

alteryx

The Definitive Guide to Self-Service Data Preparation For Microsoft Power BI

USING ALTERYX

alteryx

Data Preparation for Microsoft Power BI

As decision makers recognize the value of visual analytics for Microsoft Power BI, analysts must find ways of dealing with the increasing volumes and complexity of the data required to create richer visualizations.

Microsoft Power BI empowers analysts to create dashboards and reports that drive stronger analysis of insights. The key to deriving the full potential of those insights lies in the underlying data and how that data is prepared. Users can work with data within existing systems, and blend it with data from Excel, Microsoft Access, Microsoft SQL Server, cloud apps, social media apps, and more.

- Decision-making for retail site selection or multi-channel profiling
- Driving specific business processes such as packaging data for sale by data aggregators
- Creating predictive sales analytics using customer info, clickstream, and segmentation

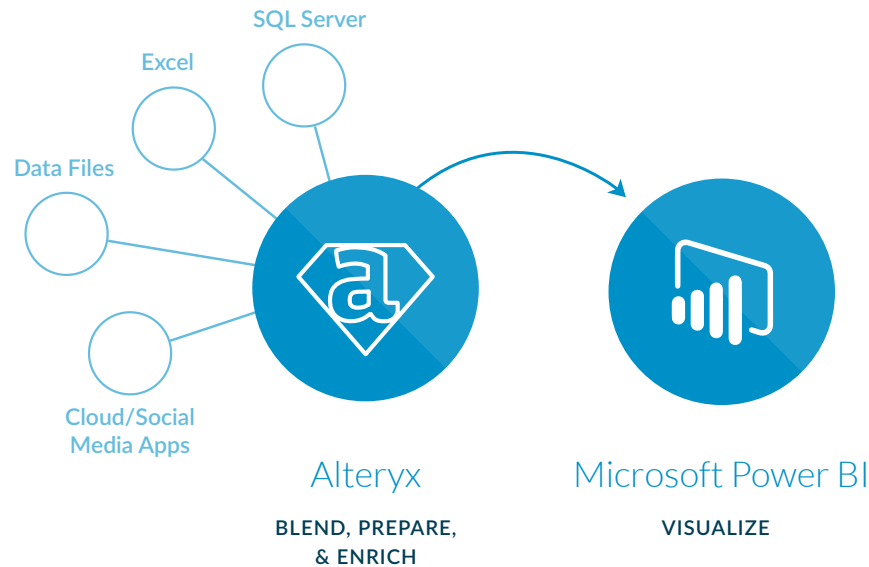
It is time-consuming to prepare data for analysis and visualization. Weeks are spent in trying to get the dataset prepared the right way. It takes a lot of time to obtain the full potential of data-driven insights if the datasets feeding it are incomplete, slow to process, have errors, or lack context. Hence, users may not be getting the full picture. There has to be a better and easier way to prepare data in order to drive stronger data discovery, exploration, analysis, and visualization to solve business problems.

Get Back The Hours You Are Losing

SPEED UP DATA PREPARATION FOR MICROSOFT POWER BI

Alteryx makes it easy to gather and prepare multiple data sources in a single intuitive workflow, with no programming required. Users can work with data within existing systems, and blend it with data from Excel, Microsoft Access, SQL Server, cloud apps, social media apps, and more.

It means that users can create the ideal dataset for their needs without relying on others. Data preparation in Alteryx can also be automated, freeing up time so users can focus on creating richer visualizations in Microsoft Power BI.



Alteryx Gives Data Analysts:

- A drag-and-drop visual workflow—no programming required
- Seamless preparation of internal, third-party, and cloud-based data
- 60+ built-in tools for spatial and R-based predictive analytics
- Simple creation of reports, analytics apps, or data for Microsoft Power BI visualization
- User productivity in hours, not weeks

Alteryx for Microsoft Power BI



Access

Alteryx gives analysts direct access to data of any type or any source to help deliver a more complete view of the data they need to make more informed decisions.



Cleanse

Duplicates, extraneous characters, trailing zeroes, and other data noise can be cleaned up in a few simple clicks. Alteryx offers extensive tools for data preparation and data cleansing to speed up the time to create the right dataset.



Shape

Data visualization tools often require the data to have a particular structure. Shaping data often involves correcting row/column format and replicating data for visualization. Using Alteryx, you can reshape your data to make it easily consumable in Microsoft Power BI.



Integrate

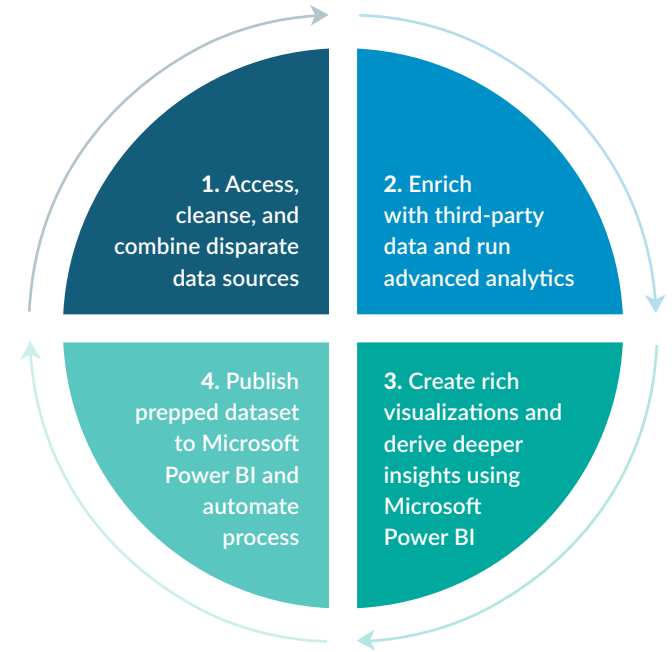
Alteryx gives users complete flexibility when it comes to joining multiple datasets by providing an array of tools to help with virtually any data situation. Alteryx allows data of any type or any level to be brought together. Join data on both the record and field level as well as non-identical fields. Other tools, like fuzzy matching, allow users to match on non-matching data.



Transform

Alteryx enables analysts to quickly add a new field to an input table, create new data fields based on an expression or data relationship, or modify an existing field based on these same premises. Analysts can also easily add complex formulas and calculations using the transformation tools.

LEVERAGE THE POWER OF ALTERYX FOR MICROSOFT POWER BI



Speed Up Your Data Preparation

- Self-service data preparation involves:
- Access your desired data
- Cleanse your data
- Shape your data
- Integrate multiple data sources
- Transform your data
- Output to Microsoft Power BI



ACCESS YOUR DESIRED DATA

Alteryx gives analysts direct access to data of any type or any source to help deliver a more complete view of the insight they need to make informed decisions. No longer do you need to rely on others to get the data you need. You can access data from multiple sources such as:

- Local data (spreadsheets, user device generated data, enterprise data warehouses, etc.)
- Databases and Data Warehouses (Oracle, Netezza, Teradata)
- Hadoop and No-SQL databases (Cloudera, Hortonworks, MongoDB, Cassandra)
- Third party data (Dun & Bradstreet, Experian, TomTom, US Census, etc.)
- Cloud/social data (DataSift, Twitter, GNIP, Facebook, Salesforce)





CLEANSE YOUR DATA

With Alteryx, data cleansing tasks are quick and easy. Duplicates, extraneous characters, trailing zeroes, and other data noise can be cleaned up in a few simple clicks. Alteryx offers extensive tools for data preparation and data cleansing to speed up the time to create the right dataset, without having to rely on outside intervention. Alteryx also allows you to simplify your data cleansing regime. You only have to define your cleansing process once. Every time you introduce or update your data, Alteryx automatically cleanses the dataset according to the rules you've previously set. Now you have a truly automated data preparation process you can trust and iteratively refine.



Input Tool



Select Tool



SHAPE YOUR DATA

Beyond data cleansing, Alteryx is instrumental in ensuring that a dataset fits your specific purpose by shaping it accordingly. Alteryx enables you to transpose data to pivot orientation of the data table so that you can view horizontal data fields on a vertical axis and vertical data fields on a horizontal axis. In addition, you can shape your data to summarize it by grouping, summing, count, spatial object processing, and string concatenation.



Transpose



CrossTab



Summarize

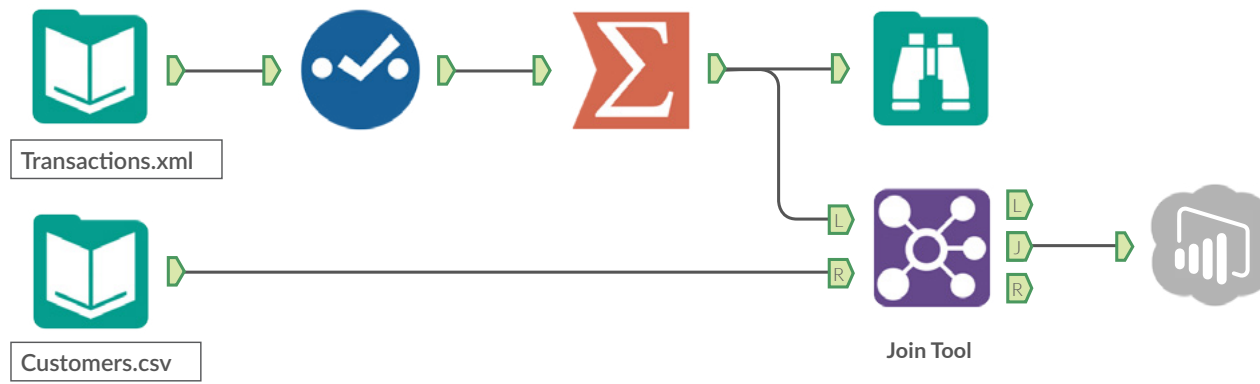


Browse



INTEGRATE MULTIPLE DATA SOURCES

Alteryx gives you complete flexibility when it comes to joining multiple datasets. Joining data in Alteryx is not limited to just one field or column. Alteryx allows data of any type or any level to be brought together. This means that it can be joined at both the record and field level, and it can even be expanded to include multiple key fields. Alteryx is flexible enough to join data on non-identical fields as well as incorporate spatial characteristics, such as customer points, to be combined into your data. In addition, fuzzy matching tools give you the ability to match two datasets based on non-matching data like names and addresses.

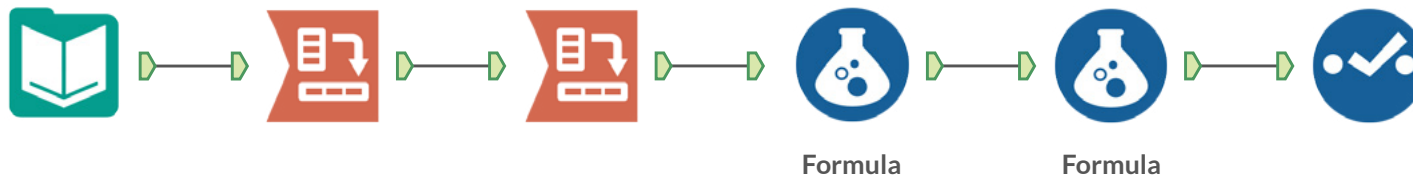




TRANSFORM YOUR DATA

Alteryx enables you to easily transform your data. Take for instance predictive modeling. This type of advanced analytics requires a narrow data set with just a few specific variables to establish causality and extrapolate for trends. In contrast, spatial visualization for demographics requires as much data as possible, so you can recombine, compare, and view the data from different perspectives such as geography, gender, income, etc.

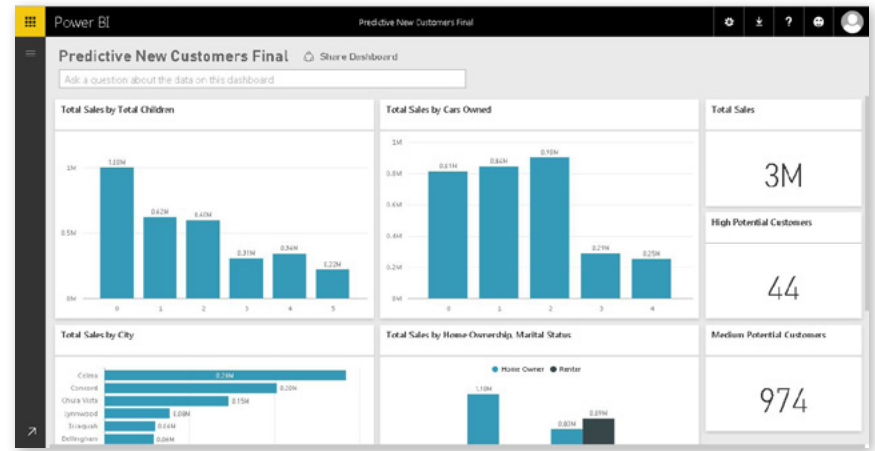
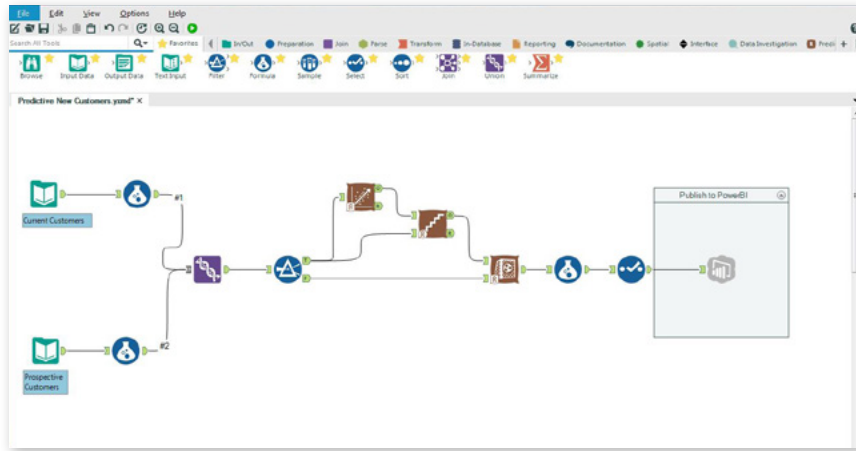
The average user could spend many frustrating weeks transforming raw data into a usable form for advanced analysis. Fortunately, tasks like these are short work for Alteryx... and by short work we mean hours. Alteryx empowers users to easily and quickly transpose data, add formulas to perform complex calculations, and utilize advanced functions to deliver required insights.





OUTPUT TO MICROSOFT POWER BI

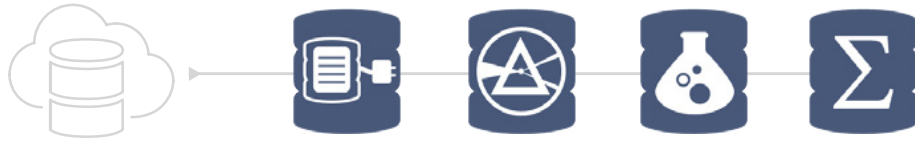
Alteryx makes it easy for you to push your dataset directly to Microsoft Power BI so that you can start creating rich visualizations, dashboards, and reports in order to uncover deeper insights.



BONUS: IN-DATABASE BLENDING AND PREPARATION

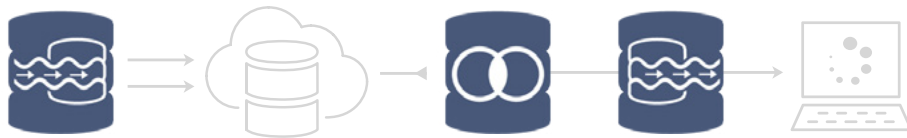
Alteryx empowers users with the ability to perform in-database blending in order to push the processing steps into the database and retrieve only the data you need, rather than pulling the entire dataset to the processing location (typically your desktop). This enables you to utilize the in-database processing power of Microsoft SQL Server and Microsoft SQL Data Warehouse to answer new questions faster.

In-database blending also allows you to avoid the need for IT, or specialized analytics staff, to write SQL code or other query languages for blending and preparing data.



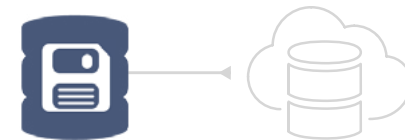
Direct connection to Microsoft SQL Server is made with **Connect In-DB** tool to access data

Filter In-DB and **Formula In-DB** tools are used to remove outliers and noisy data; **Summarize In-DB** counts the number of records



Data is streamed into Microsoft SQL Server with the **Data Stream In** tool, then joined with other data using the **Join In-DB** tool

The new dataset is returned to desktop using **Data Stream Out** tool. Location and predictive score modeling are done in-memory with Alteryx



The clean data is retained in Microsoft SQL Server using **Write In-DB** tool, ready for advanced analytics or visualization

Why Should Analysts Use Alteryx and Microsoft Power BI Together?



SPEED TO INSIGHT

Prepare your data for visualization in 1/10th the time



POWER TO ANALYSTS

Put the power of self-service data analytics in your hands



AUTOMATIC UPDATES

Update your visualizations instantly as your data changes

Learn more about how Alteryx and Microsoft Power BI speed up data preparation to visualization



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