CURATE SCHOLAR
Set your scholarly works free

Business Plan

Executive Summary ([pitch video](#))

What: Curate Scholar is an **author page product** to share and showcase academic work online.

For Whom: Any academic globally with published or unpublished/under review publications. Primary market is the 10x larger junior academic market given that our author page caters to the specific [needs of early-career academics](#) (fewer but more eclectic outputs).

How Product Is Better: Showcased works are **directly viewable**, **shareable**, and **embeddable**, allowing academics to **share their work 10x faster** than current products ([demo video](#)).

Market Need: Beyond saving user loads of time, our product amplifies the REACH of showcased work to BROADER audiences so it can achieve the impact and recognition it deserves (deep *psychological NEED* given blood, sweat, & tears poured into work). Product also yields a competitive edge for highly sought-after professorship jobs and grants (*professional NEED*).

Team - Domain Expertise: Our domain expertise stems from our meta-scientific knowledge of scientific publishing, most team members being published authors, and our strong technical and software development skills.

Team - Competitive Advantages: We are bold pioneers in the growing open science space, have intimate insider knowledge of academics' needs and constraints, and possess an unusual combination of extraordinary traits and achievements.

Mission

Scale up and roll out our Curate Scholar product to our target markets (non-technical junior academics in Europe & North/South Americas). Maintain lead by evolving our product into new dimensions, e.g., integrated audio streaming to broaden the reach of weekly professor office hours (*Clubhouse for academics*), decentralized publishing platform exit path (disruptable [$25B market](#)).

Problem

Academics need to showcase their scholarly work online:
1. to ensure it is widely accessible so it can achieve the impact and recognition it deserves, &
2. to be competitive for highly sought-after professorship jobs and grants.

Current (non-technical[1]) author page solutions, however, make it time-consuming and difficult to share works online and leave showcased works **difficult to access** and **unpleasant to consume**.

For example, on currently available author pages:
1. Full-text (and figures/tables) *cannot be directly viewed* within the author page, requiring users to navigate away from the page (reducing engagement).
2. Works and figures *cannot be directly shared* from the author page.

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[1] We focus on the larger non-technical market, but our freemium product is also valuable to users in the technical market given that their author page publications can be embedded into their pre-existing technical academic websites, and still benefit from Curate Scholar's unique (time-saving) sharing and UX-enhanced accessibility features ([example](#)).

3. Works *cannot be embedded* on external websites, individually or as a list (further reducing reach and impact).[2]
4. Associated content like data/code, slide decks, videos are *difficult to access and share* given that links to these are either not displayed or difficult to find.
5. Full-texts are *difficult to access* on small screens given generally only available as PDFs.
6. Works are *slow to access* or *inaccessible* with slow internet connections (most global south users) given the preponderance of large-sized PDFs.

Product

Curate Scholar is a fully web 2.0 modern (interactive, shareable, and embeddable) **author page for academics** that solves all of these problems by allowing academics to share their work online in **a tenth of the time** than competing products. It also makes showcased works **more user-friendly to access** and **pleasant to interact with** in **15 new ways (see appendix)**.

This amplifies the REACH of the showcased work to larger and broader audiences, ensuring the work achieves the impact and recognition it deserves. It also gives a competitive edge to academics vying for hypercompetitive professorship jobs and grants.

Curate Scholar offers the following five unique "utility delta" features (see Figure 1):
1. **Direct sharing** of scholarly works (full-text) and associated outputs (data/code, slide decks, videos, etc.)[3] directly from the author page or one's email (demo).
2. **Direct viewing** of PDF full-texts and associated outputs (figures/tables, videos, etc.) from the author page (in split- or full-screen views) via a *touch-enabled* media viewer that makes content delicious to consume on all screen sizes (interactive prototype).
3. **Direct embedding** of scholarly works and figures/charts, individually or in a list, which makes scholarly content pleasant to interact with in any online context in which it appears.[4]
4. **"Interactify" your articles**: Turn static PDFs into interactive HTML articles legible on small screens and externally embeddable, boasting interactive citations and interactive charts.
5. **Ultimate accessibility**: Sonification of HTML articles (for the blind and visually impaired), auto-translatable to 100+ languages, plain-language summaries, dark mode, keyboard navigation, and keyboard shortcuts (as per Web Content Accessibility Guidelines).

Curate Scholar also duplicates all of the main (five) features currently offered by competing products (see Figure 1) but offers *enhanced versions* of these features. It will boast:
- An (ad free) clean/minimalist author page (career-stage customizable),
- One-click batch importing of articles for quick setup,
- Fully touch-enabled,
- Enhanced impact analytics (e.g., embedded content analytics), and
- An article discovery service, enhanced by uniquely allowing the user to customize recommendations based on transparency-related criteria (e.g., data/code availability).

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[2] Imagine if video sharing platforms like YouTube *did not* allow video embedding. This is the current state of academic author pages, including open access journals who prevent the external embedding of HTML/PDF versions of their articles, e.g., *PLOS ONE*, *eLife*, and *F1000*. UCPress journals, e.g., *Collabra*, now *do* allow it given LeBel's pesky emails.
[3] With links to (most of) such associated content automatically extracted from PDF/HTML full-texts.
[4] Example online contexts: Undergraduate teaching, graduate student seminar classes, journal club, conference websites/programs, news reports, journalistic reportings, university press releases, public policy online reports, etc.

			Competing Products			
	Curate Scholar	**Academia**	**ResearchGate**	**Google Scholar**	**BibBase.org**	**Owlstown**
State of the Art Features						
Author page with publication list	✓	✓	✓	✓	✓†	✓
Direct links to article full-texts from author page	✓				✓ (technical)	
Professional academic website (custom domain name)	✓*†	✓† (sub-domain only)				✓†
Impact analytics: Article/data views, downloads, & citations	✓**†	✓†				
Discovery: Search alerts, follow researchers & articles	✓	✓†	✓	✓		✓
Unique "Utility Delta" Features						
Direct viewing of article full-texts & figures/tables from author page (split- or full-screen views)	✓					
Direct sharing and **direct (external) embedding** of scholarly works & figures/tables (individually or in a list)	✓				✓ (technical & limited)	
Directly accessible associated outputs (e.g., data/code, slide decks, videos) via split- or full-screen views	✓					
"Interactify" your static PDF articles into snappy HTML articles legible on small screens	✓*†					
Ultimate accessibility: Sonification of HTML articles for visually-impaired, auto-translatable to 100+ languages	✓***†					

Notes. * Features currently being built. ** Phase II implementation. *** Phase III implementation. † Feature available with a paid premium plan.

Figure 1. Curate Scholar's unique value propositions compared to features offered by competing products.

But our Curate Scholar author page has the potential to become a lot more than just the *best author page* in the world. Our app could become a new standard (or *canonical digital form*) for interacting with, consuming, and disseminating scholarly works online more generally, e.g., the simplest and best way to share and embed lists of scholarly works online.

The Market

The customer is any academic globally with published, under review, and/or unpublished scholarly outputs. Table 1 shows the markets to be pursued and market size estimates. Business model is a business-to-consumer, software as a service (SaaS), freemium model.

A strong demand for our product exists because it **saves academics significant time** (which they have very little of) and helps them satisfy fundamental *professional* and *psychological* NEEDS.

Professionally, academics need to land jobs and secure grants. Showcasing one's work online so it's more user-friendly to access gives them a competitive advantage, particularly crucial for junior academics, who often compete against more senior academics for the same jobs/grants.

Psychologically, academics pour their blood, sweat, and tears into their scholarly work, so have a strong psychological need for their work to receive the impact and recognition that it deserves. Making showcased works ultra-accessible helps satisfy this need by amplifying the works' REACH to a wider audience (see appendix for additional demand evidence for our product).

Table 1. Market segments and market size estimation.

Market Segments	Market Size Estimates
Total global market	**25M-100M**
1. Career stage	
Junior academics (postdocs & graduate students)	17.5M-70M (target market)
Early-career professors	5M-20M
Mid-career, senior, and elite professors	2.5M-10M
2. Technical savviness[5]	
Non-technical users	60%-70% (target market)
Technical users	30%-40%
3. Geography	
Europe and North/South America	45%-55% (target market)
Asia/Global South	45%-55%

Competing Products

Several competing products exist in the scholarly outreach space, including Academia.edu, ResearchGate, BibBase.org, Owlstown, Kudos, Google Scholar, and general website builders (see Table 5 in appendix for competitor details). None of these author pages come close to achieving the time savings and user-friendly *accessibility* of showcased scholarly works of our product.

Academia.edu and ResearchGate offer researchers their own author page, but neither allow direct viewing of full-text PDF/HTML within the publication list (users must navigate to an article page, and then look for a DOI link to a journal website *or scroll down* to find the PDF). On such author pages, it is also NOT possible to embed one's publication list (or individual publication's full-text) on external websites. Worse, Academia.edu requires readers to login to be able to download PDFs.

BibBase.org allows researchers to externally embed their publication list, but it's a clunky technical solution that's difficult to use, and it also doesn't offer full-text viewing.

Owlstown, our strongest competitor, offers a clean, modern author page, including a custom domain academic website (with a paid plan). However, it suffers from several sharing and accessibility/UX shortcomings. Full-text direct viewing is not possible, external embedding is not supported, and users cannot add direct links to data/code within their main publication list.

Product Pricing

Entry pricing for our premium product will target the $70-$90 yearly range, with generous student pricing at half the normal price (see Figure 2).

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[5] Academics use either a non-technical author page (Academia.edu, etc. or a general website builder, e.g., Wordpress, Wix, etc.) or a technical author page (typically a custom or template webpage, e.g., Hugo academic; al-folio Jekyll; Github page/markdown page), or pay a consultant to maintain a technical website, or do not YET have a website other than their university profile page (see StackExchange discussions by academics about such website options [1] [2] [3]).

Our product pricing is based on a careful consideration of (1) how much better our (free and premium) products are compared to current competing products, (2) how our product matches the competing products' current features, and (3) current competitor pricing (see Table 2 & Figure 1 UVP chart).

We aim to strike a balance between undercutting the biggest players' current pricing, but pricing as high as possible in relation to the unique value our product offers to end users (with the Owlstown pricing as the ultimate basement low pricing).

We will also uniquely offer premium features as "standalone" features that can be purchased individually (again offering half-price student discount) to offer flexibility in suiting the needs of different users, and provide a low barrier to entry.

	Curate Scholar Free forever ($0)	Curate Scholar + $10 monthly ($80 yearly) *Student pricing:* *$5 monthly ($40 yearly)*
Free forever **author page** (unlimited articles; ad free) *(e.g., "stevejsmith.curatescience.org")*	✓	✓
Direct sharing & embedding of publications & figures/tables	✓	✓
Direct viewing of full-text & figures (split- or full-screen views)	✓	✓
Directly **accessible associated outputs** (data/code, slides, ...)	✓	✓
Upload full-text PDFs to ensure direct viewing & embedding § *	Up to 6	Unlimited
Professional **academic website** (custom domain) § * *(e.g., "stevejsmith.com")*		✓
"Interactify" PDFs into snappy, legible, interactive HTML articles § *		✓
Gmail plugin to directly share articles & data/materials from email § **		✓

Notes ($ in USD):
 * Feature currently being built.   ** To be implemented in Phase II.

§ Available as a standalone premium feature @ $6/month (**$3/mth for students**). If user wants more than 1 premium feature, cheaper to get the comprehensive PLUS plan.

Figure 2. Curate Scholar pricing for free and premium offerings.

Revenue Generation Potential

Our premium product has strong potential to generate significant revenues. This can be gauged by considering plausible *ranges of values* for the key revenue generation variables, chosen specifically to be justifiable and conservative based on known information from competitors (see Table 2). Such considerations yield favorable and significant upside, with potential **revenues up to $275M per year** within 5 years (50M x 10% x $55/yr).

Table 2. Main revenue-generation variables and corresponding plausible range values.

Main revenue-generation variables	Plausible values ranges
Total number of free users (within 5 years)	50K to 50M ([see appendix](#) for details)
Premium conversion rate (percentage of paying users)	[1% to 10%](#)
Premium yearly price (50% student pricing to be conservative)	$25 to $55

Furthermore, a simplified net income model, which includes our small team and server costs ([spreadsheet](#)), yields favorable projections, including a decent likelihood of breaking even by Y4 or Y5 based on conservative range values and model assumptions ([see appendix](#) for full model details, assumptions, and yearly net income projections visually displayed in chart form).

Market Summary:
- A strong demand exists for our product professionally, psychologically, and empirically (e.g., based on our competitors' user bases; our own validation tests with early beta users).
- The market is large, and at least 10x larger given our product caters to junior academics.
- Competition is mostly weak.
- Product solves a problem that is large, common, urgent, frequent (users need to share works/data multiple times per day), growing (given [rising open science standards](#)), and related to law changes[6] ([see appendix](#) for other factors that support a rapid growth view).

Current Team

1. [Etienne P. LeBel](#), PhD (*meta-scientist;* [CV](#)), *Curate Science* co-founder and CEO (Canada)
2. Technical co-founder (currently being sought via [YC's co-founder matching program](#))

The team will soon be expanded, concentrating on marketing and user growth. The company can also draw on the following consultants currently with Curate Science:
1. [Stijn Verdonck](#), PhD (*psychologist, developer*), [m-Path](#) CXO (*KU Leuven, Belgium*) - *Technical advisor*
2. [Mark Ledwich](#), BSc (*developer, data scientist*), [Transparency.tube](#) co-founder (Australia) - *Technical advisor*
3. [Stefaniia Ivashchenko](#), PhD (*biophysicist*), [Open Science TV](#) founder (France) - *Promotion/marketing & community building*

We have a strong team with deep and wide-ranging domain expertise. Our team also possesses several key competitive advantages.

Domain Expertise
Our team's strong domain expertise stems from:
1. Extensive experience in – and meta-scientific knowledge of – scientific publishing,
2. Most team members being former or active *published authors*, and

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[6] Recently passed laws in the [Netherlands (2015)](#), [France, (2016)](#), and [Belgium (2018)](#) require that publicly-funded researchers place all articles in the public domain within six (6) months of publication (even if it violates copyright).

3. A software development background in eclectic domains and strong technical skills.

Our extensive knowledge of scientific publishing stems from most team members still actively interfacing with the academic community via recent publications. Hence, we are users of our own product. We also possess interdisciplinary backgrounds, most crucially in the field of meta-science, as part of the growing open science movement. Some team members have even published specific academic work on scientific publishing, aimed at understanding and improving standards related to transparency and credibility.

On the software development side, we have wide-ranging and diverse experiences in product design, QA testing, and user-based product iterations in different domains. These include from previous projects in meta-science (e.g., researcher transparency leaderboard), broadcasting software, limousine scheduling software, and most recently, product design and infrastructure work for Curate Science's broader open science platform (a 2-year European Commission funded project). We use modern UI/UX design languages (Google's modern Material Design) and software development approaches (e.g., A/B testing to optimize UX decisions; agile development method).

Competitive Advantages

Our team possesses the following unique insights and experiences that give us competitive advantages over our competitors:
1. We're (award-winning) pioneers pushing bold initiatives in the growing open science space,
2. We have intimate insider knowledge of academics' needs and constraints, and
3. We possess an unusual combination of extraordinary traits, obsessions, and achievements.

Our team is composed of open science trailblazers who have courageously implemented bold initiatives to raise research standards in academia, including leading controversial transparency initiatives (researcher transparency audits & leaderboard; PsychDisclosure.org), conducting adversarial replications, maintaining a public replication tracker, and launching daring ventures like Open Science TV and *Transparency.tube* (see also media coverage of LeBel's bold initiatives).

We have intimate insider knowledge of academics' needs and constraints[7] – and the broader academic culture – from our various roles inside and outside academia for 10+ years (e.g., as undergrads, grad students, postdocs, professors, lecturers, research associates, scientific consultants).

We possess the following *unusual combinations of traits and achievements* unique to our team:
- A deep emotional obsession with the value of science and intellectual scholarship more generally, which provide formidable motivation to unceasingly continue improving our products to maximize the reach and impact of science for the betterment of society.
- An intense and perpetual (creative) obsession with boosting the accessibility of scholarly content in *as many new dimensions and modalities as possible* (e.g., video summaries, audio/video accessibility of professor "office hours", touch-enabled accessibility).
- Combined experiences of (1) actually being published authors, *and* (2) maintaining our own academic websites, *and* (3) LeBel having been a professor, *and* (4) LeBel also having been a paid consultant (as a PhD student) to create/maintain other professors' websites.

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[7] Including a deep understanding of the perverse incentive structure and complex ecosystem in which academics operate.

- Combined traits of being enamored by science, having a deep UI/UX design fascination, and having an academic, computer science, and software dev/QA assurance background.

(See also the appendix for a list of extraordinary achievements by each co-founder.)

Taken together, our competitors could attempt to duplicate our UVP features, but this would most likely result in releasing half-baked versions of such features given that they *cannot* duplicate all of our team's competitive advantages.

Risk Management and Contingency Plans

Five risk factors (*technical, market, social, financial,* and *legal*) may interfere with the scale up and roll out of our product. Table 3 summarizes:
1. Facts about our product or team that reduce these five risks, and
2. Specific contingency plans we can enact if any of these obstacles are encountered (see appendix for more details).

These are based on wide-ranging experiences developing and implementing similar apps in the open science space, including extensive feedback solicited from the academic community for 7+ years (LeBel giving 22+ presentations at 20+ universities in 8 countries; see his CV under *Talks*).

Table 3. Risk management for potential obstacles in rolling out our product.

Risk Category	Risk-Reducing Factors	Contingency Plans
Technical (implementation or launch-related issues)	- Idea has been validated in 6 different ways - App about half developed - Core infrastructure already implemented - Foundational problems already solved	Draw from internal and external consultants
Market (slow user growth)	- Leverage existing network contacts and high-visibility influencers - Intimate knowledge of academics' needs - Cheap user acquisition & network effects - Segment-based customizations	- Edgy/punchy social marketing campaigns (brief, humorous) - Ramp up outreach activities at conferences and events - Referral program discounts
Social (community acceptance issues)	- Leverage strong reputation from (pro-bono) science-strengthening activities for past 7 years - We're staying clear of controversial issues related to transparency and replication	Marketing campaigns based on the themes of corporate-social responsibility and the value of science
Financial (insufficient revenue &/or greater costs)	- Substantial revenue generation by competitors with inferior products - Lower server costs given priority on HTML articles (rather than large file-size PDFs)	- Reduce scope of free plan - Optimize server operations
Legal (copyright issues)	- Powerful "fair use" clause - None of our competitors have been sued	Counter sue for blocking access to public research

Objectives Over Next Six Months

- Finish MVP (pivoting from extant early beta) and release to small group (N=50) of early adopters to further validate assumptions of usability and demand basis (*3 months*). Features to be completed (GitHub):

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- - Slick automatic batch article importer (via Microsoft's Academic Search open API).
    - Automatic article metadata extraction (e.g., open access & transparency metadata).
    - Finish article sharing and embedding functionalities.
    - Fix/improve ~10 issues (GitHub) as reported/suggested by early beta users.
  - Solicit feedback from MVP users regarding UX and missing features (*1 month*):
    - Test final technical risks assumptions: Initial author page setup is sufficiently quick and painless to users, e.g., < 5-10 minutes maximum, key to ensuring smooth and rapid user growth.
  - Improve features, fix bugs, and add missing features requested by MVP users and release early beta public version (*2 months*). Premium features to be completed:
    - Custom domain author page functionality.
    - "Interactify" PDFs into legible, snappy, and interactive HTML articles using Allen Institute's open-source paper to HTML converter.

Tentative 5-year Plan

- Product development roadmap: Build out additional Phase II and III premium features (see Figure 1):
  - *Gmail plugin*: Insert article cards with direct links to full-text and data/materials directly into emails (phase II; demo).
  - *Impact analytics*: Article/data views, downloads, & citations, and uniquely, embedded impact metrics (phase II).
  - *Ultimate accessibility:* Sonify HTML articles and allow auto-translation, to meet Web Content Accessibility Guidelines (e.g., screen-reader compliant; phase III).
- User growth milestone targets:

Y1	Y2	Y3	Y4	Y5
50K users	125K users	500K users	1.5M users	50M users

- Marketing strategies:
  - Leverage existing network contacts and high-visibility influencers.
  - Edgy/punchy social marketing campaigns (brief, humorous).
  - Outreach activities at conferences and events.
- Revenue-generation and breaking-even milestones:
  - $1M yearly revenues (or greater) by Y4 or Y5.
  - Breaking even by Y4 or Y5 based on net income projections based on justifiable and conservative values (see appendix for net income model).

Supporting Materials

Table of Content:

15 new ways showcased works made more accessible and enjoyable to consume

Curate Scholar makes scholarly works 10x more user-friendly to access and enjoyable to consume in 15 new ways (pitch/demo video). Here they are:

1. Split-screen view - Article (screenshot; example author page)
2. Split-screen view - Figures/tables
3. Split-screen view - Slide decks & videos
4. Split-screen view - Data/code
5. Interactive transparency badges (links to data, code, study materials, COI disclosures, reporting standards, peer-review information, etc.; example author page)
6. External embedding - Author page (example)
7. External embedding - Article
8. External embedding - Figures/tables
9. Touch-enabled, multimodal, multi-gesture media viewer and swipeable carousel for figures/tables, videos, and slide decks, beautiful on all screens (screenshot).
10. Interactive HTML articles (demo) - Interactive charts (example; split-screen view)
11. Interactive HTML articles - Interactive citations (example)
12. Interactive HTML articles - Legible on small screens
13. Interactive HTML articles - Fast to load (even for slow internet users)
14. Interactive HTML articles - Sonification for visually impaired
15. Interactive HTML articles - Auto-translatable to 100+ languages

Additional evidence of market demand for our product

- Direct feedback and feature requests from:
  - Academics from 10+ presentations and community consultations since 2013.
  - Users of an early beta version of our product ([2018-2020](#)).
- Hundreds of requests for our product via email and via our Twitter feed.
- Stack exchange discussions by academics discussing the crucial need for maintaining a professional academic website, and what the best current products/solutions are (as of 2018 or earlier; see [1] [2] [3]).
- The [European Commission's recent grant call](#) (January 2022) is specifically looking to fund research transparency rewards and recognition systems, which is already fully integrated into our Curate Scholar product ([example author page](#) with interactive transparency signalling labels at the author and article levels).

Financial plan & revenue and expense projections (5-years)

This section describes (1) a simplified model to help gauge the financial viability of our product, (2) specific rationales for choosing range values for the key variables, (3) model assumptions, (4) chart-based model results (Y1-Y5), and (5) our cash requirements.

Model Description
The model combines plausible ranges of values (via a Cartesian product for simplicity; [see spreadsheet](#)) for both expected revenues and expenses for the next 5 years (see [Table 4](#)). Such values were chosen specifically to be justifiable and conservative based on known information about our competitors' products.

Table 4. Expected revenues and expenses (Y1-Y5) based on plausible (conservative) range values for key variables.

Estimates (in USD)	Y1	Y2	Y3	Y4	Y5
Revenues					
1. Total # of free users	500-50K	1K-125K	5K-500K	10K-1.5M	50K-50M
2. Percentage of premium users	1%-10%	1%-10%	1%-10%	1%-10%	1%-10%
3. Premium pricing (yearly)	$25-$55	$25-$55	$25-$55	$25-$55	$25-$55
Expected premium revenues (median value via Cartesian product of 3 variables' ranges of values)	$40K	$100K	$401K	$1.2M	$39.7M
Cash from seed investments ($1M)	$200K	$200K	$200K	$200K	$200K
Total revenues	***$240K***	***$300K***	***$601K***	***$1.4M***	***$39.9M***
Expenses					
1 Technical co-founder (prod. dev./UX)	$100K	$100K	$100K	$100K	$100K
1 Technical co-founder (lead developer)	$100K	$100K	$100K	$100K	$100K
Full-stack developers ($100K/yr)	$100K	$100K	$100K	$200K	$300K
Marketing/User growth specialists ($100K/yr)	$100K	$100K	$100K	$200K	$300K
Total personnel costs	$400K	$400K	$400K	$600K	$800K
Expected server costs (median; $1/user/year)	$25K	$63K	$252K	$755K	$25M
Total expenses	***$425K***	***$463K***	***$652K***	***$1.36M***	***$25.8M***
Net income (revenues - expenses)	***-$185K***	***-$163K***	***-$24K***	***+$40K***	***+$14.1M***

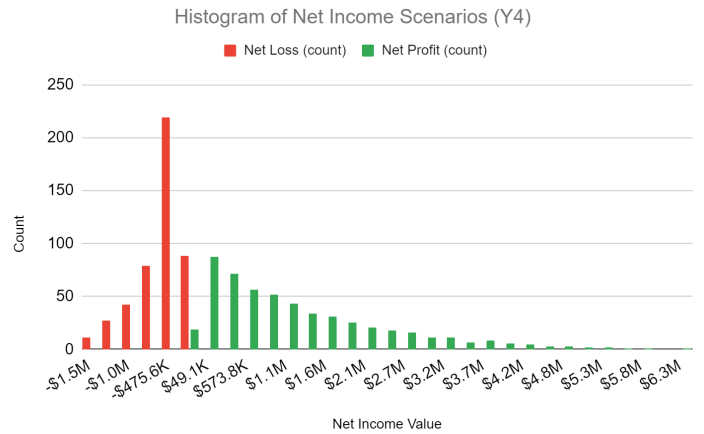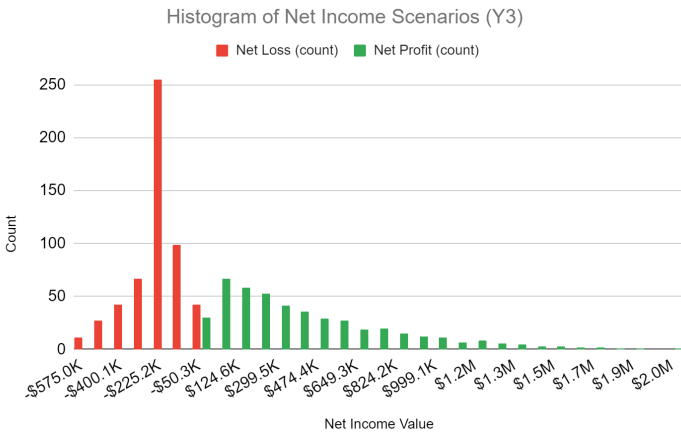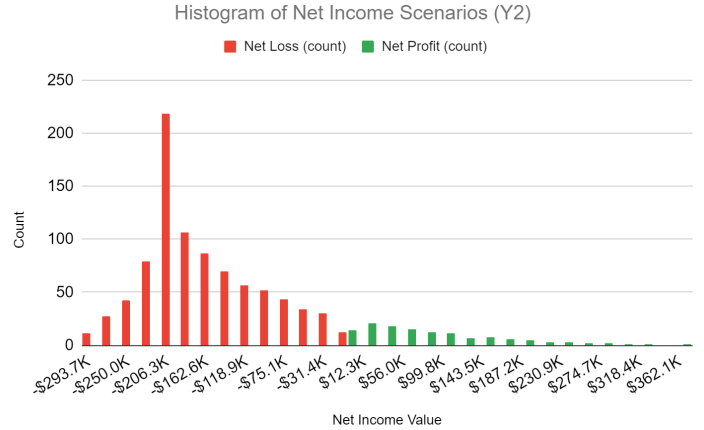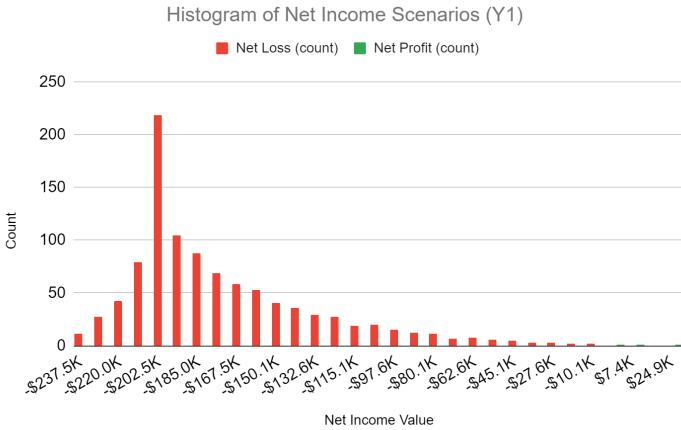Rationales/justifications for Range Values of Key Variables:
- Total number of free users:
  - Starting point is ResearchGate's 20M users (after 10 yrs). To be conservative, we use ResearchGate's 20M instead of Academia.edu's 30M users (as of December 2021; of which 300K are paying premium users, generating $30M revenues/year).
  - But multiplied by 5 given ResearchGate excludes the entire junior market given that they require at least 5 publications and a verified email at recognized institutions to be eligible to join (we allow any undergraduate/graduate student with at least one scholarly output, e.g., preprint, or conference poster, etc.). We use a conservative 5x multiplier given typical grad student to faculty ratio >10:1), so 100M (20M x 5).
  - But @50% market saturation (given after 5 years only instead of 10 years), **so 50M free users**.
  - Year-to-year ranges were determined by considering worst- and best-case scenarios for each year, based on a conservative interpretation of competitors' user growth.
- Percentage of premium users **(1% to 10%)**:
  - Industry standard is between **1% to 10%**, e.g., Academia.edu's premium percentage is 1%, but we could expect higher given our product is 10x better in 15 new ways.
- Premium pricing **($25 to $55)**:
  - Starting point is our entry premium price range of $70-$90, based on a careful consideration of how our product compares to competing products, competitor pricing (see Table 2 & Figure 1 UVP chart), striking a balance between undercutting the biggest players' current pricing, but pricing as high as possible in relation to the unique value being created for end users (with the Owlstown pricing as the ultimate basement low pricing).
  - To be conservative, we went with the (half-price) student pricing (given junior academics is our target market), so $35-$45, but decided on a slightly wider range of **$25-$55** to capture the uncertainty in this estimate.
- Server costs (**$1/user/year**):
  - Based on Academia.edu ~$1/user/year server cost in 2017 ($6M/yr server costs for 6M active users, as communicated to me by the CEO in a June 28, 2017 phone call).
  - But our costs should be substantially lower given:
    - Academia.edu allows free (non-premium) users to upload an unlimited number of PDFs whereas we will only allow up to 6 PDF uploads per free user.
    - Junior academics (our target market) have substantially fewer publications.
    - We will encourage users to opt for faster HTML articles (rather than large file-sized PDfs).
  - Hence, server costs should be at least half ($0.50/user/year), but decided to go with **$1/user/year** to be conservative given the possibility of slightly larger server costs due to our unique external embedding functionality.

Model assumptions:
- For simplicity, for each of the 3 key revenue-generating variables, range values were fixed at 10 equally-sized steps between the upper and higher bound values, and then combined via a Cartesian product (see spreadsheet), e.g.,
  - Percentage of premium users: 1%, 2%, 3%, 4%, 5%, 6%, 7%, 8%, 9%, 10%

- ○ Total # of free users (Y1): 500, 6K, 11.5K, 17K, 22.5K, 28K, 33.5K, 39K, 44.5K, 50K
- ○ Premium pricing: $25, $28.33, $31.66, $35, $38.32, $41.65, $45, $48.3, $51.6, $55
- Assumes fixed server costs per user across years.
- Team growth: To support rapid growth, a full-stack dev and full-time marketing specialist/community outreach team member will be added in each of Y4 and Y5.

Results (Y1 through Y5; see spreadsheet)

Histogram of Net Income Scenarios (Y1)

Net Loss (count)   Net Profit (count)

Histogram of Net Income Scenarios (Y2)

Net Loss (count)   Net Profit (count)

Histogram of Net Income Scenarios (Y3)

Net Loss (count)   Net Profit (count)

Histogram of Net Income Scenarios (Y4)

Net Loss (count)   Net Profit (count)

Histogram of Net Income Scenarios (Y5)

Net Loss (count)   Net Profit (count)
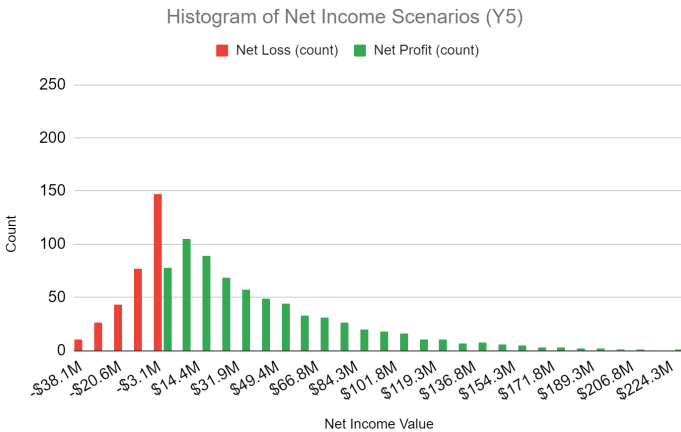
Cash Requirements
- Total cash requirements: $200K/year for 5 years for a 4 person team, growing to 6, and 8 in Y4, and Y5, respectively (see Table 4), with the hope of breaking even by Y4 or Y5.

Reasons and evidence supporting rapid growth view

Reasons and evidence that our product could experience rapid user grow, along three main categories investors generally care about:

1. *Problem*:
    a. Large, common, frequent (e.g., sharing articles and associated data/materials multiple times per day), and an urgent problem among academics (~100M user market).
    b. Mandatory problem given new Open Access law changes in a growing number of European countries.
    c. Growing problem given rising open science standards and general growth rate of academia, i.e., ~100-200K per year, but growing at a faster rate in global south markets, where the research-intensive universities market is still growing.
2. *Solution*: Product >10x better than current products:
    a. Offers 5+ unique (large "utility delta") accessibility-boosting features, saving scholars tons of time, and boosting the impact and recognition of their work.
    b. Enhanced versions of five (5) current features offered by competitors.
3. *Insights/Competitive advantages (team or product)*:
    a. Founders: 1 of 10 experts and thought leaders in the world in the open science space, and who possess unusual combinations of traits yielding several competitive advantages.
    b. Cheap user acquisition (beyond word-of-mouth) given brand exposure via embedded content (example).
    c. Several network effects via co-authors, which boost the utility delta of the app, and accelerates user growth.
    d. Several exciting "exit paths" for long-term growth and maintaining lead, e.g., evolving product into new accessibility dimensions and releasing related sister products as part of our integrated suite of apps, e.g., audio/video calling to broaden the reach of professors' office hours (*Clubhouse for academics)*, decentralized publishing platform (disruptable $25B market), or interactive CV sister product.

Competing product details (& tangentially related competitors)

Table 5. List of competing products (see below for additional tangentially related competitors).

Competing product	Type (investors)	Category	Features and Deficiencies
Academia.edu	private (Spark, Khosla, Howzat)	discovery, outreach	Create author page (ads) & academic website, but no custom domain, closed walled-garden model (no public domain), no full-text direct viewing, no embedding (premium $80/yr).
ResearchGate	private (Benchmark, Founders, Gates)	discovery, outreach	Create author page (ads galore), but no full-text direct viewing from author page, no external embedding, no custom domain.
Google Scholar Profile	private (Google)	discovery, outreach	Claim author profile (no ads), but no control, no full-text direct viewing, no embedding (cannot even specify preferred full-text links), & cannot use custom domain.
BibBase.org	independent	outreach	Create embeddable publication lists (technical, no ads), but cannot tell open access (OA) status, no full-text direct viewing, no direct links to data/code (only technical solution), & old tech. Author page w/ paid plan ($48/year), but no custom domain (only supported with $950/month 400-user enterprise plan).
Owlstown	independent	outreach	Create academic website (no ads), but no full-text direct viewing, no external embedding, no links to data/code within publication list. Custom domain available (Pro Plus $24/year).
Kudos	private (UK)	outreach, communication	Create author page (eg; my own), but focused more on science communication. Poor UX, no direct OA links (must navigate to article page, then navigate to journal website), no direct viewing, no embedding, no custom domain, even w/ $125/year plan Pro plan for a "project page" to showcase pubs (for $435 one-time, set it up for you, including plain language summaries; as of 2021, 375K+ users from 10K+ universities worldwide).
General website building platforms	private (e.g., Wordpress, Weebly, Wix, & Squarespace)	outreach	Generally just list publications with messy & poor UX, no direct OA links, no direct viewing, no embedding. Pricing for unlimited pages (as of Sep 2021): 1. Wordpress ($48/year), 2. Weebly ($72/year), 3. Squarespace ($144/year), and 4. Wix ($168/year).

Additional competing products, which are tangentially related:
- Rubidium: Scientific websites made for scientists by scientists. But this is a (technical) service to create an academic website for academics, rather than a non-technical academic website builder ($1,600 (Economy) or $4,200 (Pro) one-time fees).
- ResearchID (not to be confused with Clarivate's Web of Science ResearcherID): Personal author page automatically updated with publications (from Scopus Author ID), showing citations, h-index, & i-10 index (from GoogleScholar profile ID), but no direct links to full-texts (only DOI links some of the time, ouch), no open access status, no links to data/code, no direct viewing, not embeddable, etc. (example author profile; example #2 without even DOI links).
- ScienceOpen.com (example author profile): Not meant as an author page, but rather as a platform focused on search/discovery and post-publication peer review.

- Mendeley reference manager (but bought by Elsiever publisher in 2013) and Mendeley Profile, an author page product to showcase research outputs and research impact metrics & accomplishments (but wasn't able to find it/sign up, so may be paused or pulled?).
- Rescognito (founder's author profile): Allows researchers to get recognition for various open scholarly activities, alongside a list of their publications (so not really meant as an author page).

List of extraordinary achievements by each co-founder

Technical co-founder #1: Etienne P LeBel (CV):
- Ambitious PhD dissertation (*Metric calibration of psychological instruments: Utility and feasibility*), which developed a general framework to calibrate the metric (unit of measurement) of instruments to measure constructs in psychology and the broader social sciences.
- As a junior academic (graduate student/postdoc), LeBel pushed for higher research standards, e.g., conducting and leading a controversial transparency initiative (PsychDisclosure.org), courageously defying his professors, mentors, and the broader professional field.
- Developed a harrier race timing software (*Race Pace 2000*) for a high school assignment (in Visual Basic), which was used by coaches to time official races for several seasons.
- Is a published author in world leading international journals in psychology and meta-science (changing fields during graduate school; see CV). This includes being a published author in *Science*, considered the world's most prestigious scientific journal, among the first to join a controversial mega-study, which attempted to replicate 100 published psychology findings.
- Conducted the world's first researcher transparency audit in science (2021).

Technical co-founder #2 (currently being sought via YC's Co-founder matching program):
- [Impressive coding solution, product scale up, or revenue generation/funding acquisition]

Risk management/contingency plans details

Additional details regarding the five key risk factors (*technical, market, social, financial,* and *legal*) that may interfere with the scale up and roll out of our Curate Scholar author page. For each of the risk categories, we list:
1. Facts about our product or team that mitigate these risks and
2. Specific contingency plans that we can enact if any of the obstacles are encountered.

Technical/execution risks*:* In finishing early beta so it's ready for public launch.
Risk-reducing factors:

- We've used a multi-pronged approach to validate our idea (including validating the core feature set):
    a. Talking to customers all over the world, soliciting extensive feedback from the academic community for 7+ years (22+ presentations/workshops at 20+ universities in 8 different countries).
    b. As published authors, we are also users of our own product.
    c. Receiving regular requests for our product via email and social media (Twitter), when we were regularly releasing prototypes for feedback ([example](#)).
    d. Extensive feedback from early beta users of an earlier free version of our product (N=~40).
    e. Competitors' large user bases and our intimate knowledge of our competitors' product deficiencies.
    f. Careful and deep consideration of the complex, multi-stakeholder academic ecosystem ([see our guiding diagram](#)) in which academics operate, and the many needs/constraints (e.g., publish or perish) academics face in getting and keeping jobs and grants.
- Our app is already about half developed ([early beta release video](#); [GitHub repo](#)).
- We've already solved most foundational technical problems (e.g., author and article disambiguation).
- Several existing open-source tools that will be leveraged to implement features that still need to be added:
    a. Batch article importing: [Microsoft Academic Graph](#)'s Academic Search open API for;
    b. Analytics component: [CrossRef's Event Data open API](#), a new free source of altmetrics for our).
    c. Article transparency metadata extraction:
        - *Open access*: Swiss National Science Foundation's [Open Access check tool](#) to determine open access status
        - *Open data*: QUEST's (Germany) [Open Data Detection in Publications (ODDPub) text-mining tool](#) to extract open data status from data availability statements
        - *COI/funding disclosures*: [Serghiou et al.'s (2021)](#) [rtransparent R package](#) that automatically extracts COI/funding disclosure statements from PDF/XML articles

Contingency plans:
- Draw from internal and external consultants for help with technical hurdles.

Market risks*:* User growth is slower than anticipated.
Risk-reducing factors:
- Leverage our existing network contacts to spread awareness of our new product, which includes hundreds of high-visibility open science influencers and scholars. We're well-connected in the open science/academic space (e.g., seed funding from the [Center for Open Science](#), ties to existing open science and meta-science spaces; [BITSS](#), Berkeley economics-based group).
- Our uniquely customizable author page is designed to cater to the needs of all three (3) career-related segments simultaneously – junior ([example junior-centric author page](#)), mid-career, and senior academics – increasing the likelihood of overall user growth.

- - Drawing in users via our unique [transparency signalling interactive labels](#) (article- & author-levels), particularly attractive to junior academics given they need every possible competitive advantage.
- Cheap user acquisition given brand exposure via embedded content (above and beyond word-of-mouth), and mass invitation campaigns (see [contingency plans below](#)).
- Several network effects via co-authors, which boost the value of our product to other users, accelerating user growth.
- Already having received lots of feedback from our (early) beta users regarding what features our app is still missing that are most needed (and broader feedback on the needs of time-starved academics from canvassing the academic community for 7+ years).

Contingency plans:
- Use edgy/punchy social marketing campaigns, e.g., brief, humorous public service announcement-style videos (Tik-tok-esque) targeting the junior researcher market:
  - Example 1: Feature-specific social campaigns: *"Your scholarly work is your gold. Get it out there. Let others see it. Let them deliciously consume it. Embed it. Mix it.[8] Set your scholarly works free."* (catchy music, visually-synced sound effects, etc.).
  - Example 2: Imprisoned scholarly works metaphor, then seeing the cage being opened and the works escaping, freely being able to be disseminated and embedded!
- Outreach activities, including at conferences, e.g., open science or meta-science related conferences and events.
- Referral program: Premium plan discounts for users who get their co-authors/colleagues to create their Curate Scholar page.
- Mass invitation campaigns: Authors invited to claim their free, pre-populated author page via email addresses automatically-scraped from article full-texts.

Social risks: Public relations issues with the research/academic community.
Risk-reducing factors:
- We can leverage Curate Science's positive brand, strong reputation, and good will to the community achieved from our unwavering commitment to strengthening science for 7+ years.
- Our app stays clear from current controversies in the transparency and replication spaces, particularly in relation to senior researchers, who are apprehensive of rising research standards given they have more to lose than junior researchers (which we learned the hard way in previous projects).

Contingency plans:
- Marketing campaigns based on the themes of corporate-social responsibility and value of science.

Financial risks: Insufficient revenue generation and/or greater costs than anticipated.
Risk-reducing factors:
- Competitors (e.g., Academia.edu, $80/year; Kudos $125/year) have been able to generate substantial revenues from mediocre freemium products whose showcased works are difficult to access, suffer from poor UI/UX, and cannot be externally embedded, etc.

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[8] For example, show a Curate Scholar article being added to a 2-article card list being embedded in a journalist's (or blogger's) news article reporting on the 2 articles.

- Our server costs will be lower than competitors (e.g., Academia.edu) given that we will encourage users to opt for (much more accessible, interactive, and pleasant UX) HTML articles, which are much cheaper than expensive-to-host PDF articles (what Academia.edu predominantly host).

Contingency plans:
- Reduce scope of free plan.
- Optimize server operations.

Legal risks: Possible litigation regarding copyright infringement from publishers.
Risk-reducing factors:
- Scholarly content is unambiguously strongly protected under "fair use", which we have very intimate knowledge of.
- Indeed, this is corroborated by the fact that none of our competitors have been sued for allowing their users to upload their own full-text PDFs (Academia.edu, ResearchGate, Owlstown, etc.), which technically violates some of the publisher's copyright, but is only the case given antiquated copyright laws that were never meant to apply to digital academic content.

Contingency plans:
- Counter sue for blocking and paywalling publicly-funded research, a practice that is self-defeating, unethical, and actually illegal in France since 2016. Offense is the best defense.

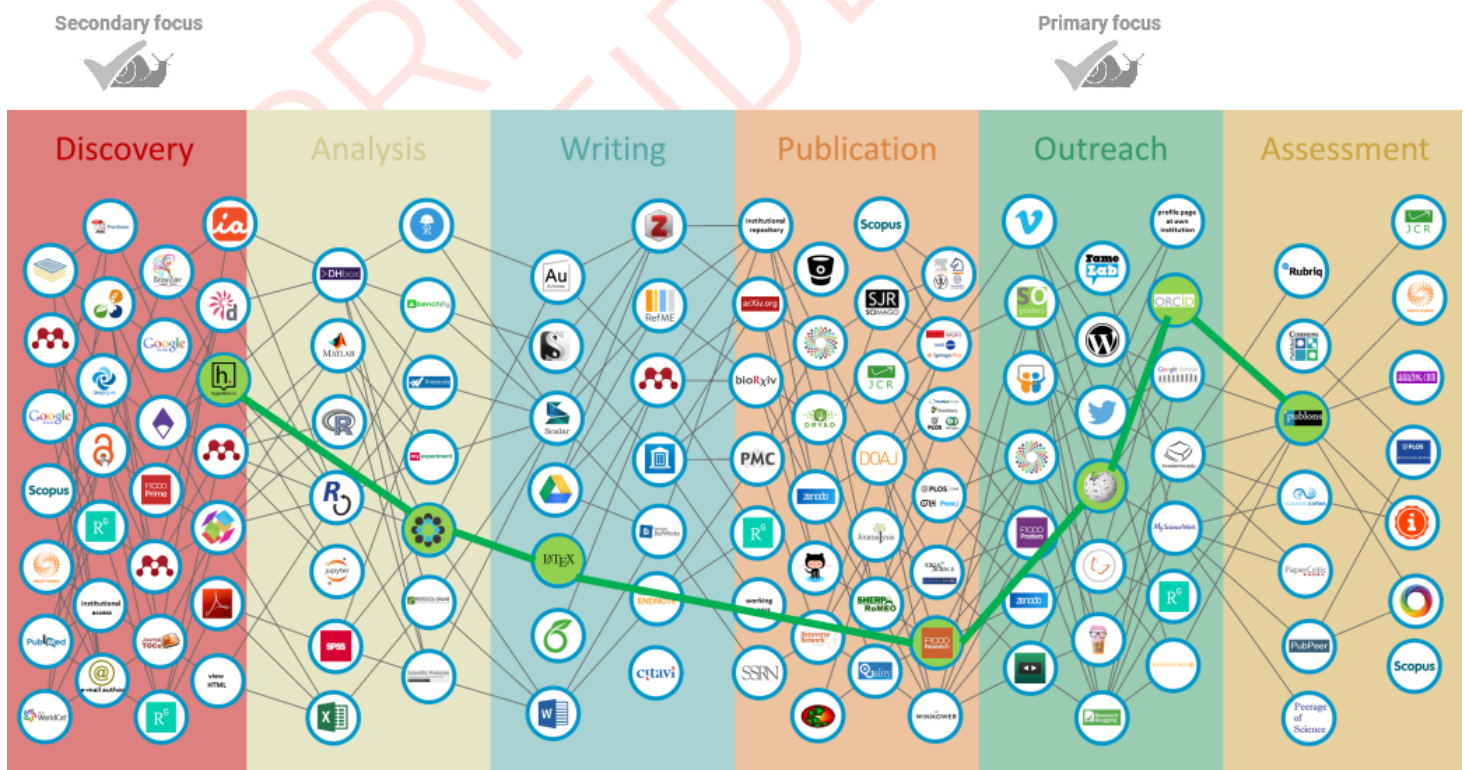# Curate Scholar's positioning in open science ecosystem

Figure 3. Current ecosystem of open science tools and companies across six sectors of the research workflow. Curate Scholar's primary focus is in outreach, with a secondary focus on discovery via its article recommender.

Transparency influencers endorsements of Curate Science

"The global open science movement has made great strides in increasing the transparency of research. A key next step is developing technologies to ensure that all research meets minimum transparency standards. Curate Science is at the leading edge of tackling this problem."

Brian Nosek, PhD, *Director, Center for Open Science*

"Curate Science is making steady progress tackling the holy grail problem in academic science: Differentiating credible evidence from unreliable or otherwise non-verifiable research."

Chris Chambers, PhD, *Professor of Cognitive Neuroscience, Cardiff University* and author of *The Seven Deadly Sins of Psychology*

"Curate Science is tackling the important challenge of organizing the transparency and replication of published research so that researchers can efficiently evaluate the credibility of scientific claims. This is what the scientific record should look like in the 21st century."

Daniel Lakens, PhD, *Associate Professor of Meta-Science, Eindhoven University* and teacher of *Improving Your Statistical Inferences* MOOC

"Curate Science's vision has always been at the cutting-edge. It offers delicious web products for forward-thinking researchers to make their research more transparent and accessible. It also takes on the next big challenge: Linking findings to illuminate reliable research as science self-corrects."

Bobbie Spellman, PhD, *Professor of Psychology, University of Virginia,* active open science proponent, and editor of special issue on transparency