NELSON MANDELA UNIVERSITY

PROFESSORIAL INAUGURAL LECTURE (FULL TEXT) PROFESSOR BRINK BOTHA

Topic:

"PROPERTY DEVELOPMENT BODY OF KNOWLEDGE (PDBoK)"

Faculty of Engineering, the Built Environment and Technology

11 August 2021

Table of Contents	Page
Abstract	3
1. Background and introduction	4
2. Definition of terms	
a. Property developmentb. Real Estate developmentc. "Body of Knowledge (BoK)"d. Best Practice	4 4 4 4
3. Property development explained	5
4. Factors affecting success in property development projects	9-11
5. The property development project life cycle	11-12
6. Property development knowledge areas	12-15
a. New proposed knowledge areas	16-19
7. Perceived property development body of knowledge	19
8. Proposed best practice guide towards sustainable success in the	
profession of property and real estate development	19-20
9. The research	22
10. The process	22
11. Conclusion	23
12. Recommendations	23
13. References	24

Abstract

Property development constitutes one of the largest enterprises and gross domestic product contributors of the world. Property development is about the development of land or Real Estate. The business of property development boasts enormous successes over the centuries, however also incurred substantial losses. Then the Covid-19 pandemic took this sentiment to new horizons. Empirical research identified factors affecting the perceived success of property development. The property development project life cycle has been identified to an extent, however, in the international arena, there are still extensive debate in terms of what constitute the accepted norm and stages involved in the proposed property development project life cycle. During primarily the last two decades, further empirical research identified certain knowledge areas that inform the property development process and ultimate life cycle, however, a Best Practice Guide informing the Property Development Body of Knowledge (pork) does not exist. The primary objective of this on-going research project will be to deliver this knew knowledge. The secondary objective will be in the form of knowledge areas aligned to the internationally agreed property development project life cycle that will enable the practice of property development to be professionally governed in all its impact and composure.

Keywords: Property development, Best Practice, sustainable success, governance, knowledge areas.

1. Background and introduction

Property development is an exciting and occasionally frustrating, increasingly complex activity involving the use of scarce resources. It is a high-risk activity that often involves large sums of money tied up in the production process to provide a product that is relatively indivisible and illiquid (Botha, 2016, Wilkinson, Reed & Cadman, 2008).

2. Definition of terms

a. Property development.

Botha (2016) agreed with Millington (2000) that property development can be described in its widest sense as any activity which changes the state of land and can be identified under the following three categories:

- Erection of new buildings.
- Demolition of existing buildings and their replacement with new buildings, and
- Improvement of existing buildings by improving their state of repair.

The property development process orchestrates the property development property life cycle from inception to completion.

b. Real Estate development.

Real Estate development, or property development as referred to is a process encompassing activities contributing towards the development of land or parcels of land and Real Estate. Real Estate is the land along with its natural resources, that which is fixed to the land, that which is appurtenant to the land and which is immovable by law. The current research that amongst other informs this inaugural lecture refers to property development encompassing and contextualising Real Estate in similar realm and thematic approach (Botha 2016 & Carier, 2001).

c. "Body of Knowledge (BoK)".

Oliver (2012) explained that a Body of knowledge (BoK) is a complete set of concepts, terms and activities that make up a professional domain defining professional association within learned society, in this instance the property development fraternity.

d. Best Practice.

In its generic format, commercial or professional procedure that are accepted or prescribed as being correct or most effective (Bogan & English, 1994).

3. Property development explained

Property development can be thought of as an industry that produces commodities in the form of built spaces such as houses, offices, or factories. The commodities so produced are not only productive assets, as they provide a flow of benefits that includes the provision of accommodation as well as income, but also financial assets, in that they have capital value and can be realized by sale. As its simplest, urban economic activity generates requirements for land and property which might be met by the existing stock of buildings or through new development. These requirements are mediated through a property market process which, amongst other things, determines property values, allocates space in buildings between competing users, and stimulates the production of new space through development and re-development (Botha, 2016).

Over the last two decades, the demand for land resources has changed significantly. This has been brought about by changes in the size, income and preferences of the global population, the rate of growth of economic activity, methods of transport, and techniques of production and distribution (demographics). On the supply side, existing buildings wear out or becomes less suitable to present uses, and the cost of construction new buildings or adapting old buildings changes significantly. Development is the response to such changes and property developers performs a range of functions, acting as entrepreneurs who recognise development potential and bear the risk of the project (Botha, 2016).

In the Private Sector

Property developers sometimes becomes Property Investors in their own developments. In typical cases, these developers turned Investors become new owners and hence plays a role in decision making relative to Facilities Management and possible further re-development. This phenomenon has an influence in terms of how the property development project life cycle is interpreted in terms of especially the final close-out stage (Botha, 2016).

In the Public Sector

Terms like initiation and briefing of the development life cycle is replaced by institutional terminology such as 'terms of reference' for example. Then in the feasibility and viability reporting stage, more emphasis is placed on budgetary requirements than pure value relative to cost. In the end, the chronological flow of the practical side of the development life cycle, stays very much the same (Botha, 2016).

4. Factors affecting success in property development projects

Botha (2016) reported that certain identified factors have an influence on the perceived business success of property development projects in His Book Title A GUIDE TO BUSINESS SUCCESS IN SUSTAINABLE PROPERTY DEVELOPMENT.

Feasibility:

- A feasibility study is an essential tool in considering the potential financial outcome and perceived success of a project that is already in the planning stage of the property development process. Feasibility entails opportunities and threats as presented by the environment, the resources required to carry through, and ultimately the prospects for success.
- To determine whether a development will be successful or not, the feasibility study takes all the relevant factors into account to establish whether the socioeconomic climate is favourable for the active and effective implementation of the development.

Viability:

- A viability study is an in-depth investigation of the profitability of a business idea to be converted into a business enterprise.
- For an idea to be a viable business idea it must be marketable, the business must be manageable, and viable at a sustainable point.
- The viability study is the first phase of business planning to establish whether a business idea is viable.

Profitability:

• Having a goal of profitability and crafting a strategy to achieve it are what separates successful from unsuccessful entrepreneurs in terms of the perceived success of projects undertaken.

Different techniques are available by which to evaluate the original needs of property development including:

- investment appraisal techniques that assess the expected factor of profitability of undertaking such work.
- identifying a relationship between the benefits that might be achieved from developing compared with the costs involved in the project.

 calculating the costs of not undertaking such work and comparing these against the costs of development as part of the feasibility study to be read with the overall viability report on a proposed project.

Risk Management

- Although the distinction between uncertainty and risk is widely accepted, the terms are often used inter-changeably. In practice developers tend to refer to risk.
- Pre-construction, contract negotiation, formal commitment, construction, and post-construction risks are related to property development. These categories give rise to the following vital risk factors which are applicable to any type of development and can be used as a framework for identifying unique risk factors specific to different types of property development:
 - \circ environmental.
 - o time delay.
 - o land cost.
 - o acquisition terms.
 - approval processes.
 - o cost increases.
 - \circ political.
 - \circ experience.
 - \circ engineering.

Procurement:

- Procurement is the stage of the development process which includes the appointment of a building contractor, agreement on the type of building contract to be used, and the construction or refurbishment of the building on site, in accordance with a set of design drawings and specifications.
- A developer can require the type of contract that best meets a project's needs in relation to a site, design, market, and financial feasibility and viability.
- Different types of building procurement offer a range of risk transfer opportunities.

Strategic factors

- Property markets are affected by unforeseen consequences of unforeseen events resulting from strategic factors such as durability, heterogeneity, indivisibility, long gestation periods in production, susceptibility to intervention and regulation, the high cost of entering property transactions, exchange and exit, demand, appraisal, feasibility, viability, and decision making to be considered in the business process.
- The future study of property markets should include the construction of normative scenarios as strategic factors. Scenarios should aim to detect the key variables that emerge from the relationship between the various strategic factors describing a system, especially those relating to the actors and their strategies.

External/Specialist advice

The property development process is complex, and most developers do not have all the skills required to deal with a major development adequately.

The benefits of using specialist advice include:

- Engendering of accountability.
- Guidance with respect to decisions.
- Guidance with respect to the right direction.
- Guidance with respect to the next step.
- Motivation, and
- Moral support.

Governance structures

Governance structures in property development entails all the processes and interaction such as laws, norms, organized society all governed by the state. Proper governance structures ensure professional conduct and Best Practice towards achieving perceived sustainable success in blending with the factors and subsequent knowledge areas.

Demand planning

- The macro-economic concept of demand should be part of the feasibility study and viability reporting on a property development project.
- The following factors should be considered in the feasibility study to determine the proposed viability of a proposed property development project:
- Construction: volume, type, location, and tendencies.
- Lease: lease levels according to type, tendencies, and services included.
- Duration of lease: owner occupation against type of lease, and tendencies.
- Open space: relationship between type of building, location, and tendencies.
- Competition: number, location, lease, prices, and tendencies.
- Current fixed inventory: number, type, location, lease, and tendencies.
- Geography: climate, topography, and land.
- Community facilities: type, location, and services provided.
- Services: type, extent, location, tax, and tendencies.

Demographics

- Demographic development is the response to changes such as:
 - the change in demand for land resources over the last decade brought about by changes in the size, income, and preferences of the global population, the rate of growth of economic activity, methods of transport, and techniques of production and distribution.
 - significant changes in the cost of constructing new buildings or adapting old ones that deteriorate or become less suitable for present uses.
- National population growth rates are a function of births versus deaths, and immigration versus emigration.
- Local population growth rates are a function of the same factors, as well as of migration patterns within the country or area.
- Migration patterns include regional migration, urbanisation, urban/suburban relocations, and industrial growth patterns.
- The type of population can be determined by means of the age distribution of the population, the size, type, and duration of households, including retirement patterns, and marriage and divorce figures.

Urban planning

- Land and property development are a key dimension of both urban capacity and urban quality.
- Urban areas require a development industry with a capacity to produce and refurbish sites and buildings in a context of dynamic and unpredictable changes in demand for locations and for building forms.
- The development industry must be capable of producing products which create and sustain the economic assets of places, while sustaining their aesthetic and biosphere qualities, and promoting social accessibility and cultural value for the people with a stake in an urban area.

PESTEL Analysis

- An environmental analysis should identify any key external factors that require some form of organisational action.
- The PESTEL framework categorises external factors as follows:
 - Political: includes changes in government, such as a new head of state and resultant policy changes.
 - Economic: includes changes in public spending, interest or exchange rates, and the climate for business investment.
 - Social: includes changes in lifestyles, attitudes, buying habits or demographic changes, such as extended life expectancy and the growth of the 'grey' market.
 - Technological: includes new products and services, or new approaches to research and development activity.
 - Environmental: includes the impact of green policies to minimise the effects of climate change,
 - Legal: includes new legislation, such as the introduction of the minimum wage or changes in health and safety legislation.

Trends Analysis and Property Cycles

- Major events that trigger major cycles in property markets are often explained by irrational human or crowd behaviour.
- Property development practitioners should be mindful and cautious of the holistic business process based on which trends and cycles should be identified and programmed into the parameters of property and development trends and cycles.

- The cyclical nature of the demand for property is driven by different factors such as:
 - $\circ\,$ interest rates and economic growth linking it to financial and credit cycles.
 - building lags in relation to demand changes for space which are mainly driven by the fluctuations in business activity.
 - the different supply and demand conditions for various property types causing price increases and decreases to occur at different times resulting in diverse property cycles for various property types.
 - the cycle of boom-overpayment-slump-survival, known as the BOSS cycle, which has been a constant feature of the residential land market and residential development industry since the 1970s, caused by fundamental flaws in the market and developer actions.
- Economic and property research has established the nature of the link between the business cycle and the property development market in which occupier demand for property is largely determined by consumer confidence and ability to deal with the financial implications.
- The business cycle encompasses three cycles, all of which exhibit different periodicity: the business cycle which drives the occupier market, the credit cycle which influences bank and institutional funding, and the property development cycle. The likely success of development projects will be influenced by when they are started and completed in the business cycle.

5. The property development project life cycle

Fisher & Collins in (1999) already argues that the property development process is best described as a lifecycle comprises of stages that includes processes. Property development follows a chronological and interlinked process of activities (events) through a typical Property Development Project Life Cycle via critical and non-critical path. This Life Cycle can currently with the further contributions of relevant literature be identified in a total of fifteen (15) stages depending on the extent of involvement as decided by the parties involved.

The Property Development Project Life Cycle can be identified as follows:

- 1. Stage 1: Property Development initiation and briefing (intent and purpose analysis, including demand & supply).
- 2. Stage 2: Professional feasibility and viability reporting.
- 3. Stage 3: Pre-acquisition identification and securing of vacant land or property.

- 4. Stage 4: Design: Site Development Plan.
- 5. Stage 5: Procurement.
- 6. Stage 6: Marketing.
- 7. Stage 7: Infrastructure development.
- 8. Stage 8: Construction and documentation.
- 9. Stage 9: Tenant installation or special requirements.
- 10. Stage 10: Letting.
- 11. Stage 11: Occupation.
- 12. Stage 12: Property development project close out.

Optional further stages:

- 13. Stage 13: Property Management.
- 14. Stage 14: Facilities Management.
- 15. Stage 15: Future Development.

(Researchers own construction based on related literature)

6. Property development knowledge areas (Developed and published by Botha, 2013 & 2016)

The following empirical constructs related to the theme of Property Development were developed through reliable scientific research validating the theoretical argument for the current on-going research. The primary objective of this research is to develop the Property Development Body of Knowledge (PDBoK).

Then Botha published new knowledge in the form of a fully integrated business model for success in property development. This knew knowledge are condensed into the following constructs:

FINANCIAL RISK FORECAST

Inflation and escalation in procurement contracts has a major impact on the business success of a proposed property development project. Although relatively accurate inflation figures exist, and allowance for escalation and interest on borrowed capital or own equity are taken into consideration during the feasibility study, the calculations are essentially projections, and are subject to macro-economic influences that can influence the outcome of property development projects significantly. As a result, property development practitioners should consider the following aspects when compiling a feasibility study:

- Incorporate the highest inflation forecast figure in feasibility calculations.
- Allow for escalation in the procurement phase to be reported in the feasibility study as part of the viability report.
- Take all financial risk into consideration when projecting the perceived success of proposed property development projects.

• Include a level of tolerance to increase product pricing to the consumer if market indicators and the property cycle allow it.

CONSUMER CONFIDENCE AND ABILITY

Property development projects have high monetary value relative to other businesses in terms of the GDP. So, although it is a macro-economic term, consumer demand plays an important role in determining the initiative to develop property. Consumer demand is determined by consumer confidence and the ability of the targeted population to provide payment guarantees to accept the property development product on offer within the development period as affected by the property cycle. Identifying consumer confidence and ability successfully involves:

- Verifying demand based on consumer statistics or on urban spatial development, incorporating migration and other strategic factors.
- Consulting specialist advice about the segment of the property market for which the specific property development project is planned.
- Identifying the relevant demographics of the targeted consumer population to verify financing options; and
- Concluding approval of finance in principle for development end-users from financial institutions that finance mortgages for property.

PROCUREMENT

The actual procurement of the contracting parties for the property development has a significant influence on the feasibility during the operational phase of the project. Expenditure related to construction is considered when compiling the feasibility study. However, in many cases, 'average' or 'market related' rates are used, and these data are very rarely based on actual tenders and appointment rates at feasibility stage. The cyclical nature of the development market, together with strategic factors that influence tender prices related to construction can, therefore, result in significant variance in actual tender appointments or turnkey prices and estimates during the planning stages. To reduce the risk of substantially negative variance in terms of feasibility projections and actual procurement rates, the following factors should be considered:

- Planning turnkey projects *in lieu* of conventional tender methods to avoid variance in procurement appointments in comparison with feasibility projections.
- Making appointments according to fixed construction prices in line with the feasibility allowances.
- Negotiating during the procurement process to ensure feasibility projections are met; and
- Allowing for possible variation orders in the feasibility study.

(Note: Included in the proposed theoretical Property Development Project Life Cycle. Stage 5).

URBAN PLANNING

Urban planning is conventionally undertaken by local authorities who govern the town planning of different areas of jurisdiction using 10-year planning intervals. As these local authorities serve a public purpose, their primary objective is not necessarily business oriented. However, no exclusions should even be considered by property development practitioners. Taking the long-term planning projections into consideration will indicate the opportunities where property development can be undertaken within the spatial development framework.

FINANCIAL FEASIBILITY, PRACTICAL VIABILITY CONSIDERATIONS PROFESSIONAL FEASIBILITY AND VIABILITY REPORTING

Although feasibility and viability are generally known to be key factors affecting the success of property development projects, research has revealed confusion between the two concepts. Accordingly, the concepts have been defined clearly and the following protocol is recommended when conducting feasibility studies and preparing viability reports.

- 1. A viability report should contain:
 - a feasibility study
 - a recommendation report
 - an evaluation report, and
 - references
- 2. The feasibility study should address the following:
 - profitability and financial feasibility
 - PESTEL analysis
 - definition of trade area
 - macro-economic factors incorporating demand and supply analysis in niche markets
 - socio-economic factors
 - demographic factors
 - consumer income and expenditure patterns
 - urban growth pattern and spatial development planning
 - property tendencies
 - property trends in the built environment
 - market feasibility, and
 - merchandising analysis

3. A recommendation report should be based on the following viability considerations:

- physical viability
- zoning and other limiting real rights
- site characteristics
- services
- underground factors
- topography
- vegetation
- location characteristics
- accessibility
- exposure of the site and structure, and
- complementary activities
- 4. An evaluation report should include:
 - Recommendations based on the feasibility and viability factors portrayed in the viability report.

a. New proposed knowledge areas

The afore-said knowledge areas amongst the following newly identified variables emanating from literature and other related scientific research sources informs the Property Development Project Life Cycle.

VALIDATED PURPOSE

In the epilogue of his Doctoral thesis, Botha (2013) emphasised that property development should be regulated by amongst other macro-economic influences and should not be manipulated by role players, hence the focus on business success and not merely a process albeit the private of public spaces.

PROPERTY DEVELOPMENT INTENTION

As read with the afore said, the property development intention should be directly proportional to the purpose arrived form valid and reliable data. This should amongst other formulate one of the initial stages of the property development project life cycle.

DESIGN THINKING

In the time of digitalisation, Building Information Modelling and four-dimensional application in the Built Environment and business of property development, cognitive, strategic, and practical processes by which design concepts are developed should be part of the process. Further research will identify in which stages of the property development life cycle the knowledge will be eminent and shared (Visser, 2006, Cross, 2001 & Brown, 2008).

SYSTEMS APPROACH AND APPLICATION

The proposed property development project life cycle adopts various systems and processes into typical chronological and aligned stages towards mobilising property development project by means of Best Practice and sustainable success (Botha, 2016).

MARKETING

Frej, Peiser & Richard (2003) argued that Marketing and property development are inseparable. Even if the developer becomes the investor, the marketing effort merely shift in focus.

PROJECT MANAGEMENT BODY of KNOWLEDGE (PMBoK)

The PMBoK identified ten (10) knowledge areas informing Project Management best Practice through six (6) identified stages of the Project Life Cycle within project Management terms. As property development is positioned within the Built Environment and as current international research addresses amongst other the property development Project Life Cycle, is evident that this knowledge be constructed as a significant variable having an influence on the ultimate formulation of the perceived Property Development Body of Knowledge (PMBoK, 2017).

PROPERTY DEVELOPMENT IDENTIFICATION OF WORK (PD IDoW)

Existing knowledge created different theories in terms of the identification of work and scope of services linked to the proposed property development Project Life Cycle. This has not been refined yet. Current research identified this weakness and subsequent problem area being addressed in recent research (Botha, 2016).

PDPP (PROPERTY DEVERLOPMENT PROCESS PLANNING)

Process planning inform integrated four-dimensional planning within property development and Built Environment projects (Botha, 2016).

STRATEGIC PLANNING AND APPRAISAL

As property development constitute highly strategic thing and execution of wellplanned business, the emphasis on strategy can never be underestimated. Continuous appraisal is part of the strategy which can change at any given point in time subject to potential identified and unidentified risk measures during the property development project life cycle (Botha, 2016).

DEVELOPMENT MANAGEMENT

Development management is not unique to property development, it amongst other speaks to transformational management and decolonisation (Crabtree, 2013).

ECONOMIC INDICATORS (INCORPORATING PESTEL PROCESS ANALYSIS

This everchanging date should be incorporated throughout the property development project life cycle. The theory will be operationalized as such (Botha, 2016).

ORGANISATIONAL BEHAVIOUR

As the property development discipline in its current state is not Professionally Governed, an elusive organizational behaviour will be created as part of new knowledge. Wagner & Hollenbeck (2010) reckon this knowledge in theory, should inform the total property development project life cycle.

CHRONOLOGICAL AND INTERLINKED PROCESS FLOW

The interpretation will be to an extend like critical path and non-critical path in conventional construction. However, the indifferent approach is in the processes which are semi chronemically and interlinked attached to each other depending on different scenarios.

FUTURE FORECASTING

Sustainable success in property development is subjected to amongst other having a very good understanding of what not only the thirty to fifty year Space Development Planning of the various local authorities anticipates, but even more towards future scenarios in terms of probable critical deviation from conventional practice as a result

of amongst other technology and unforeseen pandemics like Covid-19 and the everchanging effect thereof (Statement by the author).

TURN AROUND STRATEGIES (LESSONS LEARNED)

Masinde, 2016 urged that lessons learned from successful turnaround strategies of economic and aesthetic obsolesce are even more important than the identification of current problems. The empirical knowledge empowers further strategic thinning and implementation of mitigation factors, such as possible re-development, new development, emended purpose, etc.

PROPERTY DEVELOPMENT PROCESS BREAK-DOWN STRUCTURES (PDP WBS)

There a no agreed international guide towards typical Work Breakdown Structures of the property development Project Life Cycle. Part of the current and future research will be based on creating a baseline PDP WBD to work from and refine (Botha, 2016).

PUBLIC PRIVATE PARTNERSHIPS

This lecture explained amongst other property development in the private and public spheres. Existing knowledge recommended PPP's, but the reality scenario is lack om implementation mobilisation ability.

SUSTAINAIBLITY IN PROPERTY DEVELOPMENT

This is one of the primary objectives and driving forces of creating the current nonexistent Property Development Body of Knowledge. Research will proof where the concept and variable construct of sustainability have effect (Botha, 2016).

PROPERTY DEVELOPMENT LIFE CYCLE

This is the theoretical explanation of the process. Research will proof the accepted international norm towards adopting Best Practice (New hypothetical theory).

BUSINESS MANAGEMENT

The generic concept of Business Management informs the business of property development.

LIFE CYCLE FACTORS

Certain identified factors will influence the final composition of the perceived property development Project Life Cycle.

FORCE MAJEURE

The term that 'arrived' during Covid-19. How will the inability to perform according to contract affect the property development Project Life Cycle in the future?

These constructs are now validated onto the current theory illustrating future knowledge areas of property development. They are interlinked in terms of process, procedure towards creating the proposed Property Development Body of Knowledge (PDBoK) that should be the catalyst towards Professionalisation of this sectorial practice.

Property Development knowledge areas informed the Property Development Project Life Cycle. The interdependencies between these knowledge areas and the Property Development Project Life Cycle will be tested in on-going research.

The ultimate finding will produce the following:

7. Perceived Property Development Body of Knowledge (explained)

PROPERTY DEVELOPMENT BEST PRACTICE: THE PROPERTY DEVELOPMENT PROJECT LIFE CYCLE AS INFOMED BY THE PROPERTY DEVELOPMENT KNOWLEDGE AREAS KNOWN AS THE PROPERTY DEVELOPMENT BODY OF KNOWLEDGE

8. Proposed best practice guide towards sustainable success in the profession of property and real estate development

Property Development Best Practice explains how the Property Development Project Life Cycle is informed by the Property Development Body if Knowledge. Property Development involves large amounts of capital, natural resources, and large-scale risks to produce immovable structures that have long term consequences for society and the environment (Botha, 2016). Property development is about systematic processes based on scope of works and specific targeted deliverables contributing towards sustainability in the property development practice both in the Public and Private spheres (citation). Although extensive research has been conducted and property and real estate development worldwide, the Property Development Body of Knowledge has not been created yet. The Property Development Project Life Cycle has been identified to an extent, hence an international agreed consensus seemed yet to be arrived at.

Recent evidence referring to amongst other COvid-19, related Force Majeure and other factors, highlighter more failures in the practice of property development as reported through the ages. These as read with the fact that there is no pure property development professional governance in the form of a statutory body or any other directly related professional governance constituting best practice in this principle, provide clear direction towards this research theme with the objective of creating new knowledge in this field that will be recognized as the international Property Development Body of Knowledge.

a. PD BEST PRACTICE: GRAPHICAL ILLUSTRATION INDICATING OPERATIONALISED INTERDEPENDANCIES

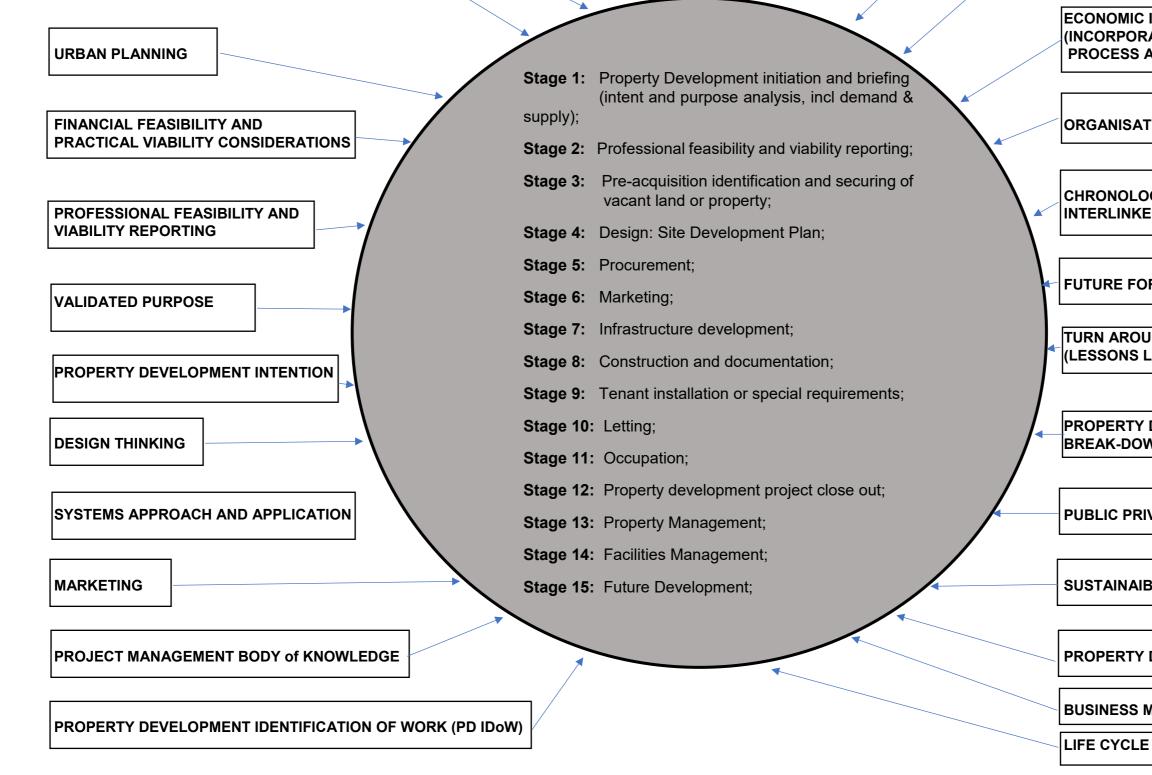
Following a graphical illustration of the current theory showing the interlinking constructs linked in proposed hypothetical context.

THEORETICAL (CONCEPTUAL) STRUCTURAL EQUATION PROPERTY DEVELOPMENT BODY OF KNOWLEDGE MODEL

The following theoretical model illustrates constructs that could potentially constitute the knowledge areas that will inform Best Practice in the business of Property Development: FINANCIAL RISK FORECAST

CONSUMER CONFIDENCE AND ABILITY

PROCUREMENT (Note: Included in the proposed theoretical Property Development Project Life Cycle. Stage 5)



STRATEGIC PLANNING AND APPRAISAL

PDPP (PROPERTY DEVELOPMENT PROCESS PLANNING)

DEVELOPMENT MANAGEMENT

ECONOMIC INDICATORS (INCORPORATING PESTEL **PROCESS ANALYSIS)**

ORGANISATIONAL BEHAVIOUR

CHRONOLOGICAL AND INTERLINKED PROCESS FLOW

FUTURE FORECASTING

TURN AROUND STRATEGIES (LESSONS LEARNED)

PROPERTY DEVELOPMENT PROCESS BREAK-DOWN STRUCTURES (PDP WBS)

PUBLIC PRIVATE PARTNERSHIPS (?)

SUSTAINAIBLITY IN PROPERTY DEVELOPMENT

PROPERTY DEVELOPMENT LIFE CYCLE

BUSINESS MANAGEMENT

9. The research

The major motivation for the further research on this subject matter relates to the following problem statement:

The lack of a credible Best Practice Guide for Sustainable Property development (PDBoK) results in on-going non-compliance within the practice of Property Development.

The questions emanating from the subsequent problem and sub-problems can be posed as follows:

- What authenticated research-based knowledge constitute a roadmap towards best Practice in property and real estate development?
- Can the International arena agree to a generic property development project life cycle in its infinite form?
- What knowledge areas are outstanding that could support sustainability in Property and Real Estate Development?
- Why is there no proper Professional Governance in the practice or Property and Real Estate Development?

10. The process

The ongoing research will be undertaken in a triparty format:

- 1. Identifying the empirical findings on the proposed property development project life cycle stages and subsequent stage titles.
- 2. Identifying the knowledge areas that informs Property development Best Practice.
- 3. Identifying the property development body of knowledge depicting the knowledge areas that inform the Property Development project Life Cycle.

These triparty motions should be able to provide answers and new knowledge base don the questions 1, 2 and 3 posed as follows:

- What authenticated research-based knowledge constitute a roadmap towards best Practice in property and Real Estate Development?
- What knowledge areas are outstanding that could support sustainability in Property and Real Estate Development?

The result should produce the following new knowledge based on the proposed empirical research following on sub-sections of completed scientific research:

11. Conclusions

Importance of Corporate Governance in the practice of property development.

The result should produce the following new knowledge based on the proposed empirical research following on sub-sections of completed scientific research:

PROPERTY DEVELOPMENT BODY of KNOWLEDGE: A BEST PRACTICE GUIDE TOWARDS SUSTAINABLE SUCCESS IN THE PROFESSION OF PROPERTY AND REAL ESTATE DELVEOPMENT

This proposed outcome should provide direction towards question posed:

• Why is no proper Professional Governance in the practice or Property and Real Estate Development?

12. Recommendations

The creation of the PDBoK through credible international scientific research

13. References

Bogan, C.E. & English, M.J. (1994). Bench marking for Best Practices: Winning Through Innovative Adaptation. New York: McGraw-Hill.

Botha, B., Adendorff, C. & Collier, D., 2016. A GUIDE TO BUSINESS SUCCESS IN SUSTAINABLE PROPERTY DEVELOPMENT. 1st ed. Cape Town" Colliers Corporate Communications. ISBN 978-0-620-74176-7.

Carrier, C., 2001. 'Zone Fefer', the Arable Land Debate, and Real Estate Speculation: China's evolving land use regime and its geographical contradictions. Journal of Contemporary China, Volume 10 – Issue 28.

Crabtree, L., 2013. Decolonising Property: Exploring Ethics, Land, and Time, through Housing Interventions in Contemporary Australia. SAGE Journals, Geography, Urban Studies & Planning. Environment and Planning D: Society and Space. Vol 31, Issue 1.

Cross, Nigel. Design Cognition: Results from Protocol and other Empirical Studies of Design Activity, in C. Eastman, M. McCracken and W. Newstatter (eds.) *Design Knowing and Learning: Cognition in Design Education*, Elsevier, Oxford, 2001, pp. 79-103. ISBN 0 08 043868 7.

Fisher, P. & Collins, T. 1999. *Commercial property development*. Newcastle: University of Northumbria.

Frej, Anne B; Peiser, Richard B. (2003). *Professional Real Estate Development: The ULI Guide to the Business* (2 ed.). Urban Land Institute. p. 3. ISBN 0874208947. OCLC 778267123.

Masinde, A., 2013. Challenges of Implementing Turnaround Strategies at Kenya Railways Corporation. University of Nairobi Research Archive.

Millington, A. 2000. Property development. London: EG Books.

Oliver, G.R. (2012). Foundations of the Assumed Business Operations and Strategy Body of Knowledge (BOSBOK): An Outline of Shareable Knowledge, p. 3.

Project Management Institute, 2017. A GUIDE TO THE PROJECT MANAGEMENT BODY OF KNOWLEDGE PMBOK GUIDE, Sixth ed.

Tim Brown. Design Thinking. Harvard Business Review, June 2008.

Visser, W. 2006, The cognitive artifacts of designing, Lawrence Erlbaum Associates.

Wagner, J. A., & Hollenbeck, J. R. (2010). Management, which is the process of stated Objectives, Planning, Organizing, Directing, Controlling, and Staffing to achieve stated (formalized) objectives. *Organizational behaviour: Securing competitive advantage*. New York: Routledge.

Wilkinson, S., Reed, R. & Cadman, D. 2008. *Property Development*. 5th edition. London: Taylor & Francis.