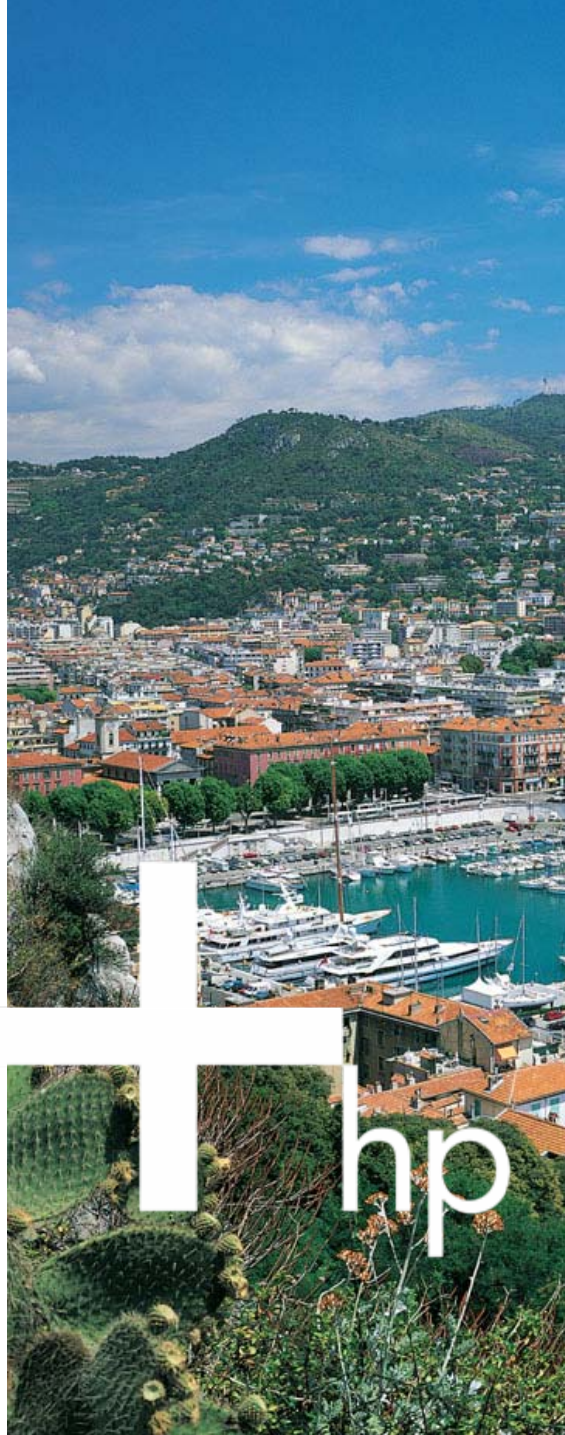
Large scale en masse federation: An HP IT case study

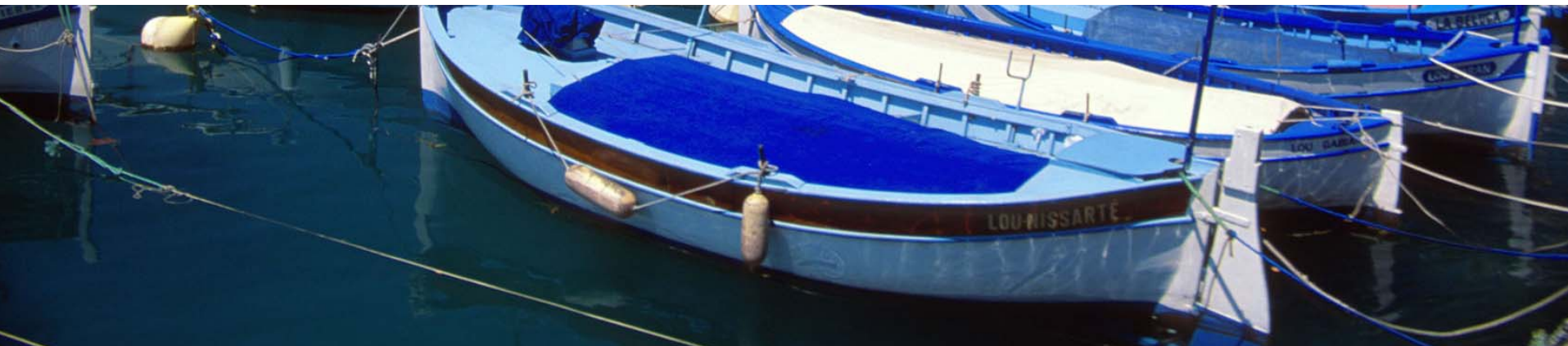


Anjali Anagol-Subbarao
Chief Architect, IDM, ebusiness HP IT

Agenda

- Overview of HP-IT Identity Management
- Federation Use Cases
- Learnings

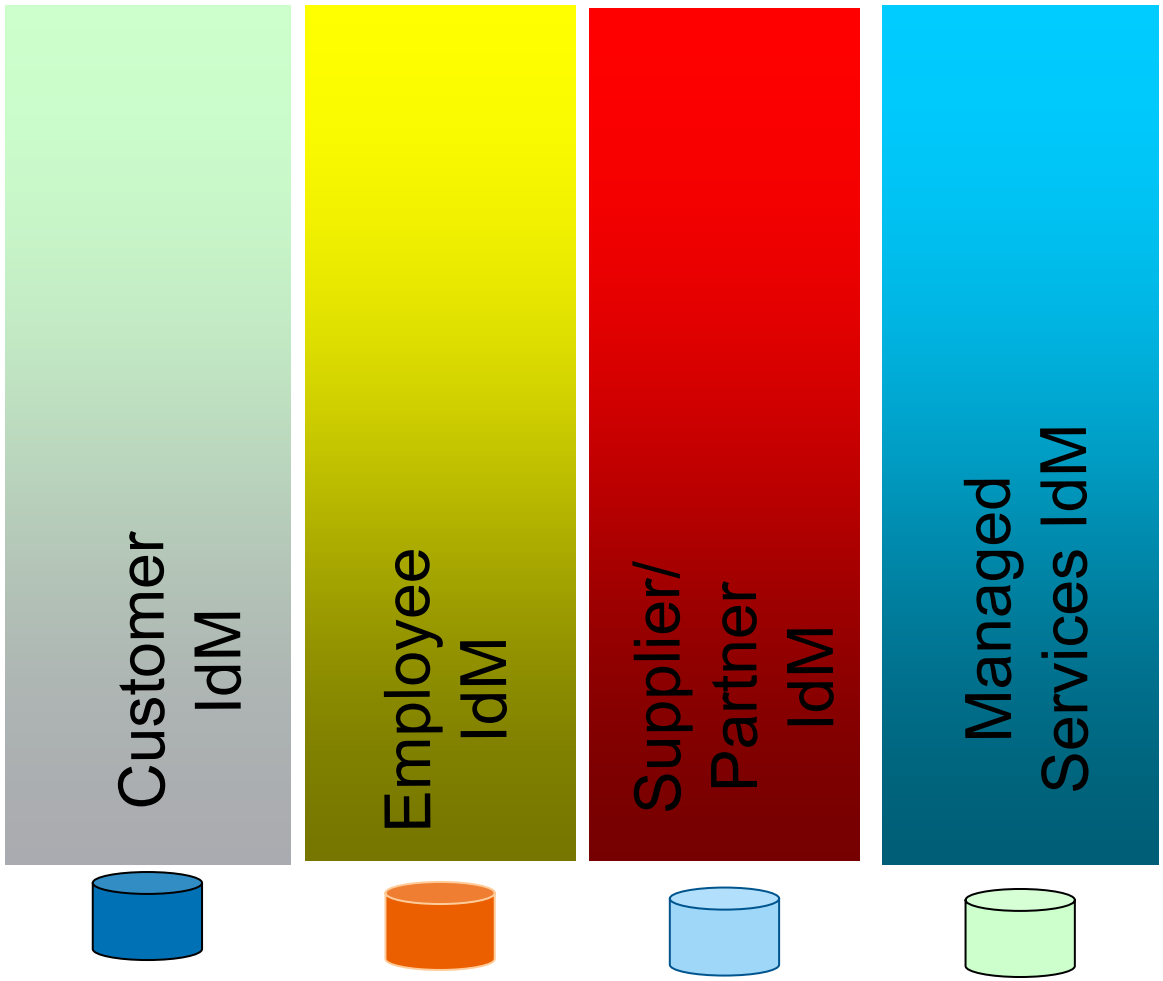
HP IT’s IDM system



Objectives/Drivers for IdM at HP

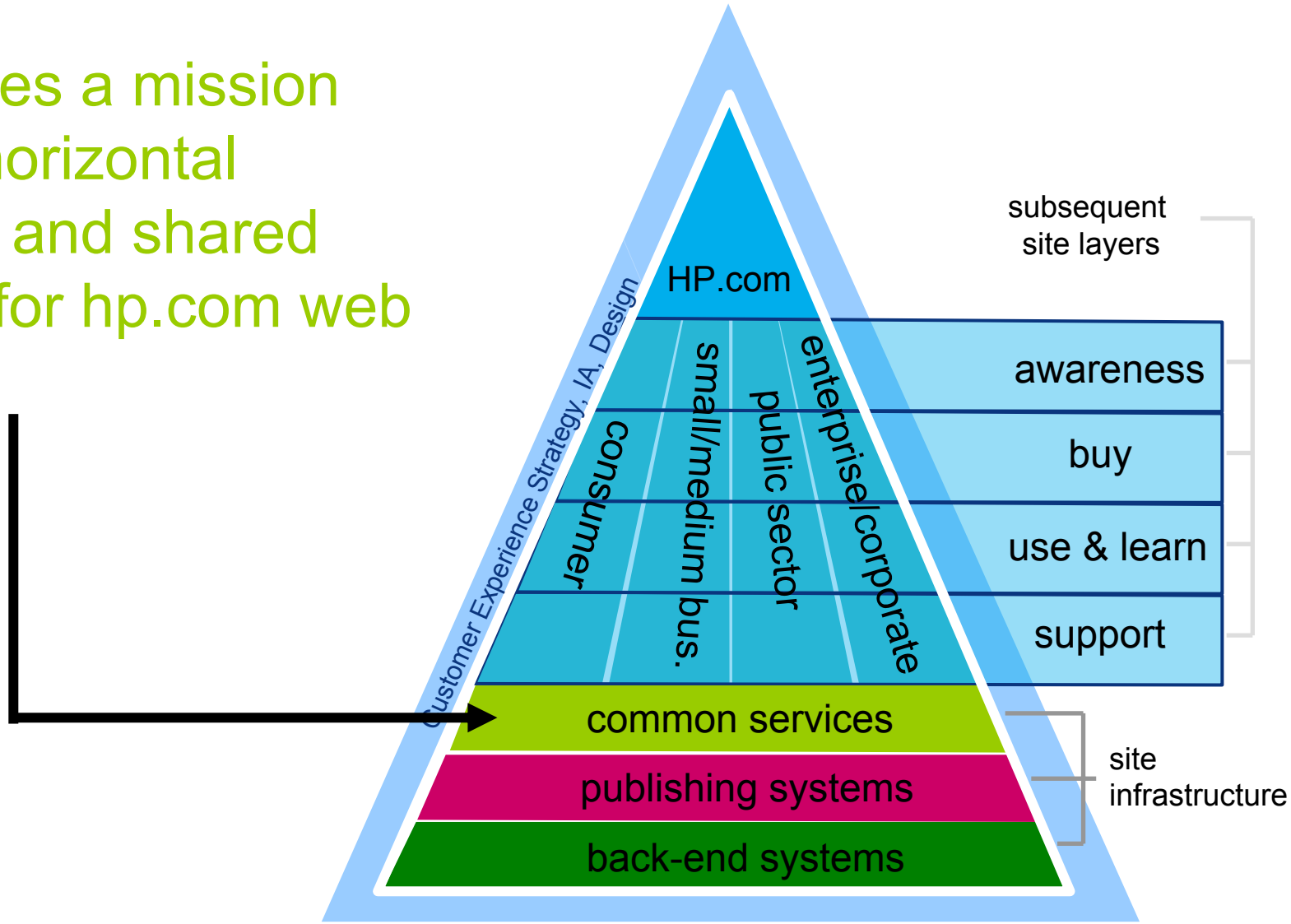
- Enable new business opportunities
- Enable extended enterprise
- Cost Reduction
- Risk Mitigation and Security
- Enable non-interactive principals (e.g. app to app)
- Move toward loosely coupled web services based IdM capabilities

HP's IDM Verticals



HP Customer Identity Management

It provides a mission critical horizontal process and shared service for hp.com web sites



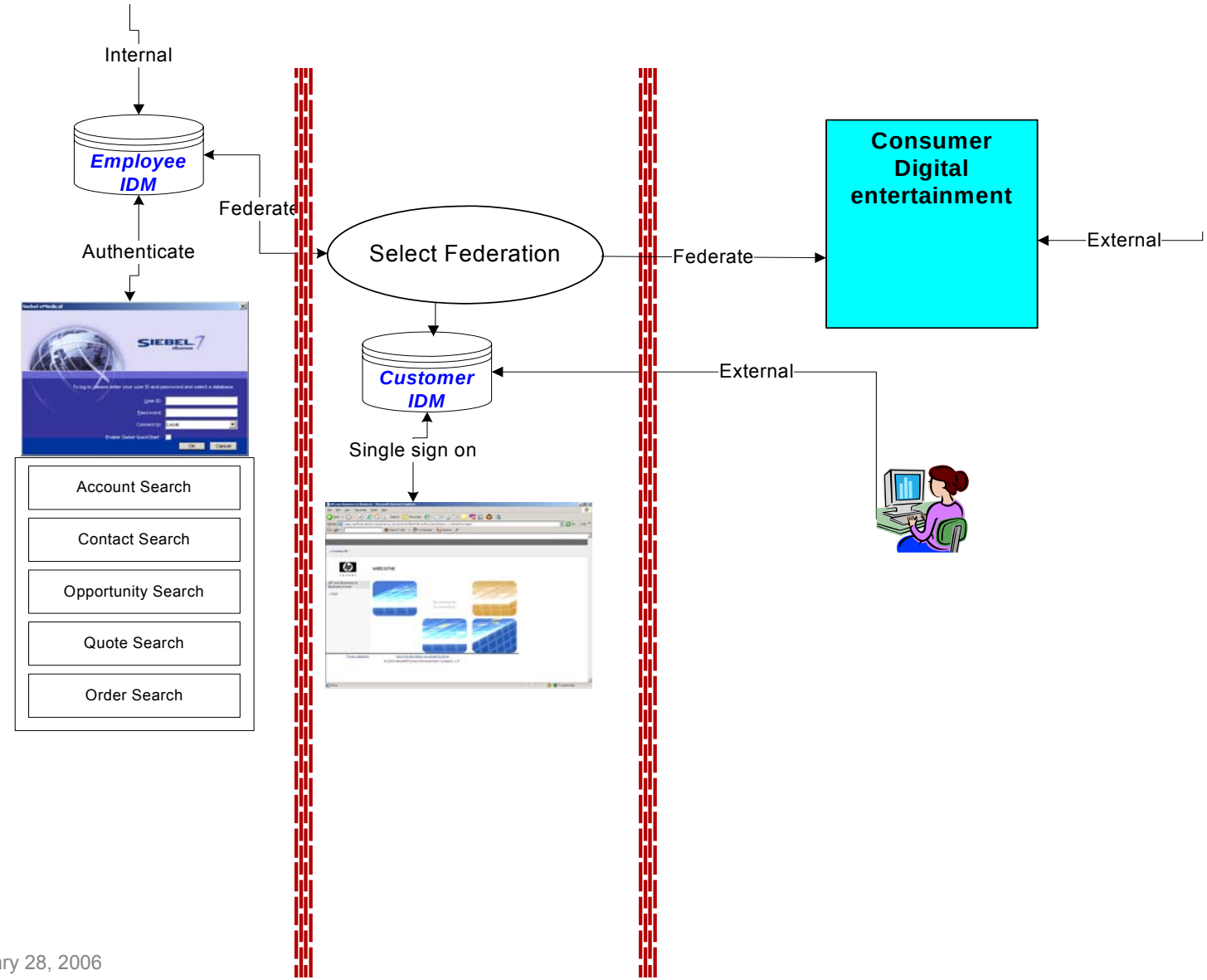
Industry Leading Implementation

- One of the largest IDM systems in the industry
  - 21MM users, growth rate of 700,000/month
- One of the highest Available systems in HP
  - SLA of 3 9's , avoids loss in revenue /minute of $2000
- Decreased cost/user by $10 to < 60 cents

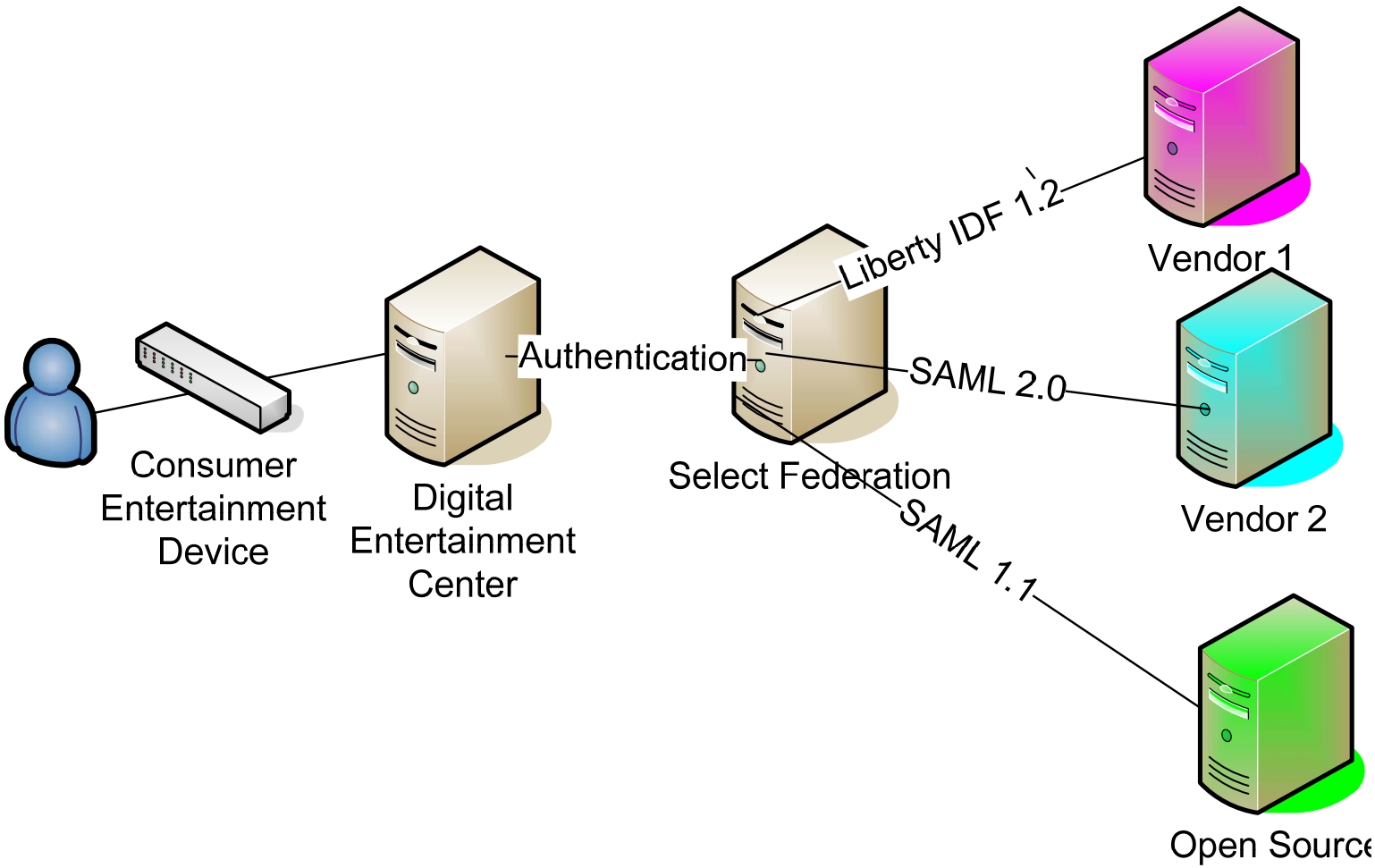
	Total Site cost of development	Cost of Authentication Dev	HPP Integration (Median)	Cost avoidance
High	$2,000,000	$400,000	$55,337	$344,663
Medium	$1,000,000	$200,000	$47,120	$152,880
Low	$750,000	$150,000	$20,025	$129,975

Federation Use Cases

Federation Use Cases



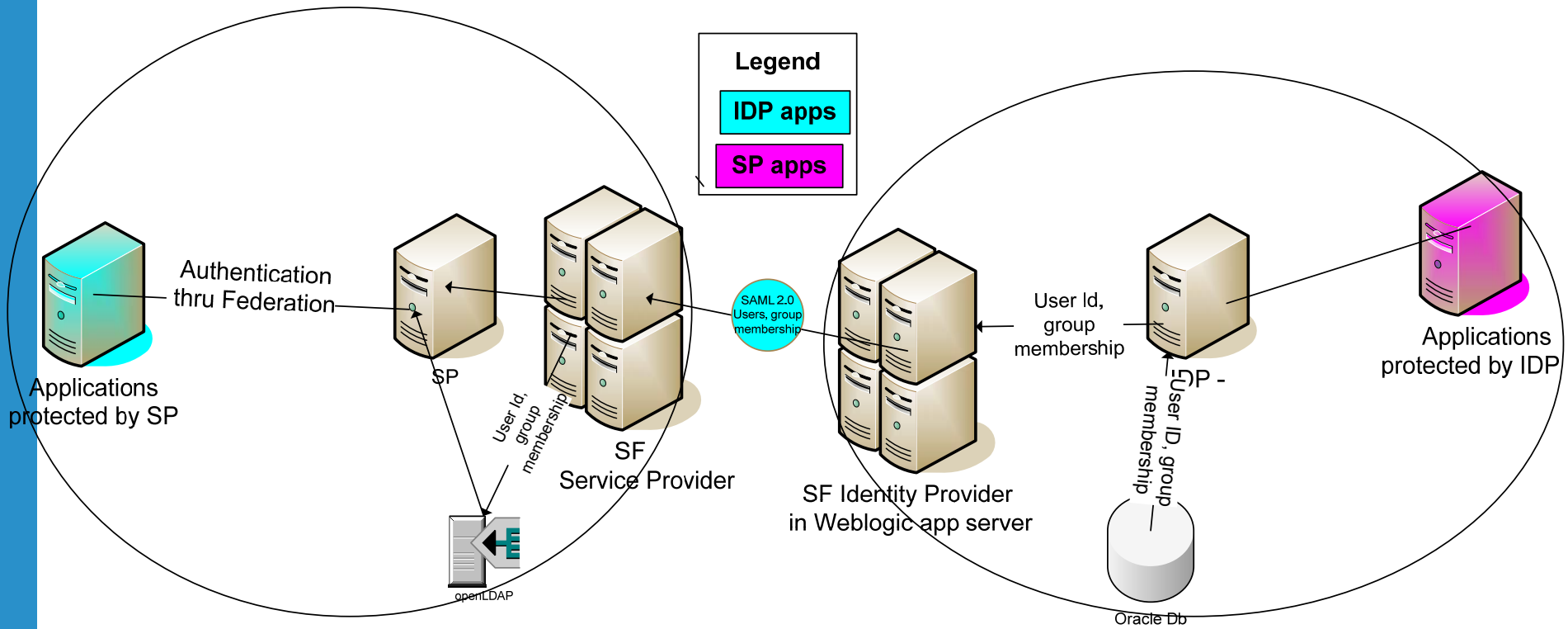
Federation architecture



Workings

- Interoperability between different vendors established
- Accounts 1:1 linked between IDP and SP
- User attributes sent in SAML 2.0 assertion
- Authorization by sending group membership through SAML assertion as attributes
- Session management like common and local logout achieved
- Privacy of user – action of federation and shared attributes

Federation Setup



Learnings

Federation strategy

- One consistent federation architecture across all 4 verticals
  - Leverage
  - Consistency of architecture
  - One face to customer

Account linking

- 1 to 1 Account linking between IDP and SP users to facilitate
  - Personalization
  - Audit ability
  - Change from many to 1 to relationship- 1 to 1 would be new design
  - If user has a pre-existing account and via a federated relationship binds there pre-existing directory entry to the federation relationship they can’t unbind it.

User parameters

- Bulk federation for existing users
- Auto discovery of new users by SP
- User centric- User in control of attributes
  - Privacy maintained for attributes sharing
  - action of being federated shown to users

Central login server

- HP as an SP uses a central login server so decisions about IDP can be made centrally

  1. Different urls for each IDP
  2. If the user's IDP cannot be determined show list of IDPs

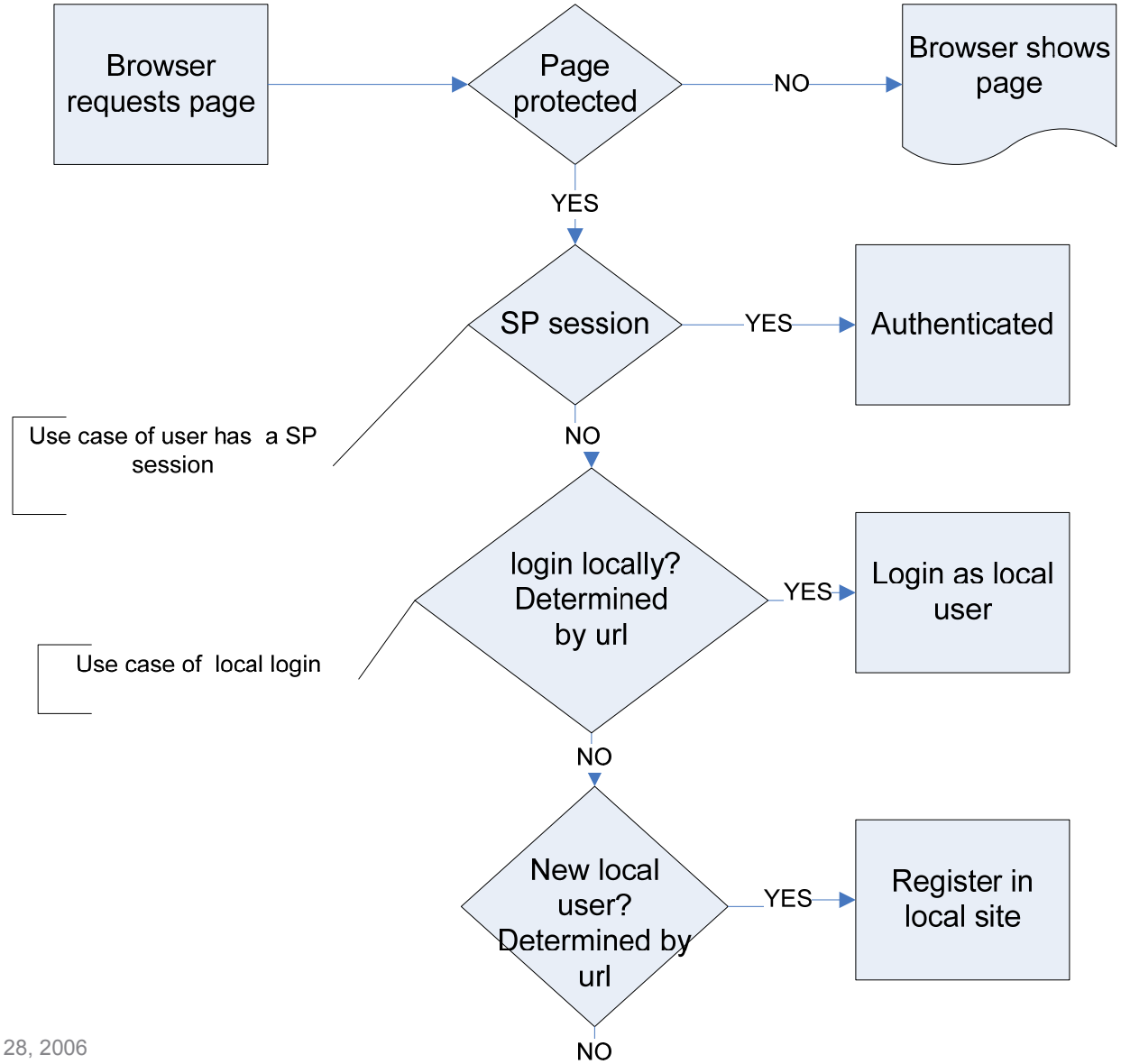
- Central login server will also serve as IDP site for HP to federate to external parties
- Central login server is more secure as it handles credentials

User Experience considerations

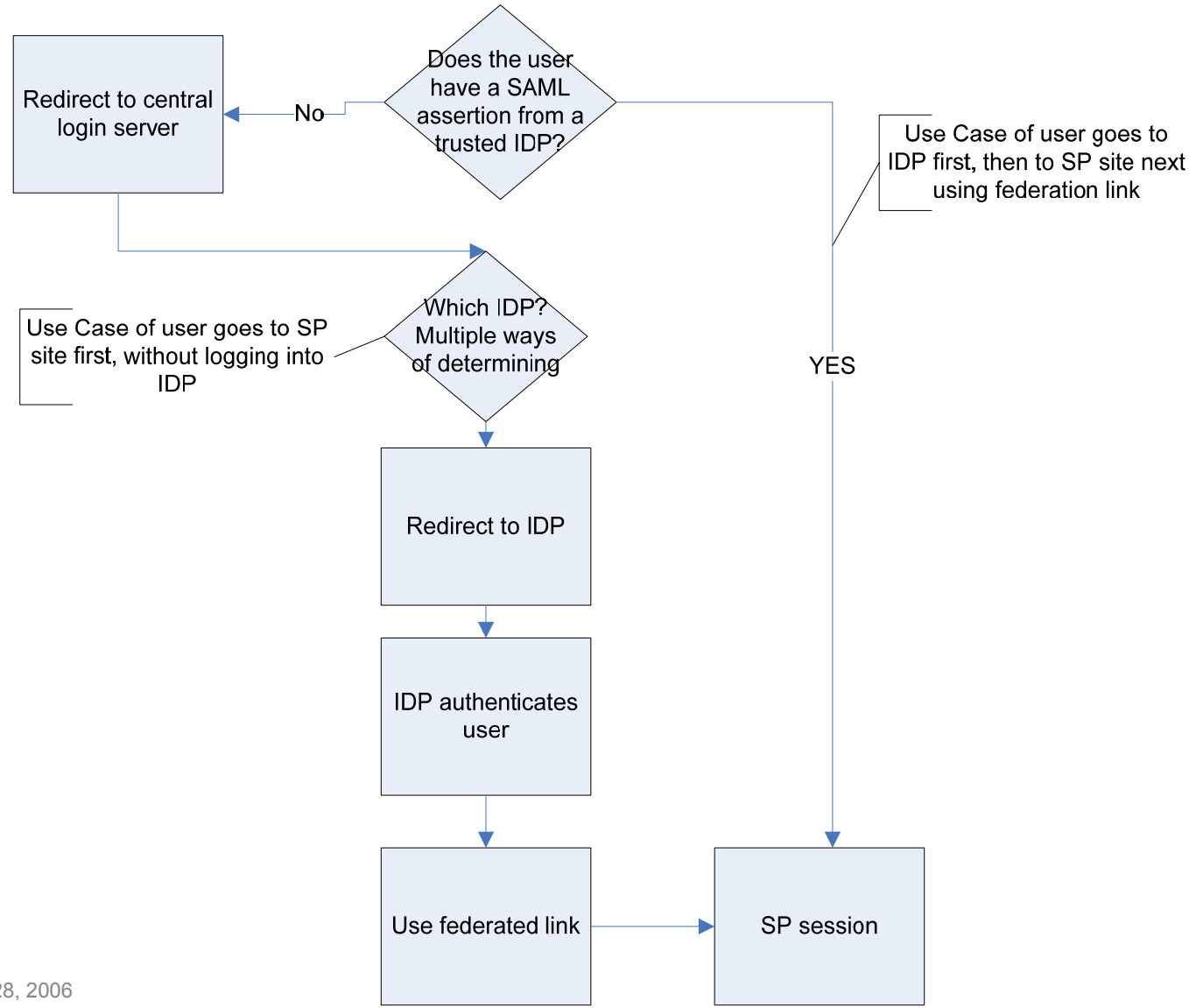
- Clarity for native login users

- Seamless login from IdP to SP
  - If user comes thru federation link from IDP
  - If user comes to SP and needs to be redirected to IDP
  - If IDP of user needs to be determined

Various flows

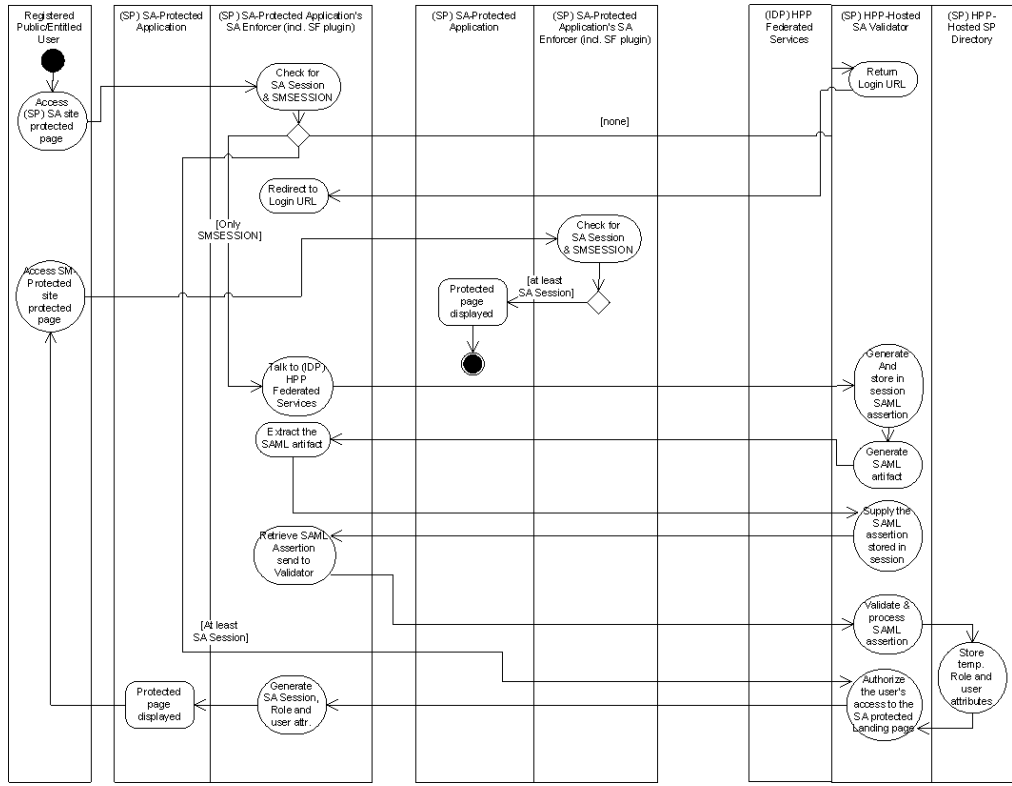


Various Flows contd.



Details of Use Cases

- Use cases can get complex
- Should analyze, document, test
- May need customized code for some use cases
- Include use cases to allow for future IDP and SP integrations



Future vision

- Move to a complete infrastructure services based architecture
  - Registration services
  - Authentication and Authorization services
  - Federation services

- Use ID-WSF standards for these services

Call to Action

- Use Learnings for your own implementations
- Liberty Alliance specification http://www.projectliberty.org/
- OASIS SAML specification

  http://www.oasis-open.org/committees/tc_home.php?wg_abbrev=security
- SF web site http://www.managementsoftware.hp.com/products/slctfed/index.html

Thank you