Occupier Perspective

The TMT Sector

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DTZ Occupier Perspective
The TMT Sector
TMT overtaking the traditional sectors

22 October 2012

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- This report covers the TMT (Technology, Media and Telecommunications) sector from an occupier perspective. The report provides an insight into property markets across major global TMT hubs in the US, Asia Pacific and Europe and looks at current location trends driving each sub sector.

- Our analysis of the 100 largest listed global TMT players shows that technology companies dominate the TMT sector, accounting for over half (52%) of the combined market capitalisation. The US is headquartering approximately two thirds of the biggest media and technology companies. The telecoms sector displays a more globally diverse distribution with headquarters scattered around the globe.

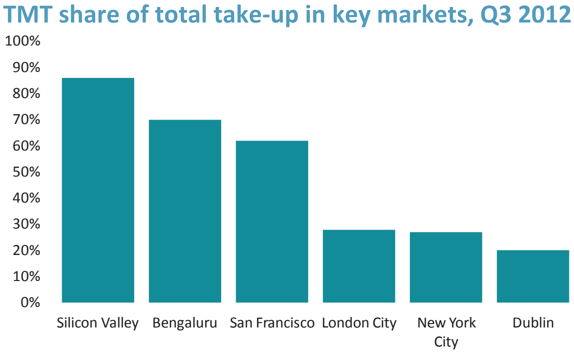
- The TMT sector has recorded increased office market activity across several global markets. CBD areas are becoming increasingly attractive, driven mainly by access to young talent.
  - In Central London, TMT take-up has increased markedly, accounting for 28% of overall leasing activity in Q3 2012, compared to the financial services sector share of 14%.
  - In San Francisco, technology tenants currently account for approximately 60% of the total take-up, an increase from 19% in 2009.
  - In New York City, the demand from the technology and media sectors is for the first time neck and neck with the finance sector (Figure 1).

- TMT occupiers have substantially different property needs from other occupiers. The rapid pace of growth, high levels of M&A activity and employee profile fosters a need for flexible buildings and lease structures. The unique characteristics of the sector require landlords to offer TMT occupiers the ability to provide highly customised and efficient space. This has a major impact on the demand for space and the traditional real estate dynamics in key global markets.

- The TMT sector is an ever-changing industry characterised by high levels of competition and innovation. As such, the sector is constantly evolving as players seek new markets for growth. Going forward, we anticipate increased expansion into second and third tier cities in India and China and emerging markets in Latin America, Africa and Eastern Europe.

Figure 1

TMT share of total take-up in key markets, Q3 2012



Source: DTZ Research

The TMT Sector

Sector Overview

Technology companies dominate the TMT sector

The TMT (Technology, Media and Telecommunications) sector is a growing and evolving industry encompassing a number of segments including computer software, broadcasting, publishing, internet and mobile services. The sector accounts for a third of the top 50 largest global companies active across all sectors by market capitalization.

Our analysis of the 100 largest global TMT companies shows that technology companies[1] dominate the sector, accounting for over half of the combined market cap. Telecoms accounts for 35% of the overall market share whilst the media sector only accounts for 12% (Figure 2). This trend is also mirrored in the list of top 20 biggest TMT companies operating globally. As illustrated by Figure 3, twelve out of the 20 largest players are major technology companies. Only two media companies are present in our top 20 ranking - Comcast and Walt Disney. Although the media sector has a small market share, it has witnessed a big turnaround in profitability in the past year. This is due to strong growth in the advertising industry since the economic downturn.

The US serves as base for major TMT companies

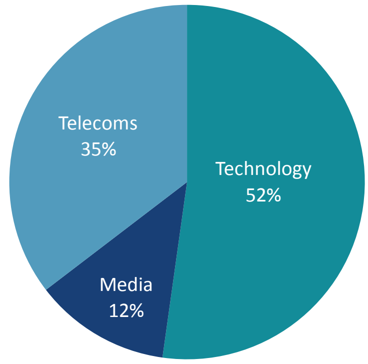
Apple is a clear market leader. With a market capitalisation reaching US$624 billion as at Q3 2012, the California-based firm is a highly influential technology firm. Washington-based Microsoft is in second position with a market capitalisation of US$253 billion, followed closely by Google, IBM, China Mobile and AT & T. 12 out of the 20 largest TMT companies are based in the US. Only two European companies rank in our top 20 list – SAP AG and Vodafone Group. The rest are mainly based in Asia – Japan (Nippon Telegraph & Telephone), China (China Mobile and Tencent Holdings), South Korea (Samsung Electronics) and Taiwan (Taiwan Semiconductor Manufacturing). The list includes one Latin American company - América Móvil, the fifth largest telecoms company in the world by market capitalisation, headquartered in Mexico (Figure 3).

The US has been at the forefront of advances in modern technology and telecommunications. Major American TMT hubs in Silicon Valley and New York continue to play a key role in the global technology and media landscape; 68% of major media global players and 63% of top technology companies are headquartered in the US (Figure 4). The telecoms sector displays a more globally diverse distribution with a significant share of headquarters in "other locations", mainly South America, Canada and the Middle East.

[1] For the purpose of this study, we define technology companies as those being active within software & computer services and hardware & equipment.

Figure 2

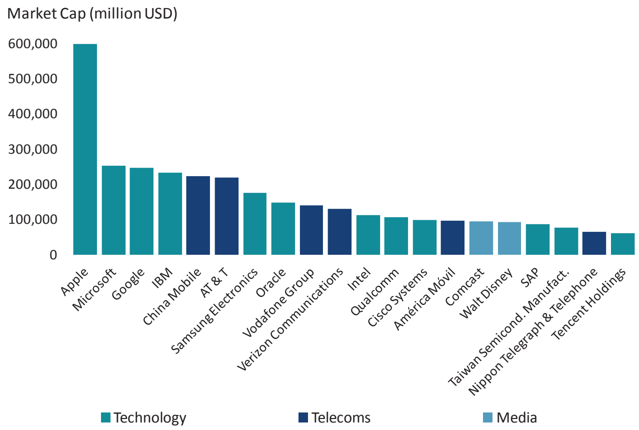
Top 100 TMT companies by sector, by market cap, Q3 2012



Source: DTZ Research, Bloomberg

Figure 3

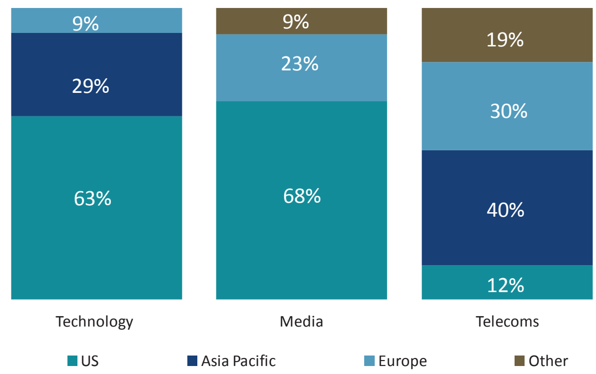
Top 20 TMT companies ordered by market capitalisation



Source: DTZ Research, Bloomberg

Figure 4

TMT headquarters by sub-sector & region



Source: DTZ Research, Bloomberg

The TMT Sector

Impact on Property

TMT overtaking the financial services sector

TMT occupier activity has increased across several global office markets, in many cases picking up the slack left by weaker demand from the financial services sector in the face of the global economic downturn. In London, take-up from TMT companies has been above trend in recent years. As the demand from the financial services sector plunged in 2011, TMT became the sector with the largest share (23%) of overall take-up. The trend has continued in 2012, with TMT committing to more than 125,000 sq m (Figure 5). New York's tech sector has emerged as an increasingly powerful economic driver for the city, currently accounting for 27% of total take-up, on par with the finance sector (Figure 6).

Increased TMT activity in CBD areas

Technology and media companies are increasingly choosing to locate in CBD centres as opposed to traditional out-of-town technology business parks. This trend is mostly evident in Dublin, London, New York, San Francisco and Singapore. In London, the city core has accounted for nearly a third of TMT take-up over the last two years. One of the main drivers has been the proximity to young talent who prefer urban living. However, choice of office space is highly limited in CBD areas and landlords in city centres find it increasingly difficult to accommodate TMT players who often follow a steep growth curve and require highly customised and efficient space to support this expansion.

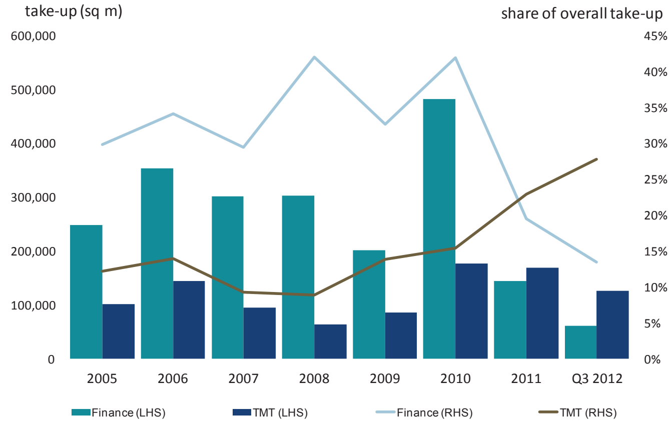
In San Francisco Bay Area, start-ups are headquartering and establishing satellite offices in San Francisco City as opposed to the Silicon Valley. Companies flock to the city in order to attract a young employee base and capitalise on the city's new payroll tax exemption for new employees. Technology tenants in San Francisco in Q3 2012 accounted for approximately 62% of the total tenant base (figure 6), compared to 19% in 2009 and 30% in 2010 and 2011.

TMT hub Bengaluru offers favourable occupancy costs

In this report, we identify nine major global TMT hubs as shown in figure 7 and map 1. Out of the nine TMT hubs, Hong Kong remains the least affordable global market in terms of occupancy costs. However, the market has seen a decrease of 4% in rents since the start of 2012. As demand from the financial sector continues to decline in Hong Kong, TMT stands out as an increasingly important sector for growth and investment in the area. At the other end of the scale, occupiers in Bengaluru CBD currently benefit from the most affordable occupancy costs. However, going forward we anticipate costs to rise by 7% per annum over the five year forecast horizon, supported by solid demand from innovative local TMT companies as well as global players.

Figure 5

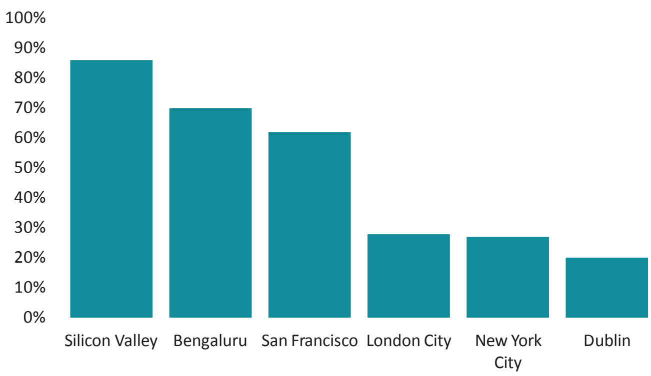
TMT versus finance sector take-up, central London, 2005-Q3 2012



Source: DTZ Research

Figure 6

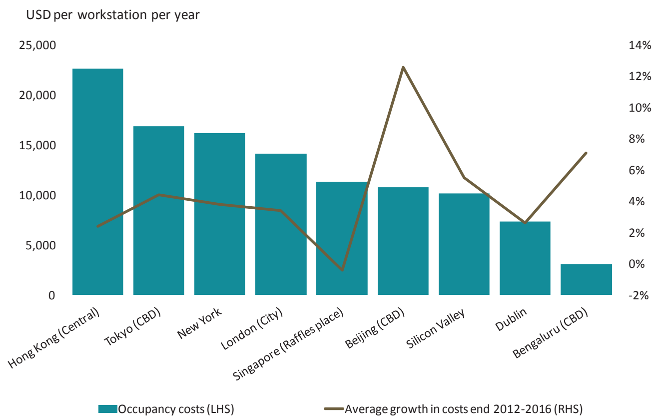
TMT share of total take-up in key markets, Q3 2012



Source: DTZ Research

Figure 7

Total occupancy costs, Q3 2012, and average annual growth in costs, end 2012-2016



Source: DTZ Research, Oxford Economics

The TMT Sector

TMT hubs - US

San Francisco Bay Area

Key indicators (Silicon Valley)

Occupancy costs, Q3 2012: **10,180** USD/workstation/annum
Average annual costs growth, 2012-2016: **5.5%**
Vacancy rate, Q3 2012: **14.7%**
Market wide take-up, H1 2012: **436,644 sq m**

Recent TMT deals:
- Palo Alto Networks: 28,000 sq m, Santa Clara
- Amazon research unit lab 126: 54,000 sq m, Sunnyvale
- LinkedIn: pre-leased 52,000 sq m, Sunnyvale

Drivers of growth

- Silicon Valley accounts for 40% of all venture capital investment in the US
- Large workforce of well-educated engineers, marketing & legal experts
- Job growth in Silicon Valley is currently among the fastest in the United States at 3.4% annually
- Growth supported by well-renowned Stanford University providing young talent and research centres

TMT sector activity

Demand in San Francisco Bay Area has increased over the past 3 years, currently accounting for 80% of the new office space demand. Explosive growth in the technology industry has generated strong TMT tenant demand in Silicon Valley's office market, reminiscent of the dot-com boom. Expansions by locally headquartered TMT tenants have created a scarcity of Class A space - causing a spread of market activity to the Southern end of Silicon Valley and North to the San Francisco Peninsula. Demand for office space is high throughout the entire region, reflected by increased construction activity. In San Francisco, market activity has largely been driven by technology firms, including major expansions by Twitter and LinkedIn in 2012.

Outlook

Established TMT giants are deepening their ties to Silicon Valley and the greater San Francisco Bay Area as they build massive office campuses to accommodate future growth. Apple is on the verge of building a 260,000 sq m campus in Cupertino and Facebook will begin construction of a campus extension for 2,800 engineers at their Menlo Park headquarters in 2013. In San Francisco city, technology companies continue to commit to large floor spaces in anticipation of their future growth.

New York

Key indicators

Occupancy costs, Q3 2012: **16,200** USD/workstation/annum
Average annual costs growth, end 2012-2016: **3.8%**
Vacancy rate, Q3 2012: **7.5%**
Market wide take-up, H1 2012: **980,000 sq m**

Recent TMT deals
-Viacom: 130,000 sq m renewal, 1515 Broadway
-Random House: 34,000 sq m renewal, 1745 Broadway
-Havas: 21,000 sq m, 200 Hudson St

Drivers of growth

- New York was the only US region to see an increase (of 32%) in the number of venture capital deals between 2007 and 2011 (The Center for the Urban Future)
- New tech start ups in the city (Tumblr, Foursquare Spotify etc) report successful growth and over a dozen established tech start-ups have moved to New York from other US technology hubs in recent years
- The city's strong finance, media and advertising sectors stimulate TMT innovation and growth
- Cornell University & Israel Institute of Technology, plan to establish an applied sciences campus in the City
- Attractive location to the new working generation who demand more urban living

TMT sector activity

New York is currently the main headquarters in the US for media companies that have annual revenues over USD2 bn, according to the U.S. Bureau of Labor Statistics. The city has further seen its technology sector grow solidly in recent years. Midtown South is the area at the centre of the TMT boom and displays the lowest vacancy rate (5.7%) among the three submarket clusters. The vacancy rate is expected to stay low, as the area continues to see strong demand from TMT companies and solid growth in technology jobs.

Outlook

Low vacancy rates in Midtown South indicate a lack of quality space available for some larger TMT companies. Therefore, TMT companies will most likely see a greater presence in the Downtown area as well as Brooklyn. In Downtown, the delivery of World Trade Center combined with already high vacancy rate, will push the vacancy rate at the highest level for this decade. This trend will most likely continue with the market inventory changing in the near future.

The TMT Sector

TMT hubs - Europe

Dublin, Ireland

Key indicators (CBD)

Occupancy costs, Q3 2012: **7,330** USD/workstation/annum
Average annual costs growth, end 2012-2016: **2.6%**
Vacancy rate, Q3 2012: **22.0%**
Market wide take-up, Q1-Q3 2012: **74,500 sq m**

Recent TMT deals:
-Opennet: 1,470 sq m, Dublin 12, Q2 2012
-SAP: 1,330 sq m, Dublin 24, Q2 2012
-Facebook: 1,050 sq m, Dublin 2, Q2 2012

Drivers of growth

- Availability of young, well-educated and English-speaking labour
- Expertise in technology and software development
- Affordable office space
- Competitive tax regime (12.5% corporation tax rate)
- Supportive regulatory environment and well established business support services
- Promotion of R&D activities through tax incentives and grant aid
- Serves as European headquarters to major TMT companies such as Google, Facebook, LinkedIn and Twitter

TMT sector activity

Demand for space in Dublin continues to be driven by the TMT sector. The sector accounted for approximately 20% of all newly occupied space in Q3 2012. Within the CBD district, approximately 85% of take up was grade A accommodation. The continued strength of take up from IT and telecoms firms has copper-fastened Dublin's reputation as one of the leading global locations for digital media enterprises.

Outlook

The favourable business climate supported by the government will continue to act as a major driver for growth in the TMT sector. Furthermore, current presence of major players is creating a growing labour pool of young talent. Established companies are expanding at consistently rapid pace. Affordable occupancy costs and flexible lease packages available in the city are a continued attraction for TMT occupiers.

London, UK

Key indicators (City)

Occupancy costs, Q3 2012: **14,110** USD/workstation/annum
Average annual costs growth, end 2012-2016: **3.4%**
Vacancy rate, Q3 2012: **7.2%**
Market wide take-up, Q1-Q3 2012: **270,000 sq m**

Recent TMT deals
-Google: 14,500 sq m, London Midtown
-NBC Universal: 10,400 sq m, London Midtown
-UBM: 9,600 sq m, Southwark
-Telefónica: 5,000 sq m, Soho

Drivers of growth

- International connectivity (English language and favourable time zone positioning)
- Skilled workforce, sensible regulations and access to capital
- Investment from government and major companies in the growth of London's East End 'Tech City'

TMT sector activity

Occupiers in the TMT sector committed to 170,000 sq m of space in 2011 in Central London, accounting for 23% of leasing activity. The share has been partly inflated by the low levels of activity from the financial services sector. Our 2012 data shows a continuation of this trend: The financial services sector accounted for only 14% of total take-up in Central London, compared to the TMT share of 28% in Q3 2012. The City core has accounted for the largest proportion of TMT take-up over the last two years. The city fringe locations of Clerkenwell, Farringdon and Shoreditch (including the 'Tech City' area) mainly attract technology start-ups. These often have lower floorspace requirements and seek more flexible lease terms.

Outlook

Despite economic uncertainty, confidence in London's TMT sector is relatively high. In a recent Ipsos MORI poll, more than half (52%) of business leaders believed the TMT sector to have the greatest potential for growth in the UK over the next 12 months. Our view is that TMT will continue to play a major role in London's occupier market, driven by developments in big data, cloud computing and social media. Furthermore, Oxford Economics forecasts Information and communications employment to increase by 12% from 2012 to 2020 in London City, compared to the financial and insurance employment growth of 5%.

The TMT Sector

TMT hubs - Asia Pacific

Beijing, China

Key indicators (CBD)

Occupancy costs, Q3 2012: **10,780** USD/workstation/annum
Average annual costs growth, end 2012-2016: **12.6%**
Vacancy rate, Q3 2012: **2.2%**
Market wide net absorption, Q1-Q3 2012: **346,587 sq m**

Recent TMT deals:
-Huawei Technologies: 15,000 sq m, South 2nd Ring
-Renren social network: 27,000 sq m, West 2nd Ring,

Drivers of growth

- Beijing's tech hub, Zhongguancun, in the north-western part of Beijing city, is home to more than 12,000 high-tech enterprises
- Numerous global TMT companies have R&D centres in Beijing (Yahoo!, Google, Microsoft)
- Major local TMT players are present in Beijing (Huawei, Sina, Baidu, Tencent)
- Beijing's prestigious universities and strong university-government relationships create new talent and drives big technology initiatives

TMT sector activity

Beijing has seen high levels of leasing activity from the IT sector in recent years. However, the CBD and several other submarkets are suffering from severe lack of supply and high levels of owner-occupation, with only around 50% of the development pipeline likely to be made available for leasing. As CBD rents escalate, companies such as HP are increasingly looking to occupy space outside the CBD area. IT companies are currently favouring Zhongguancun, "China's Silicon Valley", where rents are more affordable.

Outlook

Government policy continues to favour the development of technology based industries utilising the intellectual foundation of the top grade universities and research institutes in the city. This is a powerful driving force that no other market in the country has. Therefore, office demand from the TMT sector is likely to be sustained. However, as Beijing becomes more expensive and saturated, we expect to see corporates increasing activity in second and third tier cities such as Chengdhu, Schenzen and Dalian.

Bengaluru, India

Key indicators (CBD)

Occupancy costs, Q3 2012: **3,110** USD/workstation/annum
Average annual costs growth, end 2012-2016: **7.1%**
Vacancy rate, Q3 2012: **13.1%**
Market wide net absorption, Q1-Q3 2012: **625,998 sq m**

Recent TMT deals:
-Cap Gemini: 51,000 sq m, Whitefield, Q2 2012
-VM Ware: 43,000 sq m, JP Nagar, Q2 2012
-Oracle: 39,000 sq m, JP Nagar, Q2 2012

Drivers of growth

- Low labour costs and young talent attract major foreign companies and technology start-ups
- Strong innovation culture stimulate successful local companies (Infosys, Wipro)
- Well established technology institutions provide a large pool of engineering graduates
- Numerous global TMT companies have their R&D centre in Bangalore (Intel, Cisco, Texas Instruments, Oracle, Google, Yahoo, Facebook, HP, IBM)

TMT sector activity

Approximately 70% of the demand for Grade A office space in Bengaluru stems from technology companies, IT Enabled Services-Business Process Outsourcing firms and the telecom sector. Tenant activity in Bengaluru remains strong, driven primarily by the TMT sector. Total take-up for office space in the city is likely to be over 900,000 sq m in 2012.

Outlook

Bengaluru is likely to remain one of the most important geographies for the TMT sector in the Asia Pacific region. Demand for office space is largely dependent not only on India's economic growth, but also on the performance of the global economy, and more specifically on global IT spending. We expect demand to continue for second and third tier cities in India such as Hyderabad, Chennai, Pune, Gurgaon and Noida.

The TMT Sector

Hong Kong, China

Key indicators (Sheung Wan/ Central/Admiralty)

Occupancy costs, Q3 2012: **22,630** USD/workstation/annum
Average annual costs growth, end 2012-2016: **2.4%**
Vacancy rate, Q3 2012: **4.5%**
Market wide net absorption, Q1-Q3 2012: **27,734 sq m**

Recent TMT deals:
-Lenovo Group: 1,000 sq m, Quarry Bay
-Saatchi & Saatchi HK Limited: 1,300 sq m, Quarry Bay

Drivers of growth

- The significant cloud computing investment in China has fostered an innovative TMT environment
- Hong Kong benefits from a less regulated market and lack of internet censorship compared to China, therefore serving as gateway to the Chinese market
- The Hong Kong government has invested in strategic IT clusters (Cyberport and Hong Kong Science Park)
- Kowloon East revitalisation will provide more new and larger office space in the future

TMT sector activity

Tenant activity in Hong Kong has been fairly subdued across all sectors, as turmoil in the Eurozone has impacted on business sentiment. The central market has seen rental declines of 11% over the last six months. Nevertheless, demand is expected to pick up and rental values are forecast to increase in 2013, albeit at a fairly moderate pace. However, activity and rents in the decentralised districts - where the majority of TMT companies are based - have remained largely stable.

Outlook

Future development of the TMT market in Hong Kong is largely dependent on the current government's blueprint for industrial diversification, housing policies as well as cooperation with the mainland. Hong Kong and Shenzhen are jointly developing a large border area, Qianhai, which will consist of land for TMT industries. It is believed that Qianhai will benefit from its closeness to both Mainland China and Hong Kong. Compared to traditional office submarkets in Hong Kong, Qianhai enjoys lower labour and office costs.

Singapore

Key indicators (Raffles Place)

Occupancy Costs, Q3 2012: **11,330** USD/workstation/annum
Average annual costs growth, end 2012-2016: **-0.4%**
Vacancy rate, Q3 2012: **5.8%**
Market wide net absorption, Q1-Q3 2012: **118,627 sq m**

Recent TMT deals
- Cisco Systems: 10,000 sq m, Changi Business Park
- Google: 9,000 sq m, Marina Bay

Drivers of growth

- Strong legal & IP protection framework, excellent connectivity with Asia, highly educated talent pool
- Numerous global TMT companies have set up regional HQs in Singapore
- Cosmopolitan city with intimate knowledge of diverse Western and Asian tastes and needs
- Ranks as the second most network-ready country in the world and the first in Asia, according to the World Economic Forum's Global Information Technology Report 2010/2011
- Strong support from government such as tax incentives and funding and development of specialised business and industrial parks

TMT sector activity

The TMT sector currently accounts for approximately 5% of office space taken up in the CBD. This proportion is higher at 9% in the CBD fringe areas, as TMT occupiers tend to locate in mid-priced office locations. Besides the CBD fringe, TMT occupiers are also located in business parks outside the city. For instance, Creative is located in the International Business Park (west of Singapore) while British Telecom, Cisco Systems and EMC are taking up space in Changi Business Park, to the east of the city.

Outlook

The above drivers will see more TMT companies setting up or expanding their operations in Singapore. This will support demand for office and business park space from local as well as key global players. Facebook recently took on an extra office floor in the CBD while Google is building its first data centre for South East Asia in Singapore.

The TMT Sector

Tokyo, Japan

Key indicators (CBD 5-kus Grade A)

Occupancy Costs, Q3 2012: **16,850** **USD/workstation/annum**
Average annual costs growth, end 2012-2016: **4.4%**
Vacancy rate, Q3 2012: **8.9%**
Market wide net absorption, Q1-Q3 2012: **561,501 sq m**

Recent TMT deals
- SAP: 17,236 sq m, Hanzmon (Chiyoda-Ku) - relocation

Drivers of growth

- High levels of technological development in consumer electronics
- Sophisticated and tech-aware consumers with high purchasing power, offering vast potential for profitability
- World-class broadband services and highly developed forms of telecommunications

TMT sector activity

TMT is a fast growing industry in Japan, led by the increasing popularity of social-networking, gaming and e-commerce. The rapid adoption of smart consumer electronics has contributed to rising demand from TMT companies in Tokyo. The Roppongi and Shibuya submarkets are the most popular. Both Google and Yahoo! chose Roppongi for their headquarters, whilst Shibuya tends to attract local internet-related companies.

Outlook

The TMT industry will continue to grow in line with the growth of cloud computing and the adoption of smart phones, and office demand will follow. In addition, rapid growth of the gaming industry is expected to drive office space expansion in Tokyo going forward. At a broader level, Tokyo's Grade A office market is finally approaching the bottom of the cycle after almost four years of market doldrums. Although the recovery remains slow, prime rents are expected to return to growth in 2013 in line with stabilising vacancy. This means that now is a good time for TMT companies to negotiate leases.

The TMT Sector

Map 1

Total occupancy costs and average annual growth in costs, end 2012-2016, TMT hubs

Source: DTZ Research, ESRI

The TMT Sector

Location trends

The Technology Sector

Emerging markets transforming the industry

The US is home to 80% of the top 10 technology firms by market capitalisation (see Table 1). Although the country is likely to maintain its leading global position, other worldwide markets will see strong gains in the future. The growth of the technology sector and economic growth in Asian, African and South American economies are highly correlated. New technologies help stimulate education and consumer income, and growth markets respond by offering technology companies unique profitability opportunities and a competitive edge. Oxford Economics reports in *The New Digital Economy* that in 2020, the E7 (Brazil, Russia, India, China, Mexico, Indonesia and Turkey) will account for a greater share of global GDP than the G7. Population growth is twice as strong in E7 nations as it is in G7 countries and the former is seeing a growing segment of well-educated working-age inhabitants.

As an example of companies expanding into emerging markets, IBM has created a "growth markets" group, headquartered in Shanghai. Emerging markets now account for 21% of the company's revenue and the number of operations has doubled in main emerging markets such as China and Brazil. The company has a presence in more than 20 African countries and has recently announced that it is opening a research lab in Kenya (see Appendix 1). According to the GSMA (Global System for Mobile Communications Association), Africa is the fastest growing mobile market in the world. In early 2011, Samsung announced plans to double its share of the sub-Saharan smartphone market.

China and India are fuelling further growth; these markets added 300 million new mobile users in 2010. India's successes in offshored IT and business processing outsourcing services have sparked rapid growth in the country's broader technology sector. Strong local language skills, quality of labour, IP security and continued governmental support will sustain India's strong positioning as an attractive country for global TMT companies looking to strengthen their cost competitiveness. More than 600 multinational companies, including Cisco Systems, IBM and Microsoft, have their R&D subsidiaries in India.

With its vast population and fast-growing economy, China is often described as the new superpower in technology. The country is forecast to have 1.4 bn middle-class consumers by 2030. However, Western companies expanding in China face several challenges in the state-managed economy. Appendix 2 provides a more detailed description of the opportunities and challenges facing TMT companies in major emerging markets.

London and Dublin major European technology hubs

Described as a mobile nation, the UK has always been quick to adopt new technology. According to the Office of Communications, UK consumers own more smartphones and spend more time online than any other nation in Europe. Several companies have announced expansions plans and growth opportunities, particularly in London. The local government and several major technology companies are investing London's Tech City, where Google has opened 'Campus' - a technology community centre, offering desk space to newly established technology companies. Furthermore, Amazon has stated that London is the "obvious choice" for their international digital media development.

A further indication of London's growing importance to the global technology scene is Silicon Valley Banks' decision to open its first UK branch in London (June 2012), offering banking and loan services to the UK tech industry. However, London and other European HQ hubs such as Geneva and Amsterdam are seeing strong competition from corporate tax haven Dublin, where Zynga, LinkedIn and Twitter have chosen to locate their international headquarters. Furthermore, Dublin is a significant engineering hub to Google. The strong technology sector draws on the city's favourable tax regime, large talent pool and affordable property.

High levels of M&A activity

The technology sector is an extremely fragmented sector with high levels of activity in the M&A market, consistently registering some of the highest deal values. The technology industry is characterized by an evolving and innovative business culture where companies are constantly coping with changing consumer needs and high levels of competition.

According to Ernst&Young[2], global M&A activity is being driven by five megatrends: smart mobility, cloud computing, social networking, "big data" analytics and cross-sector and cross-industry blur. US companies dominated the global transaction volumes in 2011, accounting for 56% of technology cross border value. Google alone bought more than 20 companies. European companies bought mostly in the US, while Asia Pacific companies bought companies around the world - only 17% of the region's cross border deals were intra-regional.
The largest technology companies presented in Table 1 were also some of the biggest deal-makers in 2011. Microsoft acquired Skype for USD8.5 bn. Another technology giant, Google, completed their biggest acquisition to date in May 2012, when they purchased Motorola Mobility for USD12.5 bn.

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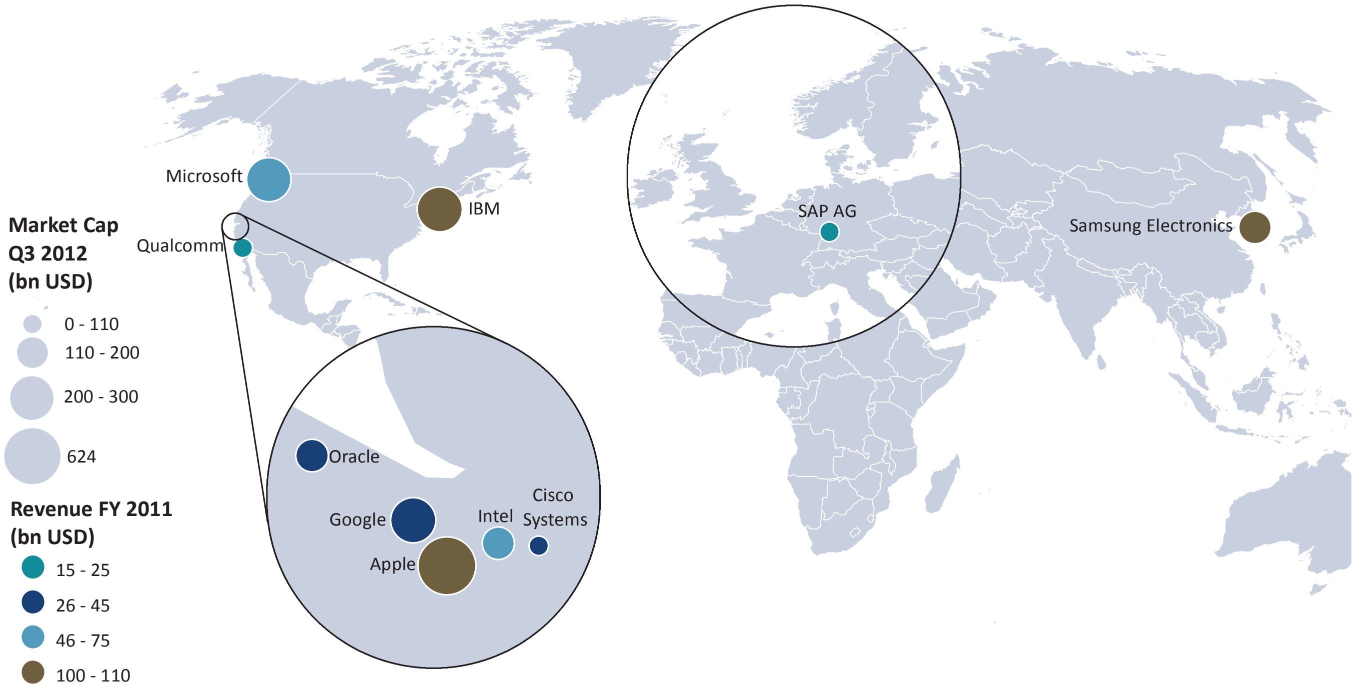
[2] Global Technology M&A update, October-December 2011

The TMT Sector

Map 2

Headquarters, revenues and market capitalisations of top 10 listed technology companies



Source: DTZ Research, Bloomberg, ESRI

Table 1

Top 10 global technology companies ordered by market cap

Rank	Group	Headquarters	Market cap Q3 2012 (million USD)	Total no. employees (FTE)	Market presence
1	**Apple Inc.**	Cupertino, California, US	623,544	60,400	Operating segments based in Americas, Europe, Asia Pacific
2	**Microsoft**	Redmond, Washington, US	252,885	94,000	Hold offices in more than 100 countries
3	**Google**	Mountain View, California, US	247,149	54,604	Hold 70 offices in more than 40 countries
4	**IBM**	Armonk, New York, US	233,126	433,362	Present in more than 170 worldwide countries
5	**Samsung Electronics**	Suwon, South Korea	176,522	221,726	Regional headquarters in Asia Pacific, Europe, The Americas, Middle East and Africa
6	**Oracle Corporation**	Redwood City, California, US	148,066	115,166	Operates in more than 140 countries
7	**Intel**	Santa Clara, California, US	113,293	100,100	Principal executive offices are located in the US, and marketing offices worldwide
8	**Qualcomm**	San Diego, California, US	106,153	21,200	Facilities in Americas, Asia, and Europe.
9	**Cisco Systems**	San Jose, California, US	98,263	71,825	Strong presence in the US
10	**SAP AG**	Walldorf, Germany	87,127	59,420	Hold offices in more than 130 countries

Source: DTZ Research, Bloomberg

The TMT Sector

The Media Sector

Growth to new markets expected in the medium term

As shown in Map 3 and Table 2, 8 of the 10 largest media companies are headquartered in the US with only Vivendi being based in France and Naspers headquartered in South Africa. The US players are mainly headquartered in New York (i.e. News Corp, Time Warner, Viacom, Thomson Reuters) or in California (i.e. Walt Disney, Facebook, DirecTV). Comcast, the world's leading media company is headquartered in Philadelphia (Pennsylvania).

The media industry has been severely affected by the global economic downturn. Figures from the Advertising Association in October 2011 suggest that after sharp contractions in advertising spend in 2008 and 2009, growth returned in 2010 but media companies are generally less optimistic about the economic outlook. Despite this, a large number of media companies prioritise growth going forward and a large number of media services firms aim to grow by opening in new locations within the next year. This trend is being driven primarily by new product development and increased confidence levels in global markets.

The Middle East in particular is an attractive marketplace for international media companies and here the potential for growth is still very apparent. This trend is being driven by favourable demographics - under 25 year olds make up a large proportion of the region's population – as well as the introduction of new technologies and a gradual easing of some of the traditional restrictions on media. Dubai was the first of the Emirates to begin offering studios and office space to international media companies nearly 10 years ago as part of a bigger move to diversify its economic base. Over the years, Dubai Media City has attracted many large foreign companies, from Viacom's MTV and Nickelodeon to Time Warner's CNN, to set up local channels and offices in Dubai. Abu Dhabi is now also trying to position itself as a major hub for media companies wanting to expand.

Other emerging markets have seen an increased presence of media companies in the last year. The Walt Disney Company, for example, has made significant progress in emerging markets, including Russia and China. In Russia the company launched a free-to-air Disney Channel that will reach 75% of the country's viewers. The company has also announced plans of a significant development in China – the Shanghai Disney Resort, which will give Walt Disney a major footprint with two themed hotels, recreational facilities and the tallest castle ever to be built at a Disney park.

Latin America is also on the radar for future expansion by many media companies. Following dismal financial results in the US, California-based DirecTV is planning future expansion into Latin America where it maintained high paced growth and increased its full year outlook in terms of subscribers. The unprecedented growth was driven by the strong brand, competitive offers, unique products and services, and increasing demand from a young and growing middle class. Although Brazil is currently DirecTV's biggest market in Latin America, the other regions are witnessing high growth rates. This trend bodes well for the company.

Other examples of media companies expanding in Latin America include UK-based Elsevier and Thomson Reuters. Thomson Reuters completed 39 acquisitions in 2011, investing in faster growing international markets, with a particular emphasis on rapidly developing economies such as Brazil.

Demand for space remains strong in established markets

The more established markets of the United States and Western Continental Europe are continuing to slow, on the back of concerns surrounding the ongoing Eurozone crisis. Despite this, demand for space continues to be sustained. In the San Francisco Bay, demand from social media, cloud computing and gaming companies remains strong. Facebook has recently taken up large units of space.

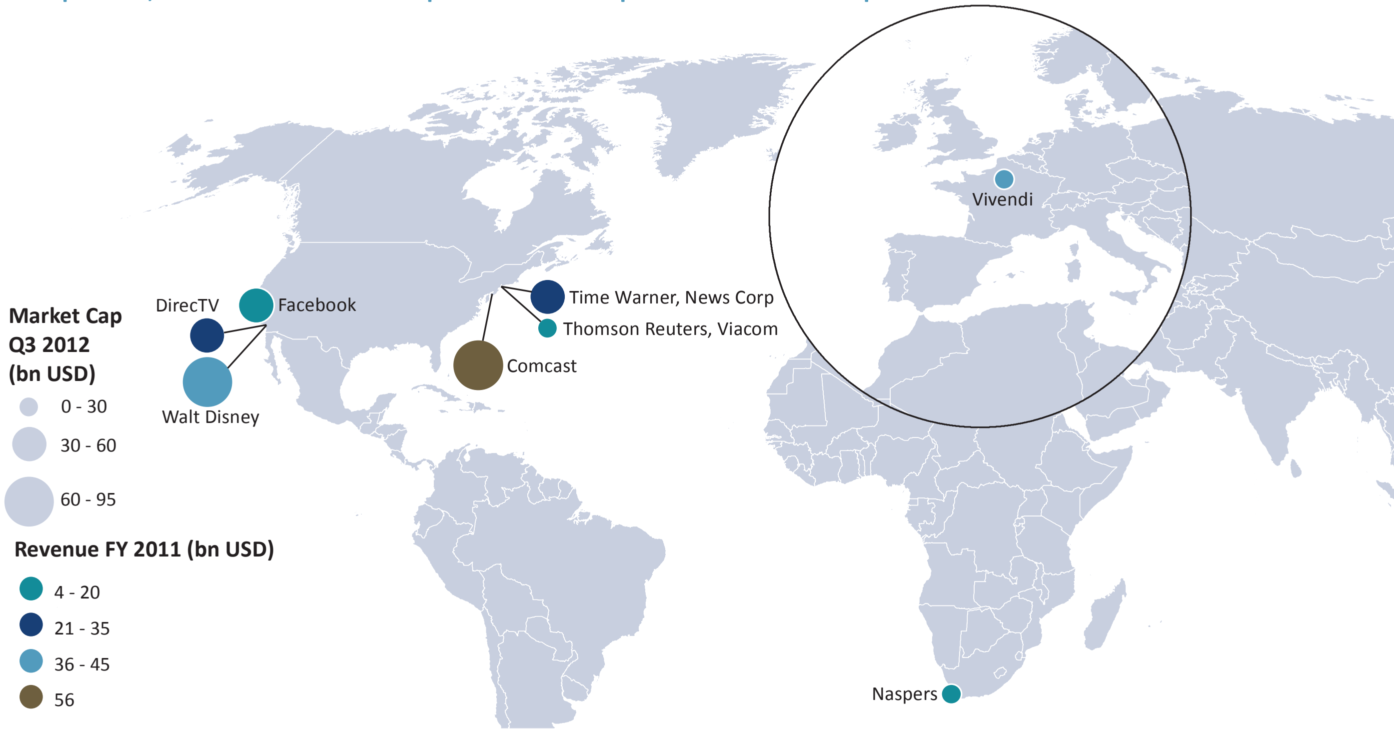
In Europe, London remains a major hub for media companies. Noho (North of Oxford Street) and Soho are established locations for media companies including advertising and entertainment. The AirW1 scheme in Soho has been popular with media occupiers with both Telefónica and Halfords Media UK acquiring space and EMAP in negotiations to take nearly 3,000 sq m. Furthermore, Facebook recently took more than 3,000 sq m of office space in the 'Midtown' submarket (which includes Covent Garden and Bloomsury), whilst other recent media deals in London have included Bloomberg, NBC Universal and UBM.

In Asia Pacific, Singapore aspires to be the 'Interactive and Digital Media Capital'. The city-state is already a major broadcast hub in Asia with the presence of international cable and satellite broadcast networks such as ESPN, Discovery and NBC Universal. The country's robust intellectual property rights environment, strong infrastructure and governments' efforts to attract international companies and talents are likely to further strengthen Singapore's status in the global media world.

The TMT Sector

Map 3

Headquarters, revenues and market capitalisations of top 10 listed media companies



Source: DTZ Research, Bloomberg, ESRI

Table 2

Top 10 global media companies ordered by market cap

Rank	Group	Headquarters	Market cap Q3 2012 (million USD)	Total no. employees (FTE)	Market presence
1	**Comcast**	Philadelphia, Pennsylvania, US	94,330	126,000	Strong presence in US, distributes internationally
2	**The Walt Disney Company**	Burbank, California, US	93,195	156,000	Theme parks and resorts in North America, Europe and Asia. Theme park under construction in Shanghai
3	**News Corp**	New York City, New York, US	57,797	51,000	Broadcasts to Europe, Africa, Asia and Latin America. Publishing is concentrated in US, UK and Australia
4	**Facebook, Inc.**	Menlo Park, California, US	49,805	3,539	Global presence
5	**Time Warner**	New York City, New York, US	42,360	34,000	Operates in over 200 countries
6	**DirecTV**	El Segundo, California, US	32,648	25,700	Planned further expansion into Latin America
7	**Viacom**	New York City, New York, US	27,514	10,580	Present in over 160 countries, planned further international expansion
8	**Vivendi**	Paris, France	26,082	58,318	Owns companies in France, Morocco, Brazil, and recently the UK, plans further expansion into rapid growth countries
9	**Naspers**	Cape Town, South Africa	24,665	11,577	Major African operator
10	**Thomson Reuters**	New York City, New York, US	24,193	100,000	Present in over 100 countries, 39 acquisitions made in 2011 in emerging economies

Source: DTZ Research, Bloomberg

The TMT Sector

The Telecoms Sector

The telecoms sector is increasingly global

The telecoms sector is inherently multinational and as illustrated by Map 4 and Table 3, the 10 largest telecoms companies are based in a variety of locations across different continents. In this era of connectivity and innovation, telecoms companies play an important role in reducing geographic limitations. As such, the sector is constantly evolving and seeking new markets for expansion. The sector is characterised by a highly competitive environment in which companies are continuously looking to expand their global footprint and increase margins. Cost saving measures, such as infrastructure sharing, are becoming increasingly important.

Telecoms closely linked to economic growth worldwide

Over 70% of the world's six billion mobile phone users are in emerging markets where the mobile phone has become one of the main drivers of change and evolution. The mobile phone is relatively inexpensive and enables money transfer – creating a stepping stone to financial services for billions of people with no bank accounts or insurance. Therefore, telecommunications is an important driver of economic growth, which often surpasses the growth prospects in mature markets. Large global firms with extensive geographical exposure typically embark on market opportunities in growth economies. The strong economic and population growth in these markets allow international mobile telecoms companies to expand by introducing mobile phones to a larger share of the population. These companies also see revenue growth in developing regions due to the lack of fixed-line infrastructure.

Vodafone - one of the world's largest mobile companies - has in recent years been targeting emerging economies, currently representing 29% of their service revenue. In the year ending March 2012, the company's revenue from Africa, the Middle East and Asia Pacific grew by 8 % (driven primarily by strong growth in India). Its revenue in Europe declined by 1% as the Eurozone crisis impacted users.

In a move to capitalise on the growing opportunity in the Middle East, operator groups Zain and Vodafone have recently announced a partnership to enhance each other's footprint in the region. The firms aim to satisfy growing demand among multinational businesses for communications solutions, as well as improve roaming services for consumers across the region. Vodafone will work with Zain's subsidiaries in Saudi Arabia, Bahrain, Kuwait, Jordan and Iraq. The partnership will complement Vodafone's own regional operations in Egypt and Qatar.

Telefónica, on the other hand, has good geographical diversification in Latin America which is now the second largest mobile market behind Asia Pacific. The company plans to spend more than USD14.6 bn on expanding its services and networks in Brazil by the year 2014. It will also use part of its investment towards running a new innovation centre in São Paulo.

The 2014 Football World Cup acts as catalyst for development in Brazil's telecoms sector. China Telecommunications Corp has opened two subsidiaries in Brazil to provide data services and telecommunications infrastructure. Furthermore, Nokia Siemens is in talks with a local partner to start producing 4G equipment in Brazil to help wireless operators establish coverage in host cities for the World Cup. Finally, Huawei, China's largest telecom equipment and service provider is planning to build or buy a factory in Brazil.

Africa is the fastest growing mobile market in the world

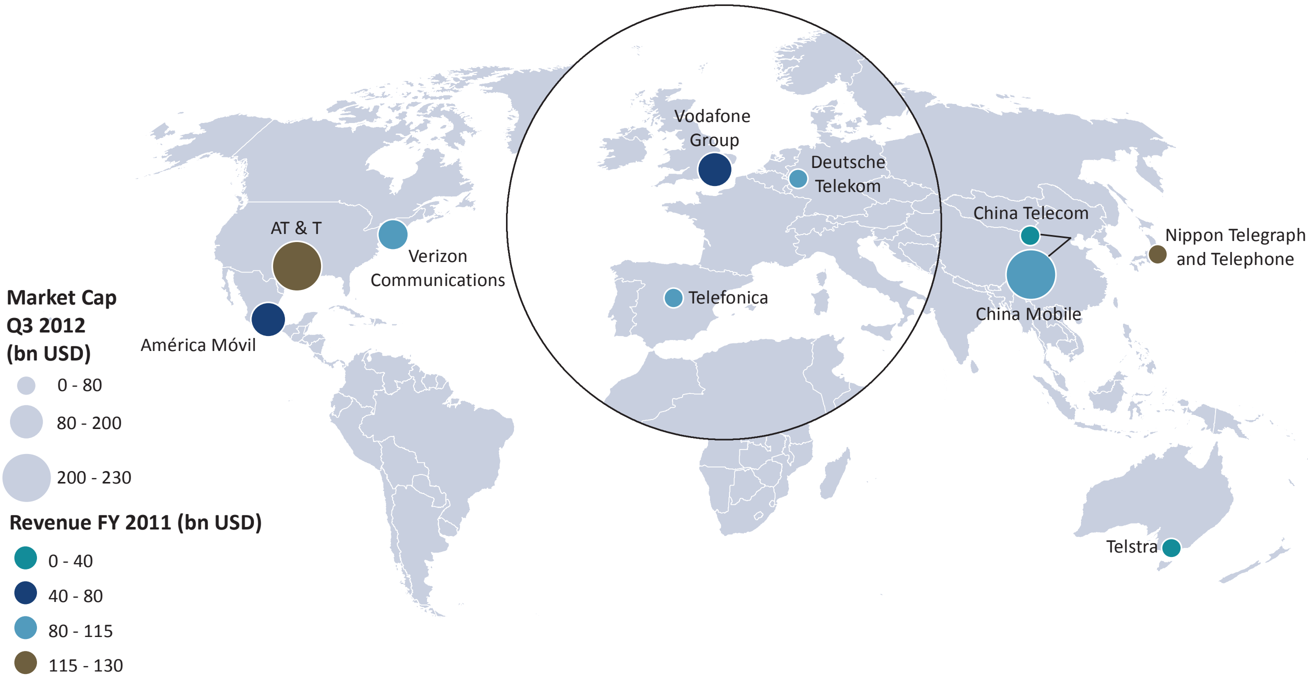
Africa is the fastest growing mobile market in the world and will be home to 738 million handsets by the end of this year, according to a survey by industry body GSMA. As such, many telecoms companies are looking to either enter or expand on African soil. Kenya in particular is being targeted by a number of large telecoms players. Vodafone's Safaricom Ltd. currently dominates the Kenyan telecommunications sector, holding 77% of the market share. India's Bharti Airtel Ltd is also an important player in Kenya.

A number of operators are targeting other African markets such as south Africa-based cellphone operator Vodacom which is considering expanding into Angola, Ethiopia and Uganda. Rwanda is seen as a key telecom market with vast growth potential.

Telecoms is one of the continent's more robust industries as the cell phone market expands to include Internet access, mobile banking and retail transactions. Mobile services have brought phones to people in remote areas that never had land lines. Korea's Samsung sees some of its biggest opportunities on the continent from rising demand for cheaper smartphones. The rise of smartphones has also given millions of Africans internet access for the first time.

Map 4

Headquarters, revenues and market capitalisations of top 10 listed telecoms companies



Source: DTZ Research, Bloomberg, ESRI

Table 3

Top 10 global telecoms companies ordered by market cap

Rank	Group	Headquarters	Market cap Q3 2012 (million USD)	Total no. employees (FTE)	Market presence
1	**China Mobile**	Beijing, China	222,805	145,954	Offices located in China only
2	**AT & T**	Dallas, Texas, US	219,684	252,330	Present mainly in the US
3	**Vodafone Group**	London, UK	141,291	86,373	Operates in over 30 countries, including emerging markets in Africa
4	**Verizon Communications**	New York City, New York, US	129,886	188,200	Hold offices in nine countries including the UK and Hong Kong
5	**América Móvil**	Mexico City, Mexico	97,149	148,058	Operates in 18 countries across Latin America, Central America and the Caribbean
6	**Nippon Telegraph & Telephone**	Tokyo, Japan	64,449	219,343	Global presence through subsidiaries and affiliated companies
7	**Telefónica**	Madrid, Spain	62,803	286,145	Present in 25 countries across Europe, Latin America, US and Asia
8	**Deutsche Telekom**	Bonn, Germany	54,002	235,132	Developed strong presence in Eastern Europe
9	**Telstra**	Melbourne, Australia	50,772	35,790	Global presence through Telstra International
10	**China Telecom**	Beijing, China	47,604	309,799	Present solely in China

Source: DTZ Research, Bloomberg

Appendix 1

Table 4

Major recent TMT company establishments and relocations

Sub-sector	Company	Target market(s)	News	News announcement
Technology	Google	Santiago, Chile	First Latin American data centre to open by the end of 2013	September 2012
Technology	Microsoft	Silicon Valley, US	New office to open which further strengthens current presence in the US tech hub	July 2012
Technology	IBM	Nairobi, Kenya	First research lab to open in Africa – promotes the development of science and technology in Africa	August 2012
Technology	SAP AG	China	New offices in Beijing, Wuhan and Shenzen – showing commitment to continued growth in China	July 2012
Media	Amazon	London, UK	Amazon chooses London as centre for their international digital media development	July 2012
Media	Walt Disney	Russia	Increasing presence in Russia by the launch of a nationwide Disney channel	October 2011
Telecoms	Vodafone Group	London, UK	Vodafone is to open a centre in London's Tech City which will promote and support start-up companies	August 2012
Telecoms	NTT Com	South East Asia	New data centres established in Singapore and Malaysia, as part of expansion plans in Asia Pacific	April 2012
Telecoms	Telstra	South East Asia and India	New operating licenses have enabled Telstra to expand in India, Singapore and Japan	December 2011
Telecoms	América Móvil	Bangalore, India	New facility in Bengaluru will allow the company to further penetrate the Indian market	May 2011

Source: Babel PR

Appendix 2

The table below highlights key considerations for TMT companies who wish to expand to emerging markets.

Table 5

Opportunities and challenges in emerging markets

Market	Opportunities	Challenges
Brazil	• Improved business environment • Fast-growing middle class with increased usage of modern technologies • Hosting of the World Cup in 2014 & the Olympic Games in 2016 expected to accelerate much needed investment in Brazil's infrastructure • Since 2003, the Brazilian government has funded research in numerous areas of TMT	• High taxes & complex tax structure • Sources of capital are limited & expensive • The judicial system remains lethargic and expensive - enlisting local expertise when drafting contracts is paramount • High levels of bureaucracy - registering a new company takes between 3 to 6 months • Skill shortages & weak infrastructure
China	• Strong average annual GDP growth forecast between 2012/2020 (7.8%) • Rising prosperity leading to rapid consumption growth • Tax incentives exist for new businesses • Extensive investment in cloud computing and outsourcing • Government budget for science and technology has increased by 20% annually over the past 5 years • Largest number of mobile phone users in the world	• Opaque bureaucracy which requires careful navigation • Stability risks imposed by immature capital markets • High tax rates by international standards • Shortage of skilled labour • Government restrictions around the high-tech industry • Infringement of trademark common issue for foreign brands
India	• Strong average annual GDP growth forecast between 2012/2020 (7.5%) • Growing middle class & rise in personal income • Widespread availability of Special Economic Zones • Relative ease of foreign companies of setting up a business • Skilled labour from established national engineering universities • Potential for growth as transforming from an outsourcing nation to an innovative TMT hub	• Businesses face problems with corruption & red tape • Poor transport infrastructure particularly in rural areas • Huge power supply issues • Government authorisation is required to lay off staff • Obligatory for foreign businesses in wireless communications to obtain formal approval from the federal government in order to operate
Ireland	• Transparency of tax, intellectual property and data privacy laws make Dublin a portal to European markets • Young and skilled English-speaking labour • The TMT sector is among the top three Irish growth industries • Competitive corporate tax regime, 12.5% corporation tax rate • Promotion of R&D activities through grant aid and tax incentives	• High competition for skilled staff and visa requirements infringe the access to international talent • Continued economic challenges on a national level • Muted GDP growth in the short to medium term
Kenya	• Most developed economy in Eastern Africa & large number of well-educated English speaking professionals • 'Young' country with 70% of its population under 35 • Nairobi is the transportation hub of Eastern & Central Africa • Technology industry growing by approx. 20% annually • Strong demand for telecommunication technologies including 3 G modems	• Lack of financial resources & inability to secure loans from banks • Costly & lengthy bureaucratic procedures of registration • Corruption, tribal tensions, land titles, political instability and poor infrastructure pose threat to growth • Local universities lack modern technology facilities - low availability of qualified talent require in-house training
Mexico	• Ease of entry for foreign companies thanks to numerous free-trade treaties to key trading partners (i.e. EU, US) • Low business costs and great costs advantages for the development of software, web and multimedia • Large population and healthy consumer spending • The project "Digital Creative City" in Guadalajara aims to make the city Latin America's media and entertainment capital	• High levels of corruption, red tape & frequently changing tax laws • Complex legal system • Limited employment pool available for multinational corporations • Personal safety, especially for foreigners, remains an issue
Russia	• Growing strength of consumers & continued economic reforms • Low cost and generally highly skilled workforce • Support provided for SMEs. Includes grants for start-ups • Continuing development of 'Skolkovo' as an innovation hub - new opportunities and finance boost for start-up companies • With Russia's accession to World Trade Organization, some encryption technology (i.e. wireless equipment) no longer needs a licence. • The foreign equity limitation (49%) has been removed on telecommunications	• Geographically vast market, spanning nine time zones • Lack of transparency and limited information • Underdeveloped infrastructure and logistical challenges, especially in accessing markets outside of major cities • Burdensome regulatory regimes, extensive corruption and inadequate rule of law • English is not widely spoken, although knowledge of the language is expanding, especially in the major cities

Source: DTZ Research, Oxford Economics

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Updates on occupational markets from an occupier perspective, with commentary, analysis, charts and data.

Global Occupancy Costs Offices 2012
Obligations of Occupation Americas 2012
Obligations of Occupation Asia Pacific 2012
Obligations of Occupation EMEA 2012
Office Occupier Review Asia Pacific H1 2012
Office Occupier Review Europe H1 2012
The European Insurance Sector – June 2012

Property Times

Regular updates on occupational markets from a landlord perspective, with commentary, charts, data and forecasts. Coverage includes Asia Pacific, Bangkok, Beijing, Berlin, Brisbane, Bristol, Brussels, Budapest, Central London, Chengdu, Chongqing, Dalian, Edinburgh, Europe, Frankfurt, Glasgow, Guangzhou, Hangzhou, Ho Chi Minh City, Hong Kong, India, Jakarta, Japan, Kuala Lumpur, Luxembourg, Madrid, Manchester, Melbourne, Milan, Nanjing, Newcastle, Paris, Poland, Prague, Qingdao, Rome, Seoul, Shanghai, Shenyang, Shenzhen, Singapore, Stockholm, Sydney, Taipei, Tianjin, Ukraine, Warsaw, Wuhan, Xian.

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