NGN Citizens Panel
April 2023; Findings Report

Contents

1. Background and context to the NGN Citizens' Panel

1.1. Purpose of the NGN Citizens' Panel

The NGN Citizens' Panel was one of several key strategic engagement activities undertaken by NGN between November 2018 and June 2019, as a mechanism to ensure that customer values, preferences and ideas were genuinely reflected in NGN's Business Plan for 2021 - 2026.

Since 2019 the panel has evolved to become an enduring deliberative panel that helps inform strategic decisions across the business.

Why convene a Citizens' Panel?

The Citizens' Panel is brought together to focus on the 'knotty' questions within NGN's business planning and future areas of work.

The objective of meetings is to gain clarity on domestic customers' preferences; understand the importance placed upon different performance areas, measure support for different business decisions, understand where consensus exists and also capture dissenting views.

In choosing to convene the NGN Citizen's Panel as a Citizens' Panel the focus is on ensuring that the company engages, in depth, with a wide variety of customers, including specifically those who do not generally interact with the company already. By actively recruiting people from across the region who are not already engaged with the gas network, or necessarily even interested in it, the Panel members reflect a true cross-section of NGN's customer base.

This is seen as particularly important for aspects of the company's planning where there are no simple 'right' decisions, but instead decisions involve making a trade-off between different priorities. Decisions like these are a particularly appropriate focus for deliberation with representative Citizens' Panels as they benefit from participants being given time, access to balanced and in-depth information about the issues, and the opportunity to discuss their opinions with other customers before drawing conclusions.

1.2. Engagement methodology

The NGN Citizens' Panel uses a deliberative methodology to consider various implementation elements of the company's business plan. This involves learning about different potential options, deliberating on these together, and providing views on the direction they think NGN should take.

Process Design

The process design is underpinned by the principle that deliberative methods offer a distinctive approach to public engagement, which differ from other forms of consultation, because they are fundamentally about giving participants time to learn about and discuss issues in depth before coming to a considered view. As such they can:

- give decision-makers a detailed understanding of informed public opinion on complex issues and/or value-laden and controversial questions; and
- open up the space for revealing consensus, wherein trade-offs have to be made, and a solution that respects the constraints of the policy and practical environment can be found.

The defining characteristic of a deliberative engagement process is that it brings together a group of people, selected to be broadly representative of the demographics of the population (i.e. a mini public), to deliberate on a significant community or policy issue. This will, by definition, involve a three-stage process:

A dedicated learning phase: A central feature of this approach is the learning component, wherein participants are able to develop an understanding of the issue based on unbiased information and/or the clear presentation of arguments from different perspectives. Throughout this phase, information can be presented in a variety of ways including presentations from experts, written information and through facilitated discussions.

Discussion focused on developing dialogue: To enable this, participants tend to work for most of the time in small groups, supported by highly skilled facilitators to engage in dialogue about the topic. This allows time for people to develop and test opinions on issues that are new to them (and on which they do not have a pre-existing opinion), explore their pre-existing opinions in light of what they have heard, and encourages a wider understanding of the opinions of others.
The importance of subject experts being available to respond to participants' questions during this phase cannot be understated and was key to the success of the way this phase of the deliberative process was delivered during the panel meetings.

The deliberation phase: This stage of a deliberative engagement event involves participants coming to some conclusions based on what they have learnt, through a process of public reasoning.

Deliberative processes use a variety of exercises and techniques throughout the sessions. In this case, the process was specifically designed to support all participants to engage with complex information and feel able to put their opinion forward on their own terms.

1.3. Members of the panel

Members of the NGN Citizens' Panel were selected to be a reflective sample of the overall population of the region. As far as possible, the selection of members was undertaken to mirror the demographics of the area, as recorded in the most recent census.

Recruitment methodology (recruitment began in 2019 with top up recruitment in 2022 and 2023)

The rationale behind the Citizens' Panel approach was to engage a broad cross section of domestic customers from across the region, including those who have had no reason to engage with NGN previously and who may have given little thought to how their gas network operates. Membership of the Panel was therefore determined through a process of stratified random selection to (as closely as possible within a group of this size) reflect the demographic characteristics of the geographical area.

Recruitment of participants was undertaken by the Sortition Foundation - a not-for-profit social enterprise dedicated to promoting fair, transparent, inclusive and effective deliberative processes by ensuring accurate representative and random sampling during recruitment. The method they used was based on the idea that, in principle, every resident in the area should have an equal probability of receiving an invitation to take part.

Potential participants were given two easy ways to register their interest: online or over the phone. Upon registering their interest, socio-economic and demographic data was gathered to enable stratification and relevant exclusions (e.g. people whose homes were not connected to the gas network).

From the pool of interested respondents a second, stratified random selection was performed, matching the latest UK census data on six dimensions: age, location, gender, ethnic background, disability and occupational grade. Where the level of interested respondents did not meet the number required for the stratified sample additional targeted recruitment was undertaken via advertisements on job boards and location specific on-street recruitment.

Once the selection of members was completed, members went through an onboarding process. Onboarding of participants included an introduction to the project, arranging accommodation needs for in person meetings, and supporting members with any dietary or other access requirements so that everyone could fully participate in the process.

The original membership of the panel was recruited in 2019 with top up recruitment, also carried out by Sortition Foundation by the same method, in 2021 and 2023. New members were given an evening induction session together, to support them in arriving at the first whole membership in-person session of 2023 on April 22nd.

When contacted to reconvene the Panel for the 2023 meetings online, 33 previous members indicated that they were interested and available to participate. Supplementary recruitment of 17 new members was carried out to bring the Panel membership back up to 50. This was conducted using a targeted email invitation to participants who had previously been contacted for randomly

selected engagement opportunities in the catchment area by the Sortition Foundation (who managed the original recruitment for the Citizens' Panel).
On the day 35 members attended the meeting - this was due to Eid falling on the same day as the panel meeting, as well as several members unfortunately sick or with last minute emergencies.

Demographic categories used during recruitment

The table below shows the breakdown of demographics used to recruit participants (as taken from the census) and how the final profile of attendees compared. It should be noted that due to the lower than expected turnout these numbers match less that is usual for the panel.

Gender	**Attendees**	**Census**
Female	54%	51%
Male	43%	49%
Non-binary	3%	n/a

Ethnicity	**Attendees**	**Census**
BAME	11%	14%
White	89%	86%

Age	**Attendees**	**Census**
18 - 29	9%	20%
30 - 44	34%	25%
45 - 59	31%	26%
60+	26%	29%

Geographic Spread	**Attendees**	**Census**
Bradford - Leeds Central	43%	37%
North	34%	39%
East	23%	24%

Occupation Status	Attendees	Census
Not working	46%	38%
Services	20%	17%
Skilled or Elementary	6%	17%
Professional	23%	28%

Disability	Attendees	Census
Have a disability	34%	23%
Do not have a disability	66%	77%

2. Overview of the day

The thirteenth meeting of the NGN Citizen's Panel was held on Saturday 22nd of April 2023, and was held in person for the first time since 2020. There were two sessions; a morning and afternoon session each facilitated by Involve. Three NGN staff members worked alongside Involve staff and associates as small group facilitators.

The morning session ran from 10:00am - 12:40pm and covered the topic of Low Carbon Technology.

The session included presentations from NGN staff followed by facilitated discussions in small breakout groups (average five - seven people). NGN staff were available to answer questions in the breakout groups with additional information to support member discussions. The outline programme for the morning session was as follows:

10:00	Members arrive and greet one another
10:30	Welcome to new panel members and welcome back in person! What has happened so far on the panel and what has NGN done in response.
11:00	The Low Carbon Technology Transition - presentations about technologies and case studies of various options for change. Followed by small group discussions
12:40	End of the morning session

The afternoon session ran from 1:40 pm – 4:00 pm and looked at potential transition to Hydrogen as a source of heating for homes. This session consisted of presentations from NGN staff who have worked on the development of Hydrogen powered homes and associated technologies. Members also participated in facilitated discussions in small breakout groups (average five - seven people). NGN staff were available throughout the discussion times, to answer technical questions about a potential Hydrogen transition. The outline programme for the afternoon session was as follows:

13:40	Presentation: Introducing the potential change to hydrogen. Looking at safety and perceptions of risk relating to hydrogen and natural gas. Followed by small group discussions.
15:00	Presentation: How should we communicate about a potential transition to hydrogen? Thinking about trusted voices, how best to inform and help customers. Followed by small group discussions
15:35	Reflections on the day and next steps
16:00	Meeting closed.

Records of the facilitated discussions from both sessions were captured via flipchart paper notes written directly by members and facilitators. The session was followed up with an evaluation of how people felt the day went.

38 members of the panel joined in both the morning and afternoon sessions. All members who took part were given a thank-you gift of £75 for their participation in the meeting.

3. You said, we did

NGN is committed to acting on the outcomes of member panel discussions. At the beginning of each panel discussion NGN presents a brief summary of what members asked for at the previous session, and what NGN are doing to address this. In January 2023 members met online to discuss 4 main points:

1. To identify which areas and ideas NGN customers still think there's value in/ are important and meaningful for us to monitor from RIIO-2 that Ofgem didn't accept.
2. To understand which areas from RIIO-2 our customers think we should continue to monitor
3. To understand customers' priority of all outputs - in order what would they place most onus on the business looking at/ focus on and relevance.
4. To begin to identify any alternative measurements/ ideas for customer targets and standards to inform how we view the next iteration of our annual strategic plan for outputs and to inform our thinking around the next stages of RIIO3.

As a result of this discussion in January, the following actions were taken by NGN:

You said…	**So we are…**
Targets relating to vulnerable customers were of high importance, followed by performance standards relating to gas escapes and safety Connections targets for commercial customers, quotations for new connections and quick reinstatement were ranked of less importance.	Using this to inform an internal review of areas to focus on and those service standards we should stop monitoring for this next reg year
A number of themes emerged that were driving considerations of importance around customer service ● Vulnerability ● Flexibility ● Climate change and global warming ● Timeframes and quality of service	Using these to form the basis of future engagement around customer service for our next business planning period
Outputs need to flex or particularly vary by location and other factors such as weather	Going to undertake further engagement on this

4. Low Carbon Technology - Part 1

Introduction to LCT and the purpose of this conversation

In the NGN annual customer perceptions research (2022) 83% of customers agreed that the way we heat our homes would change in the next ten years.

Wider research shows most customers have heard of the phasing out of gas boilers when asked unprompted. However, even once informed of the future changes, the most common choice for replacing their current system in the next 1-2 years was 'with a mains gas boiler' (42%). Heat pumps also continue to have high awareness.

There are national funding schemes that allow people to install low carbon technology (triple or double glazing, loft insulation, heat pumps) but research shows few people have heard of them/ know about them or use them e.g., Warm homes, ECO4, Green homes grant, boiler upgrade schemes.

The interplay between gas and electricity is complex and NGN want to have a clearer understanding of what customers understand, what's stopping them and what level of change they will accept.

This insight will help NGN to understand where customer knowledge gaps are, how NGN can help customers make good decisions about low carbon technology and future energy systems. It will also help inform future innovation projects and industry research programmes to ensure all pieces of work deliver meaningful benefits for customers.

Members heard presentations from NGN to give background on the scale of the challenge with domestic retrofit, and the complexities of navigating through various technology options and barriers. This included facts, figures and illustrations to show what the future will hold in terms of domestic energy transition and the challenges that people may face, as well as case studies of different situations.

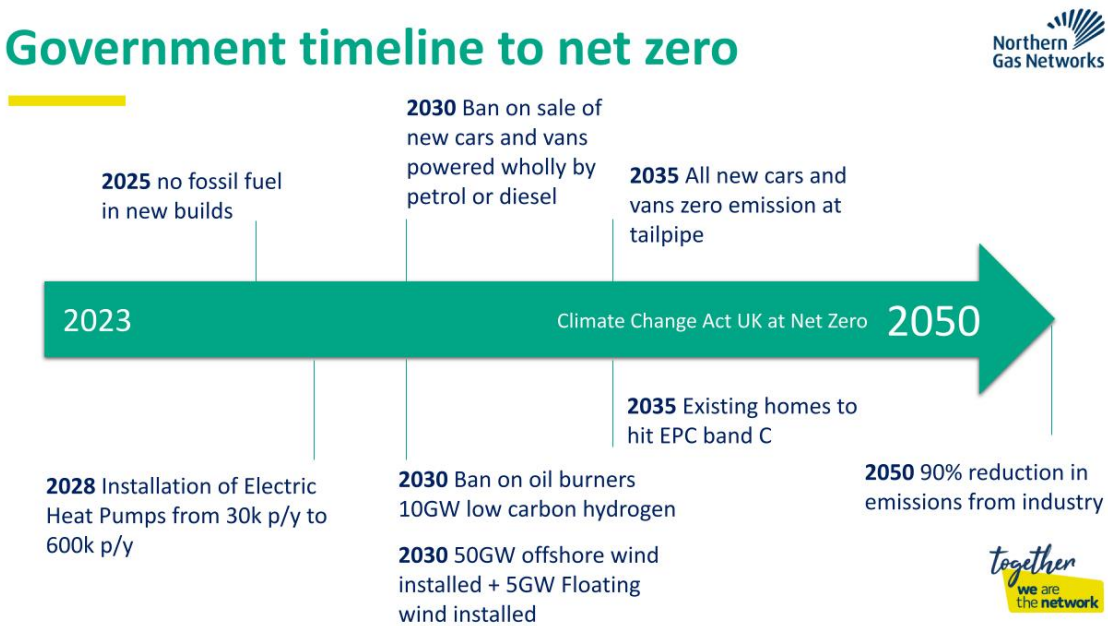
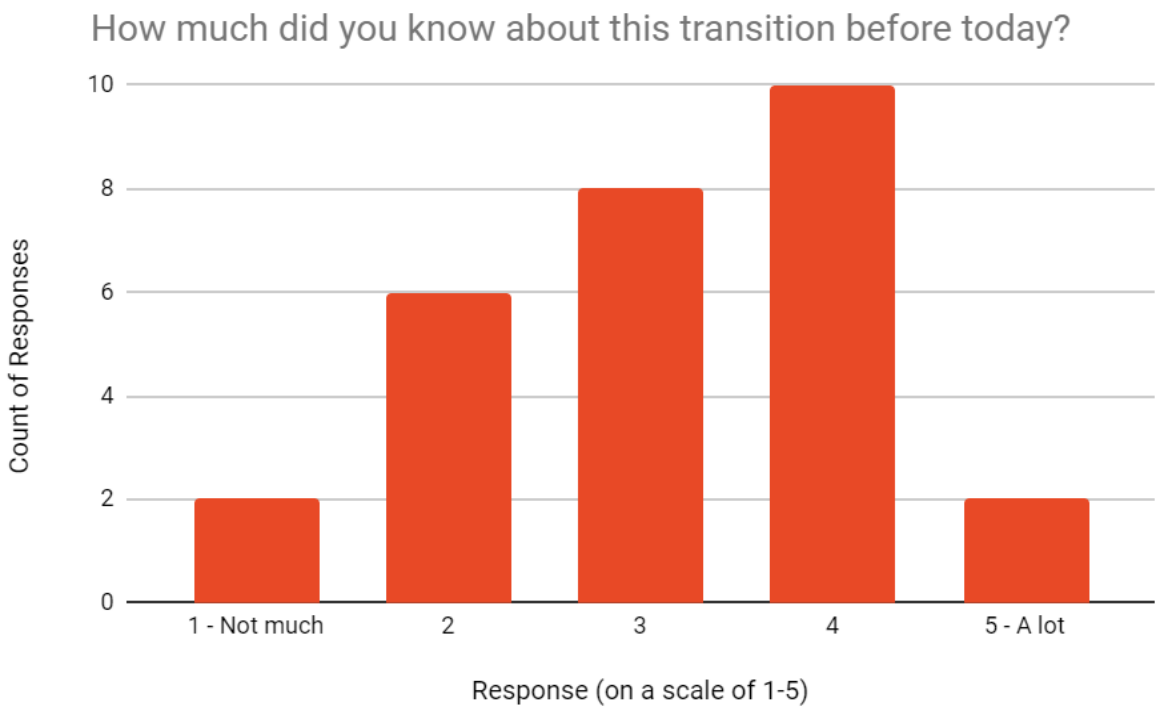


Figure 2.1 Government timeline to net zero



4.1. Where are people on this journey

Members are at varying stages on the journey towards low carbon technology (LCT). A few members are using low carbon technology such as electric heaters, solar panels, and heat pumps. Members feel that energy ratings on appliances do impact choice when purchasing, although not all of these members know to what extent this is reducing their carbon impact. Other members are trying to reduce emissions by choosing to use more electricity, recycling, using less heating at home, and by choosing a more fuel-efficient car.

There are different attitudes to climate across the membership, with some members being environmentally conscious and knowing a lot about the transition, and others are not sure where to start or having lost faith in a greener future.

Members commented on the need for government policy to help on the journey towards net zero, and remarked that industry need to do more.

Barriers to transitioning to low carbon technology include cost, lack of knowledge, local and national system barriers.

A few members have already reduced their consumption as much as possible in order to save money, and cannot reduce it any further, or pay more to use greener energy sources such as electricity. Members expressed concern about the financial impact of low carbon technology on end users of energy. Members also asked for clarity on installation costs, running costs and any other

associated costs, as well as any support grants including where and how to apply. Some members commented that electric cars are still unaffordable.

"If this technology does start to take off, I'm worried on the impact of the costs passed down to the end customer"

Lack of knowledge about low carbon technology is a barrier for some members. It was also suggested that younger generations have more information about global warming.

Systemic barriers also affect members ability to transition to low carbon technologies, these barriers include; living in the countryside with no link to the gas network (needing oil), cancelled support schemes, being in a rental property with no control over landlord decisions, lack of infrastructure for electric cars, council tenants with little information from councils. Some members feel that there is little that individuals can do and that this is a problem with industry.

4.2. What does the net zero transition mean for people, their friends and their families

The cost of the net zero transition was a concern for the majority of members. This included the cost of appliances, cost of energy, cost of new homes with LCT built in, the cost to wider society of a secure energy supply, and questions about what help is available for individuals. Members are concerned about the urgent need to insulate their homes, especially as fossil fuels run out, and whether or not LCT will work will for them.

Members in rental accommodation are concerned about the limited choices available to them and their families. Members also mentioned worries about landlords selling properties due to the high cost of transition.

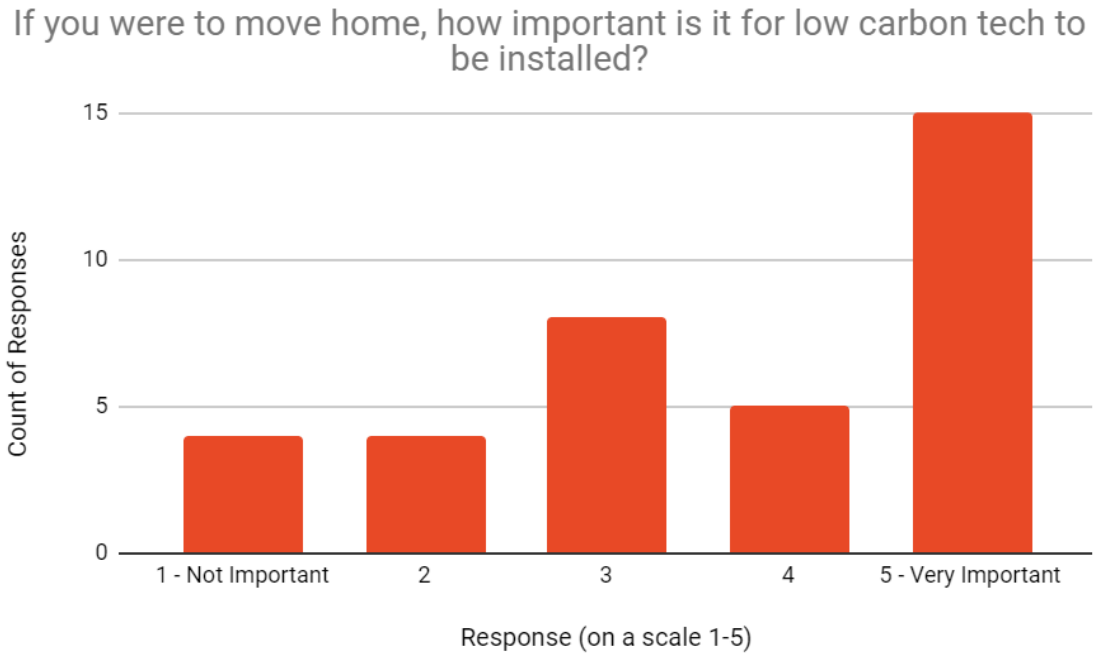
Members expressed doubts in the collective ability to transition to net zero, and worry for the future of their children, mentioning current failures to meet net-zero targets.

Disruption was a concern for some members.

Members commented that levels of understanding vary greatly across the public. They suggested the need to inform the public using social media, advertising, games, and by providing opportunities for the public to engage.

4.3. The importance of LCT when moving home

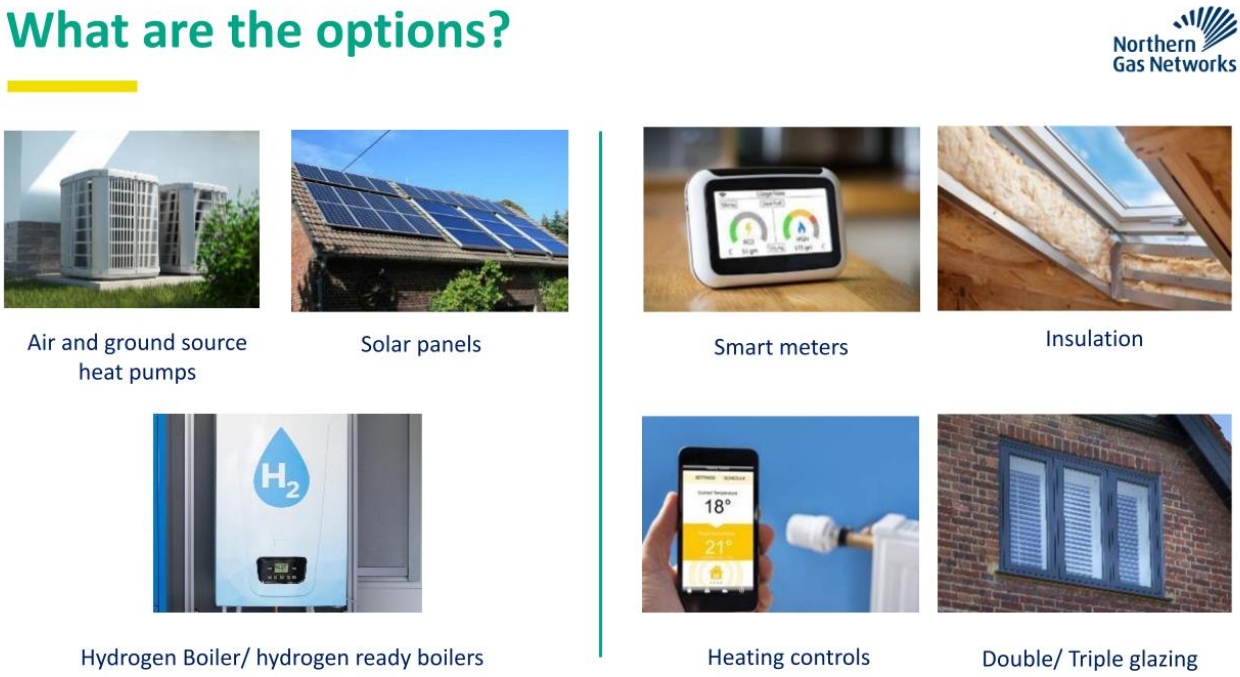
Members were asked about the importance of low carbon technology when moving home. Below are member votes. Some members commented that it would be attractive if a home had already been fitted with LCT. Additionally, some other members mentioned that it would be important that a property has the potential to be adapted to include more renewable energy. Other members felt that it was not hugely important but would be a 'nice to have' and could sway them on a particular property depending on the technology available.



5. Low Carbon Technology - Part 2

5.1. The options for retrofitting

In the second half of the morning session, members had a presentation on the different options for retrofitting homes with low carbon technology. The presentation covered the differing and complex needs of different potential customers through the use of hypothetical case studies. Members then spent time reflecting on the following questions on when they would consider making changes, the potential factors that would affect them, and the barriers to change.



5.2. When to make changes - factors that affect this

Members had varying views on when they would make changes. Some members would make changes as and when appliances break down, others would upgrade to LCT as soon as financially possible, and others are waiting for the technology to become more available and affordable, and for infrastructure to improve.

Members mentioned barriers including cost, the fact that they are renting, and a lack of knowledge about how to make changes. Members also highlighted the potential for legislative/government pressure to encourage or mandate changes.

Particular LCT options highlighted included double glazing, insulation and boilers (including hydrogen). A few members are actively upgrading their homes on an ongoing basis.

When moving into a new house some members would be willing to pay more in order to have LCT already installed, others are actively looking for eco-build properties. Members see moving into a house as a long term investment, however some members would only prioritise LCT for their long-term home. Other members would not be actively looking to change to LCT unless they moved into a new build which had the changes already installed.

Not all members are considering changes, with some preferring non technology measures to reduce energy consumption.

The cost of upgrading to LCT is a barrier highlighted by the majority of members. Members commented on the high cost of LCT and are concerned about return on investment, in particular the long timescale required to 'break even'. Some members are looking to what they perceive to be cheaper options such as insulation, as opposed to hydrogen boilers, solar, and heat pumps, which are seen as more expensive.

Some members would be interested in making changes if it was more affordable and/or if grant funding was made available. Other members mentioned the particular cost barrier for those who are on lower incomes. Members also highlighted the need for clear and accessible information on the financial help available for LCT upgrades. Another barrier mentioned include the lack of choice when renting, both privately and with the council.

"If it was free to do I would love to protect the planet but I can't afford to do it"

"[I] would make changes if it was affordable" *"Is it worth it?"*

"[I] hear about government schemes but never seem to be eligible for them"

Members suggested that legislative changes might help the LCT transition. In particular some said they would make changes when the government makes it law, and others suggested that landlords should have the responsibility to make changes.

"All new builds to have solar"

Knowledge and information are another key barrier for many members. Members highlighted the importance of providing clear and accessible information about what help and advice is available, both financially and otherwise. For example, members mentioned their belief that seaside environments are less suitable for some LCTs such as solar, due to the sea air and sea gulls. Some members felt that the LCT transition is complicated and that it needs to be made more straightforward.

"It is complex! – that's a blockage to many, the complexity needs to be broken down [and] simplified"

"Clear and straightforward info about what saving can be made with all the options that are available e.g. 6 thermostatic valves costing £x will save £y"

5.3. Levels of change and/or disruption

Members were asked what levels of change and/or disruption they would accept. Many members would expect and put up with up to a few days of disruption in the house, however others would only accept minimal disruption, around half a day. Some members highlighted accessibility needs, preferences to be out of the house when work is done, and the need for good communication.

Members are more comfortable with disruption if there are grants for work, if there is compensation given, or if the disruption is short, and if there are long term benefits such as a reduction in bills.

"If this was to help us long term, then people would accept more disruption than usual"

"Reduction in bills would make it worthwhile"

Some members mentioned that they do not know what is required or what the disruptions would be and that they would need more information before making a decision.

5.4. Blockers to changing to low carbon technology

Members identified several blockers to adopting and changing to LCT. These were around the themes of cost, knowledge of the changes, systemic and cultural factors, safety, and trust in new technologies.

Several members expressed concern about lack of knowledge and understanding of new technologies. Members highlighted not understanding enough about the safety risks, as well as being unsure of how to make choices between different options and not knowing the advantages and disadvantages of each LCT.

Cost is a barrier for many members. Members suggested government incentives, including through council tax and schemes, and support for those who need it most. Members also highlighted the high cost even with government schemes and the added costs of maintenance.

Systemic factors highlighted by members include lack of permission to make decisions, for example if renting, and a lack of clear policy and direction. Some members questioned if these changes will make an impact on the environment, and others questioned what other countries are doing to help.

Several members mentioned concerns about trust in the technology companies, fitters, and contractors. Other members don't trust the government to follow through with support promises. The safety of appliances is also a concern for some members.

"I don't trust the government to follow through with their support promises"

"Too much choice, concern that companies providing services are not stable"

"Safety concern – has it all been tried and tested enough to be able to roll out to the public"

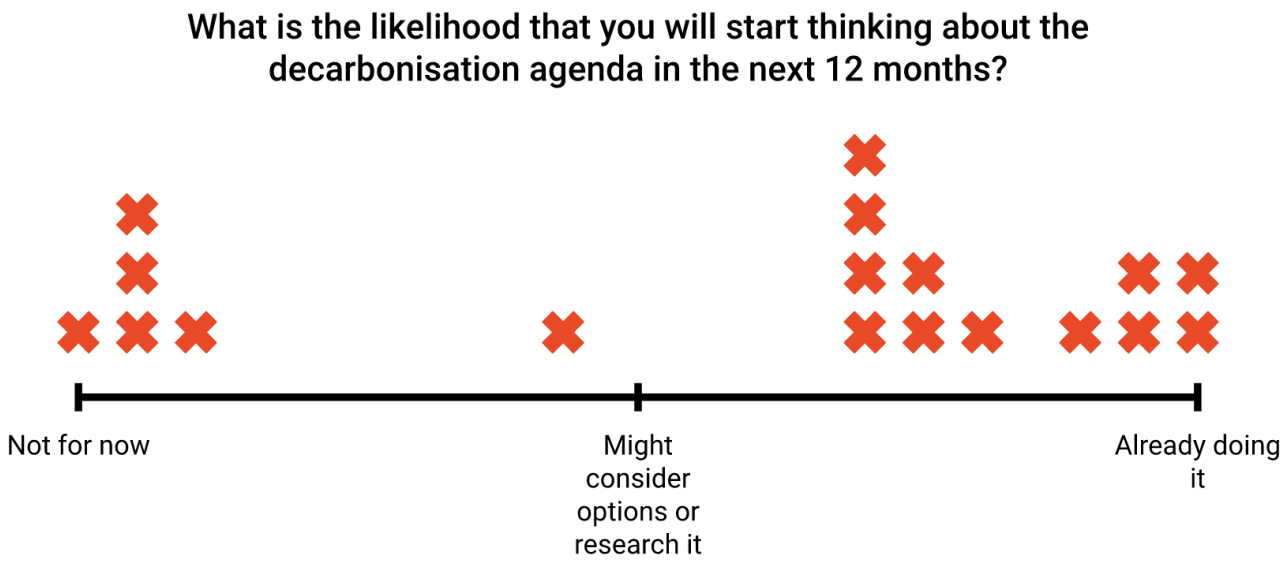
Lack of information is another blocker to the shift to LCT. Members would like more information about safety, proof of technology, data on the environmental impact and the journey to net-zero.

Members highlighted that clear communication is essential and suggested social media, television, radio, bus stop ads, tiktok as platforms for sharing information and educating the public, as well as a specific support website that provides advice and support. Some members also highlighted the importance of local information and encouragement from authorities, although some members trust NGN over the government to educate them.

In relation to wider systems and culture, members highlight the importance of influential people leading the way in promoting changes, government promotion of energy storage, and easier access to green energy.

5.5. Likelihood of thinking about decarbonisation

During the lunch break, members were asked to respond to the following question:



5.6. Concluding summary - Low Carbon Technology

Members are at varying stages on the journey towards low carbon technology (LCT). Members are generally in favour of LCT and support the idea of retrofitting their homes to support the transition to net zero. They see it as an important factor in improving their homes and take it into consideration when moving.

The main concern from members is the cost of purchasing and maintaining LCT, with many members commenting on the need for systemic support from government, in the form of both funding, infrastructure (in the case of home connections and EV's), and legislative and other support for those who do not own their homes.

Another key area highlighted by members is the varying depth of knowledge across the population and the importance of filling knowledge gaps and supporting people to understand what is involved in LCT and what they will need to do. Specifically members want to know about safety, proof of technology, data on the environmental impact and what they will need to do on the journey to net-zero.

Members also spoke about lack of trust in various institutions and the importance of clear messaging from a wide variety of trusted sources. What defines trusted, varies across the membership, however some trusted sources include government, legal institutions and influential members of society who can set an example.

6. Hydrogen

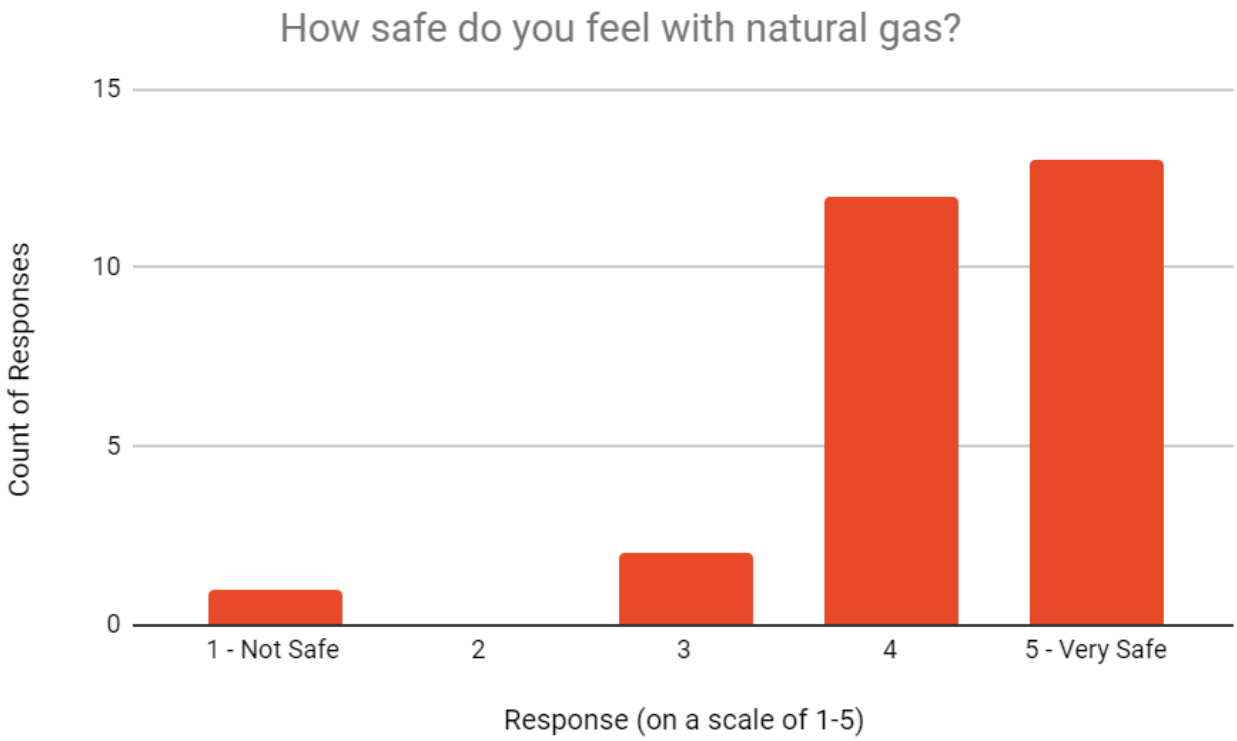
Introduction to hydrogen and the purpose of this conversation

People are very happy with natural gas as an energy source, and don't want to lose it. One of the frequent concerns voiced around hydrogen gas is safety.

NGN wanted to explore this issue and understand customer perceptions on gas safety and mitigations, and use those learnings to apply to their hydrogen safety work. NGN wants to understand what would make customers feel safe, so that they are able to reassure them of safety in the event of a switch to hydrogen.

6.1. How safe do people feel with natural gas?

Members were asked to think about social risks to safety such as natural gas, road transportation, trips and falls, air transportation and rail transportation. Members discussed what they felt were the greater and smaller risks that they take in daily life. After this, members were given an overview of the gas safety industry today.



6.2. What contributes to the feeling of safety or lack of safety with natural gas?

Members have high confidence in the safety of natural gas. In particular they highlight long term experience of using it, and the trust they have in gas companies due to their historical safety record, the regulation and certification of gas, lack of incidents, fast response to emergencies and the speed of repairs.

Members also report that confidence in gas is due to the amount evidence that is available about incidents, communication about new gas pipeline infrastructure, as well as the safety devices in homes, and the smell added to gas

Some members mentioned that the notices on boilers can cause concern but understand the need for these safety notes.

Other members expressed concern about the economics and politics of natural gas.

6.3. Hydrogen transition - Have you heard about it

Members were asked what they have heard about hydrogen and their thoughts on a potential transition from natural gas to hydrogen for home heating and cooking. Members had heard about ongoing trials and tests of hydrogen homes, and about its status as a potential clean energy source. Members also mentioned examples of existing use such as in cars and boilers, and use in other countries. Some members know nothing about hydrogen, and others feel they do not know enough and are nervous of the unknown. Members would like to understand what it is, how it is delivered and what it can be used for.

Members want to understand the sources of hydrogen and the plan of import/export of hydrogen, as well as information about the impact on job security & the environment. Some members believe that hydrogen is future proofing our energy needs. Some members feel positive about hydrogen but have reservations with regard to the cost of providing it on a large scale.

Members expressed concerns about the safety of hydrogen, having heard about past disasters, and some felt they would like to see safer alternatives, and other options.

6.4. Hydrogen transition - What are your concerns

Safety is a concern for many members who ask if hydrogen is as safe or more safe than natural gas. Members also asked if there are similar safety regulations in place as for natural gas.

Cost was raised as a concern by the majority of members. Cost of production, of buying new appliances, and of maintaining and fuelling appliances were all highlighted. In addition, members asked about the efficiency of hydrogen.

Knowledge and education is important for many members. In particular members want to know:

- How much will change day-to-day, for example in how you use it?
- How will it be brought to homes?
- What else would people need to do for this transition to happen?
- How will members of the public be informed about the transition?
- What happens if hydrogen fails long term, and who will pay for this?

Members have environmental concerns including wastage of old products, the amount of water used in production, and if it will be green hydrogen.

With regard to the transition, members expressed concern about those who currently do not have access to the gas network. Other members are concerned about the time needed to change over appliances.

Members are concerned about the potential impact of a hydrogen transition on global inequality, with countries which are unable to transition being left worse off. Members specifically mention the availability of water.

"Does it mean a two tier system around the world of countries that can produce hydrogen and those that can't"

6.5. Hydrogen transition - expectations

Members' expectations about the hydrogen transition focus around cost, reliability and safety, disruption, appliances, information and communication, and environmental impact.

Many members expect hydrogen to be cheaper than natural gas over the long term and question what support will be in place to achieve this. Some members think it will be more expensive and so would not like to transition. Other members are concerned that not many people will be able to afford new appliances. With regard to appliances, members expect that they will be like for like in terms of size and cost, and that every home would have detector/s. Members question who will be paying for the new appliances.

"Expect it to be cheaper than natural gas"

"Very difficult to see many people being able to afford new appliances in the current/near future"

Members expect hydrogen to be as safe or safer than natural gas.

In terms of disruption, members expect little to no impact. Other members expect that hydrogen will be rolled out countrywide as quickly as possible. Some members are concerned about potential negative effects of burning hydrogen, such as potential damp or mould.

Members expect to be educated and supported to learn about the hydrogen transition. Members highlight the need for more publicly available information.

Some members expect that hydrogen fuel will be better for the environment. Other members expressed concern about the environmental impact of burning hydrogen, in particular highlighting the amount of water used, and nitrogen oxide pollutants.

Some members highlight the potential effects of the 2024 elections on decisions about hydrogen, and others believe that we should use more renewable energy instead of hydrogen.

6.6. Hydrogen safety- detectors, appliances and other solutions

Members were asked for their thoughts about a range of hydrogen transition options, from appliances to detectors and safety equipment. Members' views on the potential positives and negatives of each of these options are set out in the table below.

Applications	Positives	Negatives
Detectors	• Makes sense. Cheap, safe and not a new thing. • Have them elsewhere • Sometimes don't have to pay for them	• How is it powered? • How are they tested/checked? • Are they reliable - as reliable as gas detectors?
New Meter valves	• Safer – stops leakage	• Would customer be informed of leak and is there a smell to H2 (want to know about leak as concerned about vulnerable people & animals)
Improved Smart Appliances	• More efficient • More convenient • Improved functionality • Improved safety • New boilers are convertible at a small cost	• New appliances generally don't seem to last long • Appliances not reliable • Nervous of new transition • Are appliances hackable? • Cost of new appliances • Cost of maintenance • Education required, not everyone can use smart technology. • Environmental cost of old appliances. • Concern for those who are already struggling financially.

Inspection of Equipment	● Increased safety ● Increase in public trust ● Give public faith ● Good if it can be done for everyone at no additional or minimal cost e.g. free first 3-5 yrs.	● Possible increased costs ● Don't know much about how appliances work safely ● Possible issue about going into people's homes ● Can it be enforced if people need to enter homes?
Increase in Mains Replacement	● Better safety ● Compensation if there is disruption ● Re-use wherever we can ● Do work in warm months	● Disruption ● Concern over lack of understanding of pipe network by multiple companies – water, broadband etc so accidental disruption ● Concern over the use of plastic ● Local authority very slow to replace pipes ● Who is responsible for servicing?
Ventilation	● With Climate change, better ventilation needed ● Improves safety ● Should be attached near boiler ● Little bit is ok	● Increased bills, worried about extra electricity use for heating etc ● Who pays for the ventilation ● Concerns if not able to have hydrogen due to house having ventilation issues ● Corrosion ● Damp as produces H20 so condensation will increase

Members further highlighted barriers of cost, information and safety concerns. Members suggested that clear information about what the changes will cost for individuals, and support with these costs, would help. In addition, reassurance about the safety of appliances, plenty of notice as to when changes are needed, and easily accessible information, would help. Other members highlighted the limited choice for renters.

Some members said that there were no barriers for them, mentioning that they felt it seems to be a like for like change. Some members are early adopters of these technologies.

"If appliances are old and not working properly this would help push people to buy new tech"

"Companies need to be on board to provide detectors. [The] Fire service currently gives free smoke detectors, could this be implemented for hydrogen?"

6.7. Concluding summary - Hydrogen safety

Members still have high confidence in the safety of natural gas, mainly based on their long-term experience of using it, and the historical safety record.

Members had heard about hydrogen and in general are not opposed to its use. Members main concern is safety and ensuring that hydrogen and all of the associated appliances are at least as safe as natural gas with similar safety regulations in place.

Cost was the next concern for members, including production of hydrogen, the cost and maintenance of appliances, and the cost of fuel. Members highlighted the need for clear communication about cost for individuals and support for all members of society in the transition.

Members highlighted the variety in depth of knowledge across the population, and the importance of clear and trusted information and education around what is happening and when and what individuals need to do.

Members have environmental concerns including wastage of old products, the amount of water used in production, the pollutants released when burning hydrogen, and where the hydrogen comes from.

7. Communication about Hydrogen

7.1. Messaging and trusted voices

Members were asked about their preferred method of communication, as well as which voices they trust and do not trust.

Members trust a variety of sources, some members prefer information in person and others prefer links to information through social media, print and television.

Many members prefer messaging to come from an official source, for example, UK government or Ofgem, as they trust government voice and legislation. These members believe that private companies' campaigns are misleading. Some of these members see NGN as carrying out government aims. Some members trust local government communication over national government. Other members say that they trust messaging from energy companies such as British Gas, gas networks and gas companies.

Several members trust celebrity figures, such as Guy Martin or Martin Lewis, or popular science figures such as Brian Cox and David Attenborough. Others trust experienced engineers and scientists, and the people doing the work, who can explain the physical goings on with supplying hydrogen.

Other members trust those with lived experience of hydrogen already, such as participants in the hydrogen trials. Trusted sources also include, non-political public information films, friends and family, and other community members,

7.2. What helps people to feel safe about hydrogen

Factors that help members to feel safe about hydrogen include evidence and information from a trusted source, communication from gas companies, and broad cultural support.

Members express a preference for evidence such as; extensive research and testing, statistics and facts comparing hydrogen to existing energy, demonstrations, science programs, video accounts of installations which have proven safe over time, and information about common assumptions and misconceptions.

Information that members would like access to/to see is; case studies, educational materials, demonstration site visits, leaflets and safety regulation labels on appliances.

With regards to communication, a letter from a gas company is the most trusted source of information for many members. Other preferred communication methods are; public service announcements, feature television programmes (for example, chefs cooking with hydrogen), and speaking with those with lived experience of using hydrogen.

The following communication methods were also mentioned; social media, television adverts, billboards, text message, links on gas company websites.

7.3. What formats would you prefer when receiving/responding to safety advice?

Members have a variety of views on the formats preferred for information.

Television is a format preferred by many members. These members would like to see; documentaries, visual safety videos, animations, information programmes, adverts and news episodes.

Many members would prefer paper copies of information such as letters; newspaper articles; notes on notice boards, billboards and bus stops; flyers; and information included on bills.

Many members would like information available in person, for example, drop in centres, government announcements, demonstrations, places to see the appliances, information events, and community meetings.

Some members would like a phone number to call to ask questions. Some members would like information available online, through internet news, on social media, through smart devices that can respond to questions and via email. Members also mention the need for access for those whose first language is not English.

7.4. What information would be helpful for you now?

Helpful information for members right now would be around safety, learning about hydrogen and the potential transition, the cost, real life experience, service providers and safety.

Members want to know about the safety and efficiency of hydrogen, it's comparison with natural gas, and how the transition will impact them. Members also want to know information about the pros and cons of hydrogen, the timeline for transition, the environmental and sustainability benefits and about how energy is produced with hydrogen,

Real life experience shared from the current hydrogen trials would be helpful, so other customers can see the impact. Members ask for feedback from this trail to be shared. Members also ask for more information through podcasts, discussions, through schools (educating children who then educate their parents).

Members also highlighted the need to share information about the difference between NGN & actual gas companies, as they believe that not many people know the difference.

7.5. Terminology and messaging - What is the best way to communicate about this?

Members were asked about how NGN can best communicate with the public about the potential hydrogen transition, with a particular focus on trying to understand the most useful terminology.

With regard to language and information, members highlight the importance of non-techincal language and keeping things as simple as possible. Some members suggest the use of visuals, and others mention the importance of avoiding; small print, misleading advertisements and confusing terms and conditions.

Members suggested multiple methodS of engagement including; using fun animations and videos, continuously feeding information, explaining benefits, starting to educate children from a young age, celebrity endorsements, broad-based communication to a wide range of ages.

Members suggested using email, television, radio, advertising, and NGN social media. Some members were not keen on animation however others preferred it as it is more visual.

7.6. Concluding summary - communicating about hydrogen

When hearing from members of the panel about communications methods, responses were varied and although there was agreement in some areas, other areas had contradictory views.

When it comes to what people want to know, members are broadly in agreement. Members agreed that information should be clear, simple, and jargon free, with visual representation of information. Members also agreed that including real life examples of people's experiences with hydrogen from test villages and sites is something that they can trust. In terms of specific content, members want to know about the cost, the safety, and specific and individually relevant information about what they will need to do if and when the time comes to transition.

When it comes to how to communicate this there are many differences amongst group members. With regard to the medium of communication there was no consensus. Members each prefer different formats, including: television, social media, word of mouth, in person events, newsprint, news channels, email, letters.
When it comes to the preferred source of information there was also no consensus. Some members trust national government and official sources and others specifically do not trust these sources and prefer to hear from people that they know, influential cultural figures and local institutions. Some members prefer official letters and emails and others only trust in person information or people that they know.

This highlights a key challenge with communicating about hydrogen, not the what to communicate, which has broad agreement, but the how to communicate it. It is suggested that NGN can take the 'what' to communicate as suggested by members, and come up with various example options of 'how', and bring these to the membership for testing.

8. Reflections on today in groups

8.1. What did you appreciate or enjoy about today?

People/in person

- Great opportunity to meet new people
- Getting to meet the panel members in person.
- Enjoyed the interaction
- Constant group rather than constantly changing breakout rooms
- Staying in the same group 😊
- Meeting in person
- Face to face
- Face to face good
- It's better to do face to face meeting than online
- Face to face – in person
- Enjoyed face to face again
- The people on my table, great bunch, enjoyed the day

Logistics and event space

- Good venue & hospitality
- Better than zoom
- Human interaction
- LOVELY LUNCH 😊
- Catering!!
- The opportunity to use a quiet room
- Food was great
- Venue really easy to find, very accessible and friendly

Process of facilitation

- Share views
- Able to ask question
- Presentation in person (interactive)
- Group discuss
- Efficient/time management
- Facilitator 😊
- Facilitators knowledge
- Collaboration
- Well organised
- Lunch
- Love not sharing between tables at the end!
- Listening to other opinions
- Well structured – good questions to lead discussion
- Flowed really well, not too long spent on any particular section
- David – thorough + made sure we were all heard. Thank you 😊
- Enjoyed the informal, happy atmosphere

- Really enjoyed day, particularly interaction with fellow table members and our facilitator
- Good session, discussion, members

Content

- Learning about energy future and the potential of hydrogen (x 2)
- Liked on the hydrogen town info seeing that our feedback from previous sessions was listened to/actioned re appliance cost
- Having 'experts' in relative subject areas to drive the discussion
- I learned lots about gas
- I enjoyed discussing and understanding NGN
- Room fun and organised
- Everything

8.2. What would you like to do differently next time?

Space/process

- Speeches could be louder
- Bit harder to get to not a morning person
- Noise – space out tables. Or turn around horizontal
- Hard seeing screen – using second screen
- No 5 min/2 min count down
- Group switch to hear from more people
- Less background noise if possible
- Try different ways of talking about topics e.g. games. Make table more wider interaction + move around
- More spaces between tables because it's too loud and hard to hear people on my table
- Change teams every time to get fresh ideas!
- Maybe swapped groups after lunch (mix it up)
- Couldn't really see the slideshow, prefer printouts
- Bigger smart screen or projector

Logistics

- Consistency of emails – different times given for today's session
- Meet in person rather than zoom
- Option to zoom in if can't do face to face
- More chocolate cakes
- Coffee was yucky

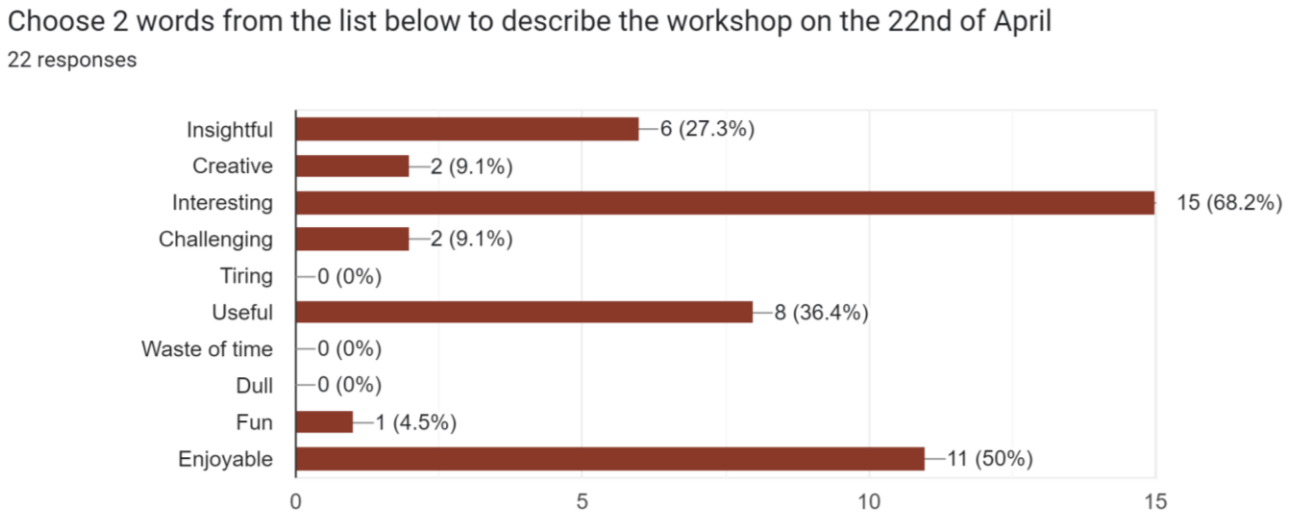
Content

- This format works well, but maybe have different subjects morning/afternoon more about how NGN works
- Next time I want to know how our ideas and opinions help to effect and improve NGN
- More time on points to discuss and question

9. Session evaluation

Members were asked to evaluate the session through the following questions.

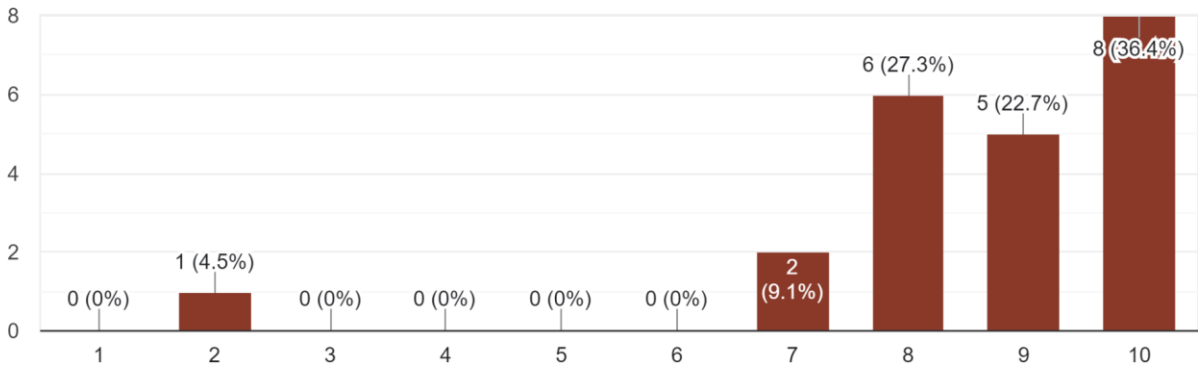
Asking members to select two words from a list provided to describe the day, the most popular selections were ‘interesting’ and ‘enjoyable’ and ‘useful’..



Members were then asked to add a word of their own to describe the day. These words are shown in the below word cloud.

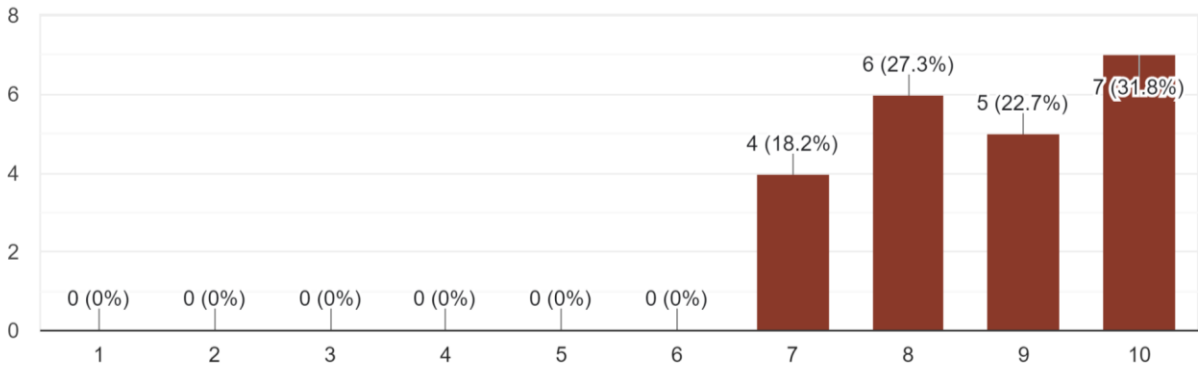
Overall, how satisfied were you with the workshop?

22 responses



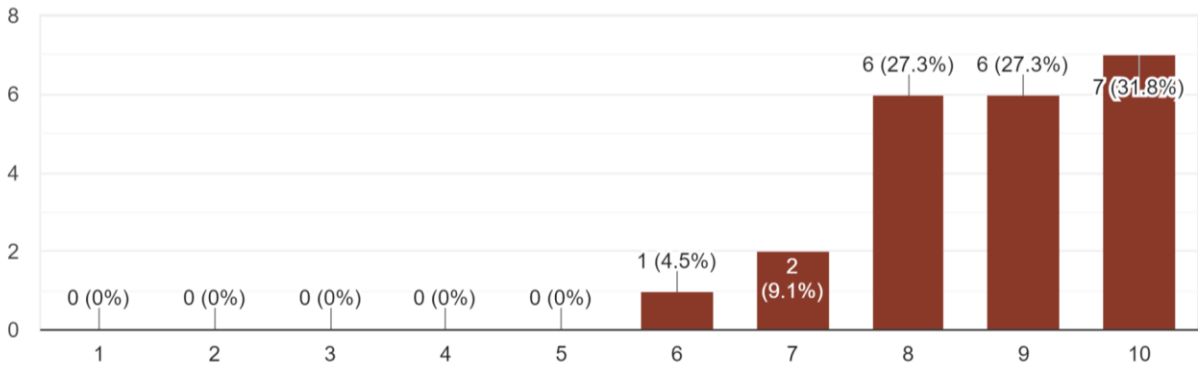
How would you rate the discussions?

22 responses



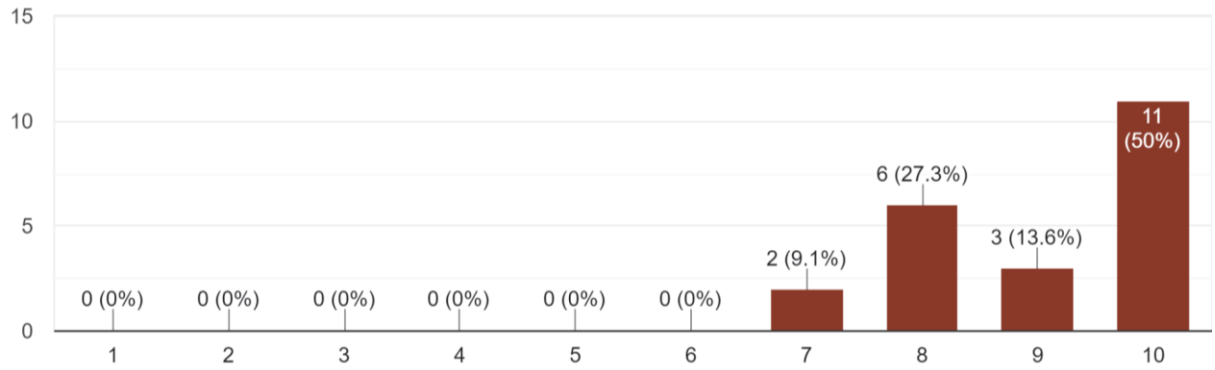
How would you rate the speakers / content?

22 responses



How would you rate the facilitator?

22 responses



Any other comments on the day

- I like in person groups better than zoom 😊
- Thanks for everything
- Enjoyed format but to be honest enjoyed presentations more when on line.
- SOME OF THE SPEAKERS WERE DIFFICULT TO HEAR TO US AT THE BACK
- Maybe more space between tables outside noise on other tables made it hard to concentrate at times
- Maybe have a timer for the discussion
- I struggled in the loud room as I have issues with my ears, in which loud noises affect me, I don't know how that could be solved, this is why I prefer the video calls
- Potentially keeping the same groups for a couple of sessions as a lot of the discussions are more open and insightful when people are comfortable with each other. I think it would be more beneficial for the discussions and their quality, rather than constantly introducing yourself and starting from scratch. It would also mean you meet other members of the panel properly rather than fleetingly.