

UK ESPPU Drafting Day

04 Nov 2024

Poll results

Table of contents

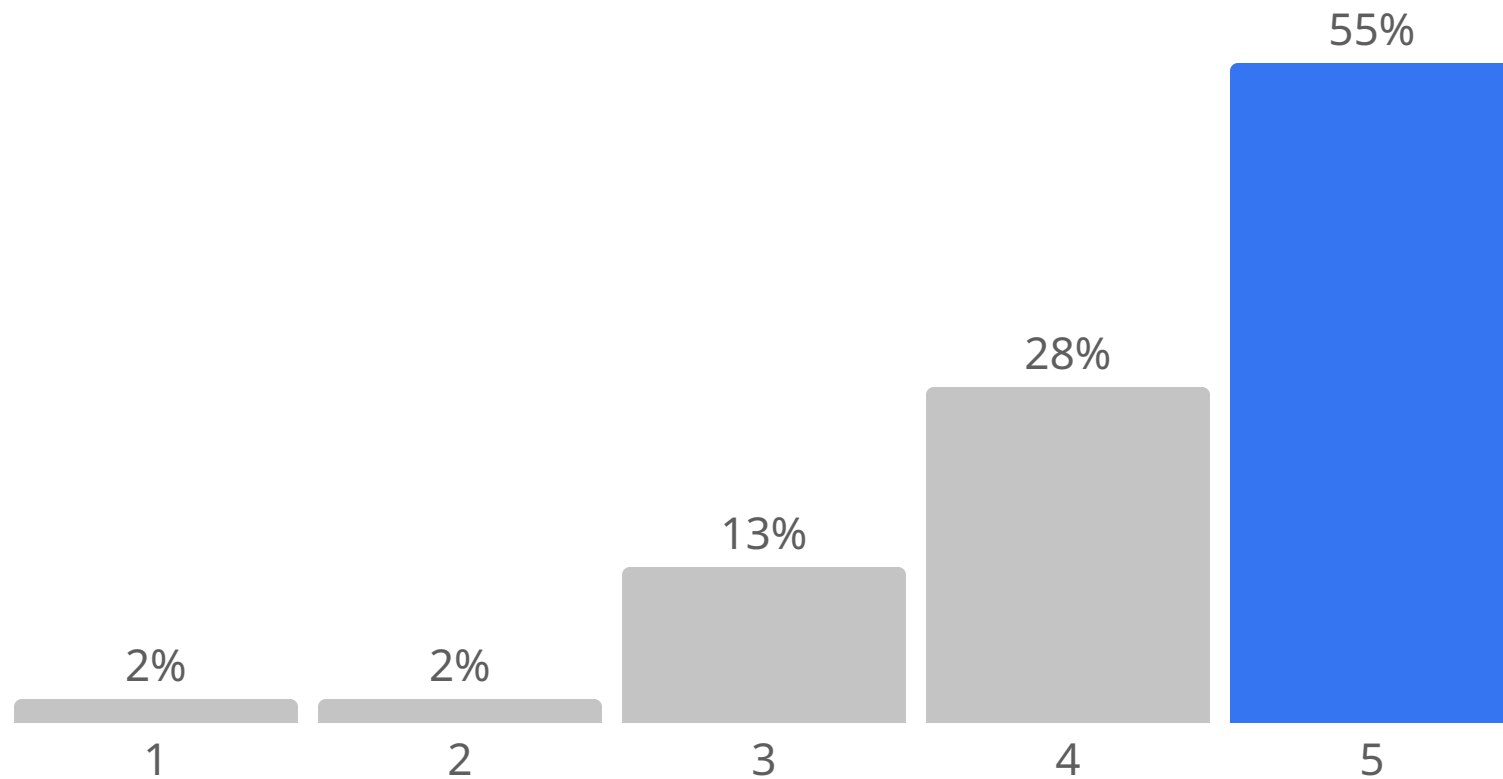
- Responses to sample statements

Responses to sample statements (1/35)

0 4 7

3a- "CERN should remain a global laboratory for particle physics so it is important that a post-HL-LHC collider is built"

Score: 4.3

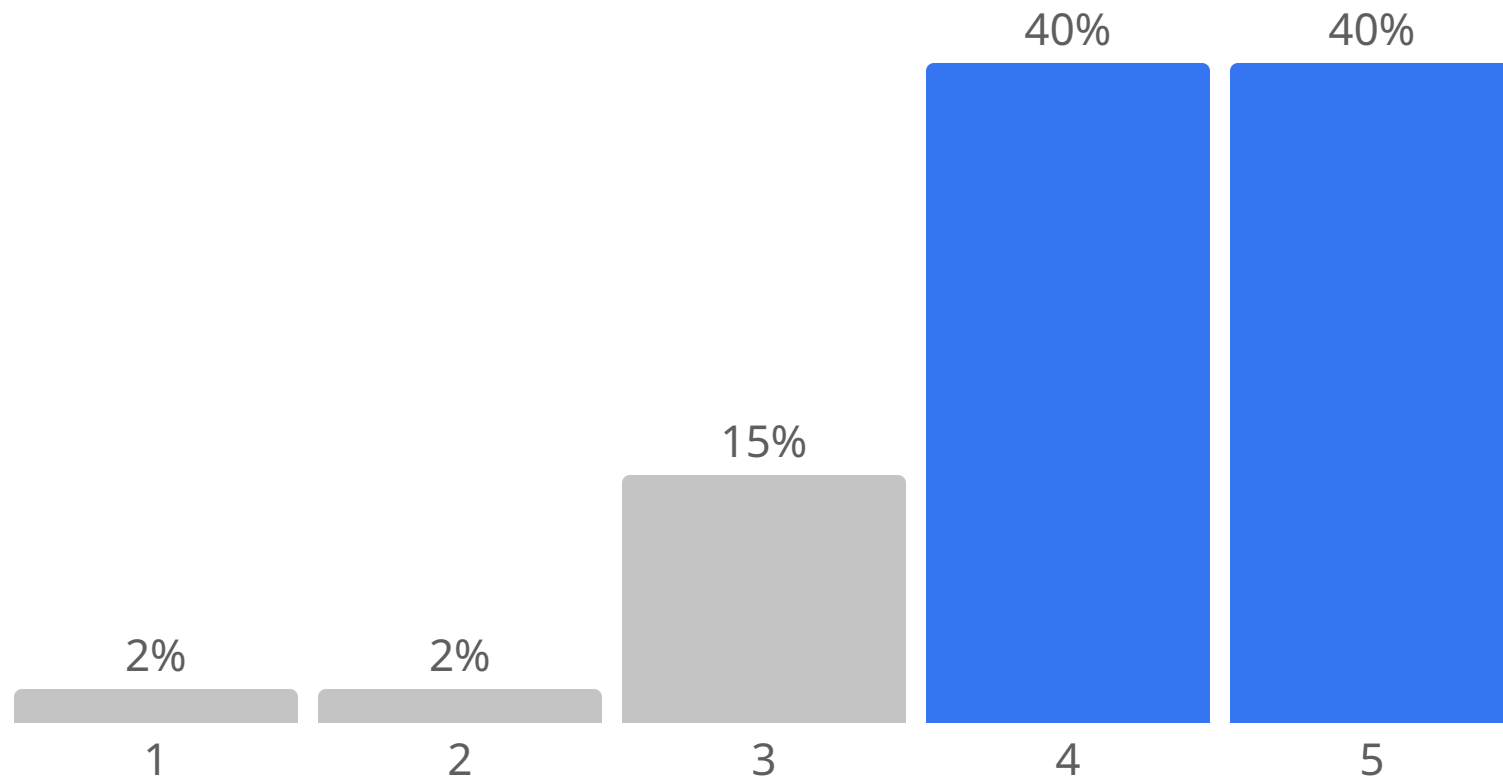


Responses to sample statements (2/35)

0 4 7

3a-“For a full understanding of the Higgs sector an e+e- Higgs factory must be realised somewhere in the world.”

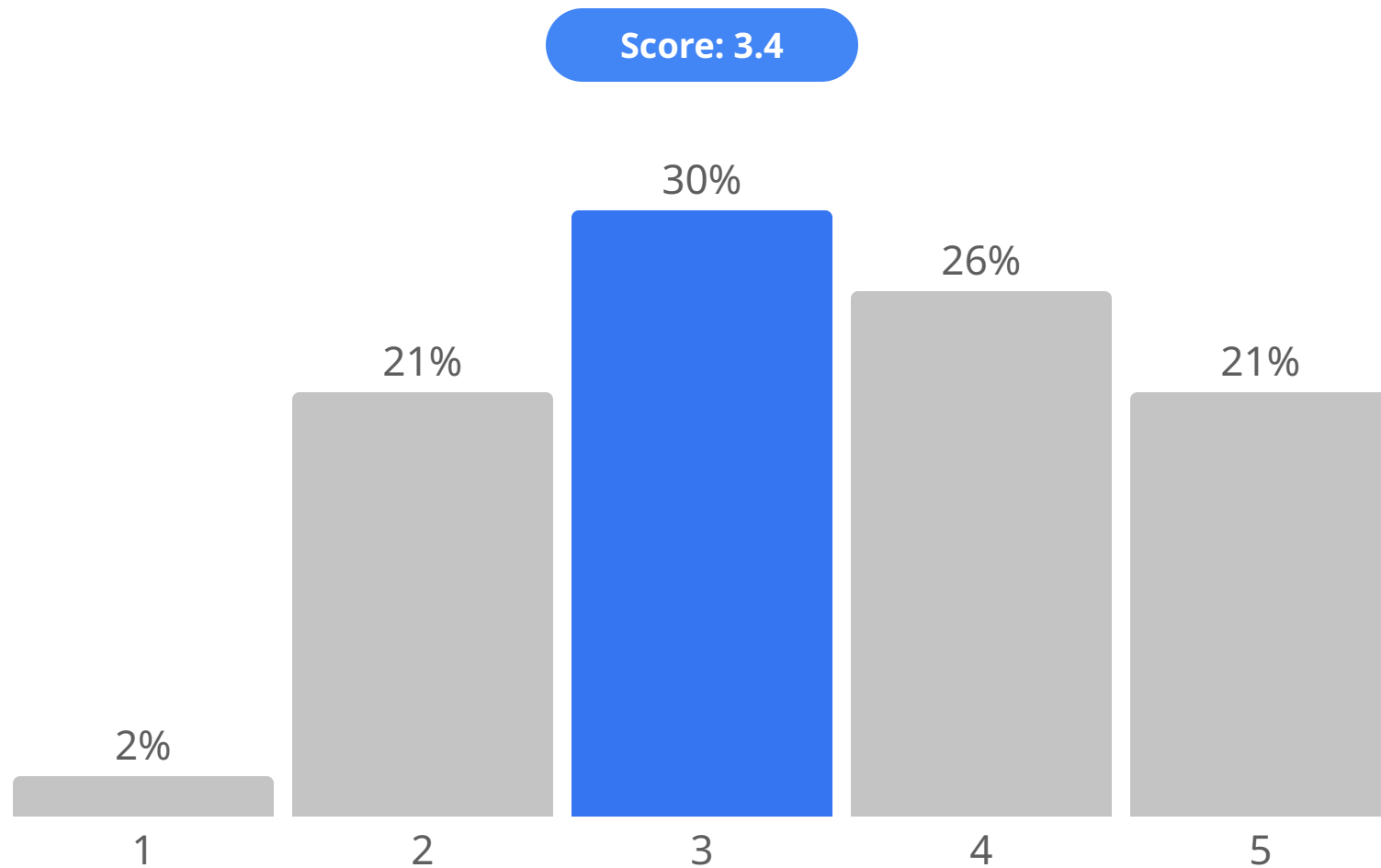
Score: 4.1



Responses to sample statements (3/35)

0 4 7

3a-“From an accelerator physics perspective the FCC in all three flavours is a technically feasible flagship European collider.”



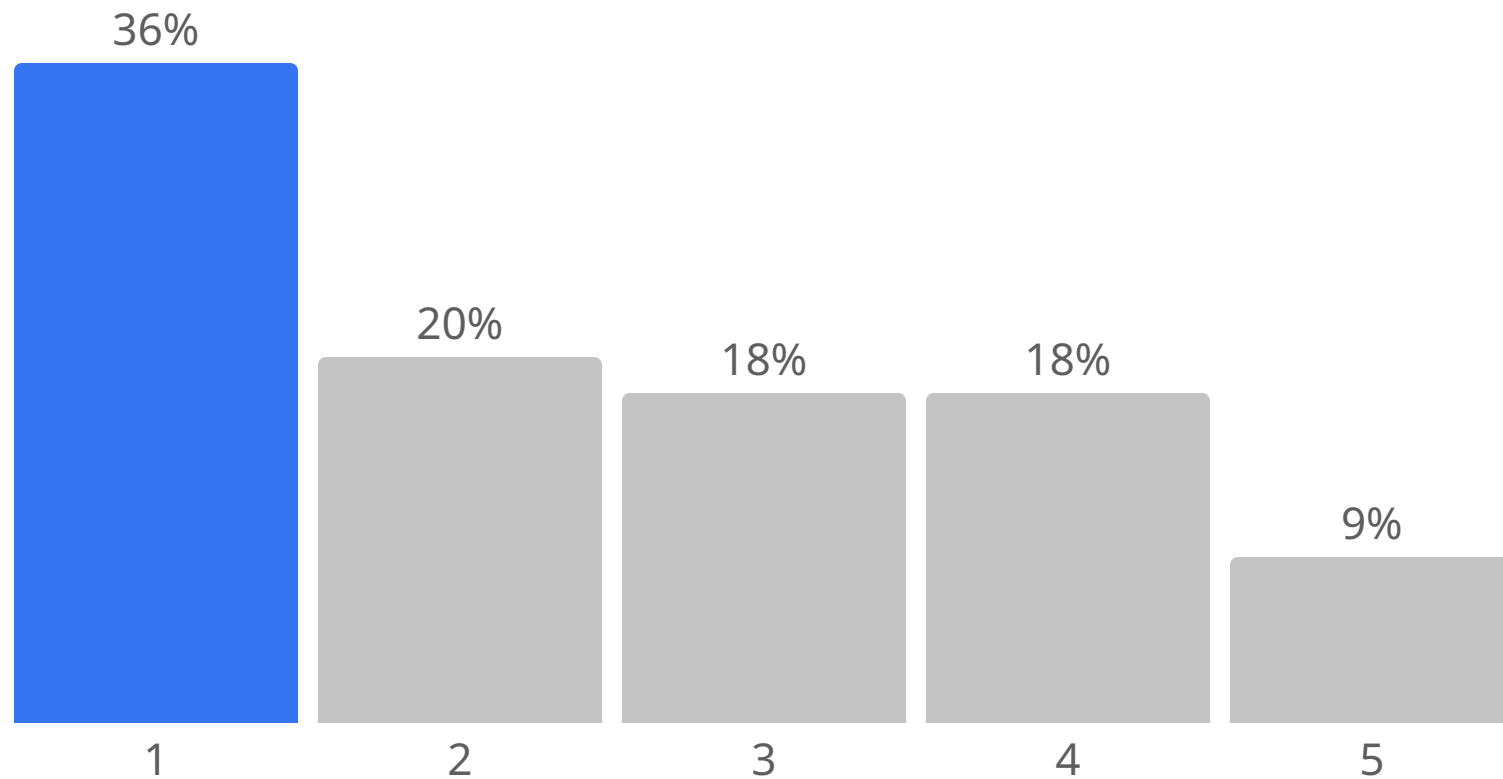
Rating poll

Responses to sample statements (4/35)

0 4 5

3a-"FCC-hh is not affordable under any foreseeable budget scenario and thus the FCC tunnel should not be built and a Higgs factory should be a linear e+e-collider at CERN."

Score: 2.4

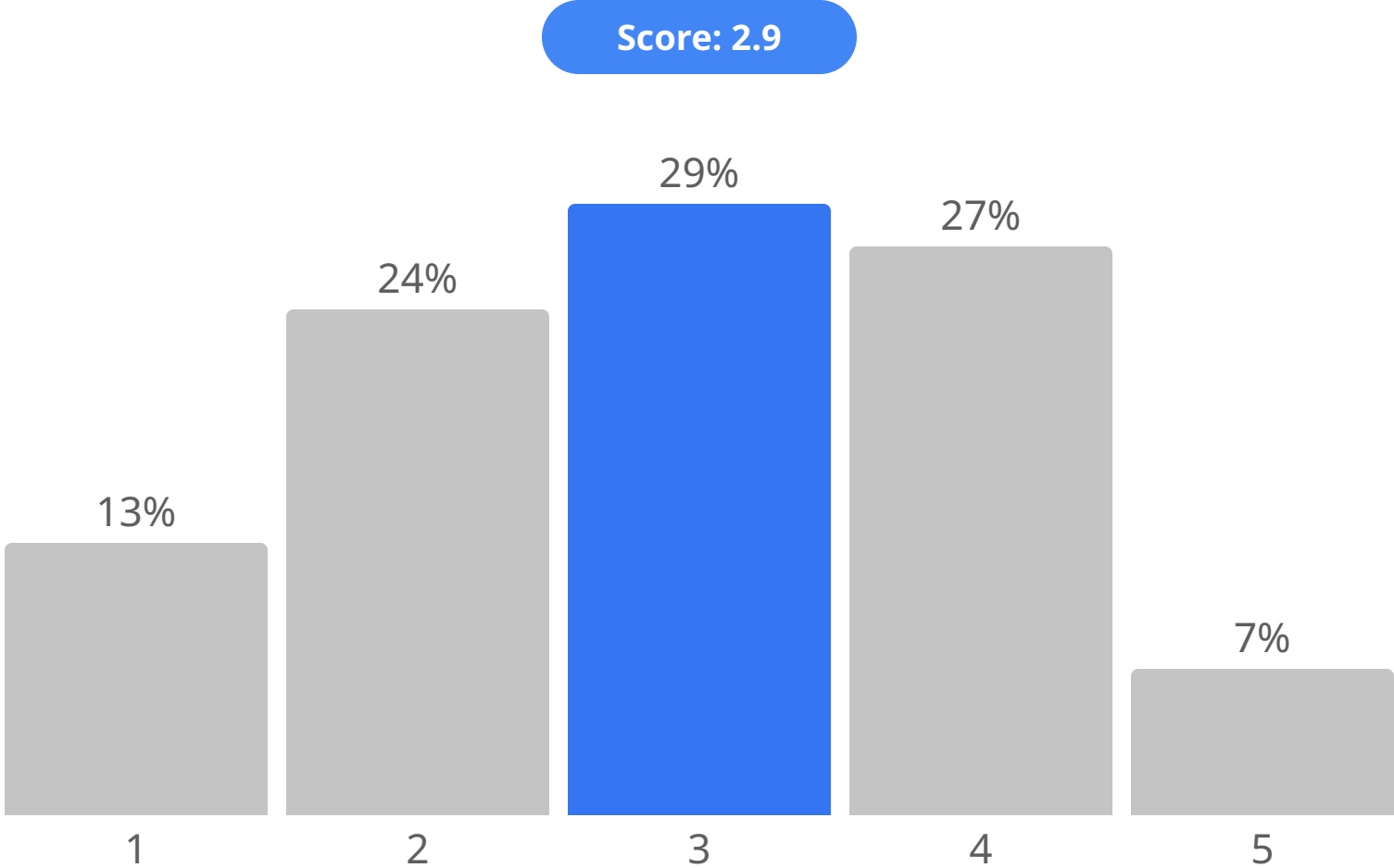


Rating poll

Responses to sample statements (5/35)

0 4 5

3a- "The only project mature enough in terms of a robust feasibility study and costing is FCC-ee and this should be pursued as the number-1 priority."

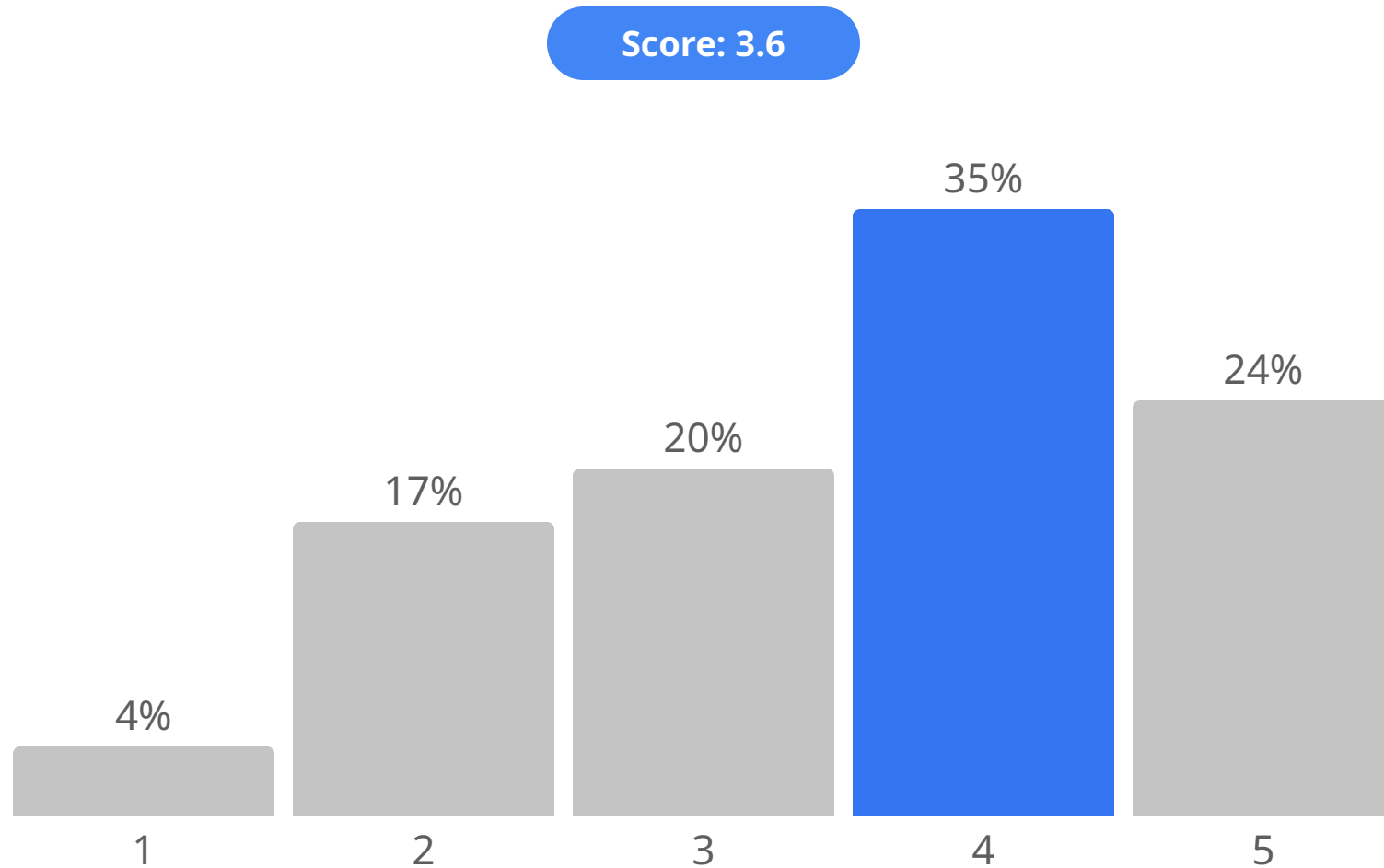


Rating poll

Responses to sample statements (6/35)

0 4 6

3a- "A decision on a 10 TeV pcm collider cannot be made now owing to the level of accelerator R&D still required. A next-generation e+e- collider should therefore be independent of a further-future 10 TeV pcm collider."

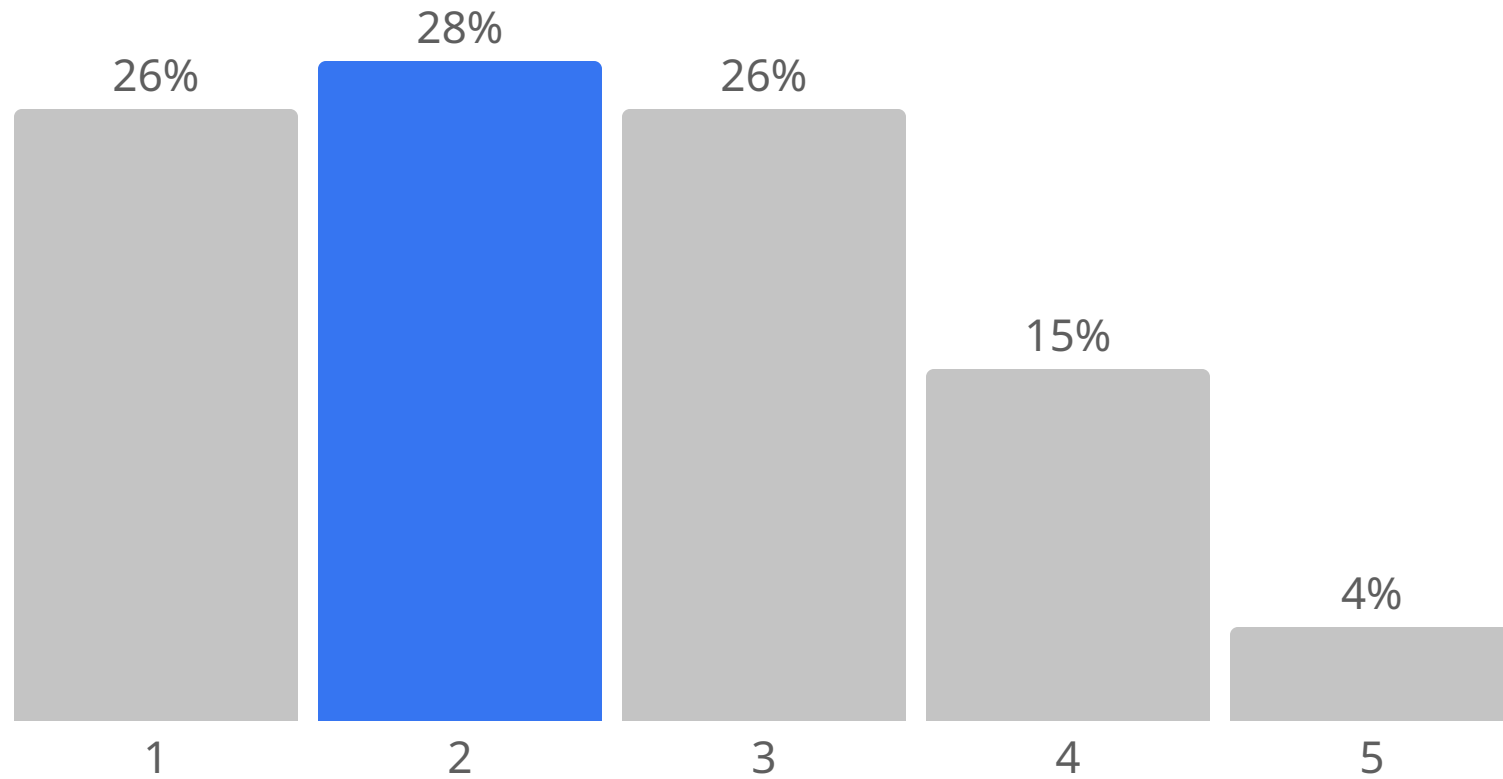


Responses to sample statements (7/35)

0 4 6

3a- "Any future collider should fit within the existing CERN sites."

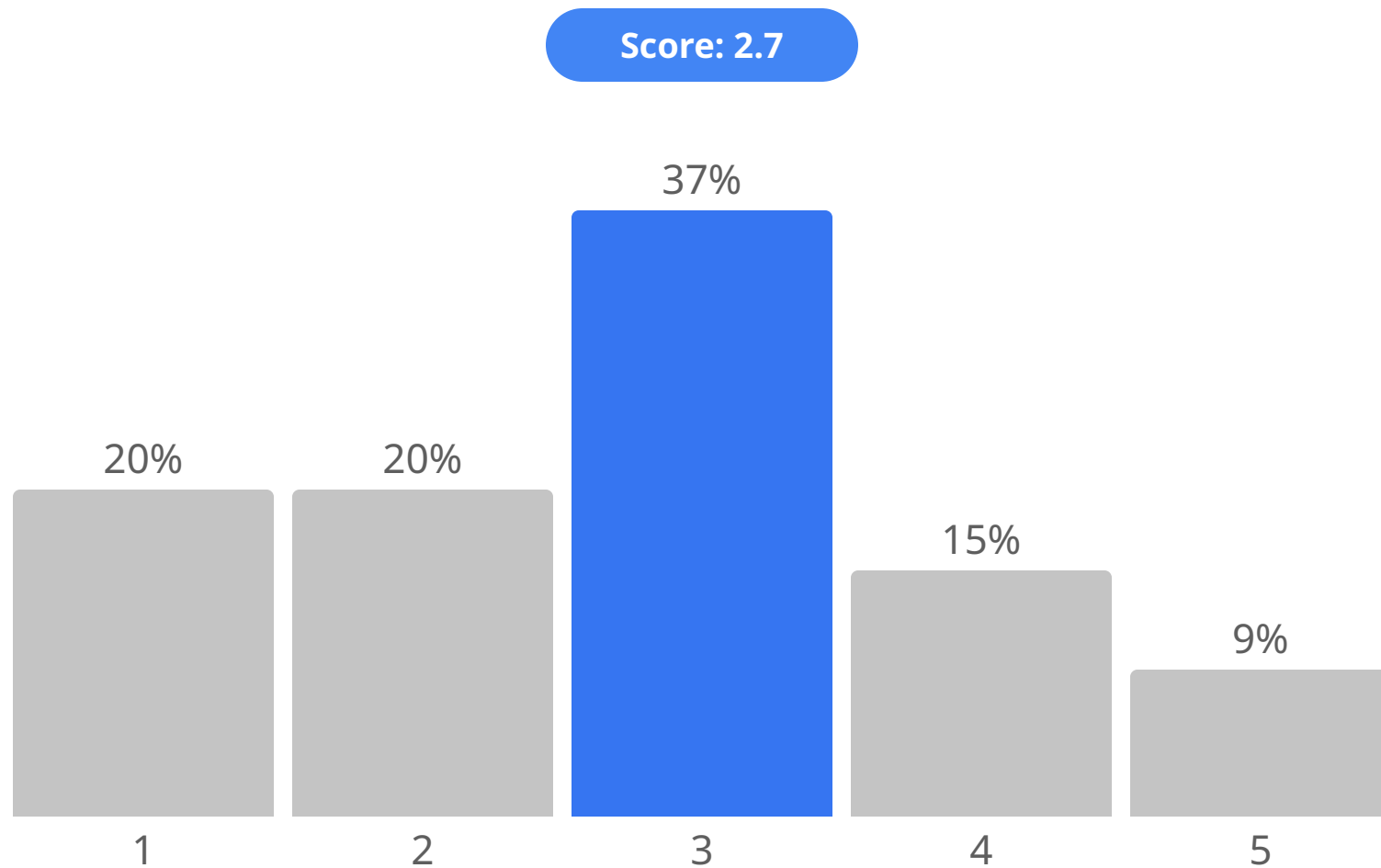
Score: 2.4



Responses to sample statements (8/35)

0 4 6

3a- "The quickest path to a 10 TeV pcm collider is a muon collider at CERN and this should be pursued as the number-1 priority."



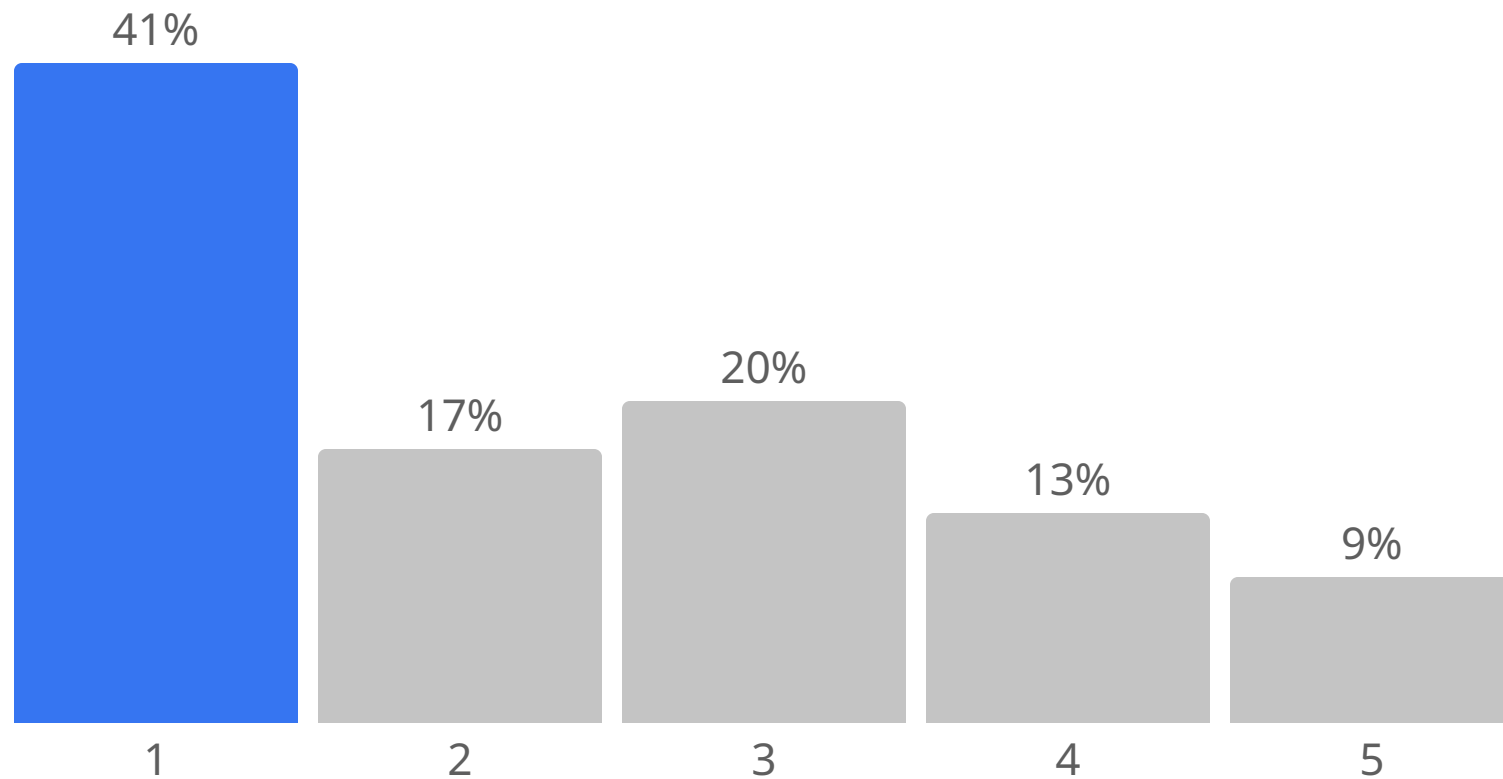
Rating poll

Responses to sample statements (9/35)

0 4 6

3a- "None of the collider projects currently proposed is acceptable due to either cost or sustainability issues and so this decision should be deferred until an acceptable project has been proposed."

Score: 2.3

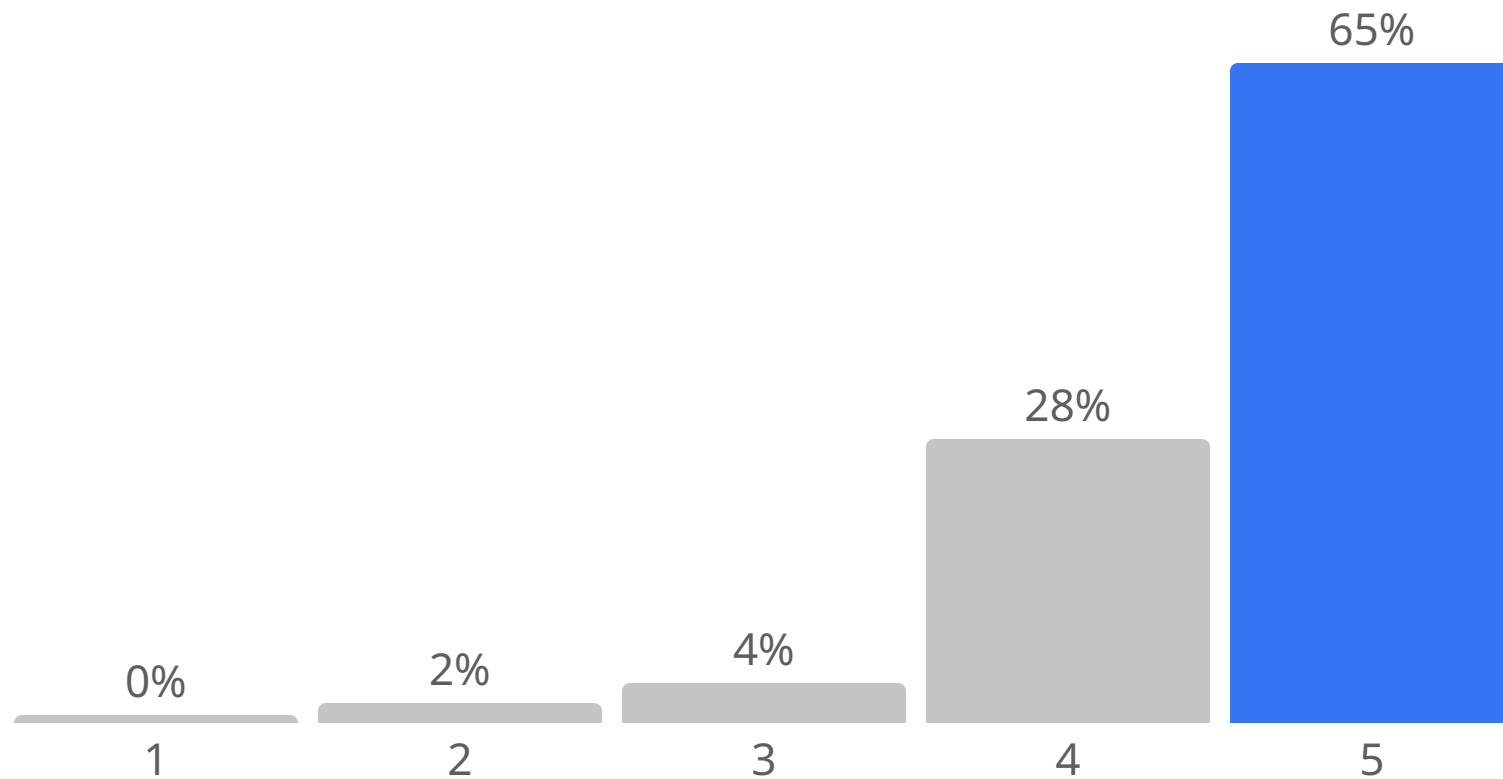


Responses to sample statements (10/35)

0 4 6

3b- "The future programme should be compatible with full exploitation of the HL-LHC, where the current programme runs to 2041"

Score: 4.6



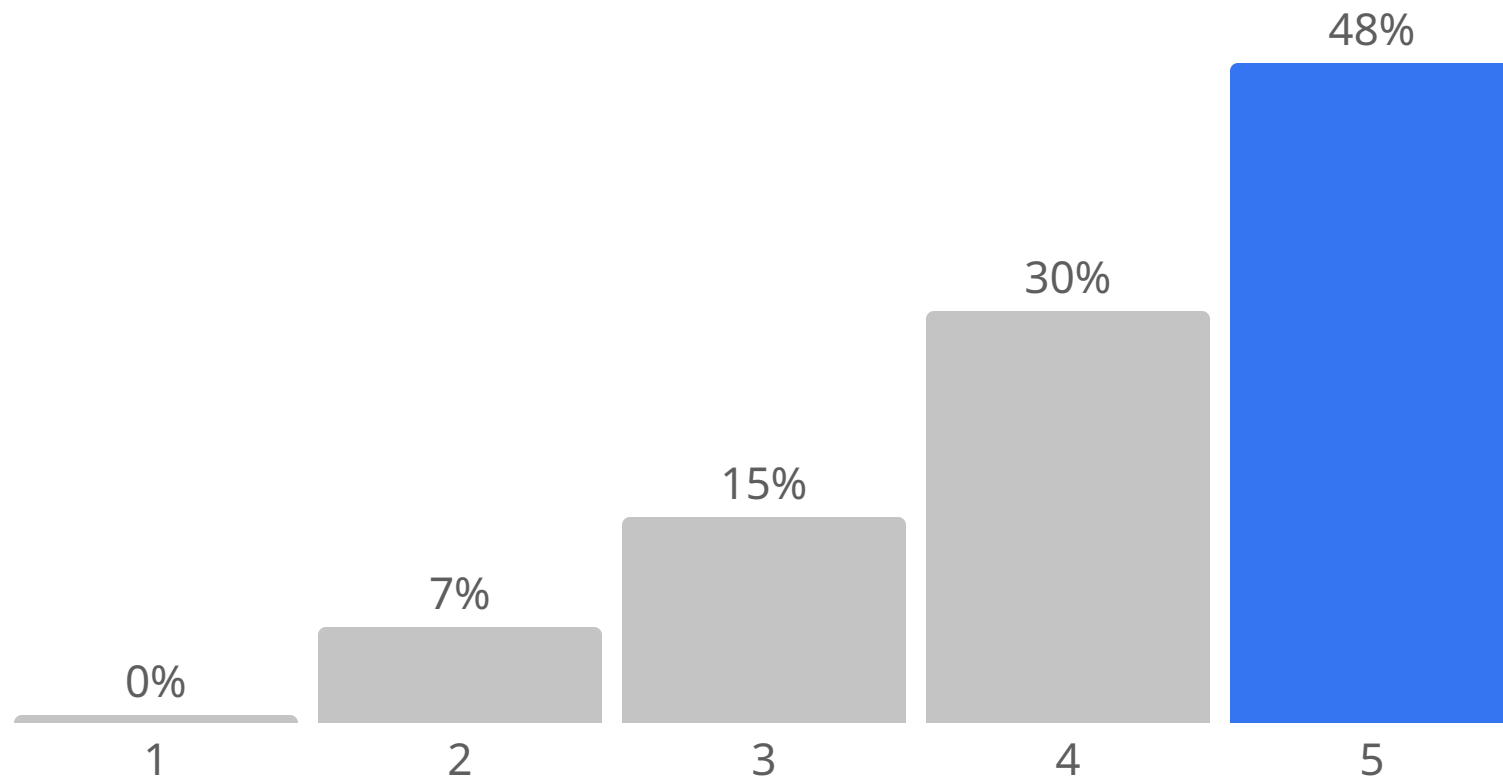
Rating poll

Responses to sample statements (11/35)

0 4 6

3b- "The operation and construction of a world leading collider based experiment must take careful consideration of the impact to the climate, and by extension or otherwise the ecosystems and societies in proximity."

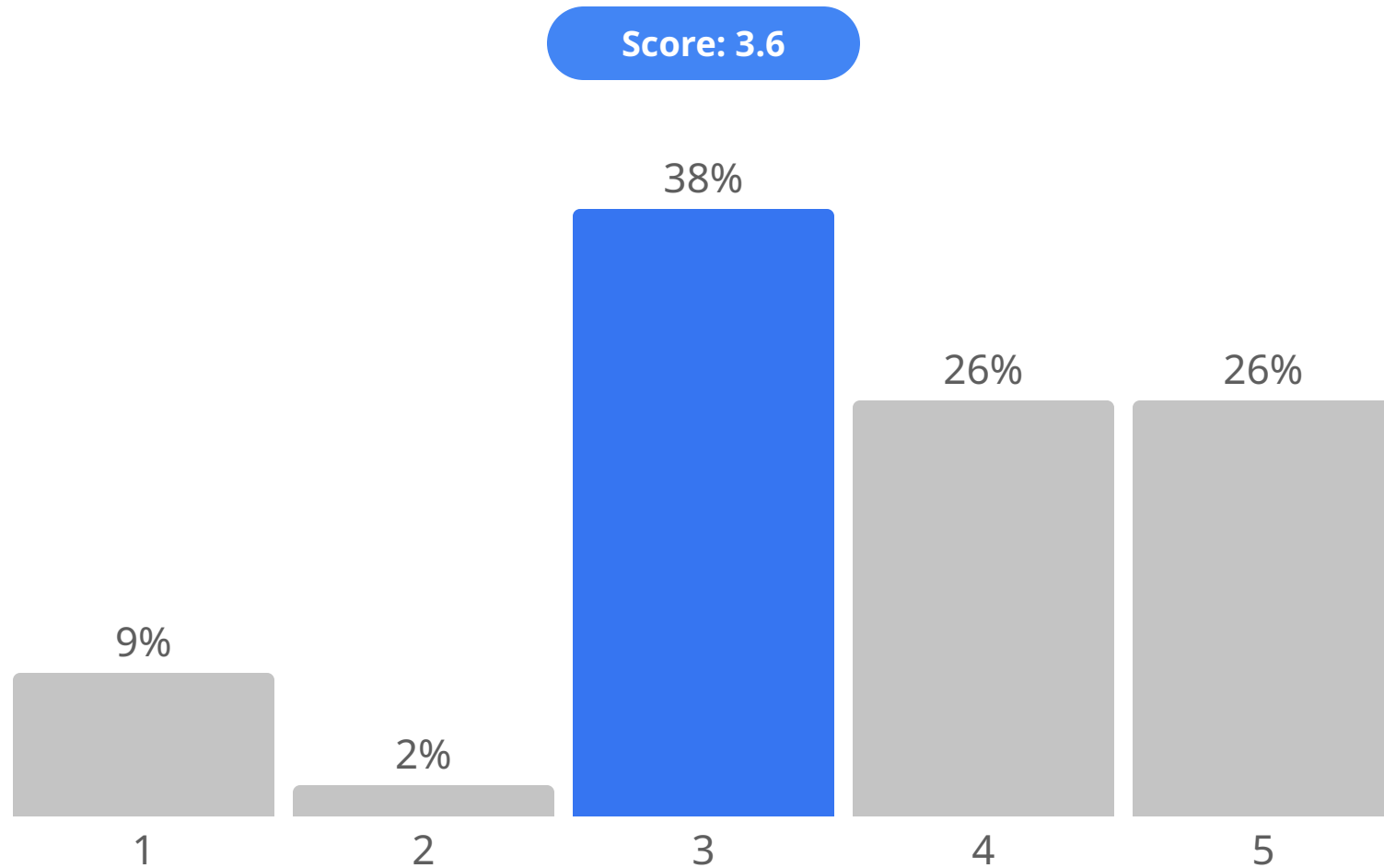
Score: 4.2



Responses to sample statements (12/35)

0 4 7

3b “The next collider at CERN should have the same or lower environmental impact to both construct and to operate as the LHC.”

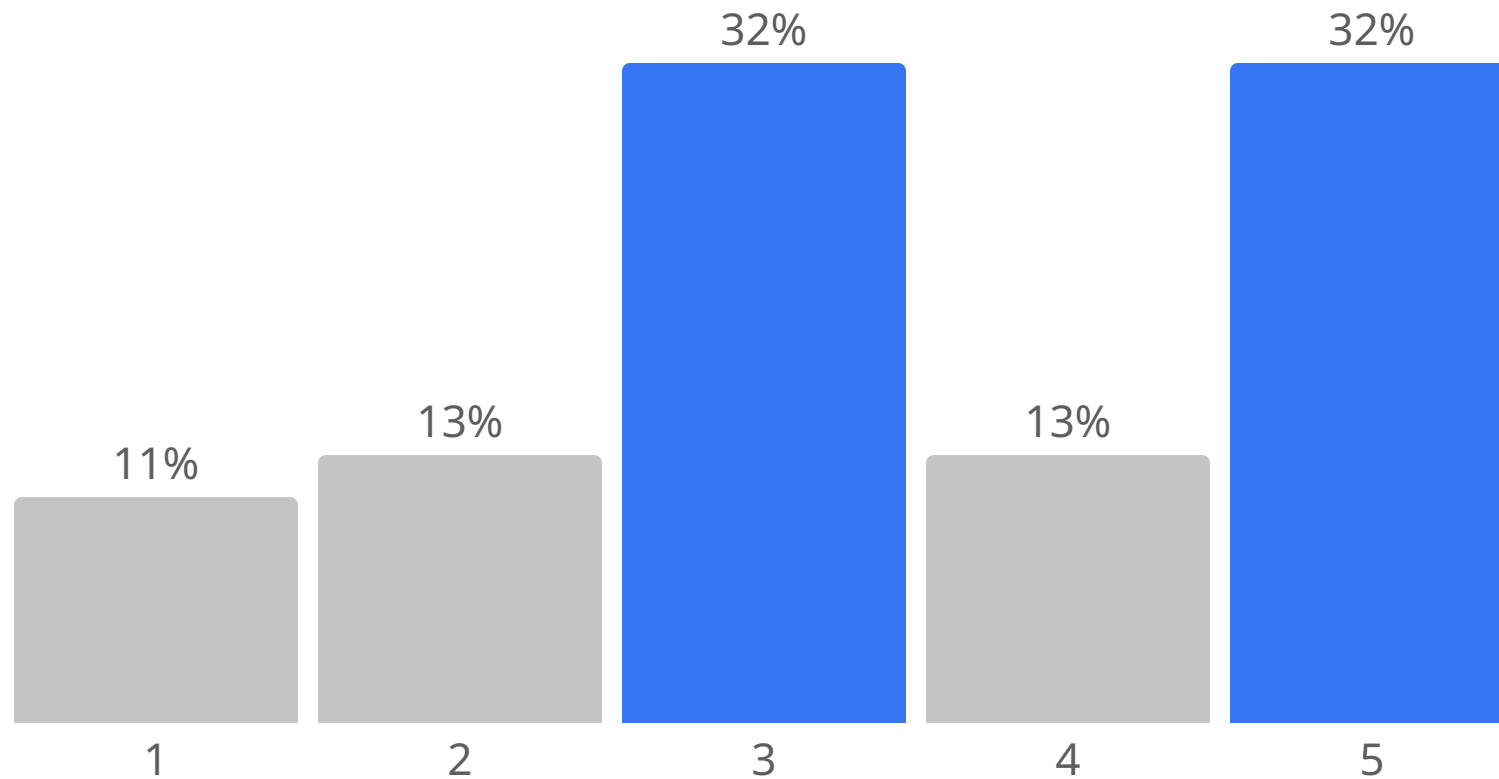


Responses to sample statements (13/35)

0 4 7

3c- "There should not be two Higgs factory machines operating globally at the same time"

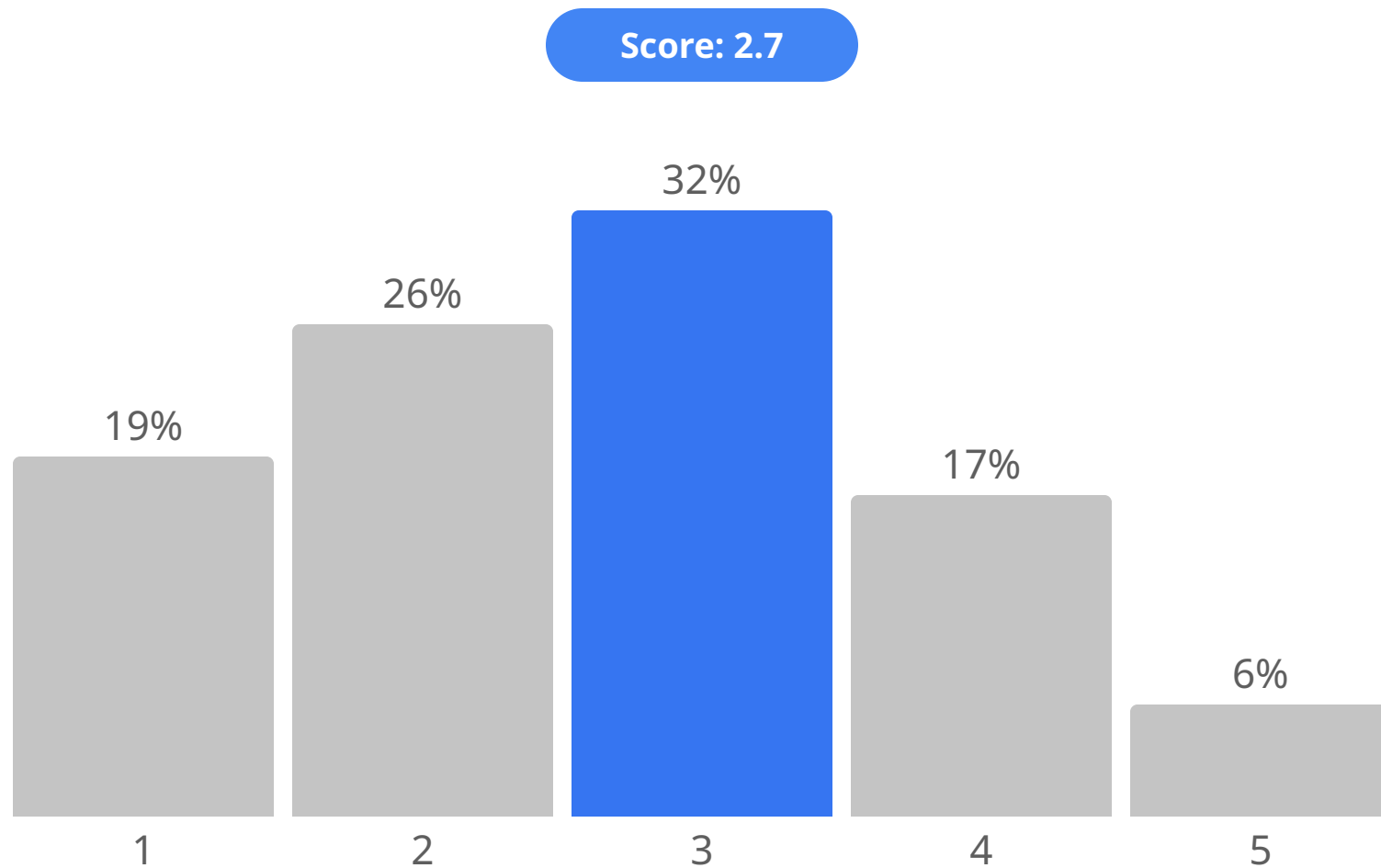
Score: 3.4



Responses to sample statements (14/35)

0 4 7

3c- "If China proceeds with CEPC then CERN should build ILC"

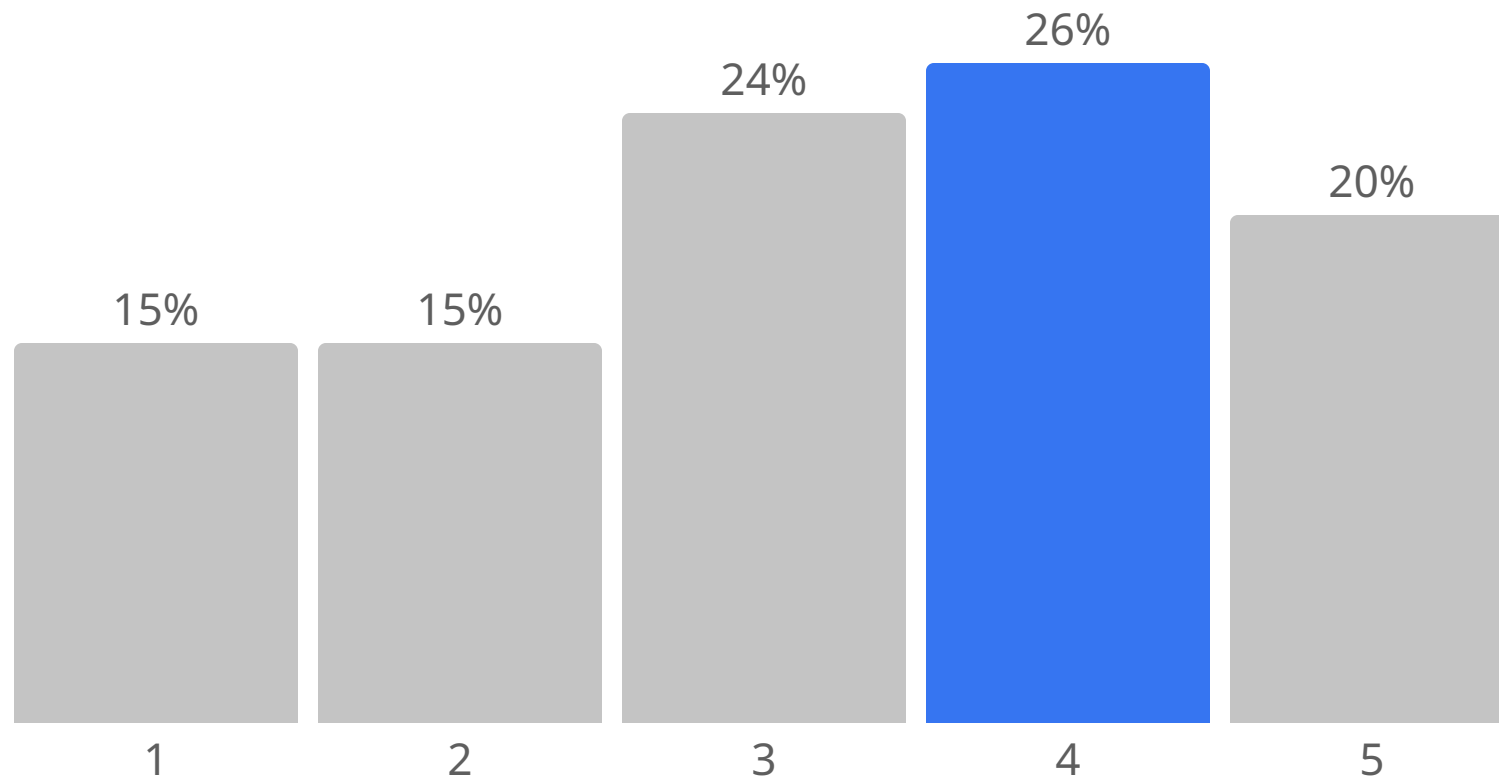


Responses to sample statements (15/35)

0 4 6

3c- "CERN should prioritise energy-frontier exploration and proceed towards FCC-hh as quickly as possible"

Score: 3.2

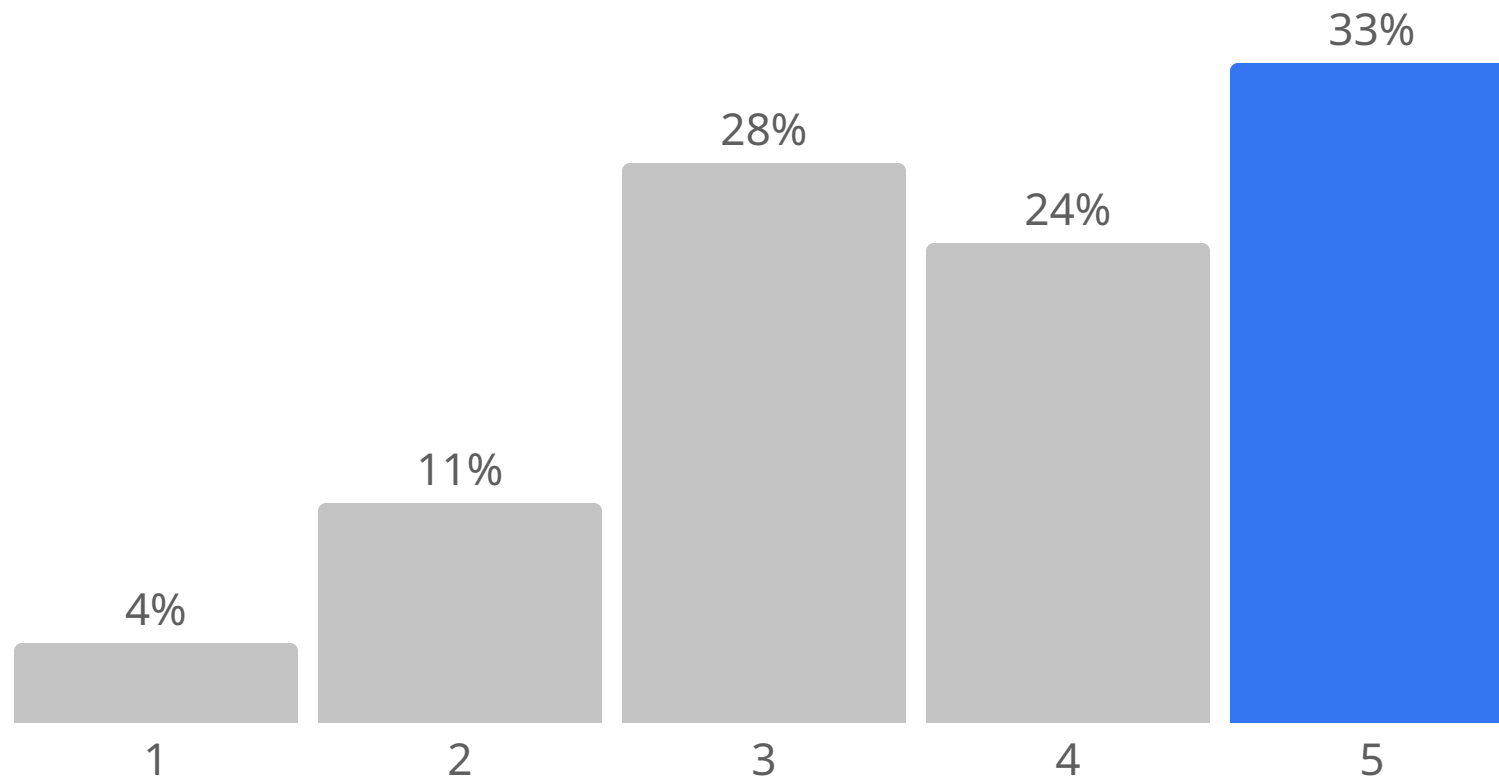


Responses to sample statements (16/35)

0 4 6

3c - "If China proceeds with CEPC then CERN should not build FCC-ee"

Score: 3.7

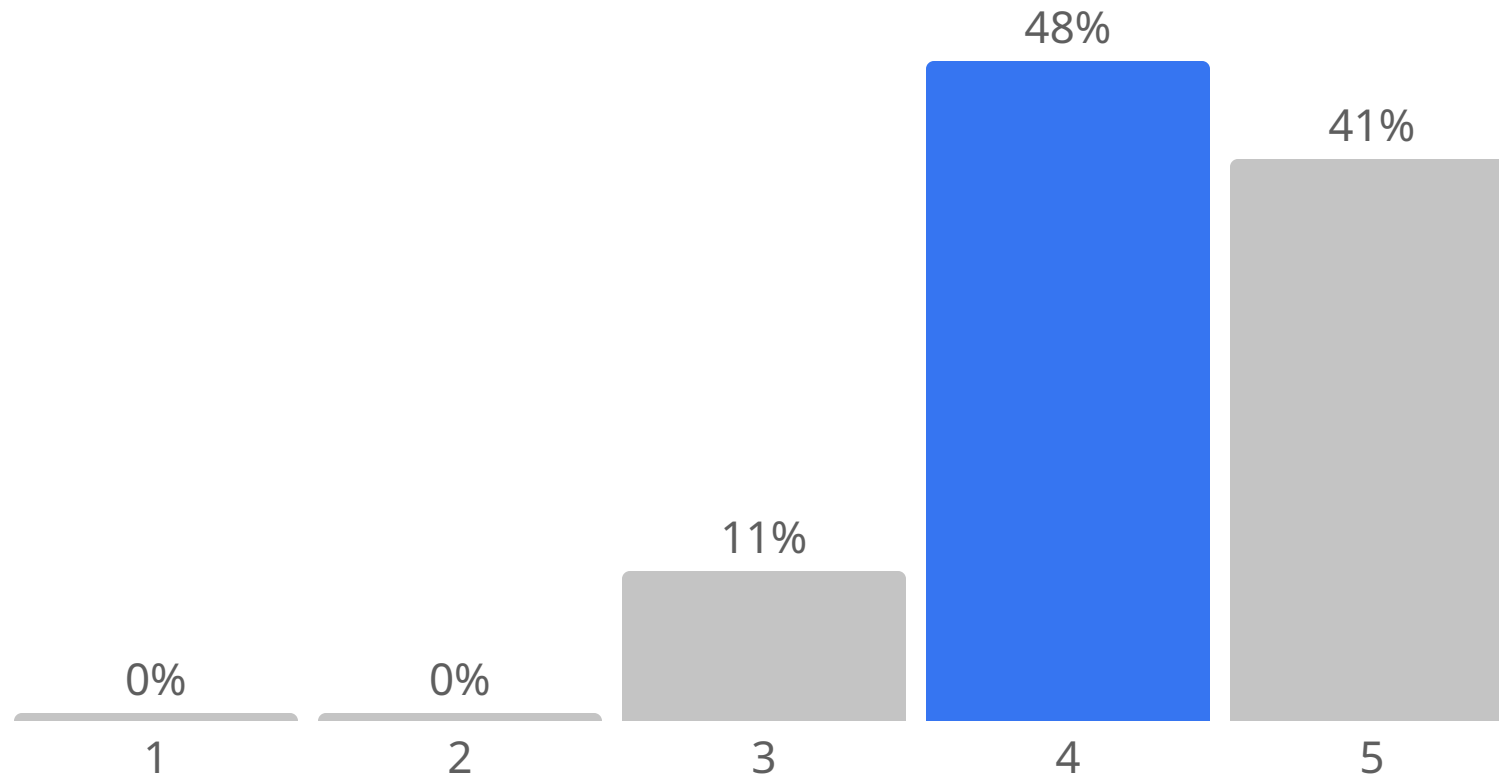


Responses to sample statements (17/35)

0 4 6

3c- "If China or Japan proceed with CEPC or ILC then Europe should seek to participate"

Score: 4.3

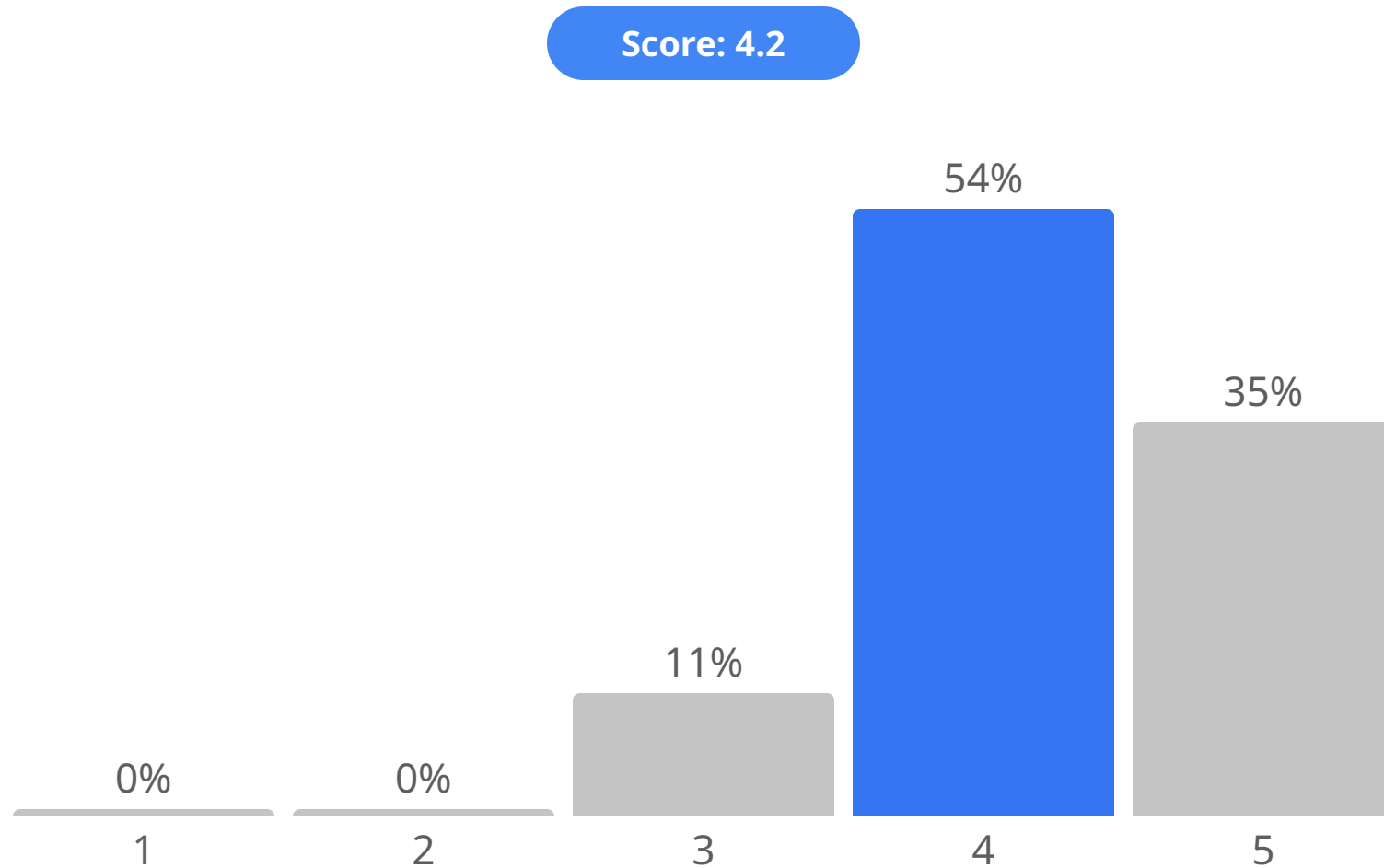


Rating poll

Responses to sample statements (18/35)

0 4 6

3d- "In order to maintain European expertise and recruit new members to the field of accelerators, novel technologies such as those underpinning the Muon Collider should be pursued." (also relevant for 3b-ii,v)



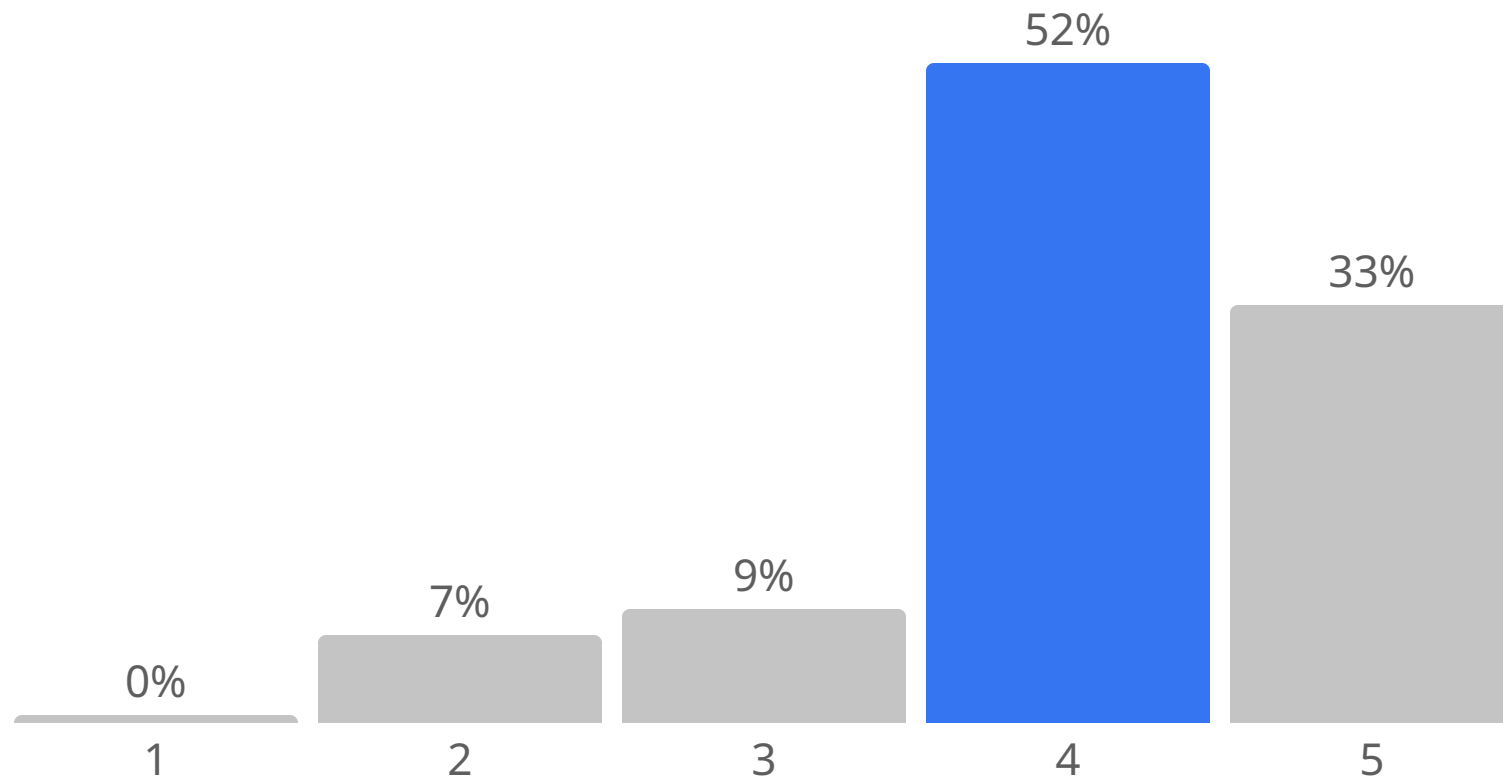
Rating poll

Responses to sample statements (19/35)

0 4 6

3d- "There should be a significant investment now in R&D for high-field dipoles for FCC-hh so that a feasibility study can be concluded on FCC-hh within a decade i.e. before significant spending on FCC-ee begins."

Score: 4.1

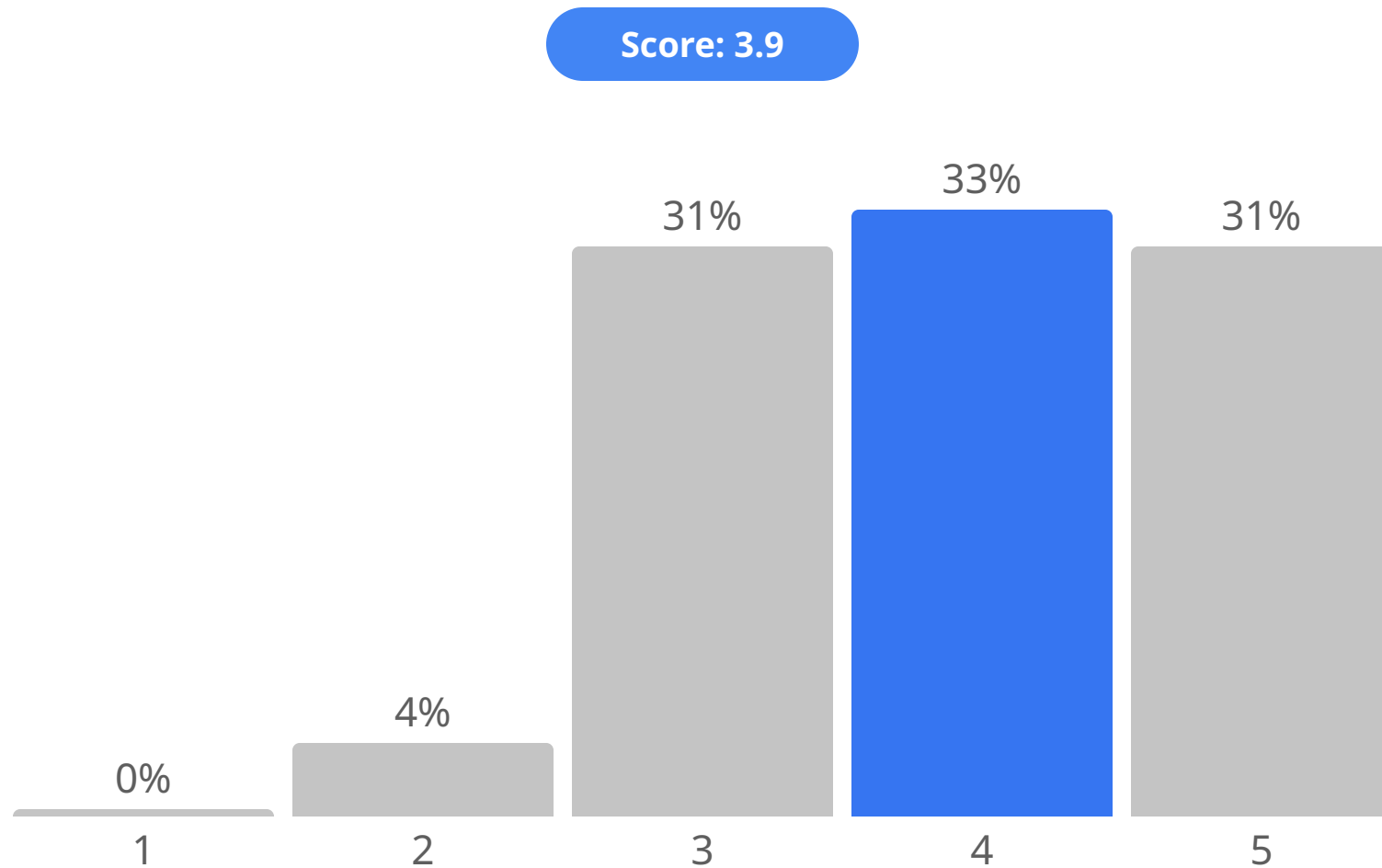


Rating poll

Responses to sample statements (20/35)

0 4 5

3d- "The priority for accelerator R&D topics should be those which have the potential for a significant impact in making future colliders more sustainable (e.g. HTS magnets, high efficiency klystrons, thin film superconducting RF cavities, fast reactive RF tuners, permanent magnets)."



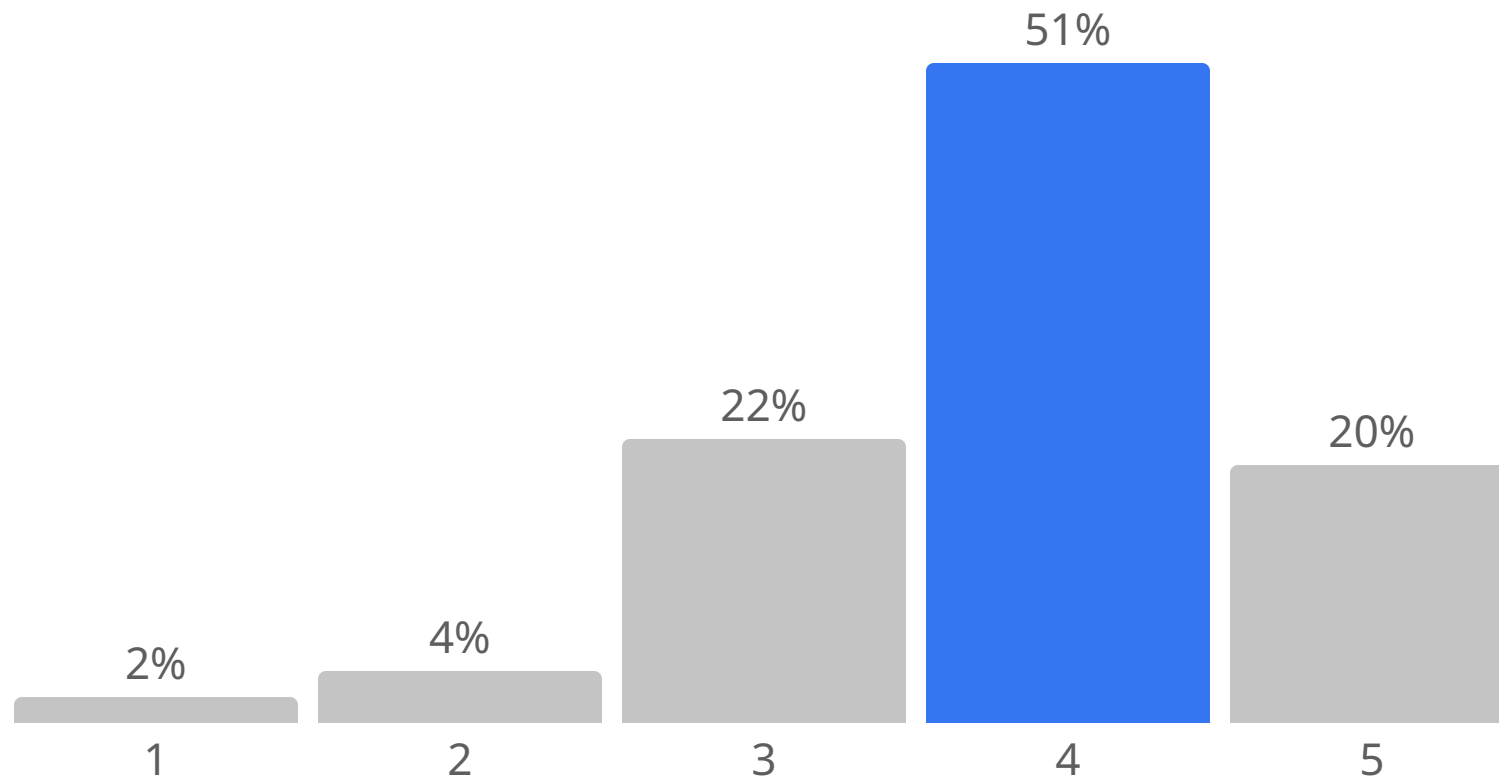
Rating poll

Responses to sample statements (21/35)

0 4 5

3d- "Plasma acceleration (both laser and beam driven) R&D for future colliders should receive significant investment as this technology offers the most likely long term future for HEP colliders."

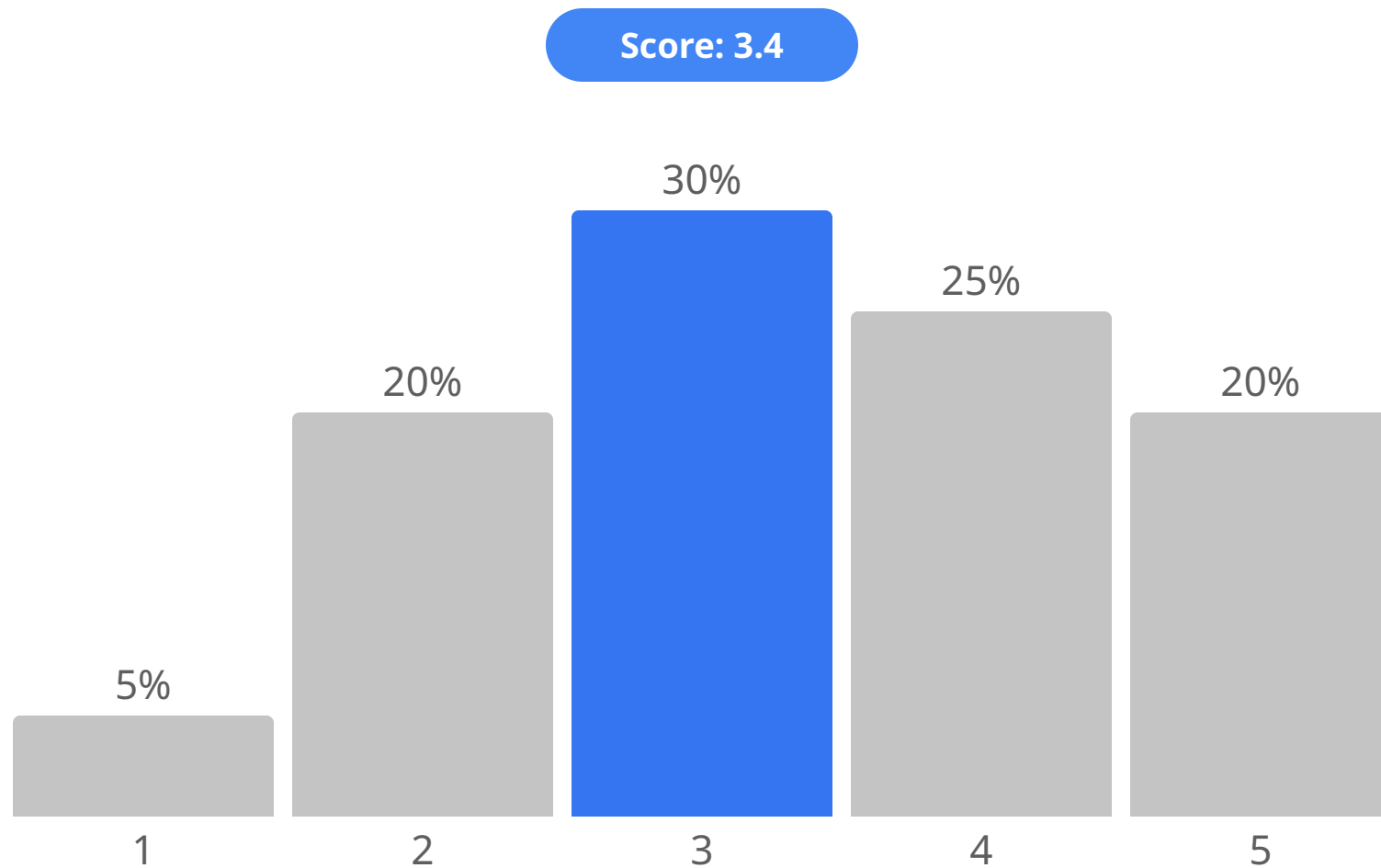
Score: 3.8



Responses to sample statements (22/35)

0 4 4

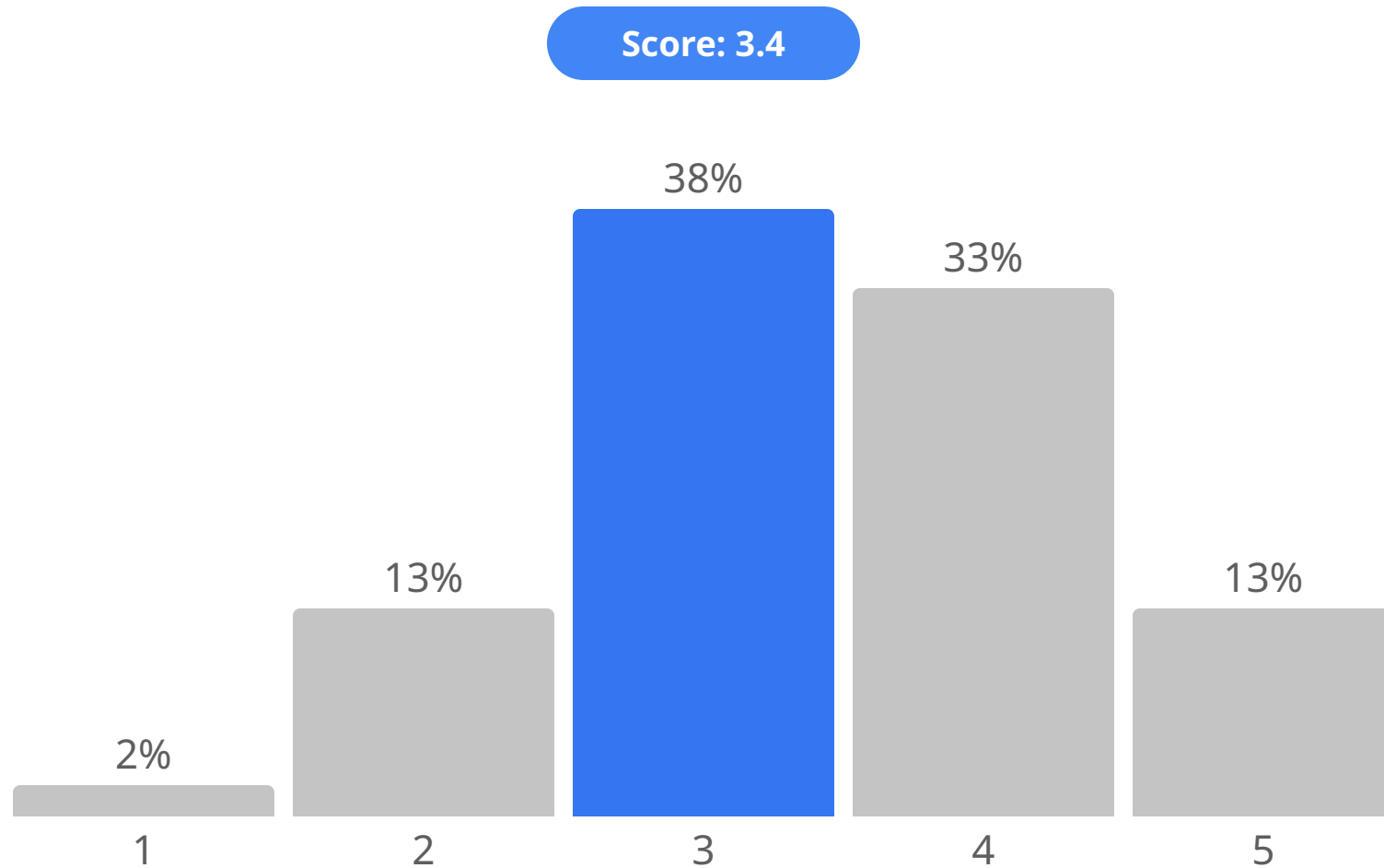
3e- "The LHeC would bridge a gap in time and physics between the HL-LHC and the next major collider."



Responses to sample statements (23/35)

0 4 5

3e- "The LHeC and FCC-eh strengthen the physics discovery potential of the HL-LHC and FCC programmes."



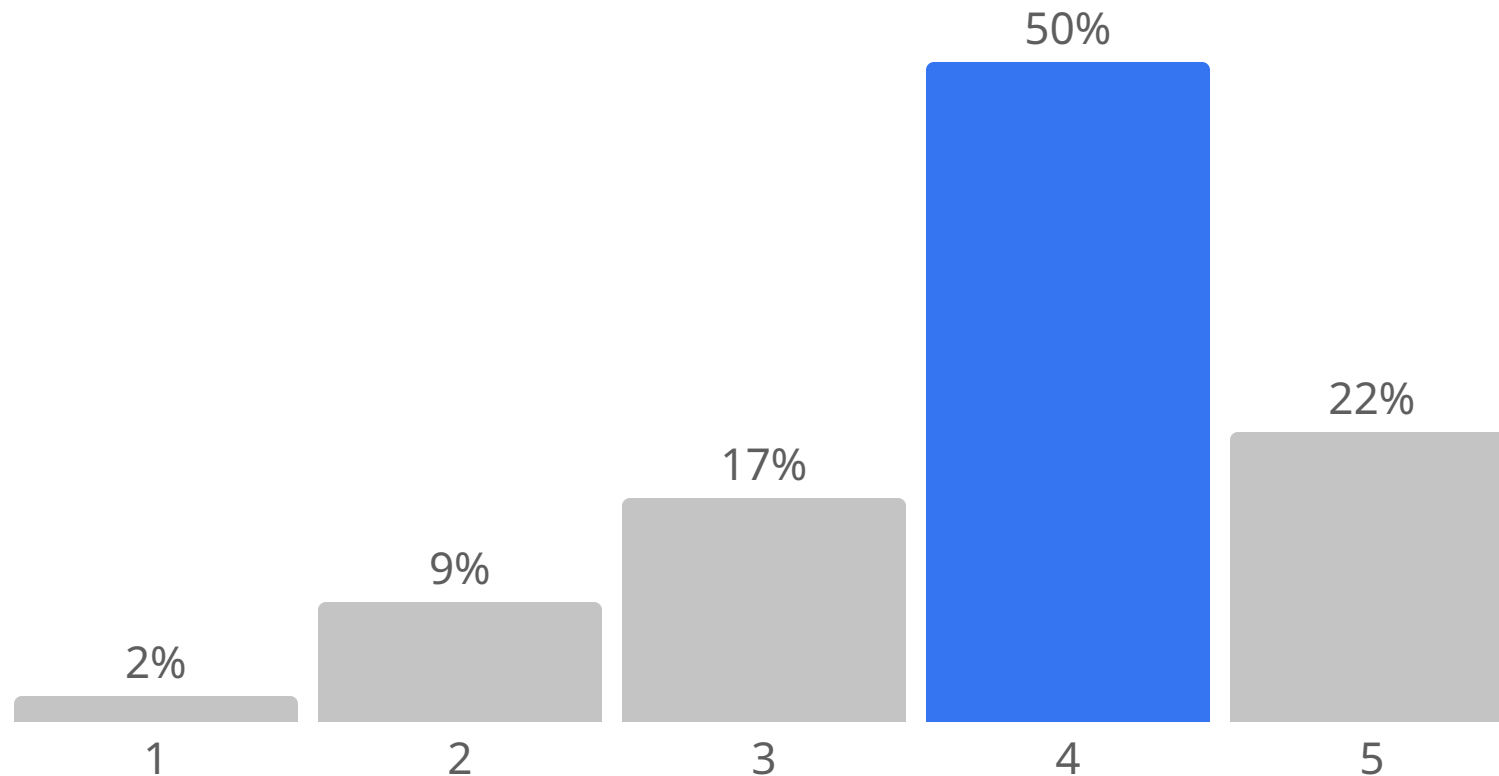
Rating poll

Responses to sample statements (24/35)

0 4 6

4a- "Europe should prioritise its leading contributions to the construction and scientific exploitation of the long-baseline neutrino oscillation experiments DUNE and Hyper-K, as well as to at least one, preferably two, neutrinoless double beta decay experiments capable of fully probing the inverted ordering parameter space for Majorana neutrino masses. This..."

Score: 3.8



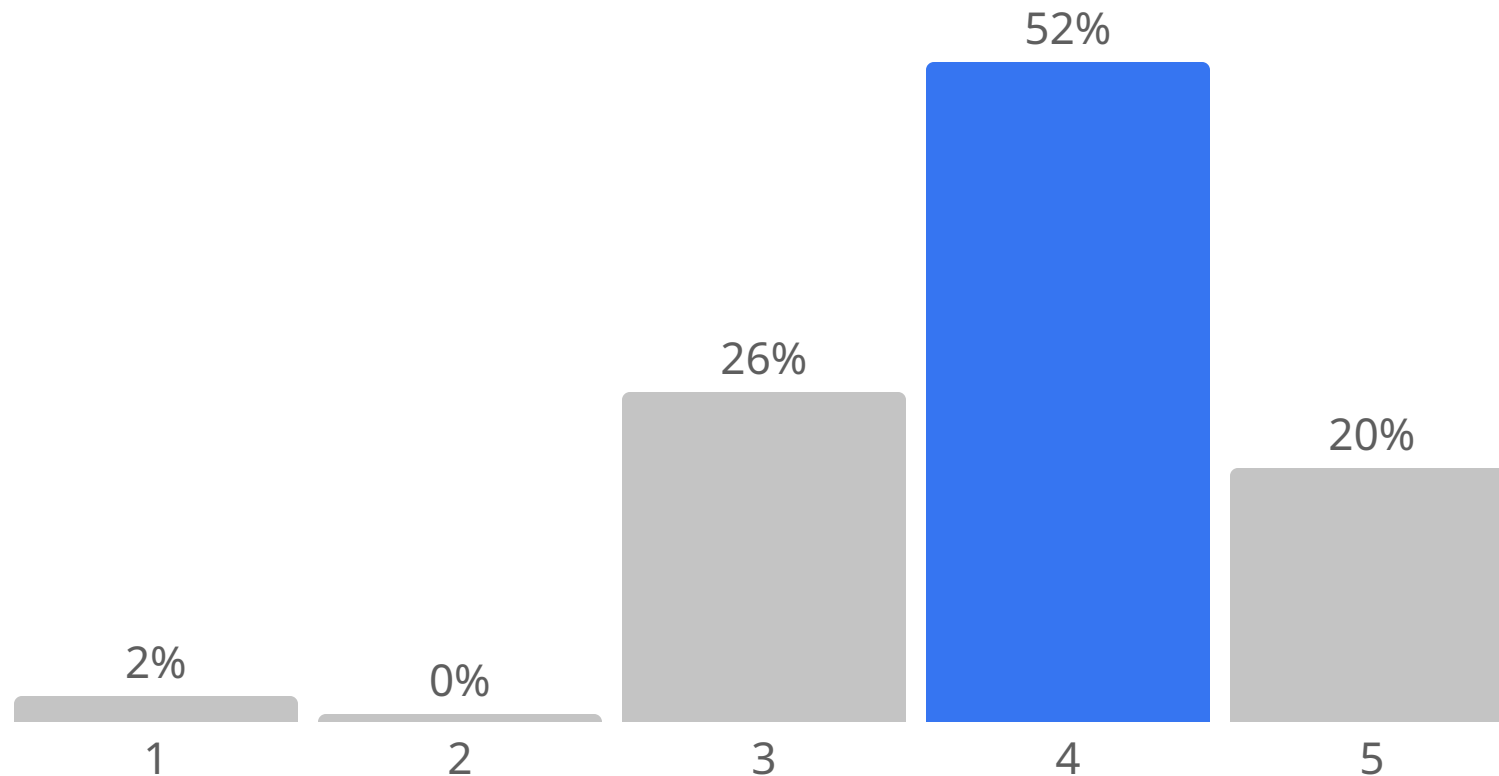
Rating poll

Responses to sample statements (25/35)

0 4 6

4a- "Integrating quantum technologies into the European Strategy for Particle Physics offers a unique opportunity to leverage the existing expertise in the UK, at CERN and other European labs. By building on these strengths, we can open new avenues for exploring the fundamental laws of nature and position Europe at the forefront of innovation in particle..."

Score: 3.9



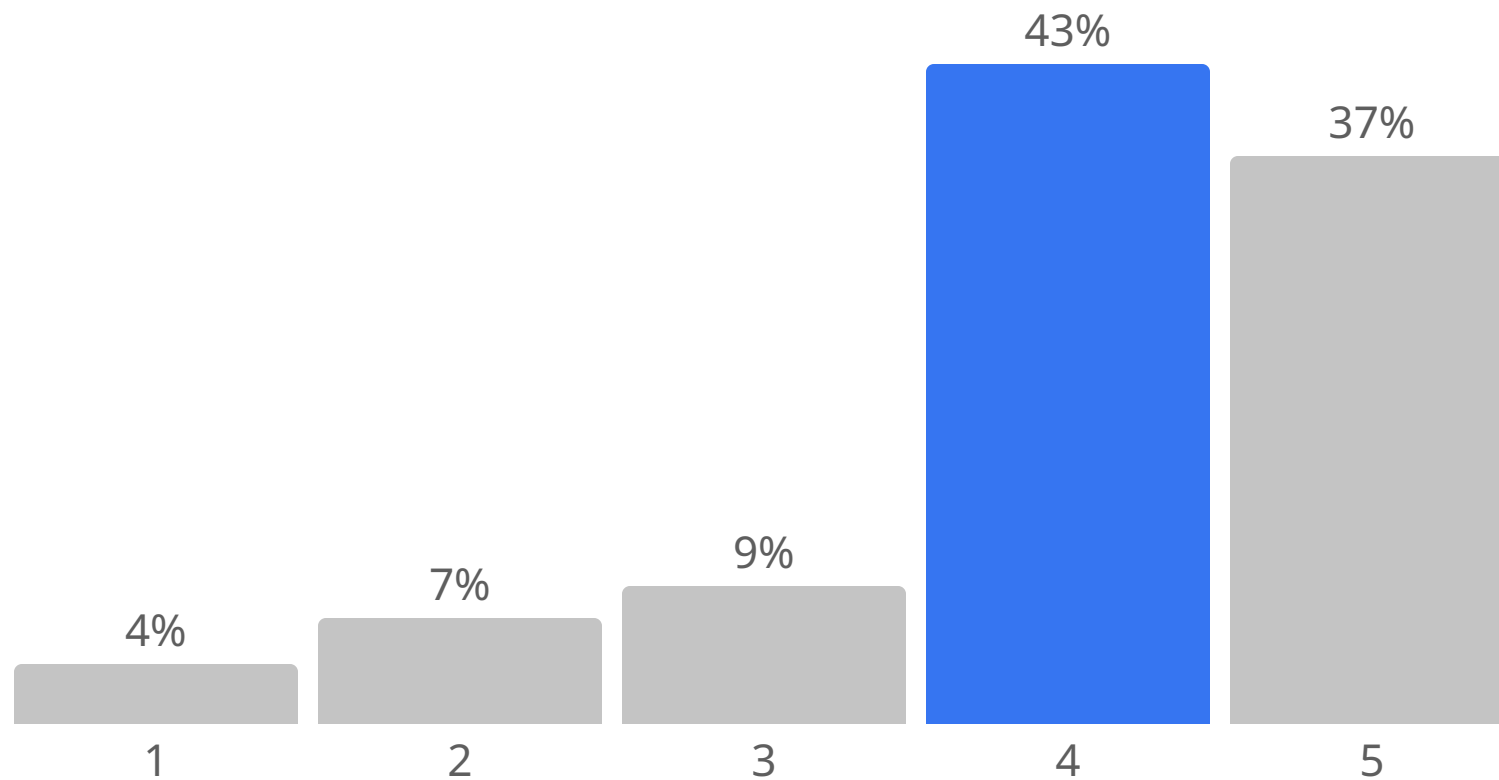
Rating poll

Responses to sample statements (26/35)

0 4 6

4a- "There is clear interest in the UK to host a large dark matter detector with interest also from other European countries and the US. This should be flagged as a priority and we should understand what support CERN could offer, similarly to what currently on offer with the neutrino platform."

Score: 4.0



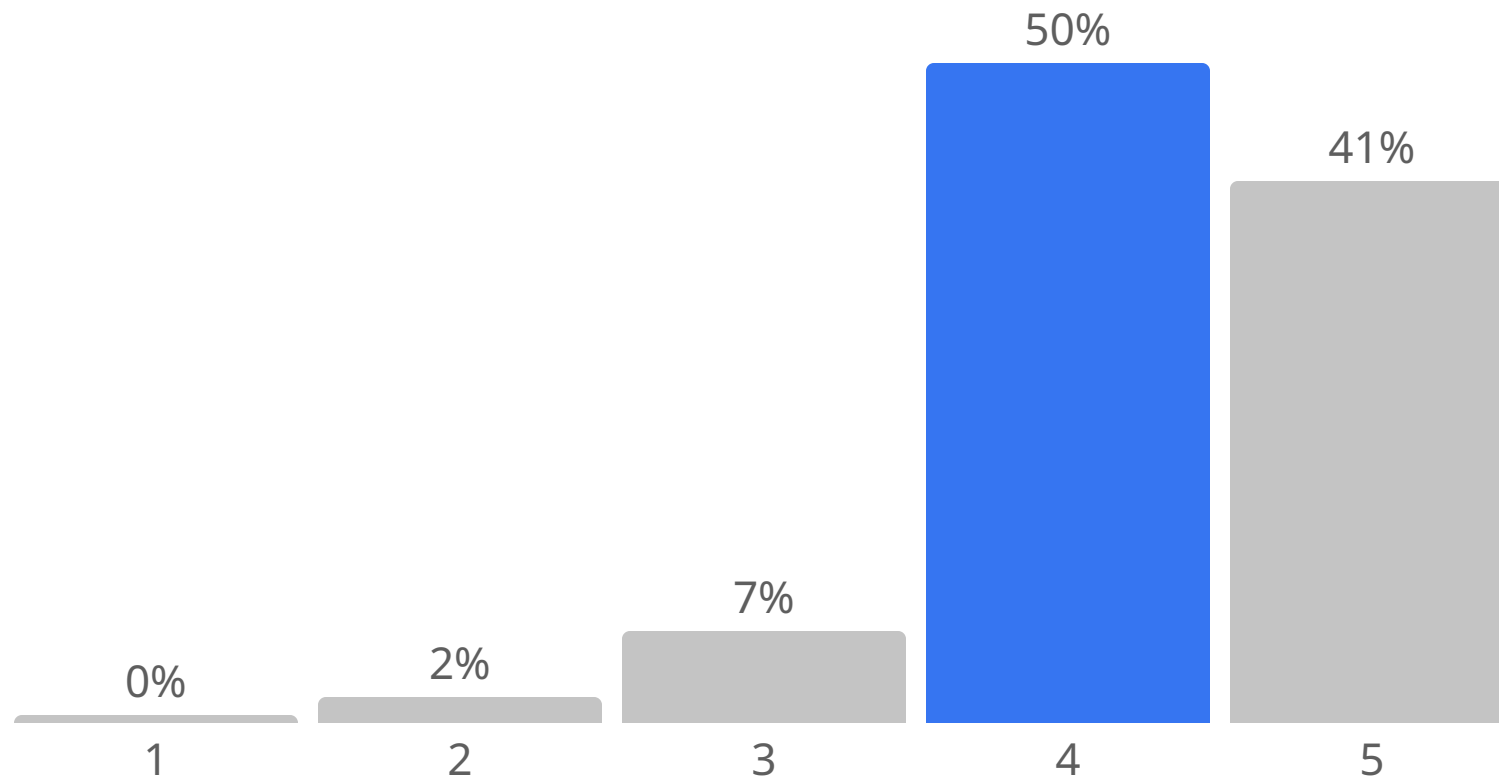
Rating poll

Responses to sample statements (27/35)

0 4 6

4a- There are many non-collider experimental opportunities that should be pursued in the next 25 years that complement and extend those at energy-frontier colliders. These experiments are sensitive to many phenomena and BSM parameter space not accessible to energy-frontier colliders e.g. FIPs, FIMPs, Quirks, milli-charged particles, LLPs, EDMs, dark-sector...

Score: 4.3

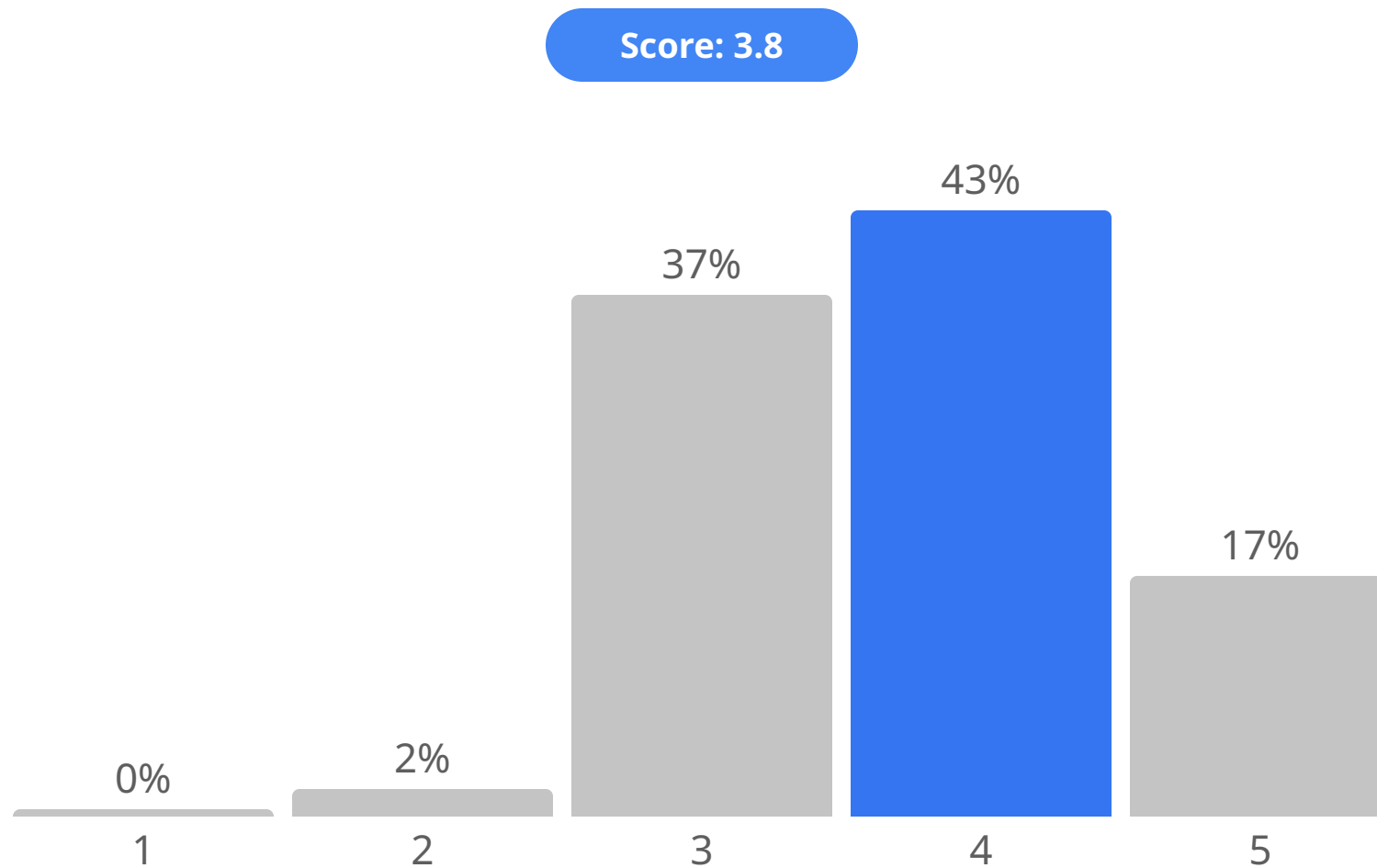


Rating poll

Responses to sample statements (28/35)

0 4 6

4b- "Physics potential complementary to energy-frontier colliders (we don't know what the BSM physics will be ...), training, timing: filling large gaps in the programme."



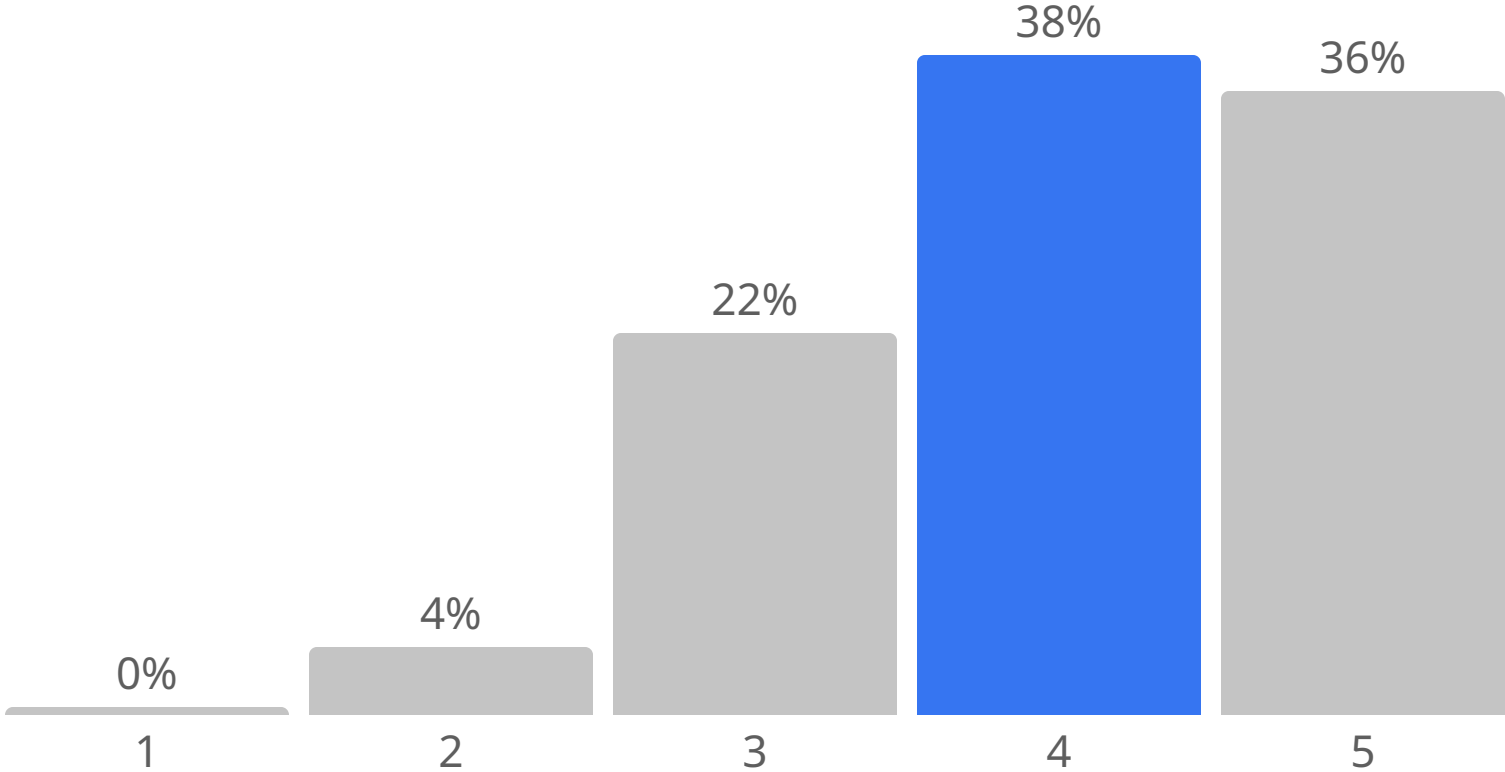
Rating poll

Responses to sample statements (29/35)

0 4 5

4b- "Experiments that mostly use existing large-scale resources and infrastructure are cost-effective and the environmental impact is reduced."

Score: 4.0



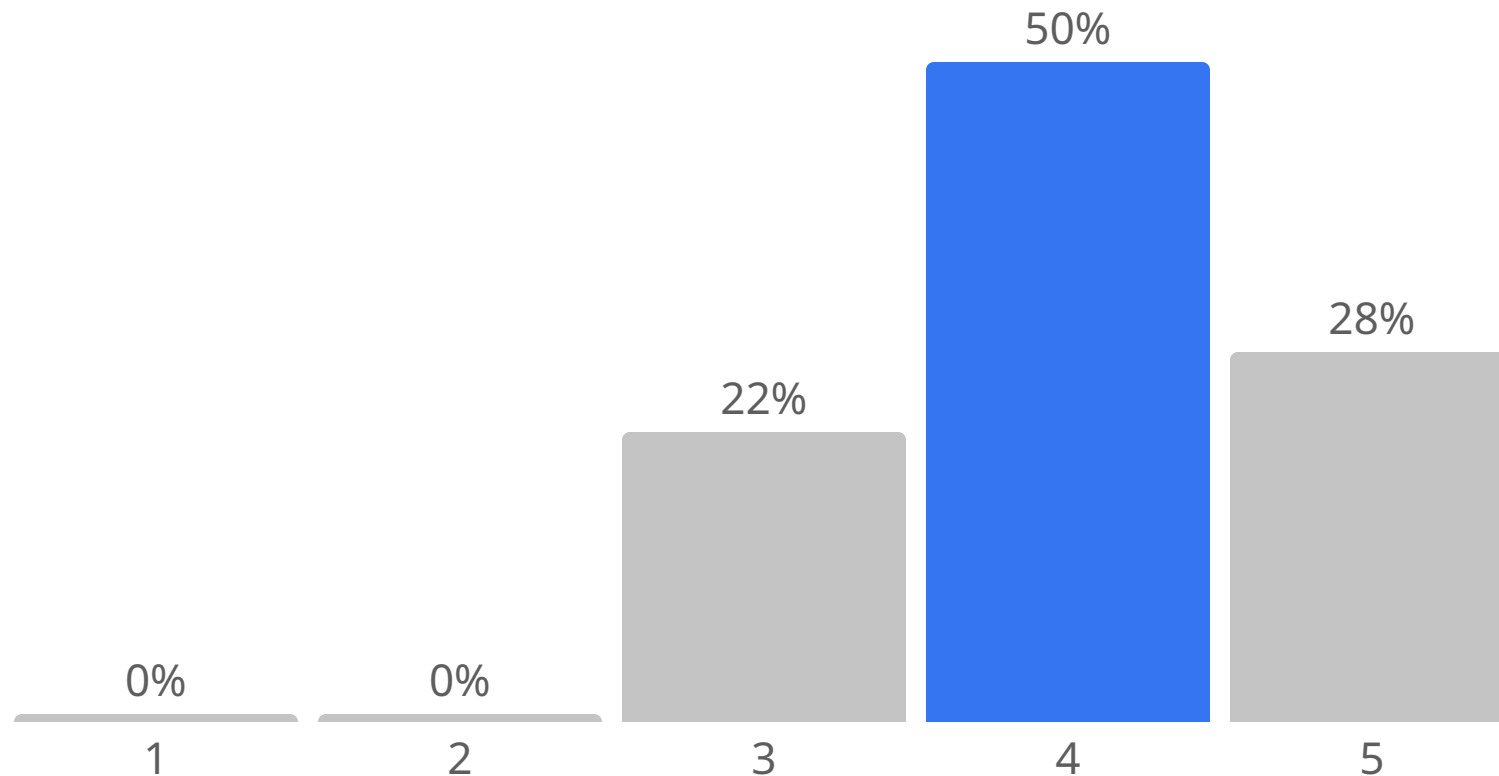
Rating poll

Responses to sample statements (30/35)

0 4 6

4b- "Several of the planned non-collider programs will continue beyond HL-LHC and will thus provide continuity in the particle physics programme, avoiding long gaps without running experiments which is important in attracting future students to the field. Critically they also provide important training opportunities in the R&D, construction and commissioning of..."

Score: 4.1

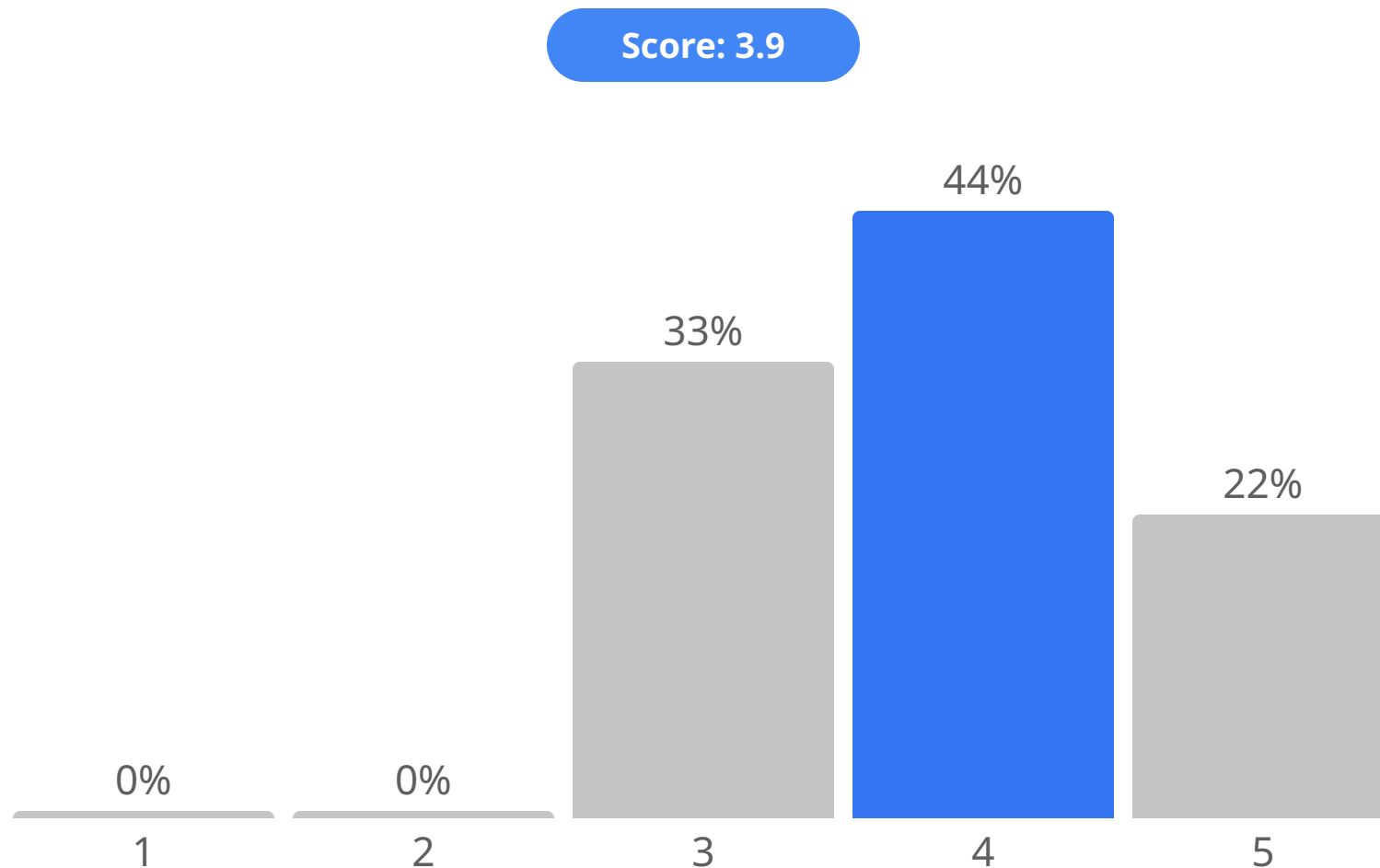


Rating poll

Responses to sample statements (31/35)

0 4 5

4c- "CERN's accelerator complex is well suited to cater to both nuclear and particle physics. The injector synchrotrons have been robustly upgraded to cater to many types of user, and around 50% of protons produced at CERN are used by ISOLDE. As the LHC typically uses around an hour of beam time in the injector synchrotrons a day, it is efficient to maintain CERN's nuclear..."



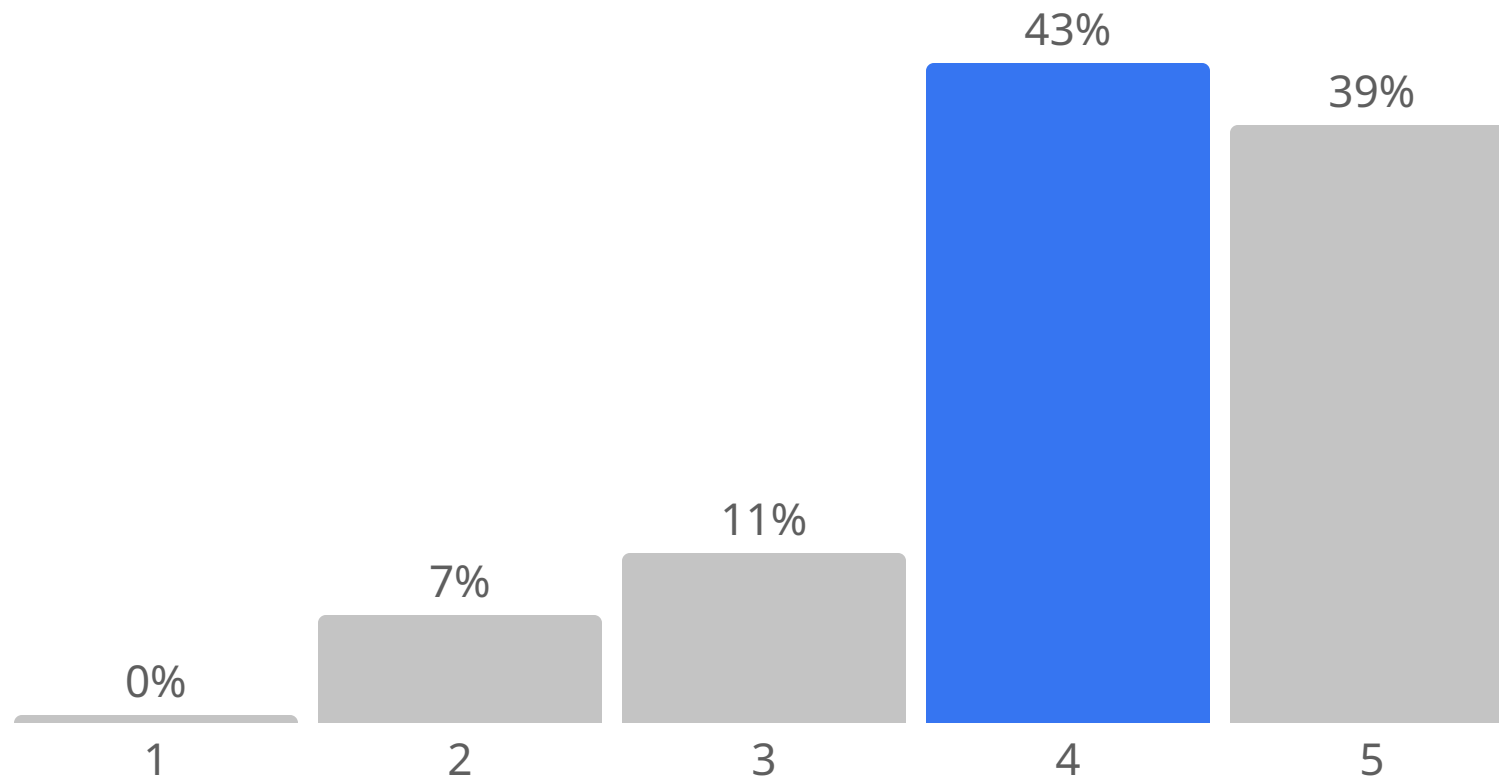
Rating poll

Responses to sample statements (32/35)

0 4 6

Additional points- "To protect R&D in detectors, software, and computing, funding should be safeguarded and ideally ring-fenced. This will ensure the R&D programme is not eroded by current or future large-scale project commitments. This strategy is essential for securing the technical capabilities and advancements that will drive future success of particle..."

Score: 4.2



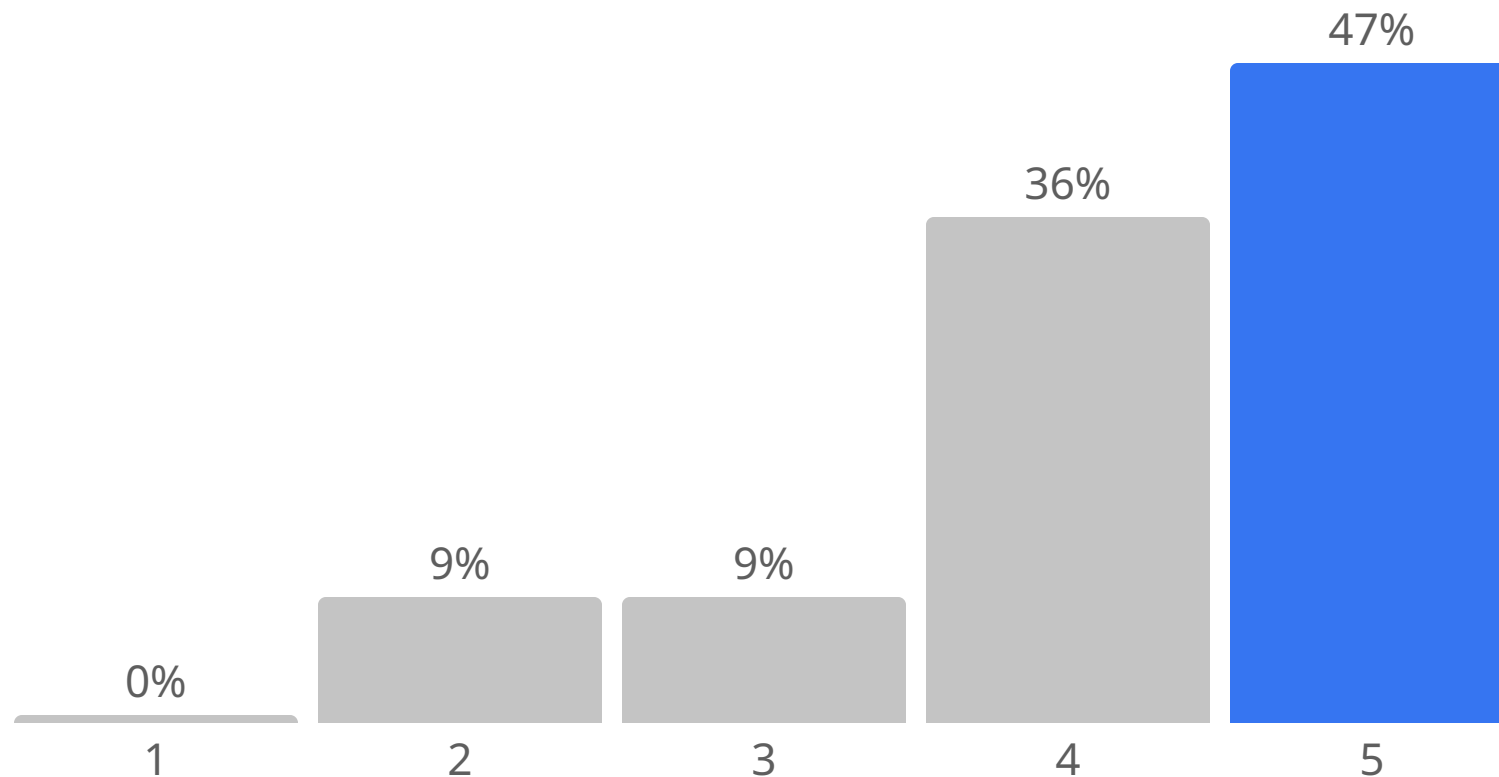
Rating poll

Responses to sample statements (33/35)

0 4 5

Additional points- "Software and computing are essential for the development and operation of modern particle physics experiments, which generate and process massive datasets (exabytes by the late 2020s). To maximize the physics potential of future colliders, we must leverage modern computing technology for both low-latency (e.g., trigger-level) and high-...

Score: 4.2



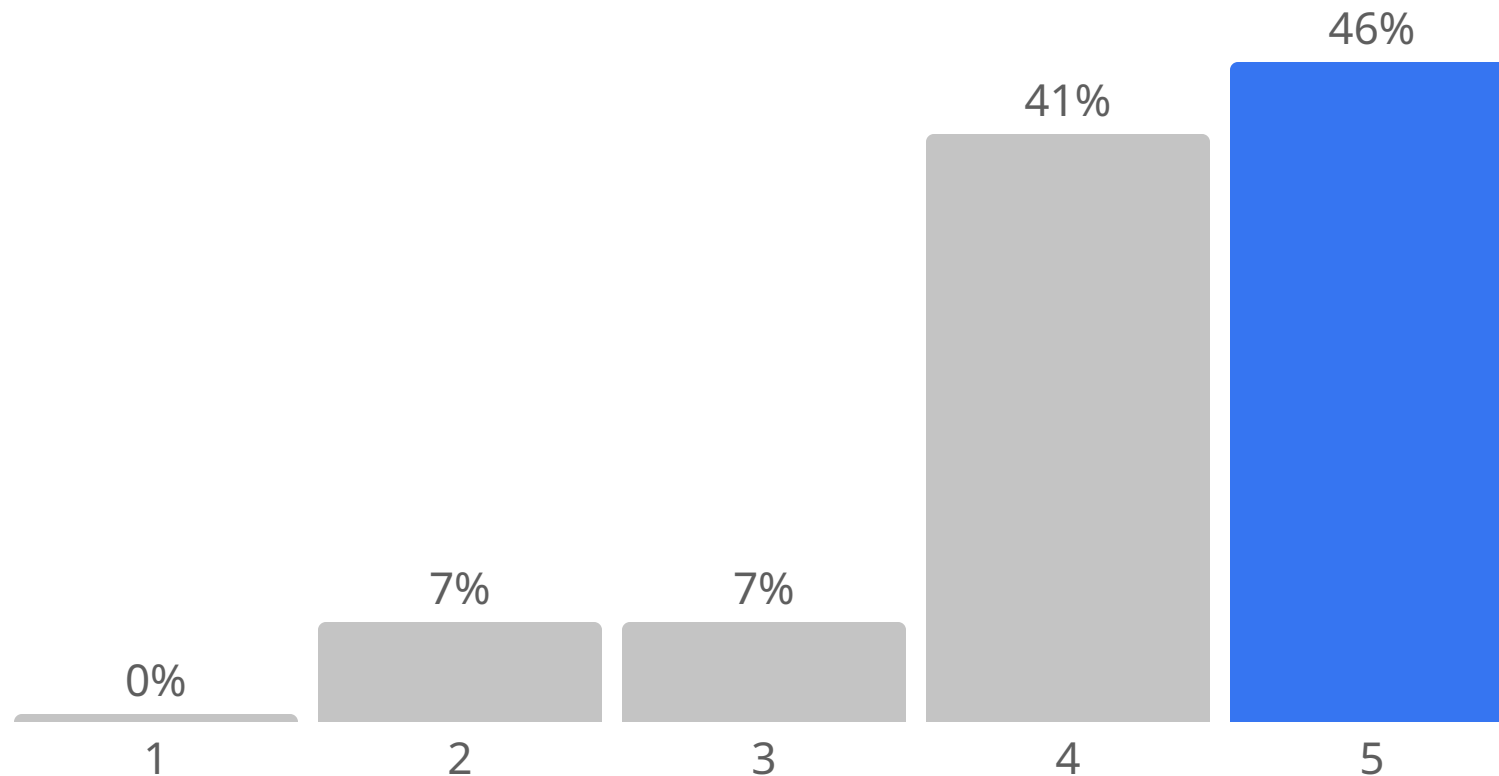
Rating poll

Responses to sample statements (34/35)

0 4 6

Additional points- "Detector R+D is essential for the success of collider and non-collider programmes, so additional support for the DRD collaborations emerging from the 2021 ECFA detector R+D roadmap is key for the field. This includes financial resources and ensuring that training is provided for new researchers to get involved."

Score: 4.3



Rating poll

Responses to sample statements (35/35)

0 4 5

Additional points- "Advances in theory will be essential for future experiments to test the Standard Model. The European community should ensure that essential infrastructure (e.g. Monte Carlo generators) are supported and recognised, and support the establishment of new roadmaps to meet the theory needs of future experiments."

Score: 4.4

