

Futures of Disabilities: Is Technology Failing Us?

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Research team also includes:

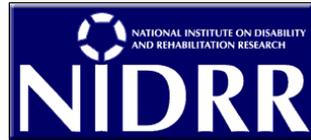
Helena Mitchell, James White, DeeDee Bennett, Dave Stone & Braeden Benson



Introduction

The mission of the Wireless RERC is to research, evaluate and develop innovative wireless technologies and products that meet the needs, enhance independence, and improve the quality of life and community participation of people with disabilities.

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Research

User-Centered Research

Policy Approaches to Accelerate Access to Advanced Wireless Technologies



Development

The App Factory

Emergency Lifelines on Wireless Platforms



Training

Promoting Awareness of Access and Usability Needs for Wireless Devices

State of the Technology Summit

Building Research Capacity in Wireless Accessibility and Usability





Migratory Trends...



What do we mean by migratory trends?

- **A mass exodus from one type of technology to another...**
 - Analog to Digital
 - Fixed to Mobile
 - TTY to SMS
 - Communications (feature phone) to Computing (Smart Phone)
 - Print to Electronic Text



- **Migratory trends in technology have the potential to create large-scale, positive impact on educational attainment, employment and social inclusion.**

Some Observations

- **Many companies and colleges only allow on-line applications...but many such applications are not accessible.**
- **Tablet computers, eReaders and distance learning could positively impact inclusive educational environments.**
- **12% of people with disabilities 21-64 have earned a Bachelor's Degree or higher.**
- **Telework could improve the unemployment rate of people with disabilities.**
- **People with disabilities only make up 22% of the labor force, compared to 69% of their non-disabled counterparts.**

Why is technology not living up to its promise?

...slow policy, poor implementation, cost, disinterest, lack of awareness, prejudice?



Futures Visioning

- **Current wRERC research employs a futures visioning process to provide long-range options.**
- **Make course changing/correcting/affirming technology recommendations within the context of:**
 - Socioeconomics
 - Law/Policy
 - Culture/Thought



Futures...the what if...

- The “S” is important
- It's thinking about possible futures
- US futures visioning examples
 - military (threat detection)
 - corporate (market analysis)
- Applying futures visioning in the academic context is unusual

Futures Studies Techniques

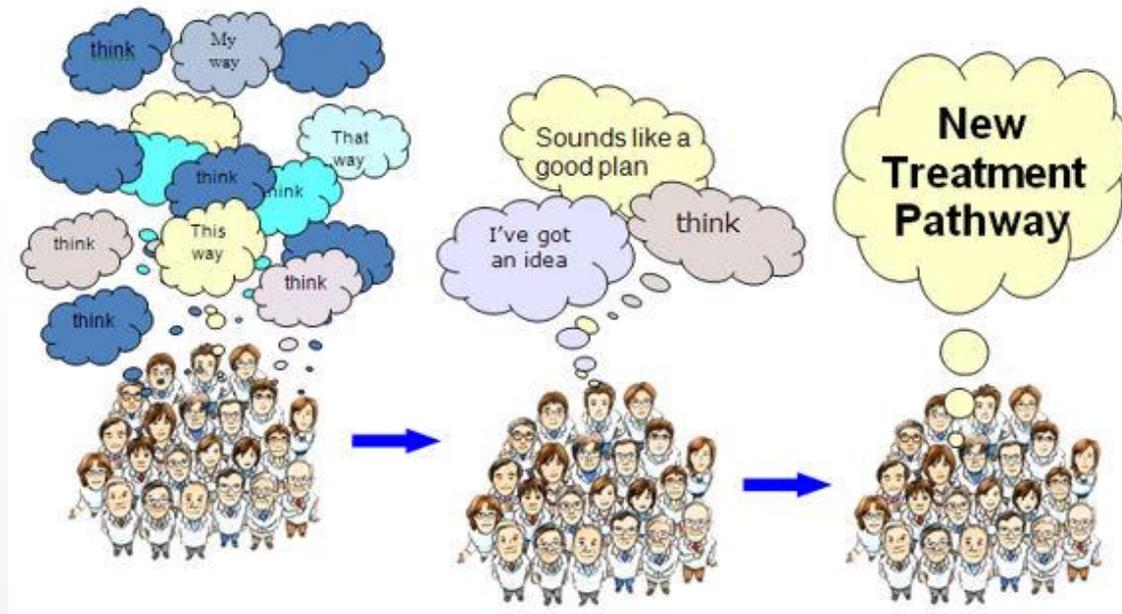
- Scenario method
- **Environmental scanning** (continuous structured data collection and processing on a broad range of environmental factors, favored in business)
- **Monitoring** (documentation and analysis, usually of media, focusing on specific issues of interest)
- Trends
- **Delphi method**



Delphi Method

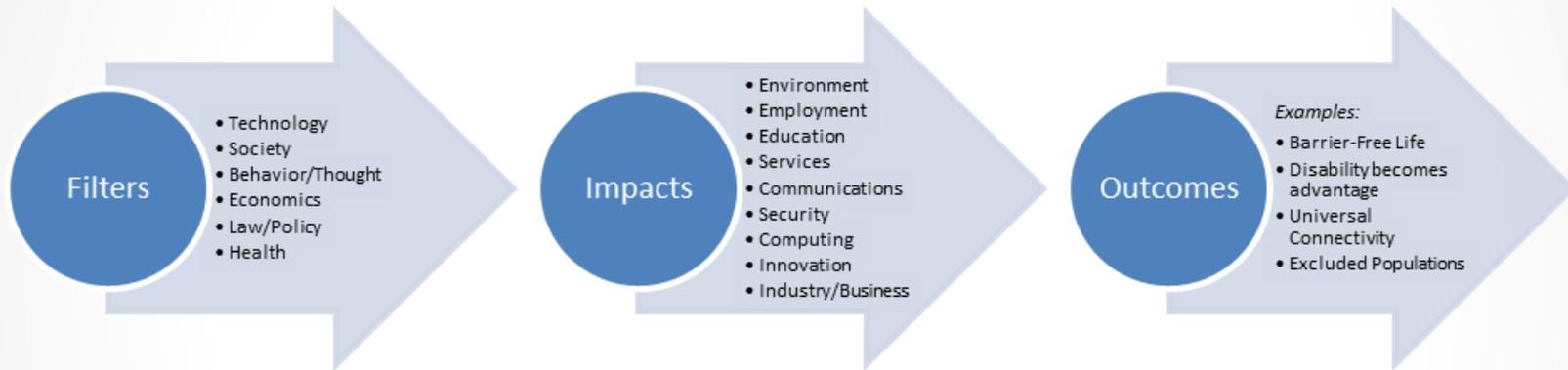
The Delphi Method

- Survey method to harvest forecasts from independent experts.
- Rounds of surveys to collect expert opinions on complex questions.
- **Research Question:** *What kinds of physical, economic, social and policy factors serve as the context for the migration from legacy, analog technologies to mobile, digital technologies?*



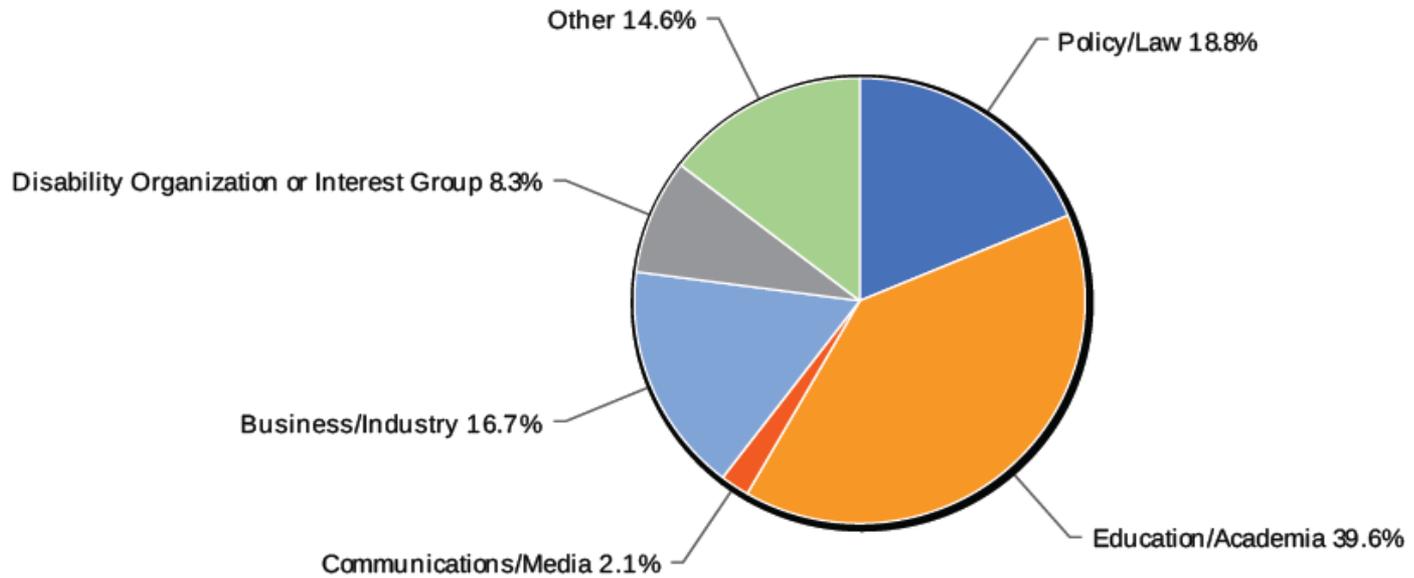
Developing the Delphi Questions

- Literature Review and Environmental Scan

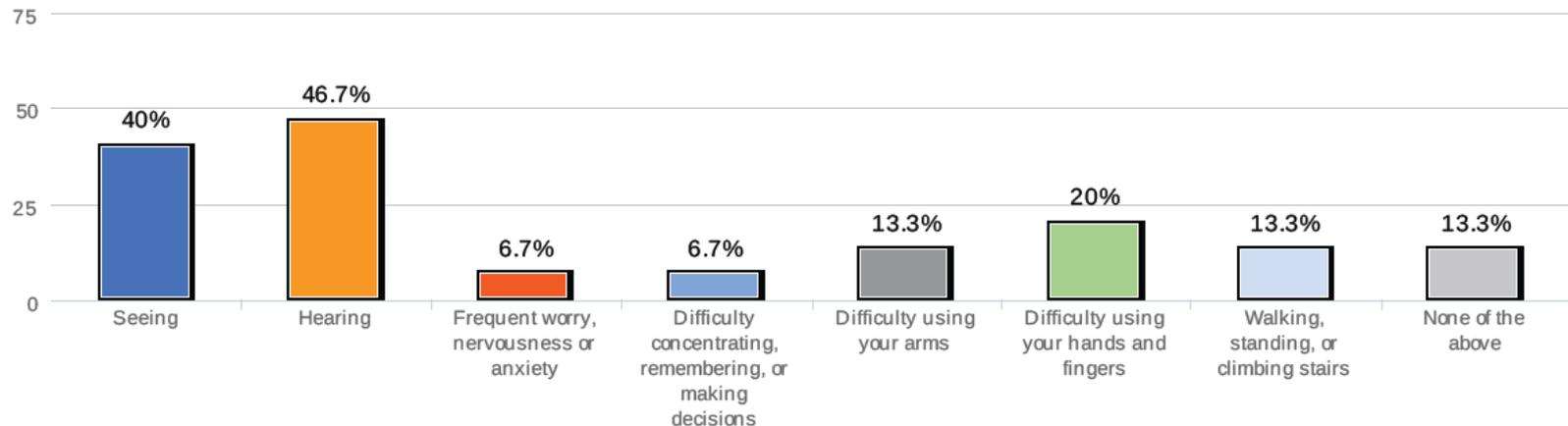


- In developing this schema categories of opportunities and barriers were cross-referenced, to arrive at sixteen areas of focus.
- Resulted in 44 open and close-ended questions.

Respondent Profile



36% have a disability



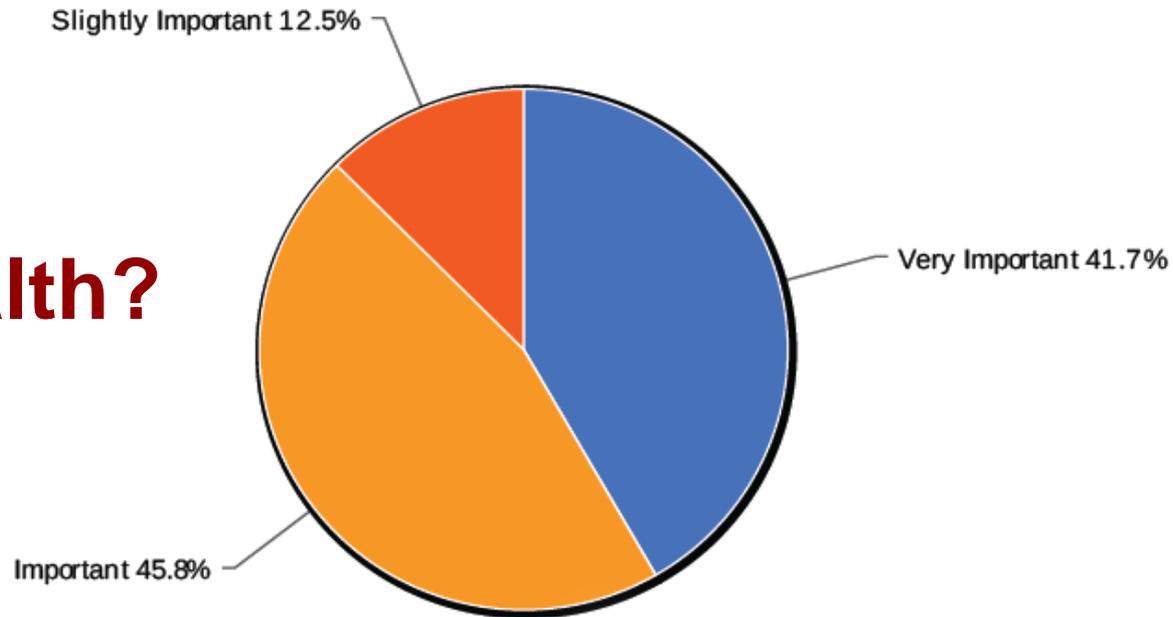
PRELIMINARY RESULTS: DELPHI ROUND 1

Top Issues Rated Very Important and Important

- The potential of **apps**, specifically in communications (98%)
- **Accessible solutions**' impact on technology adoption (94%)
- **Increased life expectancy** of people w/disabilities (94%)
- Time lag between **innovation and policy/regulations** (92%)
- **Affordability**'s influence on technology adoption (90%)
- Expanding role of the **family caregiver** (i.e. medical) (88%)
- Greater stigma associated with **mental health** issues (88%)

Why is this important?

31. Recent research indicates that the role of the family caregiver is expanding to performing medical and nursing tasks. How important is this issue?



Tele-health?

Remote monitoring?

What systems will be needed to support caregivers?

PRELIMINARY RESULTS: DELPHI ROUND 1

Issues Rated Least Important

- **Trust** - family/friend vs. sales staff in device selection (37%)
- People w/disabilities **representation in the media** (33%)
- Potential **increase in the incidence** of disability (33%)
- Potential of **the cloud** in the delivery of accessibility services (33%)
- **Youth w/disabilities** more likely to share emergency info. on SM (32%)
- Perception of tech as fashionable impacting **perception** of disability (28%)
- **ADA Generation**'s impact on migration to wireless technology (25%)



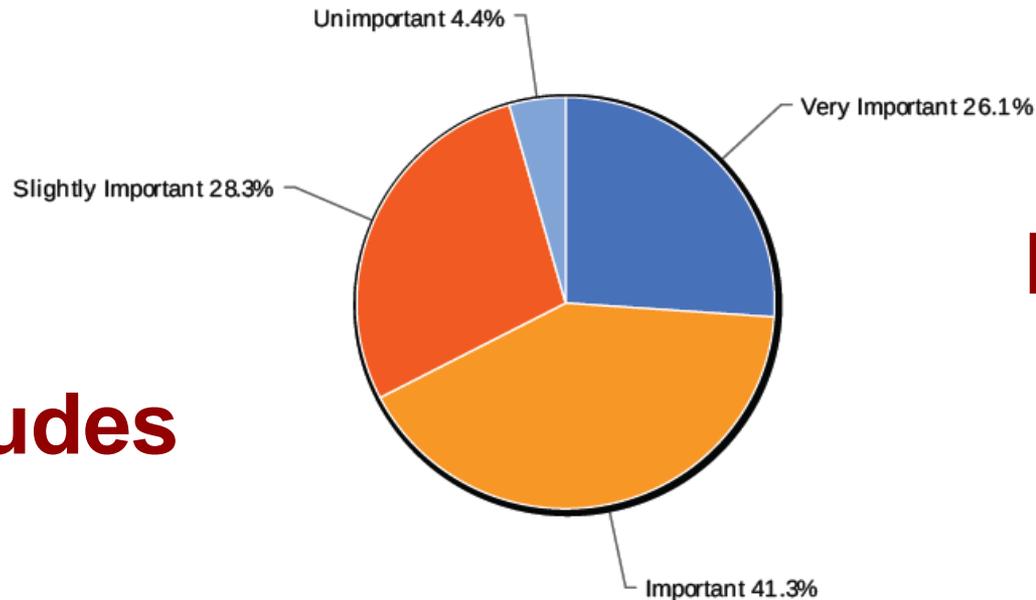
"I got sick dance moves, my mom says I have 'Get down syndrome'."



Why is this important?

27. People with disabilities are being represented more through traditional media including movies, television shows and reality shows. How important is this issue?

Bias



Perception

Attitudes

Can greater exposure result in increased real-world inclusion?

PRELIMINARY RESULTS: Open Ended



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“Given the demographic realities of America's aging population, what systems will be needed to support this population?”

- Easy to use, yet stylish
- Automatic provision of accessible tech and alternatives
- Medical technology/delivery of healthcare
- In house monitoring systems
- Devices that help preserve/promote independence
- Successful aging in the home
- Apps for caretakers and care receivers

PRELIMINARY RESULTS: Open Ended

Across all open ended questions five themes emerged:

- Technology
- Cultural Understanding
- Education
- Employment
- Support



Questions?

Comments?

What do you feel are the factors that contribute to people with disabilities being disproportionately affected by limitations to employment, education, and social inclusion?

Is technology failing us?

2050, what's the situation for people with disabilities?

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