0606 Project Avatar

Tech interviews – discussion guide (60 mins)

AREA OF DISCUSSION	TIME ALLOCATION	START TIME
1. Introduction	2-3	
2. Contact preferences	10	
3. Changes in technology	15	
4. Prototypes	30	
5. Thanks and wrap up	2-3	

1. Introduction and purpose of discussion

(How ENWL currently use largely traditional methods to communicate with their customers, how they are using new technology to improve the service they offer and how they could use new technology in the future to further improve the way that they interact with their customers and improve the service they receive).

2 Introduction to Electricity North West (2-3 minutes)

As you know from the information that we sent to you before this meeting, Electricity North West are responsible for providing you with your electricity. Have you had chance to read? Any questions?

Probe on: initial perception of ENWL, awareness of scale of business,

The two main reasons why a customer may contact ENWL are A) during a supply interruption, often known as a powercut (SHOWCARD B) and B) because they need a connection (SHOWCARD C)

- Clarity regarding the difference between Electricity North West, suppliers and National Grid
- Check for understanding of why may need to contact ENW (supply interruptions or connections – any other reasons?)

2. Contact preferences and background (10 minutes)

- Have you previously had to contact Electricity North West? Why? When?
- How did you make contact? (ie by phone/email/web form)
- How do you generally like to communicate with companies? / how do you want to provide and receive information? Any challenges or frustrations in communicating with companies for you personally?
- If there was a power cut in your home, how would you like to be informed?

Push and Pull communications. Companies communicate with customers in different ways. Some communications are 'push' – which is information that they send to customers (for example BBC news will send 'push notifications' about the latest news stories to people who have download their app). Others are 'pull' – which is information that customers are able to find or access for example on a company website.

- In a power cut situation what type of information would you like to be sent ('push') or what would you like to be able to access (pull)?

3. Change in technology and DSO (15 minutes)

The rate of technology development in the last 10 years has been the most rapid in history. Just thinking of smartphones – it's amazing how much information people are able to access in a moment on a device kept in their pocket/handbag.

Virtual assistants are taking things to another level. Technology, such as the Amazon echo (Alexa) and Google home, are becoming increasingly common in peoples' homes. People can ask questions of these devices (for example what is the weather like), play music, and even control devices in their home remotely (for example adjusting the heating whilst you're out, or lighting a room as you enter). SHOWCARD (Overview of Alexa).

- Probe: Do you have an Alexa/Google home or similar? Would you consider getting one? Why/why not?
- For those that have them – how do you use yours? What are your favourite functionalities?

It's likely in the future that people's homes will become be increasingly interconnected, so appliances will interact with other appliances and your phone, and potentially to external organisations.

This means in the future there will be a lot of data available about us and our household that could make our life easier and also potentially could be shared with organisations (with your permission) so they have an increased understanding about you or your behaviour.

For example smart meters in people's homes mean that energy suppliers are able to see how much energy has been used in the house. **Showcard H –** what is a smart meter and how they can be used by ENWL

- Do you have a smart meter/ would you consider getting one? Why/why not?
- If have smart meters – has it actually caused you to moderate the way you use electricity? If so was this just in the short term or has it had long term influence?

(IF TIME ALLOWS) Flight radar app

There are lots of other examples how Electricity North West could *use or develop existing technology* to improve the services provided to its customers. One example is the '**Flight radar**' app technologies, which allow you to pan in to any area of the world and click on any flight, from any airline to instantaneously see all of its details i.e. the plane type and flight number, its route, flying speed, height and landing times etc. You can also use this app to point to any area of the sky and it will pick up any plane that's overhead, in that direction. **INTERVIEWER**: Demo app

READ OUT: DNO's could potentially harness this type of technology, allowing customers to point their smart phone at:

- An excavation and instantaneously receive information back about the reason for the works, when the hole is due to be filled in, then be automatically notified when the tidy-up is completed and disruption has stopped.
- Customers could similarly use this type of technology to report any number of issues, for example vandalism or rubbish at a substation. This technology could just pick up your GPS location, like the Flight Radar App. This could give you various updates from initial investigation through to completion and even provide photographs when the work has been completed.
- Reaction to this method of pointing, clicking and then receiving push notifications?
- What would the benefits be?
    - How would it make customers' lives easier?
        - Who would this appeal to and why?
- Are any problems foreseen?

Changes in future energy - LCT:

It's likely in the future that people's energy usage will change, as they use low carbon technology (LCT) such as solar panels as a source of power, or heat pumps to heat homes and buildings. This may change people's day to day energy use. For example electric cars are likely to become more popular (meaning people will need to charge their cars rather than rely on petrol as the only source of power).

- PROBE: Understanding and perceptions of LCT (positives/negatives).
- For those with LCTs already – why did you choose to purchase your LCTs? What has your experience been so far? Would you recommend it to others Why/why not?

Changes in future energy – Move to DSO

ENWL's role is also likely to change, as they move from been a DNO to a DSO Showcard J: **OVERVIEW OF DSO**

- PROBE: Had you heard of a DSO before? Positive/negative reactions

INTERVIEWER NOTE: Before continuing ensure that respondents understand how a DSO differs from a DNO and their role in the future

4 Feedback to prototypes (30 minutes)

ENWL have been speaking to customers like you about their service needs and how they might like to communicate with ENWL in the future. They are designing some new ways of communicating with customers which I'd like to show you and ask for your views on. When giving us your thoughts please think about

- What information might be available to you in the future (for example in a DSO world you may want to be selling energy that you have generated back to the network)
- How the information is likely to be communicated to you

These are only ideas at the moment to help give you a feel for what might be available in the future – so remember they are still very clunky and don't represent anything like how the fully developed technologies might appear.

1 Prototype 2 (15 mins)

The first idea is something that you may be able to access in your home through your smart phone, a central hub such as an Echo, Google Home, Apple Pod, or possibly holograms or a future type of technology.

The idea is a Chatbot. A Chatbot is a computer programme that can hold both verbal and text based conversations with a person. It recognises what people ask it (either what they say or what they type) and provides an answer (which again can be typed or ''spoken'). Chatbots give the appearance of a human interaction without there being a person or human involved.

Chatbot are used already, particularly in the banking and financial sectors. Whilst currently in early stages of development, it's expected that within the next couple of years this type of technology will become commonplace and it is likely that you will not be able to tell the difference between a person and a Chatbot.

Chatbots would allow you to immediately make contact with the organisation and the department that you needed information from. They could send you useful information (using push notifications) without you having to call the company and wait to speak to someone. They also allow lots of customers to simultaneously have different conversation with what sounds like a human and receive quick, consistent and accurate responses.

DNOs are already starting to investigate this type of technology [**SHOWCARD I]**

- PROBE: How would you feel if you were communicating with a Chatbot? Is this acceptable? Appealing? Credible?
- If Electricity North West offered a Chatbot, would you consider using it to make contact?
- Would you be averse to making contact?
- What concerns do you have?

INTERVIEWER TO DEMO VOICE COMMAND AND ALSO TEXT INPUT. Remember this is just at the idea stage – you would be speaking without hitting the microphone key and receiving an instantaneous verbal response. The pre-prepared responses that you see here are just for demonstration purposes. Remember that Chatbots are continuously learning and when these technologies are fully integrated, will respond appropriately to the questions that you ask.

Let's imagine that your electricity supply has suddenly been interrupted, without any warning, its winter, it's already dark and causes you significant inconvenience. This scenario gives you some idea of the type of communication that you might have with ENWLs Chatbot in the future.

Even if there were a lot of faults on the network you would be able to make immediate contact, even when there were major storms or floods without getting a message or having to hold to speak to an operator.

This example assumes that you have reactively made contact but if ENWL had your contact details its Chatbot would automatically send a message to your mobile devices or smart home hub, as soon as Smart Meters started sending alarms that supplies had been interrupted. We expect this would occur almost instantaneously (but for this to happen your DNO would need to have access to your contact information).

PROBE

- General perceptions? If you were in this situation what information would you like to know?
- What do you like or dislike about this idea thinking about your personal day to day circumstances
- Any concerns (for example security?)
- Any types of household/business which might need to receive information in a different way?
- How could the idea be improved?
- Thinking of a time when you might need to be in contact with ENWL, what situation would this be most useful in? For example longer duration faults, if away from home so can decide when to go home? Any other situations?
- Would you want information pushed to you or would you want to log on and see it?

Now thinking of a different situation (this time a planned interruption – at the moment ENWL posts a notice to its customers, advising them that their electricity will be switched on on a certain day between specific times). In the future ENWL may use this technology to let you know that your home will be affected by a planned interruption.

PROBE:

- How would you feel about receiving information in this situation using a Chatbot?
- Would you still prefer to be notified via traditional methods or want this as well?
- Is there anyone else you would like to be notified in this situation? Would you be happy to share your own plus a nominated person contact details to allow ENWL to send you a 'push' message? Why/why not?
- Any other concerns?
- What situation do you think a Chatbot would be useful to be in contact with ENWL? Why do you say this?

2 Prototype 1 (15 mins)

The second prototype is something that you may have in your home in the future and you can connect to from your smart phone, a central hub such as an Echo, Apple Home Pod or Google Home, or possibly holograms.

This is probably what the next generation of smart meter technologies will look like. This isn't the type of technology that DNO's will develop but they are likely to be able to use the information to improve customer experience. ENWL understand that customers are often concerned with data privacy so remember you will have control over who sees your personal data and how it is used.

INTEVIEWER: Guide the customer through its functionality:

Homepage 'My Smart Energy Hub'– the prototype can be demonstrated via different types of homes. Each home gives a view of what typical electricity usage might look like for an average customer living in that kind of property in the future.

1st screen: The various rooms in 'House 1'. The size of the circles correlate with the amount of energy being used by each room, the bigger the circle, the more electricity being used.

Click on a room e.g. 'Utility' to view consumption on a room by room basis

Click on a device to see exactly how much electricity each appliance is using at any given time in both units and cost

REACTION TO PROTOTYPE 1:

PROBE

- General perceptions?
- What type of electricity consumption information would be it be useful for you to know about your home? What would you do with this information? Anything you wouldn't need to know?
- FOR THOSE WITH LCT: how would this help you manage your LCT?
- How would having access to this information make you feel?
- What like or dislike about the idea thinking about your personal day to day circumstances?
- Any concerns (for example security?)
- Any types of household/business which might need to receive information in a different way?
- Who would this appeal to and why?
- How could the idea be improved?
- Thinking of a time when you might need to be in contact with ENWL, what situation would this be most useful in? For example power cuts that last for a long time, if away from home so can decide when to go home? Any other situations?
- Would you want information pushed to you or would you want to log on and see it?
- Do you think the extra information provided by this technology (vs. traditional smart meters) would help you make decisions about what you use?
- Can you think of any other situations where this might be useful, either for you or for other types of customer? PROMPT IF NEEDED: For example:
    - Providing energy efficiency advice
    - Automatically notify nominated contacts about a supply outage so they could make provisions. ie with a health care provider/support worker-carer
    - Information about the nearest place with power to charge your smart devices, so you can stay in touch with people
    - After a power cut has gone over a certain length of time, should the system issue electronic vouchers for hot meals and drinks at the nearest outlet – can you think of a better solution – is

a more personal service more important to you (sometimes during a power cut ENWL send a catering van or in certain circumstances a representation of the British Red Cross).

READ OUT: We are interested in understanding how much information you would be willing to share if this technology was available.

- Would you share your data if it would:
    - Enable Electricity North West to contact you proactively? Yes/No
    - Ensure that the network was better managed to prevent you having power cuts (because they better understand what is being used at any given time) Yes/No
    - Make it easier to connect a new electricity supply to the network Yes/No
    - Was financially beneficial – i.e. allows you to make savings or earn income from helping the DNO manage the network using your excess power Yes/No
- Would you like to know the carbon emissions associated with your devices (real time or historical data) so you are aware of your own carbon footprint?
- Would you like the platform to 'push notifications' to you, via the CHATBOT or your phone, if it detects that you could be using your energy/ balancing your usage/generation/storage more efficiently?
- Would you like the platform to automatically link to local weather information to optimise your generation and storage of energy based on the weather conditions?
- Would you like the platform to flag up potential problems with your electricity supply e.g. warning of unusually low/ high usage or unusually low/high voltage? ENWL would monitor the power remotely to save you the inconvenience and notify you automatically what they are doing to resolve the problem.
- Would you like the platform to offer you different 'operating modes' such as:
    - Manual mode: user retains full control of all devices at all times
    - Holiday mode: platform can control devices e.g. as turning on selected lighting to improve security
    - Low cost mode: platform can control devices e.g. Set/delay when things are used/ charged to reduce costs and maximise your generation revenue

N.B. You would be able to take back control at any stage and overrule the decisions that the platform has made for you, whilst retaining unrestricted access to power to carry out the activities you want to at the time that you want to.

- Has the recent high profile Facebook case (involving the data analytics firm Cambridge Analytics allegedly using Facebook users' data to benefit Donald Trump's election campaign) made you more reluctant to provide contact details or any other information to a DNO?

5: Thank and close