Demand forecasts for telecom infrastructure equipment and services in Africa and the Middle East

2017 edition

Your comprehensive guide to expected procurement activities in 30 markets

TowerXchange

5th Annual TowerXchange Meetup Africa & Middle East

3-4 October 2017, Sandton Convention Centre, Johannesburg

From new site rollout to upgrade work on existing infrastructure, significant investment is going into African and Middle Eastern towers. Ahead of the 5th Annual TowerXchange Meetup Africa & Middle East coming up on 3-4 October 2017 in Johannesburg, TowerXchange take a deep dive into the MEA region, exploring the current appetite for passive infrastructure equipment and services in 30 countries.

Our detailed guide condenses months of interviews and market studies to provide you with the most comprehensive overview of where the key opportunities lie for the supplier ecosystem.

Read this report to learn:

- Where the volume of new build will be highest across MEA
- Countries, MNOs and towercos requiring significant investment in cell site energy
- Country-by-country requirements for site upgrade and turnkey infrastructure services
- Where the most imminent opportunities exist for small cells and DAS deployment
- Expected investment in RMS, access control and site management systems
- Who are the leading MNOs and towercos in each country

To connect with MNOs, towercos and I&C firms leading procurement activities, join us this October at the **5th Annual TowerXchange Meetup Africa & Middle East**; MEA's most concentrated audience of buyers of passive infrastructure and equipment.

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- MEA's only dedicated telecom passive infrastructure exhibition
- Exposure to a database of 35,000 tower industry professionals

Contact Annabelle Mayhew, Chief Commercial Officer to learn more about how to get involved

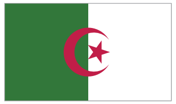
Laura Graves
Managing Director, EMEA
TowerXchange
lgraves@towerxchange.com

Annabelle Mayhew
Chief Commercial Officer
TowerXchange
amayhew@towerxchange.com

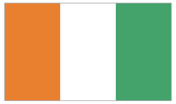
Alexandria Macbeth
Marketing Manager, EMEA
TowerXchange
amacbeth@towerxchange.com

Kieron Osmotherly
Founder & CEO
TowerXchange
kosmotherly@towerxchange.com

Demand forecasts: telecom infrastructure in MEA

Vendor opportunity matrix	Energy	RMS, ILM and access control	Tower manufacture	Turnkey infrastructure	Small cells, microcells, DAS and IBS*	Advisors	Towercos	MNOs
Algeria	Low	Medium	High	High	Low	Low	None	Djezzy Mobilis (Algeria Telecom) Ooredoo
	There are 18,000 towers split between the three operators; Mobilis have gone to tender to appoint 6 companies to build 1,400 new sites, Djezzy have a master plan to deploy 150-200 sites per year having launched a tender in December, and Ooredoo have launched a site builder tender to deploy a modest number of sites. 4G rollout is ongoing and with many sites unsuitable for additional tenants, strengthening and upgrade work will be required. The vast majority of sites are on-grid with very few generators and with low diesel costs, the incentive to switch to hybrid solutions is reduced. Whilst Djezzy had looked at a tower sale, restrictions on foreign direct investment in the country suggest there will be no transactions in the near term.							
Angola	Medium	Medium	High	High	Low	Medium	Antosc	Unitel Movitel (Plus Angola Telecom holds a license)
	Angola needs to double its site count in order to meet coverage requirements, with Unitel requiring an additional 1,000 towers and Movitel around 2,000, plus with a new MNO expected to enter in 2017, the potential for new site build is high (although challenging macroeconomic conditions are slowing investment). Around 85% of sites are operating with diesel generators and Unitel are currently assessing solar hybrid solutions. Movicel has started to explore the potential monetisation of some of their sites, thus creating opportunities for towercos and transaction advisors. Angola's first towerco Antosc recently started building sites.							
Bahrain	Low	Low	Low	Medium	Medium	Medium	None	Batelco Viva (STC) Zain
	A small market with just 1,500 towers, extensive decommissioning is required with estimates suggesting a total of 400 towers could effectively serve the market. The government has issued an RFP for a study into how best to consolidate the country's towers. There are currently no tower sale processes underway but with Zain looking to monetise their towers in Saudi Arabia and Kuwait, Bahrain could see a future transaction from the operator. With a robust electricity grid, energy efficiency is more a priority than generation and backup power.							

Vendor opportunity matrix	Energy	RMS, ILM and access control	Tower manufacture	Turnkey infrastructure	Small cells, microcells, DAS and IBS*	Advisors	Towercos	MNOs
Burkina Faso	High	Medium	Low	Medium	Low	Low	Eaton	Orange Telecel Telmob (Onatel)
	Over 60% of the population is in rural areas and with ARPU being low, Burkina Faso needs low cost solutions along with satellite backhaul in order to improve coverage for much of the population. Eaton entered the market following the acquisition of Airtel's sites (prior to Airtel selling their opco to Orange). Over 50% of the country's towers are off-grid and Eaton are known to be assessing renewable energy options, including the repair/ replacement of 60 solar sites they have inherited. Orange has signed an ESCO contract governing 120 sites with Energy Vision. New build in the market is relatively conservative although Onatel have just announced plans to install 800 new base stations (a 62% increase).							
Cameroon	High	Low	Medium	Medium	Low	Low	IHS	CamTel MTN Orange Nexttel (Viettel)
	IHS own or manage the majority of Cameroon's towers having acquired MTN's portfolio and entered into a 'manage with license to lease' (MLL) arrangement with Orange. The entrance of Viettel-owned Nexttel in early 2013 increased competition and prompted MTN and Orange to invest in their networks, MTN secured a US$96.6mn loan in December 2016 indicating further investment is to be expected and Nexttel aims to launch 4G in 2017. IHS has also secured contracts with CamTel and Afrimax so expect further co-locations. Around 25% of sites are off-grid with about a third of these relying on solar. Declining grid availability means back-up power is a high priority for on-grid sites. IHS have 180 solar-hybrid sites and are continuing to deploy more across their portfolio of 2,408 towers.							
Chad	High	Medium	Low	Medium	Low	Medium	None	Millicom Airtel Sotel
	There are an estimated 2,000 towers in Chad, a country where electrification sits at just 4%. To address power issues, To address power issues, Millicom has recently signed an agreement with an ESCO in the country. Airtel had previously agreed the sale of their towers to Helios prior to the transaction being cancelled because of an unfavorable regulatory environment. Orange are reportedly looking at acquiring Millicom's subsidiary in the country after their takeover of the Airtel opco failed.							

Vendor opportunity matrix	Energy	RMS, ILM and access control	Tower manufacture	Turnkey infrastructure	Small cells, microcells, DAS and IBS*	Advisors	Towercos	MNOs
Congo B	Medium	Low	Low	Medium	Low	Medium	Helios	Airtel MTN Bintel
	A small market with just 900 towers, of which Helios own 394. MTN launched 4G in 2016 with further rollout expected in 2017. Orange had attempted to acquire Airtel's opco but the deal lapsed, Bintel have a very low market share and may have their license stripped. Helios have identified 1,200 sites in Tanzania, Congo Brazzaville and the DRC which are candidates for hybrid technologies with plans to deploy such technologies at 380 sites during 2017. With towers still to be integrated, Helios will need to deploy upgrade capex to bring the sites up to standard.							
Côte d'Ivoire	Medium	High	High	High	Low	High	IHS Pan-African Towerco	MTN Orange Moov LPP
	IHS own or manage a portfolio of 2,599 towers, having acquired sites from MTN and entered into an MLL arrangement with Orange. Orange are known to have an aggressive plan for new site build in 2017 and number three operator Moov are also looking to expand their portfolio of 800 sites, proposing the addition of 200 sites in 2017. With IHS having reportedly expressed little interest in a BTS contract from Moov and also Orange, it opens the market up for other parties. The regulator has recently awarded a fourth operating license to LPP (after the revocation of four MNO's licenses in 2016); LPP assume ownership of the 400-500 sites owned by the previous operators and with significant parallel infrastructure will need to undertake a degree of decommissioning. Overall estimations suggest that the market needs a further 2.000 towers to be added between all operators within the next three years. MTN have almost finished 4G rollout, with Orange yet to start, LPP will need to start to deploy their network in 2017 and are expected to use Moov and IHS' sites, although Moov do not have experience of commercialising their sites to date. With regards to power, Orange stated that diesel accounted for 36% and grid 64% of total energy costs in the country. IHS has 110 solar hybrid sites and continues to rollout more across its portfolio. One of the MNOs which had a license revoked had started discussions regarding a tower sale and there exists the potential that LPP (and potentially Moov) could consider such a strategy.							

<table>
<tr><th>Vendor opportunity matrix</th><th>Energy</th><th>RMS, ILM and access control</th><th>Tower manufacture</th><th>Turnkey infrastructure</th><th>Small cells, microcells, DAS and IBS*</th><th>Advisors</th><th>Towercos</th><th>MNOs</th></tr>
<tr><td>DRC</td><td>High</td><td>High</td><td>High</td><td>High</td><td>Low</td><td>Low</td><td rowspan="2">Helios</td><td rowspan="2">Africell
Airtel
Orange
Supercell
Tatem
Telecom
Vodacom</td></tr>
<tr><td></td><td colspan="6">With 4,350 towers (of which Helios own 1,832 following the acquisition of Millicom - now owned by Orange - and Airtel sites), the country needs a doubling of its existing tower stock. With one of the highest number of SIMs per tower in the world and an estimated 15-20mn users coming online in the next five years, extensive investment is required. Outside of the three main cities almost all sites are off-grid with power being 2.5x more expensive in rural areas. Orange has recently signed an ESCO contract governing 250 sites with Greenwish Partners. Helios have committed to investing US$100mn+ into new site build and improvement capex, with reducing diesel usage being a big part of that; the towerco has deployed 51 solar sites in the country, and have identified a further 400 sites in the country which they think a suitable candidates for the technology and play to deploy systems at 150 sites during 2017. The company will be on a major drive to increase co-locations on its newly acquired sites, signifying significant spend. Vodacom are currently working on deploying many rapid deployment, low cost sites in order to address the poor geographical coverage in remote areas, whilst Africa Mobile Networks is deploying 750 solar powered towers in rural areas. Poor road infrastructure makes site access challenging, underscoring the importance of robust RMS and site management systems to monitor and control sites.</td></tr>
<tr><td>Egypt</td><td>High</td><td>Medium</td><td>High</td><td>High</td><td>Medium</td><td>Medium</td><td rowspan="2">HOI-MEA (Alkan, EEC and Mobiserve also possess infraco licences)</td><td rowspan="2">Orange
Etisalat
Vodafone
Telecom Egypt</td></tr>
<tr><td></td><td colspan="6">Egypt has over 20,000 towers split fairly evenly between the three MNOs. Infraco licenses have been awarded to Alkan, Mobiserve, EEC and HOI-MEA with only the latter reporting an owned portfolio of sites. 4G licenses were awarded to the three MNOs and Telecom Egypt at the end of 2016 with rollout expected this year. With one of the highest number of SIMs per tower in MENA, new build in addition to tower strengthening will be required, a task MNOs are keen to pass on to towercos. High data usage in urban centres will also likely necessitate small cells and DAS for urban infill. Grid connection is slow and expensive in Egypt so diesel generators are widely used, with the high load meaning that as many as three DGs can be required per site. The case for renewables will be boosted as fuel subsidies removed, and solar-hybrid trials are currently underway in the Delta region.</td></tr>
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Gabon	High	High	Medium	Medium	Medium	Low	None	Gabon Telecom Moov Airtel Azur
	A small market with 1,000 towers, most of which are in the main cities. A pioneer in digital TV, fibre and cellular coverage, Gabon is one of SSA's most progressive markets. 50% of sites in the country are on grid, 30% off-grid and 20% are on bad grid where more than 6 hours of power is not usable. Energy Vision has secured Gabon, and SSA's, largest ESCO contract to date, and is in the process of taking on the energy equipment for over 400 sites.							
Ghana	Medium	Medium	Low	Low	Medium	High	American Tower Eaton Helios	MTN Vodafone Airtel Tigo Glo Expresso Surfline Blu Busy
	74% of the country's 6,000 sites are owned by towercos and with strict regulation governing new build, fewer than 100 greenfield sites will be added in 2017, but expect co-location growth to continue. Requirements for densification as 4G rollouts continue may neccessitate regulatory changes thus opening up new build activity and shared DAS will grow with American Tower currently operating 18 DAS sites in the country. Grid connection is good by SSA standards with one towerco reporting that just 3-4% of sites are off-grid and another reporting reductions in diesel usage in 2016 due to improved availability (which is trending towards 20 hours a day). The introduction of new tariffs has caused electricity costs to skyrocket, meaning it can actually be cheaper to run on generators in some instances. The business case for solar and hybrid solutions is strengthening and deep cycle batteries are being widely deployed. Airtel and Tigo have announced plans to merge which, if approved, will lead to decommissioning of overlapping Helios and Eaton sites.							
Iran	Medium	High	Medium	High	Medium	Medium	Iranian Towers Fanasia	MCI MTN Irancell Rightel MTCE Taliya TKC
	With economic sanctions having been lifted in 2016, Iran is an attractive new opportunity for many companies. Newly formed towerco, Iranian Towers - in which number one and number three MNOs MCI and Rightel are shareholders alongside domestic towerco Fanasia, plans to replace towers on 400 sites and rollout 2-3,000 new ones. Extensive decommissioning is also expected across Iran as the MNOs look to share infrastructure. The grid is widespread and reliable in Iran but energy efficiency is a key focus as towers transition into towerco hands, this change in ownership is also stimulating demand for RMS and site management platforms.							

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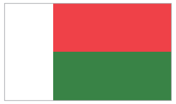
Iraq	High	High	High	High	Medium	Medium	None	Zain Asiacell (Ooredo) Korek Telecom
	Following heavy conflict in the country, extensive network rebuilding is required with Korek Telecom citing a need to almost double their stock of 3,600 sites, The vast majority of sites have at least one, if not two generators with an appetite amongst operators to look at hybrid solutions. There has been little to no infrastructure sharing to date but the government is proposing enforcing it, especially as 4G rollout starts to intensify. In addition to macro-sites there is a strong need for in-building solutions in the market.							
Kenya	Medium	Medium	Medium	High	High	High	Eaton SEAL Towers	Safaricom Telkom Kenya Airtel
	Market leader Safaricom owns 3,400 ground based towers, of which a third are off-grid. Due to the intermittent nature of power, all on-grid sites have back-up generators or batteries with Safaricom known to be assessing different renewable solutions and broadening their supply base. Eaton entered the market following the acquisition of Airtel's sites and Telkom Kenya are have initiatied the sale of their 1,000 sites, with both American Tower and Eaton in the running. Following the acquisition, expect extensive upgrade work. In addition to Eaton, several other build-to-suit towercos are starting to emerge, although obtaining a license has proven challenging. Around 500 buildings are suitable for DAS with a hundred or so covered already; Safaricom are piloting shared DAS networks.							
Kuwait	Medium	High	Low	Medium	High	Medium	None	Zain Ooredoo Viva (STC)
	The sale of Zain's 1,600 sites to Towershare is expected to be announced imminently (pending regulatory approval), and the transfer of sites will likely elicit expenditure on energy efficiency and site management systems from the new owners.							

Vendor opportunity matrix	Energy	RMS, ILM and access control	Tower manufacture	Turnkey infrastructure	Small cells, microcells, DAS and IBS*	Advisors	Towercos	MNOs
Madagascar	High	Medium	Medium	High	Low	Medium	TowerCo of Madagascar	Telma Airtel Orange Blueline
	TowerCo of Madagascar (ToM) own over half of the country's stock of 1,600 towers with the towerco forecasting it will add a further 100 sites in 2017. MNO TELMA are the market leaders and are currently deploying 4G with Orange set to follow suit following acquisition of a license in January this year. Power is a major challenge in Madagascar with ToM putting a big focus on renewable energy at present, piloting different technologies as well as looking at battery replacements. Airtel report 50% of their sites to be off-grid, with battery-DG hybrids in place; the MNO had looked at the ESCO model but found it couldn't compete and is currently reviewing its managed services contract to bring down costs.							
Mozambique	Medium	Medium	Low	Medium	Low	High	None	mCel Movitel Vodacom
	Viettel owned Movitel rolled out 1,500 sites in three years following their entrance in 2012, prompting Vodacom to add a further 800 sites. New site build has however dropped off significantly since then with just 20-30 sites forecasted to be added in 2017; extensive investment is however being diverted to fibre rollout. Whilst the power situation has improved in Mozambique, there is a large rural population and the majority of rural sites are dependent on diesel generators. mCel initiated a process to sell their 1,200 sites but attracted limited interest; should the transaction go ahead the acquiring party will need to deploy a good deal of improvement capex as the towers have reportedly been poorly maintained. In the absence of an interested party, mCel could well look to sign a deal with an ESCO. Annual floods cause challenges for tower owners.							
Namibia	Medium	High	Medium	High	Medium	Medium	Powercom	MTC Telecom Namibia Paratus
	The Namibian telecom sector is in the midst of an overhaul, with a new law mandating infrastructure sharing in the country. Such a change means decommissioning services will be in greater demand than tower building (although some low capacity monopole structures in the country will need to be replaced). What's more, the changes may place the country's full complement of towers into the hands of a dedicated infrastructure provider, creating demand for investments in ERP systems and an improved NOC. Whilst the grid is robust, Namibia's climate is ideal for solar and so there is significant appetite for assessing renewable solutions.							

Vendor opportunity matrix	Energy	RMS, ILM and access control	Tower manufacture	Turnkey infrastructure	Small cells, microcells, DAS and IBS*	Advisors	Towercos	MNOs
Niger	High	Medium	Low	Medium	Low	Low	Eaton	Airtel Moov Orange Sahelcom
	Similar to Burkina Faso where Eaton Towers' also has a footprint following the acquisition of Airtel's sites, Niger is characterized by a low ARPU and high percentage of the population living in rural areas, thus necessitating solutions to provide low cost coverage. Over 50% of the country's towers are off-grid with Eaton examining renewable energy options (including the repair/ replacement of 200 solar sites the company has inherited) and Orange issuing an RFP for an ESCO. New build requirement in the market is thought to be relatively conservative although Eaton is undertaking some for Airtel.							
Nigeria	High	Medium	High	High	High	High	IHS American Tower Communication Towers Nigeria BCTek Engineering	Airtel 9mobile Globacom MTN Smile Bitflux InterC Network ntel Spectranet
	Africa's largest mobile market, Nigeria needs to double its tower count adding another 30,000 sites. IHS own over half of the country's existing stock (having acquired MTN, Etisalat and CDMA Visafone's sites as well as HTN Towers) and American Tower own 4,748 sites following their acquisition of Airtel's portfolio. Following a deep recession new site rollout has been scaled back but is expected to pick up again by mid 2018, with American Tower announcing their intent to also start building towers in the country. 75% of Nigeria's sites are off-grid with on-grid availability being as low as four hours per day. The first phase of IHS' big five programme is underway with five companies chosen to replace diesel generators with solar-hybrid solutions on around 10-12,000 sites. Contracts are yet to be awarded for the second phase which is set to cover 6,000 sites. American Tower is investing capex in improving diesel generator efficiency with average lifespan across their portfolio having increased by 30% and sigificant investment in hybrid solutions is planned. Small cells and DAS will play a critical role in meeting escalating data demand in urban areas, where overlapping macro sites are saved from decommissioning in order to meet future capacity. Macro economic challenges are putting considerable pressure on the market but signs of an improvement are on the horizon. Etisalat's recent exit from the market creates opportunities for a new entrant, and with this potential network investment and supply chain development.							

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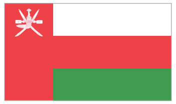
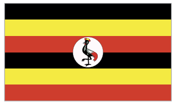
Oman	Low	Low	Medium	Medium	Medium	Medium	None	Omantel Ooredoo
	Plans to award a third operating license have been put on hold, although the potential entrance of such a party will increase demand for new rollout (although mandated infrastructure sharing will reduce the number of new sites required.)							
Rwanda	Medium	Low	Low	Medium	High	Low	IHS	MTN Tigo Airtel KT Rwanda Networks
	IHS own over 80% of the total sites in Rwanda having acquired portfolios from Airtel and MTN. A small market, major focus is on consolidation but some BTS activity is coming up for the towerco. The company has invested heavily in power systems on its sites already but is looking into a solar farm to supply the grid with power. IHS has already invested in state of the art monitoring systems across its sites and so procurement in this area is not a priority. Of all the SSA regions, Rwanda is showing some of the strongest promise in small cells and DAS making it a key target for such companies looking to enter Africa; IHS have explored shared DAS.							
Saudi Arabia	Medium	High	High	High	High	High	None	Saudi Telecom Company Mobily Zain
	In spite of complete population coverage an additional 3,500 – 4,000 new macro sites need to be added in order to bring >10MB broadband coverage to rural areas by 2020. In addition to this, a further 1,000-2,000 new sites are estimated to be required to meet growing data usage in urban areas. Number three MNO Zain is in exclusive negotiations with a consortium involving Towershare and IHS Towers after having previously entered into exclusive negotiations with TASC Towers; expect investment in the towers following an acquisition. Number one and number two MNOs, Saudi Telecom Company and Mobily were in the process of forming a joint venture to manage their tower portfolios, but are currently reassesing their options. OPEX costs on STC's site are known to be high with the operator looking for strategies to bring this down. Energy does not present a major challenge in Saudi however energy efficiency measures as a means of optimising costs will be a priority.							

Vendor opportunity matrix	Energy	RMS, ILM and access control	Tower manufacture	Turnkey infrastructure	Small cells, microcells, DAS and IBS*	Advisors	Towercos	MNOs
Senegal	Medium	High	Medium	High	Low	High	Al Karama Towers	Sonatel Millicom Expresso
	Market leaders Sonatel (majority owned by Orange) own approximately two thirds of the country's 3,300 sites. Newly formed towerco, Al Karama Towers (AKT), have agreed the purchase of Expresso Telecom's 450 sites; whilst the on/off sale of Tigo to Wari or a second consortium may also shake loose further towers also of interest to Al Karama, although overlap means decommissioning may be required. Expect improvement capex to be deployed to bring acquired towers up to standard for colocation. AKT's deal with Expresso involved a build to suit programme, creating opportunities for tower manufacturers.							
South Africa	Low	Medium	High	Medium	High	High	American Tower Atlas Tower Eagle Towers Blue Sky Towers Pro High Site Communications Coast to Coast Comco	Vodacom MTN Cell C Telkom
	MNOs are keen to invest in expanding their networks with both MNOs and towercos set to play a role. After having sold their towers to American Tower, Cell C are rebuilding their network of sites adding 600-800 towers per year for the next five years, number two towerco Atlas Tower built 62 sites in the past four months outstripping number one towerco American Tower, which is digesting the acquisition of Eaton Towers South Africa. Telkom have recently spun out their towers into a new wholly owned subdisiary Gyro Towers which is aggressively pursuing colocations. Vodacom and MTN similarly pursue co-locations with over 400 potential tenants due to the large number of ISPs in the market. Small cell shipments to South Africa have been high, demonstrating the appetite for deployment in the country. Unlike other SSA countries, the majority of sites are on reliable grid and so demand for energy equipment is lower, although energy efficiency and battery storage are still of high importance, with one operator known to also be looking at fuel cells. Speculation about the potential future sale of MTN's South African towers has died down for the time being and the company is looking at ramping up investment in the country.							

Vendor opportunity matrix	Energy	RMS, ILM and access control	Tower manufacture	Turnkey infrastructure	Small cells, microcells, DAS and IBS*	Advisors	Towercos	MNOs
Tanzania	Medium	Medium	Medium	Medium	Medium	High	Helios	Vodacom Millicom Zantel Airtel Viettel Smart TTCL
	Having recently added Zantel's mainland sites to their portfolio Helios own around half of the country's ~7,400 towers, although significant decommissioning is planned. Whilst American Tower had been poised to enter the market with the acquisition of Airtel's sites, the deal is now off; although the towers could very well return to market. Airtel's sites are in need of modernisation, lacking sophisticated access control systems and so expect investment. The country needs an estimated 2,000-3,000 new sites to be added in the next 2-4 years. 70% of the country's sites are on-grid, but conditions are conducive to solar hybridisation. Helios set up four pilot sites for hybrid technologies at an average cost of $12,500 per site and have identified a further 1,200 sites in Tanzania, Congo Brazzaville and the DRC which are candidates for hybrid technologies with plans to deploy such technologies at 380 sites during 2017. Airtel have 50 solar sites amidst their portfolio of 1500, most sites are reliant on generators with a few rooftops having batteries. With a growing urban base, Tanzania is a good candidate for small cells but lags behind comparable markets. DAS are starting to be deployed.							
Uganda	High	Medium	Medium	Medium	Low	Medium	American Tower Eaton	Africell Airtel i-Tel MTN Smart Smile UT Mobile Vodafone (Afrimax)
	There are still around an additional 3,500 towers to be added to Uganda's total of 3,485; growth rate was 17% between 2012 and 2014 but has since slowed to 10% as MNOs opt for co-location on existing sites. Eaton Towers and American Tower are present in the market and are handling the majority of new build. With eight MNOs, consolidation is likely, which may lead to decommissioning. Maintenance costs in the country are high (approximately double those in Ghana). Around 27% of sites are off-grid, with about half of new build being off-grid, grid outages are common, even in Kampala, meaning that lots of investment is going into hybrid solutions. Uganda is Eaton's only market without significant RMS installed, although there are no imminent plans to change this. DAS deployment is behind other East African countries.							

Vendor opportunity matrix	Energy	RMS, ILM and access control	Tower manufacture	Turnkey infrastructure	Small cells, microcells, DAS and IBS*	Advisors	Towercos	MNOs
Zambia	High	Low	Medium	Medium	Low	Low	IHS	Airtel MTN Zantel
	Another market in which IHS have a dominant market share, owning 85% of the country's total stock. The towerco plans to become diesel neutral in the next few years suggesting significant investment in hybrid solutions are to be expected on its 1,960 sites. IHS currently operates over 200 solar hybrid sites. Huawei are rolling out the first 400 sites under Universal Service Fund money as part of the country's bid to improve rural coverage. The anticipated entrance of a fourth MNO would precipitate further site rollout and investment in network infrastructure.							
Zimbabwe	High	High	Low	High	Low	Medium		Econet NetOne Telecel
	New legislation mandating infrastructure sharing is shaking up the Zimbabwean market with frictions between privately owned Econet and state owned NetOne and Telecel. Grid power can be available for as little as 12 hours a day so even on-grid sites need backup power. Colocation will necessitate tower upgrade work, both on the structural side and to ensure sufficient energy capacity. Econet are in the process of forming their own ESCO unit, Distributed Power Africa, which will be a key buyer of energy equipment. The company had also explored, and then shelved plans to spin out an infrastructure unit, Ecotowers.							

* Vendors of small cells, microcells, DAS and IBS should note that TowerXchange are characterising demand for such solutions relative to other countries in MEA, as opposed to in comparison with the rest of the world. So for example when we characterise demand as high in South Africa, we mean South Africa is one of the most attractive markets in MEA, not that South Africa has demand comparable to the USA, for example.

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The biggest names use TowerXchange to raise their profile, position your business alongside them

4

Benefit from a pre-event briefing, one-to-one meeting scheduler and use of on-site meeting rooms to use your time most efficiently on-site

Turn up prepared with your event plan laid out in advance – arrange back-to-back meetings with identified prospects

5

Your company profile and interviews will be read by 35,000+ industry professionals

So much more than on the day, sponsoring gives you the opportunity to appear in the TowerXchange journal, the go-to source of information for the global tower industry

"Attending TowerXchange in Africa gives me the perfect opportunity and environment to meet all the people I need to network with. It is highly cost effective considering how many existing relationships can be revisited and the new ones that are discovered"

CTO, GSM Systems

Testimonials

"If you want to circulate with industry contacts in the tower industry, this is a great forum, with focused and directed effort to network. Superb for my first experience and strongly recommended"
CEO, NETIS

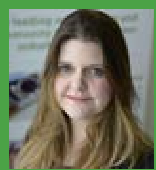
"The event in the telecom tower business for the African continent"
Network Supply Chain, Vodafone Procurement Company

"A great and rare moment in industry life where an active actor can return home with the feeling of having achieved half a year's work in terms of learning, benchmarking and assessing new solutions and suppliers. The event brings together the industry to aid the sector in reaching a high level of operational excellence and efficiency"
Director, M&A Capital & Executive Board Member, Al Karama Towers

How to get involved

A whole range of opportunities exist to leverage the TowerXchange Meetup and community for your business development and marketing goals.

To discuss the options available and how to tailor these to your specific goals, contact:



Annabelle Mayhew
Chief Commercial Officer
amayhew@towerxchange.com

Meetup Africa & ME 2017

3-4 October, Sandton Convention Centre, Johannesburg

TowerXchange

By invitation only: restricted to Director, VP and C-level attendees. Maximum of 2 delegate passes per company except for MNOs, towercos and sponsors

Benefits	Delegate pass	Exhibitor	Bronze Sponsor	Silver Sponsor	Gold Sponsor	Platinum Sponsor	Diamond Sponsor
Access to TowerXchange Meetup	1 pass	1 pass	1 pass	2 passes	3 passes	4 passes	5 passes
Daytime Catering	✓	✓	✓	✓	✓	✓	✓
TowerXchange Roundtable interactions	✓	✓	✓	✓	✓	✓	✓
Video on TowerXchange TV	✗	✓	✓	✓	✓	✓	✓
10ft x 10ft Turnkey booth	✗	✓	✓	✓	✓	✓	✓
Logo on backdrop, signage, fliers & invites for TowerXchange Meetup	✗	✗	✓	✓	✓	✓	✓
Your choice of bronze sponsorship benefit	✗	✗	✓	✗	✗	✗	✗
Your choice of silver sponsorship quality benefit	✗	✗	✗	✓	✗	✗	✗
Your choice of gold sponsorship premium benefit	✗	✗	✗	✗	✓	✗	✗
Your choice of platinum business-class benefit	✗	✗	✗	✗	✗	✓	✗
Your choice of diamond first-class benefit	✗	✗	✗	✗	✗	✗	✓

Roundtable host	**Panel moderator**	**Technology Evaluation working groups**

There is limited availability for roundtable hosts, panel moderators and inclusion on the Technology evaluation working groups please contact **amayhew@towerxchange.com** to learn more

* Discounted rate available to Towercos, Government and Regulator representatives, 100% discount for qualifying Director - C-level execs from Operators

Bronze, Silver, Gold and Platinum Sponsorship Benefit Options - Bespoke packages can be created on request

Bronze Sponsorship
Stationary sponsor (provided by client)
Gift drop (provided by client)
Drinks coaster sponsor (provided by client)
Business card wallet (provided by client)

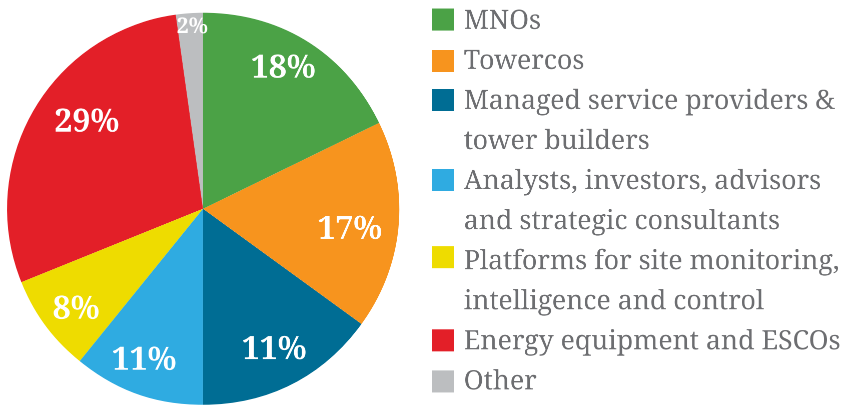
Silver Sponsorship
Totes Bags (provided by client)
Sponsorship of coffee break day two pm
Sponsorship of coffee break day two am
Sponsorship of coffee break day one am
Sponsorship of coffee break day one pm

Gold Sponsorship
Sponsorship of breakfast (Open) day one
Sponsorship of breakfast (Open) day two
USB sponsor (provided by client) - **SOLD**
Lanyards (provided by client)

Platinum Sponsor
Sponsorship of Lunch Day one
Sponsorship of Lunch Day two
Sponsorship of icebreaker drinks
Champagne Roundtable session sponsor

Diamond Sponsor
Sponsorship of Drinks Reception
Sponsorship of Networking Dinner

Industry breakdown of Meetup Africa 2016



TowerXchange's who's who in passive equipment and services

Welcome to the TowerXchange who's who, a kind of vendor directory with personality! Over the last three years we've interviewed over 202 business leaders from innovative passive infrastructure equipment and service providers. By popular demand, here we categorise those profiles, with each company name hyperlinked to our exclusive interviews. If you would like to be included in the TowerXchange who's who, read by over 35,000 industry professionals, contact **Annabelle Mayhew**, Chief Commercial Officer **amayhew@towerxchange.com**

Energy equipment and ESCOs

4energy
Ascot
Ascot hybrid
Ascot & Makasa Sun
Apollo Solar
Apollo Solar on Africa
AST (Applied Solar Technologies)
AST case studies
Ausonia
Ballard
Ballard CALA
Beijing Dynamic Power
Bergey Windpower
Bladon Jets
Bladon Jets revisited
Camusat
CCE
CCE EMSaaS case study
Controllis
Cummins
DAQS Europe
Delta Electronics
Eltek Africa
Eltek APAC
Eltek CALA
Eltek on ESCOs
Emerson Network Power
Enatel SYNERGi
Enatel
Energy Vision
Enertika
FG Wilson
FG Wilson opex-busters!
Flexenclosure
Flexenclosure Myanmar
Flexenclosure Myanmar, part two
Gen Power
Heliocentris
Heliocentris hybrid solutions
Huawei energy intelligence
Huawei Network Energy
IPS
IPT Powertech
IPT Powertech T-ESCO
Mecc Alte
Orun Energy
Pace Group
Panasonic
Perkins
PowerOasis
PRAMAC
ReliOn
Schneider Electric
SDMO
SEDEMAC
Solar BK
SUNCO
SunEdison
Total
TSi Power
Turbina
UGE (Urban Green Energy)
Unipower
ZTE

Energy storage

Amara Raja
Aquion Energy
Coslight India
EnerSys

TowerXchange's who's who in passive equipment and services (cont.)

Is your company not included in our Who's who? Would you like to suggest additions? Please email amayhew@towerxchange.com

EnerSys Africa

EnerSys optimise cyclic use

Exide Technologies

Flexenclosure on batteries

Fluidic

GE Energy Storage

GILDEMEISTER

GS Yuasa

Imergy

NorthStar

Redflow

Saft

Trojan Battery Company

Site monitoring and management

Accruent

Accruent on globalisation

Accruent's SaaS

Accruent site management

AIO Systems

AIO Systems Asia

AIO Systems CALA

AIO Systems Nigeria

azeti Networks

azeti Networks on site protection

Broadnet Telecom

Caryon Development

Codefish

ConnectM

Digant Technologies

FieldForce

Flexenclosure eManager

Flexenclosure on fuel monitoring

Galooli

Galooli fuel monitoring

HMS Industrial Networks

Inala SAM

Inala Infrastructure Intelligence

Infozech

Infozech 'Discipline of Action'

Infozech India and Myanmar

Infozech on use of data

InfraSTAT

Invendis

Invendis Africa and Asia

Jabil Inala

NAAP Global Solutions

Nexsysone

Nexsysone Africa

Nexsysone network management

Qowisio Long Range Technologies

Qowisio goes wireless

Quintica

Tarantula

Tarantula Asia

Tarantula Europe

Tarantula process optimisation

Tarantula shared infra

Telemisis

Telemisis and Jabil Inala

Treefrog

WebNMS

Westell Africa

Westell CALA

ZNV

Access control, Health and Safety

Abloy

Abloy Africa

Abloy CALA

Acsys

Acsys on access control

Acsys on SLAs

Acsys mobile app

Acsys productivity

Acsys efficiency

AKCP

Capital Safety

EMSS Consulting

Karam

LockedUp

TowerXchange’s who’s who in passive equipment and services (cont.)

Is your company not included in our Who’s who? Would you like to suggest additions? Please email amayhew@towerxchange.com

Construction, O&M and managed services

4site

ADNA

AJ Ingenieros

Alifabs (now CommScope)

Alkan CIT

Ardom Telecom

Camusat

Camusat East Africa

Camusat Myanmar

CLEARGOL

COTECH

EEC Group

Ericsson

Ericsson Nigeria

Ericsson Managed Services

Everest Engenharia

Grid Rental Sites

GSMTOWERS turnkey

Huawei Managed Services

HOI-MEA

i engineering

IPT PowerTech

Jtel

KGP Logistics

Leadcom

Leadcom CALA

Leadcom Myanmar

Lemcon Americas

Likusasa

Likusasa Mozambique

Mer Group

Mer Group CALA

Mer Group Ghana

Mer Group low cost sites

Mobiserve

NETIS

NETIS Ghana

NETIS workforce

NEWL

Orissa Wicomm

Planex

Plessey

Reime Group

Sagemcom

TES

ZTE

Structural engineers, rooftops, masts, towers and accessories

Aerolens

Ambor Structures

ASE Structure Design

Calzavara

Cue Dee

Delmec

Elektroskandia

Ganges Internationale

Ganges total tower solution

Geostrut

GSM Telecom Products

GSM Telecom Products Myanmar

Intelli Towers on costs

Intelli Towers on evaluation

Intelli Towers on strengthening

Leadcom on strengthening

Le BLANC

Metalogalva

Mott MacDonald

NANHUA

Orion

Ramboll

Sabre Industries

Sierra Tower Partners

Solaris Technologies

SPTDI

TIA Telecom

TKM Maestro

TNX

Valmont Site Pro 1

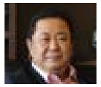
VNTower

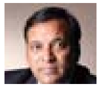
Zamil Infra

With special thanks to the TowerXchange "Inner Circle"

Our informal network of advisers:


(Chairman) Daniel Lee
Managing Director
Intrepid Advisory Partners


Zhiyong Zhang
Chairman & President
Miteno

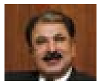

Akhil Gupta
Chairman
Bharti Infratel


Nat-sy Missamou
Sharing New Business Program Director, Orange


Nina Triantis
Managing Director, Global, Head of Telecoms & Media
Standard Bank

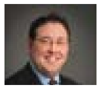

Terry Rhodes
CEO
Eaton Towers


Marc Ganzi
President, Digital Bridge & Mexico Tower Partners


Arun Kapur
Co-Founder
Irrawaddy Green Towers


James Maclaurin
formerly CEO
edotco

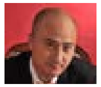

David Murphy
Director - TMT, EMEA
Standard Chartered Bank


Dagan Kasavana
CEO
Phoenix Tower International


Chuck Green
Executive Chairman
Helios Towers Africa

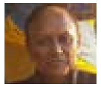

Suresh Sidhu
CEO
edotco


Malcolm Collins
Chief Executive
CTIL

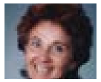

Ted Zhong
Founder & CEO,
Astro Tower

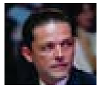

Hal Hess
EVP, International Operations and President, EMEA and Latin America
American Tower


Nobel Tanihaha
President Director
PT SOLUSI TUNAS PRATAMA (STP)

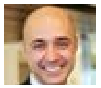

Umang Das
Chief Mentor
American Tower


Gilles Kuntz
CEO
TowerCo of Madagascar

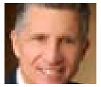

Maria Scotti
CEO
Torrecom


David Meganck
Founder and COO
Acsys


Tilak Raj Dua
Director General
TAIPA


Dimitris Lioulias
GM of Strategy
Saudi Telecom Company


Kurt Bagwell
President International
SBA Communications


Jim Eisenstein
Chairman & CEO
Grupo TorreSur


Bimal Dayal
CEO
Indus Towers


Inder Bajaj
Advisor, Helios Investment Partners & former CEO
HTN Towers

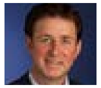

Tunde Titilayo
Vice Chairman
SWAP International

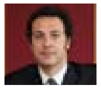

Peter Bendall
Senior Vice President
Macquarie Infrastructure and Real Assets


Jeffrey Eldredge
Partner
Vinson & Elkins


Enda Hardiman
Managing Partner
Hardiman Telecommunications Ltd.


Adeel Bajwa
CEO
Dhabi Group


Scott Coates
CEO
Wireless Infrastructure Group


Carlo Ramella
COO, EI Towers
and Chairman, Towertel


Alexander Chub
President
Russian Towers

About TowerXchange

Founded in 2012, TowerXchange is your independent community for operators, towercos, investors and suppliers interested in EMEA, CALA and Asian towers. We're a community of practitioners formed to promote and accelerate infrastructure sharing. TowerXchange don't build, operate or invest in towers; we're a neutral community host and commentator on telecoms infrastructure.

The TowerXchange Journal is free to qualifying recipients. We also provide webinars and regular meetups. TowerXchange monetises this community through hosting annual Meetups and the sale of advertising, without compromising editorial integrity.

TowerXchange was founded by Kieron Osmotherly, a TMT community host and events organiser with 21 years' experience, and is governed with the support and advice of the TowerXchange "Inner Circle" – an informal network of advisors ■

Tower Xchange