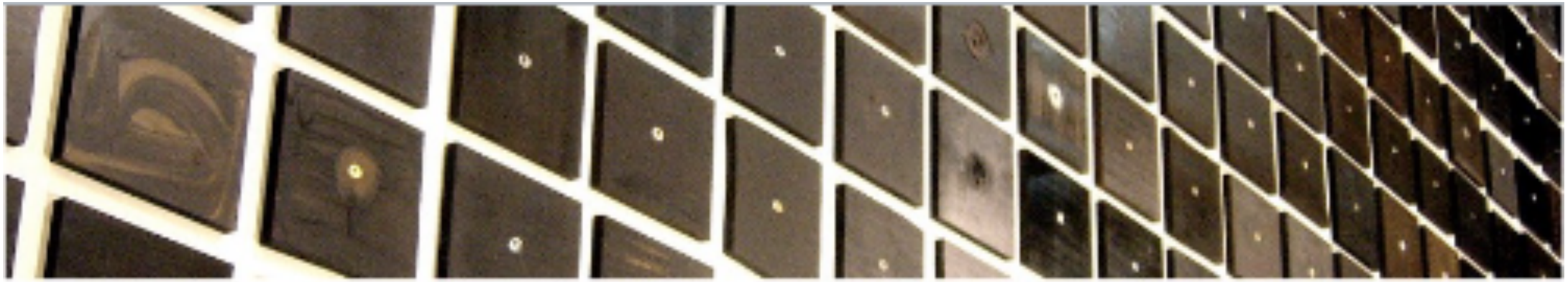


UiO : Universitetet i Oslo

SCOTT input

Focus in SCOTT

Josef Noll

Co Founder and Visionary at Basic Internet Foundation
Prof. at University Graduate Studies (UNIK), University of Oslo (UiO)
Head of Research at Movation AS
Norway

SCOTT - our comments

- Use cases of interest (harmonisation)
- technology blocks (which technologies do we need, and how can they concentrate)
- Concepts (secure and distributed IoT clouds, software enabled smart infrastructures)
- impact: innspill
- cut down project outline
- focus! and achievements!

Reality in 2016: Bad indoor coverage - WLAN is helping

- Telenor will solve challenges of indoor coverage
  - ➡ Voice over Wifi (VoWifi)
  - ➡ Voice of LTE (VoLTE)

VOLTE & VOWIFI

Telenor Norge vil løse innendørsdekningen

Med dårlig innendørsdekning fra mobilnettet vil WiFi redde situasjonen.

AV: ODD RICHARD VALMOT | TELE-KOMMUNIKASJON | PUBLISERT: 24. FEB. 2016 - 09:03

Facebook 0 Twitter

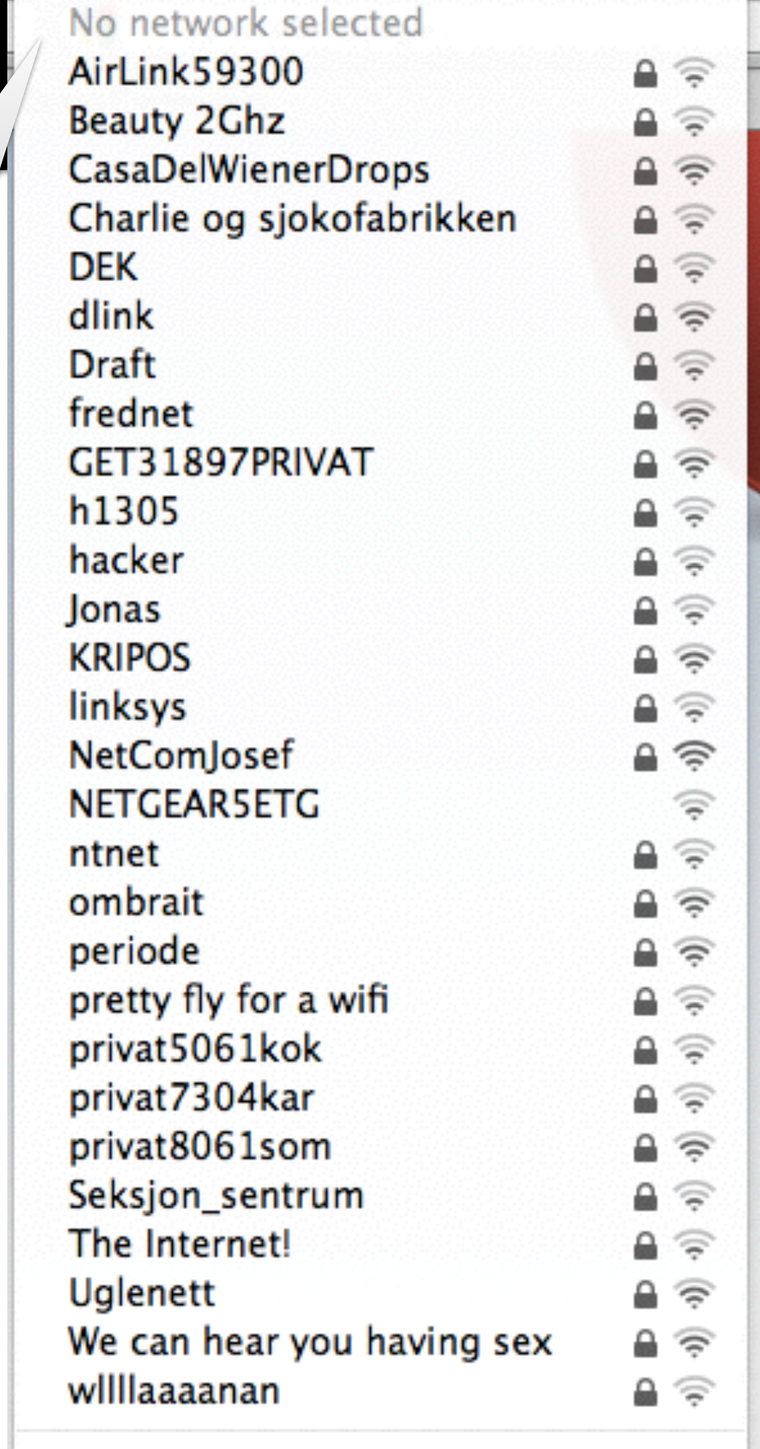
BARCELONA (digi.no): Telenor Norge benyttet anledningen under Mobile World Congress til å annonsere slutten på dårlig innendørsdekning. Ikke bare vil de løse problemet ved å la telefonene kommunisere via kundenes egne mobiltelefoner, de vil også gi dem veldig mye bedre samtalekvalitet.

TU JOBB
Finn din neste jobb

http://www.digi.no/artikler/telenor-norge-vil-lose-innendorsdekningen/320592

The world of 2016

Wifi at “Legevakten” Feb2011



- Interference-limited Wifi
  - increased demand on customer services
  - “meaningless discussions” on “Wifi”
  - need for managed Wifi
  - Wireless for automation industries
- Managed wireless & Wifi
  - Need for managed Wifi
  - from home wifi to wifi in SMEs and industry
  - Wireless for automation industries
- Societal challenges

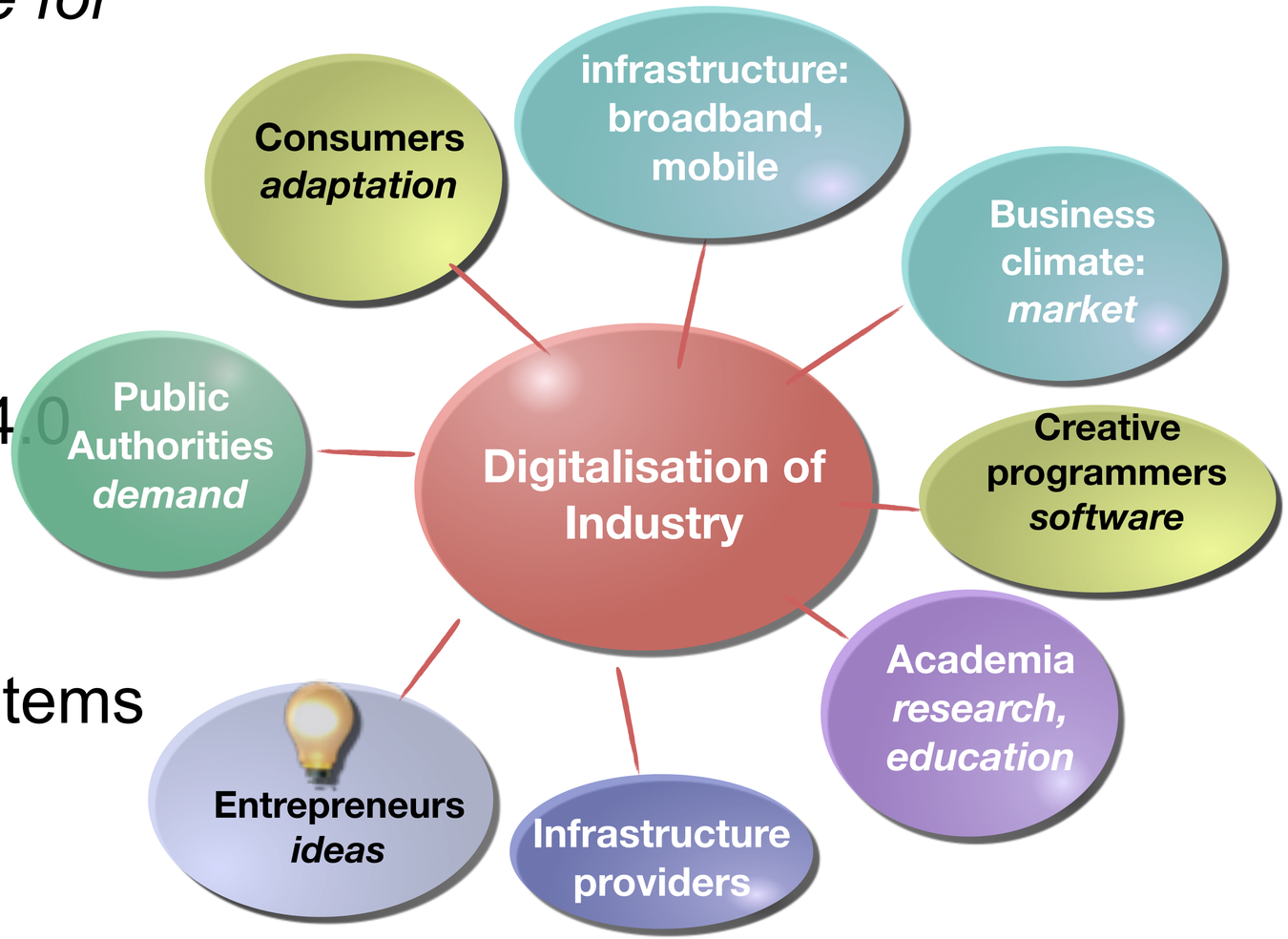
  Energy, Health, “Internet for all”

  Security, Privacy, “Digital Societies”

Focus of IoTSec

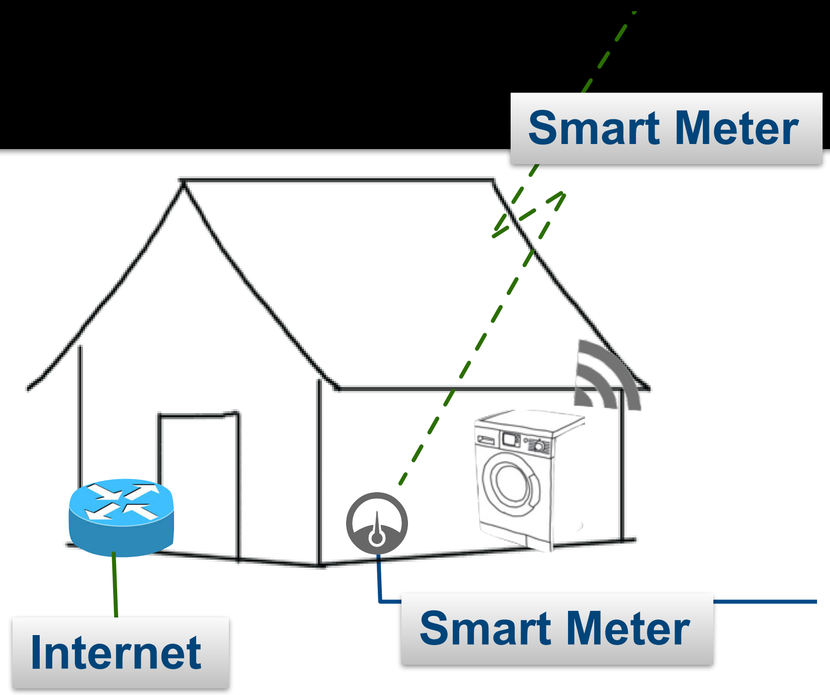
based on: security & privacy for systems of systems

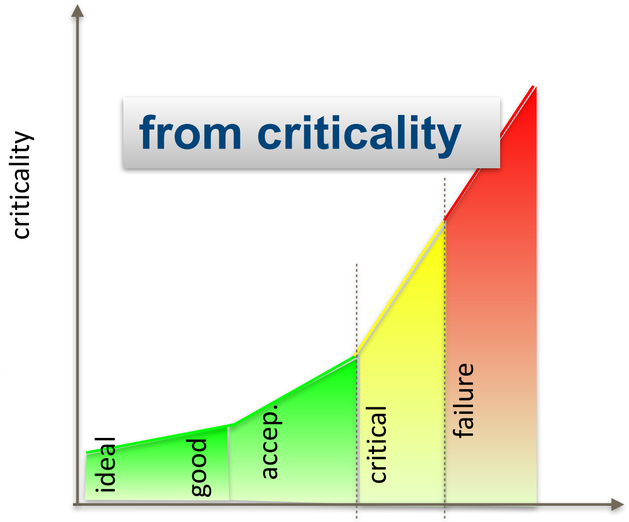
- *"we are building the Security Centre for Smart Grid"*
- Smart Grid infrastructure
  - ➡ towards Smart Homes, Smart Cities
  - ➡ towards Autonomous systems
- Security & Robustness of Industrie4.0
- Model System of Systems
- Networked Autonomous Systems
- Smart Grid enabled Distributed Systems



Upcoming Infrastructure

- Smart Meter
  - ➡ read and control
  - ➡ logic?
- Smart Home
  - ➡ intelligent devices
  - ➡ on-demand regulation
- Challenges
  - ➡ Logic: Centralised <—-> Fog
  - ➡ Smart Meter: Information <—> Control
  - ➡ Smart Grid Information <—> Internet Info

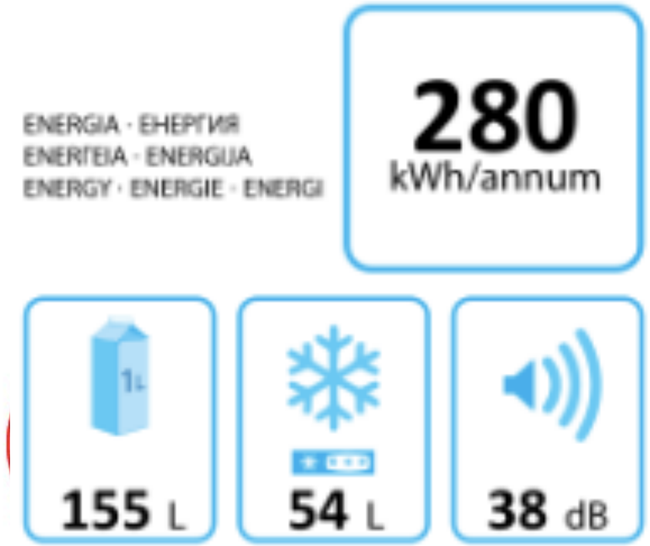




to measurable: security, privacy and dependability

SPD level	SPD vs SPD_{Goal}
(67,61,47)	(🔴,🟡,🟢)
(67,61,47)	(🔴,🟡,🟡)
(31,33,63)	(🔴,🟡,🟡)

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.

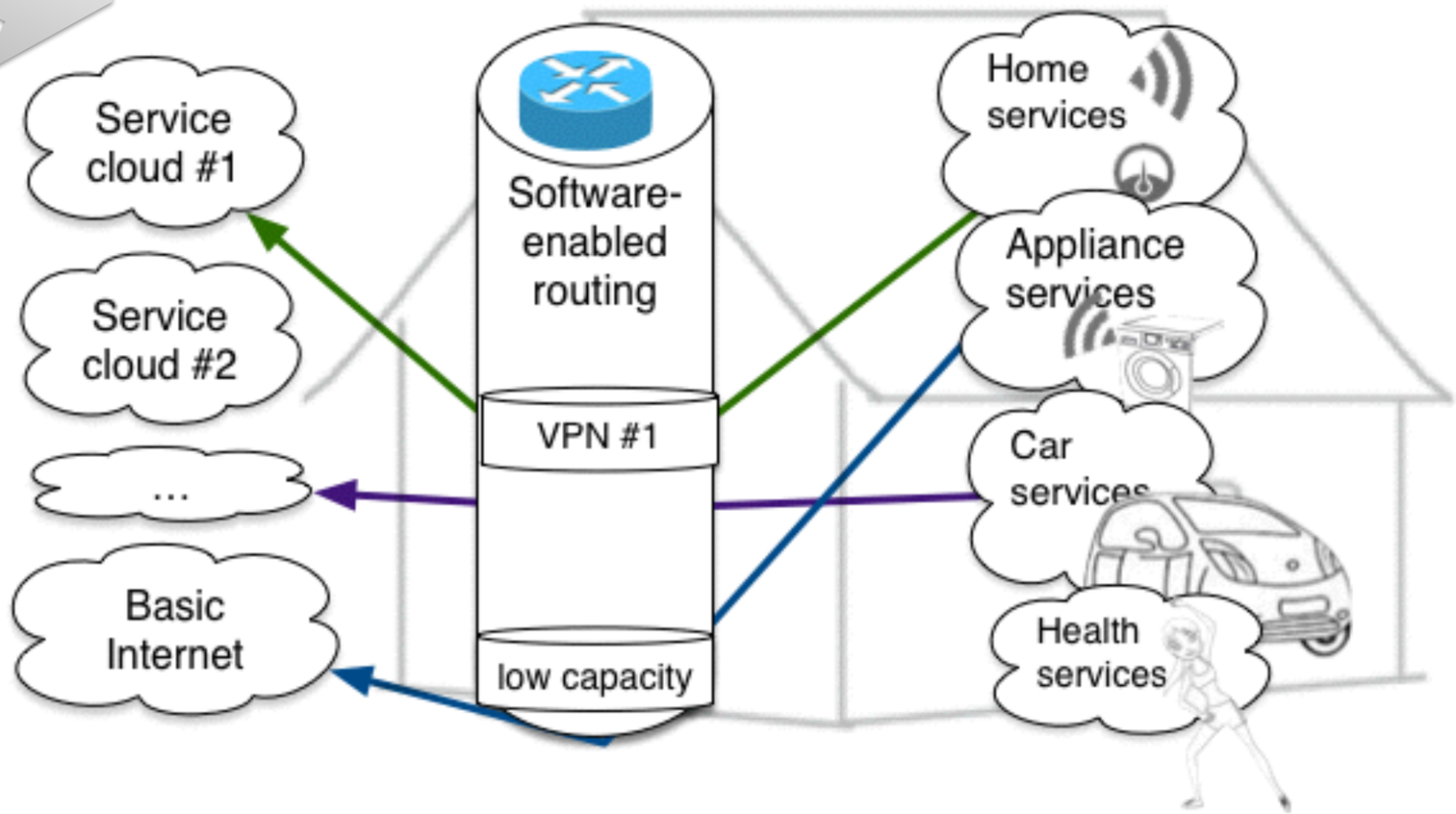
Managed Wifi Communications and Insight

- Distributed equipment
  - router, TV, mobile,…
  - authentication
  - traffic routing
  - service logics (where, what)
- Collaborative services
  - owner information
  - service data
  - statistics, e.g. urban,…
- Local decisions
  - knowledge cloud
  - fog computing

Challenges: Set-up, Connectivity

Future Service Requirements (in a wireless infrastructure)

- *"we have no control of what is going on in Wifi"*
- "only 25% of broadband customers experience the speed they got promised"
- more than 75% of all calls to ISPs is related to wireless
- over 90% of boxes sent to ISP are fully functionable

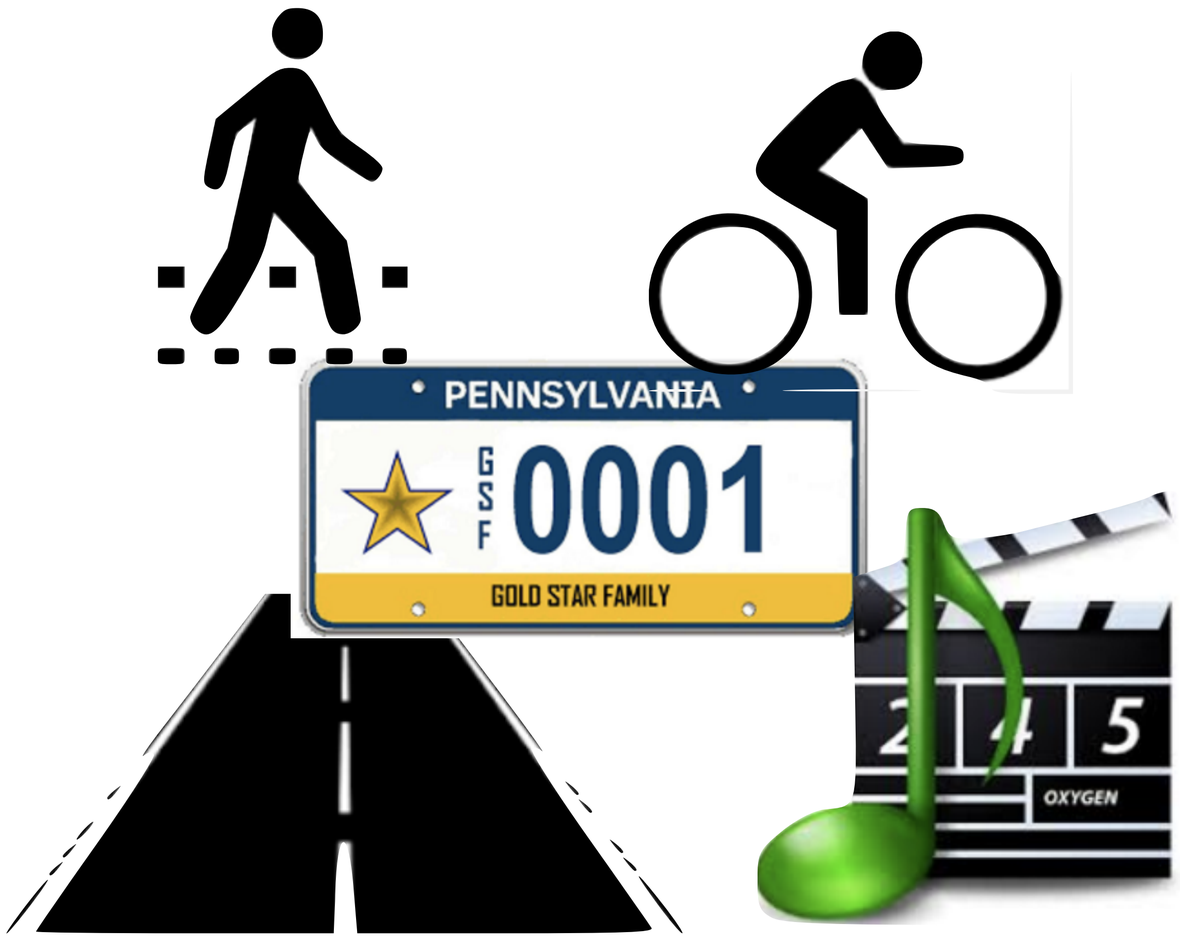


WWRF vision for 2017; “7 trillion wireless devices serving 7 billion people by 2017”,

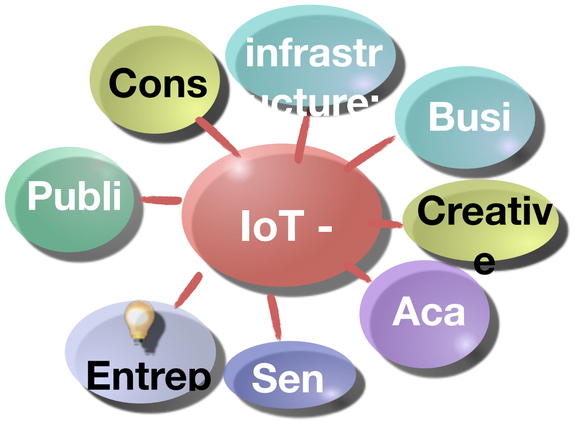
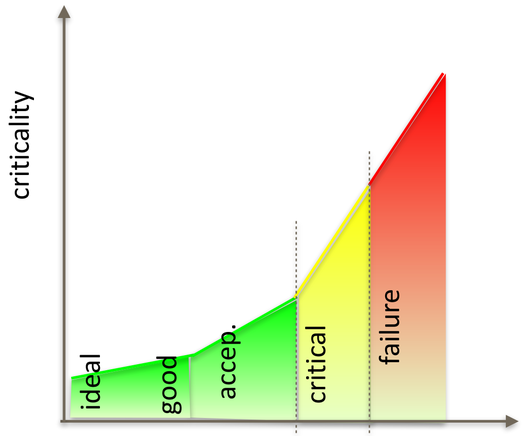
The vision of 2026

- “Digital and Inclusive Society”
- Networks adopting to service needs
  - ➡ Security, privacy, dependability
- “the Road Network Infrastructure”
- Low-capacity Internet
  - ➡ free and open access
- Broadband services
  - ➡ authenticated access

or



Conclusions

- Internet of Things (IoT) is a game changer
  - ➡ Everything is wireless: Smart Infrastructures
  - ➡ Autonomous systems, Critical Infrastructure
- Collaborative approach for a (more) secure society
  - ➡ trust is not enough, need for measurable
  - ➡ partnership for security: threats, measures, counter activities
- Measurable Security and Privacy for IoT
  - ➡ IoTSec.no - Security for Smart Grid
  - ➡ Industrial impact: Security Centre for Smart Grid
  - ➡ Privacy labelling for apps and devices
- Innovation ecosystem for the IoT
  - Reducing the digital gap
  - Providing Basic Internet to everyone

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