

# Scouting Report

Grant Opportunities for [Aerospace Client]

July 6, 2023



**GRANTEXEC**

# Executive Summary

GrantExec is delighted to provide this Scouting Report on grant opportunities for [Aerospace Client] as it seeks non-dilutive funding for its groundbreaking work on internal atmospheric propulsion. Following an exhaustive evaluation of over 8,000 active grant opportunities across both the public and private sectors, we recommend six key grants that align with [Aerospace Client]'s objectives. These opportunities include:

1. NSF SBIR: America's Seed Fund
2. Engineering Design and Systems Engineering
3. Strategic Astrophysics Technology Program
4. Fluid Dynamics Program
5. Research Interests of the Air Force Office of Scientific Research: Propulsion and Power Program
6. Sloan Foundation Energy & Environment Grants

Collectively, these grant programs offer a total funding amount of approximately \$106,475,000, with the largest individual award ceiling from the Strategic Astrophysics Technology Program at \$5,000,000.

The Sloan Foundation Energy & Environment Grants, with their emphasis on Net Zero Innovation, provide an excellent opportunity for [Aerospace Client] to fund their sustainable propulsion research. The NSF SBIR: America's Seed Fund, Engineering Design and Systems Engineering, Strategic Astrophysics Technology Program, and Fluid Dynamics Program also offer robust opportunities that intersect with Belen's current and future projects.

This report includes an in-depth breakdown of these proposed opportunities and a synopsis of the current grant landscape. With the information provided, [Aerospace Client] will be in a strong position to pursue these non-dilutive funding opportunities.

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# [Aerospace Client]



<p><b>Organization Overview</b></p>	<p>[Aerospace Client] is an aerospace startup, founded in 2021, dedicated to making new discoveries in air and space travel. Specifically, the organization seeks to find, cultivate, and promote breakthroughs in internal atmospheric propulsion, a sustainable alternative to traditional chemical propulsion systems. Broadly, [Aerospace Client] aims to inspire the younger generation to take an interest in space exploration and its potential.</p>
<p><b>Objectives</b></p>	<p>Obtain funding for their working prototype, atmospheric propulsion.</p> <p>Uses:</p> <ul style="list-style-type: none"> <li>● Program Development and Expansion</li> <li>● Technology and Infrastructure</li> <li>● Research and Development</li> <li>● General Project Funding</li> <li>● Education Initiatives</li> </ul>
<p><b>Preferences</b></p>	<p>Desired Funding Sources:</p> <ul style="list-style-type: none"> <li>● Federal Government</li> <li>● State Governments</li> <li>● Local Governments</li> <li>● Private Foundations</li> </ul> <p>Desired Award Amount: No limit.</p>
<p><b>Key Contacts</b></p>	<p>Information provided by [lobbyist], Belen’s Government Relations Advocate</p>

# Funding Opportunities

Total Funding Identified	\$106,475,000
Next Deadline	All rolling – applications accepted anytime.

Click on a grant to view the opportunity's details.

- NSF SBIR: America's Seed Fund
- Engineering Design and Systems Engineering
- Strategic Astrophysics Technology Program
- Fluid Dynamics Program
- Research Interests of the Air Force Office of Scientific Research: Propulsion and Power Program
- Sloan Foundation Energy & Environment Grants

# NSF SBIR: America's Seed Fund

[Click here to learn more](#)

Funder	National Science Foundation
Award Amount	Phase I: \$275,000 Phase II: \$1,000,000
GrantExec Briefing	<p>The National Science Foundation's Small Business Innovation Research (SBIR) program presents a compelling opportunity for [Aerospace Client], a for-profit startup with a strong focus on internal atmospheric propulsion research and development. This federal grant offers up to \$1.275 million in funding spread across two phases, which could significantly advance [Aerospace Client]'s mission to revolutionize space travel with its proprietary technology. The NSF SBIR program is specifically designed to fund innovative startups that are driven by technological innovation, potential market impact, and scalability—all of which align with [Aerospace Client]'s mission and goals. Moreover, as the program is nationwide and its eligibility criteria focus on small businesses, [Aerospace Client] fits neatly within the intended recipients, adding to the attractiveness of the grant opportunity.</p> <p>Given the alignment between [Aerospace Client]'s focus and the NSF SBIR program's objectives, it is recommended that the startup apply for this federal grant. There is a strong indication that [Aerospace Client]'s innovative approach to atmospheric propulsion, its current theoretical model, and its provisional patent, all provide the technological innovation the grant targets. Furthermore, the startup's minority-owned status could be seen favorably, considering the federal government's emphasis on diversity and inclusion in technology sectors. This grant, if obtained, could be used to further the research and development activities, program expansion, and education initiatives—promising an opportunity to make significant strides in their mission. However, it should be noted that all funded work must be conducted in the United States. The project's principal investigator should be able to commit a minimum amount of work per six months, which could necessitate operational or staffing adjustments. Despite these considerations, the overall benefits and potential for progress render the NSF SBIR grant an attractive opportunity for [Aerospace Client].</p>
Matching Requirement	No
Opportunity Status	Active
Last Updated Date	7/1/2023
Deadline	Rolling

## Eligibility

## Listed criteria:

- Your company must be a small business (fewer than 500 employees) located in the United States.
- At least 50% of your company's equity must be owned by U.S. citizens or permanent residents. NSF does not fund companies that are majority-owned by multiple venture capital firms, private equity firms, or hedge funds, to participate in SBIR and STTR.
- All funded work, including work done by consultants and contractors, needs to take place in the United States.
- The project's principal investigator (tech lead) must be legally employed at least 20 hours a week by the company seeking funding. The PI doesn't need any advanced degrees.
- The principal investigator needs to commit to at least one month (173 hours) of work on a funded project per six months of project duration.

## Contact Information

The NSF allows for a 1500-word "[Project Pitch](#)" to determine whether you are a strong candidate for the fund. This is a low-cost, low-risk method of testing the waters.

[sbir@nsf.gov](mailto:sbir@nsf.gov)  
703-292-8050

# Engineering Design and Systems Engineering

[Click here to learn more](#)

Funder	National Science Foundation
Award Range	Unrestricted
GrantExec Briefing	<p>The Engineering Design and Systems Engineering (EDSE) federal grant is a funding opportunity that aligns closely with [Aerospace Client]'s mission and activities. This funding program, administered by the National Science Foundation (NSF), is intended to advance design and systems science in the field of engineered artifacts, a term broad enough to encompass the proprietary atmospheric propulsion technology [Aerospace Client] is developing. [Aerospace Client]'s focus on internal atmospheric propulsion fits within the EDSE's funding priorities, which include design optimization, mechanism design, and robotics and intelligent system design. Furthermore, the grant opportunity encourages a multidisciplinary approach, an aspect congruent with the wide scope of activities at [Aerospace Client], spanning program development, technology and infrastructure, research and development, and education initiatives. The grant does not require cost sharing or matching, and its eligibility is unrestricted, which increases accessibility for entities like [Aerospace Client]. It is noteworthy that the funding program is still active and follows a rolling close date, making it an opportune choice for immediate or future funding.</p> <p>Based on the information available, it is highly recommended that [Aerospace Client] apply for this funding opportunity. The EDSE program's focus on design science and systems science aligns well with the organization's aims, and the fact that the EDSE program supports a variety of areas related to design representation, design optimization, and mechanism design directly aligns with [Aerospace Client]'s goals. This could greatly aid the organization in obtaining funding for its working prototype. Also, the fact that the EDSE encourages collaborations between experts in different domains could provide [Aerospace Client] with additional expertise and resources to further its research and development efforts. Lastly, the eligibility for for-profit organizations, including start-ups, makes [Aerospace Client] a fitting candidate. However, it is crucial for [Aerospace Client] to articulate how the proposed project is of special concern from a national point of view, as indicated by NSF's eligibility conditions. Thus, the proposal should also include a thorough explanation of how the project benefits the broader public or the scientific community, in addition to advancing [Aerospace Client]'s mission.</p> <p>Review the NSF Proposal &amp; Award Policies &amp; Procedures Guide <a href="#">here</a>.</p>
Matching Requirement	No



Opportunity Status	Active
Last Updated Date	6/12/2018
Deadline	Rolling
Eligibility	<p>For-profit Organizations — U.S.-based commercial organizations, including small businesses, with strong capabilities in scientific or engineering research or education and a passion for innovation may be eligible to apply. An unsolicited proposal from a for-profit organization may be funded when the project is of special concern from a national point of view, special resources are available for the work, or the proposed project is especially meritorious. NSF is interested in supporting projects that couple industrial use-inspired challenges and research resources with those of IHEs; therefore, the Foundation especially welcomes proposals for cooperative projects involving both IHEs and industry. Specific NSF funding opportunities also may make For-Profit Organizations eligible for submission of proposals to the Foundation. US-based affiliates or subsidiaries of foreign organizations must contact the cognizant NSF program officer prior to preparing and submitting a proposal to NSF.</p>
Contact Information	<p>Kathryn Jablokow  <a href="mailto:kjabloko@nsf.gov">kjabloko@nsf.gov</a>            703-292-8360</p>

# Strategic Astrophysics Technology Program

[Click here to learn more](#)

Funder	NASA
Funding	\$600,000,000+
Award Range	\$5,000 – \$5,000,000+
GrantExec Briefing	<p>The Strategic Astrophysics Technology (SAT) program from NASA's Astrophysics Division presents a promising funding opportunity for [Aerospace Client]. The SAT program seeks to support the maturation of key technologies to be used in future strategic astrophysics flight missions. [Aerospace Client] aims to secure funding for its working prototype that could potentially revolutionize propulsion technology in the aerospace industry. This appears to be precisely the kind of research and development project that the SAT program targets. Furthermore, the funding opportunity aligns with the organization's plans to use funding for program development, expansion, technology, infrastructure, and research.</p> <p>While the opportunity appears beneficial, there are considerations to bear in mind before [Aerospace Client] proceeds with an application. The SAT program specifically supports technologies whose feasibility has been demonstrated (Technology Readiness Level, TRL, 3) to the point where they can be incorporated into NASA flight missions (TRL 6). [Aerospace Client] would need to assess whether its Atmospheric Propulsion prototype fits within these levels. Further, [Aerospace Client] would need to ensure its proposal does not fall into the specific technology development exclusions listed in the SAT 2023 program guide. A careful review of these exclusions will be necessary to ensure the funding application aligns with the grant's stipulations. Moreover, the SAT program necessitates a mandatory Notice of Intent (NOI) before the actual proposal, which [Aerospace Client] should adhere to. With these factors in mind, given the alignment of the grant's focus with [Aerospace Client]'s work, it would be advisable to consider applying for this opportunity, provided the organization meets the grant's requirements.</p> <p><a href="#">Full text of the opportunity</a></p> <p><a href="#">Omnibus Solicitation</a></p>
Matching Requirement	No
Opportunity Status	Active
Last Updated Date	2/14/2023

<b>Deadline</b>	Notice of Intent: 10/20/2023 Full Proposal: 12/14/2023
<b>Eligibility</b>	Unless otherwise restricted by a particular program element, organizations of every type, domestic and foreign, government and private, for-profit, and not-for-profit, may submit proposals without restriction on teaming arrangements, other than with China.
<b>Contact Information</b>	Mario R. Perez mario.perez@nasa.gov (202) 358-1535

# Fluid Dynamics Program

[Click here to learn more](#)

Funder	National Science Foundation
Total Program Funding	\$9,175,000
Award Range	Undisclosed
GrantExec Briefing	<p>The Fluid Dynamics federal grant program is a unique opportunity that aligns well with the goals and needs of [Aerospace Client]. The program aims to support fundamental research for a better understanding of various fluid dynamics phenomena. The areas of interest and activities within the program are broad, covering turbulence and transition, high-speed boundary layer transition, bio-fluid physics, non-Newtonian fluid mechanics, microfluidics and nanofluidics, wind and ocean energy harvesting, and fluid-structure interactions, all of which could be pertinent to [Aerospace Client]'s work in developing internal atmospheric propulsion. The funding can be used for program development, expansion, technology and infrastructure, research and development, general project funding, and educational initiatives, which are all areas of need for [Aerospace Client]. Furthermore, the grant provides for instrument development for time-space resolved measurements. It encourages innovative AI ideas related to the use of machine learning in fluid dynamics research, aligning with Belen's scientific orientation.</p> <p>Given [Aerospace Client]'s focus on developing and promoting breakthroughs in Internal Atmospheric Propulsion, it would be recommended that they consider applying for this grant. The objectives and research areas of the Fluid Dynamics program complement [Aerospace Client]'s mission and activities. The funding could be leveraged to advance Belen's research and development efforts, expand its program, and enhance its infrastructure and technology. Furthermore, being a Minority-Owned Organization, [Aerospace Client] could potentially have an edge in a competitive grant process. However, it should be noted that the grant appears to be heavily research-focused, so [Aerospace Client] would need to ensure that its proposal outlines a clear research plan that aligns with the funding program's priorities. In addition, while the funding amount for this program is substantial, competition could be intense, given the unrestricted eligibility. Therefore, a strong, well-prepared proposal would be critical to increase the chances of success.</p>
Matching Requirement	No
Opportunity Status	Active

Last Updated Date	3/21/2023
Deadline	Rolling
Eligibility	<p>For-profit Organizations — U.S.-based commercial organizations, including small businesses, with strong capabilities in scientific or engineering research or education and a passion for innovation may be eligible to apply. An unsolicited proposal from a for-profit organization may be funded when the project is of special concern from a national point of view, special resources are available for the work, or the proposed project is especially meritorious. NSF is interested in supporting projects that couple industrial use-inspired challenges and research resources with those of IHEs; therefore, the Foundation especially welcomes proposals for cooperative projects involving both IHEs and industry. Specific NSF funding opportunities also may make For-Profit Organizations eligible for submission of proposals to the Foundation. US-based affiliates or subsidiaries of foreign organizations must contact the cognizant NSF program officer prior to preparing and submitting a proposal to NSF.</p>
Contact Information	<p>Ronald D. Joslin  <a href="mailto:rjoslin@nsf.gov">rjoslin@nsf.gov</a>            703.292.7030</p>

# Research Interests of the Air Force Office of Scientific Research: Propulsion and Power Program

[Click here to learn more](#)

Funder	DOD – Air Force Office of Scientific Research
Award Range	Floor: \$3,000 Ceiling: \$100,000,000
GrantExec Briefing	<p>Based on the detailed description of the A.1.h. Propulsion and Power program from the Air Force Office of Scientific Research (AFOSR), this grant program appears highly relevant to [Aerospace Client]'s mission and activities.</p> <ul style="list-style-type: none"> <li>• <b>Coupled Material and Plasma Processes far from Equilibrium:</b> This part of the research, specifically focused on advancing plasma-based space propulsion systems and understanding plasma-spacecraft interactions, directly aligns with Belen's interests. The research into new electric propulsion candidates for Very Low Earth Orbit that make use of large amounts of beamed energy and the harvesting of air as a propellant seems particularly relevant to Belen's concept of internal atmospheric propulsion.</li> <li>• <b>Smart, Functional Nano-energetics for Propulsion Purposes:</b> Given the need for propulsion for air and space travel, Belen could potentially benefit from the development of nanostructured reactive materials for more controlled and efficient propulsion.</li> <li>• <b>High Pressure Combustion Dynamics in Rocket Engines:</b> As Belen seeks to develop alternative propulsion systems, understanding the dynamics of combustion processes at high pressures could be vital. The research in this area is focused on increasing the efficiencies and performance options of rocket and other propulsion systems, which aligns with Belen's mission.</li> <li>• <b>Structural Batteries:</b> The research focused on combining electrochemical and mechanical functionalities could be applicable to [Aerospace Client] if the design of their propulsion system includes energy storage or requires managing mechanical stress, especially during launch.</li> </ul> <p>Overall, the Propulsion and Power program's focus on advancing understanding and technology for space propulsion and power could provide a valuable source of support and collaboration for [Aerospace Client]'s internal atmospheric propulsion project. I highly recommend contacting Dr. Justin Koo, the Program Officer, to discuss the specifics of Belen's research and how it could fit into this program.</p>
Matching Requirement	No

Opportunity Status	Active
Last Updated Date	January 30, 2023
Deadline	Rolling
Eligibility	Eligible entities: Public & State controlled institutions of higher education, Private institutions of higher education, For-profit organizations other than small businesses, Small businesses
Contact Information	Dr. Justin Koo <a href="mailto:space.power@us.af.mil">space.power@us.af.mil</a> 703-696-8568

# Sloan Foundation: Energy & Environment Grants

[Click here to learn more](#)

Funder	Alfred P. Sloan Foundation
Award Range	Floor: \$50,000 Ceiling: \$2,500,000
GrantExec Briefing	<p>The funding opportunity aligns substantially with the mission and activities of [Aerospace Client]. The program emphasizes investigating under-explored questions and interdisciplinary research across social and natural sciences, early-career faculty involvement, and training the next generation of students. Most notably, the topic of 'Net Zero Innovation and Negative Emissions Technologies' directly intersects with [Aerospace Client]'s interest in sustainable alternatives to traditional chemical propulsion systems, such as their atmospheric propulsion concept. The program's focus on generating novel research, building multidisciplinary networks, and disseminating information for decision-making resonates well with Belen's goal of making new discoveries in space travel and inspiring interest in space exploration among the next generation.</p> <p>Considering these aspects, it is advisable for [Aerospace Client] to consider this funding opportunity. The focus on Net Zero Innovation is a unique opportunity for Belen to fund research and development for their prototype, while their minority-owned status might be positively considered by the foundation. However, there are several considerations to keep in mind. Firstly, the Sloan Foundation is very selective in this area due to significant funding available from other sources, so a strong and compelling proposal is essential. Secondly, the foundation emphasizes non-partisan, balanced, evidence-based analysis and primarily focuses on the United States; hence the proposal must conform to these requirements. Lastly, [Aerospace Client] must demonstrate how their research into atmospheric propulsion can contribute to the field of energy systems beyond space travel, to align with the broader energy system focus of the Sloan Foundation. This may involve showcasing the potential terrestrial applications of their technology.</p>
Matching Requirement	No
Opportunity Status	Active
Last Updated Date	7/6/2023
Deadline	Rolling



## Eligibility

Due to the significant funding available from both public and private sources for energy and environmental research, the Sloan Foundation is very selective in the grants it makes in this area.

## Recent Recipients:

University of California, Davis

\$250,000

To study the technological, economic, and environmental trade-offs associated with the use of natural gas as a low-carbon transportation fuel option in the United States

Association of Environmental and Resource Economists

\$50,000

To continue and expand the AERE Scholars Program that aims to diversify energy and environmental resource economics and create a more inclusive culture across the field by engaging other professional societies

Gordon Research Conferences

\$50,000

To support student and early-career scholar participation in the 2023 and 2025 Gordon Research Conferences on Carbon Capture, Utilization and Storage (GRC-CCUS)

University of Illinois, Urbana-Champaign

\$50,000

To support a multi-sectoral workshop on equitable transitions to sustainable transportation, resulting from the Energy Insights 2022 Ideas to Action Call for Proposals

North Carolina A&T State University

\$50,000

To examine the equity dimensions of the Value of Lost Load metric in multiple regions, resulting from the Energy Insights 2022 Ideas to Action Call for Proposals

Good Energy Collective

\$50,000

To initiate a fellowship program to engage undergraduate students from Historically Black Colleges and Universities (HBCU) in energy transitions research, resulting from the Energy Insights 2022 Ideas to Action Call for Proposals

## Contact Information

Interested scholars should send a two-page LOI to [energy@sloan.org](mailto:energy@sloan.org).

# The Grant Landscape Today

## Federal Grants

Total Active Funding	Active Grants	Forecasted Grants	Awards	Median Award
\$71.2B	2,095	222	26,202	\$350K

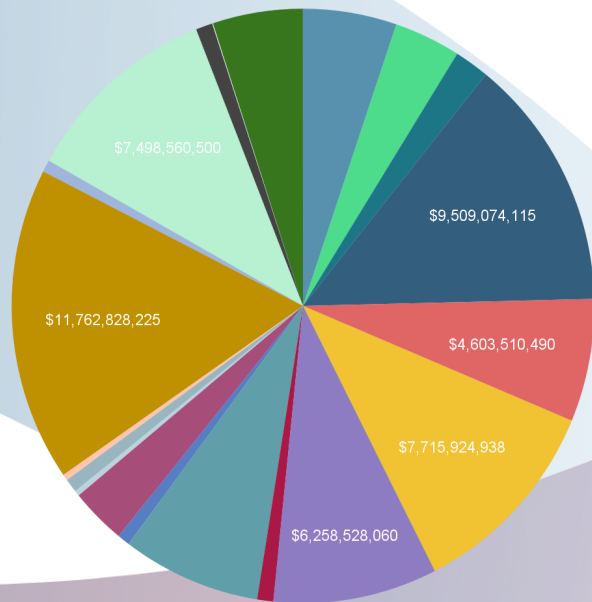
## Last 24 Hours

New Funding  
20

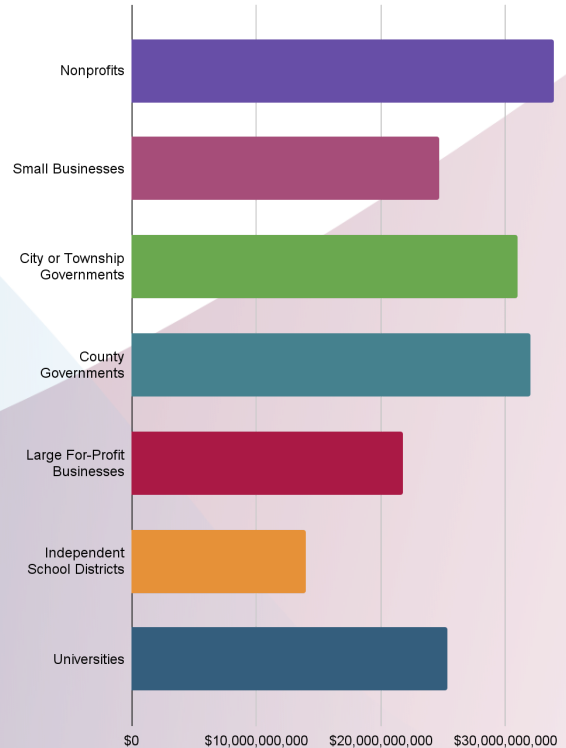
New Grants  
188

New Awards  
\$6.6B

Grant Funding by Agency



Funding by Eligibility



- USAID
- USDA
- DOC
- DOD
- ED
- DOE
- HHS
- DHS
- HUD
- USDOJ
- DOL
- DOS
- DOI
- TREAS
- DOT
- VA
- EPA
- LOC
- NASA
- NARA
- NEH
- NSF
- SBA
- SSA

# Complete Landscape

## Federal, State, Local, and Privately-Funded Opportunities

Total Active Funding

\$103.6B

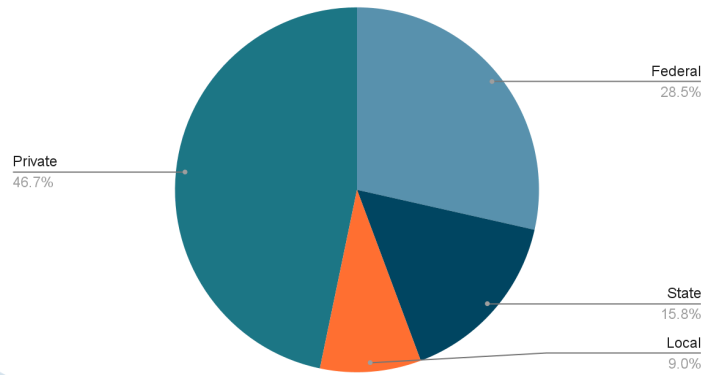
Grants

8,458

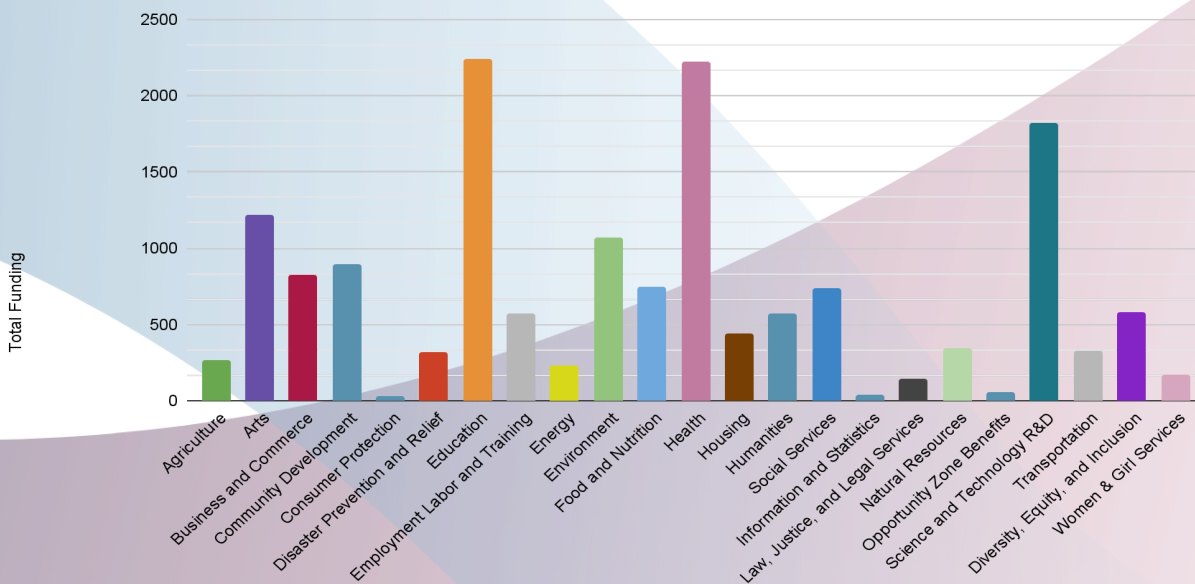
Funding Sources

3,395

Grants by Source Type



Grants by Focus Area



# Our Methodology

At GrantExec, we pride ourselves on our unique, data-driven approach to identifying grant opportunities that are tailored to our clients' specific needs and goals. Our methodology has been honed through extensive research and collaboration in the fields of grant sourcing, government affairs, strategic fundraising, data analysis, natural language processing, and software development.

The onboarding form you complete upon signing up provides us with the relevant information about your organization we need to make quality recommendations. This detailed profile forms the foundation of our search process.

Once your organization's profile is created, it serves as input for our proprietary matching algorithm at GrantExec. This algorithm scans our expansive database, which consists of over [8,000 active grants](#), to pinpoint those that align precisely with your organization's characteristics and needs.

In instances where direct matches are limited, our algorithm is designed to extend its scope, highlighting related opportunities within your field. The inclusion of these additional grants presents a multitude of advantages. It broadens your vision, often inspiring adaptations or expansions to your mission, and fosters long-term planning by showcasing grants that might align with future growth. This approach not only provides networking opportunities and fosters partnerships but also provides visibility of funding trends and the competitive landscape.

After identifying potential grants, we curate this information into a report that presents the selected grants in an easily understandable and actionable format. With this approach, we deliver more than just a list of grants — we provide insight designed to empower your organization to secure the funding it needs to flourish.

At GrantExec, our methodology is built on a foundation of innovation, personalization, and thoroughness. We are dedicated to delivering the highest quality service to each of our clients, from large academic institutions to local nonprofits to startups and other changemakers across the country.

# About GrantExec

GrantExec is a social startup dedicated to expanding access to grant opportunities by facilitating nonprofit and small business access to a share of the \$1 trillion in publicly and privately sourced competitive grants distributed annually. GrantExec provides grant monitoring, matching, and application services to identify and secure non-dilutive funding opportunities without traditional financial barriers.

## Mission

To help grantors and grant-seekers find one another and streamline the grant application process to help organizations solve the world's problems.

## Why We Exist

We believe that with the right resources, anyone can change the world for the better. Each time an organization wins a grant, its capacity to do good multiplies. As a startup with the technology to vastly improve access to grants, we want to help as many grant-seeking organizations as possible.

Learn more about us at [GrantExec.com](https://GrantExec.com) or shoot us a message anytime at [hello@grantexec.com](mailto:hello@grantexec.com).

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### Disclaimer:

We work tirelessly to provide you with the most current and accurate information, sourcing directly from funders. This report, created with the best information available at the time, is intended to help you uncover exciting grant opportunities. However, please keep in mind that grant details can change. While we strive for accuracy, we can't guarantee the continued availability or specific criteria of any grant opportunities identified. Please review the source link and/or contact the appropriate program officer, listed in the "Contact Information" field before applying. We also recommend that you seek legal and financial counsel as necessary to ensure program compliance and success.

We appreciate your understanding and thank you for trusting us with your grant search needs.