

Advances in 21st Century Human Settlements

Charles Chavunduka
Innocent Chirisa *Editors*


New Urban Agenda in Zimbabwe

Built Environment Sciences and Practices

 Springer

Advances in 21st Century Human Settlements

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Preface

The New Urban Agenda's potential contribution to the built environment sciences and practice in terms of skills, methods and processes has not been explored in the Zimbabwe context, yet towns and cities are engines for sustainable development. Attention to the built environment disciplines and practice is important because of their centrality to economic dynamism and sustainability of urban services. This collection, contributed from different built environment disciplines and professions, seeks to support the UN-Habitat New Urban Agenda passed at Habitat III in Quito, Ecuador, in 2016. The book begins by exploring theoretical and conceptual material on the built environment concept. It recognizes that sub-Saharan African countries and Zimbabwe in particular are operating in a changing environment of rapid urbanization, unemployment, poverty and inequality. Its premise is that the built environment sciences and practice can make a contribution to addressing sustainable development challenges through the introduction of technology and innovations in infrastructure, institutions and processes that enhance socio-economic growth and development. The book brings together scholarship from various disciplines in the built environment and presents sector initiatives such as those relating to curricula and new practical approaches for classroom application, the application of emerging technologies like blockchain, smart contracts, artificial intelligence and the use of remote sensing. It offers a renewed built environment concept, which is interdisciplinary in approach, one that redefines the discipline and practice pillars and their economic, social, environmental and governance dimensions for sustainable development. Hitherto, in the Zimbabwe context, approaches in built environment teaching and professions have lacked an integrated view that leverages co-innovation in the development of sustainable cities and communities.

The book is aimed at readers from disciplines in spatial planning, land surveying, architecture, real estate, geography, construction and civil engineering, quantity surveying, related sciences; and practitioners, including those working within international organizations, NGOs and built environment consultants. It fills a gap by connecting the hitherto sparse and sometimes fragmented built environment sciences and practice with the sustainable development agenda. In that way, it strengthens understanding of the New Urban Agenda and Sustainable Development Goals in

Zimbabwe. New Urban Agenda issues are discussed in the context of the actual planning, design and implementation of the built environment, highlighting both positive and negative practices. It further aims at purposefully influencing the New Urban Agenda and implementation of Sustainable Development Goals for success. With a focus on Zimbabwe, it highlights the opportunities and challenges faced in creating the built environment; and addresses how built environment sciences and practice can be shaped to steer the New Urban Agenda. Simultaneously, it analyses the reverse relationship, as through the provision of international norms, aspirations and guidelines; the New Urban Agenda positively influences the built environment disciplines and practice. It advances scientific discourse on the built environment concept and its effective application to the realization of the New Urban Agenda in Zimbabwe. Among novel contributions, the book offers a built environment climate resilience framework with a comprehensive platform that is accessible to developers and decision-makers. It identifies initiatives including those that harness smart technologies, academia thrust on innovation and business linkages, as well as those that have looked into shared value creation in the built environment.

Harare, Zimbabwe
Bindura, Zimbabwe
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The Built Environment in the Context of the New Urban Agenda: An Overview



Charles Chavunduka, Innocent Chirisa, and Tsungirayi Diana Tsikira

Abstract Zimbabwe is experiencing rapid urbanisation that is potentially unsustainable given the economic, social, environmental and governance context. The built environment sciences and practice can make a contribution to addressing sustainable development challenges through the introduction of innovations in infrastructure, institutions and processes that enhance economic growth and development. The book is aimed at readers from disciplines in spatial planning, architecture, real estate, geography, construction and civil engineering, land surveying, quantity surveying, related sciences, professionals and practitioners. The built environment has received increased prominence because of its potential in steering the New Urban Agenda through emerging discourses, institutions and practices; yet in most of sub-Saharan Africa and Zimbabwe in particular, the concept has not been fully developed. This book brings together scholarship from different disciplines in the built environment and presents sector initiatives such as those relating to curricula, smart technologies and cutting-edge innovations in steering sustainable development. It presents initiatives in various sectors of the built environment that have the potential to boost the competitiveness of cities and ideas on how the disciplines can be shaped for steering the sustainable development agenda. The chapter contributions in this book are outlined and how they contribute to evolving ideas on the built environment.

Keywords Built environment · New urban agenda · Curriculum · Practice · Zimbabwe

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1 Introduction

The idea for this book has its origin in 2019 collegial discussions about the need to establish a faculty of the built environment at the University of Zimbabwe. All built environment disciplines would be offered in one faculty thereby improving the arrangement hitherto whereby some built environment disciplines like spatial planning and real estate had been offered in the faculty of social sciences. At that time, a countrywide universities curriculum review was undertaken with the objective of having the education system contribute to the transformation of Zimbabwe into an upper-middle income economy by 2030. The curriculum was to respond to the national industrialisation and modernisation agenda. In that respect, education should go beyond the theoretical epistemic where knowing is a dead end in itself, to transforming knowledge into ‘goods and services’ through innovation for industrialisation.

During the national curriculum review, engagement in the built environment cluster raised concern with the fact that disciplines have been operating in isolation. In view of this limitation, the curriculum development and review process debated the adoption of inter and trans-disciplinarity in the built environment concept. This entails a new trajectory, moving away from discipline-specificity that excludes modules from other relevant disciplines to include such as long as they enhance the practical application of the degree qualification in real life. For example, a degree in civil engineering should also include modules in spatial planning and accounting. Thus, debate focused on the use and relevance of the interdisciplinary approach in the built environment concept.

Debate about the built environment disciplines coincided with related discussion concerning the matter that they fall under different professional institutions. The arrangement has not enabled interested built environment disciplines to participate in activities of common concern. An example is the ongoing revision of the 1977 Model Building By-Laws by engineers, a matter that is of interest to planners and architects. The lack of a coordination mechanism among professional institutions has precluded essential collaboration that would enhance built environment practice.

Whilst reviewing the built environment curriculum it became clear that it needs to leverage sustainable urban development, hence the New Urban Agenda (NUA). Essentially, SDG 11 aligns with the NUA but Zimbabwe policy documents are silent about the agenda. The National Development Strategy 1 (2021–2025) makes reference to inclusivity and resilience building but does not address other aspects of SDG 11. This book identifies gaps in the New Urban Agenda in Zimbabwe and explores how various built environment disciplines can be shaped to steer the process. It is aimed at readers from disciplines in spatial planning, architecture, real estate, geography, construction and civil engineering, land surveying, quantity surveying, related sciences, professionals and practitioners.

2 Legacies in Built Environment Education

Although Zimbabwe withdrew from membership of the Commonwealth in 2003, as a former British colony, built environment knowledge and practice were modelled on British higher education (Home 2013). There is a Eurocentric bias in knowledge production in the built environment disciplines that is a legacy of colonial building traditions. In fact, universities in anglophone Africa are strongly influenced by models inherited from the colonial era. Former British colonies have been members of various Commonwealth Associations of civil engineers, architects, land surveyors and planners and the professional training model has been based on British practice. For example, the Association of Surveying and Land Economy (CASLE) was formed in 1969 as a federation of independent professional societies representing surveying and land economy in Commonwealth countries. It develops professional bodies in its field and sets standards for all specialisms in surveying. The Commonwealth Association of Planners was formed in 1972 with the objective of developing skills of urban and regional planners across the Commonwealth to meet the challenges of urbanisation and sustainable development of human settlements.

Through the influence of Commonwealth institutions such as the Royal Town Planning Institute (RTPI), the built environment curricula in Zimbabwean universities have remained similar to those taught across the Commonwealth. Before the Government of Zimbabwe established planning schools, most practising planners sought membership of the RTPI in order to strengthen participation in Commonwealth built environment professional networks. The legacy of Commonwealth Associations may inhibit progress in evolving and advancing knowledge suitable for the Zimbabwe context of rapid urbanisation and rising levels of poverty in urban and rural areas. Apart from the influence of Commonwealth institutions, the legacy of colonial laws has been slowing the adaptation of built environment curricula to interdisciplinarity. Built environment curricula in African universities and Zimbabwe in particular have been slow to adapt and evolve, but curriculum development is beginning to adopt interdisciplinary approaches, and the breaking down of disciplinary boundaries to solve common problems (Home 2021).

3 The New Urban Agenda and Sustainable Development Goals

The New Urban Agenda (NUA) presented at the UN-Habitat III Conference held in Quito, Ecuador, in October 2016, is mainly aligned with Goal 11 of the United Nations Sustainable Development Goals (SDGs), which is to turn urbanisation into an engine for development and to make cities more inclusive, safe, resilient and sustainable (Caprotti et al. 2017; UN-Habitat 2016). It focuses on three aspects, which are to promote sustainability and inclusion in society to end poverty, promote inclusive and sustainable urban wealth and promote resilience and sustainability in

development and the environment. It is a framework for guiding countries and their urban areas towards sustainable urbanisation. It is not legally binding and does not have an implementation plan. As such, different countries have been tackling the NUA in their own ways.

The 2030 global agenda for sustainable development stresses the importance of rapid urbanisation as both a challenge and solution to the most pressing global issues (Robin et al. 2019). Though cities only occupy 2% of the total land mass, they generate 70% of global GDP, consume over 60% of global energy, emit 70% of greenhouse gases and generate 70% of global waste (IISD 2018). Seeing as cities can generate wealth and grow the economy, the idea behind the NUA is to turn urbanisation and cities into tools for sustainable development, which in turn leads to job creation, poverty reduction and increased quality of life. There are too many people living in poor-quality housing and without adequate infrastructure services such as water, sanitation and electricity, without stable employment, reliable sources of income, social services or prospects for upward social mobility (UN-Habitat 2016). Informal settlements are home to about 62% of African urban population (UN-Habitat 2013) and informality constitutes the dominant form of contemporary urban living (Davis 2006). The NUA represents a paradigm shift in several ways. Firstly, it is a shift towards a new model of urbanisation that can better respond to the challenges of the twenty-first century, that is, issues such as inequality, climate change, informality in the urbanisation process and in job creation, and the unsustainable forms of urban expansion. Secondly, it is a shift away from the rigidity of the technocratic generic modernist model towards a more open, malleable and incremental urbanism that recognises the role of space and place and how they are shaped by planning and design—in making cities more equitable. Thirdly, it represents a paradigm shift away from the specialist-led approach to urban development embodied in the Charter of Athens towards a much more participatory process of urban co-creation (Mehaffy and Haas 2020).

The basis for the NUA is the many SDGs that can be met with sustainable urban policies and good local governance (Satterthwaite 2016). National urban policy is a key component of the NUA and is defined as policy specifically created to directly affect the development of urban areas (van den Berg et al. 2007). The other key components are rules and regulations, territorial planning and design, and municipal finance. National urban policies meet national development targets with legislation playing an important role to achieve orderly development. The NUA puts emphasis on regulated spatial planning, along with concepts of territorial and regional balance. Ultimately, the NUA projects international commitment to action on urbanisation as a global concern. It is a vehicle for achieving the SDGs and in particular Goal 11. Cities have a central role in the achievement of SDGs and if the NUA were to focus narrowly on SDG 11, a holistic approach to urban development would be lost (Caprotti et al. 2017). There is complex interaction among the SDGs which should be taken into consideration for effective implementation of the NUA. Underpinning the NUA is the assumption of the existence of strong, well-resourced and well-capacitated governments at national, regional and local levels; able to develop and

implement policies and plans, and drive forward what is largely a state-directed agenda (Watson 2016).

4 New Approaches to Teaching

The concept of the built environment appears to have been popularised in the 1960s, but a review of the literature shows that developing a shared understanding of it remains a challenging task (Moffatt and Kohler 2008). The conceptualisation of the built environment has changed over the decades (Srinivasan et al. 2003). In its initial definitions, the built environment focused on buildings, their planning, creation and occupation. This approach focused particularly on practicality and measurable performance (Davis et al. 1993; Lutzkendorf and Speer 2005). During this period, the idea of the built environment was mainly limited to buildings and other forms of infrastructure such as roads, bridges and dams. This view dates back to the city beautiful movement (Wilson 1994) whereby it was believed that making American cities aesthetically pleasing would encourage the wealthy to spend their money there (Tougwa 2015). It was a materialistic approach, one which made it easier for policies to be changed according to the demands of the market or economy at any given time. Little thought was given to whether the physical infrastructure that was being added would actually benefit the broader urban society.

With time the idea of the built environment as a physical artefact shifted to being a process that is both directly influenced, and indeed created by actors, as well as the broader socio-political-economic climate (Nielsen and Farrelly 2019). It is both malleable and flexible to change through the agency of professionals such as spatial planners, urban designers and architects, whilst also being fixed and obdurate once physically built as a form of socio-technical lock-in. It is produced by society, whilst simultaneously influencing the actions and decisions of society. The built environment can reinforce society's sense of place, convey power and dictate what is acceptable and what isn't. It can be used as marketing, enticing visitors and new residents. It can influence user decisions and behaviour, that is, more bikeways, dense matrix of individual shops, walkways encourage cycling and walking versus driving.

Recent conceptualisation of the built environment views it as a system. It is a complex and interconnected system made up of buildings, people and services which consume, generate and import resources to create wealth, as well as dispose of the waste created during the process (Moffatt and Kohler 2008; Nielsen and Farrelly 2019). This expansive notion of the built environment conveys a systems approach, where dynamic relationships exist between built environment elements (Moffatt and Kohler 2008). Here the built environment is conceptualised as a socio-ecological system. It is constantly changing, reflecting the evolution of social systems and influencing this evolution in turn. Adopting a systems perspective to the built environment defines it not as an object but as social-ecological system. The built environment is a system and has material flows that begin with inputs from nature, then flow into intermediary processes. After use, flows may be reconverted by infrastructure systems

for reuse. Ultimately, all flows are directed to waste products. Economic mainstream theory presents relations between the built environment and the ecosphere as exchanges between two equivalent systems. The built environment only exists in relation to the ‘non-built’ environment, that is, the ecosphere. It represents physical artefacts that embody a diverse array of overlapping systems at a point in time that have created the final outcome.

Contemporary thinking about built environment sciences and practice has seen persuasion in the Biglan disciplinary model which defines the built environment as an applied, but theoretically coherent, interdiscipline with a common epistemological axiomatic (Chynoweth 2009). The Biglan model develops its ideas from Kuhn’s (1962) concept of a paradigm. Science proceeds, not through a process of incremental development, but by periods of uneventful ‘normal science’ interspaced by periods of rapid change (or paradigm shifts) following a crisis in the prevailing epistemological and methodological paradigm. Within this thesis, it is noted that different academic disciplines are characterised, to varying degrees, by the presence of paradigms that prescribe the appropriate problems of study and the validity of the methodologies to be employed. Some fields (typically the natural sciences) are characterised by highly developed paradigms, but others (e.g. the humanities) are less so.

The Biglan model draws on the concept of a paradigm which it uses to place disciplines on a continuum from ‘hard’ (paradigmatic) to ‘soft’ (non-paradigmatic). The model also explicitly incorporates the pure/applied knowledge theme which enables it to identify any discipline on a hard-soft/pure-applied matrix. Based on Biglan’s empirical findings, the position of individual academic disciplines can be plotted on a matrix as illustrated in Fig. 1.

In Fig. 1, the natural sciences fall into the bottom left (hard-pure) quadrant whilst the arts and humanities are found in the bottom right (soft-pure) part of the matrix. In fact, there is a continuum from the natural sciences on the far-left-hand side of the diagram, through the social sciences in the centre, to the humanities and finally to the arts on the far-right-hand side. ‘This transition reflects the progressive relaxation of paradigmatic requirements and the increasing level of personal input by the individual scholar into the academic enterprise’ (Chynoweth 2009; 304). The matrix is completed by the inclusion of the applied axis. In this conceptualisation, the applied sciences, serve the engineering professions and appear in the top left (hard-applied) sector whilst the social and creative professions are found in the top right (soft-applied) quadrant.

In Zimbabwe, the built environment subject area is not well-established as a recognised field of study. Zimbabwe universities define the field as including engineering, architecture, urban and regional planning, quantity surveying, land surveying and real estate. This definition describes the field in terms of its various fields of application, rather than defining its cognitive base. Most undergraduate degree programmes in these disciplines operate in isolated silos (Ilesanmi 2017). They are mainly based on discrete curricula which prepare students as professionals: engineers, architects, planners, quantity surveyors, realtors and land surveyors—with limited interdependencies. The curriculum content of built environment undergraduate programmes

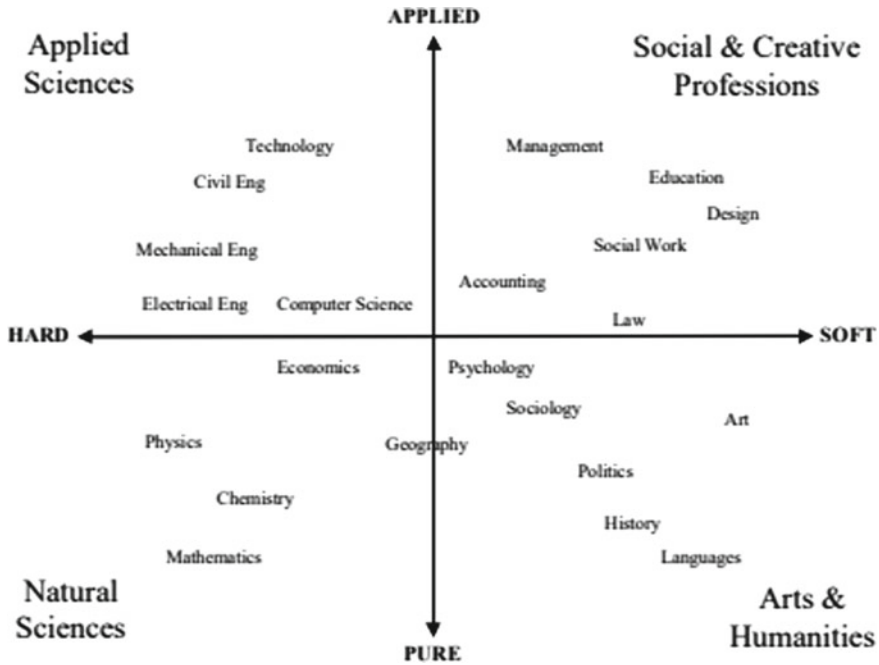


Fig. 1 Biglan disciplinary model. Source Chynoweth (2009)

provides an indication of the relevant areas of expertise. Various professional institutes have defined its academic base by reference to particular areas of knowledge. Although there are inevitably minor differences in the various descriptions, a degree of consensus is seen to emerge regarding the substantive areas of built environment knowledge. For the purpose of this book, these are defined in terms of the following six subject disciplines: construction and civil engineering, real estate and land economics, architecture, spatial planning, quantity surveying, geoinformation and land surveying.

The predominantly applied nature of the field’s knowledge base can be illustrated by locating these areas of knowledge within the Biglan model (Fig. 2).

This exercise also highlights the enormous diversity of academic practices within the built environment which are seen to span almost the entire spectrum of the arts and sciences. This latter point raises questions as to whether it is appropriate to describe the field as an academic discipline at all, or whether it is simply an amalgamation of disciplines which collectively serve the fields of application identified above.

The built environment field is not a discipline in the sense of having an epistemic community sharing a unified knowledge domain. Also, the field is too diverse to be described as an academic discipline in its own right. Yet problems of sustainable urbanisation transcend conventional disciplinary boundaries and require an interdisciplinary approach. Initiatives to improve the urban environment and the poor need

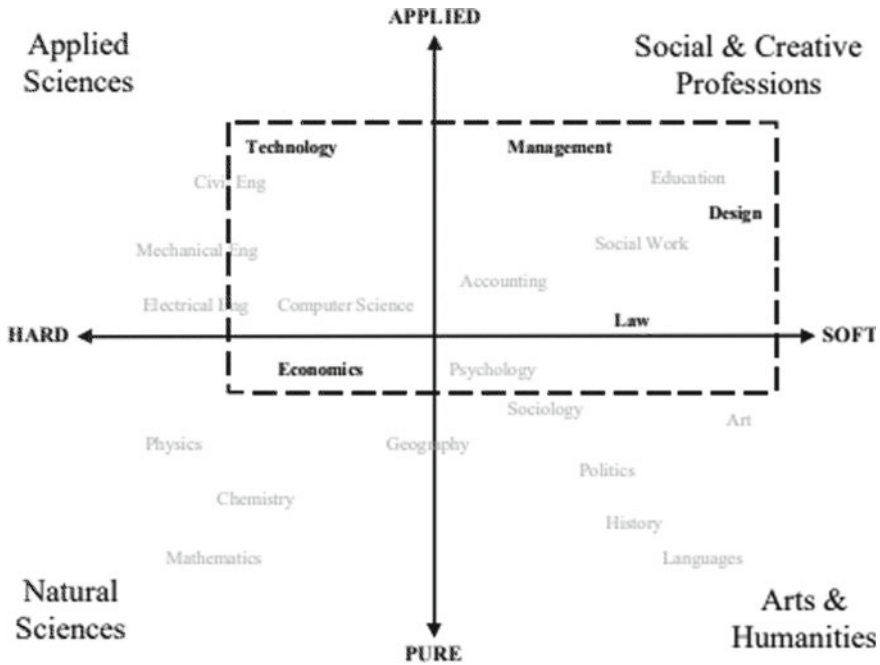


Fig. 2 Built environment knowledge base. *Source* Chynoweth (2009)

a holistic approach, more so, in ‘overheating’ Southern cities that are ‘deindustrialising’ and where populations are increasing (Evans and Marvin 2006). These complex societal problems do not respect disciplinary boundaries and are better understood and solved through an interdisciplinary approach (Stock and Burton 2011). Thus, interdisciplinary knowledge, skills and education are essential to meeting the shortage in high and middle-level human resources needed for the NUA.

There is an evident quest for interdisciplinarity but the Zimbabwe built environment is characterised by multidisciplinary. Multidisciplinary occurs where a variety of disciplines are encountered simultaneously in circumstances where the possible relationships between them are not made explicit. This is frequently associated with undergraduate modules where much common ground exists among the built environment disciplines but there has been a very slow convergence in approaches. There are evident differences in paradigms, methods and approaches between engineering and other built environment disciplines which pose a challenge to interdisciplinarity. The issue of disciplinary loyalty is strong but breaking down of barriers is more urgent than ever despite difficulties.

Interdisciplinarity occurs where a number of separate disciplines surrender their own axiomatics and collectively define themselves by reference to a common strategic axiomatic. This takes place where the traditional disciplines of knowledge are brought together in structures which reflect ‘basic themes of society or need areas’ rather than their own disciplinary identities. The existence of a common axiomatic

then facilitates epistemological integration as the disciplines collectively address the resolution of common problems. Where this occurs a new hybrid form of knowledge is created which is usually referred to as an interdiscipline (Klein 1990).

In Chap. 2, Muneta and Chirisa do a global analysis of the contribution of value chain process in the built environment. They reckon that building processes are very complex and hence need more interaction and collaboration between actors in the industry. Various opportunities in the built environment are identified for eliminating process and market barriers in organisational innovation leading to new business models focusing on collaboration between the different building actors and/or new construction value-chain-related ecosystems. Improved chain relations and overall chain performance are expected to yield tangible benefits in terms of economic performance and, in some cases, poverty reduction. A really sustainable value chain demands a profound understanding and insight into resource production and heritage, and a comprehensive and sound assessment of good governance, social consequences, working conditions and environmental management. They identify an important role of government as a major investor in the built environment and environmental value chain. Improvement in digital technologies is seen to play an important role in the development of intelligent business models and their use in understanding share value creation in built environment context and the well-being of society, users and residents.

In Chap. 3, Chamunorwa reminds us that sustainable urbanisation requires an active role of the biophysical environment in shaping the built environment. The chapter examines the biophysical environment and built environment nexus and finds opportunities for planning, designing and managing the latter using the former's components as the guiding framework. It makes recommendations for government to craft policies that integrate biophysical conditions of urban areas in planning, shaping and managing the built environment. Counsel is given on the need for planning frameworks to include issues that go beyond traditional site analysis.

In Chap. 4, Masarira introduces built environment sciences by exploring the role of geoinformatics and land surveying in the realisation of the NUA. The chapter highlights challenges arising from rapid urbanisation and informalisation, particularly economic inequality, high youth unemployment and environmental degradation. The cadastre is posited as an engine providing a base for land use planning, tenure security and upgrading of informal settlements. Cadastral information, topographic mapping and existing plans provide a database shared by surveyors, engineers, architects, planners, realtors and other professionals in the built environment. Innovations including the adoption of inclusive tenure approaches, flexible tenure models, fit-for-purpose registration and use of drone technology in informal settlement upgrading will leverage the ability of geoinformatics and land surveying in steering the NUA in Zimbabwe.

In Chap. 5, Chavunduka points out that spatial planning provides a framework for sustained and inclusive economic growth, realisation of adequate standards of living and working conditions for all segments of society and management of the built environment of cities and territories. The chapter explores initiatives in spatial planning particularly informal settlement upgrading that have been advancing the goal of

achieving sustainable cities and communities. It further analyses how the initiatives have been constrained by lack of an effective strategy for implementing the NUA, outdated legal and institutional frameworks, and lack of regulation of the planning profession. A coherent and up-to-date spatial planning policy, legal and institutional framework including regulation of the planning profession are recommended for the NUA.

In Chap. 6, Shumba examines the contribution of construction and civil engineering to the NUA in Zimbabwe. The agenda is seen from the perspective of developing sustainable smart cities. Discussion of the contribution is done within the context of the National Development Strategy 1 and Zimbabwe Vision 2030. A series of case studies on construction projects, integrated water management, water and sanitation, and smart city initiatives are used to demonstrate progress towards the achievement of Goal 11 (sustainable cities and communities), Goal 6 (clean water and sanitation), Goal 9 (Industry, innovation and infrastructure) and other SDGs. The chapter underscores the need for an implementation plan for the success of the NUA in Zimbabwe and sub-Saharan Africa.

In Chap. 7, Zavirima and Mavhima consider the contribution of architecture to the NUA from sustainable development and smart cities perspective. The centrality of architecture in the built environment is explored through the architectural concept of housing. Architectural role in steering the NUA is constrained by self-interested institutions, outdated laws, regulations and by-laws that do not enable intra and interdisciplinarity, public participation, evolving digital and building technologies including building information modelling. The chapter recommends a review of the legal framework to enable public and professional participation, and adoption of affordable new technologies for delivery of housing infrastructure, smart buildings, sustainable cities and communities in the NUA.

In Chap. 8, Kanonhuhwa and Mashingaidze analyse rapid urbanisation, infrastructure decay and challenges posed by the increase in informal public transport in relation to improving access to affordable, secure and reliable public transport. Official policy has been to capacitate a wholly government-owned public transport operator but the operator has not coped with demand. On the basis of case studies of Harare and Mutare, the authors proffer policy advice that is centred on improving the efficiency of the urban transport system as a whole, shifting towards environmentally friendly modes of transport and fuel efficiency. This would be enabled through the adoption of instruments on land use planning, regulation of norms and standards and investment in a functional public transport system.

In Chap. 9, Moyo and Chigara address the role of quantity surveying education through key informant interviews with quantity surveying academia, professional body representatives, consultants and government officials. The contribution of quantity surveying to the NUA faces among others, challenges arising from limited vocational education and training in sustainable development, nascent profession, lack of coordination mechanism among built environment professional bodies and absence of an integrated Construction Act. This has seen quantity surveying lagging behind other built environment professions in steering the NUA. Perceptions shared by key

informants call for strengthening education for sustainability as well as a responsive construction policy.

In Chap. 10, Kwangwama examines the role of real estate and land economics in driving the NUA in Zimbabwe. The chapter traces the history of real estate in Zimbabwe to inform the opportunities and constraints faced in implementing the NUA. The shift from segregation of land uses towards mixed-use development has been an important paradigm in real estate development bringing more inclusive, equitable and sustainable outcomes. Land is found to be a constraint to real estate development because unlike in the first two decades of independence, post-2000 fast-track land reform has allocated acquired peri-urban farms to housing cooperatives and land barons who have not improved it through land development services thereby compromising the delivery of inclusive, equitable and sustainable cities. The continued decline of the national economy negatively affected the availability of finance, new investment and a sustainable built environment. A stable macro-economic environment and improved land governance are identified as essential ingredients for real estate to enable the NUA in Zimbabwe.

In Chap. 11, Mazongonda and Chigudu address outdated legal and institutional frameworks including planning models and prescribe revisions for realisation of the NUA. The existing framework is rigid and development control biased but given rapid urbanisation and informalisation trend in Zimbabwe, planning ought to expend resources on visioning the future African city rather than evictions, demolitions and removals. Drawing from country trends in informality, urban economics, technological factors, environmental conservation, planning process and governance quality; the authors analyse the forces at play in pursuing the NUA. Governance reform is recommended for sustainable cities.

In Chap. 12, Chavunduka turns to a discussion of climate resilience amidst the impact of extreme weather events and the role that built environment disciplines and practices can play in climate change mitigation and adaptation. The chapter highlights that it is imperative to factor climate resilience in planning as a means to attaining the global concern on sustainable development and the NUA. It recommends a climate resilience framework that offers a comprehensive platform for developers and decision-makers.

In the last chapter, the authors review some recent scholarship and stakeholder activity and speculate on the future of the African built environment over the remaining 8 years of the New Urban Agenda and beyond.

5 Conclusion

The chapter introduced issues surrounding the potential adoption of the interdisciplinary approach in the built environment. It found that colonial legacy in built environment education is a constraint to evolving interdisciplinary approaches. In Zimbabwe, built environment disciplines such as architecture, urban and regional planning, quantity surveying, land surveying and real estate operate in silos yet

curriculum development is pursuing interdisciplinary approaches. A case is made for interdisciplinary knowledge, skills and education in leveraging the role of the built environment in steering the NUA.

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