



GSMA Mobile for Development Impact supports the digital empowerment of people in emerging markets through its Mobile for Development resource. It is a central platform of data, analysis and insight used to inform investment and design decisions for mobile services. Our work is freely accessible through support from Omidyar Network and in partnership with The MasterCard Foundation at: www.gsmaintelligence.com/m4d.

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Vital Wave engages multinational corporations and development organisations to scale business and programs in diverse global markets. The firm is a leading provider of professional services at the intersection of business, development, and technology. Vital Wave draws on proven analytical methods and decades of field experience in low- and middle-income countries to achieve sustained impact and growth for its clients at the global, regional, and local levels.

List of organisations interviewed

The conclusions and recommendations in this report are drawn from interviews with Silicon Valley startup ecosystem players and investors, mobile operators, mobile entrepreneurs in emerging markets, and others. The research and analysis was conducted by Vital Wave with support from Marissa Drouillard and Ken Banks, from July to September 2014.

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Incubators & accelerators (*investors)

500 Startups*

88mph* Acceleprise

IgniteXL

Santa Clara Global Social Benefit Institute (GSBI)

Meltwater Entrepreneurial School of Technology (MEST)

Joyful Frog Digital Incubator (JFDI)

IdeaSpace*
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Tigo Think*

Orange Fab Lab, Silicon Valley*

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Funding Channels

Omidyar Network VC4Africa

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Mobile operators

Smart Communications

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Tigo

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Orange

SingTel

Telefonica

Globe Telecom

Vodafone

GrameenPhone

Kopo

Labor Link (Good World Solutions)

Labor Voices

Sari Software Solutions

WezaTele

Volo Broadband

Lumeter

Emprego

Criticalink

Miaki

Lenndo

Cialfo

Mi Media Manzana

Ala2ona

Juhudi Kilimo

BookBox

Emerging market entrepreneurs & Silicon Valley: making the mobile connection

Other support organisations

African Technology Foundation

AMTOB ANDE

Benetech / Social Coding for Good

Endeavor

Frugal Innovation Lab

Ideo.org Mifos NestGSV

Plug and Play Tech Center

Startups

8villages

Angaza Design

Apstrata

EngageSPARK

HiviSasa

Other ICT organisations and companies

Mozilla

TechSoup Global

Kiva.org Zendesk

Hubs and networks

Impact Hub San Francisco

iHub Nairobi

TIDE

Galvanize

Events and news organisations

SeedStars World

Geeks on a Beac

Executive Summary

These are promising times for entrepreneurs in emerging markets. Launching new mobile products and services has never been faster or cheaper, and the pool of digitally savvy, connected consumers grows daily. Mobile device penetration in emerging markets continues to rise, thanks to falling handset prices and the increased utility of mobile platforms. Application development is expanding and accelerating. From Dhaka to Dakar, coders with a fast Internet connection and good ideas are responding to market pain points and driving innovation with new mobile apps. Many of these entrepreneurs are as ambitious as Silicon Valley's early pioneers. They want to disrupt markets and change existing systems.

However, while *launching* a new mobile product or service is easier than ever, *scaling* one is not. Initiatives that help mobile entrepreneurs in emerging markets have enjoyed a few early successes. Mobile startups are finding a foothold in local markets, the entrepreneurial ecosystem is growing, and emerging-market talent is carving a place in the digital economy. However, the limited number of scaled success stories is a sign that critical challenges remain. Many emerging-market entrepreneurs lack experience in effective marketing, optimising service architecture for scale, or capturing and analysing user data to steer growth and development.

Recognising these needs, many have wondered if Silicon Valley, with abundant capital and a track record of disruptive innovation, is poised to help mobile startups scale in emerging markets.

Silicon Valley is home to a unique mix of knowledge, skills, and strong, entrepreneur-focused networks. Further, the rise of more open platforms and operating systems like Android and Firefox has shifted mobile innovation from hardware to software, and has removed more barriers for mobile startups to scale.

Established companies in Silicon Valley are now looking toward the widespread adoption of mobile in emerging markets and planning their growth strategy around these future users. Facebook and Yahoo have declared themselves "mobile-first"; and venture capital for mobile products and services has increased from 7 percent in 2010 to nearly 20 percent in 2013. As of October 2014, hundreds of mobile startups have been established in Silicon Valley, and teams from more than 20 global Mobile Network Operators (MNOs) are based there.

Google's Android One and Mozilla's Firefox OS phones reveal strategies to build traction in emerging markets by making the hardware supporting these platforms affordable to more customers. Facebook has announced its readiness to make multi-billion dollar investments to connect billions of unconnected users to the Internet. e-Commerce giants like Amazon, eBay, Rocket Internet, and Alibaba (spurred by the largest IPO of all time) are pushing aggressively into emerging markets, forging local partnerships, and fortifying the mobile commerce ecosystem.

Despite these promising developments, emerging-market entrepreneurs still face challenges in raising capital. Silicon Valley venture capital (VC) firms are reluctant to fund overseas startups due to distance and limited familiarity with business environments in emerging markets.

To continue its historic influence in global technology markets, Silicon Valley must engage with the entrepreneurs who are building products and services for the next billion consumers, wielding a large portion of the estimated six billion smartphone connections that will be in use by 2020, nearly 80% of which will be in emerging markets.

While Silicon Valley resources have traditionally gone to developed-world ventures, they can be strategically applied to help entrepreneurs in emerging markets. Silicon Valley-based accelerators can serve as an effective bridge to the business and technical skills, resources, and networks that many emerging-market entrepreneurs lack.

As discussed in <u>Financing Innovation</u>, Silicon Valley is uniquely positioned to help emerging market mobile startups scale, and there are key stakeholders who can make it happen.

The below table presents recommended actions and potential benefits for stakeholders who can accelerate the scaling of mobile-enabled products and services in emerging markets.

Table 1: Recommended actions and potential benefits for ecosystem stakeholders

Stakeholder	Recommended Action ("Gives")	Potential Benefits ("Gets")
Emerging-market mobile entrepreneurs	 Leverage local resources at early stages to develop and launch mobile products and services with the potential to scale. Engage with Silicon Valley ecosystem when ready to scale through structured support programmes or informal networks. Share knowledge of home market context, including viable business models and user preferences. Position companies as longer-term investments. 	 Knowledge, networks, and skills to scale mobile startups Funds for scale Capital and knowledge can be used to explore future opportunities for entrepreneurs and startups.
Silicon Valley support players (accelerators, startup resources)	 Increase number of emerging-market startups engaged in existing accelerator programmes through outreach and modified selection criteria. Ensure programmes are relevant to emerging-market startups. 	 Access to new pipeline of startups to include in programmes Exposure to key mobile growth markets Participating startups can serve as global champions for programme success.
Silicon Valley investment funding channels	 Provide time, expertise, and access to resource networks. Develop appropriate metrics for emerging-market startups. Invest funds. 	 Early access to new pipeline of potential investments Greater knowledge and understanding of key mobile growth markets and new business models
Silicon Valley-based technology companies	 Engage with emerging-market startups to understand needs and market environments. Ensure global accessibility of platforms and tools that help emerging-market startups scale. 	 Potential to deploy, test, and build champions in local markets Gain knowledge to localize for market needs or build a more flexible platform to meet varying market conditions.

Mobile entrepreneurship in emerging markets

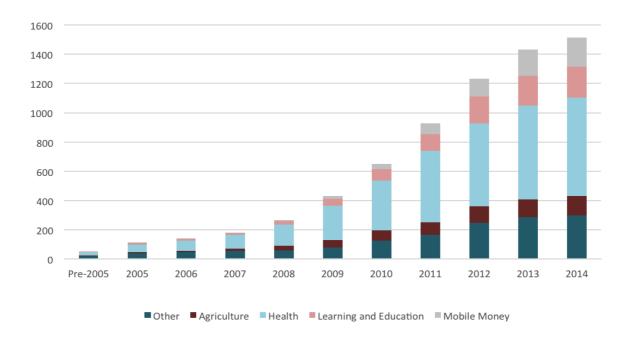
Mobile penetration in emerging markets is increasing rapidly, and building a mobile application has never been faster or cheaper. The number of entrepreneurs and support organisations has increased dramatically around the world, while at the same time governments, donors, and development organisations are focusing on entrepreneurship as a key driver of economic growth in emerging markets. However, launching a product is only the first step to creating a value-generating business. Acquiring the right business skills and tools to scale is difficult for entrepreneurs everywhere, especially in emerging markets.

Why mobile matters

The use of mobile devices in emerging markets is rising rapidly. There were 2.7 billion unique subscribers in the developing world, with just under 5.8 billion SIM connections between them, as of Q3 2014. ¹

The number of products and services using mobile to offer positive social impact is also increasing (see Figure 1). We are currently tracking over 1500 deployments across Asia, Africa, and the Americas. Mobile-enabled products and services have dramatically increased access to basic necessities like electricity, health information, and educational materials. Mobile financial services like Econet's EcoCash in Zimbabwe and Telenor's Easypaisa in Pakistan have brought financial services to previously "unbanked" populations. With 219 services in 84 countries at the end of 2013, mobile money is now widely available, and there are over 60 million active mobile money accounts globally.² A 2014 study on the value of mobile broadband for working women in the developing world found that 80 percent of working women consider their mobile phone an important tool for work.³

Figure 1: The Rise of M4D
Source: GSMA Mobile for Development Impact



¹ Source: GSMA Intelligence

² GSMA Mobile Money for the Unbanked, <u>The State of the Industry Report 2013</u>

³ Qualcomm Wireless Reach, Vital Wave, and GSMA. Transforming Women's Livelihoods Through Mobile Broadband

Social media platforms like Facebook and Twitter are also experiencing a steep rise in usage. Facebook recently reached 100 million users in Africa, equivalent to half of the continent's Internet-connected population.⁴ This penetration level provides additional evidence that consumers with limited incomes can and will spend on data in order to access to the mobile web.

"Entrepreneurship" Defined

The Global Entrepreneurship Monitor defines entrepreneurship as "any attempt at new business or new venture creation, such as self-employment, a new business organization, or the expansion of an existing business, by an individual, a team of individuals, or an established business."

The inspiration for entrepreneurship varies, and there is a distinction between "necessity-driven motives" and "opportunity-driven motives." Necessity-driven entrepreneurs typically start a business because they see no better opportunities for work, while opportunity-driven entrepreneurs aim to disrupt a market and reach a level of local or global scale.

Why entrepreneurship matters

A healthy entrepreneurial environment is seen by many as a key to broader economic growth and development. Entrepreneurs see market deficiencies and translate them into opportunities. In developing countries, infrastructure is often underdeveloped, social services are difficult to access, and businesses are hobbled by a range of market inefficiencies. Entrepreneurs are among the first to use new mobile technologies to address these problems. For example, medical workers who used to walk miles to deliver patient reports now use text or mobile web-based services to capture, track, and share information in real time.

Mobile and technology-focused entrepreneurship

From mobile startups to small and medium-sized enterprises (SMEs), the ecosystem that supports mobile businesses is growing. Increased feature phone, mobile web and smartphone penetration, and a proliferation of mobile-based services are fueling this growth. Product development is accelerated as Internet connectivity costs fall and developers gain access to affordable hosting options, tools and services. Mobile product developers can now go from idea to minimum viable product (MVP) quickly and cheaply. As a result, entrepreneurial activity is blossoming globally, particularly in emerging markets.

Startup-friendly environments, including co-working spaces, business plan competitions, incubators, and accelerators, are emerging, especially in regional hubs like Nairobi in East Africa, Lagos in West Africa, Bangalore in South Asia, and Manila in Southeast Asia. Many startup support programmes are funded by bilateral donors, corporate partners, universities, or VC funds, and most have an explicit focus on technology- and mobile-based startups (e.g., Africa's 88mph and Kickstart in Manila). Early results from initiatives like infoDev's mLabs⁵ network, launched in 2010, point to positive impacts on the mobile innovation and

⁴ Josh Constine, <u>Facebook Hits 100M Users in Africa, Half the Continent's Internet-Connected Population TechCrunch</u>, TechCrunch, 8 Sept. 2014.

⁵ mLabs is a network of specialized mobile app business incubation and acceleration service providers. mLabs is an initiative of infoDev, a global trust fund programme of the World Bank.

entrepreneurship ecosystems, and on startups launched through the initiative.⁶ In addition to general ecosystem development, investor attention to these emerging-market technology hubs also continues to grow. However, the money flowing to startups in the developing world still falls far short of the investment resources that startups in Silicon Valley receive.

This rise of digital economies within emerging markets presents a profound opportunity for startups to develop and sell new products and services. In markets where household incomes are increasing, incumbent consumer goods and services companies may not be agile enough to react to changing market demand and preferences. This creates a window of opportunity for startups that can react quickly and apply new technologies to unmet market needs. Emerging-market entrepreneurs also benefit from their knowledge of local markets, an advantage over larger multinational or regional companies.

Users in emerging markets want mobile services that will improve their lives by connecting them with friends, family and businesses, and improving access to basic services. Nowhere is this more evident than in Kenya, where mobile entrepreneurs have introduced many new products and services to address social problems or underserved needs. In fact, entrepreneurs in Kenya report that meeting a need that was underserved in the market was the main reason they started their businesses, and most of these needs were identified from personal experience. Sixty-seven percent of services we currently track, are led by organisations other than mobile operators, a trend that will surely continue as a wide range of organisations look to customerpaying revenue models for longer-term revenues that enable scale.

The "Scaling" Stage

This report defines "scaling" as a stage in a company's development after it has established a viable product or service, a proven market, a clear commercialization strategy, and a considerable customer base. Revenues are strong or growing. The company has several employees and a team focused on scaling up operations regionally or internationally. In the traditional startup model, the scaling stage would typically follow the "Idea," "Prototype," and "Seed" stages, and would be followed by an "Expansion" stage.

Growing support, but scale is limited

In spite of all the increased activity and improved market conditions, startups in emerging markets still lack the resources to scale. A survey of nearly 600 entrepreneurs in six Sub-Saharan countries found that accessing financing, skills, and talent is one of their greatest challenges.⁹

It is no surprise that emerging-market entrepreneurs report funding as a challenge. Indeed, raising capital is difficult in every market. However, it is more pronounced in emerging markets, especially when trying to raise capital locally. In many regions, local funds are available, but investors find few projects that are ready for true growth. 88mph founder Nikolai Barnwell states,

⁶ infoDev. Do mLabs Make a Difference? A Holistic Outcome Assessment of infoDev's Mobile Entrepreneurship Enablers

⁷ GSMA Mobile for Development Impact, Digital Entrepreneurship in Kenya 2014

⁸ Source: GSMA Mobile for Development Impact, M4D Impact Products & Services Tracker (Oct. 2014)

⁹ Omidyar Network, Accelerating Entrepreneurship in Africa

"There's a lot of money for seed funding, early stage, and from development agencies. But as an investor, there isn't a big enough group of qualified entrepreneurs that you can invest into." This sentiment is echoed in a survey of investors active in Information Communications Technology (ICT). In the survey, investors stated that their greatest perceived risk was backing startups without scalable business models. The lack of appropriate experience and weak business skills among entrepreneurs were reported as the second and third highest perceived risks.¹⁰

Local programmes vs. global competition

Many entrepreneurs surveyed report that they have participated in some type of startup support activity, such as a business plan competition (38 percent), incubator or accelerator (41 percent), or co-working space or hub (32 percent). However, once startups expand beyond early-adopter customers, local resources are often insufficient to support further scale.

Kenyan MNO Safaricom launched the Safaricom AppWiz Challenge in 2013 to identify developers with interest in mobile ICTs. AppWiz combines a competition and support programme for developers, with the goal of helping to build the capability of the local developer ecosystem. "Local entrepreneurs need to start looking at competing on a global scale, not just in Kenya," said Veronica Ogeto Tchoketch, Head of Innovation at Safaricom. Finalists participate in a three-month incubation programme during which they receive local mentorship and business coaching. While the programme has benefitted a number of entrepreneurs with financial, technical, and business support, challenges such as access to local, experienced mentors and experts remain. Tchoketch notes that there are many startups in the seed stage unable to reach the next level in terms of scale and revenue based on a lack of appropriate, locally available resources.

Startups need more than just the ideas and energy of entrepreneurs and developers to reach scale. They also need "people with skills in user experience, deep cloud knowledge, marketing and sales," according to Ravi Agarwal, Founder of Philippines-based EngageSPARK. Agarwal also points out that top talent is reluctant to join startups because they lack a financial safety net and cannot absorb the risk of failing.

There is also disparity in skills between more developed regions of Asia, such as India and the Philippines, and parts of Africa. While parts of Asia have forged ahead in the number of engineers and developers with the skills to build mobile applications, many parts of the world still lack a critical mass of technically trained professionals. In most of these regions, few institutions offer business and technical training to young professionals. This means most entrepreneurs are self-taught and limited in their exposure to world-class product and service development methodologies.

Connecting emerging market mobile entrepreneurs with the skills, experience, and networks to support national and international scale will be vital to overcoming these challenges.

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¹⁰ GSMA Mobile for Development Impact, Financing Innovation

Silicon Valley: Re-investment and the shift to mobile

Silicon Valley continues to be viewed as the best place in the world for startups to learn how to scale. Despite the growth of vibrant technology centers in Seattle, Boston, Bangalore, Beijing, and elsewhere, Silicon Valley scores highest on nearly every entrepreneurship index. For example, the Global Startup Ecosystem Index ranked Silicon Valley first in Funding, Performance, Talent, Support, Mindset, and Trendsetter.¹¹

But it has not always been that way. Several waves of innovation paved the way for modern-day technology startups. The unique history of the Valley resulted in a special culture and a self-reinforcing, pay-it-forward, networked ecosystem.

"Silicon Valley is composed of people that made 1 million users in a day, that sold companies for \$500M+, that made more than 750 investments, that manage billion-dollar funds. The Valley has always been excited about doing hard things, and if starting companies is not hard anymore and everybody can do it, it's not exciting anymore. You know what's hard and exciting, instead? Scaling them."

- Armando Biondi, cofounder and COO of AdEspresso and angel investor

The original startup accelerator was a group of friends

Silicon Valley's concentrated talent pool emerged from Cold War government spending on military research and development. As the private and public sectors worked to advance and commercialise new technologies, like microwave electronics and aerospace, relationships were forged between Bay Area universities and local corporations. These organisations attracted talented professionals and academics to work on innovative projects at local universities such as Stanford and government-backed technology companies.¹² These conditions set Silicon Valley on a course where industry experts could thrive and make money, attracting like-minded entrepreneurs with great foresight and personal commitment to investing their own fortunes in new ventures. Four of the eight co-founders of Fairchild Semiconductors went on to establish the Bay Area's first venture capital firm in 1961. The firm went on to invest in fifteen companies, establishing technology giants such as Intel and Advanced Micro Devices (AMD).¹³

¹¹ Armando Biondi, Silicon Valley has Evolved its Not about Startups Anymore Venture Beat, Web: 14 Aug. 2014.

¹² Stuart Leslie, How the West was Won. The Military Making of Silicon Valley, Piscataway, NJ: IEEE Press, 1993.

¹³ Endeavor Insight, <u>How Did Silicon Valley Become Silicon Valley? Three Surprising Lessons for Other Cities and Regions</u>
¹⁵ Ibid

"What makes Silicon Valley a place where startups can succeed? The belief that they can."

- Dave McClure, Angel Investor and Head of 500 Startups

Fairchild and its founders began a trend that was repeated by other companies in the semiconductor industry in Silicon Valley, a pattern that ¹⁴Endeavor Insight refers to as the "Entrepreneurship Acceleration Cycle," in which successful founders reinvest their time and money into new firms. According to Endeavor Insight, almost 70 percent of Silicon Valley's public firms can be linked back to Fairchild, representing 92 companies with a combined value of over US\$2.1 trillion and 800,000 jobs. ¹⁵ The key to these success stories is how successful founders were open and willing to connect with and invest in others, share their networks, and provide individual advice and guidance.

The Fairchild model for perpetuating success continues today through a group of entrepreneurs known as the "PayPal Mafia," a term that refers to members of PayPal's founding team, who since the acquisition by eBay have gone on to create, invest in, and advise some of Silicon Valley's most important tech companies. The way these founders connected with each other and the startups they invested in has become a defining feature of Silicon Valley. Social networks, not headhunters, were used to build teams. According to Conner Forrest, "It's not just the money that members of PayPal put into new startups, it was the advice they gave that helped shape the next generation of startups." 16

Silicon Valley: the global mobile hub

Silicon Valley is more relevant to mobile technology than ever before. For years, innovation in the mobile space happened at the hardware level, within a closed operating system on an individual device. With the advent of open or accessible platform operating systems like Mozilla's Firefox and Google's Android, innovation has shifted to the software layer – an area where Silicon Valley excels.

These platforms enable entrepreneurs to create value and achieve scale independent of device manufacturers and operators. While mobile operators used to control relationships with users through proprietary operating systems and pre-loaded applications and content, the shift to smartphones and open/accessible platforms has opened the door to other content and service developers. Google's Android and Apple's iOS now account for 90 percent of smartphone operating systems worldwide, and over 80 percent of developer mindshare.¹⁷ While smartphone penetration in developing markets remains low, smartphones as a share of handset sales is now over 40 percent, compared to less than 10 percent in 2008. Moreover, these figures do not account for handsets acquired second-hand, a very common means of mobile phone acquisition in emerging markets.

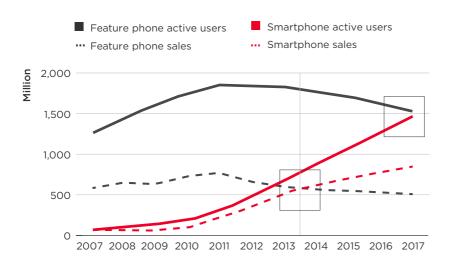
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¹⁶ Conner Forrest, How the 'Paypal Mafia' Redefined Success in Silicon Valley, TechRepublic, Web: 14 Aug. 2014.

¹⁷ GSMA Mobile for Development Impact, Platform Wars

Figure 2: Smartphones versus feature phones in emerging markets

Source: GSMA Intelligence, Strategy Analytics



Since both Google and Apple have their home in Silicon Valley, resources for mobile developers and startups utilizing these platforms are more accessible than in other places. As people spend increasing amounts of screen time on mobile devices, the network of companies focusing on mobile-based products and services will continue to grow. More than ever, Silicon Valley is positioned as the global hub of mobile technology.

The mobile industry's increasing presence in Silicon Valley

Silicon Valley is not just for developers and entrepreneurs anymore. While more than 300 mobile startups call Silicon Valley home, 25 non-Silicon Valley-based multinationals and more than 25 global MNOs are also located there. When access to networks is vital to business growth, these numbers matter. For startups, a physical presence in the Valley provides access to insiders at some of the world's largest mobile companies – many with presence and distribution networks in emerging markets. For their part, mobile operators are actively engaging mobile startups in Silicon Valley. Nearly all major global operators have some presence in the Valley, primarily to engage in venture capital and technology scouting. Mobile operators commonly partner with startups for co-development and testing, and many startups have become acquisition targets. Operators that have launched structured programmes to incubate and accelerate startups include Orange (i.e., Orange Fab), Verizon Wireless (i.e., Verizon Innovation Center), AT&T (i.e., AT&T Foundry Labs), SK Telecom (i.e., SK Telecom Americans Innopartners), and SwissCom. Several operators maintain close relationships with existing accelerators in Silicon Valley. KDDI America and SingTel partner with Runway Accelerator to scout new technologies and keep a pulse on the startup scene. Several operators, including Globe and Mobily, maintain relationships with Plug and Play Tech Center and support Plug and Play's "Media & Mobile" startup programme.

While traditional mobile players seek new ways to engage with a billion new mobile users in emerging markets, there is a demonstrated belief that having a presence in Silicon Valley is an important part of positioning in this shifting global landscape.

¹⁸ Marc Zawaki, Spotlight: The Silicon Valley Mobile Industry Cluster, 650 Labs, 11 Aug. 2013

Tapping into Innovation with Orange Fab

"Orange has been based in Silicon Valley for over 15 years and has developed a series of relationships with stakeholders in the ecosystem in order to approach innovators early on in the development of their projects," says Georges Nahon, CEO, Orange Silicon Valley. "Nearly two years ago, Orange decided to meet these new, difficult-to-spot entrepreneurs through a simple and effective gateway. On the one hand, this allows us to detect interesting projects for our clients while also enabling these companies and their founders to have quick access to qualified, efficient stakeholders in the Orange decision group who can take product knowledge and make a decision in a relatively short amount of time."

Orange Silicon Valley created Orange Fab to implement this gateway program. Orange Fab identifies existing startups and works with them to develop and scale their products and services. To date, in the three "seasons" of Orange Fab, there have been 22 startups participants. Participants work on-site with Orange Silicon Valley engineers, analysts, and product managers, receive advice from mentors and industry thought leaders, and have the opportunity to pitch to Orange executives and other leading corporate brands such as Visa, LG Electronics, Hilton, Morpho, Fnac, and Moet Hennessy.

Smart Moves by Smart Communications

Philippines-based mobile operator Smart, who partnered with a number of other organisations to launch the Manila-based IdeaSpace accelerator, plans to establish an outpost in San Francisco in the next 12-18 months. The rationale behind IdeaSpace's Silicon Valley presence is multifaceted, according to Earl Valencia, the Head of IdeaSpace. The Silicon Valley branch will enable Smart to gain access to other global players and expand Smart products – proven in the Philippines – to other markets. In addition, IdeaSpace wants a landing pad for startups accelerated back in the Philippines. "Once they've reached certain target revenue milestones in the Philippines, we want them to spend 2-3 months in Silicon Valley to do business development, look at expanding their distribution options, and potentially raise additional capital from investors and other donors," says Valencia. He adds that he also wants to raise awareness in Silicon Valley about the real opportunities in emerging markets. "There's money to be made," he says.

Technology giants shift to "mobile-first"

While Google, Facebook, and Apple dominate the mobile developer and startup ecosystems, other companies are quickly shifting to a "mobile first" posture to increase revenues and user engagement.

Facebook's US\$16 billion acquisition of messaging application WhatsApp in 2014 demonstrates the value big companies are placing on mobile apps. Facebook's Q3 earnings report revealed that it makes 66 percent of its advertising revenue on its mobile platform, and roughly one-third of all Facebook users are mobile-only. Perhaps even more important are growth numbers that reveal Facebook's user base is growing twice as fast in the mobile space than its overall user growth. All of this indicates that Facebook is now a mobile company. 20

Yahoo is also banking on mobile products and services to revive falling profits. The company publicly stated in 2013 that it would make large investments to become a mobile-first company by developing and acquiring mobile applications and investing in mobile platforms. In Yahoo's 2013 Annual Report, the company reported over 400 million monthly users were on mobile devices, more than half of its 800 million global user base. However, with revenue from mobile still dramatically lower than its competitors, the report states: "If we are unable to develop products for mobile devices that users find engaging and that help us grow mobile revenue, our competitive position, our financial condition and operating results could be harmed."²¹

Mobile business applications are seeing considerable attention and growth. Salesforce, the cloud-based customer relationship management (CRM) service, and file-sharing companies like Dropbox and Box are all driving toward more business-focused mobile applications. New mobile enterprise applications enable greater offsite productivity and allow employees to work on their personal mobile devices. These mobile-first business initiatives may have particular relevance in emerging markets, where the mobile phone may be a worker's primary means of accessing company information, providing data, or communicating with colleagues.

Silicon Valley eyes emerging-market opportunities

Venture Capital firms

Silicon Valley's concentration of VC firms and its track record of good timing and wealth creation make the Valley a magnet for developers and tech entrepreneurs from Singapore to South Africa. Until recently, investors tended to be commercially driven and domestically focused. Few funders spoke about 'social impact' as an objective, and even fewer were interested in emerging-market opportunities. This is beginning to change, and a growing number of VC firms are taking a closer look at emerging markets. These firms range from purely commercial to philanthropic in terms of their motives, and most would agree that the quality and quantity of investment opportunities coming from entrepreneurs in the developing world is increasing.

In the spring and summer of 2014, several high-profile emerging-market Internet companies made headlines with IPOs or IPO prospects. Chinese e-commerce platform Alibaba raised US\$21.8 billion, valuing the company at over US\$168 billion.²² Not only

The Verge, Web: 23 July 2014.

¹⁹ Josh Constine, <u>Facebook Beats In Q3 With \$3.2B Revenue</u>, <u>User Growth Up A Slower 2.27% QOQ To 1.35B</u> TechCrunch, Web: 29 Oct. 2014.

²⁰ Ellis Hamburger, Facebook's new stats: 1.32 billion users, 30 percent only use it on their phone,

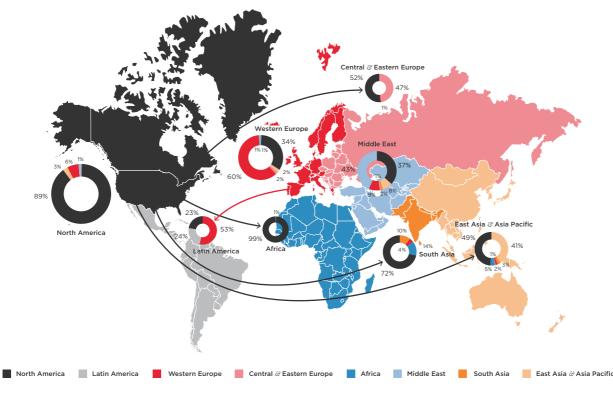
²¹ Yahoo! Inc, Yahoo! Inc. 2013 Annual Report

did Alibaba's IPO break Visa's record and topped Facebook for the biggest technology offering ever, but the stock is expected to attract large growth-oriented investors based in the United States. India's e-commerce leaders are also attracting investment from international funders. Flipkart recently raised US\$1 billion, most likely to ward off competition and continue to make acquisitions.²³ Snapdeal, a Flipkart competitor in India, is already planning to list publicly in the United States in the next 12 to 24 months.²⁴

The success of e-commerce companies like Alibaba, Flipcart, and Snapdeal, which derive a growing portion of their profits from mobile-based sales, is evidence that emerging-market-based companies can grow to a global scale, and merit consideration as investments. In fact, Yahoo's early stake in Alibaba led to a multi-billion dollar windfall. Nevertheless, the lion's share of Silicon Valley VC investments still go to companies based in the United States. Only 10 percent of ICT investments from North American investors are invested internationally, with 6 percent going into startups in Western Europe, 3 percent to East Asia and Asia Pacific, and 1 percent to the Middle East (see Figure 3).

Figure 3: Where do ICT investors put their money?

Source: GSMA Mobile for Development Impact. Financing Innovation. Report, 2014



Given the attention that emerging-market startups are receiving in the media, the blistering pace of mobile technology adoption in these markets, and the potential for digital technology to address urgent social and institutional challenges, one would expect investment levels to be higher. Africa and South Asia did not even register against the sheer volume of investment activity in

²² Bloomberg BusinessWeek, <u>Alibaba said to raise \$21.8B in Record-Breaking U.S. IPO</u>, Bloomberg BusinessWeek, Web: 29 Sept. 2014

²³ Catherine Shu, <u>Indian E-Commerce Giant Flipkart Raises Massive \$1B Investment Round</u>, TechCrunch, Web: 29 Jul. 2014.

²⁴ Christina Farr, Why India's answer to Alibaba & eBay is the tech IPO to watch, Venture Beat, 15 Feb. 2014.

North America. This raises several interesting questions: what prevents VC investors, especially smart tech investors in Silicon Valley, from investing in mobile opportunities abroad, and what can be done to attract more capital for technologies that could have a transformative impact in the developing world?

Even with sound business plans and solid teams, most emerging-market entrepreneurs still face challenges raising capital from Silicon Valley venture capital firms. Firstly, many investors believe that physical proximity to their portfolio companies improves their ability to add value to them.²⁵ Secondly, most VCs are unfamiliar with the context and business opportunities in emerging markets. The problems that entrepreneurs address in emerging markets are different, and in some cases the size of the markets or limited consumer purchasing power are less attractive. Institutional voids, device ownership challenges, and differences in consumer behaviors ultimately affect the value proposition and the business model in a way that can dissuade Silicon Valley investors.

VC models and expectations need to shift. Investors who inject capital into businesses in Tanzania or Pakistan cannot always expect to receive the same short-term rates of return as more developed markets but should anticipate longer-term returns. Entrepreneurs may also need to position their companies as longer-term investments, where capital is used to not only scale the venture but also develop the ecosystem and promote a self-reinforcing cycle of entrepreneurship. This is a fundamentally different pitch than what Silicon Valley investors are used to hearing. Furthermore, lack of physical proximity is mitigated by easier travel and remote video conferencing that facilitates better communication and interpersonal relationships. While many challenges associated with emerging markets infrastructure remain, Alibaba and others have proven that emerging-market entrepreneurs can turn market limitations into billion-dollar businesses and viable investments.

Technology companies

At a mobile conference in China in 2013, Stephen Ozoigbo, Founder and CEO of the African Technology Foundation (ATF), met with of Evernote's executive team to discuss the company's growth in Africa. ATF works to build bridges between African and global business communities, and Evernote, a fast-growing company that offers a suite of online software and services, hoped to establish connections and build communities in an emerging tech market. Evernote has over 100 million users, mostly in North America. To date, there are around 1 million users in Africa, of which 50% are in South Africa. A few months after their meeting, Evernote partnered with ATF to launch a technology roadshow and a regional competition for African developers to integrate their applications with the Evernote API. The winner received a 10-day trip to Silicon Valley to attend Evernote's user conference and demonstrate their app live on stage. Evernote's primary goal for the roadshow was to establish a community of champions in Africa who would expand their platform in local markets.

Evernote is one of many tech companies that have made, and continue to make, substantial investments to understand local needs and gain a foothold in emerging markets. Most have learned that simply offering mature-market products and services is no guarantee of success. The market dynamics in developing countries are very different, and often require different business models. Dropbox announced its platform would be available in local languages like Malay and Indonesian. San Francisco-based Uber is now present in 45 countries, including South Africa, Nigeria, India, Colombia, and the Philippines. The digital ridesharing service is exploring new means of payments that can address the needs of users without credit cards. ²⁶ Facebook

²⁵ Z. Finkelstein and M. Gedalin, <u>Silicon Valley VCs don't like to travel. Here's why they should reconsider</u>, Venture Beat, 26 Jul. 2014.

created a limited-resource "Connectivity Lab" in its Silicon Valley headquarters to develop emerging market-focused applications for feature phones and 2G networks.

Opportunities for Silicon Valley-based technology companies will increase along with smartphone penetration, rising global incomes, mobile payment innovations, and improvement to the mobile network infrastructure. Gaining a foothold (or expanding established services) will be easier with the right partners and representatives. Adapting to the needs of local consumers is another sound strategy. In each case, companies that cultivate relationships with local entrepreneurs will be better positioned.

Accelerated global impact

The two broad groups discussed in this report – emerging-market mobile entrepreneurs and the Silicon Valley investment and technology community – can support each other for profit, growth, scale, and associated socio-economic development.

Emerging-market mobile entrepreneurs often lack resources to grow beyond the initial seed stage. Silicon Valley's startup ecosystem and growing influence in mobile can support them by providing access to finance, cloud-based infrastructure, and professional networks with business and technical skills.

Silicon Valley investors can find viable investment opportunities by connecting with emerging-market mobile entrepreneurs. These local tech leaders can help investors understand the context and opportunities in distinct markets. Organisations like 500 Startups and VC4Africa are educating investors about potential opportunities in emerging markets. Geeks on a Plane, an initiative of 500 Startups, takes investors, executives, and startups to emerging markets to expose them to cross-border opportunities and establish global connections. VC4Africa connects angel investors located outside of Africa with entrepreneurs and startups in Africa via a curated network. This network fosters relationships and establishes a platform on which investors can learn about and invest in African startups.

"Even global companies like Mozilla have many executives who have not had a lot of exposure to these markets. It's kind of a cultural exchange opportunity for them. Get the decision makers to have a better idea of what's going on in these markets. If [companies] want to expand into a new market, the entrepreneurs can be a foothold, or help them learn about the market."

- Mark Surman, Executive Director, Mozilla Foundation

By engaging with emerging-market entrepreneurs, Silicon Valley technology companies can discover new investment opportunities and open the door to new markets. Ambitious, tech-savvy entrepreneurs can inform product and service design by explaining unfamiliar market pain points, environmental conditions, and customer needs. For technology companies, better market knowledge means better testing and deployment, and the ability to build a more flexible product or service that meets

local needs and unique market conditions. Entrepreneurs can also become champions in their home market, promoting partners, building the overall ecosystem, and providing access to local developer communities.

The role of incubators, accelerators and innovation labs

A proliferation of programmes in Silicon Valley that support startups has made it easier for promising companies to tap into well-established networks and resource pools. Incubators, accelerators, and other Silicon Valley-based immersive programmes have diverse operating models and goals. Many programmes are attached to corporations (e.g., Orange Labs, AT&T's Foundry), Venture Capital funds, universities (e.g., Stanford, Singularity), or governments. Other programmes maintain an industry or sector focus (e.g., health, wearables, mobile, social impact, non-profits). There are also several prominent, unaffiliated programmes, such as Plug and Play, the self-proclaimed "Silicon Valley in a Box." Both Plug and Play, which brings together about 300 companies, and the newer NestGSV occupy cavernous buildings in the heart of Silicon Valley and serve as nurturing ecosystems with working spaces for startups, workshops on business fundamentals, and meeting spaces for events. Funders, experts, and mentors pass through on a daily basis.

BookBox, Inc. & Stanford's Social e-Challenge

Brij Kothari, co-founder of BookBox, Inc., participated in Stanford's Social e-Challenge in 2003, which exposed him to for-profit social venture business models. Kothari had previously founded PlanetRead, a non-profit organisation in India. BookBox is now a sustainable, for-benefit social enterprise that produces children's animated stories in 30+ languages. The company's productions receive about 20,000 views per day on YouTube. During a conference at Stanford, Kothari made connections with Indian government contacts and funders from Google.

Curated startup programmes have a distinct advantage: they do not require entrepreneurs to move to Silicon Valley. While some startups incorporate in the United States to seek venture capital and build a US client base, many believe that building and disrupting local markets requires their continued presence in those markets. Curated startup programmes allow entrepreneurs to spend time in Silicon Valley building networks and gathering insights, and then return home to scale their business.

One noteworthy example is the Startup Lab at Singularity University (SU), based in Silicon Valley. The SU Lab focuses on scaling startups that aim to solve major global issues through low-cost technologies in limited-resource environments. The Lab has a clear strategy. First, "Grow and Support" entrepreneurs through a robust network of mentors with area expertise and a peer network. Second, "Convene and Connect" by bringing people together from various groups, including large corporations. Central to SU Lab's programme is a quarterly retreat for Lab entrepreneurs, mentors, and others within the SU network. These retreats give participants the chance to learn about technology trends and build valuable personal relationships. "What entrepreneurs really need is someone who can help them make connections once they are back in their market," says Mark Surman, Executive Director of Mozilla Foundation. "They are going to pick up some of the Silicon Valley pixie dust and then once they get back to their home market they will need continued access to Silicon Valley in order to move forward."

The role of mentors

Many entrepreneurs see access to mentors as an important pathway to navigate a challenging business landscape. Hilda Moraa, a serial entrepreneur and CEO and co-founder of Kenya-based Weza Tele, a provider of enterprise mobility solutions in commerce, supply chain and distribution, was struggling with her company's business model. "Figuring out the right business model can take forever," she states. "There is a lack of knowledge [in Kenya] of how to do it. ... Sometimes it just requires someone to help you do it. We can learn from stories in Silicon Valley. We can look at business models in Silicon Valley - how they have been disruptive and scalable." Moraa believes that, while online frameworks like the Business Model Canvas are helpful, the ability to apply a static framework and translate it into ongoing, actionable tools is limited, particularly when factors change so quickly for startups. "We need more than just sharing ideas on how to use frameworks and models. We need peer-to-peer learning," she says.

Tiago Borges Coelho, co-founder of Mozambique-based job search site Emprego, agrees that access to mentors is the primary resource his team needs. Because there is very limited startup activity in Mozambique, Coelho and his co-founder find it difficult to find guidance on scaling their products and services regionally. "We want to talk to people with experience who can help us strategize on the best way to internationalize. What tools can we use? How can we use the IP we've developed and transform it into a scalable business?" says Coelho.

Juhudi Kilimo & GSBI

Juhudi Kilimo provides asset-based loans and basic business and finance training to smallholder farmers and enterprises in Kenya. The service allows users to purchase wealth-generating financial solutions for their agribusiness. CEO Nat Robinson participated in the Global Social Benefit Institute's Accelerator programme. Access to mentors was "by far" the most valuable component for Robinson. Robinson continues to have regular update calls with both of his assigned mentors, who have helped him navigate specific startup challenges. According to Robinson, this was critical because of the "difficulty in finding local mentors with the experience or perspectives to help manage relationships with the board and investors."

Mentors also play another role that is critical to an entrepreneur's success: confidence. With limited exposure to other successful business leaders, it can be difficult for emerging-market entrepreneurs to maintain confidence in their progress. While in Silicon Valley failure is often considered a "badge of honour" and entrepreneurs are encouraged to try again, failure in places less familiar with startup dynamics is seen less charitably.

Timing assistance with readiness for scale

Silicon Valley is not always the best place to develop or launch a product or service. A high cost of living and strong competition from large tech companies for software developers drive up the cost of talent. Salaries for executives have also risen, even among startups. Seed-stage startups can have a longer runway in other locations where there are lower costs, a "good enough" infrastructure, and local talent. Arguably, Silicon Valley offers more value after a product has gained traction in the market. At this point, early adopters can provide user feedback to inform product iterations, and startups become interesting to investors.

However, emerging-market entrepreneurs ranked the Silicon Valley resources they most valued and access to mentors and networks was the clear winner, with over 60 percent ranking this as the first or second most valued resource. Notably, raising funds was the second most valued resource.

There are other reasons beyond networks and funding to visit Silicon Valley. A global survey of app developers conducted by Vision Mobile determined that successful developers (i.e., those with higher revenues in app marketplaces) derive more benefits from user analytics, ad networks, cloud computing, and cross-platform tools.²⁷ In the Valley, proximity to the companies developing these tools, and the ability to tap into networks of experts who use such platforms, is unparalleled.

Meltwater Entrepreneurial School of Technology (MEST), a Ghana-based programme that helps entrepreneurs build mobile businesses, has brought several students from Ghana to Silicon Valley for an immersive experience. According to Louis Dorval of MEST, the biggest takeaway for these entrepreneurs is that they understand for the first time a picture of the global market, competition, and standards. "If you've never left Ghana before, it's tough to imagine what quality looks like and who you are competing with globally," says Dorval. "Until you've been to a coffee shop and seen entrepreneurs pitch VCs at the table next to you, it's kind of hard to believe. The developing-world entrepreneur then thinks: 'At the table next to me is an entrepreneur my age making a pitch, but his PowerPoint is ten times better than mine. I need to up my game in a significant way.' They understand very quickly what the game is on a global level, not only for pitching but also for execution."

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²⁷ Vision Mobile, <u>Developer Economics State of the Union</u>

Conclusions and recommendations

Mobile growth is exploding globally, driven by the increasing adoption and utility of smartphones and the advent of more open/accessible platforms. Billions of new users in developing countries have demonstrated an appetite for mobile products and services that improve their health, education, and livelihoods. Entrepreneurs in emerging markets are developing new mobile products and services to meet evolving user needs, disrupt markets, and change existing systems. Creating these solutions is faster and cheaper than ever, but scaling them in emerging markets is a challenge.

While startup ecosystems to support mobile entrepreneurs in emerging markets are developing, they lack local expertise in areas like marketing, product optimisation, and user data analytics for growth. In addition, access to capital funding is limited in most emerging markets.

Silicon Valley offers a unique collection of resources for emerging-market entrepreneurs in search of experienced entrepreneurs, technical tools, and funding. A culture of openness and willingness to invest in others, combined with a broad, interconnected network of technological and business resources, amplify the Valley's worth. Mobile-focused companies, particularly operators, are creating outposts and innovation hubs throughout the Bay Area, augmenting an already robust ecosystem for mobile entrepreneurs and startups.

Capital flowing from Silicon Valley to emerging markets is also rising. Venture capital for mobile products and services is at peak levels. VC firms are considering a wider range of mobile products and services tailored to less familiar emerging markets. Technology companies are instituting global and "mobile-first" strategies. Industry leaders like Google and Facebook, and smaller technology platforms like Evernote, have all made significant efforts to increase their mobile presence in emerging markets.

Increased engagement and collaboration between emerging-market entrepreneurs and Silicon Valley can expand the global mobile opportunity. Silicon Valley-based incubators, accelerators, and immersion programmes are critical gateways to resources and networks. The opportunity to work with experienced mentors and fine-tune business models is particularly valued by emerging-market entrepreneurs. But there are also considerable benefits for the VC firms and tech companies that participate in these programmes. Emerging-market entrepreneurs provide valuable insights on user needs and preferences, and they can act as partners and advocates in new markets. They are also viable candidates for partnerships and acquisition.

Part of the challenge of scaling products and services for development is the perception that these efforts are primarily a social cause, as opposed to a business opportunity. As the utility of mobile technologies expands, and profits at some of the world's largest tech companies come from mobile-based services, this perception is changing. A viable mobile business *with* a social benefit is not an idea; it is an increasingly common reality.

Appendix: Glossary

- API: Application Programming Interface
- Angelist: Startup marketplace where startups and investors can create and search profiles. Also tracks open funding rounds.
- IPO: Initial Public Offering
- Lean Startup: A method developed by Eric Ries based on his previous experience working on startups. Ries believes that startups can shorten their product development cycles by adopting a combination of business-hypothesis-driven experimentation, iterative product releases, and controlled tests that measure the effect of various ideas.
- Mobile for Development (M4D) Services: Mobile for Development (M4D) Services are defined as mobile-enabled services
 that have a positive impact on a user's life.
- iOS: Mobile operating system developed by Apple.
- Android: Mobile operating system currently developed by Google.
- mLabs: mLabs is a network of specialised mobile app business incubation and acceleration service providers. mLabs is an
 initiative of infoDev, a global trust fund programme of the World Bank.

Startup Stages

- Idea + Prototype: Founders have more than one idea but no tangible prototype. By end of prototype stage founder have crystallized their idea.
- Seed: Founders have formed a company of their ideas and have a clear business model and core team.
- Growth / Scale: Company has a polished product or service, a well-proven market, a clear commercialization strategy and a
 considerable customer base. Revenues are strong and growing. Company has several employees and focused team. Focus
 is on scaling up operations.
- Expansion: Profitable company looking to expand operations regionally or internationally
- Exit: Company "exits" typically through a liquidity event such as an IPO or acquisition.

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About the GSMA

The GSMA represents the interests of mobile operators worldwide, uniting nearly 800 operators with more than 250 companies in the broader mobile ecosystem, including handset and device makers, software companies, equipment providers and Internet companies, as well as organisations in adjacent industry sectors. The GSMA also produces industry-leading events such as Mobile World Congress, Mobile World Congress Shanghai and the Mobile 360 Series conferences.

For more information, please visit the GSMA corporate website at www.gsma.com. Follow the GSMA on Twitter: @GSMA.

About Mobile for Development - Serving the underserved through mobile

Mobile for Development brings together our mobile operator members, the wider mobile industry and the development community to drive commercial mobile services for underserved people in emerging markets. We identify opportunities for social, economic impact and stimulate the development of scalable, life-enhancing mobile services



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