



FireThrive

*Evaluating a data driven, behaviour change design
approach for bushfire preparedness*

*Danielle Teychenne
Co Founder, FireThrive*



FireThrive

A social enterprise that develops interactive experiences and tools to help communities adapt to worsening bushfire conditions.

Our team



Danielle Teychenné

Behavioural Designer



Dan Steen

User Experience Specialist



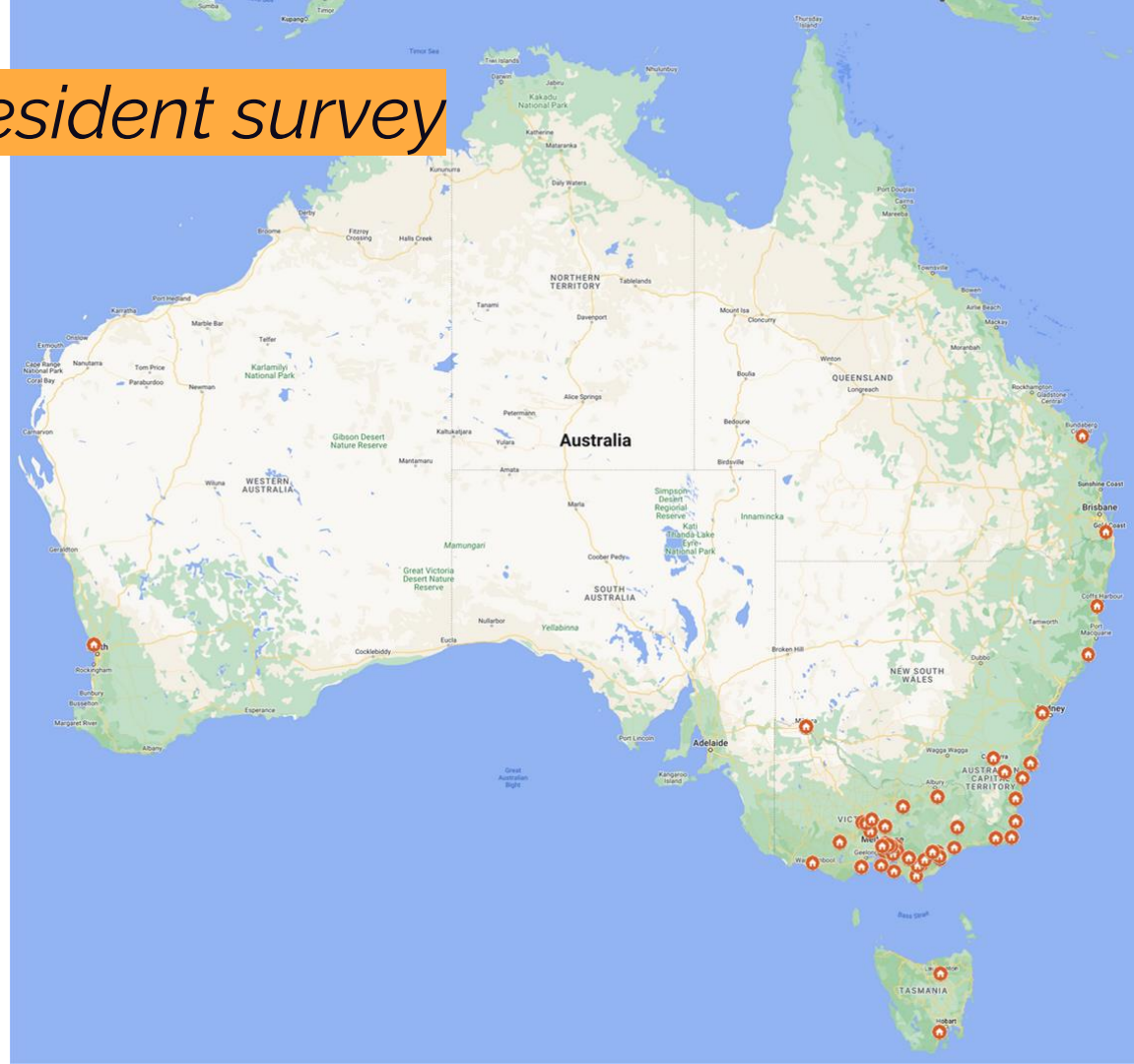
Rachael Vorwerk

Science Communicator



Resident survey

- 181 respondents across Australia
- Strong desire for accessible, community based preparedness education
- 50% of respondents did not have bushfire plan or emergency kit
- Information overwhelm/messaging fatigue
- Frustrations with communication infrastructure during the bushfire event



Results

I don't know how to prepare

Not sure what a bushfire emergency kit is!

Having a **list of what you need to do** and when and what you need to buy and have ready that could be ticked off as you do it/buy it and refreshes ready for the next year each year would be great. On my phone!

Information campaigns - what to keep in your car, safer places to stop, what not to do (e.g don't jump in a tank)

Location specific scenarios and storytelling helps give better understanding

Keep it real, get the **community** not the agencies driving the process and trust the skills that are already in the community

I'm always open to more bushfire knowledge

All in one app with checklists and maps for preparation

Consider **online engagement platforms** at times likely to suit working people (ie. after-hours zoom meetings)

The CFA website and Emergency website do not link seamlessly to provide details of up to date emergency. The CFA website takes about **5 clicks before you can get information** on emergencies that then takes you to another website during bushfire season. Poorly designed

Include safety information, practical information on planning tailored to the area and likely type of threat

Ongoing discourse and **engagement activities** that address the complete living with bushfire story

Not aware there was such a thing [as a bushfire emergency kit]

I have a first aid kit so guessing I should add to that. Would be good to know what a bushfire emergency kit is.

More knowledge

Make it **simple** yet comprehensive

Leading up to the bushfire season suggesting **strategies** to be fire ready... this could be an education process via a game. People would then know they need to leave as they would be educated



User experience journey



BUSH FIRE SURVIVAL PLAN

Bush fire survival plan
Get up to date with the latest bush fire survival plan. Make a plan for yourself, your family and your pet. It's the best way to stay safe.

[READ MORE](#)



Know your risk
Find out how much risk you are in, and what you can do to reduce it. The Standard and Advanced levels include advice, guides, maps, assistance and benefits.

[READ MORE](#)



Prepare your home
A well-prepared home is more likely to survive a bush fire. Find out how to make your home more fire-resistant and what you can do to protect your home, including bushfire survival plan.

[READ MORE](#)



Prepare yourself and family
Prepare to move to a safe place around the house and family. Find out how to make your home more fire-resistant and what you can do to protect your home, including bushfire survival plan.

[READ MORE](#)



Prepare your home
A well-prepared home is more likely to survive a bush fire. Find out how to make your home more fire-resistant and what you can do to protect your home, including bushfire survival plan.

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Prepare yourself and family
Prepare to move to a safe place around the house and family. Find out how to make your home more fire-resistant and what you can do to protect your home, including bushfire survival plan.

[READ MORE](#)



Fire Danger Ratings
The Bushfire Risk Rating (BRR) is a measure of the level of bushfire risk in your area. It is based on the level of bushfire risk in your area. Find out how to make your home more fire-resistant and what you can do to protect your home, including bushfire survival plan.

[READ MORE](#)



Alert Levels
The bushfire risk rating (BRR) is a measure of the level of bushfire risk in your area. It is based on the level of bushfire risk in your area. Find out how to make your home more fire-resistant and what you can do to protect your home, including bushfire survival plan.

[READ MORE](#)

GET STARTED

OUR CURRENT PLAN IS

One of the most important things to do before a bush fire is to decide what you will do if one should start.

<input type="radio"/>	<input type="radio"/>
Leave Early. Your safest choice.	Prepare to Stay. Only if you're well prepared.
<input type="radio"/>	<input type="radio"/>
We Don't Have a Plan	Unsure

GET READY WEEKEND

SAVE THE DATE
17-18 SEPTEMBER 2022





Dr Ken Strahan

Social science researcher



International Journal of Disaster Risk Reduction

Volume 27, March 2018, Pages 307-316



Self-evacuation archetypes in Australian bushfire ☆

Ken Strahan ^a, Joshua Whittaker ^b, John Handmer ^a



Responsibility Denier

You are highly committed to evacuating in a bushfire but expect others to direct and assist. You do minimal preparation to your house in the lead up to the bushfire season.



Experienced Independent

You are committed to defending your property, but are willing to evacuate in certain circumstances. You thoroughly prepare your property in the lead up to the bushfire season.



Community Guided

You are committed to evacuating and will follow community advice to do so. You make moderate preparations to your household to protect it in your absence and have materials ready to protect it from spot fires.



Considered Evacuator

You understand that evacuation is the best way to protect yourself and your property. You make moderate preparations to your house in your absence.



Threat Denier

You are highly committed to remaining and do not perceive bushfires as a threat. You don't own fire fighting equipment, protective clothing, and don't make any preparations for your property.



Dependent Evacuator

You are highly committed to evacuating but you rely on others to direct and assist you. You do minimal preparation to your property in the lead up to the bushfire season.



Worried Waverer

You are prepared to stay and defend your property, but worry you lack experience. This often leads you to wavering between staying or going. You thoroughly prepare your property in the lead up to the bushfire season.

Which bushfire evacuation archetype are you?

Learn about the different archetypes underpinning the *How prepared are you for a bushfire?* web application.

Stream 2 BCRRF Grant



Australia wide campaign



Greater Sydney, Hunter
and Central region
campaign



1 tailored
campaign for
a local council
area

(16 LGAs)

How prepared are you for a bushfire?

Take this 10 minute quiz to find out.

This tool gives you insight into how prepared you are for a bushfire, your strengths, and things you could do to better prepare.

Entirely backed by research, this quiz will help you to become better prepared this bushfire season.

Take the quiz



Quiz web application

 **FireThrive**
How prepared are you?

How prepared are you for a bushfire?


Take this 10 minute quiz to find out.

This tool gives you insight into how prepared you are for a bushfire, your strengths, and things you could do to better prepare.

Entirely backed by research, this quiz will help you to become better prepared this bushfire season.

[Take the quiz](#)




 **FireThrive**
How prepared are you?

1. During the last bushfire season, how often did you **think about the threat of bushfire**?

Not at all A little Some of the time Often

[Previous](#)

Find out more
Home
Retake the quiz
Tailor to your community
[Get in touch](#)

 **FireThrive**
How prepared are you?

Unlock your results

To prove that you are not a bot, you need to verify your email. This will allow you to revisit your profile anytime in the future to access your personalised tips.

Don't worry, you can opt out at any time.

*First name

*Last name

*Email

*Postcode

 **FireThrive**
How prepared are you?


Marion's preparedness profile



Well done, you've completed the quiz! You are now on your way to becoming the best

 **FireThrive**
How prepared are you?

strengths

 **Strengths are on your mind**

 **It takes knowledge and vacate, or to stay and defend**



Behavioural analysis

Mapped each archetype's characteristics over a number of areas including

- Threat perception
- Evacuation preference
- Prior knowledge/skill
- Perception of stakeholders
- Trusted information sources

	Summary of the characteristics	Thinking about threat and level of responsibility			Effectiveness of evacuating or remaining				Knowledge and skill				Perception of stakeholders						Preference for evacuating or remaining					
	Experienced baseline	Thought about building threat	Need to be self-reliant during responsibility	Evacuation best way to protect personal safety	Evacuation best way to protect property	Remaining best way to protect personal safety	Remaining best way to protect property	Need knowledge / skill to evacuate	Need knowledge / skill to remain	Householders influence decisions and are knowledgeable	Householders are self-reliant and responsible for protecting	Householders are knowledgeable, well-informed and prepared, accurate info	Media influence decisions	Media are knowledgeable	Media well informed and protect personal accurate info	Media responsible for protecting	Emergency services influenced decision	Emergency services knowledgeable	Emergency services well informed	Emergency services provide accurate info	Emergency services responsible for protecting	Evacuate or remain	More detail	
Threat denier	Threat deniers do not believe that a disaster will affect them or their family. They do not believe that they are responsible for protecting themselves or their property.	No	No	No	No	No	Yes	No	No	No	No	Yes	No	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Remain	Remain - Evacuation is not considered as a viable option.
Responsibility denier	Responsibility deniers do not believe that they are responsible for protecting themselves or their property. They do not believe that they are responsible for protecting their family or their property.	No	No	No	Yes	No	No	Yes	Yes	No	No	No	No	Yes	No	Yes	No	No	Yes	No	Yes	Yes	Evacuate	Evacuate - Evacuation is considered as a viable option.
Dependent evacuator	Dependent evacuators do not believe that they are responsible for protecting themselves or their property. They do not believe that they are responsible for protecting their family or their property.	No	No	No	Yes	Yes	No	No	No	No	No	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Evacuate	Evacuate - Evacuation is considered as a viable option.
Considered evacuator	Considered evacuators do believe that they are responsible for protecting themselves or their property. They do believe that they are responsible for protecting their family or their property.	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	No	Yes	No	Yes	Yes	Yes	Yes	No	No	No	Yes	Evacuate	Evacuate - Evacuation is considered as a viable option.	
Community guided	Community guided evacuators do believe that they are responsible for protecting themselves or their property. They do believe that they are responsible for protecting their family or their property.	No	No	No	Yes	Yes	No	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Evacuate	Evacuate - Evacuation is considered as a viable option.
Worried waverer	Worried waverers do believe that they are responsible for protecting themselves or their property. They do believe that they are responsible for protecting their family or their property.	No	Yes	Yes	Yes	Yes	No	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Wavering between	Wavering between - Evacuation is considered as a viable option.
Experienced independent	Experienced independent evacuators do believe that they are responsible for protecting themselves or their property. They do believe that they are responsible for protecting their family or their property.	Yes	Yes	Yes	No	No	No	Yes	No	Yes	Yes	Yes	No	No	No	No	No	No	No	No	No	No	Remain	Remain - Evacuation is not considered as a viable option.



Responsibility Denier



Immediate improvable behaviour

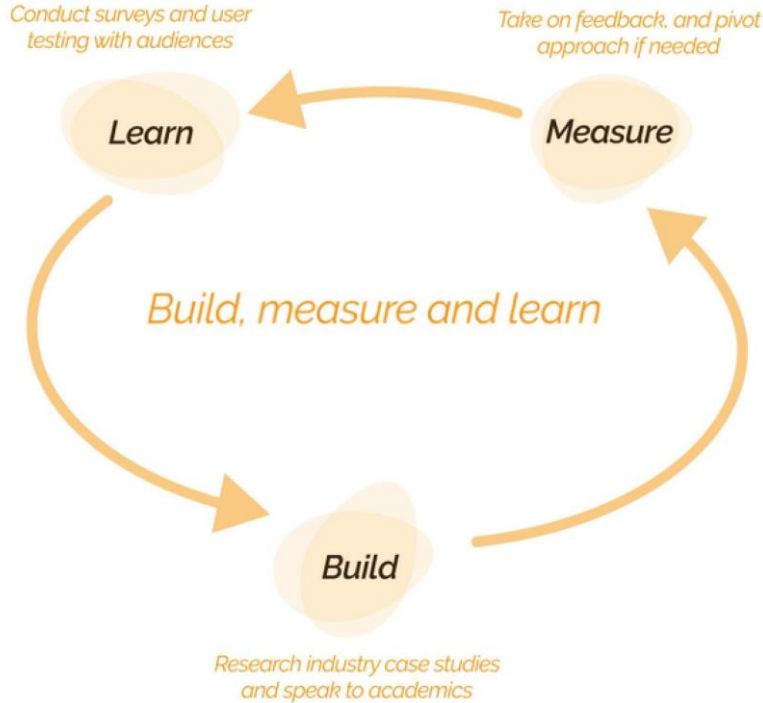
Self reflection of what emergency services can realistically do during a bushfire.

Master behavioural goal

Increased self reliance and responsibility for bushfire evacuations.



User testing



A checklist of how to prepare would be helpful.

I would really like to see decision making in a real world scenario, so I would probably click the interactive scenario out of curiosity.

At this point, I feel like I can't walk away with something concrete

This would make me check the gutters - preferably now rather than in a bushfire.

And it's very nicely presented and displayed it's very user friendly, very easy to understand language as well.



User testing

It's so hard to find high quality information these days and covid has really proved that. The media don't have viewer's best interests at heart and I'm not trustworthy.

This looks like it could be really good. People always ask us "when will you go" and I say "I don't know". This could help.

It's really easy to use, very clear and simple 25 multiple choice questions, it's easy.

And it's very nicely presented and displayed it's very user friendly, very easy to understand language as well.

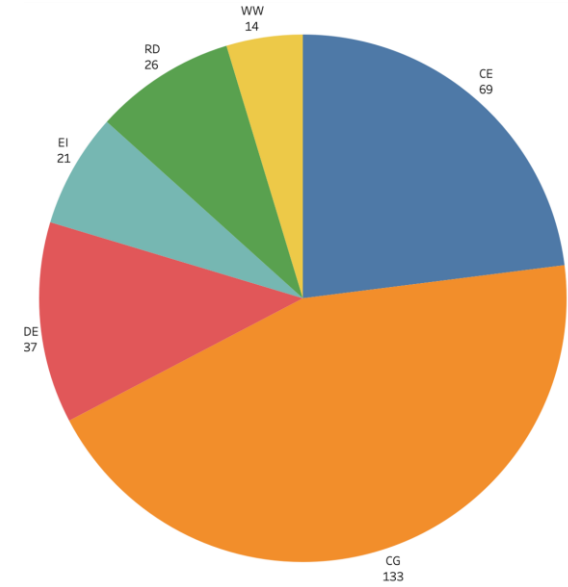
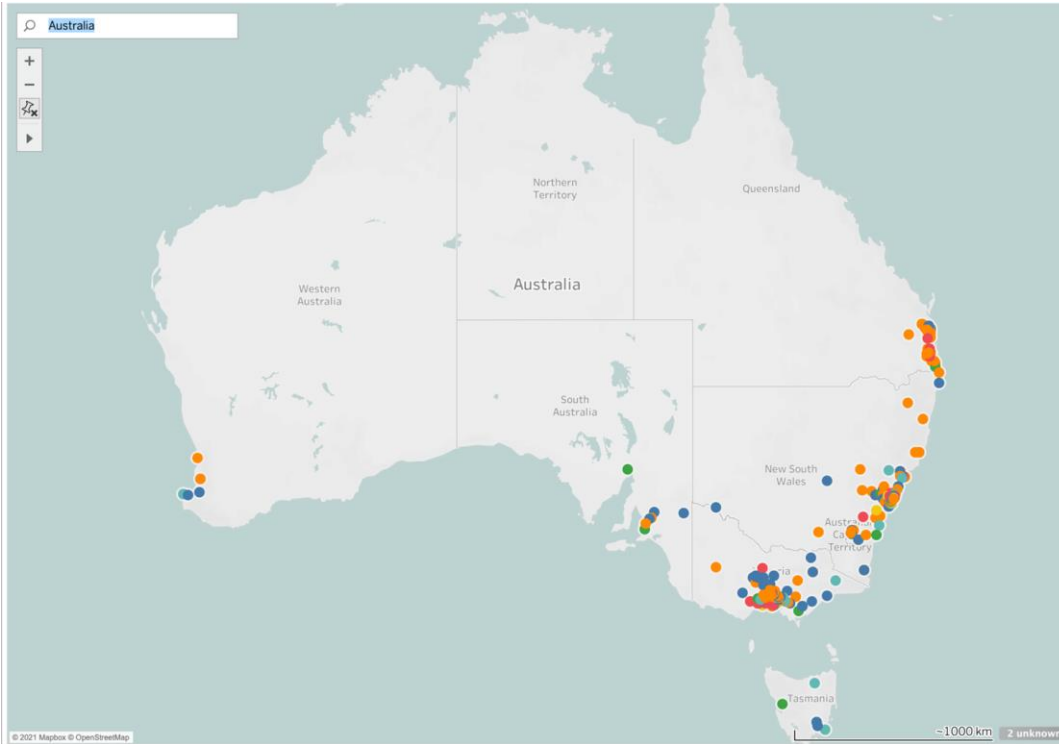
I would use this tool.

So it does get you to think about it and it puts bushfires back on your radar, when a lot of people don't want to think about it and that's one of the key barriers that somebody brings it up in the street when we're having a chat and everyone else changes the topic.

A reminder would be excellent... at the start of Summer, November or something that said "hey it's time to clean your gutters"



Snapshot of archetype data

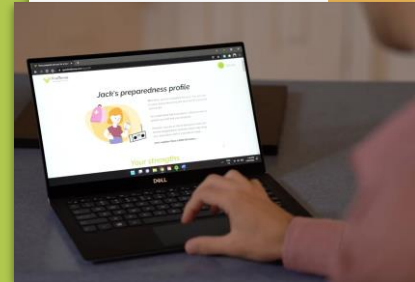
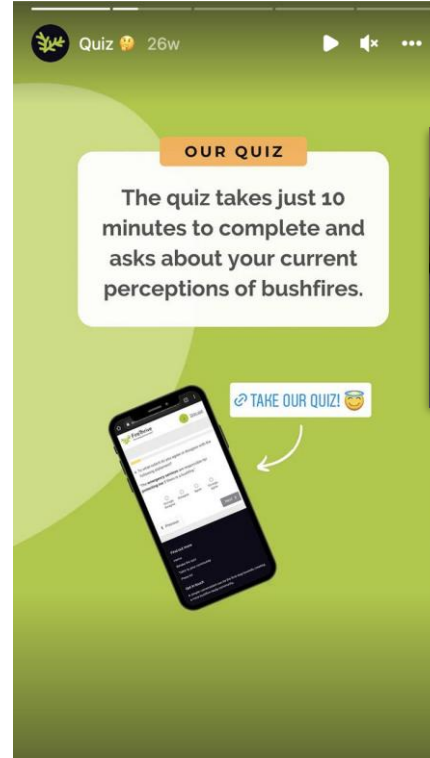


- Considered Evacuators
- Community Guided
- Dependent Evacuators
- Experienced Independents
- Responsibility Deniers
- Worried Waverers



Promotion

- Engaged with the 16 LGAs across the greater Sydney, Hunter and Central region
- Received varying degrees of engagement from stakeholders
- Offered press kit and physical magnets for public spaces
- Presented online at local resilience expos



Email campaign



Complete the quiz



Experienced Independent

You are committed to defending your property, and are willing to evacuate in certain circumstances. You thoroughly prepare your property in the lead up to the bushfire season.



Worried Waver

You are prepared to stay and defend your property, but worry you lack experience. This often leads you to wavering between staying or going. You thoroughly prepare your property in the lead up to the bushfire season.



Considered Evacuator

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Threat Denier

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Prepare to stay only if you are prepared
RFS checklist



Evaluate your stay and defend capabilities



Hypothetical stay and defend scenarios



Bushfire danger period and fire permits
RFS webpage



Neighbour conversation starter



You've finished!
RFS MyFirePlan quiz



Reflect on your bushfire plan
RFS MyFirePlan quiz
RFS '4 Simple steps to get ready for a bushfire' resource



'What if...bushfire?' scenario resource from Climate Wise Communities



Stay and defend contingency planning activity



Re-evaluate your bushfire plan
Talk to your local brigade



Develop your stay and defend decision making skills scenario resource



You've finished!
RFS MyFirePlan quiz



Rank your evacuation activities - RFS
leave early checklist



RFS Prepare your pets + Bushfire fact video resource



What's your trigger to leave? scenario activity



10 minute timed bushfire evacuation rehearsal



Contingency planning with the RFS
'Get ready for a bushfire' resource



You've finished!
RFS MyFirePlan quiz



Rank your most trusted evacuation contacts - RFS
know your risk video



RFS MyFirePlan quiz - Stay informed video



What's your trigger to leave? contingency planning



Share your bushfire plan with your evacuation allies



Get to know your local RFS brigade + static water supply program



You've finished!
RFS MyFirePlan quiz



Evacuation allies conversation guide



Support network activity - RFS AIDER program



Plan for the unexpected contingency planning resource - RFS alerts and warnings



10 minute timed bushfire evacuation rehearsal



Identifying your household preparedness allies



You've finished!



Know your risk RFS video resource + factsheet



What's your responsibility? Interview with a firefighter - drag and drop activity



Give your house the best chance of survival. Interview with a firefighter - RFS prepare your home resource



Understand your triggers to leave. RFS alert levels + Your neighbourhood safer places



Backup plans 'What if...bushfire?' scenario resource from Climate Wise Communities



You've finished!
RFS MyFirePlan quiz



Check if you're on bushfire-prone land + Know your risk RFS resources



Know your risk RFS video resource



'What if...bushfire?' scenario resource from Climate Wise Communities



Emergency survival kit RFS resource + Big Weather 10 min evacuation video



Test your knowledge how to survive in a bushfire



You've finished!
Prepare to stay checklist RFS

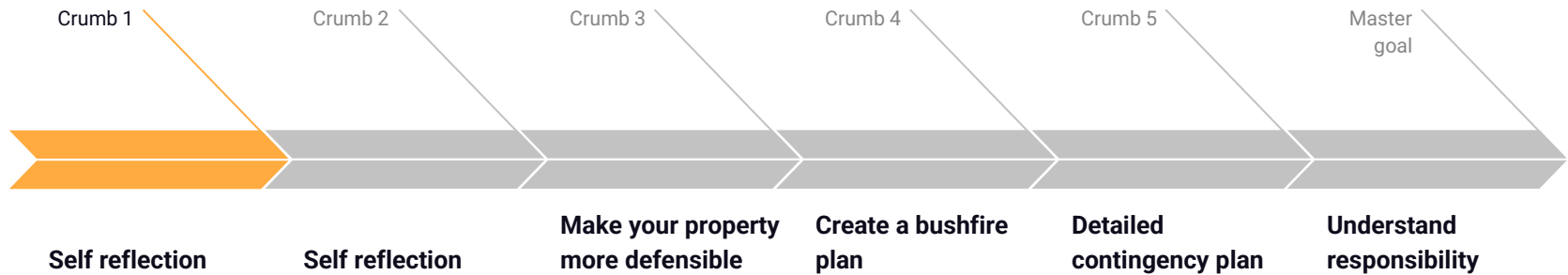


Users can retake the quiz periodically, with profile shifts demonstrating behaviour change over time.



Responsibility Denier

Behaviour change journey



Behaviour canvas

Asset:

Asset type:	Target audience/archetype:	Project	Hypothesis	Asset synopsis
		Client		

What behaviours are we changing?

The behavioural trait we're trying to modify	How the asset will address this <input type="radio"/> Knowledge <input type="radio"/> Motivation <input type="radio"/> Skills <input type="radio"/> Environment	Behavioural master goal
---	---	--------------------------------

How are we changing those behaviours

Beginning	Middle	End/Continuation
------------------	---------------	-------------------------

FT philosophy

- Playful
- Behaviour driven
- Socially driven
- Narratively rich
- Active
- Approachable
- Personalised
- Bite-sized

Sources, references and examples

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Intervention design

- Small, achievable steps scaffolded to achieve gradual change in bushfire preparedness
- Bite sized, just in time, low barrier to undertake
- Leveraged existing RFS, community based resources
- Engaged with RFS community engagement coordinators for feedback



Checking Your Risk

If you're surrounded by bush, near grassland or paddocks, near the coast, or in an area where grasslands meet built-up areas, then you may still be at risk of bushfire. Spend a few minutes [checking your risk here](#) (3 mins).



Conversation Guide

To help you to reach out to your neighbours or family, we have developed a short [conversation guide](#) to help you get the ball rolling.

Network of Allies

Whilst you may expect the emergency services or a loved one to assist you with your evacuation, it's important to have a network of allies to lend a hand if the unexpected happens.



Intervention design

Conversation guide

How to reach out to your neighbours about preparing for a bushfire



[View transcription](#)



[View transcription](#)

What's your trigger to leave?

If your telephone and mobile has no network signal, how would you reach out to your most trusted bushfire allies?



According to your profile, you think emergency services are responsible for protecting you.

Whilst this is correct to an extent, there are only so many houses firefighters can protect (especially when, at times, there are only two fire trucks per 600 households!).

What can I do?

There are many ways you can prepare yourself in the lead up to the bushfire season so you're not reliant on the emergency services.

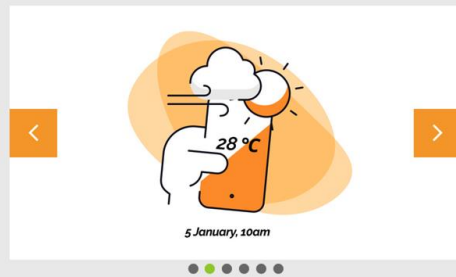
The best place to start is to reach out to your neighbours to coordinate a bushfire plan.

Why reach out?

Coordinating your bushfire plan with someone will help you both.

Often people leave their bushfire plan until it's too late, so starting the conversation early will help you both to have a safer, less stressful bushfire evacuation.

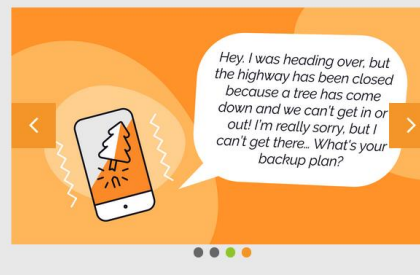
Scenario 3: Changing conditions



5 January, 10am, 28 degrees

It's a windy day in late January. Bushfires have been rife across the state. You're waiting at your doorstep for your evacuation ally. Your bags are packed and ready to go, but it's been 45 minutes with no sign of them. They're not usually late.

Scenario 1: The closed road

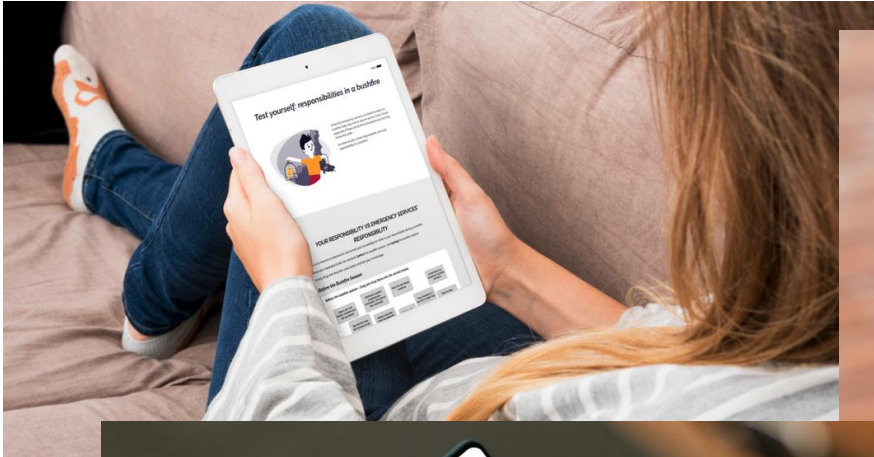


The phone rings

"Hey, I was heading over, but the highway has been closed because a tree has come down and we can't get in or out! I'm really sorry, but I can't get there.. What's your backup plan?"

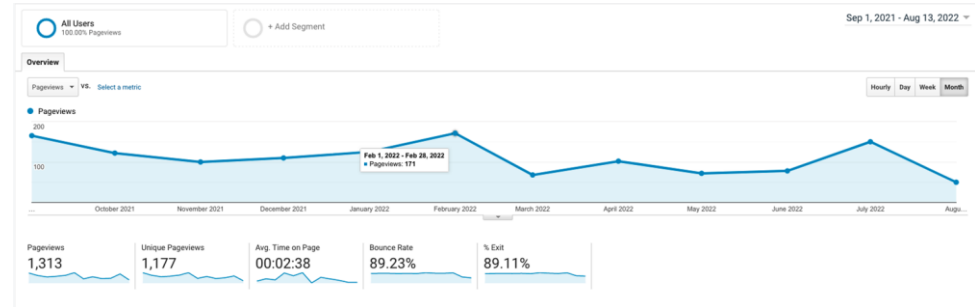
Email campaign

Launched in Feb 2022



Evaluation

- **392 total users**
 - 164 NSW based
 - 228 across VIC, TAS, SA, WA, QLD
 - 0 users from NT
 - Signed up between Sep 2021-June 2022
- **Data sources**
 - Google Analytics
 - Send in Blue
 - Preparedness quiz (before/after)
 - Zoom based interviews



Advanced statistics		
Sent :		80
Delivered :	98%	78
Opens : Details	25%	20
Clicks :	126%	98
Cancelled subscriptions :	0%	0
Bounces :	3%	2
Hard bounces :	1%	1
Soft bounces :	1%	1
Blocked :	0%	0
Spam :	0%	0
Invalid emails :	0%	0
Deferred :	0%	0



Evaluation

February - June 2022 timeline

Non-NSW Cohort

- 51 users
- Quiz 1 responses analysed
- Quiz 2
 - 6 repeat users
 - Responses analysed and compared
- Comparison to other cohort

NSW Cohort

- 51 users
- Quiz 1 responses analysed
- Quiz 2
 - 7 users
 - Responses analysed and compared
- Email engagement metrics analysed
- Comparison to other cohort



Evaluation

- Email 1 showed the most level of interaction, followed by email 2
- **37.25%** of the cohort opened the emails
 - total number of openings = **182**
- **23.53%** of the cohort clicked through to resources
 - total number of clicks = **41**
- Certain users engaged more often, accounting for the majority of respective total click and opening values.



Limitations

- Wholly online campaign
- Constrained by grant timelines
- Public focus and discourse - covid and floods
 - Media release from Deputy Premier was shelved
- Not a community led project, no sense of ownership



Complete the quiz at

quiz.firethrive.com

Sign up to our newsletter for the
evaluation report

firethrive.com



FireThrive

Twitter & Facebook

@FireThriveAU

Instagram

@firethriveau

LinkedIn

@firethrive

