



Data Analytics Professional Services

See What Navisite Can Do For You!

Staffing



- Combine teams of 20+ experts and growing
- Management staff with a combined 20+ SME years
- Our teams are broken up into architects and developers
- Project Manager and Business Analyst on staff
- All members maintain a short bio/resume



Scope of Data Analytics Services



Design and Strategy

Create a better plan for managing, optimizing, securing and scaling your data with fully managed cloud services.



Data Integration

Integrate and transform your data for the cloud and generate insights that will drive your business forward.



Data Warehousing

Power your data analytics with data warehousing services that efficiently collect, organize and store your data.



Data Visualization

Analyze business data using various graphics to highlight Key Performance Indicators (KPIs) and trends.



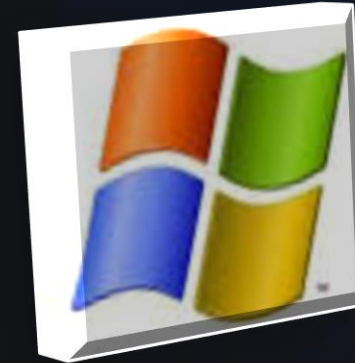
Advanced Analytics

Take your data to the next level by training and analyzing models to make predictions and automate forecasting.

We are the Subject Matter Experts

Microsoft

- On Premise
- Cloud Implementations
 - IaaS
 - SaaS
 - DBaaS
- DevOps

































NAVISITE

Platform Tools

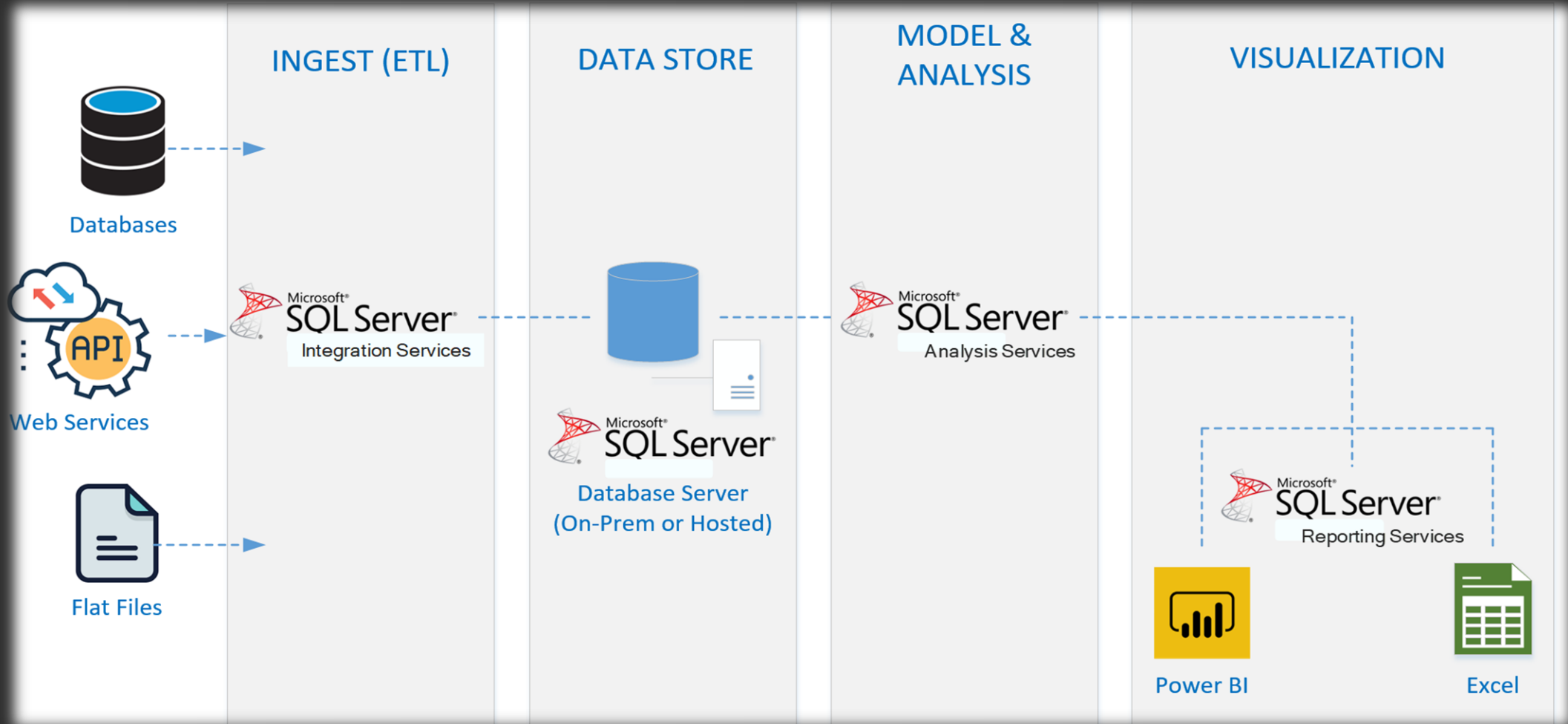


Microsoft Data Analytics Tools & Technologies

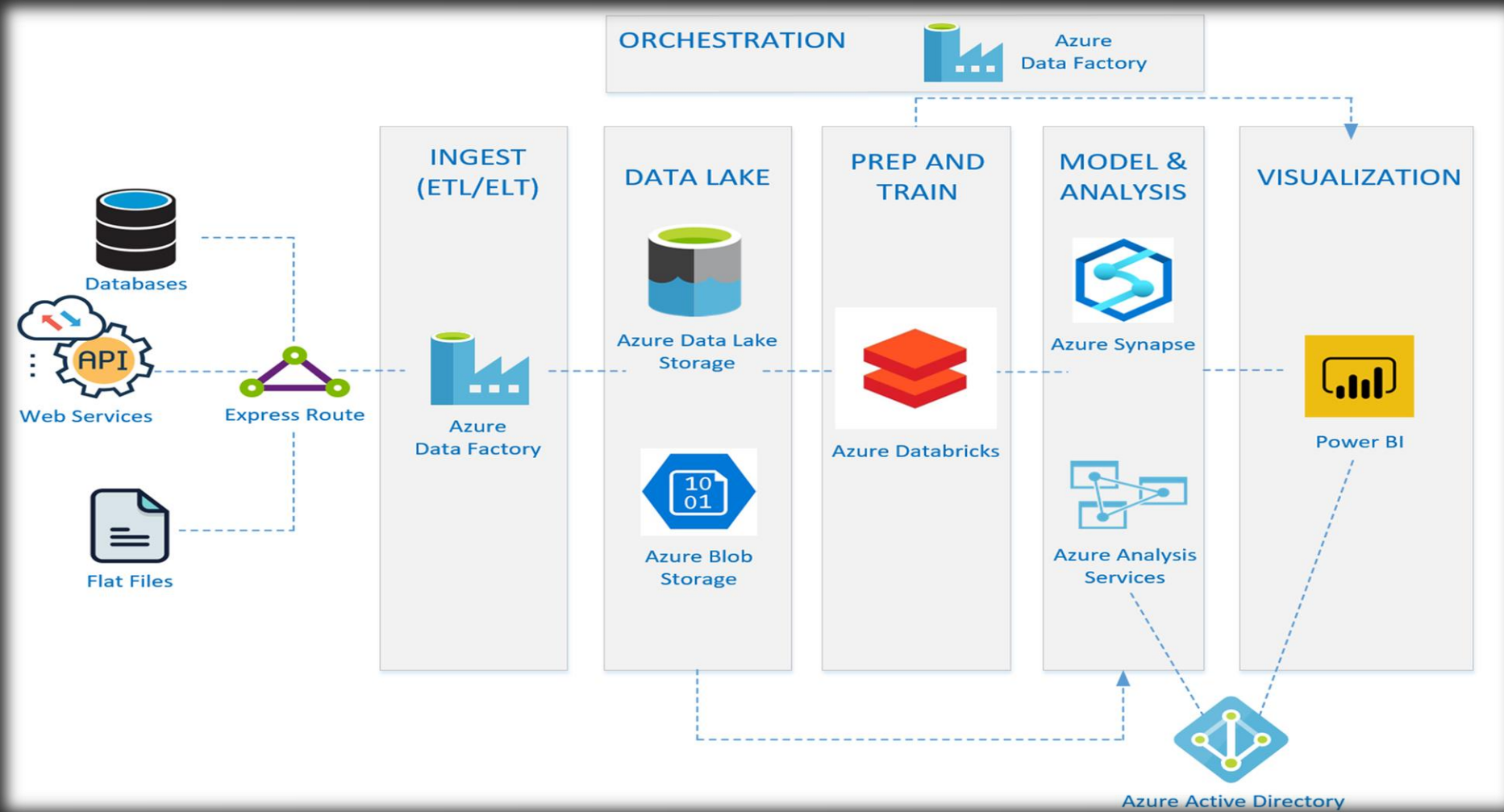
Data Visualization				A.I.	Machine Learning				
 Microsoft SQL Server Reporting Services SQL Server Reporting Services	 Power BI	 Power Apps	 Excel	 Cognitive Services	 Databricks	 Azure ML Services			
Data Modeling and Warehousing				Data Analysis/Processing		Application			
 Microsoft SQL Server Analysis Services SQL Server Analysis Services	 Azure Analysis Services	 Azure Synapse	 Power BI	 Databricks	 Azure Synapse	 Power Apps			
Data Integration (ETL/ELT)					Integration Workflow				
 Azure Data Factory	 Microsoft SQL Server Integration Services SQL Server Integration Services	 Databricks	 Power BI	 Azure Function App	 Azure Event Hubs	 Azure Streaming Analytics	 Azure Logic Apps	 Power Automate	 Azure Automation
Data Storage									
 Microsoft SQL Server SQL Server	 Azure SQL DB	 Azure Cosmos DB	 Azure Blob Storage	 Azure Data Lake	 Azure Synapse				

Data Warehousing

Microsoft On-Prem Solutions

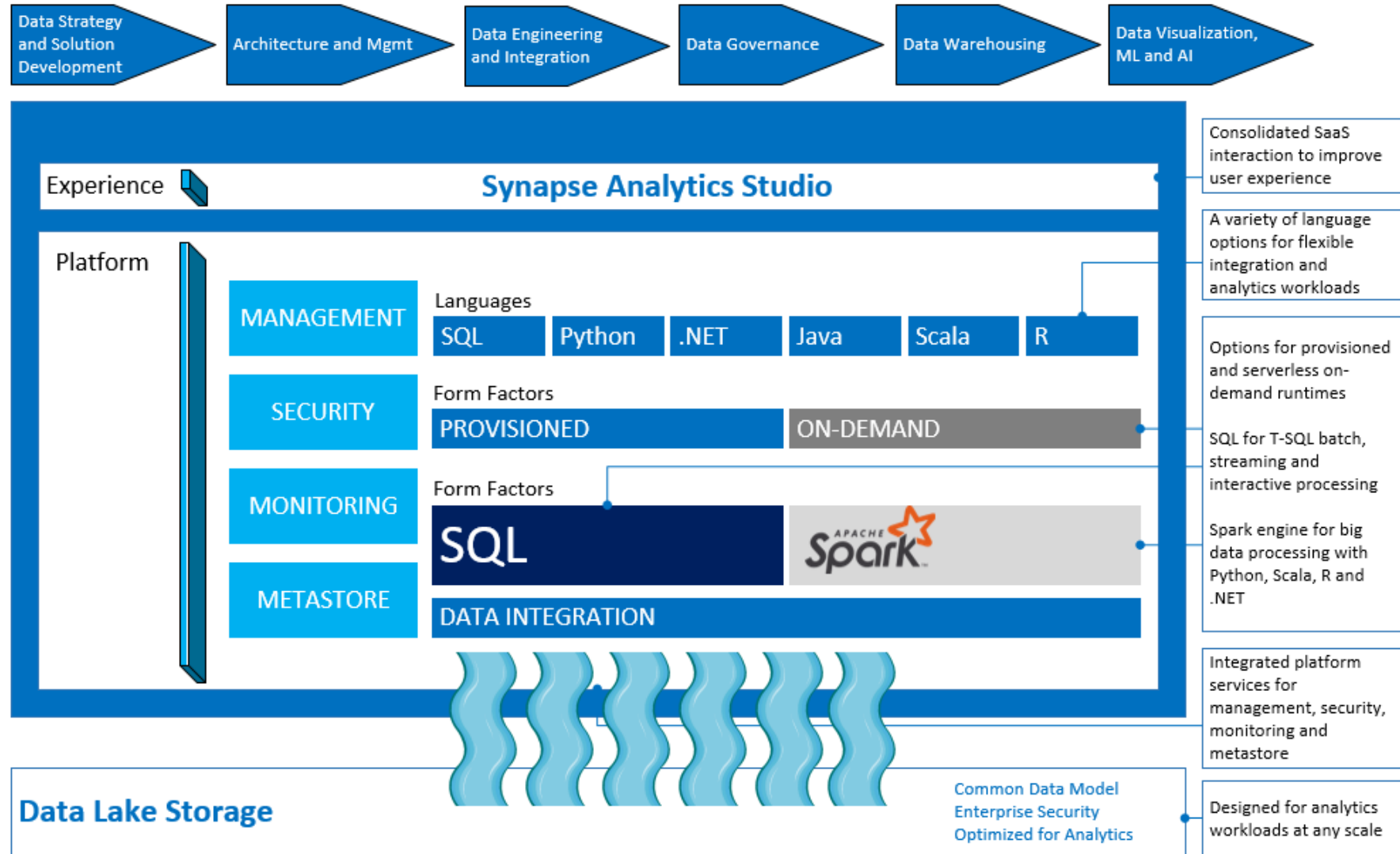


Modern Microsoft SaaS Solutions

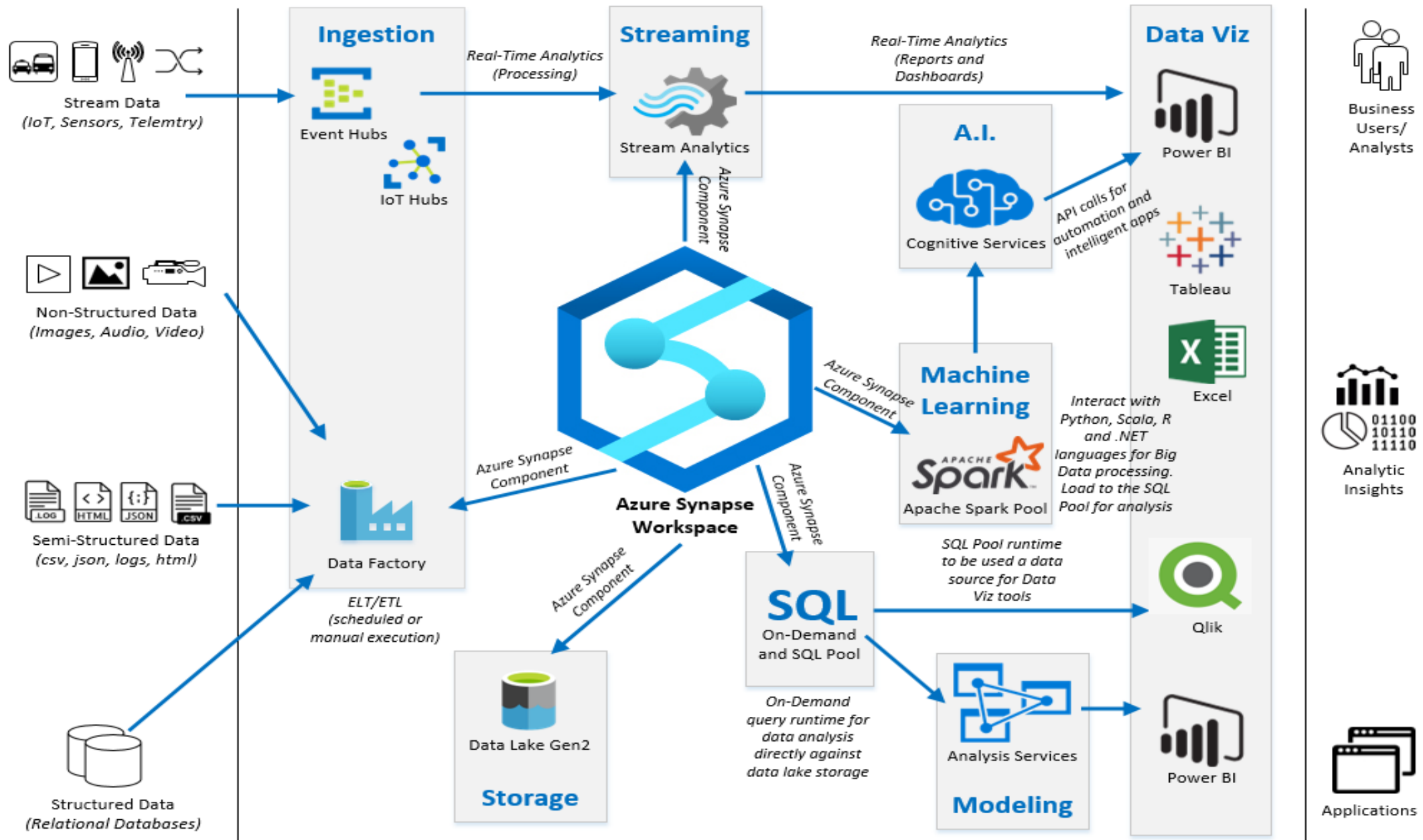


Azure Synapse Analytics

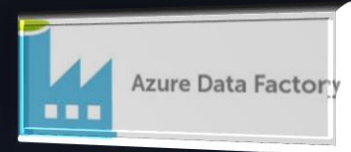
Designed for analytics workloads at any scale



Azure Synapse Data Analytics Solution



Driving Your Data with ETL/ELT

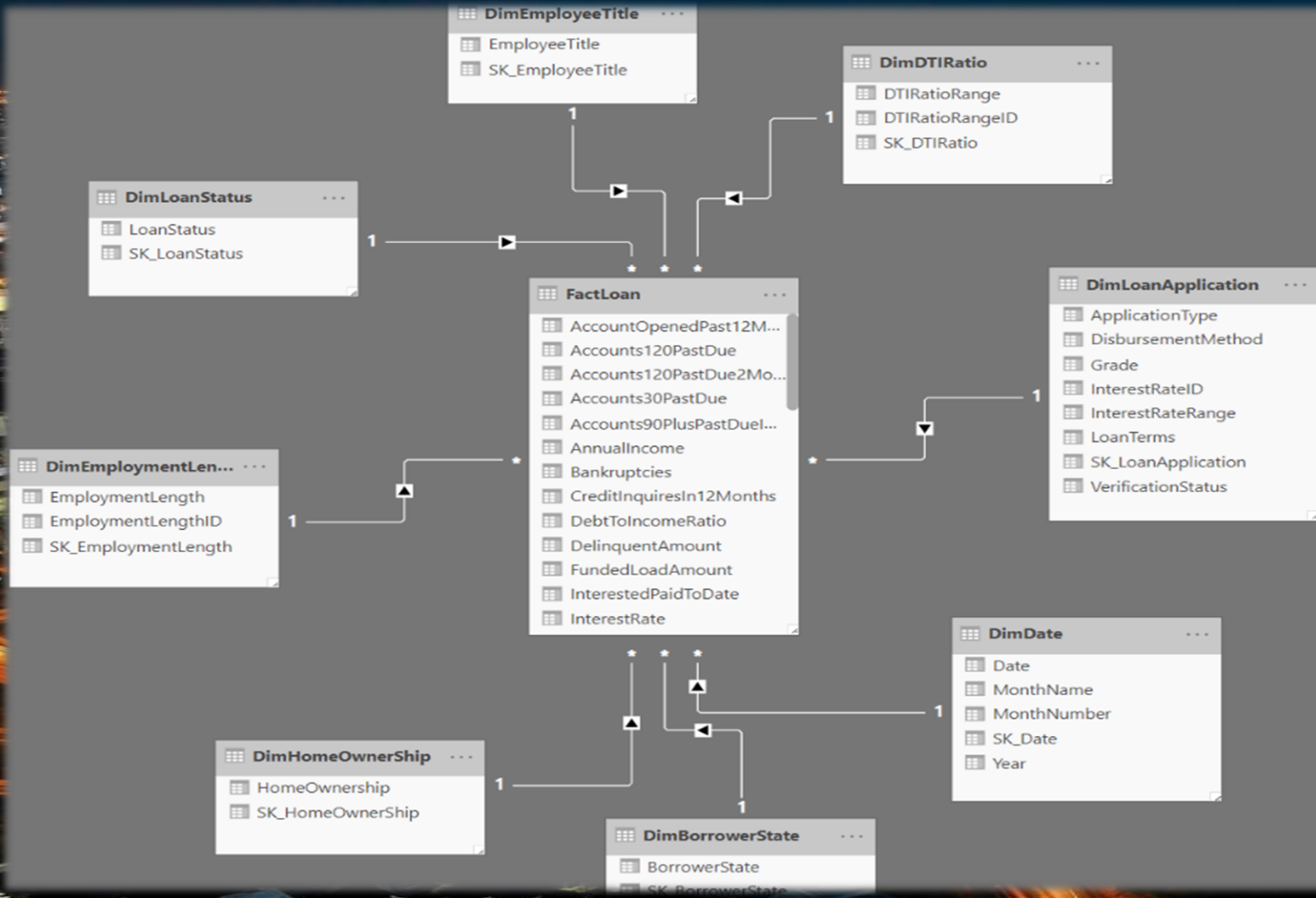


```
,SK_EmployeeTitle
,SK_EmploymentLength
,SK_HomeOwnership
,SK_LoanApplication
,SK_LoanStatus
,CONVERT(decimal(15,2), CONVERT(float, annual_inc)) as AnnualIncome
,CONVERT(decimal(10,2), dti) as DebtToIncomeRatio
,CONVERT(decimal(10,2), FundedLoadAmt) as FundedLoadAmount
,CONVERT(decimal(10,2), int_rate) as InterestRate
,CONVERT(decimal(10,2), installment) as MonthlyPayment
,CONVERT(decimal(10,2), out_prncp) as RemainingPrincipal
,CONVERT(decimal(10,2), total_pymnt) as TotalAmountPaidToDate
,CONVERT(decimal(10,2), total_rec_prncp) as PrincipalPaidToDate
,CONVERT(decimal(10,2), total_rec_int) as InterestedPaidToDate
,CONVERT(int, delinq_2yrs) as NumDelinquentIn2Years
,CONVERT(int, delinq_amnt) as DelinquentAmount
,CONVERT(int, inq_last_6mths) as CreditInquiresIn12Months
,CASE
  WHEN mths_since_last_delinq = '' THEN NULL
  ELSE CONVERT(int, mths_since_last_delinq)
END as MonthsSinceLastDelinquency
,CONVERT(int, open_acc) as OpenAccounts
,CONVERT(decimal(10,2), CONVERT(float, total_rec_late_fee)) as LateFeesPaidToDate
,CONVERT(int, open_acc) as OpenCreditlines
,CONVERT(int, num_accts_ever_120_pd) as Accounts120PastDue
,CASE
  WHEN num_tl_120dpd_2m = '' THEN NULL
  ELSE CONVERT(int, num_tl_120dpd_2m)
END as Accounts120PastDue2Months
,CONVERT(int, num_tl_30dpd) as Accounts30PastDue
,CONVERT(int, num_tl_90g_dpd_24m) as Accounts90PlusPastDueIn2Years
,CONVERT(int, num_tl_op_past_12m) as AccountOpenedPast12Months
,CONVERT(decimal(10,2), percent_bc_gt_75) as PercentageBankCardsGreaterThan75ofLimit
,CONVERT(int, pub_rec) as PublicRecords
,CONVERT(int, pub_rec_bankruptcies) as Bankruptcies
,CONVERT(int, tax_liens) as TaxLiens
,CONVERT(decimal(10,2), tot_coll_amt) as TotalCollectionAmountsOwed
,CONVERT(decimal(10,2), tot_cur_bal) as TotalCurrentBalanceAllAccounts
,CONVERT(decimal(10,2), tot_hi_cred_lim) as TotalHighCreditLimit
,CONVERT(decimal(10,2), total_bal_ex_mort) as TotalBalanceExclMortgage
,CONVERT(decimal(10,2), total_bal_il) as TotalCurrentBalanceAll
FROM Demo.dbo.StageLoanData stage
LEFT JOIN DimBorrowerState states
  ON stage.addr_state = states.BorrowerState
LEFT JOIN DimDate dates
  ON CONVERT(date, REPLACE(stage.issue_d, '-', '')) = dates.Date
LEFT JOIN DimDTIRatio ratio
  ON CASE
    WHEN stage.dti IS NULL OR dti = '-1' THEN 1
    WHEN CONVERT(decimal(10,2), stage.dti) BETWEEN 0 AND 20.49 THEN 2
    WHEN CONVERT(decimal(10,2), stage.dti) BETWEEN 20.50 AND 40.49 THEN 3
    WHEN CONVERT(decimal(10,2), stage.dti) BETWEEN 40.50 AND 60.49 THEN 4
    WHEN CONVERT(decimal(10,2), stage.dti) BETWEEN 60.50 AND 80.49 THEN 5
    WHEN CONVERT(decimal(10,2), stage.dti) BETWEEN 80.50 AND 100.49 THEN 6
    WHEN CONVERT(decimal(10,2), stage.dti) >= 100.50 THEN 7
  END = ratio.DTIRatioRangeID
LEFT JOIN DimEmployeeTitle title
  ON stage.emp_title = title.EmployeeTitle
LEFT JOIN DimEmploymentLength emplength
  ON stage.emp_length = emplength.EmploymentLength
LEFT JOIN DimHomeOwnership home
  ON stage.home_ownership = home.HomeOwnership
LEFT JOIN DimLoanApplication loanapp
  ON stage.application_type = loanapp.ApplicationType
  AND stage.verification_status = loanapp.VerificationStatus
  AND stage.term = loanapp.LoanTerms
  AND CASE
    WHEN CONVERT(decimal(10,2), int_rate) BETWEEN 0 AND 5.49 THEN 1
    WHEN CONVERT(decimal(10,2), int_rate) BETWEEN 5.50 AND 10.49 THEN 2
    WHEN CONVERT(decimal(10,2), int_rate) BETWEEN 10.50 AND 15.49 THEN 3
    WHEN CONVERT(decimal(10,2), int_rate) BETWEEN 15.50 AND 20.49 THEN 4
    WHEN CONVERT(decimal(10,2), int_rate) BETWEEN 20.50 AND 25.49 THEN 5
    WHEN CONVERT(decimal(10,2), int_rate) BETWEEN 25.50 AND 30.49 THEN 6
    WHEN CONVERT(decimal(10,2), int_rate) BETWEEN 30.50 AND 35.49 THEN 7
  ELSE -1
  END = ISNULL(loanapp.InterestRateID, -1)
  AND stage.disbursement_method = loanapp.DisbursementMethod
  AND stage.grade = loanapp.Grade
LEFT JOIN DimLoanStatus loanstatus
  ON stage.loan_status = loanstatus.LoanStatus
```

```
FROM Demo.dbo.StageLoanData stage
LEFT JOIN DimBorrowerState states
  ON stage.addr_state = states.BorrowerState
LEFT JOIN DimDate dates
  ON CONVERT(date, REPLACE(stage.issue_d, '-', '')) = dates.Date
LEFT JOIN DimDTIRatio ratio
  ON CASE
    WHEN stage.dti IS NULL OR dti = '-1' THEN 1
    WHEN CONVERT(decimal(10,2), stage.dti) BETWEEN 0 AND 20.49 THEN 2
    WHEN CONVERT(decimal(10,2), stage.dti) BETWEEN 20.50 AND 40.49 THEN 3
    WHEN CONVERT(decimal(10,2), stage.dti) BETWEEN 40.50 AND 60.49 THEN 4
    WHEN CONVERT(decimal(10,2), stage.dti) BETWEEN 60.50 AND 80.49 THEN 5
    WHEN CONVERT(decimal(10,2), stage.dti) BETWEEN 80.50 AND 100.49 THEN 6
    WHEN CONVERT(decimal(10,2), stage.dti) >= 100.50 THEN 7
  END = ratio.DTIRatioRangeID
LEFT JOIN DimEmployeeTitle title
  ON stage.emp_title = title.EmployeeTitle
LEFT JOIN DimEmploymentLength emplength
  ON stage.emp_length = emplength.EmploymentLength
LEFT JOIN DimHomeOwnership home
  ON stage.home_ownership = home.HomeOwnership
LEFT JOIN DimLoanApplication loanapp
  ON stage.application_type = loanapp.ApplicationType
  AND stage.verification_status = loanapp.VerificationStatus
  AND stage.term = loanapp.LoanTerms
  AND CASE
    WHEN CONVERT(decimal(10,2), int_rate) BETWEEN 0 AND 5.49 THEN 1
    WHEN CONVERT(decimal(10,2), int_rate) BETWEEN 5.50 AND 10.49 THEN 2
    WHEN CONVERT(decimal(10,2), int_rate) BETWEEN 10.50 AND 15.49 THEN 3
    WHEN CONVERT(decimal(10,2), int_rate) BETWEEN 15.50 AND 20.49 THEN 4
    WHEN CONVERT(decimal(10,2), int_rate) BETWEEN 20.50 AND 25.49 THEN 5
    WHEN CONVERT(decimal(10,2), int_rate) BETWEEN 25.50 AND 30.49 THEN 6
    WHEN CONVERT(decimal(10,2), int_rate) BETWEEN 30.50 AND 35.49 THEN 7
  ELSE -1
  END = ISNULL(loanapp.InterestRateID, -1)
  AND stage.disbursement_method = loanapp.DisbursementMethod
  AND stage.grade = loanapp.Grade
LEFT JOIN DimLoanStatus loanstatus
  ON stage.loan_status = loanstatus.LoanStatus
```



Navisite Moves Data Into New Homes



Data Viz with Navisites Experts

RETAIL SALES OVERVIEW

● Warehouse Sales ● Retail Sales Transfer ● Retail Sales



Top 10 Sales Items

Item	Total sales
CORONA EXTRA LOOSE NR - 12OZ	\$132,196.37
CORONA EXTRA 2/12 NR - 12OZ	\$92,180.17
HEINEKEN LOOSE NR - 12OZ	\$79,730.75
MILLER LITE 30PK CAN - 12OZ	\$67,269.93
CORONA EXTRA 4/6 NR - 12OZ	\$66,159.92
HEINEKEN 2/12 NR - 12OZ	\$61,647.98
HEINEKEN 4/6 NR - 12OZ	\$50,694.44
BUD LIGHT 30PK CAN	\$50,314.04
MODELO ESPECIAL 24 LOOSE NR - 12OZ	\$41,221.88
COORS LT 30PK CAN - 12OZ	\$40,872.94
Total	\$682,288.42

Select A Year

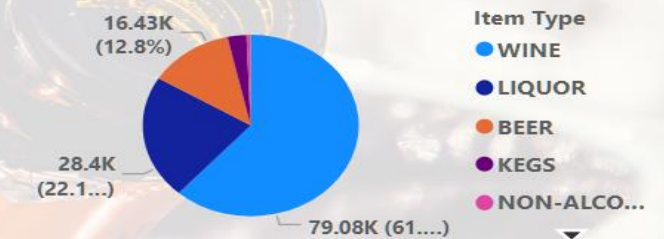
All

Select A Month

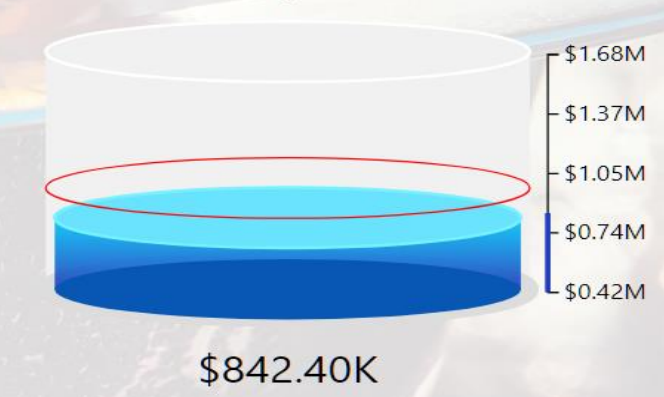
All

Month Year Supplier	Jan-2018			Feb-2018			Apr-2017			May-2017		
	QTY	AVG	Sales	QTY	AVG	Sales	QTY	AVG	Sales	QTY	AVG	Sales
8 VINI INC	3	\$0.00	\$0.00	3	\$0.00	\$0.00						
A HARDY USA LTD	1	\$0.24	\$0.24							1		
A I G WINE & SPIRITS	4	\$0.47	\$1.89	3	\$0.06	\$0.17				4		
A VINTNERS SELECTIONS	874	\$0.86	\$752.67	867	\$0.85	\$733.92	192	\$0.00	\$0.00	983		
A&E INC	4	\$0.25	\$0.98	2	\$0.37	\$0.74				4		
A&W BORDERS LLC										2		
ADAMBBA IMPORTS INTL	2	\$1.27	\$2.53	2	\$2.87	\$5.74				2		
AIKO IMPORTERS INC	3	\$0.38	\$1.13	4	\$0.41	\$1.63				6		
ALLAGASH BREWING COMPANY	10	\$2.03	\$20.34	16	\$1.28	\$20.42	3	\$0.00	\$0.00	8		
ALLIED IMPORTERS USA LTD	1	\$0.17	\$0.17	1	\$0.51	\$0.51	1	\$0.00	\$0.00	1		
ALTITUDE SPIRITS INC	2	\$0.41	\$0.82	2	\$0.74	\$1.47				1		
AMERICAN BEVERAGE CORPORATION	11	\$2.14	\$23.51	11	\$2.73	\$29.98	10	\$0.00	\$0.00	10		
AMERICAN BEVERAGE MARKETERS	16	\$9.13	\$146.12	17	\$10.52	\$178.90	14	\$0.00	\$0.00			
AMERICAN FIDELITY TRADING	15	\$0.31	\$4.71	18	\$0.27	\$4.82	2	\$0.00	\$0.00	20		
AMERICAN VINTAGE BEVERAGE INC				1	\$0.34	\$0.34				2		
ANHEUSER BUSCH INC	228	\$14.79	\$3,372.29	229	\$16.26	\$3,724.35	96	\$0.00	\$0.00	175		
ARCHER ROOSE LLC	1	\$0.00	\$0.00							2		
AREL GROUP WINE & SPIRITS	21	\$2.06	\$43.17	19	\$1.67	\$31.78	12	\$0.00	\$0.00	23		
ARIS A ZISSIS	2	\$0.33	\$0.65	1	\$0.45	\$0.45				2		
Total	13345	\$5.68	\$75,791.77	13100	\$5.94	\$77,804.13	5195	\$0.00	\$0.00	13453		

Items Sold By Item Type



Retail Sales vs Target Goal



Case Study



Aqua Finance is a leader in fast, flexible financing programs for more than 5,000 dealerships in numerous industries – from water treatment and home improvement to HVAC, RV, marine and more.



CHALLENGE

Operating in a highly regulated field and growing rapidly at 40% YoY, Aqua Finance was fast outpacing its inflexible IaaS environment with a third-party hosting provider.

It needed the help of experts to develop a modern, flexible and secure blueprint for transitioning its \$2B business – including its mission-critical web-based dealer portal – to the cloud.

SOLUTION

Partnered with Navisite to create a multi-phased plan to achieve a cloud-native architecture based on Azure:

- Provided Navisite Cloud Assessment to develop application modernization roadmap.
- Designed timeline for evolution from IaaS to SaaS/PaaS for improved application responsiveness to business needs.
- Integrated plan for design and buildout of BI, data warehouse and remote DBA services.

RESULTS

“With 80% of our business flowing across our dealer portal, even a 1-hour outage could result in a \$1M loss, so our cloud environment needs to be rock solid. Navisite has the deep Azure expertise we need to build, monitor and maintain a secure, resilient and high-performing cloud architecture with the elasticity to adapt and scale as we continue to grow.”

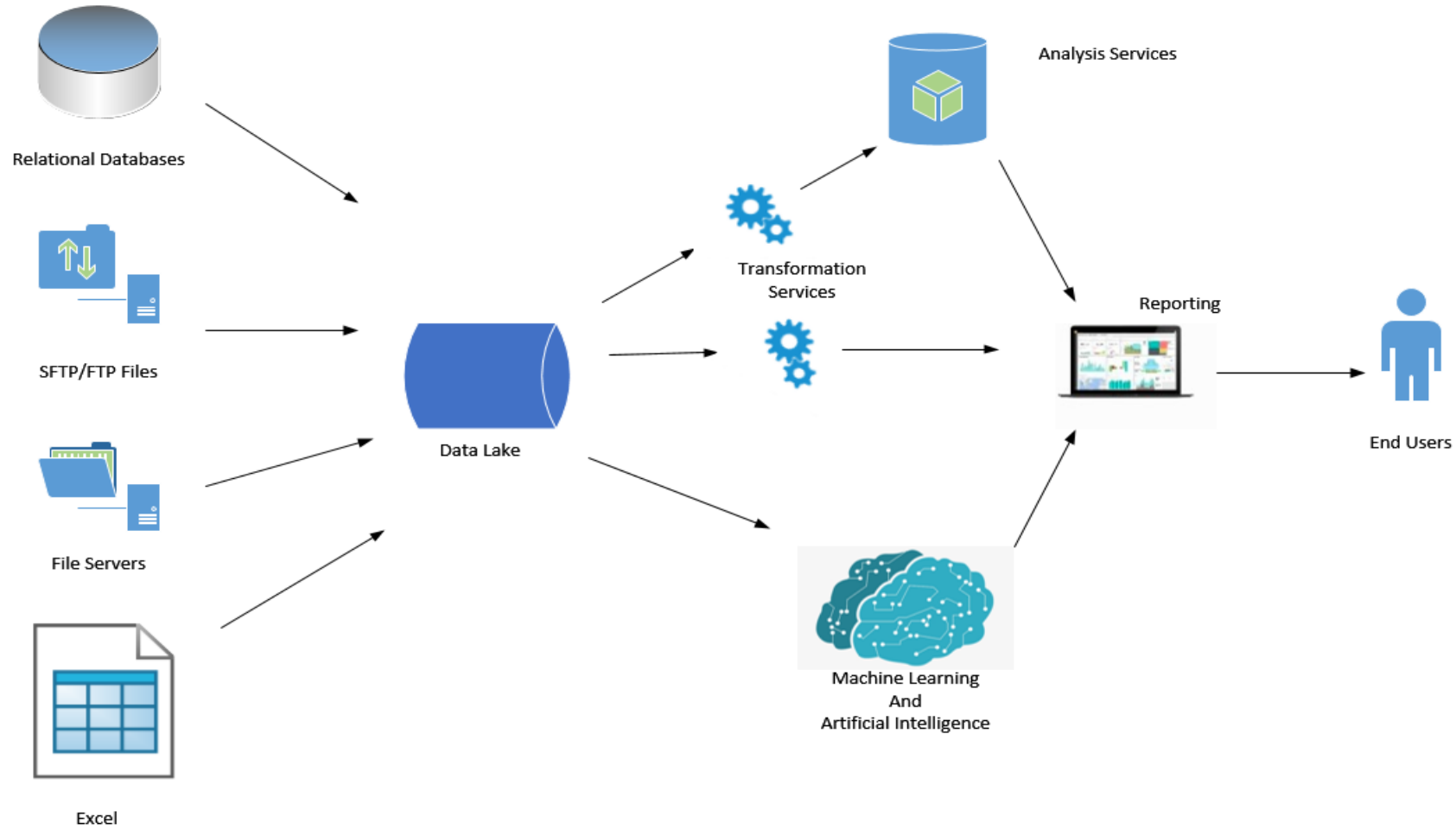
-Jon Gelhaus, SVP of IT & CSO





Data Lake Technologies

Data Lake Architecture



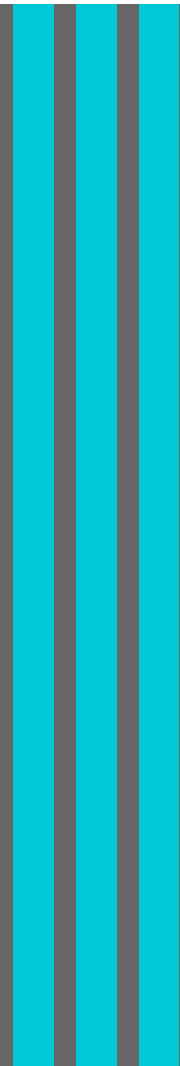
Our Capabilities on Microsoft

- Data Lake and Delta Lake Technologies
 - Configuration
 - Identifying Workload Patterns
 - Security Best Practice
 - Optimization and Provisioning
 - Optimized File Formatting
 - Cloud Service Provisioning
 - Architectural Design
 - Raw Storage
 - Hot and Cold Options
 - Containers



Advanced Analytics

Robotic Process Automation (RPA)



We are the Subject Matter Experts

Microsoft

- AI Bots
 - Chat Bots
 - Attended and Unattended AI Bots
 - Natural Language Processing
- Power Automate
 - Automatic workflows
 - Provides a single automation platform



Providing a RPA TCO

- Discovery call around your current manual process
- Internal review and analysis on the process and a solution
- Mock up of a similar solution
- Provide estimated cost for tools and implementation.

When to think about RPA Opportunities

- When a customer points out
 - Volume of repetitive tasks
 - Points out a velocity issues needing more bodies
 - Efficiency or error prone processes
 - Needing decision making programmatically
 - Uptick in manual work



RPA Prime Candidates

- Updating Information Programmatically
- Migrating Information and maintaining Application logs
- Urgent tasks based of events
- Critical system monitoring opportunities
- Financial processing
- Automating custom responses especially with frequently asked questions

SYNCLAIRE BRANDS

Synclaire Brands is the premier children's footwear provider in the U.S.



CHALLENGE

As Synclaire's business grew, its manual approach to invoicing could not be sustained. Similarly, maintaining its image catalog and sending and logging the appropriate style images to each retail partner became too complex a process to manage manually.

Synclaire needed to automate these core business processes and turned to Navisite's experts in data analytics, integration and automation to find a solution.

SOLUTION

Navisite's data analytics experts used Microsoft's process automation tools (SSIS) to develop:

- A new automated schedule to scan for shipping confirmations and then generate and send customized invoices to Synclaire's retail partners.
- Two automated workflows for the multiple steps involved in image catalog management—one to catalog the images by style, and another to deliver customized images to retailers.

RESULTS

With Navisite's help, Synclaire was able to cut invoice delivery from up to three days to just hours, and automate the entire process for collecting, storing and sending customized style images to retail partners.

"Navisite's experts have continuously proven that their knowledge and experience in data integration and automation can support our most complex IT projects."

- Evan Cagner, CEO of Synclaire Brands

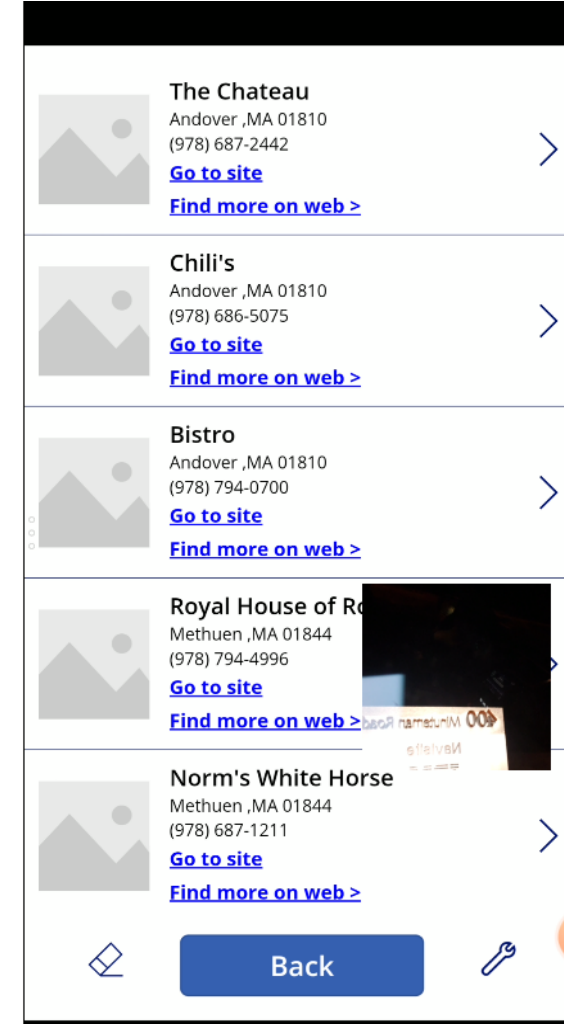
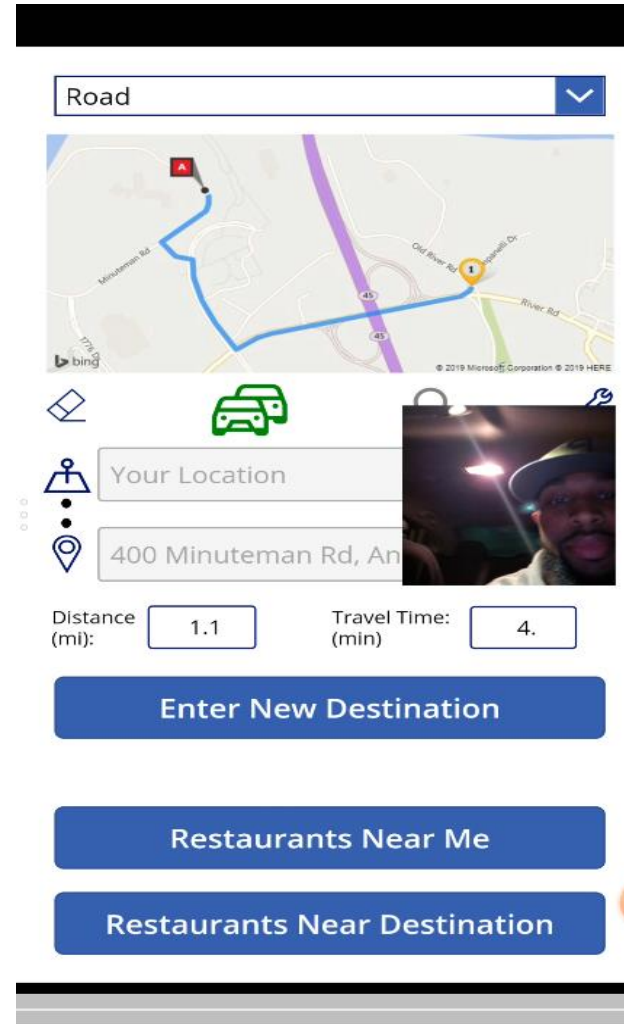
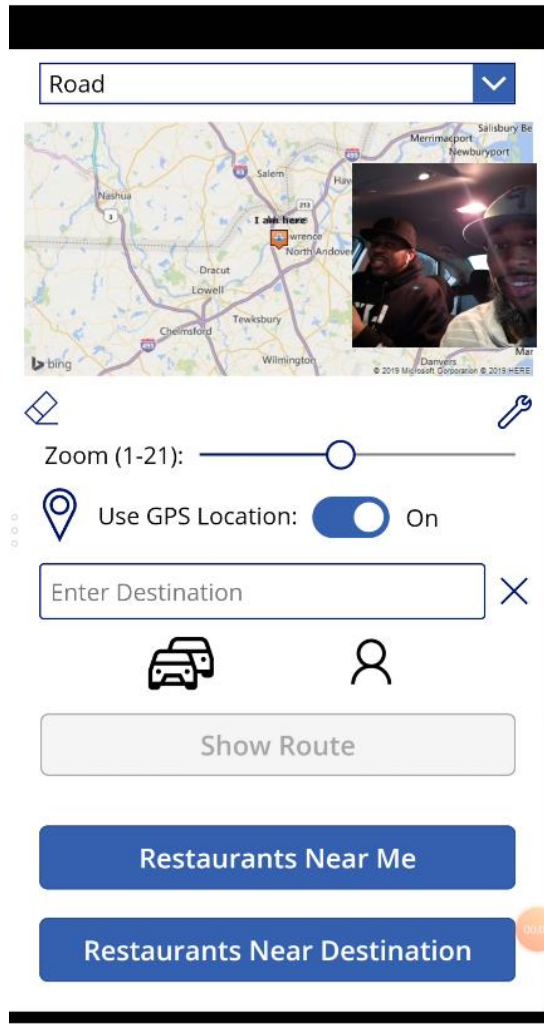




Advanced Analytics

Machine Learning & Artificial Intelligence

Power Apps with AI



Data Bricks and Machine Learning

The screenshot shows a Databricks notebook titled "2a.BostonHousingPredictions (Python)". The notebook content includes:

- :Number of Instances: 506
- :Number of Attributes: 13 numeric/categorical predictive. Median Value (attribute 14) is usually the target.
- :Attribute Information (in order):
 - CRIM per capita crime rate by town
 - ZN proportion of residential land zoned for lots over 25,000 sq.ft.
 - INDUS proportion of non-retail business acres per town
 - CHAS Charles River dummy variable (= 1 if tract bounds river; 0 otherwise)
 - NOX nitric oxides concentration (parts per 10 million)
 - RM average number of rooms per dwelling
 - AGE proportion of owner-occupied units built prior to 1940
 - DIS weighted distances to five Boston employment centres
 - RAD index of accessibility to radial highways

	CRIM	ZN	INDUS	CHAS	NOX	RM	AGE	DIS	RAD	TAX	PTRATIO	B	LSTAT
count	506.000000	506.000000	506.000000	506.000000	506.000000	506.000000	506.000000	506.000000	506.000000	506.000000	506.000000	506.000000	506.000000
mean	3.613524	11.363636	11.136779	0.099170	0.554695	6.284634	68.574901	3.795043	9.549407	408.237154	18.455534	356.674032	12.653063
std	8.601545	23.322453	6.860353	0.253994	0.115878	0.702617	28.148861	2.105710	8.707259	168.537116	2.164946	91.294864	7.141062
min	0.006320	0.000000	0.460000	0.000000	0.385000	3.561000	2.900000	1.129600	1.000000	187.000000	12.600000	0.320000	1.730000
25%	0.082045	0.000000	5.190000	0.000000	0.449000	5.885500	45.025000	2.100175	4.000000	279.000000	17.400000	375.377500	6.950000
50%	0.256510	0.000000	9.690000	0.000000	0.538000	6.208500	77.500000	3.207450	5.000000	330.000000	19.050000	391.440000	11.360000
75%	3.677083	12.500000	18.100000	0.000000	0.624000	6.623500	94.075000	5.188425	24.000000	666.000000	20.200000	396.225000	16.955000
max	88.976200	100.000000	27.740000	1.000000	0.871000	8.780000	100.000000	12.126500	24.000000	711.000000	22.000000	396.900000	37.970000

Command took 0.11 seconds -- by dking@rdx.com at 1/5/2020, 6:50:37 PM on BostonDemo

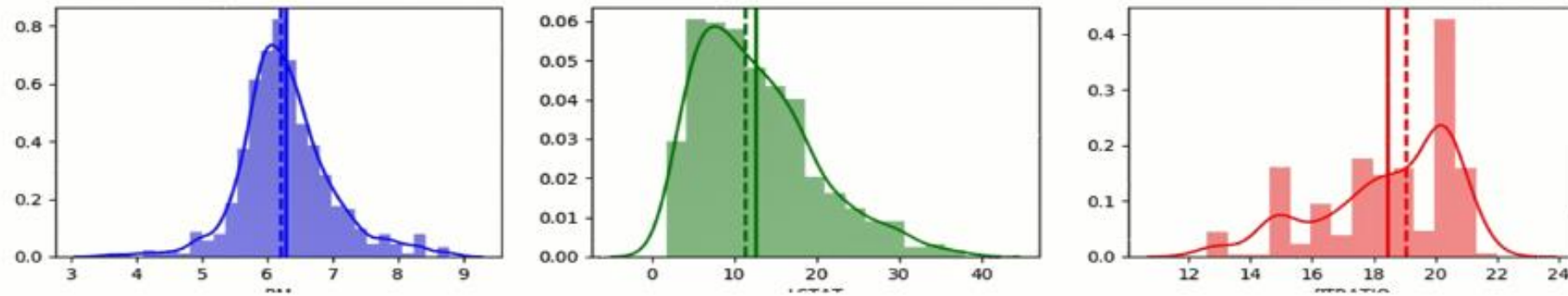
```
Cmd 4
1 boston_df
```

Data Bricks and Machine Learning

```
import matplotlib.pyplot as plt
import seaborn as sns
clr = ['blue', 'green', 'red'] #different colors for different subplot
fig, ax = plt.subplots(ncols=3, figsize=(15,3)) #create three empty subplots

#select three features and check them
for i, var in enumerate(['RM', 'LSTAT', 'PTRATIO']):
    sns.distplot(boston_df[var], color = clr[i], ax=ax[i])
    ax[i].axvline(boston_df[var].mean(), color=clr[i], linestyle='solid', linewidth=2)
    ax[i].axvline(boston_df[var].median(), color=clr[i], linestyle='dashed', linewidth=2)

display(fig)
```



Data Bricks and Machine Learning

Databricks Resources

2a.BostonHousingPredictions - Python

community.cloud.databricks.com/?o=7513095677402975#notebook/325032287443267

Apps | Sql Server, Import a... | Parse XML tags wit... | Login | ADP Workfo... | Design Ideas | Suggested Sites | Amazon.com - Onli... | Ebay | HP - See What's Hot | Other bookmarks

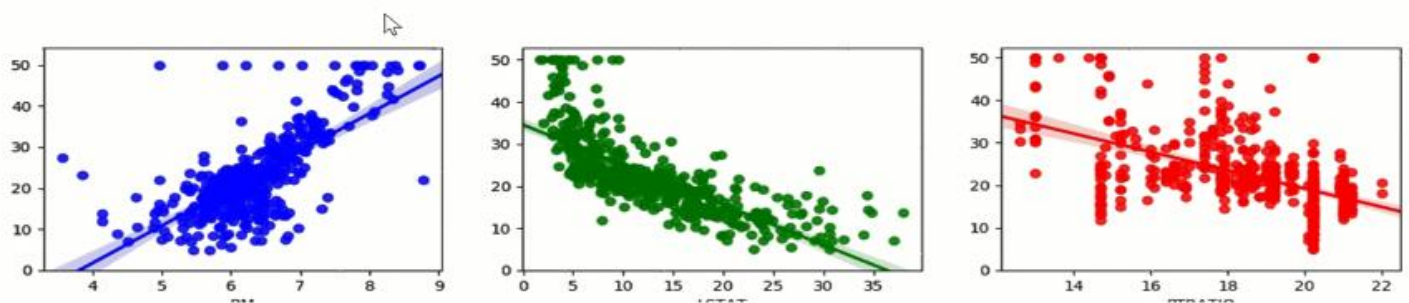
databricks

BostonDemo

File | View: Code | Permissions | Run All | Clear | Publish | Comments | Runs | Revision history

Cmd 7

```
1 #check how the features are related to the target value
2 fig, ax = plt.subplots(ncols=3, figsize=(15,3))
3
4 for i, var in enumerate(['RM', 'LSTAT', 'PTRATIO']):
5     sns.regplot(boston_df[var], boston.target, color=clr[i], ax=ax[i])
6     ax[i].set(ylim=(0, None))
7 display(fig)
```



Command took 1.40 seconds -- by dking@rdx.com at 1/5/2020, 6:53:06 PM on BostonDemo

Cmd 8

```
1 #display the correlation between the different features
2 # boston_df.corr() calculates the correlation matrix between the features
3 fig,ax= plt.subplots()
4 sns.heatmap(boston_df.corr(), square=True,annot=True)
5 display(fig)
```

Type here to search

9:55 PM 1/6/2020

||| NAVISITE

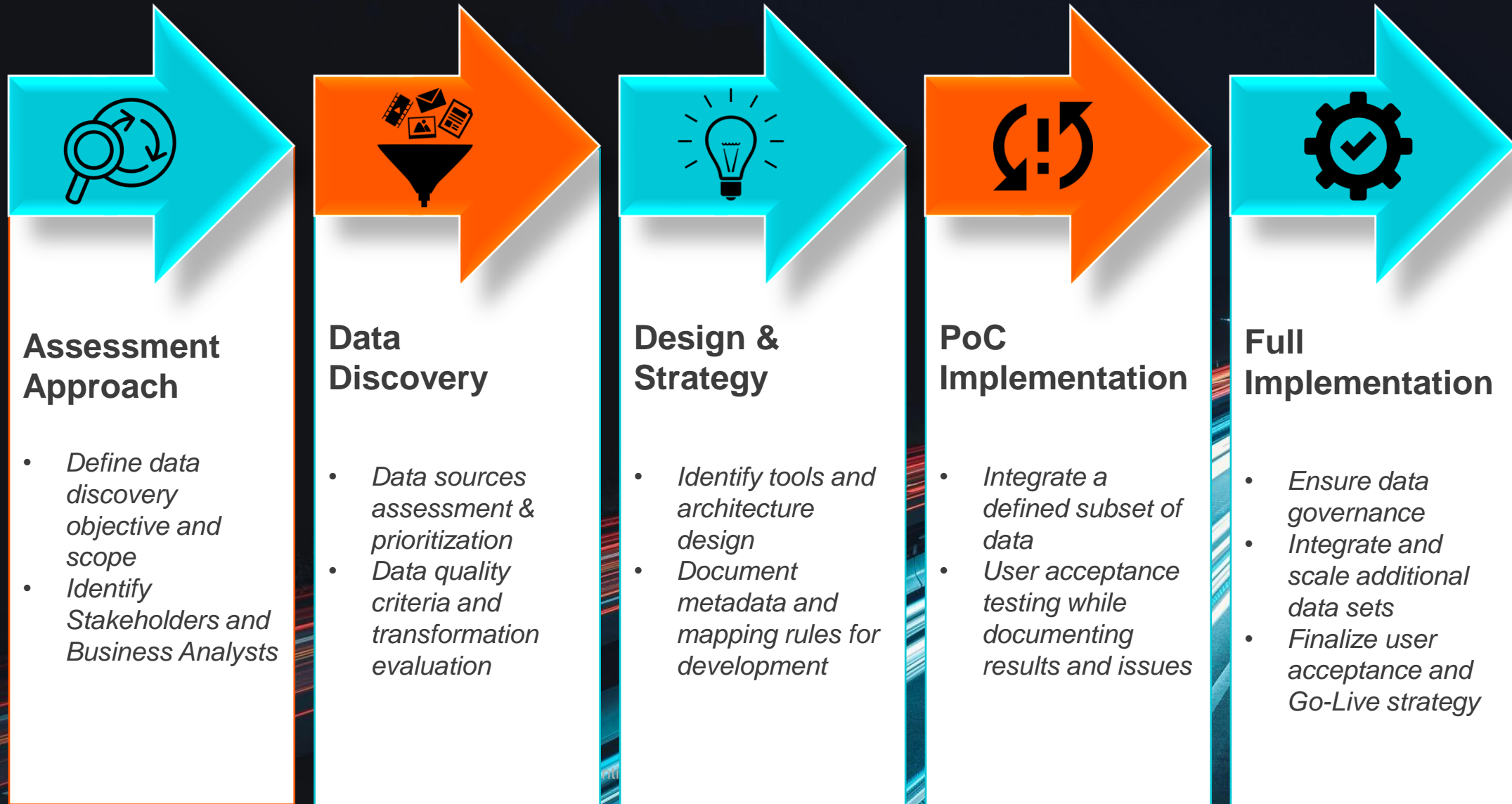
||| ELEVATE



Our Approach

SoW's and Case Studies

Data Integration Assessment



Navisite Data Analytics Project Implementation Estimate

Project Cost

201K

Project Hours

1080

Project Weeks

30

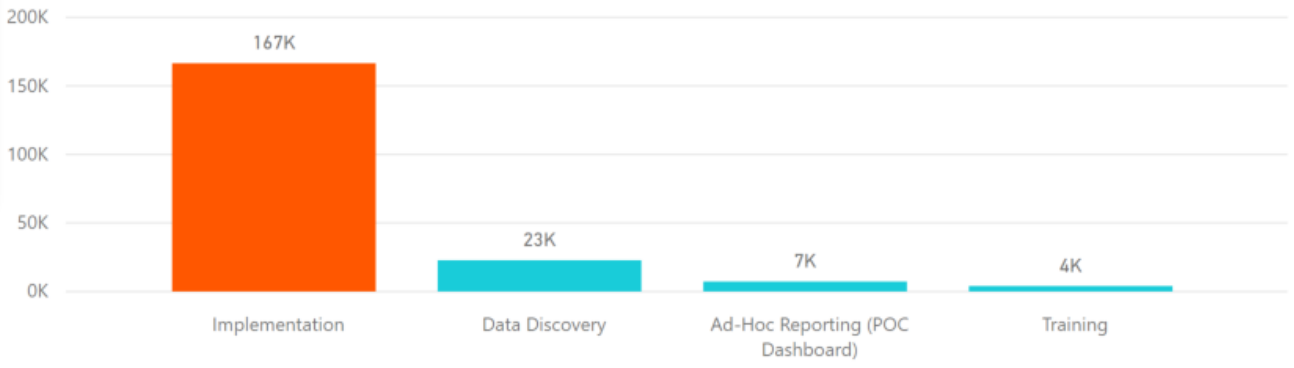
1 Yr Maint. & Support Cost (Optional)

42K

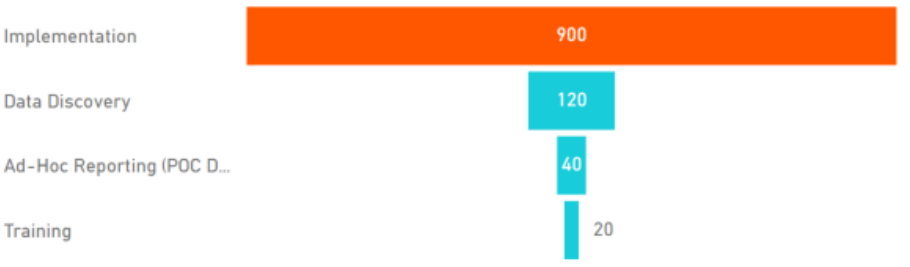
Project Resource Hourly Rate

Data Analytics Architect	200
Data Analytics Engineer	175
Project Manager	210

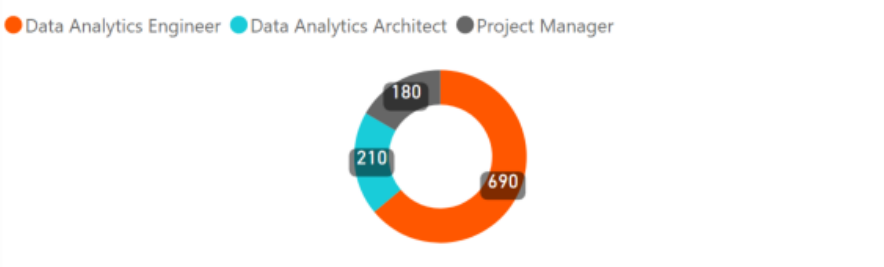
Total Cost by Project Phase



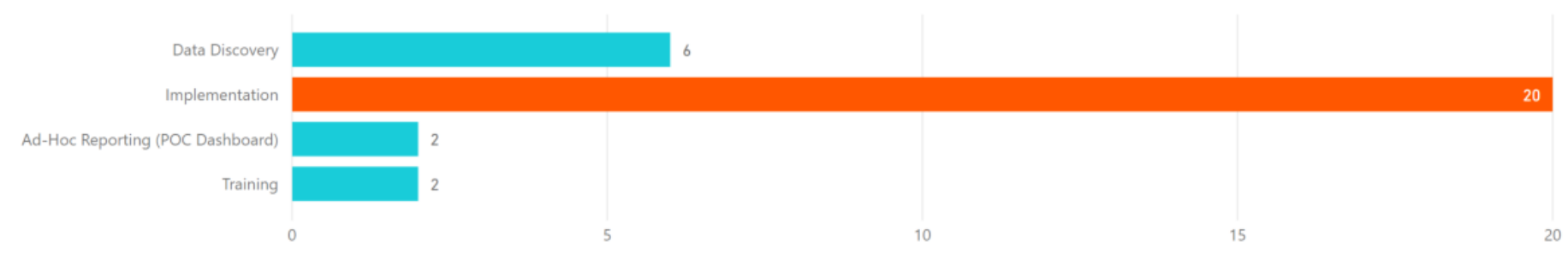
Total Hours by Project Phase



Total Hours by Project Resource



Number of Weeks by Project Phase





NAVISITE

Thank you!