


DÄNEMARK: DER STAAT ALS VORBILD DIGITALER INNOVATION

PROF. DR. ROMAN BECK

 @roman_beck
beck@itu.dk

DENMARK HAS LONG BEEN A FORERUNNER (1/2)

2001:

- Introducing the **digital signature**
- Digital communication with and by the authorities (via e-mail)

2004:

- **NemKonto** (mandatory default citizen's bank account for payments from the authorities)
- **Virk.dk** (digital public services web portal for businesses)
- **Sundhed.dk** (web portal providing personal access to personal health data)

DENMARK HAS LONG BEEN A FORERUNNER (2/2)

2007:

- **NemID** (eID solution enabling log-in to online public services)
- **Digital Post** (digital mailbox for messages and communication from public authorities)
- **Borger.dk** (digital public services web portal for individuals)

2011:

- **Digital Post** made mandatory for individuals and businesses
- **Online self-service** solutions made mandatory for individuals and businesses

CORNERSTONES OF THE DIGITAL STRATEGY FOR DENMARK'S PUBLIC SECTOR

- Digital solutions must be easy-to-use, quick and ensure high quality
- Public sector digitization must provide good conditions for growth
- Security and confidence must be ensured at all times



DIGITAL SOLUTIONS MUST BE EASY-TO-USE, QUICK AND ENSURE HIGH QUALITY

Case Study: Digital Learning and Teaching

- By 2018, students, parents, and teachers have a shared user portal as digital access point to access learning materials, communications, and other information
- By 2019, all relevant written exams from upper-secondary school will be digital and by 2020, all relevant written leaving exams from primary and lower-secondary school will be digital



PUBLIC SECTOR DIGITIZATION MUST PROVIDE GOOD CONDITIONS FOR GROWTH

Case Study: Automatic Business Reporting

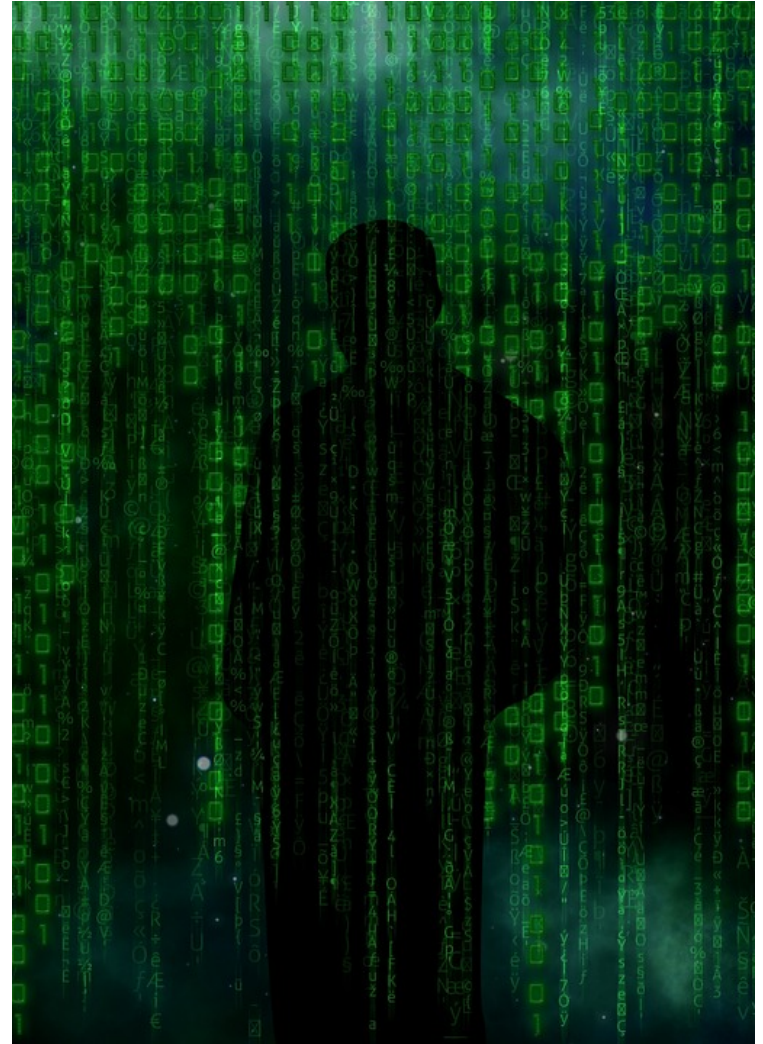
- Business spend substantial resources on reporting to the authorities
- Authorities should be able to retrieve relevant data directly from businesses' systems
- The goal is to ease the administrative burden on businesses by 3 billion DKK by 2020



SECURITY AND CONFIDENCE MUST BE ENSURED AT ALL TIMES

Case Study: Information Security

- All public authorities have to commit to the international information security standard ISO27001
- Public employees should have and be familiar with guidelines how to store and manage sensitive data
- Efforts against hacking incidents will be intensified



DRIVING INNOVATION IN THE PUBLIC SECTOR



SKAT



- **Registering vehicles and transferring ownership based on blockchain**
- **Current challenges:**
 - Imbalance of trust between buyer and seller
 - Seller must trust that buyer will re-register the vehicle
 - Authenticity of Registration Certificate
 - Excessively rebuilt or stolen vehicle being sold
 - History of the vehicle
- **Goal: Secure and automated transfer of ownership**

BLOCKCHAIN TO AVOID FRAUDULENT TAX REFUND APPLICATIONS

- **Shareholders receiving dividends have to submit a form to receive tax refunds when residing in another country (with which Denmark has a double taxation agreement)**
- **9 billion DKK were stolen**
- **Blockchain can be used to...**
 - make transactions transparent and trackable
 - make refunds only available for the rightful owner



For further information please contact me!

Prof. Dr. Roman Beck

Head of Research TIME Group



IT University of Copenhagen

Rued Langgaards Vej 7

DK-2300 Copenhagen S, Denmark

beck@itu.dk | www.romanbeck.com

phone +45 7218 5323 | twitter @roman_beck