

**MODERN TOOLS IN A MODERN WORLD: HOW  
APP TECHNOLOGY IS BENEFITTING SMALL  
BUSINESSES**

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**HEARING**  
BEFORE THE  
SUBCOMMITTEE ON HEALTH AND TECHNOLOGY  
OF THE  
COMMITTEE ON SMALL BUSINESS  
UNITED STATES  
HOUSE OF REPRESENTATIVES  
ONE HUNDRED FOURTEENTH CONGRESS  
FIRST SESSION

HEARING HELD  
JULY 23, 2015



Small Business Committee Document Number 114-021  
Available via the GPO Website: [www.fdsys.gov](http://www.fdsys.gov)

U.S. GOVERNMENT PUBLISHING OFFICE

95-579

WASHINGTON : 2015

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None.	
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None.	



## **MODERN TOOLS IN A MODERN WORLD: HOW APP TECHNOLOGY IS BENEFITTING SMALL BUSINESSES**

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**THURSDAY, JULY 23, 2015**

HOUSE OF REPRESENTATIVES,  
COMMITTEE ON SMALL BUSINESS,  
SUBCOMMITTEE ON HEALTH AND TECHNOLOGY,  
*Washington, DC.*

The Subcommittee met, pursuant to call, at 10:00 a.m., in Room 2360, Rayburn House Office Building. Hon. Aumua Amata Coleman Radewagen [chairwoman of the subcommittee] presiding.

Present: Representatives Radewagen, and Moulton.

Chairwoman RADEWAGEN. Good morning. I call this meeting to order.

Good morning. I want to welcome all of you to this hearing of the Small Business Subcommittee on Health and Technology. It is an honor to chair this Subcommittee, and I look forward to continuing the work we are doing to improve opportunities and growth for the nation's small businesses.

Today, we will be examining apps which are applications of technology accessed on smartphones and other portable handheld devices. U.S. demand for mobile data grew by 63 percent in 2014, and is expected to increase sevenfold by 2019. Since 2007, the United States has seen more than 750,000 app economy jobs created. An astonishing 77 percent of the apps are made by startups, or small companies, and nearly 80 percent of these companies are located outside of Silicon Valley. And this industry is steadily growing. Findings predict that the app economy will reach 151 billion by 2017.

App technology provides businesses and consumers with fast, viable solutions to everyday problems, and research shows it is the entrepreneur due to an ability to remain flexible in a quickly changing market environment who is leading the development of these innovative apps. Developers are producing apps that integrate home automation systems, track and monitor health statistics, offer budget and financial transaction tools, and allow consumers to have their groceries purchased and delivered.

The continued impact that the app industry will have on the United States' economy are significant, and we must help foster that growth. In fact, more than 20 percent of all apps sold in China were developed by American businesses. This is a perfect illustration of the potential growth for the industry.

I also want to touch on the implications app technology provides for underserved regions, such as my district, American Samoa. Entrepreneurs in the farthest corners of America can tap into the app industry, and our residents are among the innovators. For instance, a Pago Pago native from my district developed a photo app that allows users to add Polynesian cultural filters and designs to their photos before sharing them.

I want to thank the witnesses for being here today to help us examine and further understand the implications app technology can have on the economy.

I now yield to the ranking member for his opening statement.

Mr. MOULTON. Thank you, Chairman Radewagen, for holding this important hearing. Thank you also to our witnesses, especially Cassie Gray, a small business owner who traveled from Massachusetts to be here today. Creative entrepreneurs like Cassie make our economy stronger, and we need their input to ensure the laws we make are working for every day Americans.

There is no question that technology has changed every facet of the American economy. Think about it. Only a few years ago it would be hard to imagine how much we could accomplish from a device that fits comfortably in our pockets. This hearing comes at an appropriate time. Research shows that entrepreneurship among Americans is declining, an alarming trend. In her testimony, Ms. Gray describes the Etsy platform as a “onramp to entrepreneurship.” For our economy to truly improve, we need more onramps to entrepreneurship, and technology, like mobile apps, can help lead the way.

Today, entrepreneurs are building entire business models around smartphone applications. New forms of commerce are emerging daily as the web becomes an increasingly mobile platform. Small business owners use social networks, like Facebook, Instagram, and Twitter, to market their products. Americans now use smartphones, tablets, and other handheld devices to do everything from ordering groceries to booking travel arrangements, to sharing photos, to monitoring their health and fitness. Our economy is stronger and more efficient as a result of these innovations.

Not only are entrepreneurs developing innovative apps, but more traditional businesses are harnessing wireless technology to reach new markets and serve existing customers more efficiently. Nearly two-thirds of small businesses now say it would be difficult to continue operating without the use of wireless technology. Thirty percent of firms with fewer than 20 employees utilize mobile applications as part of their business model, and small companies are saving 275 million employee hours a year through the innovative uses of wireless technology.

As mobile web platforms become more integral to the American economy, Congress, the FCC, and other agencies will encounter a number of regulatory challenges that must be addressed. As Cassie will demonstrate in her testimony, one of the most basic challenges is ensuring widespread access to broadband. Today, the Federal Communications Commission reports that 95 percent of small firms have broadband connectivity. This constitutes important progress but more work must be done. In particular, there remains a signifi-

cant gap between rural areas like western Massachusetts and large cities.

Ensuring universal broadband access is vital to promoting commerce. In that regard, programs like the Rural Utility Service and the Universal Service Fund will remain critical to economic development in traditionally underserved communities. This Committee has an important role to play in ensuring that as those initiatives evolve and are reformed, the needs of small and micro businesses are kept in mind.

Entrepreneurship and innovation are two traditions that have always made our country an economic leader. That remains the case today as small businesses are on the leading edge of developing new apps and utilizing them to expand their market share and find new efficiencies. As always, this Committee has an important role to play in ensuring that policy changes in this area provide the appropriate degree of regulation and consumer protection, while allowing the space for maximum amount of innovation and growth.

Before I close my remarks, I want to take a moment to acknowledge another witness, Patty Greene. Ms. Greene is the academic director of the Goldman Sachs 10,000 Small Business Program at Babson College in Massachusetts. This program has benefitted small business owners throughout the country, throughout Massachusetts, and throughout the Sixth District. It is wonderful to have her with us here today.

On that note, I would like to thank all the witnesses for being here to share their valuable perspectives, and I yield back the balance of my time.

Chairwoman RADEWAGEN. I would like to take a moment to explain the timing lights for you. You will each have five minutes to deliver your testimony. The light will start out as green. When you have one minute remaining, the light will turn yellow. Finally, it will turn red at the end of your five minutes. I ask that you try to adhere to that time limit.

Our first witness this morning is Morgan Reed, executive director at ACT, The App Association, where he specializes in application development issues. Mr. Reed has testified in both the House and Senate chambers, and has authored several white papers on app development. He also serves on the Advisory Council of the Mobile Health Information Management Systems Society.

Our next witness is Dr. Patricia Greene. Dr. Greene is the Paul T. Babson chair in Entrepreneurial Studies at Babson College. Before joining Babson, she chaired entrepreneurial and leadership programs at the University of Missouri, Kansas City, and Rutgers University. She is also a member of the National Advisory Board for the Small Business Administration's Small Business Development Center.

Next, we have David Barrett, the founder of Expensify, a complete online expense management service. He started programming when he was six-years old, and it has been his primary activity ever since. With a brief hiatus for project management, technical writing, and world travel.

Finally, we have Ms. Cassie Gray, owner of ShopClementine, an Etsy shop that she runs out of her home in Massachusetts. Ms. Gray creates minimalist jewelry using recycled silver, reclaimed

gold, and gemstones, and diamonds. What started as a hobby has developed into a nine-year-long career through online sales. Ms. Gray, thank you for being with us today.

Mr. Reed, you have five minutes.

**STATEMENTS OF MORGAN REED, EXECUTIVE DIRECTOR, ACT/  
THE APP ASSOCIATION; PATRICIA G. GREENE, PH.D., PAUL T.  
BABSON CHAIR IN ENTREPRENEURIAL STUDIES, BABSON  
COLLEGE; DAVID BARRETT, CEO, EXPENSIFY; CASSIE GRAY,  
OWNER, SHOPCLEMENTINE**

**STATEMENT OF MORGAN REED**

Mr. REED. Thank you.

Chairwoman Radewagen, Ranking Member Moulton, and distinguished members of the Committee, my name is Morgan Reed, and I am the executive director of ACT, The App Association. I thank you for holding this important hearing on the impact of the app industry on mobile innovation for small businesses.

We represent more than 5,000 companies that create the apps used on smart devices around the globe. My goal today is to highlight the remarkable growth of the app industry and where it is headed.

We have three key findings for the Committee. First, app companies are succeeding in every region of the country, as you have all pointed out. Two, the growth of the app economy provides access to technology previously out of reach from many small business owners in rural and underserved communities. And three—here is where I am going to predict the future a little bit—the future of the app economy, including in your districts, will be in financial, enterprise, and in health.

In 2008, The App Store launched with only 500 apps. In seven years, the number of apps now exceeds four million across several different platforms, and the app economy has emerged as a \$120 billion marketplace. Our industry research has consistently found that more than three-quarters of the top grossing apps are made by small companies, and 80 percent are based in the U.S. And as you noted, 77 percent are based outside of Silicon Valley. And while we all love Silicon Valley, I think it is a very important thing, especially as we are sitting on this Committee, to understand that spread and that capability that the app economy is producing.

But, you know, those are just numbers, so let us get a little bit more specific.

Chairwoman, you have already mentioned the app is called Kavagram, and it is done by a gentleman, Sonny Stevenson. And he did it, as you pointed out, to spread Polynesian artwork, allowing you to edit photos, decorate them with designs and images. It really borrows from the Instagram theme, and it has really been a huge hit. Several NFL players have been using it and putting out some pretty amazing photos using the app from Sonny.

Ranking Member Moulton, you have one of my favorite app companies in your district. It is called Playrific. With more than 50 employees, Playrific builds amazing kids' apps, like Pink Chillies, the Magical Elephant Game, which lets you build puzzles, test your



memory. They are doing just a great job in a really safe environment for kids, and it is worth pointing out, 50 employees is a real job creator.

More importantly, every single one of your districts has a bricks-and-mortar small business that is using mobile to manage their point of sale, to manage their expenses, to help with customer relations, and improve customer service in the field.

Now, the future of that mobile app economy is not necessarily just in those apps in the store but in the apps being used in your place of business. If you think of it this way, your mobile device then becomes the place in the repository for all of your information on your customer, something called customer relations management. It tells you when you last met with them, what was your sale. When you go into that meeting with a customer, you possess in your hands for the first time what did they last buy? When did they last talk to you? All of that information that makes for rich customer relations can be right in front of you on your mobile device. Your training documents, and as we say most importantly, your sales material for that next big deal.

Now we step to the next place in health. Right now, we all know about wearables. I think at least three of the four of us have wearables on right now. And what we know about them is that your wearable device collects amazing information. But your next step is your doctor is going to speak to you through an app, and they are going to be able to see in near real time, the information off your wearable. And God forbid you are in an ambulance. The ambulance will be able to send information to the emergency room via an app called Airstrip, which is already in the market, to keep tabs on your vitals, to make sure your emergency room is ready the moment you land.

Well, what makes these apps possible? There is some obvious stuff—the network, devices, storefronts—but I would say the biggest element is trust. Cloud technology that provides remote data storage is the lifeblood of the mobile economy. It allows users to access and share from any location.

And if trust is a key building block, then loss of trust is the destructive kryptonite. Small businesses must be able to protect the data of their customers whose trust they have worked so hard to earn, so strong encryption, something, by the way, OPM did not have, is critical. We ask that you take seriously any government efforts to weaken security measures.

Just as troubling, the Department of Justice is currently requiring American companies to break the law overseas, forcing them to give data stored on foreign nationals at datacenters abroad without approval of the host country. We encourage you to support the LEEDS Act, which would provide a clear legal framework for law enforcement agencies.

And finally, while small businesses must have the ability to protect their intellectual property, they also need help pushing back on patent abusers. H.R. 9, the Innovation Act, restores trust by including strong measures to ensure transparency in patent ownership, clarify what is and is not infringement, and allow defendants to recover legal costs.

I thank you again for the opportunity to testify, and I look forward to your questions.

Chairwoman RADEWAGEN. Now, Mr. Barrett.

#### **STATEMENT OF DAVID BARRETT**

Mr. BARRETT. All right. Hello, everyone. I am going to be the least slick speaker here. I have never done this before, but it is quite exciting. Thank you so much for having me here.

I am David Barrett, the founder and CEO of Expensify. We do expense reports that do not suck. It is a bold division, but we are improving the world one expense report at a time.

So what I am going to talk about here is probably highly overlapping, so I am going to be more anecdotal here about the rise of the app stores. And I would say in my mind, the app economy started with actually a little known phone called the Danger Hiptop. I think I was only person who liked this phone. It was the first phone to actually have its own integrated app store, meaning that you could actually download and expand the functionality of the phone itself. This phone launched in 2002, but the app economy did not really typically take off until about 2008 with the iPhone App Store. And at six years, nothing happened. And I think the important reason why nothing happened is because the Hiptop was not backed by Apple, and thus, did not have the power to convince AT&T to allow applications to be installed on their phones. And so for about six lost years, we had the potential for an app economy but it simply did not happen. And I think that really drives home the importance of having open access to the technology, the Internet, and the users, in order to actually enable the technology of an app store to work.

Secondarily, I would say in addition to the app store, what makes this whole revolution possible is the sheer power of these phones. I am trying to think of ways to sort of summarize how powerful these phones are, so to give some examples, the first portable computer that I can think of would probably be the Apollo Command Module, 1969. It had about 64 kilobytes of memory, 43 kilohertz of processing speed. To put it into comparison, a single iPhone can process about 16,000 times more data, about 33,000 times more fast. So that is basically a single iPhone has more power than the entire Apollo mission combined. All of NASA at that time could be powered by a single iPhone easily.

Maybe more recent is 1997. IBM had a computer called Deep Blue. It was the first computer to ever beat a world champion in chess. A single iPhone is about 10 times more powerful than that computer, and that was just 1997. Or maybe a more recent IBM computer is Watson. In 2011, it beat Jeopardy for the first time. And so it was hailed at the time as being the smartest AI ever created. It is about 2,500 iPhones, which means in about seven years, due to Moore's Law, which means that basically computing power doubles every 18 months. In about three terms, every one of your constituents is going to have a phone in their pocket more powerful than today's smartest AI. And so that is pretty astonishing I would say. It is not totally accurate to say that every smartphone is as powerful as a super computer, but it is pretty darn close. And any

policy you put in place today is probably going to be applied to super computers by the time it is actually out in the real world.

And so how this sort of works as a real world example. Expensify, as I said, we work in the ever-so-exciting field of expense report management, and what we do is we have an app where you take a picture of the receipt and a technology called Smart Scan will read the information off that receipt automatically without any typing involved, put it on the right expense report, and submit it for you. And so I would say in our world, the availability of a telephone platform with an integrated smartcam can enable this sort of scanning technology to bring extreme productivity to small businesses that are doing mobile travel on the road.

And so I would say the app evolution is not going to sort of appear like HAL 9,000. Artificial intelligence is not going to sort of appear in this personal form. It is first going to start off with applications highly optimized for certain problem demands, like Expensify.

And so I think that an exciting thing about this, as we are getting these more powerful automation platforms, they are not going to appear typically like in the enterprise or in the factories and trickle down to the people. The exciting thing about this environment is because of the sheer affordability of this platform, it affects everyone all at once. The entire world is benefitting from these sort of small business applications, starting with the individuals and moving on up. And so this sort of bottom-up adoption of this technology I think is really a major change for how technology has historically been adopted.

So I would say maybe a final point, I have heard real broadband mentioned. I think that an amazing component of the app technology is it enables rural areas to actually contribute to a global economy. I know that our Smart Scan Technology employs about 150 contract workers throughout actually rural Michigan, where we have one of our offices. And so unlike a typical Silicon Valley business, which is just based around San Francisco, we actually employ a global workforce and bring jobs actually back from around the world to rural America.

And so I think that the smartphone technology, sort of powered by this global Internet economy, is bringing rural economy into the global economy as well. And so I think there is a wide variety of things it can do. All sorts of information in my notes here. But most importantly, things are really great right now, and I would say the most important thing we should work on is let us not screw it up. Things are actually really awesome. We do not need a ton of help. I would say patent reform, innovation reform, even tax reform things could help, but by and large, the main thing is let us just keep the party going. So thank you so much.

Chairwoman RADEWAGEN. And now Dr. Greene?

#### **STATEMENT OF PATRICIA G. GREENE**

Ms. GREENE. Thank you, Chairman Radewagen, Ranking Member Moulton, members of the Subcommittee. Thank you for the opportunity to testify. It really is an honor to be here today.

I am going to base my testimony largely on that as an entrepreneurship educator, but also as the owner of a small business, a store in Gettysburg, Pennsylvania.

I am also very pleased with the topic of the hearing today. As much of the public discussion around entrepreneurship and technology is really driven on a very thin slice of actual businesses in the United States, those that use or sell technology, and I would like to focus today that we are also looking at the other side of the equation. How do small businesses use and benefit from technology?

If we consider that fewer than 10 percent of all U.S. businesses have more than four employees, we are a country of micro-businesses. There are 25 million businesses that fit into this territory of how do we actually learn again and use about this. The fact that apps can be helpful I take as a given. The question is how? How do these small businesses get access to the apps? How do they learn about them? How do they integrate them into their actual operation so that they can be tools for productivity?

For evidence, I am going to use a couple different things. One is a piece of research that was done last year by AT&T with the Small Business and Entrepreneurship Council, and finding that 94 percent of the polled small businesses use smartphone technology, two-thirds of them are using mobile apps, and they do save up to 150 hours each. However—and I think this is an important however—73 percent of them are using them for social media and marketing; only 18 percent of them are using them for point of sale, those types of activities; and only 18 percent of them are currently using apps to improve their operations. There is a huge opportunity to work with our small businesses.

The rest of my evidence I am really going to draw from the Goldman Sachs 10,000 Small Businesses Program. This is a half billion dollar initiative to help small businesses. We currently operate in 13 sites across the country in some of the territories, and we are working with businesses that do have at least four employees, so they are growth-oriented countries. The companies today reflect over \$3 billion in revenues.

The important part about that is the diversity of the businesses and the diversity of the people. So for the businesses, no single industry represents more than 10 percent of the businesses in the program, the professional services is 34 percent. Everybody else is under 10 percent. And the business owners are important, too, in thinking about who is actually using the technology tools. The median age in the 10,000 Small Businesses is 46 years old. The range goes from 22 to 75. And please remember that these are, by definition, growth-oriented businesses fairly split as to gender with 46 percent of the businesses are owned by women and a very broad array of educational backgrounds ranging from some high school, possibly a GED, to multiple graduate degrees. So when we are thinking about who is using apps in growing their businesses, we are looking at all kinds of people in all kinds of businesses.

Within the program, we teach about technology in three different ways. The first one really is it is embedded into the curriculum, so we actually do have teaching notes for our teams to use as to how do they expand and learn about technology. We work with peer

learning, so how do they actually learn from each other, which is a huge way to learn about apps, and we also have a tech clinic where we actually teach them not about the apps themselves but about how do I identify what technology is available, how do you evaluate it, how do you know what to pay for it, and most importantly, how do I bring it back into my company and teach others how to use it?

The app technology piece is really probably the most critical question in the how to use it. So the pricing is rarely the big challenge. It really is about a fear of inappropriate adoption. If I bring it in, will it work? And what is the cost if it does not work for me to have to go back, as these businesses generally have a very slim margin for errors.

The question of app is also related to how they train their employees, and within the 10,000 Small Businesses, we have got 86.4 percent of the business owners report that they are providing on-the-job training, and again, these are very small companies with 62.6 percent using some version of online learning. Again, another opportunity for apps in general.

I would like to close with one short example actually from a woman in another Massachusetts, Victoria Amador, of Tremendous Maids, who basically learned about an app to organize communication across her company from another person in the program. She reports that using—in this case she is talking about Google Voice—saves her thousands of dollars. He recommended to her when they met during the online portion and therefore, she becomes an example of using technology to enable working with others to learn about technology.

Thank you very much.

Chairwoman RADEWAGEN. And now Ms. Gray.

#### **STATEMENT OF CASSIE GRAY**

Ms. GRAY. Good morning. My name is Cassie Gray, and I am the owner of Clementine, a handcrafted jewelry business. Thank you, Chairwoman Radewagen, and Ranking Member Moulton, for the opportunity to testify.

My road to entrepreneurship was anything but fast or predictable. I moved to New York after graduating from college and joined the publishing industry, working my way up from assistant to senior copywriter. But I developed something like a restless hand syndrome. I just wanted to make something tangible, and I found my way to beading and jewelry making in my spare time.

About 10 years ago, my personal life was in flux and I left New York to move back to my hometown of Ashfield, Massachusetts. In this rural hill town, I had to cull together a living from whatever I could—freelance writing, waiting tables, and making my jewelry. I opened ShopClementine on Etsy.com in January 2006. When I got my first sale, I literally jumped for joy. For the first few years, revenue was quite modest but I had fallen in love. While I was still working other jobs, I devoted myself to learning all I could about jewelry. I took a series of intensive metalsmithing courses, which gave me the confidence to expand my line and focus on attracting new customers.

Through it all, Etsy has remained my main venue. The Etsy platform allows me to directly talk to my customers, making the shopping experience truly personal. Now, I work 50–60 hours a week on my business, and yearly business is more than \$130,000. While my store is particular to my personal circumstances, my experience is similar to other Etsy sellers. Just today, Etsy released a new report about U.S. Etsy sellers, which reveals that they are business owners in their own right, and the income they earn on Etsy through the website and mobile apps, matters to their lives and the broader economy. Like me, most Etsy sellers are women, 86 percent. Many are parents with children at home. Just under a fifth are low income. And 39 percent live in rural areas. Nearly half of all sellers had never sold their goods until they joined Etsy, demonstrating that Etsy functions as an onramp to entrepreneurship.

And while some might be inclined to write our community off as hobbyists, income from these creative businesses matters. For 30 percent of Etsy sellers, their creative business is their sole occupation. For the rest, their creative business supplements other jobs, contributing an average of 15 percent to total household income overall.

The Internet and mobile technologies have opened up incredible new opportunities to people like me. To operate my shop, I use the website and two mobile apps Etsy offers. As of December 31, 2014, Etsy's mobile apps have been downloaded 21.8 million times. The Sell on Etsy app is indispensable in my day-to-day routine. When I am working at my jewelry bench, I check orders and communicate with customers via the app. If I go to make a hammered ring but I cannot remember what gauge the silver should be, I check the listing details via the app. If I get a message from Etsy alerting me that one of my items has been featured editorially, I can increase the quantity available so that item does not sell out. I also do most of my business's social media interaction via apps—Instagram, Pinterest, Twitter.

Mobile app technology enhances how entrepreneurial Etsy sellers, like me, reach customers and make a living. And it is only the beginning. Already more than half of Etsy's traffic comes from mobile devices. The fact that I can use my phone at all to do these things is a bit of a miracle; however, we still have a long way to go to getting access to technology to those who need it.

I live and work in Franklin County, which is the poorest county in Massachusetts. Most of Ashfield, where I live, is completely without cellphone reception. In my house, high on the hill, I get just one bar of 3G. There is no broadband or cable available, so I use a satellite to connect to the Internet. It is slow and it involves me having to go out in the middle of winter storms with a kayak paddle to whack the accumulated ice off the dish.

This gap in accessibility harms entrepreneurship and business. Policymakers have an opportunity to support businesses like mine. In addition to expanding broadband to rural areas, lawmakers should focus on the needs of the self-employed and micro-businesses. Most Etsy sellers work alone and face very different challenges from even a 10 or five person business. They are part of a growing trend towards self-employment in the U.S., which offers both new opportunities and new challenges.

For example, new administrative burdens impact micro-businesses dramatically. The newly introduced Remote Transactions Parity Act would require all Etsy sellers, regardless of size, to collect and remit sales tax in every state. Proposals like this threaten to undermine businesses of one who simply do not have the time or resources to comply with such requirements.

Overall, I believe the Internet and mobile apps are creating incredible new opportunities for entrepreneurs around the country. I urge Congress to enact policies that support independent, creative businesses, enabling the broader maker market to thrive.

Thank you.

Chairwoman RADEWAGEN. I want to thank the panel for your testimony. And now I will give myself five minutes to ask some questions.

Mr. Reed, you note that there are three billion different apps on the Apple store site. This is tremendous growth in just seven years. Do you expect the industry to continue growing exponentially or do you believe it will taper off?

Mr. REED. Oh, I am confident that it will continue to grow exponentially simply because look at the number of devices that people have. This last year, we reached a point where connected devices in the United States exceeds the population of the United States. One of the things to realize is that the next generation of cars will all be connected devices. You have heard of the whole connected car movement. Well, now, every single car is going to come with its own series of applications and its own connection. So there is no question that the explosion is going to happen.

What I think is more exciting is, as much as I love cool games, and we have a ton of members making cool games, I think it is really the way that mobile devices are going to empower Ms. Gray and others are the place where that exponential growth is going to be the most significant.

Chairwoman RADEWAGEN. You mentioned that some small businesses are using apps for inventory tracking instead of expensive software programs. How do these apps compare in terms of the quality, features, and ease of use as compared to a program used on a desktop?

Mr. REED. Well, it is a great opportunity to sit here next to Mr. Barrett, who is, in fact, one of those generating an application, as he said, that completely alters the paradigm. That is what is so amazing.

So as you know, before, you would sit down at your desktop computer. You would have your stack of expenses, and you would sit there typing away. Well, with a product like Expensify—I am going to be your salesman today—you literally take your phone, you click it, and it shows up. So the idea of how it changes—and I thought Dr. Green, her point was exactly right—the fact that that is only still at somewhere under 20 percent, that is this hockey stick growth that we are going to see, because an app like his does not just do better or cheaper than the desktop equivalent; it literally changes the paradigm by adding features, like the ability to take a photograph, the ability to combine it together, and then move it to a desktop product that allows you to file your taxes, that allows you to—hopefully not independent state sales tax in 7,000 dis-

tricts—but that is where you really see that hockey stick growth. It is right there. It is from products like his, and from what Dr. Greene talked about, and the way that Ms. Gray said that she would like to incorporate them in her practice.

Chairwoman RADEWAGEN. Thank you, Mr. Reed.

Dr. Greene, what do you consider to be the major hurdles to small businesses utilizing apps in a constructive manner to increase a small business's efficiency?

Ms. GREENE. I think there are two parts to that. The first is knowing what is out there. They do know about a lot of the social media, but especially in underserved areas, I am finding that they only know about a small slice of what is really possible. So just knowing what is actually possible. And then the second is being able to undertake what they do see as a risk of incorporating this because they are afraid of getting it wrong, they do not have a lot of resources available to correct mistakes, and they think they may be doing okay as they go and not necessarily seeing the opportunity of what they could really accomplish with using these new types of tools.

Chairwoman RADEWAGEN. Mr. Barrett, could you please elaborate on the impact your business in particular has had on the state and local community at your location in Michigan? How did you choose this location?

Mr. BARRETT. Sure. Well, actually, I just flew from there yesterday, and it is in rural Michigan, in the middle of nowhere, surrounded by trees and one ski hill. It happened randomly. We had a contractor that we hired remotely, and then we had a problem. And we were like, "Hey, we need the guy to do this." And he was like, "I know a guy." And then that became two people, then it became four, and now it is like basically hundreds.

And so I would say we have brought millions of dollars of economic activity to this tiny town. We are working with the local government, with the mayor and the city developers there, and so I would say we view Ironwood, Michigan, as a true partner in the business, and a really critical sort of secret weapon that we employ to compete aggressively with our Silicon Valley peers, but also the enterprise incumbents.

Chairwoman RADEWAGEN. Dr. Greene, in your testimony, you state that peer learning about technology tools for small businesses is critically important. What recommendations would you make to policymakers to encourage the use of these tools, specifically mobile technology, such as apps?

Ms. GREENE. I think that is a difficult one from a policy perspective on how do you drive peer learning. The part I would probably go to comes back to my experience working with the SBDCs and the SBA, in making sure that there are arenas in those funded parts of the program where these kinds of programs can happen. Probably the most important part of that though is to make sure that anyone that teaches in any kind of program that is supported by the government actually does understand technology, is able to teach about technology, and age cannot be an excuse. These programs are really for everyone, so no matter the age of the instructor or the student, there has to be an openness there to try new things.



Chairwoman RADEWAGEN. Thank you.

And now I yield to Ranking Member Moulton.

Mr. MOULTON. Thank you, Chairman.

Ms. Gray, what can Congress do to help promote the development of apps for small business?

Ms. GRAY. Well, I would say the most important thing is to continue to keep it free and open, to not put any barriers. Your work on the net neutrality was really helpful. I think that in order to really tap into entrepreneurship and technology, we need to keep a level playing field for everyone involved so that no single party or entity has an advantage.

Mr. MOULTON. Thank you very much.

Mr. Reed, would you like to add some comments?

Mr. REED. I think one of the things that I think she mentioned, that this committee of particular jurisdiction has some interesting efforts on a very good story about figuring out how do you get mobile apps to be built? When we had our fly-in, we had a person come who had tried to reach out for an SBA small business loan, and he went through a process where he went to, I think, 19 banks. He is a great entrepreneur, incredibly successful. One of the banks said something I thought was amazing. Said, "You know what? You are a great guy. We know you will be successful. If you were coming here to build a gas station, I would write you a check. But because I do not know how within the confines of the SBA to properly fund your clearly, likely to be successful mobile application, I cannot give you the money."

And so while I completely agree with Ms. Gray that barriers to entry are a huge part of it, the government has the ability to write a check. And when it says I will write a check for a gas station but I will not write it for an app that will grow and employ 150 people, that is when I have a problem.

Mr. MOULTON. Thank you very much.

Mr. Barrett, I am a former Expensify user myself. I ran a small business before running for Congress. I appreciate it. You certainly made things a lot easier for us as we were trying to get our company off the ground.

Mr. BARRETT. Happy to help.

Mr. MOULTON. You mentioned immigration reform. I wonder if you could comment on that and what a difference it would make and why you feel it is important to the small business economy.

Mr. BARRETT. Sure. I think there are sort of two aspects of immigration reform. One is that immigrants are historically much more likely to start businesses than nonimmigrants. I think 40 percent of the Fortune 500 has been founded by immigrants or children of immigrants. And so I think if we are trying to drive the growth in the small business economy, the number one thing we can do, Trump's comments notwithstanding, is to encourage legal immigration, because legal immigrants are the best and the brightest. And so we want to encourage this.

Secondarily, I would say the truly best and the brightest are H1B visa holders. These are basically the finest people that we can find around the world. If we are going to let anybody in, that would be the people that we should definitely emphasize. And I know that as a small business, we compete very aggressively with, again, our

peers and our incumbents. And the number one tool that we have in doing that is hiring. And so I think that hiring is, as I mentioned, rural Michigan for us is really key because we find the right people for the right position, but also, we search around the world for the best people. And so I think improving or raising the cap on H1Bs can help not just Silicon Valley, but I think many businesses, compete more aggressively. In addition to just increasing immigration overall, I think we will drive more small business growth.

Mr. MOULTON. Great. Thank you.

And Dr. Greene, would you be willing to add to that and offer your own perspective on the value of immigration reform, or whether it is valuable or not, frankly, to small businesses?

Ms. GREENE. I think Mr. Barrett covered that quite well. There are two ways to look at that in entrepreneurship, too. There is a long history of certain immigrant groups also being very strong in creating businesses. Not all immigrant groups but certainly quite a few of them. So not only for the best and the brightest coming in, and I think there are a lot of best and brightest here, too, that they can all work together with, but also looking at who is going to start and grow the next round of businesses comes into play as well.

The woman that I mentioned from Massachusetts as an example of using apps actually is an immigrant to the United States and has received several awards as an immigrant-owned business.

Mr. MOULTON. Thank you very much.

Thank you all very much for appearing before the Committee and for testifying. I certainly have learned a lot, and I yield the balance of my time.

Chairwoman RADEWAGEN. I want to thank all of the witnesses for taking time away from their businesses and families to participate in today's hearing.

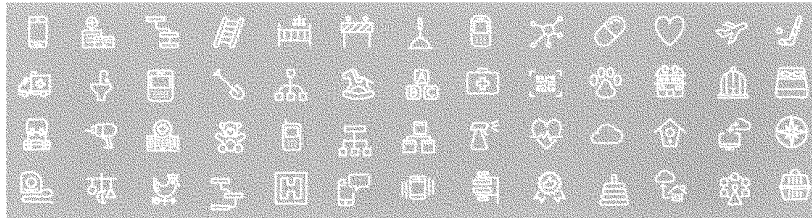
I now ask unanimous consent that members have five legislative days to submit statements and supporting materials for the record.

Without objection, so ordered.

This hearing is now adjourned.

[Whereupon, at 10:43 a.m., the Subcommittee was adjourned.]

## APPENDIX



### Testimony

*of*  
**Morgan Reed**  
Executive Director  
ACT | The App Association

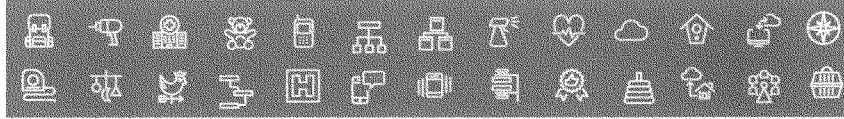
*before the*  
Small Business Subcommittee on  
Health and Technology

*on*  
Modern Tools in a Modern  
World: How App Technology is  
Benefiting Small Businesses

July 23, 2015  
Room 2360 of Rayburn House  
Office Building







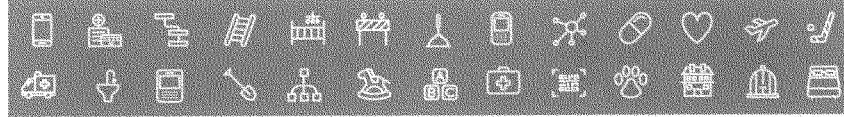
Chairwoman Radewagen, Ranking Member Moulton, and distinguished members of the Committee: My name is Morgan Reed and I am the executive director of ACT | The App Association. I thank you for holding this important hearing on the impact of the app industry and mobile innovation on small businesses. As a licensed iOS developer, it has been an honor to represent the interests of software companies over the past 11 years.

ACT | The App Association represents more than 5,000 app companies and technology firms that create the apps used on smartphones around the globe. As the world has quickly embraced mobile technology, our member companies have been creating innovative solutions to help improve workplace productivity, accelerate academic achievement, and live healthier lives.

My goal today is to explain the remarkable growth of the app industry and how its emergence has given small business owners new resources to help them succeed.

Specifically, the app industry has three key messages for the members of the Committee:

1. App companies are succeeding in every region of the country.
2. The growth of the app economy provides access to technology previously out-of-reach for many small business owners in rural and underserved communities.
3. Specialized apps provide new tools and resources to help small companies improve their efficiency and prospects for success.



## App Industry Emerges

Apps have revolutionized how we work, play, communicate, and manage our health.

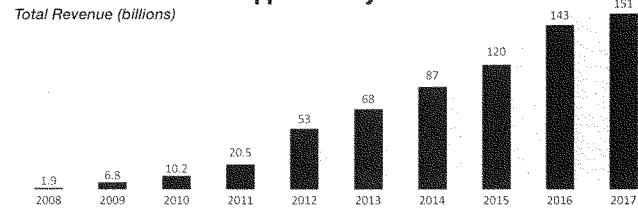
In 2008, the Apple App Store launched with only 500 apps. In just seven years, that number now exceeds 3 billion across several different platforms.<sup>1</sup> During that short period, the app economy has emerged as a \$120 billion marketplace.<sup>2</sup> This tremendous growth shows no signs of slowing.

From its beginning, startups and small companies have been the engine of innovation in the mobile marketplace. The memorable ad campaign for smartphones featured the refrain, “there’s an app for that.” The software companies that make apps are as much a reason for the success of those devices as the hardware manufacturers who make them.

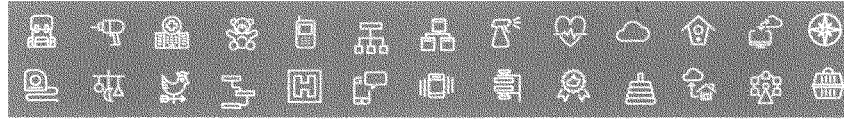
Small businesses are providing most of this value. Our industry research<sup>3</sup> has consistently found that more than three-quarters of the top-grossing apps are made by small companies. Eighty percent of those companies call the U.S. home.<sup>4</sup>

## Growth of the Mobile App Economy

Total Revenue (billions)

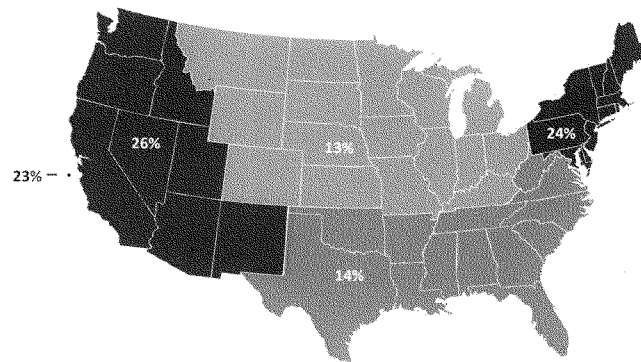


Source: research2guidance, APPNATION, VisionMobile<sup>5</sup>



The primary reason for small companies succeeding in the app marketplace is that there are few barriers to entry. The ability to write computer code is the key requirement. App platforms manage transactions, offer a storefront, and provide security.

That means app makers can succeed in any region of the country. Accordingly, needing just an internet connection, app companies can be found in every single congressional district. Moreover, 77 percent of the top-ranked apps are made outside Silicon Valley,<sup>6</sup> in places such as Kennebunkport, Maine, and Cincinnati, Ohio.



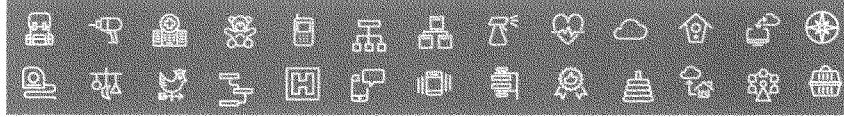
Cloud technology that provides remote data storage is the lifeblood of the mobile economy. It allows users to access and share data from any location. It is also where apps are sold and downloaded.

This allows company employees to access their work files from any location outside the office. It also provides considerable flexibility for growing companies that can scale their IT investment based on requirements that may fluctuate seasonally or periodically.

This mobility is key to helping service personnel in the field. Apps give them the ability to check customer records, keep track of job progress, and make sure the right person is assigned to the next closest job, all without constantly calling back to home base.

4





Over \$300 billion is spent through mobile commerce every year.<sup>7</sup> Local retailers can easily tap into this market using apps like Etsy and EBay that serve as their storefront. These can be particularly helpful to small businesses in remote areas looking to reach customers outside their region.

Apps also offer companies an alternative to existing enterprise products. Inventory management software is an expense that can be too steep for many small businesses and startups. A number of inventory apps offer a different solution for tracking merchandise with the added benefits of mobile access and a lower price point.<sup>8</sup>

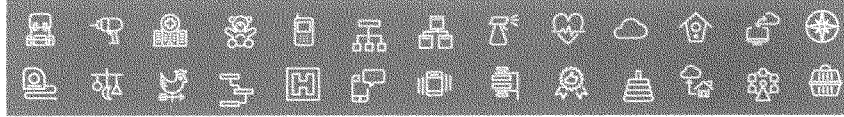
For small companies looking to grow, customer relationship management (CRM) software is a critical tool for success. CRM is used by sales, marketing, and customer support teams to ensure continuity and quality of service. App versions of these tools help sales agents tailor their pitch and improve the likelihood of success.<sup>9</sup>

Small companies are also turning to apps to manage point of sale interactions. Vastly improving the ease and efficiency of transactions, mobile devices are replacing cash registers and companies are relying on apps to process payment, print or email receipts and connect to inventory management systems.

Small companies and startups are nimble enough to respond quickly to shifts in demand. The success of business app companies often results from identifying and responding first to market opportunities. Small business customers benefit greatly from this kind of innovation because an app is more likely to meet the unique requirements of niche or local marketplaces than general software targeting a broader demographic.

Provides a mobile platform for consumers and businesses to remotely conduct transactions without needing credit cards or currency.

Consumers post their project needs on the app where businesses can submit bids for the contract.



## Travel

### **Tripit**

Uses travel confirmation emails to create a detailed trip itinerary helping business travelers keep organized and on time.

### **Kayak**

Users can find the best and cheapest options for booking flights, hotels, or car rentals.



## Niche

### **Woodcraft**

Gives carpenters Computer-Aided Design (CAD) and 3D modeling.

### **Houzz**

A visual tour of homes showcasing the work of interior decorators. Homeowners can find ideas and connect with local companies for project work.

### **iScrap App**

Provides location information of scrap yards with scrap metal visuals for part identification and pricing.

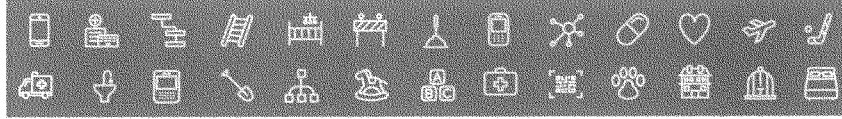
The mobile health industry has grown remarkably in recent years. Connected devices now outnumber people in the United States,<sup>10</sup> and consumers are becoming increasingly comfortable using smartphones and tablets to monitor their health.

These solutions are particularly important to small businesses. With fewer employees, small companies are more susceptible to productivity shortfalls from missed days due to illness. Studies have shown that workplace health programs can increase productivity, decrease the use of sick leave, and foster a better working environment.<sup>11</sup> Mobile health apps help facilitate that activity.

Employees use an app that includes exercise tracking to promote better health and fitness. The app also helps users find care providers, work with their insurer to manage coverage, and refill prescriptions from almost any location.

Harnessing the power of mobile health, patients and their care teams can monitor chronic conditions, and track symptoms and treatments in order to make better decisions about when an office visit is needed. Able to share daily readings from a glucometer or blood pressure cuff, patients can now provide a physician with far more information than a single appointment would reveal.

There's also the medical practice itself. Many small and independent practices rely on mobile apps to improve productivity and efficiency, and access resources that may otherwise be cost prohibitive.<sup>12</sup> Medical practices use apps to manage workflow, perform complex medical calculations, and run point-of-sale services for patients. Apps also help them connect patients and manage their offices remotely.



## Conclusion

The meteoric rise of the app economy has created a new wave of entrepreneurship. Companies are being founded with new innovations at a breathtaking pace.

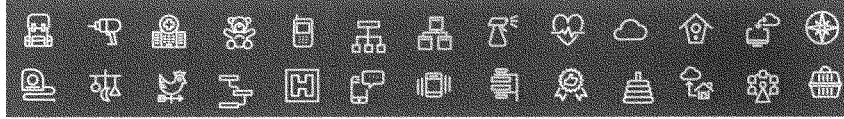
This is happening everywhere. Businesses producing mobile apps can succeed wherever software coders can be found. This has led to widespread geographic diversity in the app economy, generating revenues and creating jobs all across the country.

This unique diversity has resulted in a much broader range of software options for small businesses. Apps created by people in a particular region are more likely to reflect community interests and preferences.

Workplace and enterprise apps are often tailored to specific industries and their unique requirements. This is especially beneficial to niche or local marketplaces that may not be served by software written for a broader demographic audience.

Significantly, the emergence of apps serving small businesses has been greatly beneficial in rural and underserved regions. Companies can install software instantaneously from a trusted App Store without worrying about travel, local store inventory, or availability of IT specialists.

The decentralized nature of the app economy makes it more responsive to consumers on a granular level. This accounts for its dramatic success to date and bodes well for the continued growth of companies that make apps and the small businesses that rely on them.



I thank you again for the opportunity to present testimony about our extraordinary marketplace and its impact helping small businesses prosper. I look forward to our continued work together and pledge our support to help advance measures that promote innovation and foster growth.



## End Notes

<sup>1</sup> "Global Mobile Application Market 2015-2019," TechNavio Insights (March 2015). Available at: <http://www.reportlinker.com/p01816829-summary/Global-Mobile-Application-Market.html>.

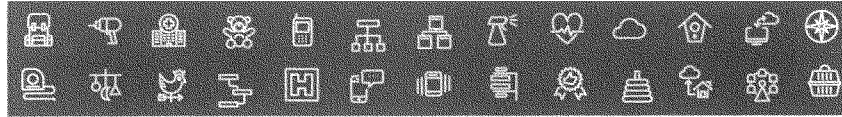
<sup>2</sup> Wilcox, M. & Voksoglou, C., "Developer Economics Q1 2015: State of the Developer Nation," VisionMobile (February 2015). Available at: <https://www.developereconomics.com/reports/developer-economics-q1-2015/#key-insights>.

<sup>3</sup> Godfrey, J. & Reed III, M., "WWDC Preview: The iOS App Economy," ACT | The App Association (June 2015). Available at: <http://actonline.org/wp-content/uploads/WWDC-Preview-The-iOS-App-Economy.pdf>; Bernard, C. & Godfrey, J., "State of the App Economy 2014," ACT | The App Association (October 2014). Available at: <http://actonline.org/wp-content/uploads/2014/10/State-of-App-Economy-web.pdf>; Godfrey, J. & Reed III, M., "App Store After Five Years," ACT | The App Association (July 2013). Available at: <http://actonline.org/wp-content/uploads/2014/04/The-App-Store-After-Five-Years.pdf>; Godfrey, J., Reed III, M., & Herndon, E. W., "Apps Across America," ACT | The App Association (July 2012). Available at: [http://actonline.org/wp-content/uploads/2014/07/Apps-Across-America\\_new.pdf](http://actonline.org/wp-content/uploads/2014/07/Apps-Across-America_new.pdf).

<sup>4</sup> Bernard, C. & Godfrey, J., "State of the App Economy 2014," ACT | The App Association (October 2014). Available at: <http://actonline.org/wp-content/uploads/2014/10/State-of-App-Economy-web.pdf>.

<sup>5</sup> Mikalajunaite, E., "The Application Development Market Will Grow to \$US100bn in 2015," research2guidance (July 6, 2011). Available at: <http://www.research2guidance.com/the-application-development-market-will-grow-to-us100bn-in-2015/>; "APPNATION State of the App Economy Report Forecasts App Economy to Reach \$151B by 2017," APPNATION (July 2013) available at: <http://appnationconference.com/main/research/>; "App Economy Forecasts 2014-2017," Vision Mobile (December 2014), available at: <http://www.visionmobile.com/product/app-economy-forecasts-2014-2017/>.





<sup>6</sup> Godfrey, J. & Reed III, M., "WWDC Preview: The iOS App Economy," ACT | The App Association (June 2015). Available at: <http://actonline.org/wp-content/uploads/WWDC-Preview-The-iOS-App-Economy.pdf>.

<sup>7</sup> Wilcox, M. & Voksoglou, C., "Developer Economics Q1 2015: State of the Developer Nation," VisionMobile (February 2015). Available at: <https://www.developereconomics.com/reports/developer-economics-q1-2015/#key-insights>.

<sup>8</sup> Inventory apps include: On Shelf, Stock Control

<sup>9</sup> CRM apps include: Base CRM and Sales Tracking, Sellfy, Microsoft Dynamics

<sup>10</sup> "Definitive data and analysis for the mobile industry," GSMA Intelligence (accessed July 2015). Available at: <https://gsmaintelligence.com>.

<sup>11</sup> "Workplace Health Promotion," Centers for Disease Control and Prevention (October 2013). Available at: <http://www.cdc.gov/workplacehealthpromotion/businesscase/benefits/productivity.html>.

<sup>12</sup> "Medical Practice Efficiencies & Cost Savings," Office of the National Coordinator for Health Information Technology (March 2014). Available at: <http://www.healthit.gov/providers-professionals/medical-practice-efficiencies-cost-savings>.



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U.S. HOUSE OF REPRESENTATIVES  
COMMITTEE ON SMALL BUSINESS  
SUBCOMMITTEE ON HEALTH AND TECHNOLOGY

Modern Tools in a Modern World:  
How App Technology is Benefitting Small Businesses

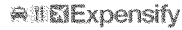
U.S. House Of Representatives  
Committee On Small Business  
Subcommittee On Health And Technology

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TESTIMONY OF DAVID BARRETT, FOUNDER/CEO OF EXPENSIFY

JULY 23, 2015

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Version 1.0 (2015-01-01)  
 www.expensify.com

Expensify, Inc.  
 dbanett@expensify.com

## Fact Sheet: Empowering SMBs with Enterprise-Grade Apps

### Key Points on what is happening

- "Smartphones" are **pocket-sized supercomputers** that enable productivity gains beyond what even the largest enterprises could achieve just a few years ago.
- But smartphones are **so affordable** that even the smallest businesses can receive the full benefit of technology historically limited to large enterprises with massive IT budgets.
- Additionally, mobile "app stores" enable businesses like Expensify to market themselves to small businesses that were **previously unreachable** by classic enterprise-based sales models.
- This all adds up to a smartphone-based "app economy" that is improving the efficiency of the "global economy" with astonishing speed — there is no gradual "trickle down" from big companies to small, **everybody is benefiting all at once**.

### What Congress Can Do to help SMBs

1. **Help create awareness** by working with the SBA and Chamber of Commerce to educate small business owners as to what mobile apps are available.
2. **Support the "gig economy"** by strengthening employees' freedom to choose when and how they want to work.
3. **Welcome legal immigrants** to start more small businesses and to enable existing SMBs to compete more effectively with large enterprises
4. **Simplify internet tax** collection by centrally aggregating and publishing per-zipcode sales tax rates on a defined schedule.
5. **Encourage crowdfunding** by reducing the risk and overhead for business owners to solicit funds from a broader range of investors.
6. **Reward true innovation** by creating tough software patent standards to invalidate frivolous claims and stop patent trolls.

### About Expensify

- Expensify is a service for **business travelers** to get reimbursed for expenses incurred on the road. In simple terms, Expensify does "Expense reports that don't suck!"
- Expensify's **SmartScan™ technology** (patent #US8861861) automatically reads expense data from electronic receipt images captured via iPhone and Android smartphones, which are then submitted, approved, and reimbursed automatically -- all within 24 hours from scan to cash in the bank.
- Expensify is the **fastest growing** expense management service in the world (Gartner'15).
- Expensify is a **"Key Partner"** of Intuit's QuickBooks Online, FastCompany's "2015 Most Innovative Company", and winner of "CPA PracticeAdvisor 2015 Innovation Award".

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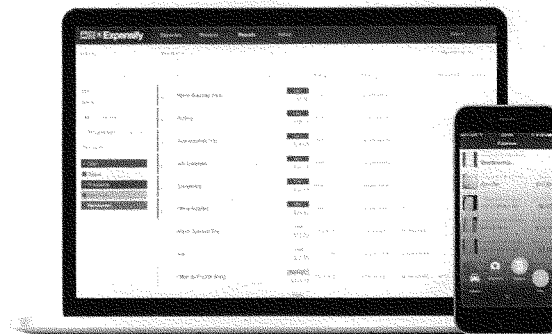
Expensify, Inc.  
 dbanett@expensify.com



Expensify, Inc. is a public company  
listed on the NASDAQ stock exchange

Investor Contact: Jeff  
dbarrett@expensify.com

- Expensify is used by over 1000 churches and non-profits, **400,000 businesses** and 3M users.
- Expensify is best known for powering global expense management for major tech brands like Yahoo, Uber, Square, and most of Silicon Valley. However, 75% of Expensify's revenue actually comes from **small businesses** under 100 employees.
- Expensify is itself a small business, with **75 full-time**, high-tech employees split between offices in Silicon Valley and rural Michigan.
- Expensify has partnered with the Ironwood, MI city government to **bring jobs downtown** and revitalize this civic center.
- Expensify sponsors a scholarship to **Gogebic Community College**, and has partnered with the college to develop a cutting edge engineering curriculum.



### Executive Summary

The last decade has seen an explosive rise in smartphone technology delivering a wide range of mobile applications, providing universal access to unprecedented efficiency gains. Small businesses are especially poised to benefit from these gains due to their accelerated adoption of new technology, along with the optimized processes they enable. Expensify is just one example of how enterprise-grade mobile technology can be delivered to small businesses via a low-cost app. Congress is uniquely positioned to help small businesses find products like Expensify through training and awareness campaigns, as well as help companies like Expensify build products to help small businesses through targeted reforms to patent, immigration, internet tax collection, and support for the "gig economy".

### Mobile App Stores: a 10 Year Overnight Success

Though it might seem obvious to say the app revolution started in 2007 with the launch of the iPhone (though more appropriately it should be in 2008 when the app store launched -- the same year Expensify was founded), I'd actually mark the start as five years earlier (2002), with the launch of a little known phone called the "**Danger Hiptop**" created by a guy named Andy Rubin. This was the first phone sold by a major carrier that had largely unrestricted access to the internet, and that launched with an integrated app store.

Expensify, Inc. is a public company  
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I was a big fan of the phone: I hosted the first dinner for Hiptop developers, and even wrote the first Hiptop calculator. But what is most notable about the Hiptop's app store was how it was a **colossal failure**. So far as I can tell -- and I've owned nearly every version of the device since launch -- no new apps were ever added. Indeed, I couldn't even get my calculator app listed, despite not connecting to the internet.

Accordingly, the world would need to wait another **6 years** before iTunes was updated to allow third party developers to publish applications to a global store for download and installation onto the iPhone. Four years later, there were over a million apps listed. Now, I'm sure there are many reasons why the iPhone App Store succeeded where the Hiptop App Store failed. But I would say the biggest reason comes down to: **carrier control**. Apple had the clout to force AT&T to allow (largely) unrestricted applications onto their network, whereas Hiptop didn't.

(Fun fact: After Hiptop's failure, Andy Rubin went on to build a new mobile operating system: Android. It launched in 2008 with an integrated app store, and now has more apps than the iPhone.)

#### KEY TAKEAWAY:

Innovation requires providing developers open, unrestricted access to both the internet and its users to flourish. Carrier control delayed the app economy by 6 unnecessary years; support network neutrality to ensure carriers and ISPs don't undermine innovation again.

### Smartphones: Pocket-sized Supercomputers

It's hard to fathom just how powerful smartphones have become, and how quickly they continue to grow. Though not at all scientific, here are some examples to put things into perspective.

Perhaps the original "portable computer" was upon the Apollo Command Module, in 1969. It had 64 kilobytes of memory, and operated at a speed of 43 kilohertz. As comparison, the iPhone 6 has 1 gigabyte of memory, and operates at 1.4 gigahertz. In other words, the iPhone can process 16,000x more data at 33,000x the speed as the Apollo Command Module. Indeed, a single iPhone has far more computing power than **all of NASA** combined at the time it was landing astronauts on the moon. And it only costs \$200.

For a more modern example, take IBM's legendary supercomputer in 1997, named "Deep Blue". It achieved fame when beating the world chess champion Garry Kasparov in a controversial 6-game rematch. At the time, it was the 259th most powerful computer in the world. The iPhone is about 10x more powerful, meaning the phone in your pocket could easily **defeat the top 10 chess players** in the world, simultaneously.

Or even closer: take IBM's latest supercomputer named "Watson". In 2011, Watson challenged the top to Jeopardy! champions to a duel, receiving the exact same inscrutable hints at the exact same time as the human contestants. Watson beat them handily, and was hailed as the **smartest AI ever built**. That version of Watson is still more powerful than an iPhone -- and actually more equivalent to about 2500 iPhones.

But technology never stands still. One of the founders of Intel, Gordon Moore, coined the famous "Moore's Law", which states (loosely) that "**Computer power doubles every 18 months**." By that measure, everybody should have a computer in their pockets as powerful as Watson in about 7 years. That means in three terms, many of your constituents will have a computer as powerful as the most powerful AI ever built -- in their pocket. (And this doesn't even include the inconceivably more powerful computers it will have instant access to over the internet.)

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How Expensify's SmartScan™ technology  
works. (Source: Expensify, Inc.)

Indy MacVittie, CEO  
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#### KEY TAKEAWAY:

While it's not technically accurate to say **smartphones are equivalent to the fastest supercomputers** today, draft policy as if it were true because Moore's Law will make it true before that policy goes into effect.

### Real World Automation: Expense Reports that Don't Suck

So while the future will see increasingly powerful artificial intelligent applications automating away the mundane details of life in ways that are hard to imagine, we can get a glimpse of what that looks like in the **humble world of expense reports**.

As background, expense reports are the worst part of business travel. It's bad enough leaving your family for days or weeks at a time, living out of cramped hotels and eating in lobby restaurants. It looks so glamorous on TV, but in practice it's a stressful, exhausting mess of taxis, meetings, airports, and delays. So at its best, **business travel is still pretty awful**.

But then add in the pile of crumpled receipts you pull out of every nook and cranny at the end of the trip, and it's **downright sadistic**. The end of the trip is just the start of your expense report -- which means flattening out every receipt and glue-sticking it to a separate piece of paper, typing each receipt carefully into the right cell of a spreadsheet, stuffing everything into an envelope, submitting for approval and, eventually, if lucky, getting reimbursed.

In a sense, you are extending a zero-interest loan to your employer, and then need to act as your own repo-man to get paid back. Every receipt lost is a receipt unreimbursed -- a coffee here, a dinner there -- and pretty soon it adds up to real money. It's an almost offensive end to a grueling journey, but it's the world that **millions of business travelers** experience every day.

But mobile apps like Expensify are changing that. With Expensify, just scan the receipt when you get it using your smartphone's built in camera. The **Expensify app** will instantly upload it to the cloud such that it will never be lost, meaning you never need to put that receipt in your pocket in the first place.

Next, Expensify's **SmartScan™ technology** will automatically read the information off of the receipt image, such that you don't need to type it in manually at the end of the trip. Then it creates a new expense report for you, puts the expense on the report, and submits it right on time -- exactly as your finance team always wished you would. After that the report is updated with the categories your accountant needs, analyzed for fraud, automatically approved, exported to your accounting system, and then automatically reimbursed.

All this adds up to Expensify getting you **reimbursed tomorrow for your receipts today** -- without anybody needing to look at it ever again, not you, your manager, or your accountant.

#### KEY TAKEAWAY:

The steady march of technology will continue to create new automation capabilities, each **optimized for different problem domains**. Automation sophisticated enough to be called "artificial intelligence" won't appear overnight in the form of HAL 1000, but rather as specialized apps built to solve an increasingly-difficult array of specific problems. So while Expensify can't beat Watson in Jeopardy!, Watson can't do your expense report, either.

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HOW EXPENSIFY TRANSFORMED  
SMB EXPENSE MANAGEMENT

EXPENSIFY'S DASH OF HUMAN REVIEW

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### And the Winner Is: Small Business

One of the most incredible aspects of the mobile app revolution is that unlike previous technologies that appeared first in the enterprise and then "trickled down" to the people, mobile apps start with the people first. This means mobile apps are improving the efficiency of **everybody, all at once**, regardless of company size. Indeed, if mobile apps favor anybody, they favor small businesses -- in three broad ways:

First, small businesses like Expensify who create these apps are given a massive advantage over larger enterprise competitors. Concur took 22 years and 4,200 employees to amass 22,000 customers, for example, while it's only taken 7 years and 75 people for Expensify to obtain 16,000 customers; Gartner says we're the fastest growing company in our class in the world. This is because the historical strengths of a large company -- access to capital, global reach, and an army of "warm bodies" to throw at problems -- are neutralized in an environment where anybody in their basement can create an app that is given the **same visibility and distribution as every other app**. This means the need for expensive marketing campaigns and giant sales teams has been dramatically reduced, leaving large companies with very few strengths and a long list of weaknesses for their smaller competitors to exploit.

But second and more importantly, the sheer power and affordability of the mobile app ecosystem enables companies like Expensify to offer enterprise-grade capabilities to the smallest of businesses: **what previously cost millions of dollars, now costs \$5/mo.** This means the businesses who are most able to adapt quickly to new technologies, are now the first to access them. Accordingly, large businesses who are accustomed to having a technology advantage are seeing much stiffer competition from their smaller competitors, driving a heightened level of innovation nationally and globally.

#### KEY TAKEAWAY:

The mobile app economy is increasing the speed of business innovation, which fundamentally favors **smaller, more nimble companies** over their larger competitors.

### The Smallest of Businesses: Enter the "Gig Economy"

The third benefit I'll mention is still emerging, but is potentially the most interesting yet: the rising "gig economy" is expanding the workforce by **unlocking underutilized capacity** in existing workers, and enabling those to work who simply couldn't before. This is best explained by example:

One of Expensify's key technologies is something called "SmartScan". This is the magic that not just reads information off of your receipt, but categorizes it correctly, puts it on the right expense report, links it to the corresponding transaction on your credit card statement, and more. It is a very complex and sophisticated system involving a wide range of technologies, along with **a dash of human review**. The human component is critical because even the best technology has limits -- and providing a truly magical experience requires going beyond the limits of what technology can do alone.

This is especially important in an area called "optical character recognition" -- the process of not just reading information off the receipt, but making sense of what it means. Mobile cameras are good, but not good enough for a pure technology solution alone to get the level of quality we need: even the best technology isn't nearly as good as the human eye. Accordingly, Expensify has a team of **"SmartScan agents"** who manually transcribe and categorize information from the receipts quickly, accurately, and at very high scale.

Our initial approach was to hire full time employees for this task -- and in fact we still do for certain types of receipts that require it. But as important as it is for the results to be

EXPENSIFY'S DASH OF HUMAN REVIEW

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accurate, they also need to be **low cost to provide**: even though we offer the feature free to users, it's not at all free for us. As a result, we initially started these positions overseas on the assumption that would provide the lowest "unit cost".

Unfortunately, over time we realized that this sort of transcription work is best done in very short shifts -- quality tends to degrade dramatically after about 4 hours. But for all the attention given to the lost cost of overseas labor, we were surprised to discover a wide range of **employer restrictions overseas**. For example, in many cases we found that we could only hire in consecutive 8-hour shifts, in 5 consecutive days, all starting at the same time per day -- regardless of the employee's individual wishes. These unexpected constraints meant that in order to maintain adequate staffing at all hours of the day (we process millions of receipts daily) we needed to hire far more people than expected -- and many of those workers were producing very low quality results. After doing the math, we realized the anticipated cost savings of working overseas were almost entirely eliminated by these accumulated constraints -- while at the same time making an unhappy work environment for some employees.

For this reason we've fully reinvented the system around the notion of a **flexible, "on demand" workforce** based out of rural Michigan. We have since brought work to hundreds people who are either unemployed or even unemployable via normal channels due to a simple lack of appropriate jobs in the area. These workers can dial in at a time and place that is convenient for them, any hour of the day, and for as little or as long as they like. This flexibility means we've been able to bring high-paying work to hundreds of students, stay-at-home moms, seasonal employees, those recovering from medical conditions, entrepreneurs starting their own small business, or anybody just looking to add a secondary source of income to make ends meet.

Most interestingly, we find we get a **significantly lower unit cost** from workers in Ironwood, MI than those in Nepal, Honduras, or the Philippines -- despite paying them substantially more on an hourly basis -- due to increased speed, accuracy, and cultural awareness of the receipts being processed (eg, "Subway" is both a mode of transportation and a delicious sandwich). This means we are able to pay workers more, in a better work environment, while keeping well-paying jobs in the United States. In aggregate, we've paid millions of dollars to workers and employees in rural Michigan, as a direct consequence of it being the best place in the world to find high quality, reliable labor.

#### KEY TAKEAWAY:

The individual right to choose where and when to work creates a global competitive advantage for the American workforce.

### But Challenges Remain, and How Congress Can Help

So the state of the mobile app union is strong -- and it's already providing significant benefits to small businesses nationwide. If nothing else, our #1 goal should just to be **avoid screwing it up**. But we can do more than merely that, and here are a few ideas of where to start:

1. **Help create awareness.** The vast majority of customers who come onto Expensify aren't coming from a competing solution, but rather coming from nothing -- a shoebox of receipts, if that. It's great that they are finding us, but the fact is that millions of businesses could be getting the benefit of Expensify and other mission-critical apps of our kind (payroll, benefits, insurance, etc). Recognizing that Congress can't endorse specific solutions, I could imagine Congress working with the Small Business Association (SBA) and Chamber of Commerce to provide **training and awareness** to small businesses, thereby accelerating the adoption of these productivity tools and thus increasing the efficiency of the US economy.

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2. **Support the "gig economy".** I'm not sure if that is really the most flattering framing of the issue ("flexible economy" is more accurate, though less sexy), but the reality is workforce flexibility creates a major competitive advantage -- both with small businesses competing with larger businesses with greater resources, but also US businesses competing abroad. There are valid concerns that need to be taken seriously so as to provide adequate protections for 1099 contractors, but we should actively seek solutions that preserve the **major advantages** that this flexibility affords.
3. **Welcome legal immigrants.** The news has been dominated by the impact of illegal immigration, but the more important story is how incredible legal immigration has been for this nation's small business community. Trump's statements notwithstanding, legal immigrants are some of the best the country has to give: over 40% of Fortune 500 companies (each of which started out as a small business) were founded by immigrants or the children of immigrants -- and immigrants are twice as likely to start new businesses as non-immigrants. Additionally, if we're going to let anybody in, we should absolutely be expanding the H1-B program as it explicitly invites the **best and brightest talent in the world** -- with every H1-B visa holder creating between 2 and 5 jobs for native born Americans. Given the reduced reach and visibility of each small business relative to their larger incumbent, H1-B visas are an especially powerful tool for obtaining the best talent and competitiveness.
4. **Simplify internet tax collection.** Sales tax collection is a fast moving and increasingly complex world. Historically, companies would grow their teams roughly as fast as they grew their sales regions, and by the time you were selling nationwide, you'd have a whole team devoted to tax compliance. But the internet enables small businesses to sell nationwide well before they have the internal capacity to figure out the ever-shifting world of internet sales tax collection. It would be helpful if Congress created a **central registry** of sales tax rates by zip code, updated on a regular schedule (eg, quarterly), to reduce the burden of compliance on small businesses.
5. **Encourage crowdfunding.** The cost to start a business has fallen dramatically, but still isn't remotely free. Most entrepreneurs need some help to get off the ground, and despite the rise in "angel investors" and "seed VCs", getting that first bit of funding can be a daunting task. "Crowdfunding" platforms like Kickstarter and Indiegogo are great options for companies that sell a specific, finite product (such as a watch or even a song), but the law restricts selling equity in the business outright. Well-connected entrepreneurs can get around this with "handshake" deals among "friends and family" to get off the ground, but entrepreneurs without the right friends or family are out of luck. If Congress were to define a low threshold under which businesses could **legally sell equity to their peers** -- and not just high-income "accredited investors" -- this would reduce the barrier to entrepreneurship and thus drive an increase in new small business creation.
6. **Reward true innovation.** Love them or hate them, patents and copyright are here to stay. Used properly they can help foster an innovative ecosystem of ideas. However too often they are used in anti-competitive fashion that undermines innovation. Congress could tip the scales away from the **dark side** by raising the bar for what is seen as "non-obvious", simplifying the process to challenge the legitimacy of the patent, and increasing penalties for using frivolous patent suits as a form of naked blackmail.

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#### Witness Bio



David Barrett started programming at the early age of 6 and has been working hard to become an expense report magnate ever since. David attended the University of Michigan and worked in their Virtual Reality Lab, before moving to Texas to write 3D graphics engines for the video game industry. Next he moved to California to join Travis Kalanick in building a peer-to-peer file transfer technology called Red Swoosh, which was acquired by Akamai in 2007. In 2008 David left Akamai to start Expensify, and has been improving the world ever since, one expense report at a time.

Expensify Inc. (NYSE:EXFY)  
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**Testimony from Dr. Patricia G. Greene**

**Paul T. Babson Chair in Entrepreneurial Leadership, Babson College**

**Academic Director, Goldman Sachs *10,000 Small Businesses* and *10,000 Women***

**Co-Owner: Artworks, Gettysburg, PA**

**Investor and Advisor: Portfolia, San Jose, CA**

**House Committee on Small Business**

**Subcommittee on Health and Technology**

**Modern Tools in a Modern World**

**July 23, 2015**

Chairwoman Radewagen, Ranking Member Moulton, Members of the Subcommittee, thank you for the opportunity to testify before the Subcommittee on Health and Technology on the topic of Modern Tools in a Modern World, or more explicitly for today, how apps, which I interpret as mobile computing tools, “improve businesses’ day-to-day operations, make them more efficient, assist their marketing and outreach capabilities, and, ultimately, stimulate revenue and job growth”.

I’m going to base my testimony largely on my experience as an entrepreneurship educator with Babson College, as the academic director and lead designer of the Goldman Sachs *10,000 Small Businesses* and now *10,000 Women* programs, as a federal appointed member of the SBA Advisory Board for the SBDC programs, as co-owner of Artworks, a store in Gettysburg, PA, and most recently, as investor and advisor to Portfolia, an equity based crowdfunding platform focused on women-led businesses and women investors.

I’m very pleased with the topic of this hearing today as much of the public discussion around entrepreneurship is very technology driven, but it’s often driven to a tiny slice of businesses, those that exist to advance the use and/or sell technology. It’s gratifying that today we are looking at the other side of the equation, how small businesses can use and benefit from technology.

Our economy is one of small businesses, with less than ten percent of all U.S. businesses having more than four employees. This means there are more than 25 million very small businesses either creating jobs, or providing the owner a job, and approximately an additional two million with between 5 and 499 employees, all trying to find the best tools to survive and thrive.<sup>1</sup>

*10,000 Small Businesses*, or 10KSB, is a \$500 million initiative to help small businesses in the United States by providing entre-

<sup>1</sup> <http://www.census.gov/econ/smallbus.html>. Accessed July 21, 2015.

preneurs an integrated program of practical business and management education, business support services, and the opportunity to access capital. Babson College is the academic partner for the program and is responsible for the education and advising components, the training for all those who deliver the program, the measurement and evaluation system, and the national alumni program. To date the program has served nearly 5,000 small businesses who represent nearly 100,000 employees across the US and the UK, including 49 states, D.C, and Puerto Rico and collectively have over \$3 billion in revenues. We deliver the program through twelve community college sites and one blended (on-line and face-to-face) model housed at Babson College.

The *10,000 Small Businesses* alumni provide a highly useful context for considering the questions of this subcommittee today, how do, or how can, apps help them run more efficiently. The entrance requirements are for the business to be at least two years old, have at least four employees, and have revenues of at least \$150,000. The program alumni are a broad cross-section of U.S. small businesses, with one unifying criteria, they all explicitly want to grow their businesses. They are largely mature businesses. The typical business comes into the program with \$692,000 in revenues, 11 employees, and having been in business for 11 years. Professional, scientific and technical services is the only industrial category that includes more than ten percent of the businesses and all industrial categories are represented in one way or another.

The owners themselves are also important to consider when thinking about the use of technology tools. The business owners are most often around 46 years old, with a range from 22 to 75. They are fairly evenly split as to gender, with 46% of the businesses owned by women. And they have a very broad range of educational backgrounds, ranging from some high school to multiple graduate degrees.<sup>2</sup>

Given my background, my focus is more on how small businesses actually learn about technology tools. Most entrepreneurial education programs focus on planning, and very few actually focus on how to operate the business. I do take *10,000 Small Businesses* as an exception. The use of technology by the businesses is primarily addressed in three ways in this program. First, we train all instructors to have an area of their classroom dedicated to a technology flip chart. Each business owner is asked to list the tech tools they use in running their businesses, with an emphasis on apps. This approach is particularly used during the *Operations and Processes* module.

Second, the program is built on peer learning and the business owners are organized into Growth Groups to work with each other. These sessions include both formal and informal exchanges of information about tools used. Notably, we avoid organizing any business owner group by industry to promote cross boundary learning about tools.

<sup>2</sup> <http://www.goldmansachs.com/citizenship/10000-small-businesses/US/about-the-program/impact-of-10ksb/index.html>. Accessed July 21, 2015.

And third, we created a technology clinic for alumni of the program that is focused on learning how to identify what technology exists, how to decide what apps are relevant, how to price them, and very importantly, how to integrate them into the company, including training employees on their use.

I'd like to briefly expand on each of these techniques. First, too often technology, particularly apps, is thought of in very small buckets, applied to only specific areas. So the push toward discussing apps in every module is designed to both encourage the use of apps where appropriate, but to also demonstrate to others the range of possibilities from note taking and collaboration to the more specific marketing or scheduling. This approach does mean that you need entrepreneurship and small business instructors who are actually current and adept in using these apps. Age is not an excuse for avoiding technology.

Peer learning about these tools is important, while potentially limited as to scale, especially when conducted outside of any organized program such as 10KSB. The use of technology, particularly mobile technology such as apps, needs to be integrated into regular training about starting and growing businesses, and decidedly not segregated into separate courses or offered only to certain types of businesses. We do not serve our small business owners well if we "protect them" from technology. By this I mean a practice I have seen in a number of other small business service programs of deciding beforehand who is likely to grow, who is amenable to the use of technology, and therefore who would benefit from more exposure to and instruction about technology tools.

The technology clinic proved to be a learning experience that we are now scaling across the country. For the pilot we included speakers from Square, largely focused on facilitating point of sale operations, Dropbox, for file sharing and storage, and Alignable, a social media collaboration tool. The intent was to demonstrate the range of tools available to the small business owners, while delving more deeply into the general technology selection and usage questions. The questions raised most often by the business owners were those that moved beyond selection, to training, and particularly about how to learn to connect across apps for increased efficiency. While not called this by the business owners, the desire was for an integrated portfolio, without being tied to any particular product or brand.

For apps, the actual price of the app is generally less of a concern due to most pricing structures. The cost comes in the time spent on adoption, including the learning necessary to make the usage decision, and then to roll it into the company. There is also the fear of inappropriate adoption, the situation when the app doesn't perform as expected, or just isn't a fit for the business. Changes in technology are difficult for any size company; however, smaller companies generally have less budgetary room to make mistakes. While adopting an app may seem like a small download decision, the potential impact of that decision on their company often drastically slows down making the actual decision.

The question of app adoption is also related to how small business owners train their employees, in this case, about the use of technology. This again is often something that could often be better addressed in small business start-up or growth programs. The need to do this is included in 10KSB and at 18 months after the program, 86.4% of the business owners report that they are providing on-the-job training, with 62.6 percent using some version of on-line learning, which actually then suggests employee training and developing as another app use for small businesses.

Much of the question about the use of apps and small businesses therefore comes down to learning. Learning about what is available, what makes sense, and how it can be used to improve the efficiency and effectiveness of any business. Overall, apps can make business life easier, and make small businesses more competitive. To also be considered, time is the small business owners' most precious resource and appropriate app selection and deployment takes time.

I'd like to close with one general and one more specific example of learning and using apps in 10KSB:

One of the most striking memories I have from my experience in this program comes from New Orleans where early one morning before class I noticed one of the more senior business owners in the class sitting down with the youngest member of the class in order to unpack his new iPad and learn from her about the apps and tools she was using to organize and operate her business. This actually is peer learning at its finest, recognizing that every business owner has both something to learn and to teach.

More specific is the example of Victoria Amador, co-founder and CEO of Tremendous Maid, Boston, MA.<sup>3</sup> Tremendous Maid provides residential and commercial cleaning in the greater Boston area. The business was awarded Small Business of the Year from the City of Boston—Main Street District for Hyde Jackson and recognized by Governor Deval Patrick during Immigrant Entrepreneurship Month in 2013. Tremendous Maids was also named the 2014 Neighborhood Business of the Year by the Immigrant Learning Center Organization. Ms Amador uses technology tools ranging from basic CRM to sophisticated scheduling programs and free tools such as Google Voice. She explains that she sees these tools as a better way to serve her clients and communicate much more effectively with her team. She reports that the ability to maintain clear communication is paramount to her industry in order to serve high end clients. She credits Google Voice with saving her thousands of dollars. She learned about Google Voice from a discussion with another 10KSB business owner. He recommended it to her when they met during the on-line portion of the national blended cohort. Ms Amador's example therefore becomes one of using technology to enable working with others to learn about technology.

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<sup>3</sup><http://www.tremendousmaid.com/about/>. Accessed July 21, 2015.

Thank you again for the opportunity to testify before you today.



**U.S. House of Representatives Committee on Small Business**  
**Subcommittee on Health and Technology**

**Testimony on “Modern Tools in a Modern World: How App  
Technology is Benefitting Small Businesses”**

**Presented by:**

**Cassie Gray, Founder, Clementine**

**July 24, 2015**

Good morning, my name is Cassie Gray and I'm the owner of Clementine, a handcrafted jewelry business. I'm so honored to have been invited to speak with you today. Thank you Chairwoman Radewagen and Ranking Member Moulton for the opportunity to testify.

My road to entrepreneurship was anything but fast or predictable. I graduated from Haverford College with a BA in English in 1997 and promptly moved to New York and joined the publishing industry, where I worked my way up from assistant to senior copywriter. But I developed something like restless hand syndrome; I just wanted to make something tangible. I started sewing again, then rediscovered beading and jewelry making—all things I hadn't done since I was a child.

About ten years ago, my personal life was in flux, and I left New York to move back to my hometown of Ashfield, Massachusetts. In this rural hilltown, I had to cobble together a living from whatever I could: freelance writing, waiting tables, and selling my jewelry. I opened ShopClementine on [Etsy.com](https://www.etsy.com) in January 2006. When I got my first sale I literally jumped for joy. For the first few years revenue was quite modest, but I'd fallen in love. I spent hours each day in the Etsy community forums, chatting with other makers from across the country and the globe.

While I was still waitressing and freelancing to get by, I devoted myself to learning all I could about jewelry. I attempted to teach myself to solder, but soon realized that a propane camping canister and tin plumbing solder probably weren't going to give me the results I was looking for. I took a series of intensive metalsmithing courses at several different craft schools, which gave me the confidence to move in new directions, expand my product line and focus on attracting new customers who were willing to spend more for high quality handmade jewelry. Through it all, Etsy has remained my main retail venue. The Etsy platform allows me to talk directly to my customers, making the shopping experience truly personal. Now, I work 50–60 hours a week on my business, and yearly revenue is more than \$130k.

While my story is particular to my personal circumstances, much of my experience aligns with that of other Etsy sellers. Just today, Etsy released a new report on the US Etsy seller community, which reveals that Etsy sellers are business owners in their own right, and the income they earn on Etsy—through the website and mobile apps—matters to their lives and to the broader economy.<sup>1</sup>

Like me, most Etsy sellers are women—86% in fact. Many are parents with children at home and just under a fifth are low-income, with annual household income under \$25,000. 39% of Etsy sellers live in rural areas, compared to 21% of the general US population. Nearly half of all sellers had never sold their goods until they sold them on Etsy. In this way, Etsy functions as an on-ramp to entrepreneurship, creating opportunities for many people who might not otherwise have started a business and removing traditional barriers.

And while some might be inclined to write our community off as hobbyists, income from these creative businesses matters. For 30% of Etsy sellers, their creative business is their sole occupation. For the rest, their creative business supplements other jobs, contributing an average of 15% to total household income overall. This money makes a difference—44% use it for necessary household expenses.

Etsy sellers are also self-reliant. Like me, most Etsy sellers manage every part of their business themselves. The vast majority of sellers work alone from home, and most are self-taught. Of the 65% who required capital to start their businesses, 83% relied on their own personal savings, and only 1% obtained a loan.

The Internet and mobile technologies have opened up incredible new opportunities to people like me. To operate my Etsy shop, I use the website and the two mobile apps Etsy offers, including one designed specifically to help sellers manage their shops, called Sell on Etsy. As of December 31, 2014, Etsy's mobile apps have been downloaded 21.8 million times.

The Sell on Etsy app is indispensable in my day-to-day routine. When I'm working at my jewelry bench, I check orders and communicate with customers via the app on my phone. If I go to make a hammered ring, but can't remember what gauge the silver should be, I check the listing details via the app. If I get a message from Etsy alerting me that one of my items has been featured editorially, I can go to the app and increase the quantity available so that item doesn't sell out. I also do most of my business's social media interaction via apps: Instagram, Pinterest, Twitter, and Facebook. There are apps that let you enhance photos with text to easily create promotions, apps that let you tie all your social media outlets together so posting to one automatically populates the others. If I see that I'm running low on 14k gold wire, I can check the metals market app for the spot price of gold and decide whether to place an order today or wait for the price to come down. Mobile app technology enhances how entrepreneurial Etsy sellers like me

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<sup>1</sup> [www.etsy.me/sellercensus](http://www.etsy.me/sellercensus)

reach customers and make a living. And, it is only the beginning. Already, more than half of Etsy's traffic comes from mobile devices.

The fact that I can use my phone at all to do these things is a bit of a miracle. However, we still have a long way to go getting access to technology for those who need it. I live and work in Franklin County, which is the poorest county in Massachusetts. Most of Ashfield is completely without cell phone reception; in my house high on a hill, I get just one bar of 3G.

There is no broadband or cable available, so I use a satellite to connect to the internet; it's slow and involves me having to go out in the middle of winter storms with a kayak paddle to whack the accumulated ice off the dish. Technology is sprinting ahead, but there are rural areas that are at a disadvantage. This gap in accessibility is a huge hindrance to entrepreneurship and business.

Policymakers have an opportunity to support Internet-enabled businesses like mine with hearings like the one today focusing on the benefits of the mobile app economy. There are other needs as well. In addition to fostering greater broadband deployment in rural areas, policy makers should adopt policies that specifically target the self-employed and micro-businesses. Most Etsy sellers are businesses of one, and face very different challenges from even a five- or ten-person enterprise. They are part of growing trends towards self-employment in the US, which offer both new opportunities and new challenges.

For example, members of our community often struggle to learn about and comply with the regulations that govern their businesses and products. Regulatory agencies should establish a Micro-Advocate to conduct direct outreach to micro-businesses, create user-friendly educational tools, and make formal recommendations to ease compliance burdens.

Further, policymakers should not increase the administrative burdens our community faces. For example, the newly introduced Remote Transactions Parity Act would require all Etsy sellers, regardless of size, to collect and remit sales tax in every state. Proposals like this threaten to undermine businesses of one, who simply don't have the time or resources to comply with such requirements.

Finally, many Internet-enabled businesses sell their goods worldwide, yet trade laws have not kept up with the advent of global e-commerce, and most independent, creative businesses lack the infrastructure and information to navigate complicated international trade rules. Customs and duties vary by country, and packages are often delayed at the border or subject to unforeseen import taxes, leading buyers to reverse transactions or demand refunds. De minimis customs exemptions offer a great opportunity to reduce these barriers. We appreciate efforts by this Congress to increase the U.S. de minimis to \$800, and are hopeful that Congress can continue to pressure the administration to prioritize this issue in ongoing trade negotiations.

Overall, I believe the Internet and the mobile app economy are creating incredible new opportunities for entrepreneurs around the

country. I urge Congress to enact policies that support our efforts to start and grow our creative businesses, enabling the broader maker-economy to thrive.

