Air Force Advanced Manufacturing Olympics Technical Challenges
Official Rules

NO PURCHASE NECESSARY TO ENTER OR WIN. A PURCHASE DOES NOT INCREASE YOUR CHANCES OF WINNING. VOID WHERE PROHIBITED. The following official rules govern the five (5) Challenges outlined below (each a “Challenge”), including start and end dates, eligibility, participation requirements, judging, and prize details for each. Each Challenge contains a challenge of skill. The computer clock of Sponsor is the official time-keeping device of the Challenges.

CHALLENGE 1: APPROVAL SPRINT RELAY

The goal of this technical Challenge is to identify innovative strategies for rapid design, qualification and deployment of sustainment solutions which leverage new manufacturing materials, processes, and components. Selected Approval Sprint teams will compete to deliver a polymer additively manufactured replacement solution for rapid deployment of a specified aircraft component.

1. ELIGIBILITY: The Promotion is open only to legal residents of the fifty (50) United States (excluding Puerto Rico) and the District of Columbia and Canada (excluding Quebec), who are eighteen (18) (except Alabama and Nebraska 19 and 21 in Mississippi) years of age or older at the time of Challenge registration. Qualifying participating teams have been pre-selected by the Sponsor. Employees, officers and directors of the University of Dayton Research Institute (the “Sponsor”), and any of its subsidiaries and affiliates, Wright Brothers Institute, The Outcast Agency, and Realtime Media LLC, their respective parent companies, affiliates, subsidiaries, advertising, and fulfillment and marketing agencies, (collectively, “Promotion Parties”) their immediate families (parent, child, sibling & spouse and their respective spouses, regardless of where they reside) and persons living in the same households as such individuals (whether related or not) are not eligible to participate in the Promotion. By participating in the Promotion, you release, discharge and hold harmless Promotion Parties, their respective parents, affiliates, subsidiaries, retailers, advertising and promotion agencies and the respective officers, directors, employees and agents of each of the foregoing, from any and all damages whether direct or indirect, which may be due to or arise out of participation in the Promotion or any portion thereof, or the acceptance, use/misuse or possession of any prize. By participating, you agree to these Official Rules and to the decisions of the judges and Sponsor, which are final and binding in all respects. Void where prohibited by law, rule or regulation. All federal, state and local laws and regulations apply.

2. TIMING: The Challenge will consist of three (3) phases, as detailed below:

- **Challenge Entry Period:** Begins at or about 9:00:00 AM ET on August 31, 2020 and ends at 11:59:59 PM ET on September 25, 2020
  - August 31, 2020: Approval Sprints Challenge virtual kick-off*
  - September 25, 2020: All materials submitted; Challenge closed

- **Judging Period:** Begins at or about 9:00:00 AM ET on September 28, 2020 and ends at 11:59:59 PM October 16, 2020

- **Winner Notification:** All winners will be notified at the AMO Virtual Event held between October 20, 2020 and October 23, 2020

3. HOW TO PARTICIPATE: Entries chosen for the Challenge will be invited to participate remotely throughout the Approval Sprint Challenge event. During the event, teams will compete remotely using their own software and equipment to develop a specific F-16 polymer component for additive manufacture. The event will kick-off with a virtual meeting, at which time, specific component requirements and Challenge deliverables will be provided. Teams will be required to deliver final printed
components, a technical data package, and an accelerated qualification strategy for full approval of proposed materials, machines, and complete family of components. Teams will have the opportunity to present their final design and qualification process to the judging panel by means of a recorded video presentation or other media. Qualification strategy will be judged relative to standard Air Force processes with more information available to teams at kick-off. Printed components will be independently evaluated relative to minimum requirements for one-time flight. After entrant submission is approved by the Sponsor, based on compliance with these Official Rules and all entry requirements, you will receive one (1) entry into the Challenge (“Challenge Entry”), Limit of one (1) Approval Sprint Relay Challenge Entry per team throughout the Challenge Entry Period.

QUALIFICATIONS FOR CHALLENGE TEAMS:

- Collaborative teams with industry, government, and academic partnerships are encouraged.
- Teams must have the capability, software, and equipment to design & model a component geometry and prepare a solid model and engineering drawing.
- Teams must have access to a polymer 3D printing technology and material with reasonable potential of producing a component to the following requirements.
- Teams will be required to share requested information about machines, materials, etc.
  - Build volume: 4 x 6 x 6 inch minimum
  - Chemical compatibility: immersion in jet fuel, hydraulic fluid, engine oil, and water
  - Service temperature: -65 to +200°F
- Selected teams must be available to compete remotely during the Challenge timeframe and also attend the AM Olympics Virtual Event.

EQUIPMENT & MATERIALS:

- Teams will be responsible for all equipment and software identified under qualifications.
- Teams may also be requested to provide optional video footage of CAD design, simulation, manufacturing equipment, print processing, and other activities to support virtual delivery of Challenge content.

By submitting an Entry, you represent and warrant that the work submitted is original to you and that neither it nor its contents infringes upon or violates the rights of any third party. You also acknowledge and agree that Sponsor may receive other Entries under this Promotion that may be similar or identical to the Entry submitted by you, and you waive any and all claims you may have had, may have, and/or may have in the future, that any other Entry reviewed and/or used by Sponsor may be similar to your Entry and you understand that you will not be entitled to any compensation because of Sponsor’s use of such other similar or identical material. Entrants are free to use audio as long as they hold the appropriate license for their use as well as Sponsor’s use during the Promotion. Any entries that use music that violates copyrights will be disqualified.

RESTRICTIONS ON CHALLENGE ENTRIES: Entries may not contain, as determined by the Sponsor, in its sole discretion, any content that:

- Is sexually explicit; unnecessarily violent or derogatory of any ethnic, racial, gender, religious, professional or age group; profane or pornographic; contains nudity;
- Promotes alcohol, illegal drugs, tobacco, firearms/weapons (or the use of any of the foregoing); promotes any activities that may appear unsafe or dangerous; promotes any particular political agenda or message;
- Is obscene or offensive; endorses any form of hate or hate group;
- Appears to duplicate any other submitted challenge entries;
- Defames, misrepresents or contains disparaging remarks about other people or companies;
- Contains trademarks, logos, or trade dress (such as distinctive packaging or building exteriors/interiors) owned by others, without permission;
- Contains any personal identification, such as license plate numbers, personal names, e-mail addresses or street addresses;
• Contains copyrighted materials owned by others (including photographs, sculptures, paintings, and other works of art or images published on or in websites, television, movies or other media), without permission;
• Contains any individual other than the you and/or any materials embodying the names, likenesses (including makeup), voices, or other indicia identifying any person, including, without limitation, celebrities and/or other public or private figures, living or dead, without providing legal releases for such use in a form satisfactory to Sponsor;
• Contains look-alikes of celebrities or other public or private figures, living or dead;
• Has been previously published or won previous awards
• Communicates messages or images inconsistent with the positive images and/or good will to which Sponsor wishes to associate; and/or
• Violates any law.

4. JUDGING: Begins at or about 9:00:00 AM ET on September 28, 2020 and ends at 11:59:59 PM October 16, 2020. The judging panel, selected by the Sponsor, will score each Entry up to the maximum amount of points allowed. The judging panel will include Subject Matter Experts (SMEs) from areas such as: F-16 Systems Program Office (SPO) engineering, Air Worthiness Board (AWB), Change Evaluation Team (CET), Configuration Control Board (CCB), and AM technical experts. Judging will be based on the following criteria:

Tech Data Quality (20%): A robust technical data package is necessary to support both the Air Force qualification process and ultimate reproduction of the proposed component. You will assess the following:
• Component design data (10 points): Thorough definition must be provided for engineering interpretation – functional requirements, models, drawings, tolerances, & material specs.
• Manufacturing data (10 points): Thorough definition here should result in repeatable reproduction – print file definition & settings, process controls, & procedures

Qualification Strategy (50%): We want to identify novel approaches and advanced tools to positively impact time, cost, & risk reduction in the qualification of new materials, processes, and components within the Air Force. Each of these will be assessed:
• Novel methodologies (10 points): Revamping the existing Air Force qualification process to cut through the red tape without loss of quality will be rewarded.
• Innovative digital tools (10 points): Identification of promising new digital tools should be rewarded if backed with data. Think digital twin, in process monitoring, or even using existing digital CAD tools in new ways.
• Component / Design Qualification (10 points): A thorough evaluation of design criteria should offer a plan to reduce time and risk with the qualification of the new design.
• Material Qualification (10 points): Substituting a new AM polymer material for a well-defined legacy polymer material requires an efficient plan to characterize and control properties.
• Process Qualification (10 points): A new AM process requires a thorough qualification plan to control quality and repeatability through consistent set-up, run, and process control. Novel approaches to qualification should reduce both time and risk of new process introduction.

Judges' Discretion (10%): This allows for additional scoring discretion to reward teams for attention to detail, quality of deliverables, and/or significant positive impacts not fully captured by other scoring criteria.

The remaining 20% of the Total Combined Score is the Technical Score based on Design Evaluation, calculated by the RSO AMO Team using a pre-determined scoring method assessing performance of printed parts.

Entries that do not contain all required entry information, contain restricted content, or are considered inappropriate for any reason are not eligible. The Entry with the highest score from the Judges will be deemed the potential Grand Prize winner. In the event of a tie, the judges will select the Entry with the
higher score from the Judges’ Discretion judging criteria. Sponsor reserves the right not to award all prizes or to choose fewer than 3 (three) if, in its sole discretion, it does not receive a sufficient number of eligible and qualified Entries. Prize awards are subject to verification of eligibility and compliance with these Official Rules.

5. **WINNER NOTIFICATION:** Winners will be announced at the conclusion of the AM Olympics event. All winners will be announced no later than October 23, 2020. Winners will receive their prizes within 4 (four) to 6 (six) weeks after winner announcement. Prizes will be awarded only upon winner confirmation, verification, and final approval by Sponsor. Potential winner becomes the “Winner” only after verification of eligibility by Sponsor. Failure to fully comply with these Official Rules will result in a forfeiture and an alternate Winner will be selected.

6. **PRIZES/PRIZE RESTRICTIONS:** Three (3) Promotion Prizes will be awarded, consisting of the following*:

- **1st PLACE PRIZE (1):**
  - $100,000 check

- **2nd PLACE PRICE (1):**
  - $50,000 check

- **3rd PLACE PRIZE (1):**
  - $40,000 check

* A Government employee or team competing on his/her/their own time and with his/her/their own equipment is eligible for the cash prize. A Government employee or team competing on work hours and/or with Government owned equipment is ineligible for the cash prize. In lieu of the cash prize, the winning Government unit would work with the Sponsor to receive specialty equipment of equal value to the cash prize amount. All government or military employees participating in challenges outside of their official capacity must provide a letter from their supervisor authorizing participation outside of their normal duties. If a government employee or member of the military is approved to work outside of their official capacity, they must receive their prize directly from Wright Brothers Institute. Team captains will be contacted if their team qualifies for a prize. Team captains will determine prize amounts to be dispersed to team or individual team members.

**CHALLENGE 2: BOX OF PARTS FLOOR EXERCISE**

The goal of this Challenge is to demonstrate 3D scanning and modeling technology. With the rise of handheld scanning, the end goal is to identify automated or hands-free scanning for rapid and accurate reverse engineering capabilities.

1. **ELIGIBILITY:** The Promotion is open only to legal residents of the fifty (50) United States (excluding Puerto Rico) and the District of Columbia and Canada (excluding Quebec), who are eighteen (18) (except Alabama and Nebraska 19 and 21 in Mississippi) years of age or older at the time of Challenge registration. Qualifying participating teams have been pre-selected by the Sponsor. Participation requires applicable experience in the knowledge area being tested, specifically experience with scanners and experience with CAD and scanning and modeling software. Employees, officers and directors of the University of Dayton Research Institute (the “Sponsor”), and any of its subsidiaries and affiliates, Wright Brothers Institute, The Outcast Agency, and Realtime Media LLC, their respective parent companies, affiliates, subsidiaries, advertising, and fulfillment and marketing agencies, (collectively, “Promotion Parties”) their immediate families (parent, child, sibling & spouse and their respective spouses, regardless of where they reside) and persons living in the same households as such individuals (whether related or not) are not eligible to participate in the Promotion. By participating in the Promotion, you release, discharge and hold harmless Promotion Parties, their respective parents, affiliates, subsidiaries, retailers, advertising and promotion agencies and the respective officers,
directors, employees and agents of each of the foregoing, from any and all damages whether direct or indirect, which may be due to or arise out of participation in the Promotion or any portion thereof, or the acceptance, use/misuse or possession of any prize. By participating, you agree to these Official Rules and to the decisions of the judges and Sponsor, which are final and binding in all respects. Void where prohibited by law, rule or regulation. All federal, state and local laws and regulations apply.

2. TIMING: The Challenge will consist of three (3) phases, as detailed below:

- **Challenge Entry Period:** Begins at or about 9:00:00 AM ET on August 7, 2020 and ends at 11:59:59 PM ET on August 31, 2020
  - August 7, 2020: Box of Parts virtual kick-off meeting*
  - August 17, 2020 - August 19, 2020: Teams work through Challenge requirements
  - August 20, 2020: Teams submit completed solid models by 23:59 PST for review
  - August 21, 2020: Teams submit video PowerPoint presentations and pdf to designated file storage

- **Judging Period:** Begins at or about 9:00:00 AM ET on August 24, 2020 and ends at 11:59:59 PM September 18, 2020
  - August 24, 2020 – August 28, 2020: Solid models and presentations under review
  - August 28, 2020: Teams submit written report
  - August 31, 2020: Teams return ship the box of parts
  - September 18, 2020: Judges will finalize results

- **Winner Notification:** All winners will be notified at the AMO Virtual Event held between October 20, 2020 and October 23, 2020

3. HOW TO PARTICIPATE: An identical box of various parts will be shipped to each team. The team will choose parts for scanning and modeling. Each team will have three (3) days to work on the Challenge. Since this a virtual event, teams will be asked to periodically record their computer screen and meetings for each part, as well as the "unboxing" of parts upon receipt. This footage will be used for the final production of the virtual event. Teams can scan and work on parts in whichever way they see fit. More than one (1) part can be worked at a time based on the team’s capacity. Once parts are completed, they can be submitted to the online drive. Judging will take place as parts are submitted for review. Once judging is complete, teams will be brought back to interview their designs and any lessons learned. In addition to the interview, all teams are required to submit a final report explaining the following: scanners used, software used, lessons learned, pictures of parts, model, and setups, and anything else necessary to complete the job. To achieve maximum points per part, contestants must come under an average tolerance of 0.006in showing that they can accurately reverse engineer the given box of parts. A team that models every part with poor accuracy will lose points and this approach will not result in successful Challenge completion. These parts will range in size and complexity. The more parts that are successfully completed will result in more points awarded. After entrant submission is approved by the Sponsor, based on compliance with these Official Rules and all entry requirements, you will receive one (1) entry into the Challenge (“Challenge Entry”). **Limit of one (1) Box of Parts Floor Exercise Challenge Entry per team, throughout the Challenge Entry Period.**

EQUIPMENT & MATERIALS:

- Teams will be provided with a box of parts; each box will be identical so that no team has an advantage.
- Each team will scan these parts using their own scanners and reverse engineering capabilities.
By submitting an Entry, you represent and warrant that the work submitted is original to you and that neither it nor its contents infringes upon or violates the rights of any third party. You also acknowledge and agree that Sponsor may receive other Entries under this Promotion that may be similar or identical to the Entry submitted by you, and you waive any and all claims you may have had, may have, and/or may have in the future, that any other Entry reviewed and/or used by Sponsor may be similar to your Entry and you understand that you will not be entitled to any compensation because of Sponsor’s use of such other similar or identical material. Entrants are free to use audio as long as they hold the appropriate license for their use as well as Sponsor’s use during the Promotion. Any entries that use music that violates copyrights will be disqualified.

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- Is sexually explicit; unnecessarily violent or derogatory of any ethnic, racial, gender, religious, professional or age group; profane or pornographic; contains nudity;
- Promotes alcohol, illegal drugs, tobacco, firearms/weapons (or the use of any of the foregoing); promotes any activities that may appear unsafe or dangerous; promotes any particular political agenda or message;
- Is obscene or offensive; endorses any form of hate or hate group;
- Appears to duplicate any other submitted challenge entries;
- Defames, misrepresents or contains disparaging remarks about other people or companies;
- Contains trademarks, logos, or trade dress (such as distinctive packaging or building exteriors/interiors) owned by others, without permission;
- Contains any personal identification, such as license plate numbers, personal names, e-mail addresses or street addresses;
- Contains copyrighted materials owned by others (including photographs, sculptures, paintings, and other works of art or images published on or in websites, television, movies or other media), without permission;
- Contains any individual other than the you and/or any materials embodying the names, likenesses (including makeup), voices, or other indicia identifying any person, including, without limitation, celebrities and/or other public or private figures, living or dead, without providing legal releases for such use in a form satisfactory to Sponsor;
- Contains look-alikes of celebrities or other public or private figures, living or dead;
- Has been previously published or won previous awards
- Communicates messages or images inconsistent with the positive images and/or good will to which Sponsor wishes to associate; and/or
- Violates any law.

4. JUDGING: Begins at or about 9:00:00 AM ET on August 24, 2020 and ends at 11:59:59 PM September 18, 2020. The judging panel, selected by the Sponsor, will score each Entry up to the maximum amount of points allowed. Judging will be based on the following criteria:

Innovation (20%): The AF wants to accelerate the amount of time it takes to reverse engineer parts. Look for innovative technologies that are fast, automated, hands-free, etc.

Technical Knowledge (20%): Rapid deployment of innovative solutions depends on the developers' knowledge of technology and AF applications. Evaluate how well the participants know the technologies and can explain what they are delivering and how it will benefit the Air Force.

Ease of Use (10%): The tools we provide our airmen must be beneficial and easy to use. Be wary of technology that is complex or requires specialized certification to operate. Look for technologies that can be picked up and used immediately.

The remaining 50% of the Total Combined Score is the Technical Score, calculated by the RSO AMO Team using a pre-determined scoring method based on Accuracy and Timing, worth 30% and 20% of the Total Combined Score, respectively. Accuracy will be based on measured
comparison of submitted models to high-definition scans of the distributed parts. Timing will be based on the participants’ self-recorded duration to create new parts.

Entries that do not contain all required entry information, contain restricted content, or are considered inappropriate for any reason are not eligible. The Entry with the highest score from the Judges will be deemed the potential Grand Prize winner. In the event of a tie, the judges will select the winning Entry using their discretion. Sponsor reserves the right not to award all prizes or to choose fewer than 3 (three) if, in its sole discretion, it does not receive a sufficient number of eligible and qualified Entries. Prize awards are subject to verification of eligibility and compliance with these Official Rules.

5. WINNER NOTIFICATION: Winners will be announced at the conclusion of the AM Olympics event. All winners will be announced no later than October 23, 2020. Winners will receive their prizes within 4 (four) to 6 (six) weeks after winner announcement. Prizes will be awarded only upon winner confirmation, verification, and final approval by Sponsor. Potential winner becomes the “Winner” only after verification of eligibility by Sponsor. Failure to fully comply with these Official Rules will result in a forfeiture and an alternate Winner will be selected.

6. PRIZES/PRIZE RESTRICTIONS: Three (3) Promotion Prizes will be awarded, consisting of the following*:

- 1st PLACE PRIZE (1):
  - $100,000 check
- 2nd PLACE PRICE (1):
  - $50,000 check
- 3rd PLACE PRIZE (1):
  - $40,000 check

*A Government employee or team competing on his/her/their own time and with his/her/their own equipment is eligible for the cash prize. A Government employee or team competing on work hours and/or with Government owned equipment is ineligible for the cash prize. In lieu of the cash prize, the winning Government unit would work with the Sponsor to receive specialty equipment of equal value to the cash prize amount. All government or military employees participating in challenges outside of their official capacity must provide a letter from their supervisor authorizing participation outside of their normal duties. If a government employee or member of the military is approved to work outside of their official capacity, they must receive their prize directly from Wright Brothers Institute. Team captains will be contacted if their team qualifies for a prize. Team captains will determine prize amounts to be dispersed to team or individual team members.

CHALLENGE 3: MATERIAL HURDLES

The goal of this technical Challenge is to identify and demonstrate new aluminum materials that will further the AM industry. The Material Hurdles Technical Challenge is designed to demonstrate material properties and provide potential solutions for the USAF.

1. ELIGIBILITY: The Promotion is open only to legal residents of the fifty (50) United States (excluding Puerto Rico) and the District of Columbia and Canada (excluding Quebec), who are eighteen (18) (except Alabama and Nebraska 19 and 21 in Mississippi) years of age or older at the time of Challenge registration. Qualifying participating teams have been pre-selected by the Sponsor. Selected teams must be willing to produce the required specimens in a timely manner in order to participate. Employees, officers and directors of the University of Dayton Research Institute (the “Sponsor”), and any of its subsidiaries and affiliates, Wright Brothers Institute, The Outcast Agency, and Realtime Media LLC, their respective parent companies, affiliates, subsidiaries, advertising, and fulfillment and
marketing agencies, (collectively, “Promotion Parties”) their immediate families (parent, child, sibling & spouse and their respective spouses, regardless of where they reside) and persons living in the same households as such individuals (whether related or not) are not eligible to participate in the Promotion. By participating in the Promotion, you release, discharge and hold harmless Promotion Parties, their respective parents, affiliates, subsidiaries, retailers, advertising and promotion agencies and the respective officers, directors, employees and agents of each of the foregoing, from any and all damages whether direct or indirect, which may be due to or arise out of participation in the Promotion or any portion thereof, or the acceptance, use/misuse or possession of any prize. By participating, you agree to these Official Rules and to the decisions of the judges and Sponsor, which are final and binding in all respects. Void where prohibited by law, rule or regulation. All federal, state and local laws and regulations apply.

2. **TIMING:** The Challenge will consist of three (3) phases, as detailed below:

- **Challenge Entry Period:** Begins at or about 9:00:00 AM ET on July 24, 2020 and ends at 11:59:59 PM ET on August 19, 2020
  - July 31, 2020: Virtual Kick-off meeting with teams*
  - August 19, 2020: Final date for teams to ship tensile blanks, artifacts, and cube. Return shipping must be postmarked 19 August 2020
- **Judging Period:** Begins at or about 9:00:00 AM ET on August 20, 2020 and ends at 11:59:59 PM October 7, 2020
  - October 7, 2020: Judges will analyze results
- **Winner Notification:** All winners will be notified at the AMO Virtual Event held between October 20, 2020 and October 23, 2020

3. **HOW TO PARTICIPATE:** Selected teams will provide hexagonal blanks and artifacts of novel, additively manufactured, high strength aluminum for analysis. All teams must submit a one-page description of the material used, its benefits, the manufacturing method(s) including AM equipment utilized, heat treatment, and any pricing information the team is willing to provide.

**Aluminum tensile specimens:**
Teams will supply a minimum of 10 tensile blanks additively manufactured according to the provided drawing. Tensile blanks will be additively manufactured exclusively from the aluminum alloy of choice, and heat treated as desired. Tensile blanks will be provided in the as-printed surface condition. The blanks will be machined into ASTM E8 tensile specimens and tested.

**Aluminum artifacts:**
Teams will supply a minimum of 3 artifacts additively manufactured according to the provided model. Artifacts will be additively manufactured exclusively from the aluminum alloy of choice, and heat treated as desired. Artifacts will be provided in the as-printed surface condition. The artifacts will be used to evaluate buildability, surface roughness, porosity, and compressive yield strength.

**Aluminum cube:**
Teams will supply one (1) 20 mm cube additively manufactured exclusively from the aluminum alloy of choice, and heat treated as desired. The cube will have the build orientation identified, and provided in the as-printed surface condition. The cube will be used to evaluate microstructure.

After entrant submission is approved by the Sponsor, based on compliance with these Official Rules and all entry requirements, you will receive one (1) entry into the Challenge (“Challenge Entry”). **Limit of one (1) Material Hurdles Challenge Entry per team throughout the Challenge Entry Period.**
EQUIPMENT & MATERIALS:
Each team will provide the following as previously described:

- 10x aluminum tensile blanks
- 3x aluminum artifacts
- 1x aluminum 20 mm cube
- Video(s) describing material, manufacturing methods and benefits to the USAF. Videos will be compiled and edited to create content for the AMO Virtual event.

By submitting an Entry, you represent and warrant that the work submitted is original to you and that neither it nor its contents infringes upon or violates the rights of any third party. You also acknowledge and agree that Sponsor may receive other Entries under this Promotion that may be similar or identical to the Entry submitted by you, and you waive any and all claims you may have had, may have, and/or may have in the future, that any other Entry reviewed and/or used by Sponsor may be similar to your Entry and you understand that you will not be entitled to any compensation because of Sponsor’s use of such other similar or identical material. Entrants are free to use audio as long as they hold the appropriate license for their use as well as Sponsor’s use during the Promotion. Any entries that use music that violates copyrights will be disqualified.

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- Is obscene or offensive; endorses any form of hate or hate group;
- Appears to duplicate any other submitted challenge entries;
- Defames, misrepresents or contains disparaging remarks about other people or companies;
- Contains trademarks, logos, or trade dress (such as distinctive packaging or building exteriors/interiors) owned by others, without permission;
- Contains any personal identification, such as license plate numbers, personal names, e-mail addresses or street addresses;
- Contains copyrighted materials owned by others (including photographs, sculptures, paintings, and other works of art or images published on or in websites, television, movies or other media), without permission;
- Contains any individual other than the you and/or any materials embodying the names, likenesses (including makeup), voices, or other indicia identifying any person, including, without limitation, celebrities and/or other public or private figures, living or dead, without providing legal releases for such use in a form satisfactory to Sponsor;
- Contains look-alikes of celebrities or other public or private figures, living or dead;
- Has been previously published or won previous awards
- Communicates messages or images inconsistent with the positive images and/or good will to which Sponsor wishes to associate; and/or
- Violates any law.

4. JUDGING: Begins at or about 9:00:00 AM ET on August 20, 2020 and ends at 11:59:59 PM October 7, 2020. The judging panel, selected by the Sponsor, will score each Entry up to the maximum amount of points allowed. Judging will be based on the following criteria:

*Novel Solution* - (1 to 10 points) 20% weighting factor: Evaluate the high strength additive aluminum material and/or method of manufacture. A higher score would be awarded to an innovative technology, or novel solution.
Buildability – (1 to 10 points) 20% weighting factor: Evaluate the success of participant builds, especially the AMO Artifact with unsupported overhangs, thin walls, and other features. A higher score would be awarded to builds most like the provided model.

Microstructure & Porosity – (1 to 10 points) 20% weighting factor: Evaluate the microstructure, amount of porosity, and size of any defects of provided specimens. This will include metallographic images and potentially X-ray CT inspection. A higher score would be awarded to specimens having reduced amounts of porosity, and porosity of smaller size.

Technology Readiness Level - (1 to 10 points) 20% weighting factor: Evaluate the high strength additive aluminum technology readiness level. Basic research would score 1, up to a 10 for full system demonstration.

Potential for USAF Applications - (1 to 10 points) 20% weighting factor: Evaluate the potential benefits to the USAF and DOD. Suitability for the production of sustainment components is the priority, but there may be other unique applications.

Entries that do not contain all required entry information, contain restricted content, or are considered inappropriate for any reason are not eligible. The Entry with the highest score from the Judges will be deemed the potential Grand Prize winner. In the event of a tie, the judges will select the winning Entry using their discretion. Sponsor reserves the right not to award all prizes or to choose fewer than 3 (three) if, in its sole discretion, it does not receive a sufficient number of eligible and qualified Entries. Prize awards are subject to verification of eligibility and compliance with these Official Rules.

5. WINNER NOTIFICATION: Winners will be announced at the conclusion of the AM Olympics event. All winners will be announced no later than October 23, 2020. Winners will receive their prizes within 4 (four) to 6 (six) weeks after winner announcement. Prizes will be awarded only upon winner confirmation, verification, and final approval by Sponsor. Potential winner becomes the “Winner” only after verification of eligibility by Sponsor. Failure to fully comply with these Official Rules will result in a forfeiture and an alternate Winner will be selected.

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  - $50,000 check
- **3rd PLACE PRIZE (1):**
  - $40,000 check

* A Government employee or team competing on his/her/their own time and with his/her/their own equipment is eligible for the cash prize. A Government employee or team competing on work hours and/or with Government owned equipment is ineligible for the cash prize. In lieu of the cash prize, the winning Government unit would work with the Sponsor to receive specialty equipment of equal value to the cash prize amount. All government or military employees participating in challenges outside of their official capacity must provide a letter from their supervisor authorizing participation outside of their normal duties. If a government employee or member of the military is approved to work outside of their official capacity, they must receive their prize directly from Wright Brothers Institute. Team captains will be contacted if their team qualifies for a prize. Team captains will determine prize amounts to be dispersed to team or individual team members.

**CHALLENGE 4: SUPPLY CHAIN CHALLENGE**
Teams are given a wartime scenario and logistics Challenge problems to solve that will require the use of novel advanced manufacturing concepts coupled with innovative Supply Chain Management (SCM) approaches to recommend basing strategies (e.g., manufacturing locations, types of equipment, distribution network and response times).

1. **ELIGIBILITY:** The Promotion is open only to legal residents of the fifty (50) United States (excluding Puerto Rico) and the District of Columbia, who are eighteen (18) (except Alabama and Nebraska 19 and 21 in Mississippi) years of age or older at the time of Challenge registration. Qualifying participating teams have been pre-selected by the Sponsor. Employees, officers and directors of the University of Dayton Research Institute (the “Sponsor”), and any of its subsidiaries and affiliates, Wright Brothers Institute, The Outcast Agency, and Realtime Media LLC, their respective parent companies, affiliates, subsidiaries, advertising, and fulfillment and marketing agencies, (collectively, “Promotion Parties”) their immediate families (parent, child, sibling & spouse and their respective spouses, regardless of where they reside) and persons living in the same households as such individuals (whether related or not) are not eligible to participate in the Promotion. By participating in the Promotion, you release, discharge and hold harmless Promotion Parties, their respective parents, affiliates, subsidiaries, retailers, advertising and promotion agencies and the respective officers, directors, employees and agents of each of the foregoing, from any and all damages whether direct or indirect, which may be due to or arise out of participation in the Promotion or any portion thereof, or the acceptance, use/misuse or possession of any prize. By participating, you agree to these Official Rules and to the decisions of the judges and Sponsor, which are final and binding in all respects. Void where prohibited by law, rule or regulation. All federal, state and local laws and regulations apply.

2. **TIMING:** The Challenge will consist of six (6) phases, as detailed below:

   - **Challenge Entry Period (Round 1):** Begins at or about 9:00:00 AM ET on August 4, 2020 and ends at 11:59:59 PM ET on August 12, 2020
     - August 4, 2020: Virtual kick-off meeting for qualification/ submission package provided
     - August 5, 2020 – August 12, 2020: Teams develop strategies and must post both a written strategy (Microsoft PowerPoint) and video presentation by the deadline on August 12, 2020 11:59:59 PM ET to designated drop box.

   - **Judging Period (Round 1):** Begins at or about 9:00:00 AM ET on August 13, 2020 and ends at 11:59:59 PM August 19, 2020

   - **Finalist Announcement:** Two finalists will be notified and announced on or about August 21, 2020 to advance to the Wargame simulation round. All team strategies will be posted on site for viewing.

   - **Challenge Wargame Simulation Period (Round 2):** Begins at or about 9:00:00 AM ET on September 1, 2020 and ends at 11:59:59 PM ET on September 15, 2020
     - Finalists team strategies loaded into Wargame software

   - **Judging Period (Round 2):** Begins at or about 9:00:00 AM ET on September 16, 2020 and ends at 11:59:59 PM September 18, 2020

   - **Winner Notification:** All winners will be notified at the AMO Virtual Event held between October 20, 2020 and October 23, 2020

3. **HOW TO PARTICIPATE:** Teams are given a wartime scenario and logistics Challenge problems to solve that will require the use of novel advanced manufacturing concepts coupled with innovative Supply Chain Management (SCM) approaches to recommend basing strategies (e.g., manufacturing locations, types of equipment, distribution network and response times). Registered teams will compete in a qualifying round and two (2) teams that are selected as
finalists will compete head-to-head in a Wargame simulation and play against the scripted scenario. Teams in the qualifying round will be provided background information on basic Air Force deployment concepts and definition of unique terms. Teams will be given an opportunity to ask clarifying questions that pertain to the general deployment concept of operations in the background information during the kickoff meeting. During the kick-off meeting, teams will be provided a scenario and Challenge requirements and be given 6 working days to propose advanced manufacturing basing strategies. A template will be provided for team responses and distributed the day following the kick-off meeting. The qualifying round will be judged by a predetermined team. Two (2) teams will advance to the final round and have their strategies executed within the Wargame software. Strategies will be executed against pre-determined challenges faced at deployed location. All team strategies will be posted for viewing on the web site following the announcement of the two (2) finalists. Finalists that advance must be available to answer questions to assist programmers to load the team strategy into the Wargame software. Teams will not be able to make changes from the strategy submitted during the qualifying round nor will teams see the game executed until after the final judging. The Wargame will be executed, and judges will review the outcome and select an overall winner. A video will be produced to capture the Challenge competition of the finalists and will be presented during the finale event for all spectators. Teams will not know the outcome until the winner is announced at the finale event.

After entrant submission is approved by the Sponsor, based on compliance with these Official Rules and all entry requirements, you will receive one (1) entry into the Challenge (“Challenge Entry”). Limit of one (1) Supply Chain Challenge Entry per team throughout each Challenge Entry Period.

QUALIFICATIONS FOR CHALLENGE TEAMS:
- Team size is not limited.
- All registered teams must have at least one member attend the kick-off event in August. Useful functional skills for this Challenge may include a combination of knowledge related to: aerospace engineering, advanced manufacturing, materials science, supply chain management, industrial and retail maintenance, security, civil engineering, robotics, sustaining engineering, purchasing, logistics, sustainment and advanced systems technology.

EQUIPMENT & MATERIALS:
- Teams must have valid email addresses.
- Computers with Microsoft PowerPoint
- Computers capable of connecting to the virtual platform and allows active engagement (video and audio).
- Teams must be capable of recording and producing videos.

By submitting an Entry, you represent and warrant that the work submitted is original to you and that neither it nor its contents infringes upon or violates the rights of any third party. You also acknowledge and agree that Sponsor may receive other Entries under this Promotion that may be similar or identical to the Entry submitted by you, and you waive any and all claims you may have had, may have, and/or may have in the future, that any other Entry reviewed and/or used by Sponsor may be similar to your Entry and you understand that you will not be entitled to any compensation because of Sponsor’s use of such other similar or identical material. Entrants are free to use audio as long as they hold the appropriate license for their use as well as Sponsor’s use during the Promotion. Any entries that use music that violates copyrights will be disqualified.

RESTRICITONS ON CHALLENGE ENTRIES: Entries may not contain, as determined by the Sponsor, in its sole discretion, any content that:
• Is sexually explicit; unnecessarily violent or derogatory of any ethnic, racial, gender, religious, professional or age group; profane or pornographic; contains nudity;
• Promotes alcohol, illegal drugs, tobacco, firearms/weapons (or the use of any of the foregoing); promotes any activities that may appear unsafe or dangerous; promotes any particular political agenda or message;
• Is obscene or offensive; endorses any form of hate or hate group;
• Appears to duplicate any other submitted challenge entries;
• Defames, misrepresents or contains disparaging remarks about other people or companies;
• Contains trademarks, logos, or trade dress (such as distinctive packaging or building exteriors/interiors) owned by others, without permission;
• Contains any personal identification, such as license plate numbers, personal names, e-mail addresses or street addresses;
• Contains copyrighted materials owned by others (including photographs, sculptures, paintings, and other works of art or images published on or in websites, television, movies or other media), without permission;
• Contains any individual other than the you and/or any materials embodying the names, likenesses (including makeup), voices, or other indicia identifying any person, including, without limitation, celebrities and/or other public or private figures, living or dead, without providing legal releases for such use in a form satisfactory to Sponsor;
• Contains look-alikes of celebrities or other public or private figures, living or dead;
• Has been previously published or won previous awards
• Communicates messages or images inconsistent with the positive images and/or good will to which Sponsor wishes to associate; and/or
• Violates any law.

4. JUDGING:
Round 1 (finalist) judging begins at or about 9:00:00 AM ET on August 13, 2020 and ends at 11:59:59 PM August 19, 2020. The judging panel, selected by the Sponsor, will score each Entry up to the maximum amount of points allowed. Judging will be based on the following criteria:

**Efficiency (35%)**: The Air Force requires different supply chain approaches to address unique missions. We want to assess the advanced manufacturing strategies in terms of capability to support global responsiveness, accountability, traceability, digital thread, resources, and resistance to attack. Definitions will be provided to assist with scoring.

**Innovation (30%)**: Evaluate how well the teams demonstrated the application of advanced technology or methodology to meet warfighter demand and how it will benefit the Air Force supply chain now and into the future.

**Quality and Risk (20%)**: The Air Force supply chain supports a diverse customer base and must adopt logistical support solutions that produce quality parts, on-time and can be delivered to the point of need. Look for elements that describe measures for managing data integrity, counterfeit part mitigation and address the different kinds of risk factors associated with supporting logistical worldwide military operations.

**Cost Benefit (10%)**: The supply chain seeks solutions that offer benefits (tangible or in tangible) for reduced costs and/or increased readiness levels for Air Force warfighters. We are looking to assess the estimated value and associated benefits of proposed strategies relative to costs such as, tools, systems, resources, security, readiness, and the logistics footprint.

**Judges’ discretion (5%)**: The remaining 5% of the score is judge’s discretion.

The top two qualification winners will go on to compete in the Wargame competition which will determine the overall marathon winner. The Wargame judging will be done via 30 minute teleconference, beginning at or about 9:00:00 AM ET on September 16, 2020 and ending
The scoring will include calculated game elements such as, number of right parts produced, on-time delivery and missed sorties etc. and includes five points for judges’ discretion. Judges will receive the game tallies, review the challenge video and individually validate/score to determine overall winners. Any questions on the video calculated scores is addressed during the panel meeting. The Gold, Silver and Bronze medalists will be announced at the award ceremony.

Entries that do not contain all required entry information, contain restricted content, or are considered inappropriate for any reason are not eligible. The Entry with the highest score from the Judges will be deemed the potential Grand Prize winner. In the event of a tie, the judges will select the Entry with the higher score from the Judges’ Discretion judging criteria. Sponsor reserves the right not to award all prizes or to choose fewer than 3 (three) if, in its sole discretion, it does not receive a sufficient number of eligible and qualified Entries. Prize awards are subject to verification of eligibility and compliance with these Official Rules.

5. WINNER NOTIFICATION: Winners will be announced at the conclusion of the AM Olympics event. All winners will be announced no later than October 23, 2020. Winners will receive their prizes within 4 (four) to 6 (six) weeks after winner announcement. Prizes will be awarded only upon winner confirmation, verification, and final approval by Sponsor. Potential winner becomes the "Winner" only after verification of eligibility by Sponsor. Failure to fully comply with these Official Rules will result in a forfeiture and an alternate Winner will be selected.

6. PRIZES/PRIZE RESTRICTIONS: Three (3) Promotion Prizes will be awarded, consisting of the following*:

- **1st PLACE PRIZE (1)**:
  - $100,000 check
- **2nd PLACE PRICE (1)**:
  - $50,000 check
- **3rd PLACE PRIZE (1)**:
  - $40,000 check

*A Government employee or team competing on his/her/their own time and with his/her/their own equipment is eligible for the cash prize. A Government employee or team competing on work hours and/or with Government owned equipment is ineligible for the cash prize. In lieu of the cash prize, the winning Government unit would work with the Sponsor to receive specialty equipment of equal value to the cash prize amount. All government or military employees participating in challenges outside of their official capacity must provide a letter from their supervisor authorizing participation outside of their normal duties. If a government employee or member of the military is approved to work outside of their official capacity, they must receive their prize directly from Wright Brothers Institute. Team captains will be contacted if their team qualifies for a prize. Team captains will determine prize amounts to be dispersed to team or individual team members.

**CHALLENGE 5: TDP RELAY**

The goal of this Challenge is for participants to accurately recreate a 3D printed part from an existing Technical Data Package on a different machine, or the same machine, using different techniques, all while demonstrating accuracy, skill, and completeness.

1. **ELIGIBILITY**: The Promotion is open only to legal residents of the fifty (50) United States (excluding Puerto Rico) and the District of Columbia, who are eighteen (18) (except Alabama and Nebraska 19 and 21 in Mississippi) years of age or older at the time of Challenge registration. Qualifying participating
teams have been pre-selected by the Sponsor. Teams are to provide or have access to a 3D printing technology to compete in this event. Employees, officers and directors of the University of Dayton Research Institute (the “Sponsor”), and any of its subsidiaries and affiliates, Wright Brothers Institute, The Outcast Agency, and Realtime Media LLC, their respective parent companies, affiliates, subsidiaries, advertising, and fulfillment and marketing agencies, (collectively, “Promotion Parties”) their immediate families (parent, child, sibling & spouse and their respective spouses, regardless of where they reside) and persons living in the same households as such individuals (whether related or not) are not eligible to participate in the Promotion. By participating in the Promotion, you release, discharge and hold harmless Promotion Parties, their respective parents, affiliates, subsidiaries, retailers, advertising and promotion agencies and the respective officers, directors, employees and agents of each of the foregoing, from any and all damages whether direct or indirect, which may be due to or arise out of participation in the Promotion or any portion thereof, or the acceptance, use/misuse or possession of any prize. By participating, you agree to these Official Rules and to the decisions of the judges and Sponsor, which are final and binding in all respects. Void where prohibited by law, rule or regulation. All federal, state and local laws and regulations apply.

2. TIMING: The Challenge will consist of three (3) phases, as detailed below:

- **Challenge Entry Period**: Begins at or about 9:00:00 AM ET on August 17, 2020 and ends at 11:59:59 PM ET on September 18, 2020
  - August 17, 2020: TDP Relay virtual kick-off meeting
  - August 31, 2020 – September 15, 2020: Teams work through Challenge requirements
  - September 16, 2020: Teams submit technical data package (TDP), printed part, and report NLT 16 Sep 2020 at 23:59 PST

- **Judging Period**: Begins at or about 9:00:00 AM ET on September 21, 2020 and ends at 11:59:59 PM October 2, 2020
  - September 21, 2020 – September 25, 2020: Printed parts tested
  - September 28, 2020 – October 2, 2020: Judges will finalize results, teams will participate in zoom meeting with judges to review report

- **Winner Notification**: All winners will be notified at the AMO Virtual Event held between October 20, 2020 and October 23, 2020

3. **HOW TO PARTICIPATE**: All teams will be provided with the same TDP, including a write-up describing the function of the part, images of the part, and a 3D CAD model for the teams to slice and prepare for printing. Teams will have two weeks to recreate the part and the TDP. The presentation of the TDP will be recorded and uploaded to the website. In the presentation, please include information about the benefits of the chosen printer and selected printing parameters. The finished part will be sent to ATTC-Dayton for testing. All testing will be recorded prior to the event. A panel of judges will evaluate all of the submitted TDP write-ups, presentation videos and videos of each part being tested. The judges will then determine the 1st, 2nd, and 3rd place winners of the challenge.

After entrant submission is approved by the Sponsor, based on compliance with these Official Rules and all entry requirements, you will receive one (1) entry into the Challenge (“Challenge Entry”). Limit of one (1) TDP Relay Challenge Entry per team throughout the Challenge Entry Period.

**QUALIFICATIONS FOR CHALLENGE TEAMS:**
- Teams will be selected based on level of experience and the proposed benefits of their technology demonstrated in their application and audition video.
- All 8 teams shall develop a 5 – 15 minute presentation detailing their effort and results. Teams shall submit a video recorded preview of their final presentations
EQUIPMENT & MATERIALS:
The team will need the following items for the competition:

- Access to polymer additive manufacturing equipment
- Ability to interpret and replicate a Technical Data Package
- Presentation software (ex: PowerPoint)
- Video recording capability

By submitting an Entry, you represent and warrant that the work submitted is original to you and that neither it nor its contents infringes upon or violates the rights of any third party. You also acknowledge and agree that Sponsor may receive other Entries under this Promotion that may be similar or identical to the Entry submitted by you, and you waive any and all claims you may have had, may have, and/or may have in the future, that any other Entry reviewed and/or used by Sponsor may be similar to your Entry and you understand that you will not be entitled to any compensation because of Sponsor’s use of such other similar or identical material. Entrants are free to use audio as long as they hold the appropriate license for their use as well as Sponsor’s use during the Promotion. Any entries that use music that violates copyrights will be disqualified.

RESTRICTIONS ON CHALLENGE ENTRIES: Entries may not contain, as determined by the Sponsor, in its sole discretion, any content that:

- Is sexually explicit; unnecessarily violent or derogatory of any ethnic, racial, gender, religious, professional or age group; profane or pornographic; contains nudity;
- Promotes alcohol, illegal drugs, tobacco, firearms/weapons (or the use of any of the foregoing); promotes any activities that may appear unsafe or dangerous; promotes any particular political agenda or message;
- Is obscene or offensive; endorses any form of hate or hate group;
- Appears to duplicate any other submitted challenge entries;
- Defames, misrepresents or contains disparaging remarks about other people or companies;
- Contains trademarks, logos, or trade dress (such as distinctive packaging or building exteriors/interiors) owned by others, without permission;
- Contains any personal identification, such as license plate numbers, personal names, e-mail addresses or street addresses;
- Contains copyrighted materials owned by others (including photographs, sculptures, paintings, and other works of art or images published on or in websites, television, movies or other media), without permission;
- Contains any individual other than the you and/or any materials embodying the names, likenesses (including makeup), voices, or other indicia identifying any person, including, without limitation, celebrities and/or other public or private figures, living or dead, without providing legal releases for such use in a form satisfactory to Sponsor;
- Contains look-alikes of celebrities or other public or private figures, living or dead;
- Has been previously published or won previous awards
- Communicates messages or images inconsistent with the positive images and/or good will to which Sponsor wishes to associate; and/or
- Violates any law.

4. JUDGING: Begins at or about 9:00:00 AM ET on September 21, 2020 and ends at 11:59:59 PM October 2, 2020. The judging panel, selected by the Sponsor, will score each Entry up to the maximum amount of points allowed. Judges will evaluate the teams based on their presentations, knowledge of their selected technology and ability to apply it to the part. They will also take the performance of the part into consideration as they watch the test videos. Judging will be based on the following criteria:

The testing of the part will consist of the following, in this order:

1. Dimensional and visual inspection
2. Pressurizing (up to 10.0 psi)
3. Hanging weight (200+ lb.) Weight will continue to be added to the parts until failure.
The Challenge team in its entirety will be judged on the following criteria:

**Technical Knowledge (35%)**: Showcase knowledge and familiarity with the hardware and software chosen to create the part.

**Innovation (35%)**: Use of techniques and features of the technology chosen to create the part, highlighting any unique approaches or out-of-the-box thinking to achieve the best results.

**Design Approach (30%)**: Interpretation of the Technical Data Package with a focus on the critical parts of the design. The RSO AMO team will score the dimensional, pressure/leakage and weight hanging tests. These scores will be provided to the judges at the time of the judging event.

The RSO AMO Team will combine the scores to calculate the Total Combined Scores. These scores will be reviewed a final time by the judging panel, who will then select the Gold, Silver and Bronze medalists.

Entries that do not contain all required entry information, contain restricted content, or are considered inappropriate for any reason are not eligible. The Entry with the highest score from the Judges will be deemed the potential Grand Prize winner. In the event of a tie, the judges will select the winning Entry using their discretion. If a tie still exists after the initial tie breaker, an additional “tie-breaking” judge will be brought in to evaluate the tied entries, based on the Judging Criteria above. Sponsor reserves the right not to award all prizes or to choose fewer than 3 (three) if, in its sole discretion, it does not receive a sufficient number of eligible and qualified Entries. Prize awards are subject to verification of eligibility and compliance with these Official Rules.

5. **WINNER NOTIFICATION**: Winners will be announced at the conclusion of the AM Olympics event. All winners will be announced no later than October 23, 2020. Winners will receive their prizes within 4 (four) to 6 (six) weeks after winner announcement. Prizes will be awarded only upon winner confirmation, verification, and final approval by Sponsor. Potential winner becomes the “Winner” only after verification of eligibility by Sponsor. Failure to fully comply with these Official Rules will result in a forfeiture and an alternate Winner will be selected.

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1. **OWNERSHIP OF ENTRIES:** By submitting an Entry, you grant Sponsor a license to use the Entry, in whole or in part, in any manner necessary in order to conduct and promote the Challenge and the AMO Virtual Event as well as any related uses. You will retain all remaining intellectual property rights in the Entry itself as well as any conceptual ideas contained therein. You also consent for your Entry to be posted on https://www.afrso.com/advanced-manufacturing-olympics or other websites and social media platforms. Furthermore, you consent to the use, by Sponsor, its affiliates, subsidiaries, parents, and licensees, of your name, likeness, and image, in connection with the AMO Virtual Event and any related marketing activities, in any media or format now known or hereafter invented, in any and all locations, without any payment to or further approval from you. You agree that this license and this consent is perpetual and cannot be revoked. For uses beyond the consent that you grant above, you agree that Sponsor’s use of your personal data will be governed by the Privacy Policy posted on the Sponsor website. You also agree that Promotion Parties are not responsible for any unauthorized use of any Entry by third parties. Promotion Parties do not guarantee the posting of any Entry. Finally, you agree that you will not use the Entry for any other purpose, including, without limitation, posting the Entry to any online social networks (other than for entry into this Promotion), without the express consent of Sponsor in each instance.

2. **GENERAL PRIZE CONDITIONS:** Prize will only be awarded by Sponsor upon potential winners’ verification of eligibility and final approval by Sponsor. No prize substitution, cash equivalent of prizes, transfer or assignment of prizes is permitted, except by Sponsor which reserves the right to substitute a prize with one (1) of comparable or greater value, in its sole discretion. If any winner is at least 18 but still considered a minor in his/her jurisdiction of residence, prize will be awarded in the name of his/her parent or legal guardian who will be responsible for fulfilling all requirements imposed on winners set forth herein.

3. **MISCELLANEOUS:** Promotion Parties are not responsible for late, lost, incomplete, corrupted, stolen, garbled, damaged, delayed, undelivered or misdirected Entries, all of which are void. Online Entries will be considered to be entered by the authorized account holder of the e-mail address submitted at time of entry and he/she must comply with these Official Rules. The authorized account holder is deemed as the natural person who is assigned to an e-mail address by an Internet access provider, online service provider or other organization that is responsible for assigning e-mail addresses for the domain associated with the submitted e-mail address. By entering the Promotion, you recognize and agree that the registration information provided by you will be made available to Sponsor; use of such information will be governed by Sponsor’s privacy policy found at https://udayton.edu/terms/index.php. Upon entering the Promotion, winners grant Sponsor the right to print, publish, broadcast, and use world-wide in any media now known or later developed, the winner's name, portrait, picture, voice, likeness, city and state of residence, and biographical information for any purpose, including but not limited to, in advertisements, publicity, and other communications, worldwide, in perpetuity, without additional compensation, notification or permission, except where prohibited by law. You agree to comply with these Official Rules and the decisions of the Sponsor and judges shall be binding and final.

4. **RELEASE:** As a condition of entering the Promotion, you agree that (1) under no circumstances will you be permitted to obtain awards for, and you hereby waives all rights to claim punitive, incidental, consequential or any other damages, and any claims, judgments or awards shall be limited to actual out-of-pocket expenses; (2) all causes of action arising out of or connected with this Promotion, or any prizes awarded, shall be resolved individually, without resort to any form class action; and (3) in no event will you be entitled to receive attorneys’ fees. BY ENTERING THE PROMOTION, YOU AGREE TO RELEASE, DISCHARGE AND HOLD HARMLESS PROMOTION PARTIES AND THE RESPECTIVE OFFICERS, DIRECTORS, AND AGENTS OF EACH, FROM
ANY AND ALL LIABILITY FOR ANY INJURY, LOSS, OR DAMAGE OF ANY KIND TO PERSONS, INCLUDING DEATH, AND PROPERTY, WHETHER DIRECT OR INDIRECT, WHICH MAY BE DUE TO OR ARISE OUT OF PARTICIPATION IN THE PROMOTION OR ANY PORTION THEREOF, OR THE ACCEPTANCE, USE/MISUSE OR POSSESSION OF PRIZES, OR ANY PRIZE-RELATED TRAVEL OR ACTIVITY. YOU WAIVE ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

5. DISCLAIMER: Promotion Parties are not responsible for printing or typographical errors in these Official Rules or in any Promotion-related materials. Sponsor reserves the right, in its sole discretion, to disqualified any individual that tampers with the entry process. Sponsor also reserves the right to terminate, suspend, cancel or modify the Promotion and award the prizes for the Promotion from among all eligible, non-suspect entries received (i) as of the date of termination using the judging procedure outlined above if for any reason this Promotion is not capable of running as planned due to any reason, including infection by computer virus, bugs, tampering, fraud, unauthorized intervention, technical failures or other causes that may corrupt or impair the integrity, fairness or proper play of the Promotion. Promotion Parties are not responsible or liable for any events which may cause errors and/or the Promotion to be stopped, including but not limited to any error, omission, interruption, deletion, defect, delay in operation or transmission, communications line failure, theft or destruction or unauthorized access to, or alteration of, entries, nor are they responsible for any problems or technical malfunction of any telephone, network or telephone lines, computer on-line systems, servers, or cable, satellite, or Internet Service Providers, computer equipment, software or any other failure of any email or entry to be received by Sponsor on account of any technical problems, human error or traffic congestion on the Internet or at any web site, or any combination thereof, including any injury or damage to yours or any other person’s computer relating to or resulting from participation in this Promotion or downloading any materials in this Promotion. Promotion Parties are not responsible for computer, mechanical, technical, electronic, network or other errors or problems, including any errors or problems that may occur in connection with the administration of the Promotion, the processing of Entries, or in any other Promotion-related materials. Promotion Parties may stop you from participating in this Promotion if you violate Official Rules or act, in Sponsor’s sole discretion: (a) in a manner Sponsor determines to be not fair; (b) with an intent to annoy, threaten or harass any other entrant or the Sponsor; or (c) in any other disruptive manner. Should more prizes be awarded through a computer, hardware, or software malfunction, error or failure, or for any other reason, in any prize category, than are stated for that category in the Official Rules, Sponsor reserves the right to award only the number of prizes stated in the Official Rules for that category. In no event will more prizes be awarded than that listed in Section 6 of each Challenge.

CAUTION: ANY ACT OR ATTEMPT BY AN ENTRANT TO DELIBERATELY DAMAGE ANY WEBSITE OR UNDERMINE THE LEGITIMATE OPERATION OF THIS PROMOTION IS A VIOLATION OF CRIMINAL AND CIVIL LAWS. SHOULD SUCH AN ATTEMPT BE MADE, PROMOTION PARTIES RESERVE THE RIGHT TO SEEK DAMAGES AND OTHER REMEDIES (INCLUDING ATTORNEYS’ FEES) FROM ANY SUCH INDIVIDUAL(S) TO THE FULLEST EXTENT PERMITTED BY LAW.

6. CHOICE OF LAW AND JURISDICTION: Except where prohibited, all issues and questions concerning the construction, validity, interpretation, and enforceability of these Official Rules, or the rights and obligations of entrants or winners, Sponsor, and administrator in connection with this Promotion, shall be governed by, and construed in accordance with, the laws of the State of Ohio, without giving effect to any choice of law or conflict of law rules or provisions (whether of the State of Ohio or any other jurisdiction), which might otherwise cause the application of the laws of any jurisdiction other than the State of Ohio. Any action seeking legal or equitable relief arising out of or relating to the Promotion or these Official Rules shall be brought only in the courts of the State of Ohio. You hereby irrevocably consent to the personal jurisdiction of said courts and waive any claim of forum non-convenience or lack of personal jurisdiction they may have.
7. **TAX INFORMATION:** All federal, state, local, and other taxes on prizes and any other costs and expenses associated with prize acceptance and use not specified herein as being provided, are the sole responsibility of the applicable winner. A 1099 tax form will be issued to all winners.

8. **WINNERS LIST:** To receive the list of winners of prizes, send a #10 self-addressed stamped envelope for receipt by October 31, 2020 to: Air Force Advanced Manufacturing Olympics Technical Challenges Winners List Request, c/o Realtime Media, 200 Four Falls Corporate Center, Suite 100, Conshohocken, PA 19428.

**SPONSOR:** University of Dayton Research Institute, 1700 S Patterson Blvd, Dayton, OH 45469

**ADMINISTRATOR:** Realtime Media LLC, 200 Four Falls Corporate Center, Suite 100, Conshohocken, PA 19428