

In the framework of the upcoming **Global Forum 2022**, that will take place on **17 & 18 October 2022**, in **Muscat, Oman**, a series of preparatory thematic webinars, featuring contributions, reflections and dialogue among key experts and interested stakeholders, are organized.

This report sums up the discussions of the Global Forum Thematic Webinar VII.

Global Forum Thematic Webinar VII

June 15th, 2022

Local Democracy

Digital Accessibility & Assistive Technologies

The Future of Digital Identity

Participants (42):

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The Global Forum Thematic Webinar VII on "Local Democracy; Digital Accessibility & Assistive Technologies; and the Future of Digital Identity" took place on June 15th, 2022 from 13:30 to 15:00 Paris time via Zoom.

It was a most inspiring webinar featuring great minds from around the world who shared deep expert insights and forward-thinking thoughts on central societal questions. The participants engaged in very interesting and expanding discussions on topics that are usually not addressed much within the Global Forum.

It was the seventh of a series of live webinars (the next one will be in September 2022) devised for the purpose of feeding the framework of the upcoming Global Forum 2022.

Agenda

Welcome and Introduction

Local Democracy / Digital Accessibility & Assistive Technologies /

The Future of Digital Identity

Tufool Abdullah Mohamed Al Dhahab, Head of the Industry Development Department
Ministry of Transport, Communications and Information Technology - MTCIT, Oman

Alfredo Ronchi, Secretary General EC MEDICI Framework, Italy
‡ Interface Interaction design for elderly people

Cid Torquato, One of the leading formulators of inclusive public policies in Brazil
‡ Digital Accessibility and Assistive Technologies

John Erik Setsaas, VP of Identity and Innovation, Signicat, Norway
‡ The Future of Digital Identity

Antonella Valmorbida, Secretary General ALDA – The European Association for Local
Democracy, Belgium
‡ Local Democracy and Citizen Engagement

Hugo Kerschot, Founder & Managing Director, Is-Practice, Belgium & Project manager of the
DUET project
‡ Digital Twins for smart cities, some EU pilots

Concluding Remarks

Welcome and Introduction

Ingrid Andersson, moderating, together with Sylviane Toporkoff, welcomed the participants to this 7th Global Forum webinar and reminded that there will be a last webinar in September before the Global Forum 2022 event in Muscat.

Preparations for the Global Forum event in October are advancing well. Covid-19 restrictions have been lifted in Oman. The Global Forum 2022 will be organized under the high patronage of the Ministry of Transport, Communications and Information Technology of Oman.

Tufool Abdullah Mohamed Al Dhahab, Head of the Industry Development Department Ministry of Transport, Communications and Information Technology - MTCIT, Oman, welcomed the participants and emphasized that it is a great pleasure and honour for the Ministry of Transport, Communications and Information Technology to welcome and support the Global Forum 2022 in Muscat, Oman, on 17 and 18 October.

Digital Accessibility & Assistive Technologies

Alfredo Ronchi, Secretary General EC MEDICI Framework, Italy, **elaborated on interface interaction design for elderly people**. The target group of human-computer interfaces for elderly people comprises retired persons (Third Age) as well as elderly people (Forth Age) both with or without disabilities. The first group is mainly composed of people being able to work, interact and carry out the usual tasks.

A research project carried out under the umbrella of the ITU extended the scope to children hospitalized for long time, persons affected by chronic diseases or allergies and persons in need of assistance, such as women subjected to violence in a broader sense. This enlarged scope will have a major impact on the research outcome of the project.

Chronic diseases may represent some of the key aspects when dealing with third and fourth agers. Chronic conditions have persistent or recurring health consequences. They are illnesses or impairments that cannot be cured. Some of the most prevalent chronic conditions, such as sinusitis or hay fever, are generally not disabling—however, others, such as heart disease and arthritis, can cause significant limitations in people’s ability to perform certain basic activities of daily living. Thus, in addition to medical services, people who have chronic conditions often need personal, social, or rehabilitative care over a prolonged period of time.

Interaction design is defined as the design of interactive products that are able to support humans in their working activities and everyday tasks. Interactive products are everywhere in our everyday life at various levels and for various tasks, such as smartphones, coffee machines, personal organizers, remote controls... However, how many of those devices are really easy and enjoyable to use? The list is probably rather short due to improper interaction design.

Another definition of interaction design as about shaping digital devices for people’s use, alternately defined as the practice of designing interactive digital products, environments, systems, and services. The process in interaction design usually involves different points:

understanding the interactions and the potential users, understanding how interfaces may influence the users, identifying users' needs and requirements, applying user-centred design processes, design prototyping and digital mock-ups, and finally, evaluating and assessing the results. It also involves using evaluation schemes, tracking users, interviewing experts and users, and finally testing the user profile modelling.

Interaction design aims is to discover the users' goals and thus is concerned with defining how the forms of products relate to behaviour and use, anticipating how the use of products will mediate human relationships and affect human understanding.

“Seniors” differ from the average computer user. Of course, such definition will evolve through time (with seniors becoming more and more computer-skilled) even if some aspects mainly due to the aging process will persist.

Accessibility is one of the key aspects in terms of enabling a proper use of services to visually and hearing-impaired people. Size, colour combinations, motions and effects must be carefully taken into account when designing the interface. In addition, seniors tend to better learn short sequences of actions (commands). In general, they don't want to understand the logic of applications but prefer to directly connect one of few “actions” to the activation of the required service.

Tests have shown that elderly people prefer taking paper-based notes concerning information or the number to type to quickly access the required service (e.g., a videoconference system to contact relatives, make a phone call, access a photo group etc.). One of the most relevant concerns expressed by potential users is the risk of damaging the system, blocking the application or getting lost in the cyberspace. These elements have to be carefully considered in the design phase. One of the key aspects is to create a kind of general reset option taking the senior user back “home” in case something happens when using the application.

Cid Torquato, CEO at ICOM Libras, Former Deputy Secretary for the State of Sao Paulo for the Rights of Persons with Disabilities and Former Municipal Secretary for the Persons with Disabilities in the City of Sao Paulo, **addressed the issue of digital accessibility and assistive technologies.**

As stated by Ban Ki-moon, Former Secretary-General of the United Nations: “Our challenge is to provide all people with the equality of access they need and deserve”. If we do not achieve the accessibility goals we want, we will not have the society we are aiming for.

Accessibility is very important. Nevertheless, it is not valued enough. Worldwide one billion people experience some form of disability and yet less than 10% of them have access to digital accessibility and assistive technologies. This is a major issue, and although the United Nations created some worldwide buzz after the World Summit on the Rights of Persons with Disabilities, there is still a lot of work to do. People with and without disabilities are still not treated equally.

In Brazil, around 10% of the population is experiencing some form of disability, which represents around 22 million persons. About 60 million Brazilians are in need of digital accessibility. There are 14 million websites in Brazil and less than 1% are digitally accessible. This merely reflects the situation worldwide. Even in the USA, which is rather advanced in terms of accessibility, the percentage of accessible websites is low. This situation is alarming. In a world which becomes more and more digital, the lack of accessibility is a major problem.

The City of São Paulo has become the most accessible city in Brazil. One very important initiative was to create a Digital Accessibility Certification in 2019. It represents a good way to show who and what is accessible. Up to now only few countries have implemented this kind of certification, although it is an important instrument to move forward in terms of digital accessibility. Another initiative was to create the first Brazilian regulation on digital accessibility based on the Web Content Accessibility Guidelines of W3C and in collaboration with the Associação Brasileira de Normas Técnicas, a Brazilian association for technical regulation. These two initiatives are changing the scenario of digital accessibility in Brazil.

The NGO ICOM Libras provides access to Brazilian Sign Language Interpreters via videocall. ICOM Libras connects deaf and hearing people online and simultaneously. The service is available through several channels, mobile phones, tablets and computers. The deaf person is connected via video and signing to the interpreter who relays the message via spoken language to the hearing person. The hearing person can reply in real time to the interpreter who translates into signs for the deaf person. ICOM already answers more than 1 million video calls per year, which is an impressive figure for Brazil. Up to now, this type of service is available in only few countries, although it is a fundamental service in order to include the deaf community.

We have to pursue the establishment of an 18th UN Sustainable Development Goal “Accessibility for All”, in order to treat accessibility with the importance it deserves.

Sylviane Toporkoff wondered whether big companies are showing interest in working in this area of digital accessibility and assistive technologies.

Alfredo Ronchi confirmed that due to the IoT and the increased use of smart home devices, companies are much more interested in adding functions to their own IoT devices in order to improve the services they provide to seniors. Moreover, there is an increasing interest due to the need to reduce the cost for health and welfare. The use of AI and mobile devices to move health assistance from the hospital to the home, and thus to increase the number of people that are cared at home, is a general trend. Companies are interested in supporting this trend by providing new tools and devices.

Cid Torquato explained that diversity is a hot topic these days especially among the big multinational companies. There is a good response from such companies in Brazil in terms of digital accessibility and inclusion in general. Moreover, the federal and states governments are playing important roles in giving persons with disabilities more opportunities. In Brazil, big companies are complying and are interested in this topic.

Regarding persons with disabilities in Brazil, there are also more and more start-ups working in the area of digital accessibility and assistant technologies. As demand is growing, more and more companies are interested in participating in this field.

The Future of Digital Identity

John Erik Setsaas, VP of Identity and Innovation, Signicat, Norway, **provided an insight in the future of Digital Identity.**

In 2005, Kim Cameron compiled the 7 laws of identity (with identity meaning to prove who you are in a digital context), which are still very relevant today (for more information, see <https://www.identityblog.com/?p=1065>):

1. User control and consent.
2. Minimum disclosure for a constrained use.
3. Justifiable Parties.
4. Directed Identity.
5. Pluralism of Operators and Technologies.
6. Human Integration.
7. Consistent Experience Across Contexts.

We are still living very much in the past regarding digital identity: there are too many logins and too many passwords, with each login requiring a new password for each and every organization and service. This is a challenge both for the service providers who need to collect the information and the users who have to manage too many passwords and accounts.

There are more and more eID Providers, such as bankID—a widely-used method of electronic identification in Norway. In this case, the service providers do not need to find out each time who the user is, as they talk directly to the eID provider. Users can use the same credentials for many uses which benefits both the user and the service provider.

However, the user does not know what information is shared between the eID providers and the service providers, especially when signing in for Facebook, Google, LinkedIn, etc. This raises once again the question of security and privacy, because the eID providers will know each time a user is logging in for a service.

The concept of the “Identity Wallet” promotes a user-centric approach which puts the user in control. The users decide what information they want to share with the different parties. The user will have a mobile identity wallet, probably a mobile app, and shares directly with the service provider. In this case the issuer does not know the reasons for using the data.

The identity wallet can store data from multiple issuers, ranging from driver licenses, health data, credentials from the government, membership clubs... and those elements can be presented to the service providers based on the users’ choices.

One important aspect of the identity wallet are verifiable claims, i.e., the possibility to share something without revealing everything: for example, proving that a user is over 18, a user’s citizenship, marital status, birth date, photo, etc. without revealing anything else. A concrete example of a verifiable claim could be that a user is eligible for a rebate for public transportation without revealing the reason for this.

The identity wallet provides better security as it enables anti-tracking and thus prevents anyone to know what data the user shares and with whom. It also offers improved privacy (privacy-by-design) and enables a user to provide a proof for something without revealing

other information. Moreover, it puts the user in control as there is no central authority or (vulnerable) data store. The users decide about sharing and managing their own data. The identity wallet is user-friendly and inclusive. Identity wallets provide ease of use for both the users and the services providers.

The concept of identity wallets is recognized all over the world. Gartner calls this concept “decentralized identity” and foresees a huge take-up of this concept in the coming 2 to 5 years.

In 2020, the European Commission stated that they will propose a secure European e-Identity that the European users could control by themselves. This was an important statement, which was later followed-up by the new regulation eIDAS 2.0 (electronic IDentification, Authentication and trust Services) which talks specifically about the identity wallet. The European Union invests a lot of money in this field in order to fund large scale pilots, to prove the technology, and test it out throughout the Member States.

Gérald Santucci wondered whether the concept of the identity wallet is very distinct from the work on self-sovereign identity (for which exists a W3C standard). Moving forward, experts are also looking for disposable SSID. DSSIDs are temporary attribute-based identities integrated in a smart contract (blockchain) between a receiver and a supplier of a service.

John Erik Setsaas explained that upcoming EU framework is inspired by self-sovereign identity. Self-sovereign is taking it to the more extreme and is now pulled back to more practical application. Both concepts are definitely related. However, it doesn't have to be blockchain based, even if blockchain is often part of the discussions it is not necessarily required.

Gérald Santucci proposed to put the discussion in a longer-term perspective. At its basic level, identity is the perception individuals have about themselves. Then, identities were issued by the government: the passport, the driver's licence, etc. Today, we have online identities which requires an online identity management (see Facebook, Netflix, Amazon etc), and we have to make sure that it involves a trusted institutional third party. Users have to entrust their data to the issuing authority—which requires trust in the identity providing third party.

Moreover, self-sovereign identity allows to have identities based on purpose and context. Disposable SSIDs would let people chose a trusted third party for a specific context.

Another interesting aspect with respect to identity could be to discuss ‘things’, i.e., the IoT. We are moving to a virtual world to which the real world is more and more connected to (see Metaverse) and IoT devices have identity considerations. Are there IoT SSID scenarios where the disposable/ contextual aspect comes into play? In this virtual world we are heading to will be more than 25 billion connected devices. Every device (thing) is likely to be given an ‘identity’ to communicate between all of them and with humans. Hence, the issue of identity applies to these smart objects. How to handle this point? Should we? Our discussions need to address those points research is heading towards today.

Alfredo Ronchi stated that a group of people is currently working on the attribution of a digital identity to AI applications in order to collect certificates in the digital wallet and to improve transparency and trust in the field of AI and machine learning. These are still a kind of black boxes, thus the idea of adding a certification to ensure that they are compliant with EU regulations, that they are not threatening citizens etc. In this context, the idea to add cyber-IDs to cyber objects is very interesting.

John Erik Setsaas underlined that the eIDAS regulation states that each state shall provide a digital identity wallet to all citizens free of charge. In this respect, the government is responsible for issuing, and it is important to have a strong binding between the physical individual and the digital wallet. This leads to a number of challenges, for instance the question of accountability. If you want to have anonymity, you can't have accountability. There are more and more cases that concern regulated businesses (banks etc.) where it is important to know who people are. We need to have mechanisms that allows people to be private, to limit the sharing, but at the same time include some sort of accountability in case the person violates the terms of conditions.

Stéphane Grumbach added [via chat] that there is a balance between the freedom of choice given to people (e.g., what data they want to share) and the norms imposed by the government that apply to all. But the choice given to people has to be useful.

John Erik Setsaas added [via chat]: As citizens we have freedom, but also responsibilities and we need to be held accountable for our actions. This is a difficult discussion—and different from country to country, among other things based on the trust in society in general.

Stéphane Grumbach [via chat] agreed that it is culture dependent. On many issues one can understand people will make different choices and it makes sense—but on sharing data, what would be the use?

John Erik Setsaas [via chat] wondered how to prevent the service providers from collecting too much info? Regulation (like GDPR) is necessary, but is it sufficient?

He also shared the following link <https://ourworldindata.org/trust> and proposed that one attribute in the digital wallet could be "User is alive: yes/no".

Local Democracy

Antonella Valmorbida, Secretary General of ALDA – The European Association for Local Democracy, Belgium, **presented a European organisation promoting local democracy and citizen engagement and some of its projects.**

ALDA (350 members) is working on the concept of citizen engagement at a local level, mainly with local governments, councillors and civil society leaders in the EU-27 Member States, but also in the neighbourhood of EU (i.e., the Mediterranean area from the Maghreb to the Middle East and Eastern Europe).

The European Support to Local Democracy (ESLD) is ALDA's flagship initiative, kicked off with the adoption of the Strategic Plan 2020-2024. The document includes all of ALDA's activities and a panoply of instruments supporting local democracy from an institutional and civil society viewpoint. ESLD comprises hundreds of projects, participants and stakeholders from Europe and beyond. ESLD also promotes cooperation in order to reach the Sustainable Development Goals and EU key objectives.

During the last years, ALDA has developed its digitalisation perspective. Digitalisation goes with challenges and opportunities. However, investing in digital means to be ready to change and improve skills, knowledge, processes, and guidelines to innovate and to be more resilient. Though, digitalisation and inclusiveness require both a digital and cultural approach, which has to be embedded into a long-term strategy. In order to build such strategy, it is important

to involve all stakeholders, set up a support to facilitate the process, and ensure digital security and data protection.

ALDA's P-CUBE project is an educational digital game teaching students, professionals and public officials the theory and practice of public policy. The project aims to raise awareness of the importance of developing multi-disciplinary skills in the area of policy making. P-CUBE primarily addresses students, but also decision-makers, urban planners, NGOs, CSOs, social workers, and scientists, in order to familiarize these groups with the specificities of public decision making and illustrate the kind of decisional strategies that can be employed by the promoters of policy innovation.

The Horizon 2020 project SHERPA (Sustainable Hub to Engage into Rural Policies with Actors) is designed to gather relevant knowledge and opinions that contribute to the formulation of recommendations for future policies relevant to EU rural areas. SHERPA uses results of on-going and past research projects to engage citizens, stakeholders, policymakers, and scientists in the development of strategic thinking and practical recommendations for the formulation of modern rural policies.

PART-Y (Participation and Youth: Lab for Equal Cities) seeks to engage, connect and empower young people, to support educators, youth workers, educational leaders and support staff, and to strengthen common values, civic engagement and participation. The project aims to trigger the participation of young people in civic life by fostering their inclusion in the political decision-making process and promoting the concept of 'generation equality' introduced by the UN entity for gender equality UN Women.

Sylviane Toporkoff wondered whether ALDA is also addressing the issue of voter abstention which becomes a real problem in several countries worldwide.

Antonella Valmorbida confirmed that ALDA is working on this question by creating the right conditions for elections in a way that citizens get all the information they need and get encouraged to vote. ALDA is working on pre-election preparation in the EU but also in other countries.

ALDA also works on governance in general. The reason why people don't vote is that there is a breach of trust, which means that the participation mechanism is broken. High voter abstention means that people do not trust and have no interest in interacting. ALDA is helping local governments to restore these mechanisms by building an atmosphere of transparency, trust and sense of leadership. In fact, abstention is a sign that the trust in public authorities and policies is damaged.

ALDA mainly works with local communities (which are ALDA's members). Together with local communities and the civil society, ALDA puts in place instruments for dialogue and participatory mechanisms. In some cases, ALDA is also asked to advise national governments, e.g., Algeria, Tunisia or Morocco, which are implementing processes of decentralisation.

Paul Wormeli added that trust is the fundamental issue. People have to believe 2 things: First, that the government can influence people's wellness, and secondly that they will. If the perception is that policy won't fix things, then nobody cares about elections. And if the perception is that even if they could, they won't, then people further discredit the government and lose trust in institutions and government.

Walid El Abed stated that, even in modern democracies, governments are just making laws and distributing money. The question is, is this really what people want? Or do we need a vision of where we are going together? We have to align with the natural properties of humans. With respect to identity, the only valid identity of humans is their body in the space, everything else is just an extension of the identity, and this has to be protected.

Hugo Kerschot, Founder & Managing Director, IS-Practice, Belgium, and project manager of the H2020 DUET project, **introduced the concept of using Digital Twins for smart cities as a supporting tool to foster citizen engagement.**

DUET (Digital Urban European Twins) is an EU H2020 project which leverages the advanced capabilities of cloud, sensor data and analytics in the form of digital twins, to help public sector decision-making become more democratic and effective.

A digital city twin is comparable to the industry's digital twins: a digital representation of a physical asset to experiment with. Digital city twins bring entrepreneurial thinking, agile processes and open innovation to government decision making—they represent a tool for better policy decision making and citizen involvement.

However, a digital city twin is more than just the 3D visualization of a city and a connection with sensors. Combining 2D/3D terrain data, IoT, predictive data models and visualizations are the key to simulate the impact of an eventual decision on a city.

The project received international recognition and several awards, and the EC proposed to use the DUET platform as a demonstrator for European cities to experiment with digital twins.

DUET is realising digital city twins in the three pilot cities Gent (Belgium), Athens (Greece) and Pilsen (Czech Republic)—each of them covering different geographical scopes, spatial challenges, and policy needs.

The city of Gent implemented the digital twin to help the city and its stakeholders explore correlations between mobility, health and air data. For instance, the digital twin simulates the impact of a bridge closure due to roadworks on traffic, air and noise pollution. Based on mobility models and information from sensors, it is possible to simulate how air quality and noise will change in certain areas.

The Patton bridge in the city of Pilsen was closed during almost 1 year and the city used the simulation to communicate with the citizens how this closure impacts the traffic in order to help the citizens adapting and anticipating traffic conflicts.

Such simulation requires good data, a good model of the city, and a number of sensors. The dashboards developed in the DUET project help visualizing the different situations and make them easy to read.

The architecture of DUET is based on a very open scalable technical concept. The open platform can host different data sources and models to create the pilots in the different cities.

Another interesting use case is the one in Flanders: Citizens put small camera devices on their windows in order to measure the traffic volume around schools (i.e., what kind of traffic at different times of the day). The concept is GDPR approved and this use case led to the emergence of a new project: The CompAIR project, which has been recently launched

together with some of the DUET project partners, is focussing on air quality in city environments, based on citizen engagement and citizen science.

Gérald Santucci commented [via chat] that: 1) Things become smart/connected, i.e., they tend to become ‘subjects’ (like human beings). 2) Humans are developing their ‘avatars’ in the Metaverse. 3) Every Human and/or Thing can have its ‘digital twin’. These 3 evolutions (probably there are more) are very important and could be further explored by the Global Forum, in particular with the point of view of industry in terms of the evolution of internet, identity, security, privacy... In the local context, the potential of digital twins looks tremendous (if there is good data and the right models).

François Belorgey [via chat] pointed out that understanding/ visualizing an environmental impact thanks to IoT is not green by itself: it generates carbon by its very existence (building and running), and it may generate green consequences only if it leads to decisions that reduce CO2. That has to be measured, with follow-up in time, for each installation. Do the users actually do something green thanks to this service? Multiplying sensors may be one of the worse environmental things to do if no action is taken ... IoT or information is not green. Measuring air quality for example, and only that (“measuring”), increases CO2. Only action taken based on information may be green.

Concluding Remarks

Sylviane Toporkoff, together with Ingrid Andersson, thanked the speakers and participants for these great discussions on topics the Global Forum usually doesn’t address enough, such as how do we protect people, how do we protect people’s identities and people with specificities, minorities and vulnerable people, or how to make their voice heard in this difficult world? Such discussions have to be encouraged because it is a vital part of the Global Forum’s network community—it is about shaping the future, the future of our planet. Some of the today’s discussions would definitely be good for a roundtable discussion during the Global Forum event in Oman.

The moderator reminded the **upcoming Global Forum Thematic Webinar in September on AI and Ethics (date TBC)**.