NASA's GATEWAYS TO BLUESKIES

Inspire. Innovate. Impact.



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 NASA's University Innovation Project, part of NASA's Aeronautics division within the Research and Technology Mission Directorate.

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2027 Guidelines Change Log:

All changes made after the initial publication date will be listed here, and updates will be highlighted in yellow within the document.

Oct 20, 2026

- Pages 7 and 8 - Revised foreign national participation requirements in the Eligibility section and in the Participation Agreement (latest version dated October 20, 2027), including:
  - New Foreign National Acknowledgement Form requirement for each foreign national (participant and faculty advisor signatures required) See also page 13.
  - New restriction prohibiting foreign national participants from attending the culminating Forum, regardless of location.
- Page 9 - Added requirement to include citizenship information for all team members on proposal cover page submissions.

NASA Aeronautics & University Innovation Project Overview

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

The University Innovation (UI) project supports educating the next generation of aeronautical innovators by providing opportunities for postsecondary-led teams to conduct research into transformative technology that supports NASA Aeronautics' major research goals. The three recurring UI opportunities include the University Leadership Initiative (ULI), the University Student Research Challenge (USRC), and NASA's Gateways to Blue Skies (GBS) Competition.

NASA's Gateways to Blue Skies Competition Overview

NASA's Gateways to Blue Skies (GBS) competition expands engagement between postsecondary institutions and NASA Aeronautics, industry, and government partners by providing an opportunity for multidisciplinary teams of students from all fields and academic levels (i.e., freshman, sophomore, junior, senior, and graduate) to tackle critical challenges and opportunities in aviation 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 2027, the theme focuses on using innovative airborne platforms for land-based infrastructure inspection. The competition is divided into phases. Phase 1 participation involves submitting a 5–7-page systems-level concept proposal, along with a 2-minute video summarizing the team's proposal. Based on the review of Phase 1 submissions, up to 8 teams may be selected to receive a $9,000 prize and advance to Phase 2, where they will present an updated final concept paper and infographic in person at the GBS Forum to a panel of NASA and industry experts. NASA OSTEM internship opportunities* within NASA Aeronautics during the following Spring or Summer semesters serve as the competition prize for members of the winning team.

**Please review NASA's OSTEM Internship "At a Glance Comparison" table for more information about GBS prize eligibility.*

The expectation is that GBS projects are **student-led initiatives** (i.e., students are doing the work). Faculty serve as mentors, and if a team is selected as a finalist, help manage any monetary awards sent to the academic institution. Proposed solutions should originate in the academic environment from the student team, versus from an advisor, outside individual, business, or professional endeavor.

Background & Context for 2027 Theme

Infrastructure is the foundation of our Nation's strong economy, global competitiveness, and daily quality of life. When that infrastructure is damaged or in disrepair, it can limit the movement of people, goods, services, and life-critical resources like water and energy. As the Nation's infrastructure ages and our needs continue to change and grow, investments will be made in new infrastructure and the repair and modernization of outdated infrastructure. Inspections are important throughout the phases of infrastructure projects and often come with significant challenges. Many structures such tunnels, bridges, highways, railways, and electric grids, can be massive in size, difficult to reach, require disruptive shutdowns to access, or force workers to navigate extreme heights, confined spaces, and hazardous environments.

NASA Aeronautics is dedicated to working with industry and government partners to advance the capabilities and performance of the Nation's aviation sector. As infrastructure ages and expands, **there are opportunities to use innovative airborne platforms to improve the safety, reliability, efficiency, and cost of current inspection practices.**

Capabilities and opportunities for improvement include, but are not limited to:

- Advanced monitoring and diagnostic systems
- Aging infrastructure and material degradation assessment
- Large-scale and long-distance infrastructure monitoring
- Navigation and data collection in GPS-denied or confined environments
- Operations in high-risk, hazardous, or high-interference zones
- Automated compliance and safety reporting
- Digital twin integration and 3D structural modeling

2027 Theme – Infra Air | Aviation for Infrastructure Inspection

Through the 2027 GBS Competition, collegiate-level student teams will **conceptualize innovative airborne platforms for inspecting land-based (i.e., hard) infrastructure that can be implemented by 2035 or sooner with the goal of improving safety, reliability, efficiency, and cost**.

Proposed solutions should be aviation-first, with primary focus on the infrastructure inspection area being addressed, but should include well-described end-user applications, system operations and methods, and user relevance and adoptability. Teams should consider relevant regulations and standards, as well as 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.

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.

Teams are highly encouraged to contact appropriate non-government stakeholders to better understand the current industry and technologies used in infrastructure inspection and current gaps or opportunities that may be addressed through their proposed concept.

Included: “Land-Based” (Hard) Infrastructure

For the purposes of this challenge, **land-based** (or "hard") infrastructure refers to physical, terrestrial structures and systems built on land to support human society, mobility, and economic activity.

Key Categories & Inclusions:

- **Mobility & Transportation:** Roads, highways, land bridges, overpasses, terrestrial tunnels, railway networks, and public transit systems.
- **Utilities & Public Works:** Power grids, electrical substations, land-based water treatment plants, inland dams/reservoirs, and telecommunications towers.
- **Economic & Industrial Assets:** Warehouses, freight terminals, logistics hubs, and commercial or industrial buildings.

Excluded: Marine & Offshore Infrastructure

Structures, facilities, and assets located in oceanic, marine, or deep-water environments fall outside the scope of this challenge.

Key Exclusions:

- **Marine & Offshore Structures:** Offshore oil and gas platforms, marine ports, floating docks, and subsea infrastructure (e.g., underwater pipelines or cables).
- **Navigational & Water Transport Aids:** Offshore lighthouses (built on marine reefs or rock formations), ocean buoys, and underwater marine tunnels.

Infrastructure Inspection Areas

Infrastructure inspection encompasses a wide range of activities to ensure these critical assets are safe, reliable, and in good working order. Key components of land-based infrastructure inspection include, but are not limited to:

Operational Environments & Conditions

- **Confined Space Assessments:** Navigating difficult-to-access interior areas such as water pipelines, sewer systems, tunnel ventilation shafts, and bridge box girders to assess internal conditions.
- **Hazardous Environments:** Navigating areas potentially dangerous for human inspectors, including high-voltage power lines, tall structures like bridges, or active roadways and railways, as well as temporarily hazardous conditions like earthquakes and flooding.

Inspection Targets & Methods

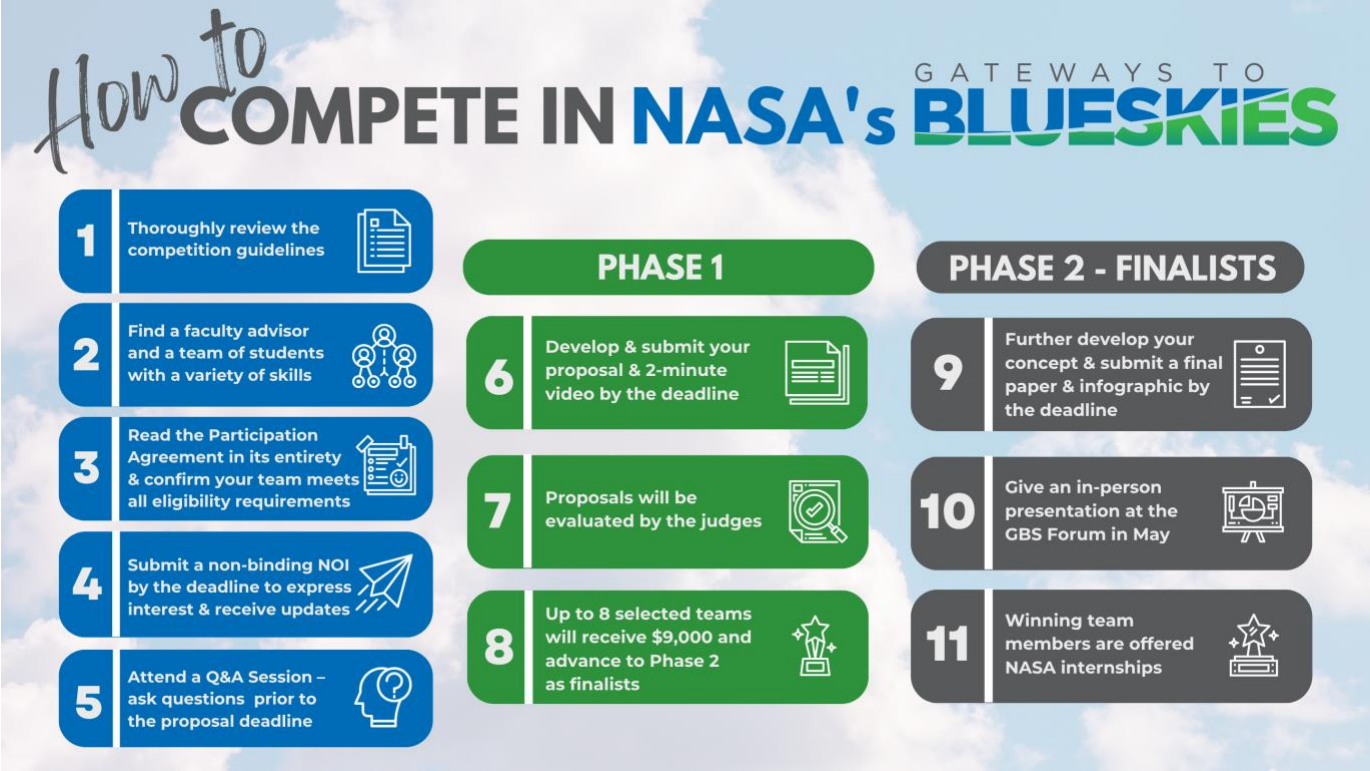
- **Routine Inspections:** Regularly scheduled assessments of infrastructure (like bridges, towers, or dams) to identify obvious defects, wear, or immediate safety hazards.
- **Mechanical and Active System Checks:** Inspecting the moving parts of infrastructure, such as the gears on drawbridges, spillway gates on dams, or ventilation fans in transit tunnels.
- **Leak Detection and Environmental Monitoring:** Identifying hazardous gas leaks (like methane along pipelines), chemical spills, or water main breaks to prevent environmental damage and resource loss.
- **Dynamic Load and Stress Monitoring:** Observing and measuring how infrastructure behaves under live loads, such as tracking the physical deflection of a bridge while a heavy freight train or line of trucks passes over it.

Data Integration & Advanced Capabilities

- **Advanced monitoring and diagnostic systems:** Utilizing multi-sensor payloads (e.g., thermal, acoustic, LiDAR) to capture a comprehensive picture of structural health.
- **Digital Integration and Record-Keeping:** Seamlessly updating digital twins, 3D structural models, and maintenance databases with fresh inspection data to track degradation over time.

How to Compete in GBS

(Click image below to expand in web browser.)



Participation Agreement

Upon entering the Gateways to Blue Skies Competition via a proposal submission, all team members – including the Faculty Advisor – agree to abide by the eligibility, terms, and conditions outlined in the Participation Agreement.

Eligibility

NASA welcomes submissions from teams comprised of 2-6 students from accredited U.S.-based postsecondary institutions, including technical colleges, community colleges, colleges, or universities. Teams may be comprised of a combination of full-time or part-time students (although foreign national students must be full-time students) from any postsecondary academic level and can include senior capstone students, clubs, multi-university teams, or multidisciplinary teams. Additional eligibility restrictions apply. See the Participation Agreement for full Eligibility Requirements.

Team Size

Each team must consist of:

- one faculty advisor affiliated with the lead U.S.-based academic institution.
- a minimum of 2 student members **who are U.S. citizens or lawful permanent residents who actively participate in the project and will present at the culminating GBS Forum if the team is selected as a finalist.**
- a maximum of 6 student members, each of whom must be 18 years or older by the time of proposal submission.

Forum Attendance

- If selected as a finalist:
  - only U.S. citizen and lawful permanent resident team members may attend the Forum, and

  - at least two U.S. citizen or lawful permanent resident student team members must attend the GBS Forum and present the team's work during their scheduled presentation timeslot and during their poster session. Attending team members are expected to participate in all Forum events.
- At least one faculty advisor is highly encouraged to attend the Forum with each team. Team-affiliated industry advisors may also attend the Forum.

NEW for 2027: Foreign National Policy and Acknowledgement Form

Policy: Although eligible foreign nationals attending the proposing U.S.-based postsecondary institution can participate on a Gateways to Blue Skies team, they are not eligible to win a prize from NASA if selected as a finalist. Prizes for the GBS competition are defined as any of the following: monetary award, NASA site visit/tour, final forum attendance/presentation, and NASA internship.

Acknowledgement Form: When submitting the proposal, teams are required to upload a signed GBS Foreign National Acknowledgement Form for **each** foreign national participant, acknowledging the policy above. Signatures from both the foreign national team member and primary faculty advisor are required on each form.

Dates and Deadlines

Note: All deadlines are 11:59 PM Eastern Time on the date specified below, unless otherwise indicated.

DATE	DESCRIPTION
October 12, 2026	Notice of Intent (NOI) deadline (non-binding)
October 20, 2026	Deadline to submit advance questions for Q&A Session #1
November 5, 2026	Q&A Session #1 for interested teams (3:00-4:30 PM Eastern Time)
January 27, 2027	Q&A Session #2 for interested teams (3:30-4:30 PM Eastern Time)
Phase 1: Proposal and Video Submission	
February 22, 2027	Deadline to submit Proposal and Video
March 22, 2027	Teams are notified of their selection status, and Finalists advance to Phase 2
Phase 2: Final Deliverables and Forum	
April 23, 2027	Deadline to Register and Pay for the Blue Skies Forum
May 10, 2027	Deadline to submit Final Paper & Infographic
May 20, 2027	Deadline to submit Presentation/Chart Deck Files (Noon Eastern Time)
May 24-26, 2027	2027 Gateways to Blue Skies Forum

Notice of Intent

Notice of Intent Deadline: 11:59 PM Eastern Time October 12, 2026

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.

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. postsecondary institution and any partnering colleges or universities (if applicable)
- Project title (if known)
- Contact information for the faculty advisor and student team lead
- Short description (high-level overview) of the proposed concept (limited to 1,500 characters), including specific infrastructure inspection area selected.

Submitting an NOI does not bind any participant or team to submitting a proposal. It is also understood 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 submission.

Phase 1: Proposal Guidelines

Proposal and Video Submission Deadline: 11:59 PM Eastern Time on February 22, 2027

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 the team's concept.

Proposal Expectations

Robust proposals are expected, which demonstrate a strong basis of research analysis. The GBS judging panel is looking for well-developed concepts at the proposal stage that have strong potential for further 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 a 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.

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 postsecondary 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)
    - **New! Citizenship (U.S. Citizen, Lawful Permanent Resident, or Foreign National)**

- 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 Quad Chart Template (found on the "Proposal" section of the 2027 Competition Details page), **incorporating it into the body of the proposal document as its own separate page.**
- Abstract (Excluded from page limitation)
  - The abstract must be on a separate page and include a short summary (no more than 2 paragraphs) of the specific infrastructure inspection area selected, team-selected use case, proposed innovative airborne 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 infrastructure inspection area with good opportunities for improvement and innovation. For this specific area, assess its current state, the people/processes involved in its management, and any relevant equipment or technology currently utilized. In addition, identify the demands that can be met with the proposed solution.
2. Identify a use case & propose a solution: Conceptualize and justify a solution that can effectively meet the needs of your specific team-selected infrastructure inspection area/use case that is deployable by 2035 or sooner. Teams may consider adopting **new** technologies, **integrating** technologies used elsewhere, making **better use** of existing technologies, **evolving** organizational practices to better employ technologies, etc.
   a. Consider the operational context surrounding the solution – who is impacted by the technology, how information collected is used and by whom, and which parts of the process are affected.
3. Conceptualize/analyze technical development and implementation: Provide an overview and concept of operations (ConOps) of the solution, addressing the team-selected infrastructure inspection area/use case. Concepts should consider:
   a. Minimal barriers to adoption/use (i.e., effectiveness, simplicity, high reliability, maintenance, user-friendliness, support system needs, relevance to current operations)
   b. TRL of technologies used by the system
   c. Connectivity constraints (internet, power, GPS, etc.) and processing limitations
   d. Challenges posed by confined or adverse environmental conditions (light, weather, 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 justifying rationale to support them.

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

- Think of your proposal as a sales pitch. Include enough information to convince the judges that your proposed concept is ***credible and valuable.*** Provide good justification for your choices.
- 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 depth of analyses and details.
- 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's 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.
- **Orientation**: Videos should be horizontal, not vertical (no TikTok-style videos)
- **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:**
  - NASA-created images may be used, but the NASA "meatball" and "worm" logos may not.
  - Teams must not use copyrighted music or images.
    - It is the responsibility of the team to follow copyright law. Neither NASA nor NIA can approve the use of copyrighted material.
- **YouTube Video Title:**
  - Use the format "***2027 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 required on the Proposal and Video Submission Form:

- Name of U.S. postsecondary institution
- Partnering colleges or universities (if applicable)
- Project title
- Contact information for the advisor(s) and student team lead
- Team member information [academic major, year in school, and citizenship (US/LPR/FN)]
- File upload for PDF proposal document
- URL for team's YouTube video (video must be "unlisted" or "public")
- Specific infrastructure inspection area(s) selected
- A 2-3 sentence synopsis (high level overview) of the proposed concept (max 600 characters)
- ***VERY IMPORTANT!*** PDF file upload for Phase 1 Faculty Advisor Attestation Form, using the provided template (must be signed by the Advisor)
  - By signing the Attestation Form, the Faculty Advisor confirms that:
    - They have reviewed and approved the team's proposal submission.
    - All team members have read, understand, and agree to comply with the full Gateways to Blue Skies Participation Agreement. Upon entering the Gateways to Blue Skies Competition via a proposal submission, all team members – including the Faculty Advisor – agree to abide by the eligibility, terms and conditions outlined in the Participation Agreement.
  - **Submissions without a valid, signed Phase 1 Faculty Advisor Attestation Form will be deemed non-compliant and will not be reviewed.**
- Acceptance of the GBS Participation Agreement
- NEW! PDF File Upload for Foreign National Acknowledgement Form (one for each foreign national team member, also signed by the team's primary faculty advisor)
- *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. 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's and/or university's completed Vendor W-9 Form:**
  - This 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.

***Information Regarding Required Vendor W-9 Form**

- Ensure the submitted W9 is correct at the time of proposal submission. GBS program staff will immediately 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.

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 2027 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 infrastructure inspection area and use case, including challenges, needs, potential impact, and proposed advancements.
- **Concept of Operations Overview (Max 20 points):** Presents a clear ConOps description of the solution, 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 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)

- **Explanation of Proposed Concept (Max 10 Points):** Clearly explains the infrastructure inspection area being addressed and visually 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 2027 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, where they will further develop their concept and present their final work at the GBS Forum. Allocation of the funds is at the discretion of the team's faculty advisor.

Phase 2: Finalist Team Deliverables

Finalist teams selected to receive funding 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.

Phase 2: Final Paper Guidelines

Final Paper & Infographic Submission Deadline: 11:59 P.M. Eastern Time on May 10, 2027

Final Paper Expectations

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.

The final paper should be treated as a stand-alone document, written for someone who has never read the initial proposal. It is different from the proposal. Incorporate the results of your research, analysis, design refinements, and any updates made in response to judges' feedback on your proposal. **The abstract should clearly state how your concept has evolved and matured since the proposal submission, while the body of the paper should provide additional detail and rationale for these changes.** Your final paper should present the complete, well-researched and well-supported solution developed throughout the competition and address all required final paper elements below.

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 and 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** (Excluded from page limitation)
    - The abstract must be on a separate page and include a brief summary (no more than 2 paragraphs) of the final paper, including conclusions and key findings. **Be sure to also 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 sections are required, 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)
  - 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.

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.
- **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:**
  - 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" x 36" (W x H) 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, 2023, and 2026).

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 infrastructure inspection opportunity space/chosen use case
- The current industry practice
- The proposed airborne 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 either a 6' table or an easel 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. Posters should be exactly 48" x36" (W x H - 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.**

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
- 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 20, 2027

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 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 advisors' 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 (not 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 250 MB 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 2027 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)

- **Situation Assessment** (Max 10 points)**:** Demonstrates a well-supported analysis and rationale of the selected inspection area and use case, including challenges, needs, potential impact, and proposed advancements.
- **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.
- **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.

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 2027 (location TBD). **Note: Due to security restrictions, foreign national team members will not be able to attend the Forum if it is held onsite at a NASA center. Teams should plan for this possibility.** During the culminating Awards Ceremony at the GBS Forum, awards will include 1st place, and any other panel-determined honors (e.g., Best Poster, Most Creative/Innovative Project, etc.). NASA OSTEM internship opportunities* with NASA Aeronautics serve as the competition prize for members of the winning team (Pathways internships excluded).

NASA will provide up to 6 aeronautics-focused OSTEM 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 either 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 spring or summer internships. Internships are also available to graduating seniors if taken within the three sessions immediately following graduation. **Internships can be taken during one of the following sessions:**

- Spring 2028: Mid-January to early March
- Summer 2028: Late May/early June to August (10 weeks)

*Please note that NASA OSTEM internships have additional eligibility requirements:

- U.S. citizenship.
- Cumulative 3.0 GPA (on a 4.0 scale).
- Undergrad and grad students must be enrolled full-time in a degree-granting program at an accredited college / university
- Students who have graduated from a higher education institution may apply for internships that take place in the three sessions immediately following their graduation.
- See full eligibility criteria under the "At a Glance Comparison" 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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