



2021 ANNUAL MEMBERS MEETING

October 21, 2021

8AM Pacific / 11AM Eastern – Teleconference
(See Next Page for Dial-in and Zoom Instructions)

Conference Call Dial-in and Zoom Info

<https://www.snia.org/annualmeeting>

Link will start Zoom meeting – afterwards, redirects to copy of the presentation materials

Teleconference/Zoom coordinates:

Zoom Meeting ID: 892 6902 1833 Passcode: 102121

<https://snia.org/annualmeeting>

One tap mobile

+17207072699,,89269021833#,,,,*102121# US (Denver)

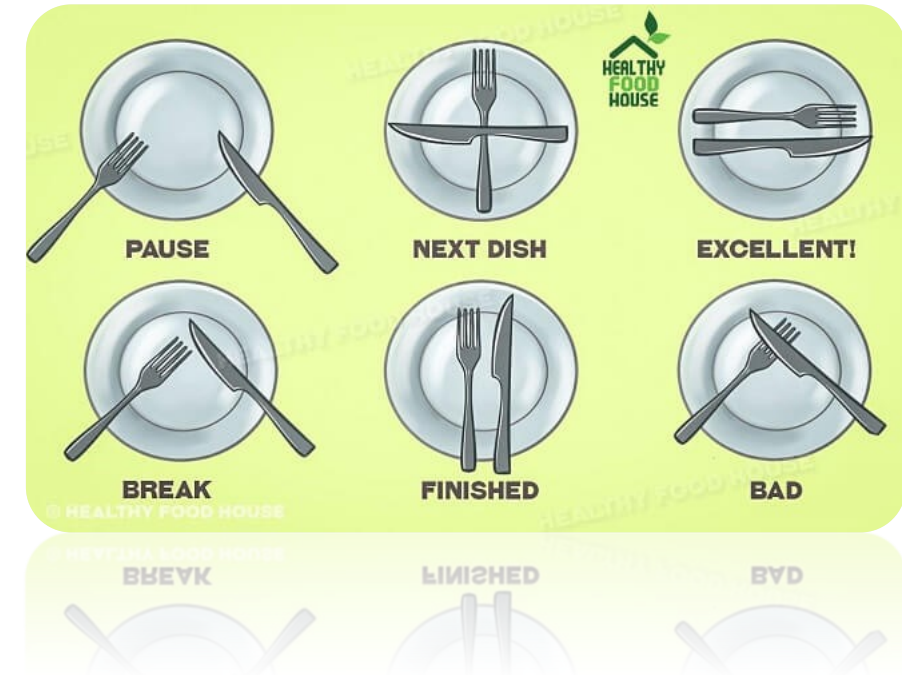
+13462487799,,89269021833#,,,,*102121# US (Houston)



Find your local number: <https://us06web.zoom.us/j/84401234567>

Zoom Format – Attendee Guidance

- Enter Name (Company) on your Zoom Login/Attendee Info
- Everyone will be on Mute, except the Moderator/Speaker
- You can unmute yourself if you would like to say something
 - Voting Member Company Primary/Alternate representatives, please identify yourself when joining
- Remain on Mute when not speaking
- Use the Chat Icon to text message the group or a particular person
- Use Raised Hand function under “Reactions” icon



2021 Annual Members Meeting Agenda

- Greetings and Roll Call – Michael Oros, Executive Director
- FY2020: Annual Report published
 - Motion to Approve 2020 Meeting Minutes – Richelle Ahlvers, SNIA Secretary
 - Fiscal Report (2020 Annual Report) – Sue Amarin, SNIA Treasurer
- FY2021: SNIA update and achievements to date – Michael Oros, Executive Director
- FY2022: What's ahead for SNIA – J Metz, Ph.D, SNIA Chair
- Discussion and Q&A – Members and SNIA Board Members
- Announcement of the 2021 Board and Technical Council Election Results – Michael Oros, Executive Director
- Adjourn



Roll Call and Approval of 2020 Minutes

- Roll Call of Voting Member Companies
- Primary Representatives of Voting Member Companies
 - Please identify yourselves during Roll Call
- If you work for a Voting Member Company and do not hear your primary representative, please identify yourself during roll call
 - Proxy representation is Accepted at Annual Members Meeting
- Vote to approve 2020 Meeting Minutes will take place upon quorum being met

Roll Call

Roll Call:

Roster of Voting Companies and Primary/Voting Representatives

- Leah Schoeb, AMD
- Jason Molgaard, ARM
- Steve Wilson, Broadcom
- Dan Hanson, Shalom Shefa, Cisco
- Bill Elliott, Dell Inc.
- Paul Von-Stamwitz, Fujitsu America Inc.
- Victor Cao, Futurewei*
- Chris Lionetti, Curtis Ballard, HPE
- Tim Lofink, Hitachi Data Systems
- Yolanda Fang, Huawei Technologies*
- Roger Hathorn, IBM
- Artanis Wang, Inspur
- Richelle Ahlvers, Intel Corporation
- Mark Carlson, Kioxia Corporation
- Wang Zhenhao, MacroSAN
- John Maroney, Micron
- Chris Lueth, NetApp
- Scott Shadley, NGD Systems
- Martin Peterson, Oracle Corporation
- Rob (Barkz) Barker, Pure Storage
- Bill Martin, Samsung
- Xuemei Qiu, Sichuan Huafeng Enterprise Group Co. Ltd.
- Boyan Ivanov, StorPool Storage
- Ivan Tchoub, YADRO

Quorum is 12 of 23

SNIA FY2020 Annual Report

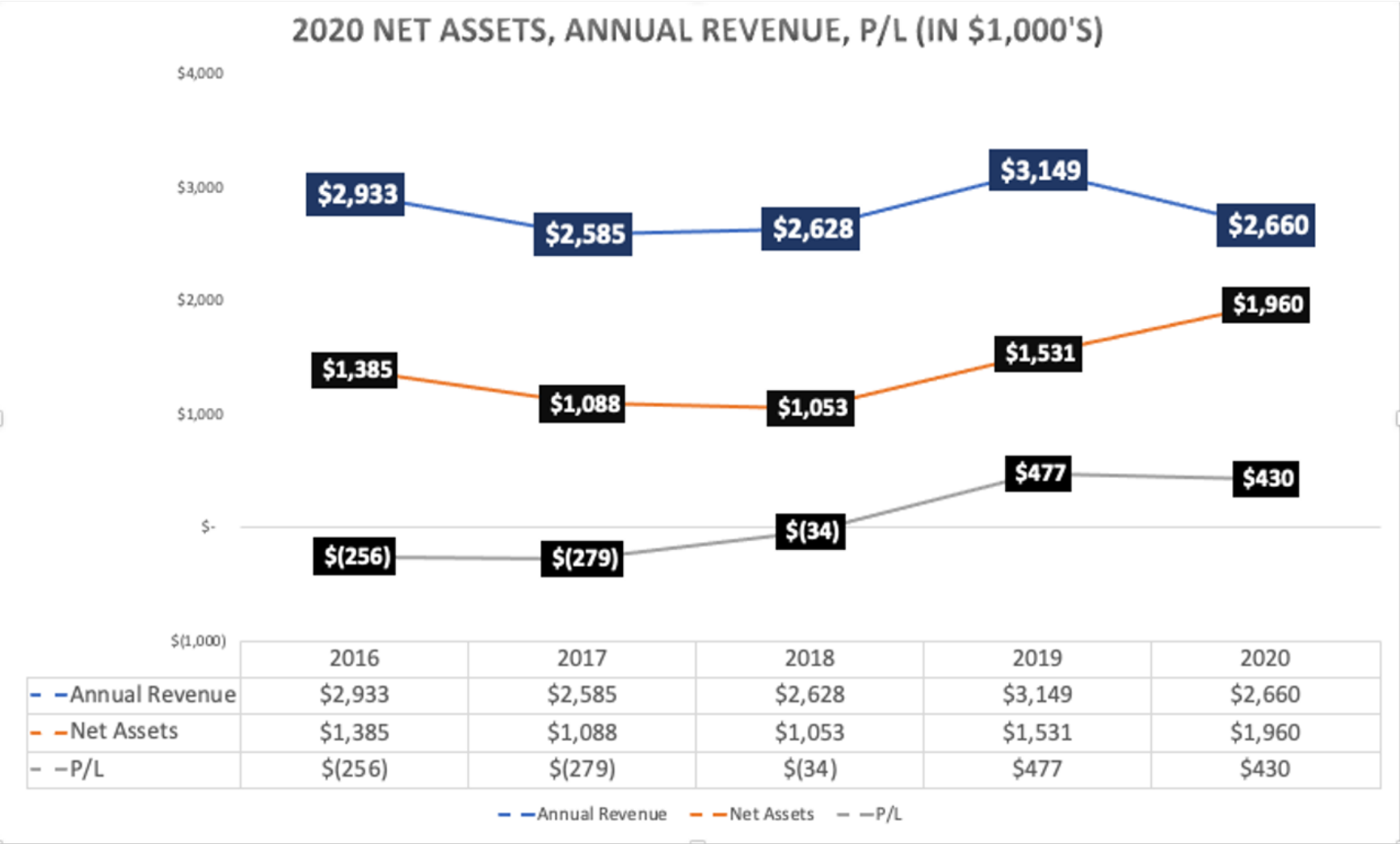


Motion: Approve 2020 Meeting Minutes

FY2020 annual report posted on SNIA website:
(https://www.snia.org/about/corporate_info/documents)

<https://www.snia.org/sites/default/files/corp-docs/AnnualReport20.pdf>

SNIA Fiscal Report: 2020



Note: P/L numbers include allowances for bad debt, depreciation and vacation accrual. For details, refer to our 2020 annual report at: http://snia.org/about/corporate_info/documents



FY2021



SNIA Vision and Mission

Vision Statement

- Be the globally recognized and trusted authority for storage leadership, standards, and technology expertise.

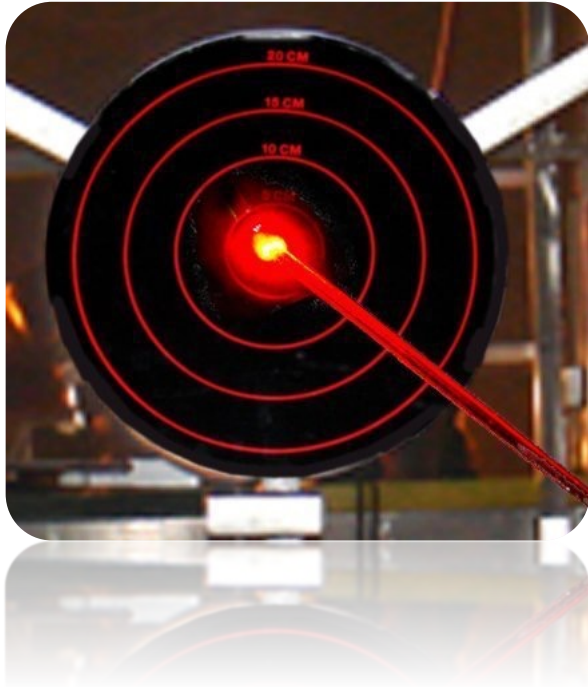
Be “all things storage.”

Mission Statement

- Lead the storage industry worldwide in developing and promoting vendor-neutral architectures, standards and educational services that facilitate the efficient management, movement and security of information.

Lead the storage ecosystem

SNIA Focus for 2021



- **Technical Focus and Marketing Initiatives**
 - Updated Specifications, Standards
- **SNIA Internal Efficiency**
 - Root out inefficiencies, provide guidance for consistency and simplify processes
- **Membership**
 - Focus on retention and member satisfaction with SNIA programs
- **Alliances and Partnerships**
 - Engage our existing Strategic Alliances and grow them; establish new ones
 - Enhance partnerships with other SDOs and Open Source community
 - Execute on collaborative work registers and foster new areas of collaboration
 - Strong focus on next-generation technologies and infrastructures
- **Execute online education objectives**
 - Strong webcast agenda; outside-in analyst engagements
 - Build out online education library and organize our content; Dictionary updates
- **Balanced Budget**

2021 Achievements – Technical Publications



SNIA Standards

- TLS Specification for Storage Systems v2.0
- Swordfish Scalable Storage Management API Specification v1.2.2
- Native NVMe-oF™ Drive Specification v1.1
- Swordfish Scalable Storage Management API Specification v1.2.3
 - *Membership vote active, to be published November 2021*

2021 Achievements – SNIA ISO Standards



- **ISO/IEC 20919:2021**
 - Information technology — Linear tape file system (LTFS) Format specification
- **ISO/IEC 24775:2021**
 - Information technology — Storage management (Parts 1-8)
- **ISO/IEC 5965:2021**
 - Information technology — Swordfish Scalable Storage Management API Specification
- **ISO/IEC DIS 5733**
 - Information technology — Cloud Data Management Interface (CDMI) Version 2.0
 - ISO ballot opened September 24th

2021 Achievements – Public Review Drafts

- Smart Data Accelerator Interface (“SDXI”) Specification v0.9.0 rev 1
- Swordfish Scalable Storage Management API Specification v1.2.3
- Blockchain Interoperability Specification v0.5 rev 0.1
- Computational Storage Architecture and Programming Model v0.8 rev 0
- Computational Storage API v0.5 rev 0
- CDMI Extensions and Profiles

<https://www.snia.org/publicreview>

2021 Achievements – SFF TA TWG

- **SFF-8024**
 - SFF Module Management Reference Code Tables 4.9
- **SFF-8472**
 - Management Interface for SFP+ 12.4
- **SFF-TA-1006**
 - Enterprise and Datacenter 1U Short Device Form Factor (E1.S) 1.5
- **SFF-TA-1007**
 - Enterprise and Datacenter 1U Long Device Form Factor (E1.L) 1.2
- **SFF-TA-1009**
 - Enterprise and Datacenter Standard Form Factor Pin and Signal Specification (EDSFF) 3.0
- **SFF-TA-1016**
 - Internal Unshielded High Speed Connector System 1.0

2021 Achievements – Membership

- **Membership:**

- 86 core members (+15 new members YTD)
- 79 SFF members
- 23 Educational Institution members
- 22 non-core Regional Affiliate Members

- **Voting membership: 24**

- **Startup Membership category continues to grow: now 24 members**

- \$1,000/year non-voting membership
- In business for less than 4 years and annual revenue <\$10M/year
- Can join SNIA for up to 4 consecutive years in the membership class
- Contact membership services to join or with questions: membership@snia.org
<https://www.snia.org/membership-application>



SNIA Marketing Objective: Raising SNIA's Visibility

Promoting Standards, Technologies, and Educational Programs



ATTENDING OUR HIGHLY-RATED BRIGHTTALK WEBCASTS

- ✓ 24 webcasts produced so far this year, generating over 10,000 total views
- ✓ Average rating of 4.6 out 5



WATCHING VIDEOS ON OUR SNIAMEDIA YOUTUBE CHANNEL

- ✓ Contains over 1,000 SNIA videos
- ✓ Generating more than 160,000 views so far this year



LEARNING VIA SNIA CAMPAIGNS AND PROGRAMS

- ✓ Basic Storage Education and Content
- ✓ "What Is" pages
 - 16 topics generating over 100,000 views this year
- ✓ 3 Campaigns this year: "Geek Out" on Storage Basics
 - NVMe-oF™
 - Computational Storage
 - Great Storage Debates
 - Generating 6,985 unique views

Education – A SNIA Priority

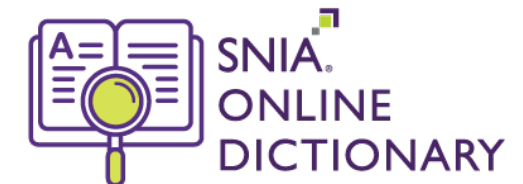
- Storage Developer Conference (SDC)
 - Annual conference BY Developers FOR Developers
 - SDC'21 – over 120 educational sessions, plus networking Birds-of-a-Feather
- Educational Webcasts
 - Live vendor-neutral webcasts produced by Forums, Initiatives and Committees
 - Covering a wide range of storage and storage-related topics
- Resources
 - SNIA Educational Library <https://www.snia.org/educational-library>
 - A single repository of all SNIA educational content
 - Over 1,000 assets
 - SNIA Dictionary
 - Concise and clear definitions of more than 2,000 technology terms
 - Ongoing major review and revision – input welcome
 - "What Is" pages
 - Expanded descriptions of key technologies
- University Engagement
 - Future plans for closer collaboration with academia
 - Provide storage resources for students and faculty
 - Continued education for those new to the storage industry



BrightTALK™



Advancing Storage & Information Technology



2021 Achievements – Events and Regions

Raising SNIA industry leadership profile

Events

- Members Symposium (Jan. - virtual)
- Persistent Memory and Computational Storage Summit (Apr. - virtual)
- PM Hackathons throughout the year
- IO Lab: SMB3 (June & Sept. - virtual)
- Three Storage Developer Conferences
 - SDC EMEA (Jun: Virtual)
 - SDC India (Aug: Virtual)
 - SDC Global (Sept: Virtual)

Regions

- **SNIA EMEA - Regional Affiliate**
 - ◆ Successful SDC EMEA event; SMB3 Plugfest and education
- **SNIA Japan - Regional Affiliate**
 - ◆ Ongoing technical storage seminars, end user surveys and industry engagements executed virtually
- **SNIA India - Regional Affiliate**
 - ◆ SDC India event as virtual conference; sustained Meet-up program
- **SNIA South Asia - Regional Community**
 - ◆ Minimal activity
- **SNIA Malaysia - Regional Community**
 - ◆ Community led by Chin-Fah Heoh, with blogs
- **SNIA Brazil - Regional Community**
 - ◆ Virtual activity
- **SNIA China - Regional Community**
 - ◆ Organizing to increase local participation and activity

2021 Strategic Alliances

Raising SNIA industry leadership profile

- New Alliances completed in 2021
 - DMTF / OFA / SNIA three-way alliance
 - International Association of Privacy Professionals (IAPP)
 - Open Fabric Alliance (OFA)
- New Alliances in the process of being developed
 - Open Compute Project (OCP)
- Existing Alliances in the process of being refreshed
 - DMTF
 - DMTF / NVM Express / SNIA three-way alliance
 - The Green Grid

Strategic Alliances





FY2022

WARNING – Next Slides

PAIN POINT

PARTICIPATION EXPECTED

Goals From the Chair

- Are you *proud* to be a SNIA member?
 - My goal is to make SNIA an organization that makes members *proud* to be part of it
 - *The standards/trade association identity crisis*
- Three Phase Approach
 - Short Term - Simplicity & Accountability
 - *Ongoing process*
 - Medium Term – Industry Outreach
 - *Moving into current phase*
 - Long Term - Create a “Global Ecosystem” Organization
 - *Spreading SNIA and member relevance across the industry*

2021/2 - SNIA Focus Areas

2021

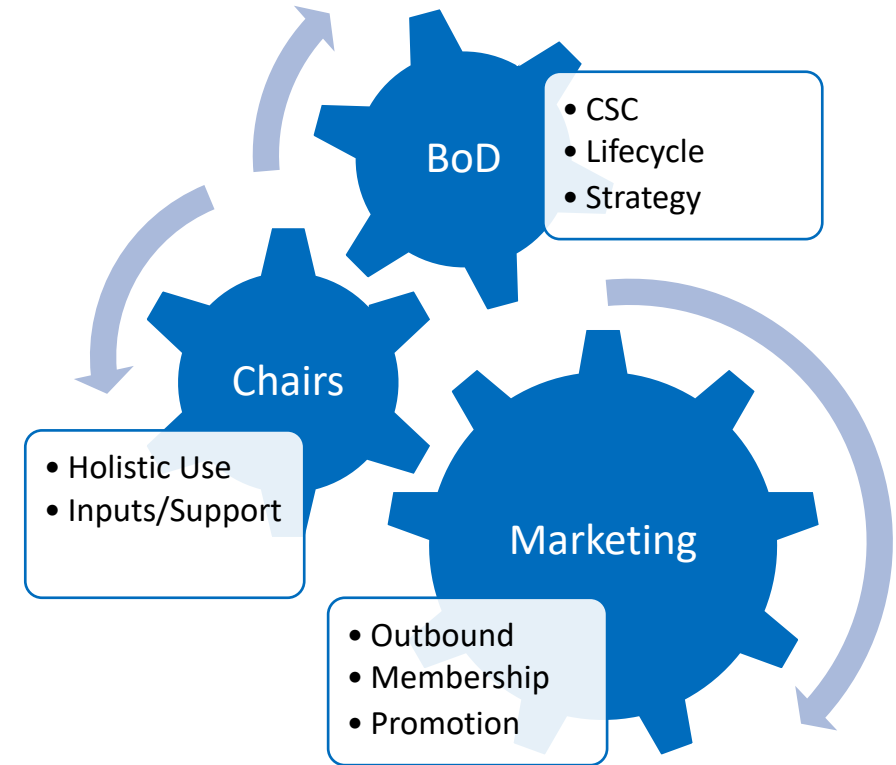
- Internal Refocusing:
 - Theme: ***Simplicity and Accountability***
 - Better communication among groups
 - Internal audit of SNIA groups
 - Ongoing SWOT Analysis
- Process Improvements:
 - Simplified electronic communication
 - Mechanisms for simplifying uniform processes
 - Introduce gating processes that ensure dependencies are met
 - Improve liaison/communication

2022

- Actions:
 - Training SNIA groups, more interaction
 - Implementing consistency in documentation procedures
 - Simplified electronic communication
 - Standardized on single information platform
 - Initializing checks and balances
- Audits:
 - SNIA Group SWOT analyses feeding into strategy and tactics

Driving a Path to Holistic Communication

- Integrating results from SWOTs
 - Aligning CSC, Lifecycle, and Strategy
- More Chair Involvement
 - Regular Chairs Meeting(s) – Feedback request, Interviews
- Evolving Collaboration Efforts
 - Encouraging and supporting cross-functional interactions



Creating an Effective Communication Plan



What is needed today:

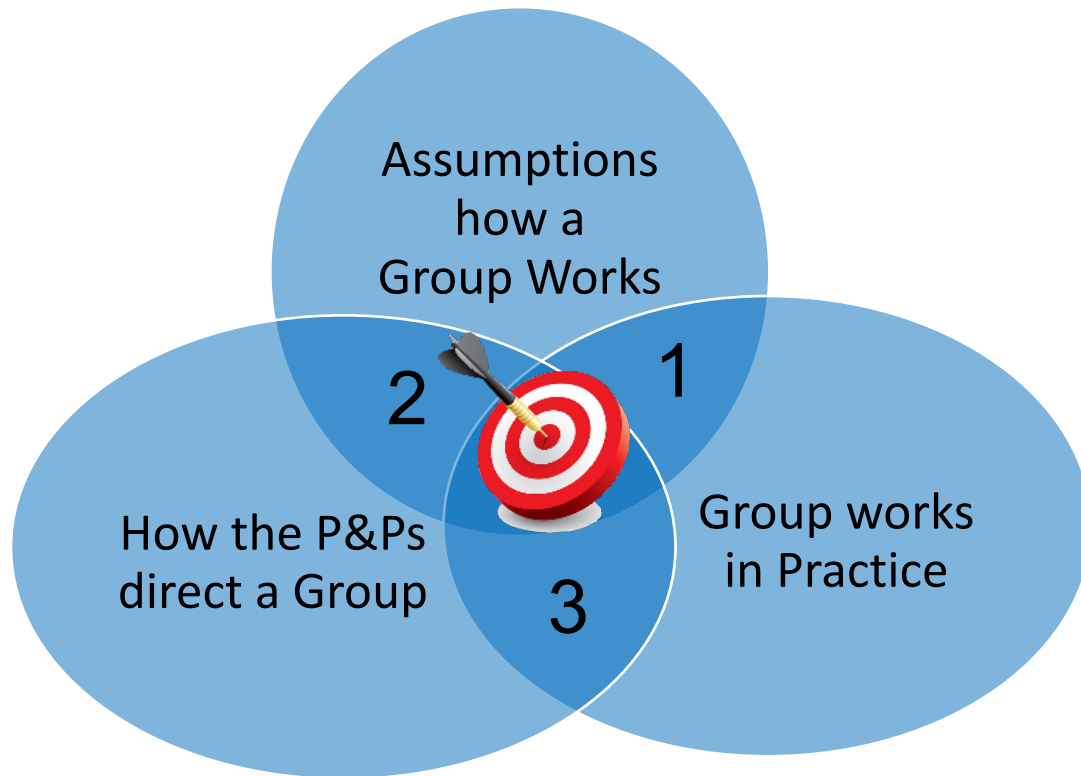
- **Plan Needs to Encompass all Members**
 - Leveraging TWGs, Committees, and Marketing
 - Membership, Strategy, Lifecycle, TC, BoD, etc...
- **Drive through Marketing and Membership**
 - Marketing executes a holistic external plan
 - Chairs drive support through Committees/TWGs

Next Steps:

1. Get volunteers
2. Initialize Framework
3. Interview/Discuss
4. Develop Framework
5. Build Plan for Review
6. See step #1

Goal: Deliver Draft by 1H22

Lifecycle Dilemma



- A group owner may have incorrect assumptions of the P&Ps and operation of the group were linked (1)
- We assume that Groups are following the P&Ps. As an outsider to a group, we may lack insight as to the daily operation of a group in action (2)
- Do the P&Ps represent all of the expectations of a group. We may assume actions in a group that are not outlined. (3)
- State Diagrams attempt to bring all of these situations to a center state.
 - A Group creator can see a roadmap to follow to correctly institute a new group
 - A Group owner/member can determine the process and requirements to enter or exit any state (Proposed, Initial, Chartered, Probation, Dissolved, etc).

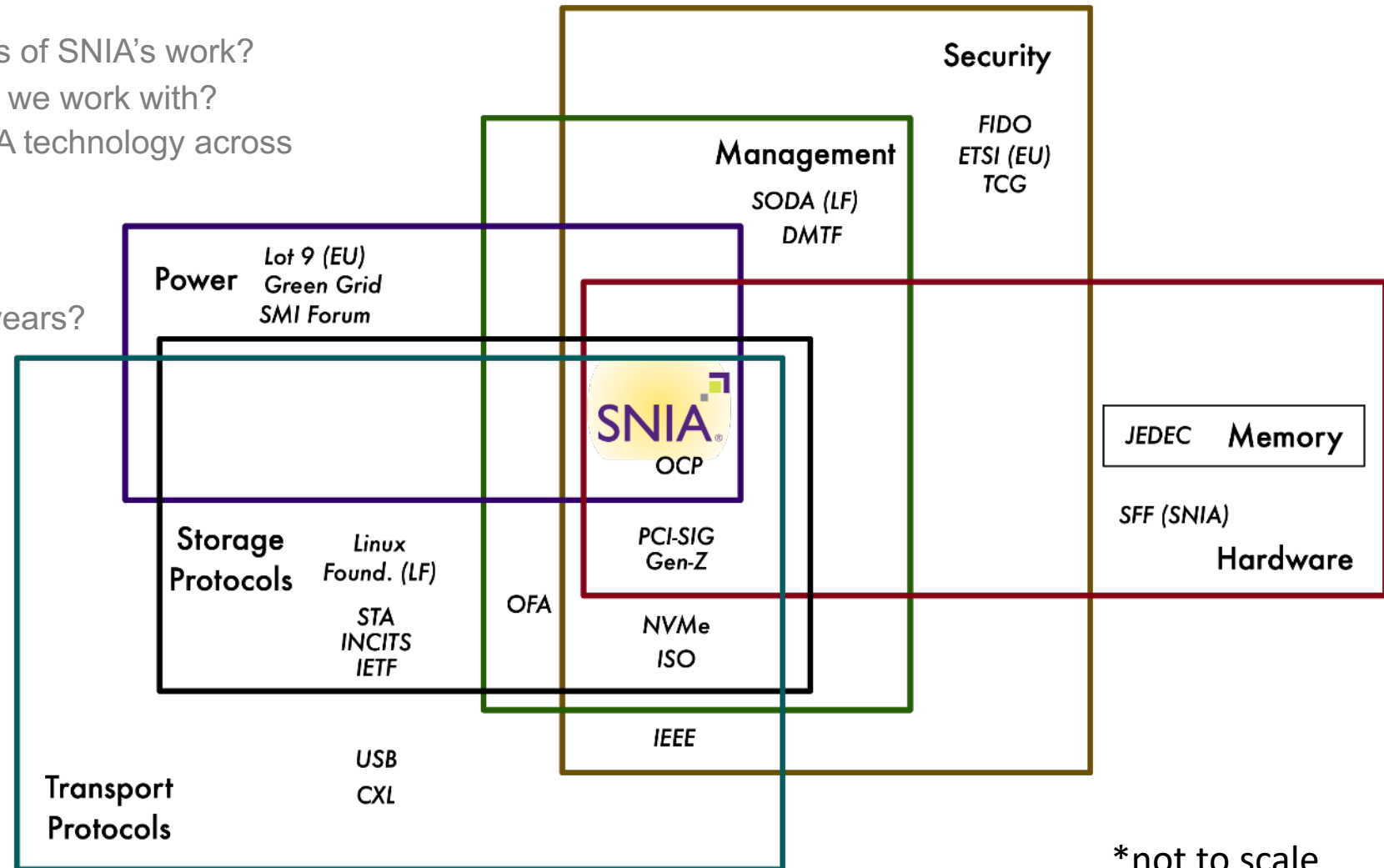
SNIA Industry, Technical Outreach

■ Strategic Questions

- What are the impacts/consequences of SNIA's work?
- Who are our alliances? Who should we work with?
- What are the ways to distribute SNIA technology across disciplines?

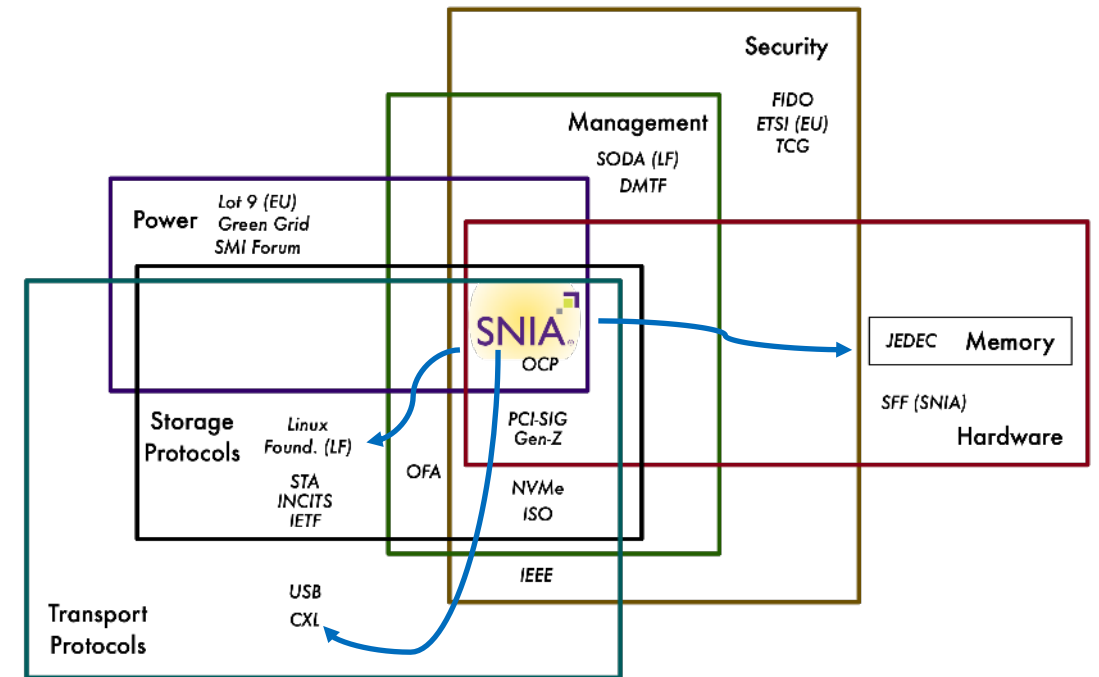
■ Tactical Questions

- What are the key projects?
- Which groups will be pivotal in 3-5 years?



Example: SDXI

- SNIA has a number of standards, projects, and initiatives that affect the industry: management, computational storage, programming models
- One Current Example: SDXI
 - Vendor-Neutral Memory-to-Memory DMA
- Additional Technical Outreach Targets
 - SNIA -> Computational Storage
 - DPDK
 - Linux Foundation
 - CNCF
 - CXL
 - Others? JEDEC?



2022 - Technical Work Focus Areas

- Blockchain Interoperability Specification v1.0
- Computational Storage API v1.0
- Computational Storage Architecture and Programming Model v1.0
- LTFS Tape Image Format Specification v1.0
- LTFS Compliance Test Specification v1.0
- Persistent Memory (PM) Storage Performance Test Specification v1.0
- SNIA Emerald™ Power Efficiency Measurement Specification v4.1
- Swordfish Scalable Storage Management API v1.2.4
- Storage Device-Level Power Efficiency Measurement Specification v1.0
- Smart Data Accelerator Interface (“SDXI”) Specification v1.0

Join the Technical Work Groups – Participate in their development!

SFF TA TWG Standards in Development

- SFF-8613
 - Mini Multilane 4/8X Unshielded Connector (HDun)
- SFF-8614
 - Mini Multilane 4/8X Shielded Cage/Connector (HDsh)
- SFF-8665
 - QSFP+ 28 Gb/s 4X Pluggable Transceiver Solution (QSFP28)
- SFF-TA-1005
 - Universal Backplane Management (UBM)
- SFF-TA-1020
 - Cables and Connector Variants Based on SFF-TA-1002
- SFF-TA-1023
 - Thermal Characterization Specification for EDSFF Devices
- SFF-TA-1024
 - Test Procedure for SFF-TA-1016 Mated Cable Assembly
- SFF-TA-1025
 - QSFP56 Electrical
- SFF-TA-1026
 - Storage System High Speed Cable Interconnect
- SFF-TA-1027
 - Next Gen QSFP Connector, Cage, & Module
- SFF-TA-1028
 - QSFP112 Electrical
- SFF-TA-1029
 - Cabled QSFP Cage & Connector

Discussion and Q&A

- What are your thoughts?
- Give us your feedback on the org, technical work streams, the industry, and the trends



Board of Directors and Technical Council

Elections 2021-2022

2021-2022 Elected Board of Directors

- Richelle Ahlvers – Intel *
- PK Gupta – Dell *
- Roger Hathorn – IBM *
- Cody Hosterman – Pure Storage **
- Chris Lionetti – HPE **
- Chris Lueth – NetApp *
- J Metz – AMD **
- Scott Shadley - NGD Systems *
- Shalom Shefa – Cisco **
- Paul von Stamwitz – Fujitsu **
- Board Advisors:
 - Michael Oros – SNIA Executive Director
 - 2021-2022 Technical Council Chair(s) (TBD)



* Directors elected to a new 2-year term. ** Directors serving year-2 of elected or appointed term.

Three (3) At-large Seats and Five (5) Advisor Seats on Board of Directors may be appointed by the SNIA Board.

2021-2022 Elected Technical Council

- Curtis Ballard – HPE **
- Mark Carlson – KIOXIA **
- Anthony Constantine – Intel Corporation *
- Fred Knight – NetApp **
- Bill Martin – Samsung *
- Jason Molgaard – Arm *
- David Peterson – Broadcom *
- Leah Schoeb – AMD **
- TC Advisors:
 - Arnold Jones, SNIA, TC Managing Director



* Members elected to a new 2-Year Term as Voting Members. ** Serving Year-2 of Term in elected seat.
Three (3) Voting Seats and 14 Advisor Seats may additionally be appointed by the SNIA Board.

SNIA Staff and Contractors

(as of October 1, 2021)

- **Executive Director:** Michael Oros

- **Operations and Business Services**
 - Michael Meleedy, Business Operations Director
 - Kelli Martin, Business Services Coordinator
 - *Andee Wilcott, Web Manager (Contractor)*

- **Marketing**
 - *Kristin Hauser (Contractor)*
 - *Diane Marsili (Contractor)*
 - *Denise Ridolfo (Contractor)*

- **Membership Services and BizDev**
 - Erin Weiner, Membership Services Manager

- **Education and Global Programs**
 - *Paul Talbut, Regional Program Director (Contractor)*

- **Technology and Technology Center**
 - Arnold Jones, Technical Council Managing Director
 - *Contractor support model for Tech Center and Lab*

- **SNIA Emerald**
 - *Dave Thiel, Program Director (Contractor)*

- **SMI Management and Program Support (Includes F&I Programs)**
 - Tom Mancuso, Senior Technical Operations Manager
 - *Linda Capcara, SMI Marketing (Contractor)*

- **CMSI Management and Program Support**
 - *Marty Foltyn, CMSI Marketing (Contractor)*

Note: SNIA has Contractor Agreements with additional industry and subject matter experts in various functions and Forums and Initiatives (F&Is)

2022 – SNIA Events

- [SNIA Annual Members Symposium](#)
 - Week of January 24th, Virtual
- [Persistent Memory Summit](#)
 - Week of May 9th
- Persistent Memory Hackathons | <https://www.snia.org/pmhackathon>
- SDC EMEA | 1H'22, Virtual | <https://www.snia.org/sdcemea>
- SNIA Technical Symposium | April (TBD), Virtual
- SDC India | 1H'22 (TBD) | <https://www.snia.org/sdcindia>
- SNIA Members Symposium/APTS | July 25-29, 2022, Portland, OR
- SDC North America | Sept. 19-22, 2022, Santa Clara, CA | <https://www.storagedeveloper.org>
- SNIA Technical Symposium | October 24-27, 2022



Acknowledgement

- We could not do the work of SNIA without our dedicated volunteers. You are consistently the greatest asset for the organization and industry!
- Feedback on how we are doing and new initiatives to start/consider is always encouraged
- The support of all SNIA member companies, SNIA staff and contractors is deeply appreciated



Questions

Your Feedback is encouraged and always appreciated.





Thank you

We look forward to your active participation
in SNIA throughout the upcoming year.





Backup



Newsletters, Education, Social Media

- [SNIA Matters](https://www.snia.org/news_events/news/snia_matters) Newsletter – subscribe: https://www.snia.org/news_events/news/snia_matters
- SNIA Education - <https://www.snia.org/educational-library> (searchable)
- SNIA Dictionary - <https://www.snia.org/dictionary> searchable dictionary
- SNIA on YouTube - <https://www.youtube.com/user/SNIAVideo>
Hundreds of Technology-focused presentations are available for free
- SNIA Webcasts on BrightTalk – view upcoming and on-demand webcasts at <https://www.brighttalk.com/channel/663/snia-webcasts>
- SNIA Podcasts - <https://www.snia.org/events/storage-developer/podcasts>
- SNIA Mailing Lists - <https://www.snia.org/subscribe>
- SNIA on Storage Blog - <http://sniablog.org>
- SNIA Standards: <https://www.snia.org/standards>
- SNIA on Twitter - <https://twitter.com/SNIA>
- SNIA on LinkedIn - <https://www.linkedin.com/company/snia/>
- SNIA on Facebook - <https://www.facebook.com/SNIA.ORG>

SNIA Gold Deck

SNIA Introductory and Overview Presentation

<https://www.snia.org/about>

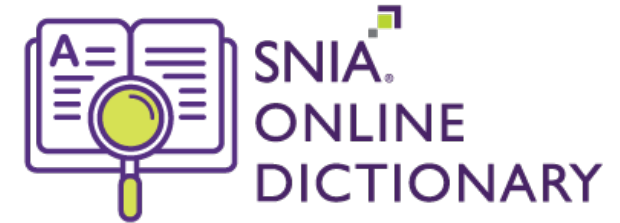
SNIA Educational Resources



SNIA's library of recent presentations, videos, tutorials, white papers, and more are now accessible through our [Educational Library](#).

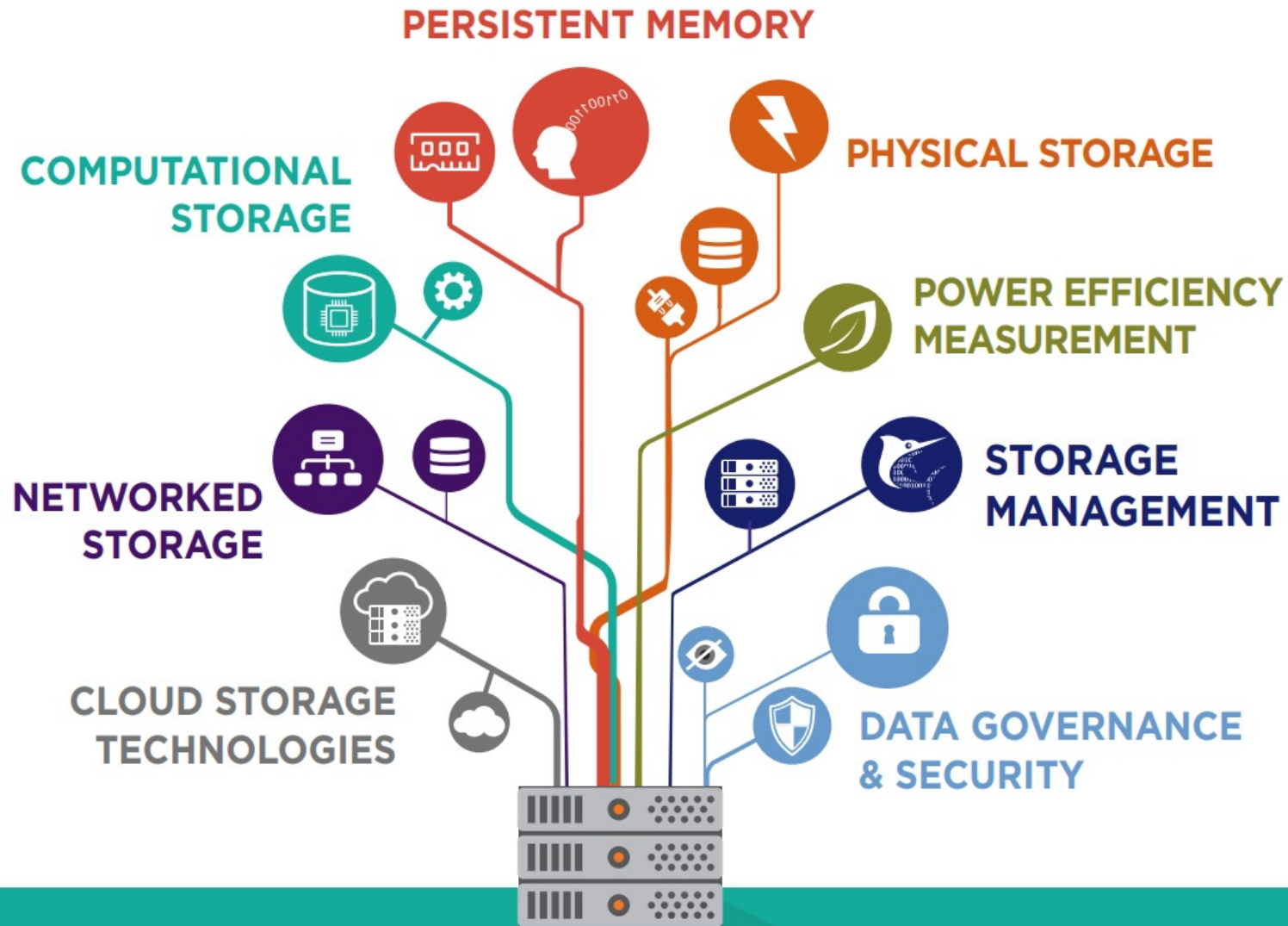


The [SNIAVideo YouTube channel](#) features hundreds of videos covering a vast array of storage topics. From Persistent Memory to Cloud, Data Management to Power Efficiency--plus coverage from our global events--our channel offers news, education and insights for all levels of storage professionals.

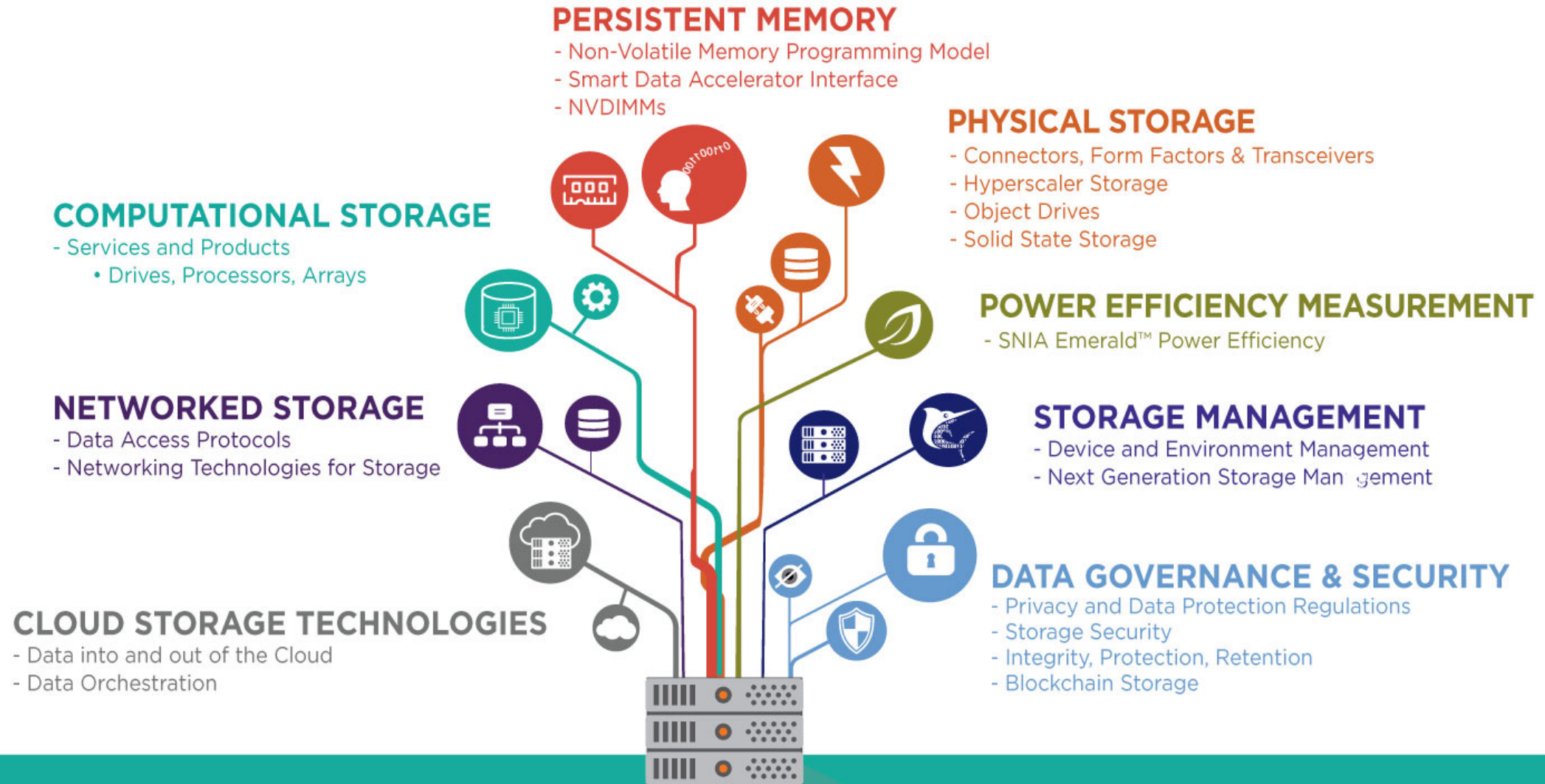


The [SNIA Dictionary](#), which contains terms and definitions related to storage and other information technologies, is the storage networking industry's most comprehensive effort to arrive at a common body of terminology for the technologies it represents.

SNIA's Current Technology Global Focus Areas



SNIA's Technical Work Driven by Each Focus Area



The Real Value to SNIA Membership



INFLUENCE

- ✓ Influence technologies important to the marketplace
- ✓ Showcase storage expertise
- ✓ Amplify your company's reputation
- ✓ Gain insight into emerging technologies

COLLABORATE

- ✓ Develop relationships with key industry experts
- ✓ Participate in multi-vendor interoperability activities
- ✓ Engage in open standards development



LEAD THE INDUSTRY

- ✓ Drive standards development and adoption
- ✓ Align strategic business objectives with industry trends
- ✓ Demonstrate thought leadership through education