Choosing the Best Identity Management Technology for your Business

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Introduction

- **Complexity**

  Systems are networked and Internet-worked

  Virtualization, Outsourcing, Software as Service, ...

- **User Management**

  Did not change since 60s

  Manual, Slow, Unreliable

- **Need for a change: Identity Management**

  Better, faster and dependable User Management

  Distributable Authentication, Authorization, ...

Agenda

- **Enterprise Identity Management**

  Traditional **Enterprise** environment

- **User-Centric Identity Management**

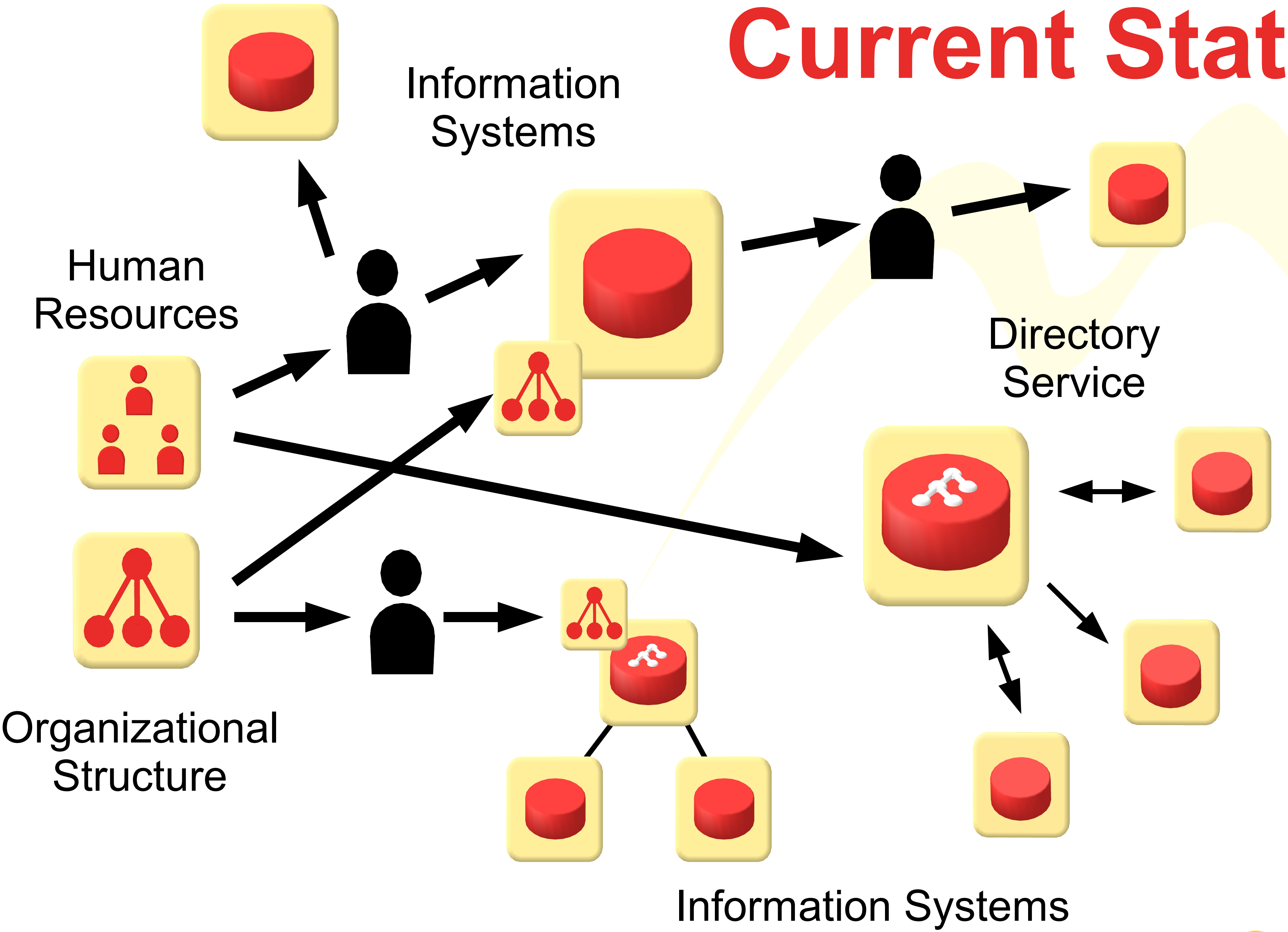
  Internet and distributed systems

- **Government Identity Management**

  Government information systems, eGovernment

Enterprise Identity Management

Current State



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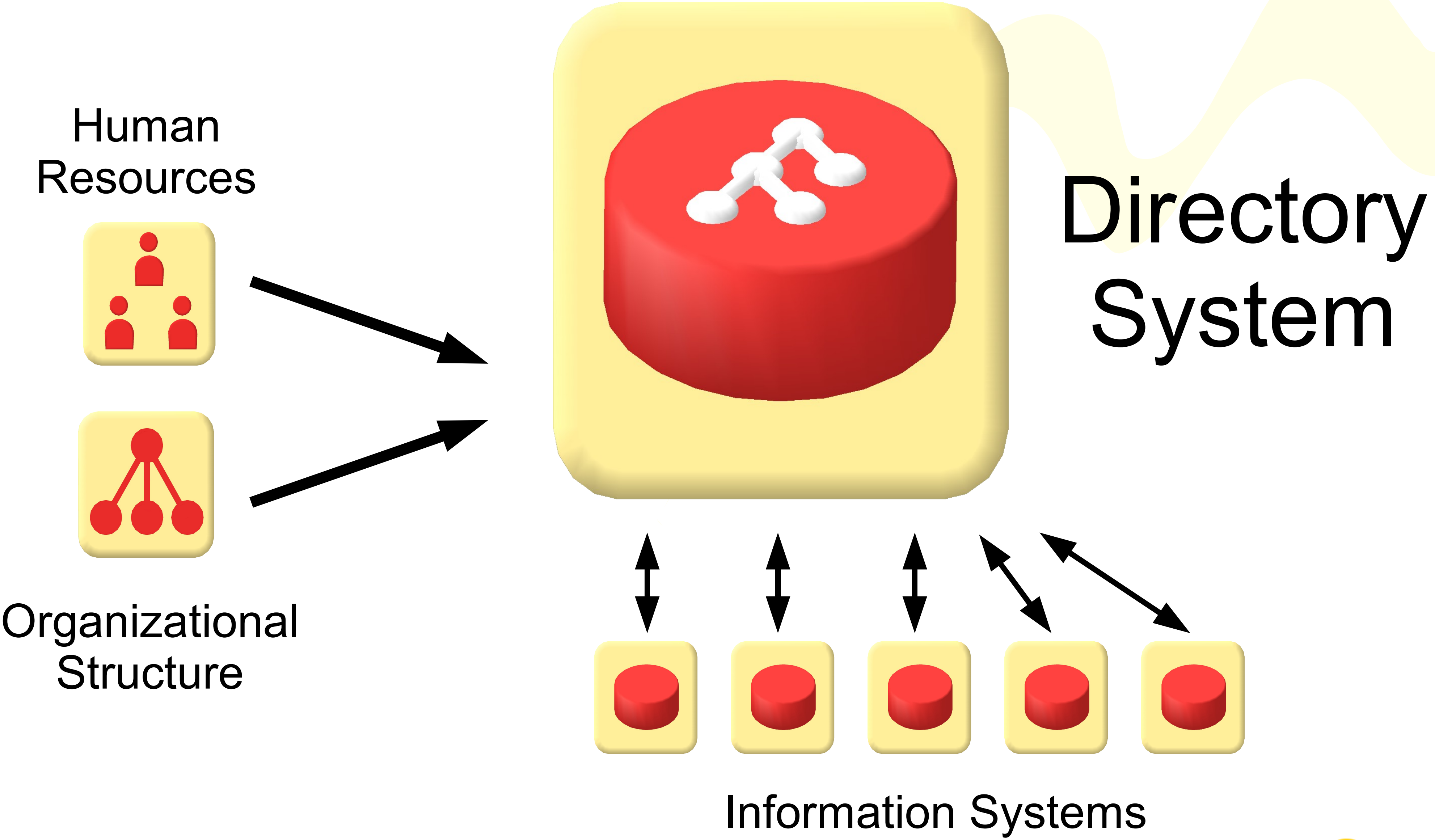
Single Directory Paradigm



Human Resources

Organizational Structure

Directory System

Information Systems

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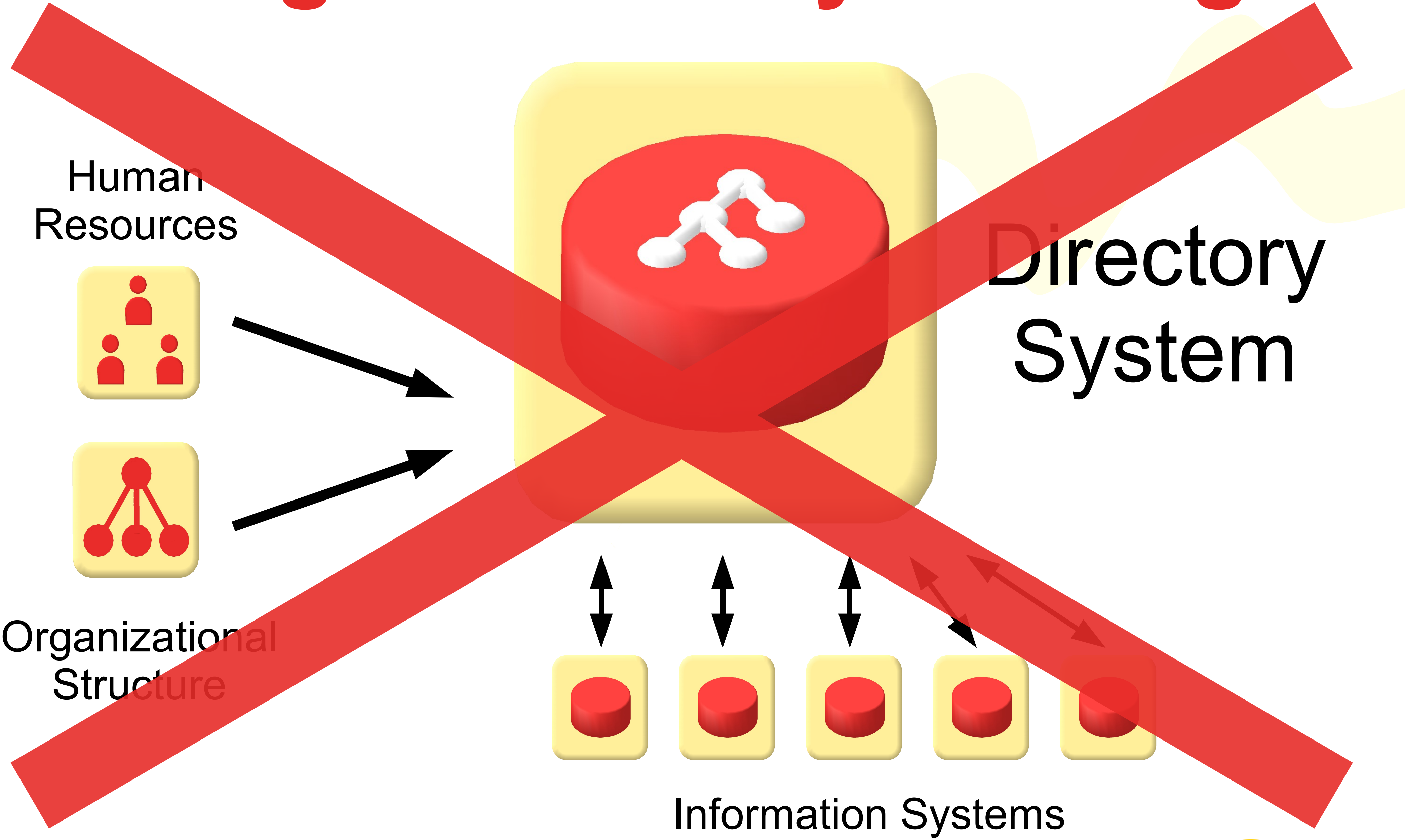
Single Directory Paradigm



Enterprise IDM Challenges

- **Multiple Sources of User Data**

  Employee No., Tel. Number, E-Mail Address, ...

  Organizational Structure: Functional, Project, Effective

- **Stateful Services**

  Requirement to keep service state: Home Directrories, Mailboxes, historical records, ...

- **Inconsistent Policies**

  Different identifiers, Different permissions and roles, ...

- **Re-provisiong na De-provisioning**

  Name changes (e.g. marriage)

  Disposing of unused accounts

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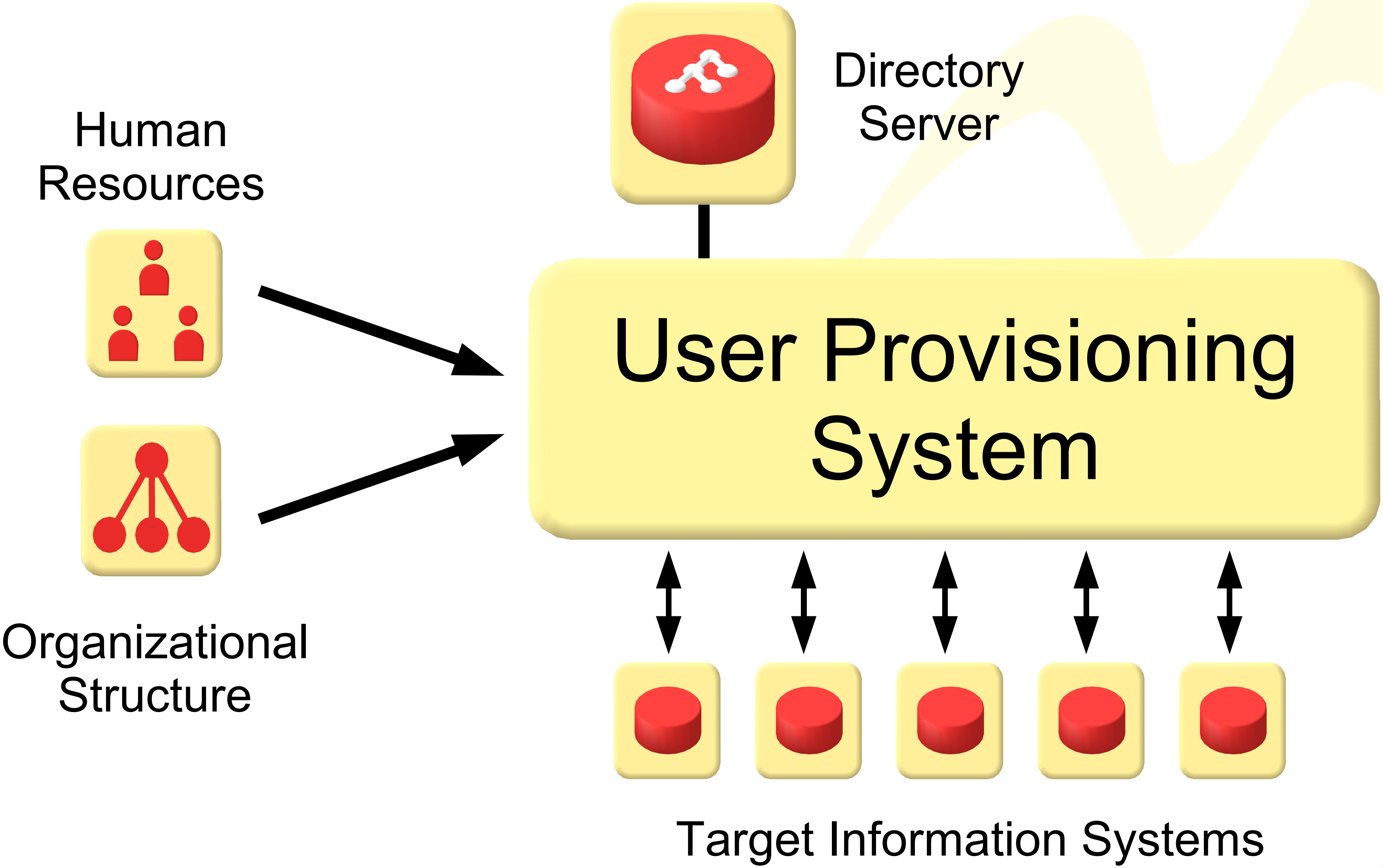
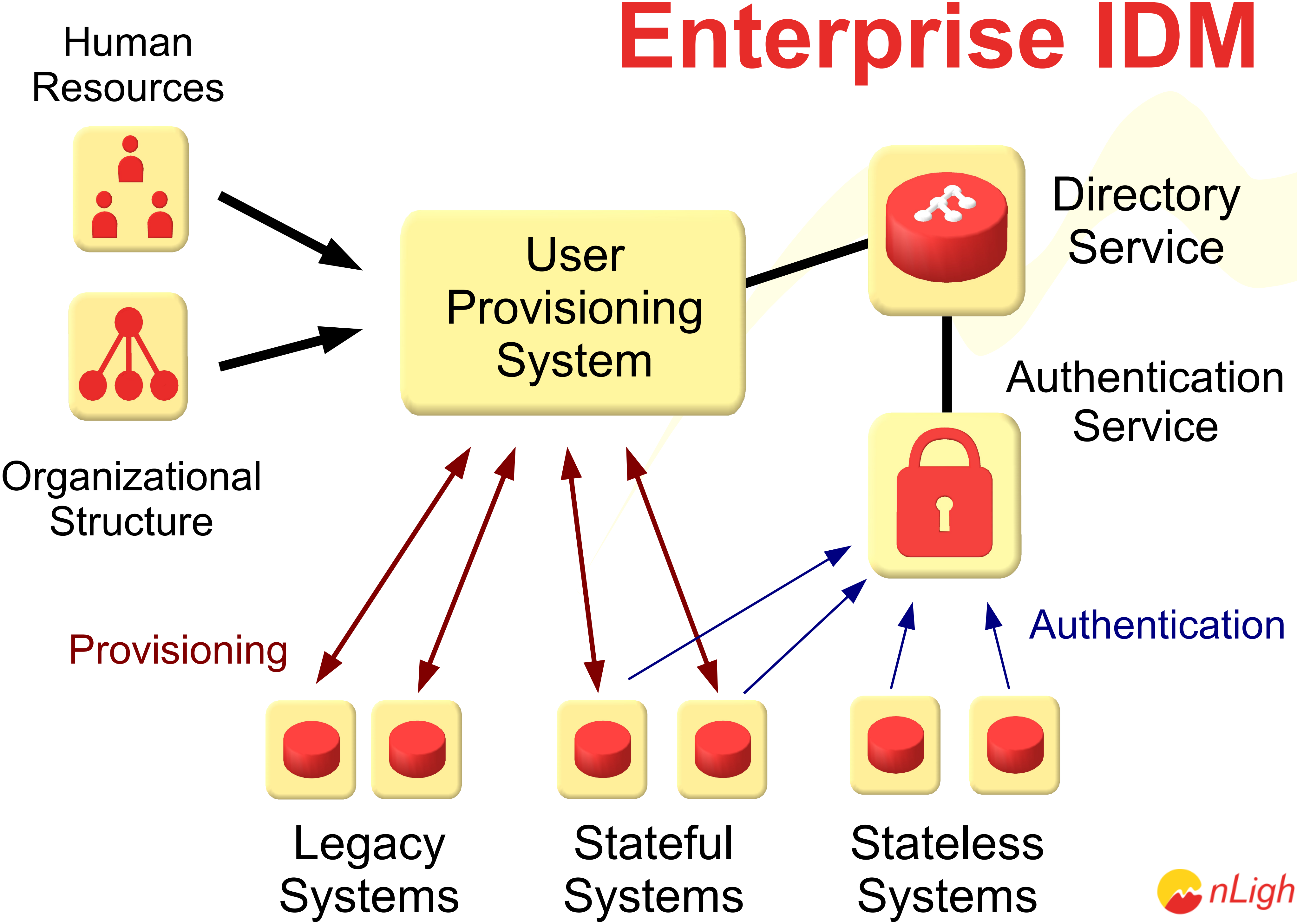
User Provisioning



Enterprise IDM



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Enterprise IDM Solution

- **Provisioning System**

  Manages state of the information systems

- **Directory Services**

  Provide common repository of user information

- **Authentication Services**

  Maintain user session, provide Single Sign-On, ...

- **Future: Service Oriented Architecture**

  Identity Services

User-Centric Identity Management

Identity Management for the Internet

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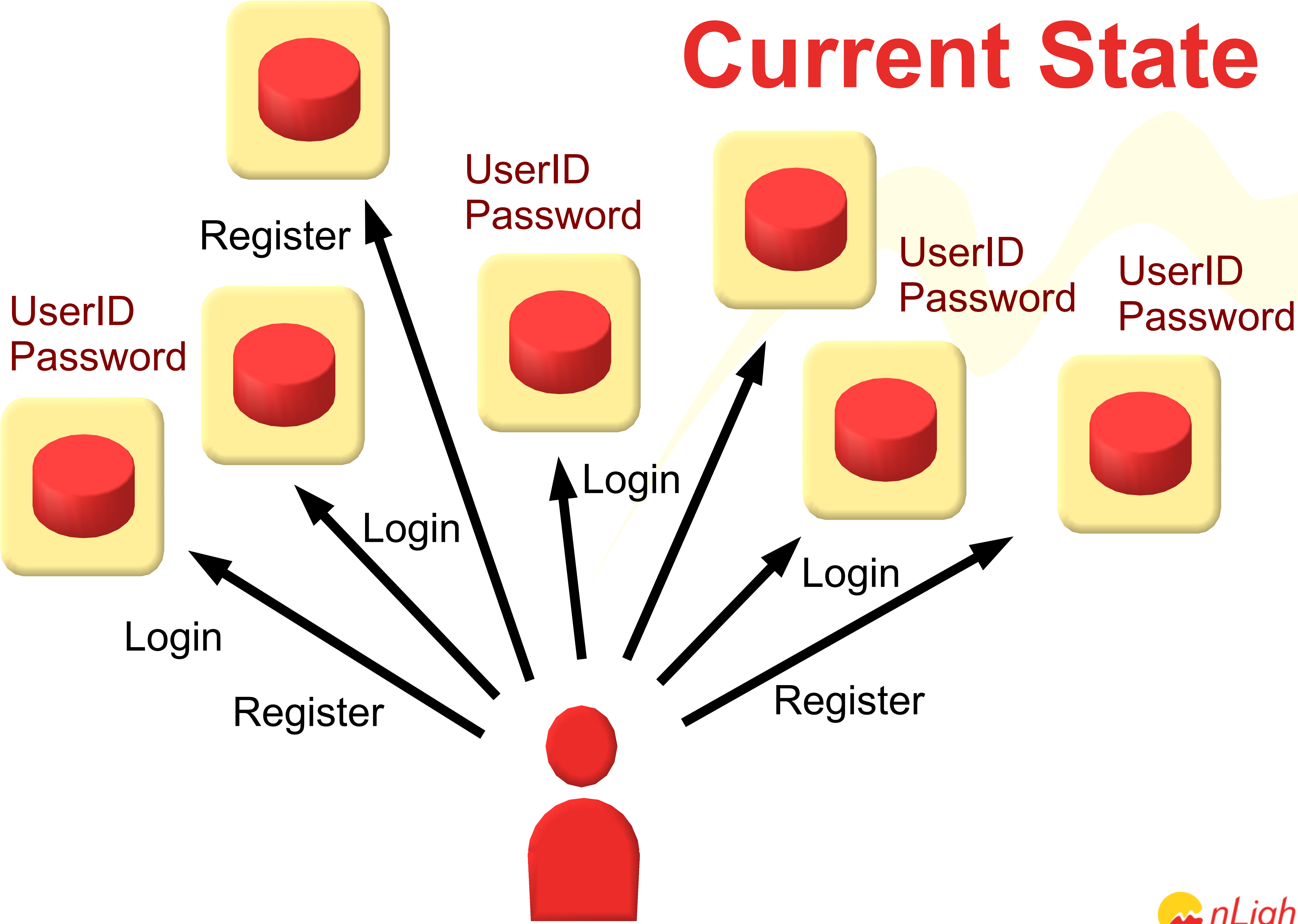
Current State



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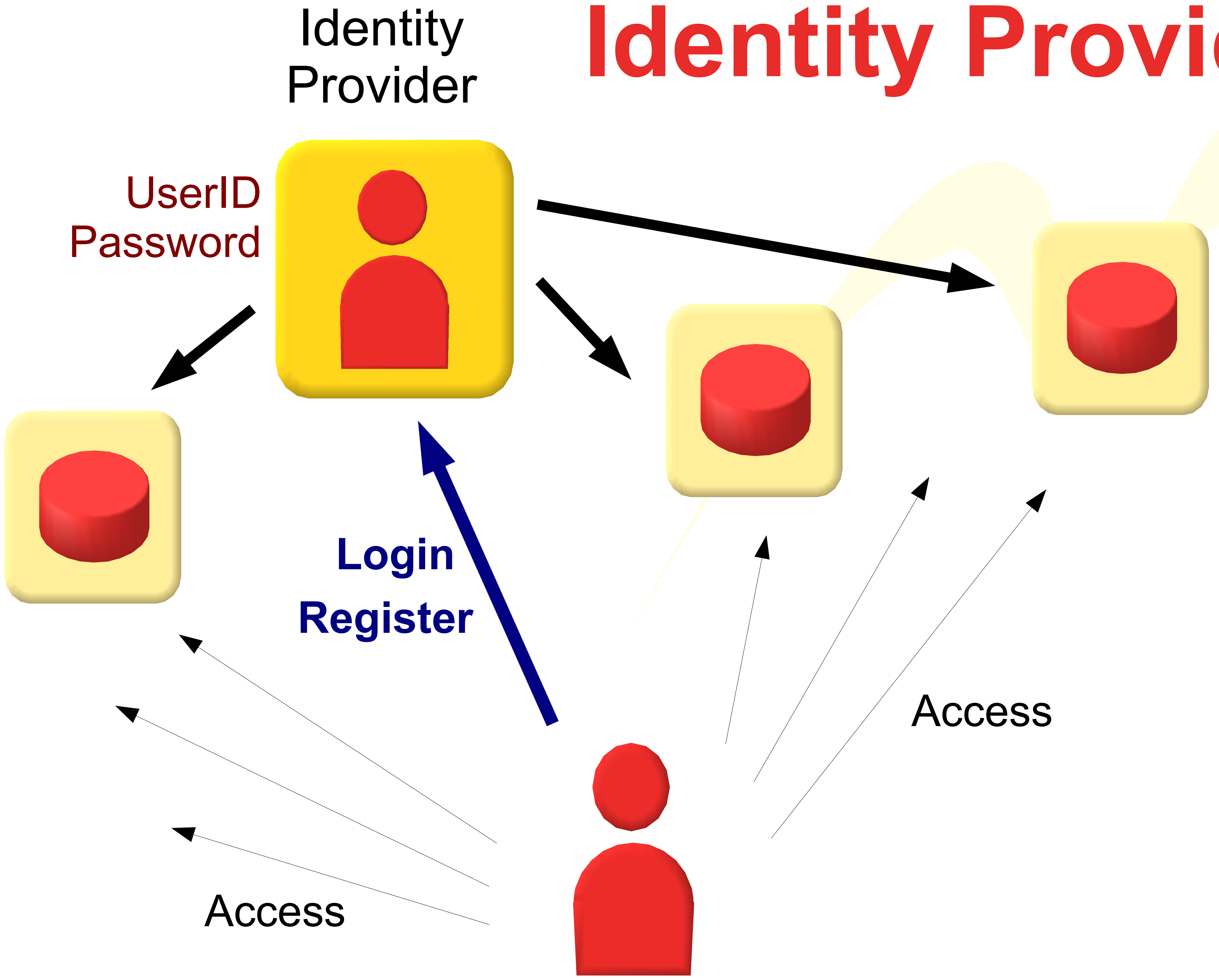
Identity Provider



User-Centric Identity

- **Simplifies Management of Personal Data**

  Keeping track of what data were submitted

- **Enabler for “Web 3.0” Applications**

  Distributed Social Networks

  Syndicating “Software as Service” Applications

- **Requires Trust**

  Current Identity Services require some level of trust to Identity Provider or other network components.

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Government Identity Management

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Government Digital Identity

- **X.509: Traditional Method**

  Expensive, cumbersome and inflexible

  Fixed identifier in certificate allows tracing user

  Government certificates usable only for G2C

  Insecure on common workstations

- **Alternative?**

  Not really

- **What to do?**

  Use Enterprise methods to clean up identity stores

  Invest in research

Common Identity Problems

- **Global Identifiers**
  - SSN, E-Mail Address, URLs, ...
  - May cause loss of privacy
- **Insecure Workstations**
  - Malware can compromise most PCs
  - If workstation cannot be trusted, nothing can be secure.
- **Honeypot Effect**
  - Centralizing of personal data attracts thieves.
  - Both server-side and client-side

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Conclusion

- **Enterprise Identity Management**
  - Effective, real value
  - Will be needed for next generation architectures
- **User-Centric Identity**
  - Under heavy development, may be usable in near future
  - Will enable “Web 3.0” applications
- **Government Identity**
  - X.509 is not really effective
  - Further research is needed

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Thank You

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Extra Slides

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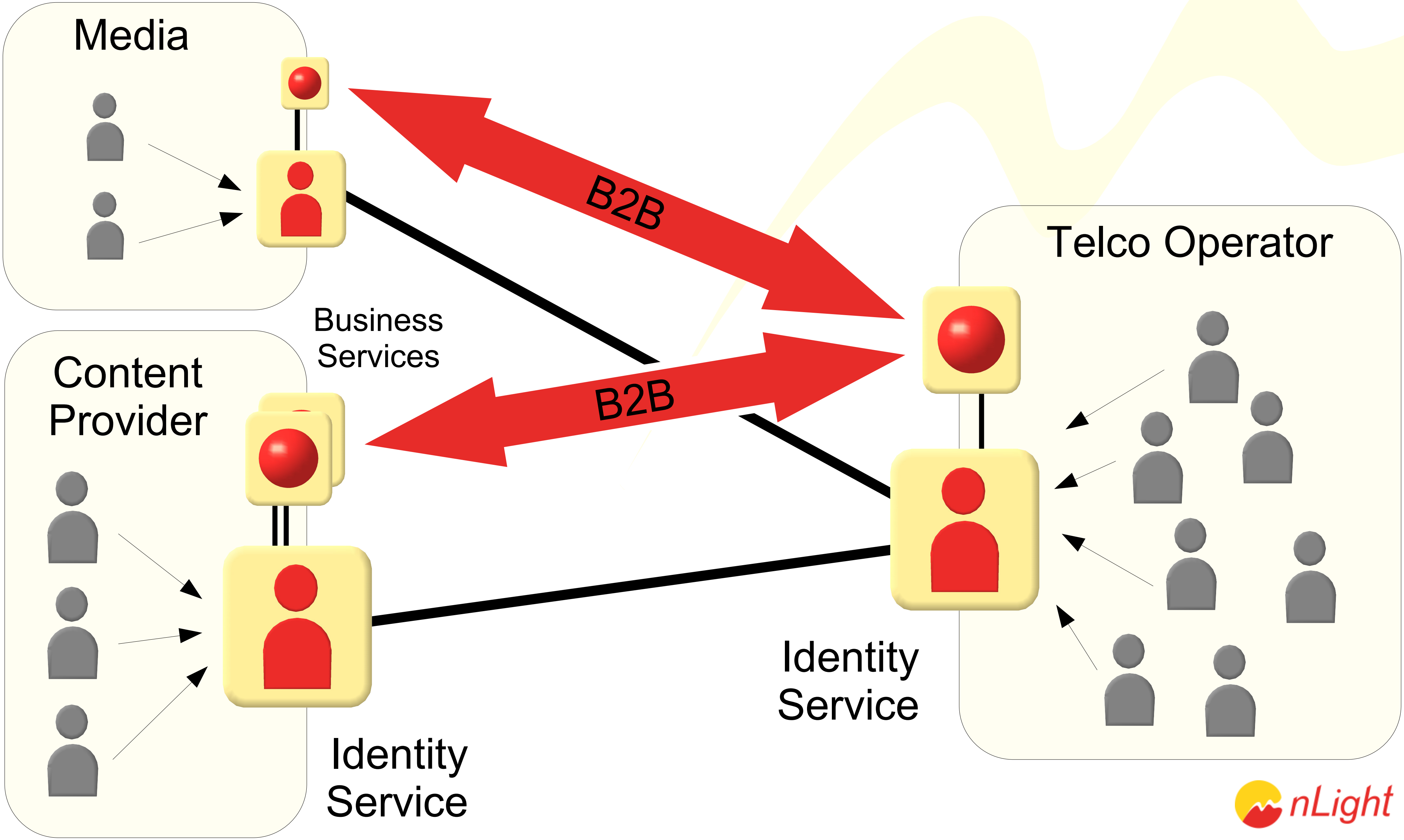
Cross-Domain Identity



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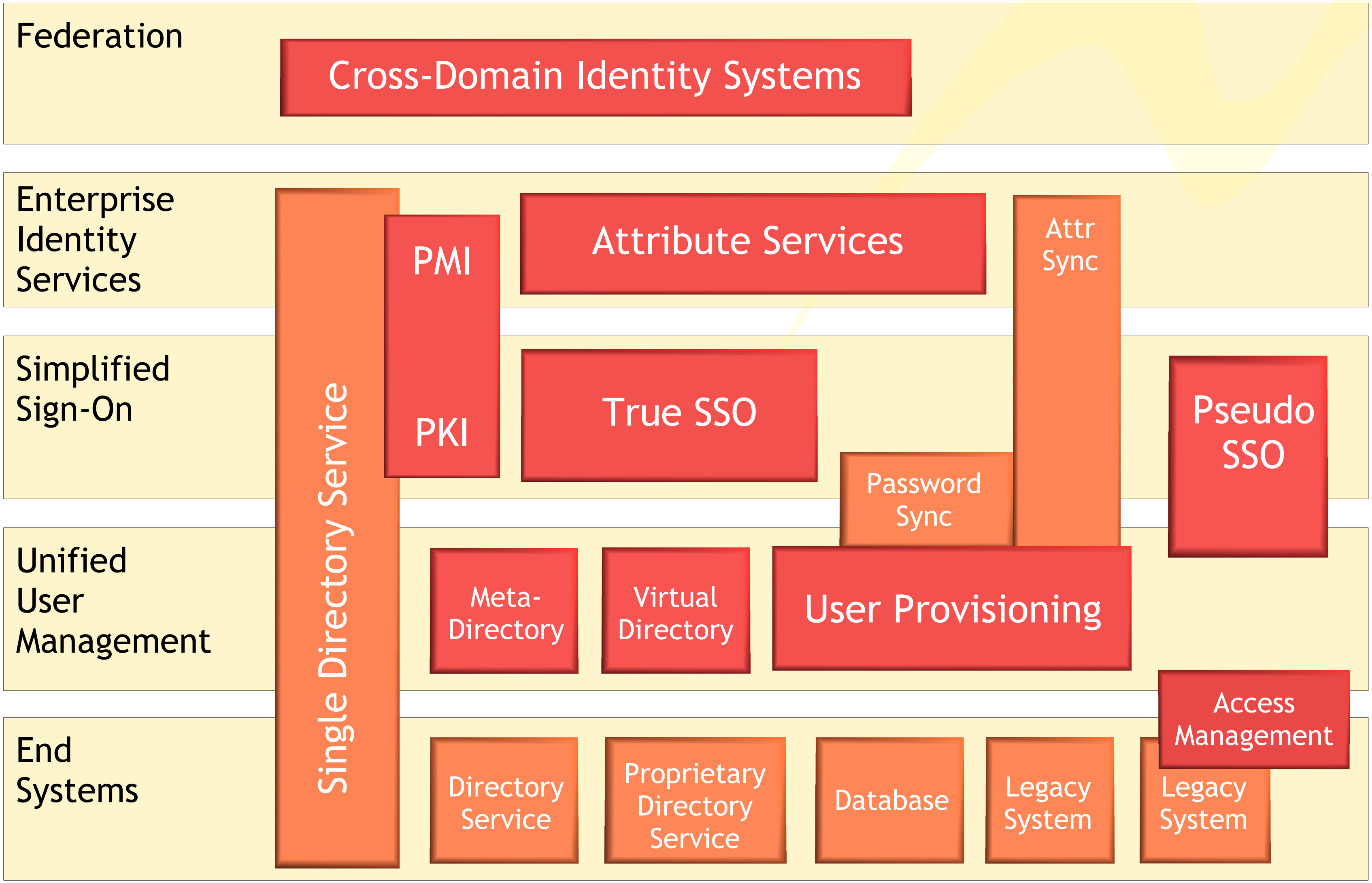
Identity Management Technologies



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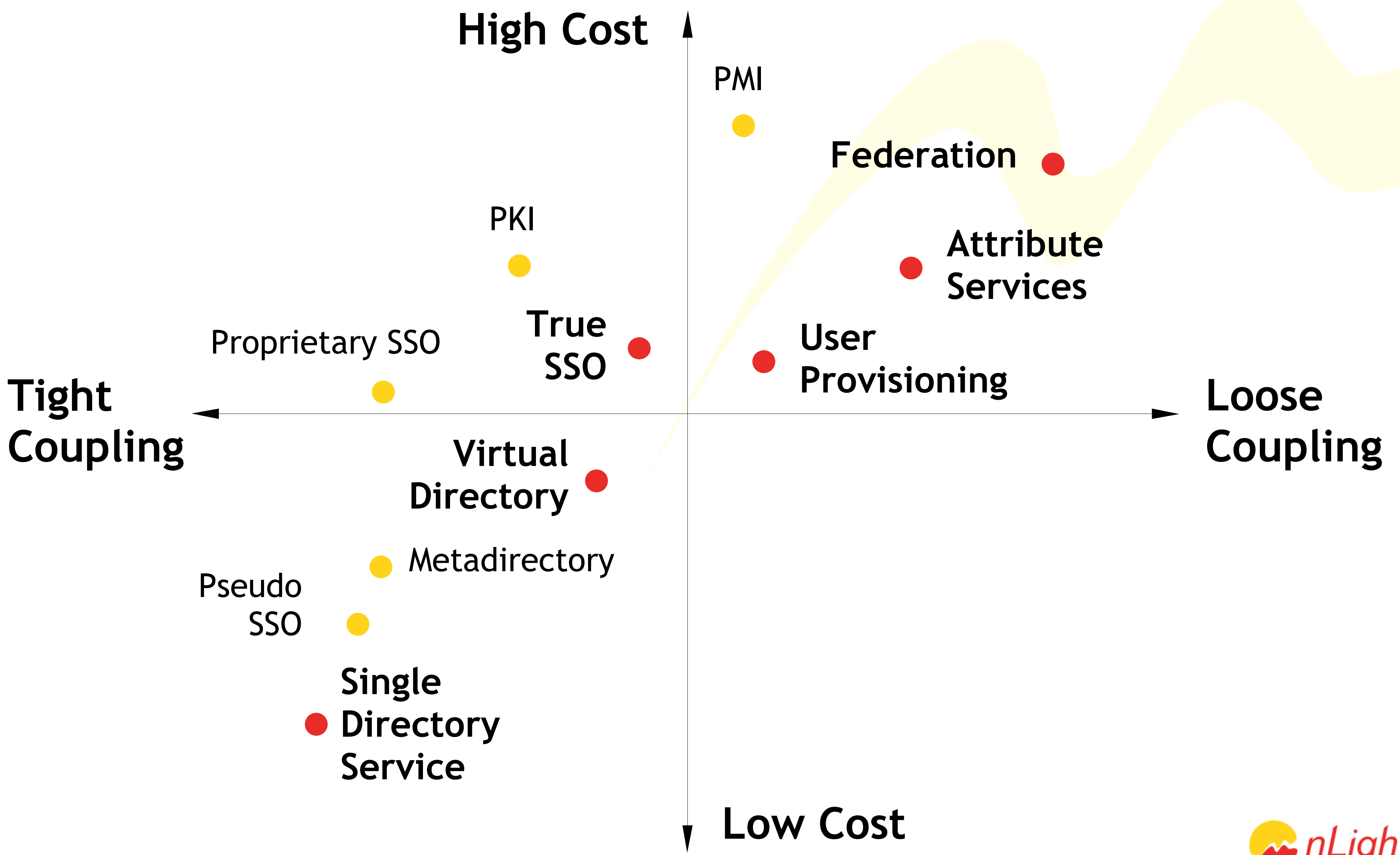
IDM Technolgies Compared


High Cost
PMI
Federation
PKI
Attribute Services
True SSO
Proprietary SSO
User Provisioning
Tight Coupling
Loose Coupling
Virtual Directory
Metadirectory
Pseudo SSO
Single Directory Service
Low Cost