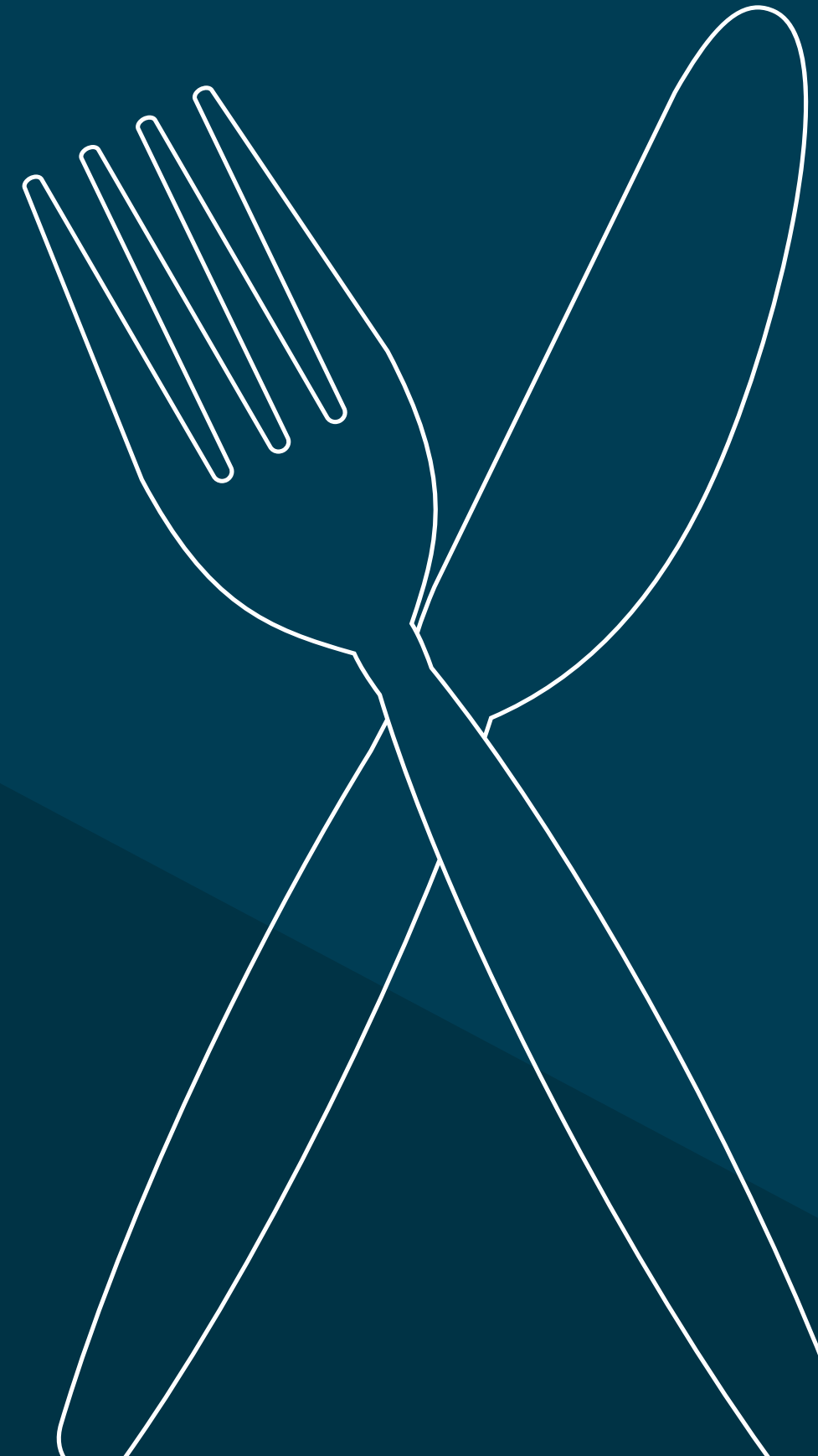


alteryx
COOKBOOK SERIES

6 Steps to Faster Data Blending for Tableau



What is Data Blending for Tableau?

Data Blending is the process of combining data from multiple sources to create an actionable analytic dataset. For Tableau users this is a critical and often time consuming process.

Tableau offers analysts the ability to deliver incredible insight to their organizations. As decision makers recognize the value of Tableau's visual analytics, analysts must find ways of dealing with increasing volumes of data, and complexity of the data required. In turn this forces analysts to spend many days dealing with:

- Long waits for the right data for their analysis
- Manual preparation and integration of different data sets
- A lack of the advanced analytics that many decisions require

Alteryx provides the advanced data blending capabilities required to reduce the time and effort to create the perfect dataset for a Tableau visualization. This cookbook shows how you can get started with faster data blending for Tableau.



Business analysts need insights fast to keep up with the pace of business



Decision makers are turning to tools like Tableau to understand data quickly



Analysts need faster data blending so they can spend their time visualizing their data

Alteryx Addresses The Speed Challenge: Faster Data Blending for Tableau

In order to get a true view of a business problem, analysts need many sources of data brought together. This is why over 200 Tableau customers use Alteryx for its powerful data blending capabilities usually only found in production Data Integration tools. Like Tableau, Alteryx is built with the analyst in mind – with a graphical workflow that does not require coding or specialist skills.

Users can take advantage of data in existing systems of record, for example a data warehouse, but then blend it with data on their desktop, in cloud systems, or even from big data systems such as Hadoop. This allows them to create the specific dataset they need quickly, and to render it directly to Tableau.

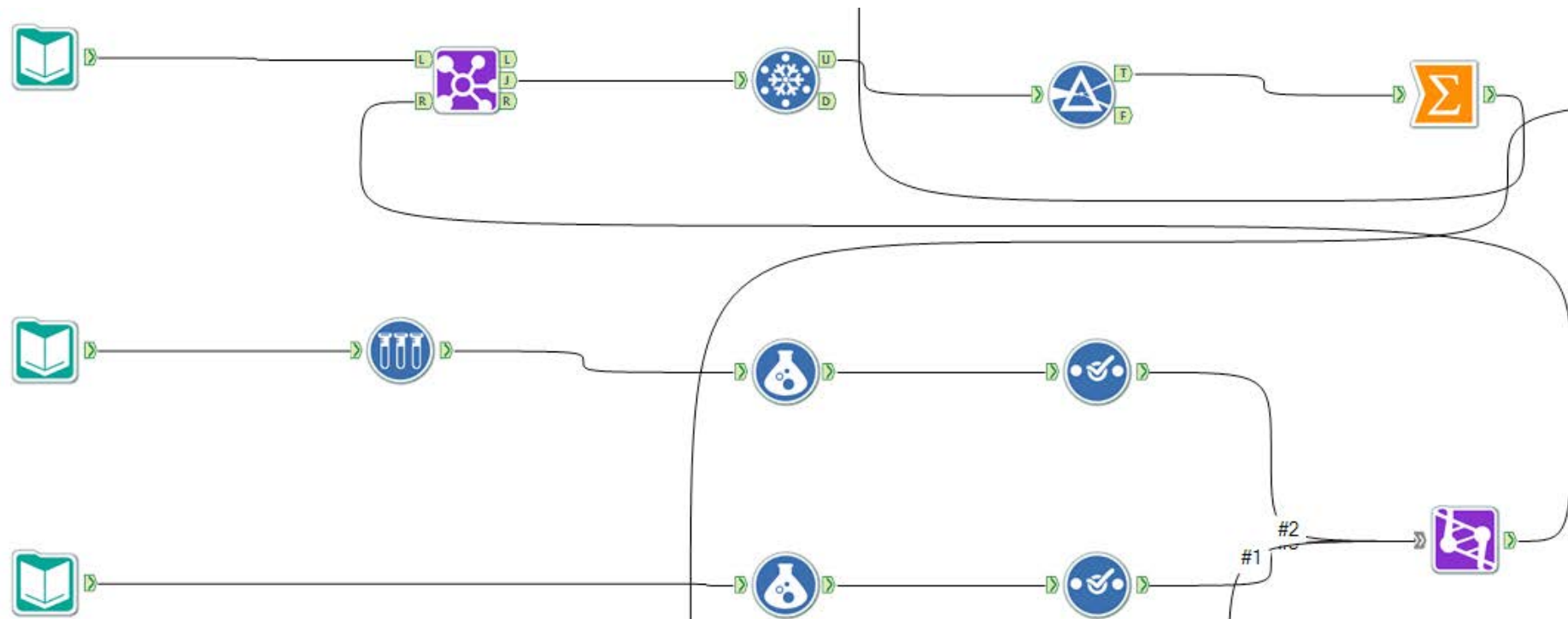
Data Blending Capabilities for Tableau

- Access to structured, unstructured, and semi structured data
- Data cleansing
- Data integration
- Data transformation
- Data enrichment

Alteryx Visual Analytics Kit for Tableau

To make it easy to get started with Alteryx and Tableau, we created the Visual Analytics Kit. This kit provides many pre-built analytics applications and corresponding visualizations.

This whitepaper workflow is based on the Multi-Channel Analysis sample that is part of the Visual Analytics Kit. You can download the kit and explore this and other analytics workflows at alteryx.com/kit



Alteryx Visual Analytics Kit for Tableau

- Survey Analysis
- Advanced Data Blending
- Parsing XML
- Sending Polygons to Tableau
- Multi-Channel Analysis
- A/B Testing
- Market Basket Analysis
- Drive Time Analysis

Download the Alteryx Visual Analytics Kit for Tableau at alteryx.com/kit

Recipe for Faster Data Blending

- 1 Get data from all the data sources needed for your analysis
- 2 Quickly cleanse your data to remove outliers, duplicate data, and other data noise
- 3 Optimize the data for visualization by moving rows to columns and renaming fields
- 4 Join the specific data required from all your different types of sources
- 5 Transform your data so that it is ready for analysis without manual formulas or copying data
- 6 Output your results by launching them directly in Tableau without spending time looking for files

Ingredients you need

- A copy of Alteryx
alteryx.com/download
- A list of the data sources you want to blend
- Access to each database or source you are going to use
- A rough specification of the dataset you need
- A clear understanding of the analysis you want to deliver

See demo videos on Data Blending for Tableau at alteryx.com/tableau

1

Get data from all the data sources needed for your analysis

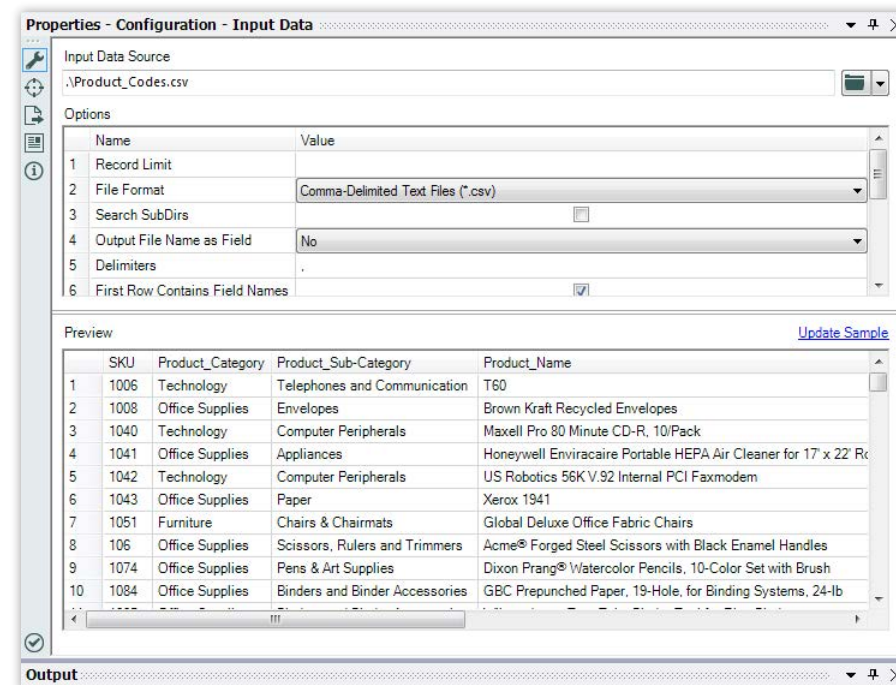
- By using the Input tool you can drag and drop data sources into the Alteryx canvas to build a workflow
- Choose each data source you need by using the configuration pane for the Input tool
- Preview your datasets so that before you blend them together you can understand if you need to make changes later in the workflow



Customer Database



Product Sales



Recipe for Analytic Greatness

- Ensure you have the right credentials to access your data sources
- Understand what problems are in your data
- Plan how you will transform your data in your workflow

2

Quickly cleanse your data to remove outliers, duplicate data, and other data noise

- Once you have accessed your datasets you can now prepare them for blending and analysis
- Remove outliers and noisy data by using the Sample tool, in this case
- Use the Filter tool to isolate only the subset of data that you are interested in
- Use the Unique tool to remove duplicate data

Recipe for Analytic Greatness

- Make product names, categories, and user IDs consistent as you bring multiple datasets together
- Using Alteryx you can create a taxonomy of your terms and create consistent category names



3

Optimize the data for visualization by moving rows to columns, renaming fields, and associating demographics

- Drag the Transpose icon onto the canvas, and transpose your columnar data to row format
- Use the Select tool to rename your fields to make your visualizations more readable
- Use the Formula tool to take values from one set of cells and reuse them on other rows of data

Recipe for Analytic Greatness

- Shape and label your data to optimize it for Tableau
- Associate 3rd party demographic data such as Experian Mosaic data with your customers for segmentation



Move sales data from columns to rows



Rename fields such as LOR to Length of Residence



Associate Mosaic segments with each transaction so you can analyze product sales by segment

4

Join the specific data required from all your different types of sources

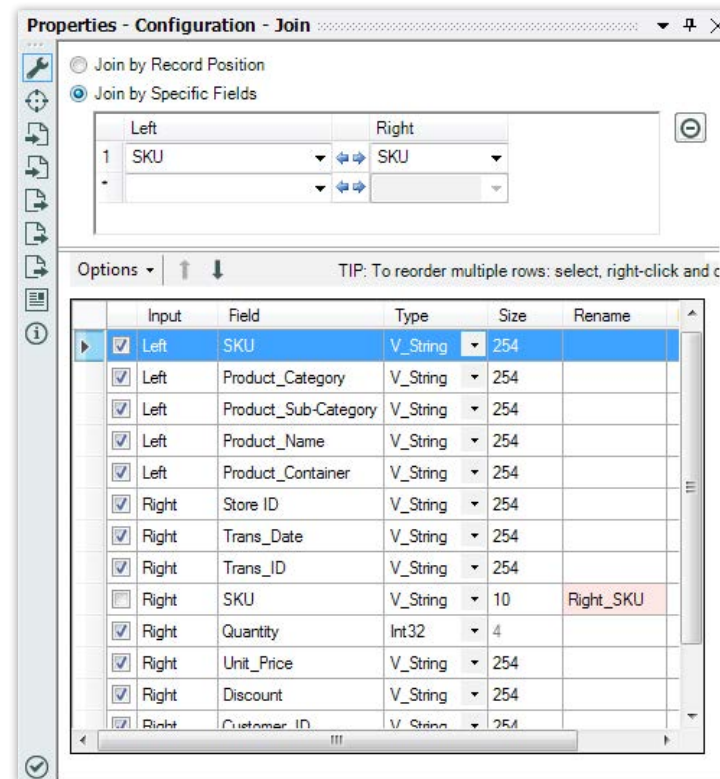
- Accept and combine each stream of data into a single stream using the Union tool
- Join the product details to the customer transactions on the SKU number. In some cases fields don't exactly match, but Alteryx lets you join them anyway using Fuzzy Match



Use the Union tool to combine each data source into a single stream



Join product details to customer transactions



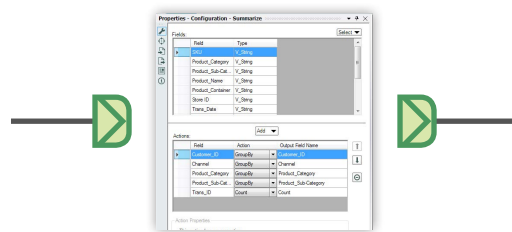
Recipe for Analytic Greatness

- Bring together fields that don't exactly match using the Alteryx Fuzzy Match tool
- Fuzzy Match has preconfigured match styles and can be used to identify non-exact duplicates and merge them or purge them

5

Transform your data so that it is ready for analysis without manual formulas or copying data

- Use the Summarize tool to count the number of transactions by Customer ID
- Then use the Summarize tool again to total the value of the purchases



Summarize: Count the number of transactions, and add the value of the transactions

The screenshot shows the 'Properties - Configuration - Summarize' window. It is divided into two main sections: 'Fields' and 'Actions'.

Fields:

Field	Type
SKU	V_String
Product_Category	V_String
Product_Sub-Cat...	V_String
Product_Name	V_String
Product_Container	V_String
Store ID	V_String
Trans_Date	V_String

Actions:

Field	Action	Output Field Name
Customer_ID	GroupBy	Customer_ID
Channel	GroupBy	Channel
Product_Category	GroupBy	Product_Category
Product_Sub-Cat...	GroupBy	Product_Sub-Category
Trans_ID	Count	Count

At the bottom, there is an 'Action Properties' section with the text: 'This action has no properties'.

Recipe for Analytic Greatness

- Alteryx provides hundreds of tools that perform data transformations
- Our whitepaper on [Mastering Survey Analytics](#) gives great detail on transforming data for visualization

6

Output your results by launching them directly in Tableau without spending time looking for files

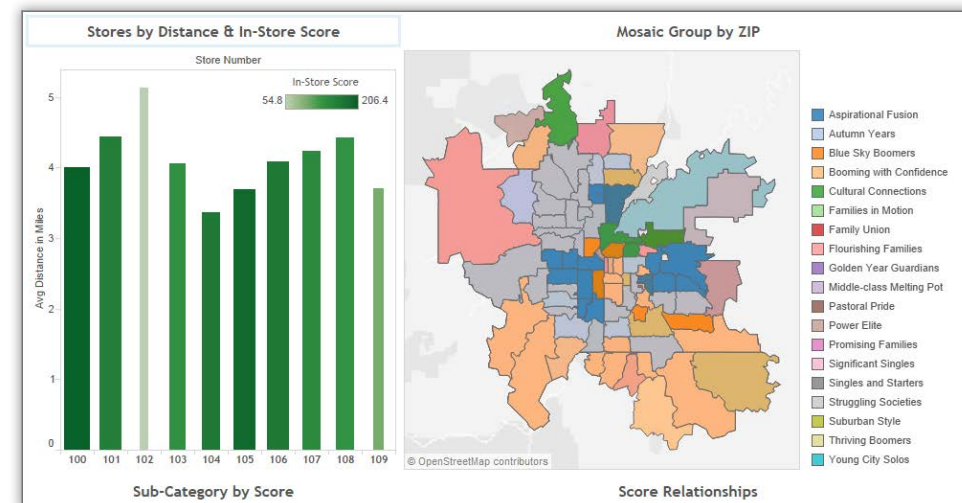
- Don't spend time searching for files – launch Tableau directly from Alteryx
- Alteryx can output directly to the Tableau TDE file format, providing performance gains by compiling computations prior to rendering your visualizations
- Alteryx can also launch Tableau workbooks, updating the underlying data but displaying the results in your dashboards

Recipe for Analytic Greatness

- Use Alteryx Server on a scheduled basis to provide incremental updates to TDE files on Tableau Server, ensuring your visualizations are always up-to-date



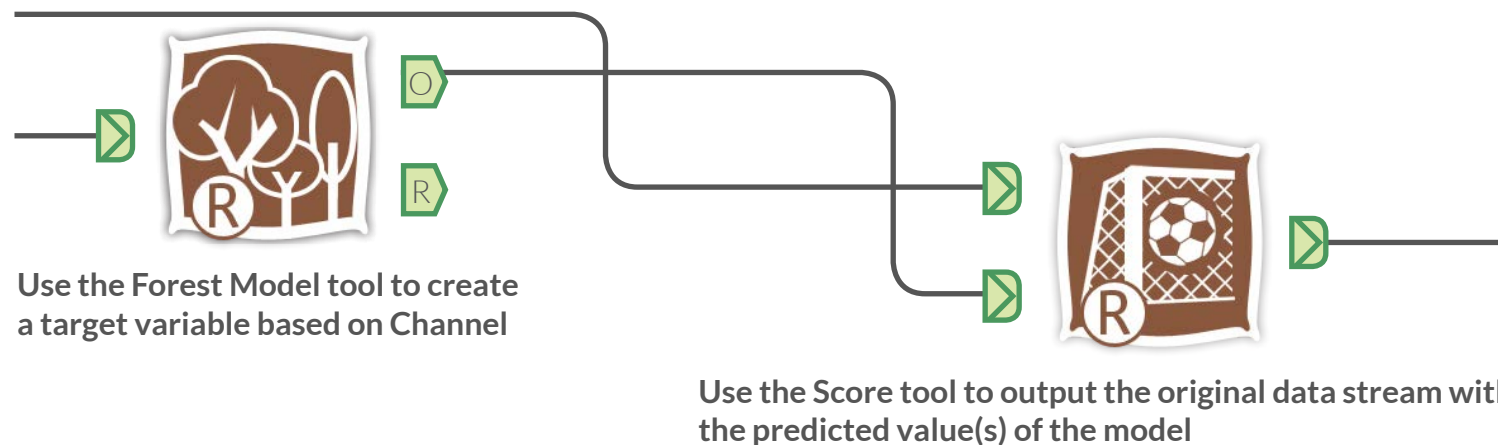
Tableau Workbook Tool: Immediately launch your results in your favorite Tableau Workbook





Bonus : Use Advanced Analytics in Alteryx to Score Customers

- With your historical data in place, you can now predict customer value
- Calculate which customers added in the last week will become Top 5% Lifetime Value customers
- Determine which customers are the most likely to churn by turning to other vendors
- Alteryx provides drag and drop predictive analytics that analysts love – no coding necessary!



Recipe for Analytic Greatness

- Use your blended data as the basis for powerful predictive and spatial analytics
- Reuse your Alteryx workflows for new problems and datasets – you can continue to build your own intellectual property



“With Alteryx and Tableau, a week’s worth of work became a couple of minutes. And with the dashboards available, we’ve been able to eliminate 4 hours of weekly meetings.”

– Matthew Hughes

Manager of Inventory and Analytics

Alteryx Helps Sager Creek Become An Analytics Driven Business

Sager Creek has moved from manual labor and inventory calculations into a world of advanced analytics. They developed their analytics processes in Alteryx in just a few hours, and output the results directly to Tableau dashboards.

Deeper Business Insights

Sager Creek has gone from manual calculations to analytics that optimize labor scheduling and inventory planning

Hours Not Weeks

Sager Creek has reduced inventory calculation work from one week to a few minutes

Intuitive Workflow

Sager Creek has created these analytics workflows in just a few hour with Alteryx



Consumer Orbit Provides Clients With A Single Customer View In Hours

“We believe transformational companies need transformational tools. We’ve built our company on Tableau and Alteryx.”

– Bill Engel
Chairman

Consumer Orbit is able to create new dashboards for every client, by combining 10 or more sources of data. They use Alteryx, which enables data analysts to blend all those sources in hours, not weeks. Without the ability to custom blend these sources quickly for every client, Consumer Orbit would not be able to cost effectively offer their services.

Deeper Business Insights

Performing predictive analytics to drive marketing optimization and decisions in an easy to use dashboard for each client

Hours Not Weeks

Processing an entire consumer file of 60 trillion records in hours not days

Intuitive Workflow

Blending 10+ sources of marketing data for every client in a few hours

Resources



Practice data blending in Alteryx
alteryx.com/download



Watch demo videos of Data Blending for Tableau
alteryx.com/tableau



Download the Tableau Viz kit
alteryx.com/kit



View Customer videos
alteryx.com/customers



Why Should Analysts Use Alteryx and Tableau Together?



They can deliver fast insights to take advantage of business opportunities



They can shift from spending 2/3rds of their time preparing data to analyzing it



They release IT from the burden of iterative data requests, making IT happy!



“A manual process that took days to scrub a list of prospects against CNA current and past insureds data can now be done in minutes.”

– CNA Insurance

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Data Blending and Advanced Analytics

More than 700 customers and
thousands of data analysts worldwide rely on Alteryx daily.

alteryx.com/tableau