



Anaheim, CA
June 4-7

Platform Training Highlights

Terry Alexander, Ph.D.
Pfizer



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Advanced Spatial Analytics

Flood Risk Use Case

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Flood Risk Use Case



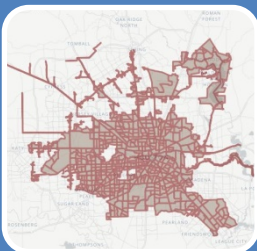
Texas Rivers

- Name
- 100 Year Flood Range
- Spatial Objects - Lines



Houston Urban Area

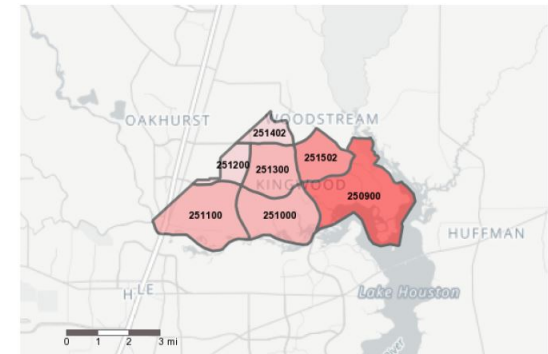
- Spatial Object - Polygon



Houston Housing Tracts

- Tract
- Houses per Tract
- Median House Value
- Spatial Objects - Polygons

Houston Housing Tracts with Assumed Flood Risk > \$250M



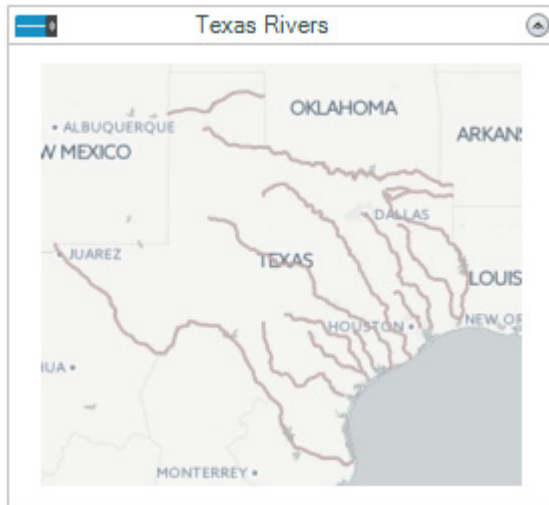
TRACT	Total Houses per Tract	Median House Value	Assumed Risk
250900	3,559	\$334,475	\$1,131,423,997
251502	3,633	\$218,417	\$793,507,750
251000	1,478	\$385,150	\$569,251,700
251100	2,967	\$167,180	\$496,021,344
251300	2,665	\$178,500	\$475,702,500
251402	2,358	\$113,133	\$266,768,400
251200	1,880	\$138,400	\$260,192,000





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Buffer (38) - Configuration

Spatial Field
SpatialObj_Built Include in Output

Generalize to 1% of Buffer Size

BufferSize

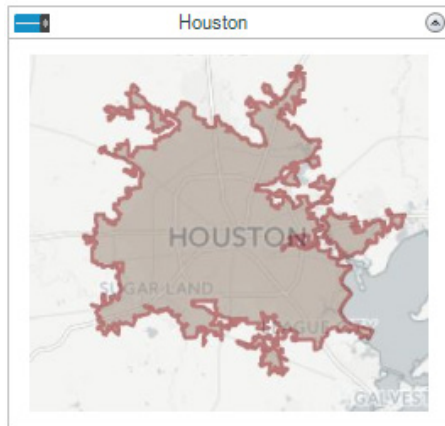
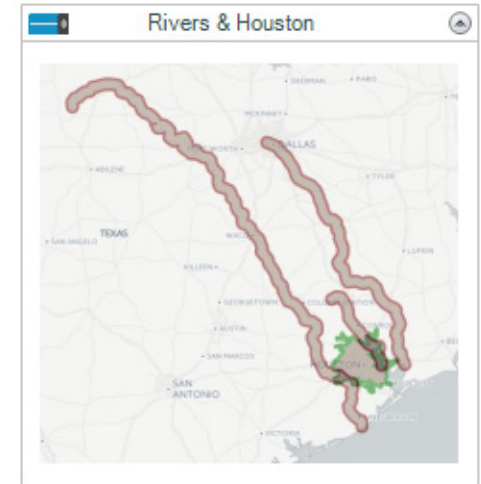
Specific Value: 1

From Field: 100 Year Flood Range (mi)

Units: Miles

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Spatial Process (16) - Configuration

1st Spatial Field
Houston Urban Area

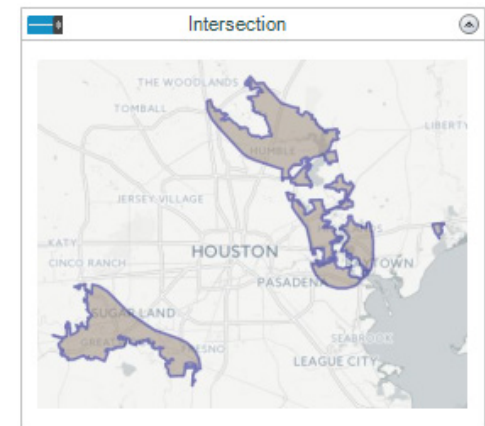
2nd Spatial Field
Buffered Rivers

Action

- Combine Objects
- Cut 1st From 2nd
- Cut 2nd From 1st
- Create Intersection Object
- Create Inverse Intersection Object

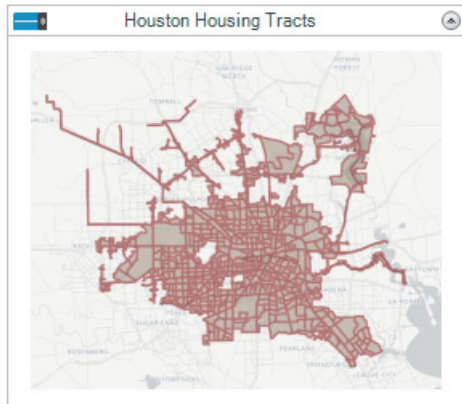
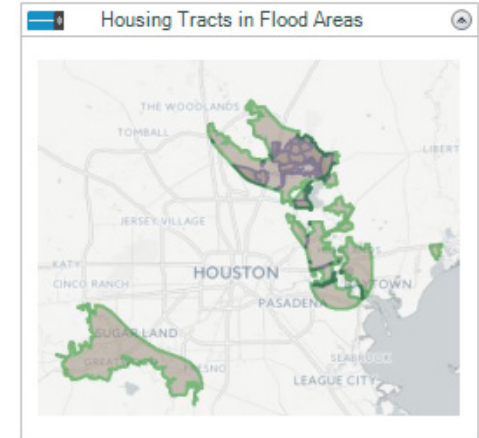
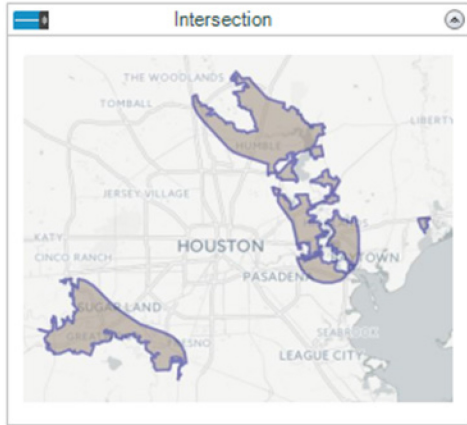
Don't Output Empty Objects

The diagram illustrates the intersection of two spatial fields. On the left, two overlapping circles are shown: a blue circle labeled "#1" and a yellow circle labeled "#2". An arrow points to the right, where the intersection of the two circles is highlighted in green, and the resulting intersection object is labeled "#1" and "#2".



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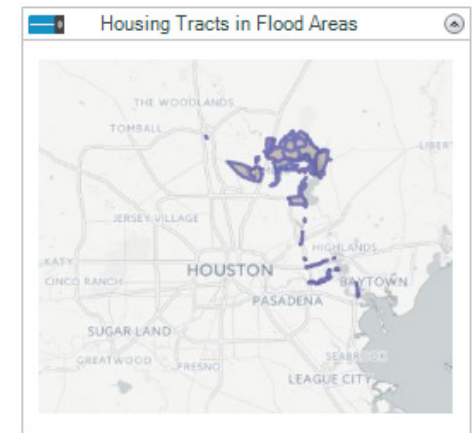
Spatial Match (54) - Configuration

Targets (T Input)
 Spatial Object Field:

Universe
 Use Records from U Input
 Use Records from File or Database:

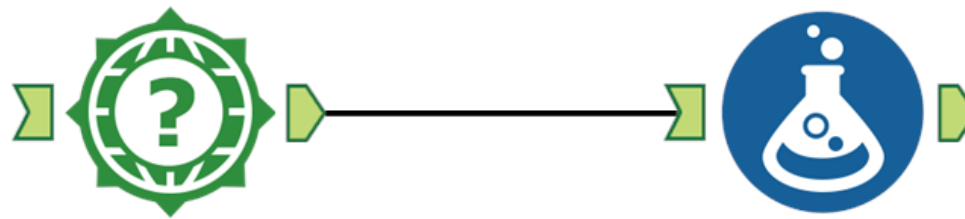
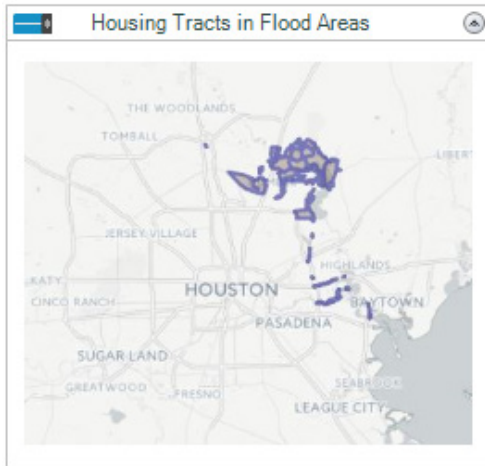
Spatial Object Field:

Where Target Intersects Universe
 Output Intersection Object (Intersects Only)



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Spatial Info (57) - Configuration

Spatial Object Field:
IntersectPoly

Items To Output:

- Area (Square Kilometers)
- Area (Square Miles)
- Bounding Rectangle as Points
- Bounding Rectangle as Polygon

Formula (59) - Configuration

Output Column	Data Preview
Percent of Tract	9.95672558299439e-004

$$\frac{[AreaSqMi]}{ST_Area([Tracts SpObj], "SqMi")}$$

Data type: Double Size: 8

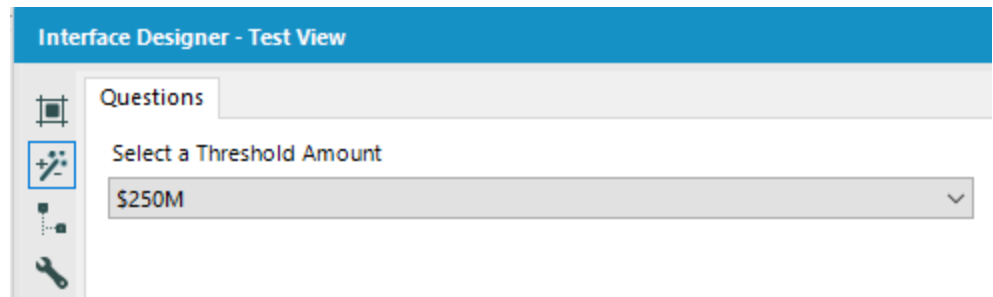
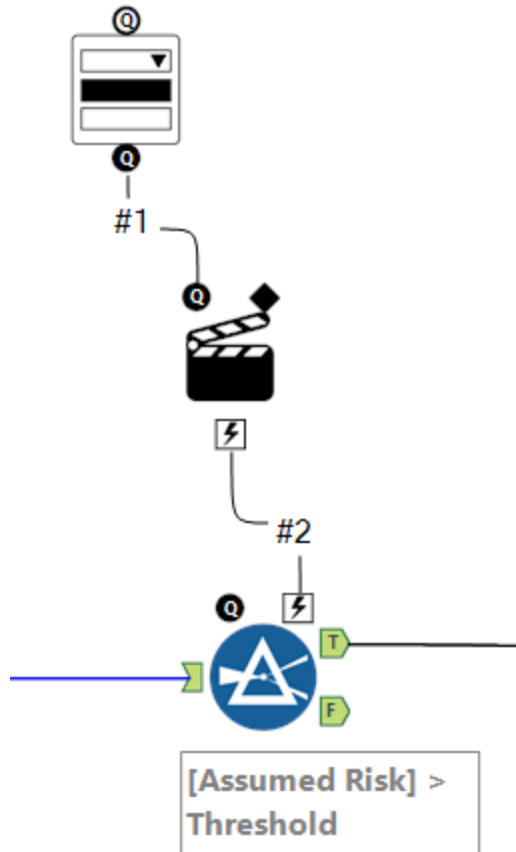
Assumed Risk	76892.3068235116
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$$([Total\ Houses\ per\ Tract] * [Percent\ of\ Tract]) * [Median\ House\ Value]$$

Data type: Double Size: 8

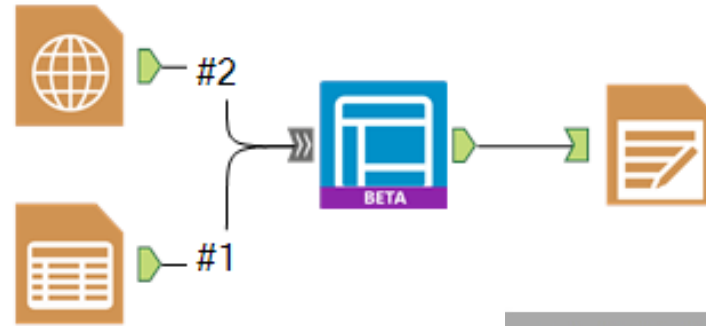
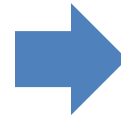
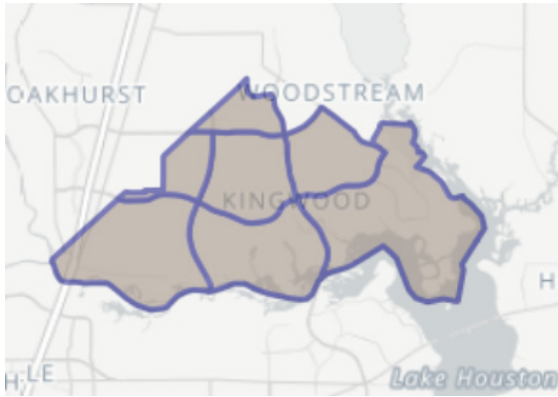
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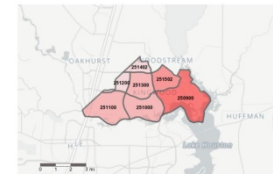


Results - Browse (58) - Input

4 of 9 Fields | Cell Viewer | 7 records displayed, 184 KB

Record #	TRACT	Total Houses per Tract	Median House Value	Assumed Risk
1	250900	3559	334475	1131423997.02012
2	251502	3633	218416.666667	793507750
3	251000	1478	385150	569251700
4	251100	2967	167180	496021344.401532
5	251300	2665	178500	475702500
6	251402	2358	113133.333333	266768400
7	251200	1880	138400	260192000

Houston Housing Tracts with Assumed Flood Risk > \$250M



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250900	3559	\$334,475	\$1,131,423,997.02
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251000	1,478	\$385,150	\$569,251,700
251100	2,967	\$167,180	\$496,021,344.40
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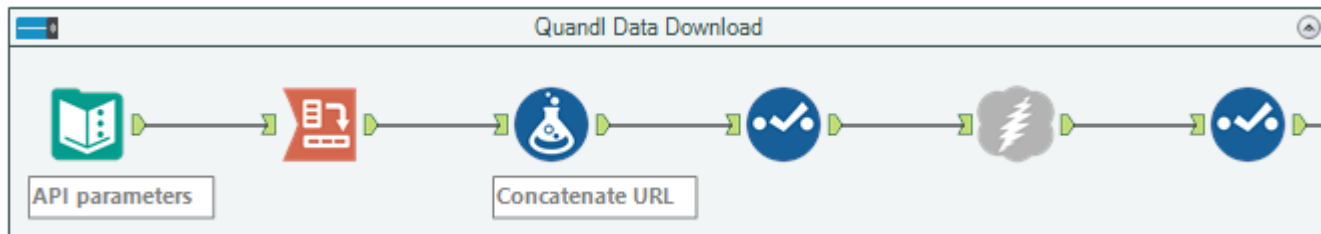
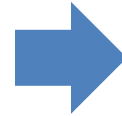
Build a Custom Connector

Quandl Example

Build a Custom Connector

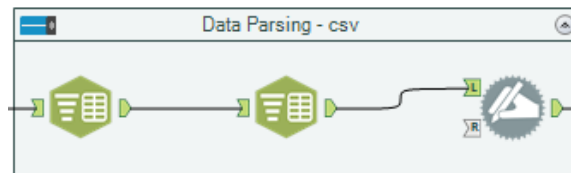
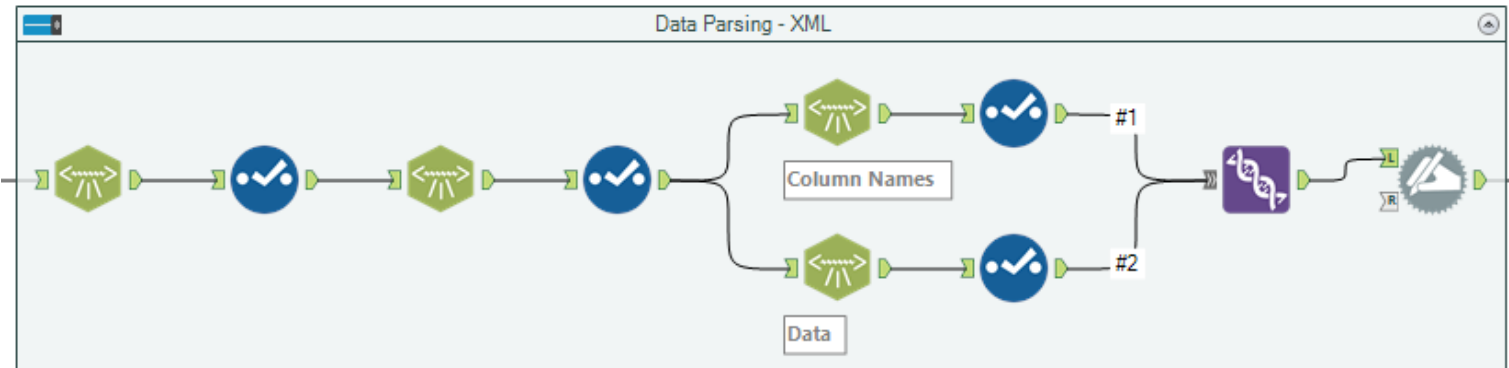
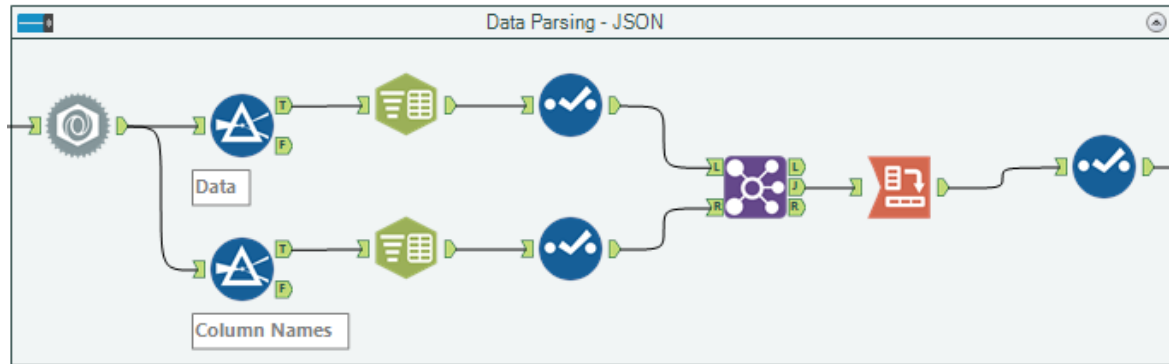
Quandl Example

Name	Value
base_url	https://www.quandl.com/api/v3/datasets/
api_key	*****
database_code	WIKI
dataset_code	FB
data_format	.json
data_specs	data
limit	500
order	asc
start_date	5/17/2016
end_date	5/19/2016



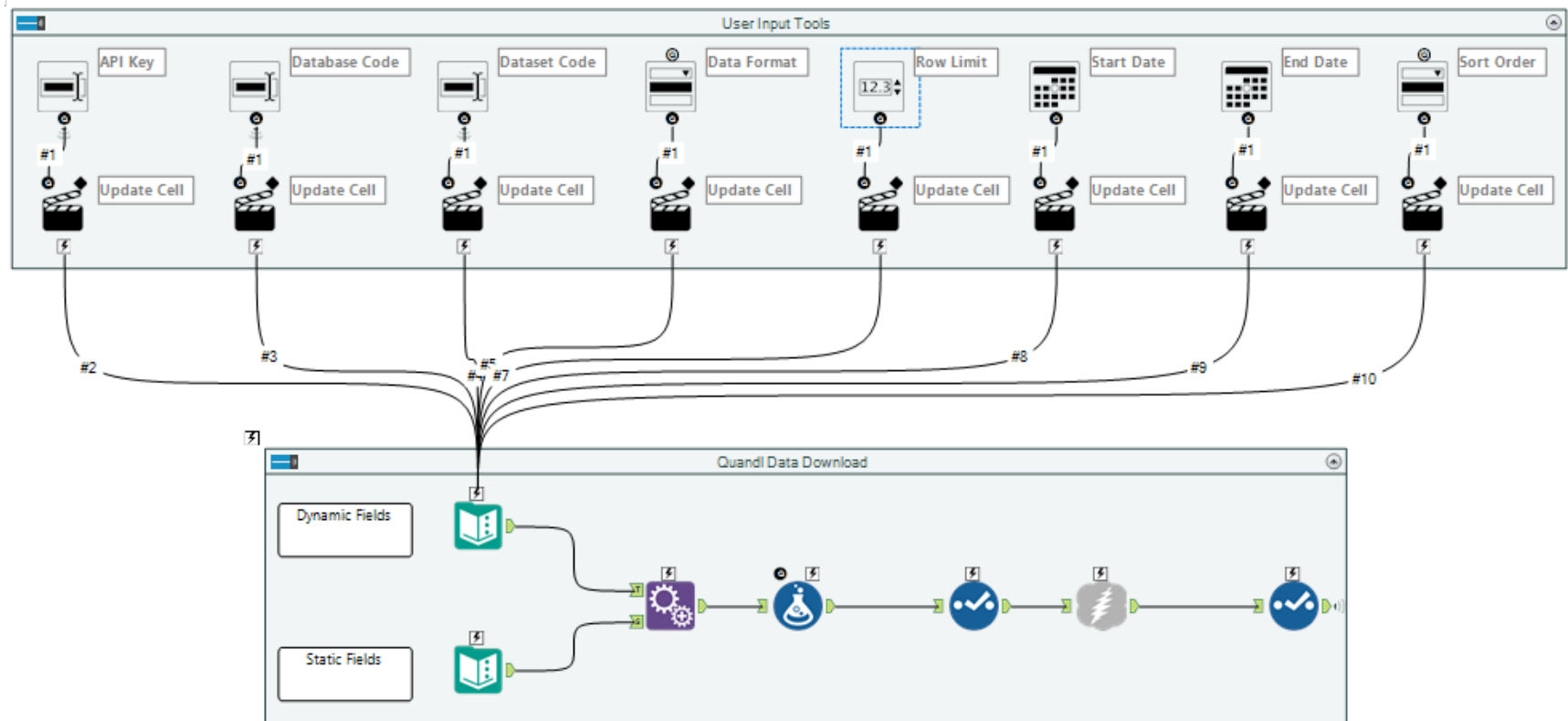
Build a Custom Connector

Quandl Example



Build a Custom Connector

Quandl Example



Build a Custom Connector Quandl Example

Questions

API Key

Database Code
WIKI

Dataset Code
FB

Data Format
JSON

Sort Order
Ascending

Row Limit
50

Start Date

January 2018						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
31	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	1	2	3
4	5	6	7	8	9	10

Today: 7/14/2018

End Date

June 2018						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
27	28	29	30	31	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

