



IET Energy Panel

Policy & Insights



Precious Renewables Survey Report
13 September 2022

Summary

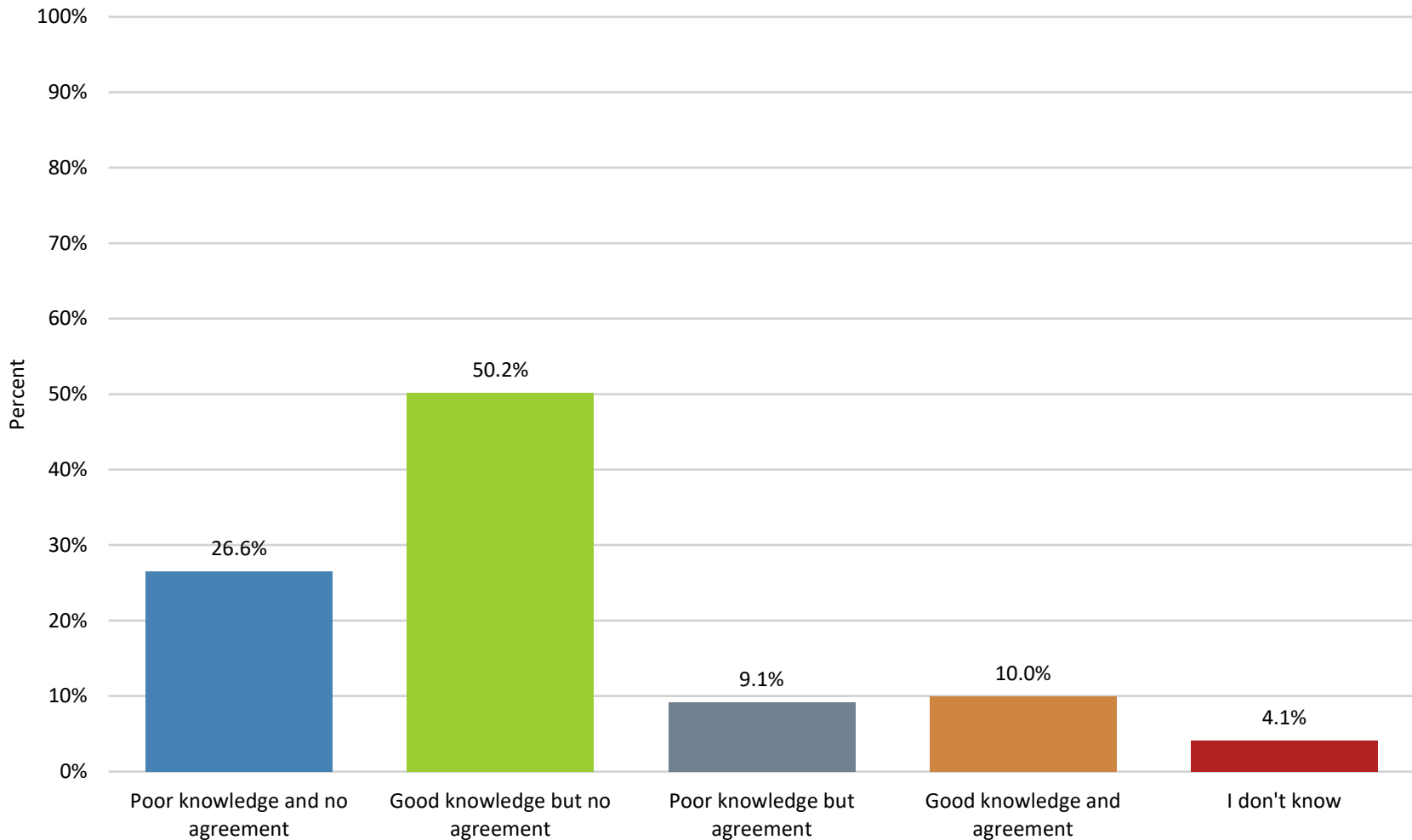
This slide deck shows the results of a UK-wide survey carried out by the IET Energy Panel between 1 August and 12 September 2022.

The survey results highlight the importance of the recommendations in the IET paper UK renewables - limitless energy or a precious resource, and particularly the need for an effective strategic planning process and new whole-system coordination and accountability mechanisms.

These survey results will inform an upcoming paper on resilience in energy systems, and contribute to the planning of a 2023 conference on energy storage.

The members of the IET's Energy Panel provide information to support policy makers in the areas of energy demand, power systems, power generation, future fuels, oil and gas, and heat systems.

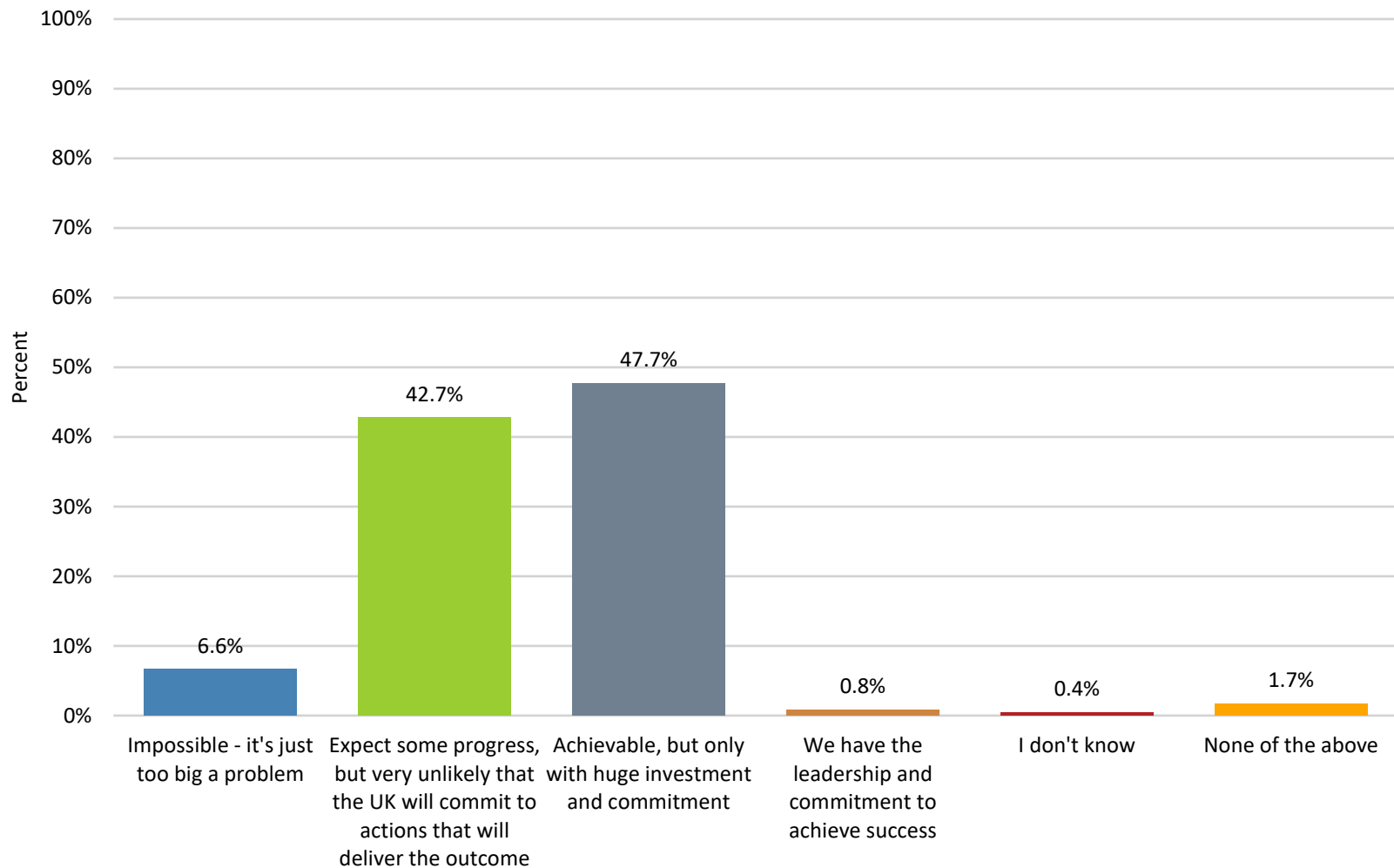
1. KNOWLEDGE WITHIN ENERGY SECTOR: Do you feel there is good knowledge and agreement about what is needed to transition the energy sector to renewables? (Please select one of the following options)



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Name	Percent
Poor knowledge and no agreement	26.6%
Good knowledge but no agreement	50.2%
Poor knowledge but agreement	9.1%
Good knowledge and agreement	10.0%
I don't know	4.1%
N	241

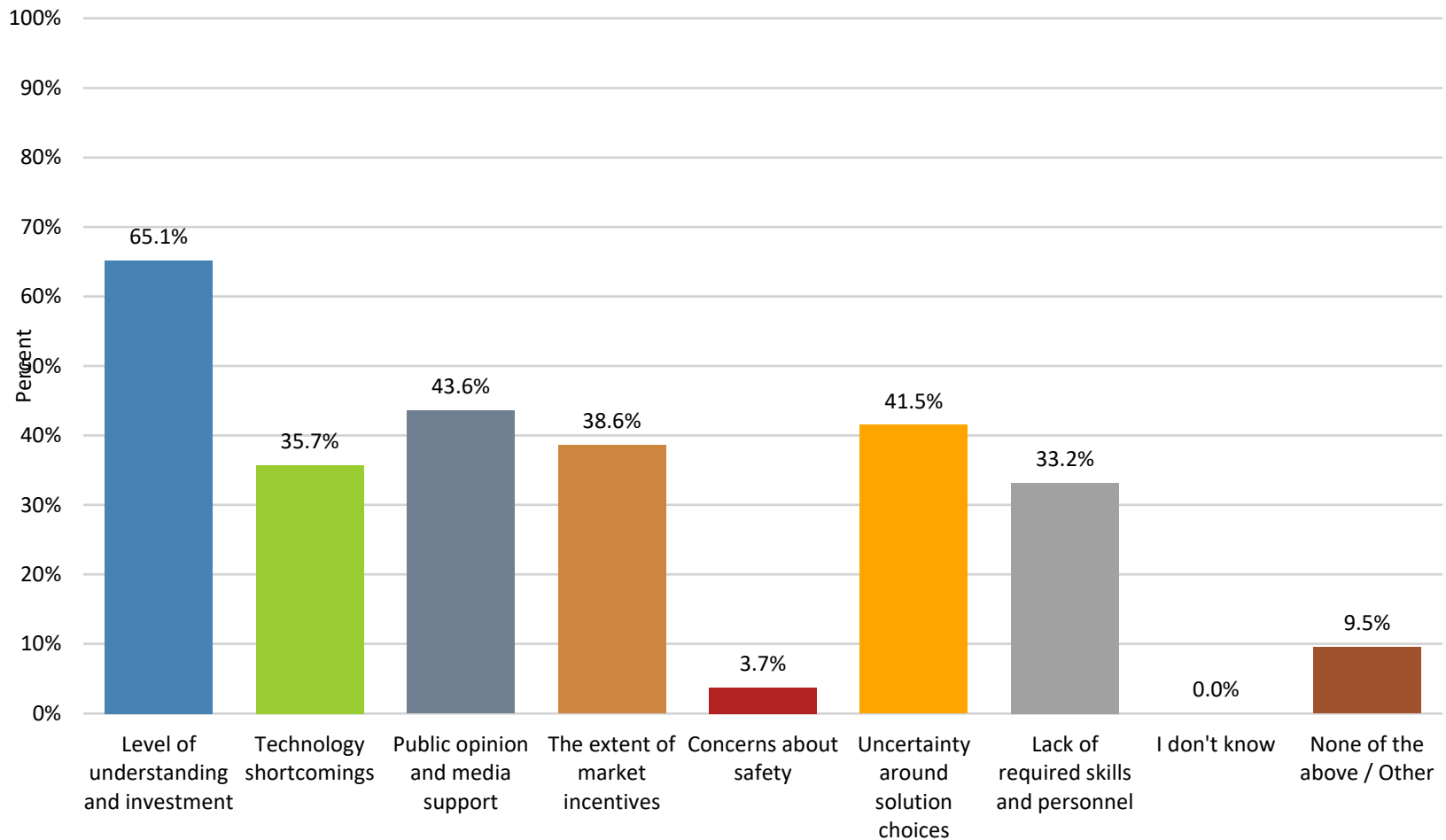
2. ACHIEVABILITY OF NET ZERO: In your opinion, how achievable are the changes needed to hit net zero in the timescales required? (Please select one of the following options)



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Name	Percent
Impossible - it's just too big a problem	6.6%
Expect some progress, but very unlikely that the UK will commit to actions that will deliver the outcome	42.7%
Achievable, but only with huge investment and commitment	47.7%
We have the leadership and commitment to achieve success	0.8%
I don't know	0.4%
None of the above	1.7%
N	241

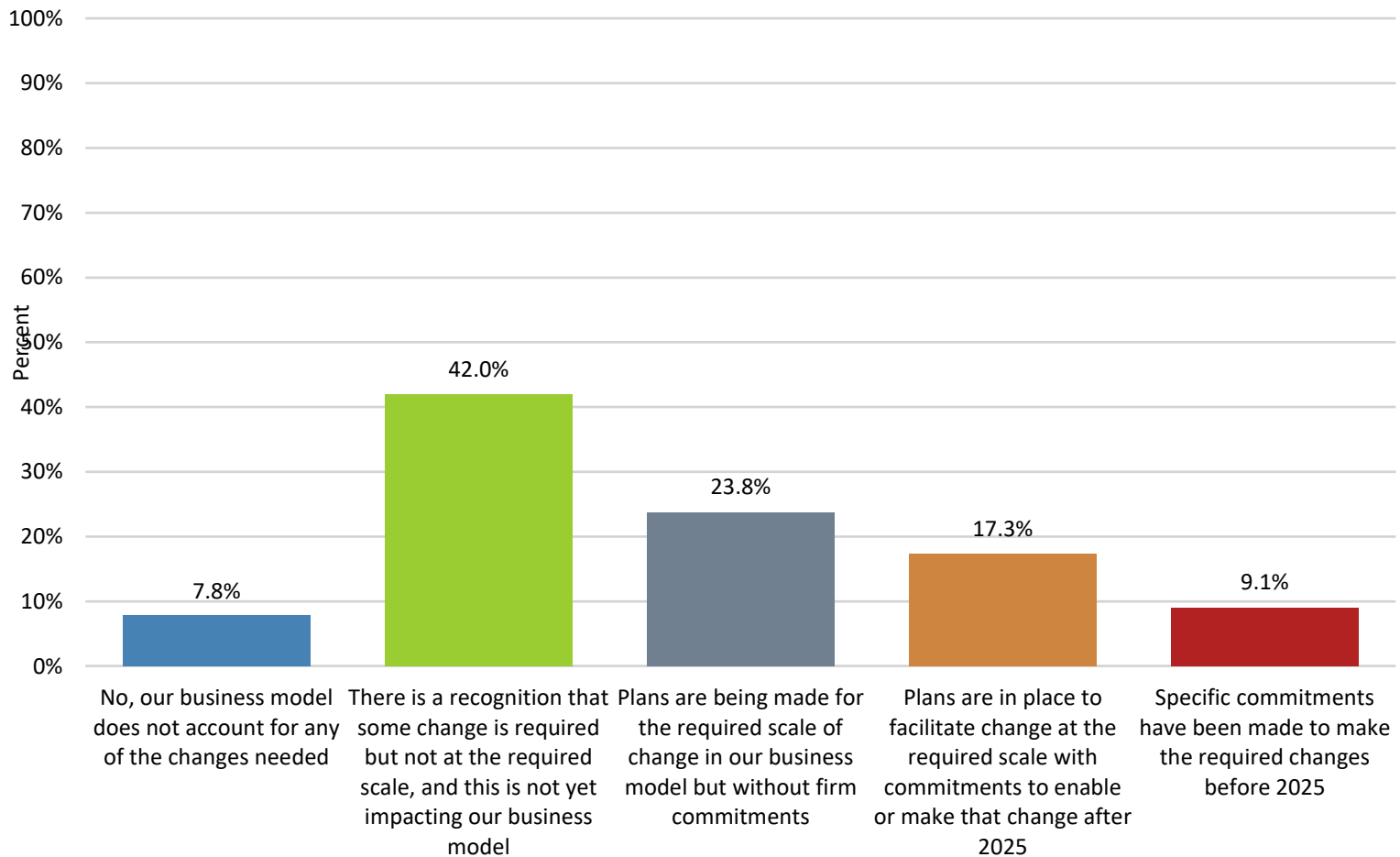
3. AMBITION / DELIVERY GAPS: Where are the biggest gaps that need to be filled in order to deliver a net zero energy sector? (Please select three from the list below)



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Name	Percent
Level of understanding and investment	65.1%
Technology shortcomings	35.7%
Public opinion and media support	43.6%
The extent of market incentives	38.6%
Concerns about safety	3.7%
Uncertainty around solution choices	41.5%
Lack of required skills and personnel	33.2%
I don't know	0.0%
None of the above / Other	9.5%
N	241

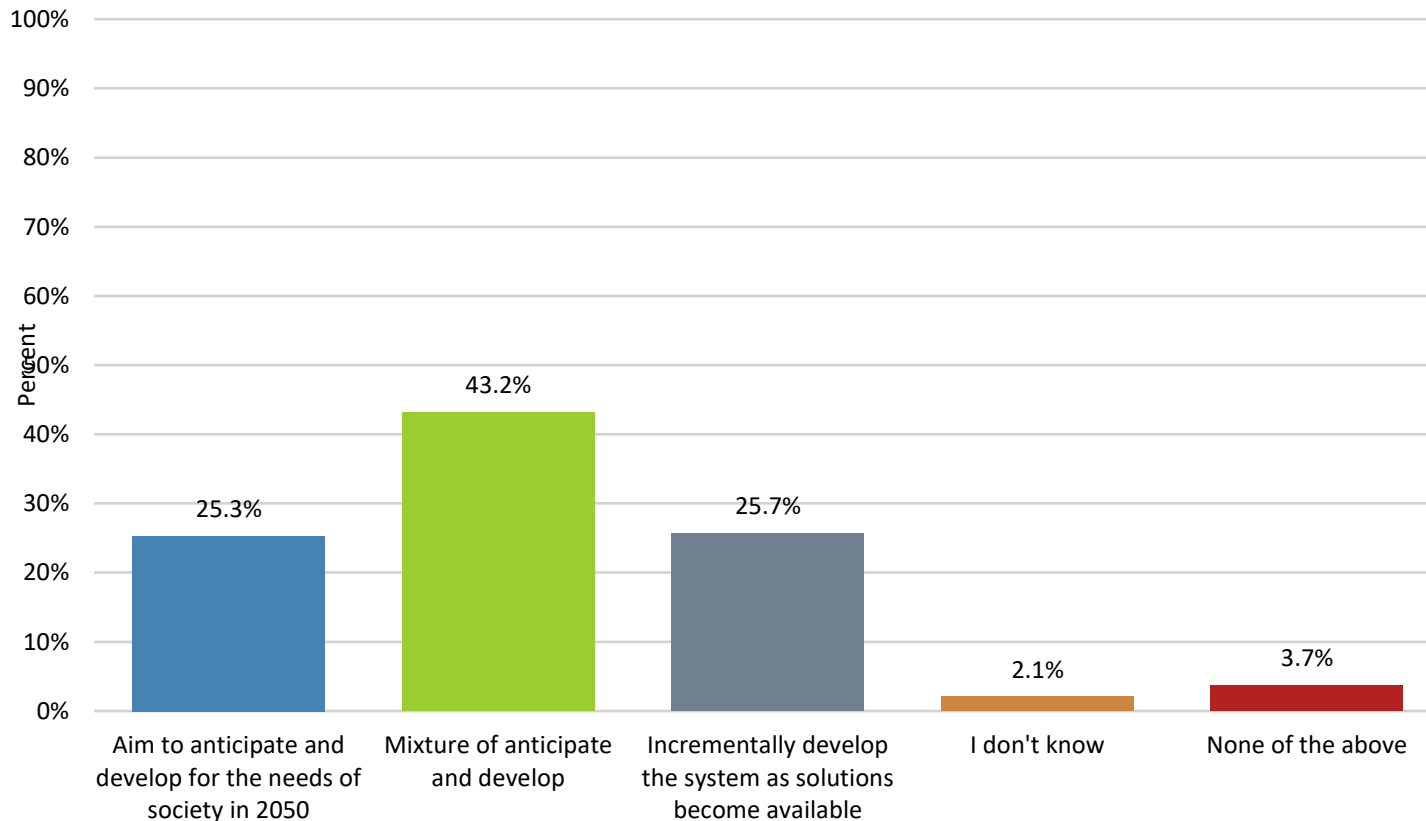
4. UNDERSTANDING OF SCALE OF CHANGE: In your professional activities, most importantly your role in the energy sector, do you believe there is a recognition of the scale of the challenge? (Please select one of the following options)



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Name	Percent
No, our business model does not account for any of the changes needed	7.8%
There is a recognition that some change is required but not at the required scale, and this is not yet impacting our business model	42.0%
Plans are being made for the required scale of change in our business model but without firm commitments	23.8%
Plans are in place to facilitate change at the required scale with commitments to enable or make that change after 2025	17.3%
Specific commitments have been made to make the required changes before 2025	9.1%
N	231

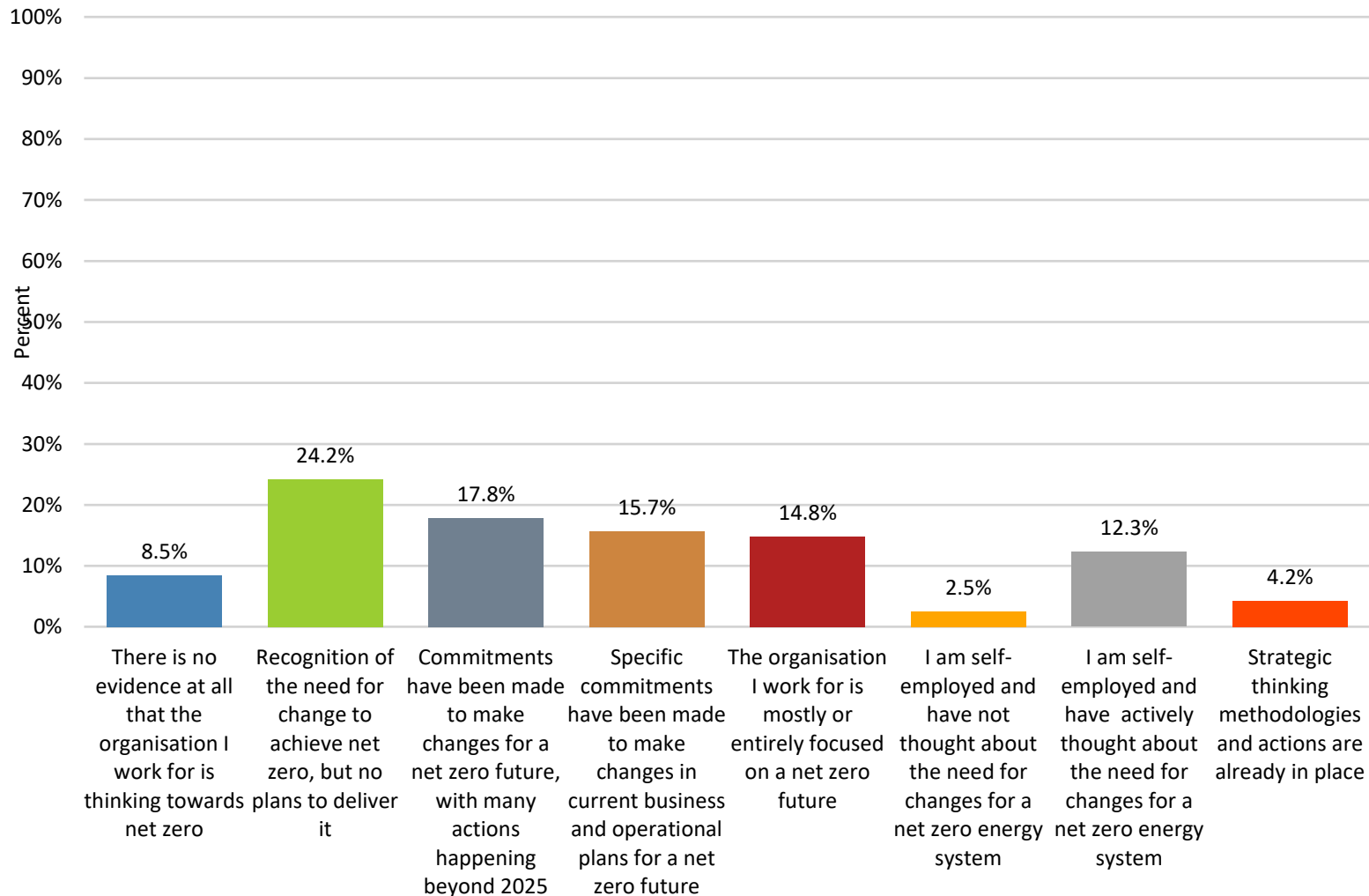
5. STRATEGIC OR INCREMENTAL: The requirements on the energy system are changing dramatically driven by the move towards decarbonisation. Should the energy sector as a whole aim to anticipate and develop the energy requirements of society in 2050, or alternatively incrementally develop the system as solutions become available? (Please select one of the following options)



5. STRATEGIC OR INCREMENTAL: The requirements on the energy system are changing dramatically driven by the move towards decarbonisation. Should the energy sector as a whole aim to anticipate and develop the energy requirements of society in 2050, or alternatively incrementally develop the system as solutions become available? (Please select one of the following options)

Name	Percent
Aim to anticipate and develop for the needs of society in 2050	25.3%
Mixture of anticipate and develop	43.2%
Incrementally develop the system as solutions become available	25.7%
I don't know	2.1%
None of the above	3.7%
N	241

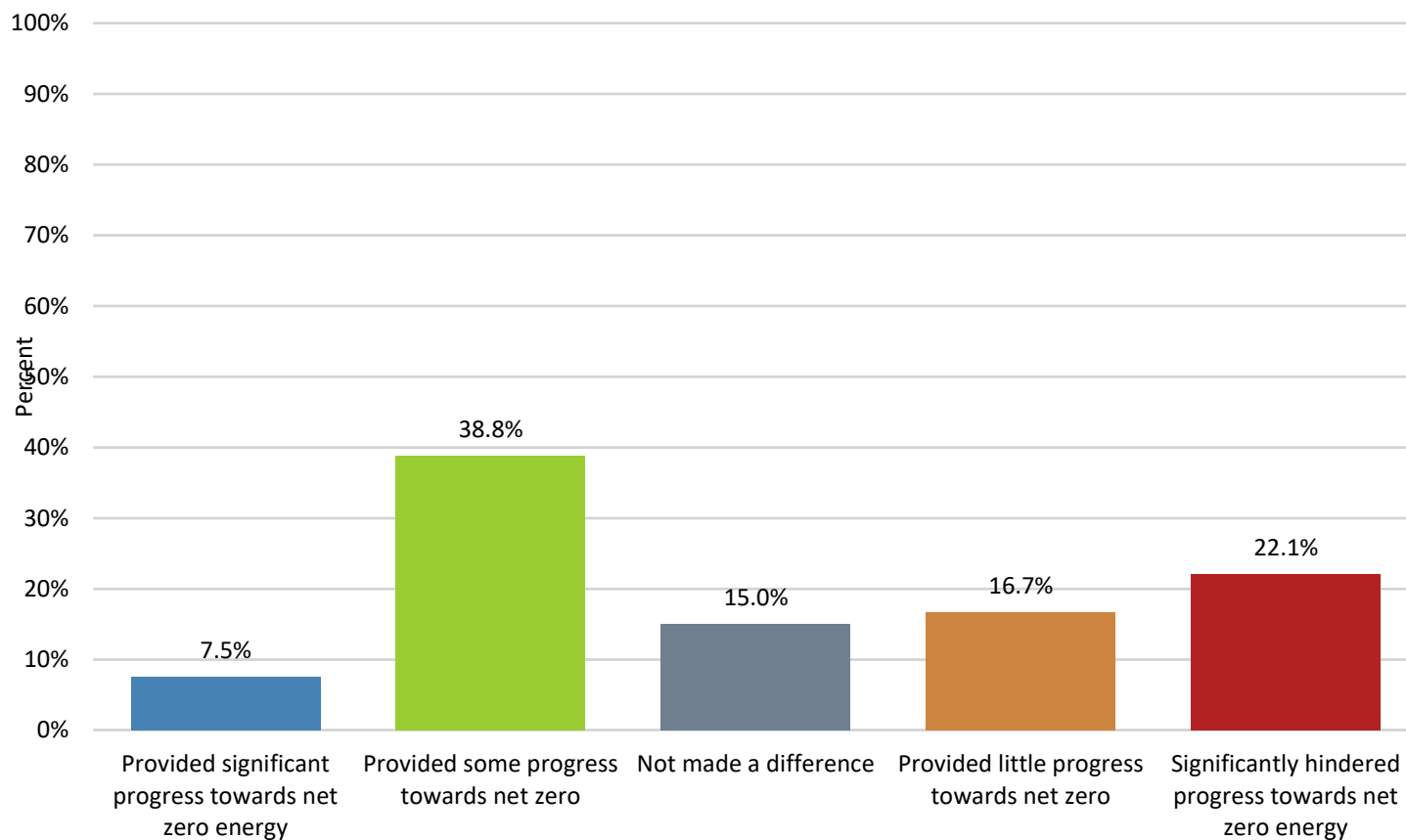
6. EVIDENCE OF THINKING AHEAD: In your professional activities, most importantly your role in the energy sector, what degree of evidence do you see of strategic system thinking? (Please select one of the following options)



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 (Please select one of the following options)

Name	Percent
There is no evidence at all that the organisation I work for is thinking towards net zero	8.5%
Recognition of the need for change to achieve net zero, but no plans to deliver it	24.2%
Commitments have been made to make changes for a net zero future, with many actions happening beyond 2025	17.8%
Specific commitments have been made to make changes in current business and operational plans for a net zero future	15.7%
The organisation I work for is mostly or entirely focused on a net zero future	14.8%
I am self-employed and have not thought about the need for changes for a net zero energy system	2.5%
I am self-employed and have actively thought about the need for changes for a net zero energy system	12.3%
Strategic thinking methodologies and actions are already in place	4.2%
N	236

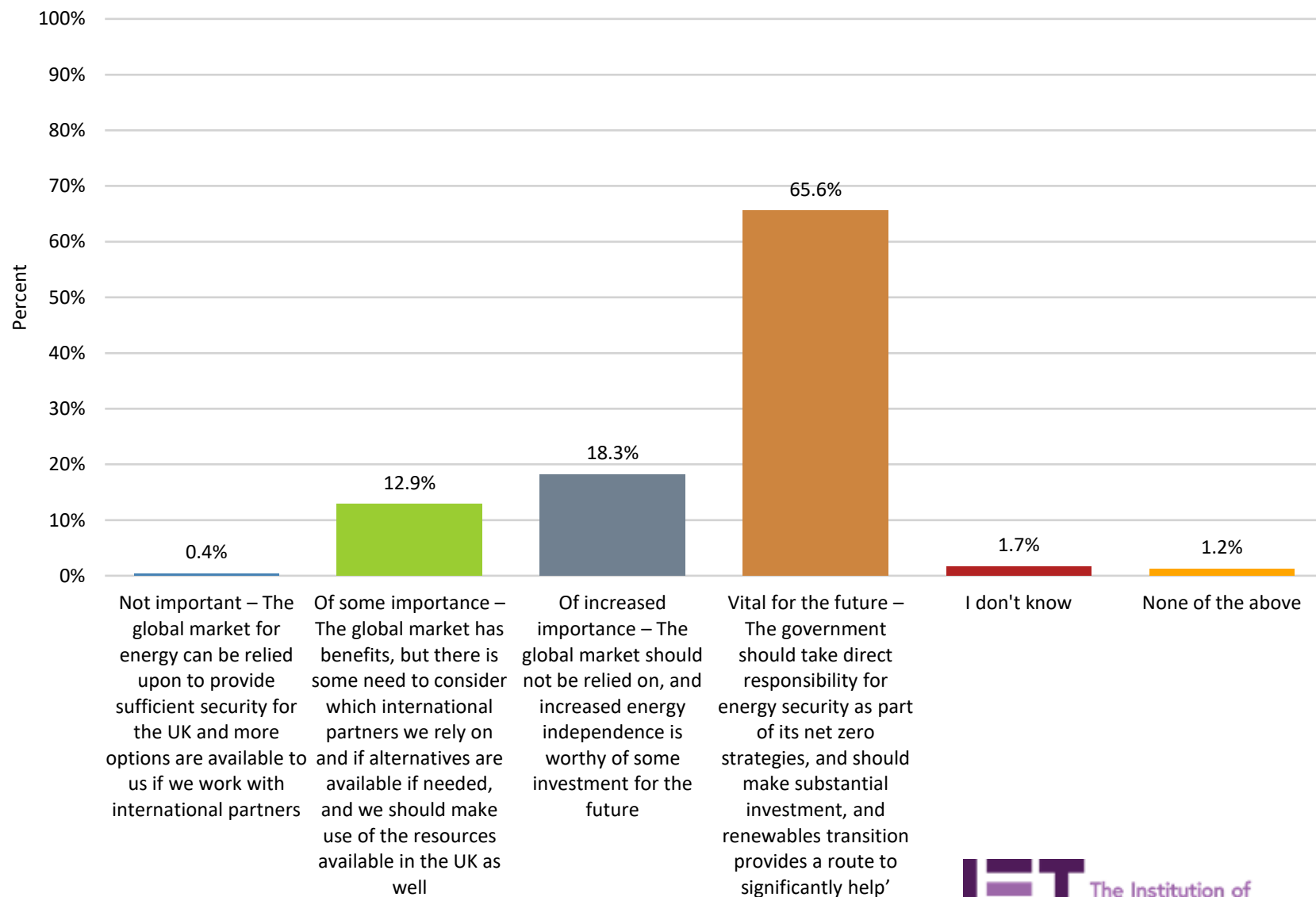
7. IMPACT OF ENERGY COSTS: We are seeing record high prices for gas and electricity and experiencing difficult political pressures affecting energy supplies. To what extent has this improved the progress towards a net-zero energy system, or hindered it? (Please select one of the following options)



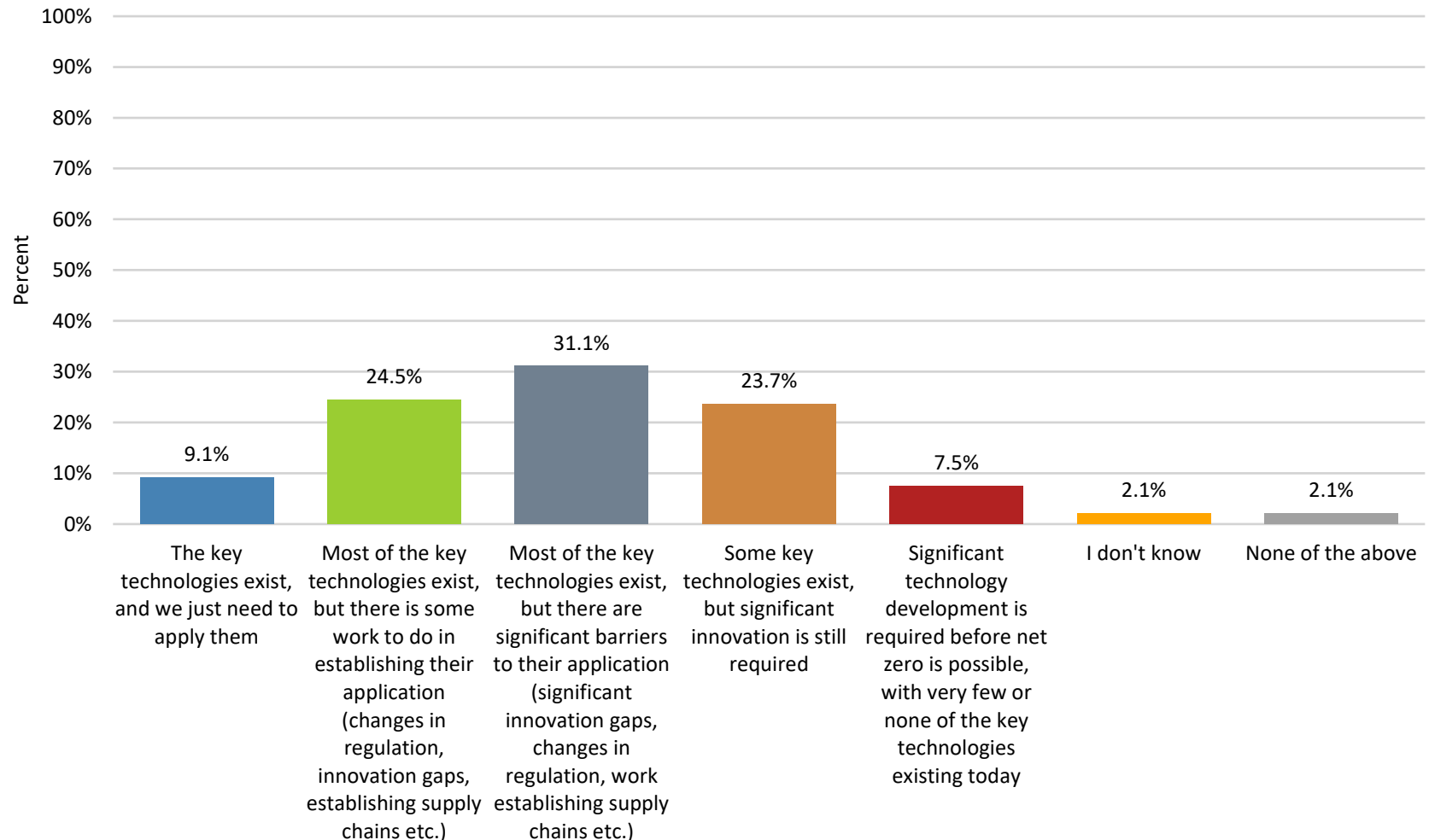
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Name	Percent
Provided significant progress towards net zero energy	7.5%
Provided some progress towards net zero	38.8%
Not made a difference	15.0%
Provided little progress towards net zero	16.7%
Significantly hindered progress towards net zero energy	22.1%
N	240

8. ENERGY INDEPENDENCE: How important and achievable is UK energy independence? (Please select one of the following options)



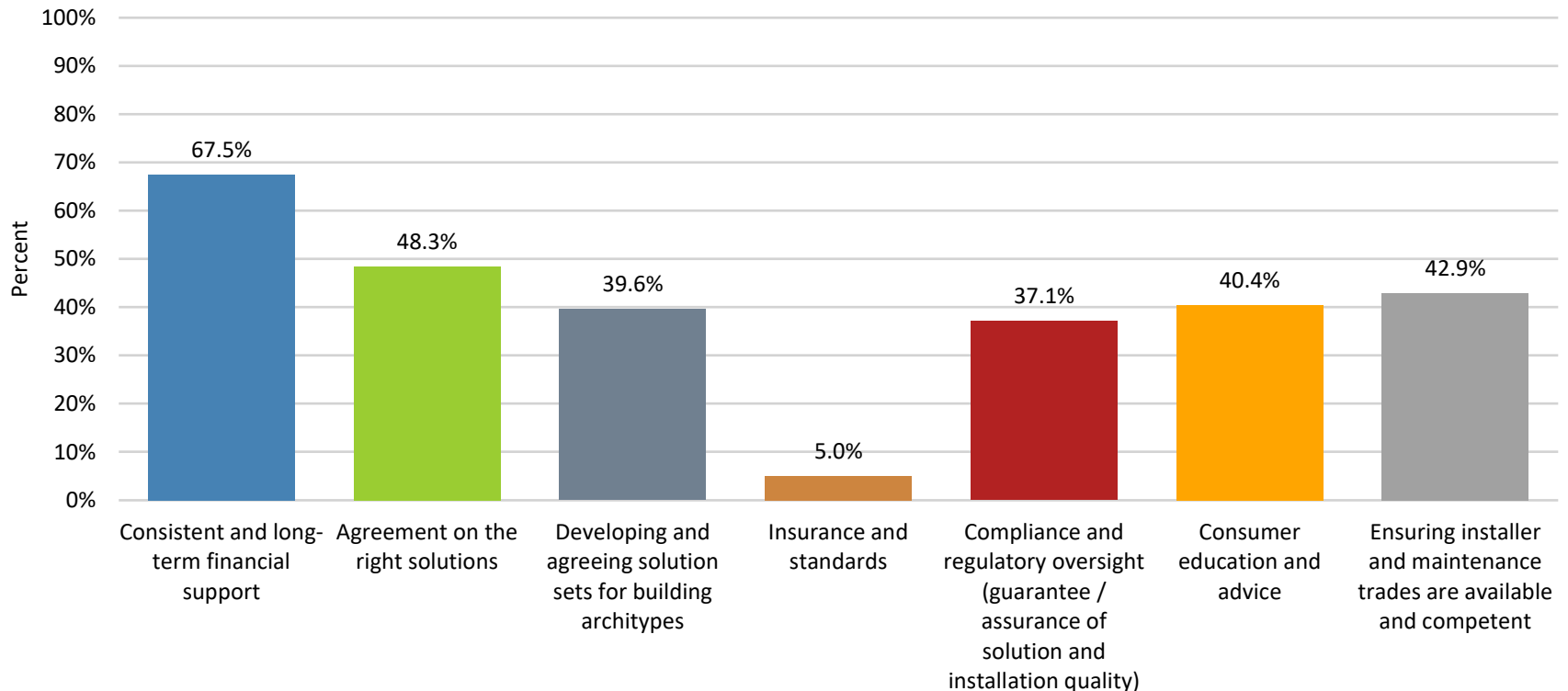
9. TECHNOLOGY READINESS: To what extent do the technologies already exist to support the transition to net zero? (Please select one of the following options)



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Name	Percent
The key technologies exist, and we just need to apply them	9.1%
Most of the key technologies exist, but there is some work to do in establishing their application (changes in regulation, innovation gaps, establishing supply chains etc.)	24.5%
Most of the key technologies exist, but there are significant barriers to their application (significant innovation gaps, changes in regulation, work establishing supply chains etc.)	31.1%
Some key technologies exist, but significant innovation is still required	23.7%
Significant technology development is required before net zero is possible, with very few or none of the key technologies existing today	7.5%
I don't know	2.1%
None of the above	2.1%
N	241

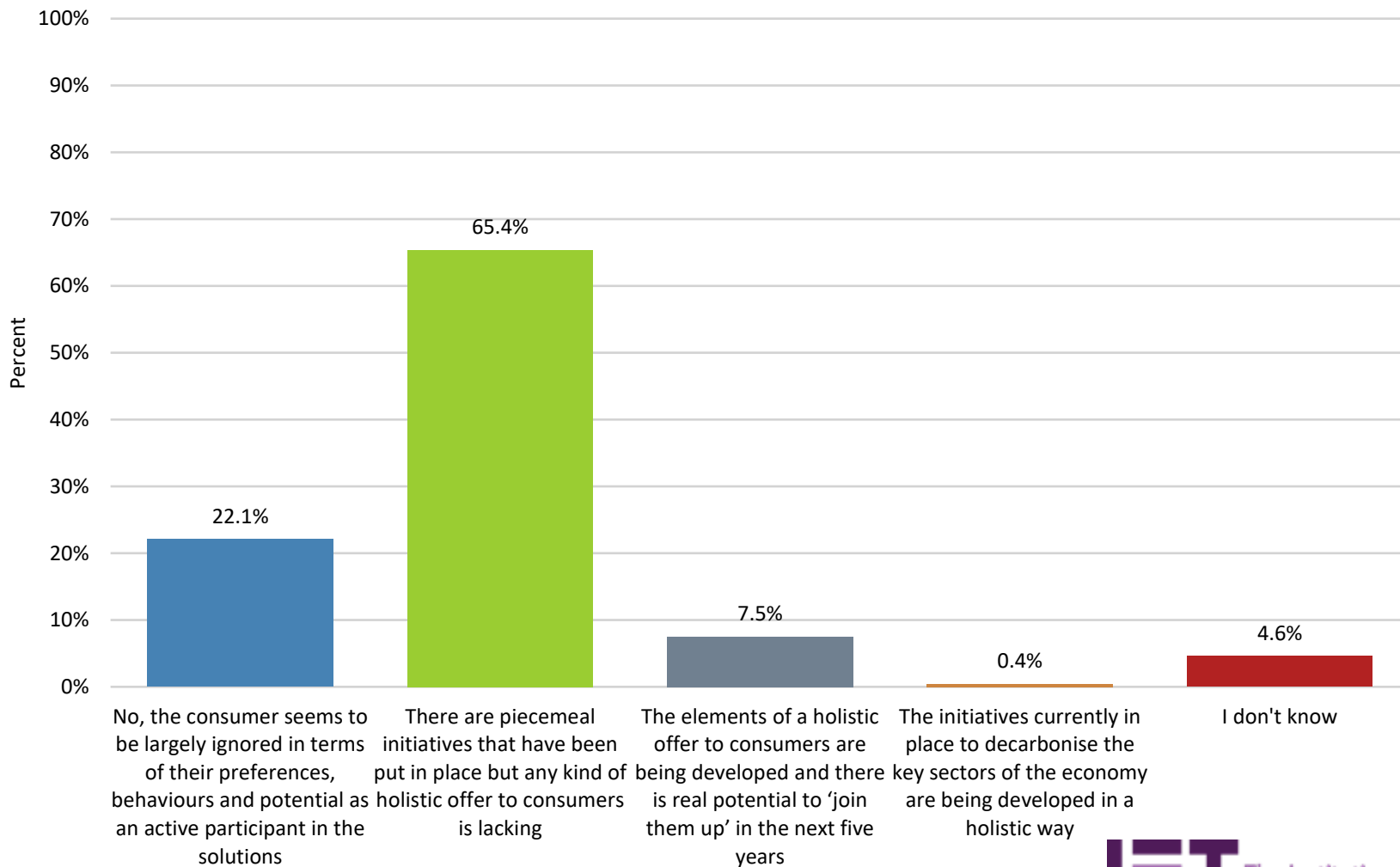
10. ENERGY EFFICIENCY: To make a step change in the deployment of energy efficiency measures, what are the three most important actions needed? (Please select three from the list below)



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Name	Percent
Consistent and long-term financial support	67.5%
Agreement on the right solutions	48.3%
Developing and agreeing solution sets for building archetypes	39.6%
Insurance and standards	5.0%
Compliance and regulatory oversight (guarantee / assurance of solution and installation quality)	37.1%
Consumer education and advice	40.4%
Ensuring installer and maintenance trades are available and competent	42.9%
N	240

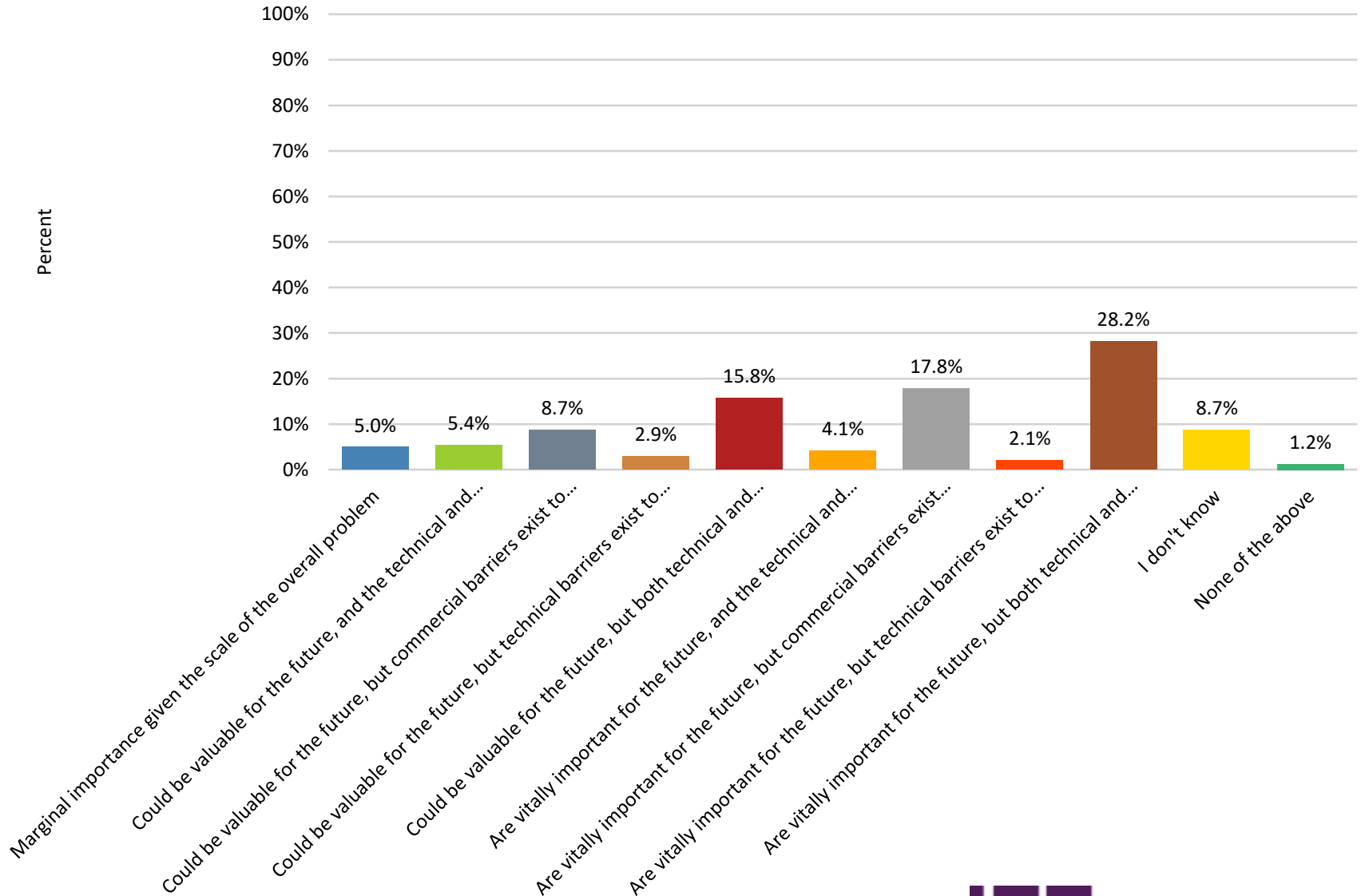
11. DEMAND SIDE: In your opinion, are the various requirements and characteristics of the demand side of the energy sector (e.g. customer behaviour, consumer technologies, built environment, energy communities) being sufficiently taken into account while considering the net zero challenge? (Please select one of the following options)



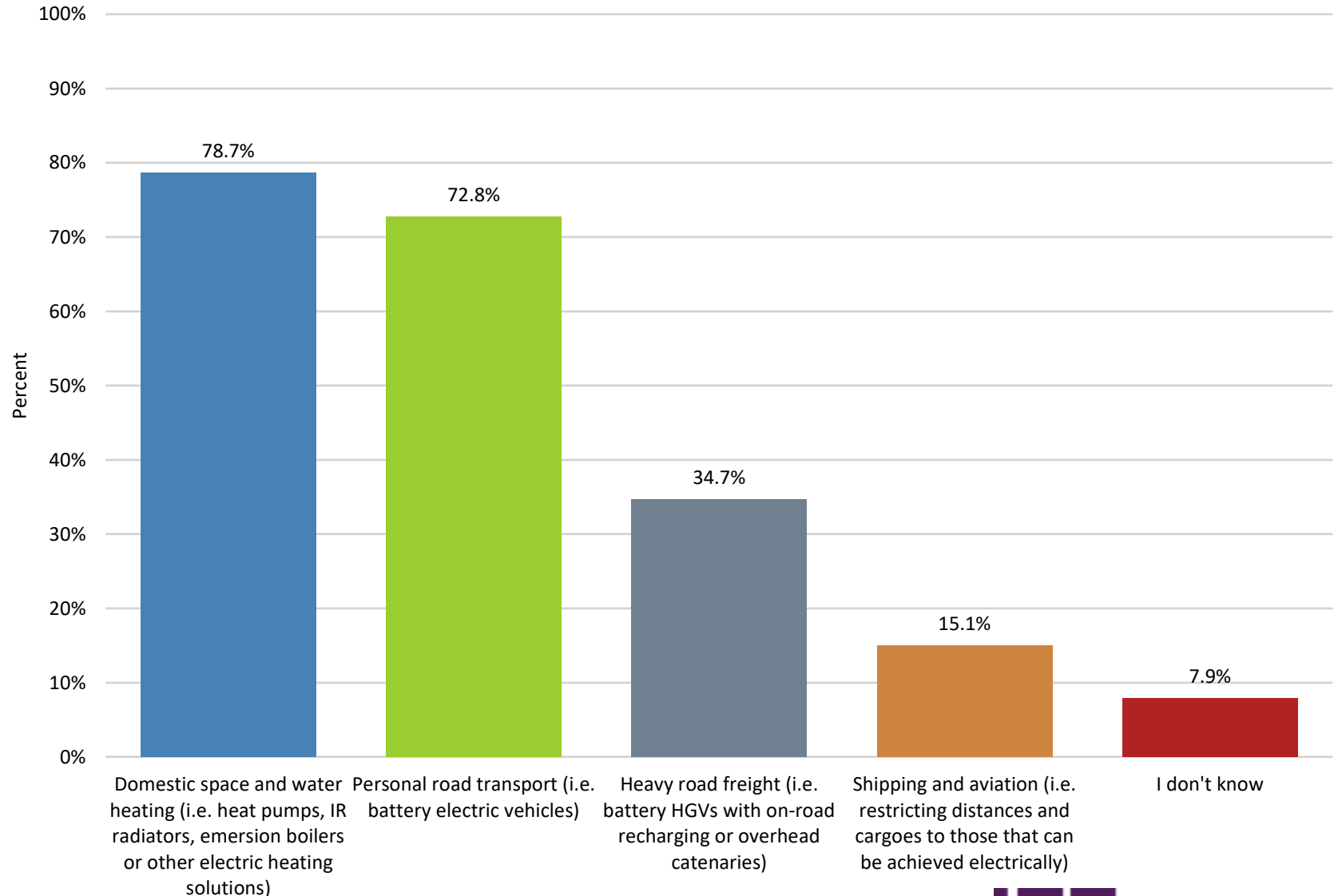
11. DEMAND SIDE: In your opinion, are the various requirements and characteristics of the demand side of the energy sector (e.g., customer behaviour, consumer technologies, built environment, energy communities) being sufficiently taken into account while considering the net zero challenge? (Please select one of the following options)

Name	Percent
No, the consumer seems to be largely ignored in terms of their preferences, behaviours and potential as an active participant in the solutions	22.1%
There are piecemeal initiatives that have been put in place but any kind of holistic offer to consumers is lacking	65.4%
The elements of a holistic offer to consumers are being developed and there is real potential to 'join them up' in the next five years	7.5%
The initiatives currently in place to decarbonise the key sectors of the economy are being developed in a holistic way	0.4%
I don't know	4.6%
N	240

12. DISTRIBUTED ENERGY RESOURCES: How important are distributed energy resources and what are the barriers to their use? (Please select one of the following options)



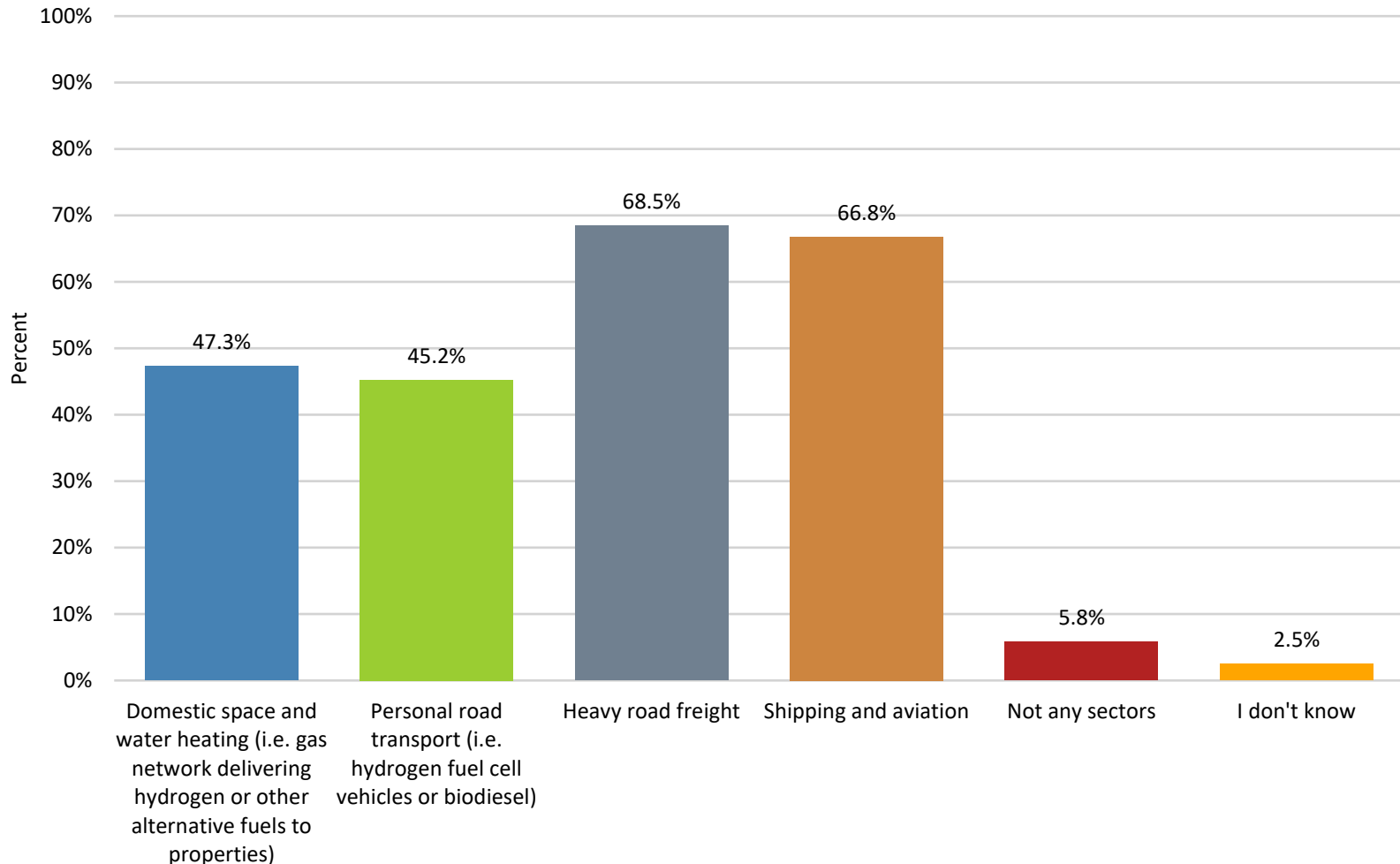
13. ELECTRIFICATION FOR DECARBONISATION: In which sectors is electricity likely to be the most suitable energy vector choice? (Select all that apply)



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Name	Percent
Domestic space and water heating (i.e. heat pumps, IR radiators, emersion boilers or other electric heating solutions)	78.7%
Personal road transport (i.e. battery electric vehicles)	72.8%
Heavy road freight (i.e. battery HGVs with on-road recharging or overhead catenaries)	34.7%
Shipping and aviation (i.e. restricting distances and cargoes to those that can be achieved electrically)	15.1%
I don't know	7.9%
N	239

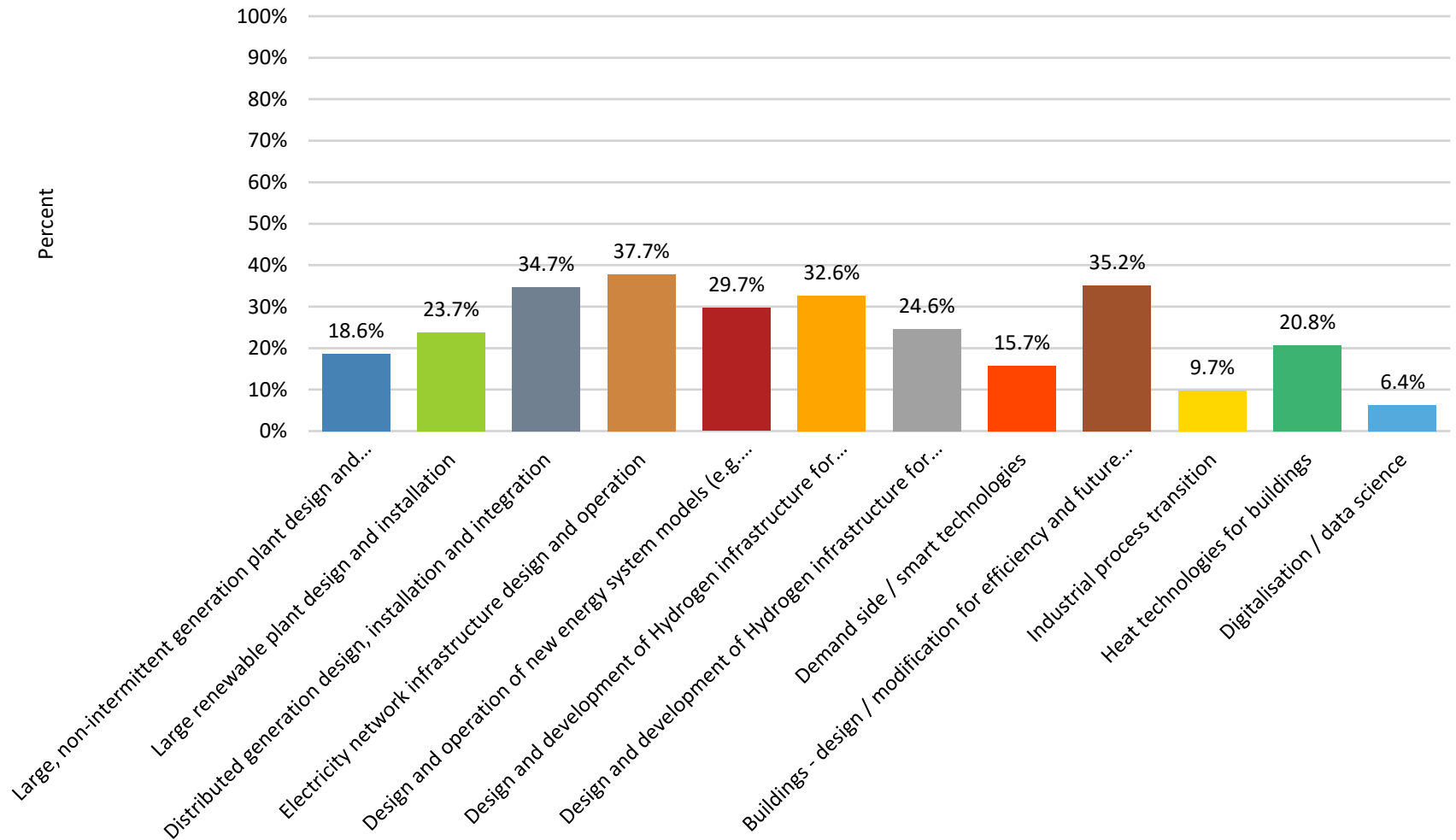
14. HYDROGEN AND ALTERNATIVE FUELS: In which sectors is there a role for green hydrogen or other alternative net zero fuels as a primary choice for energy? (Select all that apply)



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Name	Percent
Domestic space and water heating (i.e. gas network delivering hydrogen or other alternative fuels to properties)	47.3%
Personal road transport (i.e. hydrogen fuel cell vehicles or biodiesel)	45.2%
Heavy road freight	68.5%
Shipping and aviation	66.8%
Not any sectors	5.8%
I don't know	2.5%
N	241

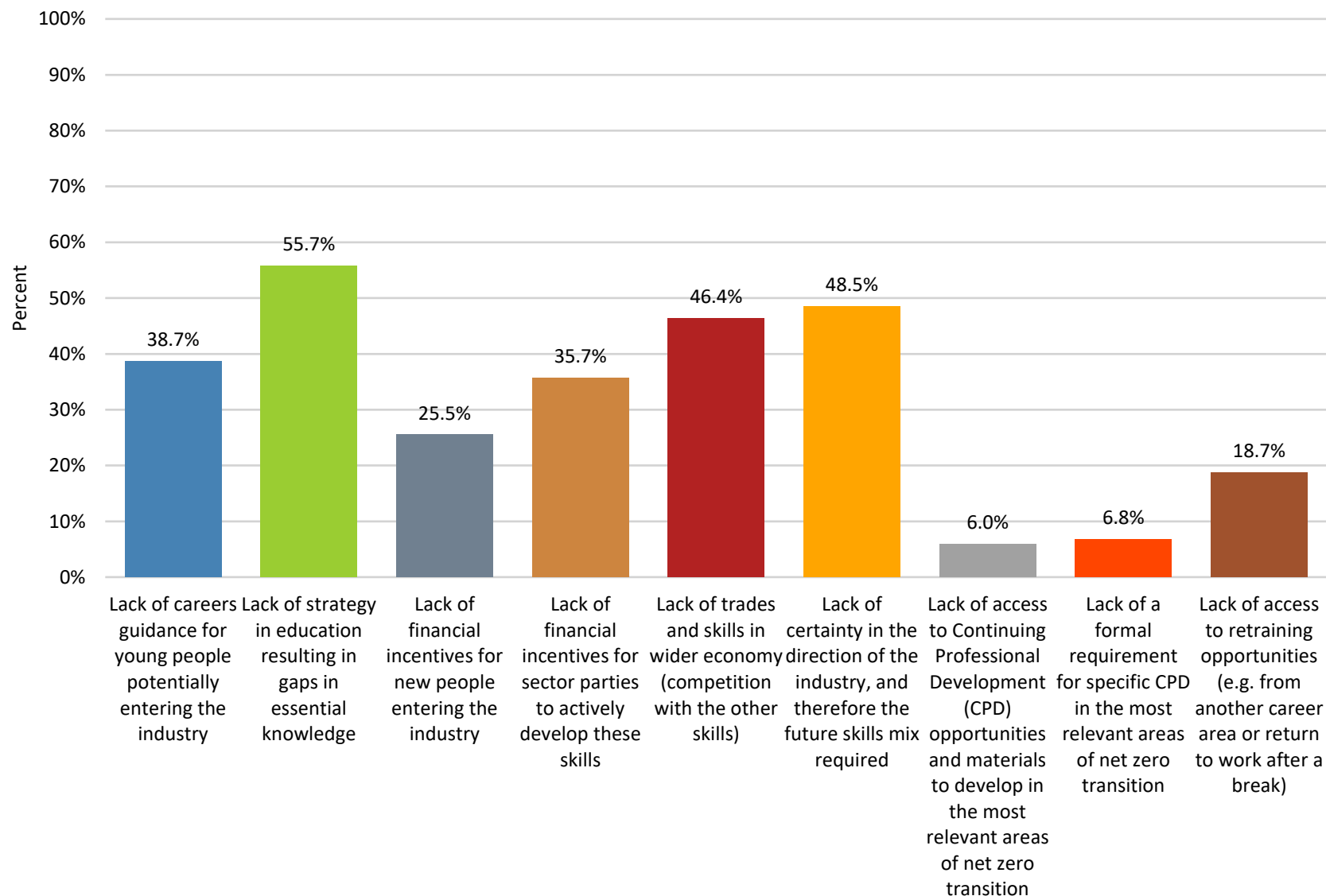
15. AREAS FOR SKILLS DEVELOPMENT: Select the top three areas for investment in re-skilling / upskilling required in next ten years to meet goals. (Select three only)



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Name	Percent
Large, non-intermittent generation plant design and installation	18.6%
Large renewable plant design and installation	23.7%
Distributed generation design, installation and integration	34.7%
Electricity network infrastructure design and operation	37.7%
Design and operation of new energy system models (e.g. islanded / decentralised / multi vector)	29.7%
Design and development of Hydrogen infrastructure for seasonable energy storage or industrial uses	32.6%
Design and development of Hydrogen infrastructure for space heating or road transport	24.6%
Demand side / smart technologies	15.7%
Buildings - design / modification for efficiency and future purpose	35.2%
Industrial process transition	9.7%
Heat technologies for buildings	20.8%
Digitalisation / data science	6.4%
N	236

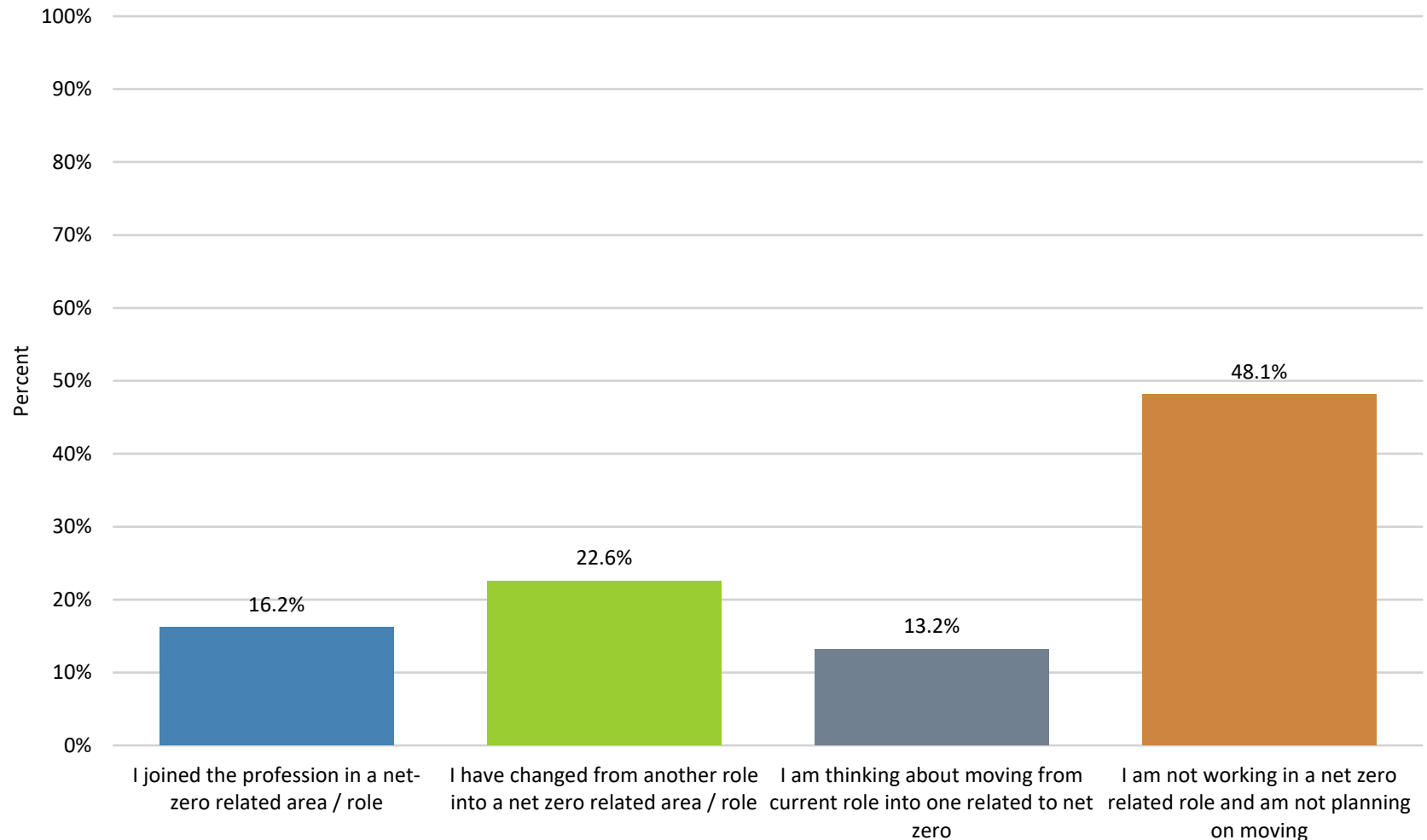
16. SKILLS BARRIERS. What are the major barriers to the development of the appropriate skills and scale of skills required to enable net zero? (Please select three from the list below)



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Name	Percent
Lack of careers guidance for young people potentially entering the industry	38.7%
Lack of strategy in education resulting in gaps in essential knowledge	55.7%
Lack of financial incentives for new people entering the industry	25.5%
Lack of financial incentives for sector parties to actively develop these skills	35.7%
Lack of trades and skills in wider economy (competition with the other skills)	46.4%
Lack of certainty in the direction of the industry, and therefore the future skills mix required	48.5%
Lack of access to Continuing Professional Development (CPD) opportunities and materials to develop in the most relevant areas of net zero transition	6.0%
Lack of a formal requirement for specific CPD in the most relevant areas of net zero transition	6.8%
Lack of access to retraining opportunities (e.g. from another career area or return to work after a break)	18.7%
N	235

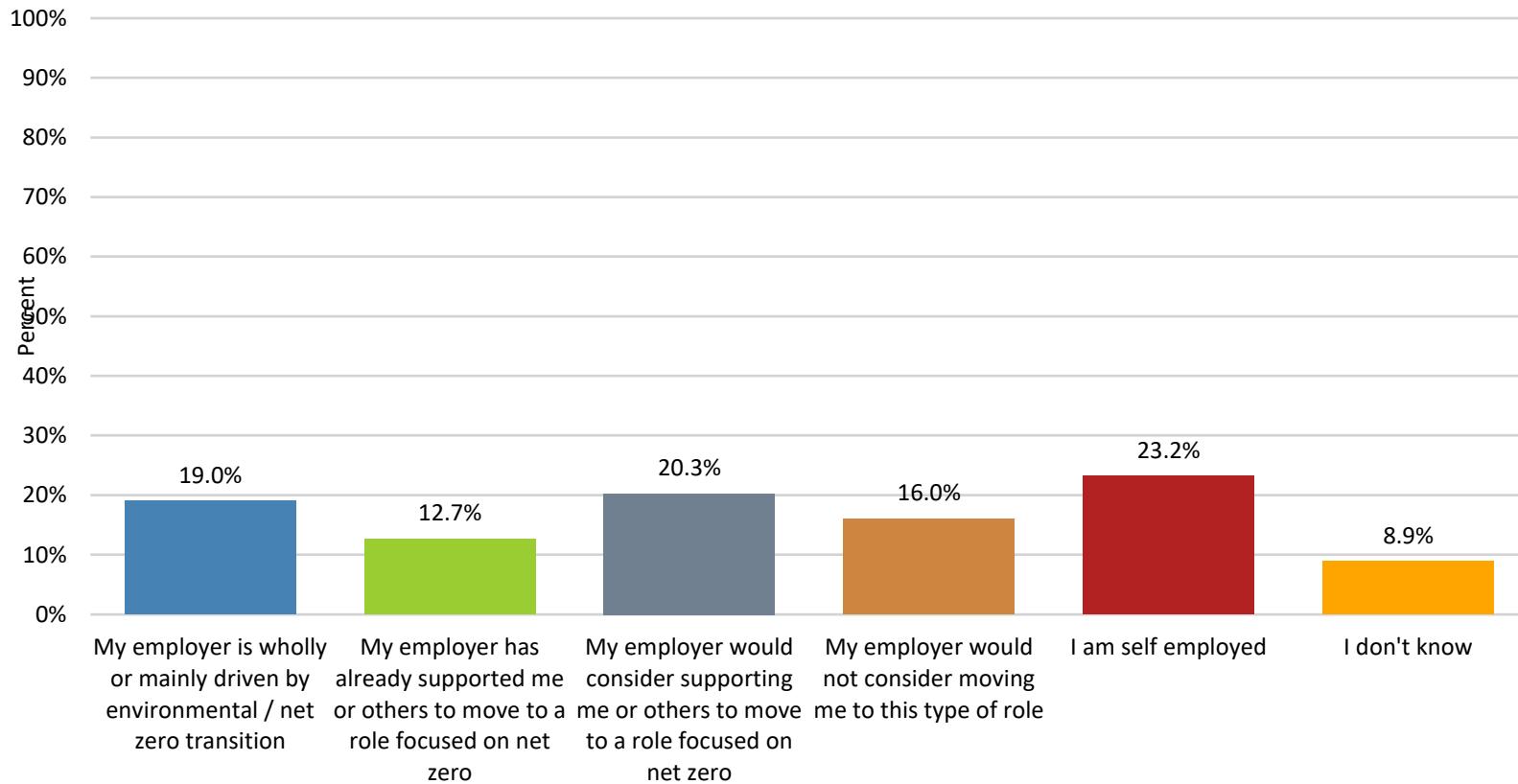
17. YOUR CARRER AND NET ZERO: Have you actively chosen a career path in or related to enabling the transition to a net zero energy system? (Please select one of the following options)



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Name	Percent
I joined the profession in a net-zero related area / role	16.2%
I have changed from another role into a net zero related area / role	22.6%
I am thinking about moving from current role into one related to net zero	13.2%
I am not working in a net zero related role and am not planning on moving	48.1%
N	235

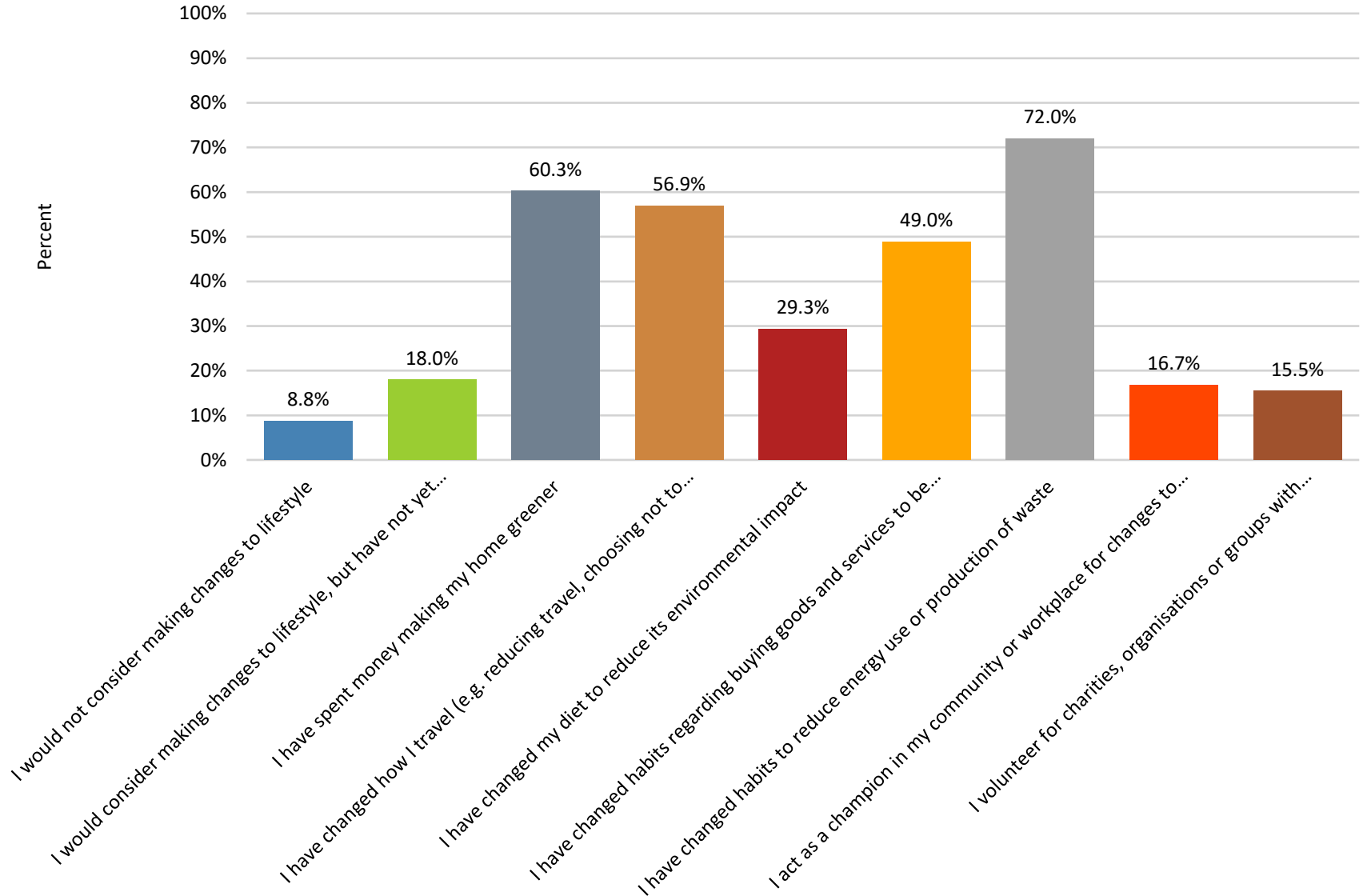
18. ORGANISATION SUPPORT FOR NET ZERO: Would your current employer support you in moving into a role which focuses on the net zero transition? (Please select one of the following options)



18. ORGANISATION SUPPORT FOR NET ZERO: Would your current employer support you in moving into a role which focuses on the net zero transition? (Please select one of the following options)

Name	Percent
My employer is wholly or mainly driven by environmental / net zero transition	19.0%
My employer has already supported me or others to move to a role focused on net zero	12.7%
My employer would consider supporting me or others to move to a role focused on net zero	20.3%
My employer would not consider moving me to this type of role	16.0%
I am self employed	23.2%
I don't know	8.9%
N	237


19. PERSONAL ACTIONS: To what extent does the drive towards decarbonisation impact how you act in your personal and work life? (Please select all that apply)



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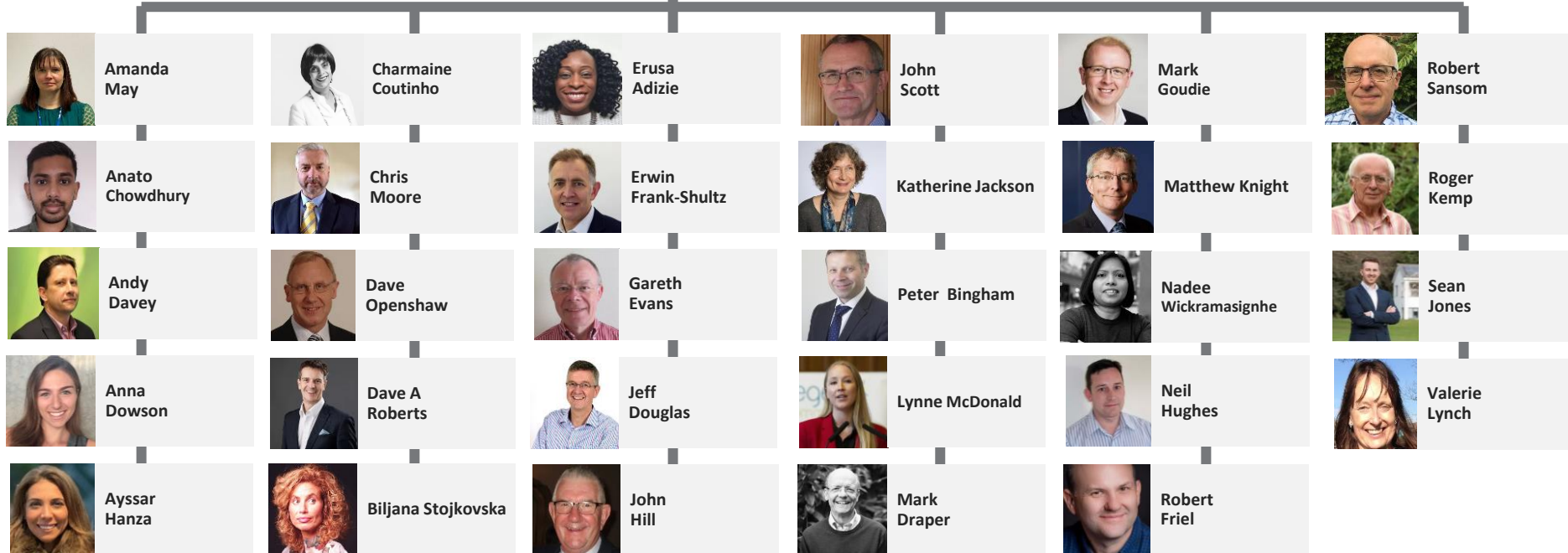
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We support the IET 2030 Strategy desired outcome: ‘We are the leading evidenced voice of engineering and technology influencing societal debate’.

BY 2030 our desired ambitions is:

Our influence is seen in society everyday and we are working to engineer a better world’

We channel the [global expertise](#) by gathering intelligence from engineers across the profession, address [major challenges](#), [develop best practice](#), provide [robust, impartial information](#) to key stakeholders, and [influence government policy](#).