

CITYCENTRE: Planning, knowledge and collaboration for developing vibrant and attractive city centres

0. Relevance to the call

The project “Planning, knowledge and collaboration for developing vibrant and attractive city centres” (CITYCENTRE) will develop novel knowledge helping local authorities and politicians in small and medium-sized cities to plan for and develop more attractive and vibrant city centres, and to execute more efficient and effective planning processes resulting in plans with higher goal achievement potential. Attractive and vibrant city centres are important when aiming to make cities more sustainable. It stimulates more compact urban development, reduce car-dependency, traffic and greenhouse gas emissions, as well as land-take. It facilitates the use of active transport modes, contributing positively to public health and well-being. It also contributes to social inclusion, as city centres are open to all, offer public and commercial meeting places, and normally are the most accessible area in a city. CITYCENTRE hence addresses several UN objectives: sustainable cities and communities, climate action, good health and well-being and reduced inequalities.

CITYCENTRE will contribute to this by developing the knowledge base, which is an important foundation both for planning of cities and city centres pursuant to the Planning and Building Act (PBA) and for developing them in more sustainable ways. The planning competency basis will thus increase as important knowledge gaps are closed. CITYCENTRE includes the market dimension as it studies collaborative processes between municipal authorities and different market actors (landlords, developers, retail and service businesses) both inside city centre planning processes and in the everyday relations between these key actors.

The PBA defines the structuring frame for planning processes. The processes involve and affect local authorities, politicians and a range of public and private actors, all with different interests, objectives, knowledge and power. In addition, the physical dimension in city centres often includes historic buildings and environments subject for preservation. This makes city centre planning processes especially complex, resource demanding and rife with conflicts, which often result in plans with lower goal achievement potential than desired. The PBA is the backbone of these processes, but the legal instruments in the Act are insufficiently adapted to some of the challenges faced in the complex city centre planning processes. CITYCENTRE will address this by: i) investigating, analysing and comparing city centre planning processes, aiming at identifying potentials for improving processes, conflict management, analyses and plans, ii) developing important, but today absent, knowledge to be used in city and city centre planning and collaboration processes. Taking findings from the EVAPLAN project as the point of departure, CITYCENTRE will contribute with a deeper exploration of strengths and shortcomings of relevant legal instruments in the PBA when applied in complex tasks such as city centre planning processes, with the aim to suggest improvements that will ensure better support to local authorities. CITYCENTRE includes a PhD, and will strengthen the competences of the academic environments involved, as well as the user partners.

1. Excellence

1.1 State of the art, knowledge needs and project objectives

That cities succeed in making their city centres more attractive and vibrant is important in achieving prioritized societal goals concerning environmental, social and economic sustainability (Ministry of Local Government and Modernisation (MLGM) 2017). Attractive and vibrant city centres stimulate more compact urban development. This is a key issue in achieving societal goals of reducing car-dependency, traffic and greenhouse gas emissions from transport, as well as land take (Newman and Kenworthy 2015, Ministry of Environment 2012, Ministry of Transport and Communications 2017, Næss et al. 2019). Attractive city centres and compact cities facilitate and stimulate use of active transport modes, contributing positively to public health and well-being (Sallis et al. 2016, National Public Roads Administration 2012, Ministry of Health and Care Services 2015). It contributes to social inclusion, as city centres are open to all, offer public and commercial social meeting places, and normally are the most accessible area in a city (Jacobs 1961, Carmona 2015). That cities succeed in making their centres attractive and vibrant is also important in terms of economic sustainability, as city centres accommodate substantial capital, values and turnover (Ministry of Trade, Industry and Fisheries (MTIF) 2018). Such areas may represent some of the most important spaces in the city, with critical local significance (Carmona 2015). An ‘attractive and vibrant city centre’ is understood here as a city centre that residents appreciate and use frequently, and which is perceived to be a good place to locate and run businesses.

Many cities have defined goals to make their city centre more attractive and vibrant, for the benefit of inhabitants, city centre businesses and the wider business sector in the urban region (MLGM 2017, Kongsberg municipality 2018, Lillehammer municipality 2014). This is a challenging task as urban sprawl

and out-of-city shopping centres have reduced city centre competitiveness with respect to attracting businesses, users and customers (Aslan Viak 2013), as city centre retail is facing increased competition (Virke 2017, MTIF 2018), and as it is challenging to establish well-functioning collaboration arenas for key city centre actors (Tennøy et al. 2014).

Planning processes pursuant to the PBA is a key tool for local authorities in ensuring desired qualities in cities and urban regions (MLGM 2017), such as more attractive and vibrant city centres. Any changes in the city centre involve and affect a range of different actors and stakeholders, for instance planning authorities and other public authorities, residents, landlords, developers, retail businesses, other businesses, and different interest groups. The actors enter the processes with different interests, objectives, power and knowledge. Real and fundamental conflicts are often embedded in these processes, the stakes may be high, and some actors will gain and some lose, whatever decision is made (Flyvbjerg 1998). The planning processes can, hence, be understood as arenas for battles, settling conflicts, prioritising, and making decisions, which does not necessarily mean arriving at consensus or at plans and development contributing effectively to achieve defined goals (Børrud et al. 2018, Stead and Meijers 2009, Tennøy 2012, Tennøy et al. 2016, Tennøy and Øksenholt 2018). Cultural heritage is an important resource for local development and for creating cultural, social and economic benefits (Ministry of Climate and Environment 2005), but changes in the city centre may put pressure on existing built structure and cultural heritage (Bandarin 2014). City centre planning processes are thus often complex, resource-demanding and rife with conflict (Tennøy et al. 2014, Swensen 2012). The PBA defines the structuring frame of these processes, but the legal instruments in the Act are insufficiently adapted to some of the challenges faced in the complex city centre planning processes (Børrud et al. 2018). Despite the importance of and interests in making city centres more attractive and vibrant, city centre planning processes are not much researched. To our knowledge there are no studies conducted on city centre planning processes in small and medium-sized cities in Norway, except for a limited study undertaken by ourselves (Tennøy et al. 2017a). This study found that city centre planning processes, and the underlying analyses, are carried out in very different ways, and that they vary in terms of how systematic, knowledge-based and verifiable they are. There is, hence, a significant need for knowledge with respect to how city centre planning processes currently are executed, and the potential for executing such processes more efficiently and effectively contributing to more attractive and vibrant city centres. This also concerns how the legal instruments in the PBA can be used to ensure the desired qualities.

The challenges faced in city centre planning processes are enhanced by a lack of documented knowledge. Previous thorough literature reviews have revealed major knowledge gaps with respect to central aspects in city centre planning and development (Tennøy et al. 2014, 2015, 2017b). This concerns city centres in general, and not least in small and medium-sized cities. It is, for instance, documented that city centres lose retail turnover to out-of-city shopping centers (Aslan Viak 2013), but there is a lack of documented knowledge on how the land use structure and development affect attractiveness and vibrancy of city centers.

Furthermore, there is some documented knowledge of what visitors do when visiting the city centres, what they appreciate and not, and which changes in the physical environment lead to greater use of the city centre and increased retail turnover (Gehl Architects 2014, Ravenscroft et al. 2000, Teller and Reutterer 2008, Stene 2012, Lawlor 2012, Hass-Klau 1993, Whitehead et al. 2006, Burden and Litman 2011), but mainly from larger cities. There are nevertheless few empirical studies into the effects of specific qualities, changes and measures, for example on effects of reduced parking availability or upgrading of pedestrianised streets, and virtually none that have been conducted in small and medium-sized cities and that have a relevance to Norway. This lack of documented knowledge leads to uncertainty, resistance and more conflict when the local authorities try to develop their city centres, and it increases the risk of implementing measures that do not have desired effects or have unforeseen negative consequences.

Previous studies of small and medium-sized Norwegian cities have shown that collaboration between key actors (municipal authorities, landlords and retail associations) in city centres is important in making them more attractive (Tennøy et al. 2014). A key challenge is getting all actors to participate and work towards the same goals. A recent study documented how activation of citizens and non-governmental organisations in collaborative efforts to improve their city centre brought novel insights (Vestby 2018). There is a need for more studies on how various actors collaborate, and if and how a change in collaborative structures and organisations can contribute to increased collaboration and more attractive city centres.

Retail plays a major role in the Norwegian economy, employment and value creation and in creating attractive urban spaces (MTIF 2018), but city centres face growing competition from e-commerce and the emergence of new business models (Pedersen et al. 2018, Virke 2017). With goods increasingly being either consumed online (streaming services, e-books, etc.) or purchased online and delivered directly to the consumer, this constitutes yet another competitor to city centre retail. How to plan for and develop the city

centre in ways that mitigate the negative effects this development may have on city centres is thus hugely important. Here lies a need for research and knowledge.

The overall objective of CITYCENTRE is to enhance the ability of local authorities and politicians in small and medium-sized cities to plan for and develop more attractive and vibrant city centres, and to execute more efficient and effective planning processes resulting in plans with higher goal achievement potential. The project will contribute to this by developing knowledge that help close the identified knowledge gaps.

1.2 Novelty and ambition

Planning theory distinguishes between knowledge and theories used *in* planning (how the built environment affects people's behaviour and perceptions), *about* planning (how planning is practiced) and *of* planning (how it ought to be practiced, including its institutions like the PBA) (Friedmann 2017). CITYCENTRE is novel and ambitious in the sense that it will generate knowledge on all three aspects: how characteristics of the built environment affect use of and perceptions of city centres, and hence their attractiveness and vibrancy; how differences in city centre planning practices affect goal achievement potentials of plans and the resulting built environment; as well as how instruments in the PBA work and are helpful in complex planning processes. As the project includes studies of how built environment qualities influence if people thrive in cities (Gehl 2013), it also has the potential to contribute to urban design theory.

CITYCENTRE is ambitious in aiming to combine all these kinds of knowledge in producing a guide on city centre planning processes. CITYCENTRE is also ambitious in the sense that it investigates complex planning processes dealing with complex planning issues.

As mentioned, literature reviews have revealed major knowledge gaps in these areas, and in particularly for small and medium-sized cities (Tennøy et al. 2014, 2015). To our knowledge, this will be the first larger project in Norway and abroad that systematically study city centre planning and development in cities of this size. As there are few examples of previous research addressing the issues and cases to be investigated in CITYCENTRE in similar ways, the project has significant potential to develop knowledge beyond state-of-the-art, and to advance empirical knowledge, research methods as well as planning theory.

CITYCENTRE will develop novel methods and tools for studying city centre qualities and their impact on city centre attractiveness. The project will empirically explore opportunities, challenges and potential impact of new business models and technology on future city centre retail, that will bring novel insights.

1.3 Research questions and hypotheses, theoretical approach and methodology

CITYCENTRE seeks to answer the question: *How can local authorities in small and medium-sized cities more effectively plan and develop attractive and vibrant city centres, and execute more efficient city centre planning processes?*

The project is organised as case study research, which is a good approach when seeking answers to how and why the world works as it does, when examining ongoing practices and changes that the researcher does not control, and where the boundaries between what is being studied and the context is not clear (Yin 2003). Each case will be analysed separately, to reveal the causal interrelations in each case. We will further do cross-case analyses within WP-cases, that enables more general explanations and conclusions. This approach enables in-depth studies of issues and can help to further develop theory in the field (Flyvbjerg 2006). As there is very little documented knowledge on city centre planning and development in small and medium-sized cities in Norway, we have selected four cities (Kongsberg, Tønsberg, Arendal and Lillehammer) with a population of between 27 000 and 46 000 as cases. All selected cities have clear goals and strategies for developing more attractive and vibrant city centres.

We will use different methodological approaches to answer each research question (method triangulation), and there will be a methodological overlap between several of the work packages. The methods will be: GIS analyses based on register data from Statistics Norway (SN) (residents, settlement patterns, density), analyses of data from the Central Register of Enterprises (CRE) (number of people in work and enterprises in different industries, turnover) and data on commuting from SN; questionnaires; interviews; field work (observations, registrations); analyses of turnover figures, number of pedestrians in a cross section of the city centre, etc.; document studies; process analyses.

We define city centre attractiveness as the residents' perception of and use of their city centre. This is also defined as the dependent variable in the project. The attractiveness of the city centres in the case cities will be measured through surveys (in WP3) at the start of the project, and again towards the end. The survey will be used to create an attractiveness indicator for each city, which will be used in other parts of the project.

The project is designed as follows: WPs 2-5 develop knowledge on issues that are important in city centre planning processes. WP6 studies planning processes. Knowledge from WP2-5 will be introduced into these processes, and part of the WP6 research will be to monitor how the new knowledge affect the processes.

WP6 will also contribute to reveal knowledge needs, and this will be important input to WPs 2-5. Knowledge from all WPs will be input to WP6 and WP7.

In **WP2** we ask: *How do cities' land use structure impact city centre attractiveness in small and medium sized cities?* There is an agreed understanding in the research literature that compact cities with a high density of work-places and dwellings in and around the city centre will have more attractive and vibrant city centres, due to more people having easy access to the centre, and hence using it more (Newman and Kenworthy 2015, Engebretsen and Strand 2010). Further, that external located retail will compete with the city centre about shops, services and customers, leading to fewer people using them and hence less attractive and vibrant city centres (Asplan Viak 2013). These correlations are, however, not well documented through empirical research on small and medium-sized cities.

CITYCENTRE will empirically study the assumed causal interrelations by mapping the land use structure of each case city, using register data on the location of businesses (retail, services, food/drink, offices), of employees (from the CRE) and of residents (population data from SN). TØI has access to all relevant data at the lowest possible geographical level. Based on these data, we will analyse if high shares of employees and residents located in and close to the city centre correlate to high score with respect to attractiveness in each case city, and in cross-case analyses. External retail activities will be taken into account in these analyses. This provides a basis for analysing *how local authorities ought to steer spatial development in cities to make the city centre more attractive and competitive*. We will take into account inter-urban competition (GIS analyses of data on commuting, the percentage of employees in relevant industries in neighbouring municipalities compared to the case-study municipality), as this is a potential explanatory factor as to why attractiveness can vary between cities with a similar area structure (Tønnesen 2015).

In **WP3**, we ask: *How do various qualities of a city centre affect its attractiveness?* Throughout the research literature described in section 1.1, three key qualities of a city centre stand out as particularly influential with respect to its attractiveness: The activities and experiences it offers (e.g. people, shops, pubs, restaurants, cultural activities, things to watch and enjoy, places to meet and socialise), characteristics of its built environment (e.g. if there are nice building, trees and greeneries, water, pleasant and walkable streets, parks and squares, if there is annoying traffic), and its accessibility by different modes of transport. These qualities can be conflicting. For instance, the trade-offs between easy access by car and pleasant environments with less parked and moving cars, is a recurrent discussion in city centre development (Tennøy et al. 2014, 2015). CITYCENTRE will i) systematically study correlations between defined city centre qualities and attractiveness, and ii) document the effects of changes and measures (pilot tests) carried out by the local authorities in the city centres.

We will start by establishing the current state of i) the city centre's attractiveness to residents, ii) the city centre's qualities, and iii) how, and how often, residents make use of the city centre. This will facilitate analysis of correlations between qualities, use and attractiveness. *The city centre attractiveness* will be surveyed through questionnaires, as described above. It is challenging to collect data that describe *city centre qualities*. We will develop a method for systematic collection of data that describe important city centre qualities, to be used in case cities. Relevant data sources include questionnaires, interviews, register data, observations and registrations (of activities and experiences it offers, characteristics of its built environment, and accessibility by different modes of transport, as substantiated above). When we study *how and how often residents make use of the city centre*, important data sources include questionnaires, interviews, turnover figures and recorded behaviours in the city centre (Gehl and Svarre 2013). This will tell us what users are doing in the city centre, how much of their shopping they do there, etc. By systematically analysing these data we will describe the attractiveness, qualities and use of each individual city centre, analyse the correlations and discuss causal interrelations. We will conduct surveys at the start and towards the end of the project, which will enable us to analyse if and how various city centre initiatives and measures (that changes in any of the three types of qualities) affect the use and attractiveness of the city centre.

Furthermore, we will study which city centre qualities are perceived to be important for their locational choices by *representatives of the retail and service industries* (questionnaires, interviews). Their answers will be analysed, and the findings compared to the city centre qualities that enhance city centre attractiveness to residents and contribute to their increased use of it.

Another important part of WP3 will be the *pilots*, where we study if and how changes of three kinds of qualities discussed above (e.g. parking provision, pedestrian streets, new street furniture, play grounds, trees, etc.) affect residents' perceptions of city centre attractiveness and use of the city centre. We will select three case cities that plan to, or are willing to, implement temporary or permanent measures, and study their effect through before- and after studies (questionnaires, interviews, registrations, turnover figures, footfall, etc.).

Together, these inquiries will increase our knowledge and understanding about how the defined qualities affect the use and attractiveness of city centres, and how specific changes in qualities affect these variables. By analysing findings across all cities, we will generate more robust and general knowledge. On this basis, we will analyse *which city centre qualities local authorities ought to plan for and develop to make their city centres more attractive*. The implementation of WP3 will require us to solve methodological challenges associated with studying city centre qualities and their impact on city centre attractiveness. This work will contribute to the development of a methodology specific to the field.

In **WP4** we ask: *How do various forms of collaboration affect city centre attractiveness?* Collaboration between different actors is important for achieving desired city centre development. Previous studies of small and medium-sized Norwegian cities have shown that i) clear and long-term political engagement and leadership, ii) municipal responsibility for processes, progress and continuity, iii) attitudes and knowledge among key actors, and iv) good collaborative efforts between key actors are all important factors in making city centres more attractive (Tennøy et al. 2014). A main challenge is getting all actors to participate and work towards the same goals. The actors' objectives, knowledge and various forms of power (Lukes 2005) are assumed to be key factors affecting the collaboration (as discussed in section 1.1).

CITYCENTRE will identify existing forms of collaboration within the case cities, and how these are organised (surveys). We will study actors' perceptions of challenges and opportunities within these collaborations in three case cities, and if and how different practices in terms of collaboration and organisation affect city centre attractiveness (interviews with city centre actors and municipal authorities). We will organise workshops in all three cities and will work with relevant actors to study how they can strengthen and improve the collaboration. This include how they can involve other actors, like non-governmental organisations and citizen groups, in activating the city centre (Vestby 2018). In combination, these findings will be used to analyse *how local authorities can change and improve their collaborations with other actors in ways enhancing city centre attractiveness*.

In **WP5** we ask: *How can new business models, retail structures and technology affect city centre attractiveness?* City centres face new challenges from growth in online shopping and the emergence of new business models (Pedersen et al. 2018, Virke 2017). City centres in small and medium-sized cities are more sensitive to changes in retail structure than larger cities, as they have fewer shops and a lower turnover. It is important that both local authorities and city centre actors understand the implication of these changes, and work together to facilitate the continued sale of goods and services in city centres.

CITYCENTRE will explore retail development and trends and acquire an overview of what future business models and retail structures may look like, and which challenges and opportunities they may bring (document studies, interviews). We will study how representatives of the retail and service industries in three case cities believe they will have to adjust and how it will affect future localisation preferences and demand for premises, and whether local authorities' understanding of city centre developments and future facilitation coincides with this (interviews). We will summarise the findings for each case city and analyse the similarities and differences with respect to the actors' understanding of future challenges, needs and solutions. Findings will be presented in workshops held in each case city, which will allow us to work closely together with key city centre actors on these prominent new challenges. We will analyse and summarise findings across cities, to establish *how local authorities can prevent new business models, retail structures and technology from undermining the city centre*.

City centre planning processes are important tools when developing attractive and vibrant city centres. In **WP6**, we ask: *How do local authorities execute their city centre planning processes, and how does this affect their chances of achieving an attractive city centre? What are the strengths and shortcomings of the PBA in these processes?* City centre planning processes pursuant to the PBA are important tools for local authorities in developing attractive city centres. They have the potential to define the overarching framework for integrating different sectors and interests, giving room for communication, and for developing common understandings, objectives and visions (Stead and Meijers 2009). They can clarify which areas can be developed and transformed, which buildings and areas need to be subject to preservation, how streets should be used, the accessibility by different transport modes, etc. As described in section 1.1, these processes are complex, as numerous and different actors and interests are involved and/or affected. Conflicts and disagreements are a natural and necessary (Flyvbjerg 1998). Typical issues relate to balancing preservation of buildings/cultural heritage sites of historic value with development and transformation (Skrede and Berg 2018, Swensen *in press*), and the trade-offs between accessibility by car and pleasant walking environments (Tennøy et al. 2015). How these processes are executed, which objectives and interests are prioritised, what knowledge is used, as well as how power is distributed and exerted, affect the goal-achievement potential of resulting plans (Flyvbjerg 1998, Lukes 2005, Tennøy 2012, Tennøy et al. 2016).

CITYCENTRE will study ongoing city centre planning processes in three case cities in order to document and analyse how their processes are executed, and to identify any potential for improvement. The various actors' objectives/interests, knowledge and power, together with properties of the PBA, will serve as key analytical variables. Methods will be document studies, participatory observations and interviews with relevant actors (politicians, planning authorities, sector authorities, property developers, landlords, businesses, city centre associations, citizen groups, etc.). We will seek to clarify how the processes are executed, what conflicts and disagreements arise, how are they handled and which disputes remain unresolved. We will also seek to clarify what the main objectives/interests of the key actors are, as well as which analyses are carried out, what types of knowledge form the premise for the various contributors and what knowledge wins through. Also important is what type of power the various actors possess, how they exercise it. On this basis, we will analyse i) how planning process execution, objectives, knowledge, power and conflicts influence the content of city centre plans, ii) how this affects the efficiency and effectiveness in city centre planning processes with respect to resources used and the goal achievement potential of the resulting plans, and iii) the strengths and weaknesses of the PBA in city center planning processes. The findings will be discussed in workshops with relevant actors from the three case cities, during which we will identify the possibilities and scope for improvement. Each case will be analysed separately, and then used in cross-case analyses. Together, these inquiries will help us develop more robust and general conclusions concerning *how city centre planning processes can be changed and improved to become more efficient and effective in producing plans with respect to creating more attractive and vibrant city centres, as well as to resources used, and how the PBA can be adjusted to become a more efficient and effective tool in such processes*. These results will be used in developing a guide on city centre planning, in close collaboration between all project partners to ensure its relevance and usefulness.

In **WP7** which is the synthesis, we will answer the overall research question: *How can local authorities in small and medium-sized cities more effectively plan and develop attractive and vibrant city centres, and execute more efficient city centre planning processes?*

We will analyse findings across all work packages and case cities to generate more robust and general knowledge on how various city centre qualities, land use structure, and collaboration affect city centre attractiveness, and how this knowledge can be used as input in city centre planning processes. Further, how processes can be optimised to give a higher degree of goal achievement (more attractive city centres), and how strategies for handling new retail structures best can be included. Findings and issues will be thoroughly and critically discussed in workshops with the expert group to ensure scientific quality and relevance.

Possible risks that may endanger the project and its outputs: CITYCENTRE involves many collaborating partners. This is an important strength, and also a risk. Strong and active project management is essential, and is secured by a highly experienced project manager. The project is securely anchored at three levels (county authority, local authority and the local community) to ensure interaction and robustness. There is a risk that planned cases are not aligned in time with the project. This is sought reduced by having four case cities, but plans for cases in three cities in each WP. The risk associated with implementation of pilots is sought minimised by also considering temporary measures, as these will be easier to implement. There is also risk in that some of the methods to register and analyse city centre qualities innovate and are yet to be tested. This risk is addressed by using method triangulation. The financial risk is considered to be low, as in-kind contributions make up most of the organisation's own funding and the amount of support per participant is low. The financial risk with regards to the pilots are also considered to be low, as the measures should either be rather cheap or be a part of the local authorities' budget for city centre improvements.

CITYCENTRE gives rise to few **ethical challenges**. All research will comply with the ethical guidelines produced by the National Committee for Research Ethics in the Social Sciences and the Humanities (NESH), and all data collection will be reported to the Norwegian Centre for Research Data (NSD). We do not anticipate any major ethical challenges associated with registrations and footfall counts, as none of the data collected will include recognisable personal characteristics. Any personal data collected through interviews will be handled in compliance with the EU General Data Protection Regulation (GDPR). **Gender perspectives:** CITYCENTRE is managed by a woman, seven of the eight WPs are led by women, and the intent PhD candidate is a female.

2. Impact

2.1 Potential impact of the proposed research

The outputs of CITYCENTRE will address the important and under-studied issue of city centre planning processes and development. The outputs will, if successful, have a substantial impact on the scientific research field through the resulting theoretical, methodological and empirical advancements concerning: i) what affects the efficiency and effectiveness of city centre planning processes in producing plans

contributing to more attractive and vibrant city centres, ii) strengths and shortcoming of legal instruments of the PBA when tested to its limits in the complex processes, iii) how various qualities affect city centre attractiveness and vibrancy, iv) effects of collaboration between key actors, and v) the potential effects of new retail structures. This knowledge will improve the scientific understandings of city centre planning and development in general, and not least with respect to the small- and medium-sized cities context. Through pilot studies, CITYCENTRE will produce empirical knowledge, and at the same time develop new methods and tools for mapping and evaluating effects of changes in city centre qualities. Together, CITYCENTRE outputs this will have a substantial scientific impact on the existing theoretical research fields *in* planning, *about* planning and *of* planning (Friedmann 2017).

CITYCENTRE outputs will contribute to enhance the ability of local authorities and politicians in small and medium-sized to plan for and develop more attractive and vibrant city centers, and to execute more efficient and effective planning processes, resulting in plans with higher goal achievement potential. The competences of the collaborating research institutes ensure new insights into important and difficult issues such as balancing preservation with development, and the role played by historic buildings and sites in making city centres more attractive. CITYCENTRE will develop a guide to city centre planning processes. In a recent seminar, the need for this guide, and a stronger knowledge base, was highlighted by representatives from local authorities. By identifying potential weaknesses of the PBA when applied in complex city center planning processes, the project has the potential to contributing to improvement of this important instrument. CITYCENTRE has the potential to benefit more than 30% of the Norwegian population, living in 50 municipalities with 20 000 to 70 000 inhabitants (1,7 mill. inhabitants in total), by contributing to more attractive and vibrant city centres in these small and medium-sized cities.

CITYCENTRE outputs will promote future value creation on several levels, for partner cities as well as other cities in Norway and elsewhere. For public authorities, but also for the market (retailers, service providers, property owners, developers), inhabitants and others affected, the impact lies in: *increased efficiency and effectiveness* in city centre planning processes, with respect to costs and resources, as well as to goal achievement; *more efficient public investments*, as measures will be better targeted to achieve prioritised goals; *improved quality* of city centres, to the benefit for residents and businesses; and *better and more useful services*, both in the form of improved and more inclusive processes and a better business climate for those operating in the city centres, but also in the services provided to the inhabitants in the city centre.

CITYCENTRE have the potential to impact on four of the UN SDGs. Developing more attractive and vibrant city centres contributes to more compact cities, shifting travel behaviour away from the private car and towards more active and sustainable mobility forms, resulting in reduced energy demand, traffic related pollution and noise. This address the UN SDG11 of 'sustainable cities and communities' and UN SDG 13 of 'climate action'. CITYCENTRE also addresses the UN SDG 3 of 'health and well-being' and UN SDG 10 of 'reduced inequalities', since: shifts to more active transport have a positive impact on public health and; city centres are social and non-excluding, open to all inhabitants, often contain both public and commercial meeting places, and are more easily accessible for those who do not have access to or can use a private car.

2.2 Measures for communication and exploitation

CITYCENTRE has a broad target audience spanning from local actors and public authorities, through to the scientific community within the research fields of city centre development, urban planning and policy processes. The research will be disseminated to the *research community* through seven articles in scientific journals, and five papers and presentations at international scientific conferences. The inclusion of a PhD will ensure new knowledge in education institutions, as the PhD candidate will give guest lectures and involve relevant MA candidates at the University. The research will be disseminated to *practice* through a TØI report summarising main findings, seven articles in popular science magazines, lectures at seminars and conferences, yearly project meetings, and an end-seminar directed towards practice.

Activities that will contribute to the realisation of impact are: pilot testing of measures; developing a guideline for measuring the effects of physical measures implemented; organising workshops with key actors on collaboration processes and the potential in different organisations and structures; developing a guide on executing efficient city centre planning processes; identifying points of improvement in the PBA.

Active collaboration and dialogue with user partners will safeguard relevance and usefulness, as well as an exchange of knowledge generated. Actors will take an active part in producing the knowledge through discussions, case selection, interpretations and quality assessment of findings. Four workshops (involving actors in each case city) and four project meetings (involving all project partners) will be held, during which knowledge will be shared and developed among actors, findings discussed, and potential impacts explored.

3. Implementation

3.1 Project manager and project group

Dr. Aud Tennøy, Chief Researcher for the research group Sustainable Urban Development and Mobility at Institute of Transport Economics (TØI), will lead the CITYCENTRE project. Dr Tennøy is an experienced project leader. She has managed several large projects with many partners and collaborators, financed by the Norwegian Research Council and others. Dr. Tennøy has worked extensively across the field of urban and transport planning and development throughout her career, including six years as an urban planner for Oslo Municipality. Her key research interests and expertise are highly relevant for this project, and include: Effects of how land use and transport systems are developed on how attractive, liveable and climate-friendly cities become; The functioning of planning institutions (like the PBA), systems and processes; Methods, instruments and analyses in planning; How planning practice is executed and how planners use knowledge in planning analyses; and various actors' objectives, knowledge and powers in planning processes. Dr. Tennøy has received international awards for her works on these issues. Dr. Tennøy will be supported in administrative tasks by the highly competent and experienced administration at the Institute. This includes an enthusiastic communication section, helping in disseminating the research to a broader public.

The project will be carried out by an interdisciplinary research team from two strong research institutions within their fields, TØI and the Norwegian Institute for Cultural Heritage Research (NIKU). The TØI team is based in the research group *Sustainable Urban Development and Mobility* that is a leading research community in Norway with respect to urban planning and development. NIKU is the leading Norwegian research community on cultural heritage in spatial planning and community development. The expertise of the two institutes complement each other, and together the project group possess solid scientific knowledge on all issues in the project. The TØI team includes Dr. Aud Tennøy (PhD Urban and regional planning), Dr. Anders Tønnesen (PhD Human geography) and research planner Oddrun Helen Hagen (MA Physical planning). The NIKU team includes Dr. Grete Swensen (PhD Ethnology) who will work together with other well-qualified NIKU-researchers.. The collective project team is well qualified to carry out the tasks in the project and ensure that the project is executed to a high scientific standard. See enclosed CVs for more information.

The project is a collaboration between the research institutes and relevant user partners related to four case cities. To safeguard cross-level involvement, all case cities include participants from the county administration level, municipal level and local city centre actors. Four county authorities (Buskerud, Vestfold, Aust-Agder and Oppland), four local authorities (Kongsberg, Tønsberg, Arendal and Lillehammer) and four city centre retail associations are taking part in the project. They will contribute and collaborate in bringing in relevant issues and experience to the project, as well as case areas to be studied, see section 3.2.

The research team will be supported by an international scientific expert group, which together holds high-level internationally expertise on the issues CITYCENTRE deals with. The expert group will serve as academic sparring partners for the project group in two workshops, where the research is critically discussed to ensure high scientific quality of the work and results. The expert group include Professor Per Gunnar Røe (Department of Sociology and Human Geography, University of Oslo), Dr. John Stone (Urban Planning Program, University of Melbourne), Associate Prof. Enza Lissandrello (Department of Planning, Aalborg University), and Associate Prof. Erling Dokk Holm (Department of Property and Law, NMBU).

CITYCENTRE includes a PhD fellowship in Society, Development and Planning at the Norwegian University of Life Sciences (NMBU). Research Planner Oddrun Helen Hagen (TØI) will be the PhD candidate in the project. Dr. Sebastian Peters (NMBU) has agreed to supervise the candidate, while Dr. Tennøy has agreed to co-supervise. The PhD candidate plan to do a research stay abroad.

3.2 Project organisation and management

The project is divided into eight closely interlinked work packages with defined objectives and tasks.

Main activities	2020		2021				2022				2023				2024	
	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2
WP1: Project management																
WP2: Land use structure																
WP3: City centre qualities																
WP4: Actor collaboration																
WP5: New retail structures																
WP6: Planning processes																
WP7: Synthesis																

WP8: Dissemination														
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Each WP has a designated WP-leader and principal researchers, see below. The management group will include all WP leaders, to ensure good communication, efficient implementation and robustness.

WP1: Project management. *Managing the project, coordinating activities, ensuring a high academic standard, following up the expert group, costs.* Tennøy, TØI (WPL), all WPL.

WP2: Land use structure. *Study how local authorities can plan for and steer the land use development to ensure that the city centre increases its attractiveness.* Tønnesen, TØI (WPL), Øksenholt, TØI.

WP3: City centre qualities. *Study how local authorities can develop their city centres to enhance their attractiveness.* Øksenholt, TØI (WPL), Swensen, NIKU.

WP4: Actor collaboration. *Study how local authorities can strengthen the city centre through better collaboration.* Øksenholt, TØI (WPL), Tennøy, TØI.

WP5: New business models, retail structures and technology. *Study and explore how local authorities can plan and facilitate for new business models, retail structures and technology.* Øksenholt, TØI (WPL), Tønnesen, TØI.

WP6: City centre planning processes. *Study how local authorities can improve and optimise city centre planning processes.* Tennøy, TØI (WPL), Skrede, NIKU.

WP7: Synthesis - an attractive and vibrant city centre. *Analyse how local authorities can optimally develop their city centres to enhance their attractiveness and vibrancy.* Tennøy, TØI (WPL), Øksenholt, TØI.

WP8: Dissemination. *Widespread dissemination of the research results among professionals (local and county authorities, various city centre actors, consultancies, etc.) and researchers in Norway and abroad.* (See section 2.2 and grant application form for more information). Tennøy, TØI (WPL).

The researchers involved in the project is allocated to the defined WPs due to their specific expertise and interests. Dr. Tennøy lead WPs 1 and 7 as she is the project leader. She also leads WP6, corresponding to her interest and expertise in planning processes pursuant to the PBA (see also 3.1). Dr. Tønnesen lead WP 2, building on his expertise and interest in land use structures as explanatory factors for city centre competitiveness. Øksenholt (TØI) will lead WPs 3, 4 and 5, as these WPs, together with WP 2, will be the main focus of the PhD work. NIKU researchers Dr. Swensen and Dr. Skrede will contribute with their expertise concerning spatial planning and cultural heritage in WPs 3 and 6.

All user partners will contribute with their competence and expertise in city centre planning and development. They will cooperate with the researchers in defining interesting cases, and in finding relevant interviewees, documents and data, and will participate in relevant workshops and the like organized by the project, and in the project group meeting which is led by TØI and meets at least once a year. A steering group will be established, with up to five representatives from the funding partners, which will also meet at least once a year. *The county authorities* will ensure interaction between researchers in the project and the municipal and other local actors. They will have a key role in transferring findings, knowledge and innovations to a broad range of cities and actors, and will be a strong dialogue partner for the researchers involved with respect to goals, experiences and challenges in the region and the cities. *The local authorities/case cities* will ensure interaction between researchers and important local actors. They will have a key role in helping to select pilot measures and, if possible, carry this out in their city centre, and in inviting researchers to study their planning and plan making processes. They will be a strong dialogue partner for the researchers involved, and will help to establish contact with important local actors and in obtaining existing data they have access to. *The local actors* (city centre associations, trade associations, etc.) will serve as point of contact between the researchers and the various city centre actors. They will have a key role in facilitating or helping the researchers obtain various information (data, contacts, etc.). If effects of specific measures are to be evaluated, they will assist in preparing for and subsequently obtaining relevant information, such as turnover figures and customer numbers. They will be a strong dialogue partner, a project resource and sparring partner for the researchers, as they have valuable local knowledge with regards to the city centre and the different actors that the project will benefit from.

The main instruments for international cooperation will be i) the participation of international experts in the international scientific reference group, and ii) the PhD-candidate doing a research stay at the University of Melbourne, Australia. In addition, the knowledge created in CITYCENTRE will be disseminated internationally at scientific conferences, which might lead to international cooperation in later projects.

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