

The Wisdom of Things

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Brussels without traffic lights...





...AI agent on
SAS's Board of
Directors...

...Belgian tax via blockchain...



Filing Status

- 1 Single
- 2 Married filing jointly (even if only one had income)
- 3 Married filing separately. Enter spouse's SSN above
- 4 Head of household
- 5 Self
- 6 Spouse

Exemptions

c Dependents:

(1) First name _____ (2) Dependent's security number _____

If more than four dependents, see instructions and check box.

Boxes checked on 6a and 6b
No. of children on 6c who:
• lived with you
• did not live with you due to divorce or separation (see instructions)

Dependent not entered
Add number lines above

7	
8a	
9a	

Unemployment co

b Taxable amount

The first AI
machine on a
corporate
board

First
robotic
pharmacist

Tax collected
via blockchain

First city
without
traffic
lights

Commercial
implantable

mobile phone
10% of people
wearing clothes
connected to the
internet

1 trillion sensors
connected to
the internet



**Data
Science**

The first AI
machine on a
corporate
board

First
robotic
pharmacist

Tax collected
via blockchain

**Security
&
Privacy**

First city
without
traffic
lights

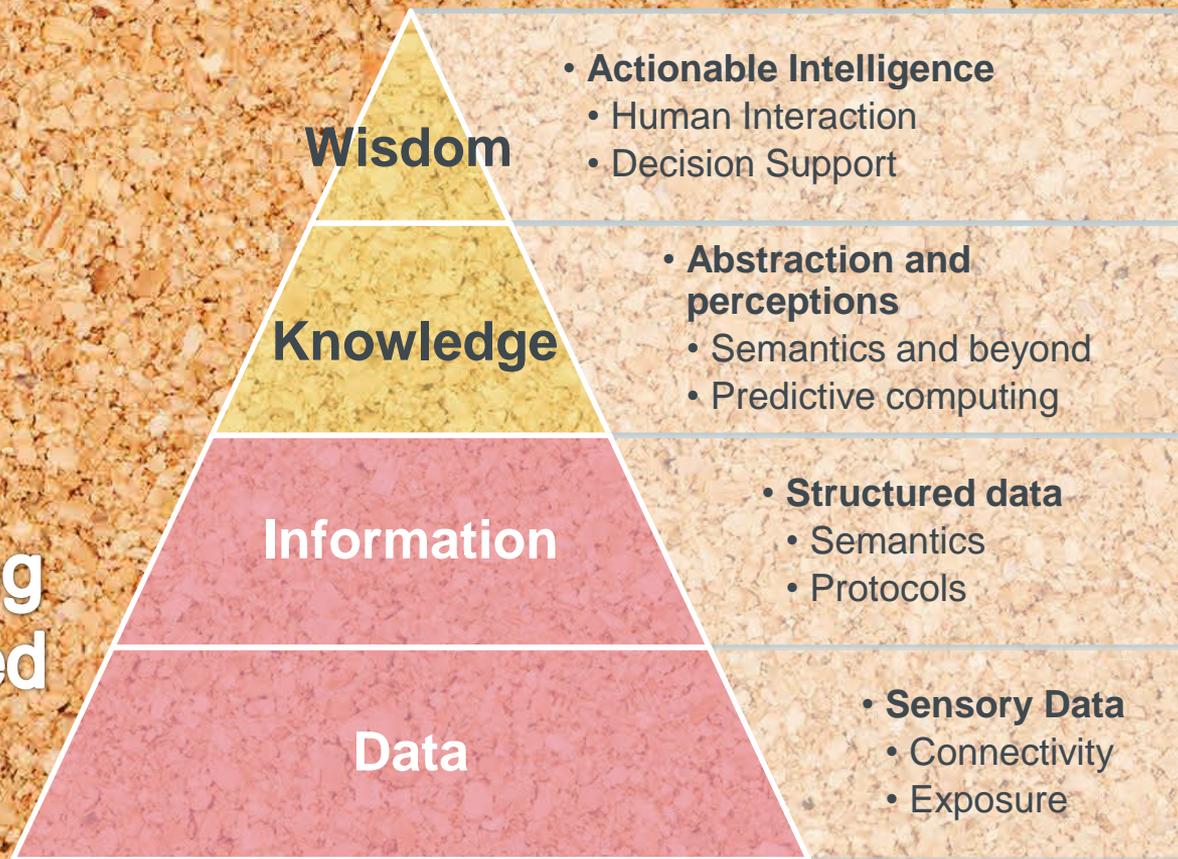
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**Everything
Connected**

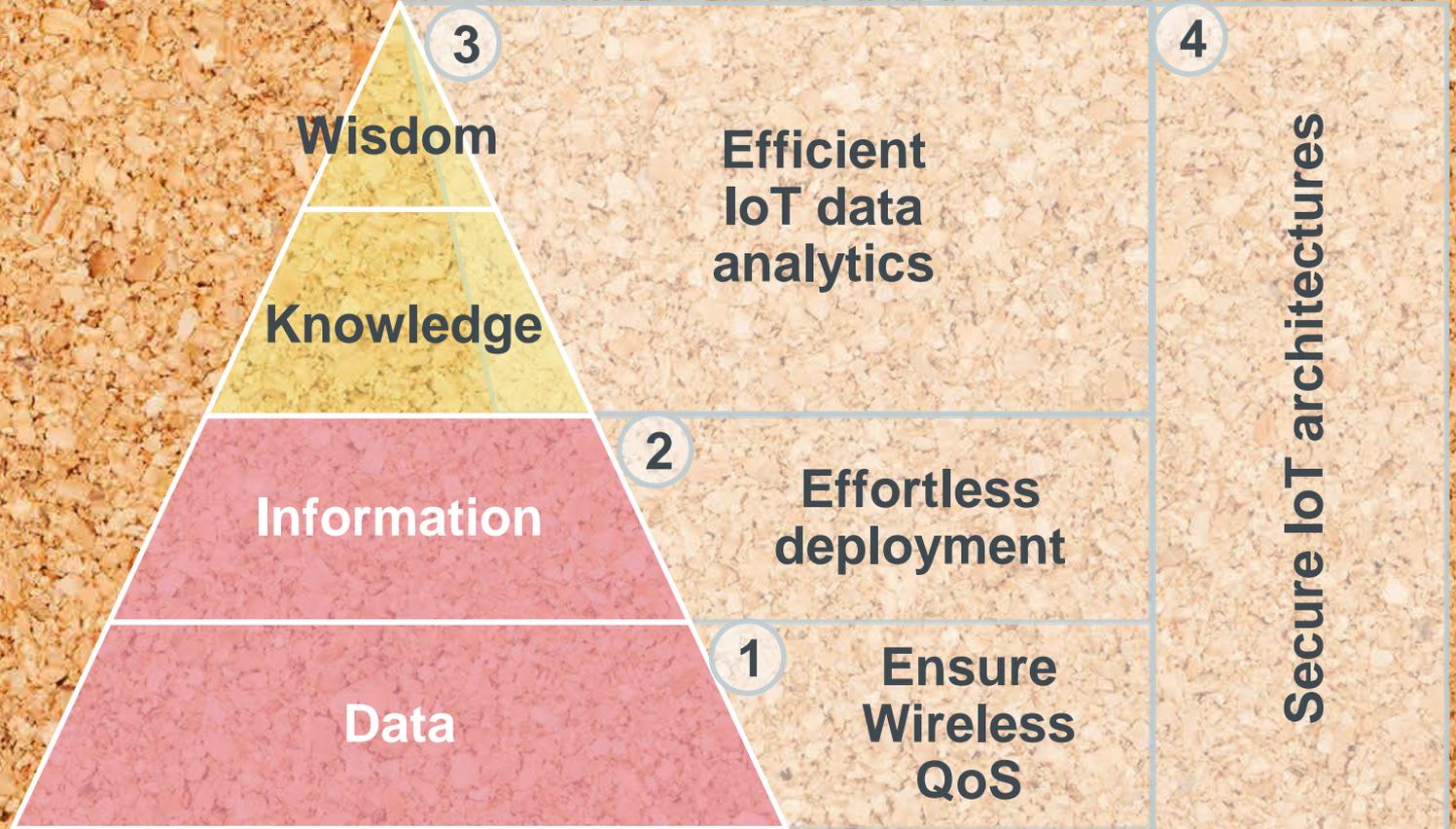
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**Data
Science**

**Everything
Connected**



**Security
&
Privacy**



1

Ensure Wireless performance

Flexible Radio Platform

Reliability in dense and harsh environment

Flexible protocol development

Distributed Network Intelligence

2

Effortless deployment of IoT solutions

Plug-n-Play Sensor Integration

Self-managed, cognitive IoT architectures

Effortless adaptive distribution of IoT Intelligence

Scalable collection and processing of IoT Data

3

Efficient IoT data Analytics

Unsupervised event and anomaly detection in (real-time) IoT data streams

Black/Grey/White-box adaptive system modeling and control

Predictive/corrective maintenance in industrial setting

Distributed reasoning on distributed IoT data

4

Secure IoT Architectures

End-to-End Security Architectures

Cryptography for IoT

Hard -and software primitives for secure IoT ...

Advanced support for policy enforcement and management





INTERNET OF DATA

BROWSING
ANTWERPEN.BE

SMARTPHONE
CALLING
Zmin 03sec

INTERNET OF HUMANS

SMARTWATCH

INTERNET OF THINGS

15 min
BEFORE RAIN
APPROACHES YOU

05 min 37 sec
BEFORE ARRIVAL

08...07...
SINCE DEPARTURE

1,214 KWH
GAINED

1,358 KWH
GAINED

04 TABLES LEFT

FULLY BOOKED

CITY OF THINGS CONNECTS

200.000 CITIZENS
WITH 34.000 SMART
DEVICES

REPRESENTING THE

LARGEST IoT LIVING LAB

EVER OFFERED TO TECH BUSINESSES

23 WATT
USED

ENERGY SAVING
MEDAL UNLOCKED

17 HOURS
PARKING LEFT

04 RESTAURANTS
ON YOUR WAY

YOU WALKED 1894 METER
SO FAR

YOUR PACKAGE
WILL ARRIVE IN 15 MIN

235 METER UNTIL
BIKE PARKING

124 PEOPLE
FAVORISED







APM TER

MINALS

NOELI

CORNELIA MAERSK
KALINGAYTORO

2014 -
2015

FORWARD

Driving the IoT onto the factory floor



MANUFACTURING



Fast, reliable wireless connectivity can be elusive in a factory full of structures and machinery that obstruct signal transmission.

- In the warehouse, wooden crates full of metal parts are sometimes stacked up like 'walls' that move and change very often. This constantly changing geography has a severe impact on wireless coverage
- Working in shifts and with fluctuations in demand, usage patterns are very uneven. When a lot of devices are working close together, e.g. Bluetooth headsets that connect to terminals, interference issues appear.
- Proprietary information makes security a top priority.

PICANOL

Weaving textile manufacturing into the IoT



MANUFACTURING



Intelligent weaving machines that are part of the IoT can warn textile mill operators of maintenance requirements and pinpoint efficiency opportunities.

- Proactive and reactive maintenance are key applications for IoT in the textile industry. To support these applications, two architectures are needed: one is a point-to-point solution that connects individual machines to each other and to human operators, and the other gathers data from all the machines for comparison and storage on a single server.
- The solution should accommodate various data collection needs and keep up with evolving hardware.



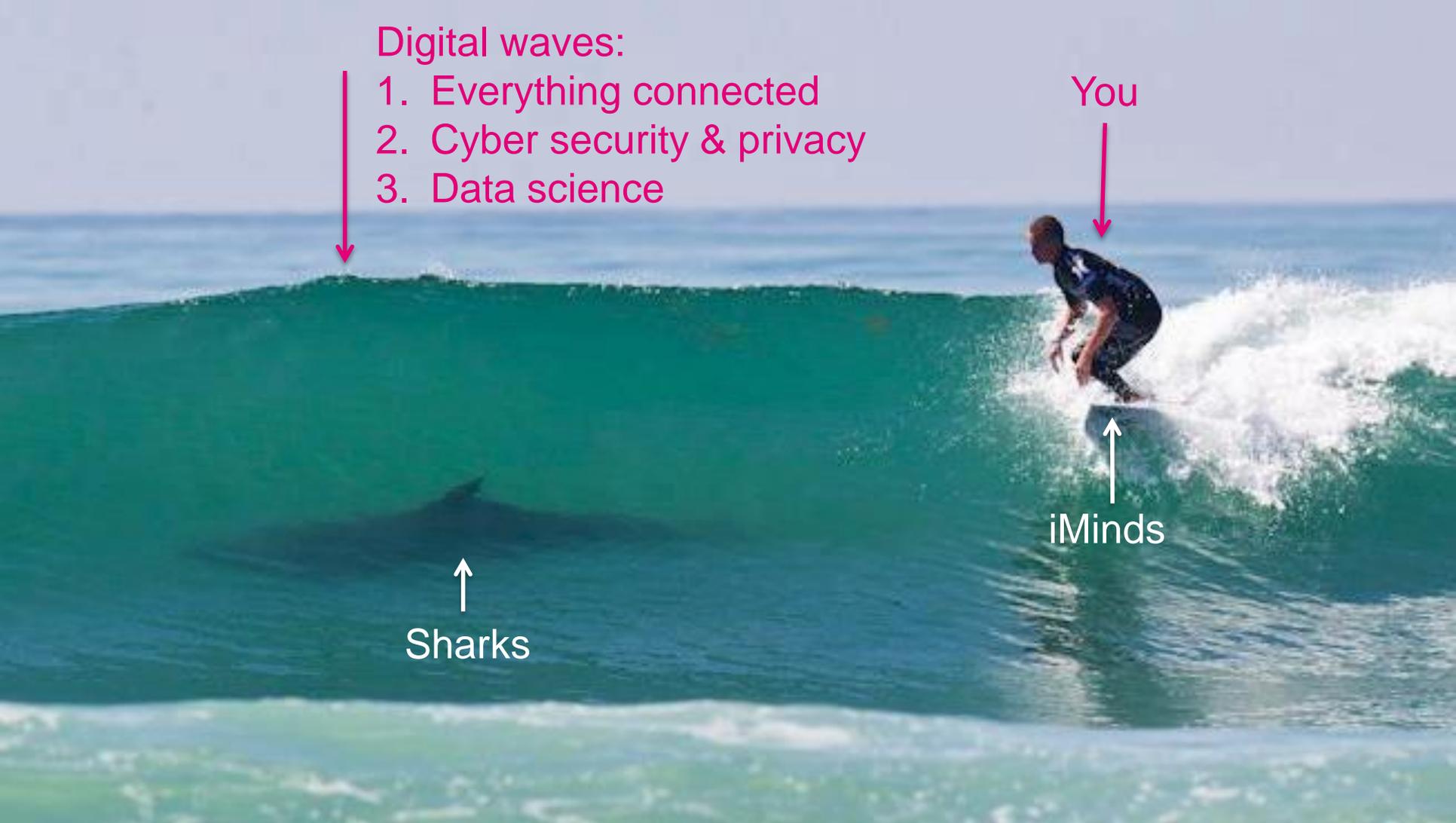
Digital waves:

1. Everything connected
2. Cyber security & privacy
3. Data science

You

iMinds

Sharks



The wisdom
of the crowd:
No one of us
is smarter
than all of us

