

EF Campus Shut the Sash Initiative

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Why Focus on Lab Buildings?



Lab Buildings take up **10% of land** on campus, but are responsible for **40% of campus energy consumption**.

Fume Hoods



fume hoods are **variable** — the exhaust fan works harder to evacuate air when the sash is more open

if left open when not in use, the ventilation system uses extremely high energy

the Shut the Sash Initiative encourages proper closure

In Spring 2024, Fume Hoods Used...

TOTAL

**750,000
kWh**

...brew **44.8 million** cups of
coffee!

ERC

223,000 kWh

GCIS

296,000 kWh

Searle

231,000 kWh



That's Enough
Energy to...

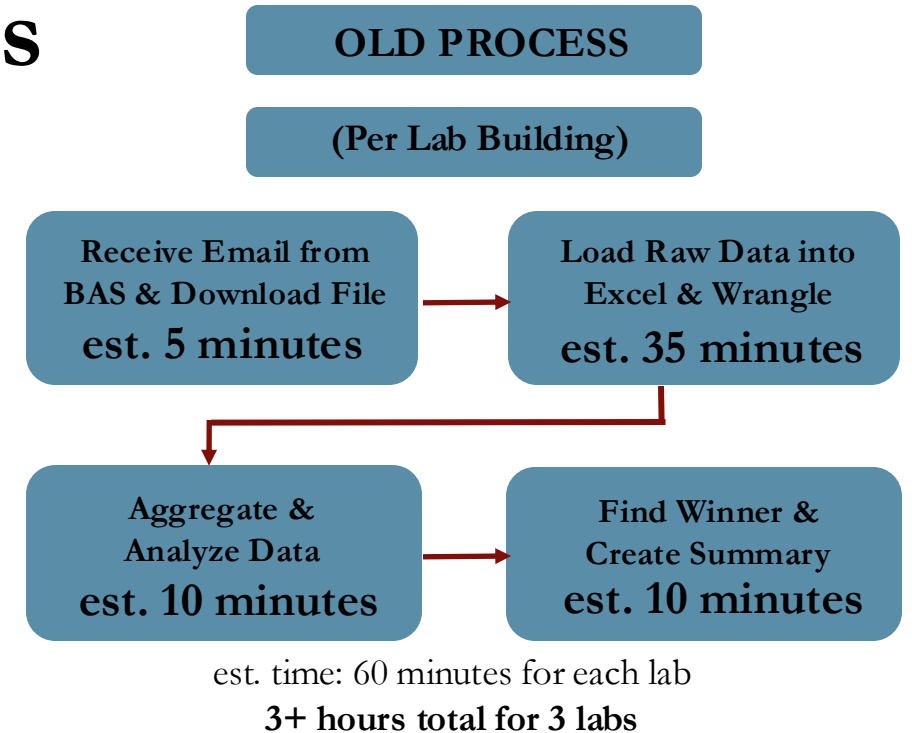
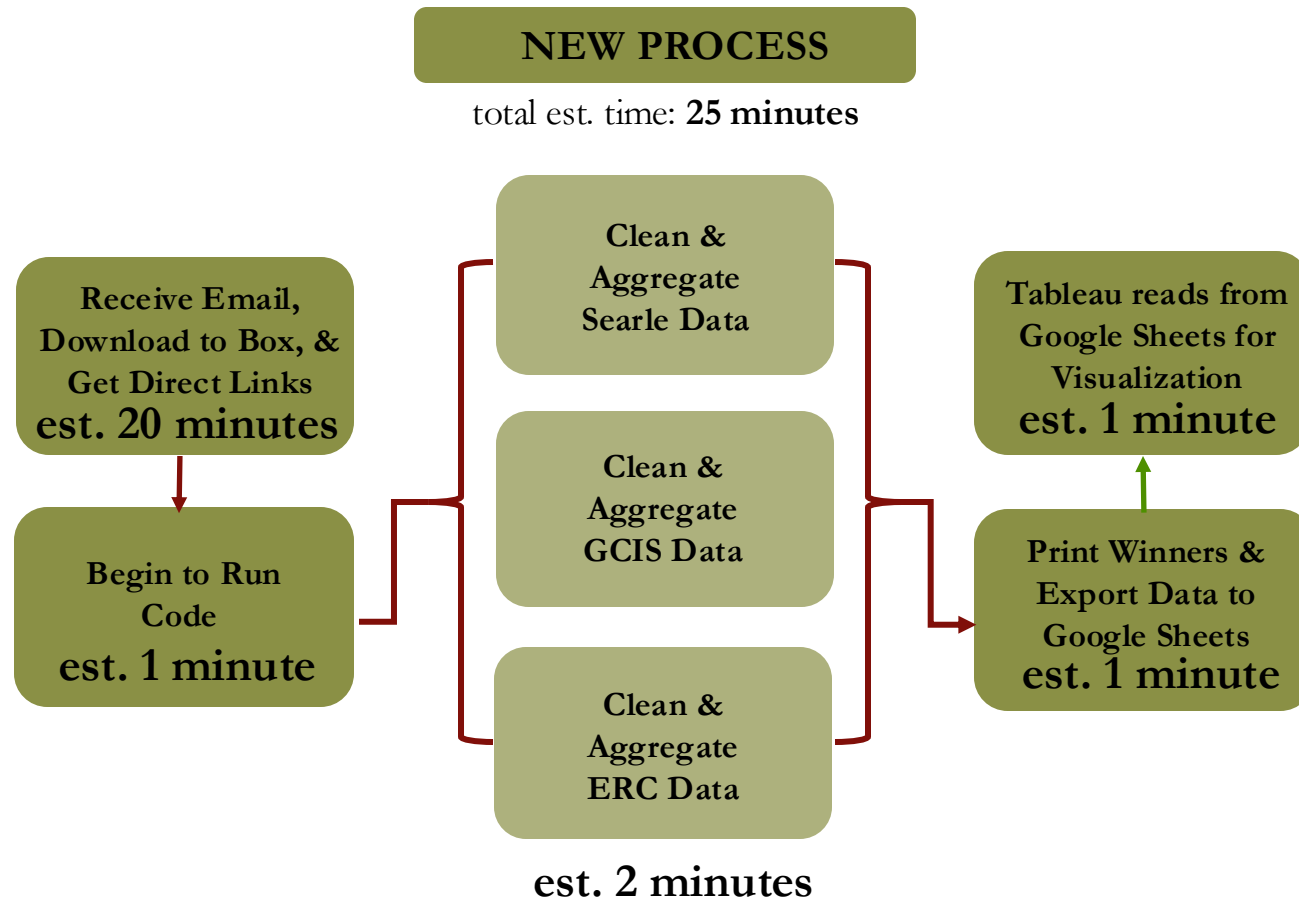
OR

...drive an electric car for
2,340,000 miles.
You could circle the
Earth's equator
94 times!

BY LAB

Shut the Sash — Improvements

data analysis process streamlined into single pipeline



**3+ hours vs.
25 minutes**
reduced time taken to
analyze fume hood data
by **over 75%**.

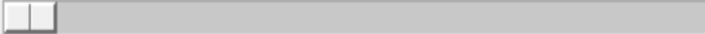
Shut the Sash Tools — Savings Calculator

Methods

- an **interactive** tool that displays how much **energy/money** would be saved if average percent opennness **decreased by x%**
- when **x is 0**, "Adjusted Openness %" is buildings average from **previous Quarter** (i.e. Spring 2024)

Calculator In Action – Starting Openness

Openness Reduction %
0.0



Calculate Savings

Building	Adjusted Openness %	Energy Savings (kWh)	Money Saved (\$)
GCIS	24.20	0.00	0.00
Searle	23.43	0.00	0.00
ERC	32.86	0.00	0.00

Shut the Sash — Impact

Current Impact

- quickly and accurately documents energy usage within labs
 - the bottom **10 labs** used **~493,491.94 kWh** of energy, spending **\$64,153.95**
 - a **3%** reduction would save **~60,000 kWh**.
- address trends in fume hood usage as a university community via quarterly newsletters and seminars
- expanding initiative to all campus buildings

Change from Winter to
Spring 2024
(w/ names removed)

