Appraiser Workload Dashboard

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

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...

20k Projects

DMS

DataSF

DBI

ASR

manual updates each of the 60 workbooks

Analyst prioritize and assign
distributed to appraisers...
who entered info into ASR-400 terminal screens...
(results exported to excel for quality checks by the 8 Principal Appraisers...)

20k Projects

DMS

DataSF

DBI

ASR

Manual updates each of the 60 workbooks

Analyst prioritize and assign

Terminal

Terminal

Terminal

Terminal

Excel
any entry errors sent back to appraisers for correction...
and constant manual shuttling around of projects between workbooks...
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
Incorporated a Data Quality Page
### 2019 LIEN DATE PROJECT

<table>
<thead>
<tr>
<th>Field Check</th>
<th>Mandatory</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Status</th>
<th>All</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>APN</th>
<th>Permit</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>FC</th>
<th>APN</th>
<th>Permit</th>
<th>Issue Date</th>
<th>Project Cost</th>
<th>Class Code</th>
<th>Situs</th>
<th>Notes Line (On NC Screen)</th>
</tr>
</thead>
</table>

```
---
Situs
- 1540 MARKET ST
- 1700 MARKET ST
---
```
### 2019 LIEN DATE PROJECT
#### Progress to Goal

<table>
<thead>
<tr>
<th>Chief Lien Date Tracker Category</th>
<th>Chief</th>
<th>Principal</th>
<th>Appraiser</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Valued for Lien Date</td>
<td>94</td>
<td>104</td>
<td>191</td>
</tr>
<tr>
<td>2 Valued for Lien Date Incomplete</td>
<td>17</td>
<td>57</td>
<td>26</td>
</tr>
<tr>
<td>2 Valued for Lien Date with Error</td>
<td>3</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>3 Reviewed for Lien Date</td>
<td>57</td>
<td>113</td>
<td>203</td>
</tr>
<tr>
<td>4 Reviewed for Lien Date Incomplete</td>
<td>101</td>
<td>47</td>
<td>262</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Lien Date Tracker Category</th>
<th>Count of APN+Permit Key</th>
<th>%GT Count of Permit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Valued for Lien Date</td>
<td>797</td>
<td>10.66%</td>
</tr>
<tr>
<td>2 Valued for Lien Date Incomplete</td>
<td>26</td>
<td>0.37%</td>
</tr>
<tr>
<td>2 Valued for Lien Date with Error</td>
<td>15</td>
<td>0.20%</td>
</tr>
<tr>
<td>3 Reviewed for Lien Date</td>
<td>2367</td>
<td>31.65%</td>
</tr>
<tr>
<td>4 Reviewed for Lien Date Incomplete</td>
<td>31</td>
<td>0.41%</td>
</tr>
<tr>
<td>5 Review for Lien Date</td>
<td>4240</td>
<td>56.70%</td>
</tr>
</tbody>
</table>

**Total:**
- **Chief:** 7478 (100.00%)
- **Remaining:** 4240 (56.70%)

**By Chief & Principal:**

![Bar chart showing distribution by chief and principal]

**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

**Percentages:**
- **Chief:** 10.66%
- **Remaining:** 31.65%
- **Total:** 56.70%
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!
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

Icon Credits: Icon made by Freepik, Eucalypt from www.flaticon.com