



# The Future of Federation

Adding your voice to the future of federations

REFEDS Federation 2.0 Working Group  
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# REFEDS

## Federation 2.0 Working Group

- Began work in February of 2019
- Global participation in bi-weekly phone calls
- Charter:

WG is following a structured process to gather input from a wide range of information sources and individual perspectives, in order to review the past and current states and formulate possible future scenarios for the evolution of research and education federations. Data will be analysed and synthesised to articulate the value of R&E federation, identify potential changes that may increase that value, and recommend actions that R&E Federations and others can take to increase their value over time.





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## Process





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## Scenario Planning Workshop

*After TNC19*

Autonomy





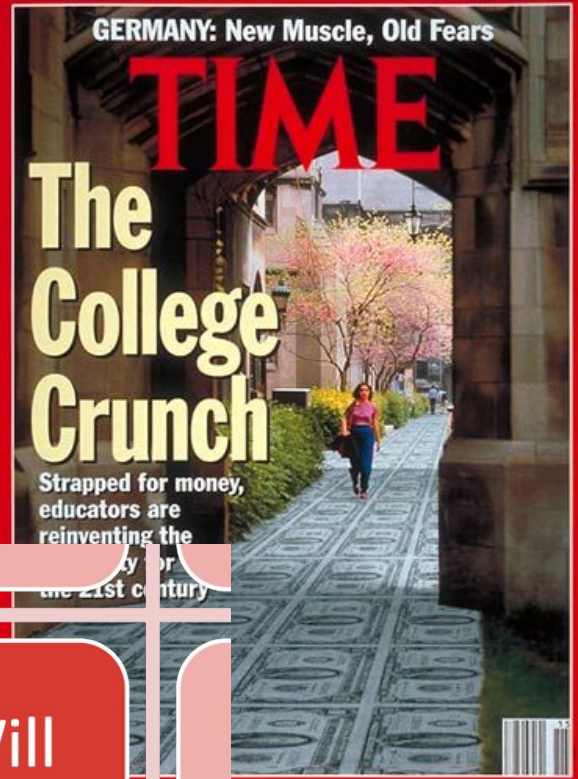
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Jenny is an archaeologist ... [who stores] her collected data in G Suite using her institution provided account... Nurul is happy to collaborate. However, her institution has her storing all of her research materials in Office 365.

Autonomy

I Will Survive

Scarcity





Financial pressures on institutions lead to infrastructure investments in off the shelf “enterprise” solutions that don’t easily enable inter-institution collaboration, much less global collaboration.

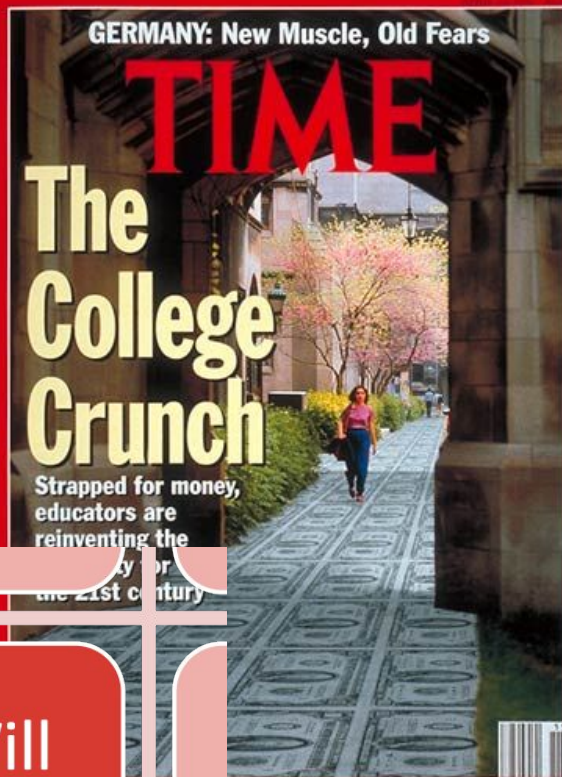
Reflects a reality for smaller or less research oriented organizations where the focus is on providing education solutions.

Reflects the growing market share of “enterprise” solutions that were not designed with collaboration context beyond corporate solutions.

Autonomy

I Will Survive

Scarcity





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Everything was taken away from us - “*the others*” closed themselves off and we were left with nothing ...[now] students are trained in the system at an early age, and are taught how to be creative and innovative in making things even better for us. ....They learn how to analyze data and how to use this system to improve things, how to develop processes and policies to make our lives even easier. All research and education is designed to benefit us.



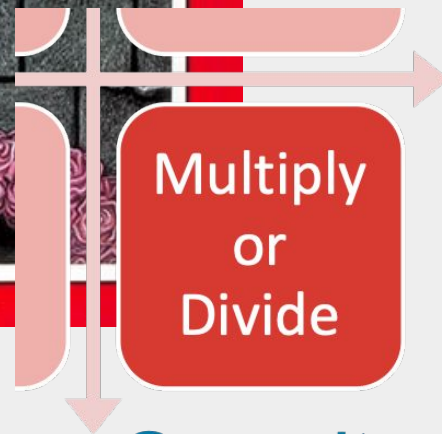
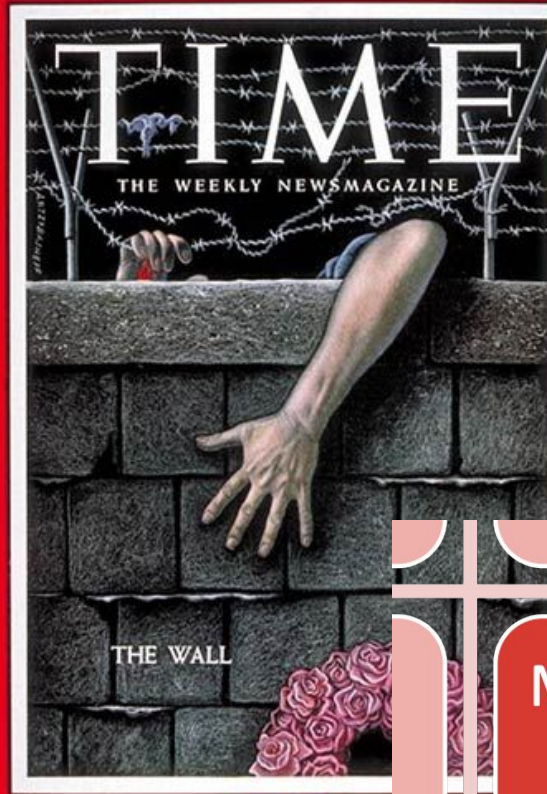


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Political forces isolate a country and the government directs the use of resources.

Reflects how current political tensions are affecting research (Chinese participation in US biomedical research)

Suggests a need to ensure protocols and standards don't artificially isolate researchers.



Direction

Scarcity





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To bypass the bureaucracy and delays, AppleGoogle establishes massive research centers around the world, directly recruiting research talents in multiple disciplines.... Researchers respond to the call to action, with large-scale defections from traditional higher learning institutions to work in these research centers. Further, AppleGoogle establishes learning institutes starting at K-12 range to in order to develop the next generation of digitally-skilled talents.

French Advances / My Doctor Fired

# TIME

IT PROMISES TO SOLVE SOME OF HUMANITY'S MOST COMPLEX PROBLEMS

BY JEFF BEZOS, NASA AND THE CIA.

EACH ONE COSTS \$10,000,000 AND OPERATES AT 459° BELOW ZERO. AND NOBODY KNOWS HOW IT ACTUALLY WORKS

## THE INFINITY MACHINE

BY LEV GROSSMAN

Mission Accomplished

Abundance

Direction

times.com



# REFEDS

Powerful corporations set the protocols and standards to meet their goals, not taking into account academic research and education needs.

Reflects the increasing influence of the corporate interests in interoperation standards.

Suggests a need to participate in standards making meetings outside the academic community.

French Advances / My Doctor Fired

# TIME

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Once upon a time (in the not too distant future), in a Holodeck far far away, there was a stream of young collaborators searching for their perfect collaboration match. These collaborators are young, energetic, and confident. Around them are so many opportunities, so many choices. Will they find that perfect match...

Autonomy

Abundance

Tinder for  
Collaboration

Joy of  
**Virtual  
Reality**

And why it's  
about to change  
the world  
By Joel Stein



Palmer Luckey, 22,  
inventor of the  
Oculus Rift, is one



# REFEDS

Explores the possibilities of research without resourcing constraints - or funding incentives.

Illustrates the need for organizations that coordinate and decide on directions for research and development.

Suggests services that might be attractive to researchers (that are being offered “for profit” at this time)

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Abundance

Tinder for Collaboration



Palmer Luckey, 22,  
inventor of the  
Oculus Rift, is one



# References

Working Group Wiki <https://wiki.refeds.org/display/GROUPS/Federation+2.0>

Call participation <https://internet2.zoom.us/j/8853848902>

Alternating Wednesdays

Mailing list <https://lists.refeds.org/sympa/subscribe/federation2>

Hämmerle, Lukas. "The Future of Federations – Part One: Federations on Their Way into the Future – A View from Switzerland." *REFEDS* (blog), April 10, 2018. <https://refeds.org/a/1903>.

Barton, Tom. "The Future of Federations – Part Two: Federation 2.0." *REFEDS* (blog), May 7, 2018. <https://refeds.org/a/1930>.

Phillips, Chris. "The Future of Federations – Part Three: Tackling the Innovator's Dilemma." *REFEDS* (blog), May 30, 2018. <https://refeds.org/a/1953>.





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# Five draft strategies

Recommendations, which are essentially the next steps to implement each strategy, are being developed.





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Renewal

Provide opportunities for skilled people at universities to allocate some of their time towards developing solutions to problems that R&E federations need addressed, as one means of countering the loss of skilled people to big corporations and waning set of universities who see it in their self interest to develop and in-source those skill-sets.



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## Discussion

What if it is not a problem in the way it's framed. Business model problem. Fed op & participants - what it brings us is use cases for what we would like to solve -- why don't we pay back for the value it is give. Pool (less substantial) resources? Or we should always strive for sustainable business models.

Sweep up small amounts of capacity instead of looking for contractual agreements for project engagement? Develop a process for needs defined and pull in "volunteers" -- smaller scale contribution -- instead of looking for FTE engagement? Reduce friction, reduce pre-discussion so that engagement is easier. Bringing in contributions, not necessarily money, doc fixes, eg . Low entry contribution to shared projects. Big and small contributions have been going on for years - conference helps illustrate solutions in progres and developed in isolation. Don't loop back and offer guidance and lessons. -- Give nuanced answers . CF commercial simple answers ad simple question: we too complex

Why leaving? Outsourcing? Smaller institutions that don't have resources to lose? Are we digging our own grave. Yes & Yes?

SMALL CONTRIBUTIONS GATEWAY TO LARGE CONTRIBUTIONS.

Why is this an issue?







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## Engagement

- Make it far easier to participate in R&E Federation.
- Bring R&E Federation value to more academic communities, especially those lacking the resources of the top tier institutions, wealthy nations, and large-scale research activities that have driven development of R&E Federation to this point.
- Increase the ability to influence policy and standards development. The more broadly valued, the more likely to be able to sustain that value and shape or adapt to external changes.



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## Discussion

Threats/Opportunities - government engagements on eIDs. Corporation side - federations and higher ed folks have approached the corporations to ask that solutions be adapted, and then enterprises that fill the gaps that support the goals of collaboration offer strategic solutions. Classification of vendors or even solutions community provided and supporting those that meet goals

If we get people on board with a clear definition of value, the engagement will follow. Innovation around the value proposition: if the federation value is clear and sold the commercial solutions

Selling the value to different constituencies (Are commercial solutions a target for “selling” federation? YES) Bring along the corporations. Connect abstract concepts to the different constituencies. Get the concepts in the RFPs? We need a common vocabulary so we don't talk past each other.

Nurturing multilateral applications: supported in research, but what about other solutions? Student rideboard in an area. Prizes for multilateral application. Move to cloud a move to bilateralism. How do you get the message via branding? Success of a killer app that carries the value of mu





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## Governance

- To keep a sharp focus on the mission of R&E Federation, stack the governance deck.
  - Increase representation by those representing needs of researchers and scholars.
  - Increase representation by those not in the entitled, leading edge.



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## Discussion

Raised the uncommon annual fees, needed lots of discussion and engagement, **the missing people were the SPs**. Engaging the DIVERSE set of 300+ corporate partners. Multilateral implementers.

Get back in provost office - administrative overlaps the R&E





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## Harmonisation

- Eliminate unnecessary complexity in interop, on-boarding, change management, policies and processes.
- International Baseline. Clear policy and process requirements for participation in global federation.
- Make centrally operated services available that support operation of federation infrastructure and services to reduce duplication and impedance to operate each federation.



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## Discussion

Federation is (too) hard. Baseline good for those participating in community.... Commercial vendors who kinda support saml .... Messy, difficult, hard to wrap head around, the IT teams stretched thin to explain to the (commercial) SPs.

Is the future of federation not doing federation?

What if federation is too hard because it's looped into IT and the effort isn't IT but policy, trust and assurance. We target to technical but we might be missing the policy people -- the policy stakeholders.





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## Sustainability

- Find business models to sustain operations so that R&E Federation can continue to be able to serve and influence, and minimise the amount of funding it takes to make it work so that business models are more likely to be sustainable over the long term (achieved in part by Harmonisation).
- Because of the concerns over how national governments or megacorporations may impede key values and needs of R&E, it is essential that business models look beyond governments for their long term viability.



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Discussion







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What are we missing?





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Discussion





## Draft Mission

The mission of international identity federation is to provide a trusted infrastructure for scholarly collaboration in support of its member institutions' missions of teaching, learning, research, and public service by:

- Providing policy, process, and technical standards and guidelines to promulgate trust
- Meeting the unique requirements of research and higher education, particularly academic freedom and open access
- Enabling timely access by faculty, researchers, and students to services that support higher education and research
- Allowing scholars, researchers, and students to use those services
- Ensuring that users' experience is timely, seamless, secure, and privacy preserving
- Providing technical and operational resources
- Maintaining a vital and engaged community to guide all aspects of these activities



**REFEDS**

Discussion





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Thank you!

