



# The Next G Alliance

## - Some Thoughts for Consideration

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November 16, 2020

# Next G Alliance Objectives

- Develop a roadmap for 6G, starting with only a rough timeline (“2030”), highlighting that now is the time for basic 6G research. Gradually get more detailed and specific over time.
- Confirm that 3GPP is expected to develop the 6G specifications (standards), 3GPP member companies will make technical contributions to 3GPP, normal processes will be used for continuing 5G work, and 3GPP will continue to develop 5G releases
- Determine how to interact with other equivalent organizations in other regions, such as those in Asia, and with other organizations in North American, such as 5G Americas
- Bring in key companies from newly emerging verticals and industries interested in using our wireless standards
- Roadmap overall technology directions (not just communications) for the future and their potential interaction with communications
- Develop an evolving set of trends leading to an evolving high-level vision for 6G
- Determine where research is needed in communications, enabling technologies, and related application areas
- Determine how to interact with the USG; present areas of research needs to the US government
- Expect research output to be made public in the normal way (e.g., research papers will be presented/published by IEEE conferences, journals, and magazines)
- Ensure Next G Alliance is setup with full openness and transparency, and that the processes are clear and fair for all stakeholders

# Scope of the Technology Roadmap - Possible\* Themes

NextG alliance roadmap based on US industry strengths - covering what is specified in 3GPP plus enabling technologies and key application enablers

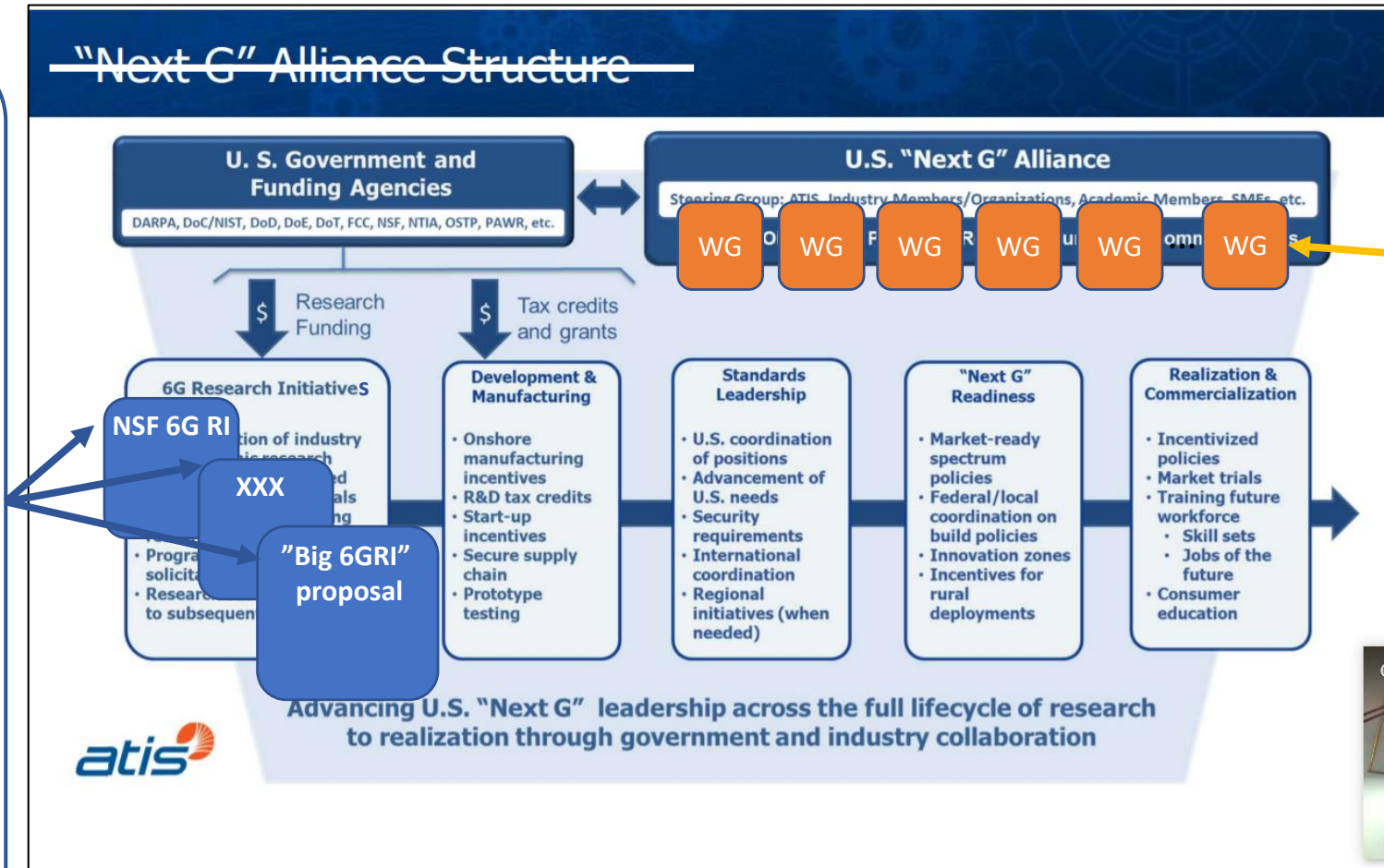
- THz communication (includes New waveform/receiver design, RFIC, Channel modelling)
- NextGen Massive MiMO
- Spectrum Sharing and co-existence
- New Sensing plus communications technologies
- Software defined, Open, AI/ML and cognitive 6G network platform
- Open Service framework and APIs, for new use cases
- IP, Ethernet, Internetworking and Optical for 6G
- Trustworthy Systems, Security and privacy protection for 6G
- 6G Mobile-Network-Cloud fabric
- Semiconductor technologies
- Application technologies
- End-to-end systems for 6G, sub-networks of devices

\*not an exhaustive list

# Relationship NextG Alliance to Research Initiatives - a push/pull model

## Multiple research projects/initiatives "pull"

- Using several funding mechanisms
- Allowing for different partners per project/initiative
- Each initiative with its own governance as per funding agency process
- Early start by NSF funded project with in-kind from group of vendors
- Allows for bigger proposals when funding comes available



Groups External to Next G Alliance



Next G Alliance Internal WGs

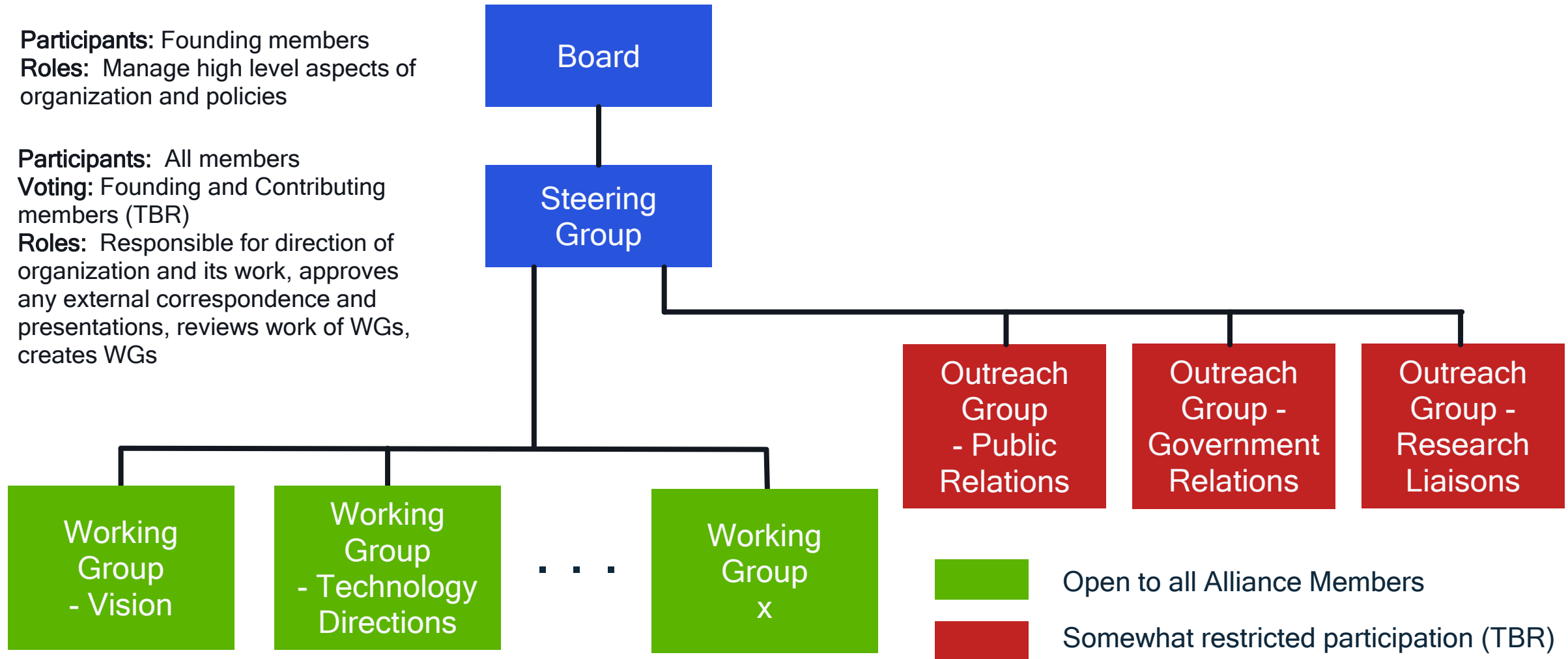
## NextG Alliance "push"

- Delivers strategies, roadmaps, recommendations, lobbying, knowledge - to government and ecosystem
- Liasoning role towards the reserch intitatives.
- Keeps record of ongoing research initiatives and provides guidance
- NGA tech companies enage both in the definition "Push" and the execution research "pull" to ensure sync

# Next G Alliance Organizational Structure

**Participants:** Founding members  
**Roles:** Manage high level aspects of organization and policies

**Participants:** All members  
**Voting:** Founding and Contributing members (TBR)  
**Roles:** Responsible for direction of organization and its work, approves any external correspondence and presentations, reviews work of WGs, creates WGs



# Roles for Groups Under the Steering Committee

- Working Group - Vision
  - Develops vision for Next G
  - Develops roadmap for Next G
  - Develops timeframe for Next G
- Working Group - Technology Directions
  - Develops landscape of existing research
  - Develops areas of needed research (gaps)
  - Assesses and selects the key technical enablers
  - Delivers strategies, roadmaps, and recommendations
- Outreach Group - Public Relations
  - Develops external messaging for the Next G Alliance
  - Messaging including website, media coverage, and social media
- Outreach Group - Government Relations
  - Delivers lobbying and knowledge - to government (non-technical) and ecosystem
- Outreach Group - Research Liaisons
  - Comprehensive visibility of external US 6G research projects in order to track the fulfilment of Next G research roadmap
  - Disseminate through joint events, seminars, and website
  - Liaison with Global 6G Research organizations

# Some Open Items

- Develop written charter of Next G Alliance
- Develop operating procedures for the Alliance
- Determine WGs that are needed
- Develop written scopes for each WG
- Determine (elect) leadership of the Alliance
- Determine whether additional companies should be invited to participate in the Next G Alliance, e.g., those in verticals, user communities, and application providers
- Develop a one-page description of the Alliance, its goals, and objectives
- Put together a website guidance team under Working Group - Public Relations with the charter to design and oversee the Next G Alliance website