

# FCC Software and links with detector/physic

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For the FCC-SW group

# Status

- Back in March, and based on the snowmass experience, 2M events for each of the 60 hard scatter processes have been produced:
  - <https://test-fcc.web.cern.ch/test-FCC/index.php>
- Those events are still not being used...
- Common software framework has improved significantly in the past months but, mainly developers are using the framework so far
- We urgently need to inverse the tendency, but how?
  - Closer collaboration with physics and detector groups
  - Clear goals and timeline to be defined
- The people involved in the software developments are too precious and their time needs to be wisely spend and objectives/goals clearly defined.

# Points to discuss

- The Software group can not work blindly!
- Close relation with FCC-hh physics and detector groups needs to be established (that is now my responsibility)
- How to better coordinate the overall effort and prioritize the activities in the software group?
- How to better distribute the usage of the FCC software?
- How to attract new people?

# Some more thoughts

- Physics

- What is needed for the physics studies:
  - Flexible analysis framework, centrally produced processes
  - Mostly with Delphes for the 2018 deadline
  - Physics analyses based on fully simulated sample seems unrealistic

- Detector/Performance

- What is needed for the detector and performance studies:
  - Flexible simulation framework
  - Mostly with full simulation
  - Used to validate and improve the Delphes setup

- One example, Pileup

- Need inputs from the physics on how to setup the mixing
- Need detailed simulation studies to understand vertexing, b-tagging, jet reco performance (sub-structure) etc...
- Would make sense to setup a Task-Force!!