



Capacity in UK university engineering departments: initial response summary

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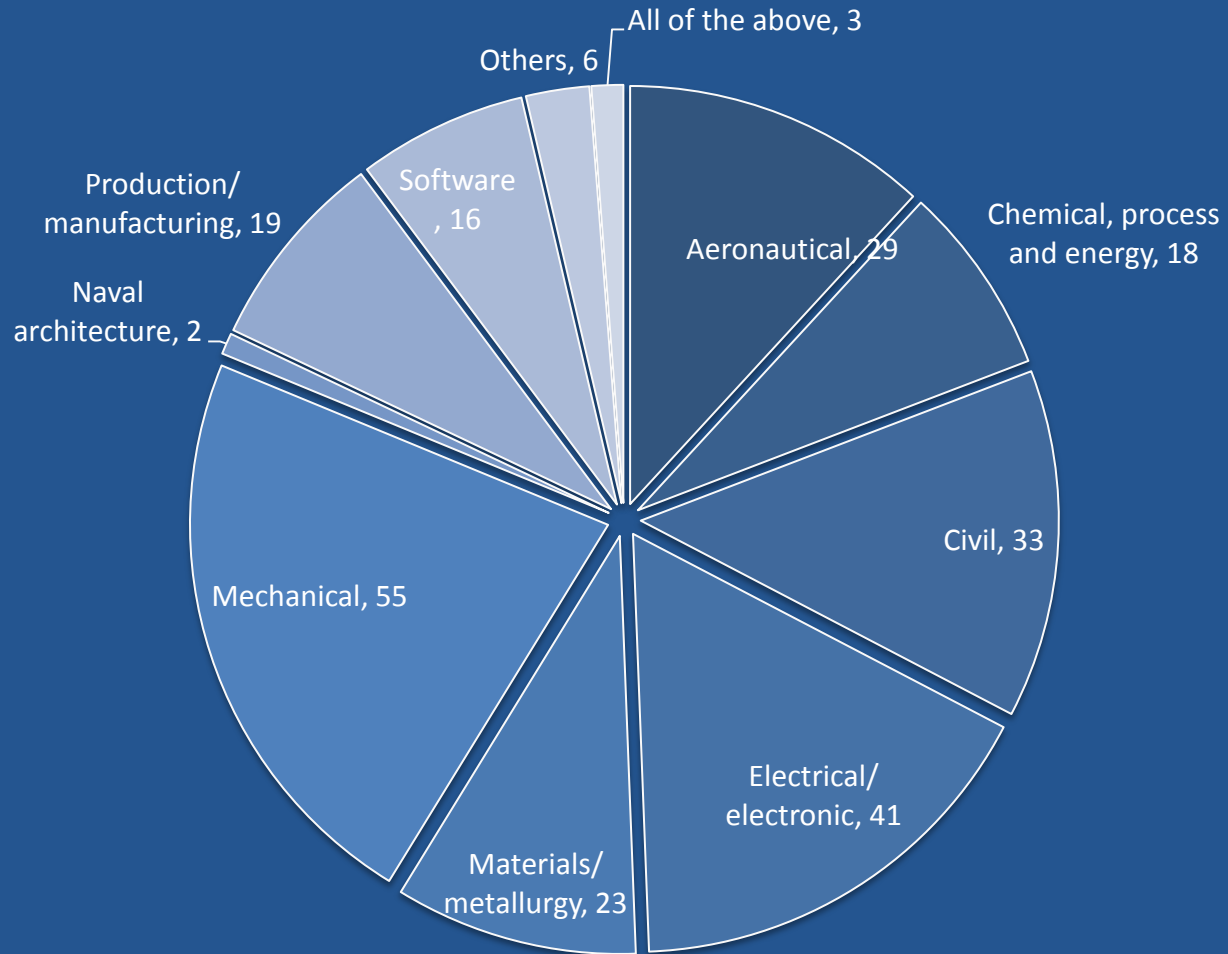


Opinion poll of members of the Engineering Professors' Council (EPC) May 2013: how long would it take to double student capacity in engineering departments, other things being equal

- The EPC has 78 institutional members, all of which are UK universities
- This poll was conducted during the period 22nd-31st May, 2013
- All members of academic engineering staff in member institutions were emailed on 22nd May with a link to the Smart Survey. The questions asked are attached as an Appendix
- The poll did not ask the respondent to identify themselves or their university to encourage response, however, this means that we cannot guarantee having a unique response per university department
- A total of 108 responses were received, all from unique IP addresses
- It was acknowledged that this was a complex question and a sample of some of the verbatim comments received have been provided here to indicate the complexity and the avenues for further work
- The poll closed at 11:00 on 31st May. This report represents a DRAFT and initial summary of the results.

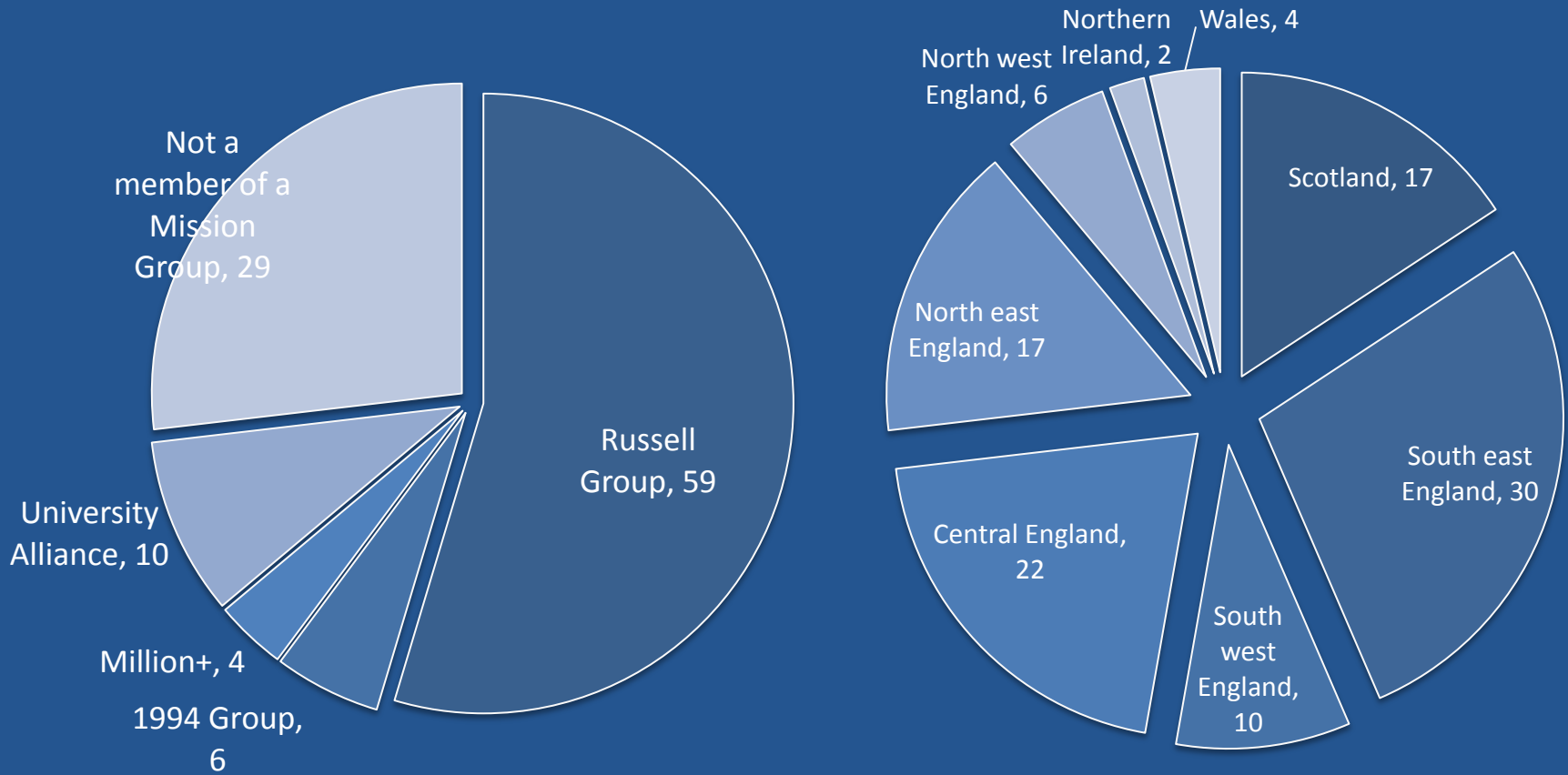


Response mix: discipline



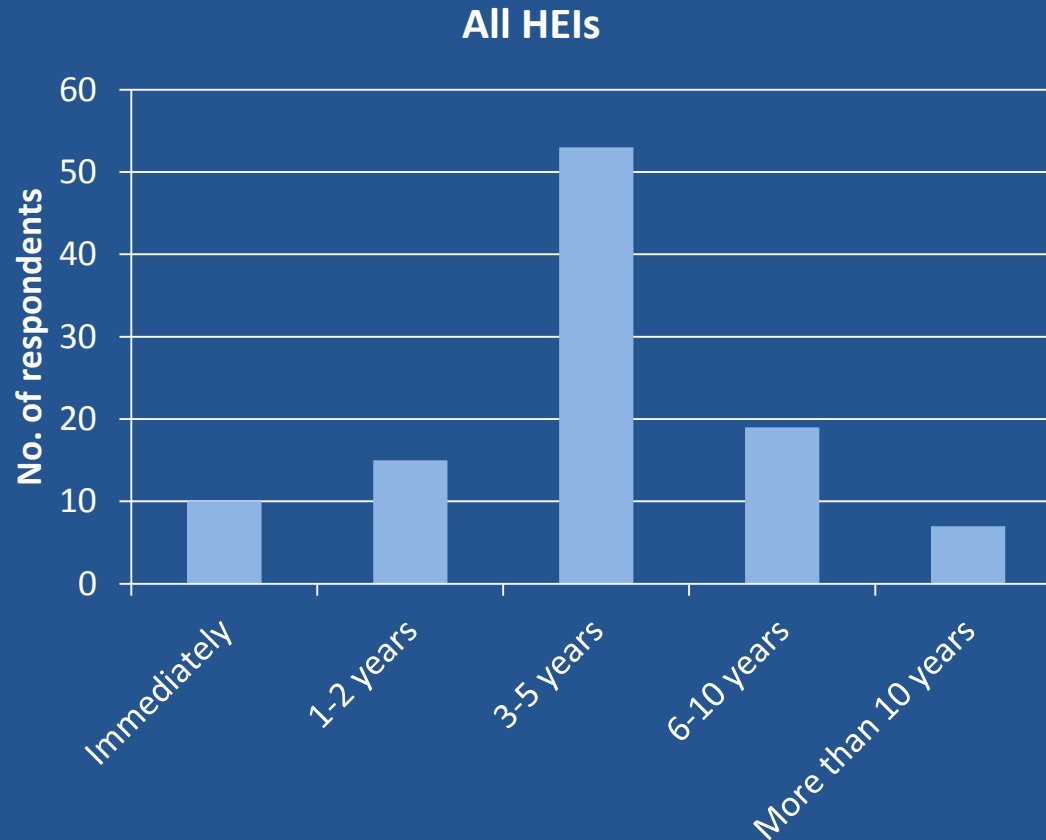


Response mix: mission group and region





Over what time period could you accommodate a doubling of your intake of undergraduate engineering students?

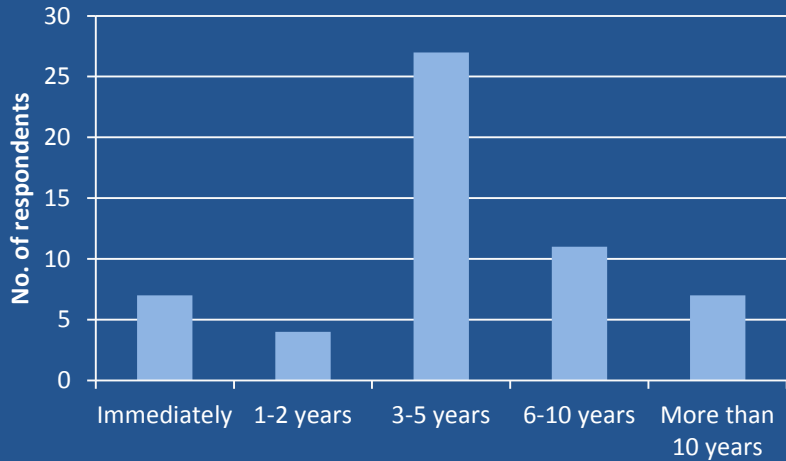




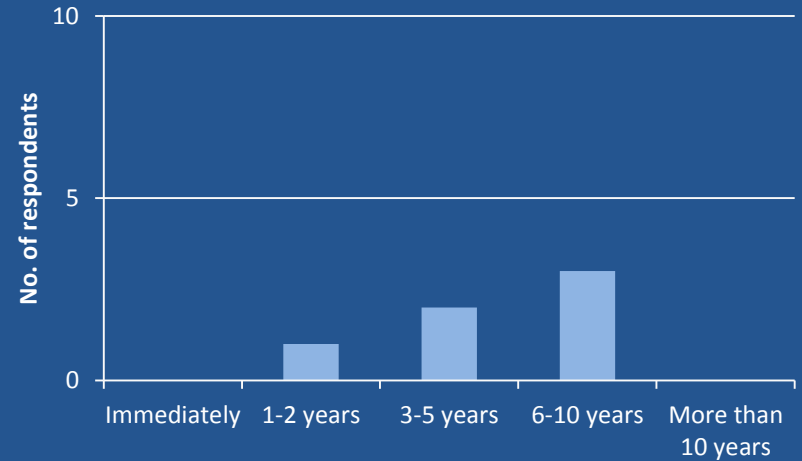
Over what time period could you accommodate a doubling of your intake of undergraduate engineering students?

By Mission Group

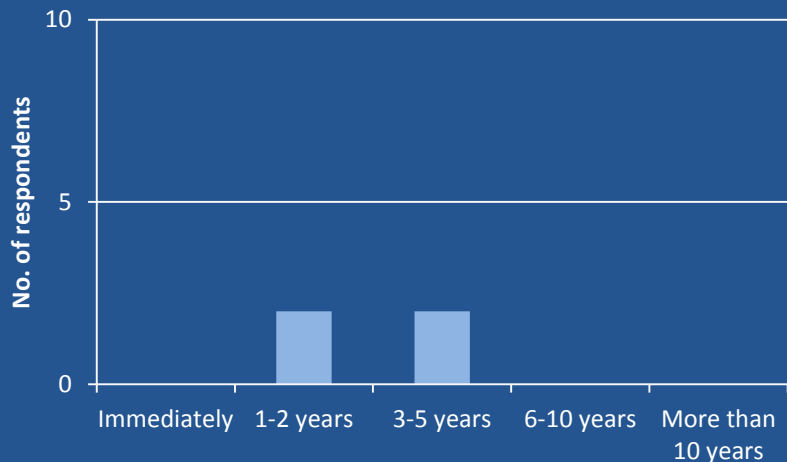
Russell Group



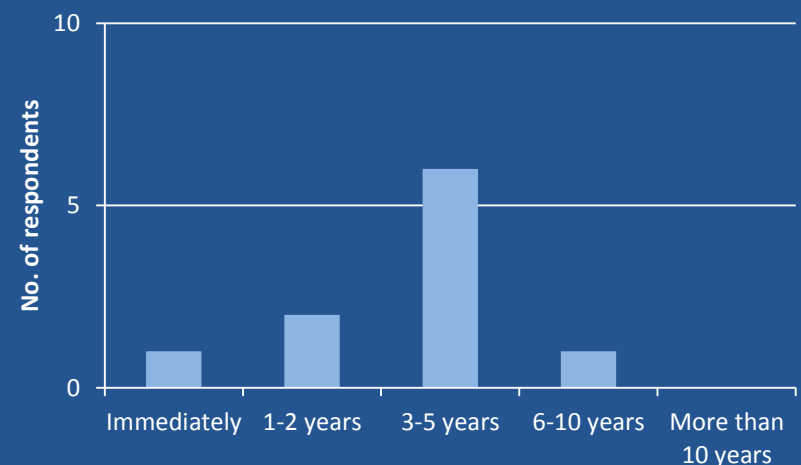
1994 Group



Million+



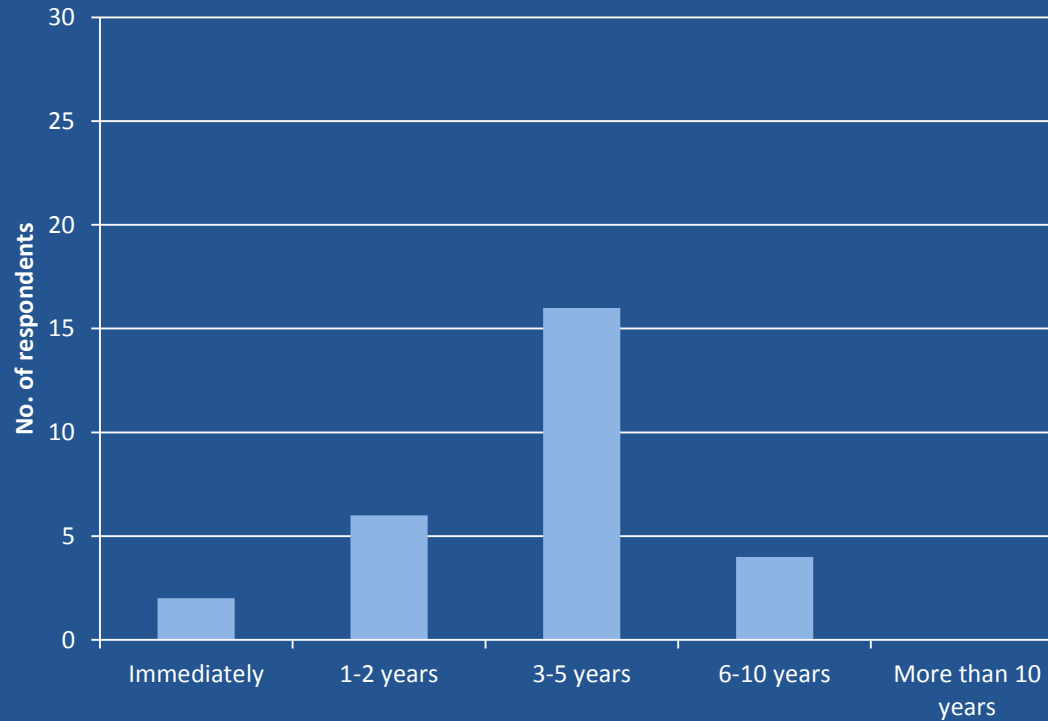
University alliance





Over what time period could you accommodate a doubling of your intake of undergraduate engineering students?
By Mission Group

Not a member of a mission group



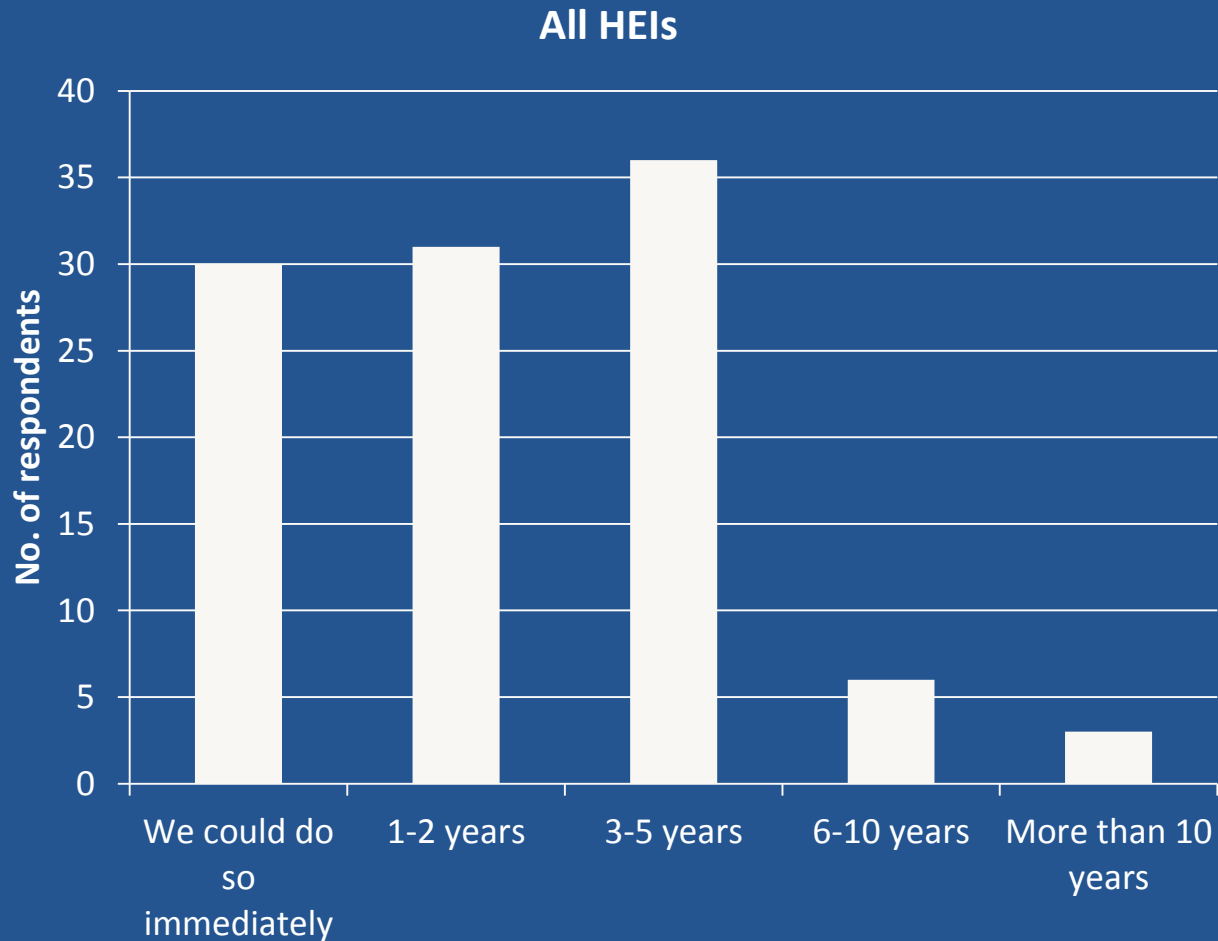


Over what time period could you accommodate a doubling of your intake of undergraduate engineering students? By discipline

	We could do so immediately	1-2 years	3-5 years	6-10 years	More than 10 years
Aeronautical	1	4	13	7	3
Chemical, process and energy	0	2	11	2	2
Civil	4	6	11	7	3
Electrical/electronic	3	6	21	8	2
Materials/metallurgy	4	3	13	0	2
Mechanical	3	9	29	8	4
Naval architecture	0	0	1	0	0
Production/manufacturing	2	3	8	3	2
Software	0	4	9	1	1
Others	0	0	4	1	0
All of the above	0	0	2	0	1



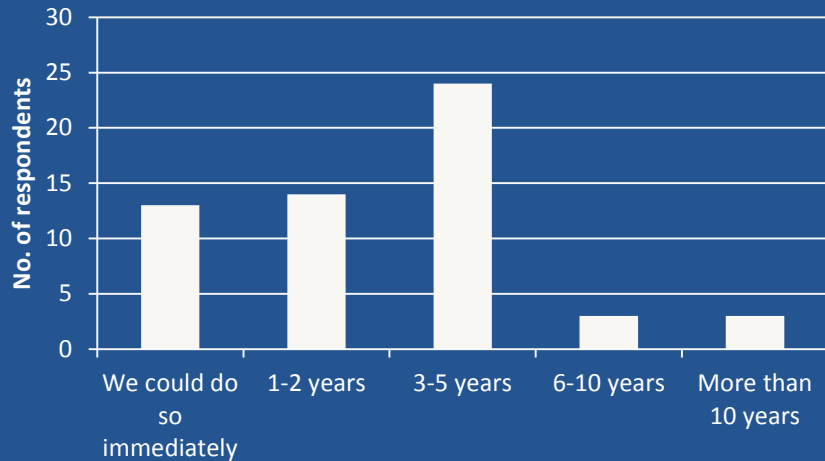
Over what time period could you accommodate a doubling of your intake of postgraduate (taught) engineering students?



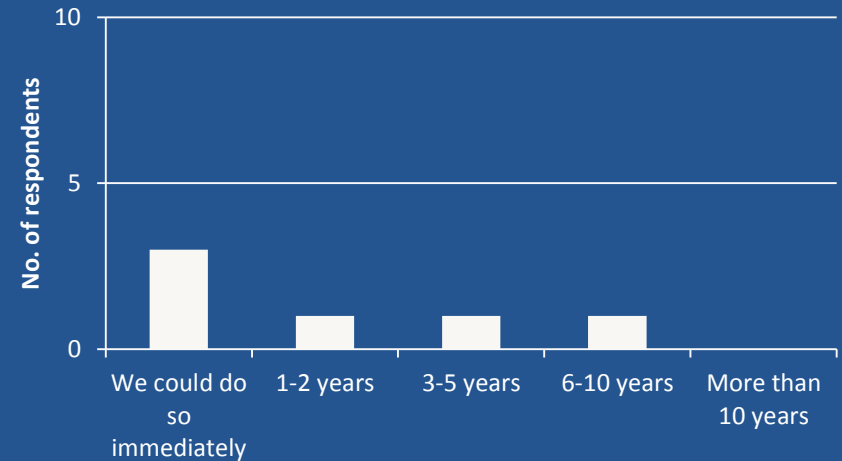


Over what time period could you accommodate a doubling of your intake of postgraduate (taught) engineering students? By Mission Group

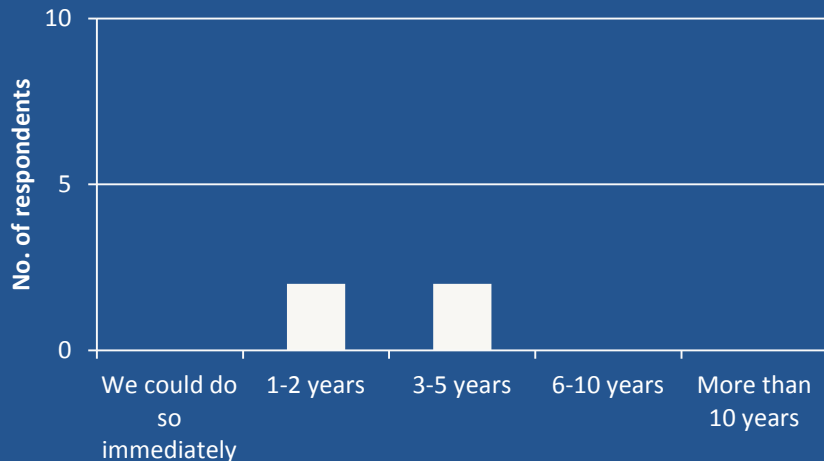
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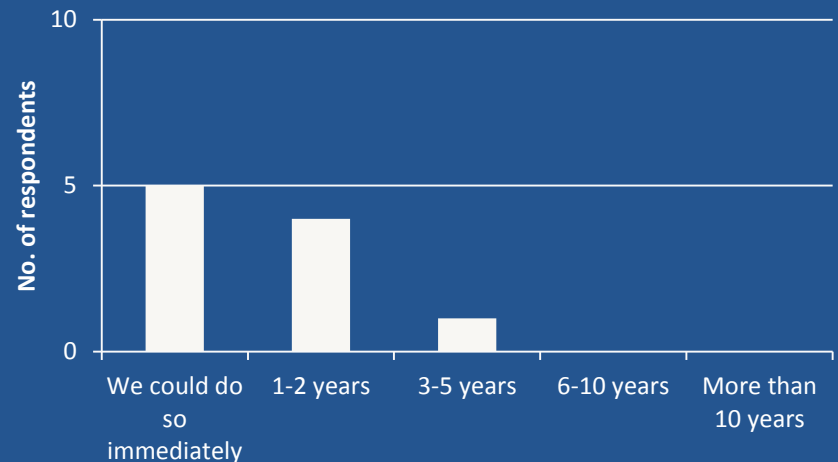
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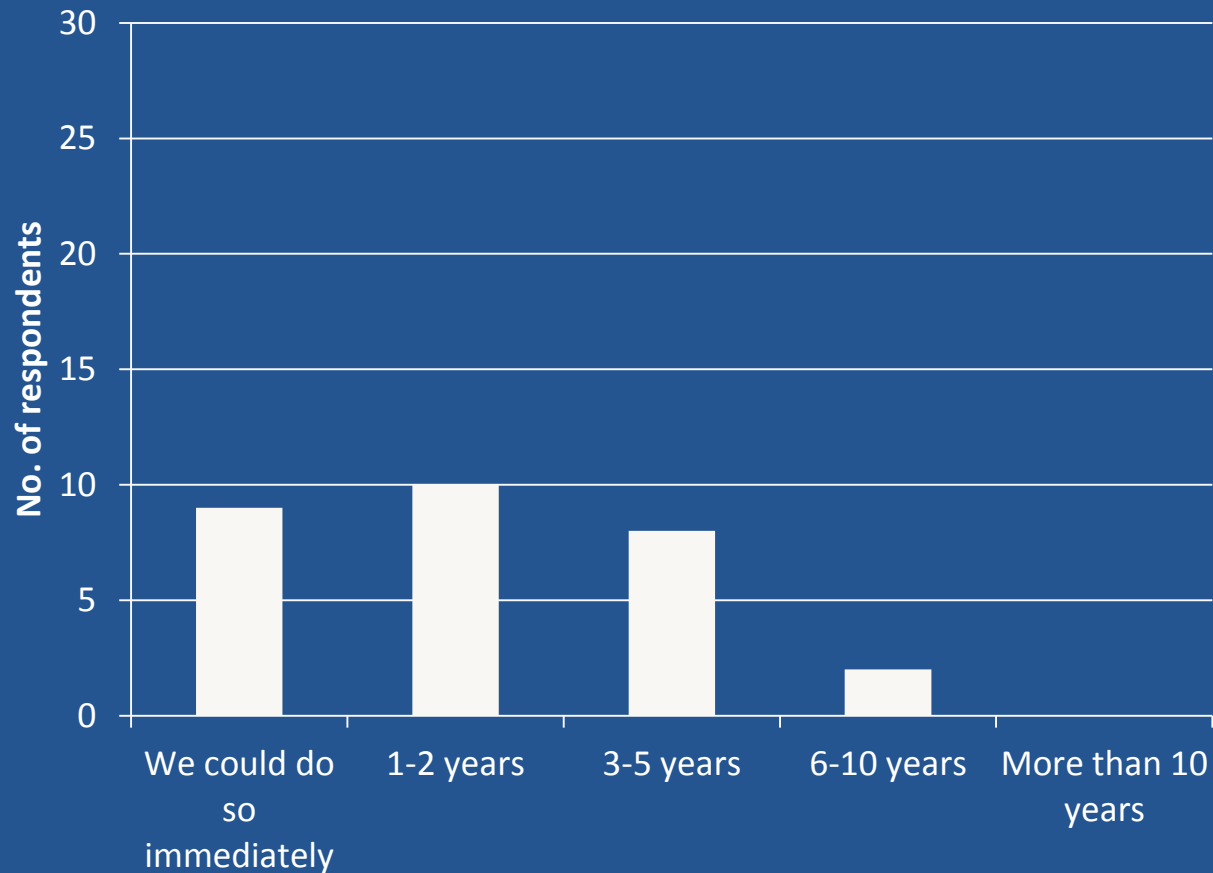
University Alliance





Over what time period could you accommodate a doubling of your intake of postgraduate (taught) engineering students?
By Mission Group

Not a member of a Mission Group





Over what time period could you accommodate a doubling of your intake of postgraduate (taught) engineering students?
By discipline

	We could do so immediately	1-2 years	3-5 years	6-10 years	More than 10 years
Aeronautical	7	11	6	4	1
Chemical, process and energy	5	5	7	1	0
Civil	8	11	10	2	1
Electrical/electronic	14	14	9	3	1
Materials/metallurgy	5	9	8	0	1
Mechanical	15	18	16	3	2
Naval architecture	0	0	1	0	0
Production/manufacturing	6	6	5	1	1
Software	5	6	4	0	1
Others	1	4	1	0	0
All of the above	1	0	1	0	1



Other issues to address

Representative sample of verbatim comments

Not just physical infrastructure – it's about availability of expertise and affordability of salary. *“The challenge in specialist fields is as much around recruiting the right academics to deliver the growth. For example, in the power industry, it is becoming increasingly difficult to attract staff into the HE sector as other parts of the world start to offer far better remuneration packages and the private sector continues to offer far higher salaries than the HE sector can afford.”*

Quality of intake and perception of the profession– *“A key part of this "doubling of numbers" depends on the quality of the intake.*

If the numbers are doubled by accepting many students with weaker qualifications into engineering, this will not address the national target of having a large supply of very able engineers. What is badly needed is a national change of culture to give engineering the image of being the future path for a successful and happy and financially rewarding life. But that challenge has been before governments for decades now, so I don't see this plan to double student numbers as addressing the need well at all. “

Other university infrastructure would be needed too *“Also have significant concerns about other [student] facilities and library provision - so easy to overlook, ...we don't have enough text books to go around as things stand.”*

A different perspective on the staffing issue: *“Lack of experienced lecturing staff (particularly for level 4 and 5 options). REF exercises have built barriers to bringing in staff from industry.”*

Change management implications: *“This [would] consume huge amounts of [existing] academic time. New ways of assessing students are essential. There are also issues with capacity for design projects (staff) and research projects (staff and infrastructure). “*



Other issues to address

Representative sample of verbatim comments

There will be differences between types of engineering – a number said that they could double capacity in electrical now, for example but not mechanical, civil or energy...

There is a “leakage issue” that needs to be addressed too: *“Everyone sees this as a supply side problem, when in fact there is a real demand side issue. Graduates are voting with their feet and not going into engineering companies.”*

A number talked about needing to re-think the way students were assessed but if they moved to more online assessment, for example to deal with the extra volume, this would impact on the students’ ability to get the kind of hands-on project experience that employers want.

In relation to postgraduate numbers...

“We already have 'full' MSc courses - nearly all overseas students as there are very few scholarships available for home applicants.”

“We are a 'rich' department as a result of overseas student recruitment but [as a result] ‘poor’ in terms of our direct contribution to UK plc - and this is a cause of great concern to many staff. “

[Our ability to recruit more UK students immediately is] only possible since international student numbers have been decimated as a result of UKBA policy, so we have plenty of scope for rapid recovery!

“As far as PhD students are concerned, the problem is acute - there are very few UK students coming through, probably less than 15%. In 15 years it will be hard to replace and recruit academic staff from within the UK”