

**Unified Forecast System
Community, Education, and Outreach Team
Strategic Implementation Plan 2025 - 2028**

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Introduction and Background

The Unified Forecast System Community, Education, and Outreach Team (UFS CEO) supports the UFS¹ Community, as outlined in the [UFS Strategic Plan 2021-2025](#).

The UFS Community works collaboratively with NOAA's Earth Prediction Innovation Center (EPIC) to empower sectors across the Weather, Water, and Climate enterprise to actively innovate and contribute towards the advancement of accurate and reliable weather forecasting. The mission of EPIC is to be the catalyst for community research and modeling advances that continually inform and accelerate advances in our Nation's operational forecast modeling systems.²

The vision for the Unified Forecast System is to continuously improve world-class predictions of weather and climate to assure the protection of life and property and the advancement of prosperity.

The purpose of this document is to outline the UFS CEO Team (1) membership, (2) initiatives, (3) deliverables and success metrics, and (4) communication tools and contacts. This document shall be reviewed every two years to ensure ongoing relevance and accuracy.

The UFS Community, Education, and Outreach (UFS CEO) Team is made up of UFS Community volunteers from across the weather, water, and climate enterprise. This includes partners from NOAA offices, non-NOAA federal offices, collaborative institutes, academia, and the private sector.

Objective 1: Community

This objective aims to support existing members of the UFS community and promote collaboration by:

- Strengthening the UFS open-science community environment through inclusive decision making through open meetings, ongoing community surveys to collect community member feedback, and publicly accessible information and resources. This includes providing support and facilitating partnerships between UFS Steering Committee subgroups, academia, industry, and the broader public.

¹ The UFS is defined as a community-based, coupled, comprehensive Earth modeling system. The UFS numerical applications span local to global domains and predictive time scales from sub-hourly analyses to seasonal predictions. It is designed to support the [Weather Enterprise](#) and to be the source system for [NOAA's](#) operational numerical weather prediction applications. UFS community access (cloud resources and sandbox) is maintained by the [Earth Prediction Innovation Center](#).

² Read EPIC's Strategic Plan [here](#).

- Utilizing social science best practices and strategies for building and supporting a UFS Community of Practice (CoP)³ to create and maintain a **UFS CEO Team Strategic Implementation Plan**.

Objective 2: Education

This objective aims to teach students, users, and interested partners how to use the UFS by:

- Updating and providing access to information and resources that support UFS users. This includes online tutorials, user guides, webinars, EPIC/UFS websites, newsletters, etc.
- Building and maintaining an **Academic Engagement Task Force** and **Student Engagement Plan** to strategically reach and include academic stakeholders (such as K-12, Undergraduate, Graduate, University Faculty, and the public). This includes collaborating with current and new **UFS Student Ambassadors** to enhance academic engagement with the UFS.

Objective 3: Outreach

This objective aims to improve public understanding of and engagement with the UFS by:

- Actively participating in a broad range of channels that promote information and content sharing about the UFS. Including, but not limited to, social media channels such as X, LinkedIn, and Instagram.
- Sustaining a cohesive identity for the UFS community through branding and effective communication. This involves cooperation with partner organizations, NOAA Communications, and following 508 compliance and any other relevant policies.

UFS CEO Team

Membership:

The UFS Community, Education, and Outreach Team is open to volunteers from across the weather, water, and climate enterprise, including academia, industry and government and is focused on education and outreach activities for the UFS. Membership includes at least one representative from each UFS Steering Committee working groups (or future UFS Implementation Team⁴ (UIT) Subgroups), at least one representative from the EPIC Program Team, and at least one representative from the EPIC contract. The UFS CEO Team will be led by two co-chairs, with support from a webmaster and the UFS Secretariat. For more information

³ A Community of Practice (CoP) is “a flexible group of professionals, informally bound by common interests, who interact through interdependent tasks guided by a common purpose and thereby embodying a store of common knowledge” (Jubert 1999).

⁴ It is proposed to change the name of the UFS Steering Committee to the UFS Implementation Team (UIT) in the new UFS governance structure. The UIT will have 4 subgroups where the current working groups and cross-cut teams will be grouped into.

on the roles & responsibilities, please see the [UFS CEO Team Charter](#). See Appendix A for a current membership list.

Coordination Meetings:

The UFS CEO Team meets bi-weekly and is open for anyone to join. The Co-chairs meet on a bi-weekly basis to review progress and any action items for the UFS CEO Team. Additionally, the Webmaster, UFS Secretariat and the Co-Chairs hold bi-weekly meetings when needed.

EPIC and UFS Collaboration

The UFS CEO Team works closely with EPIC and its ECE team to build the UFS community, and educate and support the community as it grows. Many of the members from the EPIC ECE team attend and contribute to the bi-weekly UFS CEO Team meetings, helping push forward various initiatives laid out in this document. Additionally, members of the UFS CEO Team take part in EPIC's program increment planning each quarter, providing key stakeholder feedback and helping align EPIC with the communities' needs. The table below shows the collaboration between the EPIC ECE team and the UFS CEO Team, through routine meetings/engagement.

Meeting/Event	CEO Team Members	ECE Team Members	Frequency/Cadence
UFS CEO Team Meetings	Facilitates	Attends	Bi-Weekly
UFS Steering Committee Open Meetings	Attends	Attends	First Friday of each Month
UFS Steering Committee Executive Meetings	Attends	Attends	2nd and 4th Friday of each Month
EPIC ECE Team Stand Ups	Attends/ Provides Input	Facilitates/Manages	Daily, Monday through Thursday
EPIC Sprint Reviews	Attends/ Provides Feedback	Facilitates/Manages /Presents	Monthly
EPIC Quarterly Review Meetings	Attends/ Provides Feedback	Facilitates/Manages /Presents	Quarterly
EPIC Program Increment Planning	Attends/ Provides Input	Facilitates/Manages /Presents	Quarterly

EPIC Deliverables	Reviews as Needed or Requested	Prepares and submits to EPT as scheduled	As Scheduled with the EPIC Program Team (EPT)
UFCW Planning Meetings	Attends/ Participates	Facilitates/Manages	Weekly to Bi-Weekly from January through the UFCW event

Initiatives

Academic Task Force

The UFS CEO team will reach out to those within academia to create a task force. This task force will focus on finding creative ways to improve training and educational materials for the UFS. This task force will also enable and encourage others in academia to incorporate the UFS into their classrooms and research projects.

UFS Student Ambassador Program

The UFS Student Ambassador Program started in 2023 when a William M. Lapenta student intern served as the first UFS Student ambassador and created a student engagement plan. The program grew the following year and built upon work completed by the first student ambassador. Through the UFS CEO Team, we would like to continue expanding the student ambassador program each year by inviting more students to be involved in the summer workshop and with the UFS applications.

The next initiative for the UFS Student Ambassador will be updating the Graduate Student Test. The goal would be to create a newly updated tutorial called a “**Usability Assessment**” that would allow anyone, regardless of their coding or research background, to be able to run the UFS. Revamping this “test” would include reviewing and updating the existing graduate student test tutorial material, documenting the process, and collaborating with the EPIC team to create new tutorial material as necessary for the success of the program. Ideally when completed, this **Usability Assessment** could be shared and used at universities across the US to increase academic engagement and modeling code usability.

Additional initiatives may be started at any time and will be added to this section when appropriate.

UFS CEO Deliverables & Success Metrics

This section outlines a list of current deliverables and how the UFS CEO Team coordinates with the EPIC Community Engagement (ECE) Team to accomplish them.

Deliverables

The table below outlines the current deliverables related to UFS community, education, and outreach teams but it is not a comprehensive list. Additional items can be added at the UFS CEO Team Co-chairs discretion.

Deliverable	CEO Team	ECE Team	Frequency/Cadence
Community, Education, and Outreach Charter	Creates/Edits/Maintains	Reviews	Review annually
UFS CEO Strategic Implementation Plan (this document)	Creates/Edits/Maintains	Reviews	Review annually
Student Engagement Plan	Creates/Edits/Maintains	Reviews	Review annually
EPIC Community Portal (epic.noaa.gov)	Reviews/Provides content suggestions	Edits/Creates	Ongoing (Update on a monthly basis)
UFS Community Portal (ufs.epic.noaa.gov)	Edits/Creates	Reviews/Provides content suggestions	Ongoing (Update on a monthly basis)
Communications Strategy (currently EPIC's CSD document)	Reviews	Creates/Edits/Maintains	Review annually
Membership Roster	Maintains/Updates	Reviews	Review Quarterly
UFS Mailing List	Maintains/Updates	N/A	As Needed
UFS Community Surveys	As Needed	Reviews	As Needed
Current Action Items Document	Maintains/Updates	Contributes	Ongoing (Update Bi-weekly)
UIFCW Annual Workshop	Contributes	Plans/Executes	Annually
UIFCW Annual Report	Contributes	Edits/Creates	Published Annually
UFS Insights (Newsletter)	Contributes	Edits/Creates	Published Quarterly

Social Media Posts (LinkedIn, X, and Instagram)	Contributes	Creates/Publishes	Weekly
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Success Metrics

Measurable Outcomes

Measurable outcomes are quantitative measures that represent successful community engagement and collaborative participation within the UFS community. Outcomes will be measured at the most relevant timescale (daily, weekly, monthly, annually). The UFS CEO Team, in collaboration with the ECE team, are responsible for ensuring accurate monitoring, updating, and presentation of these outcomes.

- # Website views (monthly)
 - # of Newsletter page opens
- # webinars (quarterly)
 - # webinar views/attendees
- # UIFCW attendees (annually)
 - # students
 - # new attendees
 - % change
 - variety across sectors
- # on UFS mailing list (semi-annually)
- # members in WGs (semi-annually)
- Social media engagement metrics (quarterly)
 - Posts, followers, etc.
- # of public presentations (annually)

On an annual basis, ECE and the UFS CEO team should draft an informal report that includes most, if not all, of these metrics and share them with the broad community.

Communication Tools & Contacts

Communication Tools

To achieve its goals, the UFS CEO has access to several communication tools. Audiences include: UFS Community (Federal/State Government, Academia, Industry), students, the UFS Steering Committee, UFS working groups and cross-cutting teams, Model component groups, International collaborators, and the General Public.

- UFS and EPIC Community Portal
 - UFS/EPIC related news, including: UFS Insights newsletter (current and past issues), relevant blog posts, and events pages
 - About UFS: General-public description of the UFS, its community and major partners/stakeholders, High-level technical documents, governance overview, Governance and key documents,
 - Code: comprehensive code pages for each UFS application, get started information, Descriptions of current UFS Working groups.
 - Support: training resources, FAQ pages to common questions, GitHub discussions, and technical FAQs
 - Proposed update cycles
 - Regular updates
 - Weekly updates to News and Events
 - Monthly updates to articles
 - On-demand updates
 - Articles announcing code releases
 - Items of interest to the community
 - Success Stories
 - Monthly updates to either the UFS or EPIC community portal, with a complementary social media post
 - UFS Community Portal (ufs.epic.noaa.gov)
 - This is managed by the *Webmaster* (currently held by Alex Alder, OSTI), with content reviewed by the CEO Co-Chairs and other relevant stakeholders.
 - Update Cadence: At least Monthly
 - EPIC Community Portal (epic.noaa.gov)
 - This is managed by the ECE team, with content reviewed and approved by the EPIC program, CEO Co-Chairs, and other relevant stakeholders.
 - Update Cadence: At least Monthly
- UFS Webinars
 - Managed by the *Webmaster* (Alex Alder, OSTI)
 - UFS Webinar - [Suggest a Speaker Form](#)
- Email Communications
 - Managed by the *UFS Secretariat*
 - Content is reviewed by the UFS CEO Co-Chairs prior to distribution
- UFS Community Calendar (Google)
 - Managed by the *UFS Secretariat*
 - *Add the UFS Community Calendar here*
- Social Media
 - Utilize the EPIC social media accounts on LinkedIn ([noaaepic](#)), X (@noaaepic), and Instagram (@noaaepic).
- UIFCW

- Annual workshop that brings the UFS community together to celebrate accomplishments and collaborations, discuss challenges and opportunities, and to expand knowledge of the UFS.

Contacts

- NWS Communications:
 - [Susan Buchanan](#) (NOAA Public Affairs)
- OAR Comms
 - [Mike Walker](#) (OAR Comms); [OAR comms team](#)
- Weather Program Office OAR:
 - [Jennifer Vogt](#) (UFS CEO NOAA co-chair)
 - [Maoyi Huang](#) (EPIC PM)
 - [Justin Gehrts](#) (WPO Comms)
- NCAR/DTC
 - [Mike Ek](#) (DTC)
 - [Louisa Nance](#)
- UFS Community
 - [Alison Gregory](#) (UFS CEO Community co-chair, UCAR)
 - [Cindy Bruyere](#) (UCAR, Deputy Director for Scientific Partnerships and Services Center, CPAESS)
- NWS Office of Science and Technology Integration (OSTI):
 - [Kevin Garrett](#) (OSTI Representative, UFS R2O)
 - [Alex Alder](#) (UFS Community Portal)
 - [Shira Francis](#) (UFS Secretariat)
- GSL
 - [Ligia Bernardet](#) (CCPP)
 - [Curtis Alexander](#) (SRW WG Co-lead)
- PSL
 - [Jeff Whitaker](#) (R2O)
 - [Phil Pegion](#) (DA)
- NSSL
 - [Lou Wicker](#) (SRW WG Co-lead)
 - [Keli Pirtle](#) (NSSL Comms)
- GFDL
 - [Lucas Harris](#) (Dynamics & Nesting WG Co-lead)
- EMC
 - [Jacob Carley](#)
 - [Mike Barlage](#) (Land WG Co-lead)

UFS CEO Staffing Resources

To make sure we have the people we need for this project, we're assuming the following:

- Each UFS Steering Committee⁴ working group/team will assign one person to the CEO Team. This person needs to have time to attend bi-weekly CEO meetings and regularly contribute to CEO projects and initiatives.
- NOAA will provide a co-chair for the UFS CEO, dedicating 4-8 hours per week for one or two years.
- Non-NOAA partners will also provide a co-chair for the UFS CEO, dedicating 4-8 hours of administrative time per week for one or two years.
- We'll maintain official funding for someone to handle secretariat and internal communications for the UFS Steering Committee⁴. This will take about 15-20 hours per week.
- We'll also maintain official funding for someone to manage the UFS Community Portal (ufs.epic.noaa.gov), which will take about 4-8 hours per week.

Signatures

Dr. Hendrik Tolman
Senior Advisor for Advanced Modeling Systems,
NOAA / NWS / Office of Science and Technology Integration
UFS Steering Committee Co-Chair

Appendices

Appendix A

[UFS CEO Team Membership Roster](#)

Appendix B

Important Links/References

- [UFS CEO Team Charter](#)
- [UFS 2021-2025 Strategic Plan](#)
- [EPIC Comms Strategy Document](#) (will need to update with new link)

Appendix C - Relevant Definitions

Name	Acronym	Description
UFS Implementation Team	UIT	A newly envisioned UFS Steering Committee ⁴ .
Community, Education, and Outreach Team	CEOT	UFS Steering Committee working group responsible for communication, education and outreach initiatives related to the UFS.
Unified Forecast System	UFS	The Unified Forecast System (UFS) is a community-based, coupled, comprehensive Earth modeling system. It is designed to provide numerical guidance for applications in the forecast suite of NOAA's National Centers for Environmental Prediction (NCEP). The UFS applications span local to global domains and predictive time scales from hours to greater than one year. The UFS is also intended to be an exploratory model that can include research elements that are not part of production suite applications.”
Earth Prediction Innovation Center	EPIC	What is EPIC? The Earth Prediction Innovation Center (EPIC) was established to advance weather modeling skill, reclaiming and maintaining international leadership in the area of numerical weather prediction, and improve the transition of research into operations. EPIC will enable the most accurate and reliable operational

		numerical weather prediction system in the world. By adopting a community modeling paradigm and making NOAA's model code available to the public, external world-class scientists and researchers have the opportunity to collaborate on new model improvements that can eventually be integrated into the operational model. Instead of keeping research and development inside of NOAA, the entire Weather Enterprise (i.e., government, industry, and academia) will be able to work with NOAA to improve our modeling system, thereby accelerating advancements to NOAA's mission of protecting life and property. EPIC is taking a multi-pronged approach toward facilitating scientific innovation. It is improving access to and usability of the UFS through an open, collaborative cloud development environment and by developing user support tools that will enable participation of experts from throughout the Weather Enterprise. As part of this endeavor, EPIC will guide usage and management of cloud development environments and provide a code repository, observational data, and other tools required for a fully-coupled, end-to-end Earth modeling system. EPIC is also investing in promising projects at varying levels of maturity along the research to operations to research (R2O2R) spectrum.
UFS Community, Education, and Outreach Team Charter	UFS CEO Team Charter	The purpose of this document is to outline the (1) purpose and scope (2) roles and responsibilities, and (3) roles and responsibilities of the UFS CEO Team.
CEO Team Strategic Implementation Plan	UFS CEO Team SIP	<i>This document.</i>
Coupled, Comprehensive Earth Modeling System		The physical environment is a complex interplay between the atmosphere, oceans, land, cryosphere, and biosphere. To accurately model one aspect of the Earth system, you must include all others. The UFS architecture fosters model coupling (e.g., air-sea-land interactions).
Community-based		The strength of the UFS is that it provides the infrastructure, tools, and code for anyone to participate. No longer is numerical weather modeling confined to government agencies and supercomputer resources. Academia and industry can dissect code, apply

		algorithms, and test the impacts of their efforts within a collaborative environment.
EPIC Communication Strategy Document	EPIC CSD	This document outlines EPIC’s communications strategy to enhance collaboration and engagement with the UFS community, the weather research community, and beyond.

Additional Resources

- NOAA Communications: <http://www.noaa.gov/NOAA-Communications>
- NOAA Social Media: <http://www.noaa.gov/stay-connected>

UFS Secretariat Roles & Responsibilities

Email Communications

This person is responsible for sending out UFS-related email announcements to the UFS mailing list when requested by the CEO Team co-chairs, ECE team, or the UFS Steering Committee Co-Chairs. All other requests will be reviewed and approved by the CEO Team co-chairs prior to being sent. This person is responsible for monitoring the UFS Secretariat Email, checking it for incoming messages at least once per business day. The UFS Secretariat is also responsible for keeping the UFS community mailing list up to date, refreshing it regularly with new additions from the UFS Communications sign up form, and removing inactive or defunct contacts.

UFS Meetings

The UFS Secretariat hosts and runs the monthly UFS Steering Committee Open Meeting, the weekly UFS Steering Committee executive meetings with EMC, as well as the semi-monthly UFS Steering Committee meetings. The Secretariat may also be asked to support other high level meetings as needed.

UFS Community Calendar

The UFS Secretariat will maintain the [UFS Community calendar](#) and ensure that meetings that should be made available to the public are shared to this calendar.

UFS Team Rosters

The UFS Secretariat will maintain and update the UFS Team Rosters on an annual basis.

Electronic Records Management

The UFS Secretariat will be responsible for maintaining organization and consistent naming conventions of documentation, ensuring proper sharing permissions are on the folders and files, and archiving older information.

UFS CEO Team

The UFS Secretariat is a member of the UFS Communication, Education and Outreach Team and supports the committee through the following activities: sharing information to the community by emailing pertinent announcements and requests out, as directed, maintaining the UFS Community Calendar, working with the UFS Community webmaster on synchronizing messaging and updates, working with the EPIC team on similar matters relating to continuity of messaging, attending the bi-weekly UFS CEO Team meetings, working with the team in planning outreach events, including participating in, planning, and attending the summer workshop (UIFCW).

UFS Webinars

Assist and coordinate with the person running the UFS Webinars on advertising to ensure a proper bank of available speakers or providing coverage hosting and running the webinar as needed.

UFS Steering Committee Documentation and Policies

The UFS Secretariat should be very familiar with the UFS overarching documents to include the following: UFS Organization and Governance and the UFS Steering Committee Charter. Support the co-chairs and UFS Steering Committee Executive council on duties related to documentation and policy updates such as providing feedback, soliciting and tracking comments/feedback, adjudication of comments/corrections, tracking document change status, etc.