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Technology and the Cloud

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SEFLIN 2013

Technology and the Cloud

Daniel Hendrix

Content

What is it?

History and Background

What Drives the New Model

Big Names in Cloud Computing

Cloud Added Value

Technology and the Cloud

Libraries, Why We Should Care

What is it?

- "There's no question that the Cloud is real"
 - Joe Weinman, presenting at IEEE
- Not a 'thing'
- It is a model
 - Maintaining local servers and equipment
 - Avoid hardware failures
 - Mass software installations/upgrades
 - Compatibility issues
- Goals
 - Simplify processes
 - Save time and money
- Libraries: Community, data and technology

History and Background

Web 1.0 // The Read Web

Content created by professionals

Web 2.0 // The Read/Write Web

Content created by all—the internet became interactive

Web 3.0 // The Living Web

Data goes from static to dynamic—information finds the user

A Carrot and a Stick



Cloud Education Incentive

1. IBM

- In 2007, IBM begins “Blue Cloud” initiative
- In 2008, IBM Partners with Google

2. Universities get Involved

- IBM/Google Curriculum/Support/Software
- IBM/Google Gifts Three New Data Centers

The Cloud

The problem is that (as with Web 2.0) everyone seems to have a different definition.

SaaS – Software as a Service



PaaS – Platform as a Service

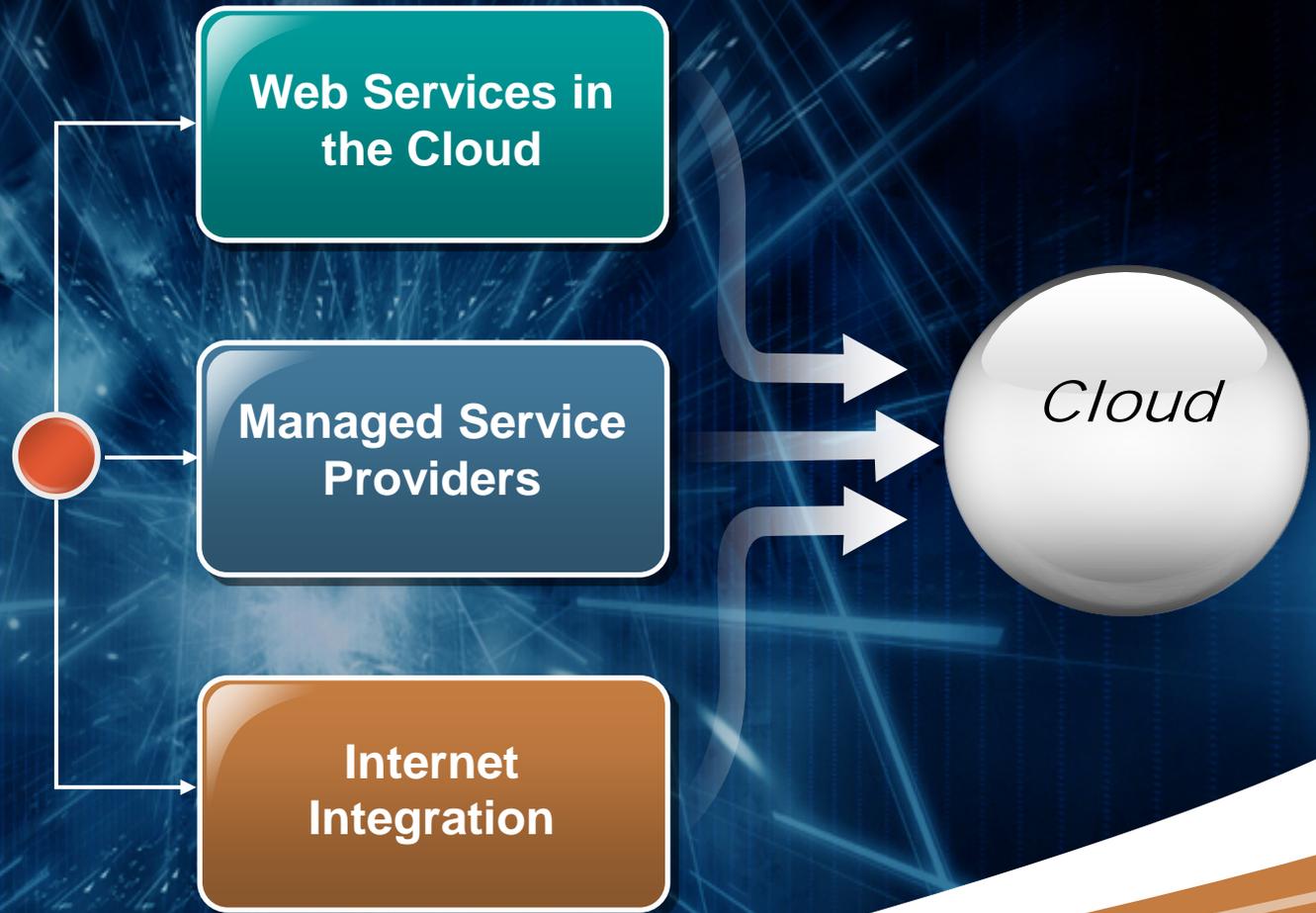


IaaS – Infrastructure as a Service

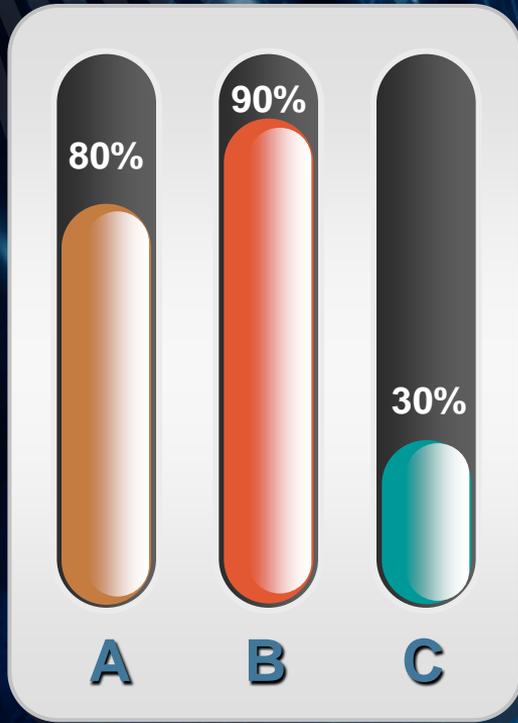


Other Definitions

Concurrent
models outside
of SPI:



Who Really Knows?



A. The SPI Model

B. Other Models

C. Water in the Atmosphere

What Drives this New Model

Workload Shift

01

Local → Remote

Efficiency

02

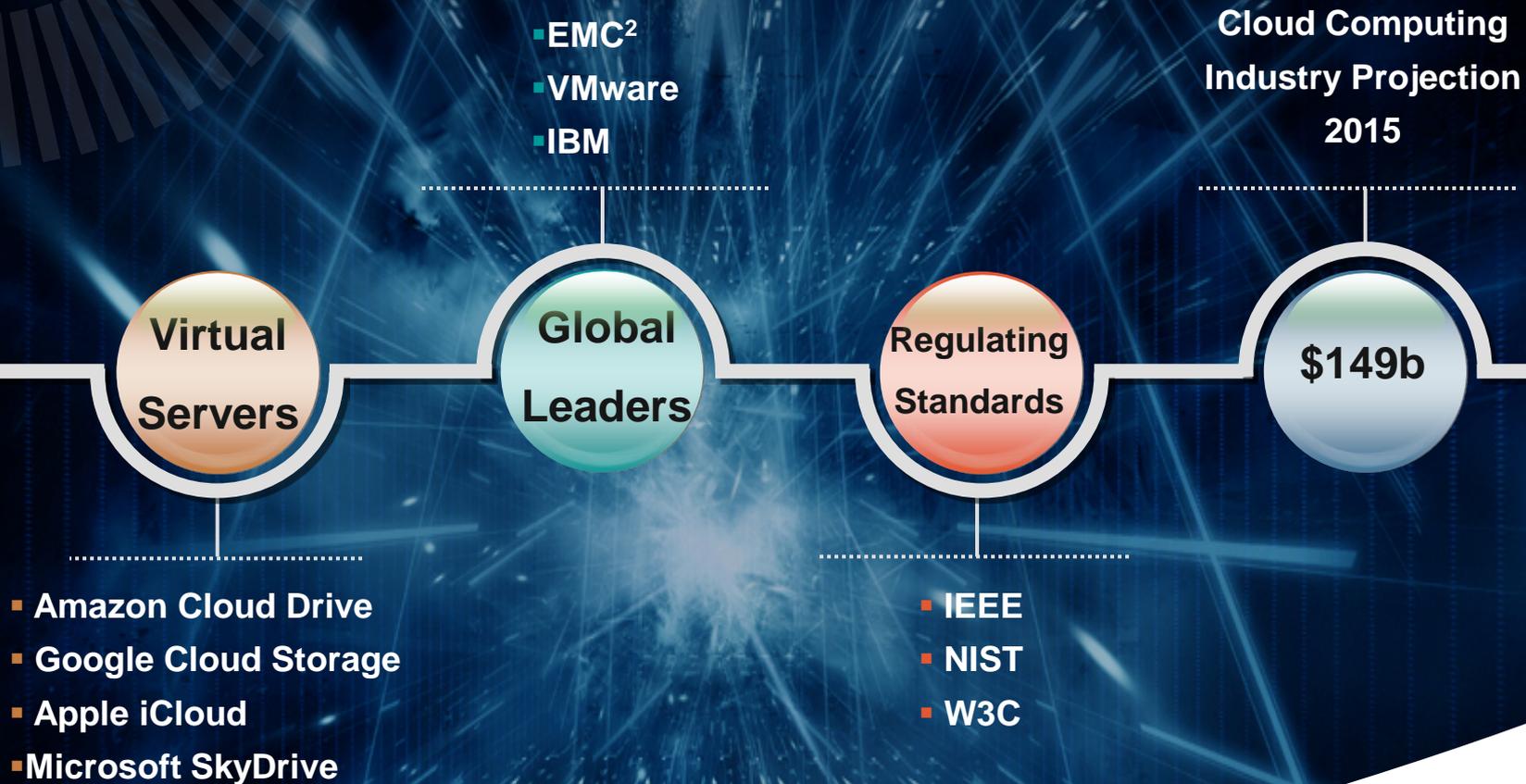
- Hardware demand → decreases
- Software demand → decreases

Benefits

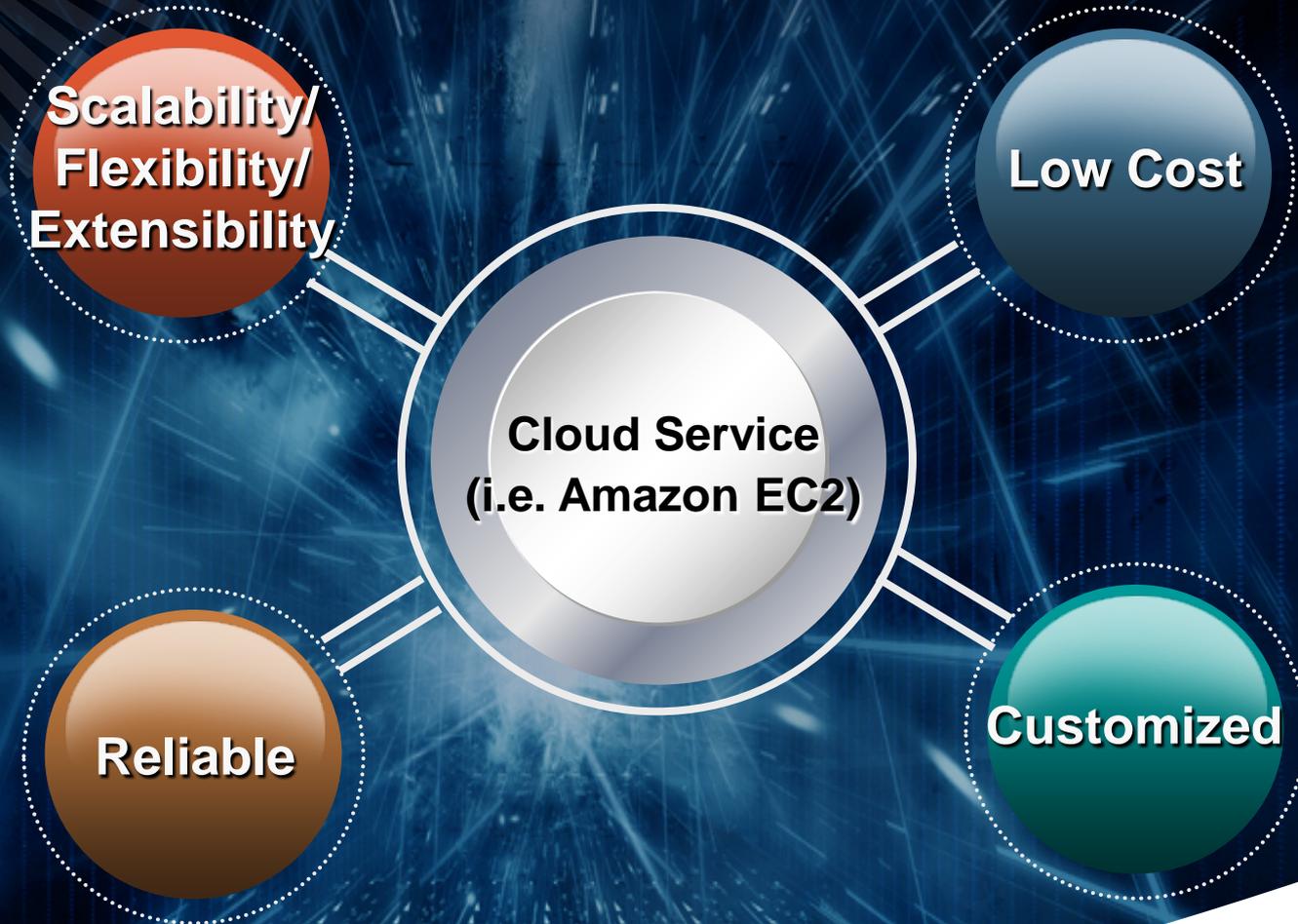
03

- Redundancy → Failure rates for data eliminated
- Security → Data is stored in powerful, high-security server stacks

Big Names in Cloud Computing

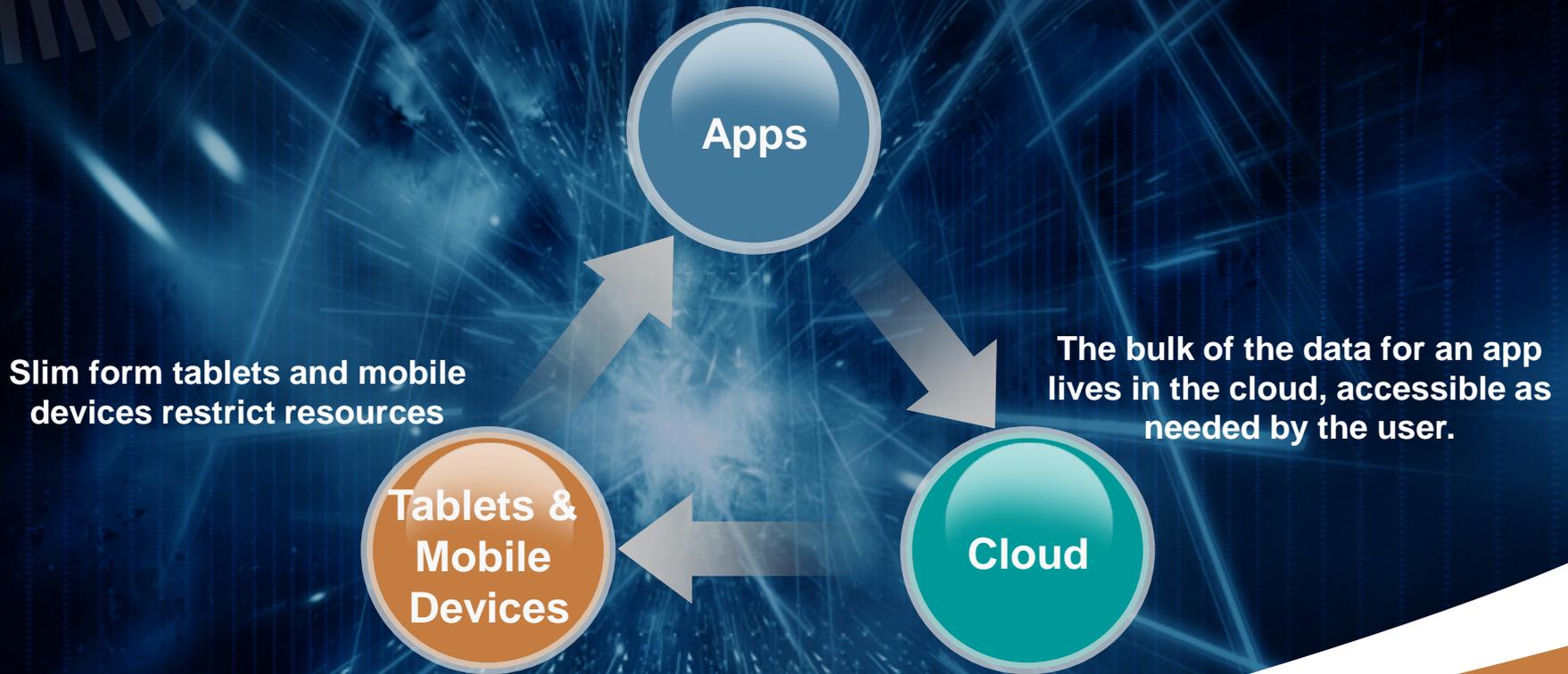


Cloud Added Value



Technology and the Cloud

Application are only partially installed on devices to limit demands on storage.

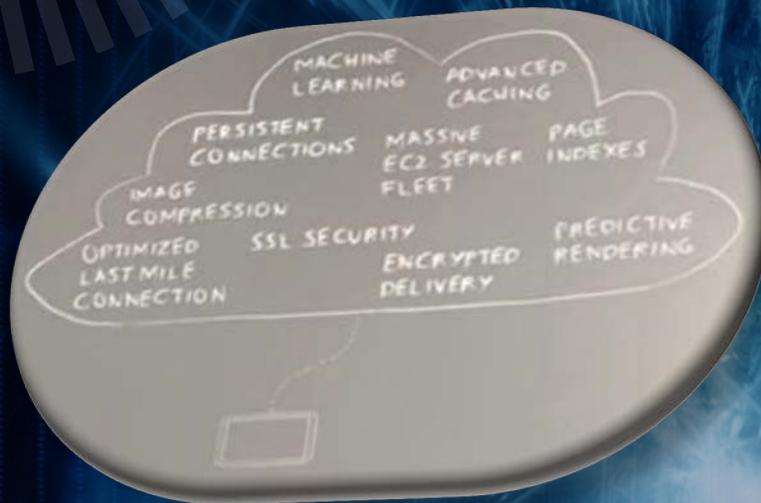


Slim form tablets and mobile devices restrict resources

The bulk of the data for an app lives in the cloud, accessible as needed by the user.

Cloud/Software Interoperability

Cloud-accelerated Browser – Amazon Silk, build on EC2



Libraries, Why We Should Care

Libraries have been using the cloud for over a decade...

Databases

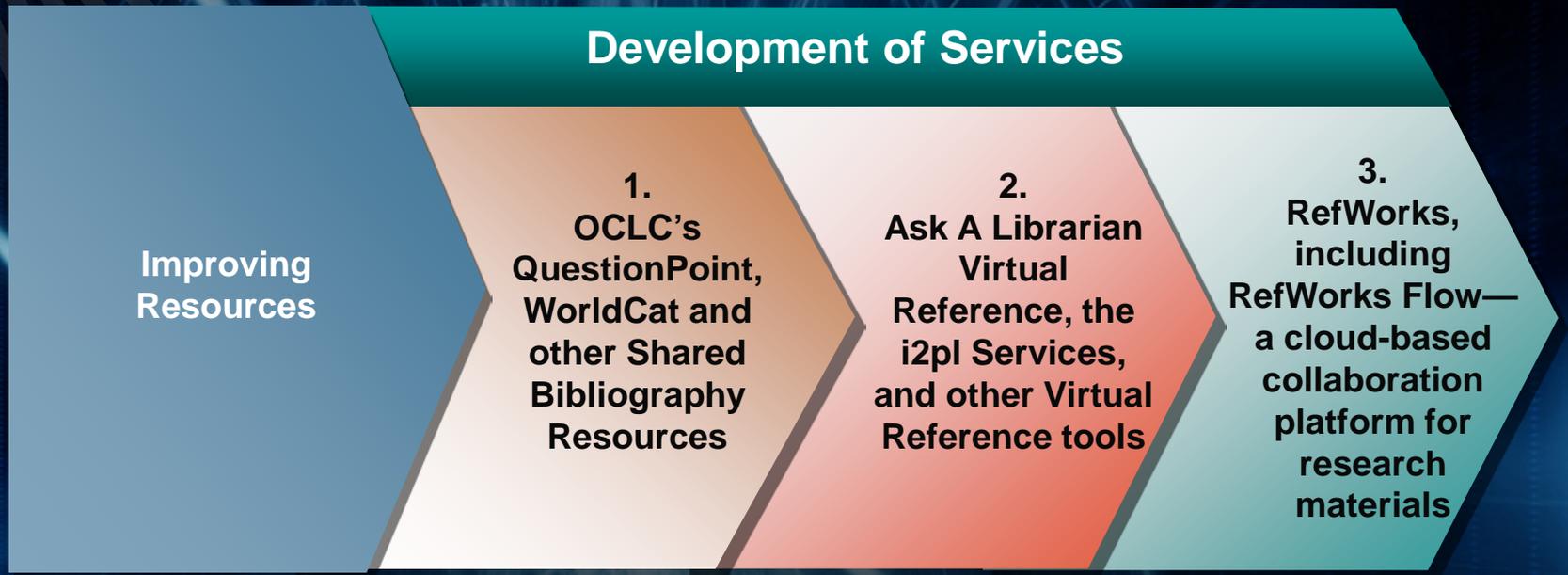
Catalogs

Electronic
Resources

*Cloud-
based*

Library Infrastructure

Operating in the Cloud



External Impacts

By using a standardized model to meet regular business practices, Cloud Computing accomplishes:



Optimism and Dreaming

5 Year Forecast

Expansion of
Cloud Services →

Intercloud →

Dynamic
Software

2014

- 2013 will see a lot of new cloud-based products
- Companies develop divisions for Cloud R&D

2015

- Demand rises
- Expansion of Industry – forecast to reach \$150b

2016

- Cloud-based models become integrated
- Open source style mentality starts taking hold

2017+

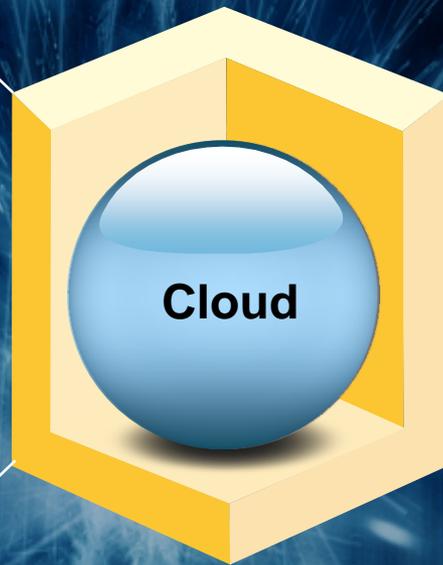
- New dynamic products (browsers, catalogs, databases) are created

What We Gain

The Library in the Cloud

Expanding

- Redundant data and tasks simplified
- Acquisition's increasingly diversified collections become manageable
- Serials collections strewn about the web become more centralized
- Electronic resource librarians given powerful tools to integrate and organize ever-changing vendors and resources



Collaborating

- Maintenance of catalog records reduced (update it locally, share it with all)
- Collection building becomes geographically extensible
- Digitization initiatives shared instantly; inter-library workload is simplified

Everything becomes cooperative

Benefits of Cloudy Libraries

Working...

...Inside Your Library

- Improved communication
- Broader access to interdepartmental data
- Streamlined workflows

Awareness

...Between Libraries

- Increased interoperability
- Extensibility
- Data richness

Sharing

...With the World

- Improved service levels
- Increased visibility
- Community participation

Involvement

The background is a vibrant blue with a complex pattern of light trails and digital lines radiating from a central point, creating a sense of depth and movement. A faint, semi-transparent circular graphic with radial lines is visible on the right side. The bottom of the image features a curved, layered border in white and orange.

Thank You !