

All aboard!

Travel and transportation—moving ahead with accessible technology





Tens of millions of active seniors trekking in and out of airports and rail stations. Travelers with disabilities spending billions on leisure and business trips. Retired (but definitely not retiring) boomers checking into hotels, motels and B&Bs in an unending stream of stop and go.

The whole world, it seems, is on the move, and travel and transportation businesses that don't want to play catch-up with wayfaring customers are looking at accessible technology in a whole new way.

It's not just about supporting customers with physical disabilities anymore. For today's travel and transportation businesses, it's also about inclusion—the potential to enable a broader range of customers to more easily and effectively use information technology, regardless of their individual abilities or disabilities.

And few industries exhibit a greater need for the transformative advantage of accessible technology than travel and transportation, which increasingly find themselves booked into a business itinerary that closely follows marketplace, demographic, and technological trends.

New mobile and Web-based marketing and communication channels, for example, are rapidly being adopted by customers young and old, exposing airlines, airports, railways, and hotels to an onslaught of rising expectations. Not coincidentally, those same channels and the information technology that powers them also have presented travel and transportation companies with the opportunity to help streamline their business processes, reduce costs, accelerate responsiveness to the market, and integrate customers more closely into their business models.

One significant development driving that integration has been the trend toward self-service, evident in year-over-year growth rates for online customer transactions. Consumers at every level—across a full range of abilities and disabilities—have become increasingly savvy about using

Web-based applications, mobile phones, and self-service kiosks that put them in charge. Price-search engines and other popular Web-based tools already give customers the edge when it comes to educating themselves about products and services, and then zeroing in on the best deals.

Shifting demographics

Making things even more interesting are demographic shifts with the potential to put travel and transportation companies squarely in the path of new and growing customer sets. Active seniors, multicultural populations, and technologically empowered customers with disabilities all represent significantly expanding market segments for hoteliers, airlines, and railway companies; their sheer numbers and collective levels of disposable income make them hard to ignore.

Some 420 million people across the planet are 65 or older, for example, and their numbers are expected to increase dramatically over the next two decades.¹ In particular, baby boomers entering retirement represent

a huge opportunity, since older populations travel more than any other age group, registering some 260 million trips a year.² According to one recent industry report, active seniors are one of four major customer segments forecast to have a substantial effect on the airline industry during the next 15 years.³

Filling out the potential passenger list is a worldwide population of nearly 500 million people with disabilities—customers notable not just for their use of technology in personal and professional settings, but for their sizable spending levels.⁴ According to one study, travelers with disabilities spend in excess of \$13 billion annually on business and leisure travel.⁵

For all those reasons, travel and transportation companies are beginning to look at accessible technology as essential. According to a study by the National Telecommunications and Information Administration, nearly three out of four people with some form of disability use the Internet at home and at work.⁶ It only takes one

more click in logic to conclude that many of them are using accessible applications such as speech output, tactilely-discernible hardware, specialized keyboards, and other assistive technologies. From there it's another easy link to the likelihood that people who have no obvious disability or impairment also take advantage of accessibility options or assistive technology just because it makes things easier and more comfortable—a consideration that extends across age groups.





The story behind the story is that technology designed to be more accessible to people with disabilities also can benefit a broader audience, such as active seniors. In fact, travelers who are not quite so senior may be taking advantage, as well. The Pew Internet & American Life Project, for example, cites usability tests highlighting the fact that when changes to Web designs are made to accommodate older users, performance also improves for younger adults.⁷

The underlying message? Accessible technology has the potential to be helpful not just to people with disabilities, but to a much broader range of customers.

Business opportunity

For airlines, airports, railways, and hotels, improving accessibility to technology translates into an opportunity to reach new markets and embrace potentially brand-loyal customers by improving their experience and giving them reason to differentiate among a global array of service providers. In the travel and transportation sectors

especially, competition is keen, and attention to accessibility and ease of use can provide an edge that delivers not only operational efficiency and effectiveness, but customer satisfaction.

The question is, how do travel and transportation enterprises address accessibility in a way that helps them reach those goals and the bottom line?

First, they should stay up to date about accessibility laws, regulations, and guidelines in the regions and localities where they operate.

Many areas may require businesses to provide additional or alternative functionality that makes their facilities or services more accessible to persons with disabilities.

Second, travel and transportation businesses should consider adopting open accessibility standards and implementing accessibility best practices for the customer-facing technologies they use, including Web-based, self-service kiosk, and mobile.



For Web-based information and applications, the World Wide Web Consortium (W3C) has developed Web Content Accessibility Guidelines (WCAG) and an Accessible Rich Internet Application Suite that serve as worldwide standards for Web accessibility.^{8,9} Governments that maintain Web accessibility policies often refer to those standards, and travel and transportation businesses can capitalize on them to help make their Web-based applications accessible to the broadest range of customers.

Just the ticket

Passengers are moving down the tracks a lot faster, for instance, due to one European railway company's WCAG-compliant Web site. The solution allows customers of varying ages and abilities to get online information regarding railway services, and along the way has helped to improve customer satisfaction and reduce the cost of data transmission through more efficient, standards-based coding.

Global accessibility standards for travel and transportation industry self-service kiosks have yet to be defined, but references such as an IBM accessibility checklist offer practices that can be useful.¹⁰ At the same time, the increasing need for accessible self-service travel kiosks is stimulating discussion among standards-development organizations, airport authorities, airlines, and other stakeholders. IBM is participating in that exchange with the idea of contributing to the development of a consistent, industry-wide approach to accessible self-service kiosks.

IBM kiosk solutions conform to the company's own accessibility developer guidelines, as well as to existing Common Use Self-Service (CUSS) standards, and feature such innovative technology as an alternative input method for touch-screen, minimal-dexterity controls operable by one hand, as well as keys that can be discerned by touch before they're fully activated.

For travel and transportation businesses contemplating or using mobile applications, the W3C Mobile Web Initiative publishes a document called "Mobile Web Best Practices," which focuses on accessibility guidelines formulated for Web-based content—including airline or hotel check-in applications—that can be accessed from a mobile device.¹¹



As a leader in accessible information technology, IBM participates in the development of global accessibility standards that accommodate new technologies, build on a generally recognized body of accessibility requirements, can be objectively measured, and are harmonized to broadly meet needs in different geographies. When such standards are incorporated into regulations and policies, the market value for accessible products and services is enhanced.



On time...and on the money

New self-service channels, a wider customer base, evolving regulations, and established standards. Put them all together and the conclusion is obvious: For travel and transportation industries, accessibility has arrived.

Accessible technology that empowers people with disabilities, and at the same time improves overall service and usability, has become an imperative for businesses hoping to book themselves into 21st-century success. What's more, enterprises that take the initiative in "accessifying" their products and services stand to outpace their competitors, gaining in good will and the bottom line.¹²

But what's the right accessibility itinerary for travel and transportation businesses? How do they get there from here? The trip is bound to take individual enterprises in slightly different directions, but there are a few fundamental steps most companies can follow... and IBM can help point the way.

First, evaluate the accessibility of your existing customer-facing technologies by determining how they conform to established standards and how usable they are for customers with physical impairments.

An **IBM Accessibility Services diagnostic assessment** offering can help businesses evaluate the accessibility of their existing Web, kiosk or mobile applications. Using semi-automated tools, assistive technologies and skillful manual inspections, an experienced IBM team works to assess the conformance of those customer services to established accessibility standards, as well as their compatibility with commonly used assistive technologies. Actionable recommendations then are formulated and optional usability evaluations are performed with the help of people with physical disabilities. Lastly, an Accessibility Assessment Report and an Executive Presentation summarizing IBM's findings are issued.

Next, set out a plan of action aimed at improving accessibility, especially as it relates to increasingly popular self-service technologies.

The **IBM Accessibility Services strategy & roadmap planning** offering can help airlines, airports, hotels, and railway companies document their “as-is” state, develop an improvement strategy, and draw a detailed roadmap leading to improved accessibility. Once the Accessibility Strategy & Roadmap helps travel and transportation businesses arrive at more accessible technologies, their next steps might very well be expanded markets, increased brand loyalty, and greater customer use of self-service applications that can impact profitability.

Finally, implement self-service Web, kiosk and mobile applications that conform to accessibility standards and are more usable by a wider range of customers.

The **IBM Accessibility Services application & Web design** offering can help travel and transportation businesses make sure their Web sites and Web-based applications conform to accessibility standards and are compatible with commonly used assistive technologies. Our skilled technicians can work with your company’s development team to define Web accessibility requirements, establish accessible design approaches, implement accessible code into your customer applications, and perform accessibility tests to help make your Web pages and services usable by customers with a wide range of abilities and disabilities.

The accessible **IBM Self-service Kiosk** integrates accessibility features into IBM’s market-leading self-service kiosk solutions for airports, airlines, and hotels, offering support for customers with vision or mobility impairments in their independent use of applications such as self-service check-in.¹³ Available accessibility features include an audio connection for private listening of applications such

as text-to-speech, tactilely-discernable hardware components, specialized keypads and keyboards, layered audio help, and on-screen highlighting.

IBM Mobile Application Development Services also can facilitate the use of accessible customer-facing applications on mobile devices. Using PDAs and cell phones enhanced with applications such as text-to-speech output, customers are able to manage reservations, access loyalty programs, check into flights or rooms, and request paperless boarding passes—transactions that are becoming increasingly valuable for travelers with disabilities. With the wave of a personal handheld device, they’re down the boarding ramp and on their way to the next destination.





And make no mistake. For travelers of every age and ability, destination is what it's all about. In a different sense, forward-thinking travel and transportation enterprises also are arriving—not at exotic locales or tropical hideaways, but at conclusions. One of them is that an emphasis on accessibility may well be what they need to help their businesses take flight.

Another is that IBM offers the kind of expertise and solutions that can help them deliver accessible technologies in time to make their next scheduled connection...to success.

For more information about IBM Human Ability and Accessibility solutions, please contact your IBM representative or visit ibm.com/able or customerfacingsolutions.com

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