AI for disability inclusion

Enabling change with advanced technology

accenture

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More than one billion people globally are living with some form of disability.

Collectively, people with disabilities cross every age, ethnicity, gender identity, race, sexual orientation, and socioeconomic status. In the United States, 26% of adults (one in four) have a disability. Yet 50% of this community in the US are more likely to be unemployed than nondisabled[1] people of working age.[2]

Why is that? What is keeping organizations from hiring more people with disabilities? After all, the business case for tapping individuals from this vast and highly talented pool of individuals has been made. Hiring more individuals with disabilities can help improve performance and position organizations for long-term growth.

Our experience points to an overarching barrier: the persistent, misguided perception that finding, hiring, onboarding and developing persons with disabilities is too difficult—not worth the effort and resources that an organization would have to extend to do so.

In this report, through collaboration with Disability:IN and the American Association of People with Disabilities (AAPD), we bring an evidence-based perspective to bear. Based on Accenture's ongoing study of persons with disabilities in the workplace, and advances in "human + machine" work, we see that Artificial Intelligence (AI)—when developed and used responsibly and ethically—has the potential to facilitate the entire employment journey for persons with disabilities. It can help organizations identify candidates (and vice versa). It can enable engagement at work. And it can drive a culture of confidence in this underutilized segment of the workforce while supporting advancement within organizations.[3]

To that end, we will explore three foundational steps that organizations can take to help them leverage AI's great potential as an enabler of change in this context. They are:

- **Expand executive awareness of the power of AI to foster disability inclusion;**
- **Focus on the myriad benefits of AI while screening for and eliminating the possibility of unintended consequences; and**
- **Use the R(AI)S guiding principles (Responsible, Accessible, Inclusive, Secure) to inform decision-making about using AI to improve inclusion.[4]**

As recent headlines attest (and as that second step acknowledges), AI can be a double-edged sword. One global survey of risk managers found that **58%** identify AI as the biggest potential cause of unintended consequences over the next two years. Only **11%** in that study described themselves as fully capable of assessing the risks associated with adopting AI organization-wide.[5] The risk that AI could create or exacerbate existing barriers to employment or engagement at work, and the ancillary risk of liability, is real.

It's worth noting that in April 2021, the European Commission took a major step toward a new regulatory framework to address high-risk sectors and applications, including recruitment, facial recognition technology, and applications linked with workers' and consumers' rights.[6]

Accenture views AI as a constellation of technologies that allow smart machines to extend human capabilities by sensing, comprehending, acting, and learning, thereby allowing people to achieve much more than they could on their own. These technologies include natural language processing, computer vision, and other applications of machine learning recognition.

We have developed this report with these concerns top of mind. There's no doubt that the work of taking these steps is hard; it requires dedication. And it is worth it. Designing, developing, and using responsible, ethical AI can tap the incredible potential of talent with disabilities, while helping all workers reach their potential. Getting this right helps everyone thrive.

Expand executive awareness of the power of AI to foster disability inclusion

Chapter 1

While **84%** of C-suite executives believe they must leverage AI to achieve their growth objectives,[7] most haven't put AI to work to advance growth through inclusion. Our research suggests one key reason: Many are not fully aware of the barriers to inclusion that may exist in their organizations. While **67%** of C-suite respondents believe they've built a supportive workplace that enables their disabled employees to thrive with the right technology, environment and support, only **41%** of employees with disabilities agree.[8]

The majority of executives, **78%**, believe their organizations will be able to leverage AI solutions to address barriers to including persons with disabilities over the next three years, particularly in the area of accessibility. To achieve this goal, they must fully understand the vital impact of "advance work" needed to deploy ethical AI that benefits workers with disabilities. This work includes independent algorithmic assessments and auditing and adoption of inclusive design principles. It ensures that AI solutions are designed—and their underlying data are assessed—as rigorously as possible to prevent unintended consequences such as bias and discrimination. Yet just **37%** report that they have inclusive design principles in place to support "human + machine" collaboration[9]—essential to the development of fair and unbiased AI solutions. (See the page, "What is 'inclusive design'?")

Finally, there is the lack of disability representation in data sets and this remains a critical source of bias—and it's an issue whose solution rests, in part, on culture. Fostering a positive culture of safe self-disclosure is vital to achieving responsible and ethical AI. Organizations can't incorporate the perspectives of employees with disabilities if people aren't comfortable being open and giving their input. It's a vicious cycle; as Accenture's global Getting to Equal 2020: Enabling Change research illustrates, **76%** of employees with disabilities and **80%** of executives with disabilities are not fully open about their disabilities at work. While some disabilities result in a form of forced disclosure (mobility challenges, for example, are apparent), many people with disabilities can and do successfully conceal a disability such as dyslexia, autoimmune diseases like multiple sclerosis, or chronic mental illness.

What is “inclusive design”?

Inclusive design considers the needs of all users as a product or service is being developed, from start to finish. With inclusive or human-centered design, a person with a disability is simply another individual with specific lived experiences. Organizations that design for diversity and edge cases, including individuals with disabilities, will create better solutions and experiences for all users.

Microsoft defines inclusive design as a methodology, born out of digital environments, that enables and draws on the full range of human diversity. The company notes that “exclusion happens when we solve problems using our own biases. As Microsoft designers, we seek out those exclusions, and use them as opportunities to create new ideas and inclusive designs.”[10]

Effectively incorporating inclusive design into the way organizations create products and services requires adopting a new culture. Organizations need to take charge, consciously integrating accessibility, diversity and inclusion into their ways of working.[11]

Ideally, accessibility (the “what”) and inclusive design (the “how”) work together to make experiences that are not only compliant with standards, but truly usable and open to all. And the “why”: Together, inclusive design and accessibility can allow teams to build more diverse products, attract talent, ensure product teams are representative of the diversity of the customers we serve, and help identify new opportunities for revenue growth.

Failing to accommodate and co-create solutions with and for employees with disabilities can be very costly: According to the Equal Employment Opportunity Commission (EEOC) in the US, over 24,000 disability discrimination charges were filled with the agency in 2019. The EEOC’s enforcement efforts have amounted to $116M in monetary benefits to plaintiffs.[12]

Focus on the benefits; screen for and eliminate potential for unintended consequences

Chapter 2

AI has the potential to tackle some of the world's most intractable challenges, but only if the underlying algorithms and the data set powering them are trustworthy and free of bias. Biases often occur at the intersections of disability, race, gender, and other identities.

Case in point: A popular AI software that attempts to predict how a candidate will perform on the job by analyzing factors on display in their job interview such as gestures, tone, and cadence. This software has been called out by experts as dangerously biased against persons with disabilities, who might present with a range of characteristics that would not hinder their work performance but could affect how their potential is scored.[13]

Consider, too, the extent to which racial bias is imbued in facial recognition, detection, and related technology. Research has found divergent error rates across demographics, with accuracy rates being lowest for women, Black people and those 18-30 years old. How might the technology perform when adding aspects of disabilities that cause disfigurement or facial differences?[14]

To ensure that AI is helping and not inadvertently working against the inclusion of all people with disabilities, regardless of gender, race, etc., it's critical to assess the potential consequences of AI deployment on every part of the employment experience. In this report, we focus on three areas: **the hiring process, life at work, and employee evaluations.**

One tool developed by Accenture's Responsible AI unit[15] has the potential to help address bias. The Algorithmic Assessment Toolkit uses statistical methods to identify when groups of people are treated unfairly by an algorithm and visualizes the impact of potential corrective measures.[16] It's important to point out that the tool has not yet been used for the purpose of detecting bias on the basis of disability, but if the desired variables were defined with set parameters, and there is agreement on the threshold considered to be "fair," and the right data is available, it could be used for that purpose.

The hiring process

Research shows that approximately **76%** of organizations with 100 or more employees use algorithms to assess performance on hiring tests,[17] and **40%** of organizations use AI when screening or assessing candidates during recruitment.[18]

These systems have become much more sophisticated in recent years. Many of the new AI tools for employment use neuroscience principles to perform pre-employment assessments of candidates. Some tools aim to measure cognitive and emotional features of the candidate, while specifically trying to avoid demographic (race, gender) bias through an auditing process of the data that is present within the tool's algorithms.[19] They seek to match candidates' performance against that of existing employees who have succeeded in the same role for which the organization is hiring.

However, employers that use AI for pre-employment assessments may unwittingly make unfair decisions. The data they gather, for example, may not include considerations of disability in all its variations (including physical, cognitive, sensory, visible, and invisible).

The issue can be further compounded if the "fix" is not appropriate. Simply adding in that data may not be the solution. Here again, design matters enormously. Disability should not only be considered as a stand-alone category, but rather carefully examined regarding intersectional identities. Those responsible for sourcing and including such data must scrutinize who defines disability and how.[20] Programs that evaluate cognitive performance, for example, could fail to recognize how neurodiversity plays into candidates' responses. Plus, assessments that evaluate employees based on algorithmic perception of their facial expressions, tone of voice or movements can penalize candidates with disabilities. They may also constitute unlawful pre-employment disability-related inquiries and/or medical examinations under federal anti-discrimination law. And timed assessments can be unfair to people with disabilities, including those who use assistive technologies.

It is possible to navigate potential pitfalls by allowing people who are applying for a job to tailor their interview or assessment experience, as needed. Candidates who may need more time to answer questions, or who may not be able to convey their talents adequately in a video interview scenario, for example, can work with a talent advisor or similar role to develop the best scenario for them. (Of course, candidates must be notified - ahead of time - about how the interview or assessment tool works. That way, an informed decision can be made whether or not an accommodation is needed, including allowing or disallowing automated decision-making used to evaluate performance.)

Life at work

Lacking inclusive design and accessibility, both built and digital work environments can be difficult to navigate if one has a disability. In some cases, an individual may feel they have to do two jobs to accomplish one, with the first job being the task of overcoming obstacles so that they can perform their actual job. AI-powered advances in accessibility, such as predictive text, speech-to-text transcription, and voice and visual recognition have great potential to help organizations eliminate some of these barriers—and comply with the law in the process.[21] The caveat is the need to foresee, avoid (and be ready to mitigate) negative impacts.

These kinds of tools are not one-and-done solutions—nor are they one-size-fits-all. As AI-based systems become an integral part of HR processes and the workplace, it's important to assess whether each tool is needed and, if so, what it is doing to help employees thrive at work and to leave them net better off.

AI is also enabling immersive learning environments using extended reality (XR) technologies—virtual, augmented and mixed reality (VR, AR and MR)—in customer-service training sessions. These tools closely mimic real-life situations and allow employees to gain greater levels of knowledge in less time than they would through more traditional "on-the-job" training.

Consider technology that describes people, text and objects aloud for those with low vision. AI-powered tools and apps such as Blindsquare[22] seek to help those with visual impairments navigate their travel and work environments independently. There are also new solutions that operate computers via eye movements. Technologies like these can improve the lives of employees with disabilities and have the potential to enable employers to meet their legal obligations in a cost-effective way.

Walmart leverages VR training for its associates in order to increase employee engagement around areas such as empathy, diversity and inclusion in their customer experience as well as compliance training.[23] Leveraging these tools for on-the-job training helps employees navigate a variety of situations and experiences in virtual "practice worlds" (where mistakes don't matter).

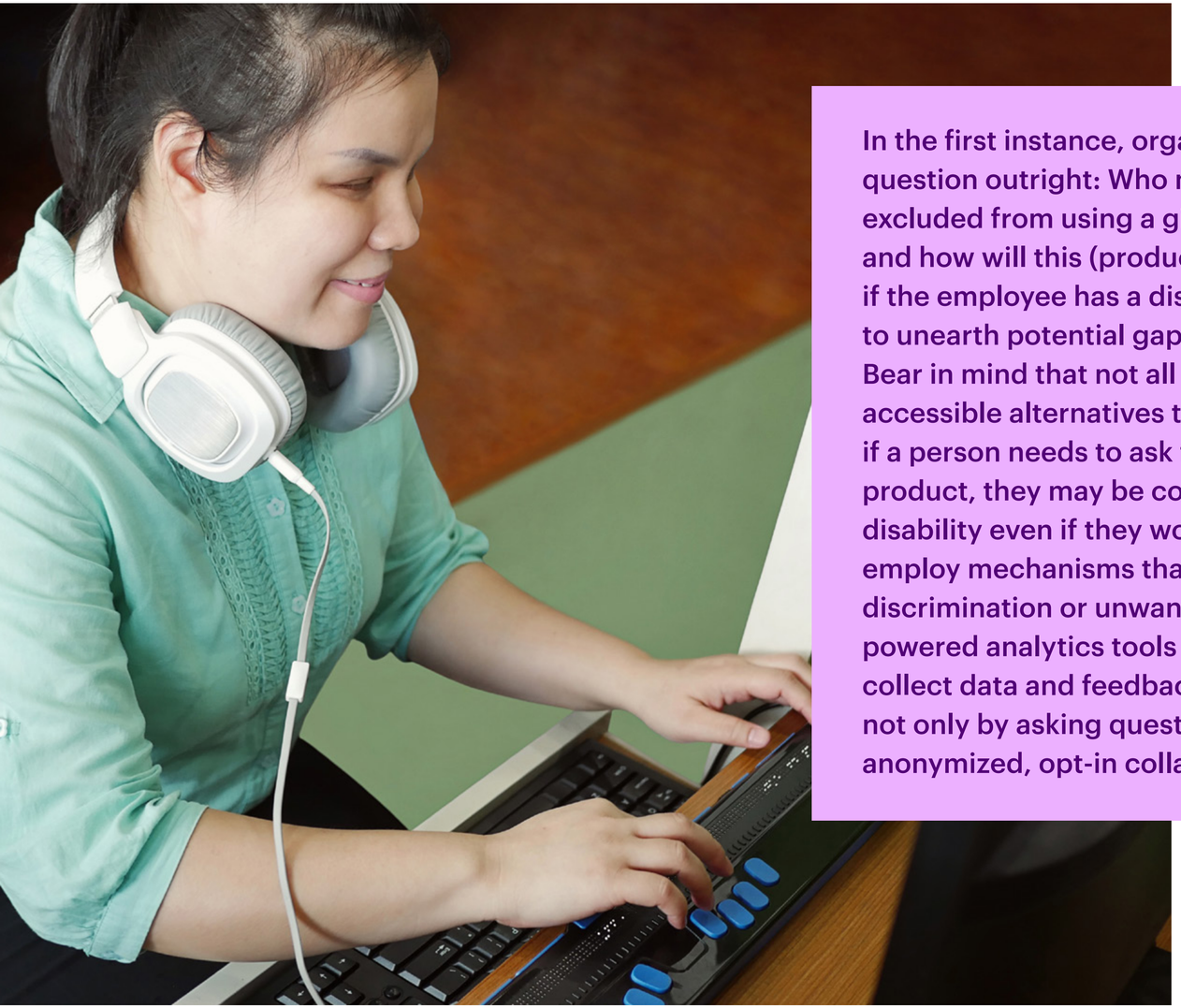
As this technology and its use cases become more sophisticated by the day, employers must be cautious when procuring and utilizing XR tools to ensure that they work for everyone. For example, a lack of captioning[24] is an issue, and individuals with limited mobility can't use VR without assistance. Even with a headset on, many can't make the head or body movements required to get the full experience. Disabilities such as autism and anxiety can also make using VR difficult or even harmful. Fortunately, there are some worthwhile initiatives underway to address XR accessibility (XRA) concerns, such as PEAT's Future of Work[25] project and the XRA Developers Guide[26] for accessibility and inclusive design in immersive experiences. (See the page, "What is 'inclusive design'?")

Employee evaluations

Using AI-powered tools, managers can extract valuable insights from employees about their strengths and areas for improvement and the ways in which their learning experience and environment could be customized to support higher levels of engagement and job satisfaction. AI-driven feedback can help organizations assess employee performance based on historical data and achievement of current metrics and suggest recommendations that can help individuals and groups achieve greater performance levels going forward.

Such tools, however, must consider the range of needs and behaviors they may encounter in a given group of people if they're going to generate worthwhile insights. Suppose, for example, that an organization is seeking to figure out whether employees are likely to remain there or pursue employment elsewhere. And suppose to do this, it uses AI-powered analytics to scan data from different aspects of worker behavior, such as attendance, arrival/departure times and participation in work-sponsored social activities. On the surface, those seem like viable metrics. But what if a person with disabilities is unable to attend work-sponsored social activities due to a lack of accessibility? What if travel to/from work must happen at certain times due to their personal needs or transportation availability? What if an employee relies on paratransit which is often delayed? What if an employee's schedule is affected by the need to care for a disabled relative, a child or an elderly parent? The results will be skewed, likely against employees who stand out for any of these reasons though they have nothing to do with engagement, productivity, or loyalty.

How do organizations avoid having such measures result in unfair practices, unlawful disparate treatment or impact based on an employee's protected status? How can organizations prevent AI tools from mistreating or excluding otherwise successful and productive employees?



In the first instance, organizations should ask the question outright: Who might be unintentionally excluded from using a given product (or service) and how will this (product or service) avoid bias if the employee has a disability? This will help to unearth potential gaps and opportunities. Bear in mind that not all platform vendors offer accessible alternatives to their products, and that if a person needs to ask for help using a given product, they may be compelled to disclose a disability even if they would prefer not to. Tools can employ mechanisms that seek to prevent bias or discrimination or unwanted disclosure. Some AI-powered analytics tools and platforms, for example, collect data and feedback from each employee not only by asking questions but also through anonymized, opt-in collaboration analytics.

This is an especially important tactic since, again, organizations are struggling to create a culture of safe self-disclosure which impacts the availability of reliable, trustworthy datasets. Plus, organizations must ask if it is always appropriate to make inferences based on data regarding disability. By anonymizing and aggregating employee activity data, the risk of any bias creeping in while measuring engagement can be mitigated.

While the rewards are ample and the ethical and legal compliance imperatives are strong, the journey to inclusion is not straightforward. Where to begin? It starts with your people: Organizations have to take steps to encourage a positive, safe culture of self-disclosure and inclusion (that can start with leadership disclosing their own disabilities). At the same time, employers must respect that they cannot lawfully require self-disclosure of a disability.

The second necessary shift is one toward inclusive design and development of AI: All technological changes or implementations in an organization should be executed with these principles in mind, especially in light of self-disclosure and data privacy issues.

Finally, leaders should take a strong, uniform, visible stance on process and governance: Transparency is key to any inclusion effort, and more so when complex capabilities like AI are under consideration.

With these foundational moves made, organizations are better positioned to unleash the power of AI for all—while working toward eliminating biases and sparking more innovation and growth for the organization too.

R(AI)S your AI game with guiding principles

Chapter 3

To make sure that AI positively impacts people with disabilities and helps them achieve their goals, employers can look to the set of guiding principles we call R(AI)S (for Responsible, Accessible, Inclusive, and Secure).

These principles synthesize insights from expert interviews, research from the Berkman Klein Center for Internet and Society at Harvard University,[27] as well as a host of published AI principles from around the world. At a high level:

Responsible

means adopting and scaling AI responsibly and ethically; innovating with purpose; and placing a premium on compliance, accountability, transparency and explainability.[28]

Inclusive

means taking action for fairness in/with AI: Use inclusive design approaches that incorporate the lived experience of persons with disabilities, and debiasing techniques to create a culture of equality and inclusion.

Accessible

indicates that all AI endeavors put a premium on accessibility and that includes features and functionality of the tool itself, the capabilities of vendors involved, the experience of the person with disability surrounding its use.

Secure

at one level means ensuring that using AI will not put data privacy at risk. However, it also recognizes security in the sense that individuals should not need to ask for help because of their disability (thus potentially depriving them of the autonomy and privacy that would otherwise be protected when using the technology).

To cover these four areas comprehensively, we recommend that employers ask themselves the framing questions listed below. The answers—followed up with "how can we do this better?"—will suggest outlines for a plan of action, which will be unique to each organization. Inspiration can also be drawn from examples of organizations that have demonstrated significant advancement in particular areas, as called out for each principle.

Responsible

- **Are we assessing and communicating how our investment in or use of AI-powered systems impacts employees and/or candidates throughout the employee lifecycle, particularly those who might be adversely affected (e.g., due to disabilities, race, gender, etc.)?**
- **Have we engaged an independent team responsible for evaluating whether AI is used for its intended purposes? Is that team empowered to stop deployment until negative impacts are assessed and eliminated?**
- **Are we open about the AI-based tools we build and/or use for the purpose of recruiting and interviewing candidates for hire? Do recruiters, candidates, and hiring managers/staff know these tools exist, what they do and why, and how to access them?[29]**
- **Are we providing accessible alternatives and complaint channels for employees and/or candidates with disabilities who need to report they may be disadvantaged by AI-powered tools for any reason?**

Salesforce

Salesforce's commitment to inclusive, ethical AI became even more important when its Einstein AI technology was made available across its products. The company founded the Office of Ethical and Humane Use as a part of its Office of Equality, which represents diversity of all kinds, including disabilities. Its Office of Ethical and Humane Use developed a framework for Responsible AI and implements it across the company. In addition to ensuring data privacy and security, Salesforce trains its employees to recognize harmful stereotypes in AI algorithms and their consequences. In case of issues, Salesforce's ethical AI framework lists steps to solve them, such as communication with affected communities, protection mechanisms, commitment to transparency, and a Data Science Review Board.[30]

Accessible

- **Have we appointed or established a Chief Accessibility Officer, Office of Accessibility, executive sponsor, and/or leadership team champion to oversee and be accountable for accessibility efforts?**
- **Are we engaging employees with disabilities in our accessibility efforts including, but not limited to, usability testing?**
- **Are we embedding accessibility into our relevant policies and any commitments to ethics and corporate citizenship, and are we monitoring progress and regularly seeking feedback from a wide range of stakeholders, including employees with disabilities, ERG members, and the public?**
- **Are we defining accessibility and usability as a requirement in our procurement contracts with tech vendors, including AI tool vendors, and regularly testing for it? Likewise, are we evaluating vendors with these capabilities top of mind?**[31]

Microsoft

Responsible AI is a group effort at Microsoft. In addition to appointing a Chief Accessibility Officer and having a CEO eager to speak on the topic, the Office of Responsible AI sets company-wide guidelines and governs their implementation. Responsible AI Strategy in Engineering (RAISE) is an initiative the engineering team built to enable the implementation of responsible AI rules and processes across engineering groups. The Aether Committee, established in 2017, advises senior leadership on issues, best practices, and R&D opportunities. Aether organizes working groups that focus on areas such as fairness and inclusiveness. Together, these three groups put principles into practice. Outside of the company, Microsoft's AI for Accessibility program provides seed grants to developers, universities, inventors, and NGOs that are creating solutions or products to assist people with disabilities with "work, life, and human connections." Microsoft then connects the most promising projects with their internal teams and experts to help them scale. Finally, Microsoft pledges to bring inclusive design to its products.[32]

Inclusive

- **Are we directing and/or incentivizing our talent development teams (internally and externally) to use inclusive design principles? Are there consequences for failing to adhere to these principles?**
- **Are we proactively assessing risk of role displacement as a result of AI and providing inclusive and accessible ways of reskilling and training employees who may be affected?**
- **Are we conducting regular fairness assessments/audits of algorithms (and the underlying dataset(s)) to understand and act upon any potential negative impacts our AI tools could have for persons with disabilities and other at-risk communities (e.g., based on gender, race or age)?**

The American Association of People with Disabilities (AAPD)

AAPD is leading the Start Access initiative with support from Verizon and the Partnership on Employment and Accessible Technology (PEAT). The program is focused on AI-enabled tools that are increasingly used in talent acquisition to source, screen, onboard and train employees, particularly as organizations move rapidly to virtual spheres which will endure post-pandemic. Start Access aims to build and convene an engaged stakeholder community from across the startup ecosystem to promote “born accessible” solutions such as inclusive development teams/co-design, inclusive datasets, algorithmic fairness tools and techniques, and transparency/accountability practices.

Secure

- **Do we have an internal governance model in place ensuring safe, secure and fair deployment and operation of AI systems?**
- **Are we increasing investment in the security of our AI systems?**
- **When assessing candidates for employment and using AI-based tools, do we recognize that candidates with disabilities have the same reasonable expectations of privacy as do other candidates?**
- **Is accessibility understood to be a key element of privacy and security for people with disabilities, enabling independence and freedom from having to ask for help? Is accessibility also understood to be a key element of protecting system security because it eliminates the need for third parties to access systems designed for independent use?**
- **Are we actively avoiding finding or using information that should not be considered while using AI-based tools for recruiting purposes?**

Telefónica

In October 2018, Telefónica's Executive Committee adopted its own AI Principles along with a governance model to ensure effective implementation within the company. The first principle, Fair AI, states that algorithms should not discriminate against people with disabilities or other protected classes such as race, gender, religion, or other personal conditions. Telefónica promises to monitor data sets for unfair bias or discrimination, and to optimize algorithms while considering their impacts. Further, the company will be explicit about what personal or non-personal data is used and for what purpose. Users will know they are interacting with AI tools, that their data is secure, and practices are compliant and lawful. This extends to any third-party AI tool Telefónica employs.[33]

AI: A worthy match for barriers to inclusion

AI-based tools have the potential to be a worthy match for the barriers to inclusion that persons with disabilities face along the employment journey. By responsibly and ethically blending advanced technologies with human ingenuity—and empathy—organizations can clear a path for a large group of people who are ready to contribute, innovate and grow their organizations.

Academics, regulators/ policymakers, investors, and developers can also R(AI)S the bar

Chapter 4

While employers must be powerful advocates and drivers for the ethical implementation of AI, organizations also need the engaged support of all stakeholders. Academics, regulators/policymakers, investors, and developers (with and without disabilities) must also work in concert with organizations and persons with disabilities to realize the full potential of AI-based inclusiveness. In that spirit, we offer a set of R(AI)S questions for each of these stakeholder groups to consider:

"How shall we do that?"

"How can we better our efforts here?"

As a member of academia....

Recognize that your role can have tremendous and direct influence; your ability to examine both the big picture and individual cases with objectivity and informed curiosity, and your willingness to share your analyses widely, with conviction, can meaningfully shift the trajectory of discussion and solutions. Keep in mind, always, that the design and execution of projects focusing on persons with disabilities must include members of this community. Ask the following questions, and follow each one with: "How shall we do this?" or "How can we better our efforts here?" Each answer will bring your action plan into clearer focus.

Responsible

- Are we fostering discovery and innovation in the area of AI-powered systems, and to what extent are we involving persons with disabilities when doing so?
- With input and leadership by people with disabilities, are we considering how our research and development (R&D) of AI-based systems impacts people with disabilities, particularly along the employment journey?
- Are we advancing the quest for standardized frameworks, data labeling and auditing methods for AI systems, specifically to ensure disability inclusion?

Accessible

- Are we encouraging/fostering R&D in the area of AI for accessibility through convenings, thought leadership, relevant programs and initiatives, and are we doing so with the support and input of disabled people?
- Are we funding or seeking funding for initiatives and/or programs/degrees that focus specifically on the area of accessibility with the support and input of disabled people?

As a member of academia....

Inclusive

- Are we implementing accessibility and inclusive design as requirements/pillars of educational programs related to UX/UI design, computer science and data science?
- Are we raising awareness among early career researchers and developers of the growing impact of AI on inclusion and that this is a feasible career path?
- Are we actively involved in communities and/or research delving into the topic of AI fairness with the aim of ensuring that disability is included?

Secure

- Are we collaborating with policymakers to create representative, publicly-available datasets to ensure inclusion of persons with disabilities when training algorithms?
- Are we emphasizing the importance of metadata to help stakeholders understand the context of data used to train algorithms?
- Are we fostering standardization efforts with regards to bias analysis?

As a regulator or policymaker...

Regulators and policymakers—especially those working alongside colleagues with disabilities, stakeholders and/or disability organizations—can take significant steps to advance inclusivity by considering these questions as comprehensively as possible. Ask the following questions, and follow each one with: "How shall we do this?" or "How can we better our efforts here?" Each answer will bring your action plan into clearer focus.

Responsible

- Are we strongly encouraging the funding of AI research and employing regulation that recognizes the way people with disabilities may both benefit from and be harmed by AI when considering funding, research and regulatory priorities? In doing so, are we recognizing the intersection of race and disability and ensuring that nothing done for the claimed benefit of disability can in any way harm Black and other people of color, including people with disabilities in these groups?
- Are we adapting existing regulations and frameworks to include AI-powered technologies, with an eye to populations at risk/international human rights conventions?
- Are we emphasizing that AI developers and users are bound by existing anti-discrimination legislation and responsible for the outcomes and consequences of their AI-enabled tools?
- Are we including a disability lens when considering regulations and funding designed for AI ethical principles such as privacy, security, and autonomy?

Accessible

- Are we providing accessibility standards for the development of AI systems as well as for close monitoring once systems are in use, to be in line with the needs of persons with disabilities?
- Are we specifically including persons with disabilities as a group to be considered when employing AI in our guidelines and policies?
- Are we working with stakeholders with disabilities and regulators/policymakers and organizations with expertise in technology bias against persons with disabilities to understand the needs of various kinds of disabilities, to ensure that we set the right standards of accessibility for as many people as possible? How are we verifying/pressure-testing these standards?

As a regulator or policymaker...

Inclusive

- Are we leveraging existing non-discrimination legislation to support fairness in AI? And are we considering the need for additional legislation—doing so in collaboration with affected communities and their representatives?
- Are we defining fairness, particularly for AI systems that are at risk of discriminating between people with diverse backgrounds and experiences (e.g., in hiring)?
- Are we encouraging the use of standardized bias analysis?
- Are we encouraging the use of validation datasets to test for disparate impact on persons with disabilities?

Secure

- Are we specifically pushing for data protection for AI systems in high-risk areas (e.g., healthcare)?
- Are we defining and enforcing quality requirements for data used to train AI systems?
- Are we funding, creating and/or providing access to representative datasets that consider persons with disabilities to train AI systems?
- Are we providing means for communication that are easily accessible to help persons with disabilities take part in AI public participation initiatives?

As an investor...

Investors set and sustain critical trends. To help do so in the interests of equity, corporate social responsibility (CSR), and heightened business performance, ask the following questions and and follow each one with: "How shall we do this?" or "How can we better our efforts here?" Each answer will bring your action plan into clearer focus.

Responsible

- Are we emphasizing in our communication with investee organizations the importance of responsible, inclusive innovation for persons with disabilities that remove barriers and enhance accessibility?
- Are we regularly engaging with our portfolio organizations to address potential opportunities to advance disability inclusion (e.g., through the use of ethical AI and other advanced technologies)?
- Are we calling upon our investees to provide accessible re-skilling opportunities where there is potential for job displacement as a result of AI technology, including employees with disabilities?

Accessible

- Are we funding organizations with the potential to ethically expand the capabilities of AI in promoting accessibility and inclusion in a manner desired by the disability community?
- Are we investing in an AI ecosystem that appreciates the value of accessibility and leverages inclusive design principles?
- Have we sought and listened to input from respected disability organizations, disabled advocates, and others in determining whether organizations seeking funding meet real needs in an ethical way?[34]

As an investor...

Inclusive

- Have we proposed tying executive compensation to inclusive design, where applicable?
- Are we incorporating disability inclusion and equality into our investment decisions, including relevance to any AI platforms and solutions and are we practicing rigorous due diligence (including listening to people with disabilities) when evaluating products or tools claiming to be inclusive?

Secure

- Are we proposing to tie executive compensation to security issues that may arise from misuse of data and/or result in discrimination against areas of diversity, including disability?
- Are we actively communicating expectations on security measures related to AI-powered technology?

As a developer of AI...

AI developers are at the core of organizations' abilities to tap these technologies to include applicants and workers with disabilities, help them thrive at work, and reap the performance benefits of doing so. Real progress starts here. Ask the following questions, and follow each one with: "How shall we do this?" or "How can we better our efforts here?" Each answer will bring your action plan into clearer focus.

Responsible

- Are we developing AI-powered systems and algorithms with datasets that include persons with disabilities, recognize disability as a cross-cutting issue impacting race and gender, and avoid discrimination?
- Are we investing considerable effort upfront to avoid and eliminate potential sources of bias?
- Are we providing user-facing, easy-to-comprehend information for stakeholders to understand the collection and processing of data?
- Are we leveraging the expertise of NGOs such as We Count,[35] Center for Democracy and Technology,[36] and others that are focused on algorithmic fairness, generally, and on disability inclusion in AI, specifically?
- Are we providing information on a system's capabilities and limitations as it pertains to the needs of persons with disabilities (such as by including persons with disabilities who are people of color, LGBT, etc.)?

Accessible

- Have we appointed a person on our team who will monitor accessibility of features and functions in our tools?
- Are we designing with the end-user in mind, considering the dynamic nature of disability?
- Are we continuously engaging with persons with disabilities, grasping the various needs of different kinds of disabilities to make sure our accessibility efforts are relevant to as many people as possible?
- Are we verifying that AI-powered solutions work with the assistive tech that users with disabilities rely on?

As a developer of AI...

Inclusive

- Are we ensuring that our AI-based tools follow inclusive design principles that include the lived experiences of persons with disabilities?
- Do we have feedback loops in place that leverage insights gained from AI systems in use to improve bias analysis?
- Are we using a methodology to measure fairness? Are we following methodologies from established/credible authorities in this space?
- Are we proactively identifying and remedying any potential bias introduced by the development team itself?
- Are we evaluating our AI-based tools using validation datasets that test for possible disparate impact on persons with disabilities?

Secure

- Are we developing AI systems in alignment with existing laws and regulations protecting the rights of persons with disabilities?
- Are we taking all available measures to prevent the malicious gaming of AI-based tools and systems at the hands of bad actors?
- Are we engaging regularly with all relevant internal and external stakeholders to ensure the privacy, security, and autonomy rights of persons with disabilities, keeping in mind, specifically and especially, the sensitivities regarding data?

Co-Authors

Laurie A. Henneborn

Laurie Henneborn is an Accenture Research Managing Director who leads research and thought leadership development focused on raising awareness and taking actions pertaining to disability inclusion and equality in the workplace. Some of her past works in this space have included Getting to Equal: Disability Inclusion Advantage and Getting to Equal: Enabling Change. She is also on the board of directors for AAPD and sits on the Disability Inclusion Leadership Council at Accenture. Laurie is especially passionate about coaching and mentoring colleagues with “invisible” disabilities and chronic diseases, drawing from her own experience since being diagnosed with multiple sclerosis in 2004.

Ray Eitel-Porter

Ray Eitel-Porter is a Managing Director at Accenture and Global Lead for Responsible AI. He led the formation of the Accenture / Alan Turing Institute Strategic Partnership to create a channel for cutting-edge research in data science and AI into real-world applications and has 20+ years of experience in technology start-ups and corporate leadership positions. Ray is also an editorial board member of the academic journal AI and Ethics. He cares deeply about encouraging greater innovation with data and analytics in business, schools, and further education and has chaired the English government’s Data Skills Taskforce since 2015 and worked with TeenTech to create the first National Data Science Prize for schools.

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DISABILITY:IN

Jill Houghton,
CEO

Chad Jerdee,
Chair of the Board
(former Senior Managing Director & Executive Sponsor for Disability Inclusion initiatives at Accenture)

Lainey Feingold,
Accessibility Subject Matter Expert

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Maria Town,
President & CEO

Ted Kennedy, Jr.,
Chair of the Board

Henry Claypool,
Technology Policy Consultant

OTHER

Adam Forman,
Workplace Technology & Labor & Employment Law Attorney, Epstein, Becker, Green

Nathaniel Glasser,
Employment Partner,
Epstein, Becker, Green

Alexandra Reeve Givens, President & CEO,
Center for Democracy & Technology

Additional Accenture contributors

Lisa Bartolini
Patrick Connolly
Sytze Dijkstra
Michelle Keating
Emily Kish
Amanda Leacy
Tom Lounibos
Regina Maruca
Giju Mathew
Deeksha Khare Patnaik
Vani Seshadri
Melissa Summers
Jim Wilson

Methodology

The principles and stakeholder considerations included in this report have been developed through extensive interviews and review of existing AI principles published globally. Here are some of our key sources:

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We Count, About.

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Accenture is a global professional services company with leading capabilities in digital, cloud and security. Combining unmatched experience and specialized skills across more than 40 industries, we offer Strategy and Consulting, Interactive, Technology and Operations services—all powered by the world's largest network of Advanced Technology and Intelligent Operations centers. Our more than 500,000 people deliver on the promise of technology and human ingenuity every day, serving clients in more than 120 countries. We embrace the power of change to create value and shared success for our clients, people, shareholders, partners and communities. Visit us at www.accenture.com.

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