The Quality Display of Visual and Graphic Information

MAY 2003

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We Used to Write These **Big Huge** Reports, Now We "Show" Information

We wrote these reports from beginning to end:

INTRO (Statement of problem)

BODY (Discussion)

- Develop problem
- Provide evidence

SUMMARY (Conclusions) RECOMMENDATIONS (Next steps)

Communicators Found They Were More Successful Using Pictures

We began to organized our papers "backwards":

CONCLUSIONWhat we know, key points

EVIDENCE

Data, findings

Enter the need for GOOD GRAPHICS. . .

Effective Graphics

- Are readily understood by the reader
- Are relevant to the world we live in
- Are timely
- Are formatted with a sense of balance, proportion, and clarity of design
- Have integrity (data/analysis)
- And they answer some very predictable, fundamental questions

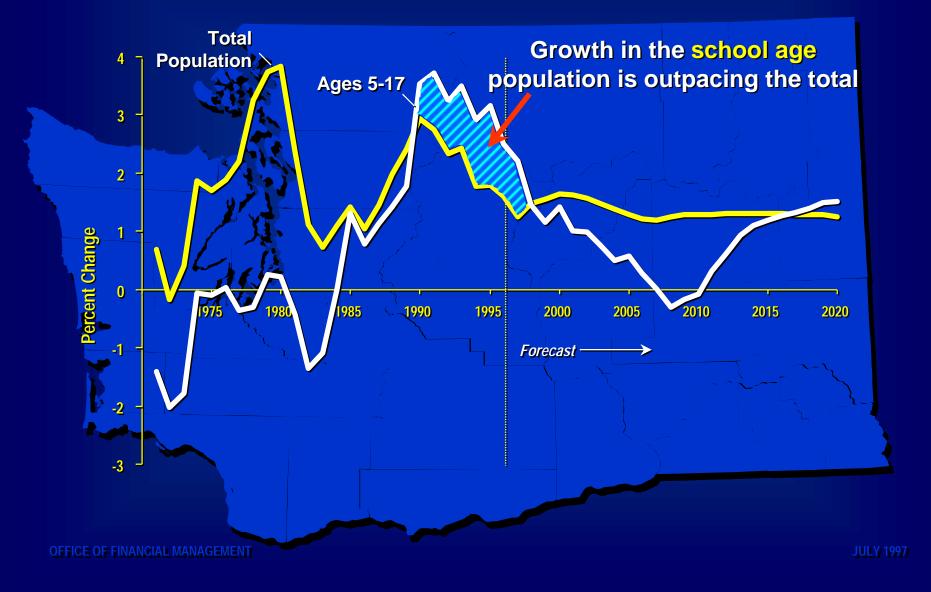
The Questions Are:

- 1. What compared to what?
- 2. What does the universe look like?
- 3. What does a piece of the universe look like?
- 4. What does it look like in space or time?
- 5. How does the world work?

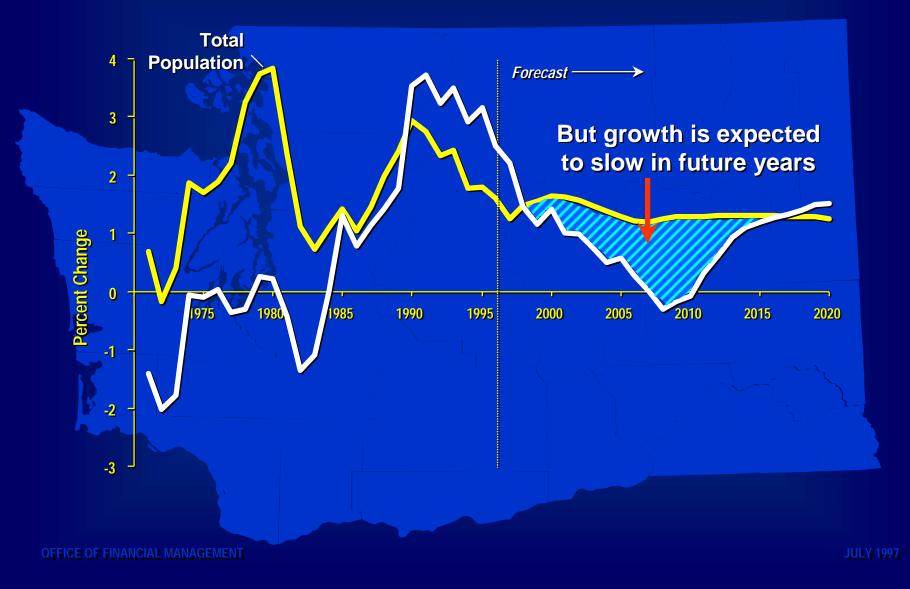
What Compared to What?

Trendlines — "Before and after" or forecasting data

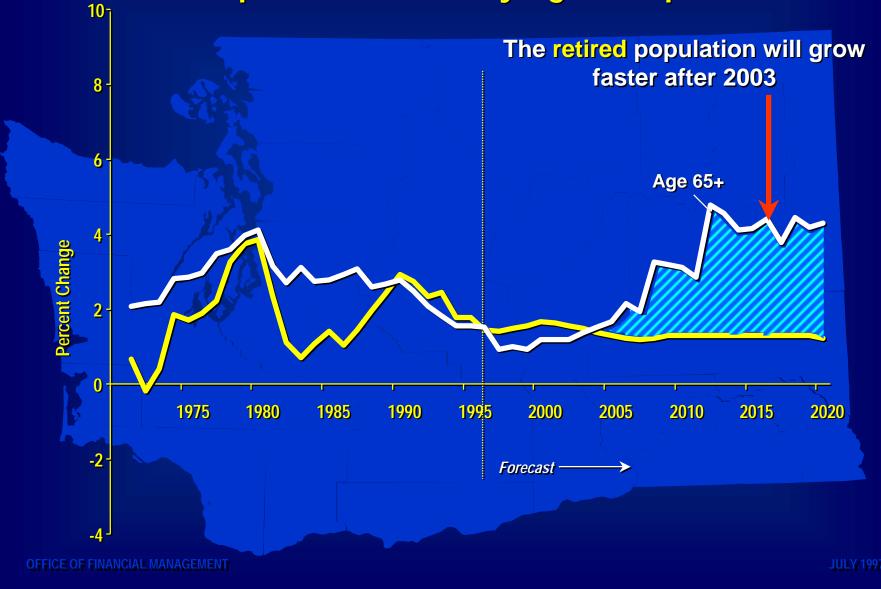
Population Growth by Age Group

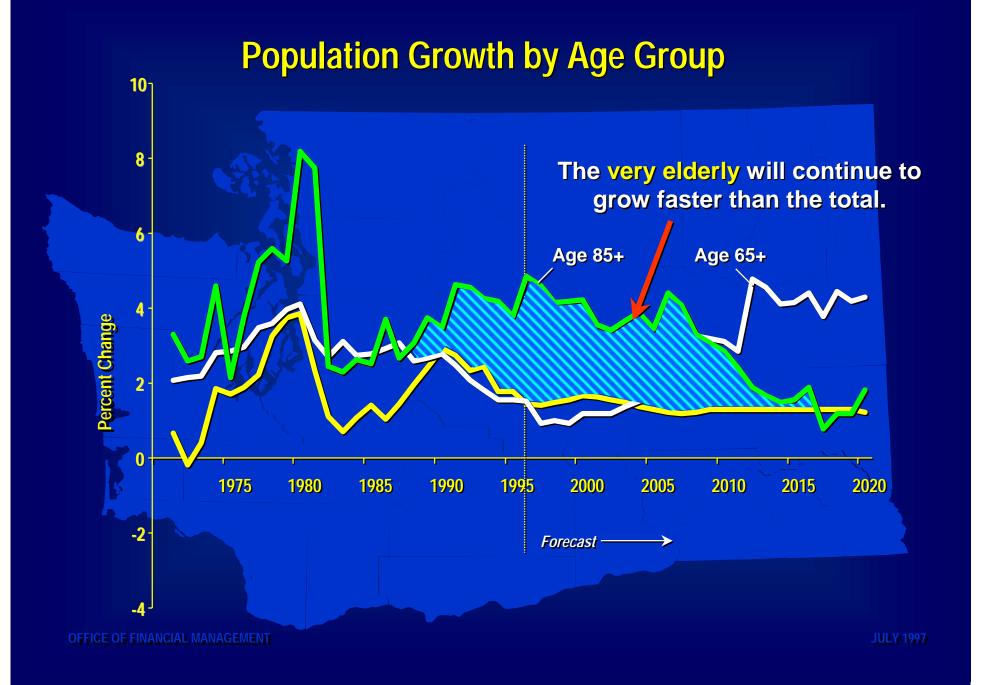


Population Growth by Age Group



Population Growth by Age Group





What Compared to What?

- Trendlines "Before and after" or forecasting data
- Bar charts One item measured against another



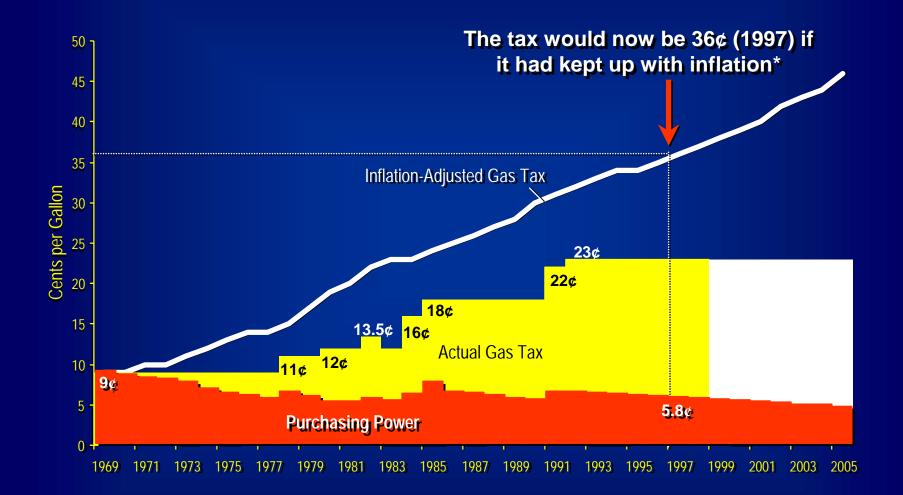
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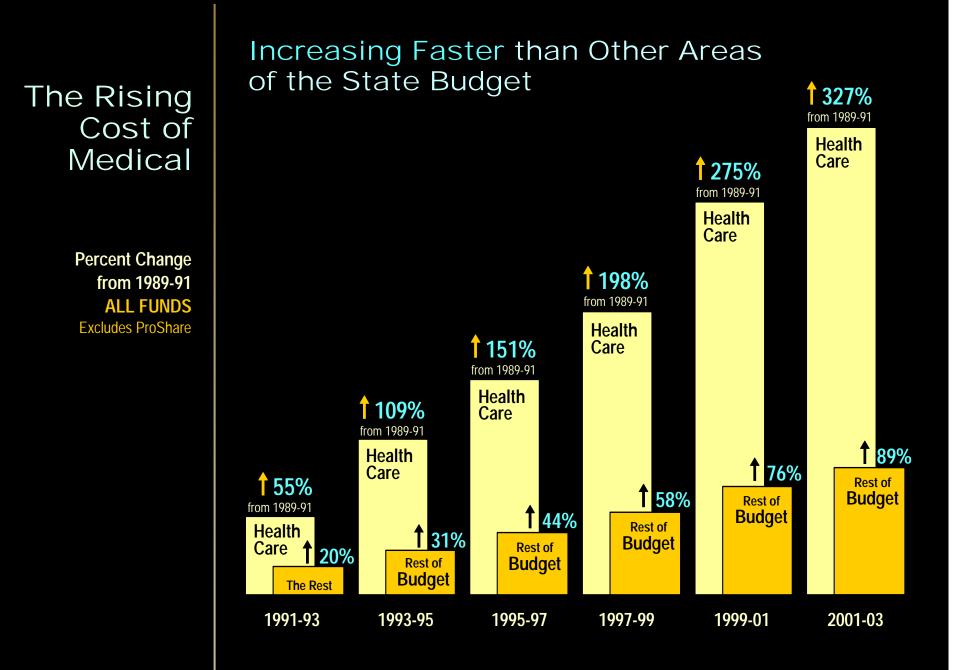
Statewide Planning Saving Lives: Trauma Care

A turnaround of 5 lives per 100 trauma patients with penetrating injuries) ; /	<u>1998</u> 3 lives above the national average	
	<u>1990</u> 2 lives below the national average			

State Gas Tax vs. Inflation



SOURCE: Washington State Department of Transportation * Based on Implicit Price Deflator (IPD).

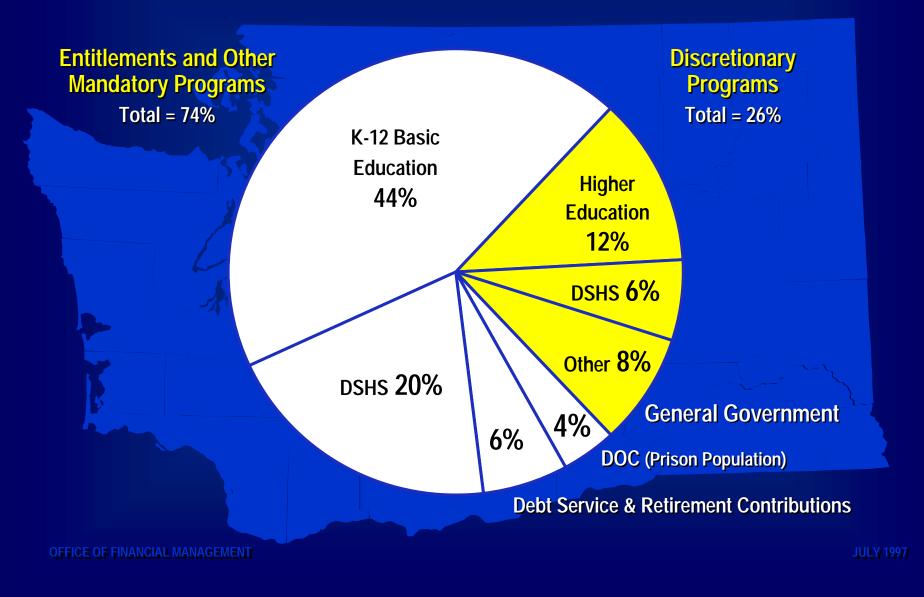


SOURCE: Legislative Evaluation and Program Committee (LEAP), ProShare calculation from DSHS Budget Division. Medical costs include the Washington State Health Care Authority and DSHS Medical Assistance payments.

What Does the Universe Look Like?

• Pies — The whole and the pieces

1997-99 General Fund-State Budget TOTAL = \$19,084 Million



Major Components of Change Between 1997-99 Appropriations and Estimated 1999-01 Maintenance Level*

Total Change = \$1.1 Billion

HiEd Enrollment/Technology, Etc. \$48 Million	5%	
Bond Debt \$125 Million	12%	
Other DSHS \$132 Million	12%	
Corrections Population, Related Costs \$129 Million 12%		
K-12 Enrollment, Related Costs \$80 Million	7%	
Major Health Programs** \$569 Million Includes: • K-12/State Employee Health Benefits \$258 Million • DSHS Long Term Care \$58 Million • DSHS Medical Assistance \$253 Million	52%	
LEOFF Pension, Other \$2 Million	0%	

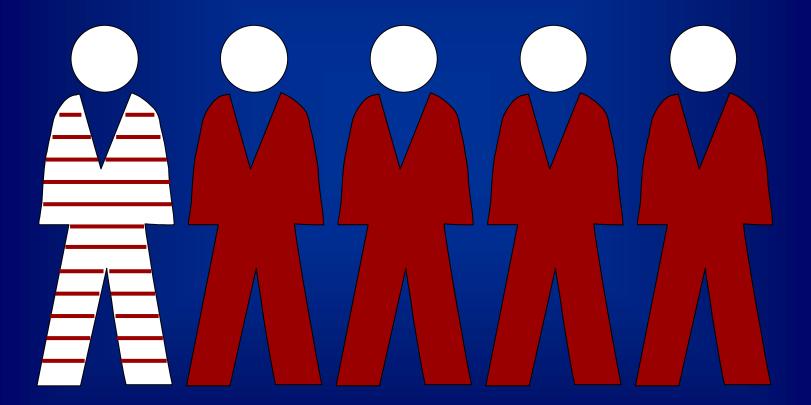
*Current estimate as of November 12, 1998. Does not include salary or vendor increase; pension savings are prorated to applicable programs. ** Includes DSHS Medical Assistance, DSHS Long Term Care, K-12/Employee Health Benefits.

What Does the Universe Look Like?

- Pies The whole and the pieces
- Images One out of how many?

Safer Communities

Four out of five felons currently reside in the community



Half of Washington's Adults Are Either Current or Former Smokers

Never Smoked = 49% of adults

Former smokers = 27%

Still smoking = 24%







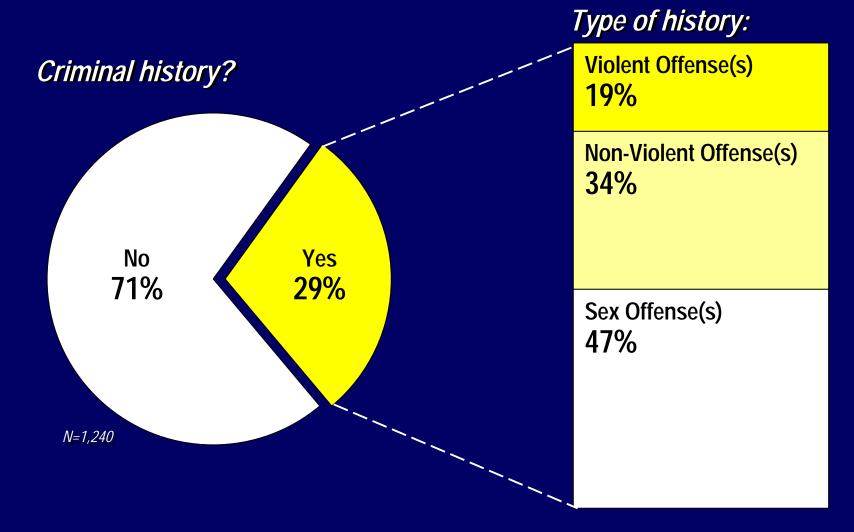
What Does the Universe Look Like?

- Pies The whole and the pieces
- Images One out of how many?

What Does a Piece of the Universe Look Like?

Linked pies — A piece of the whole

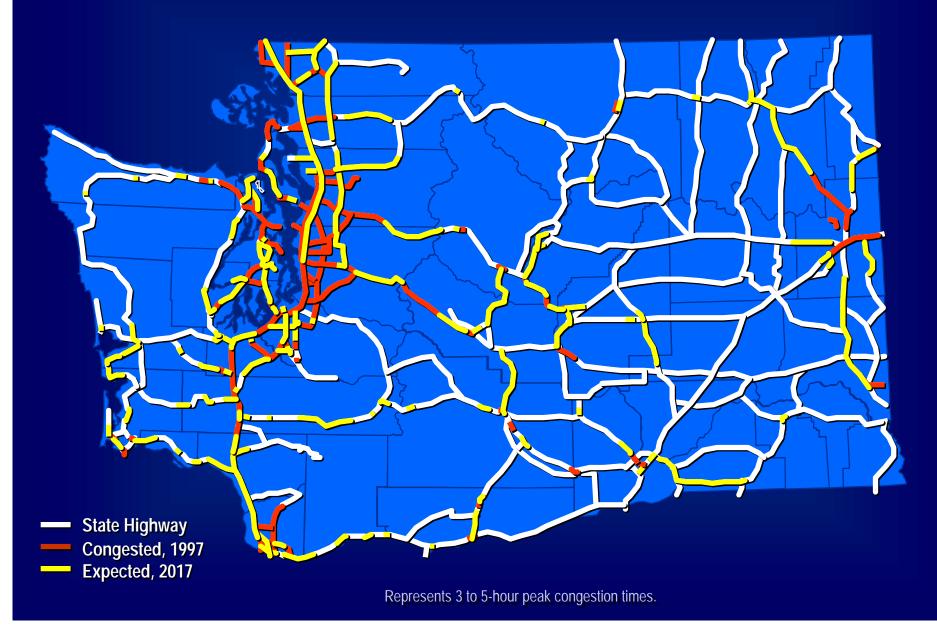
Criminal History of Adults Convicted of Felony Sex Crimes



What Does It Look Like in Space or Time?

Space — Maps (relationships)

State Highway Congestion



Tobacco Rates Vary Across Our State, but Three Counties are of Particular Concern

Lewis

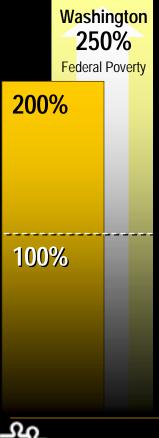
Pacific, Grays Harbor, and Lewis counties lead in:

- Maternal smoking
- Lung cancer deaths
- Adult smoking
- Tobacco sales to minors

Grays Harbor

Pacific

PART 1

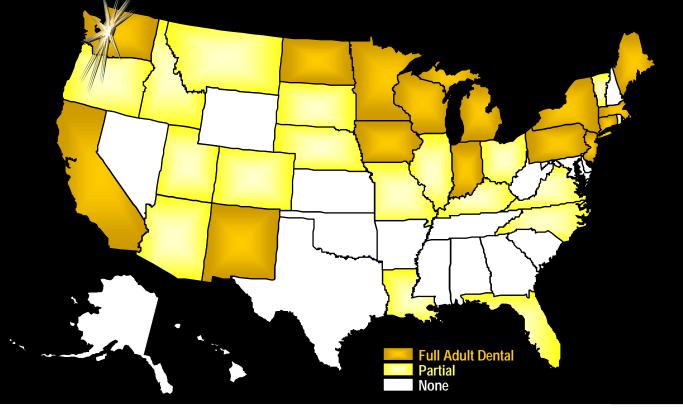




A Bellwether State

Progressive – At the forefront of health care reform **Comprehensive –** At the top end of the benefit scale

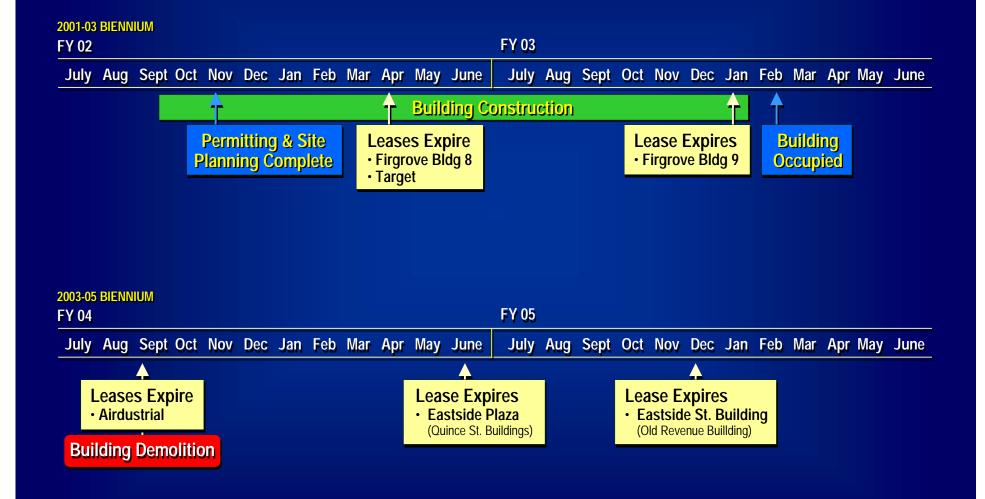
- Providing medical for 2 in 5 children
- Reaching 250 percent of the poverty level for children
- One of 15 states with full dental benefits for adults



What Does It Look Like in Space or Time?

- Space Maps (relationships)
- Time Timelines

Project Timeline



What Does It Look Like in Space or Time?

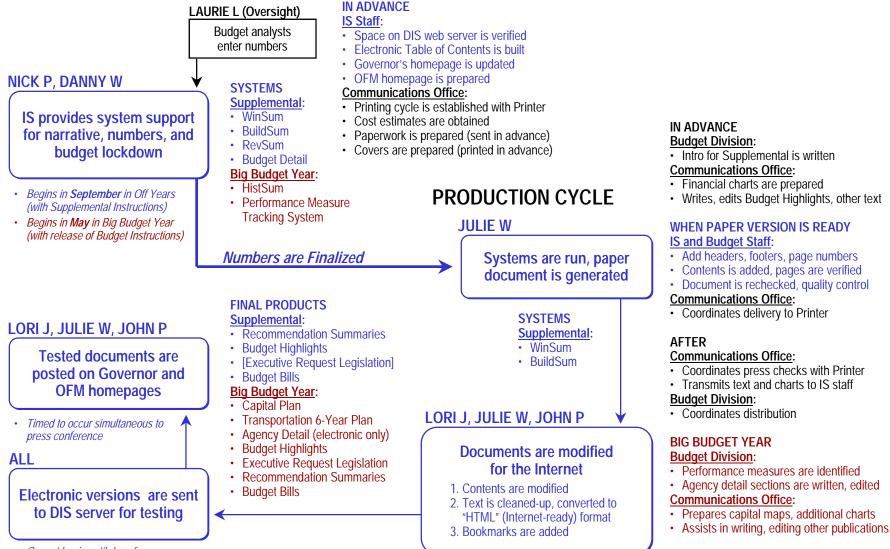
- Space Maps (relationships)
- Time Timelines

How Does the World Work?

• Flow charts — Work study analysis

IS Budget Process, Production Cycle

BUDGET DEVELOPMENT PROCESS



 Cannot begin until day of press conference (to assure confidentiality)

Format:

Above All Else. . .

- Format and design should not distract from content
- Instead, the content should be the first thing you see
- The formatting should not even be noticed
- For charts, this means 90 percent of the architecture is devoted to your data

Color vs. Black and White

COLOR:

- <u>Blue</u> is basic
- For slides, <u>white</u> and <u>yellow</u> work well for text
- <u>Red</u> provides emphasis, but may convey a sense of alarm when used for numbers
- Green adds an additional color
- Stick with these colors while you're learning

Color vs. Black and White

FOR BOTH COLOR AND BLACK AND WHITE:

- <u>Strong colors</u> convey a sense of confidence in your data, power
- <u>Gradient shades</u> are used to show incremental transitions in data or scale
- <u>Shades</u> are used consistently throughout a presentation or publication

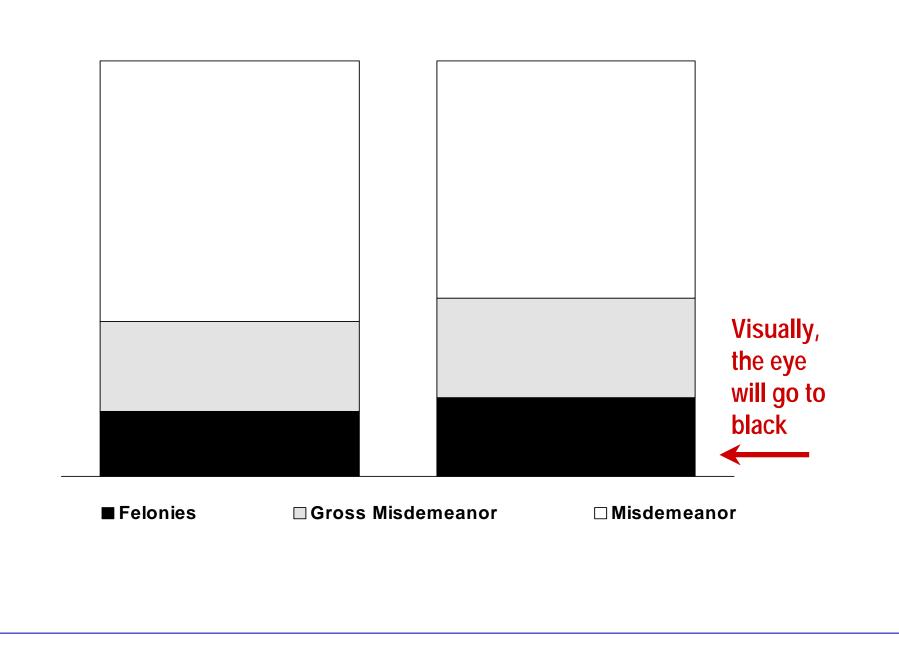
Color vs. Black and White

FOR BLACK AND WHITE:

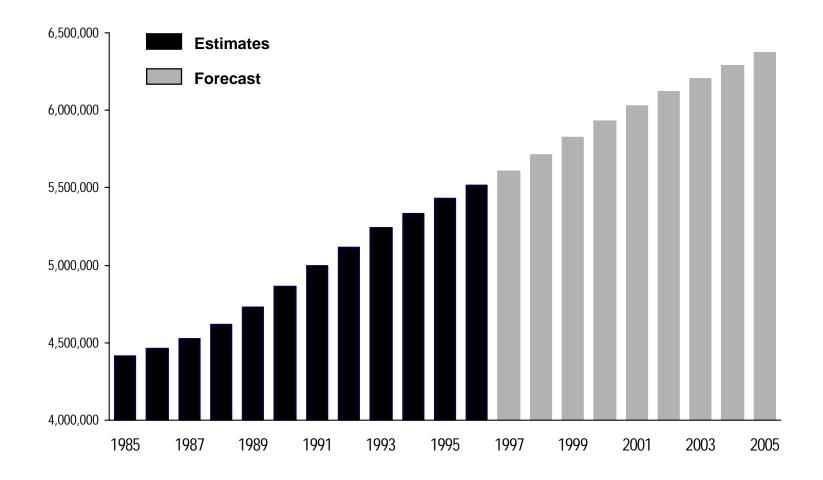
- <u>Black</u> is used for the most significant piece of data (this is not always the biggest slice)
- <u>White</u> is used for data with least significance

FOR COLOR:

• <u>Blue</u> is basic, <u>red</u> conveys a sense of alarm



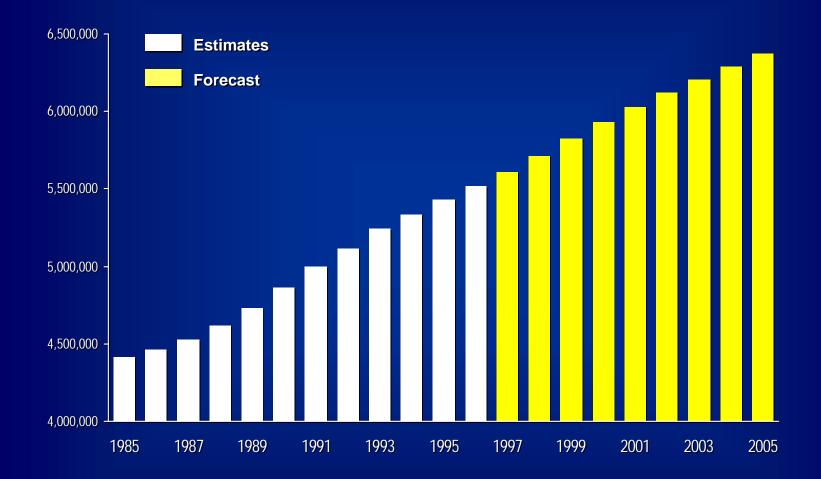
Washington Population Growth: 1985-2005



OFFICE OF FINANCIAL MANAGEMENT

FEBRUARY 1997

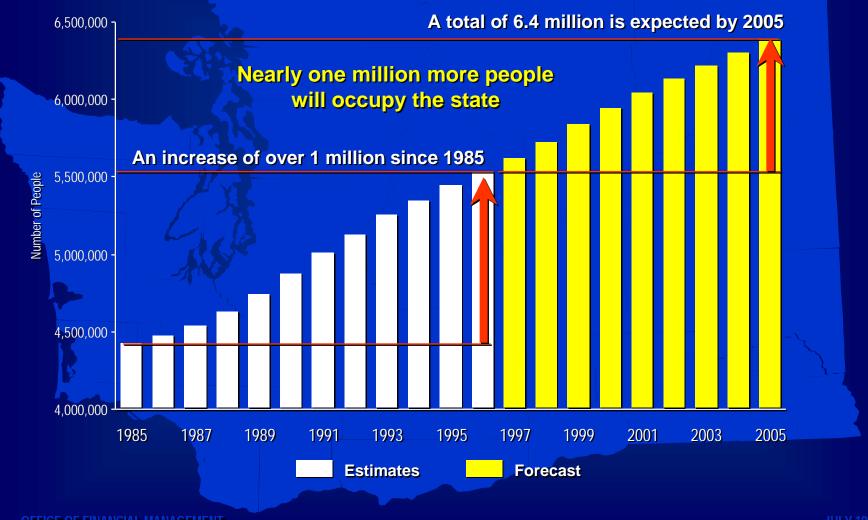
Washington Population Growth: 1985-2005



OFFICE OF FINANCIAL MANAGEMENT

FEBRUARY 1997

Washington Population Growth: 1985-2005



JULY 1997

Text:

UPPER CASE TEXT IS UNFRIENDLY

- Lower case is friendly
- AVOID overuse of UPPER CASE text
- Also avoid overuse of *italics*, <u>underlines</u>, and <u>combinations of</u> <u>the ABOVE</u>

Fonts:

- Fonts with straight edges work well for headlines, tables, or bold text
- Fonts with curved, flowing edges work well for text in general
- Avoid using more than two fonts in any publication

30 Percent Rule:

Main headings, subheadings, and text each decrease by 30 percent

Placement:

Never deviate from the grid!