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Access management for online resources

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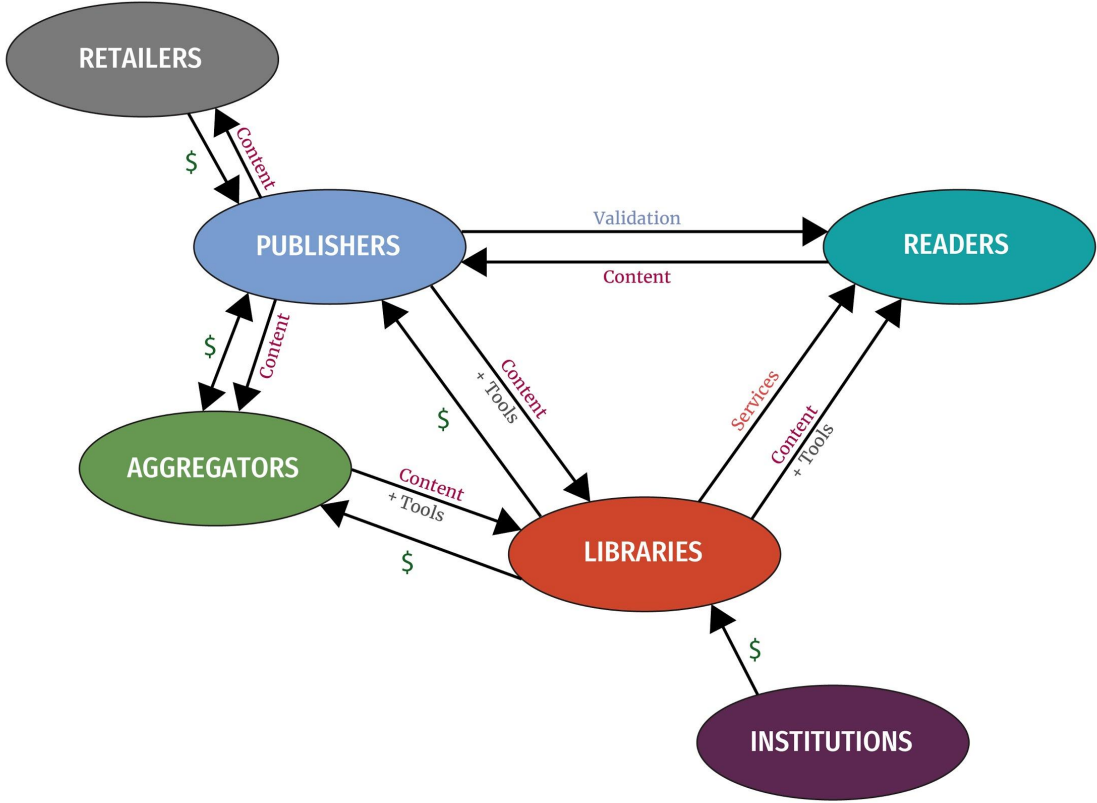
June 6, 2022

Online resources and the emergence of digital libraries

- Free with print – print and electronic – online only
- Need of usage statistics licenses - value for money
- Access management technologies: give access to the right content to the right people at the right time
- New skills required for librarians
- New paradigm of libraries and content providers relationship
- The “invisible” user



Scholarly online content ecosystem

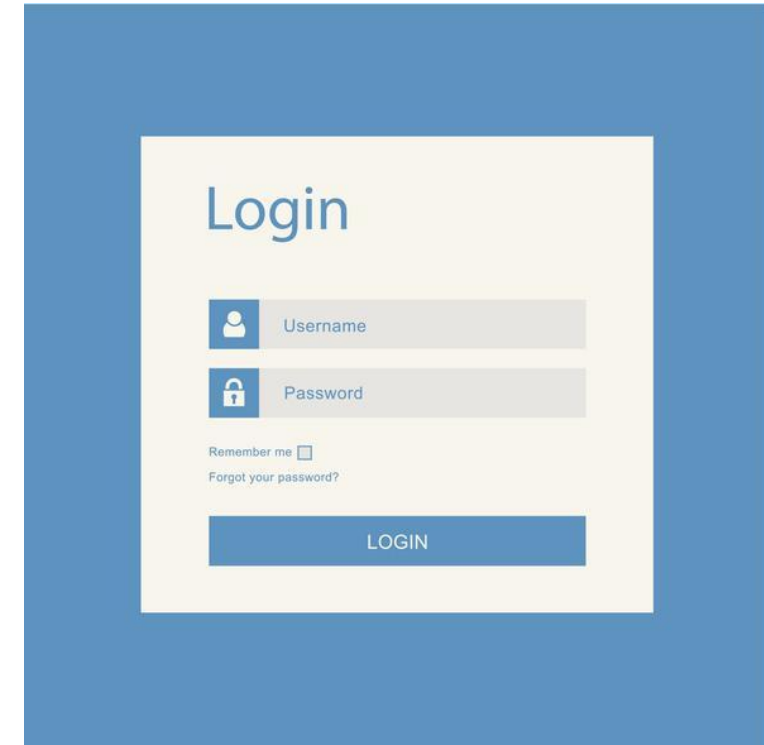


The Scholarly Publishing Ecosystem, in: *An Open Approach to Scholarly Reading and Knowledge Management* by The Rebus Foundation, McGuire, H.

Access management

Login credentials

- Time consuming – password administration
- The weakest authentication solution (rely on humans; susceptible to informatic attacks)
- Management of exact number of licensed users
- Allow to know about the users - identification, profiles



Login

Username

Password

Remember me

[Forgot your password?](#)

LOGIN

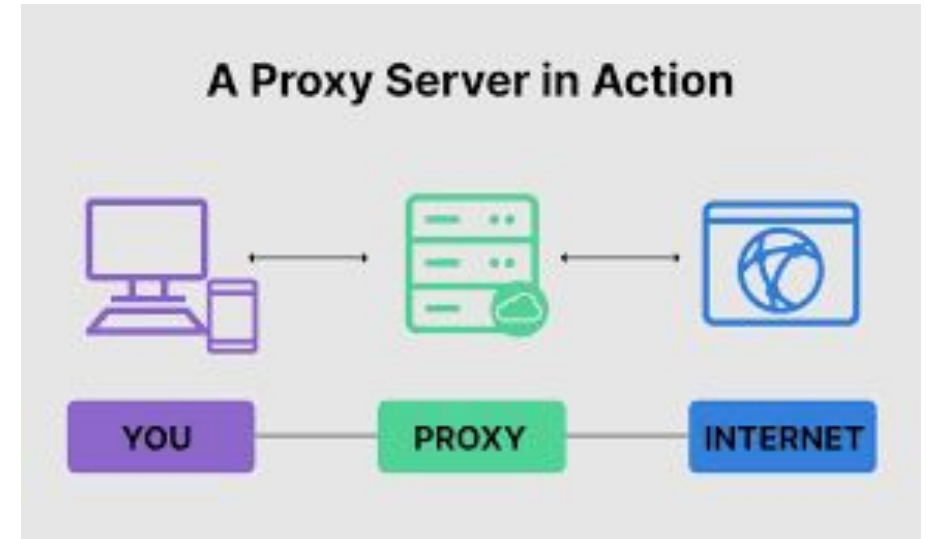
Internet protocol address (IP)

- 48 years old – linked to the origin of the internet
- Impose online static boundaries to the usage – in campus
- Allow access to different type of users: walk-in and visitors
- Withdraw the need of login credentials and its administration
- Does not authenticate but authorize
- Time consuming administration



Proxy servers

- For access beyond the IP online boundaries
- Proxy servers – receive the request from a user (“unauthorized IP address”) and send it to the content provider from “an authorized IP address” – the content provider will send the content to the proxy server – it will forward it to the user
- Dense technology and need of IT skills for implementation

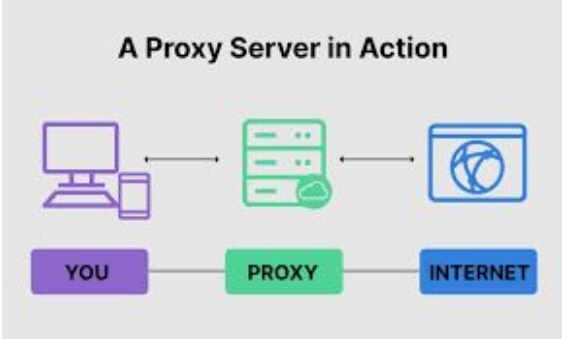
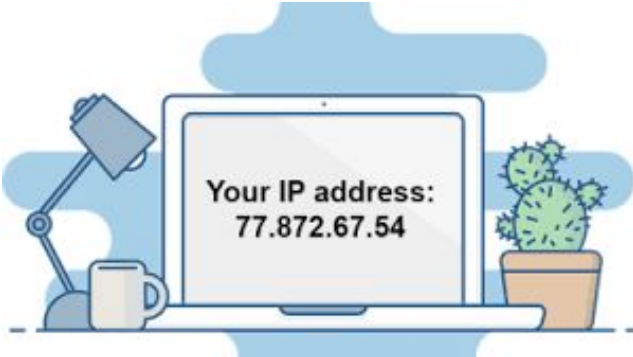
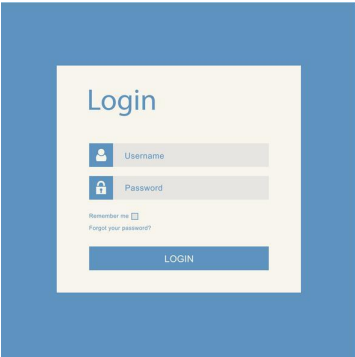


Virtual Private Networks (VPN)

- Your computer looks and functions as if it were on campus
- Insecure if used in public networks
- Requires software installation and updates
- Slow down experience even using sites like Google
- No user information

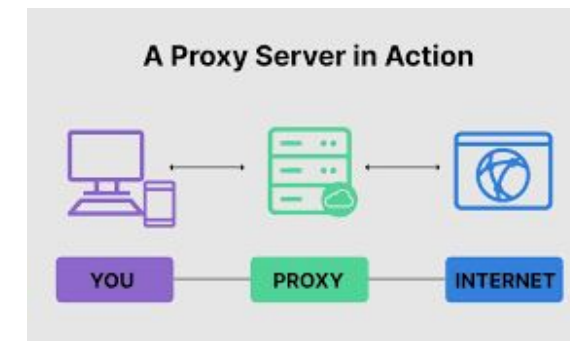


To continue:



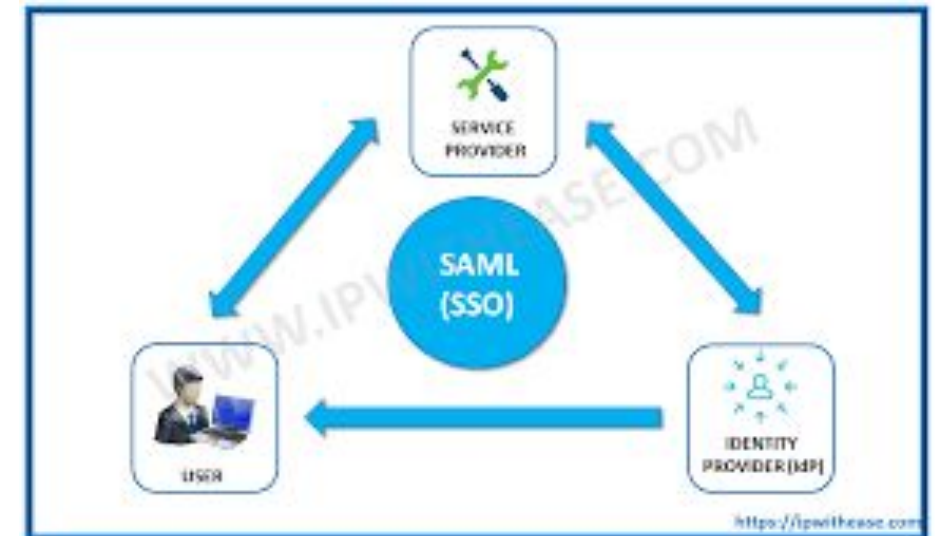
IP- Proxy

- Good for anonymity
- Difficult to login and lengthy navigation (6+ steps)
- Personalization is not possible
- Run out of IP addresses: IPv4 - 92.232.189.23 now IPv6 2001:0db8:85a3:0000:0000:8a2e:0370:7334
- Cases of piracy and inflated usage
- Maintenance is time consuming
- Difficulty to restrict access to resources within the campus (for example walk-in users)



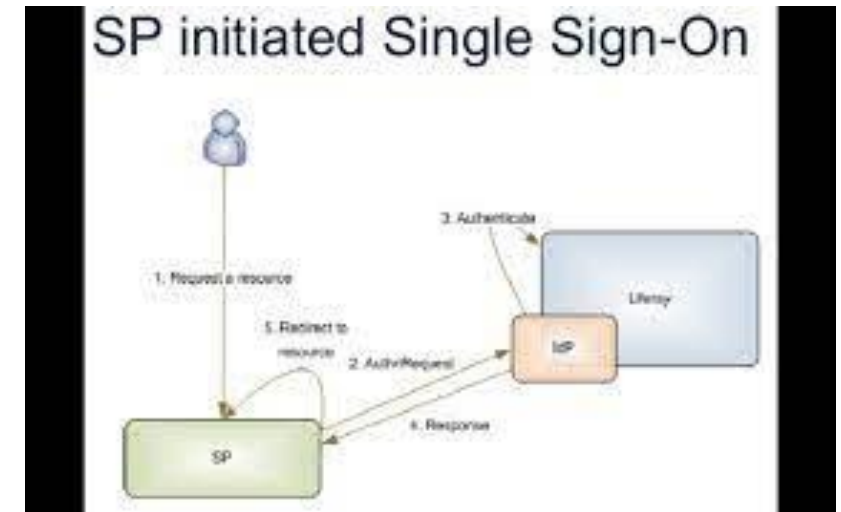
SAML

- Started in 2002 – version 1 of the Security Assertion Markup Language (SAML)
- XML based language
- It is about authentication – based on the rights to access of a user. SAML certify their identity
- Fast transactions – split of a second
- Requires connection with a list of library users and an exchange of attributes between the institution and the content provider platform
- Made possible to get usage data about the user
- Made possible to establish single sign-on (SSO)
- Identity federations



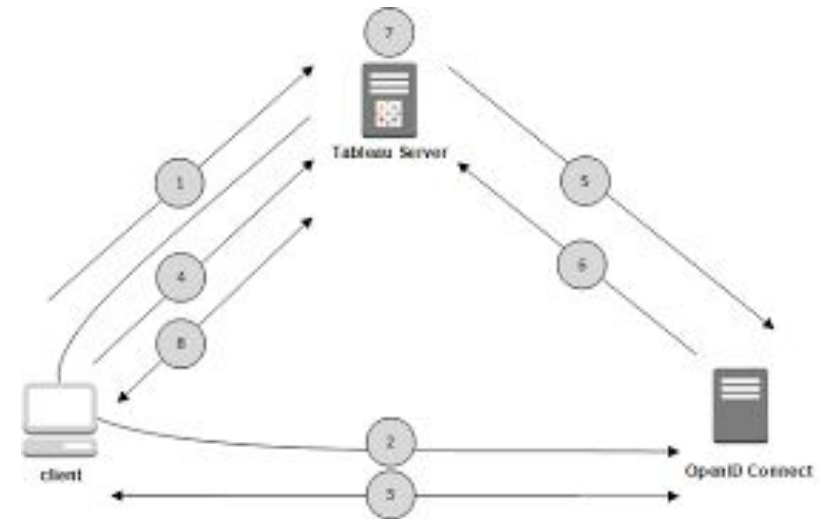
Shibboleth

- Based in SAML technology
- Open source software – sponsors and implementors
- It has different software components – all together make up a Federate Identity Management
- Allows direct login to a limited number of library resources off-campus
- Usually used along other access solutions as proxy

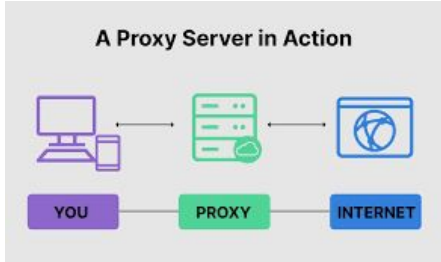
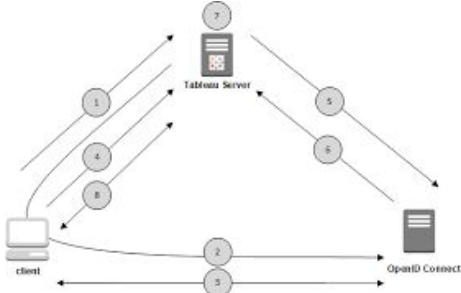
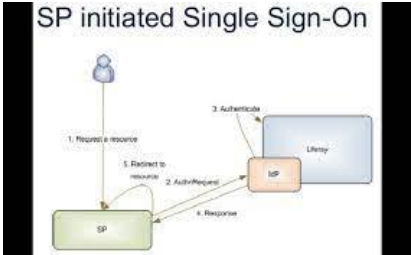
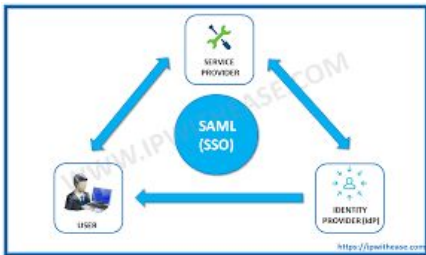
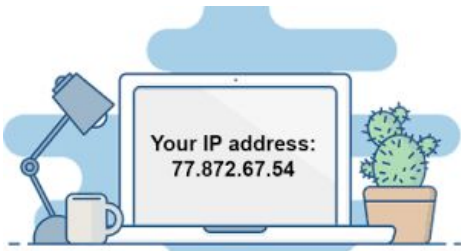
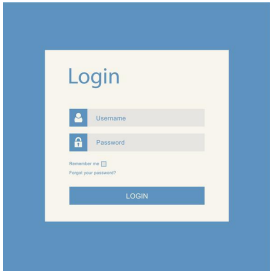


OpenID Connect

- Extension of OAuth 2.0 (Open Authentication protocol)
- Based on REST/JSON (lighter)
- Use 2 tokens : access token ; ID token – enables an app to get the identity without requiring a call to the application to the identity provider – uses an authorization server
- Do not replace SAML but work together for a robust authentication/authorization solution



Access management



User journey

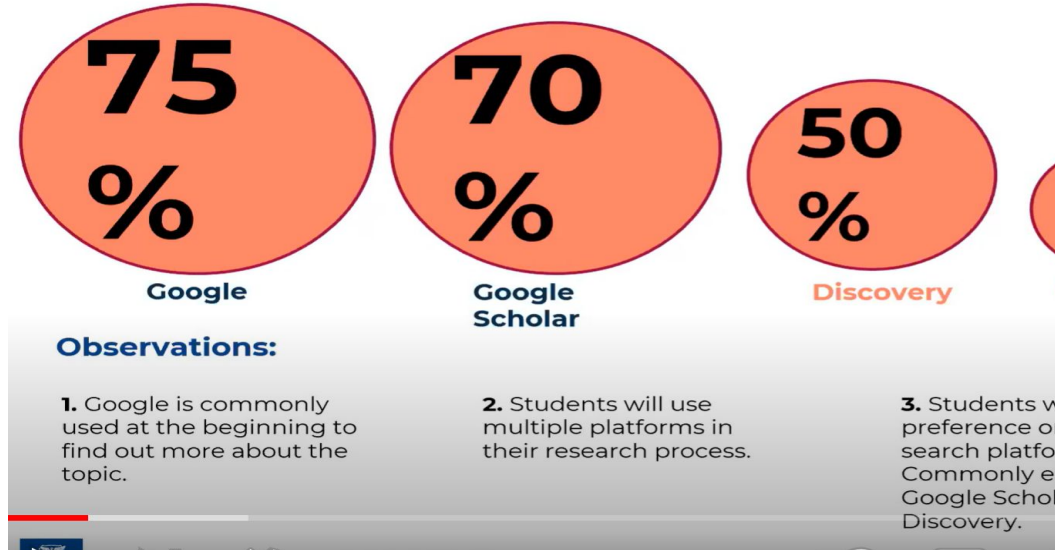


Where the user journey starts?

- ✓ A&Is
- ✓ Google Scholar
- ✓ Social and Professional networking sites
- ✓ Library catalogues and services
- ✓ top resources per subject field

Our focus on User Experience

STUDENTS USE =



“Users have kind of pattern...they start in Google to get an idea of the keywords they will need and the scale of the queries they may want to do and then, they go to more refine resources like discovery tools, library catalogues, google scholar or specific disciplines databases”

Caroline Gauld from the University of Melbourne (<https://www.youtube.com/watch?v=SXCi515julE>)

“People discover articles through search around 45% of the time. 55% of the time they are doing something else. However, discovery via search has increased over time”

How Readers Discover Content in Scholarly Publications 2021,, Gardner, T. & al. Renew Consultants

«Discovery is not as simple as ‘novice’ vs. ‘expert’(...) A professor in one discipline may, for example, use Wikipedia or basic Google searches to familiarize themselves with a new topic just as a new student might»

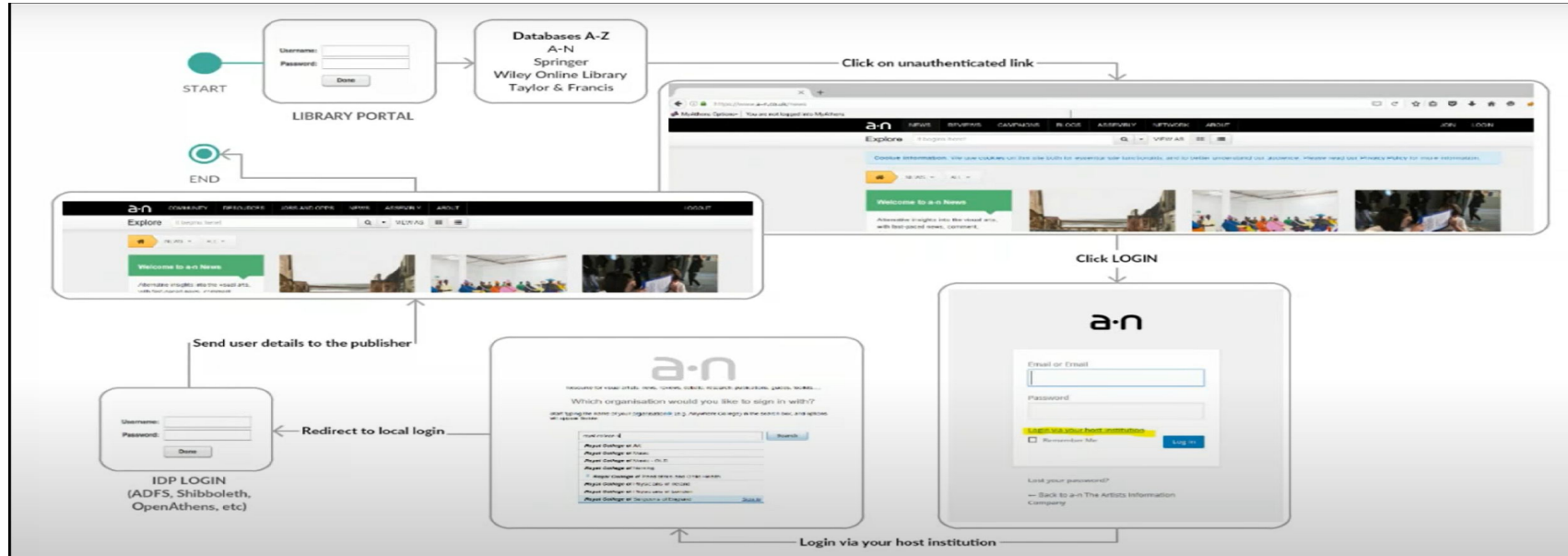
Resource Discovery@ The University of Oxford, Madsen, C. & al., Athenaeum21 Consulting Research

User journey: links

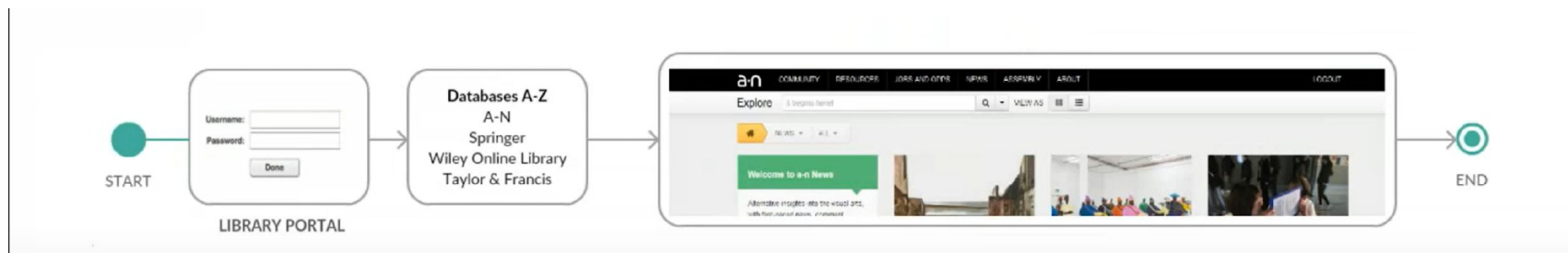
- Configured (with a prefix – that includes authentication service)
- Personalize user experience
- Seamless access: Publishers and libraries



User journey: links



6 steps user journey



SSO user journey



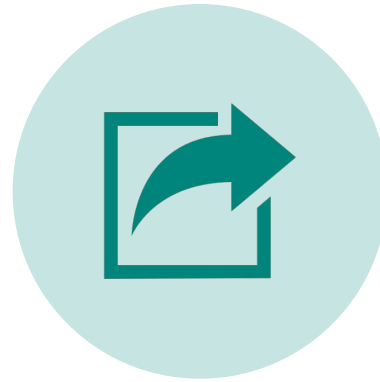
Usage statistics



Usage statistics



Content: COUNTER
Code of Practice



Transfers: logs



Users: directory attributes

Conclusions



Statistics and insights



Access to the right content
at the right time



User experience and
engagement

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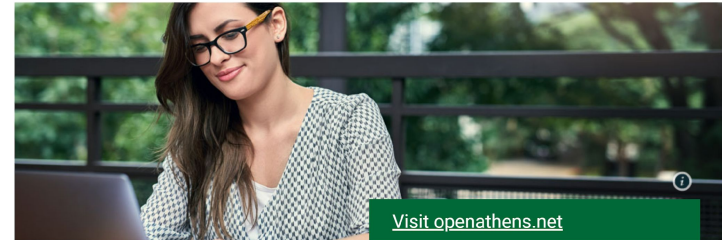
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Thank you

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