Blueprint simulator - Personal Edition

Description

A script that simulates how long it takes to gather all remaining blueprints based on your personal inventory (saved in separate Excel sheet). Which takes into account the individual probabilities of the remaining blueprints. This script uses either a spender or hoarder strategy.

The spender strategy buys a new blueprint along the way while recycling any excess blueprints. The hoarder strategy instead saves all filaments from recycled blueprints and waits until has enough to buy all remaining missing blueprints (called here the *filament tipping point*).

If you want to change or update the underlying probabilities for each tier (perhaps based on your own measurements) then you can update them in the Excel file under the Data sheet.

By default the simulation works based on previously observed probabilities which are:

- Common: 0.6
- Decent: 0.25
- Nifty: 0.1
- Splendid: 0.05

Personal

Found a total of 169 out of 528 already claimed blueprints. Remaining number of blueprints is 359. Additionally, a total of 10300 filament has been collected and will be used in the simulations.

Found a total of blueprints for each tier:

- Common: 99
- Decent: 43
- Nifty: 16
- Splendid: 11

Simulation conditions

The number of blueprints claimable per week is 6.

The average time in hours it take for claiming all blueprints in a week is estimated to be around 9 hour and 30 minutes. [1]

The recycled yield is calculated as getting 50% back when recycled.

Results

Ran using 1000 simulations per approach.

Spender strategy

Average hours required: 1621

Average weeks required: 171

Average years required: 3.3

Average number of recycled blueprints: 816

Hoarder strategy

Average hours required: 1472

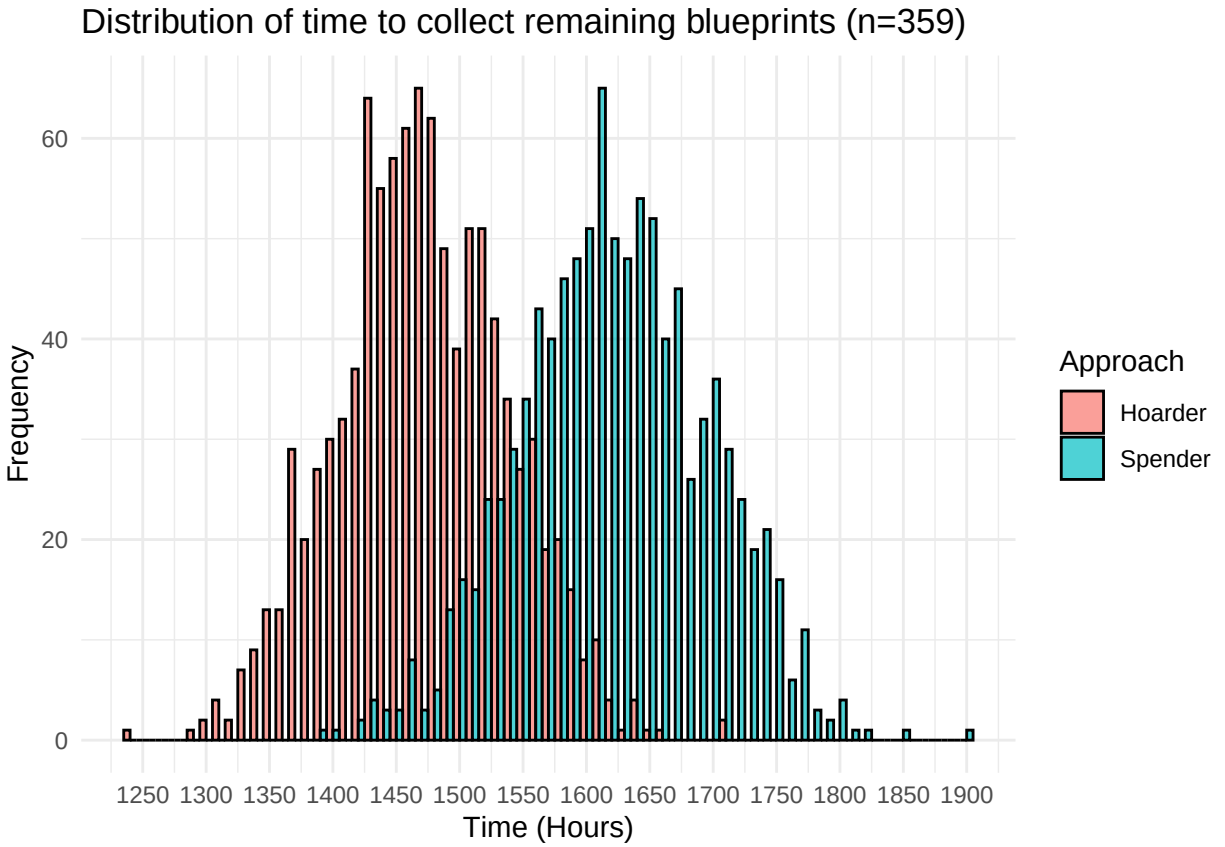
Average weeks required: 155

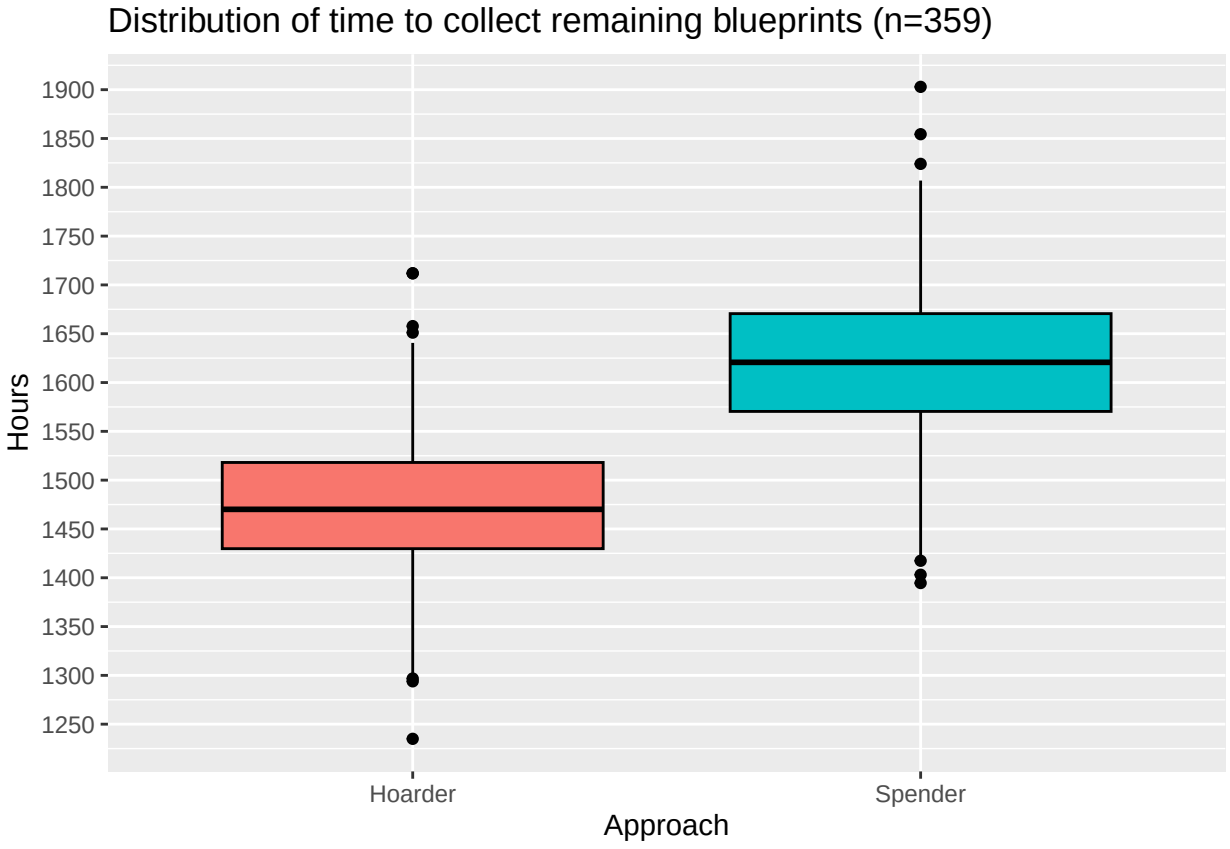
Average years required: 3

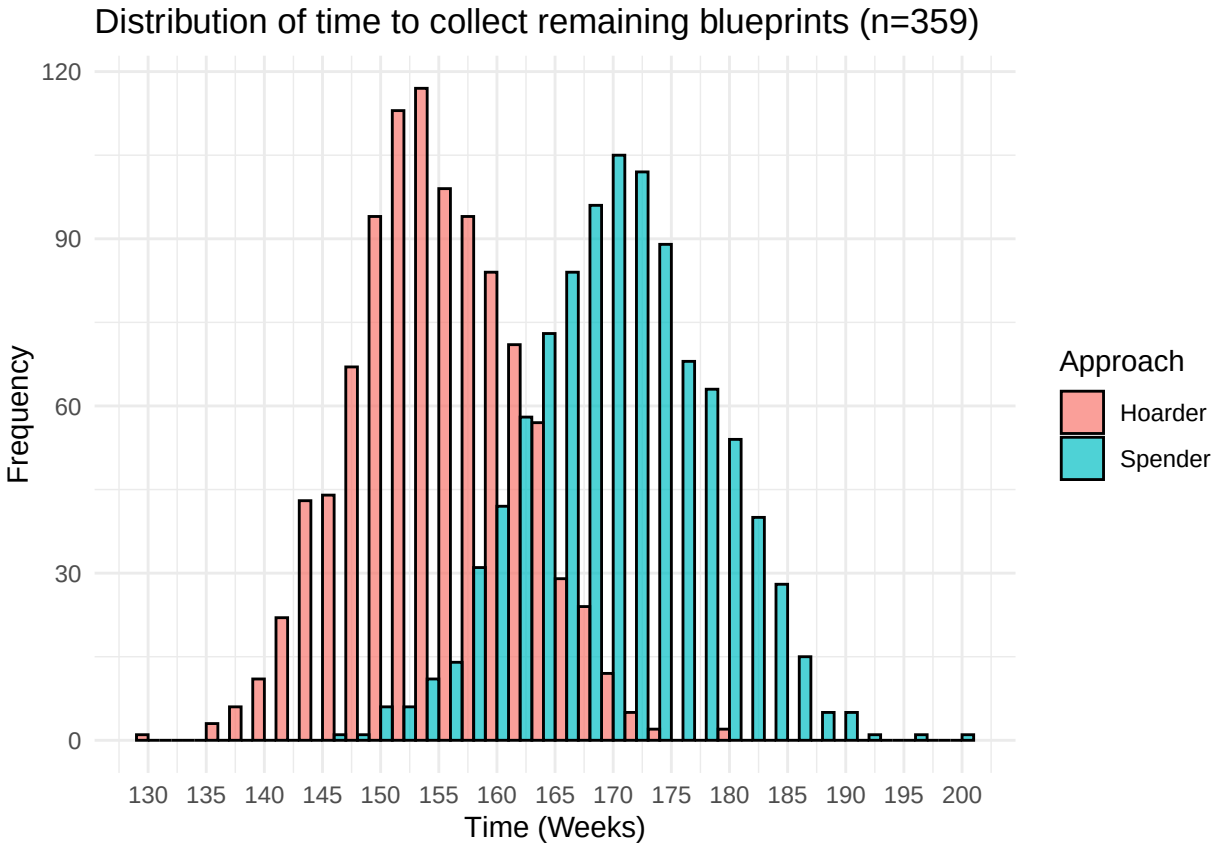
Average number of recycled blueprints: 675

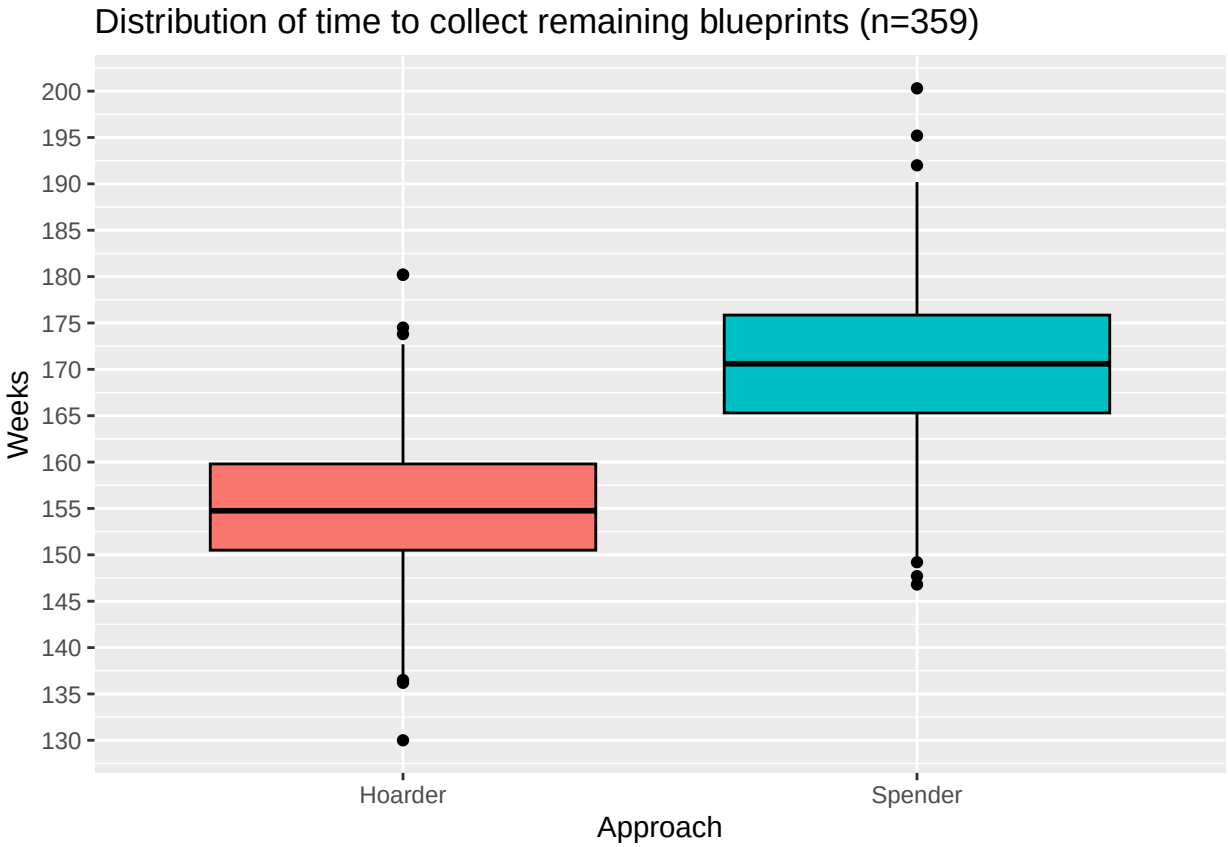
Average filament required for tipping point: 345K

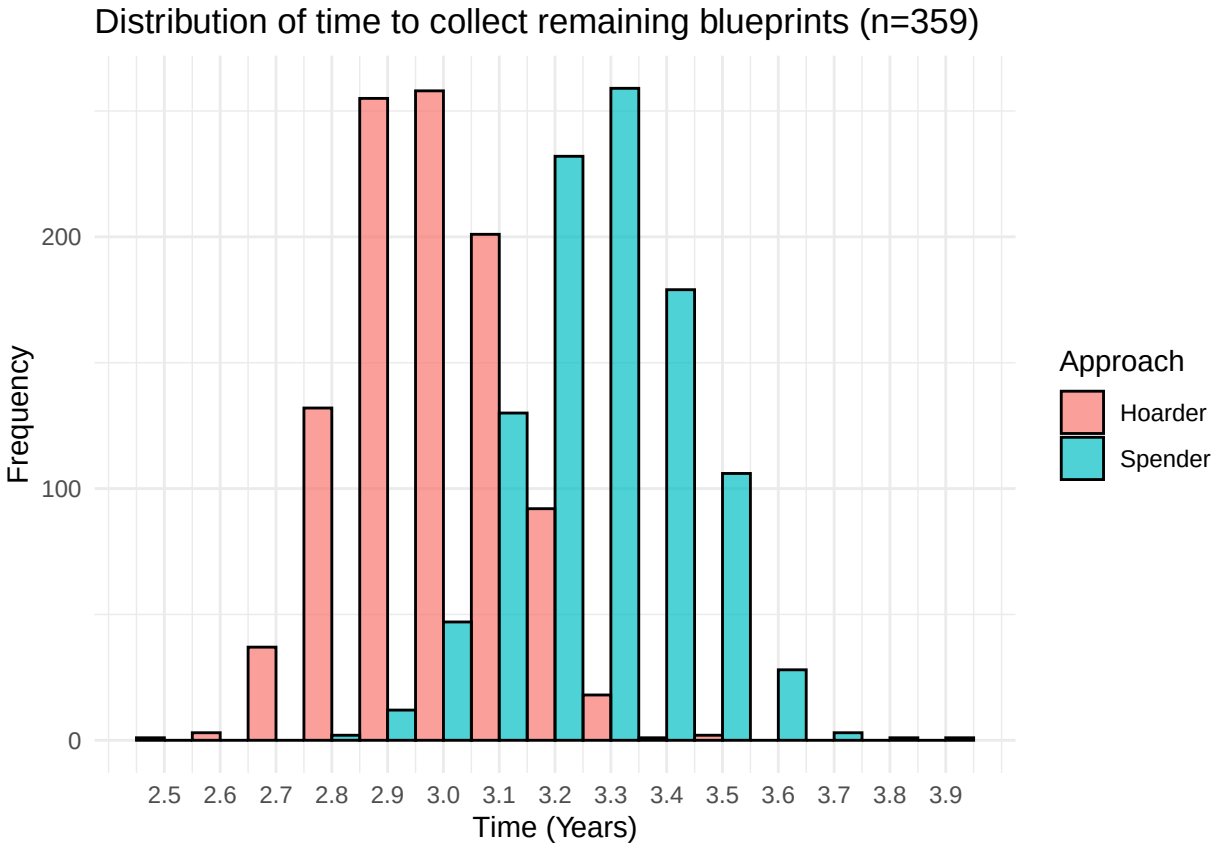
Visualizing distributions

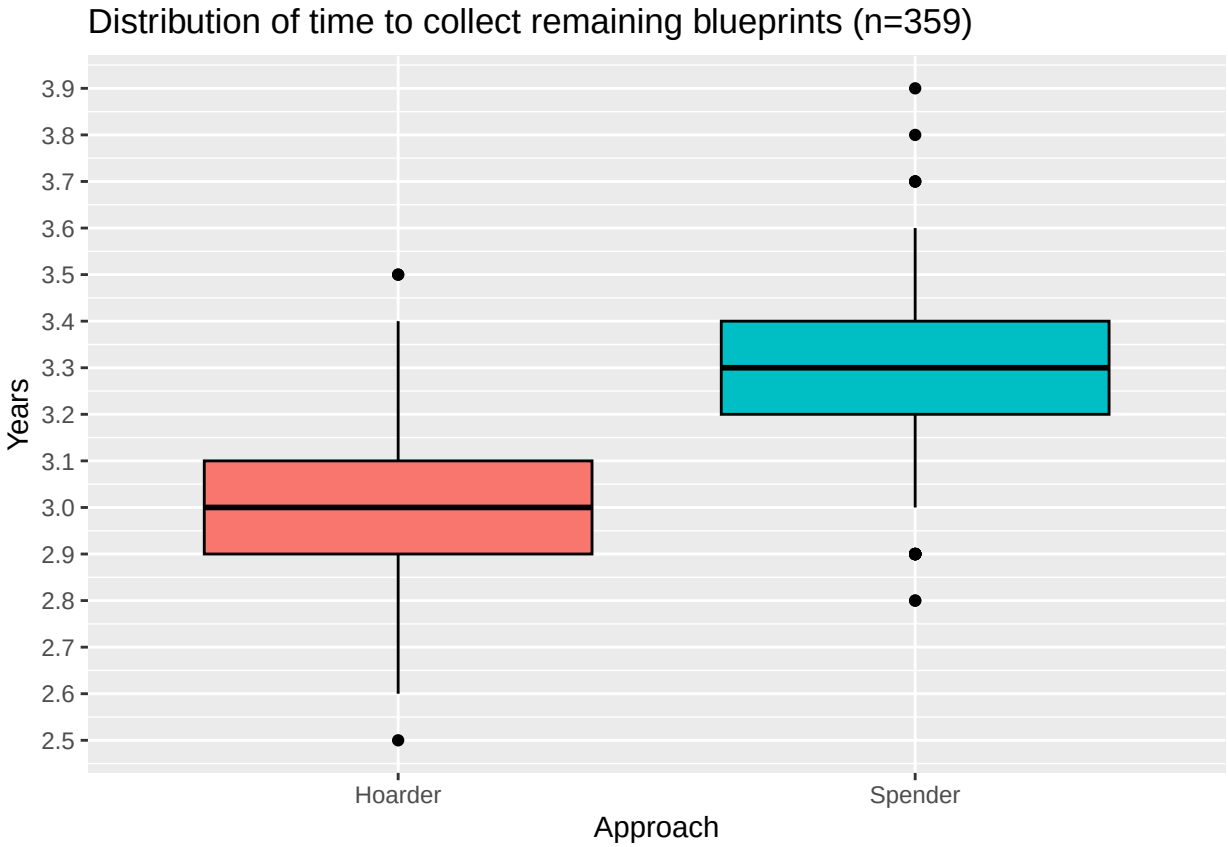


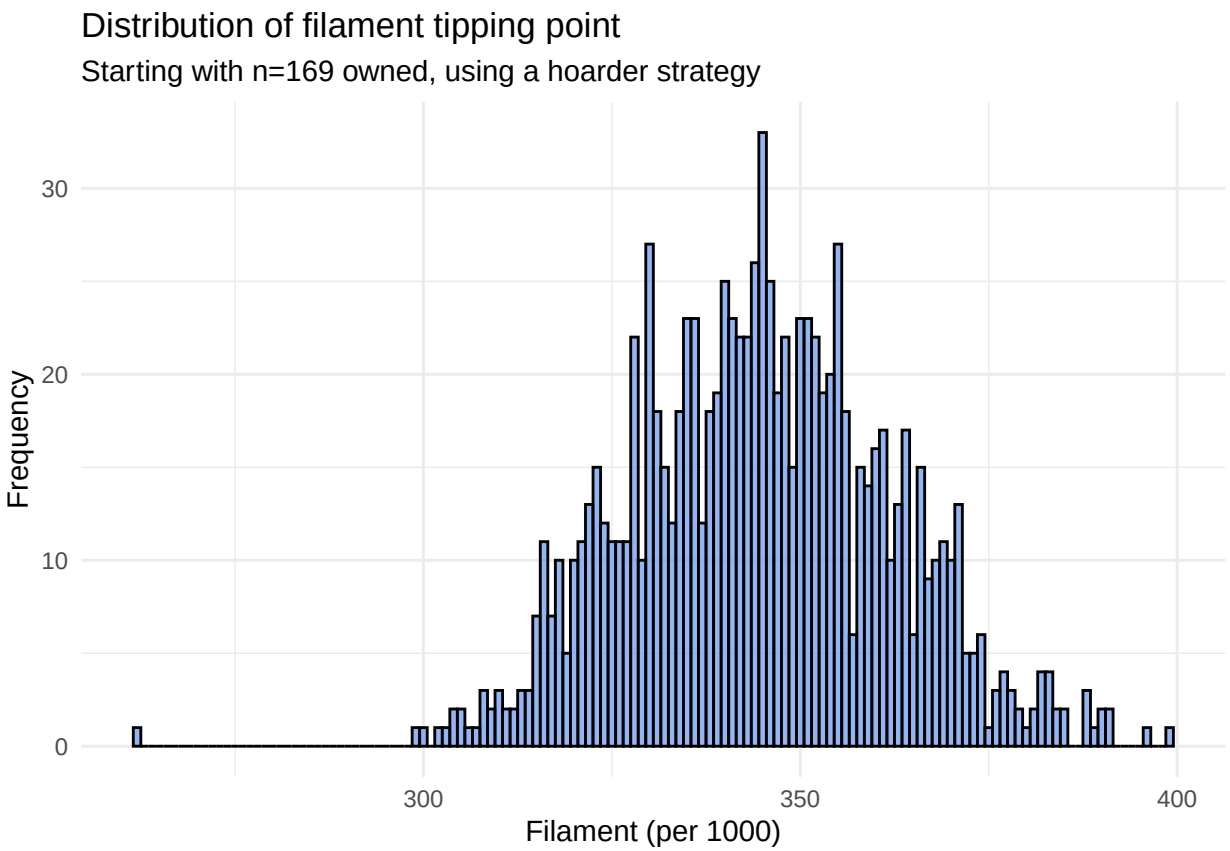


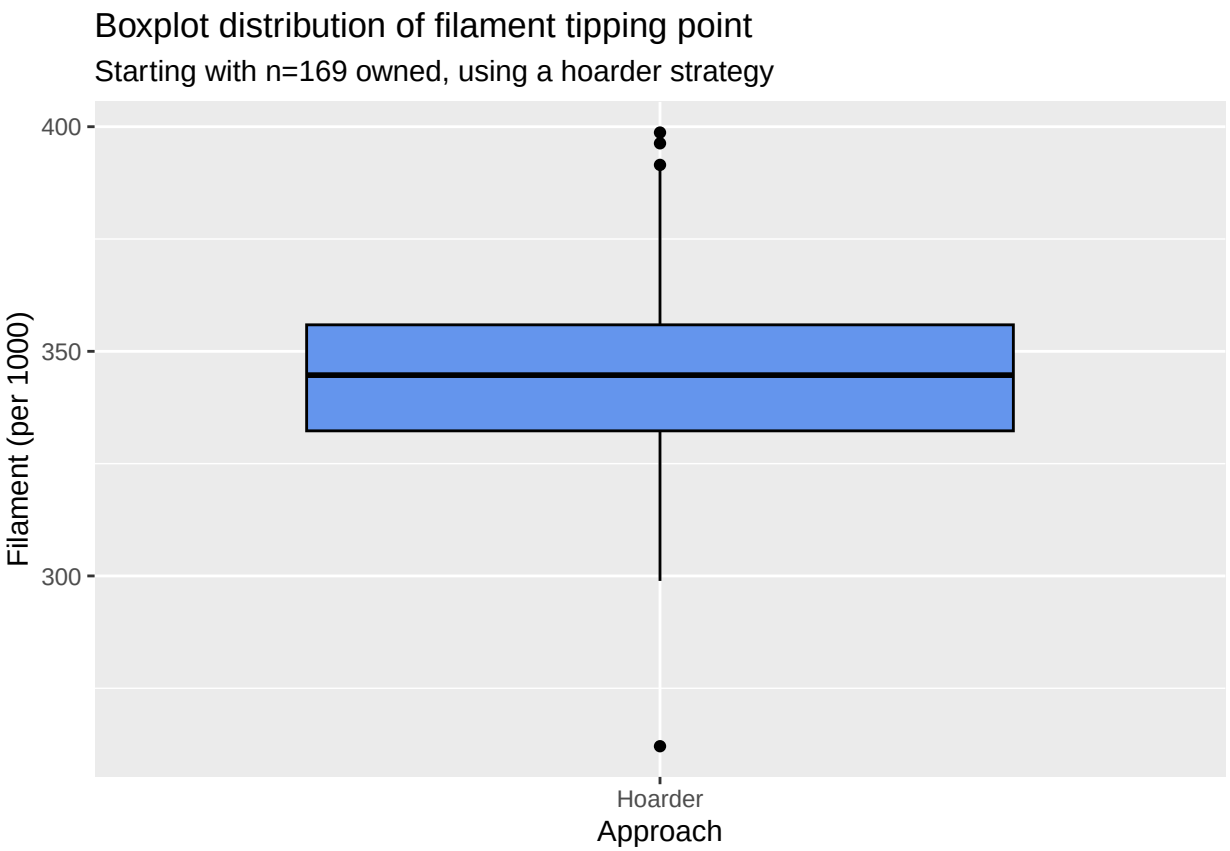

Distribution of time to collect remaining blueprints (n=359)
Frequency
120
90
60
30
0
130
135
140
145
150
155
160
165
170
175
180
185
190
195
200
Time (Weeks)
Approach
Hoarder
Spender


Distribution of time to collect remaining blueprints (n=359)
Weeks
200
195
190
185
180
175
170
165
160
155
150
145
140
135
130
Hoarder
Spender
Approach


Distribution of time to collect remaining blueprints (n=359)
Frequency
200
100
0
2.5
2.6
2.7
2.8
2.9
3.0
3.1
3.2
3.3
3.4
3.5
3.6
3.7
3.8
3.9
Time (Years)
Approach
Hoarder
Spender


Distribution of time to collect remaining blueprints (n=359)
Years
3.9
3.8
3.7
3.6
3.5
3.4
3.3
3.2
3.1
3.0
2.9
2.8
2.7
2.6
2.5
Hoarder
Spender
Approach


Distribution of filament tipping point
Starting with n=169 owned, using a hoarder strategy
Frequency
30
20
10
0
300
350
400
Filament (per 1000)


Boxplot distribution of filament tipping point
Starting with n=169 owned, using a hoarder strategy
400
350
300
Filament (per 1000)
Hoarder
Approach