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Softwaregestützte Umsetzung des EUCS

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> whoAml...



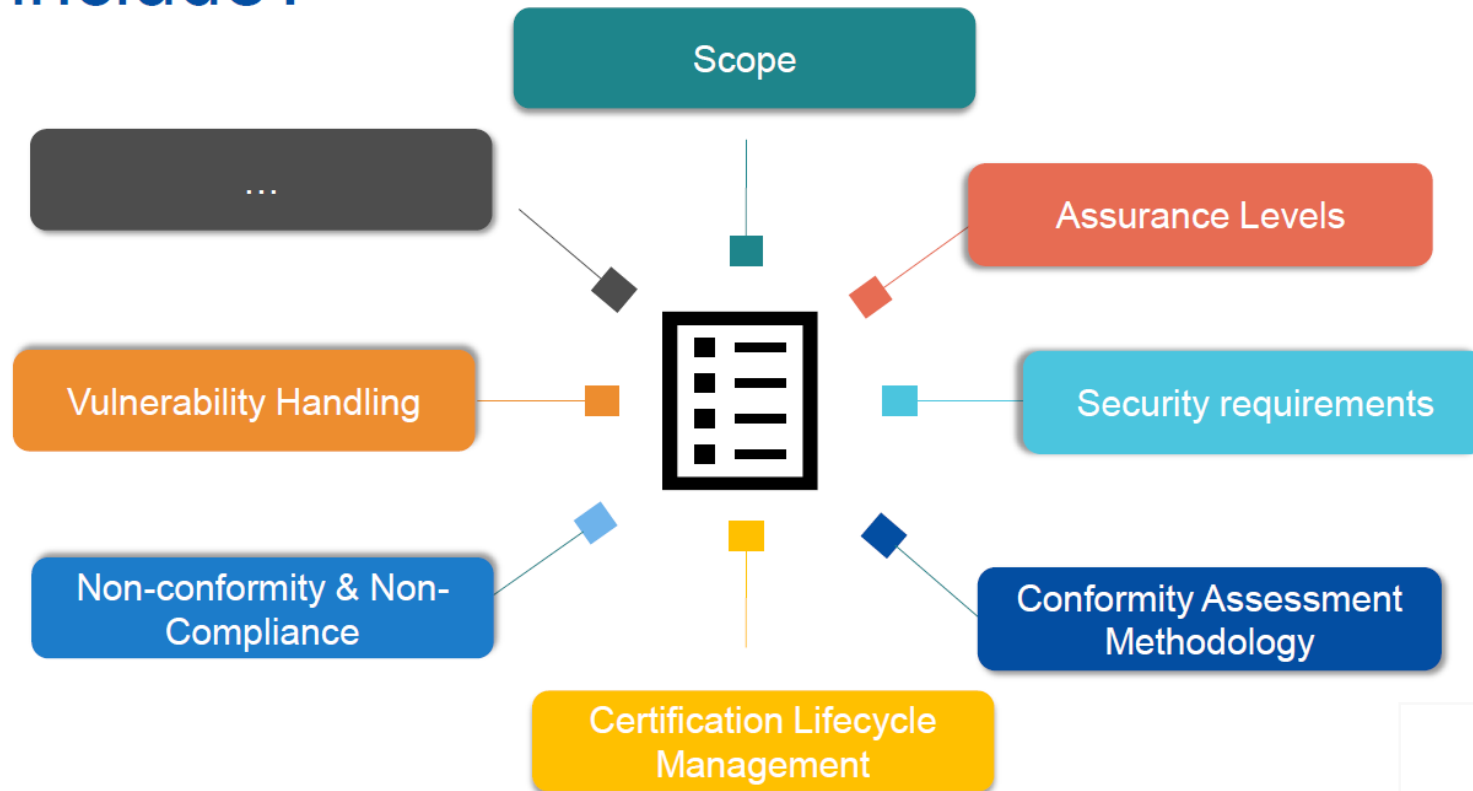
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- Was konnte uns MEDINA zum EUCS zeigen?
- Wie greifen wir diese Erkenntnisse in EMERALD auf?
- Wie denken wir, kann EMERALD zukünftige Audits – vor allem im Rahmen des EUCS – unterstützen?
- Worauf konzentrieren wir uns dabei?
- Ich möchte einen „Call to Action“ starten

- **Zertifizierungen in der Cloud:** Cloud-Dienste nutzen Zertifizierungen, um Vertrauen in ihre Leistungen zu schaffen.
- **Herausforderungen:** Die wachsende Komplexität erschwert den Zertifizierungsprozess sowohl für Cloud-Dienste als auch für Auditor:innen.

What does a cybersecurity certification scheme include?



MEDINA (2020 – 2023)



<https://medina-project.eu>



Certification
metrics and
specification
languages



Automated
evidence
management



Lifecycle
management of
certificates



Continuous
compliance

- MEDINA betonte die Bedeutung von Unterstützung und Agilität bei der Überwachung und Bewertung von Cybersecurity-Audits.
- Automatisierung spielt eine große Rolle und ist mit geeigneten Tools durchaus möglich.

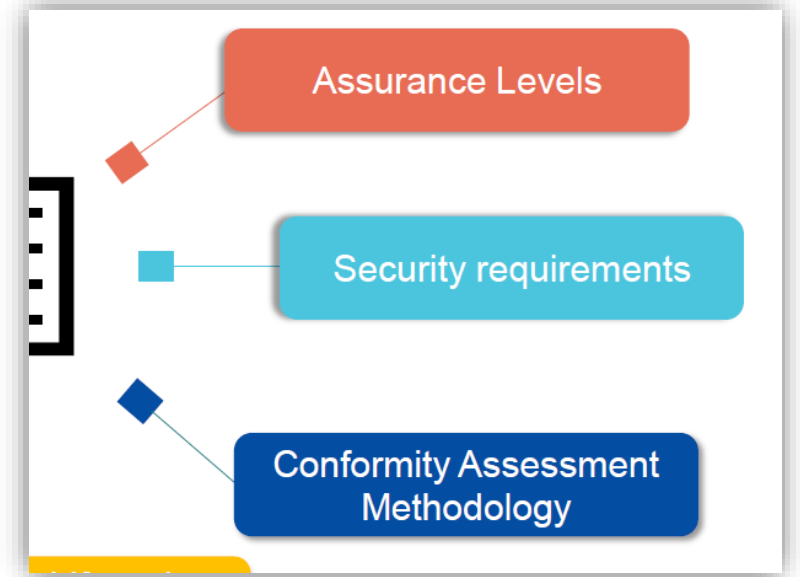
Customer in the first place



- Technische Anforderungen

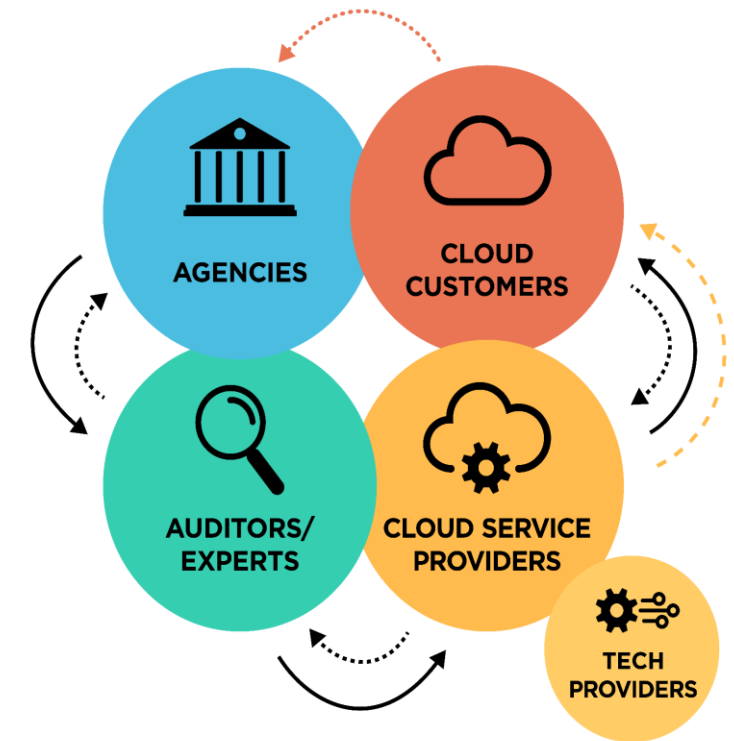
vs

- Organisatorische Anforderungen



EMERALD (2023 – 2026)

- EMERALD beschreibt, wie ein Certification-as-a-Service (CaaS) Ansatz alle Stakeholder im Audit unterstützen kann.
 - Evidence Management: Verwaltung von Nachweisen für kontinuierliche Überprüfungen.
 - User Interaction: Transparenz und Nachvollziehbarkeit für alle Beteiligten.

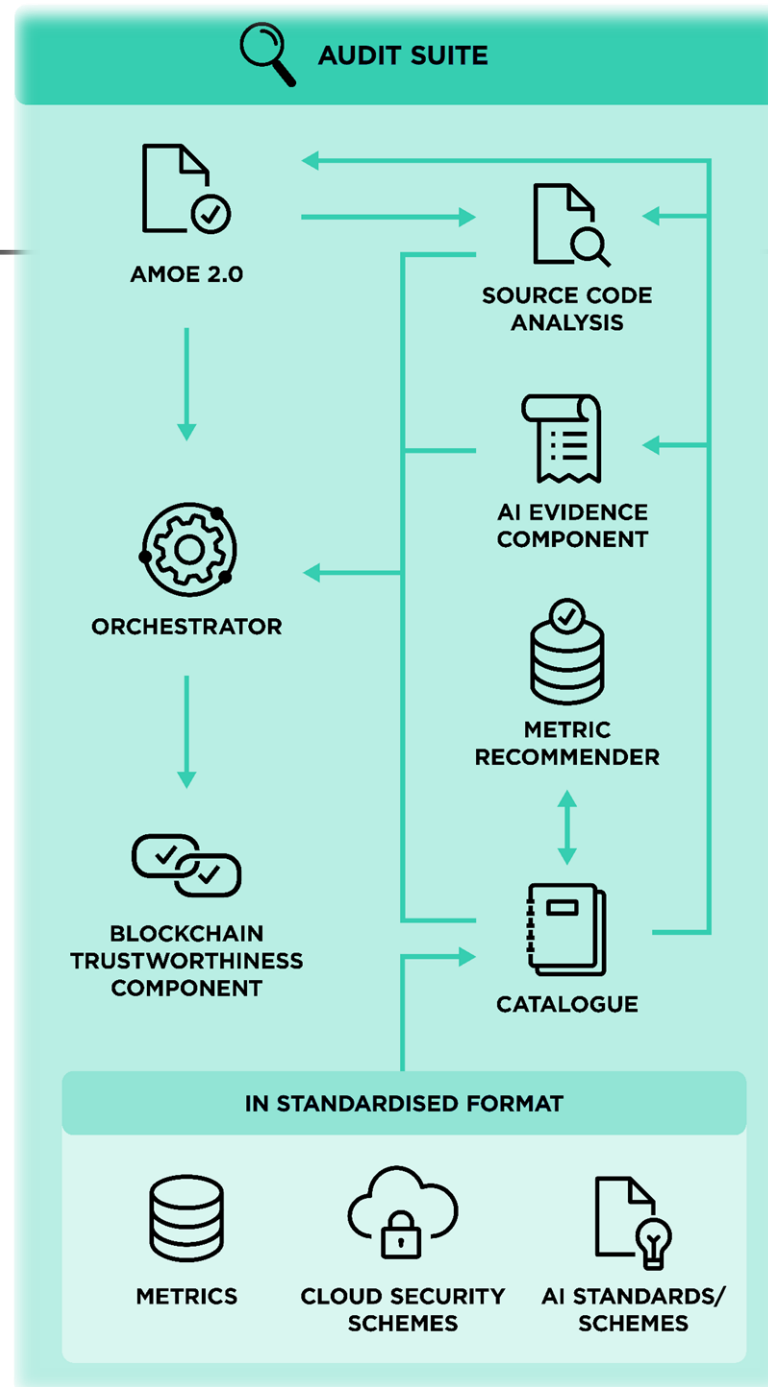


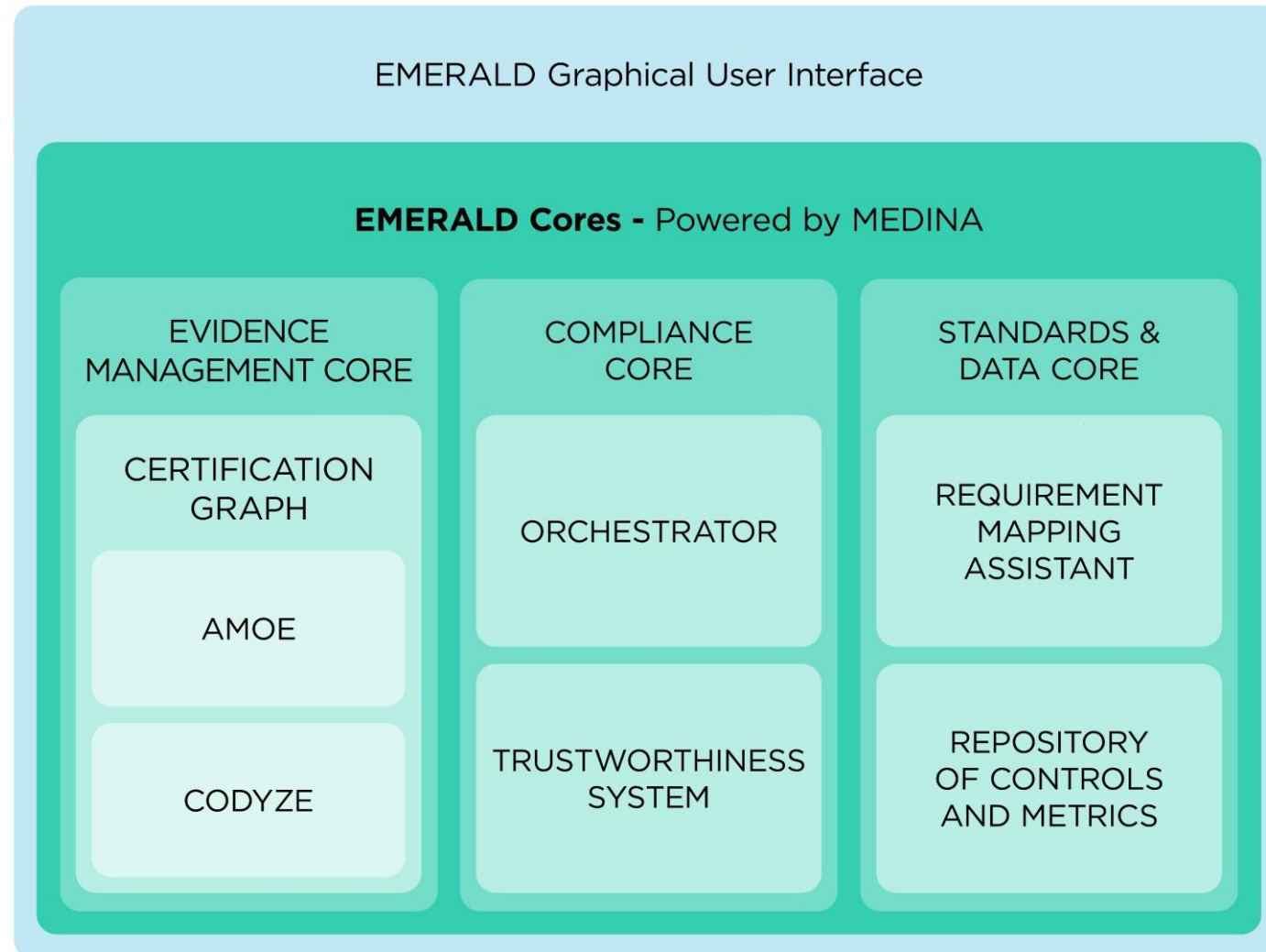
- Stakeholder of the cybersecurity domain and EMERALD
- Supplier relationship
- Customer relationship
- - - Certification mandatory for business decisions
- Demand security schemes to build up trust in cloud services

EMERALD

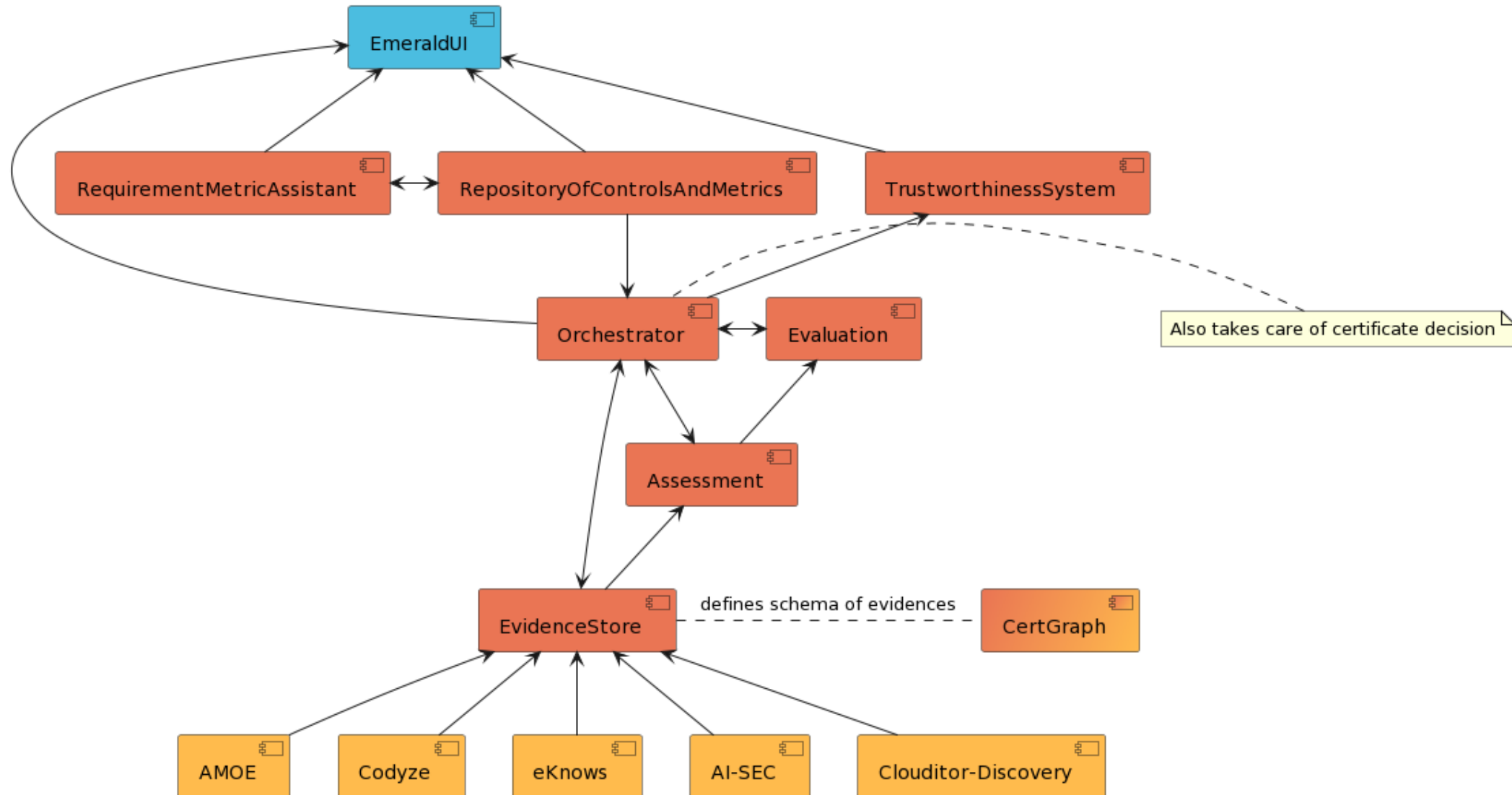
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Erste Überlegungen





EMERALD Komponenten



■ **Nachvollziehbarkeit und Protokollierung**

- Komponenten sollten alle Aktivitäten und Änderungen protokollieren.
- **Audit Trails** ermöglichen es, den gesamten Prüfungsprozess nachzuvollziehen.

■ **Vertraulichkeit und Datenschutz**

- Komponenten müssen sicherstellen, dass sensible Daten geschützt sind.
- **Verschlüsselung** und **Zugriffssteuerung** sind wichtige Aspekte.

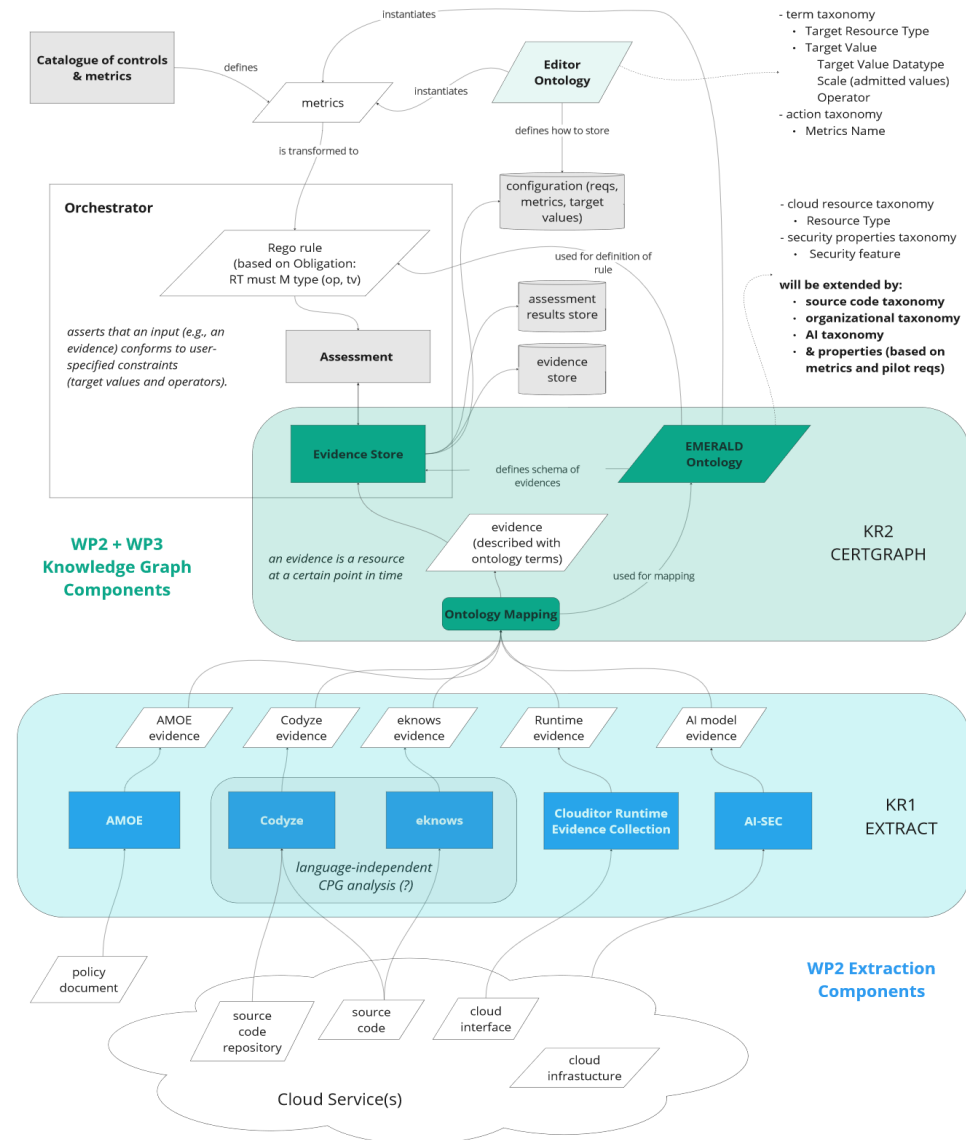
■ **Automatisierung**

- EMERALD wird automatisierte Prozesse implementieren, um repetitive Aufgaben zu bewältigen.
- Fehler können minimiert und die Effizienz gesteigert werden.

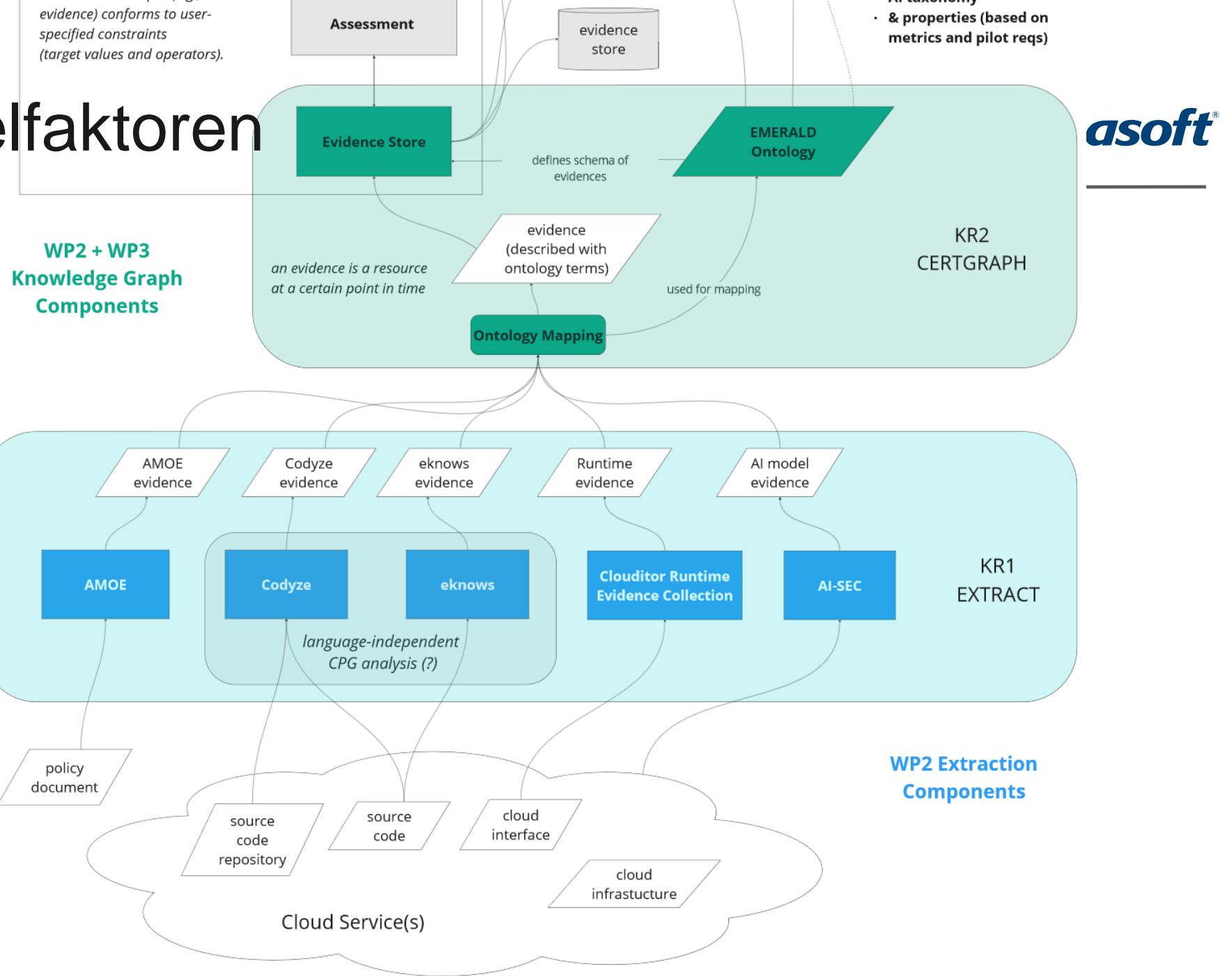
■ **Konsolidierung**

- EMERALD wird verschiedene Audit-Aspekte (Compliance-Prüfungen, Sicherheitsüberwachungen, ...) in einer einzigen Plattform ermöglichen.
- Verwaltung und Nutzer-Interaktion können erleichtert werden.

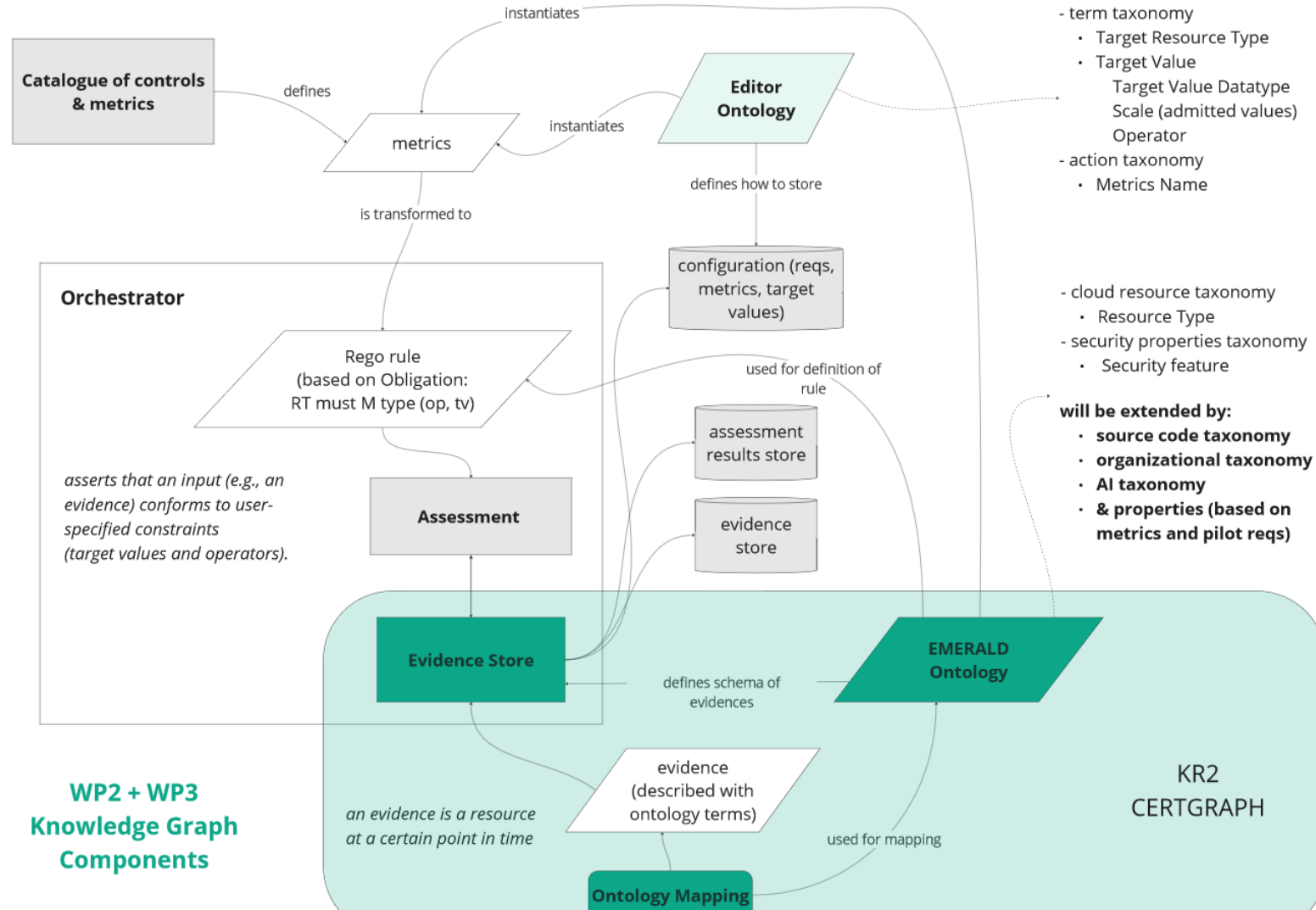
Schlüsselfaktoren



Schlüsselfaktoren



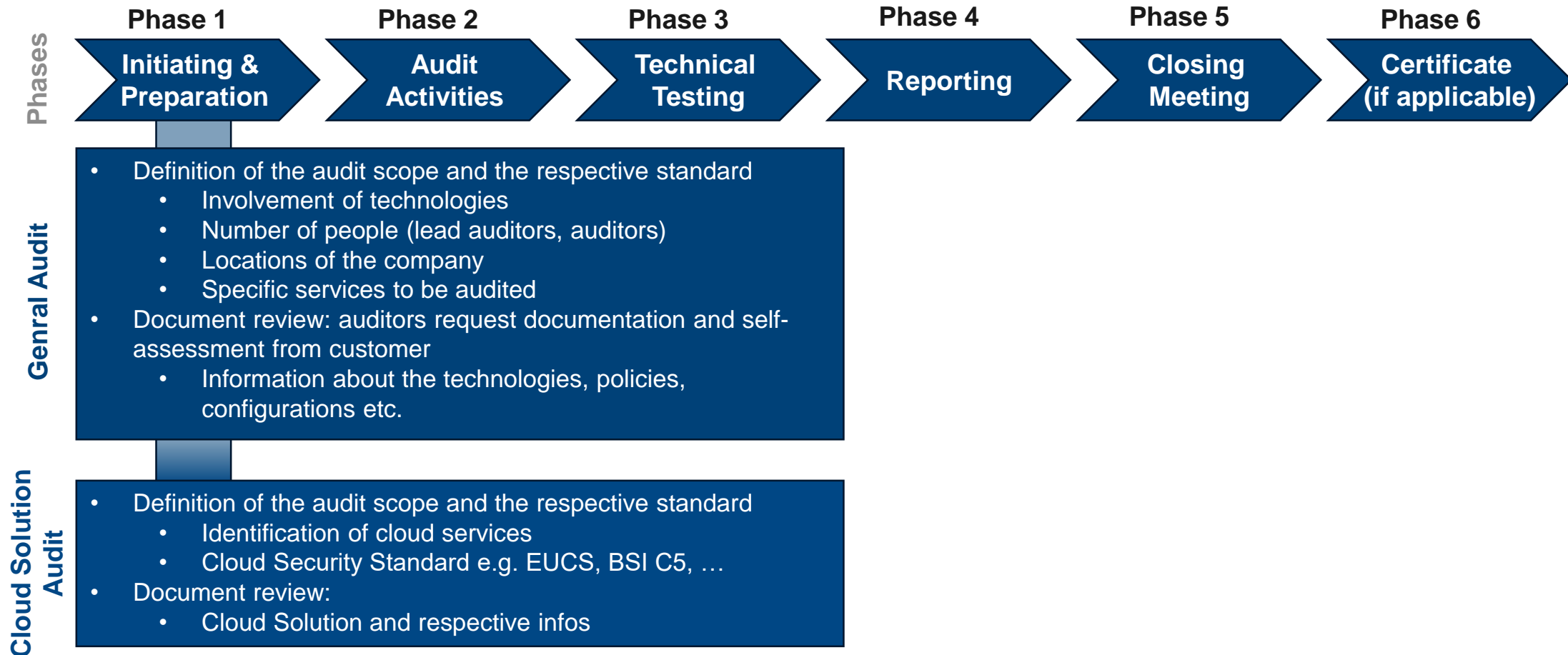
Schlüsselfaktoren



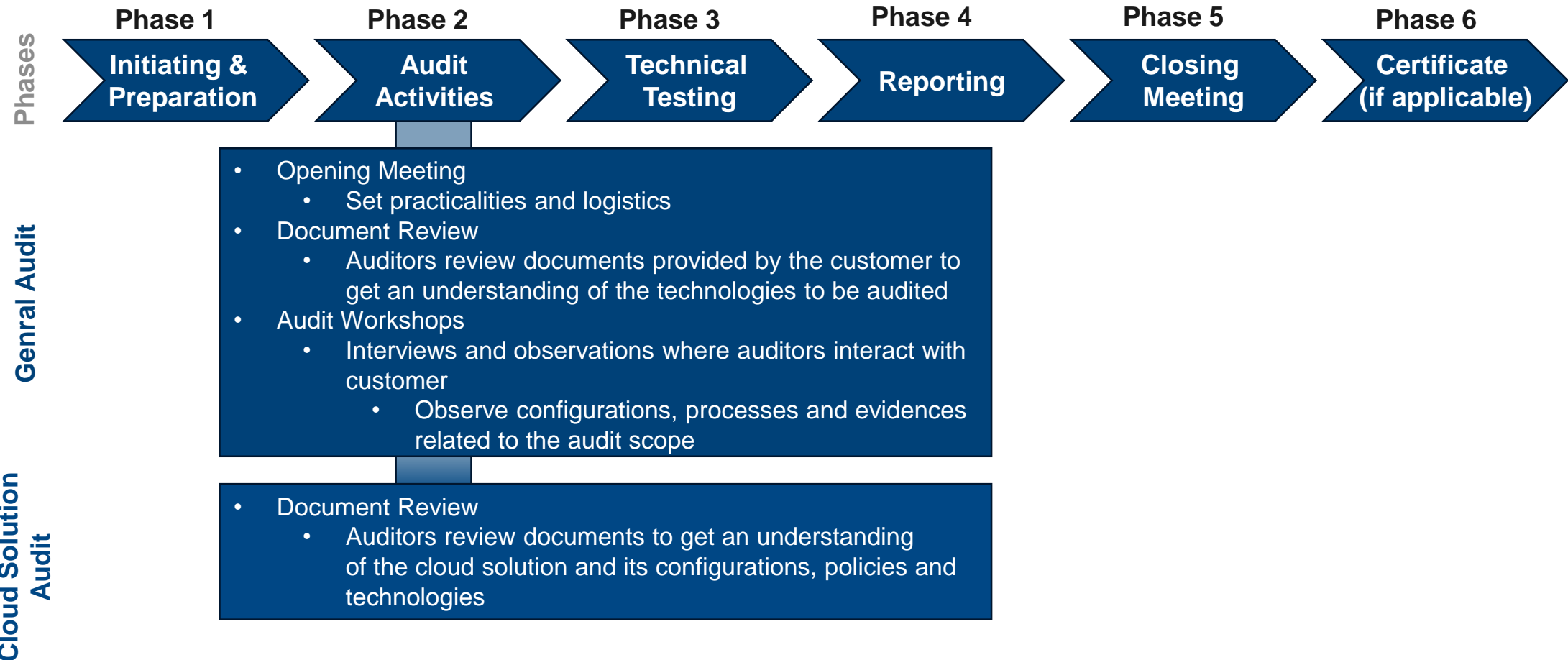
- Eine **intuitive Benutzeroberfläche** ermöglicht es Stakeholdern, Informationen leicht zu überprüfen und zu verwalten.
- **Visualisierungen** wie Diagramme und Dashboards können komplexe Daten verständlich darstellen.



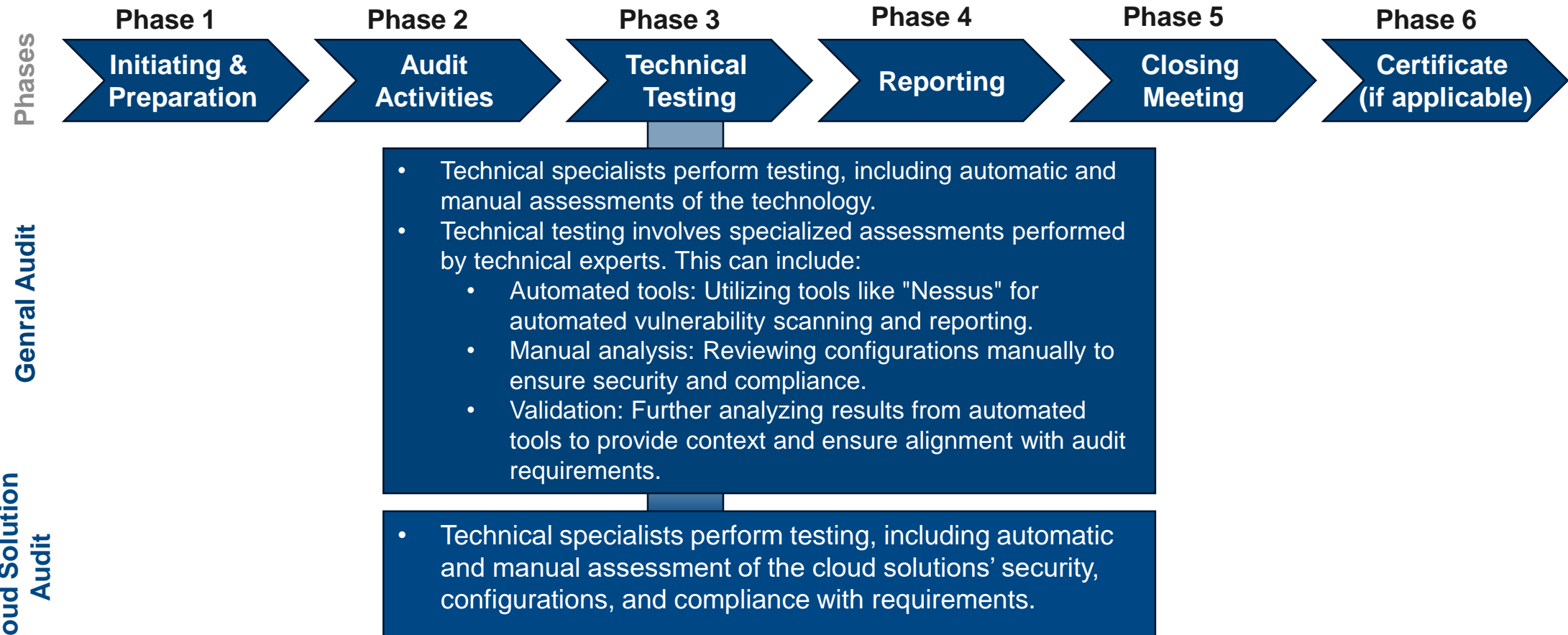
Phasen des Audit Prozesses



Phasen des Audit Prozesses



Phasen des Audit Prozesses



Phasen des Audit Prozesses



Phases

Genral Audit

- After completing the audit activities, the auditors compile their findings and observations into a report.
- The report typically includes details about the audit process, the scope, findings, observations, recommendations, and any non-conformities identified during the audit.

Cloud Solution
Audit

Phasen des Audit Prozesses



Genral Audit

- A closing meeting is held to discuss the audit findings and observations with the customer.
- This meeting provides an opportunity for clarifications, discussions about non-conformities, and agreeing on any necessary corrective actions.

Cloud Solution
Audit

Phasen des Audit Prozesses



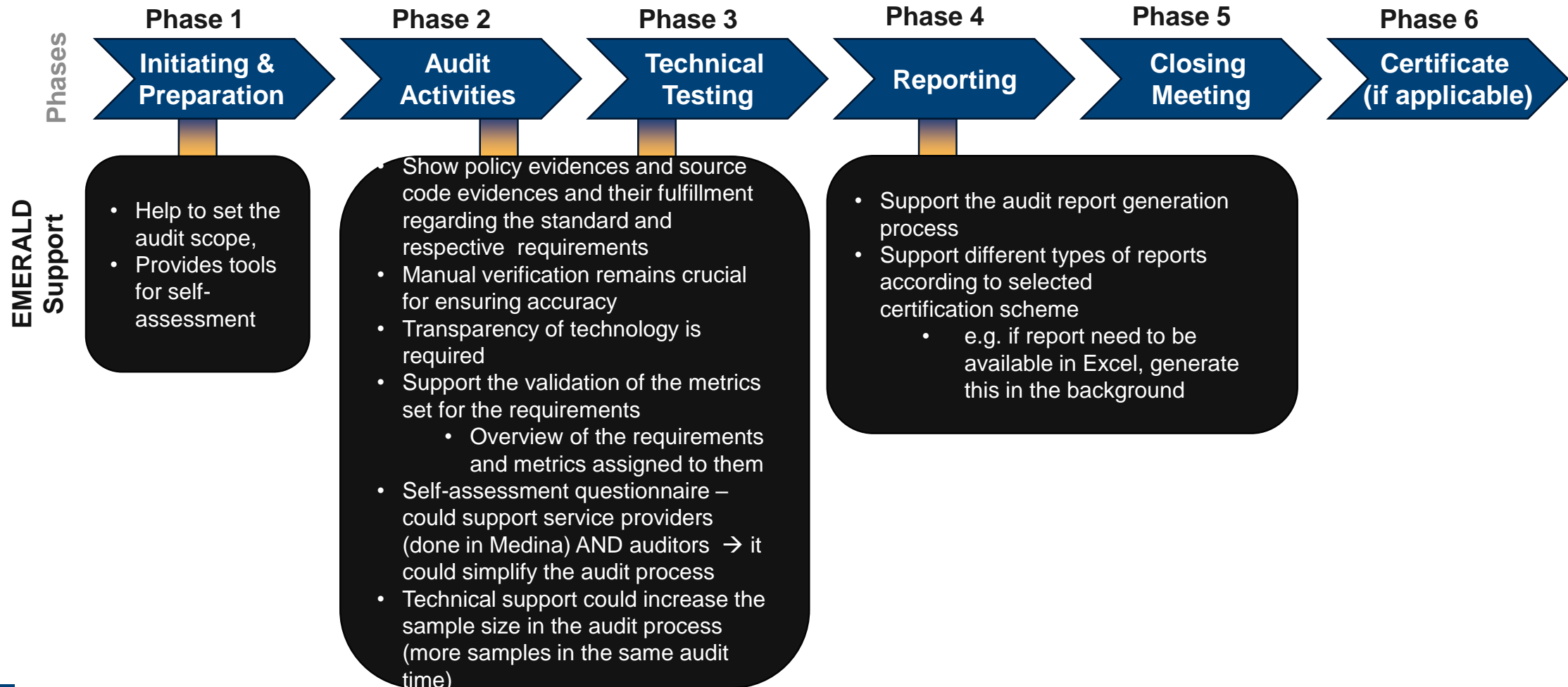
Phases

Genral Audit

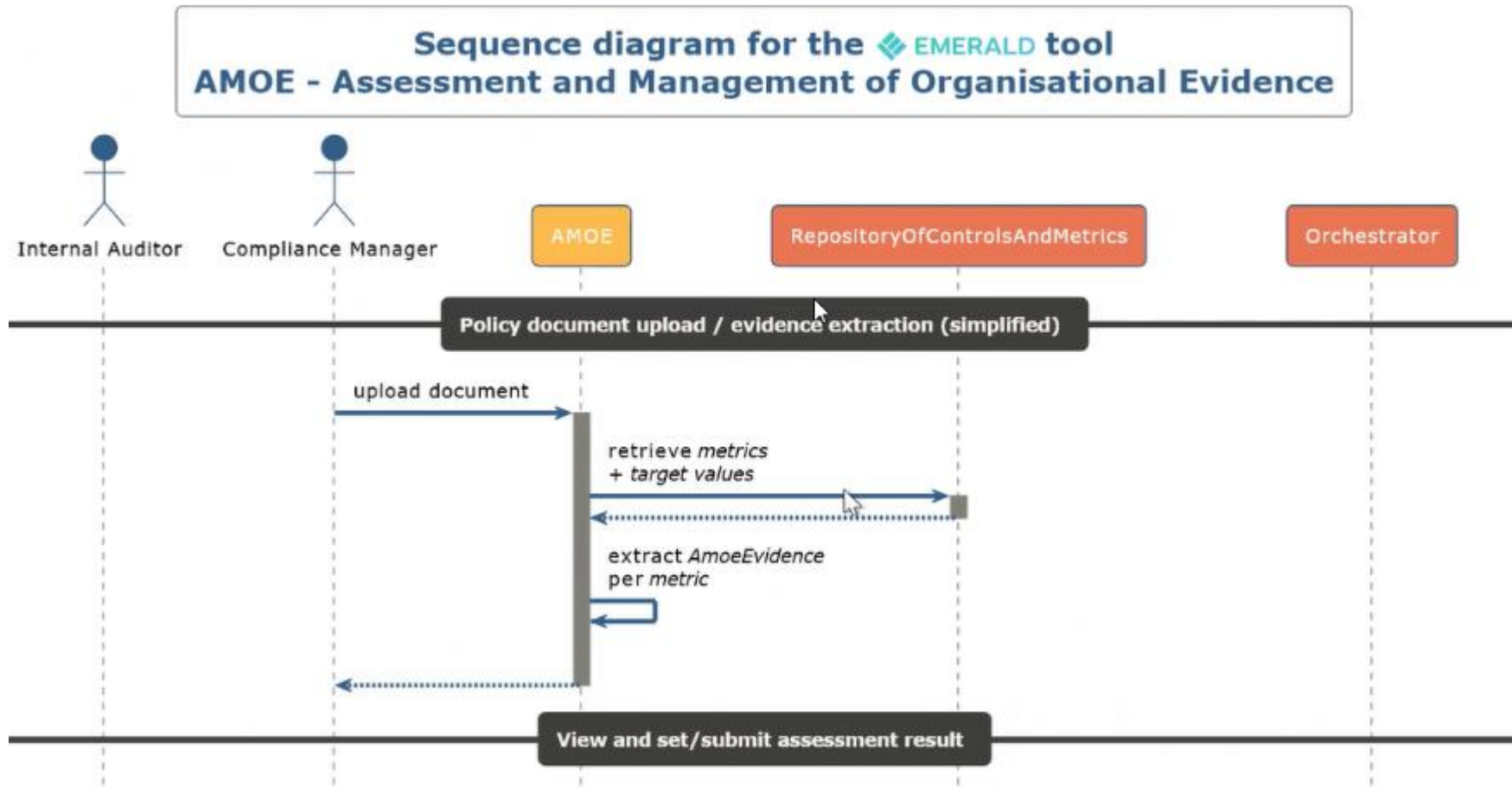
- Depending on the audit criteria and standards, if all requirements are met, the auditors may grant a certificate of compliance or conformance to the customer.

Cloud Solution
Audit

Unterstützung durch EMERALD



Wo wir uns derzeit befinden



- **Hypothese:** es ist möglich, dass Softwareanwendungen in Zukunft auch die Komplexität von Audits reduzieren, ohne dabei die Integrität und Transparenz des Auditprozesses zu beeinträchtigen.

- Interviews über Nutzer:Innen Verhalten
 - in Bezug auf Transparenz und
 - Nachvollziehbarkeit
- Experten:Innen Meinungen zu Metriken
 - individuell
 - abgeleitet & allgemeingültig
- Test- und Trainingsdaten für Komponenten wie AMOE

PARTNERS



TECNALIA is the largest centre of applied research and technological development in Spain. It provides specific solutions to the major global challenges and transforms technological research into prosperity.



FRAUNHOFER AISEC, a leader in cybersecurity research, develops customized security concepts and solutions to protect businesses and the public sector against cybercrimes and to enhance data security.



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CNR is the largest public research institution in Italy. Founded in 1923 it is focused on carrying out, disseminating and enhancing scientific and technological research in the main fields of knowledge.



SCCH is a non-profit COMET center that focuses on data and software science. Excellent research is conducted in both areas at SCCH. SCCH was founded by the Johannes Kepler University Linz in 1999.



The **Know Center** is a leading European innovation and research center for trustworthy AI and data science.



CaixaBank is the leading financial group in Spain and one of the most significant in Portugal. Constantly striving for the innovation, it will provide a large experience on cybersecurity in finance.



IONOS is the leading European digitalisation partner for small and medium-sized businesses (SMB).



CloudFerro provides innovative cloud services. The company delivers and operates cloud computing platforms for demanding markets, such as the European space sector, climate research and science.



OpenNebula Systems is the deep tech company behind OpenNebula, the only European open source Cloud & Edge Computing Platform in the market and a success story of EU-funded research and innovation.



NIXU, a DNV company, is a trusted cybersecurity services partner. We help our customers ensure business resilience with peace of mind across multiple industries, enabled by some of the best cybersecurity professionals in Europe.

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PROJECT INFO

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End date: Oct 31st 2026
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EMERALD

Evidence Management
for Continuous Certification
as a Service in the Cloud

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