SLA-Ready’s main outputs

**Educating and empowering customers and providers**

- A Common Reference Model for SLAs
- SLA Marketplace
  - 23 Real-world use cases
  - Online SLA tool for cloud customers
  - SLA Repository & Self-assessment questionnaire for CSPs
- Outreach workshops to EU SMEs
- Contributions to standardisation in cloud SLAs.

1/1/2015 – 31/12/2016

Partners:
Layered methodology

SME MARKET TO SLA (RELATED) REQUIREMENTS & STANDARDS, AND VICE VERSA
ISO 19086-1/-4, CCSC SLA, C-SIG SLA, EC SMART, ETSI TR 103 125, SLALOM

SMEs

Use Case Recognition

23 Use Cases

Common Reference Model Cloud SLOs & SLAs

Common Reference Model Requirements Cloud SLOs & SLAs

EC Cloud SLA Standardisation Guidelines, Technical, Economic, Sociological, Legal and governance aspects; & Cloud SLA/SLO related International Standards

CRM is a reference specification for building Cloud SLAs and helps towards a common understanding of SLAs for cloud services

SME 1 Novice
SME 2 Basic Knowledge
SME 3 Experienced
SME 4 Novice
SME 5 Basic Knowledge
SME 6 Experienced

SME 1
SME 2
SME 3
SME 4
SME 5
SME 6

UC A
UC B
UC C
UC D
UC E
UC F

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## SLA-Ready CRM hierarchy: elements

<table>
<thead>
<tr>
<th>Groups (8)</th>
<th>CRM Elements (30)</th>
</tr>
</thead>
<tbody>
<tr>
<td>General</td>
<td>SLA URL</td>
</tr>
<tr>
<td>Freshness</td>
<td>Revision date</td>
</tr>
<tr>
<td>Readability</td>
<td>SLA Language</td>
</tr>
<tr>
<td>Support</td>
<td>Contact support</td>
</tr>
<tr>
<td>Credits</td>
<td>Service Credit</td>
</tr>
<tr>
<td>Changes</td>
<td>SLA change notifications</td>
</tr>
<tr>
<td>Reporting</td>
<td>Service levels reporting</td>
</tr>
<tr>
<td>SLO &amp; Metrics</td>
<td>Specified SLO metrics</td>
</tr>
</tbody>
</table>

A Common Reference Model to describe, promote and support the uptake of SLAs: www.sla-ready.eu/reports
Services to educate & empower SMEs

SLA Marketplace
23 Use cases
• Covering range of cloud users, businesses & stages of cloud service lifecycle
• Basis for Business Guide & recommendations

SLA-Aid – Online tool
• 30 Questions cover Common Reference Model elements
• Recommendations reflect good practices for each element

SLA Repository
• Self-assessment q’aire based on CRM
• CSP results published online

SME Workshops
• Addressing a need for face-to-face interaction and deeper discussion on priorities

www.sla-ready.eu/marketplace
Recommendations for the EU DSM strategy

- **SLAs need to be trusted sources of information:** The CRM should be used as a first step towards this.
- **Knowledge is key for SMEs:** More SME workshops and comprehensible legal advice for SMEs to overcome legalese barriers when signing cloud contracts.
- **A transparent SLA can be a unique selling point for CSPs:** Transparency can lead to competition and cloud adoption.
- **Contributions and support to ISO/IEC 19086 1-4** are a key element in creating a culture of trust and transparency in cloud SLAs and procurement of cloud services.
- **Elements which empower transition to cloud should be covered:** Essential CRM elements such as findability, update-validity, period, languages generally not covered in standards.
- **Community clouds face the same challenges as SMEs:** Pre-commercial procurement of cloud services has and can benefit from the CRM.
- **Automated and machine readable SLAs needed for emerging services of IOT.** A way to automate and accelerate the enforcement and checking of SLAs. Challenge in getting them semantically right. Technical and non-technical experts (incl. vertical industries) are required to define qualitative aspects (e.g. termination).
ISO/IEC 19086-1/-4: Cloud SLAs

- Provides terminology and components of SLAs for cloud services (including security and privacy)
- Specifies a model for describing cloud SLA metrics
- Presents the core/conformance requirements associated provided SLA components
- Facilitates common understanding between the Cloud Service Providers and the Cloud Service Customers
ISO/IEC 19086-1/-4: Cloud SLAs

Updates from previous ISO/IEC SC38:

- 19086-1: Moving to DIS before the end of the year (no contributions)
- 19086-2: All contributions to WD (metrics samples, feedback on conceptual model) accepted and published in new CD version.
- 19086-3: Contributions to DIS submitted (balloting in 1/2017)
- 19086-4: Extensive changes to current CD version, new CD version will be issued after the finalization of SLA-Ready

During the lifetime of the project, total of 48 contributions were submitted to ISO.
Thank you!
SLA-Ready CRM: Elements and components of the SLO & Metrics group

- Service monitoring
- Accessibility
- Availability
- Termination of service
- Cloud Service Support
- Governance
- Attestations, certifications and audits

- Organization of Information Security
- Human Resources Security
- Asset Management
- Access Control
- Cryptography
- Physical and Environmental Security
- Operations Security
- Communications Security
- Systems Acquisition, Development and Maintenance
- Supplier Relationships
- Information Security Incident Management
- Business Continuity Management
- Compliance

- Service Resilience
- Customer data backup/restore
- Disaster Recovery

- IPR
- Cloud Service Customer Data
- Cloud Service Provider Data
- Account Data
- Derived Data
- Data portability
- Data deletion
- Data location
- Data examination
- Law Enforcement Access

- Response time
- Capacity
- Elasticity

- Consent and choice
- Purpose legitimacy and specification
- Collection limitation
- Data minimization
- Use, retention and disclosure limitation
- Accuracy and quality
- Openness, transparency and notice
- Individual participation and access
- Accountability
- Privacy compliance

Courtesy of TUDA & Arthur’s Legal