

# The future of Telecoms in Africa The “blueprint for the brave”



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## Foreword

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“...what surprises me is the interest from global advertising giants in telco acquisitions in the race to secure access to the growing African middle class”

Mark Casey, TMT Industry Leader – Africa

Africa can no longer be considered the Dark Continent. Given the rate at which mobile connectivity is growing, it seems only natural that the way business is done will change. But how will Telco's embrace this change and are they even ready for it?

Deloitte has recently completed an in-depth analysis of the market, its trends, and the drivers of it. We are convinced that there will be consolidation in the telecommunications sector and inevitably more inbound investment as the market opens up and the economic returns improve.

Indigenous companies, foreign investors, and global players have all made significant investment into the continent or certainly parts of it. Even governments are waking up to the opportunity to regulate and to auction spectrum and licences.

While the future shape is still far from clear, we see four potential scenarios:

1. Winner takes all – as the markets consolidate quicker than most operators can respond;
2. Turf wars continue as new and existing operators battle it out for the profitable market and are joined by banks trying to protect their core business against mobile payments;
3. New entrants come into the market from adjacent sectors with greater added value than the traditional carriers – foreign media and even advertising groups are viewing telcos as a ready-made channel to market; and
4. Owning the hearts, minds, and wallets of consumers is the end goal. Will telcos, who have laid the foundation for connectivity and access, be the winners; or will it be global technology groups, the banks, media, advertisers or retailer giants?

The impact is not just on the industry incumbents, but on all players in their respective value chains (hardware, software, services and people provisioning) as they reposition their offerings to keep in step with an uncharted end-state.

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“...industry boundaries are dismantling, and owning the consumer experience space is the prize”

Arun Babu, TMT Southern Africa

# Fast rewind on some key trends

“...those companies who are successful members of the existing telco value chain will need to have a hard look at their future strategies or become redundant over time”

Jim Sloane, Global TMT – Africa

## African growth and the rising of the African middle class

Africa is one of the fastest growing regions in the world, with a forecast real GDP annual growth rate to 2017 of 5.5%. Over the next decade c.100m more people are expected to join the African middle class

A decade of rapid GDP growth ...

- Africa has grown at 8.7% CAGR in real GDP terms between 2000 and 2010, making it the second fastest growing continent in the world, only behind china-propelled emerging Asia. Third party forecasts suggest Africa will continue to grow very rapidly at c.5.5% CAGR to 2017
- Part of this rapid GDP growth relates to improved international trade and an accelerated pace of foreign direct investment, in particular from emerging super-powers such as China and Brazil. Many major multinational corporations invest in Africa, both in natural resources, infrastructure, goods and services. Large brands such as Unilever, Diageo and Parmalat have entered Africa's consumer market
- There surely remain impediments to growth – road, rail infrastructure and power can be scarce, political instability and corruption are still widespread, regional integration is progressing only slowly but all these elements are improving and making long-lasting impacts

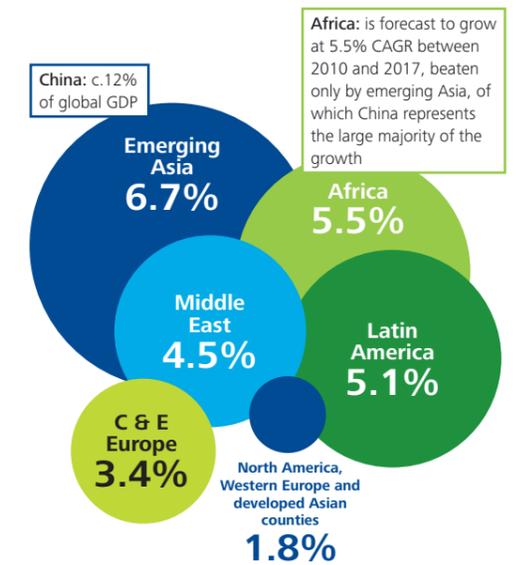
... has created a growing African middle class

- Africa's contribution to global GDP remains small at 2.7% but growth experienced to 2010 has put total consumer spending in Africa ahead of Russia and equal to India, albeit fragmented across many countries
- Whilst there is a wide disparity among income levels across the continent, GDP growth is positively impacting individual earnings and private consumption, migrating an accelerating number of people into the African middle class – those spending between \$2- and \$20 a day
- Between 2000 and 2010 the number of people in Africa's middle class grew by 130m, forecasts from the African Development Bank suggest that at least 100m more people may become middle class by 2020

Source: African Development Bank, World bank data, IMF forecasts, Deloitte 'Rise and Rise of the African Middle Class'  
 Note: Africa 5.5% growth forecast: North Africa forecast (5.6%) SSA (5.5%)

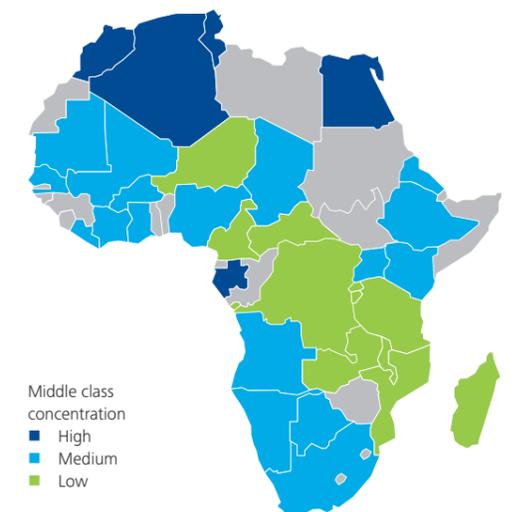
### The world's second fastest growing region and its growing middle class

African contribution to global forecast real GDP growth 2011 GDP distribution (x-axis); GDP growth 2010-17 (y-axis)

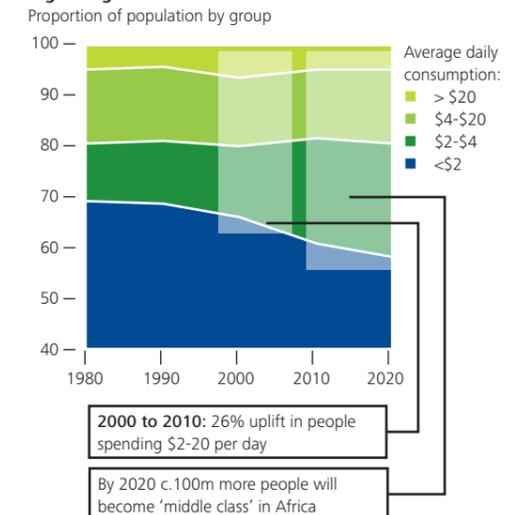


### Concentration of the middle class

A wide disparity between countries

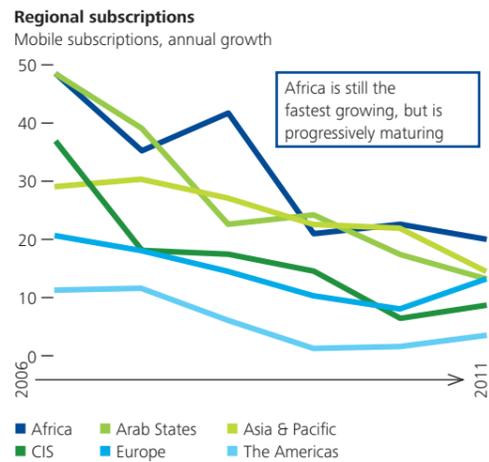


### A growing African middle class

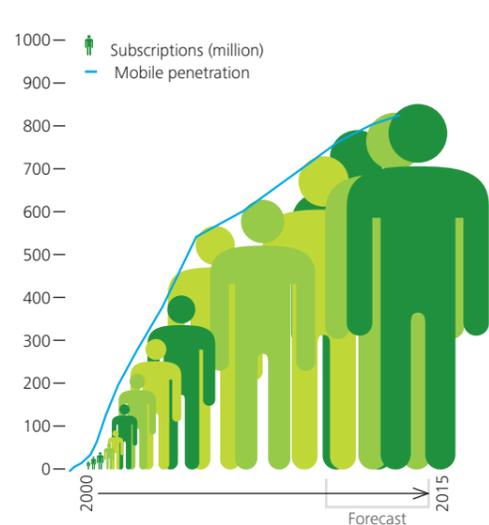


# Subscriber growth remains strong but is maturing – rural may be the next frontier

## Maturing subscriber growth in the African region



## African subscriber growth and penetration



Fuelled by improved economic conditions, the last five years have seen Africa experience the fastest telecoms growth worldwide, which has transformed fundamental aspects of social and business life

Mobile subscriber growth remains fastest in the world, positively impacting telecoms markets as well as African economies at large

- African mobile telecoms have witnessed massive growth over the last decade; subscriptions CAGR reached 42% during 2006-08 and 21% 2009-11. This rapid uptake has been mainly driven by:
  - mobile services being a core life enabler to all user segments
  - favourable macroeconomic factors flowing to higher consumption
  - licensing opportunities and improved regulatory environment
- Telecommunications growth Africa has positively impacted incomes across the continent: in Sub-Saharan Africa, mobile revenues reached \$35bn in 2011 representing GDP contribution of approximately 3%
- Recent Deloitte and GSMA research states that a 10% increase in mobile penetration in developing economies is likely to increase productivity by 4.2%

Mobile subscriber growth is maturing and could well saturate in the medium term in some markets if rural coverage does not increase

- On average, mobile subscription penetration has reached 72% across Africa (3Q12) but country penetration rates vary
- Multi-SIM ownership is widespread and actual penetration of individuals could be closer to 40% to 50% in some countries, potentially leaving room for further growth. For instance this is the case in Nigeria where mobile penetration is above 60% but human penetration just above 26% with multi-SIM ownership at c.2.4 per user
- Further growth in subscriber levels is likely to be driven by; (1) Lower call prices and overall cost of ownership of handsets to gain access to lower income segments; (2) better network coverage in rural areas and operating models adapted to serving such remote connectivity needs; (3) mobile data connectivity (as well as M2M), which has already proved very successful in a number of countries

Source: WCIS, ITU, GSMA and Deloitte analysis  
Note: Penetration rates are based on active SIMs

# Mobile markets are slowly moving towards lower revenue growth levels

The combination of slowing subscriber growth rates and rapidly reducing ARPU levels is making revenue growth challenging in an increasing number of African markets

Large countries with high subscription growth or comparatively higher ARPU levels continue to be seen as high growth markets

- Subscriber growth remains fastest in central African countries such as in Nigeria or Sudan and is expected to continue being concentrated in regions where penetration is comparatively low
- Whilst subscriber growth is slower in more mature markets such as Egypt or South Africa, these markets continue to concentrate the largest net revenue potential due to higher income levels, large and growing populations and sustained economic growth

## The drivers of future subscriber growth

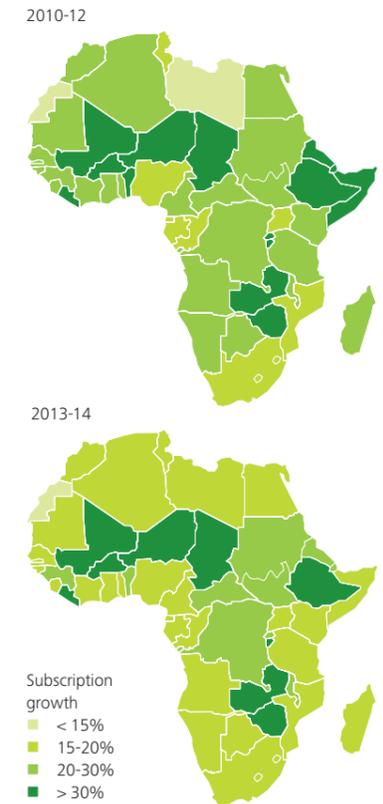
- Further subscriber growth is likely to continue being driven by
  - lower call prices and lower overall cost of ownership for handsets, allowing penetration of lower income segments
  - better network coverage in rural areas and operating models adapted to serving such remote connectivity needs
  - mobile data connectivity (as well as M2M), which has already proved successful in a number of African countries (e.g. SA)
  - multi-SIM ownership in countries where it is still increasing

## The challenge: revenue-dilutive incremental subscribers

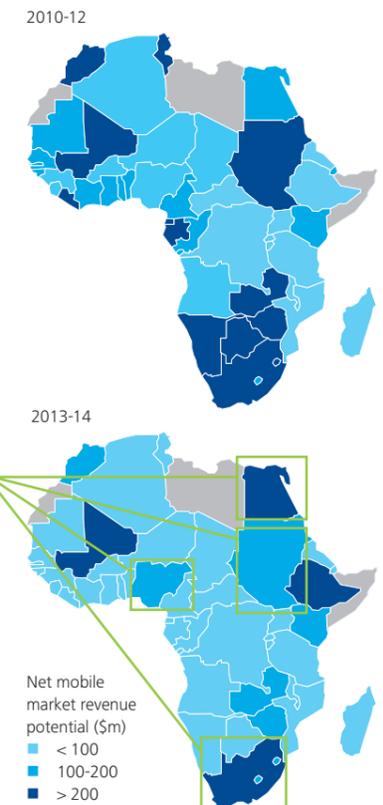
- As mobile operators continue to add subscribers to their network they typically reach out to harder to reach areas or segments and often either poorer subscribers or multi-SIM owners
  - incremental subscribers often spend much less than more affluent early adopters of mobile services
  - reaching to specific niche segments or to remote areas, where competition may be less strong can be costly, diluting margins

## High potential markets

### Mobile subscriptions growth



## Mobile market net revenue potential

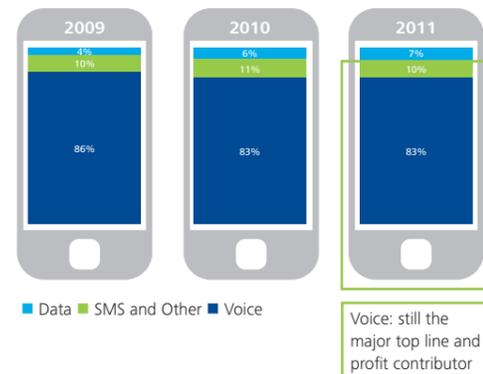


Source: Deloitte analysis, Telegeography, ITU data, IMF

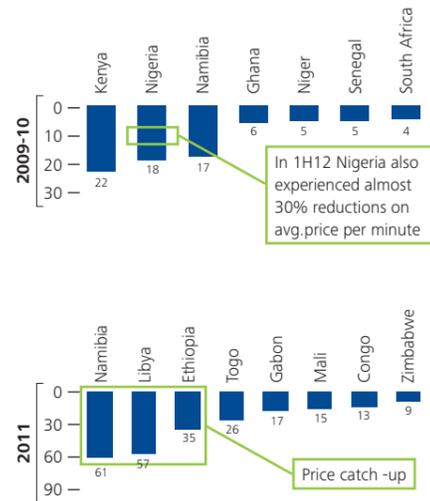
# Telecoms services (voice mostly) continue to be commoditised

## Voice ARPU dilution through aggressive pricing and low income segments

Typical Telcos' revenue composition<sup>1</sup>  
Percentage



Voice price reductions (2009/10 and 2011)  
% price reductions, lowest tariff



## Voice is still the major revenue earner for most telecommunications operators. Tough competition has meant rapid declines in revenue per minute in key markets and accelerated decline of voice ARPUs

Voice still represents the majority of revenues by a large margin. A number of countries are seeing an acceleration of voice ARPU decline through competition

- Voice still represents the majority of revenues for operators. In the case of this Telcos' key markets, voice represented over 80% of revenue in 2011<sup>1</sup>
- ARPUs have been declining as a natural result of lower price levels, lower income segments being penetrated and customers spreading usage across multiple SIMs to maximise value from various mobile tariffs
- In some countries, competition has heightened price pressure, resulting in faster declines, such as in Kenya in 2008-09, in Ghana in 2010, or more recently in Nigeria (1H 2012). In such cases traffic does not compensate for lower revenue per minute, i.e. volume-price elasticity is lower than 1
- The acquisition of Zain by Bharti (2010) triggered several such cases across Africa and resulted in a number of price wars during 2011

## Regulation also puts pressure on average revenue per minute

- Special taxation on telecoms services has increased in some cases (e.g. Tanzania) or is being put in place (e.g. Egypt)
- Mandated declines in mobile termination rates have become steeper

## Whilst ARPU is pressurised, voice traffic levels continue to increase, pressuring the networks and calling for capacity investments

- Aggressive discount policies and low prices have led to significantly higher traffic levels through volume-price elasticity
- Operators have been challenged to maintain minimum service levels and number of them, such as in Ghana, Nigeria or Kenya have breached acceptable congestion levels, sometimes leading to being temporarily barred from selling new SIMs

# Most telcos have embarked on a journey of cost consolidation and diversification "The Blueprint"

## Whilst operators are seeking to contain costs, they also seek revenue growth through service diversification: banking on data, business ICT services, mobile applications and mobile advertising

Operators are diversifying: seeking out growth levers and incremental margins in data, IT, banking, and VAS

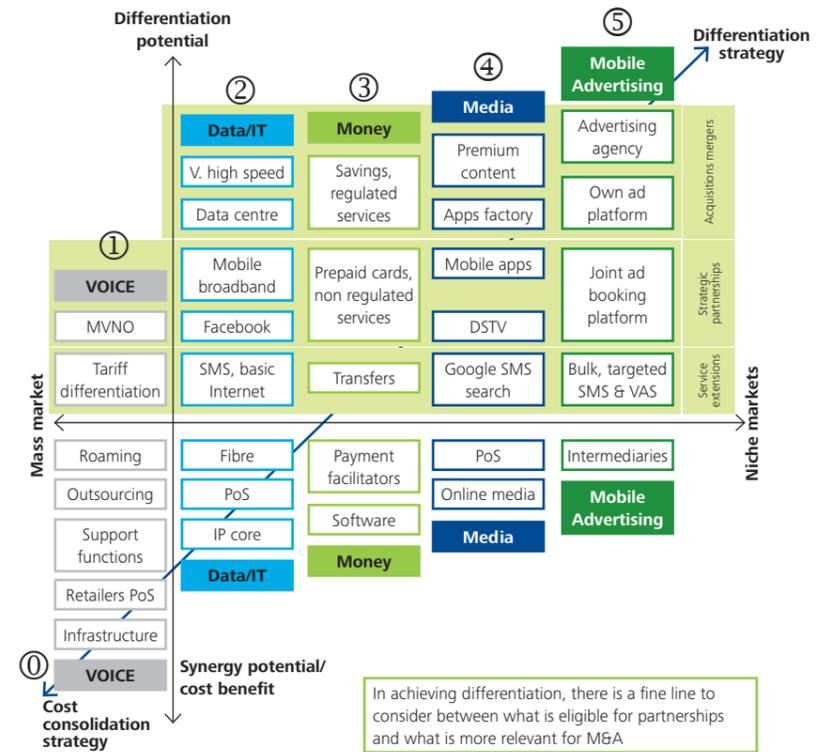
- Commoditisation of voice has pushed a dual-pronged agenda for telcos, of both cost reduction and diversification
- Operators are seeking out higher returns in immediate adjacent markets as well as higher segment focus, typically through strategic alliances and/or acquisitions, e.g.

- ① in developed markets, launch of sub-brands or MVNOs in case they can achieve further differentiation and better capture niche segments
- ② acquisition of fixed internet and data providers to complement mobile voice/data and retain the lucrative higher income segments, to differentiate with businesses and achieve infrastructure synergies
- ③ deploying mobile banking services, as operators see themselves increasingly as service enablers for all aspects of usual day life, reaching agreements with international remittance organisations as well as in-country banking groups, with utility providers and with leading retail distribution networks
- ④ extending services to convergent media offerings, and partnering with content owners such as DSTV or local media, with content providers (eg. Facebook), news and search (eg. Google), social networking (e.g. MTN Pulse), gaming (MTN Play)
- ⑤ advertising partnerships to potentially subsidize low income segments and tap into international markets

## Identifying the appropriate execution path is challenging

- In most cases, there is only a small divide between what is eligible for partnerships and what is more relevant for M&A, often a result of the availability of opportunities

## A conundrum of differentiation options



Source: MTN Annual reports, GSMA / Wireless Intelligence, CTO 2012, Deloitte analysis

Note: 1. Voice (Airtime and interconnect), SMS & Other (SMS, handset revenues, accessories and other), Data (all non-SMS data), The Telcos' markets includes South Africa, Nigeria and Ghana

# A transformation towards new operating models through operational innovation

## Operations and towers outsourcing

### Operations outsourcing

Examples of recent outsourcing activities amongst African telcos

Tower site management	Managed radio network	Finance Service centre
Network site security	Managed services & VAS	Customer Service centre
Technical field maintenance	Network IT	Billing
Prepaid distribution	Cash collection	Branding

### Infrastructure carve outs: Tower transactions

A plethora of examples

Country	Owner	Outsourcer	Value	Towers	Date
Ghana	Tigo	Helios	33	752	Jan 10
Tanzania	Tigo	Helios	80	1020	Sep 10
Ghana	Vodafone	Eaton	na	750	Oct 10
South Africa	Cell-C	American	430	3200	Nov 10
Nigeria	Starcomms	Swap tech	81	407	Dec 10
DRC	Tigo	Helios	45	729	Dec 10
Ghana	MTN	American	218	1876	Dec 10
Uganda	MTN	American	175	1000	Dec 11
Uganda	Warid/Orange	Eaton	153	694	Mar 12
Rwanda	Rwandatel	Airtel	16	na	Apr 12
Uganda	Warid	Eaton	60	400	Oct 12
Cameroon	MTN	IHS	143	827	Oct 12
Ivory Coast	MTN	IHS	141	931	Oct 12
Egypt	na	Mobiserve	na	na	Oct 12
Cameroon & Ivory Coast	Orange	IHS	na	2000	Apr 13
Kenya	Telkom	Eaton	na	1000	Jun 13
Tanzania	Vodacom	Helios	75	1149	Jul 13
Rwanda	MTN	IHS	na	524	Dec 13
Zambia	MTN	IHS	na	704	Dec 13

With higher traffic levels, extended network reach and targeted investments in new services, the need for operational efficiency has become even greater. Sharing and outsourcing have taken centre stage

Increased focus on cost control, re-assessment of core areas of service value add and cost differentiation vs. non core

- In the last two years African telcos turned their focus towards cost control and operational efficiency, a result of market maturity possibly accelerated by acquisition of Zain by Bharti in 2010
- Downsizing operations is difficult as it requires an acute sense of what can be a differentiation element today or in the future, and what can be best achieved outside the organisation
- Typical areas where operators have focused their efforts have been in setting up ABC controls, outsourcing managed networks, site maintenance and security, and back office functions in SSCs<sup>1</sup>

Sharing has been commonplace for African telcos but with tight margins and investments calls, releasing value through tower deals has become more attractive and has gathered pace

- There may be c.170 000 towers in Africa, and a good share of them are already shared between market players, whether through regulatory pressure (increasingly so) or not
- Releasing value through towers is attractive and many operators have gone down this route, albeit under different types of models (JV, asset sale, operate and maintenance, co-location rights)
- Four main outsource partners have emerged, Eaton, Helios, IHS and American Towers and are consolidating tower portfolios

Finding appropriate operating models to break the rural frontier

- Reaching rural areas is a necessity for many operators willing to expand. This is no small feat as costs rapidly spiral up – for instance energy or site maintenance – whilst income levels reduce
- Super low cost models are being tested and developed, e.g. Movitel in Mozambique, VNL in Ghana (DIY low power solar solutions), solar chargers (Vodacom) or through projects such as ‘openBTS’, ‘the village telco’

# Voice: differentiating and keeping an edge on tariffs whilst maintaining profitability

Tariff innovation is tactical, always in focus and geared towards maintaining share, stimulating demand and migrating towards data – it is also disruptive and has weighed dearly on profitability in recent periods.

Tariff innovation is still a core differentiation element for African telcos as they compete to capture niches and the low end market

- African ARPU levels have not just reduced because of reaching low usage segments but also because of genuinely stiff price competition
- Differentiating on price is a core element of African operators tactics as markets mature and as they reach to niches and the low end market
- Because voice remains the #1 profit contributor and because elasticity is critically high, such tactics have to be managed very carefully

How to be both innovative and profitable?

- Tariff innovation aims at achieving core benefits such as usage stimulation, securing fixed spend, leveraging yield on under-used assets, service bundling or securing segment niches and communities.
- Whilst pricing tools vary with objectives, most tariffs compete on the best set of ‘freebies’ to offer (e.g. free usage, cinema ticket, wifi ticket)
- Experience shows that new tariffs often have a disruptive adverse impact on markets, whether on operators’ top line or on competitors’ reaction to new pricing structures. Typical pitfalls include:
  - making tariffs available and attractive to too many users at once
  - not anticipating the reaction of competition as a war game
  - overlooking the road-testing of tariffs during pilots
  - overlooking side-effects, which analytics can help understand, such as socially linked consumer groups, implied churn etc.

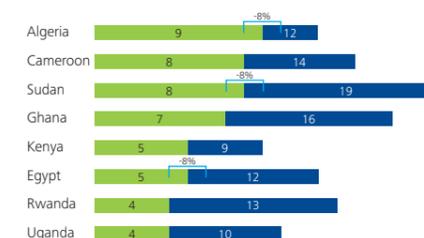
Do MVNOs and sub-brands have a right to play?

- African MVNOs make c.0.5% of MVNOs globally. For many, Africa would have too low ARPUs and lack price stability, lack licensing or the ability to differentiate over distribution or operating model
- They are a growing area of focus though, in particular in the most developed markets such as South Africa, Egypt or Morocco. Regional platforms could well develop across markets with regional MVNEs

A never-ending downward trend on prices through tariff ‘innovation’

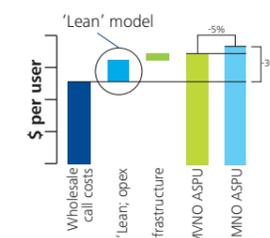
### ARPU evolution 2007-11

Average market ARPU (\$/month) (CAGR)



### MVNO economics (illustrative)

A lean model to lead on cost? (\$/user)



### Selected examples of tariff innovation, Africa

Balancing tariff innovation and profitability

Tariff concept	Benefits
Flat tariffs - weekly/daily booster, unlimited tariffs pass a daily/hourly spend	<ul style="list-style-type: none"> <li>smaller package top-ups</li> <li>stimulates usage</li> <li>higher flexibility, loyalty</li> </ul>
Yield benefits - Dynamic discounting based on cell usage	<ul style="list-style-type: none"> <li>Yield, geographic price deaveraging/ rural discounts</li> </ul>
Usage stimulation: get benefits pass a level, free call/hour/day	<ul style="list-style-type: none"> <li>hybrid approaches rather than contractual commit.</li> <li>'talk for X long, get Y free'</li> </ul>
Service bundling: extend beyond 'telco'	<ul style="list-style-type: none"> <li>lifestyles, digital media</li> <li>total connectivity (fix/mob)</li> </ul>
Secure niches - targeted discounts	<ul style="list-style-type: none"> <li>achieve attractive tariffs for targeted segment only</li> </ul>

### Differentiating MVNO elements

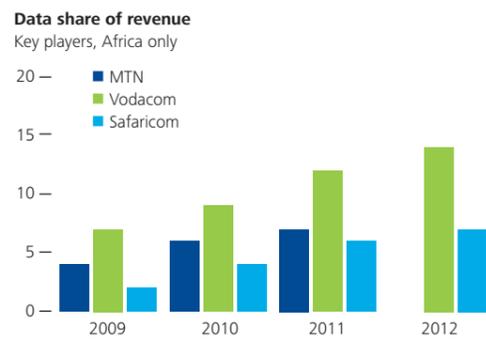
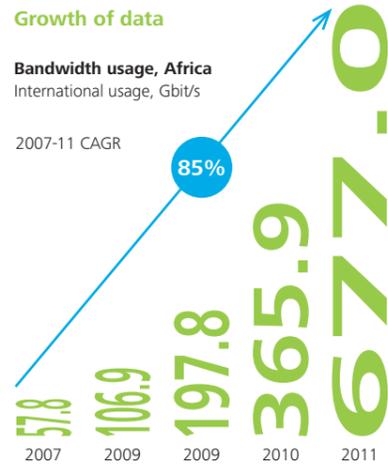
Western Europe vs. Africa

Core conditions	WE	Afr	African context
Existing MVNO regulation	✓	✗	few markets eg. SA, EG, MA
Willing MNO host network	✓	✗	few markets eg. SA, EG, MA
High ARPU & price stability	✓	✗	few markets eg. SA, EG, MA
Differentiating distribution	✓	✗	loose distribution structure
Leaner operating model	✓	✗	African opcos fairly lean
Segment-specific value-add	✓	✓	e.g. Set' Mobile Cameroon
Segment-specific tariffs	✓	✓	e.g. Econet Wireless SA
Retail brands to leverage	✓	✓	e.g. Virgin SA, Red Bull SA
Existing MVNE infrastructure	✓	✗	no regional MVNOs

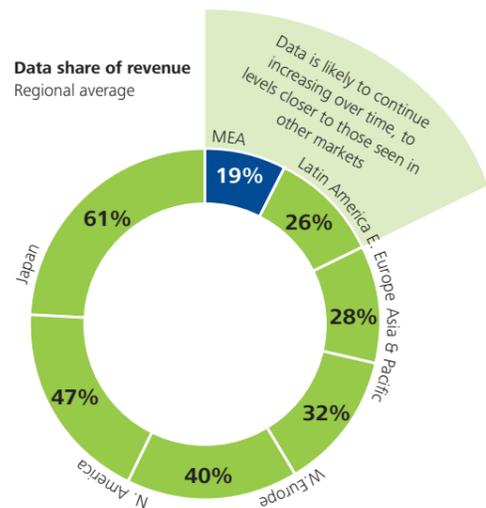
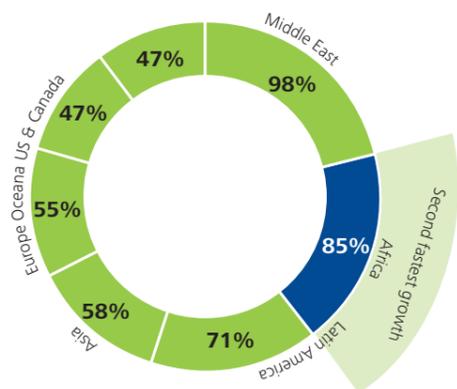
Apart from more mature countries such as Morocco, Egypt or South Africa, Africa is a much harder environment for launching MVNOs

Source: specialised press, project experience, company news releases  
Note: 1. Shared Service Centres

Source: GSMA, operators websites, project experience



**Regional bandwidth usage**  
Compound annual growth 2007-11



Source: Gartner Mobile services Worldwide, 2012Q4  
Note: MTN markets are SA, Nigeria, Ghana. Vodacom, SA (82%) also Tanzania, Lesotho, DRC, and Mozambique

## Data: banking on the (still oncoming) data tsunami?

**Africa's total bandwidth usage grew at 85% CAGR between 2007 and 2011, a rate of growth beaten globally only by the Middle East. Mobile data now makes a noticeable contribution to operators' revenues**

**Developing data infrastructure has been a challenge but significant growth in usage is now visible**

- Developing international and national infrastructure for Africa has been a long process involving many stakeholders in funding the development of international hubs and domestic infrastructure
- Bandwidth usage grew at 85% CAGR in 2007-11 mainly driven by:
  - declining prices, essentially a result of submarine connectivity
  - latent demand met by increased data supply
  - increased speeds and quality of service
- Telecommunications operators are progressively evolving their business models and network infrastructure towards data connectivity

**Sustained significant growth is also expected for the period 2013-17**

- Cisco considers that Africa will be the fastest growing region in terms of mobile data traffic and will grow by c.77% CAGR (17 fold) over the 2013 to 2017, generating by 2017 over 0.9 exabytes/month of data

**Data revenues are now an important contributor to operator revenues – the profitability of data now needs to be carefully thought through**

- For major players, data has already become an important contributor to total revenues. In 2012, non SMS data contributed 14% of total revenues for Vodacom and 7% for Safaricom
- As data increasingly contributes to operator margins, its standalone profitability needs to be carefully thought through, from infrastructure investment cases to subscriber acquisitions, beyond demand stimulation
  - building a data market is a balancing act between funding demand stimulation through lower margins (e.g. low data prices; attractive local content online: MTN and Afrinolly content application) and making data profitable in the longer run
  - this will require crafting an appropriate mix of access technologies (3/4G, Wifi, WiMAX) and data services to grow operations in a profitable way

## Data demand: what are the use cases for the new African middle class?

**Consumer data demand is driven by the need to communicate, by innovative online services and rich-form entertainment. There is a wide gap today between consumers' ultimate aspirations and existing supply**

**Early adopters now consume a wide range of popular data services, accessed on mobile or fixed**

- As in other geographies data demand is driven by:
  - the desire to communicate with peers
  - accessing data-based information and services
  - accessing entertainment in data rich formats
- In the African context these drivers are compounded by the impact that communications have on everyday life, such as instant messenger services (lower cost than via SMS or email)
- Innovation is apparent and drives demand, with

initiatives ranging from mHealth to mMoney, eGov, jobs/cattle/crop price market monitors, weather – Africa is a land of innovation where tech firms (Nokia, Google) now locate their innovation labs

**Mass market adoption through middle classes and richer applications will continue to fuel demand**

- Most importantly, African middle classes are rapidly increasing spend on digital entertainment
- Applications are getting richer. Entertainment is a case in point as both international and local firms are rapidly building local content offerings (partnerships)
- Bandwidth constrained applications based on SMS are aiming for richer formats (e.g. Facebook)
- Many new form factors are coming to market, starting with more affordable smart phones (e.g. 'Huawei 4Africa') but also web TVs

Driver	Consumer need	Example products and services
Immediate network adjacencies: advanced messaging and social data communications	<ul style="list-style-type: none"> <li>Communications with friends, family and colleagues</li> <li>In multiple format across many different types of platforms</li> <li>Using in the first instance lower grade products (e.g. 0.facebook) but rapidly moving to improved interfaces</li> <li>Accessing local interfaces that fit African comms cultures</li> </ul>	<ul style="list-style-type: none"> <li>Google SMS service: allows access to Gmail via SMS; Google search gateways is another popular service allowing searches through SMS</li> <li>MTN and Orange have each developed data light versions of Facebook (e.g. 0.facebook) to be accessed over low-grade mobile phones</li> <li>Since May 2012, Facebook is the most visited internet site in Nigeria 1</li> <li>Mxit developed very rapidly as the #1 social networking in South Africa, battling with Facebook</li> </ul>
Features of new life and business support services & information	<ul style="list-style-type: none"> <li>Life-enabling services e.g. job, transport updates, translators</li> <li>Banking services, for the un-banked or under-banked</li> <li>eGovernment services such as health services, for those unable to reach advice</li> <li>Small business support services such as Agricultural services, to access crop price or weather information</li> </ul>	<ul style="list-style-type: none"> <li>Daktari 1525 is a partnership between Safaricom and Call-a-doctor, it offers advice and referrals (however it does not offer online diagnosis)</li> <li>Mfarm is an SMS based service which allows farmers to check the real time crop prices</li> <li>Citizen TV (Kenya) is one of many African news channels available also emitting on YouTube for online information access</li> <li>Voice of America keeps Nigerians up to date with an SMS based news service</li> </ul>
A strong desire for media entertainment in rich format	<ul style="list-style-type: none"> <li>Digital entertainment in its widest possible form, delivered to individual homes or directly individuals rather than through collective access</li> <li>Wider offerings, currently not met/distributed by local television or other media</li> <li>Catch-up trend of African population towards non linear online entertainment services</li> </ul>	<ul style="list-style-type: none"> <li>YouTube partners in South Africa, Nigeria, Kenya and Uganda with content providers such as Nollywood Love and Lagos TV for local offerings</li> <li>New form factors are emerging, from smartphones apps (e.g. MTN Afrinolly) to simple low-cost connected web TVs such as Vodacom's 'Webbox'</li> <li>Traditional forms of entertainment such as pay-TV remain strong, in particular Multichoice, distributed over several platforms: satellite (DSTV), online (M-Net) and mobile (DSTV Mobile), typically through partnerships. It faces hard competition, although alternatives (e.g. Top TV, GTV) struggle for share</li> </ul>

Source: Telegraphy 2012, ITM Broadband in Africa 2012, company websites, annual reports, (1) Open Society country profile

# Data demand: what are the use cases for African Businesses?

**Demand for managed data has grown rapidly across Africa. Operators have expanded the richness of connectivity and IT offerings, whilst getting on board and framing the SME cloud opportunity**

**African operators have formally branched out dedicated business units to focus on SMEs**

- Specific offerings for businesses and corporates have always existed but in the course of 2010-2012, the richness of the data and ICT offerings to businesses has dramatically improved
- This is in part due to the skills and efforts put in by operators into business-focused operations over recent years
- Connectivity offerings, in particular in urban centres, have now reached a level close to the refinement and grade levels traditionally seen in more developed economies

**Rapid ICT growth, initially fuelled by demand for traditional IT is now supported by the need to grow rapidly, keep costs low and remain flexible**

- Companies providing traditional IT services such as web hosting, web agency services and IT support have grown very rapidly in recent years
- Many successful African businesses are faced with a shortage of IT skills whilst pre-packaged end to end solutions are available. This triggers a rapid shift of basic functions outsourcing
- Cloud solutions are increasingly popular, in particular services that provide best practice business support tools at low costs, supplanting the need to buy software and run internal teams
- In a very dynamic African business environment, the need for flexibility and scalability is acute

Driver	Business need	Example products and services
Immediate network adjacencies: going beyond business basic connectivity services	<ul style="list-style-type: none"> <li>• A wider breadth of connectivity needs beyond simple broadband</li> <li>- higher bandwidth (Fibre)</li> <li>- managed data (MetroEth.)</li> <li>- secure comms (VPN)</li> <li>- mobile solutions (APN, M2M)</li> <li>- integrated communications (email, IM, hosted VoIP)</li> </ul>	<ul style="list-style-type: none"> <li>• The portfolio range varies significantly by telco</li> <li>• Dedicated or shared satellite, fibre, DSL, mobile links between sites</li> <li>• Innovation in dedicated managed network solutions including backbone, mobile access points, inter-site backbone links, managed VPN, mobile fleet management</li> <li>• Innovation in billing (forward or reverse to employees of a specific business)</li> </ul>
Developing ICT offerings to: -meet internal IT needs -develop external digital interfaces	<ul style="list-style-type: none"> <li>• Support the growth of internal IT needs beyond connectivity</li> <li>• Includes dedicated housing space, managed storage, basic IT software needs, e.g. security, mail management</li> <li>• Digital agency capabilities including developing business interfaces with customers, distributors and suppliers, covering website design and development, web hosting</li> </ul>	<ul style="list-style-type: none"> <li>• Panda security offers South African cloud based antivirus based on a freemium model</li> <li>• Afrihost provides a full suite of dedicated and managed hosting services, domain management. It has partnered with MTN to provide data access and hosting as a bundled service</li> <li>• Web Africa is an African website hosting service</li> <li>• FaxFX is a leading South Africa services provider in faxing solution platforms for business. The business also offers a free fax to email service</li> <li>• Woza online is a Google initiative with the South African government to help get SMEs online</li> </ul>
Innovation in new hosted business functions and virtualisation	<ul style="list-style-type: none"> <li>• Functional support, growth and scalability of IT functions, 'variabilisation' of IT costs</li> <li>• Outsourcing needs for a basic set of functions (admin, HR, CRM functionalities)</li> <li>• Innovation vs. traditional Western world cloud based solution to cover for instance Desktop as a Service ('DaaS')</li> <li>• eCommerce solutions</li> </ul>	<ul style="list-style-type: none"> <li>• Zoho.com is an online cloud based service which provides business with a suite of business software at low cost</li> <li>• MTN Cloud services were launched in December 2012 in a number of West African markets; it provides a full suite of cloud services as business function enablers to SMEs and corporates</li> <li>• Vodacom is partnering with CloudWare to also offer a wide range of almost off the shelf cloud based software solutions, which can be rapidly deployed across its existing SME customer base</li> </ul>
<p>The service catalogue can be wide: collaboration portals, document management, process designer, IP telephony, unified comms, email, CRM, report designer, subscriber analytics, sales force applications, SAP, Oracle, payroll, HR, procurement, logistics, accounting, firewall, backup, remote desktop</p>		

Source: Company websites, Annual reports, Balancing Act, Telegraphy, MTN

# Data supply: unleashing international connectivity to fuel growth

**Once a bottleneck, international sub-sea cable and satellite connectivity have significantly improved, bringing costs down and helping to bridge the digital divide between Africa and the rest of the world**

**International connectivity remains the lifeblood of data offerings**

- Most data connectivity is for content (whether consumer or business) that is still located outside of Africa; and international connectivity can typically make a significant portion (up to 50%) of the price of fixed broadband
- There are two elements reducing the need for international data but both are only nascent and for now fail to reach scale:
  - local exchanges (IXP) allow direct traffic routing locally. There are c.20 in Africa but co-locating carriers is hard. West Africa lacks local peering
  - more content is developed locally and African populations are avid of local content. This remains small in comparison to international offers

**The launch of a handful of key sub-marine cables around the African contour has triggered a rapid price drop and mass (coastal) availability**

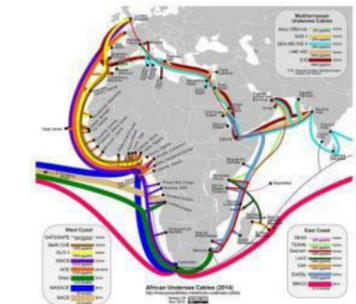
- Between 2009 and 2012 a handful of cables launched on the Eastern (EASSy, TEAMS, SEACOM) and Western (Glo-1, Main-1, ACE) coasts of Africa, triggering an almost 90% drop in international data costs at launch
- By 2014 a new generation of cables directly connecting to the Americas (WASACE, SACS, Sa-ex) and Asia (BRICS) will have launched and further accelerate the phenomenon, bringing the number of cables to c.20
- Satellite connectivity costs have also dropped as a result. New satellites were launched in 2012 and are now planned for 2014 (e.g. SES Astra)
- For market players, the ability to derive a competitive cost advantage from better access to data has the potential to be disruptive (sub-scale units)

**A tipping point: lower international costs could bring the price of data offerings below the critical \$15/month level for the middle classes**

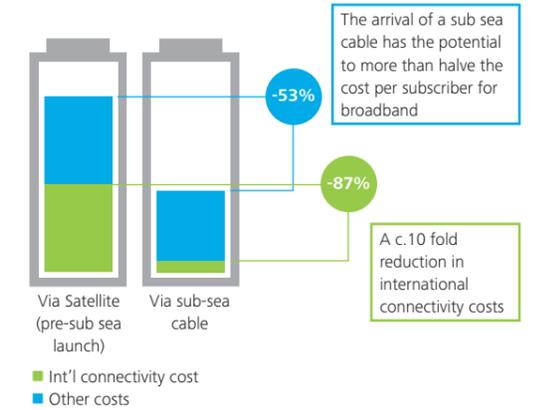
- As an example of lower price levels, a \$30/month subscription could potentially reduce by over half to c.\$15 if data is sourced by sub sea cable
- In many African countries a \$15/month price level can often be associated with the beginning of mass adoption, in case price reductions are passed on to the consumer

## International infrastructure investments

**International sub-sea cable**  
Projected connectivity in 2014



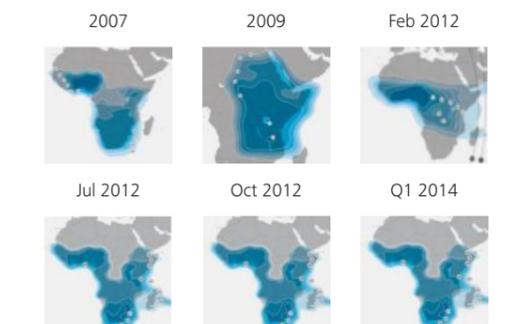
**Sub-sea cable has reduced costs**  
Monthly USD subscriber



**An example: SES Astra**  
African satellites

Satellite	Position	Payload	Launch
NSS-703	47°W	C & Ku	Oct 1994
NSS-5	340 E	64C / Ku	Sep 1997
NSS-7	338 E	97C / Ku	Apr 2002
NSS-10	322.5	56 C	Feb 2005
ASTRA 4A	5 E	40 C / 6 Ku	Nov 2007
NSS-12	57 E	88 C / Ku'	Oct 2009
SES-4	338 E	52 C / 72 Ku	Feb 2012
SES-5	5 E	C & Ku	Jul 2012
ASTRA 2F	28.2 E	Ku & Ka	Oct 2012
ASTRA 2G	28.2E	Ku & Ka	Q1 2014

**An example: SES Astra coverage in Sub Saharan Africa – Ku band**



Source: SES Astra marketing, Analysys Mason 2012

Notes: C-band access is widespread across the continent, due to wider beams and better signal propagation

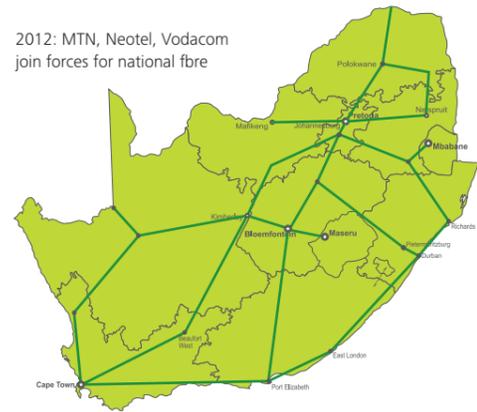
# Data supply: domestic infrastructure sharing, acting as a catalyst

## Growth of data

### National infrastructure initiatives

Example of private infrastructure initiatives in Southern Africa

2012: MTN, Neotel, Vodacom join forces for national fibre



Many countries still lack a national telecommunications backbone to deliver high speed data to their populations and businesses; these are getting into shape, whether through public or private initiatives

Further investment in national backbone infrastructure is still required to deliver high speed broadband access deeper within each country

- Whilst many African countries have benefited from access to sub-sea cable, only few of them have the in-country national infrastructure to deliver this throughout their country to domestic regional hubs
- Domestic connectivity is often achieved through strings of micro-wave towers and satellite connectivity, which are sub-optimal to carry large amounts of data without incurring incremental investments.

Infrastructure sharing initiatives, whether private or public, are acting as market catalysts. They need to remain consistent with wider policy making

- Investments are being made by the private sector and by governments in developing voice and data infrastructure, often through fibre sharing.
- In doing this, national utilities have a key role to play in commercialising existing infrastructure, whether ducts, poles or actual fibre. This has been the case in many geographies, e.g. in Tanzania (TANESCO)
- The development of cross-country backbone infrastructure needs to be consistent with wider development initiatives, e.g. access to electricity

If there is a role for public institutions to foster growth in underserved areas and address areas of market failure, then what is it?

- There exist many models for infrastructure sharing and in all of them public institutions can play a key role, either by directly taking part in the commercial/operational construct or through shaping and influencing
- A number of regulators have decided to enforce infrastructure sharing through policy (e.g. mast sharing, urban duct sharing), such as in Ghana or 'heavy' regulatory moves (public infracos, functional separations)
- As private initiatives gather pace and as data becomes paramount to the private sector, the role for public intervention may have to be redefined

### A range of potential constructs for infrastructure sharing

	Method	Description	Example
Private	Asset sharing	Share between operators a number of identified assets, on 1:1 or rent basis	Operators in Ghana agreeing to co-share ducts; tower sharing in Kenya
	Sale and lease back	Identified assets are sold or transferred to a consolidating 3rd party for management, then leased back to the former owner	Most towercos (Eaton, Helios towers) in many sub-Saharan markets. Fibre swap deals in Kenya (e.g. KDN)
	Joint ventures	Better control in carve-outs through JV; allows external funding; allows to share future investments in underserved areas	MTN tower sales; world bank funded multi-operator fibre venture in Burundi; tower agreements in rural areas
	PPP contracts	PPP contracts between telcos and public sector, built as service contracts or BOT <sup>1</sup>	Government bulk capacity purchase in Rwanda; BOT in DRC
Public	Public infracos	Independent public led structures to roll out services where private is unwilling	Sierra Leone: Salcab; South Africa: Broadband Infracos
	Functional separation	Incumbents are split into operationally separate entities to facilitate retail competition at arm's length	Proposed functional separation of Telkom in South Africa by the government

Note: 1. BOT: Build, Operate, Transfer

# Data supply: data access networks are ramping up, but slowly (a costly process)

Urban centres are seeing widespread availability and increasingly stronger competition. Data coverage outside major centres remains limited; operators highlight costs as the key limiting expansion factor

Data network access and mobile broadband offerings in urban centres is becoming increasingly widespread ... and competitive

- Whilst 2G coverage is increasing slowly in-country, 3G coverage typically remains confined to main urban centres, where the more affluent smartphone users are currently broadly located
- Many technologies and data offerings are competing: mobile data (3G/4G), WiMAX, proprietary FWA, satellite, fibre, fixed DSL, or fixed cable in some cases, each with their own benefits and target segments
- Many operators are taking a multi-technology approach to reaching their subscribers (e.g. both 3G and WiMAX; or cable and data). In doing so, they need to remain agile, to run converged core networks and keep a close eye on technology cost control.

Outside urban centres, access to data remains limited

- Mobile data coverage is used also for fixed nomadic internet access and plays a key role in developing data access in less urban areas
- Further expansion will happen in time but operators face a high cost of expansion: insufficient backhaul infrastructure, limited power supply, lower demand from lower density and lower smartphone penetration, making the economics of expansion rapidly challenging
- Operators need to identify alternative operating models for rural expansion.

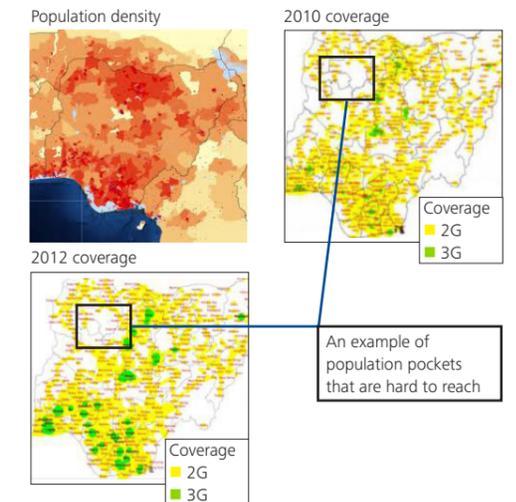
3G or not 3G? LTE or not LTE?

- Some countries have already launched LTE but coverage remains limited. Whilst LTE provides higher speed, wider coverage (when sub 1GHz) and cost efficiencies, it could still lack a mobile device base for some time
- As a fixed/nomadic broadband alternative, it is however very attractive. Mobile broadband now surpasses fixed broadband in many markets (eg. SA)
- For operators not having launched 3G, the temptation is high to leapfrog directly to LTE (at least for combo sites) but the downside of not allowing data access to the rapidly growing smartphone device base can be high.

## Deploying deeper voice and data access networks

### Typical Telco, GSM/GPRS/3G Network coverage

2G and 3G coverage vs. population density, 2010 and 2012



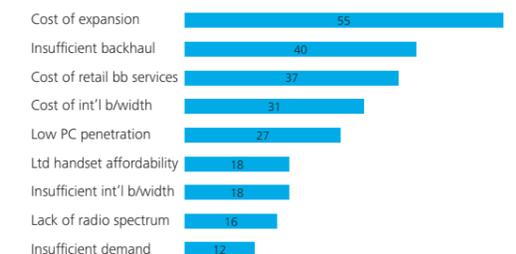
### Recent LTE launches

2012 (not exhaustive)

Company	Country	Date
Neotel	South Africa	Mar 2012
Movicel	Angola	Apr 2012
MTC	Namibia	May 2012
Mascom	Botswana	Jun 2012
Telesis	Tanzania	Oct 2012
Vodacom	South Africa	Oct 2012
Cell C	South Africa	Dec 2012
Airtel	Nigeria	Dec 2012

### Expansion challenges faced by Telcos

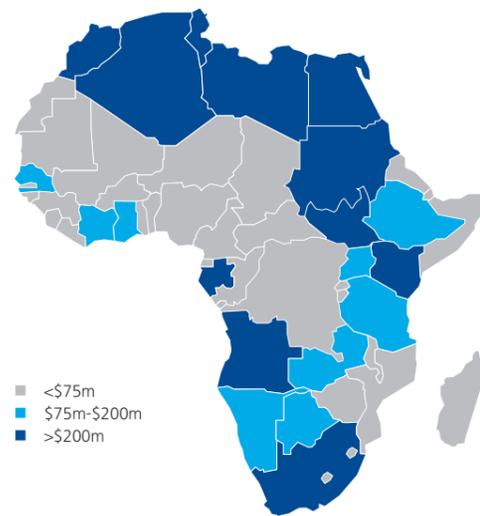
Percentage respondents giving 5/5



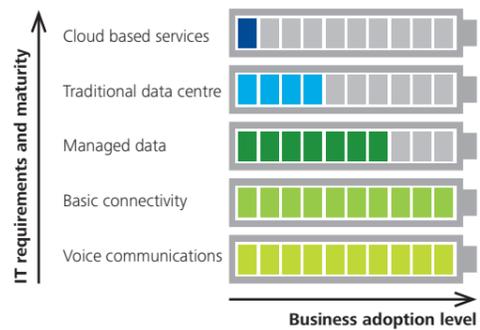
Source: SSA Observatory 2012, ITM Broadband in Africa 2012, all launch data from Telegeography  
Note: Survey conducted online in July 2011, targeted list of C-level industry professionals. 46% of 250+ respondents were mobile, fixed or converged operators, ISPs (16%), vendors (14%) and content providers (7%)

**A growing ICT sector rapidly getting into shape**

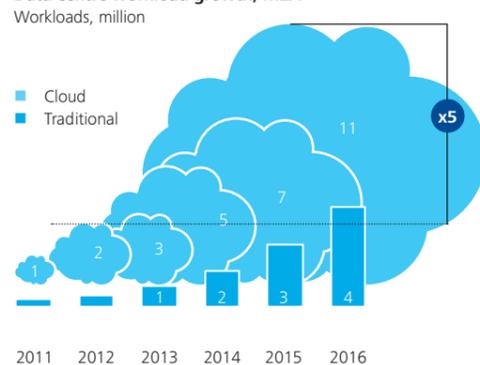
Estimated size of the ICT enterprise services market 2013 – c.\$9b



**IT readiness: crucially, still dependent on availability of basic communication layers**



**Data centre workload growth, MEA**



**A competitive provider landscape for data and IT services**

- Focused business data players with regional/multicountry presence (Connecteo)
- ISPs with services for both consumer and business segments (Access Kenya, Ringo)
- IT solutions integrators and consultancies (Tata)
- Mobile operators, with clear IT ambitions (MTN)
- Fixed telecoms incumbent with existing business customer relationships (Telkom SA)
- Wholesale data providers with retail ambitions (Liquid Telecom, Suburban Telecom)
- International cloud solutions providers (IBM, BT)
- Data centre players (e.g. Teraco, Dimension data)

Source: Cisco Analysis 2012, Deloitte analysis

# IT services: a rapidly changing competitive landscape in a rapidly growing market

**IT maturity follows improvements in data connectivity. Most telcos have recognised the opportunity to expand in IT services and are making the IT service provider landscape more competitive as a result**

African ICT remains under-developed and suffers from poor access to electricity, low PC and broadband penetration – Those barriers to growth are reducing as demand increases and suppliers adapt

- African states are developing e-government and e-education; SMEs are seeking online advertising, e/m-payment, admin outsourcing services and digital commercial front-ends; multinationals set up in Africa continue to seek global standard data/IT services
- Service providers are deploying hubs and data centre capabilities across the continent. Countries where BPO are well established (Morocco, Kenya) have developed data centre infrastructure for some time. South Africa may already have 100,000 sq.m floor space

**There is now a wide range of players with very different strategies to capturing IT opportunities**

- Small business-focussed data access providers and resellers have existed for over a decade but are now facing high data costs (from low scale), miss a competitive edge as new technologies become available, and finally require more investments (e.g. data centre)
- Some data providers now seek regional expansion e.g. (Ecoband, MWEB, iBurst, Suburban) as data demand remains strong
- Some telcos have looked to partner with focused ISPs or else have tried to buy them (e.g. Safaricom ISP acquisition trail in Kenya)

**Cloud solutions are expected to grow rapidly in Africa and data centre facilities are developing rapidly in the hottest urban centres**

- Cisco believes MEA will be the fastest growing region for datacentre workloads and that Middle East and African data centre workload will be multiplied by almost 5 between 2012 and 2016.
- Beyond a simple 'catch-up' effect with Western Europe or North America, this trend is also accelerated by the comparative lack of IT skills within African businesses, making the case for outsource business functions through cloud even more attractive

# Mobile money: getting on to the next phase (maturity)

**Almost all mobile operators now have a mobile money offering, although not as successful as M-Pesa of Kenya. Delivering more mature mobile banking services is what telcos may now be looking for**

Mobile money is an attractive diversification opportunity already well proven in Kenya. Almost all mobile operators in Africa have now launched one flavour but success is taking time to replicate

- For Safaricom, M-Pesa contributes 18% of revenues, more than data (7%). In 2010 it contributed to 35% of incremental revenues
- Most African operators have launched mobile money paradigms: beyond revenues, it creates stickiness and value of the end user
- The success of M-Pesa in Kenya remains unique: over 80% of adults in urban areas have used mobile phones to send money in 2011, vs. 37% in Tanzania, 18% in Nigeria and only 7% in SA

**Multi-party cooperation is an art – identifying the appropriate partners to achieve both individual strategic ambitions and overall market growth for mobile money is challenging**

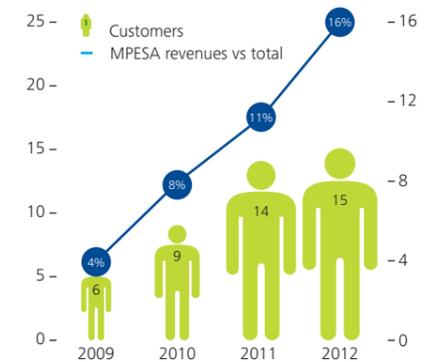
- Mobile money typically involves many stakeholders, from mobile operators to retailers, utilities, employers, banks, consumers and crafting an appropriate partner selection programme is crucial
- Regulations dictate what mobile money services can be provided, how and by whom, and therefore influence cooperation strategies.

**There could soon be a next wave of more mature mobile banking services: mobile-only banks, micro-finance, minsurance**

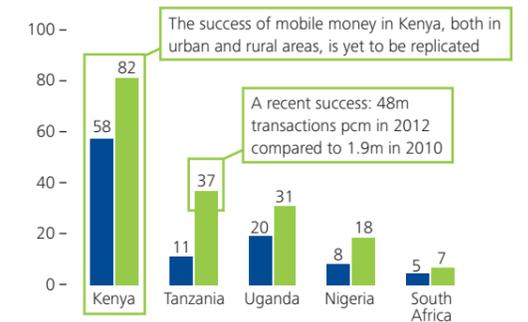
- There is now a need to grow a wider range of mobile banking and insurance services on mobile phones, beyond simple payments. To achieve this, different models may need to be put in place.
- Banking could take a new shape with mobile-only banks such as TYME in South Africa (MTN, SABA, retailers Pic'n'Pay and Boxer)
- Micro-finance products could be further enabled by mobile, e.g. in Nigeria (cloud based micro-banking software from MTN)
- Minsurance (e.g. MTN group agreement with Hollard)

**Mobile Money: fast growth but hard to break into on your own**

**M-PESA customers and revenue**  
FY09-12, Safaricom



**Mobile phone used to send money**  
Percentage aged 15+, 2011



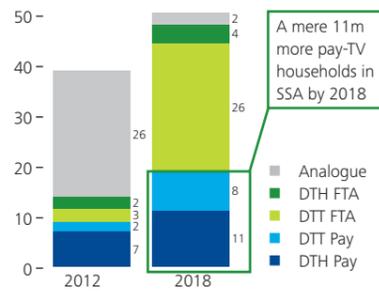
**Example cooperation models for mobile money**

<b>Mobile carrier solutions</b>	<ul style="list-style-type: none"> <li>• M-Pesa: leading mobile payment service in Kenya</li> <li>• Tigo cash: payment service deployed in Tigo geographies</li> <li>• Airtel money: mobile payment service in Airtel geographies</li> <li>• MTN: deployed in Uganda, Cote d'Ivoire, Rwanda, South Africa</li> </ul>
<b>Distribution alliances with utilities and retailers</b>	<ul style="list-style-type: none"> <li>• M-KOPA: prepaid solar power paid through M-Pesa in Kenya</li> <li>• UCHUMI: Retail chain using M-Pesa payment in Kenya</li> <li>• NWSC: in Uganda, water bills paid through Airtel, MTN money</li> <li>• Multichoice: pay-TV top-up via M-Pesa</li> </ul>
<b>Alliances with financial institutions</b>	<ul style="list-style-type: none"> <li>• TYME: partners with Pic'n'Pay and SABA for a mobile-only bank</li> <li>• Mshwari: Safaricom and CBA on deposits and loans</li> <li>• BNP Paribas: Partner to Orange Money service in West Africa</li> <li>• M-Pesa SA: Partnership Vodacom/Nedbank on mobile money</li> </ul>
<b>Financial institution solutions</b>	<ul style="list-style-type: none"> <li>• Wizzit: Subsidiary of Bank of Athens, provides mobile banking in South Africa with ABSA and the SA Post Office</li> <li>• Standard Bank: acquired MTN banking business in South Africa</li> <li>• FNB: eWallet service delivered as a mobile application in South Africa, can also be used with FNB ATMs</li> </ul>

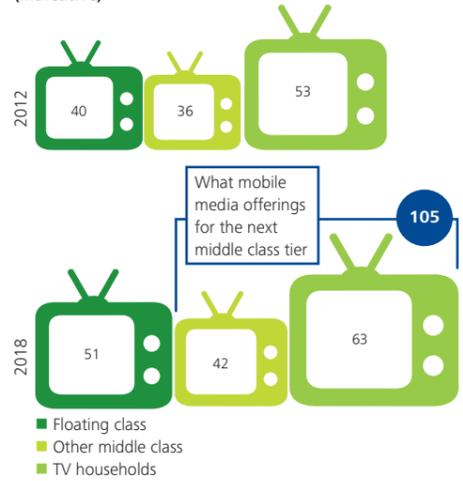
Source: Safaricom annual report 2012, AfricaNext 2010, CGAP "Drivers of Mobile Money Profitability" 2011, "A Review of Financial Inclusion", Teleography, Global Financial Inclusion (Global Findex) Database, Deloitte research

**Media services for the African middle classes: TV, and then? (million households)**

**Sub-Saharan TV households 2012-2018**



**SSA TV households vs. the African middle-class (indicative)**



**Telco's right to play in content**  
Own, partner or let go?

<b>Telco-led content offerings</b>	<ul style="list-style-type: none"> <li>Continued investments in portals and mobile TV (e.g. in SA)</li> <li>Platforms help telcos develop their VAS and content offering, e.g. Comviva for the VAS technology, Baidu and Opera for browsers or Spice for the exclusive African local content</li> </ul>
<b>Content partners</b>	<ul style="list-style-type: none"> <li>Telcos are working with content partners to make their content available on mobile, the range is very wide</li> <li>Many local television programmes are doubling up online and delivering content over YouTube (Lagos TV, Citizen TV)</li> <li>Applications are adapted for low connectivity (0.Facebook)</li> </ul>
<b>Media-led content offerings</b>	<ul style="list-style-type: none"> <li>Canal+ launched dedicated African channels (+d'Afrique)</li> <li>Multichoice launched DTT channels GoTV in 2011</li> <li>Chinese StarTimes also launched DTT platforms in Africa</li> <li>Scale is critical for media distributors (e.g. GTV, HiTV)</li> </ul>

**The media graveyard:**

- HiTV (Nigeria) failed to secure football rights and closed
- GTV collapsed in 2009, failing to achieve scale rapidly
- Smart TV (Swedish DTT venture) exited Kenya and Uganda

# Media: how to make middle classes enter a mobile digital age?

**Telcos have successfully taken a more traditional dual-pronged owning/partnering approach to content delivery. They are now succeeding in bringing digital media experiences to the next tier of the middle class**

**African media : highly fragmented and complex but changing fast through digital/mobile engagement and talented local creation**

- A wide range of cultures and legacy local media makes the African media landscape very fragmented – a challenge for the largest scale media operations such as Multichoice (DSTV)
- Modes of content delivery are changing fast, from analogue state or regional TV and radio broadcasters and newspapers, and DTH, to DTT (albeit slowly), mobile VAS or fixed cable/IPTV triple-play
- Content creation is shifting from international or South Africa to more local hubs that are developing fast (Nolly/River/Zolly-wood) and African populations are avid of such locally-relevant content

**Media for the middle class: strategies for top and bottom**

- The top: enjoys premium entertainment through a variety of channels, triple or quadruple play offerings and multi-screen experiences – needs to be retained
- The rest: mobile broadband –enabled phones as first ever screens, before TV or PC. Simple VAS are enjoyed on the small screen and are a stepping stone to more enriched experiences – needs to be convinced to spend on media and charged a low fee (sub \$10 or 15)

**In developing media experiences, telcos need to strike a careful balance between core and non-core, and owning vs. partnering**

- core skills are local market knowledge, technology adaptation and integration, multi-format delivery, devices, promotion of content (app stores) as opposed to content creation or aggregation, albeit if the latter needs to be kick-started (e.g. app incubation centres)
- there are many opportunities for telcos to define seamless customer journeys, for instance through adapting digital apps to low connectivity (0.facebook); multi-screen (add mobile to an existing media offering); hybrid TV and wireless models (possibly with DTT)

Source: Annual reports, Investor presentations, Balancing Act 2012, Digital TV Research 2013  
Notes: 1. Middle class: above \$2 per day

# Mobile advertising: set to grow

**Mobile advertising is maturing in many markets globally as a powerful and direct advertising medium. The specificities of the African continent could make it even bigger for African telcos – up to \$1.3b by 2016**

**Global advertising spend is shifting to emerging markets and to Africa in particular as the next frontier of global consumers**

- Mobile phones are the most ubiquitous personal technology in Africa; phones are a powerful, albeit intrusive, advertising medium
- The African mobile advertising market could be worth only \$136m<sup>1</sup> in 2012 but it could be supply-constrained rather than demandconstrained – it could possibly increase to \$1.3b<sup>1</sup> by 2016
  - advertisers, both global and local are delivering mobile ad campaigns and want more of these in particular in Africa. Firms like Unilever, Coca-Cola and Reckitt-Benckiser are committing increasing ad spend levels to the continent
  - however the infrastructure typically does not support advertising medium beyond urban districts and African consumers are overall very hard to reach with any type of focus, in particular the next tiers of the African middle class
- Some stakeholders are getting organised,
  - global agencies buying into Africa, rapidly developing affiliate networks; mobile ad networks and mobile agencies
  - mobile browsers, such as Opera, are deploying advanced solutions for search and display, in line with online

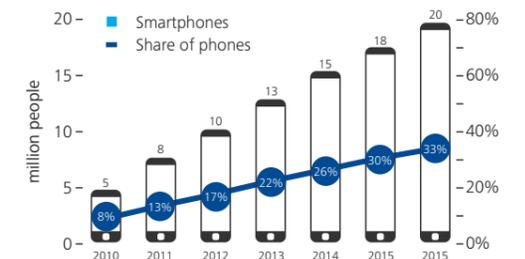
**Smartphone era and the role for telcos**

- Smartphones represent only a very small proportion of phones in Africa, apart from leading markets such as South Africa (17%). But this will increase rapidly, possibly faster than most expect, through the grey market (e.g. second hand phones from WE and ME) or low-cost smartphone initiatives (e.g. 4Afrika: Microsoft, Huawei)
- For telcos, it may be imperative to develop a structured approach to marketing their valuable digital assets, for instance through a consolidated platform (e.g. WEVE in the UK), advanced analytics or controlled portals and browsers (Baidu)

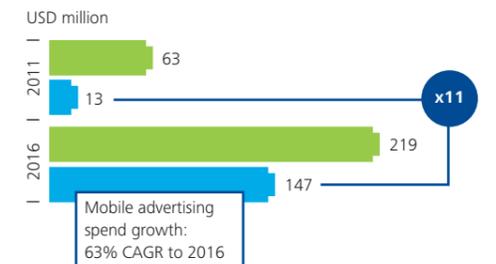
Source: BMI-T, MTN, Bloomberg, Mobile Marketing Awards 2012, company websites  
Note: 1. Informa Telecoms and Media 2012

**Mobile advertising: made possible by smartphones and set for very rapid growth**

**Smartphone handsets in circulation forecast 2010 – 2016, South Africa only**



**Digital advertising spend**  
South Africa only, 2011 and 2016



**Mobile advertising in Africa: emerging roles**

<b>Advertisers</b>	<ul style="list-style-type: none"> <li>Unilever and Coca-Cola have stated for a long time that they have a strong focus on growing in Africa</li> <li>Many other brands want to reach African populations</li> </ul>
<b>Advertising agencies</b>	<ul style="list-style-type: none"> <li>Ogilvy Africa was launched in 2012 with Scangroup</li> <li>AdVine is a leading South African sales agency</li> <li>Media Reach is the Nigerian affiliate of OMD</li> </ul>
<b>Mobile advertising networks, tech providers and browsers</b>	<ul style="list-style-type: none"> <li>Opera is a leading mobile browser used in Africa; it recently acquired 4th screen and Mobile Theory</li> <li>France Telecom is developing an African-specific mobile browser with Baidu, the Chinese browser</li> </ul>
<b>Mobile operators</b>	<ul style="list-style-type: none"> <li>Vodacom runs an opt-in mobile ad service (AdMe)</li> <li>MTN runs ad platforms in South Africa and Nigeria</li> <li>Tigo runs targeted ads and discounts for subscribers</li> </ul>

# Key drivers for telecoms M&A and current opportunities

## Key drivers for telecoms M&A: not necessarily about hype

A range of high level deal rationale for some typical telco M&A situations (non exhaustive)

Change		A selection of key benefits
1	Integration of telecoms operations	Cross-border <ul style="list-style-type: none"> <li>Scale benefits integrate/outsources key support functions across geographic footprints</li> <li>Lower competition in case foreign operators consolidate targets within the country</li> <li>Bring in external skills and competencies and drive through efficiencies not previously identified</li> </ul>
		In-country <ul style="list-style-type: none"> <li>Further scale benefits from rationalisation of local contracts and infrastructure consolidation</li> <li>Sanitize competition level (requires regulatory approval)</li> </ul>
2	Reassessment of core and non-core functions as well as core and non-core infrastructure	IT, site maintenance / security and support functions <ul style="list-style-type: none"> <li>Cut staff costs through outsourcing non-core support functions, possibly to an existing provider/vendor</li> <li>Support functions typically include customer support, IT management &amp; maintenance, admin, finance, utilities</li> </ul>
		Towers and other infrastructure (e.g. fibre) <ul style="list-style-type: none"> <li>Benefit from lower utility/maintenance costs; access lower costs for expansion (rural), sustain lower prices</li> <li>Mutualise tower/fibre investment, raise cash rapidly for debt repayment, lower debt levels in future</li> <li>Retain control over the carved out assets if the structure allows (e.g. MTN tower JVs)</li> </ul>
		Network outsource <ul style="list-style-type: none"> <li>Network outsource deal with network vendor such as Ericsson, Huawei or Alcatel Lucent</li> </ul>
		Wholesale data <ul style="list-style-type: none"> <li>Secure lower-cost model, achieve cost synergies in core network, reduce data costs (international)</li> </ul>
		Data centre capabilities <ul style="list-style-type: none"> <li>Consider outsourcing the management of data centre to local providers or global players such as IBM</li> </ul>
		Distribution <ul style="list-style-type: none"> <li>Direct impact on cost sales &amp; marketing opex from downstream consolidation and integration benefits</li> <li>Service bundling and further in-store presence leveraging move from prepaid to post-paid or hybrid</li> </ul>
3	Diversification	Data connectivity <ul style="list-style-type: none"> <li>Jump-start data access services from acquiring small brands, as well as staff expertise</li> <li>Secure existing high-value subscribers seeking data connectivity</li> </ul>
		IT / Data centre <ul style="list-style-type: none"> <li>Leverage small data centre player with expertise in hosting/managed data/IT for BPO trend &amp; SME cloud</li> </ul>
		Media <ul style="list-style-type: none"> <li>Capture opportunity for higher entertainment spend from wealthier middle/high income African households</li> <li>Jump-start media/content strategy from acquiring/developing sought-after content (studios / rights)</li> <li>Differentiate through non-replicable content (e.g. live broadcasts, news/dating service)</li> </ul>
		Other industry and services sectors <ul style="list-style-type: none"> <li>e.g. financial services (mobile money), advertising agency, other consumer business</li> <li>Differentiation through service bundling, partnerships with specific brands or retail networks</li> <li>Secure key assets (e.g. regulatory approvals for mobile banking) or core competencies (e.g. web agency)</li> </ul>

# 1. Integrating telecoms operations: cross border and in-country mergers

**In-country consolidation typically raises higher benefits than cross-border, from integration across all internal functions, re-use and/or disposal of duplicate infrastructure or higher buyer power at local level**

**For smaller operators or even some regional players, scale and operational know-how is likely to be increasingly critical to financial performance**

- Many markets experienced a period of accelerated price declines following the acquisition of Zain by Bharti in 2010. Higher market pressures resulted in degraded financial performance for market players unable to flex their cost base and offset declining margins
- Nigerian CDMA operators are a case in point – faced with very high market pressure in urban centres, over-crowded telecoms supply and difficulties to expand outside cities, merging was mandatory

**The level of benefits resulting from integrating operations, both cross-border or in-country will depend on telecom sub-sectors**

- for corporate data providers, benefits could come

from demand aggregation as to benefit from a more streamlined use of international capacity (although its cost is decreasing)

- for broadcasters, the aggregation of content over a larger subscriber base or the aggregation of advertising agencies across a larger base of broadcast platforms could result in respectively lower direct costs or higher revenues

**In-bound investments from telecoms operators based outside Africa is possible, as much as exits from international investors**

- 2011 and 2012 proved that a number of global heavyweights such as Vimpelcom, China Mobile, America Movil, Singapore Telecom or others such as Korea Telecom or Viettel, could have some interests in African operations
- Exiting the African telecommunication markets is also on the cards for several companies, whether as a result of a corporate and geographic refocus (Vivendi) or because investments haven't developed as much as initially expected (Essar)

Some typical benefits of a cross-border merger

Example topic	Example implications	Impact
Marketing & advertising	Concepts, research, pilots, sales tools, advertising campaigns can be done at regional level, then implemented locally	++
Planning / engineering	Outsource business planning and radio engineering to group level, leave operational implementation local	+
Support functions	HR, admin, financial planning, IT support, charging planned remotely and implemented locally where needed	++
Group level	Standardize technical purchases and execute procurement at group level in order to leverage scale	++

Additional benefits in the case of in-country consolidation

Example topic	Example implications	Impact
Local contracts	Leverage scale for the negotiation of all local contracts (energy, rent, distribution)	++
Duplicate infrastructure	<ul style="list-style-type: none"> <li>• Avoid rent on duplicate coverage sites</li> <li>• Reposition sites for added coverage</li> </ul>	++
Data network leases	Consolidate demand from data / traffic sites and leverage lower demand per site	+
Operational integration	<ul style="list-style-type: none"> <li>• Integrate operational teams (lower staff)</li> <li>• Set higher operational targets for tracking of dealer network, sites maintenance</li> </ul>	++

# 2. Reassessing core and non-core

**Divestment from non-core functions is already an active trend; the pace of tactical divestments from operational functions or infrastructure could continue at this sustained pace over the coming years**

**Selective outsourcing: identifying the appropriate activities, most relevant partners and most beneficial terms**

- Selling core internal functions to outside companies likely to consolidate such services across industry sectors is likely to raise rapid cost benefits if contracts are negotiated well
- In assessing core and non-core activities it is crucial to set the ambition target and the medium term strategic vision – outsourcing activities deemed non-core today could be fatal to a longer term strategic position

**Depth of the outsourcing programme**

- For each outsourced activity, the depth to which a separation is a strategic decision in itself and can raise varying levels of cost / benefits and risks. There

are some basic elements that can be outsourced and others, which bear additional elements of risk

- Customer care – as a basis, outsourcing customer care can be rapidly outsourced for vanilla products (mobile voice), for which standard scripts can be written and for which standard processes can be triggered; outsourcing support for new products is a difficult choice and depends on the outsourcer as a potential lack of flexibility in rapidly adapting new scripts and processes could potentially impact customer satisfaction
- Site maintenance – outsourcing maintenance of sites for what regards security, utilities (power) as a basis, with replacements and site upgrades as an option for standard technologies (2G), should new technologies be considered a core differentiating asset
- IT Services – outsourcing IT services for the maintenance of internal local servers, basic connectivity, user access as a basis; as an option outsourcing network charging and billing, network support systems and monitoring to a group regional entity

Some typical benefits of a functional outsource programme

Example topic	Example implications	Impact
Existing FTE inefficiency	Activity level has dropped (e.g. call centre improving efficiency but the number of subscribers does not increase)	++
Estimated efficiency gain	Based on benchmarks, imposing target efficiency levels to the outsourcer, to a level close to industry best practice	+
FTE transfer to outsourcer	Transfer of FTEs through the outsource programme, e.g. to a network vendor for the maintenance of sites	++
Carve-out and re-integrate	Carve-out for a period of time and include put option on re-integration after a period of time, define and monitor performance levels and trigger synergies	+

Some typical benefits of an infrastructure carve out (e.g. towers)

Example topic	Example implications	Impact
Short term cash injection	Cash through the asset sale, minus transition costs, but triggers EBITDA reduction through the lease	++
Reduce site costs on existing sites	Lower site maintenance and utility costs in existing coverage areas (c. 15% saving typically) by merging two sites together	+
Reduce minimum investment for new sites	Sharing infrastructure for new builds can make rural sites economical again, despite increasing rollout costs as a result of distance and lower rural income levels	+

### 3. Diversifying the telecoms services portfolio and beyond

**M&A has been most active between telecoms operators and ISPs and/or ICT providers, however deals have slowed down between 2011 and 2012, versus the level of activity seen in 2009-10**

**Telecoms operators are having a hard think at the range of services, which are still strategic and those, which are best served with partners**

- Media strategies have not worked for all market players; some have decided to divest from former investments in movie creation (e.g. Orange)

**Acquiring ISPs has remained a hot topic in recent years**

- Several mobile operators have sought to acquire local ISPs. Safaricom in particular has been most active in doing so
- There are key reasons why acquiring ISPs is attractive, including :
  - key technical staff, knowledgeable of data centres, IT outsourcing etc.
  - scarce assets, e.g. transmission infrastructure, rights of way (e.g. for overhead fibre), spectrum
  - fill unused data capacity by aggregating demand

**A selection of acquisitions of ISPs, data providers and IT firms**

Country	Date	Buyer	Target	Sub-sector	Deal (\$m)
Zimbabwe	01/14	Econet Wireless Zimbabwe Ltd	Liquid Telecommunications Ltd		55
Rwanda and Zambia	12/13	IHS Holding Ltd	Mobile Towers in Rwanda and Zambia		n/a
Tanzania	11/13	Vodacom Group Ltd	Cavalry Holdings Ltd		242.75
DRC	11/13	Bharti Airtel Ltd	Warid Congo SA		n/a
Algeria	10/13	Smart Link Com SpA	Divona SpA		1.4
Nigeria	06/13	Millicom International Cellular SA	Jumia		35
Kenya	05/13	Nippon Telegraph & Telephone Corp	AccessKenya Group Ltd		43.76
Tanzania	11/13	Vodacom Group Ltd	Cavalry Holdings Ltd		242.75
West Africa	09/12	Sky Vision	Afinis	VSAT data	3.3
East Africa	10/11	Safaricom	7-Seas Tech	IT services	n/a
South Africa	12/10	Bus. conn.	UCS	IT outsourcing	90
Kenya	10/10	Safaricom	Insta. IGO W.	WiMax	n/a
Zambia	08/10	Vodacom	Africonnect	ISP	n/a
Kenya	08/10	Safaricom	PDN	Bus/res ISP	n/a
Nigeria	08/10	Investec	IHS	Telco tech	75
Egypt	07/10	ECMS	Link Dot Net	Bus/res ISP	130
South Africa	07/10	Pinnacle	Axiz tech	IT distrib	23
South Africa	07/10	NTT	Dimension data	IT, DC & infra	2822
Egypt	07/10	ECMS	Link Dot Net	Bus/res ISP	130
Tunisia	06/10	Tun.Telecom	Topnet	Bus/res ISP	24
Kenya	11/09	Safaricom	One Comm.	Bus/res ISP	2.6
South Africa	06/08	Tata	Neotel	Business data	n/a
South Africa	01/08	ConvergeNet	FutureCell	Business data	10

IT providers, providers of server space and storage, of IT management and data centre products acquire business data connectivity providers to expand their range of services and extract higher value from subscribers

- raise back-office synergies by integrating smaller companies
- leverage the existing subscriber base to push new services

**Acquiring data centres and IT outsourcing capabilities**

- Cloud is rapidly becoming important for many telcos; small businesses as well as public administrations require some form of cloud service
- Large IT players, for instance from India (Tata TCS, IBM) are entering the African continent but lack hands-on local knowledge; smaller players are developing local data centre solutions rapidly, for Teraco in South Africa (600 sq.m in Cape Town, 640 sq.m in Jo'burg)
- Telecoms operators are following suite, have built extensive data centres (e.g. Telkom's 9700 sq.m Cybernest ) and some have already developed comprehensive service portfolios.
- In this context, M&A can serve multiple purposes, either with regard to accelerating market timing, shaping its structure, or acquiring specific skills and technologies (e.g. lightweight, scalable, low-cost infrastructure)

### Current opportunities – General themes

**Various factors set the stage for M&A opportunities in Africa**

#### General themes of opportunities in Africa

Consolidation	• As competition intensifies and growth slows down in Africa, consolidation efforts will begin to drive M&A transactions as smaller players exit. The African telecommunications sector is controlled primarily the 4 large players, MTN, Vodafone, Bharti and France Telecom.
Infrastructure outsourcing	• Increased interest in infrastructure deals as operators consider strategic options and costs of infrastructure ownership, with tower and cable being the key infrastructure under consideration • Governments like Kenya have embraced the network sharing model with a PPP model for a single wholesale LTE network as a route to increasing the availability of broadband services
New licenses	• As the region moves onto more advance networks "3G and 4G", new license auctions/ awards can be expected. Further as Africa transitions to digital television, spectrum availability for the telecommunication sector will increase.
Evaluation of MVNOs	• African mobile market still has many unreached segments which could be addressed by MVNO's. Telecom operators will continue to evaluate the proposition of MVNO's to increase mobile penetration rates. Already existing operational MVNOs include Virgin Mobile and Hello Mobile in South Africa as well as Set'Mobile in Cameroon. Egypt and Morocco are rumored to be considering MVNO permits.
Triple play	• With voice revenues dropping due to price wars, most players have or are shifting focus to data. The demand for fixed data and particularly mobile data is increasing. The various undersea cables bringing faster connectivity to Africa is opening Africa to the possibility of triple play services. In Kenya, the Wananchi Group is offering triple play services. As this space evolves, M&A deals for companies with data licenses where converged licenses are not in effect and content and media providers may driver smaller size M&A deals.
Mobile Money	• Following the success of mobile money transfer services in Kenya (M-Pesa) and the growth of African mobile subscribers, regional telco players are evaluating and adopting the model to tap into new revenue options and extend access of the unbanked population. • There will be continued partnerships between telcos and financial institutions to offer clients mobile based money transfer services and micro-credit services. In Kenya, Safaricom in partnership with Commercial Bank of Africa has taken the mobile money transfer one step ahead and introduced M-Shawari a MOBILE micro-credit services product. • This new wave of mobile money services raises a wild card possibility of potential acquisitions and mergers between telcos and financial institutions in Africa where mobile money is taking root.

## Current opportunities – Fixed and Mobile Telecommunications providers

Many African governments have decided to privatise the incumbent operators, save for a few

### Fixed and Mobile Telecommunications

Company	Opportunity
Ethiopia (mobile)	<ul style="list-style-type: none"> <li>Large mobile subscribers such as MTN and Vodacom have set up business in the country, given Ethiopia's 16.8 million mobile subscribers and a mobile penetration rate of 18.9%.</li> <li>Ethiopia's ministry of communications and information technology said it has received applications from 218 firms to provide VAS since the government gave approval for private firms to offer non-voice services. It is not certain how many firms the government intends to award concessions.</li> </ul>
Comores Telecom (fixed / mobile)	<ul style="list-style-type: none"> <li>The government of the Union of Comoros has launched the privatisation of its national PTO Comores Telecom (Comtel) via an international auction and has invited expression of interest for 51% stake</li> </ul>
Sonitel & Sahelcom	<ul style="list-style-type: none"> <li>The Niger government is reported to be looking for a new buyer for Sonitel and Sahelcom after the deal with LAP green was cancelled for failure to meet the terms of the privatisation</li> </ul>
Zamtel (fixed / mobile)	<ul style="list-style-type: none"> <li>The Zambian government has seized 75% of LAP green's stake in Zamtel. Although LAP green has filed a petition to the Lusaka high court this could be an opportunity for another operator to acquire the stake and operate in Zambia</li> </ul>
Madagascar	<ul style="list-style-type: none"> <li>Fixed telecoms incumbent and mobile operator Telma is rumoured to be for sale, it is owned at 68% by Distacom and at 32% by the State</li> </ul>

## Current opportunities – Other private sector opportunities (Media, ISPs, Mobile tech)

There are a number of private opportunities in Africa, both for mobile operations or data players / Internet providers

### Other private sector opportunities (Media, ISPs, Mobile tech)

Company	Opportunity
Maroc Telecom (mobile)	<ul style="list-style-type: none"> <li>As part of Vivendi's strategy to divest its telecom assets, a 53% stake in Maroc Telecom has been sold. The deal is expected to complete in early 2014.</li> </ul>
Vimpelcom (mobile)	<ul style="list-style-type: none"> <li>As part of their exit plan from the African market, they have sold Burundi (U-com Burundi) and Central African Republic (Telecel-RCA).</li> <li>Sale did not include Zimbabwe (Telecel Zimbabwe) which is to be negotiated separately. Algeria government could exercise its right to acquire Orascom Algeria once it's put up for sale.</li> </ul>
Mattel (mobile)	<ul style="list-style-type: none"> <li>Tunisie Telecom (TT) is reported to be close to selling its majority stake in Mauritanian telco Mattel.</li> </ul>
Telecom Egypt (Fixed/mobile)	<ul style="list-style-type: none"> <li>Telecom Egypt is reported to be awaiting government's decision on possible sale of its Vodafone Egypt stake.</li> </ul>

# Current opportunities – Licences

Several fixed or mobile telecom licences are expected to be awarded in the short to medium term

## Licences

Company	Opportunity
Nigeria (fixed)	<ul style="list-style-type: none"><li>The Nigerian Communications Commission (NCC) will begin the actual auctioning of the 2.3GHz spectrum licence between two pre-qualified bidders, Globacom Limited and Bitflux Communications Limited.</li></ul>
Sudatel	<ul style="list-style-type: none"><li>Sudatel is interested in expanding its operations to Chad, Niger and Mali where opportunities for telecom licences remain.</li></ul>
Togo (mobile)	<ul style="list-style-type: none"><li>The government of Togo will grant a license to a 'full-blown' mobile virtual network operator (MVNO) in the country, with the Ministry of Posts and Telecommunications confirming it has issued a notice of call for expressions of interest, which will be followed by a 'restricted' tender.</li></ul>
Angola (mobile)	<ul style="list-style-type: none"><li>The regulator is expected to issue third mobile license.</li></ul>
Sao Tome and Principe (mobile)	<ul style="list-style-type: none"><li>Sao Tome has launched a tender for award of a second telecommunications license and assignment of capacities on the international submarine cable ACE. Unitel only applicant to meet requirements for second telecoms licence</li></ul>

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# Deloitte global M&A presence

A global network of over 6,000 dedicated professionals providing specialist advisory across the deal life cycle

Deloitte's M&A Global Reach



Transaction Lifecycle



Deloitte believes its role as advisors is to customize services to our clients needs, providing deep expertise, while continuing to deliver the advantages of having one integrated M&A advisor

# Deloitte African footprint

## A direct local presence in 34 African countries and service 51

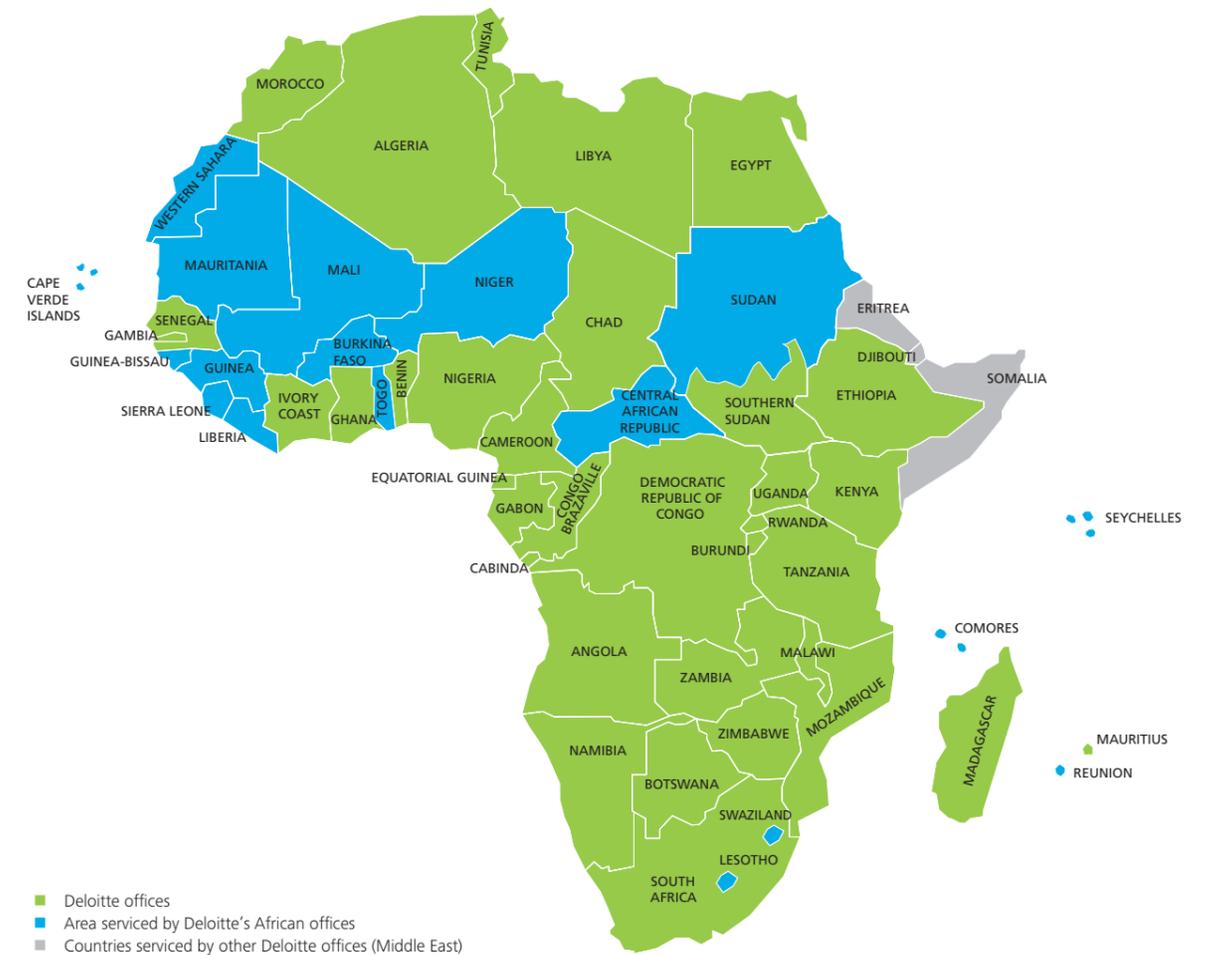
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- The Deloitte offering is split into four service lines:

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Reorganisation Services	Customer Relationship Management
Financial Risk Solutions	Supply Chain Management
Valuation Services	Human Capital
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Investment Banking	Technology Integration Outsourcing
Tax	Audit
General Tax (tax planning, international tax, tax compliance, current tax advice) Transfer pricing M&A tax advice Indirect Taxes	Financial Statements Audits Special Purpose Audits International Accounting Services Securitisation Services Risk Management Internal Audit IT Risk and Security

- Our four service lines are subdivided into industry sectors, for instance Telecoms, Media and Technology (TMT)
- The Deloitte TMT practice includes more than 15,000 professionals worldwide, serving over 80% of the TMT companies of the Fortune 1000
- In Africa, Deloitte has offices in 22 African countries
- The UK TMT practice, the Portugal TMT practice, the French TMT practice and the South African TMT practice act as centres of excellence for African telecoms clients

Countries where Deloitte has local offices and from where the whole of Africa is served



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