

# Creating Commercially Viable Projects from the Onset



MML Turner & Townsend

27<sup>th</sup> August 2019

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making the **difference**



# Health & safety moment

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Think safe, travel safe, work safe, be healthy

# We are a global consultancy

**Turner & Townsend** is an independent professional services company specialising in programme management, project management, cost and commercial management and advisory across the **real estate**, **infrastructure** and **natural resources** sectors.

With **108 offices** in **45 countries**, we draw on our extensive global and industry experience to manage risk while maximising value and performance during the construction and operation of our clients' assets.

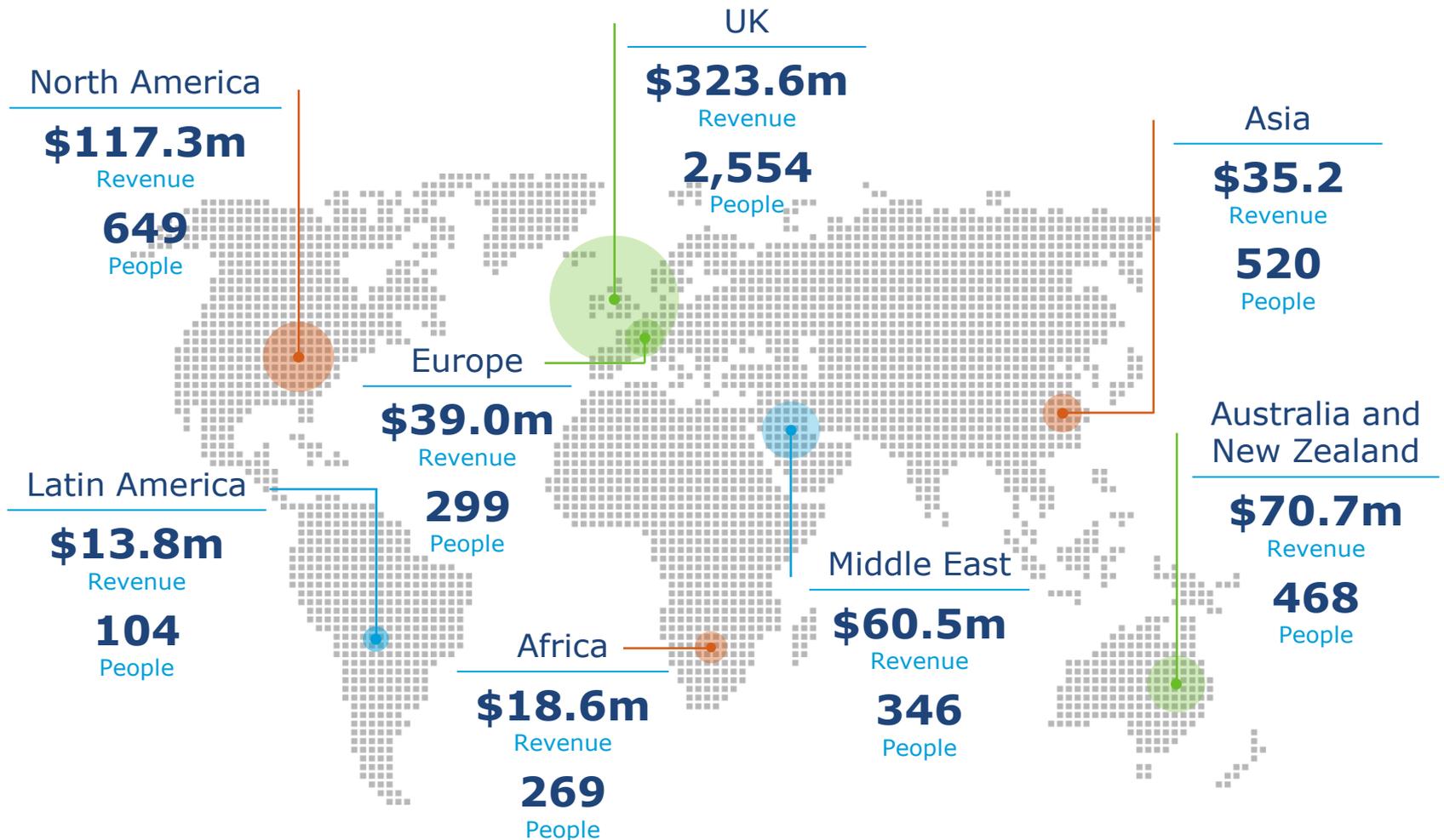


# Our Local Business

**Nairobi based MML Turner & Townsend has for the past 32 years built up a reputation as the largest and most respected project and cost management consultancy in East Africa.**



# We work across 8 regions



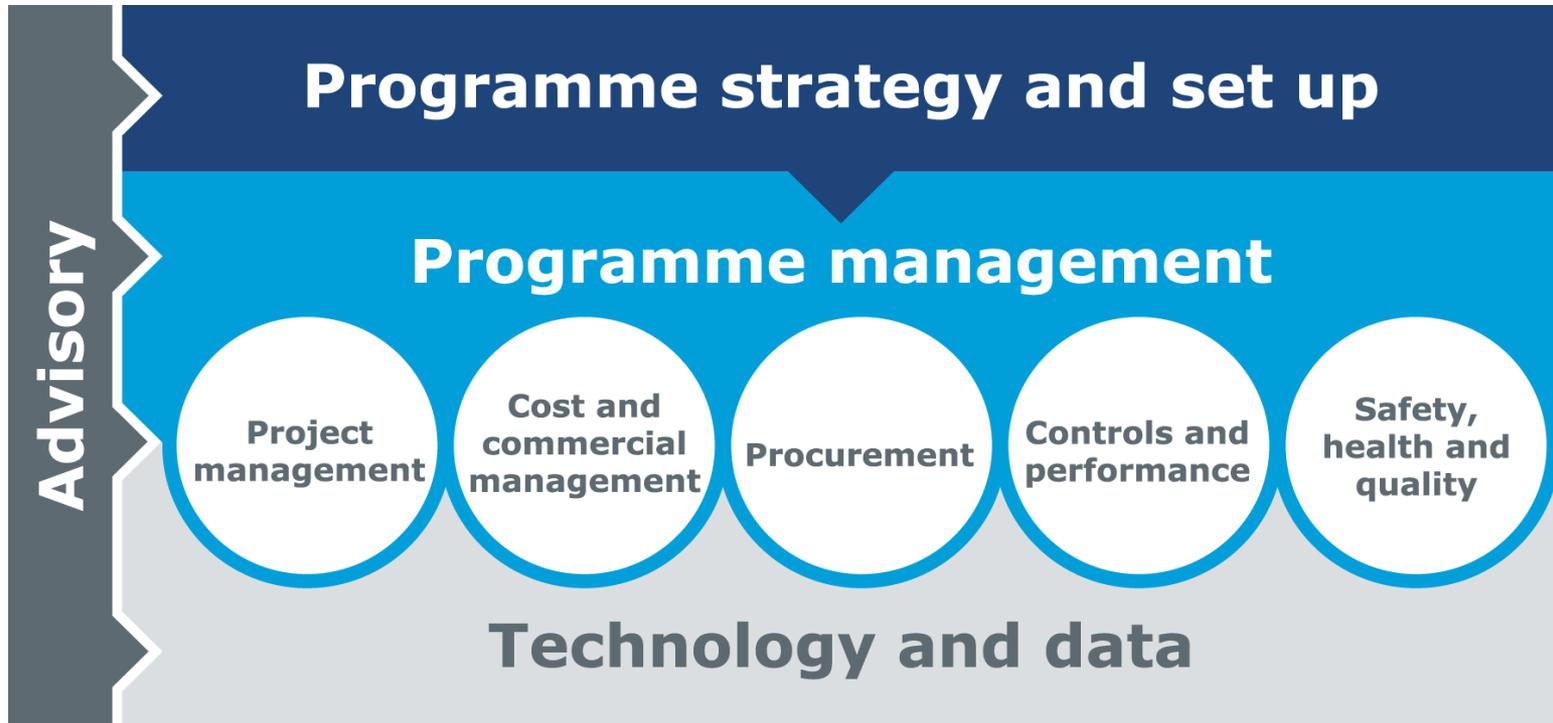
# As a partnership we act as one business globally

**110**  
Offices

**45** Countries



# We deliver the following services across sectors in Africa



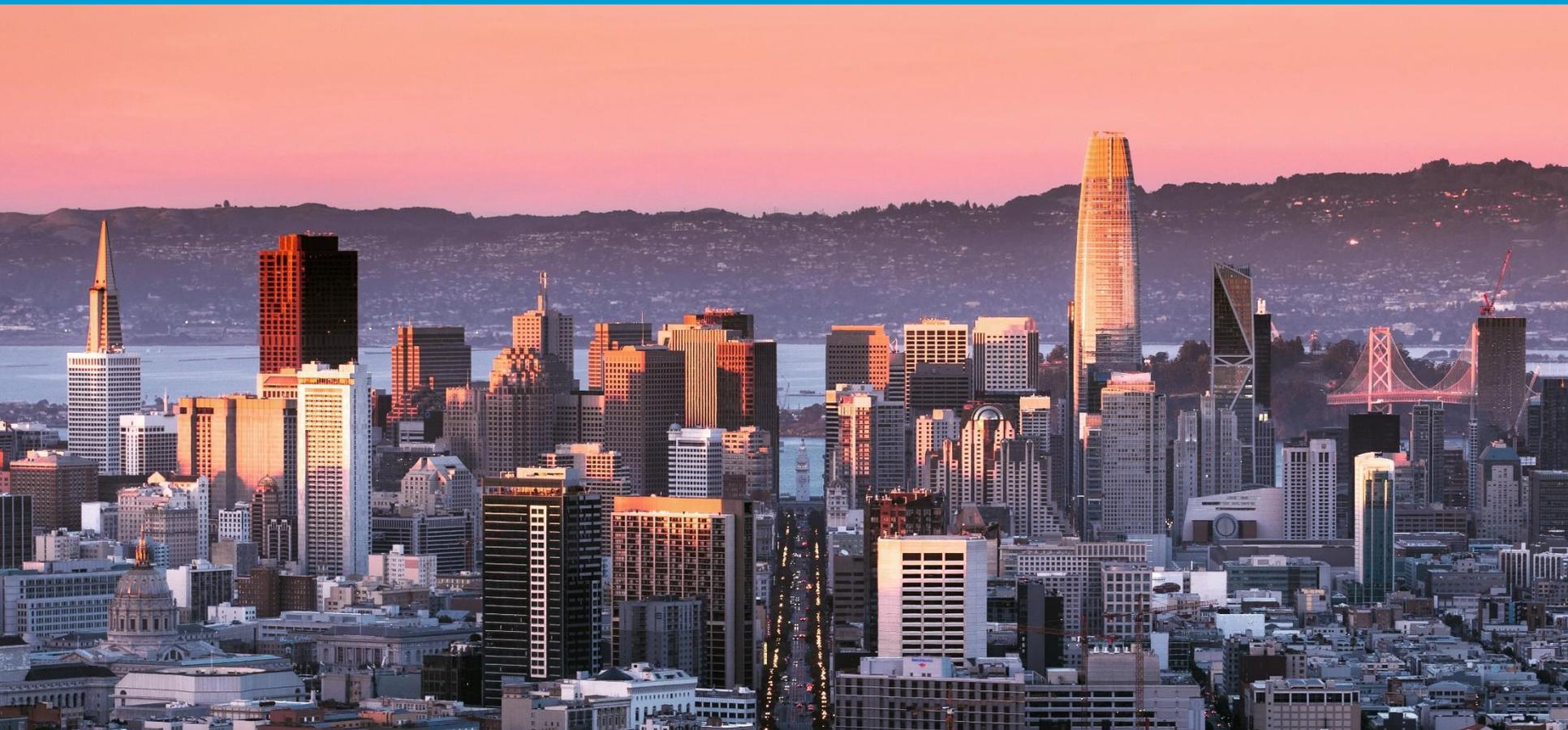
# International construction market survey 2019



MML Turner & Townsend

Rewel Kariuki , Director - Cost Management

making the **difference**



# An introduction to ICMS

## Overview:

The annual survey of **64 markets** revealing the cost of building around the world. Drawing on information from over £655bn of global real estate investment

## Audience relevance:

For those considering real estate construction expenditure – the survey helps to identify the **key global trends** and **enables informed investment decisions** to drive the best return.

## Companies and individuals who benefit from using the data include:

- Companies investing in several locations
- Multinationals
- Investor developers
- Architects

## Takeaway:

With our insight and data on the markets we operate we can advise on the right tactics to deploy to manage risks, control costs and capitalise on opportunities in the set-up and delivery of major projects and programmes.



**26,000+**  
**downloads**  
**since the**  
**launch**

# The data includes . . .



**\$655bn**

Data comes from over \$655Bn of global real estate projects/ investments



**9**

Different build categories



**64**

Data included from 64 markets around the world



**6**

Data included from 6 markets in Africa

1. Kenya
2. Rwanda
3. South Africa
4. Tanzania
5. Uganda
6. Zimbabwe

# The data comes from our involvement on projects in East Africa

1

## Industrial

- Mitchel Cotts Cargo Handling facility at JKIA
- Unilever Omo Factory Nairobi
- KBL Bottling Deport in Nyeri
- Tissue Culture and molecular laboratory for coffee Research Foundation
- Swiss sport Air Cargo handling facility at JKIA
- Bidco warehouse and plant

2

## Commercial

- Garden City Business park
- The Junction Mall
- Barclays Diani Shopping Centre
- Village Market Expansion phase II
- Capital Centre Mall
- Phased refurbishment of over 100 Branches for KCB Bank
- Refurbishment of Caltex Petrol Stations

3

## Hotels

- Safari Park Hotel
- Mount Kenya Safari Club
- The Sarova Stanley Hotel
- Southern Sun Mayfair Hotel
- Windsor Golf &Country Club
- Sweet waters tented camp in Nanyuki

4

## Hospitals

- Agha Khan Hospital, Nairobi
- Agha Khan Hospital, Uganda
- Gertrude's Children's Hospital

5

## Commercial – Fit -out

- Sage
- Philips
- Jaguar Land Rover
- BMW
- CDC offices

6

## Residential

- Riverbank by Centum
- Pearl Marina, Uganda
- Mae Ridge Housing
- Riverside Park
- ISK staff Housing

# Global key highlights

**35**

markets are warm,  
hot or overheating

**23**

markets are  
warming up

**5**

markets  
are cooling

**18**

new markets in  
the 2019 survey



## Economic overview:

### Global

**3.5%**

forecasted GDP growth in 2019

**3.6%**

forecasted GDP growth in 2020

### USA

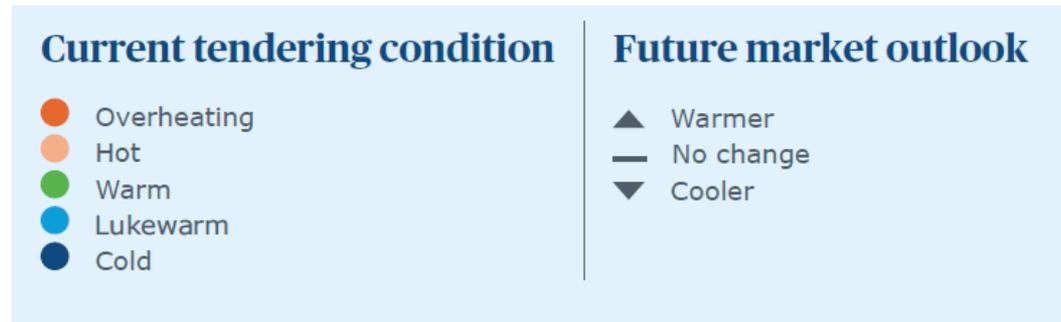
**2.5%**

forecasted GDP growth in 2019

**1.8%**

forecasted GDP growth in 2020

# What does the ICMS say about the East Africa real estate market?



## Africa

- ▲ Dar es Salaam
- ▲ Kampala
- ▲ Kigali
- ▬ Nairobi
- ▼ Harare
- ▬ Johannesburg

1

The current tendering condition in East Africa is lukewarm, but looking to heat up in the future in Rwanda, Tanzania and Uganda.

2

Kenya's current tendering situation looks to remain the same for the near future.

# ... continued

## 3 Construction cost inflation should remain consistent across East Africa this year

Region	Markets	Cost inflation in 2018	Forecasted cost inflation in 2019
Africa	Johannesburg	4.7%	6.0%
	Dar es Salaam	4.0%	4.0%
	Kigali	3.2%	3.2%
	Harare	3.0%	3.0%
	Kampala	3.0%	3.0%
	Nairobi	3.0%	3.0%

## 4 Nairobi is the 4<sup>th</sup> least expensive place to build across the 64 markets surveyed

Five least expensive places to build



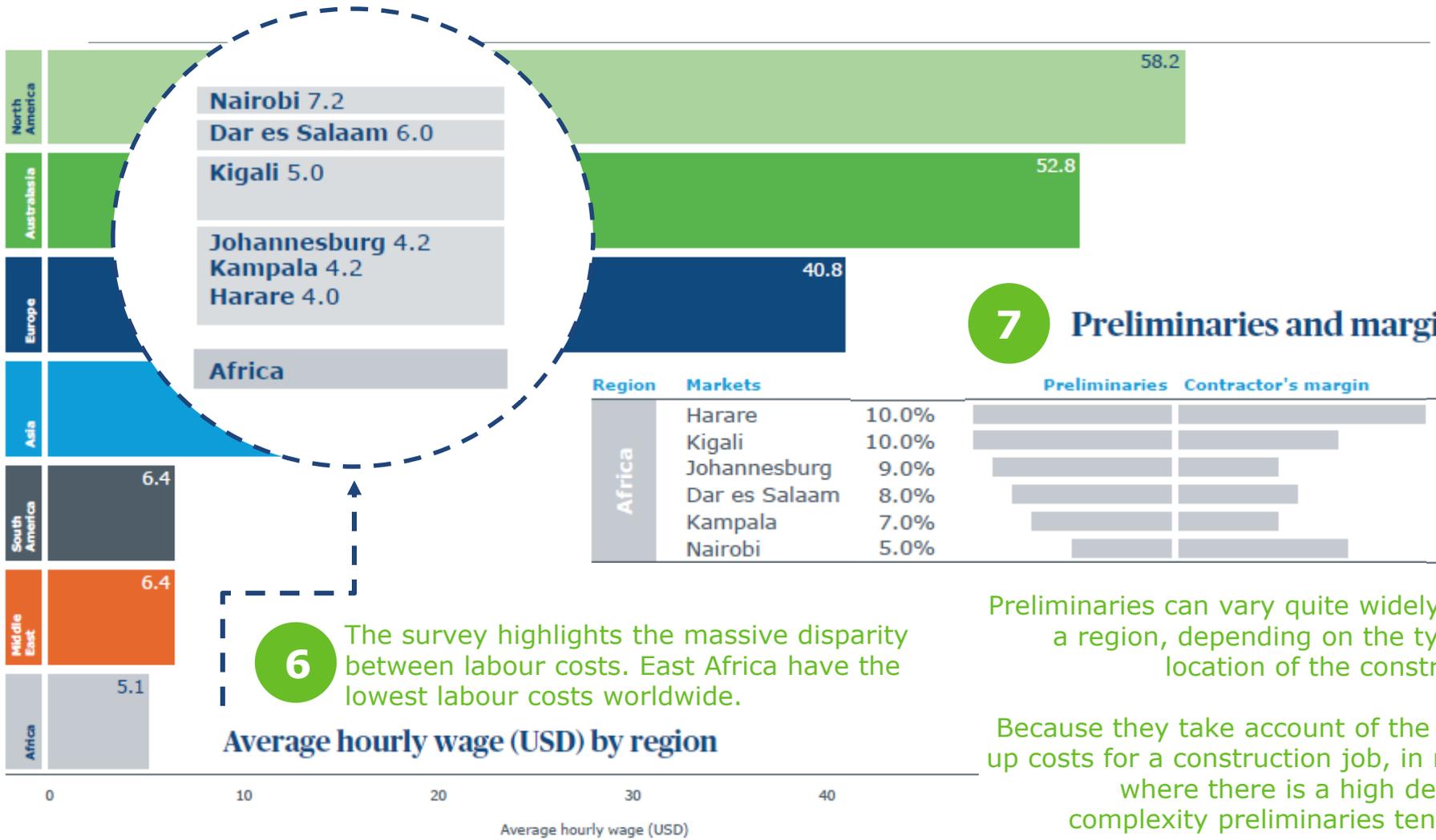
1. Bangalore 2. Istanbul 3. Guangzhou 4. Nairobi 5. Beijing

## 5 Ave. cost of six building types in US Dollars

Region	Markets	Average cost of six building types	USD
Africa	Harare		1,683.3
	Kigali		1,085.4
	Kampala		967.3
	Johannesburg		952.2
	Dar es Salaam		922.3
	Nairobi		738.4

1. High-rise apartments
2. Office blocks
3. Large warehouse distribution centres
4. General hospitals
5. Primary and secondary schools
6. Shopping centres and malls

... continued



6

The survey highlights the massive disparity between labour costs. East Africa have the lowest labour costs worldwide.

Average hourly wage (USD) by region

7

### Preliminaries and margins

Preliminaries can vary quite widely within a region, depending on the type and location of the construction.

Because they take account of the setting up costs for a construction job, in regions where there is a high degree of complexity preliminaries tend to be higher.

# ... continued

8

**Kampala and Kigali**, while considered only lukewarm are still reporting skills shortages. This raises the question of **where labour will come from as and when these markets heat up from lukewarm to hot.**

**Nairobi and Dar es Salaam** are in balance.

**Surplus**  
Edmonton  
Istanbul  
Muscat  
Riyadh  
São Paulo

**7.8%**  
(2018: 6.5%)

**In balance**  
Barcelona  
Bogotá  
Brisbane  
Buenos Aires  
Dar es Salaam  
Doha  
Harare  
Ho Chi Minh City  
Houston  
Mexico City  
Moscow  
Nairobi  
Paris  
Perth  
Santiago  
Scotland  
UAE

**26.6%**  
(2018: 34.8%)

**65.6%**  
(2018: 58.7%)

**Skills shortage**

Amsterdam  
Atlanta  
Auckland  
Bangalore  
Beijing  
Berlin  
Chicago  
Christchurch  
Dublin  
Frankfurt  
Guangzhou  
Hong Kong  
Indianapolis  
Jakarta  
Johannesburg  
Kampala  
Kigali  
Kuala Lumpur  
London  
Madrid  
Melbourne  
Munich  
New York City  
Northern Ireland  
Ottawa  
Phoenix  
San Francisco  
Seattle  
Seoul  
Shanghai  
Singapore  
Stockholm  
Sydney  
Tokyo  
Toronto  
UK Central  
UK North  
UK South  
Vancouver  
Vienna  
Warsaw  
Zurich



# The East Africa market in summary

## Kenya Nairobi

Biggest growth sectors are **residential** and **social housing**; **industrial manufacturing** and **distribution**; **power** and **utilities**

**Over supply** of high-priced housing and commercial developments.

**Suppressed investment** due to cap on interest rates and banks not lending as much.

**Construction costs set to rise 3%** due to rising land and import costs

## Rwanda Kigali

**Government developing infrastructure** to support a competitive private sector

**Rwanda** has three initiatives for growth – technology, foreign investment and tourism.

**Made in Rwanda policy** launched to reduce its trade deficit and **upscale local manufacturing**

## Tanzania Dar es Salaam

Growth in residential and commercial property projects

**Demand for affordable housing** is at three million. Commitment by government to build 200, 000 annually.

**Boost in tourism** expected after expansion of the Mwanza airport on eastern shores of Lake Victoria.

**Construction costs set to rise 3%** due to rising land and import costs

**One of China's Belt and Road destinations.**

## Uganda Kampala

**Growth in commercial offices, large mixed-use developments and private housing.**

**Economy likely to grow** with increasing investment in infrastructure.

East Africa Crude **Oil pipeline** will bring opportunities

**Risk of economic uncertainty and increased costs** may follow 2021 elections

# Data available in the ICMS

## Around the globe

Africa

## Kenya Nairobi

Construction opportunities will change on shift in policy focus

✉ rewel.kariuki@turntown.com

### Economic overview

Economic activity in Kenya outpaced expectations in 2018 with annual GDP growth hitting 6.3 percent. Inflation was 5.5 percent, within target range, and interest rates have been eased down to 9 percent to support expansion.

The nation's budget and policy have been directed towards President Kenyatta's Big Four – food security, affordable housing, manufacturing, and affordable healthcare for all.

### Construction market and trends

The biggest growth sectors are residential and social housing, industrial manufacturing and distribution and power and utilities. But the surge in recent years of high-priced housing and commercial development has created an oversupply, suggesting a slowdown in 2019.

Meanwhile, a cap on interest rates, leading banks to ration credit, has suppressed investment.

In infrastructure, the focus on the Big Four has limited funding. Several projects are due to finish in 2019, including the 9,000 m<sup>2</sup> semi-automated air cargo handling facility for Mitchell Cotts Freight Kenya Ltd.

Two key hospitality projects in Nairobi are currently ongoing; a 235-bed Hyatt hotel fit-out in Westlands and 170-bed four-star hotel apartments under the Ascott Somerset brand in Rosslyn.

Construction cost are set to rise 3 percent in 2019, pushed up by rising land and import costs. The supply of skilled labour currently presents few problems.

### Future outlook

Construction activity is likely to ease over 2019, in line with an expected slowdown in global growth.

Construction of affordable housing and low-cost health facilities should help to offset the slowdown in high-end private sector development.

International building costs per m<sup>2</sup> of internal area, in 2018

	KSH	USD (exchange rate: 101)
<b>Airports (Building only)</b>		
Domestic terminal, full service	267,000	2,644
Low-cost carrier terminal, basic service	200,000	1,980
<b>Car parks</b>		
Multi-storey – above ground	42,000	416
Multi-storey – below ground	45,000	446
<b>Commercial</b>		
Offices – Business Park	65,000	644
CBD Offices – up to 20 floors medium (A-Grade)	72,000	713
CBD Offices – high-rise prestige	95,000	941
<b>Education</b>		
Primary and secondary	45,000	446
University	50,000	495
<b>Hospitals</b>		
Day centre (including basic surgeries)	85,000	842
Regional hospital	103,000	1,020
General hospital (e.g. city teaching hospital)	125,000	1,238
<b>Hotels</b>		
3 Star travellers	102,000	1,010
5 Star luxury	130,000	1,287
Resort style	120,000	1,188
<b>Industrial</b>		
Warehouse/factory units – basic	35,000	347
Large warehouse distribution centre	50,000	495
High-tech factory/laboratory	100,000	990
<b>Residential</b>		
Individual detached or terrace style house – medium standard	52,000	515
Individual detached house – prestige	80,000	792
Townhouses – medium standard	60,000	594
Apartments – low-rise medium standard	55,000	545
Apartments – high-rise	65,000	644
Aged care/affordable units	35,000	347
<b>Retail</b>		
Large shopping centre including mall	67,500	668
Neighbourhood including supermarket	57,500	569
Prestige car showroom	72,500	718

Kenya international building costs

	KSH	USD (exchange rate: 101)
<b>Composite trade rates</b>		
Excavate basement (m <sup>2</sup> ) (1800m <sup>2</sup> job)	400	4
Excavate footings (m)	350	3
Concrete in slab (m <sup>2</sup> ) (1500m <sup>2</sup> job)	14,000	139
Reinforcement in beams (tonne)	120,000	1,188
Formwork to soffit of slab (m <sup>2</sup> )	700	7
Blockwork in wall (m <sup>2</sup> ) (10,000 block job)	1,800	18
Structural steel beams (tonne)	240,000	2,376
Pre-cast concrete wall (m <sup>2</sup> )	2,500	25
Curtain wall glazing incl support system (m <sup>2</sup> ) (1000m <sup>2</sup> job)	20,000	198
Plasterboard 13mm thick to stud wall (m <sup>2</sup> ) (3000m <sup>2</sup> job)	3,250	32
Single solid core door incl frame and hardware (no) (50 door job)	39,500	391
Painting to walls primer + 2 coats (m <sup>2</sup> )	400	4
Ceramic tiling (m <sup>2</sup> ) (1000m <sup>2</sup> job)	2,500	25
Vinyl flooring to wet areas (m <sup>2</sup> ) (500m <sup>2</sup> job)	2,400	24
Carpet medium tufted (m <sup>2</sup> ) (4500m <sup>2</sup> job)	5,000	50
Lighting installation (m <sup>2</sup> ) (5000m <sup>2</sup> + job)	1,000	10
Copper pipe 15mm to wall (m) (1000m + job)	2,600	26
Fire sprinklers (per m <sup>2</sup> ) (5000m <sup>2</sup> job)	3,200	32
Air conditioning incl main plant (m <sup>2</sup> ) (5000m <sup>2</sup> + job)	10,500	104
<b>Labour costs, per hour</b>		
Group 1 Tradesman eg plumber, electrician	800	8
Group 2 Tradesman eg carpenter, bricklayer	800	8
Group 3 Tradesman eg carpet layer, tiler, plasterer	800	8
General labourer	500	5
Site foreman	1,500	15
<b>Material costs</b>		
Concrete 30 MPa (m <sup>3</sup> ) (1500m <sup>3</sup> job)	11,000	109
Reinforcement bar 16mm (tonne) (120 tonne job)	86,000	851
Concrete block (400x200) per 1000 (>10,000 block job)	60,000	594
Standard brick per 1000	50,000	495
Structural steel beams (tonne) (100 tonne + job)	175,000	1,733
Glass pane 10mm tempered (m <sup>2</sup> )	9,000	89
Softwood timber for framing 100mm X 50mm (m)	500	5
13 mm plasterboard (m <sup>2</sup> )	1,500	15
Emulsion paint (litre)	685	7
Copper pipe 15 mm (metre) (1000m + job)	1,450	14
Copper cable (metre) (3C + E, 2.5mm PVC) (100,000m + job)	360	4
<b>Plant costs</b>		
Hire 50t mobile crane + operator (day)	120,000	1,188

# Terms and references

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## Building costs per m<sup>2</sup>

### Costs for the construction of the building, including:

- Preliminaries (or general conditions) costs and substructure
- Columns
- Upper floors
- Staircases
- Roof
- External walls and external doors
- Internal walls and internal doors
- Wall finishes
- Floor finishes
- Ceiling finishes
- Fitments
- Plumbing and HVAC
- Fire protection
- Electrical and communication systems and transportation systems

**It is assumed that building costs are based on the typical building standards and building methods for the region**

### Exclusions from buildings costs per m<sup>2</sup>

- External works
- Landscaping
- Professional fees
- Demolition
- Loose furniture
- Fittings and equipment
- Developers internal costs and finance
- Local authority fees and headworks charges
- Land
- Legal
- Finance and holding costs
- GST or sales taxes
- Site investigation and test bores
- Removal of significant obstructions in the ground
- Abnormal footings
- Allowance for underground or onsite car parking (unless stated otherwise)

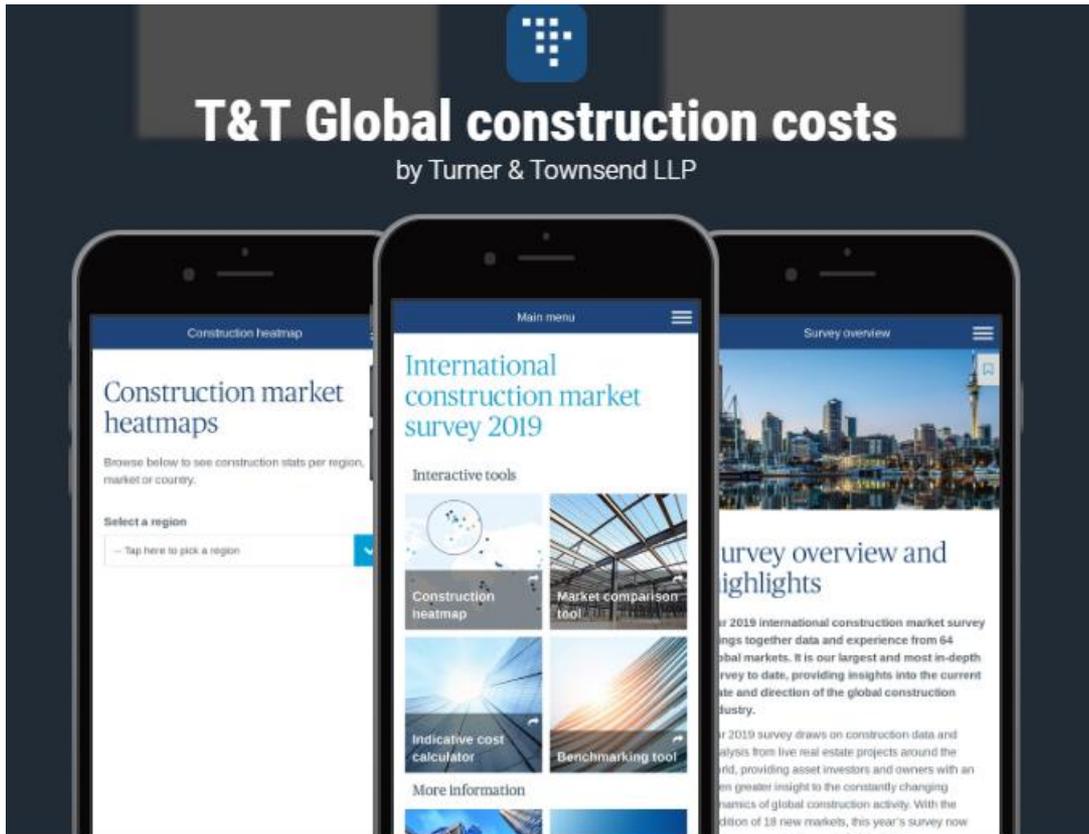
### Labour Costs

#### All-inclusive cost to the employer which includes:

- Basic hourly wage
- Allowances
- Taxes
- Annual leave cost
- Workers compensation and health insurance
- Pensions
- Travel costs and fares

**It excludes overheads, margins and overtime bonuses**

# ICMS App



**Download it now**

To download the ICMS app, select from the options below or search for 'Turner & Townsend' in the Apple or Google Play store.



# Different methods to use the data

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## Method one: convert to a single currency such as USD

This is the most common means of comparison, useful for a multinational organisation paying for projects in its home currency.

### Advantages

- Easy to understand and visualise.
- Gives the cost of typical building in each country.

### Disadvantages

- A change in the exchange rate makes a huge difference: if a particular currency is strong compared to the base currency, the cost of construction looks expensive.
- Is not a reliable indicator of relative costs and efficiency of construction between countries.

## Single currency method

## Method two: Purchasing Power Parity (PPP)

The PPP measure shows costs in relation to cost of living in the country. It indicates the construction cost per square metre in the local currency, relative to the costs of a basket of construction materials and labour. The PPP cost of a particular building type is calculated by dividing the cost in m<sup>2</sup> in local currency by the PPP coefficient. A lower PPP cost generally indicates more efficient construction (see page 113 for more detail).

### Advantages

- Leaves exchange rate out of the equation.

- Useful for governments, policy-makers and researchers to compare costs and efficiency with other countries.

### Disadvantages

- For a global firm looking to build overseas, it can be more convenient to look at cost in its home currency.
- The cost of the basket of goods ignores contractors' margins, labour productivity and preliminaries.

## Purchasing Power Parity

## Method three: location factors

Location factors extend the basket of goods approach used in method two (PPP) by adding labour productivity, market conditions, contractors' preliminaries and margins.

A similarly specified building constructed for USD100m in London (location factor 100) should cost USD108m in Toronto (location factor 108) at the exchange rate as of the first quarter of 2018.

### Advantages

- Useful for a company considering a complex investment in several locations and wanting to know the cost in a single currency.
- Will show the difference in cost between countries of buildings built with similar specifications and inclusions.

### Disadvantages

- As this method uses a common currency, it is subject to the same disadvantages as method one.
- In practice, local building codes, methods and specifications are different between regions.

## Location Factors

# Takeaways from today

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*Let us help you take a more commercial approach to conceptualizing projects*

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- Using the ICMS and the data behind the survey we can help property developers and architects to **drive more informed decisions upfront about the viability of certain construction projects** in specific cities.
- We can **help international companies** coming into the country **understand costs relative to where they come from.**
- Given the way we manage big data we are able to very **quickly check the viability of a project at the very early ideas stage** with the developer and architect. **This way time isn't wasted conceptualizing something that won't work financially.**
- Redrawing designs reduces the profitability of the architect's services and for the developer time is of the essence when they are looking to commercialise their property. **Let us help prevent you having to go back to the drawing board.**
- Our data covers labour costs, material costs and plant costs covers projects across residential, retail, hotels, hospitals, schools, universities, commercial offices and car parks, industrial warehouses and even airport buildings.

*"Turner & Townsend can provide numbers that property developers and their professional teams can trust."*

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MML Turner & Townsend

# International construction market survey 2019

Cost data and analysis from 64  
global markets

Find out more on [www.turnerandtownsend.com](http://www.turnerandtownsend.com)

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