



AN  OPEN INITIATIVE

10 Trends to Follow in 2021 Research Funding.





This document identifies 10 trends that are shaping the funding landscape in 2021. The pandemic that has gripped the globe is also forcing research-oriented organizations to reinvent themselves to be faster, more agile, and to do more with less.

Breakthroughs in scientific methods are transforming how research is conducted. A gradual global financial recovery is underway. Organizations are becoming increasingly connected through digital channels. Collaboration and the open sharing of ideas are fast becoming organizational imperatives.

These are some of the key trends that will reshape the research industry in 2021 and beyond. The red thread that runs through them is transformation. All aspects of the research ecosystem are experiencing reinvention. Organizations that embrace transformation and act decisively to innovate are best poised to thrive.

Top 10 Trends

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Covid-19 has challenged all areas of the research ecosystem but also unleashed new and novel innovations that can be replicated to increase collaboration, improve decision, and accelerate discovery.

STEVE PINCHOTTI

CEO of Altum

#1

2021 will see the largest year over year increase in donor contributions and research funding in a decade

We expect a significant bounce back after a drop in research funding in 2020. COVID severely impacted grant making globally in 2020. With multiple COVID vaccines approved, we can expect a boost in hiring, output, GDP, and consequently discretionary income among corporates and individuals leading to more charitable contributions. Funders will begin to grow contributions, accelerate hiring, and increase grant making.

#2

Artificial Intelligence (AI) and machine learning (ML) will permeate new use cases and experiences such as predictive models for funding

Simple text search is insufficient to identify the connections, patterns, and emerging opportunities that exist in your grants data. AI-based solutions will begin to permeate all facets of research and grants management. The ability to instantaneously identify experts, existing literature, in-flight research, published datasets, as well as the historical track records of researchers and institutions will accelerate and improve decision-making throughout the entire research ecosystem.

#3

The rise of the citizen scientist

A critical part of any research organization is the input of patients, citizens, and other stakeholders and constituents. Citizen scientists are becoming more common as more academic literature is available to the public. The Open Science movement enables patients and stakeholders to participate in the research process in unprecedented ways. Research organizations will increase the participation of stakeholders in the peer review process and solicit feedback and input from a vast community to ensure resources are being focused in the most appropriate areas.



#4

Accelerated output of research information coupled with need for more seamless collaboration compels research participants to embrace FAIR data standards

The digital infrastructure and data strategy for research funders and institutions is one of the most critical priorities for 2021. The preliminary release of the National Institute of Standards and Technology (NIST) Research Data Framework (RDaF) was issued on October 26, 2020 and aims to provide the community with a coherent research data management strategy. Researchers will see funders and institutions require open and FAIR (Findable, Accessible, Interoperable, Reusable) data requirements in grant agreements.

#6

The publishing industry faces further business model disruption with more open peer review pre-print processes

With research budgets significantly impacted by COVID, a growing chorus of voices emerges to combat the draconian publishing model. A new trend emerges where publishers and funders collaborate and share peer review data. Research outputs will be published in new and innovative ways and considered “peer reviewed” if a funder approves the final outputs of the projects. In addition, demand by donors and boards to see research ROI sooner in the research lifecycle, compel funders and institutions to embrace continuous publication and sharing of pre-print information.

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Crowdsourcing of ideas can lead to out-of-the box solutions that lead to research breakthroughs. This is where things really get exciting.

SALVO LA ROSA, PHD

Chief Scientific Officer, Children's Tumor Foundation

#5

The speed of science continues to accelerate spurred on by borderless collaboration and new technologies

Informal research networks surge and rapidly displace traditional bureaucratic and highly governed team efforts. Ideas are shared quickly and easily across unmanaged platforms like Slack, Teams, and Zoom — enabling even more rapid dissemination of ideas and data. Increased emphasis on time to market and collaboration are incentivized by funders and institutions. AI-driven analysis of grant and research data will enable project creation and predictive capabilities to assist researchers to identify new areas of focus. Proposed topics will be compared against existing research for uniqueness and innovation.

#7

Crowdsourcing of ideas surges as more organizations tap the community for contributions

Research and grants management platforms will gather communities of users which will enable the expeditious facilitation of ideas, multi-disciplinary teams, and collaborators. As more funders, institutions, and researchers embrace ‘borderless’ science and ‘work from anywhere,’ these platforms will gain importance as gathering points for knowledge transfer and collaboration. Innovative funders will embrace events like hackathons to tap ideas from new talent sources and leverage AI and ML powered solutions to identify the best and brightest programs and people to fund globally.

#8

Adoption of metadata and data standards leads to a more connected research ecosystem

More research funders will institute guidelines and requirements for open science connected to the funding they provide. The research community has adopted standard persistent identifiers (PIDs)—for people (e.g. ORCID), content (e.g. DOIs, PMIDs), and organizations (ROR). However, the record of the award and the link back to the application was largely missing. Grantmakers are keen to measure impact and outcomes and will increasingly require applicants to include their ORCID ID and to assign DOIs to their research outputs through organizations like DataCite. The linkages, discoveries, and disambiguation that are achieved with the metadata, persistent identifiers and data management frameworks enable research organizations to focus less on data curation, and more on data outcomes and research innovation.

#9

Researcher burden decreases through automated opportunity matching and eligibility assessment

A common goal of the research and grants industry is to reduce administrative burden. Grants and research management platforms will take a significant step to further reduce the burden on researchers. Machine learning algorithms will assess open funding opportunities and present curated lists of available funding opportunities that best match researchers' expertise. Funders will also identify ways to streamline the eligibility criteria and funding guidelines to expedite the decision-making process for research institutions. The ability to auto-assess eligibility will expedite the process in which institutions determine which funding opportunities to pursue.



#10

The biggest near-term threat to philanthropic organizations is a cyber-attack - not another pandemic

According to UK-based risk management and insurance firm, Ecclesiastical Insurance, A third of charities have suffered a cyber-attack during the coronavirus pandemic. Suffering a data breach is serious for any organization. Yet for charities, whose success is built upon their reputations and the goodwill of supporters, the loss of any sensitive information or fraud through phishing attempts can be devastating. Foundation leaders will need to partner closely with their Information Technology and Security teams to ensure appropriate safeguards are in place to mitigate cyber risk.