Data Collection for Performance Measurement

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Introductions

⌘ Name

⌘ Agency

⌘ Why you're taking the class

Objective

To demonstrate how data collection is linked to the performance measurement effort and how it should be addressed to ensure <u>reliable</u> information is available for effective decision-making about County programs and services.
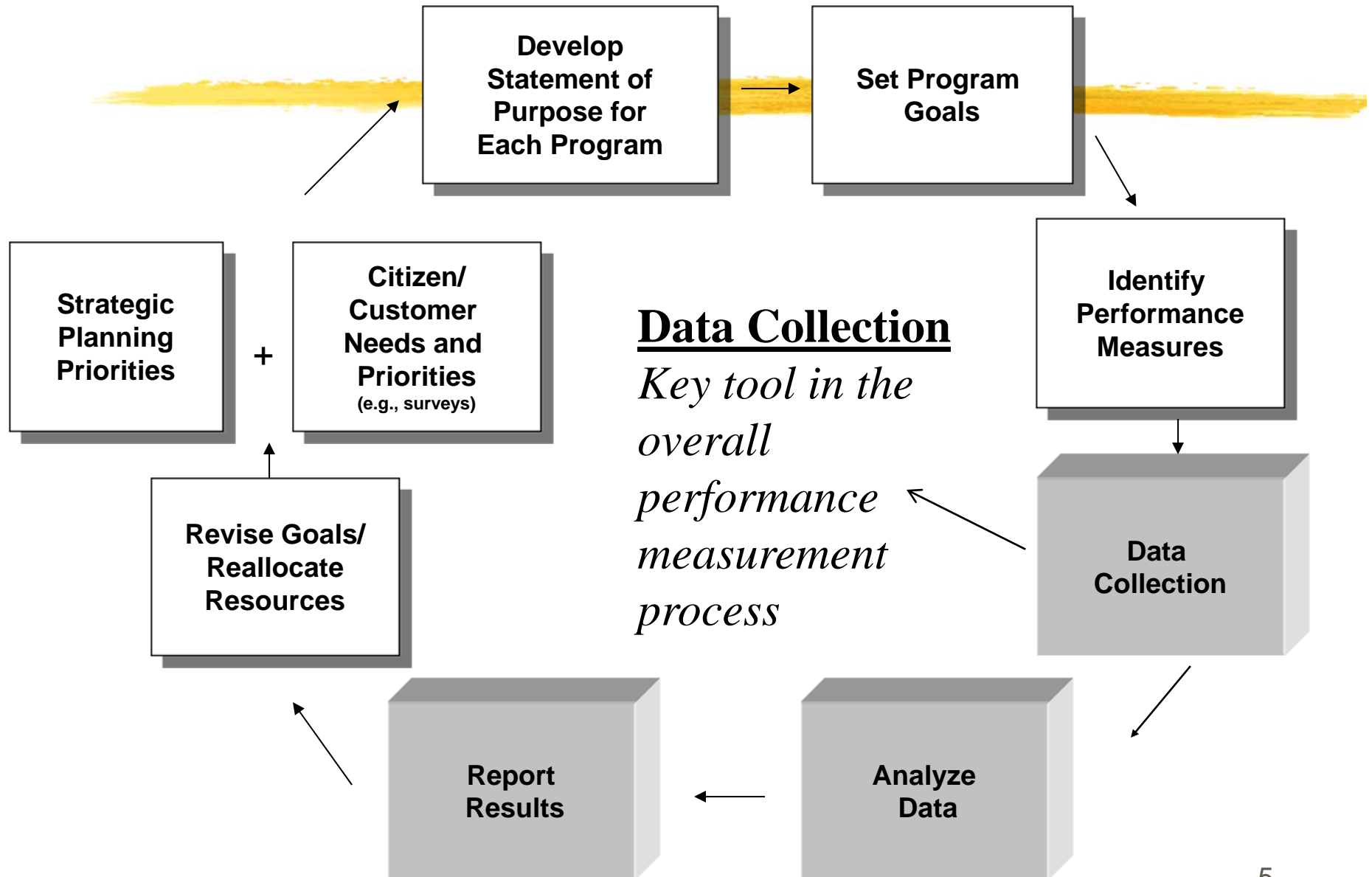
Or . . .

- ⌘ What to Collect
- ⌘ How to Collect It
- ⌘ When to Collect It
- ⌘ What to Do with It Once You've Got It

Performance Measurement Process

Develop Statement of Purpose for Each Program

Set Program Goals

Strategic Planning Priorities

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Citizen/ Customer Needs and Priorities (e.g., surveys)

Data Collection

Key tool in the overall performance measurement process

Identify Performance Measures

Revise Goals/ Reallocate Resources

Data Collection

Report Results

Analyze Data

Benefits in Collecting Data for Performance Measurement

- ⌘ Helps identify a problem or confirm that a problem exists

- ⌘ Allows us to work with facts

- ⌘ Enables us to establish baseline measurement criteria

- ⌘ Provides information to measure success

Why We Measure Performance

- ⌘ NOT to keep score

- ⌘ To provide accountability

- ⌘ To have better information for decision making

- ⌘ To continue to improve

3 "Rs" of Good Data

⌘ Reliable – credible; calculations are accurate and consistent over time

⌘ Relevant - pertains to the service being measured

⌘ Representative - typical of the service being measured

SMART Measurement

⌘ Strategic: collect only needed data

⌘ Measurable: get the right data for program being measured

⌘ Accurate: measure things as accurately as possible given time and cost constraints

⌘ Reliable: record data correctly

⌘ Time-Based: keep it simple

TYPES OF DATA

Quantitative Data

- Measurement of quantity or amount
- "Hard Data"
- Examples: Clients served, cost per client, staffing, budget dollars

Qualitative Data

⌘ Soft Data

⌘ Customer
    perceptions or
    experiences

Family of Measures

Terminology	Definition	Examples
Output	Quantity or number of units produced.	⌘Library books checked out ⌘Patients transported
Efficiency	Inputs used per unit of output.	⌘Cost per appraisal ⌘Plans reviewed per reviewer
Service Quality	Customer satisfaction, or how timely a service is provided.	⌘% of respondents satisfied with service ⌘Avg. days to address a work order
Outcome	Consequences associated with a program	⌘Reduction in fire deaths ⌘% of juveniles not reconvicted

Quantitative Data

⌘ Outputs - clients served, children immunized, purchase orders issued, etc.

⌘ Efficiency - cost per client, cost per immunization, cost per purchase order, etc.

Qualitative Data

⌘Service quality - accuracy, timeliness, or customer satisfaction

⌘Outcome - results or impact of service

**Exercise #1 – Identify
Types of Data
(10 minutes)**

Data Collection Process

Step 1: Define the Scope of Data Collection

Ask yourself the following questions:	Examples:
Who would be involved in the decision making?	Program managers, frontline staff, IT staff etc.
What <u>type</u> of program-generated data will we need to collect?	Neighbor ratings of neighborhood safety
Where will I get it?	Neighbor surveys
How will the information be used?	Resource needs/allocation; budget impacts
Establish baselines; set realistic targets	Past performance; benchmarking; national standards; Board direction; internal goals; mandates

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Step 1: Sources of Data

Measure	Source
Board packages prepared	BOS agenda records
Total cash payments	Receipts; bank records
Lunches served	Administrative records
Help Desk calls processed	Telephone system records
Permits Processed	Permit Applications
Information accessed	"Hits" on web pages
Satisfaction with program	Surveys
Condition of parks	Trained observer

Step 2: Consider Sample Size and Frequency of Data Collection

⌘ Consider time and expense $$$$

⌃ Should information for the entire population be collected, or is a sample of the population more appropriate?
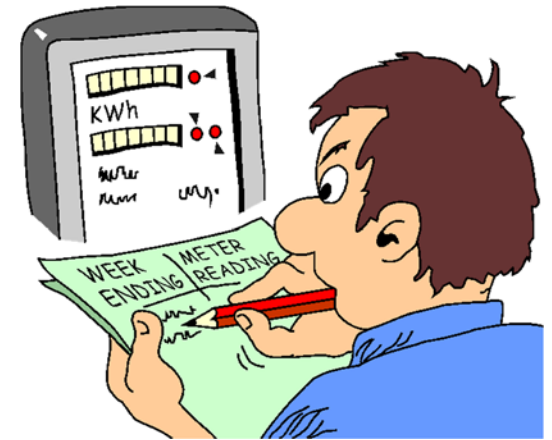
⌘ How often should the data be collected?

⌃ Weekly? Monthly? Quarterly? Annually?

Step 3: Document the Data Collection for Each Type of Data (Appendix A)

⌘ Design a data collection sheet that specifies:

- ⌃ Who will collect the data
- ⌃ How it will be recorded
- ⌃ How often it will be collected
- ⌃ What collection medium will be used (manual or automated)

Step 4: Test the Collection Method

⌘ Always do this step, no matter how simple the data collection is.

  ⌃ Testing can save you time and trouble in the long run
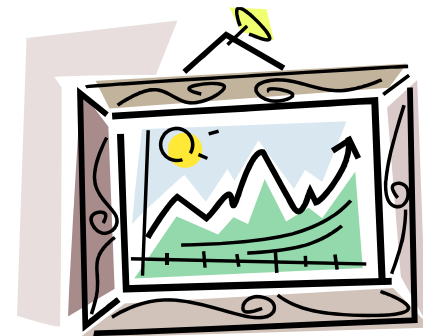
  ⌃ Check formulas; methodology

Step 5 Gather the Data

⌘ Work on summarization during data collection

   ⌃ Identify trends early

   ⌃ Avoid unpleasant surprises

   ⌃ Identify anomalies

Step 6: Analyze the Data

- Identify or confirm a problem that exists
- Identify trends
- Determine direction of the program
- Determine if goals/targets are being met
- What actions if any are required
- Who needs to be told

Step 7: Use the Data

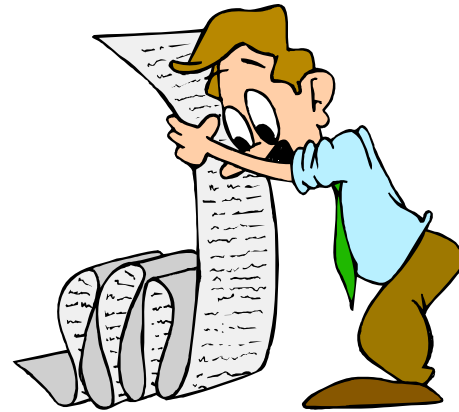- Refine projections for performance measures

- Improve service delivery

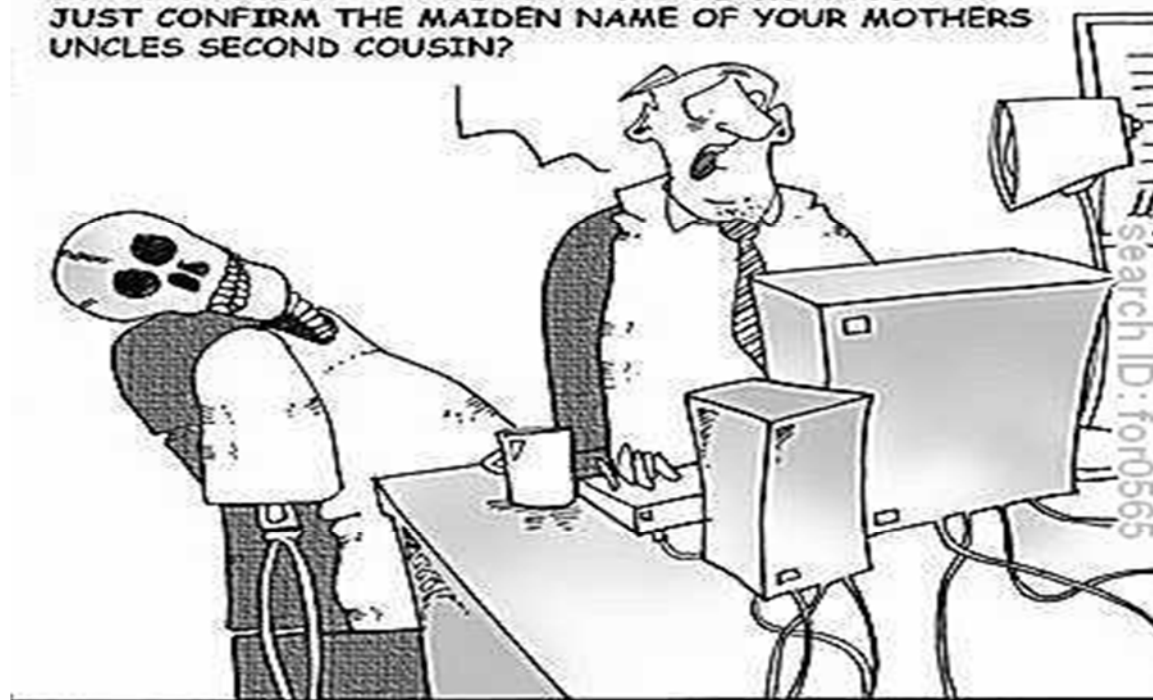- Support request for additional resources and funding

- Update strategic plans

Key Point

Generate and collect only the data to be analyzed

Tips on Collecting Data

Collecting Quantitative Data

⌘ Unobtrusive measurement

⌃ subjects unaware

⌘ Questionnaires and surveys

⌘ Reactive measurement

⌃ comment cards, 800 numbers, complaints, etc.

Collecting Qualitative Data

- Participation
  - experience reality as public does (e.g., secret shopper)
- Observation
  - unobtrusive trained observer
- Interviews/Focus Groups
- Document Review
  - review comment cards

Exercise #2 – Data Collection Process

Reporting Results

Data Presentation

✤ Should be concise, easy to understand and tailored to audience

✤ Three different approaches

- ⌃ Text
- ⌃ Tabular (tables)
- ⌃ Graphical (pie, bar, line)

Data Presentation - Text

FY 2006 (Peak Period)

Total Major/Minor Plans Received for Processing	6,359
Total Filled E III & UF II	23
Workload to staff	276

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FY 2008 (Actual)

Total Major/Minor Plans Received for Processing	4,735
Total Staff	20
Workload to staff	237

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FY 2009 & FY 2010 Projected

Major/Minor Plans for Processing (Projected)	3,855
Total Staff	15.5
Workload to Staff	249

Data Presentation: Tabular

Fiscal Year	Workload	Staff	Plans/Reviewer
2006	6359	23	276
2008	4735	20	237
2009 (projected)*	3855	15.5	249
2010 (projected)	3855	15.5	249

Data Presentation: Pie Chart

Gym/Field Applications Processed

541

542

1342

441

800

345
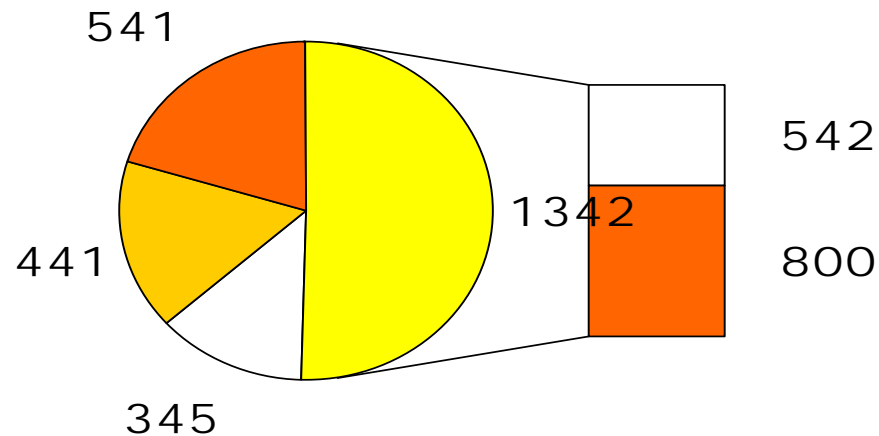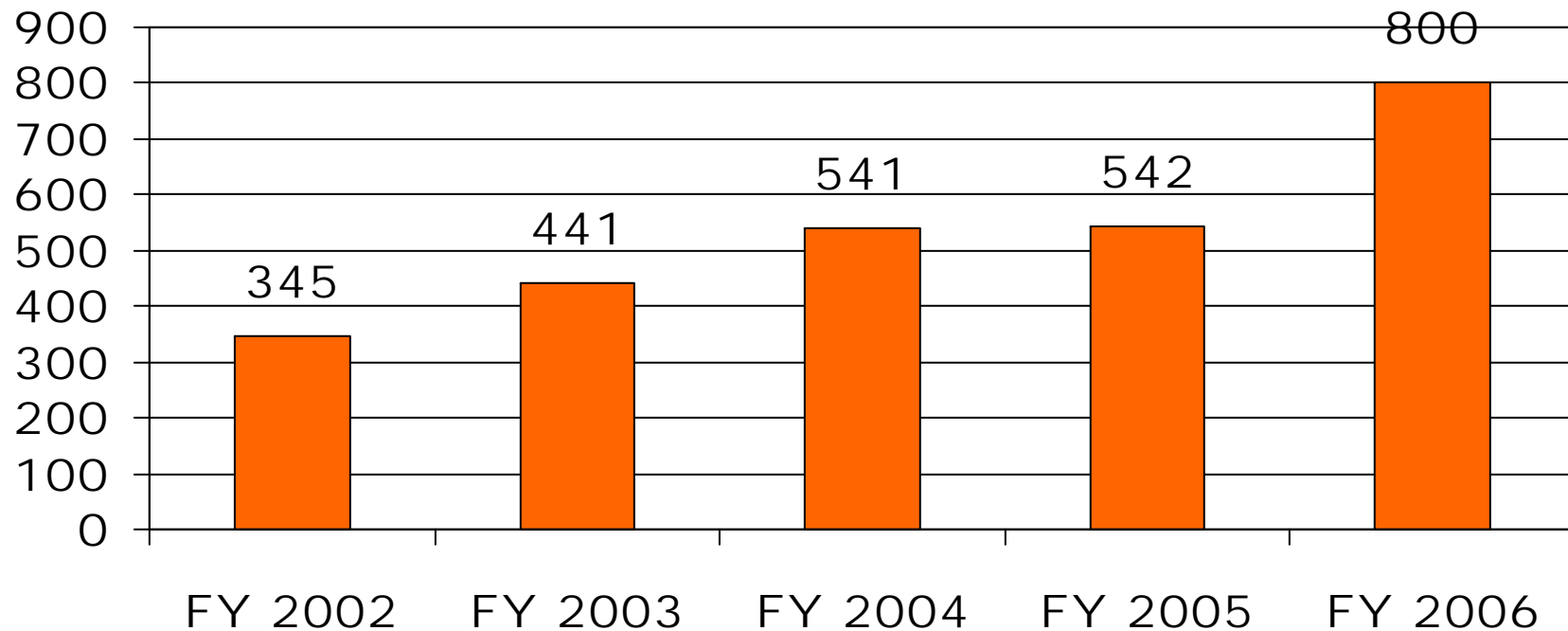
Pie charts are used to show classes or groups of data in proportion to the whole data set. The entire pie represents all the data, while each slice represents a different class or group within the whole.
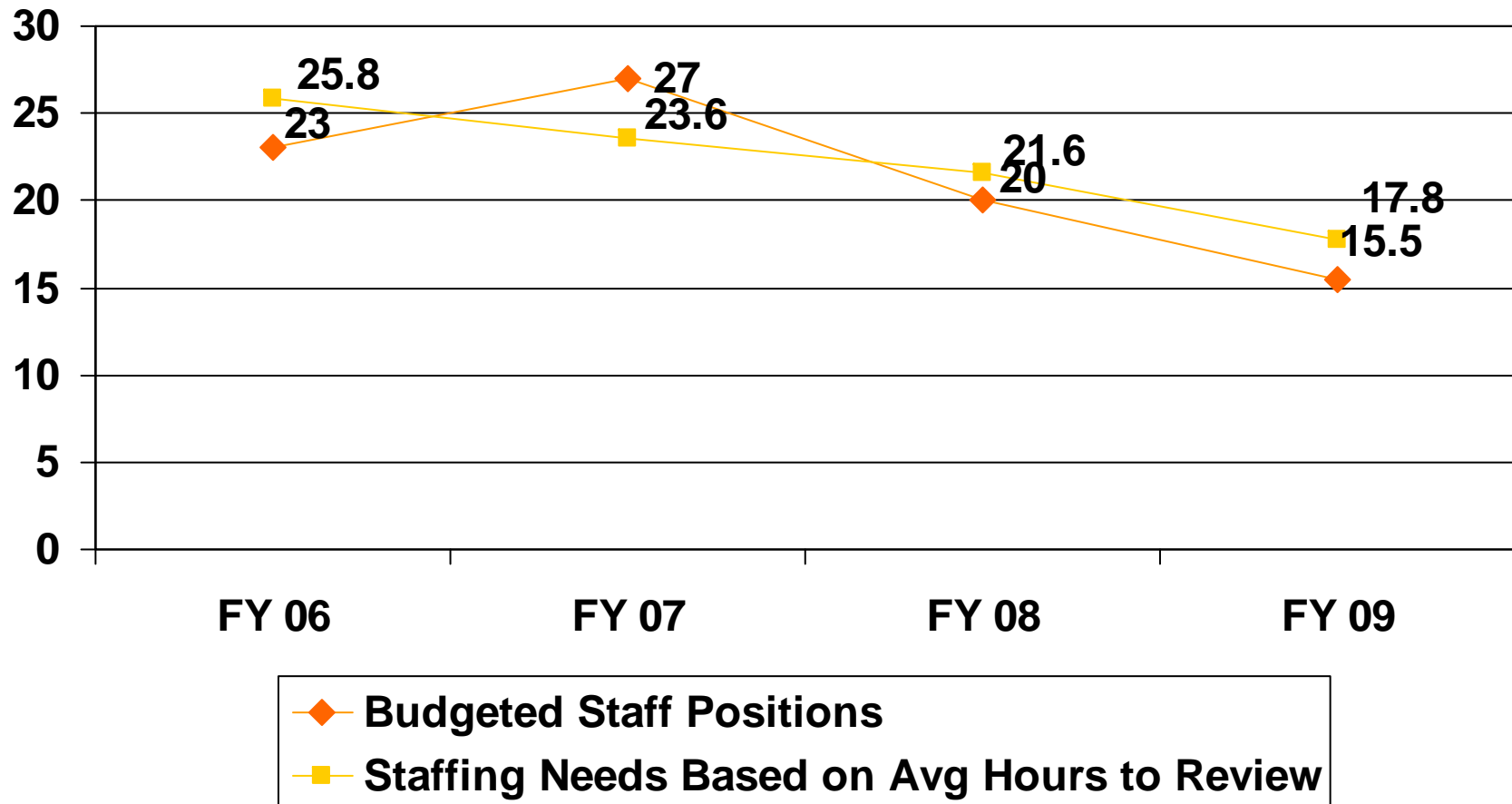
Data Presentation: Bar Graph
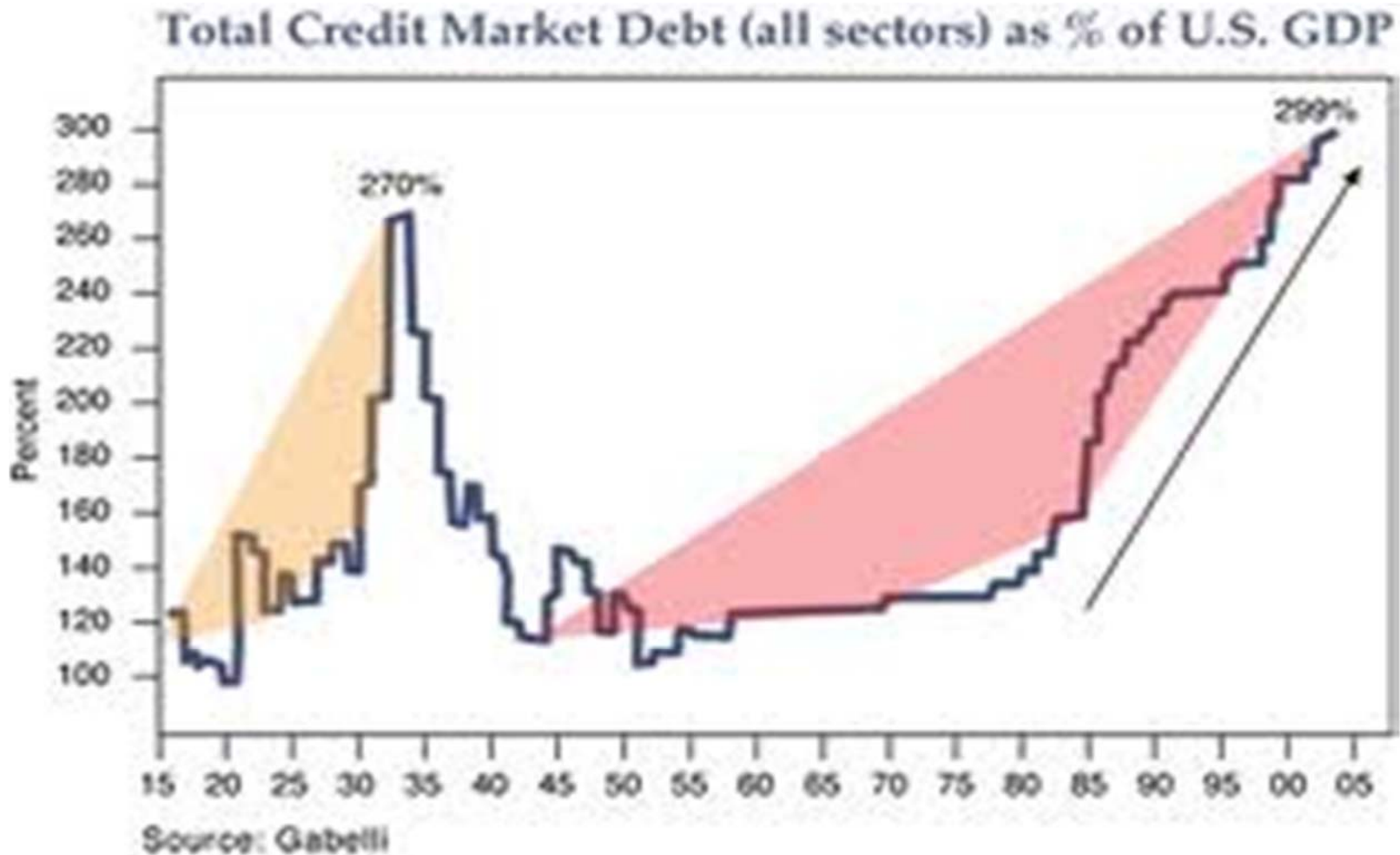
Gym/Field Applications Processed

Bar Charts, like pie charts, are useful for comparing classes or groups of data.

Data Presentation: Line Graph

Legend:
- ◆ Budgeted Staff Positions
- ■ Staffing Needs Based on Avg Hours to Review

Data points:
- FY 06: Budgeted Staff Positions = 23, Staffing Needs = 25.8
- FY 07: Budgeted Staff Positions = 27, Staffing Needs = 23.6
- FY 08: Budgeted Staff Positions = 20, Staffing Needs = 21.6
- FY 09: Budgeted Staff Positions = 15.5, Staffing Needs = 17.8

Data Presentation: Line Graph

Total Credit Market Debt (all sectors) as % of U.S. GDP

Source: Gabelli

Things to Look For:

Interpretation depends on what information you are looking for. Examples of what you might look for:
- The tallest bar.
- The shortest bar.
- Growth or shrinking of the bars over time.
- One bar relative to another.

Presentation Tips:

⌘ **Watch out for inconsistent scales.** If you're comparing two or more charts, be sure they use the same scale. differences and how they might trick your eye.

⌘ **Be sure that all your classes are equal.** For example, don't mix weeks and months, years and half-years.

⌘ **Be sure that the interval between classes is consistent.** For example, if you want to compare current data that goes month by month to older data that is only available for every six months, either use current data for every six months or show the older data with blanks for the missing months

⌘ **Bottom Line ....** Compare apples to apples!

Best Practices

DATA INTEGRITY

"Trust, But verify"

- Ronald Regan

Best Practices or Lessons Learned

1. Centralized recordkeeping
2. Data Integrity
3. Data Bias
4. Periodic Review
5. Internal audits
6. Surveys
7. Benchmarking
8. Educating staff
9. Leveraging Technology
10. Stakeholder Involvement
11. Data Protection

Best Practices: Centralized Recordkeeping

- Senior Staff Position – Lead
    - Reporting
    - Trends
    - Internal audits
- Branch representatives
    - Data entry

Best Practices: Data Integrity

- ⌘ Periodic Review
  - ⌂ At least annually (recommend monthly)
- ⌘ Consistency
  - ⌂ Same data from year to year
  - ⌂ Document changes as explanatory data
- ⌘ Accuracy
  - ⌂ Calculations
  - ⌂ Data inputs

Best Practices: Be Aware of Data Bias

- Exclusion – portions of process are not studied
- Sampling – one or several subpopulations are disproportionately represented
- Interaction – workers are aware that they are being observed
- Perception – data collector may have pre-conceived ideas
- Operational – data collection is flawed

Best Practices: Review of Performance Measures

- Process changes
- New initiatives (internal and external)
- Overcome old way of measuring

Best Practices: Internal Audits

⌘Check program formulas

⌘Anomalies in data

   ⌃   Process changes

   ⌃   Error in data entry

Best Practices: Reporting

⌘ Monthly
  - ⌃ Front line supervisors, staff
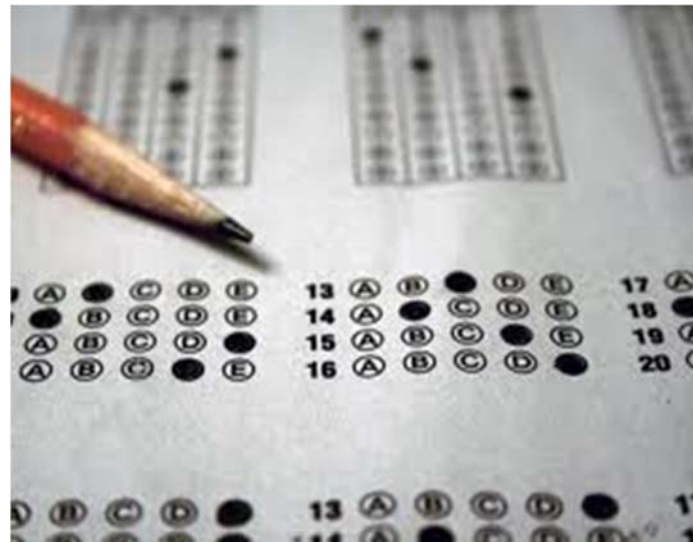 - ⌃ Specific to their business area

⌘ Quarterly
  - ⌃ Senior managers
  - ⌃ Focus on key performance measures

⌘ Annual (budget)
  - ⌃ Board of Supervisors; Citizens

Best Practices: Conducting Surveys

Measures customer satisfaction, timeliness and/or accuracy of a service.

Best Practices: Benchmarking

� Building Code Effectiveness Grading Schedule (ISO Survey)

✶ Participate in the International City/Council Management Associations (ICMA) annual survey

✶ Prince William County's Service Efforts and Accomplishments (SEA) report

Best Practices: Educating Staff

- Importance of record keeping
- Importance of data entry
- Impact of process changes

Best Practices: Leveraging Technology

✥ Use technology to capture and report data
- Survey "Snap"
- Forecasting Pro
- Active strategy

✥ E-Commerce

✥ Software: Word, Excel, and/or PowerPoint

Best Practices: Stakeholder Involvement

⌘Support
- ⌃ Become your best advocates

⌘Ensure compliance
- ⌃ Provide support and guidance upfront

⌘Process improvement
- ⌃ Feedback may lead to process changes

Best Practices: Data Protection

- ⌘ Passwords
- ⌘ Limit access to key personnel
- ⌘ Conduct audits
- ⌘ Databases; Spreadsheets (read-only)

In Closing ......

- Critical link between data collection, performance measures, program resources, and program outcomes.
- "7" Data Collection Steps
- Ensure best practices are used

Remember ....

SMART Measurement

⌘ **Strategic**

⌘ **Measurable**

⌘ **Accurate**

⌘ **Reliable**

⌘ **Time-based**

3 "Rs" of Good Data

⌘ **Reliable**

⌘ **Relevant**

⌘ **Representative**

Resources:

⌘ Performance Measurement
http://infoweb.fairfaxcounty.gov/DMB/

⌘ Tools for Reporting
http://www.skymark.com/resources/tools