

# Beyond Compliance: Designing Accessible and High-Performance Labs



**Andrea Haenlin-Mott**  
ADA Coordinator  
Office of the University  
Architect/Facilities and  
Campus Services  
Cornell University



**Chris Jahn**  
Vice President, S&T Practice  
Leader  
CannonDesign

# **Learning Objectives**

- 1. Describe the philosophy around an effective framework for providing effective accessible laboratories for teaching and research.**
- 2. Identify the stakeholders who should be included in the design of accessible lab spaces.**
- 3. List the three main themes that encompass accessible design in the teaching and research environment.**
- 4. Employ strategies to achieve a high degree of accessibility that minimize or eliminate compromise to essential activities.**

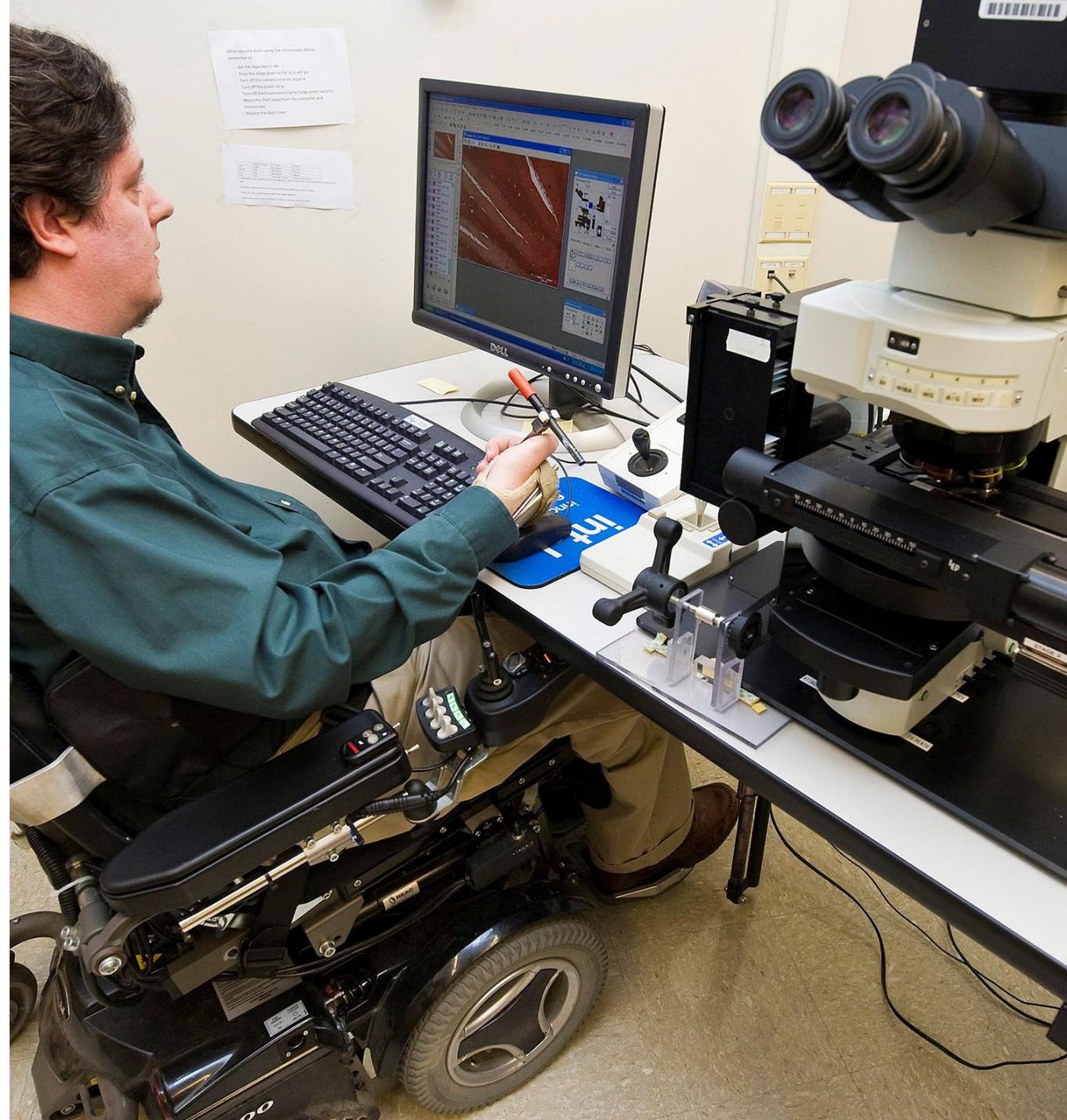
# **Agenda**

- 1. Philosophy / Framework – What’s our mindset?**
- 2. Stakeholders – Who’s affected? Who do we include?**
- 3. Accessibility Overview – Where do we focus?**
- 4. Examples – What Do Effective Strategies Look Like?**

# Philosophy / Framework

# Philosophy / Framework

- What does compliance look like?
  - “Code” isn’t the whole picture
  - Code doesn’t define “reasonable accommodation”
  - Code doesn’t define (nor require) program access
  - ADA – significant implications for academic program
- Faculty / Students: Mission of Academic Rigor
  - Participation: Emphasis on thought process, vision, understanding.
  - Enable physical practice to the fullest reasonable extent.
- Employees / Staff: Duty to Accommodate
  - Consider essential functions of a lab tech



# Philosophy / Framework

- Who Benefits?
  - Permanent disabilities
  - Temporary needs (e.g. injury)
  - People of differing ergonomic ideals

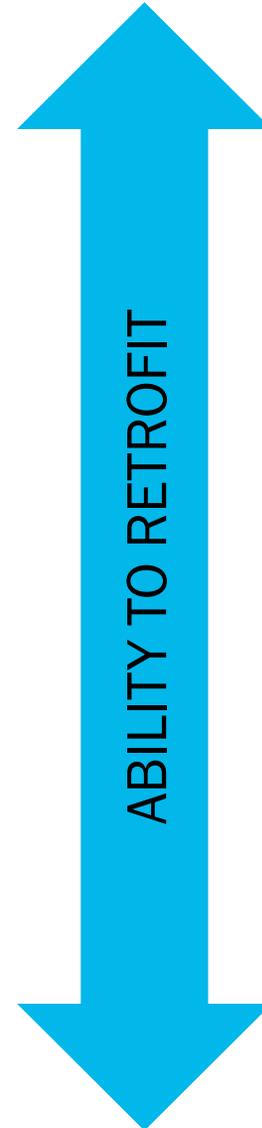


# Philosophy / Framework

## Day 1 vs. Defer

- Include measures on Day 1 that would be costly or highly disruptive to implement later
- Leverage adaptable features and straightforward future accommodations

DIFFICULT



EASY

# Philosophy / Framework

Minimize elements that are sub-optimal for lab functions.

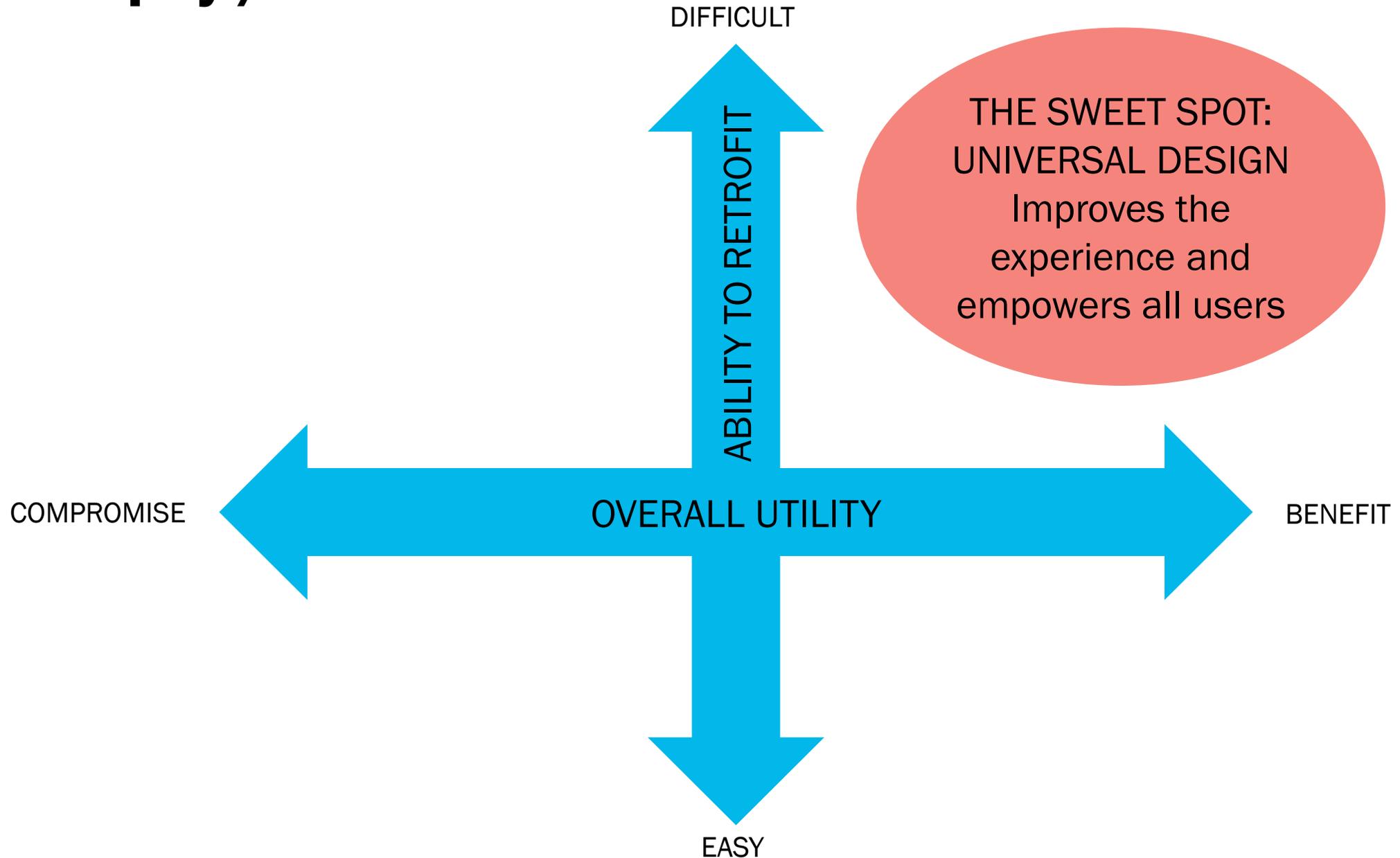
Leverage measures that improve the experience for everyone!

COMPROMISE



BENEFIT

# Philosophy / Framework



# Philosophy / Framework

There is no perfect accommodation.

Push for innovative measures that benefit access and inclusion.

Do not put the health and safety of others at risk to accomplish access.



# Stakeholders

CANNONDESIGN

# Stakeholders

- Researchers
- Instructors
- Students
- Department Heads
- EH&S / Fire
- Facilities



# Accessibility Overview

CANNONDESIGN

# Accessibility Overview

- Maneuvering Clearances
- Reach Ranges
- Operability



# Maneuvering Clearances

- Code requirements focus on safe egress and spatial access.
- Generally in sync with best practices for lab planning.



# Reach Ranges

- Often overlooked
  - Lab benches typically 30" deep.
- Reasonable accommodations
  - Electrical power – power strip at odds with fire marshall / EHS policies?
- Sinks
  - Lots to access – faucet(s), eyewash, towels, pegboards...



# Operability

- Challenges extend beyond the building to equipment.
- Often present limits to physical practice.

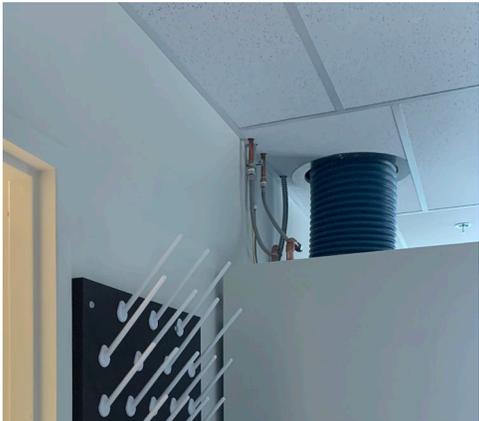


# Some Examples

CANNONDESIGN

# Adjustable Hood

- Benefits people of different statures or even seated operations
- Capabilities vary
  - AHJ approval – for flex duct
  - Cup sinks – possible! But facilities needs to be on board
  - Natural gas – likely a no-go
  - Other gasses, power, data – you bet!



# Built-in receptacles

- Fixed casework – blank drawer panel
- Mobile casework – tricky!
  - Watch counter depth
  - Custom can be done (in close coordination with manufacturer)



# Sinks

- Forward approach
- Side approach
- Hands-free operation?
  - Foot pedals vs. sensors



# Questions?

CANNONDESIGN