34th **C**entral **E**uropean **C**onference on **I**nformation and **I**ntelligent **S**ystems

PROJECT SECTION **PITCHES**

PROJECT NAME:

Application of Inclusive Design Thinking in the Technically-Oriented Subjects at HEI

INSTITUTION:

University of Žilina

PRESENTER:

Mr Peter Márton

20 - 22 September, 2023 / organized by Faculty of Organization and Informatics / Dubrovnik, Croatia

PROJECT: eduIDT

Erasmus + Project

Application of Inclusive Design Thinking in the Technically-Oriented Subjects at HEI

Project started: November 2022
Project ends: July 2025 (32 months)
Budget: 250,000 €

Funded by the Erasmus+ Programme of the European Union

Our consortium

GERMANY

European Institute for Labour and Industrial Relations

GERMANY

Wilhelm Büchner University

FRANCE

IMT Atlantique

SPAIN

Technical University of Valencia

ESTONIA

Tallin University

SLOVAKIA

Eggztra Innovations

SLOVAKIA- COORDINATOR

University of Žilina

HUNGARY

University of Debrecen

CROATIA

University of Zagreb

Project goal

The project aims to **implement the methodology of inclusive design thinking (IDT) into technically focused subjects at HEIs**, to provide lecturers with all the necessary information, knowledge, materials, and support to facilitate its application in their subjects.

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Priorities

Inclusion and diversity in all fields of education, training, youth and sport

Exploration of the world of underrepresented groups by students and lecturers during project activities

Stimulating innovative learning and teaching practices

Defining a way how to implement in the educational process the concept of IDT

Building inclusive higher education systems

Improvement of the processes related to the innovation of the education activities considering the problems of underrepresented groups

Project activities

- **Creation of IDT study materials**

To provide lecturers access to relevant information related to the IDT concept

- *Analysis of current literary sources in the field of IDT*
- *Discussing concept of the materials with lecturers*
- *Creation of study materials (written document, videos)*
- *Translating materials to 7 languages (German, Croatian, Hungarian, Slovak, Estonian, French, Spanish)*

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Project activities

- **Creation of IDT study materials**

Inclusive design brings in features that enable inclusion of excluded groups.

On the other hand, all users can benefit from features primarily designed for excluded groups or features inspired by their needs or frustrations.

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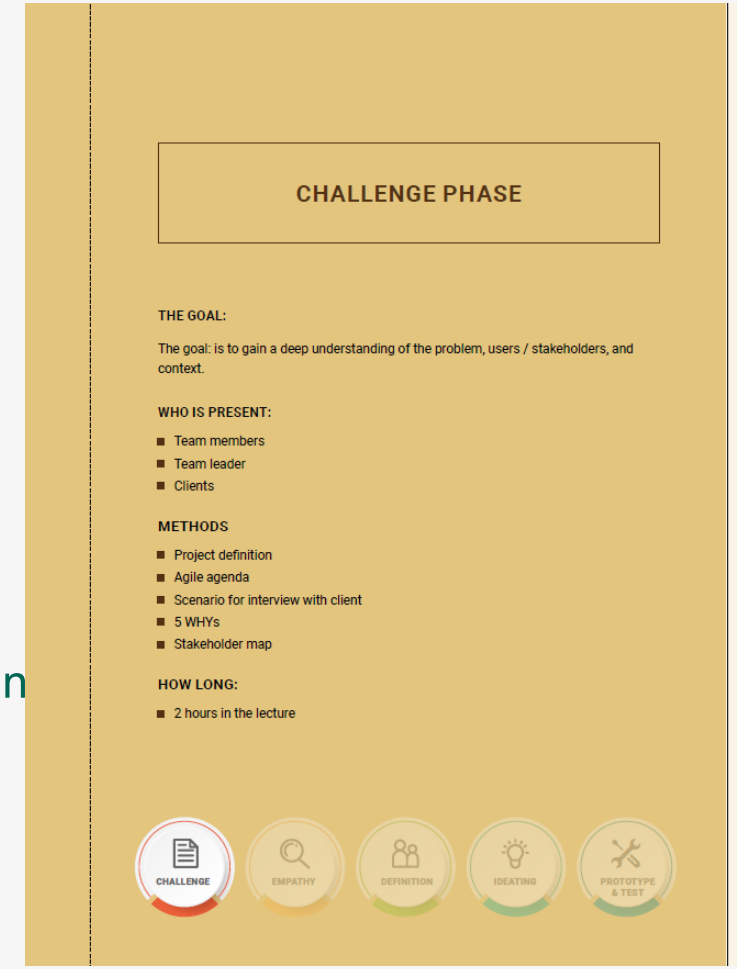
Project activities – Creation of materials

Structure of the materials

- Inclusion
- Design thinking and Inclusive design thinking
- Inclusive Design Thinking Process
- Application of Inclusive Design Thinking in Education
- Materials for teaching
- Templates



CHALLENGE PHASE

THE GOAL:

The goal: is to gain a deep understanding of the problem, users / stakeholders, and context.

WHO IS PRESENT:

- Team members
- Team leader
- Clients

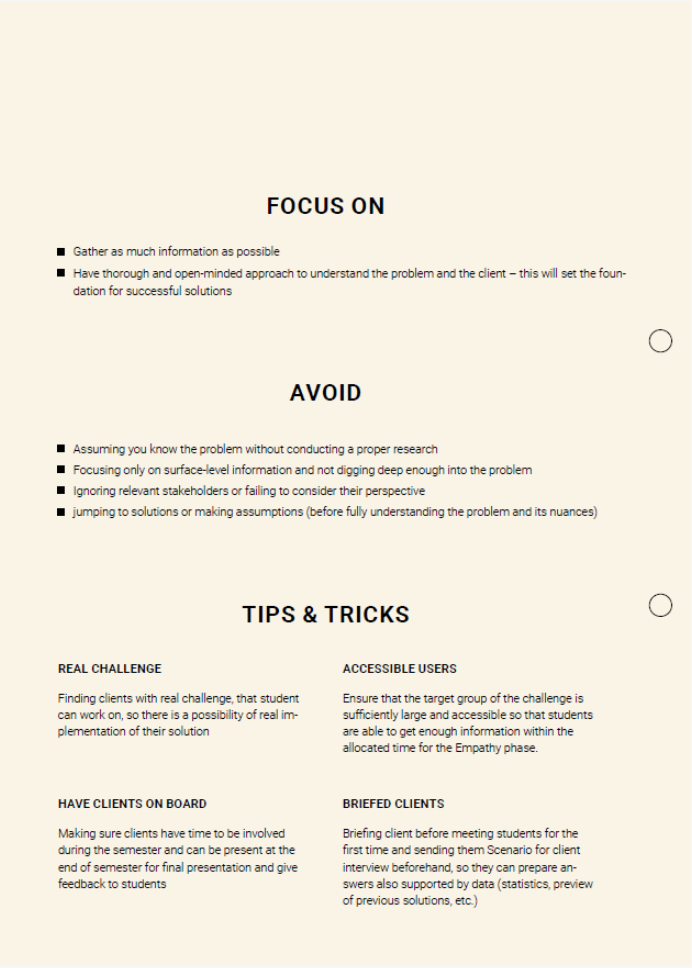
METHODS

- Project definition
- Agile agenda
- Scenario for interview with client
- 5 WHYs
- Stakeholder map

HOW LONG:

- 2 hours in the lecture

CHALLENGE · EMPATHY · DEFINITION · IDEATING · PROTOTYPE & TEST



FOCUS ON

- Gather as much information as possible
- Have thorough and open-minded approach to understand the problem and the client – this will set the foundation for successful solutions

AVOID

- Assuming you know the problem without conducting a proper research
- Focusing only on surface-level information and not digging deep enough into the problem
- Ignoring relevant stakeholders or failing to consider their perspective
- jumping to solutions or making assumptions (before fully understanding the problem and its nuances)

TIPS & TRICKS

REAL CHALLENGE

Finding clients with real challenge, that student can work on, so there is a possibility of real implementation of their solution

ACCESSIBLE USERS

Ensure that the target group of the challenge is sufficiently large and accessible so that students are able to get enough information within the allocated time for the Empathy phase.

HAVE CLIENTS ON BOARD

Making sure clients have time to be involved during the semester and can be present at the end of semester for final presentation and give feedback to students

BRIEFED CLIENTS

Briefing client before meeting students for the first time and sending them Scenario for client interview beforehand, so they can prepare answers also supported by data (statistics, preview of previous solutions, etc.)

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Project activities – Creation of materials

Templates with examples

- Personas
- Brainstorming methods
- Evaluation methods
- Methods for obtaining information

VISUALLY IMPAIRED PERSON

Johannes Blindholm (45)

RESIDENCE	Capital city
EDUCATION	Secondary education
OCCUPATION	-
INCOME	Disabilty pension
FAMILY	Parents, brother, dog
NEED ASSISTANCE	Yes

My story

How I live?

I am living alone, girlfriends have not stick for long time with me, maybe because I am different, but I think I am quite self-sufficient. Twice a week a home help comes which covers basic chores and errands – groceries, cleaning the house, washing (I could easily wash white and colour together ending up with all my clothes with the same unidentified colour), ironing etc.

How I see myself?

I do not "see" myself as a disabled person, because I do not know how different it can be to actually see. This is my normal, although I realise this world is adjusted to those who see. So I feel it is more challenging for me to live my life to the fullest I believe it can be also more creative and maybe even more satisfying. But sometimes I feel alone in my world.

Who helps me?

When I need to go somewhere new I plan ahead. With voice control on my phone I find my route via public transportation. Google maps are guiding me, whispering in my ear, through my earphones, so I know where I am and what do I need to do next. Fortunately, in public transportation there are voice notifications of bus stops so I know where to get off the bus. When I find a nice soul, they tell me which is the right bus to get on, or go with me further then they needed to go, just to lead me in the right direction or even help me get to the place I wanted to go. It is mostly women, maybe they are more empathetic.

What kind of problems do I have?

In known environment I don't have any problem with moving around – I know how my flat looks like in my head, how many steps do I need to take to get where I want, e.g. from my bed to the kitchen – my first morning steps leading me to my coffee machine...I love the smell of freshly brewed coffee☕. Crucial thing for me, is to put everything on the same spot so I can find it again...I am actually a perfect partner, I do not leave any mess in the house. Anything that is moved by just one inch can lead to broken glass and health risk.

When I need to leave my safe space at home, my best friends are my white cane and my guide dog Marty. Both of them help me recognize unexpected objects in my way, a bike or scooter on the pavement, trash bins, or parked cars where they should not be, or deeper puddle after a heavy rain.

The most stressful situations are when I need to go somewhere for the first time. Cane and Marty are great, but sometimes I need to rely on others goodwill too. I am not afraid to ask, believe me, but sometimes it can be difficult to find someone to ask. Most people see that I am blind and probably move to another side of the street, so they do not need to deal with me. I can't see them, but I can feel them. Sometimes the other extreme happens, when someone just jumps in my path wanting to help me, even when I do not need it and then feel frustrated when I said I do not need it.

My day

Morning

- I get up at 6 a.m., I like my routine so I set the alarm clock everyday.
- I have my morning coffee and do my hygiene routine.
- I love preparing my own breakfast, but sometimes my home help Mary put eggs on another shelf in the fridge, so I am standing in front of my opened fridge, the fridge "screaming at me with this annoying signal, that it is open for too long and I am sweating trying to "look for" my eggs and vegetables. For my morning tea I wait for Mary, it is our social activity on the days she comes.
- Till Mary arrives, I dictate some notes, what do I need to buy, who I want to call or meet, checking my calendar for the day.
- Mary comes at 10 a.m., we enjoy our tea and then she leaves for groceries.
- When Mary is not coming, I listen to music or audiobooks.

Afternoon

- At noon my lunch and dinner arrive from our social organisation.
- In the afternoon I go to nearby parks to get some air, but I really like to work out so I run on my treadmill when I get back home.
- Then I relax for a bit or go to the club to meet with my friends.

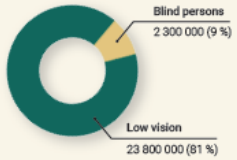
Evening

- In the evening I warm up my dinner and call my relatives – my parents, brother Peter and friend from school – I like Tony the most so we speak once a week.
- In the evening I lie down with Marty and listen to podcasts – I like history and politics.
- I go to bed every day at 10 p.m. – as I said I like my routine.

Information and statistics

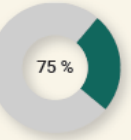
TYPES OF DISABILITY

Women are more at risk of becoming blind or partially sighted than men.



UNEMPLOYMENT RATE

More women are unemployed than men.



AGE-RELATED DEGENERATION

90 percent of visually impaired persons is over the age of 65

One in three senior citizens over 65 faces sight loss.

IMPACT OF VISION IMPAIRMENT

- Delayed motor, language, emotional, social and cognitive development
- Lower levels of educational achievement
- Lower rates of workforce participation and productivity
- Higher rates of depression and anxiety
- Social isolation, difficulty walking, a higher risk of falls and fractures
- Greater likelihood of early entry into nursing or care homes

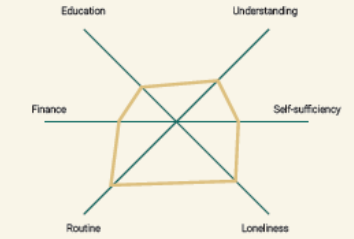
GLOBAL CAUSES OF SIGHT LOSS

- Age-related macular degeneration
- Cataract
- Diabetic retinopathy
- Glaucoma
- Uncorrected refractive errors
- Blind since birth

Users and research methods

Person	Interview	Focus group	Safari	Customer shoes	Questionnaire
Impaired person	Yes	Yes	Yes	Yes	Limited (Audio)
Assistant / nurse	Yes	Yes	Yes	Yes	Yes
Family member	Yes	Yes	Yes	No	Yes

Attributes



Resources

European Blind Union (EBU)
About blindness and partial sight – Facts and figures
www.euroblind.org/about-blindness-and-partial-sight/facts-and-figures

World Health Organization (WHO)
Blindness and vision impairment
www.who.int/news-room/fact-sheets/detail/blindness-and-visual-impairment

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Project activities

- **Upskilling & Tasks preparation**

To prepare lecturers for the application of IDT to their technically-oriented subjects

- *Workshops on Inclusive Design Thinking for Lecturers*
- *Analysis of lecturers courses*
- *Preparing tasks for students and testing them*

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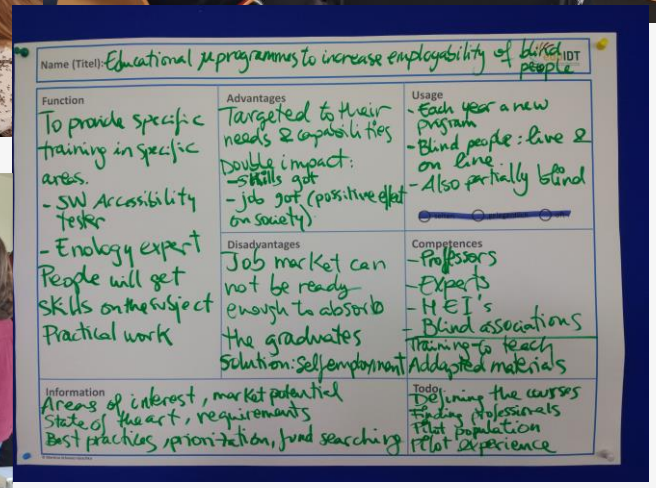
Project activities - Upskilling

Workshop on IDT

- The goal is to go through the all phases of IDT to give possibility to lecturers to try it and have better understanding of it
- 1st part of the Workshop was held in Darmstadt in April 2023



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Project activities

- **Implementation of IDT**

The application of IDT to real conditions and sharing experiences

- *Implementation*
- *Gathering experience from the implementation*
- *Sharing experiences – final conference*

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Thanks!

Do you have any questions?

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