Chapter 12.
Analytics In Action

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• Some material adapted from: Sorger, Stephan. “Marketing Analytics: Strategic Models and Metrics. Admiral Press. 2013.

Outline/ Learning Objectives

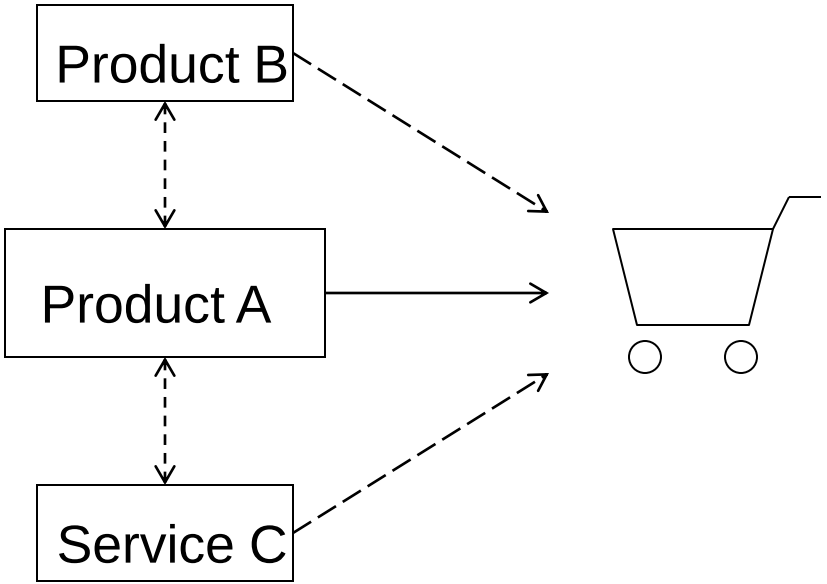
Topic	Description
Rapid	Learn rapid decision tools, such as Pareto analysis
Pivot Tables	Describe how to create and work with pivot tables
Communications	Increase communications effectiveness with data

Rapid Decision Models: Pareto Prioritization

Name	Sales	Demographics	Geography	Psychographics
Alex Alpha	$1,100	Age 25	Atlanta	Aardvark lover
Betty Beta	$100	Age 44	Boston	Bat lover
Debbie Delta	$300	Age 35	Denver	Dog lover
Edie Epsilon	$200	Age 38	El Paso	Egret lover
Gary Gamma	$1,300	Age 24	Galveston	Goose lover
Total Sales	*$3,000*			*Customer Data, Original*

Name	Sales	Demographics	Geography	Psychographics
Gary Gamma	$1,300	Age 24	Galveston	Goose lover
Alex Alpha	$1,100	Age 25	Atlanta	Aardvark lover
Debbie Delta	$300	Age 35	Denver	Dog lover
Edie Epsilon	$200	Age 38	El Paso	Egret lover
Betty Beta	$100	Age 44	Boston	Bat lover
Total Sales	*$3,000*		*Customer Data, Sorted by Dependent Variable*	

Rapid Decision Models: Cross-Sales Model



Cross-Sales Model

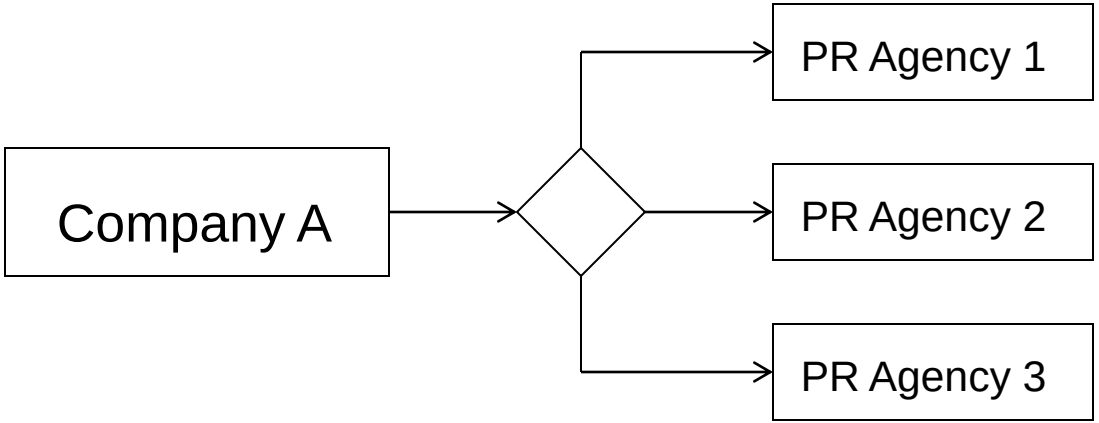
Name	Sales	Sales, A	Sales, B	Sales, C (service)	
Alex Alpha	$1,100	$600		$300	$200
Betty Beta	$100	$0		$100	$0
Debbie Delta	$300	$0		$300	$0
Edie Epsilon	$200	$0		$200	$0
Gary Gamma	$1,300	$800		$300	$200

Related Product and Service Sales Data, Original

Name	Sales	Sales, A	Sales, B	Sales, C (service)	
Gary Gamma	$1,300	$800		$300	$200
Alex Alpha	$1,100	$600		$300	$200
Debbie Delta	$300	$0		$300	$0
Betty Beta	$100	$0		$100	$0
Edie Epsilon	$200	$0		$200	$0

Related Product and Service Sales Data, Sorted by Dependent Variable

Supplier Selection Framework



Typical scenario: Must select from one of three public relations (PR) agencies

Supplier Selection Framework

Selection Criteria	PR Agency 1	PR Agency 2	PR Agency 3
Industry Contacts	8: big Rolodex	6: out of date	8: big Rolodex
Social Media Expertise	8: strong focus	5: not a focus	5: not a focus
Article Opportunities	5: not a focus	5: not a focus	8: strong focus
Award Opportunities	5: not a focus	8: strong focus	5: few awards
Crisis Management	8: fast response	3: no focus	5: some focus
Cost Structure	1: $$$$$	3: $$$	7: $$
Total Scores	*35*	*30*	*38*

Scoring: Scale of 1 to 10; 1 = Poor; 10 = Outstanding

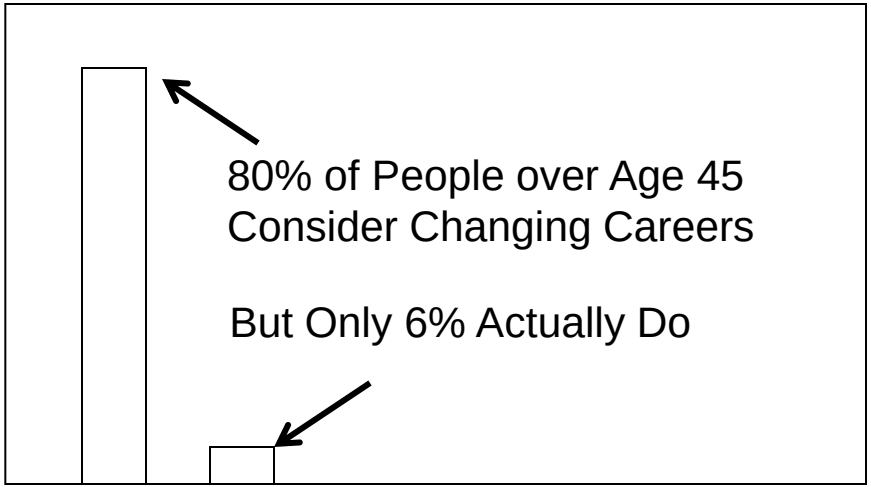
Straight Sum: Add scores to find total; Highest score gets selected
Modified Sum: Disqualify supplier if they fail any one category
Weighted Sum: Adjust significance of certain criteria

Metrics in Marketing Campaigns

Sample Bold Metrics	Potential Campaigns
33 Million: Americans living alone	Campaigns for single-serving meals
70% of people 12 and older who abuse prescription drugs say they get them from a friend or relative	Campaigns with anti-drug message
49%: Dog napping increase: 2010-2011	Campaigns for dog security
53%: Percentage of overweight dogs	Campaigns for diet dog food
13.9 hours/week: Time spent on tablets	Campaigns for tablet apps
61%: Non-essential emails delivered	Campaigns for spam filters
3 Billion/mo: Hours of YouTube watched	Campaigns to promote video usage

Sample Bold Metrics and Campaigns

Metrics in Marketing Campaigns



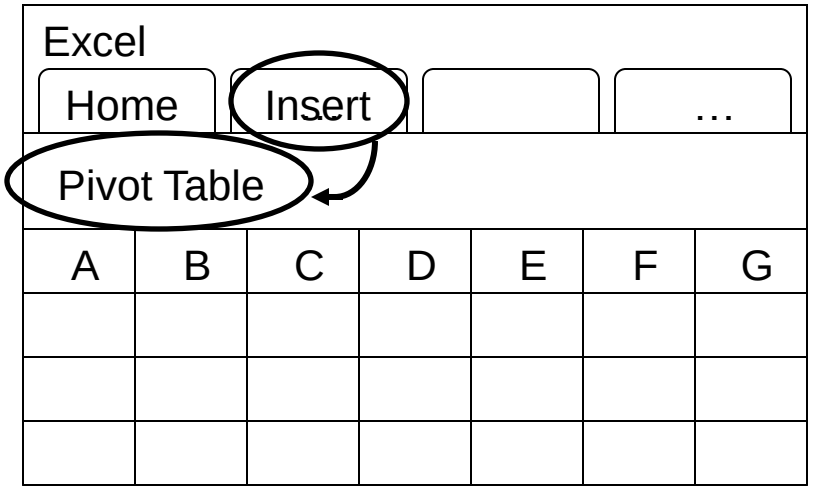
Example of Juxtaposition

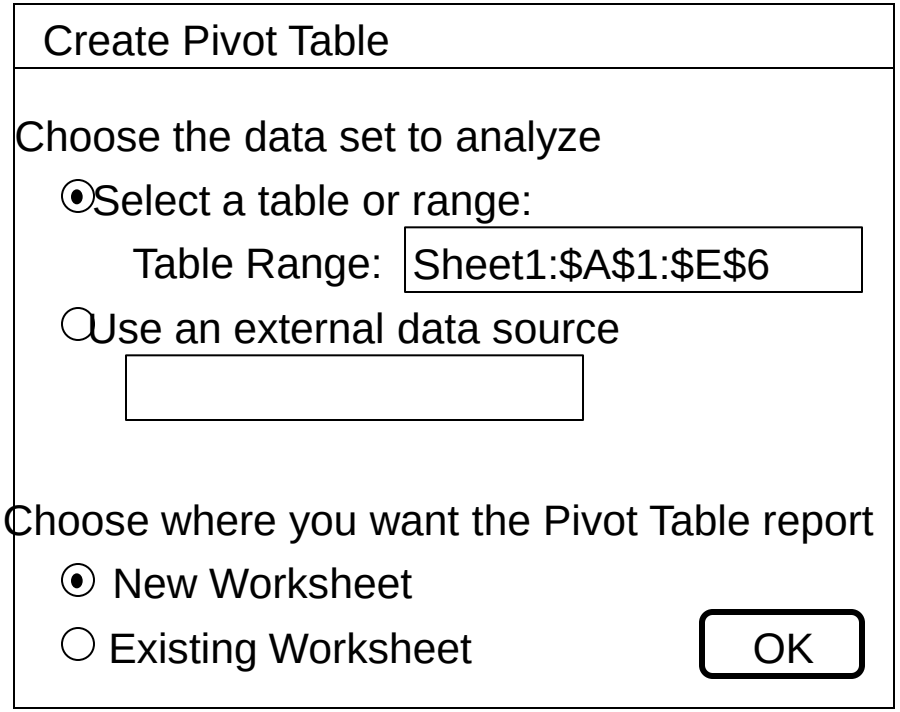
Pivot Tables

Name	Sales	Date of Sale	Product	Channel
Alex Alpha	$1,100	January	Product A	Store
Betty Beta	$100	February	Product B	Internet
Debbie Delta	$300	February	Product B	Store
Edie Epsilon	$200	January	Product B	Internet
Gary Gamma	$1,300	January	Product A	Store

Original Data Set

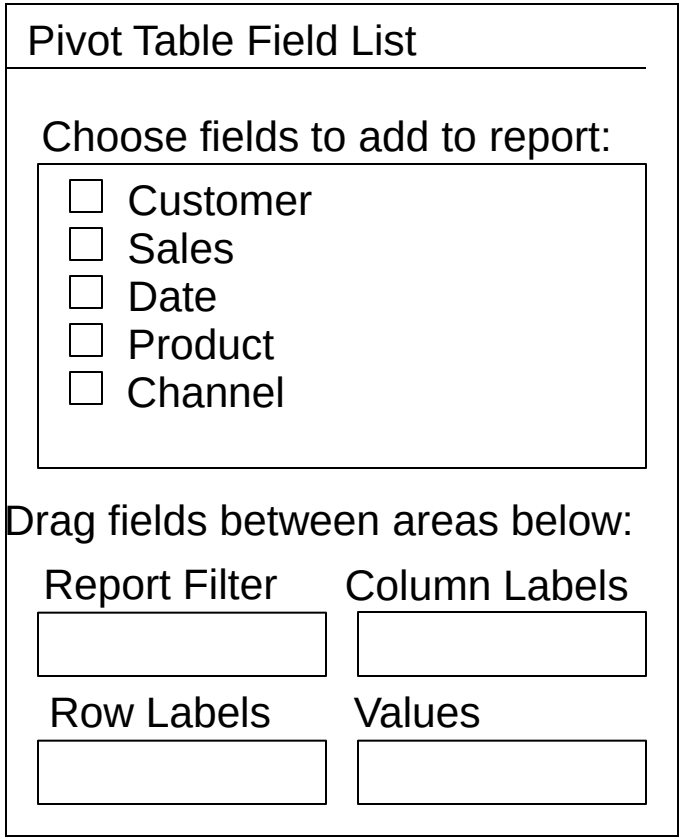
Pivot Tables





Launching Pivot Table in Excel

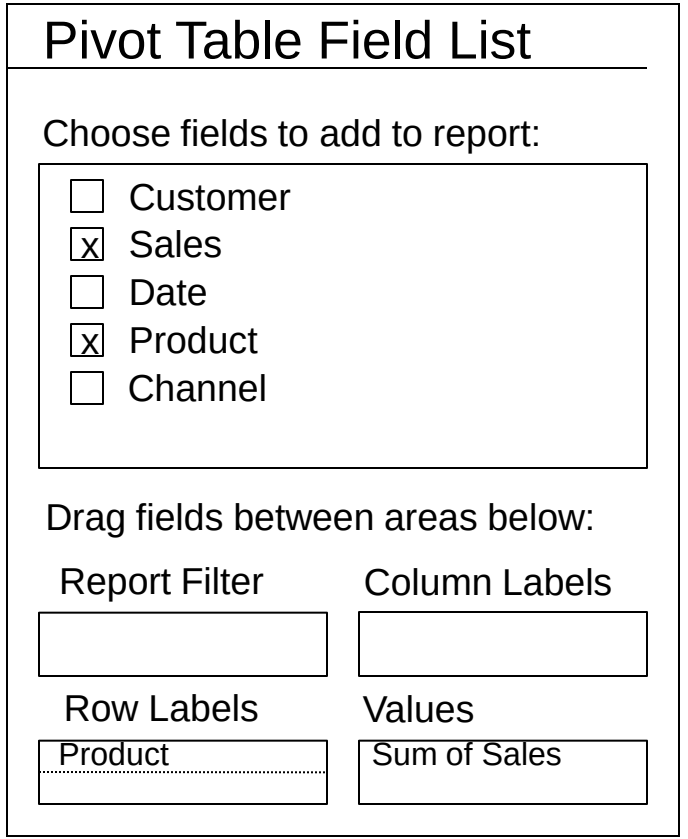
Pivot Tables



Excel's Pivot Table Field List, Based on Original Input Data Set;
Select "Sales" and "Product" to get basic table of sales by product

Pivot Tables

	A	B	C	D
1	**Row Labels**	**Sum of Sales**		
2	Product A	2400		
3	Product B	600		
4	**Grand Total**	**3000**		
5				
6				
7				
8				
9				
10				
11				
12				



Pivot Tables: Basic Report: Sales by Product; → Select “Date” to see how sales vary over time

Pivot Table

	A	B	C	D
1	**Row Labels**	**Sum of Sales**		
2	**Product A**	**2400**		
3	January	2400		
4	**Product B**	**600**		
5	January	200		
6	February	400		
7	**Grand Total**	**3000**		
8				
9				
10				
11				
12				

Pivot Table Field List

Choose fields to add to report:

- [ ] Customer
- [x] Sales
- [x] Date
- [x] Product
- [ ] Channel

Drag fields between areas below:

Report Filter	Column Labels

Row Labels	Values
Product Date	Sum of Sales

Pivot Tables: Sales by Product and Date

Select “Channel” to see how sales vary with type of Distribution Channel (store)

Pivot Table

	A	B	C	D
1	**Row Labels**	**Sum of Sales**		
2	**Product A**	**2400**		
3	**January**	**2400**		
4	Retail Store	2400		
5	**Product B**	**600**		
6	**January**	**200**		
7	Internet	200		
8	**February**	**400**		
9	Internet	100		
10	Retail Store	300		
11	**Grand Total**	**3000**		
12				

Pivot Table Field List

Choose fields to add to report:

- ☐ Customer
- ☒ Sales
- ☒ Date
- ☒ Product
- ☒ Channel

Drag fields between areas below:

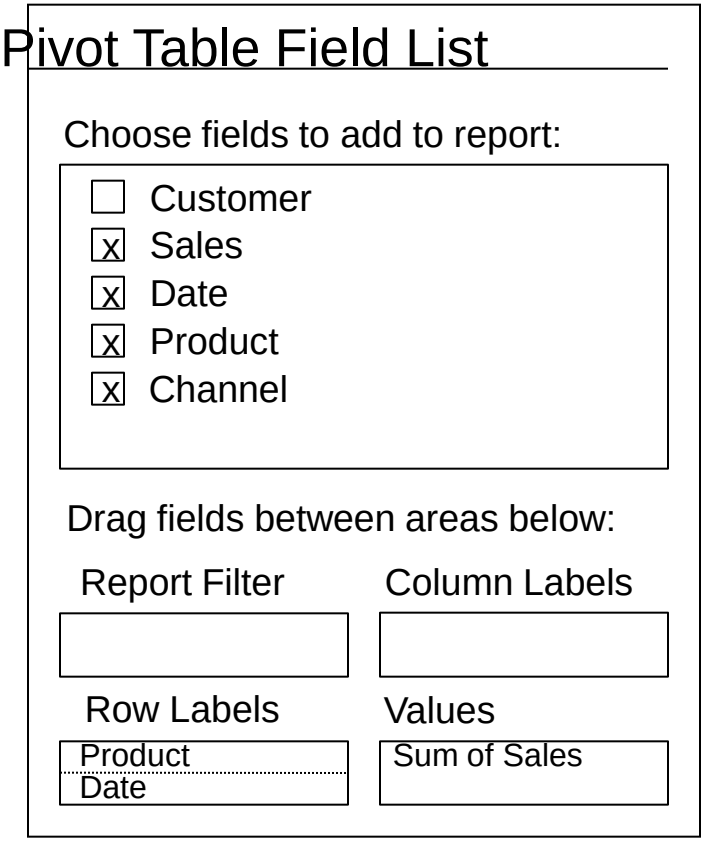
Report Filter	Column Labels

Row Labels	Values
Product Date	Sum of Sales

Pivot Tables: Sales by Product, Date, and Channel (Added Date, and then Channel)
What if we had added Channel, and then Date?

Pivot Table

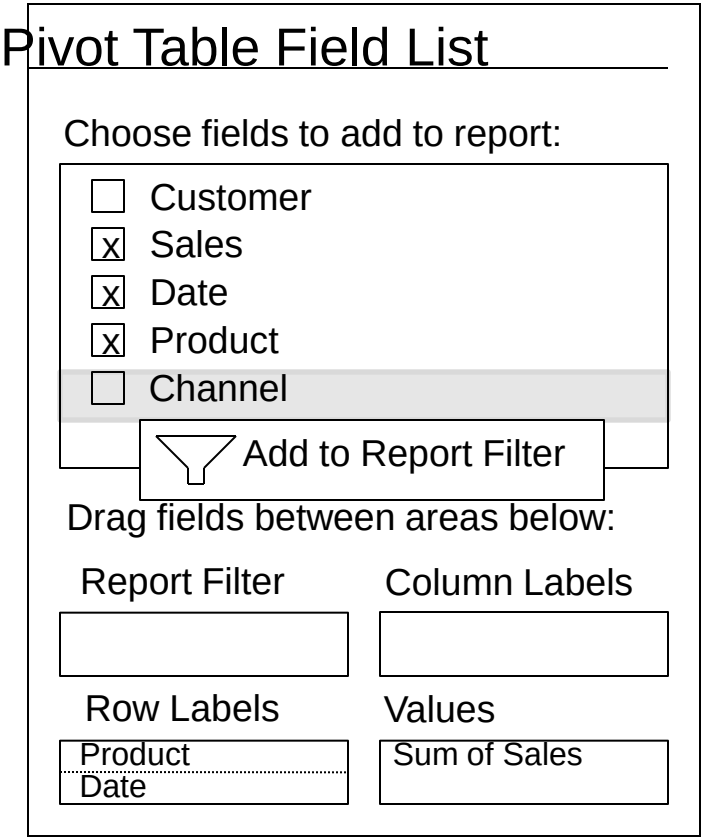
	A	B	C	D
1	**Row Labels**	**Sum of Sales**		
2	**Product A**	**2400**		
3	**Retail Store**	**2400**		
4	January	2400		
5	**Product B**	**600**		
6	**Internet**	**300**		
7	January	200		
8	February	100		
9	**Retail Store**	**300**		
10	February	300		
11	**Grand Total**	**3000**		
12				



Pivot Tables: Sales by Product, Date, and Channel (Added Channel, and then Date)

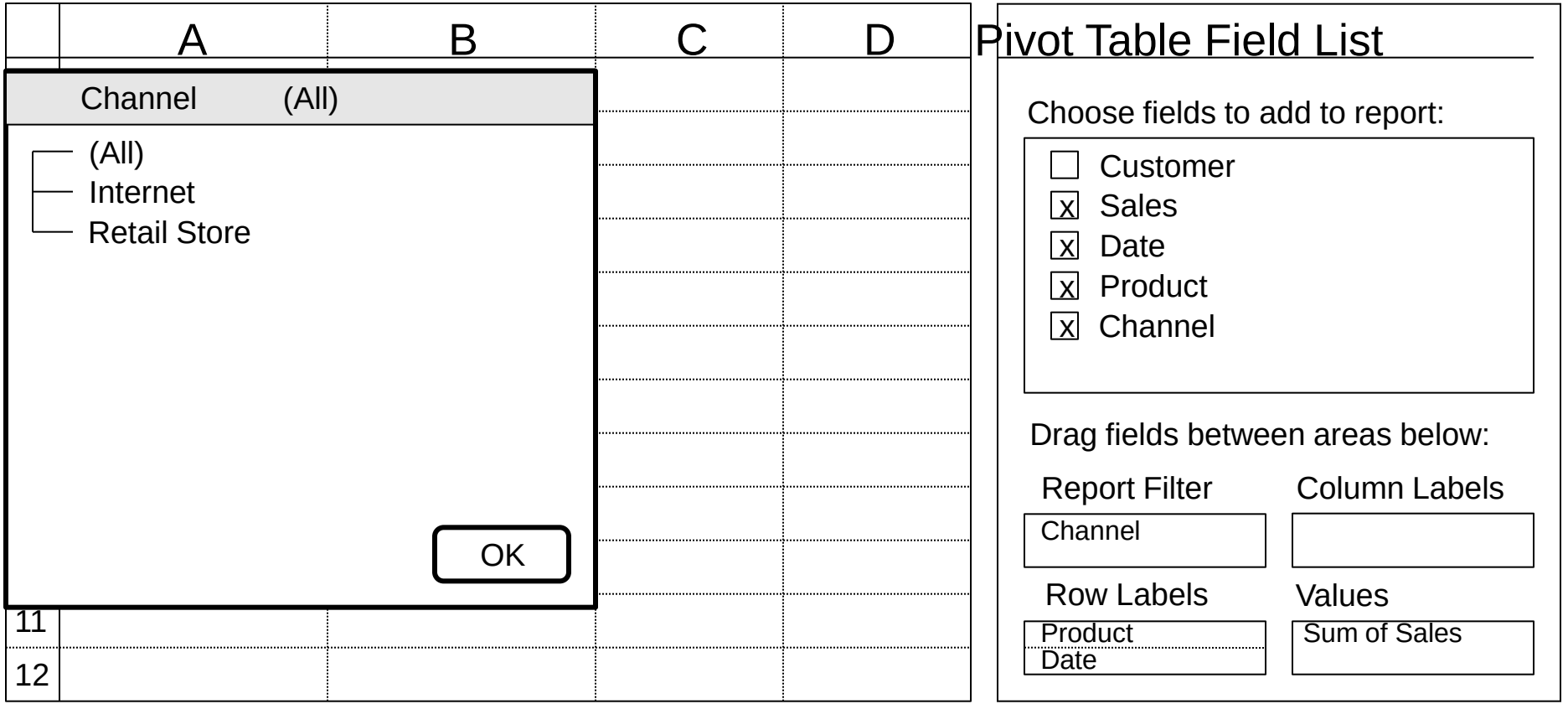
Pivot Table

	A	B	C	D
1	**Row Labels**	**Sum of Sales**		
2	**Product A**	**2400**		
3	January	2400		
4	**Product B**	**600**		
5	January	200		
6	February	400		
7	**Grand Total**	**3000**		
8				
9				
10				
11				
12				



Adding Field to Report Filter

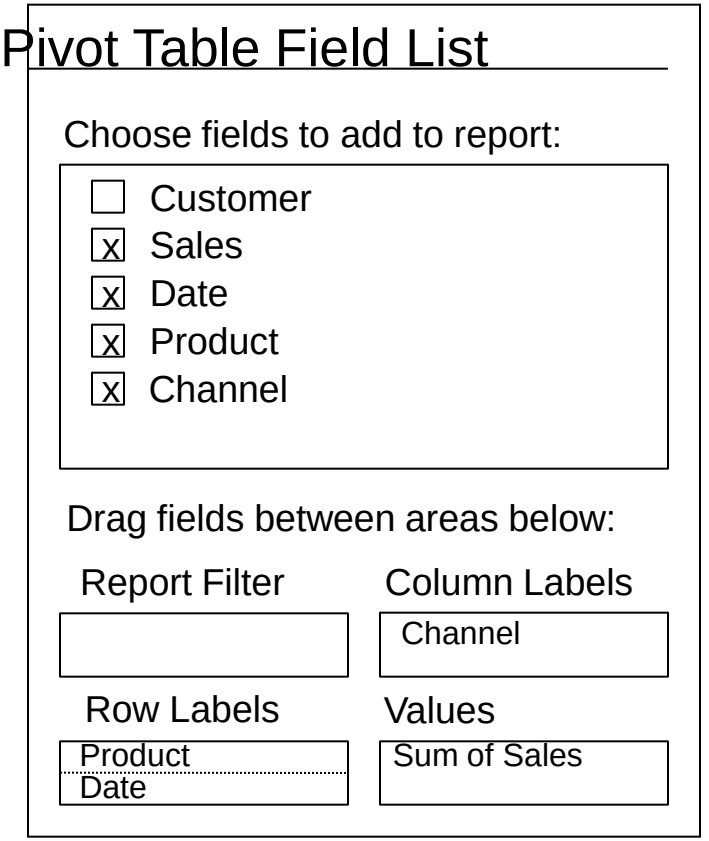
Pivot Table



Selecting Reports using Report Filter

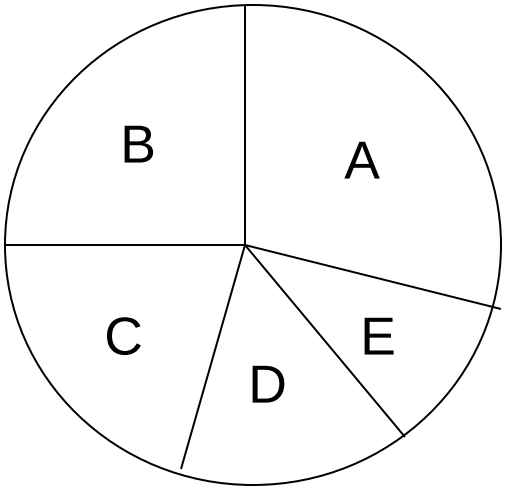
Pivot Table

	A	B	C	D
1	**Sum of Sales**	**Column Labels** ▼		
2	**Row Labels** ▼	**Internet**	**Retail Store**	**Grand Total**
3	**Product A**		**2400**	**2400**
4	January		2400	2400
5	**Product B**	**300**	**300**	**600**
6	January	200		200
7	February	100	300	400
8	**Grand Total**	**300**	**2700**	**3000**
9				
10				
11				
12				



Pivoting Pivot Tables: Transposing from Columns to Rows

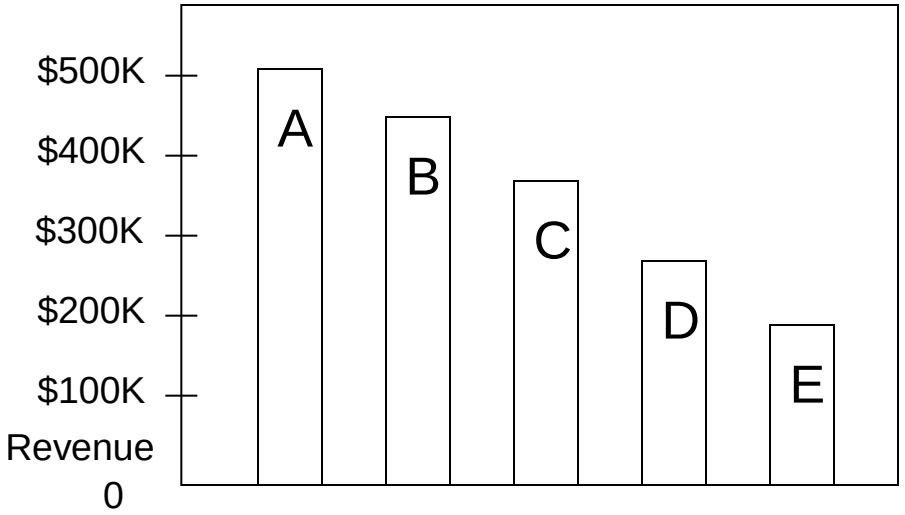
Chart Selection



Sales Revenue by Product

Pie Chart

Typical Applications:
-Market share breakdown
-Revenue breakdown
-Marketing budget breakdown

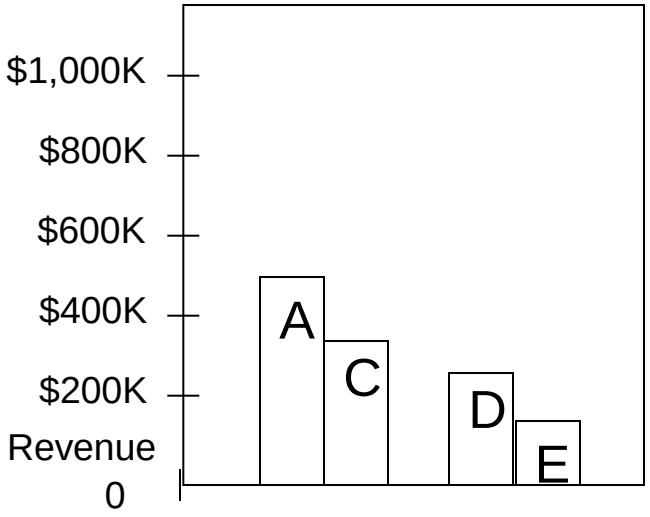


Sales Revenue by Product

Vertical Bar Chart

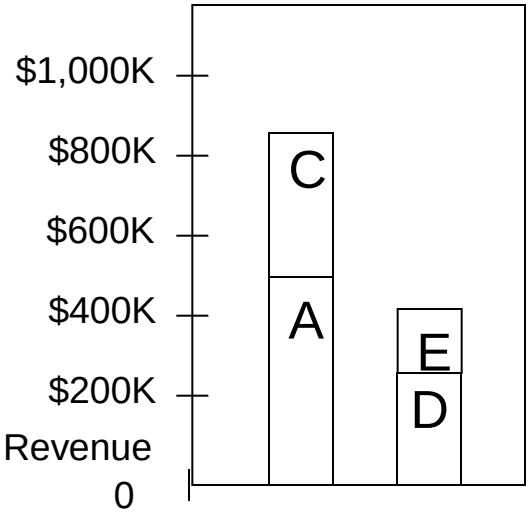
Typical Applications:
-Sales revenue comparisons
-Before-After comparisons
-Competitive comparisons

Chart Selection



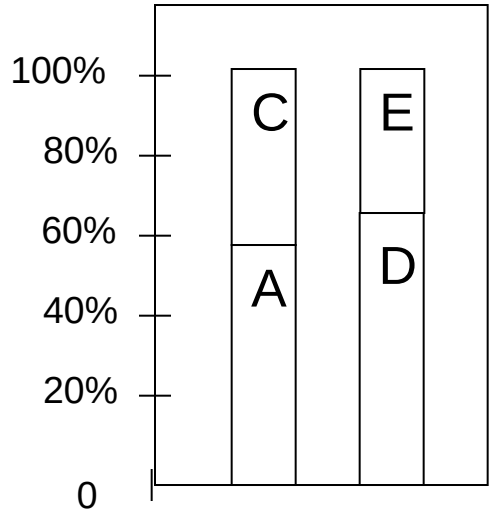
Sales Revenue by Product

Clustered Column Chart



Sales Revenue by Product

Stacked Column Chart

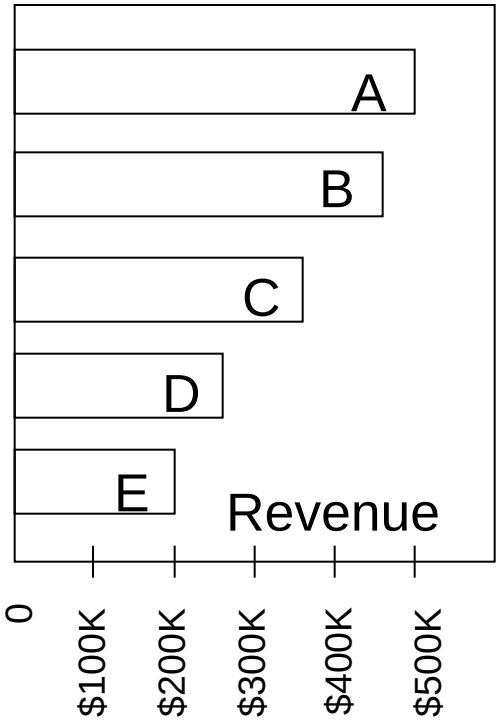


Sales Revenue Contribution

100% Stacked Column Chart

Column chart variations available in Excel

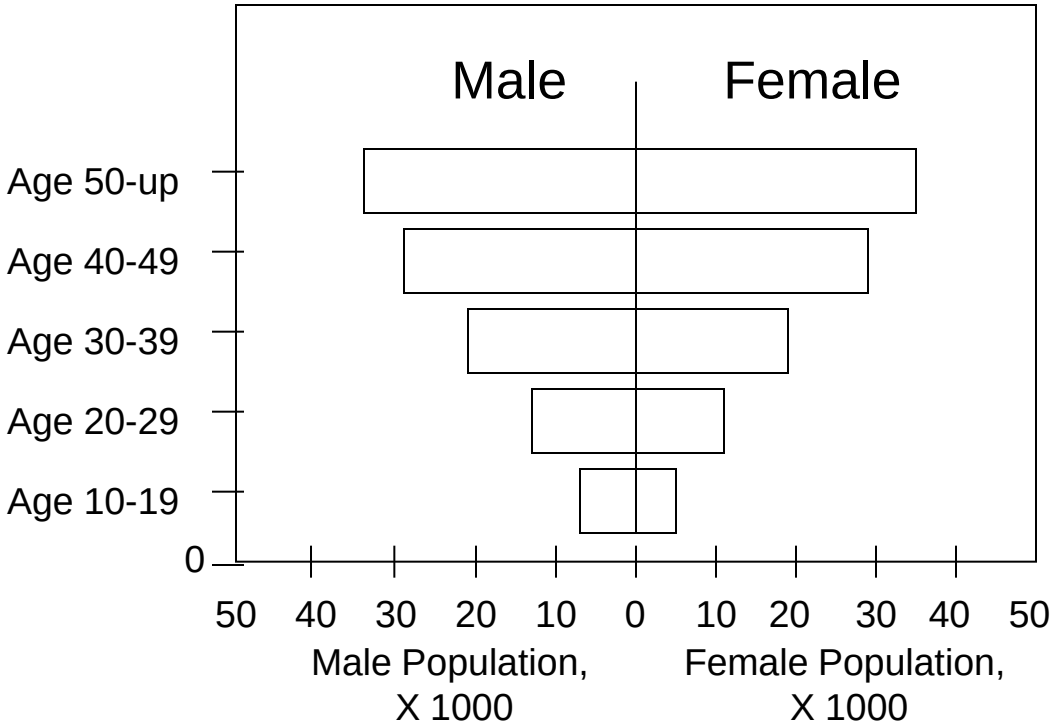
Chart Selection



Horizontal Bar Chart

Typical Applications:
-Long category names
-Tornado charts (see next slide)

Chart Selection

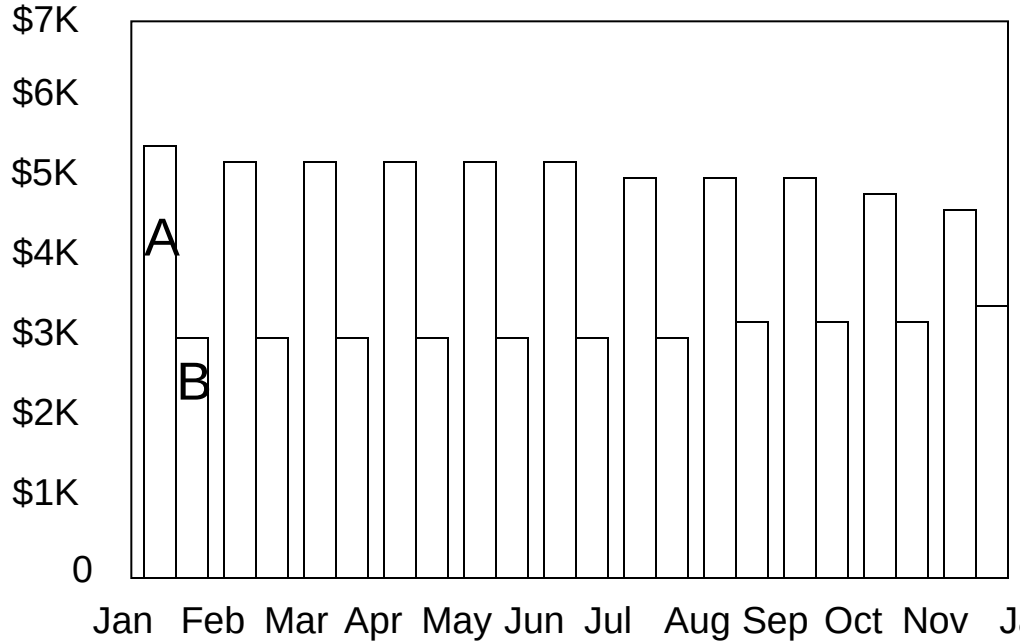


Age Group	Males	Females
Ages 10 - 19	-8,000	5,000
Ages 20 - 29	-12,000	11,000
Ages 30 – 39	-22,000	20,000
Ages 40 – 49	-30,000	30,000
Ages 50 – up	-34,000	34,000

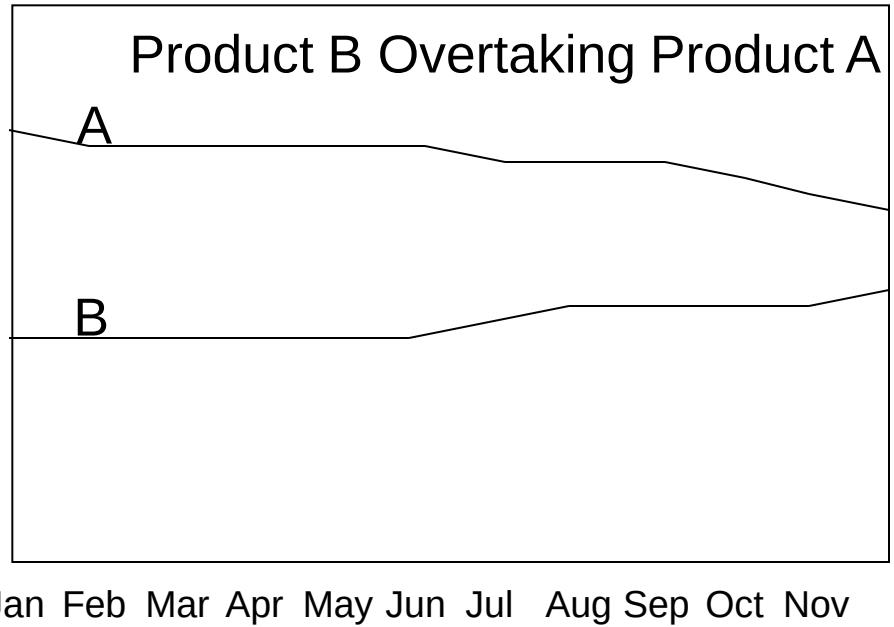
Displays population comparisons

Requires data preparation (see table)

Chart Selection



Clustered Vertical Bar Chart



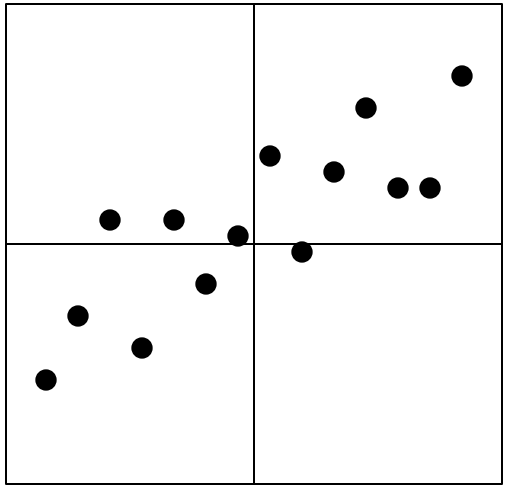
Line Chart

Typical Applications:

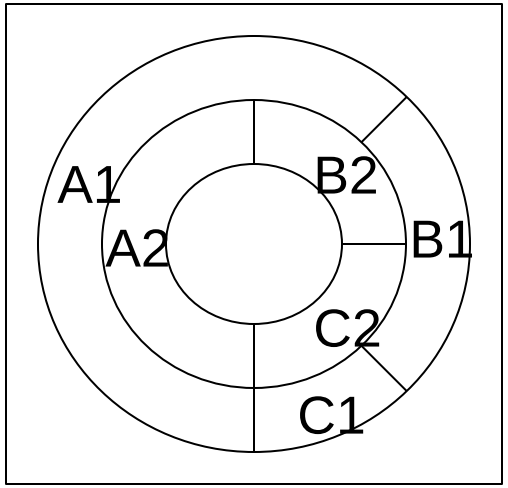
-Trends comparing internal data with other internal data

-Trends comparing internal data with external data

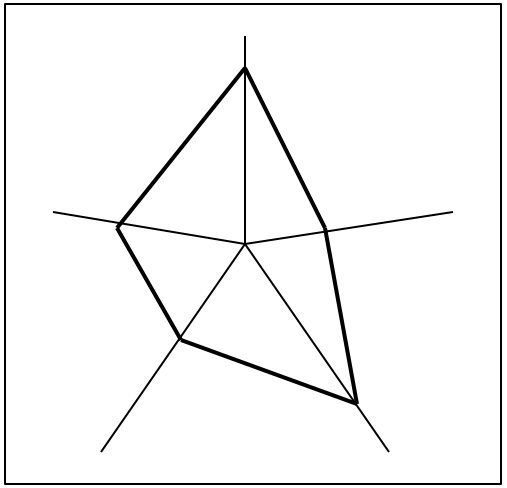
Chart Selection



Scatter Chart



Doughnut Chart



Radar/ Spider Chart

CAUTION: Use sparingly in front of general audiences
Can be confusing, with large chance of mis-interpretation

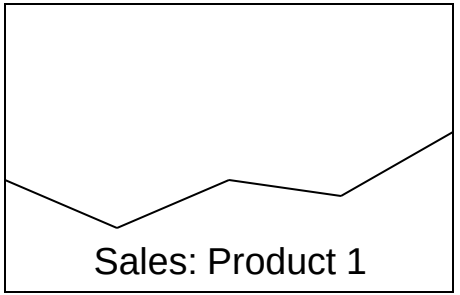
Chart Enhancements

Sales increased from
$4.2 M in 2012 to
$5.3 M in 2013

Words and Numbers

Sales	2012	2013
Product 1	$3.0M	$4.0M
Product 2	$1.2M	$1.3M
Total	$4.2M	$5.3M

Data Table



Basic Chart

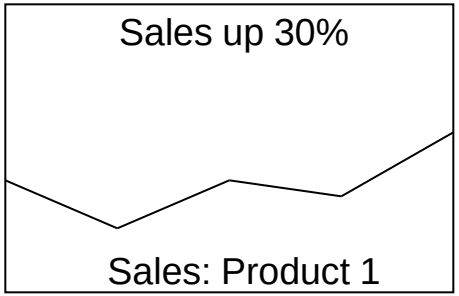


Chart with Headline

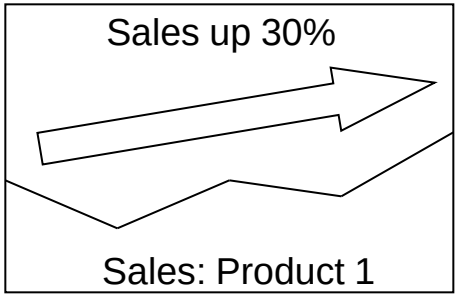


Chart with Trend Arrow

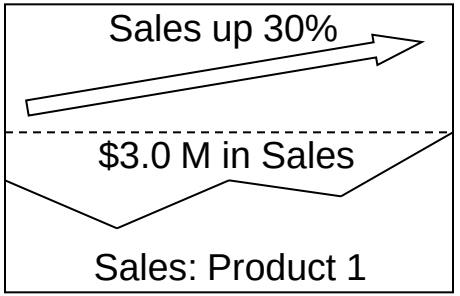
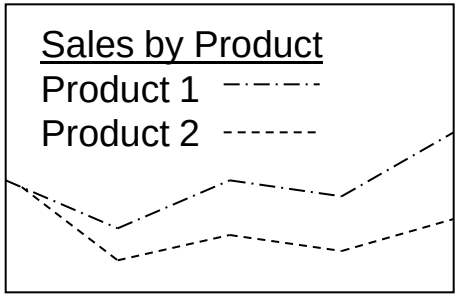
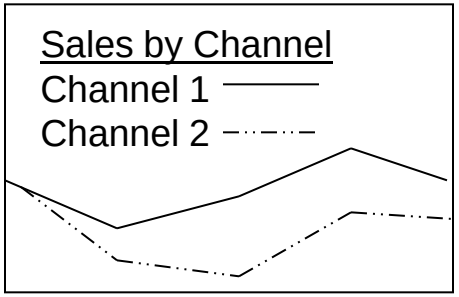


Chart with Threshold

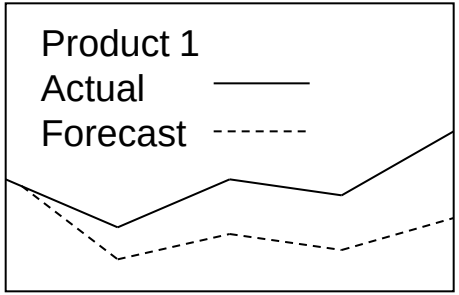
Chart Enhancements



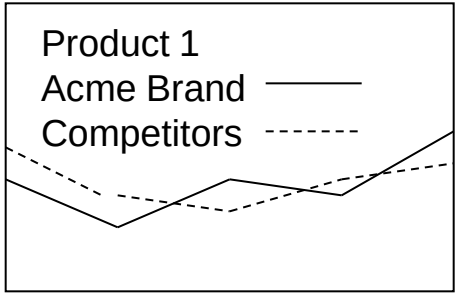
Breakdown: Products



Breakdown: Channels



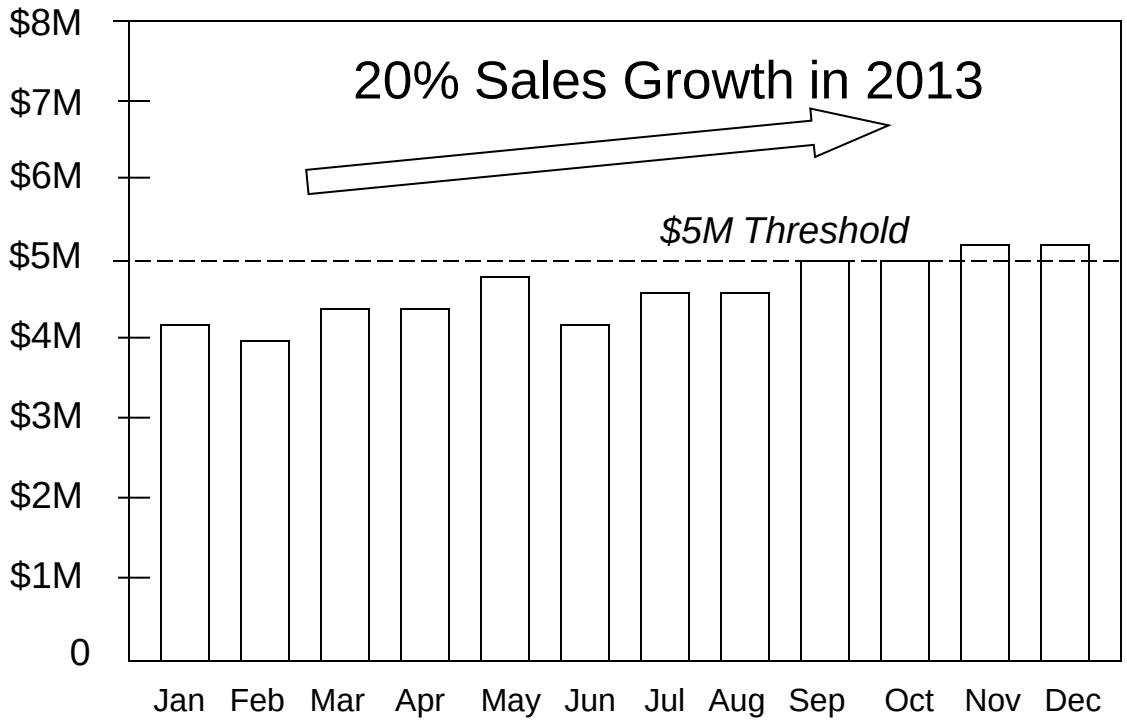
Comparison: Forecast



Comparison: Competition

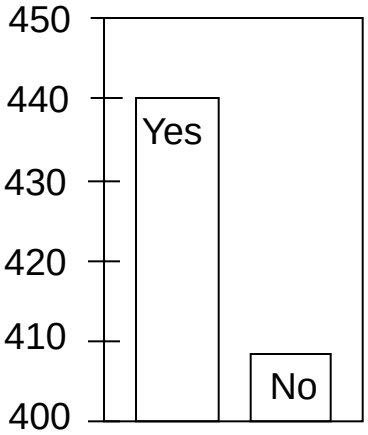
Comparisons using lines of different types

Chart Enhancements

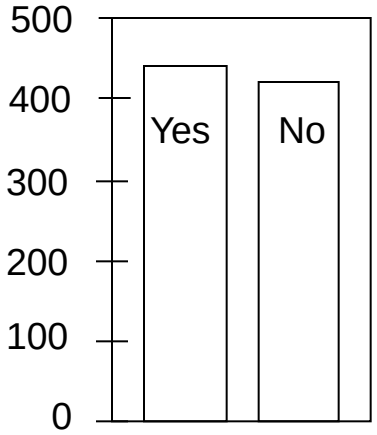


Addition of Trend Arrow, Threshold, and Headline

Marketing Analytics Ethics



Results of Survey: "Would you recommend Acme products to others?"



Truncating Trickery

The Ethical Way

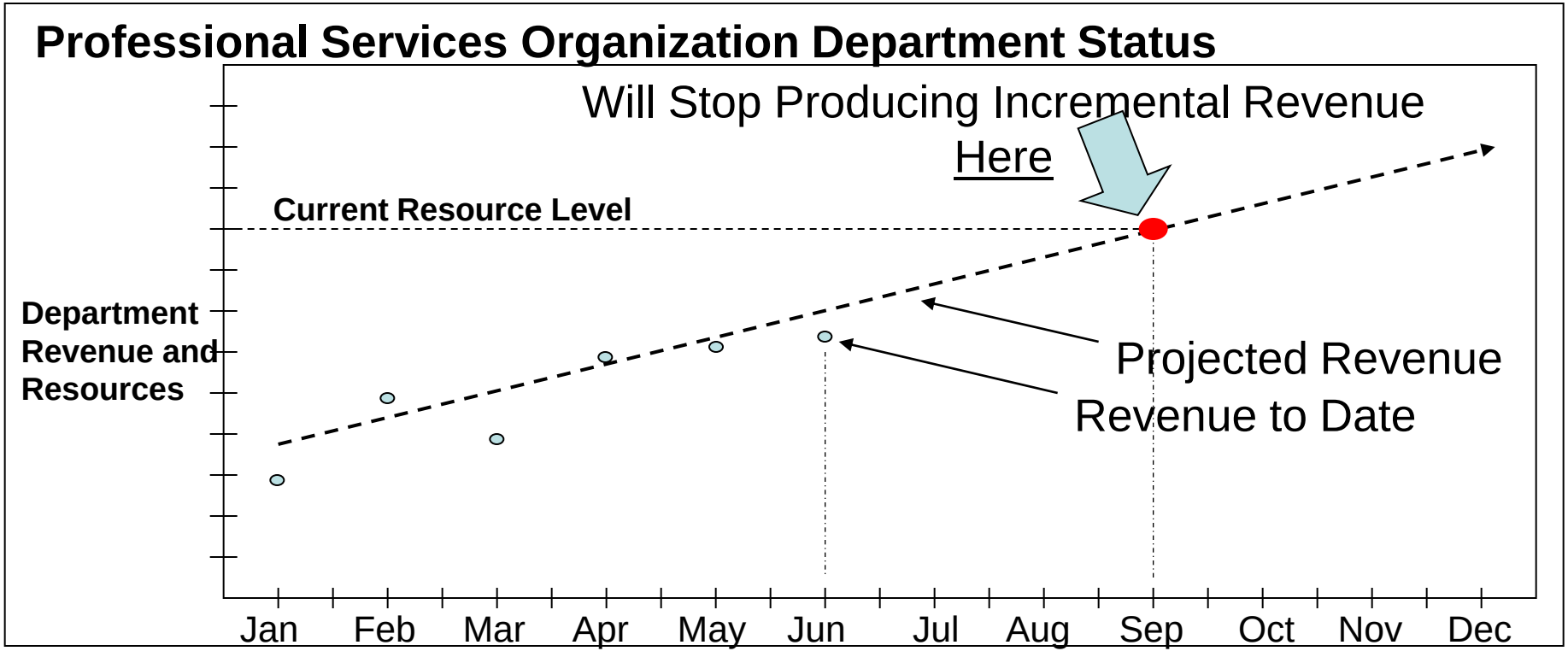
"With great power comes great responsibility"

Data-Driven Presentations: Wrong

Engineering Department Status

- Engineering resources are very low; definitely need more engineers
- Some engineers working many hours per week
- Engineers risk getting burned out from working so many hours
- New projects coming up will require more resources than we have
- Engineering resource types
    - Engineering resource type A: have 10 engineers; need at least 12
    - Engineering resource type B: have 3 engineers; need at least 4
    - Engineering resource type C: have 5 engineers; need at least 6
    - Engineering resource type D: have 15 engineers; need at least 20
- Possible slips to schedule can occur unless we hire more engineers
- Recommend hiring at least 2 additional engineers in next month
- Many engineers complaining to their management about workload

Analytics into Action



Good for presenting to executive audiences; relevant to CEO KPIs

Outcome-focused, instead of process-focused

Check for Understanding

Topic	Description
Rapid	Learn rapid decision tools, such as Pareto analysis
Pivot Tables	Describe how to create and work with pivot tables
Communications	Increase communications effectiveness with data