Privacy in IoT

The unique opportunity to learn and discuss where the Internet of Things meets GDPR, and where Hyperconnectivity meets Privacy & Security. Who wouldn't be totally confused!? In our Open Webinars, Arthur's Legal will address the Pains & Gains of the GDPR, X By Design & Resilience.


Arthur van der Wees


Dimitra Stefanatou


Janneke Breeuwsma

Arthur's Legal organizes seven (7) webinars on Privacy in IoT with the focus on GDPR, supported by AIOTI and Create-IoT

Go to **arthurslegal.com/iot/** for more information and subscription for the webinars.

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Zapplied
Ignore us at your own peril

Privacy in IoT

Open Webinars by Arthur's Legal, supported by:

AIOTI WG3 Privacy-in-IoT Taskforce, and

H2020 CSA CREATE-IoT & LSPs AG Trust in IoT

Arthur van der Wees

Managing Director Arthur's Legal, the global tech-by-design law firm & strategic knowledge partner

Expert Advisor to the European Commission (Cloud, IoT, Data Value Chain, Cybersecurity, Privacy & Accountability)

Project Leader H2020 IoT LSPs & CSAs Activity Group on Trust, Security, Privacy, Accountability & Liability

Founding Member, EC's Alliance for IoT Innovation (AIOTI)

Task Force Leader AIOTI Security in IoT & Privacy in IoT

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CREATE-IoT

European Large-Scale Pilots Programme

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Privacy in IoT Open Webinar Series

Webinar 1: GDPR: Processing, Protection, Security & Strategies

Webinar 2: X-by-Design: Upstream & Downstream Resilience
Right Now!

Webinar 3: State of the Art Privacy Principles & Requirements
Wednesday **25 April 2018**, 10.00 - 11.00 CET

Webinar 4: Consent Management & Engagement in IoT
Wednesday **2 May 2018**, 10.00 - 11.00 CET

Webinar 5: Compliance, Accountability, Assurance & Penalties
Wednesday **9 May 2018**, 10.00 - 11.00 CET

Webinar 6: IoT Ecosystems, Pre-Procurement & Collaboration
Wednesday **16 May 2018**, 10.00 - 11.00 CET

Webinar 7: Data Subject Rights & Data Management in IoT
Wednesday **23 May 2018**, 10.00 - 11.00 CET

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Please subscribe to the Privacy in IoT Mailing List at: www.arthurslegal.com/IoT, in which we will keep you up to date with dates, login details and the latest news on the GDPR, Privacy in IoT and related topics.

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Webinar Nr. 2

GDPR Inside

X-by-Design:
Upstream & Downstream Resilience

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X By Default

What does it mean?

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#Personal Data Flows & Control

GPDPMPS Regulation

Personal Data Processing
Personal Data Management
Personal Data Protection
Security

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Brief History of the Origin of Privacy By Design

1995	95/46 EC Privacy Directive (v1.0)
90s	Privacy by Design (PbD)/ PET
00s	Digital Age
2011	Start Design Regulation (v1.x)
10s	Digital is a Need To Have, for All
2018	2016/679 GDP Regulation (v2.0)

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There is No Retrofitting in Security & Privacy

Resilient data protection & cybersecurity needs to be built into systems & services, not bolted on.

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X By Design

in Plendid Isolation?

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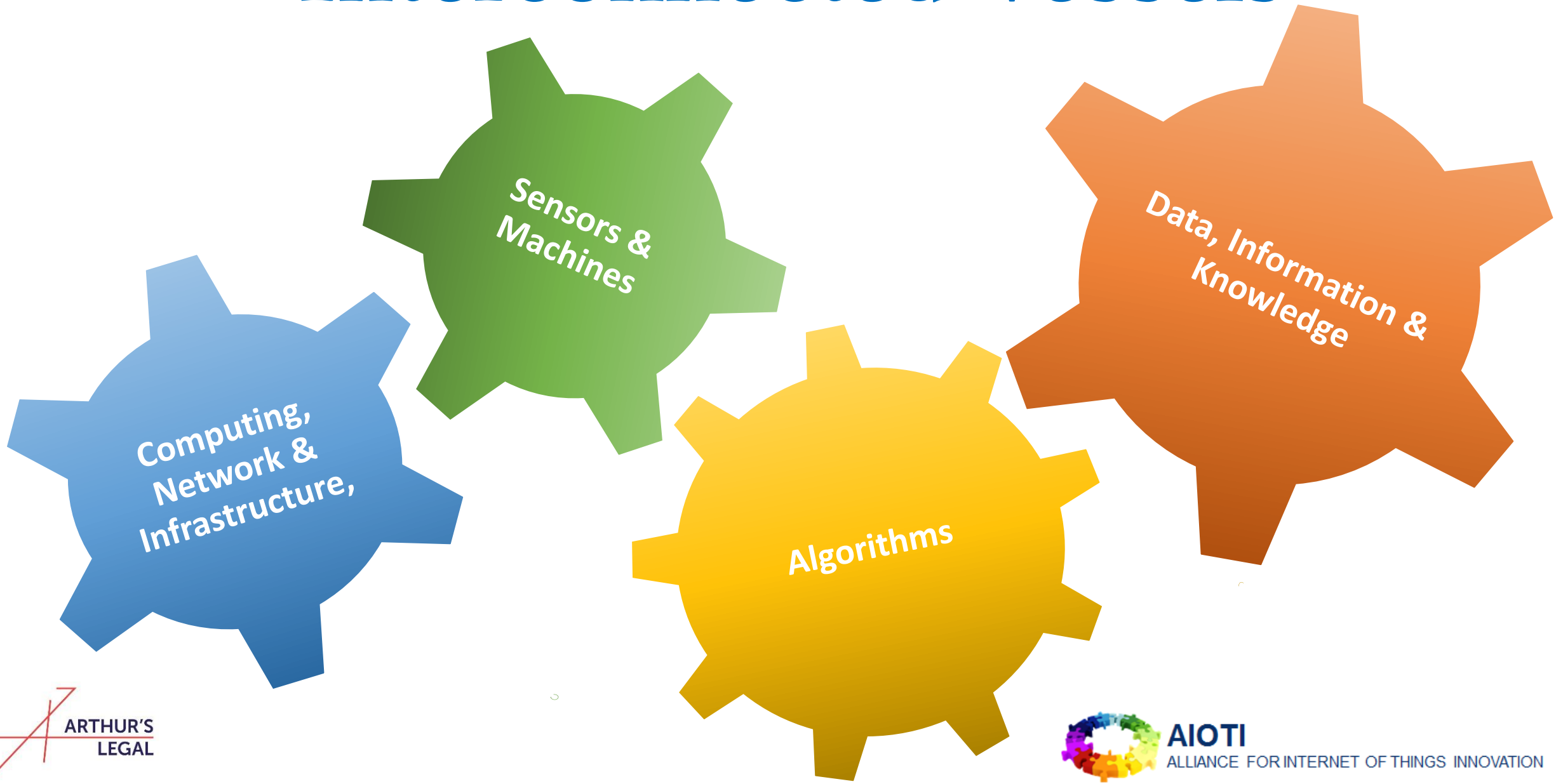
Interconnected Vessels



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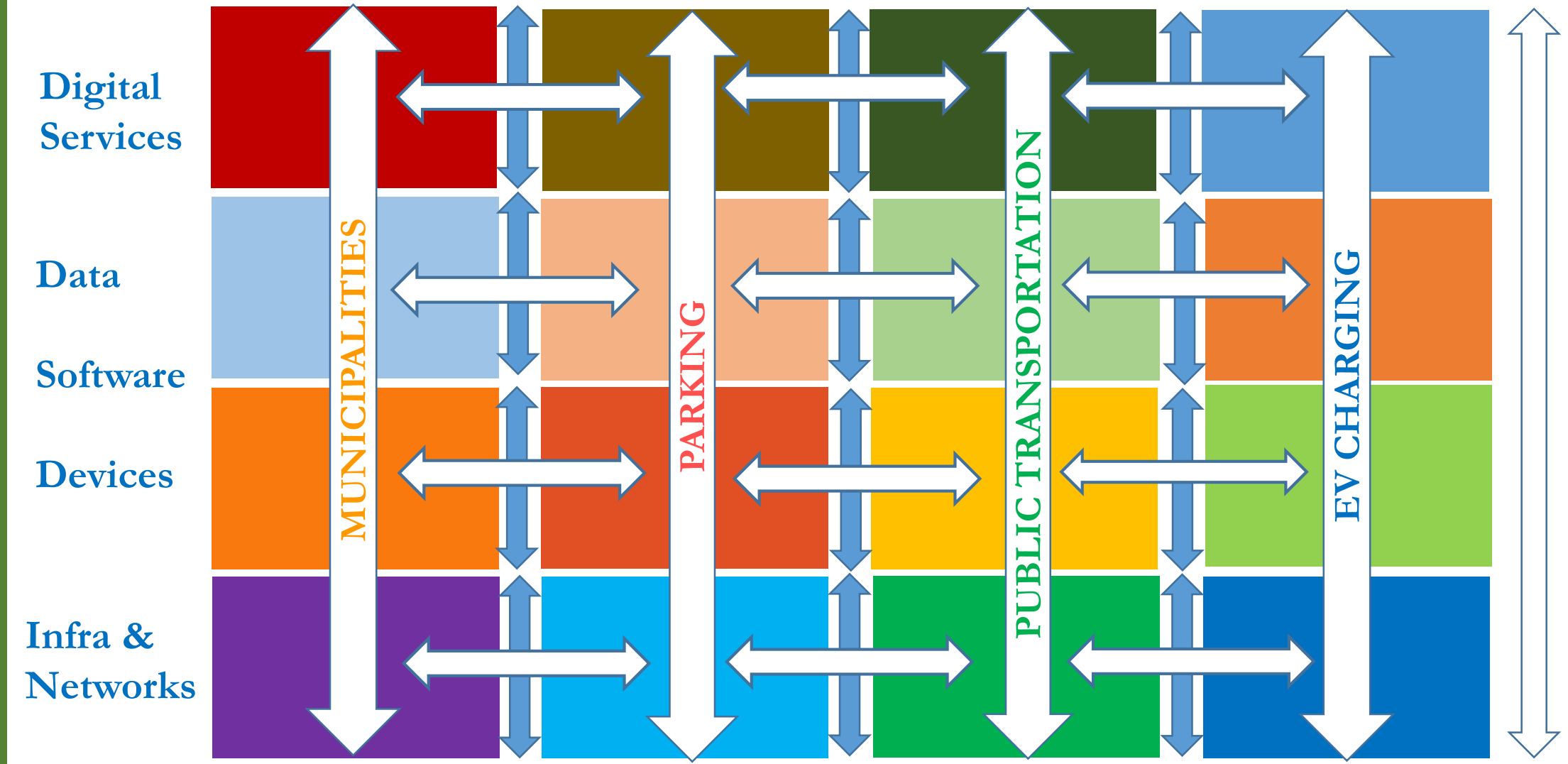
Hyperconnected, accountable Smart Society Value Chain towards the Customer: x2x



Verticals

Horizontals

Vertical & Horizontal Value Chains

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Who is Responsible?

GDPR is about Balancing Out the Allocation of Control, Benefits, Risk, Accountability, Responsibility & Trust

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50 Days

to Effective Date GDPR

25 May 2018

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Changes GDPR (Part 2 of 7)

A. Pseudonymisation (15x in GDPR)

Pseudonymised personal data is still personal data. Most identifying fields within a data record replaced by pseudonyms. But re-identification is still reasonably likely. However; reduces risks. Helps with GDPR accountability. Safeguard, Data protection by design, data security requirements.

B. Right to Data Portability

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Changes GDPR (Part 2 of 7)

Personal Data Processing & Article 20 GDPR

Right to Data Portability

20.1 The data subject shall have the right to receive the personal data concerning him or her, which he or she has provided to a controller, in a structured, commonly used and machine-readable format and have the right to transmit those data to another controller without hindrance from the controller to which the personal data have been provided, where … (a) the processing is based on consent …, of on a contract …, and (b) the processing is carried out by automated means.

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Personal Data Processing & Article 20 GDPR

Right to Data Portability

20.2. In exercising his or her right to data portability pursuant to paragraph 1, the data subject shall have the right to have the personal data transmitted directly from one controller to another, where technically feasible.

20.3. The exercise of the right referred to in paragraph 1 of this Article shall be without prejudice to [the right to be forgotten]. […]

20.4. The right referred to in paragraph 1 shall not adversely affect the rights and freedoms of others.

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Privacy in IoT, by Design

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X By Design

- Privacy
- Data Protection
- Security
- State of the Art
- Resilience
- Transparency
- Trust
- Engagement
- Accountability
- Competitive Edge

} By Design

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Data Protection by Default & By Design =

GDPR Principles

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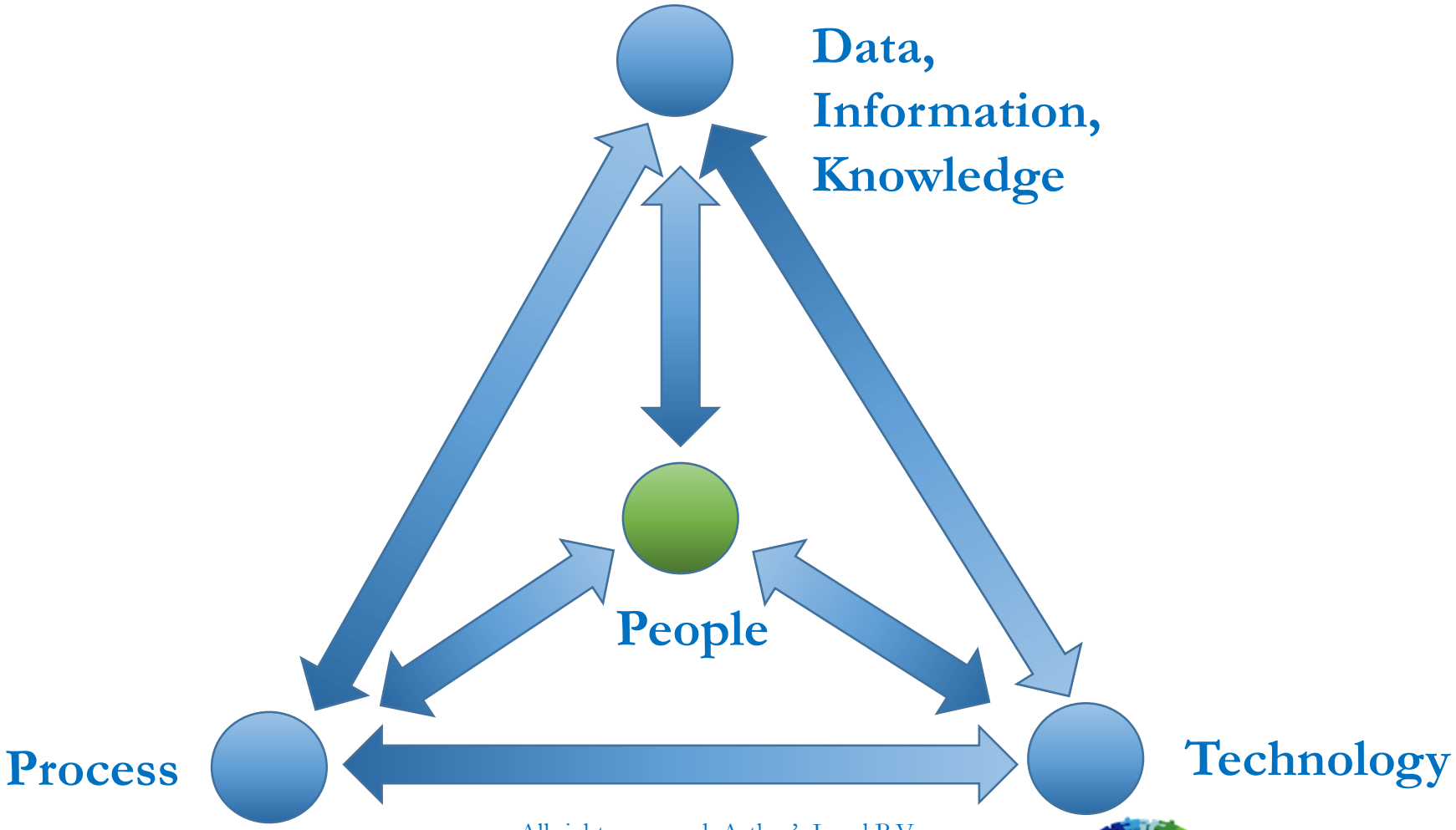
People, Process, Technology & Knowledge

Human-Centric Organisations & Systems



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Life Cycles Methodology

Systems Life Cycle: What does the life cycle entails, how long needs and can a device, product, system or service remain connected to the ecosystem in a secure, safe and compliant manner, what can the user/customer expect, and how is both the device, product, system or service as well as the user/customer able to keep up to date with (at least) the state of practice?

Stakeholders Life Cycle: What stakeholders are involved regarding a device, product, system or service and in a relevant ecosystem, what if the dynamics thereof changes, who is accountable for what part of the ecosystem, how to keep the stakeholders up to date, and what happens if there is an incident of any kind within the IoT ecosystem?

Data Life Cycle: **What data is collected, created or otherwise concerned, what is its classification, can it be segmented, minimised and isolated, what if it has multiple classifications and what if the classification changes, how controls the data, for what purposes is one entitled to process the data, what meta data and derived data is generated during the data life cycle, and what does data deletion mean?**

Contextual Life Cycle: In what context is a device/product/ecosystem used, as what persona is a stakeholder involved and in what context is data used in an ecosystem, what if the context thereof changes, who is accountable in what context, how to make stakeholders aware of changes in best practices, rights and obligations when the context changes, and how to secure the rights and obligations of the relevant other stakeholders?

Legal Life Cycle: As a person or legal entity, with whom do you want to engage? And if so, how to assess, prepare, negotiate, contract, execute, operate, update, amend, escalate and terminate such engagement (a.k.a. legal relationship)?

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7 Phases of the (Personal) Data Life Cycle

Which phase(s) are we talking about?
PII* + Actor + Legal Basis + Purpose(s)

1. Obtain /Collect
2. Create / Derive
3. Use
4. Store
5. Share / Disclose
6. Archive
7. Destroy / Delete

Most PII* comes out of Phase 1 & 2

BUT

Personal Data is created & processed in any and each phase

* PII: personal identified or identifiable information

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Continuous Updatability

‘Find & Fix’ deficiencies, whether they arise from design, operation, law or deliberate instances.

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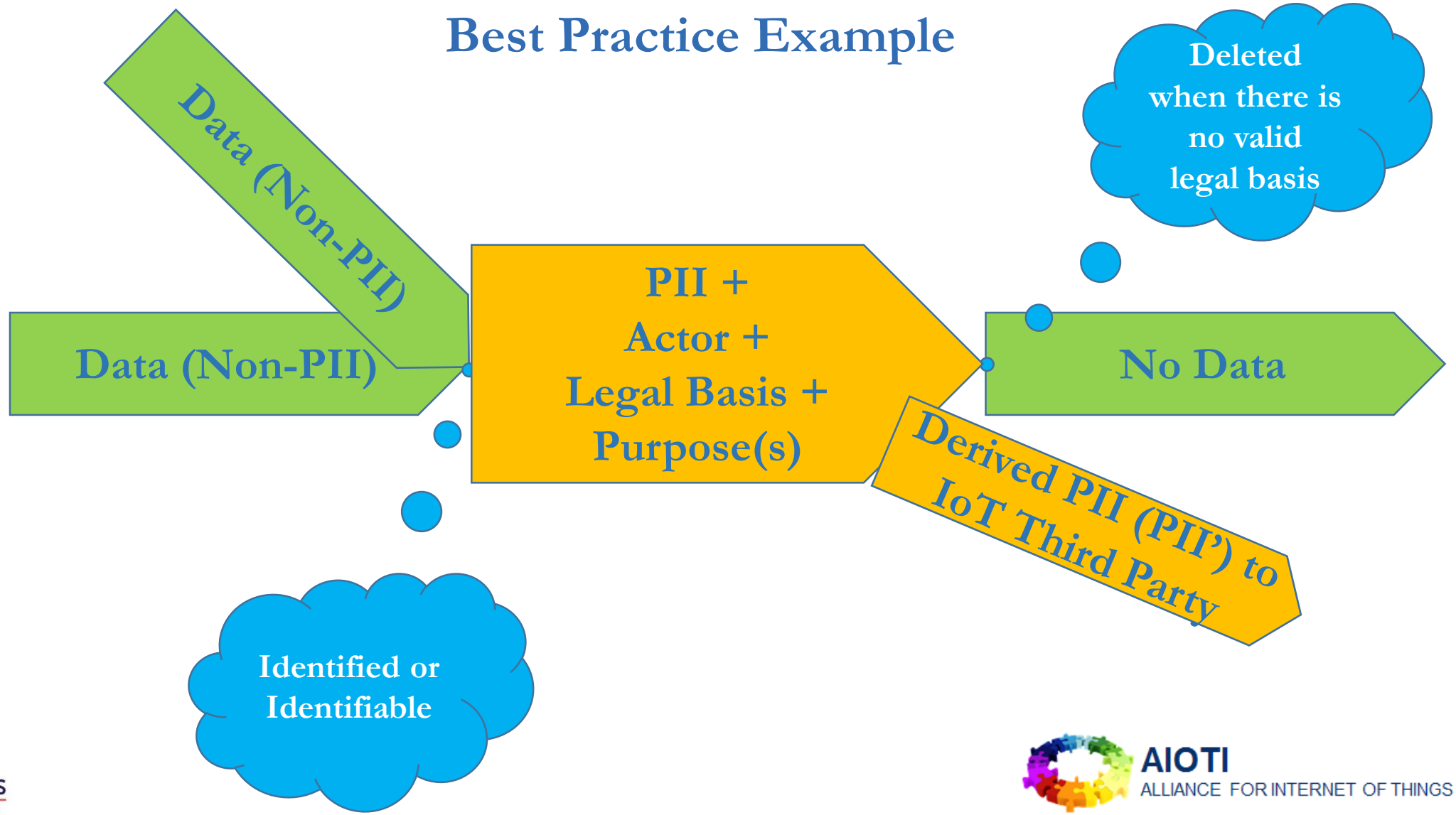
Appropriate Personal Data by Design

Best Practice Example



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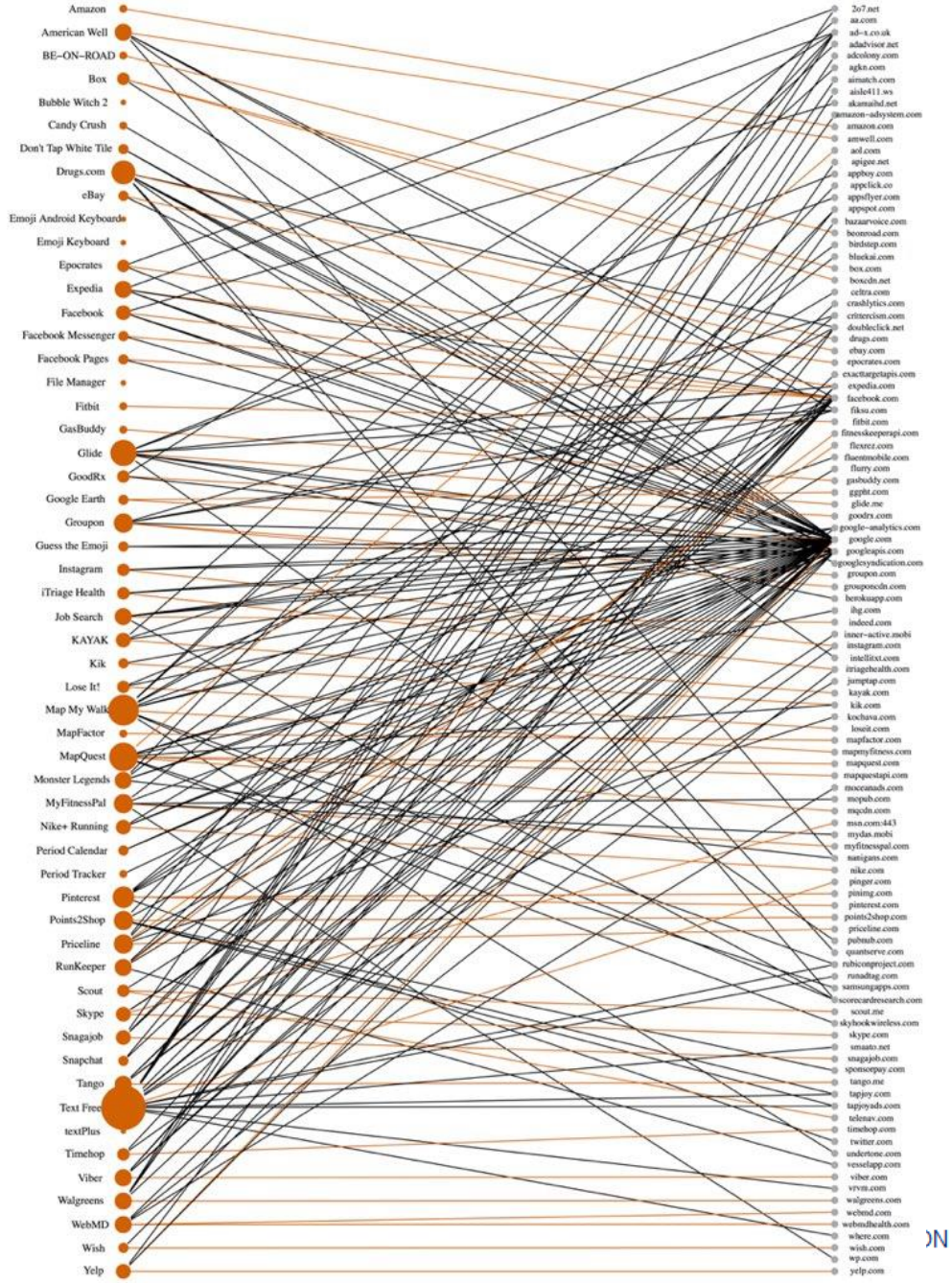
Connected Devices & Tick The Box:

Additional Unmanaged Risk

Shadow IT +
Shadow Websites +
Shadow Cloud +
Shadow IoT +
=
Shadow Data Flows

=

Pandora's Box of Data Management



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#Impact Assessment

Excellent to Start with Impact Assessments

State of Play (SOP) IAs & State of the Art (SOTA) IA

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Purpose Impact Assessment

IA is an important tool for accountability:

a. Help controllers to comply with requirements of the GDPR;
b. Demonstrate that appropriate measures have been taken to ensure compliance with the GDPR.

When to IA?

According to article 35 of the GDPR, organisations need to carry out an Impact Assessment in case the processing of personal data is **'likely to result in a high risk to the rights and freedoms of natural persons'.**

Prior to processing, carry out the assessment of the impact of the envisaged processing operations on the protection of personal data.

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‘Likely to result in a high risk to the rights and freedoms of natural persons’ means?

The criteria are:

1. Evaluation or scoring (recitals 71 and 91)
2. Automated-decision making with legal or similar significant effect (Article 35 (3)(a))
3. Systematic monitoring (Article 35(3)(c))
4. Sensitive data (Article 9)
5. Data processed on a high scale (recitals 91) (see the WP29 Guidelines on DPO)
6. Data sets that have been matched or combined (see WP29 Opinion on Purpose limitation)
7. Data concerning vulnerable data subjects (recital 75)
8. Innovative use or applying technological or organisational solutions (Article 35(1) and recitals 89 and 91)
9. Data transfer across borders outside the European Union (recital 116)
10. When processing itself ‘prevent data subjects from exercising a right or using a service or a contract’ (Article 22 and recital 91)

First & Second Privacy Principle in IoT

No PII by Default

Avoid Personal Data (PII) Collection or Creation (*)

(*) Exceptions permitted, when & where required

'As If' X-by-Design

Design & Engineer Ecosystems As-If these will (now or in a later phase) process Personal Data

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#Impact Assessment

1. Data Classification
2. Actors & Stakeholders
3. Technical Stack
4. Legal Grounds
5. Legitimate Purposes
6. Data Life Cycle
7. Personal Data Flows

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Better leave it to the Monkeys!?

Chaos Engineering by Design: Design for Failure

Simian Army Projects

- Chaos Monkey
- Chaos Gorilla
- Chaos Kong
- Janitor Monkey
- Doctor Monkey
- Compliance Monkey
- Latency Monkey
- Security Monkey

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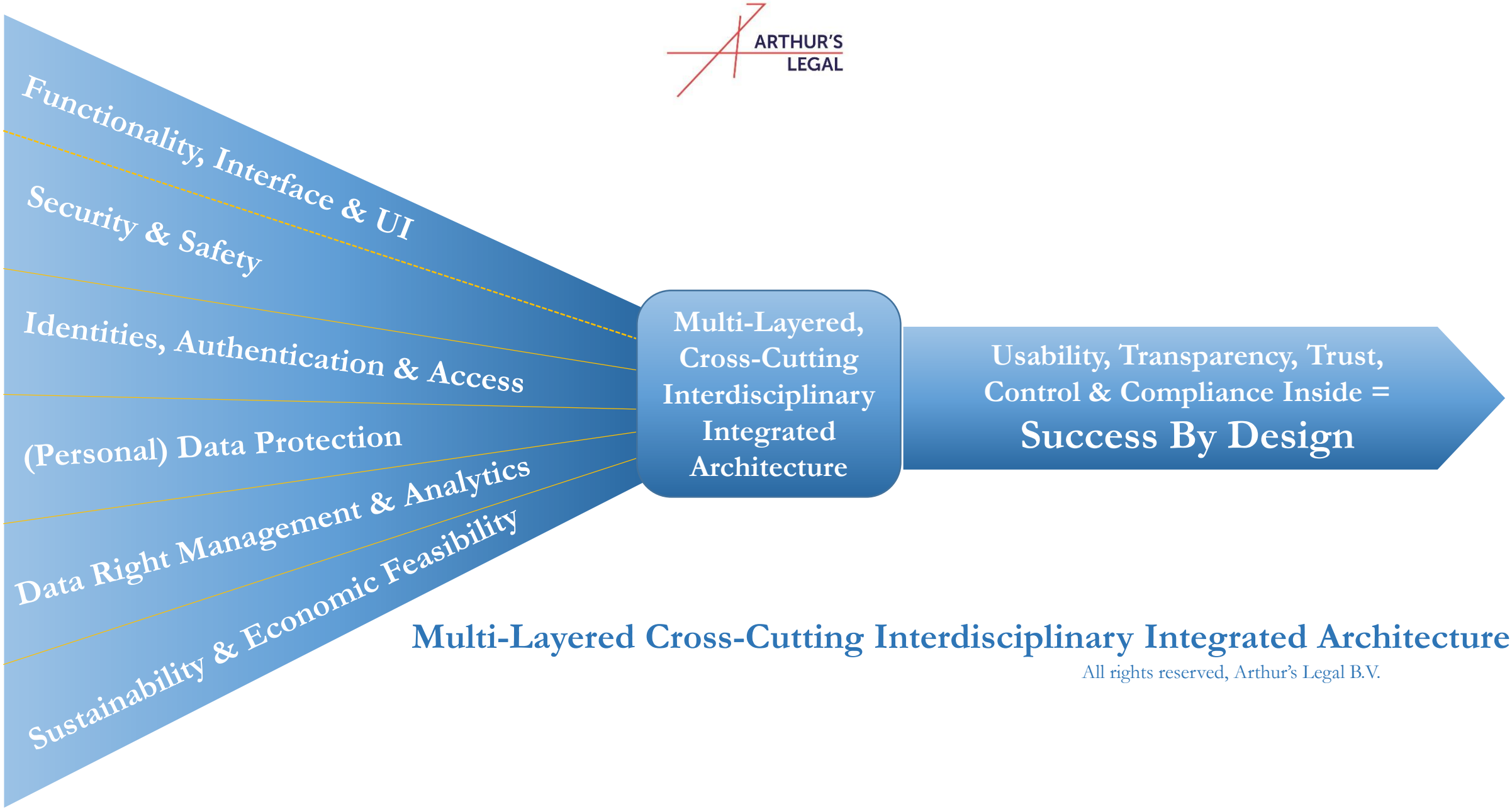

Multi-Layered Cross-Cutting Interdisciplinary Integrated Architecture

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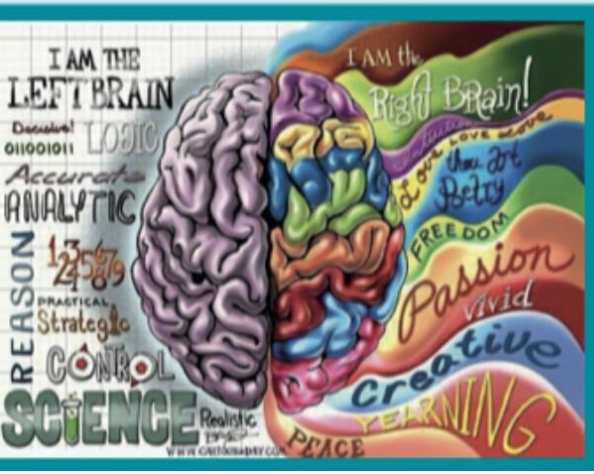
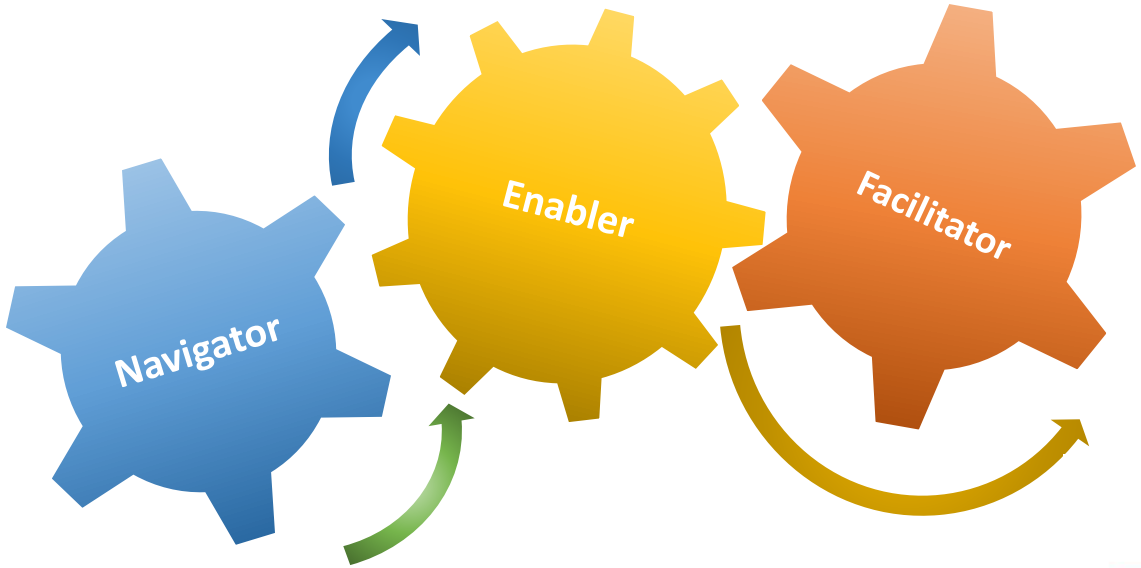
STRATEGIES AND SYSTEMS



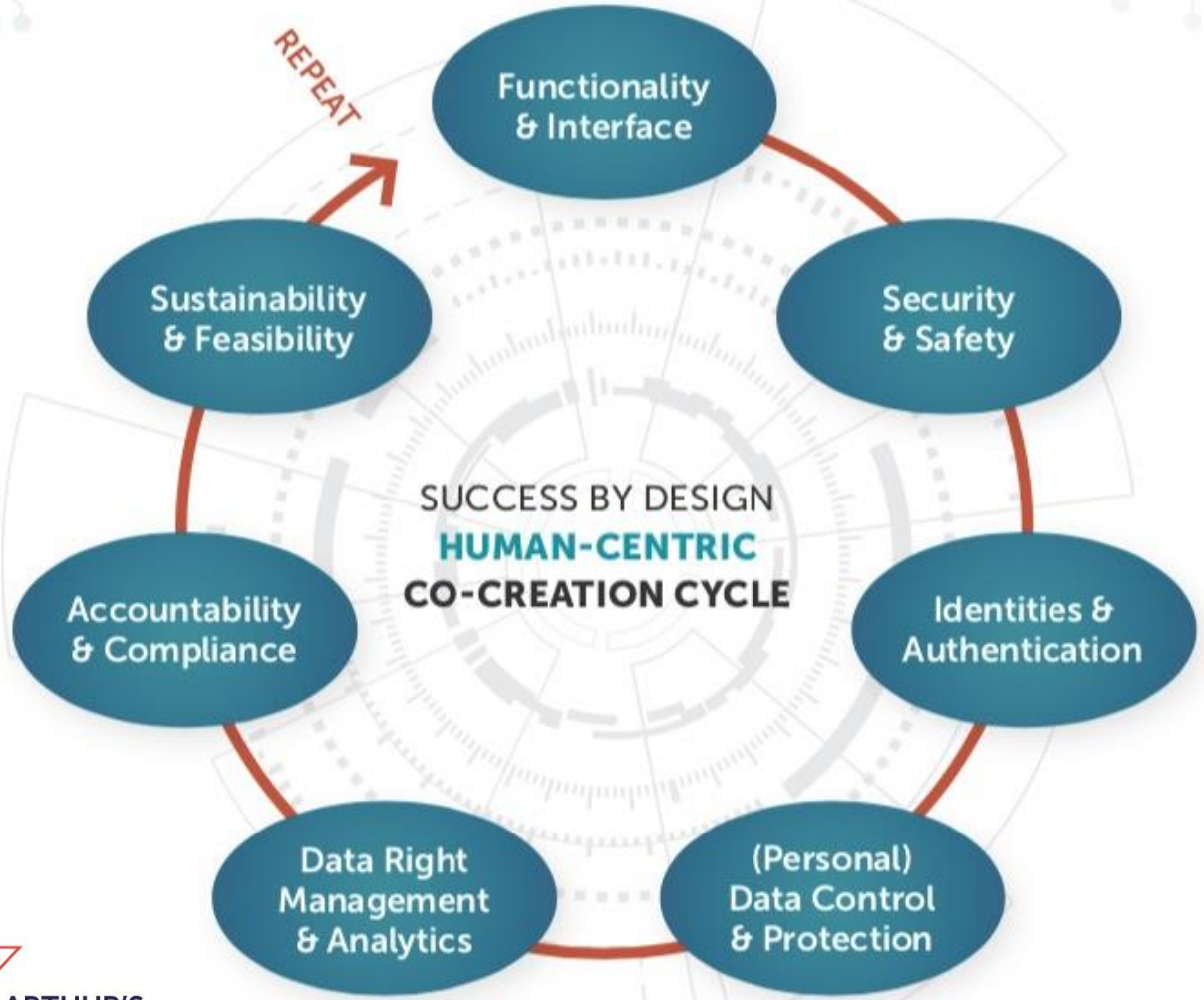
The Multiplicity Approach

Symbiotic combination of diverse groups of people that work together with diverse groups of machines, algorithms and capabilities to identify, address & solve problems, and make & execute decisions.



In this Digital Age, technology has outstripped our societal, economical and legal frameworks.

How to catch up and keep up?



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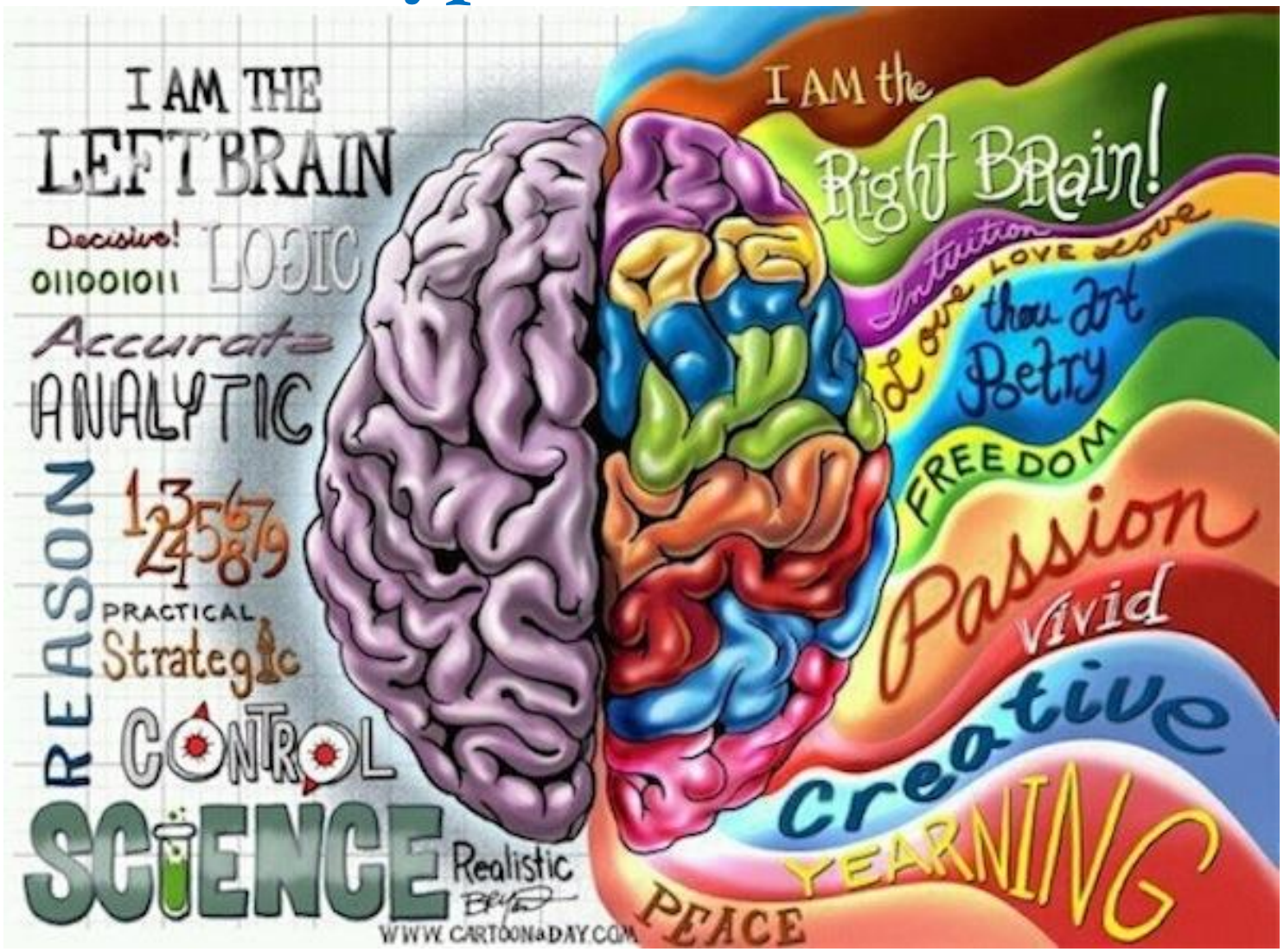
Hyper-connect!



Thank You

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Arthur's Strategic Services & Systems } Global Tech & Strategies by Design. Est. 2001

Arthur's Legal: Arthur's Legal a global tech and strategic x-by-design law firm. Arthur's Legal is founded in 2001 and since its incorporation provides integrated full services, and mainly focuses on local and global private and public organizations that are active as customer, user, vendor, integrator, consultant, legislator or policy maker in the fields of IT, licensing, cloud computing, internet of things, data analytics, cybersecurity, robotics, distributed ledger (block chain) technology and artificial intelligence. Arthur's Legal is also a leading deal making expert; it has already structured and negotiated out more than 5.000 major technology and related deals with and for global Fortune companies as well as other major organizations in the public and private sector worldwide.

Arthur's Global Digital Strategies: The counsels of Arthur's Legal are legal experts, strategists, technologists, standardization specialists and frequent speakers worldwide, with in-depth experience and are well-connected in the world of technology, combinatoric innovation, data, digital, cybersecurity, (personal) data protection, standardization, risk management & global business. On these topics, its managing director Arthur van der Wees LLM is expert advisor to the European Commission, Dutch government as well as other public and private sector organizations and institutes worldwide.

Trust, Digital Data, Cybersecurity, Algorithms, AI, Robotics & Internet of Things: Arthur's Legal is Founding Member of European Commission's (EC) Alliance of IoT Innovation (AIOTI), Co-Chair of AIOTI WG4 (Policy), Project Leader of both the AIOTI Security in IoT and Privacy in IoT taskforces, co-author of EC's Cloud SLA Standardisation Guidelines, co-author of Cloud Security Alliance's Privacy Level Agreement (PLA) 2.0, co-contributor to ISO standards such as ISO/IEC 19086 (Cloud Computing), co-author of the IERC Handbooks 2016 (Strategic & Legal Challenges in IoT) and 2017 (Security & Privacy in IoT), member of ESCO and co-author of the Dutch National Smart Cities Strategy. Arthur's Legal is co-founder of CloudQuadrants on the maturity of cloud offerings, the Cyberchess Institute that landscapes the real-life cybersecurity arena, the Cyber Trust Institute that sets trust trajectories and orbital requirements and parameters for technology-as-a-service, the Institute for Next Generation Compliance that promotes the restructuring and automation of compliance and related procurement, and the Institute for Data and Evidence Based Trust that aims to build and enhance trust and data protection in open, decentralized digital, cyber-physical and virtual ecosystems. Furthermore, Arthur's Legal is EC H2020 project IoT CREATE consortium partner and activity group leader on trust, security, safety, privacy, legal and compliance topics in IoT in five EU large scale pilots on smart healthcare, smart cities, wearables, smart farming, food safety and autonomous vehicles with EUR 250M of accrued EC and other funding. Together with IDC Arthur's Legal is also doing research and policy making for the Commission on data portability & application portability. One can build it's own AI with Zapplied.

Connected & Hyper-connected: Arthur's Legal has an unique interdisciplinary 3D-angle & x-by-design approach, connecting vital topics such as usability, security, data management, (personal) data protection, compliance with technology, infrastructure, architecture and global standardization thereof, with the capability and ability to connect those components in hyper-connected ecosystems much earlier (read: pro-active, preventative) than the traditional policy-making, legal and compliance practice does. For upcoming events, key notes and other activities, please check out website, stay up to date via its social media channels, or contact us.

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