VFS Technical Committee Charters
Updated: July 2026

The Technical Committees and their areas of primary responsibility are given below in the charters attached herein.

Acoustics Technical Committee Charter
[Updated September 2022]

1. General Information

1.1 Conventions: Name of the Committee and Definitions.

- The name of the committee is the Vertical Flight Society Acoustics Technical Committee.
- The Vertical Flight Society shall be referred to herein as the VFS.
- The Vertical Flight Society Acoustics Technical Committee (TC) shall be referred to herein as the Acoustics TC or TC

1.2 Mission/Charter: The Acoustics TC has the following purpose and objectives:

- Organize and conduct the Acoustics Sessions at the VFS Forum.
- Promote and conduct technical specialists' meetings and workshops in acoustics.
- Provide support to the Journal of the American Helicopter Society in acoustics.
- Encourage research efforts that study vertical flight vehicle acoustics.
- Promote communications between vertical flight vehicle acoustic research activities in Government, Industry, and academia.
- Conduct evaluations and develop recommendations to assist national and international leaders in the development and implementation of policies that concern vertical flight vehicle acoustics.
- Promote VFS membership affiliation and encourage interactions with other professional societies.
- Provide acoustics expertise to the vertical flight vehicle community.

2. Membership

2.1 Members of the Committee: The Acoustics Technical Committee representation shall include up to thirty voting members from the following categories. Membership across categories shall be split such that US institutions (Industry, Government, and Academia) comprise at least 25% of the TC.

- Voting Members:
    - Category A: Vertical Flight Industry: Up to fifteen members from major vertical flight vehicle manufacturers, scientific consultants in vertical flight vehicle technologies, operators, designers, etc. Membership is limited to one representative from each company, inclusive of all subsidiaries.
    - Category B: Government: Up to ten members from national agencies around the world are welcome in this category. No more than five members from an individual nation may be represented in this category, and no more than one member from the same agency at the same location is allowed.
    - Category C: Academia: Up to ten active faculty members from universities are permitted. Membership is limited to two representatives from each institution.

- Non-Voting Members:
    - Category D: Student: Up to ten members are permitted. Each student member shall be actively enrolled in a college or university seeking a degree directly related to the vertical flight industry. Membership is limited to one representative from each academic advisor and no more than two from each institution.
    - Category E: Honorary Members: Up to five honorary members are permitted. Honorary members should be identified by their career long, and significant contributions to the TC and relevant vertical lift acoustics community.

2.2 Election of New Members

- Any voting member who is present, or represented by proxy, at a meeting can nominate a new member, subject to

the restrictions in Section 0.
- The Chairperson shall prescribe election procedures that allow the new member positions to be filled.
- All election decisions by the Acoustics TC require the approval by vote per Section 0.
- Elections of new members shall normally take place once per year at the Acoustics TC meeting held during the Annual Forum of the VFS.
- Elections of new members may also take place at other times as designated by the Chairperson.
- Typically, an outgoing member nominates a successor from their organization, who is then approved by members of the TC. However, no permanent status is given to Industry, Government, or Academia. Nominations are equally open to all VFS members in accordance with the category and overarching rules.

2.3 Terms of Membership
- The term for new members, except honorary members, shall begin after the VFS Forum (on a date specified by VFS) in which they were nominated and continue for three years, including attendance at three TC meetings during VFS Annual Forums.
- Terms for the Chairperson and the Deputy Chairperson are two years each. These terms supersede, and thus may add to, whatever term existed prior to selection to office. The Chairperson and Deputy Chairperson shall attend three meetings, the first as incoming and third as outgoing. Nominations for deputy Chairperson may be made by the membership. It is suggested that the nominations alternate between the three Categories A, B, and C. The committee then votes per Section 0 to approve or to disapprove of the nomination. The Deputy Chairperson automatically becomes Chairperson after their term is fulfilled.
- An honorary membership has no term limit. However, an honorary member may be removed from the Acoustics TC at any time by a vote per Section 0.
- A TC Member may terminate their membership by submitting a resignation letter to the Chairperson. Vacant membership positions shall be filled in accordance with Section 0.
- A TC Member whose employment (including college enrollment) changes during their tenure, such that they no longer qualify for the Category they were elected to, will have their position automatically terminated at the next Annual Forum or meeting of the TC, whichever comes first.
- The TC Chairperson or Deputy Chairperson can recommend to the TC that a member be removed from the TC before that Member's term is complete, but only for the reason of non-participation in Committee for two consecutive years. This recommendation requires a vote per Section 0.

3. Membership Voting

3.1 Member Voting Rights: Each Member shall be entitled to one vote at a meeting of the Acoustics TC. Students and honorary members are not eligible to vote on Acoustics TC issues.

3.2 Proxies: Any Member entitled to vote may do so either in person or by transferring their vote to another Member of the Acoustics TC, authorized by a written proxy signed by the Member, and filed with the TC Chairperson.

3.3 Quorum for Voting: If a quorum of voting members is present at a TC meeting (including proxies per Section 0), then a majority vote (including proxies per Section 0) on an issue shall be considered the act of the whole TC.

4. Membership Meetings

4.1 Time and Place of Meeting: An annual meeting of the Members shall take place during the VFS Annual Forum. The Chairman must notify each TC Member of the time and place for this meeting at least two weeks prior to the event. Other meetings of the TC may be called throughout the year by the Chairman. However, the Chairman must notify the TC Members of the time and place at least thirty days prior to the date of such a meeting.

4.2 Quorum Requirements: At least fifty percent of the voting members, represented in person or by proxy, shall constitute a quorum for the transaction of business at the meeting of the Members. If the number determined by fifty percent of the voting members, represented in person or by proxy, is not a whole number, then the next highest whole number determines a quorum.

5. Officers of the Acoustics TC

5.1 Officers of the TC: The TC shall have a Chairperson, a Deputy Chairperson, a VFS Forum Session Chairperson, and a VFS Forum Deputy Session Chairperson as officers.

5.2 Election of Officers:

- Any voting TC member can nominate any other TC Member for the positions of Deputy Chairperson or Session Chairperson. Election of officers takes place at the TC meeting during the Annual VFS Forum.
- The Chairperson is not elected by the TC, rather the Deputy Chairperson automatically becomes the Chairperson after their term as Deputy Chairperson is complete.
- The Session Chairperson is not elected by the TC, rather the Deputy Session Chairperson automatically becomes the Session Chairperson after their term as Deputy Session Chairperson is complete.

6. Duties for TC Members and Officers

6.1 Duties for Membership

- Nominate and elect the Forum Acoustics Session Chairperson.
- Using the guidelines specified in Section 0, assist with evaluation of the following:
- Forum abstracts
- Forum technical papers
- Forum presentations for the Best Paper candidates
- Exception: Authors are not permitted to provide evaluations for their own abstracts, technical papers or presentations.
- Assist the editors of the Journal of the American Helicopter Society in reviewing and coordinating papers submitted for publication.
- Actively participate in TC activities.
- Accept and carry out action items assigned, as appropriate, during TC meetings.
- Participate in the nomination and selection of new members of the TC.

6.2 Duties for Chairperson

- Prepare for and conduct TC meetings.
- Release meeting minutes.
- Prepare agendas for TC meetings.
- Communicate with TC Members as needed.
- Maintain current list of TC Members and appropriate contact information.
- Maintain the TC bylaws and membership records.
- Ensure that TC inputs for the VFS Annual Forum Best Paper Award are communicated to the VFS Technical Council.
- Maintain contact with the Technical Director of the VFS and members of the Technical Council.
- Represent the TC committee in VFS planning processes, as required.

6.3 Duties for Deputy Chairperson

- Committee minutes shall be maintained by the Deputy Chairperson or by another TC Member designated by the Chairperson.
- Assist in the execution of Chairperson duties as required by, or in the absence of, the Chairperson.

6.4 Duties for Session Chairperson

- Gather Forum abstracts and technical papers and distribute them to the TC for evaluation.
- Review abstract and technical paper evaluations by TC Members and define Acoustic session(s) for the VFS Forum. Abstracts and technical papers will be evaluated by at least three voting members, excluding paper authors, according to the official Alfred Gessow Best Paper Award Guidelines, provided for reference in **Error! Reference source not found.**.
- Administer Best Paper Award:
    - The three technical papers with the highest mean score will be candidates for Best Paper. For these three candidate technical papers (“Final Papers”), the following will be evaluated to determine the Best Paper:
    - The Final Paper and Presentation for each candidate for Best Paper will be evaluated by at least three voting members, excluding paper authors. The Final Paper will be evaluated according to the official Alfred Gessow Best Paper Award Guidelines, provided for reference in **Error! Reference source not found.**. The Presentation will be evaluated based on the scoring provided in **Error! Reference source not found.**. The mean score for the Final Paper and Presentation will each contribute to the Best Paper Award based on a weighted scale, where:
        - Final paper evaluation is worth 80%
        - Presentation evaluation is worth 20%
- Monitor authors’ progress in the preparation of their VFS Forum papers.
- Coordinate with VFS Headquarters for Forum Acoustics Session(s) agenda.

- Chair VFS Acoustics Sessions as needed.

6.5 Duties for Deputy Session Chairperson

- Assist the Session Chairperson when requested by the Session Chairperson.
- Chair VFS Acoustics Sessions as needed.

7. Changes to the Bylaws: Any changes to the bylaws of the Acoustics TC require a vote per Section 0.

Appendix A: Gessow Best Paper Award Scoring System

(**NOTE**: This Appendix is provided for informational and reference purposes only. It is not part of the VFS Acoustics TC Bylaws. It should be updated when Gessow Best Paper Award Scoring System is updated without need to amend TC bylaws.)

At each evaluation level, the scoring system outlined below should be used for ranking the candidate papers.

	Element	Rating	Weighting Factor	Max
1.	Originality/creativity	0 to 5	6	30
2.	Technical Content	0 to 5	6	30
3.	Relevance of Contribution	0 to 5	4	20
4.	Organization and Clarity	0 to 5	4	20
			Total:	100

Each Rating should be an integer. Reviewers should use the following table to assist them in assigning numerical ratings. Note that the scale is only intended to be linear between 1 and 5, not between 0 and 1. Any Element that could not be graded higher than a "C" should be rated a zero.

For scoring within a Technical Committee, any paper that has an Element rated as "zero" should be disqualified. (However, if the abstract was good enough to be selected, the changes of an Element being rated zero should be quite small.)

Score	Adjectives and Guidance Corresponding to Numerical Ratings
5	Excellent, Outstanding, Nearly Perfect, World Class, Breakthrough (an "A+")
4	Superior, Very Impressive, not a "5", but certainly better than a "3" (an "A")
3	Very Good, Particularly Noteworthy, Very Promising (a "B+")
2	Good; not a "3" but better than a "1" (a "B")
1	Adequate, Potentially Promising (a "C+")
0	Marginal, Poor, None, Non-existent, Not qualified ("C" or less)

Appendix B: Best Paper Presentation Award Scoring System

(**NOTE**: This Appendix is part of the VFS Acoustics TC Bylaws. Changes to this system require a vote according to Section 3.3)

At each evaluation level, the scoring system outlined below should be used for ranking the candidate presentation.

	Element	Rating	Weighting Factor	Max
1.	Organization of Content	0 to 10	3	30
2.	Technical Level of Content	0 to 10	2	20
3.	Legibility and Clarity of Content	0 to 10	2	20
4.	Volume and Clarity of Speech	0 to 10	2	20
5.	Question and Answer Engagement	0 to 10	1	10
			Total:	100

Each Rating should be an integer. Reviewers should use the following table to assist them in assigning numerical ratings. Note that the scale is only intended to be linear between 1 and 10, not between 0 and 1. Any Element that could not be graded higher than a "C" should be rated a zero.

Any presentation that has an Element rated as "zero" should be disqualified from Best Paper Award contention.

Score	Adjectives and Guidance Corresponding to Numerical Ratings
10	Excellent, Outstanding, Nearly Perfect, World Class, Breakthrough (an "A+")
8	Superior, Very Impressive, not a "10", but certainly better than a "6" (an "A")
6	Very Good, Particularly Noteworthy, Very Promising (a "B+")
4	Good; not a "6" but better than a "2" (a "B")
2	Adequate, Potentially Promising (a "C+")
0	Marginal, Poor, None, Non-existent, Not qualified ("C" or less)

Advanced Vertical Flight Technical Committee
[Formed May 2006]

Mission/Charter: to broaden the vertical flight technology base with emphasis on VSTOL concepts beyond the conventional rotorcraft area, to include:

a) Rotorcraft concepts such as the tilt wing.
b) Stopped rotor and canard rotor wing systems.
c) Non-rotorcraft concepts such as fan-in-wing, lift engines, thrust augmentation devices, lift fans, lift or lift/cruise vectoring nozzles, and attitude (reaction) control systems.

The committee will concentrate on requirements related to:

a) emerging and enabling technologies
b) design
c) systems integration
d) testing
e) operation and maintenance of such aircraft

The committee will:

a) Support and organize technical sessions at the Annual Forum and technical meetings.
b) Promote educational awareness of VSTOL flight.
c) Encourage nominations for the Paul E. Haueter Award.

Aerodynamics Technical Committee Charter
[Formed 1999]

Mission/Charter: the Aerodynamics Technical Committee is committed to promoting the broadest dissemination of technical studies that expand the understanding of rotary wing and Vertical/Short Take Off and landing aircraft aerodynamics.

The Committee will accomplish this mission through:

a) Conducting high quality technical sessions at the Annual Forum.
b) Candid dialogue among Committee members at the annual meeting.
c) Support of technical specialists' meetings held by regional chapters.
d) Contributions to *Vertiflite* articles.
e) Editing and review assistance for Society's technical *Journal* articles.
f) Active participation on Integrated Technology Teams.

The Committee shall also:

a) Maintain a strong technical organization with a membership representative of the Society.
b) Provide a forum for discussion of issues affecting the Society and keep adequate historical records.
c) Work effectively with the Society's leadership and other technical committees to foster a strong technical society.
d) Interact with other professional societies as appropriate to advocate the advancement of aerodynamics.

Aircraft Design Technical Committee Charter
[Updated October 2023]

Mission/Charter: The Aircraft Design Technical Committee's areas of primary responsibility are to coordinate VFS activities on

a) Overall vertical lift aircraft, subsystem, and component designs.
b) Design technology, design criteria, and design synthesis.
c) Interdisciplinary design considerations including performance, reliability, maintainability, weights, vulnerability, crash safety, and economics.

Additionally, the committee should maintain a strong technical organization, providing a training ground for new Society leaders in their respective fields and maintain adequate historical records.

The committee will:

a) Follow the VFS Technical Committee guidelines for membership and committee officers.
b) Solicit, evaluate, and select relevant and high-quality papers.
c) Assess the technical quality of Aircraft Design presentations at the Annual Forum and nominate an author(s)

for “Best of Aircraft Design” presentation.

d) Support the *JAHS* Editor in the selection process for publication of Aircraft Design papers by encouraging committee members to provide technical reviews.
e) Offer a center for communication among the various industry, academia, and government agencies interested in the various aspects of Aircraft Design technical information.
f) Encourage the use of the VFS as a medium by which the members can and should publish their Aircraft Design findings.
g) Establish the VFS as an organization to which the technical community across government, industry, and academia can look for assistance, direction, and leadership with respect to vertical flight aircraft design.
h) Assist with the Student Design Competition
    i. Help select a competition coordinator. The position should rotate with the sponsor. (The historic order of the sponsors has been The Boeing Co., Bell Textron, Sikorsky Aircraft, DEVCOM Army Research Lab, Airbus Helicopters, and Leonardo Helicopters,)
    ii. Solicit participation in the competition from ALL universities having faculty and students involved in vertical lift research. Many schools have historically strong programs in vertical lift but have never participated in the competition. Efforts should be made to draw them in.
    iii. Coordinate with the VFS Education Committee, the Student Design Competition RFP, and judging of proposals. Effort should be made to work with the Education Committee to include suggestions to modify the competition in order to enhance the educational value.
    iv. Coordinate with the sponsor to provide prize awards/money.

Autonomy & Uncrewed Aircraft Systems (UAS) Technical Committee Charter

[Updated May 2023: The committee voted to officially change the committee’s name from Unmanned VTOL Aircraft & Rotorcraft to *Autonomy and Uncrewed Aircraft Systems* in May 2023.

Committee Background: Uninhabited Aerial Vehicles and the associated field of intelligent robotic systems are becoming an integral element of the military and hold promise for many civil applications as well. The U.S. Congress, the Administration and the DoD have stated the intent to progressively transform to a force structure with a large component of UAVs in the execution of operational and intelligence collection operations. Other nations are also planning significant expansion into this area of technology. Currently the international budget for these systems is over $2B and growing rapidly. In the future there is likelihood that certain classes of manned aircraft will also have alternative UAV modes of operation. The Society held a special UAV session at the 2001 Forum with outstanding participation, including significant international participation. Although there is an Association for Unmanned Vehicle Systems International and a European Uninhabited Vehicle Systems annual meeting, these groups are very broad-based and do not represent the special technical interests of the vertical flight community.

Mission: This committee focuses on new technologies for UAV systems with a balanced consideration of five broad areas: autonomy and operability; reliability and robustness; payloads, sensors and data links; performance; and survivability.

Charter: the committee will focus on those aspects of UAV vertical flight technology that are unique to these types of systems, with the major emphasis on the emerging field of intelligent semi-autonomy and interoperability with manned systems. Other UAV-unique technologies associated with performance, sensors and payloads, reliability and robustness, operability and survivability will also be considered.

Technical Scope: the committee seeks to focus on new technologies for UAV systems with a balanced consideration for five broad areas of capability and will act as the technical focal point for developments in these areas:

a) Autonomy and Operability: for minimum operator intervention except when the situation requires mission- related reasons and to minimize the level of operator training.
b) Reliability and Robustness: to achieve increased air vehicle operability and affordability by system improvements to significantly reduce air vehicle loss rates
c) Payloads, Sensors and Data Links: to enable a wide range of missions and concepts of operation in instrument meteorological conditions.
d) Performance: to permit the greatest degree of mission flexibility in terms of range, endurance, payload, speed and altitude.
e) Survivability: for military systems.

It will address UAV-unique aspects in areas such as:

a) innovative system design (including ground control elements and networking)
b) UAV unique sensors and payloads
c) sensor exploitation and perception
d) situational awareness and understanding

e) intelligent semi-autonomous avionic systems
f) task and goal based decision making technologies including emerging multi-layer architectures
g) all-electric flight controls
h) obstacle and aircraft sensing and avoidance
i) threat detection sensing and avoidance
j) combined manned-unmanned operations
k) airspace operations, safety, reliability, and testing

Advances in the more traditional technology areas of aerodynamics, structures, materials, dynamics, propulsion and drive systems, acoustics, etc., will either be referred to the standing committees or incorporated within this committee as appropriate.

Avionics and Systems Technical Committee Charter
[Updated September 2022]

Background: Avionics and systems enable aircrews to fly helicopters and VTOL aircraft and perform mission functions effectively. These roles are becoming more complex as military missions are increasingly requiring these aircraft to be interconnected within the digital battle space. This interconnectivity is increasing by orders of magnitude, amounts of information and data to be processed and absorbed by the crews. Fortunately, avionics and systems capabilities are also increasing at a phenomenal rate to allow aircrews to cope with increasing workload and mission demands. The primary challenge is to provide increasing capabilities at affordable cost and to reduce operating and support cost of fielded systems.

Mission: This committee studies avionics, flight control, and mission systems for manned, unmanned, or optionally manned vertical flight aircraft. This encompasses related aspects of hardware, firmware, and software design, development, implementation, verification and fielding. Additional areas of interest include cyber security, airworthiness/certification, innovative use of COTS technologies, and open systems architectures.

Charter: this technical committee shall strive to further the state-of-the art in avionics and systems by keeping pace with the needs of helicopters and VTOL aircraft aircrews. Areas addressed will include:
a) Activities associated with the design, development, test, and use of avionics and systems to support basic flight management and the various missions of our unique vertical flight aircraft.
b) Cost reduction.
c) Use of commercial off the shelf solutions, and specific mission system solutions for both commercial and military use.
d) Operational needs and experience.
e) Night and adverse weather requirements, and advanced systems.

These activities shall be accomplished through:
a) High quality technical sessions held at the Society's Annual Forum; technical specialists' meeting arranged with regional chapters.
b) Soliciting technical papers and activity summaries for publication in the technical *Journal* and *Vertiflite* publications.

The Avionics and Systems technical committee shall:
a) Maintain a strong technical organization of avionics specialists from equipment suppliers, system integrators, aircraft prime contractors, and both domestic and foreign commercial military users.
b) Provide training for new society leaders and maintain historical records.
c) Interact effectively with other technical committees within the Society.
d) Coordinate and serve as a link between the Society and other professional societies as needed.

Crash Safety Charter
[Updated January 2025]

Mission: This committee studies operational environments and mission requirements for identification of the aircrew and maintainer vehicle. This committee studies all aspects of rotorcraft crashworthiness technology including but not limited to:
a) Human tolerance to crash impacts.
b) In-flight obstacle strike.
c) Cockpit delethalization.
d) Crashworthy fuel systems.
e) Ditching and post-impact flotation.

f) Energy absorbing components such as landing gears, subfloor structure, seats and restraint systems with associated design criteria formulation.
g) Analytical model development, testing, and system integration into a crashworthy rotorcraft design.

Charter: The Committee will provide a channel for the collection and distribution of technical information, and it will help to focus industry and Government interests in crash safety technical areas. The Committee will:

a) Produce a technical session at the annual VFS Forum.
b) Establish and maintain a diverse committee membership including industry, Government, and academia with domestic and international members.
c) Solicit technical papers for publication in the VFS technical *Journal* and *Vertiflight* publications.
d) Promote crash safety through presentations, publications and member participation in activities that generate or maintain crash safety publications, standards, specifications, etc.

Committee Membership and Term Durations

a) The balance of the committee should include representation from the rotorcraft, eVTOL, and support industry, with similar representation from government and academia, to include representation from international organizations. Total membership, including Chair and Deputy Chair, but excluding Honorary members, should not exceed 22, including 6 to 9 from industry, 6 to 8 from government labs, 3 to 6 from academia, 2 to 5 from international organizations, and 1 to 2 Honorary members. Membership balance regarding region, expertise, and member organizations should be considered.
b) Terms for Chairperson and Deputy Chairperson are two years each.
c) The leadership posts are traditionally held alternately by representatives from industry and government on an alternating basis.
d) Any committee member may nominate the new Deputy Chair, which is accepted by vote of the full Committee.
e) Normal progression is to step from Deputy Chair to Chair post (note implied four year commitment by individual and organization).
f) Terms for Session Chairperson and Co-Chairpersons are one year.
g) Session Chairpersons volunteer and/or nominated by Committee Chairperson are accepted by vote of committee.

Crew Stations and Human Factors Charter

Mission: This committee studies operational environments and mission requirements for identification of the aircrew and maintainer vehicle interface issues that impact workload and mission success. This includes the study of integrated crew station design, control concepts, information transfer, display methodology, symbology and formats, automation and artificial intelligence concepts, prototyping of crew systems, and the interdisciplinary interface of crew systems with other vehicle systems. The Technical Committee will serve as the focal point for Crew Stations and Human Factors related to technical activity within the Vertical Flight Society.

Charter: the Committee will provide a channel for the collection and distribution of technical information, and it will help to focus industry and Government interests in crew station and human factors technical areas. The Committee will:

a) produce a technical session at the annual Forum
b) promote Technical Meetings
c) encourage the use of the Society's publishing media, and establish the Society as a provider of technical expertise and leadership to the rotorcraft community and related technical organizations
d) serve as a source of technical information for existing rotorcraft operational environments, human interface technologies and issues that impact human performance and mission success, and associated design analysis tools and methods

Dynamics Technical Committee Charter

[Updated September 2022]

Mission: foster, promote, and enhance technical excellence in the rotorcraft dynamics community by dissemination of information in:

a) advancement in rotorcraft dynamics research and development that lead to advanced analytical modeling, design, structural control, and experimental methodologies
b) improvements in rotorcraft dynamics attributes, longer life, and/or lower weight and cost rotorcraft
c) increased rotorcraft capabilities and commercial operator and passenger acceptance
d) Expanded rotorcraft applications and markets.

Charter: the Dynamics committee will focus on the following technical areas, rotorcraft attributes, capabilities, and

competencies such as:

a) Structural dynamics, rotor dynamics, and aeroelasticity
b) Aeromechanical stability and vibration
c) Physical, computational, and empirical modeling and analysis Experimental data acquisition, signal processing, system ID and validation Structural transfer path analysis
d) Structural and aeroelastic design optimization
e) Active/passive structural isolation and vibration suppression
f) Active structural and rotor control solutions

The committee will further:

a) Sustain a diverse T/C membership, including representatives of industry, government and academia
b) Establish and maintain an international presence on the Committee
c) Organize high quality Dynamics Sessions at the annual Forum
d) Provide feedback to presenters at the annual Forum
e) Support the VFS Journal review process to ensure technical excellence
f) Organize, promote and conduct relevant and timely technical specialists' meeting
    i. Aeromechanics every 4 years
    ii. Dynamics every 4 years
g) Promote and conduct collaborative research programs and multi-year workshops e.g., Rotor Vibratory Loads Prediction
h) Establish and maintain public domain databases, including a Dynamics Committee web page
i) Communicate international activities in industry, government, and academia
j) Promote multi-disciplinary and systems perspectives
k) Establish and substance communications and coordinated activities with other Technical Committees and professional societies as appropriate
l) Promote multi-disciplinary and systems level perspectives
m) Promote membership affiliation and communication with other professional societies
n) Conduct evaluations and develop recommendations on contemporary special topics in dynamic and aeroelasticity by the committee or by subcommittees, as appropriate

Dynamics Technical Committee By-Laws

Dynamics Committee Membership and Term Durations

a) The balance of the committee should include representation from the rotorcraft, eVTOL, and support industry, with similar representation from government and academia, to include representation from international organizations. Total membership, including Chair and Deputy Chair, but excluding Honorary members, should not exceed 22, including 6 to 9 from industry, 6 to 8 from government labs, 3 to 6 from academia, 2 to 5 from international organizations, and 1 to 2 Honorary members. Membership balance regarding region, expertise, and member organizations should be considered.
b) Terms for Chairperson and Deputy Chairperson are two years each. These terms supersede and, thus, may add to whatever term existed or was remaining prior to selection to office.
c) The leadership posts are traditionally held alternately by representatives from helicopter industry and government on an alternating basis with consideration given to regional balance.
d) The existing Chair and Deputy Chair nominate the new Deputy Chair, which is accepted by vote of the full Committee.
e) Normal progression is to step from Deputy Chair to Chair post (note implied four year commitment by individual and organization).
f) Terms for members are three years. Membership starts a year before the first meeting attended and ends after the third meeting attended. Other duties may require extension of terms, but should not exceed four years, unless duties as Chairperson and/or Deputy Chairperson are assumed. Periodic turnover is seen as healthy for the committee because it
g) Brings new ideas and energy into the Committee and encourages participation in VFS activities by a larger segment of the dynamics community.
h) For the helicopter industry and government members, the outgoing members nominate a successor from its organization. Nominations are accepted without vote.
i) For academic and non-helicopter companies, no permanent status is given to a university or company. Nominations are to be equally open to all members. Traditionally, NRTC Rotorcraft centers of Excellence have had representation. New members are nominated by individual Committee members and accepted by vote of full Committee.
j) Terms for Session Chairperson and Co-Chairpersons are one year.
k) Session Chairpersons volunteer and/or nominated by Committee Chairperson and accepted by vote of full

Committee. Desirable for Session Co-Chairperson to become Session Chairperson in following year.

Dynamics Committee Membership Roles and Responsibilities

Chairperson:

a) Maintain Committee mission statement, charter, bylaws, membership records, and calendar Maintain current list of Committee members and addresses.
b) Maintain database of Committee member's self-described background and expertise for reference by VFS Journal Dynamics Associate Editors in selecting paper coordinators and reviewers.
c) Communicate with Committee members as needed.
d) Nominate Deputy Chairperson.
e) Solicit volunteers and/or nominate Session Chairperson(s).
f) Solicit nominations for academia and non-helicopter organizations.
g) Prepare for and conduct Committee meetings.
h) Send out Committee meeting announcements.
i) Prepare Committee meeting agenda(s) Release Committee meeting minutes.
j) Participate on Sub-committee for Best Paper Review.
k) Communicate Best Paper and presentation results to VFS Technical Council and Committee members and arrange for plaque(s) to be presented for Best Paper and presentation at Annual Forum.
l) Communicate results of Journal Quality recommendations to VFS Journal Dynamics Associate Editors.
m) Provide results of presentation Quality review to Presenters at VFS Forum and Committee members
n) Write yearly *Vertiflite* Highlights article on the basis of Committee input.
o) Maintain contact with the Technical Director of VFS and members of the Technical Council Prepare semi-annual Committee reports and communicate to Technical Council.
p) Represent the Committee in VFS planning processes as required. Coordinate with other Technical Committees as required.
q) All other responsibilities of regular members.

*Deputy Chairperso*n:

a) Take and document Committee meeting minutes.
b) Assist Chairperson as needed with *Vertiflite* Highlights article.
c) Assist Chairperson in representing the Committee in VFS planning processes as required.
d) Assist Chairperson in nominating new Deputy Chairperson.
e) Participate on Sub-Committee for Best Paper Review.
f) All other responsibilities of regular members

Session Chairperson:

a) Revise Call for Papers for Annual Forum.
b) Gather Forum paper abstracts, coordinate with other Technical Committee Session Chairpersons to categorize papers and distribute abstracts to the Committee for evaluation.
c) Select papers based on Committee abstract review and inform authors of selection Organize Dynamics session(s) with Co-Chairpersons.
d) Monitor progress in paper presentation.
e) Coordinate with VFS HQ for correct Forum agenda.
f) Forward written copies of Forum papers to Sub-committee for Best Paper review.
g) Lead Best Paper review sub-committee and communicate results to Committee Chairperson.
h) Chair one session at the VFS Forum
i) All other responsibilities of regular members

Session Co-Chairperson(s):

a) Assist, as needed, Session Chairperson with Call for Papers, assessment of abstracts, organization of Dynamics Sessions, and monitoring of papers.
b) Participate in Best Paper review Sub-committee Chair session at the VFS Forum.
c) All other responsibilities of regular members.

Members:

a) Participate in at least one Committee meeting at Annual Forum (a representative should be sent when direct participation is not possible; non-participating members can have their membership revoked by a review of a subcommittee formed by the Chairperson).
b) Assist with the evaluation of Forum abstracts.
c) Assist with the evaluation of presentation quality of presenters in Dynamics Session at VFS Forum.
d) Assist with the evaluation of VFS Forum dynamic papers for recommendation for publication in the VFS Journal

Assist with the evaluation of the technical papers for the Best Paper recommendation (one or volunteers are desired for participation on review sub-committee).

e) Assist the Associate Dynamics Editors of the VFS Journal as requested in reviewing and coordinating papers submitted for the publication.
f) Submit to the Chairperson yearly inputs for the *Vertiflite* Highlight article Participate in Committee Specialists' meetings, workshops, and other activities.
g) Accept and carry out action items assigned, as appropriate, during Committee meetings Participate in the nomination and selection of new members of the Committee.

Electric-VTOL (eVTOL) Committee Charter
[Formed October 2021]

Mission: to foster and steer the growth of sciences and technologies related exclusively to *electric power* of VTOL aircraft and the *infrastructure* needed to operate such aircraft. Electric-VTOL aircraft, in short eVTOL, is an emerging and evolving type of aircraft that are propelled by electric power and of a scale typical of manned aircraft.

"Propelled by electric power" defines the role of electric power. "More-electric" or "fly-by-wire" technologies that deal with electrified sub-systems are not under the purview of this committee. Electric power must be the principal means of propulsion. All sources of electric power such batteries, hydrogen fuel cells, solar, thermal, hybrid, or even nuclear, are within the purview of this committee as long as the drive is electric. Combustion engines and mechanical drives are not under the purview of this committee.

"Scale typical of manned aircraft" defines the intent of the aircraft. Small UAS or drones are not under the purview of this committee, unless used for demonstration of proof of concept. The payload and level of safety must be commensurate with manned aviation. However, unmanned aircraft can be used as test beds for research, technology development, and flight tests.

In summary, the mission of this committee is to devote attention exclusively to the special and unique problems that arise from the use of electric power as means of propulsion.

Technical Focus, Capabilities, and Competencies of the eVTOL Committee

The technical focus will cover broadly the unique challenges of electric power, infrastructure, economics, safety, the aircraft, and its flying qualities.

Electric power: is the principal barrier of eVTOL and the committee will deal with the following:

a) Advanced batteries
b) Hydrogen fuel cell systems
c) Advanced electric motors and drives including innovative control and cooling
d) Hybrid-electric power generation, transmission, and distribution
e) Power architecture including fault-mitigation, reliability, vulnerability and survivability
f) Problems associated with high-voltage
g) Thermal problems and cooling system

Infrastructure: the committee will deal with problems of infrastructure unique to eVTOL, from electric-specific needs of the vertiport, to workforce, to regulatory and certification needs such as:

a) Special re-fueling, such as fast charging and power grid
b) Special re-fueling, such has hydrogen fueling and supply
c) Impact on power-grid
d) Impact on environment
e) Special problems of airspace insertion and air traffic management
f) Special challenges of pilot training
g) Special challenges of education and workforce development
h) Standards, special regulatory needs and certification

Economics: the committee will deal with economics exclusive to eVTOL such as

a) Life cycle costs of electric aircraft
b) Market research and analysis
c) Economics of operation such demand modeling and pricing of missions
d) High-volume manufacturing and economies of scale

e) Challenges of global supply chain\.

Safety: the committee will deal with safety issues exclusive to eVTOL:
a) Crash absorption and egress with on-board high voltage
b) Fire protection and safety from explosions with batteries and hydrogen storage
c) Reliability and air-worthiness of electric components
d) Vulnerability in physical space such as ballistic damage from live fire
e) Vulnerability from potential cyberattacks, and trusted autonomous systems

Aircraft: the committee will deal with unique aeromechanics if it is exclusive to electric power:
a) *Flight, wind-tunnel and model-testing of electric sub-systems and components
b) Problems related to transient high-bandwidth asynchronous rotor speed variation;
c) Unconventional controls and handling qualities;
d) Challenges of power-propulsion interference and integration;
e) Interferences between multiple electric rotor/s and airframe;
f) Structural loads, and vibration caused by electric power; and
g) Unique problems of noise, such as electric motor noise

* e.g., if a new rotor is designed for eVTOL, description of the rotor goes to AVF, its impact on the aircraft goes to AD, its impact on the power and electric drive goes to eVTOL.

Flight operations: the air mobility use case envisioned for eVTOL require them to be easy to fly. The committee will deal with flying qualities unique to eVTOL such as:
a) Aircraft response to localized- or micro- weather phenomena
b) Impact of high urban winds and gusts
c) Autonomy, collision and obstacle avoidance, safe landing
d) Operation in temporarily GPS-denied environment
e) Advanced cockpit design for real-time Human Computer Interface
f) Applications of AI to make flying easier
g) Special provisions of pilot training such as SFARs

Charter

The committee will:
a) Maintain a diverse and balanced membership from academia, government, and industry.
b) Maintain international participation.
c) Archive new research and development on electric power and infrastructure at the VFS Forum.
d) Attract and retain non-traditional constituents related to electric power to grow VFS.
e) Steer and review high-quality manuscripts for publication in the *Journal of the AHS.*
f) Promote, conduct and support specialist's meetings, workshops, and councils.
g) Support international activities in industry, government, and academia.
h) Maintain the VFS professional short course as the premier course on eVTOL.
i) Promote liaisons and joint activities with sister TCs and professional societies.
j) Nurture a diverse body of next-generation society leaders.

eVTOL Committee By-Laws

Membership and Term Durations:
a) The balance of the committee should include representation from VTOL/eVTOL companies, representation from energy and electric-power companies, governments, and a limited representation of operators, pilots, specialized support and consulting industry, and regulators.
b) Total membership, including Chairperson and Honorary members should be no less than 7, generally no more than 15, but not exceed 20.
c) A nominal makeup may consist of 5-8 from industry, 2-4 from governments or national/international laboratories, 2-4 from academia, and 2-4 from other categories (pilots, operators, regulators).
d) Membership balance with regard to international and U.S. regional participation, type of expertise, diversity of background, and variety of organization should be considered.
e) Only one member can be admitted from one organization.
f) Terms for members are two years.
g) Membership starts a year before the first meeting attended and ends after the third meeting attended. Other duties may require extension of terms, including duties as Chairperson and/or Deputy Chairperson are assumed.
h) Reappointed to a two-year tenure will be made on a yearly basis by the committee Chair. Periodic turnover will bring fresh energy and greater participation from a wider spectrum of the eVTOL/UAM community. At the same

time, it is intended that the makeup of the committee include about 60% “old” members (greater than one year of service) and 40% “new”. Reappointments could be utilized to produce this diversity through a combination of two- and four-year tenures.

i) Terms for Chairperson and Deputy Chairperson are two years each. These terms supersede and, thus, may add to whatever term existed or was remaining prior to selection to office.
j) Leadership posts shall be held alternately by representatives from industry, government, and academia on an alternating basis with consideration given to regional balance.
k) Existing Chair and Deputy Chair nominate the new Deputy Chair, which is accepted by vote of the full Committee.
l) Normal progression is to step from Deputy Chair to Chair post (note: implied four-year commitment by individual and organization).
m) For VTOL/eVTOL industry and government members, nominations are accepted without vote. For others, new members are nominated by individual Committee members and accepted by vote of full Committee.
n) Terms for Session Chair and Co-Chairs are one year. Session Chairs volunteer and/or are nominated by Committee Chair and accepted by vote of full Committee. Normally Session Co- Chair becomes Session Chair in following year.

Member Roles and Responsibilities

a) Participate in committee meeting at VFS Annual Forum or send a representative; non- participating members can have their membership revoked by a review of a sub-committee formed by the Chair.
b) Review Forum abstracts.
c) Review Forum papers. Select the Best Paper. Selection should be made by all or by a sub- committee of at least 5 members (selected by the Session Chair and Committee Chair).
d) Evaluate presentation quality in eVTOL Session at Forum.
e) Assist with recommendation for publication in the AHS Journal.
f) Assist the Associate Editors of the AHS Journal as requested in reviewing papers submitted for publication.
g) Submit to the Chairperson yearly inputs for the Vertiflite Highlight article.
h) Participate in Committee Specialists’ meetings, workshops, and other activities.
i) Participate in the nomination and selection of new members of the Committee.
j) Accept and carry out action items assigned, as appropriate, during Committee meetings
k) Liaison members are encouraged to promote inter/joint-TC or -society activities

Chairperson Roles and Responsibilities:

a) Maintain Committee mission statement, charter, bylaws, membership records, and calendar.
b) Maintain current list of Committee members and addresses (phone, email, mail).
c) Maintain database of Committee member’s self-described background and expertise for reference by AHS Journal eVTOL (or other) Associate Editors in selecting reviewers.
d) Nominate Deputy Chairperson.
e) Prepare call for papers and evaluation metrics for paper acceptance with Session Chair.
f) Solicit volunteers and/or nominate Session Chairperson(s).
g) Solicit nominations for academia and non-aircraft industry organizations.
h) Prepare for and conduct Committee meetings.
i) Send out Committee meeting announcements.
j) Prepare Committee meeting agenda(s). Release Committee meeting minutes.
k) Participate on sub-committee for Best Paper Review.
l) Communicate Best eVTOL Paper and presentation results to VFS Technical Council and arrange for plaque(s) to be presented for Best Paper and presentation at the Annual Forum.
m) Communicate results of Journal Quality recommendations to AHS Journal Associate Editors. Write yearly Vertiflite Highlights article on the basis of Committee input.
n) Maintain contact with the Technical Director of VFS and members of the Technical Council. Prepare annual Committee reports and communicate with Technical Council.
o) Represent the Committee in VFS planning processes as required. Coordinate with other Technical Committees as required.
p) All other responsibilities of regular members.

Deputy Chairperson Roles and Responsibilities:

a) Take and document Committee meeting minutes.
b) Assist Chair as needed with Vertiflite Highlights article.
c) Assist Chair in representing the Committee in VFS planning processes as required.
d) Assist Chair in nominating new Deputy Chair.
e) Participate on Sub-Committee for Best Paper Review.

f) All other responsibilities of regular members

Session-Chairperson Roles and Responsibilities:
a) Prepare and / or revise Call for Papers for Annual Forum with Committee Chair.
b) Gather Forum paper abstracts, coordinate with other Technical Committee Session Chairs to categorize papers and distribute abstracts to the Committee for evaluation.
c) Prepare metrics of evaluation with Committee Chair.
d) Inform authors of selection. Organize eVTOL session(s) with Co-Chairperson.
e) Coordinate with VFS HQ for correct Forum agenda.
f) Forward written copies of Forum papers to Sub-committee for Best Paper review.
g) Lead Best Paper review sub-committee and communicate results to Committee Chairperson.
h) Chair one session at the VFS Forum
i) All other responsibilities of regular members

Session Co-Chairperson Roles and Responsibilities:
a) Assist, as needed, Session Chairperson with Call for Papers, selection of abstracts, and organization of eVTOL sessions.
b) Participate in Best Paper review Sub-committee Chair session at the VFS Forum.
c) All other responsibilities of regular members.

Handling Qualities Technical Committee Charter

Mission/Charter: this Committee studies flying qualities, stability and control, response modeling criteria, control systems, and ground and water handling. Handling Qualities encompasses aircraft characteristics, which govern the ease and precision with which a pilot is able to perform tasks in support of an aircraft mission. This includes basic vehicle stability and control/response characteristics and the pilot-cockpit vehicle interface.

The Handling Qualities technical committee shall strive to advance the state-of-the-art in various technical areas including:
a) Applications of mathematical modeling to rotorcraft component integration.
b) Operational needs and experience.
c) Night and adverse weather requirements, and development of advanced flight control system.

These activities shall be accomplished through:
a) High quality technical sessions held at the annual forums; technical specialists' meetings arranged with regional chapters.
b) Soliciting technical papers and activity summaries for publications in the Journal and *Vertiflite.*
c) Maintaining a strong technical organization
d) Providing a training ground for new society leaders and maintaining adequate historical records.
e) Interact effectively with other technical committees within the Society.
f) Coordinate and serve as a link between the Society and other professional societies as needed

Integrated Vehicle Health Management (IVHM) Committee
[Updated June 2024]

Mission: foster technical excellence in the vertical flight health management to include Integrated Vehicle Health Management (IVHM) and Health and Usage Management Systems (HUMS) communities; disseminate technical information and promote advanced research and development that enables:
a) Total aircraft health management.
b) Condition-based maintenance (CBM) for both military and commercial vertical flight aircraft.
c) Certification of IVHM/HUMS for maintenance credits.
d) Enhance safety, reduce operational cost and increase availability/mission readiness.

Charter:
a) Sustain a diverse IVHM technical committee membership.
b) Organize high quality IVHM technical sessions for the annual Forum and other technical meetings.
c) Promote multi-disciplinary and systems perspectives.
d) Support the Society's Forum best paper selection and Journal review process to ensure technical excellence.
e) Promote and conduct relevant and timely technical meetings and workshops.
f) Communicate international activities in industry, government and academia.
g) Promote communications with the other Society's technical committees and professional societies.
h) Serve as training ground for new leaders in IVHM.

Technical Focus, Capabilities & Competencies

a) IVHM/HUMS system analysis and architectural trade studies/tools and models.
b) Embedded sensors, data acquisition and communication systems.
c) Signal processing, incipient fault detection/isolation diagnostics and prognostics.
d) Physics of failure models, seeded-fault testing, and analytical approaches.
e) Design, development and certification of IVHM/HUMS.
f) IVHM/HUMS information management and data integrity assurance.
g) Data mining and data fusion, data-driven including artificial intelligence, machine learning (deep learning), and model based engineering (such as digital twin).
h) Maintenance credits, probabilistic risk assessment and continued airworthiness.

History Committee Charter

Mission/Charter: the purpose of the History Committee is to facilitate the preservation and understanding of vertical flight history. Specifically, the Committee will endeavor:

a) To assemble a group of specialists in the technologies related to the technical history of gyroplanes, helicopters, and other vertical flight aircraft, and provide a focal point for the Society on vertical flight history.
b) To facilitate the identification, preservation, and dissemination of key technical historical documents of benefit to the Society and to the community at large.
c) To formally solicit papers on the history of vertical flight and have them presented them at the Forum, building a unique historical archive on vertical lift aircraft.
d) To foster, promote and enhance the understanding of the technical history of vertical flight in the Society and between the various technical disciplines.
e) To advise and help manage the dissemination of historical information regarding the history of vertical flight technology.

Committee Structure: the committee shall meet at least once each year, at the annual Forum, and include such activities as:

a) Welcome any new and/or interested members.
b) Solicit officer volunteers and vote for confirmation.
c) Discuss progress toward meeting overall Committee goals.
d) Discuss progress toward achieving specific Committee projects.
e) Discuss potential new projects.
f) Discuss and vote on matters of emphasis for the Committee.
g) Discuss and vote on areas of application of financial resources.

The Committee will consist of at least 7 regular committee members, with no more than 15.

a) The Committee will seek members who represent all facets of the field, with representation from the major industry, government, and academic organizations.
b) All Committee members must be members of the Society. A member should serve on only one committee at a time.
c) Committee members must actively participate in the committee business. Commitment must be obtained from the members and, where applicable, their supporting organization, to actively participate on the Committee and attend the annual Forum if possible.
d) Membership is for a minimum of two years, with continuance based on interest level, contribution to the committee, and consistent effort to attend meetings.
e) The committee elects the officers, with the Chair being approved by the Technical Director or the Deputy Director. The committee Chair is elected for a one-year period, with reconfirmation by the committee and the Technical Director or the Deputy Director. Typically, the renewal for a second term will be automatic, unless the Chair elects to step down.

The Committee officers will be led by the following positions:

a) Committee Chair, responsible for: organizing and leading the annual meeting, coordination of assessing the technical quality of the History Session papers at the annual Forum, and, at the end of the committee Chair's term, propose to the Deputy Director a candidate successor to the Committee Chair's position.
b) Deputy Chair, responsible for: taking over the Committee Chair's role if necessary and support the Chair in planning and execution of the Committee responsibilities and activities.
c) Secretary, responsible for: recording and publishing meeting minutes in a timely manner; maintain and public committee officers and member's contact information.
d) Forum Session Chair, responsible for: serving as the primary committee contact for the Forum History Session(s). Roles include drafting the Call for Papers, solicit papers, manage review of abstracts with the committee members, contact authors, organize presentation session(s) and conduct session(s).

e) The Committee will appoint sub-committee members as required for specific projects.

Manufacturing Technology and Processing Charter
[Updated: June 2026]

Background: This committee studies advanced manufacturing and quality assurance methods as applied to production of vertical lift aircraft hardware; including but not limited to new processing techniques, nondestructive evaluation, or unique methods used to produce high quality hardware. It also addresses disciplines that support design productibility, as well as the use of UAS for inspection and related assessment purposes.

Mission: foster, promote, and enhance technical excellence, as well as support dissemination of latest information and advancements in the following technical areas:

a) Advanced manufacturing processes such as direct digital manufacturing, augmented reality for shop floor assembly, rapid prototyping, composite repairs for field support, ergonomic analysis to improve safety in manufacturing, etc.
b) Highly-efficient production control techniques (in-process imbedded sensors, nondestructive evaluation, smart materials, etc.)
c) Advanced tooling concepts and methods
d) Lean manufacturing practices

Charter:

a) Sustain a diverse Committee membership with balanced representation of industry, government, and academia.
b) Organize and conduct high-quality sessions at the annual Forums.
c) Support the AHS *Journal* review process to ensure technical excellence in IMPACT areas
d) Promote and conduct relevant and timely technical specialists' meetings and workshops
e) Promote and conduct collaborative research programs and multi-year workshops
f) Promote and sustain communication and coordinated activities with other Technical Committees as appropriate
g) Promote membership affiliation and communication with other professional societies

Manufacturing Technology and Processing Committee Bylaws

Committee Membership and Term Durations

a) Terms for Chair and Deputy Chair are two years each.
b) The existing Chair and Deputy Chair nominate the new Deputy chair, which is accepted by vote of the full Committee.
c) Normal progression is to step from Deputy Chair to the Chair post
d) Terms for Session Chair and Co-Chair are one year.
e) Session Chair volunteers and/or are nominated by Committee Chair and accepted by vote of full Committee.
f) Desirable for Session Co-Chair to become Session Chair in the following year.

Committee Roles and Responsibilities

Chair:

a) Maintain Committee mission statement, charter, by-laws, membership records, and calendar.
b) Maintain current list of Committee members and addresses.
c) Communicate with Committee members as needed.
d) Nominate Deputy Chair.
e) Solicit volunteers and/or nominate Session Chair.
f) Prepare for and conduct Committee meetings.
g) Send out Committee meeting announcements.
h) Prepare Committee meeting agenda(s).
i) Release Committee meeting minutes.
j) Participate on Sub-Committee for Best Paper Review.
k) Communicate Best Paper and Presentation results to Society's Technical Council and Committee members.
l) Write the yearly Vertiflite Highlights article on the basis of Committee input.
m) Maintain contact with the Society's Technical Director and members of the Technical Council.
n) Prepare semi-annual Committee reports and communicate to Technical Council.
o) Represent the Committee in the Society's planning processes as required.
p) Coordinate with other Technical Committees as required.
q) All other responsibilities of regular members.

Deputy Chair:

a) Take and document Committee meeting minutes.
b) Assist Chair as needed with *Vertiflite* Highlights article.
c) Assist Chair in representing the Committee in Society's planning process as required.
d) Assist Chair in nominating new Deputy Chair.
e) Participate on Sub-Committee for Best Paper Review.
f) All other responsibilities of regular members.

Session Chair

a) Revise Call for Papers for Annual Forum.
b) Gather Forum paper abstracts, coordinate with other Technical Committee Session Chairs to categorize papers and distribute abstracts to the Committee for evaluation.
c) Select papers based on Committee abstract review and inform authors of selection.
d) Organize IMPACT sessions(s) with Co-Chair.
e) Monitor progress in paper preparation.
f) Coordinate with AHS for correct Forum agenda.
g) Lead Best Paper review Sub-Committee and communicate results to Committee Chair.
h) Chair one session at the annual Forum.
i) All other responsibilities of regular members.

Session Co-Chair

a) Assist, as needed, Session Chair with Call for Papers, assessment of abstracts, organization of impact sessions, and monitoring of papers.
b) Participate on Best Paper review Sub-Committee.
c) Chair session at the annual Forum.
d) All other responsibilities of regular members.

Members

a) Participate in at least one Committee meeting a year at Annual Forum.
b) A representative should be sent when direct participation is not possible.
c) Non-participating members can have their membership revoked by a review of a subcommittee formed by the Chair.
d) Assist with the evaluation of Forum abstracts.
e) Assist with the evaluation of presentation quality of presenters in IMPACT Sessions at the annual Forum.
f) Assist with the evaluation of Forum IMPACT papers for recommendation for publication in the AHS Journal
g) Assist with the evaluation of the technical papers for the Best Paper recommendation.
h) Submit to the Chair yearly inputs for the Vertiflite Highlight article.
i) Participate in Committee Specialist meetings, workshops, and other activities.
j) Accept and carry out action items assigned, as appropriate, during Committee meetings.
k) Participate in the nomination and selection of new members of the Committee.

Modeling and Simulation Technical Committee Charter

Mission: the Modeling and Simulation Committee provides focus on the use of virtual and constructive simulation in support of rotorcraft engineering design, test and evaluation, military doctrine development and aircrew training. The primary orientation of the committee is toward effective scientific and engineering application of these simulation types as opposed to facilities, per se.

Today, simulations can be presented in a virtual reality environment, on motion platforms, desktop workstations, or in portable containers and can be networked interactively with other simulations and live events. State-of-the-art computers are capable of simulating aircraft components, sensors and systems to a high level of fidelity. They can provide realistic out-the-window and sensor imagery. Sophisticated algorithms can be incorporated to simulate operational conditions that pilots and crew might encounter. Simulation applications in the areas of handling qualities, flight controls, pilot vehicle interface, armament, crew training, operations analysis, and the development of tactics, techniques and procedures for military operations are becoming routine as a part of design and development.

Charter: the Modeling and Simulation technical committee shall strive to provide a forum for the continued use of simulation in the aircraft life cycle and to allow a means of demonstrating its application in reducing the cost of design and development

The activities of the Modeling and Simulation Committee shall be accomplished by:

a) Conducting high quality technical sessions at the Annual Forum and technical specialists' meetings.
b) Solicit its membership from a broad base of simulation users/developers in both the military and industry.
c) Hold, at least annually, a membership meeting to review yearly accomplishments and discuss future application of simulation in reducing rotorcraft development costs.
d) Interact effectively with other technical committees within the Society in order to understand the needs of these other technical disciplines and define potential areas for future simulation application.
e) Coordinate and serve as a link between the VFS and other professional societies.

Operations & Infrastructure Technical Committee Charter
[Updated June 2024]

Mission/Charter: the Operations and Infrastructure Committee will serve as the Society's focal point for addressing manned and unmanned applications of rotorcraft and powered lift aircraft in military, civil and paramilitary operations, to include it's supporting infrastructure. The Committee will provide a channel for the collection and distribution of operational and technical information and will help focus industry and Government modeling, simulation, design standards, and technological solutions, including promising emerging technologies and operational challenges in mission areas to include:

a) attack/assault, reconnaissance, command and control
b) vertical employment
c) anti-submarine warfare
d) heavy lift
e) search and rescue
f) offshore oil support
g) aircraft medical services
h) scheduled passenger transport
i) aerial application
j) human external cargo
k) law enforcement
l) electronic news gathering
m) cargo operations

The committee will:

a) Conduct a technical session at the annual Forum.
b) Promote regional technical meetings, encourage the use of the Society's publishing media.
c) Establish the Society as the provider of technical expertise and leadership to the rotorcraft, powered lift, and UAS communities and related technical organizations.
d) Solicit its membership from a broad spectrum of users, designers, developers, and researchers from the industry, military/government, and academia.

The committee will further serve as a forum for modeling, simulation, and technical information for rotorcraft powered-lift and UAS operational and technological solutions in the following areas:

a) Concepts of Operations
b) Tactics/Techniques
c) Tools/Technologies and Methodologies
d) Aircraft Survivability/Vulnerability Analysis
e) Electronic Decision Aiding to Operations
f) Command/Control/Communications Techniques
g) Intelligence/Data Gathering Applications
h) Manned and Unmanned Teaming Applications
i) Supportability Techniques
j) Extreme Weather Operations Techniques
k) Infrastructure Modeling
l) Urban Weather Environment Challenges

Product Support Committee Charter
[Updated May 2020]

Mission/Charter: to influence the industry to implement product support enhancements, by recognizing the diversity of requirements in new and existing fleets.

This committee is dedicated to maturing the development and application of technology, processes, and innovations that support vertical lift operators and maintainers. The committee strives to influence the industry to integrate design concepts

and enhancements that will contribute to the operators' supportability, safety and economy of operation.

Propulsion Technical Committee Charter

Mission/Charter: the Propulsion Committee charter is to emphasize and further the advancement of propulsion technology for vertical flight and foster its useful application throughout the industry with a focus on airworthiness safety. This includes:

a) Technology for power plant and power transmission design and criteria including their interaction
b) Airframe interface, performance, operational environment, related accessories, and subsystems including
    i. APU's starting systems
    ii. fuel systems
    iii. hydraulic systems
    iv. pneumatic systems etc.

The Propulsion Committee places primary emphasis on the following areas:

a) thermodynamics
b) internal aerodynamics
c) dynamics
d) control systems
e) drive system technology
f) propulsion systems performance and operational characteristics
g) EHUMS
h) reduction of operating costs
i) weight or maintenance requirements
j) installation concepts
k) environmental requirements, and integrated control systems including simulation uses to enhance propulsion systems.

These activities will be furthered through:

a) High quality technical sessions held at the annual Forums and technical specialists' meetings.
b) Technical papers and activity summaries prepared for publication in the Journal and *Vertiflite*.
c) Maintain a strong technical organization, providing a training ground for new society leaders and maintain adequate historical records.
d) Coordinate and serve as a link between the Society and other professional societies as needed.

Safety Committee Charter
[Updated June 2023]

Mission/Charter: The Safety Technical committee was created to increase the emphasis of safety in all technologies that are integral to the design, certification and operation of VTOL aircraft weighing more than 55 pounds. Safety is to be considered both at the component reliability level and integrally at the level of the helicopter and its operations. The aim is to substantially increase the safe operation of the helicopter and increase survivability of its occupants in the event of an unsafe situation.

The committee will:

a) Study the application and benefits of technology in order to negate the safety critical hazards to commercial, private and military rotorcraft in worldwide operations.
b) The Safety technical committee will also coordinate the VAST initiatives and mitigation strategies within the Society's technical committees and promote the development of suitable technologies.

Committee Membership: the Committee's membership will include a small group of "core" members and liaison members from the other Society's technical committees.

Structures & Materials Technical Committee Charter
[Formed February 2005]

Mission/Charter: the Structures & Materials Technical Committee should strive to satisfy the technical, educational, informational, and advocacy needs of the structures and materials community with interest in rotorcraft flight. The helicopter structure provides the platform that supports all systems necessary for aircraft performance. The helicopter structure should, therefore, be designed such that the pilot can successfully perform the aircraft's mission. The designed-in capabilities of the structure should assure readiness of the aircraft.

The Structures &Materials Technical Committee (S&M TC) shall strive to advance the state-of-the-art in all technical areas of structural analysis and materials. The technical areas shall not only include the behavior of materials and the fundamental methods of structural analysis but will also include the advances in these fields. Advances in the methods of analysis, for example, will include improved accuracy and faster turn-around times through the use of advanced engineering and computing resources. Advances in materials, for example, shall include comprehensive documentation of the material behavior pertinent to the rotorcraft industry. The use of resources, such as, large-model visualization and integrating the interaction of multi-disciplines, should be encouraged to enhance concurrent engineering within the Integrated Product and Process Development process. The goals of advances in structural and materials should be directed towards rapidly producing a lighter, more capable quality product less expensively.

These activities will be coordinated through:

a) The organs of the Society
b) Technical sessions and technical specialists' meetings will be arranged to foster advancement and interest at international, national, and regional levels
c) Technical papers will be solicited for the Journal and *Vertiflite* to encourage the above goals.

The Structures & Materials Technical Committee shall:

a) Maintain a strong technical organization and provide the training ground for upcoming Society leaders.
b) Maintain historical records of its activities.
c) Interact constructively with other technical committees within the Society to further its goals.
d) Serve as a link between the Society and other professional societies for all structures and materials activities.

Fatigue and Damage Subcommittee Charter

Mission/Charter: the main purpose of this subcommittee is to foster the advancement of the technologies of fatigue and damage tolerance in rotorcraft design. This is primarily accomplished in two ways:

1. First, the subcommittee offers a forum for discussing the current issues involved in these two technologies and provides a means of keeping open communication amongst the subcommittee members and the rotorcraft community in general.
2. Second, the subcommittee seeks to investigate and clarify the details involved in making these technologies successful through member participation in round-robin technical problems.

Systems Engineering & Architecture Technical Committee Charter
[Formed May 2010; Updated July 2026]

Mission: to foster, promote, and enhance systems engineering, certification & architecture practices with a cross functional mindset from capability instantiation through design, manufacturing, and field support.

Charter: the charter of the Systems Engineering & Architecture Technical Committee is to:

a) Promote a unified understanding of Systems Engineering & Architecture through the Society.
b) Cooperate with the rotorcraft community on common Systems Engineering & Architecture interests.
c) Educate the rotorcraft community about Systems Engineering & Architecture best practices.

Focus areas include:

a) Systems Engineering & Architecture methodologies, frameworks, and modular & open system approaches (MOSA) to ensure the effective development, delivery and upgradability of capability through the implementation of a balanced approach with respect to cost, schedule, performance, and risk, using integrated, disciplined, and consistent practices.
b) The discipline and practice of Systems Engineering for students and practicing professionals to promote learning, career growth and development.
c) How practitioners apply the role of Systems Engineering in supporting the development of robust, certifiable, and ethical Artificial Intelligence (AI) systems, as well as the transformative potential of AI tools in revolutionizing the practice of Systems Engineering.

The committee will:

a) Promote a unified understanding of Systems Engineering & Architecture in the international vertical flight community through publication of papers and the organization and development of technical sessions for the Society's Forum and conferences.
b) Collaborate with the other Technical Committees and other professional societies' technical committees in areas of mutual interest to promote product, technology, and process application; lifetime learning and career

growth & development.
c) Recruit and maintain active members with representation from the rotorcraft industry as well as others in academia, Department of Defense (DoD), and National Aeronautics and Space Administration (NASA) organizations. The committee members are expected to have the full support of their organization.

Additional areas of responsibility include but not limited to:
a) Planning agendas
b) Selecting technical session topics
c) Soliciting speakers and authors for applicable focus areas
d) Reviewing and evaluating papers to be presented
e) Choosing technical session chairpersons
f) Selecting award recipients
g) Maintaining and operating with succession plans for the Systems Engineering Technical Committee Chair & Deputy Chair.

Test & Evaluation Technical Committee Charter
[Updated July 2024]

Mission: to assess and promote national and international Vertical Lift Test and Evaluation domain activities and knowledge. To influence the advancement and relevance of Vertical Lift Test domain processes and practices impacting design effectiveness, flight safety, and regulatory frameworks. And develop and foster young and diverse professional member engagement in the Vertical Lift Test and Evaluation domain.

Charter:
a) Maintain a strong technical committee membership, including representatives from industry, government, and academia from all areas of the vertical flight community and all test and evaluation specialist domains.
b) Organize high quality VFS Forum sessions.
c) Organize and conduct relevant Technical Specialist meetings.
d) Support the VFS Journal to ensure technical excellence.
e) Promote communication with other Technical Committees and other professional societies.
f) Promote VFS membership affiliation, with a focus on rejuvenation and diversification.
g) Establish the VFS as an organization to which the government, industry, academia and the general public can look for assistance, direction, and leadership with respect to vertical flight aircraft test and evaluation

Committee Structure: the committee operates through the dedication of volunteers and should include representation from industry, government and academia. An annual committee meeting is held generally in conjunction with the Society Annual Forum.
a) The number of regular committee members should be no more than 16, including the Chair.
b) Former committee members who made a distinct contribution and are recognized experts in the field of test and evaluation may be nominated as Emeritus members. Emeritus members are not counted as regular committee members.
c) Membership should achieve a balanced representation of the active organizations, industry, government, and academia.
d) The Committee members should be active and recognized professionals in the field of test and evaluation.
e) Commitment should be obtained from the members and their supporting organization that the member will be able to participate at one committee meeting a year. Inactive members will be removed from the committee.
f) Periodic turnover is encouraged to bring new energy and ideas and to promote and encourage participation in the Society's activities.
g) The committee elects the officers with the Chair being endorsed by the Operation & Product Support Deputy Technical Director.

Committee Officers

Chair: terms for Chair are two years.
a) The Chair position should be held alternatively by representatives from the helicopter industry, government and academia.
b) The Chair should provide a successor, preferably an experienced committee member, and should ensure that at least one member is willing to serve.
c) The Chair and the Deputy Chair nominate the new Deputy Chair.
d) The Deputy Chair will normally progress to the Chair position.
Chair Roles and Responsibilities:

a) The Committee Chair organizes and leads the annual meeting.
b) Communicates with Committee members as required.
c) Nominates Deputy Chair.
d) Solicits volunteer or nominates Session Chair.
e) Prepares Committee agenda.
f) Communicates Best Paper and Presentation results to the Technical Director.
g) Solicits papers for presentation to the yearly *Vertiflite*.
h) Represents the Committee in VFS planning process.
i) Coordinate with other Committee Chairs.

Deputy Chair: terms for Deputy Chair are two years.

a) Progresses to the position of Chair.
b) Assists the Chair to nominate the next Deputy Chair

Deputy Chair Roles and Responsibilities

a) The Deputy Chair takes Committee meetings minutes.
b) With the participation of the Committee members evaluates the papers presented as potentials for publication in the VFS Journal.
c) Maintains contacts and assists the Chair as needed with *Vertiflite* articles.
d) Assist the Chair with the preparation of the next Committee meeting.
e) Serves as the Committee Secretary.

Session Chair: term for Session Chairs is one year.

a) Session Chair volunteer or are nominated by Committee Chair and then approved by the Committee.
b) If more than one session planned may suggest to the Committee Chair to nominate a Session Co-Chair

Session Chair Roles and Responsibilities:

a) Revises and publishes the Call for Papers for the Annual Forum.
b) Responsible for gathering the paper abstracts and coordinating the distribution to the Committee members for review.
c) Selects the papers based on Committee review and informs the authors.
d) Monitors final papers presentation.
e) Chairs the Technical sessions.

Committee Members: terms for Members are three years.

Committee Members Roles and Responsibilities:

a) Participate in one Committee meeting at the Annual Forum.
b) Evaluate the Papers presentation.
c) Submits to the Chair information to be presented in the *Vertiflite*.
d) Participate in workshops and technical meetings.
e) Participates in the nomination and election of new members of the Committee.