Extended Abstract for Special Session S02

Draft title: Fostering home-based work and remote work in neighbourhoods: design scenarios

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1. Abstract

Work and workplace in cities are changing, due to ongoing technological advances, shifting demography, new lifestyle preferences and the growth of the knowledge economy based on human capital. Whilst the role of cities’ central business districts as facilitators of knowledge and co-location of entrepreneurs continues to strengthen, ongoing growth of home-based work and remote/nomadic work brings economic activities into the residential neighbourhood. Little is known about the role of these new work modes on spatial transformation of cities’ residential neighbourhoods, often planned with the intentional separation of land uses.

This paper offers insight into the role of home-based work and nomadic work in ongoing urban transformation within cities. The research presented herein used a combination of qualitative and quantitative methods structured to identify design personas and formulate tailored neighbourhood design options fostering home-based and nomadic work practices. Data for the research was collected through interrelated online surveys and design charrette workshop conducted in the City of Gold Coast, Australia.

It appears that most home-based workers and remote/nomadic workers work individually but see a need for urban planning interventions facilitating transformation of residential neighbourhoods towards multi use. These interventions vary depending on design personas type and specific location within the city. Alternative design concepts are suggested within this paper, offering actionable knowledge for city policymakers and planners.

2. Introduction and overview of relevant literature

Home-based work has grown in major Australian cities by around 25% in just five years, exceeding the overall employment growth rate of 10% (ABS 2017). In the absence of research-based evidence on the level of impact that the growing popularity of home-based work and nomadic work have on cities, planners and policymakers often overlook these forms of employment. The resultant knowledge gaps provides a research space for exploring what Australian demographer Bernard Salt described as ‘the quiet revolution occurring in suburbia’ (NBN, 2016), where residential neighbourhoods appear to gradually transition towards mixed-use urban environments.

Recent literature on home-based and remote/nomadic work is generally consistent in describing them as desirable forms of employment, correlated with perception of personal/family success (Morganson et al., 2010), with the ability to control working hours considered as key benefit (Maruyama et al., 2009). Mas and Pallais (2017) measured employee-friendly alternatives offered by companies and concluded that home-based work is the most valued alternative work arrangement, with employees willing to take 8% lower wages for the option of working from home. Despite certain
benefits and seemingly high social status of these types of work, researchers point to social, professional and physical isolation which home-based workers find as a major drawback (Bartel et al., 2007). Home-based work and nomadic work are therefore considered to be multi-layered and complex, combining the need for autonomy and creative management of time and place with a sense of unease and loneliness relieved through contact with others (Daniel et al., 2018).

Researchers recognize that whilst the role of cities as facilitators of knowledge and co-location of entrepreneurs continue to strengthen (Glaeser 2011, Florida 2014, Foth et al., 2016), residential areas located at the periphery of cities are becoming digitally networked with traditional central business districts (Audirac, 2005). This process has cumulative impact on cities and is often referred to as ongoing, gradual decentralization of urban functions (Shao 2015, Thierstein et al. 2008, Lüthi et al. 2010). Certain peripheral neighbourhoods appear to attract entrepreneurial individuals to the point where economic activities such as home-based work or nomadic work become spatially significant (Khallash et al., 2012, Holliss, 2015). Such neighbourhoods are considered to spontaneously evolve into mixed-use (Hirt, 2016, Alizadeh and Sipe, 2013, Dolan, 2012).

The overarching purpose of this research program is to deliver design recommendations fostering urban transformation caused by the growing popularity of home-based work and nomadic work practices in residential neighbourhoods. This is underpinned by three specific research questions:

(a) What is the spatial distribution of home-based workers?
(b) What is the appropriate design response fostering growth of home-based work and nomadic work whilst mitigating their impact on communities?
(c) What is the role of networking and collaboration at the neighbourhood scale and how can it be advanced through design solutions?

Further sections of this paper provide a description of research methods employed to address the research question and presentation of findings with accompanying discussion.

3. Methods

This research has commenced in December 2016 and is scheduled for completion in 2019. It involves both qualitative and quantitative research methods, in particular online surveys among the home-based work community, design charrette workshop for home-based workers and nomadic workers, and comprehensive analysis of census data. City of Gold Coast, Australia’s sixth largest city was selected as a case study area due to its relatively high proportion of home-based workers which is estimated at approximately 7% of the workforce. Findings of the research to date describe patterns of the spatial distribution of home-based workers in cities, their impact on the built environment and city planning strategies fostering this type of work (currently in publication).

Building on the previous stages of the project, research presented in this paper offers alternative neighbourhood design concepts with actionable knowledge for city policymakers and planners. These concepts are derived from a ‘design persona’ exercise, seeking to tailor neighbourhood design options to different lifestyles and locations within the city. This approach has been based on assertion that the future oriented nature of design makes meaningful projection of residential-lifestyle experiences essential in the urban planning process (Foth et al., 2011). Following this line of thought, human-centred design methods were extended – particularly persona development that lead into scenario-based design strategies – to suit the context of urban planning. Data needed for design persona development was collected through design charrette workshop and online survey conducted within the case study city. The following questions were asked:
What is the focus of your work?
What is your age, gender, approximate address (suburb)?
What are your favourite urban amenities?
Do you intend to work from home in foreseeable future?
Does your work involve use of car?
Do you interact with other home-based workers in the area?
What challenges/barriers affect your work and can they be overcome or mitigated through neighbourhood design?
Do you think interactions with other home-based workers would be beneficial to your work?
What types of placemaking interventions should be made in your area to foster transformation of residential neighbourhoods toward live/work communities? Are these interventions necessary?

4. Summary of Findings (partial)

This research is ongoing and a final formulation of design personas and associated policy recommendation will be finalised in May and submitted to the conference (if accepted) in June as full paper. Data collected and analysed to date leads to the following, key patterns:

- Home-based work is likely to be clustered, with certain pockets within cities able to have even 15% of the local workforce working full time from home.
- Over 90% of research participants want to continue to work from home in foreseeable future, unless they are nearing their retirement age.
- Data points to noticeable correlations between age, gender, occupation type, economic aspirations and desire to transform the neighbourhoods. Younger males with ambitious plans to expand their businesses are very keen to collaborate and support placemaking solutions which enhance remote work in their neighbourhoods.
- At the same time, home-based workers and remote workers in higher age brackets prefer to stay isolated, despite noticing this as a barrier to their work. They seem to value residential amenity over perceived benefits that they could profit from if given an opportunity to collaborate, network and interact with like-minded workers living nearby.
- In most occupational types, home-based work appears to be a lifestyle choice. Arts and media professionals however seem to commence work from home and/or nomadic work because of lack of interesting job opportunities available to them. Data indicates that once arts and media professional commence home-based work, they are very satisfy with it and demonstrate support to placemaking interventions supporting transition of their neighbourhoods towards mixed-use.
- To the contrary, home-based business owners, particularly males, often declare desire to abandon home-based work as soon as their establishments grow to a certain size where relocation to an office will be the most practical solution.

Given that home-based work and remote work in cities are clustered, urban planning response should be tailored to respond to the needs of the local communities. It is particularly the younger generation of home-based and remote workers who seek changes to the built environment as opportunities and solutions enhancing collaboration and networking amongst home-based workers and remote workers. They tend to live closer to the city centre and identify a need to increase collaboration, networking and face-to-face interactions with other, like-minded people living locally. The urban
planning response proposed through design charrette includes relaxation to development control policies, by way of enabling unrestricted employment of non-residents on the premise, ability to sale goods and services directly from the premise and opportunities to display appropriate signage advertising home-based businesses. Further, new development or redevelopment within such areas should be designed to accommodate home-based work through adequate consideration of live/work separation in dwellings. Road infrastructure and public transport in those areas should also take into account different movement patterns, different to the routine peak morning and afternoon commutes. Finally, these neighbourhoods should also be catered with local service centres in convenient, walking distances, providing co-working spaces for nomadic workers and opportunities for home-based workers to network and meet.

Older generation of home-based workers is correlated with the well-established areas in predominantly low-density urban neighbourhoods. Here, design solutions should be sensible to match needs and preferences of this group. Urban planning interventions should focus on the local service centre, where co-working spaces and office supply stores could emerge, providing the local home-based work community with opportunities to enhance their work through collaboration, networking and business support. Planning relaxations should be marginal, to maintain the amenity of the area.

5. References


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