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Artificial Intelligence to Enhance Civic Participation: ITHACA

Aiming for participatory democracy and the inclusion of vulnerable groups:
challenges, aspirations and lessons

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ITHACA

HFDT Symposium – 2024 06 19



COGNITIVE SCIENCE SECTION (CSS): Self-Introduction

<https://cognitive-science.at/>

<https://cognitive-science.at/projects/>

<http://web.cognitive-science.at/projectvis/tagcloud.html>

Surprise – Surprise


CALL: HORIZON-CL2-2022-DEMOCRACY-01-01:

34 proposals submitted,
3 projects funded

- Trusted AI for Transparent Public Governance fostering Democratic Values (AI4Gov)
- Knowledge Technologies for Democracy (KT4D)
- artificial Intelligence To enHAnce Civic pArticipation (ITHACA)

Evaluation Summary Report – Research and Innovation Actions:



Proposal Evaluation Form		
	EUROPEAN COMMISSION	Evaluation Summary Report - Research and innovation actions
	Horizon Europe (HORIZON)	

Call: HORIZON-CL2-2022-DEMOCRACY-01
 Type of action: HORIZON-RIA
 Proposal number: 101094364
 Proposal acronym: ITHACA
 Duration (months): 36
 Proposal title: artificial Intelligence To enHAnce Civic pArticipation
 Activity: HORIZON-CL2-2022-DEMOCRACY-01-01

N.	Proposer name	Country	Total Cost	%	Grant Requested	%
1	KONNEKT ABLE TECHNOLOGIES LIMITED	IE	425,625	16.12%	425,625	16.12%
2	ETHNIKO KENTRO EREVNAS KAI TECHNOLOGIKIS ANAPTYXIS	EL	295,000	11.17%	295,000	11.17%
3	PANEPISTIMIO PATRON	EL	281,250	10.65%	281,250	10.65%
4	Raising the Floor	BE	297,500	11.27%	297,500	11.27%
5	Stamadianos and Partners Law Firm	EL	129,375	4.90%	129,375	4.90%
6	UNIVERSITAET GRAZ	AT	420,000	15.90%	420,000	15.90%
7	MNLT INNOVATIONS IKE	EL	87,500	3.31%	87,500	3.31%
8	SOFTWARE IMAGINATION & VISION SRL	RO	320,625	12.14%	320,625	12.14%
9	PEDAL CONSULTING SRO	SK	155,750	5.90%	155,750	5.90%
10	AGENTIA METROPOLITANA PENTRU DEZVOLTARE DURABILA BRASOV ASOCIATIA	RO	135,750	5.14%	135,750	5.14%
11	MESTO MARTIN	SK	92,500	3.50%	92,500	3.50%
Total:			2,640,875		2,640,875	

Abstract:

ITHACA project aims to better understand the complexities and controversies for applying AI into the field of civic participation and stimulate new and responsible practices of research and innovation that anchor AI technologies design in human rights, values and principles, and moral and ethical reflection. The project vision is to contribute to the maximisation of the possible positive impact of AI on the functioning of democratic institutions and processes by developing and testing of a human centric Artificially Intelligent and Ethics by Design online discussion platform for civic participation in local governance, which incorporates human and social interpretations into the design process to ensure that AI decision-making processes are explainable, transparent and fair. ITHACA will pay particular attention to the needs and voices of citizens from vulnerable groups, with a view to ensuring that human rights impacts stemming from the design, development and ongoing deployment of algorithmic systems are comprehensively monitored, debated and addressed. Through its pilot activities in two different EU countries, ITHACA plans to assess the ability of AI to enhance citizens participation in the local governance while preventing or minimizing possible adverse effects stemming from unregulated use of AI and empowering citizens with knowledge about the AI model involved. ITHACA will also provide scalable tools for the identification of security risks and threats and for conformity with the Fairness principle and Privacy principle in AI-based systems and big data for civic engagement applications. Based on its implementation experiences, the project will define a data governance framework with relevant ethical principles and practices to be implemented in the design, development, deployment process for AI civic engagement platforms as well as policy recommendations on philosophical, legal and ethical values that should be embedded in the development of such platforms.

Evaluation Summary Report

Evaluation Result

Total score: 13.50 (Threshold: 10)

Overview

- Duration: 01/2023 – 12/2025
- Funded by HORIZON EUROPE
- HORIZON-CL2-2022-DEMOCRACY-01-01
- <https://www.ithaca-project.eu/>
- <https://cognitive-science.at/projects/ithaca/>
- **11 partners in the European Union:**

PARTNERS (Country)	Main field of expertise
Konnektable Technologies Limited (IE) – COORDINATOR/LEAD	Technology / AI
Centre for Research and Technology Hellas (EL)	Technology / AI
University of Patras (EL)	Technology / AI
Raising the Floor (BE)	Social & Cognitive Science
Stamadianos & Partners Law Firm (EL)	Law & Ethics
University of Graz (AT)	Social & Cognitive Science
MNLT Innovations IKE (EL)	Technology / AI
Software Imagination & Vision SRL (RO)	Technology / AI
PEDAL Consulting (SK)	Dissemination
Brasov Metropolitan Agency for Sustainable Development (RO)	Pilot City
City of Martin (SK)	Pilot City

Why another Platform for Participatory Democracy?

Existing platforms:

- Better Reykjavik (<https://betrireykjavik.is>)
- Decidim.Barcelona (<https://www.decidim.barcelona/>)
- Maptionnaire (<https://www.maptionnaire.com/>)
- Fluicity (<https://get.flui.city/en>)
-

CSS analysed and evaluated existing platforms – the report is included in
A Study on good practices of citizen engagement and democracy in AI applications:
<https://www.ithaca-project.eu/results/>

CSS performed

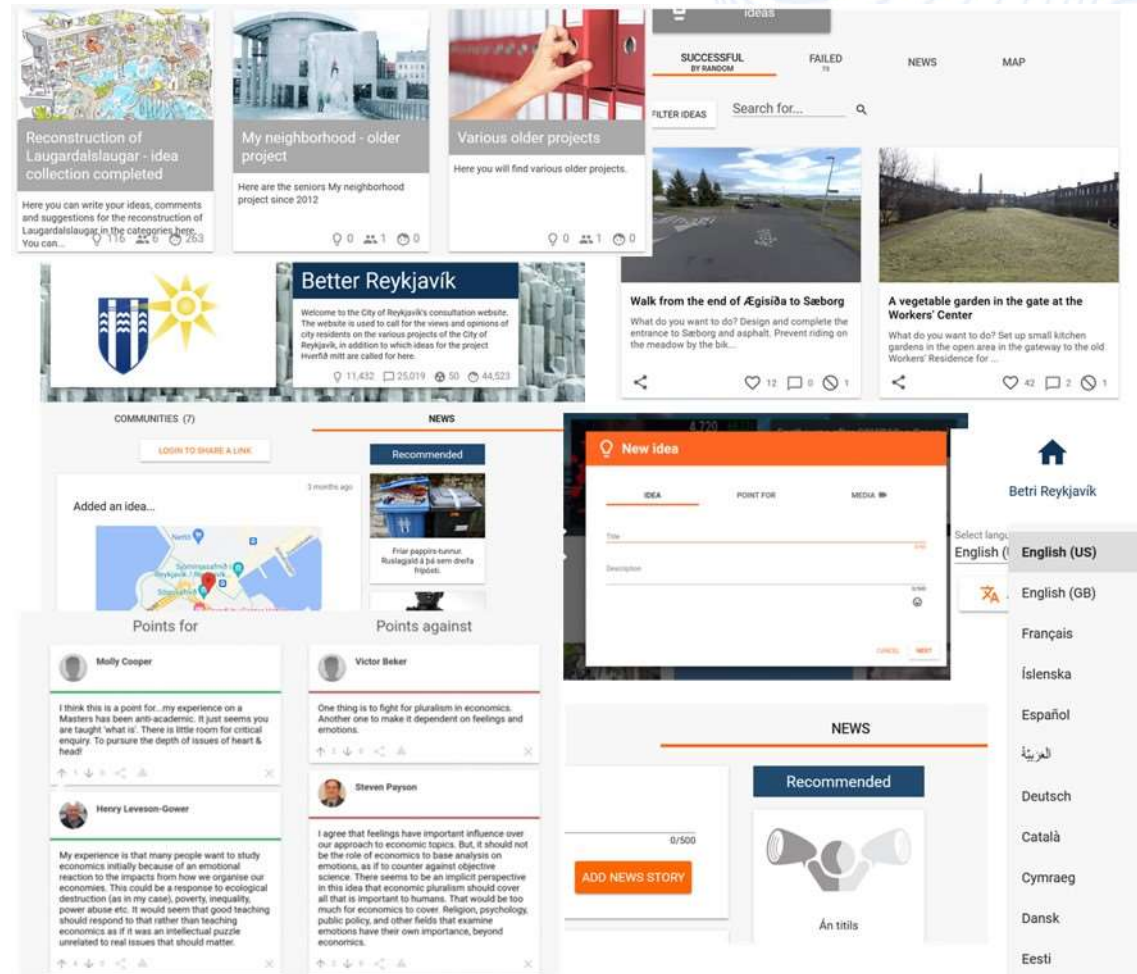
An Overview of Personal Information Management Systems

<https://www.ithaca-project.eu/results/>

ITHACAs main objectives und „selling points“:

Planning and creating an AI-based participatory platform by focusing on accessibility and inclusiveness for vulnerable groups

Example: BetterReykjavik



Screenshots from: <https://betrireykjavik.is/domain/1>; <https://www.citizens.is/your-priorities-features-overview/>;
https://www.citizens.is/portfolio_page/better_reykjavik/

Further Objectives of ITHACA

- To explore and implement innovative ways to support civic engagement in local governance through the use of AI and big data in an ethical and comprehensible way
- To involve citizens with different needs, ages and socio-economic backgrounds in the analysis and design using AI-powered solutions for civic participation
- To address critical aspects such as privacy, transparency, data management, barriers and opportunities for equal participation
- To provide policy recommendations on how to ensure that philosophical, legal and ethical values are embedded in the development of AI-powered technologies that support civic participation

Our Approach: Overview

- **Identification** of vulnerable & marginalized groups and vulnerability criteria
- **Refinement** based on the social contexts in the two pilot cities Martin (Slovakia) and Brasov metropolitan area (Romania)
- **Enrichment** by statistical & demographic data (e.g. Eurostat, national and regional statistics)
- **Recruiting** „representatives“ from NGOs, Associations, Self-help groups, etc. who served as multipliers for reaching vulnerable groups and persons
- **Advertisement** via local newspapers, media outlets and banner to enable the inclusion of the broader public
- **Collecting Data** by focus groups and questionnaires

Our Approach

vulnerable / marginalized social groups

- Elderly / pensioners (e.g. 60+)
- Younger / youth (i.e. 18-30)
- Refugees & Migrants (e.g. Ukrainians, Syrians, etc.)
- Roma people
- People with physical disabilities
- People with mental disabilities and/or problems (e.g. depression, addiction, etc.)
- People in rural areas
- Homeless people
- People of colour
- Women (Pregnant women &) women with young children
- Families with many children (e.g. >3)
- Single parents
- LGBTQIA+

vulnerability criteria / factors

- low income
- poor living conditions
- precarious employment / (repeated) unemployed
- lack of insurance
- low educational background
- limited educational opportunities
- low digital literacy and/or particular need for support wrt to digital platforms
- limited access to infrastructure / mobility
- limited access to cultural program and information,
- social isolation / loneliness
- structural /systematical discrimination concerning participation
- facing physical and/or verbal violence

Recruiting & Selecting Participants for the (two) AI Focus Groups & Citizen Juries

- Part I – Socio-demographics
 - Age, Gender, Highest educational attainment, Current occupation
- Part II – Living and Work Situation
 - Type of household, Size of household, Number of people in the household, Access to internet, transport, amount of money at free disposal
- Part III – Individual / Subjective Vulnerability
 - Affiliation to religious, linguistic, ethnic or other minority, Physical limitations, Mental limitations, Satisfaction with social environment and medical support, Opportunity to use cultural, social, or leisure facilities

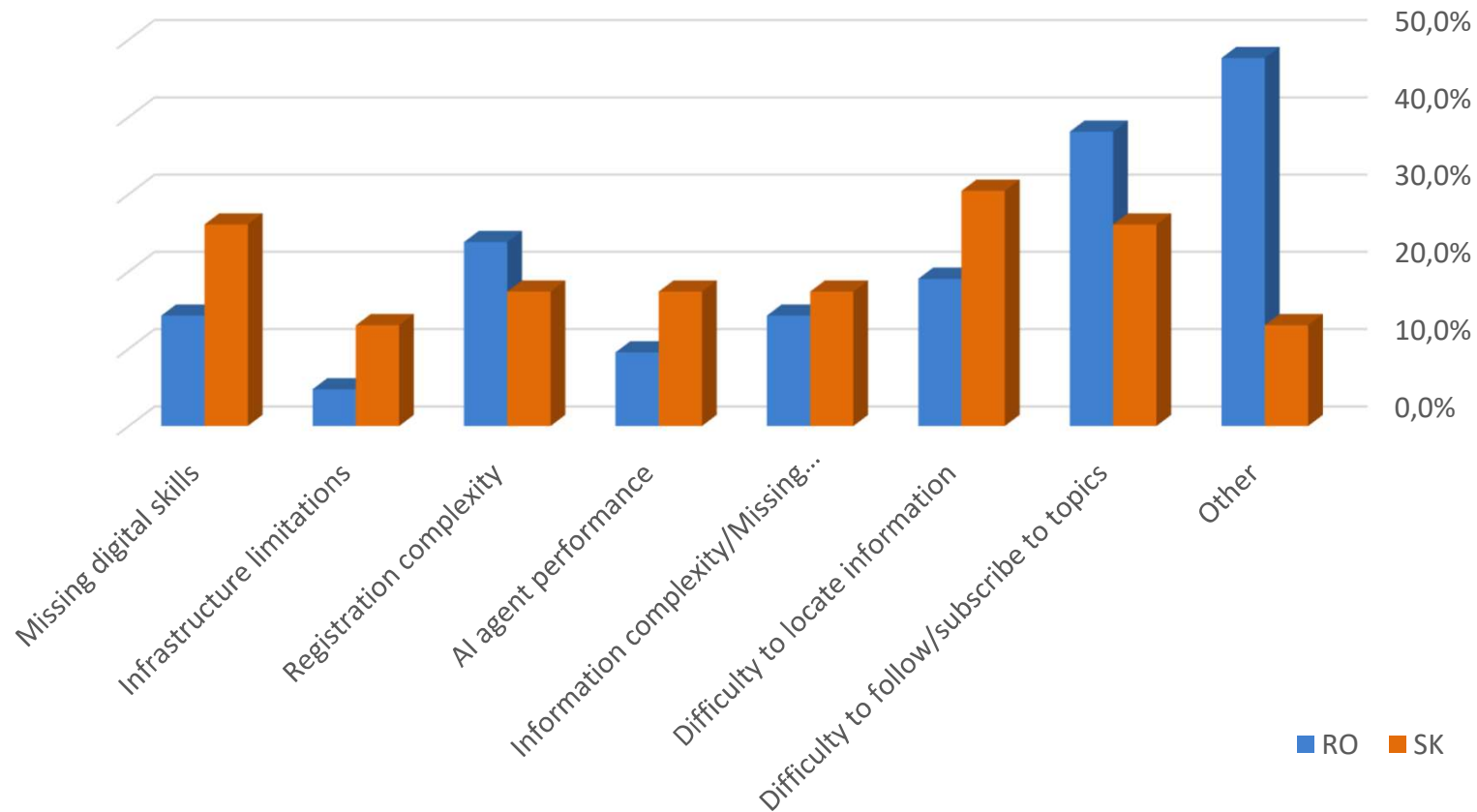
→ As less questions as possible & as many as necessary to recruit diverse AI Focus Groups and Citizen Juries

Focus Groups: AI Citizen Juries

- 2 Workshops (July and December 23) in both Pilot Cities (n ≈ 25+ in each of the 4 Workshops)
- Expense Allowance: 80 € per WS
- Discussions to identify potential harms of AI in the context of civic participation
- Listen to their concerns, risks and challenges
- Discussing strategies, how AI could facilitate their needs and wishes for civic participation



Results of Focus Groups by AI Citizen Juries: Main Technology Barriers



Questionnaire: Platform Requirements of End Users

1) What features / functionalities would you want to have?

Possibility	I would like to have that	I cannot imagine it	I don't want to have that
Recommendations (Recommends topics or posts that might interest you, based on other posts/ topics you liked or commented on)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sentiment Analysis (Determines the sentiment (positive, negative, or neutral) expressed in discussions.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Toxicity sensor / Spam-/Phishing-Post detection (Detects harmful or toxic behaviors or texts in posts, chats or comments and can prevent discrimination, threats or harassments.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Automated reporting and analyzation (Provides statistics about your engagement and impact of your or others' posts to understand the effectiveness of their contributions.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Multimedia posts (Posting and watching videos, photos, locations or voice recordings)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2) How should YOUR posts / comments / contributions be rated/commented by others?

Possibility	I would like to have that	I cannot imagine it	I don't want to have that
Rating (e.g. by 1-5 stars)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<u>Commenting</u>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<u>Upvoting and Downvoting posts</u>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<u>Upvoting only</u>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<u>Reacting with emojis</u>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

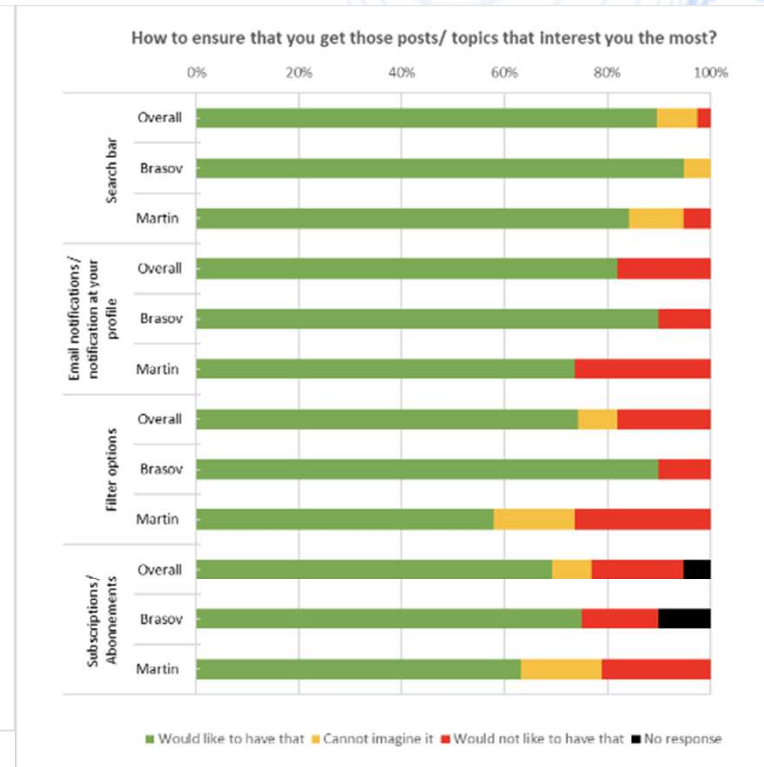
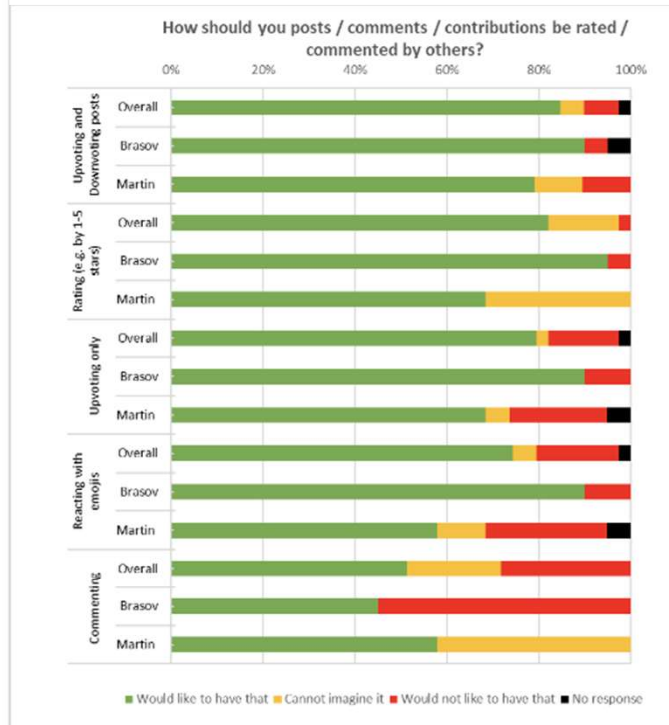
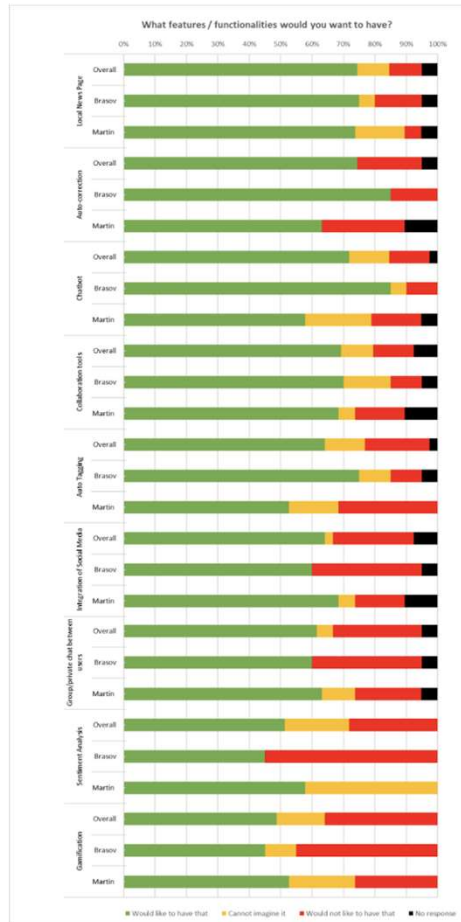
3) A platform with many users and many contributions related to different topics might get chaotic or confusing very soon. **How to ensure that you get those posts/ topics that interest YOU the most?**

Possibility	I would like to have that	I cannot imagine it	I don't want to have that
Search bar (Search for content, topics, posts or tags within the entire platform by entering a keyword or query in the search bar.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Filter options (Filters posts or topics based on their date, location, length, popularity, ...)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Subscriptions /Abonnements ("Following" either Users or Topics)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Email notifications / notification at your profile (Get regularly emails that update you on new content on the platform)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Do you have additional or alternative ideas / are the features or functionalities missing that should be included?

Open-answer field after every cluster of possibilities

Results of the User Requirement Questionnaire:



Conclusions

Elements that contributed to the successful inclusion of vulnerable groups:

- Multipliers (Representatives)
- Expense Allowance, refreshments and snacks
- Open atmosphere and discussion culture
- Honest interest in the AI Citizen Juries voices, comments, ideas & suggestions and feedback
- Continuity (2 WSs, to a large extent the same participants)

The Next Steps:

Agenda of the Current ITHACA-Meeting in Bratislava

Time	Topic	Presenter
10:00 – 10:15	Welcome and Presentation of the Agenda	KT
10:15 – 10:30	Tour de table of the participants	KT
10:30 – 11:00	WP3 - ITHACA platform design and development	KT
15 min Coffee Break		
11:00 – 11:30	WP4 – Pilots’ implementation & evaluation	CERTH
11:30 – 12:00	WP5 – Conformity assessments tools, policy recommendations and guidelines	SnP
60 min Lunch Break		
13:00 – 14:00	WP6 - Dissemination, Communication and Exploitation	PED
14:00 – 14:30	WP8 – Ethics Requirements	KT
Concluding remarks		
End of Day 1		
Time	Topic	Presenter
10:00 – 10:15	Day 2 Welcome and Presentation of the Agenda	KT
10:15 – 11:00	WP7 - Project Management	KT
11:00 – 11:30	Concluding remarks	
End of Day 2		

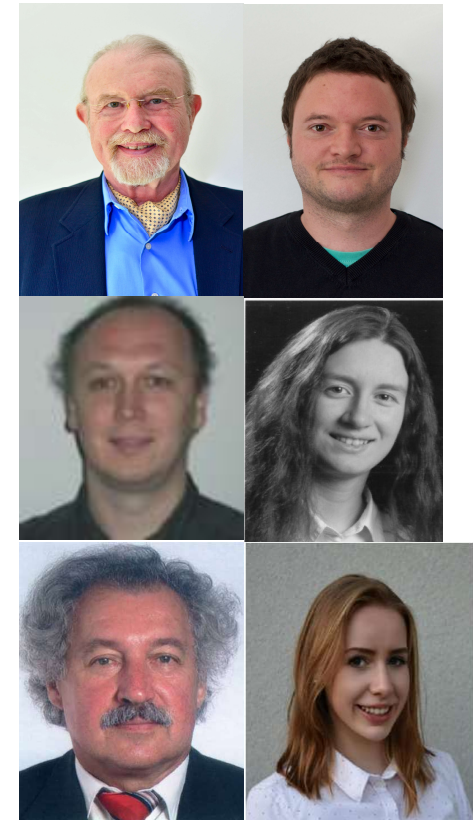
Take Home Message about the ITHACA-Project

- https://www.ithaca-project.eu/wp-content/uploads/2023/10/ITHACA_MAIN_RENDER_10.mp4



CSS-Team of ITHACA

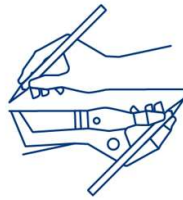
- ALBERT Dietrich, Senior Scientist, Head of CSS
 - BEDEK Michael, Post-Doc
 - NUSSBAUMER Alexander, Post-Doc
 - PRÜNSTER Stephanie, Office Assistant
 - WEICHSELGARTNER Erich, Senior Scientist
 - ZANGL Maria, PhD-Candidate
- BINDA Gunnar, Senior Scientist (team member in 2013)



Thank you!

If you have any further questions that come up in the following days or if you are interested in the ITHACA project, please do not hesitate to contact

[\[dietrich.albert, michael.bedek, maria.zangl\]@uni-graz.at](mailto:{dietrich.albert, michael.bedek, maria.zangl}@uni-graz.at)



ITHACA
AI To Enhance Civic Participation

<https://www.ithaca-project.eu/>

<https://cognitive-science.at/projects/ithaca/>