Technology Forum - Open Data and Analytics
Unleash Data with Alteryx

Presenter: Jan Chan

Velocity
Business Solutions

FASTER **ANSWERS**. MORE **INSIGHTS**. BETTER **OUTCOMES**.

LATE NIGHTS. LONG HOURS.

Due to many analytic inefficiencies, employees are stuck in spreadsheet hell trying to analyze their data — instead of using their time wisely to affect changes based on what the data reveals.

$6 BILLION
hours per year are spent working in spreadsheets.

26 HOURS
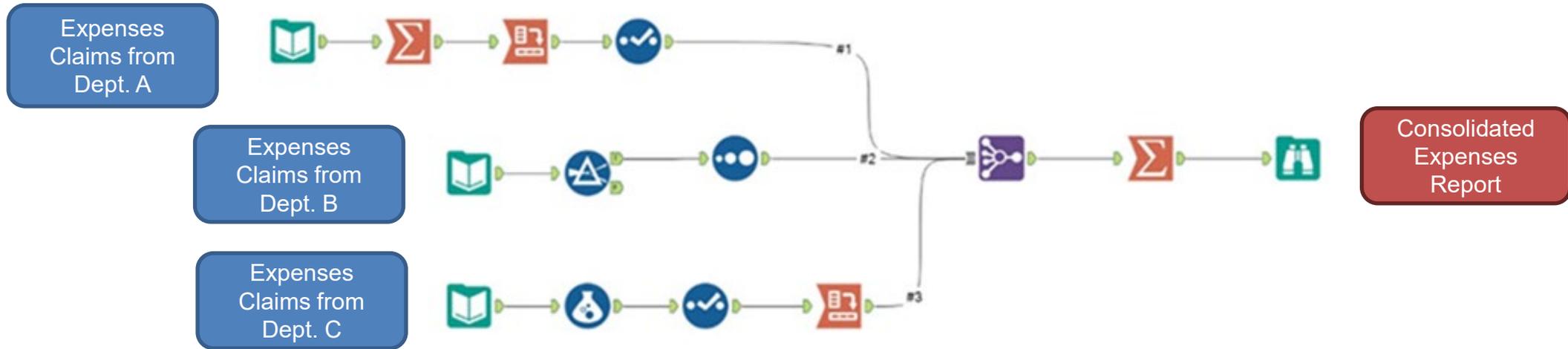per week are wasted working in spreadsheets.

8 HOURS
per week wasted repeating the same data tasks.

Source: "The State of Self-Service Data Preparation and Analysis Using Spreadsheets," IDC

Alteryx Workflow Approach is Superior

Expenses Claims from Dept. A

Expenses Claims from Dept. B

Expenses Claims from Dept. C

Consolidated Expenses Report

Consistent
Preparation, analytics and reporting in the same workflow

Transparent & Self-Documenting
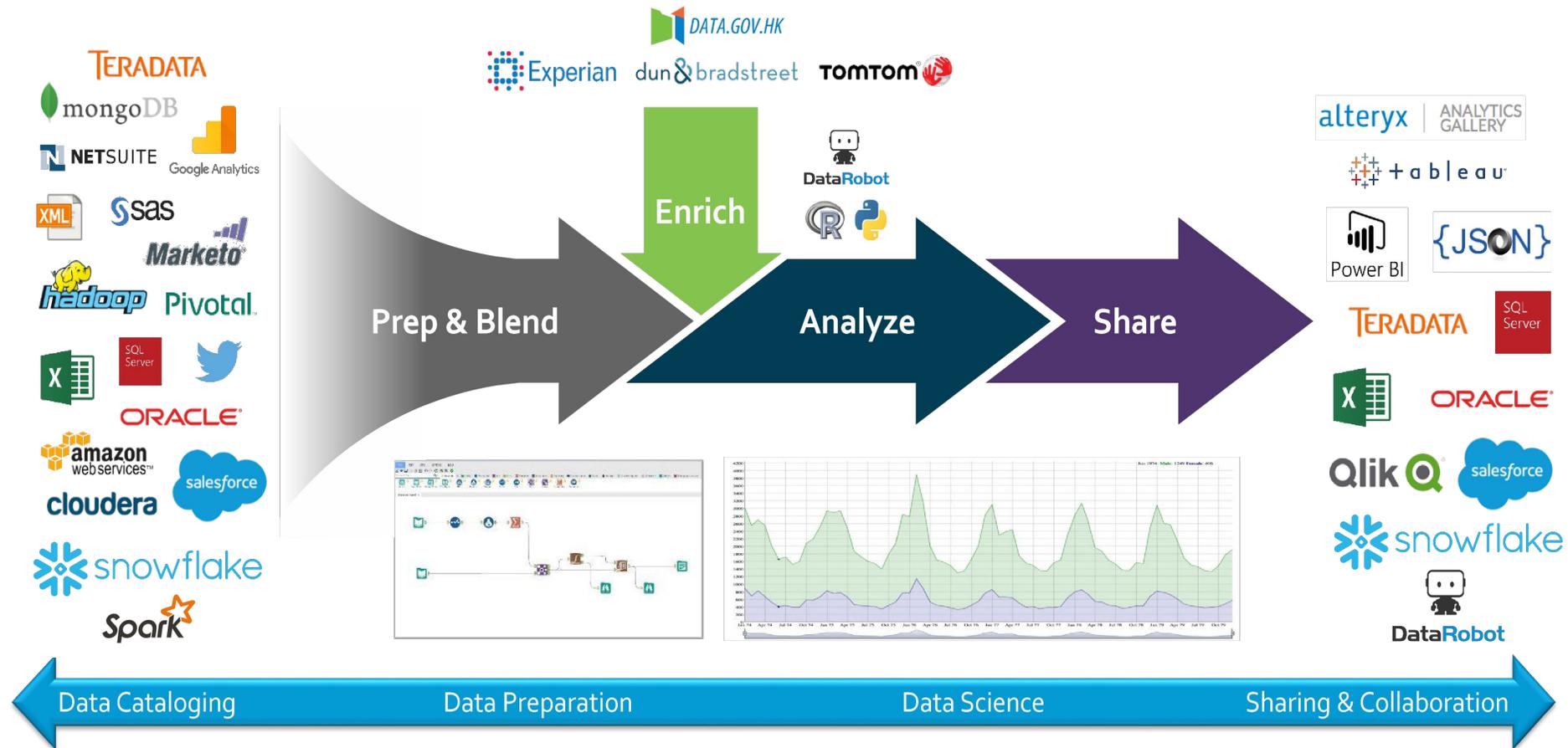See data flow through the process, and the actions performed at every step

Flexible
Supports more than just structured data that fits nicely into rows and columns

Repeatable
Re-run (manually or automatically) whenever you need updated results

Alteryx: Analytic Process Automation (APA) Platform
For Citizen Data Scientist

Alteryx Supported Data Sources

Workflow-based Approach is Superior

Consistent

Preparation, analytics and reporting in the same workflow

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See data flow through the process, and the actions performed at every step

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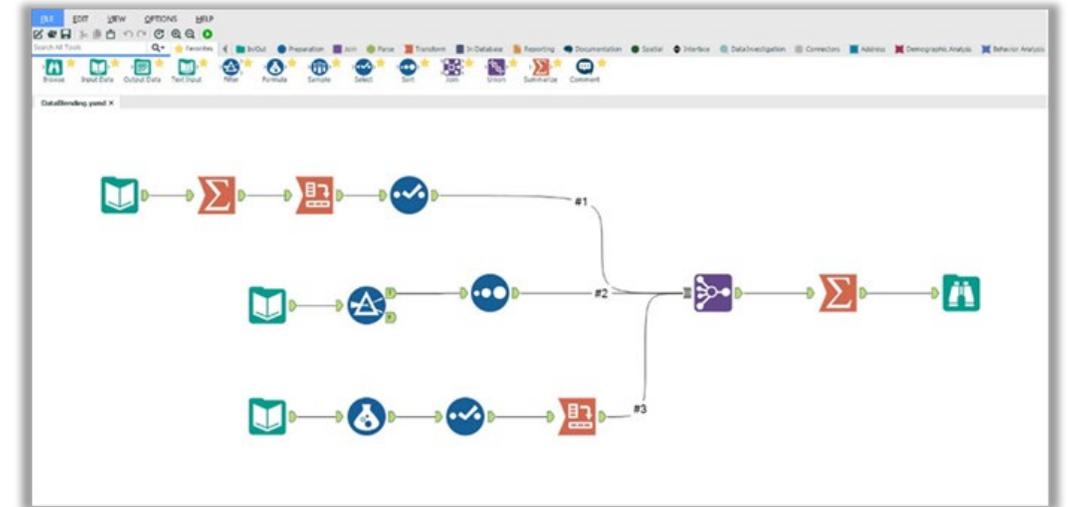
Repeatable

Re-run (manually or automatically) whenever you need updated results

Over 250+ Tools

THE PERIODIC TABLE OF alteryx TOOLS

found in alteryx 11.0.6
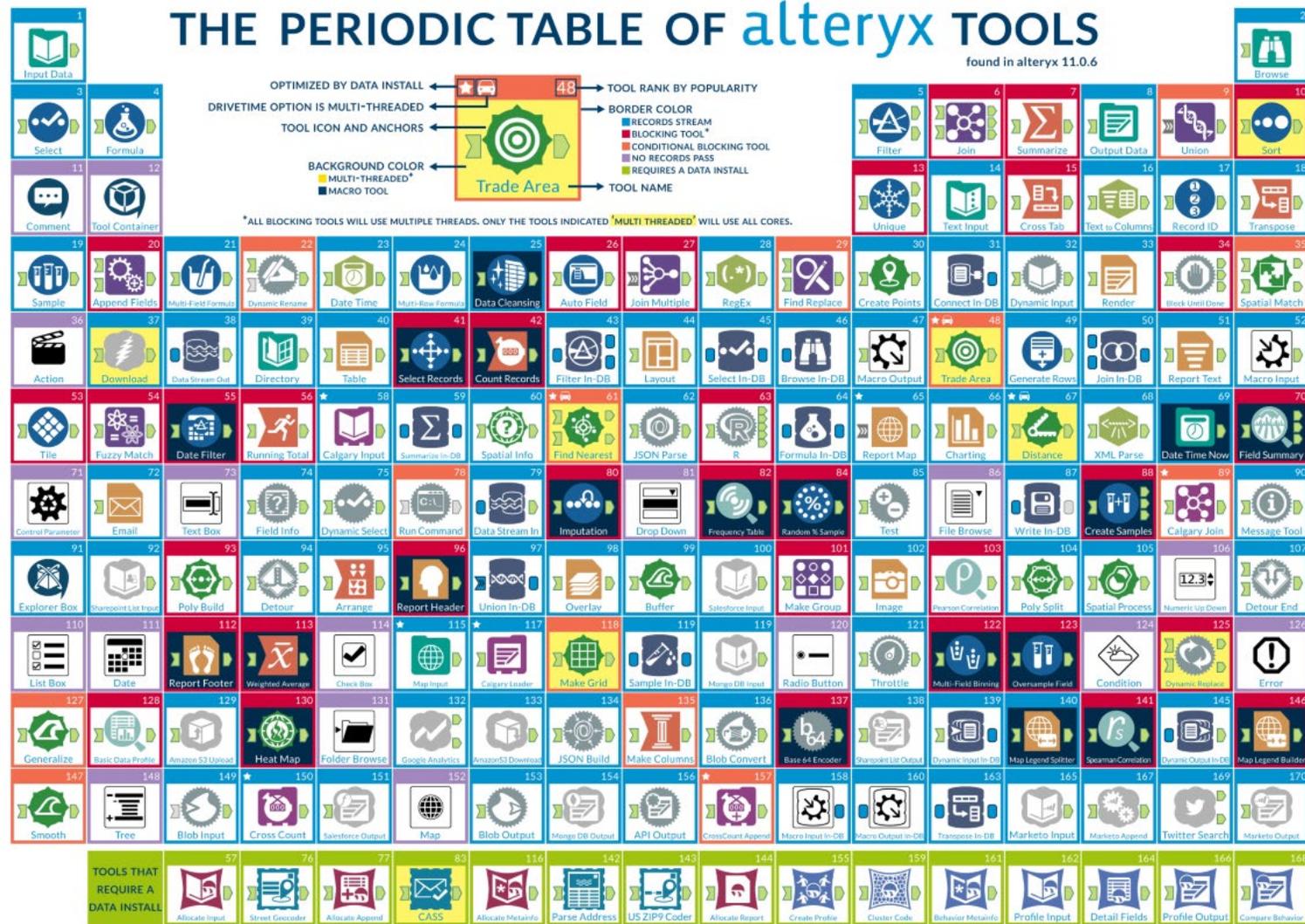
Collections of Advanced Analytics Tools

THE PREDICTIVE TOOLS OF alteryx

found in the alteryx 11.0.6 predictive install

The Alteryx Platform

Alteryx Connect

Alteryx Designer

**Administration,
Monitoring and Governance**

**Web Interface
for Sharing Apps/API's**

Alteryx Gallery

Built in security, data access
and version control

Alteryx Server

Automated scheduling, harvesting,
loading, and data refresh

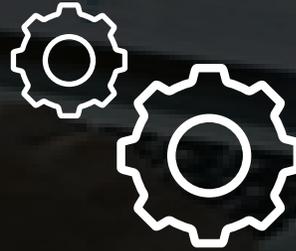APIs, SDK, web services

Metadata Catalogue

Use Cases

ETL Use Case: Regional Finance Dashboard
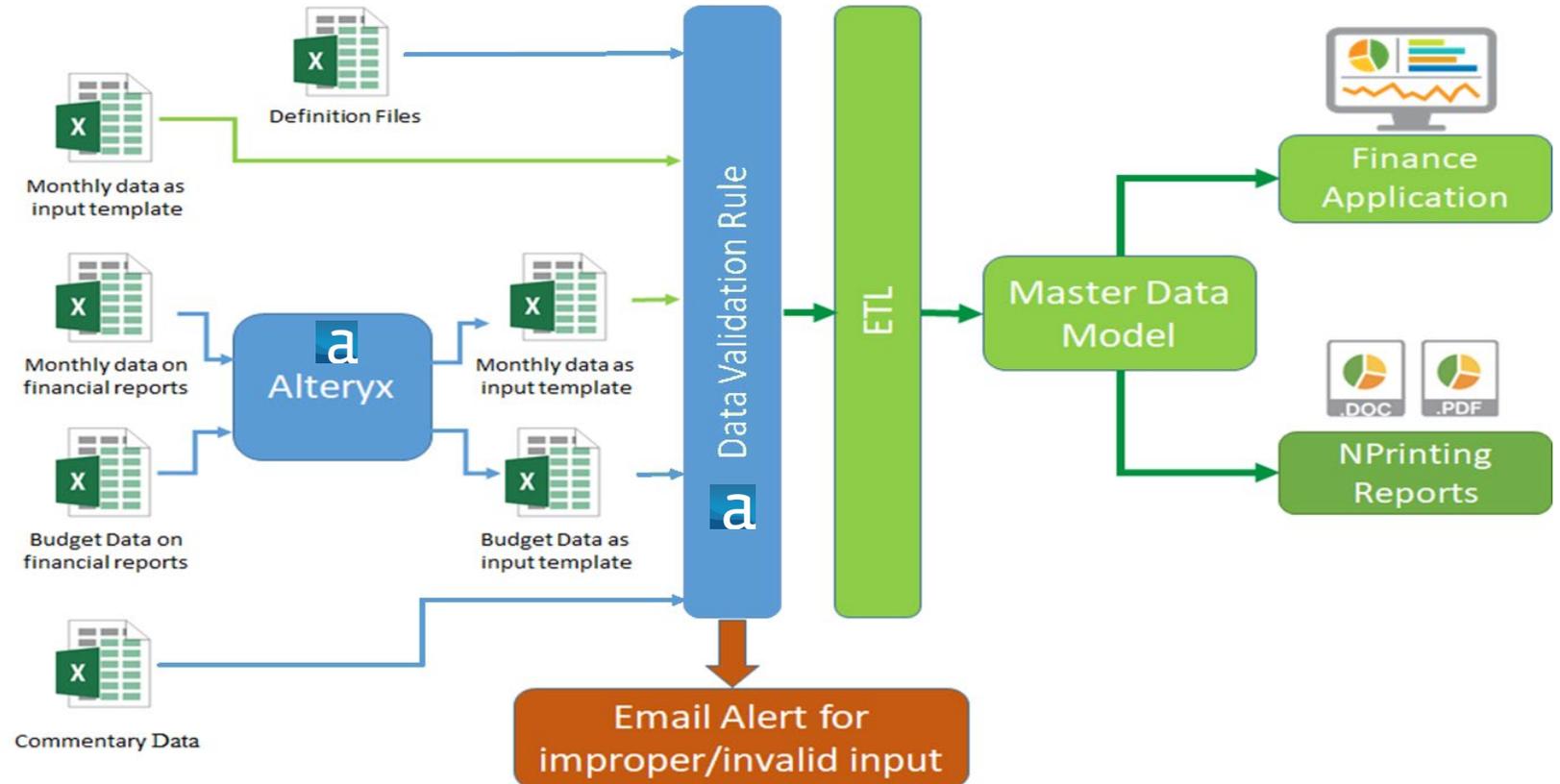
Global Insurance Company

Department: Finance

Business Problem:
Require at least 2 weeks to prepare the reports for management from extraction, validation, and visualization
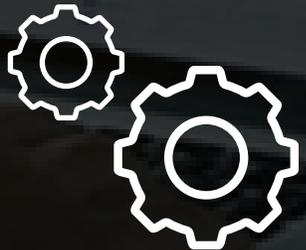
Benefits:
- ✓ Time saved: days vs weeks
- ✓ Reduced risk: manual eyeball checking vs automated validation rules and processes
- ✓ Improved sales opportunities

Definition Files

Monthly data as input template

Monthly data on financial reports → Alteryx → Monthly data as input template

Budget Data on financial reports → Budget Data as input template

Commentary Data

Data Validation Rule

ETL

Master Data Model → Finance Application

NPrinting Reports (.DOC, .PDF)

Email Alert for improper/invalid input
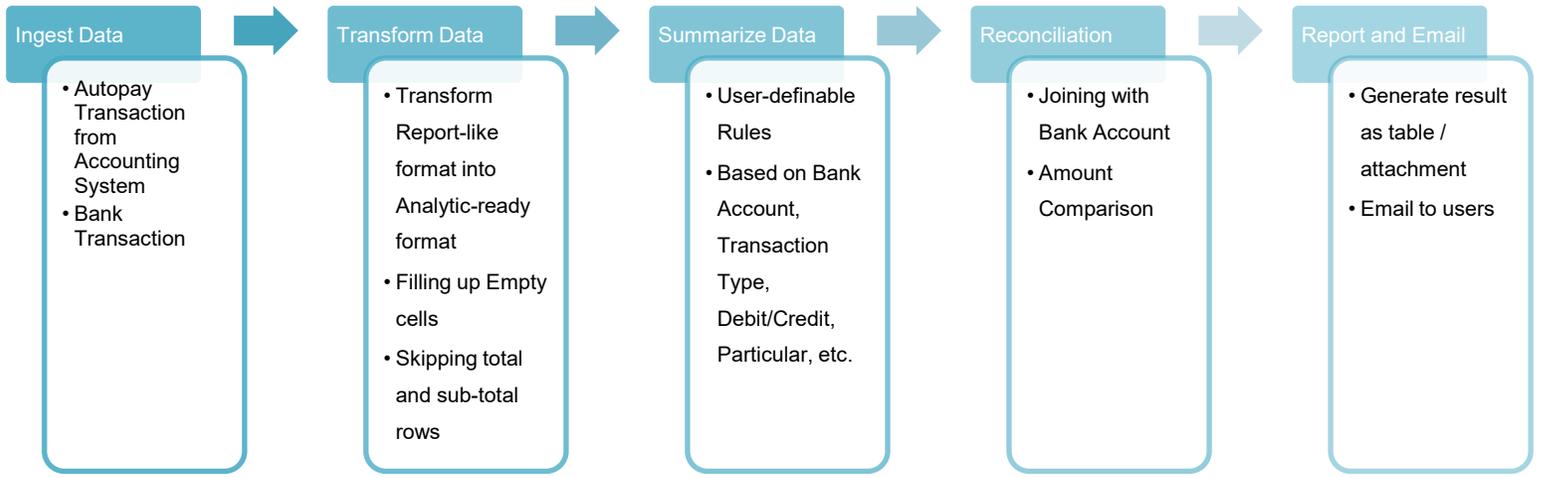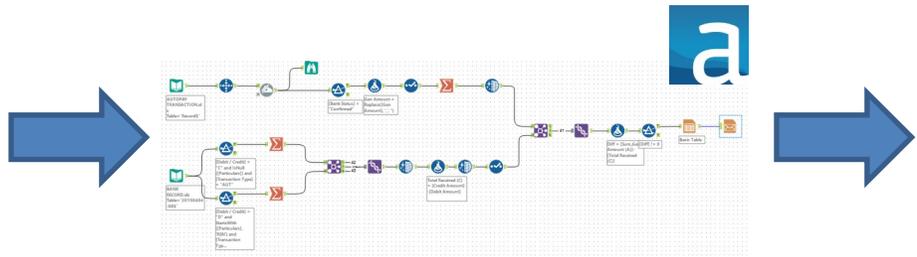
ETL Use Case: Autopay Reconciliation

Property Management Service Company

Department: Finance

Business Problem: Repetitive data transformation applied to individual Bank Accounts with varies business rules based on account type.
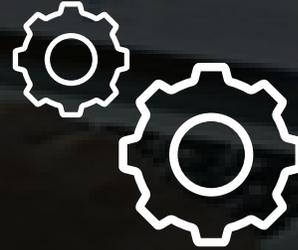
Benefits:
- ✓ Reduce Error by Automating the process for reconciliation for large amount of records across multiple bank accounts
- ✓ Flexible to adopt new business rules
- ✓ Alert user with exception through email
- ✓ Provide transparency to business users

Ingest Data	Transform Data	Summarize Data	Reconciliation	Report and Email
• Autopay Transaction from Accounting System • Bank Transaction	• Transform Report-like format into Analytic-ready format • Filling up Empty cells • Skipping total and sub-total rows	• User-definable Rules • Based on Bank Account, Transaction Type, Debit/Credit, Particular, etc.	• Joining with Bank Account • Amount Comparison	• Generate result as table / attachment • Email to users

Sales ETL Use Case: 360° Customer Dashboard

3D Printer Manufacturer

Department: Sales

Business Problem:

- Increasing number of data sources: Salesforce, Excel, Oracle etc.
- Data sizes are huge for Excel to handle
- Varying data formats per region
- Even with visualization tool, the marketing dashboard still needs 5 hours to generate
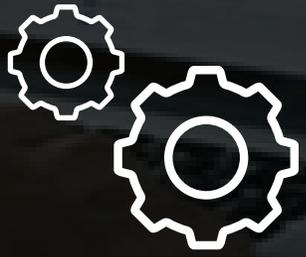
Benefits:

- ✓ Efficiency Gains and Big Time Savings: 1 Day vs 30 mins
- ✓ More Effective Communications: Better documentation and collaboration between departments
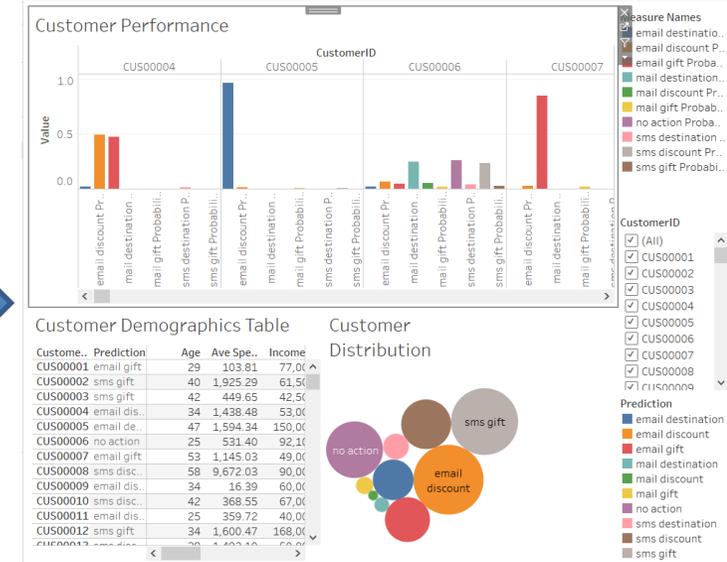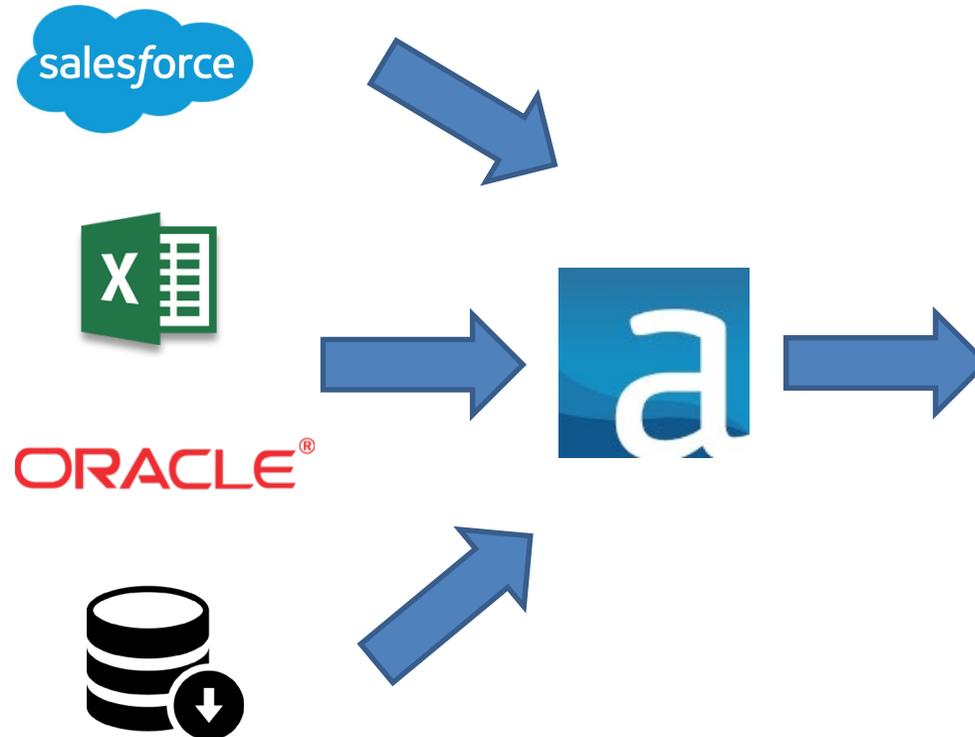
ETL Use Case: Form Analysis (Semi-structured to Structured)

Tele-communication Company

Department: Human Resources

Business Problem: Time consuming to extract claim form detail for analysis

Benefits:
- ✓ Streamline the whole process in one single run: Read and validate all PDF files in a folder and prepare data for dashboard
- ✓ Efficiency improved 80%

Insurance Claim Form PDF

Step 1

Text format

Step 2

Staff No.	Name of Insured	Hospital	Admission Date	Discharge Date
AC013	Justin Lee	SAC Hospital	2017-09-03	2017-09-10
IT085	Natalie Cheung	St. Mary's Hospital	2017-09-15	2017-09-21
..	..	..	..	..

Step 3

Generate Emails for validation result and Data for visualization

jasperlch@gmail.com
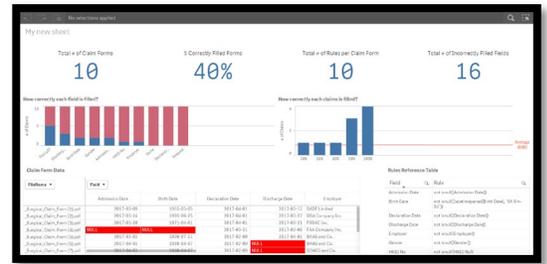
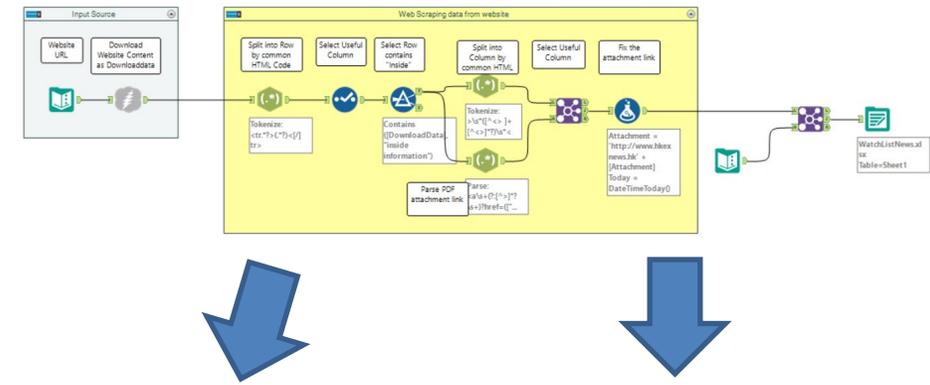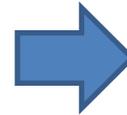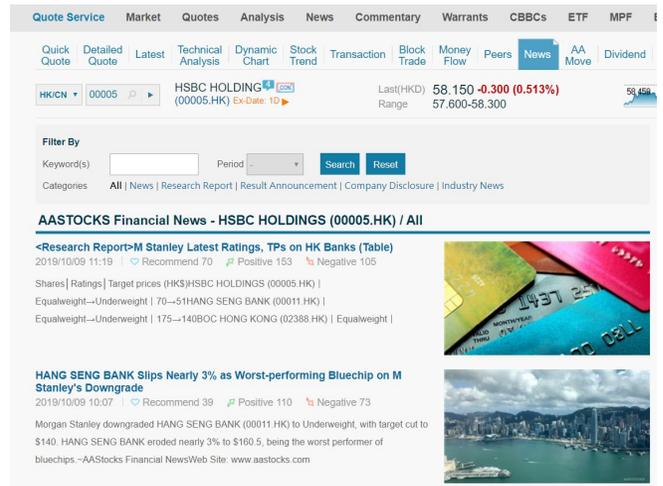# Web Scraping Case: Generate Stock Insider News for Clients
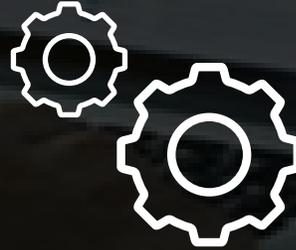
Investment Bank

Department: Brokerage

Business Problem: Need to spend at least an hour for manually grabbing day-end prices and stock news from website daily

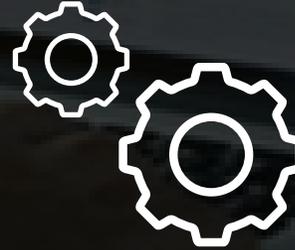**Benefits:** Only need to press Run daily now and automated reports can be generated within 5 minutes

Advanced Analytics
Case: Forecast on No. of Passengers

Airline Holding Company

Department: Strategic Planning

Business Problem: Improve the allocation of resources

Benefits: Business users can now do forecasting and prediction code-free without lots of help from other teams
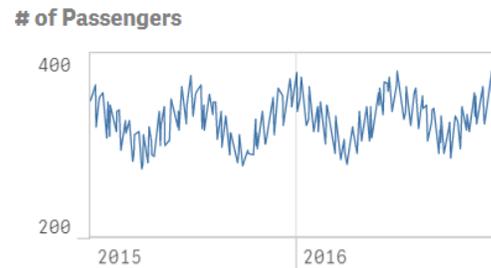
of Passengers

Gather historical data

of Passengers (Actual vs Prediction)

Measures
- Actual Data
- ARIMA (1)
- ARIMA (2)
- ETS
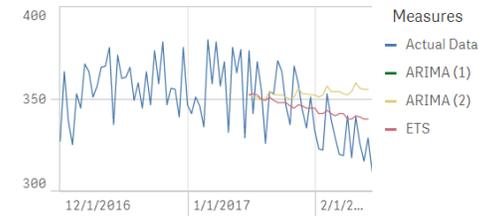
Run multiple predictive models and compare the results with actual data

of Passengers (Prediction)

Measures
- Actual Data
- ETS
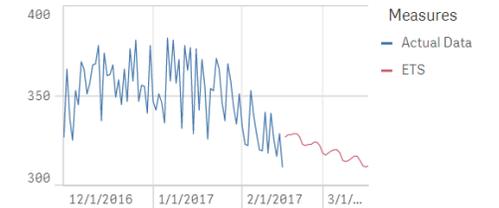
Choose the best model and make future predictions

Visualization in Qlik Sense

Marketing Use Case: Extract online stores and social media data to Data Warehouse
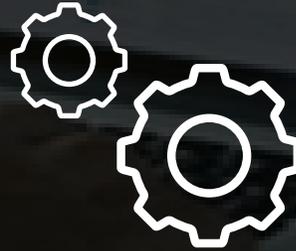
Property Development

Department: Marketing & Digital

Business Problem:
- Social media data are only captured in Google Sheets through Supermetrics
- Difficult to blend with their other data

Benefits:
- ✓ All social media data are consolidated in SQL through Supermetrics API
- ✓ Developing a marketing dashboard with internal and social media data

Facebook

Instagram

Google Analytics

Reporting Case: Generate Monthly Client Trade Report

Global Bank

Department: Customer Support

Business Problem:
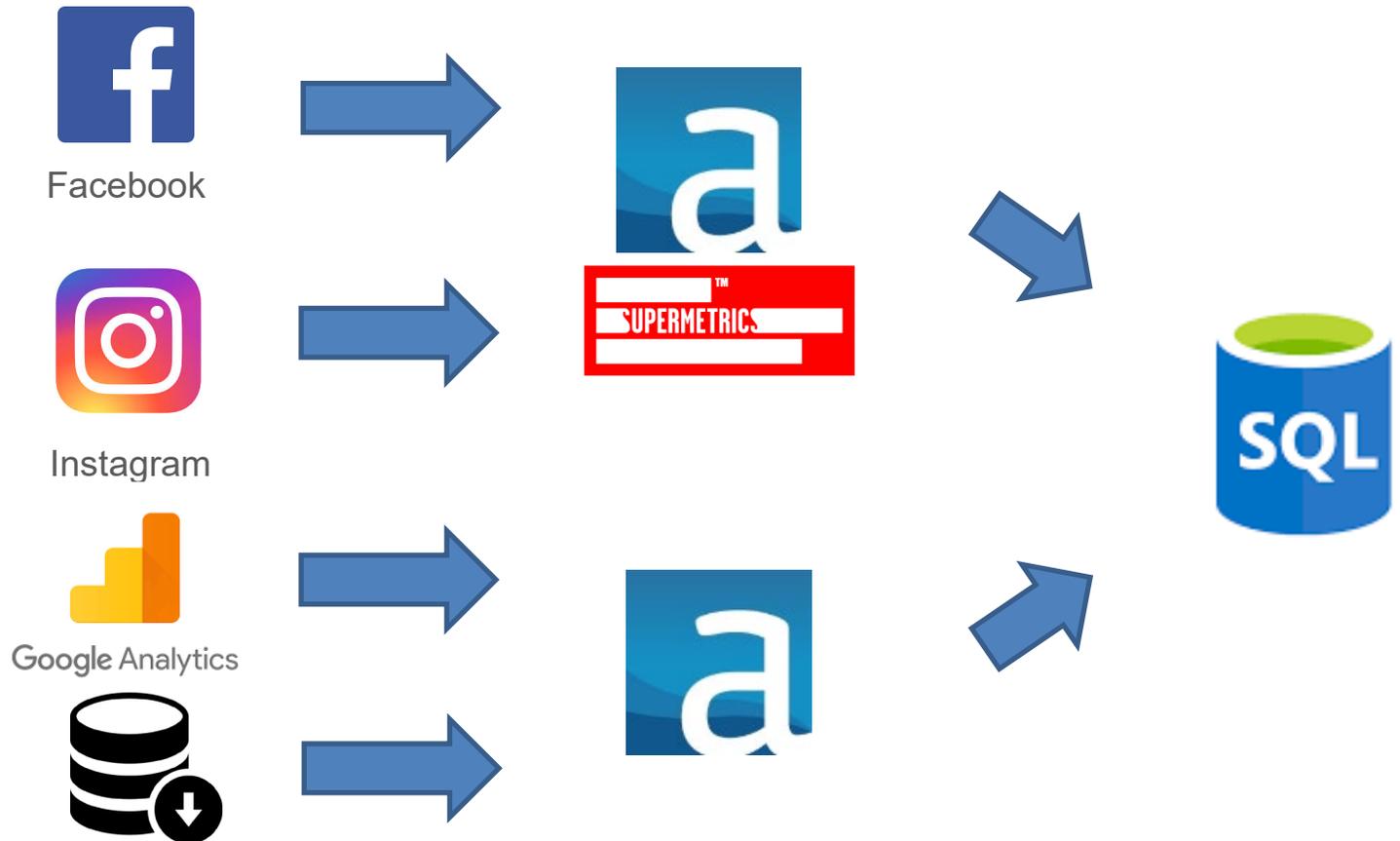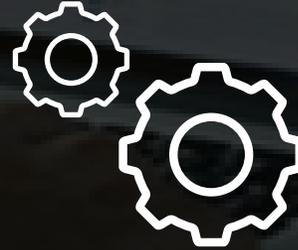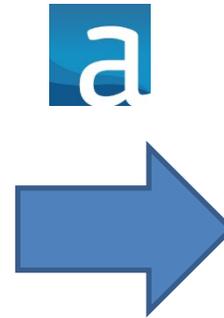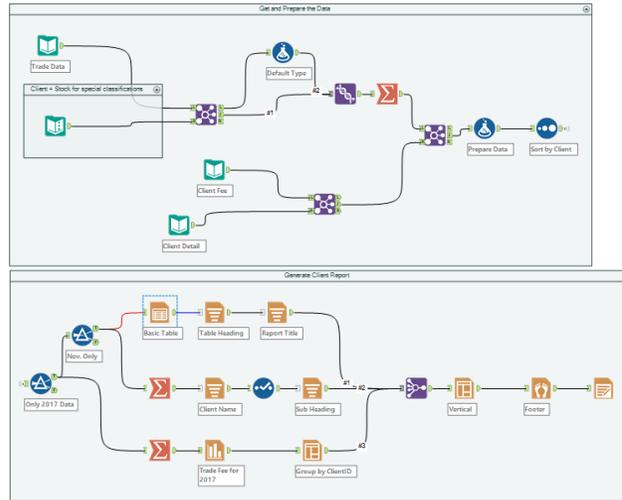Streamline the manual process of sending monthly report to client

Benefits:
- ✓ Time saved over 90%
- ✓ Emails can be sent automatically to client with encryption

For each client, a PDF with encryption is sent with the following sample layout

Monthly Client Trade Report
Barclays Capital Inc.

Total Trade Fees for Nov, 2017 is $516,203

Monthly Trading Volume and Fees

Date	No. of Trade	Trade Volume	Trade Value	Trade Fee
2017-11-01	4	207,523	9,260,777	37,043
2017-11-02	1	24,721	847,270	3,389
2017-11-03	1	77,225	4,965,614	12,414
2017-11-03	2	159,524	11,398,707	45,595
2017-11-04	5	400,036	28,713,041	114,852
2017-11-05	7	494,070	33,420,852	133,683
2017-11-09	4	313,875	14,297,407	57,190
2017-11-10	1	86,970	10,635,474	42,542
2017-11-11	4	230,498	9,960,326	39,841
2017-11-12	2	159,706	7,413,336	29,653

Current Year-to-Date Trading Fees

Trade Month
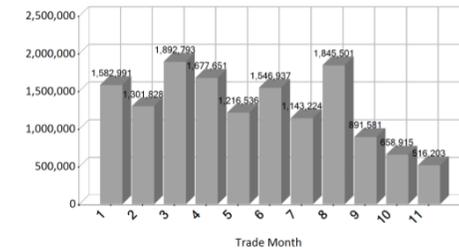
Alteryx Hourly Series - Reporting in Alteryx for Begin

Name	D:
BAR1_2017_11.pdf	11
CIT1_2017_11.pdf	11
CRE1_2017_11.pdf	11
DEU1_2017_11.pdf	11
GOL1_2017_11.pdf	11
JPM1_2017_11.pdf	11
MER1_2017_11.pdf	11
MOR1_2017_11.pdf	11
UBS1_2017_11.pdf	11

Thank You

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