

In Accountable IoT We Trust

**AIOTI WG3 Security & Privacy-in-IoT Taskforces, and
H2020 CSA CREATE-IoT & LSPs AG Trust in IoT**

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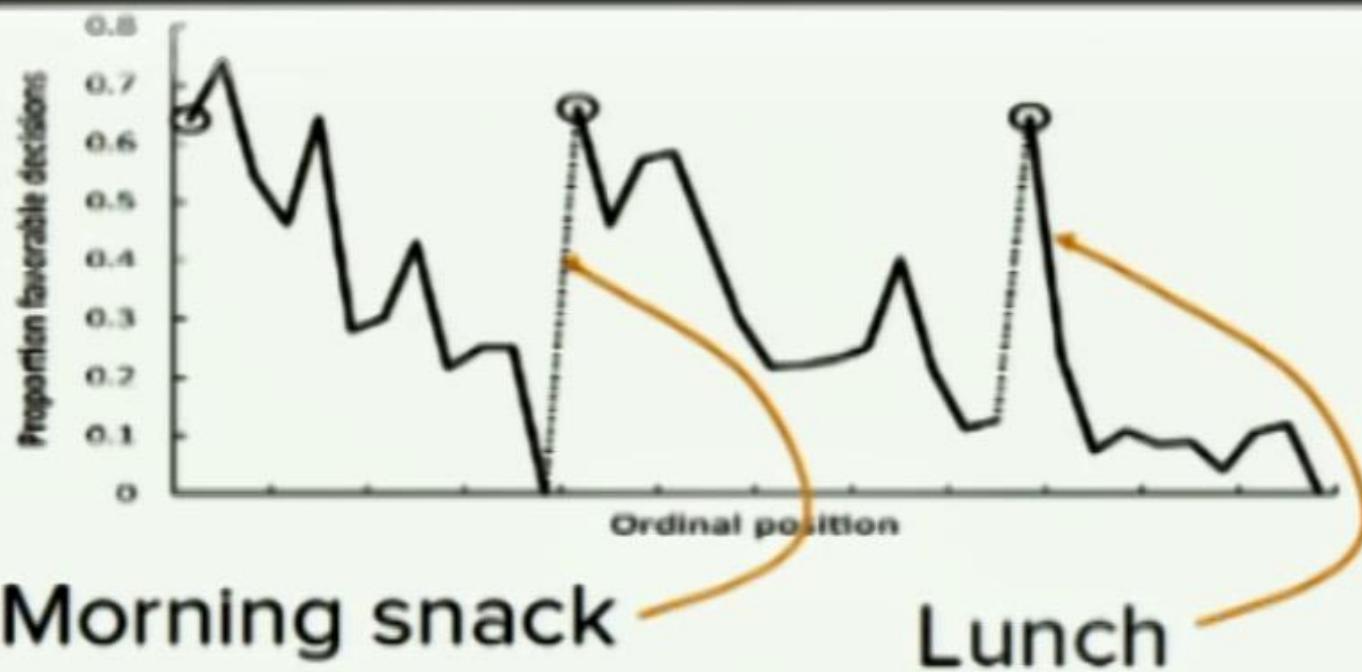
What is the Most Valuable Intangible Asset of All?

TRUST



The Age of IoT, Digital Data, Robotics & AI

What's different now? Machine Learning is the study of algorithms that can learn and act.



Judges are significantly more lenient after a food break (Danziger et al 2011).

Trusted Digital
is a Need to Have,
not a Nice to Have



AIOTI WG3 & WG4, and CREATE-IoT WG5 Scope: Trust in IoT

(Personal)
Data Protection

Security

User Adoption &
Acceptance

Resilience

Impact-Driven

Privacy

Data Control,
Access & Use

Accessibility

Data Access &
National Security

Trust

Accountability

Sector-Specific
Regulation

Liability

Integration

IAM

Data Life Cycle

IoT Device Life
Cycle

Legal Life Cycle

Stakeholders Life
Cycle

Contextual Life
Cycle

Sustainability

Dynamic
Assurance

Safety

Engagement

AIOTI

From 2018, Digital & Data Are Highly Regulated Domains

PSD2: 13 January 2018

NIS: 9 May 2018

Identifying operators of 'Essential Services'
9 November 2018

GDPR: 25 May 2018

Trade Secrets Directive 9 June 2018

Radio Equipment Directive (2016)

Registration of radio equipment within some categories:
12 June 2018

e-Privacy Regulation (draft)

Free Flow of Data Regulation (draft)

Cyber Security Act & Certification Scheme (draft)

Public Services Information Directive (revision)



1 January 2018

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Trust & Trustworthiness



Trust: By User/Society in Custodians

Trustworthiness: By Vendors/Providers As Custodians



Trust Principle in IoT

The Principle of No-Surprises

Privacy & Security Principles in IoT

Accountability

Any data controller/processer is accountable for regulatory and contractual compliance to the extent concerning its level of collecting, using, sharing and other processing, the related impact assessment linked to technical and operational measures, including with and for data subcontractors involved.

Accountability can not be outsourced.

State of the Art Accountability: Information Security Standards vs GDPR (25 May 2018)

The GDPR offers an equation for finding the appropriate level of protection, per purpose, per impact assessment, and per economic feasibility. See the Articles 25 & 32 GDPR.

We call this the **Appropriate Dynamic Accountability (ADA) Formula**:

State of the Art Security – Costs – Purposes + Impact

Although the current information security standards aim for ‘**achieving continual improvement**’, the GDPR aims to ensure up-to-date levels of protection by requiring the levels of data protection and security to continuously meet the ADA formula.

#Accountability

Is compliance as we know it dead?



From Continual to Continuous State of the Art Security & Privacy

Although the current information security standards aim for ‘**achieving continual improvement**’, article 32 GDPR aims to ensure up-to-date levels of protection by requiring the levels of data protection and security to **continuously** meet the Appropriate Dynamic Accountability (ADA) Formula

State of the Art Security – Costs – Purposes + Impact

Continuous Updatability

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



Trust Principle in IoT

Dynamic Certification & Assurance

How to Validate SOTA Trustworthiness





Functionality, Interface & UI

sOTA Security & Safety

Identities, Authentication & Access

sOTA (Personal) Data Protection

Data Right Management & Analytics

Sustainability & Economic Feasibility

Multi-Layered,
Cross-Cutting
Interdisciplinary
Integrated
High-Level
Architecture

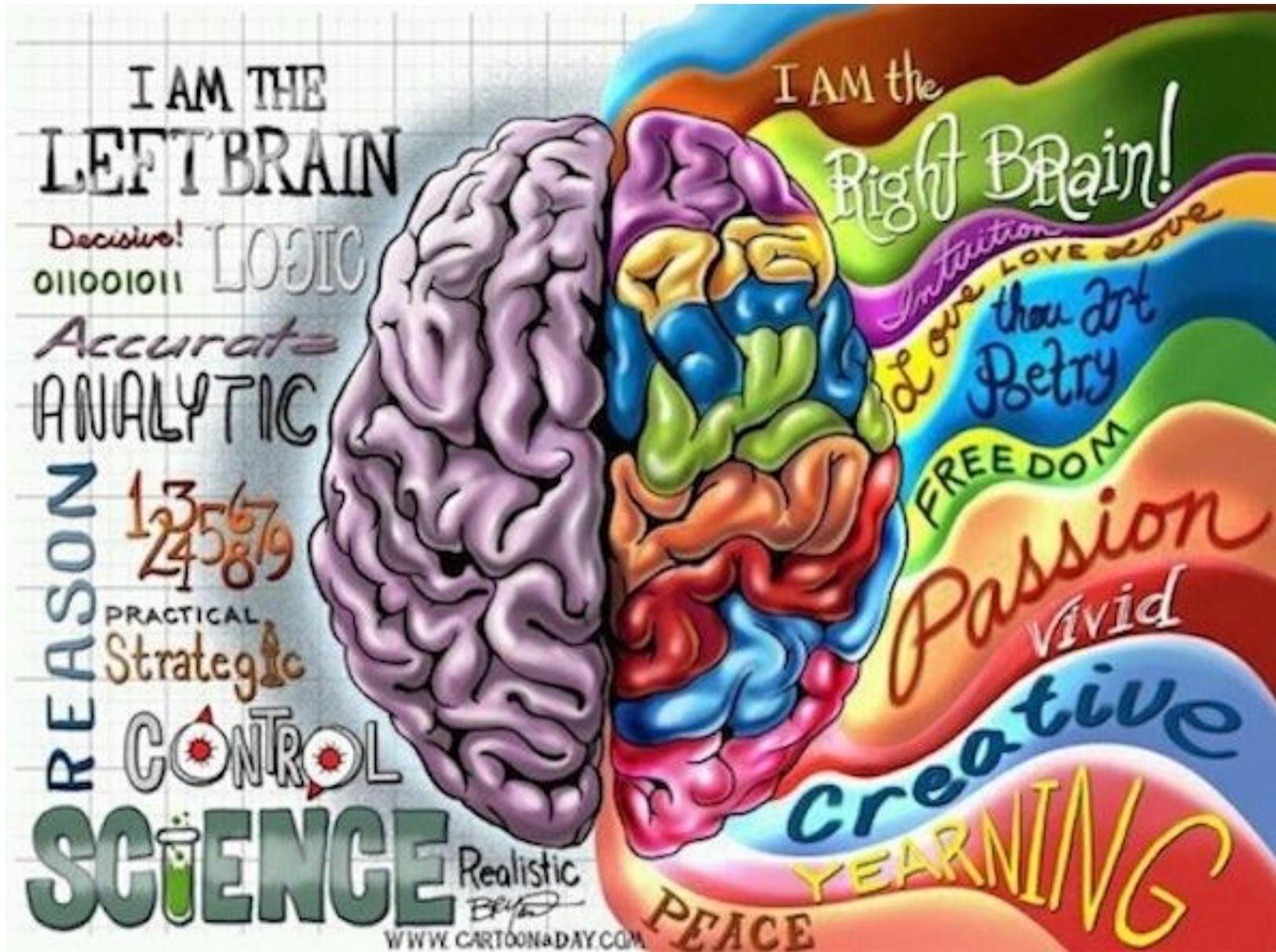
Usability, Transparency, Trust,
Control & Compliance Inside =
Success By Design

Multi-Layered Cross-Cutting Interdisciplinary Integrated Architecture

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AIOTI

Man & Technology Symbiosis: Hyperconnectivity!



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Q&A:
Anything
Goes!

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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.



Trustworthy Internet of Everything & Everybody for the Wellbeing of People and Planet

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