Mentimeter



Reuse or Rebuild in the AI Era

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Your say:

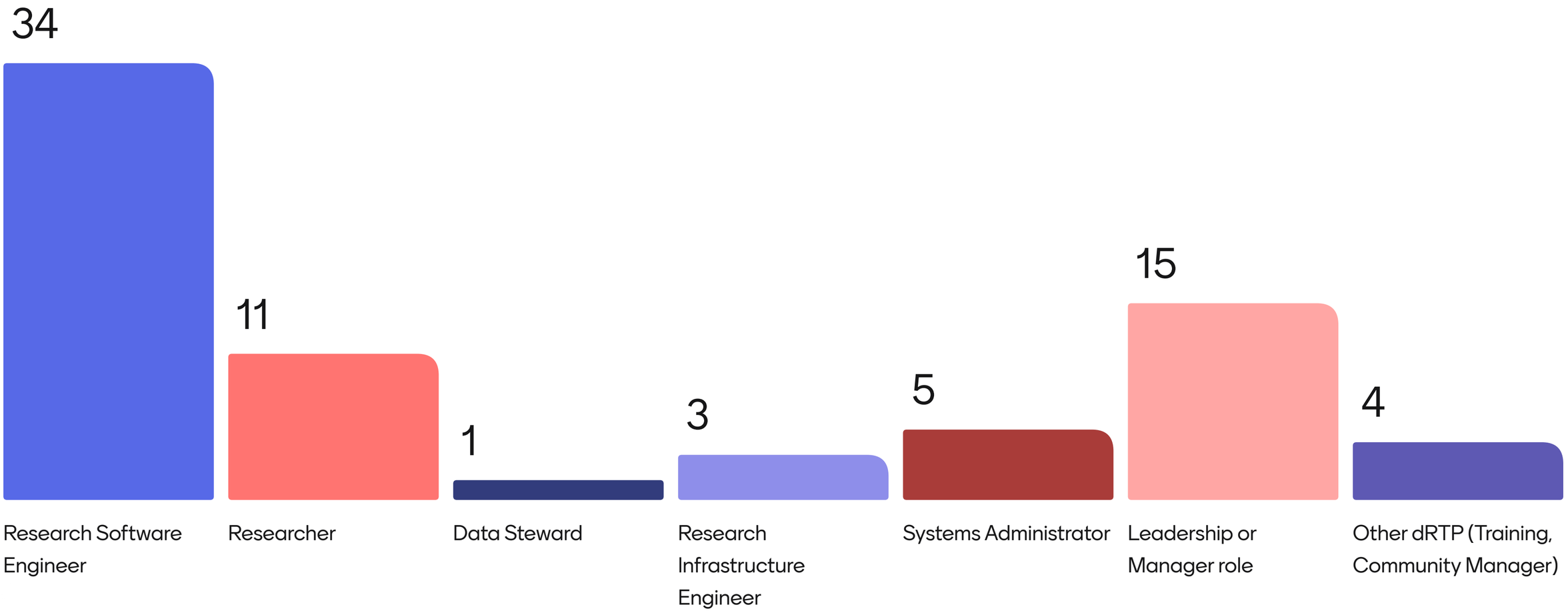


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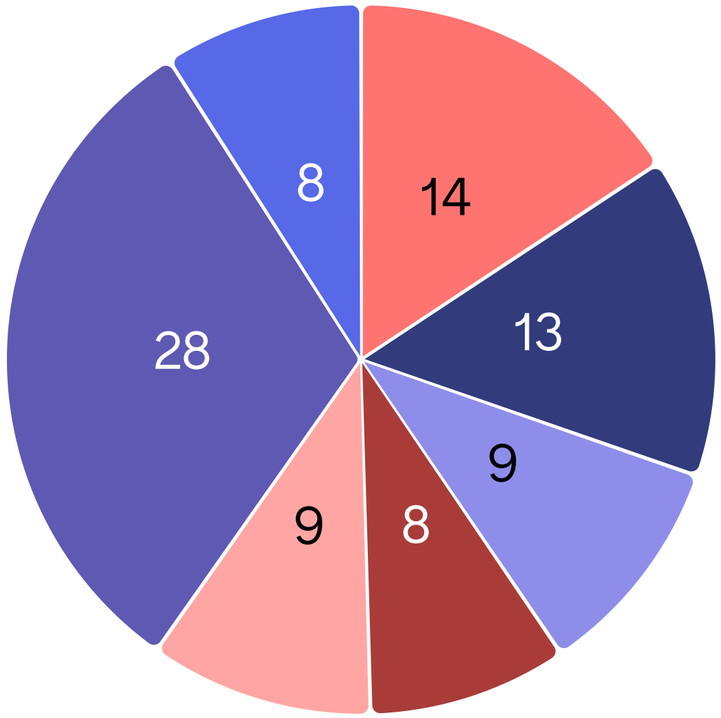
In one word, what's your first reaction to 'reuse, don't rebuild'?



A bit about you

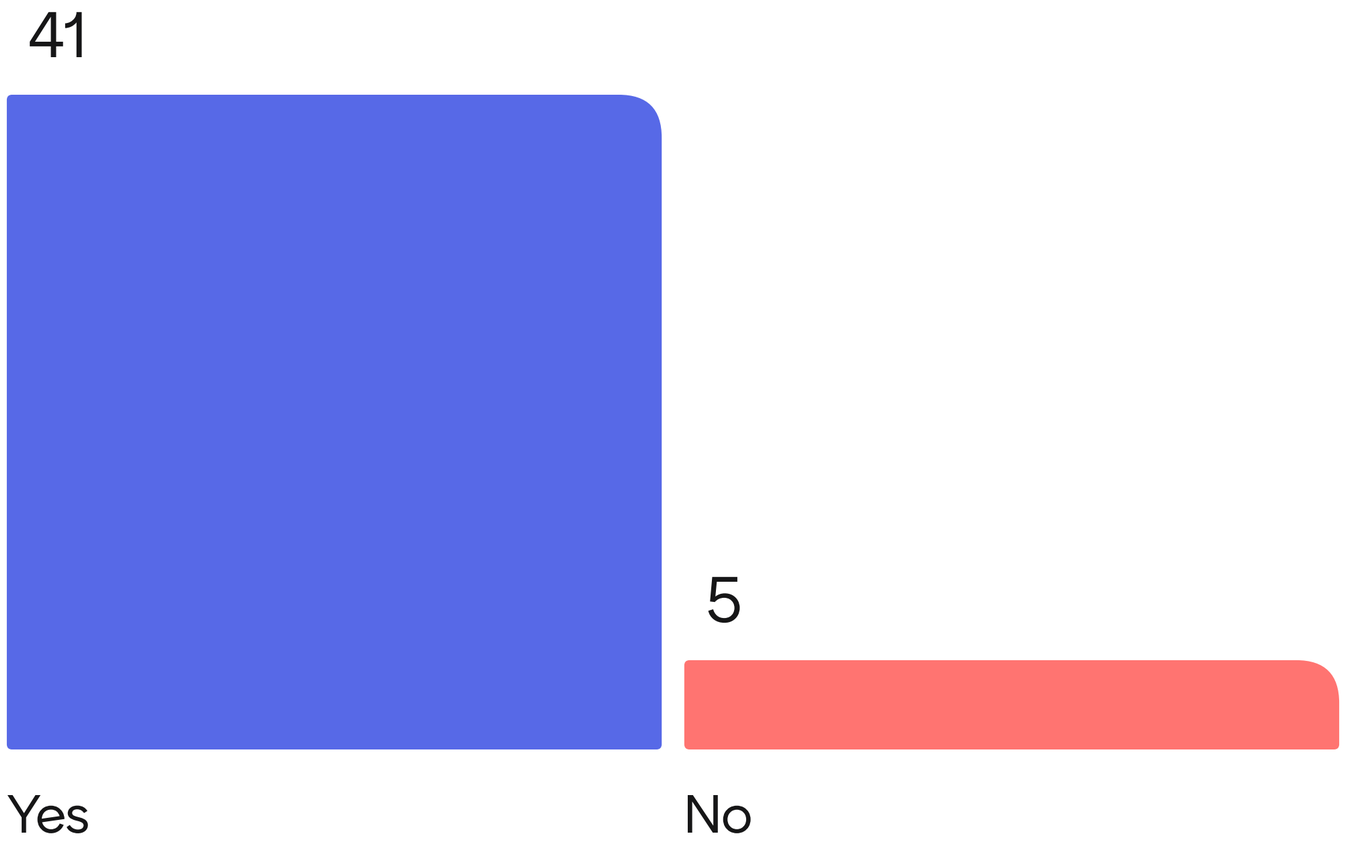


Which area do you work in? Pick as many as fit.



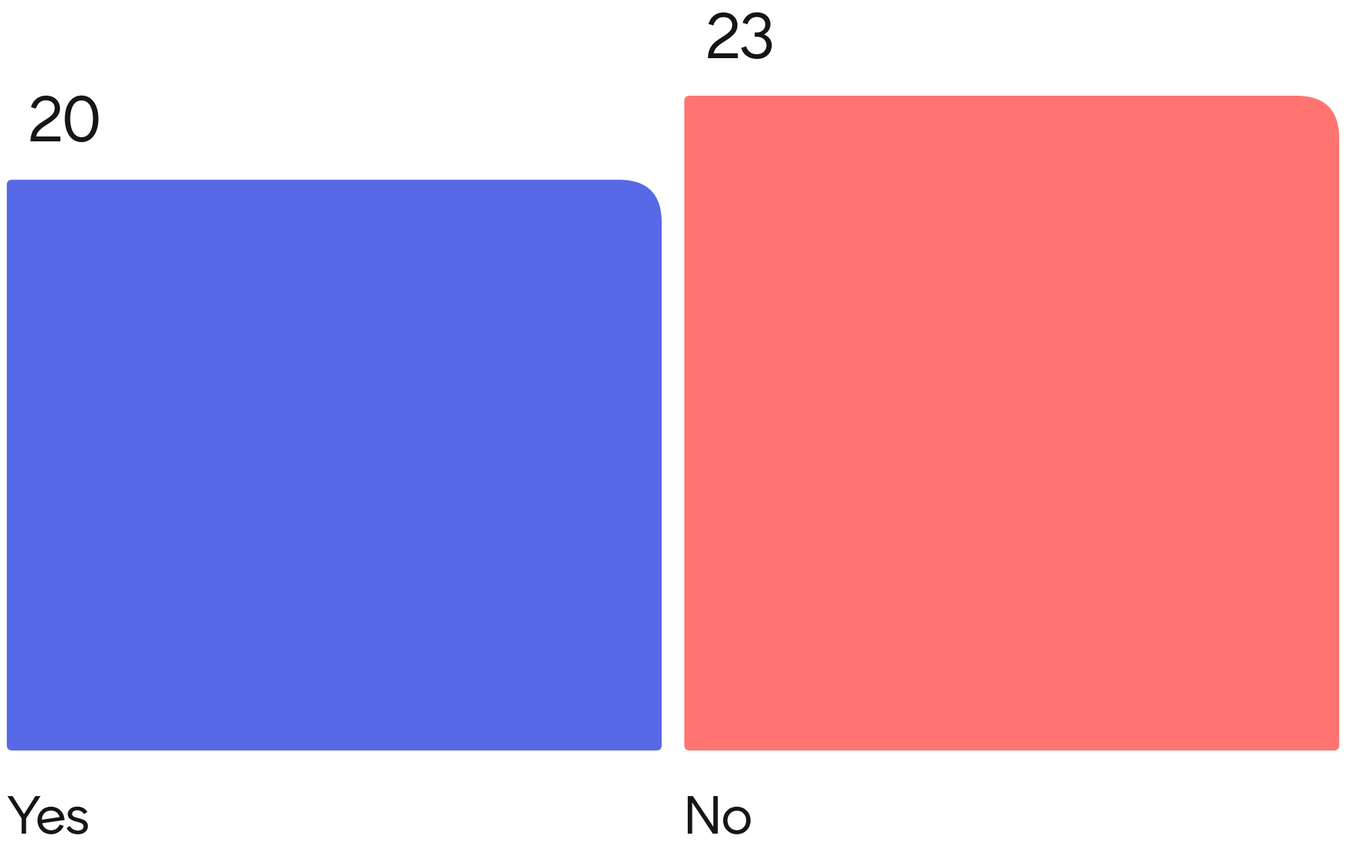
0	Arts & Humanities
14	Life and health sciences
13	Computer Science
9	Engineering
8	Earth and environmental sciences
9	Physical sciences
28	Research Software Engineering
8	Other

Do you use AI in your work?

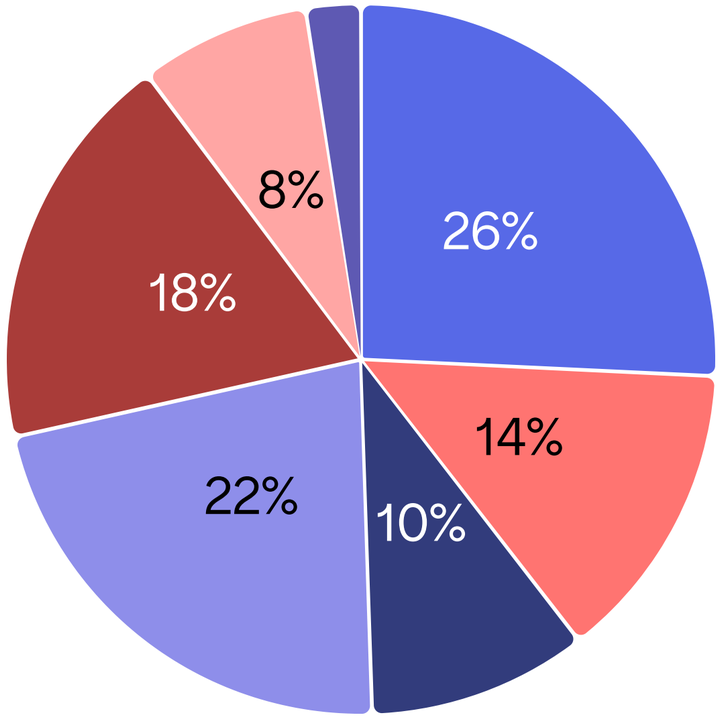


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Thinking about 2 years ago... Did you use AI in your work?

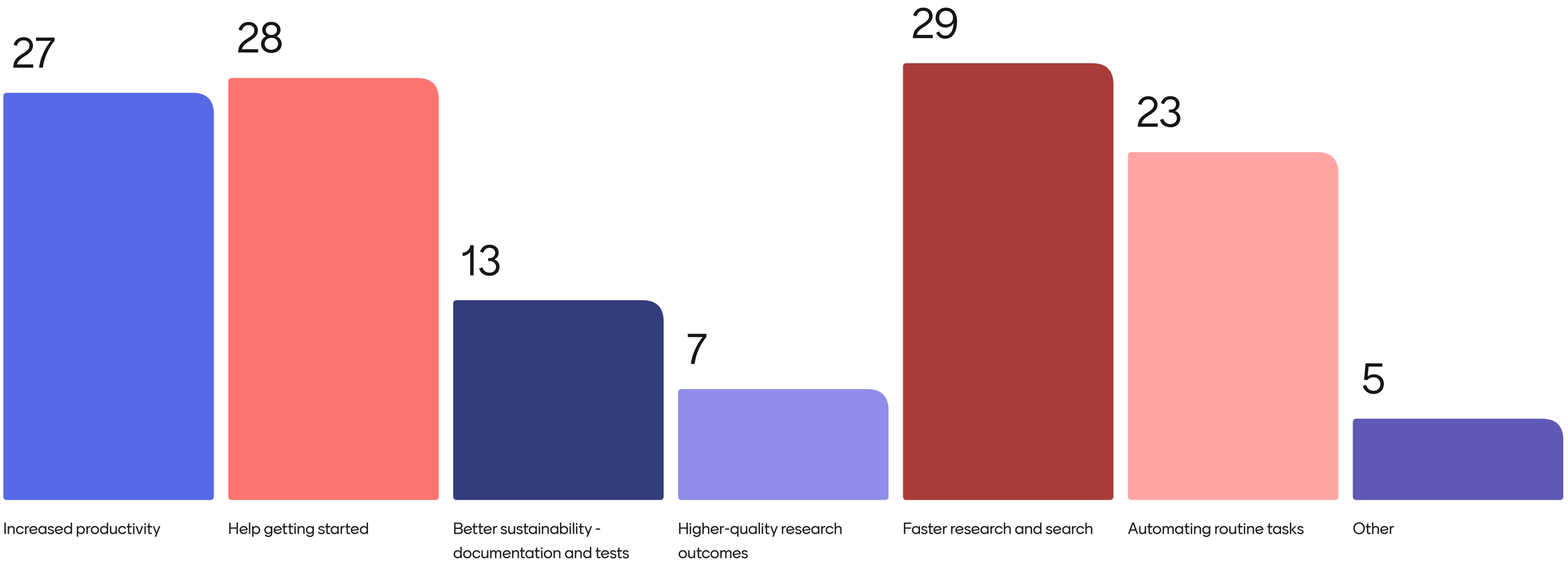


How do you use AI in your work?

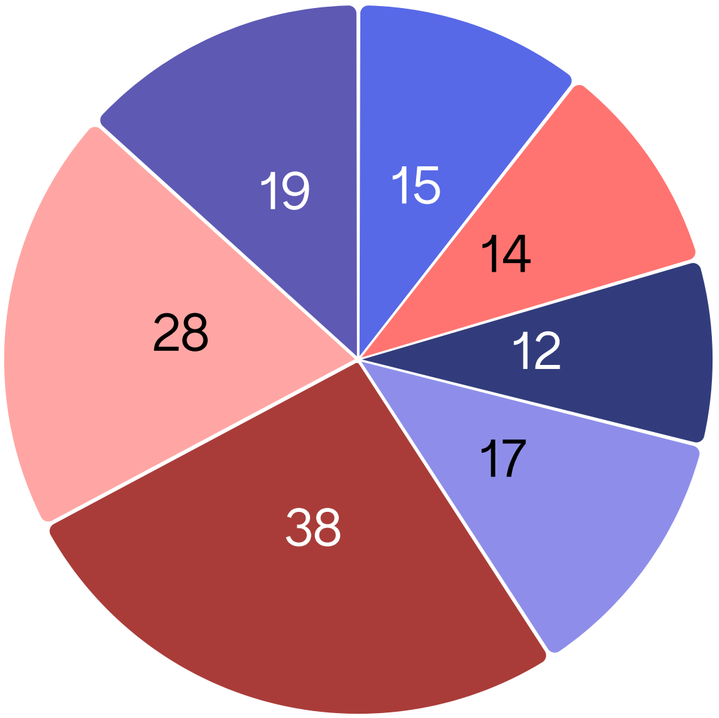


26%	Write code
14%	Implement DevOps (CI/CD pipelines, test suites)
10%	Do data analysis
22%	Research topics and work through ideas
18%	Generate and summarise content (reports, documentation)
8%	Other
2%	Don't use AI at all

What are the opportunities AI has created for your work?

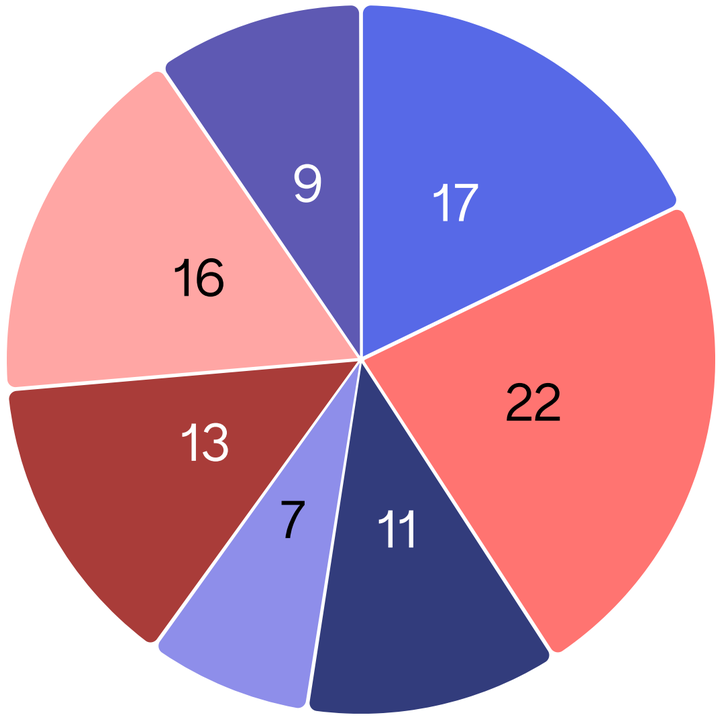


What are the challenges of using AI in your work?



15	Harder to remember what I did
14	Review takes too long
12	I cannot verify the output
17	The output does not fit my needs
38	Security, quality or ethics concerns
28	Environmental concerns
19	Takes away the creative aspect of my job

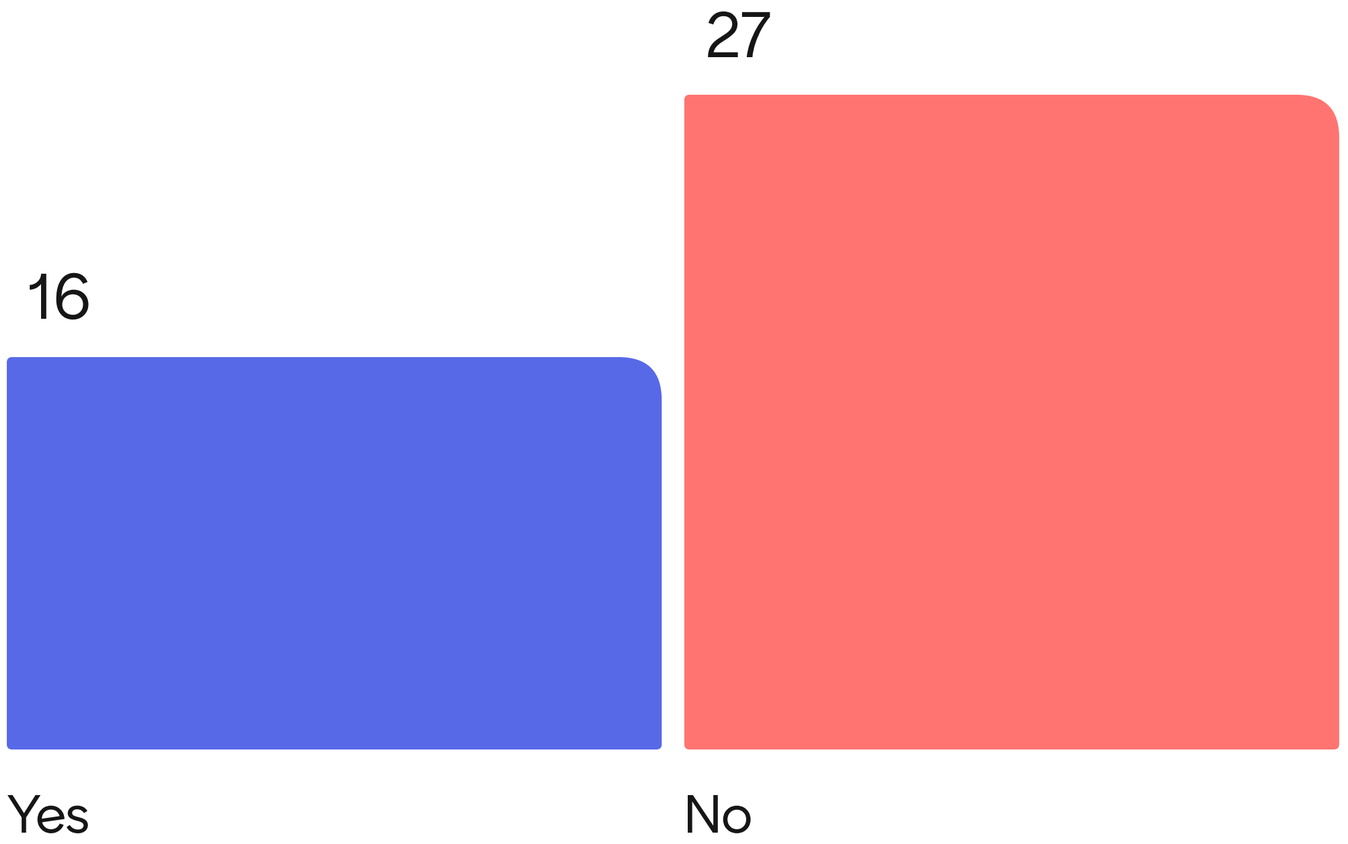
What is your involvement with Digital Research Infrastructures?



17	Local/university DRI for data storage
22	Local HPC
11	National HPC
7	Analytical platforms (Galaxy, Nextflow, etc)
13	Data sharing to Public repositories at publication
16	Specialised data platforms/repositories
9	None

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Do you know what BioFAIR is?

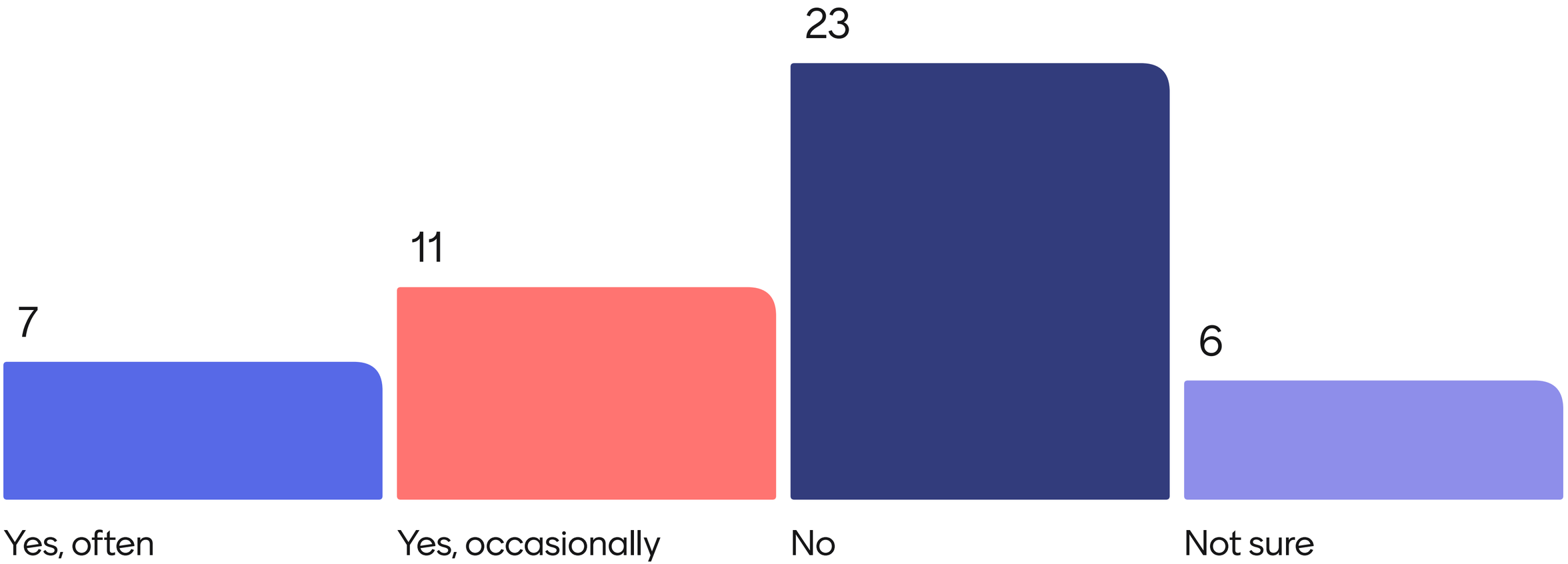


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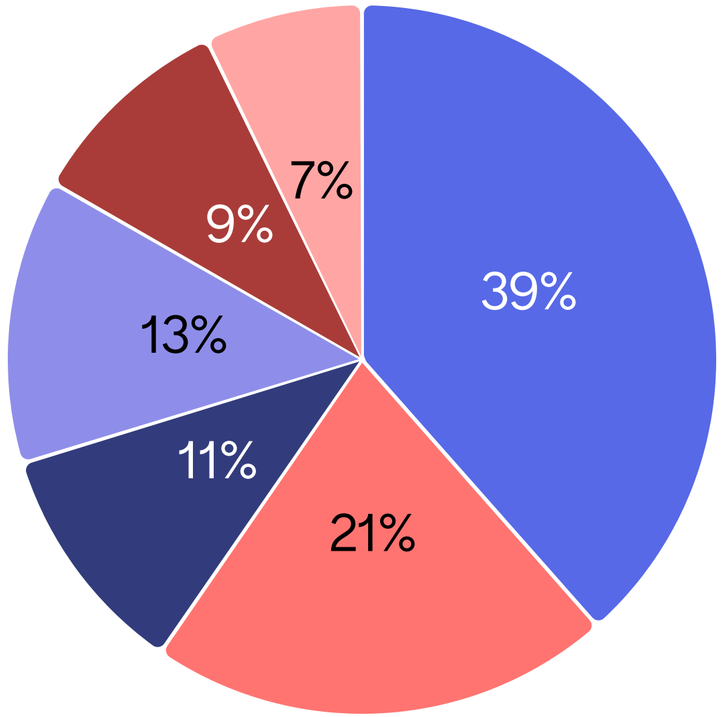


Reuse or Rebuild in the AI Era

In the last year, have you built something with AI help that you'd previously have adopted an existing tool for instead?



Where is “rebuild instead of reuse” happening most right now?



39%	Small utility scripts
21%	Data wrangling and cleaning
11%	Full analysis pipelines
13%	Whole applications or services
9%	I have not seen it happening
7%	Other

What did you learn?

Open source is dead

Rebuilt tool was worse than one I could have reused

I don't care about the actual code anymore

Researchers need training on safe AI use

You have to do so much checking if it's important - if it's not important - then less so.

There is reliance on AI tools to maintain AI generated code bases

Collaboration / code review on 100% vibe-coded tools is difficult!

Inadvertently rebuilding is an unwanted overhead (added complexity)

What did you learn?

Custom workflow tooling massively improves personal ergonomics

AI use is bimodal - either almost no AI or go all in on it

AI is great for getting started, but outputs need lots of refining

Rebuilding is better than trying to use badly designed code.

Eliminates implicit security issues, saves time from fighting with undocumented code

Hard to use pipelines, that don't utilise robust, reusable software practices

Novices have generated coding rewriting code functions and libraries, they don’t know things already exist

The cost to rewriting is much lower so where the original tool didn’t quite fit it is now much easier, as long as you have clear goals on what you are asking for and need

What did you learn?

It gets harder to find things to reuse through the sea of code available now not fit for purpose

Bugs and edge cases already solved by existing solutions reappear in new code

NOTHING

Learnt new technologies

For short pieces of work “merge these two data frames on this column” it’s been very helpful.

Rebuilt tool was just a bit too different to make results reproducible

Rebuilding with Alseems easier but the generated software may be incorrect

It can get out of hand when the codebase becomes unmanageable

What did you learn?

Good for small one off jobs with throw away scripts

It is Crazy not to use AI now. In thr past everyone kept using old/outdated systems due to the effort needed to rebuild.

AI code use is very time consuming.

Old code is often undocumented and needs to be rebuilt as well don't understand it.

You lose all the memory contained in the original tool. Decisions, etc

I spend a lot more time reviewing than I used to

I haven't tried rebuild RS with AI

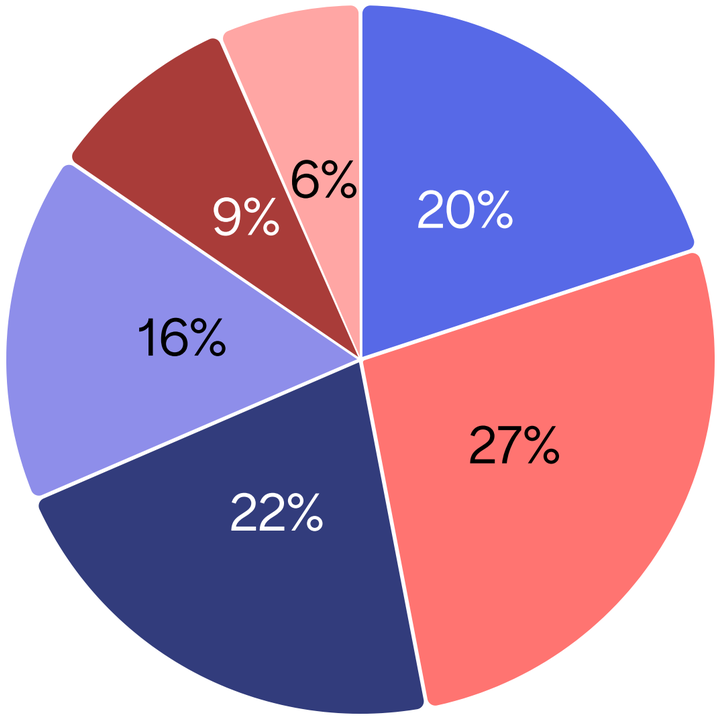
Open source is alive and well

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What did you learn?

AI is a great tool, but it is only a tool to be used for experts

What are barriers to "reuse" today?



20%	Discoverability of existing tools
27%	Poor documentation
22%	Trust in quality or maintenance
16%	Time: it is faster to ask AI to write it
9%	Licensing or governance friction
6%	Other

What is one topic you want the panel to address today?

Is supply chain attacks the most compelling reason for rebuild instead of reuse

Corporate villainy and fascism.

The reproducibility of 'rebuild'

Is it truely re-use with AI if we have to burn the world to achieve it?

The role of RSEs in this

Trust

Junior developer development is a really interesting point

How to use LLMs to build tools based on existing tools?

What is one topic you want the panel to address today?

Supply chain attack risk from reuse

What are their views on rebuild or reuse - what have they seen - what are the gotchas from their point of view - or what do they think might be issues

Is Open Source dead?

Using AI to support reuse.

Use AI to help reuse

Trust of AI rebuild vs open source.

Just because rebuilding is easier isn't a good enough reason to do it

Reproducible workflows that use AI or LLM inference for maintainability, reusability, explainability and transparancy.

What is one topic you want the panel to address today?

How to assess FAIR data and FAIR software

How can we annotate prior work by LLMs so that they are findable and hence reusable?

How can we trust and build on code in the AI era where normal signals of quality are no longer valid

AI raising expectations of rse productivity.

Isn't rebuilding instead of reusing directly contrary to the BioFAIR principle of trusted workflows?

Are we the right people to ask, we as rses have similar opinions on reuse and it might be different to say industry / management etc

What types service providers/ digial infrastructure are you looking to work with?

People keep saying cost of building is zero with AI, but is it really? And if it is now, then will it always be? And if not, what then?

What is one topic you want the panel to address today?

Reliance on providers/sovereign models

A nuanced discussion that balances "heart" and "head" here. That is, what we want vs what we expect will actually happen

Is it an "either/or" for reuse versus rebuild, or is there a more nuanced mixed model?

When Researchers expectations around delivery timelines change how will RSE holdouts adapt?

Balanced human/AI intervention

What's the future landscape for RS reuse under the AI era?

Rebuild is only ok if the agent attributes the source code and projects it based it's answers now. Otherwise the agents cannot be FAIR

Respecting open source licenses.

What is one topic you want the panel to address today?

How can we both 'rebuild' and collaborate? In my experience, it leads to ever more siloed working.

In the future will it be harder to validate results as developers have less experience of writing code themselves