

Research Report: Big Idea

The Strategic Impact of Mobile Transformation on Business Value

Navigating the Future of Work amid Cultural and
Technological Shifts in the Mobile Enterprise



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December 3, 2014



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Produced exclusively for Constellation Research clients



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Purpose and Intent

This report provides primary research on the state of mobile transformation with an eye toward how mobile and cloud computing affect the future of work. Insights from the study include challenges and recommended actions for executives seeking to initiate mobile transformation projects.

Two of Constellation's primary business research themes, Consumerization of IT & the New C-Suite and the Future of Work are featured in the analysis.

Executive Summary

The rise of mobile and cloud computing is driving a cultural and technological transformation in which people expect anytime, anywhere access to colleagues, products and services. To react to this transformation, companies have to rethink the tools and business processes they provide to their employees, customers and partners.

Constellation surveyed more than 500 organizations in education, healthcare, high tech, and retail about the state of their mobile computing efforts. The analysis highlighted three major themes that are critical for success in mobile transformation:

- 1. Mobile transformation is top of mind for most organizations.** More than 80 percent of organizations recognize the impact of mobile transformation on internal and external stakeholders and have created dedicated teams to work on solutions. Education had the lowest percentage, with 68 percent having dedicated mobile teams in place while high tech organizations led the way with 91 percent.
- 2. Mobile is not a device but an effective way of working.** The term "mobile" is not limited just to devices such as phones and tablets. Rather, mobile describes how people work in motion and in short bursts of time. More than 50 percent of respondents reported switching between devices more than six times per day, and traditional desktop computers are only used one-third of the time.
- 3. Mobile provides a starting point for digital transformation.** Mobile transformation requires re-thinking and updating existing business processes or introducing new ones. While more than 80 percent of organizations polled have performed basic updates to their Internet and Intranet sites, less than 50 percent have changed an actual business process.

Survey Methodology

Throughout October and November 2014, Constellation conducted online surveys to collect over 500 qualified responses. To qualify, respondents needed to be a senior manager, director or vice president in an organization of at least 1,000 employees in the education, healthcare, high tech or retail industries. All respondents were based in North America.



Mobile Transformation Top of Mind for a Majority of Organizations

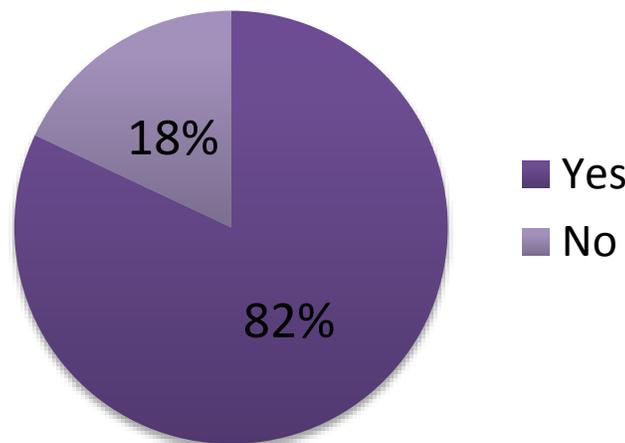
Here are the findings about the current state of mobile transformation from Constellation's research survey:

1. Most Organizations Have Dedicated Mobile Transformation Teams

Constellation sought to discover whether or not organizations have specific teams in place dedicated to planning mobile transformation. Across the entire sample, a large majority (82 percent) of organizations reported having dedicated teams for mobile transformation (see Figure 1).

From an industry point of view, education had the lowest rate, with only 68 percent of organizations reporting they have dedicated mobile teams in place, while not surprisingly high-tech companies led the way with 91 percent.

Figure 1. Most Organizations Have Dedicated Mobile Transformation Teams



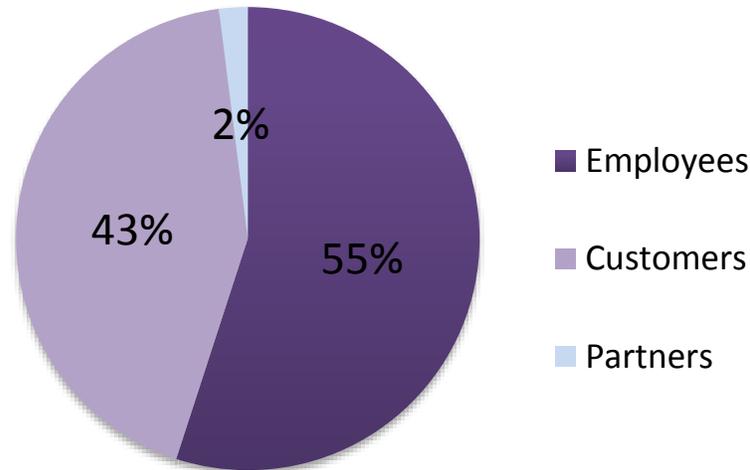
2. Mobile Transformation Projects Slightly Favor Internally Facing Projects

Mobile transformation is almost evenly split between internal and external projects. Among the organizations with a dedicated mobile transformation team, Constellation wanted to know if mobile transformation focused internally on employees or externally on customers and/or partners.



The results demonstrated a slight edge going to internal projects dedicated to employees (55 percent) (see Figure 2). Education (64 percent) and healthcare (60 percent) were skewed more toward internal than the average, while high tech and retail were both almost even between internal and external. The expectation that retail may be more focused on customers is likely offset by the need to continually train a workforce with high turnover.

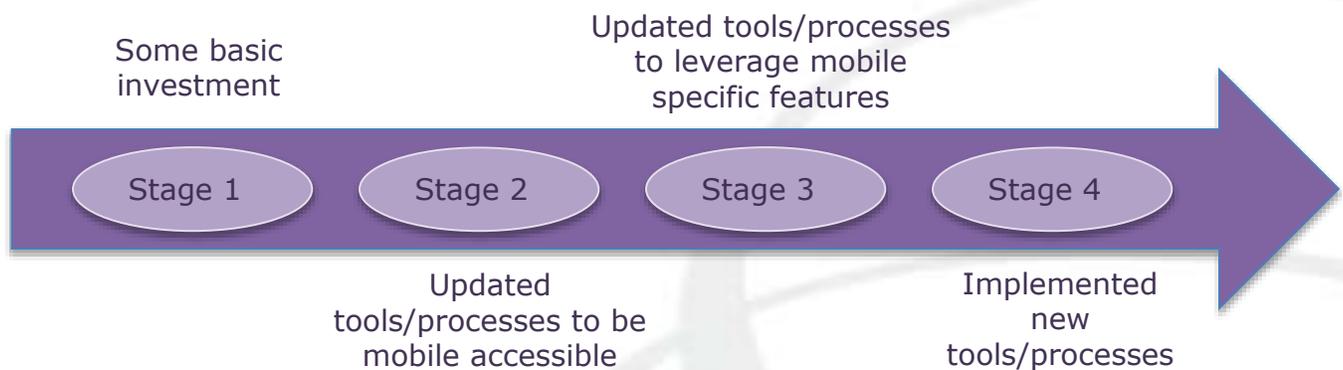
Figure 2. Mobile Transformation Projects Slightly Favor Internally Facing Projects



3. Organizations Slowly Progressing to Higher Levels of Maturity in Mobile Transformation Projects

To determine the maturity of mobile transformation projects, Constellation investigated what types of activity each company was undertaking, from simple website updates to full process transformation (see Figure 3).

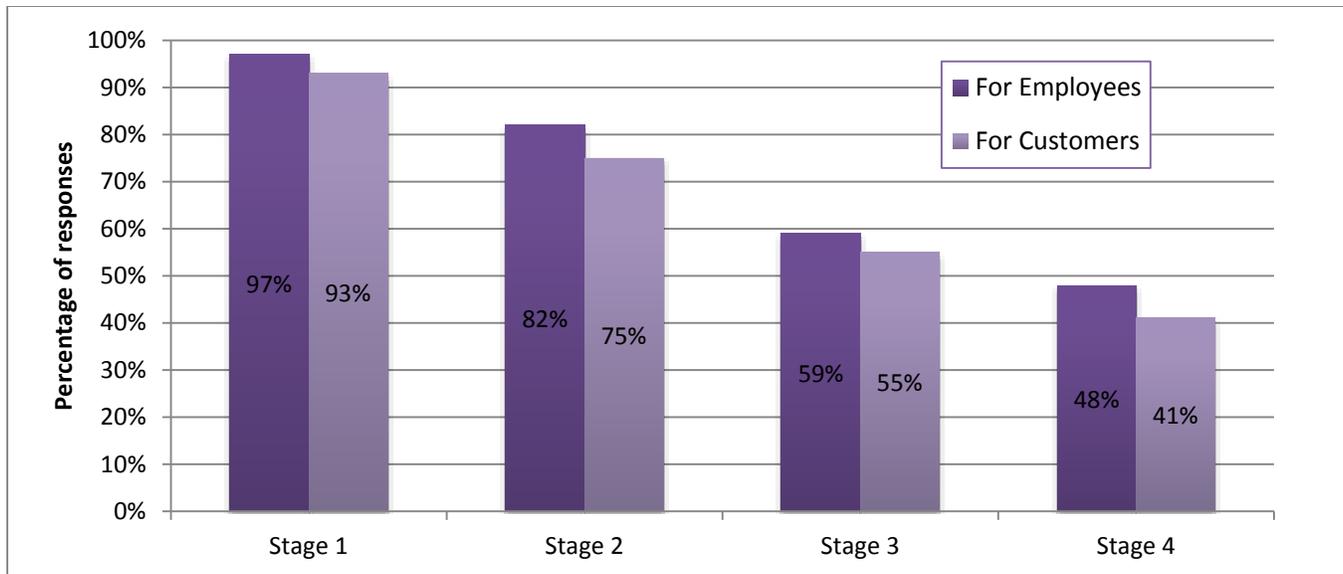
Figure 3. Stages of Mobile Transformation





Most organizations have begun some basic mobile enablement for both their employees (97 percent) and customers (93 percent) (stage 1). More than three quarters have mobile-enabled their websites (stage 2). Only about half have enhanced them with mobile-specific features (stage 3). Fewer have started to rethink entire business processes (stage 4) (see Figure 4).

Figure 4. Organizations Moving to Greater Maturity in Mobile Transformation



- **Few companies falling behind on mobile transformation.** Almost all companies surveyed have started investing, with 97 percent saying they currently have employee-centric projects and a slightly lower 93 percent reporting they have started customer-centric projects.
- **Mobile enablement of Intranet and Internet drives most efforts.** Eighty-two percent of companies have updated their Intranet (including email and internal collaboration tools) to support mobile access for employees, while 75 percent of organizations have made specific changes to their external websites to support mobile access.
- **True native mobile enablement remains an area of opportunity.** Those numbers drop to below 60 percent when it comes to updating sites to take advantage of specific mobile features such as GPS (for location) and cameras (for example: augmented shopping experiences).
- **Most organizations have yet to consider mobile transformation at the business model level.** At the highest end of mobile transformation, re-thinking existing processes or changing to new business models, less than half (48 percent) of companies have done so for employees while only 41 percent have for customers.



4. Internal Projects Favor Communication and Collaboration Tools

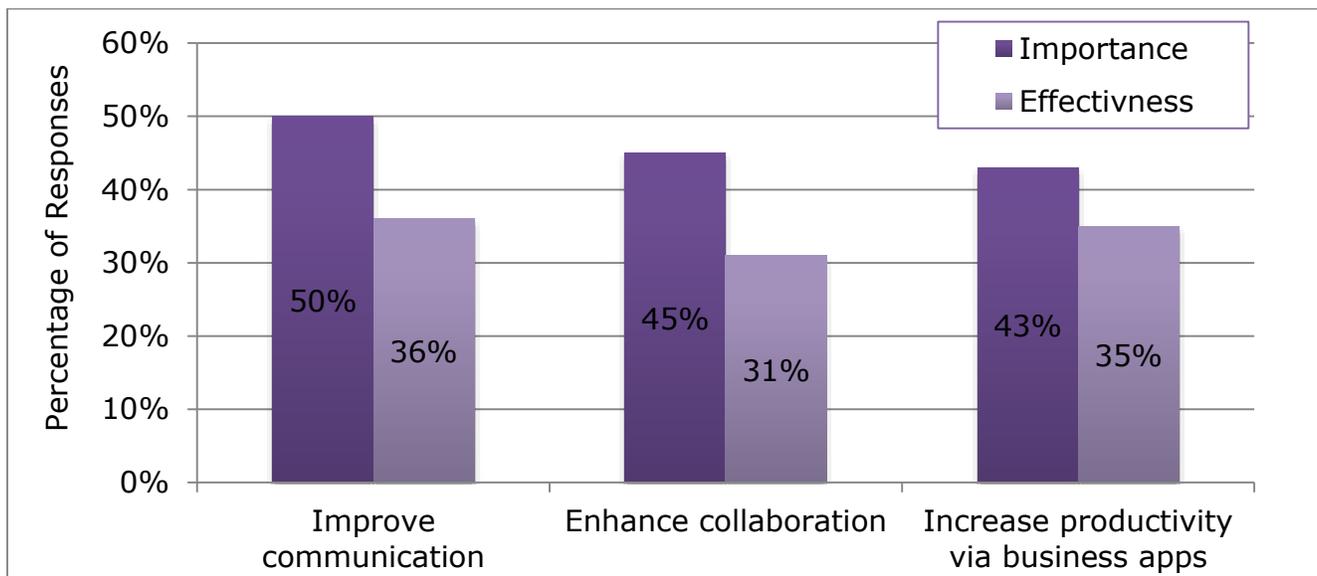
With the levels of project maturity known, Constellation next wanted to map the relative success of various mobile transformation projects. Respondents were first asked to rate the importance of various internal projects such as improving communication, enhancing collaboration and improving productivity via business applications. The three categories were each rated independently (i.e. they were not rated against each other), with 1 being lowest importance and 5 being the highest. Next, respondents were asked to rank how effective their organization currently is in delivering a successful solution for each of the three categories. The responses for importance and effectiveness were then paired to determine what areas organizations are most successful in and where they fall short of their goals (see Figure 5).

The category that was scored as the most important was improving communication, with 50 percent rating it a 5 out of 5. However, only 36 percent indicated that they are currently highly effective (5 out of 5) at meeting their desired outcomes.

Enhancing collaboration scored the second highest, with 45 percent rating it a 5 out of 5 on importance to their organization. This category had the lowest effectiveness rating, with only 31 percent stating that they were highly effective at meeting their goals.

Increasing productivity by providing mobile access to business applications had the fewest 5 out of 5 ratings, with only 43 percent ranking this as a 5 out of 5. Thirty-five percent indicated they are currently highly effective at meeting their desired outcomes.

Figure 5. Importance versus Effectiveness of Employee-Facing Mobile Projects



The first column in each category represents the percentage of responses that indicated the category was of highest (5 out of 5) importance to the organization. The second column represents the percentage that feels they have been highly effective at meeting their goals. The larger the gap, the more room for improvement in that area.



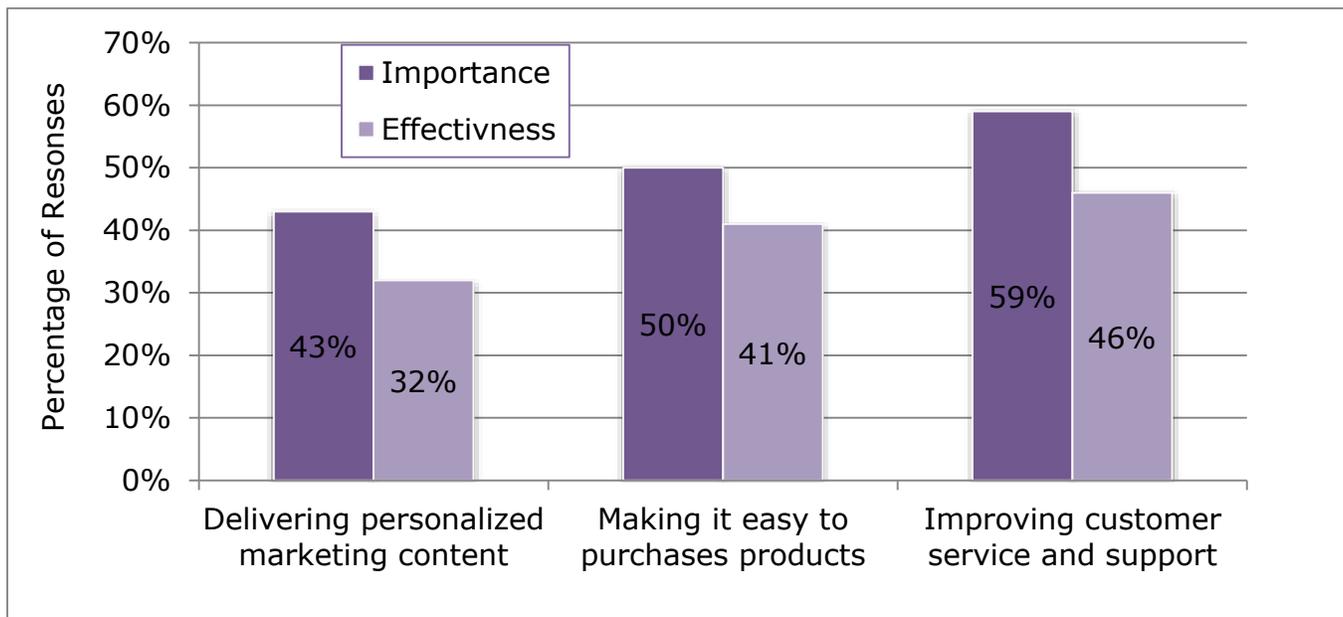
5. Mobile Support Trumps Mobile Sales and Marketing

Following the same pattern of questions used above for internal projects, respondents were next asked about the importance and effectiveness of their customer-facing mobility projects (see Figure 6).

The most important customer-facing mobile project was improving customer service and support (59 percent rated it a 5 out of 5), followed by improving the purchasing process, and finally, delivering personalized marketing content.

In all three categories, less than half replied with a 5 out of 5 rating for the effectiveness of their current solutions. The lowest rating was for delivering personalized marketing content, with only 32 percent of replies being a 5 out of 5.

Figure 6. Importance versus Effectiveness of Customer-Facing Mobile Projects



The first column in each category represents the percentage of responses that indicated the category was of highest (5 out of 5) importance to the organization. The second column represents the percentage that feels they have been highly effective at meeting their goals. The larger the gap, the more room for improvement in that area.

Recommended Actions: Take Full Advantage of Mobile

In all six categories (three internal employee-facing and three external customer-facing), less than half of the respondents indicated they are highly effective at delivering the type of solutions they would ideally like to provide to customers and employees. A large opportunity for improvement exists, with the full benefits of mobile transformation coming when organizations address three common findings:



- 1. Leverage the same tools both internally and externally.** When deploying solutions to improve communication and collaboration, using the same platform both internally and externally provides a more consistent experience, better integration (content, IDs, etc.) and simplified management.
- 2. Integrate business applications into the workflow.** To increase the effectiveness of the solutions mentioned above in Step 1, provide integration into the enterprise software tools that support the critical business processes. For example, in marketing, ensure employees can access campaign generation tools anytime from any device. Similarly in sales, provide everyone access to Customer Relationship Management (CRM) data.
- 3. Think about how mobility can drive digital transformation.** While the integration mentioned above in Step 2 is a good start, true transformation occurs when current processes are not just improved, but redesigned. In sales and marketing, it's not enough to just provide customers mobile access to their accounts, you need to rethink the experience they have with your brand, starting from the first point of contact all the way through the purchasing and continued support lifecycles.

Mobile Is Not Just a Device, But an Effective Way of Working

When people talk about mobile computing, thoughts usually turn to smartphones and tablets. While devices do play a role, mobile describes the larger topic of how people work in motion. Increasingly, more time is being spent away from the confines of a traditional office/desk environment, and working in short bursts while between other tasks is becoming more common. Sometimes, these “on-demand moments” could be as simple as glancing down at an email, but they could also be participating in a customer meeting or collaborating on a project while working at a coffee shop.

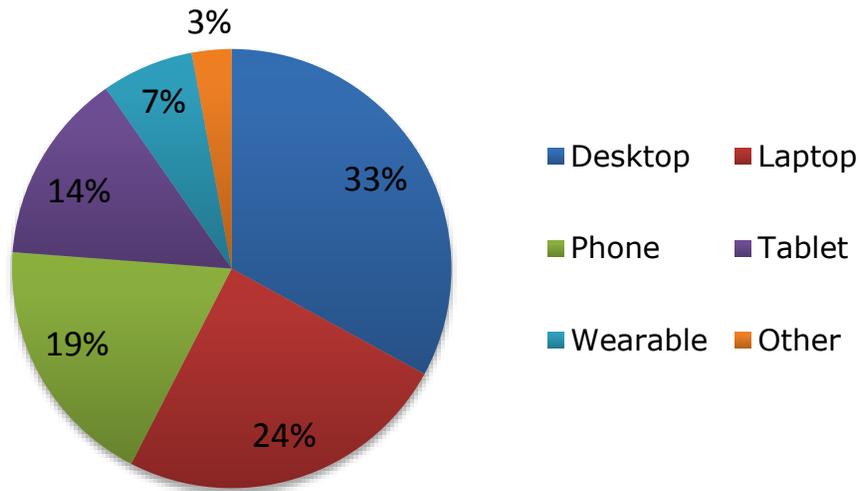
So while devices are critical components of mobile transformation, they do not represent the full story on their own. Devices, including smartphones and tablets, as well as kiosks, wearable devices, smart clothing, flexible screens and embedded devices in cars or planes form only the tangible side of mobility. To get the complete picture, these electronic objects must be coupled with the changes in work patterns that they enable. Mobility ultimately affects how folks acquire information, support decision making, and interact with each other.

1. The Growth of Anytime Anywhere Computing Is Clear

In our sample of 500+ organizations, less than one-third of their staff's time is spent using a desktop computer (see Figure 7). The remaining two-thirds of the time is spread across a variety of devices, freeing people to connect with colleagues and content at virtually anytime from any location.



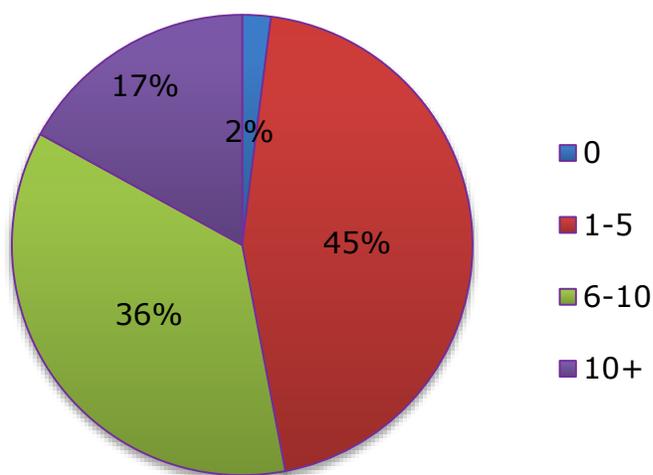
Figure 7. Percentage of Time People Spend On Various Devices



2. Constant Device Switching Is the Norm

Similarly, Constellation discovered that people switch between devices multiple times per day, with more than half (53 percent) of the respondents indicating that they switch between devices at least six times per day (see Figure 8).

Figure 8. Device Switching Is the Norm – Number of Switches a Day



In order for this switching to be effective, the current state of work must travel with the user from device to device. Whether you are simply reading email, attending a web



conference or collaboratively co-authoring a Request for Proposal (RFP) for a client, the transition between devices must include both the content and context, or else the advantage of mobility is lost.

3. Most Organizations Start with Basic Mobile Work Patterns

Constellation identifies four common basic mobile work patterns that align with business processes:

- Checking email and social networks via phone while in transit
- Attending Web conferences via tablet
- Viewing CRM data on a phone while meeting with a prospect for lunch
- Submitting expense reports from home using a phone's camera

But using mobile computing to improve access to existing processes is just the beginning. Great benefits can be achieved by creating new processes and business models that leverage device-specific features like location (GPS), motion (accelerometers) and cameras. In other words, mobile computing does not simply improve existing processes; it enables new and improved ways to work.

Recommended Actions: Apply Advanced Mobile Work Patterns by Industry for the Future of Work

Constellation foresees numerous ways in which mobile technology can be used to change how work is done in key industries. Here are some improvements that are envisioned:

High-tech:

- **Increase productivity:** Knowledge workers are often the first to adopt new technologies. Providing them mobile applications that fit into business processes such as RFPs, CRM, supply chain and project management.
- **Find expertise and recommendations:** Use location-based collaboration to discover colleagues and customers in specific geographic regions.
- **Knowledge on-the-go:** Have access to the corporate knowledge base and best practices anytime, anywhere. If you don't see the information you are looking for, ask a question in your enterprise social network and be instantly notified when there is a response.



Education:

- **Increase reach:** Collaborative study groups where students use the cameras on their devices to create a virtual classroom experience, beyond the walls of a single building or campus.
- **Reduce enrollment frustration:** Mobile applications that speed up and simplify the process of finding and registering for classes.
- **Meet your peers:** Social networking apps enable students to connect with other people with similar interests, hobbies, skills, or needs.

Healthcare:

- **Improve patient care:** Medical staff can use augmented reality (typically via glasses) to visualize patient data and see recommended courses of action in real time and in context, while leaving their hands free for procedures.
- **Reduce wait times:** Patients can now use tablets to register at clinics or hospitals, streamlining the process and reducing errors in information.
- **Improve logistics:** Support staff can use mobile devices to track equipment, place service calls and order supplies.
- **Proactive treatments:** People can use health-monitoring applications to track their heart rates, oxygen, blood sugar levels, sleep patterns and more. Armed with statistical data, people can provide more detailed information to health care professionals, helping improve treatment.

Retail:

- **Increase sales:** Digital product catalogs, video marketing material and augmented reality previews provide shoppers with incentive to spend.
- **Improve customer satisfaction:** Personalized shopping experiences based on identity, location, social networks, interests and previous shopping patterns make shoppers feel catered to.
- **Evolve the purchasing process:** Use modern electronic invoicing and payment techniques to reduce or remove the wait times of traditional checkout lanes.

Recognize the Challenges of Working Mobile

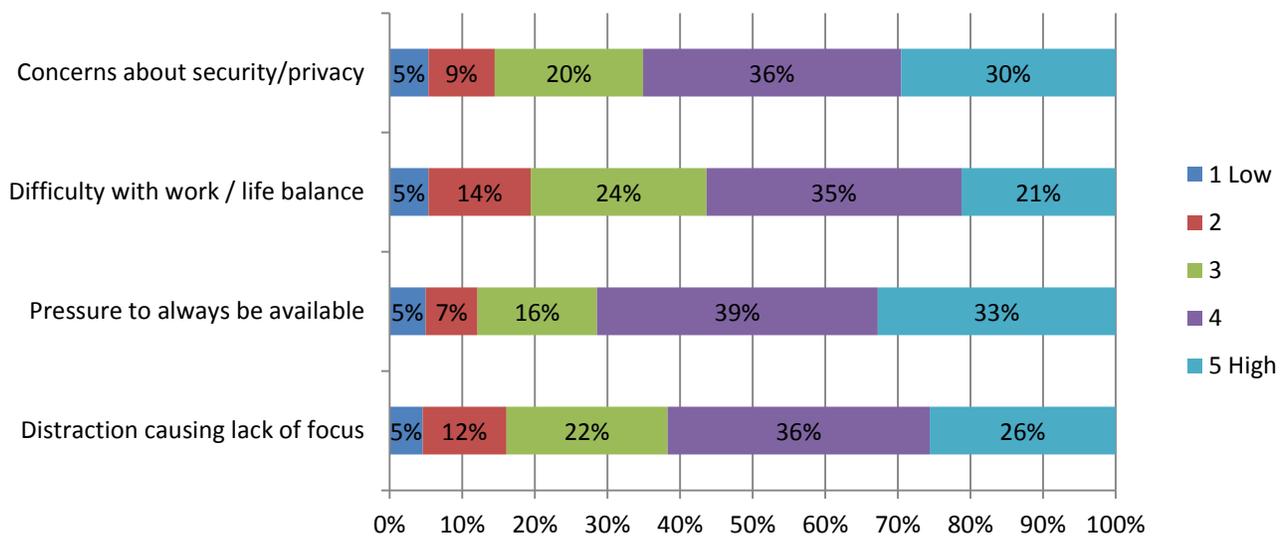
While mobile transformation opens the door to new and improved processes, organizations still need to be aware of the difficulties they may encounter. While there are many benefits of mobile transformation, they are accompanied by several challenges, both in terms of culture and technology.



1. Cultural Challenges Reflect the Always-On, Immediate Response Way of Work

On the cultural side, findings show that the greatest concern is not privacy (as may be expected) but the pressure to always be available, with 33 percent of respondents rating this a 5 out of 5. A combined 72 percent rated it a 4 or 5. Work/life balance actually had the lowest percentage of 5 out of 5 ratings, with just 21 percent indicating this is of highest concern (see Figure 9).

Figure 9. Cultural Challenges Reflect Always-On Pace of Change



2. Technical Challenges Split across Four Key Concerns

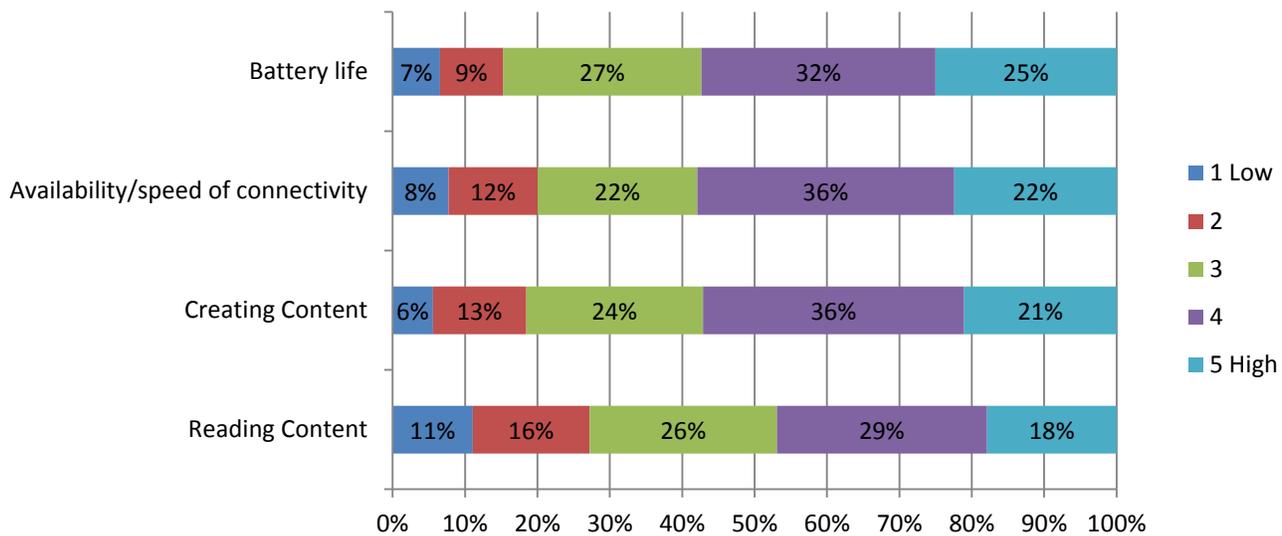
The other types of challenges fall into the technical category. Here, respondents showed almost equal concern over battery life, connectivity, and content creation. Battery life had the highest percentage of 5 out of 5 responses (see Figure 10).

In addition, other top concerns include:

- Experiencing eye strain due to screen size
- Keeping devices up to date (hardware, software, applications)
- Learning mobile device operating systems
- Dealing with broken devices (example: screens)



Figure 10. Technical Challenges Found in Four Key Areas



Recommended Actions: Build a Program That Reflects the Company Culture

To address the challenges of mobile, organizations should consider the following actions:

- **Set corporate standards and expectations upfront.** To alleviate some of the pressure employees feel regarding the need to be accessible anytime/anywhere, organizations need to set corporate policies about expected usage patterns. These policies can include guidelines for the hours and locations of when/where people are expected to work. While some companies have implemented projects such as banning email after 5 p.m., Constellation does not recommend ideas with such rigid constraints.
- **Address internal recognition based on corporate standards and expectations.** Internal recognition should be sensitive to concerns around availability, focus and work/life balance. People should not be rewarded for things such as “always the first to respond” or “are available anytime”. Instead, set clear performance measurements that are based on outcomes, not availability.
- **Choose a mobile device management platform that includes a corporate application store.** Recognize that in the era of “Bring Your Own Device”, employees still need to know what applications they should install to help them effectively do their jobs. While the days of locked-down, IT-controlled desktops are fading, it is still important that employees have guidance and support in what devices and applications they should use. If your company does not provide official Help Desk support for mobile devices and applications, you need to at least provide a self-managed help community.



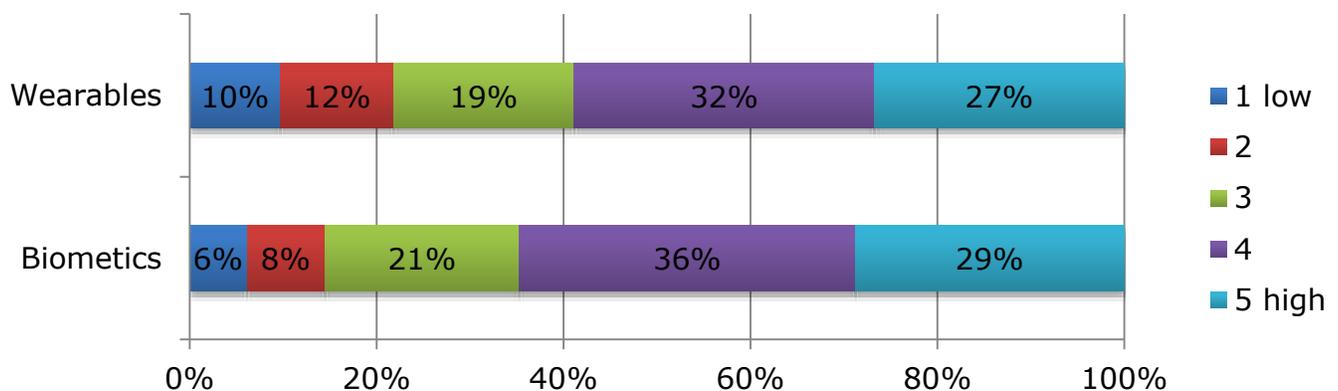
The Future of Mobile Transformation Is Just around the Corner

Respondents from the survey took the time to also identify emerging trends that could affect the future of mobile transformation.

1. Biometrics and Wearable Computing Top Emerging Trends

Respondents showed significant interest in biometrics and wearable computing (see Figure 11). Biometric security features such as facial recognition and fingerprint scanning can reduce some of the friction currently associated with identity and security. Wearable computing devices such as glasses, watches, and clothing may change how we interact with content, people and our surroundings.

Figure 11. Importance of Biometrics and Wearable Computing



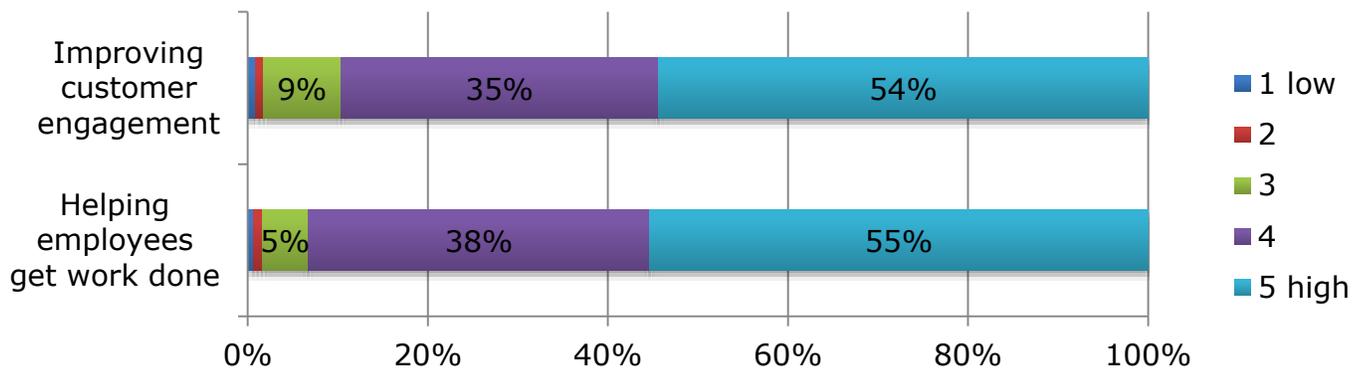
2. Internet of Things Can Enable a New Era of Communication and Collaboration

Respondents showed interest in how the Internet of Things (IOT) can not only help employees get work done, but also improve customer engagement. Constellation finds this result significant, as IOT will usher in a new level of interaction between humans and machines.

More than 50 percent indicated that the Internet of Things is of highest importance (5 out of 5) to future projects for both employees and customers (see Figure 12). This survey did not gather more details on this topic, but it is clear that the connections between people and devices and the data generated by these connections will play a significant role in both customer engagement as well as helping employees get their jobs done.



Figure 12. Internet of Things Heralds New Communication and Collaboration Capabilities



Apply the Constellation Framework for Mobile Transformation

A simple glimpse around the home or office confirms that the shift to mobile computing is upon us. Friends, family and colleagues are probably staring into a mobile device right now. Perhaps you're even reading this report on one. As the survey results have shown, two-thirds of the time people are using non-desktop PCs at work and more than 50 percent of respondents see wearable computing as high priority. More importantly, the processes for working, shopping, learning and even entertainment have evolved to incorporate mobile best practices.

In mobile transformation efforts, Constellation recommends following a five-step framework:

- 1. Begin with the end in mind:** One of the most important keys to success is defining why the organization is undertaking this process in the first place. Many failed implementations can be traced back to a lack of clear goals related to improving a specific business process. Begin by deciding if leaders are focused on internal improvements (such as sales, marketing, corporate communications) or external customer-facing ones (such as marketing, support, commerce). In some cases, both can be accomplished at the same time, depending on the use cases and the technologies chosen (see step 5 below). Look at areas in the organization that need improvement or find existing opportunities for growth via new processes, products or services.
- 2. Ensure executive sponsorship and participation:** Leaders need to set an example for the rest of the company. Can executives do their jobs via mobile devices? Can they see new opportunities for the company powered by mobile computing? Do they have access to the latest technologies? Don't shelter executives from these changes just because they are busy or they are used to the way things are. Make



sure they are leading the charge in mobile transformation. Make them believers in the way this will affect customers and employees.

- 3. Take meaningful measurements:** Too often organizations forget to get a set of “before” metrics that they can use to measure the success of a project. For mobile computing, Constellation suggests using many of the same survey questions mentioned in this report - such as time spent on devices (quantitative) and then correlating them with the use cases and challenges (qualitative). Once leaders have decided on the processes to improve (step 1 above) and received executive sponsorship (step 2 above), then decide on meaningful measurements related to those processes. Over time, you will be able to track the success or gaps that need to be addressed.
- 4. Think digital proficiency, NOT age:** There is a misconception that mobile computing is for the young. This is often linked to statements like “millennials are glued to their phones and tablets.” Constellation has found that the use of technology is not based on age, but rather digital proficiency, a term Constellation uses to describe the combination of knowledge and skill with technology. Planning a mobile transformation around a limited audience will result in the alienation of a much larger group of people. Internal and/or external mobile plans should be marketed to people based on their usage patterns, not their age.
- 5. Choose a technology platform:** The final step in the process is deciding what technology to use. Form follows function. Whether it’s updates to your website, implementations of mobile device management (MDM) solutions, development of mobile (and/or wearable) applications, revising business process workflows, or even training and marketing, technology needs to support the organization’s decisions and plans, not dictate them.

The above framework is not intended to be a rigid linear path. Make sure to evaluate progress and be prepared to refine plans each step of the way.

Disclosure

Your trust is important to us, and as such, we believe in being open and transparent about our financial relationships. With our clients’ permission, we publish their names on our website.



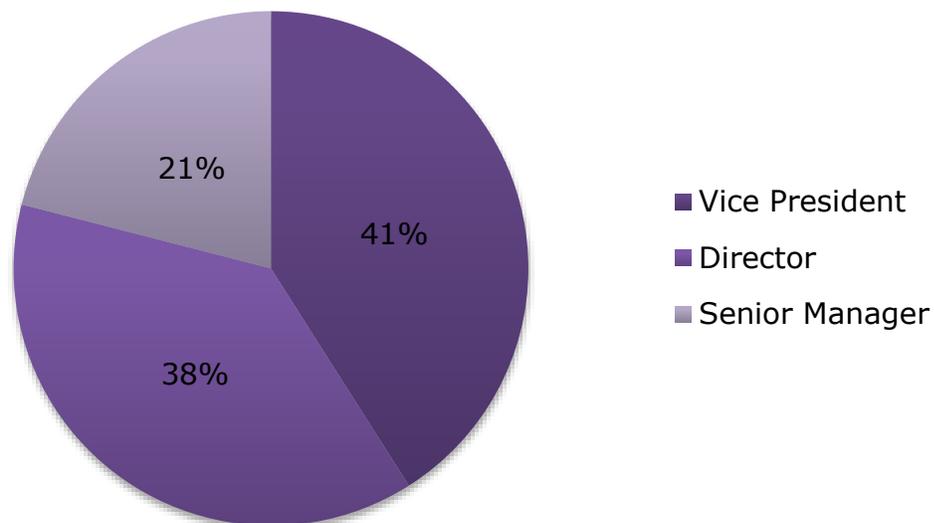
Appendix A: Survey Demographics

In October and November 2014, Constellation surveyed 504 organizations in North America. Here is a breakdown of respondents by industry and company size:

Figure 13. Survey Response Breakdown by Number of Employees and Industry

	1000-2499	2500-4999	5000-9999	10000-19999	20000+	Total
Education	8%	8%	2%	1%	1%	20%
Healthcare	6%	3%	5%	3%	4%	20%
High tech	10%	6%	7%	2%	4%	30%
Retail	12%	2%	11%	3%	2%	30%
Total	35%	19%	25%	9%	11%	100%

Figure 14. Survey Response Breakdown by Job Title





Analyst Bio: Alan Lepofsky

Alan is Vice President and Principal Analyst at Constellation Research, Inc.

Utilizing two decades of experience in the software industry, Alan helps organizations understand how to develop, purchase and implement collaboration solutions. Rather than evangelizing how social software can change the way people work, he instead focuses on how organizations can improve their existing business processes by providing access to the colleagues, content and communities that can help people get their work done more effectively. His research agenda around the Future of Work includes: Digital Proficiency, Innovation, Purposeful Collaboration, Social Task Management, Collaborative Innovation, Next-Generation Content Creation and Sharing, Gamification and Social Analytics.

Alan is an active blogger and speaker in the “Enterprise 2.0/Social Business” community, where he shares his thoughts on the business benefits of open communication and collaboration.

Since 1993, he has been designing, marketing and helping customers deploy software solutions that enable people to connect with their peers and openly share information. Prior to joining Constellation, Alan spent three years as Director of Marketing at Socialtext and, before that, 14 years in a variety of roles at IBM/Lotus.

At Socialtext, Alan was responsible for the marketing of enterprise software. He worked with prospects and customers to help them understand how social software can be used to improve core business processes. Alan was also the community manager for Socialtext's customer and business partner communities.

At IBM, Alan held several roles ranging from product management for the Lotus brand to supporting the IBM Business Partner ecosystem. Alan's final years at IBM were spent in IBM Software Group's future-thinking strategy team, responsible for bridging IBM research projects with product development.

Alan graduated from the University of Toronto with a B.A.Sc. in Engineering. His major was Mechanical Engineering with a minor in Business and Entrepreneurship.

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About Constellation Research

Constellation Research is a research and advisory firm that helps organizations navigate the challenges of digital disruption through business models transformation and the judicious application of disruptive technologies. This renowned group of experienced analysts, led by R “Ray” Wang, focuses on business-themed research, including Digital Marketing Transformation; Future of Work; Next-Generation Customer Experience; Data to Decisions; Matrix Commerce; Technology Optimization and Innovation; and Consumerization of IT and the New C-Suite.

Unlike the legacy analyst firms, Constellation Research is disrupting how research is accessed, what topics are covered and how clients can partner with a research firm to achieve success. Over 225 clients have joined from an ecosystem of buyers, partners, solution providers, C-suite, boards of directors and vendor clients. Our mission is to identify, validate and share insights with our clients. Most of our clients share a common trait - the passion for learning, innovating and delivering impactful results.

Organizational Highlights

- Founded and headquartered in the San Francisco Bay Area, United States, in 2010.
- Named Institute of Industry Analyst Relations (IIAR) New Analyst Firm of the Year in 2011.
- Serving over 225 buy-side and sell-side clients around the globe.
- Experienced research team with an average of 21 years of practitioner, management and industry experience.
- Creators of the Constellation Supernova Awards – the industry’s first and largest recognition of innovators, pioneers and teams who apply emerging and disruptive technology to drive business value.
- Organizers of the Constellation Connected Enterprise – an innovation summit and best practices knowledge-sharing retreat for business leaders.
- Founders of Constellation Academy, experiential workshops in applying disruptive technology to disruptive business models.

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