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Coffee Data as Business Intelligence.
Using Your Data to Improve Quality,
Consistency and Control.

Andreas Idl CEO, Cropster GmbH

We need data to deliver quality



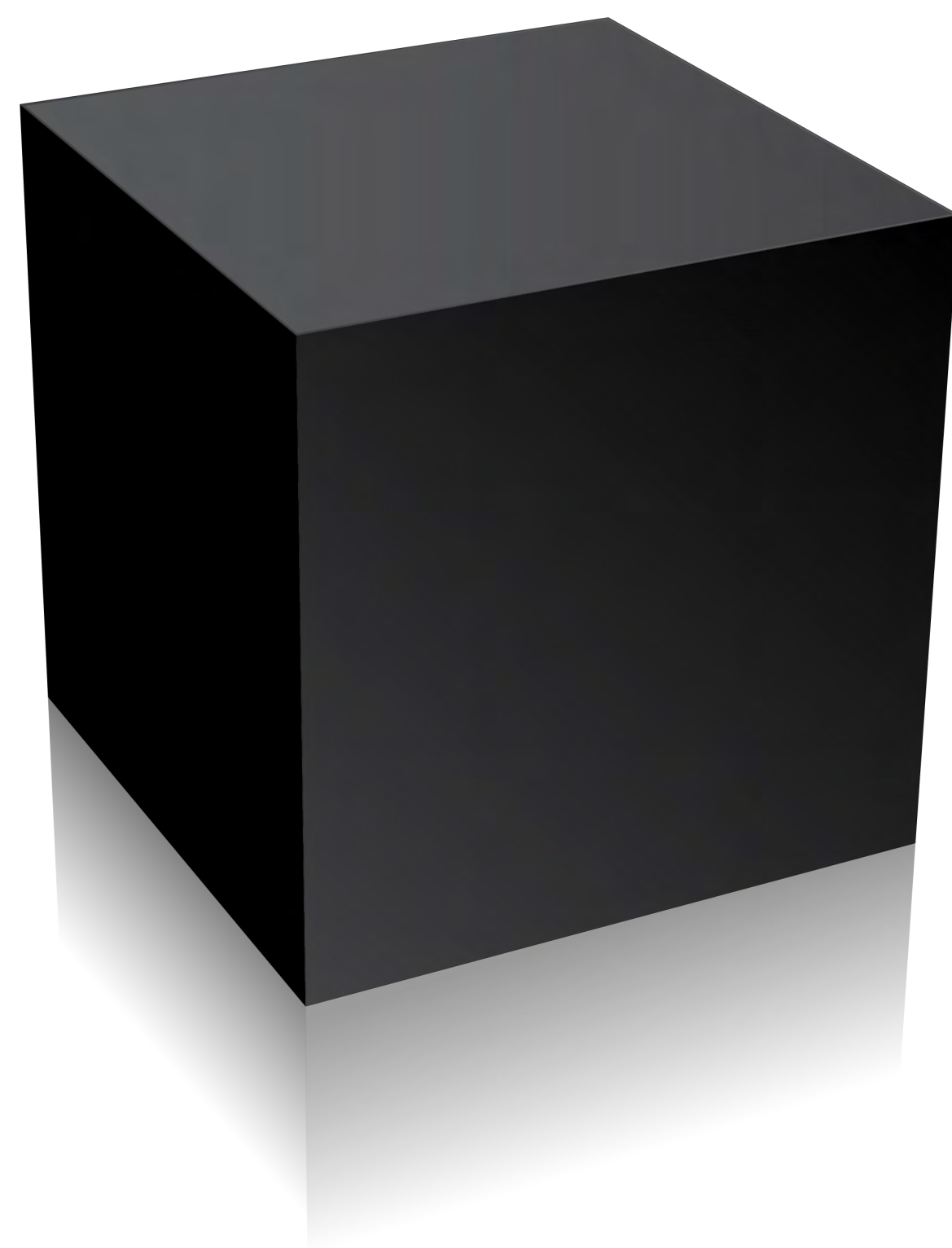


**SPECIALTY
COFFEE ASSOCIATION
OF AMERICA®**

Because great coffee
doesn't just happen.®

Source: <https://www.yumpu.com/en/document/view/11268482/view-membership-brochure-specialty-coffee-association-of-america>

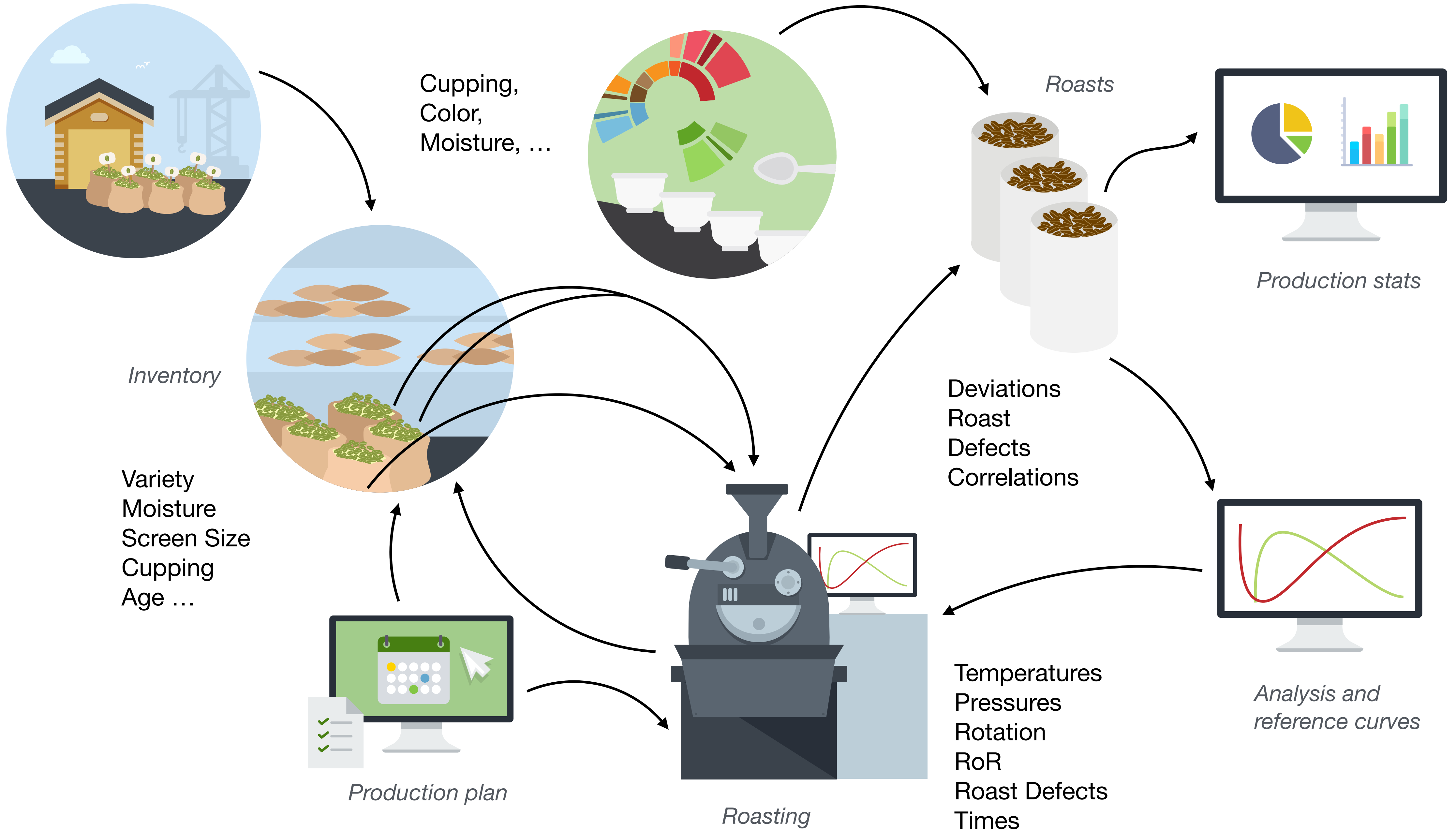
Black Box



Source: Screenshots, graphs, and icons in this presentation are all made by Cropster.

So where do we start?





Deviations
Roast
Defects
Correlations

Temperatures
Pressures
Rotation
RoR
Roast Defects
Times

What does the process look like



Origin & Green

Altitude, Location,
Processing,
Density, Water activity,
Screen size,
Defects,
Cupping, Flavors,
Storage time



Roasting

Weight, Blending ratios
Curves: Temperatures,
RoR, Gas, Rotation,
Pressures, Times,
Roasting phases,
Time of day, Batch
number, Date

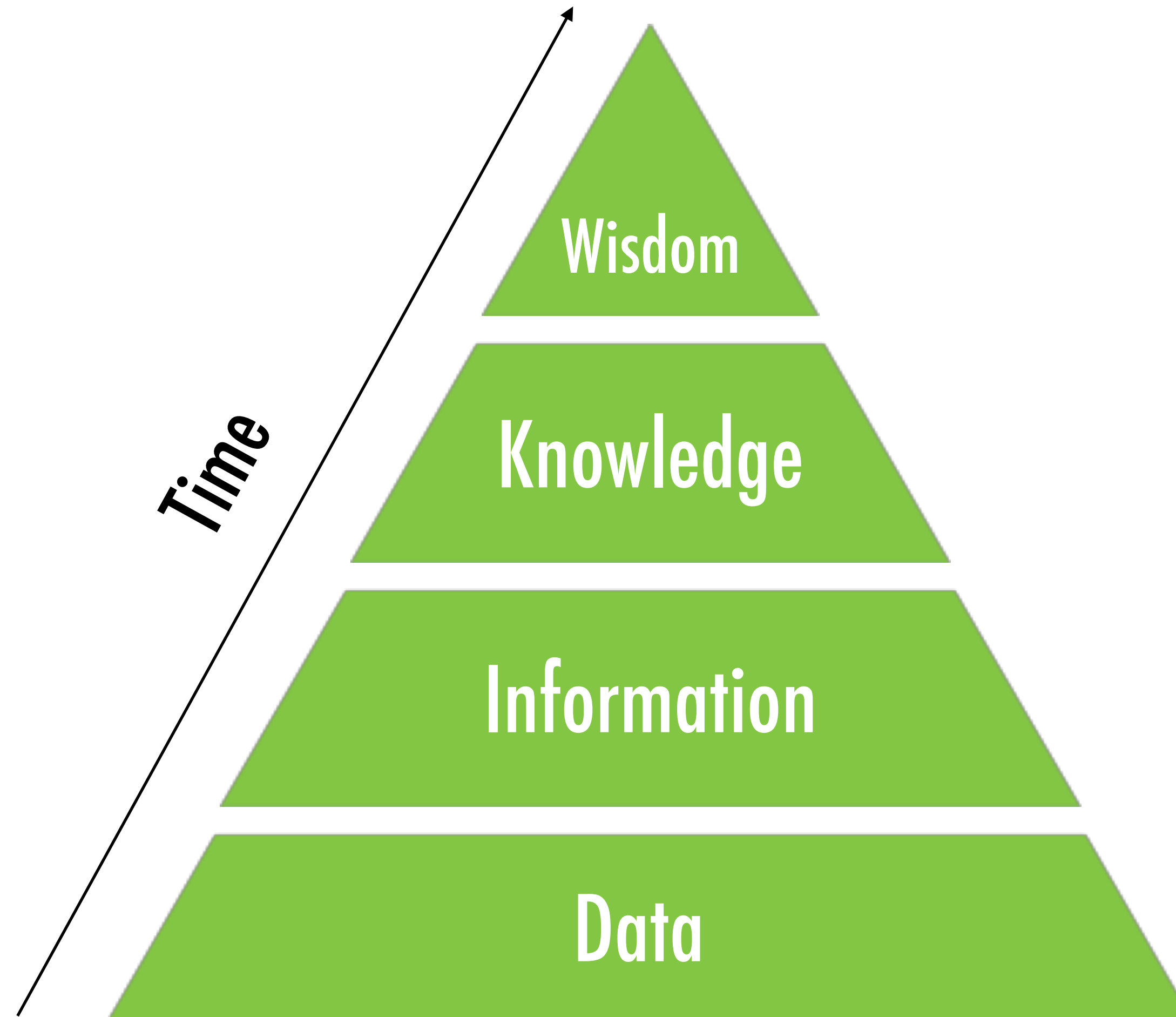


Roasted Coffee

Color,
Moisture,
Weight loss,
Cupping,
Brewing parameters,
Results

The path to good decisions

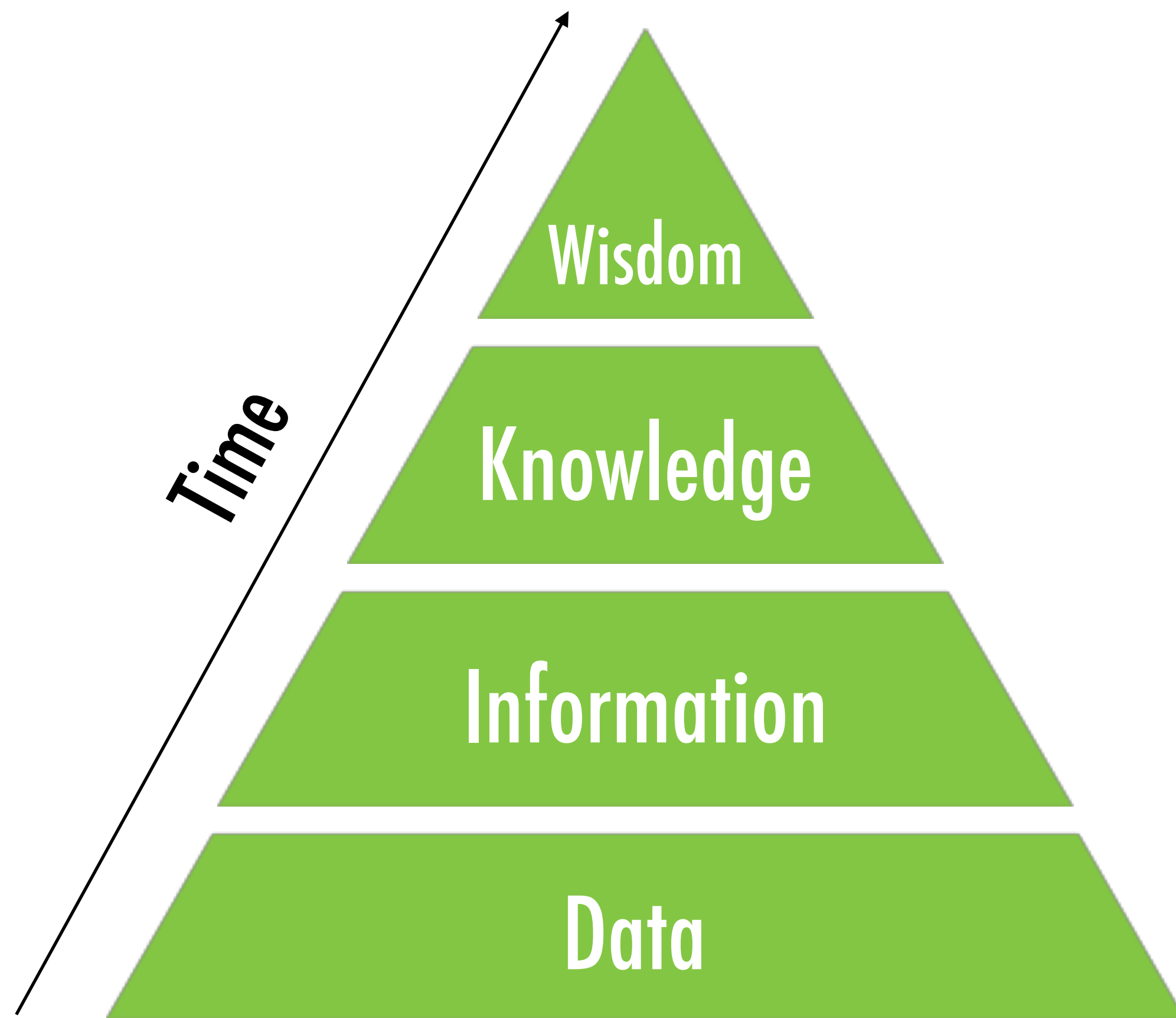
Good decision leads to efficient outcomes



A close-up photograph of a person's hands holding a large quantity of dark, roasted coffee beans. The person is wearing a blue shirt. In the background, a coffee grinder with a wooden handle and a metal spout is visible, resting on a dark surface. The scene is brightly lit, highlighting the texture of the beans and the skin of the hands.

Let's look at some examples

SO, HOW DID WE GET THERE?

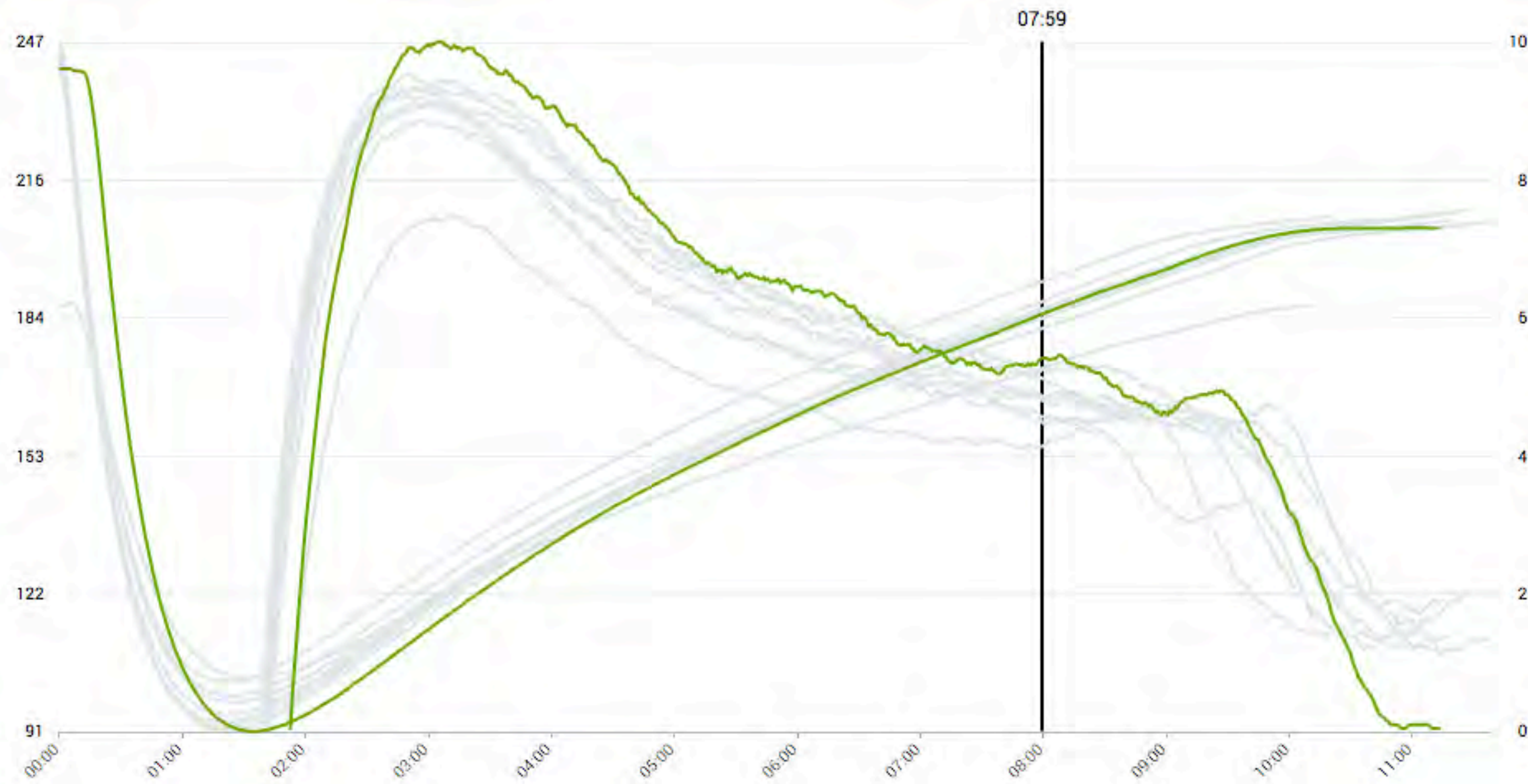


Improve profiles

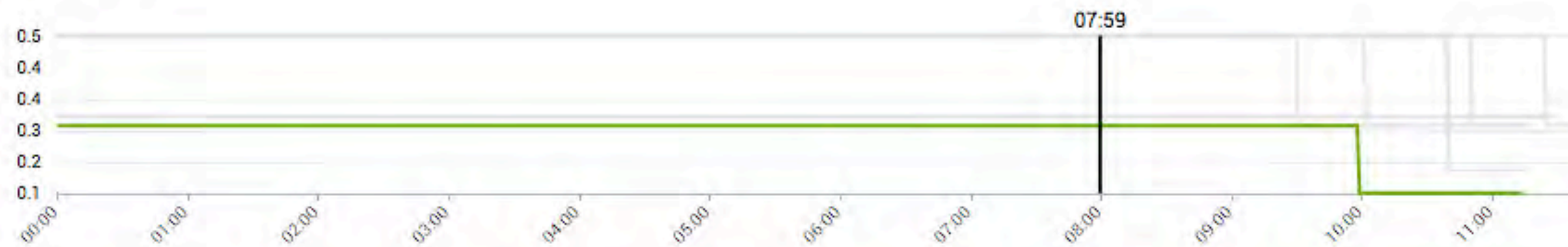
Understand baking

Correlate cupping and roasts

Cupping data and roast



Gas comments



Roasts (9)	Bean	Bean (RoR)	Gas comments
<input checked="" type="checkbox"/>	PR-0307	172.8°C	4.28
<input checked="" type="checkbox"/>	PR-0363	184.11°C	5.03 0.5%
<input checked="" type="checkbox"/>	PR-0360	181.78°C	4.72 0.5%
<input checked="" type="checkbox"/>	PR-0359	185.11°C	4.68 0.5%
<input checked="" type="checkbox"/>	PR-0358	192.5°C	5.03 0.5%
<input checked="" type="checkbox"/>	PR-0357	187.78°C	5.4 0.5%
<input checked="" type="checkbox"/>	PR-0356	185.78°C	5.31 0.5%
<input checked="" type="checkbox"/>	PR-0355	186.28°C	5.04 0.32%
<input checked="" type="checkbox"/>	PR-0354	185.11°C	5.58 0.3%

Select other roasts

Display

Settings

Graphs

- Bean temp.
- Exhaust temp.
- Drum pressure
- Gas
- Gas comments
- Bean temp. RoR
- Exhaust temp. RoR

Table

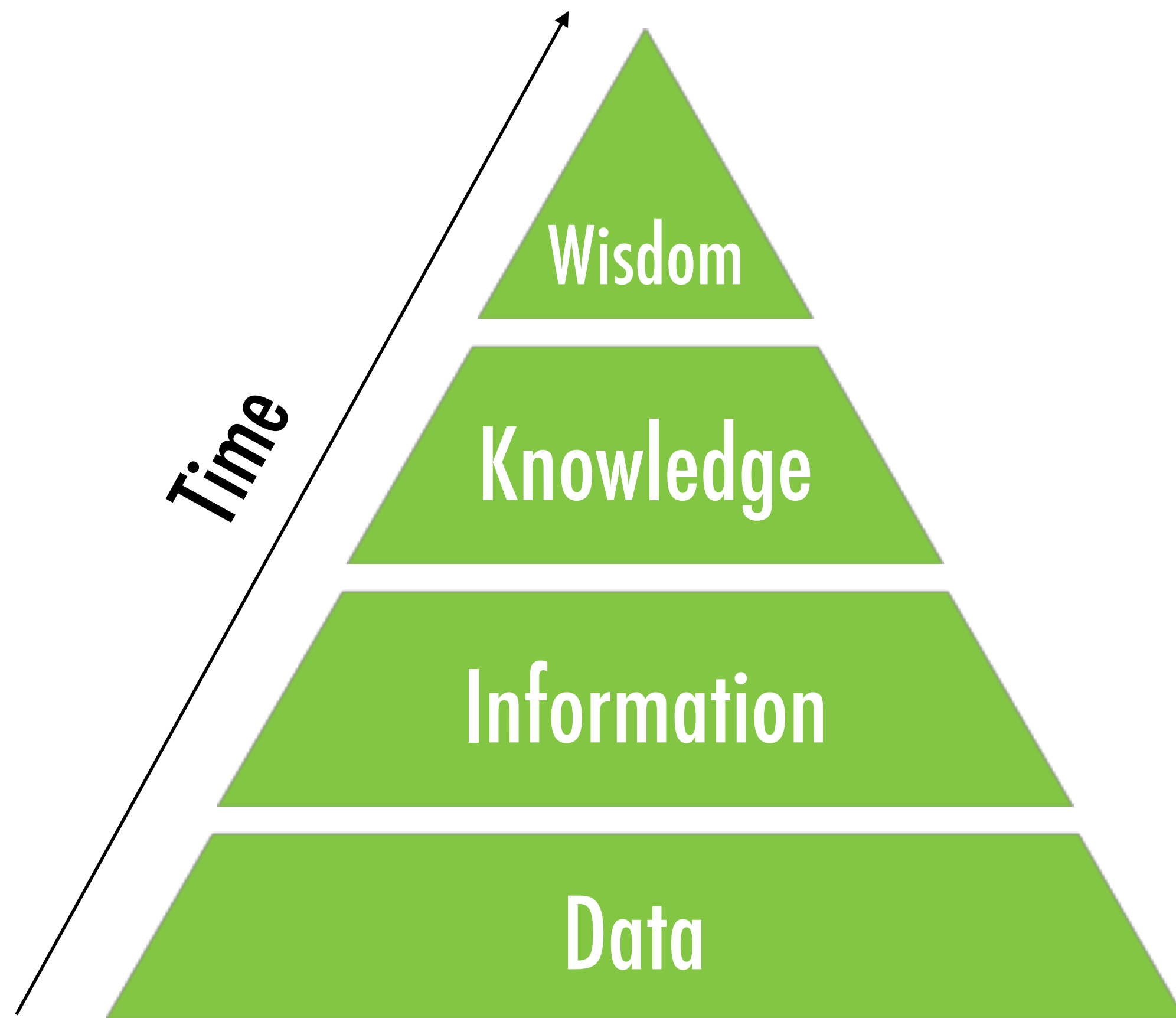
- Quality
- Statistics
- Consistency

Quality	PR-0307 Burundi Natural Wien Burundi Natural	PR-0363 Christmas Blend Perfect Espresso	PR-0360 Christmas Blend Perfect Espresso	PR-0359 Christmas Blend Perfect Espresso	PR-0358 Christmas Blend Perfect Espresso	PR-0357 Christmas Blend Perfect Espresso	PR-0356 Christmas Blend Perfect Espresso	PR-0355 Christmas Blend Perfect Espresso	PR-0354 Christmas Blend Perfect Espresso
Average	89.00	88.00	87.00	89.00	86.00	88.00	86.00	87.00	84.00
Descriptors	Berry, Cranberry	Fruity, Star Fruit	Chocolate, Nutty, Over Roast	Berry, Clean, Strawberry	Bittersweet Chocolate, Black Pepper	Apple, Fruity, Red Apple	Bittersweet Chocolate, Dried Fruit, Nutty	Jasmine, Lemon	Baked , Nutty

Quality control information comes from many places



SO, HOW DID WE GET THERE?



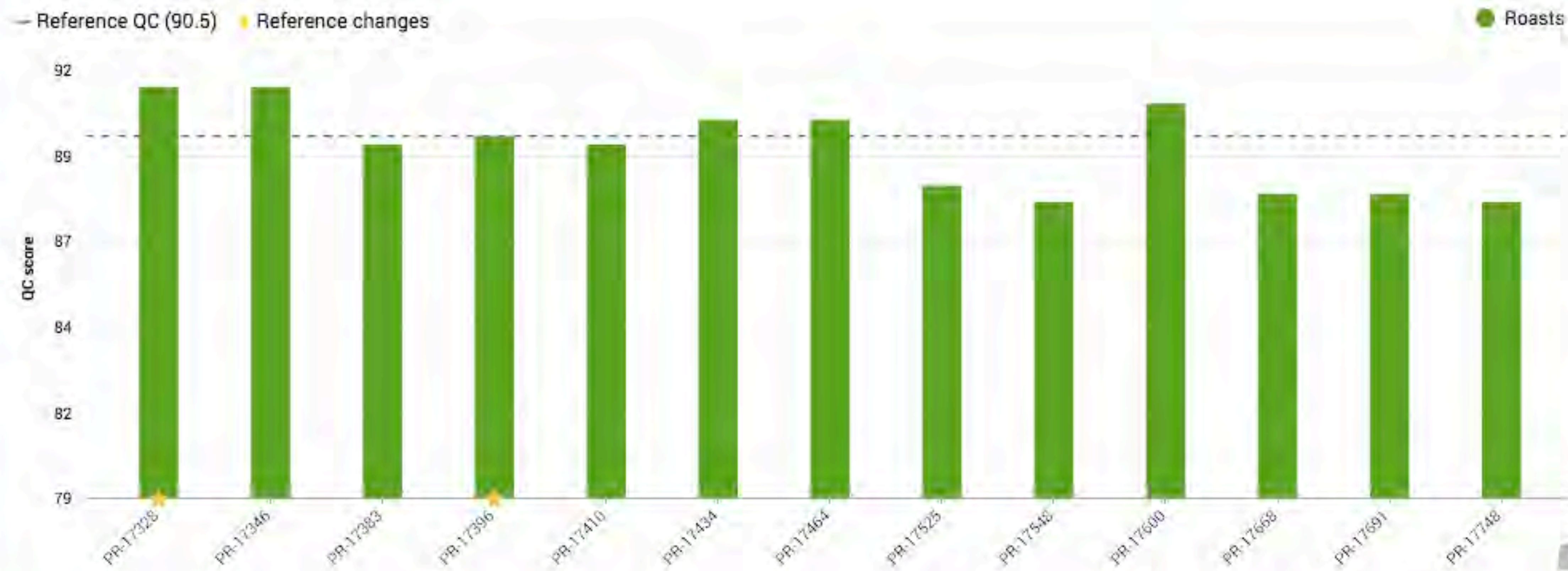
Improve storage, swap green coffee

Understand development of quality

Aggregate by time and profile

Cupping, roast, time

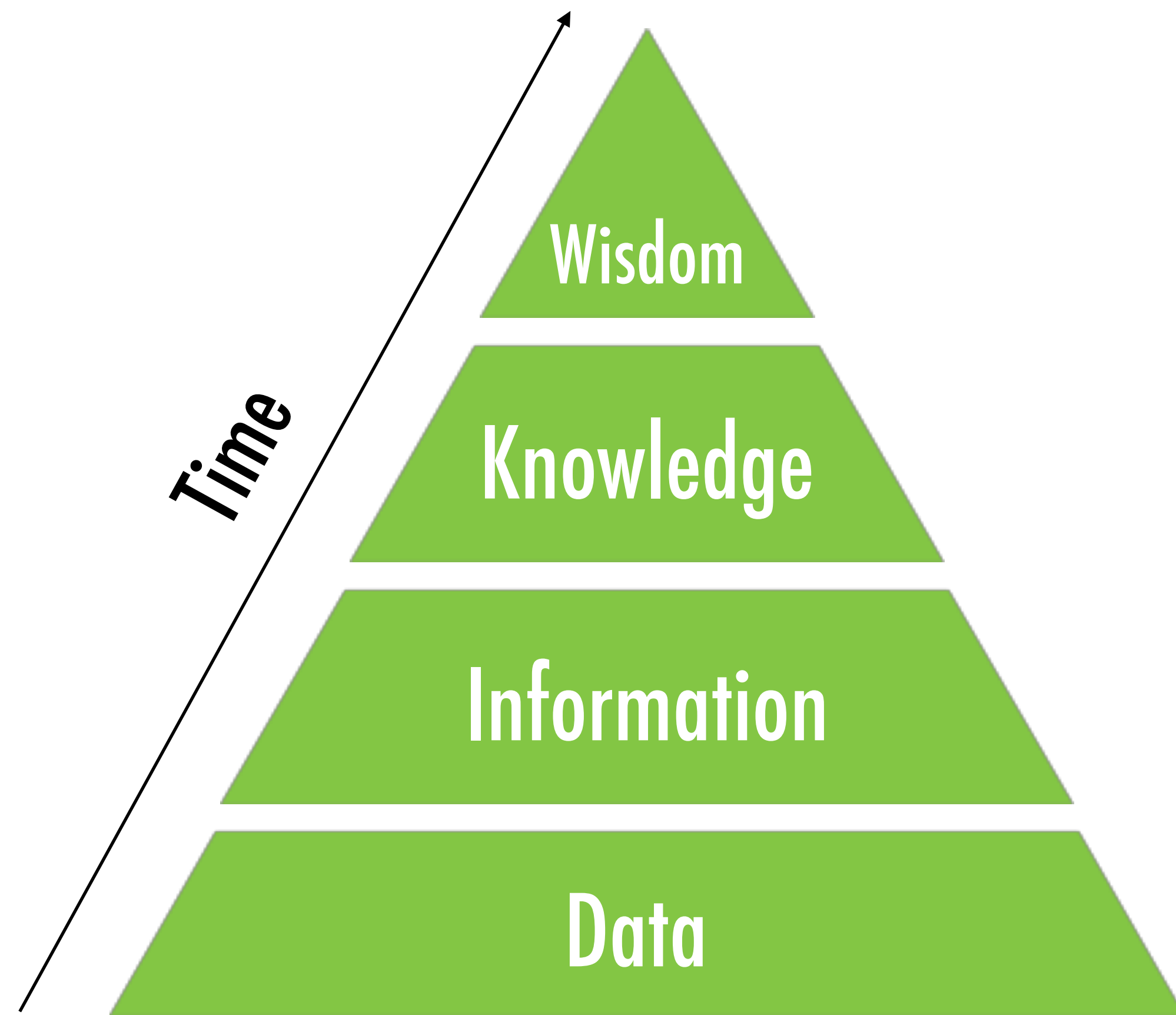
Profile development over time



How does this help in coffee buying?



SO, HOW DID WE GET THERE?



Restock & buying decision support

Run rate projection & usage over time

Aggregate by time and profile

Cupping, roast, time

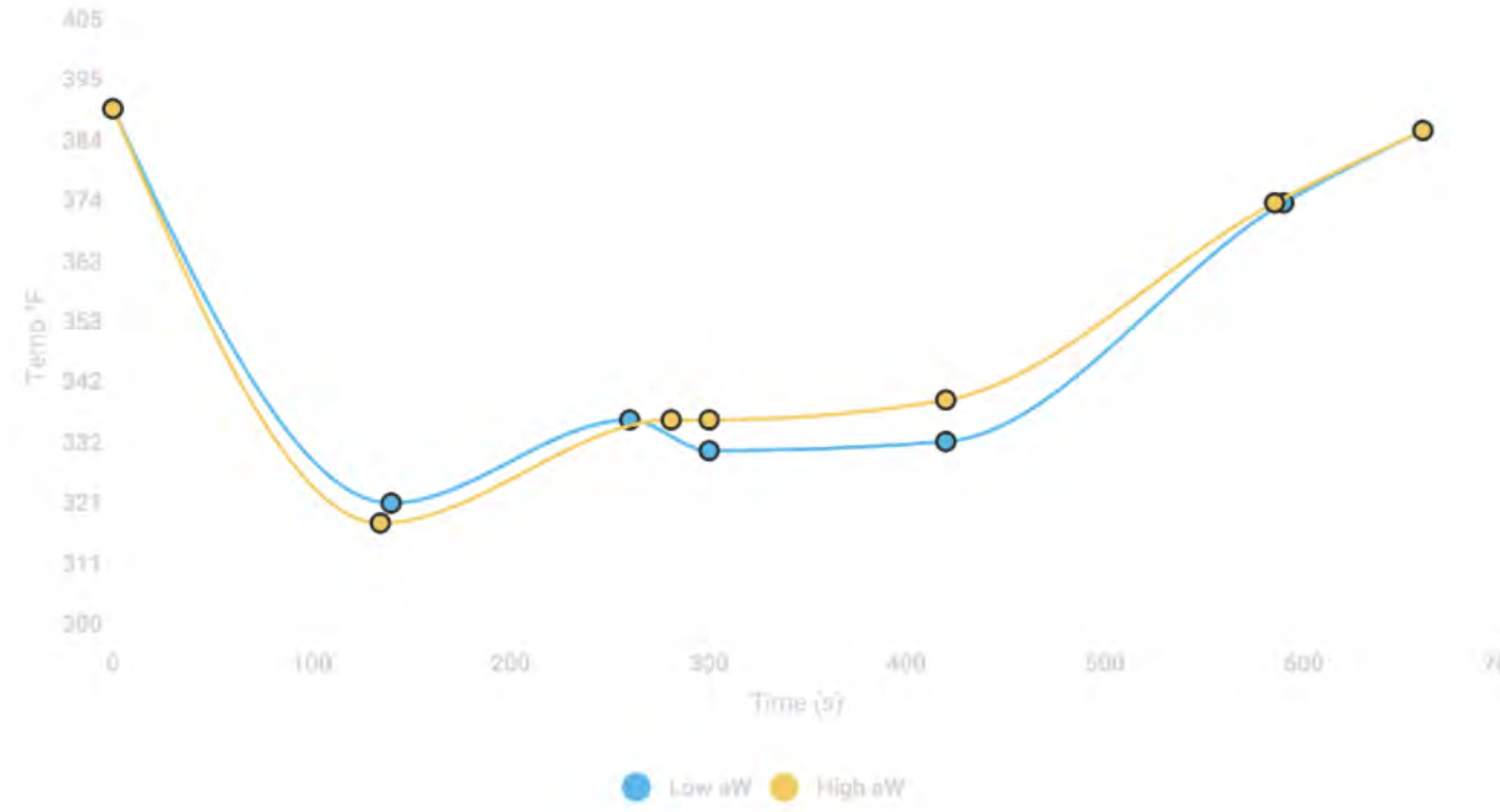
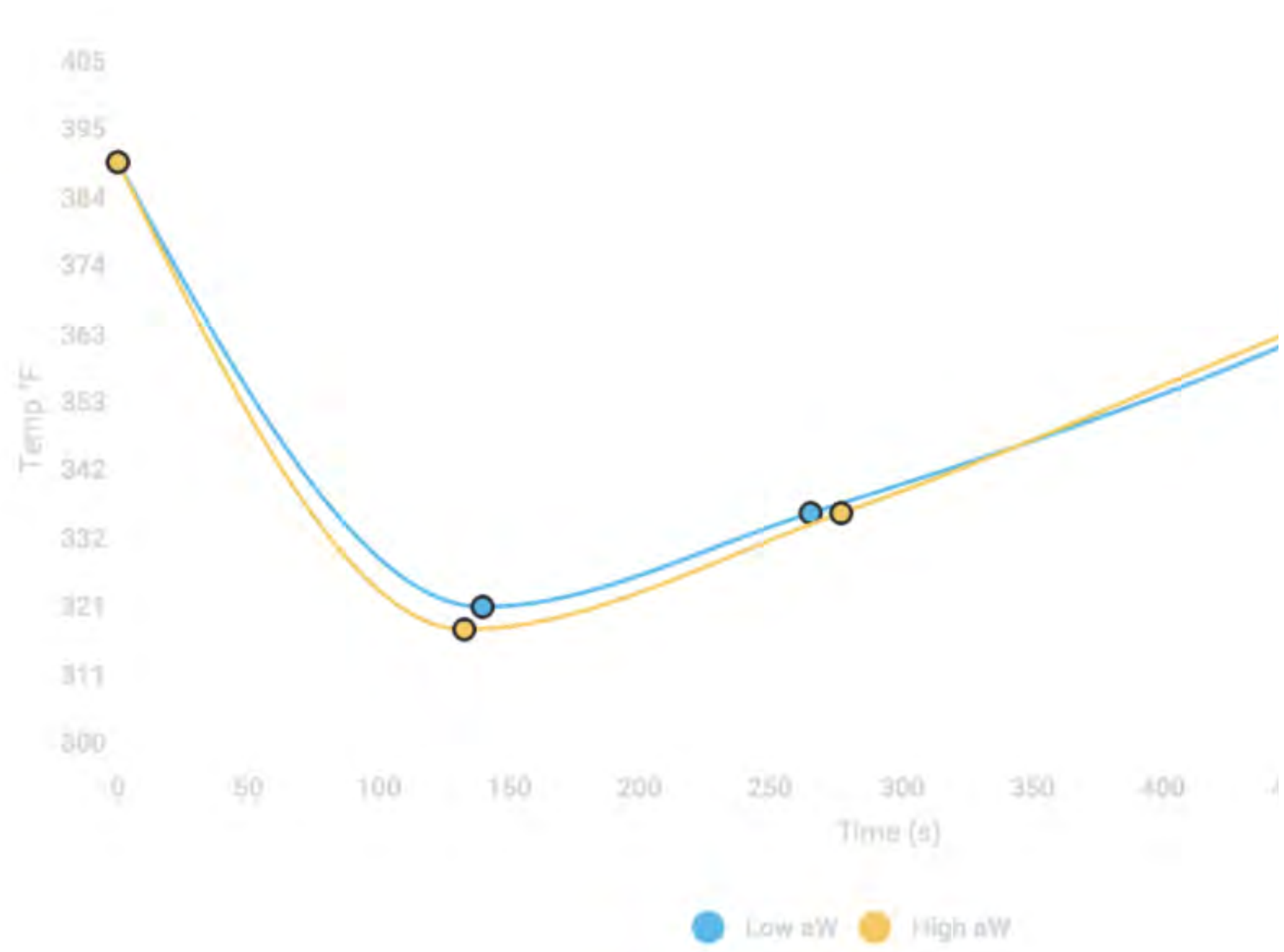
By green inventory, From February 1 to February 28, 2018

Show: 10 25 50 100 200

Customize ▾

Lot-ID	Name	Amount of green [ⓘ]	Amount (Bars)	Tendency to previous period	Amount P/W	Batches P/W	Current inventory
<input type="checkbox"/> <input type="text" value="Filter..."/>	<input type="text" value="Filter..."/>						
<input type="checkbox"/> PG-0347	Las Plantas	4,427 lb	<div style="width: 78%; background-color: #4CAF50;"></div>	▼ -16.05% from 5,273 lb	344.32 lb	8	1,742 lb
<input type="checkbox"/> PG-0301	El Morito	2,253 lb	<div style="width: 42%; background-color: #4CAF50;"></div>	▶ +0.13% from 2,250 lb	175.23 lb	4	1,545 lb
<input type="checkbox"/> PG-0348	El Milagro	1,800 lb	<div style="width: 33%; background-color: #4CAF50;"></div>	▲ +471.43% from 315 lb	140 lb	4	1,795 lb
<input type="checkbox"/> PG-0551	San Isidro	1,396 lb	<div style="width: 25%; background-color: #4CAF50;"></div>	-	108.58 lb	3	3,204 lb
<input type="checkbox"/> PG-0329	El Injerto	1,305 lb	<div style="width: 23%; background-color: #4CAF50;"></div>	▼ -23.68% from 1,710 lb	101.5 lb	3	90 lb
<input type="checkbox"/> PG-0309	El Diamante	1,035 lb	<div style="width: 18%; background-color: #4CAF50;"></div>	▲ +15% from 900 lb	80.5 lb	2	0 lb
<input type="checkbox"/> PG-0346	Vista al Bosque	90 lb	<div style="width: 2%; background-color: #4CAF50;"></div>	▼ -80% from 450 lb	7 lb	1	2,022 lb
Total		12,306 lb					10,398 lb

Show 1 - 7 of 7



<https://dailycoffeenews.com/2017/11/22/the-relationship-between-water-activity-and-the-maillard-reaction-in-roasting/>

Business Intelligence - Knowledge



Origin & Green

Altitude, Location,
Processing,
Density, Water activity,
Screen size,
Defects,
Cupping, Flavors,
Storage time



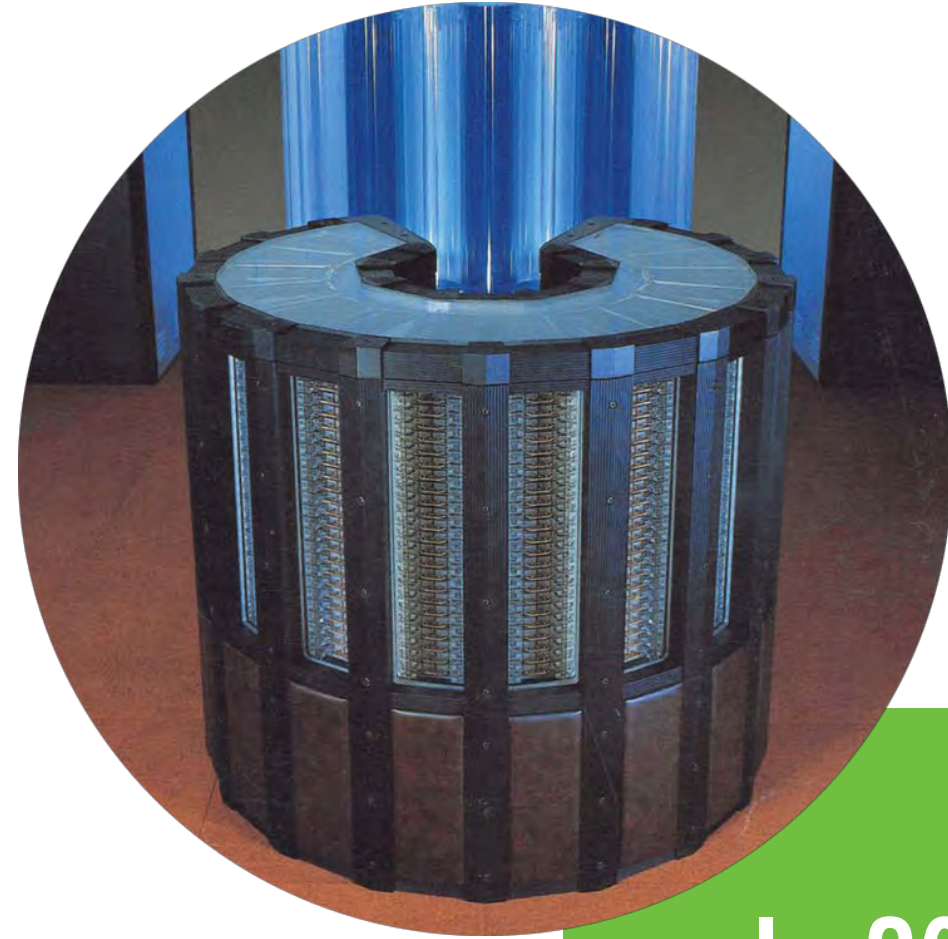
Roasting

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Roasted Coffee

Color,
Moisture,
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Cupping,
Brewing parameters,
Results



In 2011 a single Apple iPhone 4 had 2.7 times the processing power of the 1985 Cray-2 supercomputer. The most powerful computer of that era. Today everyone can leverage this enormous change to their benefit they simply need to know where to start!





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Evaluation Forms

Please Complete An
Evaluation Form After This
Lecture

Coordinator: Room Host

