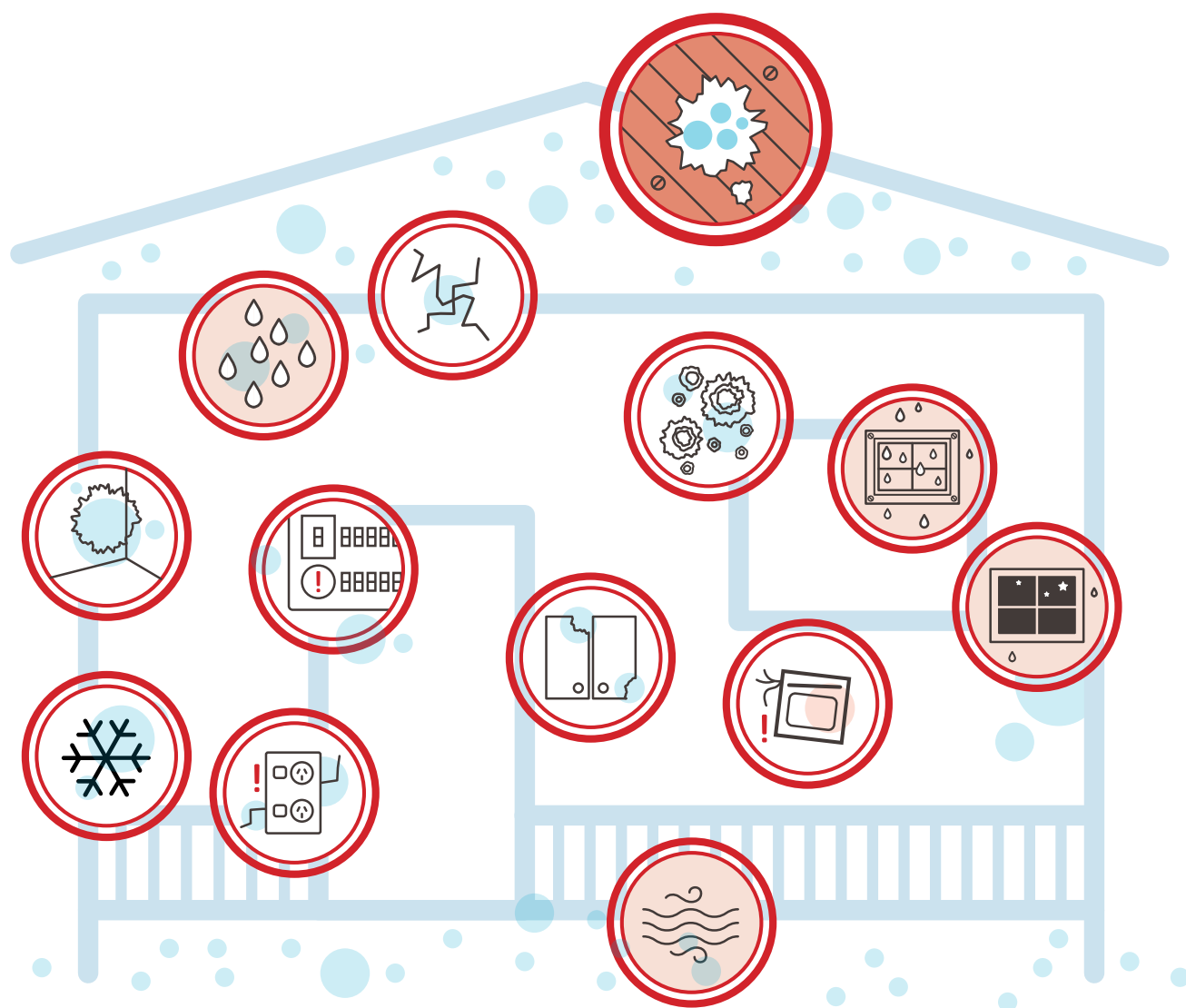


Healthy Homes Initiative – Auckland

Co-design: making Auckland homes warmer and drier



Executive Summary

This document records the Auckland Wide Healthy Homes (AWHI) co-design journey for the period October 2015 to September 2016. It is not a plan of how to resolve issues but a record of the co-design process and the learnings from it.

The report takes the reader through the four stages of co-design:

- 1) Framing the context – scanning existing information
- 2) Exploring – developing a deeper understanding through the user's perspective
- 3) Imagining – brainstorming and developing ideas
- 4) Testing – prototyping in a safer to fail environment and refining ideas.

AWHI was the first Healthy Homes Initiative (HHI) set up by the Ministry of Health to reduce household crowding and household transmission of strep throat bacteria. In 2015, the initiative was expanded to Northland, Waikato, Wellington, Lakes, Bay of Plenty, Hawke's Bay and Tairāwhiti DHB regions.

The purpose of the co-design was to ensure a human-centred design approach was used to develop practical solutions and advocate for long-term systems change towards preventing structural and functional crowding. This put the users, the families involved with AWHI, at the centre - what were their drivers, and what were their needs?

To do this we interviewed ten whānau and three AWHI coordinators to understand the experiences of whānau involved in the AWHI system. Photos were taken of the homes with the families permission, and each interview was transcribed and analysed for themes and insights. From these interviews and discussions with other stakeholders we were able to map a typical journey for a family involved with AWHI, which differed slightly depending on the tenure of their home.

We took this understanding and held a brainstorming session with key stakeholders. From this and working with targeted stakeholders, we developed a number of prototypes which we are still testing and refining. These include:

- A letter to landlords, the home assessment process and a possible working bee – these started as separate ideas but needed to be joined as the landlords permission is needed for most interventions in the home
- A minor repair service – developed from the working bee concept

- Assistance with payment for power as families were not turning on their heating in winter even if they had a heating source
- Improving the curtain supply for the curtain bank – including a curtain drive through schools
- Accessing household items such as beds through the inorganic collection.

Prototyping with families in complex situations has been difficult and time consuming. Every step must be weighed against implications for the families, which could be as serious as losing their home. It has also identified that some homes have significant deferred maintenance which needs to be addressed prior to any other interventions being completed, for example a home should not be insulated without fixing its leaking roof.

The project is still in the prototyping stage and a second report documenting October 2016 - June 2017 will be developed.

The team working on the project were supported by the Auckland Co-design lab and ThinkPlace.

Background

The Auckland Wide Healthy Homes Initiative (AWHI) was established by the Ministry of Health in 2013 to reduce household crowding for Auckland whānau with children at risk of rheumatic fever. Healthy Homes Initiatives (HHI) are one of a number of key strategies within the Government's Rheumatic Fever Prevention Programme.

There is a strong link between housing conditions, particularly household crowding, and rheumatic fever. Living in crowded housing increases the transmission rates of a range of infectious conditions, including Group A Streptococcal (GAS) throat infections (the necessary precursor to rheumatic fever). Crowding is in relation to both the size of the house compared to the number of people living in it (structural crowding), and the number of people sleeping in a room together to keep warm (functional crowding). It is hoped that reducing the

impact of household crowding will contribute to reducing the number of rheumatic fever cases in Auckland as well as having wider health and wellbeing benefits.

The Auckland Wide Healthy Homes Initiative is administered by the AWHI hub. The purpose of the AWHI Hub is to connect all eligible families to community providers, assess and plan interventions for their homes, implement those interventions with suppliers, follow up and feedback on outcomes related to warm, dry and healthy homes and the families.

At the time of setup, the AWHI hub was not contracted to generate referrals, nor the supply of interventions. Recognising the gap in the supply of interventions, the Ministry of Health contracted The Southern Initiative (TSI) in October 2015 to use a more user-centred approach to generating a better supply of interventions.

TSI formed a design team of

people with different skills and experience in health, housing, community and design.

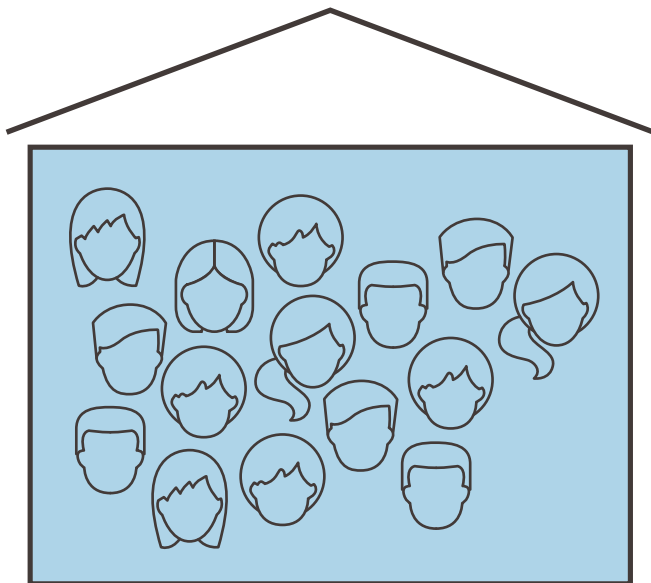
The team was supported by TSI partner the Auckland Co-Design Lab to use human-centred design to help reduce crowding.

Crowding

There are two types of crowding (also referred to as overcrowding). The Canadian National Occupancy Standard has been used to define structural crowding.

1

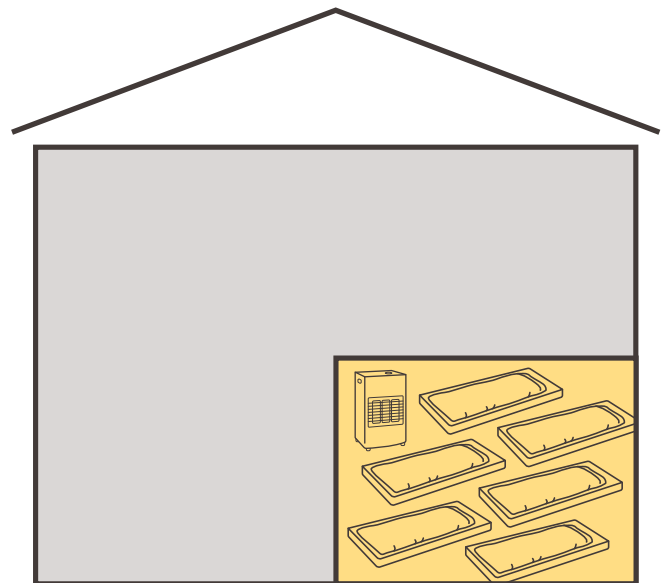
STRUCTURAL CROWDING



E.g. 15 People living in one 3 bedroom house

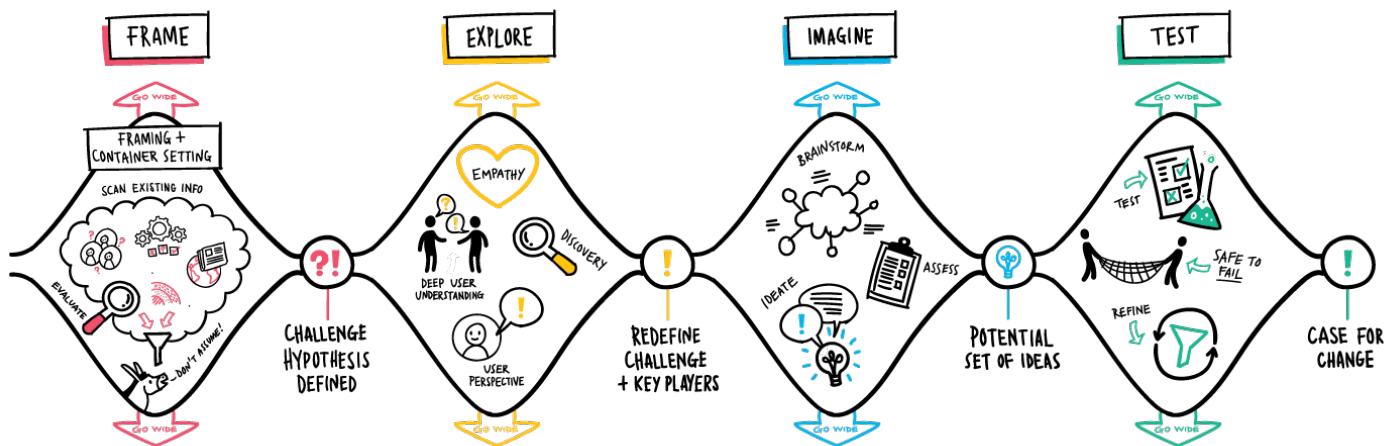
2

FUNCTIONAL CROWDING



E.g. 6 People living in a 3 bedroom house, all sleeping in one room to keep warm

The Four Phases of Co-Design



What does the co-design methodology do differently from traditional policy and implementation processes?

- Places an emphasis on people not organisations – focuses on people’s experiences and insights

to generate new perspectives and new solutions.

- Learning by doing – prefer fast experimentation (prototyping) rather than slow policy development and implementation.

While the diagram seems to show four distinct phases, the process is more iterative as shown below:



Understanding AWHI

In November 2015 the team set out to understand AWHI and to refine the aim of the AWHI co-design work. Some of what we learned is shown below.

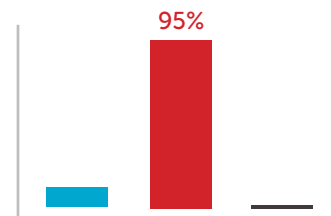
Quick Facts about AWHI

(As at October 2015)

- AWHI is one of the responses to address the link between rheumatic fever and crowding
- The model is comprised of an AWHI hub and 9 community providers
- Around 2000 families have been referred
- 95% of AWHI referrals are for Māori or Pacific children.
- Sore throat clinics – 3 or more strep throat infection diagnoses within a family in 3 months
- Overnight hospitalisation for acute rheumatic fever, a lower respiratory tract infection or meningitis
- A family member has previously had rheumatic fever and is eligible for prophylactic penicillin



Around 2,000 families have been referred to AWHI



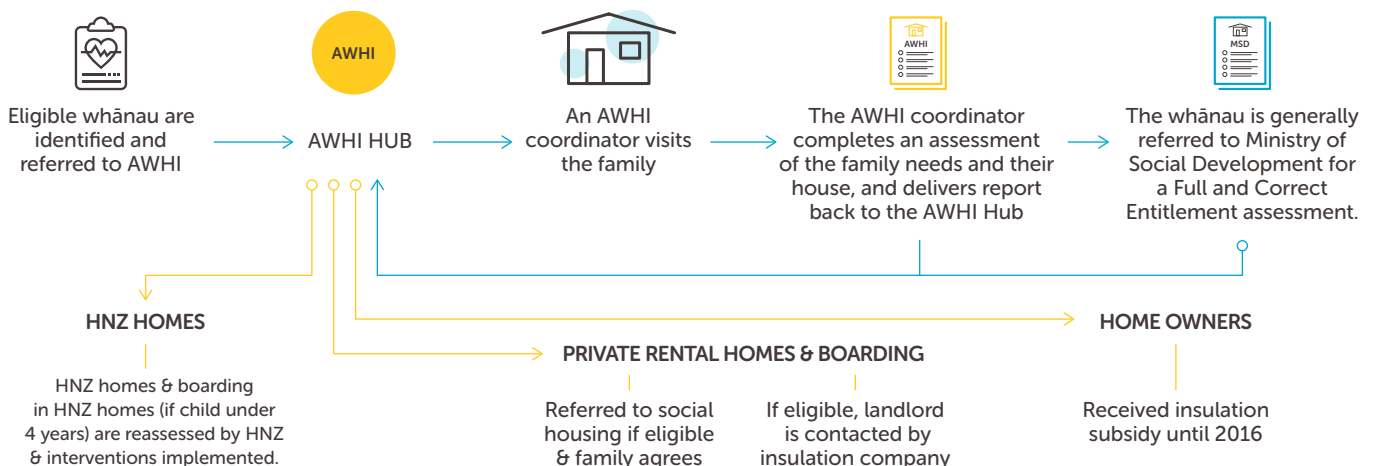
95% of AWHI referrals are for Māori or Pacific children

How are whānau identified?

Whānau are identified through one of three pathways:

The family also needs to be eligible for a community services card, have structural or functional crowding and have at least two children aged 4-19.

A simplified model of how the system should work



Whānau receive a range of interventions to make their homes warmer and drier, including:

- Financial assistance including a Full and Correct Entitlement Assessment (FACE) from Ministry of Social Development.
- Insulation
- Curtains
- Beds and bedding
- Minor repairs
- Floor coverings
- Ventilation
- Heating sources
- Private/community housing relocation
- Social housing relocation
- Dehumidifiers
- Key messages on creating a warmer, drier and healthier home

How many outcomes occurred for AWHI families?

It was difficult to know the exact numbers of homes which had received all the interventions they needed because the data collection methodologies changed. It seemed that Housing New Zealand homes were more straightforward because they have a property maintenance budget for capital interventions such as insulation and minor repairs, and they had agreed with the Ministry of Health that identified families would receive all five capital interventions (insulation, curtains, heating, ventilation and carpets). It was less clear what happened for families living in private rentals.

Setting the aim



The Project Aim

In these early stages of developing the project, the team learned that families were getting some interventions but it was difficult to understand exactly who was getting what.

Based on what the team had learned, the project aim was set; "to co-design prototypes for

improved access to a sustainable supply of quality interventions for healthy homes. The prototypes will align and strengthen existing resources using a process that empowers families and utilises local knowledge and skills."

At the end of November 2015 the team tested this aim with around 50 diverse

stakeholders at a workshop where stakeholders were also introduced to design-led thinking. In addition there was a significant exchange of ideas and useful connections made between people who had not met previously.

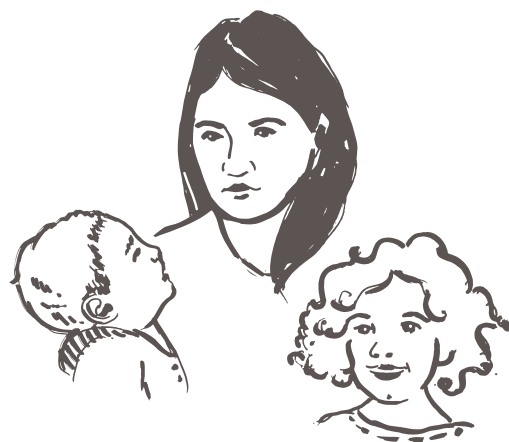
Above: First Stakeholder Workshop November 2015.

Exploration through empathy

November 2015 – April 2016

The team held in-depth empathy interviews with ten whānau and three AWHI coordinators to understand the experience of whānau involved in the AWHI process. Photos were taken of the homes and each interview was transcribed, and analysed for themes, insights and key quotes.

This is some of what they told us:

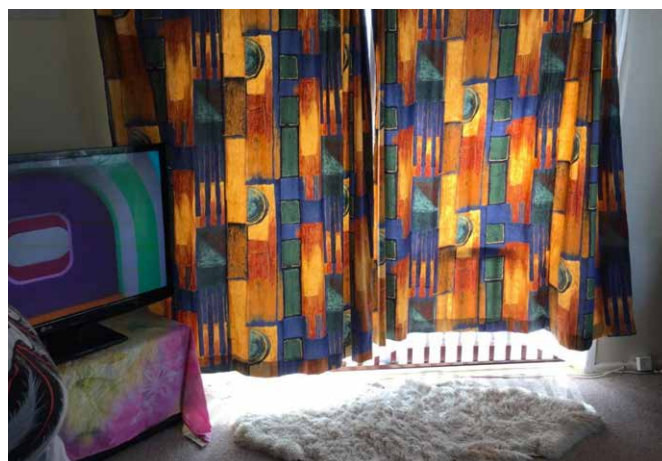


“Yeah, we all sleep in rooms now...We used to all sleep in the lounge.”

“We can’t afford to turn on the heater anyway.”



Above: Mould in one of the whānau’s homes.



Above: Inadequate curtain installation that does not achieve desired outcome for whānau.

Key insights

The team identified key insights from listening to whānau and AWHI coordinators in November and December 2015:

1. Families try to be self-reliant

Many have tried to improve their homes before becoming part of AWHI.

2. Families are struggling and vulnerable

Some people sleep together to keep warm and more than one family live in one small house because of need.

Families have expressed wanting to assist family members in need but wanting their own house at the same time.

Families perceive HNZ homes as a good option due to lower cost, greater ease and higher quality of a HNZ home compared to private rentals.

3. Families find some interventions too costly to run

If given heaters, many families do not use them.

4. Mixed views of AWHI process

Some families viewed the

process positively and believe that the interventions made a difference to their children's health. Others were frustrated by having to answer the same personal questions repeatedly with different agencies and did not want to be involved.

5. AWHI's advocacy

AWHI coordinators play a crucial advocacy role in getting interventions implemented. They also navigate the complex social assistance systems and have to follow up constantly on behalf of families.

6. Personality and dedication

Some AWHI coordinators go beyond their role to get positive outcomes for whānau. Families do not feel judged by AWHI coordinators like they do by some people in other agencies.

7. Communication with landlords could be better

Some private landlords are not being told that there is a sick child in the home and we

cannot assume they know how to make the home healthy.

8. Healthy homes literacy

Families and AWHI coordinators need appropriate education about how to make homes healthy and how to use the interventions so that they are effective, such as heating or mechanical extraction in kitchens and bathrooms.

9. The AWHI process is difficult and complex

Families are contacted multiple times by multiple agencies but information is not always shared and it is unclear who is responsible for some tasks.

10. Information sharing and relationships across agencies are critical for interventions to be delivered effectively and efficiently

An appropriate level of information about the AWHI process, and housing interventions is needed across government agencies and

organisations involved in the AWHI process.

11. Frustration with agencies

Some AWHI families are frustrated by their treatment by government agencies and are nervous about them coming into their home.

Good outcomes have sometimes been dependent on the attitude of an individual in an agency.

The school nurse appears to be a positive relationship for families.

Some other observations surfaced during the process:

Some AWHI coordinators achieved broader outcomes for families where their organisations delivered a range of programmes in addition to AWHI. This enabled them to draw upon other resources to pursue required outcomes.

The funding of AWHI was centred on completing set tasks rather than outcomes for families. Dealing with AWHI families is complex and the time required to assist some families was not adequately

taken into account by the AWHI funding model.

Families in private rentals or owner occupied houses may not be told about required interventions if there is no free supply because AWHI coordinators feel they cannot raise expectations if there is little likelihood of fulfillment.

This may have the unintended consequence of denying families the opportunity to address the issues themselves through whānau and other connections with the support of AWHI.



Above: Co-Design Team analysing insights with Design Coach, February 2016

Mapping the AWHI journeys

Based on empathy interviews and key insights, the journey for whānau, coordinators and landlords was visually mapped in February 2016.

One map described a typical journey of a family living in a Housing New Zealand home and the other two journeys of families living in a private rental.

These journey maps were then tested with whānau who had been involved in the initial empathy round. The journey maps were amended based on their feedback. Overall whānau gave very positive feedback about the journeys and connected with the stories.

This process highlighted pain points for people involved in the AWHI process such as families not being able to afford to heat

their home, even if given a heater. Similarly it highlighted workarounds in the system such as AWHI coordinators who accessed free food parcels for whānau so they could pay for curtains or carpet themselves.

This information was then supplemented by further empathy interviews with landlords, public health nurses and property managers.

In early April a stakeholder workshop was held to share what the team had found during the exploration phase and to gather feedback on the journeys.

Some of the feedback from the stakeholder workshop was:

“I liked that the deeper insights and perspectives from families were different to what I assumed.”

“I loved that we could see, feel, appreciate and have empathy for what families cope with!”



Above: Stakeholders providing feedback on the whānau journeys.

Redefining the aim

Redefining the aim

After considering the insights, the team realised that there was a supply of interventions, but in the case of private landlords, it was not clear whose responsibility it was to pay for them. In some cases, AWHI coordinators were able to use workarounds in the system to get interventions for whānau, even those with private landlords.

It also seemed as if the system was not encouraging outcomes. For example, the funding of AWHI hub centred on completing set tasks rather than outcomes for families.

Based on these learnings, the team redefined the project aim. This is common in design processes, as the exploration phase allows teams to see a clearer and more holistic view of the problem to be solved.

The aim of the project was amended to:

“The aim of our co-design process is to enable and empower AWHI families to have healthy homes by simplifying the system, removing barriers and ensuring they get the outcomes required.”

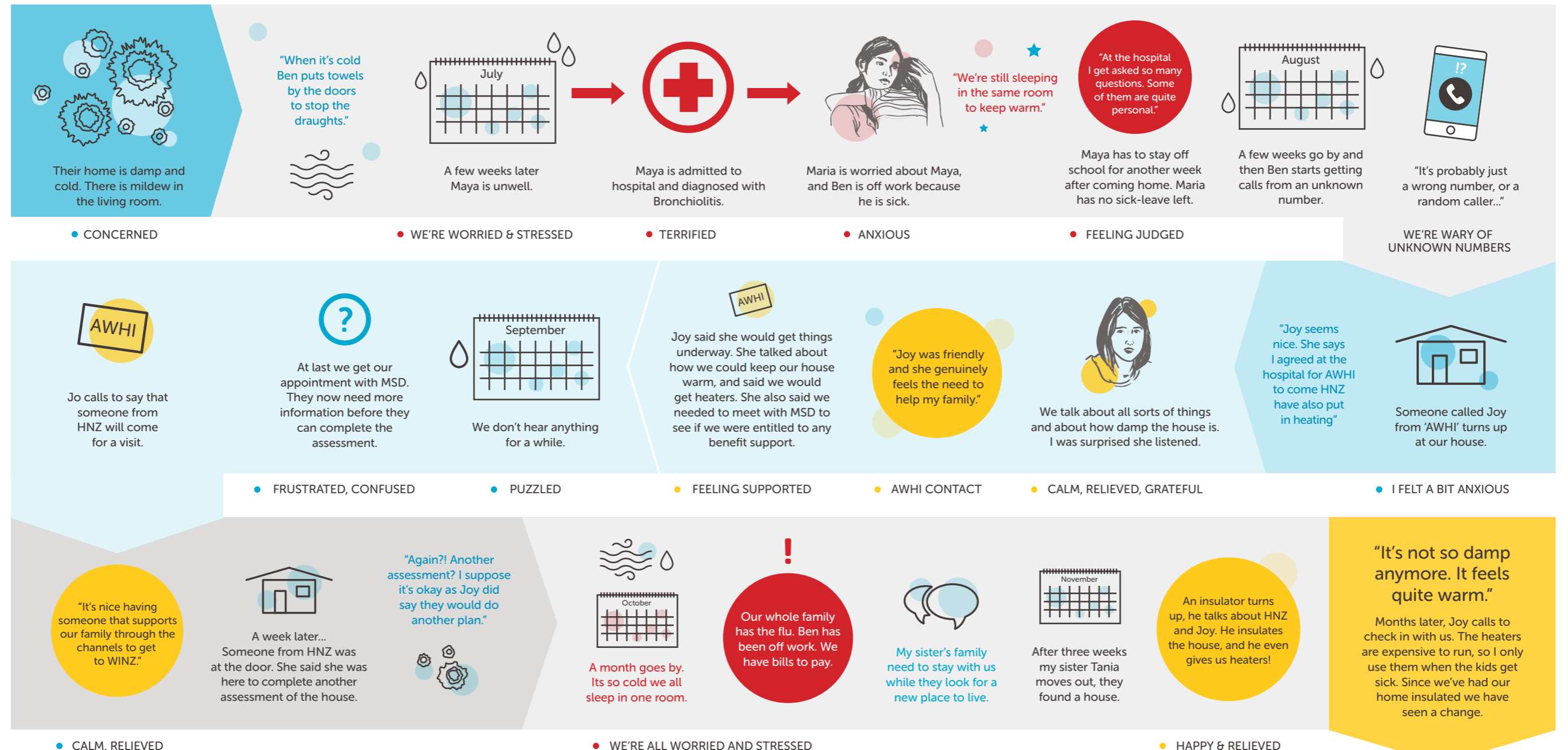
THE TAMATOA FAMILY JOURNEY

THE TAMATOA FAMILY HAVE RECENTLY MOVED INTO THEIR THREE BEDROOM HOUSING NEW ZEALAND HOME. THEY'VE FOUND IT SO COLD THAT THEY'VE BEEN SLEEPING IN THE SAME ROOM TO KEEP WARM.

THE TAMATOAS: BEN & MARIA, MAYA 7 AND ANARU 3 YEARS OLD.



ANXIOUS/WORRIED ● REALLY STRESSED ● POSITIVE ●



THE TAVAE FAMILY JOURNEY

THE TAVAE FAMILY HAVE LIVED IN THEIR THREE BEDROOM HOME FOR SIX YEARS. THEY RENT FROM A PRIVATE LANDLORD.

THE TAVAES: KEVIN & ALETIA, SANTANA 9, GEORGE 8, SIONE 6, SUMMER 4 AND TAI 2 YEARS OLD.



ANXIOUS/WORRIED ● REALLY STRESSED ● POSITIVE ●

Aletia talks to Kevin about the draughty, damp and mouldy house they live in. Kevin's already talked to the landlord but nothing improved.

"Our walls are crying."

"I want a house fit for my family."

We are worried about our tamariki. Heating is so expensive, but we're trying to keep them warm."

A few weeks later...

Our son Sione is diagnosed with Rheumatic Fever and is in hospital.

"I couldn't believe how sick my children were."

"We are so stressed out. Our other kids have the flu, Kevin is looking after them while I am with Sione."

Now Kevin is sick and has taken time off work. We're struggling to pay our bills.

At the hospital the doctors ask me so many questions and in particular about our home and I tell them everything.

● CONCERNED ● WE'RE WORRIED & STRESSED ● TERRIFIED ● STRESSED OUT NERVOUS & JUDGED

Joy seemed shocked to find out we have been on the waiting list for social housing since 2013. She said she would look into it.

"What I liked about it was that I was greeted and I felt she really wanted to help."

Joy came in and we talked, she assessed our home.

There was a knock at the door, I thought it might be the guys from the Big Red Truck trying to sell us something but it was Joy from AWHI.

Two days later...I tried to tidy our house as much as I could, but it is so mouldy.

"At first I was nervous, Joy mentioned the hospital and I was confused. We arranged a time to meet."

I get a call from someone called Joy from AWHI.

A week later...

At last Sione is well enough to come home, but he's still so sick.

I WAS HOPEFUL ● RELIEVED, CALM ● APPREHENSIVE, GLAD ● FRUSTRATED, NERVOUS ● AWHI CONTACT ● CALM, RELIEVED, GRATEFUL SUPPORTED, RELIEVED

"I already knew how to try and keep the house warm and dry. We open windows, wipe down the mould, and use towels to stop draughts."

Joy told us the house needed insulation and curtains. But I thought to myself surely we need more than that, as the carpets are ripped too.

Joy said she would try to get in touch with our landlord.

The kids all have runny noses again.

Joy struggles to contact our landlord, or find out about our place on the waiting list for social housing.

Bad news: Our landlord declined to insulate our home, and we weren't even on the list for social housing. We can go ahead with curtains though.

We apply for curtains from the curtain bank. A few months go by...

The thermal curtains get installed. Unfortunately they don't fit the window, and are too short.

"Kevin gets promoted at work, but there's a downside..."

We're no longer eligible for social housing with his new salary.

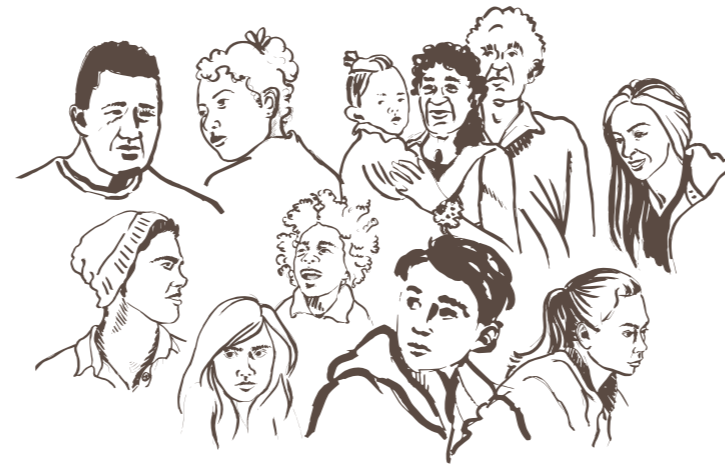
● DOUBTFUL ● HOPEFUL ● WORRIED AND DISAPPOINTED GRATEFUL ● FRUSTRATED



THE IOANE FAMILY JOURNEY

THE IOANE EXTENDED FAMILY LIVE TOGETHER IN THEIR FOUR BEDROOM HOME, RENTED THROUGH A PROPERTY MANAGER.

THE IOANES: IOSEFA AND TALIA, GRACE 8, SIONE 7, PENINA 6, TEUILA 4 AND MATTHEW 2 YEARS OLD. IOSEFAS PARENTS LAGI AND SINA AND THEIR TWO YOUNGEST CHILDREN LANI 17 AND JOHN 14



ANXIOUS/WORRIED ● REALLY STRESSED ● POSITIVE ●

Talia thinks to herself "Its not good for my older kids to have to share a room, especially now the girls are getting older." But she can't really say anything and Iosefa's parents do help with the kids.

Winter's only just starting and Sione and Grace are both off school sick. The younger ones aren't well either.

The phone rings and it's Sandra, the school nurse. The kids had throat swabs last week and Sione's has come back positive again. Sandra is coming to see us.

Sandra turns up the next morning. I'm exhausted as I've been up all night with Matthew who's sick.

Sandra tells me about AWHI and how they might help. She also gives me a prescription for Sione's sore throat and we talk about how many people live here.

I'm nervous to tell Iosefa what Sandra said about our home and health risks.

We get a txt from a lady named Joy. She says she's from AWHI and Sandra gave her our name.

● CONCERNED ● WE'RE WORRIED & STRESSED ● ANXIOUS

Another morning off work to go to MSD. At least we are now on the social housing wait list, and we can get a disability allowance for Teuila's epipen.

Joy also says our portable gas heater is really bad – it can make us sick and it's expensive to run – we thought that it was cheaper.

It was insulated last year, but there are big gaps around the doors, some of the windows don't work and there's no fan in the bathroom.

In the meantime, there's a few things that can improve our private rental.

Joy's going to help us get an appointment with MSD to find out what help we can get.

I know most of the tips about the house. We're going to change the kids beds around tonight so that they top and tail.

A WEEK LATER
"Joy calls me in the morning to make sure its still OK to come. I say yes."

Joy makes an appointment for next Tuesday afternoon.

● FEELING SUPPORTED ● CALM, RELIEVED, GRATEFUL ● AWHI CONTACT ● I FELT A BIT ANXIOUS

It sounds like Lagi and Sina might get a HNZ house first as there's not many larger homes around.

Joy talks to our property manager Jim. He is nice and tries to look after us, but the owner doesn't want to pay for anything.

The owner refuses to put in a bathroom fan or fix the draughts. At least they're fixing the bathroom window so it can open properly.

Joy explains to us what we can do to try and fix the draughts. We get some door snakes from the local church.

"Our new heater arrives from AWHI, but it's so expensive to run. We'll only use when the kids are sick."

\$\$

Good news. Lagi and Sina have got a HNZ home, but that means we've got to pay more rent and I'm going to have to sort out after school care for the kids.

A FEW MONTHS LATER

We call MSD to find out whether we're likely to get a house soon but they still have lots of people waiting for big houses.

The kids have been a bit better since they haven't all had to share the same room. Summer is coming so we're hoping they're better for a while.

● HOPEFUL ● DISAPPOINTED

Imagining – Brainstorming

A brainstorming (ideation) session was held at ONEshed community facility in early May 2016

In preparation for the brainstorming session, the team looked at the journeys for whānau, and others involved in the AWHI process. The pain-points and workarounds were changed into statements that would encourage stakeholders to think about possible innovation.

Pain-points:

- Private landlords may not know there is a sick child in their property. Their first contact may be with a private insulation company.
- Families may be too scared to talk to their landlords about what they need to make their house warm and dry in case they will have to pay more rent or may be evicted.
- Families in private rentals are not told everything that is needed to make their house warm and dry to avoid raising expectations where there is no free supply. They may have an assessment and

nothing happens for months.

- Families may decline a heating device or, if they get one, not use it because they cannot afford the electricity cost.
- The information flow between government agencies and with the AWHI hub is complex. For example, HNZ may not have up-to-date information on a family from MSD so they offer houses that are not suitable.
- Families get assessed a lot. A family may be asked about their situation by a hospital worker, an AWHI coordinator and then again by MSD. They may have a home assessment by an AWHI coordinator and then by a HNZ property person.

Workarounds:

- Some AWHI coordinators speak with the landlords and facilitate interventions and ensure they are completed even though it is not specifically their responsibility.

- Some AWHI coordinators work with families so they can rearrange funding streams e.g. accessing food parcels so they can pay for rug.
- Some AWHI coordinators work with families to assist them to make improvements e.g. removing mould using vinegar.

At the ideation workshop pain points and workarounds were shared with participants and small teams were asked to brainstorm the following:

- How might we make it easy for landlords to know what needs to happen to make the home warm and dry – without passing the cost on to the tenant?
- How might we enable families to have adequate heating?
- How might we ensure that all families receive advice on how to access assistance effectively?
- How might we reduce the

number of assessments that families face?

Key ideas created at this workshop included:

- Improved communication with private landlords. Communication ideas included an introductory letter from the health sector and a “3 way” hui with landlords, tenants and AWHI coordinators.
- Power and fuel poverty – vouchers and education around energy use for families.
- A one stop shop to make it easier and cheaper for private landlords and families to make a house warm and dry. This joined up existing community and businesses to sort out all interventions, taking advantage of recycling and skills in the community.
- A mobile fix it truck that would train families living in private rentals to be able to fix up the houses themselves.



Above: Ideation workshop participants developing ideas for prototyping.

Testing ideas – Prototyping

In June the core team prioritised and refined the ideas developed in the brainstorming workshop to take them to a prototyping phase (testing).

After careful consideration the core design team agreed on:

- A delivery system that empowers AWHI families and connects existing community enterprises and businesses. This was an evolution of the one stop shop and mobile fix it truck idea.
- An introductory letter to private landlord.
- Financial support such as vouchers for whānau struggling with heating costs.

Prototyping Sessions

The team began by bringing together interested groups of stakeholders to explore a “delivery system that empowers AWHI families and connects existing community enterprises and businesses.” This session resulted in some useful connections and thinking between stakeholders that had not worked together before. The core team then scoped how to test this with a family. The test would be explained to a family

and if they agreed, they would allow people into their house to coordinate insulation, curtains, and another intervention such as carpet or minor repairs. This prototype was referred to as a “working bee”.

When setting up the first “working bee” test, two key barriers arose - landlord consent and the cost of the interventions needed. Therefore, the team gathered some more insights about:

- a) the motivations of private landlords and property managers, and
- b) the relative cost and effectiveness of interventions.

These discussions identified a missing intervention – a ground vapour barrier - and the importance of correctly installing interventions. For example, curtains were frequently not full length and often incorrectly measured for so only giving part benefit. Incorrect curtain measuring and installation appears to be a systemic problem. Consistency in best practice

curtain measurement advice and further training is needed.

Armed with more information, the core team worked with two stakeholder groups prototyping:

- Communication with landlords.
- Empowering families involving them in curtain making.

The landlord letter would introduce AWHI and be the first step in addressing landlord consent to testing a working bee and understanding if a landlord could share some of costs of the interventions.

Landlord Letter

A session involving professional landlords, community paediatricians, the AWHI hub and the team was held to craft a prototype introductory letter to an AWHI private landlord or property manager. Participants were asked to look at an outline of a notification letter to encourage landlords and property managers to improve the condition of their rental property. They discussed the

information, tone, and sign-off that might motivate a landlord or property manager to act. As a result, a succinct prototype letter with a logo and signature from the DHB was finalised. Part of this session was also to learn more about what motivates landlords or property managers.

Curtains and Empowerment

A spin-off from the delivery session was testing how we could get whānau more involved in the working bee. One idea was to see if whānau would be interested in learning how to sew curtains. The team met with a community leader who had been part of the prototyping session and a community-based

sewing teacher. Despite initial enthusiasm about the ethos of the project, upon further investigation, the teacher concluded it was too difficult and not scalable. At this point, the team decided to leave this prototype and focus on developing other prototypes with the curtain bank.

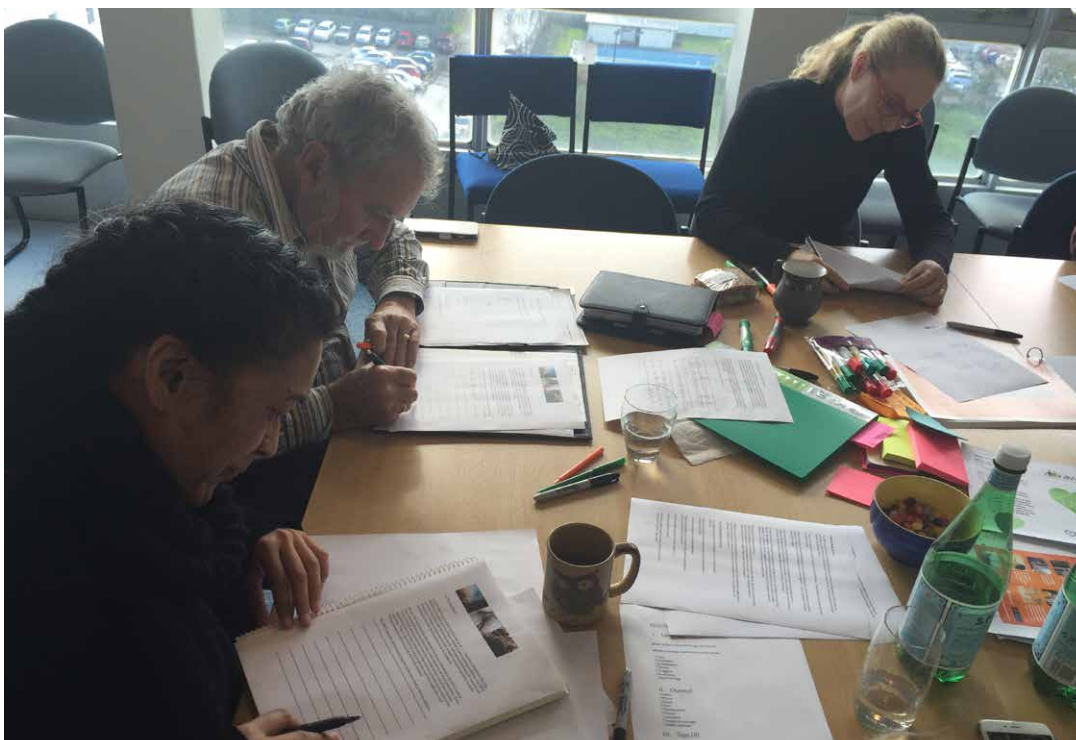
Testing the Landlord Letter

To understand whether a letter setting out the situation would create a better response than the current situation, the team along with AWHI providers tested the prototype letter with three whānau in their homes. A number of other families were identified for testing the letters; however, they were unsuitable for testing for

reasons such as multiple family illnesses, moving overseas, or declining to be involved.

Overall, the feedback was positive. Whānau were happy for the letter to be used by the AWHI coordinator as some felt too shy or uncomfortable to ask for changes from their landlords. One whānau was going to use the letter to advocate for themselves, but moved to a Housing New Zealand home instead.

The idea was to follow up the letters with the working bee, if appropriate.



Above: Developing the landlord letter with professional landlords and other stakeholders.

Prototypes

Testing of the refined prototypes continued from July to September 2016.

An AWHI assessment involves an AWHI coordinator establishing a relationship with the family, then working with them to identify where intervention is needed in the home. This may include referring the family to government agencies such as the Ministry of Social Development for a Full and Correct Entitlement assessment or Housing New Zealand. AWHI coordinators discuss with families ways of keeping the home warm, dry and healthy and identify a range of interventions needed such as insulation, ventilation, minor repairs, curtains or heating. The completed housing plan is sent to the AWHI Hub for coordination of interventions.

Prototype 1 Testing the letter, assessment process and a possible working bee

The two families in private rentals that had reviewed the letter agreed it might help

achieve some improvements and that it should be delivered to their landlord or property manager. To understand if the prototype letter would create better responses from the landlord than the current process, the letter was delivered and the design team (with the help of the AWHI coordinators) contacted the landlord and property manager.

Trish's House – testing with the first whānau

The young mum with two children under the age of two lived in a private rental in Manurewa. The landlord did not use a property manager. The newborn baby had been hospitalised and the family slept in one room because they felt very cold. The mum had carpeted the home at her own expense when she had moved in earlier in the year and the landlord had not reimbursed her. She was also catching mice with traps.

Two partners from the "working bee" prototype team (Council's EcoDesign

Service and Habitat for Humanity) assisted with the house assessments working alongside the AWHI coordinators. They both have more extensive expertise in housing performance and costing property repairs than AWHI coordinators would be expected to have.

The assessment identified:

- A fuse box that had been hardwired.
- A suspected roof leak (which would need to be fixed before any insulation is installed). The estimated cost of repairing the roof was \$8000.
- Several windows that could either not be secured or did not open as they had been painted shut.
- Walls with mould that had been recently painted over.

TRISH'S HOUSE

TRISH IS A SINGLE MOTHER OF 2 SMALL CHILDREN. TRISH IS A BENEFICIARY AND HAS RECENTLY MOVED TO AUCKLAND DUE TO A VIOLENT HISTORY WITH HER EX-PARTNER AND HAS NO FAMILY HERE. TRISH VALUES HER INDEPENDENCE AND IS HAPPY TO BE IN HER OWN HOUSE, HOWEVER THERE ARE SOME SERIOUS PROBLEMS WITH THE HOUSE ITSELF. SHE HAS APPLIED FOR SOCIAL HOUSING AND IS ON A WAITING LIST. TRISH HAS PAID TO CARPET THE HOUSE AND THE LANDLORD HAS NOT PAID HER BACK YET. TRISH AND HER CHILDREN LIVE IN THE ONE BEDROOM THAT FACES THE SUN AS THE HOUSE IS COLD AND DAMP.

TRISH, JOSEPH – 2 YEARS
LUCAS – 8 MONTHS

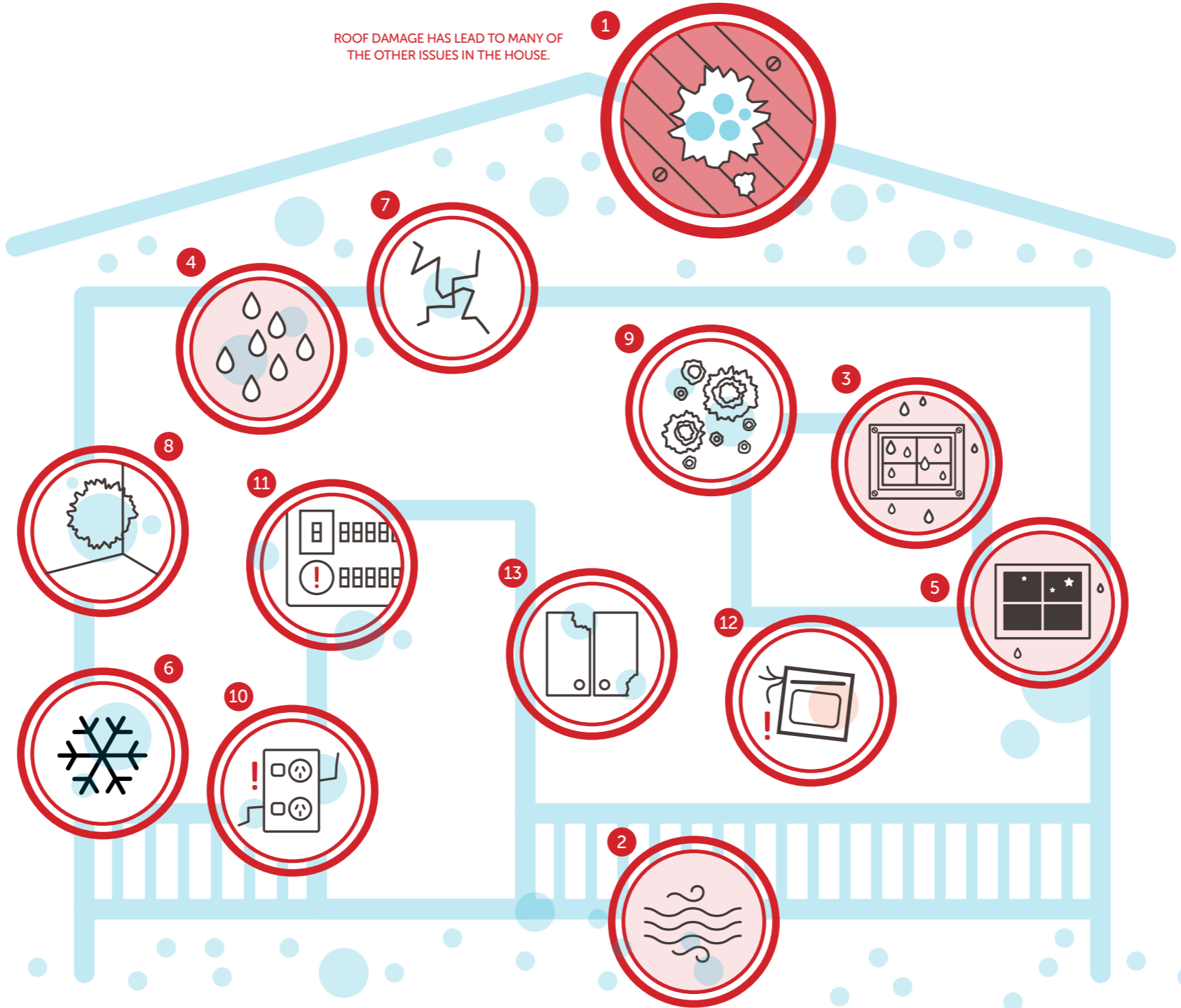
PRIVATE RENTAL HOUSE

TWO BEDROOMS

RENT PER WEEK \$385

ON WAITING LIST FOR SOCIAL HOUSING

- 1 ROOF DAMAGE**
LEADING TO WATER DAMAGE, MOULD AND ELECTRICAL PROBLEMS.
- 2 NO INSULATION**
HEAT LOSS THROUGH CEILING AND DRAFTS AND RISING DAMP THROUGH FLOORS EVEN WITH CARPET INSTALLED.
- 3 POOR VENTILATION**
WINDOWS ARE PAINTED SHUT.
- 4 NO EXTRACTOR FAN**
IN THE BATHROOM AND KITCHEN SO MOISTURE CANNOT ESCAPE.
- 5 NO CURTAINS**
LOSS OF HEAT THROUGH EXPOSED WINDOWS.
- 6 NO HEATING**
TRISH CANNOT AFFORD TO RUN HEATERS.



ROOF DAMAGE HAS LEAD TO MANY OF THE OTHER ISSUES IN THE HOUSE.

AWHI'S PRIMARY FOCUS

OTHER HEALTH & SAFETY THREATS

- MOULD & MILDEW**
IN THE LOUNGE, BATHROOM & KITCHEN.
- WATER DAMAGE TO WIRING**
CONTRIBUTES TO ELECTRICAL PROBLEMS. POWER SOCKETS CONTINUE TO BLOW.
- FUSE BOX IS HARD WIRED**
THE LANDLORD HAS HARD WIRED THE FUSE BOX SO THAT IT DOESN'T KEEP SHORT CIRCUITING BECAUSE OF THE WATER DAMAGE.
- BROKEN OVEN, EXPOSED WIRES**
DOOR HANGS OFF, NOT FITTED PROPERLY, WIRES ARE EXPOSED.
- ROTTING KITCHEN CUPBOARDS**

The AWHI coordinator hand delivered the letter to the landlord's physical address and phoned several times. The landlord did not want to discuss the letter and declined the offer of an interpreter. The team were concerned about the landlord's possible reaction which might include eviction of the whānau. The mum was open to moving to alternative housing as long as she could maintain independence.

The AWHI coordinator and the core design team worked with MSD and HNZ to ensure the family was assessed for social housing eligibility. The process turned out to be more complicated than anticipated. While the AWHI coordinator and the mother understood all the paperwork was correct and complete there was a delay at MSD. Eventually the whānau received a high score of need based on the MSD assessment and was rehoused in a HNZ home. If the whānau had not been eligible, the core design team would have helped the whānau secure another private rental.

There is inconsistent awareness of the criteria within the AWHI system. This case reveals that the MSD Fast-Track housing criteria for AWHI clients excludes households with children under the age of 4 years. Any change to these criteria would need Cabinet approval.

What about new tenants moving into the same property?

Unfortunately it is likely that this home will be re-tenanted in its current state. A conversation with the Council Compliance team identified that Council has some legislative powers to deal with dangerous or unsanitary buildings. The design team will explore how this may be used while achieving the best outcomes for families, in an environment of inadequate housing supply. Collecting data might be useful to understand the number of landlords who are not open to improving their rental properties, for example AWHI and DHBs could flag in their system if a property is involved in more than one referral.

Local councils must have policies to ensure safe and healthy buildings

The Building Act 2004 requires local councils to have policies on dangerous and unsanitary buildings. These allow them to take action against owners of such buildings, no matter when they were built.

Buildings are considered **dangerous** if they're likely to cause injury death or damage to other properties.

Buildings are considered **unsanitary** if they:

- Are offensive or likely to be harmful to health
- Don't have enough protection against moisture
- Don't have an adequate supply of drinkable water, or
- Don't have adequate sanitary facilities (such as a toilet or shower).



Above: Rotten bedroom wall and floor. Above right: Broken oven and family cooking with gas inside.

Quick Facts – Residential Tenancies Amendment Act

By 1 July 2016 landlords must:

- State the current level of underfloor, wall and ceiling insulation in the property (location, type, condition) as part of the tenancy agreement.
- Alternatively, make a statement to explain that insulation levels are unknown despite making reasonable efforts to find out.
- Install working smoke alarms
- Install ceiling and floor insulation in social housing rentals (for tenancies that receive an income-related rent subsidy) where it can be practically installed.

By 1 July 2019 all landlords must have installed ceiling and floor insulation in every rental property, where it can be practically installed.

- There are fines for landlords that fail to comply with smoke alarm or insulation regulations.
- If landlords have not complied with the requirements, tenants need to first approach their landlord. If the issue is still not resolved, they may take the case to the Tenancy Tribunal, where a work order may be made – this may include allowing the tenant to undertake the work themselves and charge the cost to the landlord.

Testing with the second Whānau

The second family moved to Auckland from overseas and had lived in the three bedroom private rental property for three years. The landlord used a property manager and the rent was \$460 per week. One parent worked and the other stayed at home to look after young children. The family were having problems getting repairs carried out and the previous property manager blamed this on the landlord who did not live in Auckland.

The multidisciplinary prototype

team inspected the home and found:

- The oven was broken and the family was cooking on a gas ring inside
- A leaking and unsanitary sink
- Rotting bedroom floor due to a leak in the adjacent bathroom
- Blinds rather than thermal curtains.

The house was insulated, had a heat pump and a disconnected ventilation system. This family used prepay power. They were setting the heat pump at 29°C when they did use it and

were advised by the Council EcoDesign Advisor that it should be set at 21° C. This suggested that education on how to use the heat pump effectively could help them.

At the time the letter was sent to the property manager, the landlord was engaging a new property management company. The new property manager visited the property for their first time while the team was inspecting the home and indicated that the family was \$5000 in rent arrears. The family disputed the amount. The bond for the

property was only lodged just prior to switching property management companies, despite the tenants having lived in the property for three years.

The property manager expressed surprise at the condition of the home and that the previous property manager had not contacted the landlord. Within 48 hours Habitat for Humanity coordinated some of the most urgent repairs for the property manager who was very grateful.

The most pressing issue for this family was the rent arrears. The family had paid the rent by cash to the former property management company and had lost some receipts and not been given others. They were advised to check bank statements and look for any receipts they could find. One receipt was located and presented to the former property manager who reimbursed the amount in cash which suggests the landlord may not have received some of the rental payments paid by this family. This has been deducted from the alleged rent arrears quantum.

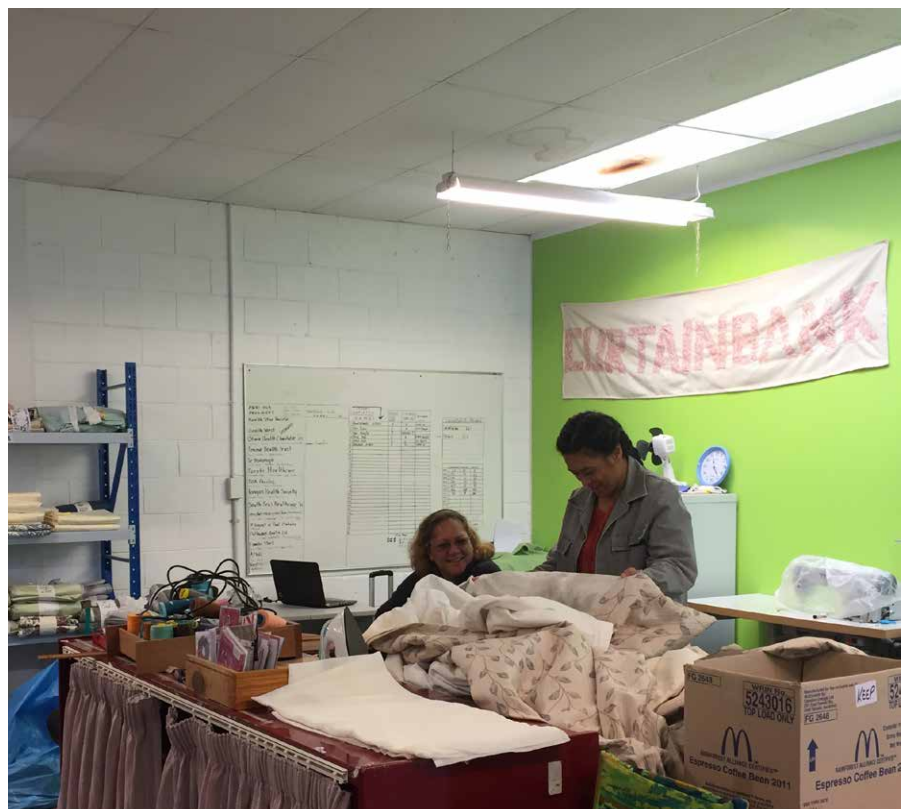
The family was paying the outstanding rent arrears at \$40 per week. The new Property Manager applied for phone mediation to formally address the arrears, but as this did not happen, the case was elevated

to a Tenancy Tribunal hearing. During this time the family was supported by a design team member including contacting the local community law centre (they needed proof of eligibility for assistance which appeared to be a barrier to the family), offering to attend the hearing as a support person or to provide childcare during the hearing. Prior to the hearing, the Tenancy Tribunal application was withdrawn by the new property management company as the tenant was continuing to pay the rent and arrears on time. The new property manager has continued to work with the landlord to access funds for outstanding repairs.

Deregulation of property management in 2008 has complicated the situation for tenants and landlords. Licensed real estate agencies are required to use Trust accounts which are audited. Other unlicensed businesses may not be as scrupulous or diligent with handling funds or with property maintenance.

Prototype 2 – Power

Empathy interviews with whānau and AWHI providers identified that even if given heaters, many families did not heat their homes as they could not afford to or were concerned about receiving high electricity bills. Through



Above: Checking curtains received as part of a school curtain drive, at South Auckland Curtain Bank.

ideation with AWHI providers, AWHI hub and an electricity retailer, a prototype consisting of electricity education, provision of power meters that the families could borrow and a power voucher was developed. This is currently being tested with families. While testing missed the 2016 winter, the empathy interviews are providing useful information. A larger scale test will occur during the autumn - winter period in 2017.

Prototype 3 – Curtain supply, school drive

Discussion with AWHI providers and the AWHI hub raised a lack of supply of curtains to offer to families. To better understand this issue, the team visited a curtain bank in late May who confirmed that the supply of curtains and curtain material was a challenge. The design team decided to check if there is latent supply in households by asking King's College to include a curtain appeal in the school e-newsletter. Families delivered 84 curtains to the school's donation storage shed. The team collected the curtains from the school and delivered them to the curtain bank. Of those 84 the curtain bank assessed 13 to be in good condition and 71 needed to be cleaned. Subsequent discussions with the curtain bank identified that some of the curtains thought to be in good condition could not

be used. Approximately two-thirds of those curtains collected were usable, the remainder could not be used due to mould which could not be removed with washing. The design team will work with other partners to investigate additional uses for the curtains that are of no use to the curtain bank.

The team will test more schools and design methods for the cleaning and storage of curtains with the curtain bank. Testing of curtain collection will expand to other opportunities such as the Hotel Association which has also placed an advertisement for the curtain bank in its latest e-publication. The curtain bank staff have been introduced to Envision, the Community Recycling Network and the recycling station in Glen Innes so that they will be able to access any curtains that are collected.

Prototype 4 – Curtain installation

Measurements for curtains for the second whānau were taken and provided to the curtain bank on a previous visit. Habitat for Humanity installed the curtains for the second family while a design team member observed. Observing the installation showed that there are improvements which can be made in the process of measurement and delivery of curtains. For example, consistent

advice and training on how to take correct measurements for the curtains. Further testing will allow Habitat for Humanity to cost a curtain installation service at scale.

Other Prototypes

Envision is keen to assist with supplying interventions such as beds so are testing the ease and cost effectiveness of sourcing recycled beds. In the first trial two bunk beds could be supplied free but required three hours driving to collect and deliver to the family. This is not viable but the team continues to work with Envision with further families in need.

Early lessons from prototyping

Early lessons from prototyping and testing include:

- Prototyping with real families in complex situations is difficult and time consuming. Every step must be tested and weighed against implications for the families, which could be as serious as losing their home.
- Working with the first two AWHI families has uncovered the complexity of the private rental market in Auckland and the stresses on the social housing system which may contribute to structural overcrowding.
- Communicating with families is time consuming. It may take 5 attempts to set up a time to speak with them and each prototype requires several interactions for follow up.

- Some private rental homes require significant interventions to achieve the desired health outcomes for families, for example roof repairs prior to insulation. The design team are collaborating with Habitat for Humanity on a prototype for a complex repair service for private landlords. Council projects with similar goals such as the healthy rentals programme in the Mangere-Otahuhu, Whau, Puketapapa and Maungakiekie-Tamaki local boards are also contributing to the learnings.

There are other stakeholders the team has been working with that are providing useful information, this includes property managers and landlord associations.

The team will continue to iterate and test prototypes but the focus for the second year will be to scale up successful prototypes. This will be reported as a second part to this document.

Prototyping Partners and Co-design Team

The following AWHI providers, stakeholders and community leaders are thanked for their assistance with the prototype development.

The AWHI Hub - the AWHI Hub's key focus is to reduce crowding in families with children at high risk of rheumatic fever. It co-ordinates nine community providers and suppliers, to support families.

HealthWEST Te Puna Manawa Whakatauki, Turuki Healthcare, Toa Pacific and Otara Heath Charitable Trust – AWHI community providers responsible for working with families.

Andrew King and Peter Lewis – landlords involved in testing the landlord letter

South Auckland Curtain Bank – providing free curtains to low-income families in need of curtains for all or part of their home.

Auckland Council's Eco Design Advisor - provides independent home performance advice including creating healthier buildings and improving energy use. This includes

a free in-home consultation and financial assistance (a loan) for home interventions including insulation, clean heating and bathroom or kitchen mechanical extraction (Retrofit Your Home).

Habitat for Humanity - a not-for-profit organisation that works in partnership with people in housing need to eliminate sub-standard housing.

Mercury Energy and GloBug Dave Timms – Randwick Park community leader

Community Paediatricians - at Waitemata, Auckland and Counties Manukau District Health Boards

Housing New Zealand (HNZ)

Energy Efficiency and Conservation Authority (EECA)

Ministry of Social Development (MSD)

Ministry of Business Innovation and Employment

Ministry of Health

Auckland Council Compliance

The co-design team included:

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