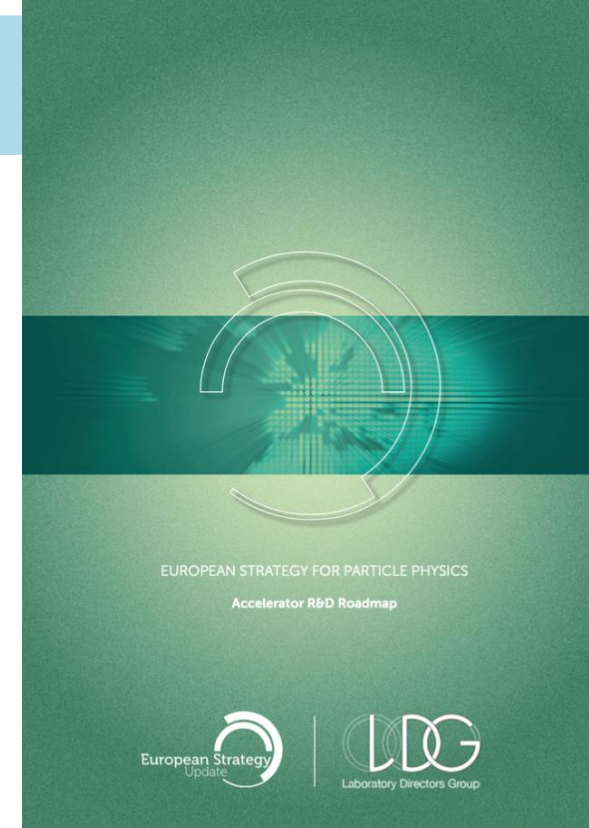
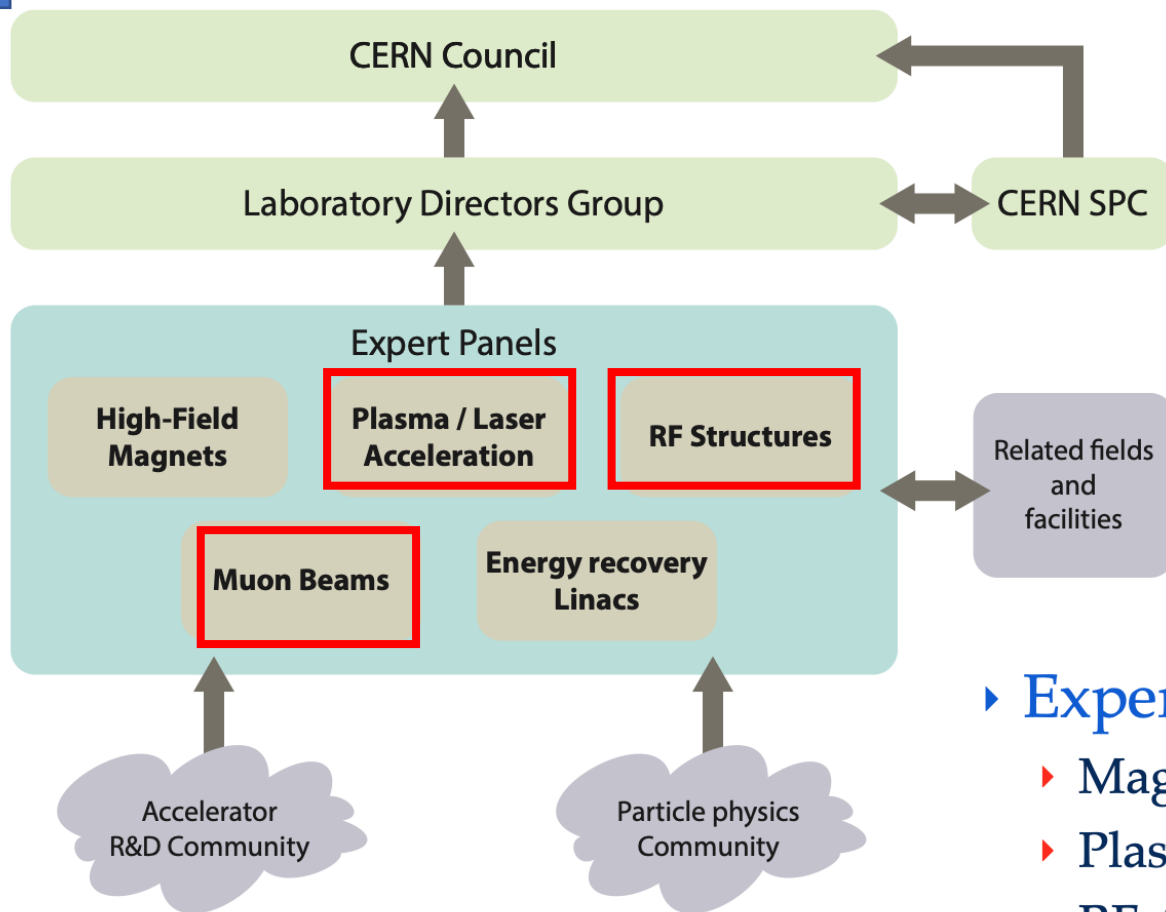


2021

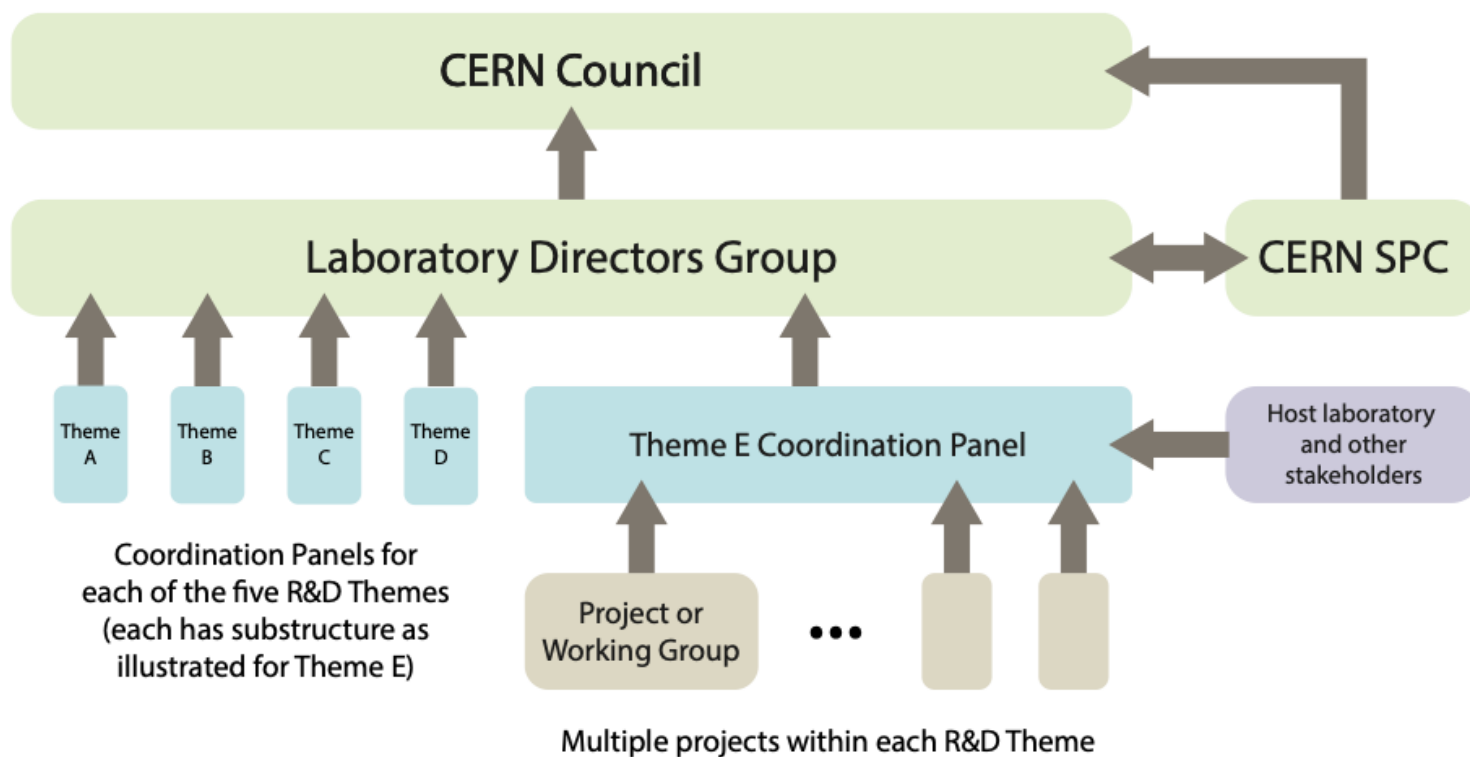
Accelerator R&D Roadmap



▶ Expert panel chairs

- ▶ Magnets: P. Vedrine (IRFU)
- ▶ Plasma: R. Assmann (DESY)
- ▶ RF: S. Bousson (IJCLab)
- ▶ Muons: D. Schulte (CERN)
- ▶ ERL: M. Klein (Liverpool)
- ▶ Co-opted authors for additional sections

Coordination Structure



- ▶ Important that the door is kept open for new participation in coming years
- ▶ Becoming clear that communication between panels is also a key aspect
 - ▶ e.g. strong overlap between RF, magnets and muons activities

Coordination Panel Leadership

- ▶ **HFM**
 - ▶ Mike Lamont (CERN)
 - ▶ Pierre Vedrine (IRFU)
- ▶ **RF**
 - ▶ Giovanni Bisoffi (INFN Padova)
 - ▶ Peter McIntosh (DL)
- ▶ **LPA**
 - ▶ Wim Leemans (DESY)
 - ▶ Rajeev Pattahill (RAL)
- ▶ **Muons**
 - ▶ Steinar Stapnes (CERN)
 - ▶ Daniel Schulte (CERN)
- ▶ **ERL**
 - ▶ Jorgen D'Hondt (VUB)
 - ▶ Max Klein (U. Liverpool)

Next Steps

- ▶ **Coordination panel tasks**
 - ▶ Open dialogue with all (current and future) stakeholders
 - ▶ Including discussion of possible future resource levels, as input to planning
 - ▶ Inaugurate suitable coordination structures – now well under way
 - ▶ Define the concrete R&D deliverables for the coming four years
 - ▶ Establishing realistic goals and expectations for next strategy update
- ▶ **First iteration of annual review cycle**
 - ▶ First LDG annual review of R&D progress on Monday 21st November
 - ▶ Will report to SPC / Council in the December sessions
- ▶ **Issues under discussion**
 - ▶ The style, composition, and schedule of the RRB
 - ▶ Ideally this should be in common with the Detector R&D
 - ▶ Practical administrative support for panels & establishment of public presence
 - ▶ Mechanisms to achieve long-term balance of the programme
 - ▶ Based on roadmap priorities but also new developments
 - ▶ Will be an active and ongoing discussion with FAs, keeping in mind the agreed position of maintaining progress on all five fronts on at least a minimal level

Plasma/lasma acceleration (draft)

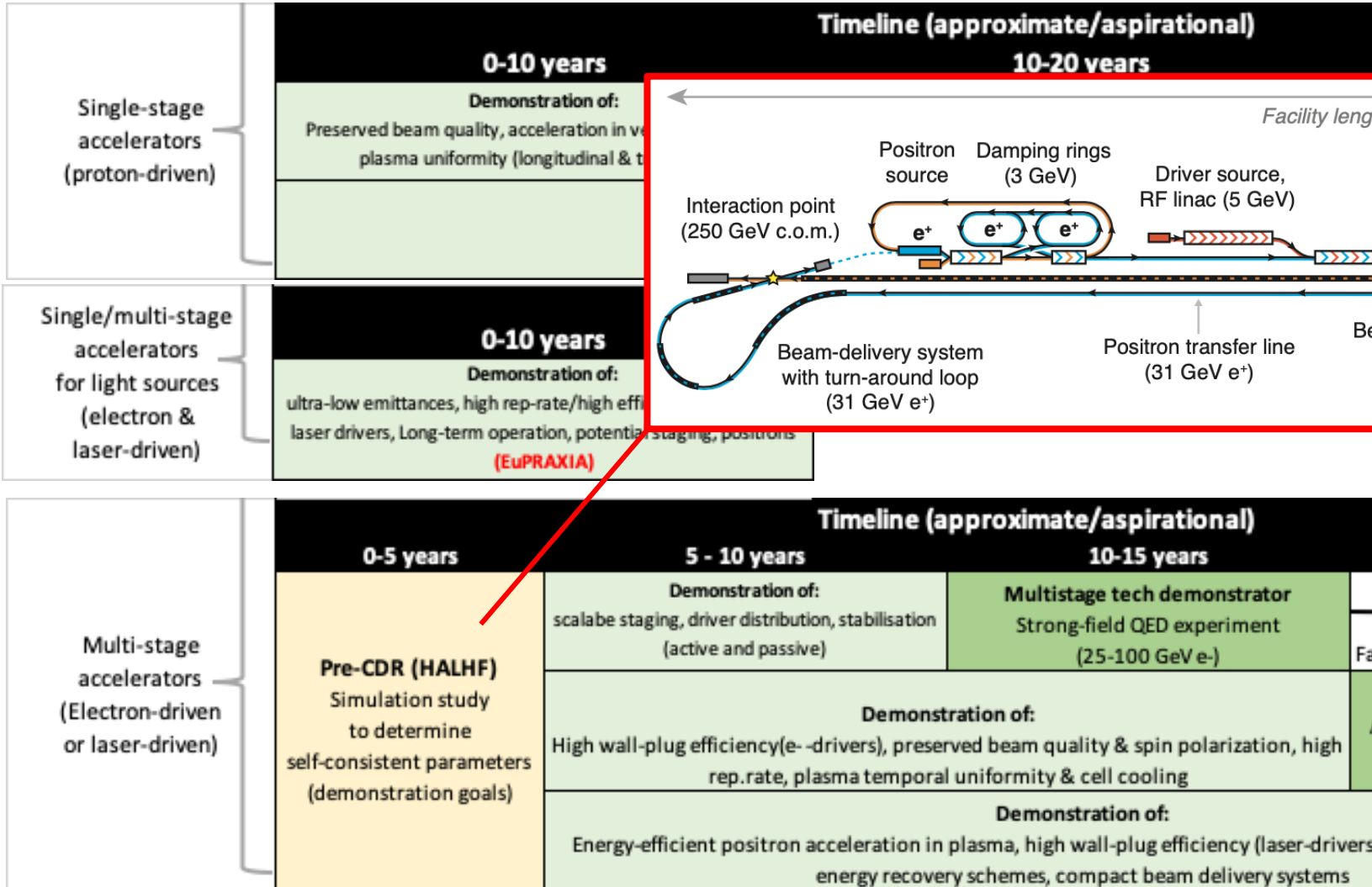


Table 1 | Work Packages and coordinators

WP No.	Work package	Coordinators	Main activities
1.1	Overall collider concepts (Higgs Factory)	Carl Lindstrøm, Brian Foster, Richard D'Arcy, Deputy: Erik Adli	Ownership of HALHF parameters, informed by expertise in the other WPs and the HEP community. Coordination of HALHF at an overarching level, including seeking input and expertise from the CLIC/ILC communities, identifying critical items in the non-plasma part of HALHF (BDS, DR, e+ production) and first investigations of physics case and detector considerations for HALHF.
1.2	Beam-driven electron linac – integrated simulations	Erik Adli Deputy: Carl Lindstrøm	Start-to-end simulations of PWFA linac with HALHF -parameters to underpin HALHF design. This includes: Developing single stage and interstage models, in collaboration with expertise from the other WPs (PIC expertise, experimental results, rep. rate studies etc.), Quantifying the overall length, efficiency and emittance preservation, including tolerances, of the HALHF PWFA linac.
1.3	Laser-driven electron linac	Jorge Viera, Brigitte Cros, Maxence Thevenet, Zulfukar Najmudin	Identifying any fundamental showstopper Improving reduced models with additional physics

Activities 2027- discussion tomorrow

