electricity north west

Bringing energy to your door

NIA ENWL018
Project Avatar

Progress Report

31 July 2019

VERSION HISTORY

Version	Date	Author	Status	Comments
V1.0	30.06.19	Geraldine Paterson / Tracey Kennelly	Final	

REVIEW

Name	Role	Date
Lucy Eyquem	Innovation PMO Manager	03.07.19
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APPROVAL

Name	Role	Date
Steve Cox	Engineering & Technical Director	29.07.19

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GLOSSARY

Term	Description
AI	Artificial intelligence
CEP	Customer engagement plan
DNO	Distribution network operator
DPS	Data privacy statement
ECP	Engaged customer panel
GB	Great Britain
IPR	Intellectual property rights
MVP	Minimum viable product

1 PROJECT FUNDAMENTALS

Title	Project Avatar
Project reference	NIA_ENWL018
Funding licensee(s)	Electricity North West Limited
Project start date	October 2016
Project duration	5 years 2 months
Nominated project contact(s)	Geraldine Paterson (innovation@enwl.co.uk) Tracey Kennelly (innovation@enwl.co.uk)

2 PROJECT SCOPE

Engagement with Electricity North West customers, GB suppliers with learning applicable to all licensed operators

Experts: consultation with a range of specialist service organisations and manufacturers of innovative technologies and relevant trade associations.

Customer engagement: research across the full range of Electricity North West customers: domestic and commercial customers with specific quotas on sub-segments including, but not limited to, urban, rural, the young (18-24 years) and customers who have made previous contact with their distribution network operator (DNO).

Employee engagement: frontline Electricity North West customer service teams.

3 OBJECTIVES

Delivering customer interactions in a technologically advanced seamless system manner will only impact on the costs and quality of a system operator's operations if the customer responds positively to that interaction.

- To broaden the level of understanding concerning customer service needs and future expectations.
- To have a robust measure of anticipated future attitudes, behaviours and needs by customer segment.
- To integrate customer research with existing service provisions and innovative solutions to optimise a customer service approach, enabling a strategy for DNOs to meet the future needs and expectations of its customer base.
- To facilitate the creation of bespoke customer service solutions targeted at specific customer groups to meet their unique medium- and long-term future needs.
- A blueprint for implementing bespoke customer service solutions incorporating a link to network control systems and data.

4 SUCCESS CRITERIA

The project success criteria are:

- An understanding of current and future customer service needs and how unmet needs might be addressed.
- Identification of a range of innovative solutions that best meet customers' increased servicing expectations.
- Reactions to mass customer contact capabilities and identification of the optimal strategy in terms of automation and interactivity.
- An appreciation of the variations in acceptability and applicability of innovative technologies and solutions across key customer segments and groups.
- A customer service blueprint, which incorporates data from existing network control systems, to best meet existing and future needs of specific customer groups and leverage higher levels of customer satisfaction.
- A demonstration of how innovative technologies and solutions can assist DNOs to better plan their customer investment strategy.

5 PERFORMANCE COMPARED TO THE ORIGINAL PROJECT AIMS, OBJECTIVES AND SUCCESS CRITERIA

The key findings from the development of the prototype solutions and learning from testing these with customers will be published in two separate reports on the project webpage.

The key outcome from the exploratory research with customers is that they are generally open to emerging technologies with the caveat that they must add value, improve the customer experience, and that customers must ultimately have control over the extent to which they engage with the technology. Critically customers expect to have control and 'opt in'/consent to the harvesting of any personal data, they also expect to be informed about how this data is used, to feel comfortable with the platforms and technologies with which they interact.

5.1 Summary of feedback

Prototype 1 - Smart home hub. This had general appeal and, whilst currently outside a DNOs licence conditions, was seen as an extension of how smart meters might potentially evolve to interact with smart technology platforms such as Hive. Most participants liked the idea of being able to easily access data about how much energy they were using, down to device level, and how this had changed over time.

In common with current considerations around smart meters, customers generally felt that data collected by the smart hub should only be shared with their DNO with their explicit consent; that data should preferably be transferred at an aggregate level and there should be clear understanding about what the data would be used for.

Prototype 2 - Chatbot. This concept, based on artificial intelligence (AI) was also favourably received. Whilst most customers initially expressed a preference to speak to a person they realised its potential in certain circumstances, for example, allowing mass communication to large numbers of customers simultaneously ie updates during supply interruption. This was recognised as being a significant advancement for effective communication during large scale events and an advantage over traditional telephone messaging systems. The panel recognised the value of AI to both DNOs and their customers when tailored to the personal

needs of the individual and understood the benefits to vulnerable customers. Furthermore, millennials who tend to be more accustomed to technologies such as web-chat, reported that they are now more comfortable communicating in this manner than speaking to a person.

Business customers expressed concerns about the ability of AI platforms to provide an adequate response, with the level of detail required to address complex queries but recognised that AI is continuously evolving and that organisations, across all sectors, are investing heavily to extend its capacity to handle complex issues.

Prototype 3 - Control centre hub. This was presented and understood by participants as representing the potential capabilities of the 'next generation' version of network management systems. The platform demonstrated how this would integrate real-time technical and customer data to improve customer servicing offerings, which would allow DNOs' customers to access real time data from prototypes 1 and 2.

The prototypes developed during the initial state of this project, specifically artificial intelligence (AI), were positively received during the focus group. This learning suggests that AI would be acceptable to customers and there is a compelling business case and direct customer benefits from implementing a scalable digital labour force.

Based on this the Avatar project has been extended to facilitate a limited trial of an AI platform within the existing welfare process. This provides an opportunity to assess the business and customer benefits and potential challenges arising from such a platform.

5.2 Virtual Worker Trial

As part of customer vulnerability commitments, DNOs must maintain the accuracy of the Priority Service Register (PSR), which is used to identify customers' requiring additional support during an outage. This dictates regular contact with customers registered on the PSR database. Increased communication and focussed awareness campaigns have seen a significant acceleration in the amount of priority service registrations and the Electricity North West register currently contains over 844,000 records. The register requires enormous human effort to manage, and it is recognised that emerging technologies could provide a more efficient method to maintain the accuracy of our records.

We recognise that any new technology capable of improving the management of the welfare process is not solely focussed on solving the issues we face today, but provides a future-proofed platform to sustain operational growth, without introducing concerns on operational impact. The trial is also expected to highlight existing and future opportunities for extending a virtual workforce to automate other business processes to improve the efficiency of our workforce and ultimately enhance the services we are able to offer to our customers.

We completed a procurement exercise and Codebase8 have been appointed to integrate an intelligent automation platform to data cleanse the PSR register to support the welfare process. This platform is based on the 'Thoughtonomy' product, which will integrate two virtual workers to automate the data cleansing operation and run the ongoing process.

The Virtual Worker element of the project has now reached the definition phase, where the Priority Service Register processes are analysed in order to define an agreed set of business requirements and business rules for the automated process. A project initiation session was held with Codebase8 to ensure a common understanding of the scope of the project, and agree the project approach. We have demonstrated the as-is business process in order for Codebase8 to document an agreed storyboard and scope statement. Once the storyboard is agreed we will start the Automated Process Design phase of the project (a deeper dive into the business process).

6 REQUIRED MODIFICATIONS TO THE PLANNED APPROACH DURING THE COURSE OF THE PROJECT

The project team disseminated the learning to the Electricity North West's customer team, who recognised the value and the potential of new platforms to enhance current customer services.

On the basis of the customer feedback, the customer team suggested a trial deployment of Virtual Workers to support existing welfare processes, which could advance our customer service offerings. The innovation team felt that this would be excellent additional learning which could be delivered within budget but required an extension of the project by 24 months to allow for the development and subsequent assessment of Virtual Workers.

7 LESSONS LEARNED FOR FUTURE PROJECTS

The procurement process for services to provide new technologies, designed to integrate with existing secure systems, which hold extensive personal and sensitive customer data can be protracted and introduce time constraints in delivery.

8 THE OUTCOME OF THE PROJECT

Not applicable.

9 DATA ACCESS

Electricity North West's innovation data sharing policy can be found on our website.

There has been no data gathered during the course of this project. The project is purely gathering customers' opinions on the future of customer service.

10 FOREGROUND IPR

There is no foreground IPR associated with this project.

11 PLANNED IMPLEMENTATION

Not applicable.

12 OTHER COMMENTS

Not applicable.