



NASA's

G A T E W A Y S T O

BLUESKIES

Inspire. Innovate. Impact.

RepAir: Advancing Aircraft Maintenance

NASA's Gateways to Blue Skies (GBS) Competition is administered by the National Institute of Aerospace on behalf of the National Aeronautics and Space Administration (NASA). GBS is sponsored by the Aeronautics Research Mission Directorate's (ARMD's) University Innovation Project.

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NASA Aeronautics & University Innovation Project Overview

NASA's Aeronautics Research Mission Directorate (ARMD) conducts research that generates concepts, tools, and technologies to enable advances in our Nation's aviation future. ARMD programs facilitate a safer, more environmentally friendly, and efficient national air transportation system.

As a program within NASA ARMD, the [University Innovation Project \(UI\)](#) funds post-secondary-led innovation to address system-level challenges in NASA Aeronautics' [strategic plan](#), which guides the Aeronautics programs. This is done through NASA-complementary, independent, alternative, and multidisciplinary research. The main UI research opportunities include the University Leadership Initiative (ULI), the University Student Research Challenge (USRC), and NASA's Gateway to Blue Skies Competition.

NASA's Gateways to Blue Skies Competition Overview

NASA's Gateways to Blue Skies (GBS) competition expands engagement between post-secondary institutions and NASA Aeronautics, industry, and government partners by providing an opportunity for multidisciplinary teams of students from all academic levels (i.e., freshman, sophomore, junior, senior, and graduate) and fields to tackle critical challenges and opportunities within the aviation industry through a new competition theme each year. The competition is guided by a push toward new technologies and fostering forward-looking, socially responsible aviation.

In 2026, the theme focuses on **advancing aircraft maintenance** and the competition is divided into phases. In Phase 1, participation involves a conceptual systems-level study, submission of a 5–7-page proposal, and creation of a 2-minute video summarizing the team's proposal. Based on the review of proposal submissions, up to 8 teams may be selected to receive a \$9,000 prize and advance to Phase 2, which includes a final design review at the GBS Forum at or near NASA's Langley Research Center. Teams selected to advance to Phase 2 are responsible for developing a final paper and infographic and giving an in-person presentation at the GBS Forum. Internship opportunities* with NASA's ARMD during the following Spring or Summer semesters serve as the competition prize for members of the winning team.

**Please review [NASA's Internship Eligibility at a Glance](#) for more information about GBS prize eligibility.*

Background & Context for 2026 Theme

The commercial aviation industry is a crucial component of the U.S. economy, playing a vital role in transporting people, intermediate/final goods, and driving demand for various goods and services nationwide. This network enhances the quality of life for the whole country and facilitates business interactions within and globally, boosting productivity and prosperity. However, the industry faces numerous challenges, particularly the need to reduce rising operational costs in a growing market to accommodate increased demand in air travel, e-commerce, and cargo sectors. Issues such as aging aircraft and components, technological advancements, and staffing shortages further complicate these challenges, hindering efforts to balance passenger safety with operational efficiency. To address these challenges, the industry needs to swiftly innovate and implement more efficient and resilient aircraft maintenance practices, including the adoption of new technologies.

NASA Aeronautics is dedicated to working with commercial, industry, and government partners in advancing the capabilities and performance of the U.S. aviation sector. There are opportunities to enhance existing systems and implement new

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technologies throughout current aircraft maintenance practices to improve capabilities, efficiency, costs, and safety. These systems and technologies can be diverse in type and application, including processes, remote, in-person, hybrid, automation, robotics, augmented reality, artificial intelligence, and machine learning. **Capabilities and opportunities for improvement include, but are not limited to:**

- Aging aircraft and component wear
- Advanced monitoring and diagnostic systems
- 3D printing for replacement parts
- Upgrading systems and components (aircraft)
- Lifecycle management
- Advanced data analytics
- Automated compliance checks (regulatory)(aircraft)
- Predictive Maintenance Technologies
- Advanced inventory management systems

2026 Theme – RepAir | Advancing Aircraft Maintenance

Through the 2026 GBS Competition, collegiate-level student teams will **conceptualize novel aviation maintenance advancements that can be implemented by 2035 or sooner with the goal of improving efficiency, safety, and/or costs for the industry.** Teams are encouraged to consider high-potential technologies and systems that aren't currently mainstream or highly regarded as becoming mainstream in the future, imagining beyond the status quo. For this competition, **teams are asked to focus on commercial aviation's* passenger and cargo airline operations.** For this competition, **we are not seeking maintenance solutions that focus on business aviation.****

Definitions

The following definitions are used for the purposes of this competition:

- ***Commercial aviation:** the operation of aircraft for the purpose of transporting passengers and cargo for compensation or hire. Teams should focus their efforts addressing aviation maintenance challenges and opportunities facing the two major areas of commercial aviation where they can make the largest impact, passenger airlines and cargo airlines, as defined below.
 - **Passenger Airlines:** These are airlines that operate flights to carry people from one destination to another. They range from large international carriers to smaller regional airlines and low-cost carriers.
 - **Cargo Airlines:** These airlines specialize in the transportation of goods rather than passengers. They operate dedicated cargo planes and are crucial for global trade and supply chains.
- ****Business Aviation (excluded from 2026 GBS):** The operation of private jets and aircraft used primarily for business purposes.

Proposed solutions should be aviation-first, with primary focus on the aviation maintenance area being addressed, but should include well-described end-user applications, system operations and methods, and user relevance and adoptability. Teams should consider how the proposed technology can integrate with or replace existing systems. The competition seeks innovative concepts, with evaluation weighted toward sound technical analysis and justification of the proposed concept according to the theme description and details.

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Teams are highly encouraged to contact appropriate non-government stakeholders to better understand the impacts of current events and technologies on the aviation maintenance sector and current management approach gaps that may be addressed through their proposed concept.

Aviation Maintenance Areas

Aviation maintenance encompasses a wide range of activities to ensure that aircraft are safe, reliable, and in good working order. Key components of aviation maintenance include, but are not limited to:

1. **Routine Inspections and Checks:** These include pre-flight, post-flight, and periodic inspections such as A, B, C, and D checks, each with increasing levels of detail and complexity.
2. **Scheduled Maintenance:** Regularly scheduled tasks based on flight hours, calendar time, or cycles, often dictated by the aircraft manufacturer or regulatory authorities.
3. **Unscheduled Maintenance:** Repairs and inspections that occur as a result of unexpected issues, such as component failures or system malfunctions.
4. **Engine Maintenance:** Overhauls, repairs, and inspections of aircraft engines to ensure they are operating efficiently and safely.
5. **Avionics Maintenance:** Repair and inspection of the electronic systems used for navigation, communication, and other critical functions.
6. **Structural Repairs:** Addressing any damage to the aircraft's body, including the fuselage, wings, and tail.
7. **Component Overhaul:** Disassembly, inspection, repair, or replacement of various aircraft components, such as landing gear or control surfaces.
8. **Systems Checks:** Verifying that all aircraft systems (hydraulic, electrical, fuel, etc.) are functioning properly.
9. **Corrosion Control:** Inspecting for and treating corrosion, especially in areas prone to moisture and salt exposure.
10. **Software Updates:** Applying necessary updates to the software systems that control or monitor aircraft systems.
11. **Documentation and Record-Keeping:** Maintaining accurate records of all maintenance activities, inspections, and repairs for compliance and safety tracking.
12. **Regulatory Compliance:** Ensuring that all maintenance activities comply with aviation regulations and standards set by authorities such as the Federal Aviation Administration (FAA) or other foreign civil aviation authorities (CAA).
13. **Tool and Equipment Calibration:** Regularly calibrating tools and equipment used in maintenance to ensure accuracy and reliability.

NOTE: Teams are not limited to the list of examples provided.

Proposing teams will*:

- Assess the situation
- Identify a use case & propose a solution
- Conceptualize/analyze technical development and implementation
- Chart a path to deployment

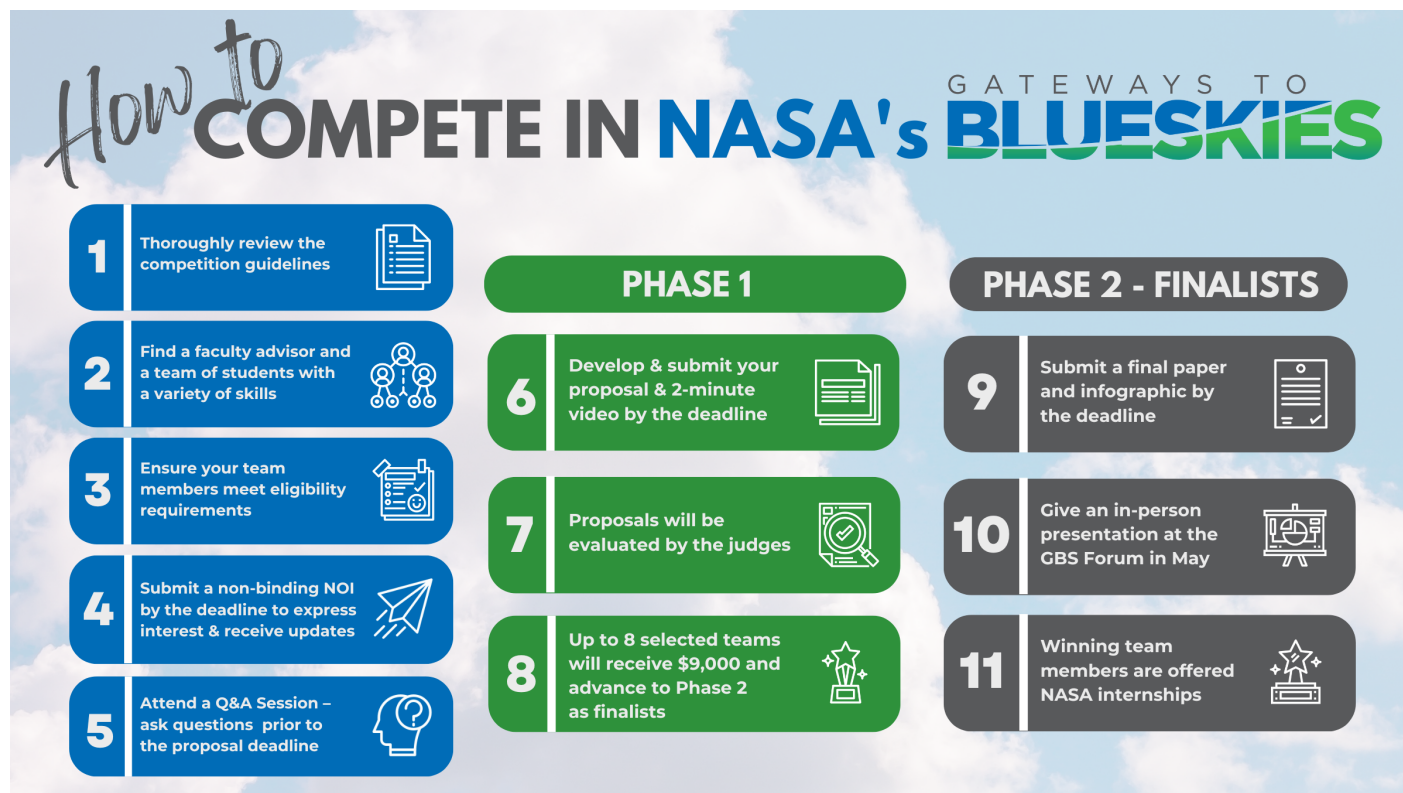
*The expectations for each of these elements are listed in more detail below under [Required Proposal Elements](#).

NEW THIS YEAR! Participation Agreement

Proposers must acknowledge that they have read and agree to abide by the full [GBS Participation Agreement](#). By submitting to the Gateways to Blue Skies Competition, all members of your team agree to the terms and conditions contained in this Participation Agreement.

How to Compete in GBS

(Click image below to expand in web browser.)



Eligibility

NASA welcomes submissions from teams from accredited U.S.-based post-secondary institutions, including technical colleges, community colleges, colleges, or universities. Teams may be comprised of a combination of full-time or part-time students from any post-secondary academic levels, and can include senior capstone students, clubs, multi-university teams, or multi-disciplinary teams. **Additional Eligibility restrictions apply. See the [Participation Agreement](#) for full Eligibility Requirements.**

Team Size

- At a minimum, teams must contain one faculty advisor with a college/university affiliation at a lead U.S.-based institution, and 2 U.S. citizen (or lawful permanent resident) students from that lead U.S.-based college/university who work on the project and can present at the culminating GBS Forum.
- Team size is limited to a maximum of 6 student team members.

Expectations

- The expectation is that GBS projects are **student-led initiatives** (i.e., students are doing the work).
 - Faculty take on the role as mentors, and if a team is selected as a finalist, help manage any monetary awards sent to the university.
- Proposed solutions should originate from the student team, versus from an outside individual or entity.

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Dates and Deadlines

Note: All deadlines must be met by 11:59 PM Eastern Time on the date specified below, unless otherwise indicated.

DATE	DESCRIPTION
November 4, 2025	Notice of Intent (NOI) submissions deadline (non-binding)
November 9, 2025	Deadline to submit advance questions for Q&A Session #1
November 20, 2025	Q&A Session #1 for interested teams (3:30-5:00 PM Eastern Time)
January 27, 2026	Q&A Session #2 for interested teams (3:30-4:30 PM Eastern Time)
Phase 1: Proposal and Video Submission	
February 16, 2026	Deadline to submit Proposal and Video
March 13, 2026	Teams are notified of their selection status and Finalists advance to Phase 2
Phase 2: Final Deliverables and Forum	
April 17, 2026	Deadline to Register and Pay for the Blue Skies Forum
May 3, 2026	Deadline to submit Final Paper & Infographic
May 15, 2026	Deadline to submit Presentation/Chart Deck Files (Noon Eastern Time)
May 18-20, 2026	2026 Blue Skies Forum at NASA's Langley Research Center, Hampton, VA

Notice of Intent

Notice of Intent Deadline: 11:59 PM Eastern Time November 4, 2025

Interested teams are strongly encouraged to submit a Notice of Intent (NOI) by the deadline to stay informed of competition news and for program managers to ensure an adequate number of proposal reviewers. Teams are limited to one NOI. Teams who submit an NOI by the deadline will receive an invitation to participate in the Q&A sessions with judges prior to the proposal due date and will receive all competition updates. NOIs submitted by the deadline will be reviewed, and teams with concepts outside of competition parameters will be notified. NOIs do not need to be comprehensive, are non-binding, and intended concepts may change prior to proposal submission.

To complete the brief NOI form, visit the [Competition Details webpage](#).

The following information will be requested on the NOI submission form:

- Name of U.S. post-secondary institution
- Partnering colleges or universities (if applicable)
- Project title (if known)
- Contact information for the faculty advisor and student team lead
- Contact information for additional advisors/team members (if applicable)
- Short description (high-level overview) of the proposed concept (limited to 1,500 characters), including specific aviation maintenance area selected.

Submitting an NOI does not bind any participant or team to submitting a proposal. We also understand that NOIs are due early in the development process, and teams will still be in the process of fleshing out many of the details of their concepts. We fully expect

that teams' concepts will change and evolve between the NOI and Proposal Package submissions, as in-depth research and analysis is conducted. Teams have the full flexibility to change ideas, concepts, and/or category selection as they work over the course of the semester. Information submitted in the NOI does not need to match the Proposal Package submission.

Phase 1: Proposal Guidelines

Proposal and Video Submission Deadline: 11:59 PM Eastern Time on February 16, 2026

To participate in the GBS Competition, teams will submit a proposal package consisting of:

- A 5-7 page proposal,
- A 2-minute video, and
- Graphic depicting team's concept.

Proposal Expectations

Robust proposals are expected, which demonstrate a strong basis of research analysis. The GBS judging panel are looking for well-developed concepts at the proposal stage that have strong potential for concept development in the final paper. **Innovative systems with sound analyses are more likely to advance to the finals.** The proposal should reflect the total scope planned for the final paper.

- **Permitted length is a minimum of 5 pages and maximum of 7 pages.**
- Submitting teams represent and warrant that the team is the sole author of the submission, that the submission is wholly original, that it does not infringe on any copyright or any other rights of any third party of which the team is aware, and that the electronic proposal and video submission are free of malware.
- Teams may not have any portion of their submissions created by non-team members, which includes the use of tools such as Generative AI.
 - AI can be used for editing purposes, but not to generate content or imagery.

Required Proposal Elements

Proposing teams will develop a 5-7 page proposal that includes the following sections, at a minimum:

- **Cover Page (Excluded from page limitation)** with the following information:
 - Name of proposing post-secondary institution
 - Project title
 - Full Names of all team members [including faculty advisor(s)] along with major course of study/discipline and year in school (i.e., freshman, sophomore, junior, senior, master's, PhD)
- **Quad Chart (Excluded from page limitation)**
 - A quad chart is a form of technical documentation used to briefly describe a concept or innovation through writing, illustration and/or photographs. It is a useful tool that helps evaluators quickly compare many projects and should accurately and succinctly represent the proposal. Quad charts must address:
 - A project summary
 - An image/graphic of all or part of the concept. Consider the graphic requirement as an "artist's depiction" of the concept, as opposed to a flow chart, diagram, UML, or similar.
 - A description of the team composition
 - Proposed deployment timeline
 - Proposers must use the [GBS Proposal Quad Chart Template](#) when submitting proposals. Template can be found on the "Proposal" section of the [2026 Competition Details webpage](#).
- **Abstract/Summary (Excluded from page limitation)**

- Include a brief summary (no more than 2 paragraphs) of the specific aviation maintenance area selected, team-selected use case, proposed novel aviation solution, and the approach being used to incorporate the solution into operations. Include an overview of the anticipated challenges and opportunities of integrating the proposed solution into operations, which will be expanded upon in the proposal. This summary gives the reader a quick glance at the *Why? What?* and *How?* of the project.
- **The body of the proposal must include the following sections: (5-7 pages)**
 1. **Assess the situation:** Select a specific maintenance area that is affected by changes in the industry or that is a good opportunity space for improvement. For this specific area/practice, assess its current state, the people/processes involved in its management, and any relevant equipment or technology currently utilized. In addition, identify the predicted demands of the future that can be met with proposed solutions.
 2. **Identify a use case & propose a solution:** Conceptualize and justify a solution that can effectively meet the needs of your specific team-selected aircraft maintenance area/ use case that is deployable by 2035 or sooner. Identifying aircraft maintenance areas to which the proposed concepts can be applied will be an important part of this proposal section.
 - a. Teams may consider adopting **new** technologies, proposing **updated** technology applications, **integrating** technologies used elsewhere, making **better use** of existing technologies, **evolving** organizational practices to better employ technologies, etc.
 - b. Consider the operational context surrounding the solution – who is impacted by the technology, how information collected is used and by whom, and which part of the process is improved.
 3. **Conceptualize/analyze technical development and implementation:** Provide an overview and concept of operations (ConOps) of the solution, addressing the team-selected maintenance area/use case. Concepts should consider:
 - a. Minimal barriers to adoption/use (i.e., effectiveness, simplicity, high reliability, maintenance, user-friendliness, relevance to current operations/ag society norms)
 - b. Support systems needs and TRL
 - c. Connectivity constraints (internet, power, GPS, etc.)
 - d. Challenges posed by adverse environmental conditions (weather, wind, rain, smoke, etc.)
 - e. Interoperability with existing people, processes, organizations, solutions, and technologies
 - f. Expected improvement over existing practices
 4. **Chart a path to deployment:** Provide a pathway and timeline to deployment for the proposed solution by 2035 or sooner, including, but not limited to: [technology readiness levels](#), training, customer/stakeholder operational integration requirements, cost/return on investment (ROI) and economic impact, and opportunity/barrier analysis (technology/development, policy and regulations, risks, etc.).

It is imperative that teams address all four elements, in summary form if necessary, due to space limitations. If needed, placeholders may be left for analysis not yet completed (to be completed if selected as finalist) but must be well justified and relevant. Proposing teams should clearly identify their assumptions and provide the justifying rationale to support them.

IMPORTANT: The bulk of the proposal should focus on items 3 and 4. Teams determine how to prioritize space to build the strongest case for the judges, providing enough detail to justify their vision for concept/deployment by 2035 or sooner, while devoting more space to analyzing that vision. The proposal must clearly articulate the intended path forward if selected as a finalist.

- **Appendices, if needed (Excluded from page limitation)**
 - **Appendices are to be used for references and calculations ONLY.** There is no preference in citation formatting, but references must be formatted uniformly and correctly.
 - Judges are **not obligated** to read beyond the stated page limit; therefore, all pertinent information should be included in the paper's main body.

Proposal Tips

- Start with a big picture view of your concept's context and use case to frame your solution and rationale. Consider the proposal page limit when determining the appropriate level of analysis details (i.e., higher systems level analysis).
- A strong proposal will make a compelling argument convincing judges of a concept's feasibility and viability. TBD placeholders should be well-justified, relevant and not overused/abused.
 - If results/details are not available yet, or are still being finalized, it is valuable to indicate that they are forthcoming and how they will be determined. If not mentioned, judges may assume it is not being addressed.
- A picture is worth a thousand words and can convey a lot of information. Images for the proposal are a plus where appropriate. Show your innovation! (Please do not include illegible hand-drawn sketches).
- Consider multiple facets of the issue, utilizing a multidisciplinary approach to provide a well-rounded concept & analysis.
- Consider including team members from a variety of disciplines.
- Utilize all available page space.
- Report quality is considered in the judges' scoring. Poor grammar, typographical errors, etc. do not reflect well on your team and will be penalized.
- Make use of published papers and reports available to you. Resources can include **but are not limited to** those posted on the [Competition Details webpage](#).

Proposal Formatting Guidelines

Teams are responsible for the formatting and appearance of their proposal.

- **Length:** Proposals must be a minimum of 5 pages and a maximum of 7 pages, inclusive of all text, graphics, tables, and charts.
 - The Cover Page, Quad Chart, Abstract, Table of Contents (if used), and Appendices are excluded from this page count.
 - References should be placed in an appendix at the end of the document. **Appendices are to be used for references and calculations ONLY and do not count toward the page limit.**
 - *Note: Judges are not required to review content beyond the maximum page limit, including appendices. Ensure all critical details are included within the proposal body.*
 - References must be formatted consistently and correctly. Simply listing a link is not acceptable.
- **Layout:**
 - Single-spaced, single column format.
 - Standard 1" (2.54 cm) margins on all sides.
- **Graphics, Tables, and Charts:**
 - Strongly encouraged where appropriate – effective visuals can convey complex ideas more clearly than text alone.
 - Figures and tables must be legible without magnification, embedded in the document, and in digital format.
 - Image files should have a minimum resolution of 150 dpi.
- **Fonts:**
 - Please use fonts common to Macintosh and PC platforms, (i.e., Times, Times New Roman, Helvetica, Calibri, or Arial for text; Symbol for mathematical symbols and Greek letters).
 - Font size must be 11 or 12 pt. throughout, including in all tables, charts, and graphs. **Text smaller than this will not be reviewed.**
- **File Type:** Proposals must be submitted as PDF files.

Use of the NASA "meatball" and "worm" logos is prohibited on all GBS submissions.

Phase 1: Video Guidelines

Video Expectations

As a part of the proposal submission process, each team must include a 2-minute video summarizing its concept. The video should:

- Introduce the team, concept, and value proposition.
- Highlight what makes the concept unique and how it addresses the identified problem.
- Use animation, graphics, or other creative elements to showcase the proposal beyond the written submission.

When addressing the value proposition, consider the perspective of a stakeholder deciding whether to invest in a product, program, or research. Stakeholders want to understand:

- The vision for the concept.
- The problem it seeks to solve.
- The scale of the problem (e.g. potential market size).
- The product or solution and what makes it unique.
- The path for implementation.

The [Heilmeier Catechism](#) serves as a helpful framework for thinking about these questions.

What to avoid?

- Do not present the video in a standard PowerPoint or “slide deck” style.
- Do not speed up the audio.
- Do not use AI generated content or AI voice-overs.
- Do not use copyrighted music or images.
- Do not use the NASA “meatball” or “worm” logos.

Video Formatting Guidelines

- **Length:**
 - Videos may not exceed 2 minutes in duration.
- **Submission:**
 - Videos must be uploaded to YouTube, providing the video’s YouTube URL on the online proposal submission form. **Other video file types or submission methods will not be accepted.**
 - Videos must be publicly accessible via link and set to either **Unlisted or Public** visibility on YouTube.
 - Tip: YouTube accounts often require verification before videos can be fully uploaded. If your video remains in “processing,” [verify YouTube account settings](#).
- **Content Requirements:**
 - The university name and project title must appear in text at the beginning of the video.
 - All team members should appear in the video, if possible (still images are acceptable).
- **Copyright Compliance:**
 - Teams must not use copyrighted music or images.
 - NASA-created images may be used, but the NASA “meatball” and “worm” logos may not.
 - Do not use music or images which may violate copyright law. Teams are solely responsible for adhering to copyright law; neither NASA nor NIA can grant approval for copyrighted materials.
 - It is the responsibility of the team to follow copyright law. Neither NASA nor NIA can approve the use of copyrighted material.

- **Video Title:**
 - Use the format “**2026 GBS – University Name – Project Title**”
 - Abbreviations and acronyms may be used if required to meet YouTube’s Character limits.

Submitting The Proposal and Video

To upload your proposal and video (.pdf files and link), please visit the [Competition Details Webpage](#). Utilize the [Checklist for a Successful Proposal](#) to ensure your proposal is complete prior to submitting.

No revisions will be accepted after submission. Proof your proposal and video files carefully. In the event of technical issues (e.g., corrupted file, broken link), we will attempt to contact you - so ensure your submission form includes current contact information. **Late submissions will not be accepted**; the form will close promptly at midnight.

The following information will be requested on the Proposal and Video Submission Form:

- Name of U.S. post-secondary institution
- Partnering colleges or universities (if applicable)
- Project title
- Contact information for the faculty advisor and student team lead
- Contact information for any additional advisors, if applicable
- Team member information (academic major and year in school)
- File upload for PDF proposal document
- URL for team’s YouTube video (video must be “unlisted” or “public”)
- File Upload for high-resolution graphic depicting team’s concept, with a minimum dpi of 300
 - This can be the same image included in your quad chart.
- Specific aviation maintenance area(s) selected
- A 2-3 sentence synopsis (high level overview) of the proposed concept (max 600 characters)
- **NEW!** PDF file upload for [Faculty Advisor Attestation Agreement Form](#), using the provided template (must be signed by the Advisor)
 - The attestation form serves two key purposes:
 - To confirm that the Faculty Advisor has reviewed and approved the team’s proposal submission.
 - To acknowledge that the Faculty Advisor has read and agrees to comply with the full [Gateways to Blue Skies Participation Agreement](#). By submitting to the Gateways to Blue Skies Competition, all team members – including the Faculty Advisor – agree to the terms and conditions outlined in the Participation Agreement.
 - **Important Note:** Submissions without a valid, signed [Faculty Advisor Approval Attestation](#) will be deemed non-compliant and will not be reviewed.
- **NEW!** Acceptance of the [Blue Skies Participation Agreement](#)
- ***Financial information** – for use only if a team is selected as a finalist
 - Financial Point of Contact (POC): Someone employed by the university who can receive and manage funds on behalf of the team if a team is selected as a Finalist. They may be contacted to confirm receipt of any awards.
 - Student team members **may not** be Financial POCs.
 - Mailing address for prizes/awards: Must be a college / university address. Awards cannot be mailed to team members or residential addresses.
 - File upload for the primary college/university’s [Completed Vendor W-9 Form](#) (must be completed by the primary university’s accounting department, a department admin or account specialist)
 - A completed [IRS W9 Form](#) from the lead institution is an acceptable substitution for the Vendor Form. Vendor Forms (or W9 substitution) should be signed and dated within the past 2 years.

- Optional survey questions
 - How did your team hear about the Gateways to Blue Skies Competition?
 - What excites you about this competition?

*Information Regarding Required Vendor W-9 Form

- Immediately upon submission, GBS program staff will verify Vendor W-9 Forms and Financial POCs for all proposing teams. If this information is incorrect at the time of submission, it could result in delays in prize disbursement. Be sure the submitted W9 is correct at the time of proposal submission.

Phase 1: Evaluation Criteria

The GBS judging panel is comprised of NASA and industry experts who will score each submission based on adherence to the guidelines and constraints, and the published evaluation criteria. The [2026 GBS Scoring Matrix](#) outlines how proposals will be evaluated, including point-value assessment. The proposal and video together can earn a maximum of 100 points.

Proposal Evaluation Criteria (80 Points Total)

Proposals will be judged based on:

- **Situation Assessment (Max 20 points):** Demonstrates a well-supported analysis and rationale of the selected aviation maintenance area and use case, including challenges, needs, potential impact, and proposed advancements.
- **Concept of Operations Overview (Max 20 points):** Presents a clear ConOps description, utilizing a systems integration approach, that addresses supporting systems, constraints, improvements, and interoperability with the existing environment.
- **Implementation Analysis (Max 15 points):** Provides a feasible pathway and timeline to implementation (by 2035 or sooner), including technology readiness levels, costs/ROI, training needs, barriers, and operational integration.
- **Innovation (Max 15 points):** Proposes a novel, creative, or substantially improved solution that measurably reduces cost or enhances safety/efficiency.
- **Proposal Compliance (Max 5 points):** Includes all required sections, forms, and adheres to format and page limits.
- **Composition/Grammar/Cohesion (Max 5 points):** Uses correct grammar, clear organization, and professional writing to convey ideas effectively.

Video Evaluation Criteria (20 Points Total)

- **Relevance to Proposed Concept (Max 10 Points):** Clearly explains the aviation maintenance need being addressed and illustrates the proposed concept.
- **Value Proposition (Max 5 points):** Video provides clear, compelling argument for investment.
- **Overall Impression (Max 5 Points):** Delivers appealing, clear, and well-structured audio and video content that is easy to follow.

Phase 1: Announcement of Finalists and Prizes

Finalist teams will be announced in March 2026 following the conclusion of the Phase 1 proposal review. Each eligible finalist team will receive a \$9,000 prize issued to their university and advance to Phase 2 of the competition, which includes a final design review at the GBS Forum. Allocation of the funds is at the discretion of the team's faculty advisor.

Phase 2: Finalist Team Deliverables

Teams selected to receive a prize and advance to Phase 2 are responsible for the following project deliverables:

- 8–10-page final paper
- Infographic summarizing final paper concepts
 - Teams must submit a digital poster file **in addition to** bringing a full-size printed poster of their infographic for display during the Forum’s poster session (48” x 36”)
- 25-minute presentation with an additional 20 minutes of Q&A at the GBS Forum

Final Paper, presentations, and posters infographics will be posted and archived on the GBS website. Finalist teams should plan to present the results of their GBS project first at the GBS Forum, waiting until after the Forum to share their project at outside technical conferences via papers or presentations. Sharing within the university environment prior to the Forum is permissible.

Phase 2: Final Paper Guidelines

Final Paper & Infographic Submission Deadline: 11:59 P.M. Eastern Time on May 3, 2026

Final Paper Expectations

The final paper should be treated as a stand-alone document, clear to someone who has never read the initial proposal. While a certain amount of overlap is to be expected, the final paper should be reflective of the team’s entirety of findings in the competition period. It should expound upon initial findings in the proposal and take into consideration the listed final paper details, evaluation criteria, and judges’ feedback. It should be robust, creative, well-researched, and well-justified. **The Final paper should be a minimum of 8 pages and a maximum of 10 pages. Teams should pay careful attention to composition, grammar, and cohesion.**

Required Final Paper Elements

Finalist teams will develop an 8–10-page final paper that includes the following sections, at a minimum:

- **Cover Page (Excluded from page limitation) with the following information:**
 - University name
 - Project title
 - Full Names of all team members [including faculty advisor(s)] along with major course of study/discipline and year in school (i.e., freshman, sophomore, junior, senior, master’s, PhD)
 - A graphical depiction of your concept
- **Quad Chart (Excluded from page limitation)**
 - [Quad Chart template](#) can be found on the “Final paper” section of the [Competition Details webpage](#).
- **Abstract/Summary (Excluded from page limitation)**
 - Include a brief summary (no more than 2 paragraphs) of the final paper, including conclusions and key findings. **Be sure to highlight (in summary form) any changes/improvements made since the proposal review,** including areas in which the final paper provides new information, expands upon proposal work, or provides expanded analysis.
- **Body (8-10 pages):**

The following section should be included, and teams should clearly justify all analysis conducted:

 - Situation assessment
 - Use case and proposed solution

- Concept of operations
 - Path to deployment
 - Changes/improvements made since the proposal review
 - Provide an expanded analyses of proposed concept according to [Theme Description & Details](#) and [Final Deliverables Evaluation Criteria](#), incorporating judge feedback when appropriate.
 - Conclusions and key findings.
- **Appendices, if needed (Excluded from page limitation)**

Final Paper Formatting Guidelines

Each team is responsible for the formatting and appearance of its final paper.

- **Length:** Final papers must be between 8-10 pages, inclusive of all text, graphics, tables, and charts.
 - The Cover Page, Quad Chart, Abstract, Table of Contents (if used), and Appendices are excluded from the page count.
 - References should be place in an appendix at the end of the document. **Appendices are to be used for references and calculations ONLY and do not count toward the page limit.**
 - *Note: Judges are not required to review content beyond the maximum page limit, including appendices. Ensure all critical details are included within the proposal body.*
 - References must be formatted consistently and correctly. Simply listing a link is not acceptable.
- **Layout:**
 - Single-spaced, single column format.
 - Standard 1" (2.54 cm) margins on all sides.
- **Graphics, Tables, and Charts:**
 - Strongly encouraged where appropriate – effective visuals can convey complex ideas more clearly than text alone.
 - Figures and tables must be legible without magnification, embedded in the document, and in digital format.
 - Image files should have a minimum resolution of 150 dpi.
- **Fonts:**
 - Please use fonts common to Macintosh and PC platforms, (i.e., Times, Times New Roman, Helvetica, Calibri, or Arial for text; Symbol for mathematical symbols and Greek letters).
 - Font size must be 11 or 12 pt. throughout, including in all tables, charts, and graphs. **Text smaller than this will not be reviewed.**
- **File Type:**
 - Final Papers must be submitted as PDF files.

Phase 2: Infographic Guidelines

Infographic Expectations

Each finalist team must submit a full-sized digital poster of their infographic with their final paper submission. **Teams must also bring a 48"x36" printed copy for display during the poster session at the GBS Forum.** The poster session provides teams with an opportunity to expound upon important concepts in their presentations and allows judges to ask questions for further clarification.

An infographic is a visual representation of information, data, or knowledge intended to present information quickly and clearly. For inspiration, see past Best Infographic Winners: ([2022](#) and [2023](#)).

Teams that produce strong infographics often include a member with graphic design skills – or a willingness to learn them.

Infographic Content

The infographic should visually summarize the team’s final paper. A viewer should easily grasp the **Why, What, and How** of the team’s concept, including:

- The aviation maintenance opportunity space/chosen use case
- The current industry practice
- The proposed solution and its projected improvements
- The approach to deployment (timeline, opportunities, and challenges)

Design Guidelines

- **Accessible:** Clear to non-technical audiences; avoid jargon. Should be understandable without verbal explanation.
- **Visual-first:** Use a strong balance of visuals and text, with emphasis on graphics over large text blocks. Avoid clutter/overcrowding.
- **Consistent with Final Paper:** Include only information discussed in the final paper – no additional content.
- **Visually Compelling:** Use color, layout, and creativity to guide the viewer through the story in a logical flow.

NOTES:

- A simple flow chart is not an acceptable infographic.
- Do not reuse a presentation slide as the infographic.
- Infographics should be very different from standard academic research posters.

Digital Infographic File Formatting Guidelines

Digital infographic file must be submitted with the final paper; files will be displayed on the GBS Website. Digital files should adhere to the following formatting guidelines:

- **Dimensions:** 9600 pixels x 7200 pixels (48” x 36”).
- **Orientation:** Landscape (horizontal)
- **Image Quality:** Print-ready, minimum 300 PPI when possible
- **Clarity:** All images/graphs must be legible and appropriately sized
- **Format:** PDF, ≤ 100MB size limit
- **Identifier:** Small team identifier (university/team name and/or logo) in bottom left-hand corner
- **Restrictions:** No embedded links (except references); no NASA “meatball” or “worm” logos

Printed Poster Requirements

At the GBS Forum Poster Session, each team will have a 6’ table to display their poster. A 48” x 36” tri-fold foam/cardboard posterboard will be provided to each team to use at no cost, along with thumbtacks and double-sided tape to secure posters to the tri-fold boards.

- **Teams are responsible for printing and bringing their own posters to the Forum, and posters should be exactly 48”x36” (landscape).**

Submitting Final Paper and Infographic Files

To upload your final paper (.pdf) and infographic (.pdf), please visit the [Competition Details webpage](#). Utilize the [Checklist for a Successful Final Paper](#) to ensure your submission is complete prior to submitting.

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No revisions will be accepted after submission. Proof your final paper and infographic files carefully. In the event of technical issues (e.g., corrupted file, broken link), we will attempt to contact you - so ensure your submission form includes current contact information. **Late submissions will not be accepted**; the form will close promptly at midnight.

The following information will be requested on the Final Paper and Infographic Submission Form:

- College/University name
- Project Title
- Faculty advisor & team lead contact information
- Additional Faculty Advisor (if applicable) & Team Member information (including academic year and major)
- File upload for PDF final paper document
- File upload for PDF infographic document
- At least one high-resolution photo or graphic illustrating your concept, for purposes of promotion in online media outlets (minimum dpi of 300)
 - Image can be a higher-resolution version of the image on the quad chart. Graphic/image should be an “artist’s depiction” of the concept, as opposed to a flow chart, diagram, UML, or similar.
- **IMPORTANT:** PDF file upload for [Faculty Advisor Approval Attestation](#) using the provided template
 - **Note: Submissions without a valid Faculty Advisor Approval Attestation will be deemed non-compliant and will not be reviewed.**
- A 2-3 sentence synopsis of the concept (max 600 characters)

Phase 2: Presentation Guidelines

Presentation Files Submissions Deadline: Noon Eastern Time on May 15, 2026

Format & Timing

- Presentations are limited to 25 minutes, followed by a 20-minute Q&A session with the judges.
- Presentations must align with the content of the final paper. **Introducing significant new ideas or concepts not included in the paper may result in scoring penalties.**
- Teams are encouraged to “go deeper,” in the presentation by highlighting the relevance and impact of the proposed solution, providing additional context, and drawing inferences or extrapolations from their analyses.
- If any errors were discovered after submitting the paper, this is the appropriate time to acknowledge and address them.

Delivery

- Presentations will be supported by a PowerPoint slideshow.
- Teams may decide who delivers the presentation; however, all team members are encouraged to stand together at the front of the room, so they are available for questions.
- **Teams should be prepared to answer questions with a strong understanding of the technologies and capabilities introduced in their final paper.**

Slide readability

- The presentation room will be large; slides must be easy to read from the back of the room.
- Use large fonts, high-contrast color schemes, and avoid black backgrounds.
- Ensure figures and calculations are clearly legible.
- Avoid dark videos or animations, which do not display well in the room setting.

Submitting Presentation Files

To upload your team's presentation, please visit the [Competition Details webpage](#).

- A Cover Slide is required and must include the project title, university name, and faculty advisor's names.
- Presentations must be submitted in PowerPoint (.pptx) format by the deadline using the online submission form provided on the GBS competition Details website.
- Files may not exceed 100 MB and must have all videos and images embedded (no linked to outside sources).
 - If file size is an issue, teams may **also** provide a download link to a larger version of their presentation, with the following restrictions:
 - Linked presentation files must be 250 MB or smaller. Files over 250MB will not be accepted; instead, the 100MB upload will be used.
 - Linked presentation files will be downloaded for offline use. Presentations cannot be played from a browser (ex., we cannot use Google Slides).
 - A 100 MB or smaller version is still required for archival on the GBS website, regardless of whether a larger linked file is submitted.
- Revisions will not be accepted after the noon EST deadline – no exceptions.
- Late submissions will not be accepted; the submission form will close promptly at Noon EST. Teams that fail to submit a presentation on time will be barred from presenting.

The following information will be requested on the Presentation Submission Form:

- College or University Name
- Project Title
- Faculty Advisor and Team Lead information
- File Upload for Presentation Chart Deck Files (.pptx or .ppt file)
- (Optional) Link to Larger Presentation File Download

Phase 2: Final Evaluation Criteria

The [2026 Blue Skies Scoring Matrix](#) outlines how the final paper, infographic, and presentation will be evaluated.

A panel of NASA and industry experts will evaluate and score these final components independently of the Phase 1 proposal review process. Proposal scores are used only to select finalists and do not impact final competition results in Phase 2.

Final deliverables will be judged against the criteria below, with a maximum possible score of 100 points.

Final Paper Evaluation Criteria (45 Points Total)

- **Concept of Operations (Max 15 points):** Presents a clear ConOps description, utilizing a systems integration approach, that addresses supporting systems, constraints, improvements, and interoperability with the existing environment.
- **Situation Assessment (Max 10 points):** Demonstrates a well-supported analysis and rationale of the selected aviation maintenance area and use case, including challenges, needs, potential impact, and proposed advancements.
- **Implementation Analysis (Max 10 points):** Provides a feasible pathway and timeline to implementation (by 2035 or sooner), including technology readiness levels, costs/ROI, training needs, barrier analyses, and operational integration.
- **Compelling Key Findings (Max 5 points):** Final paper makes a compelling, well-supported case for concept implementation.
- **Expanded Analyses (Max 5 points):** Clear highlight of changes made between proposal and final paper.

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Presentation Evaluation Criteria (35 Points total)

- **Visual Presentation (Max 10 points):** Quality, clarity, and organization of slides, including effective use of visuals and structure.
- **Presentation Delivery (Max 10 points):** Effectiveness of communication and delivery, and presence of integration and teamwork.
- **Q&A Response (Max 10 points):** Quality of responses to questions from the judges.
- **Consistency with Final Paper (Max 5 points):** Representative of the findings and work written in the Final paper.

Infographic Evaluation Criteria (20 Points Total)

- **Aesthetics, Creativity, & Organization (Max 10 Points):** Visually compelling and appealing, with good organization and flow, including effective use of color, graphics, and layout to summarize opportunity space/use case, improvements, deployment approach (including timeline and challenges), and supporting information.
- **Technical Simplification (Max 5 Points):** Language and information are easily understood by all audiences, especially those in non-technical fields.
- **Adherence to Guidelines and Consistency with Final Paper (Max 5 Points):** Compliance with infographic guidelines and use of content solely from the final paper – no additional content.

Phase 2: Prize

Overall Competition Winner

Teams selected to receive a prize and move on to Phase 2 are responsible for the development of a final paper, infographic, and an in-person presentation during the GBS Forum in May 2026 at NASA’s Langley Research Center in Hampton, VA. Foreign national team members may not be able to attend events, including tours, that take place onsite at a NASA center due to security restrictions. During the culminating Awards Ceremony at the GBS Forum, awards will include 1st place, and any other panel-determined honors (e.g., Best Technical Poster, Most Creative/Innovative Project, etc.). Internship opportunities* with NASA’s ARMD serve as the competition prize for members of the winning team (Pathways internships excluded).

NASA ARMD will provide up to 6 internships to students of the winning team. Student members of the first-place team who meet eligibility requirements to work onsite at a NASA center will receive offers for internships at Langley Research Center, Glenn Research Center, Ames Research Center, or Armstrong Flight Research Center. Selections will be based on the cumulative merit of each student’s individual internship application and availability for fall, spring, or summer internships. Internships are also available to graduating seniors if taken within six months of graduation. **Internships must be taken during one of the following sessions:**

- Spring 2027: Mid-January to early May (16 weeks)
- Summer 2027: Late May/early June to August (10 weeks)

*Please note that [NASA internships have additional eligibility requirements](#):

- U.S. citizenship.
- Cumulative 3.0 GPA (on a 4.0 scale).
- Undergrad and graduate students must be enrolled full-time in a degree-granting program at an accredited college or university
- Graduating students are eligible for the internship, provided they begin the internship within 6 months of graduating.
- See full eligibility criteria under “Eligibility at a Glance” on the [NASA Internships](#) website.

Contact Information

For Gateways to Blue Skies inquiries, please contact the GBS Program Team at BlueSkies@nianet.org:

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