Security Requirement and Implementation Solution for e-Gov System

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Agenda

- Introduction of E-Gov (Platform)
- Requirement of Identity Management & Authorization
- Implementation Solution

The Functions of e-Gov platform

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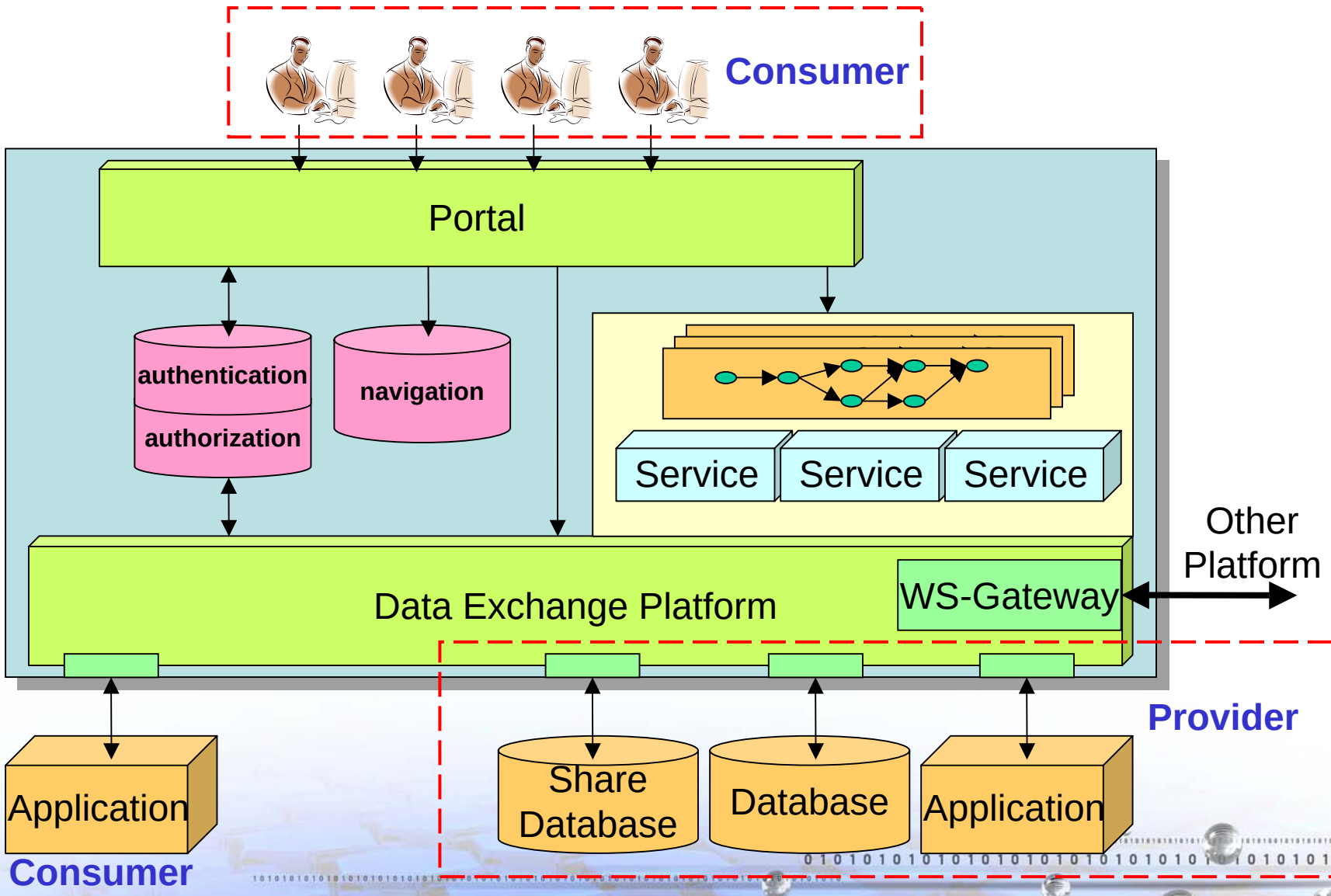
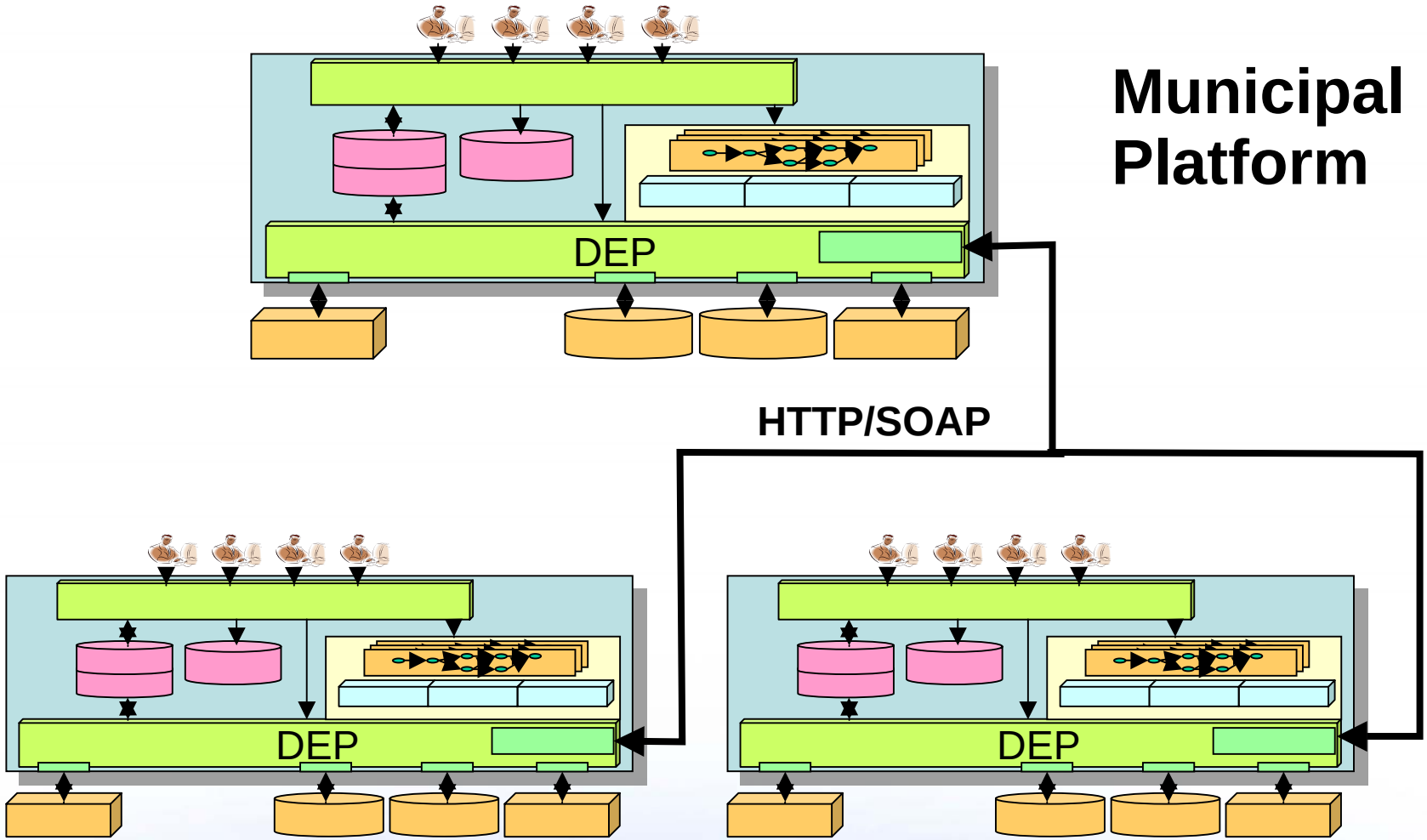
- **Objects**
  - Service support for e-Gov application
- **Functions——Support Data Sharing and Exchanging**
  - Data Exchanging
  - Uniform Portal
  - Basic business services: Authentication & Authorization & Resource navigation
  - Connect to Sharing Database, Database of Government Agencies, and Application System
- **Two-level Structure of Municipal and County**
- **Service Platform compliant with SOA**
  - Single business services
  - Composite services
  - Business process services

E-Gov Service Platform Architecture



E-Gov Service Platform Architecture



Existing Foundation for Security

- Releasing certification from uniform CA centre, providing authorization service
- Security functions in existing applications
  - No Uniform Security Solutions
  - Providing Username/Password authorization
  - Providing Role-based Right Management

Requirements of Authentication & Authorization

- Existing Security Management Services should be integrated into the Service Platform
  - Personal certification released by Authentication center
  - Adopt existing Authentication & Authorization Mechanism
- **Single Sign-On(SSO)**
  - Log in Only Once on Portal
  - Log in with Certification or Username/Password
  - Same Log-in Mechanism for County and Municipal Level Platform
- Providing Organization Structure Management and Role Management
- **Providing Federal Authentication Management**
  - Access authorization service once when log-in
  - Authorization information used by different service provider

Functions Implemented

- Base on SAML standards
- Realize uniform log-in management and authorization management services
  - Support SSO, simplifying authentication and authorization management.
- Supporting Dual Username/Password and Digital Certification Identity Management Mechanism
  - Digital Certification Signed and Authorized by authentication Centre
  - Cross authorization based on digital certification for IM in two-level Security Zone
- Mapping uniform authorization to existing right management information, supporting Right Management in Legacy system

Features of SAML

- XML-based framework
  - Describing and exchanging security information between on-line business partners.
  - Security information is expressed in the form of portable SAML assertions that applications working across security domain boundaries can trust.
  - The OASIS SAML standard defines precise syntax and rules for requesting, creating, communicating, and using these SAML assertions.

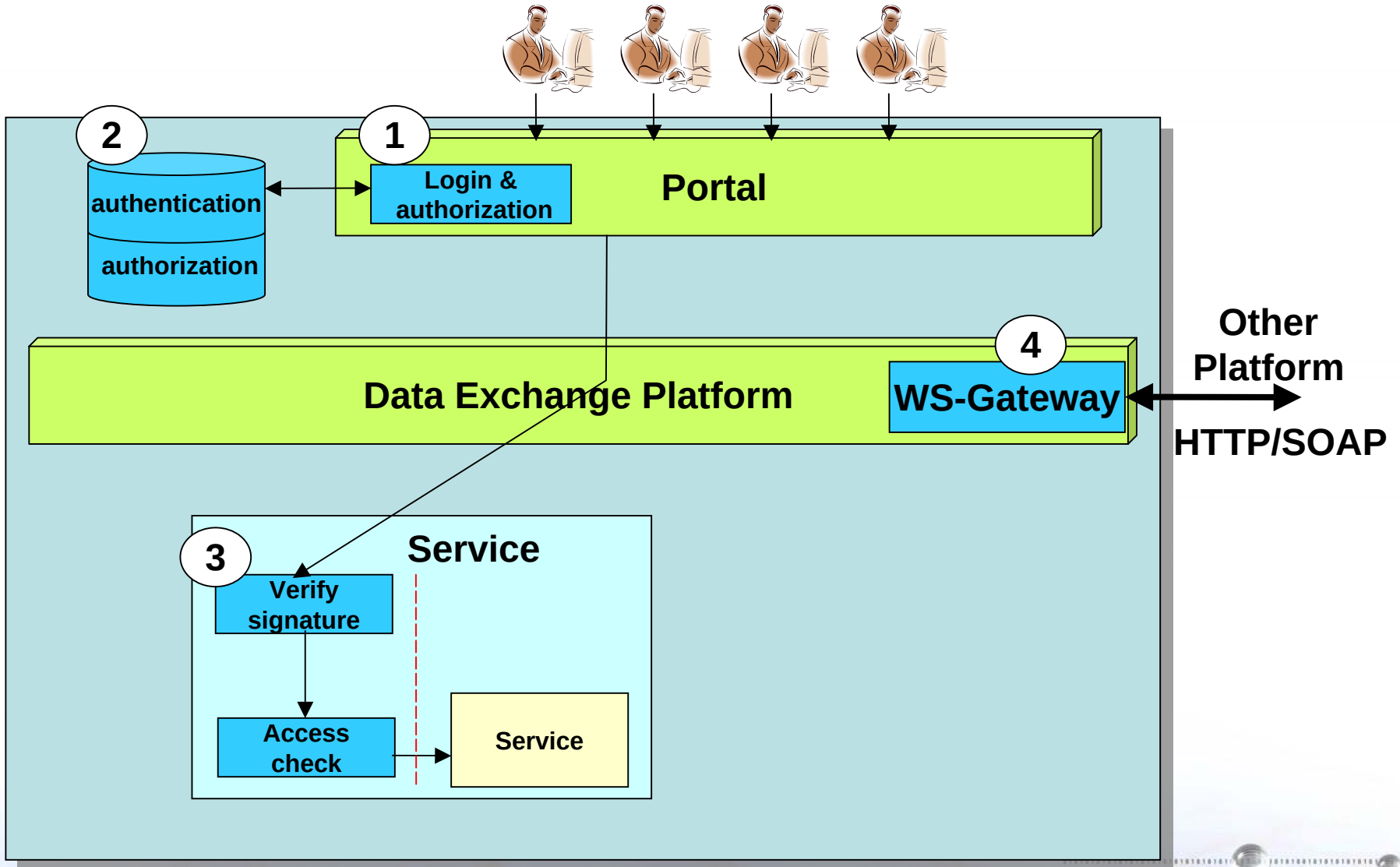
SAML usage scenario

- **Single Sign-On**
  - Within platform
  - Between platform
- **Federated identity**
  - Single service in platform
  - Process in platform
  - Services between platforms

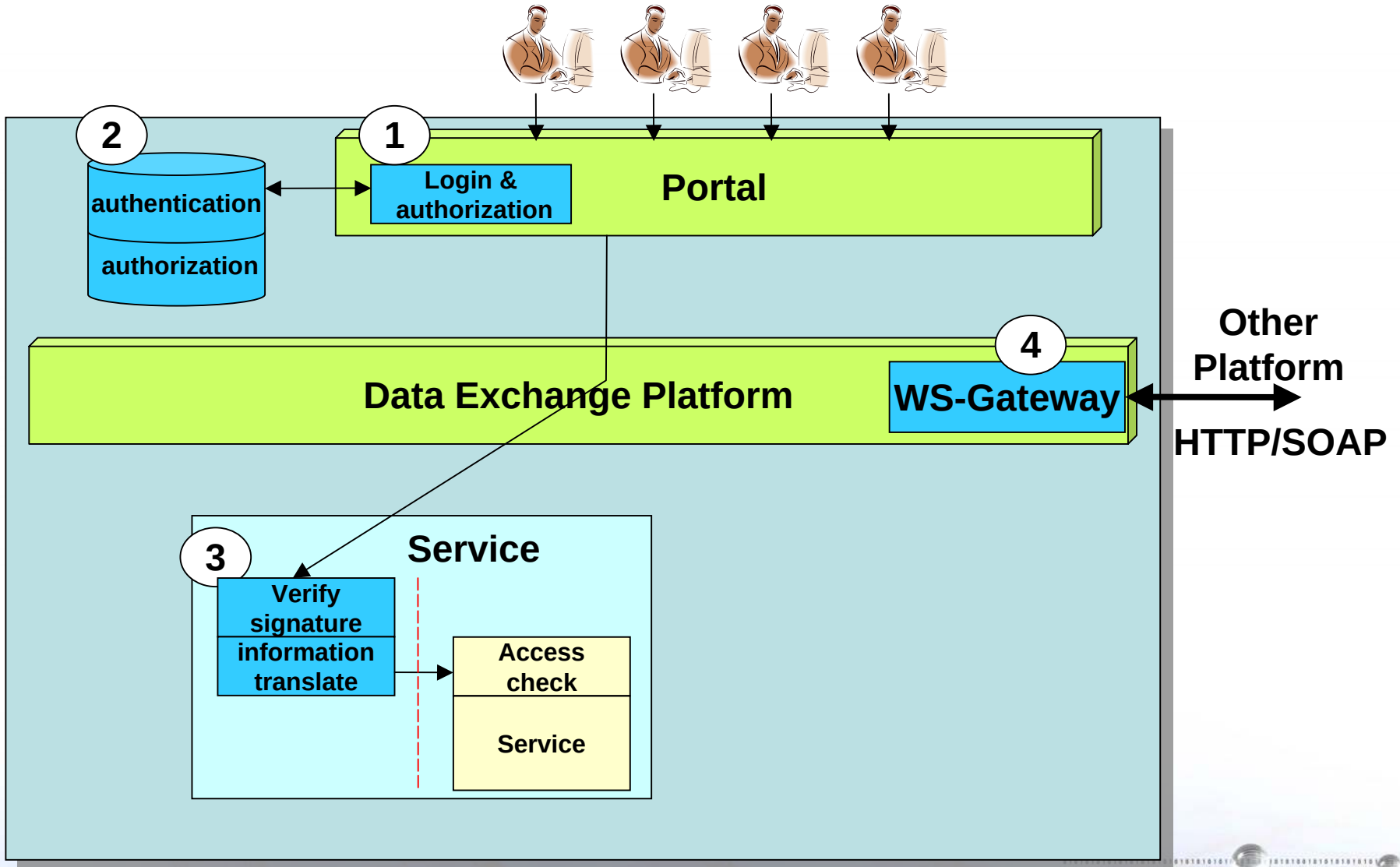
Key of the Implementation

- Different implementations for in a platform and between platforms/partners
  - A SAML-like (simplified) approach to address the requirements – SSO and Federal Authentication in the platform.
  - Real SAML compliant implementation to support the Authentication & Authorization across platforms and/or partners.
- No Authorization decision statement in SAML.
  - Just authentication assertions involved in current (primary) phase.
  - Artifact Resolution Protocol not supported.

The Architecture



The Architecture

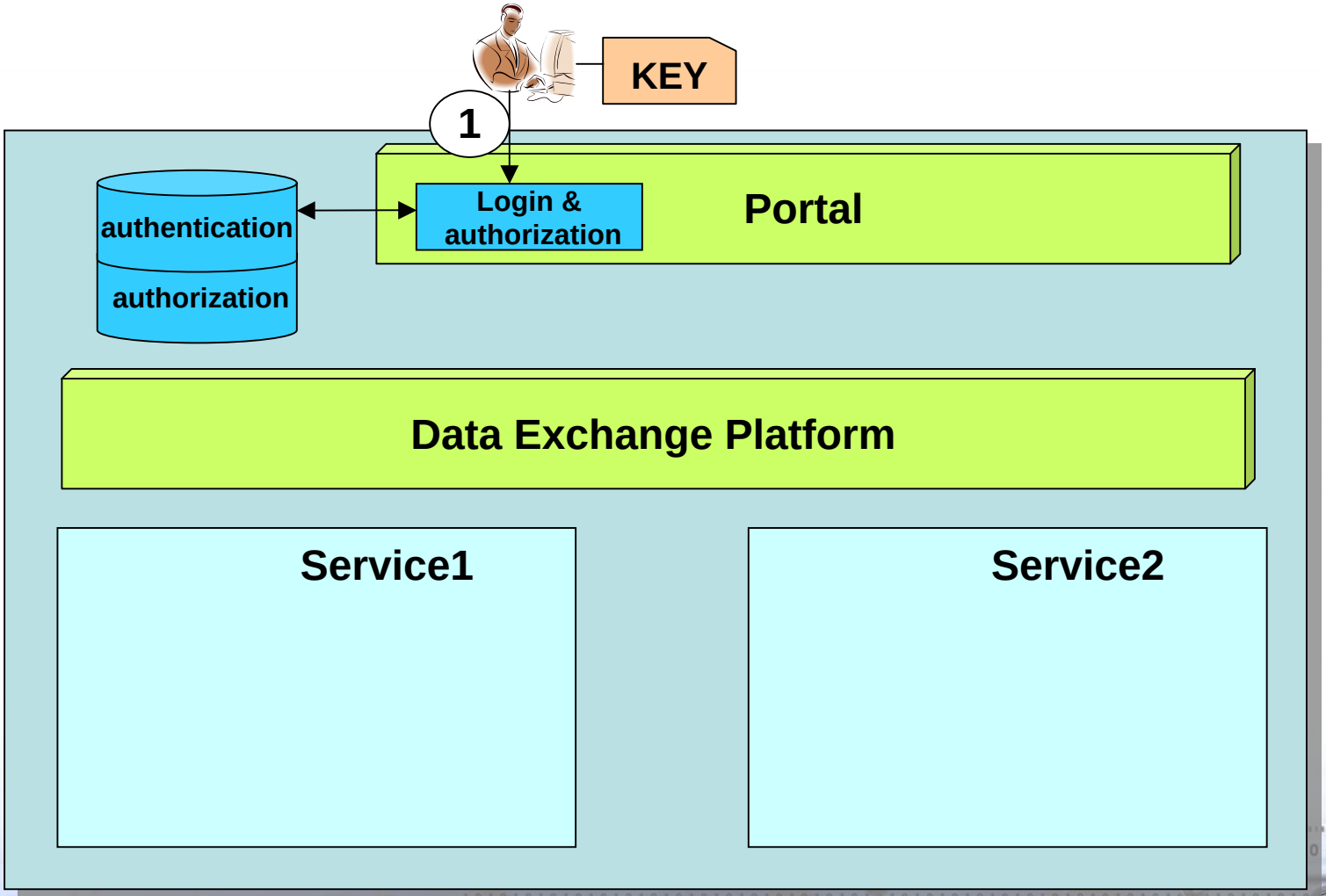


Preliminary Preparing

- Service defines open and limited roles and right information
- Release security certificate to officials and platform
- Mutual authorization between county and municipal platform (exchange public key)
- Definition of role and right information on platform
  - Simplify right management
  - Objects includes single service and process service
- Authorization for officials

Scenario 1

- **Officials/enterprise users in county platform use services in the platform**



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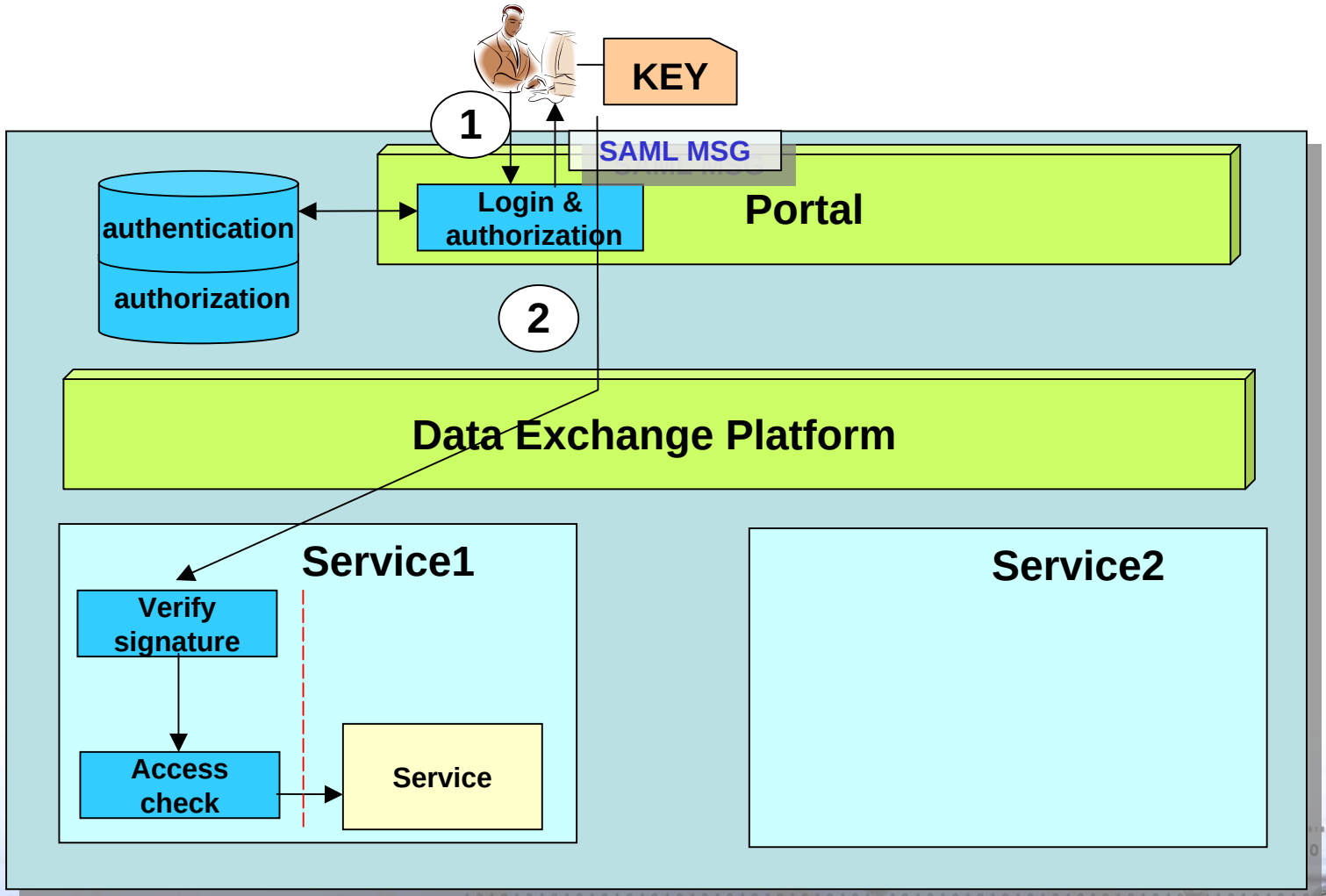

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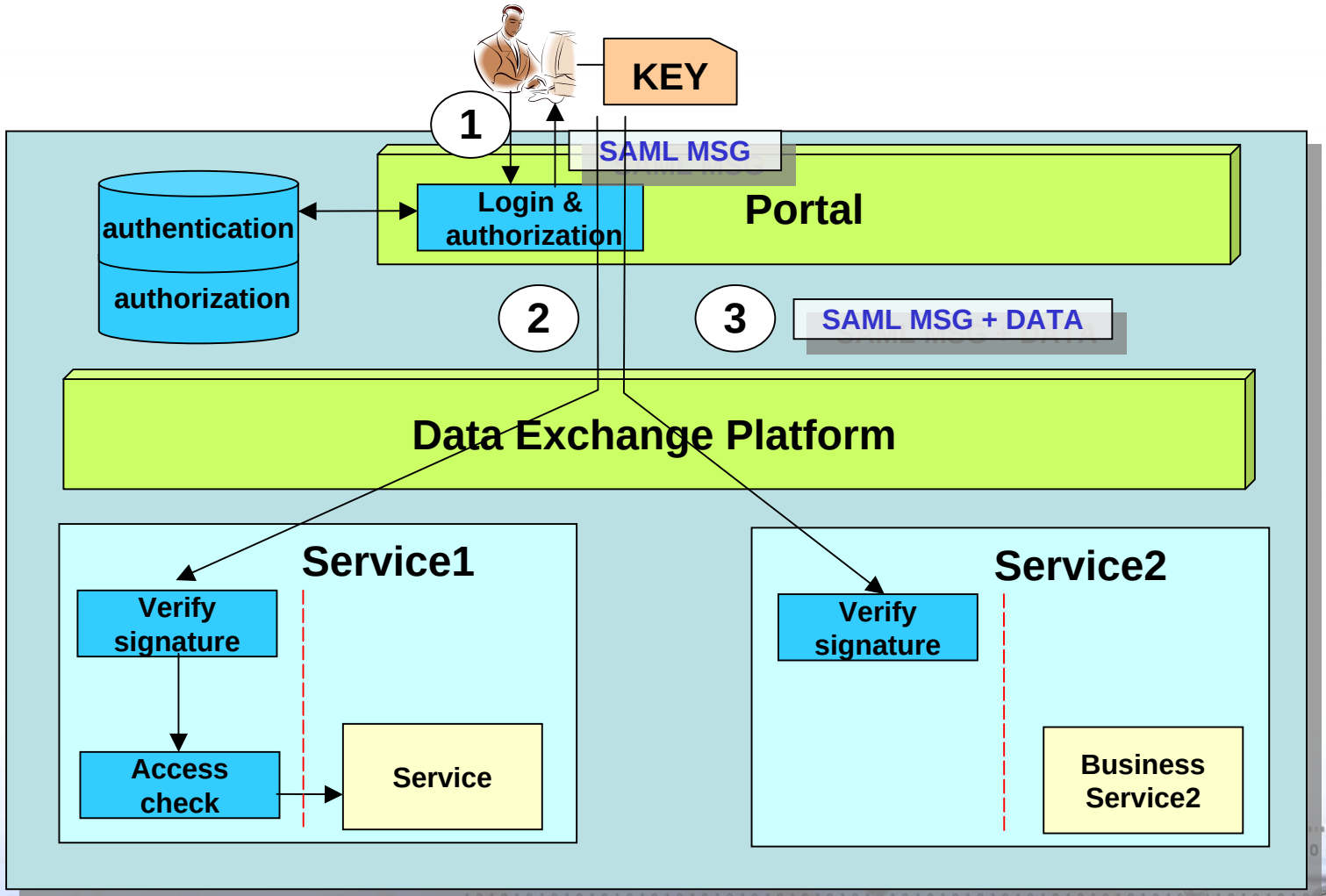

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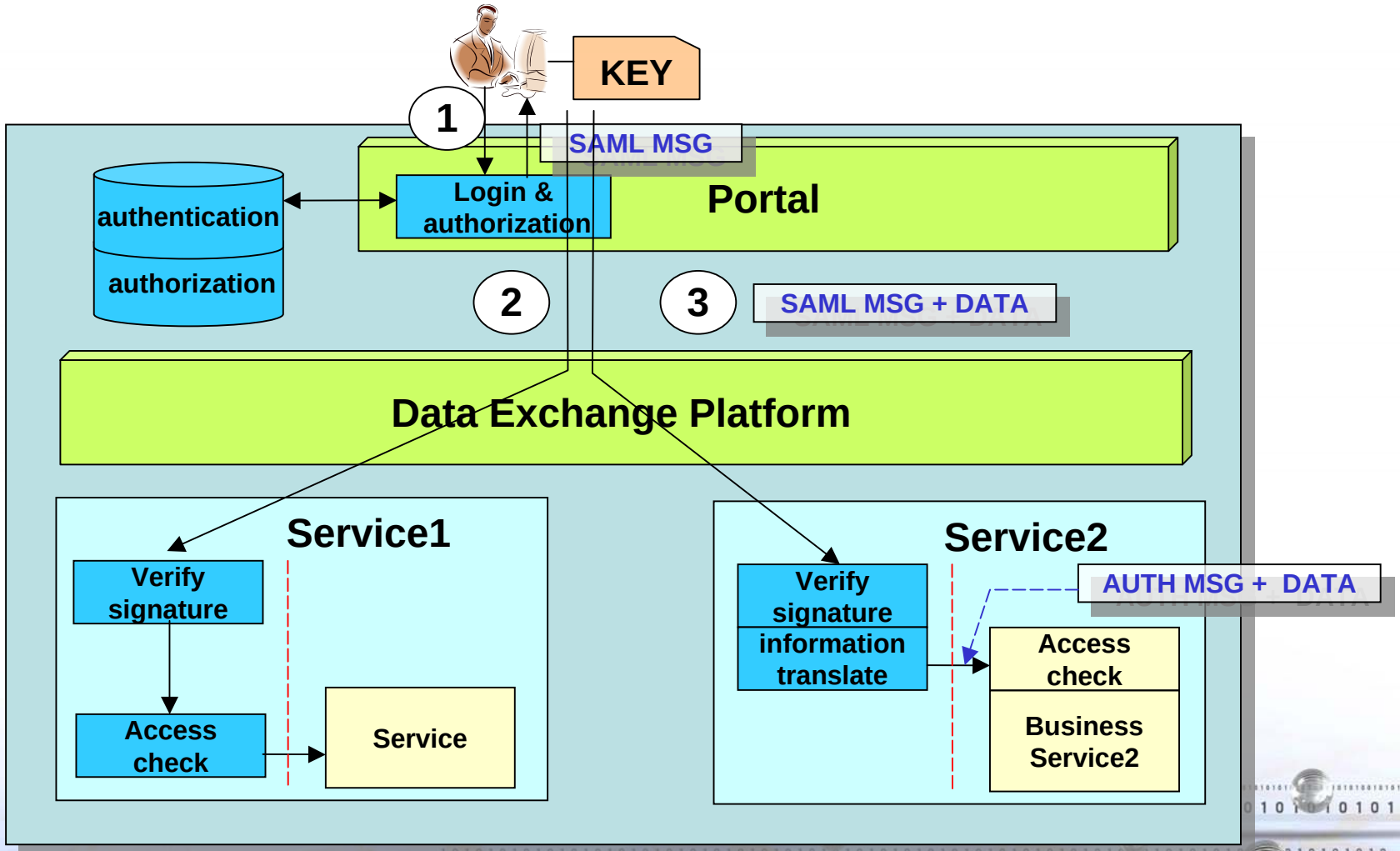
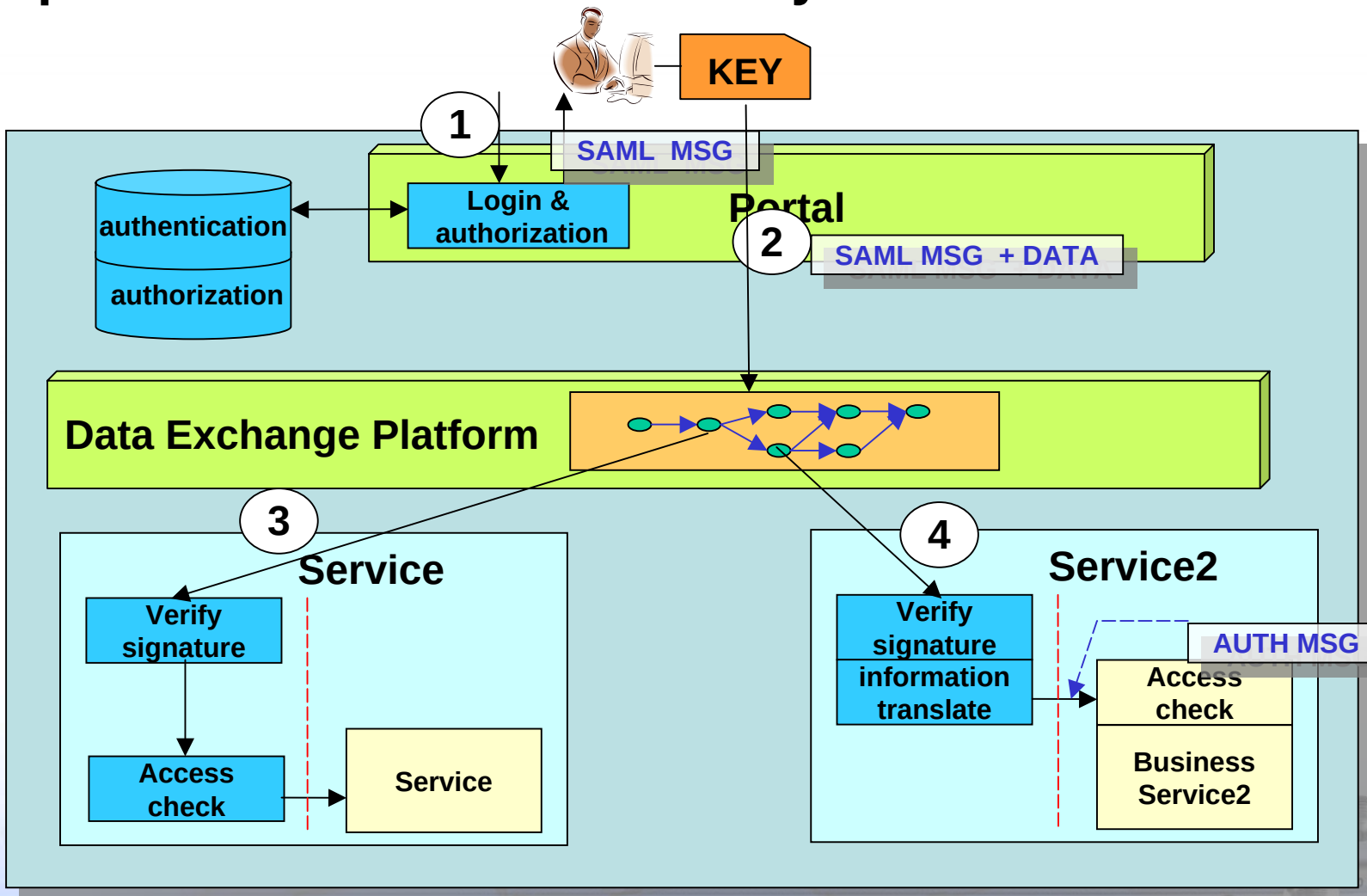


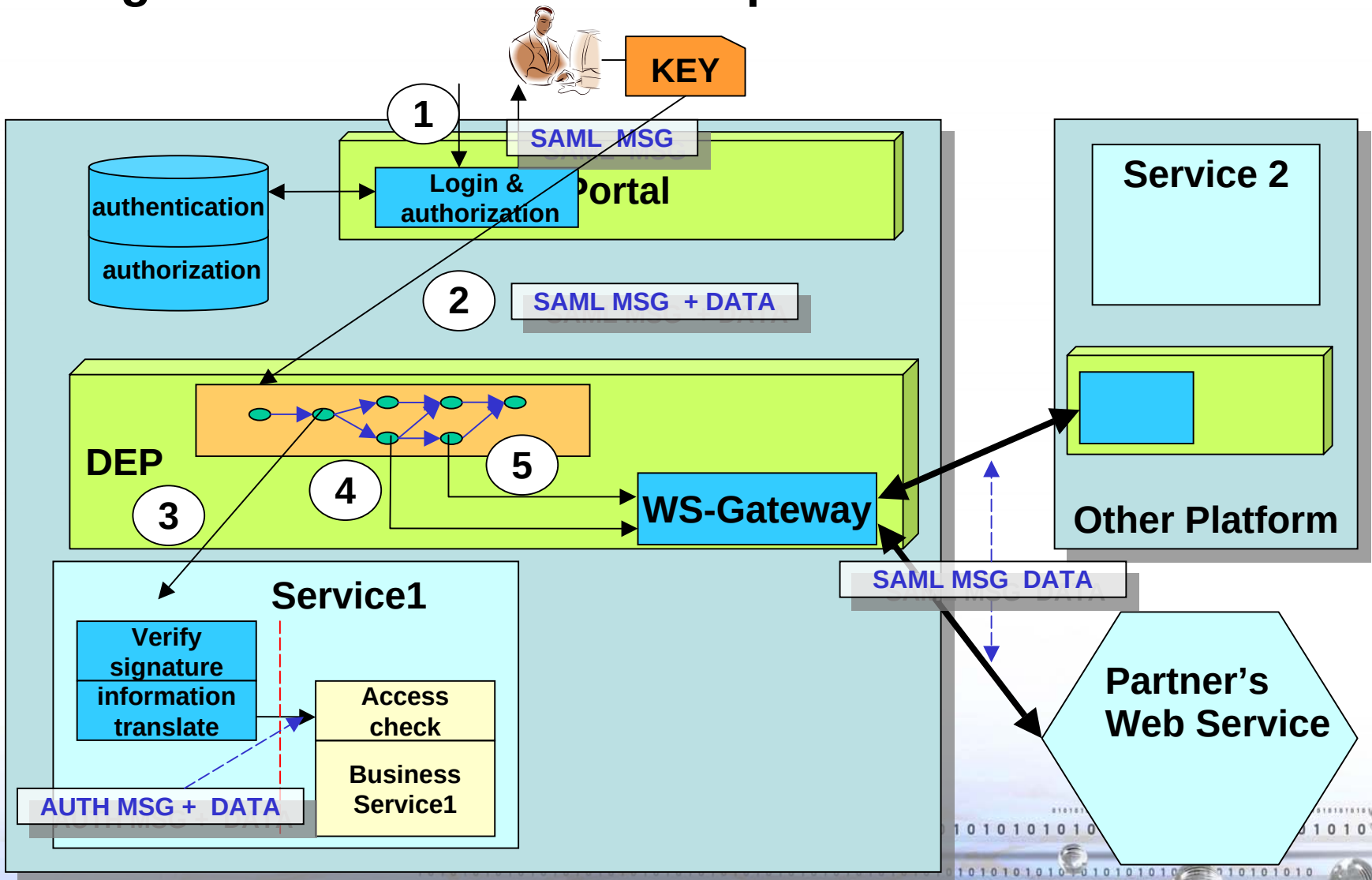
Scenario 2

- **Authentication information be transferred by process service automatically**



Scenario 3

- Usage of services in different platforms



Thanks