

CLOUD SERVICES AND SHARED RESOURCES FOR RESEARCH AND EDUCATION

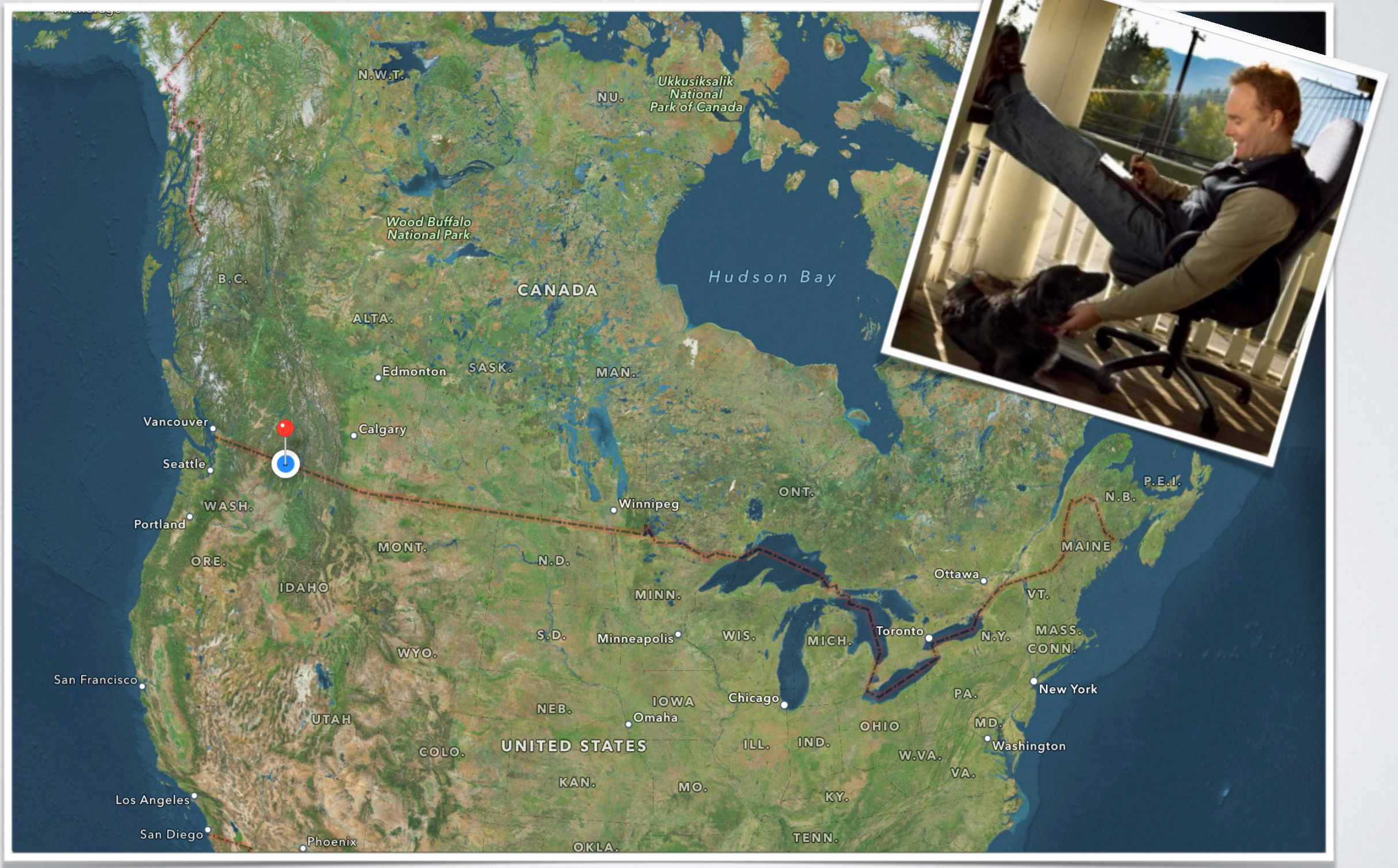
Presented by:

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BRIAN FRY - CLOUD EVANGELIST



RACK **FORCE**



"Communication – which in the end is what the digital technology and media are all about – is not just a sector of the economy. Communication IS the economy."

–Kevin Kelly - 1998 New Rules for the New Economy
Former Managing Editor of Wired Magazine

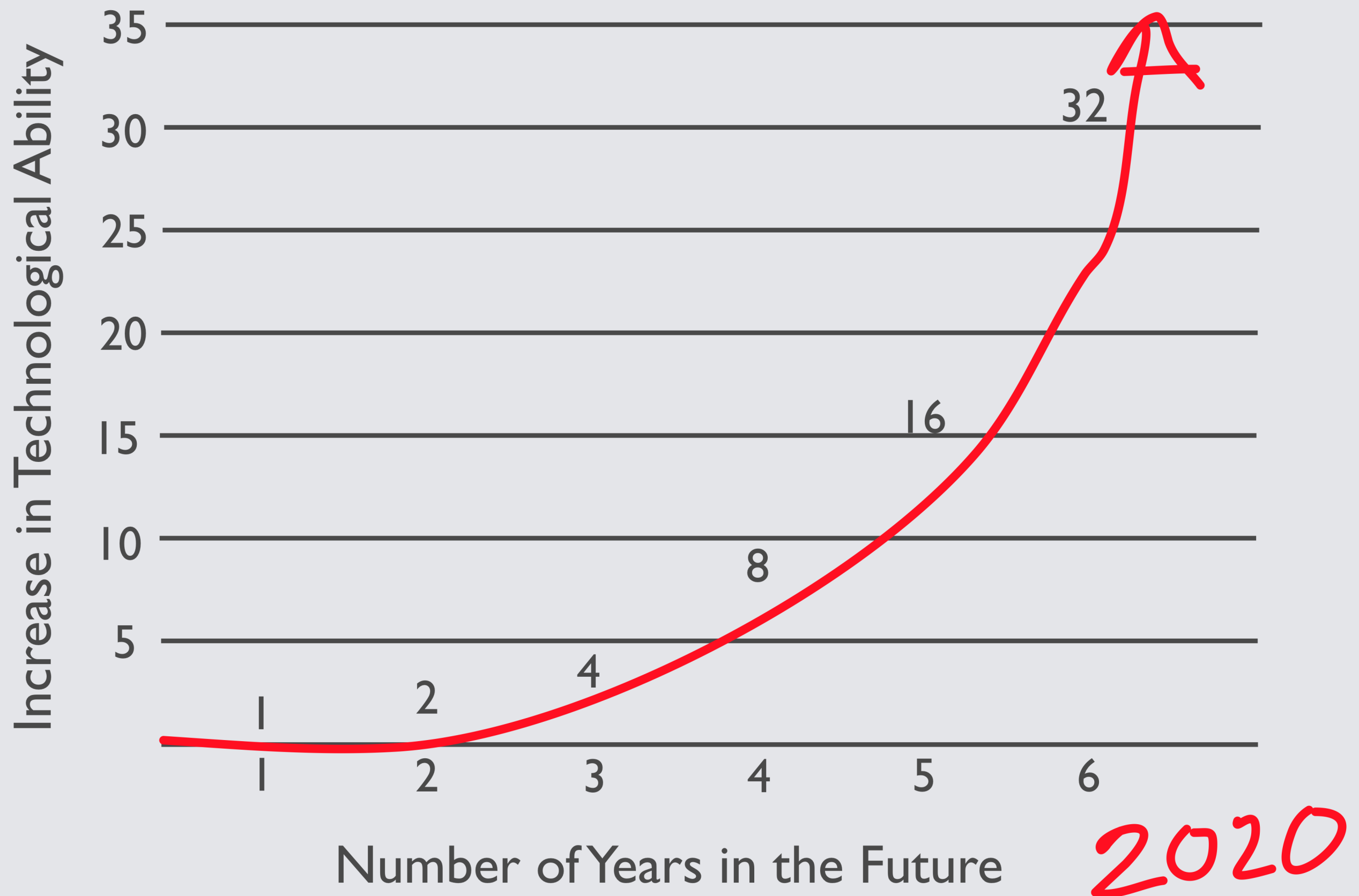
CANADIAN INNOVATION
FALLING BEHIND ...

CANADA
IS
ADOPTING
CLOUD
TOO
SLOWLY

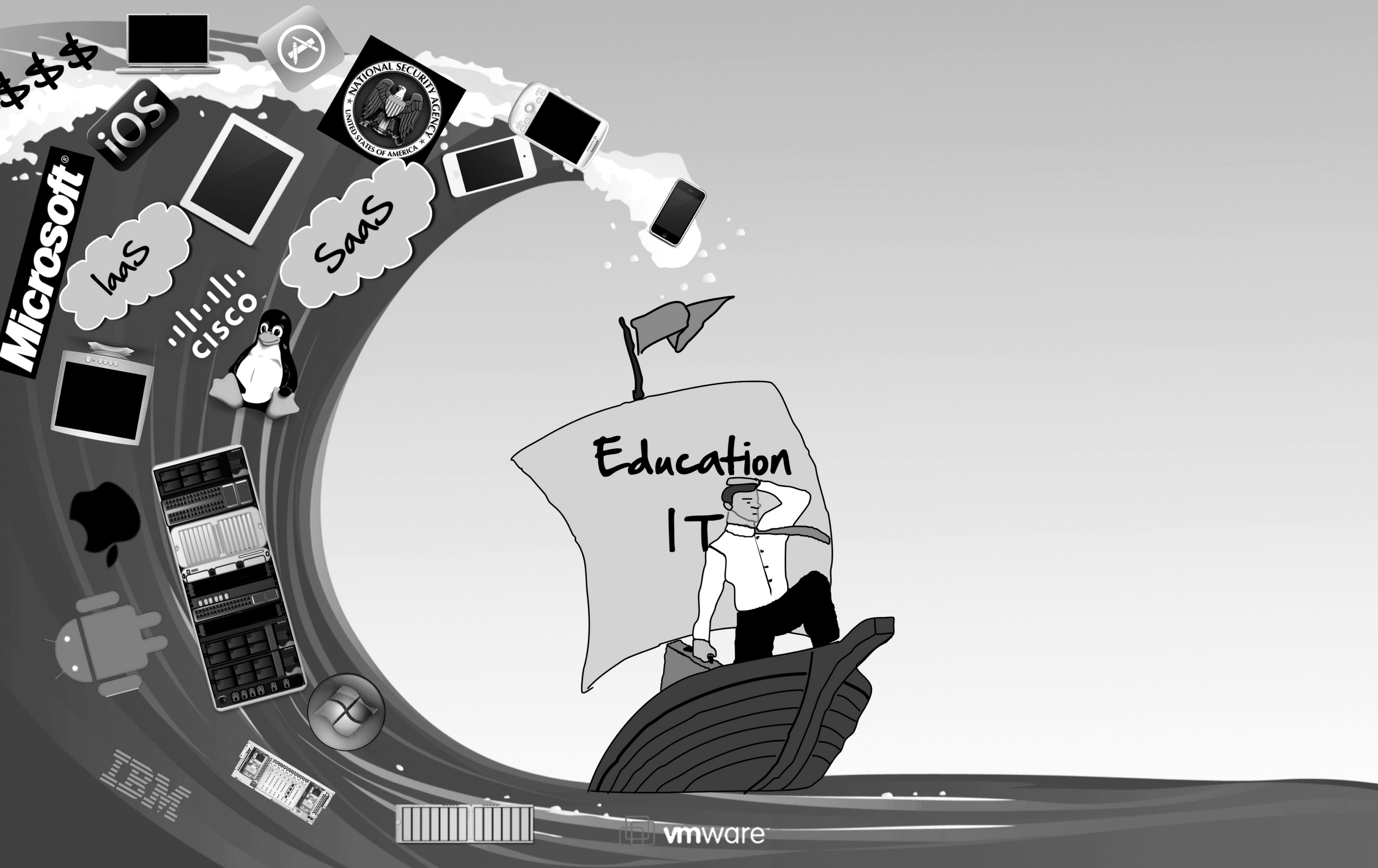
EXPECTATIONS



THE EMERGING FUTURE



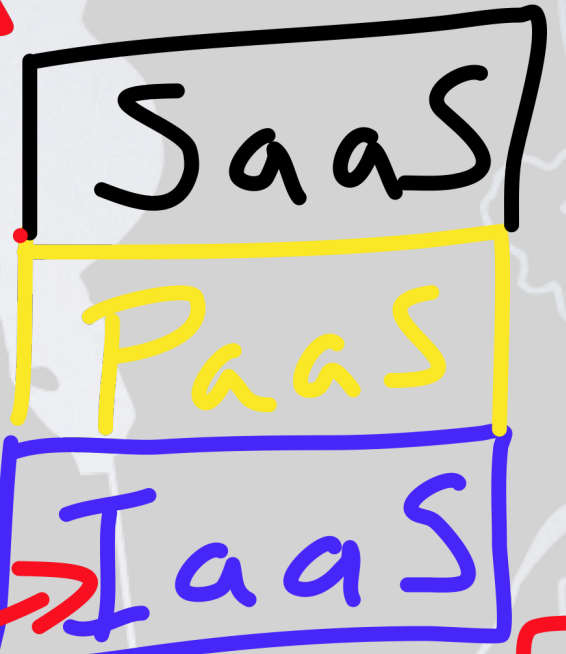
TECHNOLOGY TSUNAMI



CLOUD ADOPTION ROADBLOCK

Data Privacy
Blocks US
Clouds

Canadian
Cloud Model



CON
Part



CANADIAN R&E CLOUD PROPOSAL

1. R & E Commits to a Cloud First Policy
2. We Custom Design an R & E Community Cloud
3. Canadian Cloud Providers Commit to Support the R &E Community Cloud to Win Business

CANADIAN R&E COMMUNITY CLOUD

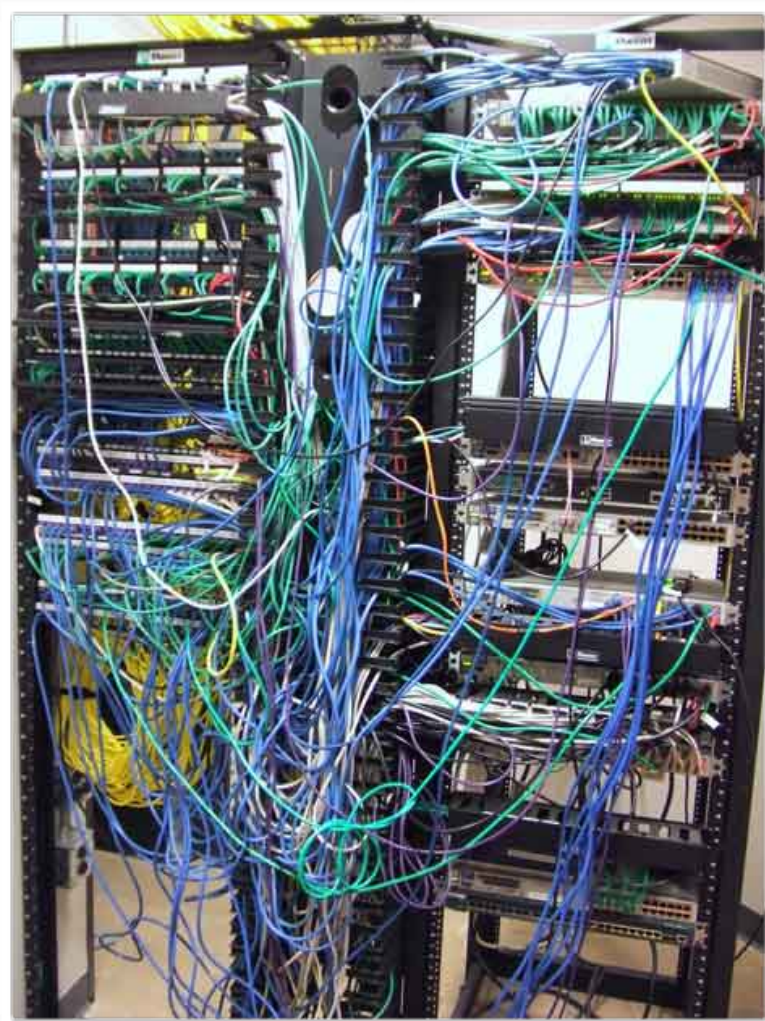
- Multi-Tenant Infrastructure for Canadian R&E
- Addresses Common R&E Computing Concerns
- Addresses R&E Regulatory Compliance
- Addresses R&E Performance Compliance

“Hey, where did all the money go?”

—Canadian Research and Education Institutions

DATA CENTER EVILS

The Spaghetti Factory



The Sauna

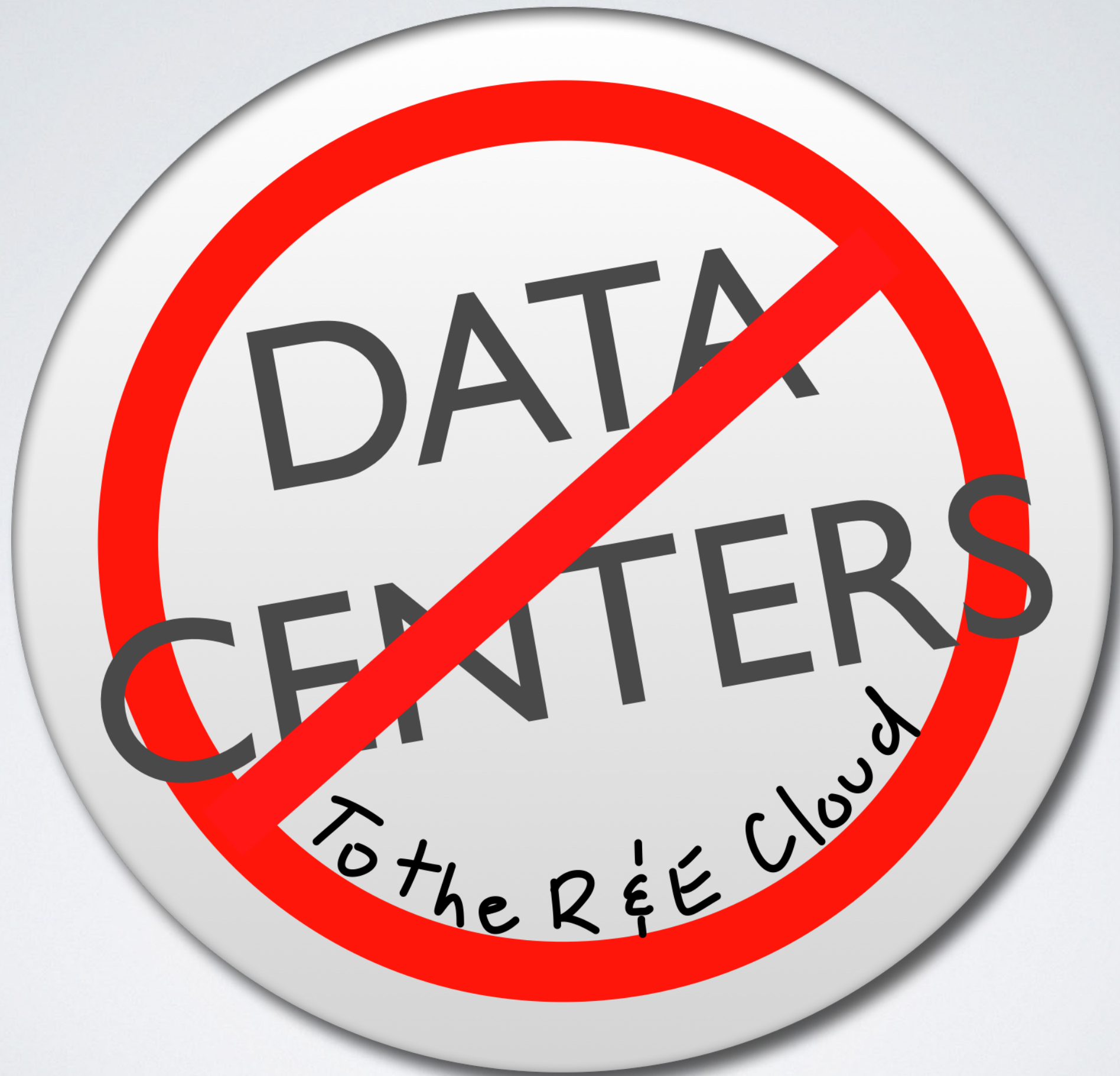


DATA CENTER EVILS

The Ego Center



http://en.wikipedia.org/wiki/File:Indiana_University_Data_Center_-_PI100134.JPG



DATA
CENTERS

To the R&E Cloud

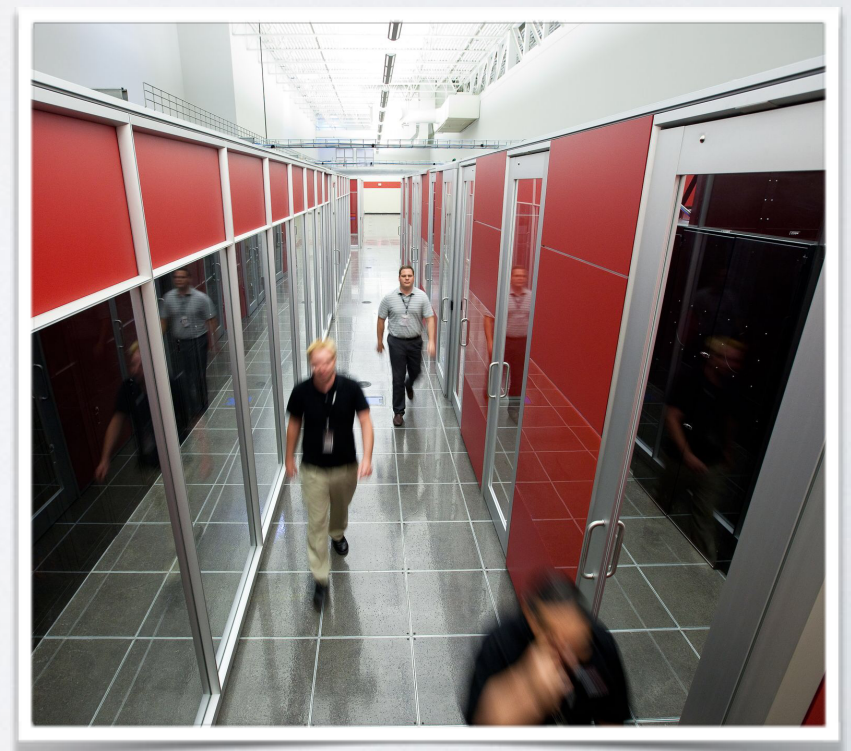
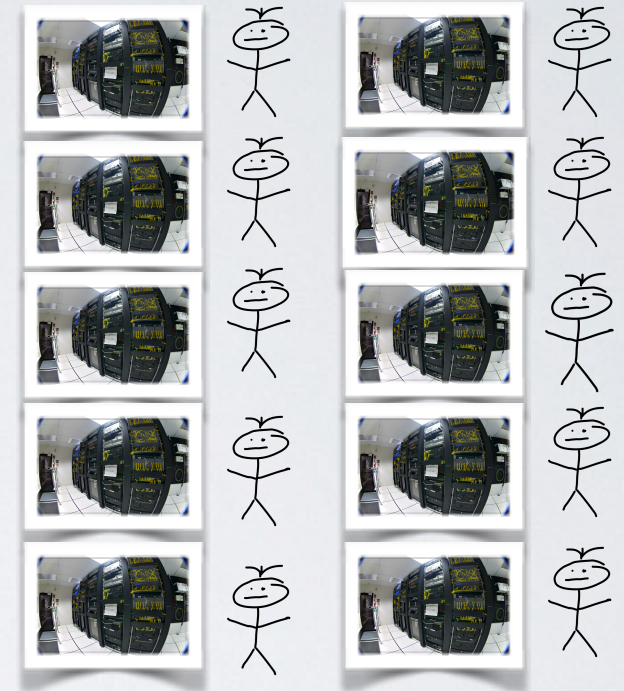
“We gotta share folks!”

—Canadian Research and Education Institutions

REASON #1

IT AND COMMUNICATION SAVINGS

- Data Centers - 10 to 1
- Software Licenses - 10 to 1
- IT Infrastructure People 10 to 1
- Network 10 to 1
- Carbon Reduction 100 to 1
- IT Infrastructure to IaaS - 40 to 60%



REASON #2

CLOUD DATA CENTER DESIGN

- Cloud Designed
- Secure
- Certified
- 24/7
- Canadian



REASON #3

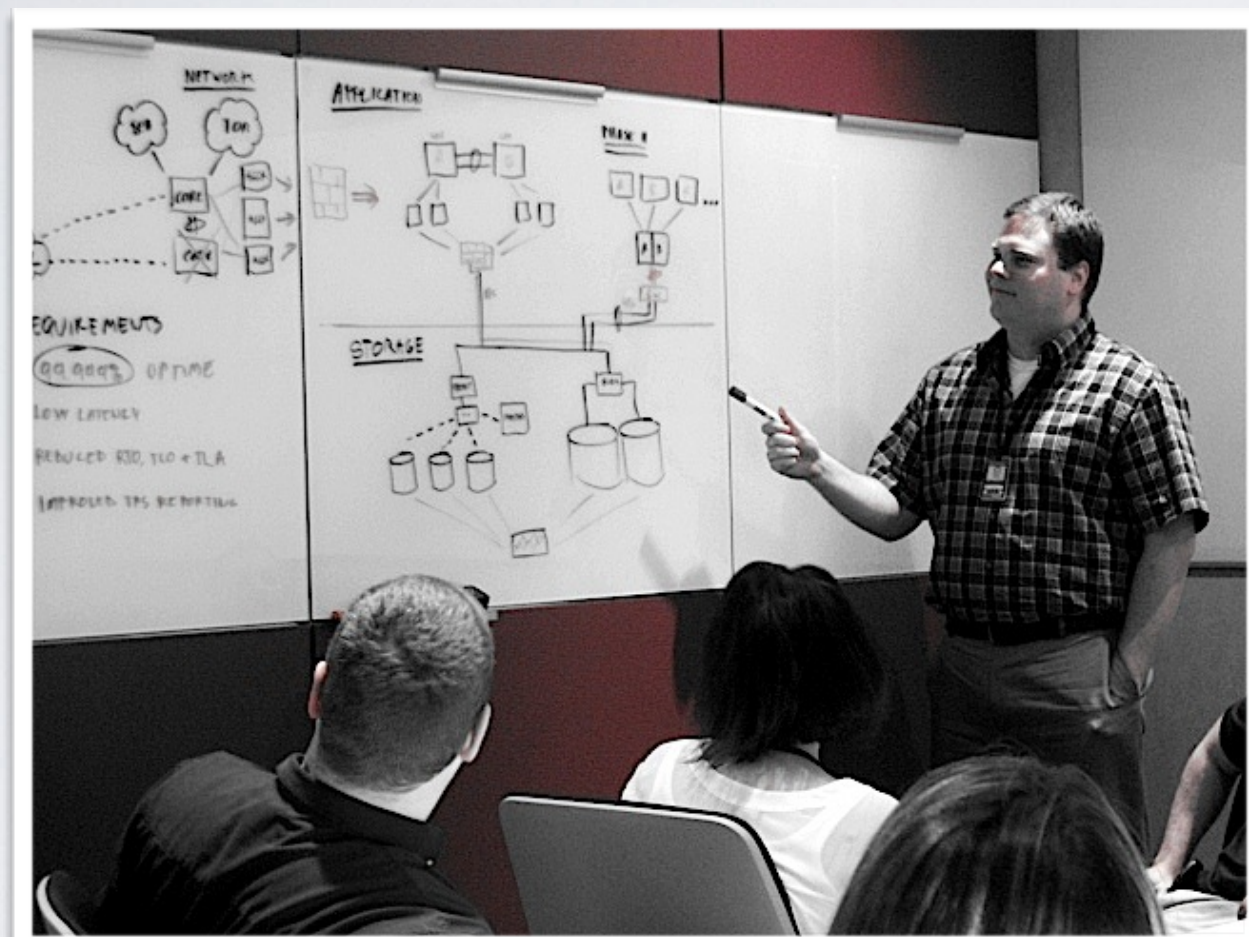
CLOUD PROVIDER EXPERIENCE

- 10+ Years of Experience
- 1000s of Customers
- 10,000s of Workloads



REASON #4

SHARED PROCESSES & CERTIFICATIONS



- ITIL Best Practices
- SSAE 16 SOC2
- PCI/DSS Compliant
- ISAE 3402
- CSAE 3416

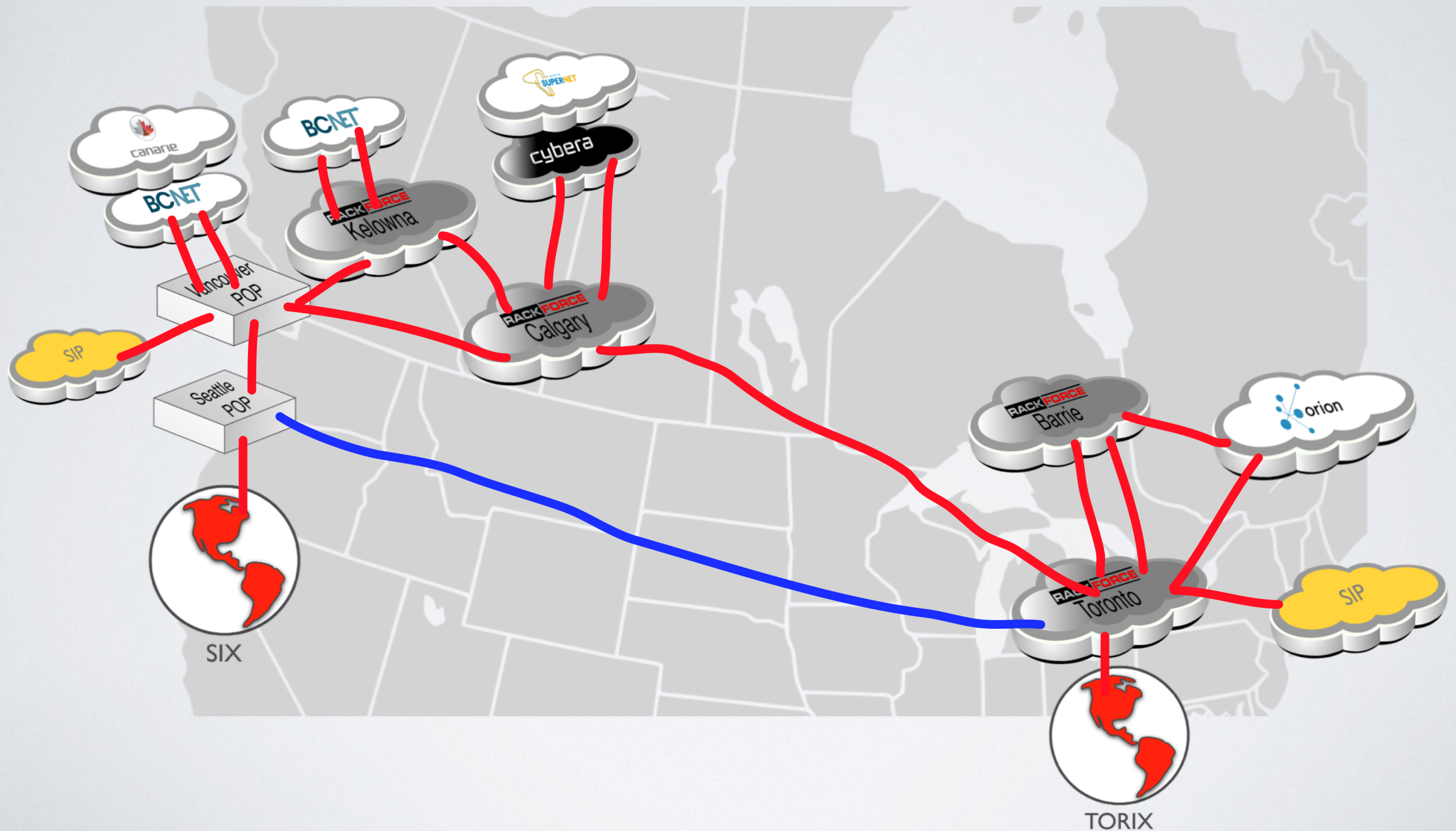
REASON #5

ACCESS TO CLOUD EXPERTISE



REASON #6

NATIONAL CLOUD NETWORK



REASON #7

R&E CLOUD ECOSYSTEM



REASON #8

SHARED RESEARCH & COMMERCIALIZATION

SQUARE KILOMETRE ARRAY



McGill



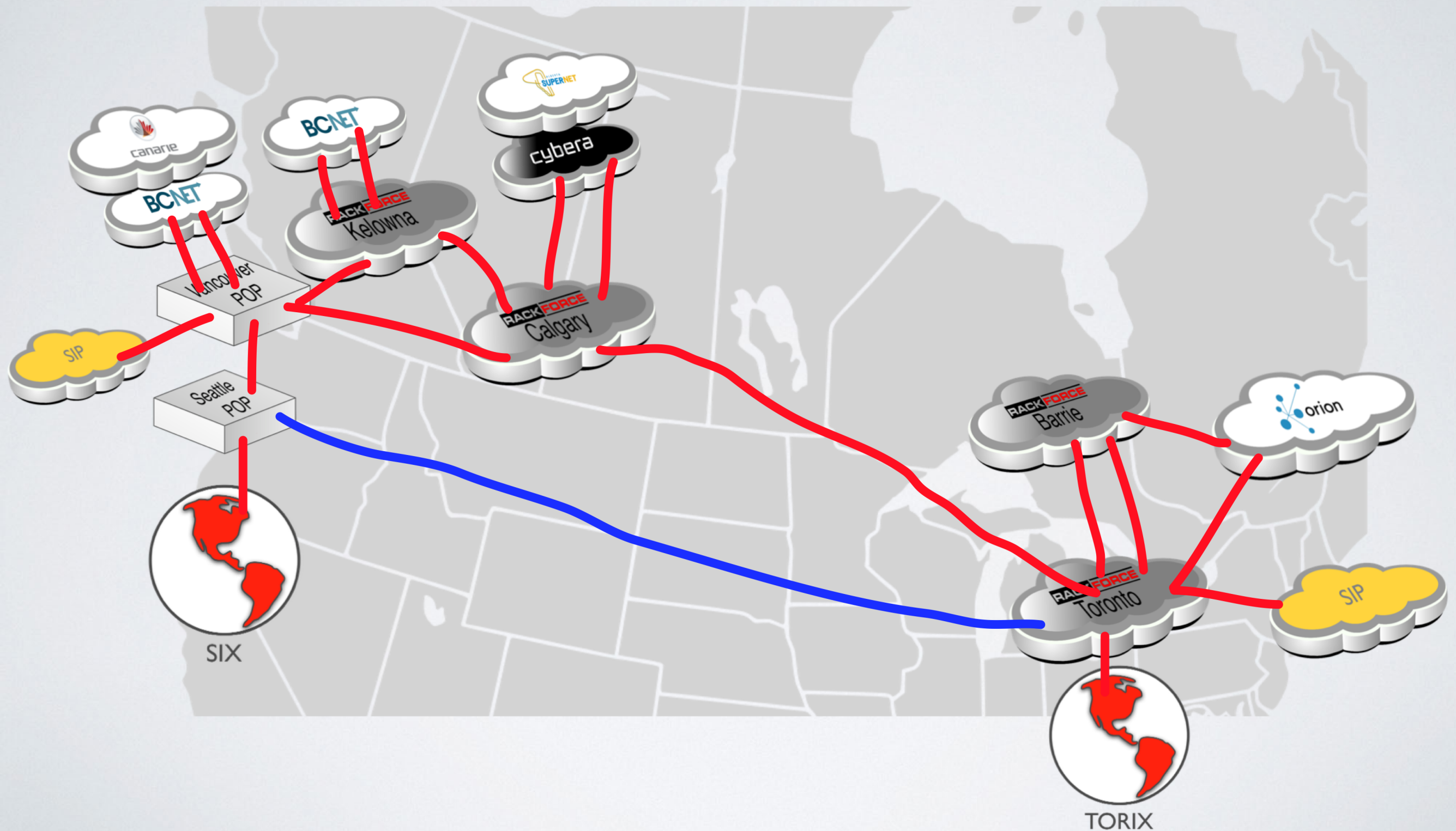
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calgary **SCIENTIFIC**



REASON #9

DISASTER RECOVERY

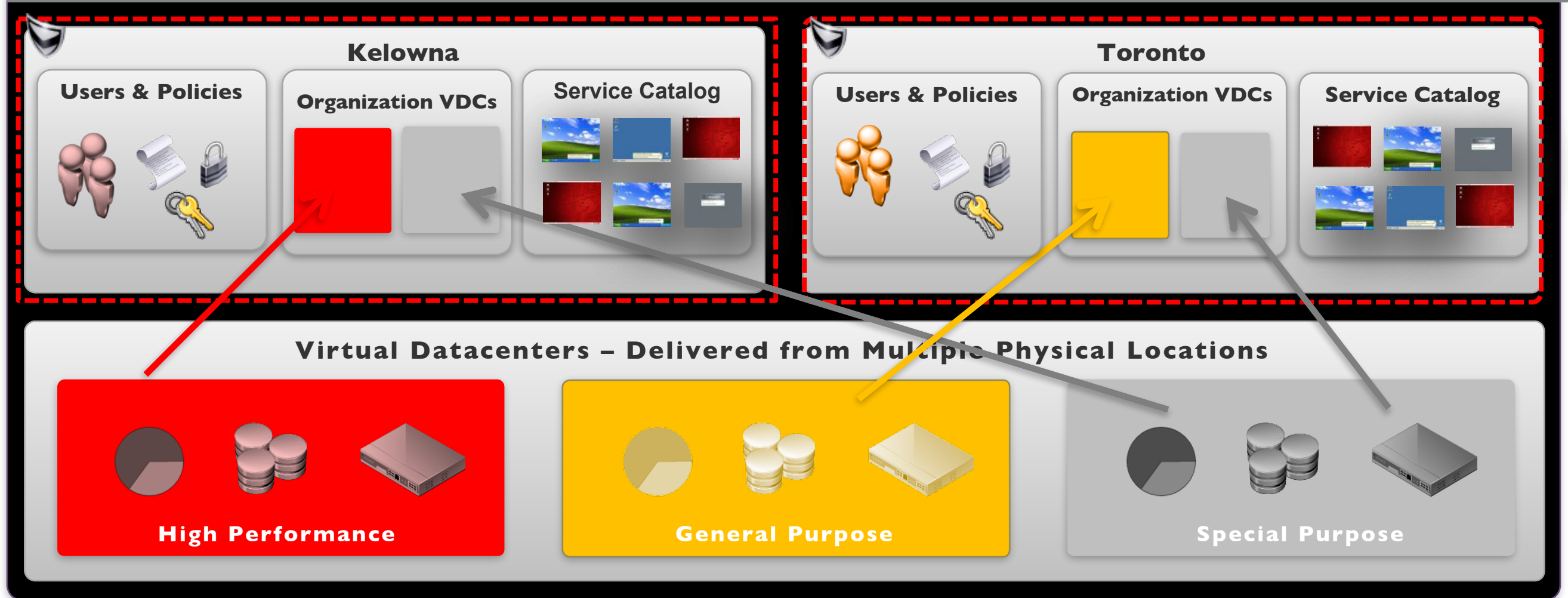


REASON #10

THE KITCHEN SINK



R&E Community Cloud



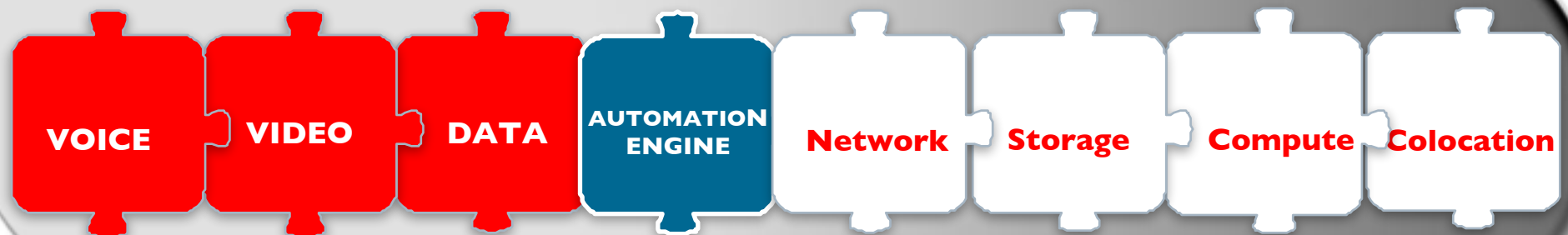
Virtualization Layer

Datacenter Infrastructure

R&E Cloud Platform

Software as a Service

Infrastructure as a Service



IT Governance, Workflow & Security



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CLOUD SUCCESS STORIES - CONTENT



Calgary Board
of Education

- interactive school maps
- student results
- international students
- why choose CBE?

- site map
- contact us

- rss feed
- faqs

home

parents

students

partners

careers

media

staff

quick launch

- schools and areas
- schooling, programs, services/supports
- Board of Trustees
- about us
- our community
- educational resources
- policies
- publications
- learning services
- learning innovation
 - Career & Technology Foundations | Strategy | Centre
 - Dual Credit
 - High School Success Strategy
 - Learning with Technology
 - Career Cruising
 - Collaborative Online Resource Environment (CORE)
 - Desire2Learn (D2L)
 - Inclusive Technologies
 - Gmail and Apps for Education
 - Mobile Learning
 - Web Awareness
 - Digital Citizenship

home > learning innovation > learning with technology > collaborative online resource environment (core)

Collaborative Online Resource Environment


The increased use of digital technologies is changing the way school systems deliver educational programs to students. Educators are faced with both opportunities and challenges. Personalized learning and organizational efficiencies are achievable while new understandings of the value of technology may require changes in instructional practice and educational leadership.

The opportunities:

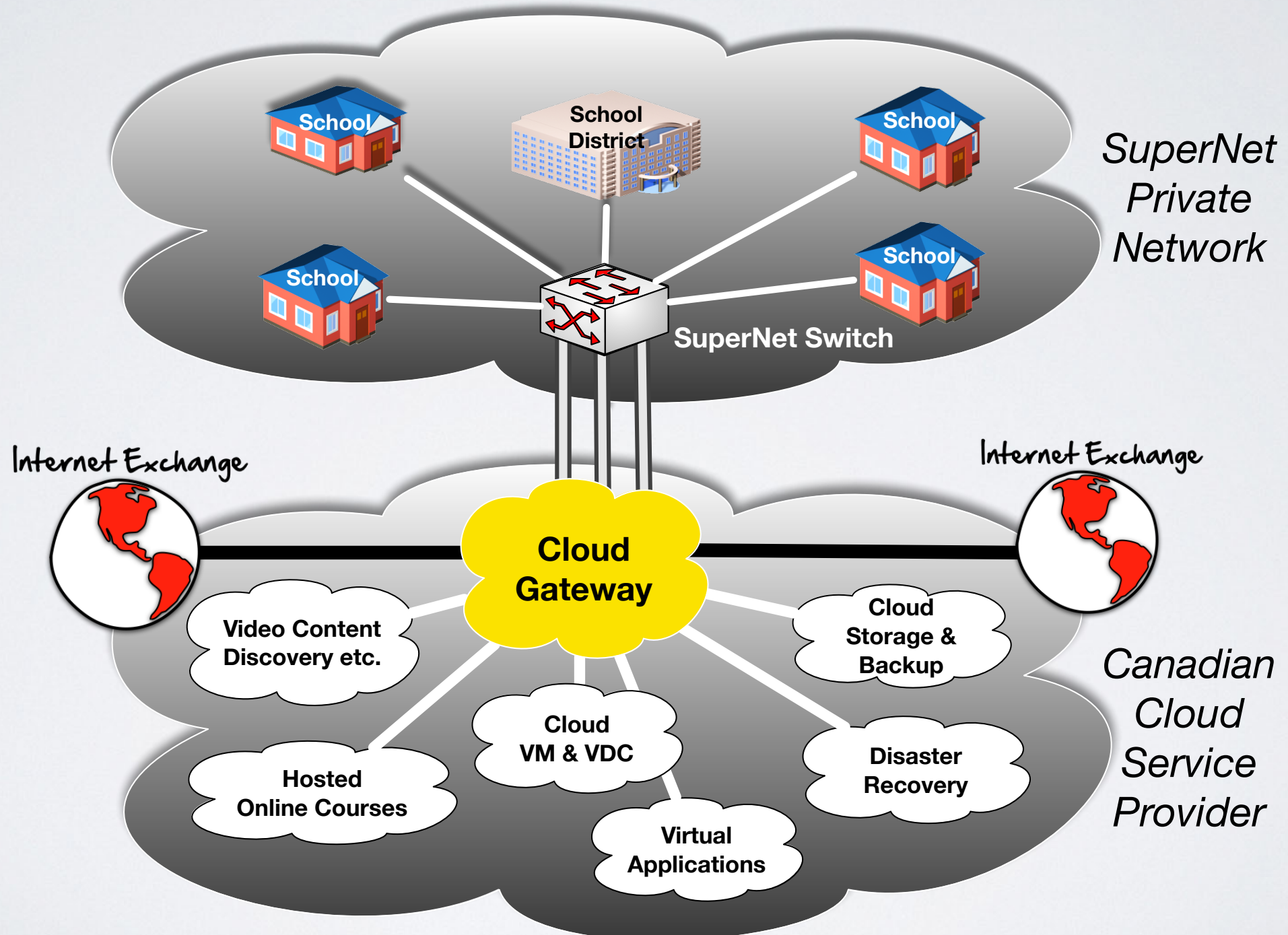
- Accessibility - access to resources anytime, anywhere
- Allows for re-mixing and sharing - interact with resources in meaningful ways
- Content is current - access to real-time information
- Ease of collaboration - build knowledge as a collective
- [Universal Design for Learning](#) approach - resources that work for everyone

Awareness:

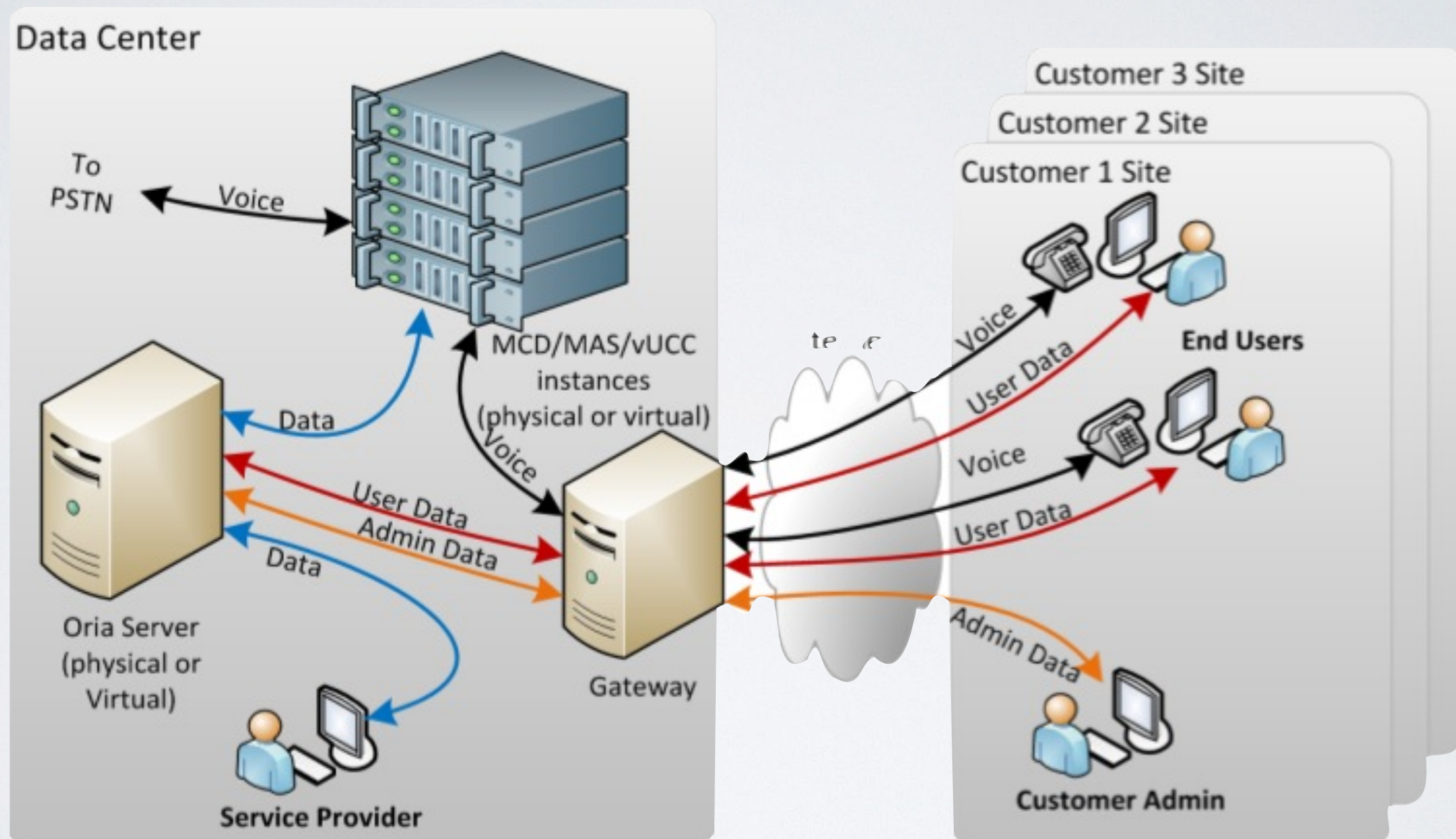
- Resource standards - requires individuals to be critical evaluators
- Connectivity - requires a digital device
- Compatibility - many non-uniform standards for files and operating systems



CLOUD SUCCESS STORIES - CLOUD AND INTERNET GATEWAY



FUTURE CLOUD SUCCESS STORIES - UNIFIED COMMUNICATION AS A SERVICE



DISCUSSION

GETTING
THE

R&E COMMUNITY CLOUD
STARTED?

CLOUD SERVICES AND SHARED RESOURCES FOR RESEARCH AND EDUCATION

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