

31 January 2017

Research Information Management at Duke University: A Researcher-centered Approach

OCLC Research Library Partnership

Works in Progress Webinar



Duke UNIVERSITY

What is Research Information Management (RIM)?

RIM is the aggregation, curation, & utilization of information about research

Other confusing appellations:



- CRIS (Current Research Information System)
- RNS (Research Networking System)
- RPS (Research Profiling System)



- RIM ≠ Research Data Management (RDM)
- RIMs are not independent researcher profile systems like Research Gate or Academia.edu



Paolo Mangiafico

Coordinator of Scholarly Communications Technology
Duke University

paolo.mangiafico@duke.edu

Duke UNIVERSITY

Research Information Management at Duke University: A Researcher-centered Approach

Paolo Mangiafico
Duke University Libraries

OCLC Research
Works in Progress Webinar
January 2017



Duke UNIVERSITY

DUKE UNIVERSITY
LIBRARIES



First, a little bit about Duke University, for those who may not know about it.

- We're in Durham, North Carolina, in the southeastern United States.
- Duke is a private university, and one of the three major research universities in our region, along with the University of North Carolina and North Carolina State University.
- Together these three form the basis for our region's nickname, the Research Triangle, and have become a magnet for a growing technology and biomedical industries.
- Duke is usually considered one of the top universities in the United States, but might be most well known to the general public for its basketball team.
- We have about 15,000 students and 4,000 faculty, and a total of about 37,000 employees, many of whom are affiliated with a regional network of hospitals and medical research facilities.

This photo shows part of the library, where I work.

[Photo by Mark Zupan, Duke University Libraries: <https://www.flickr.com/photos/dukeunivlibraries/6235406088/in/album-72157634654818778/> used under CC BY-NC-SA]

Setting the stage



To begin our conversation about research information management at Duke, let's start by looking at where we are now, and then can work backwards to talk a bit about how we got here, and what we've learned along the way.

What are we doing, and why does it matter?



But first, I'd like to talk a little bit about the big picture of what we're doing, and why we're doing it.

Research information management means different things to different people – most people usually think of researcher profiles, or institutional reporting and analytics processes, or ways to count and judge that elusive thing called productivity.

It is all those things, but at Duke, at least so far, we've been thinking about it in a broader way. We're primarily thinking about it as a way of understanding the complexity and richness of our community, and of sharing this richness with the broadest possible audiences. One of Duke's key strategic goals is "knowledge in the service of society" and our planning for this project starts from looking at it through this lens.

A synoptic view



Any university is by definition is going to be immensely multi-faceted, and programs like this can provide a kind of synoptic view of the many and varied contributions of our community, helping members of the community find each other for collaboration or new research or teaching opportunities, and helping the general public find experts and knowledge about all the topics our researchers and teachers work on.

From outside-in to inside-out



I work in Duke Libraries, and for us there's another angle too.

For many years now we've seen a growing shift in emphasis in research libraries – from focusing primarily on providing local access to research produced elsewhere, toward a greater focus on providing global access to research produced by the institution's community.

Lorcan Dempsey from OCLC and others have been talking about this for a long time, and we've seen big steps toward making this a reality in the ways libraries have put greater focus on open access programs, publishing, data management, and other efforts that help researchers in their local community share their works widely, archive them for the long term, and track how they are being used.

In Duke Libraries, our primary reason for being involved in the university's research information management program has been to support this goal.

But I don't want to get too far ahead of myself. Let's move on to looking at how the program works now, and you'll start to see some of the elements I've already mentioned as we go.

Contact Information

9 Circuit Dr, Environment Hall, Durham, NC 27708

Box 90328, Durham, NC 27708

✉ richard.newell@duke.edu 📞 (919) 681-8663

🔗 [Energy Initiative Webpage](#)

🔗 [Google Scholar](#)

🔗 [IDEAS Profile](#)

🔗 [LinkedIn Profile](#)

🔗 [NBER Profile](#)

🔗 [Nicholas School Faculty Webpage](#)

🔗 [ORCID Profile](#)

🔗 [ResearchGate Profile](#)

🔗 [ResearcherID Profile](#)

🔗 [SCOPUS Profile](#)

📅 Education and Training

Ph.D., [Harvard University](#) 1997

M.P.A., [Princeton University](#) 1990

B.A., [Rutgers University](#) 1988

B.S., [Rutgers University](#) 1988



As you scroll down the page, you can see lots of information about this professor, and his work.

There's contact information, links he has added to other sites about him, and his education and training.

Selected Publications

Books

Henderson, RM, and Newell, RG. [*Accelerating Energy Innovation Insights from Multiple Sectors*](#). University of Chicago Press, May 30, 2011.

Newell, RG, and Henderson, RM. [*Accelerating Energy Innovation: Insights from Multiple Sectors*](#). December 5, 2009.

Book Sections

Newell, RG. "[The role of energy technology policy alongside carbon pricing](#)." In *Implementing a US Carbon Tax: Challenges and Debates*, 178–190. February 11, 2015.

Newell, RG, and Iler, S. "[The Global Energy Outlook](#)." In *Energy & Security: Towards a New Foreign Policy Strategy*, edited by J Kalicky and D Goldwyn. Washington, DC: Johns Hopkins University Press, 2013. (Chapter)

Newell, RG. "[Inducing innovation for climate change mitigation](#)." In *Issues of the Day: 100 Commentaries on Climate, Energy, the Environment, Transportation, and Public Health Policy*, 20–21. January 1, 2012. [Full Text](#)

Henderson, Rebecca M., and Newell, R. "[Introduction and Summary](#)." In *Accelerating Energy Innovation: Insights from Multiple Sectors*, edited by RM Henderson and RG Newell, 1–23. Chicago, IL: University of Chicago Press for the National Bureau of Economic Research, May 30, 2011. [Open Access Copy](#)

Duke UNIVERSITY

As you keep scrolling down and tipping open each section by clicking on its heading, you reach publications.

It shows this professor's books and book sections, and further down...

Journal Articles

Gerarden, T, Newell, RG, and Stavins, RN. "[Assessing the Energy-Efficiency Gap.](#)" *FEEM Working Paper*, no. 035 (April 27, 2015).

Gerarden, T, Newell, RG, and Stavins, RN. "[Deconstructing the energy efficiency gap: Conceptual frameworks and evidence.](#)" *American Economic Review* 105, no. 5 (January 1, 2015): 183–186. [Full Text](#) [Open Access Copy](#)

Newell, RG, and Siikamki, J. "[Individual time preferences and energy efficiency.](#)" *American Economic Review* 105, no. 5 (January 1, 2015): 196–200. [Full Text](#) [Open Access Copy](#)

Newell, RG, Pizer, WA, and Raimi, D. "[Carbon Markets: Past, Present, and Future.](#)" *Annual Review of Resource Economics* 6, no. 1 (November 10, 2014): 191–215. [Full Text](#) [Open Access Copy](#)

Gerarden, T, Newell, RG, Stavins, RN, and Stowe, R. "[An Assessment of the Energy-Efficiency Gap and Its Implications for Climate-Change Policy.](#)" (November 1, 2014).

[Show More Journal Articles...](#)

Reports

Newell, RG, and Raimi, D. *Shale Public Finance: Local Government Revenues and Costs Associated with Oil and Gas Development*. September 2015. [Open Access Copy](#)

Newell, R. *A U.S. Innovation Strategy for Climate Change Mitigation (Submitted)*. December 2008. [Open Access Copy](#)

Rai, A, Newell, R, Reichman, J, and Wiener, J. *Intellectual Property and Alternatives: Strategies for Green Innovation*. 2008. [Open Access Copy](#) [Link to Item](#)

Duke UNIVERSITY

... you get to his journal articles, reports, scholarly editions, and other kinds of publications.

You might notice that next to some of the citations are buttons that say “Full Text” or “Open Access Copy” or “Link to Item.”

Each of those will take you to a version of that publication – not just the metadata, but the publication itself.

Deconstructing the energy efficiency gap: Conceptual frameworks and evidence

Journal Article

Full Text

- [Published version \(via Digital Object Identifier\)](#)
- [Open Access Copy from Duke](#)

Duke Authors

- [Newell, Richard G.](#)

Cited Authors

- Gerarden, T; Newell, RG; Stavins, RN

Published Date

- January 1, 2015

Published In

- [American Economic Review](#)

Volume / Issue

- 105 / 5

Start / End Page

- 183 – 186

Duke UNIVERSITY

If you click on the publication's title you'll get to a page with more information about it, including a little more detail about each of those links.

The green button on the previous screen that said "Full Text" is a Digital Object Identifier, which links to the published version in the journal.

The blue button that says "Open Access Copy" links to a version of the article that has been deposited in Duke's open access repository, making it easy for someone who doesn't have access to the journal web site to still be able to read the work, while indicating that this is a secondary copy, and they should still cite the original.

The third kind of link (not shown here) is more generic – it can be any link supplied by the author or found in the article metadata. Often this is a PubMed link, or a link to a different repository, or for books it could be a link to the publisher's web site or Amazon where someone could buy a copy of the book.

One other thing to note before we leave this page is that the journal name is also a link – clicking on it will show you all other articles by Duke researchers published in that same journal.

If any of the co-authors were also at Duke, their names would also be linked to their profiles, so you can branch out and learn more about this author's Duke collaborators.

Selected Grants

[Richard Newell, Sloan 2015–16](#) awarded by [Alfred P. Sloan Foundation](#) 2015 – 2017

[Developing a comprehensive understanding of the local government fiscal impacts from oil and gas development in USA](#) awarded by [Alfred P. Sloan Foundation](#) 2014 – 2016

[Energy Outlook Comparison](#) awarded by [International Energy Forum](#) 2015 – 2016

[Richard Newell with Snnovations](#) awarded by [Snnovations](#) 2015

Awards that do not permit publicity, particularly prior to 2012, are not displayed.

Recent Courses

[ENERGY 396: Connections in Energy: Interdisciplinary Team Projects](#) 2016 –

[ENERGY 796: Connections in Energy: Interdisciplinary Team Projects](#) 2016 –

[ENVIRON 593: Independent Studies and Projects](#) 2016 –

[ENVIRON 899: Master's Project](#) 2016 –

[ENERGY 395: Connections in Energy: Interdisciplinary Team Projects](#) 2015 –

[ENERGY 795: Connections in Energy: Interdisciplinary Team Projects](#) 2015 –

[ENERGY 396–1: Connections in Energy: Interdisciplinary Team Projects](#) 2014 –


[ENERGY 635: Energy Economics and Policy](#) 2014 –

[ENVIRON 635: Energy Economics and Policy](#) 2014 –


Some information on this profile has been compiled automatically from Duke databases and external sources. (Our [About page](#) explains how this works.) If you see a problem with the information, please write to Scholars@Duke and let us know. We will reply promptly.

Duke UNIVERSITY

And returning to the profile page, the last two sections show recent grants this professor has received and courses he has taught recently.



NICHOLAS SCHOOL OF THE ENVIRONMENT



[ABOUT](#)
[ADMISSIONS](#)
[ACADEMIC PROGRAMS](#)
[PEOPLE](#)
[CAREER CENTER](#)

[Home](#) > [People](#) > [Faculty Directory](#) > Richard G. Newell

nicholas school community

faculty directory

—

eos division faculty

esp division faculty

msc division faculty

marine lab faculty

faculty by expertise

+

international research map

faculty openings

staff directory

+

faculty & staff notes

student directory

+


student groups

alumni

+

board of visitors

Search the Nicholas School Community



RICHARD G. NEWELL

Gendell Professor of Energy and Environmental Economics
Director, Duke Energy Initiative

PRIMARY APPOINTMENT

Environmental Science & Policy Division

SECONDARY APPOINTMENT

Earth & Ocean Sciences Division

Dr. Richard G. Newell is the Gendell Professor of Energy and Environmental Economics at the Nicholas School of the Environment, Professor of Economics, and Professor of Public Policy at Duke University. He is Director of the Energy Data Analytics Lab and during 2011-2016 he was Founding Director of the Duke University Energy Initiative. Dr. Newell is the former Administrator of the U.S. Energy Information Administration (EIA), the agency responsible for official U.S. government energy statistics and analysis. He also served as the Senior Economist for energy and environment on the President's Council of Economic Advisors, prior to which he was a Senior Fellow at Resources for the Future (RFF).

area(s) of expertise

Climate Change
Energy
Environmental Economics
Environmental Policy

contact information


Box 90328
Durham, NC 27708
9 Circuit Dr, Environment Hall
Durham, NC 27708
(919) 681-8663
richard.newell@duke.edu

education

Ph.D., Harvard University (1997)
M.P.A., Princeton University (1990)
B.A., Rutgers University (1988)
B.S., Rutgers University (1988)

phd students


BRIAN PREST



If you had searched for this professor’s name in Google, you might have landed on this page, which is his profile on the web site for the school he is affiliated with.

But he didn’t have to build this separately – this web site is drawing profile data from Scholars@Duke, so as long as he keeps it up to date in the university system, it will also be current here, with no additional effort from him.

Almost all schools and departments at Duke now populate their faculty profiles from the central Scholars@Duke system, and this both creates consistency and saves a lot of work for many distributed webmasters and the faculty themselves.



SCHOLARS@DUKE

Newell, Richard G.'s Widgets

Collection to Display: ?

Publications

Number of items to return: ?

all

Start Date: ?

End Date: ?

Display Format: ?

☒ Detailed
 ☐ Abbreviated

Styling: ?

☒ Styled
 ☐ Unstyled

Your Embed Code:

```
<script type="text/javascript"
src="https://scholars.duke.edu/widgets/api/v0.9
/people/publications/all.js?uri=https:
//scholars.duke.edu/individual/per1676282&
formatting=detailed&style=yes&start=&end=">
</script>
```

After making your selection, copy and paste the embed code above. The code changes based on your selection.


all publications, in detailed format styled

Newell, RG, and Raimi, D. [Shale Public Finance: Local Government Revenues and Costs Associated with Oil and Gas Development](#). September 2015. [More info](#)

Gerarden, T, Newell, RG, and Stavins, RN. ["Assessing the Energy-Efficiency Gap."](#) FEEM Working Paper, no. 035 (April 27, 2015). [More info](#)

Gerarden, T, Newell, RG, Stavins, RN, and Stowe, R. [An Assessment of the Energy-Efficiency Gap and Its Implications for Climate Change Policy](#). April 20, 2015. [More info](#)

Newell, RG. ["The role of energy](#)



If Professor Newell also has a personal or lab web site or a blog or some other place he wanted to have his profile information displayed, he could easily add a bit of code that will draw his Scholars@Duke information in real time into the other web site.

This is a view of the widget functionality that we've built into the system, which is only visible after you've logged in.

You can select which information you want, some parameters of how much you want and how you want it displayed, and the system will give you a bit of embed code you can drop into any other web site.

The code for this functionality has been made open source, by the way, so if your institution is also using VIVO, you can easily implement this too.

Home
People
Schools / Institutes
Research
Scholars Admin

Richard G. Newell ⓘ

Gendell Family Professor of Energy and Environmental Economics ⓘ

Profile URL ⓘ

<https://scholars.duke.edu/person/richard.newell>

Overview ⓘ

Dr. Richard G. Newell is the Gendell Professor of Energy and Environmental Economics at the Nicholas School of the Environment, Professor of Economics, and Professor of Public Policy at Duke University. He is Director of the Energy Data Analytics Lab and during 2011–2016 he was Founding Director of the Duke University Energy Initiative. Dr. Newell is the former Administrator of the U.S. Energy In... [more](#)

Office Hours ⓘ

Global Scholarship ⓘ

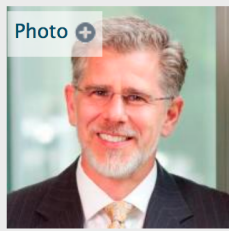
Saudi Arabia (Country)
Research

United States of America (Country)
Research

northern America (Continent)
Expertise

Add Global Scholarship

Photo +



9 Circuit Dr, Environment Hall
Durham, NC 27708
Box 90328

Edit Faculty Appointment Title

Titles come from dFac, Duke's faculty appointments system. Contact your [power user](#) to correct a title or change the title displayed on your behalf.

View This Profile

Generate Report

Generate CV

Manage Delegates

Publication Graph is hidden

Display Pub Graph

Duke UNIVERSITY

So how does all this information get into the central profile in Scholars@Duke?

Most of it is pulled from systems of record, like the campus directory, the faculty appointments system, or the course system or grants system.

To edit any of the records that come from those sources, you need to go to the original source, rather than editing them here.

This helps keep the data consistent across all university systems, and avoids the need to re-enter and update the same data in multiple places.

Home | People | Schools / Institutes | Research | **Scholars Admin**

Richard G. Newell ⓘ

Gendell Family Professor of Energy and Environmental Economics ⓘ

Profile URL ⓘ

<https://scholars.duke.edu/person/richard.newell> ✎

Overview ⓘ ✎

Dr. Richard G. Newell is the Gendell Professor of Energy and Environmental Economics at the Nicholas School of the Environment, Professor of Economics, and Professor of Public Policy at Duke University. He is Director of the Energy Data Analytics Lab and during 2011–2016 he was Founding Director of the Duke University Energy Initiative. Dr. Newell is the former Administrator of the U.S. Energy In... [more](#)

✎ 🗑️

Office Hours ⓘ ✎

Global Scholarship ⓘ

Saudi Arabia (Country) Research ✕

United States of America (Country) Research ✕

northern America (Continent) Expertise ✕

[+ Add Global Scholarship](#)

Edit Faculty Appointment Title

Titles come from dFac, Duke's faculty appointments system. Contact your [power user](#) to correct a title or change the title displayed on your behalf.

[View This Profile](#)

[Generate Report](#)

[Generate CV](#)

[Manage Delegates](#)

Publication Graph is hidden

[Display Pub Graph](#)

Photo +

9 Circuit Dr, Environment Hall
Durham, NC 27708
Box 90328

Duke UNIVERSITY

Other things are edited directly in Scholars@Duke. You can see examples of both of those here:

- the elements with a little i next to them pop up a little window that tells you how to get that information changed, as you can see near the top here.
- the elements with a pencil icon or plus sign next to them mean you can edit them here – when you click on the pencil or plus sign you'll get an editing interface.

A few other things to note on this screen:

- you can customize your profile URL – by default it matches your e-mail alias, which is typically firstname.lastname, but you can also change it to something else if you'd like. The goal here is to make it appealing for the researcher to put on a business card or CV or in an e-mail signature. It's designed to be clear and human-readable and easy to remember.
- you can also generate reports from here, export data to paste into a CV, or assign delegates who can edit your profile on your behalf.

Selected Grants

Hide Data Items | ▾

Richard Newell, Sloan 2015–16 awarded by Alfred P. Sloan Foundation

Select items to hide

Hide entire section

Developing a comprehensive understanding of the local government fiscal impacts from oil and gas development in USA awarded by Alfred P. Sloan Foundation 2014 – 2016

Energy Outlook Comparison awarded by International Energy Forum 2015 – 2016

Richard Newell with Snnovations awarded by Sunnovations 2015 – 2015

Recent Courses

Hide Data Items | ▾

ENERGY 395: Connections in Energy: Interdisciplinary Team Projects

ENERGY 396–1: Connections in Energy: Interdisciplinary Team Projects

ENERGY 396: Connections in Energy: Interdisciplinary Team Projects

ENERGY 635: Energy Economics and Policy

ENERGY 795: Connections in Energy: Interdisciplinary Team Projects

ENERGY 796: Connections in Energy: Interdisciplinary Team Projects

ENVIRON 593: Independent Studies and Projects

Duke UNIVERSITY

If desired, you can hide particular items, or entire sections, in case there are aspects of your work you'd prefer not to be shown on your public profile.

And from this screen you can also trigger an immediate refresh of the data from the source system – where you see the arrows in a circle – otherwise it automatically updates nightly.

Selected Publications

[Manage Publications](#)

You have **6** pending publications. Click "Manage Publications" to go to Elements.

Chicago

[Change preferred citation style](#)

The following publications appear on your profile. (Click for full bibliographic details.)

- Gerarden, T, Newell, RG, Stavins, RN, and Stowe, R. *An Assessment of the Energy-Efficiency Gap and its Implications for Climate-Change Policy*. January 2015.
- Newell, RG, and Siikamki, J. "Individual time preferences and energy efficiency." *American Economic Review* 105, no. 5 (January 1, 2015): 196–200.
- Gerarden, T, Newell, RG, and Stavins, RN. *Assessing the Energy-Efficiency Gap*. January 2015.
- Newell, RG. "The role of energy technology policy alongside carbon pricing." In *Implementing a US Carbon Tax: Challenges and Debates*, 178–190. February 11, 2015.
- Gerarden, T, Newell, RG, and Stavins, RN. *Assessing the Energy-Efficiency Gap*. January 15, 2015.
- Gerarden, T, Newell, RG, and Stavins, RN. "Assessing the Energy-Efficiency Gap." *FEEM Working Paper*, no. 035 (April 27, 2015).

Duke UNIVERSITY

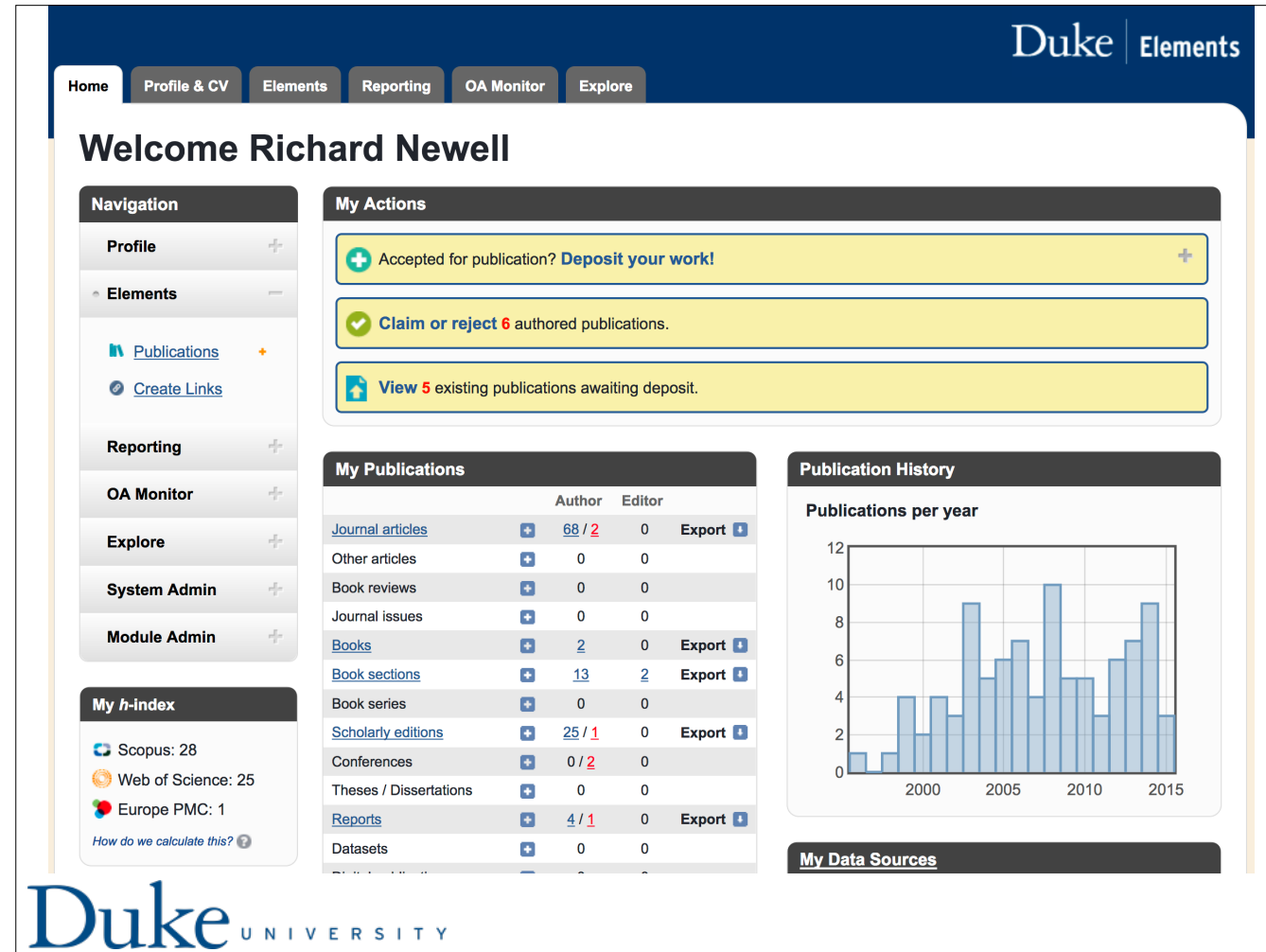
Finally – and here is where the library comes in – there's the section with publications.

To edit those, you go to a different system called Elements, which is a commercial system we are licensing from a UK company called Symplectic.

You can see here that it says Professor Newell has 6 pending publications.

Elements has the ability to search a number of bibliographic databases and save metadata for publications that match search criteria set for each of our faculty. Publications it matches to an author are put into a pending category.

The researcher can then log in to Elements and confirm or reject the publications that have been found, or add additional ones, and these are then displayed in their public profile.



Here’s what the opening screen of Elements looks like. This is something you can only get to by logging in with your Duke credentials.

You can see the publications it already knows about for Professor Newell, and also the 6 that it has found for him that he needs to check.

Also it prompts you to deposit publications that have been accepted for publication, even if they’re not out in the journal yet.

And it alerts you to publications that you’ve already accepted and that fall within the parameters of Duke’s open access policy, which you can go ahead and deposit for open access via Duke’s repository.

☐ Implications of shale gas development for climate change

[Summary](#)
[Duke users \(2\)](#)
[History \(3\)](#)
[Data sources \(6\)](#)
[Full text \(1\)](#)
[Links \(2\)](#)

Environmental Science and Technology **48**(15):8360-8368 05 Aug 2014 [Duke open access repository](#)

Reporting date: 13 May 2014 [Edit](#)

Journal Rankings

ISSN	SNIP	SJR	ERA2010	Impact Factor
1520-5851	1.927	2.464	A*	-
0013-936X	1.927	-	A*	-

Citations

Scopus
33

WoS
26

Europe PMC
2

Altmetrics
133

[Journal article](#)

On the detail page for a given publication it shows you more information about it, including how many citations various sources have for it, as well as altmetrics – like mentions in news sources, policy documents, syllabi, Wikipedia, or social media.

There’s a lot more here to show, like the data sources we have available, and the search settings, but in the interest of time I’ll just show a couple more things.

Dear Professor Paolo Mangiafico,

This is an automated message from the [Elements system at Duke University](#), where you can manage the publications listed on your [Scholars@Duke](#) profile and other University web sites.



Duke Elements regularly searches a range of online databases to find publications that appear to be authored by you, to assist you in keeping your publications list current.

Elements has found **15 new publications for you**. There are now **18 publications awaiting your approval**.

To verify that these publications are yours or correct any errors, please use your Duke NetID to log in to the Duke Elements system at [elements.duke.edu](#) and then approve or decline the publications in the pending category. If there are a large number of "false positive" publications that are not really yours, please contact elements@duke.edu and we can help to refine the search settings.

Your approval is necessary in order for your publications to appear in your Scholars@Duke profile, or other web sites that draw from it.

Other tips:

- While you are approving publications for display in your profile, you may also [upload the full text of the publications for open access via the DukeSpace repository](#) so that viewers of your profile or a Google Scholar search may click through to the publication itself regardless of whether they are at an institution that subscribes to the journal.
- This is also a good opportunity to check other aspects of your Scholars@Duke profile to make sure it is correct and current. See [these FAQs for how to do that](#).
- For more information on any of the above, please click on the Help button in the upper right menu after having logged in to Elements, or visit <https://scholarworks.duke.edu/elements/help/> directly.
- If you have any questions, please reply to this message, contact your Duke librarian, or ask for help from your organization's designated [Scholars@Duke "power user"](#) or the [Scholars@Duke Help Ticket](#) system.

Best wishes,

Duke Elements team at Duke University Libraries



Once a month, if Elements has found new publications for you, it will send you an e-mail to let you know and invite you to come check and approve or decline them. This is just a sample message, which is why it has my name in it.

The template for these messages is customizable, so we have also added information about our open access policy, with encouragement for authors to deposit, and information about how to get help. And we can customize the language here for our different schools, for example if they have different things they want to highlight or different language that they think might resonate better with their community.

We've found these messages to be very effective. Each month after they go out we have a huge spike in activity – both people logging in to update their profiles, and to deposit publications for open access.

The effects of economic and policy incentives on carbon mitigation technologies

Newell RG, Jaffe AB and Stavins RN, Energy Economics, 2006

Deposit advice

Institutional advice

SHERPA / RoMEO advice

For *Energy Economics*:

- ✓ Author can archive **submitted version** (i.e. pre-refereeing).
- ✓ Author can archive **accepted version** (i.e. final draft post-refereeing).
- ✗ Author cannot archive **publisher's version / PDF**.

Conditions:

- Authors pre-print on any website, including arXiv and RePEc
- Author's post-print on author's personal website immediately
- Author's post-print on open access repository after an embargo period of between 12 months and 48 months
- Permitted deposit due to Funding Body, Institutional and Governmental policy or mandate, may be required to comply with embargo periods of 12 months to 48 months
- Author's post-print may be used to update arXiv and RepEC
- Publisher's version/PDF cannot be used
- Must link to publisher version with DOI

Upload files

Upload file

Upload files from your local machine:

Choose file: No file selected.

File version:

Upload

Duke UNIVERSITY

One last thing to show in Elements for now.

At the point where the author is uploading a file to our repository to make it open access, Elements looks up the journal policy in the Sherpa/Romeo database, and informs the author about what the typical policy is for that journal regarding self-archiving for open access.

There's also a tab where we provide information about university policy, giving the author all of the information they need to make a decision about which version to upload for open access, and when.

So there's really a lot of useful information here right at the point of need.

Elements walks the depositor through each of the necessary steps, and once the file is uploaded and submitted, it is immediately deposited to Duke's open access repository, and a handle link from the repository is added to the article metadata.

The next time the Scholars@Duke profile refreshes this data from Elements' API (which is typically overnight, but can be triggered immediately) the article will have the Open Access Copy button adjacent to the citation, as shown earlier.

It's a pretty seamless process, and well integrated into the other things researchers are doing to maintain their public profile, and it makes it easy for our community to make open access deposit a normal part of their other routine work.



If anyone needs help with any of this, we have extensive information on a companion site called ScholarWorks.

Members of the Duke community can find information here about multiple ways they can make their work more accessible, preserve it for the future, and track how others are using it.

We have information here on how to use Elements and Scholars@Duke, how and why to make your work open access, how to manage copyrights to your own work, and understand proper use of works copyrighted by others.

There's information here about getting an ORCID and how to register it with Duke systems, how to monitor the impact of your work through traditional metrics and altmetrics, how to start your own open access journal, and more.

And there's information about how to contact me and my library colleagues for help.

This site is maintained by the Office of Copyright and Scholarly Communication, which I am a part of, but we've tried to not have the focus be on organizational units or particular tools.

We've tried to make it goal-oriented, and attuned to the perspectives and needs and incentives of our researcher community.



Increase your reach and impact

We can help you find the right venue to [publish your work](#), how to [reach a broad and diverse audience](#), and show you how you can [track who is referencing your work and what they are saying](#).

[Learn more](#)



Have a question about copyright?

Contact [Duke's Office of Copyright and Scholarly Communications](#) for individual consultations or to arrange workshops on issues related to copyright and fair use.

[Learn more](#)



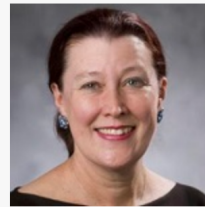
Share your work with the world

Did you know that Duke has an [open access](#) policy? We can help you make sure [your work is available to anyone who might want to read it](#), via your [Scholars@Duke](#) profile.

[Learn more](#)

SCHOLARWORKS HIGHLIGHTS

Read examples of how your colleagues are getting more reach for their research.



[SEE MORE STORIES ABOUT DUKE RESEARCH](#)

Duke UNIVERSITY

scholarworks.duke.edu

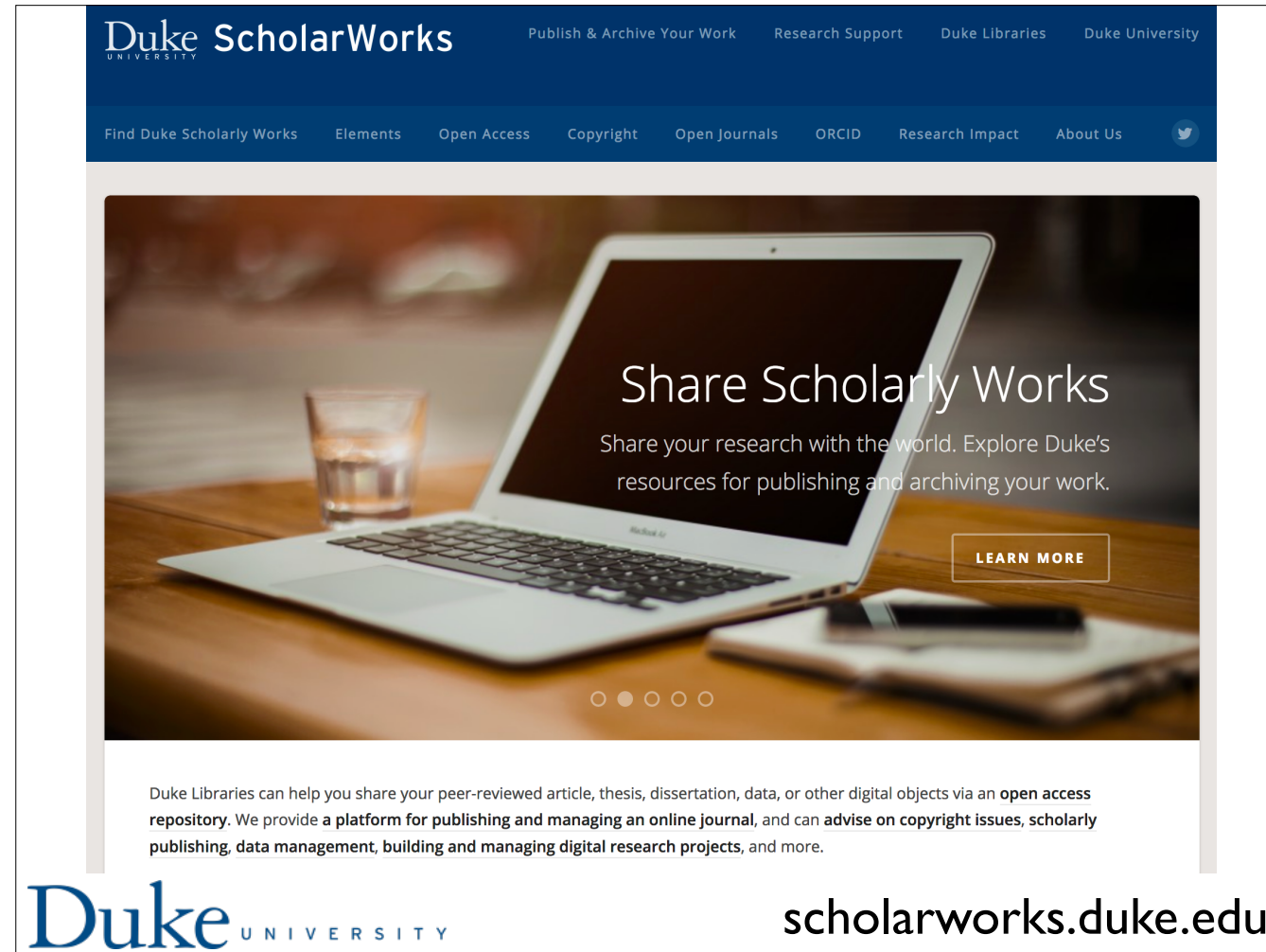
We frame this all as a way for members of our community to increase the reach and impact of their work.

We provide examples of how this benefits them in meaningful ways, by featuring stories from their colleagues.

We're aiming to make clear that this is all about helping them get the rewards they are seeking, to save them time, and to be more effective at the work they do.

When we talk about depositing their work for open access, for example, we almost never use the term “institutional repository”, which has little resonance with researchers.

Instead we say “make the full text of your publications findable from your own profile, and in Google Scholar” and we remind them that this will make their work able to be read by anyone with an internet connection, not just those at institutions who are privileged to subscribe to these journals.



That's a key component of everything we're doing with this project.

The researchers themselves are the core, and we've set up the services and the communications around them to focus on their needs and incentives.

Of course all of this does also provide benefits to the institution – we now have a comprehensive expertise database that shows off the great work going on across the university, and an archive of the work our researchers are producing. And we have data that can be used in many contexts, and for lots of collateral purposes, some of which I'll talk more about it a bit. But in a sense these are just beneficial side effects that come along with meeting the needs of our faculty.

It all starts with the faculty – if they don't see this as being useful to them, and worth their time and energy, the whole thing falls apart. You could have the best system in the world, but if your researchers don't care, they won't engage with it, and your data will be incomplete and quickly out of date, and useful for far fewer purposes.

The image is a screenshot of a web page. The top section is a header for the 'Faculty Database System' with the Duke University logo and the tagline 'Serving the Duke community for over 10 years'. Below this is a 'Faculty Database Login' section with a 'Login' button and a link to 'FDS Custom Login'. To the left of the login section is a list of departments: Arts & Sciences, Fuqua School of Business, Miscellaneous, Nicholas School of the Environment, Office of the Provost, Pratt School of Engineering, Sanford School of Public Policy, School of Medicine, and School of Nursing. Below this list is a yellow box with links: Find Experts, View News & Events, Explore Research Groups, Locate Collaborators, and Search Directory. To the right of the login section is a 'New member? click here to request an account.' link. Below the login section is a 'Duke University * Privacy Statement' link. The main content area features a 'Duke TODAY' banner with a search bar and a navigation menu: ALL, ACADEMICS, RESEARCH, ARTS, MEDICINE, CAMPUS, GLOBAL, ATHLETICS, OPINION. Below the banner is a news article titled 'FACULTY MOVE FORWARD ON OPEN ACCESS POLICY' published on March 21, 2010, in the CAMPUS, ACADEMICS section. The article is by Geoffrey Mock and discusses the Academic Council's approval of a resolution supporting a new open access repository for faculty scholarly writings, but asking that organizers return for more discussion when they have details in place about how the repository would be serviced. The article includes a 'SHARE THIS STORY' button with links to LinkedIn, Facebook, and Twitter. The Duke University logo is at the bottom left.

Duke UNIVERSITY

Faculty Database System

Serving the Duke community for over 10 years

Faculty Database Login

[Login](#)

You can also login using the [FDS Custom Login](#)

New member? click [here](#) to request an account.

[Working@Duke](#)

[Duke TODAY](#)

search

topics

ALL ACADEMICS RESEARCH ARTS MEDICINE CAMPUS GLOBAL ATHLETICS OPINION

Duke University * [Privacy Statement](#)

PUBLISHED MARCH 21, 2010 IN CAMPUS, ACADEMICS

FACULTY MOVE FORWARD ON OPEN ACCESS POLICY

Work to begin on building service system for repository

GEOFFREY MOCK

SHARE THIS STORY

[in](#) [f](#) [t](#)

In a unanimous vote, the [Academic Council](#) approved a resolution supporting a new [open access repository](#) for faculty scholarly writings, but asked that organizers return for more discussion when they have details in place about how the repository would be serviced.

Duke UNIVERSITY

So how did we get here?

This project started in 2010, with the confluence of two clusters of goals.

For many years, there had been multiple databases of information about faculty, used in different parts of the university for different purposes, but none centrally maintained. The Provost initiated a project to combine and renovate these various systems, and unlock a number of new potential purposes for them.

Around the same time, Duke’s Academic Council (our primary faculty governance group) adopted an open access policy, whereby faculty granted the university the right to make their scholarly articles openly available via a repository to be maintained by the library.

One of the stipulations was that participating in this should be made as convenient as possible for the faculty, and shouldn’t become yet another compliance burden they needed to deal with on top of their usual research and teaching work.



We knew from having studied previous attempts at both faculty profile systems and institutional repositories at other universities, and earlier experience with our own repository, that it wasn't as simple as "if you build it, they will come."

[Image is a screen capture from the movie Field of Dreams]

Understanding Faculty to Improve Content Recruitment for Institutional Repositories

[Nancy Fried Foster](#)

Lead Anthropologist
<nancyf@library.rochester.edu>

[Susan Gibbons](#)

Assistant Dean, Public Services & Collection Development
<sgibbons@library.rochester.edu>

Innkeeper at the Roach Motel

File(s): <http://digital.library.wisc.edu/1793/22088>

- [Preprint](#) (216.5Kb PDF)
- [Postprint](#) (154.5Kb PDF)

Author(s) [Salo, Dorothea](#)

Citation Salo, Dorothea. "Innkeeper at the Roach Motel." Library Trends 57:2 (Fall 2008).

Date Dec 11, 2007

Subject(s) [institutional repositories](#); [open access](#)

Duke UNIVERSITY

In particular, these two papers heavily influenced our way of thinking about how to go about implementing an open access repository service at Duke.

We understood that the systems had to have a real value proposition – they needed to be seen by the faculty as a service to them, and not just something that they were required to do.

It needed to meet their incentives and reward systems.

We couldn't just set up a digital bucket and wait for faculty to fill it.

Digital Curation Blog

Blog inspired by the Digital Curation Centre to discuss issues relating to the curation and long term preservation of digital science and research data.

Tuesday, 10 June 2008

Negative click repositories

I wanted to write a bit more about [this idea](#) of a negative click repository (negative cost was a bad name, as there is a real positive \$ and £ cost to the repository, rather than the depositor). First some ancient history...



Digital Curation Centre

Creative Commons

As believers in open science, our writing in this blog will be available under a

Duke UNIVERSITY

Another idea that was compelling was the idea of "negative click repositories" – they should save you clicks, rather than cost them. I first came across this in a post by Chris Rusbridge at the Digital Curation Center in the UK.

As I was planning for how to implement Duke's open access policy it led me to think: could we have automated processes to discover and keep track of what faculty were publishing, draw in the metadata from authoritative bibliographic sources, and then ask faculty to react to a request, rather than wait for them to be pro-active about deposit?

This would both help with outreach – reminding authors of something they could easily do – and save them time from having to enter publications themselves.



Duke UNIVERSITY

From the library's perspective, we also knew an open access process on its own was not going to have sufficient incentives to get faculty to participate.

So we started thinking about how we could integrate open access deposit into other existing processes that faculty already were inclined to do, and have a single service meet multiple personal and institutional goals.

[Image by Huida Nelson from UC Berkeley News: http://www.berkeley.edu/news/berkeleyan/2009/10/02_open-access.shtml]



It was around this same time that planning was getting underway on the new faculty database, which came to be called Scholars@Duke.

The library team that was working on implementing the open access policy and repository joined forces with the team in the Provost's Office and Office of Information Technology who were working on the faculty database, and we aimed to have a single integrated system where the different parts would support each other, and all of it would be easy to use and be useful to faculty.

Goals

1. Use authoritative sources of data wherever possible.



We had a core set of goals we decided to work toward.

First:

Use authoritative sources of data wherever possible:

Hand-entering data into systems increases the likelihood of error, or at least inconsistency, and having to enter it into multiple systems compounds that.

Wherever possible, we've pulled data from existing systems of record, using the new profile system as a hub rather than as a point of data entry. When changes need to be made to certain elements, users are directed to the system of record to make them there.

This helps keep the data consistent across all Duke systems, and when it's updated in one place, the change is reflected in all the places that draw from it.

It also means that people who are experts in or have their own reasons for maintaining particular data are the ones taking care of it, resulting in higher quality data and more frequent updates.

For example, the news story section is populated by the university's Office of News & Communication, who for their own reasons keep a running database of places where Duke researchers are mentioned in the news. It was a relatively simple process to integrate this work they're already doing with the researcher profiles in Scholars@Duke.

Goals

1. Use authoritative sources of data wherever possible.
2. Provide as many uses for the collected data as possible.



Provide as many uses for the collected data as possible:

To maximize the value of the time spent making sure the data is current and correct, we've aimed to make it easy to use the data not just in the central profile system, but also in many downstream ways: school, departmental, lab, and personal websites; reporting systems; visualization tools; even third party service layers via an open API.

We developed the widget functionality I showed earlier, and work with web developers and IT managers across campus to help them make use of the Scholars@Duke API to populate profile information in their own systems. And we work with campus units who want to integrate this data into their own reporting and analytical processes.

In the future, we may make use of data in this system to help understand not just how much and where our researchers are publishing, but also which works are most influential, most discussed, or most accessed, both within traditional academic citation contexts and elsewhere. We might also be able to use information like this as part of a set of heuristics that could help the library with preservation decisions, or maybe even decisions about collection development or investments in different kinds of publishing models.

The first step, of course, is to make sure we have current, comprehensive, and accurate information, and that opens up the door to lots of other possibilities down the road.

Goals

1. Use authoritative sources of data wherever possible.
2. Provide as many uses for the collected data as possible.
3. Provide positive feedback, and instant gratification.



Provide positive feedback, and instant gratification:

Things like having altmetrics and citation counts directly in the system where you manage your publications gives people additional incentives to add their publications there – it's a nice boost to see where your work is being discussed and linked.

Also, when you enter data you can trigger an immediate refresh of your public profile so you can see the changes immediately, and when you deposit a publication for open access a link to it appears in your profile right away.

We still have more work we need to do on this one – we don't yet have a good way for people to see summary reports of their download stats from the repository, for example, and we'd like to provide that both to individuals and to their departments and schools.

Goals

1. Use authoritative sources of data wherever possible.
2. Provide as many uses for the collected data as possible.
3. Provide positive feedback, and instant gratification.
4. Make it a living system, with ongoing improvements, and support available close to home.



Make it a living system, with ongoing improvements, and support available close to home:

The system and associated services have been in constant development since we first launched them with faculty in 2013 – we continue to improve the user experience and add new functionality, and participate in the communities of other universities using the same systems, to help them grow and improve.

And we've developed a network of people across all academic departments who have become experts in using the various parts of the system.

This way faculty can consult someone they already know, and who is in their area, for immediate help.

More extensive support is also available via e-mail, a ticket system, and in-person consultation and training.

Goals

1. Use authoritative sources of data wherever possible.
2. Provide as many uses for the collected data as possible.
3. Provide positive feedback, and instant gratification.
4. Make it a living system, with ongoing improvements, and support available close to home.
5. Be responsive to needs of the faculty, their support teams, and university leadership.



Be responsive to needs of the faculty, their support teams, and university leadership:

The project is guided by a steering committee made up of faculty, deans, vice provosts, and leadership from IT and the university's news and communications office, and meets regularly to review progress, provide feedback, and plan for improvements.

We also have a management team that is made up of various other stakeholders in groups that are implementing and supporting the systems – the Provost's Office, the Office of Information Technology, the Libraries, and IT and communications staff from various schools.

There are monthly meetings of the distributed support network – who we call “power users” – and regular training sessions held in various locations on campus.

All of these seek feedback from the users of the systems, and we build what we're hearing into the next rounds of planning and development.



From a systems perspective, these are the main tools we ended up using, after evaluating many options in 2010 and 2011.



VIVO is strong on the public facing side, and designed to be open – the code is open source, and the API is open and semantic-web based.

There was also a growing community around the system at the time we first investigated it, and its trajectory for growth seemed good. It's currently a community-supported system under the DuraSpace Foundation.

It was selected as the core of Scholars@Duke, and is what you saw in most of the screen shots when I demonstrated profiles earlier.



Who is Elements for?



Researchers

Founded by researchers, for researchers our products are designed to reduce manual effort, improve data quality and expedite the transfer of data between systems. That means researchers can spend their time on what matters most – their research.



Librarians

Librarians from across an institution, often in the context of Open Access, use our products to guarantee the quality of research data held in institutional repositories and other collections.



Administrators

Elements has been specifically developed to gather the data institutions need for internal and external assessment. Prepare for government returns, facilitate decision processes and report on the scholarly activity undertaken across an institution.



symplectic.co.uk

Elements is a system developed by a UK company called Symplectic, and is a commercial product that we license from them.

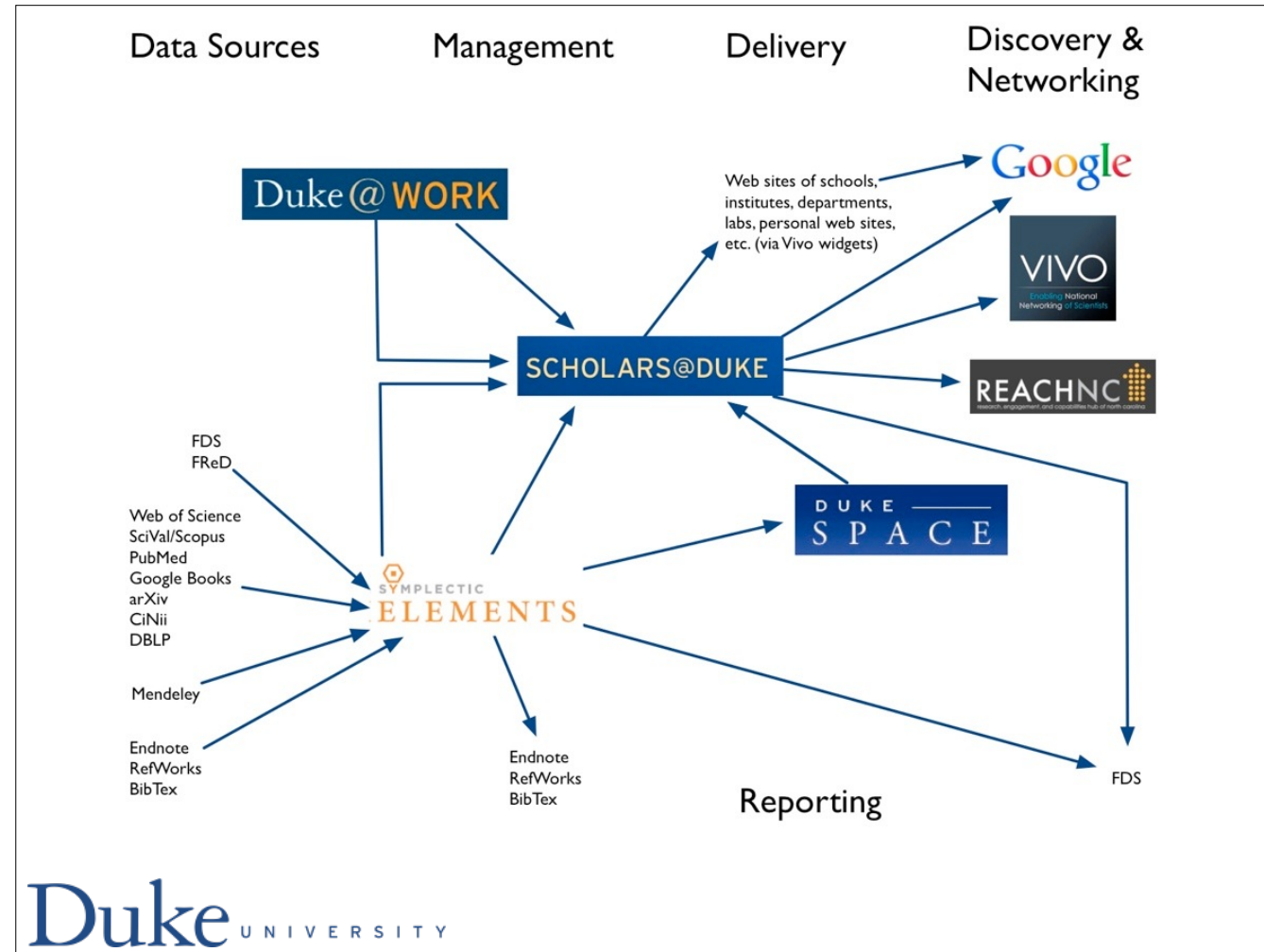
It is very strong on the faculty-facing workflow, and it has all of the service-related things we had envisioned doing when we were thinking about the negative-click repository idea, and how to meet researcher incentives to deposit their work and maintain a university profile.

As mentioned earlier, it sends the data entered here to VIVO for public display and other downstream uses, so even though access to Elements itself is limited to our user community, the data from it is open to anyone via the VIVO interface and API.

We were the first US institution to begin using it, and it's now being used by many universities in the US and around the world.

It has improved dramatically since we started using it, especially in response to needs expressed by universities to help implement open access policies.

We currently are only using it for publications and open access deposit, as I showed in some of the screen shots earlier, but it is capable of doing much more around reporting of other kinds of researcher activities.

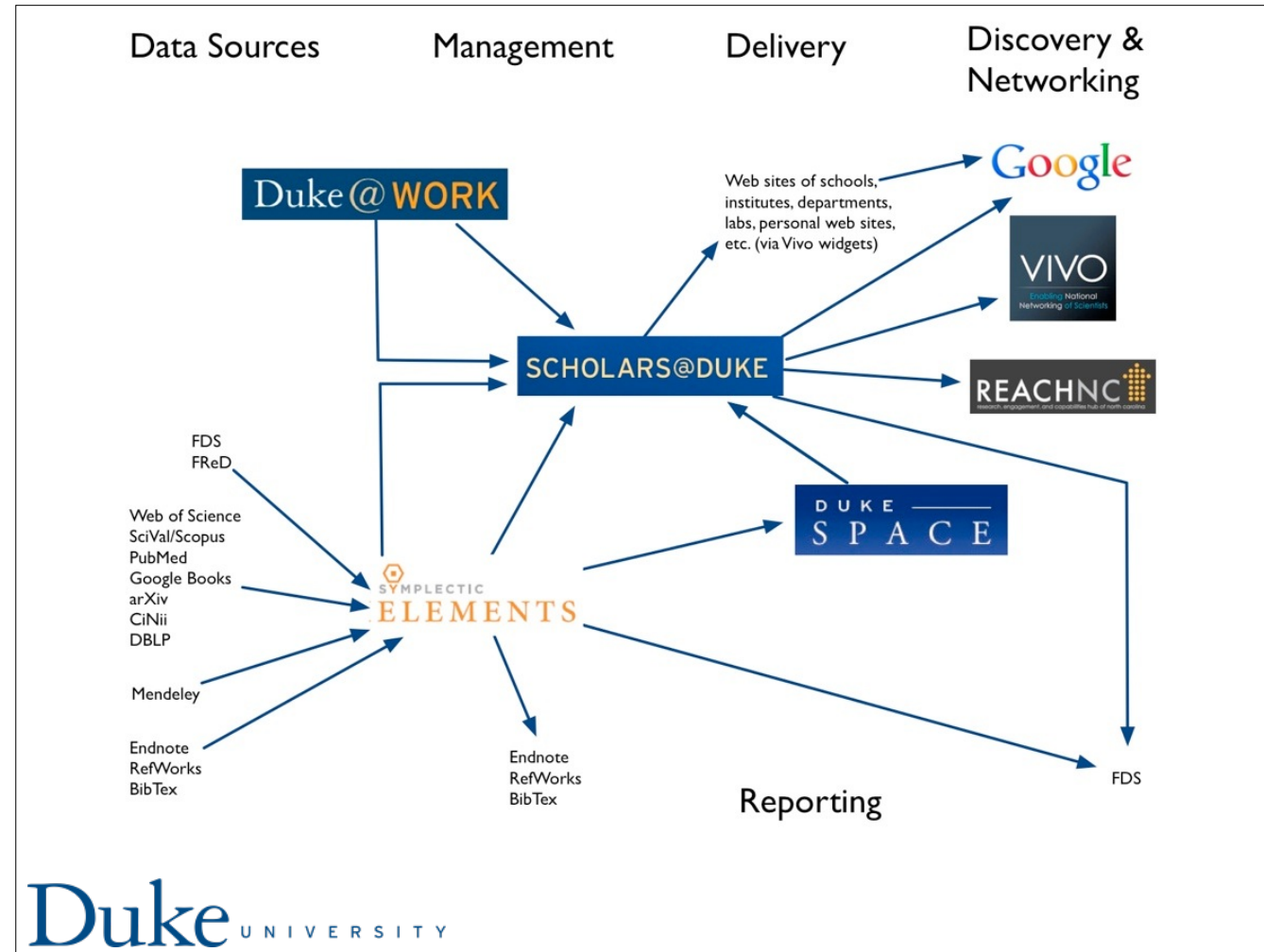


We ended up with a fairly complex implementation model, as you can see from this crazy diagram from early in our planning process, because the information we wanted to collect and use for profiles and the open access process were stored in a variety of systems.

VIVO is the hub, where you see “Scholars@Duke”.

There are a number of inputs via other authoritative systems at Duke – like our HR and directory systems (where you see “Duke@Work”) and a variety of bibliographic sources, which flow into Elements. And there are a number of outputs, including public web profiles, our DSpace repository, department and school web sites, and the international VIVO network.

Not shown here are inputs from the grants and courses system, news office, other bibliographic sources, and other things I demonstrated earlier, since those weren’t implemented yet at the time this diagram was made.



One of the positive aspects of pulling this all together was the deep collaborations that were established between multiple units across the university.

- The VIVO project is under the Vice Provost for Finance and Administration, with most of the technical work being done by the central Office of Information Technology.
- University Human Resources is involved because of the personnel data.
- The Vice Provost for Research is involved because of the connections to grant systems, and the opportunity to use profile data collected in Scholars@Duke to look for collaboration and grant opportunities for research teams.
- The Office of News & Communications is involved because of their interest in showcasing Duke research, and connecting journalists and the public with Duke experts. They track news stories about Duke researchers, and make the news links you saw in the profiles.
- The Dean's offices and IT operations of each of our schools are deeply involved in all of this, both as suppliers and consumers of data being collected here.
- And the library has been at the center of it since the beginning, as we provide some of the core data – publications – through the Elements system, as well as providing critical expertise about bibliographic databases, metadata, ontologies, usability, open access, and research dissemination in general. And we've helped keep the focus on serving researchers first, and focusing on their incentives and needs in planning.

So while the reason the library got involved in this was very specific – the open access service mentioned earlier – I think we've benefited in lots of other ways by being integral to an important, university-wide service, and showing that we have a lot to contribute beyond what people traditionally think libraries are for. While we aren't the functional owners of this program, we've played a leadership role in its planning and implementation.

Challenges and lessons learned



I'll wrap up now with some things we learned along the way, that may be helpful for others working on similar projects.

Have patience, and be pragmatic



Full engagement and complete participation are very difficult to get, and setting expectations that high will lead to disappointment.

While library and IT staff and administrative leadership may want to wrap up functional requirements and move quickly through implementation, the success of initiatives like this is almost entirely dependent on the participation of many people, most of whom will be faculty, whose independence and academic freedom the university values.

Faculty are busy, and do not welcome additional burdens on their time, or administrative mandates. If you can show value, use will increase over time.

Implement incrementally, by group



Build some visible successes in some areas with early adopters, and then these can be used as examples when engaging with other areas who may be less eager for change.

Attempting to roll out a major new initiative to a very large and varied group of stakeholders all at once is likely to result in a lower level of service for any given stakeholder, and result in bad first impressions that will be difficult to overcome.

Partnerships and collaborations are very important



A successful initiative like this will touch on many different areas of the university, and require buy-in from the stakeholders in all those areas.

Beginning the project as a collaboration between those areas, where they all see benefits for their own operations in partnership, is essential.

If the system and processes are perceived only to be a library initiative, or only to be an initiative of IT or central administration, it will be more difficult to get necessary engagement, and therefore more difficult to implement and more difficult to sustain over time.

Collaboration between units with different cultures is difficult



The culture of libraries tends to be one of service and collaboration with researchers, faculty, and students on the academic goals of the university, and we're used to communicating with faculty on these terms, and in most cases having good rapport with them.

Other administrative units, especially IT units, may have a culture more focused on completing specific tasks and functional requirements, and on compliance with mandates, and may be less interested or less patient with or less apt at finessing the more nuanced communications and implementation process required when engaging faculty on something that cannot or should not be mandated.

This can sometimes lead to friction, or impatience, or miscommunication, but ultimately all of the collaborators have something critical to contribute, and their contributions will complement each other.

Communication at wholesale level is hard, and retail level works better



We know from working with colleagues in the university's communications offices, and from earlier experience, that it's very difficult to reach faculty through broad communications.

However, we had much better success through targeted efforts – reaching out to individual departments, presenting at standing faculty department meetings, and holding office hours in their spaces, working directly with research managers and support staff in distributed areas, and engaging one-on-one with individual faculty and department chairs resulted in much deeper engagement with faculty.

Communications targeted to individuals were also very effective – the customized e-mail notifications that Elements sends out get a very good response.

And offering to go to someone's office or department meeting to work with them on their specific needs is always more welcomed than a generic training session with a broadcast announcement.

Different disciplines perceive administrative programs differently



These are broad-stroke observations, but in general scientists mostly seemed to accept participation in the university's profile and open access programs as part of the scholarly process.

Some may have been annoyed by the sense of this being yet another thing to do, but in general most began using the new systems without much fuss, and where they had questions or concerns, they were very specific.

Humanists (at least the ones we heard from) seemed more attuned to potential impacts this might have on assessment, tenure, and promotion, and how open access might affect university presses and scholarly societies. They tended to ask complex questions about these issues.

They also seemed to be more concerned about the amount of time maintaining their university profiles would take, and insisted on more assistance.

They were bothered by the perception that profile and open access programs of the kind we were implementing were mostly designed for STEM fields, and that the kinds of scholarly works that were most important to them were not well supported by these systems and processes.

Be prepared to address these concerns with sympathy, and to work hard to satisfy diverse needs before they become an impediment to successful implementation of the larger program.

The language you use is important



In communication about any of this, keep the focus on the faculty member's goals, not the library's or institution's.

And definitely not on the tools or processes themselves, since most faculty aren't going to care about that.

For example, as I mentioned earlier, when talking with faculty about our open access policy, we almost never use the term "institutional repository" or the name of our repository system.

We tell them they can make their work available to anyone via their own profile, so when people Google them or terms in their article, they will find the full text, and from there also get a citation they can use.

The repository may be where someone ends up as part of the process, but it should not necessarily be where they have to think to start.

And for the library, it's important not to talk about this or even think about this like it's about collection development.

I often hear librarians talking about "filling the repository", as if that's an end in itself, and I think it both affects the way we implement open access programs and the way they get perceived by the key stakeholders, researchers – and not in a good way.

Keep in mind the difference between means and ends



We need to remember that the open access policy and repository and our processes are just means to an end.

The real goals are:

- to make the work of our researchers more widely available
- to help put knowledge in the service of society
- to help the researchers build their own reputations, and useful collaborations
- to help build the university's reputation
- to understand the work being done in all parts of the university
- to archive copies of scholarship where we have control over it for the long term
- to build a base of open materials that can be used for many purposes, including machine analysis
- and probably lots of other things

Keep the focus on your researchers' goals



In supporting all these goals we need to always keep in mind what our stakeholders' goals are, and continually work to meet them.

Faculty participation is key for such systems to succeed, and it's important for faculty to feel like they have a stake in their profiles and the processes that build them, and are benefiting individually from having them and spending time on curating them.

Meeting their needs and incentives should be the primary goal, and if you do it right, then meeting the library's and university's goals will become a beneficial side-effect.

The library's ethos has always been to keep a focus on helping the researcher meet their goals, and by entering collaborations with other units on campus whose focus is on meeting institutional administrative needs, the combination of these areas of expertise and operating models can go a long way toward creating successful research information management programs.



Paolo Mangiafico



Haley Walton



Jim Tuttle



The Scholars@Duke Team: The Scholars@Duke team includes three full-time staff and three to five people on the developer team. From left in the photo, Rob Nelson, Richard Outten, Damaris Murry, Greg Burton, Jim Wood, Lamont Cannon and Julia Trimmer.

Duke UNIVERSITY

And on that note, I'd like to conclude with photos of the core teams working on these projects at Duke – both the Scholars@Duke team in the Provost's Office and OIT (shown in the group photo), and the Elements and repository team in the library.

None of this would have been possible without the people shown here, and many others who have contributed to it in lots of ways.

Paolo Mangiafico

paolo.mangiafico@duke.edu
@paoloman

Office of Copyright & Scholarly Communication
Duke University Libraries

scholarworks.duke.edu
scholarworks@duke.edu
@dukeopenaccess

scholars.duke.edu
scholars@duke.edu
@scholarsatduke



These slides are made available under the Creative Commons Attribution-ShareAlike 4.0 International (CC BY-SA 4.0) license.
<https://creativecommons.org/licenses/by-sa/4.0/>