximately 300–500 mm difference in grade can be addressed with stairs. A requirement for accessible entry is, also with this model, a larger back yard, which can be used to make adjustments for the difference in grade.



FIGURE 24. TOWNHOUSE, LEIPZIG, GERMANY.

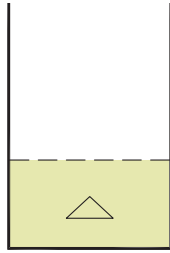


FIGURE 25. BÜRGERHAUS, CALW, GERMANY.



FIGURE 26. BIGYARD, ZELTERSTRASSE BERLIN, GERMANY.

B Inset



B2 – Inset medium

Even with a larger inset (>1000 mm), the façade line remains intact, because the building's upper floors directly border the street space. However, in this model the inset must be an architectural element that affects the character of the street. Passers-by on the street are afforded a view of the residents' semi-private space through the open ground floor. With regard to managing differences in grade and ensuring accessibility, the same rules as when using a smaller inset apply.

A larger inset requires that thermal insulation measures be taken, which poses design challenges due to the generally low floor height in detached house construction. Even with technically functional solution models, any element penetrating the exterior sheathing decreases the energy efficiency of the house and increases building costs. These points are addressed in the Aalto Energy Efficiency Research Programme (AEF) Energy Efficient Townhouse project – after all, energy efficiency is one of the key questions concerning the future of townhouse construction.



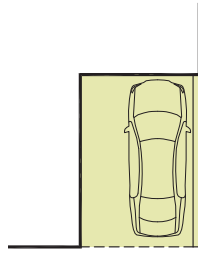
FIGURE 27. TOWNHOUSES ALPPIKYLÄ, HELSINKI.



FIGURE 28. TOWNHOUSE, NIEUW LEIDEN, LEIDEN, NETHERLANDS.



FIGURE 29. TOWNHOUSE, NIEUW LEIDEN, LEIDEN, NETHERLANDS.



B3 – Inset carport or garage | B4 – Inset maximum

An inset space the size of a parking space (B3) can be used for other purposes than parking a car. The space can serve as, for example, a rain shelter, play area, a motorcycle and bicycle storage and maintenance area, a storage area for waste and recycling receptacles and a substitute for a terrace. If attention is given to the aesthetic solutions and material choice for a parking space in the design, its intended purpose can also be expanded later into a multipurpose space that provides shelter for the entrance.

The space may extend all the way through the house structure to the back yard, thus creating an open space connecting the front and back yards (B4). This model is closer in form to the "fully free-standing house" than the other alternatives. The advantage of this model is the ability to expand yard and garden functions into the first floor of the house. Because the townhouse plot is usually small, some of the yard functions can be moved into the inset underneath the house. On the other hand, visual contact between the front and back yard can reduce the residents' feeling of privacy.

In alternatives where the garage is set into the mass of the house, special attention must be given to the fire compartmentalisation and proper ventilation of the parking space. In Finland, the structural fire safety requirements set for townhouses are presented in the Structural Fire Safety section of the National Building Code of Finland (E1). Cities and municipalities propose their own interpretations of fire safety ordinances in the form of supplementary and more detailed guidelines. Local fire departments comment on and monitor sites during the building permit application phase. A parking space usually comprises its own fire compartment. Thus, the side walls and ceiling/roof of a garage or carport must be compartmentalised. When dealing with electric cars, attention must be given to the increased risk of fire, which is due to the fire properties of the charging equipment or transformer.

In solutions where the street space is in direct contact with the house itself, attention must be given to how the garage door opens and any hazardous situations this might cause in the street area. If there is a pavement directly in front of the house, solutions in which the garage door opens out into the street space may not be used. In these cases, solutions such as overhead roll doors or folding gates or roll doors that open in to the side walls may be considered.



FIGURE 30. PAUL-ERLICH STRASSE, KARLSRUHE, GERMANY.

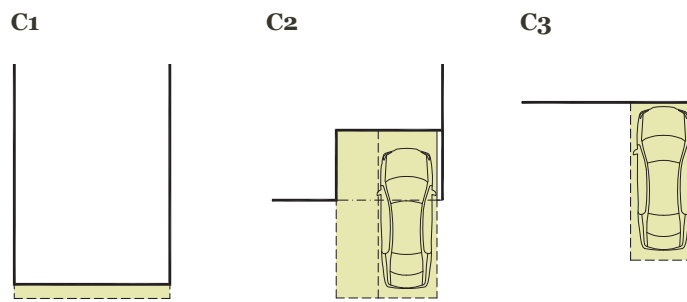


FIGURE 31. BORNEO-SPORENBURG, AMSTERDAM, NETHERLANDS.



FIGURE 32. BORNEO-SPORENBURG, AMSTERDAM, NETHERLANDS.

C Offset



C Offset front yard

Type C, where there is a yard in front of the house, can be divided into three subgroups:

C1 Offset minimum

C2 Offset medium

C3 Offset maximum

C1 Offset minimum

A small space within the townhouse plot is situated between the street space and house.

C2 Offset medium

A space larger than found in C1 is situated in front of the house and may even extend into the mass of the house.

C3 Offset maximum

In this model, an area the size of the parking space or larger is situated in front of the house frame.



C1 – Offset minimum

A front yard buffer between the townhouse and street may be extremely small (minimum of approximately 300–500 mm).

This solution gives the residents a small territorial space in front of the house. The space may be defined with a small wall or fence, which accentuates the sense of one's own, personal space. Residents can add elements to this small space that emphasise the individuality of the house, such as plantings, potted plants, benches or lights.

In terms of cityscape, this small strip in front of the house clearly separates the house from the street space, and elements, such as vegetation or partition walls, give structure to and soften the delineation between the façade and street. Even minimal vegetation serves as a carbon sink and has a favourable impact on the city's microclimate (cf. Kuittinen & Moinel 2014). A small strip in front of the house and within the plot can facilitate construction of a residential area, because the street and house are rarely built at the same time. The street space can be more clearly defined and the buffer zone can easily be filled in at a later point in time, such as with paving stones.



FIGURE 33. TOWNHOUSE, INDUSTRIESTRASSE, PLAGWITZ, LEIPZIG, GERMANY.

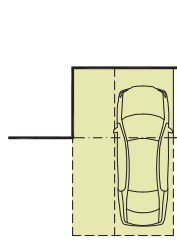


FIGURE 34. TOWNHOUSE, ROSSMÄSSLERSTRASSE, LEIPZIG, GERMANY.



FIGURE 35. TOWNHOUSE, INDUSTRIESTRASSE SCHLEUSIG, LEIPZIG, GERMANY.

C Offset



C2 – Offset medium

A front yard larger than used in C1 has a significant impact on the cityscape. It is possible to retain or interrupt a uniform street line. One key purpose of the front yard is to create a buffer zone that separates the house façade from the street space. The degree of semi-privacy in the area varies.

Light structures can be installed in the front yard and it may also be partially covered. The front yard is an intermediate space, which can be used to, for example, resolve differences in grade between the street and the ground floor of the house. A parking space may be placed halfway underneath the house frame, which allows for a more effective use of land. In such cases, both thermal insulation and fireproofing must be taken into consideration in the design. This model can be used to resolve even greater differences in grade within the plot, even though this solution will not offer an adequate amount of space where accessibility is concerned if the street and ground floor grades are not roughly at the same level.



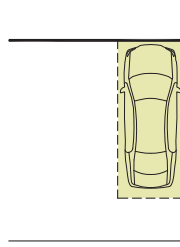
FIGURE 36. TOWNHOUSE, OBERDORFSTRASSE, LEIPZIG, STÖTTERITZ, GERMANY.



FIGURE 37. TOWNHOUSE, STEIGEREILAND, IJBURG, AMSTERDAM, NETHERLANDS.



FIGURE 38. TOWNHOUSE, PRENZLAUER GÄRTEN, BERLIN, GERMANY.



C3 – Offset maximum

Sensible from a land use standpoint, a maximum dimensioning of the front yard can be the space required for parking, to which a zone can be added for moving about behind the car or a small landscaped area between the parking space and house. The intended purpose of the large front yard is by no means limited to parking a car. Depending on the compass orientation of the townhouse area, the front yard can serve as a practical garden for the house or a second leisure area along with the back yard.

In an urban environment, there are certain problems related to plot-specific parking. Space must be reserved for drive-in access at each house. Due to the narrowness of the townhouse plot, it would be recommended to indicate the plot interface in the detailed plan. If this is not done, it is possible that the various solutions employed in adjacent plots may lead to a situation in which there is no space left for landscaping public spaces or on-street parking spaces. In solutions where a parking space may be placed on a townhouse plot, it would be a good idea to also take landscaping in public spaces and on-street parking arrangements into consideration during the planning phase.

Solutions for busy streets, where residents must back their car directly into the traffic lane, might cause hazardous situations. It is for the above reasons that consideration must be given during the planning phase as to whether parking will be allowed on townhouse plots along the street. In all townhouse projects where there is parking within each plot, the location of light traffic routes must also be carefully planned to ensure safety.



FIGURE 39. TOWNHOUSES, MALMINKARTANO, HELSINKI.



FIGURE 40. TOWNHOUSE, FRIEDRICHSWERDER, BERLIN, GERMANY.



FIGURE 41. TOWNHOUSE, RUMMELSBURGER BUCHT, BERLIN, GERMANY.

4. Research results

4. Research results

4.1 Key survey results

In analysing the results of this study, we use web panelist (n = 1214) data, unless otherwise specified. In the Finnish Dream House survey, over half of the respondents felt that they could live in a townhouse (strongly agree or agree). Later in the analysis, this group is referred to as townhouse-minded. This group accounts for 56% of the respondents, while the remainder represent 44% of the web panelists.

Contrary to expectations regarding townhouses being for families with children, townhouses also interested singles and couples nearly as much (Diagram 1). Consequently, although townhouses could be an attractive typology for large swaths of the population, the supply currently does not meet the demand. Our survey revealed that people are looking for residences in the Helsinki Metropolitan Area with a floor area of less than 120 m². However, townhouses often have a floor area of 140 m² or more (cf. Diagram 2).

The choice of residence as well as the housing preferences are influenced by budget limitations. These limitations means making compromises and giving up some of the

desired features. Even so, the choices made by residents in the same budget class can vary widely. One explanation for this is lifestyles, which reflect the attitudes and values that guide people in making their choices. In order to ensure that design and planning can be more effectively controlled to meet demand and opportunities for making choices, we wanted to learn more about the respondents through their lifestyles. Below, we will be describing the interpretations of lifestyles related to design solutions.

4.1.1 Lifestyle groups and their composition

The townhouse is a typology whose primary target group is families with children looking to own a single-family home or similar type of residence. However, the survey showed that there was also interest among those in other life situations and who prefer different types of tenure.

The aim of the survey was to find common denominators for favouring a certain type of housing that could later be used

DIAGRAM 1.
"TOWNHOUSE AS A TYPOLOGY WOULD FIT ME/US WELL."

Among the respondents, there was equal interest in townhouses in all types of families.

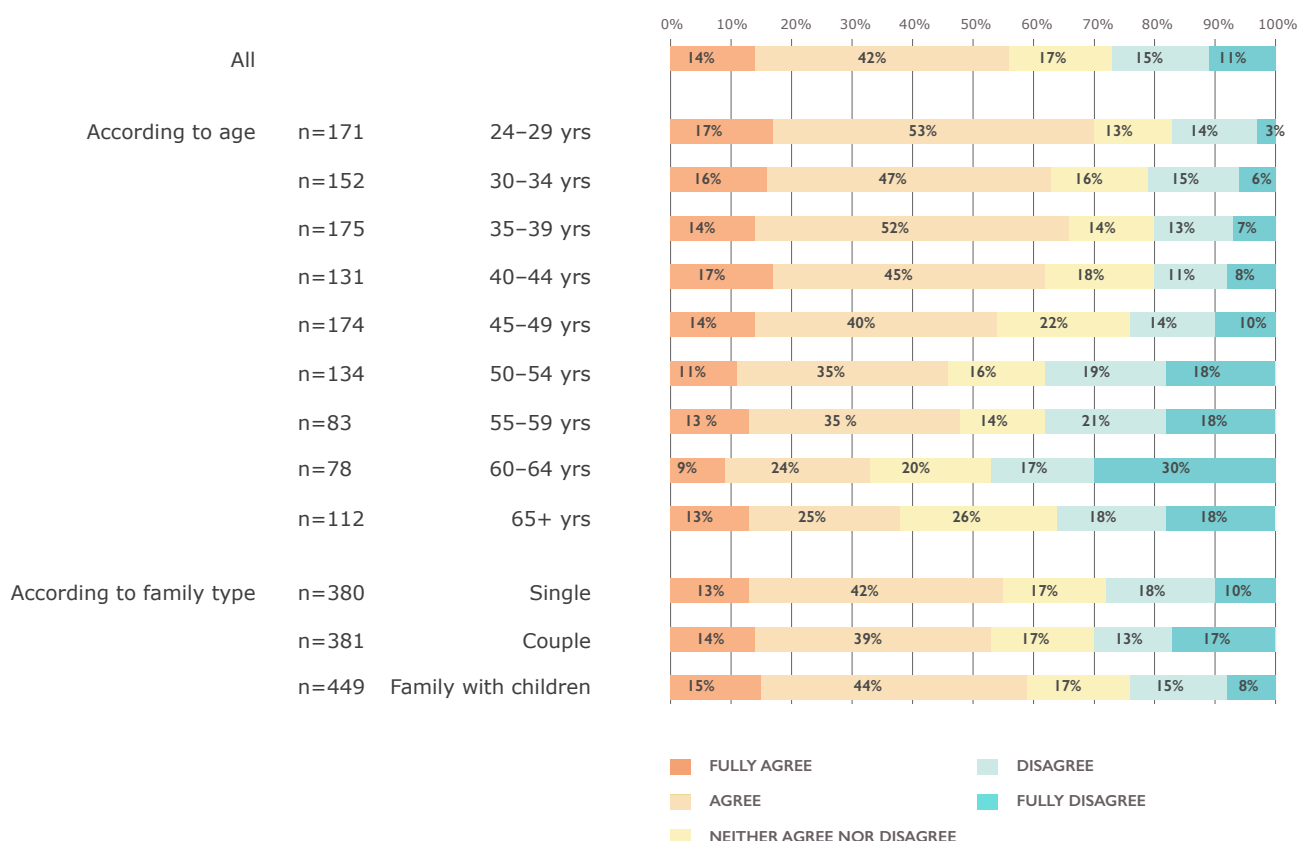


DIAGRAM 2.
HOW BIG A HOUSE WOULD YOU LIKE?

Townhouse-minded and size of the desired residence (m²)

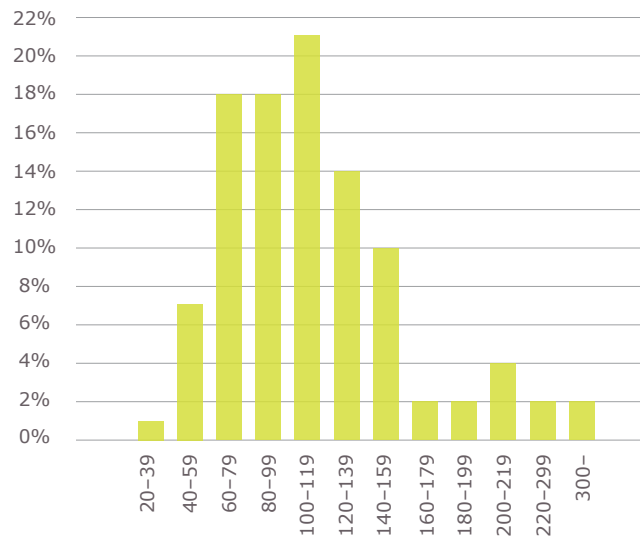
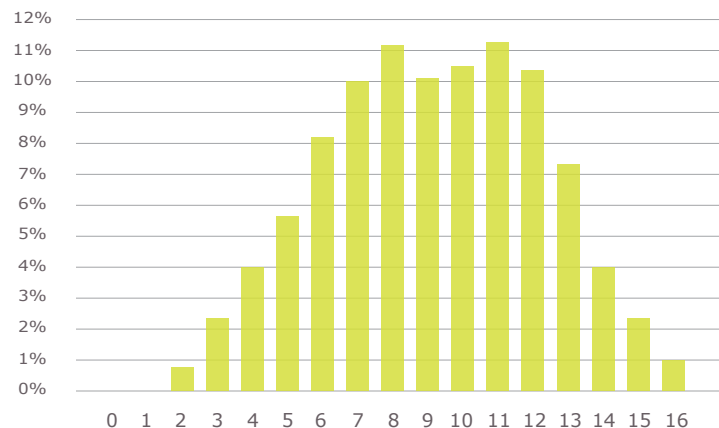


DIAGRAM 3.
DISTRIBUTION OF URBANITY SCALE

Urban preferences of respondents living in the Helsinki Metropolitan Area. In this study, urbanity refers to a built urban environment. The socialness usually related to urbanity is shown in its own socialness scale.



in developing townhouse concepts. The survey explored the attitudes of respondents to different statements. These attitudes can also be referred to as lifestyle attitudes. These attitudes included feelings about the social dimension of the living environment, such as neighbours: Is a superficial acquaintance enough or does the resident want more contact with their neighbours? Or is the resident prepared to assume responsibility and influence their own living environment and its development? (cf. Kytä et al. 2010b.)

In addition to this, residents attitudes regarding housing convenience were examined. The Residents' Barometer 2010 (Strandell 2011) mentions that low maintenance and convenience are two of the key choice criteria for choosing an apartment block. How is this desire for low maintenance related to the valuation of housing and lifestyles? What about their readiness to own their own house? The

townhouse is often thought of as a typology that borders a street space. In this case, whether it is possible to look into the house from the street or not can affect different residents in different ways. Does the resident accept that fact that privacy cannot always be guaranteed when living in a dense urban environment?

Built environment structure (urbanity)

The survey contained a number of claims concerning lifestyle and the valuation of housing. The respondents expressed their views using a five-point Likert scale: *strongly agree – agree – neither agree nor disagree – disagree – strongly disagree*. Correlations between the distribution of survey responses to the claims were analysed. A clear correlation was found between the following responses:

I enjoy being a part of liveable, urban housing environment.

I am not interested in being responsible for the maintenance of a house or a garden.

I would like to be able to follow bustling street life from my window.

Nearby park is enough nature for me.

In addition to these, there was one negative correlation with the fifth claim:

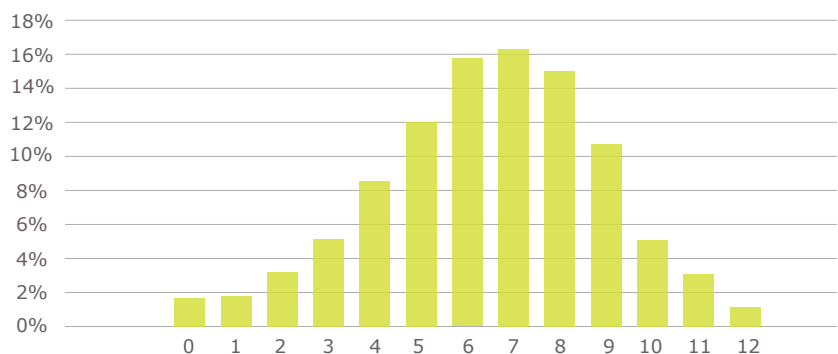
I would not want to live in a house without a nice green view from the window.

What is common to all of these claims is that they can be seen as describing the various aspects of urbanity in housing preferences. Consequently, it would be justifiable to create a combined indicator, or sum of variables, for these claims. The reliability of this type of indicator is described by Cronbach's alpha.¹ The more closely the items correlate with one another, the higher the values. The value of Cronbach's alpha should be no less than 0.60 in order for the degree of reliability to be adequate. In the first four claims, Cronbach's alpha was 0.761 and in the fifth it was 0.758, i.e. practically the same. This kind of value indicates a high degree of reliability.

A decision was therefore made to create a sum of variables on the four claims called "urban housing preferences". The indicator was scaled so that the higher the value was, the more urban the housing preferences. In principle, the value can vary between 0 and 16. However, the values 0 and 1 did not appear in the data. This can be explained in part by the fact that the survey was aimed at the Helsinki Metropolitan Area, i.e. the respondents were limited to persons living in a major metropolitan area. Diagram 3 shows the indicator distribution.

DIAGRAM 4.
DISTRIBUTION OF LOCAL SOCIALNESS SCALE

Attitude of respondents toward local community, distribution of the sum of variables.



The distribution is weighted toward the middle phases of the indicator and somewhat to the right of it, i.e. toward urban housing preferences. Indeed, this is to be expected when the respondents represent the population of a major metropolitan area.

The indicator was dichotomised, which means that the respondents were divided into two groups: those with urban preferences and those with non-urban preferences. The line between urban and non-urban classifications was set so that a respondent responding "neither agree nor disagree" to every claim would be placed in the non-urban classification as a borderline case. As a result, values 2–8 represent non-urban respondents and values 9–16 represent urban respondents. 42% of the respondents were classified as having non-urban housing preferences and 58% as having urban housing preferences.

Attitudes towards local community (socialness)

Analysing the correlation of responses also produced another clearly defined dimension of housing preferences. The following claims were very closely correlated:

Socializing with the neighbours is very important for me

I want actively to participate in a development of my neighbourhood

The survey also asked the respondents to specify their preferred type of housing and how important they felt the various criteria were to choosing a house. The importance of these criteria was measured using the following scale: *very important – somewhat important – important – not important*. One of these selection criteria was "social contacts (neighbours, friends, relatives)". It turned out that the responses given here correlated clearly with the two preceding claims.

These three questions were used to create a combined scale, which described the importance of community

¹ Research Methods Web Resource 2015: <http://www.fsd.uta.fi/menetelmaopetus/mittaaminen/luotettavuus.html>

TABLE 1.
LIFESTYLE GROUPS

When community is valued as more important, the resident is interpreted as more socially-minded. When community is less important, the resident values privacy more. Urban housing preferences emphasise a higher regard for busy, urban-style living. Less urban housing preferences emphasise a higher regard for calmer, greener residential areas.

		Importance of community	
		Less	More
Preference for urban structure	Less urban	20%	22%
	More urban	28%	30%

("socialness") in housing preferences. The scale Cronbach alpha was 0.608, which indicates an adequate degree of reliability.

The scale values ranged between 0 and 12. The higher the value, the more local community meant to the respondent. Diagram 4 shows the scale distribution of respondents. Respondents were weighted toward the middle phases of the scale. Consequently, the respondents were not polarised in relation to this dimension, but rather the distribution is more similar to a normal distribution.

This scale was dichotomised so that values 0–6 represent less of a desire for community and values 7–12 represent more of desire for community. 48% of the respondents had a lower value and 52% of the respondents had a higher value.

Lifestyle groups

The urbanity and socialness scales did not correlate with one another. They therefore represent mutually independent dimensions of housing preferences. The crossing of these two dichotomous variables resulted in the above typology (Table 1).

The resulting lifestyle groups were identified as follows:

1. *Urbsocials*: urban housing preferences and local community more important (30% of the respondents).
2. *Urbnymous*: urban housing preferences and local community less important (28% of the respondents).
3. *Subsocials*: suburban housing preferences and local community more important (22% of the respondents).
4. *Subnymous*: housing preferences less urban and local community less important (20% of the respondents).

Hereinafter, the above classifications will be referred to as "urbsocials" and "urbnymous" as well as "subsocials" and "subnymous".

4.1.2 Lifestyle groups and their use in the study

The dimensions identified in the survey – construction and residential area urbanity (dense, busy – calm, green) as well

as the degree of local community (activeness – withdrawn/privacy) – provide the basis for the lifestyle-based resident profiles specified in this survey. The choice is justified when we remember the somewhat vague definitions of lifestyles. If we use the situation-dependency as described by Chaney (1996), lifestyles as part of townhouse research should be examined based on the factors related to housing and living environments: what kind of choices the residents as consumers prefer that resonates with housing features and ways of living.

Urb- and subnymous residents who emphasise their own privacy are slightly more introverted. We shall call them Will and Wanda Withdrawn. Correspondingly, urb- and subsocials actively seek contact and participate in urban activities. Let us call them Andy and Andrea Active. This categorisation is naturally only indicative: for example, Wanda Withdrawn might also be an active participant if she can find a suitable way to participate.

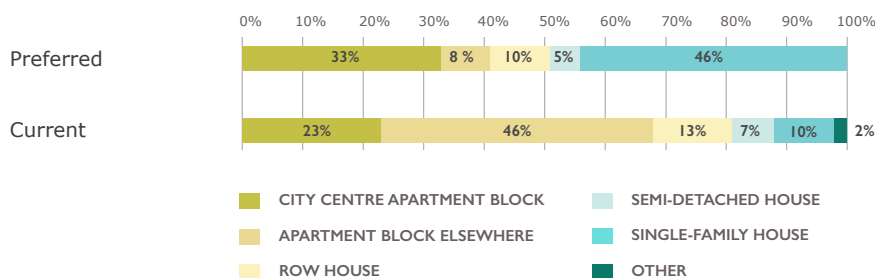
It must, however, be noted that there are both Withdrawns and Actives in densely-built, urban environments as well as more sparsely developed, greener environments. Therefore, urban density does not automatically produce Andy Actives or the desired sense of community – densely-built environments are also home to more withdrawn residents. This is why a way must be found for Wandas to live and thrive in a densely-built environment. Naturally, a single household might contain both withdrawn and active residents, whose preferences for the degree of urbanity in their residential area might also differ among its members. From a housing satisfaction standpoint, it is indeed important that any lifestyle profiles differing in the household are taken into consideration, particularly in the design of individual townhouses and the townhouse blocks they form.

Interest in townhouse living is greatest among residents who prefer a busy environment, i.e. those Andys and Wandas who appreciate a hustling and bustling urban environment. However, 55% of all subsocials, i.e. the Andy Actives who value a green living environment, have a positive attitude toward townhouse living. Among these residents, families with children form the majority and they place an emphasis on having a "child-friendly environment". When it comes to conceptualising the townhouse typology, this means, for example, opportunities for design solutions in which a mixed-use street, courtyards and block houses

DIAGRAM 5.

WEB PANELISTS BY CURRENT AND PREFERRED HOUSE TYPOLOGY

The survey asked respondents to choose one alternative for their preferred type of housing, but a small number of them chose more than just one. Townhouse was not included as one of the alternatives – it was not mentioned until the end of the survey.



all play their respective roles. It should be noted that the most represented lifestyle group among plot seekers was subsocial.

The benefits of the identified resident profiles are particularly linked with the aim of affordable housing related to the townhouse project. Purchase price and housing costs can be affected in many different ways. The method of construction, whether developer-form or independent, affects the price per square metre. According to estimates, the price per new square metre for a property built by a contractor/developer in Helsinki is 5,000–6,000 euros, whereas the price per square metre for a property built using the group construction method can be had for less than 3,000 euros (Pulkkinen 10 June 2014). Costs are also affected by the type of tenure as well as the partitioning of private and shared square metres.

This partitioning is intertwined with the interest in shared domestic spaces; residents interested in these spaces are more prepared to share part of their home for use as a shared domestic space. In this case, residents can enjoy more spacious living with fewer square metres, getting more for their money. However, if the resident is not profiled as an urbsocial or subsocial, the shared domestic spaces required in the plan might seem like an extra cost item and even an obstacle to purchasing the property. In order to ensure that the solutions used in zoning ordinances meet the end users' desires and tastes, it is of the utmost importance to understand the residents' different ways of living – in this case, their lifestyle profiles. This makes it possible to influence the targets for reasonable pricing at different design levels by putting together feature packages, which emphasise the target group's desires and tastes. In other words, not just "everything for everyone", but specifically chosen solutions for those who want them.

4.1.3 Lifestyles and preferred forms of housing

Respondents were also asked to state what their preferred type of housing was. In the actual preferred typology alternatives given, the claims focused on identifiable

typologies – the townhouse had not yet been offered as an alternative at this point.

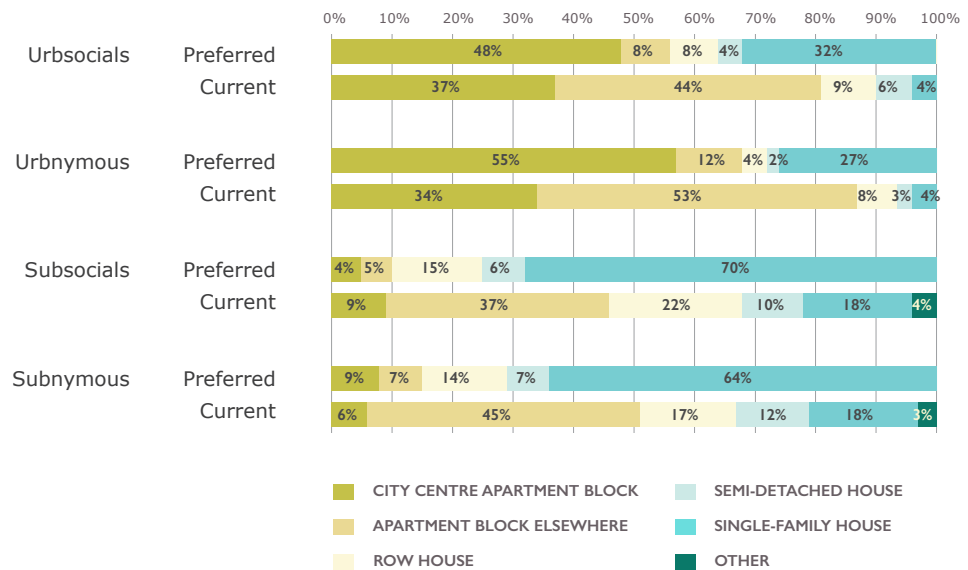
When it came to current housing, an apartment block outside the city centre was the most common form of housing (46%). For many, this also meant living far from services. With regard to preferred housing, an apartment block outside the city centre was the least desirable form of housing (8%), which suggests that the possibilities for choosing housing do not line up with preferences and actual opportunities (Diagram 5).

The Residents' Barometer 2010 showed that the desirable areas of city centre and rural housing are on a slightly rising trend (Strandell 2011). In the Finnish Dream House survey, the respondents were primarily from the Helsinki Metropolitan Area, so the preferences concerning rural housing were not examined. Instead, interest in high-density, city centre living and the relationship of other Helsinki Metropolitan Area housing alternatives with this city centre orientation was analysed. In examining the typologies, 23% of the respondents were living in a city centre apartment block environment at that time, while 33% desired this type of housing. Although a total of 10% of the respondents lived in single-family houses, 46% of them would prefer that particular typology. In the survey, the preferred alternative was divided into factory-made single-family house and custom-built single-family house. The factory-made single-family house was, however, favoured by a clear minority – a majority of the interest was in custom-built single-family houses. Both of these house types are included within the single-family house bar of Diagram 5.

Interest in the townhouse as a preferred type of housing is related to its comparability with known typologies. The townhouse is typically thought of as being an alternative to a single-family house. However, there are also townhouse-minded among, for example, those favouring city centre apartment block housing, which suggests that it is also possible find one's own townhouse neighbourhood in city centre-like areas.

DIAGRAM 6.
CURRENT AND PREFERRED TYPOLOGY BY LIFESTYLE GROUP

Proponents of busy, city centre living preferred apartment block housing in the city centre, but a majority of the respondents currently reside in apartment blocks outside the city centre. Among those who prefer a quieter, more spacious living environment, the desire for a custom-built single-family house is emphasised.



The choice of a preferred housing type showed that the primary interest was in city centre apartment blocks or custom-built single-family houses. Both types also provide a basis for the design of other townhouse concepts, keeping the specific features of living environments in mind.

It was desired that a city centre apartment block be offered as its own alternative, because the Residents' Barometer 2010 (Strandell 2011) emphasises the impact of living environment type on apartment block preferences. According to the Barometer, city centre apartment block housing has increased in popularity, but not apartment block housing in other areas. The responses to this survey can also be interpreted as being in line with the Residents' Barometer findings.

Next, we will be examining preferred housing by lifestyle (Diagram 6). Proponents of busy, city centre living preferred apartment block housing in the city centre, followed by a single-family house, presumably also in a relatively busy environment. Among those who prefer a quieter, more spacious living environment, the desire for a single-family house is emphasised, but typologies similar to row houses are also receiving more favour.

Therefore, according to the preferred housing lifestyle classification, urbsocial/urbnymous respondents would definitely prefer an apartment block in the city centre, but they would also be interested in a custom-built single-family house. This provides a strong basis for townhouse living in urban areas. Correspondingly, subsocial/subnymous respondents place a premium on detached houses. The fact that an apartment block in the city centre attracts urbsocial/urbnymous residents, confirms that the

classification of resident types makes it possible to identify residential area type preferences with the indicators used in this study.

The respondents provided feedback in the survey, asking why the city centre apartment block was the only preferred housing type described in relation to its environment among the preferred typologies. However, the living environment desires and tastes of the respondents were measured using other questions.

4.1.4 Factors affecting the choice of preferred house type

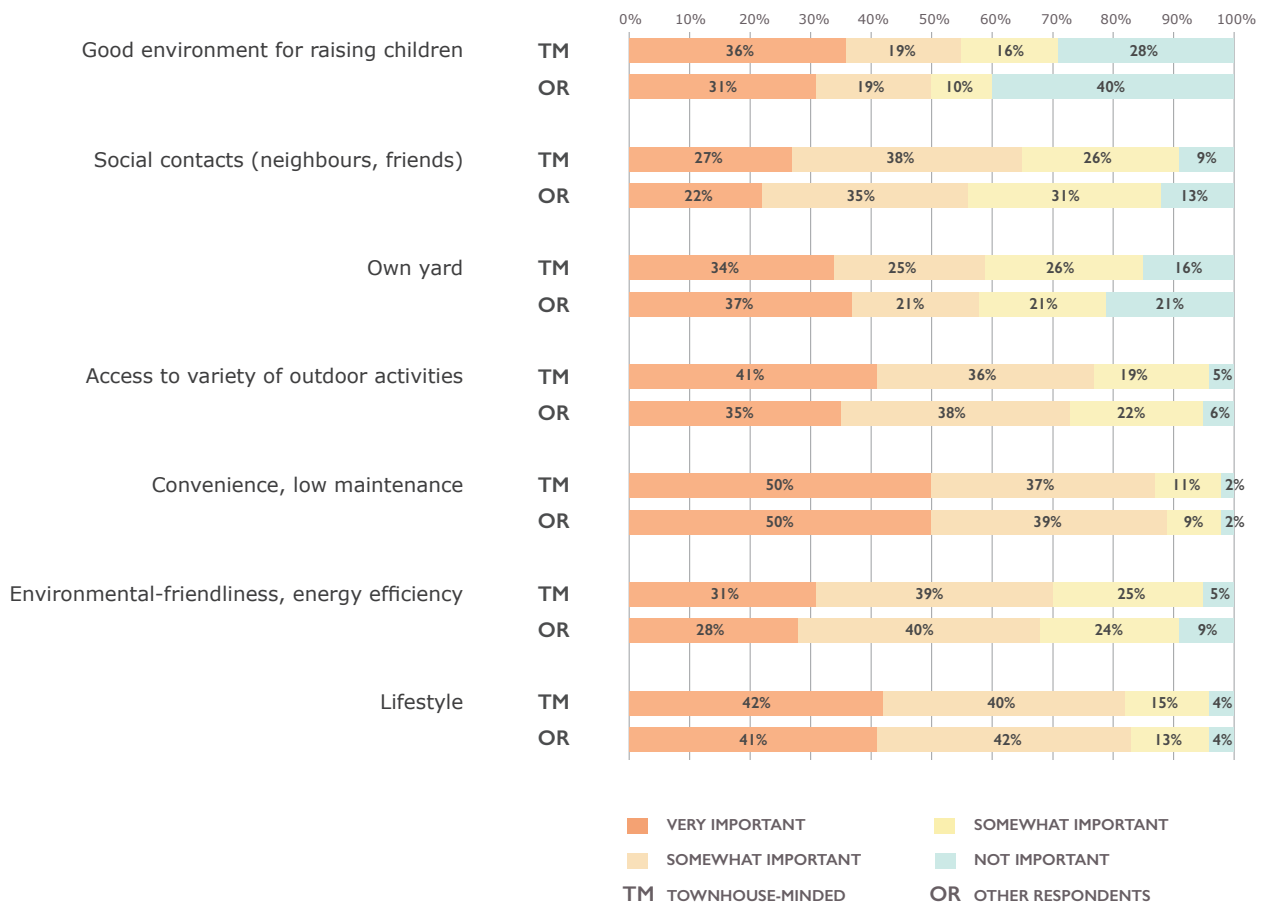
In a comparison between townhouse-minded and other respondents (Diagram 7), it was found that townhouse-minded slightly emphasised a child-friendly environment, social contacts and a wide range of outdoor activities in choosing their preferred housing type. These points were also addressed in later workshops.

In choosing an apartment block and single-family house, environmental-friendliness and energy efficiency were considered equally important: 66% of the respondents who preferred city centre apartment blocks felt that the above factors were very important or important (Diagram 8a), while 73% of the respondents favouring single-family houses felt that the above factors were very important or important (Diagram 8b). It may be that a custom-built single-family house is thought to offer more alternatives than city centre housing. Surprisingly, convenience and low maintenance is also linked to single-family house living – 82% of the proponents of custom-built single-family houses felt that low maintenance is a key factor (very important

DIAGRAM 7.

IMPORTANCE OF VARIOUS FACTORS IN CHOOSING THE PREFERRED HOUSING TYPOLOGY

Townhouse-minded and other respondents as well as factors affecting the choice of preferred typology.



or important). Indeed, these observations draw attention to the fact that the typology itself says nothing about the ways of living and possibilities actually experienced at the individual level.

Proponents of single-family houses attached greater importance to the yard. This is why, as an alternative to a single-family house, townhouses should be designed with yard environments firmly in mind, understanding that residents would see the yard – whether shared or private – as an extension of their home. The courtyard idea is also emphasised in the justifications for a single-family house preference – even here, social contact was considered to be very important (24%) or important (39%).

Residents whose preferred housing type is located in a city centre environment did not attach any importance to the yard or to low-maintenance and convenient living. Aspects of an environment for raising children were also not considered important (49%). However, this does not omit the fact that proponents of city centre apartment block housing – which may also include townhouse living in the future – also include families with children. Over one-fifth (22 %) of city centre apartment block proponents felt that a child-friendly environment was important and 12% would attach a great deal of importance to yard

solutions. A yard might also be of interest when examined from a private outdoor spaces standpoint. Various balcony and rooftop terrace solutions can be more desirable than ground-level yard space, thus becoming a strength of the townhouse typology in a dense urban environment. There could actually be two types of city centre townhouses: one emphasising low-maintenance living, in which yards would be rooftop terraces, and the "inner city oasis", in which walled yards would provide families with children with a sense of security and a place for activity.

The differentiation of housing preferences reveals that both city centre apartment block housing and a custom-built single-family house are considered to be expressions of one's lifestyle. 85% of the proponents of city centre housing (Diagram 8a) and 82% of those preferring a custom-built single-family house (Diagram 8b) felt that lifestyle played a decisive role in making choices (very important or important). This claim was in line with Resident's Barometer 2010, which found that lifestyle was emphasised in city centre housing. In the Dream House survey, the interpretation of lifestyle was left up to each respondent: the content of the concept was addressed in greater depth in an environment and energy opinion survey for the townhouse project.

DIAGRAM 8A.

IMPORTANCE OF VARIOUS FACTORS IN THE CHOOSING OF A PREFERRED TYPOLOGY AMONG RESPONDENTS WHO PREFERRED A CITY CENTRE APARTMENT BLOCK.

The presumed convenience and low-maintenance aspect, including having no yard, were associated with city centre apartment block housing. However, 29% of the respondents felt that having their own yard was very important or important.

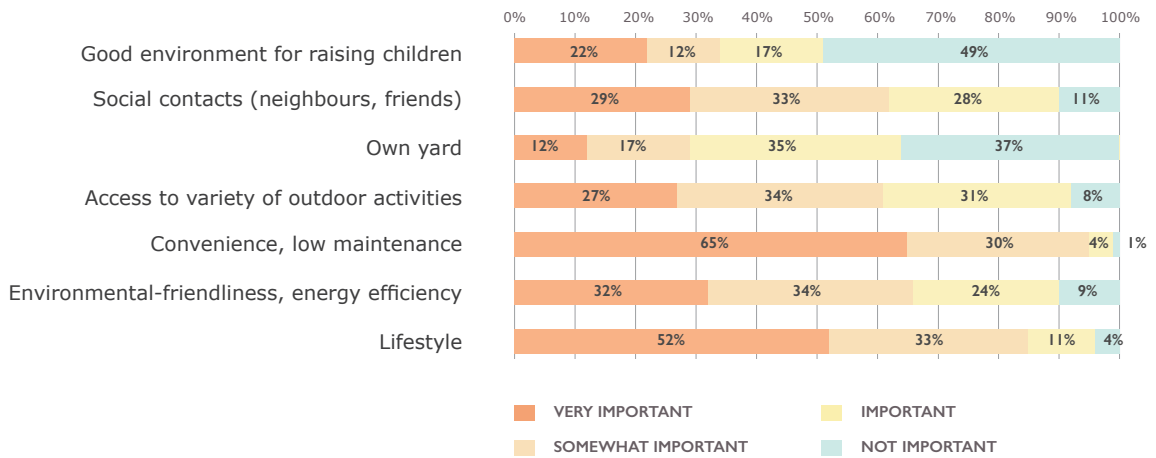


DIAGRAM 8B.

IMPORTANCE OF VARIOUS FACTORS IN THE CHOOSING OF A PREFERRED TYPOLOGY AMONG RESPONDENTS WHO PREFERRED A CUSTOM-BUILT SINGLE-FAMILY HOUSE.

A custom-built single-family house appeals to residents who value having their own yard, opportunities for outdoor activities and a child-friendly environment.

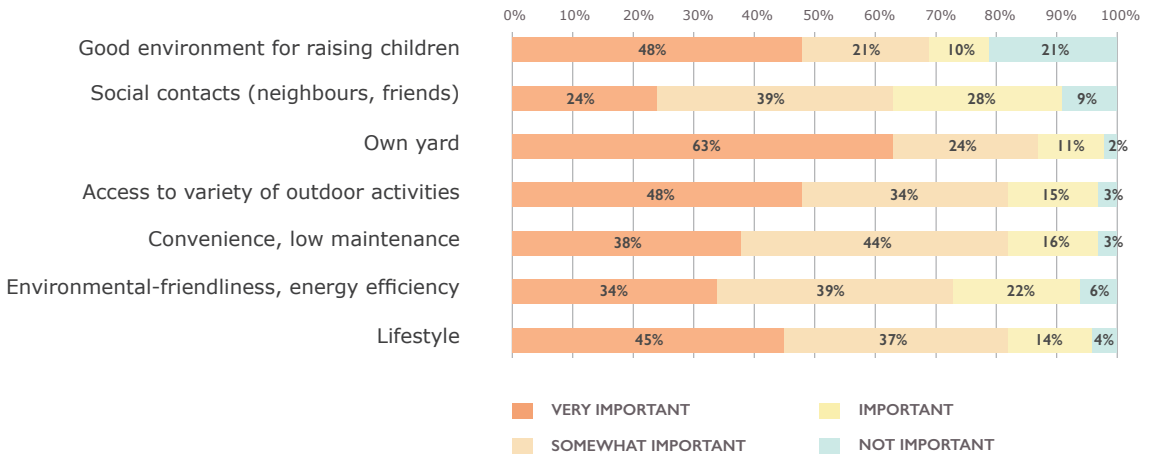


TABLE 2.
RESPONDENTS' NET INCOME AND ABILITY TO PAY MONTHLY LIVING COSTS

Interest in the type of tenure was compared to the residents' current type of housing. 9% of all respondents living in their own residence might consider rental or right-of-occupancy housing. 56% of the respondents living in rental housing wanted to remain in a rental or right-of-occupancy arrangement, even if 81% of these would prefer ownership. Townhouse-minded were slightly more likely to live in rental housing. The combined percentages exceed 100% because respondents were allowed to give more than one response.

ALL RESPONDENTS		Would like to live in:	
		A rented residence A right-of-occupancy residence	A residence they own
Now lives in:	A residence they own	9%	98%
	A rented residence A right-of-occupancy residence	56%	81%

RESPONDENTS WHO FAVOUR TOWNHOUSES		Would like to live in:	
		A rented residence A right-of-occupancy residence	A residence they own
Now lives in:	A residence they own	11%	98%
	A rented residence A right-of-occupancy residence	60%	84%

TABLE 3.
MEDIAN INCOME BY CURRENT AND PREFERRED TYPE OF TENURE

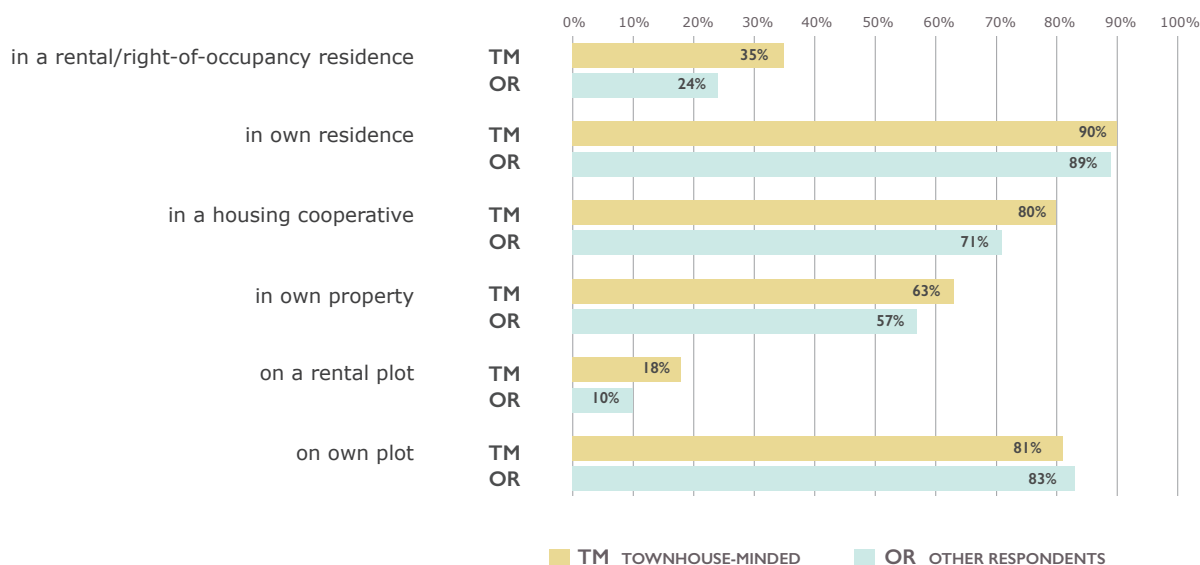
Household-specific monthly incomes were higher among residence owners. Renters had the highest living costs in relation to a maximum percentage of their net income (35%).

	Income	Maximum housing costs	Maximum share of housing cost
Now lives in: A residence they own	€4 165	€1 189	29%
A rented residence	€2 554	€888	35%
A right-of-occupancy residence	€3 521	€1 001	28%
Would like to live in a rented residence	€2 902	€931	32%
Would not like to live in a rented residence	€3 730	€1 115	30%
Would like to live in a residence they own	€3 561	€1 082	30%
Would not like to live in a residence they own	€2 631	€833	32%

DIAGRAM 9.

RESPONSES TO CLAIMS REGARDING THE TYPE OF TENURE: "I WOULD LIKE TO LIVE..." (COMPLETELY AGREE + AGREE)

Respondents for whom a townhouse would be a suitable form of housing were more open to various housing tenure types.



4.1.5 Questions concerning the type of tenure and finances

The survey examined lifestyles and the way they inform the possibilities of townhouse buildings and townhouse blocks. Another survey classification method involved the identification of townhouse-minded. Web panelist data provided a comprehensive cross-section of experiences with the various housing types, such as rental housing, which could also be seen in a readiness to accept other types of tenure (Diagram 9).

Townhouse-minded emphasised a readiness to accept various types of housing administration. A relatively greater readiness for housing on a rented plot is an important finding (18% among townhouse-minded, 10% among others), as rented plots in newbuild developments divided opinions strongly. However, the survey confirms that plot ownership was preferred by a majority (81% and 83%).

In Finland, townhouses are primarily described as an alternative to single-family houses. Even the hypothesis for this form of real estate was discarded in the survey. A majority of the respondents generally accept the idea of housing in a housing cooperative. Issues involving the type of administration were also addressed in workshops. It can generally be said that preferences concerning a certain type of tenure are affected by price as well as the perceived amount of decision-making power. Housing cooperative housing is seen as being an affordable type of housing and an alternative in cases where decisions on certain matters must be made collectively.

Ownership was the clear favourite among both those who owned their residence and those who rented. Just over half of renters would continue to rent (respondents were allowed to choose their preferred type of housing from among several alternatives). The responses did not differ a great deal according to the interest in townhouses.

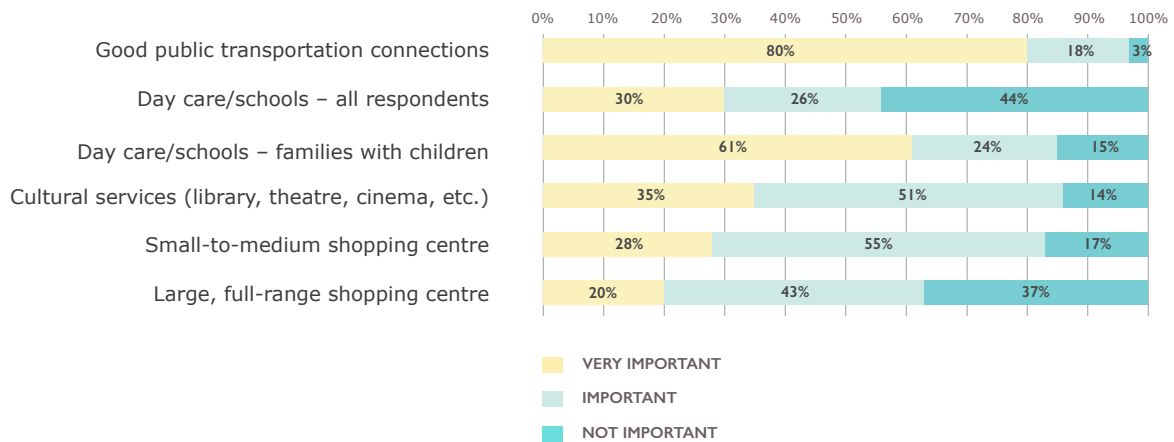
Housing possibilities are strongly linked to a readiness to choose a certain housing type, such as described above, but even more so to financial factors. Whether or not a household can afford to act in accordance with its preferences ultimately comes down to wealth. This is why the survey looked at the respondents' net income and their ability to pay the monthly living costs (Table 3).

Residents were asked to specify the monthly net income for the household (amount after taxes). Any income values higher than 15,000 euros were assumed to be annual income and excluded. Maximum living cost values higher than 4,000 were excluded. The maximum living cost percentage is still calculated from maximum living costs and income. Rental housing, whether as the current or preferred type of tenure, is associated with lower income and a lower ability to make payments. However, the maximum living cost percentage is higher for renters and proponents of rental housing than for others. The percentage of housing allowances and equivalent support can also affect income. The free-form comments revealed an emphasis on resident dissatisfaction with living costs, which further underscores the importance of the townhouse project goal to make affordable housing a reality.

DIAGRAM 10.

HOW IMPORTANT DO YOU THINK THE FOLLOWING SERVICES WOULD BE IN YOUR RESIDENTIAL AREA?

Residential area service preferences. The respondents were informed that there would be a grocery store in their own neighbourhood.



4.1.6 Environmental attitudes and building methods

The survey examined the general attitudes of respondents toward the housing service environment and shared domestic spaces as well as building methods, looking at these in terms of environmental-friendliness and organisation. All these topics are important in the design of townhouses.

Residential area type and services

Roughly one-quarter (24%) of the respondents lived in a city centre while a majority lived in suburban areas (74%). A common denominator between the two groups was a full-range of public transportation services. In examining services, respondents would prefer to live near a large shopping centre than a small one. Cultural services attracted more interest than commercial services. The first cultural service on the list was library. Indeed, a library is an excellent example of a public space where both urb/subnymous and urb/subsocial residents can find a place of their own and participate in urban culture. Families with children were naturally interested in the location of schools in the residential area (Diagram 10).

Environmental attitudes

The importance of environmental impact factors on housing choices were identified in Residents' Barometer 2010, in which attitudes were linked to, in particular, the choice of transportation modes (Strandell 2011). The townhouse study found that public transportation was considered to be an important aspect of a living environment. Environmental-friendliness factors were defined in greater detail in this study and primarily related to housing.

Keeping living costs under control by means of energy efficiency was generally considered important: nearly all web panelists felt that this was important and 40% of

them felt it was "very important" (Diagram 12). The section "energy efficiency of buildings", which was considered nearly as important, was also related to this. However, 28% felt that energy certification was "very important", i.e. controlling living costs was considered more important than energy certification. The use of renewable sources of energy as well as the environmental-friendliness of surface materials and interior design solutions were also generally considered important: over half (58%) felt that these factors were very important or important. Conversely, compromising on the size of a residence for environmental reasons was not a popular idea: nearly one-third of the respondents answered "not important", while one-third said it was "very important" or "important".

Comparisons of environmental attitudes were made between townhouse-minded and other respondents (Diagram 11a) as well as between plot seekers and web panelists (Diagram 11b). In questions concerning the environmental impacts of housing, townhouse-minded and other respondents only differed significantly in one area: slightly more townhouse-minded considered it important to compromise on the size of a residence for environmental reasons than other respondents. This is an interesting finding for development of the townhouse concept, particularly when compared to the readiness of townhouse-minded to take advantage of shared domestic spaces.

Because plot seekers are seen as respondents who have considered building their own home and have therefore probably investigated environmental and energy solutions in greater depth than the average resident, their views may reveal the final environmental impact choices more effectively than the average respondent. Plot seekers place an emphasis, in particular, on renewable sources of energy and keeping living costs under control over other claims.

DIAGRAM I I A.
IMPORTANCE OF ENVIRONMENTAL IMPACT FACTORS ON HOUSING CHOICES

32% of the townhouse-minded and 27% of other respondents felt that it was very important or important to compromise on the size of a residence for environmental reasons.

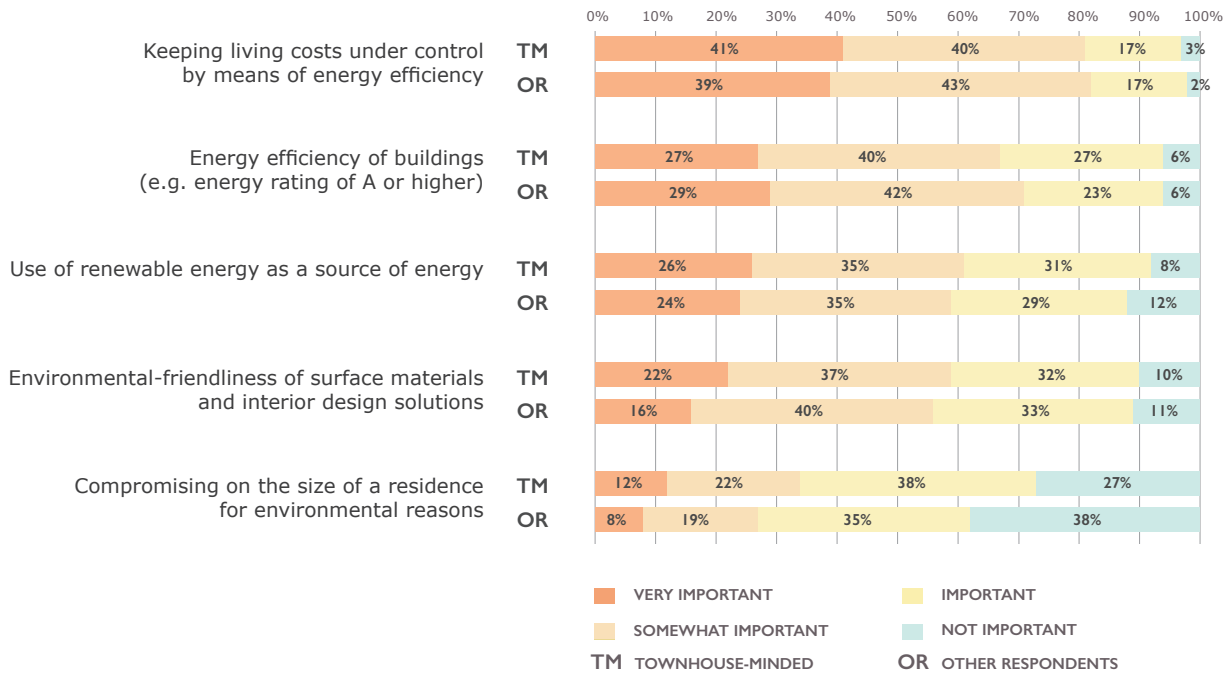


DIAGRAM I I B.
IMPORTANCE OF ENVIRONMENTAL IMPACT FACTORS ON HOUSING CHOICES

Comparison of data A comparison between web panelists and plot seekers reveals that those considering independent construction attached much greater importance to controlling living costs (very important 46%; equivalent figure among web panelists 40%).

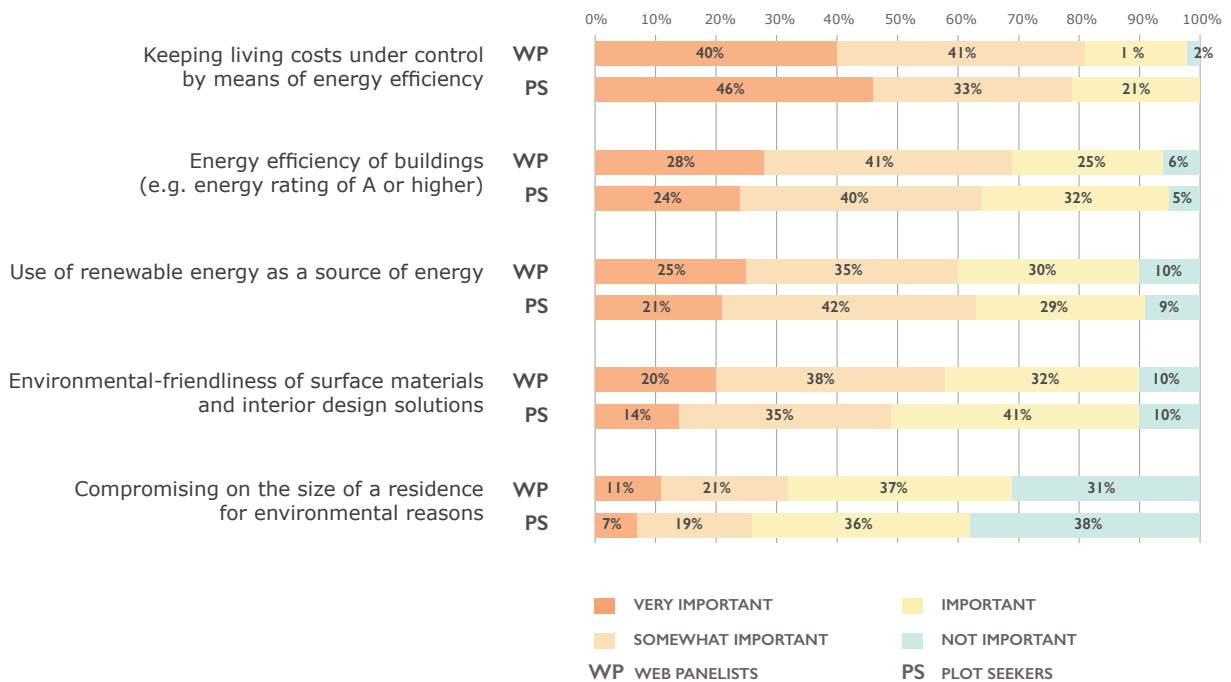
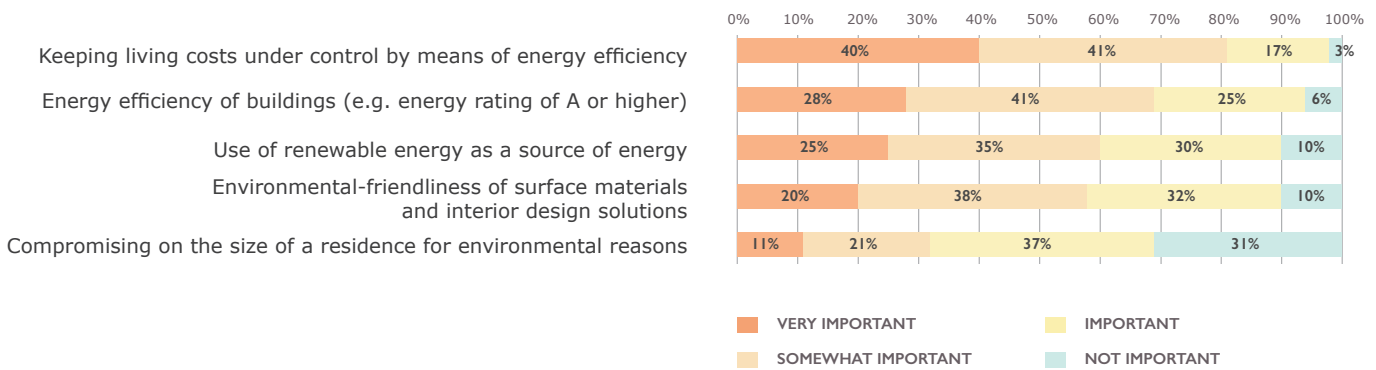


DIAGRAM 12.
IMPORTANCE OF ENVIRONMENTAL IMPACT FACTORS ON HOUSING CHOICES

Financial factors emphasised in environmental impacts.



Shared domestic spaces

The survey, in which the various features of housing were separated from the typologies, made it possible to examine different design solutions, including those not traditionally associated with detached housing, such as shared domestic spaces (Diagram 13).

There was a surprisingly large amount of interest in shared domestic spaces among townhouse-minded. This provides new perspectives on future townhouse solutions, also keeping the above-mentioned environmental attitudes in mind. Diagram 13 shows once again that townhouse-minded are more amenable to new solutions, such as the different forms of shared domestic spaces. However, the survey did not provide a clear idea as to how shared domestic spaces would be incorporated in townhouse design. We decided to include the shared domestic spaces discussion in workshops.

Despite the interest, it should be kept in mind that opinions on shared domestic spaces are divided. Below are some free-form responses taken from the survey:

Maybe people want a single-family house precisely because courtyards and shared spaces just don't work. What's yours is yours.

We're not looking for company – we want our privacy and peace and quiet.

I'd rather have a better use of space, not to mention creature comforts, in my own place than some common area. I doubt they'd stay very clean or be kept up. It would always be "somebody else's job".

Shared spaces just don't seem to work. All the work that needs doing usually falls on the shoulders of a

few people – there are always some freeloaders who love to take full advantage of the benefits, but never ready pitch in with maintaining or cleaning the place.

The costs of the common areas should never increase the living costs.

Shared spaces are surely a great idea, but I doubt their use would end up being very fair.

Common spaces rarely work in real life.

Shared areas need an outside caretaker or really dedicated and clean-type people in the housing cooperation.

Convenient, if you can book a room for your own event and, of course, for housing cooperation bees, gatherings and hobbies. A housing cooperation band, yoga and those kinds of things are OK.

Get rid of the inner yard walls –> shared yard and a wastebin shelter, etc.

There could be small, rentable workrooms, rentable storage space, a rentable guest room. You'd need a proper network-based process to manage something like this. Common kitchen/dining area, maybe even for the whole block. Common times and certain slots that can be rented for private use. There should definitely be a laundry room – not necessarily if the housing cooperation is small, but it can be shared by multiple associations!

A pleasant yard area or roof terrace could serve as a common area.

A bike repair shop, for example, might be a good idea.

This is a really good idea for people living alone.

DIAGRAM 13.

ANSWERS TO CLAIMS ON SHARED DOMESTIC SPACES IN A HOUSING COOPERATION (COMPLETELY AGREE AND AGREE)

Townhouse-minded are more amenable to the possibilities offered by shared domestic spaces; for example, 19% of the townhouse-minded would be prepared to compromise in the size of their residence if various shared domestic spaces were made available.

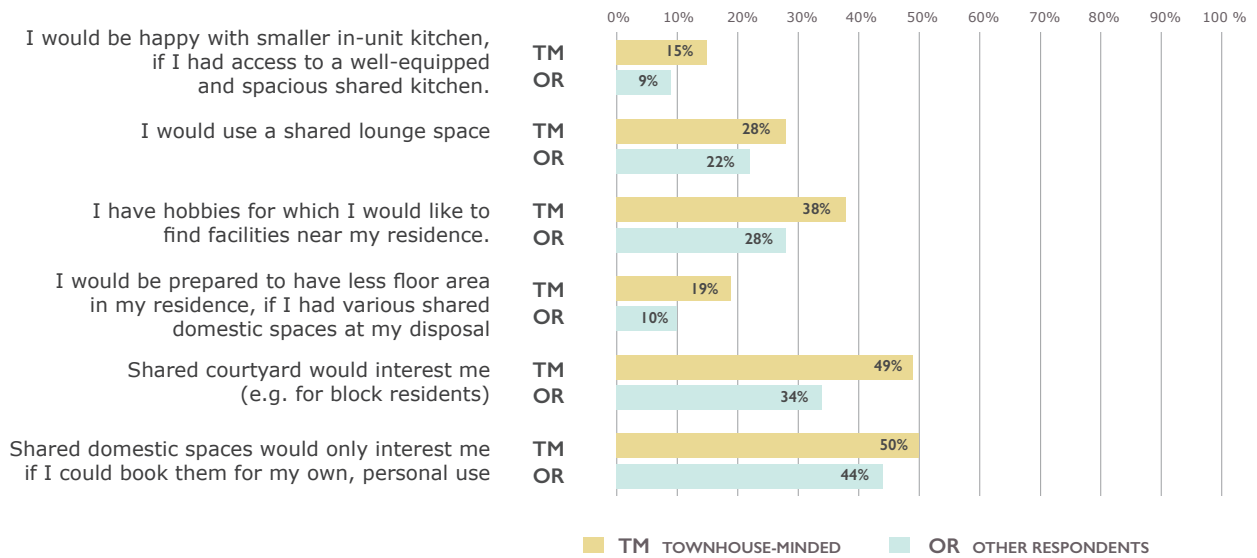


DIAGRAM 14.

IF YOU WERE BUILDING YOUR OWN DETACHED HOUSE, HOW WELL WOULD THE FOLLOWING BUILDING METHODS SUIT YOU? RESPONSES ACCORDING TO INTEREST IN SHARED DOMESTIC SPACES.

27% of web panelists and 73% of other respondents were interested in shared domestic spaces.

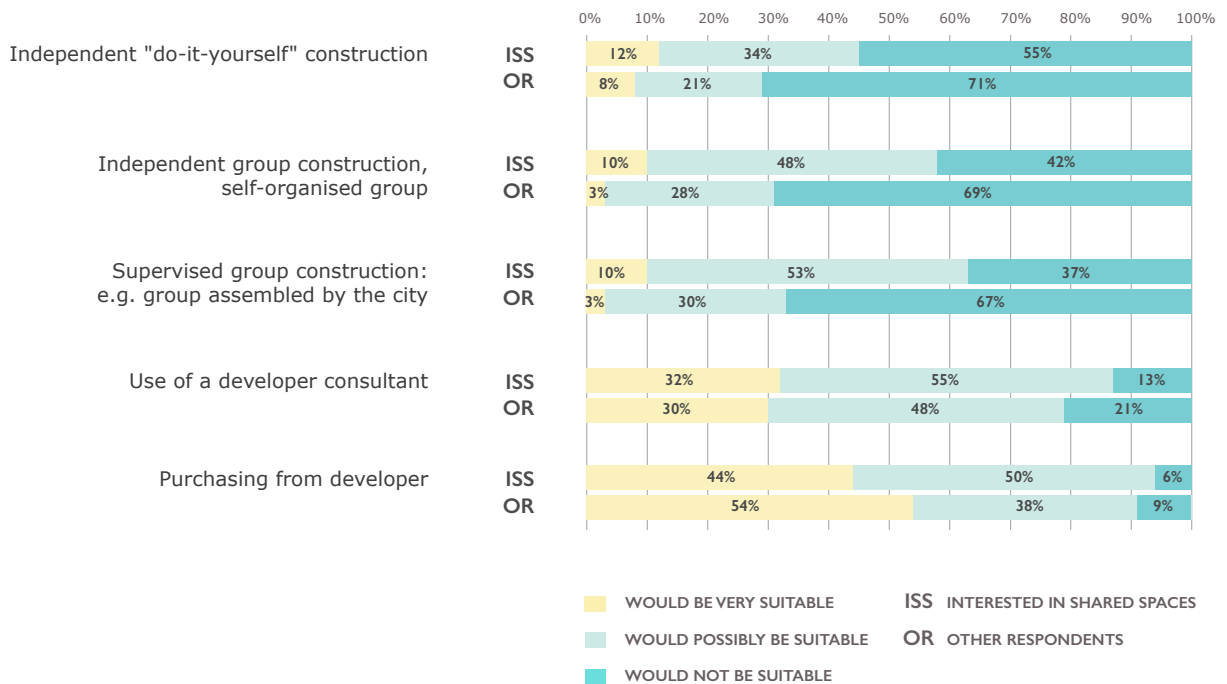
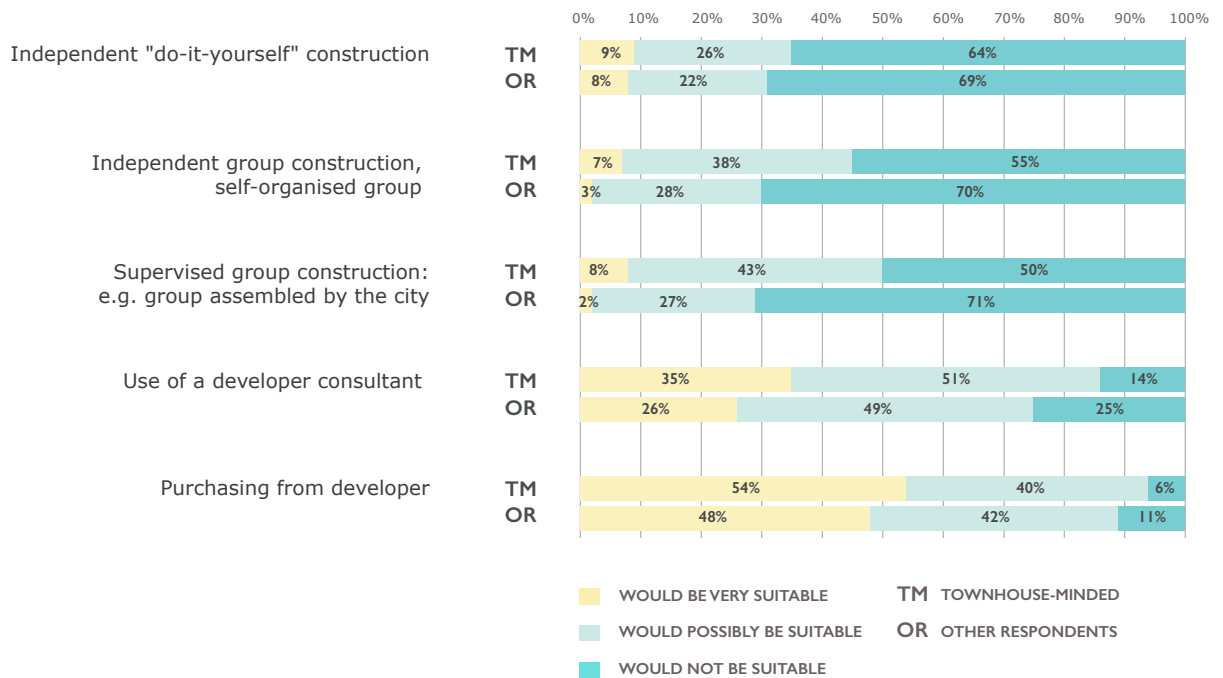


DIAGRAM 15.

IF YOU WERE BUILDING YOUR OWN DETACHED HOUSE, HOW WELL WOULD THE FOLLOWING BUILDING METHODS SUIT YOU?

Respondents interested in the townhouse typology were more interested in both independent and supervised group construction, as other respondents were interested in the use of a developer consultant. Even so, their most preferred alternative was still purchasing from developer.



The resident comments reveal not only the possibilities for shared domestic space, but also the needs: the organisation and management of shared domestic spaces must be systematic. It must be known for whom the spaces are being designed, for what purposes and under what kind of administration.

Diagram 14 assesses the interest in shared domestic spaces among web panelist respondents, according to whether the respondent is interested in them or not. Interest is assessed in relation to the type of building method (do-it-yourself, group construction, a developer consultant, etc.). The results show that the respondents who were interested in shared domestic spaces are relatively less interested in purchasing a house directly from a developer (44%) than other respondents (54%). The respondents interested in shared domestic spaces were also more ready for group construction in its various forms. This readiness provides an incentive to develop a townhouse concept, in which some of the living spaces would be shared and whose design would involve the residents. Based on experience, shared building phases bring residents together and, in this context, the rules of use for the space could also be a natural area for development.

Because group construction projects in particular interest proponents of shared domestic spaces, these types of building methods could serve as the basis for pilot projects involving townhouses with shared domestic spaces, even if proper project coordination would be an absolute necessity. More about building methods is discussed next.

Construction and developing

For many current residents, townhouses were built as a group construction project. In these cases, the residents participated in the design and construction of their homes guided by their personal preferences, even if these required some adjustment due to regulations. The building method was also examined in this survey. For a majority of the respondents, purchasing directly from a developer would be the most suitable alternative, regardless of how amenable they were to townhouses. This draws on the fact that a majority of the respondents look for convenience and staying on budget when purchasing a residence.

However, Diagram 15 reveals that the respondents interested in townhouses are, across the board, more receptive to different building approaches, which suggests their role as trendsetters.

Web panelist and plot seeker attitudes were also compared in relation to building method (Diagram 16). A surprisingly large percentage of plot seekers (86%) find purchasing from a developer to be very suitable (44%) or possible (42%). An equal number of plot seekers would prefer purchasing from a developer and using a consultant. In group construction, plot seekers value a supervised alternative (23%) more than a group working independently (18%).

Independent construction is slightly more appealing to both respondent groups as a "very suitable" alternative than independent group construction (among plot seekers 21% vs. 18% and among web panelists 9% vs. 5%). Web panelists are also not interested in supervised group construction (very suitable 5%), unlike plot seekers (23%).

DIAGRAM 16.

IF YOU WERE BUILDING YOUR OWN DETACHED HOUSE, HOW WELL WOULD THE FOLLOWING BUILDING METHODS SUIT YOU?

Plot seekers were more receptive to multiple building methods than the web panelists.

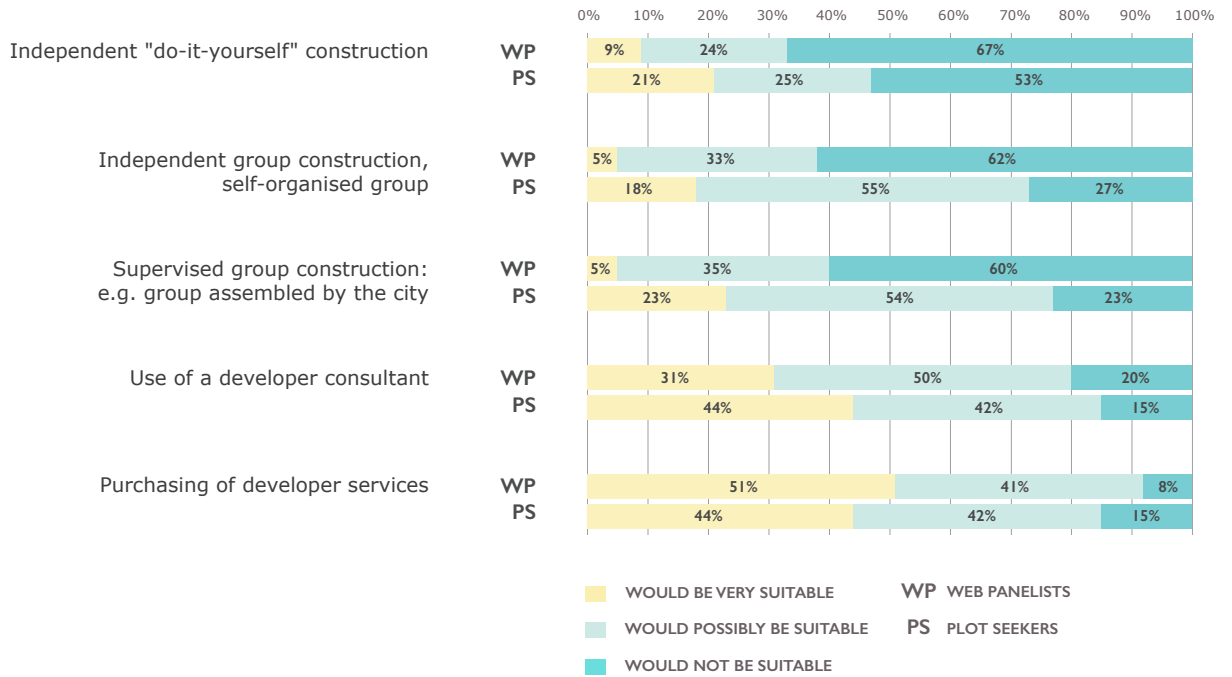


DIAGRAM 17.

IF YOU HAVE A CAR(S), WHAT KIND OF PARKING ARRANGEMENTS WOULD SUIT YOU BEST?

Parking arrangements examined between two groups: respondents interested in townhouses and other respondents.

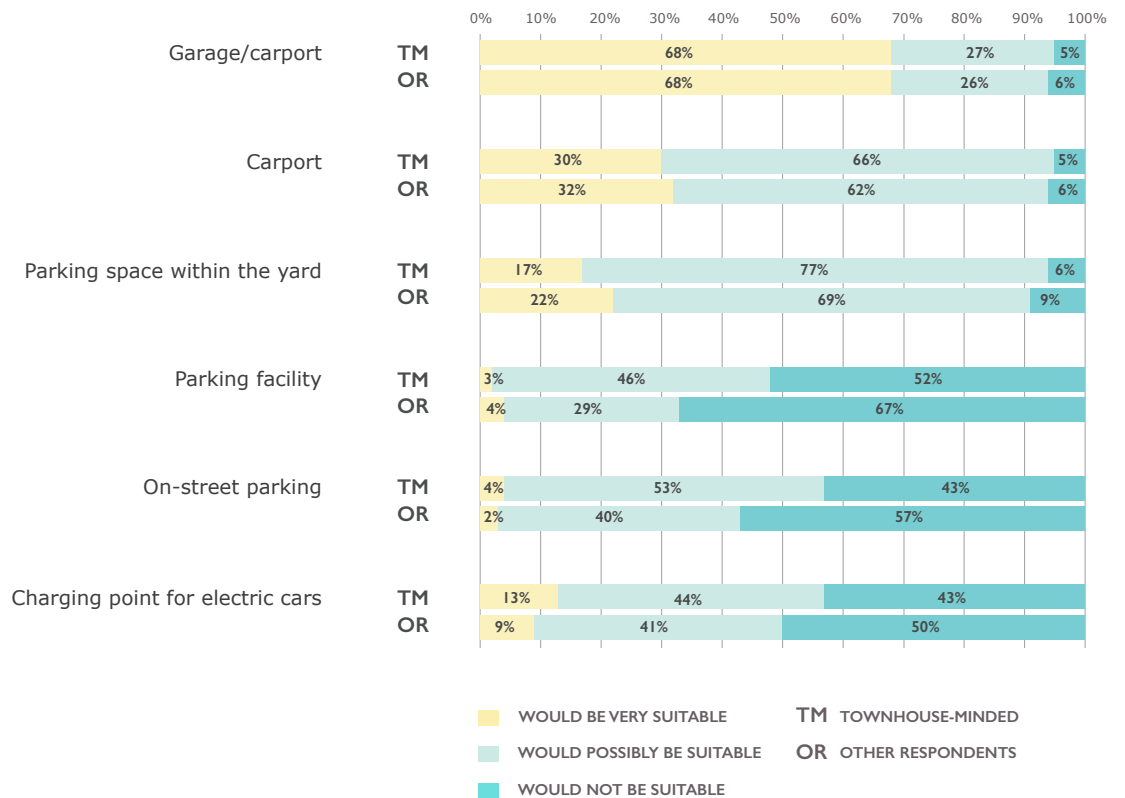


DIAGRAM 18.

THE FACT THAT THE ROOMS IN MY RESIDENCE WOULD BE ON SEVERAL FLOORS. (COMPLETELY AGREE/AGREE)

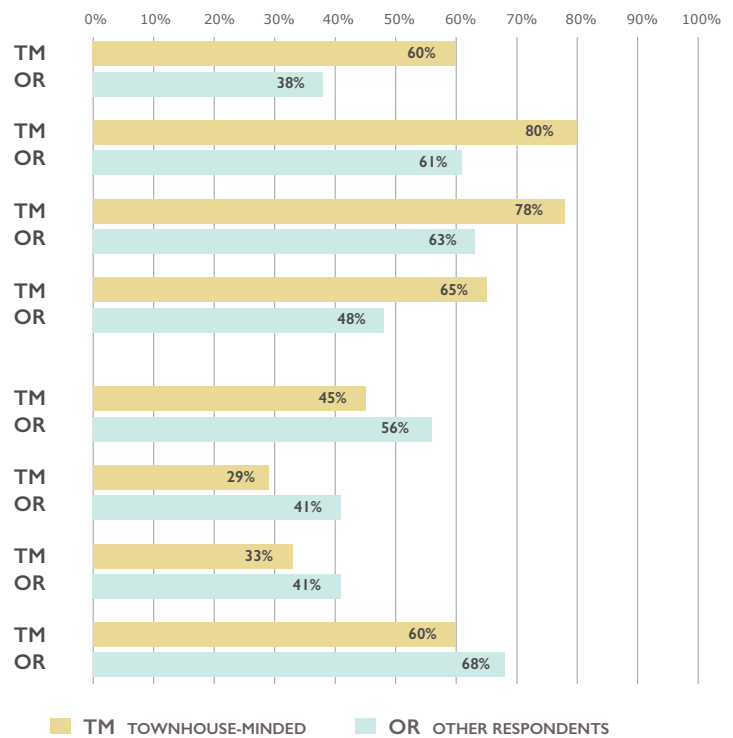
Townhouse-minded and other respondents in relation to the advantages and disadvantages of having multiple floors in a residence.

ADVANTAGES

- Would give the residence a unique feel
- Would provide a variety of uses
- Would enhance the degree of privacy for family members
- Wide range of room solutions

DISADVANTAGES

- Would make it harder to use the space and perform daily tasks
- Would make it more difficult for residents to spend time together
- Could pose hazards
- Would make cleaning more difficult



This examination emphasises the desire of residents for expert project management, suggests an interest in the services of a developer consultant. This approach should be developed, and good operating practices should be included in the group construction method. An effort has been made to promote group construction in an act, which entered into force on 1 September 2015. The purpose of the act is to facilitate the procurement of funding for group construction projects as well as ensure the legal status of everyone involved in such projects (Ministry of Justice 5 March 2015).

4.1.7 Design preferences and attitudes

In this chapter, we will be examining the design preferences and attitudes related to the townhouse typology in light of the Finnish Dream House survey data. Greater focus will be given to townhouse features involving the individual design solutions that take the residents' various life situations and housing needs into consideration both indoors and outdoors as well as their interfaces. In the survey section dealing with typology, the questions were structured so that the townhouse typology could be broken down into the most important contributing factors from a design standpoint, such as having multiple floors and the need for an office/workspace.

Driving and parking

Bordering the street space in a dense urban environment, the front yards of townhouse rows are small – in some

cases, they are non-existent. Plot-specific parking solutions steer the design of entrances and, in turn, the entire street-level floor of a residence. The placement of a garage in a very narrow-framed townhouse can result in, for example, dark interior spaces due to reduced window area. In spite of this, the garage has a great deal of support, as a majority of the townhouse-minded and other respondents (68%) listed it as their favourite parking solution. The second most popular parking solution among respondents was a carport. Compared to other respondents, townhouse-minded preferred more distant parking facilities, on-street parking and electric car charging points slightly more as a possible solution (Diagram 17).

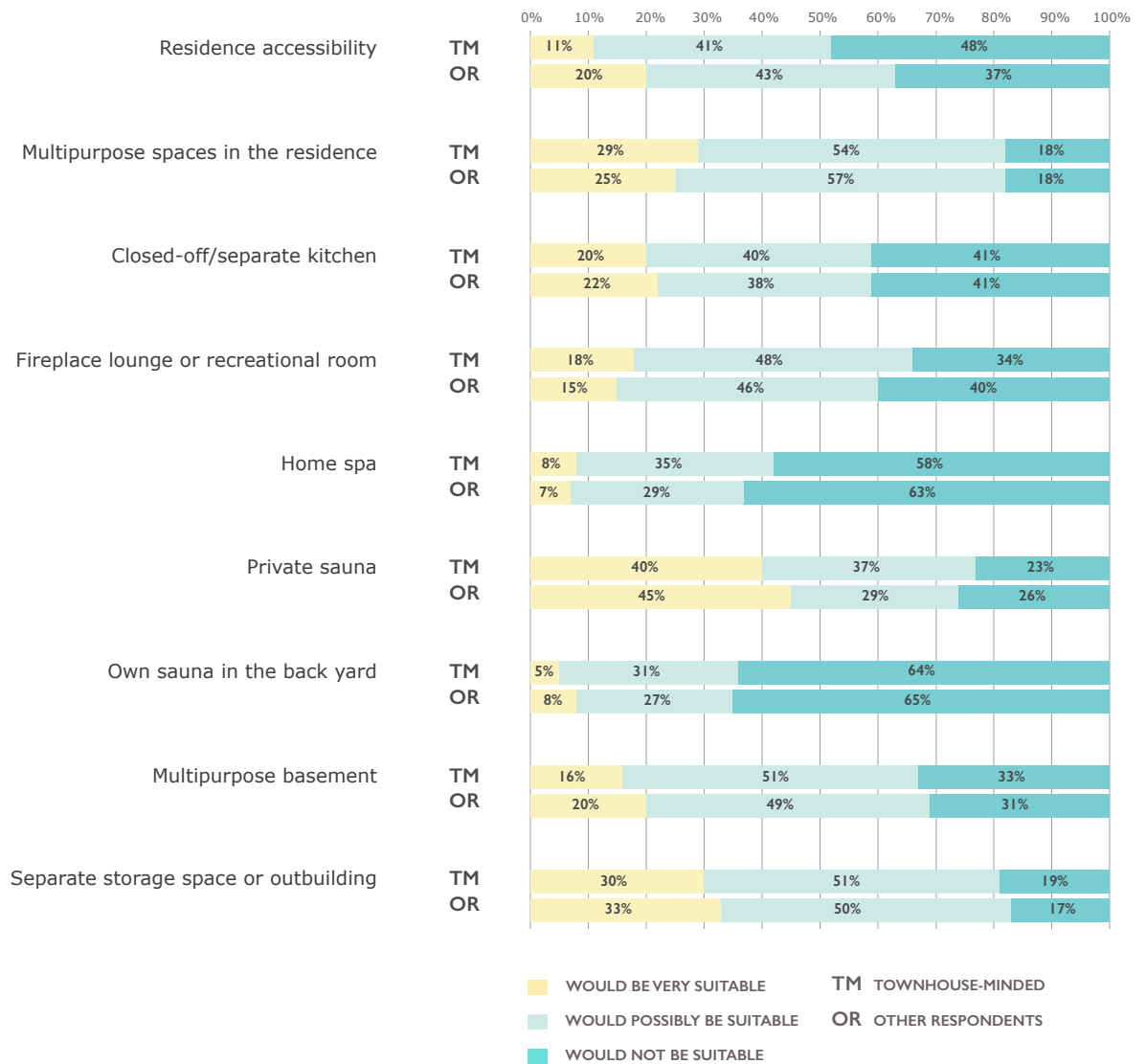
Living space

In a townhouse, living space is found on at least two floors. As expected, townhouse-minded felt that having multiple floors offered significantly more advantages than disadvantages (Diagram 18). As much as 80% felt that multiple floors increased the variety of room uses and nearly the same amount thought that having rooms on several floors enhanced each family member's sense of privacy. In addition, many considered the unique feel of the residence and wide range of room solutions to be a major strength of having multiple floors. Daily routines would also apply in a townhouse: a significant percentage of the townhouse-minded felt that having multiple floors would make routine tasks difficult, particularly cleaning.

Having rooms on several floors made accessibility a significant factor affecting design choices. However,

DIAGRAM 19.
WHAT IS YOUR OPINION OF THE FOLLOWING AS PART OF YOUR HOUSING?

Attitudes toward various housing features – townhouse-minded and other web panelists.



according to the survey, accessibility was not a decisive factor among respondents (Diagram 19). There were still differences between respondent groups: whereas only 11% of the townhouse-minded felt that accessibility was important, 22% of other respondents believed that a residence should be accessible. The survey responses seem to emphasise that townhouse-minded have a more positive attitude toward having multiple floors than the other respondents. When examining the results, it should also be kept in mind that accessibility was assessed generically, before the respondent was told that the survey dealt with a multistorey townhouse typology.

Having a private sauna inside the residence was one of the many features which most respondents said "should have". Also, having a separate storage space or outbuilding was generally desired, but these responses placed greater emphasis on the alternative "would be possible". Roughly 83% of the townhouse-minded answered "should have" or "would be possible" when it came to having multiple floors

in a residence. The wish for having multiple floors might be related to anticipating changes in housing needs or it might simply mean using one of the bedrooms as a combination guest room-office. Having a separate kitchen that could be closed off from the other rooms, a multipurpose basement and fireplace lounge or a recreation room formed the next most necessary set of features. Having a "spa" and private sauna in the back yard were considered the least necessary of the features mentioned in the survey (Diagram 19).

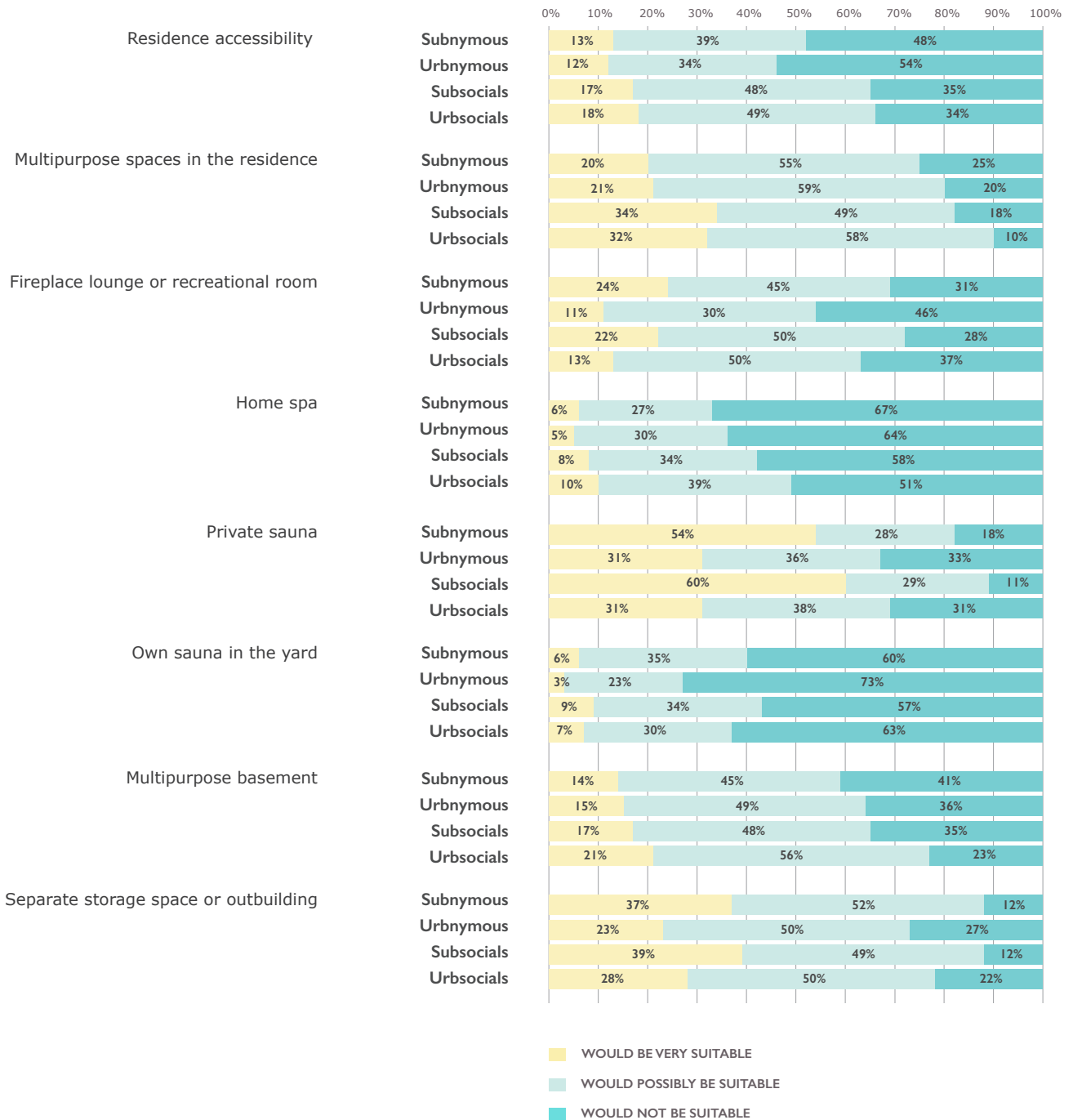
The results concerning development and conceptualisation of the townhouse typology are interesting: few residential buildings are being designed to serve as wide a range of purposes as a townhouse with multiple floors. Also, the desire for a separate storage space can easily be realised by erecting an outbuilding in the back yard, thus making it possible to install an outdoor sauna for those residents wanting one.

When living spaces are examined by lifestyle groups, differences can be seen between the respondents interested

DIAGRAM 20.

WHAT IS YOUR OPINION OF THE FOLLOWING AS PART OF YOUR HOUSING? RESPONSES ACCORDING TO LIFESTYLE GROUPS.

Attitudes in relation to residence features by lifestyle group.



in townhouse living. The Andy and Andrea Actives who seek involvement and community felt that the multipurpose nature of rooms was particularly important. Accessibility in the residence was also important to them. Over half of the subsocial/subnymous respondents felt that having a private sauna inside the residence was very important. The corresponding figure for urbsocial/urbnymous respondents was 31%. Having a private sauna in the yard was not considered important by respondents. Even fewer expressed interest in having their own "home spa". Subsocal/subnymous respondents who wanted a sauna

inside their own residence were more interested than urbsocial/urbnymous respondents in having a fireplace lounge or recreation room as well as a storage space or outbuilding (Diagram 20). This might indicate that people living in residences with less floor area in densely built areas are basically willing to forego their preferences, which in itself affects the survey results.

Office/workspace needs

The very wide range of activities performed in a residence is reflected in office/workspace needs. Doing distance

work a few hours a week does not necessarily require a separate office, but for a consultant wanting a home office, a workspace with its own entrance might be the deciding factor in making a housing choice. Hobbies also require their own space.

27% of the respondents stated that they worked from home every week, 33% worked from home less frequently and 39% not at all. Townhouse-minded performed "distance work or other activities requiring space" slightly more (64%) than other respondents (58%).

Townhouse-minded stated a need for an office/workspace in their own residence (68%) more often than other respondents (60%). The only significant difference was found in the section "work corner, for example in the bedroom", which was reported by 27% of townhouse-minded and 17% of other respondents. Renting out an office/workspace or having a separate entrance were only considered interesting by a small segment of the respondents (Diagram 21). At any rate, the possibility of having a separate office/workspace was considered a feature of townhouses.

When examining the need for an office/workspace by lifestyle group (Diagram 23), it can be seen that, for privacy-seeking Will and Wanda Withdrawn residents, having an office/workspace in one's own home is less appealing than it is for more members of the more social-minded groups. For residents valuing privacy, it might be natural that the home is an area to be kept separate from other aspects of life, whereas the more social-minded would use their homes for a variety of work and hobby activities that require space.

In comparing the need for an office/workspace among respondents seeking plots from the City of Helsinki and web panelists, it was found that the plot seekers are, on average, more interested in a work corner or an office/workspace which can be closed off, for example, behind a sliding door (Diagram 22). Many of the plot seekers responding to the survey were employed and had a family, which may partially explain the need for an office/workspace. Another explanation is that the plot seekers have, on average, given more thought to the functional and spatial solutions for their planned house.

Overlapping of indoor and outdoor spaces

The overlapping of indoor and outdoor spaces was examined by asking the respondents which rooms they thought should be connected to yard or balcony. There were no major differences between the townhouse-minded and other respondents in any aspect. Some of the respondents felt that this question was unnecessary if there was no access to a private outdoor space or it was not thought to be. For many, however, this was an important aspect. Access from the living room to the yard or a balcony was considered the most important of all alternatives – roughly 62% of the townhouse-minded felt this to be so. The second most desired connection to outdoor spaces was from the kitchen and dining room or the sauna. If a sauna is connected to the yard or a balcony, special attention should be given to

providing an adequate amount of privacy, even in the most densely built urban spaces (Diagram 24).

Adaptability

The theme of adaptability comprehends several interesting aspects in terms of the proliferation and development of the townhouse typology. Across the board, adaptability was more important to townhouse-minded than to other respondents.

A possibility to divide the house into separate apartments is related to the easily increasing floor area of a multistorey townhouse typology as well as to performing an occupation/running a business in a townhouse. The ability to alter the size of the residence by partitioning or combining rooms, such as separating an extension, was considered to be very important or important by 28% of the townhouse-minded. The ability to make rooms smaller or larger was an important feature for townhouse-minded. Unfinished space that could later be converted into living space was also discussed with regard to townhouses. 38% of townhouse-minded felt that the ability to build an uninsulated attic space that could later be converted into living space was very important or important (Diagram 25).

The ability to convert a residence was emphasised among plot seekers. Over 60% of the respondents who had considered designing and building a house felt that it was very important or important to have the ability to both change the size of a room and build an uninsulated, unfinished space that could later be converted into living space. In addition, 40% of plot seekers felt that it was very important or important to have the ability to alter the size of rooms either by partitioning or combining them (Diagram 26).

When comparing townhouse-minded and other respondents in web panelist data (Diagram 25) as well as the views of web panelists in general and plot seekers (Diagram 26) regarding the adaptability of residential spaces, the biggest differences in the interest to later convert unfinished spaces into living spaces were identified. In this regard, it makes sense that, unlike the townhouse-minded respondents, plot seekers definitely have a predilection for detached housing. Correspondingly, townhouse-minded include those living in various typologies for whom it might be difficult or even absurd to visualise unfinished or attic spaces. In general, the fact that plot seekers are more interested in adaptability than other respondents indicates that, even despite the small sampling size of respondents, today's builders consider adaptability to be a familiar and necessary feature.

All the perspectives concerning adaptability presented here are features of a multistorey, narrow and deep-framed townhouse typology. Complex adaptability was one of the more difficult concepts examined in the survey. Keeping in mind the living environment design emphasised in the research framework, the theme of adaptable and multipurpose living spaces was addressed in greater detail in the workshops. Our research group considered the theme to be very important where changing life situations, shrinking household size and working from home were concerned.

DIAGRAM 21.

WHAT KIND OF OFFICE/WORKSPACE WOULD YOU NEED IN YOUR HOME? RESPONSES ACCORDING TO INTEREST IN TOWNHOUSES.

Interest in an office/workspace between townhouse-minded and other respondents.

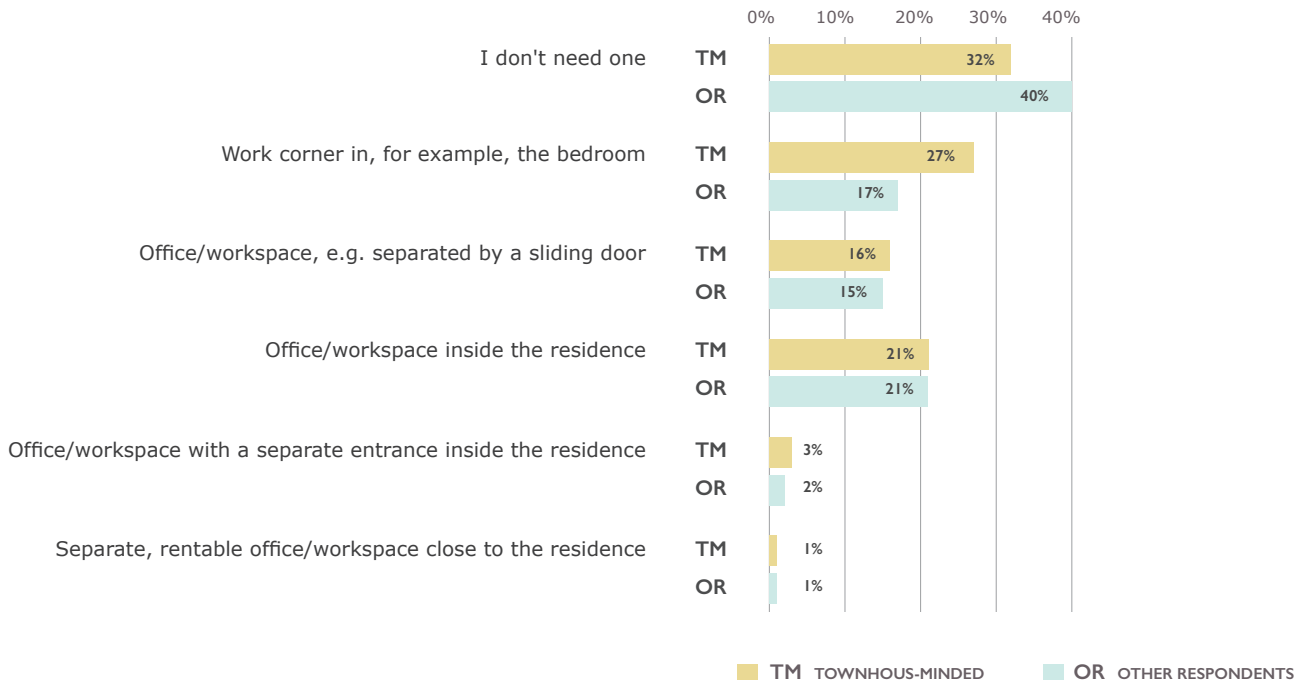


DIAGRAM 22.

WHAT KIND OF OFFICE/WORKSPACE WOULD YOU NEED IN YOUR HOME? RESPONSES WEB PANELISTS AND PLOT SEEKERS.

Comparison of office/workspace need in web panelist and plot seeker data.

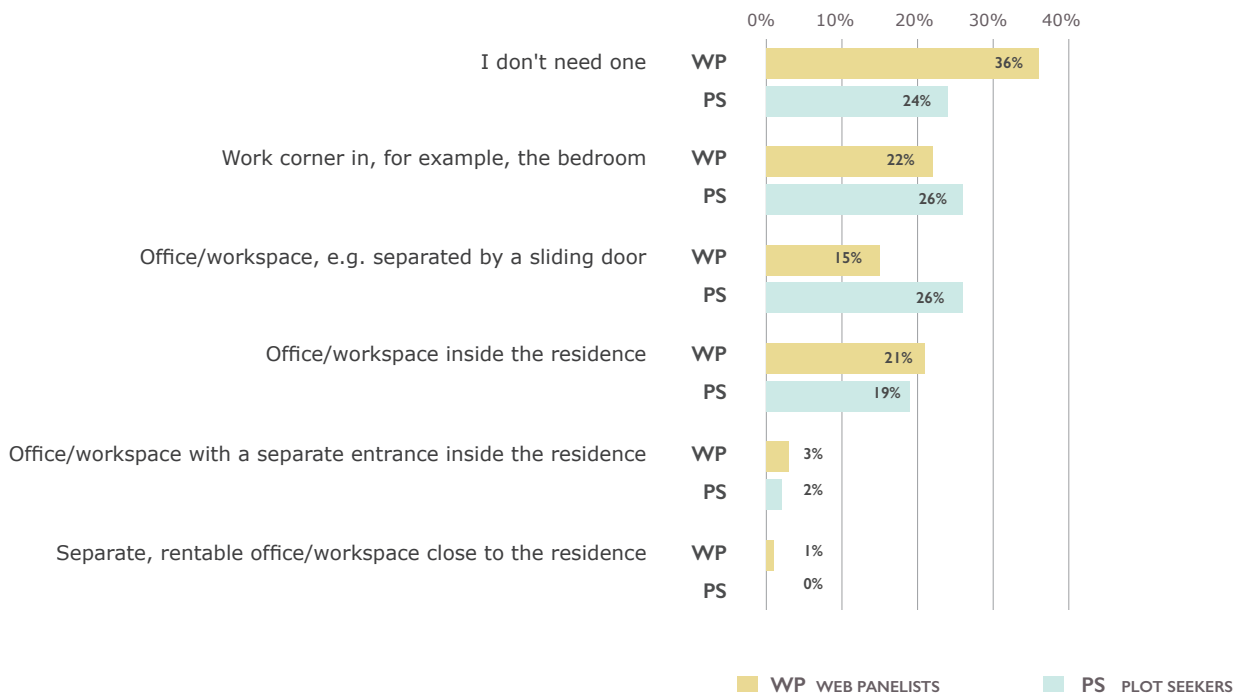
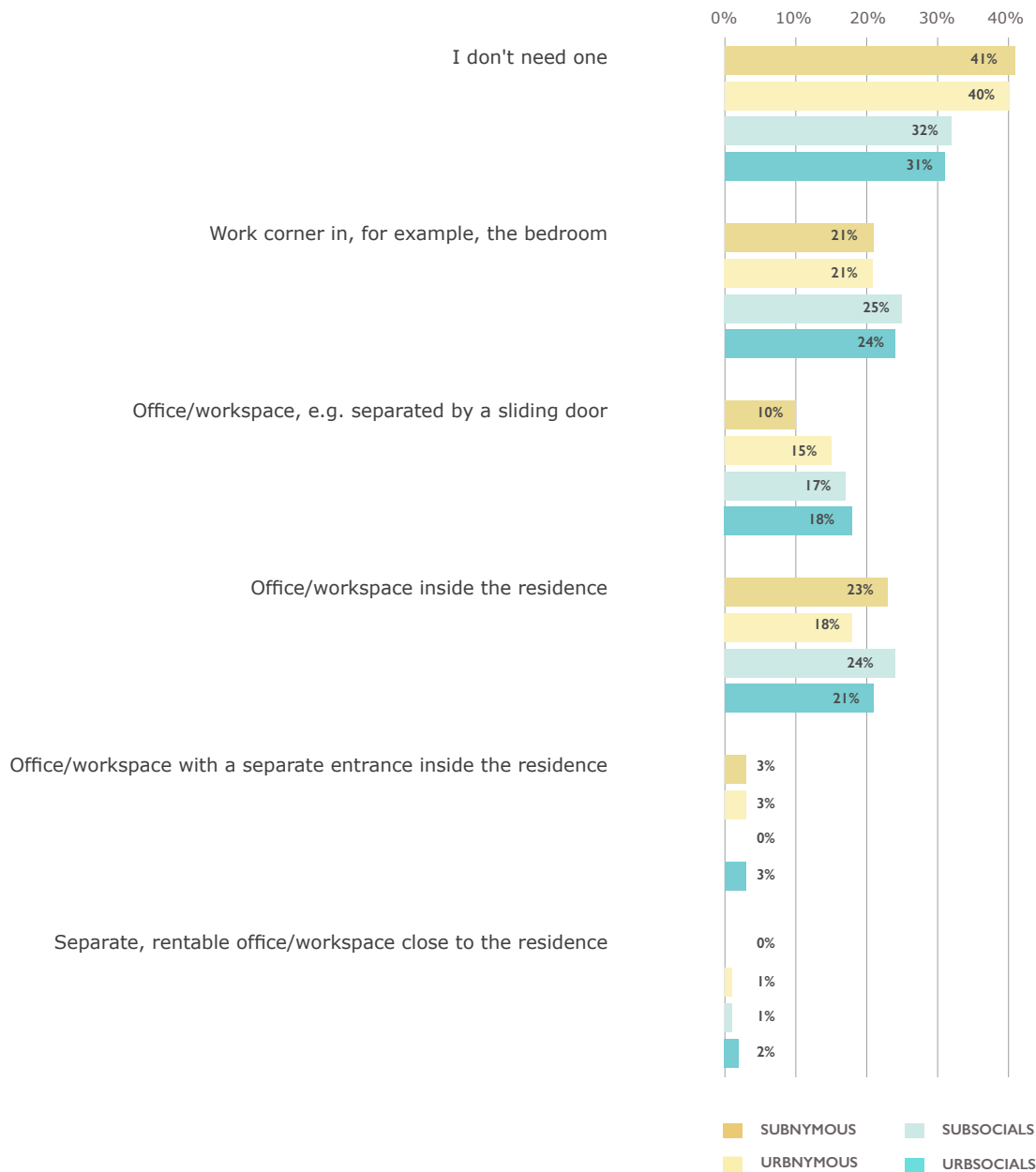


DIAGRAM 23.

WHAT KIND OF OFFICE/WORKSPACE WOULD YOU NEED IN YOUR HOME? RESPONSES ACCORDING TO LIFESTYLE GROUP

Lifestyle groups and their need for an office/workspace.



4.1.8 Preferences for outdoor spaces

Lastly, we will discuss the views concerning yards and other outdoor spaces. Yard preferences were examined in several different questions. A characteristic of townhouse living – close proximity to street space – was included in a question concerning living in a detached house on the street (Diagram 27).

The responses were somewhat surprising. Although a majority of the respondents currently live in the city, none of them were found to have an urban attitude of "open living", where the residence is linked directly to the street space, even in terms of viewability. In fact, the very opposite is true. The responses emphasised residential privacy. A clear majority of both townhouse-minded and other

respondents (townhouse-minded 84% and others 87%) felt that it was very important or important that passers-by would not be able to see into their homes. The same thing applied to outdoor spaces – 87% of the townhouse-minded and 83% of the other respondents wanted the back yard to be shielded from the view of passers-by.

Residents expressed strong opinions on their valuing of privacy in examining yard, balcony and other outdoor spaces (Diagram 27). This is important not only to design, but also the interpretation of lifestyle profiles. Even though some residents are defined as being "social" (an Andy Active) and others as being "private" (Wanda Withdrawn), this does not mean that only the Wandas are interested in privacy.

DIAGRAM 24.

HOW IMPORTANT WOULD IT BE TO HAVE ACCESS TO THE YARD OR BALCONY FROM THE FOLLOWING ROOMS?

Comparison of attitudes among townhouse-minded and other respondents.

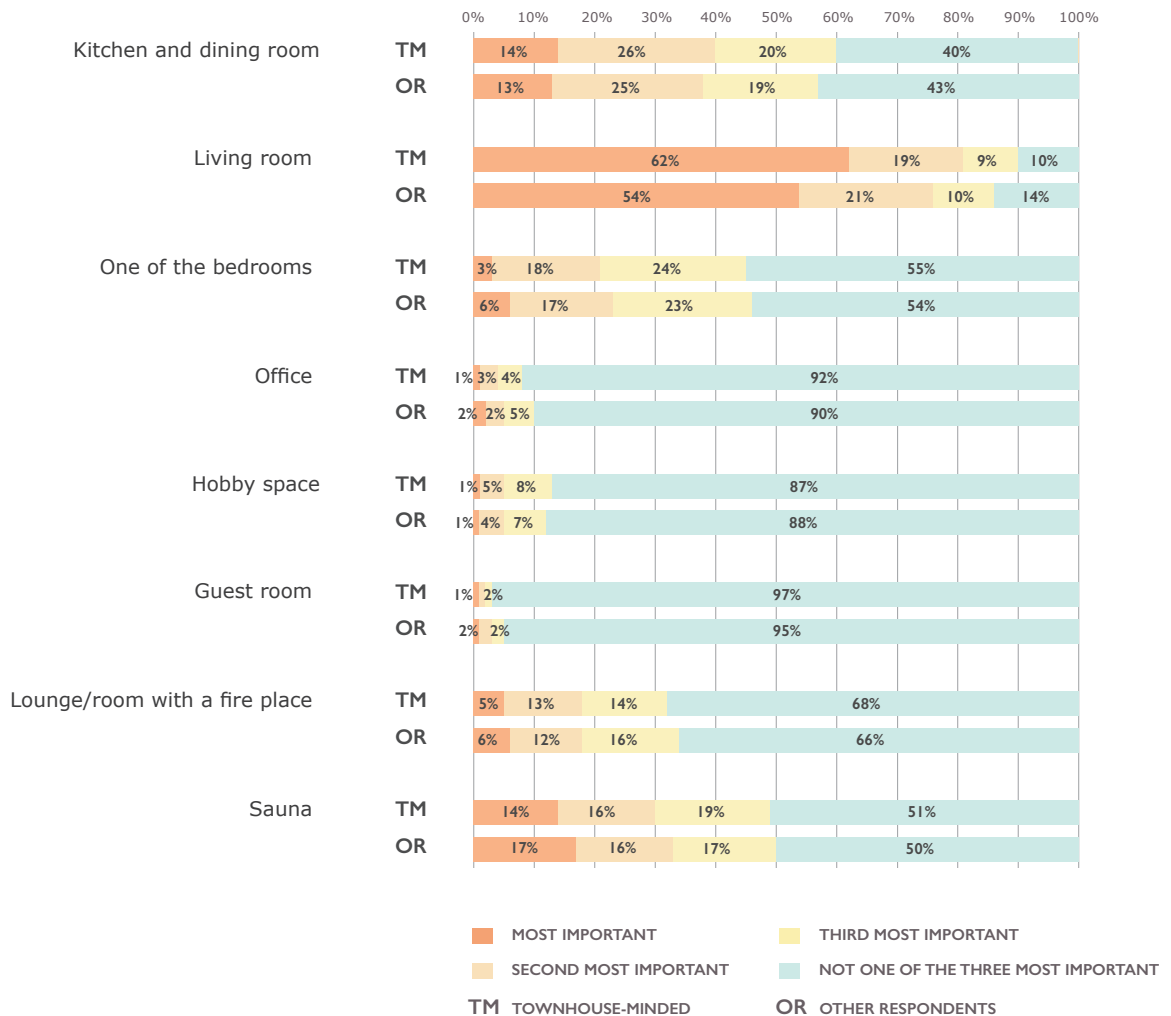


Diagram 27 also shows that respondents were not interested in having a small front yard in front of a detached house bordering the street (only 10% of townhouse-minded and 9% of other respondents were very interested). However, a small front yard might be a way to create some distance from the street space, thus providing the privacy the respondents desire. The most important thing here is what kind of possibilities are being created for front yards in design and how are they being presented to the users in the concept in an interesting way. The discussion regarding front yards was included in the workshops based on the survey results.

21% of townhouse-minded felt that it was very important to not have shared walls with neighbours. This presents its own challenges to design and the development of townhouse concepts. The desire for distance from the walls of neighbouring residences can be interpreted as a concern regarding privacy: many residents, who have had unpleasant housing experiences with noise, emphasise their desire to live in a residence with no shared walls. The neighbours or building types themselves are not necessarily seen as being the problem – it is the unpredictability of noise.

A rooftop terrace also divided respondent opinions – over one-fourth did not consider a terrace to be an important feature. Even so, the rooftop terrace was listed as an attractive feature for townhouse living in previous resident interviews. Because most residents' experiences with rooftop terraces are primarily related to outdoor spaces in apartment blocks, thus differing from the private rooftop terraces possible in the townhouse typology, we felt that it was necessary to more closely examine rooftop terrace possibilities in the workshops. Terraces, yards and outdoor spaces were usually chosen as a key workshop theme.

Yard preferences were also examined in the survey using an open question: What would the respondent like to do in a possible yard?

The yard would mostly be for the dogs, but a little garden would wonderful to have.

Garden in the summer, eat and drink. Dry clothes. Cool off after sauna.

Take care of the garden and spend summer days and evenings out in the yard with family and friends.

DIAGRAM 25.
OPINIONS ON ADAPTABILITY ACCORDING TO INTEREST IN TOWNHOUSES.

Townhouse-minded and other respondents according to their preferences for adaptability.

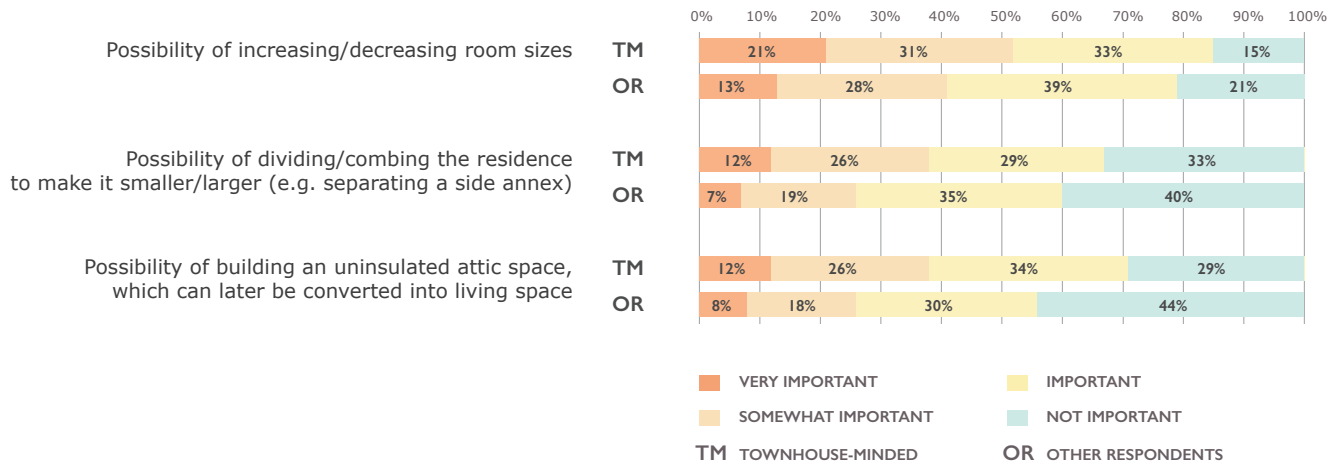
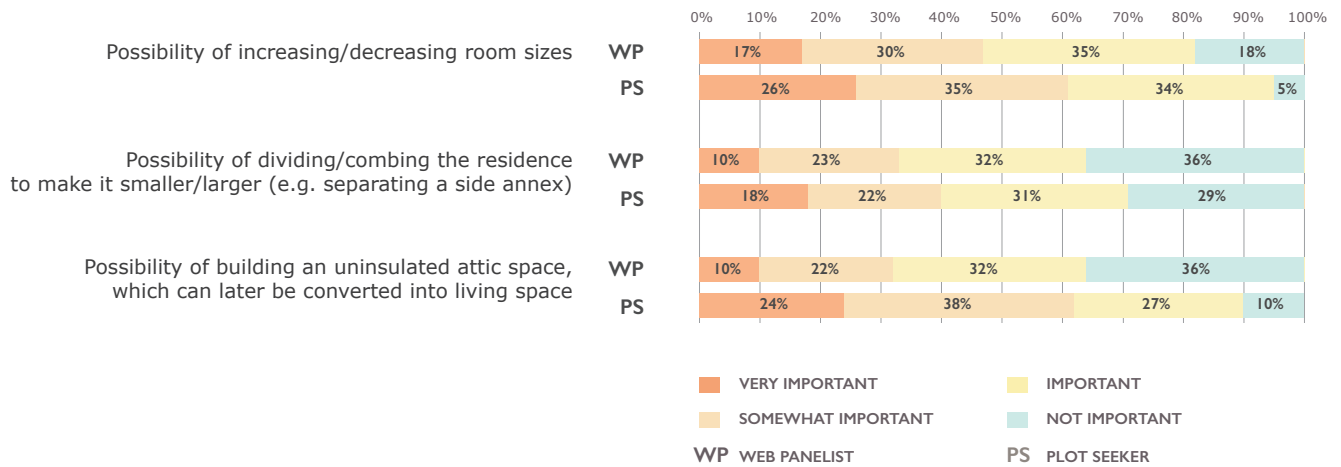


DIAGRAM 26.
OPINIONS ON THE POSSIBILITY OF CONVERTING THE RESIDENCE. WEB PANELISTS AND PLOT SEEKERS.

Plot seeker and web panelist opinions on adaptability.



Plant some practical crops, like herbs for cooking

Enjoy

If my house had its own yard – a nice sheltered spot for my plants and a water feature would be key (like we have at our cottage)

Just sit outside without caring who might be looking at you – like you're some kind of lunatic for setting up a chair in the apartment block's yard

Having my own yard would be a nice way to spend free time with my family. Also, having a little greenhouse, for example, would be a dream come true.

Just hang out.

Kick back in the sun, rake leaves in the fall, build snow forts, till some soil and plant something good to eat. I wouldn't really want a big yard, though.

Spend time puttering around with the flowers and greenery, maybe a little pavilion and grill out of the watchful eye of the neighbours. A fountain or some kind of bubbling water feature.

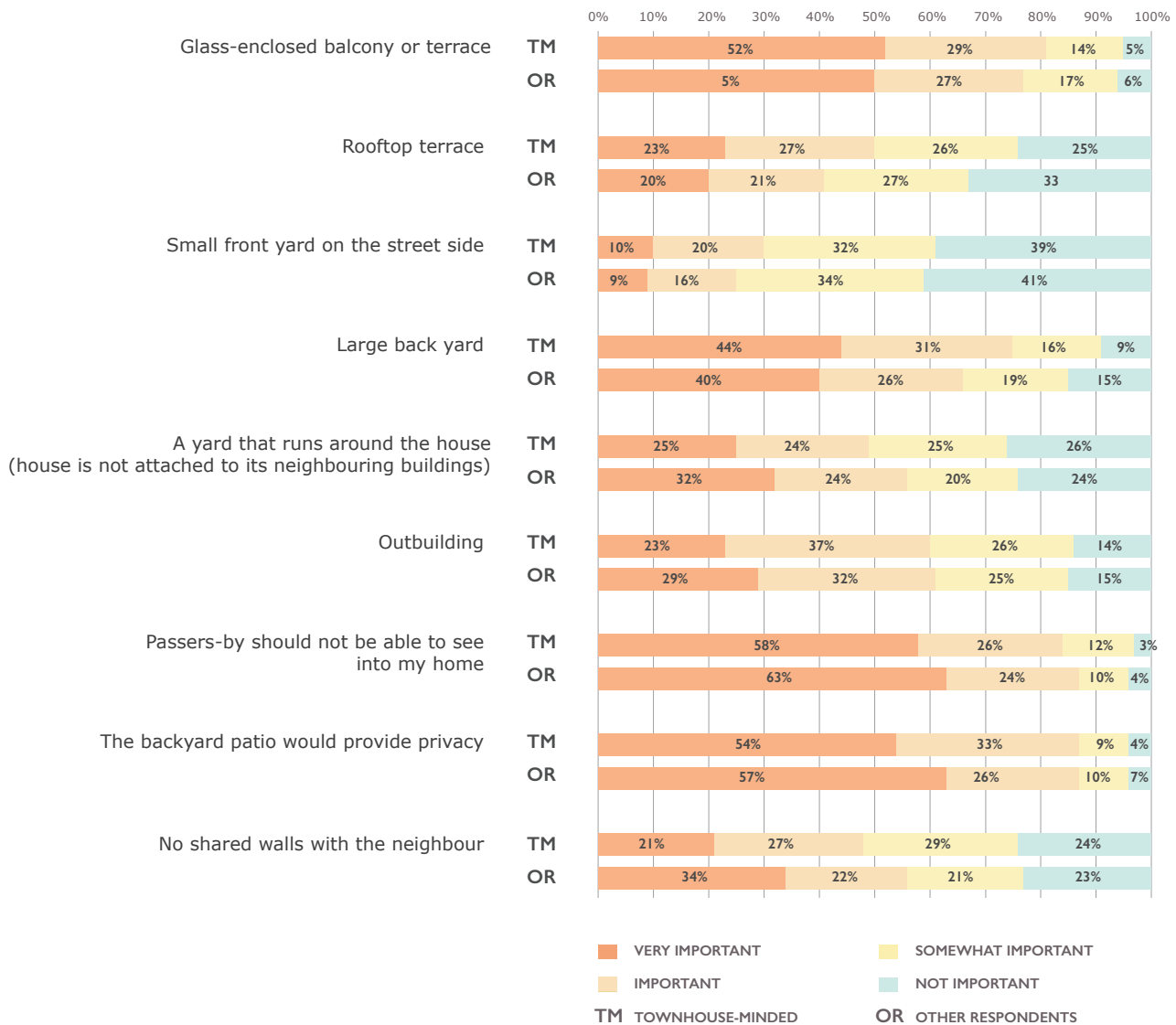
The plant and grow vegetables, grill and eat outside and just relax in the sun.

Garden, have my morning coffee, read Helsingin Sanomat, swing in the hammock, play football with my kid, build a pavilion and greenhouse, grill with my family and friends, hold birthday parties

DIAGRAM 27.

PICTURE YOURSELF LIVING IN A DETACHED HOUSE ON THE STREET. HOW IMPORTANT WOULD THE FOLLOWING THINGS BE TO YOU?

When respondents assess the importance of different factors in detached housing bordering the street space, the need for privacy rises above others among both townhouse-minded and other respondents.



Just take it easy

Grow herbs and other edibles for myself and even for the neighbours if the harvest is good... =)

Relax without anyone looking and letting the dog run around

On the balcony, I'd grow herbs and flowers and have my morning coffee. Big doors would keep the air moving in the summer and make it easy to air out all the textiles in the house.

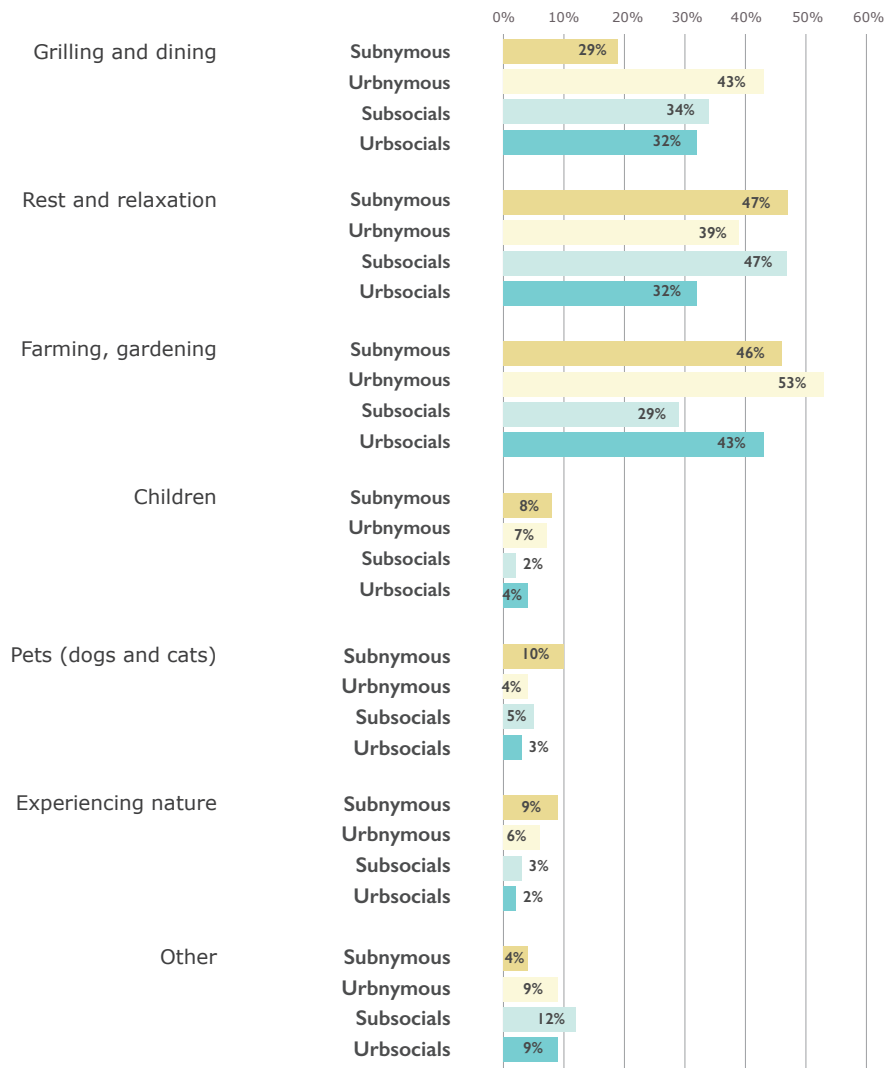
Grill in the summer and laze in the hot tub in the winter

Grill nice beefy sausages in the summer and hang up Christmas lights on the hawthorn hedgerow.

Diagram 28 quantifies the free-form responses concerning yard references. Spontaneous comments given in the free-form responses are classified and the relative percentage of all comments made is calculated. According to the results, people want peace and quiet in a yard. If neighbours are to be involved, they are invited. For some, growing plants, "digging around" and growing herbs are important, while others emphasise low maintenance. Researchers noted that cats and dogs received as many mentions as children and grandchildren. Peace and quiet were considered important, but so was experiencing nature. The alternative "other" included mentions of hot tubs, hobbies and doing projects.

DIAGRAM 28.
WHAT WOULD YOU LIKE TO DO IN YOUR YARD?

Free-form responses on preferences for yard uses by respondent lifestyle group. In the alternative "other", urbsocials mentioned "relaxing and activities on the balcony" instead of a yard, and urbnymous respondents mentioned "hobbies and relaxing in a hot tub". Correspondingly, subsocials mentioned "activities" and subnymous respondents mentioned "hobbies and relaxing in a hot tub".



4.2 Workshop results

The workshops provided a wide range of resident viewpoints and interpretations, which have been further refined to make a design principle diagram (see Chapter 5). In this chapter we will address resident viewpoints based on design principles.

In a majority of the workshops, participants were asked upon finishing their design work to give thought to their own attitudes toward townhouse living or a completed townhouse design. A repeated concern among participants was the location of a townhouse site: "Cautiously interested. Location vs. transportation connections?"; "Really depends on whether the area is nice." Workshop participants emphasised two things when discussing location. First, the townhouse must not be situated in an unnecessarily dense configuration. Building compact units with small yards is

acceptable provided that "the metro is around the corner". At the same time, the participants were told that the closer services were to the townhouse, the higher the price per square metre. Would this make the typology too expensive? Second, the relationship between urban living and living close to nature was emphasised – it is vital that this relationship is just right for the resident. Some participants wanted a vibrant, fast-paced series of townhouse blocks, where there was action around the clock. Others were looking for functional public transportation in addition to being close to nature. Even here, attitudes revealed a desire for various types of residential areas, the busy city centre and quieter green landscapes: "Urbanity and being close to nature bring it all together"; "Really nice garden-like part of the city"; "Verdant, open area"; "In the city! Urbanity!"

The cost of a townhouse unit – building, purchase and usage costs – was a concern among, in particular, families

with children and people living alone. Surprisingly, participants representing couples only mentioned price as a negative factor once. Indeed, the possibilities offered by townhouses were mentioned more frequently than the concerns. The advantages and disadvantages of these are presented below, classified according to the themes used as a basis for and identified in the survey.

4.2.1 Outdoor spaces

Outdoor spaces, which include front and backyards, terraces and balconies as well as street space, were given greater explanatory power in the workshops. For example, the importance of having a front yard was revealed to residents by means of design and hypothetical living situations. If the assignment was to decide where residents would place a bicycle parking area, guest parking for a home office or a space for snow piling, the importance of having a front yard was quickly revealed. On the other hand, choices were also made: shared waste management and more remotely placed parking were considered acceptable if their location was planned with an understanding of daily traffic rhythms and directions. Waste receptacles were moved to a more remotely placed collection point, provided that it was located along a natural traffic route. The placement of guest parking and, for example, storage for boat trailers was also discussed. According to the survey, townhouse-minded would more likely accept the more remote placement of a parking area than other residents. This was in line with the wish for a homey, safe and child-friendly street space. There is a townhouse resident group that prefers having a car-free block. However, some of the workshop participants emphasised the necessity of having easy access to parking. For example, those considering their future housing needs wanted to have a garage within the frame of the house so that, even when they were elderly, they would be able to easily get around. The need for a parking space on one's own plot or the street in front of the residence was linked to location: "If this was in Östersundom, there should be at least two parking spaces." All of these observations emphasised the need for different types of townhouse block and parking solutions.

Where outdoor spaces attached to a residence were concerned, rooftop terraces were initially an unknown possibility. But, as the game progressed, tips were borrowed from neighbours or designs from the previous day. Many found that although the rooftop terrace reduced living space floor area, it also brought a touch of luxury to everyday living. Even the most rational residential housing designer, who usually focused on maximising cost-effectiveness, might be infatuated with the idea of incorporating a yoga studio, guest room and sauna with a rooftop terrace, refusing to give up on the idea even though the meaningfulness of a third-floor living space was called into question at the beginning of the design assignment.

The back yard also turned out to offer a wide array of possibilities, ranging from a natural butterfly bar to an extremely private, low-maintenance lounging area, complete with artificial lawn and expansive terraces. Combinations of yard space and community added their own element. Single residents felt that yards brought "lovers of hedgerows" together; "Connections with

neighbours through the yard". Couples emphasised the possibility of having their own little yard: "A little yard for doing whatever". Surprisingly, families with children emphasised having peace and quiet in their private yard: "Your own yard, your own peaceful retreat"; "My own little yard and roof terrace"; "Being able to get some peace and quiet in my own yard". At the same time, it was considered important to have a block yard or other area for children and grandchildren to play in.

4.2.2 Privacy and community; particularly shared domestic spaces

In the workshop participant descriptions, privacy and voluntary socialising were emphasised. One explanation for this is the brief review of survey results given at the beginning of the workshops in which the more private and more social way of being engaged in the local community and attitudes toward privacy and community involvement were identified. Some of the participants actually did define a lifestyle profile for their reference residents. And, as in real life, it was also noted in the workshops that, for example, both residents of a two-member household were not necessarily the same. This is why designs and the residents' own comments resulted nicely in the harmonisation of various needs.

In many of the comments, the possibility afforded by townhouses to allow residents to exercise control over their privacy and community was highlighted. This is why the opportunities that shared domestic spaces offer were emphasised by single residents, while couples felt that a sense of community was established by like-minded neighbours. According to families with children, the advantages of townhouse living were the possibilities offered by shared domestic spaces and areas, and, in relative terms, these received the most comments together with privacy:

a lot of shared space – new possibilities

good common areas, garden/park-like shared space

makes it possible to socialise on your own terms

sense of being a village community

security, neighbours close by

ability to be on your own in peace and quiet, but still be close to other people

The shared domestic spaces and area game board tested the lifestyles revealed in the survey. The more private Wanda Withdrawns valued having their own yard, surrounded by a high fence or walls. However, the possibilities offered by shared domestic space also appealed to this resident group. The use of courtyards facilitates the creation of a "shared back yard", where, instead of ornamental apple trees, there would be space for fruit-producing trees and other practical crops. And shared domestic spaces could be rented for private use. The more socially-active Andy Actives want places for active endeavours and meeting people, both outdoors and, for example, in a community centre. It was noted that a townhouse block makes it possible to borrow

the features of other typologies: "Row house/apartment block advantages: shared domestic spaces and equipment". Another interesting aspect of the development of shared domestic spaces are the ideas for renting space to outside parties, even though there was some degree of concern regarding the management and maintenance required for such spaces. The examination of indoor and outdoor spaces shared by block residents was also interesting because the townhouse typology, which is considered comparable to single-family housing, is not generally associated with shared domestic spaces. In terms of developing the townhouse typology and areas, the possibilities offered by a shared domestic space, such as a block house, were tested in the workshops. And perhaps the shared domestic spaces could be located in one townhouse unit, in the row of townhouses?

4.2.3 Typology/indoor spaces

The designs produced in workshops were based on the household size of the reference residents given in the design assignment. Basically, we stated at the beginning of the workshops that the townhouse would consist of three to four floors.

Somewhat depending on the assignment, townhouses, whose first floor would contain a spacious, open eat-in kitchen, were designed for households consisting of at least two people. The highest degree of variation was found in office/workspace and hobby spaces, which were often included as a buffer zone between the street and the more private areas of the home. Depending on the intended purpose and resident lifestyles, the spaces were more or less open toward the street.

If the design did not include an office/workspace or hobby spaces on the first floor, the kitchen would usually be placed on the street side near the entrance. The natural placement of the living room was on the yard side, thus allowing for easy access to the terrace. Bedrooms, laundry room spacious bathrooms and, in many cases, a sauna were placed on the second and third floors. Although a sauna was not necessarily desired for private use, it was considered an important part of the house due to its effect on resale value.

The biggest surprise regarding the townhouse typology was how easily single residents could partition a townhouse into floor-specific residences. An analysis of townhouse designs for single residents is summed up in the Mini-townhouse typology (see Chapter 5).

4.2.4 Adaptability

The fourth theme, adaptability and its various forms took a variety of shapes as the Townhouse game progressed. However, discovering possibilities can be considered one of the key observations made. One of these discoveries was the outbuilding. If a yard space was to be maximised, there was no desire to increase the size of the outbuilding. Instead, a smaller 5 m² storage shed for bicycles and gardening tools was considered sufficient. However, some recognised the possibility of using an outbuilding type of solution as courtyard bicycle storage, while others saw the potential for

outbuildings as additional living space. A room for band practice, guest accommodations or an office/workspace were examples of how an outbuilding could be used. Using an outbuilding for living space, however, requires that its year-round access and any plans for renting it out be taken into consideration in the townhouse design.

The spatial flexibility of a townhouse was also developed in design assignments, where attention was given to the sharing of living costs by renting out a portion of the space to another household or business.

The flexibility and adaptability of living spaces were two of the most frequently mentioned and discussed features brought up in workshops. Adaptability was approached in different ways: some wanted moveable walls, some wanted different space furnishing and usage possibilities.

4.3 Shopping townhouses

One of the goals of the workshops was to assess the choice behaviour of residents participating in the workshops: what did they feel was absolutely necessary and what would they be prepared to give up? The housing survey emphasises the comprehensiveness of housing: resident choices are influenced by prior experiences, preconceptions and expectations as well as budget restrictions (Clapham 2005).

Unfortunately, we were not yet able to include the price factor as part of making choices. Many of the work groups did, however, consider costs: residents assessed costs on their own or under the supervision of a facilitator and used these in making choices. This indicates, in part, a natural proclivity to define alternatives and make them more realistic. On the other hand, the choice of housing is an example of complex decision-making, in which an individual's way of managing numerous variables is to classify them, thus forming attribute sets (cf. Coolen & Hoekstra 2001). In the townhouse game, this meant making a basic choice between a smaller (7 x 10) and larger (7 x 13) floor plan. A larger floor area slab would reduce the yard size, which forced the residents to consider their yard use needs and what they valued in a private outdoor space. When using the courtyard model game board, the residents were directed to quickly divide yard functions between the private and shared yard. When making a housing choice in real-life, however, shared domestic spaces are seldom addressed as openly. The reason for this is often that residents do not know about the possibilities offered by shared domestic spaces – their attention is focused primarily on the residence itself.

In promoting future townhouse living, informing residents of all the possibilities in a way they can easily understand is of the utmost importance. This is why we asked residents to provide what they felt were the best sales arguments for the townhouses they were designing. What did the residents feel was most important and essential – and what spoke to them in their designs? The sales arguments were arranged by household group in line with the workshop group divisions.

Why a townhouse? | Sales arguments

Townhouse for senior citizens: "Dream house for senior citizens"

Accessibility: this residence has a lift or at least space for one!	
Convenient living	Open, bright residence
Low maintenance	Effective use of floor area
Faucet	Adaptable
Washing the car in your own yard	Light and private yard
Car at the front door – safe living	Contact with neighbours
Privacy	Energy efficiency
Hobby space in contact with the street	Good transportation connections for senior citizens
	Public connections nearby (location in the city)

Townhouse for couples: "Ideal use of space for everyday activities and special occasions"

Lift: also accessible for persons with reduced mobility and senior citizens

Ideal use of space, different functions on three floors, also guest accommodations

Wonderful, luxurious upstairs floor for adults

Spa floor, with access to a terrace

Yard-level sauna complex, which can be accessed from the residence and the terrace

Low-maintenance, adaptable yard

Private, natural yard increase opportunities for activities

Practical gardening in your own yard

Conservatory

Private hot tub

Outdoor kitchen – easy to organise summer evenings outside

Well-appointed – materials and equipment

Lovely thermo-treated wood house

Smart structures, smart house

Compact and energy efficient

Multipurpose: room placement can be changed; can even house a larger family

Sports gear storage in your own yard

Privacy – other residents have no direct view

Private yard in an urban environment

Townhouse for single persons: "Functional and ecological living all year round"

Unbelievably good floor plan and sensible use of space as well as adaptable interior solutions

Cosy, pleasant

Open/close to nature

Hot tub on the rooftop terrace

Private sauna with a window

Accessible, with a lift

Two storeys: daily movements, different solution.

Bright entryway + garage

Maximum use of natural light

Private front AND back yard

Large back yard, where there is also room for children to play

Usable year round: conservatory, outdoor kitchen

Sunny terrace (for morning people)

Accessible first floor + access to outdoor spaces

Suitable to different types of households: singles, couples and (small) families

Also suitable for growing families

Upstairs adaptable

Adaptability, open space, which can be easily furnished in a variety of ways

Lift and conservatory

Type of housing in which privacy and community are taken into consideration

Practical: heated driveway – no shoveling snow!

Environmental-friendliness: effective use of land

Location: near services

Urbanity and being close to nature are combined

On a pleasant, quiet mixed-use street – no through traffic

Possibility for a second parking space on the street

Local temporary parking for guests

Novelty value: few townhouses on the market



Townhouse for families with children: "Housing for a happy, active family"

Compact and cosy whole – "pretty as a picture"

Open – as few partition walls as possible

Lots of space: extremely spacious in proportion to the floor area

Ample storage space

Modern, highly adaptable

Truly low maintenance

High-quality low-maintenance materials

Master bedroom has a walk-in closet and en suite bathroom

Upstairs luxury: spa and sauna

Personalised solution, indoors and out

Separate sauna in the yard

Sheltered, private yard

Peace and quiet for adults

Adaptable spaces: when the children move out, keep 1–2 floors and rent out the third!

Ability to have social contact while still preserving privacy

Ability to be private when desired and sociable when desired

Community building next door + pleasant neighbourhood

Nice neighbourhood, families with children

Urban living while being close the nature: yard is enough

Convenience in daily routines: parking space in the yard

Convenient for bikers: room for bike parking in the front yard and sports gear storage

Excellent transportation connections

Green, park-like location





Flexible living townhouse: "A light and bright dream, which is a worthwhile buy"

Affordable price

Functional whole

Space for relaxing and hobbies

Well-designed entryway – attention given to life situation needs

Practical mudroom

Brightness, efficiency

Lift in the residence (or space for one)

Large common room, eat-in kitchen, which is the heart of the house

Rooftop complex: sauna + guest room/yoga room/dressing room

Sumptuous sauna complex and rooftop terrace on the fourth floor, which provides a beautiful view of the sea or park. Bright upstairs rooftop room

The residence contains an ample amount of sensibly designed and placed storage space.

A residence which takes the changing needs of a family with children as well as the children's needs into consideration

Adaptability in different life situations and according to them

Unfinished space allows for expansion upstairs

Adaptability: removable partition walls in the second-floor bedrooms

Multipurpose – rentable/the top floor can be rented out

The outbuilding is like a small house: you can use it yourself or rent it out for extra income

Synergies: in three-generation housing, support and security are nearby

Social or private: you decide

Wide variety of shared domestic spaces

Quiet street: designed on a human scale and human terms. First residents and people – then cars

Urban housing while being close to nature

4.4 Workshop observations

Lastly, we compiled a number of themes which had no prescribed research questions, but had been identified during the resident workshops.

Concept of convenience and low maintenance highlighted

Workshop participants were asked to assess their ideas and conceptions of the townhouse typology in relation to other, more widely known typologies, i.e. single-family house, row house and apartment block. This comparison revealed that, for many, the townhouse is equated with a row house: the shared walls of residences bring other residents closer as well as the idea of collectively handling things. Even though, in townhouse living, many supported the single-family housing philosophy: "Own home, free to roam", property and street maintenance were seen as being the responsibility of, for example, a housing cooperation and the city. At workshops dealing with the possibilities offered by shared domestic spaces, the role of a regional maintenance service provider or custodian was emphasised, which itself underscored the idea that maintenance was the responsibility of someone other than the resident.

The fact that the townhouse is in direct contact with the street space got residents thinking about the demands of winter – where would snow be piled? Indeed, the dimensioning of street spaces is one of the key factors affecting a pleasant living environment, along with safety and accessibility. Residents already have experiences with areas, in which the aims of creating a small city environment led to excessively restrictive dimensioning. Many called for the careful planning of places for piling snow as well as, for example, guest parking.

Personalised design

The question of whether a townhouse is more a row house or single-family house had mainly to do with the outward appearance of the houses. Townhouses are seen as contributing to the building of an area's identity. A "calling card" approach was sought: the residents of each townhouse street wanted theirs to be thought of as "the most beautiful street in the city". The idea of being a "wild area" was also proposed: could Helsinki have a residential area or subdivision where the residents would be able to choose any colour they wanted for their townhouse? Or at least choose from a very wide range of colours, such as in the residential district of Borneo-Sporenberg in Amsterdam, which became widely known through several publications. Freedom of choice was seen as being associated with single-family housing: even in the Finnish Dream House survey, surely a custom-built single-family house would be far more interesting than factory-made single-family house?

Housing cooperative or property?

Resident participant views on housing cooperatives largely had to do with their own experiences – if the housing cooperative in one's own residence is primarily considered good, there would be no reason to think it would not work for townhouses. If one had experience with rental

housing, one might expect that a townhouse could even be offered as a rental property. And, if one has found company-type housing to be suitable and has no major conflicts with neighbours, a townhouse solution would be considered suitable as a housing cooperative. If one feels that their decision-making power is, in any case, restricted, a housing cooperative is also then considered a good alternative. Residents used the choice of heating method as an example: even when building the house themselves, if residents are not able to choose the type of heating, which is instead specified in a city plan as being bound to a district heating network, then it would feel more like being part of a housing cooperation than owning a single-family house.

Block structure and street space – don't make it too tight, please!

Many residents have experiences with street spaces being dimensioned far too small, thus interfering with good neighbourly relationships, compromising safety and hampering social life. Guests are invited less frequently due to a lack of parking.

In the workshop, the ability to park, for example, boat trailers and caravans was highlighted. These are examples of issues related to lifestyle, which affect housing choices. The townhouse typology has the potential to offer storage solutions for, among others, boaters, who often want the ability to put their boating equipment into winter storage somewhere other than their summer cottage or a separate rental facility. If the uninsulated attic space or, for example, a yard shed in a townhouse property can be designed to serve as storage, why is not also possible to offer alternative parking solutions? In the Dream House survey, townhouse-minded had a positive attitude toward remote parking.

Safety – the touchstone of townhouse living?

The townhouse is a typology that is primarily thought of as being aimed at families with children. However, the workshops showed that the townhouse can also serve as, for example, a three-generation residence. Being close to relatives is a way to increase one's own sense of security in their place of residence.

Safety was also highlighted in the experiences of families with children. It is generally assumed that, in particular, families with small children prefer living on a single level. A house with no stairs and everyone living is close to each other are seen as being safe. However, the Finnish Dream House survey revealed that this was indeed a misconception: multistorey townhouses were considered just as suitable by families with school-aged children and younger. This was also found to be the case in the workshops: of course, in Finland, many families with children live in two-storey row houses. The difference between families with toddlers and those with older children is primarily a question of bedroom placement. The smaller the children, the stronger the desire to have the bedrooms on the same floor. This is seen as making daily tasks easier and increasing safety.

Families with children are particularly interested in the versatility of townhouse yard spaces. The possibility of having one's own, clearly-defined yard bordering a

shared courtyard is very enticing. Especially the parents participating in the workshops who have, in their own current housing situation, given attention to the importance of fences and boundaries in daily routines, placed an emphasis on daily safety and manageability. A yard, in which parents can let even very small children can play without worrying about uninvited visitors coming in or the children getting out while the parents are doing chores, provides a sense of security and convenience.

However, the street environment poses its own challenges. The mixed-use street, which combines vehicle traffic and children playing, is seen as both enhancing and jeopardising safety. One's own preconceptions and actual experience both influence attitudes. Parking arrangements, driving directions and snow clearance procedures are design solutions, which can be used to control the actions and attention of those using the street space. The target group approach to thinking has its own emphasis. It seems that some blocks should be design on children's terms, thus making them specifically for families with children who appreciate a multipurpose environment. Some of the blocks may require a reduction in car traffic, which would speak to proponents of car-free living. On the other hand, some blocks would have to be designed with an emphasis on smooth-flowing car traffic and traffic safety.

Preconceptions regarding shared domestic spaces influence choices

Shared domestic spaces can divide opinions, even strongly. Workshop activities demonstrated the requirements for shared domestic spaces – the residents must have a clear understanding of the possibilities offered by the spaces as well as the methods and costs used to realise them.

Shared domestic spaces were approached in a variety of ways. For most residents, the use of shared domestic spaces (or not) was kept optional, even though designs for these spaces were requested in the workshop assignments. If all group members had negative experiences with shared domestic spaces, these would not be required for inclusion in the townhouse design. However, it was not noticed until the design presentation that shared domestic spaces could play a role in one's own housing solutions.

The method used to realise shared domestic spaces was also emphasised in workshop groups, in which such spaces were seen as an opportunity and included in their own townhouse solution. It would be important to know in advance how courtyards and shared domestic spaces may be used and what kind of cost structure they would involve. It was not expected that the spaces would be used for free – in fact, the opposite was true. When a fee was charged for their use, the spaces were also treated with respect. Local maintenance service providers, superintendents or custodians were, however, all considered to play a major role. Design was also considered important: if the future residents were able to participate in coming up with ideas for and designing the shared domestic spaces, it was found that common rules and regulations could be defined more quickly. Various design methods and interactive forums are essential to creating future townhouse areas, particularly if various forms of community are sought for the design, i.e.

different uses of the shared domestic spaces for different resident profiles. Wanda Withdrawns appreciate that the spaces can be rented for private use, while Andy Actives want spaces where it would be possible to drop by and see who is around for a chat.

Unused space – money pit or soul of the home?

Typically, unused space refers to floor area that cannot be defined with furnishings. A corridor might be too wide or a space at the foot of the stairs might be unnecessarily spacious. This is therefore a case of valuing space from a functional standpoint. The floor plans of apartment blocks built in the 1960s were valued precisely because of their efficiency. Unused square metres that are very situation-dependent can be completely masked in, for example, a single-family house that is hundreds of square metres in size: an unfurnished space is seen as a luxury and an indication of unused space.

When the high price of residential square metres in the Helsinki Metropolitan Area is taken into consideration, even the preferences for furnishability presented in the workshops are, at the very least, reasonable. Some of the workshop participants felt that, for example, decorative reading nooks without natural light or a view could be considered unused space. For many, a sauna was a function whose most natural placement was on the topmost floor of a residence. "But, what of it – this is, after all, unnecessary space" bemoaned the participants. When participants began coming up with ideas to use the top floor for other functions, such as a recreational room and/or yoga studio, or even an office/workspace, the many possibilities and daily flexibility that the space offers was noticed. Many also decided to eliminate some of the indoor space on the top floor, replacing it with a rooftop terrace. Ultimately, what was originally considered a third (or even fourth) floor, was made absolutely necessary and desirable. This is a question of identifying and experiencing possibilities: examples and trial approaches play a vital role.

5. Analysis of townhouse concepts



Figure 42. A business space on the ground floor can also enliven the street space, even with a deep front yard. Example, Horner Strasse, Bremen, Germany.

5. Analysis of townhouse concepts

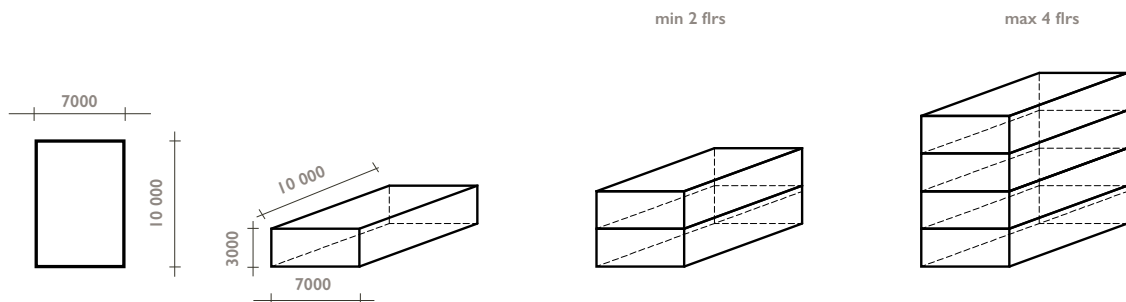
The material collected by means of the HATTU game at workshops made it possible to translate the research data into design language during the final data processing phase. We will present three concepts and the responses to our research question (*under what circumstances can a townhouse meet the different housing needs of different households*) in the form of exemplary designs that are based on them. We will also be using examples to discuss execution methods. The materials make use of four lifestyle profiles identified in the study, particularly their emphases on privacy and socialness.

The sales arguments given in workshops show that the same desires, such as the adaptability and convenience of a residence and yard adaptability, are repeated in different life situations. Preferences independent of life situations demonstrate that one concept can serve residents in different situations. What is important is that the desires for housing are in line with its execution. This is why we

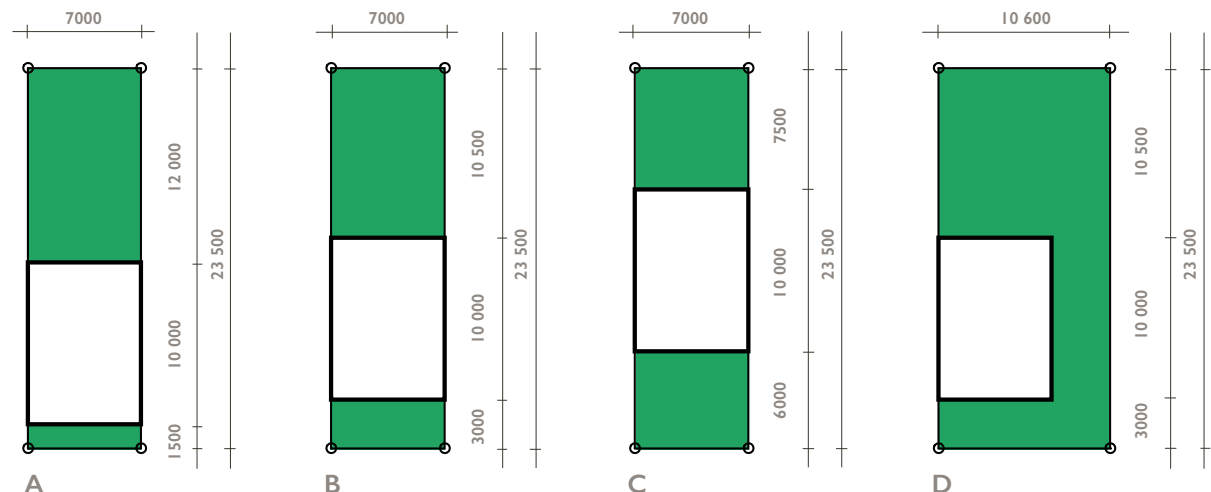
have made an effort to define the concepts presented below, so that they will correspond with lifestyles, thus allowing a single concept to meet housing needs from early childhood to the golden years.

5.1 Townhouse concepts in graphs

The concepts are based on a comprehensive analysis of workshop results. Examining workshop decision-making and comparing design principles formed during workshops revealed critical factors that differentiate various solutions. Combining these differences with lifestyles resulted in three clearly distinct models. The first, **Mini-townhouse** provides single residents with the possibility of urban living in a small unit. The **Flexi-townhouse** offers community and plenty of floor area for groups whose need for space varies according to life situation. The low-rise, adaptable **Double+** is the most low-maintenance typology.

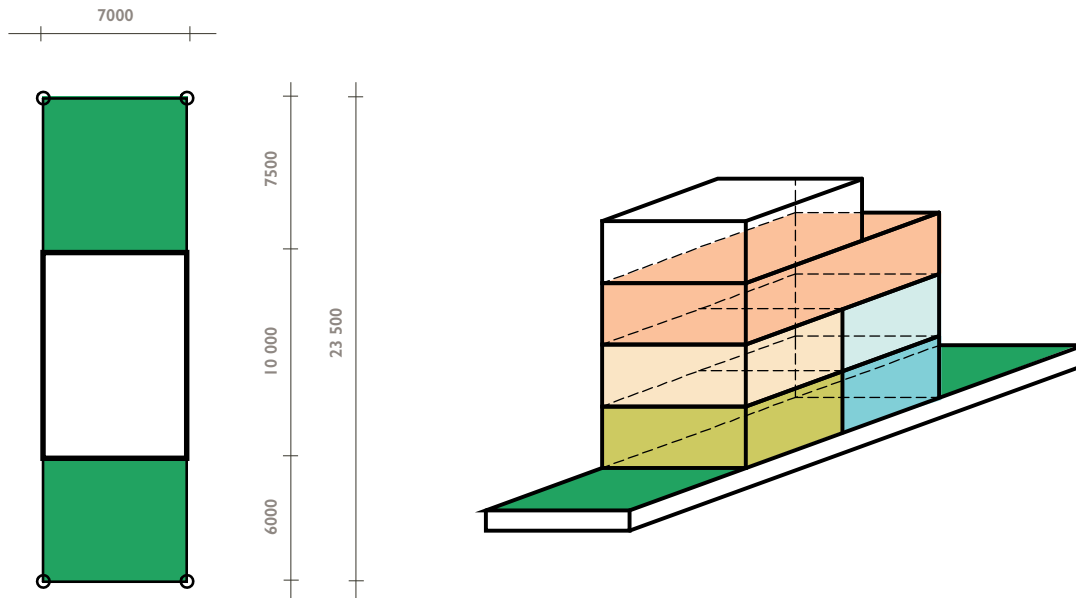


The HATTU game one-floor base module is 7 x 10 x 3 m. There is a min. of 2 and max. of 4 floors.



Placement of the base module on the plot is affected by the size of the front and back yard.

Mini-townhouse



Basis and features:

Meets the need for small residences.

Contains multiple residences.

Design on the terms of children and persons with reduced mobility.

3–4 floors.

Residence size 35–120 m²; Floor area 265.0 sqm/fl.:

1–2 residences per floor: two smaller residences per floor; larger residences with 2 floors.

Shared stairwell and lift; comparable to an apartment block stairwell.

Street-level residence convertible to a multipurpose space, which can also be rented out to outside parties. Depending on the needs of residents and nature of the residential area, the space is also suitable for use as a small work/commercial space.

As a counterpoint to smaller residences, the typology includes shared domestic spaces, which can be placed on any floor or in a courtyard (if any).

A street-level multipurpose space can also be converted into a shared domestic space for residents.

Shared domestic spaces might contain, for example, sauna facilities (no saunas in the residences), hobby and workspaces.

The shared domestic spaces are maintained and managed by a maintenance service provider, whose customers are other similar units in the neighbourhood.

Outdoor spaces:

Depending on the design solutions, an outbuilding and rooftop terrace are available for use by either all residents or only those on the first and top floors.

A house located in immediate proximity to good public transportation connections can be placed within a car-free block. The deep front yard is reserved for bicycle parking and shared activities. On-street parking and, depending on area solutions, in designated parking spaces and garages.

Storage space can be placed in an outbuilding.

Type of administration:

Suitable for both renting and ownership.

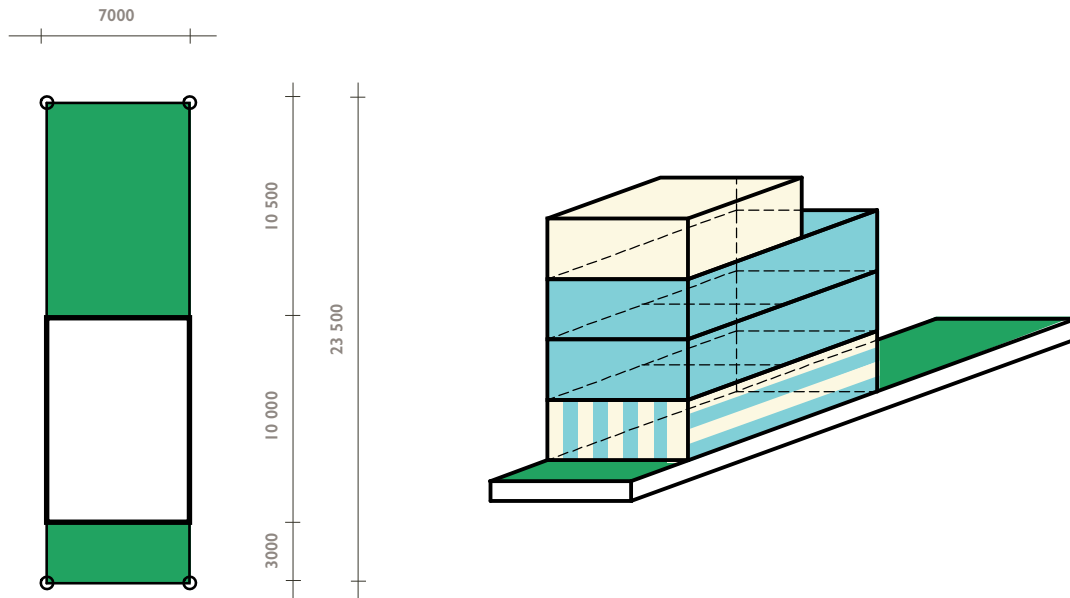
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Storage space can be placed in an outbuilding.

Building method:

Suitable for group developers, including a consultant-supervised project and construction firm.

Flexi-townhouse



Basis and features:

The design solutions allows for the subletting of floors.

The stair solution makes it possible for floors to function together and separately.

The building can be made accessible.

3–4 floors.

Floor area 235.0 sqm/fl.

Special attention has been given to both communal spaces and the need for resident privacy and private space: a spacious eat-in kitchen is located on one floor (usually the ground floor); there is also a possibility to live independently on other floors.

Communal living with immediate family and relatives (such as elderly parents) as well as friends works well with this typology. The solution is also well suited to, for example, blended families, where family size can vary from week to week. In blended families, the amount of space needed can vary widely due to, for example, a wide range of ages and social relationships.

The back yard outbuilding is all about adaptability: zoning allows a one-storey outbuilding to serve as living space or storage space. If the back yard opens onto a lane or light traffic route, the outbuilding can also be designed as a rentable living space.

Type of administration:

Primarily ownership housing, in which the space solution allows the owner to sublet the upper floors.

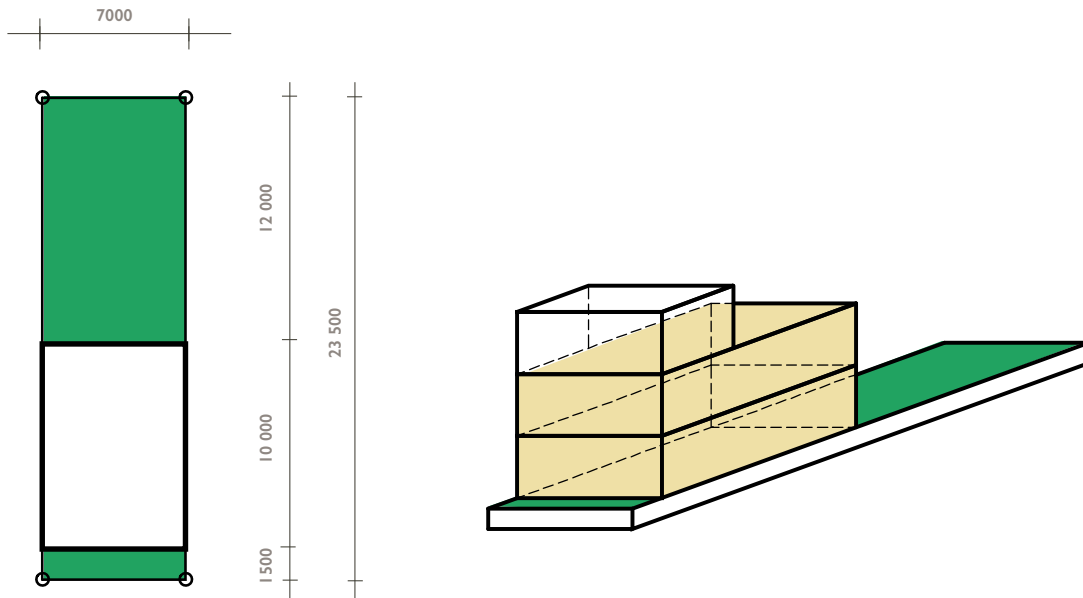
Building method:

Suitable for "sweat equity" builders, group developers, including a consultant-supervised project and construction firms.

Other:

Subletting allows the owner to temporarily reduce their living costs.

Double+



Basis and features: A 2 to 3-storey townhouse for a single household.

Floor area max. 188 sqm/fl.

Suitable for households with predictable housing needs: for example, couples whose children have moved out of the home, high-income single residents and young couples planning to have a family or with small children.

The third floor can be left unfinished during the construction phase and later converted into living space as the residents' assets and need for space grow. Unfinished space provides sufficient adaptability to residents of this typology.

Type of administration: Suitable for both renting and ownership.

Building method: Suitable for group developers, including a consultant-supervised project and construction firm.

5.2 Design by architect

Below, we will present three sample solutions, which are based on the above-mentioned concept types. The residents described in the solutions are based on the reference residents developed in workshops, also including the lifestyle profiles identified in the survey.

The concepts presented here combine different approaches to adaptability and partitioning: the importance of various degrees of adaptability was emphasised in the survey and all workshops. The workshops also drew attention to the fact that lifts are needed in different life situations, not just residences for persons with reduced mobility. This is why all the solutions presented below have a lift or at least space reserved for one. Parking is seen as a street-level solution, which can be placed in a variety of locations in all the types presented. The exception to this is parking within the plot.



Adaptability: considered the single most important feature of the townhouse typology among workshop participants.

Mini residents

Elli the Aesthete and her Elli Boutique



This active, single 55-year-old woman has her finances in order and wants to invest in her housing. Elli the Aesthete has tried townhouse living in England. Serving as a counterpoint to the hectic city life, the garden she had left an indelible impression on her. However, Elli was forced to make compromises on the garden when purchasing her residence. A talented interior designer, she has conjured up a truly magical space in her conservatory, which is ideal for listening to music and entertaining friends. Thus, her own 33 m² residence remains her private abode. She enjoys meeting her neighbours at the block house. The woodburning sauna is a great place to catch up with them. At a residents' meeting, it is agreed that the back yards are to be kept private and the courtyard can be used for shared activities. In the hobby room, Elli makes silver jewellery which she sells in her street-level boutique. In Elli's opinion, everything has gone extremely well in this City of Helsinki pilot project. Elli gives the developer consultant praise for the courage to participate in this project.

Jaana the Activist



This lower-income practical nurse lives alone, but is not lonely. Jaana is an activist, who is passionate about her environmental values. Jaana has gotten to know here neighbours while tending planting boxes in the block courtyard. As the autumn evenings begin to get dark, the yard activities are replaced with sauna and film evenings in the block house. Her own 33 m² residence is primarily a place to sleep. In addition to the shared domestic spaces, the energy efficient heating solutions and spacious bicycle storage were also factors influencing her purchase decision. At planning meetings for shared domestic spaces, Jaana has become the developer consultant's right hand. And, when Jaana sits on her own balcony enjoying mint tea that she has grown herself, she often thinks how wonderful it is that she is able to live in Helsinki.

Kalle the Estate Owner



Kalle's townhouse is a second home, where he stops in whenever the need arises. Although his estate in Central Finland takes up a lot of his time, his old friends from university live in Helsinki. As retirement age approaches, Kalle is selling shares in his law firm, even though there is still plenty of work to be had. A second home in an apartment block would have been possible, but there was just something intriguing and new about a townhouse. When Kalle comes into the city, he does not necessarily want to have contact with his neighbours. It is, however, good that Jaana keeps a spare key to his place. Kalle's sense of security is further enhanced by the fact that his neighbours keep an eye on the place while he is gone. In many ways, the future is wide open and selling the residence is not out of the question. Elli, who lives downstairs, has already expressed interest: her boutique has been doing well and she is considering expanding.

Timo the Magician and his son, Onni



Abracadabra! Timo moves a piece of furniture that converts into a billiard table into place between the living room and Onni's room. Next week, it is quality time for father and son. This highly adaptable residence is a dream come true for Timo, who is a magician. Its use of space is maximised down to the last detail, with clever storage solutions and moveable furniture. Fortunately, the developer consultant was able to recommend a professional carpenter to build the multipurpose solutions, even though there were ready-made space-saving solutions available on the market. Having a private sauna or garage would have been a waste of space. And Onni loves the courtyard and play area at the block house. Timo occasionally thinks about getting older. Fortunately, it would still be possible to live in the house when he is old and frail thanks to the lift. Having a lift was also helpful when Onni's leg was in a cast.

Flexi residents



Pyry, Hely and Lyly Ahola

Pyry, Hely and the apple of their eye Lyly are family-oriented people. That is why they built a house where family and relatives are welcome. The spacious eat-in kitchen downstairs is the place where their extended family gathers. There is a room near the entrance where Hely can work on her sculpting hobby. The space can also be rented out as an office/workspace or commercial space to outside parties. The Aholas did not want a sauna, even though many felt that it would have been a good idea from a resale value standpoint. But, this was not a very conventional type of housing to begin with. The daily household routines are handled by practical Pyry, for whom the large mudroom, well-thought out storage solutions, laundry chute and combination utility room/bathroom off the master bedroom were absolute necessities. When choosing a plot, it was important to have a designated parking space with an engine block heating post. Although it is a nice area, Pyry and Hely do not have much to do with the neighbours. The quiet mixed-use street seems to be a nice place to play for sociable Lyly.



Marko Ahola and Heli Heila

Marko and his commonlaw wife are finishing up their studies in Helsinki. Heli already has a good job in Copenhagen, where Marko also enjoys living. Still, they have to occasionally spend longer periods of time in Helsinki. During those periods, Marko rents his Uncle Pyry's outbuilding. The rent is affordable and Heli has decorated the bright space in the Scandinavian style they like: a double bed, wardrobe, desk and even an espresso machine are all that's needed. Everything else can be found in the main house, which can be conveniently accessed through the yard. Fortunately, the architect suggested putting a toilet in the outbuilding.

Uncle Esko



Pyry's bachelor nephew lives in his own place on the third floor. Well, the place is not actually Esko's – he is subletting it from his Uncle Pyry and Aunt Hely. Esko gets along very well with Pyry's family and they often grill together in the back yard or play cards in the eat-in kitchen. Indeed, Esko got to know the kitchen very well last summer, while recuperating from a motorcycle accident. As the house has no lift, he had to live on the survival floor for several months. After this, the Aholas installed a lift in the space set aside for it. The lift reinforced Esko's belief that it would also be possible to live in the house even when he was older. After all, he had everything he needed: a little kitchen, bathroom and even a rooftop terrace with a hot tub. But, if he ever happened to find "The One", Uncle Pyry would have to find a new tenant to take his place.

Double+ residents

Kaino Mäkinen



Kaino is relieved that he was finally able to sell their single-family house, which had become a burden. The new home's paved back yard and potted plants are so very low-maintenance. It is wonderful to sit out on the terrace in the shade of the awning and read a book or chat with neighbour's little girl. Kaino's grandchild, who is the offspring of his children from a previous marriage, enjoy playing in the sheltered yard, where Kaino can keep an eye on them from the kitchen window. Having his own bike storage has turned out to be a surprisingly handy place to keep his golf gear. When going over the purchasing details, Kaino thought that the developer representative's enthusiasm for what he thought was an insignificant point was a bit strange. He can rest assured that his children will be able to sell the house when the time comes for Kaino and his partner to leave. The new owner could even put in a sauna complex and fireplace lounge on the rooftop terrace if they so desired.

Vieno Mäkinen



Vieno's arthritis is getting steadily worse, which explains her growing desire for creature comforts. Shoveling snow is hard on her and even taking of the house sometimes seems beyond her capabilities. But, you would have to drag her kicking and screaming to live in an apartment block. Fortunately, there is a garage with easy access directly into the kitchen. Even when coming home from a trip out to the cottage, this design solution is very convenient. The most important thing to Vieno is, however, her little workshop near the entrance. She can always go there to do some projects, provided that her body cooperates. People can clean up in the spacious mudroom before sitting down at Kaino's coffee table.

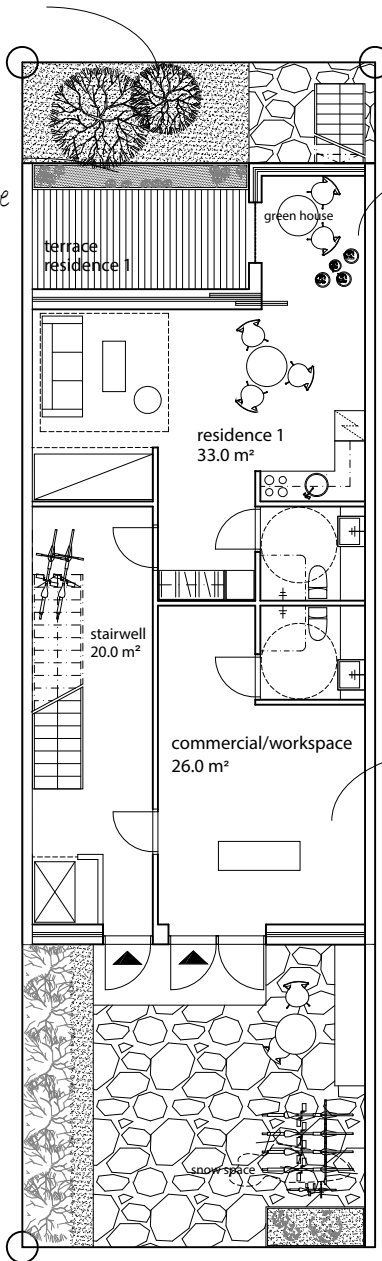
Figure 43. Street area - a place for gathering and defining boundaries.



the residents care
for the small yard
together

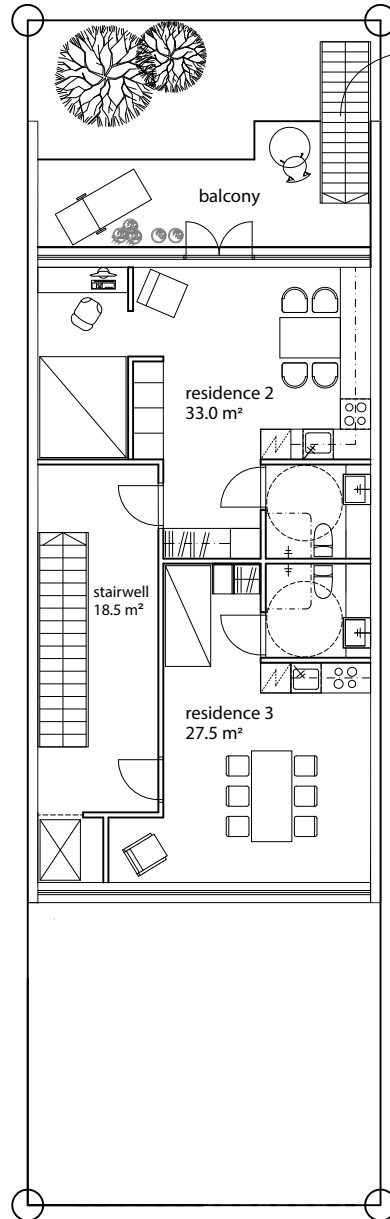
planter
boxes
frame the
terrace

Elli's
magical
green house

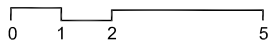


1. floor

easy access
to shared yard

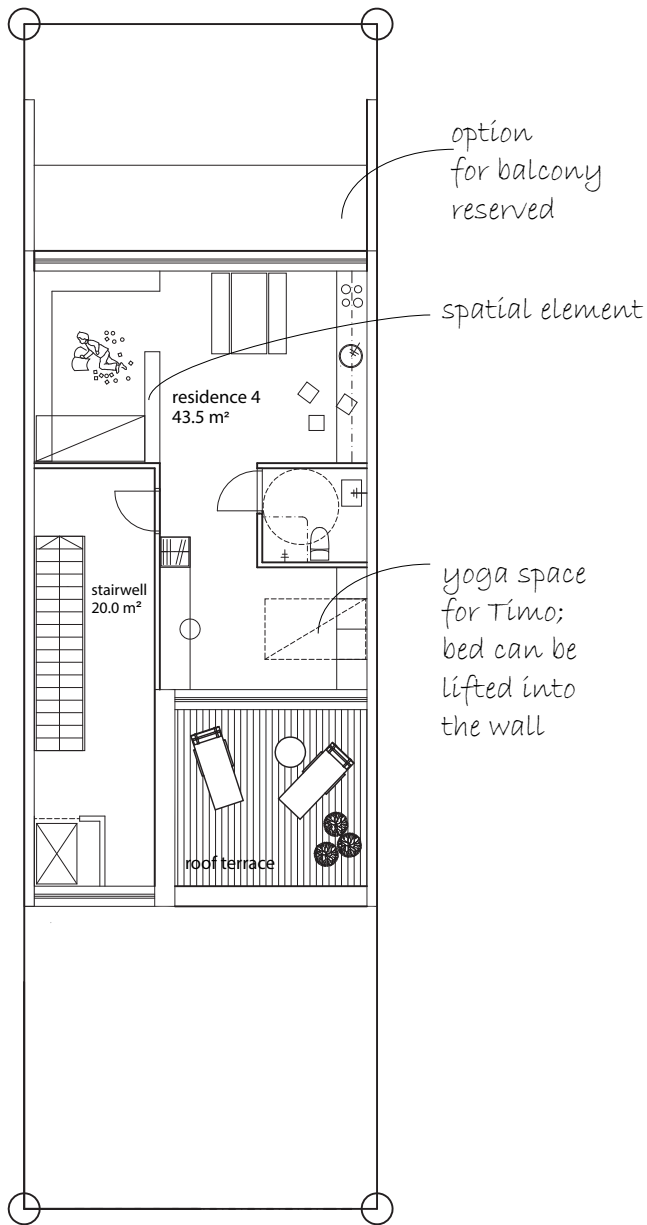


2. floor



7 x 13 m

The floor areas stated on the floor plans is calculated without any subtractions for a stairwell and lift.



3. floor

Total floor area 265.0 kem²

1st floor / Elli the Aesthete



2nd floor / Jaana the Activist



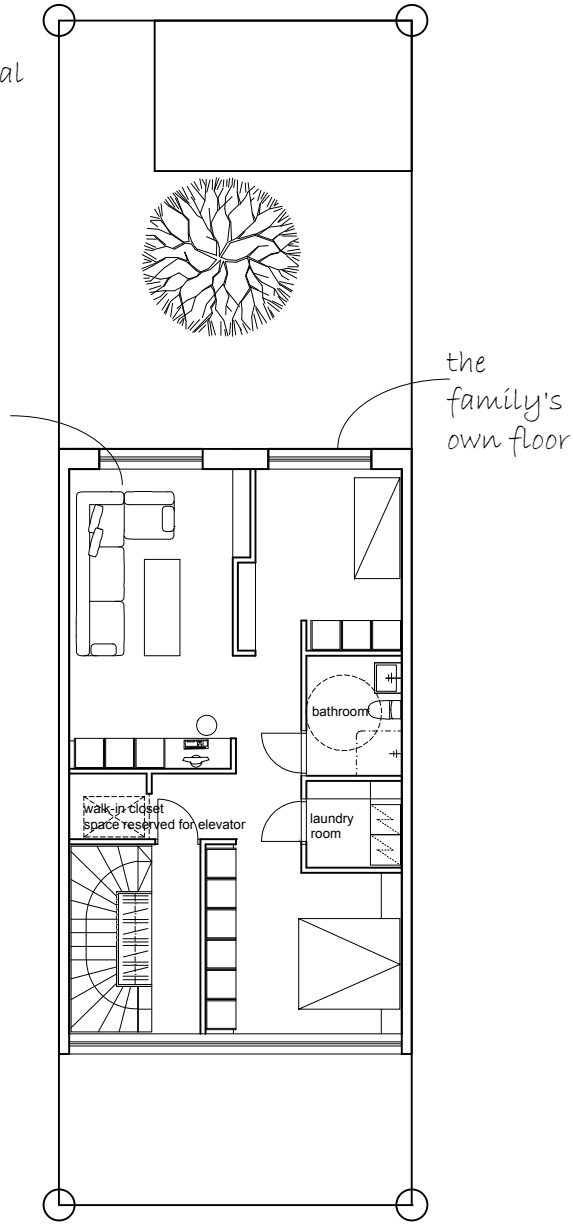
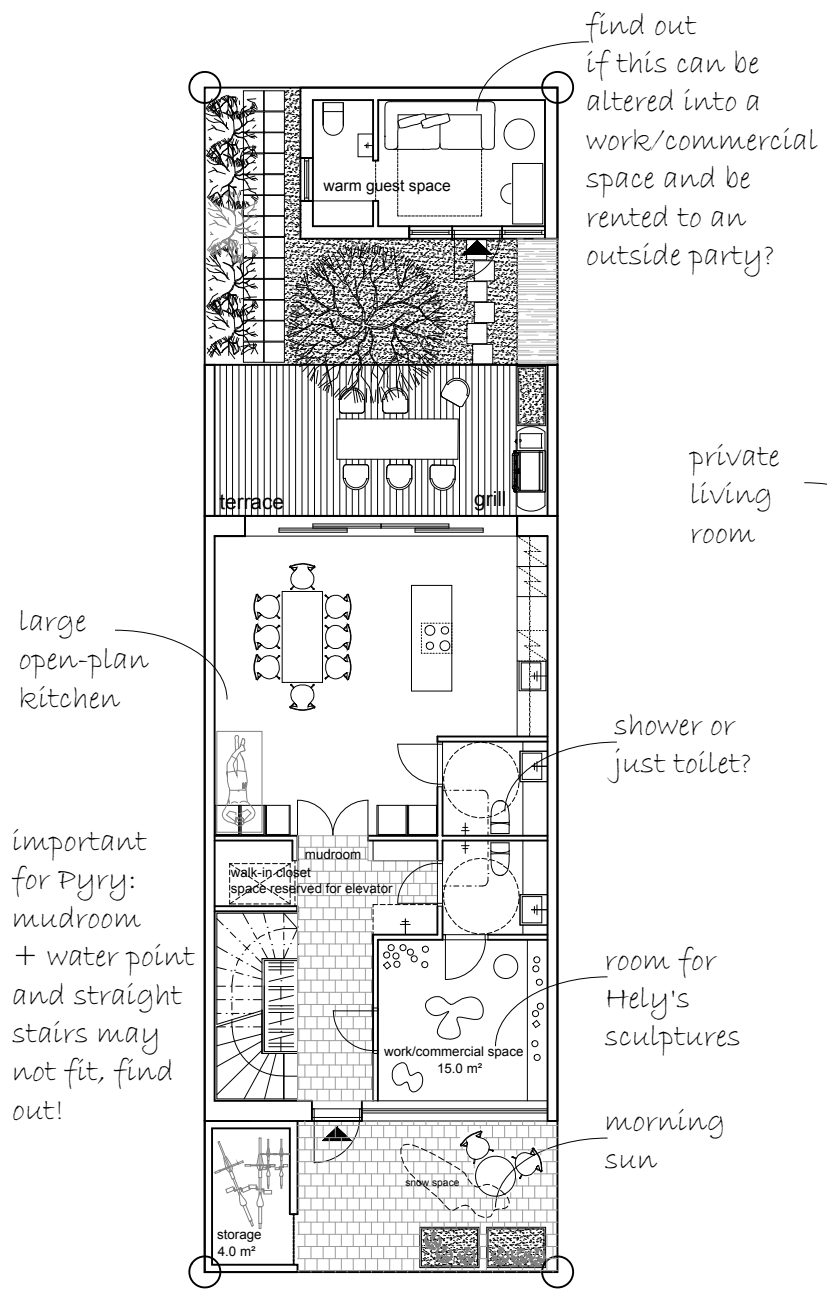
2nd floor / Kalle the Estate Owner



3rd floor / Timo the Magician and his son, Onni

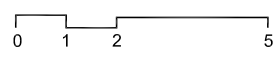


Mini-townhouse



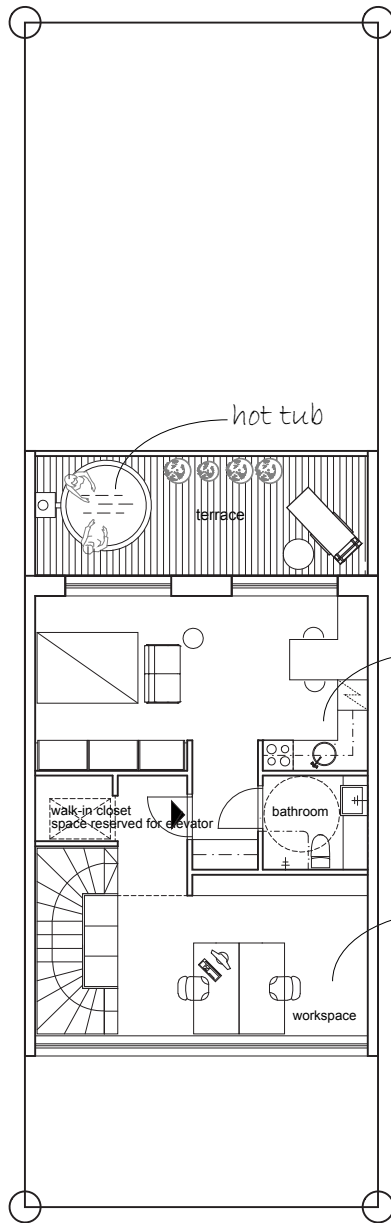
1. floor 74.0 m²
 outbuilding 11.5 m²

2. floor 74.0 m²



7 x 13 m

The floor areas stated on the floor plans is calculated without any subtractions for a stairwell and lift.



Uncle Esko's separate residence

Find out if the Family Ahola can rent the workspace to an outside party

3. floor 57.5 m²

Total floor area 205.5 m² / 235.0 sqm²/fl.



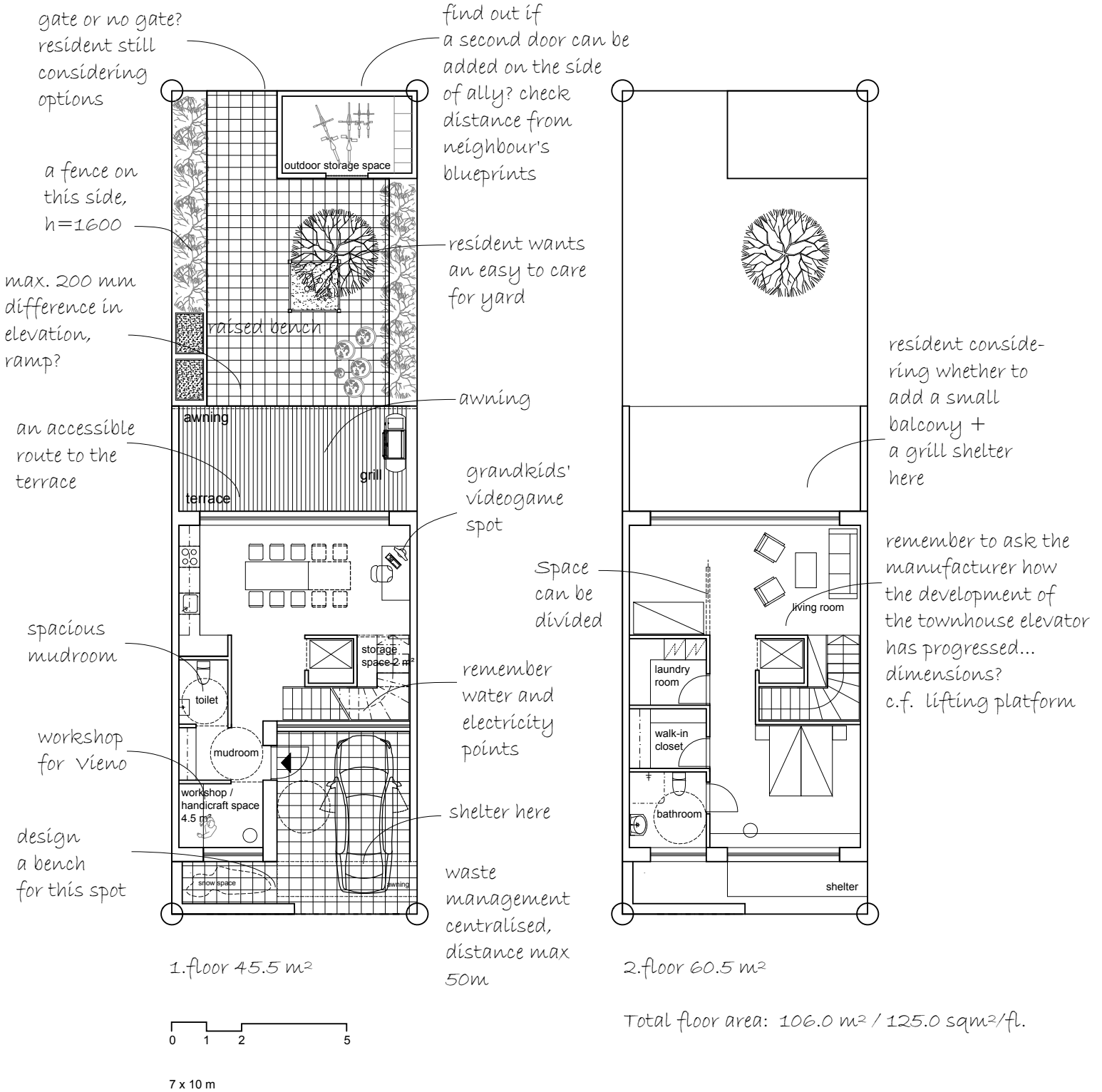
Outbuilding / Marko Ahola and Heli Heila



3rd floor / Uncle Esko



Flexi-townhouse

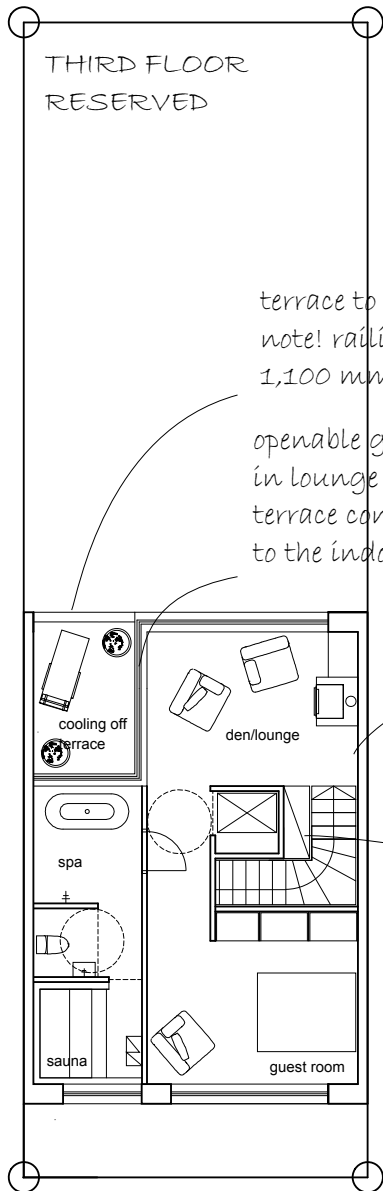


The floor areas stated on the floor plans is calculated without any subtractions for a stairwell and lift.

1-2 floors / Kaino Mäkinen



1-2 floors / Vieno Mäkinen



terrace to be completed
note! railing height
1,100 mm

openable glass wall
in lounge and SPA,
terrace continues
to the indoors

the third floor will
be raw space, stairs
all the way up,
porras ylös asti,
hissi pelkkä varaus

ceiling lantern?

3. floor (RESERVED)

+ 53.5 m² / + 62.5 sqm²/fl

Double+

6. Summary, analysis and conclusions

6. Summary, analysis and conclusions

6.1 Summary of the Finnish Dream House study

The Dream House study deals with the possibilities of and obstacles to townhouse living in Finland. The study sought to find an answer to the question: *Under what circumstances can townhouse living meet the housing needs of different households?* According to estimates, the Helsinki Metropolitan Area will be experiencing major growth in terms of both residences and residents. At the same time, housing preferences and needs are diverging: preferences, needs, opportunities and limitations must be understood more clearly (cf. Juntto 2007).

Our society is characterised by urbanisation, differentiation, an increase in the number of small households and constantly rising housing costs. Examinations based on socio-demographic variables (e.g. age, household size, education, income) play a vital role in this change. However, the importance of lifestyles (Jansen 2012) and changes in family types were identified: the number of single residents is growing, but the forms of a conventional family structure are also changing (Friedman 2012) – these have an impact on housing solutions. On the other hand, it was also found that the personal experiences of residents and available offering of residences steer the perceptions and understanding of one's own housing possibilities, which is also reflected in housing preferences surveys and their interpretation (Juntto 2007; Clapham 2005).

In developing the Dream House survey, it was considered important that the townhouse typology should basically be examined through the prism of its characteristic attributes and features, in order to ensure that any preconceptions held about the typology would not influence the responses given. Instead, an emphasis was placed on the core ideas involving housing and housing needs. A problem with the townhouse typology in Finland is that there are very few real examples of it out "in the wild" and, in turn, there is a lack of personal experiences with the typology. Conversely, the townhouse has been presented in publicity and media as a concept, whose significance and content have varied depending on the context. This is why there was a desire to avoid any preconceived notions. Various methods were also employed in the study. The purpose of doing so was to highlight the fact that, in the development of city planning and housing, useful and crucial base data can be obtained without it being based primarily on existing housing experiences. In many cases, resident data might be overlooked in the development of new residential areas when the claim "No one even lives there yet" is made. The perceptions, opinions and even experiences of people can be presented using new innovative methods and correctly phrased questions.

In basic terms, townhouse living is seen as an urban alternative to detached housing. As the results of the Dream

House survey show, examining townhouses exclusively as a family residence is an unnecessarily limited point of view. The housing preferences survey, whose respondents were primarily representatives of the Helsinki Metropolitan Area, revealed that there is an equal amount of interest in townhouses among families with children, couples and single residents. Townhouse-minded stated that they found multistorey housing to have more advantages than disadvantages. Even though the respondents represented urban living, the desire for privacy was still emphasised. This is why one critical factor in townhouse design is ensuring an adequate amount of privacy, both inside the residence and in its various outdoor spaces.

Four resident profiles were identified in the housing preferences survey, based on two scales: the urbanity of a built environment and the residents' attitudes toward the local community. The characterisation of resident profiles as lifestyles refers to the fact that a resident rarely represents a single profile or household. Our need for, among other things, privacy and community varies constantly. However, profiles help designers to outline the key differences between different types of housing solutions and their suitability for target groups weighted in different ways. Understanding building density and social attitudes is of the utmost importance when dealing with the interface of private and public spaces, which forms the core of the townhouse study.

Resident activities and housing preferences were examined in a series of workshops following the survey. Workshop participants represented residents in different life situations, age groups and family types. The residents and their experiences clearly illustrate the challenge posed by a conventional classification of household types: a single resident is not necessarily living alone, as their own children or grandchildren might live right next door. One member of a couple might spend even long periods of time staying in a second home, or one's own grown children or those in a blended family might stay with the parents from time to time. This same polymorphism applies to families with children, whose forms vary from single parents to blended families, with varying numbers of children and need for space. In many ways, the workshops helped produce a wealth of material, which was used later in the development of the townhouse concepts.

A key objective of the townhouse concepts presented in chapter 5 was to meet housing preferences and needs identified as being consistent that were not based on a life situation or lifestyle. This way, a single concept could meet the needs of a very wide range of household types. The Finnish Dream House study is now finished, but research on the townhouse typology continues with further development of the concept as well as by means of in-depth surveys and studies on energy efficiency in the AEF project.

6.2 Analysis of research methods

The townhouse is a research subject on which many studies and reports have been done. However, it can also be said that townhouse living has not been examined enough. As a review of the related literature revealed, the resident perspective has been given little attention in townhouse research. This also affects the choice of research methods.

Even though there have been several reports published in Finland, expert interviews add a unique dimension to the research. In the first phase of the study, the interviews made it possible to determine whether we, as new townhouse researchers, had been able to identify key themes in the existing data that would have to be addressed in follow-up studies. Expert interviews also emphasised the need to develop a survey that would meet design challenges as effectively as possible. It also confirmed the need for a more detailed analysis. Workshops, which we had outlined in the initial phases of drafting the research plan, were given their final form with completion of the literature reviews and expert interviews.

The collection of empirical data for our study was therefore divided into quantitative and qualitative sections. Indeed, the research literature emphasises that the dividing line between a quantitative and qualitative research approach should not be too sharply defined, but rather the approaches should lie somewhere on a continuum between the two (Creswell 2009). Even in our own research, the two different methods complement one another, also during the analysis phases.

A key hypothesis put forward in the survey was that townhouse living was intended particularly for families with children. This hypothesis was, however, the first to be discarded. Another surprise was the highlighting of shared domestic spaces as well as emphases on privacy in general. Privacy is presented as a particularly interesting aspect in materials, whose respondents come primarily from city centre and suburban areas in the Helsinki Metropolitan Area.

Motivated by design interests, the survey identified four resident profiles, whose dimensions were classified according to the degree of urbanity of a built environment (dense and active vs. quiet and green) as well as the degree of involvement in the local community (socially active vs. private and withdrawn). In our report, using the four profiles created, we call residents who live in a dense and active city centre environment Andy Actives and Wanda Withdrawns, and those living in quieter and greener areas, Andrea and Andy Actives and Will and Wanda Withdrawns. The classification is still unrefined and does not describe the lifestyles in greater detail. On the other hand, the classification is quite functional for the needs of city planning and housing design. For example, urban density and community are seen as going hand in hand in city planning. However, the degree of urban density and degree of socialness do not correlate with each other, i.e. a person who values living in a densely built environment will not necessarily value "social buzz". This is an important observation to make when designing, for example, shared domestic spaces and courtyards. At the same time, we are also aware of the need to deepen lifestyle-based profiling,

and the next step was indeed taken in the spring of 2015 with a follow-up study: Townhouse Envi, which is a survey that examines energy and environmental attitudes and housing choices.

The survey offered an opportunity to compare three different channels for gathering data. The objective for accelerating the data collection phase led to an online survey -based approach, which turned out to be a good solution. The web panelist approach to collecting response data ensures the desired number of responses. Another approach used was through the etuovi.com portal, which managed to gather less than 100 responses. The banner used to invite site users to participate in the survey would have required more comprehensive exposure. The etuovi.com survey was opened nearly 740 times without response. Less than 90 responses were received. Correspondingly, a survey addressed to web panelists, which garnered over 1,200 responses, was opened 450 times without response. A survey of people seeking plots from the City of Helsinki gathered just under 130 responses, in addition to which 118 people receiving survey invitations opened the survey form without responding. Respondents of the etuovi.com portal survey and the survey for plot seekers were also given an opportunity to participate in a product drawing, but this did not increase the survey response rate. However, the survey respondents felt that the survey was effective and important:

A comprehensive and multifaceted survey. It got me thinking about my own housing preferences.

The survey was easy and a pleasure to fill out.

Otherwise OK, but quite long!

The challenge facing the housing survey was its length. Even a somewhat less comprehensive assessment of housing, living environment, one's own current housing situation and housing possibilities requires numerous questions, thus inevitably increasing the length of the survey. In this case, our target survey length was 15 minutes. Respondents who thoroughly consider their responses and write down their own views in the free-form fields might spend 25 minutes on the survey.

The triangulation approach involves the comparison and testing of results and interpretations collected using different methods. The opportunities for interpretation offered by the survey were given a test environment in the workshops. The degrees of privacy and different types of resident took concrete form in resident designs and reference resident descriptions – design principles, such as adaptability, were integrated with daily needs. When the workshop participants gave consideration to the daily activities of their reference residents, attention was given to which design principles worked and which did not.

In the housing preferences survey, having a small front yard for a townhouse did not attract a great deal of interest among the respondents: only 30% of the townhouse-minded felt having a small front yard was very important or important (25% among other respondents), even though a small front yard does, for example, afford a certain amount of privacy. Privacy, i.e. being shielded from the

view of passers-by on the street, was valued by 84% of townhouse-minded (87% other respondents). This might be explained by minimal experience and a lack of examples when it comes to front yards, which suggests, among other things, that the respondents' preconceptions affect their responses. In workshop exercises, where the residents were able to discuss, try different alternatives and assess the functionality of different spaces in everyday situations, even front yards were given new meaning. We also made a similar observation when it came to rooftop terraces: over one-fourth of the respondents felt that having a rooftop terrace was not important. However, in workshops including the possibility of having a rooftop terrace and identifying how it could be used in daily life and for special occasions, not even the rational residents were prepared to give up having a terrace, which could even be larger than the back yard, depending on the size of the plot. However, a terrace cut out of the building mass was also a way to reduce the living space of the top floor.

Offices/workspaces and outbuildings were also examined in a new light at the workshops. Having a separate outbuilding did not attract a great deal of interest in the Finnish Dream House survey, but design examples and assessing space needs got workshop participants interested in the possibilities offered by outbuildings: a guest room originally intended for the grown child of a blended family who occasionally stayed overnight in the townhouse was also converted into an office, thus getting the workshop participants to see its possibilities.

An outbuilding would definitely be a great spot for a home office, as it's physically separate from the main house. I would gladly work in this kind of space.

The challenge facing the study, however, is the scope of the housing phenomenon. Even though the survey was used to obtain a broad understanding of residents in the Helsinki Metropolitan Area and the workshops made it possible to delve deeper into the survey results, it must be kept in mind that housing trends are inextricably tied to economic fluctuations. When the survey asked respondents what was preventing them from realising their own housing dreams, a majority said that it was a question of money. Even though there is interest in the townhouse at a basic level, financial considerations might prevent the proliferation of the typology. In developing the typology, accessibility and affordability do play a key role, along with various administration types.

Another clearly identified challenge is related to the examination of lifestyles in the survey. A comprehensive examination of lifestyles would require conducting an extensive survey of values and attitudes. Combining this kind of examination with a broad topic like housing makes the length of an individual survey unmanageable. This is why we decided to limit the examination to urban structure and social environment attributes, leaving a more in-depth analysis for future studies.

An issue of its own is cost analysis. In the early phases of developing the townhouse design game and looking for its ideal form, thought was given to how costs affect decision-making. After all, the goal was to create as realistic a template as possible for future phases of the townhouse

project, which would produce not only inspiring results, but also feasible approaches for townhouse living. In routine construction, decision-making is largely steered by costs. Would the workshop participants even be able to make realistic choices if they could not demonstrate how they would impact the total building costs? A solution for this would have been an interactive application, which could be used to build one's own house and analyse its cost development. A price would be specified for different solutions and structural components, with total costs stemming from the choices made. However, this idea was given up as there was a lack of available cost data. Specifying the data would have required us to pre-select acceptable design solutions, thus leaving numerous interesting design solutions based on a resident perspective unexamined.

The research group considered the townhouse game to provide a creative framework, within which the participants could actively search for their own dream townhouse. Plot size and house floor area as well as the number of floors and parking solutions were defined for certain premises, but the facilitators also allowed the workshop participants question given planned solutions. This made it possible to identify, for example, the importance of the relationship between parking and the entrance. All workshop participants made very realistic and cost-conscious choices. Cost-consciousness was combined with a rational approach – the work group decided then to lock down the budget decided upon at the start, or at least decide what the aim of the plan is (such as the number of bedrooms) and what would be immediately compromised on. These premises consistently reflect the selection criteria of residents described in other studies (e.g. Hasu & Staffans 2014).

However, the HATTU game method also got participants to think about other often overlooked factors or their importance. Storage spaces were emphasised, particularly in the designs for families with children, but, as in reality, attention was often given only to their existence, not their function. This observation emphasises the responsibility of the designer: one should never just be satisfied with simply finding placement for a space – its utility must also be assessed. The same applies to outbuildings. This feature was unknown to many, but the game guided the participants to think about the possible uses of an outbuilding as well as what might be lost if its size were to be increased – one's own yard area. In this equation, the residents were forced to consider costs and the desirability of different uses, not to mention how much and how the yard would be used. Discussions led to an examination of, for example, the impact that one's own hobbies and summer cottage use have on urban living as well as on the flexibility and eventual cost savings on housing an outbuilding would offer. Some actually discovered the possibility of later renting out the outbuilding or building unfinished space first and then insulating and converting it into living space when finances would allow.

The above-mentioned are only a small sampling of the examples that illustrate the benefits provided by the game. When the HATTU game is examined as a method in the broader context of this study, it can be said that it is suitable for determining the design starting points from the perspective of different residents.

The HATTU game also reinforced preconceptions of uniform Finnish housing preferences. Not, however, in terms of being bound to a typology, as "the dream of owning a townhouse" is clearly rising alongside the detached house. In this sense, uniformity is more related to acceptability. This idea of acceptability came forth during a phase of the game when there was an enthusiastic push to include "luxury elements", such as rooftop terraces and hot tubs. In this case, the resident designers were heard emphasising their justifications, by saying things like: "this family just won the lottery", "no poor or sick people here" and "some rich IT consultant must live here".

The data collection methods, which stem from a design understanding, turned out to be, collectively, a functional whole. Expert interviews tested the researchers' own understanding of the townhouse challenges, and helped in drafting the survey questions along with the background literature. The survey, which is clearly based on the design challenges, helped in identifying the lifestyle groups, which had direct value for residential design and city planning. Furthermore, the survey "plot", i.e. not revealing the townhouse typology until the very end of the survey, ensured that the respondents would not fall back on their own prejudices or preconceptions about the townhouse typology. The survey also provides information on housing preferences in general and on design preferences in relation to the design of other typologies. Deepening the survey by means of the design game is, again, an example of examining housing as a whole. No single research method on its own is capable of capturing all factors related to housing (cf. Clapham 2005). This is why housing research benefits from the use of various methods, both together and individually.

Examples of the practical use of research results can be found in chapter 5, which presents the conceptual possibilities of the townhouse typology. These diagrams and designs are an example of how architects and landscape architects skills are used in qualitative research, where data is analysed in light of a professional understanding, thus feeding the design process. *Research by Design* is changed in this process to *Design by Research* and then to *Design with Research*. In ideal terms, the design of new housing possibilities is precisely the constant interaction of research, design and oversight.

6.3 Conclusions

The research results were presented in chapter 5 in the form of diagrams and the designs refined based on them. Factors and observations that are key in terms of the proliferation of the townhouse typology are summarised in the conclusions.

6.3.1 Interactivity as a part of design

At the beginning of the 2000s, the discussion on city planning was dominated by dense and low-rise building. Even then, it was recognised that it is crucial to involve different authorities and, for example, developers in different phases of the design process: having a common understanding and mindset promotes the realisation of new housing solutions. This framework is repeated today.

In addition, end users (i.e. residents) have been highlighted. The townhouse study showed that a gaming approach can be used to learn more about the resident perspective. At the same time, the townhouse game proved to be a method that can be used in various design applications.

6.3.2 The need to develop townhouse as a building type

The study has confirmed the differentiation of housing preferences. In the future, townhouse living will hardly be monolithic in nature. The townhouse of the future will not necessarily even be a townhouse, at least not according to its strictest definition: own plot, owner-occupied and single household. The need to develop different types of townhouses is confirmed in the light of our results.

The features of a residential area and plot are influenced by various applications of the townhouse typology. Some townhouse residents want to live in a densely-built, city centre environment. Others prefer a more open, greener area for townhouse living. A considerable number of design questions deal with everything from the outdoor areas of a townhouse, including various types of balconies and rooftop terraces, to the placement of a front yard between private and public spaces. For example, our data shows that having a front yard is important to all residents, but for a variety of reasons: The front yard plays a key role in creating privacy and serving as a "calling card". The front yard also functions as a place to pile cleared snow. It would be hard to find a more functional place for bicycle storage than a front yard (cf. Pulkkinen 2014; Pulkkinen 2011; Malminkartano 2005). Furthermore, a front yard increases the degree of privacy for street-level living. Where children's play and traffic safety are concerned, a front yard is also a good solution.

The Finnish Dream House study introduced a new dimension to the townhouse discussion: courtyards and shared domestic spaces. One aspect of this new dimension pertains to establishing a sense of community sought in city planning. Even if townhouses are built as a group construction project, which in itself promotes community, resident experiences tell of a stagnating of community over time. Block-level solutions are crucial to motivating neighbour encounters and shared activities. If cars are parked right next to the front door and outdoor time is spent in the private backyard, where would spontaneous neighbour encounters happen? It would be natural to create shared spaces and areas for neighbours in townhouse sites that speak to social resident profiles. These shared spaces and areas would also provide residents moving into the area later with an opportunity to integrate with neighbourhood life. Depending on the block-level solutions employed, shared domestic spaces and courtyards could be expanded to include several blocks.

Another dimension of shared domestic spaces is related to the importance of shared public spaces. Even though, for example, the Andy and Andrea Actives who prefer greener, quieter townhouse living might want a larger private yard, they also value the possibility of spending time with others. This group places an emphasis on shared spaces: mixed-use streets, parks, children's playgrounds and other areas



Figure 44. In the townhouse study, yards are one of the main quality factors for housing. The question is whether residents will be able to fit all the desired functions in their own back yard. Would it be better to play basketball on a shared court or playground where the neighbourhood could participate?

for common activity. The Wanda and Will Withdrawns also enjoy outdoor spaces, where it is possible to do their own things while being around others. Jan Gehl (2006) suggests that residential areas should be addressed gradually in this context. According to Gehl, blocks of 15–30 residences form natural entities for social interaction. Combining townhouse blocks to form shared areas, mixed-use streets, pocket parks and playgrounds supports this thinking.

When residents want to feel that they are part of a local community, it influences their sense of responsibility for their environment over time. The Dream House study identified different ways of dealing with this in residents: active, socially-inclined residents value doing things together with others, while the more withdrawn residents want to find their own way to participate in the community. Green zones play a key role in this search for one's own place – they provide an unfettered arena for different types of residents to be out and socialise. They also, over time, reinforce the social dimension (cf. Low et al. 2005).

The community perspective is unquestionably a key aspect of the discussion on shared domestic spaces. At the same time, many routine household and living functions and space needs can be served more cost-effectively in shared domestic spaces than in private residences. These possibilities are described using examples in section 5.2 in townhouse designs where shared domestic spaces offer additional flexibility to housing solutions. Functional shared domestic spaces that are adapted to the needs of residents can compensate for elements actually missing from one's own residence or at least enhance resident satisfaction. Shared domestic spaces can be used as a means to increase the sense of living space without adding floor area: the user understands that shared domestic spaces can offer a more accessible and more affordable quality of housing. The examination of shared domestic spaces also

touches on how the home and housing are defined at the individual level.

So, how can the realisation of new, experimental townhouse typologies be promoted? Based on our data, we can answer this question by referring to city planning. The massing of townhouses, i.e. the width, depth and floor height as well as front and back yard size of houses, can be defined extremely precisely in a city plan. Understandably, zoning ordinances can be used in an effort to achieve a uniform appearance for the built environment. However, our workshop data shows that, from a resident standpoint, the relationship that a townhouse has with the street space depends on several factors related to the use of a front yard and experiences with housing privacy. What kind of cityscape would then be created if townhouses could be freely placed on plots? Varied, without a doubt. It is here that the nature and location of residential areas and, more specifically, streets are highlighted. House rows built along mixed-used streets could be a suitable place for loosening zoning ordinances for city planning trials. Another alternative would be to develop, taking the regional perspective into account, different solution models, such as the four townhouse types used in workshops (see section 3.3).

The main point of focus in developing the townhouse typology is to ensure that different resident groups are given sufficient freedom of choice. Some want renewable energy solutions or consider façade materials and colours to be important, while others prefer housing in a housing cooperative, where residents can feel like they bear less responsibility for property maintenance than when living in a single-family house. Different building methods also influence the various interpretations of the townhouse. All of these aims suggest a need for understanding the various resident types and finding each a suitable type of housing, without compromising on affordability.

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Selina Anttinen, architect/ AOA – Anttinen Oiva Arkkitehdit Oy

Riitta Jalkanen, architect/ Helsinki City Planning Department

Riku Koponen, Officer for detached housing/ City of Helsinki Real Estate Department

Juha Kämäräinen, architect/ ArkOpen Oy

Ifa Kytösaho, architect/ Helsinki Housing Production Department (ATT)

Markku Lehtinen, architect/ City of Helsinki Building Control Department

Ilkka Laine, architect/ Helsinki City Planning Department

Rikhard Manninen, architect, Head of Strategic Planning Division/ Helsinki City Planning Department

Mikko Mälkki, architect/ Aalto University, YTK Land Use Planning and Urban Studies Group

Annukka Pietilä, architect/ SARC Architects

Mari Siivola, architect, Head of Master Planning/ City of Vantaa

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Figure 34. Rossmässlerstrasse, Connewitz, Leipzig, Germany. Photo: Tina Ullrich, 02/10/2014.

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Figure 42. Pynguin, Horner Strasse, Bremen, Germany. Photo received from business owner, 28/5/2015.

Figure 43. Illustration: Anna Ratia. Photo: Oberdorfstrasse, Leipzig Stötteritz. Photo: Jukka Honkala, 12/6/2014.

Figure 44. Malminkartano, Helsinki. Photo: Eija Hasu, 29/06/2010.

All drawings in sections 3.3 and 5: Tina Ullrich

Resident profile symbols: Anna Ratia

Appendices

Interview survey for city planners and architects on development of the townhouse typology

Anne Tervo & Eija Hasu

Respondent background:

1. In what position/on what assignment are you working right now? How long have you been working in this capacity/on this assignment?
2. To what extent (temporally/qualitatively) have you been working with the townhouse concept?
3. Who else in the organisation is working with issues related to townhouses. Types of cooperation?
4. What about a previously held position, on a prior townhouse concept work assignment?

Definition:

1. Is there a definition of the townhouse concept and how would you yourself describe that concept? Does the given definition correspond with your idea of the concept? Should it be changed/further defined?
2. What perspectives do you feel are key in the discussion on townhouses? Are, for example, location, typology possibilities, energy efficiency, complementary construction, diversification of the housing offering, lifestyles and resident groups addressed?
3. Are there any conflicts in the concept?

Location:

1. What types of areas are suitable for the townhouse typology? What types are not? Why?
2. Is there a difference between complementary construction and new residential areas?
3. What features should townhouse areas have? Are services, the importance of street space, neighbourhood features and improving the image of the population/area addressed?
4. What is required of a street from which there are entrances to the residence?

Residents:

1. For what kind of household-dwelling unit do you feel a townhouse is suitable? Families are emphasised, but should other resident groups be included? For what types of families?
2. What about the socioeconomic status of families/resident groups?
3. In your opinion, what does the townhouse offer target group X "more of" compared to other typologies? Could a typology other than townhouse be an even better option?

Design solutions:

1. When examining typological solutions, what do you feel are the strengths and weaknesses of townhouses?
2. Also, describe in greater detail: indoor spaces, outdoor spaces, connection to the city, energy efficiency/design, execution, project management
3. Should current accessibility regulations/requirements be applied in the townhouse concept? How do you feel current accessibility regulations/requirements are compatible with the townhouse concept?
4. What should be taken into consideration during the zoning phase in order to ensure that accessibility regulations/requirements can be realised?
5. In terms of accessibility, what do you feel is the most challenging thing to realise in the townhouse concept (connection to the street, elimination of level differences, dimensioning of wash facilities, space for a lift, "surviving floor", etc.)?

Outdoor spaces:

1. Number and location of private yard areas?
2. Are shared courtyard areas needed?
3. If the townhouses are attached to one another, the back yard is accessed through the residence or by going around the row of houses. Should this be seen as feature of the typology or should a different solution be used?
4. Gardening sheds and similar structures are not usually seen as being part of the townhouse typology. Should this be taken into consideration in the Finnish version of a townhouse? If so, how?
5. What type of parking arrangements should be made? What would be a good parking space standard?

Proliferation:

1. The townhouse concept has not spread very rapidly. Why do you think this is?
2. How can its proliferation be accelerated? What do you think is an obstacle to proliferation of the concept?
3. Do you think that the concept has been marketed adequately/on the right forums?
4. Affordable/expensive?

Realisation:

1. Resident, group construction or developer: how do you see the role of these actors in realising townhouse sites? What about opportunities? Threats?
2. How does the choice of developer affect your own work?
3. What do you think the best possible way to realise a townhouse project will be? Ready-made reference plans? Larger role for the developer? Architectural design for each site? Group construction? Developer consultant?

In conclusion:

1. Could you picture yourself living in a townhouse?
2. Is there anything you would like to add here?



A New Finnish Dream Home: questionnaire

What would your dream home be like? For one person it might be an apartment in an high-energy city/town centre, while someone else might want a single-family house in a country-side environment. A third person's dream home has yet to be realised.

This survey by the Aalto University Department of Architecture evaluates housing needs and attitudes in the Helsinki metropolitan area. The information gathered in the survey will be used for the development of new housing solutions. All the answers will be processed anonymously.

Those respondents who leave their contact information at the end of the survey will be included in a raffle for three one-year subscriptions to a magazine of choice from the Otava Media product family (Deko, TM or Suomen kuvalehti) and six family tickets (value 42 euros) to next summer's Housing Fair. The next Housing Fair will be held in Jyväskylä 11 July - 10 August 2014. The raffle is sponsored by Suomen asuntomessut. Winners will be notified privately.

For further information, please contact architect Anne Tervo, [anne.tervo \[at\] aalto.fi](mailto:anne.tervo@aalto.fi)

Background information

These questions will help us profile the respondents. Questions with a * are mandatory.

If your answer to a question with an "Other, please specify" type of response, please first click on the option to activate it and then enter your answer into the text field.

1. You are

- Female
- Male

2. Your year of birth

(yyyy)

3. How many adults live in your household?

Including yourself. Please note that children who have turned 18 or more will be specified in the question following this one.

- 1
- 2

More, please specify who.

4. How many children live in your household?

Also children who have turned 18 and live at home.

None

0-6 year olds, how many?

7-15 year olds, how many?

16 year olds and older, how many?

Other comments:

5. What is your current situation/status in working life?

If more than one option applies to your life, please select the primary option.

- Entrepreneur
- Freelancer
- Wage-earner who holds permanent employment
- Wage-earner who holds temporary/fixed-term employment
- Pensioner
- Unemployed
- Student
- Stay-at-home mother/father
- Other, please specify:

6. Estimate your household's total monthly net income (approximate estimate):

Net income refers to your household's income after taxes and other similar deductions.

euros

7. How much would you be willing at most to pay for housing each month?

The household's total ability to pay for housing This includes all housing-related costs: rent/loan payments, housing cooperative management and financing charges, energy consumption and parking fees. An approximate estimate will suffice.

euros/month

Current and previous housing

The following questions will concern your current and previous living arrangements.

8. I live in...

- Helsinki
- Espoo
- Kauniainen
- Vantaa
- Another location, please specify where:

9. What is your residential area's postal code?

10. I currently live in...

If you select "Other, please specify", click the option first to activate it, and then add the information to the text field.

- A town/city centre
- A suburban area
- A sparsely populated area
- Other, please specify

11. The building I currently live in is...

- An apartment block
- A row house
- A semi-detached house
- A single-family house
- Other, please specify

12. What type of residence do you currently live in?

How many rooms are in your residence? (excluding the kitchen)
What is the floor-space of your residence? (square metres)

13. My residence is

- Owner-occupied
- Rented
- A right-of-occupancy residence
- Other, please specify

14. Have you lived in a residence where the rooms were located on different floors?

No, I have not
Yes, I have, the residence had _____ floors

15. Before moving to my current residence, I lived in

- An apartment block in town
- An apartment block in the suburbs
- A row house
- A semi-detached house
- A single-family house
- Other, what?

16. Do you have more than one residence?

Leisure-time residences (e.g. cottage, timeshare)

No
Yes, how many?

City/town homes (e.g. a work residence in addition to a permanent residence)

No
Yes, how many?

Housing preferences - housing and residential area

The following questions will concern the type of housing you would appreciate and the factors you would focus on, if you were changing residence.

17. What is your favourite type of residential building, and what do you think of the other options listed below?

Select the one with the most appeal as your favourite (only one) and assess the appeal of the other options - think of your current situation.

	<i>Favourite</i>	<i>Good option</i>	<i>Pretty good</i>	<i>Okay</i>	<i>Holds no appeal</i>
An apartment block in a town/city centre	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
An apartment block outside the town/city centre	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A row house	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A semi-detached house	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A uniquely designed single-family house	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A factory-made single-family house	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

18. Would you like to add anything to your previous answer?

19. What size would your favourite type of residence be?

How many rooms would you like the residence to have? (excluding the kitchen)

How large a residence would you like? (square metres)

**20. Which of the following factors related to management would be true in your choice of residence?
I would like to live in/on...**

	<i>Fully agree</i>	<i>Agree</i>	<i>Do not agree or disagree</i>	<i>Disagree</i>	<i>Fully disagree</i>	<i>I cannot say</i>
A rental/right-of-occupancy residence	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Own residence	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A housing cooperative (usually a row house or apartment)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Own property (usually a single-family house or towhouse)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A rental plots	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Own plot	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

21. Select your favourite building type. How important do you feel the following characteristics are in its selection?

	<i>Very important</i>	<i>Moderately important</i>	<i>Of some importance</i>	<i>Not important</i>	<i>I cannot say</i>
Good environment for raising children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Social contacts (neighbours, friends, relatives)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Own yard	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Access to variety of outdoor activities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Convenience, low maintenance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ecological sustainability, energy efficiency, environmental-friendliness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lifestyle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

22. More and more attention is given to the environmental impact of housing. How important do you feel that the following issues related of environmental impact factors are with regard to your housing choices?

	<i>Extremely important</i>	<i>Moderately important</i>	<i>Of some importance</i>	<i>Not important</i>	<i>I cannot say</i>
Energy efficiency of buildings (e.g. energy rating of A or higher)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Keeping living costs under control by means of energy efficiency	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Environmental-friendliness of surface materials and interior design solutions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Use of renewable energy as a source of energy.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Compromising on the size of a residence for environmental reasons	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

23. How important do you feel it would be to have the following services in your residential area?

This includes the assumption that there is a grocery store in the area.

	<i>Very important</i>	<i>Important</i>	<i>Not important</i>
Good public transportation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Day care/schools	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cultural services (library, theatre, cinema, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Small-to-medium-sized shopping centre	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Large, full-range shopping centre	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other, please specify:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

24. The following questions concern your lifestyle and housing values:

Think about your favourite type of housing

	<i>Fully agree</i>	<i>Agree</i>	<i>Do not agree or disagree</i>	<i>Disagree</i>	<i>Fully disagree</i>	<i>I cannot say</i>
I enjoy being a part of liveable, urban housing environment.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A living environment with a small-town ambiance appeals to me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Socialising with my neighbours is very important to me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am not interested in being responsible for the maintenance of a house or a garden.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I feel it is important that my home has enough space for me to have friends and relatives over.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I would not want to live in a house without a nice green view from the window.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I would like to be able to follow bustling street life from my window.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nearby park is enough nature for me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Leisure-time housing provides necessary balance for city living.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I want to actively take part in the development of both my neighbourhood and living environment.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Everyday life and the functionality of housing

Housing solutions influence a multitude of things, such as mobility, work possibilities and how much we enjoy our living environment. Please answer the following questions considering your favourite type of housing.

25. Do you feel that the following should be a part of your housing?

	<i>Definitely</i>	<i>Might be a nice option</i>	<i>I would not miss it if it were not there</i>	<i>I cannot say</i>
Residence accessibility (suited for persons with reduced mobility)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The residence has multipurpose space (dining area, which transforms into a leisure space etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Closed-off/separate kitchen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fireplace lounge or recreational room	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Home spa	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Private sauna	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sauna in the back yard	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Multipurpose basement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Separate storage space or outbuilding	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

26. How important would it be to have access to the yard or balcony from the following rooms?

Select the three options you feel are most important.

	<i>Most important</i>	<i>Second</i>	<i>Third</i>
Kitchen and dining area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Living room	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
One of the bedrooms	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Office	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hobby space	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Guest room	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
lounge/room with a fire place	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sauna	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

27. What activities would you especially like to do in your own yard?

You may skip this question.

28. Do you work from home?

Distance work, or other activity that requires an office or workspace.

- Weekly
- Not often
- Never
- Other, please specify:

29. What kind of office/workspace would you need in your home?

Space for tools, meeting clients, work or other activities.

- I don't need one office/workspace
- A work corner in, for example, the bedroom
- An office/workspace, e.g. separated by a sliding door
- An office/workspace inside the residence
- An office/workspace with a separate entrance inside my residence
- A separate, rentable office/workspace close to my residence
- Other, please specify:

30. If you have a car(s), what kind of parking arrangements would suit you best?

If you do not have a car, you can skip this question.

	<i>I would favour this option</i>	<i>A possible option</i>	<i>I would not use this</i>	<i>I cannot say</i>
A garage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A carport	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A parking space within the yard	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A parking facility	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On-street parking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Charging point for electric cars	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other, please specify:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

31. Do you have any comments on matters related to parking? (Bicycles, mopeds, etc.)

Possibilities of housing types

The following questions concern the possibilities opened up by different residence types - how appealing do you find these possibilities?

32. Picture yourself living in a detached house facing a street. How important are the following spaces and things to you and your own comfort?

	<i>Very important</i>	<i>Moderately important</i>	<i>Of some importance</i>	<i>Not important</i>	<i>I cannot say</i>
Glass-enclosed balcony or terrace	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rooftop terrace	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Small front yard on the street side	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Large backyard (room for hobbies, gardening, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A yard that runs around the house (the house is not attached to its neighbouring buildings)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Outbuilding	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Passers-by should not be able to see into my home	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The backyard patio would provide privacy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
No shared walls	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

33. Picture yourself living in a building association (apartment blocks, row houses) What is your opinion on the following statements concern shared domestic spaces?

	<i>Fully agree</i>	<i>Agree</i>	<i>Do not agree or disagree</i>	<i>Disagree</i>	<i>Fully disagree</i>	<i>I cannot say</i>
I would be happy with smaller in-unit kitchen, if I had access to a well-equipped and spacious shared kitchen.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I would use a shared lounge space (reading periodicals, recycling and socialising with neighbours etc.).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I have hobbies (i.a. music, wood work, handiwork) for which I would like to find facilities near my residence.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I would be prepared to have less floor area in my residence, if I had various shared domestic spaces at my disposal (e.g. a spacious kitchen, a communal living room, a hobby/recreational room, a guest room).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shared domestic spaces would only interest me if I could book them for my own, personal use for a certain period of time.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shared courtyard would interest me (e.g. for block residents)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

34. Would you like to give more input on shared domestic spaces?

You may also choose to skip this.

35. Housing needs vary as life situations change. How important do you consider the possibility of modifying your residence?

	<i>Very important</i>	<i>Moderately important</i>	<i>Of some importance</i>	<i>Not important</i>	<i>I cannot say</i>
Possibility of increasing/decreasing room sizes (placement of intermediate walls)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Possibility of dividing/combining the residence to make it smaller/larger (e.g. separating a side annex)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Possibility of building an uninsulated attic space, which can later be converted into living space	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

36. Please indicate how you feel about the following statements?

The rooms in my residence would be on several floors.

	<i>Fully agree</i>	<i>Agree</i>	<i>Do not agree or disagree</i>	<i>Disagree</i>	<i>Fully disagree</i>	<i>I cannot say</i>
Would give the residence a unique feel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Would provide a variety of uses (e.g. work, guests, overnight guests etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Would make it more difficult to use the space and perform daily tasks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Would enhance the degree of privacy for family members	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Would make it more difficult for residents to spend time together	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Would provide a variety of uses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Could pose hazards	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Would make cleaning more difficult	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Points of view on construction and wishes concerning housing.

How do you feel about construction? Give your response keeping your current situation in mind.
To finish, if you want you may supplement any and all of your responses in this survey. The floor is yours!

37. If you were building your own detached house, how well would the following building methods suit you?

	<i>They would be very suitable</i>	<i>They would possibly suit me</i>	<i>They would not be suitable</i>	<i>I cannot say</i>
Independent "do-it-yourself" construction	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Independent group construction: a self-organised group	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Supervised group construction: e.g. a group assembled by the city	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Use of a developer consultant manages design and construction processes, tendering, scheduling, etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Purchasing from developer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comments and suggestions - Finally, we would like to hear about your housing experiences and expectations.

Respond to this, if you have time left. If you wish, you may skip these questions.

38. Do you particularly miss anything from your previous residences or living environments? If so, what?

E.g. neighbours, seamless public transportation, certain spaces or atmosphere within the home, low housing costs, etc.)

39. What type of housing and living environment do you day dream about?

40. In your opinion, what prevents people from achieving their housing dreams?

Would you be interested in a new type of building, a Finnish townhouse?

One of the objectives of this survey has been to collect material for the design of new and diversifying forms of housing. A townhouse is a building type that can offer new alternatives for housing. In Finland, a townhouse is also known as “kaupunkipientalo”. In Central Europe, a townhouse is a house on its own plot, which characteristically includes the following:

- 2–4 floors
- A narrow long plot
- The building is connected at its sides to its neighbouring buildings much in the same way as row house residences.
- A row of townhouses can constitute a housing cooperative in the same way as a row house.
- Its own backyard and sometimes also a small front yard.

41. Please indicate how you feel about the following statements:

	<i>Fully agree</i>	<i>Agree</i>	<i>Do not agree or disagree</i>	<i>Disagree</i>	<i>Fully disagree</i>	<i>I cannot say</i>
As a building type, townhouse would be well-suited for me/us.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Would you like to take part in the development of townhouse-living?

- Workshops will be held in September–October 2014 in the centre of Helsinki. The workshop will be 2.5 hours long with coffee break.
- During workshops participants learn about and work together under the supervision of experienced designers to improve different, new housing solutions.
- Participants do not need to prepare in any way for the laid back and discussion-based event. Every individual is an expert in their own housing preferences.

The material gathered in the workshops will be used in the development of the Townhouse-building type. If you are interested in taking part, please leave your contact information. Your name and other details will not be connected to your responses. We will contact those, who left their contact information at the end of August 2014. For further information please contact: anne.tervo [at] aalto.fi

42. Are you interested in participating in the Townhouse workshop in September-October 2014?

- No
- Possibly
- Yes

43. Do you want to take part in the raffle for a magazine subscription and tickets to Housing Fair 2014?

- Yes
- No

44. Please include your contact information if you are interested in taking part in workshops and raffles.

Your contact information will not be combined with your responses.

- First name
- Last name
- Telephone
- E-mail
- Postal code
- Town/city

45. Thank you for completing this survey! If you wish, you can leave feedback on the survey. Remember to click on “Send”.



The Finnish Dream Home study, which examines the Townhouse typology is based on large planning projects that have been launched and or are being planned in Helsinki Metropolitan area, a key target of which is increasing the diversity of housing solutions by means of urban housing typologies of different kinds. The Finnish Dream Home study examines the ability of the townhouse typology to meet the diversifying housing preferences, which are connected to the one-family houses. What needs lay behind the preferences for housing? What characteristics are residents willing to forgo?

Whereas townhouse living has typically been considered as an option primarily suited for families, the premise of the Finnish Dream Home study is to identify different resident profiles and housing needs. The study especially focuses on determining the terms on which the townhouse typology could meet the housing preferences of different households.

In addition to Aalto University, the project's key financier is the Innovative Cities programme. Other funding bodies and partners include the City of Helsinki, the City Planning Department, the Building Control Department, the City Executive Office and the Housing Finance and Development Centre of Finland (ARA).



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School of Arts, Design and Architecture
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