ITASEC20
ITALIAN CONFERENCE ON CYBERSECURITY

GDPR Compliance Through Authorization Systems

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The Problem

The General Data Protection Regulation (GDPR) requires that the controller and the processor need to:
(1) demonstrate the compliance with the GDPR - "Accountability" principle;
(2) demonstrate the appropriate technical security level - "integrity and confidentiality";
(3) adapt and rethink their data practices so as to be aligned with the "data protection by-design and by-default" approach (Art. 25).

SMEs Needs

Being (by-design) compliant with the GDPR means having solutions that:
(1) are general-purpose;
(2) must take in consideration the regulation by-design;
(3) must be easily integrated with the existing business processes; and finally
(4) must be rooted in the GDPR principles dictated in Art. 5.

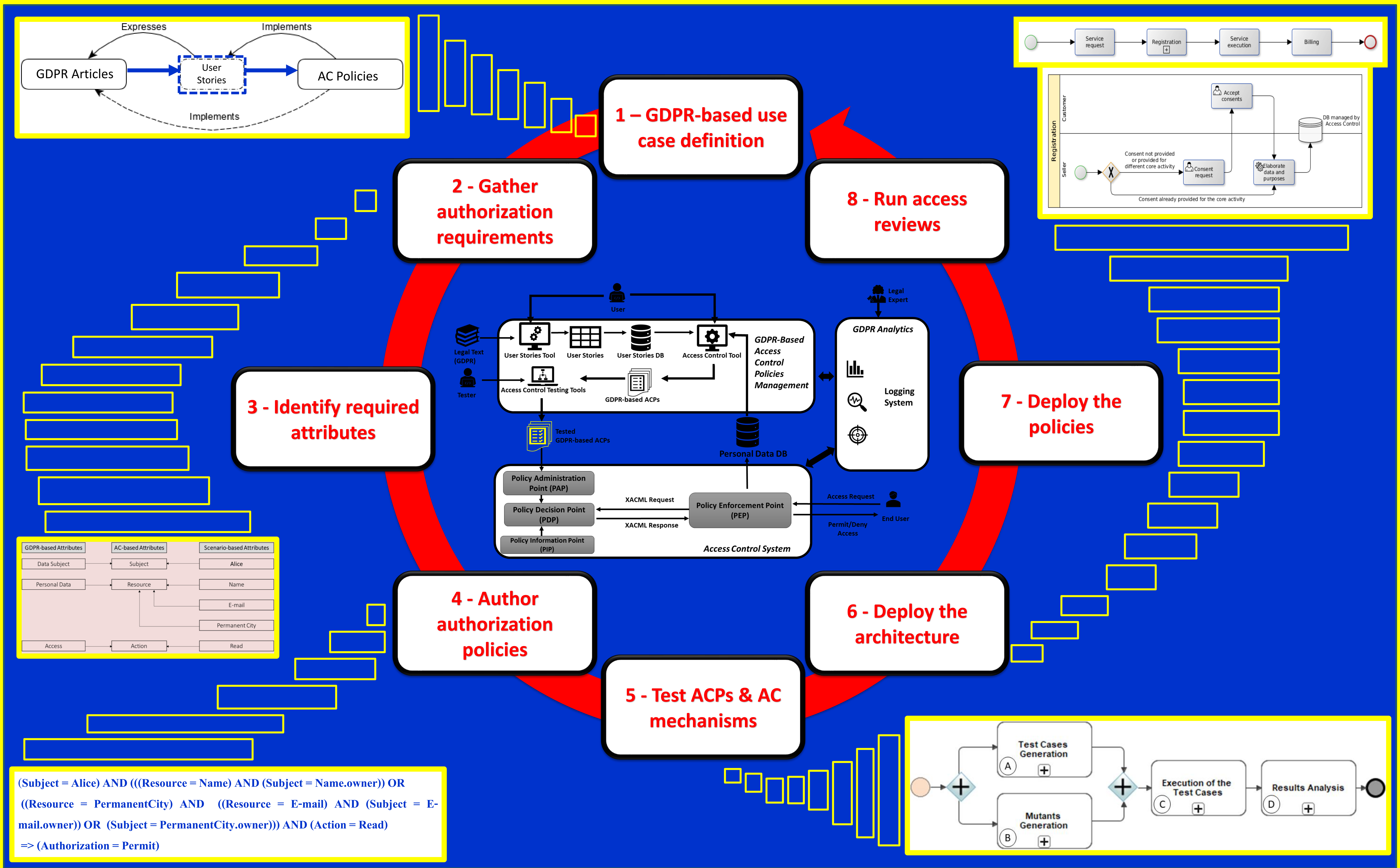
Limits of Existing Solutions

Different works are trying to give an answer on how to comply with the GDPR

- but most of them are in a early stage;
- lack of automation and tools supporting their proposal in real scenarios.

Seminal works are:
[6] discusses a systematic approach for implementing Access Control Policies (ACPs) in an industrial setting, but without taking in consideration any legal framework;
[10] presents an approach to extract ACPs from the Data Protection Directive (Directive 95/46/EC in force before the GDPR).

Main Ideas and Results



(Subject = Alice) AND (((Resource = Name) AND (Subject = Name.owner)) OR ((Resource = PermanentCity) AND ((Resource = E-mail)) AND (Subject = E-mail.owner)) OR (Subject = PermanentCity.owner))) AND (Action = Read)
=> (Authorization = Permit)

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Take Home Message

KEEP
CALM
AND
COMPLY WITH
THE GDPR

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