

Accessibility Imperatives

Differentiation through
Human-Centric Innovation...

28 November 2014





Factors Driving Accessibility

7 billion people on the planet

1.2 billion have a disability

6.8 billion mobile subscriptions worldwide

600+ million are over the age of 60

900+ million have low or no literacy

2.4 million children have cognitive learning difficulties



Market Drivers



Human Rights
(Technology Access)

151 countries ratify UNCRPD

Known Trends



**Multigenerational
Needs &
Expectations**
(Aging, Youth)

600+ million worldwide
over age 60

**Growth Market
Challenges**

< 25% population of
India is illiterate

Disruptive Trends

**Social
Networking,
Social Business**

People-centric

**Mobile, Smart
Technology
Adoption**

6 billion cell phones

Global Regulations



Regulation and policy *enforcement* creating both **risk** and **opportunity** worldwide



**Convention on the
Rights of People with
Disabilities**



US Section 503



**Accessibility for
Ontarians with
Disabilities Act**



**European
Accessibility Act**



Anywhere access creates situational challenges for everyone



Outside light



Ambient noise



Single hand



Bumpy road



Aging eyes



Eyes busy



Public places



Elderly

- 800+ million over age 65; 2 billion by 2050
- 1 in 4 over age 50 and 1 in 2 over age 65 have a disability
- Only 54% of Americans over age 65 have access to the Internet
- Annual spending power: \$2 trillion

Millennials

- 65% say losing phone would have a greater negative impact on lives than losing car
- Account for 36% of the U.S. workforce ; will account for 75% of global workplace in 2025
- Annual spending power: \$2.5 trillion





IBM Accessibility



IBM's View of Accessibility



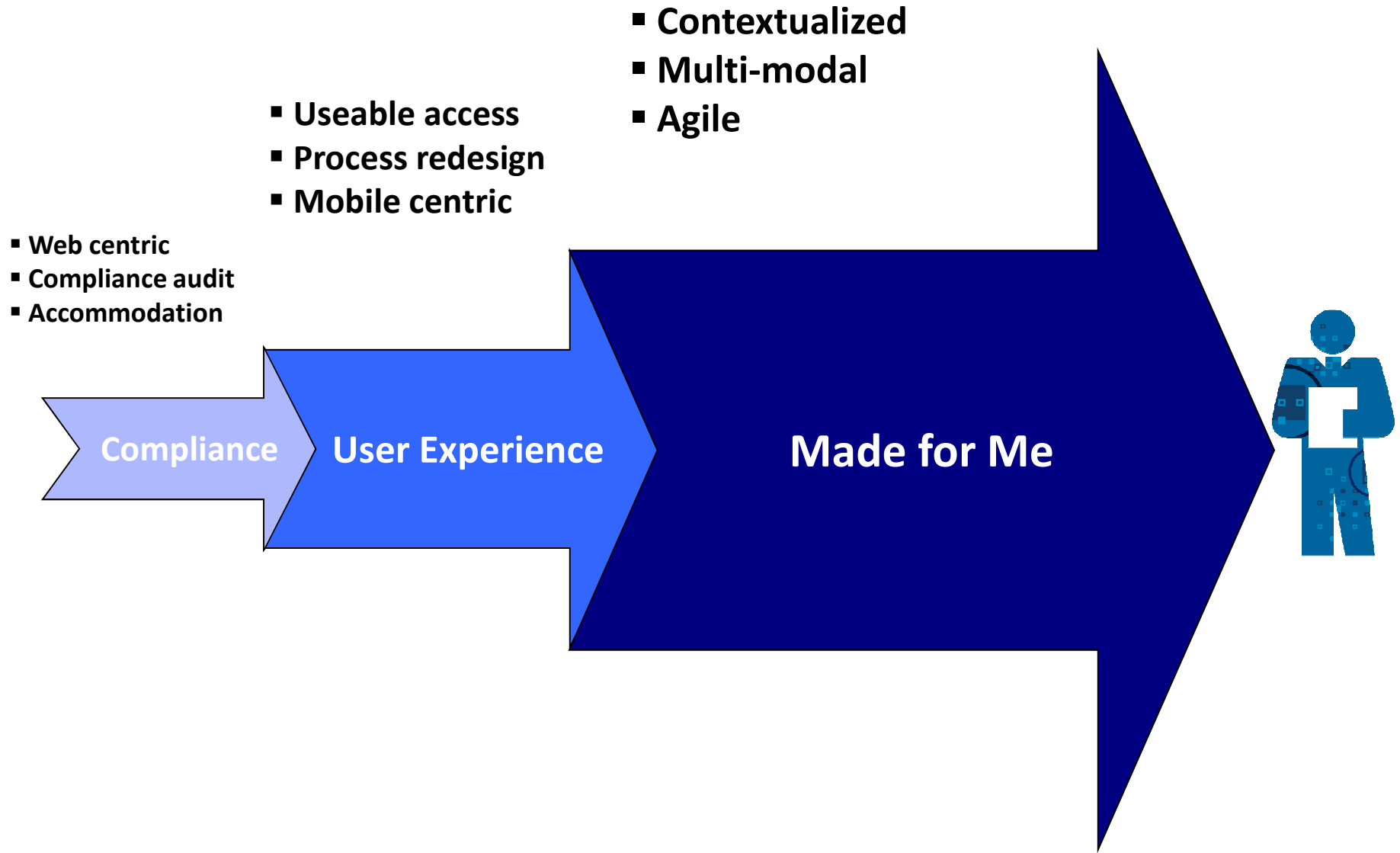
Focused on the **design and delivery** of human-centric solutions that **personalize the user experience** on any device so everyone has **equal access** to digital knowledge.



Infrastructure
Applications
Devices
Content



Accessibility Business Journey



100 Years of IBM Innovation in Accessibility



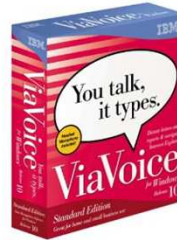
Hired first employee with a disability



First Braille Printer (1975)



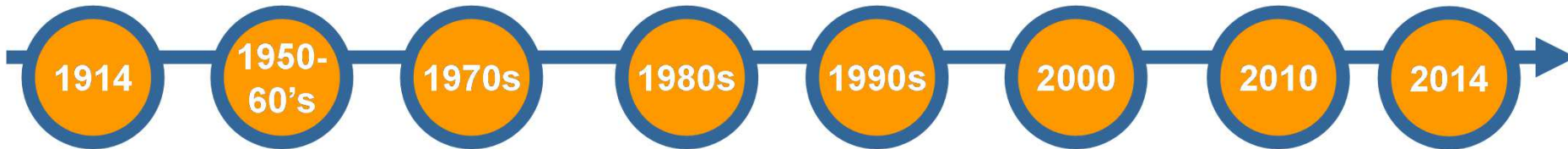
ViaVoice (1998)



Connections 3.0 (2010)



Access My NYC (2012)



Remote Control Keyboard (1950s)



Talking Typewriter (1980)



Easy Web Browsing (2003)



Media Captioner & Editor (2009)



The Human-Centric Enterprise



Changing Workforce



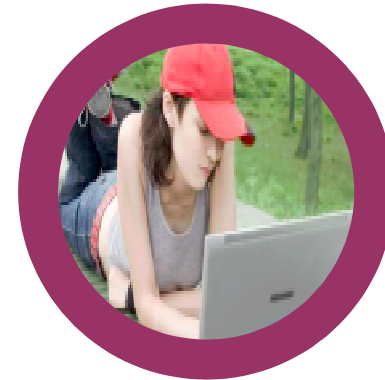
Generational shifts unleash different work styles



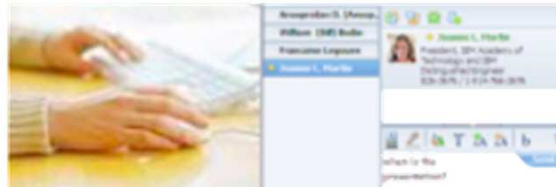
Experienced Workers (age 50+)



Mid-Career Workers (ages 35 - 50)



New Generation Workers (born after 1980)



Email

Instant Messaging

Social



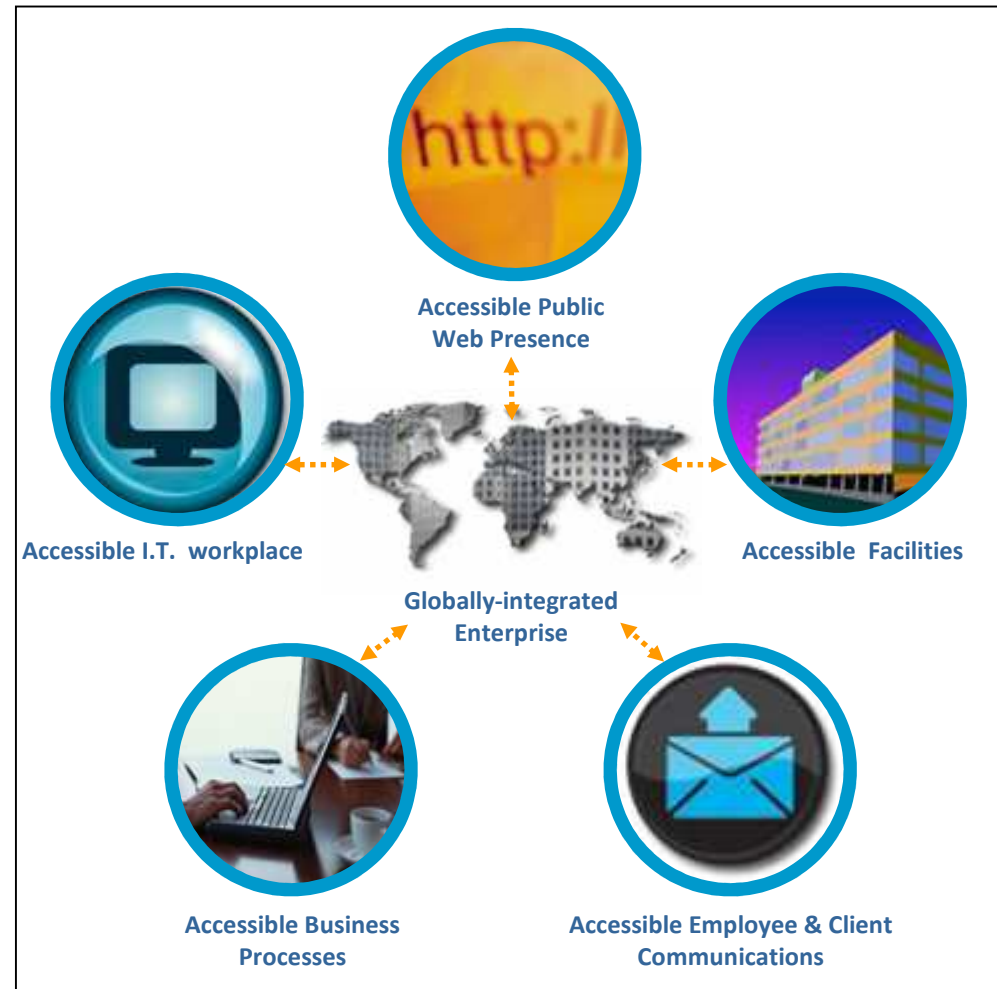
Accessibility across the Globally-Integrated Enterprise

Accessible enterprises are:

- Evolving at an increasing rate
- Increasingly virtual
- Built dynamically
- Composed of social artifacts

Key Issues:

- Accessibility can be impacted by anyone
- Accessibility can be technically complex
- Cannot be "everyone's business"
- Only possible if built on smart tools and smart processes



Corporate Instruction 162



A heritage of enterprise-wide commitment to accessibility

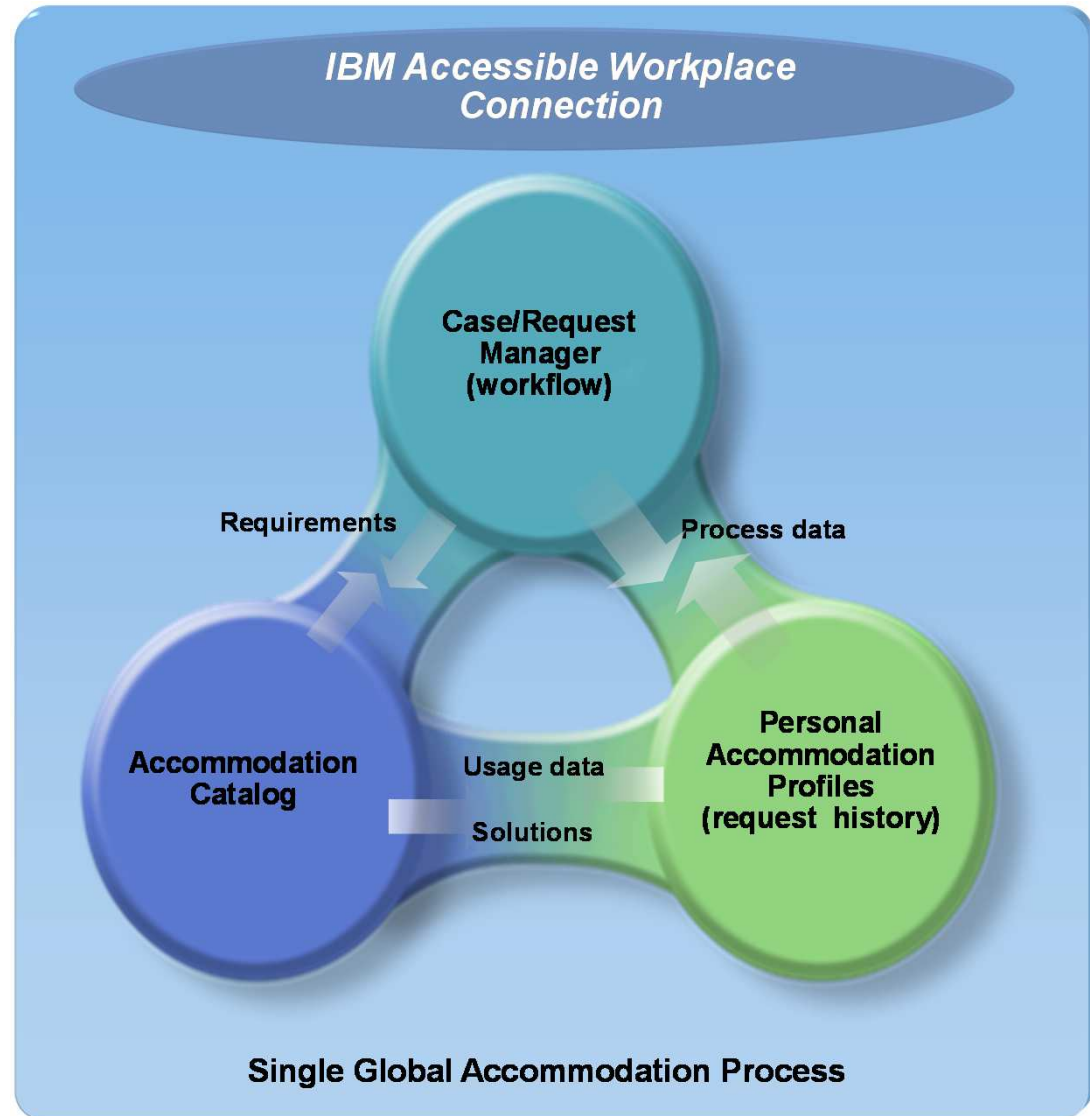
- **In effect since 1998**
 - Developed in preparation for Section 508 mandate (2000)
 - Continues to evolve with formal modifications annually
- **Enforces top-down accessibility standard**
 - Directs IBM to design accessibility into products, services, and internal applications, business communications and training
 - Integrates accessibility into IBM development process
 - Provides accessibility checklists to enforce best practices and compliance
 - Guidance and education to teach teams how to meet the accessibility requirements
- **Evolved over time to support recognized regulations and legislation**
 - Supports country-specific, region-specific and worldwide
 - Monitors pending legislation worldwide



IBM Accessible Workplace Connection



- One-stop self-service portal to support/manage workplace accommodations
- Automated, centralized and consistent processes
- Supports adherence to government regulations



Digital Accessible Learning

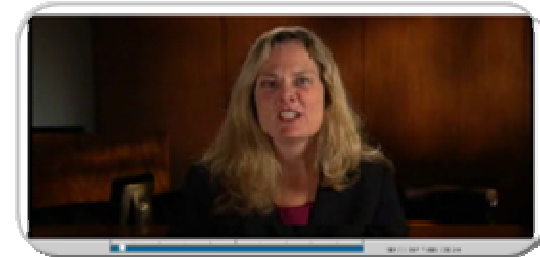


Extend the usability and reach of rich digital content with the **Media Captioner and Editor** for automated, accurate and cost-effective captioning and transcription.



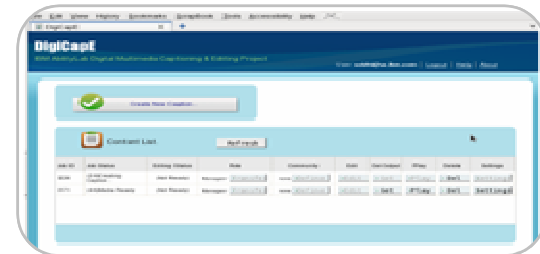
1

Submit uncaptioned video



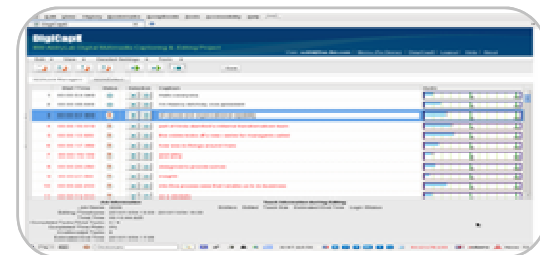
2

Check submission status



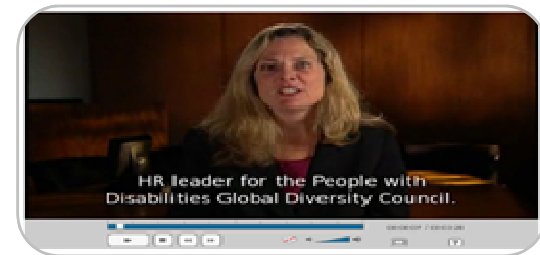
3

Edit raw transcript



4

Automatic merge to captioned video

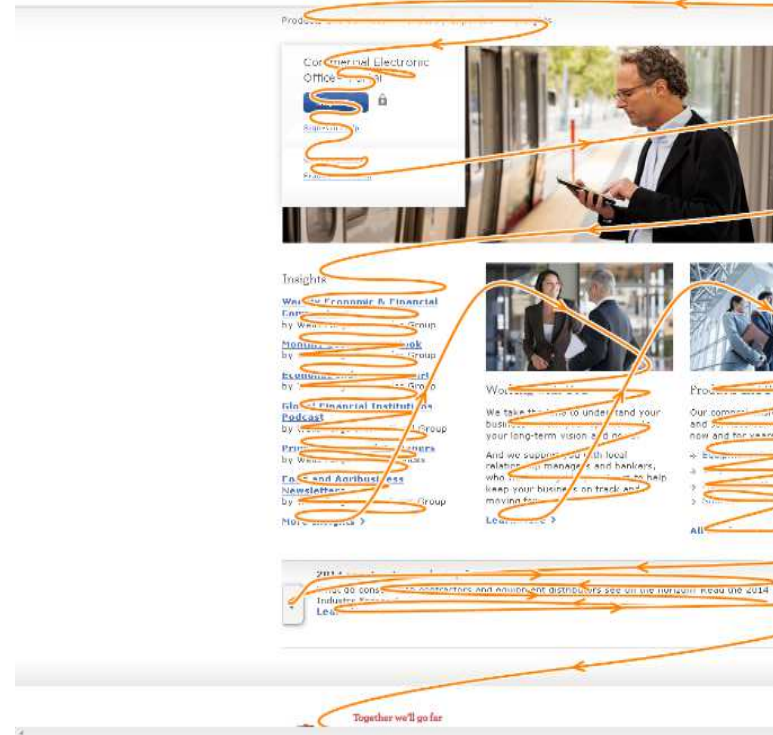
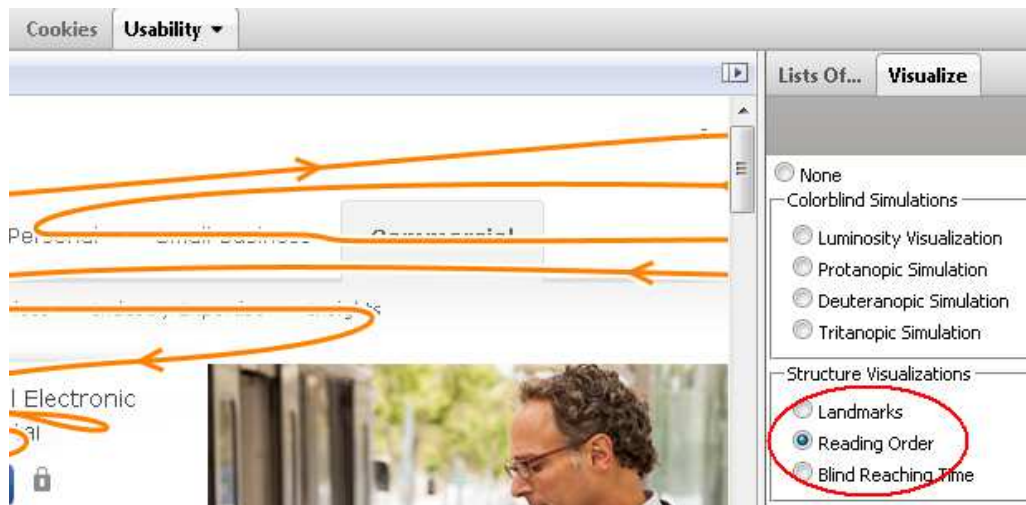




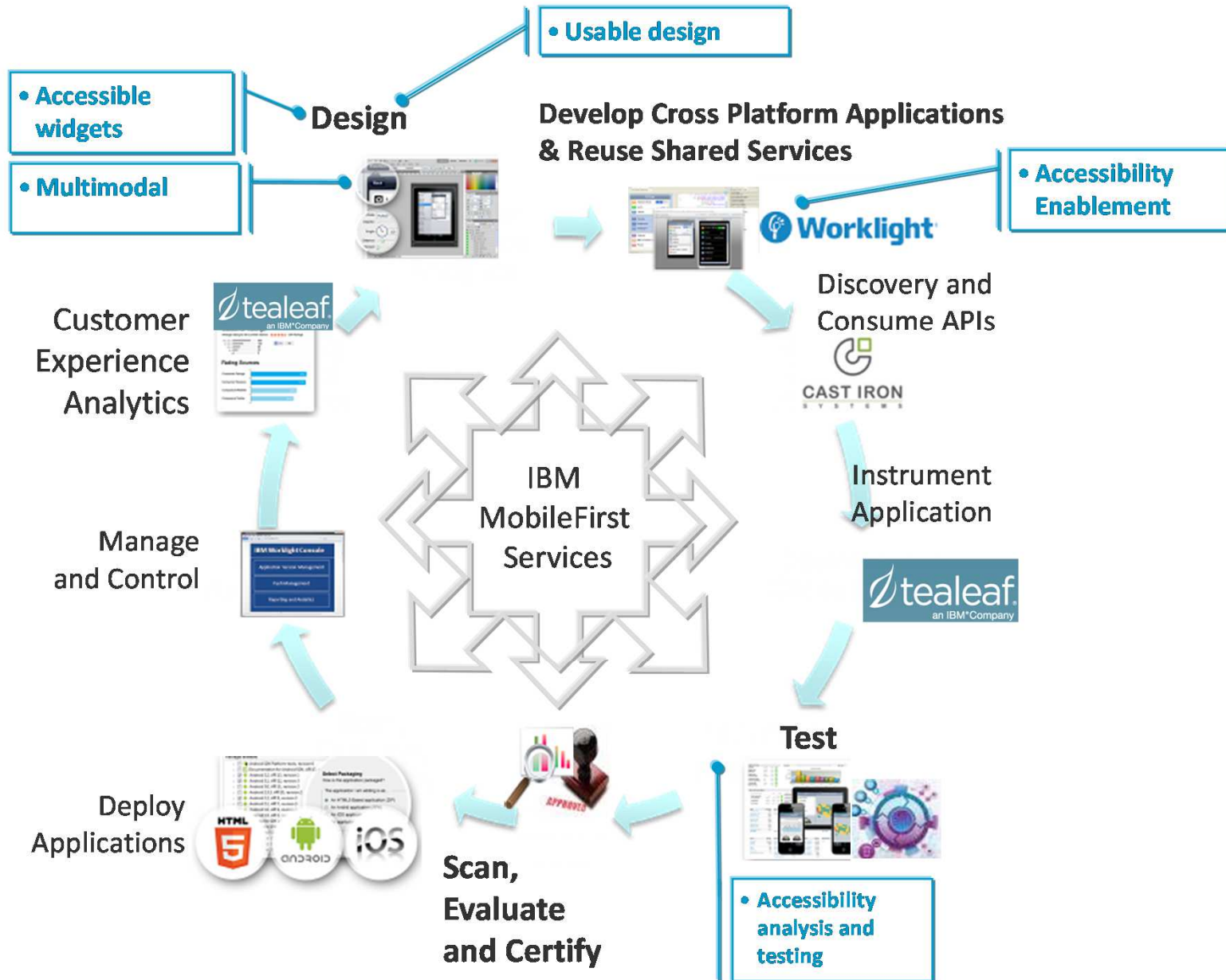
Using IBM AbilityLab Compliance Checker Tool

(Part of the IBM Accessibility Compliance System)

1. Select Usability tab
2. Select Visualize tab
3. Select Reading Order



Making MobileFirst Accessible





Examples of Innovation





Navigating a city, airport, workplace or campus is a challenge for everyone

Improves the navigation experience for all by providing personalized answers to:

- Where am I?
- How do I get where I want to go based on my capabilities?
- What accommodations do you need specific to your needs?
- Where are you?
- Help me!



**TRANSPORTATION
RESEARCH BOARD**
OF THE NATIONAL ACADEMIES



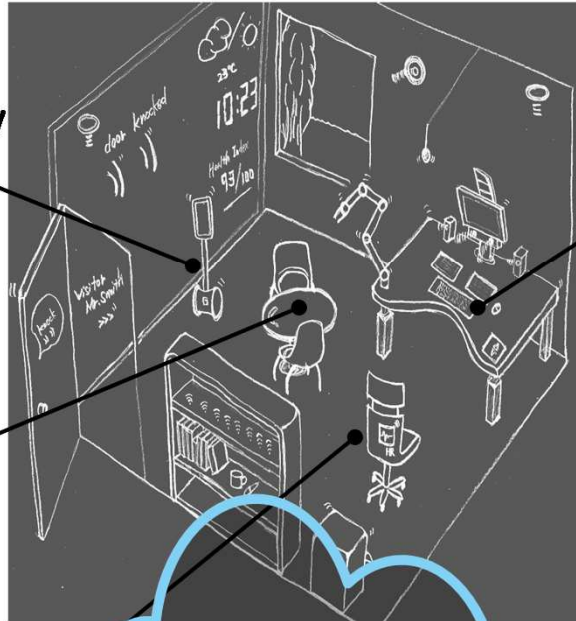
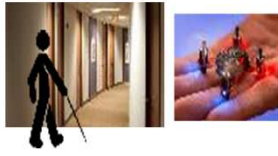
Blue Access Platform

100% on Cloud



Indoor navigation

- supports employees' mobility
- supports robots' mobility



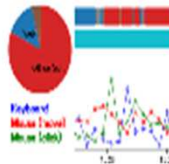
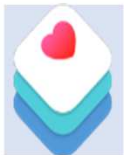
Mobile real-time captioning

- for casual meeting
- for conference (call)
- is deep metadata for non-documented activities



Work-life habit adviser

- supports to kaizen
- supports to work healthy



**Blue
Access
on IBM Bluemix**

IBM Research Accessibility



World's 1st Voice Browser



Medal with
Purple Ribbon
(2013)



Accessibility Checker
Contribution to Global Standard



MEXT Award
(2011)

**History of Innovation
over 30 Years
Open Innovation**

PwD Internship
Sep 2014 ~





**Accessibility that everyone deserves,
for the digital world everyone needs**



Thank you!

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