

Smart St Neots: Discovery Phase

Report and Recommendations



Contents

1. Executive Summary.....	1
2. Methods of Engagement.....	2
How we engaged.....	2
Interactive Map.....	3
Initial Meetings	4
Events – Farmers Market	4
Events - The Smart Meetup	5
Events – Future Takeover	6
3. Summary Analysis of data gathered	7
Number of attendees at the events.....	7
Social Media Statistics (Facebook and Twitter)	7
Interactive Map Statistics	7
Audience Feedback from the Future Takeover Event	8
4. Proposed next steps.....	8
Projects	8
Further work with Collusion	9
The Neotists	9
Tie in with HDC initiatives	9
5. Project proposals	9
6. Conclusion and Outcomes	16
7. Appendices.....	17
Appendix A – Testimonials.....	17
Appendix B - Budget	19
Appendix C – Deployment of LoRa network in St Neots (Case Study).....	20

1. Executive Summary

In June 2018 Cambridgeshire & Peterborough Combined Authority launched the St Neots Master Plan, setting out their vision for the future of the town along with £5.8m of investment in initiatives aiming to pave the way for accelerated growth. As the largest market town in the County, significantly increasing the GVA of St Neots makes an important contribution to the Combined Authority's target of doubling GVA across Cambridgeshire within the next 25 years. Smart St Neots is one of the key projects announced in Phase One of the Master Plan, with the intent of launching and testing the smart cities agenda in market towns.

Launched in September 2018, the purpose of the Smart St Neots Discovery Phase has been to work with the community to identify and co-create possible technology and data solutions to help address challenges identified in St Neots plans. Examples included Car Parking and Connected Public Transport from the Masterplan, and Flooding identified in the Neighbourhood Plan. Over the last six months, events have been carried out engaging with the local community, examining their opinion of the challenges the town is facing and working with them to understand how data and innovative technologies could offer solutions to reduce the impact of these challenges on the growth and development of their town.

Collaboration with a range of public and private sector partners has allowed the project to hold two very successful weekend engagement events, gathering feedback and input from the community. The enthusiasm in the town for this initiative has been considerable, demonstrating that the community feel a real desire to improve their town and community and make it a better place to visit, live and work.



Local residents participating in the Smart St Neots Future Takeover Event (photos provided by maciekplatek.com)

It is a central aspect of the Smart Places work to excite and encourage people to get involved in shaping how they can better connect with where they live, which often appeals to younger people who have not previously been active in town/city life. For St Neots this approach aligned with the findings of the Masterplan that the burgeoning demographic of professionals working in knowledge-intensive and creative industries should play an important role in the town's future economy, rather than primarily as out-commuting residents. It was a positive early output of this project to be able to support a St Neots' based Internet of Things (IoT) start-up to deploy the first iteration of a sensor network across the town.

This document represents the final milestone of the Discovery Phase. It provides an overview of the work that the Smart Places team have carried out, explanations of the goals and outcomes, the methodologies used and an analysis of the data collected. The final sections of the document offer

proposals for future projects that could be implemented in the town to answer some of the issues that have been raised.

The proposed projects are varied and build on collaborations started within the discovery phase. These partnerships will enable the projects to be delivered more effectively and with greater impact than could be achieved individually.

Throughout this process, the team have been reminded by the St Neots residents of the importance of this work to their community. By putting forward project proposals and suggesting next steps in this document, the Smart Places team hope to ensure that the significant momentum established by this engagement is not lost.

2. Methods of Engagement

The Smart Places team aimed to engage with the St Neots community through different media channels and events. Each engagement has had a different agenda, but all aiming to promote the Smart St Neots initiative and ensure the community are aware and involved.

How we engaged

The Smart Places team wanted to include as many community members as possible in this initiative, covering different demographics and working to gain engagement from those who would not normally have contributed. Our leaflets, posters, workshop collateral, websites, social media presence and banners offered a professional design that was easy to read, had a common theme and provided a recognisable brand.

Leaflets were distributed to around 13,000 homes in the St Neots area, introducing the work, providing ideas for discussion, asking for feedback, directing residents to our website for more information, and inviting people to attend our weekend engagement events. Leaflets were made available in the local cafés, library and Priory Centre and also offered an area for handwritten responses to be provided to ensure that those residents who prefer not to use online channels were given the chance to respond.



Fig 1: Smart St Neots Leaflet delivered to all homes

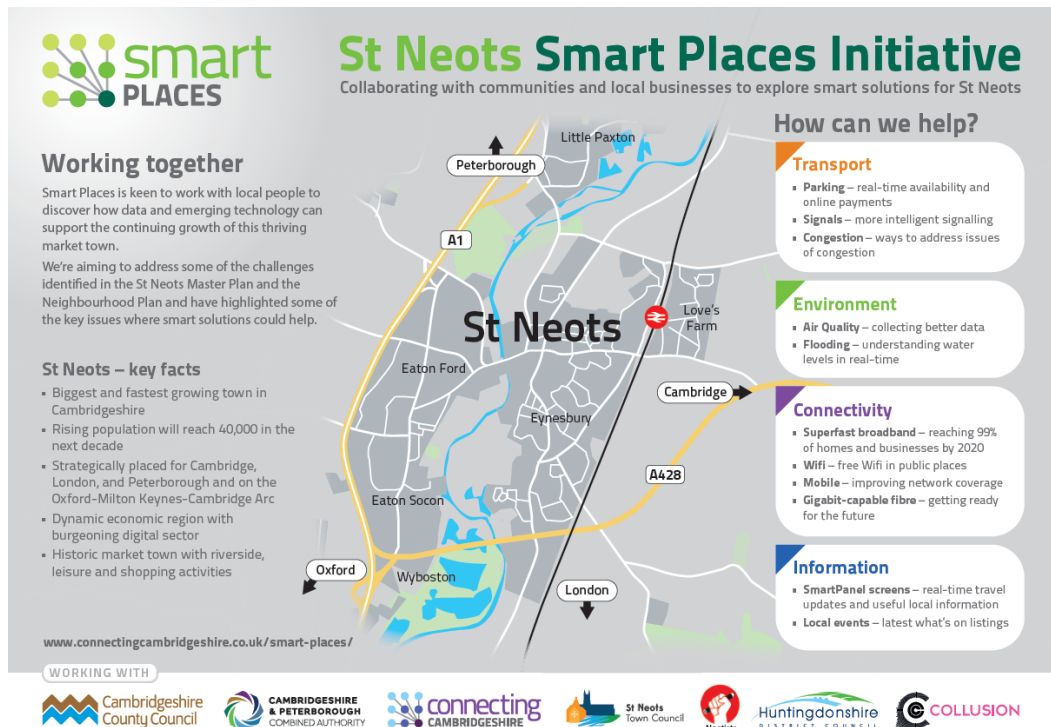


Fig 2: Smart St Neots Infographic

Targeted Facebook adverts were published ahead of the first event and event news was shared over Twitter, LinkedIn, local council and company websites and local media.

Interactive Map

Cambridgeshire County Council holds a licence for a tool called EngagementHQ. For this project, this tool was used to provide an interactive map of St Neots. The map is hosted on an externally facing website, allowing us to provide information, photos of events, updates and information on the project in a regular location accessible to all.

The map of St Neots was created and allowed residents to drop 'pins' onto areas of concern on the map and add comments regarding issues and potential smart solutions that could be implemented to combat the problems. This tool provides a very interactive and visual method of communicating with the community, and brought positive feedback from many individuals. Users specifically liked the fact that they could see what other people had contributed, and the team analysing the data were pleased with the analytic capabilities, which meant all data could be easily captured, recorded in one place and exported for use.

For future engagements, it may also be possible to extend the use of other features of Engagement HQ, such as surveys, quick polls and Frequently Asked Question categories.

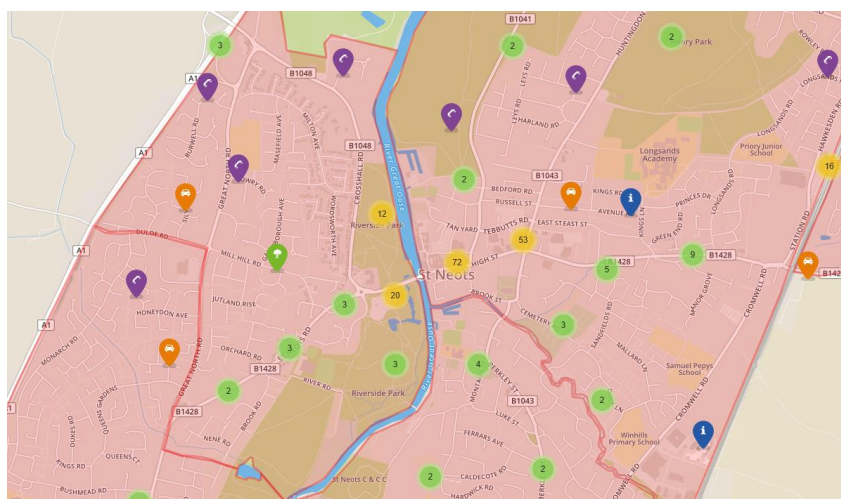


Fig 3: Extract of Smart St Neots Interactive Map

Initial Meetings

The Smart Places team scheduled meetings with a small number of community groups, councillors, residents and service providers in the town. These meetings were opportunities to talk about key issues, what sort of events would be well received by the local community and work that is already in progress in the town (to ensure that we did not duplicate efforts or contradict existing work). Carrying out these meetings early in the project helped to dictate the format of future events and engagements.

Events – Farmers Market

The Smart Places team shared a stall with the Combined Authority at the Farmers Market in St Neots on 27th October. Attending alongside the Combined Authority set the scene for the residents we spoke to, helping them to understand where the funding for this work came from and how it would fit into the Masterplan work. In addition, attending this event early in our project enabled us to engage with the local residents, handing out flyers, promoting the Smart St Neots brand and informing them of the programme of events planned for the remainder of the project, including the launch of the interactive map.



Mayor of St Neots, Barry Chapman lends his support to the Smart St Neots Initiative

Events - The Smart Meetup

The Smart MeetUp made use of a new café space that was due to open in the town. The event ran from 10am to 3pm on Saturday 10th November and over 40 residents came to discuss their concerns and ideas for the town, with the Smart Places team, who explained how technology and data may be able to help with innovative solutions to the problems that they see in the town.

Colleagues from Huntingdonshire District Council also attended, carrying out surveys to understand the local level of digital skills and helping visitors to enter their thoughts and ideas on the interactive map of the town.

All the feedback received on the day was added to the interactive map so that all comments were available to the community to review. In total there were more than 250 individual comments recorded



The St Neots Smart Panel Prototype, residents sharing their ideas and the most popular topic of the day



Events – Future Takeover

Created in collaboration with Collusion (a Cambridge-based arts and technology company) and local community group The Neotists, this three day event ran on Thursday and Friday evenings and all day on Saturday, and was attended by almost 200 people. The event focused on how creativity, data and emerging technology could support the growth of the town.

The event featured a wide range of speakers who looked at the role technology can play in creating a 'smart' market town. These included Sherry Dobbin (cultural strategist), Professor John Miles (University of Cambridge), John Taylor (Huntingdonshire District Council) and 15-year-old student Emily Stevens, who presented the youth vision for the market town that her generation will inherit.

Sessions explored the vision for expansion in the town and its creative sector, the positive impact technology could have on issues such as health, the future of transport, market town life and public services, and how residents can help drive these changes. The 'Future Town Fair' on Saturday showcased the talents of the local creatives, alongside workshops and virtual and augmented reality examples.

The event received positive press from the town and district councils as well as the Combined Authority. There was also coverage in the Hunts Post (St Neots pages), on Black Cat local radio and on the Love's Farm residents forum.

To see a film made by Adrian Storey (member of The Neotists) which provides on an overview of the Future Takeover event please click [here](#)



The Future Takeover Event saw different activities taking place over three days in the town (photos: maciekplatek.com)



3. Summary Analysis of data gathered

Number of attendees at the events

- Smart MeetUp: 40 people registered
- Future TakeOver: 193 people registered over 3 days
 - Thursday evening (43), Friday evening (41), Saturday (109)

Social Media Statistics (Facebook and Twitter)

A targeted Facebook advert was used to raise awareness for the Smart Meetup event. The advert was seen by almost 12,000 people in the local area and resulted in 258 clicks on the link for further information.

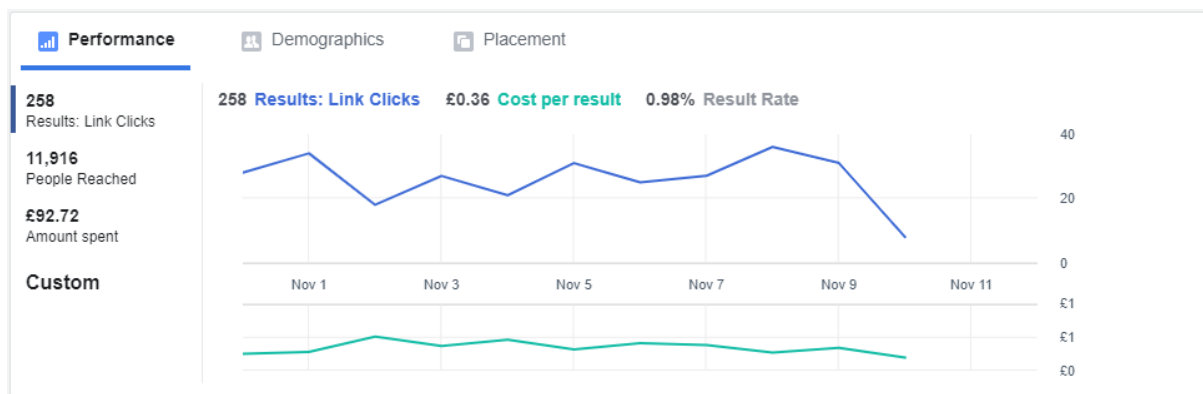


Fig 4: Facebook Ad statistics for Smart MeetUp

A further Facebook advert was run by Collusion for the Future Takeover event, costing £60 and reaching 10,382 people. Three events were also set up on Facebook with 92 responses.

Throughout the project we have also used Twitter to get news of our events out to the community. For the future takeover event, @in_collusion achieved over 36,000 impressions and @smartcamps achieved up to 4,000, generating 81 engagements.

LinkedIn was also used to inform the community and our networks about the work we have been doing in St Neots, generating shares and likes for the duration of the project. Collusion also collaborated with local entrepreneur Richard Wishart to start a conversation in the privately managed Cambridgeshire Business group for the Future Takeover Event, achieving 627 views overall.

Interactive Map Statistics

A total of 259 individual comments were received throughout the project engagement. Comments that were received during events, were added to the map separately to capture all the feedback in the public domain.

The feedback was split over 5 categories and the largest area of concern by a significant margin was Transport at 45%, with Information at 18%, Environment at 16%, Connectivity at 12% and other comments making up the remaining 8%.

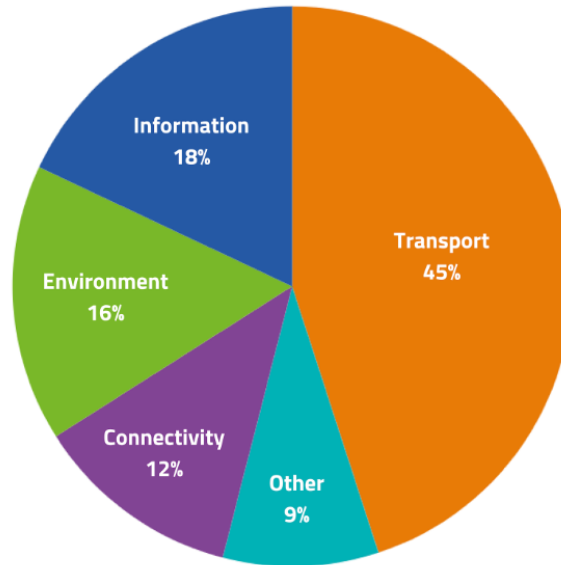


Fig 5: Analysis of interactive map feedback by category

Audience Feedback from the Future Takeover Event

During the Future Takeover events (Thursday, Friday and Saturday), Collusion carried out short surveys with the people who attended. 44 audience surveys were completed, representing a good return rate of 23% suggesting that the feedback offers a strong perception of the event overall.

The survey asked the audience to rate several factors out of 100 and the average results can be seen below across the categories:

Category	Description	Average %
Enthusiasm	I would come to something like this again	92
Local Impact	It's important that it's happening here	92
Venue/Catering	The venue/catering worked well for the event	90
Enjoyment	I had a good time	87
Discussion	I enjoyed the discussion	86
Captivation	It held my interest and attention	85
Speakers	I enjoyed the speakers (Thursday & Friday)	84
Distinctiveness	It was different from things I've experienced before	81
Future Town Fair	I enjoyed the Future Town Fair (Saturday)	80
Innovation	It introduced me to new ways of using technologies	63
Understanding	It gave me new understanding of art	60

4. Proposed next steps

Projects

Significant momentum has been built up in the town using the Smart St Neots Initiative, and our investigations have suggested that there are several projects which could be initiated in the town in response. Each project builds on one or more of themes discussed and can be directly linked back to feedback received during this work. The projects range in complexity and cost, and can be executed by one or more of the partners that have been involved with this project. By using the branding already established, we could run the future projects and demonstrate a clear link between what the

residents told us, and the work we are carrying out. If the community are to remain engaged, it is crucial that the Steering Group demonstrate that they have listened and responded to the feedback, rather than let this opportunity pass by.

Further work with Collusion

In order to maximise the funding available for events in St Neots, Smart Cambridge agreed a match fund with Collusion. The result of this was the three day Future Takeover Event, which included five specialist speakers across the Thursday and Friday evening events. The response received by Collusion was extremely positive and they are keen to carry out more events in the town to build upon this success.

The Neotists

The Neotists (a group of creatives in St Neots) work closely with the Town Council and provided significant input to Collusion in planning and raising awareness of the future takeover weekend events. They have developed a Community Interest Company (CIC) called Seriousabout within the town that aims to develop community led projects to improve the quality of life for residents including a local app to give residents better information and 'nudges' to use the high street. This CIC would provide a strong partner in the local community to work with to implement change driven by the community themselves, and may also open up additional funding opportunities.

Tie in with HDC initiatives

Huntingdonshire District Council (HDC) is focusing on delivering digitally for those who want to interact or access traditional council services using the website or App based technology. Work currently in progress to deliver this could be integrated with the Smart St Neots initiative to deliver on comments received during the engagement.

The most relevant, is their work to digitise and assist residents with accessing services online through a customer portal named One-Vu. One-Vu will allow customers to view, track and provide updates on applications/requests they have made to the council. Launched in 2019, Benefits have been integrated and Council Tax should be integrated by the end of March with further services to follow.

The 'soft' launch of the One-Vu portal attracted over 500 people to register, with almost 50% of these doing so out of hours. These figures reinforce the message from the local community that was received during this engagement highlighting the need for a digital solution enabling council services to be delivered in a more flexible way to those who wish to use it.

HDC is also currently developing an online advice directory which will be piloted by a GP Surgery in St Neots. This concept arose from research that showed approximately 40% of visits to GP surgeries are for non-medical related issues and GPs are well placed to refer people onto other services. Such information could be coordinated into the project to create a local app which is discussed in Section 5 of this report.

There is a potential for information available from HDC to be used in a number of the projects proposed in this report, along with the skills of their transformation team.

5. Project proposals

The purpose of this discovery phase has always been to answer two key questions:

- Could data and technology solutions support the growth of St Neots and assist in some of the challenges associated with growth?

- Is there an interest in the community around having these solutions?

Our engagement activities and the data shown in Section 3 of this document demonstrate that the solutions could offer support and also that the community have an interest in seeing such deployments as part of the investment in their town.

With this in mind, the Smart Places team have created proposals for projects to be run in the town. These are defined in the tables below and are proposed on the basis of several factors including:

- Feedback received from the Smart St Neots Initiative
- Projects in progress with various partners such as CCC, CPCA and HDC
- Local projects in progress (e.g. through The Neotists)
- Where investments would lead to the greatest impact being achieved
- Leveraging project already developed in other areas

Title:	Town Centre Internet of Things (IOT) Deployment Project
Feedback Answered:	<p>This project will address feedback received across multiple categories including:</p> <ul style="list-style-type: none"> • Concerns over air quality (AQ) in specific areas of the town • Appeal of the high street and town centre, restricted by current traffic volume • Water levels and flooding at Little Paxton bridge and by the riverfront • Safety concerns for volume of non-car traffic (such as bikes and pedestrians) • Real-time availability of parking spaces around the town centre and train station • Improve understanding of the movement of public transport and look to give people better information
Overview:	<p>As part of the Future Takeover event, the Smart St Neots Initiative provided £2,000 funding to an IoT start-up based in St Neots, called CThings. This funded the deployment of a LoRa (Low Power Long Range) network in the town along with several sensors. These were used to gather data which was shown at the event including: water and noise levels and air quality.</p> <p>There is the opportunity to now extend this newly established network to a level where smart data is used within St Neots to build functions which support residents and visitors to better interact with and experience the town centre, and for local authorities and developers to manage growth policy and delivery using smart data.</p> <p>This project would build on the capability that has been established in the town to extend the sensor network and develop APIs that would allow data to be collated in a central hub with controlled public access. This hub could also be developed to make the data available to local businesses/individuals who wish to build applications for use in the local community.</p> <p>We would look for the sensors to inform engagement with the community, support policy and project development and monitor and measure the impact of new schemes and developments.</p>
Proposed Method:	<p>There are two potential methods proposed for this project:</p> <p>Fully fund the process: This would include funding for purchasing, deploying and maintaining the sensors. Working with a partner on a data hub solution (potentially making use of the existing Cambridge hub), publicising the work and enabling data to be made available for users.</p> <p>Fund education: This would provide funding for the community to be educated on the availability of the system and how it can be used, how they can deploy their own sensors and be responsible for the data. Benefits include making this community owned, increasing awareness in the town (hopefully leading to changes in behaviours re: AQ etc.). However, it may also be necessary to provide some level of investment into the LoRa network to support additional sensors. Some hours would also be needed to liaise with data hub providers (UoC)</p>
Timeline:	<p>6 months set up phase, covering deployment of sensors</p> <p>1.5 yrs of operational use</p>

Outcomes	<ul style="list-style-type: none"> • A sensor network that can be used to monitor indicators of issues that help residents navigate and interact with the town, particularly supporting better interaction with the centre • A data hub that could allow local data to be made more widely available to the community • Information that could be used by HDC, CCC and CPCA • Could enable measuring the impact of new infrastructure, such as the new bridge in the town • Could contribute traffic flow data that can inform policy decisions • Measure and Monitor work as Wintringham Park is developed • The solution could be community owned based on decisions made on the design and specification of the sensors, network and data analysis
----------	--

Title:	Digital Provision of Community Information
Feedback Answered:	<ul style="list-style-type: none"> • One place where you could look for up to date local event information • Travel information including real-time bus and parking information • Phone apps for bin collection dates • What's On display boards • Interactive apps for local events • Independent shop incentives (Get the 3rd free etc.)
Overview:	<p>Comments on information in the town made up 18% of the feedback that we received. The local residents are aware of various community pages, Facebook groups, posters etc. that offer information, but the general feeling was that these were disjointed and often out of date. One place to visit for information would be a significant improvement. Residents also asked for information on travel times, parking spaces and bin collections.</p> <p>Several groups are already working on projects in this area including: MotionMap, Digital Wayfinding and Smart Panels developed in collaboration with Smart Cambridge offering journey planning and real time information on your phone and on large screens. HDC are looking at Digital Services, investigating a customer portal that will offer residents information on services online and connections to other organisations (such as CCC) if the request is outside their remit.</p> <p>This project would investigate ways in which ongoing/planned work in this space could be combined to deliver multiple pieces of information including event data, incentives for people using local independent shops, travel information etc. consistently in one place. This would be coordinated through the Neotists who have begun work on such an application via their CIC.</p> <p>There was also interest in totems/screens that would give information about what's on and travel information in key parts of the town.</p>
Proposed Method:	<p>Part One: Evaluate work in progress and available options. Gain an overview of work being conducted by relevant parties such as CCC, HDC and the Neotists. Assess what information can reasonably be provided in one location and develop a requirements specification and project plan for the application alongside partners</p> <p>Part Two: Develop the solution identified. If required, develop and deploy Smart Panels in Council locations in St Neots, integrate existing work into the new solution as appropriate and deploy the Motion Map app which may require some further development work</p>
Timeline:	<p>Part One: 3 months</p> <p>Part Two: Dependent on the specification from Part One</p>
Outcomes	<p>Part one:</p> <ul style="list-style-type: none"> • An understanding of what is already available and the potential ways to maximise the benefits by bringing them together in one specific platform <p>Part two:</p> <ul style="list-style-type: none"> • Community driven information solution combining the best available data from several sources that could also be used to drive incentive schemes in local stores, supporting the high street and strengthening the community

Title:	Mobility
Feedback Answered:	<ul style="list-style-type: none"> • Traffic flow through the town is poor especially at peak periods • Air quality is impacted by congestion in the High Street • More information on congestion/flooding is needed • Improve the appeal of the market square by making it pedestrian only • Poor rural transport into the town
Overview:	<p>45% of the feedback that we received related to transport, making it by far the largest area of concern to residents. While making large scale changes may require significant funding and infrastructure change, it is important that we investigate possible solutions for the town.</p> <p>Technology and data will allow us to better understand movement within the town and identify where there are issues. This will then inform interventions which may range from better use of signals to digital signage (VMS) or better parking systems.</p>
Proposed Method:	<p>By collecting data we can better understand movement within the town, identifying where there are issues with flows and begin to understand how parking is used. This would inform the Transport Study that has been commissioned. We would propose to collect data through sensors deployed on existing street furniture (as appropriate) and making use of the LoRa network.</p> <p>The study would then recommend solutions to be implemented. This could include optimising the signals infrastructure, better network management through digital information, 'smart' parking solutions etc.</p>
Timeline:	<p>Initial deployment of sensor solution: 6 months</p> <p>1.5yrs of operational use, likely feeding in to the St Neots Transport Study</p>
Outcomes	<ul style="list-style-type: none"> • Supports the decision making as part of the wider transport study • Further outcomes will be defined as a result of the transport study

Title:	Improving Connectivity Options in St Neots
Feedback Answered:	<ul style="list-style-type: none"> • Provide better coverage in public spaces so traders can use card machines • Installation of better connectivity on new developments • Poor mobile phone coverage in some areas • Need for gigabit networks to support economic growth • Make digital classes and equipment available
Overview:	<p>Over the last decade there has been an exponential growth of digital technology, which now underpins almost all aspects of modern living in every sphere across work, travel, leisure and health. Increasingly it impacts on the economic strength, sustainability and quality of life of all parts of the UK and beyond. As a consequence Internet access is now widely viewed as “the 4th utility”.</p> <p>Although Superfast broadband provision has improved, mobile coverage for voice and data (2G and 4G services) across parts of the county is poor and remains a subject of widespread concern amongst businesses and communities across the county.</p> <p>To support residents, visitors and businesses the Smart Places programme will work with Connecting Cambridgeshire to deliver better connectivity (mobile and public access wifi) within the centre of the town to support traders being able to use mobile payment devices, allow visitors and residents to access app’s and information on their phones and to support economic activity.</p> <p>An ambition of the town is to deploy gigabit fibre to support the development of advanced manufacturing and tech companies. The Smart Places team will continue to explore opportunities particularly with some of the new entrants to the connectivity market.</p>
Proposed Method:	<p>Public Access WiFi as part of Connecting Cambridgeshire</p> <p>Raise gigabit connectivity with partner organisations via Connecting Cambridgeshire</p> <p>Mobile coverage survey in progress</p> <p>Work with the library, St Neots Time Bank and Social Services to assist with lessons and engagement with the community to enhance digital skills</p>
Timeline:	<p>Public WiFi deployment:</p> <p>Planning: 2 – 3 months</p> <p>Deployment: 2-3 months</p>
Outcomes	<ul style="list-style-type: none"> • Provide improved connectivity in the town to enable further growth both economically and socially • Provide opportunities for users that may not currently have the knowledge or means to access digital solutions

6. Conclusion and Outcomes

The level of participation shown by the local community for the Smart St Neots Initiative has clearly demonstrated that they are highly engaged and keen to see improvements within their town. Residents have taken the time to attend events, followed the initiative on social media and have contributed their thoughts and aspirations for how the growth of the town can be supported by smart technologies and use of data.

As outlined in Section 5, collaborating with other local authority partners, local groups and national funding opportunities offers a number of options to increase the return on the investment put into the projects by the Combined Authority, and to increase the positive impact that future projects may have on the town and its growing community.

The projects suggested would build on the momentum gained through the St Neots work and would support the Combined Authorities work in delivering the St Neots Masterplan. The work would also see St Neots become a leading 'Smart' market town and create a model for how technology and data can support the development of Market Towns across Cambridgeshire and scale to other towns in the UK.

7. Appendices

Appendix A – Testimonials

Smart Meetup Event:

Cambridgeshire County Councillor David Wells, Chairman of the St Neots Masterplan steering group, said: “St Neots is leading the way for our new Smart Places Initiative, which is exploring how we can use technology and data to support the growth of the town and create a better place to live. We’ve had lots of great suggestions and look forward to working with the community and local councils to take them forward.”

Huntingdonshire District Councillor Darren Tysoe, Executive Councillor for Digital and Customer, said: “This first Smart St Neots drop-in event gave residents and visitors a chance to share ideas and comments around issues they face in the town, and they didn’t disappoint. They gave us valuable insight into what is important to them and how becoming a Smart Town could benefit them. This event was just one of several planned events and it was good to have such a solid start to the initiative.”

Mayor of St Neots, Councillor Barry Chapman, said: “The Smart Town event was an amazing success because so many took time out on a Saturday to share their ideas and interests in how St Neots could become an even better place to live. My thanks to the Combined Authority Officers who now have the daunting task of collating resident’s valuable contributions.”

Future Takeover Event:

St Neots Town Councillor Cllr Ben Pitt said: “It was no surprise to hear some big ambitions for St Neots, but what really struck me was the shared vision to make our town a thriving hub for the arts, media creation and digital innovation. There was a genuine buzz, a sense that this was the start of something big.”

Huntingdonshire District Councillor Darren Tysoe, Executive Councillor for Digital and Customer, said: “It is important that we give our residents every opportunity to share their views and help shape the future of a Smart St Neots.

“It was great to see so many people taking part, and very encouraging that the residents feel so passionately about helping to develop exciting plans for the future of this creative and dynamic market town.”

Fiona McGonigle, Business Skills Manager at the Cambridgeshire & Peterborough Combined Authority said: “We work with all the partners who were showcasing their brilliant initiatives to highlight the importance of digital technology within the Combined Authority area.

“The day created opportunities to give people an insight into the digital and creative sector bringing digital experts and residents together to give an understanding of new technologies.

“It was an excellent event that created a real buzz in showing the possibilities for St Neots to become a Smart Town which is a recommendation within the Market Town Masterplan.”

Feedback gathered by Collusion at the Future Takeover

“An inspiring evening”

“Please come back and help us create these things to reality. You all are up on vital community stuff. Thank you!”

“Really positive event thank you”

“Enjoyed the opportunity to talk to people with ideas for the future and to put forward ideas myself”

“Day two was as good as day one”

“As a Neotist, I think these events are great for showcasing the creativity of my home town”

“Needs to lead to action. Vitality of town centre is key - should be hub of community”

“have an ethical hacking session!!!”

Appendix B - Budget

The budget for the work was set at £30,000. As defined at the start of the project, the costs have been invoiced to the Combined Authority in two payments of £15,000. One at the mid-way point of the project, and one after the final event. The funds have been used in three main areas as identified below:

Man hours spent by Smart Cambridge (inc. expenses) for:

- Project Manager
- Programme Manager
- Communications Manager
- Administrative Support

Events:

- Smart Meet-up: Venue hire and catering
- Future Takeover: Catering, Speaker costs, sponsorship of a LoRa network and sensor deployment in St Neots used to provide input for the event (match funding of £5,000 to the £10,000 contribution Collusion)

Marketing:

- Design and branding of materials including: Infographic, banner, leaflets and posters
- Printing of collateral
- Distribution of leaflets to all homes in St Neots (carried out by a local St Neots company)
- A targeted Facebook campaign

Appendix C – Deployment of LoRa network in St Neots (Case Study)

cThings showcases technology at St Neots Future Takeover

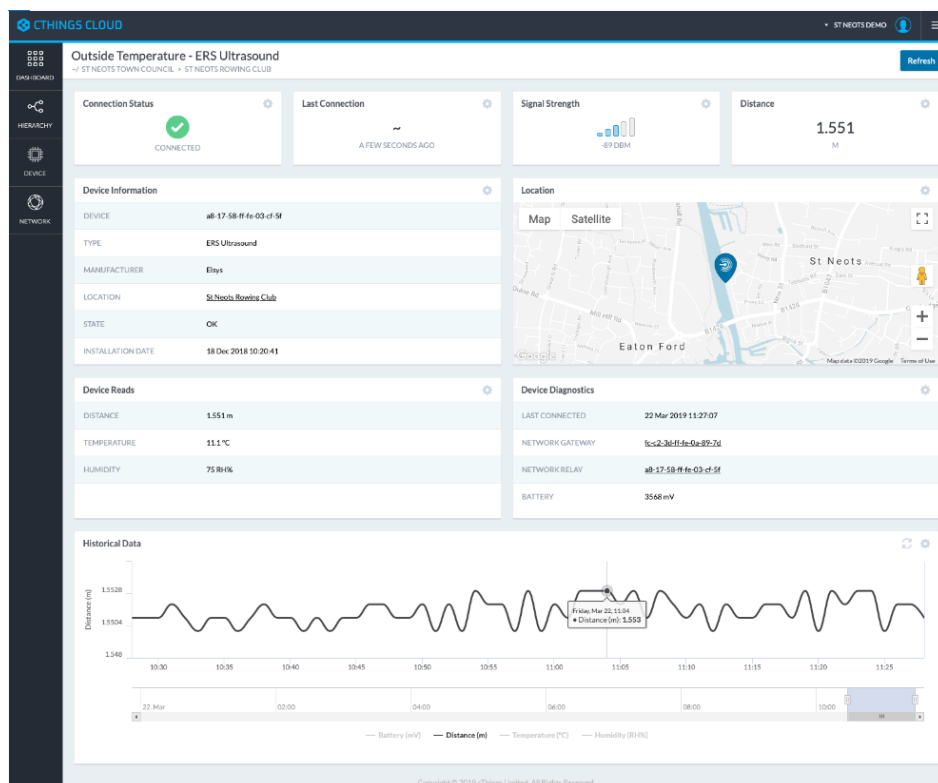
In January 2019 cThings showcased their technologies as part of the Smart St Neots event, demonstrating how the internet of things can make towns and services smarter through the use of technology.

As part of the event a LoRaWAN network was deployed using a single LoRaWAN gateway which enabled a variety of environmental data to be collected from around the town. The LoRaWAN network was made available to any resident who wished to collect sensor data and the resulting data would be available via the cThings API. The network coverage included the town centre, Eynesbury, Eaton Ford, Eaton Socon and Little Paxton, enabling comparisons of environmental conditions across each of the areas of St Neots.

To demonstrate the potential for environmental data at the future takeover weekend cThings deployed a series of sensors; CO2 sensors to measure air quality, ultrasonic sensors to measure river levels and room sensors to measure occupancy and utilisation of local facilities.

The CO2 sensors were placed around the town in open spaces as well as in the market square. The sensors located in the built up areas showed trends of increased CO2 during peak commuting times and a significantly higher amount of CO2 than the green areas of the town.

The river level monitors provided real time information regarding the water level and could be used to provide flood warnings to residents. During the period in which the devices were installed, the water level was seen to change. This change was mapped against rainfall to highlight the relationship between the two factors. In the future this information could be advantageous for the management of river levels.



The last category of cThings sensors that we demonstrated were our range of room sensors. These sensors measure environmental conditions of properties as well as their occupancy. One sensor was installed in the home of a local resident in order to demonstrate how the data from the sensor (humidity, temperature, etc.) can be used to ensure better quality housing. The cThings portal automatically triggered alerts to the resident to notify them of the risk of damp or if the CO2 levels in their home had become too high.

The room sensors were also used to count the number of people visiting the takeover event. This concept of population counting could be expanded and be used to automatically record how many people are using public facilities during certain times to allow for better planning of services.

The data that was recorded from the event has been securely stored within the cThings database and can be made available to any interested parties. We have around a month (January) of the CO2 data, two months (January/February) of the river monitor and a week of the other data.

A big part of the weekend was to try and encourage residents of the town to think about how the technology could be used. A number of residents expressed significant interest during the weekend and subsequently contacted us to further explore their ideas. These included:

- Monitoring the Little Paxton Bridge. One resident has a website that provides information on the status of the Little Paxton Bridge (open or closed). We explained that a device could be used which would provide the real time status of the bridge rather than the website being manually updated by the resident.
- Monitoring Air Quality at the Local Schools. We had multiple residents express interest in the monitoring of the air quality near schools and nurseries in the town.
- Monitoring the Water Temperature and Flow of the River. We have a number of members from groups who use the water (river swimmers, rowers) who were interested in monitoring the temperature and flow of the river for safety reasons.
- Pest and Waste Control. A resident enquired how technology could be used to reduce pests.
- Parking Availability. We had a number of residents asking whether the technology could be used to monitor parking.

Regarding the above the deployed LoRaWAN network could be used to demonstrate all of the above ideas.

- We are already planning to install the devices to monitor the Little Paxton Bridge and then the website will automatically check the status and update itself providing real time information.
- To monitor the air quality around schools would be relatively simple to undertake. Each sensor would cost circa £200 and the data would be made available on our portal as well as via our API for analysis.
- A sensor could also be installed to monitor the temperature of the water. This is of interest to the rowing club who would be interested in using this information for safety. The river level could also be monitored through a similar device. The cost would be circa £140 per device.
- Regarding pest control we have the option to provide smart rodent traps which notify when they have been triggered. Again the cost per device would be around £120. Linking to this the residents also complained about overflowing bins. We have devices which can monitor the level of bins for around £100. This information could then be used to trigger bin collection rather than fixed collection cycles.

- Similarly we have parking space sensors which fix to the parking bays and report when they are occupied. These sensors cost around £170 each which will probably make them too cost prohibitive to install but they may be of interest for demonstration.