PROJECTS MAGAZINE

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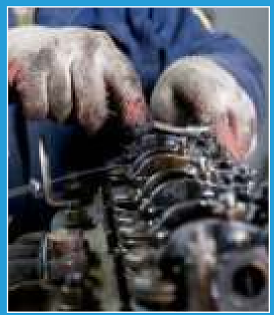

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Syldon and Partners is a wholly Kenya owned limited liability firm established in May, 2000 in Kenya to undertake consultancy services in design, installation and maintenance of Electrical, Mechanical Services and Management Information Systems (MIS), Civil and Structural works.

There are two directors, Eng. G.N. Olando – Managing Director in charge of all Electrical Services and general management of the firm. Eng. Calleb Olali is Director in-charge of mechanical services. Other core staff members include Assistant Electrical Engineer John Ruddy Munda and Assistant Mechanical Engineer Felix Ollando.

Eng. H.S Roopra, Eng. Peter Chege are associates of the firm and backstops Eng. Olando and Eng. Olali in all electrical and mechanical assignments respectively. Eng. Victor Ongewa and Eng. Cyrus Njungu are associates in-charge of power sub-stations and transmission/distribution lines respectively.

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Upper Hill, Near Citi Bank
Opposite Church of Jesus Christ Of Later Day
Saints, Mount Meru Court, Suite No. 4.

Your Next Home Could be 3D Printed

Kenya's first 3D printed home has been unveiled at Athi River.

UK-based firm, CDC Group, in conjunction with Bamburi Cement's parent firm Holcim in a venture named 14 Trees launched the house at a ceremony attended by Principal Secretary for the State Department for Housing and Urban Development, Charles Hinga.

The structure will act as a show house for a 52-unit housing development in Kilifi whose construction is scheduled to begin early 2022. The project, set to be Africa's largest 3D printing housing project, will offer 1, 2 and 3 bedroom units. Mr Hinga lauded the project, noting its potential in fast-tracking delivery of affordable houses in the country.

He added: "In line with the Affordable Housing Programme, and given the effects of climate change being experienced the world over, this project is indeed timely and opportune having achieved EDGE Advanced Certification. This is evidence that the project will benefit both the planet and the house owner through the reduction of carbon emissions during construction and lowering the water and energy costs in the running of the home."

3D-printing of houses is done using a giant 3D printer that ejects a special concrete using a nozzle, which makes it possible for a wall to be completed in just 12 hours compared to the conventional four days.

14 Trees is focused on building affordable houses, schools and social infrastructures in Africa. It was set up with the aim to accelerate the production and commercialization of environmentally-friendly, affordable construction solutions in Africa.

14Trees benefits from the expertise of Holcim's R&D centre, the world's leading building materials research centre, to accelerate the use of environmentally friendly solutions such as Durabric© and 3D printing.

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Contributions
The editors welcome news items, press releases, articles and photographs relating to the Construction Industry. These will be considered and, if accepted, published. No responsibility will be accepted should contributions be lost, damaged or incorrectly printed.

Construction of Stoni Athi Waterfront City Kicks Off

Transport, Infrastructure, Housing, Urban Development and Public Works CS, James Macharia (right) and other guests during the launch (Image: Kenya News Agency)

The National Housing Corporation (NHC) recently launched the construction of 10500 homes dubbed Stoni Athi Waterfront City in Athi River, Mavoko Sub County.

Speaking during the launch of Stoni Athi Waterfront city, Transport, Infrastructure, Housing, Urban Development and Public works CS, James Macharia noted that the houses are being developed on 150-acre land at a total cost of Sh20 billion.

Macharia observed that the houses which target low, middle, and high-income earners will be a multipurpose housing entity varying from residential, commercial, recreational facilities, schools and hospitals, adding that they will be a milestone in combating the crisis of affordable housing in the country.

"Today marks a key milestone in the affordable housing program as we launch the Stoni Athi waterfront city project. Upon completion, the project will have more than 10500 homes which will accommodate mixed use developments to fulfil the NHC mandate of housing the nation," he said, while urging more private investors to engage in housing project.

"The Mavoko project comprises 5,000 affordable housing units costing between Sh1 million and Sh3 million per unit, and 5,500 units targeting middle and upper-income households for between Sh2 million and Sh8 million a unit, added the CS, terming the project as a game-changer.

Macharia says the government has built more than 186,000 housing units in the past eight years as part of the efforts to provide decent housing for Kenyans.

He further disclosed that the NHC will also be developing 5,000 housing units in the Konza Techno City.

"NHC can enhance the use of innovative structures such as joint ventures and other collaborative enhancements to unlock the housing challenges facing the country. It has the capacity to provide vehicles through which county governments can facilitate the development of affordable homes," he said.

Macharia noted that the NHC has potential in developing homes for Kenyans since it has appropriate policies and technical expertise in planning, designing and implementing housing projects.

Furthermore, the CS reiterated that the housing corporation has the ability to structure financial solutions and enhance the use of innovative structures to unlock the housing challenge in the country.

"NHC has the ability to structure financial solutions through collaborations with financial partners. It also has the expertise to develop and present vehicles through which the county government can facilitate the development of affordable homes within the area," said Macharia.

2021 Was a Year of Mixed Fortunes – Architectural Association of Kenya

From left: John Mwaniki, AAK Registrar, Florence Nyole, AAK Vice President, Charles Mwaura Hinga, PS Housing and Urban Development, Wilson Mugambi, AAK President, Jacob Mwangi, AAK CEO and Ambrose Ofafa, Member AAK Landscape Architects Chapter at Sarova Stanley Hotel during the release of the status of the Built Environment Report on 1st February 2022.

The Architectural Association of Kenya (AAK) has expressed concern for the building sector over the uncertainty Covid-19 continues to create.

In its bi-annual Status of the Built Environment Report released on 1st February 2022 covering the second half of 2021, the Association noted that although there were some positive elements in the year, such as the report by the State Department of Housing and Urban Development that revealed the cost of construction in the country within the last four years had dropped by nearly 300 percent, and various government projects currently running, sectors such as commercial office space had continued to register declining performance. This trend was expected to continue given the apparent oversupply of office space and the new preference of working from home.

In the industrial properties subsector, the Association noted that the slow rental growth indicates that the industrial market is also feeling the effect of the weak economy, "although accompanied by less pain than the office and retail property markets."

On matters environment, the AAK noted that in recognition of the growing concerns about climate change, it recently launched a green building certification tool that assesses construction projects to establish their environmental performance.

The Chief Guest at the launch of the report, PS Charles Hinga of the State Department of Housing and Urban Development commended AAK for its continued commitment to improving the environment.

"I am particularly impressed by AAK's continued endeavor to improve the sector demonstrable by your various activities aimed at improving urban governance in Kenya including the AAK Annual Convention," he said.

Bamburi Cement to Join the Solar Power Migration

Bamburi Cement will switch to solar power joining other heavy-consuming industrialists seeking reliable and cheaper electricity supply, reports the Business Daily.

The cement maker has signed a power purchase agreement (PPA) with an independent power producer, Momnai Energy Limited, to set up two solar plants at Bamburi's factories in Mombasa and Nairobi.

The solar power systems will have a capacity of 14.5 megawatts and five megawatts at the Mombasa plant and Nairobi Grinding plant, respectively.

This will account for 40 percent of Bamburi's total power supply, saving the Nairobi Securities Exchange-listed firm 10 percent annually on costs.

Several companies, universities and factories have turned to solar energy to ensure reliable supply and reduce operational costs amid a global shift to green energy.

"We are elated to be making this step towards switching to more affordable and clean energy that will not only lead to a significant reduction in power costs but also bring us closer to our goal of achieving Net Zero carbon emissions," said Miriam Ngolo, Bamburi's Strategy and Business Development Director.

Coming up: 5000 New Low Cost Houses for Nairobi

Contractor Jia Yangping , Housing and Urban development PS Charles Hinga and Seascan Development Limited Director Fidel Gondi during the signing of MOU development project for affordable housing at Mowlem. (Image: The Star)

Nearly 5000 housing units will be put up at Mowlem in Nairobi's Eastlands area as the government pushes ahead with its Big 4 agenda.

A memorandum of understanding has already been signed between the government and the developer, Seascan Development Limited.

The project which will be the first-ever Transit-Oriented Development (TOD) Housing Programme in Kenya will cost Sh18 billion. It will be undertaken in three phases.

Phase One will include 1200 units, 2000 for phase two and the balance of 1700 units will be done in phase three, making a total of 4900 units. The development consists of studio units and 1,2 and 3-bedroom houses whose prices range from Ksh 1.8m to Ksh 5.4m.

The government is targeting to do groundbreaking of the project at the end of the first quarter of the year.

Elements of Sustainable (Green) Building

'Green' building design seems more like a buzzword or a catchphrase to advertise and sell projects, rather than something practical and achievable. How does one transform a regular building project from ordinary to sustainable and 'green' within budget, and with limited expertise?

But first, just what is a 'green' building? According to the World Green Building Council, a green building is one that in its design, construction or operation, minimizes or eliminates negative effects on the surrounding climate or natural environment and in turn promotes positive effects. Thus, these buildings improve human quality of life and protect precious natural resources in the environment.

Approaches to green building may be shaped, firstly, by available resources, climatic conditions, the cultures and traditions of the occupants, and other environmental, economic, and social priorities. This article will delve into the most pertinent features that can transform any building into a 'green' project.

Use of Renewable Energy

According to the United States EPA, buildings including commercial and residential account for about 65% of total electricity use and about 35% of total energy use. About 30% of all energy is wasted. This presents a good opportunity for energy and cost savings.

Solar energy and biofuel represent the easiest ways of improving energy stats and the 'green' conditions of buildings.

Efficient Use of Resources Such as Energy and Water

In more advanced economies, innovative technological solutions such as thermostats and smart apps help reduce the net energy consumption in homes and other establishments by reducing energy waste. Locally, 'smart meters' can integrate both solar power and metered Kenya Power connections to balance usage, thus improving energy efficiency.

Rain water harvesting and recycling are two ways of improving water use. There are many organizations in Kenya that offer products and services in this sector

Use of Sustainable Materials in Construction

While preferred, the use of ethical, non-toxic and sustainable materials sometimes proves difficult in the quest for green building. This is especially so in Kenya where concrete and steel are almost ubiquitous in building projects. While ecologically sustainable materials such as bamboo and wood may be impractical in some building projects, architectural and structural models can implement some elements of these, such as in partition walls.

Expanded Polystyrene (EPS) panels are one type of building material that should be considered when building. EPS minimizes the amount of steel and concrete, and also reduces construction time and costs.

Consideration of the Environment in Design, Construction and Operation Processes

Keeping the environment in consideration during the entire life cycle of a building especially at project conceptualization and design is important in improving the 'green' aspects of a building project. The project should not impact the environment adversely, for example, through being located on riparian land or other protected areas such as game reserves. Likewise, the waste disposal mechanisms should be consider any impact on the surrounding environment.

These methods can be integrated into any building projects such as schools, churches, community halls, apartment blocks, or even shopping or industrial complexes. Finally, all these methods should keep the quality of life of the building occupants as a key priority regardless of the method chosen.

Iron & Steel Imports Rise on Increased Economic Activity

The value of iron and steel imports rose by 69 percent in the nine months to September driven by increased economic activity and a global price rise of the commodities after supply cuts.

The latest Kenya National Bureau of Statistics (KNBS) data shows that the imports of iron and steel in the period shot up to Sh120.77 billion compared to Sh71.42 billion last year.

The rise has been attributed to the growth of real estate coupled with President Uhuru's legacy infrastructure projects, including roads and the affordable housing plan.

The local steel industry heavily relies on imported raw materials — iron ore and coal, due to the lack of investment locally. According to the Trade ministry, the local deposits of such minerals are yet to attract commercial interest.

Data also shows the quantities have been on a continued rise over the years to 1,417.18 thousand tonnes in the nine months to September 2021, a 24.5 percent increase from 1,138.24 thousand tonnes in the same period in 2016. – Business Daily

KBD50 Diesel Forklift

Year: 2021
Brand: Baoli
Engine: Isuzu
Emissions Standard: Tier II
GENERAL DESCRIPTION
• Engine: Isuzu Diesel Engine
• Mast: 3 stage full mast triplex VFHM4500
• Fork Carriage: Wider fork carriage
• 5 tonne payload
• 4700mm lift
• Double front pneumatic tyres
• Wider hang on side shift
Available from META Group Africa

Kenyan Contractors Left Fighting for "Small Jobs" to Survive

A few Chinese companies have amassed road and infrastructure contracts worth Sh1 trillion under the Jubilee administration while Kenyan contractors are left to fight for small roads and sub contracts, reports the Business Daily.

Their speed, financing muscle and negotiation power has endeared them to almost all government departments, ministries and parastatals, which have seen them eat the lunch of local companies who the government accuses of shoddy jobs and uncompetitive bids.

China Communications Construction Co (CCCC) and its subsidiary China Road and Bridges Corporation (CRBC) holds the bulk of the road and railway contracts, earning about Sh777.1 billion.

Others include China Wu Yi, Synohydro, Jiangxi Engineering, China Railways 21 Bureau Group and Third Engineering Bureau of China City Construction Group that have earned hundreds of billions for projects across the country.

Local companies like S.S Mehta, H. Young, and Seco have been pushed to the periphery as Chinese firms secure lucrative road, rail, and electricity contracts.

The dominance of Chinese companies has left a bitter taste among local contractors who are now losing out even on county roads and real estate projects.

"The Chinese companies are now doing Kerra (Kenya Rural Roads Authority) Class D roads. Kenyan companies who used to be awarded these contracts have been forced out only for the Chinese companies with shared apartment address to be awarded six to ten jobs," a local contractor who did not want to be named told the Business Daily.

China's influence on Kenya's mega projects development started gathering steam with the construction of the Thika Superhighway between January 2009 and November 2012 at a cost of nearly Sh32 billion in the last term of President Mwai Kibaki.

CRBC and CCCC have since bagged the lion's share of Kenya's mega projects — at least two railways, two ports and 23 road projects.

They include a $3.5 billion (Sh393.82 billion) standard gauge railway, a $398 million (Sh44.78 billion) oil terminal at the Mombasa port and road projects such as Southern, Western, and Eastern Bypass in Nairobi and the A109 National Highway Project.

They are expanding the Eastern Bypass, building Nairobi Expressway, Nairobi Inland Container Depot, Nairobi South Railway Station, Valley Road/Ngong Road/ Nyerere Road Interchange & Upper Hill/ Haile Selassie Overpass as well as the Na s at Lamu

Malindi Airport Expansion to Take off Soon

After 18 years of false starts, the expansion of Malindi International Airport in Kilifi County is set to take off.
This is after the State agreed to meet the demands of locals to be affected by the project.

On Thursday, the National Development Implementation Technical Committee (NDITC) led by Health Principal Secretary Susan Mochache said the government is set to Sh5 billion to compensate them.

"We have set Sh5 billion aside which will be used to acquire the land for the expansion," said Mochache who led a team of other principal secretaries to inspect the airport.

The Kenya Airports Authority plans to, among others, extend the main runway to the north from the current 1.4km to 2.4km to allow large planes to land with ease.

Extension of the main runway will allow direct flights from Europe. Malindi airport currently occupies 248 acres and needs a minimum of 640 acres to extend the runway and ensure security and safety of the facility. – The Standard, The Star

New Energy Provider Enters Kenyan Market

A Chinese company, CHINT, has officially entered the Kenyan energy sector. CHINT, which describes itself as a leading global provider of smart energy solutions, will use the Nairobi office to serve the East African market.

CHINT is engaged in smart electrics, green energy, industrial control and automation, smart home and incubators, forming an integrated whole industry chain of power generation, storage, transmission, substation, distribution, sales and consumption. It has a presence in 140 countries and regions and employs more than 30,000 employees.

The company will collaborate with Kenya Power, with CHINT Kenya tasked with transmitting solar power to government institutions and schools. The aim of the deal is to lower energy costs among those institutions in the country.

Rironi-Mau Summit Project Suffers Minor Hiccup

The construction of the Sh160 billion highway from Nairobi to Mau Summit has run into headwinds after two foreign firms moved to the Administrative Review Board following the cancellation of the procurement for independent experts, reports the Business Daily.

Spanish firm Technica Y Proyectos, S.A in consortium with Gibb Africa Ltd rushed to the board on Monday after Kenya National Highways Authority (KeNHA) notified it of the cancellation of tender for the independent expert who will supervise the construction of the road.

The termination was announced on December 24 on grounds that the evaluation process has been invalidated by the lapse of the statutory period. In the notification, the State agency said the delay was occasioned by the dissenting opinions among the evaluation committee members.

But the Spanish firm through the law firm of Kihara & Wayne Advocates said it believes that it was unfairly denied the tender, having attained the highest combined score, in breach of the Constitution.

The firm says KeNHA ought to have concluded the evaluation process strictly under the request for proposals.

“That the first respondent (KeNHA) by terminating the procurement has failed to promote and enforce transparency, effective management and accountability contrary to section 44(2)(e) if the Public Procurement and Assets Disposal Act, 2015,” reads part of the court filings.

The construction of the key highway was expected to start last September but it is likely to delay further, with the cancellation of the tender.

The tender for the construction of the 233-kilometre highway that transverses Kiambu and Nakuru will be built by the Rift Valley Highway Company — a consortium comprising Meridian Infrastructure Africa Fund, Vinci Highways, and Vinci Concessions, a French concessions and construction firm.

The construction will see the road expanded into a four-lane dual carriageway through a public-private partnership model and will have users pay for its costs, as the government turns to toll as an alternative development financing model.

Another bidder, Korea Express Corporation (KEC), Korea Consultants International Company ltd (KIC) & Apec Consortium ltd also challenged the cancellation arguing that termination does not satisfy the requirements of the law, since it came the bidders had gone through all the process.

Rosslyn Grove Diplomatic Accommodation on Course

The development will consist of a combination of apartments, townhouses, a clubhouse with gym, swimming pool and other amenities.

The 90-unit diplomatic apartment and town home community development marks GREA's first development in Kenya and a second development in conjunction with Texas based developer, Verdant Ventures. With over 80 foreign diplomatic missions coupled with a growing international investor base, there is a strong demand for diplomatic level, high-security residential communities in Nairobi.

Aevitas Group in collaboration with a local Kenyan architecture firm, Design Partnership, and Sutherland Engineers, have been tasked to design this quality development. GREA has contracted both local and international engineers and consultants. Considering its successful track record with companies such as MACE YMR, services including quantity surveying, project management, construction and other sub-contracting services have been sourced locally, with Betts & Townsend Project Managers leading the consultant team.

Materials are sourced locally as far as possible, with only specialist items being imported. The development will also look to make a social contribution to the local community, through support of community organizations in the neighbourhood. – Grea Africa

Things to Consider Before Investing in Kenya Real Estate

Amalia Prestige development in Ruiru: A successful venture by Verified Real Estate Ltd

The Kenyan real estate is no doubt lucrative. A glance at publicly available data reveals that real estate takes up a good chunk of investment portfolios. Unique trends and themes such as gated communities, smart offices and student apartments are gaining traction across the sector, with buyers willing to pay more for quality products that suit their lifestyles.

But real estate isn't just a business for industry moguls and billionaires. With new schemes such as Real Estate Investment Trusts (REITs), fractional ownership, and alternative building technologies such as EPS, anyone can become an investor in the real estate business. For clarity's sake, real estate comprises land, buildings, and may also in this context include real estate agents who are not themselves owners of these resources.

Despite its massive potential for profits and an ever-growing growth trajectory, real estate is also quite a risky business, especially where proper due diligence hasn't been done. Use these 5 tips to your advantage as you embark on your real estate venture.

Understand Your Desired Segment Through Feasibility Studies
Real estate has diverse market segments. Property development comprises both land and buildings. Buildings may be further categorized into hospitality, residential, and commercial, with the latter, further being split into office, retail, and industrial. Whether you want to invest as a buyer for a single unit, as an agent, or as a developer, it is key that you understand which segment you'd like to tackle. Each of these segments is unique.

This kind of information will only be available to you as an investor through conducting thorough feasibility studies and engaging the right experts such as other professionals in the real estate industry.

Do You Want to Purchase or Rent?
The best way to look at purchasing or renting is from a utility standpoint. Purchasing with the intent of selling later is always hinged on uncertainty. It may or may not pan out as you had hoped. You may not have the mettle to market and sell the property yourself, in which case you'd want to employ the services of a credible real estate agent who understands the market better. Purchasing or building with the view of selling or becoming a landlord is always a mid-to-long-term game.

Renting a property and providing services and amenities such as gyms, smart offices, and even furnished apartments is a shorter-term and much safer way of gaining a steady ROI, although the return is much lower than selling units.

Does Your Business Require Constant Cash Flow?
Unless you are already established in the industry or have a substantial bank balance, you will most likely run into cash flow problems if you don't plan yourself from the start. Eliminate unnecessary costs. As a startup, you may not need an office in a fancy part of town. A PC or laptop with a stable internet connection may be all that you need to source for clients and market yourself.

Understand Your Competition
You might sell at the lowest prices available, but Kenyan customers are inclined more toward quality; even tenants who rent. Understanding who your direct competition is provides a great way of knowing what your customers need and what alternatives you can offer without compromising on quality.

Never Miss a Step
Bureaucracy always tastes bitter before the result. However, you don't want to miss any steps by "greasing hands", filing fake paperwork, or opting for illegitimate methods; it always comes back to bite. Be prepared to spend your time in the trenches understanding the industry and educating yourself on procedures and what needs to be done. The result would be very happy customers on your part and no disputes, litigation, and wasted money coming to haunt you later.
Can You Make It In The Industry?
With these 5 pointers, and educated advice from those who have gone before you, sure you can! The rewards almost always outweigh the risks of plunging into real estate.

UK firm to Design Sh28bn Railways City

A plan to build a Sh28 billion city has moved a notch higher after the Nairobi Metropolitan Service in partnership with Kenya Railways picked UK firm Atkins Global to design the project, reports the Business Daily.

The deal will see the firm design the iconic Nairobi Railways City, multi-modal urban development project which will be situated in Nairobi.

The project will be situated within 425-acres, of which 292 acres is owned by the Kenya Railways and currently serving as the Nairobi Railway Station.

“UK firm Atkins Global has been appointed to design Nairobi’s new Central Train Station and associated public realm, which will provide the centrepiece of Nairobi Railway City,” said UK’s Minister for Africa, Vicky Ford MP Tuesday. “It is a flagship project to regenerate Nairobi’s Central Business District initiated by President Kenyatta, who personally requested UK support when he met Prime Minister Boris Johnson in January 2020.”

Speaking in Nairobi yesterday, Nairobi Metropolitan Services (NMS) Director-General Mohammed Badi said the project will see Public Service Vehicles (PSVs) currently picking and dropping passengers around Haile Selassie roundabout forced to find a new holding ground to pave way for works on the project.

The PSV operators around Kenya Railways headquarters operating on routes such as Ngong, Kawangware, Kiserian and Kitengela, he said will be moved to new grounds next month to facilitate works on the multi-billion shilling project. The project is set to be done in two phases. Phase one begins next month.

“Matatus currently operating around Kenya Railways Central Station will be removed by end of this month. This will facilitate works on Nairobi Railway City,” said Mr Badi yesterday.

The project which is part of the Nairobi Integrated Urban Development Plan is also aimed at expanding the capital’s Central Business District as currently set up.

The project covers the area between Haile Selassie Avenue, Uhuru Highway and Bunyala road.

The first phase of the 20-year project that is set to change the face of Nairobi Central Business District (CBD) was set to kick-off in 2020 until 2030 at Sh27.91 billion.

Railway infrastructure and water supply is expected to take the bulk of the costs at Sh17.5 billion and Sh3.9 billion respectively.

According to the Kenya Railways website, the strategic location of the Nairobi Station area also positions it perfectly to be an iconic nerve centre for the Nairobi Multimodal Transport System.

This is with the plan to establish a world-class new central station incorporating mixed-use commercial developments, hotels and intermodal facilities.

China Delivers Major Blow to Kenya’s Mega Projects Plan

Beijing has cut financing for Belt and Road Initiative projects.

Workers at a construction site.

Kenya’s ambitious plan to undertake tens of mega projects across the country has been dealt a major blow by a decision by China to reduce financing for projects under the Belt and Road Initiative, a brainchild of Chinese President Xi Jinping. The shocking decision means Kenya, which has been relying on Beijing to fund its key infrastructure projects, will have to find new ways to finance planned developments.

China has lent Kenya billions of dollars to, among other things, construct its standard gauge railway (SGR) as part of the Belt and Road Initiative, which envisages Chinese banks’ financing of projects mainly in developing countries. However, the funds have been drying up in recent years especially with the coming of the coronavirus pandemic – making things tough for a country that is already facing a huge annual infrastructure investment deficit.

Sh380 billion loan

In September 2018, for example, China declined to approve a Sh380 billion loan for the Naivasha-Kisumu SGR, despite all the formalities having been completed – a decision that forced the new railway to end abruptly in Naivasha.

This was shocking since Kenya and China Communications Construction Company (CCCC) had in August 2018 agreed on construction of the 267km railway, with only the finer details of the deal set to be finalised weeks later during President Uhuru Kenyatta’s visit to China.

That did not happen.

Instead, Chinese Premier Xi Jinping asked the parties to defer making the approval until Kenya undertook a commercial viability study on the entire Mombasa-Kisumu railway.

It later turned out that China declined to make the approval as part of its policy changes that seek to manage debt default risks by countries or projects.

According to Green BRI, a China-based think-tank that analyses the initiative, Chinese investments in the 138 targeted countries fell 54% to $47 billion in 2020 from the 2019 levels.

This is the lowest level since the initiative was inaugurated in 2013.

Interestingly, the Chinese bank funding for infrastructure projects in 40 African countries targeted by the Belt and Road Initiative fell to $3.3 billion last year from $11 billion in 2017, according to a study by global law firm Baker McKenzie.

Harsh financing terms

Although Beijing officials attribute cutting of funds to debt risk management, analysts believe the initiative is facing hostility in many countries who balk at the harsh financing terms.

“A growing number of policymakers in low and middle-income countries are mothballing high-profile BRI projects because of overpricing, corruption and debt sustainability concerns,” says Brad Parks, a researcher at the College of William and Mary in the United States.

In 2018, for example, Pakistan pulled back over the financing terms of its railway. Malaysia has also cancelled more than $11 billion in projects between 2013 and 2021, while almost $2.5 billion has been cancelled in Kazakhstan and Bolivia.

Kenya is, however, optimistic that – after spending nearly $5 billion on the Mombasa-Naivasha standard gauge railway – it will still get the additional $3.7 billion needed to extend the railway to its border with Uganda.

“This standard gauge railway will still be completed because it is part of what we call the Belt and Road Initiative,” Transport Secretary James Macharia said.

Value Engineering: Reduce Your Building Costs Without Compromising Quality

Value engineering is an approach that ensures the owner is not over-paying for quality when an equally effective, less expensive option exists. Value engineering is all about making the best use of the available budget.

As a client or project owner, your main goal is for the project to be built to class and budget. For the architect, the main concern is a building that is aesthetically pleasing and is effective to use. Usually, the architect doubles up as the project manager, and thus represents the client's needs on the ground. For the structural engineer, the desire will always be to produce a structurally sound building that can fulfill both serviceability and ultimate loading requirements. Numerous other stakeholders such as Mechanical-Electrical-Plumbing (MEP) consultants, and specialized décor providers can also be part of a single project.

Value engineering, therefore, entails that the needs and concerns of all these stakeholders are considered during the design process. This is centered around collaboration, making sure that the potential problems associated with the project are well understood by everyone on the project team and solutions produced on time.

How Is Value Engineering Actualized?
For large building and infrastructure projects, value engineering is fully realized in two major ways. One is to schedule frequent project meetings with the entire team either in person or on remote calls, such as Zoom. The second is to utilize the power of BIM, specifically 4D BIM where different aspects of project management such as schedules, drawings, amendments, cost tracking, and documentation are all handled in a single repository, or in a virtual station that can be fully accessed at any time by all team members. Leveraging the power of 4D BIM is how projects in developed countries and higher-scale projects in places like Nairobi can be accomplished within time and budget.

What are the Advantages of Value Engineering?
Engineering with a holistic mindset is the best approach to working on any building project, although the benefits might seem more inherent in larger projects where every project element concerning time and cost matters greatly. Value engineering provides a means to capture problems before they arise and share this with a highly trained team that offers ideas and solutions on time that is practical.

Value engineering tools also exist in the interfaced CAD environment, for example, the BEXEL module of programs and Blue Beam Revu allows different technicians such as engineers and architects to have their work interfaced. Thus, costs can be shared in real-time, survey points can be amended by ground teams and immediately received by office teams, project management can highlight red flags in cost, markups and annotations can be produced on a single drawing and shared across the collaborative platform, etc.

The most important part of holistic engineering is the ability to save huge costs by reducing errors and getting the most practicable solution without losing quality, thanks to different specialists brainstorming to come up with solutions.

Can Value Engineering Be Applied on Smaller Projects?
Absolutely! Even smaller residential projects qualify for value engineering, although this may be limited due to the lack of the technological tools utilized in much larger projects. The best advice is to always have a key person such as the architect who can then formulate the necessary team to complete the project tasks and brainstorm with them as may be needed.

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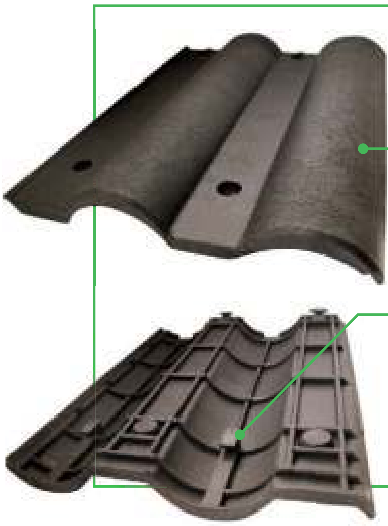
The green roof tile

Welcome to the future of roofing – a technological breakthrough from Harvey Roofing Products: the Harvey EcoTile®.

Harvey EcoTile® is a mineral composite roof tile. By utilising 98% waste material, Harvey EcoTile® is 100% recyclable yet provides superior functional benefits to other roofing options.

Harvey EcoTile's® technological design advantage ensures an interlocking, lightweight tile that is low on maintenance, weatherproof and virtually unbreakable in normal use.

Your building's roof is one of its most important elements in function, aesthetics, surface area and investment. Increase its functional performance and green credentials with one innovative product – Harvey EcoTile®.



- Lightweight
- Low Maintenance
- Durable
- Weatherproof
- Attractive
- Easy to Install
- Paintable
- SANS 10400-T
- Waste Material
- 100% Recyclable
- Waterless
- Community Projects

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