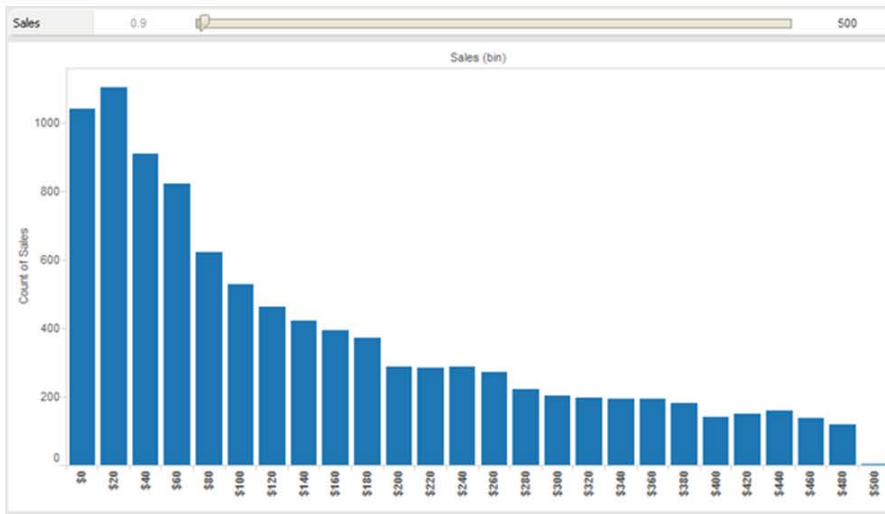


Visual Analytics with Tableau

Charting Guidelines: Histograms, Bullet Charts, Heat Maps and Highlight Tables



Histograms show data distributions across groups

Group and plot data with vertical bars along an axis

Experiment with different data groupings to balance each group's size



Number of customers
by company size

Student performance
on an exam

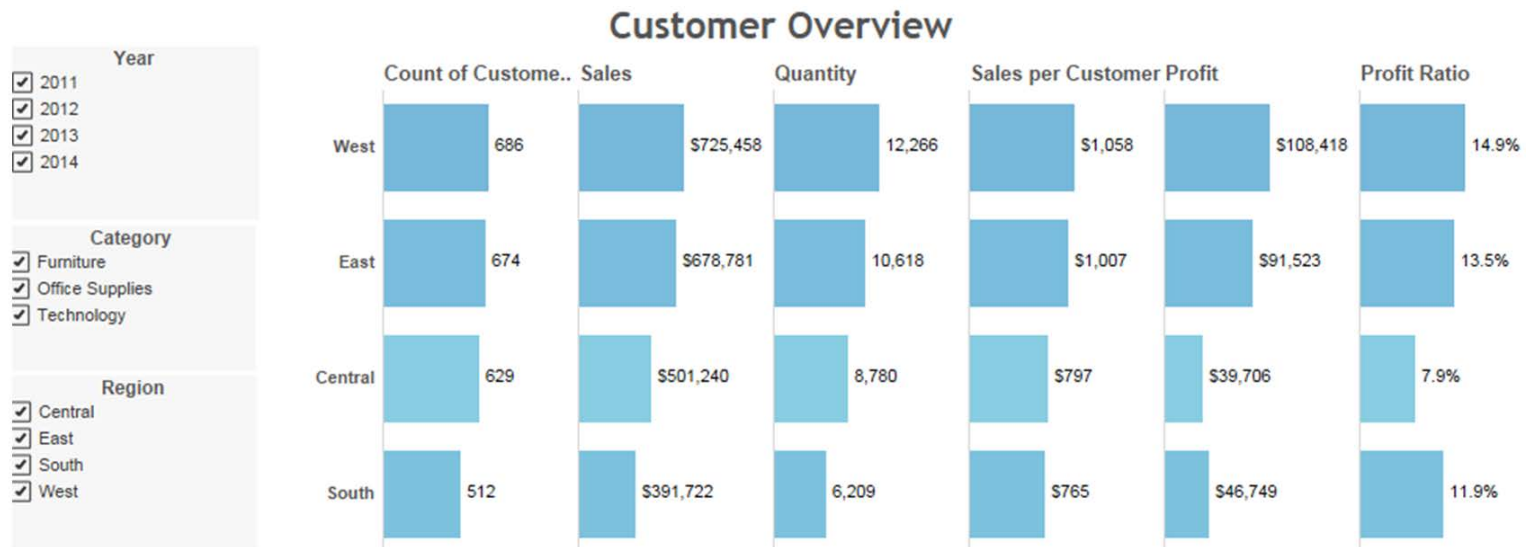
Frequency of product
defects

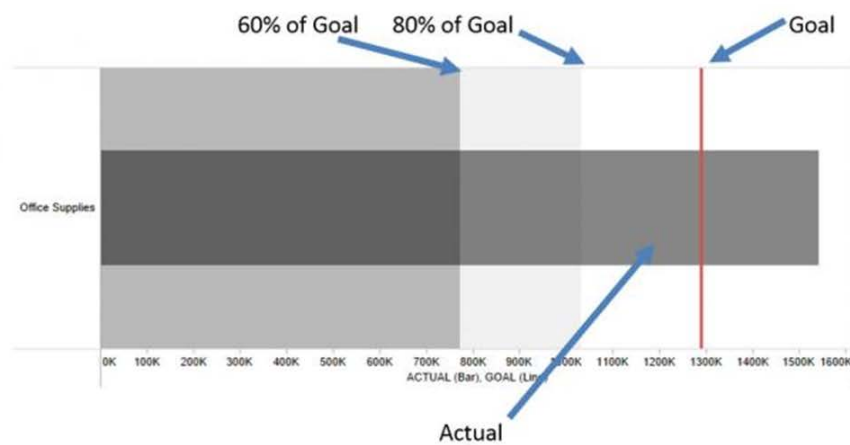


Create a variety of histograms to determine the most useful sets of data



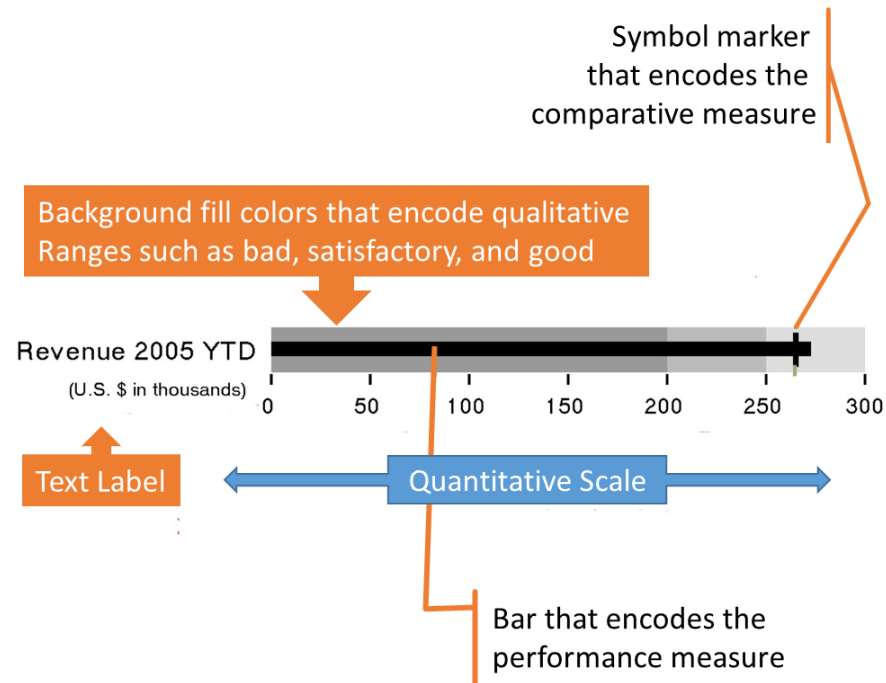
Adding filters to histograms allows the user to explore many data views quickly





Use a bullet chart to track progress toward a goal

Bullet charts are bar graphs spread out over time



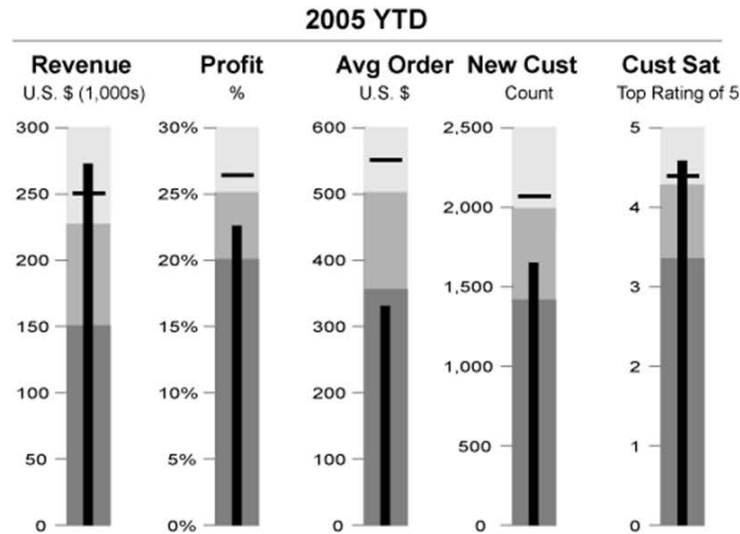
Use a bullet chart to evaluate performance of a metric against a goal

Sales quota assessment
Actual spending
vs. budget

Performance over a
spectrum: great, good
poor

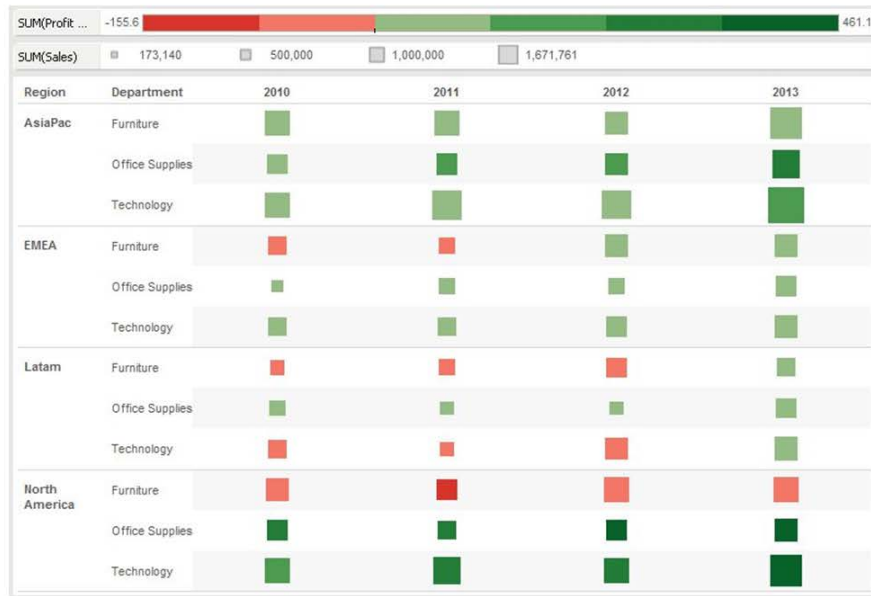
Add color to bullet charts to show achievement thresholds





Add bullet charts to dashboards to summarize insights

Combine bullets with other charts to support discussion about reaching objectives



Heatmaps compare data across two categories using color

Gradient colors show strength or weakness of trends



Segmentation analysis
of a target market

Product adoption across
regions

Sales leads by individual
sales representatives



Varying the square size shows details about multiple intersecting factors

Varying the size could reflect the number of respondents in that category



Other shapes on a heat map may help convey data with more impact

| SUM(Sales) | | \$24 \$1,031,341 | | | | | | | |
|---------------|------------------|------------------|-----------------|-------------|-----------------|-------------|-----------------|----------------|-----------------|
| Region | Country / Re.. | Consumer | | Corporate | | Home Office | | Small Business | |
| | | Furniture | Office Supplies | Furniture | Office Supplies | Furniture | Office Supplies | Furniture | Office Supplies |
| AsiaPac | Australia | | \$2,677 | \$316 | \$5,753 | \$43,007 | \$25,163 | \$1,976 | \$52,048 |
| | China | \$327,265 | \$153,923 | \$520,690 | \$284,654 | \$292,090 | \$198,831 | \$207,592 | \$177,013 |
| | India | \$169,824 | \$119,982 | \$254,423 | \$336,395 | \$177,964 | \$136,734 | \$141,475 | \$71,999 |
| | Japan | \$79,342 | \$89,044 | \$104,936 | \$122,644 | \$132,382 | \$85,140 | \$42,223 | \$28,308 |
| EMEA | Germany | \$1,350 | \$1,332 | \$878 | \$1,098 | \$38,522 | \$27,084 | \$9,873 | \$232 |
| | South Africa | | | \$18,122 | \$8,175 | \$20,453 | \$10,940 | \$24 | \$4,229 |
| | United Kingdom | \$768 | \$11,250 | \$2,836 | \$6,798 | \$11,143 | \$32,098 | \$551 | \$2,188 |
| Latam | Argentina | \$73,676 | \$20,235 | \$84,516 | \$116,670 | \$148,742 | \$65,528 | \$40,353 | \$93,933 |
| | Brazil | \$146,501 | \$115,550 | \$271,880 | \$181,832 | \$144,187 | \$115,890 | \$97,058 | \$196,796 |
| | Mexico | \$19,058 | \$14,374 | \$229,770 | \$140,469 | \$56,381 | \$43,140 | \$29,137 | \$19,366 |
| North America | Canada | \$2,100 | \$2,734 | \$6,538 | \$10,231 | | | \$24,142 | \$10,287 |
| | United States .. | \$616,038 | \$407,799 | \$1,031,341 | \$725,000 | \$663,557 | \$570,220 | \$499,786 | \$509,639 |

Highlight tables are heat maps with more dimensions:
Adds color and data for more detail



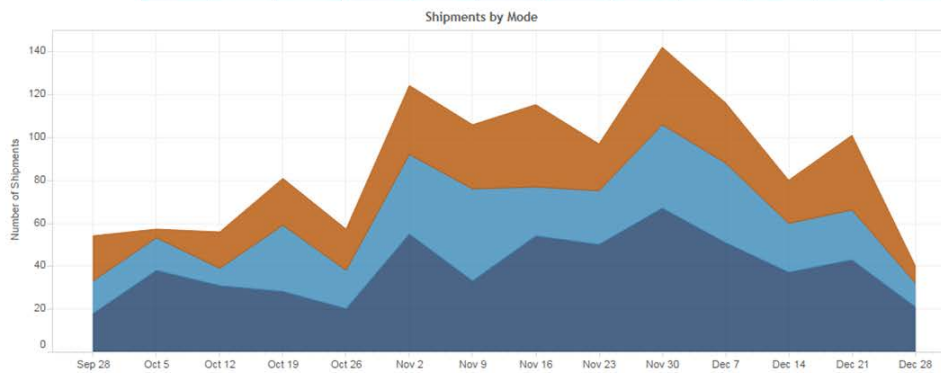
Percent of a market for
different segments

Sales numbers by
regional representatives

Population of cities in
different years

Sales by Product Category

| | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|-----------------|------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Furniture | 2011 | \$5,952 | \$2,130 | \$14,574 | \$7,945 | \$6,913 | \$13,206 | \$10,821 | \$7,320 | \$23,816 | \$12,304 | \$21,565 | \$30,646 |
| | 2012 | \$11,740 | \$3,319 | \$12,315 | \$10,476 | \$9,375 | \$7,714 | \$13,674 | \$9,639 | \$26,273 | \$12,027 | \$30,881 | \$23,086 |
| | 2013 | \$7,623 | \$3,926 | \$12,473 | \$13,406 | \$15,031 | \$12,027 | \$13,199 | \$13,619 | \$26,739 | \$10,131 | \$33,659 | \$37,069 |
| | 2014 | \$5,964 | \$6,866 | \$10,597 | \$9,053 | \$17,267 | \$16,903 | \$13,882 | \$14,909 | \$29,598 | \$21,884 | \$32,927 | \$35,537 |
| Office Supplies | 2011 | \$4,851 | \$1,072 | \$8,606 | \$11,155 | \$7,136 | \$12,953 | \$15,121 | \$11,379 | \$27,423 | \$7,211 | \$26,862 | \$18,006 |
| | 2012 | \$1,809 | \$5,427 | \$15,624 | \$12,559 | \$9,114 | \$10,648 | \$4,720 | \$11,735 | \$19,306 | \$8,673 | \$21,218 | \$16,202 |
| | 2013 | \$5,300 | \$6,683 | \$17,456 | \$10,640 | \$13,007 | \$10,902 | \$12,677 | \$9,219 | \$23,286 | \$14,799 | \$21,428 | \$38,112 |
| | 2014 | \$21,704 | \$7,390 | \$14,317 | \$14,922 | \$14,138 | \$15,297 | \$10,899 | \$29,973 | \$32,759 | \$23,403 | \$30,070 | \$31,855 |
| Technology | 2011 | \$3,143 | \$1,609 | \$32,511 | \$9,195 | \$9,600 | \$8,436 | \$8,004 | \$9,210 | \$30,538 | \$11,938 | \$30,201 | \$20,893 |
| | 2012 | \$4,625 | \$3,465 | \$10,328 | \$11,161 | \$11,643 | \$6,435 | \$10,371 | \$15,525 | \$19,017 | \$10,705 | \$23,874 | \$35,632 |
| | 2013 | \$5,620 | \$12,259 | \$21,255 | \$15,203 | \$28,653 | \$16,502 | \$12,564 | \$10,427 | \$22,883 | \$31,533 | \$27,105 | \$22,057 |
| | 2014 | \$17,035 | \$6,027 | \$28,994 | \$16,138 | \$14,247 | \$16,060 | \$23,848 | \$16,634 | \$28,132 | \$32,507 | \$49,330 | \$23,083 |



User understands
overall trends and
specific cross-section
of data