GIGAOM RESEARCH

Sizing the EU app economy

Mark Mulligan and David Card

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Executive summary

Apps running on mobile and social platforms have transformed the global gaming market and disrupted the order of the technology industry. The emerging platforms and business models like app stores and freemium pricing are rippling through — if not ripping apart — enterprise tech sectors. A few Nordic companies — including Rovio, King.com, and Supercell — are showing tremendous success from beyond Silicon Valley. But will the emerging app economy reboot a struggling Europe, jump-starting job growth and infusing European Union countries with startup energy? Signs are promising.
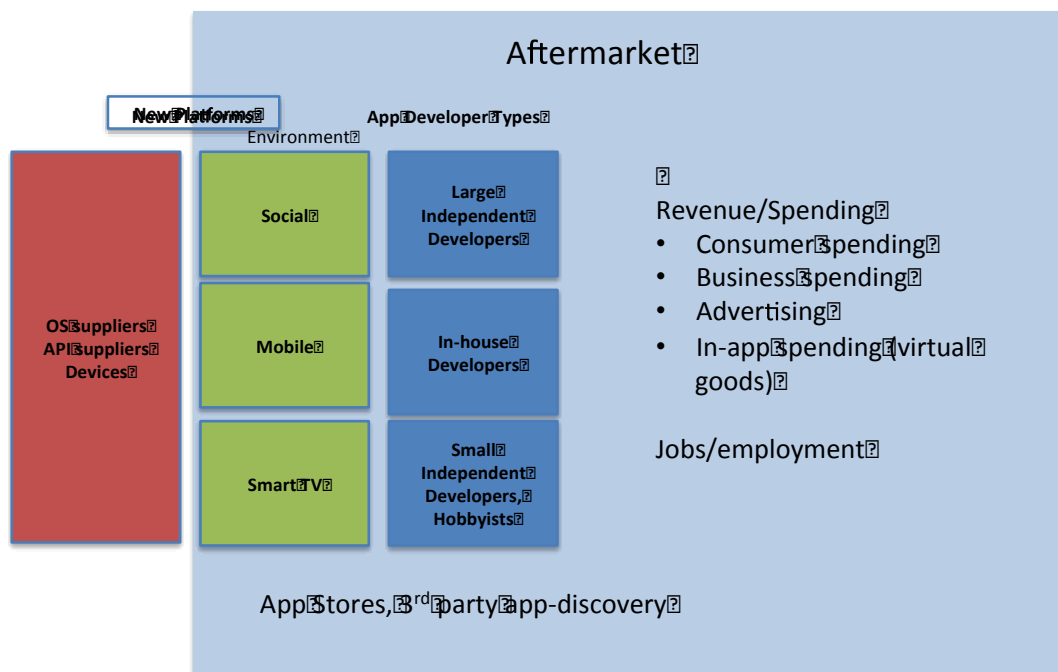
This report focuses on sizing and qualifying the EU app ecosystem, with an eye toward revenue generation, jobs supported, and the bottlenecks still facing EU app developers. Key findings from our analysis, which is based in part on two surveys of developers targeting EU markets, include the following:

- EU developers took in $23.7 billion (€17.5 billion) in revenue in 2013, and we forecast that figure will increase to $85.3 billion (€63 billion) in five years. But you might be surprised where a lot of that revenue comes from. In addition to $8.1 billion (€6.0 billion) in app sales, in-app spending for virtual goods, and advertising, EU developers recognized $15.6 billion (€11.5 billion) in 2013 from contract labor. And much of the developer-for-hire business is for companies that aren't really in the app business per se but use apps to support and market their mainstream offerings like financial services, retailing, and packaged goods.

- Fewer than half of the independent developers we surveyed said they were offering services for hire, so that's a potentially untapped market for startups. Similarly, half of the enterprises that did their own in-house development also used third-party developers. And in-house developers are by and large more satisfied in achieving their commercial objectives than independents, many of whom are frustrated by low prices, free products, or barely emerging ad revenues.

- The EU app-developer workforce will grow from 1 million in 2013 to 2.8 million in 2018. Additional support and marketing staff result in total app economy jobs of 1.8 million in 2013, growing to 4.8 million in 2018.

- EU developers face more business than technical bottlenecks. Increasing users' willingness to pay for apps is problematic, but better discovery vehicles could help relieve high customer-acquisition costs. Similarly we see an opportunity for an EU marketplace where companies needing app development could identify, negotiate with, and hire contract developers.

Introduction

The global app economy can trace its origins to the launch of Apple's iTunes App Store in 2008, but it is still a market in its infancy. Many of the current market dynamics have the air of a gold rush in the Wild West. A relatively small number of astute, opportunistic companies have quickly learned how to make the economics of the fledgling app economy work and dominate app store revenues. But companies selling through consumer app stores are just one part of a much broader ecosystem that includes independent developers acting as contractor guns for hire, small and large agencies, and the developer workforce within enterprises. At the risk of exhausting the metaphor, the surest bet in a gold rush is selling shovels.

EU app ecosystem

Aftermarket

New Platforms

Environment

App Developer Types

Social	Large Independent Developers

OS suppliers
API suppliers
Devices

Mobile	In-house Developers

Revenue/Spending
- Consumer spending
- Business spending
- Advertising
- In-app spending (virtual goods)

Smart TV	Small Independent Developers, Hobbyists

Jobs/employment

App Stores, 3rd party app-discovery

Source: Gigaom Research

This report looks at the revenues and jobs that compose the aftermarket of the European app ecosystem. We'll look at the money users and advertisers spend on and in apps that run on the new app platforms: the environments that support smartphones, social networks, and other connected devices like smart TVs. Much of the economic activity is driven by independent developers, including startups and hobbyists, as well as big companies like *Angry Birds* creator Rovio and enterprise software supplier SAP. But you might be surprised how big a role is played by companies whose primary business isn't apps: companies in financial services, retail, packaged goods, media, and so on.
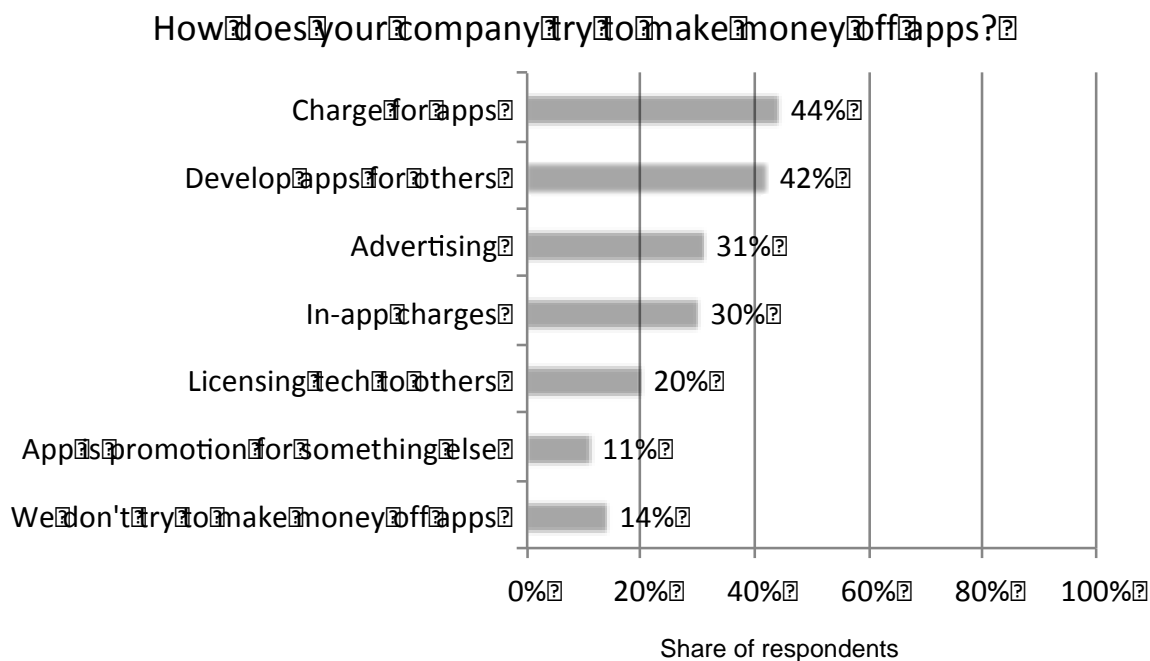
In partnership with the Insight Centre for Data Analytics at the National University of Ireland, Galway, Gigaom Research has been working for the past year or so on the Eurapp project, sponsored by the European Commission. Eurapp is part of the Startup Europe initiative of the EC's Digital Agenda, which aims to help tech entrepreneurs start, maintain, and grow their business in Europe. We have built profiles of and a forecast model for the jobs and revenues generated in the EU app economy aftermarket. In support of those models, we ran two surveys of app developers: one aimed at smaller independents and one of in-house departments that develop apps that support their company's main business. We did extensive interviews of companies in the ecosystem, hosted workshops in Brussels and Berlin, and ran two crowdsourced challenge exercises, seeking insights into how the EC can help build up this marketplace.

Although most app platforms are North American (Google's Android, Apple's iOS, Facebook's environment) — streaming music services are a notable but niche exception — European Union developers have proved highly successful at monetizing the global app economy. EU app companies account for 42 percent of app revenue across the U.S. and EU, the same share as North American app companies. EU developers have successfully leveraged global app platforms as a way of reaching otherwise-hard-to-reach North American and global consumers.

Commercial strategies for EU app developers

As shown below, the independent developers are mainly dependent on users paying for apps or extra features and functions within apps — mostly games. It's not clear that these business models scale well outside gaming and subscription music services. At the same time, the app advertising market is fragmented across a number of ad networks, and Google and Facebook currently dominate global mobile ad revenues. Developing apps for others, the strategy of 42 percent of our survey base, appears to be a more promising avenue.
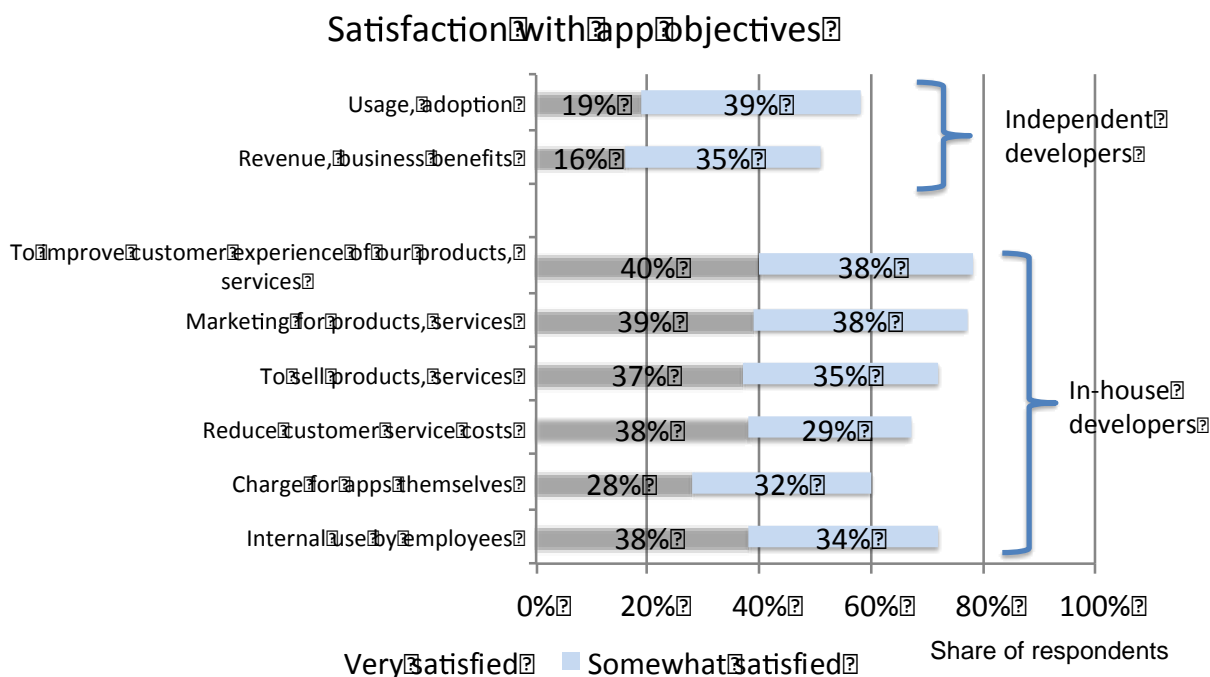
Independent developers seek to charge for apps, do contract development for others

How does your company try to make money off apps?

Charge for apps — 44%
Develop apps for others — 42%
Advertising — 31%
In-app charges — 30%
Licensing tech to others — 20%
App is promotion for something else — 11%
We don't try to make money off apps — 14%

Share of respondents

Source: Gigaom Research EU independent developers survey, 4Q 2013 N= 199

One of the reasons we like the opportunity to outsource or develop apps under contract is that potential customers are so happy with their success. The chart below shows that, on average, the in-house developer departments we surveyed are more satisfied with their commercial objectives. The surveys showed that in-house developers and independents are hiring aggressively, but they're probably constrained by capacity. The in-house teams generally use apps to boost their main business rather than try to charge separately for them.

Key app objectives: In-house developers significantly more satisfied than independent developers seeking revenue from paid apps

Satisfaction with app objectives

Usage, adoption	19% 39%
Revenue, business benefits	16% 35%
	Independent developers
To improve customer experience of our products, services	40% 38%
Marketing for products, services	39% 38%
To sell products, services	37% 35%
Reduce customer service costs	38% 29%
Charge for apps themselves	28% 32%
Internal use by employees	38% 34%
	In-house developers

0%   20%   40%   60%   80%   100%

■ Very satisfied ■ Somewhat satisfied   Share of respondents

Source: Gigaom Research EU independent developers survey, 4Q 2013 N= 193
Gigaom Research EU In-house developers survey, 3Q 2013 N= 517

EU app market forecast

The app economy to date has been powered by consumer usage of mobile devices and social networks. This consumer behavior has driven an enterprise and business-to-business halo effect. Recognizing the growing amount of time their target customers are spending on connected devices, brands are investing heavily in building apps and mobile-optimized websites to reach them. Service companies are building dedicated apps to help customers complete tasks more conveniently. Entertainment companies are capitalizing on new behavior to build new products and create new revenue streams. Enterprises are equipping their workforces that have grown accustomed to consumer mobile experiences with mobile apps to bring greater efficiency and productivity. Thus the app economy is consumer-driven at heart but with a far wider economic scope and influence.

A number of behavior- and market-specific factors will drive continued growth in the app economy, including:
- Growing downloads per user
- Growth of in-app purchases and other new monetization methods

- A modest spread of app store revenues beyond games
- Growth in number of app developers (including the transitioning of other ICT skills and new entrants)
- Growth of consumer adoption of connected devices in emerging markets

A number of potential risks and growth inhibitors also exist. These include:
- The possibility that the consumer app market will not meaningfully expand outside games
- The deterioration in paid app revenue in favor of in-app purchasing, making it difficult for non-game companies to monetize their apps
- The risk that the app economy is a bubble market that lacks the economic infrastructure for long-term sustainability
- The difficulty of new-entrant developers being discovered by users on the increasingly cluttered app platforms, thus reducing success rates and slowing the influx of capital

EU spending — including user spending and advertising — totaled $8.3 billion (€6.1 billion) in 2013, representing 30 percent of the global total. By 2018 this will have grown to $25.3 billion (€18.7 billion), representing a smaller 27 percent of the global total due to stronger growth rates in later years from other regions. Paid app spending represented the majority of revenue in 2013 but will decline from 52 percent of the total to 36 percent in 2018, with the revenue transitioning to in-app purchasing.

EU Apps spending shows shift to in-app revenue

EU app spending, 2013-2018
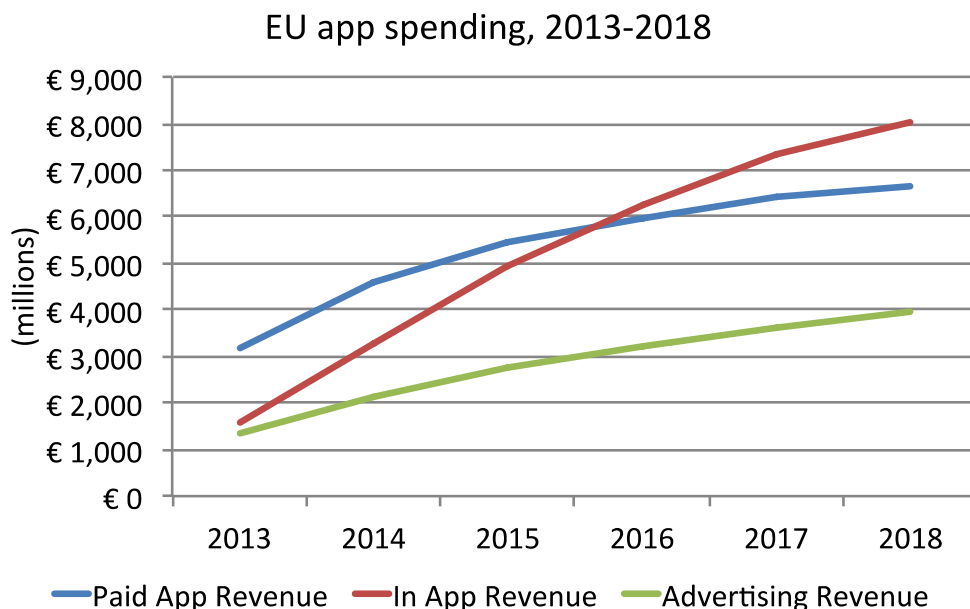
Source: Gigaom Research, 2014

EU developers earned $8 billion (€5.9 billion) in consumer app store revenue in 2013. Although EU developers account for 42 percent of global consumer app revenue and EU consumer spending accounts for just 30 percent of the global total, this results in a modest EU balance trade deficit of -$173 million (-€128 million). This is because of the app platform fees that EU developers pay on revenue earned. In virtually all instances this revenue flows to North American companies.

Contract development revenue is largest opportunity

EU app developer revenue, 2013-2018
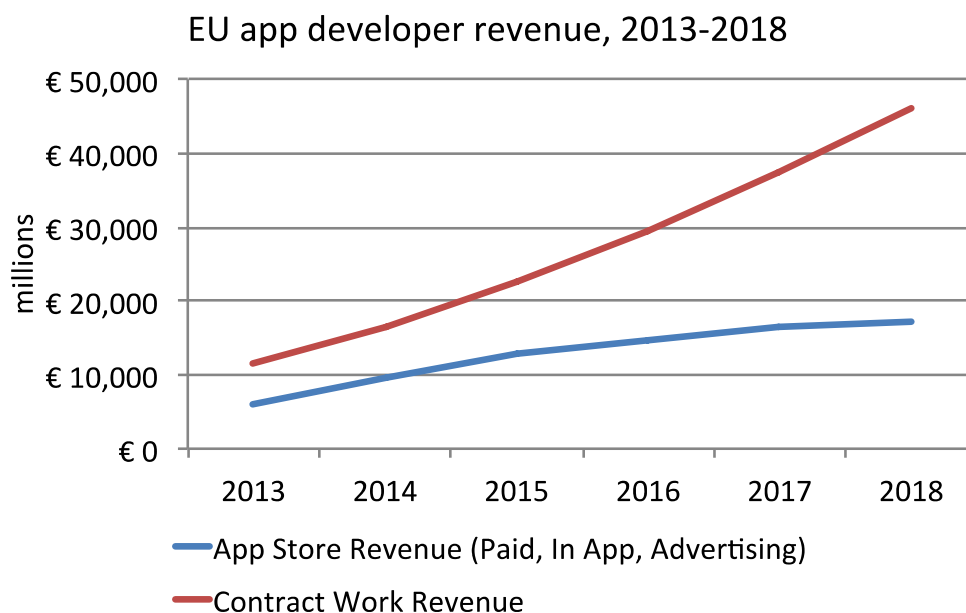
Source: Gigaom Research, 2014

The proliferation of apps beyond gaming, specifically into roles as marketing vehicles or as the means to deliver services like consumer banking and sales force automation, will drive the demand for contract labor. We project that EU developers will take in nearly $62.3 billion (€46 billion) in development work in 2018, up from $15.6 billion (€11.5 billion) in 2013.
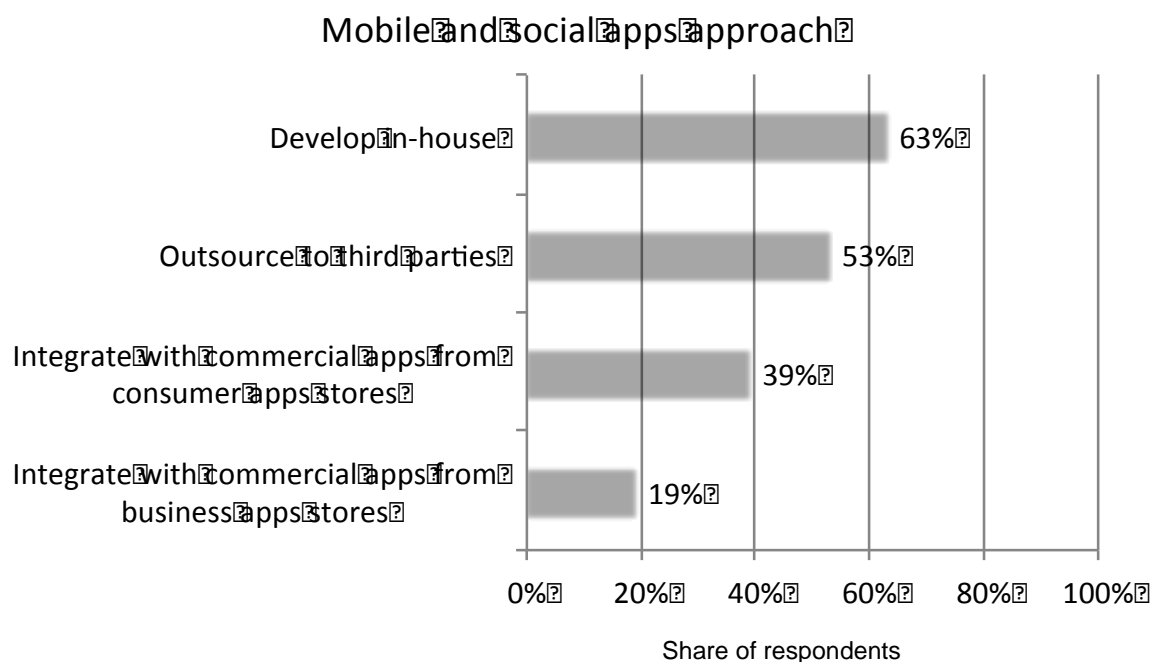
EU app economy jobs forecast

The five most successful EU app companies represent 49 percent of the appearances of EU companies in the top 50 grossing apps in the EU and in the U.S. All of these companies are game companies, reflecting the game bias of the app economy. The first-, second-, and fifth-ranking companies (King.com, Supercell, and Rovio, respectively) are all Nordic, indicative of the tech bias of these countries' economies. The success of EU app companies is not evenly distributed across Europe, with only Germany, France, and the U.K. having any meaningful number of app companies that are successful outside of their native markets. Some countries such as Italy have no app companies with apps featuring in the top 50 slots outside of their domestic markets.

This naturally creates a drain on regional skills, encouraging developers in other EU territories to relocate to major EU app countries to seek work with the most successful app companies. However,

this trend is offset to some degree by the fact that 42 percent of EU developers do contract work, which can often be done remotely. This share will rise to 65 percent by 2018, driven by a larger number of traditional and digital companies requiring regular app development expertise.

Half of in-house developers also use 3rd party developers

Mobile and social apps approach

|	
Develop in-house	63%
Outsource to third parties	53%
Integrate with commercial apps from consumer apps stores	39%
Integrate with commercial apps from business apps stores	19%

Share of respondents

Source: Gigaom Research EU In-house developers survey, 3Q 2013 N= 525

Monitise Create (formerly Grapple Mobile), a U.K.-based digital agency, builds apps for brands that use them for marketing. It counts NatWest, Barclay's, Tesco, McDonald's, and Premiere Inn among its customers. Three years ago, Grapple Mobile was a 3-person firm. It now has 120 employees and is set to double in size. Similarly, Golden Gekko (based in London with a large Barcelona office) plans to grow its staff 40 percent to 50 percent next year.

Just 28 EU companies account for all the appearances of EU apps in the top 100 grossing apps in the EU and U.S. Large independent developer companies represent the vast majority (86 percent) of the most successful EU developers, with small independent developers accounting for just 9 percent. This bias in the app-market economy toward the superstar poses breakthrough challenges for new entrants that will need to be addressed to prevent this early-stage market from ossifying around a few early success stories.

The EU app developer workforce will grow from 1 million in 2013 to 2.7 million in 2018. By that point 39 percent of developers will be small independent developers, 37 percent large independent developers, and 24 percent in-house developers. Contract work will account for the majority of the revenue for the small, independent developer segment.

EU app economy will support strong, steady job growth

EU app economy jobs, 2013-2018
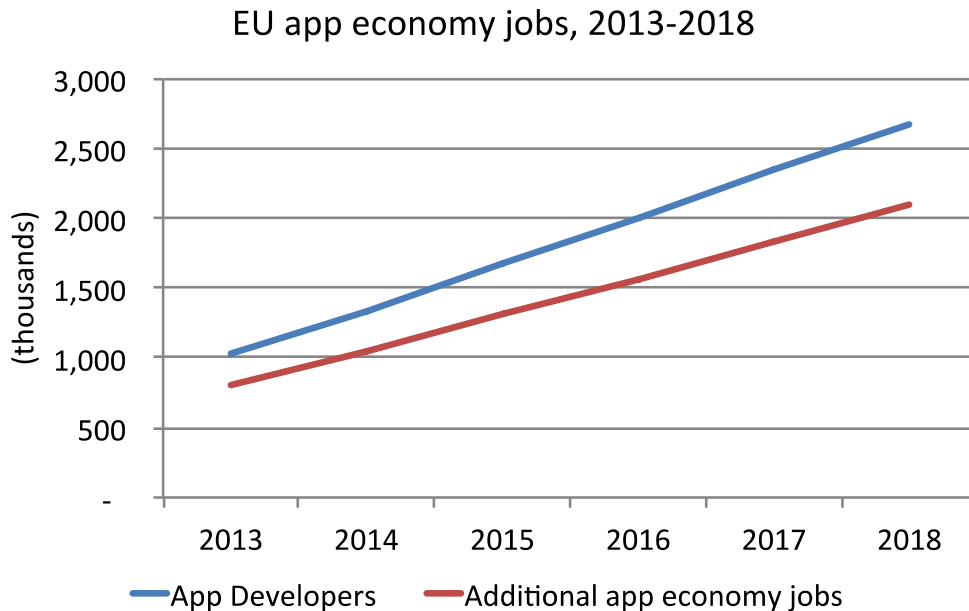
Source: Gigaom Research, 2014

The EU app workforce contains a broad range of roles and skill sets, including developers, testers, designers, and UI and UX experts. A significant amount of additional associated jobs are generated by the European app economy. For small independent developers this might be a single business development and sales executive. Large independent developers have big-company infrastructures, ranging from accounting and HR to management and IT support. Consequently the total EU app market workforce in 2013 was 1.8 million, including 0.8 million support jobs in addition to those developer jobs. By 2018 the additional jobs figure will rise to 2.1 million, resulting in a total European app economy workforce of 4.8 million.

EU app economy job profiles

The jobs in the app economy are good ones. The figure below summarizes what we heard from our survey respondents. The developer category is biased slightly toward highly educated, experienced coders. Scripters and designers are next in the hierarchy, but even testers do relatively well.

Profiles of EU app developer jobs

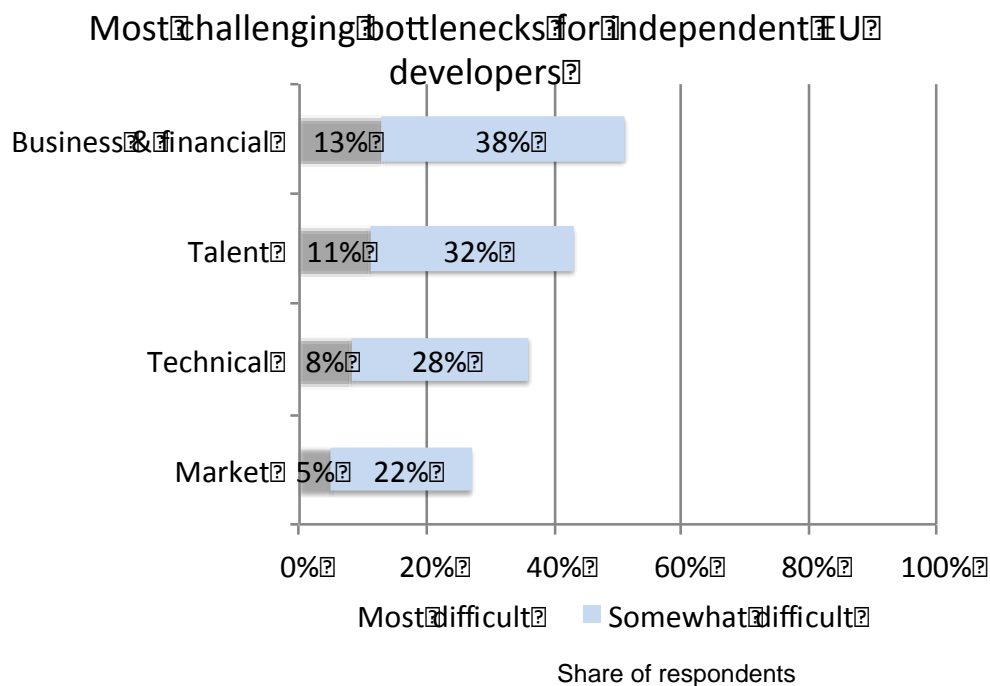|	Small, independent developers	In-house developers
Mix	Over half are coders	Mix of coders, scripters, testers
Experience	Over half have at least three years of experience, including 20 percent with over five years	Sixty percent have at least three years of experience, including 20 percent with over five years
Salary	Over 30 percent of coders and scripters make $67,670 (€50,000) or more	One-third of coders make $67,670 (€50,000) or more, as do over 20 percent of scripters
Education	More than three-quarters of coders and scripters have college or advanced degrees	Three-quarters of coders and scripters have college or advanced degrees
Gender	Over 5 percent are female	Over 10 percent are female

Source: Gigaom Research EU independent developers survey, fourth-quarter 2013, N= 193; Gigaom Research EU in-house developers survey, third-quarter 2013, N= 517

Our surveys suggested that support staff at the small independents were actually more experienced and better compensated than developers. As noted, at more-established companies, the jobs that support apps are more diversified. On average, fewer than 50 percent had three or more years of experience, although a similar three-quarters had college or advanced degrees.

Bottlenecks for the EU app economy

Our surveys, interviews, and workshops all confirmed that EU developers face more business challenges than technical challenges. The independent developers told us low prices or free apps were the biggest problem (40 percent of respondents), though customer acquisition costs (30 percent of respondents) also ranked above access to capital or financing (14 percent of respondents).

## Independent EU developers cite business, talent bottlenecks

Most challenging bottlenecks for independent EU developers

Business & financial	13% 38%
Talent	11% 32%
Technical	8% 28%
Market	5% 22%

0%   20%   40%   60%   80%   100%

◼ Most difficult   ◼ Somewhat difficult

Share of respondents

Source: Gigaom Research EU independent developers survey, 4Q 2013 N= 197

Both independent and in-house developers ranked platform incompatibility as the top technical bottleneck. In-house developers wished 4G adoption across Europe was moving faster, and the independents would like to see richer resources in terms of technologies and services available via application programming interfaces (APIs) from the platform providers.

In addition to the difficulty in supporting multiple languages and inconsistent regulatory policies across EU countries, among market bottlenecks, both independent and in-house developers cited U.S. platform domination. That, of course, leads to 30 percent revenue-sharing demands from Apple and Google, and it might be an opportunity for a second-tier platform like Microsoft-Nokia. Its app store takes only a 20 percent cut after the app generates $25,000 and allows in-app payments, third-party payment systems, and in-app advertising. And Nokia has a program it calls a BDK, or business development kit, in homage to the developer's SDK (software development kit). Nokia will integrate operator billing and operates its own advertising exchange.

The business issues are reflected by the talent or HR bottlenecks shown by the surveys. Both types of company find it hard to compete with U.S. salaries for developers and wish there were more education and training programs to teach mobile and social networking developer skills. But even the startups acknowledged their own lack of business skills.

Talent bottlenecks include salaries, education, business skills

Top talent bottlenecks for European apps
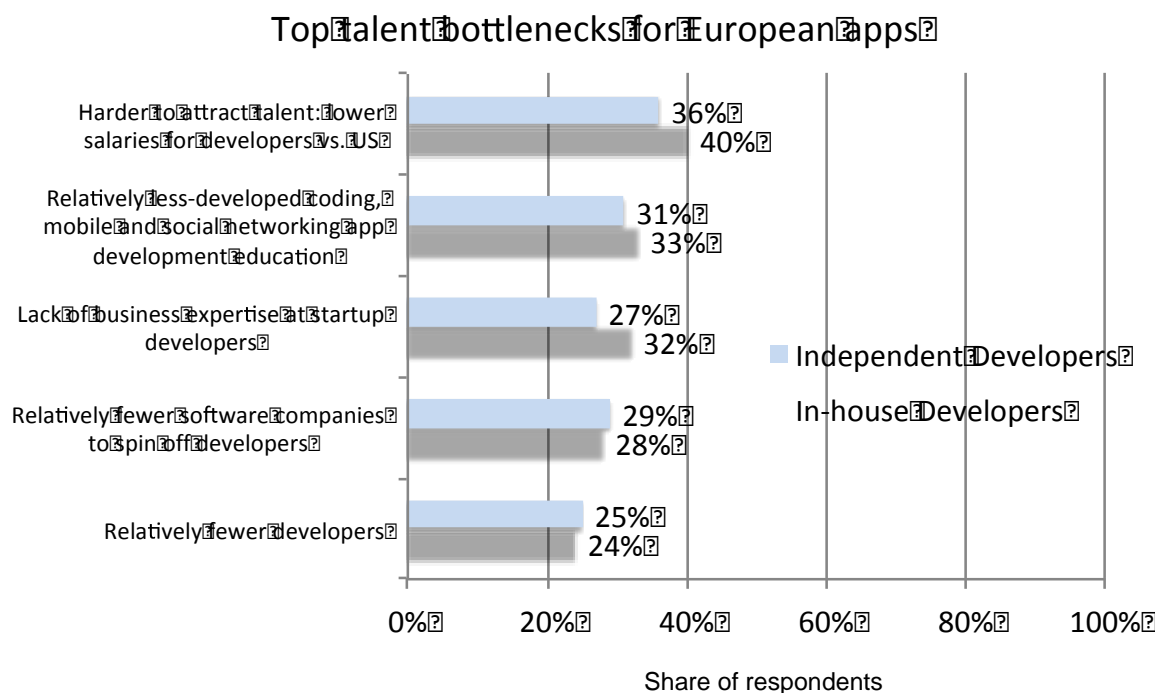
Source: Gigaom Research EU independent developers survey, 4Q2013 N=194,
Gigaom Research EU In-house developers survey, 3Q 2013 N= 522

Takeaways and recommendations

There's not much one can do to increase users' willingness to pay for apps. It might be easier to help reduce the cost of finding customers. We see a potential opportunity in third-party discovery platforms outside the Apple and Google app stores. It will be challenging: The once-dominant social game company Zynga (*Farmville*) has struggled to establish its own gaming portal outside Facebook, and it recently announced it would acquire mobile specialist U.K.-based NaturalMotion for over $500 million. Fiksu, a Boston-based company with a Finnish founder, creates loyalty programs for apps and offers a discovery network that points to app stores; 60 percent of its users come from outside the U.S.

But perhaps a more critical part of discovery might be less consumer oriented. Since we see such a large opportunity in contract development, there's a need for startups to connect with would-be enterprise customers. A marketplace for matchmaking partners would ease business friction. Such a

marketplace would have to enable discovery, qualification (certification for quality and reliability), business negotiations, and contracting. Such a marketplace could potentially be a hub for education and training as well, particularly in business rather than technical skills. Perhaps it could leverage existing university programs.

On the technology side, cross-platform development tools and higher-level abstractions like HTML5 and methodologies like responsive design could alleviate incompatibilities. Those tools and skills need training. For example, fast-growing U.K.-based contractor Chelsea Apps Factory has an internal 12-week training course to help developers move from web development to mobile. The company has grown its staff from 12 to 23 to 44 over the past three years, and it is adding a team from Accenture.

About the authors

Mark Mulligan
Mark Mulligan is a digital media strategist and a leading impartial authority on digital music. Mulligan helps companies makes sense of and profit from digital content. For 11 years Mulligan was a VP and research director at Jupiter Research (later acquired by Forrester Research), where he worked with companies across digital media value chains up to the C-suite. His clients have included record labels, retailers, telcos, book and magazine publishers, CE companies, and venture capital companies. Mulligan's expertise includes content strategy, media product innovation, user experience, value chain analysis, consumer segmentation, and go-to-market strategy. He is routinely quoted by top-tier media and speaks at leading music industry events. Mulligan is also the author of the leading music industry blog, aptly named Music Industry Blog.

David Card
David Card has been following the intersection of technology, media, and user behavior over 20 years at Gigaom Research, Jupiter Research, IDC, and Forrester. He oversees the Gigaom Research agenda, manages the analyst network, and coordinates with Gigaom Events and editorial. Prior to heading up Gigaom Research, Card led Jupiter's digital media and marketing research and acted as VP of research development. At Forrester he worked with marketing leaders to refine their interactive strategies, and at IDC he was lead Microsoft and consumer internet analyst. Aside from Gigaom events and Forrester and Jupiter forums, Card has spoken at major industry events such as E3, the Newspaper Association of America's new media conference, the PBS/NPR new media forum, the University of Texas' Online Journalism Symposium, Digital Music Forum East, Digital Hollywood, the Inverge conference, and Software Marketing Perspectives. He is frequently quoted in the traditional and online press and has appeared on *ABC World News Tonight*, ESPN, and NPR.

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