NORDIC IOT CENTRE

Xtel

design-people

TekPartner

kaastrup|andersen

seas-nve Holding A/S

Arrow Denmark

make:net

Develco

Alpha-elektronik

Aalborg Universitet

Prevas

Cibicom

Glaze

TDC Group

3 Danmark

University of Southern Denmark

Nordic IoT Centre

SMART CITY CLUSTER DENMARK

- Smart cities are rapidly emerging
- In 2050 2 out of 3 will be living in megacities
- 33.600 new jobs in Denmark in 2025

Nordic IoT Centre

FORCE TECHNOLOGY

ALEXANDRA INSTITUTTET

CIDI

- Maturity study: IoT security of Danish industry companies
- Next step: Improve this by working with 20 case companies.

ALEXANDRA INSTITUTE

DTU Compute

FORCE TECHNOLOGY

INDUSTRIENS FOND
FREMMER DANSK KONKURRENCEEVNE
The Danish Industry Foundation

IT UNIVERSITY OF CPH

Nordic IoT Centre

FORCE TECHNOLOGY

ALEXANDRA INSTITUTTET

PROCESS

1. Desk study
2. Preliminary model of change + hypotheses about success factors

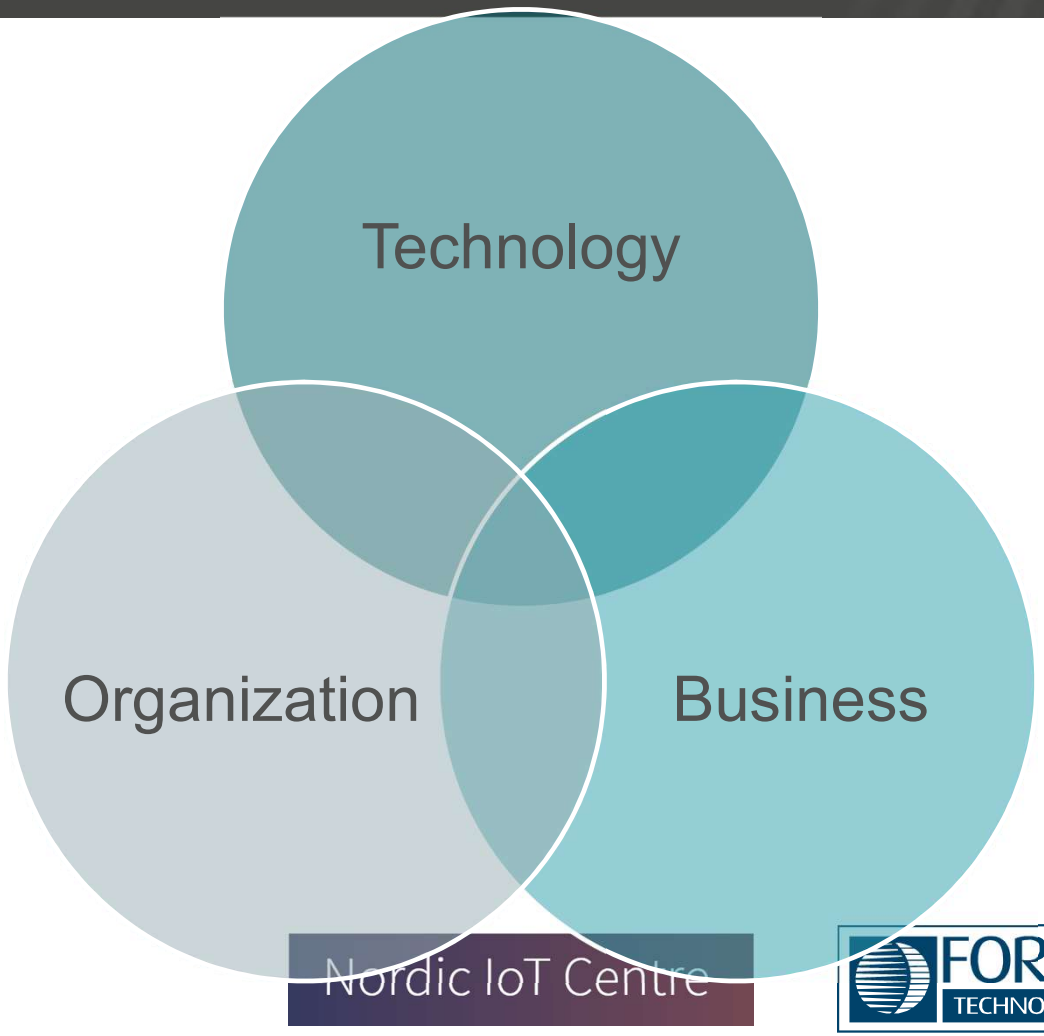
3. Interviews: companies and experts
4. Iteratively discussing findings using the Delphi method

5. Empirical analysis
6. Typological maturity model for IoT security
7. Interdisciplinary recommendations for each typology

Nordic IoT Centre

ALEXANDRA INSTITUTTET

HOLISTIC APPROACH



Nordic IoT Centre

FORCE TECHNOLOGY

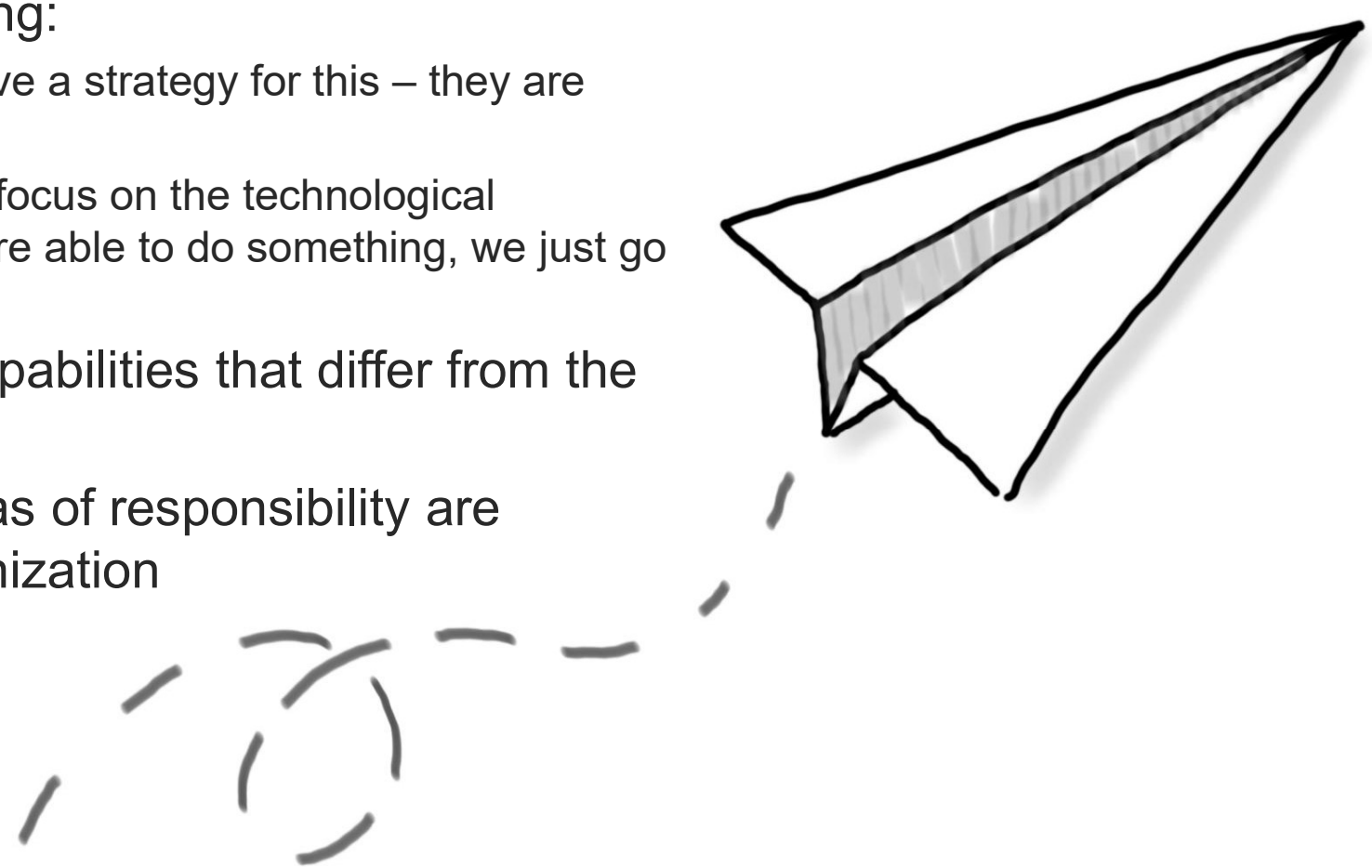
ALEXANDRA INSTITUTTET

INITIAL FINDINGS

ALEXANDRA INSTITUTE

UNCHARTED TERRITORY

- Technology in the making:
  - “Our customers don’t have a strategy for this – they are lagging behind”
  - “We have a tendency to focus on the technological possibilities – once we are able to do something, we just go ahead and implement it”
- IoT security requires capabilities that differ from the companies’ DNA
- Competencies and areas of responsibility are fragmented in the organization

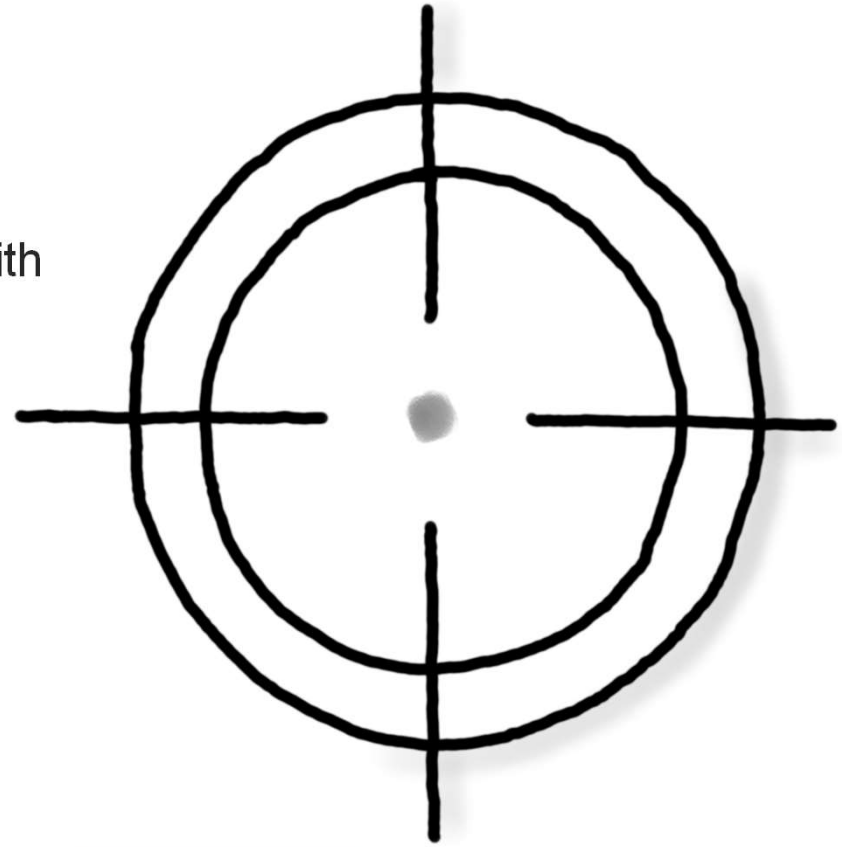


WHAT IS THE RIGHT LEVEL OF SECURITY?

- Lack of standards and/or check lists
  - Neither deficiency and overinvestment
  - Communicating with customers
- Different security requirements from different customers – and sometimes they are not the right ones
- Setting up their own metrics
  - “If it’s good enough for them, it’s good enough for us”
  - “We have created a cross-functional security board”

USING YOUR IMAGINATION

- Data in themselves are not seen as sensitive
  - *“I really can’t imagine how anyone would get anything out of our data”*
  - “Every time we have a new idea, this guy comes up with all the ways it could go wrong”
- Physical security
  - *“Well, if someone is willing to go through all that, we say: “Let them””*
- Mental models: What counts as a breach?
  - “We haven’t had any breaches. However, we did have this little incident…”

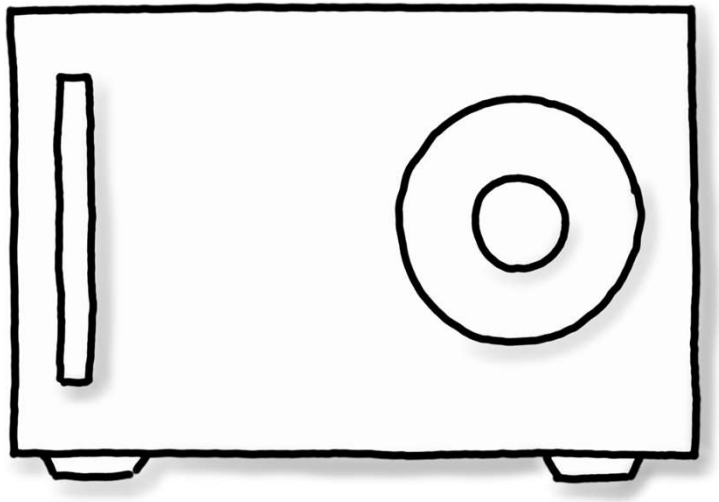


Nordic IoT Centre

FORCE TECHNOLOGY

ALEXANDRA INSTITUTTET

SECURITY IS BUSINESS CRITICAL



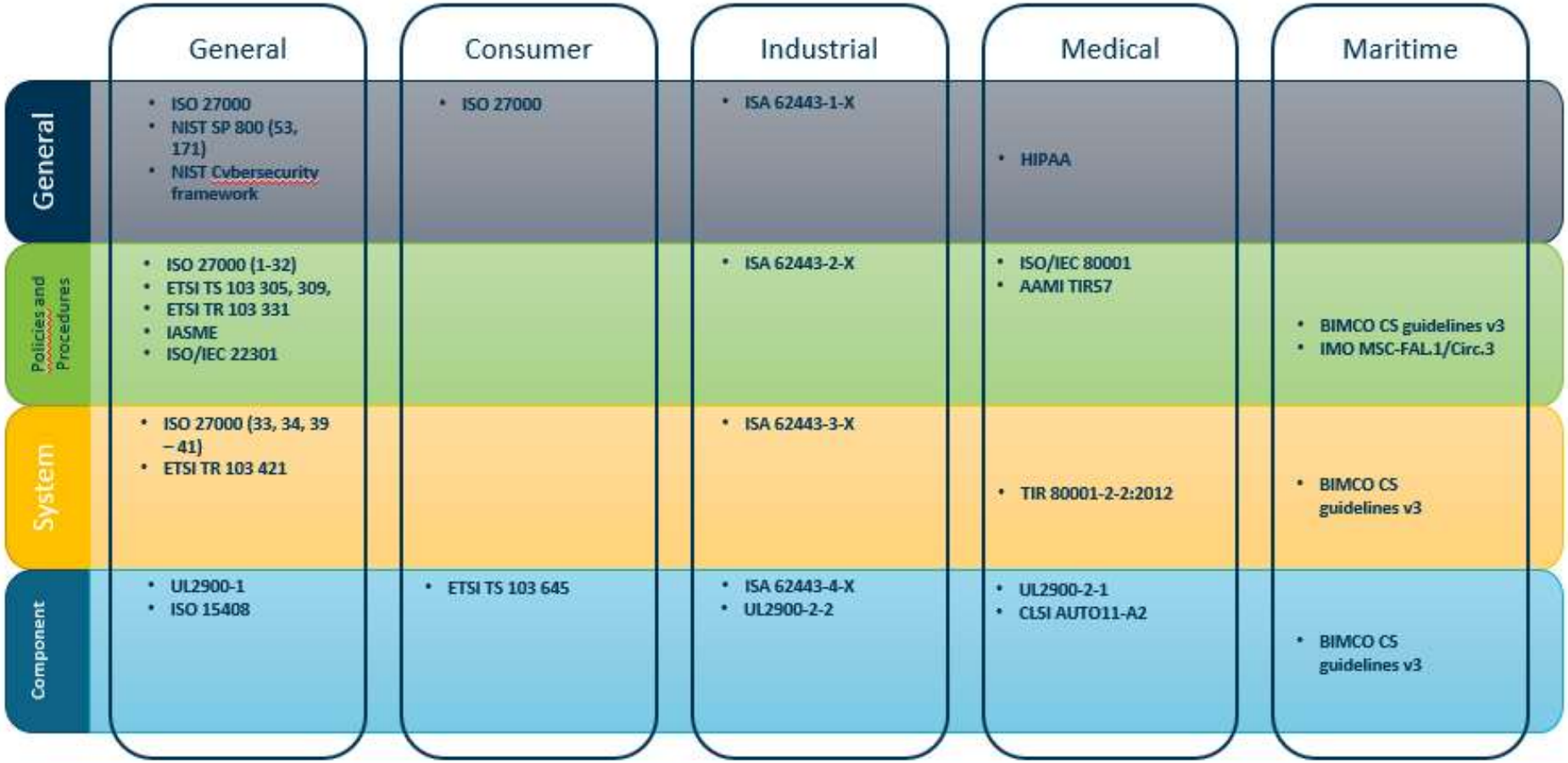
- Customers are worried about security in IoT products
- Crucial for scalability
- Security enabling new business models, products and developments

Nordic IoT Centre

FORCE TECHNOLOGY

ALEXANDRA INSTITUTTET

STANDARDS CAN HELP PART OF THE WAY



Nordic IoT Centre

FORCE TECHNOLOGY

ALEXANDRA INSTITUTTET

TS 103 645 – CS FOR CONSUMER IOT

Nordic IoT Centre

FORCE TECHNOLOGY

ALEXANDRA INSTITUTTET