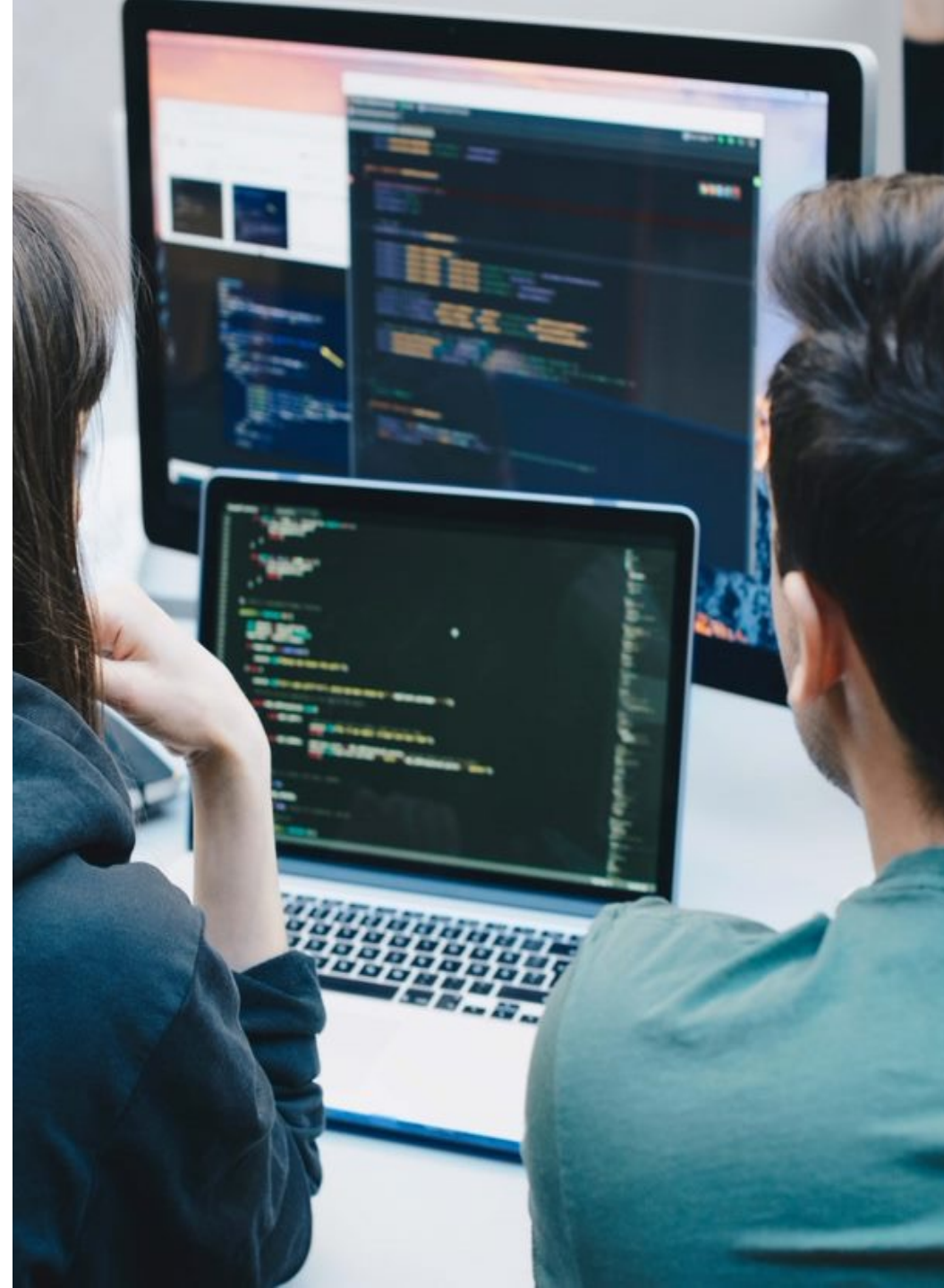


Securing Germany's digital healthcare sector

– challenges, threats and opportunities

Holm Dening
Chief Security Officer, gematik GmbH



Policy framework – from european to national level

- **Coalition agreement 2021**
- **Cybersecurity Strategy 2021**
- **Digital Strategy German Government 2022**
- **Digital Strategy Ministry of Health 2023**



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Germany's healthcare system in a nutshell

Care providers



Insurance funds



~ 83 Mio.
insured persons



~ 5,7 Mio. employees



~ 360.000 doctors

BSI und BfDI



gematik 

BMG



147 statutory and private
health insurance funds

Insured persons



Industries



~ 1.900 hospitals



~ 19.000 pharmacists



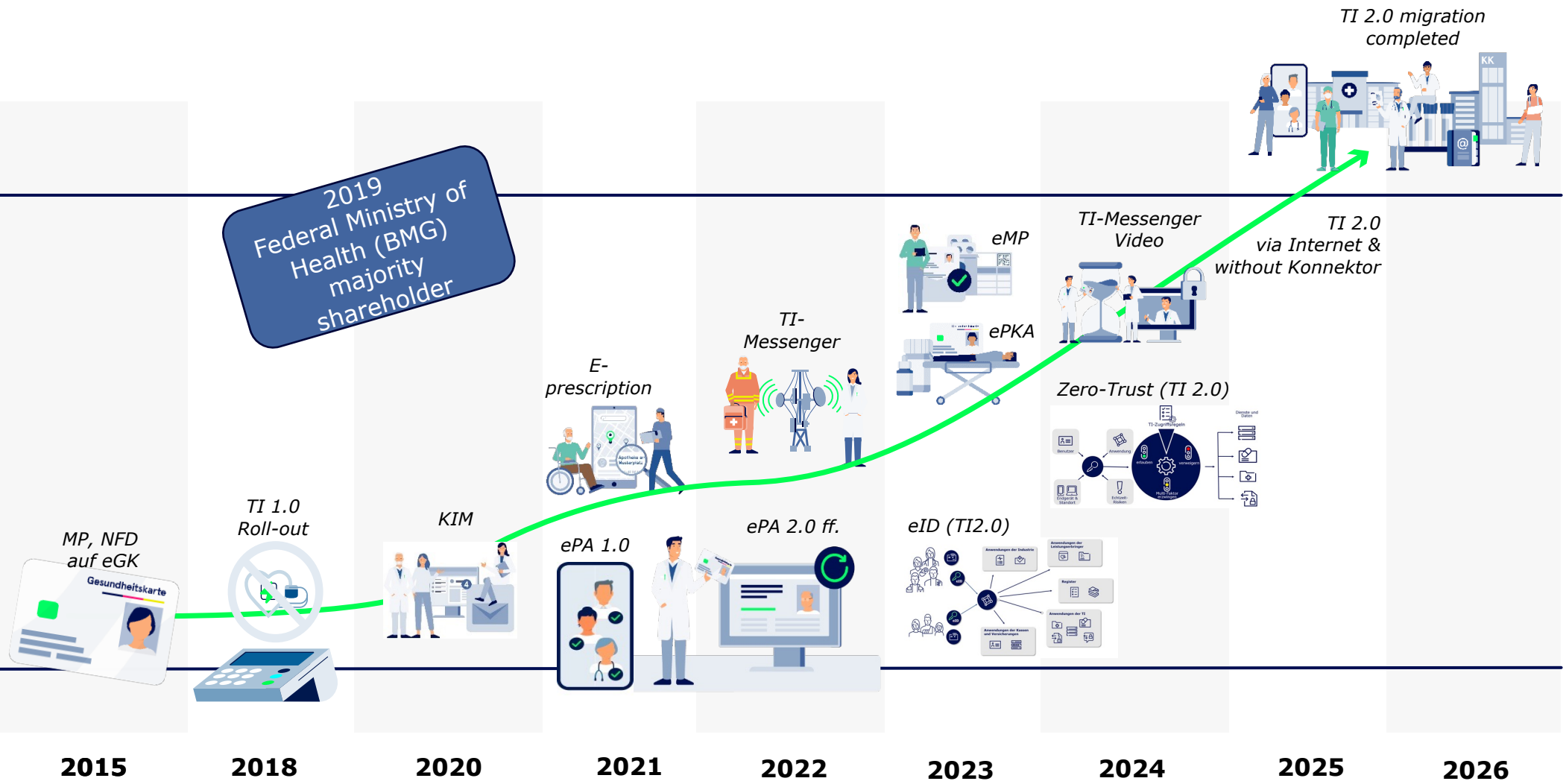
~ 110.000 doctor's offices

Digitalisation: speeding up

Telematics infrastructure **2.0**

Digital applications and technical products

Telematics infrastructure **1.0**

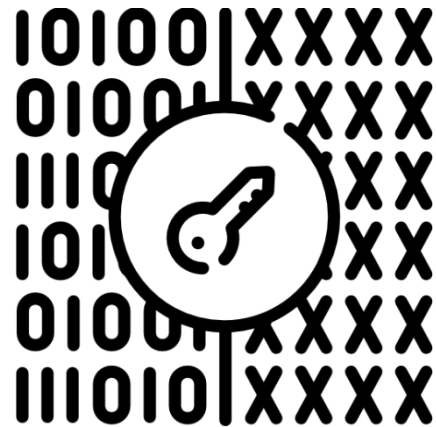


Constant challenges

... for the digitalisation of the German healthcare system

The German interpretation of GDPR

The more, the merrier

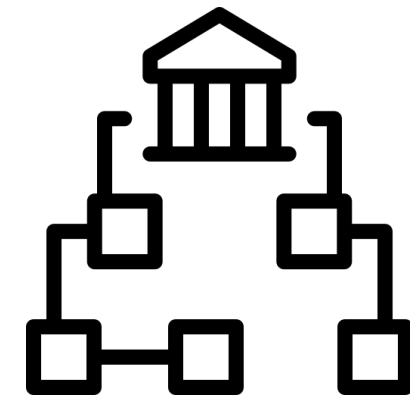


EHR based on E2E encryption

prevents beneficial application scenarios of server-side data processing

German Federalism

A colourful patchwork family



Threats...constantly evolving

- Critical infrastructure in a VUCA world
- Professionalization of threat actors
- Multi provider landscape
- Complex and distributed infrastructure
- Shortage of skilled workforce
- ...



Security has to keep up!

Our responses & future requirements

- Strong political mandate
- Holistic approach – security from design to response
- TI 2.0 based on Zero Trust
- Use of confidential computing of clear text processing of medical data off premise
- Trustful cooperation with authorities, researchers, partners from industries and science (incl. bug bounties, capture the flag contests)
- development of skilled personnel



Opportunities



- **(Political) momentum** on european and national level
- basis for successful and secure digitalisation of Germany's healthcare system
- Need for **high information security and data protection levels based on european standards**
- **european development (eID, EHDS)**
- ...

- Understanding **which EU-policies** on cybersecurity are relevant and **applicable to our German telematics infrastructure.**
- Getting a clear picture of the European **Cybersecurity Certification Framework.**
- Information on what **ENISA, ECSO and the planned ECCC** etc. hold for us.
- Understanding how gematik can **benefit from the Horizon Europe and Digital Europe Programs** and from CEF.
- Bilateral **exchange with other CERTs** from across Europe.

gematik. Gesunde Aussichten.



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