

Clouducation

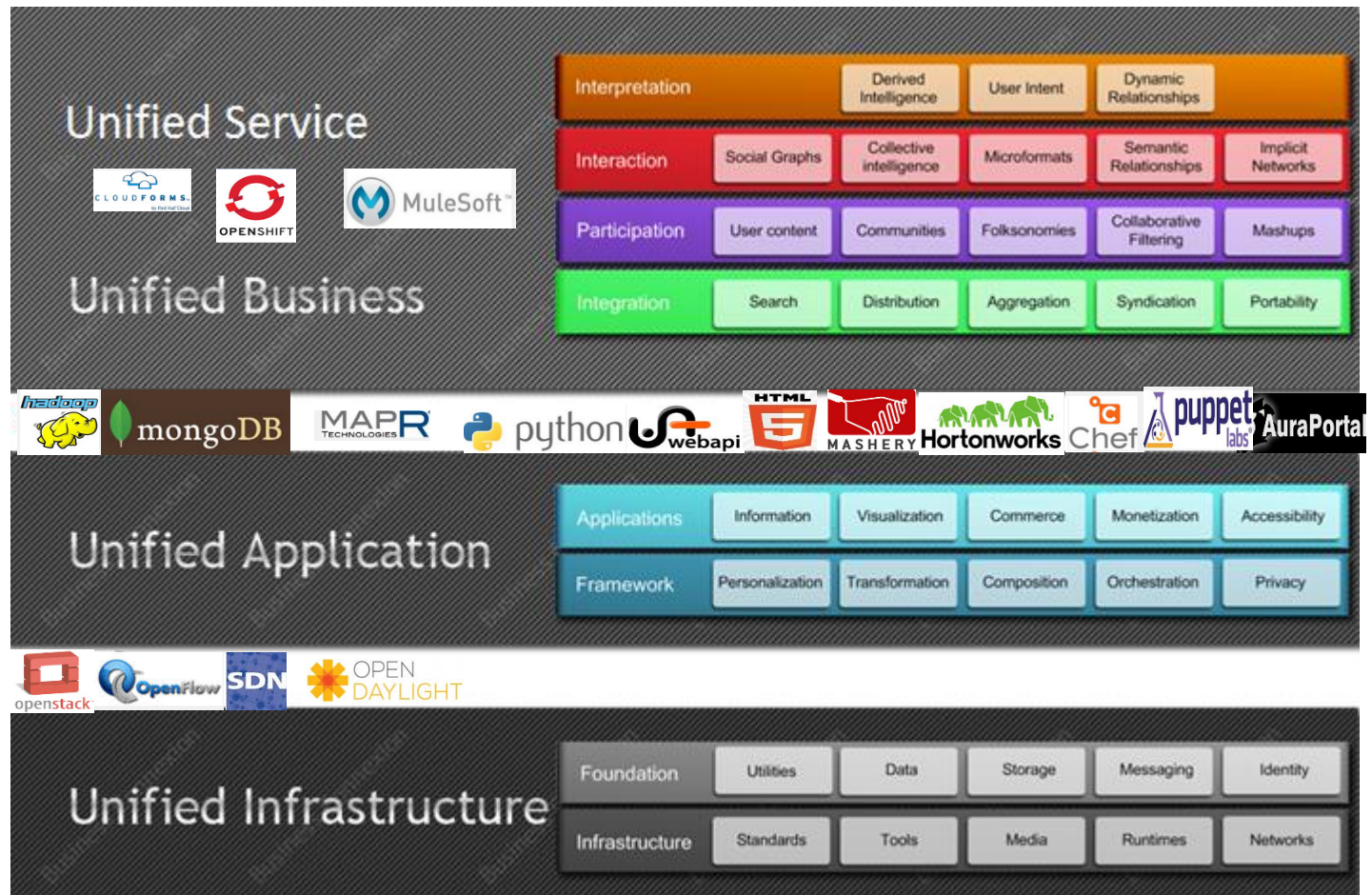
Andy Brauer
CTO
Business Connexion



Agenda

The evolution of Cloud and Internet has brought about new models and opportunities both for Study and Research in Education
We take a look at how this has changed and what is available

4 phase Cloud Model



It is about Service

Private Cloud
 Public Cloud
 Social Cloud
 Hybrid Cloud
 Media Cloud
 Industrial Cloud
 Instrumentation cloud
 Personal Cloud
 Government Cloud
 Space Cloud
 Network Cloud
 Service Cloud
 Aggregator Cloud
 Military Cloud
 Forensic Cloud
 Hacker Cloud
 Financial Cloud
 Educational Cloud

Sky Clouds

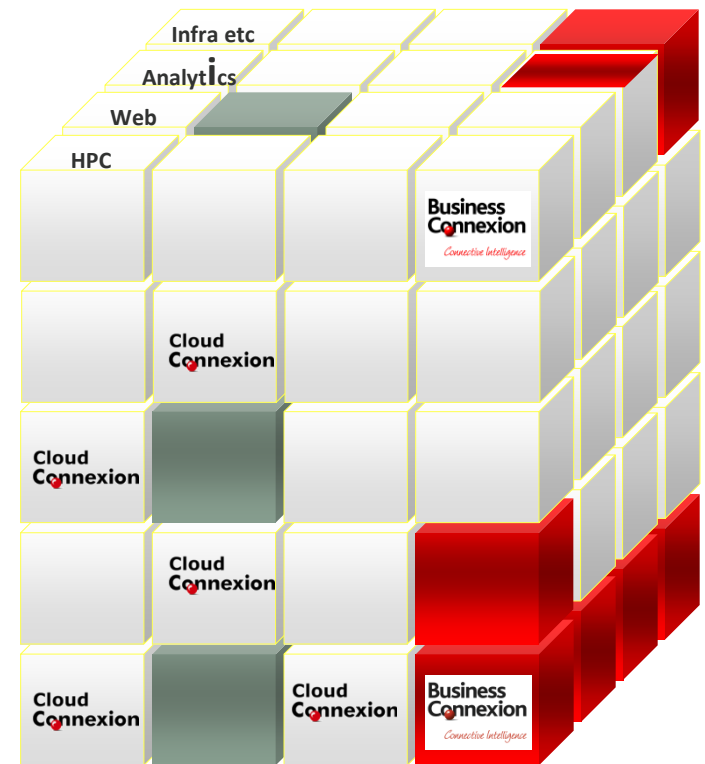
BUSAS

KAAS

SAAS

PAAS

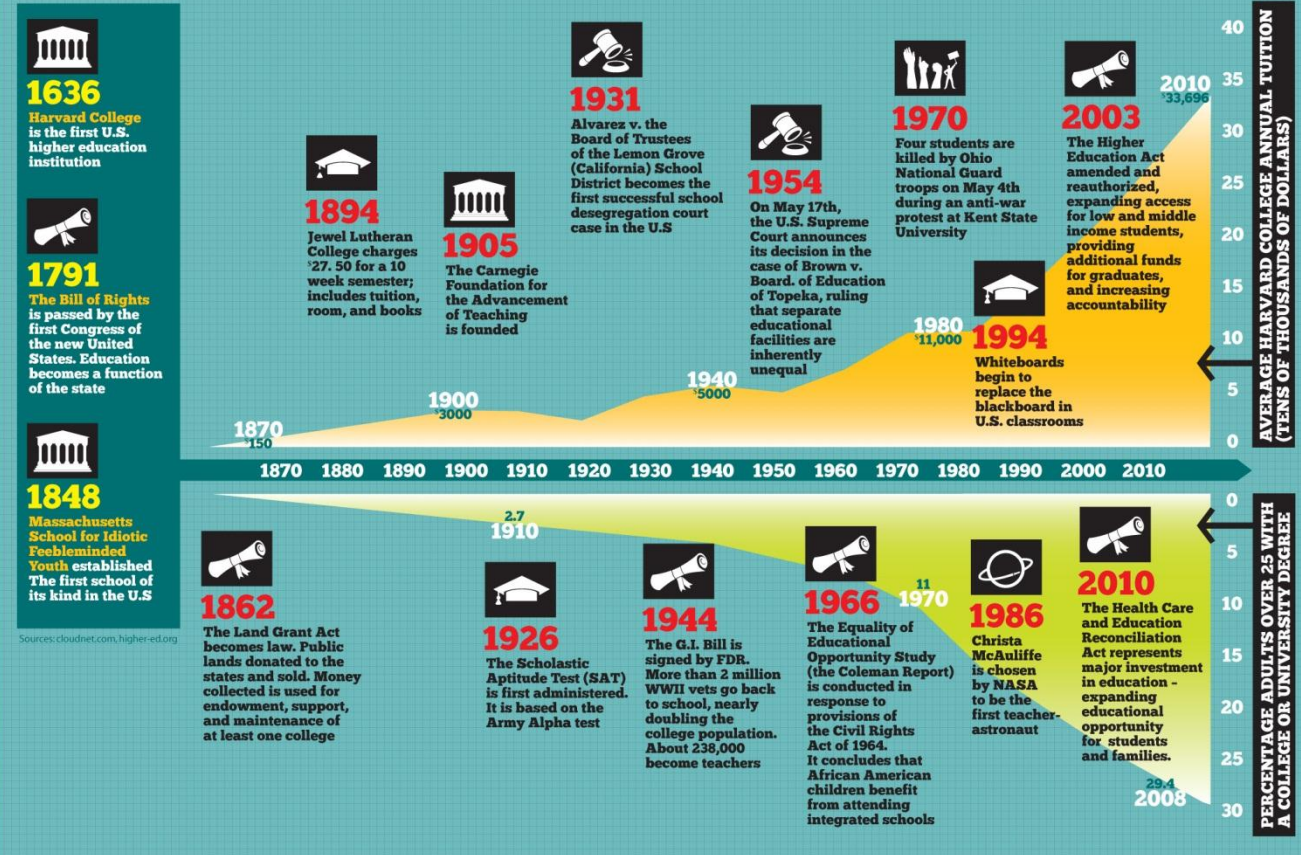
IAAS



Social Public Hybrid Private

Higher Education

374 YEARS OF HIGHER EDUCATION



The Internet has changed everything

Anyone can create and deliver almost anything to anyone
for almost no cost.

Internet + Digital Resources + Open License



MSc BSc in Cloud Computing

- <http://cloud.cit.ie/>

MSc in Cloud Computing



The application process is now open for this online only programme, please click the “**MSc Click to Apply**” image below. Also, please read the [MSc FAQ](#) before making an application.

This programme will be delivered part-time over 18 months which is equivalent to three semesters. The full-time equivalent is designed to be delivered on campus over a 12 month period which is equivalent to two semesters. The full-time mode is not currently being offered.

Further details about this programme can be viewed [here](#). Closing date for receipt of completed applications is **Monday September 1st 2014**.



BSc (Hons) in Cloud Computing



The application process is now open for this online only programme, please click the “**BSc – Click to Apply**” image below. Also, please read the [BSc FAQ](#) before making an application.

Please note that this programme will be delivered part-time over 18 months which is equivalent to three semesters. The full-time equivalent is designed to be delivered on campus over a 12 month period which is equivalent to two semesters. The full-time mode is not currently being offered.

Further details about this programme can be viewed [here](#). Closing date for receipt of completed applications is **Monday September 1st 2014**.



The High Road

The high and low roads in ICT in South African universities

The high road



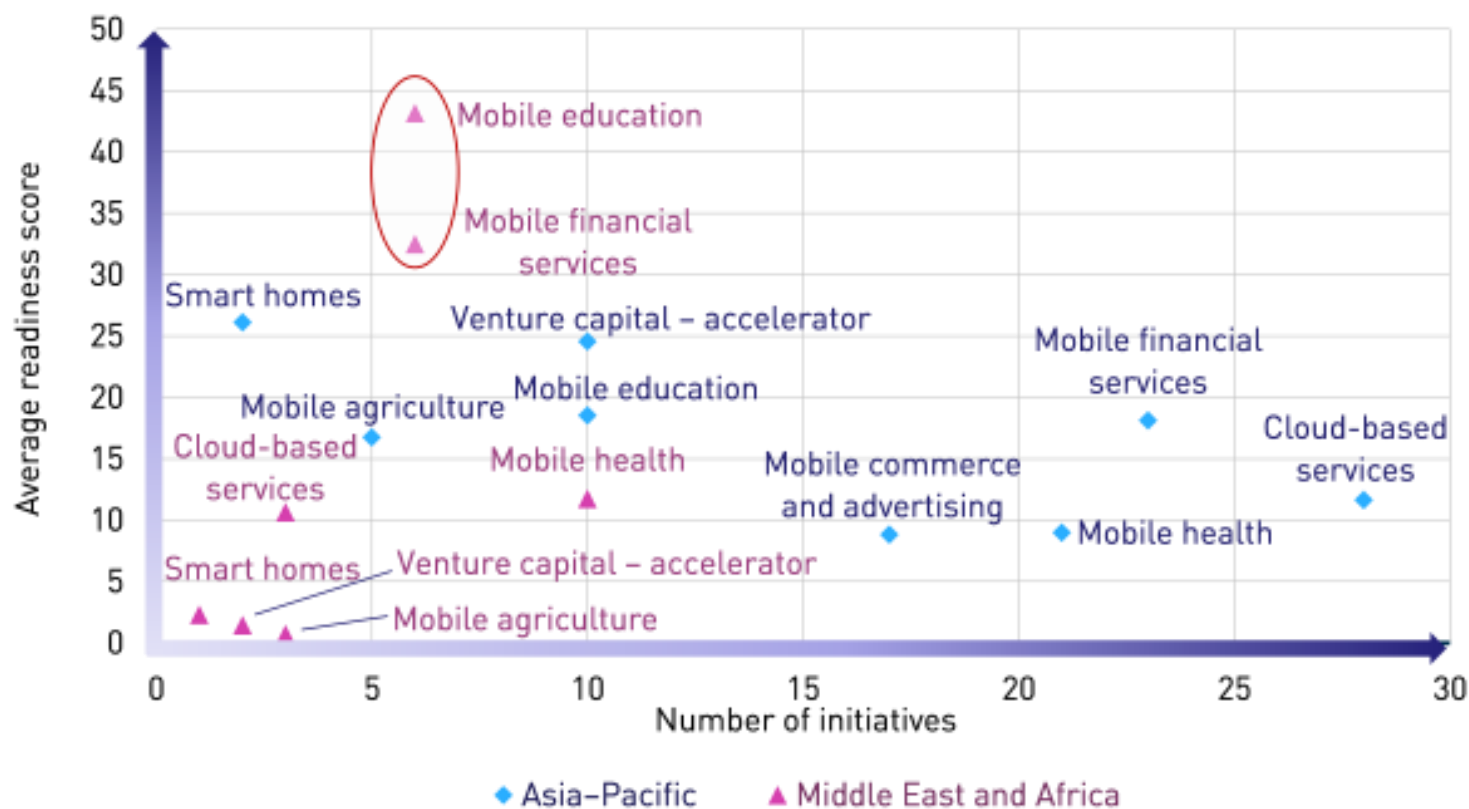
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UTSA Cloud and BigData Laboratory launches OpenStack Cloud on Open Compute hardware

- (May 7, 2014) -- The University of Texas at San Antonio announced today that the Cloud and BigData Laboratory in the UTSA College of Sciences is launching one of the largest Open Clouds in academia with initial 6,600 COREs utilizing OpenStack software, co-founded by Rackspace and Open Compute hardware, founded by Facebook, to support advanced computing and big-data analytics research.
- The UTSA Cloud and BigData Laboratory, with more than 20 doctoral students, is devoted to the research of new technologies and innovations in various areas of computing such as OpenStack integrated with a Low Latency Interconnect and High Performance Cloud, Cyber Security, Hybrid and Federated Cloud, ZeroVM and BigData Analytics. The laboratory was built in collaboration with industry partners such as Rackspace, Open Compute Project Communities, Mellanox, Internet2 and many others.

Mobile Education key



With New models we have access to
the world best universities

World University Rankings 2013-2014													
001 - 200		201 - 225		226 - 250		251 - 275		276 - 300		301 - 350		351 - 400	
Rank ▲	Institution	Location	Overall score										
1	California Institute of Technology (Caltech)	United States	94.9										
2	University of Oxford	United Kingdom	93.9										
2	Harvard University	United States	93.9										
4	Stanford University	United States	93.8										
5	Massachusetts Institute of Technology (MIT)	United States	93.0										
6	Princeton University	United States	92.7										
7	University of Cambridge	United Kingdom	92.3										
8	University of California, Berkeley	United States	89.8										
9	University of Chicago	United States	87.8										
10	Imperial College London	United Kingdom	87.5										
11	Yale University	United States	87.4										
12	University of California, Los Angeles (UCLA)	United States	86.3										

Be Proud We are on the Map

121	<u>University of Sussex</u>	United Kingdom	51.2
121	<u>University of Zürich</u>	Switzerland	51.2
123	<u>Lund University</u>	Sweden	51.1
124	<u>University of Geneva</u>	Switzerland	51.0
125	<u>Tokyo Institute of Technology</u>	Japan	50.8
126	<u>Dartmouth College</u>	United States	50.5
126	<u>University of Cape Town</u>	South Africa	50.5
128	<u>University of Florida</u>	United States	50.4
129	<u>RWTH Aachen University</u>	Germany	50.3
129	<u>Trinity College Dublin</u>	Republic of Ireland	50.3
131	<u>Radboud University Nijmegen</u>	Netherlands	50.2

September 2007

Cape Town Open Education Declaration

“...we have an opportunity to dramatically improve the lives of hundreds of millions of people around the world through freely available, high-quality, locally relevant educational and learning opportunities.”

Where can I search specifically for Open Educational Resources (OER)?

- opencourselibrary.org
- oercommons.org/oer
- Connexions (cnx.org)
- saylor.org
- oerglue.com/courses

Finding Open Resources



Cousera

https://www.coursera.org

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Relay Graduate School of Education »



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Bookboon

The screenshot shows the Bookboon website interface. At the top, a browser address bar displays "bookboon.com". The main header features the "bookboon.com" logo and the tagline "Download free eBooks and textbooks". Below this is a search bar with the placeholder text "Find the book you need" and a "Go!" button. On the left, a "Textbooks" sidebar lists various categories: Accounting, Career & Study advice, Economics & Finance, Engineering, IT & Programming, Languages, Marketing & Law, Natural Sciences, Statistics & Mathematics, and Strategy & Management. The central area highlights a three-step process: 1. Search or browse categories (with a magnifying glass icon), 2. Choose a book (with a computer monitor icon), and 3. Download in 10 seconds (with a clock icon). Below this process, it states "Download 1000 FREE eBooks Easy and without registration". At the bottom, there is a section for "Most popular free eBooks" and the "Business Connexion" logo with the tagline "Connective Intelligence".

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1 Search or browse categories

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> Lecture Notes
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> Exams
> Projects
> Study Materials
> Related Resources

> Download Course Materials

Archived Versions

> Fall 2002

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> Cite this course
> Email this page
> Newsletter sign-up
> Donate

SHARE

16.100 Aerodynamics

As taught in: Fall 2005



Sketch of a blended-wing-body aircraft. (Image courtesy of NASA.)

Course Features

> Lecture notes
> Exams (no solutions)

> Assignments (no solutions)

OPENCOURSEWARE CONSORTIUM

Getting Started

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- Become a Member
- See Current Members
- Visit OCW Websites
- Find Courses
- Get Involved
- Contact Us

Newsletter

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Events Calendar

March 2011						
S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

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Project Showcase

Check out our new Project Showcase and see what great things our members are doing around the globe.
Read more ...

JOIN NOW

The OpenCourseWare Consortium is a collaboration of higher education institutions and associated organizations from around the world creating a broad and deep body of open educational content using a shared model.

OCW Blog

- Twittering 10 Years of OCW**
As a lead up to the OCW Consortium meeting in May, the Consortium is tweeting out events and user comments from 10 years ...
- Dow and MIT announce multiyear collaboration for innovative educational outreach**
Additional content to be added to MIT OpenCourseWare's Highlights for High School site CAMBRIDGE, MA — The Dow Chemical Company and MIT today announced a multiyear collaboration for innovative educational outreach. The Open Content Licensing for Educators workshop is scheduled for 21 - 25 March 2011 and will be

OCW in the News

- Thu 03 Mar 2011 // THE OTHER Side of 50**
[Thousand Oaks Acorn](#)
- Wed 02 Mar 2011 // Dow gives \$2M to MIT for outreach fund**
[Mass High Tech](#)
- Wed 02 Mar 2011 // Dow and MIT Announce Multiyear Collaboration for Innovative Educational Outreach**
[Business Wire](#)
- Sat 26 Feb 2011 // Turkish Academy of Sciences Launches MIT OpenCourseWare Translations**
[PR.com](#)
- Fri 25 Feb 2011 // FGV Online a**

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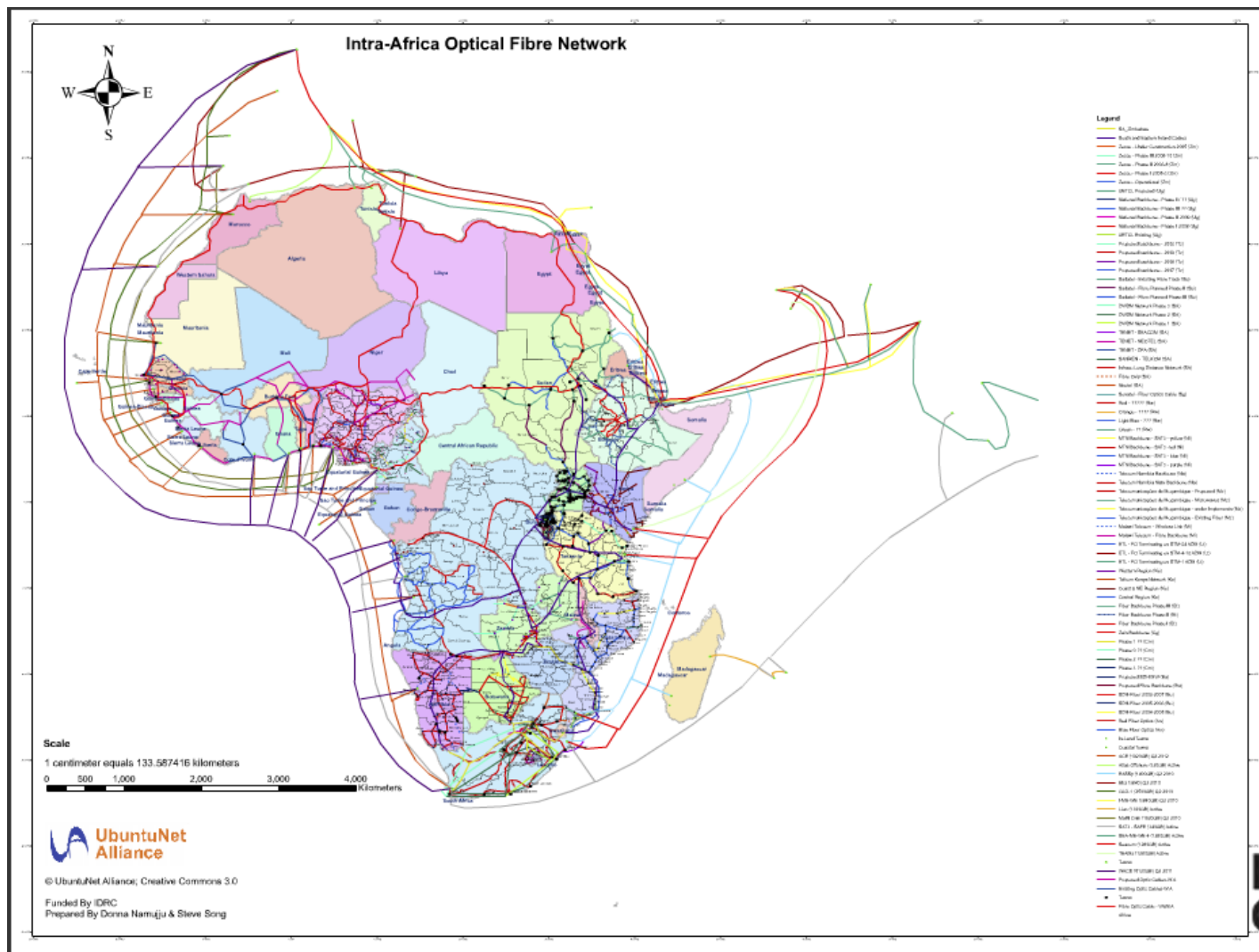
Sustaining Members

- African Virtual University
- China Open Resources for Education
- Japan OCW Consortium
- Johns Hopkins Bloomberg School of Public Health
- Korea OCW Consortium
- Massachusetts Institute of Technology
- Netease Information Technology (Beijing) Co., Ltd.
- Open University Netherlands
- Tecnológico de Monterrey
- TU Delft

UBuntuNet

- UbuntuNet Alliance is a regional association of National Research and Education Networks (NRENs) in Africa. It was established in the latter half of 2005 by five established and emerging NRENs in Eastern and Southern Africa with, these are: MAREN (Malawi), MoRENet, (Mozambique), KENET (Kenya), RwEdNet (Rwanda) and TENET (South Africa). The driving vision was that of securing high speed and affordable Internet connectivity for the African research and education community in Gb/s rather than in Kb/s.
- The objectives of the Alliance are, on a non-profit basis, to:
- Develop and improve the interconnectivity between Research and Education Networking (REN) Participants in Africa and their connectivity with research and education networks worldwide and with the Internet generally;
- Develop the knowledge and skills of ICT practitioners in these institutions; and
- Provide related auxiliary services to Research and Education Networking (REN) Participants

Ubuntunet





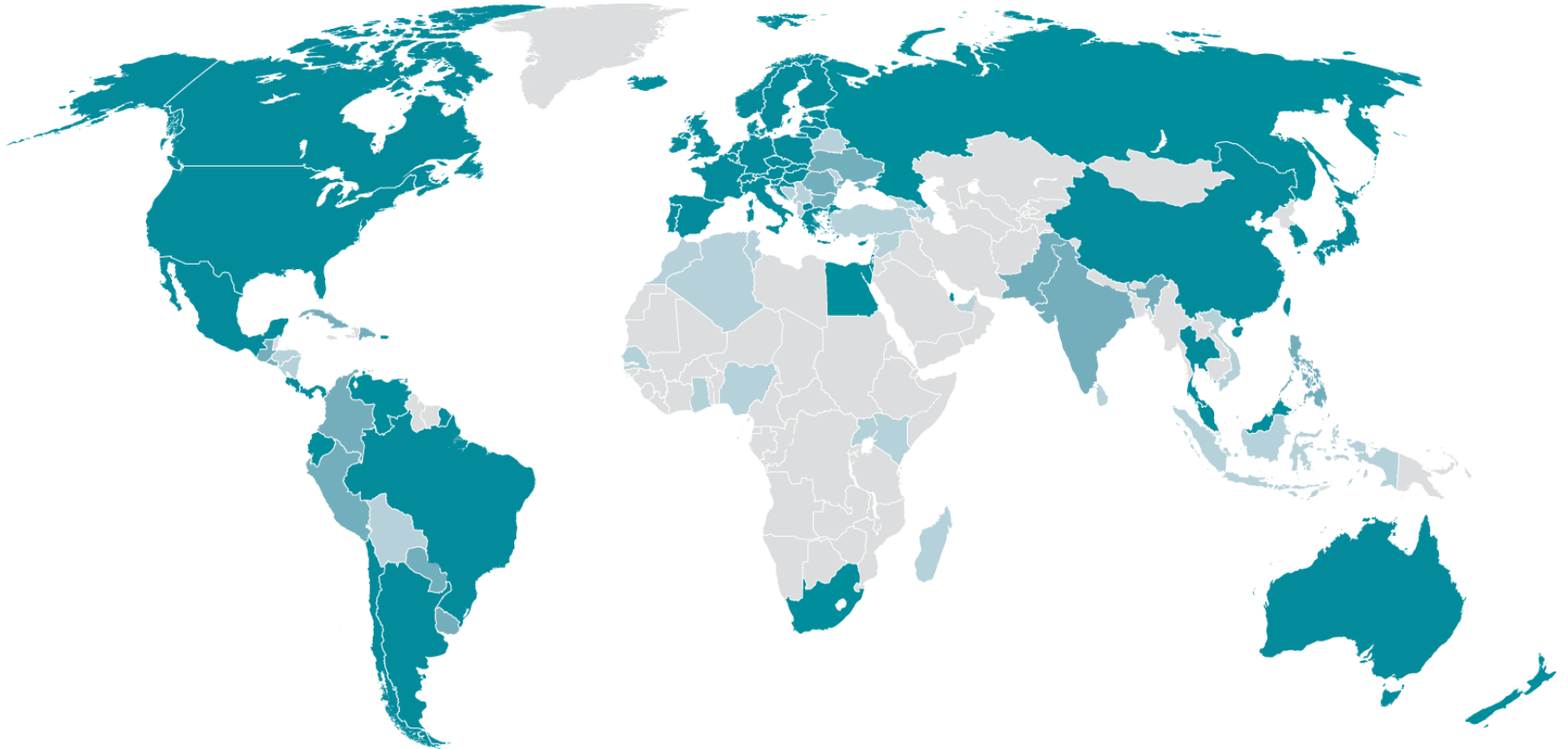
Unleashing new waves of global discovery, together.



Internet2 and Libraries



Advanced Research and Education Networks Worldwide



Internet2 International Partners

Europe-Middle East

ARNES (Slovenia)
BELNET (Belgium)
CARNET (Croatia)
CESnet (Czech Republic)
DANTE (Europe)
DFN-Verein (Germany)
FCCN (Portugal)
GARR (Italy)
GIP-RENATER (France)
GRNET (Greece)
HEAnet (Ireland)
HUNGARNET (Hungary)
Israel-IUCC (Israel)
NORDUnet (Nordic Countries)
POL-34 (Poland)
Qatar Foundation (Qatar)
RedIRIS (Spain)
RESTENA (Luxemburg)
RIPN (Russia)
SANET (Slovakia)
Stichting SURF (Netherlands)
SWITCH (Switzerland)
JISC, UKERNA (United Kingdom)

Asia-Pacific

AAIREP (Australia)
APAN (Asia-Pacific)
ANF (Korea)
CERNET, CSTNET, NSFCNET (China)
ERNET, C-DAC (India)
JAIRC (Japan)
JUCC (Hong Kong)
SingAREN (Singapore)
MYREN/MDeC (Malaysia)
NECTEC / UNINET(Thailand)
TANet2 (Taiwan)
NGI-NZ (New Zealand)
TERENA (Europe)

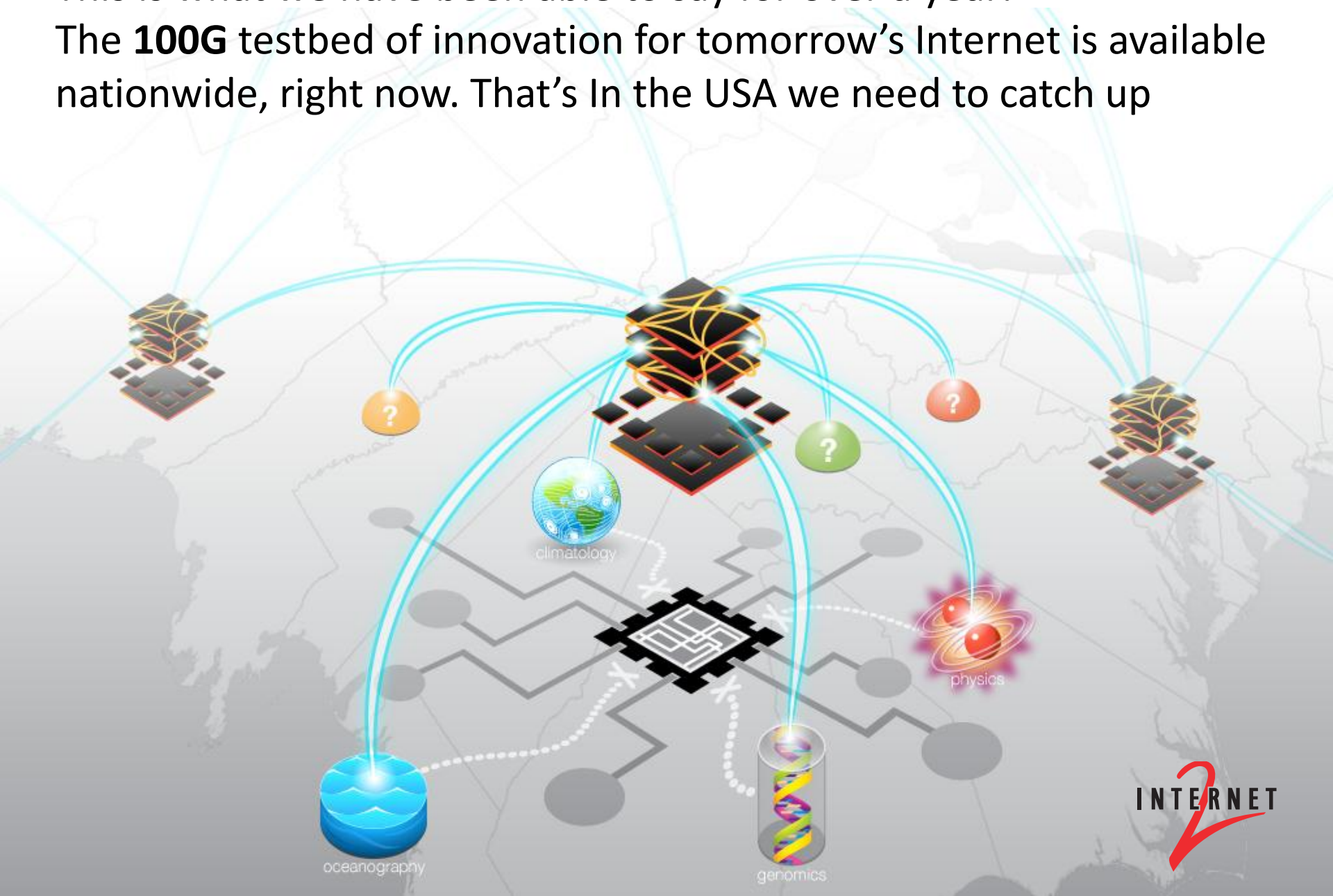
Africa

MCIT [EUN/ENSTINET] (Egypt)
TENET (South Africa)

Americas

CANARIE (Canada)
CLARA (Latin America & Caribbean)
CEDIA (Ecuador)
CNTI (Venezuela)
CR2Net (Costa Rica)
CUDI (Mexico)
REUNA (Chile)
RETINA (Argentina)
RNP [FAPESP] (Brazil)
SENACYT (Panama)

This is what we have been able to say for over a year:
The **100G** testbed of innovation for tomorrow's Internet is available
nationwide, right now. That's In the USA we need to catch up

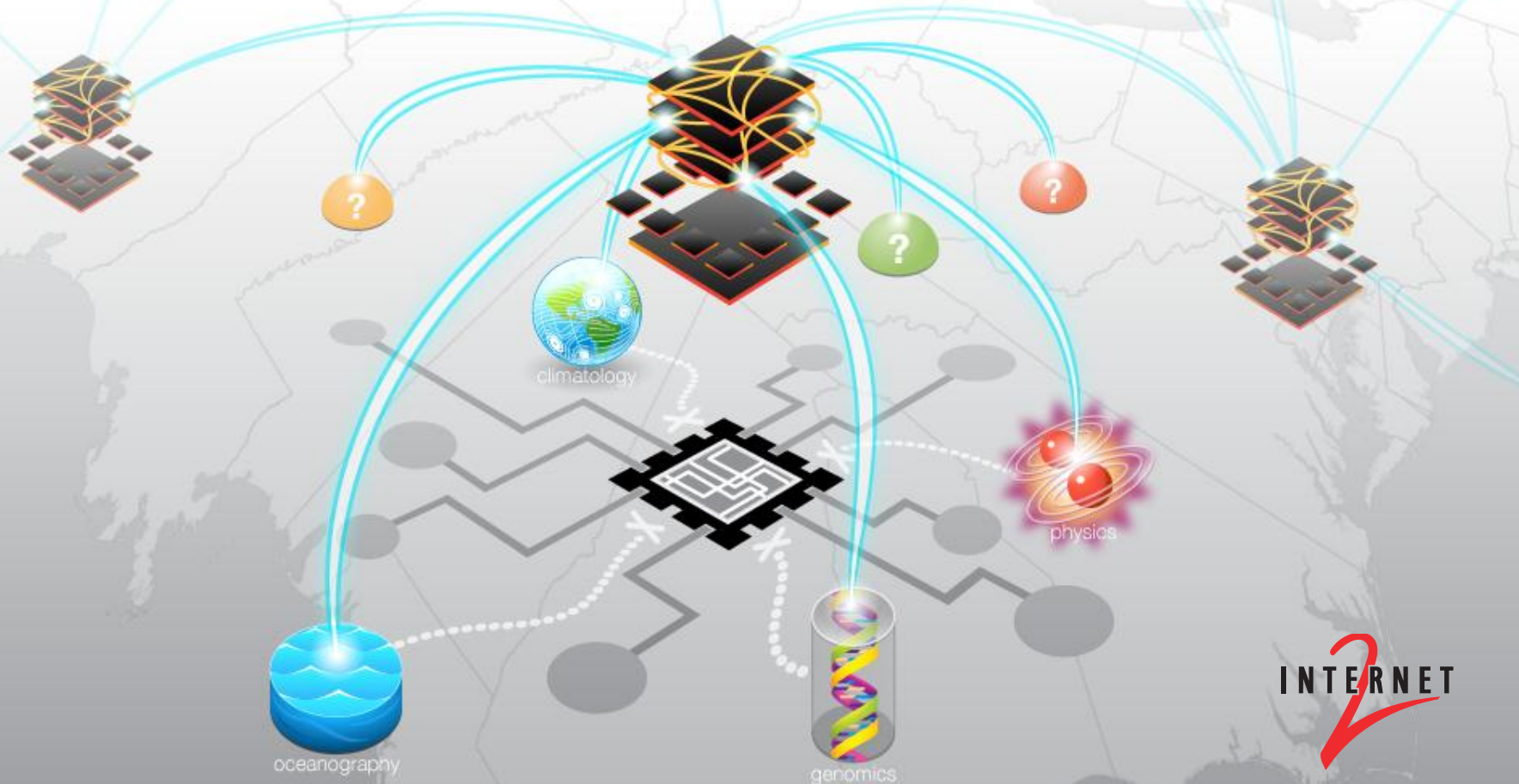


Does this create a platform for innovation?

Abundant bandwidth to enable innovation? ☒

Programmability to encourage application innovation? ☒

Support data intensive science? ☒



Does this create a platform for innovation?

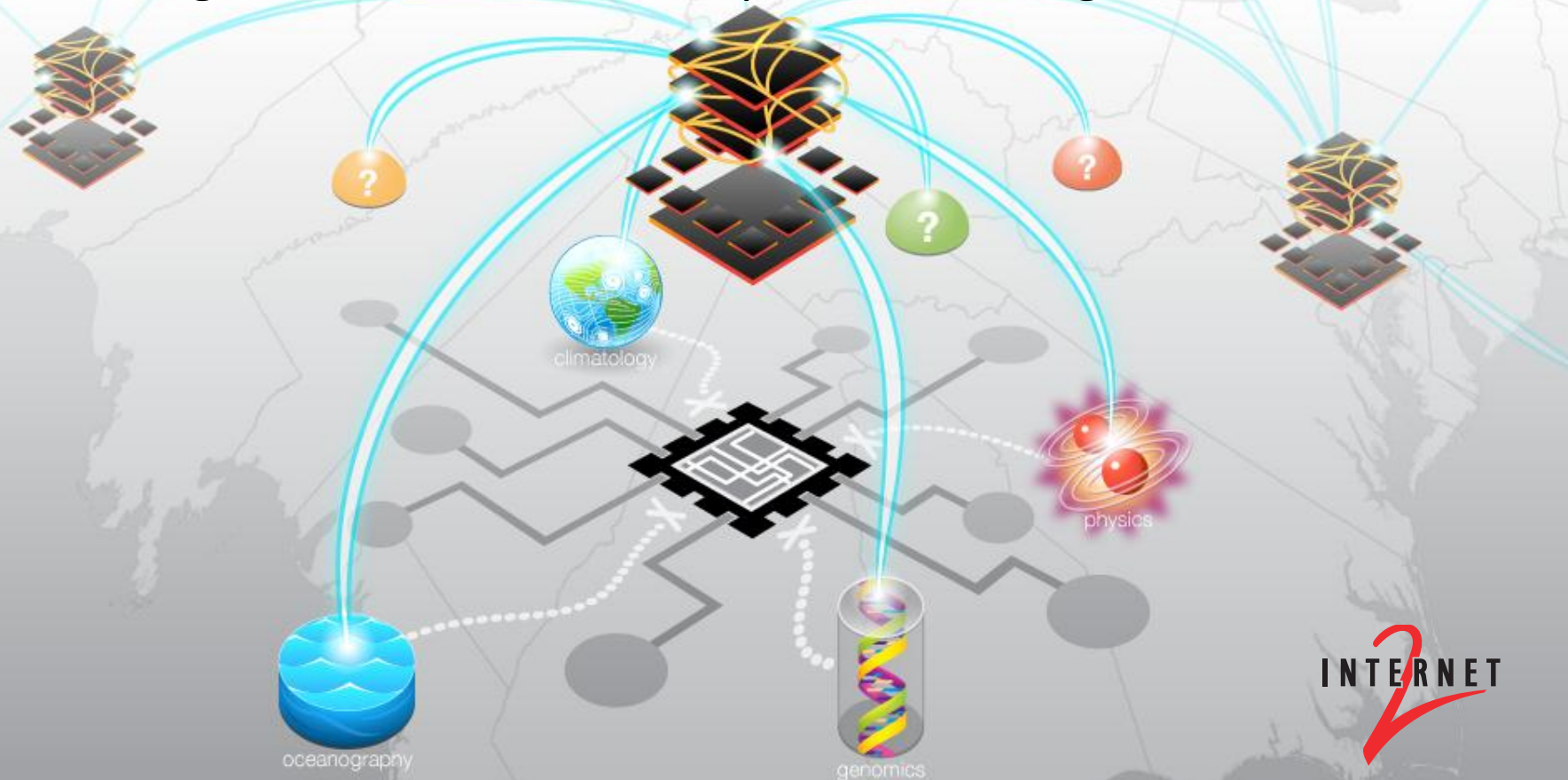
Abundant bandwidth to enable innovation? ☒

Software-defined networking substrate? ☒

Support data intensive science? ☒

Virtualization? ☐

Integrate network with compute and storage? ☐





AND HIGHER EDUCATION

Today's top cloud innovations in higher education IT

08

FEBRUARY

The African Virtual University Open Education Resources Portal

OpenEd & OER



The [African Virtual University](#) (AVU) has just launched a new OER portal that contains quality resources developed together with 12 universities in 10 African countries and released as Open Education Resources

under the Creative Commons open licence. The portal has been named [OER@AVU](#) and it is available in 3 languages: English, French and Portuguese.

Most of the resources are still being uploaded to the repository of the portal, but it will include about 219 courses and 100 videos of the African Virtual University on mathematics, physics, biology, chemistry, teacher education professional courses, and ICTs in education.

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TOP HIGHER-ED USES OF THE CLOUD *

* Percent of colleges who have migrated or planned to migrate these applications to the cloud





TOP INSTITUTIONS USING THE CLOUD



Massachusetts
Institute of
Technology

Berkeley
UNIVERSITY OF CALIFORNIA

W UNIVERSITY of
WASHINGTON

M UNIVERSITY OF
MICHIGAN



HARVARD
UNIVERSITY



UNIVERSITY OF
SAN FRANCISCO

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DID YOU KNOW?



of institutions want increased efficiency, and believe that **cloud computing** is the best way to make this happen



By the end of 2014, more than **4 out of 5** higher education students are expected to take some or all of their classes online

Banner by® ellucian™

Banner is an Enterprise Resource Planning (ERP) platform for higher education to help support departments and users on campus. Banner allows staff to manage their campus with student recruitment, degree advising, financial aid application and billing/payment tools all from within the cloud.

www.ellucian.com/student-information-system



Cirrus Insight is a tool that helps staff manage student and alumni relationships by connecting the cloud-based Salesforce CRM with Gmail. Using the Cirrus extension for Chrome, staff can view Salesforce contact records, check up on student leads and sync documents/calendars between Salesforce and Google Drive, without ever having to leave their Gmail inbox.

www.cirrusinsight.com



Evernote is cloud-based note taking platform, allowing teachers to capture notes, organize lesson plans, collaborate on projects, snap photos of whiteboards, and more. Notes are accessible anywhere (both offline and online), and are synced across mobile and desktop devices.

www.evernote.com/schools



Amazon Web Services (AWS) is a scalable cloud platform that gives institutions access to a variety of IT management tools, while allowing them to store large amounts of data on Amazon's remote servers. This allows colleges to run custom proprietary software, store secure student data and even lets students deploy projects through AWS.

www.aws.amazon.com/education



Prezi is a cloud-based presentation software, allowing teachers and instructors to create presentations with images, video and text right from their internet browser - and they can even edit offline. The software allows collaboration between teachers and allows presentations to be streamed from any device.

www.prezi.com/prezi-for-education

Lets connect the dots

- 3D printing
- Crowd funding
- Online Education
- Open Resources

Virtual and Visual Cloud using OpenSimulator





Never Stop Learning

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Thank you

Questions

