

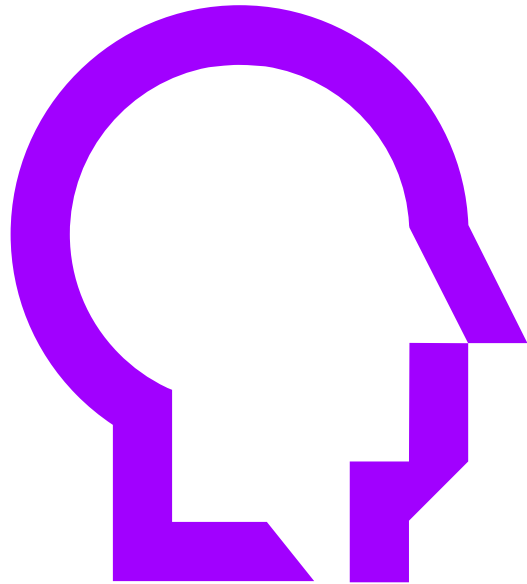
# AMPLIFY YOU

**HOW TECHNOLOGY CAN HELP  
BRIDGE THE DIGITAL DIVIDE FOR  
PEOPLE WITH DISABILITIES**

accenture

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# UNDERSTANDING THE DIGITAL DIVIDE

“Disability is part of the human condition. Almost everyone will be temporarily or permanently impaired at some point in life, and those who survive to old age will experience increasing difficulties in functioning.”<sup>1</sup>

There is a global divide between people with disabilities and those without, even in the digital age. Technology can help bridge that divide; digital accessibility aims to ensure web and mobile content is available and usable to everyone. While governments are making significant progress through increased accessibility-related regulation and greater compliance, enterprises have a powerful role to play in ensuring technology helps bridge, and not expand, the digital divide.


# A GLOBAL DIVIDE

In the United States, people with disabilities carry a 33 percent lower salary than the overall population and a 38 percent lower rate of employment between the ages of 21 and 64.<sup>2</sup> Globally, the divide is also significant: on average, men with disabilities are 12 percent and women are 10 percent less likely to be

employed.<sup>3</sup> In the digital age, the divide persists: according to a Pew Research Center survey conducted in the fall of 2016, “disabled Americans are about three times as likely as those without a disability to say they never go online (23% vs. 8%)”.<sup>4</sup>



Technology has the potential to substantially influence the divide: working consciously towards closing the divide or continuing to unintentionally widen it. On one hand, technology can empower people with disabilities to have the opportunities to participate more fully in work and society. On the other, technology can create new or widen existing digital divides, leaving many of the already disadvantaged people further behind. Consider the following examples:



**TECHNOLOGY LENDS A HELPING HAND TO SALLY**

Sally, who is a research analyst with a visual impairment, can do her job, in part, because her corporate computer’s browser supports screen readers and magnifiers and offers full-page zoom and high-

contrast color. These simple accommodations are a bridge that help Sally be a more productive and valued contributor.



**TECHNOLOGY GETS IN THE WAY FOR MARCO**

Sally’s colleague Marco is hard of hearing and wears a hearing implant. At work, where audio calls are the norm, he cannot rely on lip-reading to help him more fully grasp the conversation. A slight cultural shift in the company’s practices to using video conferencing would close this communications divide.

Sally and Marco are just two examples of the many ways technology can either bridge and widen the digital divide for people with disabilities.

## MAKING PROGRESS

Slow but progressive movement by government, including reduced barriers to access, growing legal momentum, and increased government action, are helping to close the digital divide.

### **BARRIERS TO ACCESS ARE FALLING.**

In the US, the Food and Drug Administration is taking steps to improve hearing aid availability and adoption—a change in regulations that will open the doors to innovation, as incumbents no longer have market-limiting protections that kept prices high and competitors out.<sup>5</sup> Furthermore, mainstream and assistive technologies are converging: what were once stand-alone assistive technologies such as computer screen magnifiers and speech-to-text converters are now being embedded in platforms and applications, expanding their reach and user base.

### **LEGAL MOMENTUM IS BUILDING.**

The cumulative total number of website accessibility lawsuits filed in US federal courts surged to 751 by mid-August 2017, up from 262 at the end of 2016—in only 7 months, litigation has seen a 286% increase.<sup>6</sup> In June 2017, a website accessibility case was leveled in court for the first time (rather than settling out of court). The judge found grocery chain Winn-Dixie had violated the American Disabilities Act (ADA) because its website was inaccessible to individuals with visual impairments who need to use screen reader software.<sup>7</sup> Cases like these are helping to bring accessibility to the forefront in technology design considerations.

### **GOVERNMENTS ARE PUSHING FOR PROGRESS THROUGH EMPLOYMENT AND COMPLIANCE DIRECTIVES.**

Austria, China, France, Germany, India, Italy, and Spain, among many other countries, have employment quotas for people with disabilities. In many jurisdictions, companies that fail to meet the quota are subject to significant fines. Canada's anticipated Canadians with Disabilities Act will address challenges in disability employment by pushing for more accessible workplaces—including technology.<sup>8</sup> The US federal government has refreshed the ADA and is mandating all covered online content (including websites and intranets) conform to the Web Content Accessibility Guidelines (WCAG) 2.0.<sup>9</sup>

The powerful combination of (1) new regulations that enable greater market reach for assistive technology, (2) legal action that is setting precedence for those companies that do not incorporate accessibility into their technology, and (3) governments mandating both accessible-compliant technology and increased employment of people with disabilities, is driving progress towards collectively and systematically addressing the digital divide.

**286** ▲  
**INCREASE IN  
LITIGATION IN JUST  
SEVEN MONTHS**



## THE ROLE OF THE ENTERPRISE

While a shift in legal and government action is important, enterprises play an increasingly critical role in bridging the digital divide, and many are realizing there is a business opportunity in doing so. Instead of viewing accessibility as a risk to avoid, companies are beginning to see it as a source of talent and as a way to expand into new markets.

### NEW TALENT POOLS

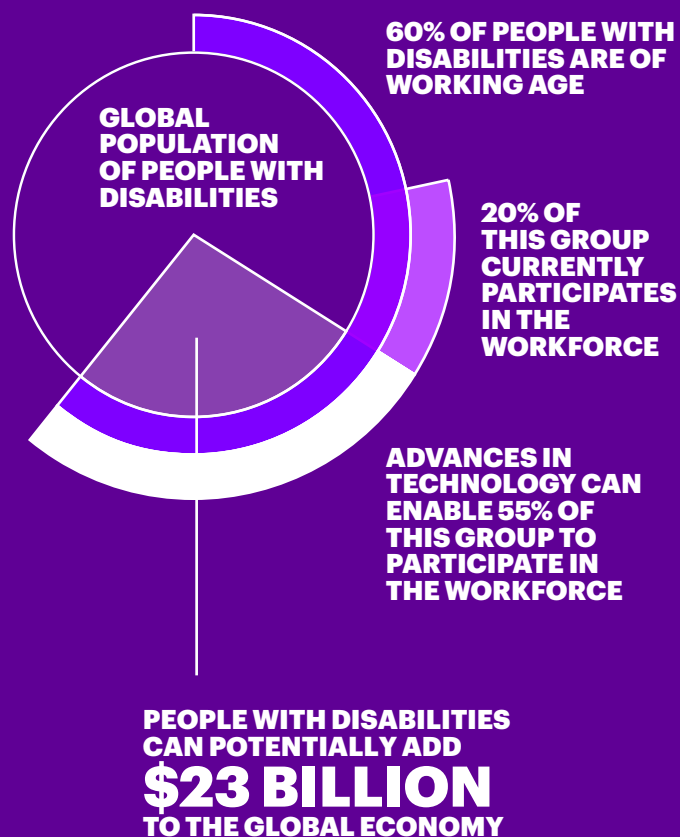
People with disabilities represent a productive and employable work force. It is estimated that nearly one in five people live with some form of disability.<sup>10</sup> Among these, 60 percent are of working age (15-59 years old) and just 20 percent of this group currently participates in the workforce—160 million people with disabilities. Gartner predicts that advances in technology can enable 350 million more people with disabilities—nearly 55% of the currently unemployed—to participate in the workforce in the next 10 years.<sup>11</sup> This could inject an additional \$23 billion in the global economy.<sup>12</sup>

### NEW MARKET OPPORTUNITIES

People with disabilities also comprise a considerable market opportunity. Globally, people with disabilities control \$8 trillion in disposable income.<sup>13</sup> With an aging population, this market is only growing bigger—the UN considers it one of the fastest-growing minority groups in the world.<sup>14</sup> Technology can create access and enable opportunities for this widely untapped market.

By embracing accessibility, businesses opt to access a larger pool of talent and markets, thereby tapping into new growth opportunities and helping bridge the digital divide.

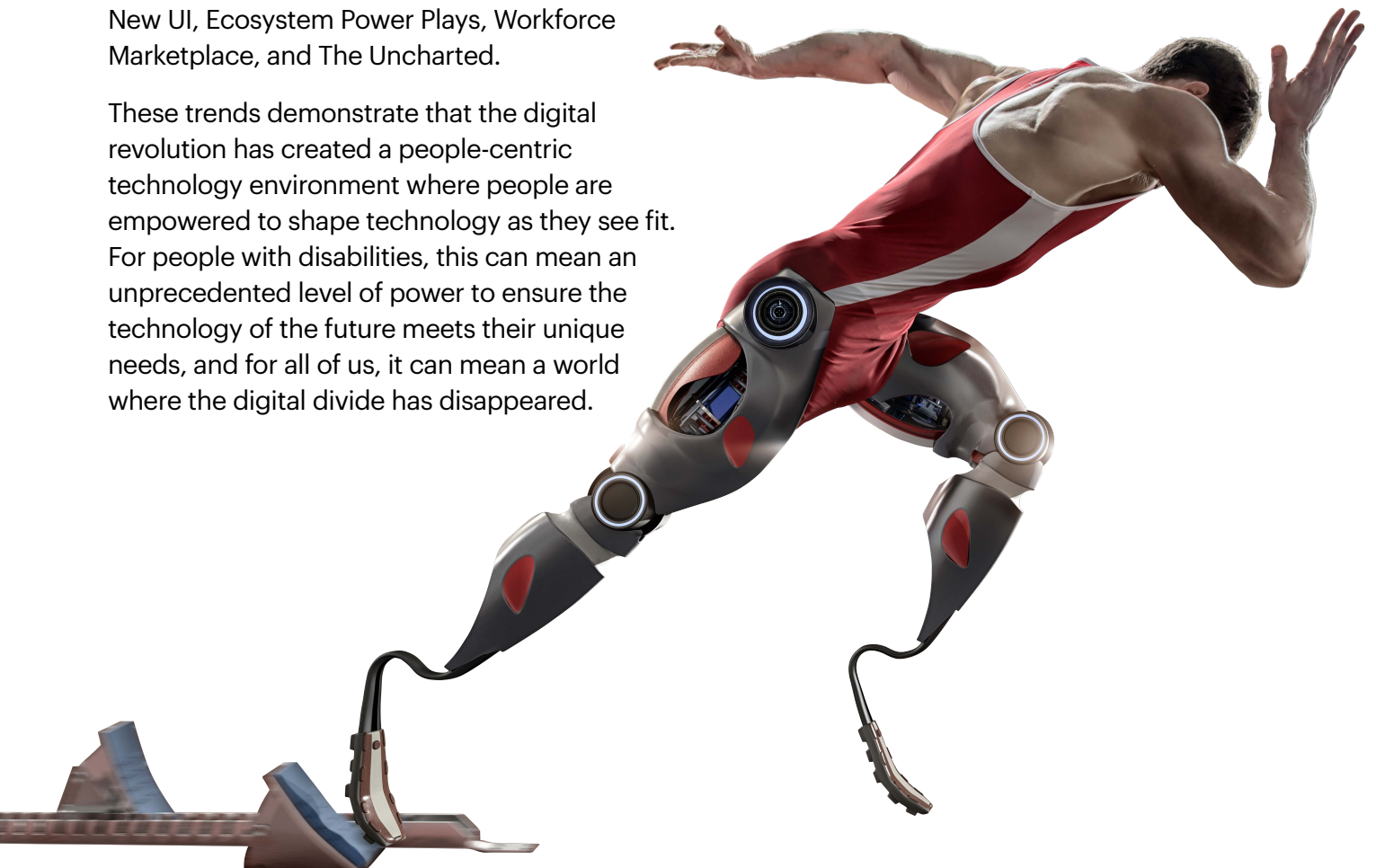
### PEOPLE WITH DISABILITIES IN THE WORKFORCE



## 2017 TECHNOLOGY VISION

Each year, Accenture takes a comprehensive look across the enterprise landscape to identify emerging technology trends that hold the greatest potential to disrupt businesses, industries, and people. The 2017 Technology Vision identifies five trends centered around the theme “Amplify You”: Design for Humans, AI is the New UI, Ecosystem Power Plays, Workforce Marketplace, and The Uncharted.

These trends demonstrate that the digital revolution has created a people-centric technology environment where people are empowered to shape technology as they see fit. For people with disabilities, this can mean an unprecedented level of power to ensure the technology of the future meets their unique needs, and for all of us, it can mean a world where the digital divide has disappeared.





# DESIGN FOR HUMANS

## INSPIRE NEW BEHAVIORS

What if technology adapted to people? The new frontier of digital experiences is technology designed specifically for individual human behavior. Business leaders recognize that as technology shrinks the gap between effective human and machine cooperation, accounting for unique human behavior expands not only the quality of experience, but also the effectiveness of technology solutions. This shift is transforming traditional personalized relationships into something much more valuable: partnerships.

Human-centered design is inclusive by definition. It is grounded in understanding an individual's needs and then designing the technology and interfaces to meet those needs. As the Harvard Business Review points out, it "is an essential tool for simplifying and humanizing."<sup>15</sup> In human-centered design, a person with a disability is simply another individual with specific needs. Companies that design for diversity and edge cases, including individuals with disabilities, will create better solutions and experiences for all users. These companies will need to drive an organizational focus on inclusive design and establish a design and development culture that prioritizes inclusivity.



## EVERYONE WINS WHEN DESIGN IS INCLUSIVE

With human-centered design, designing inclusively for every consumer can benefit individuals with disabilities. Microsoft's "tell me what you want to do" feature, which allows consumers to use intuitive commands instead of sifting through menu options, helps everyone access tools more quickly. Combining this feature with the voice-activated Cortana service can be especially helpful for people with dexterity or sight impairments.<sup>16</sup> Predictive text engines, now commonplace in text messaging apps, have a similar benefit. As another example, Fitbit's silent alarm, which vibrates—originally intended to "gently" awake users—is also quite useful for someone unable to hear an alarm sound. As companies focus on designing technology for convenience and simplicity, the success of their designs is multiplied by empowering people with disabilities.

## MINDSET SHIFT

Effectively incorporating human-centered design—inclusive design—into the way companies create products and services requires adopting a new culture. Companies need to take charge, consciously integrating accessibility into their ways of working. Administrators at the University of Iowa, ranked number one in the nation for its accessible websites, identified three key elements of their culture change: embracing a proactive approach to accessibility, planning accessibility into innovation, and creating an eagerness to learn about making digital tools more accessible.<sup>17</sup> Tech giants like Microsoft and Apple are also leading the way—establishing centers of excellence for inclusive design and incorporating inclusive design practices into all product development, ultimately leading to more "emotionally resonant products and services."<sup>18</sup>

Fitbit's silent alarm, which vibrates is quite useful for someone unable to hear an alarm sound.



## AN INCLUSIVE DEVELOPER ECOSYSTEM

Pushing for human-centered design and driving a culture that prioritizes it are just the first steps. To ensure design and development of new products and services meet the needs of people with disabilities, the developer ecosystem itself must also be inclusive. At a minimum, this requires:

### TRAINING DEVELOPERS ON ACCESSIBILITY

Driving towards accessible outcomes requires designers and developers who have been specifically trained to understand how to incorporate accessibility. Even if a platform has built-in accessibility capabilities, developers can unknowingly undermine these capabilities if they are not trained for accessibility. For this reason, several platform companies are adding training and tools to their developer offerings: Microsoft provides platform-specific detailed documentation for developers building websites and Windows desktop applications, and Google offers developers a tool that can be used to suggest accessibility improvements for Android apps. Toolkits like these enable platform ecosystems to be more inclusive.

### ENGAGING DISABILITY PROFESSIONALS

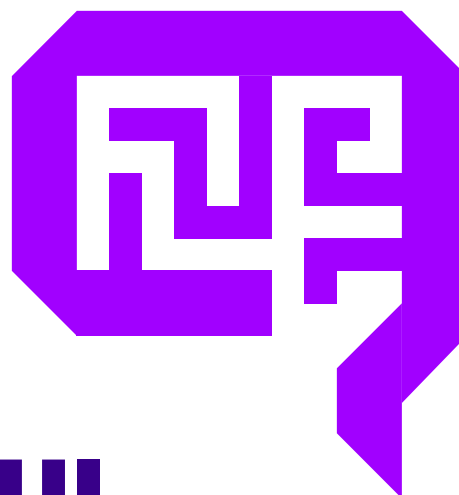
It is important to engage medical or disability professionals while designing and developing technology. Pacifica, which was highlighted by Forbes as one of four leading technologies innovating in mental health in 2016, aims to reduce anxiety, stress and depression.<sup>19</sup> The development of the app is guided by a scientific advisory board comprised of clinical psychiatrists and psychologists. By engaging clinicians, companies can avoid having non-experts create solutions that may do more harm than good.

### INVOLVING PEOPLE WITH DISABILITIES

Companies are demonstrating they foster innovation when people with disabilities are part of the design and development process. After listening to feedback from blind users, Apple added Taptic Time—the ability to tell the time using vibrations—to its Apple Watch Series 2 design. Freewheel, a fitness tracker for people in wheelchairs created by Accenture's Chaotic Moon Studios, was conceived because Tyler Hively, a content strategist and a wheelchair user, was on the product development team.<sup>20</sup> These examples demonstrate that including designers and developers with disabilities can lead to novel ideas.

As companies build technology specifically for individual human behavior, those that consider the needs of all individuals, with or without disabilities, are likely to prosper. By adopting a new cultural mindset and engineering approach, they will create inclusive solutions and digital experiences with broad market appeal.





# AI IS THE NEW UI

## EXPERIENCE ABOVE ALL

Artificial intelligence (AI) is about to become a digital spokesperson for companies. Moving beyond a back-end tool for the enterprise, AI is taking on more sophisticated roles within technology interfaces. From autonomous driving vehicles that use computer vision, to live translations made possible by artificial neural networks, AI is making every interface both simple and smart—and setting a high bar for how future interactions will work. It will act as the face of a company's digital brand and a key differentiator—and become a core competency demanding of C-level investment and strategy.

AI is fueling the convergence of assistive and mainstream technologies by changing how we all interact with technology and providing new interfaces to suit a diverse set of needs and abilities. As machine learning progresses, AI-enabled technologies will bring even more sophisticated capabilities to all of us—as long as they are trained to be inclusive.

## UNLOCKING NEW INTERACTIONS

From robotics to image and video identification, AI is unlocking new ways to help people with disabilities accomplish tasks with less effort and participate where they could not before. Here are a few examples:



### ASSISTIVE ROBOTICS

AI-based robotics can bring new capabilities to people with disabilities. Antwerp's Sign Language Actuating Node (or ASLAN) is a prototype robotic hand and forearm that can perform sign language letters and numbers. It is being designed by graduate students to address the needs of people with hearing loss. The team's objective is not to replace an interpreter, but to make sure there is always an option available to anyone worldwide needing sign language services.<sup>21</sup>



### CONTENT TRANSLATION

AI can help ensure content is accessible. Blackboard Ally, a product that integrates into learning management systems, aims to make digital educational course content more accessible. The app both scores course content against common accessibility issues, and, using machine learning, converts the content to more accessible forms such as Semantic HTML, ePub, electronic Braille or audio. Since these alternative forms are available immediately, students with disabilities or different learning preferences are not delayed in gaining access to their coursework. Ultimately, everyone benefits from higher quality and more usable educational content.<sup>22</sup>



### MENTAL HEALTH

AI is revolutionizing mental health care diagnosis and treatment. Machine learning is helping to diagnose attention deficit disorders, depression, psychosis, schizophrenia, and a host of other mental health issues. Woebot is a Facebook Messenger-based chatbot that helps people manage their mental health. Modeled after cognitive behavioral therapy, Woebot

reaches out daily to chat and uses mood tracking to determine what questions it should ask. When it senses someone is in trouble, it suggests they seek help and offers real world resources. Its developers believe it fills an important need in mental health, allowing individuals to share without fear of stigma or judgment.<sup>23</sup>



### VOICE ENABLEMENT

AI provides new interfaces which help suit diverse needs and abilities. Through Amazon's Alexa, a voice-enabled assistant, a blind person can listen to a book or tell time, while a person with a mobility impairment could adjust the thermostat or start the coffee pot with minimal effort. As voice-based computing matures, the virtual assistant will travel with the individual across devices and locations (e.g., car, office), providing assistance that transcends senses and location-based needs.<sup>24</sup>



### IMAGE AND VIDEO IDENTIFICATION

AI is also strengthening intelligence around image and video analysis. At Facebook, automated alternative text describes photos with increasing detail. Similarly, Google uses machine learning to help identify and label the contents in each frame of a video. These technological advances enable the blind to experience photos and videos much more descriptively than ever before. They also make video and photo catalogs searchable—a benefit for all of us.<sup>25</sup> In a related example, Accenture is piloting Drishti—a solution first inspired by Microsoft's Seeing AI—which uses image recognition and natural language processing to assist individuals with visual impairments in understanding the world around them with their smartphones. Drishti's facial recognition algorithms can also interpret emotion from an individual's features and inflections. This distinguishing feature can help individuals on the autism spectrum identify the emotions of those with whom they are interacting.<sup>26</sup>

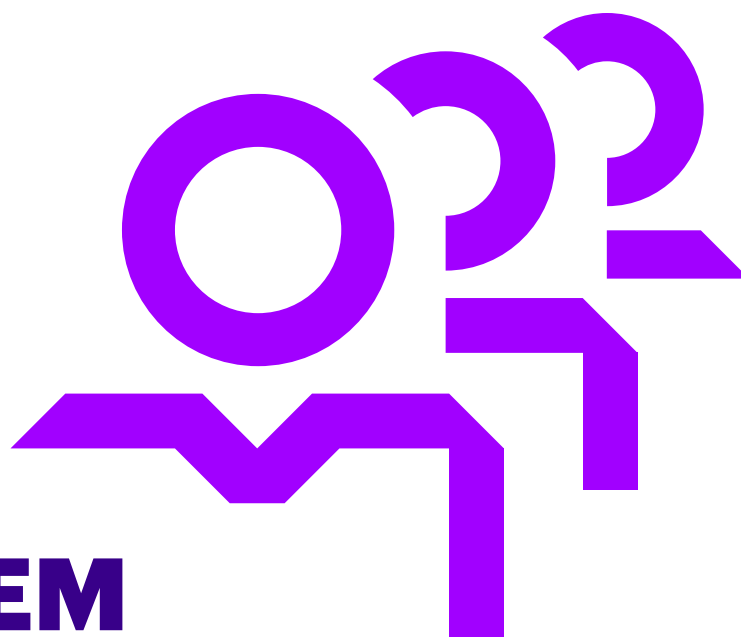


## CONTINUOUS LEARNING

AI technology uses data on how individuals interact with and use technology to continuously self-optimize. It is essential, then, that AI systems are trained on diverse data sets, including patterns of use from people with disabilities. This will help ensure technology becomes more inclusive over time: Alexa will understand conversational commands with more success and from a wider set of accents and dialects, facial recognition will become more accurate and span across more types of people, and physical-assist robotics capabilities will become more sophisticated and integrate well in a greater variety of situations.

There are a plethora of ways AI can and is already positively impacting accessibility. As long as AI is set up to learn to become inclusive, this technology will increasingly bring capabilities to the market that break down barriers for people with disabilities and ultimately help close the digital divide.





# ECOSYSTEM POWER PLAYS

## UNLEASH THE POWER OF US

Companies are increasingly integrating their core business functionalities with third parties and their platforms. But rather than treat them like partnerships of old, forward-thinking leaders leverage these relationships to build their role in new digital ecosystems—instrumental to unlocking their next waves of strategic growth. As they do, they are designing future value chains that will transform their businesses, products, and even the market itself.

Through digital ecosystems, companies have opportunities to strengthen their accessibility offerings and the accessibility within their offerings—enabling them to improve the customer experience, appeal to new customer segments, and enter new markets. Partnerships may take a variety of forms, including teaming with third party providers, companies in adjacent industries, or accessibility-focused organizations. In all cases, companies will need to work across their supply chains to ensure they can achieve end-to-end accessible outcomes.

## PARTNERSHIPS

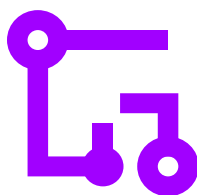
Whether a platform provider or a platform user, businesses that recognize their place in an accessibility ecosystem can turn to potential partners when they identify opportunities or gaps. To solve the smartphone-to-hearing implant integration challenge, Australian-based Cochlear is teaming with Apple to offer iPhone users the first made-for-iPhone Cochlear implant. Their joint offering lets individuals with hearing loss stream sound directly from their iPhone to the implant's sound processor and to control and customize the sound from their iPhone without the need for an app.<sup>27</sup> This partnership will make it easier for people with disabilities to use a mobile phone, increase sound quality and clarity, and avoid the multi-step process associated with the Bluetooth and app-enabled methods available today. In a similar ecosystem effort, Microsoft is working closely with VFO, the maker of the JAWS screen reader, to make it easier to use JAWS with Office 365, enabling people with visual impairments to have a simplified and more enjoyable experience of applications like Excel and PowerPoint.<sup>28</sup> These companies are demonstrating how teaming up can strengthen their offerings.

## SUPPLY CHAINS

Working with others in one's supply chain helps to ensure that products and services launched in the market are truly accessible. Hardware providers, such as laptop manufacturers, may push all responsibility for accessibility to the software that sits on their technology. However, they need to take part as well: if a consumer with a visual and mobility impairment orders a laptop, he or she will need to first open the package and then read the manual to get the computer started, before software even comes into play. The fact is, to successfully produce an accessible customer outcome, every player in the value chain must assume responsibility.

Consider the real-life experience of Shahid, a technologist with hearing loss who attended a global user conference. His overall satisfaction with the conference was dependent on a value chain that spanned the conference organizer, the event facility, and the vendors supporting the event. The background noise in the ballroom made it extremely difficult for Shahid to hear the keynote speaker with his hearing implant. He asked the audio/video team for assistance and, eventually, they figured out how Shahid could connect his hearing device directly to the sound system, removing background noise and allowing him to hear the presentations. When Shahid arrived at the event the next year, the team had created a solution that enabled him to self-connect, which greatly improved his personal experience and brand impression, not to mention the value he got from the conference.

Ecosystems stimulate the design and implementation of accessibility. By uncovering accessibility-related gaps and opportunities in their products and services, businesses can identify the partnerships that can help them be successful in the long run. Further, by working across their supply chains, companies can ensure that those products and services they bring to market are comprehensively and seamlessly accessible. As the consumer experience gains prominence and becomes more complex in the digital age, companies that think about the accessibility of their broader digital ecosystems will thrive.



To successfully produce an accessible customer outcome, every player in the value chain must assume responsibility.



# WORKFORCE MARKETPLACE

## INVENT YOUR FUTURE

The future of work has already arrived, and digital leaders are fundamentally reinventing their workforces. Driven by a surge of on-demand labor platforms and online work management solutions, legacy models and hierarchies are being dissolved and replaced with open talent marketplaces. This resulting on-demand enterprise will be key to the rapid innovation and organizational changes that companies need to transform themselves into truly digital businesses.

The rise of on-demand labor platforms and the growth of the gig economy opens up new opportunities for people with disabilities. These marketplaces can also make life more challenging for people with disabilities if they are not designed with accessibility in mind. They require all participants to take a coordinated and compatible approach to accessibility. If successful, businesses benefit from tapping into a more robust pool of qualified workers.



## THE BENEFITS AND RISKS FOR PEOPLE WITH DISABILITIES

The benefits and risks that the gig economy brings to the overall population are still being studied and debated—the same uncertainty applies for people with disabilities.

On one hand, workforce marketplaces can improve and expand access to work for people with disabilities. They allow for more flexible and diverse ways of working, providing room for accommodating unique needs. People with disabilities can have full flexibility to go to medical appointments whenever they need to—even without notice, or take more “work from bed” days. For example, while including the word “flexibility” in job descriptions was originally intended to attract new mothers, companies have found that it can also lead to an increased number of applicants with disabilities.

Yet, talent exchanges also have the potential to create challenges for people with disabilities, such as repeatedly having to disclose and

discuss their disability or, especially for people on the autism spectrum, to participate in interviews. Shortfalls in current assistive technologies could also be a recurring challenge in an on-demand labor market. An on-demand talent marketplace is likely to assemble more global project teams speaking a variety of dialects. Most current translation technologies (visual or text) struggle with dialects, which can result in a person with a disability having no access to the conversation. While workforce marketplaces bring several critical benefits for people with disabilities, companies should also be cognizant of the challenges they can create and work to mitigate them.

## ACCESSIBLE MARKETPLACE DESIGN

With a broad range of employers participating in a workforce marketplace, a well-designed accessible marketplace can be a bridge between employers and people with disabilities that may not exist today. The emergence of workplace exchanges that are purpose-built for people with disabilities can provide guidance in designing accessibility into all workforce exchanges. Organizations such as Advocations and Specialisterne have accrued substantial knowledge on how to connect and support professionals with disabilities and inclusive companies. Further, design and development of the marketplace also needs to be taken into consideration—from the hiring phase through the completion of a “gig”. Many workforce marketplaces today have multiple customer support tickets with questions or complaints related to the accessibility of the site, such as screen readers not being able to read rating stars. As with other technologies, companies building online marketplaces need to shift the cultural mindset to value accessibility, push for and leverage inclusive design, and establish an inclusive developer ecosystem.



## GREATER ACCESS TO QUALIFIED TALENT

Talent exchanges designed with accessibility in mind enable businesses to tap into a wider pool of qualified talent. In 2015, Uber launched features to make it easier individuals with hearing loss to become drivers. Thousands of drivers with hearing loss have successfully logged millions of trips. Uber has recently updated its app to show riders how to sign basic phrases in American Sign Language to better communicate with drivers with hearing loss. These small design additions in the platform are further steps to ensure Uber's marketplace attracts a wide range of potential employees.<sup>29</sup> Across professions, there are untapped qualified talent resources who could participate in the workforce if they are provided with the right accommodations.

The future of workforce marketplaces is promising for all of us—and perhaps especially for people with disabilities. By making sure the awareness, structures, and tools are in place, companies can help ensure that people with disabilities successfully complete their “gigs”. Ultimately, individuals with disabilities benefit from more fulfilling work, businesses benefit from access to more talent, and society benefits from increased employment.





# THE UNCHARTED

## INVENT NEW INDUSTRIES, SET NEW STANDARDS

Businesses are not just creating new products and services; they are shaping new digital industries. From technology standards, to ethical norms, to government mandates, in an ecosystem-driven digital economy, one thing is clear: a wide scope of rules still needs to be defined. To fulfill their digital ambitions, companies must take on a leadership role to help shape the new rules of the game. Those which take the lead will find a place at or near the center of their new ecosystem, while those that do not risk being left behind.

Businesses are finding themselves in new, uncharted waters where expectations regarding accessibility are increasing. Technology is creating new possibilities—with positive, negative and unintended consequences. Some studies show that overuse of digital technology (e.g., smartphones) can lead to mood, concentration, memory, and sleep issues. Yet, these same technologies are helping people to cope with mental health challenges. While enforcement is intensifying and regulations are shrinking the accessibility gap, progress is slow and is increasingly unable to keep up with the pace of technological change. Enterprises have the responsibility and opportunity to lead the way in these uncharted waters.



## **ENFORCEMENT IS INCREASING BUT NOT KEEPING PACE**

While there is a growing number of regulations related to accessibility, and regulation is increasingly being enforced through settlement cases, this is proving to be insufficient.

Long-standing regulations are being interpreted in the context of the digital world, legal proceedings regarding technology accessibility are increasingly finding in favor of people with disabilities, and societal expectations and activism are rising. In 2010, the US Department of Justice (DoJ) took the position that the ADA also covers online content, website access, and mobile applications (in addition to the more traditional information and communications technologies).<sup>30</sup> As of mid-2016, the DoJ had entered into 171 settlement agreements addressing website accessibility.<sup>31</sup> Advocacy groups, such as the National Federation of the Blind and the National Association of the Deaf in the US, are spurring activism specifically against websites that are not accessible.<sup>32</sup>

While this progress is positive, the evolution of technology is occurring at such a fast pace that regulatory response is unlikely to close the accessibility gap. A case in point is the US federal government which will not be able to meet its own regulation requiring all federal technology to be accessible by January 2018. Even with a multi-year push to meet this deadline, 42 percent of the most commonly-used federal websites are still not accessible.<sup>33</sup> Despite the pressure of regulatory and legal incentives, progress is slow.

## **THE RESPONSIBILITY OF ENTERPRISES**

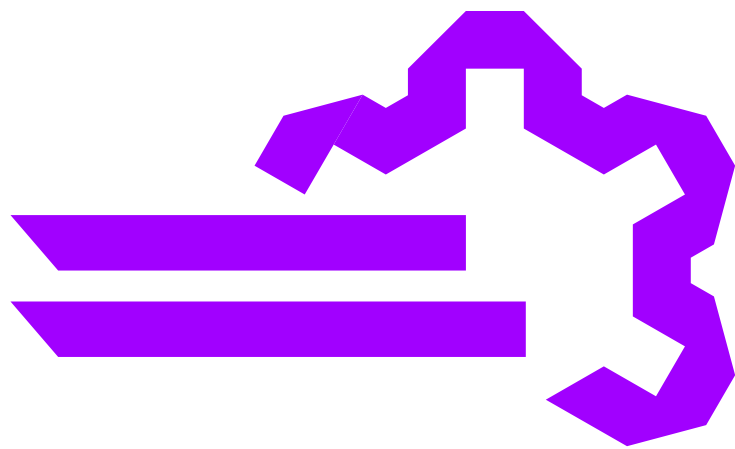
The onus is on enterprises to shape guidelines and standards for ethical use of technology that fosters accessibility and inclusiveness.

Businesses are leveraging organizations like the US Chamber of Commerce and US Business Leadership Network (USBLN) as sources of information sharing to keep up with advances in technology without compromising on regulatory imperatives. Recognition programs such as the USBLN Disability Equality Index (DEI) are providing both awareness and measurement frameworks. The DEI assesses progress in culture and leadership, enterprise-wide access, employment practices, and community engagement and support services. It is spurring companies to action, with 110 companies listed on the benchmark in 2017, compared to 48 in its first year in 2014.<sup>34</sup> These are strong resources to aid enterprises in their accessibility efforts.

## **THE HELP OF FORMAL RECOGNITIONS**

A rise in formal recognition is also helping raise the priority level of accessibility across companies and organizations. The DEI and similar programs will make it clear to consumers which technologies are accessible and which are not. Several universities and local governments have been recognized for their accessible websites and momentum is growing to make accessibility an award category. Further, studies and industry reports are now being published that compare not just technology security and speed performance, but also performance against accessibility standards. Even markers like those for secure websites could soon emerge, helping consumers quickly identify which websites are accessible and which are not.<sup>35</sup> These actions will help to encourage a more proactive stance among enterprises.

While governments continue to push for accessibility through regulatory and legislative pressure, companies have the power to influence the speed and extent to which inclusiveness is adopted. Ultimately, those businesses that self-enforce will prosper from the tremendous business benefits to be gained in both the short and long term.



# WHAT TO DO NOW

## ACCELERATING PROGRESS

As a review of these five technology trends demonstrates, technology holds great promise for closing the digital divide for people with disabilities. It also holds undeniable opportunity for businesses that make accessibility an integral part of their products and services and how they do business. The sooner companies put new accessibility structures in place, the easier it will be to keep pace with accessibility standards in a rapidly evolving technological landscape.

To advance your organization's position in technology and workplace inclusiveness, consider these actions:



### **UNDERSTAND THE IMPLICATIONS OF ACCESSIBILITY**

- Study and understand what impact designing accessible technology products and services can have on your business.
- Seek out customers and employees with disabilities and understand their goals. Work with them to shape your own business's goals for the future.
- Establish a North Star on how your company wants to incorporate accessibility into its ways of working and set shorter-term objectives that will guide actionable steps towards it.



### **DESIGN ACCESSIBILITY INTO YOUR BUSINESS**

- Harnessing this tremendous untapped opportunity begins with awareness. Begin now by educating the people in your organization from top to bottom, with awareness training for all, and detailed training for specific groups (such as human resources, procurement, and engineering).
- Establish the right ways to hire people with disabilities early. This will be crucial to designing and developing better products and services in the future.
- Recognize that integrating accessibility into your business' ways of working will be a multi-year initiative requiring buy-in from all parts of your business. Sponsorship from key leadership will go a long way toward raising visibility for the accessibility agenda.



### **TRANSFORM YOUR DESIGN AND DEVELOPMENT PROCESSES**

- Consider opportunities for making your technology more accessible for both small and large-scale problems. Small changes, like

making a recruiting website more accessible, can sometimes make an outsized difference.

- Include people with disabilities on your design teams to stimulate diverse perspectives and idea generation. Think about bringing in customers with disabilities to test your concepts early.
- Embed accessibility into your development process. It should be treated equal to security or other performance standards.
- Find ways to incorporate customer support channels into your technology offerings so that it is easy for people with disabilities to provide your business with feedback on experiences that could be improved.



### **BUILD AN ECOSYSTEM OF ACCESSIBILITY—AND CONTINUOUSLY THINK ABOUT WHAT IS NEXT**

- Look across your supply chain, and understand where you fit into a larger ecosystem, to identify gaps in creating a seamlessly accessible customer experience.
- Set guidelines together with ecosystem partners in areas where regulation does not yet exist, such as the ethical design of AI systems to avoid bias against people with disabilities (e.g., in recruitment bots).
- Establish an innovation architecture to design with and for accessibility. Accessibility can be a lens to generate new and different products and services.

How businesses decide to design and develop new technology can dictate the inclusiveness of our digital society. Momentum is building among enterprises as leading organizations blaze a trail in designing for each and every one of us. The benefits that inclusiveness offers to individuals, businesses, and society are motivating many others to follow suit. Our ability to close the digital divide is within reach. Step up to the challenge. The time to act is now.

# RESOURCES

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