Knowledge Futures Group

Annual Report
2020

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Introduction

The Knowledge Futures Group is a nonprofit organization that builds technology for the production, curation, and preservation of knowledge in service of the public good.

Our mission is critical. Public knowledge is the information we collectively generate and use to navigate life. It's our neighborhood maps; it's our legal codes; it's the recorded precedents, facts, and findings that inform our futures and color our pasts. Those who don't have access to it have less agency over their lives than those who do. We fundamentally believe that public knowledge must be a public good. We find ourselves at a time when public knowledge is not serving the public good at several scales.

State of Global Knowledge — Loss of shared reality. Disinformation and propaganda have become pervasive & powerful.

State of Tech Industry — Rapidly implementing monopolies powered by surveillance capitalism.

State of Scholarly Infrastructure — Gordian knot of incentives, control in the hands of commercial entities.

This is a complex problem that will require slow, generational changes in technology, culture, and business. Actionable strategies tend to be clearer at the smaller scales, and become more diffuse and amorphous at broader scales. That is, it is more feasible to identify solutions for academic publishing than it is for global disinformation. Our theory of change is to find solutions that can address each of these scales, but find sustainability and relevance through the clarity of the smallest scope.

The past year has brought an enormous amount of change and growth to the KFG. I'm incredibly proud of the team and their ability to make continued progress in the face of both local and global emergencies. At the end of the fiscal year, we have emerged with a sound legal foundation, a larger team, more users of our products, new and strengthened partnerships with funders and collaborators, and an unending display of the importance of the challenges we seek to address. This report will elaborate on each of those points to provide a more complete picture of where we are and where we're going.
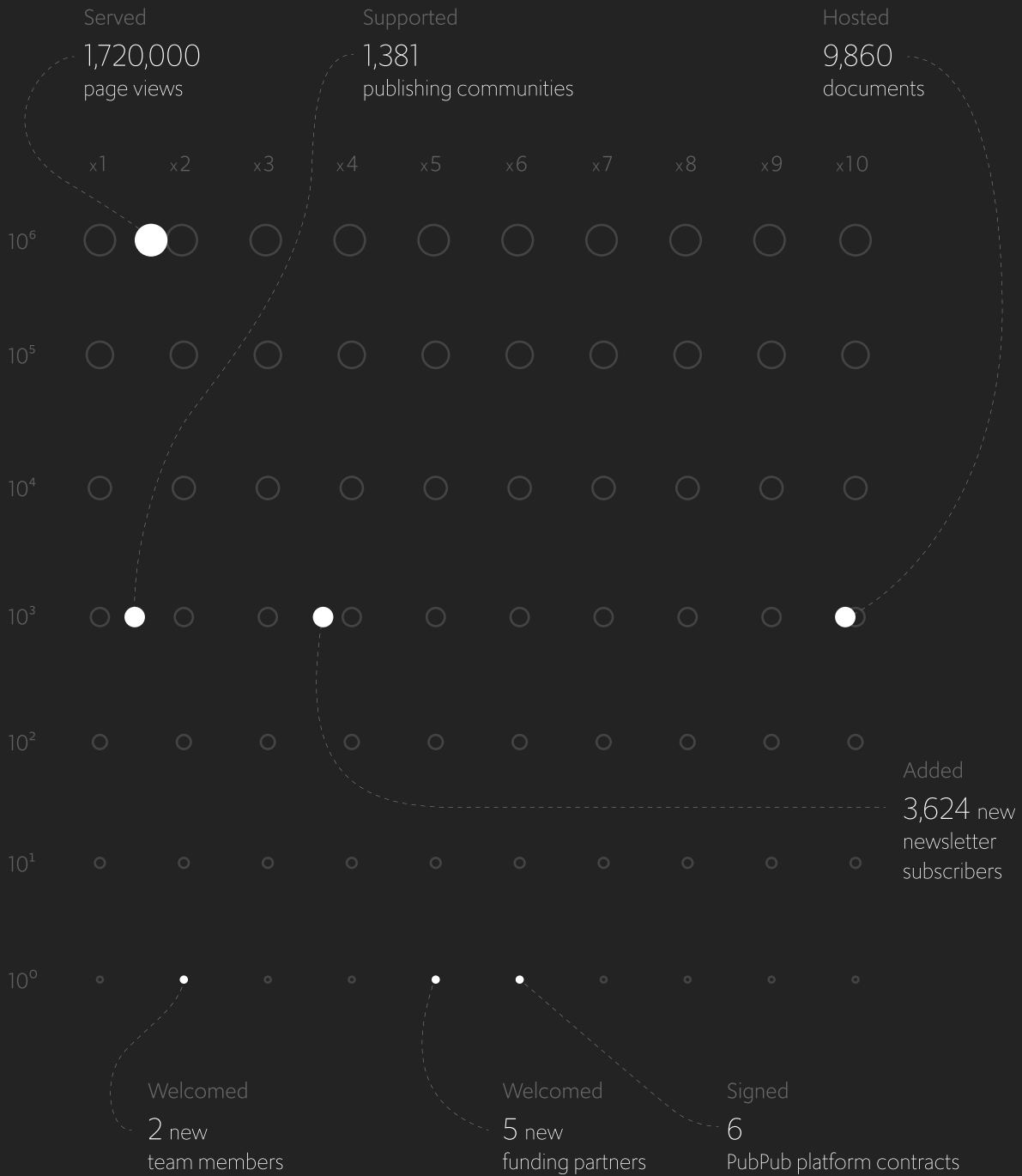
Travis Rich
Executive Director

Year in Review

MILESTONES

Jul 1, 2019 — Received first multi-institutional grant with support from Sloan foundation

Oct 1, 2019 — Hosted first annual convening

Nov 1, 2019 — Signed first publisher contract for PubPub with the American Psychological Association

Dec 6, 2019 — Launched first data collaborative with National Bureau of Economic Research and Lens.org

Feb 11, 2020 — Launched new KFG website formalizing language

Mar 10, 2020 — Crossed the 1,000 community milestone on PubPub

Apr 28, 2020 — Completed rapid, digital, open publication of 20 MIT Press books related to Pandemics, Epidemics, and their effects

Jun 25, 2020 — Announced four Programs to support thematic approaches to community building

Jun 29, 2020 — Announced McGovern Foundation support for Rapid Reviews: COVID-19, an open access, rapid-review overlay journal by the MIT Press

Jun 30, 2020 — Launched *Commonplace* as the third KFG product

Year in Review

BY THE NUMBERS

Served
1,720,000
page views

Supported
1,381
publishing communities

Hosted
9,860
documents

	x1	x2	x3	x4	x5	x6	x7	x8	x9	x10
10^6	○	●	○	○	○	○	○	○	○	○
10^5	○	○	○	○	○	○	○	○	○	○
10^4	○	○	○	○	○	○	○	○	○	○
10^3	●	○	○	●	○	○	○	○	○	●
10^2	○	○	○	○	○	○	○	○	○	○
10^1	○	○	○	○	○	○	○	○	○	○
10^0	○	●	○	○	●	●	○	○	○	○

Added
3,624 new
newsletter
subscribers

Welcomed
2 new
team members

Welcomed
5 new
funding partners

Signed
6
PubPub platform contracts

Programs

In 2020 we introduced Programs as a means to thematically organize the KFG's work. Programs provide the structure to group collaborators, funders, and KFG products around important focus areas. Importantly, programs allow us to align our broadly-applicable technical infrastructure with the specific interests and goals of our partners and funders. Further, each program provides the opportunity to form an advisory council with diverse expertise around the topic of focus.

We have organized our existing work into four programs:

KNOWLEDGE ECOSYSTEMS

We examine how knowledge ecosystems exist today, develop playbooks to improve them, and facilitate new knowledge life cycles accelerated through multi-institution collaboration.

Focus Areas:
Education, Economics, Justice, Inclusion

COMMUNITY PUBLISHING

We build infrastructure to enable community-driven publishing toward more thorough, trustworthy, and inclusive models for publishing platforms and tools.

Focus Areas:
Scholarship, Publishing Models, Trust

UNIVERSAL DATA

We research and develop tools for discovery, provenance, and interoperability of data, to ensure transparent and universal access to public knowledge.

Focus Areas:
Health, Disinformation, Democracy

MEASURING KNOWLEDGE

We build infrastructure to enable community-driven publishing toward more thorough, trustworthy, and inclusive models for publishing platforms and tools.

Focus Areas:
Impact, Analytics, Incentives

Products

KFG products are designed to function as long-lived, open infrastructure. It is critical for each to find and enact an independently sustainable business model.

1. PUBPUB

PubPub is an open-source publishing platform for open access content. It gives publishing communities of all stripes and sizes an affordable, collaborative, and nonprofit alternative to existing models and tools. PubPub supports dozens of peer-reviewed scholarly journals and books from not-for-profit university and society-based publishers, to over a thousand communities created and maintained by individual scholars and academic departments.

This year, PubPub began implementing exploratory business models. With important early contracts signed with the American Psychological Association and American Astronomical Society, the team is working with communities to find a model that is fair and sustainable. A key insight has been that the complexity of producing high-quality publications, and thus the need for empowering tools, often scales with the size of the team responsible for those works. Given that, we're implementing a seat-based pricing scheme for Pro- and Organization-level contracts. In the closing half of FY2020, we signed 6 contracts totaling $31,000.

www.pubpub.org

··· Products

2. UNDERLAY

The Underlay is a distributed knowledge graph that uses the Assertion Protocol to structure, store, and distribute graph data. Infrastructure and policy are increasingly being driven by rich machine-readable knowledge bases, but the most prolific ones are privately run black boxes. The Underlay is an open version of such a knowledge graph for public knowledge. It supports an ecosystem where knowledge is connected by distributed, open-source protocols anchored in registries tailored to the needs of their communities.

The Underlay has spent this year identifying key data communities and practices that it wishes to support. This outreach has led to a clarification of the technical infrastructure required, and a funded partnership with the Siri Knowledge Graph team at Apple. Further, we launched the Innovation Information Initiative, a knowledge collaborative focused on patents and scholarly citations, with four partner institutions and support from the Sloan Foundation.

www.underlay.org

3. COMMONPLACE

The *Commonplace* is a publication that brings together mission-aligned individuals, institutions, and organizations to discuss the many social implications of knowledge infrastructure that undergird our modern modes of information sharing and communication. Through this process, we can pinpoint emergent practices and technologies that support new ways of thinking that benefit everyone.

Launched in June of 2020, the Commonplace is a key piece of infrastructure we use to foster the community of practice and discussion needed to steward healthy and inclusive, technological and cultural change.

commonplace.knowledgefutures.org

2021 Priorities

At the end of FY2021, our first year as an independent nonprofit, we aim to be an operationally sound, diversely led organization with several revenue streams that draw a clear path towards sustainability. We intend to hire two additional employees: a Content Editor focused on PubPub, and a Software Engineer focused on the Underlay. We will use these foundations to further empower researchers, universities, libraries, and scholarly societies to play a more influential role in the health and efficacy of our shared knowledge ecosystem. We categorize these plans into three central objectives for the next fiscal year:

1. DIVERSIFY THE PERSPECTIVES AND VOICES GUIDING OUR WORK

The Knowledge Futures Group has positioned itself at the intersection of tech and academia; two fields that have failed to exemplify diversity, equity, and inclusion . Given the KFG's community-driven approach, it is critical that the communities we work with are diverse and that those who are underrepresented have seats at that table. Failing to do that, any action we take risks reinforcing the structures we're trying to change.

While racial and gender equality sit at the forefront of our mind, existing structures for academic success lead to additional marginalized voices in humanities departments, small research universities, and other non-R1, non-STEM institutions and groups.

··· 2021 Priorities

We've set the groundwork to include these voices through several initial avenues. An intended effect of including more diverse advisors and partners is that we will be able to participate in and serve communities broader than the ones we currently inhabit. Such participation creates a more diverse network from which to hire future KFG staff.

- One intended feature of the newly created KFG programs is the opportunity to form a focused advisory council specific to each program. The thematically-focused programs allow for thematically-focused advisory councils, providing us with many opportunities to include people from a breadth of expertises and perspectives.

- We plan to announce formal research partnerships with mission-aligned organizations this fall, with a focus on convening, writing, and publishing. These partnerships come from explorations in the Knowledge Ecosystems program which works to identify sustainable, multi-institution life cycles for knowledge production and dissemination. These research partnerships are designed to empower global contribution to a shared KFG mission.

- With the launch of the *Commonplace*, we have created an avenue to promote and converse with a broad set of voices. We have intentionally set the bounds on the Commonplace to include topics that intersect with and influence tech and academia, allowing us to pull a larger set of perspectives into conversations from which they are traditionally excluded.

2. IMPROVE OPERATIONAL STABILITY AND TECHNICAL LEADERSHIP

We've spoken with many potential partners and university staff about the challenges they face when making decisions about the technical infrastructure they will use. The preference for open-source, nonprofit technology has been nearly ubiquitous in their responses. Similarly consistent is the concession that the current set of propriety, for-profit solutions cater to a significantly superior set of back-office requirements. The operations, billing structures, legal provisions, network stability, and customer service offerings are lacking in resource-limited, open-source academic offerings. This makes it difficult for IT officers and department heads to commit to open infrastructure despite the ethical and strategic desire to do so.

We intend to take this insight seriously and to build out the structures required to be operationally robust, in addition to technologically innovative. Efforts to build advisory councils and expand our board of directors can aid this objective by including folks with experience in managing operationally robust infrastructure offerings.

3. GROW AND CREATE REVENUE SOURCES

Until this fiscal year, the KFG had been entirely grant/gift funded. 2020 brought about our first product-driven revenue. As our infrastructure products mature, we intend to grow the diversity of revenue sources.

At a high level, the general strategy breaks revenue into two main buckets:

1. **Grants & Gifts:** Used to fund the startup costs of new products or advanced feature development.

2. **Product Revenue:** Used to fund the ongoing operational costs associated with maintaining our infrastructure offering.

Fundamental to this division is our intention for products to be self-sustaining and to not rely on grant funding indefinitely. This plan is designed to allow funders and partners to focus on providing resources that will bring about change, rather than on Sisyphean obligation of supporting perpetual maintenance costs.

In part, this objective is strengthened by our focus on growing the diversity of voices stewarding our mission and improving operational robustness, as discussed in the two items above.

2021 Priorities

The introduction of Programs provides a structure from which to offer more topically relevant, timely initiative and grant proposals. We intend for each program to have its own mix of restricted and unrestricted support based on focused, actionable partnerships.

PubPub, as the most mature KFG product, is beginning to realize revenue from a number of university and independent publishing groups. We've spent significant time working with partners and existing users to understand what pricing models work well for them. The challenge has been unique in the breadth of customers we intend to serve. Large universities, small startups, private companies, and nonprofits all have very different price points they expect for a relatively similar tool. We've identified a seat-based pricing model (with discounts built in for applicable groups) that scales well and provides us with target customer numbers required for sustainability. We'll be exploring the implementation of this model in the beginning of FY2021.

One notable path of exploration is our collaboration with MIT around the new MIT Open Publishing Services program. This collaboration offers an exciting opportunity for KFG to explore a sustainability path for PubPub that simultaneously supports an institution's own pursuit of new revenue opportunities.

⠭ Operations

The KFG was founded as a joint effort between the MIT Press and the MIT Media Lab. To address the operational needs associated with hiring and revenue models we began working with a fiscal sponsor, YarnLabs Inc, in June R2019. However, in late 2019 we accelerated plans to form our own 501(c)(3). We incorporated as Knowledge Futures, Inc. (KFI) and applied for 501(c)(3) status in November 2019, which was granted in April 2020. We have since been working to establish Knowledge Futures, Inc as an independently operated organization and to transition away from fiscal sponsorship. This transition was enacted in July 1, 2020 — the start of FY2021.

FINANCIAL SUPPORT

In FY2020, our finances were managed by our fiscal sponsor, YarnLabs. Starting in FY2021, Knowledge Futures, Inc will be independently managing its finances. We've worked closely with YarnLabs and other advisors to establish our bookkeeping, accounting, banking, and reporting tools and relationships.

During the past year, KFG was supported by six organizations providing philanthropic gifts (from HHMI, McGovern Foundation, Lever for Change [MacArthur Foundation], Apple, Sloan Foundation, and the Reid Hoffman Foundation) totaling $1,980,000 and six service contracts (from American Psychological Association, American Astronomical Society, Harvard Kennedy School, Oxford University, Consejo Nuevo León, and Carleton University) totaling $31,000.

TEAM

In establishing our group as an independently operated nonprofit, we have organized and clarified a number of our working relationships. We continue to see the Knowledge Futures Group as a network of people committed to a shared mission, led by the nonprofit Knowledge Futures, Inc. The full KFG team includes members across institutions and organizations, working together to develop Programs and Products to further the KFG mission.

Information about how we work and structure ourselves can be found in the team handbook.

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KFI, *Design Lead*

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KFI, *Board Member* & *Underlayer*

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