



Cloud Services As An Enabler

The Strategic & Pragmatic Approach

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SLA - Ready

Agenda

1. Introduction
2. Trust
3. Digital Single Market & SLA Ready
4. Common Understanding: Back to Basics
5. Ecosystem for Digital Technology & Rule of Law

Arthur's Legal

Tech Law Firm By Design. Est. 2001

The next level law firm: Compact Core + Trusted Outsourcing + Lot's of Tech & Tools

Janneke Breeuwsma: Lawyer: Digital, Data, Privacy & Technology

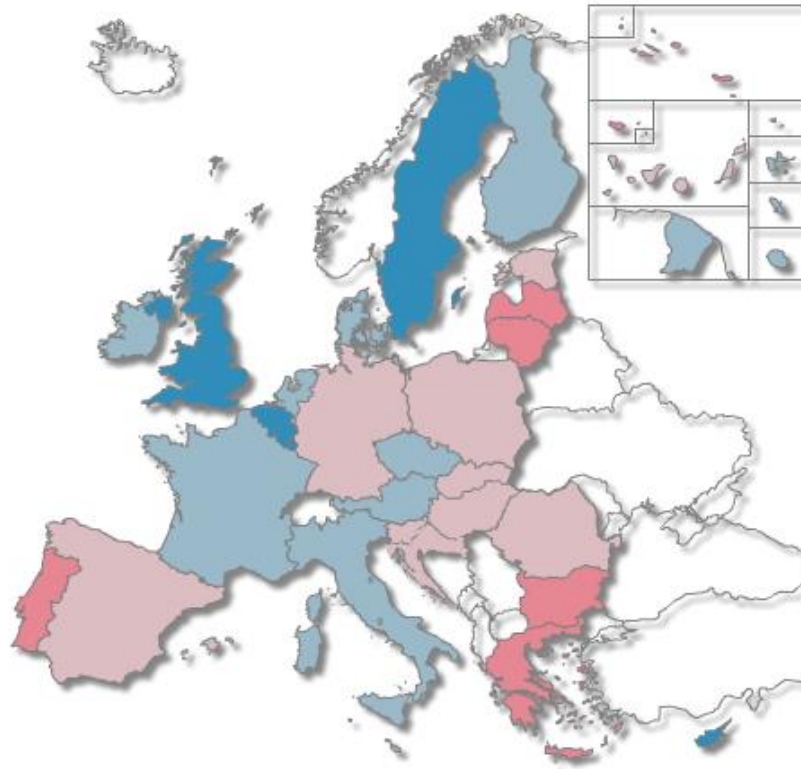
Cloud & Data: Cooperates with European Commission, global organizations including many universities worldwide. Frequent speaker at leading international conferences.

Practice What you Preach: Arthur's Legal technology partner Zapplied Platform is helping organizations with practical and user-friendly artificial intelligence to optimize and automate knowledge engineering, document generation, deal/relation life cycle management and collaboration.

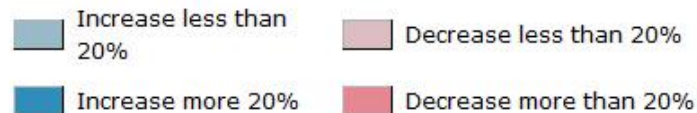


SLA - Ready

Massive Growth of Productivity Required: Digital is Key



Legend : Projected population changes 2013-2060



‘Faced with rapidly ageing populations and slowing employment growth, **mature economies need to boost productivity sharply if they are to escape stagnating living standards.**

To compensate fully to slower employment growth over the coming 50 years, productivity growth would need to be **80% faster** than over the **past half-century**, according to calculations from McKinsey.’

Demographics, Technology, Creativity & Ability to Transform: Social Prosperity or Social Disruption?



**65% OF KIDS TODAY
WILL DO JOBS THAT
HAVEN'T BEEN INVENTED
YET**



One Needs a Set of Catalysts

Invention, idea, technology, competition, peer pressure, hyperconnectivity, commodity prices, never waste a good crisis, zero day hack, chaos, survival, standardization, regulation, reports, boldness, passion, entrepreneurialship, et cetera



Connected Devices: Unmanaged Risk

Shadow IT, Shadow Cloud, Shadow IoT

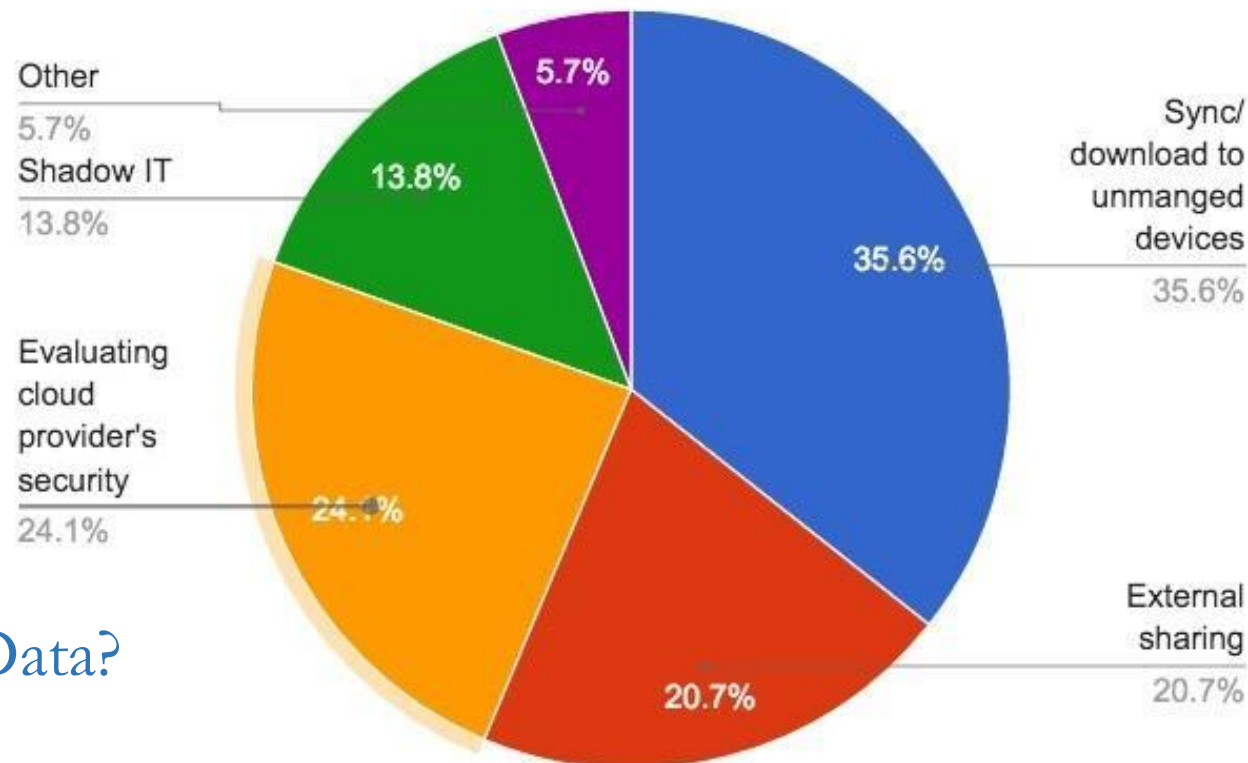
Unmanaged Devices & Application

Where is your Corporate/Governmental Data?

How to get data back within your control?

Without killing increasing adoption levels by users?

What is the biggest public cloud security challenge your organization needs to address in 2016?



Risks, Comfort & Trust in the Cloud

Major Cloud Services & Digital Single Market Challenge:

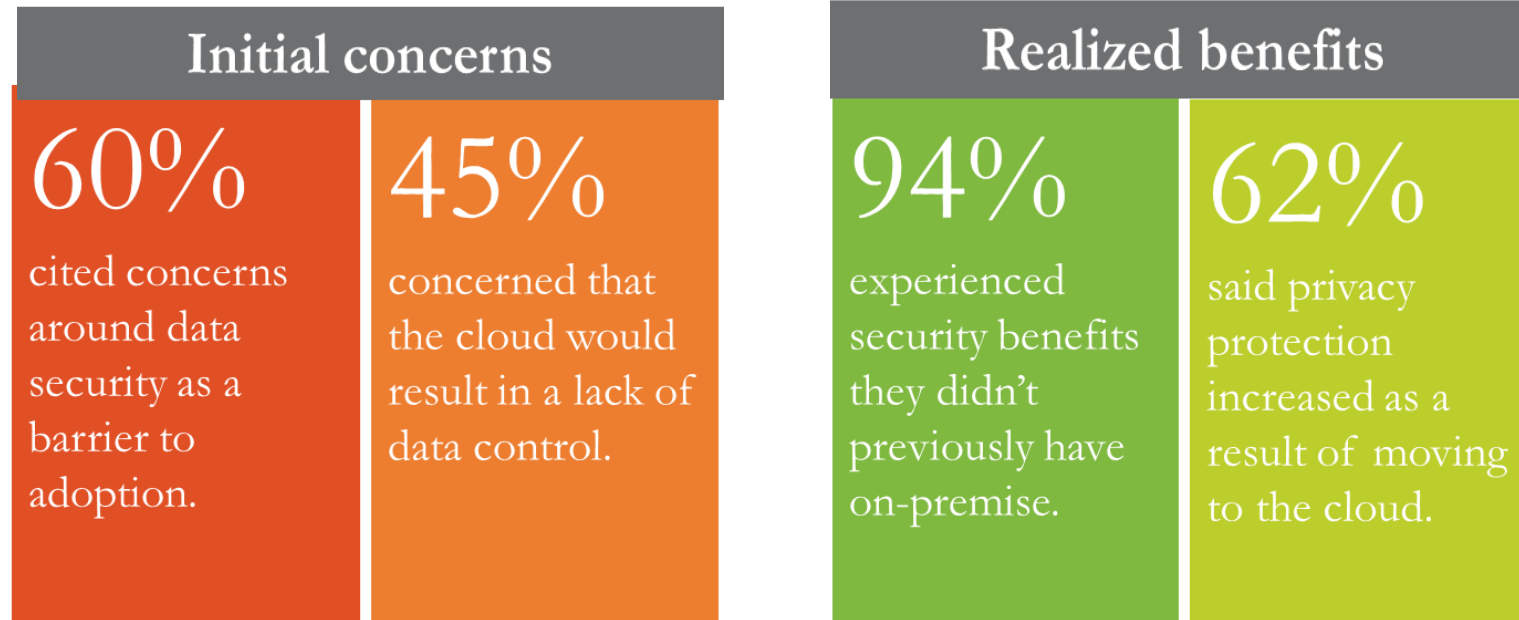
For the 80% not yet using paid cloud services, **insufficient knowledge** is the main blocking factors (42%).

For the 20% using paid cloud services, the risk of a **security breach** is the main limiting factor (39%).

Eurostat (EC)

Risks, Comfort & Trust in the Cloud

Cybersecurity & Data Protection: Threat or Strength?



Microsoft Azure (ISO 27018)



European Commission Priority: Digital Single Market

C-SIG Drafting Group DG CNECT: **EC Cloud SLA Standardisation Guidelines**, ISO/IEC 17788, ISO/IEC 19086, and other standards.

Improve transparency, bridging the disconnect between supply and demand, and increase the uptake of cloud computing by making it easier for and empower 20.000.000+ EU SMEs to understand SLAs.

Start with Common Understanding: Definitions

Cloud Computing

A paradigm for enabling network access to a scalable and elastic pool of shareable physical or virtual resources with self-service provisioning and administration on-demand.

Cloud computing can be composed of (A) five essential characteristics being (1) on-demand self-service, (2) broad network access, (3) resource pooling, (4) rapid elasticity, and (5) measured service, (B) four service models, being (i) SaaS, (ii) PaaS, (iii) IaaS, and (iv) other XaaS, and (C) four deployment models: (a) private cloud, (b) community cloud, (c) public cloud, (d) hybrid cloud.

Start with Common Understanding: Definitions

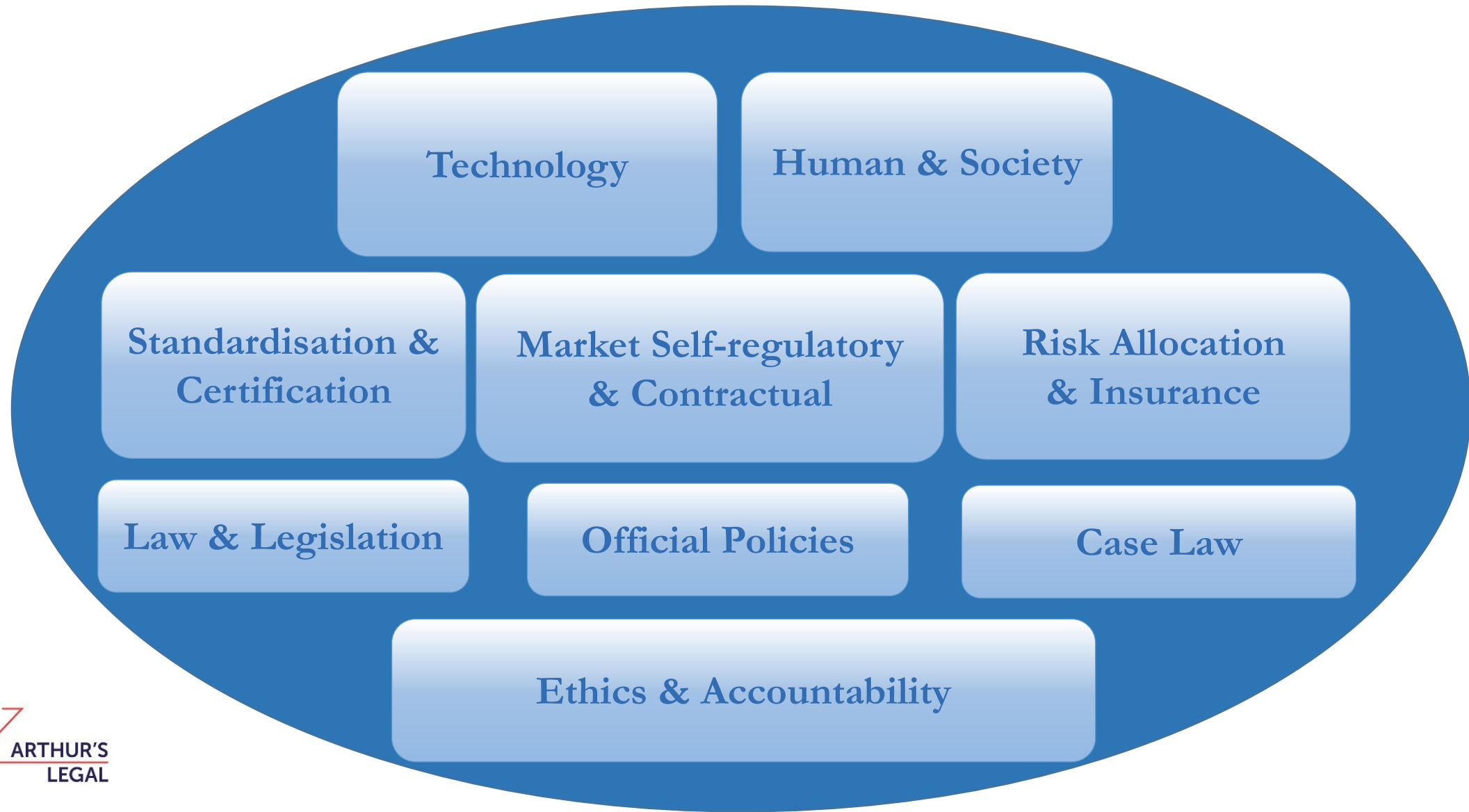
Data is not a four letter word

Data	Data of any form, nature or structure, that can be created, uploaded, inserted in, collected or derived from or with cloud services and/or cloud computing, including without limitation proprietary and non-proprietary data, confidential and non-confidential data, non-personal and personal data, as well as other human readable or machine readable data.
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EC Cloud Service Level Agreement Standardisation Guidelines (v20140828)

3D approach | Multi-story of connected data types | Classified data | Sensitive data | Personal data | Derived data | Proprietary data | IPR | Encrypted data, with or without Tokenization | Every kind of data needs to be addressed differently.

Ecosystem for Technology & The Rule of Law



Questions? Anything Goes!



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Cloud Services As An Enabler

The Main Cloud Objectives and SLA Essentials

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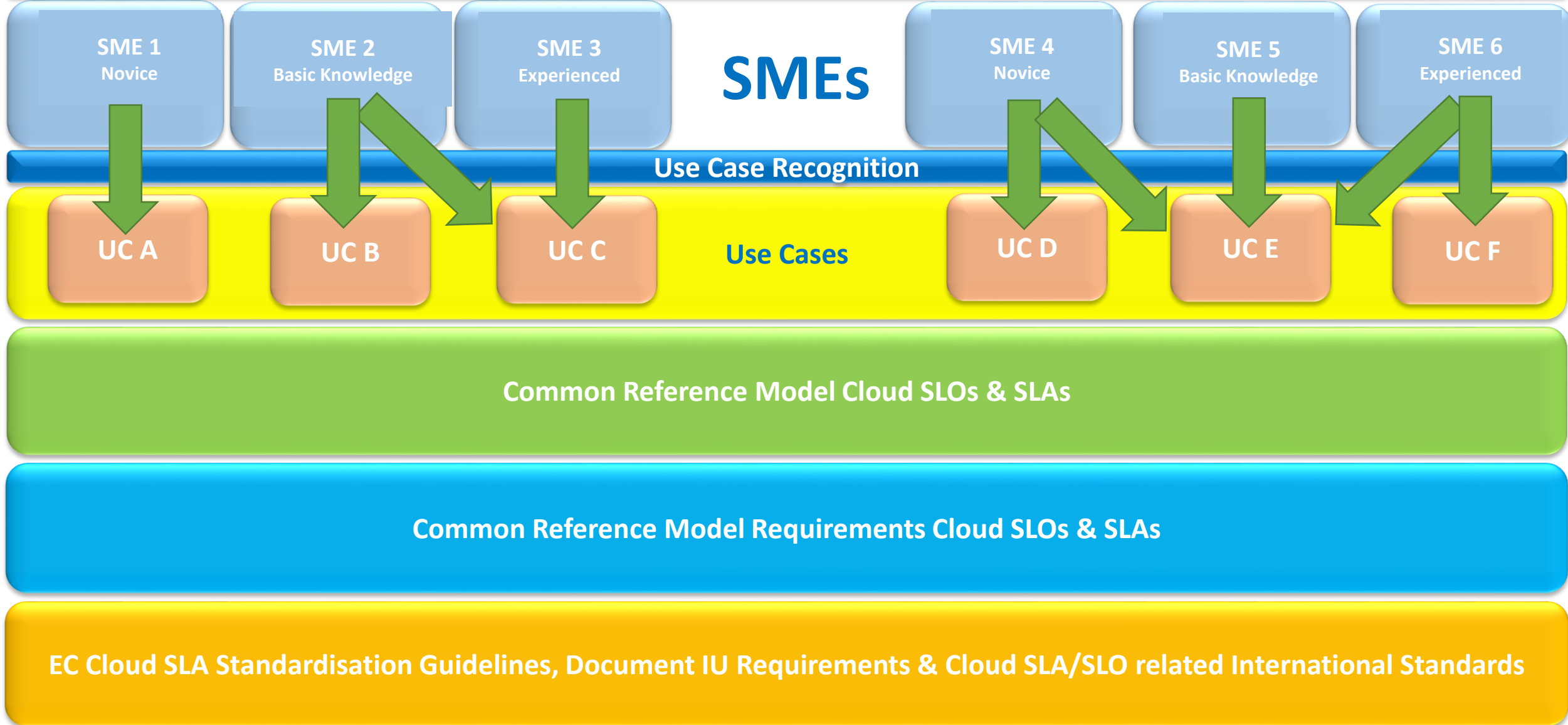


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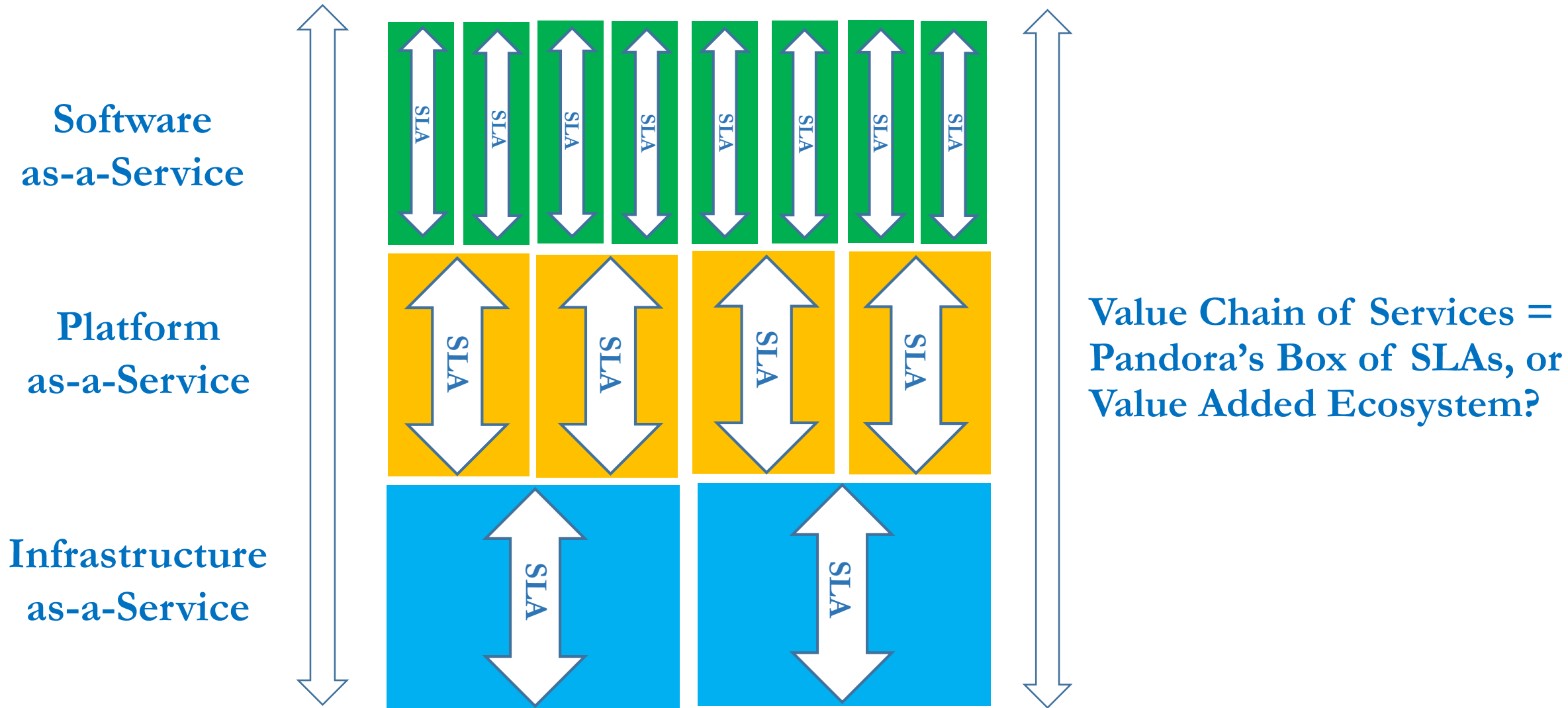
Agenda

1. From standardization to practice
2. 4 Main Categories Service Level Objectives (SLOs)
3. How to Make Informed Decisions?
4. Use Cases
5. Other Tips & Tricks

SME MARKET TO SLA(RELATED) REQUIREMENTS & STANDARDS, AND VICE VERSA



Hyperconnected, accountable Value Chain: to serve B2x, G2x, C2x, Peer2Peer



International Standardisation & Best Practices

4 Main Categories Service Level Objectives (SLOs)

1. Performance
2. Security
3. Data Management
4. (Personal) Data Protection



- ✓ SLA Life Cycle: Assess, Select, Negotiate/Contracting, Execute, Monitor, Update & Terminate
- ✓ Data Life Cycle: Create/derive, Store, Use/Process, Share, Archive, Destroy

International Standardisation & Best Practices (2)

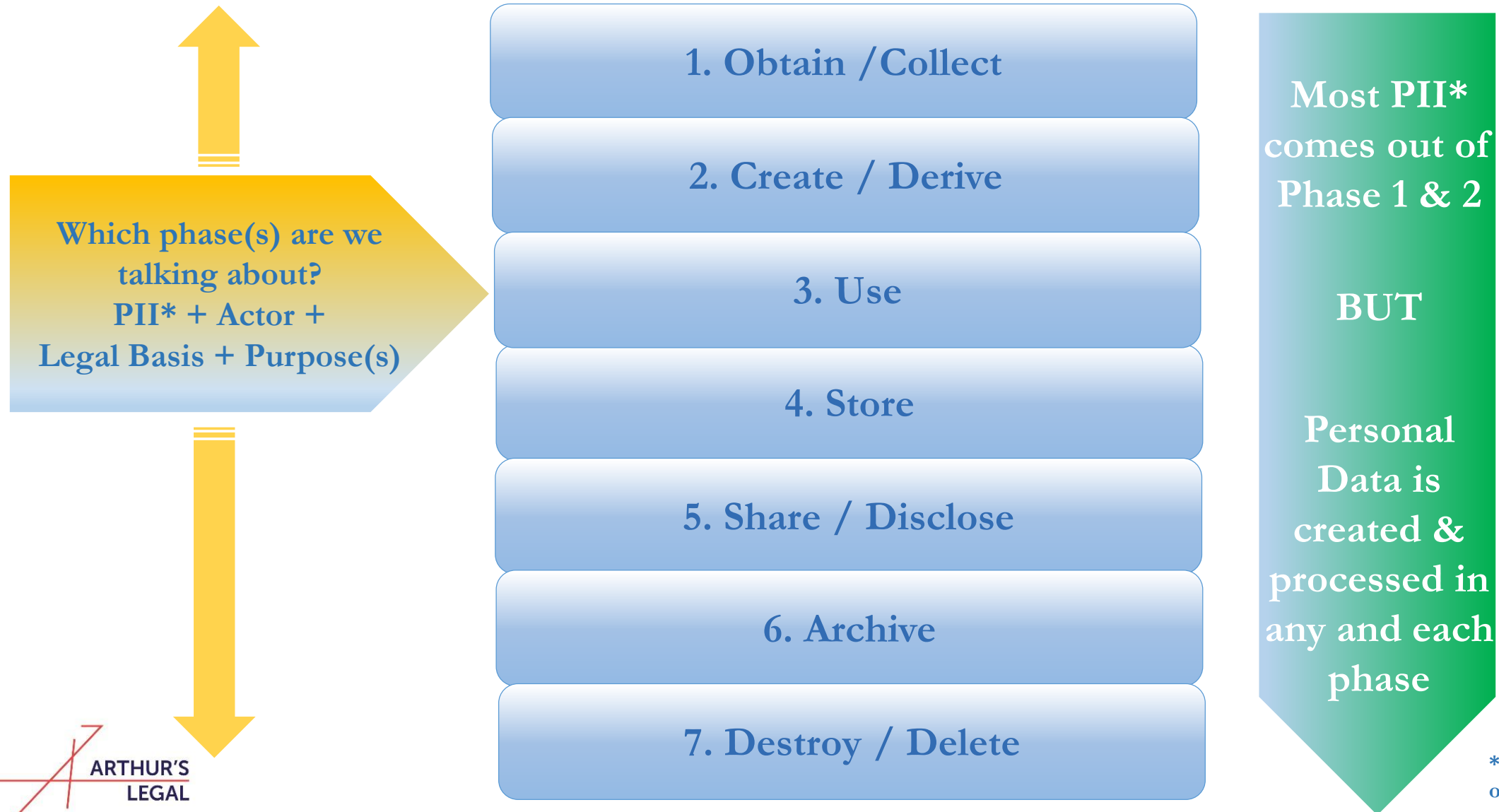
EU CyberSecurity Service Legal Objectives

Chapter 4 EC SLA Standardisation Guidelines

- 4.1. Service Reliability
- 4.2. Authentication & Authorization
- 4.3. Cryptography
- 4.4. Security Incident management and reporting
- 4.5. Logging and Monitoring
- 4.6. Auditing and security verification
- 4.7. Vulnerability Management
- 4.8. Governance
 - 4.8.1. Service changes



7 Phases of the Personal Data Life Cycle



* PII: personal identified
or identifiable information

Privacy Principles in the Data-Driven Economy

(A) No PII by Default:

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

(*) Exceptions permitted, when & where required

(B) 'As If' X-by-Design:

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

(C) De-Identification by Default :

De-Identify or Delete Personal Data (**)

(**) As soon as there is no valid legal basis

Other Mandatory Privacy Principles

If one obtains, collects, create or derives any personal data, then:

- A. Data Minimization, Data Isolation, Transparency
- B. Data retention, data deletion
- C. Zoom in and address all phases in the (Personal) Data Life Cycle
- D. Data is dynamic (quantum data computing principle)
- E. Data Encryption by Default
- F. Be Accountable

How to make Informed Decisions?

SLA Life Cycle



1. Assess

2. Select

3. Negotiate/Contracting

4. Execute

5. Monitor

6. Update & Terminate

Where to Find the Cloud Services Agreement? *

1. Service Agreement / Master Services Agreement (MSA)
2. Service Level Agreement (SLA)
3. Service Description
4. Acceptable Use Policy
5. Privacy Policy & Data Processor Agreement
6. Privacy Level Agreement
7. Security Policy
8. Business Continuity Policy / Disaster Recovery Plan

Use Case: Access to & Usability of Cloud SLAs

Name: Document transparency

Cloud service Assessment

life-cycle phase:

Source: Legal practice

Description: It is not easy to find or otherwise obtain Cloud SLAs in general, and a comprehensive set of related documents in general that sets out the complete scope of Cloud service offerings and related legal rights and obligations. Cloud customers and its advisors such as Cloud architects and IT managers have difficulty to map these out so they can assess the offerings, including terms and conditions, let alone compare those with other offerings in order to make an informed decision on what to services to use, what to expect and what to trust. Even CSPs have difficulty in providing such comprehensive set, for several reasons, including the lack of transparency of Cloud service offerings and the unwillingness to make it possible for Cloud customers to compare its offerings with competitors and other peers.

Use Case: Carve-Outs

Name:	Assumptions, carve-outs & exclusions
Cloud service life-cycle phase:	Preparation
Source:	Legal practice
Description:	<p>If Cloud SLAs provided by Cloud customers describe certain SLOs/attributes, it is important that any and all assumptions, carve-outs and exclusions are correctly, clearly and accurately described ad detailed. This ‘small-print’ is quite important in order to properly assess the Cloud service, the offered levels thereof, and which SLOs/attributes that are important for the Cloud customer are missing and need to either be requested and negotiated out with such or another CSP, or be taken into account as a risk and allocated otherwise such as with an (additional) investment or insurance.</p>



Use Case: Data Life Cycle Management

Name:	Data Life Cycle Monitoring & Amendment
Cloud service life-cycle phase:	Updates & Amendments
Source:	Legal practice
Description:	<p>If CSP and the Cloud customer have made clear arrangements on the classification and several types of data, the permitted use as well as the data life cycle thereof per classes, type and deployment, and the monitoring of those arrangements before parties execute the Cloud SLA, the execution and operation phase of the SLA life cycle is the phase to monitor, audit, update and where necessary amend those arrangements, not only to optimize the use of the Cloud services but also to aim to prevent the risk of breach of contractual or local legal requirements, and pro-actively mitigate incidents and related damages in case such breach occurs.</p>

Use Case: Data Portability

Name:	Data portability
Cloud service life-cycle phase:	Termination & Consequences of Termination
Source:	Legal practice
Description:	Cloud SLA rarely describes the data portability format, data portability interface or the data transfer date. One of the fundamental issues forgotten by both CSPs and Cloud customers is describing exactly what data is with scope of such portability arrangements, and what other data than customer data needs to be made available, accessible and transferable. This leads to discussions, vendor lock-in incidents and other escalations that are to be avoided.

Use Case: Termination Clauses

Name:	Termination Clauses
Cloud service life-cycle phase:	Termination & Consequences of Termination
Source:	Legal practice
Description:	Cloud SLA rarely describes a proper and detailed termination clause, while termination clause should be the longest and most well-structured clauses in any agreement. The Cloud customer is depending on the cloud service, so should avoid any unexpected and other unpleasant surprises, also to avoid vendor lock-in incidents and other escalations.

Use Cases: It's Up to You. Go Ahead, Shoot!

Name: Anything Goes!

**Cloud service
life-cycle phase:** Any phase

Source: Yours!

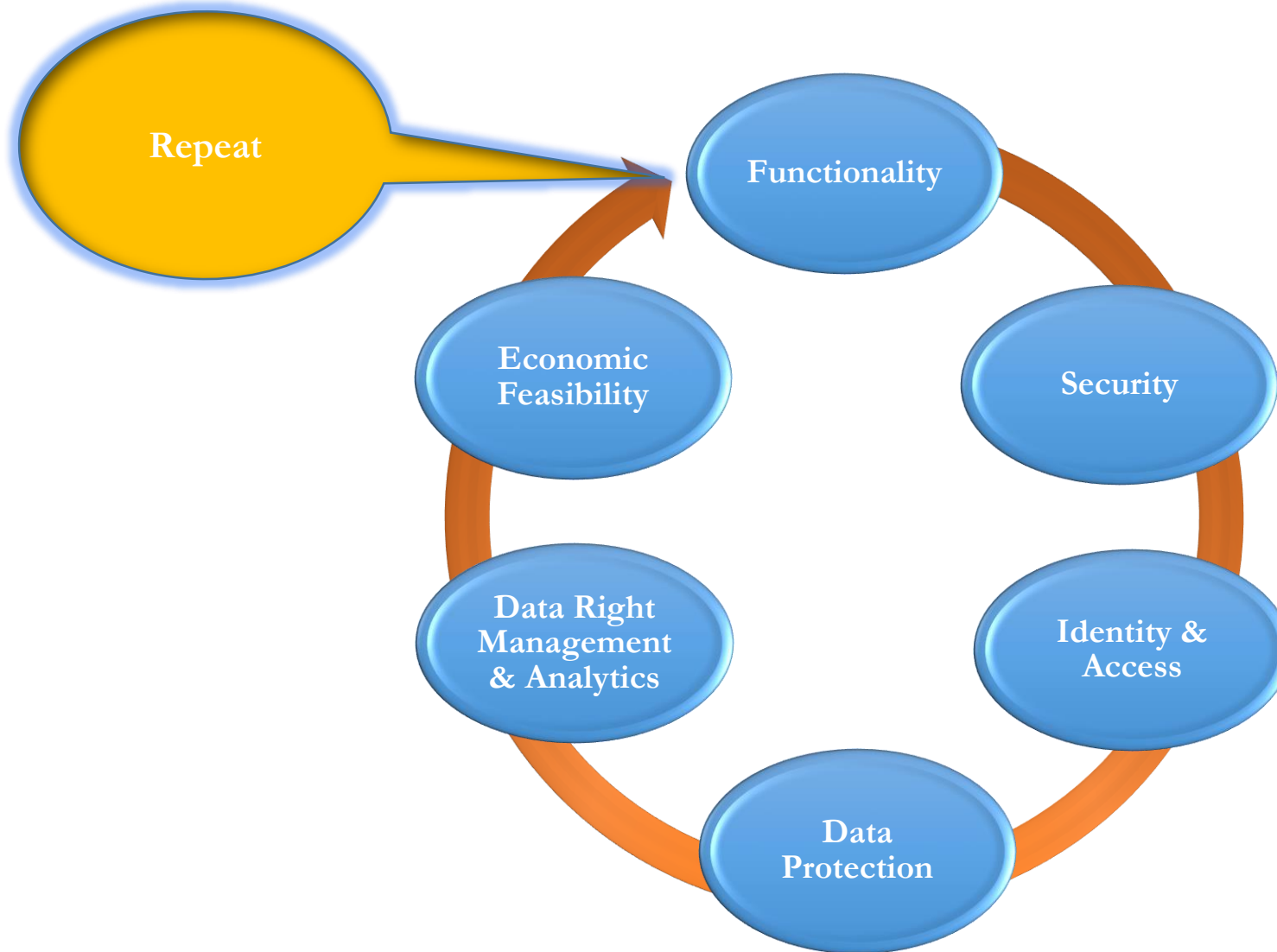
Description: We will fill it in. Let's start & continue the dialogue.

The Four Step Methodology

How to enable the digital transformation

1. **Keep As-Is**, when there is No Alternative Available, yet
2. Start from a **Blank Sheet of Paper**
3. **Migrate & Transform** cleaned-up Systems & Processes
4. **Data Life Cycle**: Foster, Archive & Delete

Multi-Angled x-by-Design Development



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