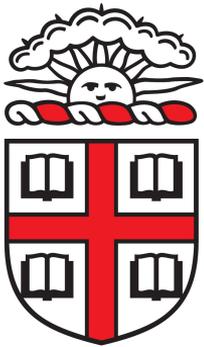


BROWN

# A new frontend for VIVO

Hector Correa / [hector\\_correa@brown.edu](mailto:hector_correa@brown.edu)  
Steven McCauley / [steven\\_mccauley@brown.edu](mailto:steven_mccauley@brown.edu)  
Brown University Library



BROWN

*READ-ONLY,  
PUBLIC USER*

VIVO | connect  
share  
discover

# A new <sup>^</sup>frontend for VIVO

Hector Correa / [hector\\_correa@brown.edu](mailto:hector_correa@brown.edu)  
Steven McCauley / [steven\\_mccauley@brown.edu](mailto:steven_mccauley@brown.edu)  
Brown University Library

# VIVO @ Brown

In production since 2014

4000+ researcher profiles

150,000 pageviews/month (Google Analytics)

# Why a new frontend?

Users have expressed

- Not very user-friendly
- Plain/boring look and feel
- Not very functional for their needs (i.e. discovery)

Technology-wise

- Use technologies we are comfortable with (Ruby on Rails)
- Allows us to innovate faster

# ~~Current~~ Original Web Site

No URL available as of December/2017

## Welcome to Researchers@Brown

Researchers@Brown brings together, in one site, publicly available information on the people, departments, and activities that collectively make up research and scholarship in all disciplines at Brown University.

---

### For FACULTY:

- You may have harvested publications pending approval.  
Click "Manage your profile" -> "Publications" -> "Manage publications".
- Check out the new "Geographic Research Area" section which uses a standard set of geographic terms.
- Coming soon! Optional network visualizations

---

### For DEVELOPERS:

- The R@B team has developed a [JSON web service](#) that makes it easy to use data from Researchers@Brown in other websites.

---

Please provide feedback or request help by contacting [researchers@brown.edu](mailto:researchers@brown.edu). Visit our [Help](#) pages for further information.

### RECENT FACULTY BOOKS



Click book jacket to view faculty profile

## ORCID

Get a [Brown ORCID Identifier!](#)

Publishers and funding agencies are increasingly requesting ORCID's for manuscript and grant submissions.

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## Search results for 'caribbean history'

[Not the results you expected?](#)

[Caribbean history](#) | Research Area

[HIST 0971L – Modern Caribbean History](#) | Course

[Latin American and Caribbean Studies](#)

... Director of Latin American and Caribbean Studies To foster greater knowledge, teaching and research on the cultures, societies, history, politics, economics ...

[The Journal of Latin American and Caribbean Anthropology](#) | Venue

... of Adoption in Latin America Book Review: Negras in Brazil: Re-envisioning Black Women, Citizenship, and the Politics of Identity :The Peru Reader:History ...

[Medical History](#) | Venue

... Venue Julia E. Rodriguez (ed.), History of Science in Latin America and the Caribbean Digital Archive (Durham: University of New Hampshire, 2010) (www ...

[Julia E. Rodriguez \(ed.\), History of Science in Latin America and the Caribbean Digital Archive \(Durham: University of New Hampshire, 2010\) \(www.hoslac.org\)](#) | Article

... Article Citation Lambe, Jennifer Medical History 618–619 10.1017/mdh.2012.72 04 Lambe, Jennifer 56 2012–10–01 ...

[:The Peru Reader:History,Culture, Politics](#) | Article

... Article Citation Leinaweaver, Jessaca The Journal of Latin American and Caribbean Anthropology 277–279 10.1525/jlat.2007.12.1.277 1 Leinaweaver, Jessaca B. 12 ...

[Henry, Paget](#) | Faculty Member

... and Ethnic Relations; Caribbean History and Society; Comparative Colonial Cultures; Sociology of the Arts; Sociology of Cultural Development; Seminar on Critical Theory ...

[Rodriguez, Daniel](#) | Faculty Member

... of Latin America, 1492–2014 HIST 2930 – Colloquium Latin America and the Caribbean PhD History Daniel • Mendenhall Fellowship (Smith College, 2012) • Mellon ...

[Lambe, Jennifer](#) | Faculty Member

... : Intimate Histories of Psychiatry and Self Latin American and Caribbean HIST 1830M – From Medieval Bedlam to Prozac Nation: Intimate Histories of Psychiatry and Self ...

### Display Only

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(2)

[people](#)

(35)

[courses](#)

(1)

[research interests](#)

(1)

[citations](#)

(7)

## Search results for 'caribbean history' limited to type 'people'

[Not the results you expected?](#)

[Henry, Paget](#) | Faculty Member

... and Ethnic Relations; **Caribbean History** and Society; Comparative Colonial Cultures; Sociology of the Arts; Sociology of Cultural Development; Seminar on Critical Theory ...

[Rodriguez, Daniel](#) | Faculty Member

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... : Intimate **Histories** of Psychiatry and Self Latin American and **Caribbean HIST 1830M** – From Medieval Bedlam to Prozac Nation: Intimate **Histories** of Psychiatry and Self ...

[Bogues, Barrymore](#) | Faculty Member

... Philosophical Association International Intellectual **History** Association **Caribbean Studies Association** Center for **Caribbean Thought Caribbean Social History Project** ...

[Fisher, Linford](#) | Faculty Member

... In America, 1865 – Present PhD Anglophone **Caribbean** Decoding Roger Williams: The Lost Essay of Rhode Island's Founding Father Native North America **Caribbean history** ...

[Channer, Colin](#) | Faculty Member

... – Remaster + Remix Iron Balloons Kingston Noir Reggae music BA **Caribbean** poetry interdisciplinary arts cinema Rhode Island Humorous monologues colinchanner.com 2016 ...

[Johnson, Jasmine](#) | Faculty Member

... and **History**; Association for the Study of the Worldwide African Diaspora; **Caribbean Studies Association**; Collegium for African Diaspora Dance; Congress on Research ...

[Whitfield, Esther](#) | Faculty Member

... 's Program in **History** and Literature before joining the faculty of Brown's Department of Comparative Literature in 2002. She teaches courses on Latin American, **Caribbean** ...

[Martinez, Monica](#) | Faculty Member

... ), Department of Latino and Hispanic **Caribbean Studies**, Rutgers University, 2012–2013 Comparative Border Studies Fellowship (declined), Arizona State University, 2012–2013 Best ...

### Limit people to

[Faculty Member](#) (35)

[Person](#) (35)



## Itohan I. Osayimwese | Assistant Professor of History of Art and Architecture

Itohan Osayimwese is an architectural and urban historian. She is Assistant Professor of History of Art & Architecture. She engages with theories of modernity, postcoloniality, and globalization to analyze German colonial architecture, urban design, and visual culture; modern architecture in Germany; African and African diaspora material cultural histories; and the architecture of development in Africa. Another research interest is the architectural and urban lives of religious cults.

### Brown Affiliations

[History of Art and Architecture](#)

[Curriculum Vitae](#)

[email](#)

### Research Areas

[19th and 20th century global architectural history](#) | [African and African diaspora material culture](#) | [Caribbean history](#) | [colonial architecture and urbanism](#) | [missionary architecture](#) | [modern architecture](#)

[Publications](#) | [Research](#) | [Background](#) | [Affiliation](#) | [Teaching](#) | [View All](#)

### selected

Osayimwese, Itohan. [Colonialism and Modern Architecture in Germany](#) 2017 .

Osayimwese, Itohan. [Armchair Safaris: Representations of African Cultures in Zoos](#) *Architectural Theory Review*. 2016; 20 (20) : 1–16 . [full text](#)

Osayimwese, Itohan. [Slavery at Monticello: Life and Work on Mulberry Row](#) *JSAH*. 2016; 75 (3) : 383–385 . [full text](#)

# New Web Site

Live since December/2017

<https://vivo.brown.edu/>

# Researchers@BROWN

[Advanced search...](#)

## Recent faculty books

*Click book jacket to view faculty profile*

## Type

PEOPLE ✕ (34)

## Affiliations

American Studies (6)

Africana Studies (5)

History (5)

Anthropology (4)

Hispanic Studies (3)

Sociology (3)

Comparative Literature (2)

Epidemiology (2)

French Studies (2)

History of Art and Architecture (2)

+ More...

## Research Areas

Caribbean (5)

Brazil (4)

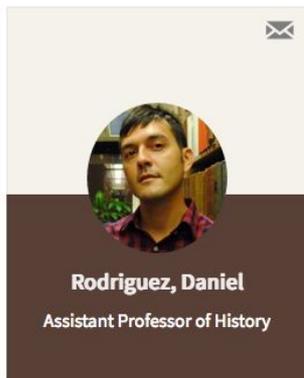
Latin America (4)

Cuba (3)

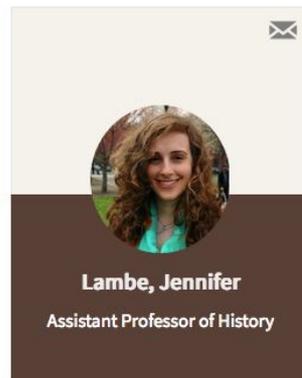
Ethnic Studies (3)

North America (3)

« Previous | 1 - 20 of 34 search results | Next »  
 for **caribbean history** ✕ (Type > PEOPLE ✕ )



**Rodriguez, Daniel**  
 Assistant Professor of History



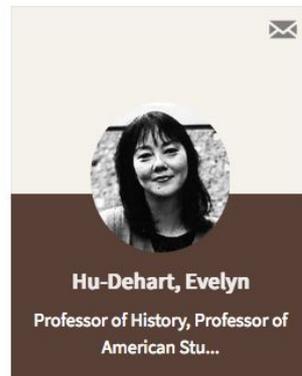
**Lambe, Jennifer**  
 Assistant Professor of History



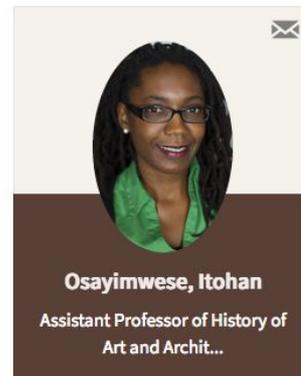
**Fisher, Linford**  
 Associate Professor of History



**Leinaweaver, Jessaca**  
 Associate Professor of  
 Anthropology, Director o...



**Hu-Dehart, Evelyn**  
 Professor of History, Professor of  
 American Stu...



**Osayimwese, Itohan**  
 Assistant Professor of History of  
 Art and Archit...

PEOPLE ✕ (80)

## Affiliations

Health Services, Policy and Practice ✕ (80)

Medicine (17)

Emergency Medicine (4)

Pediatrics (3)

Psychiatry and Human Behavior (3)

Gerontology and Health Care Research (2)

School of Public Health (2)

Brown AIDS Center (CFAR) (1)

Brown University AIDS Program (BRUNAP) (1)

Business, Entrepreneurship and Organizations (1)

+ More...

## Published In

JAMA (13)

Journal of the American Geriatrics Society (13)

American journal of kidney diseases : the official journal of the National Kidney Foundation (12)

Health Serv Res (12)

Journal of the American Medical Directors Association (12)

Medical Care (12)

Medical Care Research and Review (12)

J Gen Intern Med (11)

The Gerontologist (11)

Annals of Internal Medicine (10)

+ More...



**Ranney, Megan**

Associate Professor of Health Services,  
Policy a...



**Wallace, Byron**

Adjunct Assistant Professor of Health  
Services, ...



**Assaf, Annlouise**

Adjunct Professor of Health Services,  
Policy and...



**Springs, Stacey**

Investigator in Health Services, Policy and  
Prac...



**Rahman, Md**

Assistant Professor of Health Services,  
Policy a...



**Chen, Elizabeth**

Associate Director of the Center for  
Biomedical ...



**Steele, Dale**

Associate Professor of Emergency  
Medicine, Asso...



**Miller, Edward**

Adjunct Professor of Health Services,  
Policy and...



**Yip, Agustin**

Clinical Assistant Professor of Psychiatry  
and H...

PEOPLE ✕ (80)

## Affiliations

Health Services, Policy and Practice ✕ (80)

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Annals of Internal Medicine (10)

Health Affairs (10)

Medicine and health, Rhode Island (10)

Arch Intern Med (9)

PEDIATRICS (9)

Rhode Island medical journal (2013) (9)

Journal of Applied Gerontology (8)

Social science & medicine (1982) (8)

The American Journal of Medicine (8)

Am J Public Health (7)

American Journal of Epidemiology (7)

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A-Z

9-0

arrow your search



**Assaf, Annlouise**

Adjunct Professor of Health Services,  
Policy and...



**Chen, Elizabeth**

Associate Director of the Center for  
Biomedical ...



**Steele, Dale**

Associate Professor of Emergency  
Medicine, Asso...



**Miller, Edward**

Adjunct Professor of Health Services,  
Policy and...



**Yip, Agustin**

Clinical Assistant Professor of Psychiatry  
and H...

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[Curriculum Vitae \[PDF\]](#)

## Osayimwese, Itohan

Assistant Professor of History of Art and Architecture

History of Art and Architecture

### Overview

Itohan Osayimwese is an architectural and urban historian. She is Assistant Professor of History of Art & Architecture. She engages with theories of modernity, postcoloniality, and globalization to analyze German colonial architecture, urban design, and visual culture; modern architecture in Germany; African and African diaspora material cultural histories; and the architecture of development in Africa. Another research interest is the architectural and urban lives of religious cults.

### Brown Affiliations

History of Art and Architecture

### Research Areas

19th and 20th century global architectural history | African and African diaspora material culture | Caribbean | Caribbean history | colonial architecture and urbanism | Germany | missionary architecture | modern architecture | West and East Africa

# Features

- Same information as standard VIVO
- Modern look and feel
- Optimized for discovery
  - Focus on finding researchers
  - Affiliations, alumni of, et cetera issue searches for other researchers
  - Faceted search (affiliation, research areas, publication venue)
  - Focus on common users' needs
  - Tuned our Solr index, spell checker, faster response times
- Mobile friendly
- Fast performance

# Examples

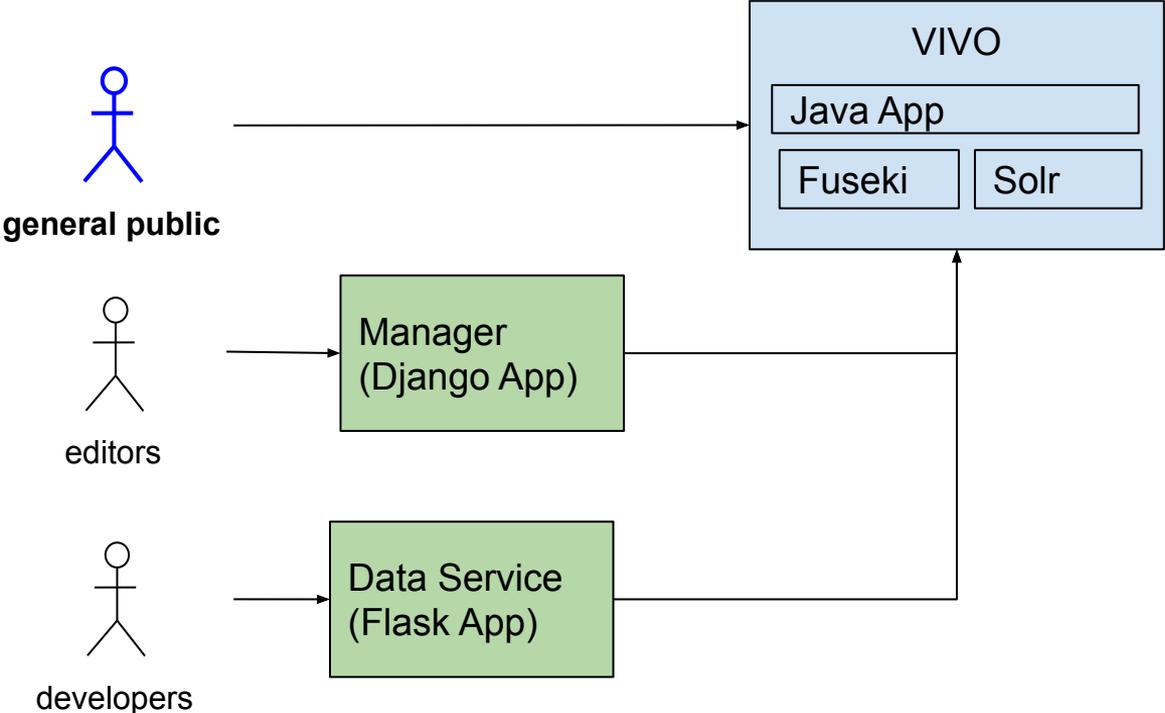
- Publication filter (link)
- Complete profile (link)
  - Alumni of (link)
  - Appointments (link)
  - Export to JSON-LD / Turtle via VIVO (link)

# System Architecture

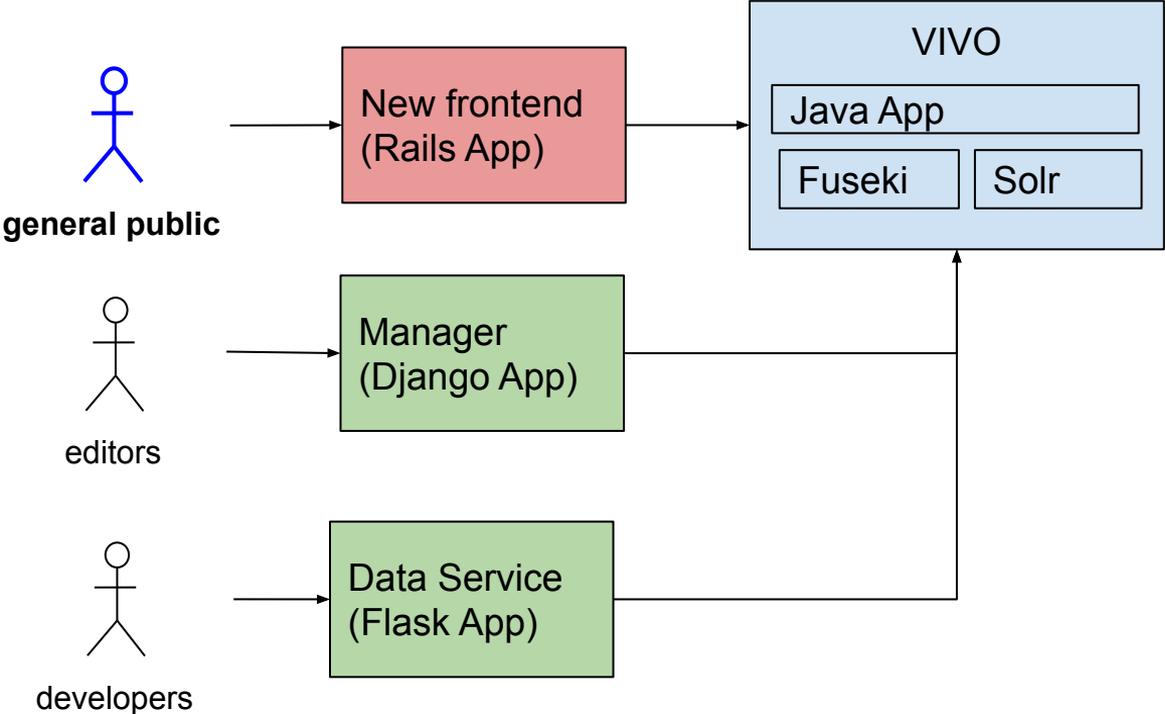
## Developer requirements

- Decouple frontend interface from backend datastore
- Better performance
- Easier, faster updates and development
- Less complexity, more collaboration

# System Architecture: original setup



# System Architecture: new setup



# System Architecture: application APIs

## VIVO APIs

- Writing: VIVO internals
- Querying: Fuseki
- SPARQL Query/Update APIs
- Frontend API should be simple and fast

# System Architecture: frontend API

Solr as VIVO API

- Bundled with VIVO
- Highly configurable
- Built for search and speed
- Live updates
- Query via HTTP
- Delivers denormalized JSON documents

<https://wiki.duraspace.org/pages/viewpage.action?pageId=55902741>

# System Architecture: configuration and workflow

## Solr configuration

- Solr schema
- Solr integrates standalone scripts: more data processing, validation
  - <https://wiki.apache.org/solr/ScriptUpdateProcessor>

## VIVO configuration

- `rdf/display/everytime/searchIndexerConfigurationVitro.n3`
- SPARQL queries against triplestore generate data for Solr fields

# System Architecture: SPARQL queries

```
386 :documentModifier_affiliationsJSON
387   a   <java:edu.cornell.mannlib.vitro.webapp.searchindex.documentBuilding.SelectQuery
      DocumentModifier> ,
388     <java:edu.cornell.mannlib.vitro.webapp.searchindex.documentBuilding.DocumentMod
      ifier> ;
389   rdfs:label "All labels are added to name fields." ;
390   :hasTargetField "affiliations_json" ;
391   :hasTypeRestriction "http://xmlns.com/foaf/0.1/Person";
392   :hasSelectQuery ""
393     PREFIX rdfs:<http://www.w3.org/2000/01/rdf-schema#>
394     PREFIX blocal:<http://vivo.brown.edu/ontology/vivo-brown/>
395     SELECT DISTINCT ?json
396     WHERE {
397       ?uri blocal:hasAffiliation ?aff .
398       ?aff rdfs:label ?label .
399       BIND(replace( '\"uri\": \"aff\"', 'aff', str(?aff) ) as ?uriStr)
400       BIND(replace( '\"id\": \"aff\"', 'aff', str(?aff) ) as ?idStr)
401       BIND(replace( '\"name\": \"aff\"', 'aff', str(?label) ) as ?nameStr)
402       BIND(concat( '{', ?uriStr, ?idStr, ?nameStr, '}' ) as ?json)
403     }
404     ""
```

# System Architecture: SPARQL queries

```
386 :documentModifier_affiliationsJSON
387   a <java:edu.cornell.mannlib.vitro.webapp.searchindex.documentBuilding.SelectQuery
DocumentModifier> ,
388   <java:edu.cornell.mannlib.vitro.webapp.searchindex.documentBuilding.DocumentMod
ifier> ;
389   rdfs:label "All labels are added to name fields." ;
390   :hasTargetField "affiliations_json" ;
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    ifier> ;
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389   rdfs:label "All labels are added to name fields." ;
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402       BIND(concat( '{', ?uriStr, ?idStr, ?nameStr, '}' ) as ?json)
403     }
404     ""
```

# System Architecture: Solr documents

```
"research_overview": "<p><strong><em><u>The Anti-Trafficking Rehabilitation Complex</u></em></strong></p>\n\n<p>My book manuscript in p  
"title_t": [  
  "Assistant Professor of American Studies"  
],  
"affiliations_json": [  
  "{\n    \"uri\": \"http://vivo.brown.edu/individual/org-brown-univ-dept3\",\n    \"id\": \"http://vivo.brown.edu/individual/org-brown-univ-dept3\"  
  }"  
],  
"alumni_of": [  
  "Pomona College",  
  "University of California, Los Angeles"  
],  
"teacher_for": [  
  "DEVL 1500 - Methods in Development Research",  
  "AMST 1600B - Global China: Flows, Forces, and Friction",  
  "AMST 1500A - Research and Transnational Communities: Qualitative Fieldwork Methods",  
  "AMST 1600C - The Anti-Trafficking Savior Complex: Saints, Sinners, and Modern-Day Slavery"  
],  
"on_the_web_json": [  
  "{\n    \"uri\": \"http://vivo.brown.edu/individual/nea0ec2d6-d754-11e5-abdf-005056aa66a3\",\n    \"url\": \"http://www.elenashih.org\",\n    \"text\": \"  
  ]
```

# System Architecture: VIVO as backend

- Minimal updates to VIVO installation
  - Solr indexing configuration
  - Reassign URLs: from VIVO pages to Rails app
- Preserve VIVO's built-in data services
  - <http://.../individual/{id}/{id}.ttl> (exports Turtle)
  - <http://.../individual/{id}/{id}.jsonld> (exports JSON-LD)
  - SPARQL Query/Update APIs
- Standalone APIs still available
  - Fuseki
  - R@B REST service
- VIVO for database administration

# System Architecture: future steps

## At Brown

- Move from standalone Fuseki to SPARQL Query/Update APIs
- Smarter SPARQL queries, better JSON handling
- Leverage inferencing and maintenance queries

## VIVO community

- Easier configuration of Solr fields
- Focus on Solr integration, staying up-to-date with latest versions
- Development of modules that hook up to VIVO APIs

# Benefits (users)

- Targets users' different needs
  - ...mainly discovery
  - ...while preserving our Linked Data options
- Good design makes a big difference
  - Thanks Symplectic for the inspiration in VIVO 2016
  - Thanks to our designers: Crystal Bruschi and Ben Tyler
- Careful: bad data might become (more) visible

# Benefits (technical)

- Familiar technologies for the team
  - Ruby on Rails
  - Designers can run the site and see their changes locally
- Easier to update the frontend
  - Push a new release without touching the VIVO backend
- Hard division between public and not-public data
- Keeps VIVO data capabilities intact

If you are going to customize VIVO (and you will)...

*your frontend and your backend don't  
have to be the same*

# Future enhancements

- Visualizations
- Built-in access to common queries
  - e.g. who has published in the last 12 months
- Connect to other systems within the university/library
- Document how to reuse our code (Rails + Solr config)
- Exports
  - ... of search results
  - ...individual researcher (make more prominent)
- Organization/affiliation pages
  - ...and others?

# Source code

- Available at <https://github.com/Brown-University-Library/vivo-on-rails>

# Questions?

- Contact us
  - [hector\\_correa@brown.edu](mailto:hector_correa@brown.edu)
  - [steven\\_mccauley@brown.edu](mailto:steven_mccauley@brown.edu)

Thanks!