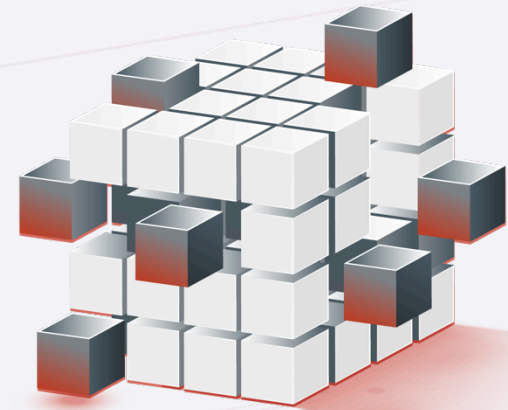


# Enhance your operations with **Grind Analytics**™

Premier data analytics and business intelligence  
to accelerate your company's growth.



## **Case Studies:** **Professional Services**



Innovation Partners



Encompass®

# USE CASE: MORTGAGE LENDER

**Problem:** Customer was exporting data from multiple systems to Excel and creating month-end reports. Key operational and financial data was known too late, and the process was extremely manually intensive.

**Solution:** Grind Analytics developed a custom solution and integrated data from multiple sources to create a centralized, real-time view of operations. We also developed a portal for data entry of goals and configuration and the customer was able to start developing dozens of reports and dashboards in Power BI. Financial data included Loan Vision Accounting (Microsoft Dynamics)

iSolved®



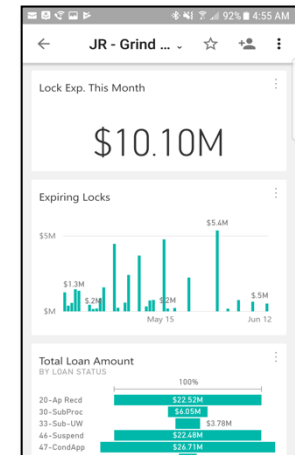
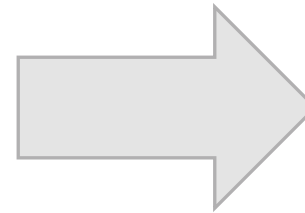
Encompass®

LOAN VISION  
Efficient Mortgage Accounting

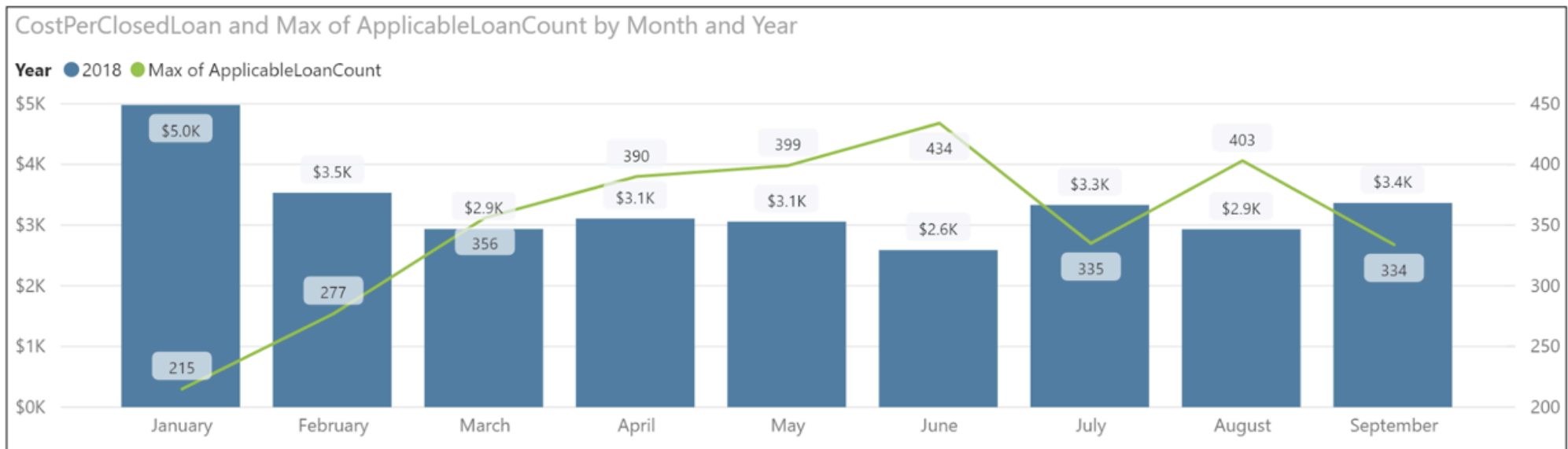
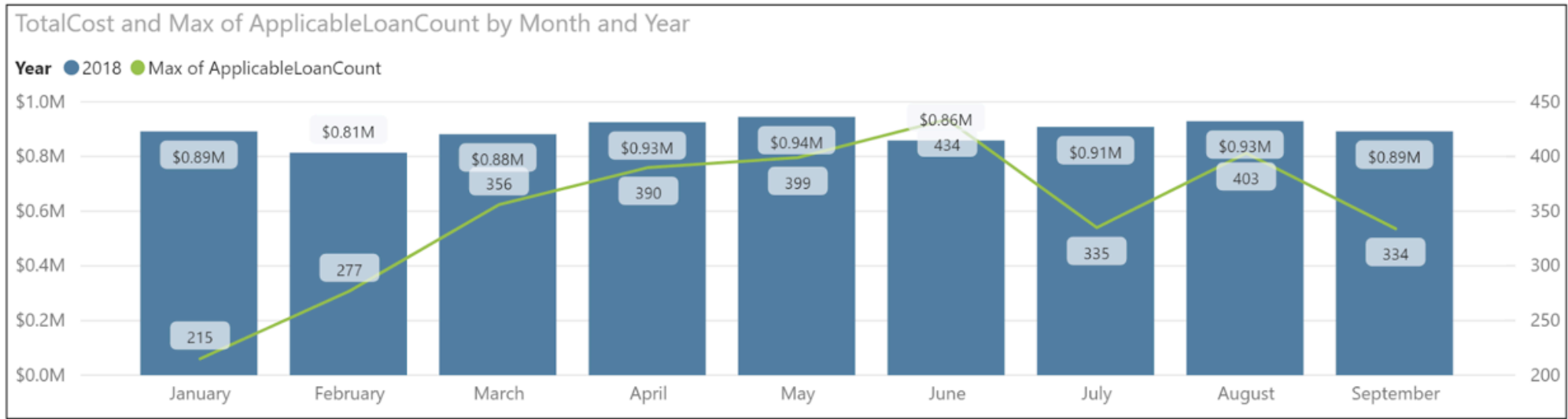


natterbox

Marketo®



# Custom Dashboard - Cost Allocation



All

Cost Allocation

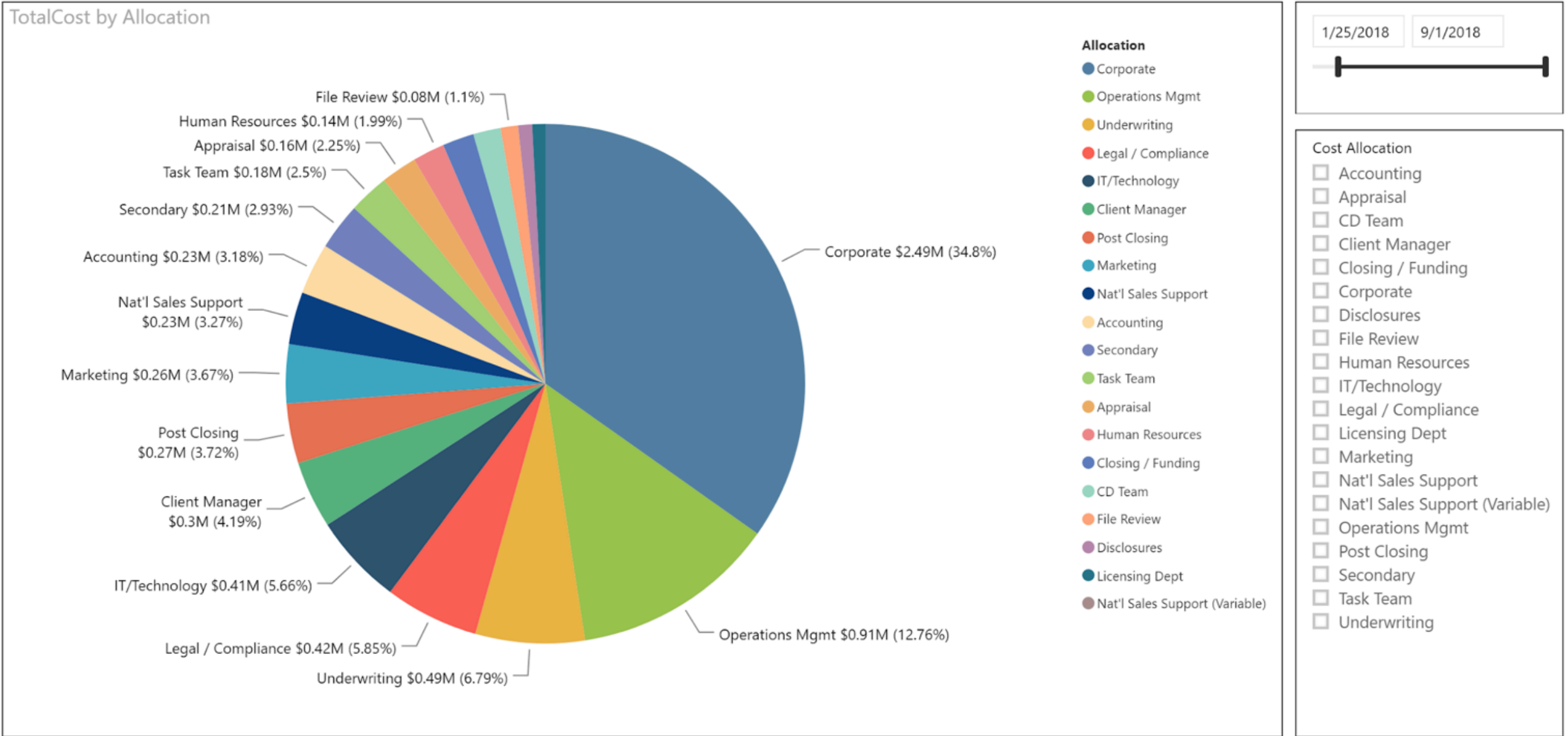
☐

 Accounting

☐

 Appraisal☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

# Cost Allocation Trends





# Branch Cost Table

Branch	January	February	March	April	May	June	July	August	September	Total
Branch 001	\$29,881.22	\$35,334.68	\$14,676.58	\$24,864.47	\$15,286.87	\$18,127.32	\$3,332.86			\$988,549.72
Branch 002	\$4,980.20		\$8,805.95	\$12,432.24	\$3,057.37	\$5,179.24	\$3,332.86	\$8,797.22		\$344,037.53
Branch 003		\$7,066.94	\$5,870.63	\$6,216.12	\$3,057.37	\$2,589.62				\$121,790.68
Branch 006					\$3,057.37	\$5,179.24	\$6,665.72	\$2,932.41	\$3,366.16	\$106,948.91
Branch 013	\$84,663.45	\$74,202.83	\$61,641.64	\$37,296.71	\$94,778.59	\$46,613.12	\$53,325.76	\$58,648.11	\$67,323.17	\$5,251,041.35
Branch 014	\$9,960.41	\$10,600.40	\$5,870.63	\$9,324.18						\$145,570.46
Branch 015	\$29,881.22	\$35,334.68	\$32,288.48	\$37,296.71	\$18,344.24	\$7,768.85	\$23,330.02	\$32,256.46	\$13,464.63	\$2,088,482.35
Branch 017	\$19,920.81	\$31,801.21	\$46,965.06	\$34,188.65						\$582,281.86
Branch 020		\$10,600.40	\$5,870.63	\$3,108.06	\$3,057.37					\$88,439.52
Branch 034	\$14,940.61	\$10,600.40	\$2,935.32	\$6,216.12		\$2,589.62	\$3,332.86	\$2,932.41		\$280,943.16
Branch 200	\$49,802.03	\$21,200.81	\$29,353.16	\$24,864.47	\$33,631.11	\$49,202.74	\$36,661.46	\$35,188.87	\$40,393.90	\$2,953,710.76
Branch 201	\$34,861.42	\$10,600.40	\$20,547.21	\$27,972.53	\$24,458.99	\$33,665.03	\$29,995.74	\$38,121.27	\$26,929.27	\$2,297,330.59
Branch 202	\$69,722.84	\$42,401.62	\$35,223.80	\$40,404.77	\$30,573.74	\$36,254.65	\$49,992.90	\$38,121.27	\$43,760.06	\$3,460,913.62
Branch 203	\$4,980.20	\$17,667.34	\$2,935.32	\$3,108.06	\$24,458.99	\$5,179.24	\$3,332.86	\$14,662.03	\$16,830.79	\$865,228.40
Branch 210		\$3,533.47	\$32,288.48	\$31,080.59	\$33,631.11	\$36,254.65	\$29,995.74	\$41,053.68	\$37,027.74	\$2,013,276.01
Branch 211	\$19,920.81	\$7,066.94	\$2,935.32							\$80,142.91
Branch 212	\$134,465.48	\$169,606.48	\$149,701.13	\$202,023.84	\$143,696.57	\$155,377.07	\$186,640.16	\$173,011.92	\$114,449.39	\$13,336,451.60
Branch 213	\$34,861.42	\$14,133.87	\$26,417.85	\$24,864.47	\$30,573.74	\$36,254.65	\$23,330.02	\$41,053.68	\$30,295.43	\$2,446,507.90
Branch 214	\$4,980.20	\$17,667.34	\$23,482.53	\$55,945.06	\$27,516.37	\$12,948.09	\$39,994.32	\$32,256.46	\$20,196.95	\$2,237,659.67
Branch 216					\$3,057.37	\$5,179.24	\$23,330.02	\$35,188.87	\$26,929.27	\$458,352.47
Branch 217						\$5,179.24		\$14,662.03	\$3,366.16	\$71,105.46
Branch 218					\$6,114.75	\$7,768.85	\$13,331.44	\$5,864.81	\$20,196.95	\$259,733.07
Branch 219				\$3,108.06	\$12,229.50	\$5,179.24		\$2,932.41	\$6,732.32	\$150,536.15
Branch 220				\$3,108.06	\$64,204.85	\$38,844.27	\$56,658.62	\$41,053.68	\$57,224.70	\$1,562,850.36
Branch 400	\$29,881.22	\$21,200.81	\$41,094.43	\$6,216.12	\$6,114.75	\$2,589.62	\$6,665.72	\$2,932.41		\$899,956.32
Branch 401				\$3,108.06		\$5,179.24	\$3,332.86	\$2,932.41	\$6,732.32	\$107,303.71
Branch 402				\$31,080.59	\$18,344.24	\$10,358.47	\$26,662.88	\$49,850.89	\$84,153.97	\$1,287,053.24
Branch 600	\$24,901.01	\$45,935.09	\$5,870.63	\$9,324.18						\$334,812.07
Branch 800			\$11,741.27							\$11,741.27
Branch 802						\$2,589.62				\$2,589.62
Branch 900	\$413,356.83	\$360,413.77	\$454,974.03		\$559,499.42	\$538,640.50	\$456,601.82	\$463,320.07	\$440,966.78	\$30,923,605.50
Total	\$1,015,961.37	\$946,969.50	\$1,021,490.07	\$637,152.10	\$1,158,744.71	\$1,074,691.39	\$1,079,846.64	\$1,137,773.33	\$1,060,339.96	\$84,911,725.42

2018



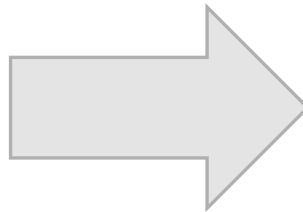
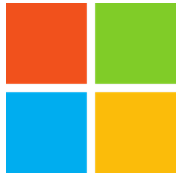
Branch

- ☐ Branch 001
- ☐ Branch 002
- ☐ Branch 003
- ☐ Branch 006
- ☐ Branch 013
- ☐ Branch 014
- ☐ Branch 015
- ☐ Branch 017
- ☐ Branch 020
- ☐ Branch 034
- ☐ Branch 200
- ☐ Branch 201
- ☐ Branch 202
- ☐ Branch 203
- ☐ Branch 210
- ☐ Branch 211
- ☐ Branch 212
- ☐ Branch 213
- ☐ Branch 214
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- ☐ Branch 219
- ☐ Branch 220
- ☐ Branch 400
- ☐ Branch 401

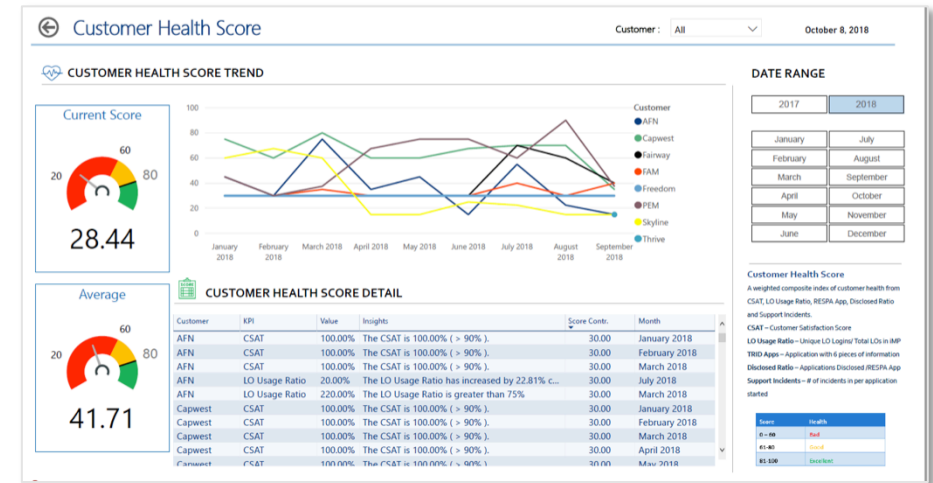
# USE CASE: SAAS FINTECH VENDOR

**Problem:** Customer was not able to attain an accurate picture of the health of their customer base.

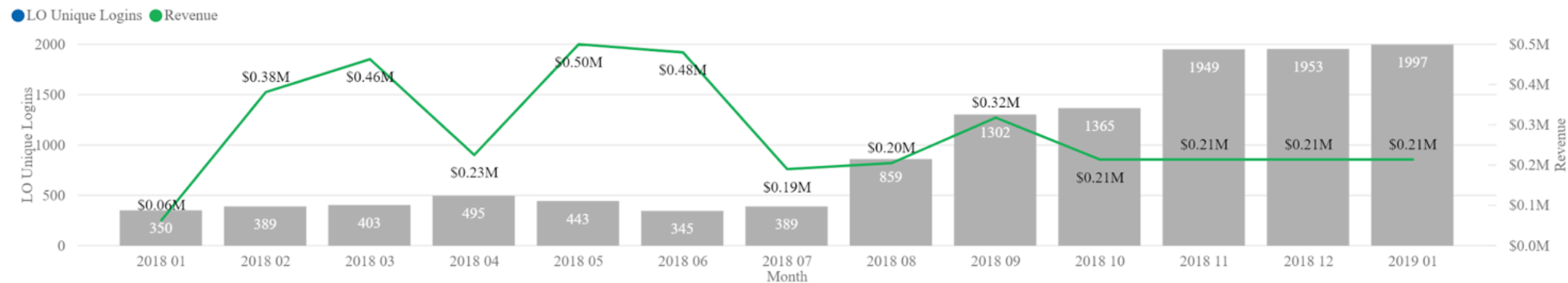
**Solution:** Grind Analytics integrated data from point of sale, financial, web analytics, and customer care systems to create a real time view of customer health metrics. We developed a custom portal for data entry of goals and configured to meet company objectives. Resulted in dozens of reports and dashboards in Power BI and included integration of multiple customer database instances.



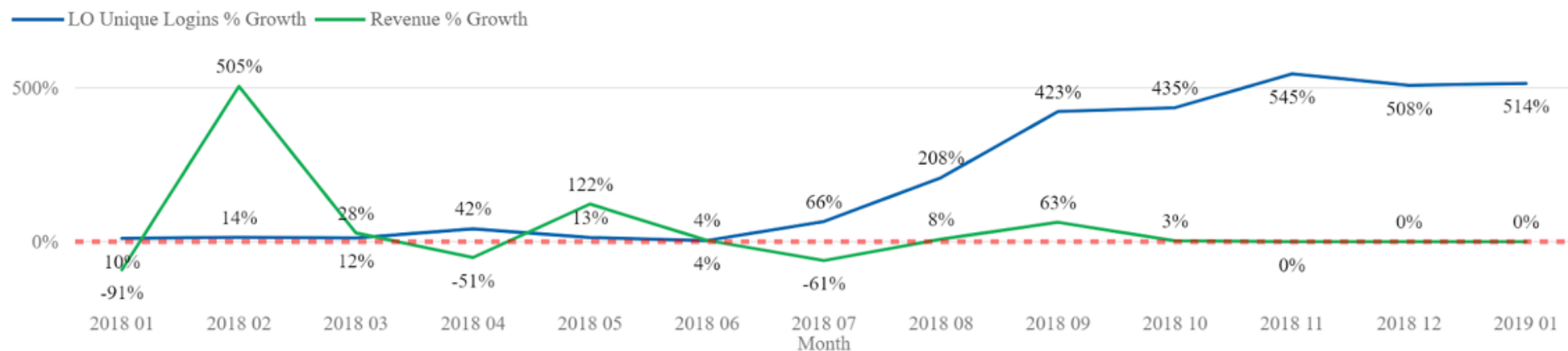
zendesk



# Custom Dashboard – Revenue Growth

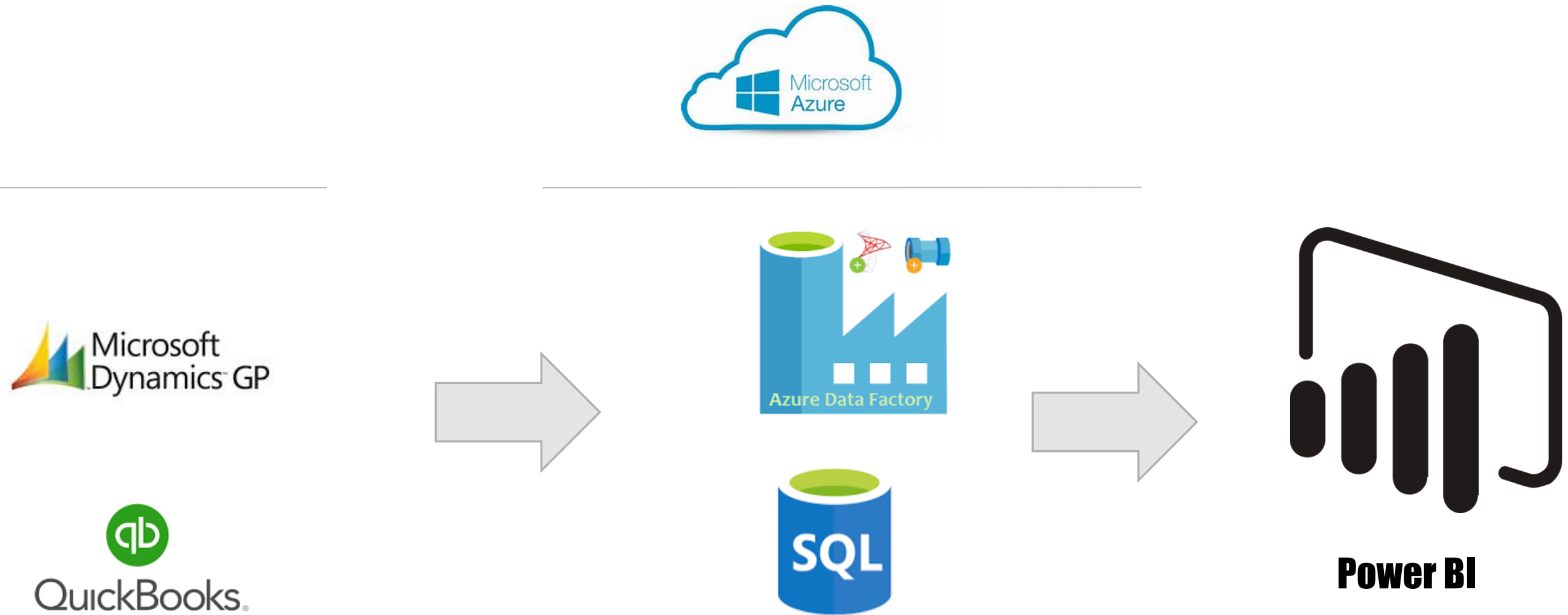


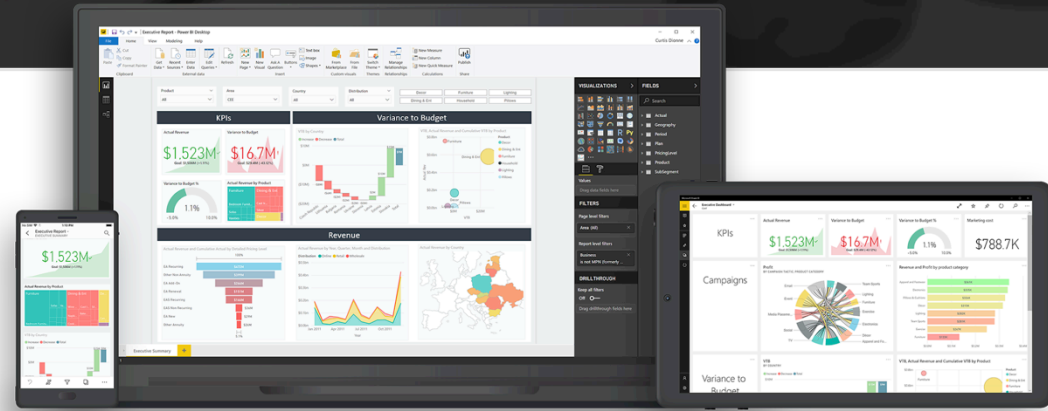
## YTD MONTHLY PERCENTAGE GROWTH - ADOPTION VS REVENUE



Positive difference between Revenue Growth Rate and LO Logins Growth Rate indicates high performing LOs are logging into iMP. And negative difference indicates less number of high performing LOs are logging into iMP.

# Custom Architecture





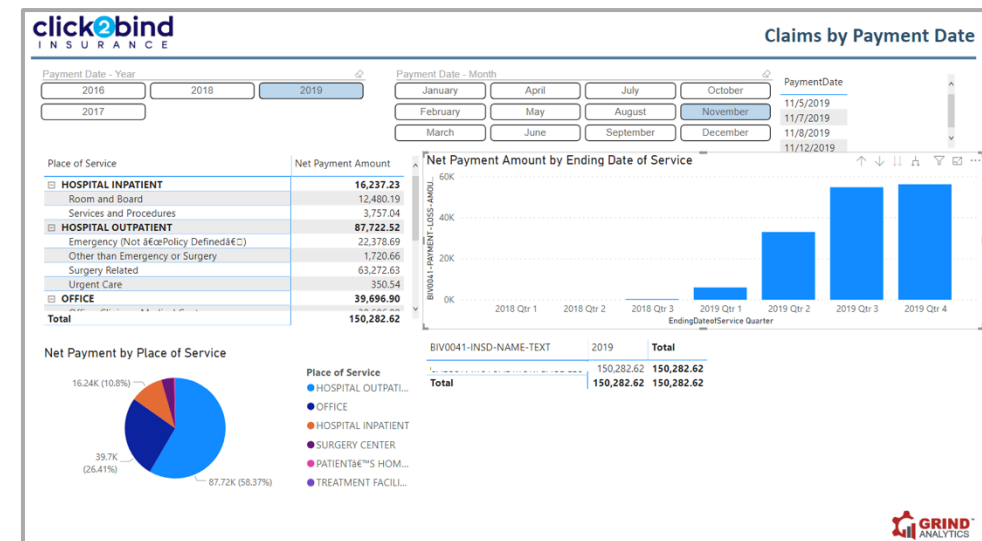
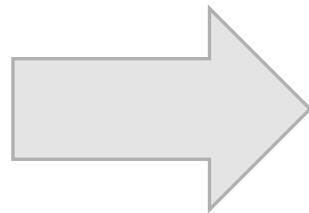
Feature	Description
Cross-Platform	Mobile Application, Web, and Desktop
Real-time Data	Data can be pushed and visualized in real-time
Report Subscriptions	Subscribe individually to reports and they are emailed on your schedule
Self-Service Dashboards	Create dashboards by pinning visuals from reports or querying data
Rich, Interactive Reports	Reports are not static. Easily report your data with rich, interactive visuals
Cortana Integration and Natural Language	Query and talk to your data with plain language. Pin results to dashboards
Insights	Artificial Intelligence analysis of data provides insights you may not see



# USE CASE: HEALTH INSURANCE CLAIMS

**Problem:** Health Insurance Broker was exporting claims data from multiple systems to Excel and creating claims analysis reports for their business customers. The process was extremely manually intensive, and could only be provided annually.

**Solution:** Grind Analytics developed automated integration with UMR for claims data. We also developed a health insurance claims data model. Now the customer is developing reports and dashboards in Power BI which will be made available to broker's customers.



# Custom Dashboard - Claims

Payment Date - Year

2016 2018 2019 2017

Payment Date - Month

January April July October  
February May August November  
March June September December

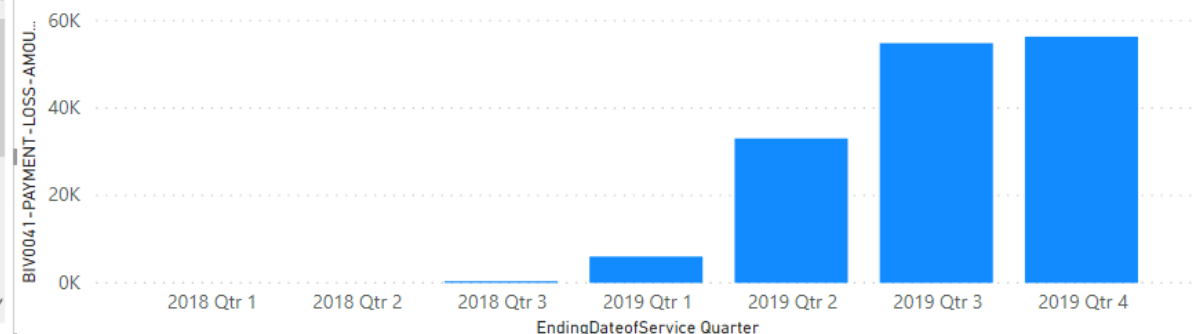
PaymentDate

11/5/2019  
11/7/2019  
11/8/2019  
11/12/2019

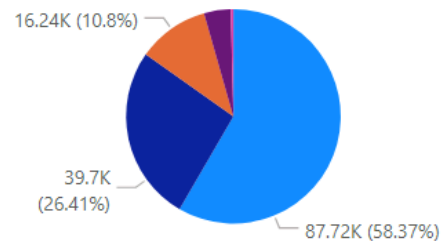
Place of Service

Place of Service	Net Payment Amount
<input checked="" type="checkbox"/> HOSPITAL INPATIENT	16,237.23
Room and Board	12,480.19
Services and Procedures	3,757.04
<input checked="" type="checkbox"/> HOSPITAL OUTPATIENT	87,722.52
Emergency (Not a Policy Defined)	22,378.69
Other than Emergency or Surgery	1,720.66
Surgery Related	63,272.63
Urgent Care	350.54
<input checked="" type="checkbox"/> OFFICE	39,696.90
<b>Total</b>	<b>150,282.62</b>

Net Payment Amount by Ending Date of Service



Net Payment by Place of Service



Place of Service

- HOSPITAL OUTPATIENT
- OFFICE
- HOSPITAL INPATIENT
- SURGERY CENTER
- PATIENT'S HOME
- TREATMENT FACILITY

BIV0041-INSD-NAME-TEXT	2019	Total
	150,282.62	150,282.62
<b>Total</b>	<b>150,282.62</b>	<b>150,282.62</b>



# USE CASE: ONLINE INSURANCE SHOPPING

---

**Problem:** Customer had desire to aggressively market online but had no method to allow customers to shop, quote, and self-serve online.

**Solution:** Grind Analytics integrated data from USPS and Core Logic Via ITC's Turborater to collect property data. We developed a custom portal based on customer requirements to collect information directly from leads and automatically presented quotes. Further integration with Encompass LOS allowed loan officers to generate quotes on demand and transition leads to broker. We managed lead and quote data using Tech Canary within Force.com and automated communications to the customer and tasks using the Force.com process builder. We used Conga composer to generate quote documents and send to leads. Lastly, we created a rules engine within Force.com to identify high risk leads/properties and flag them for manual review. All this resulted in more efficient operations.



# Custom Dashboard - Real Time Quotes

0% Complete

## Real-Time Quotes From A Rated Carriers

Please enter the property address to get started

STREET ADDRESS

1001 Grande Dr

UNIT/SUITE

Address 2

CITY

Mesquite

STATE

TX

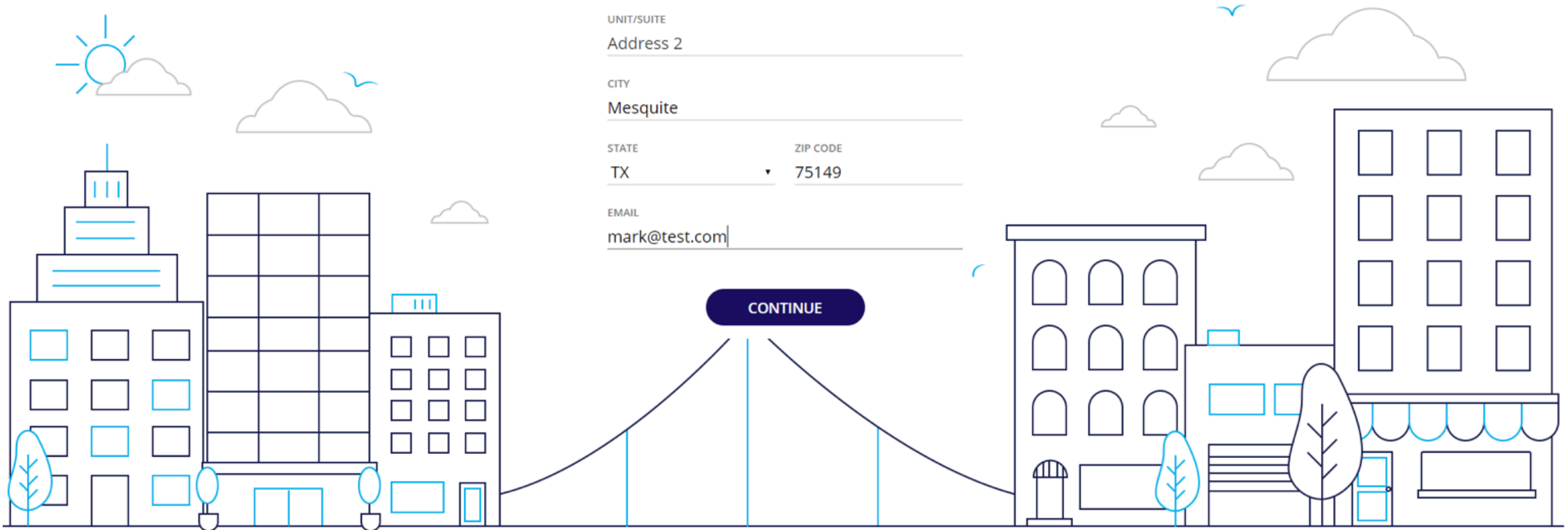
ZIP CODE

75149

EMAIL

mark@test.com

CONTINUE



# Custom Dashboard - Real Time Quotes

We Found Your Property!  
Please answer any of the blank fields below.

YEAR BUILT 1955	SQUARE FOOTAGE 1753	ROOF TYPE GABLE	FAMILY UNITS Single Family
# STORIES 1	EXTERIOR WALLS Frame	HAS THE PLUMBING, ELECTRICAL, HEATING AND ROOFING BEEN REPLACED, IF THE HOME IS OVER 30YRS? Yes	
ROOFING UPDATE 2014	HEATING UPDATE 2014	ELECTRICAL UPDATE 2014	PLUMBING UPDATE 2014
SWIMMING POOL No			

BACKCONTINUE



# Custom Dashboard - Real Time Quotes

50% Complete

Just A Few More Questions To Prepare Your Quotes!



DO YOU LIVE IN A GATED COMMUNITY?	None ▾
PRIMARY HEATING SOURCE	Central Electric ▾
FIRE EXTINGUISHERS?	<input checked="" type="checkbox"/> Yes
SMOKE ALARM?	<input checked="" type="checkbox"/> Yes
SMOKE ALARM TYPE?	Local ▾
CENTRAL FIRE ALARM?	<input type="checkbox"/> None
SPRINKLER SYSTEM?	<input type="checkbox"/> No
DOOR EQUIPPED WITH DEADBOLTS?	<input checked="" type="checkbox"/> Yes
CENTRAL BURGLAR ALARM?	<input type="checkbox"/> None
ARE THERE ANY SMOKERS IN THE HOUSEHOLD?	<input type="checkbox"/> No
WOULD YOU LIKE TO APPLY A MULTI-POLICY DISCOUNT FOR BUNDLING YOUR AUTO WITH YOUR HOME INSURANCE?	<input type="checkbox"/> No

BACK

NEXT

# Custom Dashboard - Real Time Quotes

## Your Most Competitive Options From Our A Rated Carriers

			
① Dwelling Amount	\$ 191,766.00	\$ 191,766.00	\$ 191,766.00
① Dwelling Replacement Cost	100%	150%	150%
① Other Structures Coverage	\$ 19,177.00	\$ 19,176.00	\$ 19,176.00
① Loss of Use	\$ 38,353.00	\$ 38,353.00	\$ 38,353.00
① Personal Property Amount	\$ 95,883.00	\$ 95,883.00	\$ 95,883.00
① Personal Property Valuation	Replacement Cost	Replacement Cost	Replacement Cost
① Personal Injury	Included	Included	Included
① Personal Liability	\$ 500,000.00	\$ 500,000.00	\$ 500,000.00
① Medical Payments	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00
① Water Back-Up	N/A	N/A	N/A
① Scheduled Personal Property	N/A	N/A	N/A
① All Peril Deductible	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00
Wind And Hail Deductible	2%	2%	2%
Annual Premium	\$2,346.79	\$1,718.00	\$1,718.00
		<a href="#">SELECT</a>	<a href="#">SELECT</a>

# Custom Dashboard - Insurance Quotes

1001 Grande Dr  
Mesquite, TX 75149

1<sup>st</sup> Loan #: R0001911238  
Loan Amount: \$250,000.00

LTV: 100.000/100.000/100.000  
DTI: /

Rate: 3.000%  
Not Locked

Est Closing Date: //  
DD: Mark Range

2 Alerts & Messages  
Title Order Ready 11/21/19  
eDisclosures Not Yet Signed 11/23/19

Log

Click2Bind Home Insurance Quick Quote

Click2Bind Home Insurance Quick Quote

Provider: -  
Annual Premium: -  
Monthly Premium: -

☐ Borrower Authorizes 3rd Party Quote  
Borrower who Authorized  
Get Quote

Loan Fields (read only) :

Borrower First: Manuel  
Borrower Last: Casitas  
Borrower Email: mark@testloansolohm.com  
Borrower Phone:  
Borrower DOB: 11/19/1983  
Marital Status: Unmarried

Property Address: 1001 Grande Dr  
Property City, State, Zip: Mesquite TX 75149  
Mailing Address: 123 Mail St  
Mailing City, State, Zip: Murrieta CA 92563  
Occupancy Type: PrimaryResidence  
Close of Escrow Date: //

Required Fields :

Would you like a quote for flood insurance for this property, as well? No  
Was this property purchased as a foreclosure or short sale in the past 12 months? Yes

Construction Type: Single Family Residence  
Other Type:  
Will the property be used for short-term rental or as a rental property? No  
How many months out of the year? 0

Current Industry: Information Technology  
Occupation of Applicant: Analyst

Optional Details :

☒ Fire Extinguishers  
☒ Smoke Detectors  
Smokers in Household: No  
Jewelry Value: Fine Arts Value: Bike Value:  
Fur Value: Musical Instrument Value:  
Camera Value: Recreational Vehicle Value:  
☐ Loss or claim in last 5 years?  
Number of losses incurred in the last 5 years to the insured's home or personal possessions at this or another location:  
Claim Date 1: Claim Type 1: Claim Amount 1:  
Claim Date 2: Claim Type 2: Claim Amount 2:  
Additional Claim Information:

Is there a business on the premises? No  
Owned in a Trust? No  
Are there any other parties with vested interest in the property? No  
Is the residence in a gated community? No  
How many acres is the property located on?  
Any uncorrected fire or building code violations? No  
Is there a trampoline on the premises? No  
Are there tie downs? No  
Will there be any course of construction that will occur after the purchase of the residence? No  
Has property insurance been cancelled, declined or non-renewed in the last 5 years? No  
Is the property within 300 ft of commercial or non-residential property? No  
Is the home for sale? No  
Current or most recent property insurance carrier:  
What is your current policy's expiration date?  
Any resident employees? No

Forms Tools Services

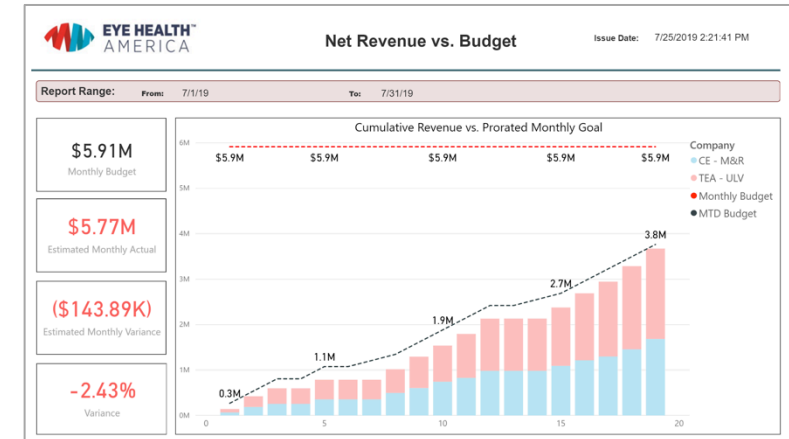
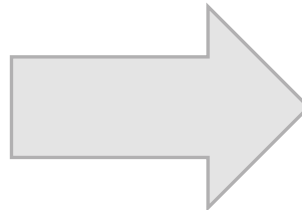
BI-weekly Loan Payment Summary  
Borrower Information - Vesting  
Borrower Summary - Origination  
Borrower Summary - Processing  
Buydown Disbursement Summary  
CD COC Checklist  
Change of Circumstance - Not Fee Related  
Click2Bind Home Insurance Quick Quote  
Client Management Support - OTHL  
Closing Conditions  
Closing Disclosure (CD) Tracking  
Closing Disclosure Page 1  
Closing Disclosure Page 2  
Closing Disclosure Page 3  
Closing Disclosure Page 4  
Closing Disclosure Page 5  
Closing Disclosure Review Form - OTHL  
Closing Vendor Information  
Compliance  
☒ Show in Alpha Order ☒ Show All

11/25 16:35 Tuesday, 12/3/2019

# USE CASE: REGIONAL MEDICAL PRACTICE

**Problem:** Customer had need to monitor practice performance after a new acquisition and reorganization, but all practices were using different systems.

**Solution:** Grind Analytics built a custom solution. The customer needed centralized dashboards to manage financial and operational performance of practices. We built a system that would integrate with each individual office platform. A data warehouse was developed in Azure to also deploy custom executive reports in Power BI.





# Custom Dashboard - Financial Data

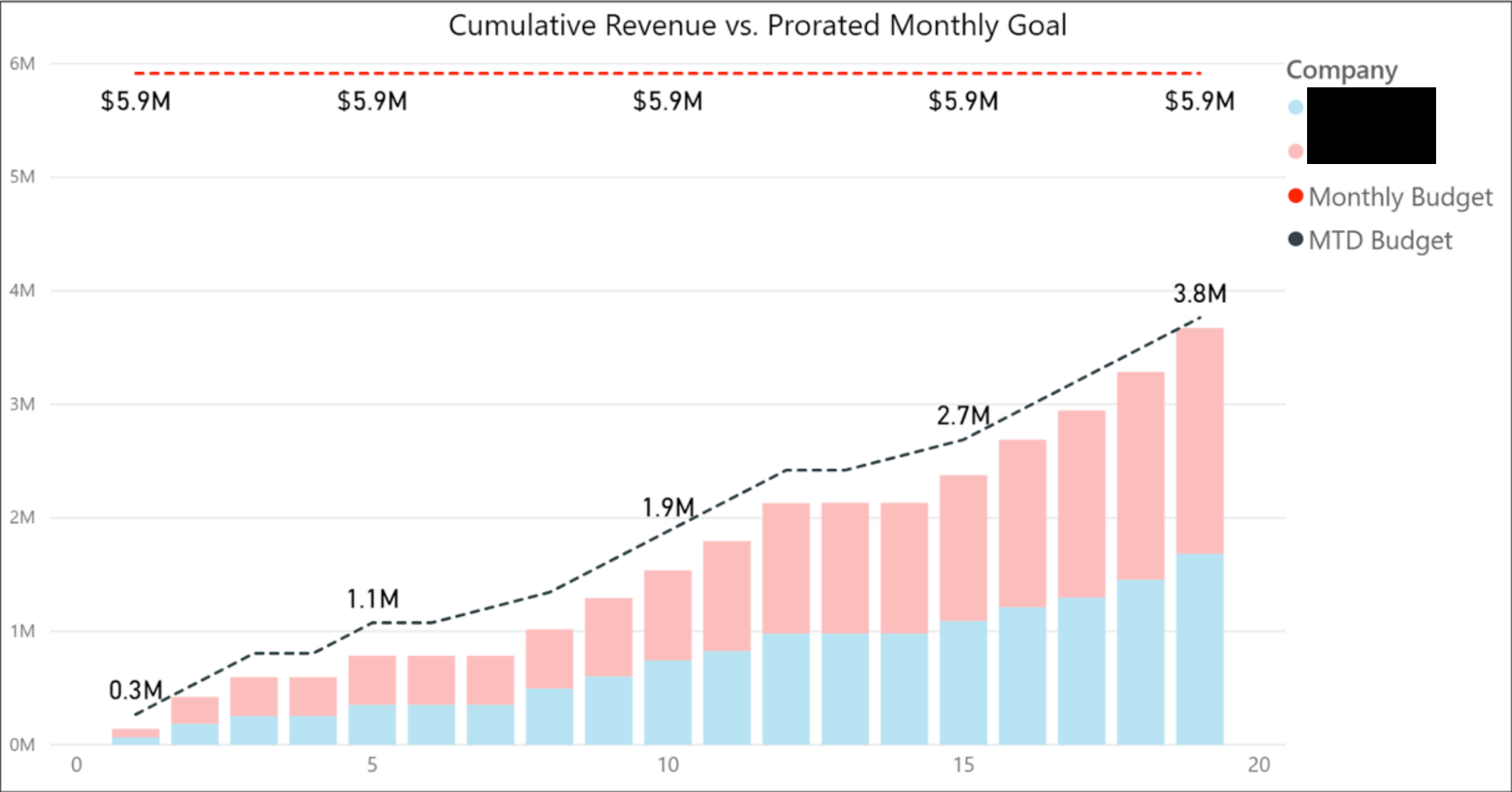
Report Range: From: 7/1/19 To: 7/31/19

**\$5.91M**  
Monthly Budget

**\$5.77M**  
Estimated Monthly Actual

**(\$143.89K)**  
Estimated Monthly Variance

**-2.43%**  
Variance



# Custom Dashboard - KPIs

Report Range:

From: 7/1/19

To: 7/31/19

\$3.85M

Deposit

\$9.25M

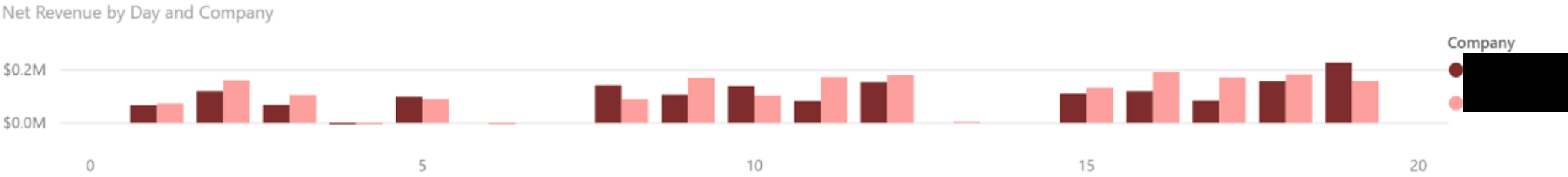
Charge Amount

(\$4.68M)

Charge Adjustment

\$3.67M

Net Revenue



Date	Daily Deposit	Charge Amount	Historical Charge Adjustment	Charge Adjustment	Net Billing	Retina COGS Expense	Net Revenue
7/19/19		\$909,306.31	-51.15%	(\$465,138.61)	\$444,167.70	(\$57,669.36)	\$386,498.34
		\$424,604.44	-49.09%	(\$208,439.50)	\$216,164.94	(\$57,669.36)	\$158,495.58
		\$484,701.87	-52.96%	(\$256,699.12)	\$228,002.75	\$0.00	\$228,002.75
7/18/19	\$395,892.40	\$842,534.43	-53.24%	(\$448,535.81)	\$393,998.62	(\$53,482.80)	\$340,515.82
	\$282,587.60	\$503,471.41	-53.09%	(\$267,270.80)	\$236,200.61	(\$53,482.80)	\$182,717.81
	\$113,304.80	\$339,063.02	-53.46%	(\$181,265.01)	\$157,798.01	\$0.00	\$157,798.01
7/17/19	\$272,125.31	\$658,115.86	-51.82%	(\$341,014.84)	\$317,101.02	(\$60,201.12)	\$256,899.90
	\$142,697.99	\$501,607.28	-53.75%	(\$269,627.25)	\$231,980.03	(\$60,201.12)	\$171,778.91
	\$129,427.32	\$156,508.58	-45.61%	(\$71,387.59)	\$85,120.99	\$0.00	\$85,120.99
7/16/19	\$363,303.20	\$802,645.47	-49.97%	(\$401,088.15)	\$401,557.32	(\$89,513.76)	\$312,043.56
	\$215,316.52	\$563,053.21	-50.05%	(\$281,800.07)	\$281,253.14	(\$89,513.76)	\$191,739.38
	\$147,986.68	\$239,592.26	-49.79%	(\$119,288.09)	\$120,304.17	\$0.00	\$120,304.17
7/15/19	\$201,736.69	\$645,424.96	-51.73%	(\$333,853.80)	\$311,571.16	(\$67,704.00)	\$243,867.16
Total	\$3,851,881.62	\$9,246,979.04	-50.57%	(\$4,675,879.19)	\$4,571,099.85	(\$899,554.26)	\$3,671,545.59