



Shaping the Student Experience with Assistive Technology



Agenda

1. Introduction
2. 3 Challenges Faced by Students with Disabilities
3. 4 Assistive Technologies that are revolutionizing accessibility in higher education
4. How to Implement These Technologies on Campus
5. How Those Technologies Shape Students' Experiences
6. How To Implement W3C Guidelines At Your School
7. Q&A



Who is here?



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3 Challenges Faced By Students With Disabilities

01

Assistive technology

02

Accessible materials

03

Institutional understanding and
will for inclusion





4 Assistive Technologies Revolutionizing Accessibility in Higher Education

01

Remote Visual
Interpreting

02

Voice Assistants

03

Note Taking

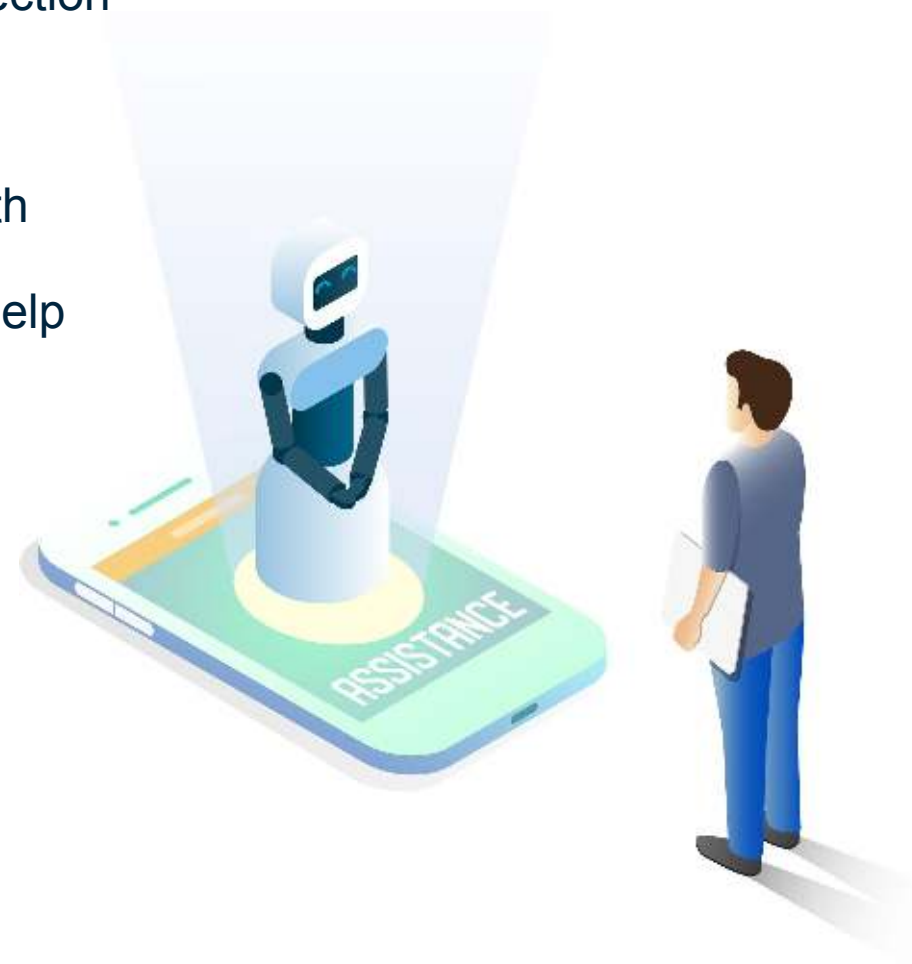
04

Transcription &
Captioning



Remote Visual Interpreting

- Aira (Artificial Intelligence and Remote Assistance)
- Connects blind users with sighted agents via a mobile connection
- Like FaceTiming a friend
- Trained agents with access to video feed, GPS, Google Earth
- Can describe a scene, read a menu and other documents, help find a rideshare
- Be My Eyes is a free service that provides volunteers





Voice Assistants

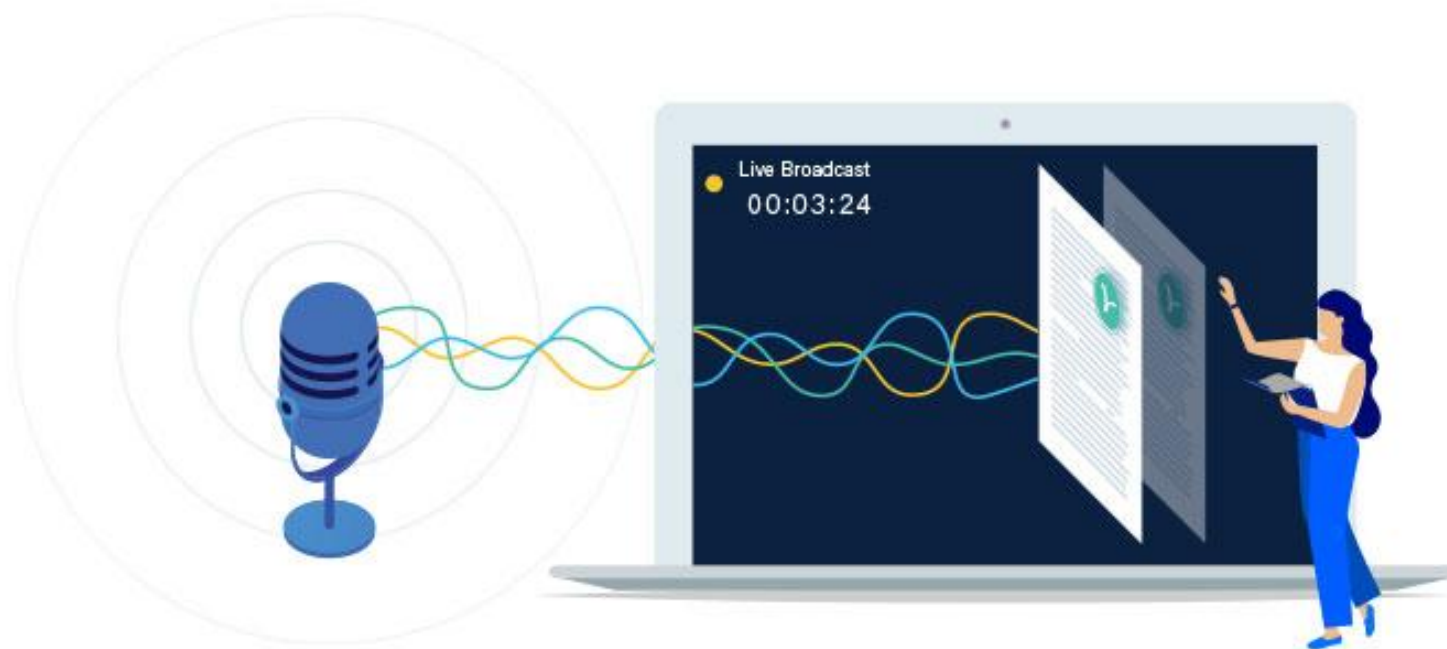
- Siri and Google Assistant allow for quick fact lookup, definitions, calculations
- The Franklin Language Master 6000 SE, a talking dictionary and grammar guide, costs \$500
- The Orion TI-84 Plus, a talking graphing calculator, costs \$600
- Siri and Google Assistant already good at definitions
- iOS has a built-in scientific calculator





Note Taking

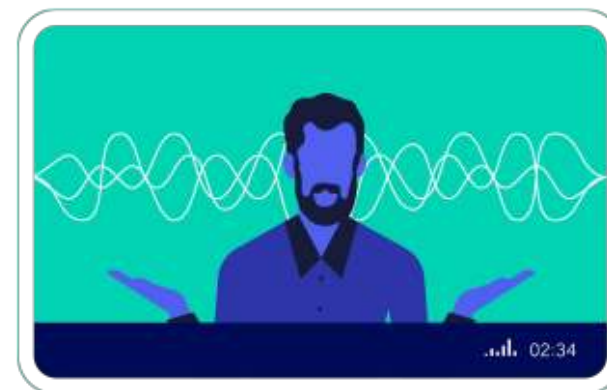
- Transcripts with annotation features from Computer Assisted Real Time captioning (CART)
- Meets the needs of all students in addition to providing an accommodation
- Enables students to engage with the lecture rather than focus on the task





Transcription & Captioning

- Verbit (features beneficial)
- Live captioning
- How transcription helps both hearing and visually impaired





How To Implement These Technologies on Campus?

The **Accessible Technology Initiative (ATI)** program reflects the California State University's (CSU) ongoing commitment to provide access to information resources and technologies to individuals with disabilities.

Vision: To create a culture of access for an inclusive learning and working environment.

Mission: To help CSU campuses in carrying out EO1111 by developing guidelines, implementation strategies, tools and resources.

Principle: To apply universal design, an approach to the design of products and services to be usable by the greatest number of people including individuals with disabilities.

Strategy: To stimulate collaboration to effect changes that will ultimately benefit all.



Accessible Technology Initiative (ATI) Program

CSU Long Beach has 3 Areas of Focus:

Instructional Materials

- Accessible Instructional Materials Center
- Bob Murphy Access Center
- Academic Technology Services
- Bookstore
- Document accessibility training
- Assistive technology training
- Online LMS training
- Disability awareness

Electronic and Information Technology procurement

- Procurement training
- Communications
- Review and approval

Web-based Information and Services

- Word, PowerPoint, PDF posted to LMS must be accessible
- Document accessibility training available



The Daily Impact Assistive Technologies

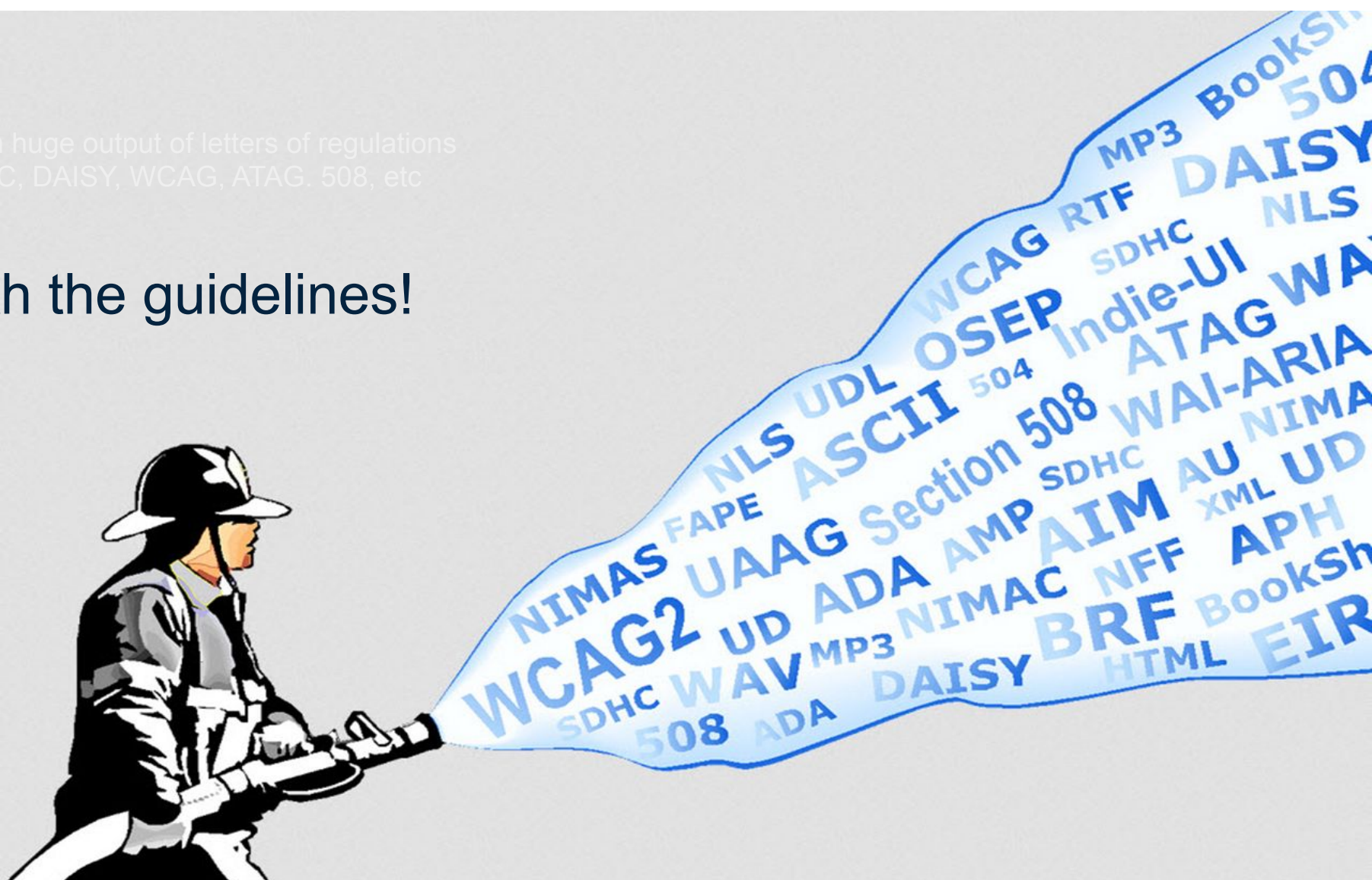
- ✓ Accessible LMS
- ✓ Multilingual screen readers
- ✓ Voice Assistants
- ✓ Rideshare apps
- ✓ Visual interpreters
- ✓ OCR
- ✓ Transcripts for videos and podcasts
- ✓ Electronic toothbrushes
- ✓ Audio Books



How To Implement W3C Guidelines at Your School?

Fireman holds firehose with huge output of letters of regulations and guidelines WCAG NIMC, DAISY, WCAG, ATAG, 508, etc

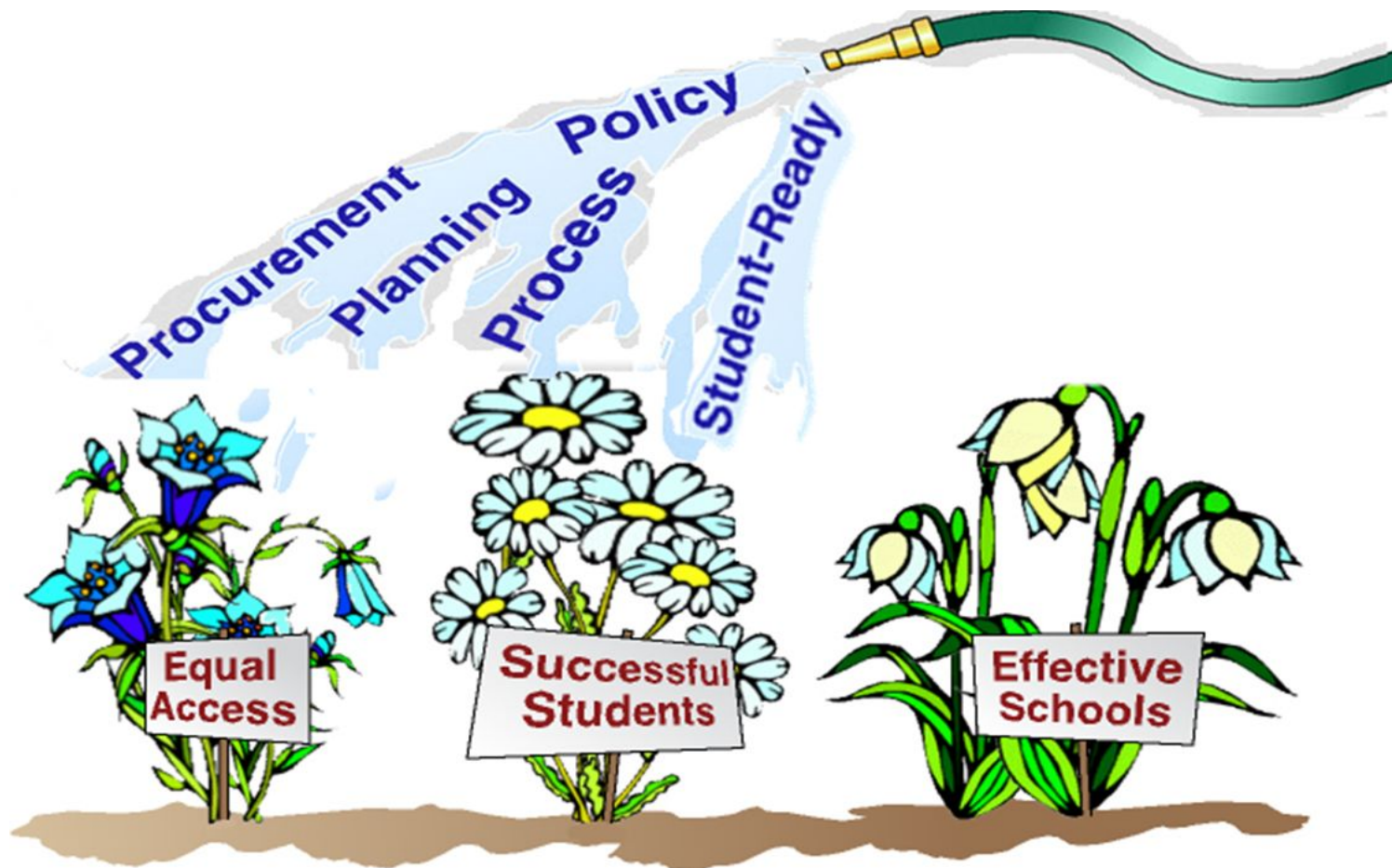
Don't start with the guidelines!





Policy and process = true inclusion

A garden hose of policy, procurement, process, and planning nourishes a garden of equal access, successful students, effective schools





Develop accessibility policy and plan

1. Convene stakeholders - include students with disabilities and their families
2. Recruit high level sponsor, support.
3. Adopt explicit policy.
4. Define roles, distribute responsibility – leadership, procurement, metrics...
5. Commit to timeline and milestones
6. Communicate support, including training and internal resource maps.
7. Test, verify, measure, collect feedback
8. Evaluate and respond as technology evolves





The WAI to Digital Accessibility

 **Web Accessibility Initiative** **WAI**

Strategies, standards, resources to make the Web accessible to people with disabilities

Get Involved | About W3C WAI

Search 

Accessibility Fundamentals

Planning & Policies

Design & Develop

Test & Evaluate

Teach & Advocate

Standards/Guidelines

Making the Web Accessible

Strategies, standards, and supporting resources to help you make the Web more accessible to people with disabilities.

Hide Section 

 **W3C**
The World Wide Web Consortium (W3C) develops international standards for the Web: HTML, CSS, and many more.

 **WAI**
The W3C Web Accessibility Initiative (WAI) develops standards and support materials to help you understand and implement accessibility.

 **You**
You can use W3C WAI resources to make your websites, applications, and other digital creations more accessible and usable to everyone.

<http://www.w3.org/wai>



4 principles of accessible content

I can perceive it.



1. Perceivable

I can use it.



2. Operable

I can grasp it.



3. Understandable

I can access it.



4. Robust



Common Barriers in digital content

Structure

Reading order

Keyboard access

Link text

Text alternatives

Color / contrast

Media





Q&A

All questions asked throughout the webinar from the comments section will be answered here.





Thank you