





# Assistive Technologies (AT) Definition and Categories

This education materials were developed by the help of CA19104 – COST Action

Advancing Social inclusion through Technology and EmPowerment (a-STEP) https://www.cost.eu/actions/CA19104/#tabs+Name:Description https://www.a-step-action.eu/







What is Assistive Technology (AT)?

Can you give me some examples?

How can you define AT?



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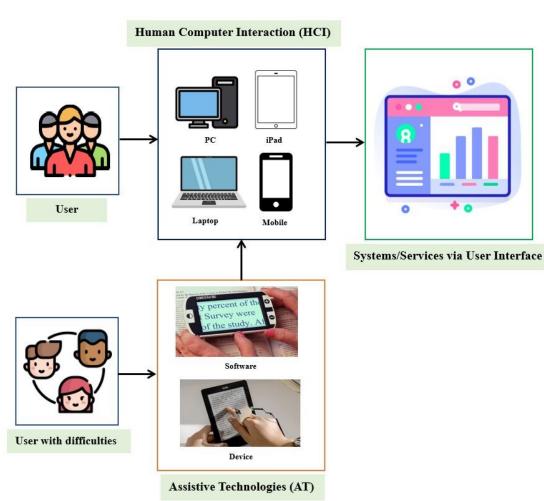
Summary





#### Relation to other fields





#### "Interfacing the Interface"

- Enable overcome functional limitations
- **Reduce** consequences of a limitation
- Design help to overcome barriers
- Participation take part in alternative ways









#### AT — Connectified and the mology

Prevention

Diagnostics

- Medicine
- Therapy
- Rehabilitat
- Education
- Free time activities
- Etc.
- Integration







### AT – Connecting role



Prevention

Healing

Rehabilitation

INTERGATION







"Any device, system and ergonomic measure that can reduce the disability gap."

Any device, system and ergonomic measure that can empower participation of

"Any device, system and ergonomic measure that can empower participation of individual users."

"Any product, instrument, equipment or technical system used by a person with a disability, especially produced or generally available, preventing, compensating, relieving or neutralizing the impairment, disability or handicap." (ISO)

AT in a broader sense: "everything that helps":

Assistive Technology Service = ATS

Assistive Technology Device = ATD





#### Characteristic of AT

- Tools/Service not people or animals
- High/Low/No Tech
- General or task oriented
- Mainstream or special devices



#### Impact - AT



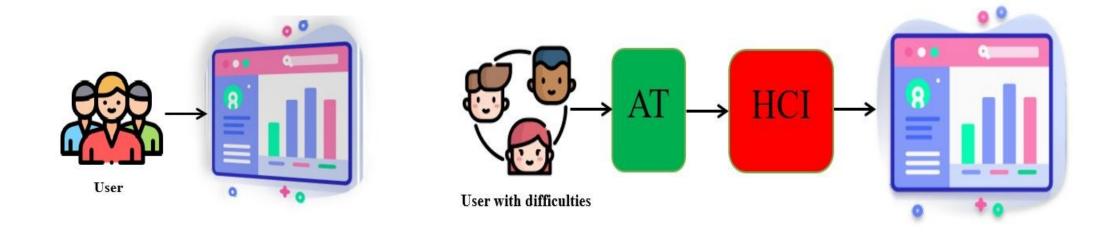
- Augmenting
- Inserting
- Substituting







#### Augmenting AT

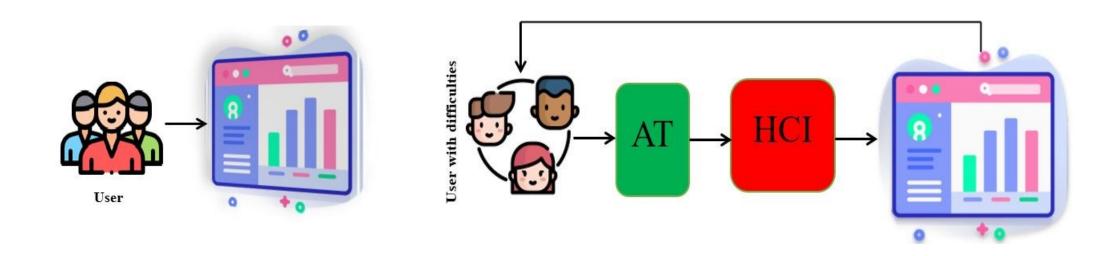


Examples? Amplifier





#### Inserting AT

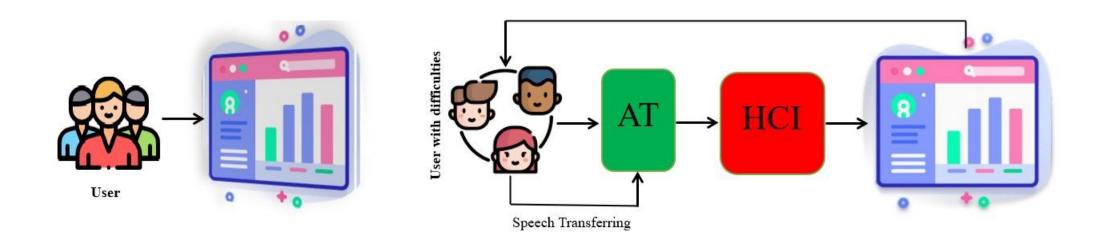


Examples? Screen magnifier





#### Substituting AT



Examples? Sign Language



#### AT categories



ISO 9999 (http://www.iso.ch/iso/en/] **EN ISO 9999 DIN EN ISO 9999 ÖNORM EN ISO 9999** in your country?





## ISO 9999:2022 Assistive products — Classification and terminology

https://www.iso.org/obp/ui/#iso:std:iso:9999:en

- Classes
- Sub-Classes
- Divisions

#### example:

Class	21	Aids for communication, information and signalling
Subcluss	36	Telephones and telephoning aids
Division	21	Receiver amplifiers







Vital Funct.	Cognition	Vision	Hearing	AAC	Mobility & manipulation
Pace Maker	Displays / output devices	Displays  Alarm systems  magnification	Alarm systems	Displays / Output devices	Environmental control  Accessibility
breathing	Input - Software	haptics	Hearing aids Sign language	devices  Predictive tying	ergonomics  Posture and sitting
incontinent	training	Audio output	tools	Symbol systems	biomechanics Input devices
	Neural prosthesis	Eye prosthesis	Speech recognition	Speech output	Output devices
Anatomy and physiology AT			Lip reading systems	training	Muscle/skeleton support

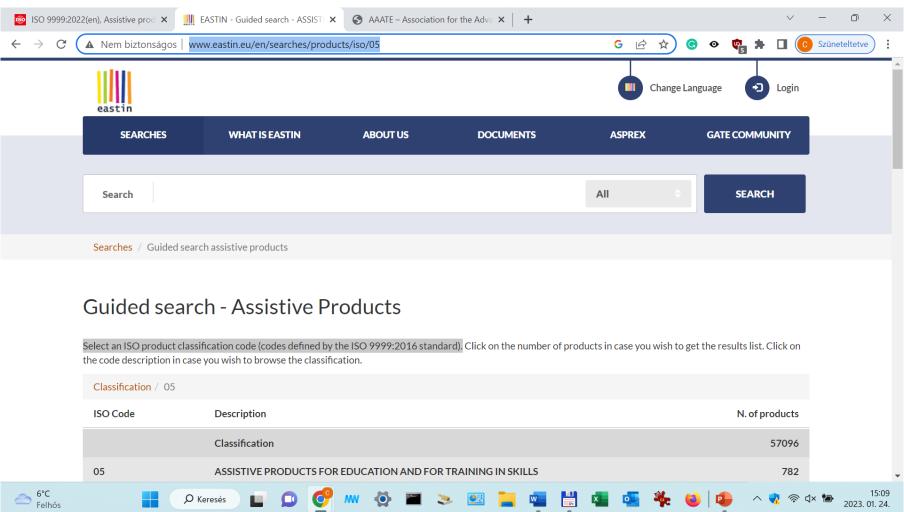
Fundamentals (design physics, mechanics, ICT, ... & Design for All)

multidisciplinary



#### AT categories











- Find your country's assistive technology standard!
- Find an assistive technology device from the EASTIN database!
- Find literature on the latest assistive technology developments.







#### Source for further information

- Association fro the Advancement of Assistive Technology in Europe (AAATE): <a href="https://aaate.net/">https://aaate.net/</a>
- Assistive Technology Industry Association: <a href="https://www.atia.org/home/at-resources/what-is-at/">https://www.atia.org/home/at-resources/what-is-at/</a>
- WHO: Assistive Technology: <a href="https://www.who.int/health-topics/assistive-technology#tab=tab">https://www.who.int/health-topics/assistive-technology#tab=tab</a> 1
- Quality Indicators for Assistive Technology Services <a href="https://qiat.org/">https://qiat.org/</a>
- University of Washington, Access Computing: <a href="https://www.washington.edu/accesscomputing/what-assistive-technology">https://www.washington.edu/accesscomputing/what-assistive-technology</a>
- Types of AT (Minnesota): <a href="https://mn.gov/admin/at/getting-started/understanding-at/types/">https://mn.gov/admin/at/getting-started/understanding-at/types/</a>
- Miesenberger K., Lectures of Assistive Technology, University of Linz, Austria
- Zagler W., Lehrveranstaltung: Grundlagen der Rehabilitations-technologien, TU-Wien, In stitute "integriert studieren", Vienna, Austria
- Sikné Lányi C., Zager W., Rehabilitációs és akadálymentes digitális technológiák alapjai, Egyetemi jegyzet, Pannon Egyetem 2008. ISBN 978 963 9696 44 0 (125 old) (Hungarian lecture book)







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