



UiO : Department of Technology Systems  
University of Oslo

ITS Kollegiemøte, 1Feb2021

# Societal Security in the Digital World



Josef Noll

Secretary General at the Basic Internet Foundation,  
Professor at the University of Oslo

University of Oslo: <http://www.mn.uio.no/its>  
Basic Internet Foundation: <http://BasicInternet.org>  
Our Wiki: <http://ITS-wiki.no>

## Societal Security

- Traditionally: Homeland Security
  - Border protection
  - Protection of Water, Air, ...

### Societal Security in the digital world

- Energy
  - Resilience of Energy Grid
- Digitisation
  - Resilience of Communication Networks
  - IoT, Automation
- Resilient Society
  - Inequality, Divide



## Resilient Societies

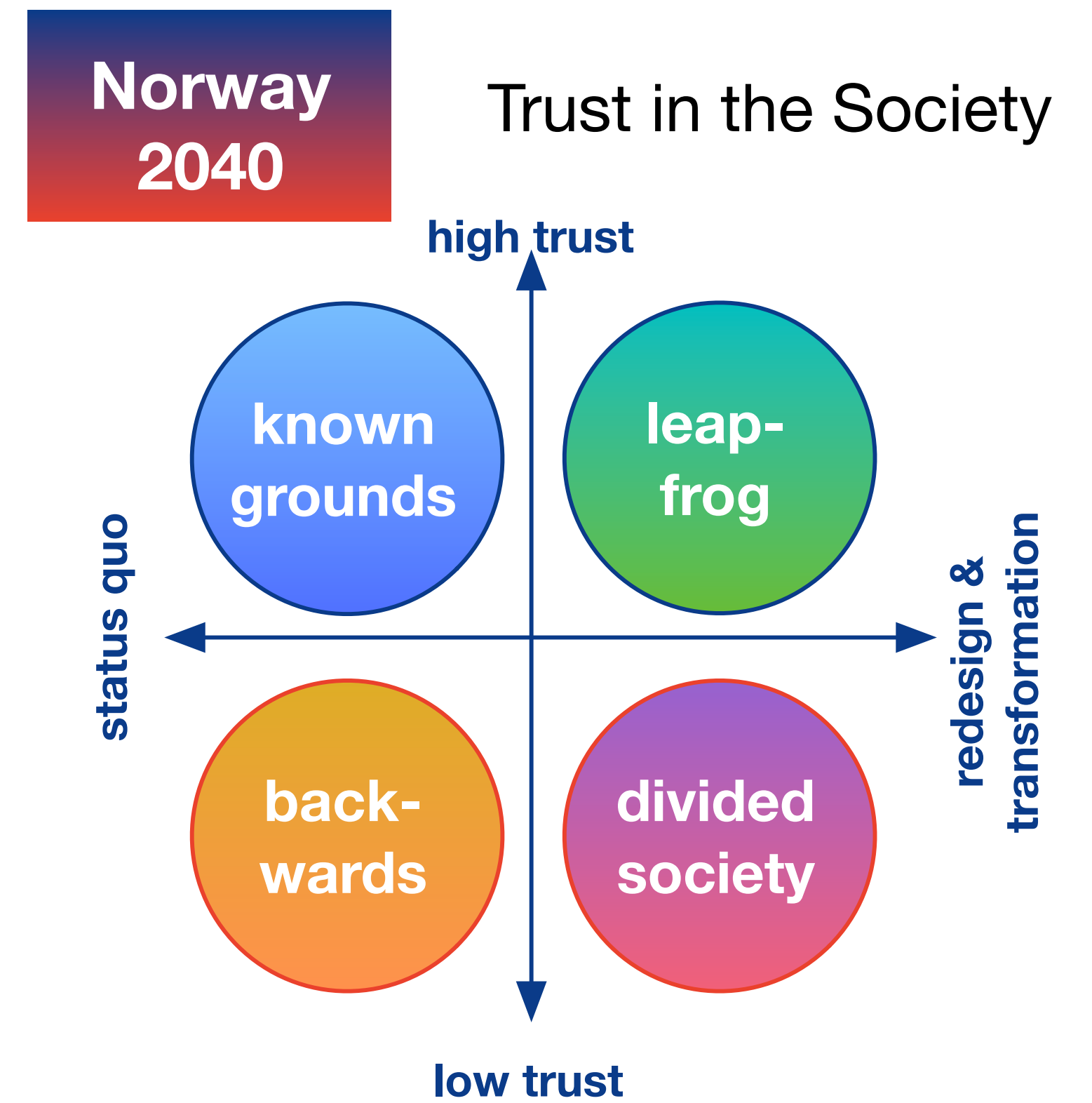
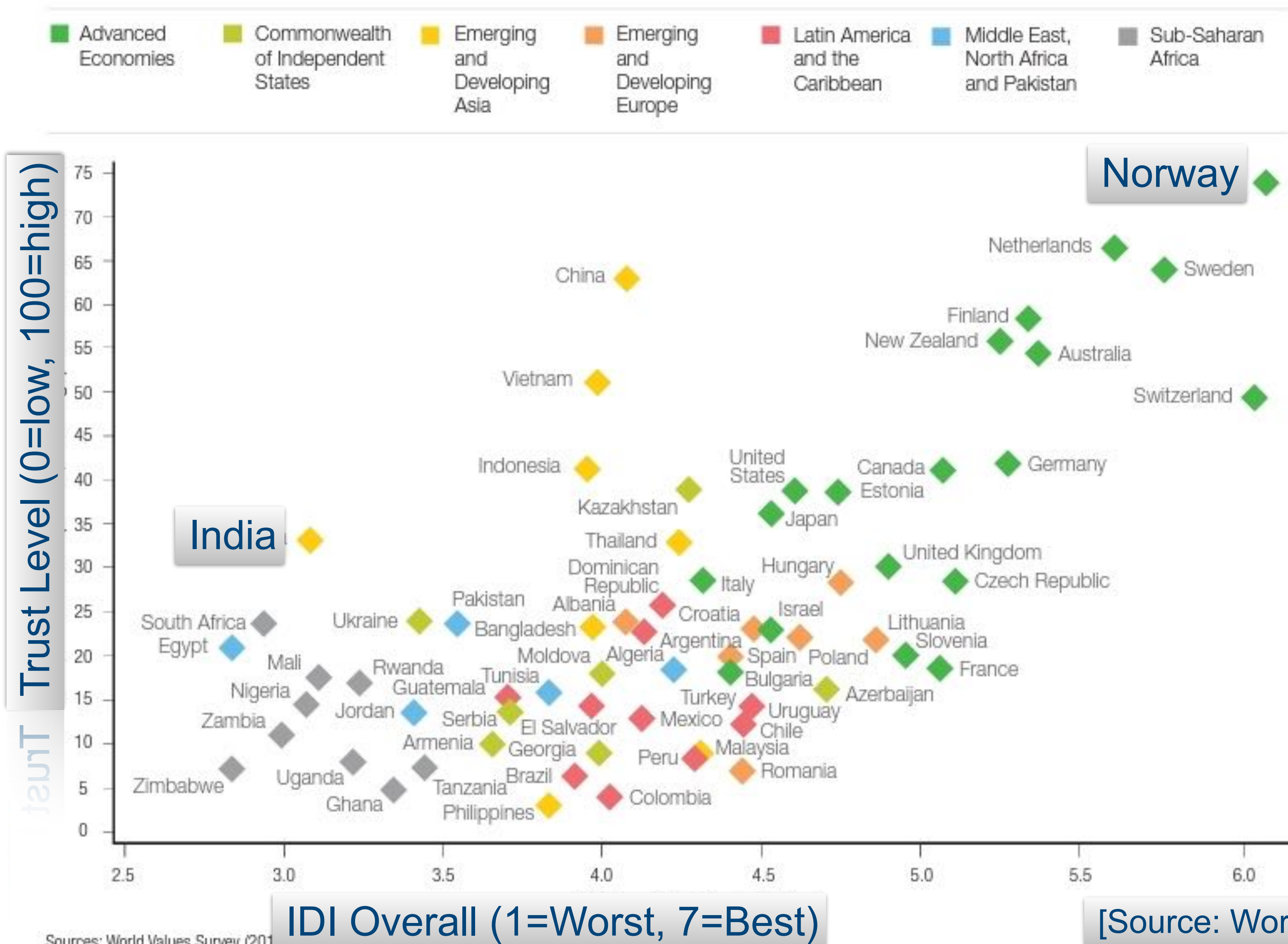
- Resilient Societies
  - Communities that can sustain themselves
    - ▶ Pandemics: COVID-19,
    - ▶ natural disaster
    - ▶ external threats: terrorism, fake news,
  - Communities that can sustain themselves
    - ▶ job-creation
    - ▶ educating, information,
    - ▶ Dugnad: value creation
  - Values:
    - ▶ “alle er med”

Trust

> Digital Participation in the society

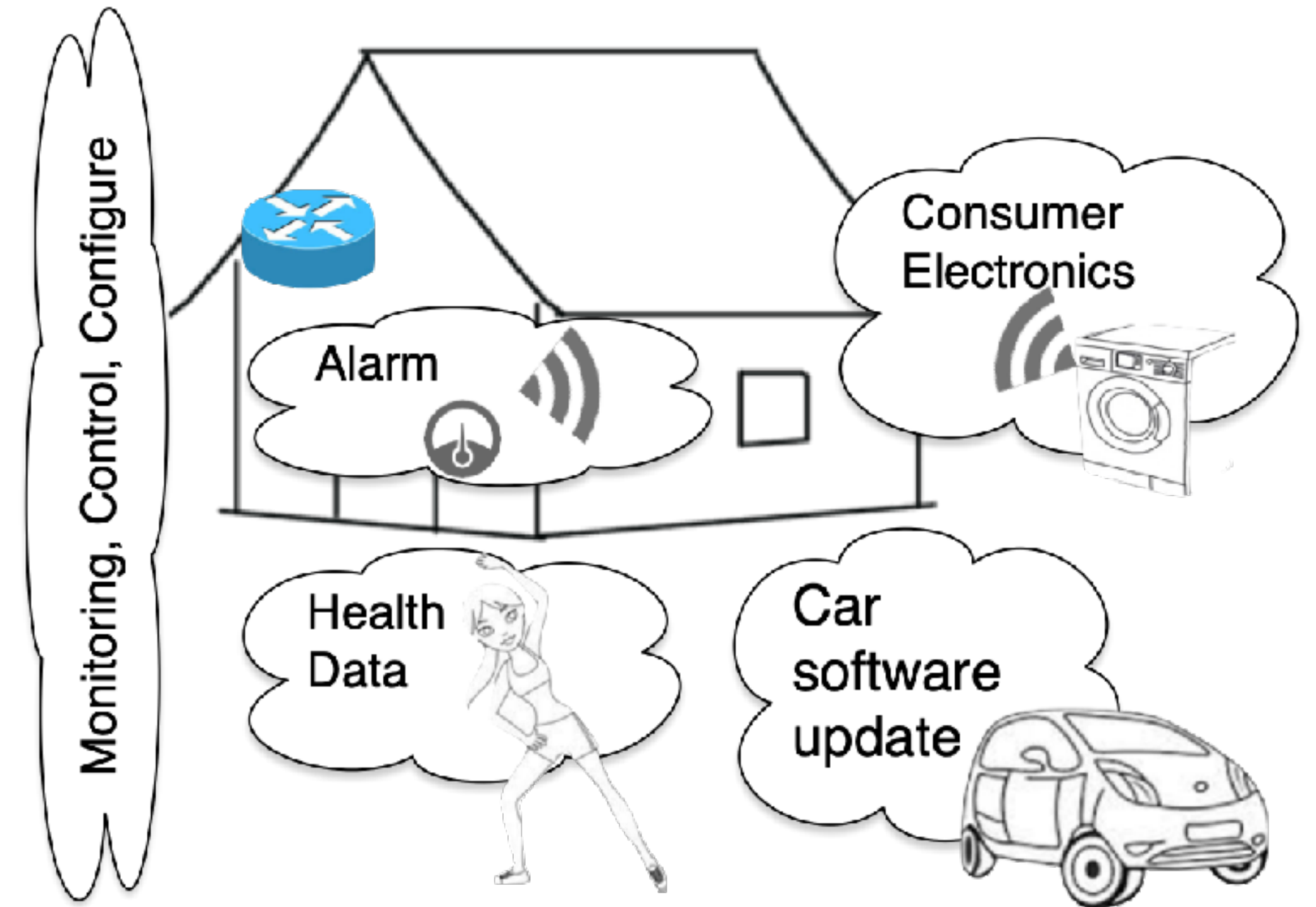


### Inclusive Development Performance and Interpersonal Trust



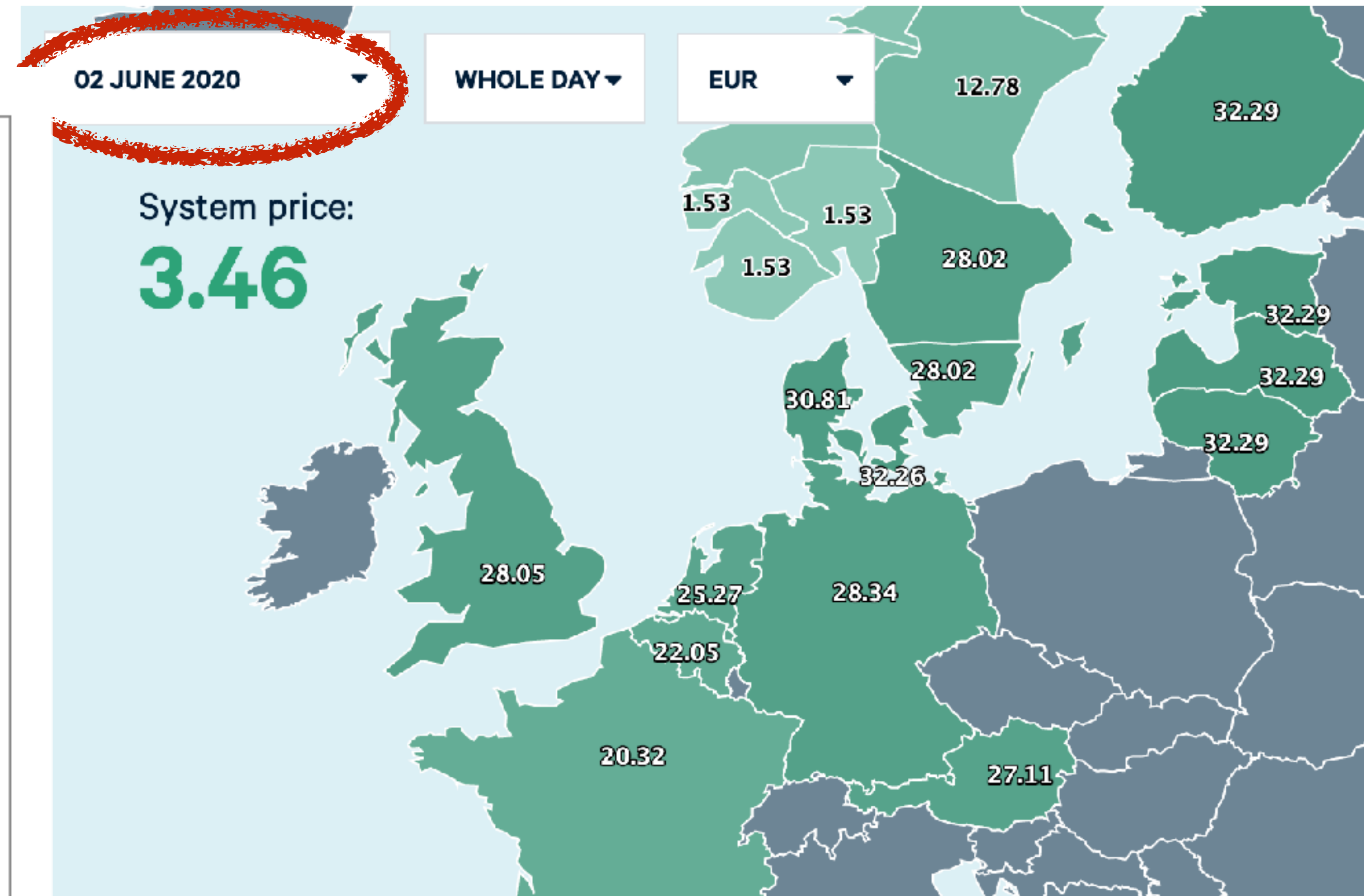
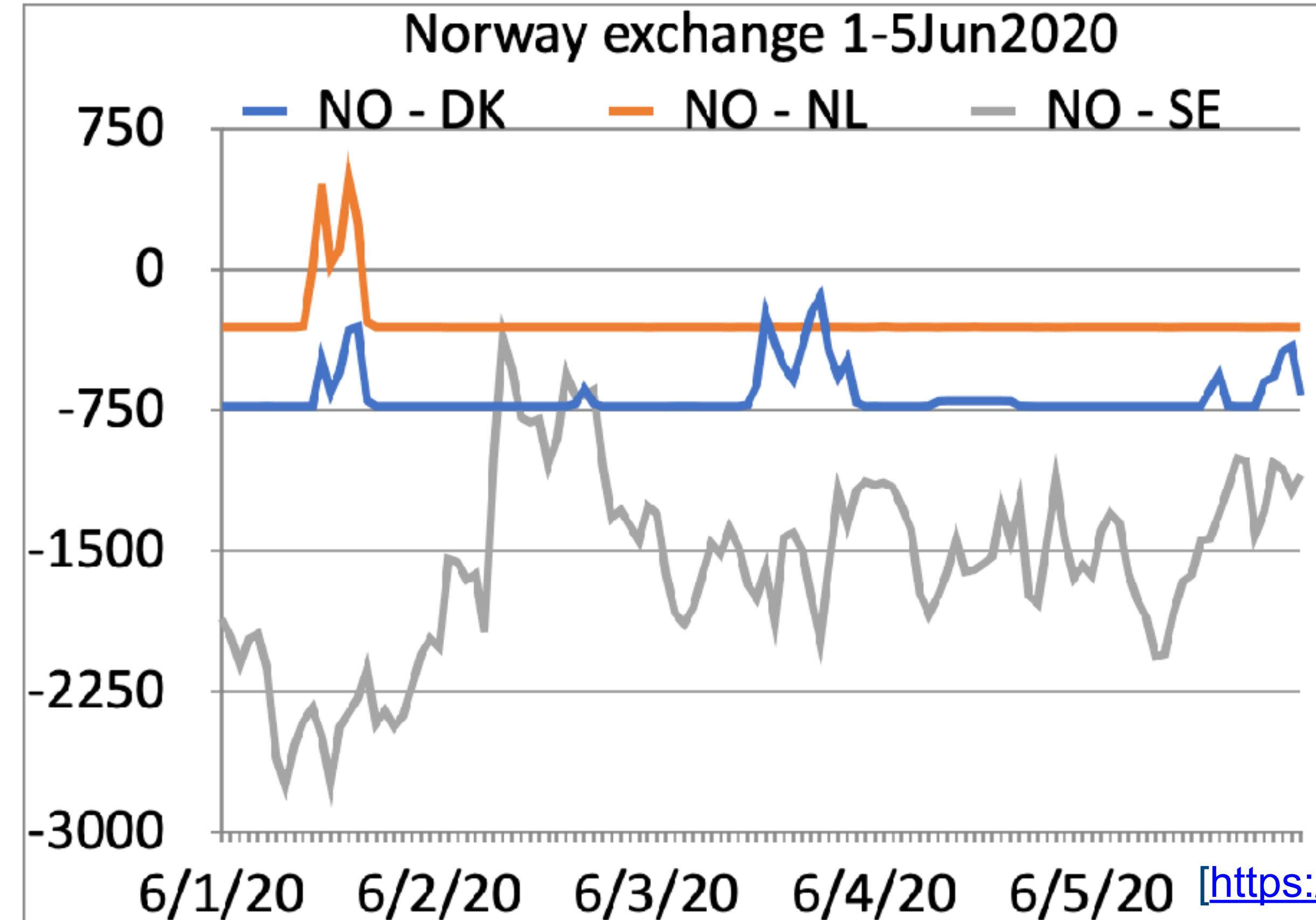
## PostDoc research Societal Security in the digital age

- Resilient Networks
  - ➔ Electricity Grid
  - ➔ Wireless Networks
- Research Tasks
  - ➔ Establish the sound baseline for trust enhancing mechanisms in digital systems, addressing a.o. network monitoring and resilience of networks and systems;
  - ➔ Establish a national and international collaboration on societal security in the digital age;
  - ➔ Relate the research to the «Norway 2040» perspective for the public sector development;
  - ➔ Interact with - and contribute to national strategies on trust-enhancing systems and services;
  - ➔ Develop best practice guidelines on how societal security contributes to selected sustainable development goals (SDGs)



## Example Smart Grid stability What has happened on 3-5Jun2020?

- See: SE-NO, DK-NO



<https://www.nordpoolgroup.com/historical-market-data/> -retrieved 22Oct2020]

## Example Smart Home Control and access in the Smart Home

### Grid stability & Resilient Grid

- Smart home and grid stability
  - energy devices: heating/cooling, car charging
  - “gracefull degradation”
- Access to information
  - who (sensor, person, service)
  - what kind of information
  - from where
- **Attribute**-based access
  - role (in organisation, home)  
device, network  
security tokens

