



Applied
Frameworks



Agile Estimation and Capacity Planning

Welcome



laura@appliedframeworks.com

Laura Caldie

- Webinar Host
- SVP Sales, SPC
- Passion for Customer Research / Customer Understanding

We help organizations create sustainable, and profitable software-enabled solutions and services through...

- Agile Acceleration
- Agile Portfolio Management
- Agile Product Management

<https://appliedframeworks.com/category/webinars/>



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BUILD PROFITABLE SOFTWARE

Profit Streams™ are the evolution of Value Streams

Create a profit engine that aligns to what your customers value most.

[Learn How](#)

SAFe TRAINING

Understanding Value Exchange Models

Tuesday November 8th, 2022 @ 1:00PM ET



Carlton Nettleton
SVP of Product, CST @ Applied Frameworks

Webinar: Understanding Value Exchange Models

By [Carlton Nettleton](#) | October 27th, 2022 | [Frameworks](#), [Profit Streams](#)

Do you understand your value exchange model? The value of a software-enabled solution is the difference between what it receives less their costs. Join Carlton Nettleton to discuss Value Exchange Models and their impact on enabled solutions' profitability.

Agile Metrics

Wednesday May 31, 2023 @ 12 PM ET



Joel Bancroft-Connors
Principal Consultant, CST
@ Applied Frameworks



Laura Caldie
SVP of Sales, SPC
@ Applied Frameworks

By [Joel Bancroft-Connors](#) | May 11th, 2023 | [Frameworks](#), [Process](#), [Webinars](#)

When looking at the transparency of Agile and the granularity of team-based metrics, it is extremely important to be responsible in how you use your measurements. On May 31 at 12 pm ET, Applied Frameworks Joel Bancroft-Connors and Laura Caldie will join to discuss the five principals they use when dealing with Agile Metrics

About our speaker...



Joel Bancroft-Connors
The Gorilla Coach

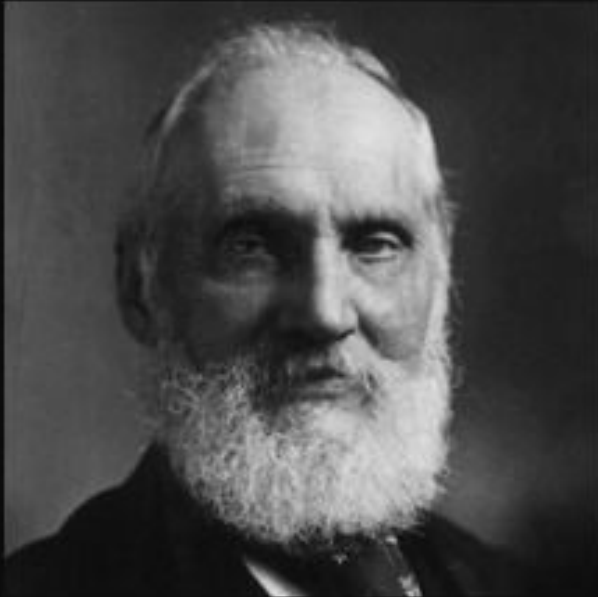
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Troy Magennis
Agile Forecasting & Data Analytics

- + President- Focused Objectives
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If you can not measure it, you
can not improve it.

~ Lord Kelvin

Go to menti.com and use the code 4909 146



Why do we estimate?





How do we estimate?





Planning Poker?





Group Solitaire



Problems with Planning Poker



HOFSTADTER'S
LAW



OPTIMISM BIAS



THE PLANNING
FALLACY



WE DON'T DO
TIME WELL



There has to be a
better way





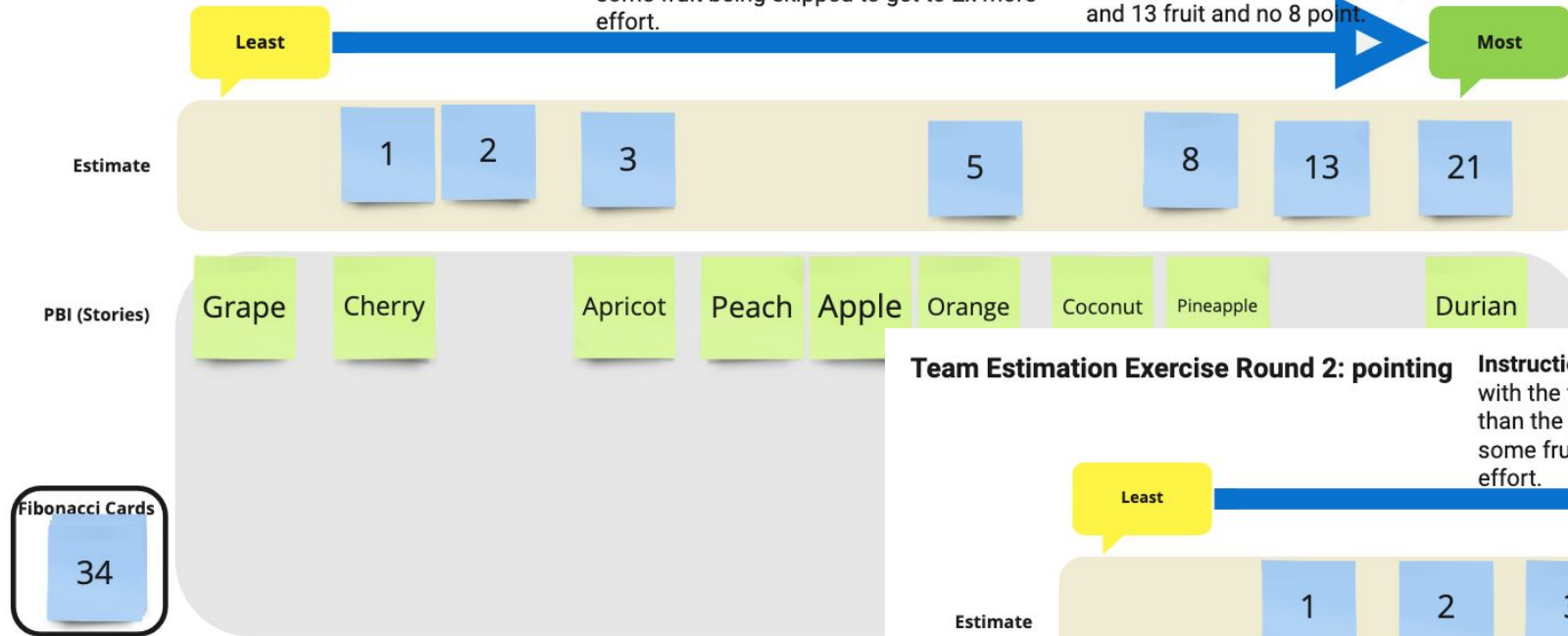
20/20 Vision



Team Estimation Exercise Round 2: pointing

Instructions: Place the next Fibonacci card with the fruit that is "roughly" 2x more effort than the fruit to its left. This may result in some fruit being skipped to get to 2x more effort.

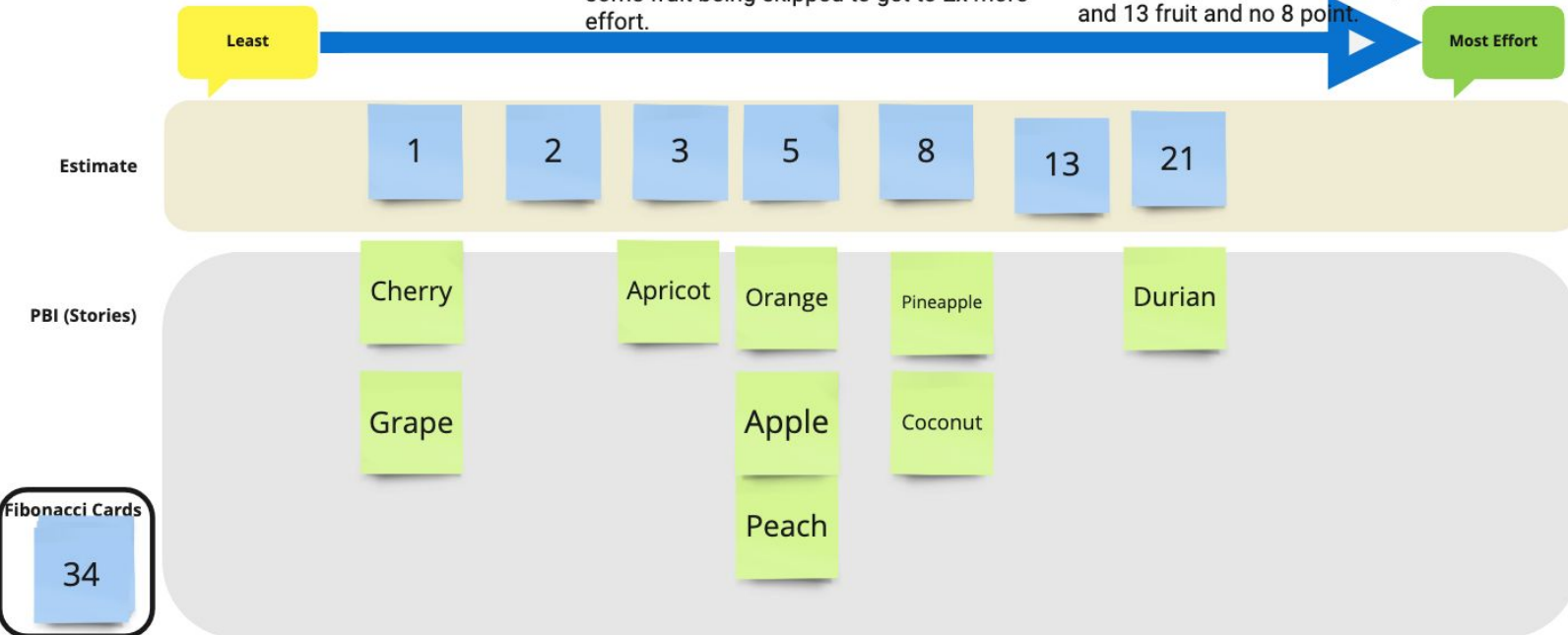
When comparing relative effort, look only at the fruit two places left or right of the fruit you are estimating. It is ok to skip numbers if there is a big jump in relative effort (e.g. there are 5 and 13 fruit and no 8 point).



Team Estimation Exercise Round 2: pointing

Instructions: Place the next Fibonacci card with the fruit that is "roughly" 2x more effort than the fruit to its left. This may result in some fruit being skipped to get to 2x more effort.

When comparing relative effort, look only at the fruit two places left or right of the fruit you are estimating. It is ok to skip numbers if there is a big jump in relative effort (e.g. there are 5 and 13 fruit and no 8 point).



Miro Template: <https://miro.com/miroverse/relative-estimation-template/>



No matter how
good your
estimates are,
it won't all get
done



Forecasting and Capacity Planning

- There will always be more work
- Prioritizing helps
- The date will almost never change
- Being able to answer “How much can we do” is vital



Story Reference Boards



Story Reference Board

Points

1

2

3

5

8

13

21

Reference
Work

Cherry

Apricot

Banana

Orange

Pineapple

Durian

Grape

Kumquat

Apple

Coconut

Jackfruit

New Work

Persimmon

Pomegranate

Papaya

Mangosteen

Capacity Planning with Story Reference Boards



Story Reference Board

Points

1

2

3

5

8

13

21

PI 1:
25

Reference
Work

Cherry

Apricot

Banana

Orange

Pineapple

Durian

Feature
Points

PI 2:
30

Grape

Kumquat

Apple

Coconut

Jackfruit

PI 3:
15

New Work

Papaya

Persimmon

Mangosteen

Pomegranate

Potential
Capacity for PI 4:
23

Total Estimated:
29

At least 1 thing is
not getting done!



An even better way...



Simple Monte Carlo Examples



<https://observablehq.com/@troymagennis/introduction-to-monte-carlo-forecasting>

Total work range

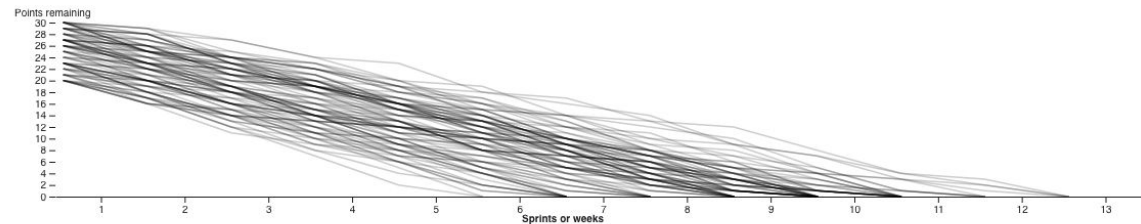
20 points (or stories) ... 30 points (or stories)

The range from lowest to highest of total backlog points or count of stories to be completed

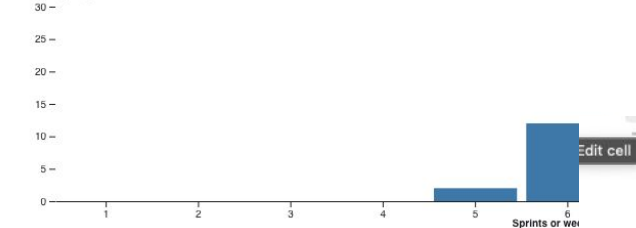
Delivery pace range

1 points (or stories) per sprint ... 5 points (or stories) per sprint

The range from lowest to highest of points or count of stories completed per sprint or week



Result frequency



Show first 100 burndown Monte Carlo

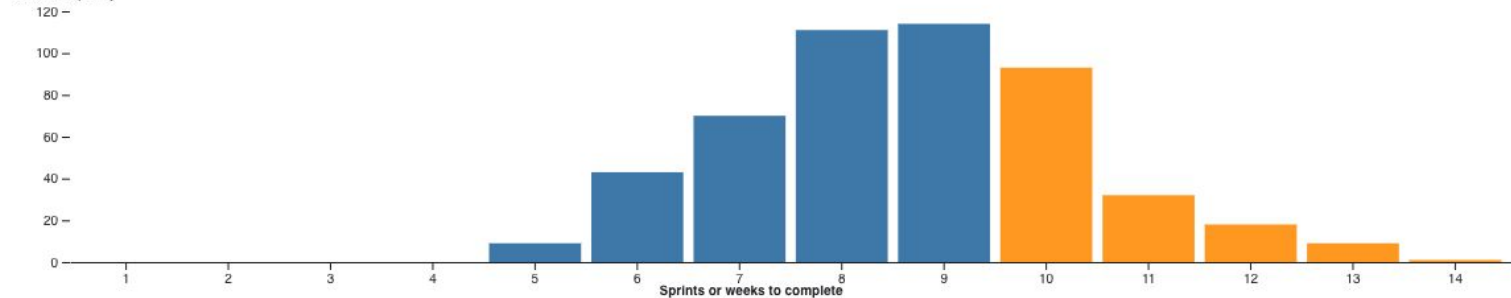
The total sum of backlog points or count of stories to be completed

Cumulative Percentile

85%

How confident do you want the duration answer to be? Higher = more certain (pessimistic)

Result frequency



Throughput forecaster



	A	B	C	D	E	F	G	H	I	J	K	L	M	
1	Forecast Duration and Completion Date										Results			
2														
3	1. Start Date			1/1/21 (optional)	enter the values in orange cells only									
4				Start date Enter the first day of the forecast. All dates will be increments of throughput weeks or sprints starting at this date.										
5	2. How many stories are remaining to be completed													
6														
7	low guess				high guess									
8	scope complexity			Clear and understood	(change this list and growth factors in the "Settings" worksheet)									
9	adjusted scope			20	25									
10														
11	3. Stories are often split before and whilst being worked on. Estimate the split rate low and high bounds.													
12	Often the throughput/velocity in the backlog is pre-split, but captured completed stories post-splitting by the dev team making forecasts optimistic.													
13	low split guess			1.00	highest split guess			1.50						
14														
15	4. Throughput. How many completed stories per week or sprint do you estimate low and high bounds?													
16														
17	Throughput/velocity data or estimate is for			1 week		7 days								
18														
19	Use historical throughput/velocity data <u>OR</u> enter a low and high estimate below. Use:			Estimate										
20														
21														
22	worst case			1	most often			3 (optional)		best case				10
23														
24														
25	Team focus on THIS work			100% (only this work)										
	Instructions	More stuff like this	Forecast	Historical Samples	Risks	Remaining Stories Actuals	Charts	Settings	+					

	No. of 1 week intervals		
Likelihood	Duration	Date	
100%	11	3/19/21	
95%	9	3/5/21	
90%	9	3/5/21	
85%	8	2/26/21	
80%	8	2/26/21	
75%	8	2/26/21	
70%	7	2/19/21	
65%	7	2/19/21	
60%	7	2/19/21	
55%	7	2/19/21	
50%	7	2/19/21	
45%	6	2/12/21	
40%	6	2/12/21	
35%	6	2/12/21	
30%	6	2/12/21	
25%	6	2/12/21	
20%	6	2/12/21	
15%	5	2/5/21	
10%	5	2/5/21	
5%	5	2/5/21	
0%	4	1/29/21	

Multiple Feature Cut Line Forecaster



Feature Cut Line Forecaster and Explorer

Only edit orange input cells like this one!

1. Start Date

1/1/21

2. Target Date

3/1/21

3. Likelihood

85%

8. Month Throughput Adjustment (increase or decrease throughput by multiplying)

4. Stories are often split into smaller pieces being worked on. Estimate the split rate low and high bounds.

Low guess

1.00

Highest guess

2.00

5. Throughput (or velocity): how many completed stories per week or sprint do you estimate low and high bounds?

Throughput/velocity data or estimate is per

Week

7 days

(choose a time interval that throughput of velocity is measured in weeks from the list in the orange cell above)

Use historical data OR enter a low and high estimate below.

Choose here:

Estimate

Worst case

5

Best case

8

Team focus on THIS work

100% (only this work)

100%

6. Enter the features and story count (or point) estimates here...

Start date: 01/01/2021

Start Order	Feature (or Epic) Name (just for reference)	Story Count (or points) Low Guess	Story Count (or points) High Guess	Scope complexity (how well understood is this scope)	Complete by Week	Forecast Completion Date (85% CI)
1	Feature 1	5	10		3	1/22/21
2	Feature 2	8	15		6	2/12/21
3	Feature 3	15	25		12	3/26/21
4	Feature 4	20	30		19	5/14/21
5	Feature 5	10	40		26	7/2/21
6						
7						
8						
9						
10						
11						
12						

Legend

✓ Forecast on or before the target date

! Forecast misses target date by one Week or less

✗ Forecast misses target date by MORE than one Week

Instructions

More Like This

Forecast

Historical Samples

Settings and Calculations

+



Questions?



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Thank you!

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