



NATIONAL CONSTRUCTION
AUTHORITY

CONSTRUCTION INDUSTRY OUTLOOK



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PREFACE

The Construction Industry in Kenya has grown in leaps and bounds over the past decade. This growth is attributed to an increase in investments, both by local and foreign investors, owing to the Government's efforts towards creating a conducive business environment.

A successive annual increase in the Government's budgetary allocation towards infrastructure development has further contributed towards easing the movement of goods and services relevant for economic growth. In 2018, the Government launched its economic blueprint dubbed, 'the big four agenda' with a focus on universal health coverage; food security and nutrition; affordable housing; and enhancing manufacturing.

The focus on affordable housing and the provision of the relevant allocations towards the idea that more companies will look into investing in affordable housing projects, as well as in utilizing the vast labour and construction materials available in Kenya, especially those manufactured by our small and medium enterprises (MSMEs).

For industry players to appreciate the exponential growth witnessed in an industry, and to grow their confidence for further investments; regular, accurate, and unbiased statistics and updates on the same, by the relevant Authority is necessary.

I wish to laud the efforts of the National Construction Authority in creating this Construction Industry Outlook. It has come at the appropriate time when the stakeholders in the industry are seeking consistent and unbiased updates and estimates on the industry, as well as information on emerging trends and potential projects worthy of investment.

ACKNOWLEDGEMENTS

The National Construction Authority, with its function to stimulate the development, improvement and expansion of the Construction Industry endeavours to make all necessary efforts towards achieving this function.

This construction outlook has been published as a source for verifiable records and statistics on the Construction Industry in Kenya. Its annual publication will ensure that the industry stakeholders are up to date with the current trends in the industry as well as on the emerging issues. It will further act as a guide for potential investors in the Construction Industry on the available opportunities in the public and private sectors.

Since its establishment in 2011, the Authority has witnessed immense growth both of itself and the Construction Industry at large. We are glad to be at the forefront in enabling the National Government, County Governments and private developers with the delivery of their projects.

As aforementioned, the Construction Industry greatly relies on the contribution of the various players: from financiers to real estate developers and agents, materials and construction equipment suppliers as well as the consultants and construction workers in the industry. The industry, therefore, needs the attendant statistics against which the growth is measured, to be able to appreciate its contribution to the economy.

The Authority appreciates the contribution of the various stakeholders mainly from Government Agencies and professional organizations who have made this publication a success. With the succeeding annual publications, we will rely on you our stakeholders for continued partnership and support.

EXECUTIVE SUMMARY

The National Construction Authority is established by the National Construction Authority Act No. 41 of 2011 (the Act) and mandated to oversee the Construction Industry and coordinate its development. Under the Act, Consultancy and Advisory(C&A) function forms a core part of the Authority's role, which engenders the essence of this document, to provide published statistics that inform trends and performance of the industry.

The Construction Industry in Kenya is wide and holds promise for the future in economic growth and realization of the vision 2030. The sector is markedly recognized for its major contribution to the GDP (Gross Domestic Product) and has attested to be an arterial income earner for over one million Kenyans.

In the shifting landscape of political, economic and environmental status the Construction Industry has continued to post an upward trend in growth, technology and material use, infrastructure development and human capital engagement. The industry permeates every sector through the provision of much-needed infrastructure that is indispensable for growth and development. The realization of vision 2030 heavily hinges on a dependable, robust, sanitized, resilient, competitive construction sector that adapts well to the ever-changing market and technology influx in the regional and global economy.

In this publication, growth has been demonstrated along various socio-political, lines, economic and sustainable aspects of construction as well as in major cross-cutting issues. Therefore, this publication is intended to inform the industry at large on the key indicator trends.

LIST OF ACRONYMS

BORAQs	:	Board of Architects and Quantity Surveyors
BSRB	:	Building Surveyors Registration Board
COSC	:	Construction outlook steering committee
EBK	:	Engineer Board of Kenya
GDP	:	Gross Domestic Product
GoK	:	Government of Kenya
JBCC	:	Joint Building and Construction Council
DCI	:	Domestic Capacity of Construction Industry
GSSA	:	Green Star South Africa
NaCRA	:	National Construction Research Agenda
KENINVEST	:	Kenya Investment Authority
KENHA	:	Kenya National Highways Authority
KGBS	:	Kenya Green Building Society
KNBS	:	Kenya National Bureau of Statistics
LEED	:	Leadership in Energy and Environmental Design
LSB	:	Land Surveyors Board
MSACC	:	Multi Sectoral Agency Consultative Committee
NCA	:	National Construction Authority
PLUPA	:	Physical and Land Use Planning Act

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LIST OF OPERATIONAL TERMS

Industry: Means the construction industry.

Construction Industry: An industry concerning Construction Works; involves the construction, extension, installation, repair, maintenance, renewal, removal, renovation, alteration, dismantling, or demolition of any building, erection, edifice, structure, wall, fence, or chimney, whether constructed wholly or partly above or below ground level; any road, harbour works, railway, cableway, canal or aerodrome; any drainage, irrigation or river control works; any electrical, mechanical, water, gas, petrochemical or telecommunication works; or any bridge, viaduct, dam, reservoir, earthworks, pipeline, sewer, aqueduct, culvert, drive, shaft, tunnel or reclamation works, and includes any works' which form an integral part of, including site clearance, soil investigation and improvement, earth-moving, excavation, laying of the foundation, site restoration and landscaping.

Stakeholder: Any person or institution with an interest in the industry.

Local Contractor(s): Means a firm incorporated in Kenya and accredited by the Board of the National Construction Authority to carry out construction works having met the conditions prescribed by the Board on its suitability to serve the public as a qualified contractor for specific works and class of works in respect of which registration is sought and has a certificate of compliance from the Registrar of Companies showing that it is trading as a contractor in Kenya.

SECTION I: OVERVIEW OF THE CONSTRUCTION INDUSTRY OUTLOOK

1.1 Introduction

This section discusses how the industry has evolved and performed since 2016. The statistics include the industry growth rate, contribution to the GDP, formal employment in the sector, government expenditure in infrastructure and roads, consumption of cement and bitumen, labor, new roads constructed and commercial loans extended to the construction sector.

The section also discusses the outlook of the industry according to the records by the National Construction Authority, which entails the construction sites registered across Kenya, and the status of registered contractors, skilled construction workers and site supervisors. It also includes statistics on how the authority has promoted capacity through training across the country that focuses on better workmanship, professionalism and quality construction works.

1.2 Background of the Construction Industry

The Kenya Vision 2030 is the national long-term development policy that aims to transform Kenya into a newly industrialized, middle-income country providing a high quality of life to all its citizens by 2030 in a clean and secure environment. The Vision comprises of three key pillars: Economic; Social; and Political. Kenya Vision 2030 overall goal for the construction sector is to increase its contribution to Gross Domestic Product (GDP) by at least 10% per annum and propel Kenya towards becoming Africa's industrial hub. The construction sector has a high potential of employment creation; provides stimulus for growth of the agricultural sector and offers significant opportunities for export expansion. This is significant considering that the Kenyan government has planned a complete revamp of road, rail and port transport infrastructure.

The Construction Industry is broad and encompasses various activities related to the building of new houses, apartments, factories, offices and schools. Further, the industry entails the building of roads, bridges, ports, railroads, sewers and tunnels, among many other activities such as maintenance and repair of all of structures. The industry through the relevant agencies as well ensures materials and services produced meet the required standards. The industry's significance is due not only to the fact that it provides the buildings and infrastructure on which virtually every other sector depends on but, on the fact that it is such a sizeable sector.

The Chinese contractors' entry into the Africa market has seen their influence significantly spread across the continent. In Kenya, their continued dominance in major projects poses threat to the growth of local contractors. To protect the local contractors, the National Construction Authority requires that for any contract awarded to an international firm, at least 30% of the works must be subcontracted to a local firm. Further, the government is on the course of setting up interventions to promote local content and ensures transfer of skills and technology to gradually bridge the existing inadequacies of local contractors.

The Government of Kenya aims to achieve a medium-income country by 2030. This led the country to develop Vision 2030, a blueprint to guide the reforms and projects in the various sectors of the economy. Previously, there have been various milestones including the implementation of Medium-Term Plan I and II of the vision 2030 and overall improved ease of doing business.

In the period under review, the Government sought to advance milestones of MTPI and II through the implementation of Medium-Term Plan III of the vision 2030 that is tailored to focus on four key priority areas namely the Big Four Agenda that include Affordable Housing, Manufacturing, Universal Health Care and Food security.

SECTION II: METHODOLOGY

2.0 INTRODUCTION

The development of the Construction Industry Outlook was guided by methods vital in addressing the process's key objectives. Qualitative and quantitative research was conducted among the Construction Industry stakeholders and the same subject to validation by a team of experts drawn from NCA and KNBS.

The following procedures were adopted in the course of outlook development.

2.1 SELECTION OF COMMITTEE OF EXPERTS

To aid quality delivery of the Outlook as well as ease the process of access to critical information, a selection of a committee of experts dubbed 'The Construction Outlook Steering Committee (COSC)' was formulated to guide the drafting process. The COSC was drawn from the industry hence assisted in the process of validating the data.

2.2 DATA COLLECTION

The process entailed designing custom-made data collection instruments that were then distributed across key institutions in the industry. The tool was unique as each institution had specific questions addressed to them.

The criteria for selecting the institutions was purposive as the process's key objective was to obtain verifiable data related to the industry.

2.2.1 Collection and Analysis of Data and Analysis

This CIO relied on primary and secondary data from industry players, both private and public. Due to divergence in mandates, processes, and structures among stakeholders, tailor-made/customized guides were employed to ensure ease in collection of data. The critical data required for the analysis involved information on key economic indicators easily acquired from the Kenya National Bureau of Statistics. Further, data related to construction of consultants training, project registration, contractor's registration, and accreditation of skilled workers was sourced from NCA and other stakeholders.

The information was thereafter analyzed using software such as SPSS, STATA, Qlik, and MS excel as would be applicable. The packages provided quality visualization through pie charts, bar charts, and trend lines.

3.0 LIMITATIONS

It is important to highlight that during the development of this publication the researchers encountered various limitations related to access to information and timeliness especially in the prevailing circumstances imposed by Covid-19. This means that the processes, insights, and outcomes may have slightly drifted from what had been projected and may not represent the operations of the industry when performing at the optimum.

SECTION III: INDUSTRY STATISTICS

3.1 ECONOMIC INDICATORS

3.1.1 Industry Growth Statistics

Despite registering positive growth over the last 7 years, the industry is currently going on a slowdown registering a 6.4% growth rate in 2019 compared to 6.9% in 2018 and 8.4% in 2017 as shown in Figure 1. This is attributed to the completion of the Standard Gauge Railway (SGR) Phase I & II whose demand had contributed to the boom from the year 2014-2016. In addition, the construction of the 1st of the three berths of Lamu Port is 100% completed. It is important to note that massive private sector interests have been registered to develop and operate the additional 29 berths as well as develop the new Lamu Port Industrial City making Lamu Port a major factor and an ideal port for exporting locally manufactured goods.

The GDP contribution by the construction sector has however been rising steadily as shown in Table 1 recording an 11.5% growth from KES 486 Billion in 2018 to KES 542 Billion in 2019.

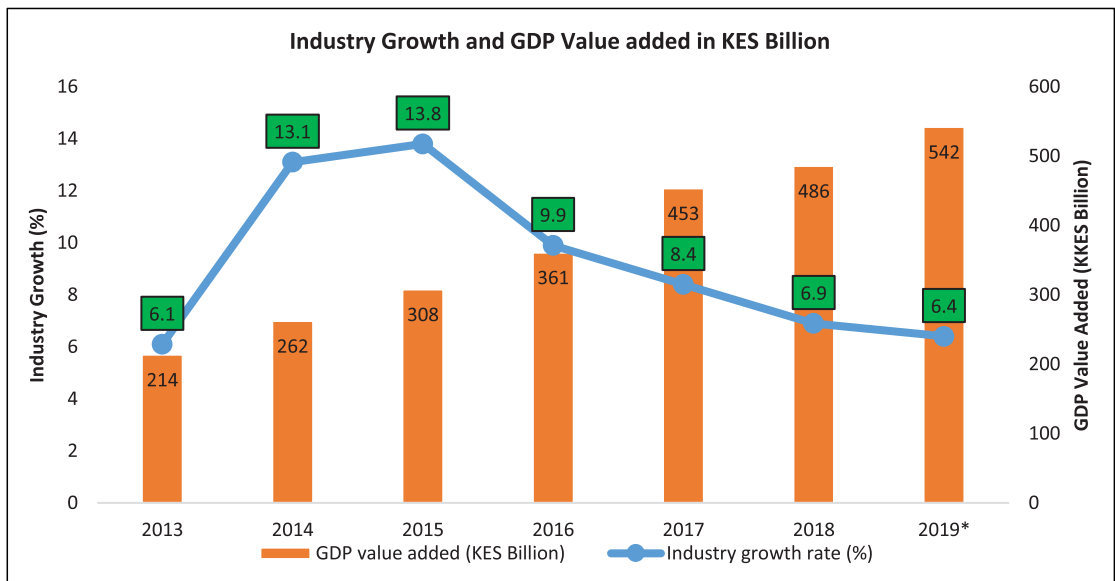


Figure 1: Construction Industry growth rate and GDP contribution

Table 1: Growth rate and contribution to GDP

	2013	2014	2015	2016	2017	2018	2019*
Industry growth rate (%)	6.1	13.1	13.8	9.9	8.4	6.9	6.4
GDP value added (KES Million)	213,565.0	262,090.0	307,562.8	360,802.6	453,332.3	485,582.9	541,760.4

Source: The Economic Survey, KNBS (2020), * Provisional

There are several critical indicators in the construction, which were studied in this report across the years. These include the annual steel consumption, annual bitumen consumption, length of new roads constructed in Kilometers, and the number of employees engaged in the formal employment in the industry, Table 2:

Table 2: Key industry indicators

	2013	2014	2015	2016	2017	2018	2019*
Annual steel consumption (tonnes)	1,609,982	1,676,855	1,870,946	1,881,201	2,047,622	2,051,032	2,433,623
Annual Bitumen Consumption (tonnes)	45,921	71,207	95,872	97,464	78,083	71,889	86,164
New roads constructed (Kilometers)	191.3	83.8	434.2	1,247	1,495	2,706	1,413
Formal employment in the sector ('000 persons)	129.7	133.1	186.3	207.1	213.4	218.4	221.5

Source: *The Economic Survey, KNBS (2020), * Provisional*

The Economic Survey indicates a consistent increase in steel consumption from 2013 to date with 2 million and 2.4 million tonnes being consumed in 2018 and 2019 respectively. There has also been a consistent increase in the number of formal employees in the sector for example between 2018 and 2019 there was an increase from 218.4 thousand persons to 221.5 thousand persons in 2019. Annual Bitumen Consumption and the length of new roads constructed in Kilometers on the other hand have presented mixed signals over the period under review as shown in Table 3.2 above.

Cement consumption is another critical indicator in the Industry. Figure 2 and Table 3.3 indicate that the importation of cement has remained relatively steady from with a dip in 2016 and a slight increase from 23 thousand tonnes in 2018 to 26.4 thousand tonnes in 2019. The exports, however, have been declining continuously from 827.9 thousand tonnes in 2013 to just 60.3 thousand tonnes in 2019. Other manufacturers like the Dangote Industries in Tanzania attribute the decline to a substituted supply in the East African region.

Figure 2: Comparison of cement imports and exports

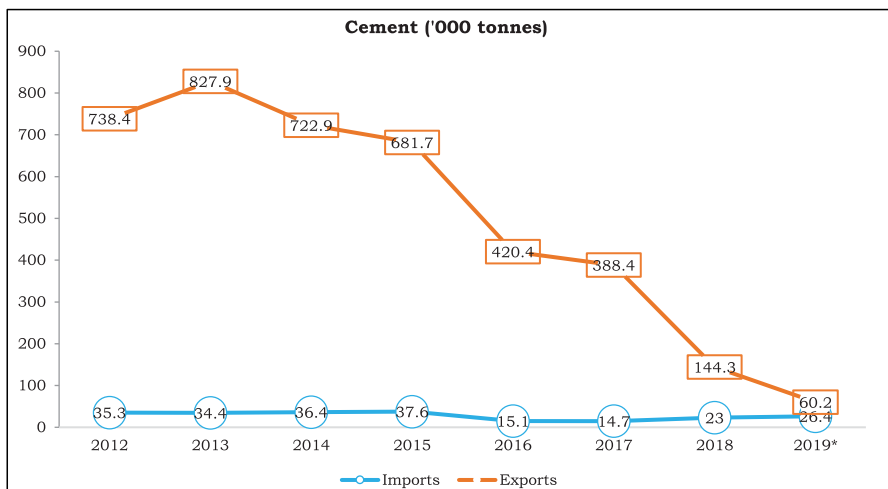


Table 3: Cement Production, Export, Import and Consumption

Year	‘000 Tonnes			
	Production	Imports	Exports	Consumption and Stocks
2012	4,693.7	35.3	738.4	3,991.2
2013	5,059.1	34.4	827.9	4,266.5
2014	5,882.5	36.4	722.9	5,196.7
2015	6,352.9	37.6	681.7	5,708.8
2016	6,715.4	15.1	420.4	6,310.1
2017	6,230.3	14.7	388.4	5,857.9
2018	6,069.9	23.0	144.3	5,948.7
2019*	5,967.2	26.4	60.2	5,933.3

*Provisional

Source: KNBS (2020)

Cement consumption and stocks shown in Table 3 calculated from a total of the production and imports minus exports are particularly important indicators as they point to the value of works executed that involve the use of cement. This indicator shows for example that from 2017 to 2019 the figures have been slightly depressed.

3.1.2 Government investment in housing and infrastructure

The government over the years has invested heavily in roads and housing to open up the rural areas, improve urban areas, and provide a dwelling for the growing population. Figure 3 and Table 4 indicate that the expenditure on roads and housing has been increasing consistently over the years especially with the launch of the Big 4 agenda which include affordable housing as one of the key components. From 2018 to 2019 expenditure has increased from KES 179 billion to 197 billion.

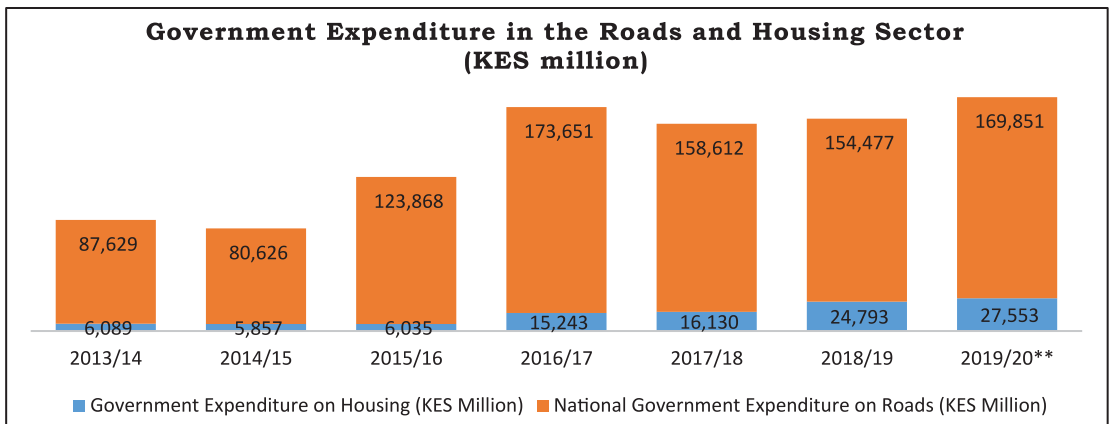


Figure 3: Government Expenditure in the Roads and Housing Sector

Table 4: Government Expenditure in Housing and Roads Sectors

	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20*
Government Expenditure on Housing (KES Million)	6,088.60	5,857.00	6,034.50	15,242.70	16,130.00	24,793.00	27,553.00
National Government Expenditure on Roads (KES Million)	87,629	80,626	123,868	173,651	158,612	154,477	169,851
Total	93,717.6	86,483	129,902.5	188,893.7	174,742	179,270	197,404

*Provisional

Source: The Economic Survey, KNBS (2020)

In terms of the length of roads, Figure 4 shows that a cumulative 7,540.3 Kms of tarmac after completion of 1,413 Kms in 2018, albeit lower compared to 2,706 Kms constructed in 2018.

3.1.3 The Building Sector Statistics and Commercial Loans Absorption

The rapid growth of population from 43.3 million in 2015 to 47.6 million in 2019 has led to rising demand for housing in most parts of the country. This presents a major chance for growth as private developers put efforts to meet the demand¹. Despite an indication of a relatively slower expansion of the sector in 2019 compared to 2018, the housing sector growth continued, this being attributable to the growth of the value of the approved building as the case of Nairobi County which reflected a shift from 12.72 billion in 2018 to 13.98 billion in 2019, as well as in the National Housing Corporation (NHC) from 430 million to 530 million respectively. Table 5 below shows the value of buildings from 2015 to 2019.

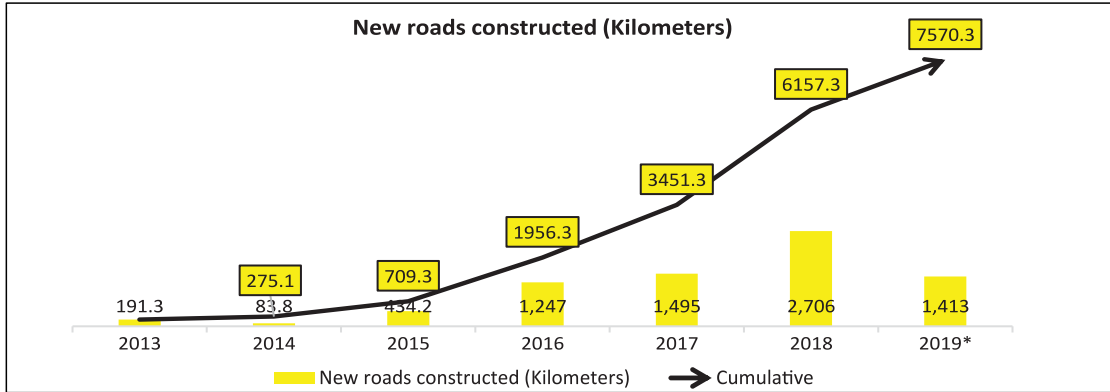


Figure 4: Length in kilometers of new roads constructed 2014-2019: Adapted from KNBS (2020)

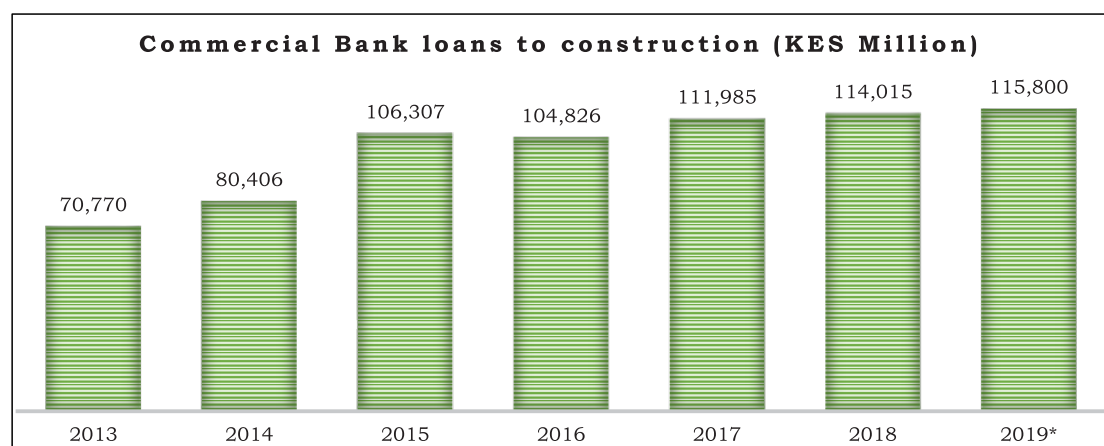
¹KNBS Economic Survey 2020

Table 5: Reported Value of New Private and Public Buildings, 2015 – 2019

Year	Private (Nairobi City County Value in KES Million)			Public Residential (Nationwide Value in KES Million)		
	Residential	Non-Residential	Total	National Housing Corporation	State Department for Housing	Total
2015	7,834	1,220	9,054	45	0	45
2016	8,806	1,462	10,268	240	822	1,062
2017	9,864	2,038	11,902	0	1,164	1,164
2018	10,785	1,940	12,725	180	250	430
2019*	11,802	2,174	13,976	100	430	530

Source: KNBS Economic Survey (2020)

This change is further demonstrated by the increase in the commercial loan absorption by the construction sector from 114.0 million in 2018 to 115.8 million in 2019 as shown in Figure 5.



* Provisional

Adapted from KNBS Economic Survey (2020)

Figure 5: Value of commercial loans extended to developers:

3.1.5 New and Upcoming Projects

There are several high-value projects that the government has planned to support the economic and service delivery agenda. This section discusses the upcoming, ongoing, and planned projects in line with the Vision 2030.

Figure 6 and Table 6 indicate that by value, 11% of the upcoming, ongoing, and planned projects are under the transport sector, 18% energy, 19% Housing and Urban development, 11% Building and Construction, and 1% other infrastructure.

Figure 6: Value of upcoming, ongoing, and planned projects

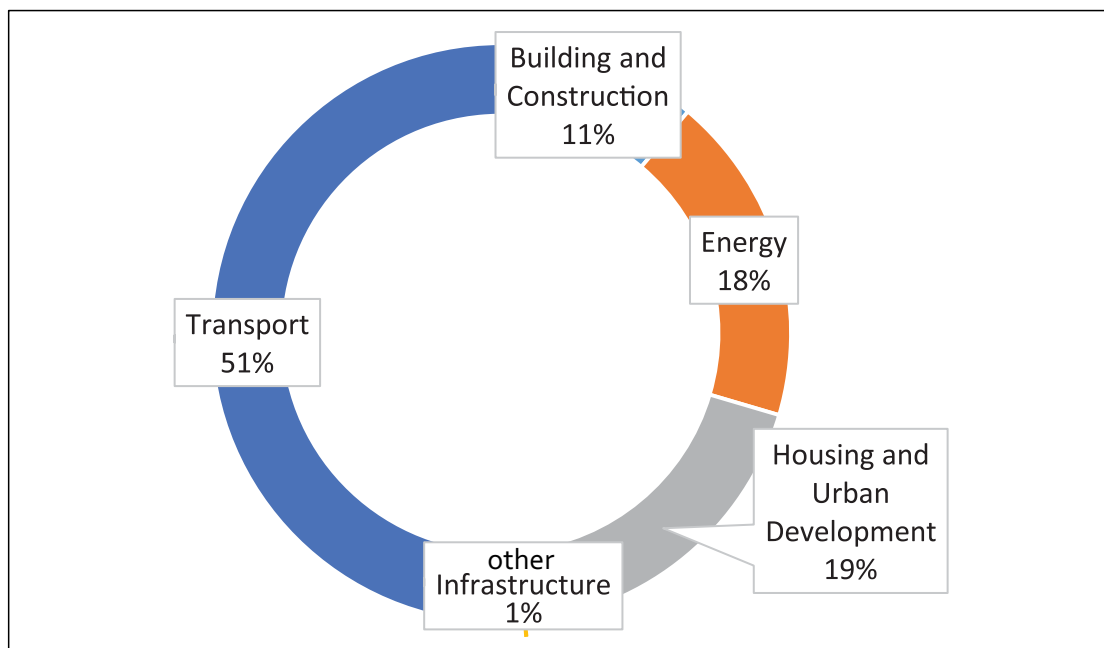


Table 6: Summary of the value of the upcoming projects by sector

Sector	Sum of Cost	Count of No.
Building and Construction	\$4,755,995,000	5
Energy	\$3,661,860,000	10
Housing and Urban Development	\$3,719,780,000	13
Infrastructure	\$88,473,720	3
Transport	\$7,601,000,000	13
Grand Total	\$19,827,108,720	44

Table 7 shows a summary of the top 10 upcoming projects by value. All of these projects are at the feasibility study phase.

Table 7: Top Ten Projects in terms of value (More details under Appendix I)

			Value in USD '000,000
No.	Project Name	Sector	Cost
1	<i>Lamu Port Under LAPSET</i>	Transport	\$5,300
2	<i>Olkaria Mixed-Use Housing Project</i>	Housing and Urban Development	\$3,300
3	<i>Dualling of Mombasa - Nairobi Highway</i>	Building and Construction	\$2,350
4	<i>Railway Cities</i>	Building and Construction	\$2,150
5	<i>Development of National Petroleum Depots</i>	Energy	\$1,200
6	<i>Development of Product Oil Pipeline under LAPSET</i>	Energy	\$900
7	<i>Olkaria VI (140MW)</i>	Energy	\$675
8	<i>Construction of Airports as Part of the LAPSET Corridor</i>	Transport	\$506
9	<i>Mombasa Petroleum Trading Hub</i>	Energy	\$500
10	<i>Construction of Isiolo - Lokichar Road Section under LAPSET</i>	Transport	\$500

3.2 NCA REGISTRATION OF PROJECTS AND CONSTRUCTION COSTS

3.2.1 NCA Registered Projects

To enhance quality assurance in the construction industry, NCA commenced registration of all construction projects in 2015. The process was implemented to ensure that all construction projects adhere to occupational safety standards, professional supervision, and compliance requirements. As the Second Quarter of 2020, a total of 10,506 projects valued at KES 917 billion had been registered by the authority. Figure 7 indicates that according to the value of construction projects registered by the authority from 2019 to the 2nd Quarter of 2020, Nairobi City County tops with KES 270.5 billion followed by Kiambu County with projects worth KES 78.6 billion and Kajiado County with KES 56.9 billion. Other top 10 include Makeni, Machakos, Mombasa, Bomet, Muranga, Kilifi, and Kisumu. Data for the other 37 counties displayed under Appendix IIa as well as distribution per NCA regional office structure attached as Appendix Iib.

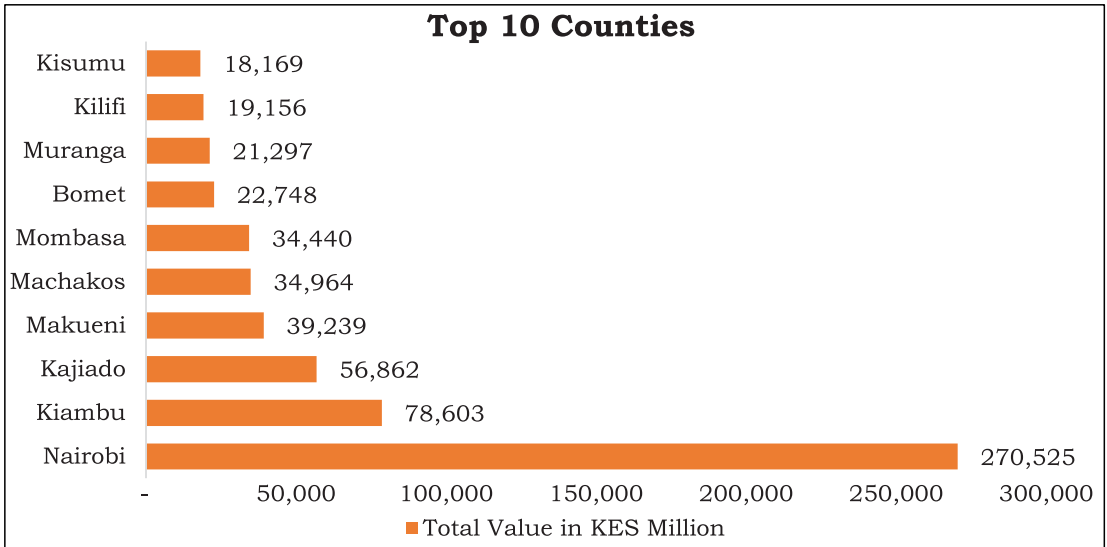


Figure 7: Top 10 Counties with Projects in terms of Value

Figure 8 is a heat map of Kenya showing the concentration of construction activity in the country. The pattern indicates that much of the activity is around the big cities including the Nairobi City Metropolitan area, Central Kenya the Nyanza Region, and the Coastal Region. The concentration pattern is further attributed to the heavy infrastructural development by the Government including the SGR and expansion of ports.

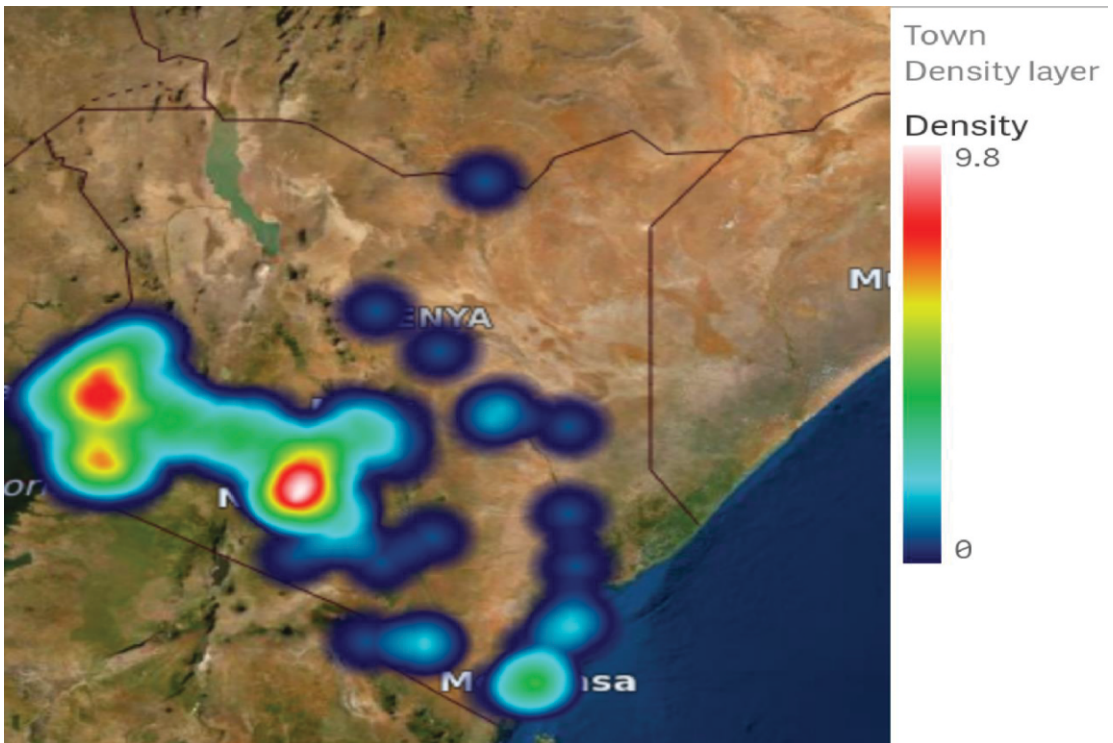
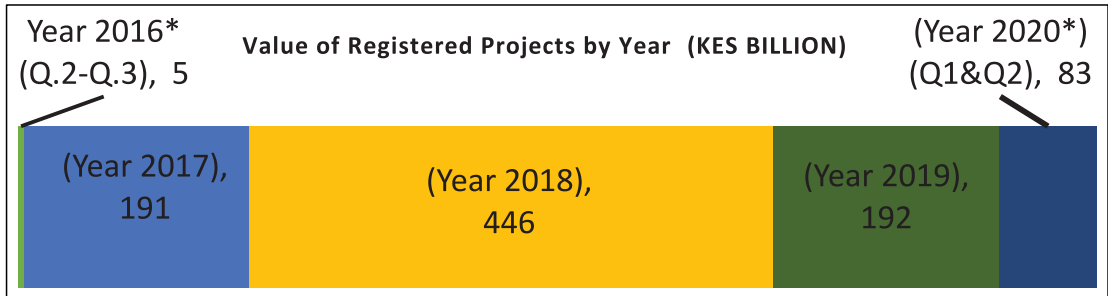


Figure 8: Heat map of Projects Registered with NCA in Kenya

Figure 9 indicates that in 2018 the authority registered the highest value of construction since 2016 valued at KES 466 billion, followed by KES 192 billion in 2019 and KES 191 billion in 2017. In 2016, when projects register in the online registration system valued at only KES 5 billion. KES 83 billion worth of projects were registered during the 1st and 2nd quarters of 2020.

Figure 9: Projects Registered with NCA (2016-2020) in Billions



The sector statistics shows an upward trend in the number and value of projects from the second quarter of 2016 to the second quarter of 2018, which recorded the number of 954 projects, registered in the period valued at KES 133 billion. There was a slowdown towards the last quarter of the same year. In the subsequent year 2019, there was another upward trend until the second quarter where 1,065 projects valued at 60 Billion were registered. Another slowdown is the second quarter of 2019, attributed to the COVID-19 Pandemic was recorded. In the second quarter of 2020, 294 projects worth KES 23 billion were registered, the lowest since 2017. Figure 10 below shows the trend of the value and number of projects registered by the Authority from the second quarter of 2016 to the second quarter of 2020.

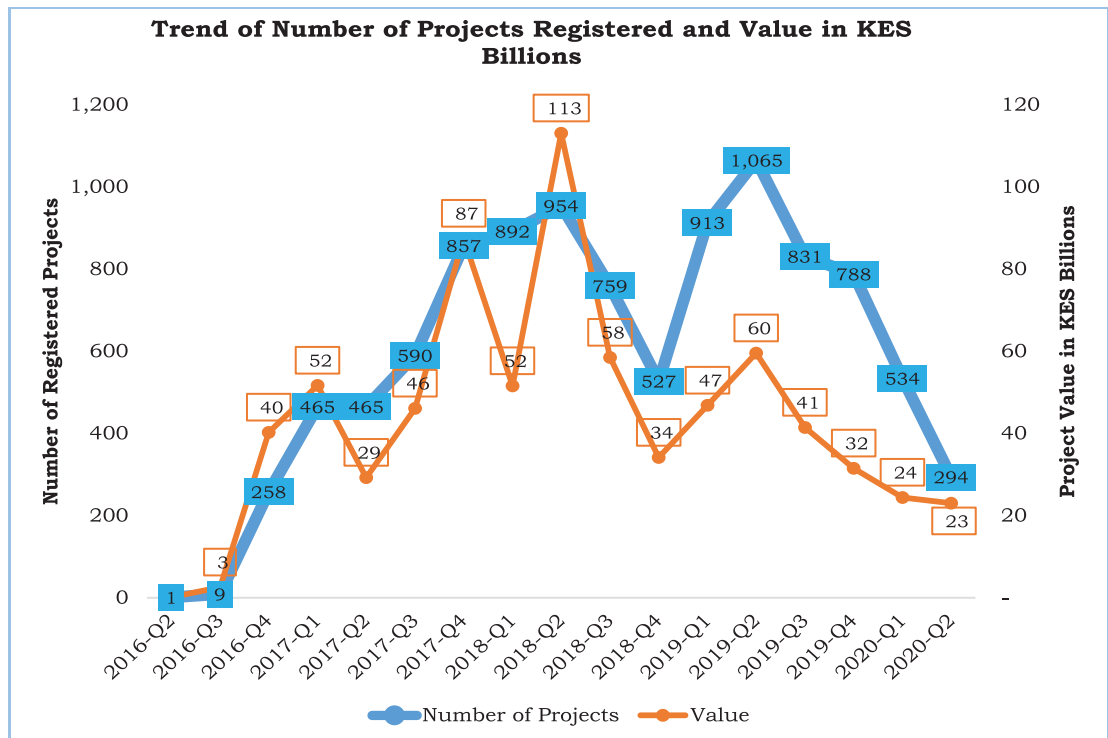


Figure 10: Trend of Projects Registered with NCA (Q2.2016-Q2.2020)

Table 8 shows that 65% of the projects registered by value, between the second quarter of 2016 and the second quarter of 2020, were private. 29% were from parastatals and other government agencies, 3% from NGOs, 0.01% from the national government, and 0.001% from CDF. Table 3.9 shows the annual trends by the client category.

Table 8: NCA Registered Projects Proportions by Developer Category

Developer Category	Value in Billions	Share
Private	596.50	65%
Parastatal/Government Agency	268.36	29%
NGO/Church/Social Organization	31.80	3%
County Government	16.60	2%
National Government	4.02	0.01%
CDF	0.07	0.001%

The private sector has consistently registered the highest number of projects by value over this period, Table 9.

Table 9: NCA Registered Projects by Developer Category

Developer Category	2016*		2017		2018		Value in KES Billions)			
	No.	Value	No.	Value	No.	Value	2019		2020**	
	No.	Value	No.	Value	No.	Value	No.	Value	No.	Value
County Government	-	-	12	2	27	2	28	4	21	9
National Government	-	-	-	-	-	-	5	4	2	0
NGO/Church/Social Organization	-	-	94	7	188	9	147	12	76	4
Parastatal/Government Agency	1	0	54	34	68	218	55	12	19	3
Private	13	5	1635	148	3253	217	3198	160	1570	67

*2016 (Q2-Q3), **2020(Q1-Q2)

Table 10 shows that by the value of the projects registered between the second quarter of 2016 and the second quarter of 2019, 66% were building works, 26 % water works, 7% electrical works, 0.9% Road works, and 0.1% mechanical works.

Table 10: NCA Registered Projects Proportions by Project Type

Project Type	Value in KES Billions	Share
Building Works	590	66%
Electrical Works	66	7%
Mechanical Works	1	0.1%
Road Works	6	0.9%
Water Works	229	26%

Table 11 shows the yearly trend of the same by project type.

Table 11: NCA Registered Projects by Project Type

Project Type	Value in KES Billions									
	2016*		2017		2018		2019		2020**	
	No.	Value	No.	Value	No.	Value	No.	Value	No.	Value
Building Works	10	5	1730	148	3403	183	3248	178	1545	75
Electrical Works	-	-	8	21	4	42	5	1	1	2
Road Works	-	-	4	2	12	2	15	3	3	0
Water Works	-	-	6	12	12	207	6	6	7	3

2016 (Q2-Q3), **2020(Q1-Q2)

With regards to the building use, Figure 11 indicates that among the building projects registered between the second quarter of 2016 and the second quarter of 2019, 49% were residential, 37% commercial, and 14% mixed-use. Table 3.13 shows the trends in building projects by the utility.

Figure 11: NCA Registered Building Projects Proportions by Building Type (Q2.2016-Q2.2020)

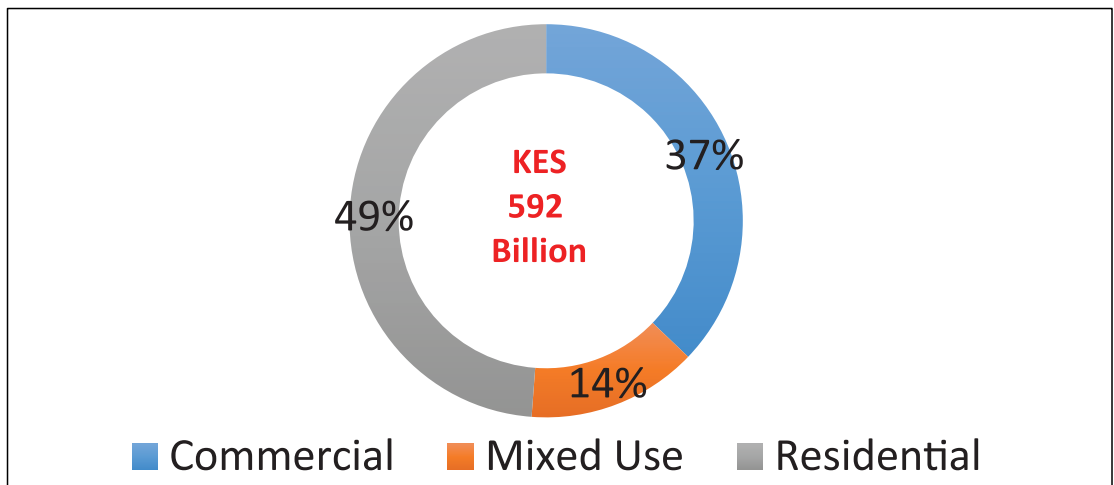


Table 12: NCA Registered Projects by Building Type

Building Type	Value in KES Billions									
	2016*		2017		2018		2019		2020**	
	No.	Value	No.	Value	No.	Value	No.	Value	No.	Value
Commercial	3	3	449	62	887	67	838	65	356	23
Mixed Use	-	-	189	19	344	26	288	29	127	9
Residential	11	2	1107	68	2189	91	2147	84	1083	44

2016 (Q2-Q3), **2020(Q1-Q2)

3.2.2 Construction Share Input

The Construction Industry requires several inputs which include raw materials, equipment, labor, and transport. The census revealed that most of the expenditure incurred for inputs in the construction sector was on materials at 48.5 percent, followed by labor at 19.8 percent as presented in Table 13. In the construction of buildings, 51.9 percent of the expenditure on inputs was on materials while 20.3 percent was on labor. In the completion of buildings and finishing activities, 58.8 percent of the costs were on materials while 18.4 percent went to labor.

Table 13: Proportion of Construction Inputs by Activity, 2017

Type of Activity	Materials and Products	Equipment	Labour	Transport Cost	Other inputs	Total
Construction of Buildings	51.9	14.0	20.3	9.1	4.7	100
Construction of roads and railways	43.8	23.7	15.9	12.0	4.7	100
Construction of utility projects	43.5	18.3	19.0	11.0	8.2	100
Construction of other civil engineering projects	45.9	16.9	18.2	9.2	9.8	100
Electrical installation activities	50.1	13.8	22.9	9.9	3.3	100
Building completion/components and finishing	58.8	13.2	18.4	7.2	2.4	100
Other specialized construction activities	45.6	8.9	23.9	7.7	13.9	100
Average	48.5	15.5	19.8	9.4	6.7	100

Source: KNBS Economic Survey, 2020

3.2.3 Construction Materials by Economic Activity

The value of construction materials by activity is presented in Table 14. The total value of construction materials used in 2017 was KSh 312.2 billion with the construction of roads and railways and construction of buildings accounting for 42.4 percent and 39.1 percent of the total respectively.

Table 14: Value of Construction Materials by Activity, 2017

Activity	Amount (KSh Million)	Percent
Construction of roads and railways	132,361.1	42.4
Construction of Buildings	122,045.7	39.1
Construction of utility projects	16,857.9	5.4
Plumbing, heat and air conditioning installation	13,132.4	4.2
Building completion/components and finishing	12,036.4	3.9
Construction of other civil engineering projects	8,341.9	2.7
Electrical installation activities	7,385.0	2.4
Total	312,160.5	100.0

Source: KNBS Economic Survey, 2020

3.2.4 Overall Operating Expenses

Table 15 presents other operating expenses disaggregated by category. Overall, other operating expenses stood at KSh 358.8 billion in 2017. Goods purchased for resale accounted for the highest proportion of other operating expenses at 28.9 percent followed by expenses on containers and packaging materials at 12.9 percent. Transportation, motor vehicle running costs, and; repair and maintenance also contributed a notable proportion of the other operating expenses.

Table 15: Other Operating Expenses, 2017

Operating Expenses	Amount
<i>Motor vehicle running costs (parts and fuel)</i>	25,796.9
<i>Leasing and hiring of plant, machinery, equipment, and vehicles under operating</i>	9,731.4
<i>Insurance</i>	15,720.5
<i>Accommodation and traveling</i>	11,378.9
<i>Office supplies</i>	6,100.0
<i>Stores and consumables</i>	12,699.1
<i>Medicine & medical supplies</i>	3,159.8
<i>Postal and courier services</i>	1,595.8
<i>Advertising and promotion</i>	13,468.4
<i>Rental of land and premises</i>	15,614.8
<i>Repair and maintenance</i>	23,193.2
<i>Telecommunication services</i>	3,379.7
<i>Transport of goods (freight by rail, road, sea, air), warehousing and storage</i>	34,268.8
<i>Clearing and forwarding charges</i>	7,875.1
<i>Waste disposal</i>	407.7
<i>Exploration</i>	238.9
<i>Entertainment</i>	982.9
<i>License fees, permits, stamp duties, and similar fees paid to government</i>	7,668.0
<i>Fees and Commissions paid</i>	14,168.9
<i>Containers and packaging materials</i>	46,150.1
<i>Donations, bursaries, and sponsorships</i>	1,571.8
<i>Goods purchased for resale</i>	103,647.9
Total	358,818.4

Source: KNBS Economic Survey, 2020

3.2.5 NCA Registered Contractors

NCA is mandated to accredit and register contractors and regulate their professional undertakings; accredit and certify skilled construction workers and construction site supervisors. Since its inception, NCA has registered over 50,000 contractors in various categories as per stipulated registration requirements and the classes of works.

Fig. 12 shows that as of the second quarter of 2020 the authority had issued a cumulative number of 112,187. Among these, 40% were NCA8, 21% NCA7, 17% NCA6, 9% NCA5, 8% NCA4, 2% NCA3, 1% NCA2 and 2% NCA1.

Figure 12: Cumulative number of Certificates Issued

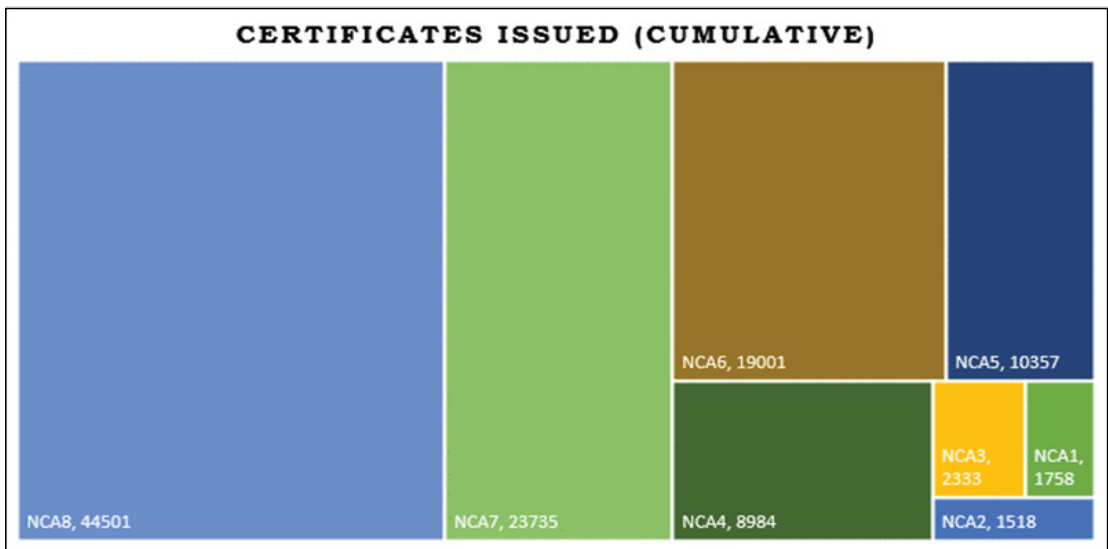


Table 16 indicates that at the beginning of FY2020/2021, out of 112,187 licenses only 23,672 were renewed, reflecting a validity ratio of 21%. Tables 17-18 show a slightly higher renewal rate at the beginning of FY2019/2020 and FY2018/2019 where 22.4% and 28% of certificates were renewed respectively. Among the valid licenses in the FY2020/21, 37% are building works, 35% road works, 21% waterworks, 4% electrical works, and 3% mechanical works.

Table 16: Status of Valid Licenses (FY 2020/2021)

Category	Certificates Issued (Cumulative)	Classes of Works						Valid 2020/21 certificates as % of registered certificates
		Roads	Water	Buildings	Electrical	Mechanical	Total	
NCA1	1,758	177	131	250	124	88	770	43.8
NCA2	1,518	179	122	246	41	39	627	41.3
NCA3	2,333	265	172	307	71	49	864	37
NCA4	8,984	877	613	919	161	113	2,683	29.9
NCA5	10,357	988	658	1,026	142	94	2,908	28.1
NCA6	19,001	1,631	956	1,597	149	87	4,420	23.3
NCA7	23,735	1,662	891	1,651	140	80	4,424	18.6
NCA8	44,501	2,434	1,559	2,724	152	107	6,976	15.7
Total	112,187	8,213	5,102	8,720	980	657	23,672	21.1

Table 17: Status of Contractors' Registration (FY 2019/2020)

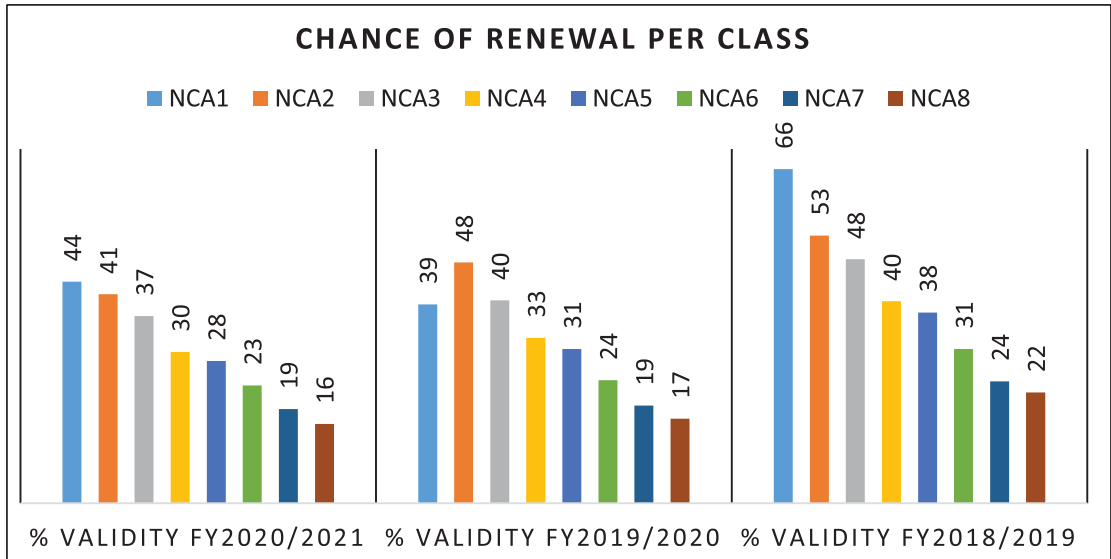
Category	Certificates Issued (Cumulative)	Classes of Works						Valid 2019/20 certificates as % of registered certificates
		Roads	Water	Buildings	Electrical	Mechanical	Total	
NCA1	1455	132	85	195	98	62	572	39.3
NCA2	1204	170	102	220	45	36	573	47.6
NCA3	1943	243	142	280	73	41	779	40.1
NCA4	7373	810	551	809	150	91	2,411	32.7
NCA5	8226	855	570	872	135	77	2,509	30.5
NCA6	15115	1,344	787	1,304	169	69	3,673	24.3
NCA7	20311	1,454	795	1,415	188	68	3,920	19.3
NCA8	35647	2,040	1,340	2,271	214	88	5,953	16.7
Total	91274	7,048	4,372	7,366	1,072	532	20,390	22.4

Table 18: Status of Contractors' Registration (FY 2018/2019)

Category	Certificates Issued (Cumulative)	Classes of Works					Total	Valid 2018/19 certificates as % of registered certificates
		Roads	Water	Buildings	Electrical	Mechanical		
NCA1	1171	171	140	238	127	97	773	66
NCA2	991	150	92	207	44	31	524	52.9
NCA3	1492	219	145	256	60	39	719	48.2
NCA4	6035	793	531	849	136	99	2,408	39.9
NCA5	6653	847	557	899	118	87	2,508	37.7
NCA6	12557	1,350	787	1,439	164	90	3,830	30.5
NCA7	17855	1,587	829	1,643	170	74	4,303	24.1
NCA8	27425	2,051	1,360	2,348	135	112	6,006	21.9
Total	74178	7,168	4,441	7,879	954	629	21,071	28.4

Figure 13 shows a systematic trend in each financial year that the higher the NCA category, the more likely the renewal chance. This is inversely proportional to the number of valid and registered certificates by category.

Figure 13: Valid Certificates Summary (FY 2018/2019- FY 2020/2021)



3.3 HUMAN CAPITAL IN THE CONSTRUCTION INDUSTRY

3.3.1 Accreditation of Skilled Construction Workers and Construction Site Supervisors.

Table 19 indicates that as of the FY 2020/21, the total number of 86,523 site supervisors and skilled construction workers had been accredited by the Authority.

Table 19: Accredited Skilled Construction Workers and Site Supervisors

Description	Totals	%
Site Supervisors	16,521	20
Skilled Construction Workers	70,002	80
Total	86,523	100

Table 20 indicates that among the 16,529 accredited site supervisors, 66% (10,864) of them specialize in building works, 16% (2,676) civil engineering works, 11% (1,723) in electrical works, and 7% (1,244) in mechanical works.

Table 20: Construction Site Supervisors Accredited

Site Supervisors Accredited	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	Total
<i>Building Works</i>	304	498	3,551	1,960	3,085	1,448	10,846
<i>Civil Works</i>	20	67	24	616	1,257	692	2,676
<i>Electrical Works</i>	36	45	161	492	657	372	1,763
<i>Mechanical Works</i>	19	25	175	270	514	241	1,244
Totals	379	635	3,911	3,338	5,513	2,753	16,529

Table 21 shows the category of top 10 accredited skilled construction workers from FY 2014/15 to FY 2019/20. Among the top 10 accredited skilled workers, the majority are Masons (32,578) and Carpenters (12,256), Steel Fixers (6,411), Electricians (5,805), Plumbers (4,207), and Painters (1,523). The rest of the categories include Welders, Joiners, Safety Officers, and Terrazzo/Granolithic Layer, workers. The full list has been included in Appendix IV.

Table 21: Top 10 Skilled construction workers accredited by trade

Skilled workers accredited	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	Total
Totals	342	2,755	3,175	9,118	30,683	20,833	66,906
1 Mason	77	1,308	1,351	6,044	15,017	8,781	32,578
2 Carpenter	61	509	821	1,605	5,655	3,605	12,256
3 Steel Fixer	24	211	100	442	3,437	2,197	6,411
4 Electrician	25	415	417	221	2,882	1,845	5,805
5 Plumber	24	142	263	294	2,133	1,351	4,207
6 Painter	5	71	77	223	286	861	1,523
7 Welder	4	36	39	84	199	305	667
8 Joiner	0	0	0	5	156	302	463
9 Safety Officer	0	0	0	5	188	255	448
10 Terrazzo/Granolithic Layer	0	0	0	6	145	205	356

3.3.2 Training and Capacity Building

NCA is mandated in the NCA Act No. 41 of 2011 to "provide, promote, review and co-ordinate training programs organized by public and private accredited training centers for skilled construction workers and construction site supervisors." NCA in partnership with various stakeholders and experts in various disciplines subjects in the industry has conducted many training programs countrywide. Capacity building is aimed at improving service delivery, supporting quality assurance, and enhancing competitiveness for assisting in the exportation of construction services connected to the construction industry; a summary of the contractor numbers and artisans whose capacity has been built in various topics over the years are as shown in the next tables. Table 22 indicates that a total of 31,753 contractors and 25,644 Site supervisors and Skilled workers have been trained by the Authority as of the end of the FY 2019/2020.

Table 22: Capacity Building Numbers

Year	Contractors Trained	Site supervisors & Skilled workers trained
2014/2015	5,003	-
2015/2016	4,263	2296
2016/2017	6,336	7516
2017/2018	4,103	3605
2018/2019	9,807	10259
2019/2020	2242	1968
<i>Total</i>	31,754	25644

3.3.3 Registered Professionals Outlook

The Construction Industry workforce is one of its most valuable tools. The success of any construction project is a direct reflection of the skills of the labour force behind it. Professionals are regulated by various regulatory authorities including Board of Registration of Architects of Quantity surveyors (BORAQS), Physical Planners Registration Board (PPRB), and Engineers Board of Kenya. A report published by the National Construction Authority in 2020 on Failure and Collapse of Buildings in Kenya shows that the ratio of professionals to the general population is still quite low compared to the developed countries, Table 23.

Table 23: Comparison of selected professionals per population of 1,000

	Registered Professionals	Ratio per population of 1,000 ²
Architects	1 509	0.032 ³
Quantity Surveyors	931	0.020
Physical Planners	220	0.005
Engineers (Construction related)	1 323	0.028

Source: Adapted from NCA, 2020

As of 4th November 2020, there were only 845⁴ Architects in good standing constituting around 56% of the total number of registered Architects, 15 being foreign. Similarly, as of 4th November 2020, there were 496⁵ Quantity Surveyors in good standing constituting around 53% of the total number of registered Quantity Surveyors, 4 being foreign. There were also 168 architectural firms and 114 Quantity Surveying firms registered locally.

²Based on 2019 census results that indicates 2019 population as 47, 564, 296

³Ratios of Architects to population from other Countries is as follows: Austria 0.53, Canada 0.26, Netherlands 0.9, UK 0.58, Ghana 0.02, Uganda 0.04

Table 24: Number of Architects, Quantity Surveyors, and firms in the Kenyan Construction Industry

Category	Number
Architectural Firms	168
Quantity Surveying Firms	114
Architects	845
Quantity Surveyors	496

Source: BORAQS Website 4th November, 2020

EBK on the other hand has an inventory that categorizes engineers into four based on their level of experience and professional qualifications as shown in table 25 below.

Table 25: Overall Number of Engineers and Engineering firms in the Kenyan Construction Industry

Category	Number
Registered Professional Engineers	2,067
Registered Consulting Engineers	433
Registered Graduate Engineers	17,101
Registered Consulting Firms	127

Source: EBK Website, 4th November, 2020

Professional engineers are further classified into several subsets as captured in Table 26 below:

Table 26: Registered Professional Engineers sub-categories

Category	Number
Civil/structural	1 189 (111 females)
Electrical/Electronics/Communications	377 (25 females)
Mechanical	325 (6 females)
Chemical	16 (1 females)
Aeronautical	3 (0 females)
Agricultural	122 (3 females)
Production	27 (3 females)
Mechanical/Production	11(0 females)

Source: EBK Website, 4th November 2020

¹Source: BORAQS website

²Source: BORAQS website

Land Surveyors on the other hand are classified into 2 categories: licensed surveyors and approved assistants. As of 26th June 2018 which was the most current list of professionals displayed in the Land Surveyors Board (LSB)⁶, there are 109 licensed surveyors, while the list of approved assistants was still under compilation.

3.4 SUSTAINABLE CONSTRUCTION

The Construction Industry has an oversized carbon footprint and contributes over a third of greenhouse emissions. The industry is greatly supported by natural capital and so is the Kenyan economy. Kenya's economy depends on natural resources (42%). There is a growing need to conserve resources and uphold environmental stewardship through responsible resource consumption and production.

Sustainable construction is based upon the Triple Bottom Line (TBL) tenets of "people, planet, and profit" and is concerned with the economic, social, and environmental impact of creating a usable structure. Building practices that will not cause long-term damage to the environment are upheld. Sustainable buildings/green buildings are designed to be energy-efficient, water-efficient, resource-efficient, to be healthy for the people who live or work in them, and to reduce pollution and waste.

Kenya's Green Economy Strategy Implementation Plan (GESIP 2016-2030) that aims for "A low carbon, resource-efficient, equitable and inclusive socio-economic transformation" charges the National Construction Authority (NCA) to promote sustainable design and construction of buildings and infrastructure. Several indicators set therein include: New and renovated buildings that are green, number of Professionals (Architects, Engineers, Quantity Surveyors) whose capacity has been built in green building, green building rating tools developed and adopted, New and renovated buildings that are certified green (LEED, GSSA, etc).

NCA as the Construction Industry regulator in Kenya is dedicated to providing leadership on this global issue at the local level. Like-minded organizations such as Kenya Green Building Society (KGBS) have formed strategic partnerships to support the delivery of this agenda. A summary of the achievements in this agenda is given in Figure 14.

Figure 14: Statistics on sustainable construction



Source: Adapted from KGBS (2020)

⁶As of 30th November, 2020

3.4.1 Trends of Sustainable Construction in Kenya

The construction sector in Kenya is overly dependent on natural capital and has exhibited a non-decelerating growth in the recent past. While the increase in construction of housing and infrastructure network had a positive knock-on effect on the overall growth of the nation's economy as infrastructure permeates every sector, it also had a negative long-term knock-on effect on the environment as it contributed to environmental degradation.

The Construction Industry consumes more than 33% of the natural resources, contributes to over a third of greenhouse gas emissions causing climate change, and over 50% of landfill waste. Consequently, the industry has an oversized and growing ecological footprint that needs to be mitigated for sustainable economic development.

Sustainable construction is based upon the triple bottom line (TBL) tenets of "people, planet, and profit" and is concerned with the economic, social, and environmental impact of creating a usable structure. Building practices that will not cause long-term damage to the environment are upheld. Sustainable buildings/green buildings are designed to be energy-efficient, water-efficient, resource-efficient, to be healthy for the people who live or work in them, and to reduce pollution and waste.

The Government is committed to mainstream responsible resource consumption and production in the Construction Industry as required in the National Green Economy Strategy Implementation Plan 2016-2030, Climate Change Act 2016, National Climate Change Action Plan 2018-2022, and the Paris Agreement 2015.

3.4.2 Status of Capacity Building

Sustainable construction will directly support the achievement of numerous SDG goals (SDG 7, 8, 9, 11, 12, 13, and 17) and mitigate the negative impacts of construction on the environment. In that principle of responsible resource consumption and production, NCA has committed to building the capacity of industry players to construct sustainably with minimal or no environmental impacts. NCA has annually trained more than 1300 contractors on sustainable and alternative building technologies since 2015. Through Partnerships with Kenya Green Building Society, UN-Habitat, NCA continues to conduct capacity-building programs nationwide and disseminate sustainable construction knowledge.

3.4.3 Green Building Certification Tools in Kenya

To avoid greenwashing and establish the standard environmental performance of construction projects it is crucial to review the design or the "As-Built" drawings of the structure through Standard and recognized internationally as well as local green building rating tools.

Kenya's Green Economy Strategy Implementation Plan (GESIP 2016-2030) that aims for "A low carbon, resource-efficient, equitable and inclusive socio-economic transformation" charges the National Construction Authority (NCA) to promote sustainable design and construction of buildings and infrastructure. Several indicators set therein include: New and renovated buildings that are green, number of Professionals (Architects, Engineers, Quantity Surveyors) whose capacity has been built in green building, green building rating tools developed and adopted, New and renovated buildings that are certified green (LEED, GSSA, etc)

Green buildings and those that have registered for certification in Kenya have continued to increase over the years although in single-digit numbers. Many construction projects have been certified through:

- Green Star South Africa certification tool,
- Leadership in Energy and Environmental Design (LEED USA),
- IFC EDGE Green Building rating tool,
- ***Green Mark rating tool and Safari green building tool are other local country-specific tools that have been developed by built environment professionals in Kenya although they are yet to be used in rating sustainable construction performance of buildings locally.

NCA as the Construction Industry regulator in Kenya is dedicated to providing leadership on this global issue at the local level. Like-minded organizations such as Kenya Green Building Society have formed strategic partnerships to support the delivery of this agenda. A summary of the achievements in these agenda are shown in Figure 15.

Figure 15: Trends of Sustainable Construction in Kenya

	2013	2014	2015	2016	2017	2018	Trend
1 <i>New and renovated buildings that are certified green</i>	9	6	4	6	4	3	
2 <i>No. of Professionals (Architects, Engineers, Quantity Surveyors) whose capacity has been built in IFC EDGE green building rating tool</i>	0	0	0	0	8	10	
3 <i>No. of Professionals (Architects, Engineers, Quantity Surveyors) whose capacity has been built in Green Star South Africa green building rating tool</i>	0	0	0	5	5	7	
4 <i>Green building rating tools developed and adopted locally</i>	0	0	0	0	1	0	
5 <i>Number of projects targeting certifications LEED</i>	9	6	2	5	2	2	
6 <i>Number of projects targeting certifications Green Star South Africa</i>	0	0	2	1	0	1	
7 <i>Number of projects targeting certifications IFC EDGE</i>	0	0	0	0	2	0	

Examples of buildings certified Green in Kenya



Garden City Mall and Residential Apartments (Using Green Star South Africa rating tool)



Dunhill Towers



World Bank Group Offices Nairobi
(Using IFC EDGE rating tool)

SECTION IV: SECTOR REFORMS/STRATEGIES

4.1 PLUPA 2019

The Physical and Land Use Planning Act, 2019 was gazetted in July 2019 as an Act of Parliament that makes provision for the planning, use, regulation, and development of land and for connected purposes which took effect on 5th August 2019. Key highlights or major changes introduced by this Act include:

- 1) Increased public participation in the preparation of development plans;
- 2) *Penalties*: Section 30 (2) of the Physical Planning Act of 1996 prescribed a penalty of only Kshs. 130,000 for anyone who develops property without development permission while the Physical and Land Use Planning Act, 2019 raises this to Kshs. 500,000;
- 3) *3 years*: Period within which to commence a project before the development permission lapses; and
- 4) *60 days*: If an applicant does not receive a response to their application for development permission after this period, such application will be deemed to have been approved.
- 5) Classification of strategic and inter-county projects.

PLUPA 2019 aims at solving key challenges previously faced by property owners and developers when seeking to obtain development permission and also seeking to ensure planning and development are undertaken rationally and cohesively at both national and county levels going forward. It is important to note projects which received approval under the repealed legislation must commence within 24 months from the date on which the permission was granted or risk such permission lapsing (in which case, development approval would need to be re-applied for under the 2019 Planning Act).

4.2 The Proposed Building Code 2020

Historically, following the repeal of the Local Government Act by the County Governments Act in 2012, the Building Code was apportioned as subsidiary legislation without a Parent Act. For the Code to be revised and gazetted, there was the need to specifically provide a legal framework to anchor the Code. On 19th November 2019, the Cabinet resolved for the Building Code to be anchored under the National Construction Authority Act No. 41 of 2011 as subsidiary legislation in furtherance of government policy in the construction industry.

In fulfillment of the Cabinet directive to enhance business reforms in the construction indicator, the Government, in conjunction with the World Bank, identified areas of reform in various Acts of Parliament, which culminated into the Business Laws (Amendment) Bill 2019.

4.3 The Construction Industry Policy (CIP)

The Construction Industry Policy seeks to create a well-coordinated and developed construction industry, address the needs of the industry and contribute to sustainable socio-economic development.

The Policy objectives include; to create an enabling environment for the growth and development of the industry; promote the development of the human resource capacity; improve quality management; promote research, innovation, and development; enhance coordination for better management of the industry; promote access and use of data and information in decision making; improve ease of doing business; reduce challenges related to land management and physical planning; promote environmental integrity and conserve heritage in the industry; protect workers and the general public from any risks associated with construction and boost risk and disaster management strategies; mainstream cross-cutting and emerging issues; and to strengthen institutions, resource mobilization, implementation of plans and coordination within the industry.

4.4 The Code of Conduct (COC)

Section 5(2) (m) of the NCA Act 2011, mandates the Authority to develop and publish a Code of Conduct for the construction industry. In fulfillment of this, the Authority published its First Edition of the Code of Conduct for the Construction Industry in April 2016. Several progressive developments and emerging issues witnessed in the industry, as well as the Code's in-built mechanism requiring its review after every three years, necessitated its review.

Article 10 of the Constitution of Kenya also highlights the national values and principles of governance, which must be observed by all persons in Kenya. Informed by this, it is prudent for the Construction Industry to have a Code of Conduct indicating the minimum acceptable standards for the players in the industry. Stakeholder engagements and public participation were conducted in a transparent, consultative, and participatory manner in line with the constitutional requirements culminating in the publishing of the 2nd Edition in the Kenya Gazette **Vol. CXXII** on 27th March 2020.

4.5 Deep Excavation and Abandoned Sites Policy Guidelines

The Authority has noted with concern the proliferation of abandoned construction sites and deep excavations within and out of urban areas. This poses a safety hazard to the public and is harmful to the environment. The Authority under the provisions of Section 23 of the National Construction Authority Act, has issued an order to all developers and contractors with ongoing, abandoned, or planned construction works with deep excavations exceeding 3.0 meters across the country to submit; a geo-technical site investigation report for their project detailing slope stability, monitoring programs, and detailed studies of the effects on adjacent structures; and, to immediately resume construction work in abandoned sites or backfill the deep excavations in project sites.

The foregoing justifies the need for policy guidelines that seek to create a sustainable Construction Industry through effective management of health and safety risks associated with deep excavation and abandoned sites. In this regard, the Authority has established a task force to develop comprehensive policy guidelines to address the issue of deep excavation and abandoned sites. The policy guidelines are being developed within the existing institutional and regulatory framework including the National Construction Act of 2011 and Environmental Management and Coordination Act of 1999.

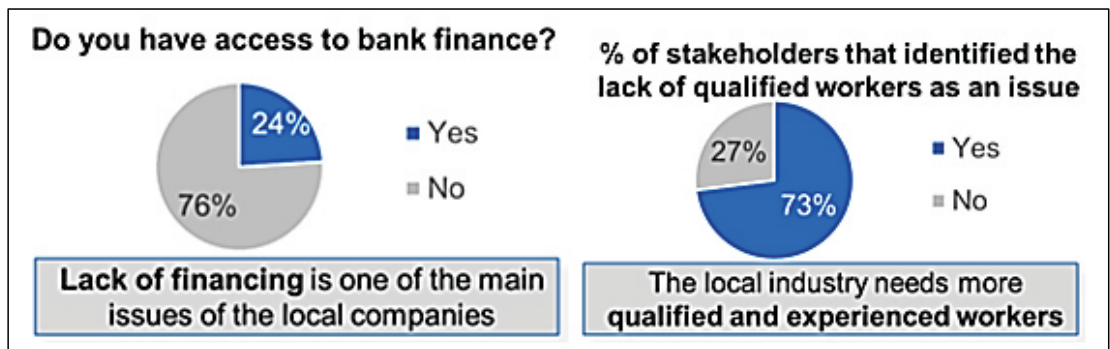
4.6 Domestic Capacity of Construction Industry (DCI)

In 2018, the National Construction Authority (NCA) in Partnership with Kenya National

Highways Authority (KENHA) awarded a contract to Aninver InfraPPP Partners S.L., a Spanish management consulting firm to carry out an assessment of the domestic capacity of the Construction Industry and develop a national construction capacity strategy. The project was conceived to address Agenda No. 4 of NaCRA 2015. The study sampled a total of 56 projects which are currently ongoing with a total value of US\$ 20.9 billion.

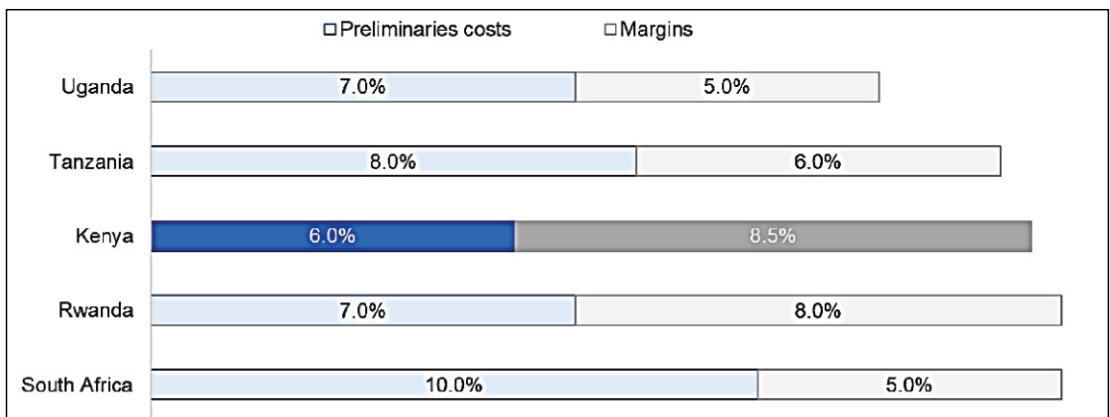
According to the report, there was a predominance of foreign contractors conducting construction projects in Kenya (85% of projects). The bulk of the total value of the projects awarded is also allocated to foreign companies. The study established that whereas there is a strong presence of international firms in the Kenyan construction industry, the local contractors experience difficulties accessing financing putting them at a point of disadvantage, Figure 16.

Figure 16: Access to finance



The same study shows that Kenya has the highest margins and lowest preliminary costs compared to Uganda, Rwanda Tanzania and South Africa, Figure 17.

Figure 17: Preliminary costs and margins in the construction industry



Source: DCI report⁷

⁷Citing the International construction market survey 2018 (Turner & Townsend)

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- 3) Engineers Board of Kenya (EBK, 2020): <https://ebk.or.ke>
- 4) International Construction Market Survey 2018 (Turner & Townsend)
- 5) Kenya Green Building Society (KGBS)
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- 7) Kenya National Bureau of Statistics (KNBS), Economic Survey 2020: The Construction Sector
- 8) Land Surveyors Board (LSB, 2020): <https://www.lsb.or.ke/>
- 9) National Construction Authority (NCA): <https://nca.go.ke/>

APPENDICES

Appendix I: Ongoing, Upcoming and Planned Projects*

No	Project Name	Organization	Sector	Cost	Opportunity Type	Stage (TO BE REVISIED)
1	Lamu Port Under Lamu Port South Sudan Ethiopia Transport Corridor	LAPSSET Development Authority	Transport	\$5,300,000,000	Public Private Partnership	Feasibility study
2	Olkaria Mixed Use Housing Project	Olkaria Mixed Use Housing Project	Housing and Urban Development	\$3,300,000,000	Operate & Manage	Feasibility study
3	Dualling of Mombasa - Nairobi Highway	Kenya National Highways Authority (KeNHA)	Transport	\$2,350,000,000	Public Private Partnership	Ongoing
4	Railway Cities	Kenya Railway Corporation (KRC)	Building and Construction	\$2,150,000,000	Joint Venture	Feasibility study
5	Development Of National Petroleum Depots	National Oil Corporation	Energy	\$1,200,000,000	Public Private Partnership	
6	Development of Product Oil Pipeline as Part of LAPSSET Corridor	Development of Product Oil Pipeline as Part of LAPSSET Corridor	Energy	\$900,000,000	Public Private Partnership	Feasibility study
7	Olkaria VI (140MW)	Kenya Electricity Generating Company (KenGen)	Energy	\$675,000,000	Engineering Purchasing and Constructing	Feasibility study
8	Construction of Airports as Part of the LAPSSET Corridor	LAPSSET Corridor Development Authority (LCDA)	Transport	\$506,000,000	Public Private Partnership	Feasibility study
9	Mombasa Petroleum Trading Hub	National Oil Corporation (NOCK)	Energy	\$500,000,000	Joint Venture	Feasibility study
10	Construction of Isiolo - Lokichar Road Section as part of the LAPSSET corridor	LAPSSET Development Authority	Transport	\$500,000,000	Public Private Partnership	Feasibility study
11	Mombasa Port Development Project (MPDP)-2ND Container Terminal Phase II & III	Kenya Ports Authority (KPA)	Transport	\$380,000,000	Public Private Partnership	Feasibility study
12	Construction of Dongo Kundu Berth 1 and a Free Port	Kenya Ports Authority (KPA)	Transport	\$340,000,000	Public Private Partnership	Feasibility study
13	Baringo-Silali-Paka Geothermal Project	Geothermal Development Corporation (GDC)	Energy	\$250,000,000	Public Private Partnership	Feasibility study

No	Project Name	Organization	Sector	Cost	Opportunity Type	Stage (TO BE REVISED)
1	Lamu Port Under Lamu Port South Sudan Ethiopia Transport Corridor	LAPSSET Development Authority	Transport	\$5,300,000,000	Public Private Partnership	Feasibility study
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3	Dualling of Mombasa - Nairobi Highway	Kenya National Highways Authority (KeNHA)	Transport	\$2,350,000,000	Public Private Partnership	Ongoing
4	Railway Cities	Kenya Railway Corporation (KRC)	Building and Construction	\$2,150,000,000	Joint Venture	Feasibility study
5	Development Of National Petroleum Depots	National Oil Corporation	Energy	\$1,200,000,000	Public Private Partnership	
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13	Baringo-Silali-Paka Geothermal Project	Geothermal Development Corporation (GDC)	Energy	\$250,000,000	Public Private Partnership	Feasibility study

14	Stoni Athi Urban Residential Housing	National Housing Corporation (NHC)	Housing and Urban Development	\$240,000,000	Build Own Operate Transfer	Feasibility study
15	Development of Lake Victoria Ports	Kenya Ports Authority (KPA)	Transport	\$240,000,000	Public Private Partnership	Feasibility study
16	Construction of 2nd of Nyali bridge	Kenya Ports Authority	Transport	\$200,000,000	Public Private Partnership	
17	Nairobi Metropolitan Rapid Transit System (NMRTS)	Kenya Railways Corporation (KRC)	Transport	\$138,000,000	Public Private Partnership	Feasibility study
18	Flat Glass Project	Coast Development Authority	Infrastructure	\$88,473,720	Public Private Partnership	Feasibility study
19	Construction of Industrial Buildings/Sheds in the Athi River Textile Hub	Construction of Industrial Buildings/Sheds in the Athi River Textile Hub	Housing and Urban Development	\$65,450,000	Public Private Partnership	Feasibility study
20	SEVEN FORKS 40MW SOLAR PV PROJECT	KENGEN	Energy	\$57,000,000	Engineering Purchasing and Constructing	Feasibility study
21	O&M Of Nairobi - Thika Road	Kenya National Highways Authority (KeNHA)	Transport	\$56,000,000	Concession	Feasibility study
22	O&M of Nairobi - Thika Highway Road	Kenya National Highways Authority (KeNHA)	Transport	\$56,000,000	Concession	Feasibility study
23	Development of A Modern Conference Centre and 5- Star Hotel	Meru University of Science and Technology	Building and Construction	\$50,650,000	Public Private Partnership	
24	Vipingo Development	Vipingo Development Limited	Housing and Urban Development	\$46,960,000	Public Private Partnership	Feasibility study
25	Likoni Channel Bridge And Multi-Storey Terminal	Kenya Ferry Services Ltd.	Transport	\$31,000,000	Public Private Partnership	Feasibility study
26	KARURA 90MW HYDROPOWER PLANT	KENGEN	Energy	\$30,000,000	Joint Venture Public Private Partnership	Feasibility study
27	Raising of Masinga Hydropower Dam	Kenya Electricity Generating Company (KenGen)	Energy	\$22,400,000	Engineering Purchasing and Constructing	
28	Construction of Residential Complex in the Athi River Textile Hub	Export Processing Zones Authority (EPZA)	Housing and Urban Development	\$18,380,000	Public Private Partnership	Feasibility study
29	Lake Basin Development Authority (LBDA) Headquarters and Housing Development Project	Lake Basin Development Authority	Housing and Urban Development	\$17,990,000	Build Own Operate Transfer	Feasibility study

30	Kanyakwar Urban Residential Housing	National Housing Corporation (NHC)	Housing and Urban Development	\$16,000,000	Build Own Operate Transfer	Feasibility study
31	Development of the Shimoni Port	Kenya Ports Authority	Transport	\$15,000,000	Public Private Partnership	Feasibility study
32	Construction of Standard Gauge Railway (SGR) as Part of LAPSSET Corridor	LAPSSET Corridor Development Authority (LCDA)	Transport	\$8,000,000	Public Private Partnership	Feasibility study
33	Development of Isiolo-Lokichar road section as part of the LAPSSET Highway	LAPSSET Development Authority	Building and Construction	\$5,345,000	Public Private Partnership	
34	CDA Samburu 300mw photovoltaic solar power generation project - Kenya	Coast Development Authority	Energy	\$5,060,000	Public Private Partnership	Feasibility study
35	Coast Development Authority Complex Project	Coast Development Authority	Housing and Urban Development	\$5,000,000	Public Private Partnership	Feasibility study
36	Konza Technopolis Urban Residential Housing Phase 1	National Housing Corporation (NHC)/ Konza Technopolis Development Authority	Housing and Urban Development	\$4,000,000	Build Own Operate Transfer	Feasibility study
37	International Conference Centre	Meru University of Science and Technology	Housing and Urban Development	\$3,000,000	Joint Venture	Feasibility study
38	Nyandarua Urban Residential Housing	National Housing Corporation (NHC)	Housing and Urban Development	\$3,000,000	Build Own Operate Transfer	Feasibility study
39	Fish Port Project	Coast Development Authority	Infrastructure		Public Private Partnership	Feasibility study
40	Changamwe Redevelopment	National Housing Corporation (NHC)	Housing and Urban Development		Build Own Operate Transfer	Feasibility study
41	Eldoret Urban Residential Housing	National Housing Corporation (NHC)	Housing and Urban Development		Build Own Operate Transfer	Feasibility study

*Source: KENINVEST

Appendix II: Registered Projects by County

Value in KES Million

	County Name	2016		2017		2018		2019		2020*		Total	
		No	Value	No	Value	No	Value	No	Value	No	Value	No	Value
1	Nairobi	2	416	294	90,229	481	75,491	435	69,138	260	35,251	1,472	270,525
2	Kiambu	2	613	108	15,584	238	37,438	280	18,321	149	6,647	777	78,603
3	Kajiado	3	1,644	173	6,166	490	31,579	458	12,478	216	4,995	1,340	56,862
4	Makueni			22	841	26	37,903	12	325	4	170s	64	39,239
5	Machakos			132	9,550	224	7,464	225	14,692	102	3,258	683	34,964
6	Mombasa			165	12,966	267	9,609	184	6,725	129	5,140	745	34,440
7	Bomet	1	22	22	651	38	21,152	15	408	2	515	78	22,748
8	Muranga			41	2,044	96	16,215	72	2,743	20	295	229	21,297
9	Kilifi			48	2,439	85	10,421	61	5,014	26	1,282	220	19,156
10	Kisumu			71	1,982	100	11,095	94	3,612	69	1,480	334	18,169
11	Nakuru	2	34	99	3,663	216	7,581	106	3,200	29	1,835	452	16,313
12	Kirinyaga			35	1,088	70	9,418	150	3,747	51	984	306	15,237
13	Meru			26	647	157	5,653	216	3,947	113	2,751	512	12,998
14	Uasin Gishu			42	1,294	48	1,750	57	4,996	26	1,763	173	9,803
15	Kisii			104	2,623	80	2,397	95	2,533	40	1,464	319	9,017
16	Embu			30	565	123	2,438	158	3,421	60	976	371	7,400
17	Kakamega			21	539	42	4,410	31	1,227	29	566	123	6,742
18	Kwale			6	194	26	1,166	29	2,895	13	351	74	4,606
19	Migori			33	976	57	2,092	41	1,098	12	282	143	4,448
20	Nyeri			21	423	88	2,069	73	1,695	7	88	189	4,275
21	Kericho			29	523	27	991	20	1,728	13	1,032	89	4,274
22	Garissa			21	1,657	14	522	18	1,508	10	277	63	3,964

Appendix III: Regional Distribution of Projects Registered by Region

		Value in KES Million									
		2016		2017		2018		2019		2020	
	Region Name	No	Value	No	Value	No	Value	No	Value	No	Value
1	Central Eastern	-	-	113	2,673	415	26,878	568	12,440	260	5,375
2	Central Nyanza	-	-	125	3,071	160	13,013	164	6,060	133	2,800
3	Central Rift	3	56	160	5,280	323	51,520	152	6,963	45	3,405
4	Coast	-	-	230	16,157	421	26,659	295	15,519	195	7,651
5	Kajiado	6	3,288	175	6,180	501	52,690	487	12,718	243	5,152
6	Kiambu	2	613	114	16,794	242	61,378	283	18,364	151	6,655
7	Lower Eastern	-	-	192	14,045	309	83,091	301	17,473	123	4,454
8	Mount Kenya	-	-	79	3,327	242	33,462	232	6,207	42	794
9	Nairobi	3	829	305	104,792	495	77,758	445	69,517	270	35,708
10	North Eastern	-	-	37	4,537	22	637	40	4,036	24	561
11	North Rift	-	-	53	1,644	84	2,897	101	7,485	39	5,734
12	South Nyanza	-	-	154	3,879	155	5,244	184	5,480	63	1,987
13	Upper Eastern	-	-	25	578	50	1,165	83	6,245	29	1,041
14	Western	-	-	71	8,381	117	10,076	100	3,127	71	1,814

APPENDIX IV: Accredited Skilled Construction Workers

Skilled workers accredited	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	Total
Totals	342	2,755	3,175	9,118	30,683	20,833	66,906
1 Mason	77	1,308	1,351	6,044	15,017	8,781	32,578
2 Carpenter	61	509	821	1,605	5,655	3,605	12,256
3 Steel Fixer	24	211	100	442	3,437	2,197	6,411
4 Electrician	25	415	417	221	2,882	1,845	5,805
5 Plumber	24	142	263	294	2,133	1,351	4,207
6 Painter	5	71	77	223	286	861	1,523
7 Welder	4	36	39	84	199	305	667
8 Joiner	0	0	0	5	156	302	463
9 Safety Officer	0	0	0	5	188	255	448
10 Terrazo/Granolithic Layer	0	0	0	6	145	205	356
11 Tile Layer	0	0	0	14	12	309	335
12 Scaffolder	24	0	10	9	42	240	325
13 Plant Operator	50	54	66	74	47	25	316
14 Laboratory assistant	0	0	3	2	146	151	302
15 Glaziers	0	0	6	1	153	135	295
16 Solar Water Heater Installer	0	0	0	2	139	81	222
17 Plant Mechanic	30	9	18	8	38	55	158
18 Landscaper	0	0	0	10	0	40	50
19 Escalator Mechanic	18		0	8	0	13	39
20 Interior Decorator	0	0	0	10	7	19	36
21 Structured Cabling Installer	0	0	0	2	0	22	24
22 Solar PV Installer	0	0	0	2	0	16	18
23 Security System Installer Electric Fence	0	0	0	5	0	9	14

24	Overhead Lines Person Transmission	0	0	0	3	0	11	14
25	Electrical Fitter	0	0	0	12	0	0	12
26	Rigger	0	0	2	6	0	0	8
27	Asphalters	0	0	2	4	1	0	7
28	Security Surveillance Systems	0	0	0	7	0	0	7
29	Refrigeration and AC Mechanic (unitary system)	0	0	0	4	0	0	4
30	Overhead Lines Person Distribution	0	0	0	2	0	0	2
31	Radio and TV Broadcast Equipment Installer	0	0	0	2	0	0	2
32	water proofing applicator	0	0	0	2	0	0	2
33	Aluminium fabricator	0	0	0	0	0	0	0
34	Storekeeper/Storeman	0	0	0	0	0	0	0
35	Form worker	0	0	0	0	0	0	0
36	Painter Decorator	0	0	0	0	0	0	0
37	Steel fabricator	0	0	0	0	0	0	0
38	Drain layer	0	0	0	0	0	0	0
39	Banksman	0	0	0	0	0	0	0
40	Batchplant Operator	0	0	0	0	0	0	0
41	Gas installer	0	0	0	0	0	0	0
42	Refrigeration & AC mechanic (unitary system)	0	0	0	0	0	0	0
43	Refrigeration & AC mechanic (air system)	0	0	0	0	0	0	0
44	Overhead crane installer	0	0	0	0	0	0	0
45	Pipe fitter	0	0	0	0	0	0	0
46	Boiler burner installer	0	0	0	0	0	0	0
47	Boiler maker	0	0	0	0	0	0	0
48	Fire services mechanic	0	0	0	0	0	0	0
49	Borehole tester/Tester	0	0	0	0	0	0	0
50	Pre-stressed sectional tank assemblers	0	0	0	0	0	0	0

51	Underground cable joiner	0	0	0	0	0	0	0
52	Cable TV installer	0	0	0	0	0	0	0
53	Supervisor security surveillance systems	0	0	0	0	0	0	0
54	Slinger/signaller/rigger	0	0	0	0	0	0	0
55	Driller	0	0	0	0	0	0	0
56	Sheet metal worker	0	0	0	0	0	0	0
57	Water treatment plant operator	0	0	0	0	0	0	0
58	Fibre optic cable installer	0	0	0	0	0	0	0

