

PRIN Timeline and Goals

Facts Checking

Numbers and Main goals

- The foreseen luminosity 150 fb⁻¹ - on track!
- The sensitivity with this luminosity is foreseen to allow for differential cross section measurements of Hbb.
- We did not emphasise the « observation » - in good anticipation of the « observation paper ».
- Measurements with both VH, VBF and foresee ggF boosted analysis.
- Plans from Hbb group do not involve the boosted ggF (moving to Exotics group)
 - On the one hand: it would be better to keep this one within Hbb given the overlap with the other production modes and the necessity to combine. Also not natural given that the boosted leptonic VH(bb) would remain in Hbb.
 - On the other hand: pragmatically Hbb group has not made huge progress on boosted analyses.

PRIN Timeline

bYUKAWA - PRIN Project

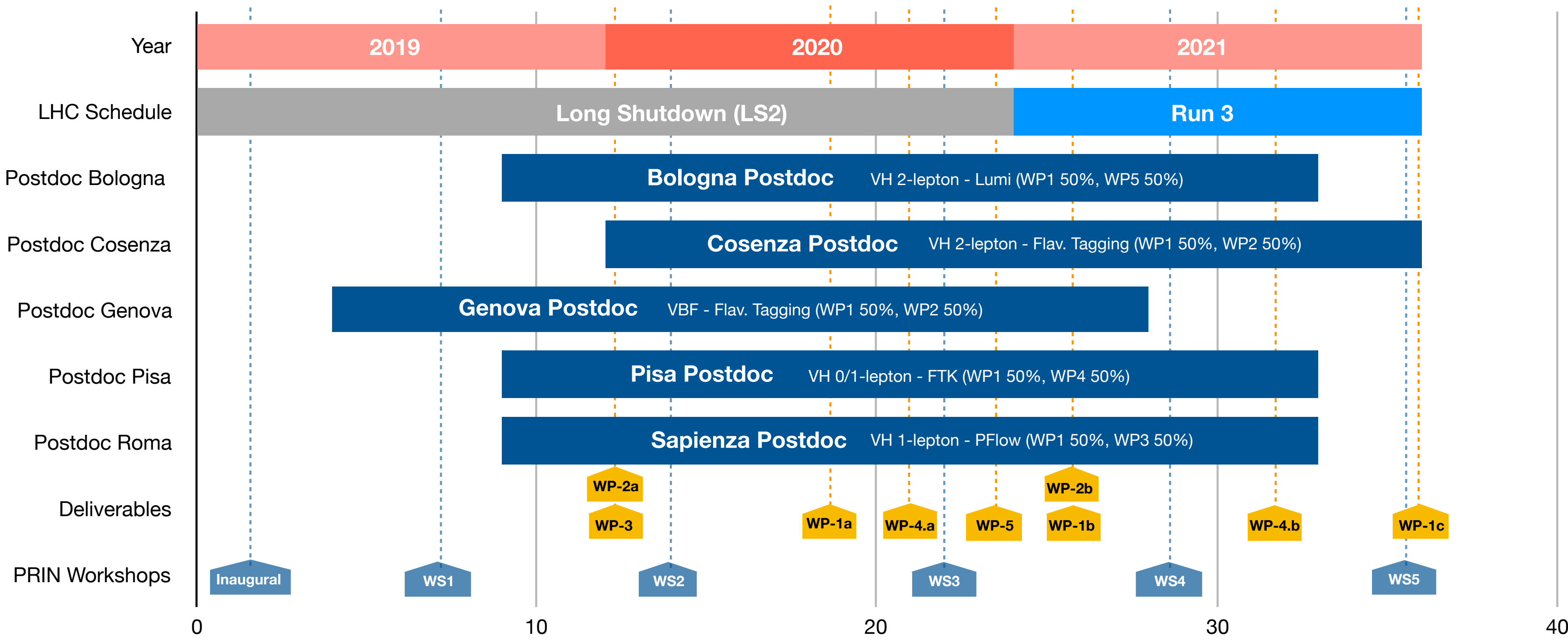
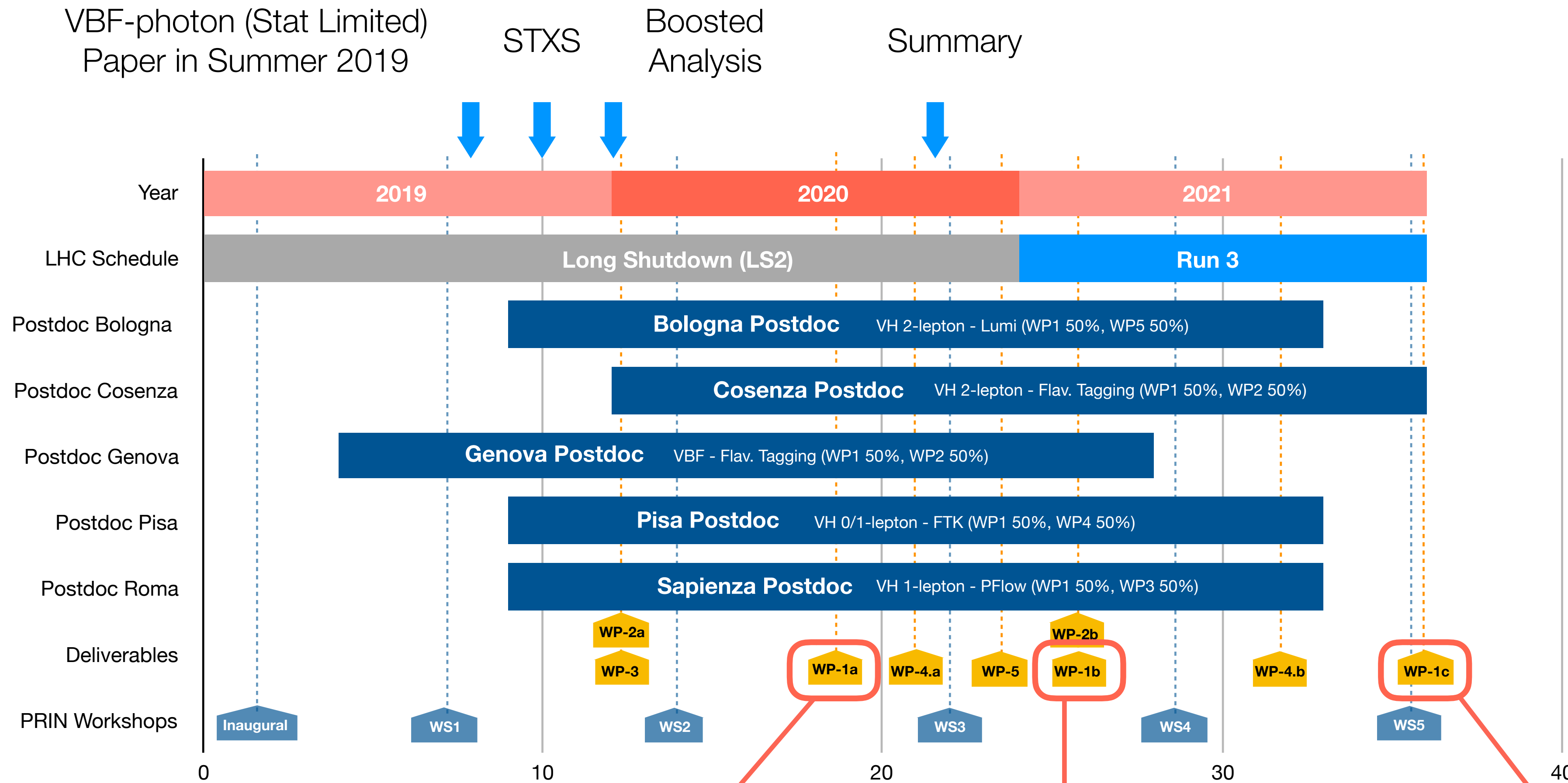


Figure 2: bYUKAWA PRIN Timeline, including the LHC foreseen schedule, the integration of the postdoc grants, the foreseen deliverables for each work-package and the main workshop events.

PRIN Timeline and Goals - WP 1

Hbb - not unexpectedly very ambitious!



A bit of tension with the very ambitious timeline from the group.

Assess ASAP how realistic these goals are and adjust the hiring accordingly.

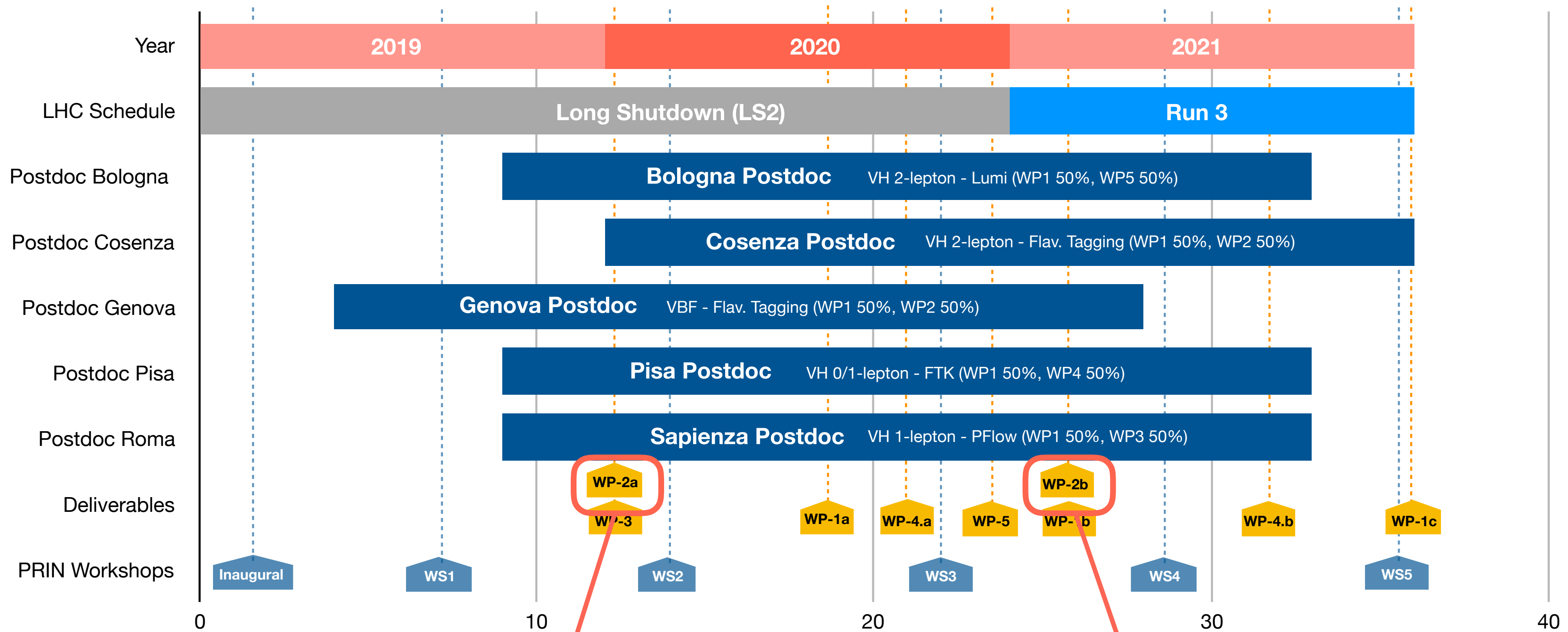
Foreseen publication of VH results

H(bb) with jets, including boosted?

Combination of all channels

PRIN Timeline and Goals - WP 2

FTag - Group schedule (see Andrea's presentation)
Many possible synergies with the PFlow (improved training, soft muon tag, soft electron tag, et...)



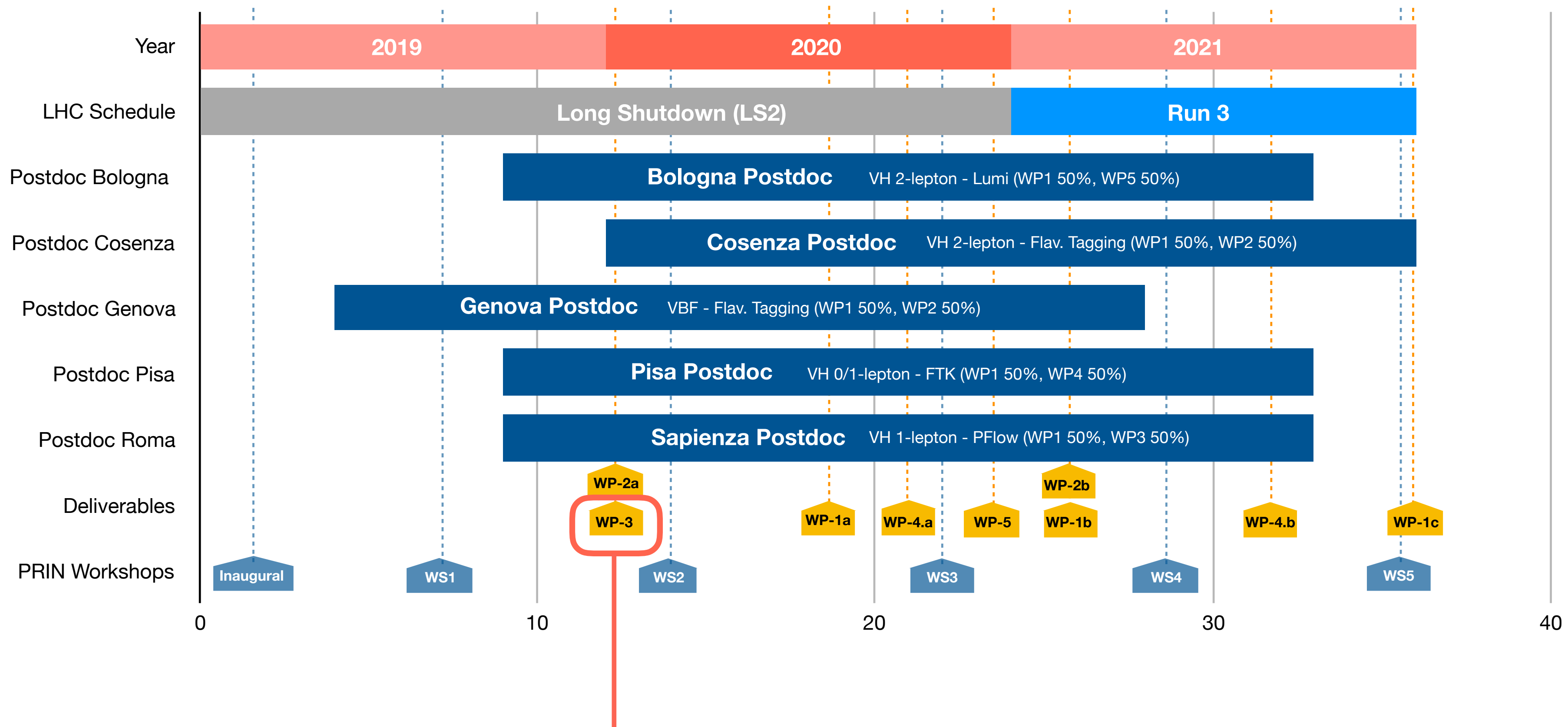
Training of novel DNN approach(es)

Calibration of trained algorithm in preparation for Run 3

PRIN Timeline and Goals - WP 3

PFlow task force done - a study group is formed with more detailed studies starting.

Computer Vision DNN for PFlow started (See previous presentation)

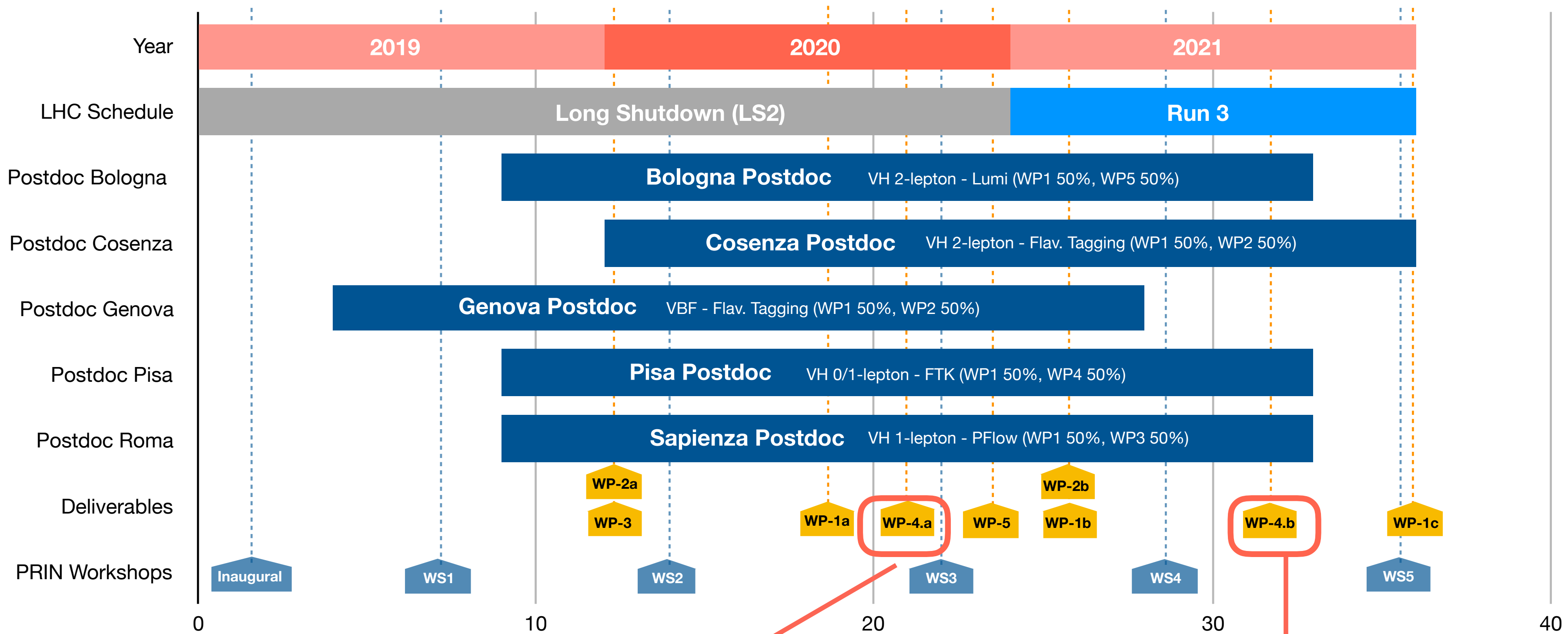


Stage 1 already implemented and committed in release 21 - available for all productions in release 22. See previous talk.

Little commitment in the project for DNN and further stages

PRIN Timeline and Goals - WP 4

FTK - Milestones discussed in more detailed in specific talk

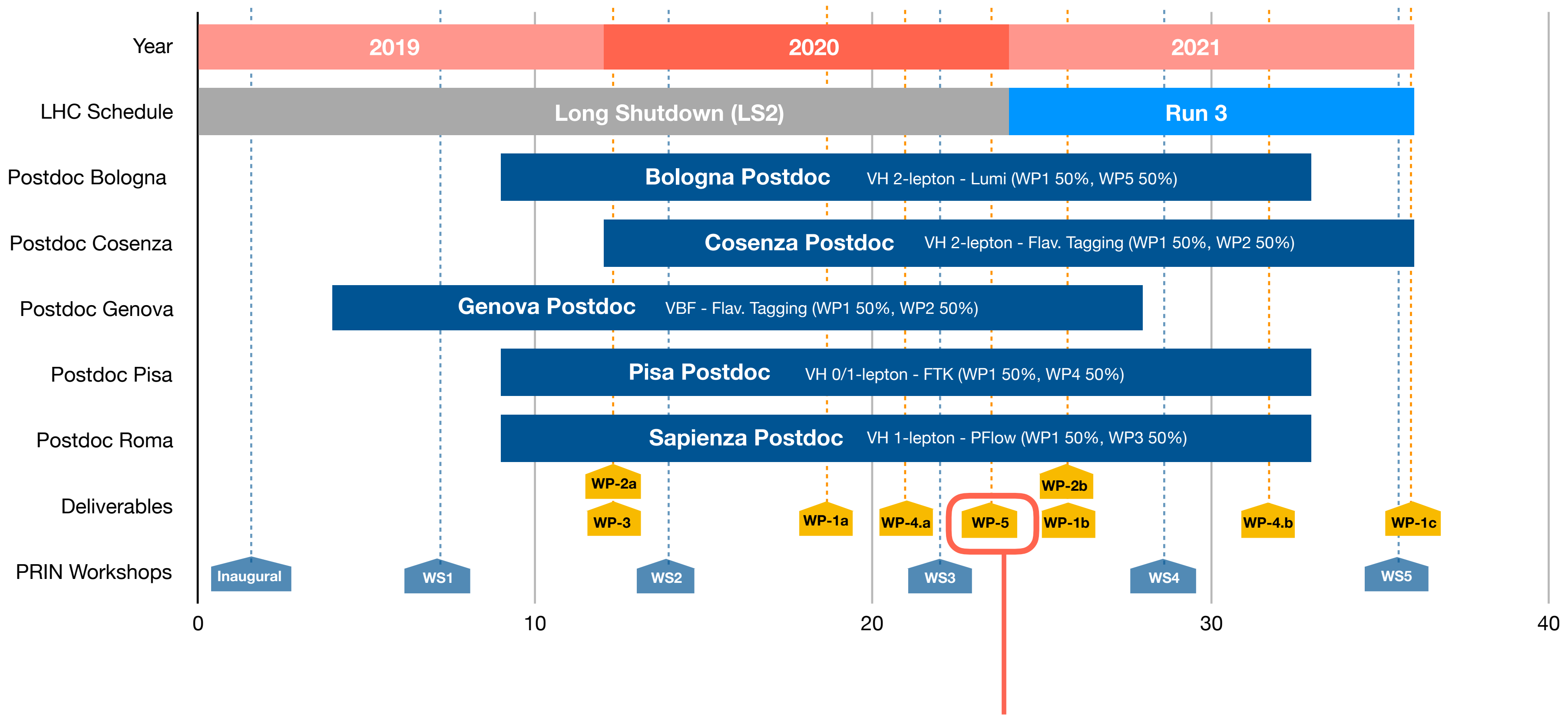


Full commissioning of FTK ready for Run 3

Implementation of specific H(bb) algorithms for ZH and VBF

PRIN Timeline and Goals - WP 5

Luminosity - Milestones discussed in more detailed in specific talk



Completed design for LUCID upgrade

PRIN Timeline and Goals - WP 6

No specific milestone for Work Package 6 on Outreach: Mainly a commitment from all members.

Conclusions and Outlook

- Main goals of the PRIN fully in line with the progress made in ATLAS in all areas of the PRIN.
- Analysis (WP1) goals to publish as much as possible in 2019 in tension with the PRIN goals. This might require some adjustments to the hiring: either anticipate them or delay them (most importantly follow closely the feasibility of the ambitious Hbb timeline).
- Other Work Packages seem to be well in line with the current progress in the collaboration - discussions this afternoon are important to understand how to best take into account the recent progress and modify the requests accordingly.