3. Planning theories

3.1 Introduction

The following figure illustrates the structure of Chapter 3.

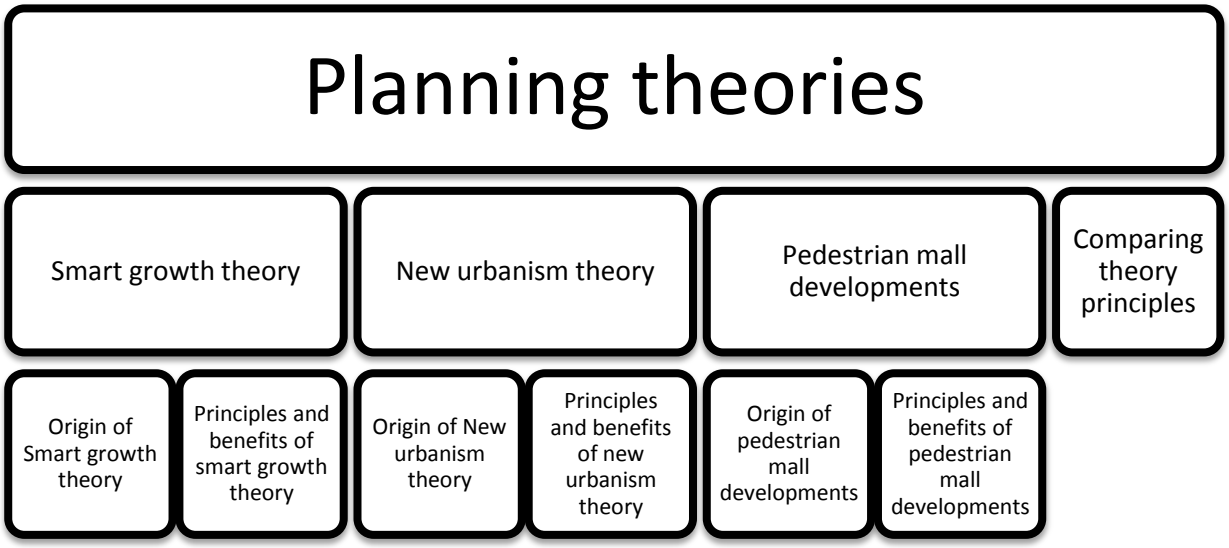

Figure 8: Chapter 3 layout

Source: Own construction (2013)

In this Chapter, as illustrated by Figure 8, two planning theories (Smart Growth Theory and New Urbanism Theory) and one non-motorised transportation development (Pedestrian Mall Developments) were identified. These theories and development could be considered as possible alternatives for urban problems as experienced in unsustainable and private vehicle orientated urban areas (see Chapter 2).

The origin together with ten principles and benefits of each theory and development were discussed, followed by a table comparing the differences and similarities.

3.2. Smart growth theory

3.2.1. Origin of Smart growth theory

The Smart growth theory was a result and alternative to the fundamental question posed, namely growth or no growth. The theory shifted the emphasis from the question and acknowledged that development and conservation are both important. Consequently, the definition of Smart growth,

according to Knaap and Talen, could be formulated as “development that serves the economy, the community and the environment” (Knaap & Talen, 2005: 107).

The origin of Smart growth is difficult to pinpoint to a specific date, however, precursors include the growth controls in the 1960s and the growth management revolution of the 1970s and 1980s. Burchell (2000) indicated that although the origins are unclear, the rapid ascendance of the Smart growth theory can be traced back to three key projects, namely:

- The first draft of the Growing Smart Legislative Guidebook: Model Statutes for Planning and the Management of Change by the American Planning Association in 1997.
- The Tool Kit for Smart growth by the Natural Resources Defence Council in 1997.
- The Smart growth and Neighbourhood Conservation Act by the State of Maryland (USA) in 1997 (Knaap, 2004: 3).

Future growth in a city means innovation and an opportunity for progression. Communities are demanding optimised investment meaning maximum results for the money spent. Residents of many cities are challenging the rules and regulations set in place, forcing them to drive long distances between home and work. Hereby they are also questioning the fiscal wisdom of neglecting current infrastructure, while new developments take place. (Bailey et al, 2006: 5).

Implementing Smart growth strategies and principles will counter the above-mentioned problems experienced in cities by residents. When implemented, residents should be able to:

- Create new attractive, convenient, safe and healthy neighbourhoods.
- Maintain attractive, convenient, safe and healthy neighbourhoods.
- Foster design that encourages social, civic, and physical activity.
- Protect the environment.
- Stimulate growth.
- Most importantly it will create more choices for all residents and visitors; from where to live, how to get around and how to interact with people around them (Bailey et al, 2006:5).

An urban sprawl problem will also be countered by creating compact cities by means of Smart Growth Developments. When communities implement these planning strategies they will preserve the best of the past and create a brighter future (Bailey et al, 2006:5).

Theart (2007:28) states: “By evaluating the pros and cons identified in this article (Smart growth: a sustainable solution for our cities) the main conclusion that can be made is that there are no quick

fixes to the city problems that we have created for ourselves. It is also true that although it can be argued that the Smart growth concept is the way to go, it is not always easy to implement and to make it work in practice. However, with more support and more effective implementation of Smart growth principles in our cities, it is definitely a concept that could possibly make a positive contribution to the quality of our lives. It might also help to ensure that the race to create sustainable cities is won."

3.2.2. Principles and benefits of Smart growth theory

The basis of the Smart growth theory is the Smart growth principles (Blair & Wellman, 2011: 497) as compiled by the Smart growth network. The Developer's Guide Book for Smart Growth (Anon., 2008: 1-12) emphasises reasons why the mentioned 10 principles work, together with a brief description of each:

Table 8: Principles and benefits of the Smart growth theory

Principles	Description	Benefits for residents in urban areas
1 – Mixed land uses	An area can be considered "mixed" when it consists of housing, retail, office, commercial and public zonings. Such development allows residents to walk to shops and work within neighbourhoods	• Shorter commutes. • Easy access to amenities for people that cannot drive. • Less expensive for communities to service.
2 – Compact design	Compact design uses space more creatively and efficiently to reduce the development footprint and to maximise space for parks, agriculture and wildlife habitat.	• Greater number of units can be built on smaller lots. • Open space and parks make developments more attractive. • Wildlife benefits from land conserved as open space. • Lower infrastructure costs • More pedestrian friendly.

3 – A range of housing opportunities and choices	Different sizes, prices and ownership options (lease/own)	• Broadens customer market for housing products. • Creates a more diverse community.
4 - Distinctive, attractive communities with a strong sense-of-place	Creating a unique place that is true to its location by using historic sites, natural features and local materials	• Higher property values. • Great community pride.
5 – Preserve open space, farmland, natural beauty and critical environmental areas	Natural land needs to be analysed and protected. This phenomenon will halt spontaneous urban sprawl	• Increase property values. • Conservation easements protect land for future generations.
6 - Walkable neighbourhoods	Walkable neighbourhoods make it easy and safe for residents to get around by foot.	• Walkable neighbourhoods are attractive. • Walking is beneficial to people's health, community vitality and the environment. • Reduces commuting costs for residents. • A walkable community provides the most affordable form of transportation any community can plan, design, construct and maintain. • Walkability attracts tourists and increases economic vitality.
7 - Direct development towards existing communities	This development means infill planning – densification takes	• Being close to town is an amenity, ensuring

	place in already built up areas, resulting in mixed land uses and walkable neighbourhoods	shorter travel times to service and allowing for multiple modes of travel. • Saves on infrastructure costs and improves the town's economy and vibrancy. • Saves on providing services such as fire, police and infrastructure maintenance. • Meaningful open space on the periphery of the urban edge.
8 - Provide a variety of transportation choices	By providing bike paths, walking paths and roadside stops for busses and other public transportation, developers create alternative transportation choices for residents.	• Certain segments of the population prefer alternative transportation. • Transportation options minimise traffic and cut down residents' fuel expenses. • When neighbours meet on the street it reinforces a strong sense of community.
9 - Make development decisions predictable, fair and cost effective	To be fair to the local community, a transparent, logical and realistic future development plan needs to be adapted and followed by the city council and developers	• Developments that are in line with future plans will be implemented faster; therefore the benefits will be felt by residents sooner. • A fair and consistent

		process ensures a level playing field whereby all developers are treated equally. • Proper planning and clear community needs will result in new development that will contribute to the community it is in.
10 – Encourage community and stakeholder collaboration in development decisions	In order to ensure a successful and sensible development in the local community the residents must be part of the process.	• Development that promotes the community will be supported by the community. • When included in the process stakeholders often proffer valuable problem-solving solutions. Such developments ensure better communities.

Source: Own construction based on Bailey et al (2006)

3.3. New urbanism theory

3.3.1. Origin of New urbanism theory

The idea of forced social mixing in urban areas, cities and towns, originated in the 19th century with idealists and social critics that condemned the living conditions of the poor. The goal of mixing different housing types is driven by the idea that social mixing ensures more equitable access to resources and that social diversity develops a more creative and ultimately more stable, urban environment (Talen, 2010: 490).

Whereas the Smart growth theory was founded by a community of environmentalists and policy planners, New urbanism was much more influenced by architects and town planners (Knaap &

Talen, 2005: 109). The first formalised guiding document, the Ahwahnee principles, for resource efficient communities, was compiled in 1991. This document's core function was to advocate the development of buildings and neighbourhoods that protected the environment and promoted quality of life (Boyko et al, 2009: 141).

In 1993 the Congress for the New Urbanism (CNU) was founded to guide public policy, development practice, urban planning and design. The Charter of the New urbanism promotes the policies compiled which maintain that compact neighbourhoods should be created that provide affordable housing and easy access to jobs and local amenities (Boyko et al, 2009: 141-142). The principles and benefits are listed below.

3.3.2. Principles of New Urbanism Theory

The following table illustrates the ten principles and benefits for residents regarding New Urbanism.

Table 9: Principles and benefits of the New Urbanism Theory

Principles	Description	Benefits for residents in urban areas
1 – Walkability	Most places must be within a 10-minute walk from home or work. Pedestrian-friendly street design is essential and pedestrian streets must be free from cars in special cases.	• Healthier lifestyle with more walking and less stress. • More efficient use of tax money with less spent on spread out utilities and roads.
2 – Connectivity	Interconnected street grid network disperses traffic and eases walking. A hierarchy of narrow streets, boulevards and alleys is necessary and a high quality pedestrian network along with a public realm makes walking pleasurable.	• Better connectivity ensures less congestion and sprawl to deal with.
3 – Mixed uses and diversity	A mix of different sectors including retail and residential. Mixed uses should be implemented on all	• Less traffic congestion and less driving.

	scales – within neighbourhoods, blocks and buildings. These mixed areas will attract a diverse population.	
4 – Mixed houses	A range of types, sizes and prices in closer proximity.	• Higher, more stable property values.
5 – Quality architecture and urban design	The emphasis is on beauty, human comfort and creating a sense-of-place. Human scale architecture and beautiful surroundings nourish the human spirit.	• More freedom and independence for children, the elderly and the poor in being able to get to jobs, recreational activities and services without the need for a car. • Great savings to residents and school boards in reduced transportation costs. • Better sense-of-place and community identity with more unique architecture.
6 – Traditional neighbourhood structure	Discernible centre and edge. Public space at centre. Transect planning – highest densities at town centre and progressively less dense towards the edge.	• More diversity and smaller, unique shops and services with local owners that are involved in the community. • More open space to enjoy.
7 – Increased density	Denser buildings, residences, shops and services closer together for ease of walking. This enables a more efficient use of services and resources.	• Close proximity to main street, retail and other services. • Close proximity to bike trails, parks and nature.

8 – Smart transport	A network of high-quality trains connecting cities, towns and neighbourhoods together. Pedestrian-friendly designs that encourage a greater use of bicycles, rollerblades and walking as daily transportation.	• Pedestrian-friendly communities offer more opportunities to get to know others in the neighbourhood and town, resulting in meaningful relationships with more people and a friendlier town. • Increase sales due to more foot traffic and people spending less on cars and fuel.
9 – Sustainability	Development must have a minimal impact on the environment. Eco-friendly technologies, energy efficiency, less use of finite fuels, more local production and more walking and less driving is pivotal to New urbanism	• Big savings occur by driving less and owning fewer cars which is also beneficial to the environment.
10 – Quality of life	Ultimately putting together these planning principles would add up to enabling a high quality of life well worth living and creating places that enrich, uplift and inspire the human spirit.	• Higher quality of life. • Better places to live, work and play. • Better lifestyle by living above workplace.

Source: Own construction based on New urbanism (2013).

3.4. Pedestrian mall developments

3.4.1. Origin of pedestrian mall developments

Zegeer (1997) defined a pedestrian mall or pedestrianised street as streets or zones that are almost exclusively closed to vehicular traffic and are primarily reserved for the use of pedestrians. The only vehicular traffic to enter these areas are delivery, waste removal and emergency vehicles. Robertson (1993) also added that Europe, and some of the larger cities in the USA, can include public transportation, such as buses or street cars. These types of pedestrian malls are often referred to as transit malls.

These shopping areas are mainly in the central business districts of towns and cities, which are closed for motorised traffic to ensure that residents can commute safely, conveniently and comfortably. This whilst being connected to public transportation and closely located to parking garages for convenient accessibility to private vehicles (Aecom et al, 2011: 5).

Byrnes (2012) indicates that the creator of the first pedestrian mall in America (in 1959 Kalamazoo, Michigan) was also the creator of the first shopping mall in the world. He envisioned a project replicating that of Vienna's Ringstrasse, but a scaled-down concept was built.

The primary reason for developing the original pedestrian mall, and also numerous other pedestrian malls across the world, was to attract businesses and residents back to the central business district that found itself in a state of decay (Rzepczynski, 2009). The growth of the suburban shopping malls also raised fears that the central business area would lose its place as the primary retail destination (Rzepczynski, 2009).

Sepe (2009: 464-465) elaborates saying that "the sustainability of any place depends on a number of factors that contribute to its liveability, quality and identity. Pedestrian intensive areas, in particular urban, cultural and historic poles of attraction, increasingly bear the imprint of globalisation, conveying messages which have developed in an uncontrolled manner and are aimed at conveying their users' patterns of thought and action. In this type of context characterised by inadequate conditions of liveability and quality, an action such as walking, which in itself is perfectly sustainable, may become in a certain sense unsustainable."

3.4.2. Principles of pedestrian mall developments

As previously mentioned, pedestrian malls were primarily developed to counter the decay of central business districts of cities and towns (Rzepczynski, 2009) and therefore followed the same basic principles worldwide to secure the subsequent benefits of improving the area.

The elements of success for thriving public spaces (including pedestrian malls) were identified by Bates (2013) after conducting a study on pedestrian malls in the USA and Europe.

These principles are listed in the table below.

Table 10: Principles and benefits of pedestrian mall developments

Principles	Descriptions	Benefits for residents in urban areas
1 – Accessibility	It is vital for people to be able to easily reach and access public spaces by walking, cycling, using public transportation or utilising a private vehicle.	• **Walking and transit** Good accessibility for pedestrians and transit users comes down to: frequency, connectivity and pleasure. • **Cycling** In the past, cycling was ignored, but the importance is now realised as part of improving walkability. • **Parking** The most important way of accommodating private vehicles is by providing parking near public spaces so people can easily park nearby and walk to the pedestrianised area.
2 – Use of Space	A variety of activities is needed to support outdoor spaces and if people can see street activity; they will want to participate in it. The foundational human needs for interaction can be satisfied in a downtown public space if there are sufficient residential	• **Residential Density** For pedestrian zones and the downtown area that surrounds it to thrive, it is vital that a large number of residents live within downtown areas and near pedestrian zones. • **Mixed Uses** Buildings need to accommodate a variety of uses to help create physical and economic diversity that generates street life. • **Active Uses** In addition to dense residential planning and a

	densities, mixed uses, numerous activities and a variety of attractions.	variety of uses; active uses such as restaurants, markets and recreational facilities should be developed. Public space should be designed so that residents of the city can move, linger and participate in social and recreational activities. • **Attractions** Residents that live in the suburbs need reasons for going to the CBD and people that live in the CBD need to be given a reason for participating in city life. The best way of accomplishing this is by having a series of attractions throughout the downtown area.

3 – Design	A number of design considerations must be taken into account when trying to create pedestrianised public space. The physical form and amenities located within a public space are essential for creating a sustainable and unique area.	• **Form**
		  • **Location**
		  Pedestrian areas need to be located within the heart of a community or in downtown where the highest level of pedestrian traffic exists. These areas should also have clearly defined edges and centres.
		  • **Planning on pedestrian scale**
		  Pedestrian zones should be designed on human scale. Visitors should therefore be comfortable with distances, heights and the surrounding built-up area.
		  • **Visual Interest**
		  Streets and public spaces should meander so they entice pedestrians to walk along them.
		• **Amenities**
		In creating a sustainable and prosperous pedestrian street, amenities such as benches, landscaping, water features, sculptures and lights should be thoroughly planned and thoughtfully implemented.

4 – Comfort	Pedestrian zones not only need to be appropriately located, accommodate	• **Weather** Physical comfort such as access to sun, shade and protection from wind is required for a successful pedestrian area. It is important to note that if a

	effective uses and be properly designed, but also need to be comfortable for their visitors. Comfort includes how well people are protected from the weather and how well the area is maintained. Comfort is also derived from how a pedestrian's area makes people feel when visiting it.	pedestrian space is designed to provide physical comfort, people will walk in almost any weather conditions, according to Speck (2012). • **Maintenance** It is important to maintain the pedestrian zone and keep it clean. • **Feeling** If all the elements listed above are properly implemented they will create a place that makes people feel comfortable, welcome and safe from crime and vehicular traffic.

Source: Own construction based on Bates (2013)

3.5. Comparing theory principles

The Smart growth, New urbanism and Pedestrian mall development theories share similar views (see Table 11), but there are also significant differences, most notably the origins and goals of each (Knaap & Talen, 2005: 109).

The six founders of the Congress for the New Urbanism were all practising architects and planners, while the Smart Growth Network resulted from joint effort of the USA Environmental Protection Agency and other government organisations. As a result Smart growth tends to be more policy oriented in its solutions while New urbanism tends to be design driven (Goldstein, 2006: 64).

The similarities and differences of the theories can be derived from the 10 principles of each. As can be observed in the following two tables, seven of the ten principles complement one another, whilst three differ.

The following table illustrates the principles shared by the three theories.

Table 11: Principles shared by Smart growth, New urbanism and Pedestrian mall development

Corresponding principles shared by the Smart growth theory, New urbanism theory and Pedestrian mall developments		
Smart growth principles	**New urbanism principles**	**Pedestrian mall principles**
Principle 1: Mixed land uses	Principle 3: Mixed uses and diversity	Principle 2, key factor 2: Mixed uses
Principle 2: Compact design	Principle 7: Increased density	Principle 2, key factor 1: Residential density
Principle 3: A range of housing opportunities	Principle 4: Mixed houses	Principle 2, key factor 1: Residential density
Principle 4: Distinctive, attractive communities with a strong sense-of-place	Principle 5: Quality architecture and urban design	Principle 3: Design
Principle 6: Walkable neighbourhoods	Principle 1: Walkability	Principle 1, key factor 1 & 2: Walking, transit and cycling
Principle 7: Direct development towards existing communities	Principle 6: Traditional neighbourhood structure	Principle 3, key factor 1.1: Location
Principle 8: Variety of transport choices	Principle 8: Smart Transport	Principle 1: Accessibility

Source: Own construction based on Anon (2008), Bailey et al. (2006), New urbanism (2013) & Bates (2013).

The table below illustrates the unique principles of each planning theory.

Table 12: Unique principles of Smart growth, New urbanism and Pedestrian mall development

Unique principles of each planning theory		
Smart growth principles	**New urbanism principles**	**Pedestrian mall principles**
Principle 5: Preserve open space, farmland, natural beauty and critical environmental areas	Principle 2: Connectivity	Principle 4: Comfort
Principle 9: Make development decisions predictable, fair and cost effective	Principle 9: Sustainability	Principle 2, key factors 3 & 4: Active uses and attractions

Principle 10: Encourage community and shareholder collaboration in development decisions	Principle 10: Quality of life	Principle 3, key factor 1.2: Planning on pedestrian scale

Source: Own construction based on Anon (2008), Bailey et al. (2006), New urbanism (2013) & Bates (2013).

3.6. Conclusion

The Smart growth theory was the answer to the question as to whether to develop nature or to conserve it. Thus Smart growth promotes sustainable development (See Figure 1) meaning development that serves the economy, community and the environment. New urbanism, on the other hand, promotes compact neighbourhood planning, the provision of affordable housing and easy access between jobs and local amenities. Although New urbanism development is also sensitive to the environment, the needs of the poor are also a core factor. Different from Smart growth and New urbanism, the development of pedestrian malls focuses on a specific area or street within the CBD of an urban area. The core reasons for pedestrian mall developments were to attract residents back to a deteriorating CBD and to ensure that the CBD remains the primary business area within the city.

Notwithstanding the fact that the three developments were compiled separately, by different professionals and to address different urban problems, they share similar principles.

The 10 core principles of New urbanism, Smart growth and Pedestrian malls were identified and compared with one another to illustrate which correspond and which could be classed as theory-specific principles.

Tables 11 and 12 compared the principles, and seven of the ten principles were identified as similar whereas three were theory specific. The seven corresponding principles were thus seen as highly important for development in the central business district and the three individual principles as development specific.

A combined view of New urbanism, Smart growth and Pedestrian mall developments illustrate that developments taking place in an urban area should strive towards similar goals to improve that area for its residents.

High-density developments should be implemented in the city centre and fill-in planning should take place in current fall-out-areas and unused erven. Within the denser city, different but compatible

land uses should be present; hence moving away from individual zone planning. A variety of residential options should be available throughout the city and more residential options should be available in the CBD for residents. Forward planning is an instrumental component in urban planning, resulting in quality designs and the creation of sense-of-place. An urban area's transport system should be based on equality between different modes; but also between private, public and non-motorised transportation. To be dependent on one mode (e.g. the private vehicle) is therefore unsustainable.

The figure below substantiates that the planning theories scrutinised form an integral part in the development of NMT within urban areas. Elements of the cycle, as seen in the figure below, relate with the principles identified as part of the Smart growth theory, New urbanism and Pedestrian mall developments.

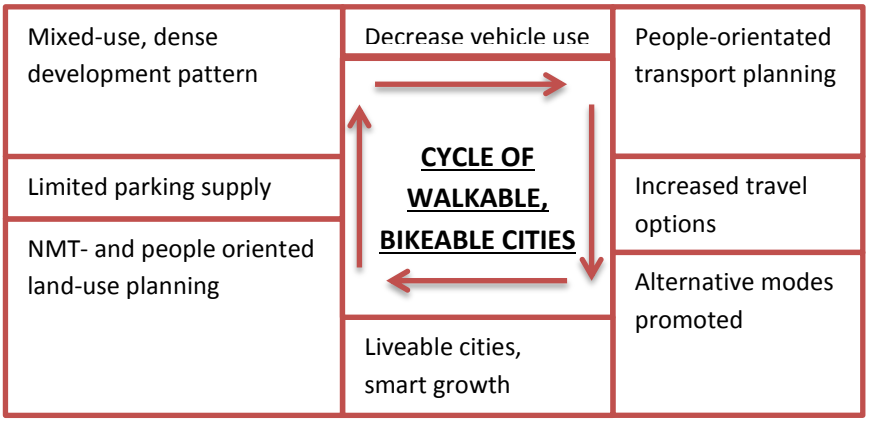

Figure 9: Cycle of non-motorised transport development within urban areas

Source: Evaluating Non-Motorised Transportation Benefits and Costs (2013).