

**Testimony of Scott R. Daugherty, Assistant Vice Chancellor and Executive Director
of the North Carolina Small Business and Technology Development Center
Before the US House Small Business Committee, Subcommittee on Health & Technology
Thursday, September 14, 2017
10:00am**

It is my pleasure to be with you today. I'm Scott Daugherty, the Assistant Vice Chancellor for Economic Development at NC State University and the State Director of the North Carolina SBTDC. I'm here on behalf of the Association of Small Business Development Centers (ASBDC) as a member and former Chairman of the Board. I'm also here in my SBTDC capacity, as State Director of the North Carolina Small Business & Technology Development Center.

The ASBDC, as you may know, is a membership based organization representing the 63 SBDCs funded by the SBA in collaboration with state and local partners. It advocates on behalf of the Small Business Administration's SBDC program. It also administers the broadly recognized and highly regarded peer based national accreditation program for SBDCs on behalf of the SBA.

The North Carolina SBTDC was launched as an inter-institutional program of the 16 campus University of North Carolina System in 1984. It was the first "T" focused SBDC in the country and has played a leadership and training role for other SBDCs seeking "T" accreditation. The SBTDC has 16 offices across the state staffed by 75 full-time professionals and supported by over 300 graduate and professional students and senior undergraduates each year.

Today, I'd like to talk about what SBDCs are doing to help small businesses adopt technology to support their businesses. I'll talk first about what we know about technology adoption trends and benefits. Then, I'll discuss what we see as the technologies that are necessary for broader adoption by small businesses. Finally, I'll close with comments on a few major challenges and concerns that result from increasing areas of technology.

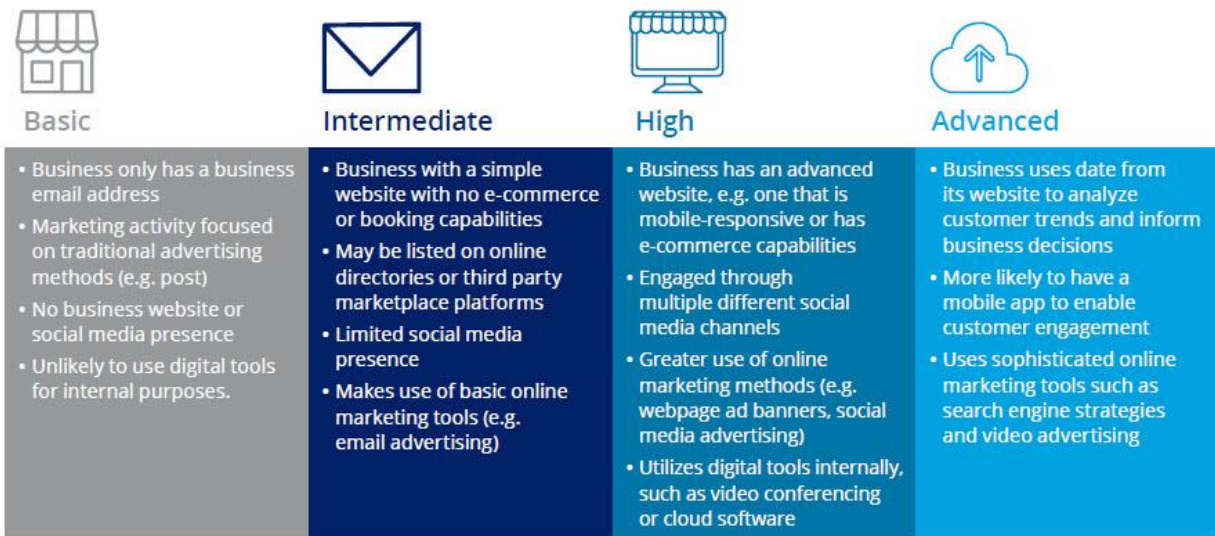
Small Business Technology Adoption Trends

A survey of over 2,000 small businesses, commissioned by Google and conducted by Deloitte (2017), indicates that there are growth and employment dividends associated with higher levels of digital engagement, regardless of size or age of business, industry or geography.

Considering companies with 250 employees or less, they identified four levels of digital engagement and provided estimates of the number of companies associated with that level.

- **Basic Level:** (20% of surveyed small businesses). Companies use only basic tools such as an email address with no website or social media presence.
- **Intermediate Level:** (30% of surveyed small businesses). Companies have a simple website that uses basic online marketing tools, online directories, or a third party marketplace.
- **High Level:** (30% of surveyed small businesses). These businesses will have a more advanced website that might include mobile or e-commerce capabilities and will be engaged with multiple social media options and online marketing channels.
- **Advanced Level:** (20% of surveyed small businesses). These companies have sophisticated digital tools such as data analytics and mobile apps.

Figure 1: Representative characteristics of US small businesses at each level of digital engagement



Source: Deloitte Access Economics (2017)

According to this research, there are measurable growth and employment dividends associated with each engagement level. When comparing the 20% at basic level of digital engagement to the 20% considered advanced, they found that “advanced” firms achieved the following.

- Earned **2 times as much revenue per employee**.
- Experienced **revenue growth** over the previous year that was nearly **4 times** as high.
- Almost **3 times as likely to be creating jobs** over the previous year.
- An average **employment growth rate that was more than 6 times as high**
- Were **3 times as likely to have exported**

It is not surprising to find that digital adoption and engagement drive incremental revenues for the SMEs given the rise of the millennial and over-all, digital-savvy consumer. It has also been noted that there is a causal effect: Higher levels of revenue growth may be achieved through digital engagement based upon consumer demand. This may fuel additional growth based on time and resource savings.

Collins, G., O’Mahoney, J., & Ma, S. (2017). *Connected small businesses US*. Deloitte. Available from: <https://www2.deloitte.com/content/dam/Deloitte/us/Documents/technology-media-telecommunications/us-tmt-connected-small-businesses.pdf>

In another survey conducted by Wakefield Research of 509 US small business owners, it was revealed that business owners embrace new trends such as the use of cloud-based technologies and the mobile, remote workforce. Even so, in this survey, commissioned by Brother, a maker of office and printer supplies, it was found that 58 percent of small businesses require employees to be present in the office.

However, in this article published in **June 2016**, survey respondents (**21%**) indicated that they would be spending the biggest portions of their IT budgets on cloud-based file sync and share technologies. An additional **28%** will spend IT funds on the purchase on mobile devices to accommodate mobile workers.

This survey indicates the pragmatism of SMEs who are willing to embrace new technologies while maintaining use of the tried and true including printers, faxes, scanners and copiers.

Chaney, P. (2016). *Small businesses adopt new technology but rely on tried-and-true, survey says*. Small Business Trends. Available from: <https://smallbiztrends.com/2016/06/technology-adoption-survey.html>

Customers are driving the demand for digital interactions. Among recent Microsoft survey respondents, an equal number wanted in-person and digital experiences including website, email and social media. As companies move toward digital engagement, clients become accustomed to the fast response and it becomes an expectation. Of those who responded to this survey, 85% say it is important to respond in a timely manner.

Regardless of generation, seventy-three percent of customers feel it is important to be able to access information about their business interactions online.

Safety and security are imperative as customers increase their comfort levels with sharing personal information. While they prefer to share their information, customers want their information protected. More than half of respondents would be unlikely to do business again with a company that had been a victim of a data breach.

The bottom line is that technology can set your business apart from the competition.

Microsoft (2016). *Survey reveals customers crave digital experiences*. Available at: <https://blogs.business.microsoft.com/en-us/2016/12/07/survey-reveals-customers-crave-digital-experiences/>

Millennials

Another recent article in Entrepreneur magazine had some interesting and relevant findings. The magazine article emphasizes the top trends for small business. Because millennials were born in the digital age, technology adoption is an expectation for the business they are dealing with. Their expectation is that there will be a 24/7 interaction between brands and their customers. They are also more in tune with work-life balance, social responsibility and business quality and ethics. They have a preference for on-line meetings and webinars, workflow optimization, and project management programs.

Web presence

Internet based technology provides a tremendous benefit to start-ups, but also provides valuable solutions for small businesses in every industry. In fact, the Independent We Stand Campaign reports that 97 percent of Internet users conduct online research on products and services prior to purchase. Even so, nearly half of small business owner's websites are not accessible via mobile and Hibu reports that 45 percent of small businesses don't have a website at all.

Ecommerce

Ecommerce and online storefronts, drive buyers to websites and mobile commerce (or mcommerce) as well as social ecommerce are becoming the most used platforms for researching and purchasing goods and services.

The author predicted that mobile payments in the US alone would generate \$142 billion in 2016.

EMV payment security

EMV or “Europay, MasterCard and Visa” is vital to business security in the years ahead. There is an expectation that the security of the small business and their customers will be the top priority. In fact several articles indicate that hacking and cybersecurity are among the most-cited fears of small business owners whether because of the potential damage to their reputations or the financial repercussions they may face.

On-line lending

Many on-line lenders award funding exclusively to small-business startups. This innovative trend is driven by simplicity and convenience as well as speed of delivery of capital and higher levels of customer service.

Business intelligence (BI)

BI software gathers disparate data and translates it into information that a business can use to improve their business. Once solely the purview of large, mega-businesses, simplified solutions are now available for SMEs.

Toren, A. (02 February, 2016). *The top 6 small-business trends on the rise*. Entrepreneur. Available from: <https://www.entrepreneur.com/article/270045#>

A Huffington Post article reiterates key points also noted in the previous article, citing the technologies most necessary for adoption include:

- The SME business must go mobile. Not only does the website need to be accessible from a mobile device, but the customer must also be able to order from their mobile device. In March 2015, when this article was updated, 93 percent of small-business websites did not work on mobile devices.
- In 2013, 15 percent of users paid by phone for something they purchased. Customers want to pay via mobile, and even though the industry is very fragmented, this activity will continue to expand.
- Invest in the best cybersecurity you can afford. Even though most of the data breached in 2013 were directed at the largest companies, the most popular type of attack—point of sale instruction—is one that could also affect small business.
- Being social is no longer simply being friendly on the phone and at the checkout lane. Being social in the age of the millennial will require the SME to meet them where they are located...on Facebook, Twitter, Instagram, LinkedIn and more. Making these sites work for the small business takes time. Many SMEs would benefit from a person who can handle these communications.
- Big Data is for smaller users too.

Sheinbaum, S. (2015). *Technology 2015: 5 things that every small business needs*. HuffPost. Available from: http://www.huffingtonpost.com/stephen-sheinbaum/technology-2015-5-things-b_6458062.html

Another recent study was conducted to investigate the challenges of individual entrepreneurs and small high-growth companies regarding barriers they face. While eleven barriers were identified, those pertaining to technology issues include the following:

- Technology diffusion and adoption: technology diffusion and adoption is more difficult for small business
- New technology implementation is expensive. New equipment costs are a barrier to entry.
- Legal uncertainty: Technology innovations often have associated uncertainty and even potential legal challenges.

This study looked at which factors relate to a successful IT implementation in small businesses, where the adoption rate is traditionally low and the failure rate is high. As indicated in the previous articles, customers appear to be the main drivers for IT adoption. However, five factors are responsible for successful implementation: organization, internal IT resources, external IT resources, supplier and customer relations.

Anonymous. (2015). *Report identifies barriers to the growth of small innovative companies*. Washington: The Small Business Advocate. 34.3 (mar/Apr 2015). Available from: <https://search-proquest-com.prox.lib.ncsu.edu/entrepreneurship/printviewfile?accountid=12725>

It is not always clear whether companies see new IT as an opportunity or threat. Small business adoption of sophisticated technologies is low, despite the causal successes. Factors that include the decision to adopt include cost benefits, management innovativeness, perception, knowledge, skills, and employee attitudes. It has even been suggested that management's comfort level with technology will heavily influence the successful adoption and implementation. Generally, most difficulties are attributed to a lack of resources (financial, technical, and managerial) that are available to small businesses (Bhagwat and Sharma, 2007).

Other Initiatives for Entrepreneurs and SME business Owners

A recent literature search of the ProQuest Entrepreneurship Database, using a variety of search terms such as "challenges", "technology adoption", "small business owners" and "SMEs", for US companies between 2010 and 2017 elicited more than 1,700 journal articles.

A cursory review of the articles indicated there are some common and general business concerns including some old favorites:

- Times are good for small business.
- The biggest challenge for even the most credit-worthy small business is obtaining financing.
- Succession planning; including retirement planning, sale of business planning, and execution of leadership changes or additions for a growing business are often addressed as concerns for SMEs.
- Human Resource Issues. Planning for growth, managing the myriad of laws and regulations, and navigating benefits, especially health insurance. They long for ways to use technology to manage these processes because they are concerned about compliance with government regulations.
- According to the 2017 State of Small Business Report, small businesses say improving existing customer experience and retention is their top strategy for revenue growth. Recent statistics indicate that only about 25 percent use CRM software, while 40 percent would like improve existing customer experiences and retention.
- They are concerned about technology and security issues including cyberattacks.

- Many SMEs do not have the training, resources or funding to implement technologies that can grow their business, manage and reduce the costs of their processes, or prevent hacks and cyberattacks.
- Fifty percent of SMEs think that the government does not do enough to support small business.

Nguyen, T., Newby, M., & Macaulay, M. (2015). *Information technology adoption in small business: Confirmation of a proposed framework*. *Journal of Small Business Management*: 53(1), pp. 207-227. Doi: 10.1111/jsbm.12058

Concerns and Recommendations

From our literature review and from our own (and colleagues') direct, extensive client experiences and their challenges, we have several suggestions to pose to the Committee with respect to enhanced small business adoption of online technologies.

First, clearly, there will be a continuing increase in small business adoption of online tools, resources and products to support customer outreach and improved business operations. Much of this will be driven by vendor outreach and engagement with small firms. This is to be expected in our market economy. However, what's also needed is a better informed small business community. This is an area of opportunity for SBA through its lead outreach organization; the SBDCs, to play an increased and more purposeful role in helping small businesses assess their online needs and use technology to help attract and retain customers.

With modest incremental funding support from SBA a national counseling and training outreach initiative could be developed and carried out nationwide through the SBDCs. This would be aimed specifically to assist small companies in the adoption of the key online technologies needed to enhance their business' web presence and support customer growth and retention.

A second area of attention for SBA and its resource partners is for a much more robust small business cybersecurity support initiative aimed, again, specifically at small to mid-sized firms. The recent Equifax debacle makes it abundantly clear that companies large and small are vulnerable. What's needed is a well thought out national training and counseling initiative developed and rolled out through the SBDCs and other SBA resourcing partners to better help small businesses prepare and protect their data.

A final area that warrants some attention by Congress is in the rapidly emerging online business financing being provided through fintech firms. These firms offer financing online with minimal documentation and apparently modest upfront interest rates which rapidly increase as the term of the loan is extended. These firms are particularly attractive to "the online user generation"; but they carry a hefty price tag. This is an area worthy of some further review.