

# Charge to the Formation Task Force (FTF) to establish the plan for a Coordinating Panel for Software and Computing

## Background

The central recommendation from the Computational Frontier (CompF) of the Snowmass 2021 Community Planning Process<sup>i</sup> was

“ ... the creation of a standing [Coordinating Panel for Software and Computing \(CPSC\)](#) under DPF, mirroring the panel for advanced detectors ([CPAD](#)) established in 2012.

*Purpose: Promote, coordinate, and assist the HEP community on Software and Computing, working with scientific collaborations, grassroots organizations, institutes and centers, community leaders, and funding agencies on the evolving HEP Software and Computing needs of experimental, observational, and theoretical aspects of the HEP programs. The scope should include research, development, maintenance, and user support”*

The CompF Snowmass Summary Report provides additional details of the community vision for the CPSC which includes career and work force development, recognition of accomplishments in S&C, and topics of diversity, equity, and inclusion.

The DPF Executive Committee (EC) agreed to undertake the creation of the CPSC as a standing committee of the DPF. A small ad hoc exploratory committee consisting of the three Snowmass CompF conveners, and the past chair of the DPF<sup>ii</sup> was formed to develop a plan to establish the CPSC. They have now presented their plan and a proposed timeline to the EC for accomplishing this. The EC approved this plan at its May 2022 monthly meeting. The plan calls for the appointment of a task force, the Formation Task Force (FTF), which is an ad hoc committee reporting to the EC, to write a report that will serve as a formal mandate and organizational plan for the CPSC.

The CPSC will work within the mandate of the DPF and DPF bylaws. It will be a standing committee of DPF and will report to the EC. Its main goal is to facilitate

communication among S&C stakeholders and to help identify issues and problems and coordinate responses among subsections of the HEP computing ecosystem. It is not a funding agency with a budget, although if asked by an agency or organization to administer funds for a specific purpose, subject to approval or concurrence by the EC, this would be acceptable. It is not a provider of computing services. It does not itself execute projects, although it might help assemble or convene a group to do one or more of them. It does not, by itself, select among competing projects or approaches, or directly make decisions or recommendations. If directly asked for advice by an organization or funding agency, it can respond directly or, more likely, arrange a task force or committee to produce a response. The CPSC can sponsor activities that aid in communication or coordination, such as workshops, meetings, or schools, and it can help promote similar activities sponsored by other organizations. It can undertake initiatives that advance software and computing and that fall within the mission of the DPF.

Establishing the CPSC will be done in the same open and transparent manner by which the Snowmass process was carried out and will borrow from the successful deployment in 2012 of CPAD, which is also sponsored by DPF. The Task Force we are establishing must operate within the parameters described above, which define in a general way the appropriate scope for the DPF-sponsored Panel. The FTF shall not redefine the Panel in a manner that would be inconsistent with its sponsorship by DPF.

### **Formation Task Force Charge:**

The Formation Task Force is an ad hoc subcommittee reporting to the EC. It is requested to address and define

- the scope of the CPSC and its charge;
- the general areas of engagement, including the people, organizations, and forums with whom they are likely to interact;
- the proposed organization of the Panel, namely the size, selection process for members, method for selecting chairpersons, terms and term limits for members and chairpersons, etc.;
- a possible initial set of working groups;
- the types of activities that it should promote; and
- the ways of communicating and being available as a resource to the HEP S&C community.

The FTF should propose ways in which the DPF can help promote the work of the Panel and advance S&C in the DPF/HEP community. The CPSC will be expected to respond to requests from DPF, HEPAP, or the funding agencies when they wish to make use of the expertise of the CPSC or the expertise that the CPSC can access. The CPSC should also take the initiative to launch studies when its members think there are important issues that must be examined, and their findings publicized.

The FTF will submit a report to the EC which will address the above issues and will also include answers to the following specific questions and requests:

Q1 Role: Please comment on the role of the CPSC in promoting domain expertise and partnerships between HEP institutions, including laboratories and universities, to address significant challenges.

Q2: Stakeholders: Identify the CPSC stakeholders: scientific collaborations, grassroots organizations, institutes and centers, community leaders, and funding agencies. In the case of the scientific collaborations, list the different kinds, not specific ones. In the case of community leaders, list the role, not individuals.

Q3: Panel membership and representation: How should the membership of the Panel be determined? How should stakeholders be represented in the panel?

Q4 Coordination: What are the methods by which the CPSC can help the community coordinate its approach to software and computing issues?

Q5: Diversity, Equity, and Inclusion (DEI): Please comment on the role of the CPSC in evaluating and promoting DEI within S&C in HEP. Should the CPSC support studies and suggest policies?

Q6: Career development: What mechanism should the CPSC use to promote discussion on career development, including recruitment, training, and retention, as well as potential S&C-for-HEP-specific job categories to improve opportunity and sustainability of S&C in HEP?

Q7: Career development: Should the CPSC create awards to recognize the work of Early Career and/or established scientists in HEP S&C? Suggest the auspices under which such programs might be created.

Q8: Panel Structure: What is the appropriate size of the CPSC? Should there be different member categories, such as full members, observers, and technical consultants for different topics/technologies?

Q9: General communication: What mechanisms should the panel use to communicate: meetings, town halls, workshops, studies, tutorials, training? With what entities should the panel communicate?

Q10: Communication across funding agencies: What role should the CPSC play in facilitating communication between different programs within and across funding agencies?

Q11: Software sustainability: How should the CPSC facilitate coordination of long-term development, improvement, maintenance, and user support of existing essential common software packages as recommended in the CompF Snowmass report?

Q12: R&D: How should the CPSC facilitate coordination of R&D efforts cutting across project or discipline boundaries, from prototype to production, as recommended in the CompF Snowmass report? How can the CPSC promote the proper consideration of sustainability and energy efficiency in the development and eventual selection of new technologies?

Q13: Emerging technologies and transition process: How should the CPSC facilitate the coordination of efforts related to enabling and transitioning HEP programs to newly established or emerging computing technologies, as recommended in the CompF Snowmass report?

Q14: Partnerships: Please comment on the role of the CPSC in encouraging and facilitating strategic links to computing research institutions, industry, and other scientific communities.

## **Acceptance and Implementation of the Report**

The FTF report is due approximately three months after the task force is appointed and should be no longer than 50 pages. We expect during this period that the FTF, with the help of the EC, will consult broadly with relevant S&C communities and stake holders so they can participate in the creation of a coordinating panel that meets their needs and that they will support. The FTF plan will be presented to the EC for comments and possible revisions. After approval by the EC, the DPF will

prepare any modifications to the DPF bylaws needed to accommodate the CPSC and will submit them to the APS for approval. Once the report is approved by the EC, the work of the Formation Task Force is finished, and the EC will begin the process of establishing the CPSC.

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<sup>i</sup> V. Daniel Elvira, Steven Gottlieb, Oliver Gutsche, Benjamin Nachman, et al., The Future of High Energy Physics Software and Computing, arXiv:2210.05822 [hep ex]

<sup>ii</sup> Exploratory group members, From CompF: V. Daniel Elvira, Steven Gottlieb, Benjamin Nachman, From DPF: Joel Butler, Sekhar Chivukula (ex officio)