

AR/VR for European Space Programmes

02 Dec 2019

Poll results

Table of contents

- In what (space) application domain(s) are you active?
- Do you consider yourself more a developer or a user of AR/VR systems? [scale: DEVELOPER:1 – USER:5]
- What is your organisation background?
- Is the AR/VR technology mature enough today to be of benefit in space missions? [scale: NO:1 - YES: 5]
- Is it viable to use AR/VR technology given that typical space missions have limited production series for systems, units and components? [scale: NO:1 - YES: 5]
- What are the current limitations of AR/VR systems?
- Any comments or suggestions related to AR/VR technology?
In what areas should ESA invest to leverage the use of AR/VR in space missions?

Table of contents

- How could AR/VR leverage or interact with other technology areas?
- Any comments or suggestions related to the ESA role and R&D strategy?
- Did the workshop fulfil your expectations? [scale: NO:1 - YES:5]
- Was the workshop useful for your work? [scale: NO:1 - YES:5]
- Was the duration of the workshop sufficient? [scale: NO:1 - YES:5]
- Was the duration of the presentations sufficient? [scale: NO:1 - YES:5]
- Would you consider participating a next time?
- What would be your preference for the next workshop?
- What would be your preferred duration for the workshop?
- Do you think the Slido tool was effective?
- Do you have any other comments or suggestions?

In what (space) application domain(s) are you active?

(1/2)

0 3 8

Astronaut Operations and Training



Spacecraft and Robotic Operations



Spacecraft Design and Concurrent Engineering



Manufacturing, Assembly, Integration and Test (MAIT)



Product Assurance and Quality Assurance (PA/QA)



In what (space) application domain(s) are you active?
(2/2)

038

Mission and Science Data Exploration

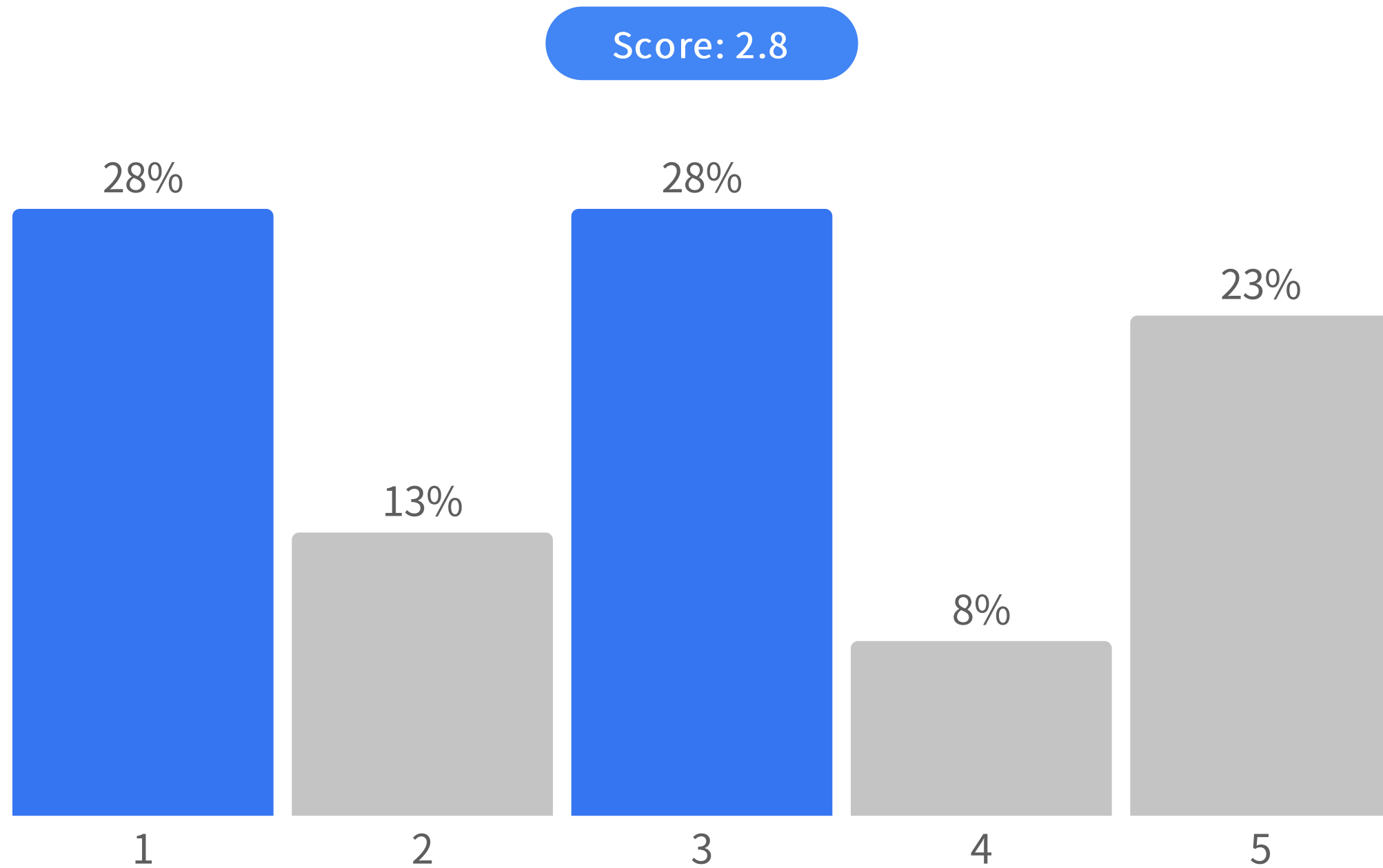


Other



Do you consider yourself more a developer or a user of AR/VR systems? [scale: DEVELOPER:1 – USER:5]

0 3 9



What is your organisation background?

0 4 3

Large Space Systems Integrator (LSSI)



Small and Medium (Space) Enterprise (SME)



Technology Company (not Space specific)



Product and/or Tool Vendor



National or European Space Agency

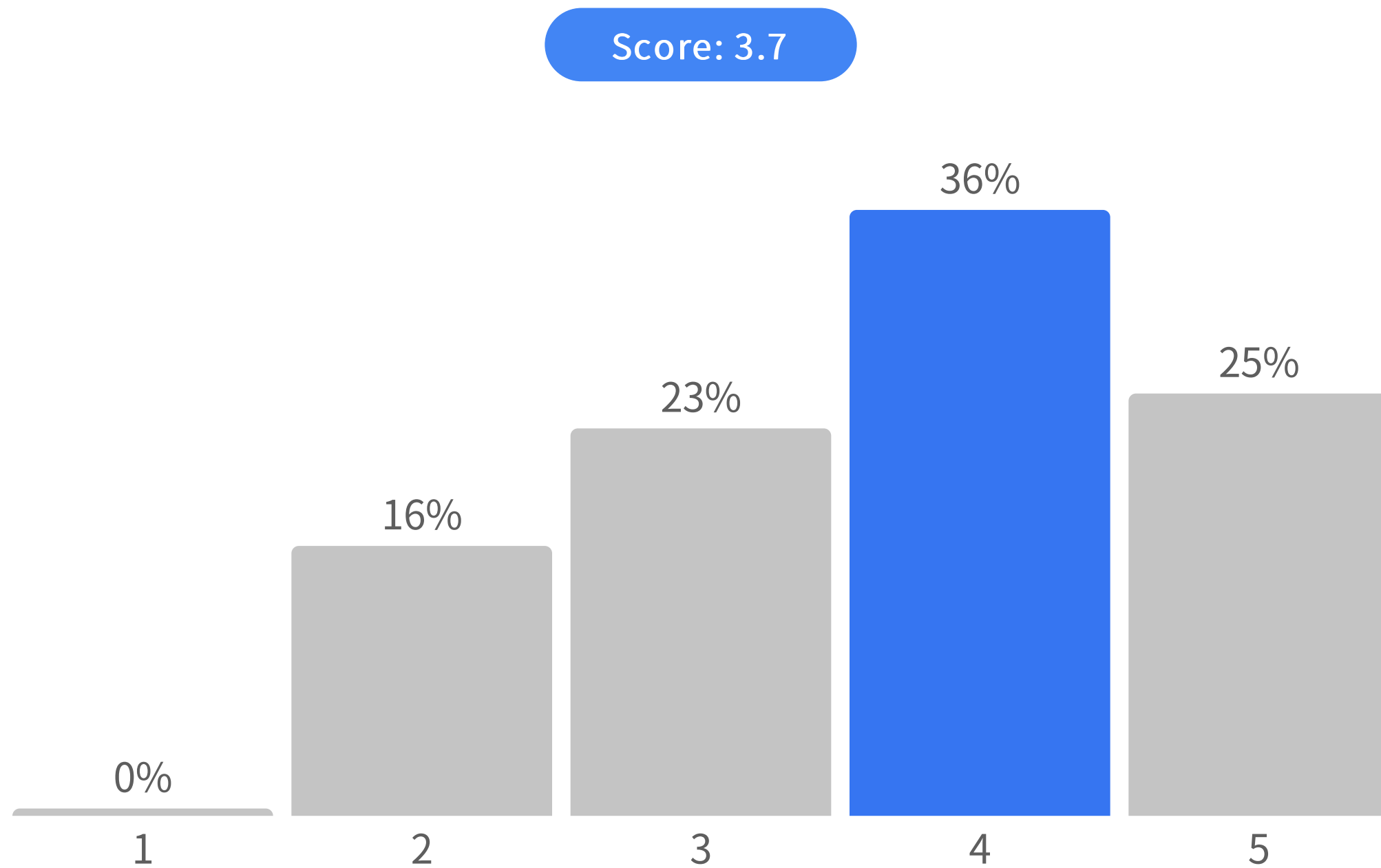


Other



Is the AR/VR technology mature enough today to be of benefit in space missions? [scale: NO:1 - YES: 5]

0 4 4

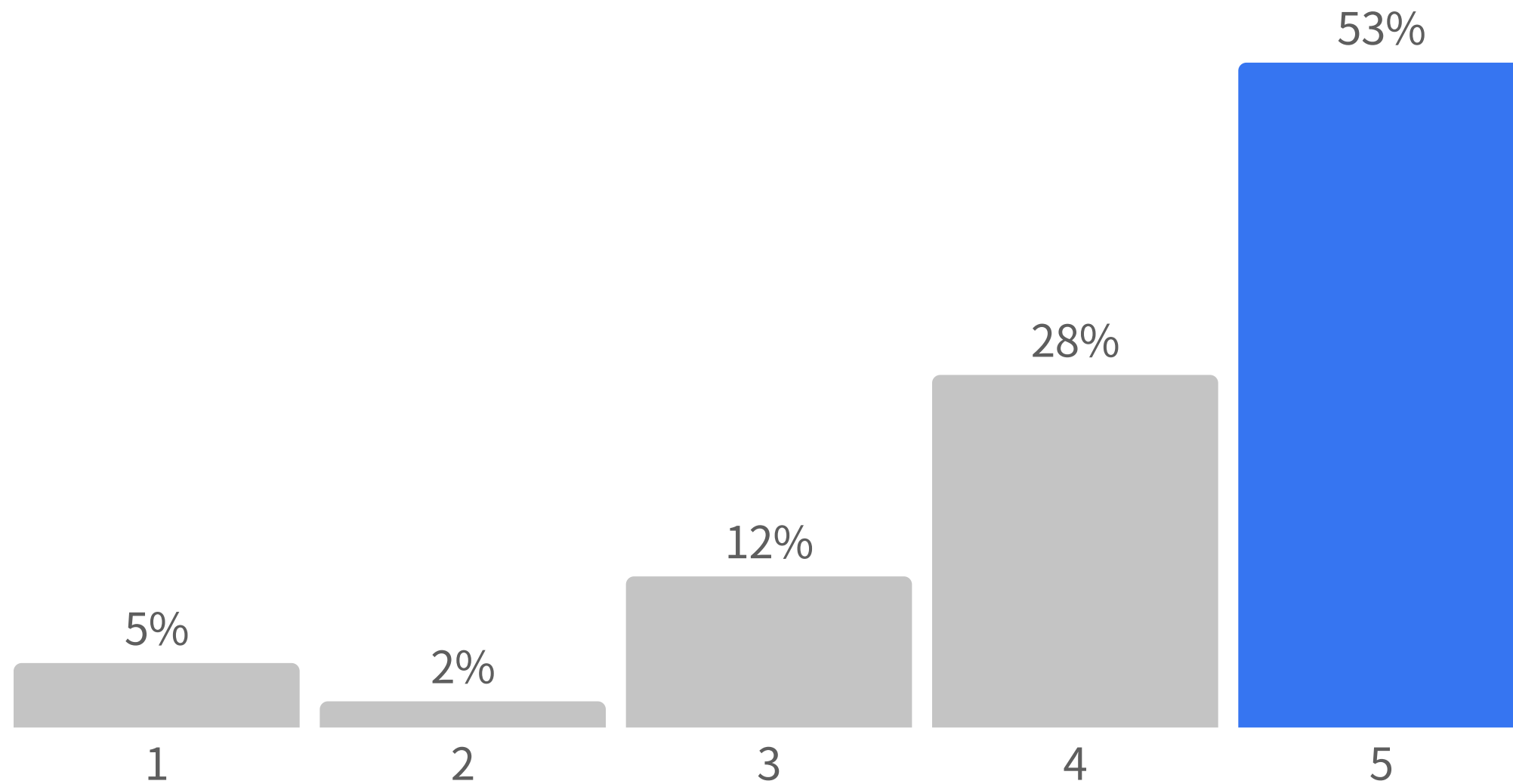


Rating poll

Is it viable to use AR/VR technology given that typical space missions have limited production series for systems, units and components?
[scale: NO:1 - YES: 5]

0 4 3

Score: 4.2



What are the current limitations of AR/VR systems? (1/2)

0 4 4

Haptic interfaces



Headset resolution



Headset field-of-view



Headset long duration usability



Object recognition capability



What are the current limitations of AR/VR systems? (2/2)

0 4 4

Susceptibility to the environment



Software development environments



Authoring tools



Any comments or suggestions related to AR/VR technology?

008

- New space can lead manufacturing, as it is a large, publicly funded, open community.
- Developers, developers, developers!
- Set an esa programme
- we love it
- When is the next workshop?
- yes
- Let's make it happen!
- It is awesome!

In what areas should ESA invest to leverage the use of AR/VR in space missions?

0 4 2

Technology



Standards



Authoring environments



Knowledge management



Demonstration and promotion



How could AR/VR leverage or interact with other technology areas?

0 4 3

Simulation



Artificial Intelligence



Big Data



Any comments or suggestions related to the ESA role and R&D strategy?

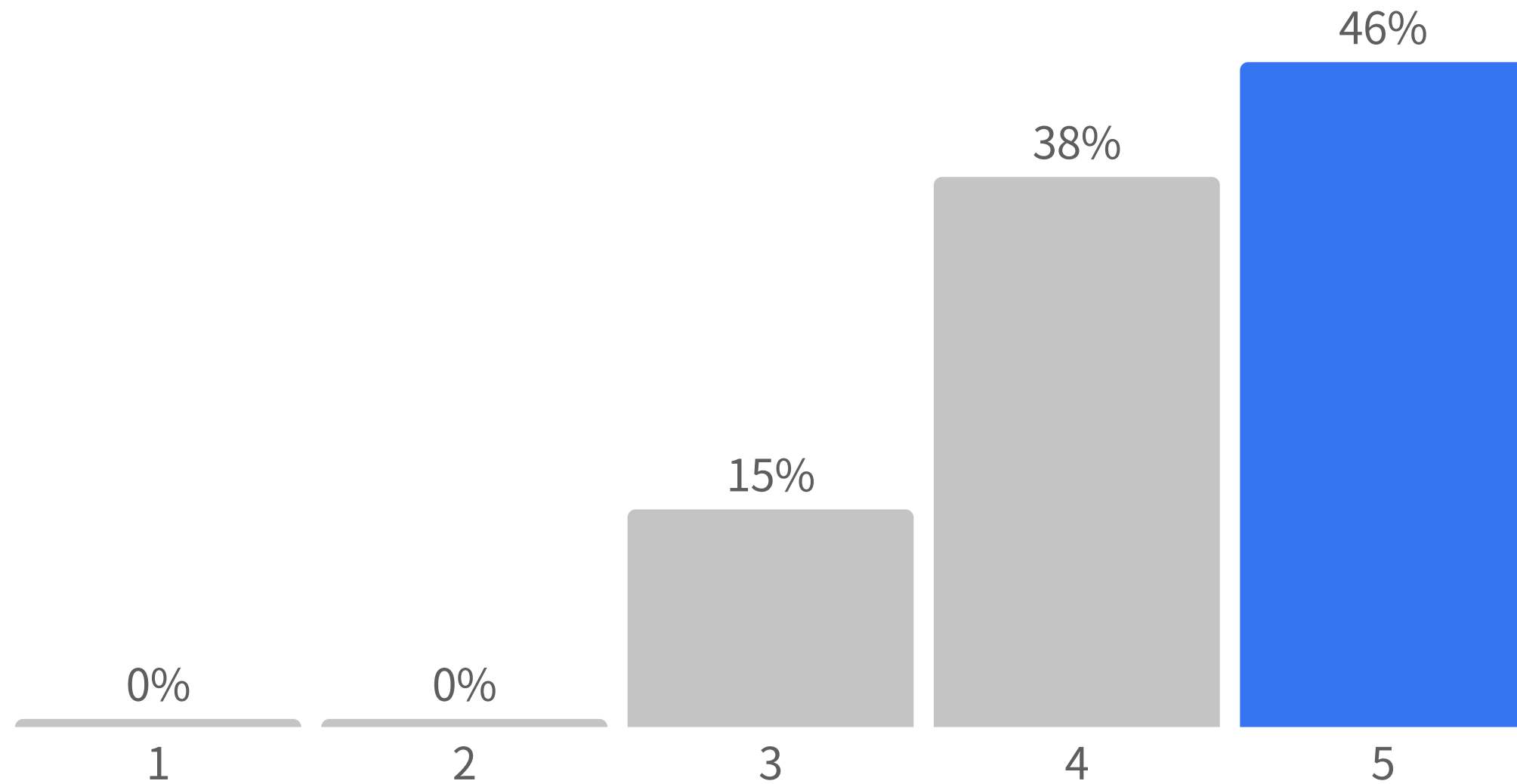
0 1 8

- More beer and wine
- Define standards and promote/push them onto hardware vendors
- Let the market lead
- Define goals not technology solutions
- Competitions with prizes
- How about enable a collaboration vr/ar platform?
- Dedicated programme!
- Spend much money
- Start a harmonisation exercise for XR
- establish a stable roadmap
- Create a clear AR strategy
- foster open source platform
- Organize regular AR/VR workshop like today
- inspire, innovate, create new usecases
- Challenge funding
- Offer tickets to space
- Liaise with CEN/CENELEC, IEEE SA, ... for standards
- Money

Did the workshop fulfil your expectations?
[scale: NO:1 - YES:5]

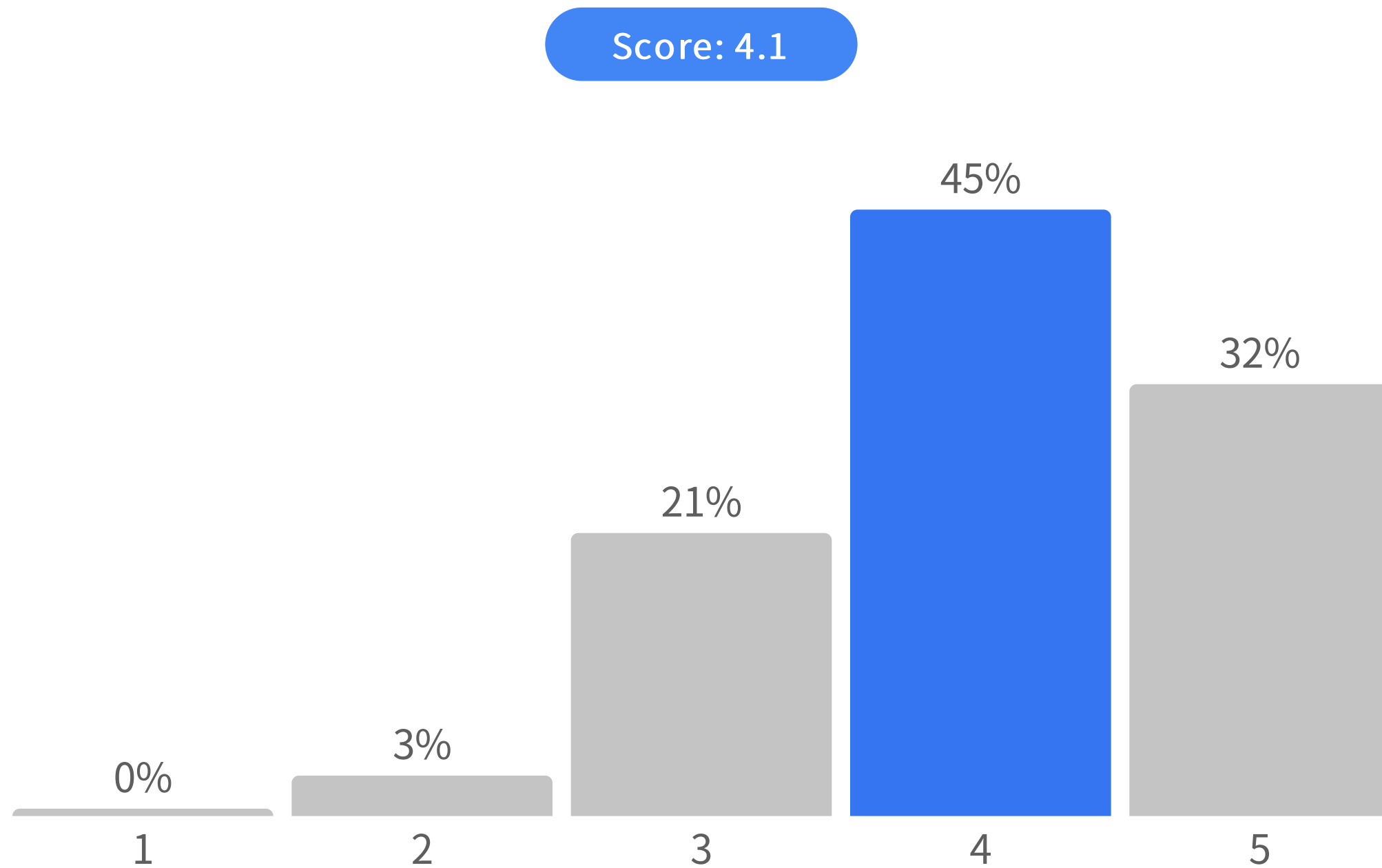
0 3 9

Score: 4.3



Was the workshop useful for your work? [scale:
NO:1 - YES:5]

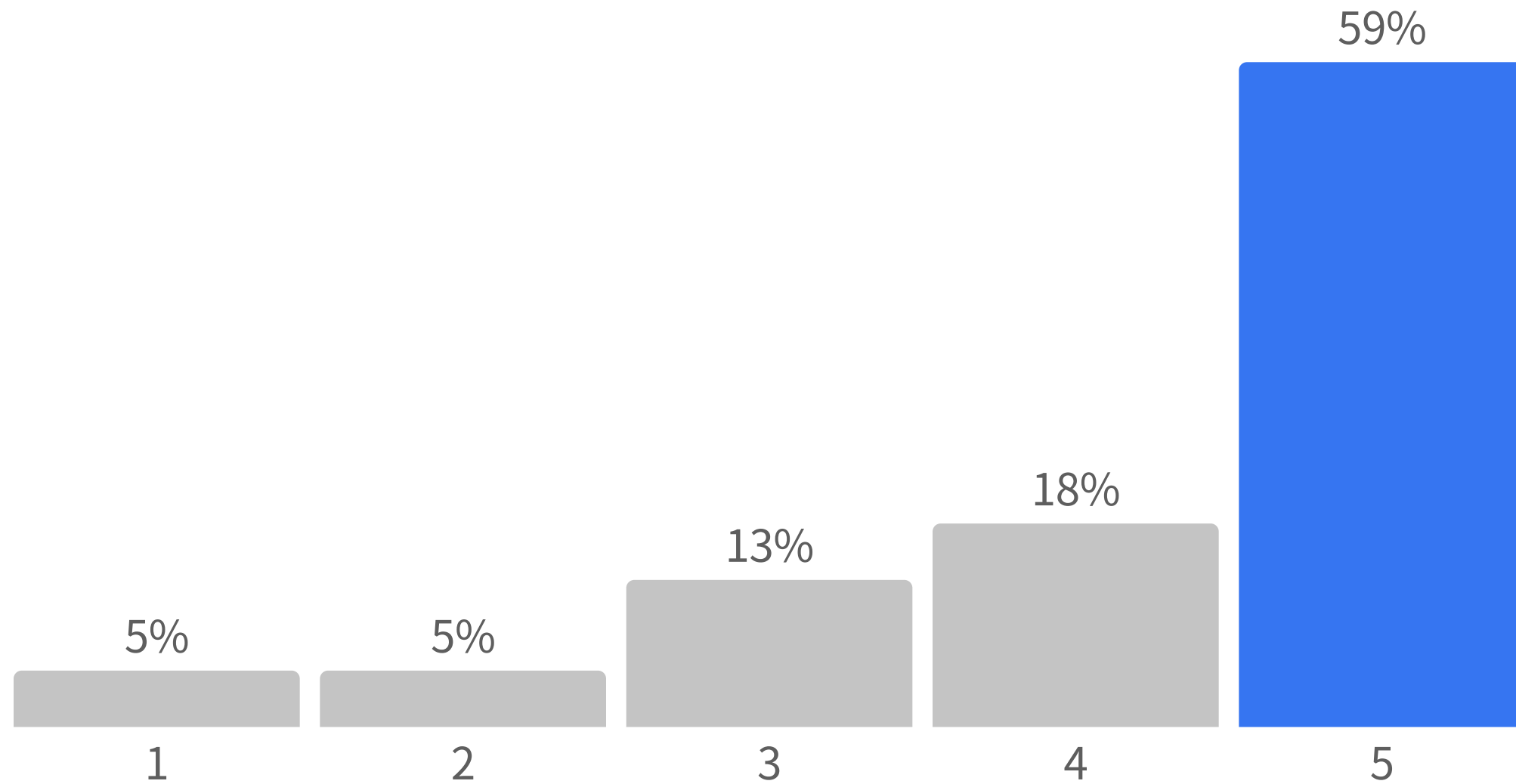
0 3 8



Was the duration of the workshop sufficient?
[scale: NO:1 - YES:5]

0 3 9

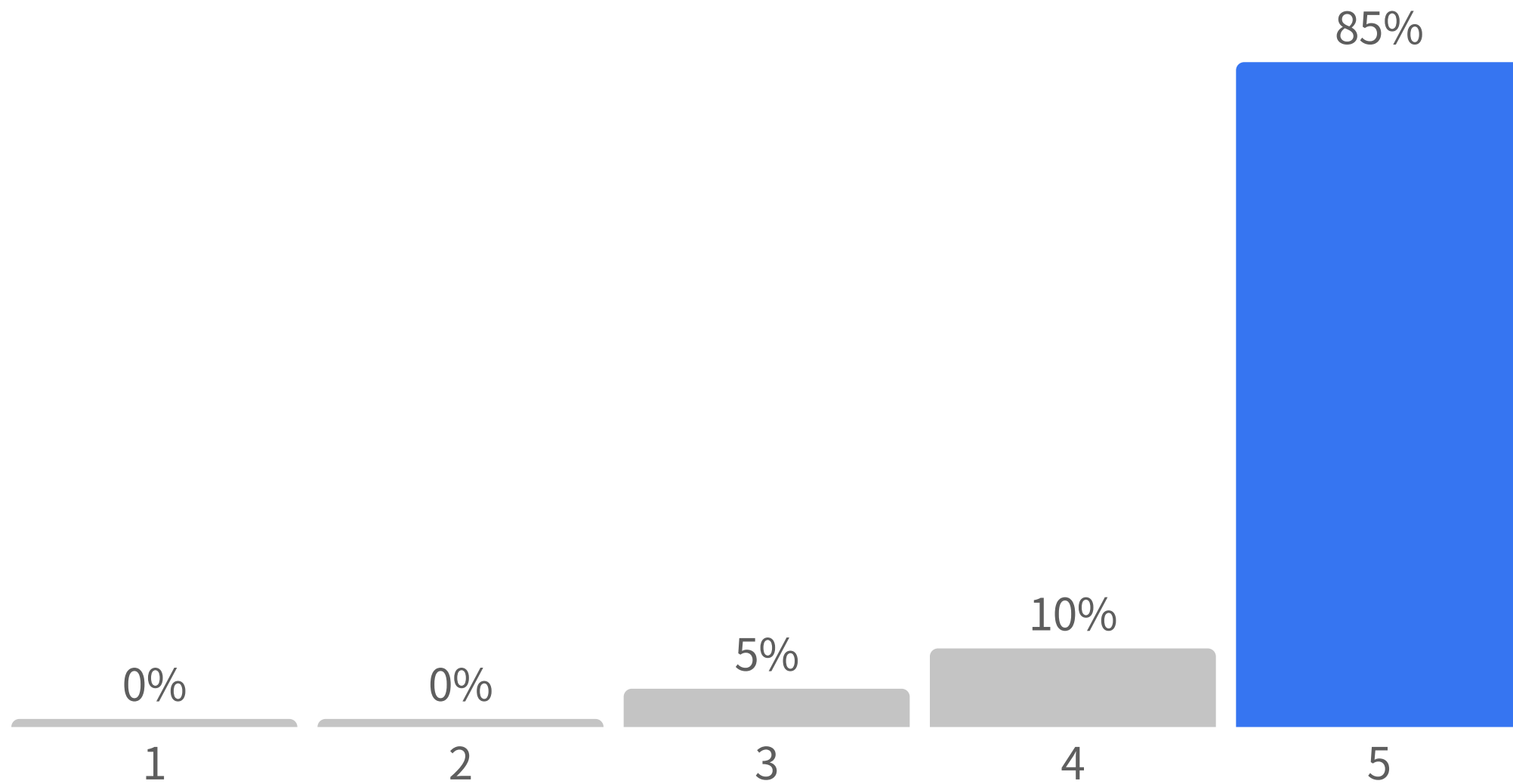
Score: 4.2



Was the duration of the presentations sufficient? [scale: NO:1 - YES:5]

0 4 0

Score: 4.8



Would you consider participating a next time?

0 3 9

Yes



No



What would be your preference for the next workshop?

0 4 1

Never again

0 %

Every year

78 %

Once every 2 years

22 %

What would be your preferred duration for the workshop?

039

One full day



Two days with later start / earlier finish



Two full days



Do you think the Slido tool was effective?

0 4 0

Yes



No



Do you have any other comments or suggestions?

0 1 6

- Will the presentations will be available?
- Maybe considering putting this event together with other topics like AI and simulation
- #Bloomberg2020
- Is this anonymous?
- Shorter please ;)
- Muchas gracias!
- 42
- thanx for the fish
- Merci
- Cheers!
- Present the ESA centres, focus areas by the heads
- Obrigado
- Having the workshop every year pushes people to present NEW stuff the year after :)
- :)
- <3
- yes
- Awesome event
- Thank you
- Shorter presentations
- Good seeing you :)
- Congrats for the logistics
- happy pension!
- Time out
- No.