The adoption and diffusion outcome prediction tool

Adoption report for:

UK - Norway follow-up: (6 participants) 4th October 2023

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For more information about ADOPT contact adopt@csiro.au

Project Details

MODEL

Standard

YOUR INNOVATION

Virtual Fence

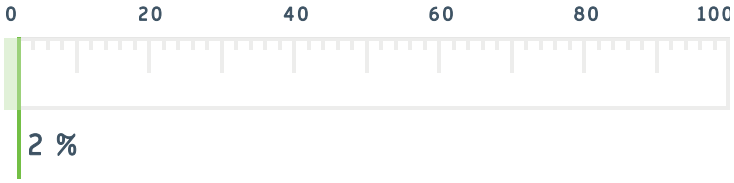
YOUR POPULATION

UK sheep farmers Group answering (Farmers = 5; Advisors 1)

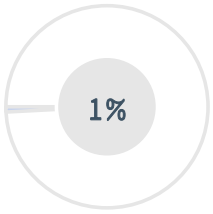
Adoption Level

TIME TO NEAR-PEAK ADOPTION LEVEL
(years)

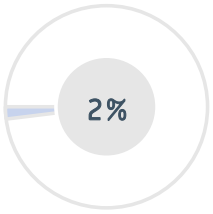
PEAK ADOPTION LEVEL
(percent %)



Predicted adoption levels



IN 5 YEARS FROM START



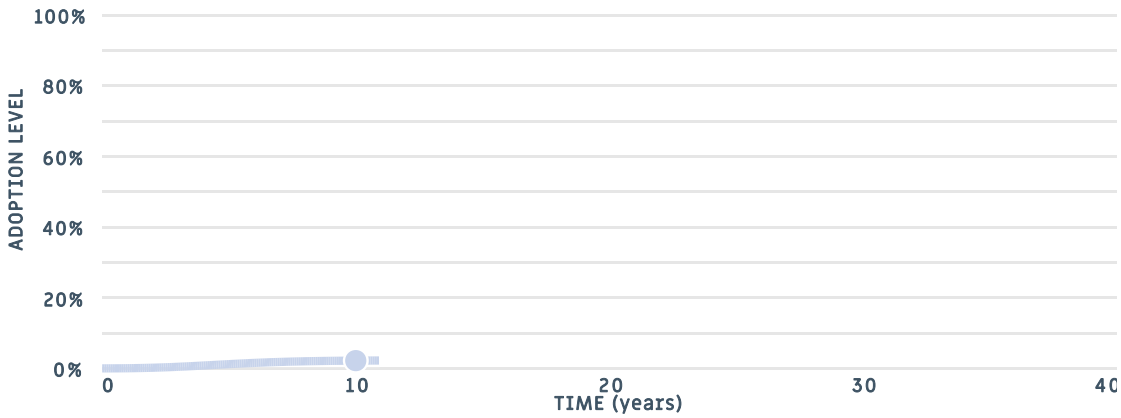
IN 10 YEARS FROM START

TIME TO 50% OF PEAK ADOPTION (years)

NOTES: The predictions of Peak Adoption Level and Time to Peak Adoption Level are numeric outputs that are provided to assist with insight and understanding and like any forecasts should be used with caution. Time to Near Peak Adoption represents the time to 99% of the maximum predicted adoption level.

Adoption level S-Curve

The following chart shows how the level of adoption in the relevant population of farmers changes over time.



Yearly Adoption Levels

Year	Adoption %
1	0
2	0
3	0
4	1
5	1
6	2
7	2
8	2
9	2
10	2
11	2

(Peak Adoption)

Changing the adoption levels

Many of the factors can be changed by activities such as extension. Based on the data entered, the ADOPT model suggests that changing the following factors would have the biggest effect on adoption.

Changing the peak adoption level

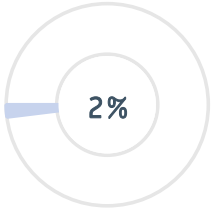
MOST SENSITIVE QUESTION

17 Future profit benefit

To what extent is the use of the innovation likely to have additional effects on the future profitability of the farm business?

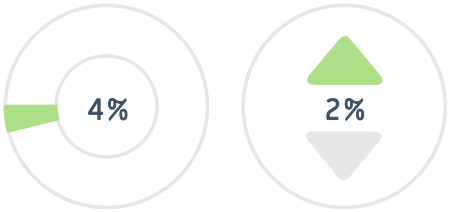
YOUR RESPONSE

Moderate profit advantage in the future



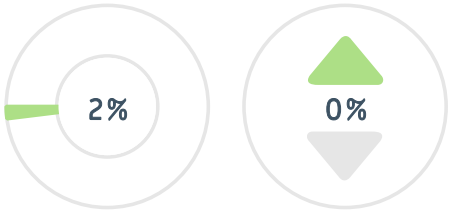
STEP UP RESPONSE

Large profit advantage in the future



STEP DOWN RESPONSE

Small profit advantage in the future



Changing the time to peak adoption level

MOST SENSITIVE QUESTION

12 Relevant existing skills & knowledge

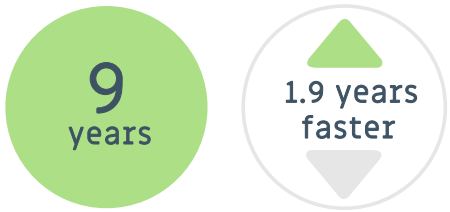
What proportion of the target population will need to develop substantial new skills and knowledge to use the innovation?

YOUR RESPONSE

A minority will need new skills and knowledge

STEP UP RESPONSE

Almost none will need new skills or knowledge



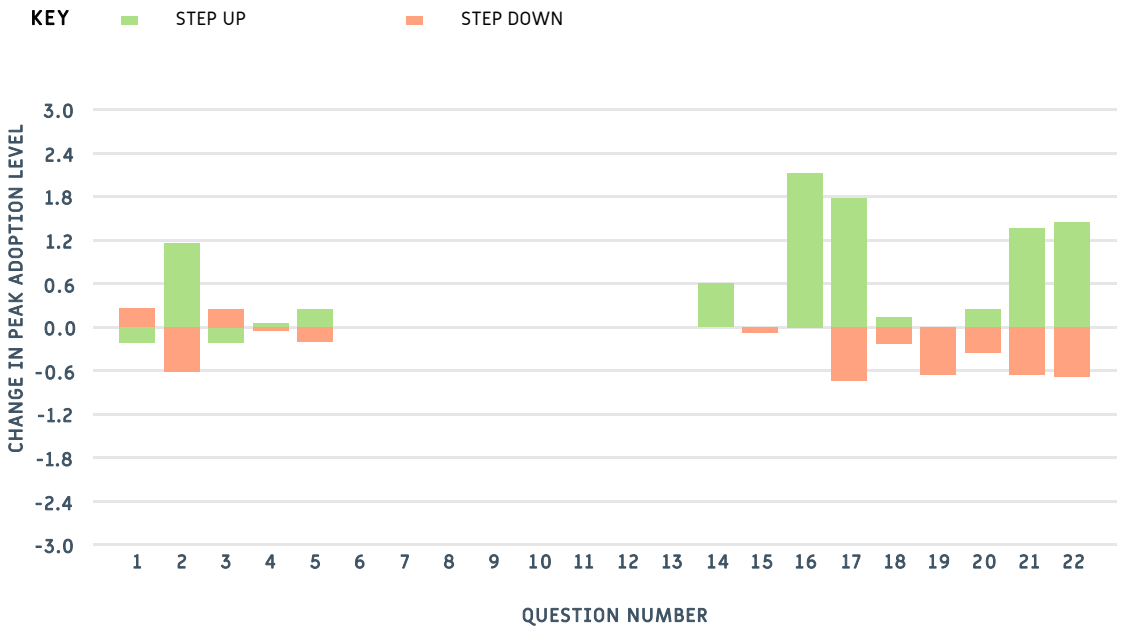
STEP DOWN RESPONSE

About half will need new skills and knowledge

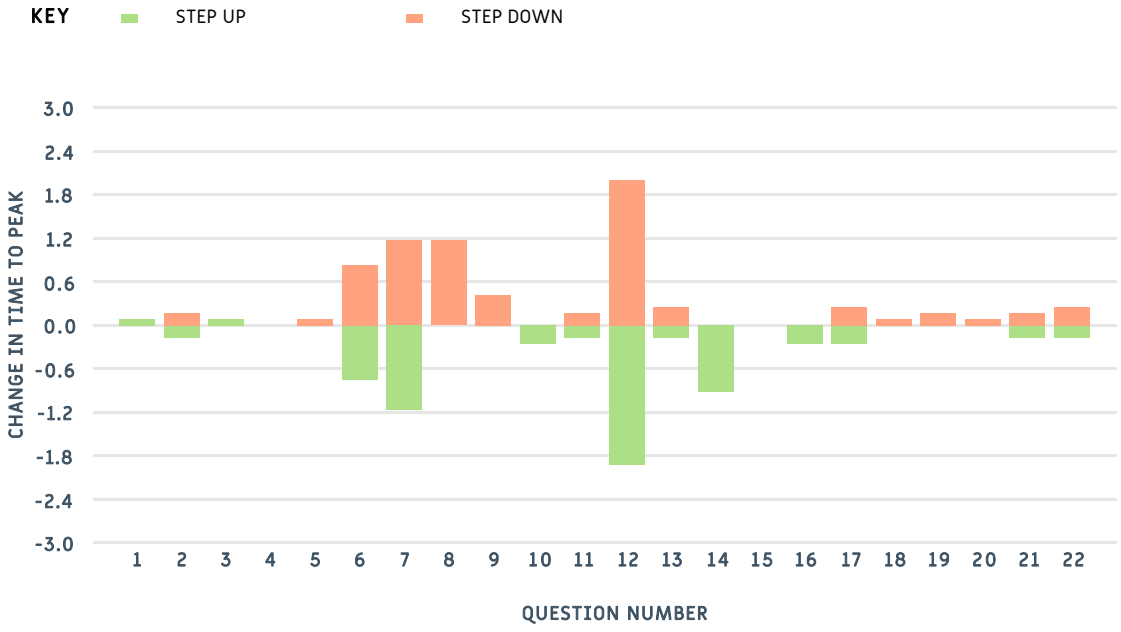
Sensitivity Analysis

The following charts show the effects on Peak Adoption Level and Time to Peak Adoption of single step changes up and down for all questions.

Peak level, sensitivity analysis

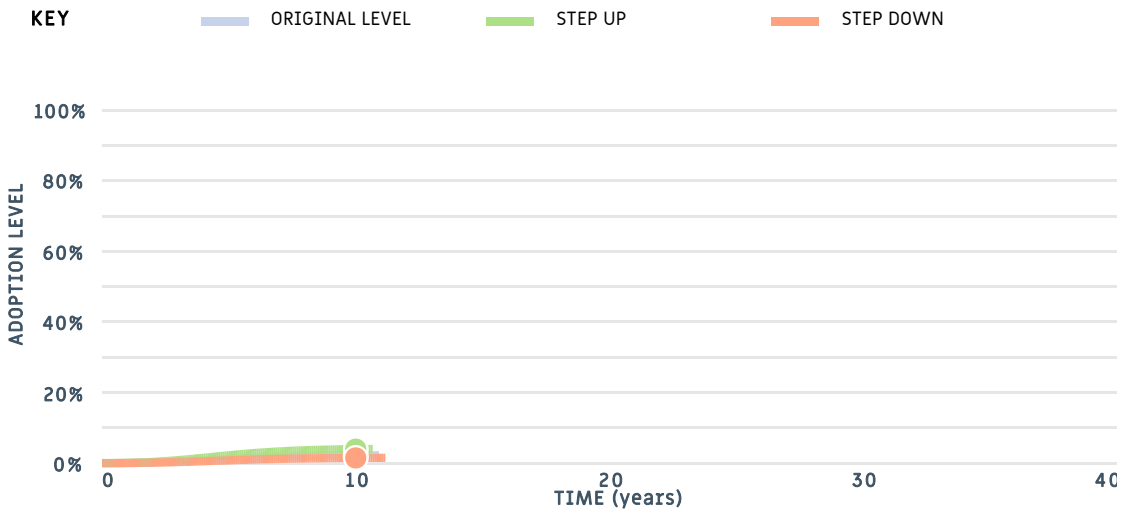


Time to peak, sensitivity analysis

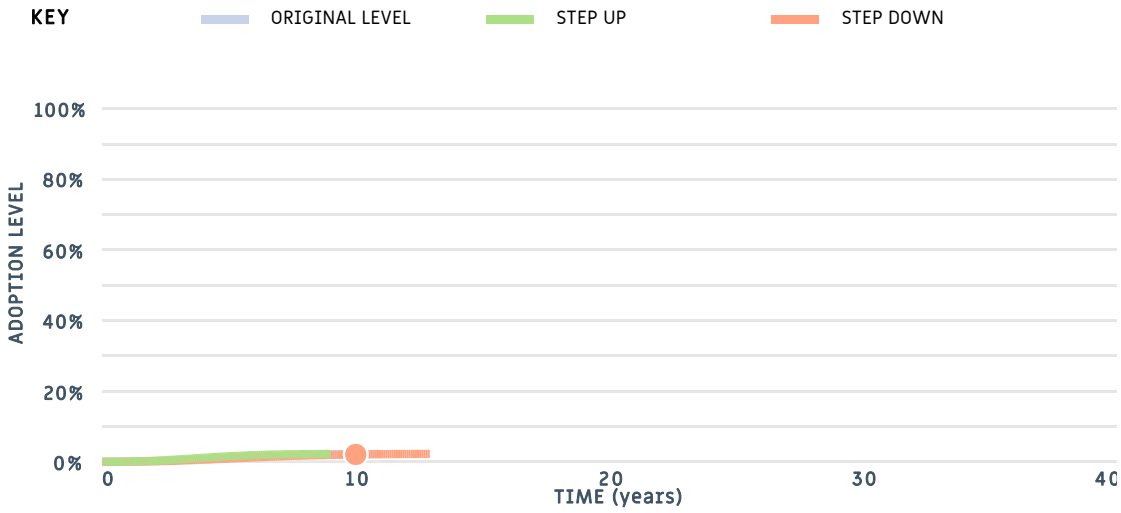


S-Curve Sensitivity

The following chart shows how the S-Curve is predicted to change when a single step change is made to the most sensitive question(s) with respect to Peak Adoption Level



The following chart shows how the S-Curve is predicted to change when a single step change is made to the most sensitive question(s) with respect to Time to Near Peak Adoption.



Responses

Question	Response	Reasoning
Relative Advantage for the Population		
1. Profit orientation	A majority have maximising profit as a strong motivation	
2. Environmental orientation	A minority have protection of the environment as a strong motivation	
3. Risk orientation	About half have risk minimisation as a strong motivation	
4. Enterprise scale	A majority of the target farms have a major enterprise that could benefit	
5. Management horizon	About half have a long-term management horizon	
6. Short term constraints	A majority currently have a severe short-term financial constraint	
Learnability Characteristics of the Innovation		
7. Trialable	Easily trialable	
8. Innovation complexity	Not at all difficult to evaluate effects of use due to complexity	
9. Observability	Very easily observable	
Learnability of Population		
10. Advisory support	Almost none use a relevant advisor	
11. Group involvement	A minority are involved with a group that discusses farming	
12. Relevant existing skills & knowledge	A minority will need new skills and knowledge	
13. Innovation awareness	About half are aware that it has been used or trialed in their district	

Relative Advantage of the Innovation	
14. Relative upfront cost of the project	Very large initial investment
15. Reversibility of the innovation	Very easily reversed
16. Profit benefit in years that it is used	Large profit disadvantage in years that it is used
17. Future profit benefit	Moderate profit advantage in the future
18. Time until any future profit benefits are likely to be realised	1 - 2 years
19. Environmental costs & benefits	Very Large environmental advantage
20. Time to environmental benefit	1 - 2 years
21. Risk exposure	Moderate increase in risk
22. Ease and convenience	No change in ease and convenience

ADOPT can be cited as: Kuehne G, Llewellyn R, Pannell D, Wilkinson R, Dolling P, Ouzman J, Ewing M (2017) Predicting farmer uptake of new agricultural practices: A tool for research, extension and policy, Agricultural Systems 156:115-125 https://doi.org/10.1016/j.agsy.2017.06.007

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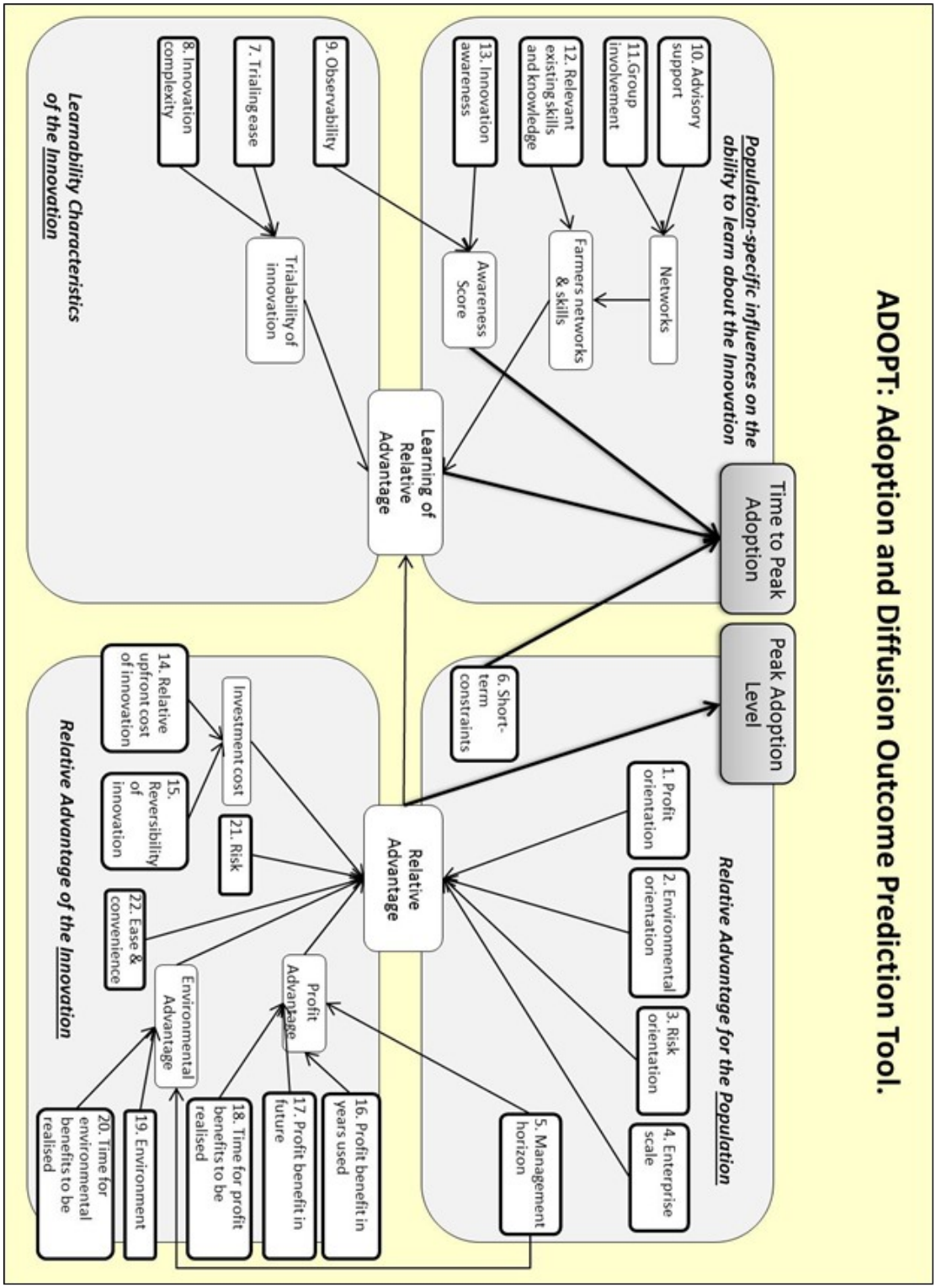

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