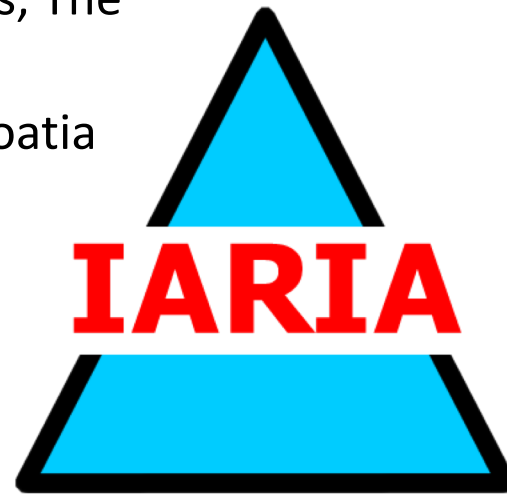
Panel debate on
Challenges on Accessibility to Digital Services

Rome, Italy, 26.03.2018

Panelists:
Lynne Zucker, Vice-President of Clinical Systems Integration, Canada Health Infoway / Inforoute Santé du Canada, Toronto, Canada
Martijn Hartog, eSociety Institute of The Hague University of Applied Sciences, The Netherlands
Lukas Smirek, Stuttgart Media University, Germany
Arian Rajh, Croatian Agency for Medicinal Products and Medical Devices, Croatia
Jon Sanford, Georgia Institute of Technology, USA

Moderator:

Lasse Berntzen, University College of Southeast Norway, Norway



Moderators Summary

Lasse Berntzen

University College of Southeast Norway

From the moderator:

- It is both a pleasure and a challenge to moderate a panel coming from different backgrounds with different perspectives. The panel theme was Challenges of Accessibility to Digital Services. Accessibility is often confused with availability (and even availability has different meanings, like uptime of systems).
- The following two slides shows some of the issues raised by the panel. I also included a slide showing my ideas about prerequisites for participation in the Digital Society.
- Each participant was asked to provide a few slides. You will find them below, and I hope you will get some nice ideas from reading them.

Accessibility

- Accessibility is about overcoming human impairments.
- It is important to take accessibility into account when designing products, services and processes.
- Accessibility is embedded in current operating systems platforms and mobile devices (e.g. iPhone).
- The challenge is not access to information, but ability to understand the information.
- Therefore efforts to implement “plain language” policies are important.

Availability

- Availability is about having access to technology.
- This is important for applications like healthcare (remote care)
- New sensing platforms can collect data about patient condition and send to relevant medical authorities.
- But technology is more than ICT. Technology can help patients live in their homes instead of moving to institutions. Technology may help patients go to bed when they want, take a bath without assistance, and take their medication at right time.

The Preconditions for Participation

- Accessibility is about overcoming human imperfections.
- Availability is abot access to technology
- In order to take part in the digital society, the following needs to be in place:
  - Infrastructure (network)
  - Access to technology (PC, mobile device)
  - Accessibility
  - Knowledge on how to use (training)
  - Legal framework (privacy, freedom of speech)
  - Technology to support legal framework (sign in, encryption)

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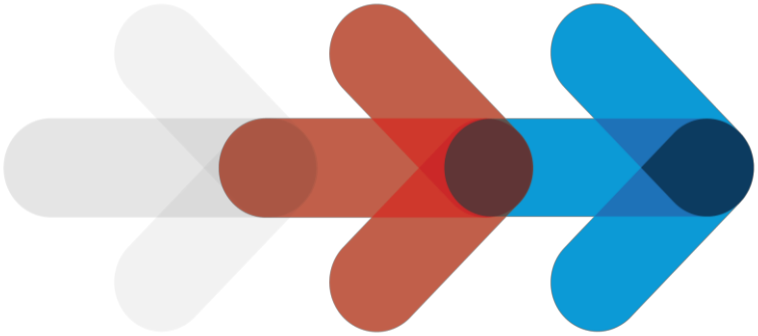
Challenges on Accessibility to Digital Services

eTelemed 2018
Rome, Italy
March 26, 2018

Lynne Zucker
Vice President, Clinical Systems Integration



Canada Health Infoway | Inforoute Santé du Canada

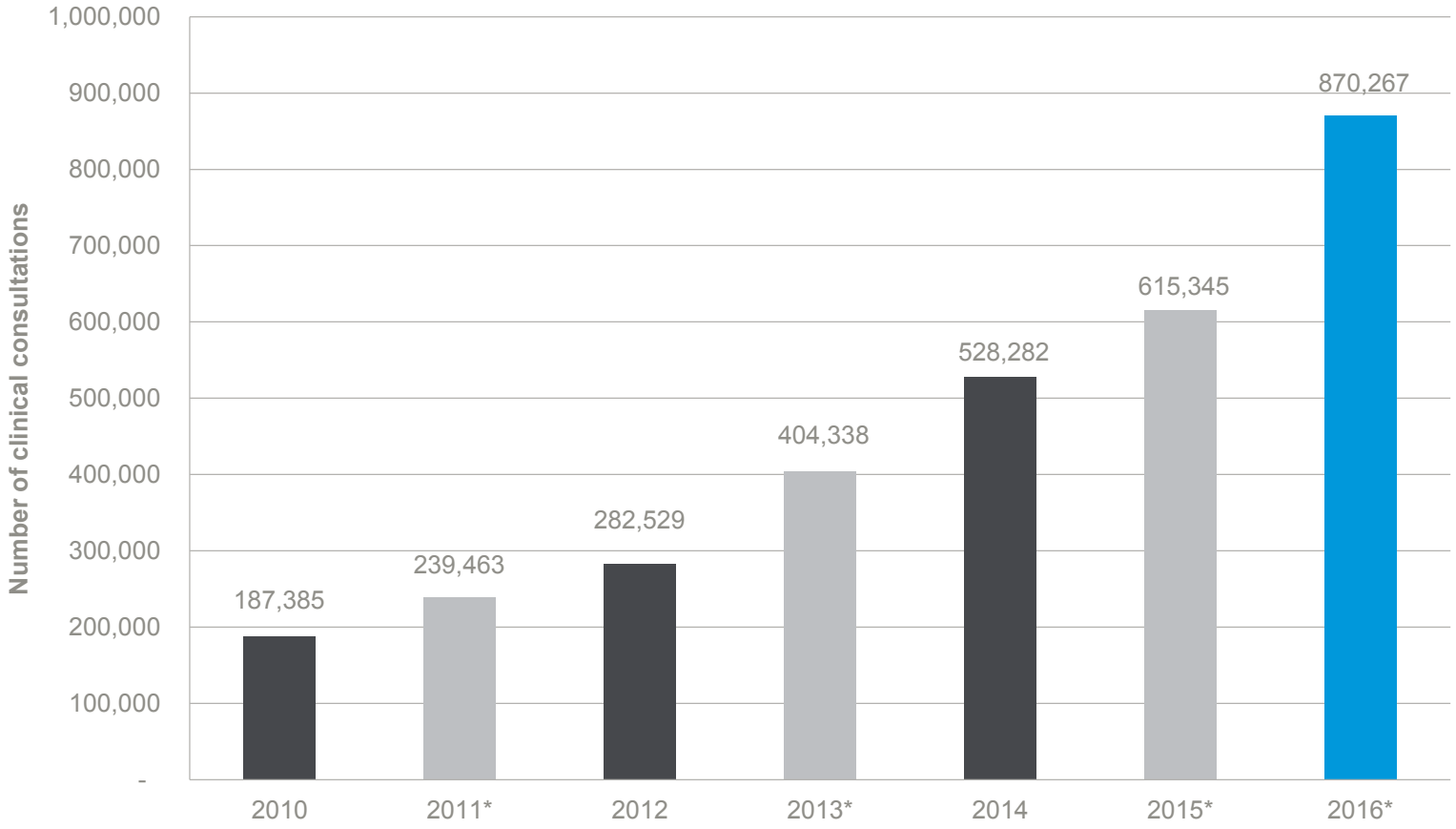
Canadian Context for Telehealth

- A concentration of specialists in and around major urban centres
- Canada's vast geography makes it difficult and costly for some patients and clinicians to connect face-to-face
- Canadians living in rural or northern areas must often travel long distances to access specialized health care

Telehealth Improves Access for Canadians Living in Rural and Remote Communities

- In 2016, telehealth saved rural Canadians nearly 218 million kilometres of travel, representing:
  - 26 million litres of gasoline
  - Nearly 60 million kilograms of $C0_2$ emissions (equivalent to taking more than 12,000 cars off the road)
- Significant improvements to timeliness of care received:
  - Wait times for some dermatology programs decreased from seven weeks (49 days) to 10 days
  - Teleophthalmology wait times decreased from about 25 days to less than two days
  - Telecrisis, telewoundcare and tele-endocrinology also experienced reduced wait times
- Patients saved approximately $325 million in personal travel costs

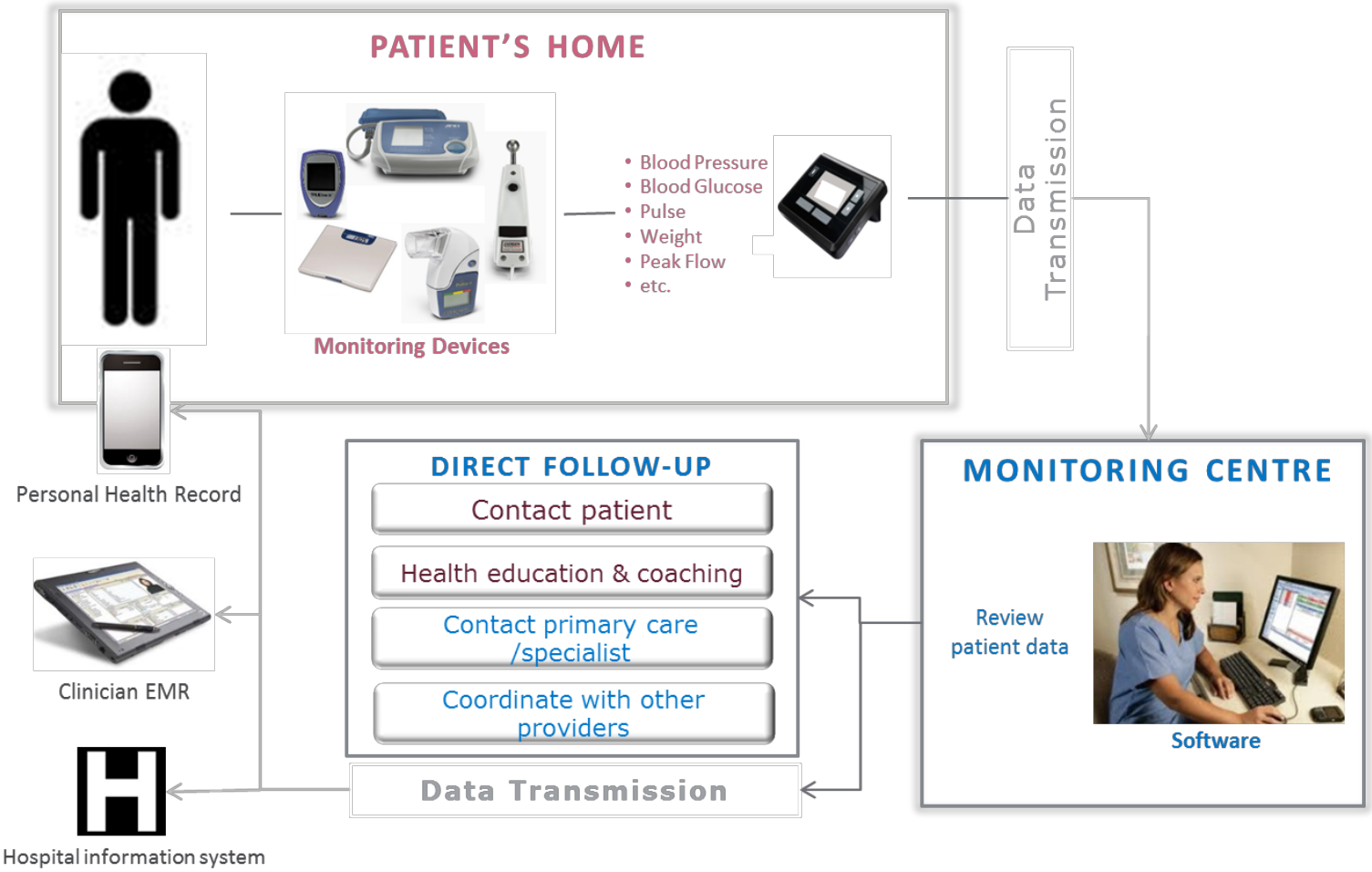
Growth in Telehealth use Since 2010



*Estimated values based on updated data provided by the Ontario Telemedicine Network.
Source: Pan-Canadian Telehealth Survey 2010, 2012, and 2014, Canadian Telehealth Forum of COACH

Telehomecare: The Intersection of Technology and Patient Empowerment

How Does it Work?



Telehomecare Patient Experience Survey

183 patients responded over a six-month period

"The program gave my mother the opportunity to recover in the comfort of her home. This was a major contributor to her recovery. It was also a great relief and support as a caregiver to be able to recognize and control potential crisis/anxiety with this condition. It gave us hope that my mother would survive her illness. We always received quality advice and speedy assistance!"

- Caregiver for patient enrolled in OTN Telehomecare program

- **Satisfied with quality of care, teaching and coaching** (99%)
- **Would recommend program to others** (97%)
- **Better quality of life** (88%)
- **Less need to visit an ED** (86%)

% Strongly/Moderately Agree

Source: Ontario Telemedicine Network Patient Experience Survey (2016)

Telehomecare → Virtual Care

- Tools and programs at providers' discretion depending on acuity of patients
  - Referrals based on care pathways
  - Apps for self-management and prevention
  - More intensive interventions for those with higher acuity and specialized needs
  - Improve access, comfort and convenience for patients

Looking Ahead: Kaiser Permanente

- More than half of the interactions between Kaiser Permanente physicians and members were conducted virtually

- In 2016, 52 per cent of the integrated health system's 110 million physician-member interactions took place via smartphone, videoconferencing, kiosks, or other technology tools

37 million test results

17 million electronic prescription refills

20 million emails to providers

Big White Wall

Post a Talkabout

Talk to other Big White Wall members who may be experiencing the same thing as you.

Create a Brick

Express your feelings by creating a Brick using pictures and images.

Assess Yourself

Take assessments to set goals and track your progress.

Find Useful Stuff

With over 200 articles on Big White Wall, you can understand more about how you are feeling.

Join a Program

Register for on-line guided support courses using recognized therapies.

Make Friends

Connect with other Big White Wall members who feel like you so you can support each other.

First Nations Personal Health Record – National Expansion

- Closing the Circle of Care initiative will deploy a Community Electronic Medical Record (cEMR) Personal Health Record (PHR) for First Nations citizens and their providers
  - 226 First Nations communities in 10 jurisdictions

- The citizen health portal gives people direct access to their health record and their health care team. It enables them to:
  - Know their health information (plus get assistance in managing it)
  - Access it from wherever they are
  - Contribute to their health record
  - Share their information securely
  - Have two-way messaging with their health care team

Mustimuhw Community Electronic Medical Record

Mustimuhw Citizen Health Portal
A Personal Health Record (PHR) Solution

Canada Health Infoway
Inforoute Santé du Canada

Thank You!

connecting life-world of citizens with systems-world of professionals

structural engagement and empowerment of a participatory society

introducing sheets as panelist on
'Challenges on Accessibility on Digital Services'
at
International Conference on Digital Society and eGovernments (ICDS)
International Conference on eHealth, Telemedicine, and Social Medicine (eTELEMED)

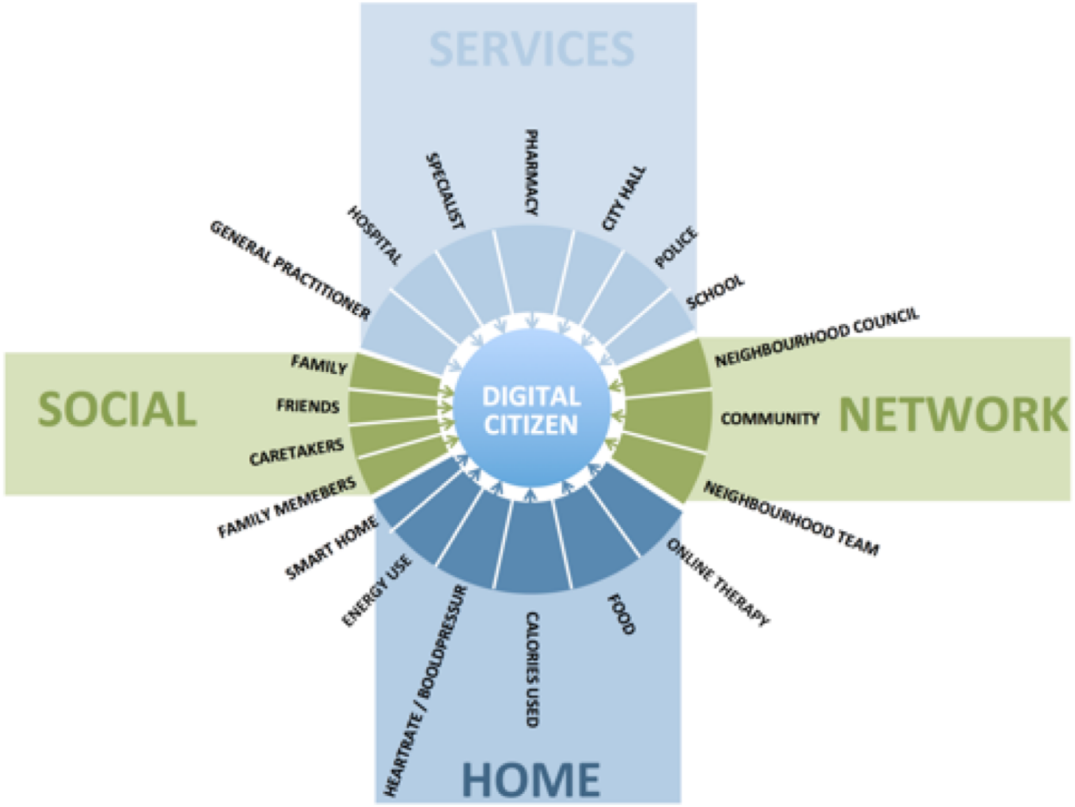
March 25 to March 29, 2018, Rome

eSociety Institute of The Hague University of Applied Sciences
Martijn Hartog – senior project leader and R&D coordinator

digital connection of
‘life-world’ of citizens with ‘systems-world’ of professionals

participatory society
citizens collaborating with professionals in healthcare | welfare | public administration | safety

digital citizens



active digital citizens
equal partners of public organizations

influence and change of
dynamics
role
responsibilities
stakeholders
policy process

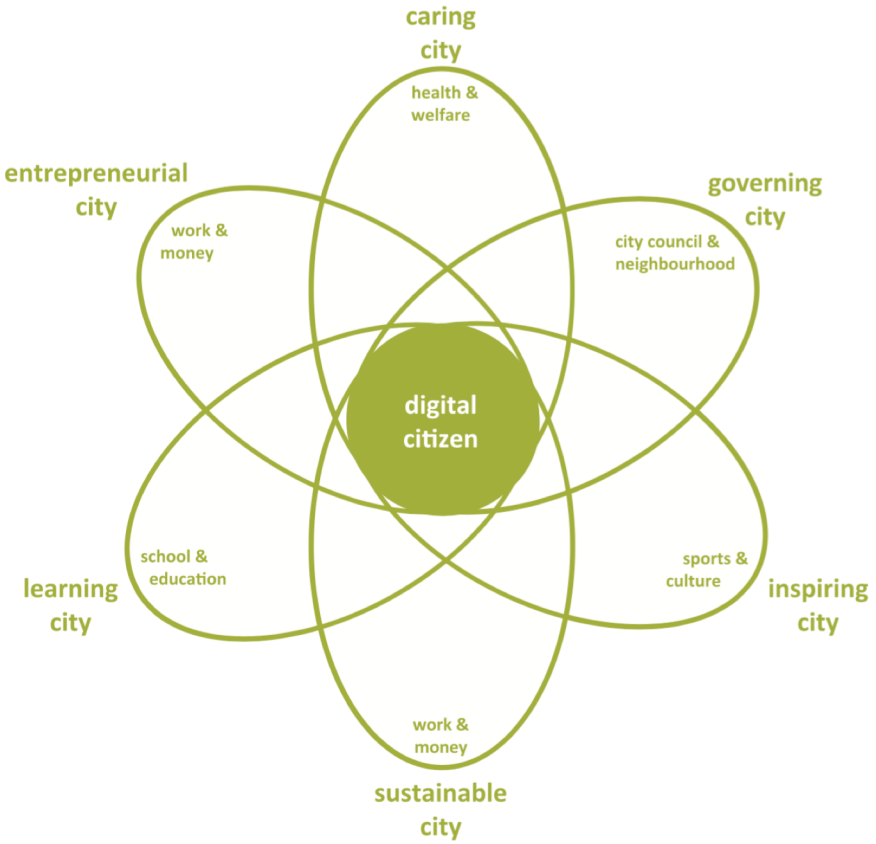
convergence of services on the individual household
complexity
quality
scale

growing diversity requires integration

citizens work and live in networks

technical challenges, data inconsistencies and information overload

interoperability of public and health products and services



people speak their own language

professionals need precise terminology

communication consistent and interoperable?

Citizens' life-world	Professionals' systems-world
Emotional closeness	Professional distance
Informal action	Formal protocols
Incidental interest	Structural attention
Informal social network	Formal professional network
Mixed levels of understanding	Professional understanding
Flexible work	Fixed, planned work
Integrated tasks	Specialized tasks
Day-to-day language	Professional jargon
Practical skills	Professional knowledge
Informal appointments	Formal appointments

societal networks require effective solutions

support on a different scale than merely on an individual level

digital solutions at the level of

groups

neighborhoods

towns

cities

regions

society

	Life world citizens	Systems world professionals
Macro	*city and society*	*sector, government and society*
Meso	*groups, neighborhoods, towns*	*organizations*
Micro	*citizen*	*professional*

a coherent digital society information architecture
supporting citizens and collaboration with professionals

infrastructure

technology

information

(open) data

services

users

structural innovation partner public sector

conceptual, explorative and innovative R&D projects

multidisciplinary practice & higher educational courses/programs

themes

e-government, e-democracy, e-health

transparency, open government, open spending, Linked (Open) Data

Citizen Information Management

new theme in government information

Dutch Citizen Vocabularies Health and Public Administration

equipping citizens for a participatory society

eHealth Academy

100.000 citizens own control and responsibility

eSociety Institute is a knowledge partner of The eSociety Platform (NL) & The Open Data Institute (UK)

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Universal Design vs. Adaptive User Interfaces – How Can We Provide Accessibility in Public Smart Services?

Lukas Smirek (Stuttgart Media University)

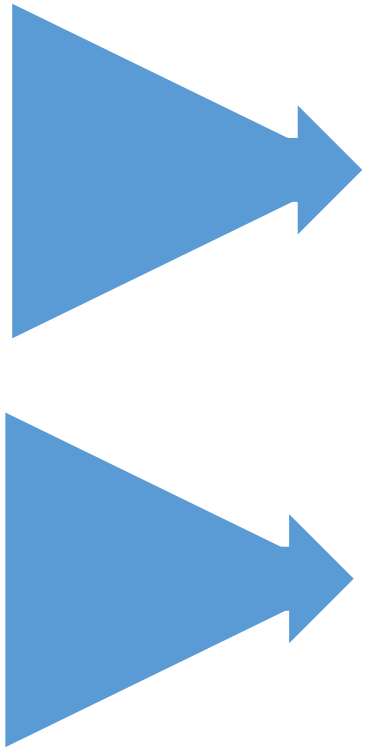
Motivation

- Chance or Challenge
- UI must fit individual needs
- Impossible to adjust every device/service by hand

  → Adaptive UIs

Adaptation can take place on different layers

- Presentation & Input Events:
  - e.g. Fontsize, volume, key shortcuts, button size & distance
- Structure & Grammar:
  - Input & output modalities, navigation & grouping structure, simplification (structure only), widget substitution...
- Content & Semantics:
  - Language, Icons, assistance, captions, audio description...



Controller

Open UI component repository

- Contribution by Stuttgart Media University:
  - Development of the Open Accessibility Personalisation Extension (OpenAPE) http://openape.gpii.eu

- Questions:
  - Can adaptive UIs provide better accessibility features than universally designed ones?
  - Expectations are high, but what is missing that we do not see more adadaptive UIs?

Discoverability and accessibility of reliable sources on the Internet and archiving services

Creator: How to make my digital content more available for the future and more discoverable?

Consumer: How to choose a reliable source on the Internet?

- A method of determining a reliable source refers to its author (creator)
  - Provenance – one of the central terms of archival science

Discoverability and accessibility of reliable sources on the Internet and archiving services

Archives/any repository:

- How could I make my holdings more accessible to information consumers and visible to other environments
  - Accessible regardless of technologies, situations, and disabilities
  - Visible, providing semantics for environment

Discoverability and accessibility of reliable sources on the Internet and archiving services

Possible solution

- Digital archival services link together content, creator, and context.

Positive consequences

- well-designed archival services make content and sources more reliable
  - described
  - available
  - discoverable to other services

…and therefore more

- visible
- accessible
- meaningful (machine processing)