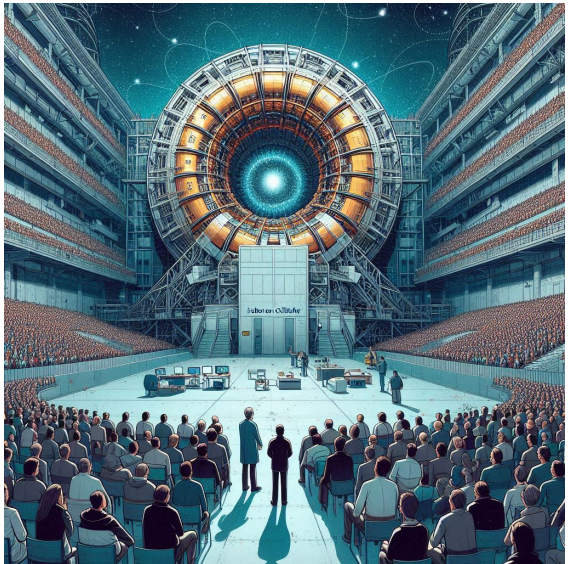
SWIFT-HEP Introduction

10 April 2025

Davide Costanzo



Introduction

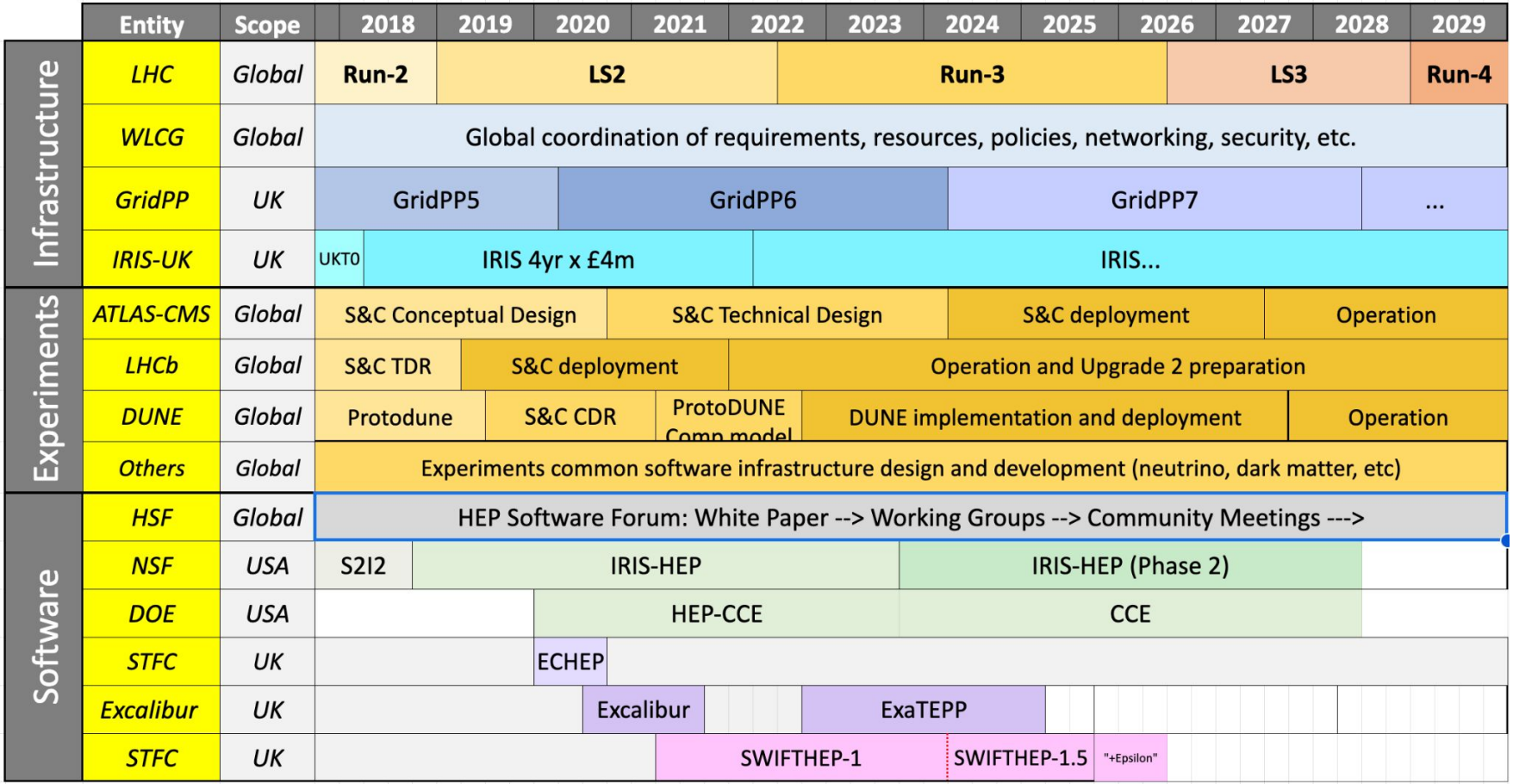
Welcome to the SWIFT-HEP #9,

- SWIFT-HEP alternating workshops: on our own (Autumn) and with GridPP (Spring)
- Plus we joined with ExaTEPP in Warwick last time
- Big thanks to Alessandra and the Manchester team for organising this event!

Is this the end of the line?

- SWIFT-HEP 1.5 funded till Sep 25…
- Announced at the town hall that the is no funding for the second phase
- Potentially we may not make it to “double digit”

Timeline


Entity
Scope
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
Infrastructure
LHC
Global
Run-2
LS2
Run-3
LS3
Run-4
WLCG
Global
Global coordination of requirements, resources, policies, networking, security, etc.
GridPP
UK
GridPP5
GridPP6
GridPP7
...
IRIS-UK
UK
UKT0
IRIS 4yr x £4m
IRIS...
Experiments
ATLAS-CMS
Global
S&C Conceptual Design
S&C Technical Design
S&C deployment
Operation
LHCb
Global
S&C TDR
S&C deployment
Operation and Upgrade 2 preparation
DUNE
Global
Protodune
S&C CDR
ProtoDUNE
Comp model
DUNE implementation and deployment
Operation
Others
Global
Experiments common software infrastructure design and development (neutrino, dark matter, etc)
Software
HSF
Global
HEP Software Forum: White Paper --> Working Groups --> Community Meetings --->
NSF
USA
S2I2
IRIS-HEP
IRIS-HEP (Phase 2)
DOE
USA
HEP-CCE
CCE
STFC
UK
ECHEP
Excalibur
UK
Excalibur
ExaTEPP
STFC
UK
SWIFTHEP-1
SWIFTHEP-1.5
"+Epsilon"

Follow up sent on 2 September

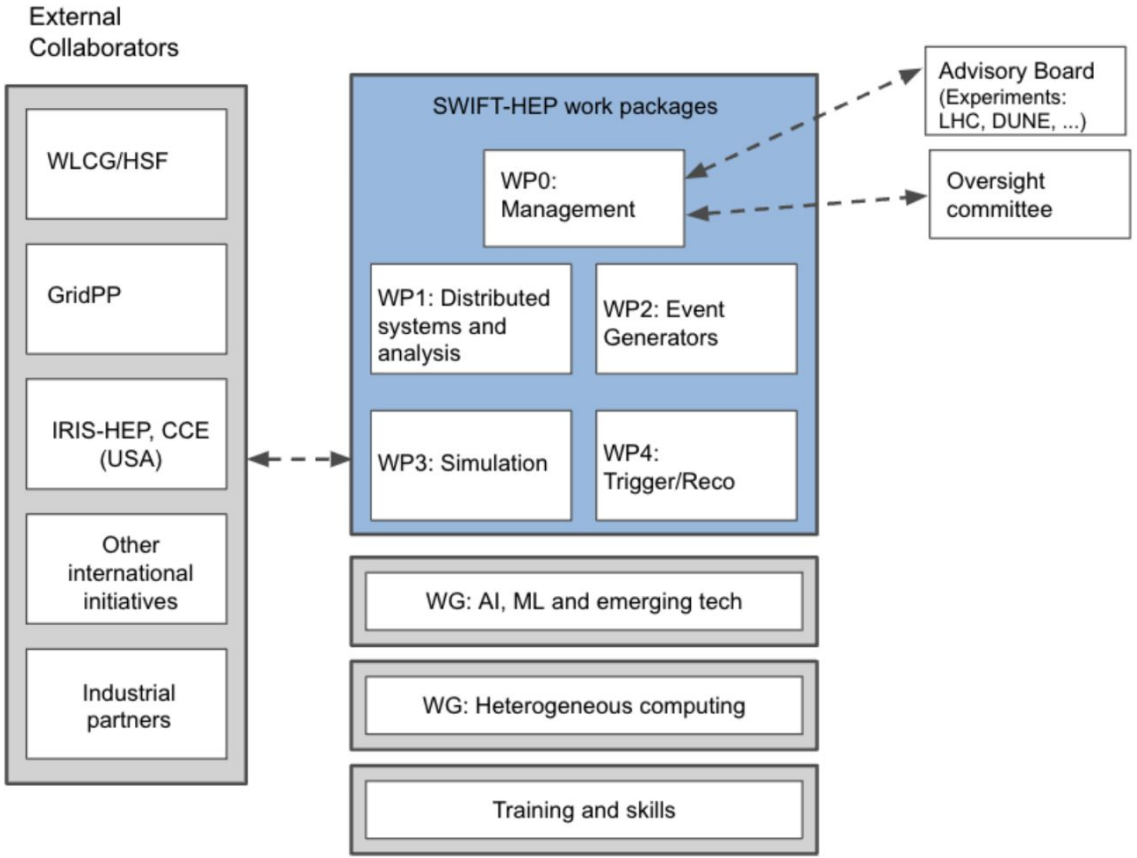
- The minimum scenario requires 5 FTEs of effort, plus some funding for workshops and travel at a cost of £585k/year and a total of £1170k over two years. The funding profile is flat across the two years as the funding is to cover existing staff (although salary increases/inflation needs to be included);

- A list of main deliverables per work package is provided below. Broadly the scope of the next two years is to fully exploit and optimise the prototypes that were developed during the first phase of SWIFT-HEP;

- We will participate in DRI calls as much as possible within the mission of the project. To achieve the best outcomes from these programmes, it is important to have community participation, for which “working groups” are proposed as described below;

- We are in the process of preparing a bid to participate in the CoSeC initiative as a Collaborative Computational Project (CCP). The scope of this initiative is still under discussion.

SWIFT-HEP organisation - Bridging and next phase



Letter from STFC

SWIFT-HEP 2

Dear Professor Costanzo,

We apologise for the delay in providing a response to your Statement of Interest (SOI) for the proposal “SWIFT-HEP 2”. The SOI alongside the additional information supplied to Programmes Directorate in September 2024, was considered by Science Board at its meeting on 19 November 2024.

Science Board maintains the recognition of the high priority work delivered by the SWIFT-HEP project and in particular the sustainability benefits it can provide to the particle physics community and the experimental programme for the UK.

However, the financial context within STFC has changed significantly since the SOI was submitted which has meant STFC has had to make difficult decisions to meet the funding level available.

This means that STFC is not in a position to fund the SWIFT-HEP Phase 2 proposal. It is understood that this will result in a withdrawal from the SWIFT-HEP collaboration.

Since November…

A bid to CoSeC was funded (Leads: Ed Bennett and Ben Morgan)
- 1 FTE*year in Warwick/Swansea + 1 FTE*year from CoSeC
- Part of the plan is to write a “roadmap for particle physics software in the UK”

Chris Gütschow received a CoSeC fellowship
- Some money for workshops, etc

A proposal for “accelerated computing” led by Durham submitted
- Note this a computer science project to which we can bid for RSE time for “small projects”

We prepared a community document on AI for particle physics in the UK

There are a few ideas for the “Software maintenance grants” recently announced

While it is useful to work with colleagues across domains.
We need to retain some **dedicated particle physics funding**

To conclude….

While the situation is unclear, we can only assume that we now need a pause.

SWIFT-HEP was a springboard to get more funding from UKRI
(aka the DRI mirage)

We only got positive feedback from the community, the funders and the international partners

We did a lot of outreach work to interact with other disciplines
(It's a wild world out there…)

Personally, I will be still involved in

- GridPP as ATLAS representative (we are ~50% of GridPP capacity)
- ATLAS S&C as member of the International Computing Board
- Chair of the ATLAS collaboration board (in 2026-27)