

# SMART FINTRY

## Lessons Learned Report

### Project Details

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Project Manager: Catherine Cooper

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Compiled by Jackie Smith

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## 1. Introduction and Background

The Smart Fintry project, following best practice project management methodology, held a lessons learned workshop with attendees from all the project partners on the 21<sup>st</sup> of March 2018. The event was hosted by Fintry Development Trust in the Squash Courts of Fintry Sports Club and facilitated by Jackie Smith of Veitch Cooper Ltd.

Workshop Attendees:

Organisation	Project Member
Veitch Cooper	Catherine Cooper
Good Energy	Antoine Khalife
FDT	Matthew Black
Veitch Cooper	Maxine Frerk
Energy Assets	Rob Edwards
Heriot Watt University	Andrew Peacock
FDT	Gordon Cowtan
Energy Assets	Alan Jones
Veitch Cooper	Maggie Laidlaw
FDT	Kayt Howells
Local Energy Scotland	Iona Hodge

The workshop objectives were to :

- reflect on the last two years of the project
- Capture our lessons learned
- Share our successes
- Consider what we could have done differently
- Consider elements which should be taken forwards to year 3 of the project

This report summaries the findings from the workshop.

### 1.1. Method

The workshop began with a recap of the original Smart Fintry project objectives and aims and the scope of each of the innovation work streams.

Three working sessions were then facilitated covering the following topics :

- Project Management, Planning, Governance, Team Working and Communications
- Overall solution – technical and operational , the solutions we implemented and the approaches we took
- Customer and Community – the impacts on them and their experiences

Each working session explored:



The attendees were asked to capture their feedback on post it notes and place on the magic whiteboard on the squash court walls. Once the feedback had been posted we discussed as a group the key themes, how we could improve areas and collected suggestions for areas to take forwards into Year 3.



Figure 1; Smart Fintry Project Partners Lessons Learned day in the Squash Court

## 2. Workshop Outputs

### 2.1. Session 1; Project Management, Planning, Governance, Team Working and Communications

The first working session explored the way the project was managed including its overall Governance, planning approach, project tools, working and communications methods.

The workshop attendees were asked to place post it notes on the magic whiteboard to represent their views on: what went well and they would repeat and what challenges were faced and things which could have been improved. The group then came together and started to group the post it notes into key themes and discuss them in more detail.

The following key themes emerged from the discussions:



Figure 2; Lessons Learned key themes within Project Management, Planning, Governance , Team working and Communications

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### 2.1.1. The areas the workshop attendees felt had gone well were:

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#### The team itself

- The team enjoyed working with each other and felt that there was a really strong bond
- It was appreciated that although there were tensions and differences of opinion at some points the team were able to resolve them quickly and move forwards
- The team was described as approachable , friendly , and they liked the informality
- Thought that the team had good communications
- Team benefited from described Roles and a shared aim and goals

#### Response to Challenges

- They liked the fact that the Team was able to adapt to changes and challenges
- Described as being very good at finding work arounds and solutions to things which at times seemed really difficult.
- Really innovative – loved to find new ways.
- Managed scope despite the fact that the group liked to discuss alternatives and new ways

#### The Supporting Project Processes

The non-glamorous side of project support was recognised as being easy to deal with, having strong processes “which just worked”:

- Grant Claim process was easy
- Finance was well managed
- The Legal processes went well
- General Agreement was good and helped everyone to know what they were responsible for agreeing
- The use of plan Milestones was easy to follow unlike the overall project gantt chart

#### Weekly Project Calls

The project held weekly calls throughout the two years. In year 1 the calls were arranged around the key work streams and in Year 2 they were around the overall project management and the operations side (installations and customer service). The calls were hosted using Go to Meeting so participants could either dial in via phone or computer.

Due to the geographically dispersed nature of the project team the Go To Meetings were the easiest means of getting the team together.

The Year 1 workstream weekly meetings were praised as they had:

- Strict agendas
- Strict actions logs which were maintained and kept up to date

### Face to Face Meetings

The workshop participants felt that the meetings which were held face to face were highly beneficial despite the difficulties in logistics and the expense of travelling.

- The Steering Group meetings which were held quarterly were far more productive when they were held as face to face meetings.
  - The group benefited from visiting each other's offices
  - Provided vital bonding opportunities
- They liked the Year 1 Planning meeting which was held in the squash courts in Fintry
- Enjoyed the innovation planning session which was hosted by Good Energy
- The individual innovation work streams benefited from hosting face to face sessions for planning and solution exploring

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### 2.1.2. The areas the attendees felt could be improved or caused challenges:

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#### Virtual Working

The team were dispersed across the country from Blackburn to Chippenham to Alloa and Fintry.

- The weekly calls were felt to be useful but at times the technology did cause issues with drop outs and difficulty hearing participants.
- Face to face time with partners was viewed as vital both for bonding and to help quickly resolve challenges and issues
- The group felt that they would have benefited from more face to face meetings

#### Record Keeping

The project used Basecamp to store all its documentation and Team Gantt to store the project plan, both of which are online tools.

- As the project progressed Basecamp was not being updated properly and the file structure became messy.
- Many project partners stopped using it and only the project manager was regularly updating it only to find people had not read or looked at new documents.
- No training was provided on the tools and in some cases new joiners to the project were not provided with access to the tools.
- Consistent document standards were not enforced

- Towards the end of the project the meeting action logs were not updated and emails were being used to record actions making it difficult to track their resolution and progress

## Planning

The project had agreed milestones which were within the original grant submission and a detailed project plan was created after the squash court planning session. The plan was captured within Team Gantt online tool.

- Team Gantt - some project members found it hard to use , it was felt that people didn't look at it or update their sections within it
- Not sure everyone understood the plan
- Year 2 planning session was cancelled as Fintry was snowed in and it was never rescheduled –the group felt that this was a real missed opportunity
- The assumptions within the project changed and elements of the solution changed but the group felt that the plan didn't always reflect the changes

## Team Continuity

During the two years of the project there were team members who left and new ones who joined. Good Energy had significant personnel changes during the project including within their senior management team which altered their organisation's view of the project.

The team changes resulted in:

- Difficult handovers with a lack of information and briefing material for new people
- New people not being given access to the project tools or assistance in how to use them
- Lost clarity on some of the project objectives and aims
- Challenges for the new members in bonding with the team who were already established

## Tensions between Community and Commercial

The project was Local Energy Scotland funded and had both the Fintry community and its community group working with commercial organisations. This did lead to project challenges including:

- We lost elements of our planned solution because of IP issues. ( commercial partners unwilling /unable to sign up to the IP clauses within the Grant conditions )
- A lack of commercial awareness within the project
- Tensions and discussions around elements of the project which project partners felt to be commercially sensitive so for a short space of time a communications embargo was agreed until the final project report was shared

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### 2.1.3. Improvement Suggestions for Future Projects

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The workshop attendees made a series of improvement recommendations for future projects to overcome some of the challenges which Smart Fintry has faced including:

- Prepare a briefing pack about the project and maintain it
  - when new team members start provide them with the pack and arrange an induction meeting / call
- Record Storing ( it doesn't have to be Basecamp it can be any solution which is online and shareable)
  - keep things up to date,
  - impose discipline,
  - remind people the importance of all project documentation – actions logs, risks logs, timesheets
  - actively share reports and documents
  - Jackie will tidy up the Smart Fintry Basecamp before the project end
- Provide training for team on the tools we use and work instructions
- Appoint a full time Project Manager or Project Administrator
- Determine what performance data you will want to gather at the start of the project and then make sure you collect it
- Have Weekly calls reflecting the work streams with
  - Set agendas
  - Stick to timings
  - Own Actions logs
- Have Planning meetings when you have major changes in scope/ solution to ensure all elements have been considered and a proper impact analysis conducted
- Host an annual face to face planning meeting
- Use Face to face meetings where possible for key decisions and governance groups such as the steering group ( good bonding opportunity and allows improved joint working)
- Have work stream get together days – all in the one place so solutions can be thrashed out
- Involve community focus group far earlier in your project
- Have a finance / accountant on the project to set up and maintain your finance processes
  - This will ensure all audit responsibilities are met
- Judge success against the original project aims – keep reminding yourself of this
- Have a strategic focus on the outcomes you are trying to achieve
- Prepare a communications plan at start of project and keep it up to date

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- determine what we want to communicate and when
  - plan it quarterly

### Recommendations to Funders

- Appreciate Commercial tensions
- Examine your approach to IPR and IP

## 2.2. Session 2; Overall solution – technical and operational , the solutions we implemented and the approaches we took

The second working session explored the solution the project implement both in terms of technical and operational and the approaches taken to development, implementation and maintenance.

The workshop attendees were asked to place post it notes on the magic whiteboard to represent their views on: what went well and they would repeat and what challenges were faced and things which could have been improved. The group then came together and started to group the post it notes into key themes and discuss them in more detail.

The following key themes emerged from the discussions:

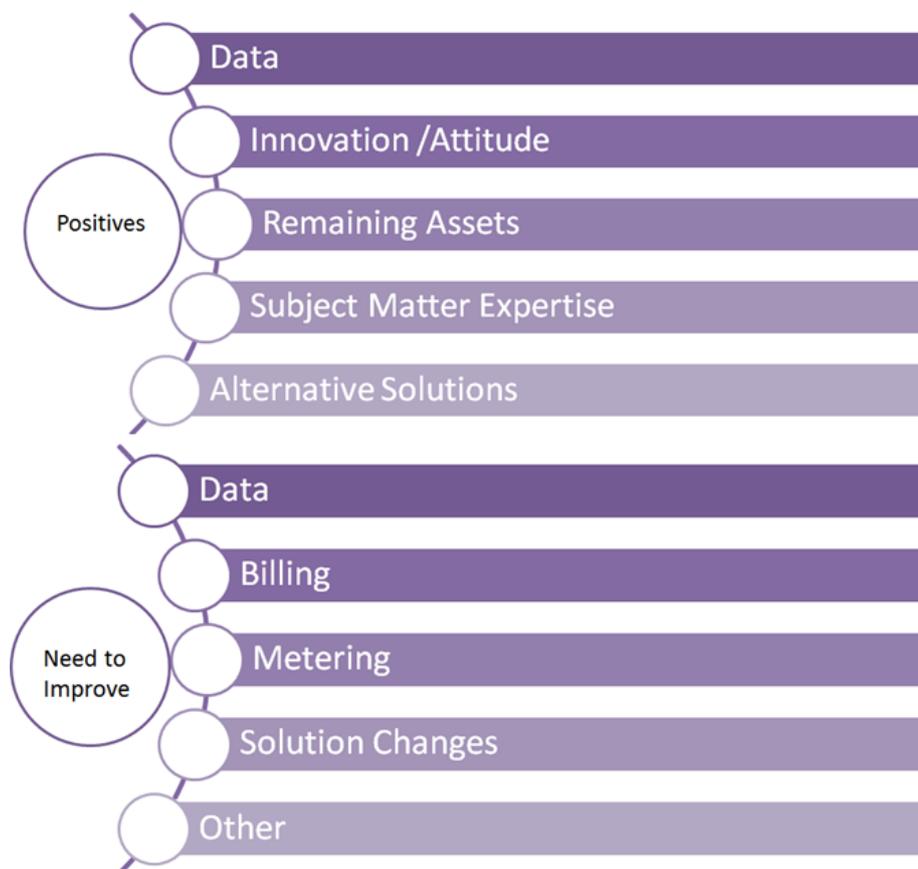


Figure 3; Lessons Learned key themes within Overall solution – technical and operational, the solutions we implemented and the approaches we took

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## 2.2.1. The areas the workshop attendees felt had gone well were:

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### Data

The team were very pleased with the real time data which was being received via the smart meters, weather forecasting , temperature sensors and generator feeds.

- Data reliability had been a concern due to the communications issues with some customer's meters but by the end of the project the team were happy with the reliability
- Access to the web analyser was easy providing Heriot Watt with lots of data to work with

### Innovation Attitude

The team had faced several challenges in the meter communications with the meters being more dispersed than original estimated and the mobile signal in the village being patchy.

- Martin from Energy Assets was nominated as a star by all the workshop attendees for his unwavering ability to create and try alternative solutions and his problem solving capabilities
  - He worked at weekends and nights trying to solve problems
- The whole team had a can do attitude and were willing to try alternatives
- Energy Assets and Good Energy recognised the power of having FDT on the ground in the village to help problem solve and there was a great willingness to work together

### Remaining Assets

FDT now own the technical solution including the meters, database, data and control platform.

- This is an exciting opportunity
- The whole team think it can be used to empower the community

### Subject Matter Expertise

The project team felt that they had benefited greatly from having Industry , Academic and Technical experts as core parts of the team. During the workshop the attendees noted the :

- Quality of resources we had on the project including:
  - Specialist Technical Resource with deep knowledge of the Energy Industry
  - Specialist Metering experts
  - A Regulatory and Policy Expert
- Quality of the design specifications which were produced

- The technical support which the project received
- Forecasting methods which have been developed are transferable to other projects

### Alternative Solutions

As mentioned previously in the innovation attitude of the team the ability to try alternative solutions ran throughout the project including looking for alternative communications methods for the smart meters :

- Essential in a rural setting when SMETS will not be available

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## 2.2.2. The areas the attendees felt could be improved or caused challenges:

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### Data

Despite having a reliable data set by the end of the project the team did flag data related issues :

- The data was unreliable at the beginning of the project due to the communications issues with the meters
- There were data gaps
- More data would have been useful :
  - Data subsets were too small for conclusive outcomes
  - Fuller data sets with more temperature data
- As the project progressed the team began to identify new data sets which would be useful to analyse , it would have been advantageous to know these early so the data could have been collected
- There was a lack of transparency on the tariff cost structures
- The focus group flagged concerns about data sharing

### Metering

The Smart Fintry project installed its own smart meters but this did cause challenges:

- Some customers received numerous visits to resolve communications issues
- It took longer than anticipated to roll out the meters due to the repeated visits
- The meters should have been providing automatic reads to Good Energy but the communications issues meant that some customers had to continue to provide manual reads
- Communications led to changes to the solution being made quickly to try and resolve issues
- Assumptions which had been made at the start of the project were proved to be incorrect and the solution had to adapt accordingly
- Concern that the meters installed are not SMETS

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## Billing

The customers signed up to the Smart Fintry Local Tariff encountered numerous billing issues and repeated complaints were made via FDT to Good Energy. Billing was a hot topic at all of the Focus Groups.

- Good Energy changed their billing engine half way through the project and this led to issues and complaints
- Automatic standard letters and bills went to customers which did not reflect the Smart Fintry Project approach leading to further confusion
- Many customers found the bills difficult to interpret and understand resulting in FDT having to spend time locally providing support explaining to individuals

## Solution Changes

The original project solution changed during the course of the project :

- Good Energy did not produce a Year 2 Local Tariff , they extended the Year 1 tariff to new customers
- The customer dashboard which the project wanted to produce to show consumers their individual consumption and hopefully positively influence their energy behaviours did not progress
- Heat Pumps were part of the original technical design but were withdrawn
- Energy Mapping software the project wished to use was withdrawn due to issues over the IP
- The project had difficulty in managing Total Heat Total Control (THTC) tariff customers and several workarounds had to be implemented

## Other

- The solution would have benefited from more integration with other technologies such as heat pumps and electric vehicles
- The Energy Supplier processes ( Billing) were difficult and not adapted to working with a small Community Energy Project
- The team were unable to develop new revenue streams to make the local energy system sustainable

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### 2.2.3. Improvement Suggestions for Future Projects

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The workshop attendees made a series of improvement recommendations for future projects to overcome some of the challenges which Smart Fintry has faced including:

- Be very clear on what data analysis you really want to ensure you are gathering the correct data as early as possible

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- Consider the density and communications coverage of mobile when determining your metering communications solution
  - Continue to explore the use of SMETS in future projects
  - Increase the sample size if at all possible
    - Small sample size – 115 houses but only 2/3 with temp data and storage heating data
  - Install more sensors for temperature to assist with thermal comfort analysis
  - Social aspect – we have flagged where individuals data looks wrong and needs further examination
  - Develop a proper Data Strategy ( Good Energy) for all customer data
  - Energy Supplier should keep the project separate from business as usual by either putting it in an incubator unit or ring-fenced area so that the data does not follow or trigger standard SMETS processes
  - For metering and control remember that one single solution will not 100% fit. There will always be something which needs work and you will end up using a combination of things eg wifi , radio
  - Consider commercial agreements with end users

### 2.3. Session 3: Customer and Community – the impacts on them and their experiences

The final working session explored the way the Customer and Community engaged with the project and their experiences.

The workshop attendees were asked to place post it notes on the magic whiteboard to represent their views on: what went well and they would repeat and what challenges were faced and things which could have been improved. The group then came together and started to group the post it notes into key themes and discuss them in more detail.

The following key themes emerged from the discussions:

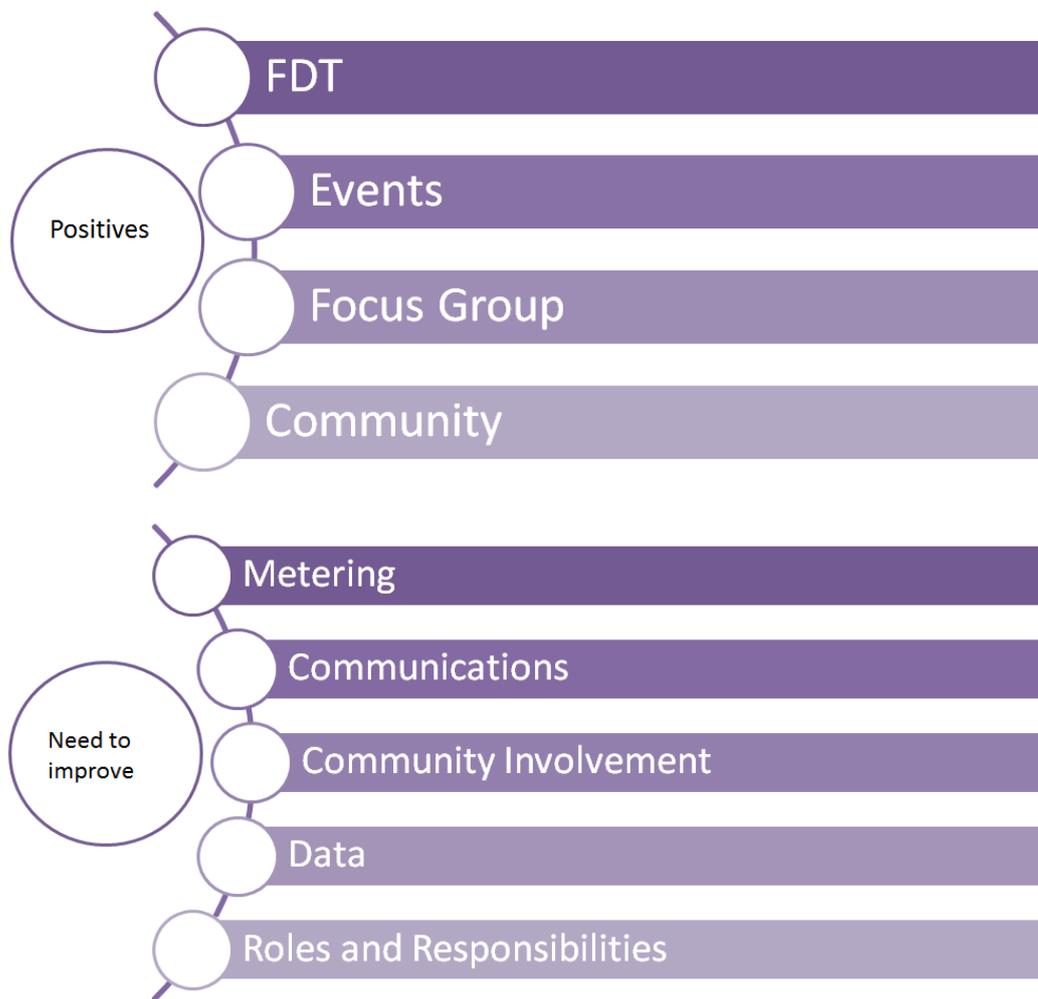


Figure 4; Lessons Learned key themes within Customer and the Community

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### 2.3.1. The areas the workshop attendees felt had gone well were:

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#### FDT

The project team felt that FDT were an asset to the project as they had over 10 years of engagement experience in the village and had built community relationships and trust.

- Strong community ethos and bond
- Having Matthew on the ground in Fintry to resolve issues and queries was really positive
  - Phoned and visited customers who were experiencing issues to smooth the way for Energy Assets and Good Energy
- Had a great base for the community to access support
- FDT had great credibility and the community trusted them
- Acted as the link between the community and the partners
- Energy Assets and FDT worked well together to arrange installations and manage repeat visits
  - Meter installers were great with customers and provided good customer service

#### Community Events

The events organised by the project were praised for being well organised and facilitated :

- FRED event
- Sign up events
  - The second event had a lower turnout but that could have been because it was on a bank holiday weekend
- December Event

#### Focus Group

- Focus Group providing great feedback and information
- Regular Focus Groups now happening

#### Community

- Strong sense of pride and identity
- Community want to see the project work
- Community appreciate the shared learning opportunities

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## 2.3.2. The areas the attendees felt could be improved or caused challenges:

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### Metering

The workshop attendees felt that customer experience suffered due to :

- Missed appointments
- Multiple visits
  - Customer complaints about repeat visits
- Difficulties in arranging visits

### Communications

- Engagement communications with the community on the project and its aims could have been improved
  - Appreciate it is difficult to get the message out and to gain active participation
- Confusion over :
  - The bills from Good Energy, customer felt they were hard to read and understand
  - How to read the new meters ( Energy Assets produced a one pager which was then published on the Smart Fintry website )
  - What the meter would look like and do ( they thought it might be a SMET)
- Complaints handling was complicated and difficult with FDT, Energy Assets and Good Energy trying to resolve issues ( See Roles and Responsibilities below)
- Good Energy communications and customer services did not treat Smart Fintry Customers any differently to their normal customer leading to confusion when they issued letters, calls and bills

### Community Involvement

- Who within the community could participate in the project and who was involved in the decision making
- Parts of the community thought the project was only about the Good Energy Local Tariff and were not aware of the wider project aims
- How do we increase the level of community engagement ?
  - Lack of project awareness in the community
  - Lack of interest within the community
- Focus Group was felt to be :
  - Too small a group
  - The attendees were too similar an age and demographic group

- The group should have started far earlier in the project
- Were customer expectations met ?
- Pricing of the tariff is key to keeping the community on board
  - To address community benefits and fuel poverty we must ensure a low price
- Were enough linkages made to other community projects ?
- Was there an element of gatekeeping going on ?
- Do the community currently see the project as failing due to :
  - Increase in the local tariff price
  - Discussions in the village around billing issues

## Data

The workshop attendees played back some of the messages they had received at the various Focus Group meetings regarding customer data :

- Who had access to the data and who was the data shared with ?
- Was it transparent enough to customers ?
- Data used in analysis was it anonymous

## Roles and Responsibilities

The main concern during the project was who “owned” the customer relationship and how the partners could all work together to resolve issues.

- Good Energy as the energy supplier had the contractual relationship with the customers on the Local Tariff and were the data controller . They also had a customer service team
- FDT were the on the ground community group who were fielding daily questions and queries from customer who were on the Good Energy Tariff
- Energy Assets were visiting customer homes to install the meters and equipment and had to liaise with both FDT and Good Energy .
- Processes were confused

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### 2.3.3. Improvement Suggestions for Future Projects

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The workshop attendees made a series of improvement recommendations for future projects to overcome some of the challenges which Smart Fintry has faced including:

- Consider assignation of rights for the villagers as the data is now a key asset
  - Like collective buying
  - Like community asset buy out
- A different approach to Communications
- Continue with positive messages and updates
  - Use all contacts with the community to pass out messages – e.g. the meter installers had great customer service
  - Focus communications around the project aims and its progress against them
  - Appoint a campaign manager – your energy supplier may be able to provide this
  - Have community leaders and supplier working jointly on the communications plan
- Think beyond the Tarriff – had to get people signed up to the tariff for the data but the project is about so much more – need to find ways to get that message out
- That way the focus is more inclusive – if you are not on the Tariff you can still be part of the project
- Consider event timing – last sign up event was on a bank holiday
- Develop a Community Executive Summary of our final innovation report
  - put it on the website ,
  - run community dissemination events
- Contact the customer who are on the Good Energy Local tariff to explain why it is important to Fintry that they stay with GE
  - if the customers switch supplier we may lose the meter and therefore the data which the project needs
- Run focus groups and events earlier and then throughout the project
- Energy Supplier needs to ring-fence the project and the support team within their organisation:
  - don't put it into normal customer services and contact centre ( this causes mass confusion)
  - train up a very small team to specialise in the project , separate phone number and email address so that the same team manage all queries
- Conduct more communication on data sharing and how data is used within the project
  - Need new consent forms for customers
  - Will be new GE T&Cs issued shortly in light of GDPR

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## 2.4. Activities to be carried forward for planning in Year 3

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The workshop attendees identified the following activities which could be added into the Year 3 plan should the project gain additional funding to proceed:

- Collect more temperature data through adding more temperature sensors into participant's homes and consider adding humidity sensors.
  - This would make it easier to segment the data on thermal comfort
  - Further sensors could be installed to coincide with the installation of new meters or heat pumps
- Consider exploring the use of water heating as a route to manage flexible loads
- Data was captured for Culcreuch Castle which should be analysed and considered
- With the Smart Fintry Portal data identify the mismatch/ match against generation in the village
- New communications methods could be trialled for the areas which have proven difficult to connect via the zigbee. Examine the merits of a wi-fi / broadband or radio communications solution.
- Move the current data analyser platform to a Cloud solution
- Develop a dashboard for customers to use demonstrating their own consumption data
  - We had previously developed wireframes to show to the focus group
- Add the maintenance charges for the data analyser into the Year 3 budget forecast
- Develop a new set of General Agreements for the Project Partners in Year 3
- Discuss with local generators how to keep their PPA agreements with Good Energy or if they are able to continue to share with the project their generator data