

Data portability and interoperability in the cloud

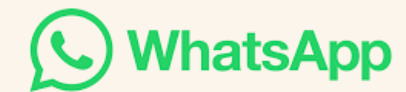
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Lessons from the past

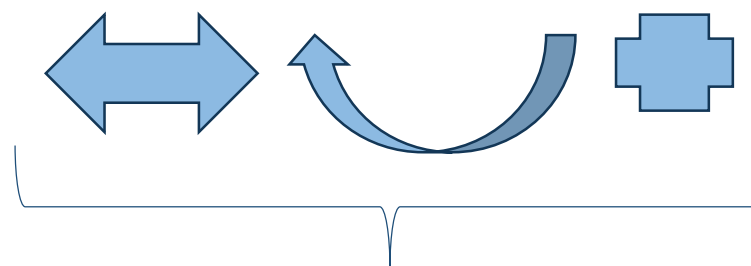
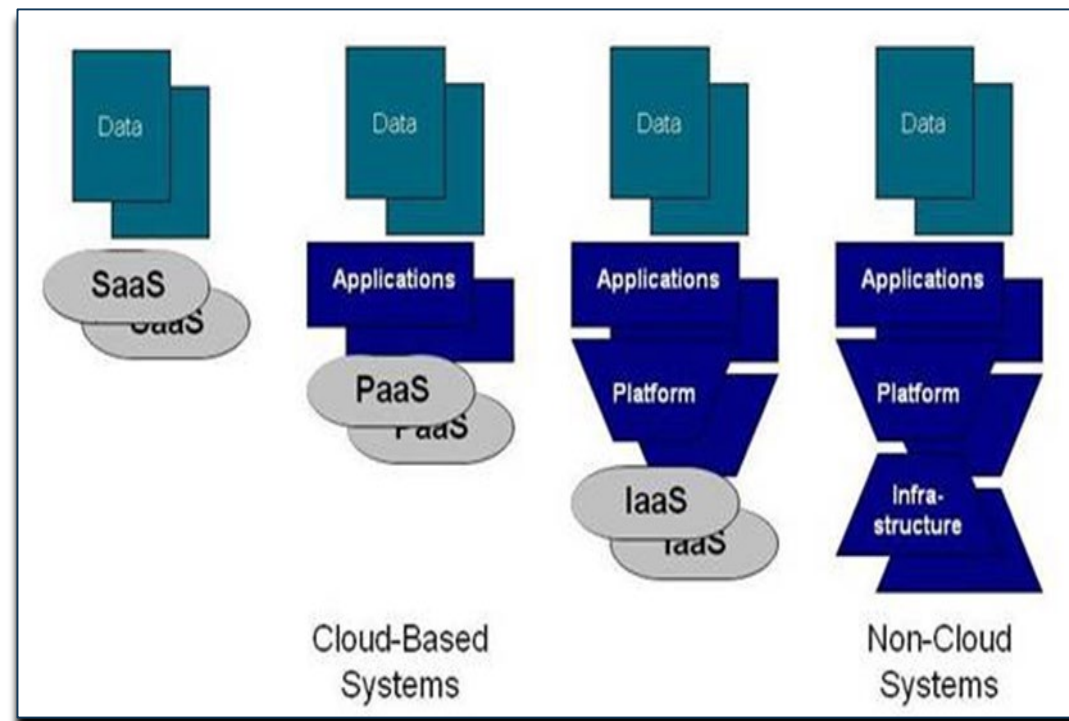
Interoperability and portability in telecoms and banking

- Telecom interoperability has a long history – rooted in standards set by ETSI, ITU, 3GPP – and supported by regulatory obligations. Examples:
 - 1983 work started on European standard for mobile voice telecoms - > 1987 first GSM technical specification
 - SMS first sent from PC to mobile in 1992 by Vodafone. Interoperability for SMS introduced in Europe Apr 1999
 - Picture messaging started ~ 2000 but with diverse standards, mobile industry created OMA, interoperability testing still ongoing in 2004. Jan 2006 IETF proposed standard to exchange messages between MMS and Internet mail
 - RCS v1.0 Nov 2016 followed by commercial launches under various names
- Porting obligations also exist in telecoms and banking – covers identifier and (in banking) key transactions + switching processes
- The history of standards in telecom interconnection shows that services evolved but this took considerable time, and in the meantime, the features and functionality of non-standardised closed services rapidly overtook the



What does interoperability and portability mean in the cloud?

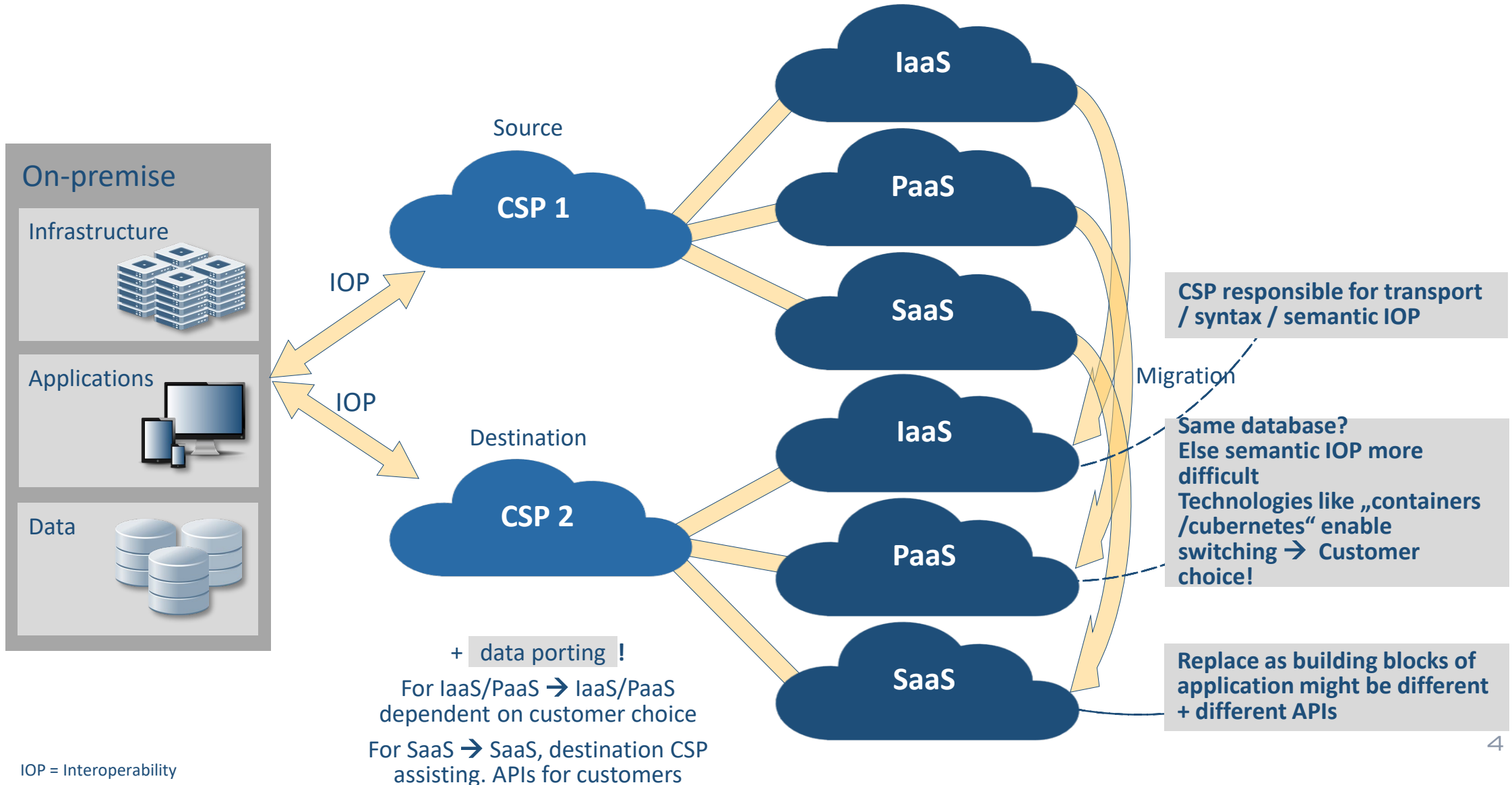
- ISO/IEC 2017:** “The ability of a Cloud Service Customer’s **on premises system** to interact with a **cloud service** or the ability for one cloud service to interact with **other cloud services** by exchanging information according to a prescribed method to obtain predictable results”
- Interoperability for cloud services** is not a straight forward concept between similar services like voice calls, SMS or banking accounts
- It is about interoperability between **IT environments** including infrastructure, platforms, applications and data (see picture)
 - Cloud IOP can mean many things
 - Not only data portability but also application portability.... Many varieties of SaaS
 - Responsibility for IOP aspects varies per scenario / customer, CSP, app



On-premise infrastructure - start situation

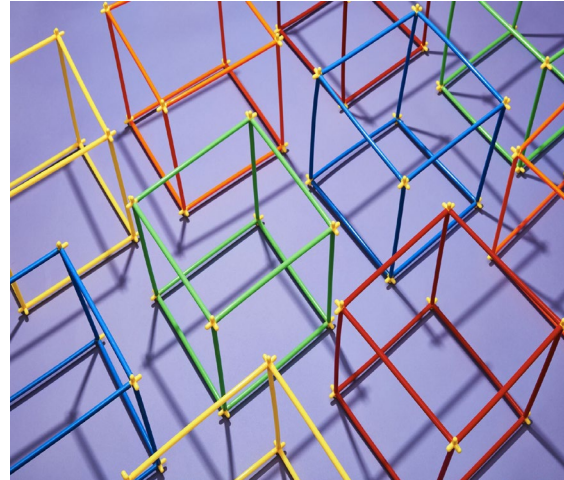
Scenario'

Migrating from CSP A to CSP B





Data portability – in some cases , the CSP has tools available, but containerisation and other standards contribute



REST, Json, XML – architecture enabling data transmission between applications using the HTTP protocol



API – is what makes the different applications ,fit’ to one another and enable them to interact and exchange data

Industry initiatives to support switching e.g. 2020 SWIPO Code of Conduct seeks to support porting and switching between IaaS / on-prem, but notes that it is “**difficult to estimate switching costs**” and there may be “**data portability incompatibilities**” due to the variety of technologies, protocols and implementation methods + customer’s on-prem facilities.

Challenges with the draft Data Act

- The draft Data Act measures appear to go well beyond provisions in the DMA, which are intended to apply to gatekeeper CSPs
- Cloud computing includes a vast range of different kinds of services: **Interoperability and portability is not meaningful in a generic sense**, but only in relation to specific cloud services or data (as with examples from telecoms, banking).
- **“Full equivalence“** in interoperability and **”service continuity“** in switching would leave little room for service differentiation and innovation
- **Responsibilities and timeframes for switching depend** on the nature / level of the source and destination cloud service, and the amounts of data involved.

Recommendations for the implementation of the Data Act

Recommendation	Comment
Recommendation 1: Targeted (case specific) intervention rather than general obligations	Instead of blanket obligations for cloud interoperability and portability and undefined standards goals, identify specific applications/cases where there is an objective interest based on evidence of demand for a specific form of interoperability and/or portability that is not being met by the market, and the conditions described in Recommendation 2 are met
Recommendation 2: Support for innovation, respect for proportionality	When mandating standards, ensure that the relevant use cases are clearly identified, intervention is relevant to the problem identified, and that the measures are proportionate and take into account the implications on innovation and the potential to differentiate. Limit the objective that interoperability should achieve “functional equivalence” to basic functions and/or data (i.e. a subset of mature and established functions or data which have been identified as essential), and further clarify this concept
Recommendation 3: Principles for service migration and shared responsibility	Distinguish between standardised and bespoke cloud services. Limit responsibilities for migration for CSPs to those which are under their control, and require recipient to collaborate in good faith. Consider developing model contract provisions addressing certain common issues.
Recommendation 4: Coherence with other legislation	Avoid overlapping or adding to other legislative measures. DMA already addresses cloud as core platform service for gatekeepers. Data Act should be lighter touch and not extend the DMA.



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