
SWITCH

The Swiss Education & Research Network

Concept and Benefits of an AAI

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Vision of e-Academia

“We want a virtual community across our institutions in which all persons associated with the Swiss Higher Education System are able to gain access to its electronic resources, independent of the accrediting organization and independent of the place where they happen to be working.”

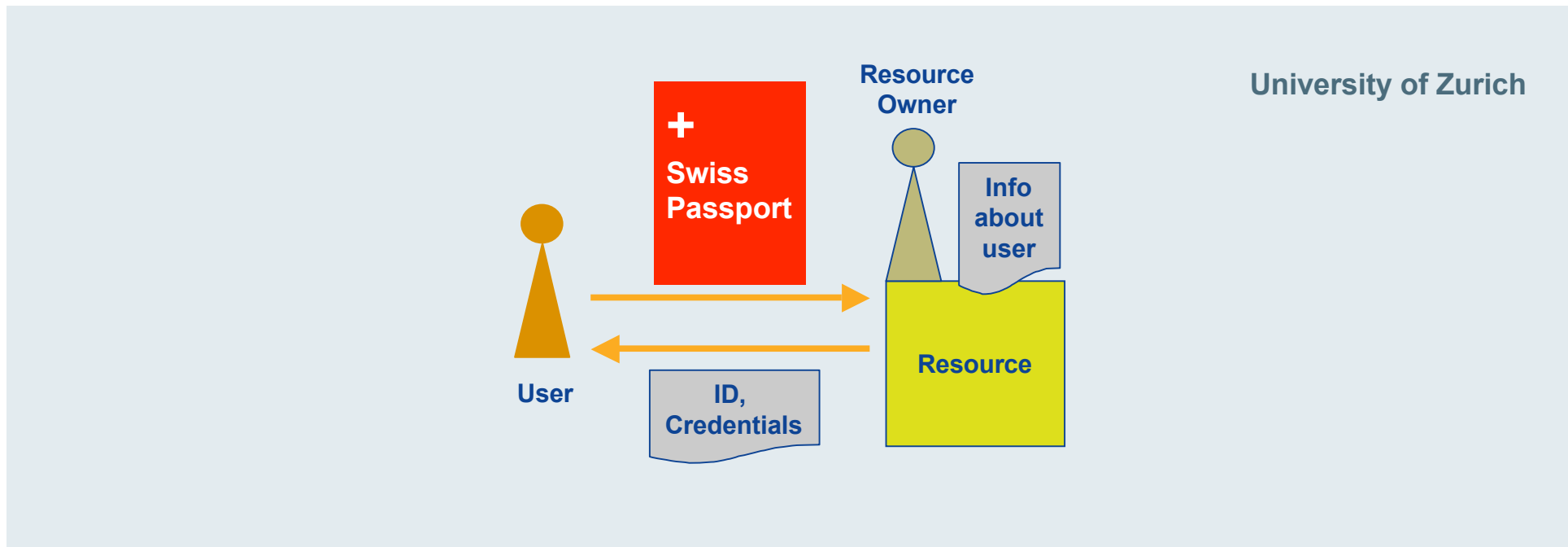
AAI as the foundation of e-Academia

“... let’s develop e-Academia, let us build the foundations in the form of a uniform authentication and authorization infrastructure (AAI) for the higher education system in Switzerland...”

Roadmap



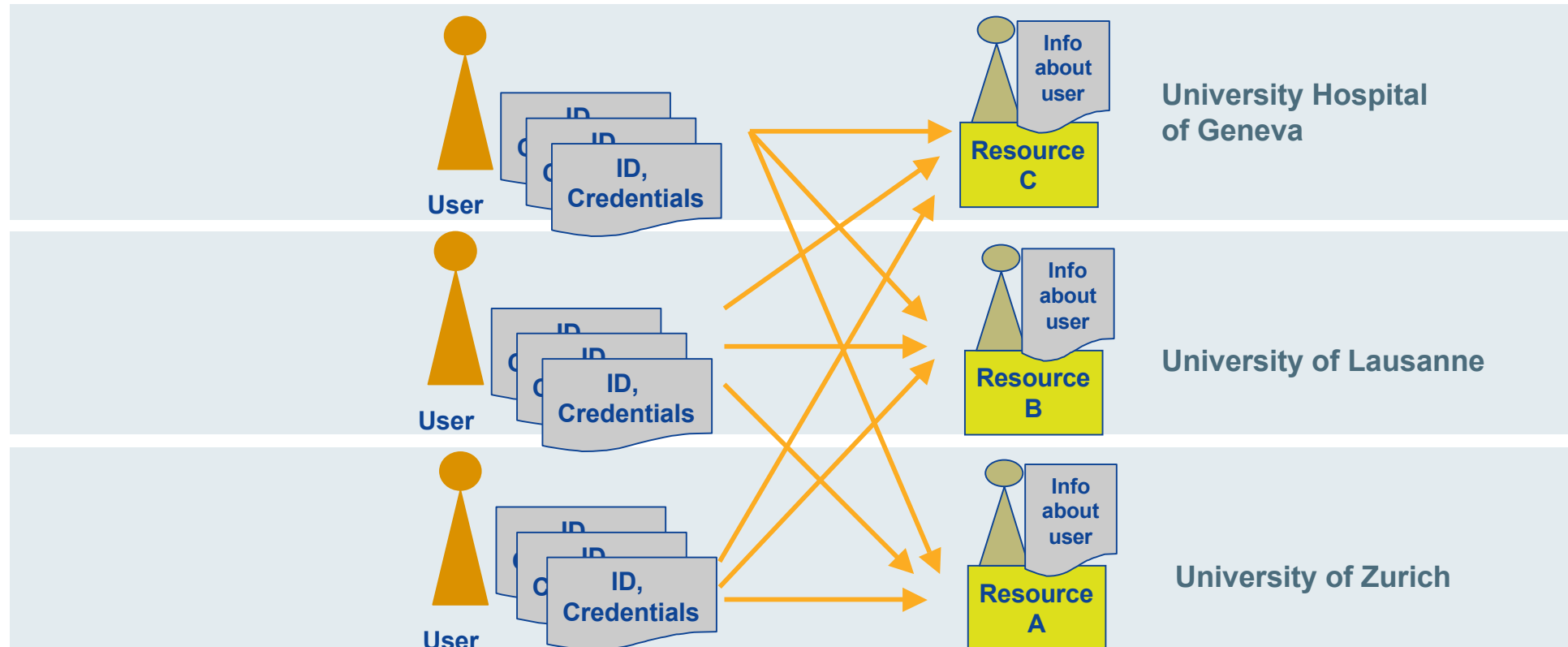
The AA Problem (1)



1 user - 1 resource - 1 organization:

NO PROBLEM

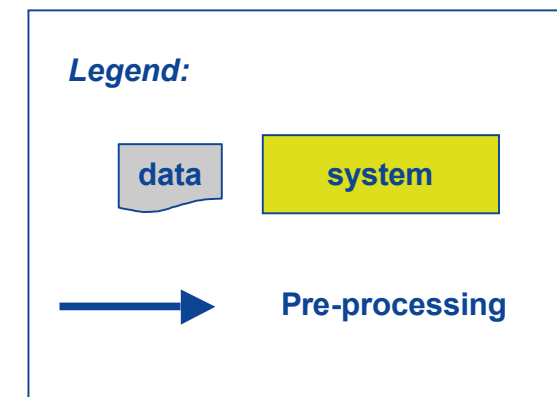
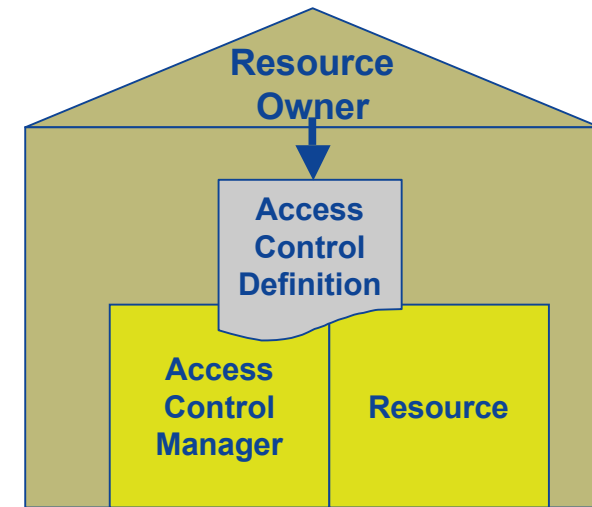
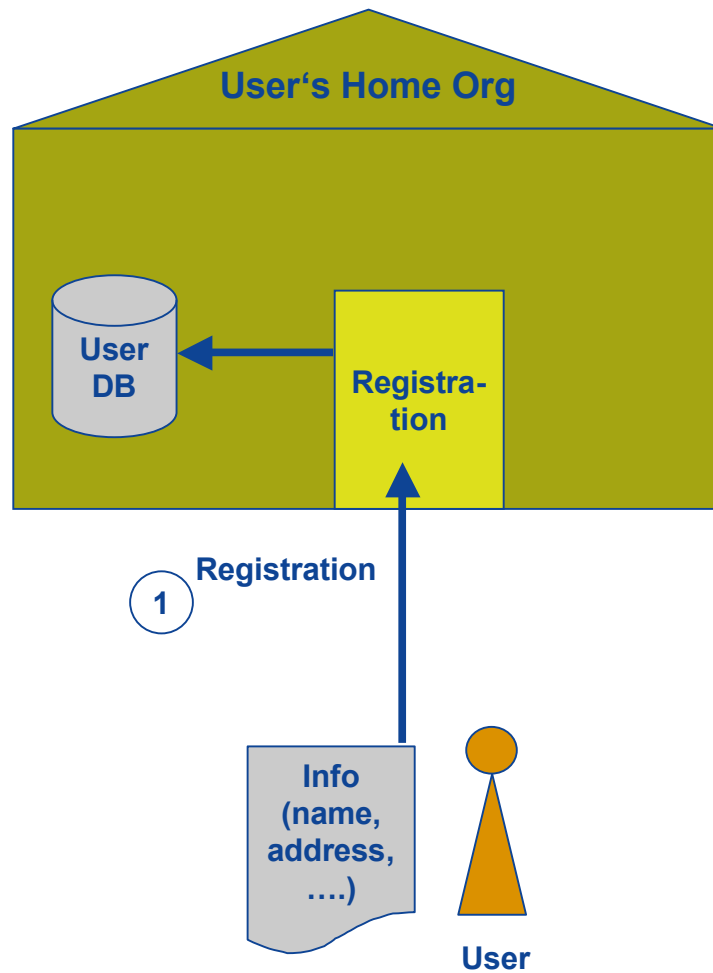
The AA Problem (2)



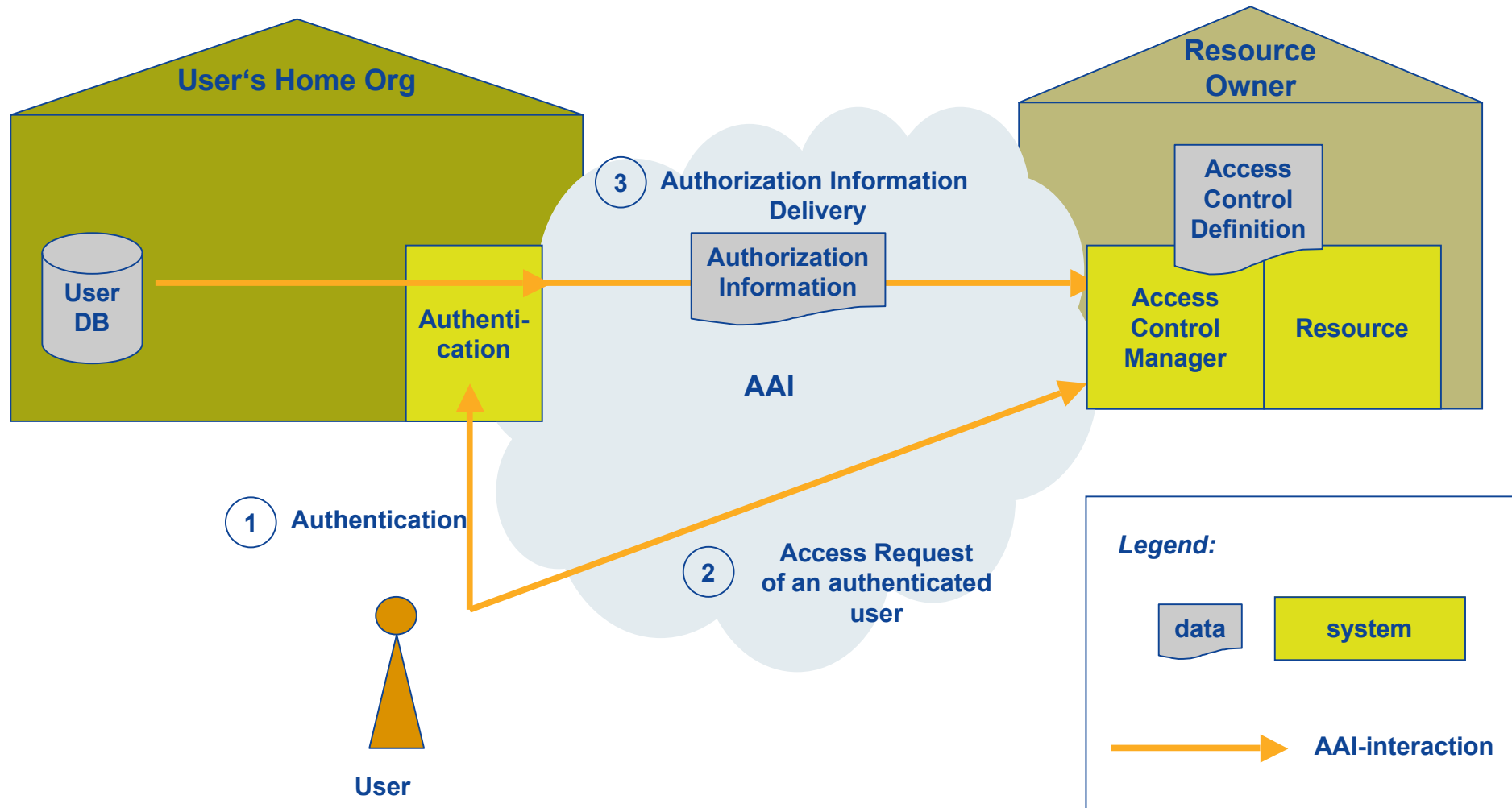
Many users - many resources - many organizations:

A PROBLEM

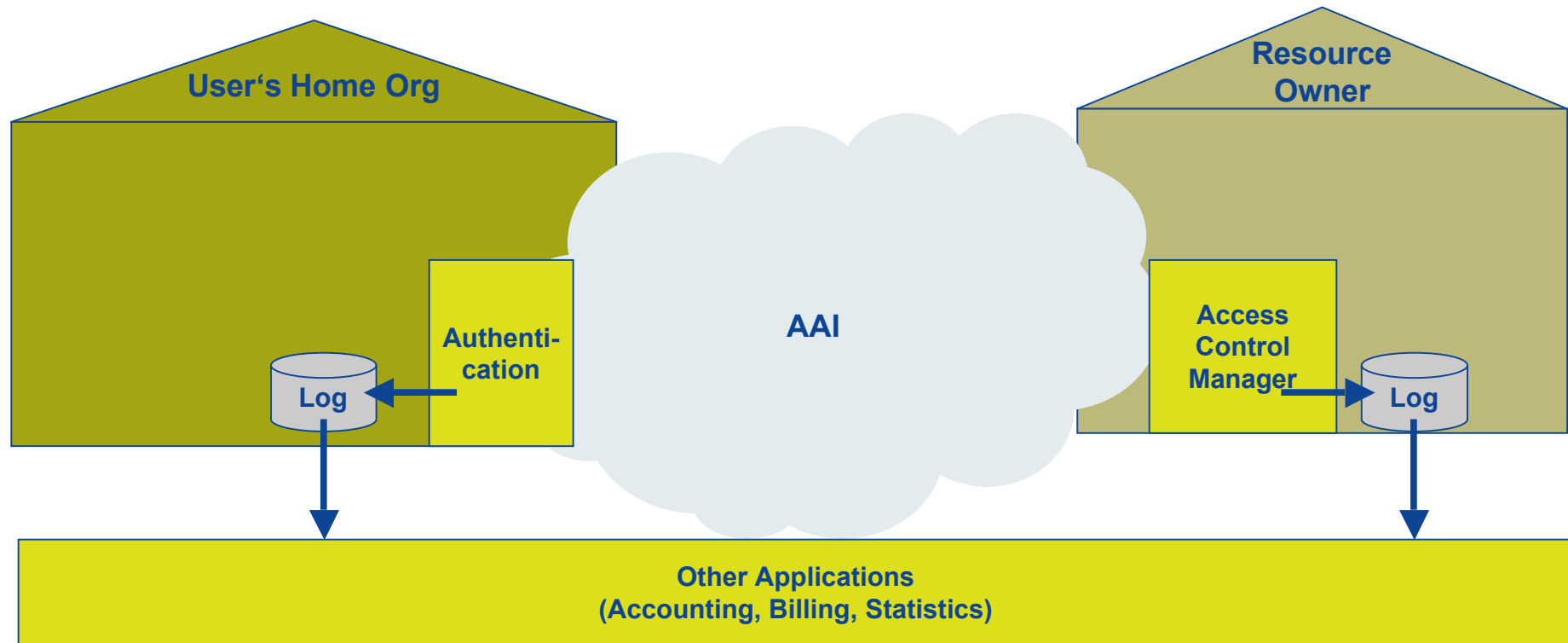
The AA Model (1)



The AA Model (2)



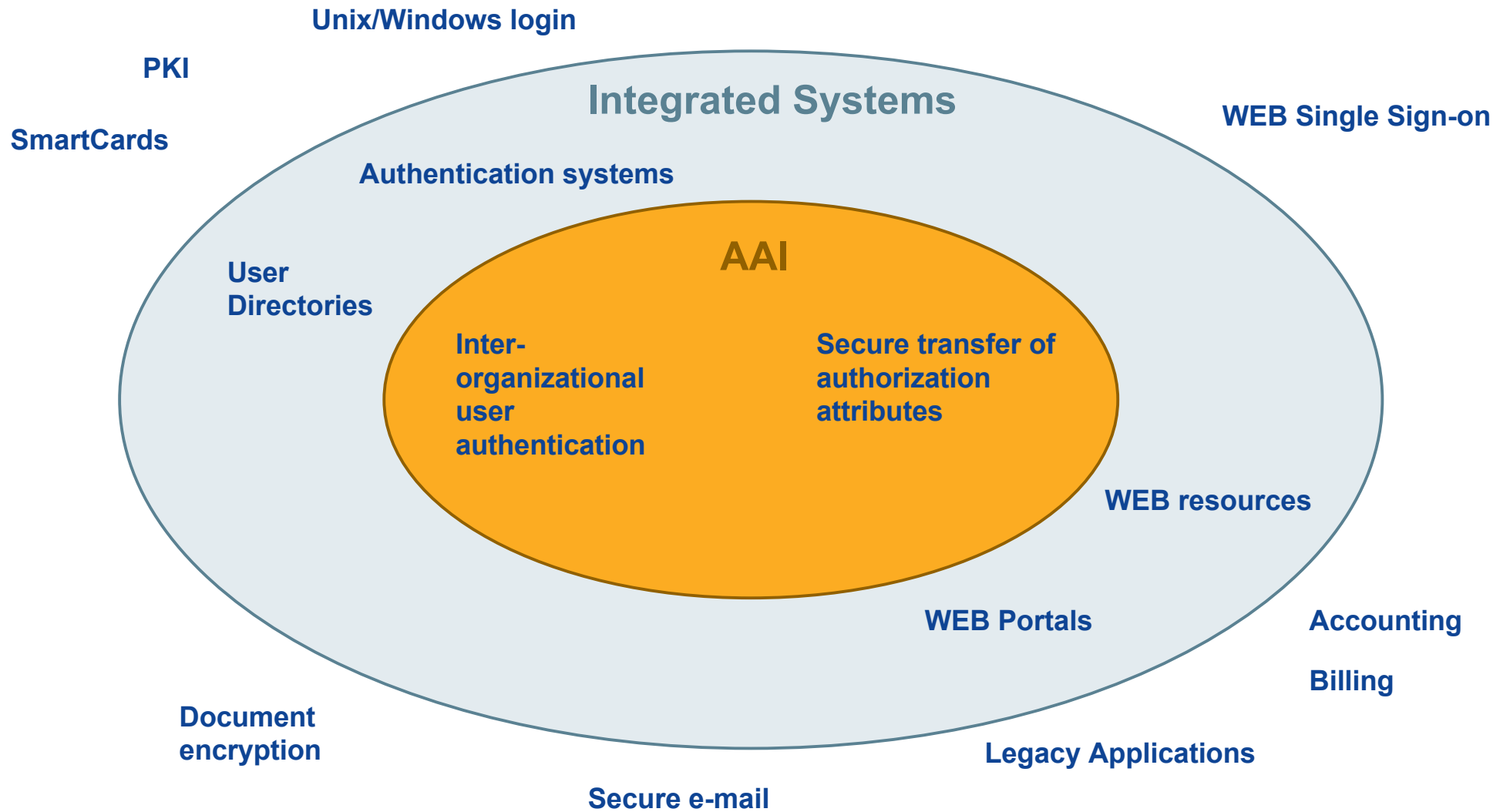
The AA Model (3)



Input to Accounting or Billing systems:

- AAI provides Identity of User and/or Name of Home Organization
- Resource measures the interactions between a user and the resource

Scope of the AAI



Advantages of an AAI

Virtual Mobility	AAI is a requirement if students of different universities wish to use common resources, and it is the basis for initiatives such as the Swiss Virtual Campus.
Information protection	AAI simplifies the protection of information by applying standardized mechanisms. Resource owners can concentrate on the protection of their resources without having to implement an entire system including registration and authentication.
Remote access	AAI makes it possible to authorize users based on personal attributes of a user instead of IP addresses. User authorization thus becomes location-independent.
User friendliness	After a single registration a user can access a number of resources. Only one authentication technology is applied.
IT efficiency	Standardized AA systems and cooperation among IT organizations improve the efficiency in the implementation and operation of security solutions.
Administration overhead	Without AAI, a user has to register with various organizations. It is feared that the administrative overhead of individual organizations will increase dramatically. AAI counteracts this tendency.
Image	Complicated and inconsistent AA mechanisms, or isolation of resources and user groups, respectively, is no longer state of the art. Not having an AAI will damage the image in the long run.