FY2024 Operations Plan

Version 1.0.0

17 July 2023

Table of Contents

1 Introduction – The Wireless Innovation Forum FY2024 Objectives

The Wireless Innovation Forum (WInnForum) Board of Directors has established the following six items as high-level objectives for the Forum for the period from July 1, 2023 through June 30, 2024 in executing on the WInnForum's Strategic Plan[1]:

1.1 Brand the WInnForum as the Preferred Venue for collaborative technical exchanges on innovative solutions for wireless systems

The WInnForum will continue to execute on its "commercialization strategy", leveraging the technical expertise of its members and its reputation as an honest broker of technical information with regulatory bodies to identify and support at least one new market or new band relevant to the Forum's mission, form regional and international member driven projects supporting that market, and initiate at least one new roadmap driven project advancing the Forum's Advocacy Agenda.

1.2 Position the WInnForum as the Preferred Neutral Venue for the International Spectrum Sharing Community

The WInnForum will work to maintain and strengthen its success in the CBRS Committee (CC), Regulatory Advisory Committee (RAC), and 6GHz Committee (6 GHz) to further foster community and ensure continued success as follows:

a. Leveraging the experience in the CBRS, position the WInnForum as the venue where licensed, unlicensed, commercial, government and civil communities can collaborate on how to share spectrum.

b. Broaden focus of standards, processes and regulatory frameworks developed for the Citizens Broadband Radio Service (CBRS, FCC Part 96) and 6 GHz (FCC Part 15) to other frequency bands.

c. Identify international shared-spectrum opportunities and determine whether and how the WInnForum can participate,

d. For those international shared-spectrum opportunities that WInnForum decides to participate in, work with stakeholders to determine how to position the WInnForum to offer maximum benefit.

e. Increase visibility of WInnForum by collecting and disseminating information on radio spectrum use.

---

[1] https://www.wirelessinnovation.org/assets/Historical/Wireless_Innovation_Forum_2023_to_2027_Strat_Plan_-_Final%20-%208%20December%202022.pdf

1.3 Drive Harmonization of Mission Critical Communications Standards

The WInnForum will focus on international harmonization of mission critical communications standards through collaboration with programs and standards development organizations that are chartered to define software defined systems standards. The WInnForum will participate in the definition and integration of frameworks and architectural approaches as the basis of next generation of software defined systems standards. The WInnForum will lead the harmonization and advancement of existing and divergent software defined systems standards.

1.4 Execute on Test and Certification Strategies for WInnForum Standards

Each Committee will continue to develop the test protocols and procedures necessary to certify equipment and services based on the Committee's standards, and to accredit certification labs to perform the necessary compliance testing. Such protocols and procedures will be developed focusing on both on the present and anticipated future requirements. In addition, the Committees will collaborate to harmonize test protocols and procedures across committees to the greatest extent possible.

This document presents specific plans for achieving these high-level objectives in separate sections dedicated to the FY2024 Meeting Plan, and the respective work plans of the Wireless Innovation Committee, the Software Defined Systems Committee, the CBRS Committee, The 6 GHz Committee, the Board of Directors, and the Forum's Corporate Administration. The budget necessary to support these objectives is also addressed in the last section of this document.

2   Wireless Innovation Forum Organizational Overview

2.1   FY2024 Organizational Structure

The FY2024 Organizational Structure of the Wireless Innovation Forum is presented in Figure 1. The Forum is organized around four standing committees, whose responsibilities are summarized as follows:

- The role of the 6 GHz Band Multi-stakeholder Committee is to serve as an industry body to study and specify sharing arrangements in spectrum designated for unlicensed operation within all or part of the 6 GHz band (5925-7125 MHz). The Committee will provide technical input to inform the FCC's 6 GHz rulemaking and will facilitate the interpretation and implementation of the rulemaking that allows industry and regulators to collaborate on implementation of a common, efficient and well-functioning 6 GHz ecosystem.

  The approach to the committee's work will emphasize the technical aspects of sharing while simplifying interfaces and requirements. This is done to advance innovative and competitive sharing approaches and to increase deployment speed of AFC systems.

- The role of the Wireless Innovation Committee (WInnCmte), formerly the Advanced Technologies Committee, is to advocate for the innovative utilization of spectrum, and advancing radio technologies that support essential or critical communications:

  o   Works with wireless end users and their representatives, including network operators, government acquisition authorities and research sponsors to validate concepts and requirements against technology readiness, to document domain specific requirements, use cases and business models.

  o   Supports member organizations in identifying new opportunities for next generation products and services in each defined market domain.

  o   Works with the regulatory and public policy community to establish a global regulatory framework promoting the adoption of emerging technologies for advanced wireless systems.

  o   Provides a venue for the exchange of information on emerging radio technologies important in wireless networking and produces reports, specifications and recommendations supporting the development and deployment of advanced wireless system and next generation radio devices

  Management and oversight of this committee is provided by a Steering Group working in collaboration with a Regulatory Advisory Committee. The Steering Group is comprised of the Forum's Officers, and is responsible for setting the Forum's "Advocacy Agenda" based on member input. This document is distributed to the members of the Forum for ballot following the Forum's standard process.

- Software Defined Systems Committee (SDS): support the harmonization of SDS standards at the international level for the mutual benefits of all stakeholders to include:

  - Defining an industry driven SDS evolution roadmap for the international community

  - Profiling SDS specifications and related APIs to define internationally accepted variants that are hosted by the Forum

  - Developing extensions to SDS standards that address any gaps between the defined SDS evolution roadmap and Forum accepted SDS specification variants

  - Providing implementation and certification guides, tools etc. easing implementation and supporting proliferation

  - Establishing and managing industry led certification programs where appropriate

  Management and oversight of this committee is provided by a Steering Group working in collaboration with an [Advisory Council](#).

- The role of the CBRS Committee (CBRS), formerly the Spectrum Sharing Committee, is to serve as a common industry and government standards body to support the development and advancement of spectrum sharing technologies based on the three-tier architecture proposed for the 3.55 GHz rulemaking activities. While the 3.55 GHz band is the main focus on the initial activities, the Wireless Innovation Forum aims to advance this technology for all applicable spectrum bands that can benefit from it.

  This Committee is intended to facilitate the interpretation and implementation of FCC rulemaking to a level that allows industry and government parties to collaborate on implementation of a common, efficient, well-functioning ecosystem around this technology.

  The main activities that will be conducted in the committee include:

  - Detailing common industry and government functionality and architecture for Spectrum Access Systems (SAS), sensors, and devices

  - Interoperability requirements and protocol definition to allow for open competitive and well-functioning systems

  - Common framework for testing and integration of components of spectrum sharing technologies to allow for rapid certification and deployment and predictability, thus expanding the ecosystem and increasing utility of the spectrum

o Details of requirements, processes, and methods for protection of incumbent users as required by the spectrum rules

o Operational procedures definition for the well -functioning of the system as it pertains to spectrum assignment, managements, and interoperability

This committee is also managed by a steering group, and includes observers necessary for the full operations and support of the system.

In addition to these standing committees, the Forum also has an India Regional Committee whose objective is to support the needs of the members in the India region and to create significant interest in the activities of the WInnForum in India.

These committees are managed by the Forum's elected officers, which include the Chair and Vice Chair of the Forum, the Chief Technology Officer, Chief Marketing Officer, Chief Regulatory Officer, the Secretary, and the Treasurer.
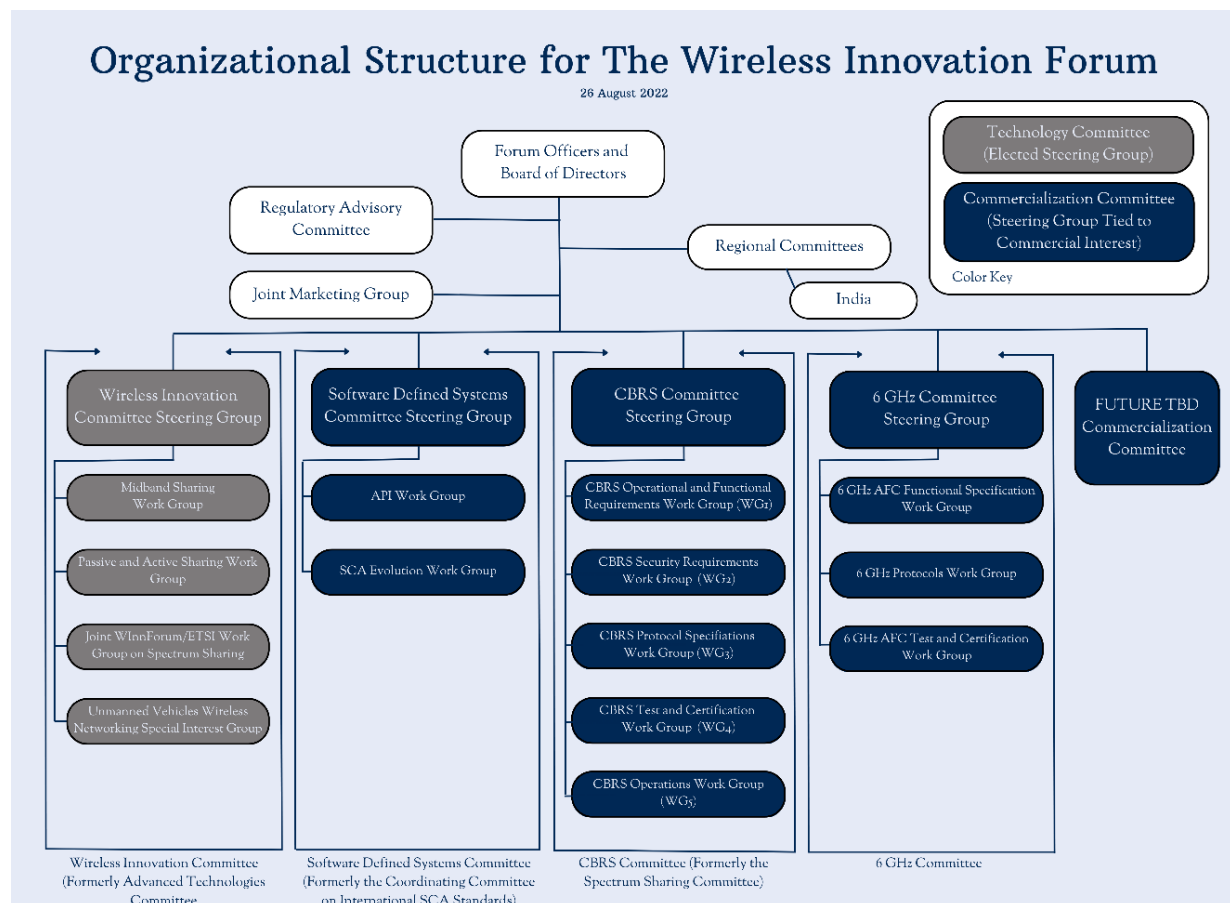
Figure 1: Wireless Innovation Forum FY2024 Organizational Structure

Management and oversight of the Forum as a whole, including the Forum's corporate affairs, is performed by the Forum's Board of Directors. These directors are elected on an annual basis, as defined in the Bylaws. The elected slate of Directors for CY2022 is provided in Table 1.

Table 1: CY2023 Board of Directors of The Software Defined Radio Forum Inc. The positions of Secretary and Academic Representative are currently vacant.

Position	Candidate	Organization
Chair of the Board of Directors	Manuel Uhm	AMD
Forum Chair/President	Mark Gibson	CommScope
Forum Vice-Chair/ Vice President	Naotaka Sato	Sony Group
Secretary	Vacant	
Chief Financial Officer/Treasurer	Ken Dingman	L3Harris
Chief Technology Officer	Andy Clegg	Google
Chief Marketing Officer	Richard Bernhardt	WISPA
Chief Regulatory Officer	Prakash Moorut	Shure
Class Directors		
Large Company	Paul Challoner	Ericsson
Medium Company	Alberto Quintana	Indra
Small Company	Pierre Jean Muller	RED Technologies
Government/Non Profit	Dawn Szelc	MITRE
Academic	Vacant	Vacant
At Large Directors		
General	Marc Adrat	Fraunhofer
General	Jean-Philippe Delehaye	DGA
General	David Hagood	Cynosure
General	David Gurney	Motorola Solutions
General	Doug Knisely	Qualcomm
General	Eric Nicollet	Thales
General	Max Solondz	Verizon

2.2 Forum Corporate Administration

Corporate administration and member services are provided to the Forum through a combination of employees, consultants, and third-party contractors. The Forum's key personnel for FY2024 are as follows:

- Chief Executive Officer (Lee Pucker) – Reporting to the Board of Directors, the Chief Executive Officer's primary responsibility is to maximize the value the Forum brings to its members.

Accordingly, the CEO drives the development of the Forum's Strategic Plan and supports the Forum's other officers in executing on that plan. The CEO proactively identifies opportunities, solves the Forum's critical problems, and makes an effort to anticipate future needs of the membership. The CEO assures that the organization and its mission, programs, products and services are consistently presented in a strong, positive image to relevant stakeholders, in particular to the Forum's membership.   The CEO, with the Treasurer, oversees the organization's finances, ensuring the Forum's member's needs are met to the maximum extent possible while maintaining financial stability as a not-for-profit organization.

- Director of Marketing and Communications (Stephanie Hamill). The Director of Marketing and Communications (MarCom) has primary responsibility for managing communications for the Forum, including internet presence and member communications, and supporting the CEO in establishing and maintaining the Forum's leadership in advanced wireless markets, evangelizing the Forum's programs and services, and supporting the organizational objectives of the Forum's membership. Reporting to the Forum's CEO, the Director of MarCom helps assure that the Forum and its mission, programs, products and services are consistently presented in a strong, positive image to relevant stakeholders, in particular to the Forum's membership.

The slate of key consultants and contractors retained by the Forum to support its members in FY2023 are as follows:

1) Virtual Inc. – Manager of the Forum's Headquarters Operations

2) InfoEx World Services – Representative for the Forum in China

3) BBD, LLP – Audits and Finance

4) Gesmer Updegrove LLP – General Legal Counsel

5) Hogan Lovells – Communications Regulatory Counsel

In addition, the Forum retains a document editor on an as needed basis to support the creation of reports, specifications, and recommendations by its members. Additional details on the Corporate Administration Work Plan for FY2024 can be found in Sections 8 and 9 of this plan.

3   6 GHz Committee (6 GHz) (Chair: Mark Gibson, *CommScope)*

3.1   *Charter and Structure*

The 6 GHz Committee (6 GHz) is a committee of The Wireless Innovation Forum that will serve as an industry body to study and specify sharing arrangements in spectrum designated for unlicensed operation within all or part of the 6 GHz band (5925-7125 MHz). The Committee will provide technical input to inform the FCC's 6 GHz regulatory activities and will facilitate the interpretation and implementation of the rules that allow industry and regulators to collaborate on implementation of a common, efficient and well-functioning 6 GHz ecosystem.

The activities to be conducted by the Committee include:

- Defining:
    - Interaction with FCC databases
    - Application of Interference Protection Criteria
    - Propagation Modeling
    - Spectrum Availability Determination
- Developing a Security Threat Assessment
- Creating an AFC Functional Specification
- Creating a Test & Certification framework

The approach to the committee's work will emphasize the technical aspects of sharing while simplifying interfaces and requirements. This is done to advance innovative and competitive sharing approaches and to increase deployment speed of AFC systems.

The Committee is ultimately a standards and technical implementation forum for industry stakeholders and developers of the spectrum-sharing technologies. The Committee will not address policy-making or liability management, but may occasionally make formal technical recommendations to the FCC or other regulatory bodies following the Forum's standard policies and procedures.

The participants of this Committee will include, but not be limited to, the following:
- Developers and operators of wireless equipment and devices
- Developers and operators of spectrum sharing systems
- Operators and service providers interested in deploying in the spectrum
- Suppliers of systems and components operating in this spectrum
- General users of spectrum outside of main providers
- Policy makers, academics, and researchers

Liaisons from other standards groups with which joint work is desired or necessary.
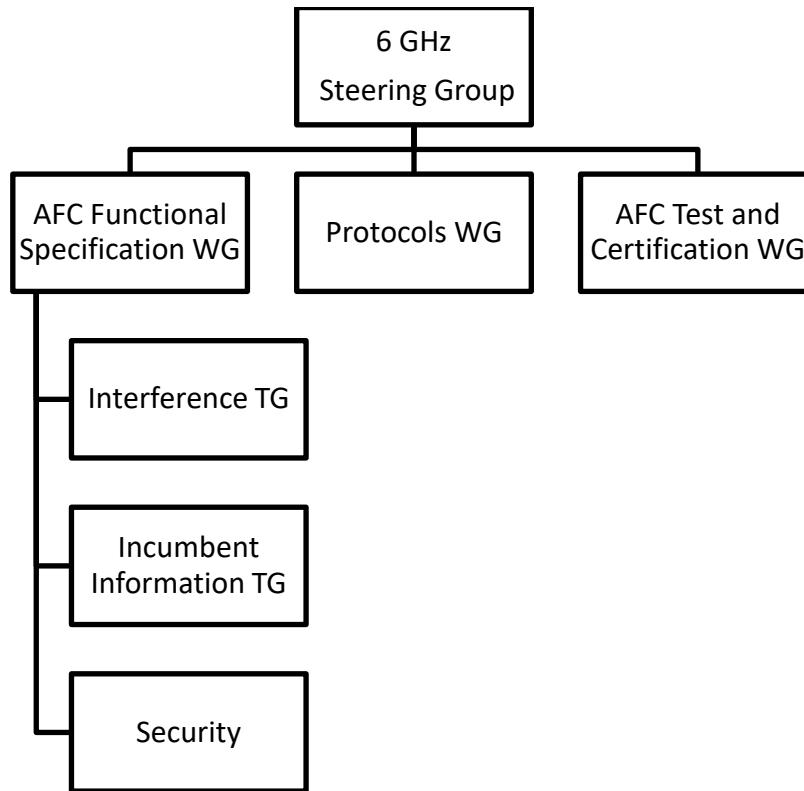
3.1.1 Steering Group

3.1.1.1 Overview

The steering group is responsible for managing the overall activity flow and ensuring consensus and agreement with results from the discussions, such that progress can be made properly and timely to serve the interest of all the stakeholders. The main activities that the steering group is engaged in should include:

- Defining the necessary subcommittees and adding new ones as required
- Prioritization of work activities in the subcommittees
- Setting objectives and desired outcome from each subcommittee
- Approving activity scope and approach for each subcommittee
- Approving the recommendations of each subcommittee
- Recommending increase of scope towards a formal standard if so determined
- Managing the committee's annual operating budget and presenting to the Board of Directors for approval
- Approving Liaison Statements to other SDOs (e.g., Wi-Fi Alliance)

Steering Group members include:

- Aruba, a Hewlett Packard Enterprise Company
- AT&T

- Baylor University
- CableLabs
- Charter Communications
- Cisco Systems
- Comcast
- CommScope
- Ericsson
- Federated Wireless, LLC
- Google
- iPosi
- Midco
- Motorola Solutions
- NCTA The Internet & Television Association
- Nokia Corp.
- Pathfinder Wireless Corp.
- Qualcomm
- RED Technologies SAS
- Shure, Inc
- Sony
- UWB Alliance
- Wireless Internet Service Providers Association

3.1.2 Partner Organizations

The Committee anticipates establishing partnerships with other organizations to advance their objectives. The Committee has executed liaison agreements with the Wi-Fi Alliance and is collaborating in the exchange and review of documentation consistent with the following: https://6ghz.wirelessinnovation.org/assets/Document%20Flow.png.

3.2 FY2024 Objectives

We are aware that work on AFC requirements is also being managed within other stakeholder groups such as the Wi-Fi Alliance. The primary objectives of the 6 GHz Committee for this year are listed below:

- Revise the AFC Functional Specification as necessary to support additional post-certification requirements.

- Revise the AFC Test and Certification Specification pursuant to the above.

- Complete the Security specifications and revise as necessary.

- Continue to work with the Wi-Fi Alliance under the liaison agreement to minimize duplication of efforts and to support the Multi-stakeholder Group as necessary. We have endorsed the following documents:

  o **RC-3006: Endorsement of Wi-Fi Alliance AFC System to AFC Device Interface Specification**
  o **RC-4009: Endorsement of WFA AFC SUT Compliance Test Plan and Test Vectors**

- Collaborate on the development of requirements and procedures regarding interference reporting and remediation.

Additional objectives may be identified as the collaboration among stakeholder groups proceeds.

3.3 FY2024 Project Plan

The 6 GHz Committee has completed a high-level project plan Nonetheless, we have identified the following tasks that should be completed:

- Revise propagation models & model input parameters as needed
- Support for point-to-multipoint
- Support for international regulatory regimes
- Directional antennas for Standard Power Devices
- Support for mobility (TBD)
- NRA Databases & operation including data recommendations (including support for any ULS changes)
- Support for interference reporting and mitigation as needed
- Canada & Mexico data (TBD)

4 CBRS Committee (Chairs: Preston Marshall, *Google* and Richard Bernhardt, WISPA)

4.1 Charter and Structure

The CBRS effort is structured into a Steering Group and five working groups.

Overall direction and committee balloting is at the level of the Steering Group. The Steering Group will meet biweekly during FY2024, unless adjusted otherwise. The Steering Group membership is as follows:

- Airspan
- Amdocs
- AT&T
- CableLabs
- Charter Communications
- Comcast
- CommScope
- CTIA
- DISH Network
- Ericsson
- Federated Wireless
- Google
- Motorola Solutions
- Nokia Corp.
- Pathfinder Wireless
- Qualcomm
- RED Technologies
- Samsung Networks
- Sony
- T-Mobile
- Verizon
- WISPA

The Steering Group is supported by five working groups:

Working Group	Title	Scope
1	Operational and Functional Requirements	Evaluate all proposed CBRS technical requirements. Scope assigned by the SG. Ongoing meetings
2	Security	Develop security requirements. As needed. No current study items
3	Protocols	Develop CBRS Interface standards
4	Test and Certification	Develop CBRS test and certification requirements, within the scope of the Forum
5	Operations	Develop and provide ongoing management of required infrastructure, including requirements and approval of organizations providing Certified Professional Installer training and certification, and CBRS Certificate Authority services.
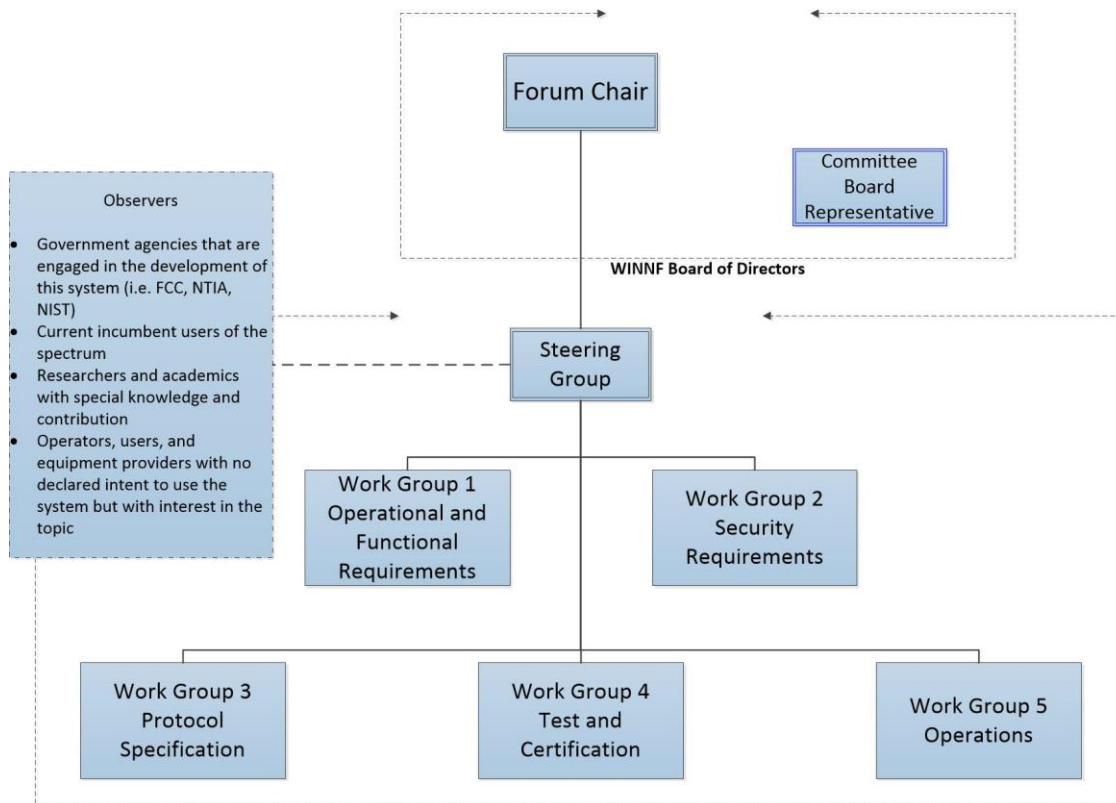
4.2 FY2024 Objectives

The effort in FY2024 will focus on issues that arise and are appropriate for standards-based solutions. These include:

- Resolution of Release 2 Compliance definition and organization of SAS and CBRS features into appropriate positions within the release structure.
- Implementation of the DoD and FCC relaxation of heartbeat intervals for operation outside of DPAs and P-DPAs.
- Improving dynamic resource allocation, such as PAL relocation, coexistence and other aspects of SAS to CBSD interaction.
- Improve propagation modeling that underlies CBRS spectrum deconfliction.
- Address opportunities for more effective or efficient use of spectrum.
- Other standards and process issues in the CBRS ecosystem that may arise.

4.3 FY2024 Project Plans

During FY2024, these requirement efforts will be executed by the existing Work Group structure. It is likely that task groups may be created for some of the major requirements efforts.

Standards changes will be addressed within the existing Work Group structure, including revisions to interfaces (WG #3) and testing/verification (WG #4)

At least one in-person meeting will be held in 4Q 23. This meeting will include both the technical committees, and reach-out to the Government to educate them on the CBRS progress, and issues facing CBRS. This meeting is intended to be held in the Washington, DC vicinity.

The CBRS Steering Group will coordinate with the Joint Marketing Committee to contribute to the overall Forum development.

5 Software Defined Systems Committee (SDS) (Chairs: Ken Dingman, L3*Harris* and Eric Nicollet, *Thales*)

5.1 Charter and Structure

The mission of the Software Defines Systems (SDS) Committee is to "oversee the evolution and adoption, at the international level, of SDS standards for the development of essential and mission critical wireless systems".

The SDS is comprised of 3 major organizational elements. A <u>Steering Group (SG)</u> that is responsible for coordinating the different activities within the SDS and ensuring that liaisons with the stakeholders and the Forum's Board of Directors are maintained. An <u>Advisory Council</u> that acts as an advisory body to the SG, representing various Government stakeholders in the identification of requirements and development of visions to support their operations. A set of <u>Working Groups</u> that focus on identifying needs/issues and providing solutions, executing approved projects. In FY2024, a new Working Group will be created, Open Systems Architecture (OSA). The current Tactical Communications Standards project and supporting SOSA™ activities will be managed from that WG and it will handle other OSA activities as they arise.

- API Working Group
- SCA Evolution Working Group
- Open Systems Architecture

The Committee supplies support for the WInnForum Joint Marketing Group.

The structure of the SDS organization is provided in Figure 3 below in conjunction with the relationship of the SDS to other WINNF organizational elements.

Steering Group Members include:
- A4ESSOR
- L3Harris Technologies
- Hitachi Kokusai Electric
- Indra
- Leonardo
- Collins Aerospace
- Rohde & Schwarz
- Thales
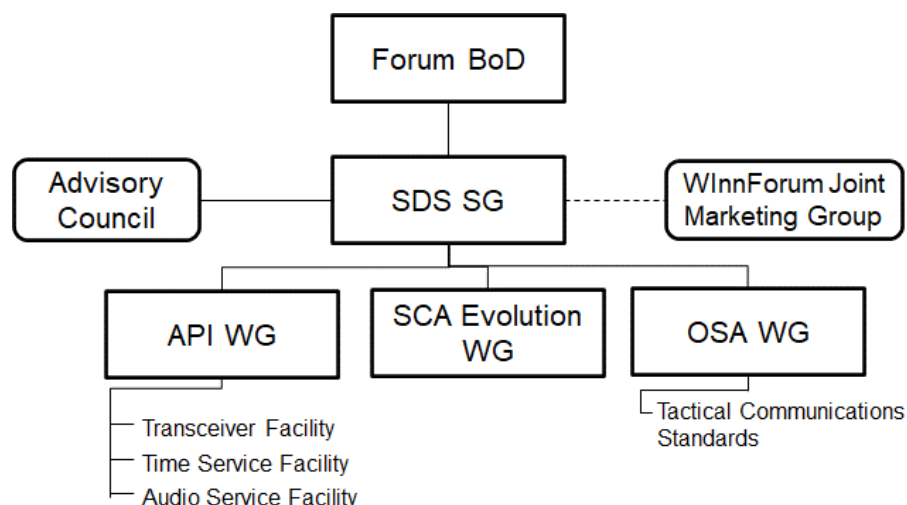
Figure 2: Software Defined Systems Committee Organizational Structure

5.2 FY2024 Objectives

5.2.1 Promote Software Defined Radio Standards and Technology World-wide

For the past few years, there has been a proliferation of Open Architecture solutions being formulated, such as FACE, MORA, VICTORY, SOSA, OMS, VITA 49, ECOA, Lavosar as well as the SCA. The Sensor Open Systems Architecture (SOSA™) has has emerged as the leading cross service OSA specification in the US DoD. The SDS Committee will work with SOSA to provide an avenue for international collaboration on the SOSA specification and promote already accepted tactical communications standards such as the SCA, Transceiver and Time Service Facilities within the SOSA framework. The objectives of the collaboration are to harmonize and optimize standards to reduce redundancy where possible and to accommodate the usage of multiple architecture frameworks when appropriate via integration strategies. An additional benefit of this work is as a vehicle to recruit new members to the Forum. We are leveraging the work done by non-members as an input to this effort and this will provide an opportunity for them to be exposed to the Forum's environment and contributions.

Support and advancement of the SCA will continue to be a focus of the committee.   The Committee will continue to promote the SCA and provide ownership support for the SCA 2.2.2 Conformance Test Suite.

The SDS Committee will promote defined Facilities Services (such as the Transceiver and Time Service Facilities) to be referenced or included as a supported specification with other standards defining organizations such as JTNC, ESSOR and SOSA™.

5.2.2 Drive worldwide convergence to a common suite of SDR standards

These objectives support the goal for the WInnForum to maintain its position as the international venue for SCA standards development and harmonization and provide a venue for the International Community to collaborate on US Standards such as SOSA™ and the SCA.

5.2.2.1 Standard specifications development

The SDS committee will carry on past efforts to drive convergence towards an internationally supported suite of SCA-compatible SDR standards enabling reconfiguration of the products, portability of the developed applications and requisite support in the developed platforms.

The efforts are based on harmonization of existing standards developed at national or multinational levels, and development of new standards when needed. Leveraging the Advisors, the Committee will evaluate standards development and harmonization needs from US and International developments. The resultant could include updates to the SCA, development of a new WInnForum Standards and contributions to other standards organizations such as SOSA™

The SDS will continue its activities in standardizing and harmonizing standards for API's that abstract hardware implementations or provide common service capabilities through the development of WInnForum Facilities Services.

The SDS will support defining the solution for the COMMs modality in the SOSA™ Architecture with the goal of maximizing the portability of existing SCA based waveforms.

During last year's Software Defined Systems face-to-face technical meeting, the attendees were joined by representatives from JTNC and the SOSA™ consortium. During the meeting the TCS team presented two candidate projects for consideration which were agreed to by all parties. Work on the first paper was initiated early in CY 2023. Successful completion of this activity provides a potential win/win/win scenario for WInnF, SOSA™, and JTNC.

5.2.2.2 Standard specifications usage

As requested in the Advisory Council held in February 2022, the Committee will create a usage guide for the Transceiver, Time Service and other completed Facilities Specifications, highlighting differences between them and the specifications they were derived from (JTNC and ESSOR) and providing guidance on migrating an application from either the JTNC or ESSOR specification to the WInnForum Facility.

5.2.3 Standards certification

The committee will provide ownership support for the SCA 2.2.2 Conformance Test Suite. The Test Procedure documentation and applications with appropriate distribution rights will be hosted on the WInnForum SCA 2.2.2 Conformance Test site. For applications with restricted distribution rights the WInnForum will negotiate with the owners to reference their content from the WInnForum SCA 2.2.2 Conformance Test site. The SDS Committee will monitor the usage of the SCA 2.2.2 Conformance Test material making the results available to the JTNC as well as using that to determine if there is sufficient demand for the WInnForum to become an SCA 2.2.2 Accreditation or Certification Body. The committee will update the SCA 2.2.2 Conformance Test Suite as needed.

5.3 FY2024 Project Plans

5.3.1 Harmonized Audio Facility

1. **Objectives:** harmonizing, completing and improving the JTNC Audio Device and Vocoder Service APIs into a WInnForum Facility (= API + behavior + properties), based on multinational efforts and lessons learnt, namely encompassing the US and ESSOR Nations.
2. **Work Group:** API
3. **Project Lead:** Eric Nicollet (Thales)
4. **Milestones**
   - Plan Approved: July 2022
   - PIM completed: Dec 2023
   - PSMs completed: Apr 2024

5.3.2 WInnForum Facilities Migration Guide

5. **Objectives:** Provide guidance to users of transceiver, time and audio service capabilities in migrating their implementations from existing JTNC or ESSOR APIs to the WInnForum Facility Services. This project will start upon completion of the Audio Facility project.
6. **Work Group:** API
7. **Project Lead:** Eric Nicollet (Thales)
8. **Milestones**
   - Plan Approved: TBD
   - Project completed: TBD

5.3.3 Tactical Communications Standards

1. **Objective:** The work performed by this project extends the work started last FY for the development of a series of contributions to SOSA™. When completed, the papers will provide the foundation for the design and implementation of a communications capability that conforms to the requirements identified within the SOSA Technical Standard.

The following artifacts are planned for development by the project team:

- Develop a white paper that describes the CONOPS for integrating SCA waveforms within a SOSA™ environment. A high-level interoperability approach has been defined, but the completion of this paper will provide more of a user's guide for how the approach can be realized. The presence of this product will provide a roadmap that SCA (and other framework) users can follow to have their products integrated in a conformant manner within a SOSA™ ecosystem. The existence of this detailed model will also allow SOSA™ to have a standard solution for a communications capability and extend the relevance and applicability of the SCA standards and products. Lastly, the write up will also be a candidate submission for the SOSA™ Reference Implementation, i.e., user's, Guide.

- Develop a white paper that describes how the Wireless Innovation Forum Transceiver Facility can be utilized within the SCA / SOSA™ Interoperability Approach or by native SOSA Waveform Applications. The development of this document will not only demonstrate how to use the Transceiver facility, but it will expose this capability to the JTNC and SOSA™ communities. If those organizations have a better understanding of the WInnF specification it may provide additional impetus for them to utilize the capability within their new designs or refactor their existing capabilities.

2. **Work Group:** Open Systems Architecture
3. **Project Lead:** Kevin Richardson (Mitre)
4. **Milestones**
   - Finalize and submit SCA / SOSA™ integration white paper: Sep 2023
   - Finalize and submit Transceiver Facility mapping to SOSA™ white paper: Dec 2023
   - COMMS Modality Specification recommendation submitted: December 2024

5.3.4 SOSA™ Support Activities

While not a specific project there will be ongoing activities to support the collaboration and advancement of WInnForum specifications in the SOSA™ Framework.

1) Support the definition of Transceiver and Time Service capabilities in the SOSA™ Framework. This will require the participation of a SME in the WInnForum Facilities to participate in the SOSA™ Working Group meetings, including in person meetings.

2) To monitor the SOSA™ activities that are relevant to the WInnForum and promote and advance the capabilities of the WInnForum, a representative of the SDS Committee Steering Group will participate in SOSA™ face to face meetings general meetings.

To support the execution of the activities defined in this plan, the SDS Committee plans to hold a working group level face to face meeting in Europe as well as meeting during the WInnForum

General meeting to be held in the spring of 2024. Face to face working groups meetings will be held based on the needs of the individual working group.

6 Wireless Innovation Committee (WInnCmte) (Chair: Mark Gibson, *CommScope*)

6.1 Charter and Structure

The Wireless Innovation Committee (WInnCmte) is led by a Steering Group comprised of the Forum's Executive Committee and the Forum's Committee chairs. The primary role of the Steering Group is to identify projects of strategic relevance to the Forum membership, to prioritize and launch projects as appropriate, and to monitor those projects to ensure and support execution. The WInnCmte will work with the WInnForum's members and external industry experts to identify new market areas where a community of practitioners could be gathered to initiate new projects.

The WInnCmte has the responsibility to maintain and update, when appropriate, the Wireless Innovation Forum's Advocacy Agenda.

The WInnCmte has established the following committee objectives for FY2024 to support the Forum's High-Level Objectives:

6.1.1 Brand the WInnForum as the Preferred Venue for technical collaborative exchanges on innovative solutions for wireless systems

The WInnForum's WInnCmte will execute on the "platform strategy" defined in FY2016 exploring potential new markets relevant to the Forum's mission. In FY2024, the WInnCmte will work with the WInnForum's members and external industry experts to identify new market areas where a community of practitioners could be gathered to initiate at least one new project.

The WInnCmte and 6 GHz committee will also work on advancing and formalizing partnerships with end user community in existing and new market areas.

WInnForum's WInnCmte will seek appropriate relationships with government and quasi-governmental groups to find members of the academic community undertaking projects (proposed or underway) which embrace the technology objectives of the WInnForum. WInnForum through the WInnCmte may reach-out to such project teams to see if a good fit may be present for a combined academic/WInnForum project. Such projects may include technical white papers and presentations, combined effort projects, or such materials and work products as is appropriate for both the academic entity and WInnForum.

The CTO and CMO will increase outreach to the academic community through, for example, attendance at relevant academic conferences, direct communication with academic groups, and awareness efforts among academic research funding agencies.

The WInnCmte will define and execute a strategy for reaching out to the award managers of the NSF spectrum innovation center and offer opportunities for collaboration to the winning team.

6.1.2 Position the WInnForum as the Preferred Venue for the International Spectrum Sharing Community

The WInnForum will work to build on its success in forming and managing the Spectrum Sharing Committee (SSC) and 6GHz committee and strengthen those communities to ensure continued success. In addition, the WInnForum will undertake the following:

1) Identify opportunities for Informing Incumbent Capability (IIC) in any relevant band.
2) Define and execute a strategy for reaching out to the award managers of the NSF spectrum innovation center and offer opportunities for collaboration to the winning team.
3) Broaden focus of standards, processes and regulatory frameworks developed for the Citizens Broadband Radio Service (CBRS, FCC Part 96) to other frequency bands.
4) Leveraging the experience in the CBRS, position the WInnForum as the venue where licensed and unlicensed communities can collaborate on how to share spectrum.
5) Identify international shared-spectrum opportunities and determine whether and how the WInnForum can participate.
6) For those international shared-spectrum opportunities that WInnForum decides to participate in, work with stakeholders to determine how to position the WInnForum to offer maximum benefit.

6.1.3 Advocacy Agenda and Relevant Projects

The WInnCmte will continue to maintain and update the 'Advocacy Agenda'.

In addition, the WInnCmte will initiate a new project related to Spectrum Access in bands other than CBRS. The WInnCmte will also seek input from the Forum membership and its Advisory Council, to initiate at least one additional new project.

6.2 FY2024 Project Plan

The following describes the projects the WInnCmte is planning to undertake in FY2024. In addition to those described here, the WInnCmte is planning to initiate at least one new project to be defined in collaboration of the Committee Chairs and its Advisory Council.

6.2.1 Advocacy Agenda

The WInnForum's WInnCmte will continue to maintain the Advocacy Agenda of the Forum and will coordinate activities with the Software Defined Systems Committee, the Spectrum Sharing Committee, and the 6 GHz Committee as well as external stakeholders such as regulatory agencies, standards bodies, and other government agencies worldwide.

The process that will be adopted for updating the Advocacy Agenda in FY2024 is as follows:

1) The WInnCmte Steering Group committee shall have a meeting agenda item as needed to discuss changes to the Advocacy Agenda.
2) The Chief Regulatory Officer is responsible for consolidating all Advocacy Agenda inputs from all Forum Committees. The procedure shall be as follows:
    a. The CRO shall lead a discussion of the consolidated proposals. If changes to the Advocacy Agenda are presented by any Committee, a discussion of the merits of modifying the Advocacy Agenda shall be conducted.
    b. Any changes to the Advocacy Agenda shall be balloted at the subsequent WInnCmte Steering Group Meeting
    c. In addition, the CRO shall maintain a consolidated Forum Advocacy Agenda proposed changes list based on inputs from all Forum committees.

6.2.2 Regulatory Advisory Committee [Prakash Moorut]

The Chief Regulatory Officer (CRO) is responsible for organizing regular Regulatory Advisory Committee (RAC) meetings and recruiting advisors worldwide. The CRO will define the topics to be covered at the meetings jointly with advisors and Forum members. Members and advisors will have opportunities to present their topics of interest to advance the objectives of the RAC.

Topics for FY2024 include spectrum sharing initiatives in various countries worldwide. There can also be contributions to relevant regulatory bodies to inform about the work the Forum is doing and also request information relevant to the RAC.

One of the key projects of the RAC is the Joint WInnForum-ETSI TC RRS WG on Spectrum Sharing Frameworks. This effort is working to develop a feasibility study on existing spectrum sharing frameworks for temporary and flexible spectrum access.

The objectives of the RAC are to:

- facilitate the exchange of knowledge on technical topics, not to advocate for one policy position or another.

- provide a venue for regulators, policy experts (advisors) and Forum members who have an interest in the development and deployment of advanced wireless technologies.

- foster Forum collaboration with the regulatory and public policy community.

- present an opportunity to enhance informal communications among the regulators and policy experts who are advisors.

- help Forum members better understand emerging regulatory trends across all ITU regions, and to help the advisors to understand emerging technologies that may impact, or be impacted by, the regulatory landscape.

6.2.3 Academic Outreach

The CTO and CMO will investigate increasing outreach to the academic community through relationships with government(s) and quasi- governmental groups, attendance at relevant academic conferences, direct communication with academic groups, and awareness efforts among academic research funding agencies.

Monitor spectrum sharing programs world-wide and engage with academics as appropriate to participate in discussions and/or projects.

6.2.4 Mid-band Sharing Project Support [Andy Clegg]

Formerly called the 3100-3450 MHz Project, the title was changed to address sharing issues and opportunities in the 3 GHz mid-bands 3100-3700 MHz.

Work with NTIA to understand their plans for the IIC and support as appropriate based on input from member companies.

Work with the Defense Spectrum Office (DSO) to understand and support their plans for the Telecommunications Advanced Research and Dynamic Spectrum Sharing Systems (TARDyS3) Tool Suite, with particular interest in the S3 informing portal.

Monitor developments in the 3100-3450 MHz band and comment on relevant proceedings.

Work to understand the potential co-existence issues of 3450-3550 MHz operations on CBRS.

6.2.5 Unmanned Vehicle Wireless Networking Special Interest Group Support [Yifeng Zhou]

The WInnCmte will support the Unmanned Vehicle Wireless Networking Special Interest Group Steering in completing additional work products.

6.2.6 PASS Working Group IIC Support [Kevin Giffford]

The WInnCmte will support the Passive and Active Spectrum Sharing in Radio Astronomy bands to demonstrate IIC capability at the Hat Creek radio astronomy facility.

6.2.7 SpectrumWiki Work Group [Andy Clegg]

Develop the SpectrumWiki index of radio spectrum use as a WInnForum-branded utility. The project will solicit and attract contributors to the SpectrumWiki database and further develop SpectrumWiki to add new features and functionality that benefit the spectrum community.The project will assure that information in SpectrumWiki is kept current and up-to-date. The project will also examine the possibility of soliciting charitable donations to fund the ongoing work of SpectrumWiki.

7 Board of Directors

7.1 General Governance

A primary responsibility of the Board of Directors in FY2024 is monitoring the operations of the Forum ensuring compliance with the 2023 to 2027 Strategic Plan[2] and this Operations Plan. Meetings of the Board of Directors are planned for the following dates:

- Web conferences the second Thursday of each month at 10AM Eastern US Time

Additional interim Board Meetings may be scheduled as required.

An additional key role of the Board of Directors is monitoring the financial performance of the Forum. The CEO will send the status of membership and the updated FY2022 financial forecast to the Finance Committee monthly. In addition, the financial performance is reviewed following the schedule below:

- November 2023 Board Meeting – Review the audited financial results for FY2023 to be presented to the members at the Annual, and the Q1 FY2024 forecast with projections for the remainder of the year.
- Annual Meeting of the Members – Present FY2023 audited financial results to the members, present updated FY2022 projections
- February 2024 Board Meeting – Review Q2 FY2024 unaudited financial results and projections for the remainder of the year.
- May 2024 Board Meeting – Review Q3 FY2024 unaudited financial results and projections for the remainder of the year.
- June 2024 Board Meeting – Review the FY2025 forecast and approve the FY2025 Operation Plan and Budget and submit to the membership for approval.

Additional work by the Board to monitor performance and explore strategy is undertaken by the following Board committees:

- **Audits Committee** – Provides board oversight of the organization's annual financial audit, including reviewing the adequacy and reliability of the Forum's internal controls and financial reporting, review the independence of and performance of the Forum's external auditor, review alleged violations of the Forum's stated policies, and reports to the board on recommendations. Chair: Assigned by the Chair of the Board

- **Finance Committee** – Provides board oversight of the Forum finances including recommending financial policies and internal controls, reviewing the annual budget prepared by staff and recommending it to the full board for approval, and monitoring

---

[2] https://www.wirelessinnovation.org/assets/Historical/Wireless_Innovation_Forum_2023_to_2027_Strat_Plan_-_Final%20-%208%20December%202022.pdf

financial reports prepared by the staff, including monitoring of investments, against the approved budget. Chair: Treasurer

- **Employee Compensation and Contractor Performance Committee (ECCP)** – as defined in the Forum's [Bylaws](#)

- **Governance and Policy Committee** – provides oversight and assessment of the Board, identifies requirements for Board orientation and education. Reviews current best practices and governance trends and makes recommendations to the full board on bylaws and policies. Chair: Secretary

- **Nominating Committee** – As defined in the Forum's [Bylaws](#). The CY2024 Nominating Committee is formed by the Chair of the Board of Directors on or before the start of the June General Meeting, and presents the proposed slate of Directors to the Board at the October 2023 Board meeting.

- **Outreach Committee** – provides input to the Board on venues and events that the Forum should have representation in attendance.

8 Infrastructure and Support Services

In FY2023, the WInnForum developed a Platform Strategy supporting the following positioning:

For individuals striving to set their organization apart and achieve their market goals in their particular wireless industry, who need an ideal setting for incubating and advancing new, potentially disruptive technologies, specifications, or guidelines, the Wireless Innovation Forum is a member driven, standards development organization that brings together groups of leading organizations from across multiple market segments around the world and at all levels of the wireless value chain to collaborate in advocating for the innovative use of spectrum and advancing radio technologies that support essential or critical communications worldwide.

Unlike other group collaboration organizations that are focused on lobbying for a specific segment of the wireless market, the Forum will act as an honest broker in advancing technologies supporting an ecosystem that spans multiple markets and brings member organizations together with other thought leaders in a multi-stakeholder community to create highly recognized reports, recommendations, global specifications, and standards.

Also unlike other standards bodies focused on supporting the wireless market, the Forum is agile, providing a venue for thought leaders to quickly build an ecosystem and rapidly advance reports, recommendations, global specifications and standards, certifications, etc. under a proven development model that can be tailored to your specific needs and under IPR terms aligned with Industry best practices.

In support of the Platform Strategy, the following will be executed in FY2024.

8.1 Advocacy of Forum Membership and Products

8.1.1 Continued Product Execution

Per the Platform Strategy, Forum staff will continue to work to complete the following in FY2024:

- The Forum will evaluate staff required to support the commercialization framework and make adjustments as required to meet member needs.

- Forum Staff will work with the Board of Director's Governance Committee to review relevant policies and make associated recommendations to the Board.

- Forum staff will strengthen the member experience by providing tools, instructional webinar(s), and reference materials.

- Forum staff will support the WInnCmte in new project creation by preparing promotional literature and materials for use on an as-needed basis for exhibit booths, speaking opportunities, etc.

8.1.2 Marketing Strategy Development

For FY2024, Forum staff will focus on executing a marketing mix that will most effectively and efficiently promote the Forum, as discussed and directed by the Joint Marketing Committee, comprised of members of each of the Forum's Committees. Possible event opportunities for promoting the Forum will be evaluated and explored. Marketing projects will include:

8.1.2.1 Video blog/podcast

"Setting the Standard" is a video podcast about WInnForum projects and advanced radio technologies standards development, featuring interviews with Forum members. This project was launched in January 2021 to help promote name recognition of the Forum and establish the Forum as the premier source for standards development in the wireless space. Published episodes have explored topics from all four committees; future episodes are being planned continually. The videos and audio have more than 1,200views/downloads as of this writing. In the coming year, we will schedule episodes to cover prominent Forum work products, events and other noteworthy topics in the wireless communications space.

8.1.2.2 Webinar and Tech Talk Planning, Promotion and Execution

The Joint Marketing Group will discuss, develop and promote periodic Tech Talks (see WInnCmte) and Webinars that cover the breadth of the Forum's committees.

8.1.2.3 Infographics

Forum staff has completed two infographics to date that have been cited by industry. Staff, along with the Joint Marketing Committee will develop at least on more infographic in FY2024.

8.1.2.4 Monthly Non-member Email

A monthly events email will continue to be sent out to our entire database to inform non-members of current activities and promote joining. They consistently rate above industry average in opens and engagement.

8.1.2.5 Committee and Forum Sell Sheets/Promotional Digital Files

Forum staff will promote sell sheets for each committee that highlight work products as well as promote becoming a member. These sell sheets will be distributed at events, in recruitment contacts, on each committee's web page, and via email where appropriate. In addition, a Forum-wide promotional piece is being developed for broad use evangelizing the Forum's role in standards development.

8.1.2.6 Social Media

In FY2023 Forum Staff discontinued using Twitter and focused instead on expanding our LinkedIn reach, increasing our followers by 25% to 646 (added 172 followers). Staff will continue to focus on this social media venue in addition to YouTube

8.1.2.7 Site Audit

Forum staff will be conducting a full site audit following completion of a series of courses on SEO best practices, as well as implementing necessary changes as a result of the audit.

8.2 Expansion of Accreditation Services

In FY2020 the WinnForum completed work on three initial certification programs required to establish the CBRS ecosystem:

- Accreditation of Public Key Infrastructure Root of Trust Certificate Authorities

- Accreditation of Certified Professional Installer (CPI) Training Program Administrators and set up of the CPI database

- Accreditation of CBSD Test Labs to run the WinnForum Protocol Testing

In FY2024, WinnForum staff will continue to maintain these programs in support of its members, including maintaining the CPI Database, providing access to application materials and requirements, receiving application materials and maintaining database of applicants, maintaining schedule of re-accreditations needed, and sending re-accreditation notices as needed. In addition, WinnForum staff will support the Spectrum Sharing Committee in establishing an industry self-certification program for CBRS Release 2 standards. WinnForum staff will also support the 6 Ghz Committee in establishing a test and certification program for AFC functional requirements and other specifications as appropriate.

8.3 Management of the CBRS Informing Incumbent Portal

WInnForum Staff will continue supporting the CBRS Informing Incumbent portal as a convenience to its members.

8.4 Member Services and Group Support

8.4.1 Project Support

Forum staff will support each steering group in the establishment and maintenance of project roadmaps, including identifying and presenting a "watch list" of strategic issues that must be evaluated and tracked to each steering group on a monthly basis. Staff will also collect additional data pertaining to each watch list issue, as required for follow up by the steering groups.

The Forum's staff will work with Forum leadership to provide the facilities, infrastructure and services necessary for the members of the Forum's standing Committees to collaborate as required to achieve the objectives stated in this operations plan. Specific services defined for FY2022 as necessary in achieving the high-level goals comes are:

- Remote Collaboration Services. Much of the work of the Forum's members is done using electronic utilizing the following tools provided by the Forum:

    o Webconferencing: A Go-To-Meeting account has been established for each committee. In addition, the Forum maintains a Go To Webinar account which can be used to host online workshops as required.

    o Online Communities: In FY2020 The Wireless Innovation Forum switched from Higher Logic Workspace to Causeway for member collaboration. In FY2024, staff will work to optimize Causeway to best meet with member needs.

    Forum staff will support its members in making use of these services as required, including supporting group leaders in maintaining online communities, scheduling and hosting web meetings, and organizing workshops.

- Project Facilitation and Management Services. Forum staff will provide services throughout the lifecycle of member projects as follows:

    o Project Initiation, including supporting the development of project proposals

    o Project Support, including schedule and budget management, tracking risks, soliciting contributions, following up on action items with volunteers and reporting

    o Editorial services, including graphics design, to ensure project reports, recommendations and specifications have a professional look and feel

    o Document Advancement and Electronic Balloting

8.4.2 Event Services

- **Face to Face Meetings**. The Forum will provide complete meeting and event services as required, including planning, registration management, site selection and facilities management, speaker management and agenda/program development for ad-hoc project meetings, committee meetings, and webinars. The Board has directed that a General Meeting be held in the Spring of CY2024 with all four Committee in attendance. In addition, the committee Steering Groups have requested the following:

    o The CBRS Committee intends to meet in September of 2023. This 3-day event will include working sessions advancing the Committee's roadmap projects, and a government/industry workshop focusing on mitigating business blockers for CBRS such as heartbeat timing, DPA activations, etc.

    o The SDS Committee intends to meet in the fall of 2023 in Europe. This will be a working meeting only to advance the Committee's roadmap projects, with no workshop planned.

o The 6 GHz Committee is still evaluating plans and may collocate a working meeting with the CBRS Committee if needed.

Staff will create and maintain the supporting communication vehicles for the events including web presence and print publication as well as promotion through press releases, email campaigns, social media and sell sheet distribution when applicable.

- **WInnForum Summit**. Forum staff will host a fall virtual event, with expanded interaction opportunities, including breakout rooms. A Program Committee for this event will be formed in June of CY2023 with representation from all 4 committees and a goal of setting the agenda by September of CY2023. Forum staff will manage the production as well as promote the event through press release, social media and emails.

8.4.3 News & Opportunities E-mail

Feedback provided by members in satisfaction surveys and one on one interviews indicates that the daily news feed provided by the Forum is a key value provided by the Forum and so as a part of our member retention strategy, Forum staff will continue this service in FY2024.

8.4.4 Member Retention

To retain current members, member representatives need to be engaged in Forum activities. To achieve this, staff will review membership engagement quarterly and create a communications plan to re-engage inactive member representatives, including a quick poll to initiate contact and determine any reason for disengagement. Staff will also personally contact member organizations that are forecasted at below 100% retention confidence to discuss what can be done to increase their satisfaction with their membership.

Also important to member retention is member onboarding. Forum staff will schedule three and six month follow up reach-outs through Oasis to new members to ensure they have all the information they need to get involved fully as well as highlight member benefits they may not be utilizing.

8.5 Awards

Awards for FY2024 will be managed as per the approved awards policy[3].

---

[3]
https://www.wirelessinnovation.org/assets/Awards%20Policy%20-%20Approved%20-%2010%20February%202022.pdf

9 Other Corporate Administration

9.1 Annual Meeting of the Members

The Annual Meeting of the Members, as described in the Forum Bylaws will be held in in November 2023.

9.2 Corporate Filings

The Forum will continue to evaluate and improve internal office functions related to financial controls and reporting, archival storage of documents, and membership initiation and renewal. Finance and Accounting Procedures are updated to reflect the change in banks, change in accounting software, and modifications of the membership renewal processes.

In addition, the Forum shall ensure filings as follows:
- 990 filing with the IRS – 15 May 2024
- California Tax Exempt Return – 15 May 2024
- Canadian Information Return – 15 November 202
- Canadian Extra-Provincial Annual Report – 2 January 2023
- 1099s to recipients – 31 January 2024
- 1099 to IRS – 28 February 2024
- SAM Renewal – 24 August 2023
- Foreign Bank Account Report Form – 15 October 2023
- Fairfax County, VA Business, Professional, Occupational License-01 March 2024
- Fairfax County, VA Personal Property Tax-01 May 2023 – filing only; no tax paid
- Virginia Corporate Commission Report - 30 April 2024
- Virginia Corporate Commission Registration Fee -30 April 2024

9.3 Insurance

In addition, the Forum shall perform an insurance review (D&O, E&O, Liability, etc.) to be completed in advance of the renewal date.

- Error and Omissions plus Certification Insurance: April 2023
- General Liability Insurance: August 2022
- Directors and Officers Insurance: January 2023

In addition, the Forum will secure cancellation insurance, as appropriate, for each major event.

9.4 FY2025 Planning

The FY2025 Operation Plan will be developed on the following schedule:

- Board Approval of High Level Goals for FY2025 – March 2024

- High Level Goals and Ops Plan Process Presented to Group Leaders –March 2024
- Draft Budget Presented to the Finance Committee – May 2024
- Draft Plan Submitted to Officers – May 2024
- Final Draft Approved by Forum Chair and CEO – June 2024

The final plan will be presented to the Board of Directors for their approval during the June 2024 Board Meeting and will be submitted to the membership for final approval immediately thereafter.