Privacy Labelling Workshop, 12Mar2020, Oslo

Privacy Labels as an enabled for the European SMEs in the new global online data-based economy

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“The last time I was connected by wire was at birth”

- Information Technology and the role of IoT
- Society5.0
  - the digital divide
- Privacy Labels for IoT
- Conclusions
The Internet and the Nordics

- First Arpanet Connection to Kjeller (June 1973)
  - (except Hawaii)
- List_of_Internet_pioneers [Wikipedia]
  - Yngvar Lundh, Paal Spilling
- Anwendungsentwicklung
  - .php, OpenSource, Linux, Skype, Spotify
  - OperaSoftware, FAST Search
  - Nokia, Ericsson
  - Telenor, TeliaSonera
- Mobiles Internet:
  - GSM
  - Mobile Anwendungen
Internet of Things

Industry 4.0

Smart City / Future Home

Society 5.0
Starting Point:

The Price of Inequality

How today's divided society endangers our future

Joseph E. Stiglitz
Winner of the Nobel Prize in Economics
Digitalisation of the Society

A digital society is made of digitally-skilled citizens

IoT Security and Privacy Functionality

Part of IoT life cycle

- search in Literature, check SPF.IoTSec.no

[Source: Elahe Fazeldehkordi https://its-wiki.no/images/d/d0/IoT_SecPrivFunc_LifeMap_v2.pdf]
Automation will come

USA work force time spent [%]

- Predictable physical work: 16%
- Data processing: 18%
- Data collection: 14%
- Unpredictable physical work: 17%
- Stakeholder interactions: 7%
- Applying Expertise: 16%
- Managing others: 12%

Technical automation potential 2016 [%]

- Predictable physical work: 78%
- Data processing: 69%
- Data collection: 64%
- Unpredictable physical work: 25%
- Stakeholder interaction: 20%
- Applying expertise: 18%
- Managing others: 9%

Example: Decent Work

- Centre for Monitoring the Indian Economy:
  - 11 Million jobs lost in 2018
    - 9 Million in rural areas
    - 8.8 Million women lost work

- 31 Million look for work
  - most of them in RUrban area
  - from 80/20% Rural/Urban to 70 / 15 / 15% Rural / RUrban / Urban
Economic Perspective [Kåkå, 2017]

- **Tax system**
  - Control of data disappears -> income goes down
  - digital competence -> digital divide increases
  - power of decision: industry vs politics

- **Future in salary**
  - salary gap increases: high income for the topp, minimum rage for the workers
  - capital income bigger than salary income

- **Jobb qualification**
  - previously: 50% of jobbs for no-knowledge, now only 10% of jobbs
  - re-industrialise the Nordics
  - focus on education and knowledge

- “5 big IT had an increase of 950 billion USD in value in 2016/2017 (over 10 months), more than combined GDP of NO, DK, FI

“[The Trust-Society in the Nordics is our strength as compared to other countries. Vi use technology faster, er productive and have a high degree of adaptability”](#)

Leif Arne Jensen, PwC, Norway
There will be no peace until all men learn to understand each other.

True...

True...

How are we going to get everybody to speak Norwegian?

Inclusiveness - Trust - Capacity

United Nations High Level Panel on Digital Cooperation 2019
Economic aspects

- Google in Norway (2019)
  - Income 178 MNOK
  - Tax 4 MNOK (2.2% of income)

- Amazon (2018 data)
  - 20% of revenue from sales of data
  - 10-15% advertisement costs for SMEs
  - 5% own advertisement advantage
  - SUM: 40% advance as compared to SME

[Aftenposten, 2020]
Impact on the society

- Social Mobility (WEF 2019)
  - Ability to move up the pyramid
  - 1) Denmark
  - 2) Norway
  - 3-5 other Nordics
  - then: NL, CH, AU

- No-work
  - Main driver for instability

70% live in countries with increased divide
IMF panel 2019
Towards Measurable Privacy - Privacy Labelling

- “Measure, what you can measure - Make measurable, what you can’t measure” - Galileo

- Privacy today
  - based on lawyer terminology
  - 250,000 words on app terms and conditions

- Privacy tomorrow
  - A+: sharing with no others
  - A: ...
  - C: sharing with …. 

- The Privacy label for apps and devices

Appfail Report - Threats to Consumers in Mobile Apps

The Norwegian Consumer Council analysed the terms of 20 mobile apps. The purpose is to uncover potential threats to consumer protection hidden in the end-user terms and privacy policies of apps.
Comparison with the Mobile Network

- **Facebook’s Free Basics**
  - 0-rated content (free usage)
  - 3-months break even
- **The con’s of Free Basics**
  - every click goes to Facebook
  - Net-neutrality
- **Privacy Labelling**
  - National Knowledge Portal
  - European Label

Premier Minister Narendra Modi (India) said, "no to Free Basics" we have been colonised once.
Conclusions

- Digital Gap increasing
  ➡ 70% in countries with increased divide

- User experience
  ➡ Clear first view, “impression”
  ➡ Second level, more details
    ➡ basis for acceptance
  ➡ Third level, privacy “maniacs”

- Business advantage for SMEs
  Counter-act on (IT-)platform advantages
  Information protection - privacy labels
Background slides

2005: Kim Cameron - 7 laws of identity

2011 OECD update on privacy guidelines

2012 EU Data Protection Reform

“Right to be forgotten”

Easier access to one’s data; right to data portability

Data protection by design and by default

Stronger enforcement of the rules - up to 4% of annual turnover

From 2018: General Data Protection Regulation (adopted in April 2016)

EU-wide harmonization

User control

More limitations on sending data outside

1. Collection Limitation Principle - “limits to the collection of personal data…”
2. Data Quality Principle - “relevant and necessary for the purpose of usage”
3. Purpose Specification Principle - “specified prior to collection - change of purpose”
4. Use Limitation Principle - “non disclosure, not for others than those” - “need consent”
5. Security Safeguards Principle - “protection by reasonable security safeguards”
6. Openness Principle - “about developments, practices and policies”
7. Individual Participation Principle - “individual to have insight, answers in reasonable time…”
8. Accountability Principle - “data controller should be accountable”
Instantaneous and high-resolution

- **HAN Port**
  - energy usage
  - online monitoring (1/s … 1/min)
- **Typical Norway**
  - Power (every 2.5s)
  - Current (every 10s)
  - Voltage (every 10s)
- **Connected devices**
- **Security**
  - physical security, encryption

AMS HAN port (NEK)
https://www.nek.no/info-ams-han-bruker
Meter analysis - knowledge about you

- **Security**
  - (unencrypted) wireless data
  - Cloud computing
  - “is my HAN port open?”

- **Information & control**
  - energy saving (water heater)
  - load control
  - Fridge, freezer, heat pump,…
  - usage pattern, “door is open”
  - “which TV channel do you watch” (every 2s)


“Amazon Echo” in your smart meter

- Amazon/Google/Apple home control
  - works on your command

- “Amazon HAN connect”
  - works all the time
  - brings all your information to the cloud
Holistic view on Digital Societies

“Internet had the ability to dismantle the divide. Internet failed miserably, the divide is bigger than ever.”
Kate Gilmore, Human Rights, UNO

Digitisation
Societal Empowerment
Digital Inclusion

1. Physical Needs like air, water, rest and sleep
2. Safety incl. shelter, food, health
3. Love, affection, belonging
4. Status, work, esteem
5. Self-actualisation

Reach full personal potential
meaningful work
Information, participation, education
Digital health, agriculture, information

[adapted from: https://shift-magazine.net/2015/11/17/the-economics-of-human-need/]

Digital Transformation Centres
Close the Gap

- **Digital Transformation Centres (DTC)**
- **Applications & Digital Societies**
- **Empowered Societies: Digital Information Spots**
- **Free access to information and Digital Public Goods**

- **DTC trainers**
- **DTC participants**
- **Mass Applications**
- **Society on large**

**RECAI**

- Rights
- Education
- Content
- Access
- Inclusion
Conclusions on Privacy Label

- Holistic view on Privacy Label
- RECAI
  - Rights (regulatory framework)
  - Education (Open availability - freemium)
  - Content (DTCs to create apps for the mass market)
  - Access (free access to information)
  - Inclusion (digital first, participatory society)

Starting with one Information Spot per village