Appraiser Workload Dashboard

Streamlining distribution of work with user-centered design and quality control tools

CITY & COUNTY OF SAN FRANCISCO
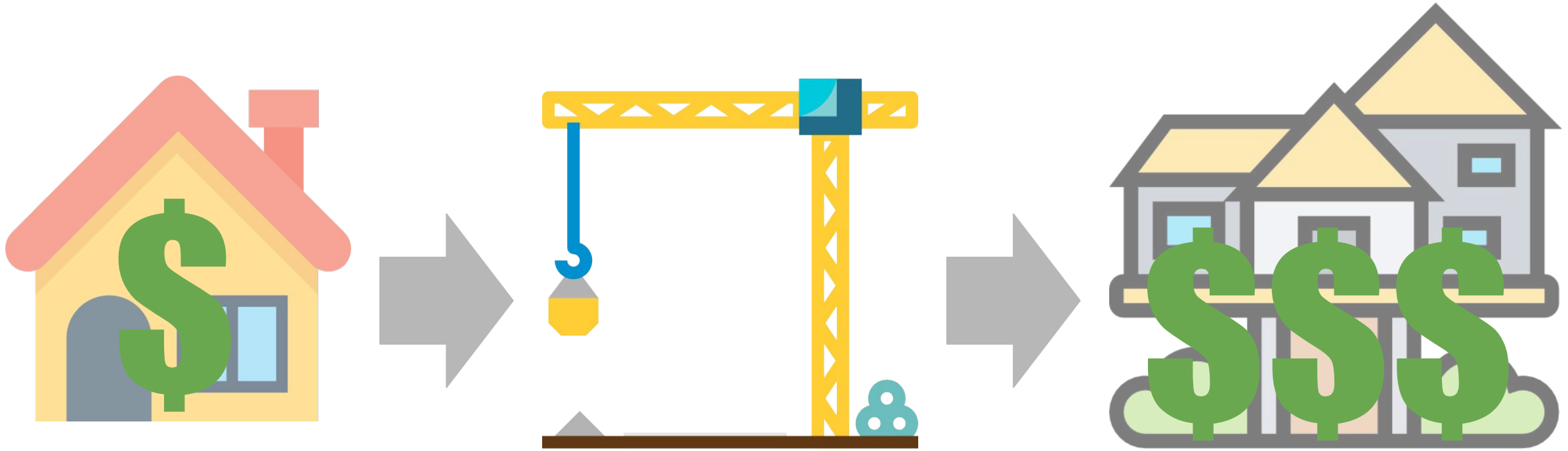**OFFICE OF THE ASSESSOR-RECORDER**

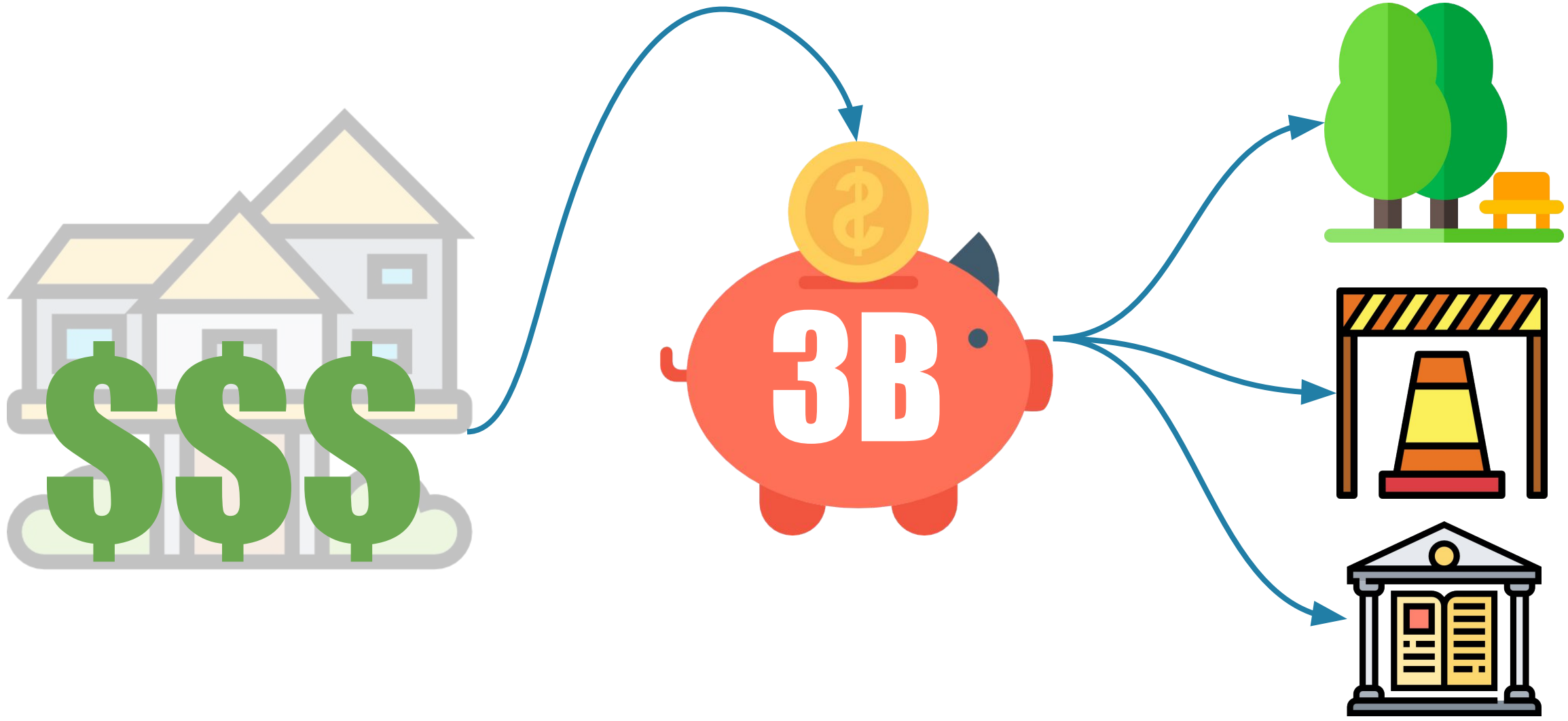Michelle Wong, Operations Analyst & Benjamin Lau, Standards Analyst

There are over 20,000 active construction projects in SF

Changes to a property from construction can lead to changes in the property's value
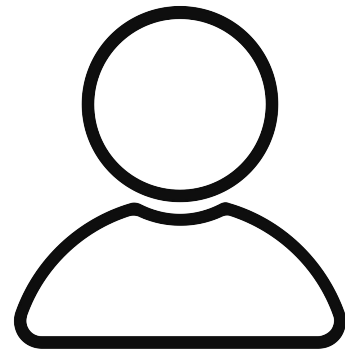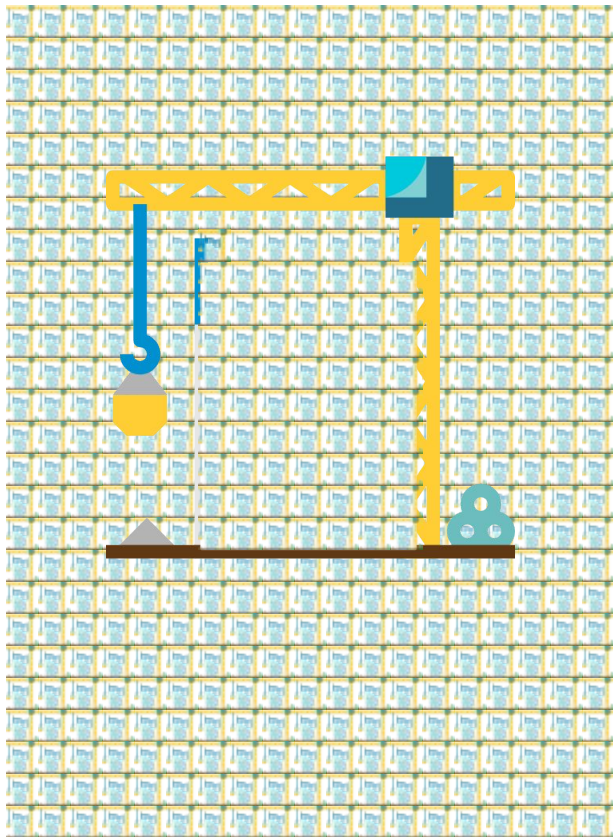
Accurate taxing of a property's value is critical to funding the general fund which pays for many city services
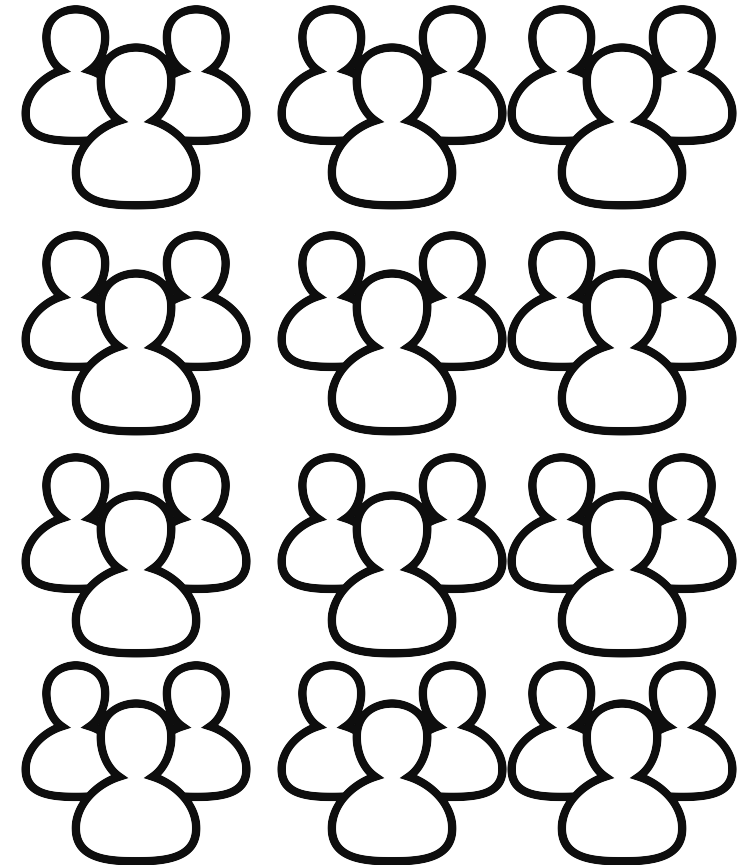
The problem

These 20k projects need to be prioritized and assigned to the 60 ASR Appraisers so a fair value can be assessed
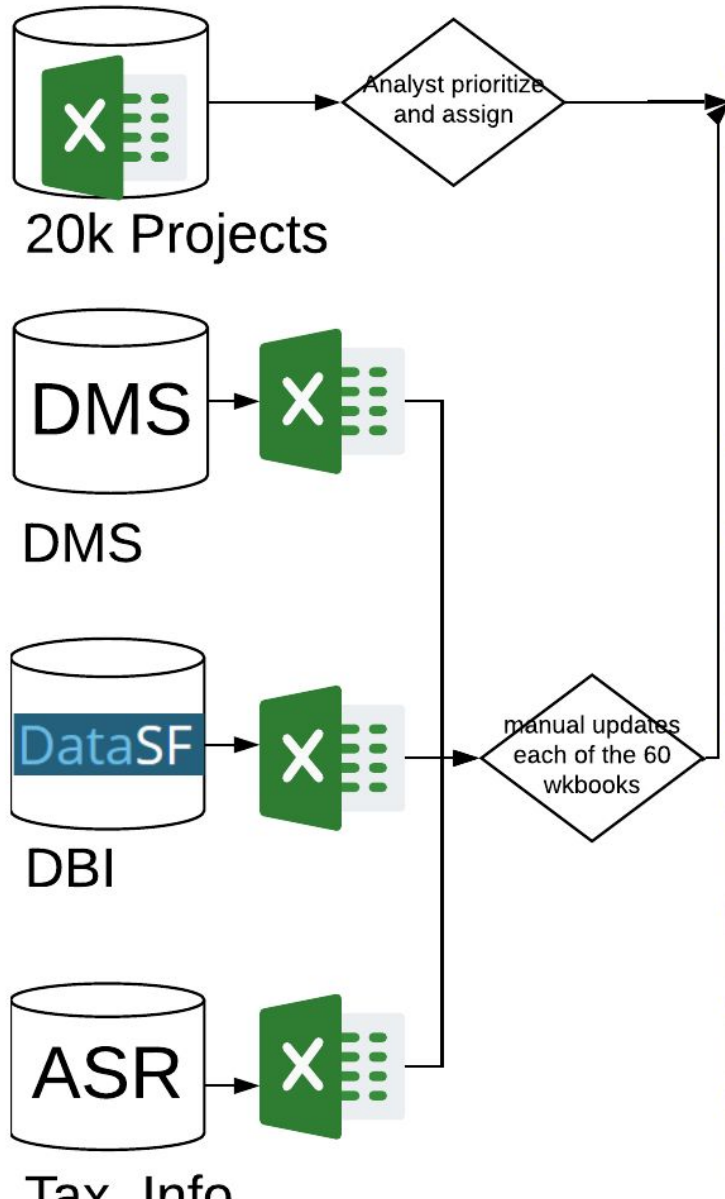
This is my job!
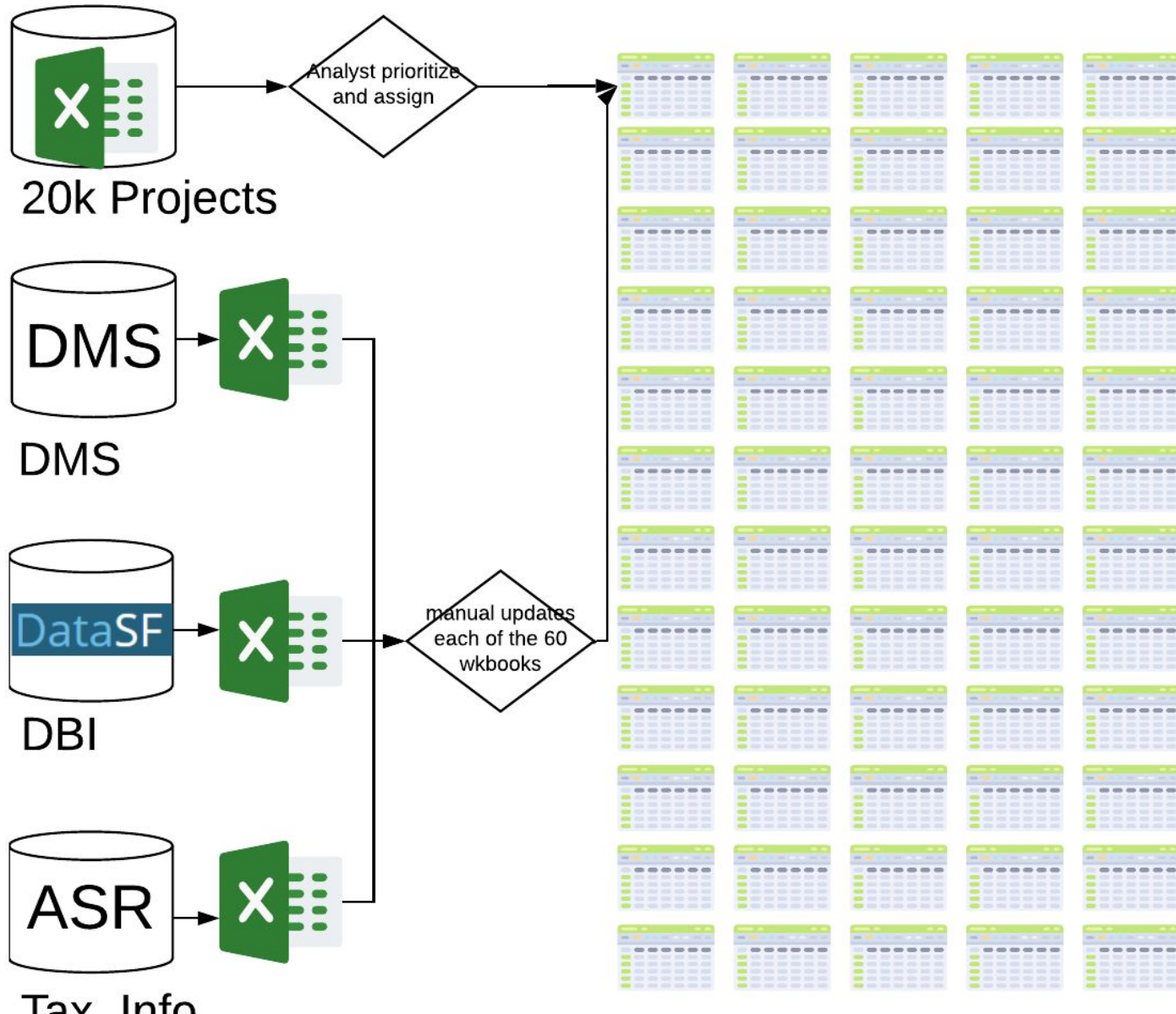
If that sounds like a lot of work, just wait...

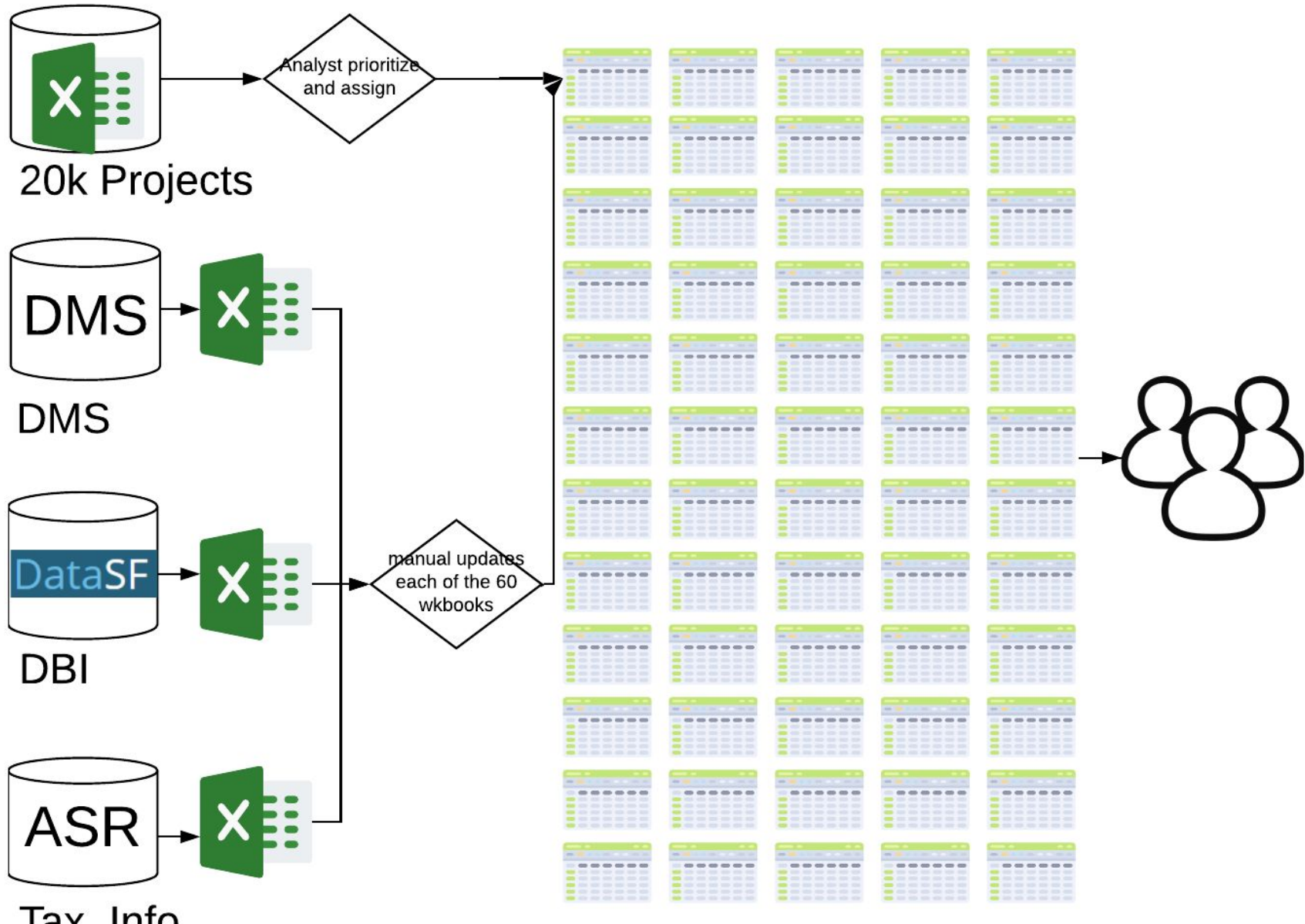# It was not a simple process...

Project data augmented by multiple other data sources...

manually pulled into 60 separate excel workbooks...

distributed to appraisers...

who entered info into ASR-400 terminal screens...

Analyst prioritize and assign

20k Projects

DMS

DMS

DataSF

DBI

ASR

Tax Info

manual updates each of the 60 wkbooks

Terminal

Terminal

Terminal

Terminal

Terminal
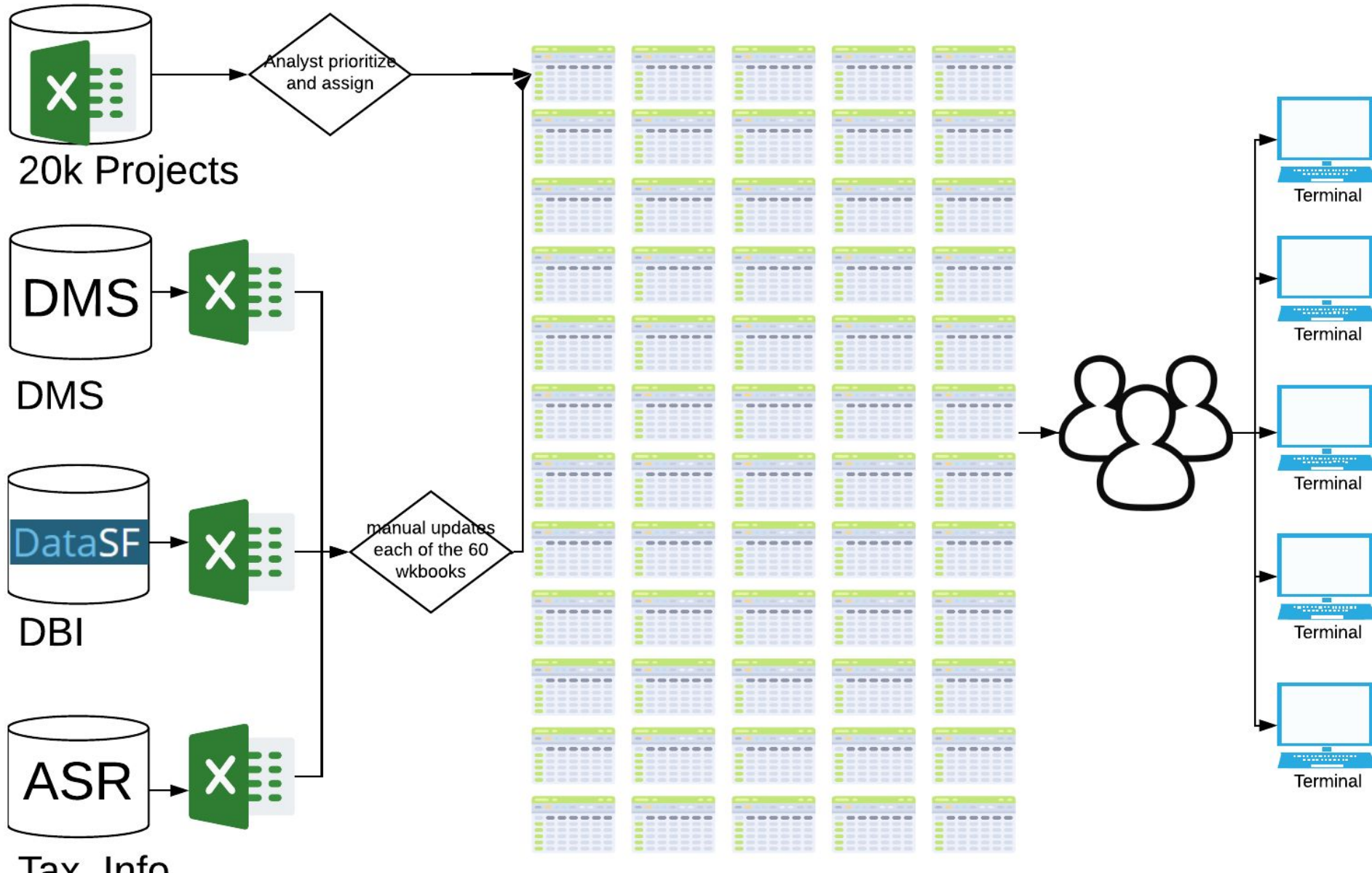
results exported to excel for quality checks by the 8 Principal Appraisers...
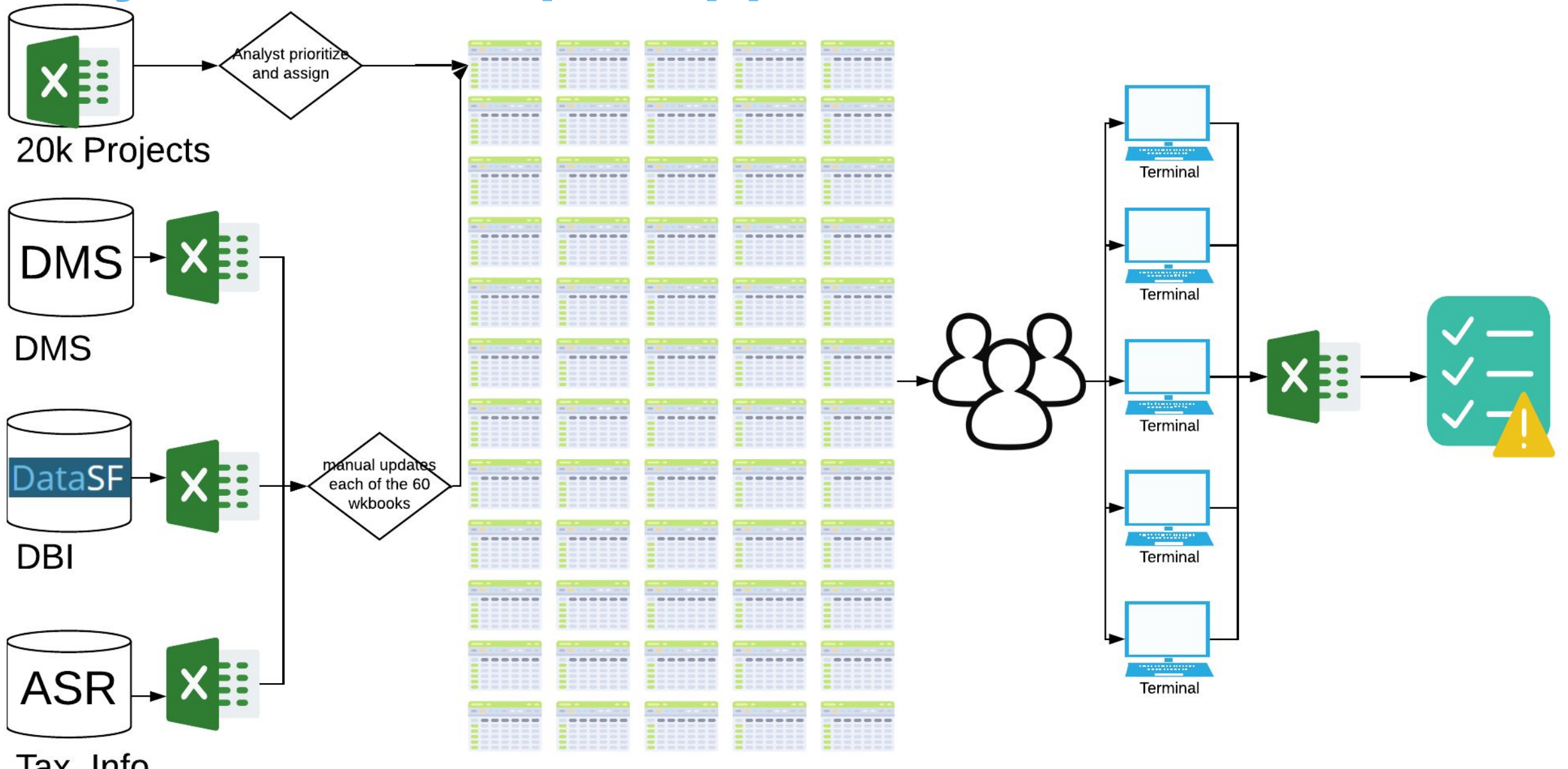
any entry errors sent back to appraisers for correction...
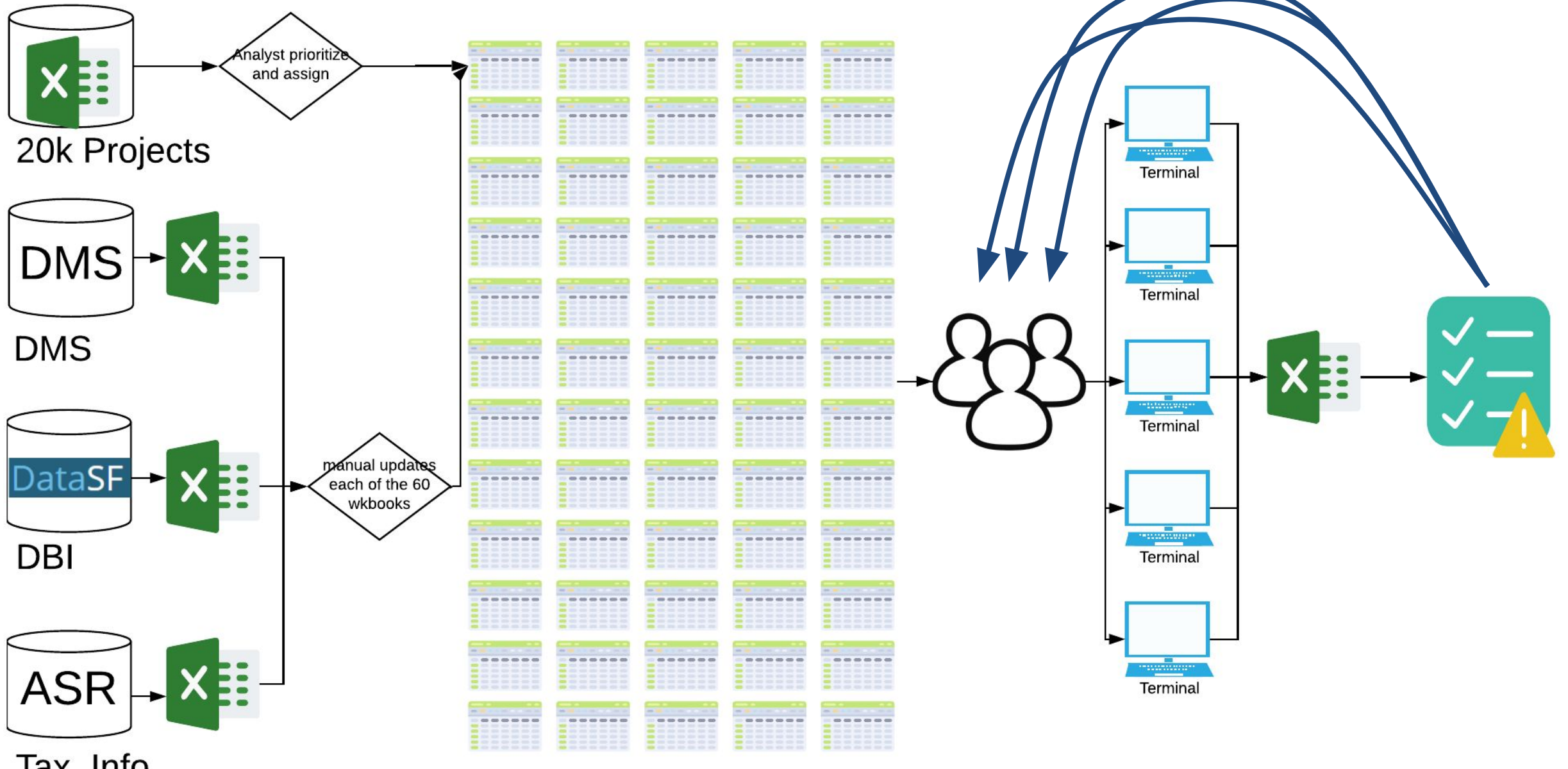
and constant manual shuttling around of projects between workbooks...

20k Projects

Analyst prioritize and assign

DMS

DMS

DataSF

DBI

ASR

Tax Info

manual updates each of the 60 wkbooks

Terminal

Terminal

Terminal

Terminal

Terminal
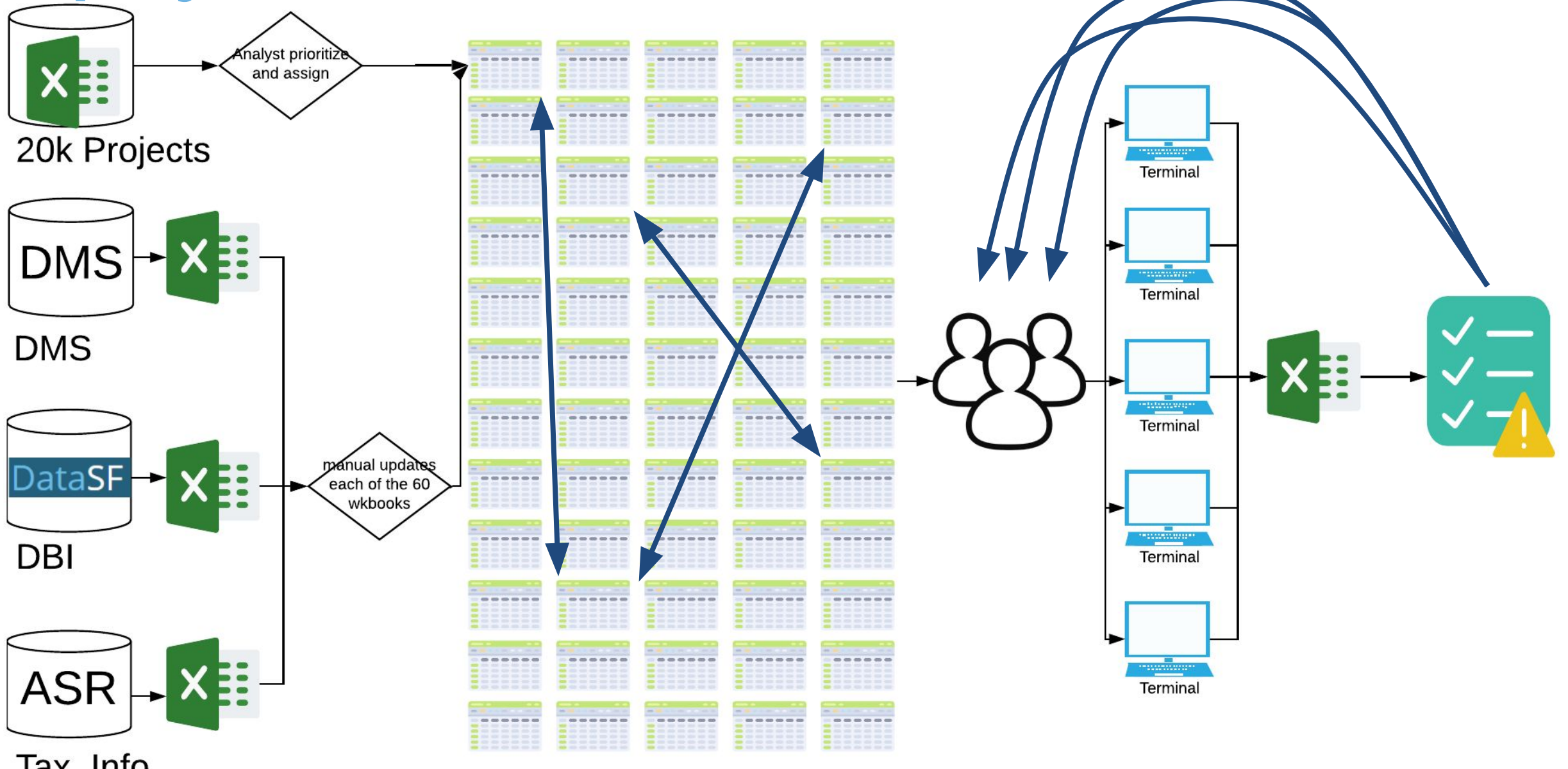
Two major problems
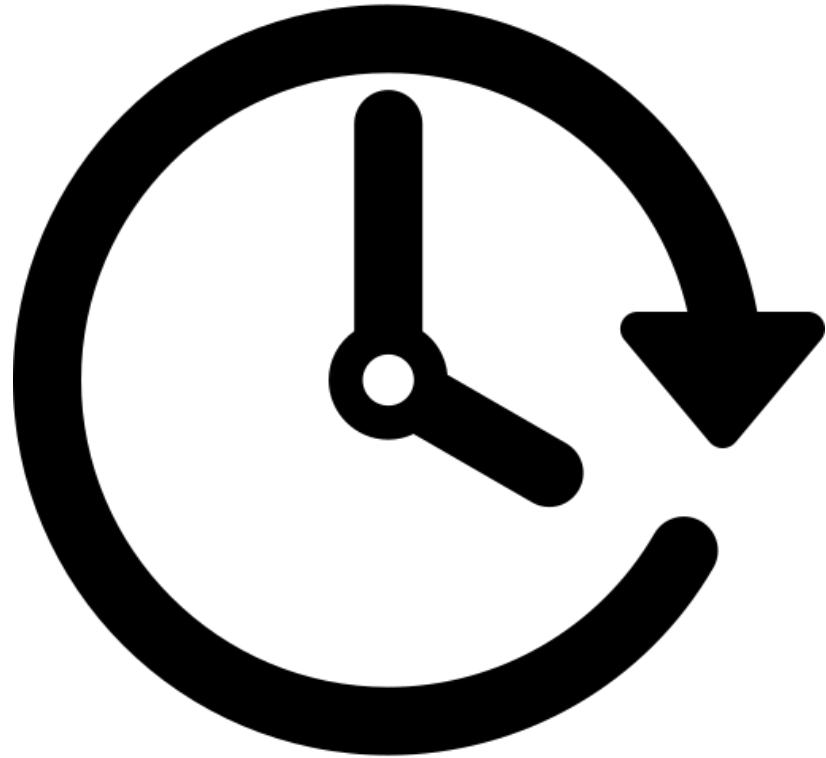
Time consuming

Data quality errors

What was done

Learned how PowerBI can not only automate data wrangling, but also handle complex data models

Three weeks later...A highly flexible and scalable data model

Three weeks later...A highly flexible and scalable data model

User Centered Feedback Process

Didn't stop at automation
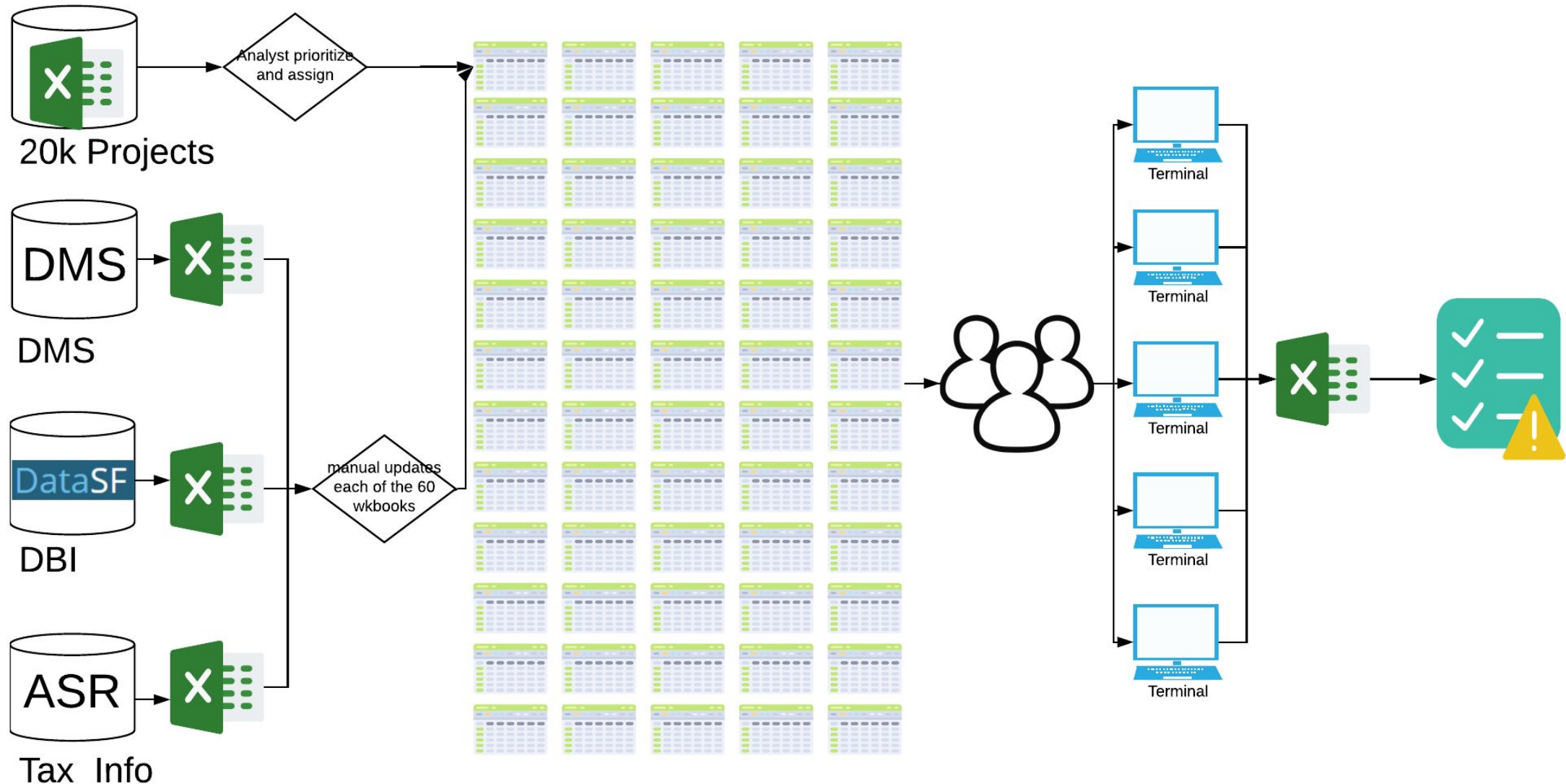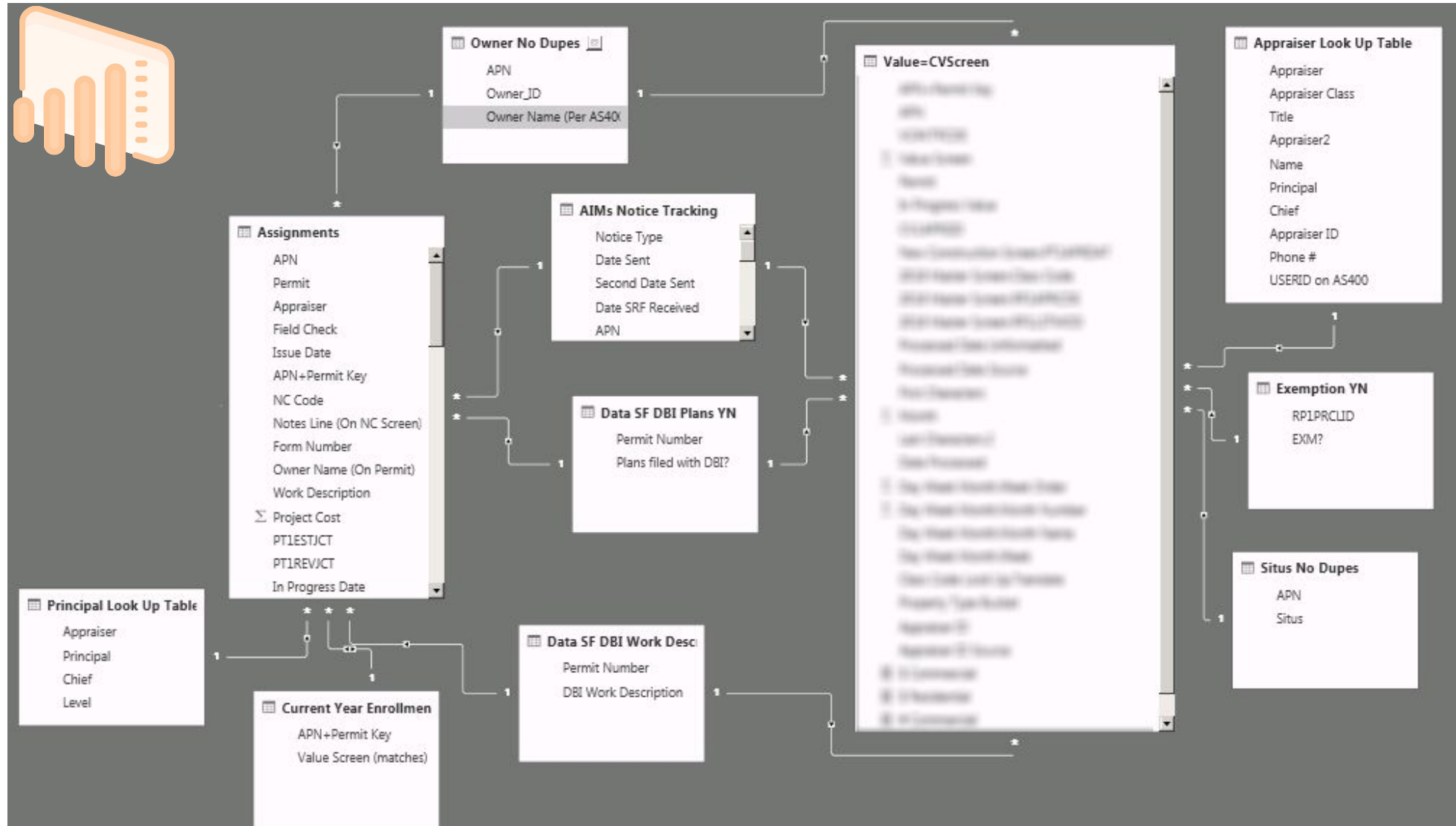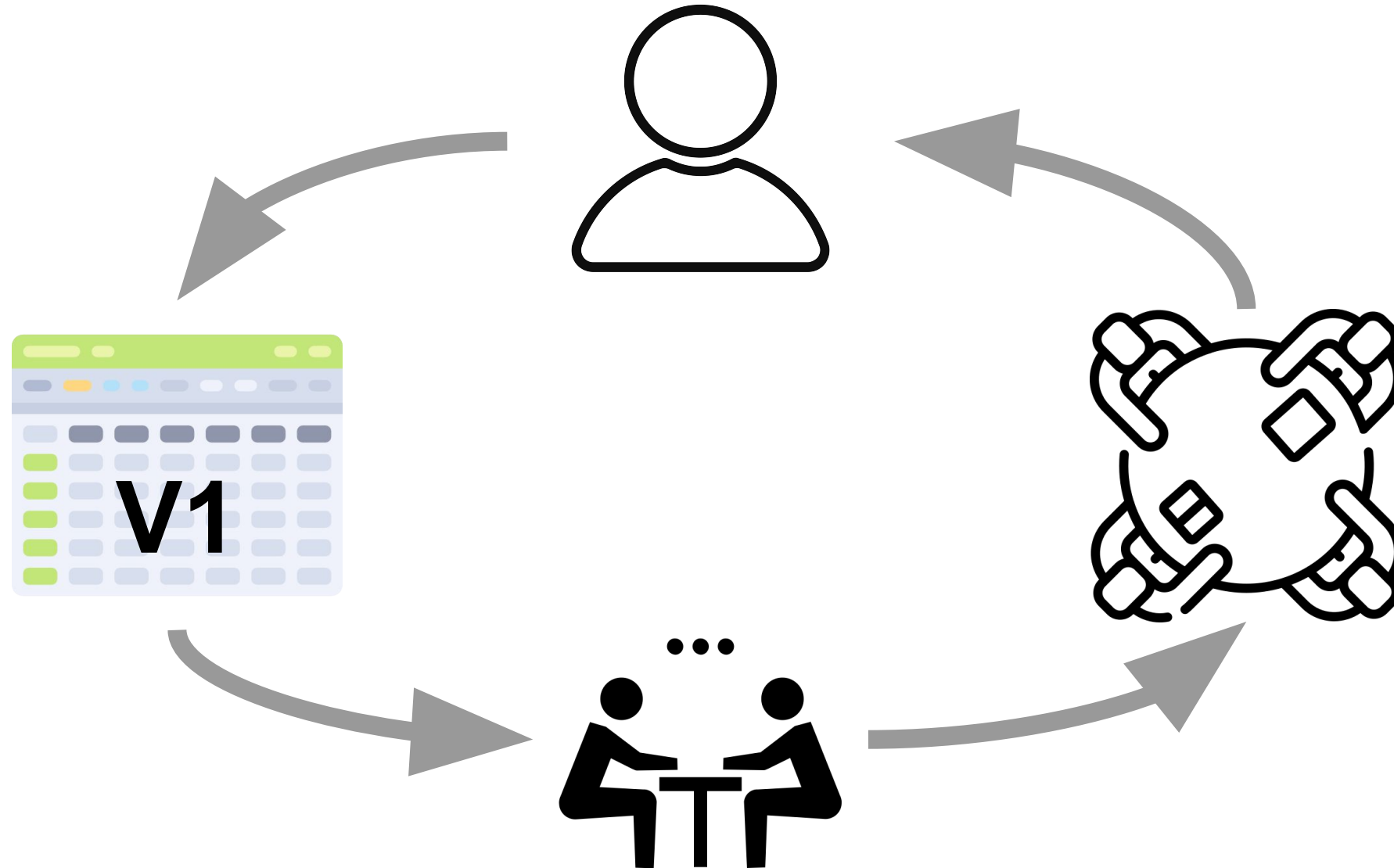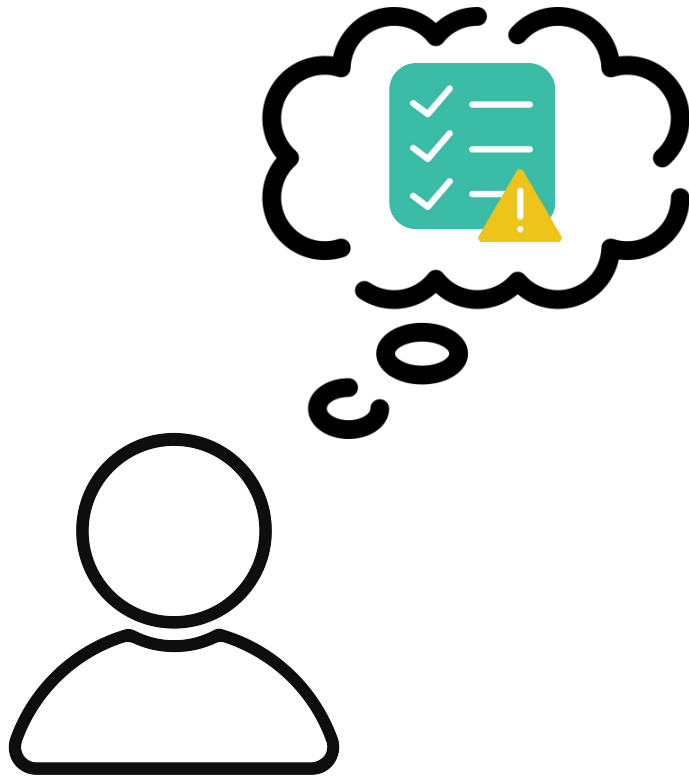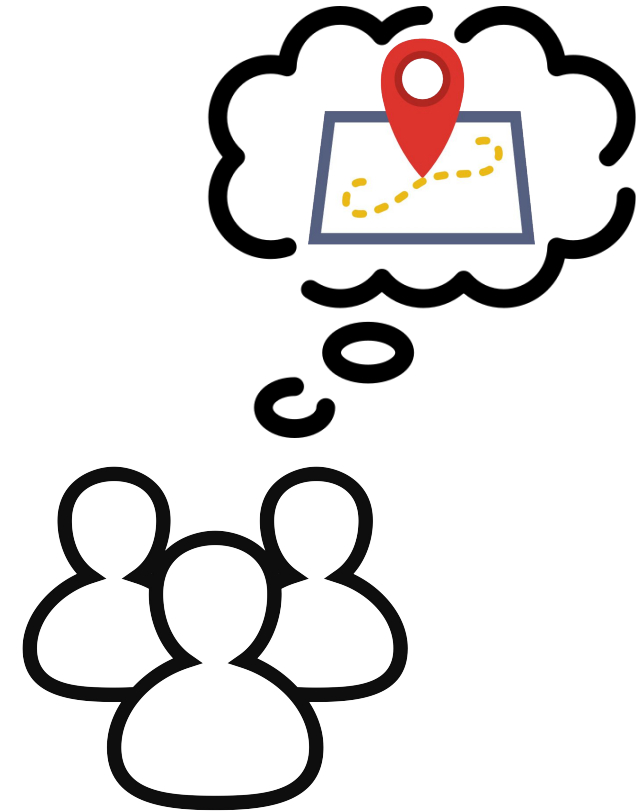
Analyst Led Innovation

Appraiser Led Innovation
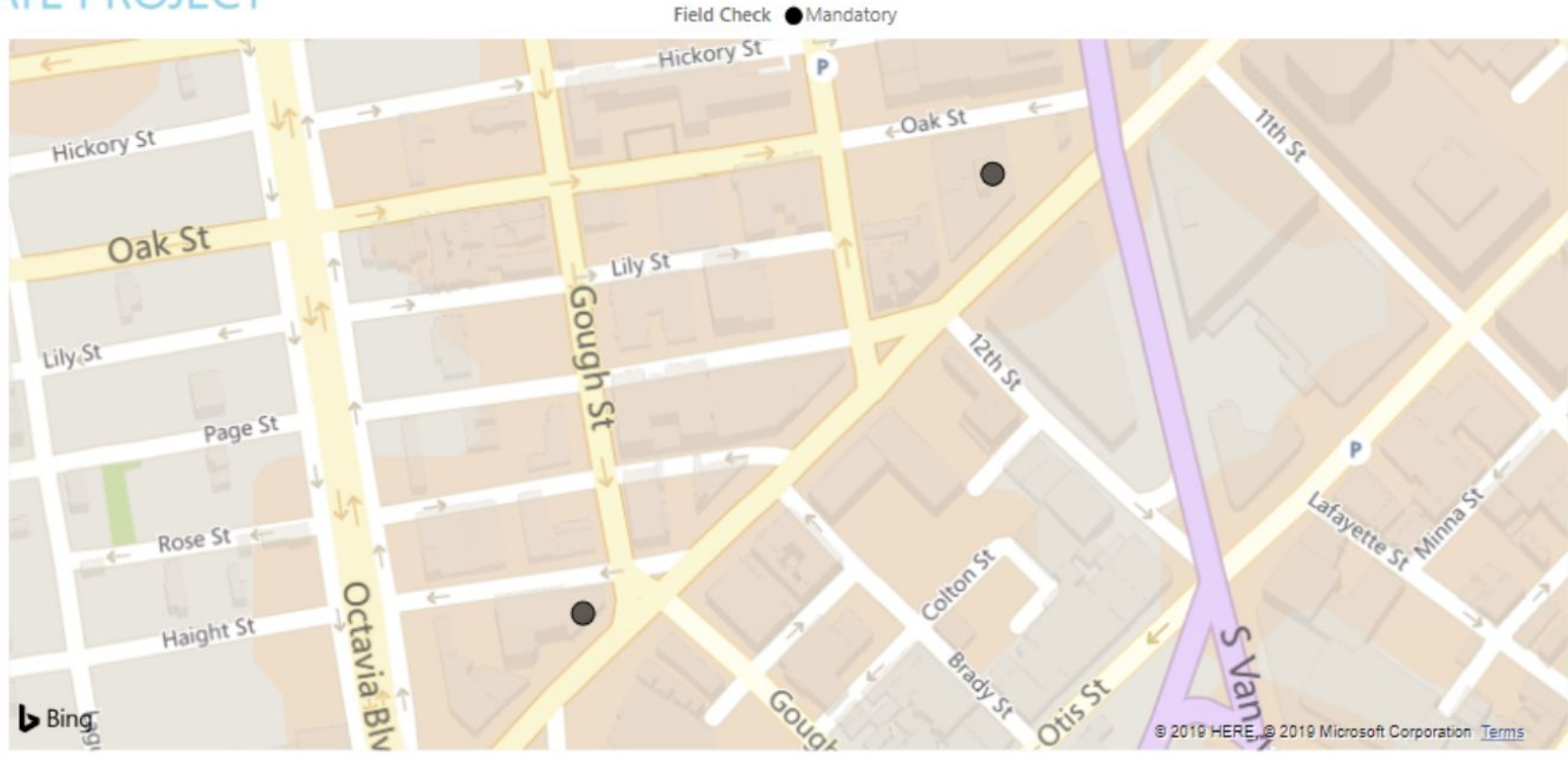
DEMO

2019 LIEN DATE PROJECT
Appraiser Assignments

Lien Date New Construction

Appraiser
All ⌄

Class Code
All ⌄

APN
🔍

Permit
🔍

Work Description Search Box

Search 🔍 ✐

0

Status
Needs Review ⌄

SRF Received?
All ⌄

FC	Status	Date SRF Received	APN ▲	Permit	Issue Date	Project Cost	Class Code	Situs	DBI Status Date	DBI Last Inspection Status	% Complete per DBI Inspection Status	DBI Work Description

CLICK ON A PERMIT TO SEE WORK DESCRIPTION BELOW

–

Lien Date Tracker ▲	Permit Status Code	NC Code	In Progress Date	Date of Completion	Event Date (CV)	% Complete	Cost Valuation Screen	New Const	NC Date	Apl#	Value Screen (mismatched)	Value Screen (matches)	PY Value Added to APN	Prior Year Total Value Added (if error)

New Construction Screen

Cost Valuation Screen

Master Screen

Value Screen

2019 LIEN DATE PROJECT

Appraiser

[_____ ▼]

Field Check

[Mandatory ▼]

⬚ •••

Status ◇

[All ▼]

APN

🔍

☐ _____
☐ _____

Permit

🔍

☐ _____
☐ _____
☐ _____

Field Check ● Mandatory

Situs

🔍 marke

☑ 1540 MARKET ST
☑ 1700 MARKET ST

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FC	APN	Permit	Issue Date	Project Cost	Class Code	Situs	Notes Line (On NC Screen)	DBI Work Description

2019 LIEN DATE PROJECT Progress to Goal

Chief: All
Principal: All
Appraiser: All

Chief

Lien Date Tracker Category									
1 Valued for Lien Date		94	104	17	57	113	47	101	264
2 Valued for Lien Date Incomplete				4	15	2	4	1	2
2 Valued for Lien Date with Error				3	1	2	5	3	1
3 Reviewed for Lien Date	23	394	280	22	396	392	205	262	393
4 Reviewed for Lien Date Incomplete		16	1	1	5	7			1
5 Review for Lien Date	104	710	704	55	938	398	409	393	529
Total	**127**	**1214**	**1089**	**102**	**1412**	**914**	**670**	**761**	**1189**

| Lien Date Tracker Category	Count of APN+Permit Key	%GT Count of Permit
1 Valued for Lien Date	797	10.66%
2 Valued for Lien Date Incomplete	28	0.37%
2 Valued for Lien Date with Error	15	0.20%
3 Reviewed for Lien Date	2367	31.65%
4 Reviewed for Lien Date Incomplete	31	0.41%
5 Review for Lien Date	4240	56.70%
Total	**7478**	**100.00%**

Legend: ● 1 Valued for Lien Date ● 2 Valued for Lien Date Incomplete ● 2 Valued for Lien Date with Error ● 3 Reviewed for Lien Date ● 4 Reviewed for Lien Date Incomplete ● 5 Review for Lien Date

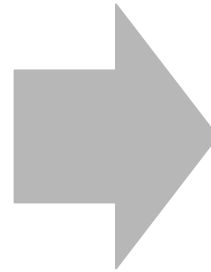Progress bar: 10.66% | 31.65% | 56.70%

By Chief & Principal
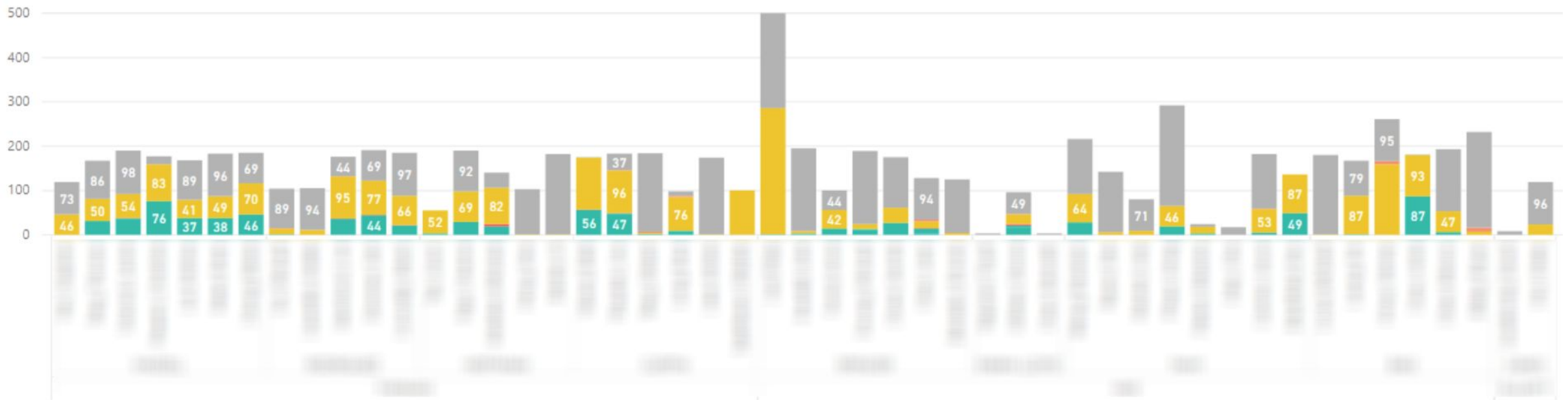
PowerBI Phone App
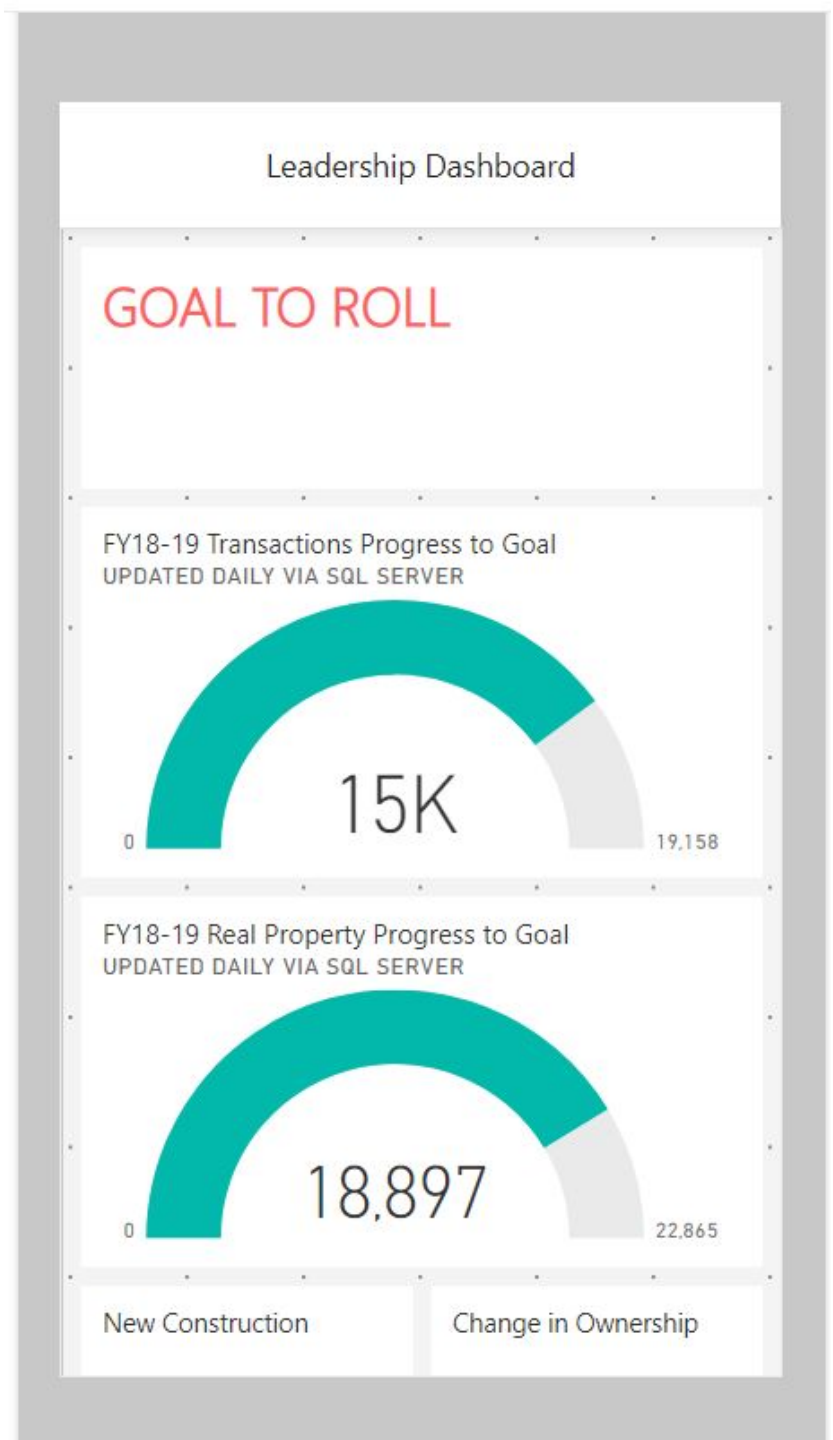
The results

No longer playing the unfun role of data quality drill sergeant

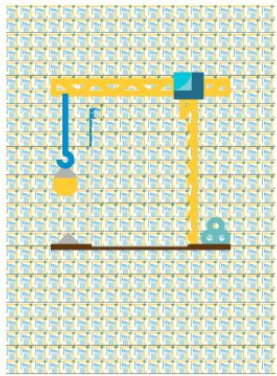# Overall the automation in PowerBI reduced my overall workload by...

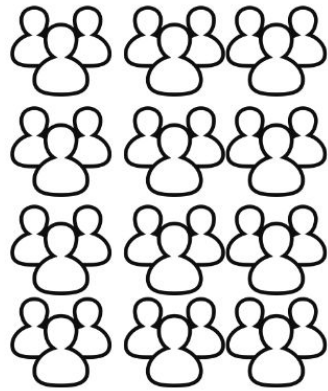# Overall the automation in PowerBI reduced my overall workload by 95%!
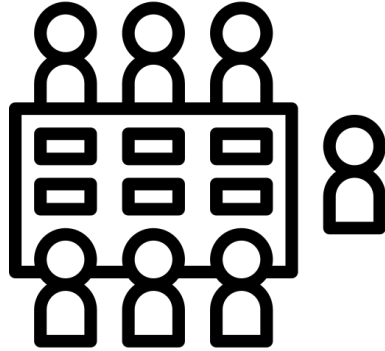
Now managing entire project!

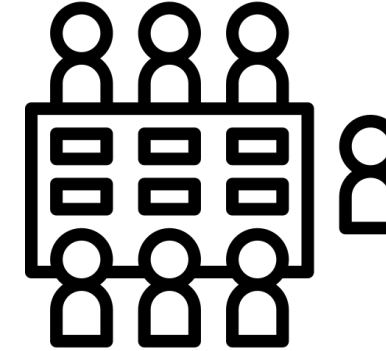This is my job!
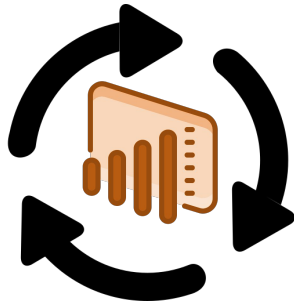
This is my job!
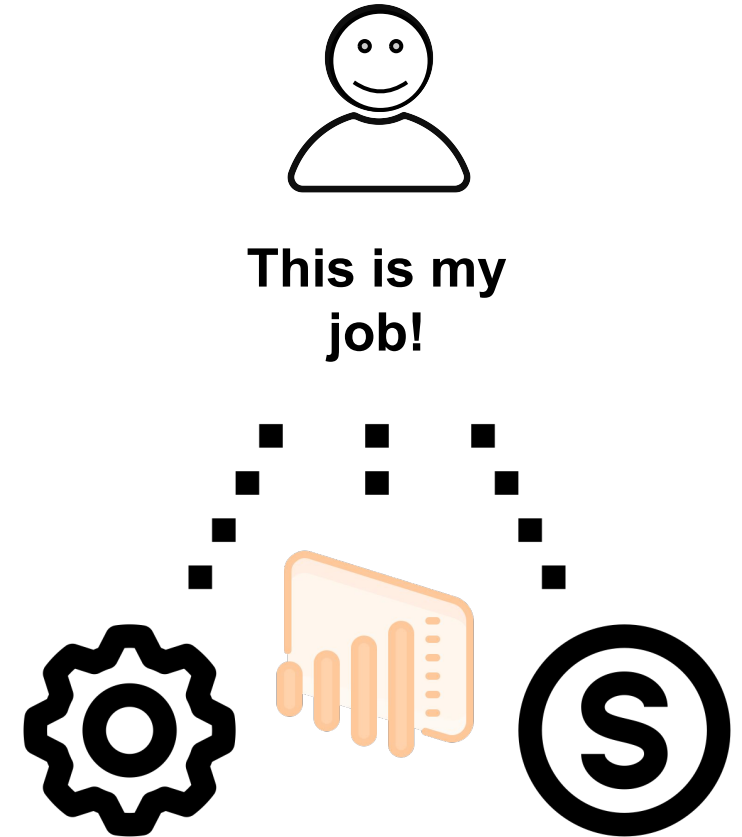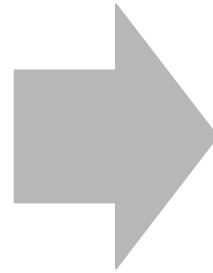
What's next

Repeating process with other departments in ASR

Transactions Unit Assignments

Business Personal Property Processing

Using Power BI for further Quality Control and Data Cleanup

- Historical Screens
- Property Characteristics

Mini PowerBI Learning Community

- All analyst attended DataSF's PowerBI Training
- Meet regularly to share tips and tricks
- How ASR able to roll out so many tools so quickly

Thank you