



PENNSYLVANIA
TECH ACCELERATOR

**Supports Coordinator
Training Series
Training #4
2026**

**Technology Agility,
Resilience, and Literacy
Training for Users and
Professionals**

Trainer

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State of the States
In Intellectual and Developmental Disabilities



KU LIFE SPAN
INSTITUTE
The University of Kansas



Pennsylvania Tech Accelerator Partners



Office of Developmental Programs
Office of Long-Term Living



Institute on Disabilities



State of the States
In Intellectual and Developmental Disabilities

KU CENTER ON
DISABILITIES



Technology First Systems Change



Technology First began as a movement but has transformed into a “framework for systems change where technology is considered first in the discussion of support options available to individuals and families through person-centered approaches to promote meaningful participation, social inclusion, self-determination, and quality of life.”

Tanis, 2019



Technology Solution

An innovation applied in the environment to address a mismatch in cultural , social, or contextual demands

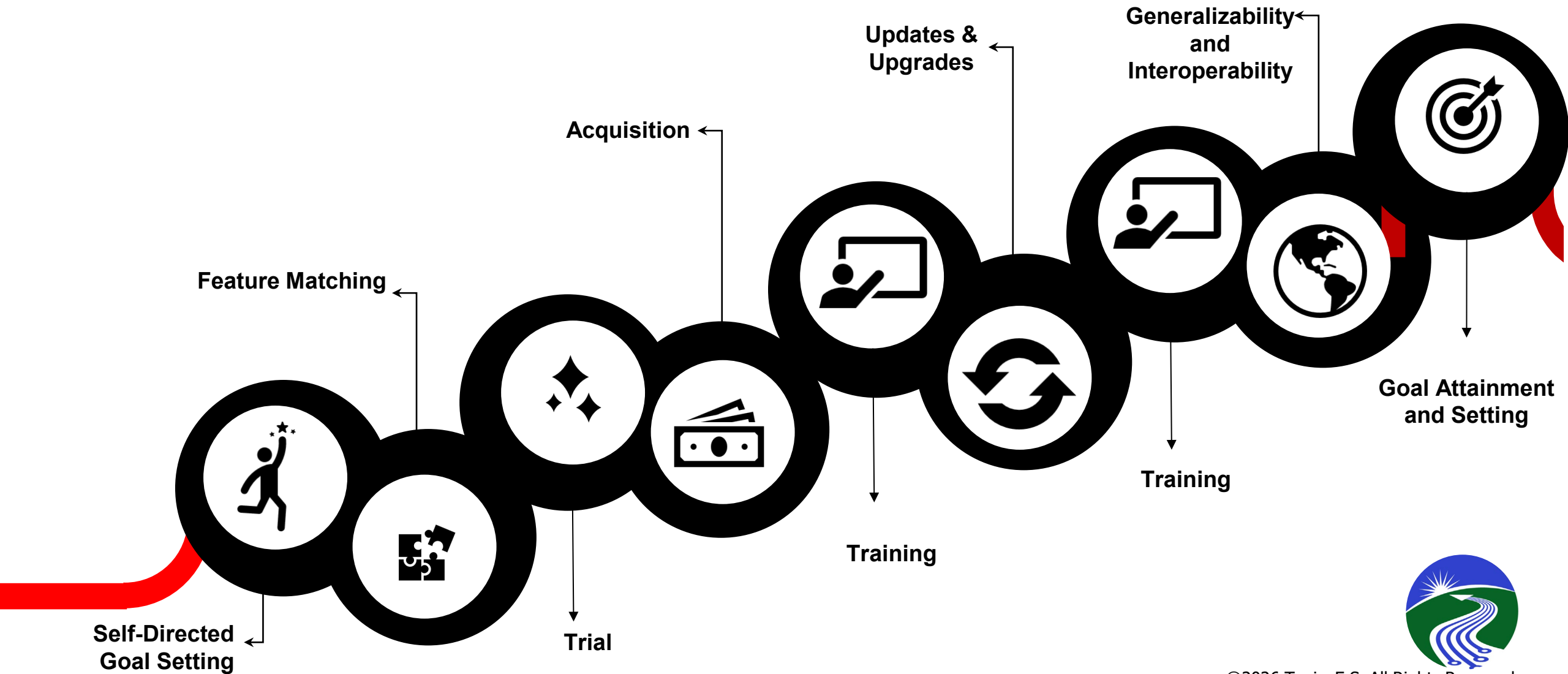
- The term is an umbrella term (captures, mainstream, assistive, and enabling technologies)
- The term technology solution allows for the inclusion of multi-functional and diverse technologies
- The term implies a person-directed and goal-oriented approach to the identification, acquisition, and on-going training of technologies
- The term supports the development of solutions to eliminate the mismatch between the person and environment
- The term allows for the inclusion of emerging and future technologies not yet identified to be supported through policy and practice



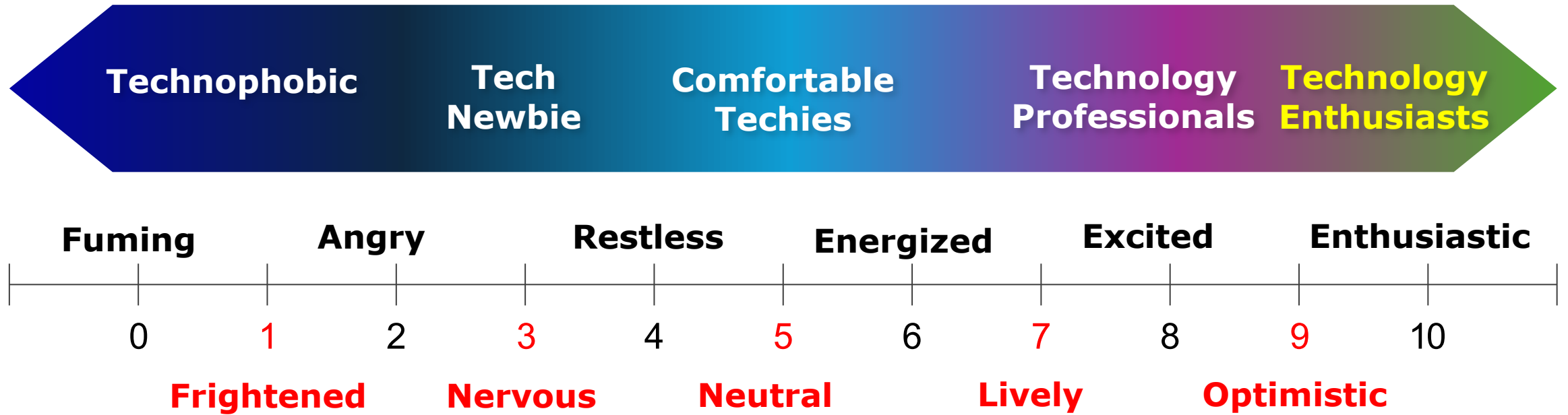
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Technology Access is Not Only About Acquisition

Sustainable Utilization of Technology Solutions



Technology Mood Meter





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Technology Literacy, Resilience, and Agility

Technology Literacy

- Definition: "Having the skills you need to live, learn, and work in a society where communication and access to information is increasingly through digital technologies" (Jisc., 2016)
- Evaluation of digital literacy among older adults (Oh, et al., 2021)
 - Information and data literacy
 - Communication and collaboration
 - Digital content creation
 - Safety
 - Problem solving ability



Approaches to Improve Technology Literacy

01

Information and data literacy

Where to find information, how to access information, and how to interpret information

02

Communication and collaboration

Communication formats/platforms, group makeup, online etiquette and styles, and managing one's identity

03

Digital content creation

Community connection, expressive communication, accessibility features, and publishing

04

Problem Solving Ability

Technology agility and resilience

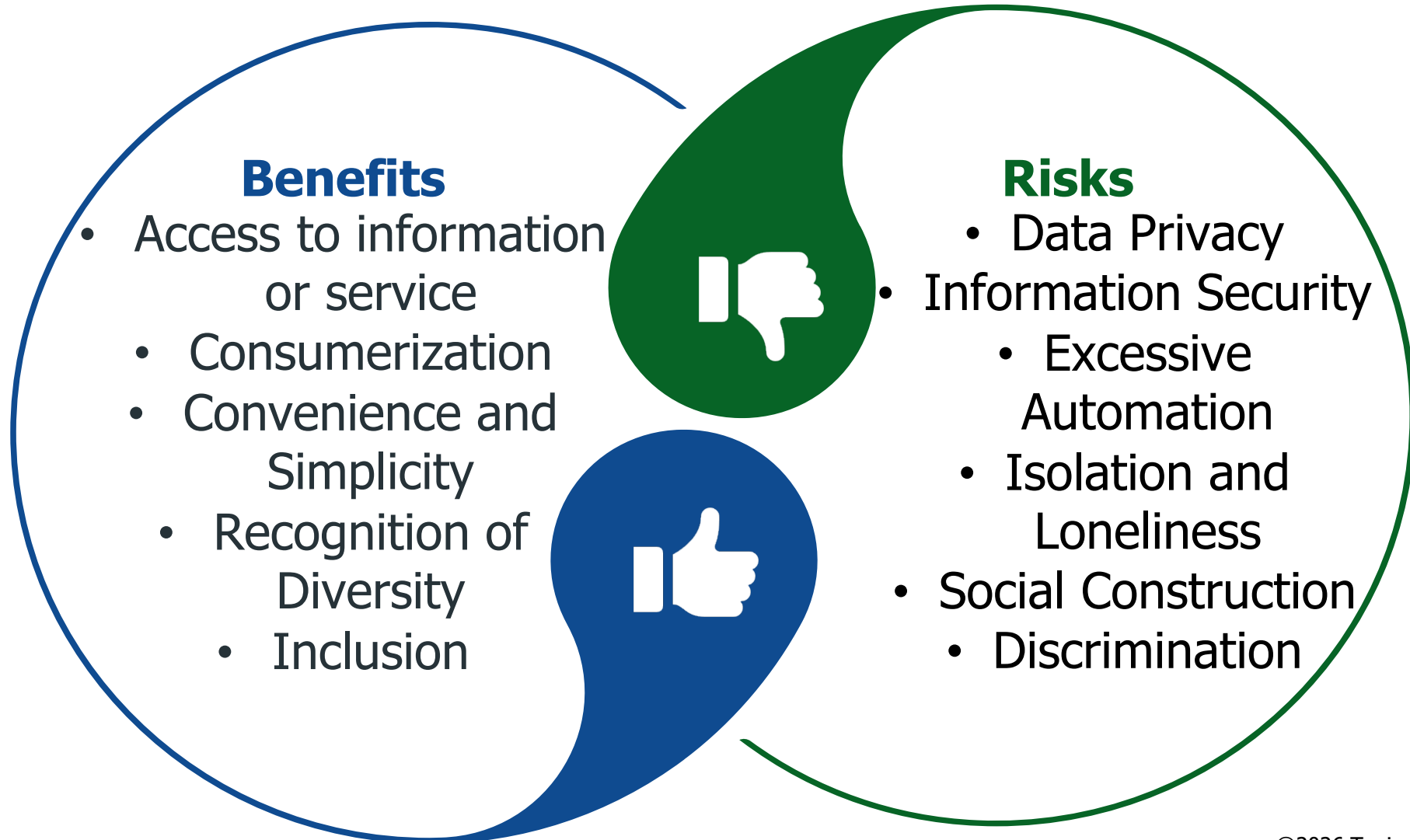
05

Safety

Privacy, security, information translation, vulnerabilities, and local supports



Weighing the Benefits and Risks



Risks of Artificial Intelligence (AI)

- AI systems can apply models of job candidates, housing applicants, that don't fit edge cases
 - Human agents can be biased, too, but may be open to appeal. AI screening can be silent, and hard to detect or reverse.
 - Inherent bias built on stereotypes of wealth, value, and function can influence basic needs evaluation in a way that impacts the most diverse individuals in significant ways.
 - This bias may contribute to the health and social inequalities that lead to enduring poverty rates of people with disabilities
 - People with disabilities may be easy to identify in "anonymous" data collected for training AI systems and cost of exposure great.



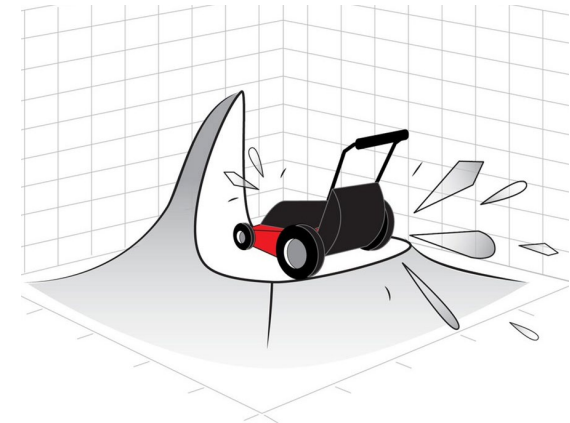
Benefits of Artificial Intelligence (AI)

- With the capacity to support functional needs and bridge the gap between the individual and their environment, technology solutions may have the greatest impact in the lives of people with disabilities.
- Executive functioning support can aid in navigation across all life domains.
- Many people with cognitive disabilities will benefit as speech recognition handles a wider range of speech characteristics.
- AI-driven personal assistants may offer valuable support in future.
 - Some fear that a restrictive data collection regime would hold back progress.



Weighing the Risks and the Benefits

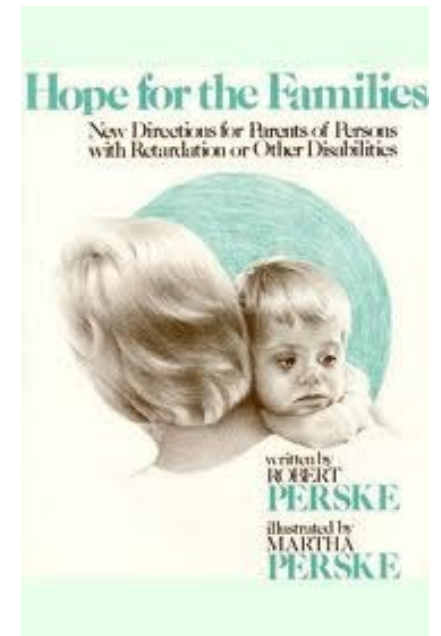
- Refusing to participate in AI regimes avoids risks but sacrifices benefits.
- Better models of diverse populations would help
 - Treviranus's "Lawnmower of Justice" removes bias toward repeat data elements
 - Asking AI systems to report outliers as well as central cases, for human postprocessing, could be helpful
- Transparency... but how?
 - Explaining privacy tradeoffs is complex



Dignity of Risk

"Overprotection may appear on the surface to be kind, but it can be really evil. An oversupply can smother people emotionally, squeeze the life out of their hopes and expectations, and strip them of their dignity. Overprotection can keep people from becoming all they could become. Many of our best achievements came the hard way: We took risks, fell flat, suffered, picked ourselves up, and tried again. Sometimes we made it and sometimes we did not. Even so, we were given the chance to try. Persons with special needs need these chances, too. Of course, we are talking about prudent risks. People should not be expected to blindly face challenges that, without a doubt, will explode in their faces. Knowing which chances are prudent and which are not - this is a new skill that needs to be acquired. On the other hand, a risk is really only when it is not known beforehand whether a person can succeed..."

– Robert Perske, Hope for the Families



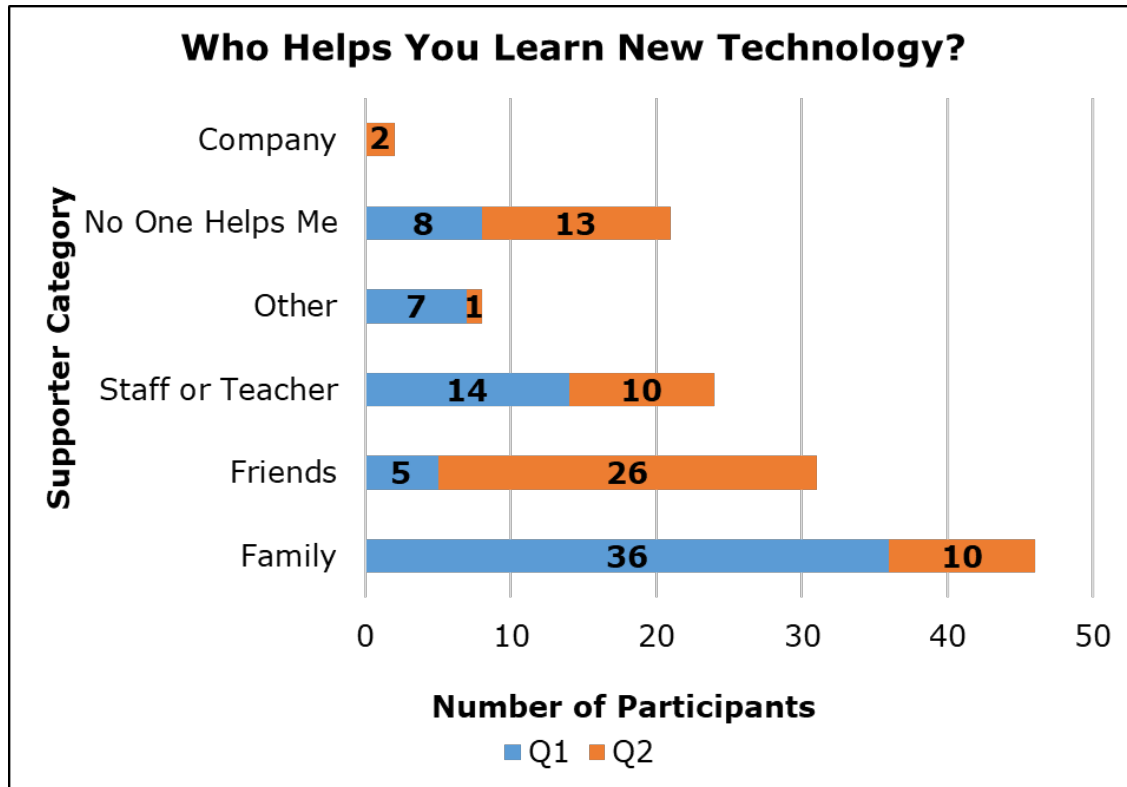
Technology Resilience



- Definition: Technology resilience is knowing what to do if something goes wrong with technology, learning from experiences in a tech-driven world and recovering from challenges encountered by technology



Technology Resilience Lessons Learned



WEARABLES
FOR **WELLNESS**

Accessibility of Wearable Technologies



Technology Resilience Questions

- Abandonment of technology devices is directly related to technology resilience
- How to prepare for problem-solving
 - What to do when technology is not working?
 - Who to ask for help when technology is not working? (More than one person)
 - What other solutions can be tried?
 - Are there times when change can be expected?
 - Who else may have had similar experiences?
 - When can you return to your device/system?



Technology Agility

- Definition: The ability to move quickly and fluidly across different technologies and tools
- Technology needs and barriers surveys indicate users have one to two technologies
- Most commonly users purchase and apply products from one trusted source/vendor
 - Need familiarity of function, purpose and general technical skills
- Apply standard functional technology settings and problem-solving across technology solutions



Technology Agility in Practice



Android Accessibility Features Settings for Android Devices

Published November, 2025

HEARING

Live Caption

You can turn on Live Captioning on Android and have a conversation or video automatically written out on the screen.

Real-Time Text

You can send and receive typed out messages during a phone call by turning on Real-Time Text (RTT).

Sound Amplifiers

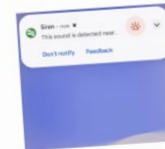
Sound Amplifier apps can help by making sounds on your device louder.

Sound Notifications

Your Android device can listen for sounds like a fire alarm and let you know when it hears them.



Live Captions



Sound Notifications

VISION

Lookout

You can use Android's Lookout app to get information about the world around you through your device's camera. Lookout can read labels and describe objects and images.

Display Settings

You can make text and icons bigger, make text bold, and adjust colors through the Android Display Settings.

TalkBack

TalkBack is a screen reader you can use with your Android device. TalkBack can read words on your screen out loud, or you can use it with a braille display.



Lookout



Display Settings

A Pennsylvania Tech Accelerator product made possible by the Pennsylvania Department of Human Services and the American Rescue Plan Act

Apple Accessibility Features Settings for Apple Devices

Published November, 2025

HEARING

Sound Recognition

Your Apple device can listen for sounds like a doorbell and let you know when it hears them.

Real-Time Text

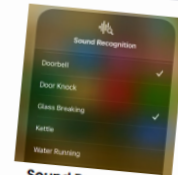
You can send and receive typed out messages during a phone call by turning on Real-Time Text (RTT).

Sound Amplifiers

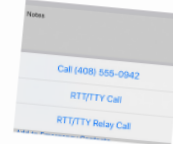
Sound Amplifier apps can help by making sounds on your device louder.

Music Haptics

With Music Haptics, you can experience music on your Apple device through vibrations, taps and textures.



Sound Recognition



Real-Time Text (RTT)

VISION

VoiceOver

Apple VoiceOver will describe what's on your screen, including images and braille.

Magnifier

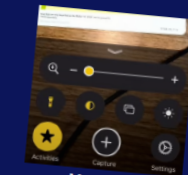
Apple Magnifier uses your camera to zoom in and describe objects around you.

Display Settings

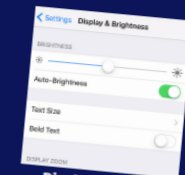
Apple Display Settings let you make text bold, increase contrast, invert colors, and use color filters for color blindness.

Typing Feedback

When you enable Typing Feedback on your Apple device, it will speak letters out loud as you type.



Magnifier



Display Settings

A Pennsylvania Tech Accelerator product made possible by the Pennsylvania Department of Human Services and the American Rescue Plan Act



Tech-RAL Q.



Technology
Resiliency
Agility and
Literacy
Questionnaire
Tech-RAL Q

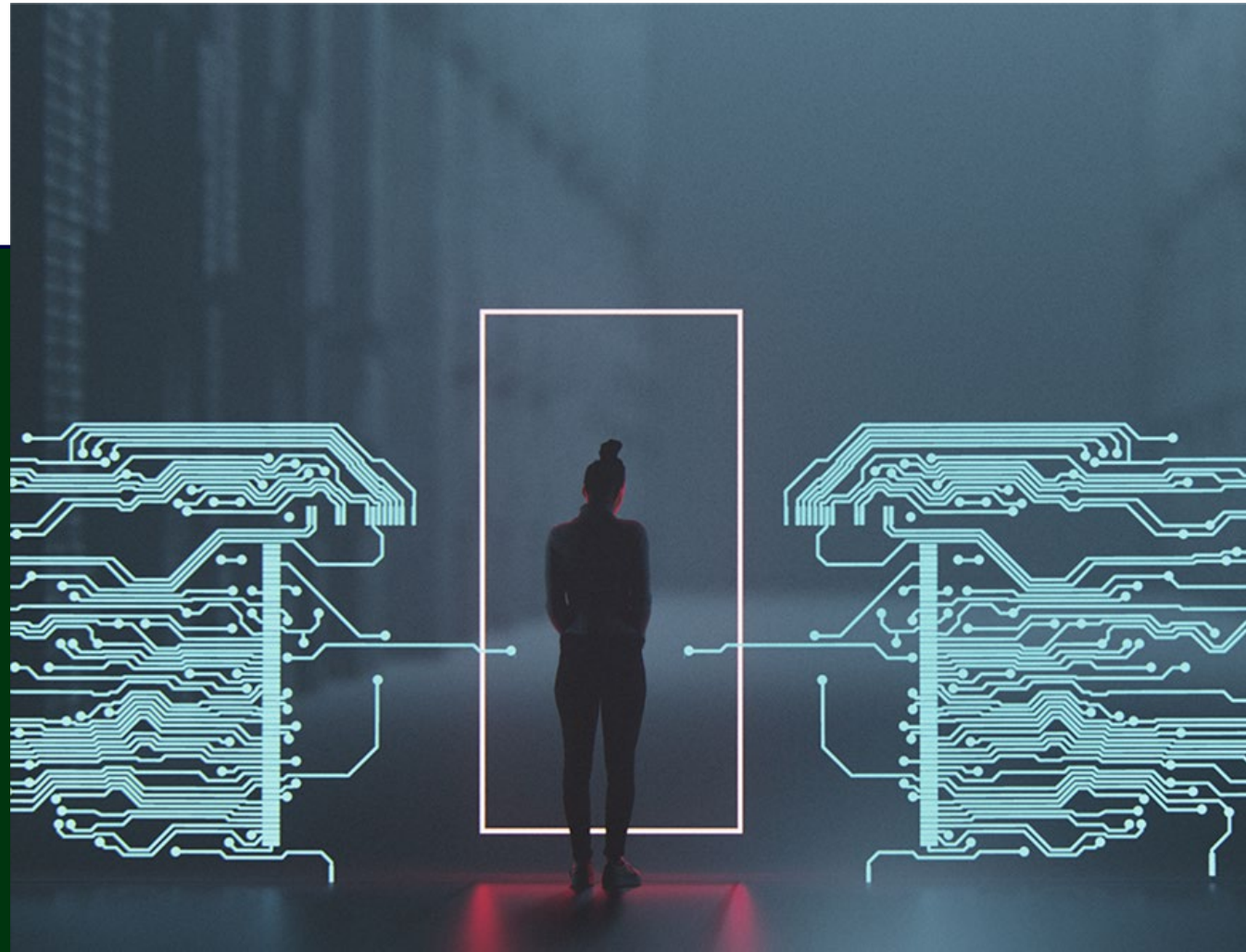




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Closing Comments

“Without technology that promotes access, connectivity and community participation, people with ID may not access services in the community like people without disability. This could lead to loneliness, and dependence on care provided in devolved institutions.”
Owuor et.al, 2018



Other Training Series Topics

- **#1 The Self-Directed Model for Identifying Technology Solutions for Individual Goal Attainment**
- **#2 Technology Solutions Specialists: Leadership and Peer Mentorship**
- **#3 Accessibility and Why it Matters**
- **#5 Technology-Related Services, Waiver Policies, and Resources for Technology Acquisition**
- **#6 Innovative and Emerging Technology Solutions for Community Living**



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