



# Consumer habits and their impact on the safety of REPFEDs. Results of a survey in Belgium

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# Content

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- ❖ Why this survey? - "what's the point?"
- ❖ How / When / Where ?
- ❖ What info do we need?
- ❖ Q&A (of the questionnaire)
- ❖ Time to consumption
- ❖ Effect of exposure
- ❖ Conclusions

# Why? - What's the point?



Shelf life 14 - 45 days

# Why? - What's the point?

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Raw materials



Time of  
consumption

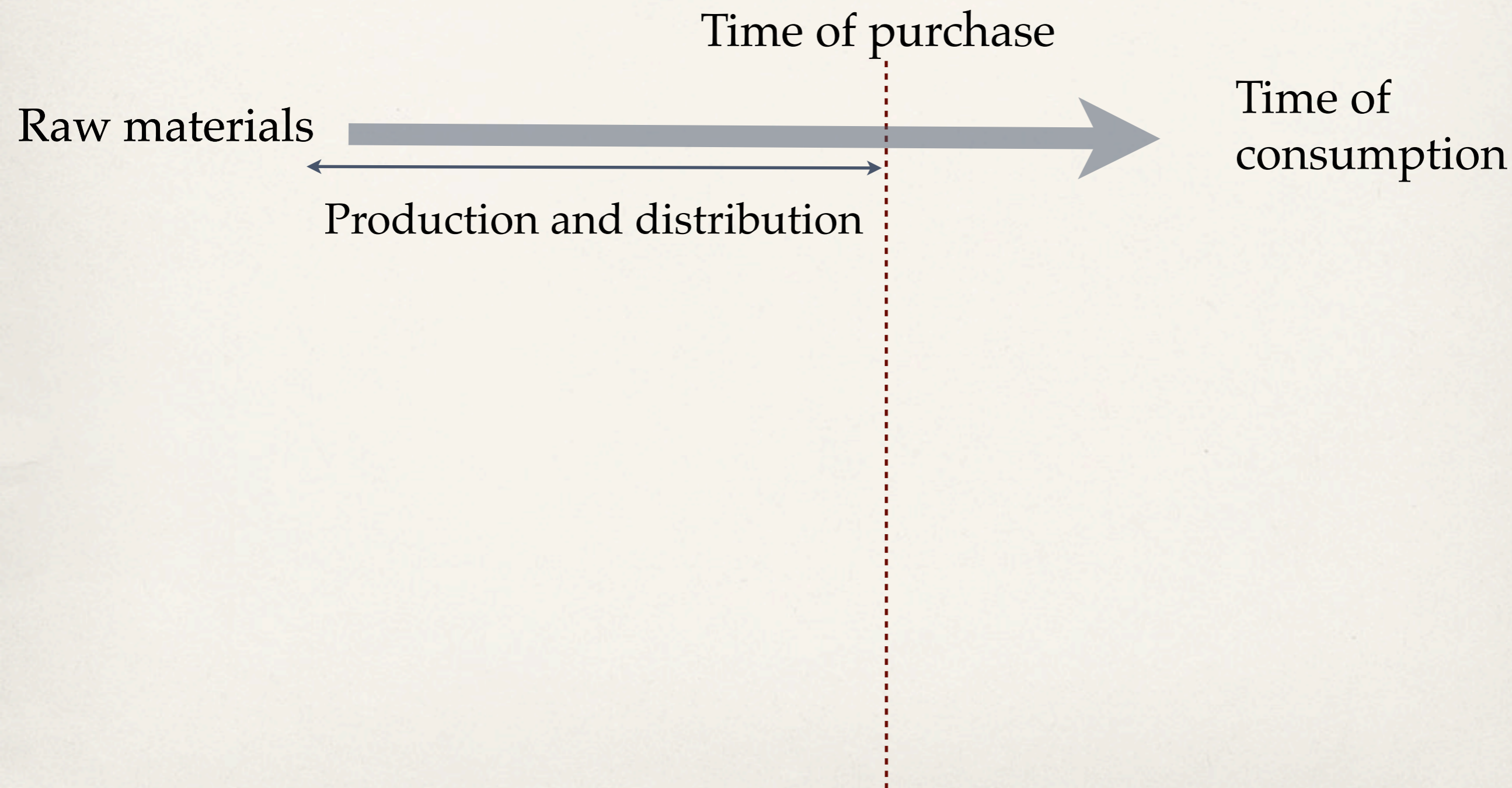
# Why? - What's the point?

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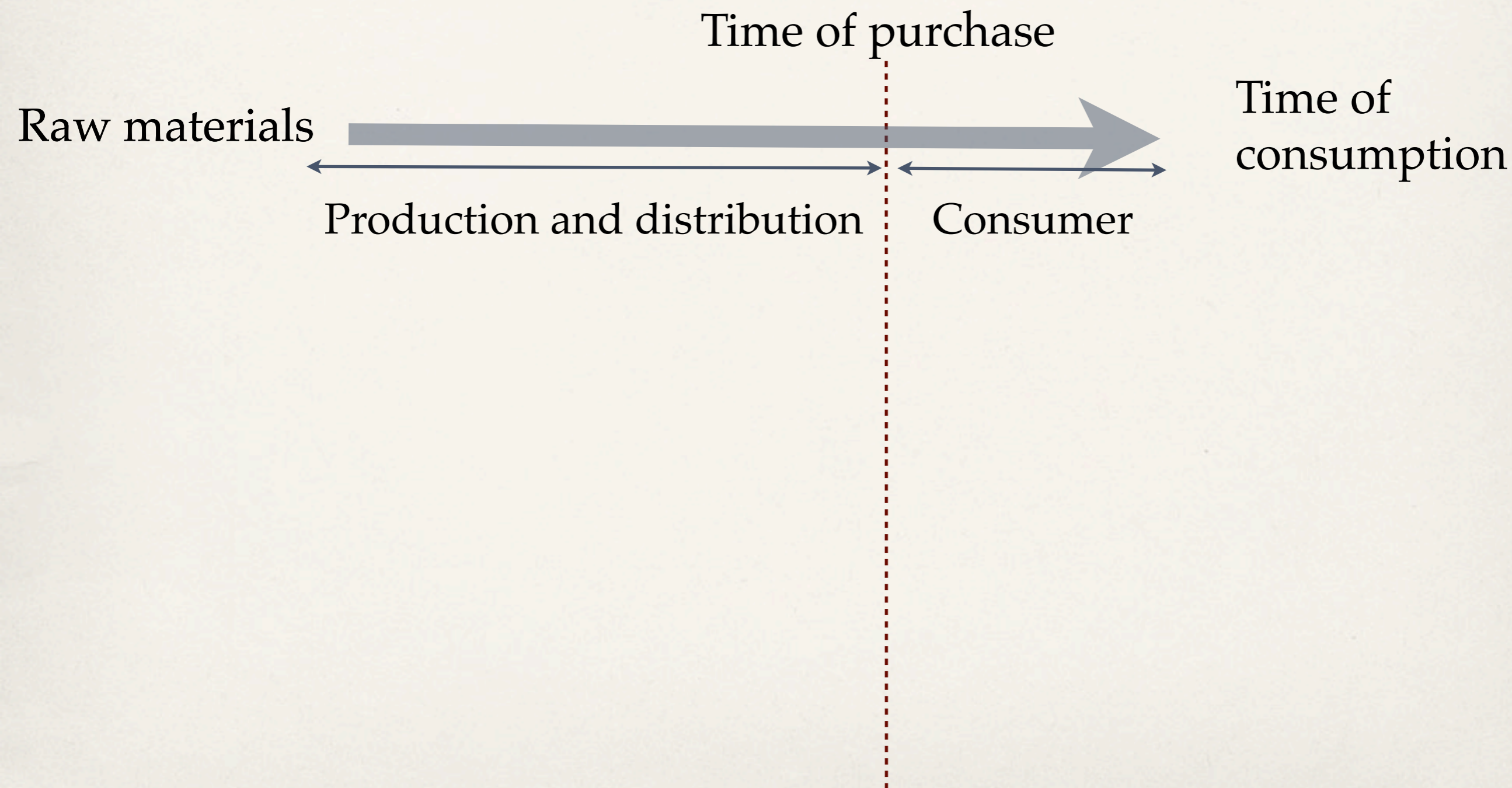
# Why? - What's the point?

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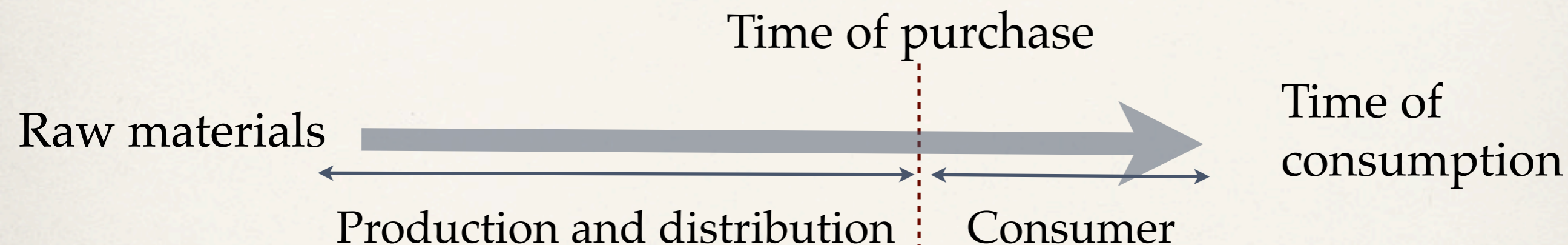
# Why? - What's the point?

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# Why? - What's the point?

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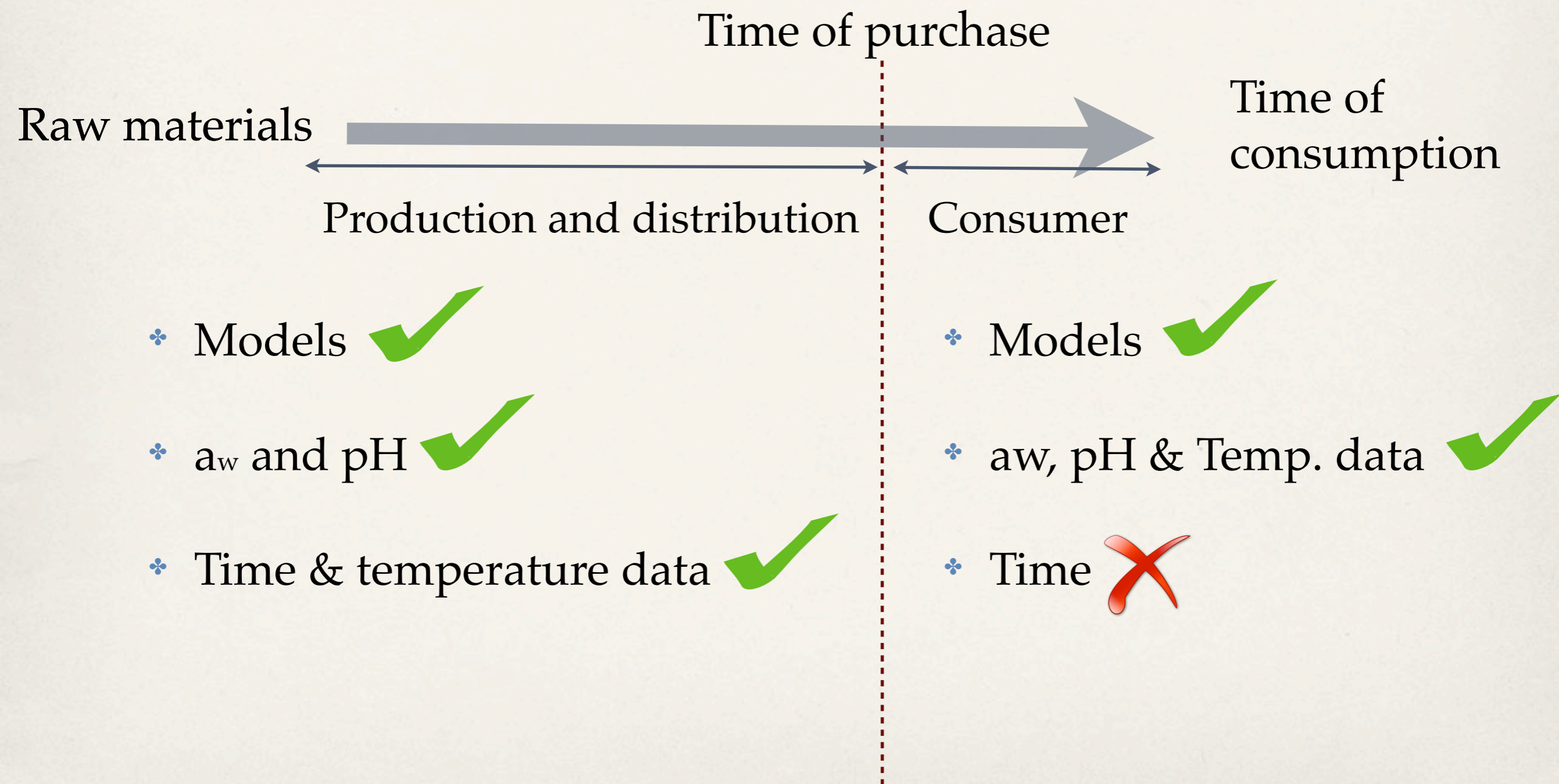


- \* Models ✓
- \*  $a_w$  and pH ✓
- \* Time & temperature data ✓



# Why? - What's the point?

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# How / When / Where ?

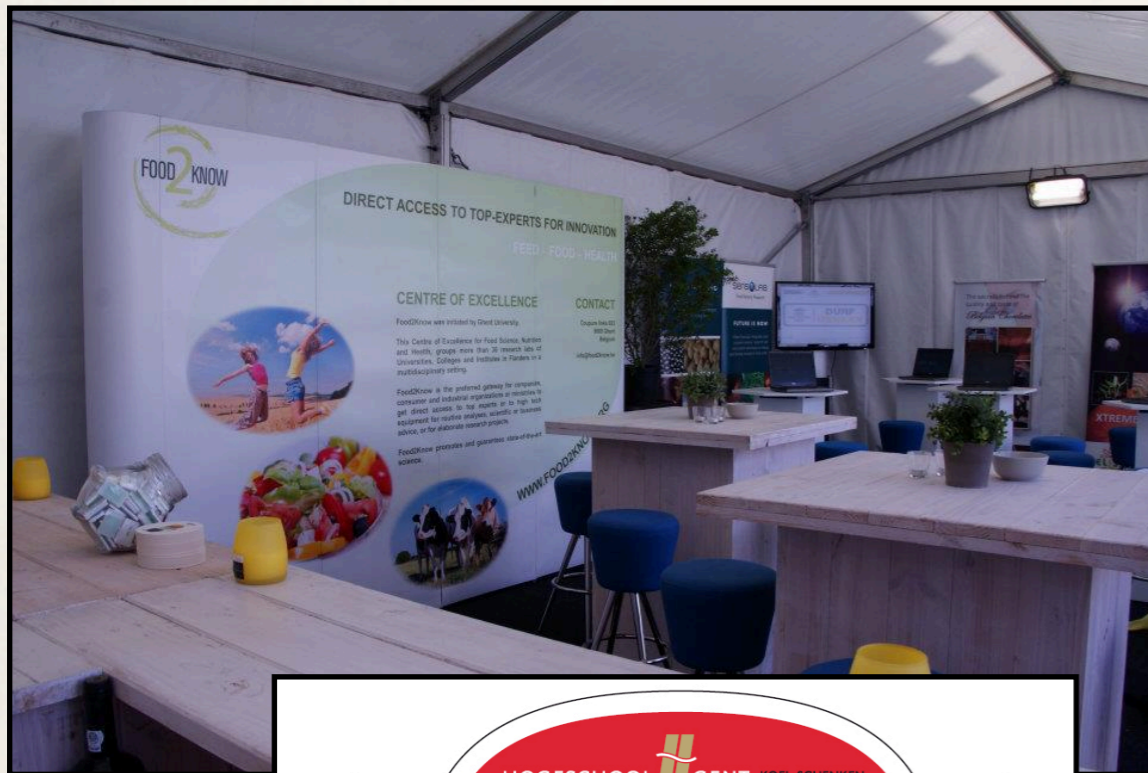
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- ❖ “Gent Tastes” :17-20 May 2012



# How / When / Where ?

- ❖ “Gent Tastes” :17-20 May 2012



# What info do we need?

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**What is the time between purchase and consumption?**

# What info do we need?

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## What is the time between purchase and consumption?

- ❖ “How long do you store a REPFED?”

- ❖ Consumer 1: 0 days

- ❖ Consumer 2: 7 days

- ❖ Consumer 3: 14 days

- ❖ Average = 7 days

# What info do we need?

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## What is the time between purchase and consumption?

❖ “How long do you store a REPFED?”

❖ Consumer 1: 0 days at 5 per week = 260 per year

❖ Consumer 2: 7 days at 2 per week = 104 per year

❖ Consumer 3: 14 days at 1 per month = 12 per year

❖ Average = 7 days

# What info do we need?

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## What is the time between purchase and consumption?

\* “How long do you store a REPFED?”

\* Consumer 1: 0 days at 5 per week = 260 per year

\* Consumer 2: 7 days at 2 per week = 104 per year

\* Consumer 3: 14 days at 1 per month = 12 per year

\* Average = 7 days

\* Weighted average = 2.3 days



# What info do we need?

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- A. How long do you store a REPFED?
- B. How frequently do you purchase a REPFED?
- C. Do you still consume a REPFED after the 'use by' date?

# The questionnaire

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1. Gender & Age
2. Do you consume REPFEDs?
3. How frequently do you consume REPFEDs?
4. When you buy a REPFED, how (long) do you store it?
5. How good do you respect the 'use by' date?
6. How closely do you follow the reheating guidelines?

# Gender & Age

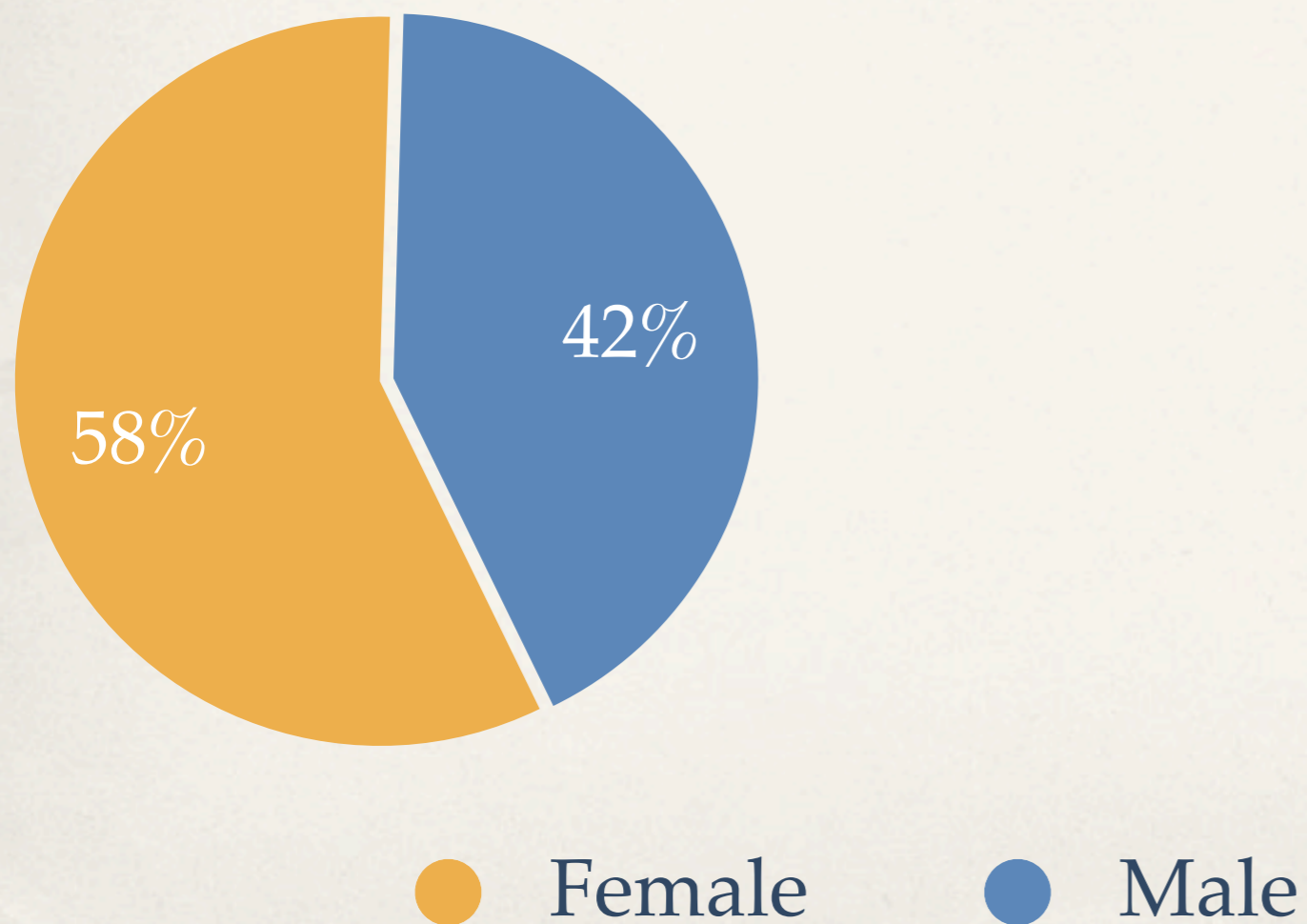
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- ❖ 931 participants
- ❖ 874 “correct”

# Gender & Age

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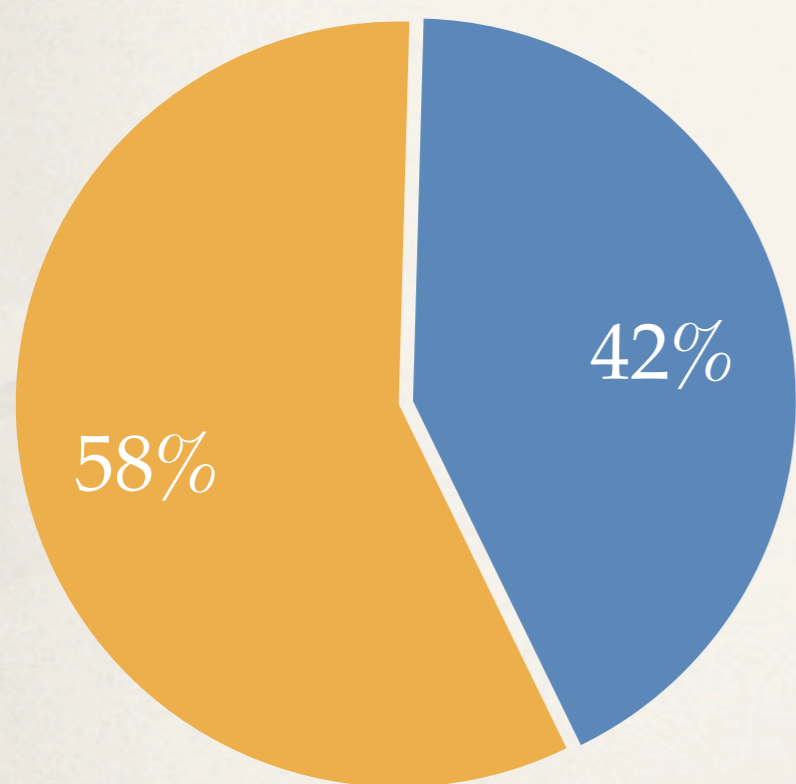
- ❖ 931 participants
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# Gender & Age

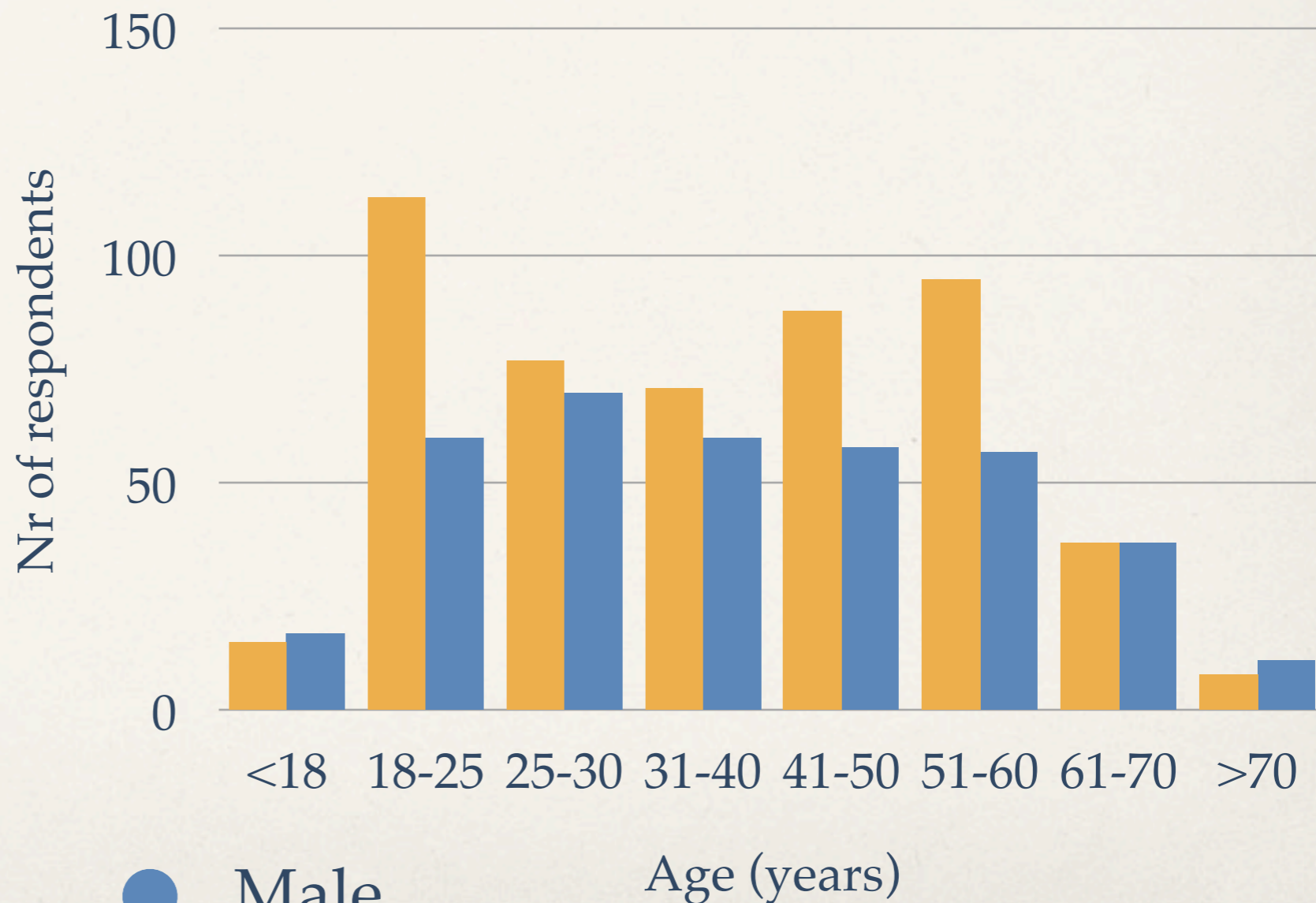
\* 931 participants

\* 874 "correct"



● Female

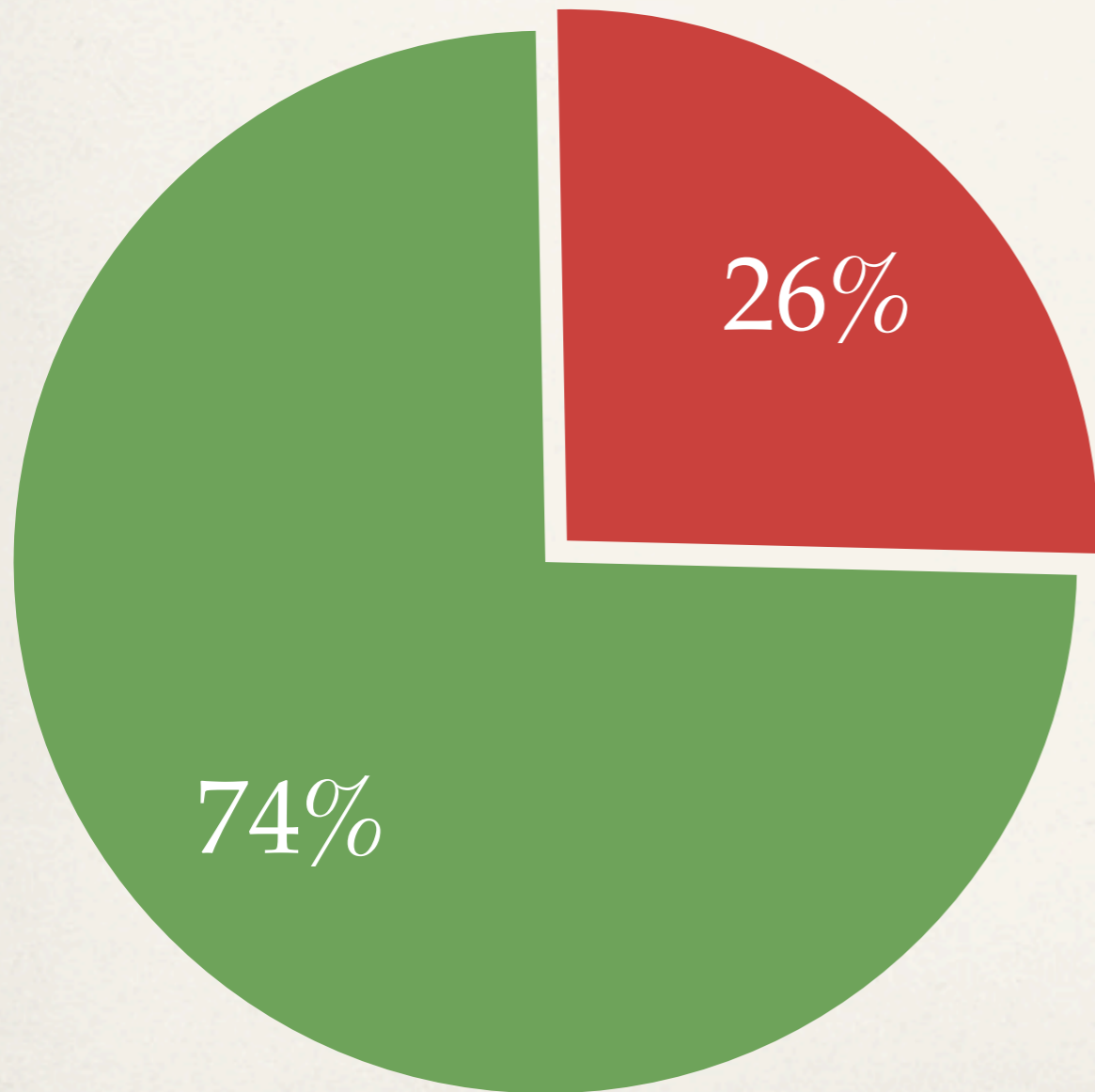
● Male



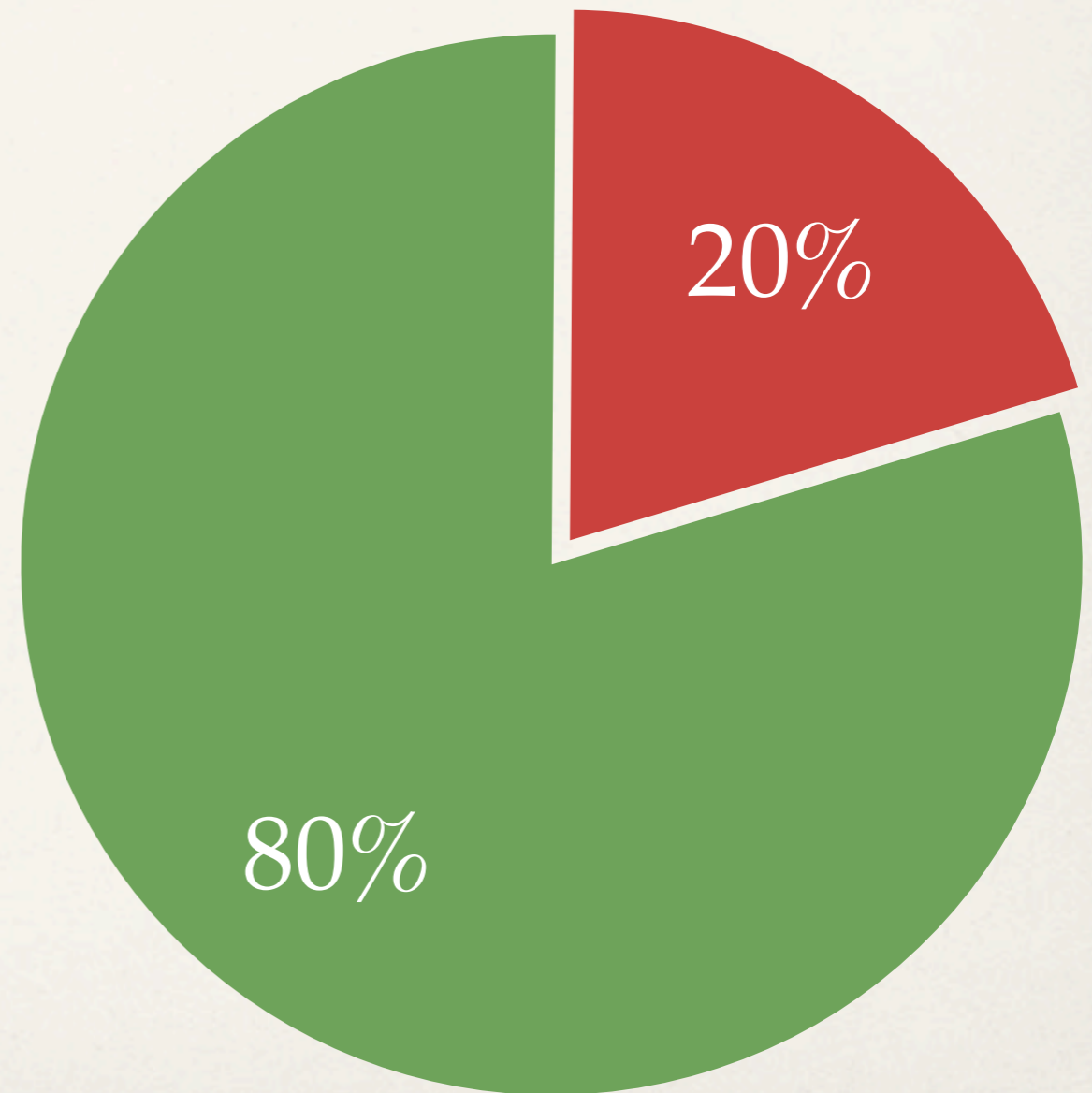
# Have you bought a REPFED in the last year? - Yes/No

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**Men**



**Women**



Yes

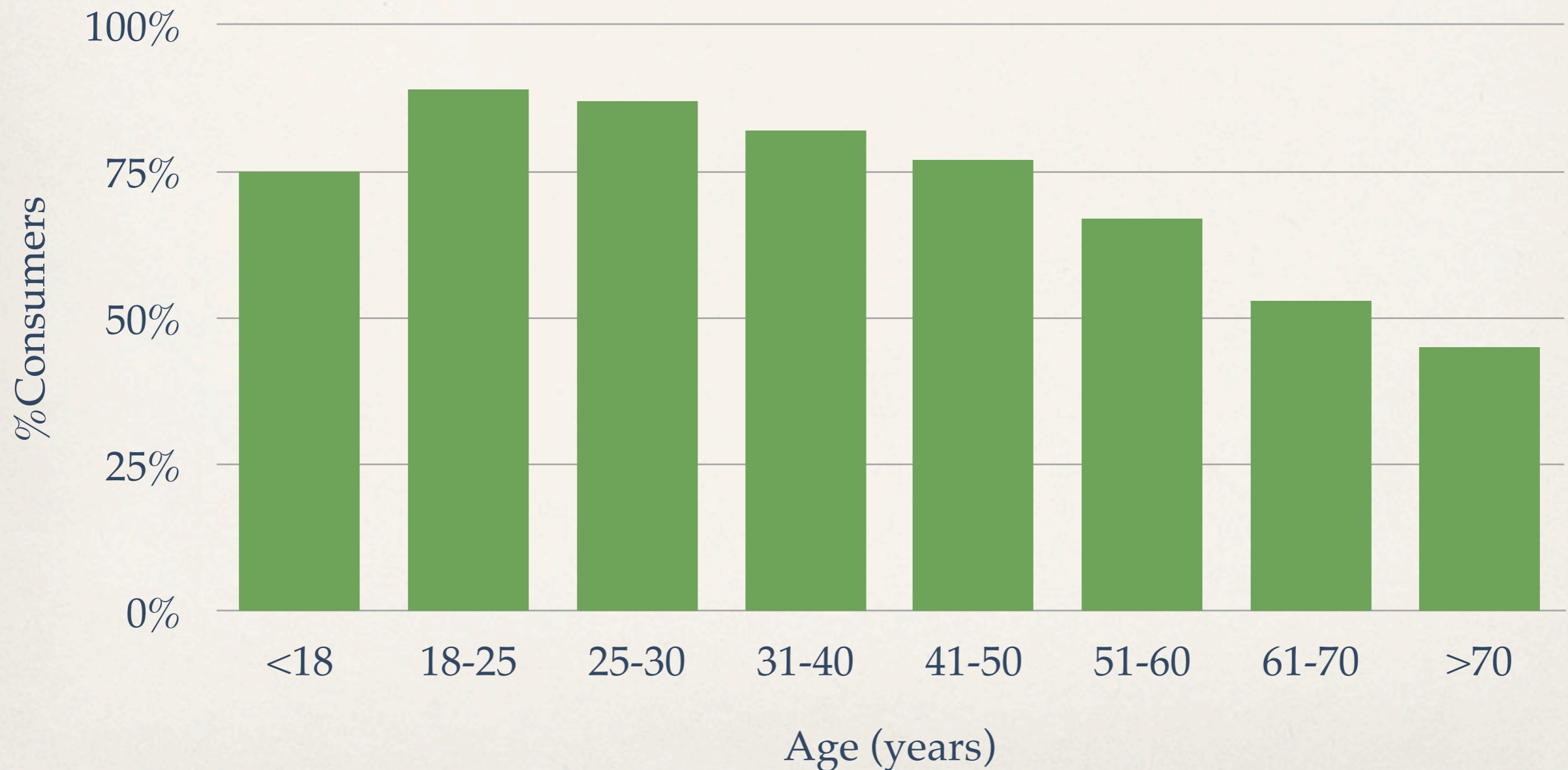


No

# Have you bought a REPFED in the last year? - Yes/No

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% Consumers per age group

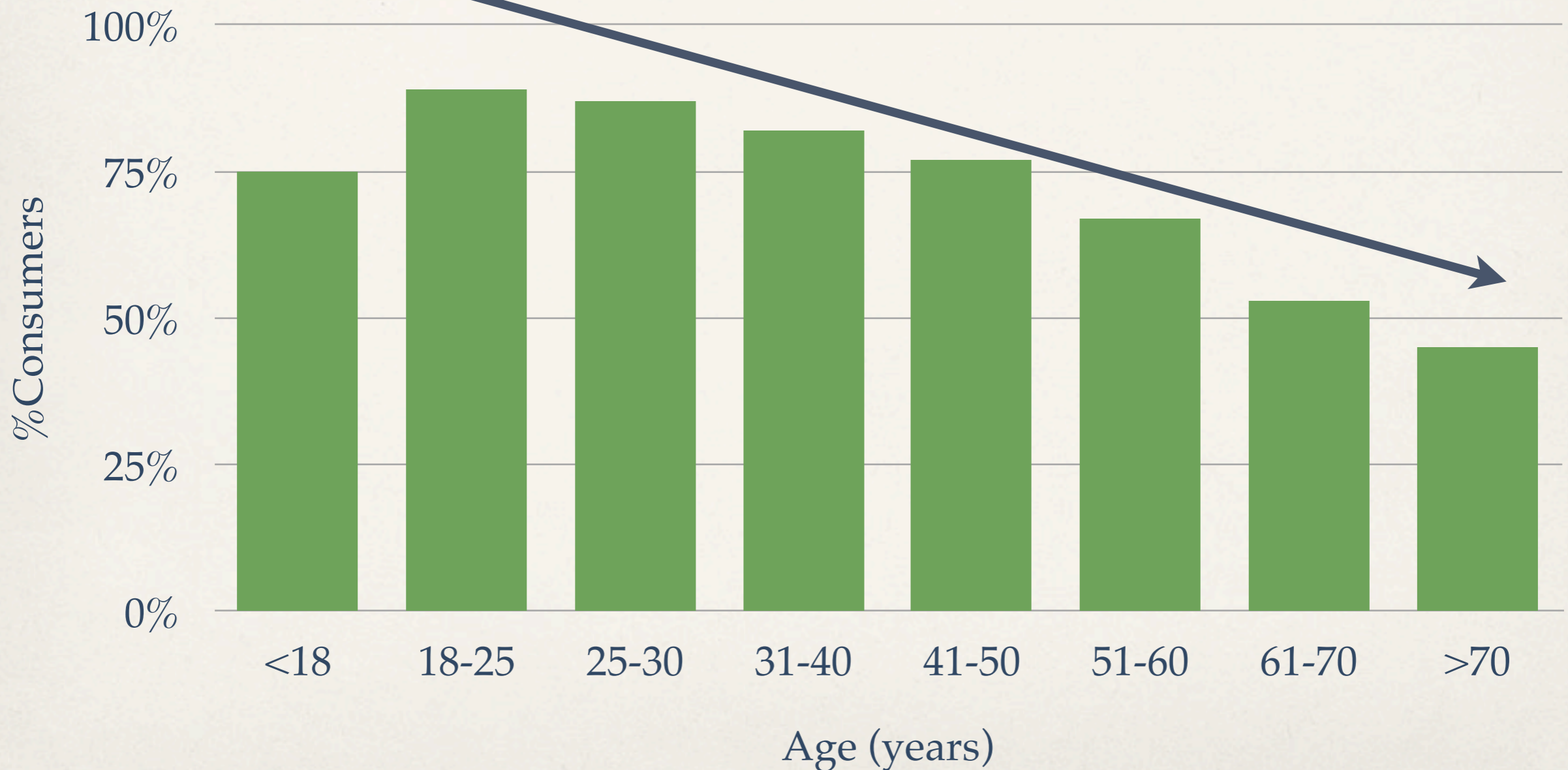


# Have you bought a REPFED in the last year? - Yes/No

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% Consumers per age group





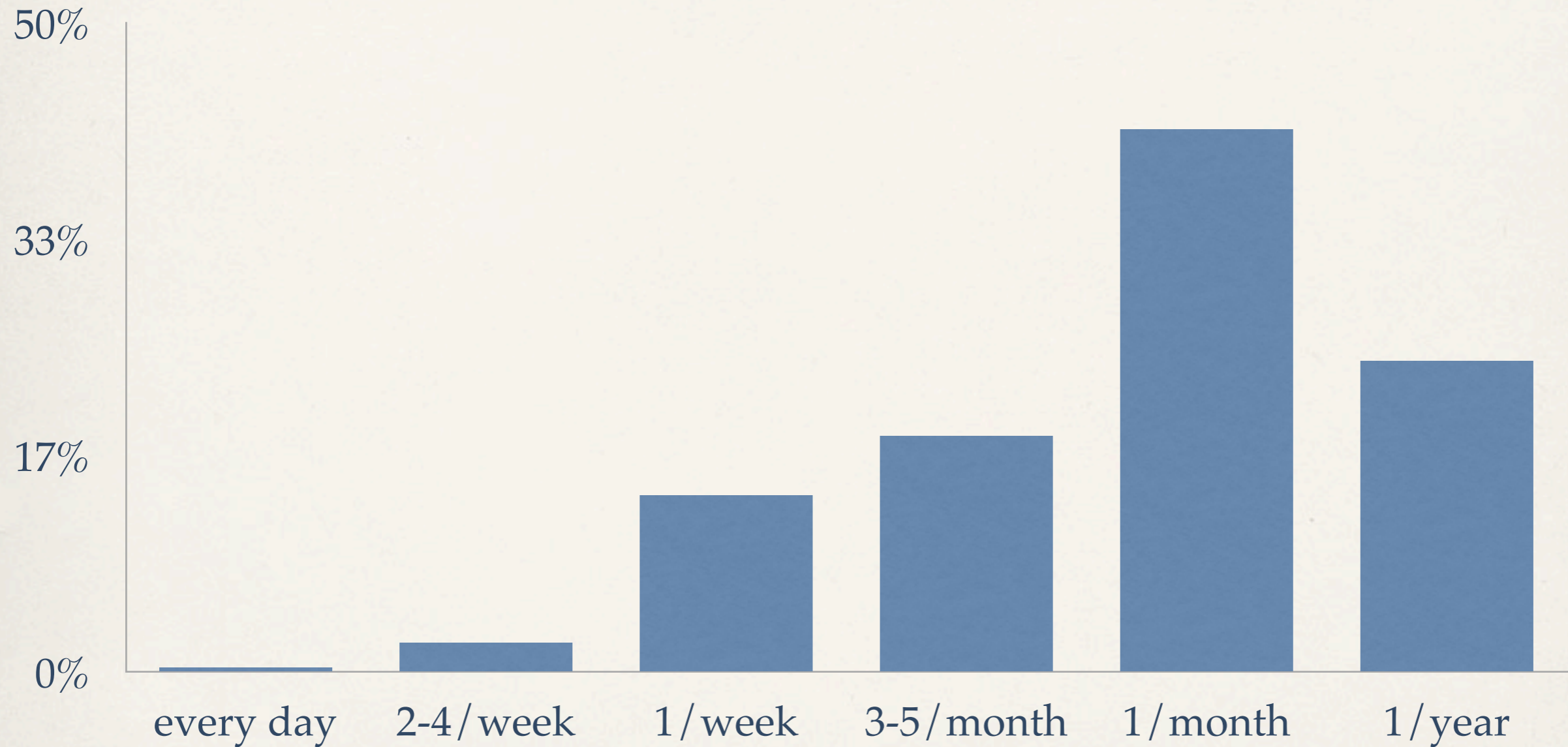
# How frequently do you buy REFFEDs?

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- a. Almost every day (5-7 a week)
- b. 2-4 times per week
- c. Once a week
- d. 3-5 times a month
- e. Once a month
- f. Once a year
- g. Never (*extra check*)

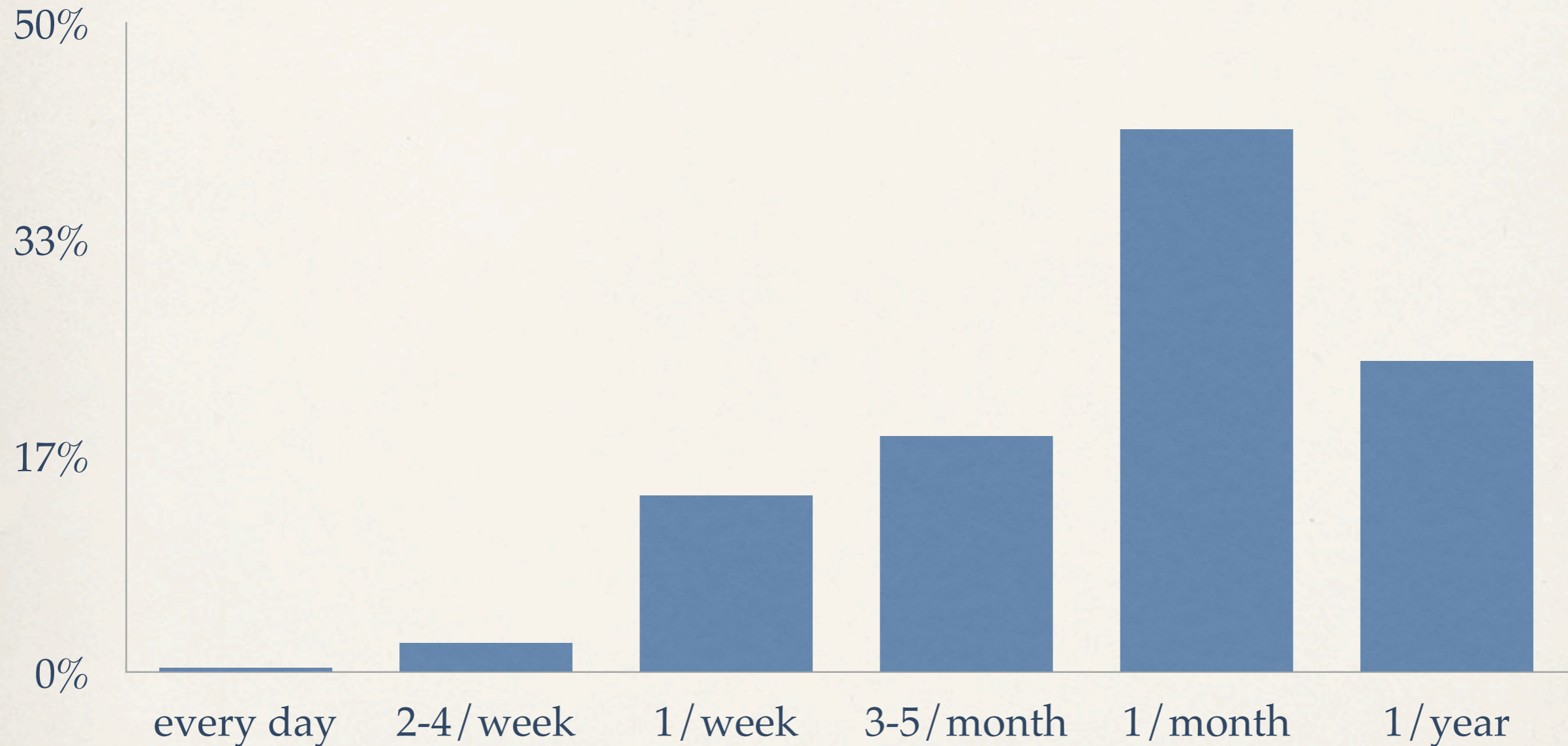
# How frequently do you buy REPFEDs?

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# How frequently do you buy REPFEDs?

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2 trends:

Men buy more frequently than women

Younger people buy more frequently than older people

# When you buy a REPFED, how (long) do you store it?

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## Multiple answers allowed

- a. In the fridge: 0 days
- b. In the fridge: 1-3 days
- c. In the fridge: 4-7 days
- d. In the fridge: up to two weeks
- e. In the fridge: more than two weeks
- f. In the freezer: + 0 days in fridge
- g. In the freezer: + 1-3 days in fridge

# When you buy a REPFED, how (long) do you store it?

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● Fridge

● Freezer

● Both

●  $\leq 3$  days

● 4-7 days

●  $> 7$  days

Shelf life: 14 - 45 days

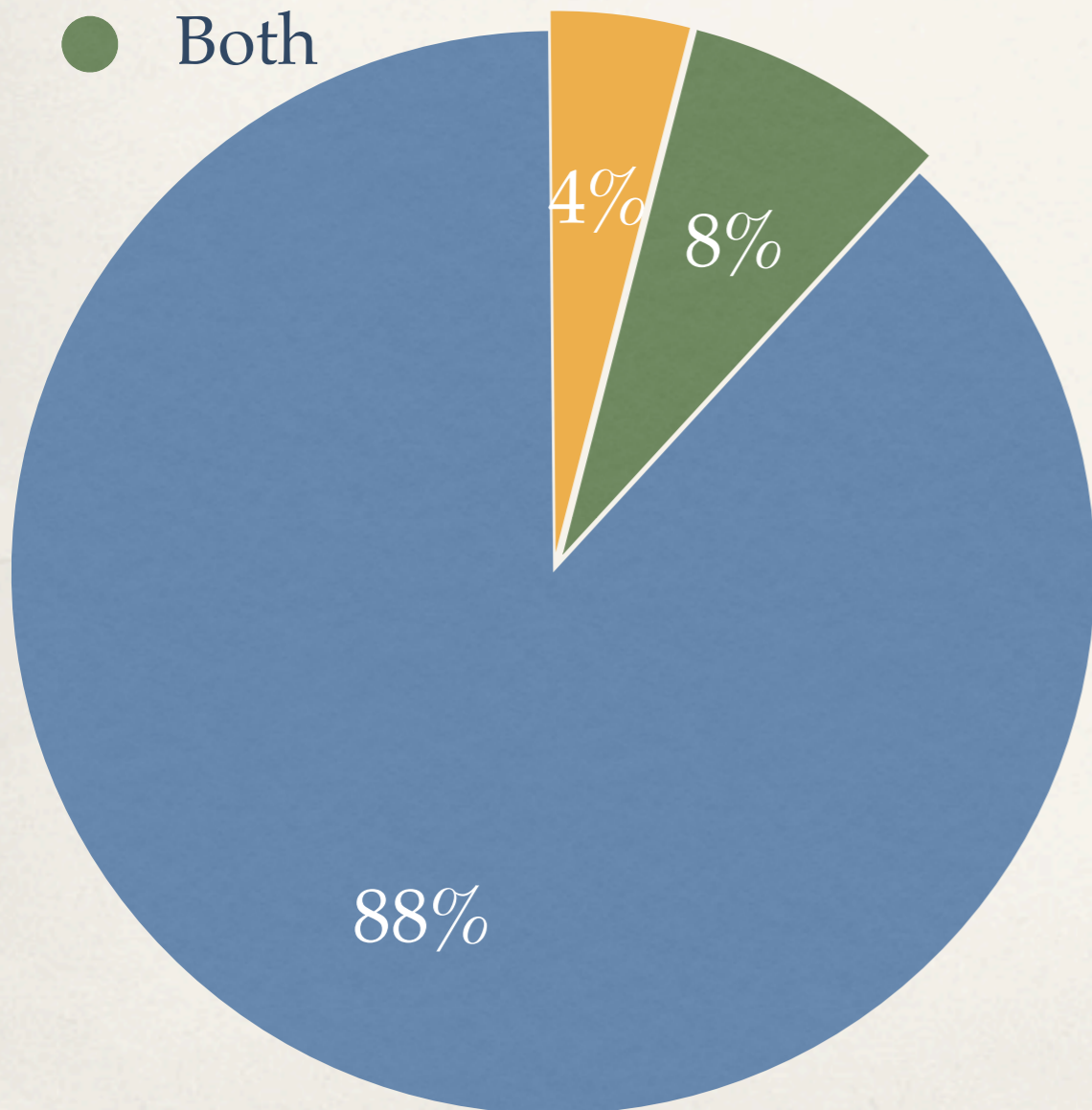
# When you buy a REPFED, how (long) do you store it?

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- Fridge
- Freezer
- Both

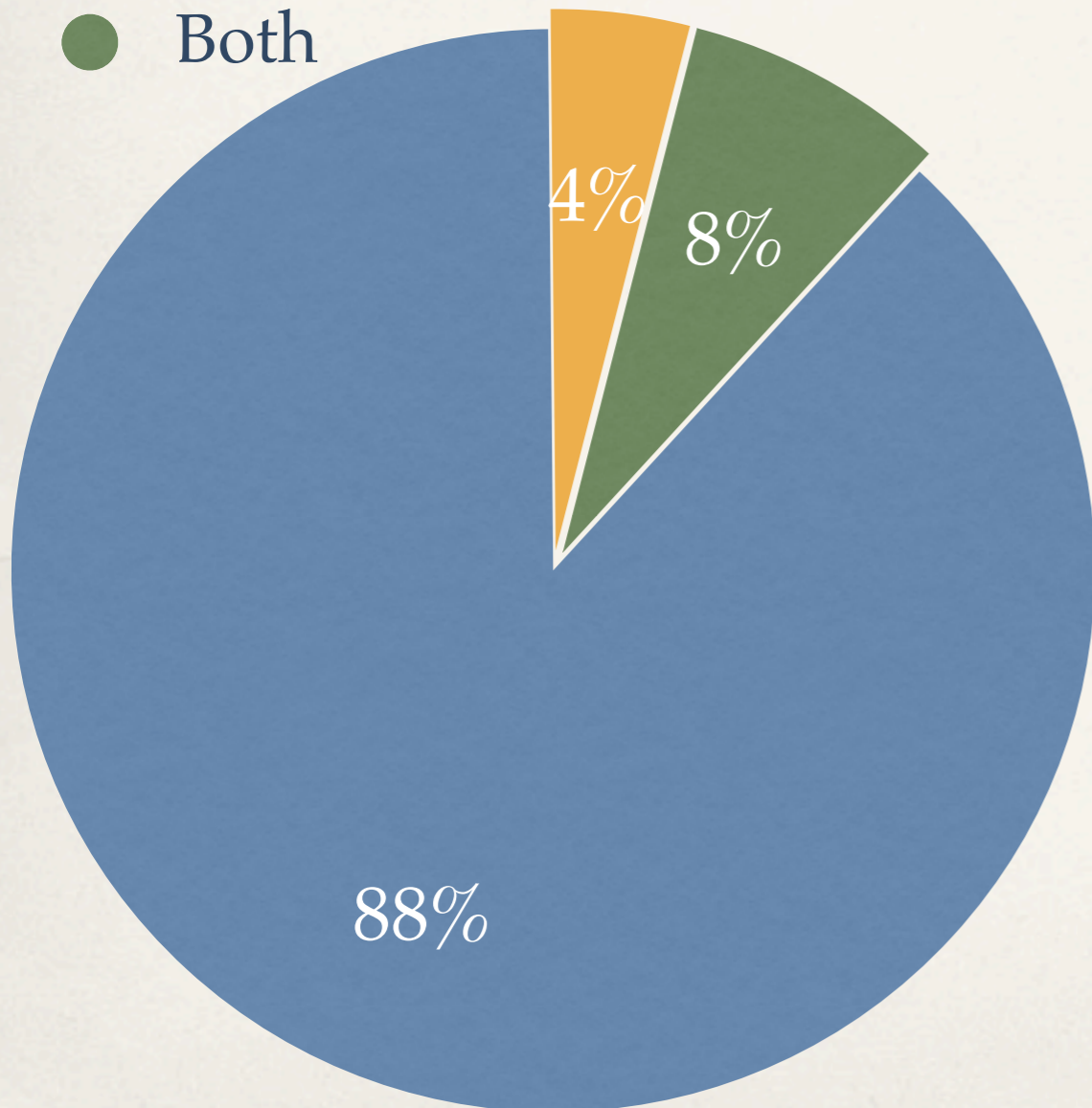
- $\leq 3$  days
- 4-7 days
- $>7$  days

Shelf life: 14 - 45 days



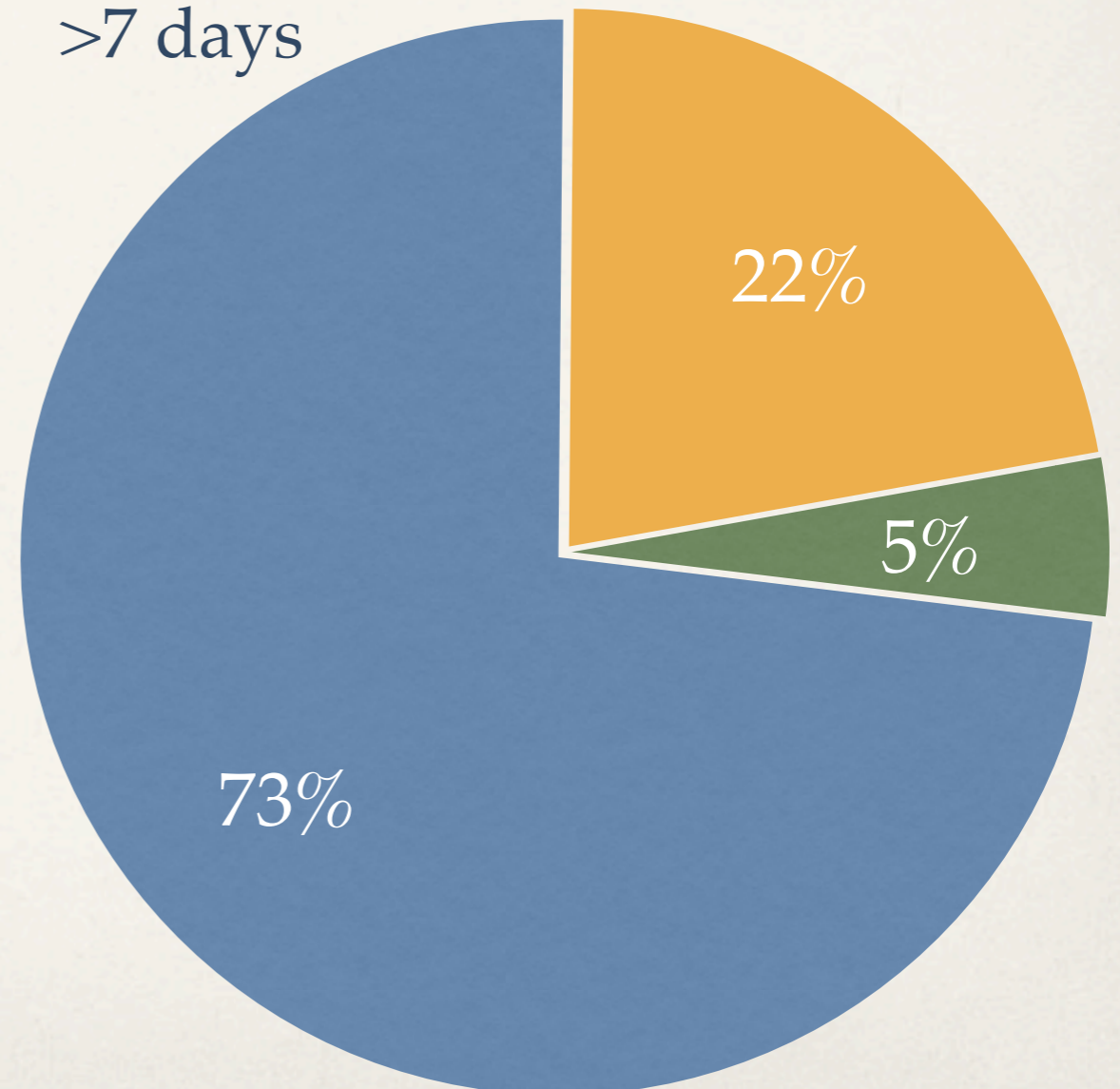
# When you buy a REPFED, how (long) do you store it?

- Fridge
- Freezer
- Both



- $\leq 3$  days
- 4-7 days
- $>7$  days

Shelf life: 14 - 45 days



# When you buy a REPFED, how (long) do you store it?

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- \* Most important link:

- \* Frequency   Storage time 



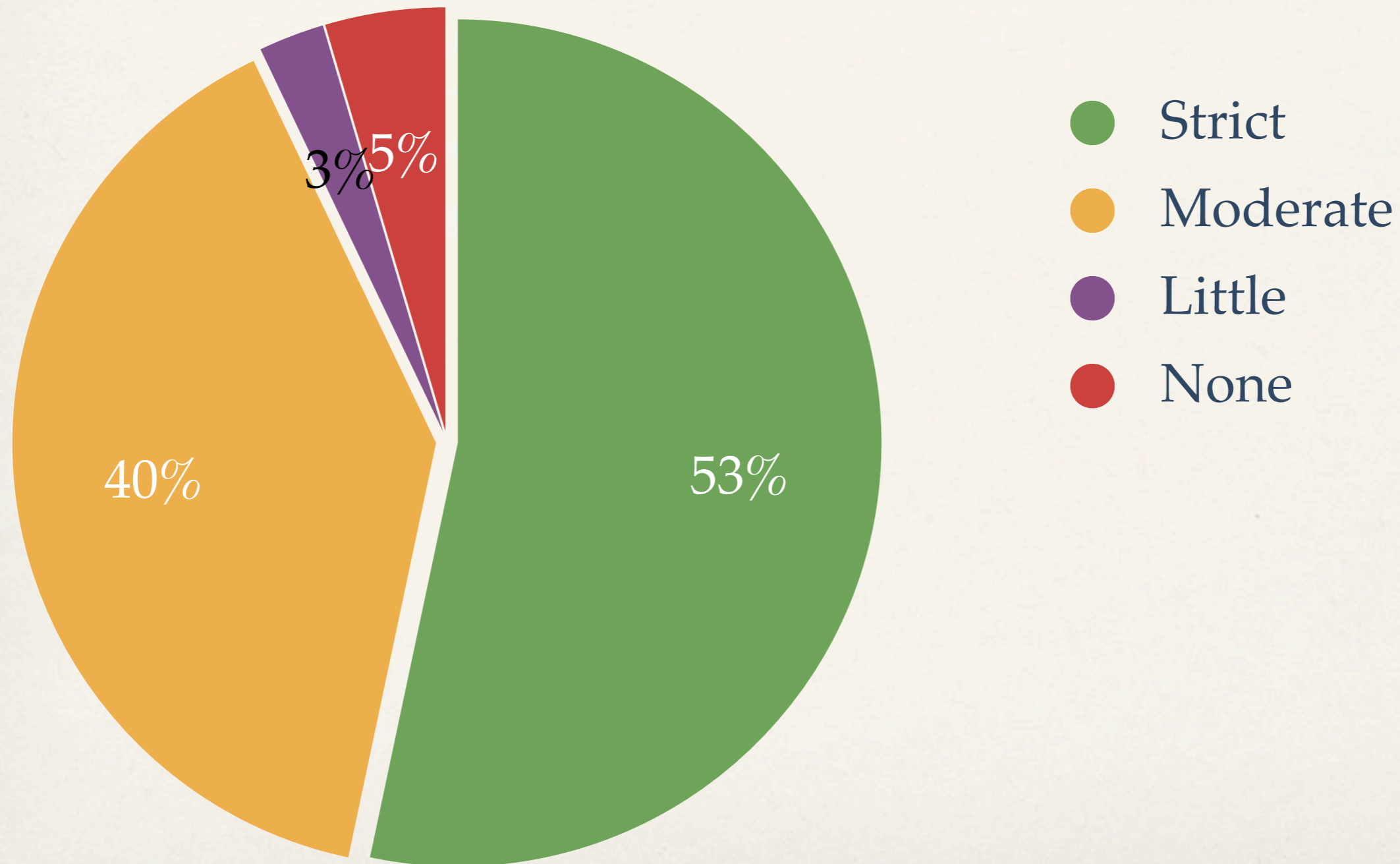
# How good do you respect the 'use by' date?

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- a. "Strict" = 0 days of margin
- b. "Moderate" = 2-3 days of margin
- c. "Limited" = X days of margin (indicate how much)
- d. "I don't" = look / smell

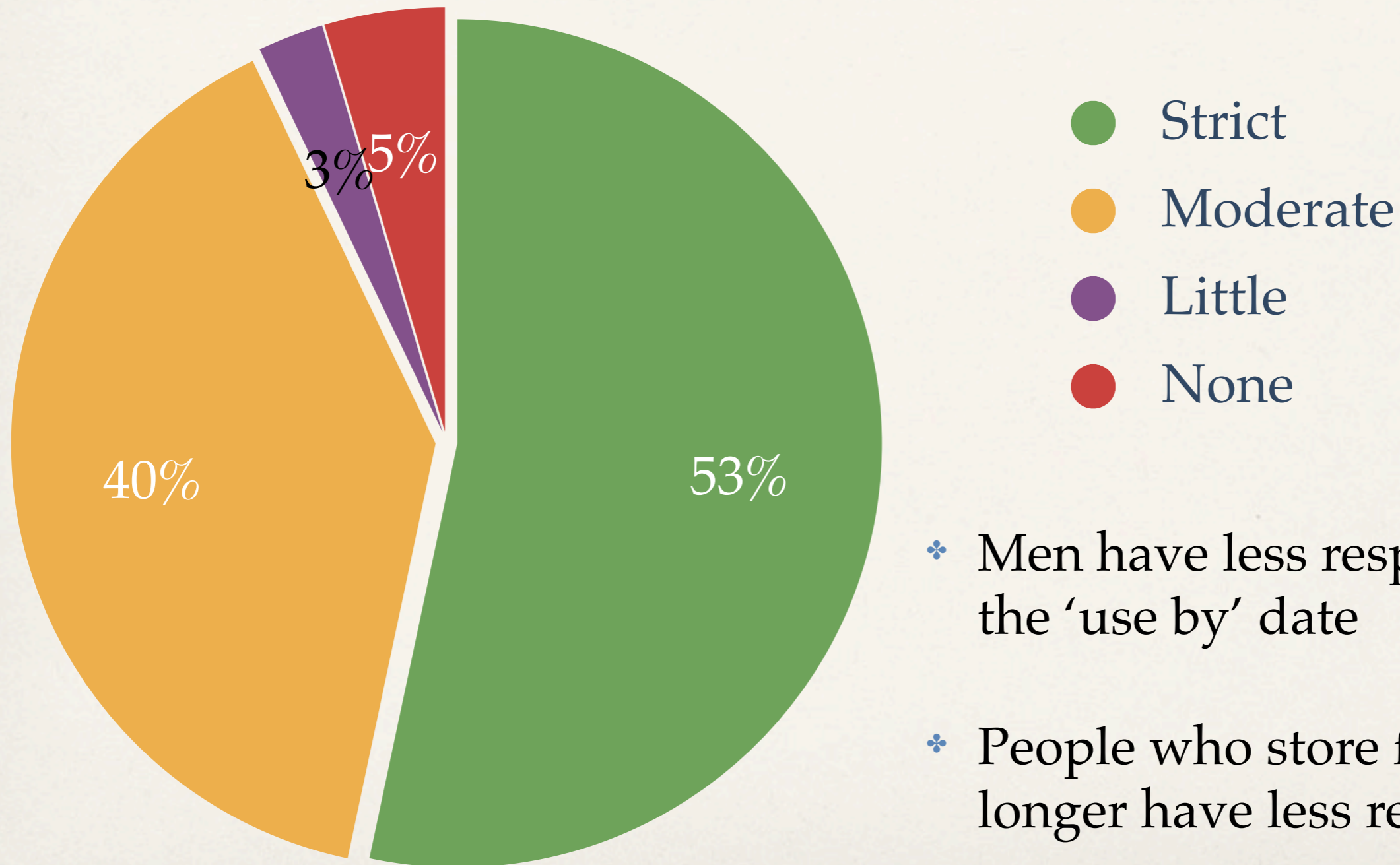
# How good do you respect the 'use by' date?

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# How good do you respect the 'use by' date?

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- \* Men have less respect for the 'use by' date
- \* People who store for longer have less respect

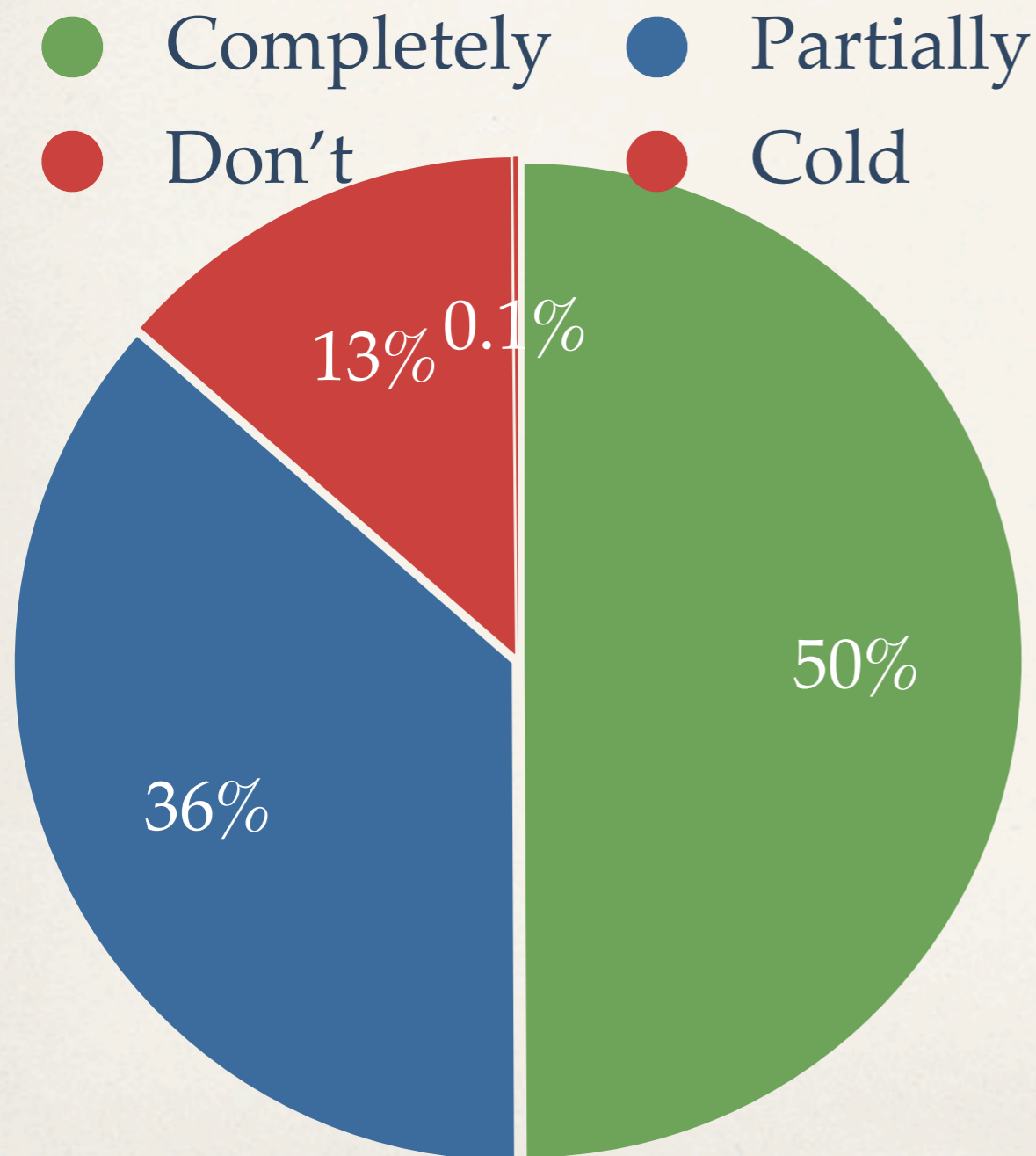
# How closely do you follow the reheating guidelines?

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- \* e.g. 800 Watt for 4 minutes, stir after 2 minutes
  - \* e.g. Put on heat resistant tray and heat for 10 minutes at 180°C
- 
- a. “Completely”
  - b. “Partially”
  - c. “I don’t follow the instruction, warm is OK”

# How closely do you follow the reheating guidelines?

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❖ Women do better than men

❖ The elderly do better than the young

❖ People with less respect for 'use by' date do worse

# Time to consumption

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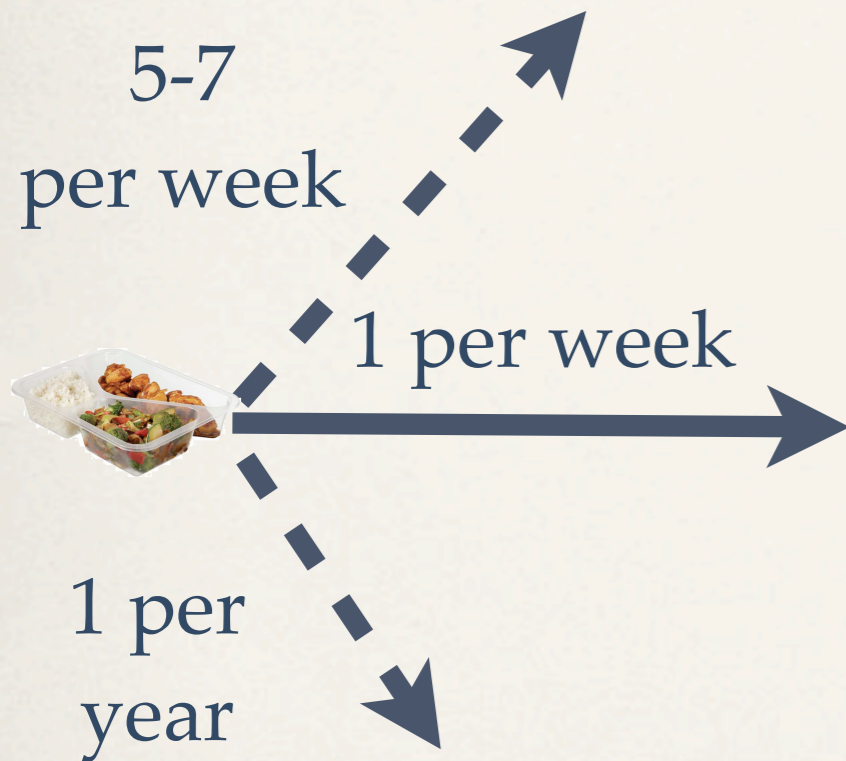
- ❖ Questions 3, 4 and 5
- ❖ Correlated → Conditional
- ❖ “the REPFED’s point of view”
- ❖ What is the probability that REPFED is consumed by a consumer who:
  1. has a certain frequency of consumption
  2. and has a certain respect for the ‘use by’ date
  3. and who stores the product for a certain time

# Time to consumption

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An example:

ADD moving package

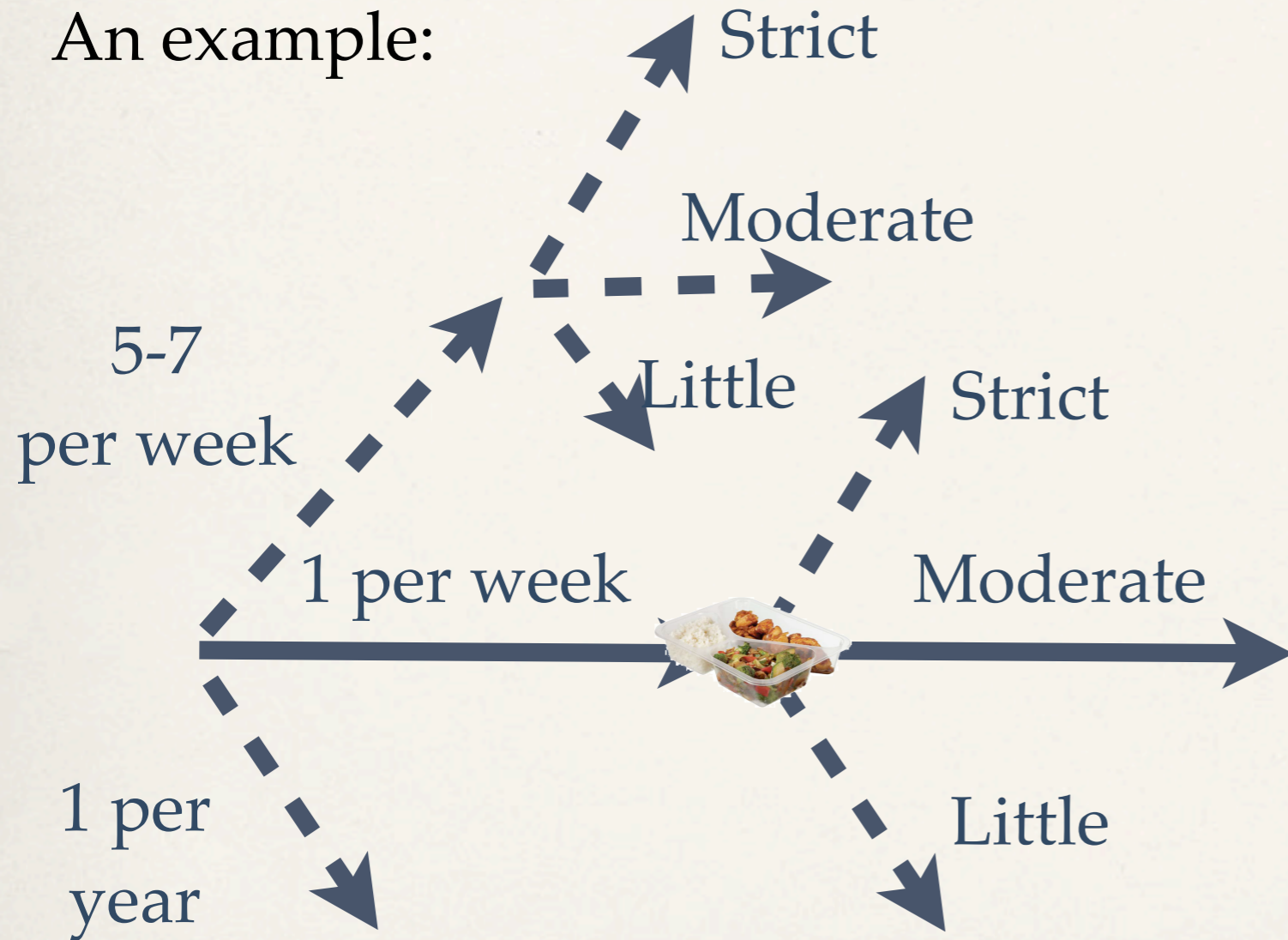


# Time to consumption

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An example:

ADD moving package

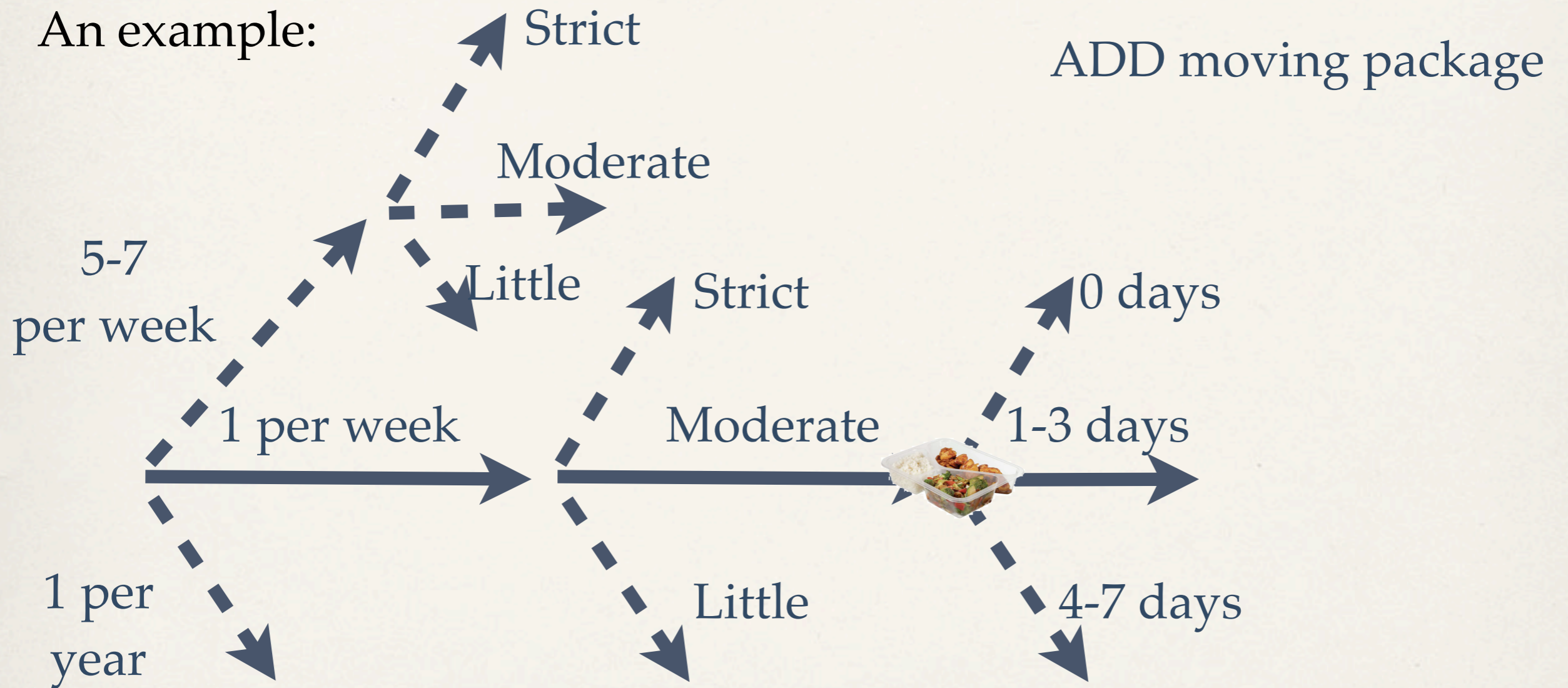




# Time to consumption

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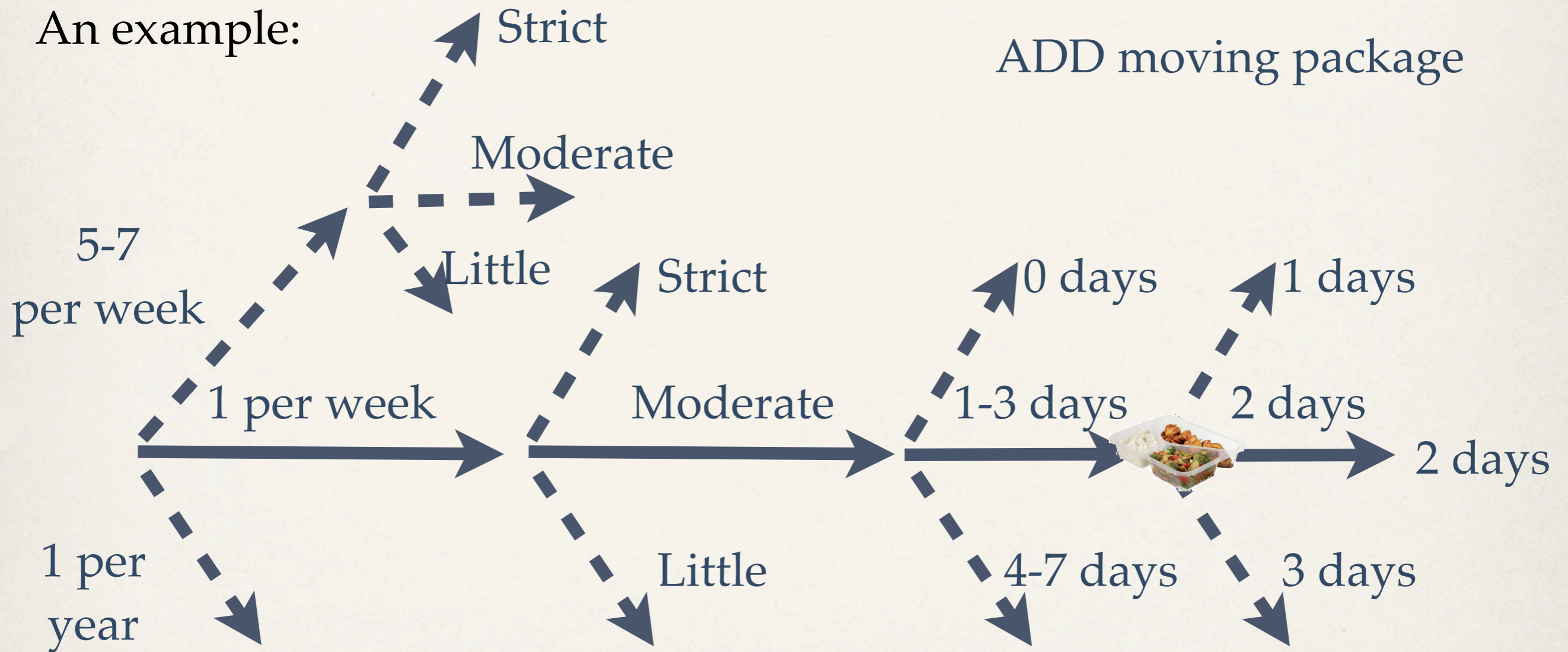
An example:



# Time to consumption

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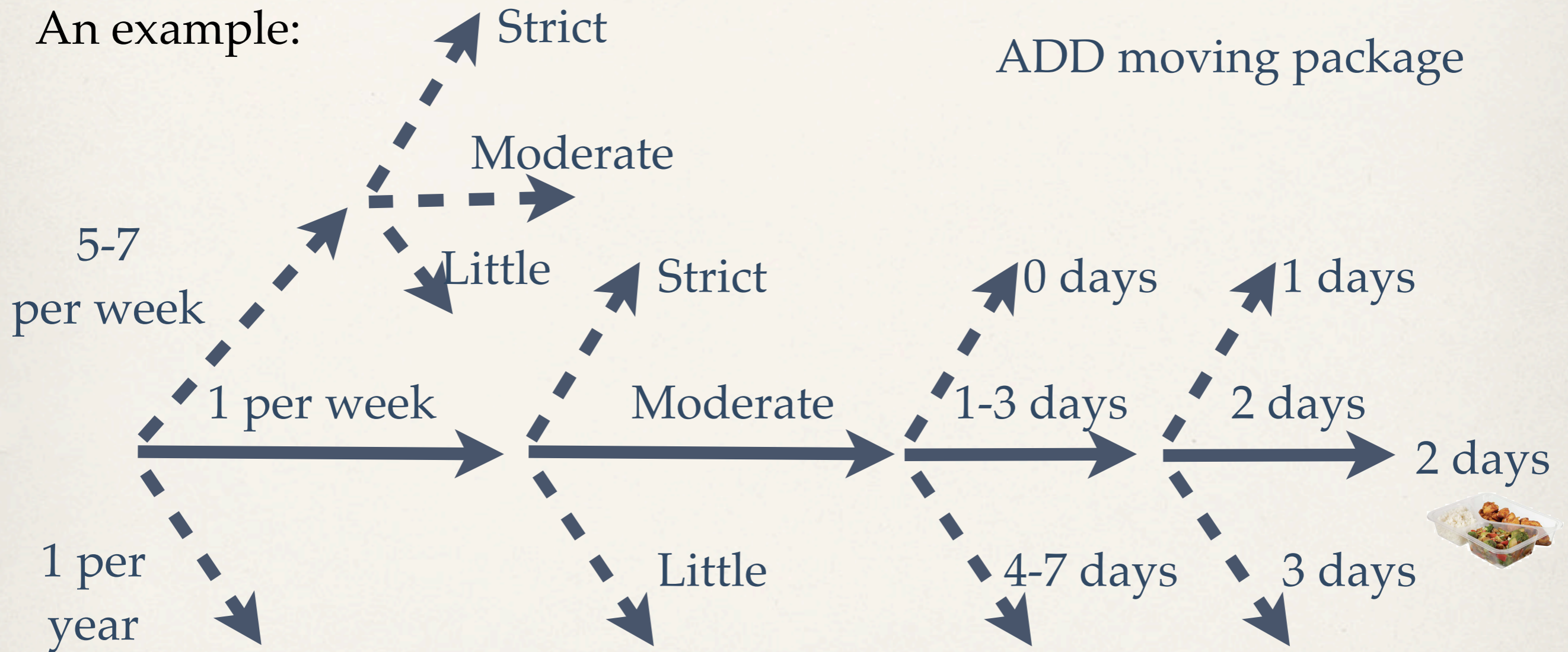
An example:



# Time to consumption

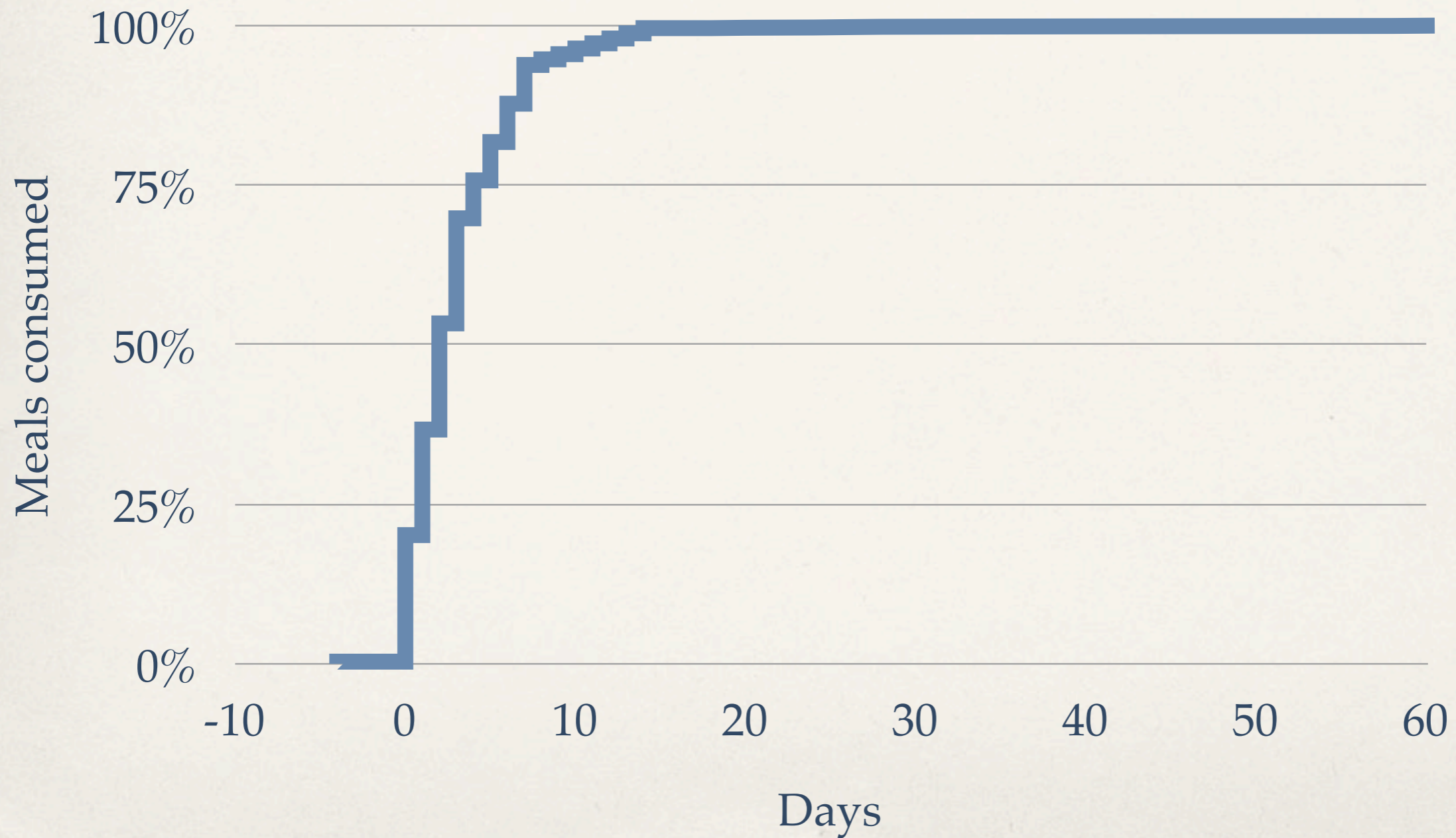
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An example:



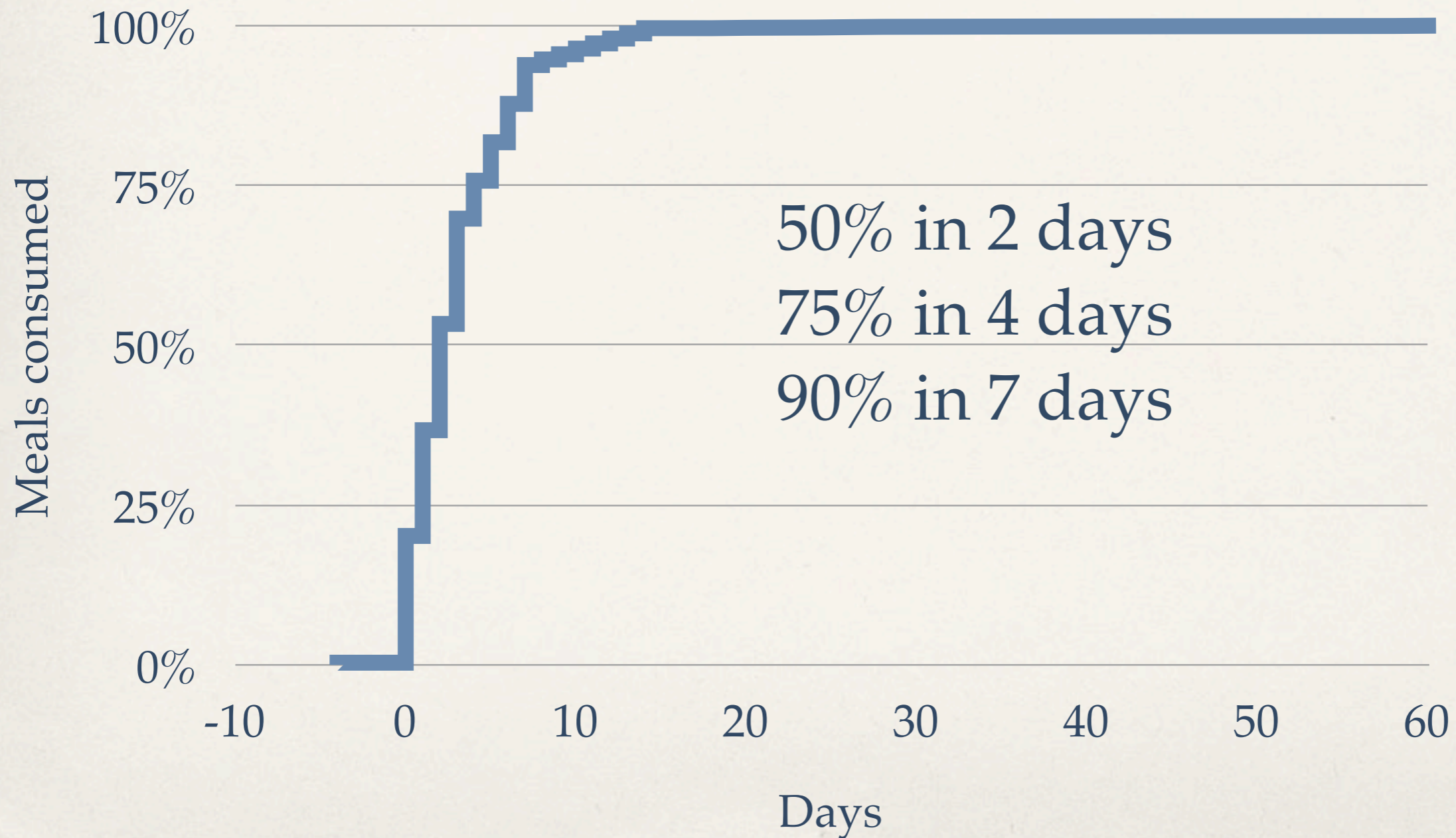
# Time to consumption

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# Time to consumption

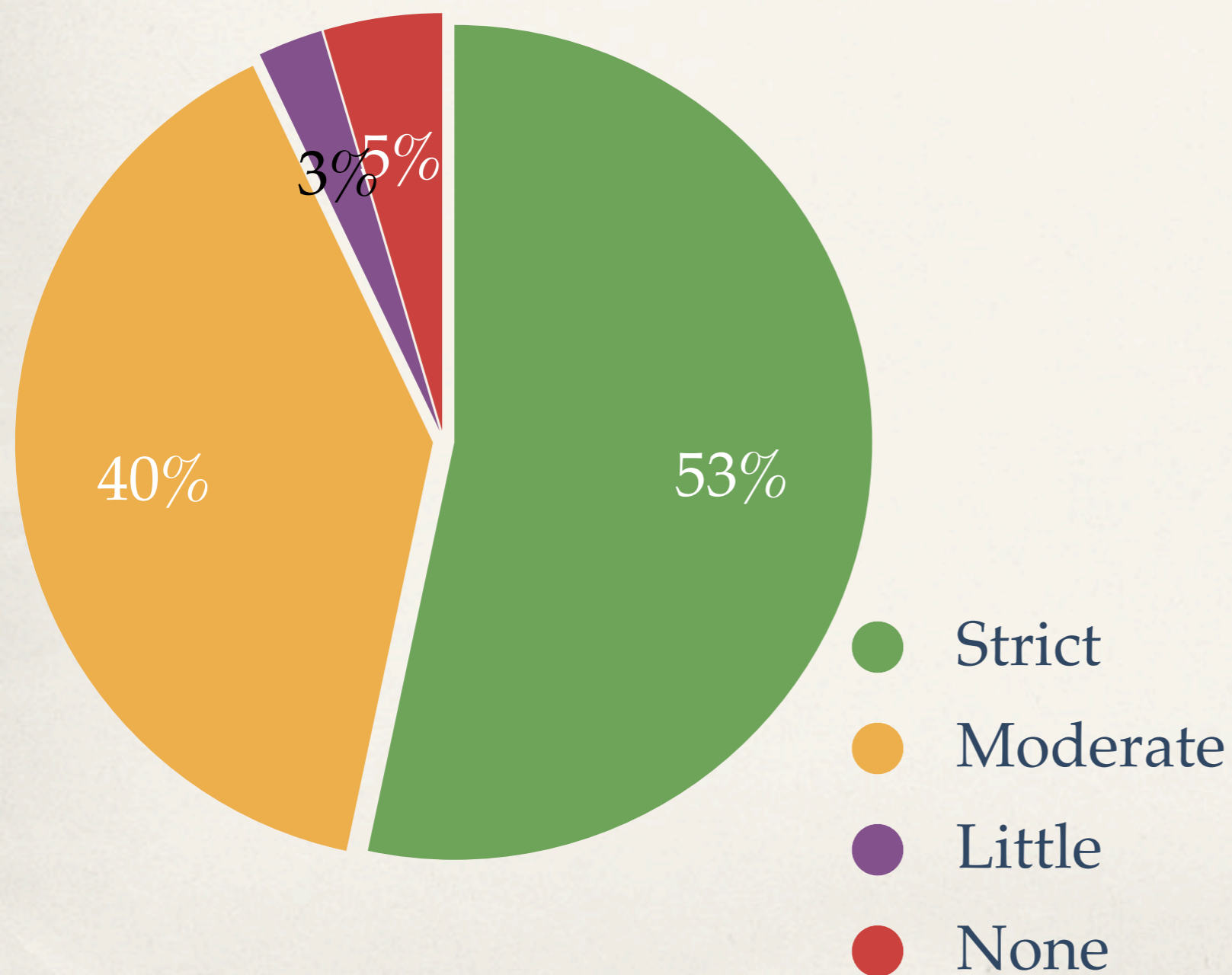
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# Behaviour and effect

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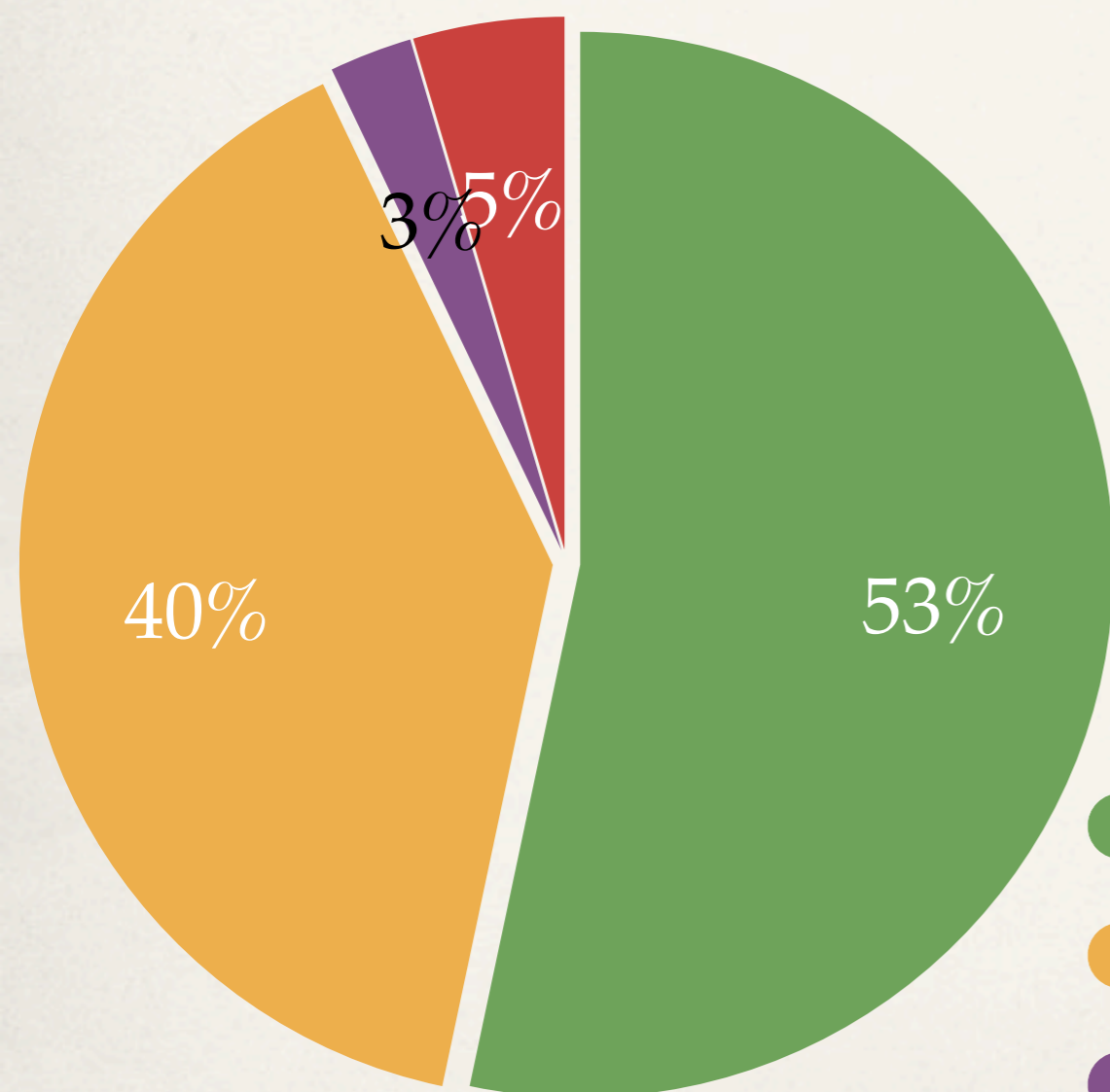
Respect for 'use by' date



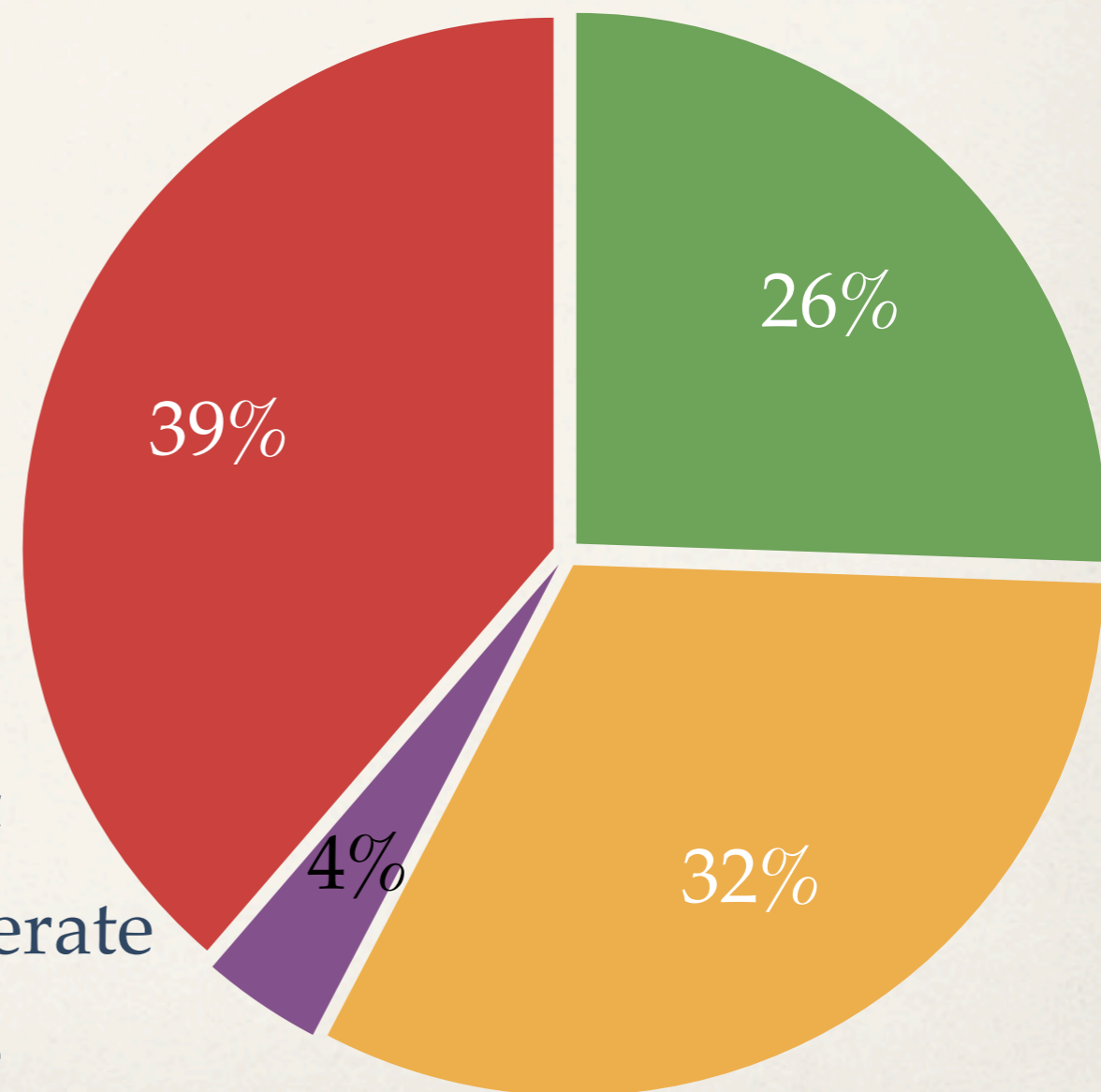
# Behaviour and effect

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Respect for 'use by' date



Prob. of eating "risky" REPFED



- Strict
- Moderate
- Little
- None

# Conclusion

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- ❖ Survey is lot of effort, but worthwhile
- ❖ Consumer behaviour in other cultures / countries?
- ❖ *B. cereus* in Belgian REPFEDs:
  - ❖ “risky behaviour” do “*all things wrong*”
  - ❖ Frequent consumers are less exposed
  - ❖ “Strict” consumers (53%) are less exposed



# Conclusion

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- ❖ Do we have to include these “risky consumers”?
- ❖ Can we?

Questions?

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