



Bubble baths and better data

Getting a better understanding of replacement rate for workforce analyses

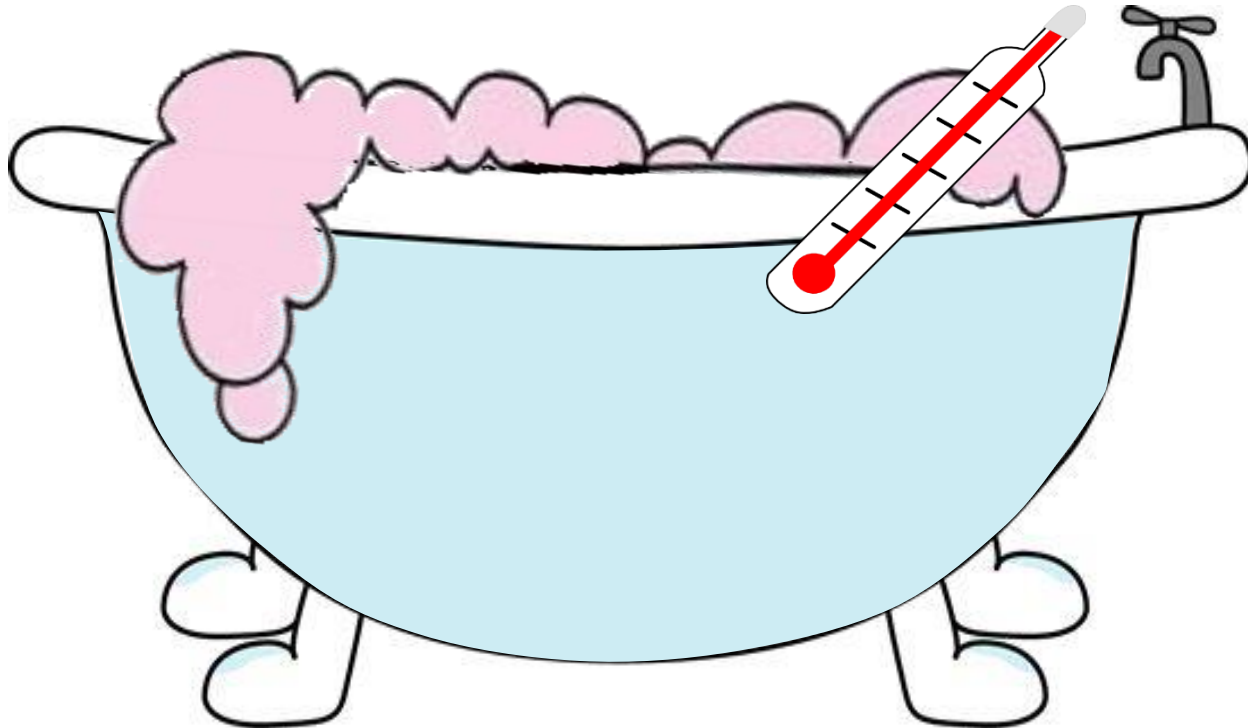
6 December 2017

Disclaimer

Access to the data used in this study was provided by Statistics New Zealand under conditions designed to give effect to the security and confidentiality provisions of the Statistics Act 1975. The results presented in this study are the work of the authors, not Statistics NZ.

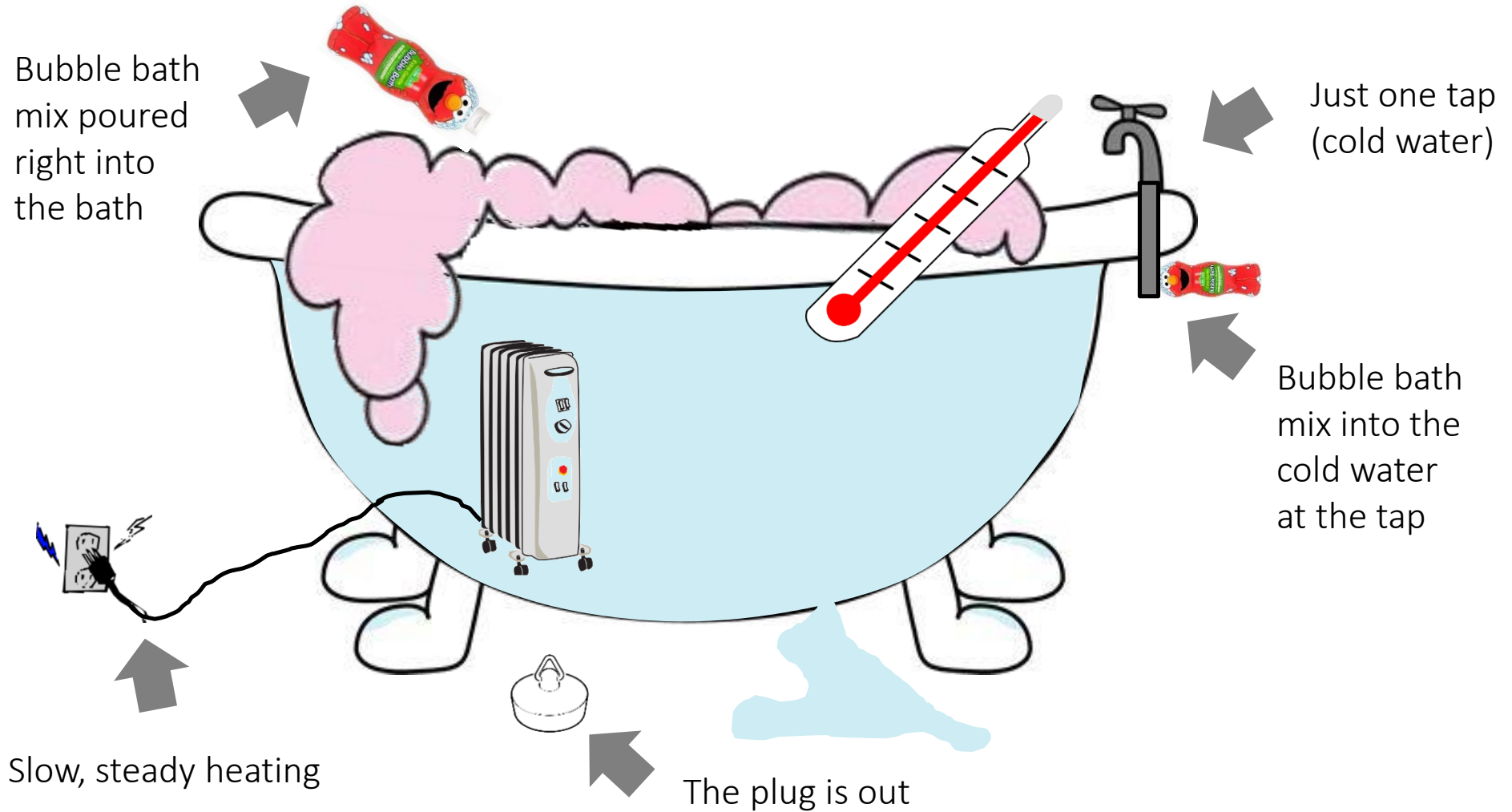
Overview of study

An ideal workforce is like a nice bath



- Enough workers
- With skills
- With experience

Flows into, and out of, the bath

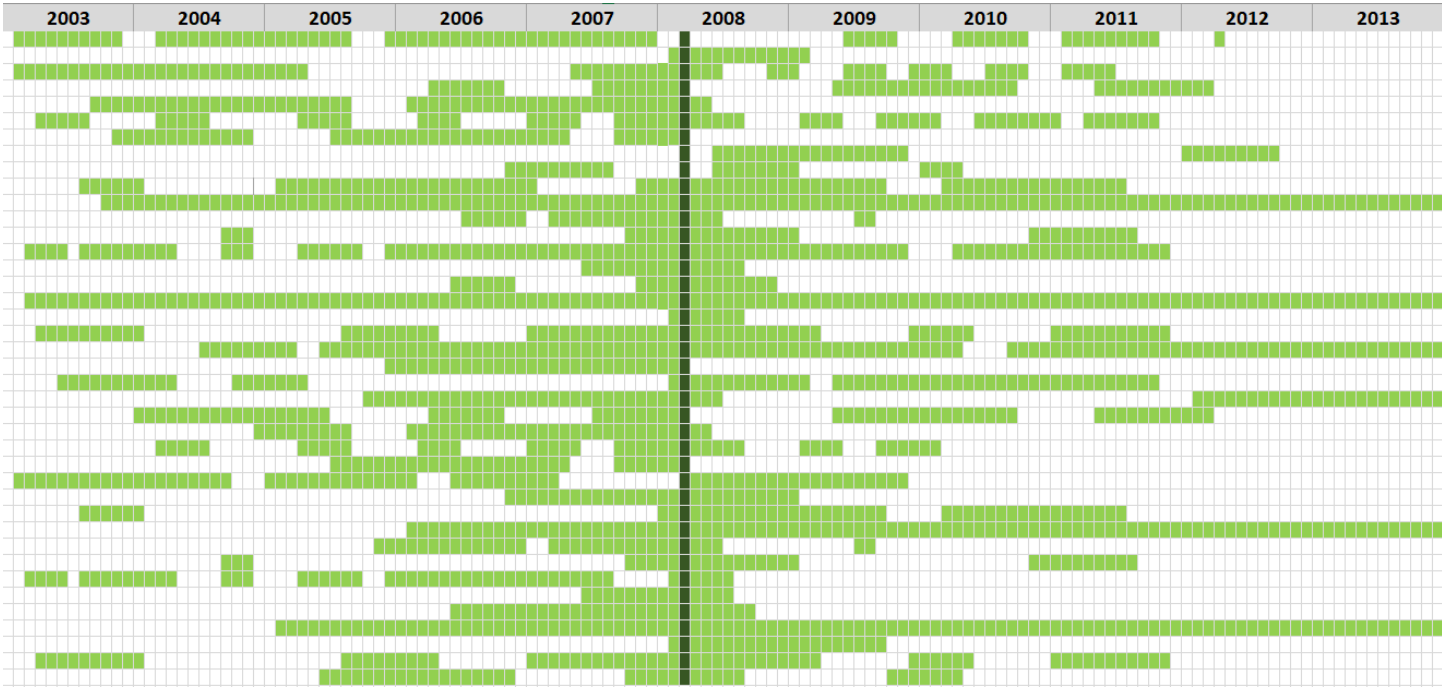


Our approach

Illustrative only
(not derived from
IDI data)

What we are analysing

Workforce at a point
in time = March 2008

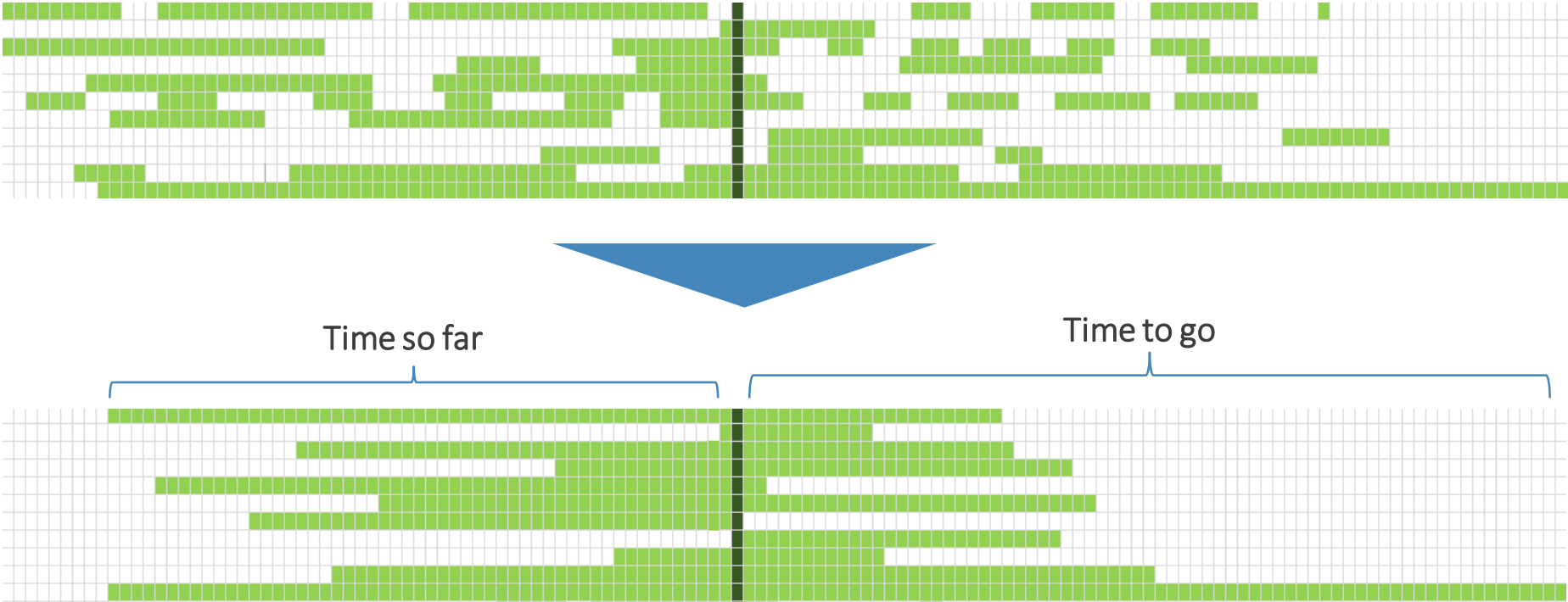


← This person works
intermittently in the
industry

← This person works
continuously for 10+
years in the industry

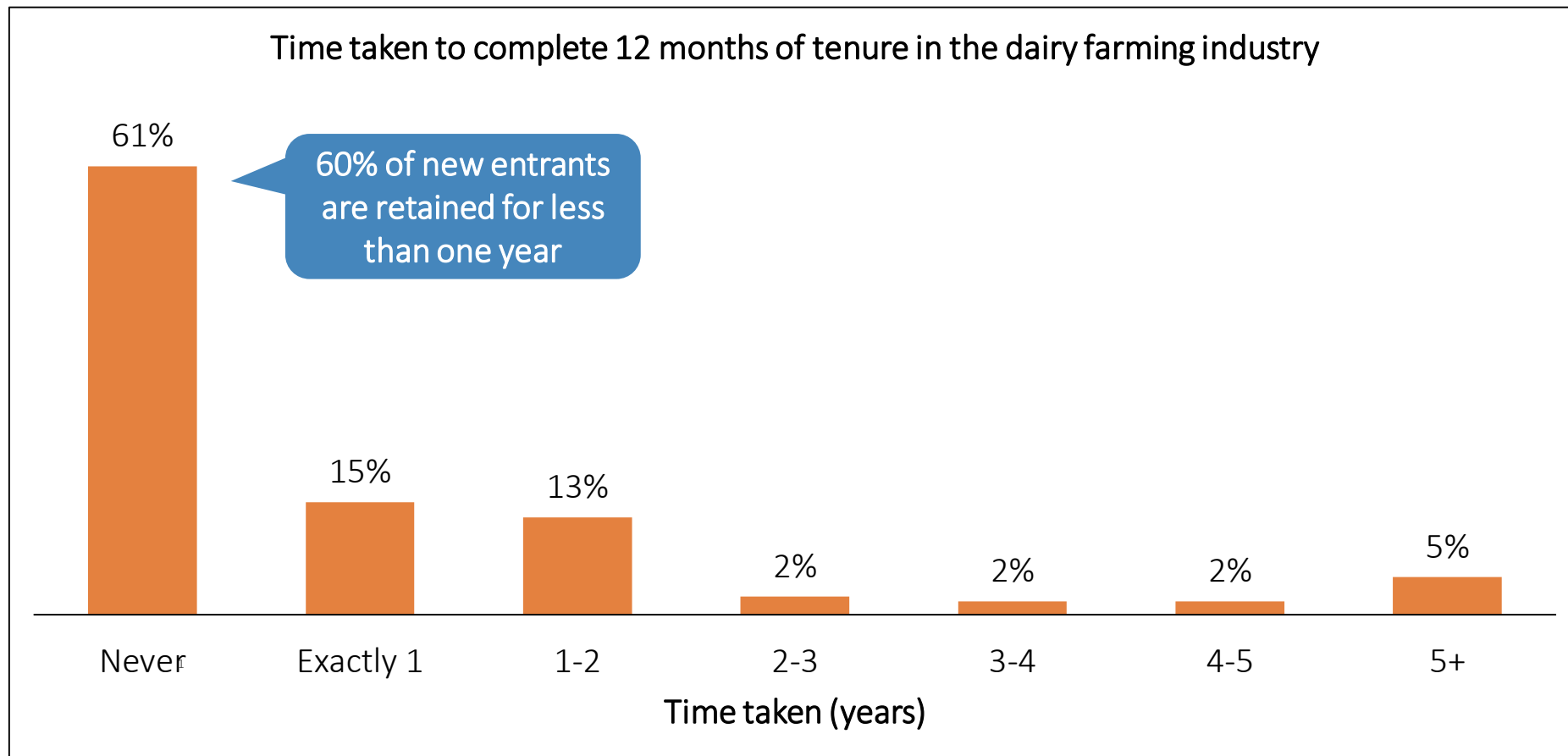
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Tenure as a measure

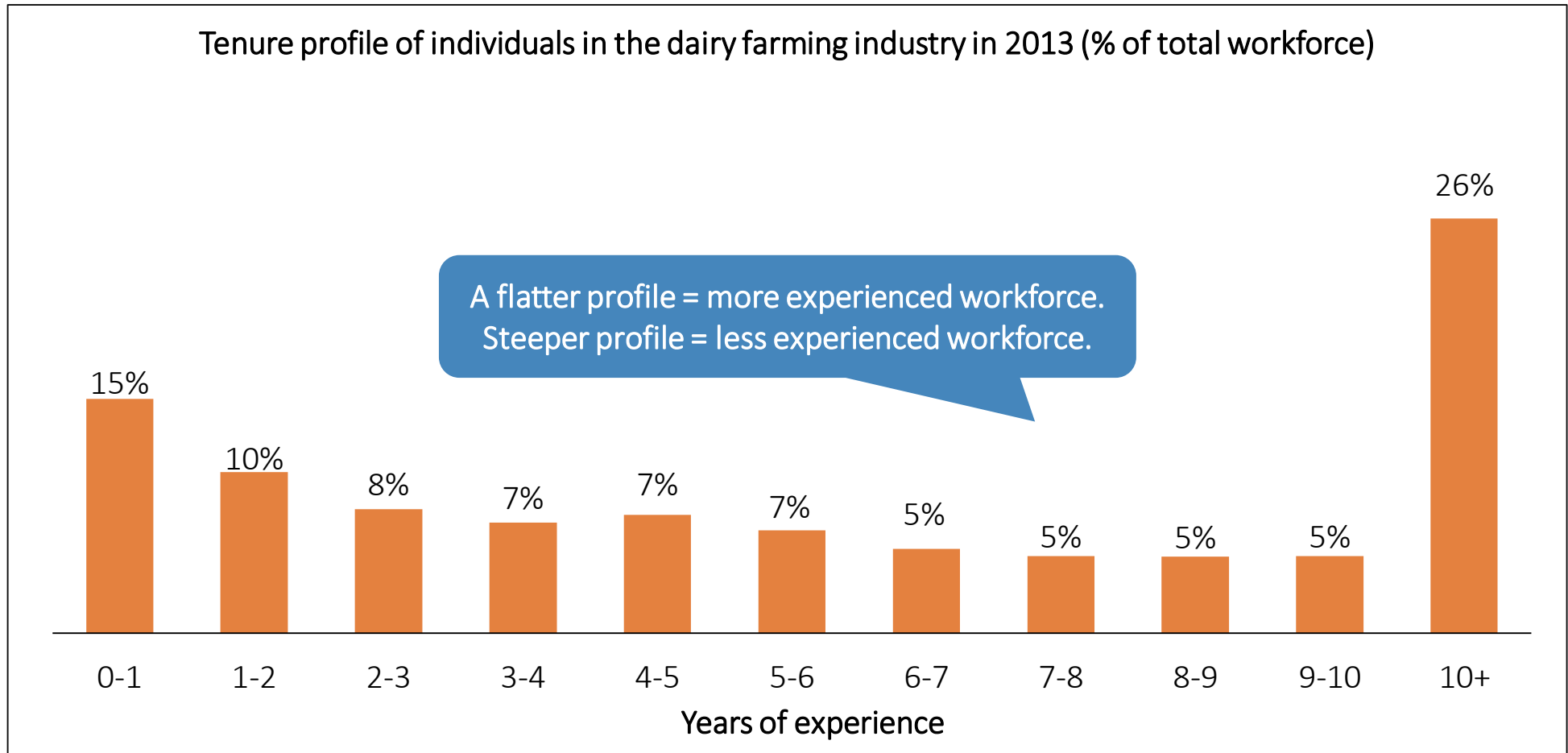


Results I: Dairy farming

How long does it take someone to work for 1 year?



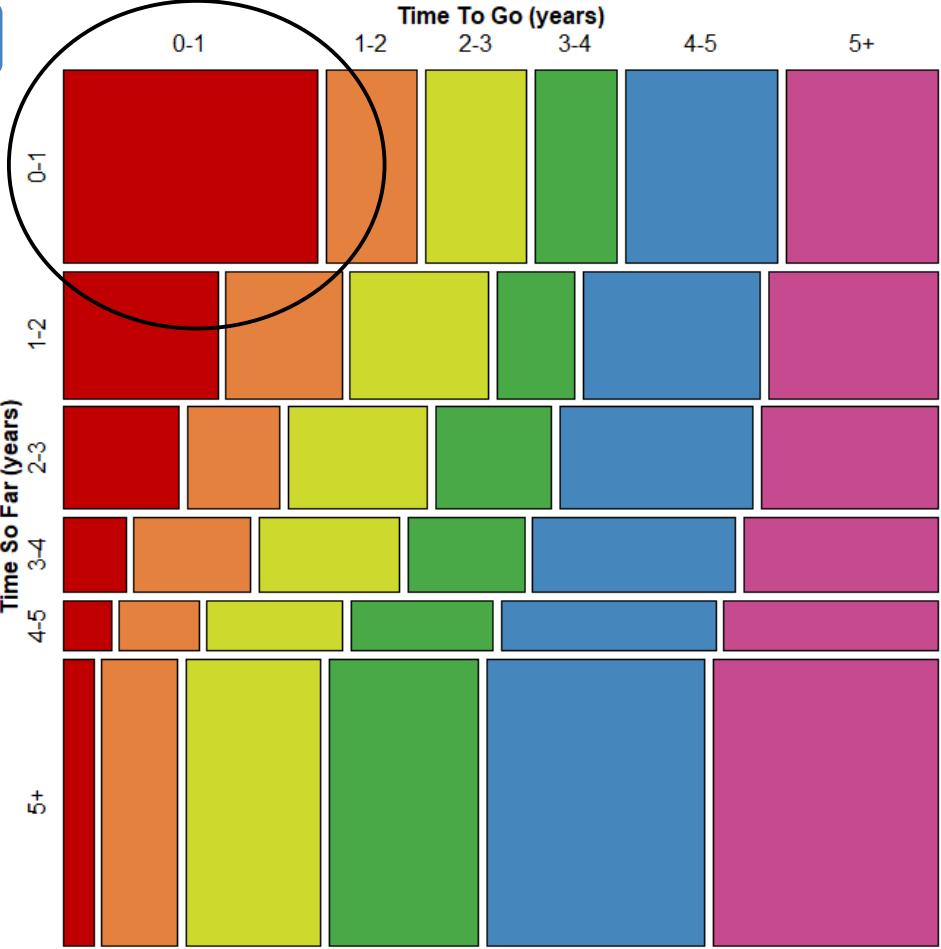
How much experience does the workforce have?



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IDI data)

Segmentation of workforce

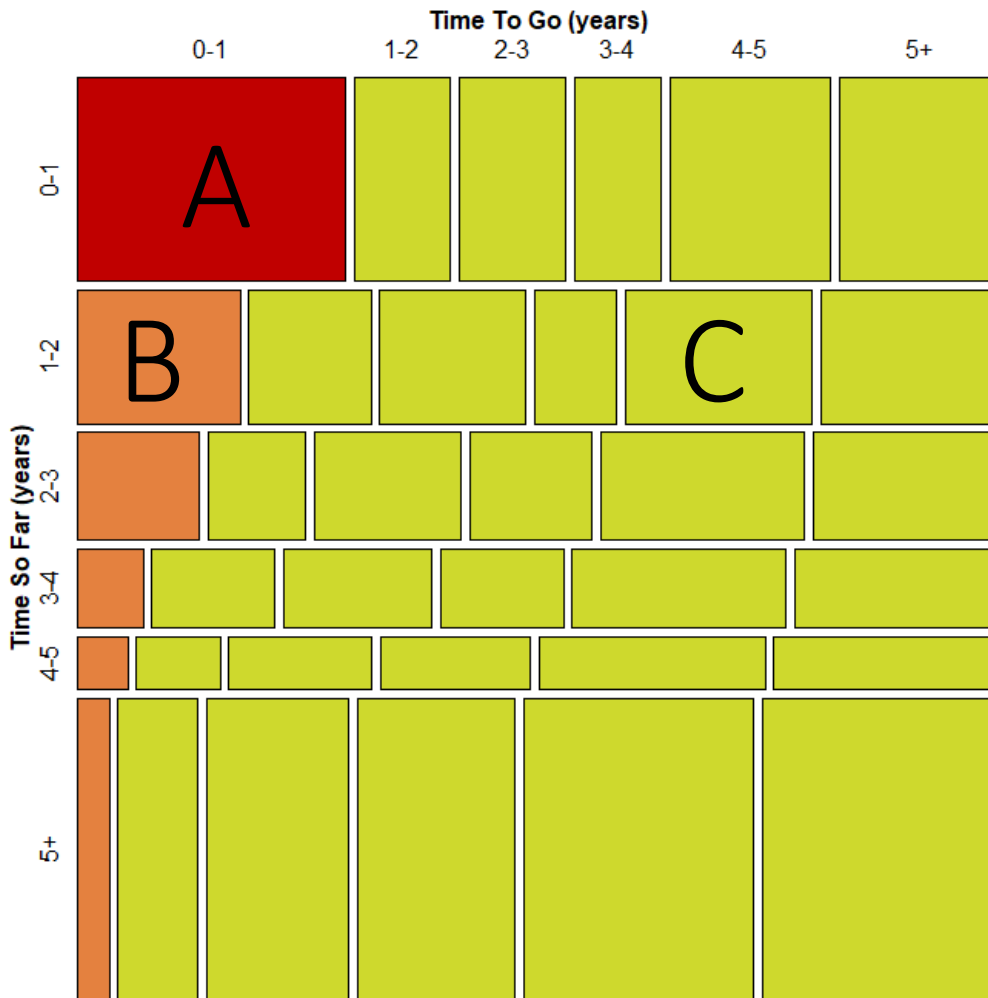
“Casual segment”



“Core workforce”

Replacement rate

Fabricated data for illustration purposes only – this image is not derived from IDI data



15%

$$\text{Total net replacement rate} = \frac{A+B}{A+B+C}$$

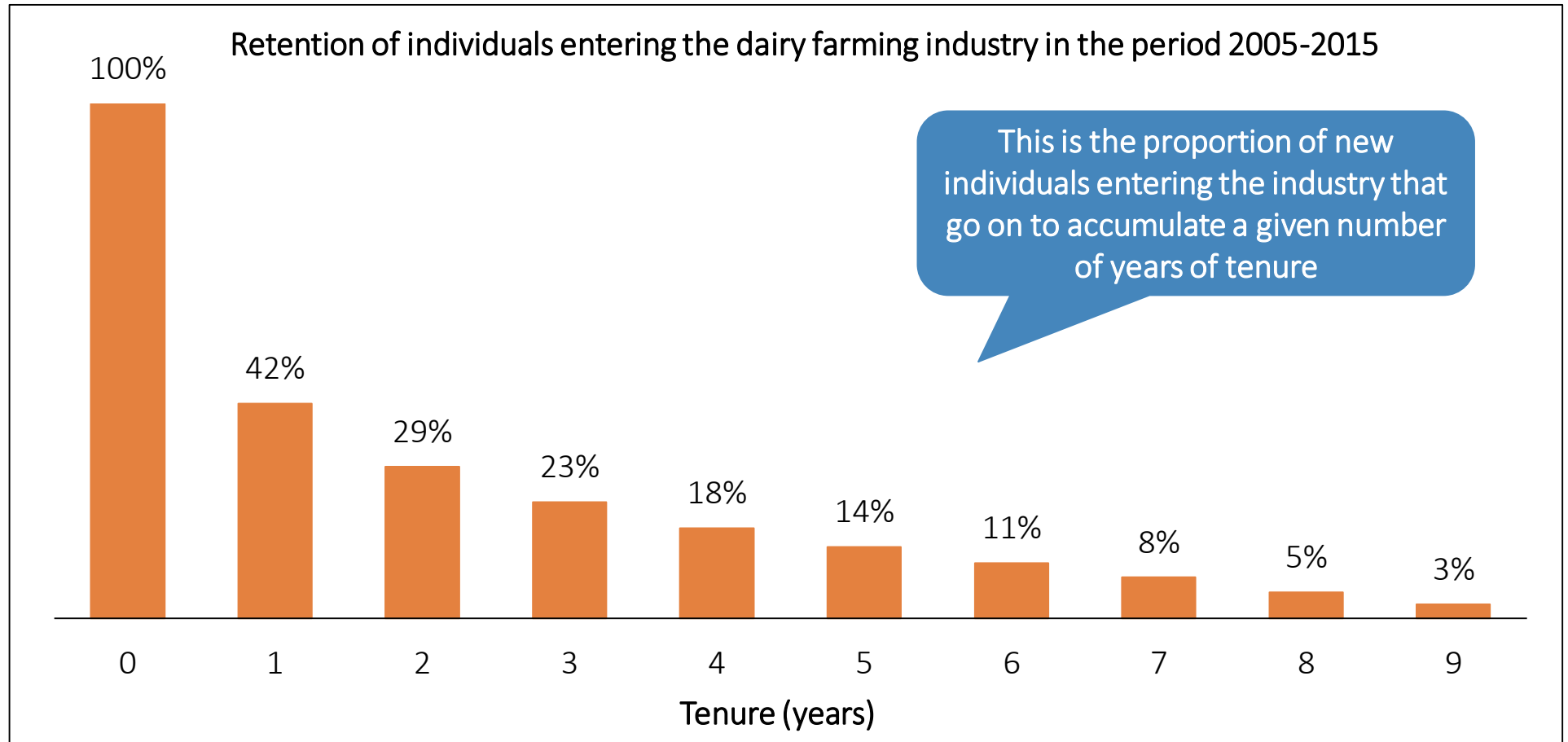
This is the net replacement of individuals with any level of tenure so far.

10%

$$\text{Core net replacement rate} = \frac{B}{B+C}$$

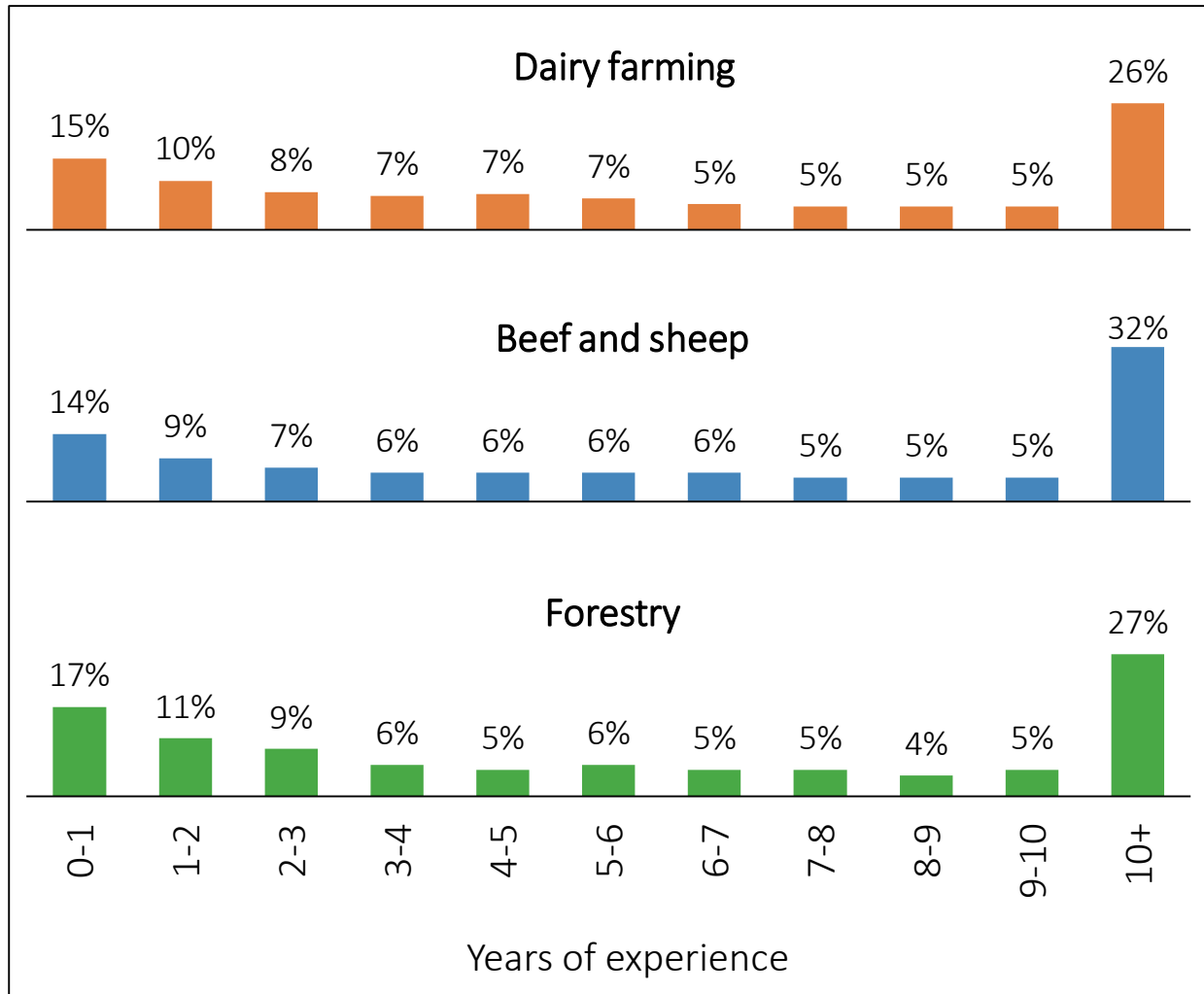
This is the net replacement of individuals that have accumulated more than one year of tenure so far.

Cohort retention

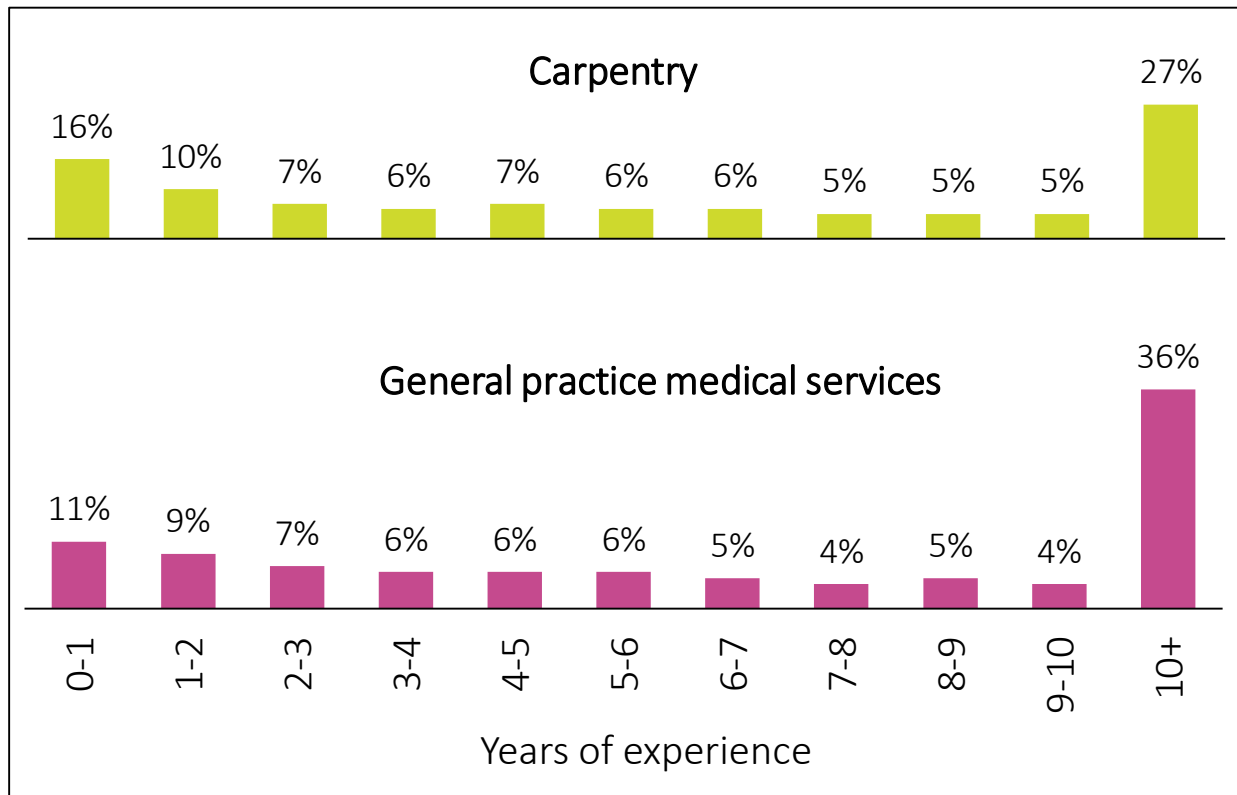


Results II: Comparison with other industries

Comparing tenure profiles between industries



Comparing tenure profiles of non-primary industries



Conclusions

So what can we conclude from this?

- We recommend core replacement rate as the measure to use when talking about replacement demand.
- The value is about 10% for dairy farming.
- It's likely to be similar in other primary sectors...
- ... and it's probably similar to other vocational sectors.

