

# Introduction to Tableau Desktop

Jock D. Mackinlay

[jmackinlay@tableausoftware.com](mailto:jmackinlay@tableausoftware.com)



# Databases: A Success Story

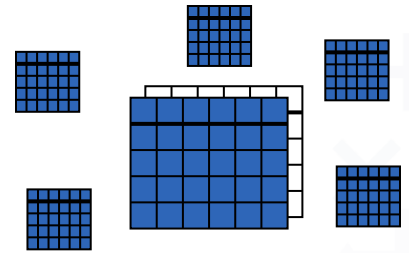
- **1960s:** Many approaches



- Niche applications
- High costs

- **1970s:** Relational databases emerge as a standard

- Rows of data organized into normalized tables
- High-level query language (SQL)
- Support parallel, transactional queries



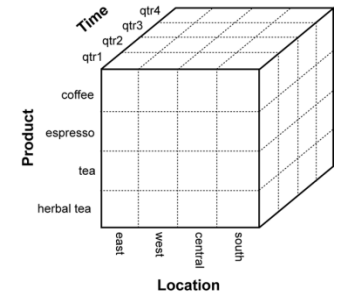
- **1980s:** Widespread adoption of OLTP technology



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# Databases: A Success Story

- **1990s:** Data warehousing enables analytic reporting
  - Dimensional modeling and star schemas
  - Multidimensional cubes & MDX
- **2000s:** Ad hoc queries become mainstream
  - Data warehouse appliances
  - Column stores
  - In-memory databases



# Visual Interfaces: Another Success

- 1981: Xerox Star



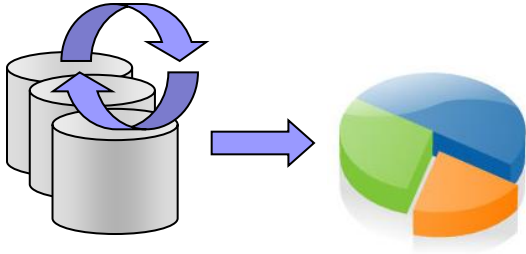
From [www.digibarn.com](http://www.digibarn.com)

# Unified

Need to be able to change both the data and the view:

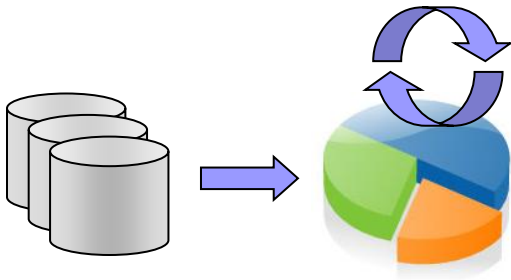
## Traditional Reporting Tools

Query many times and then generate a summary graph.



## Traditional Visualization Tools

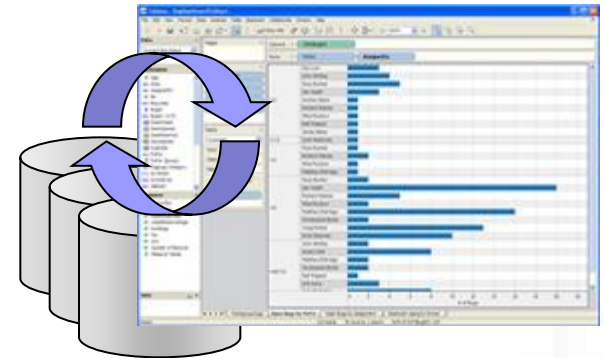
Query once and then iterate on the presentation of the data.



versus

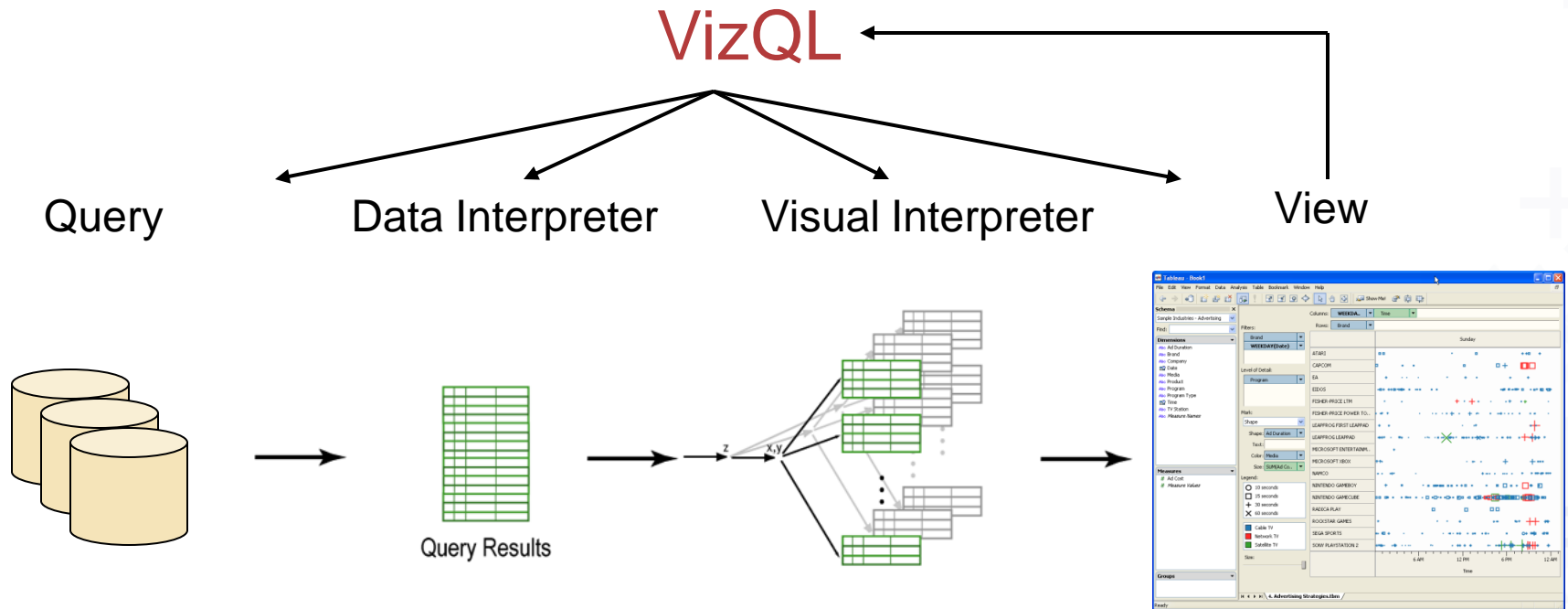
## Visual Analysis

Iteratively change both to find the perfect view.



# VizQL: Specifies Queries and Views

- Compiles into multiple query languages
- Generates many view types

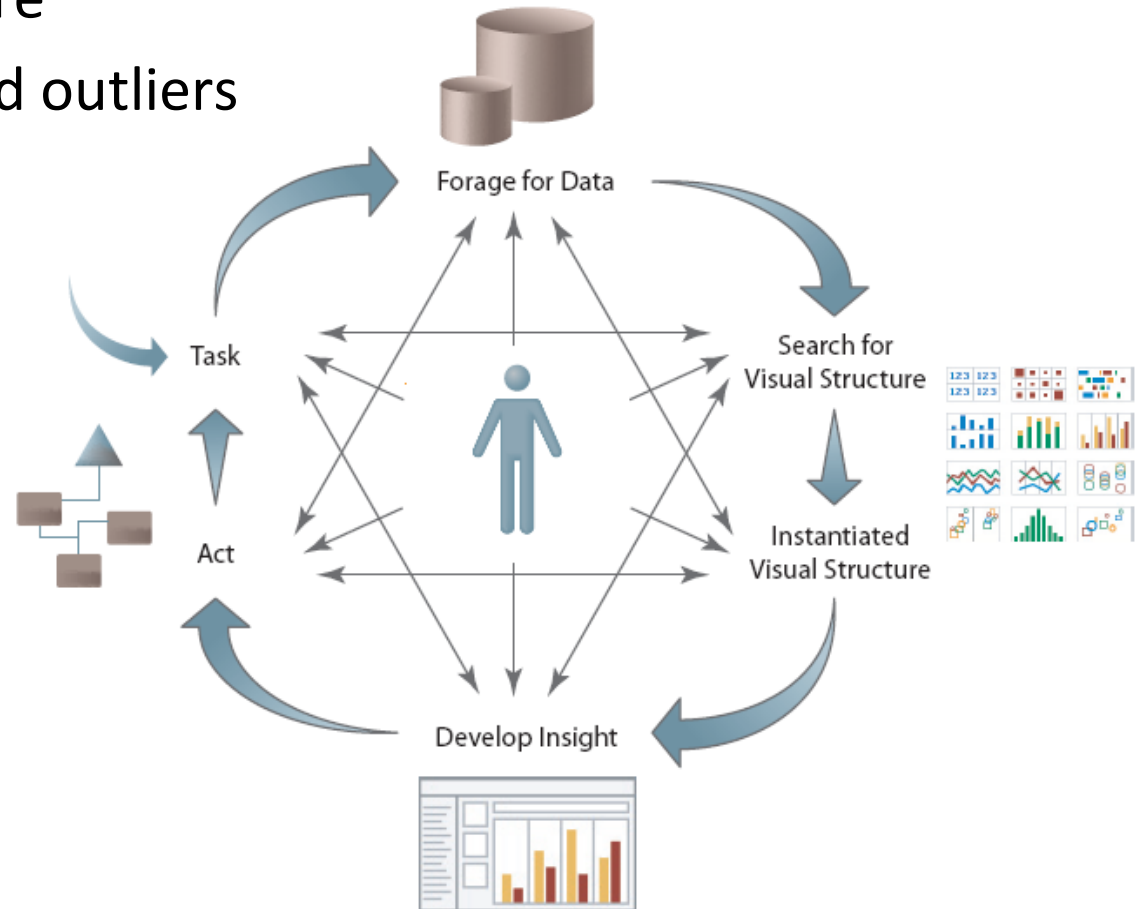


- Supports an intuitive “drag and drop” interface

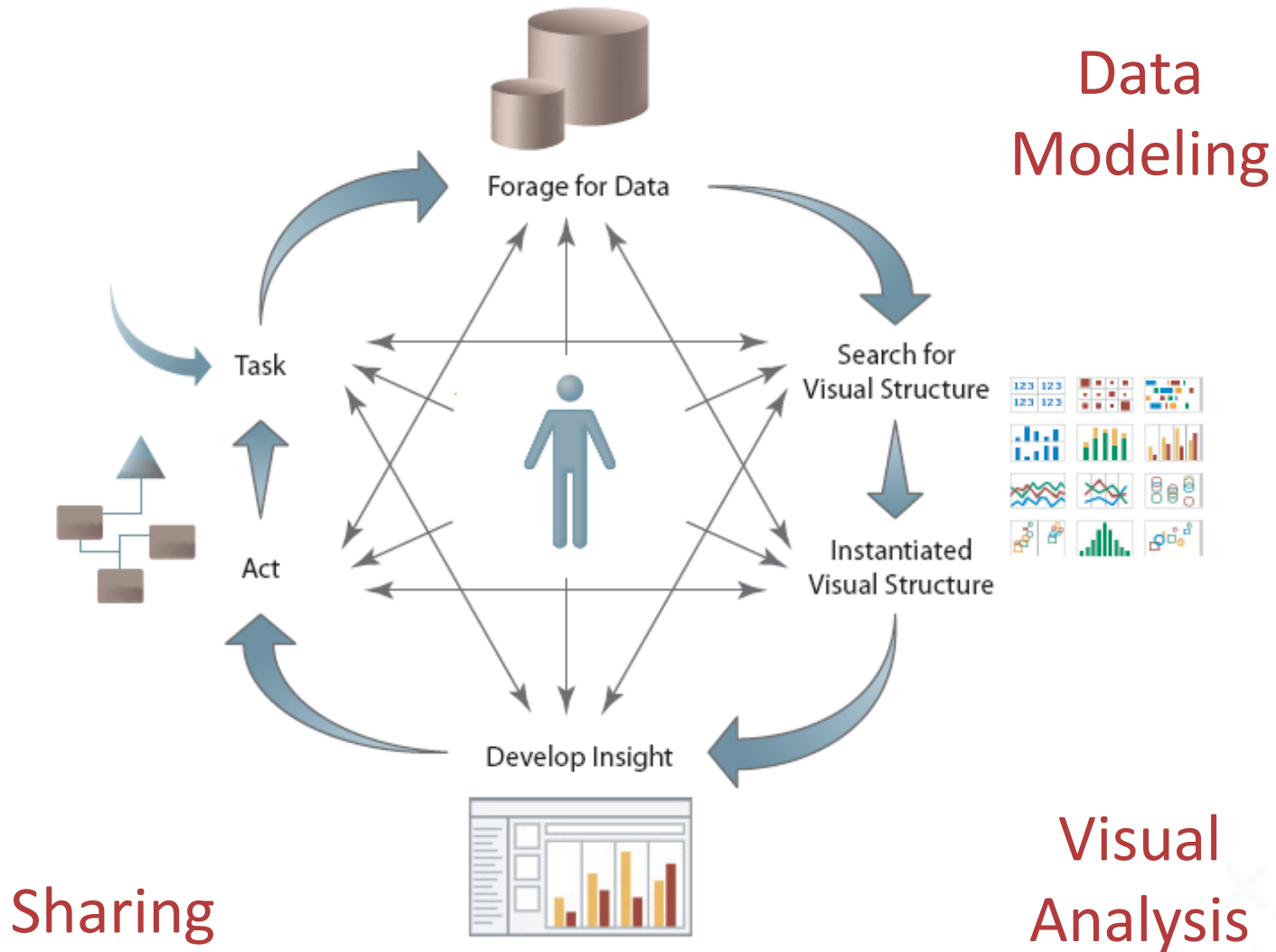
# Cycle of Visual Analysis

An unpredictable and cyclical process of question-and-answer involving many tasks:

- Discovering structure
- Finding patterns and outliers
- Deriving causal relationships
- etc.



# The Cycle of Visual Analysis





# Typical Data

Microsoft Excel - Coffee Chain.xls

File Edit View Insert Format Tools Data Window Help

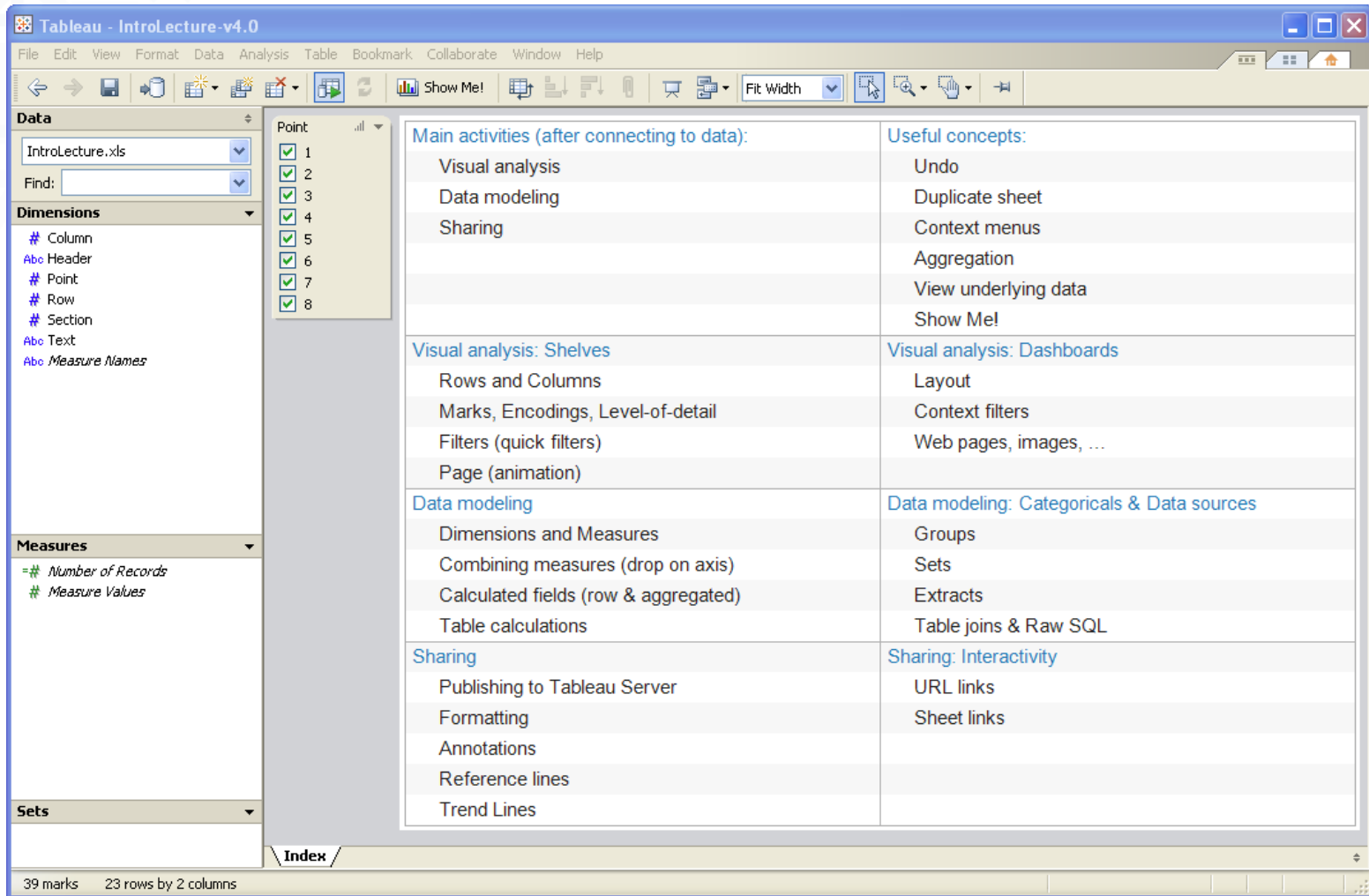
Type a question for help

R53 60

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Date	Market	State	Market Size	Type	Product Type	Product	Sales	Profit	Margin	COGS	Total Exp	Marke
2	2/1/2002	West	California	Major Market	Regular	Coffee	Amaretto	441.00	-87.00	86.00	305.00	158.00	102
3	2/1/2002	West	California	Major Market	Regular	Espresso	Caffe Latte	1,527.00	477.00	737.00	647.00	267.00	213
4	2/1/2002	West	California	Major Market	Regular	Espresso	Caffe Mocha	898.00	83.00	513.00	350.00	436.00	360
5	2/1/2002	West	California	Major Market	Decaf	Smoothie	Chocolate	681.00	322.00	451.00	285.00	107.00	83
6	2/1/2002	West	California	Major Market	Regular	Coffee	Columbian	2,064.00	786.00	1,164.00	776.00	471.00	257
7	2/1/2002	West	California	Major Market	Regular	Tea	Darjeeling	703.00	327.00	444.00	299.00	120.00	78
8	2/1/2002	West	California	Major Market	Decaf	Espresso	Decaf Espres	1,843.00	578.00	869.00	770.00	323.00	233
9	2/1/2002	West	California	Major Market	Decaf	Coffee	Decaf Irish Cr	382.00	-339.00	-79.00	488.00	309.00	150
10	2/1/2002	West	California	Major Market	Regular	Tea	Earl Grey	605.00	237.00	343.00	261.00	99.00	69
11	2/1/2002	West	California	Major Market	Regular	Tea	Green Tea	579.00	163.00	378.00	248.00	172.00	78
12	2/1/2002	West	California	Major Market	Decaf	Smoothie	Lemon	1,356.00	553.00	827.00	619.00	263.00	215
13	2/1/2002	West	California	Major Market	Decaf	Smoothie	Blueberry	622.00	195.00	326.00	247.00	131.00	79
14	2/1/2002	Central	Colorado	Major Market	Regular	Coffee	Amaretto	492.00	351.00	450.00	289.00	125.00	86
15	2/1/2002	Central	Colorado	Major Market	Regular	Espresso	Caffe Mocha	899.00	231.00	562.00	338.00	130.00	64
16	2/1/2002	Central	Colorado	Major Market	Decaf	Smoothie	Chocolate	087.00	265.00	575.00	308.00	114.00	134
17	2/1/2002	Central	Colorado	Major Market	Regular	Coffee	Columbian	641.00	192.00	333.00	259.00	121.00	92
18	2/1/2002	Central	Colorado	Major Market	Regular	Tea	Darjeeling	445.00	57.00	217.00	188.00	169.00	72
19	2/1/2002	Central	Colorado	Major Market	Decaf	Espresso	Decaf Espres	592.00	171.00	343.00	211.00	166.00	80
20	2/1/2002	Central	Colorado	Major Market	Decaf	Coffee	Decaf Irish Cr	664.00	308.00	462.00	311.00	126.00	74
21	2/1/2002	Central	Colorado	Major Market	Regular	Tea	Earl Grey	416.00	112.00	228.00	191.00	113.00	61
22	2/1/2002	Central	Colorado	Major Market	Regular	Tea	Green Tea	289.00	100.00	167.00	138.00	82.00	42
23	2/1/2002	Central	Colorado	Major Market	Decaf	Smoothie	Lemon	386.00	-9.00	243.00	167.00	250.00	144
24	2/1/2002	Central	Colorado	Major Market	Decaf	Smoothie	Blueberry	452.00	105.00	235.00	185.00	158.00	58
25	2/1/2002	East	Connecticut	Small Market	Regular	Espresso	Caffe Mocha	445.00	9.00	273.00	214.00	274.00	171
26	2/1/2002	East	Connecticut	Small Market	Regular	Coffee	Columbian	967.00	381.00	554.00	431.00	233.00	120
27	2/1/2002	East	Connecticut	Small Market	Regular	Tea	Darjeeling	382.00	151.00	241.00	169.00	79.00	48
28	2/1/2002	East	Connecticut	Small Market	Decaf	Espresso	Decaf Espres	267.00	85.00	245.00	182.00	142.00	57

Ready

# Tableau Demo



# More Information

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- Tableau is hiring
  - Seattle, WA
  - San Mateo, CA
- Help menu in application
  - Sample workbooks
  - Links to help topics, community center, and video tours
- Web site [www.tableausoftware.com](http://www.tableausoftware.com)
  - Learning center + training
  - Community center + support
  - Database drivers
- Email
  - [jmackinlay@tableausoftware.com](mailto:jmackinlay@tableausoftware.com)