

Learning Environment Enriched

Equity of Learning Experience

People

Skills Standards

Continually Replaced

Equity of Access

Deployment

Initial Purchase

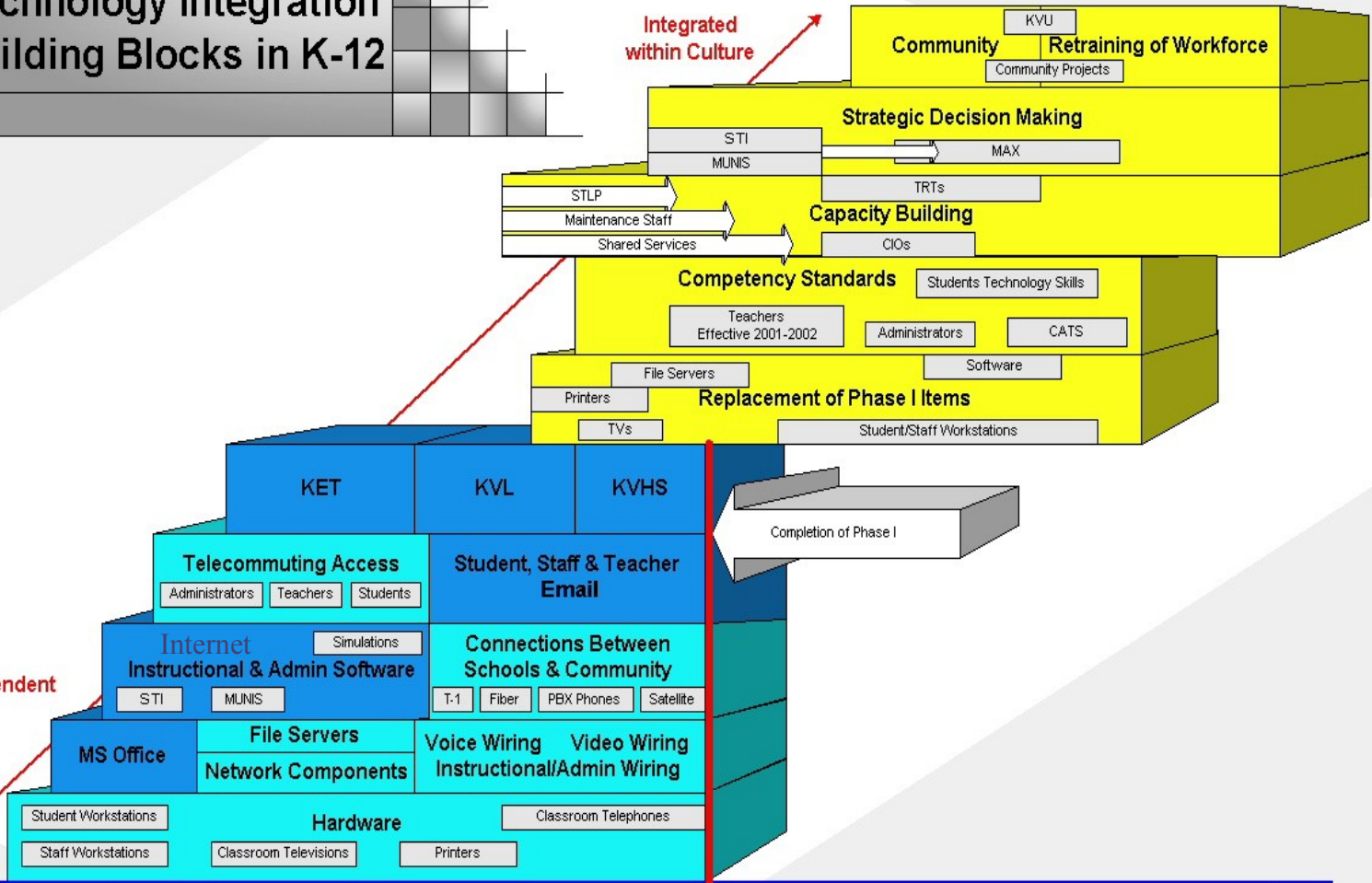
Acquisition of Core Set of Technology Tools

# Technology Integration Building Blocks in K-12

5/3/2002

Integrated within Culture

Independent



1992

2000

2006

Beyond

Implementation Schedule





**A NATIONAL EDUCATION TECHNOLOGY  
PLAN: THE FUTURE IS NOW**  
**Seven Major Action Steps and Recommendations**


**Four Years to Develop Final Version**

**Will be formally announced in Dec 2005**






## 1. STRENGTHEN LEADERSHIP

- We must invest in leadership development programs to ensure a new generation of tech-savvy leaders.
  - Retool administrator education programs to provide training in technology decision making and organizational change.
  - Develop partnerships between schools, higher education and the community.
  - Encourage creative technology partnerships with the business community.
  - Empower students' participation in the planning process.
- 



# 1. CONSIDER INNOVATIVE BUDGETING

- Consider a systemic restructuring of budgets to realize efficiencies, cost savings and reallocations. This can include reallocations in expenditures on textbooks, instructional supplies, space and computer labs.
  - Consider leasing with 3-5 year refresh cycles.
  - Create a technology innovation fund to carry funds over yearly budget cycles.
- 




## 1. IMPROVE TEACHER TRAINING

- Teachers have more resources available through technology than ever before, but have not received sufficient training in the effective use of technology to enhance learning.
- Teachers need access to research, examples and innovations as well as staff development to learn best practices. The U.S. Department of Education is currently funding research studies to evaluate the effective use of technology for teaching and learning.






# 1. SUPPORT E-LEARNING AND VIRTUAL SCHOOLS

- In the past five years there has been an explosive growth in organized online instruction and “virtual” schools, making it possible for students at all levels to receive high quality supplemental or full courses of instruction personalized to their needs. Traditional schools are turning to these services to expand opportunities and choices for students and professional development for teachers.
- 




## Recommendations include:

- Provide every student access to e-learning.
  - Enable every teacher to participate in e-learning training.
  - Develop quality measures and accreditation standards for e-learning that mirror those traditionally required for course credit.
- 



# ENCOURAGE BROADBAND ACCESS


Broadband access 24 hours a day, seven days a week, 365 days a year can help teachers and students realize the full potential of this technology.








## Recommendations include:

- Thoroughly evaluate existing technology infrastructure and access to broadband to determine its current capacities and explore ways to ensure its reliability.
  - Ensure that broadband is available all the way to the end-user for data management, online and technology-based assessments, e-learning, and accessing high-quality digital content.
  - Ensure adequate technical support to manage and maintain computer networks, maximize educational uptime and plan for future needs.
- 



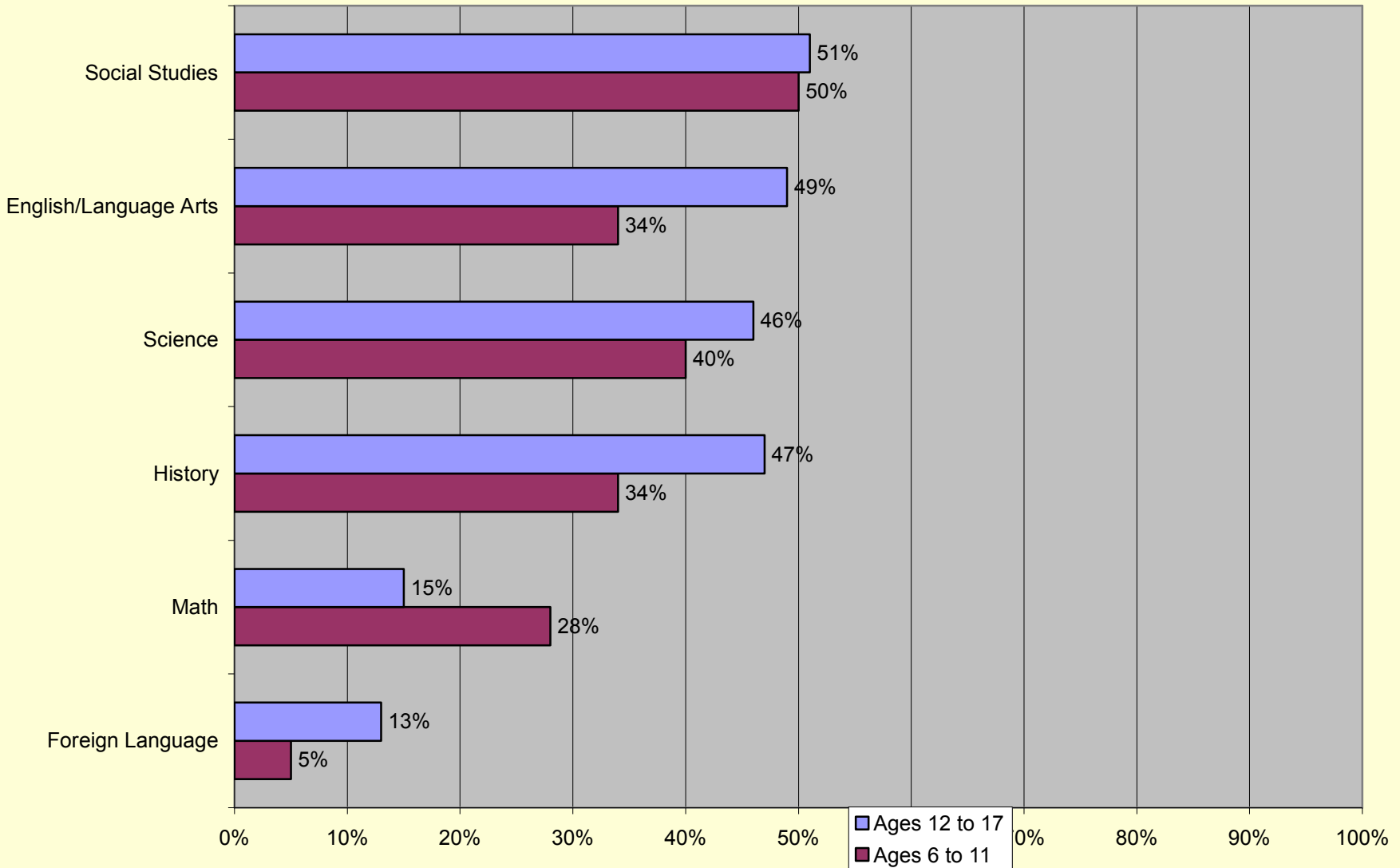
## 1. **MOVE TOWARD DIGITAL CONTENT**

- A perennial problem for schools, teachers and students is that textbooks are increasingly expensive, quickly outdated and physically cumbersome.
  - A move away from reliance on textbooks to the use of multimedia or online information (digital content) offers many advantages, including cost savings, increased efficiency, improved accessibility, and enhancing learning opportunities in a format that engages today's web-savvy students.
- 

# 1. INTEGRATE DATA SYSTEMS

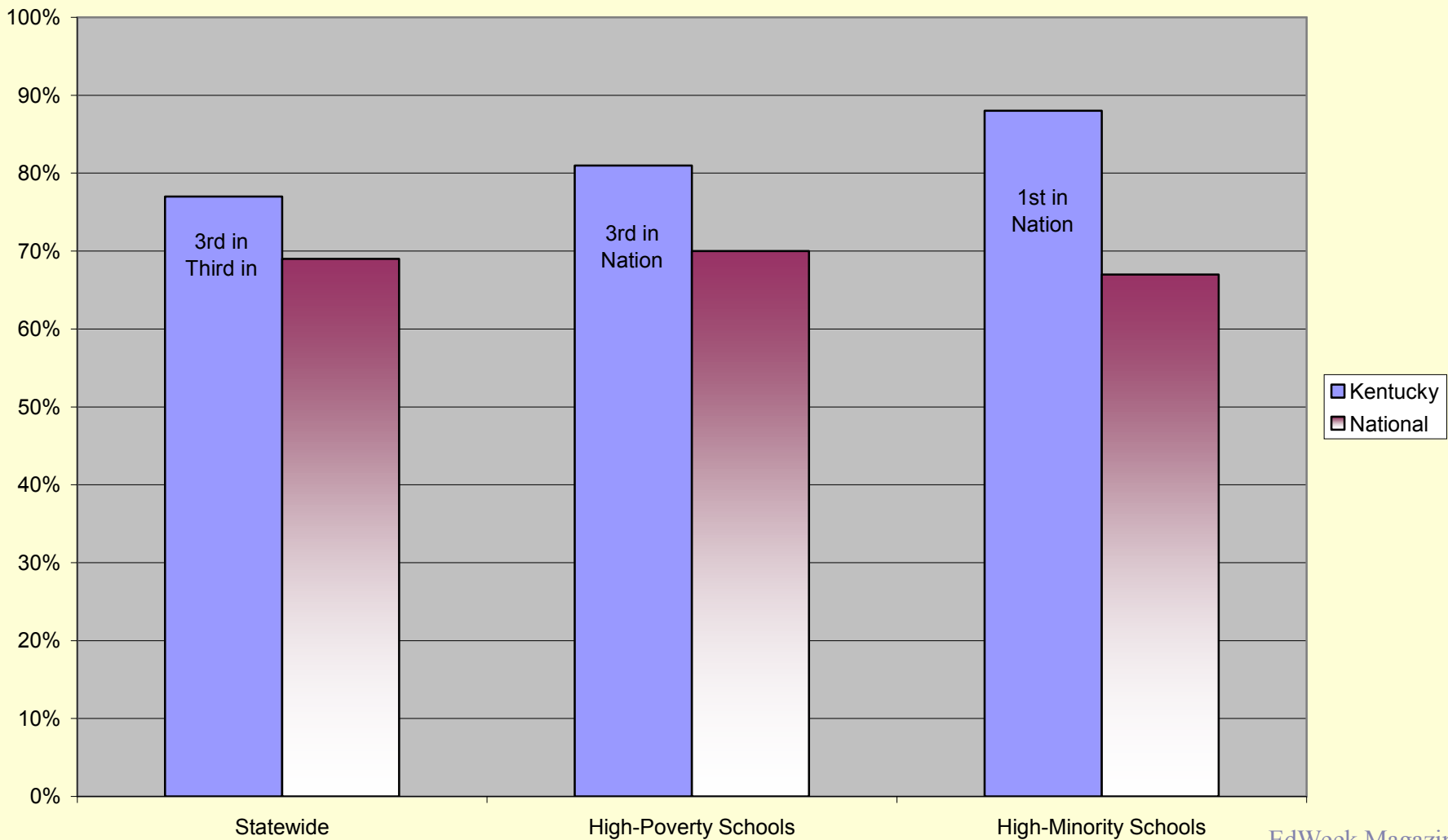
- Integrated, interoperable data systems are the key to better allocation of resources, greater management efficiency, and online assessments of student performance that empower educators to transform teaching and personalize instruction.
- Establish a plan to integrate data systems so that administrators and educators have the information they need to increase efficiency and improve student learning.
- Use data from both administrative and instructional systems to understand relationships between decisions, allocation of resources and student achievement.

## Technology Use by Subject



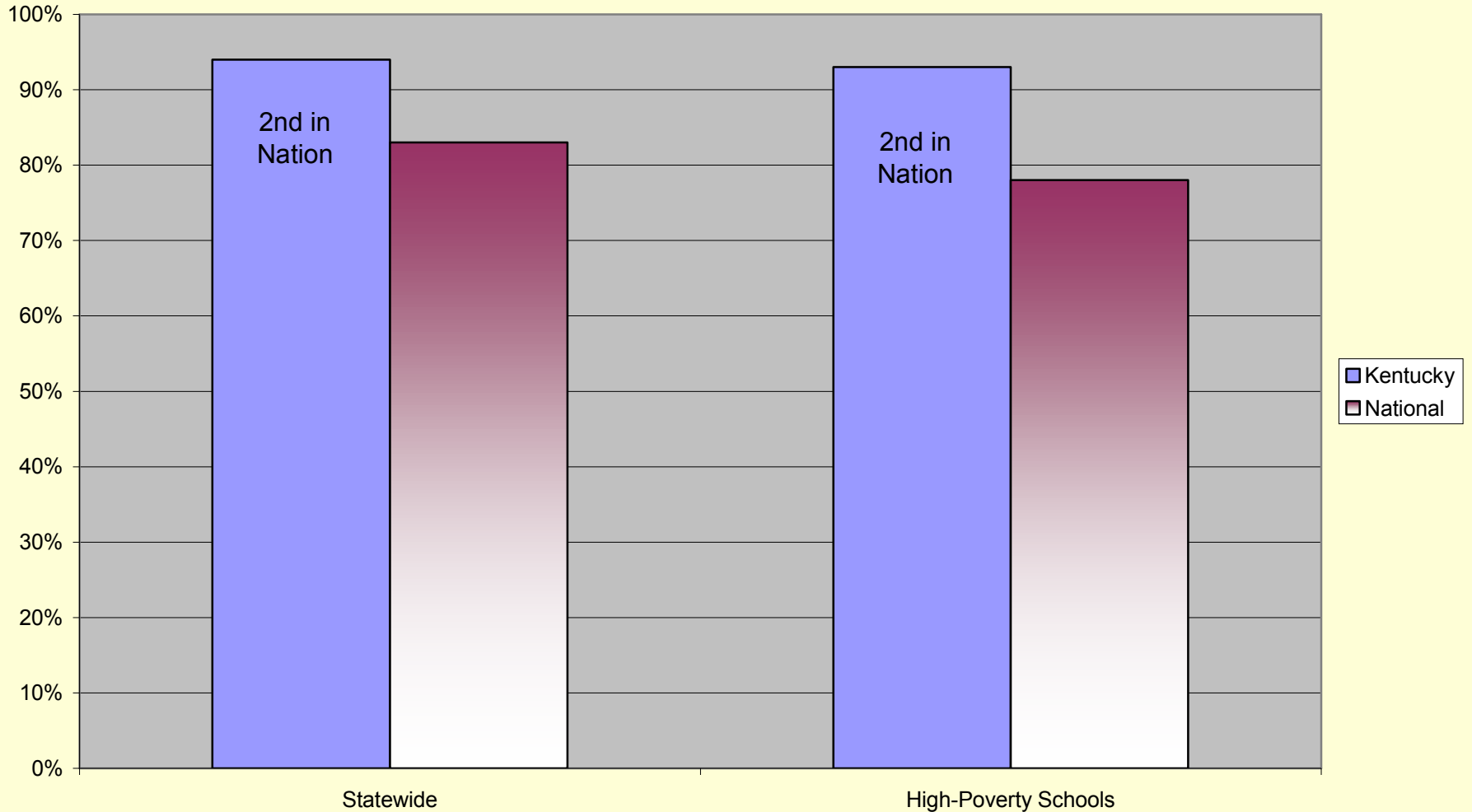
# Equity of Access

## Percent of Teachers Whose Students Use Computers During Class



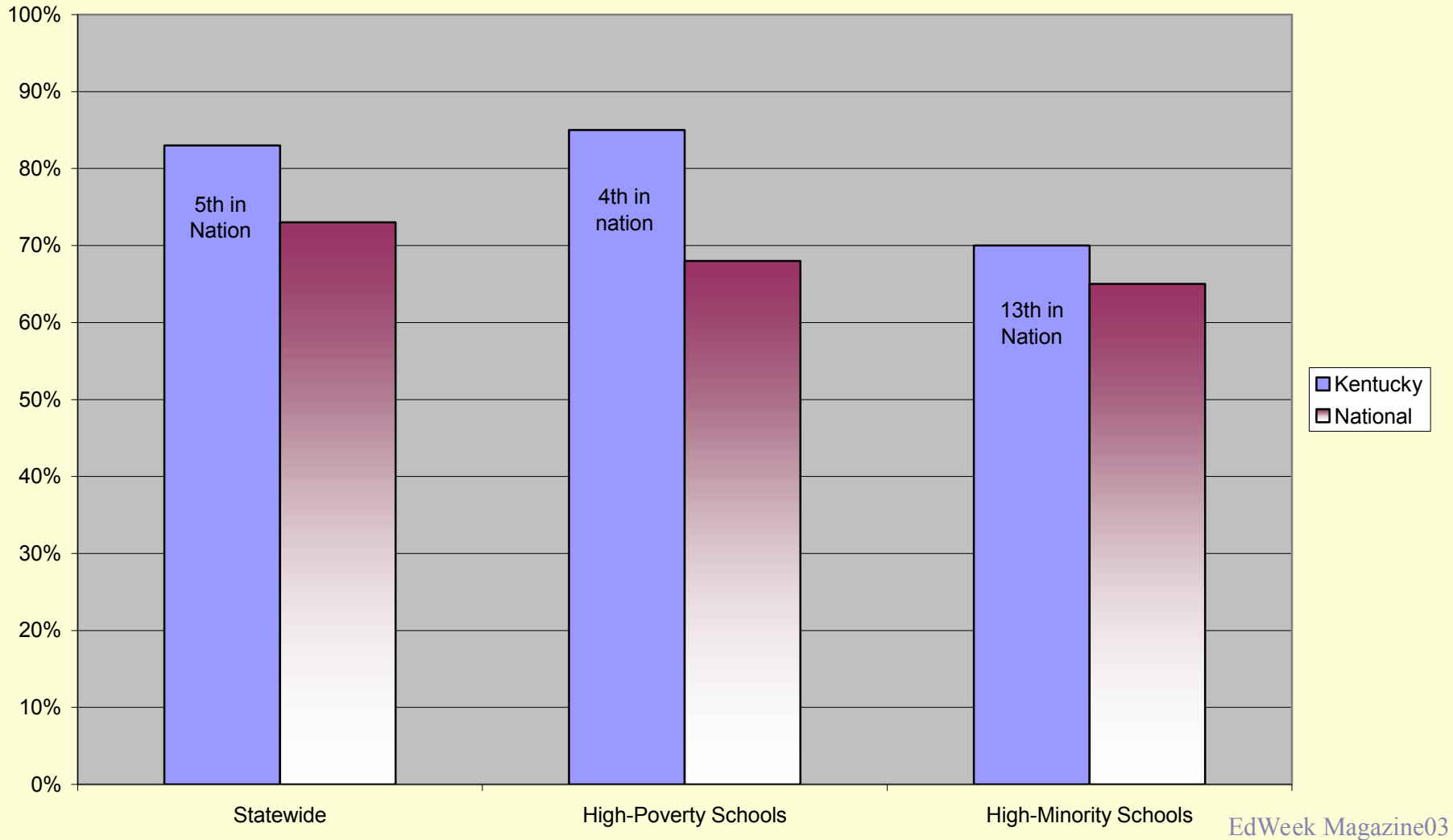
# Equity of Access

## Percent of Schools Where at Least Half the Teachers use a Computer Daily for Planning/Teaching



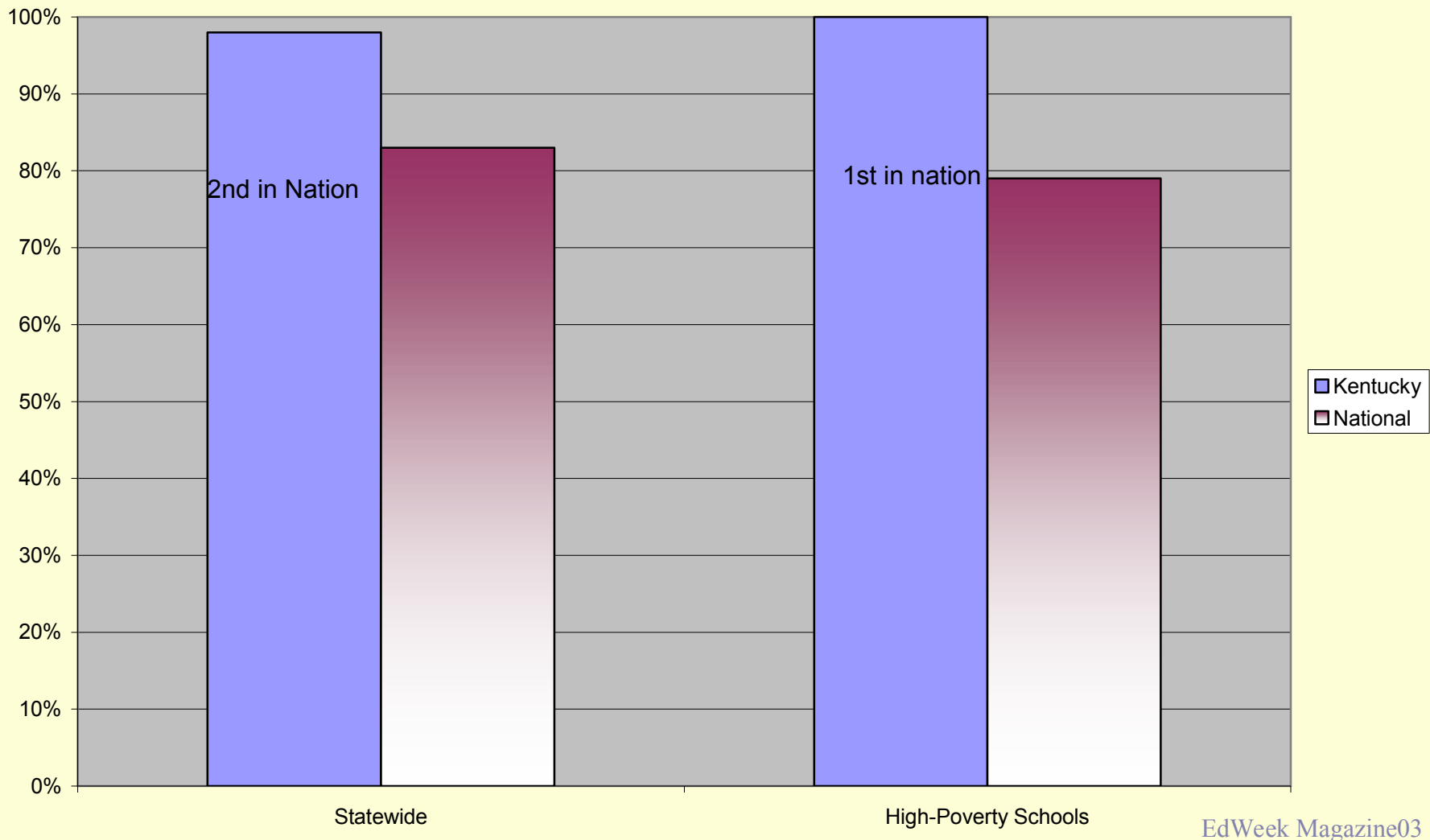
# Equity of Access

## Percent of Schools Where at Least Half the Teachers Use the Internet for Instruction



# Equity of Access

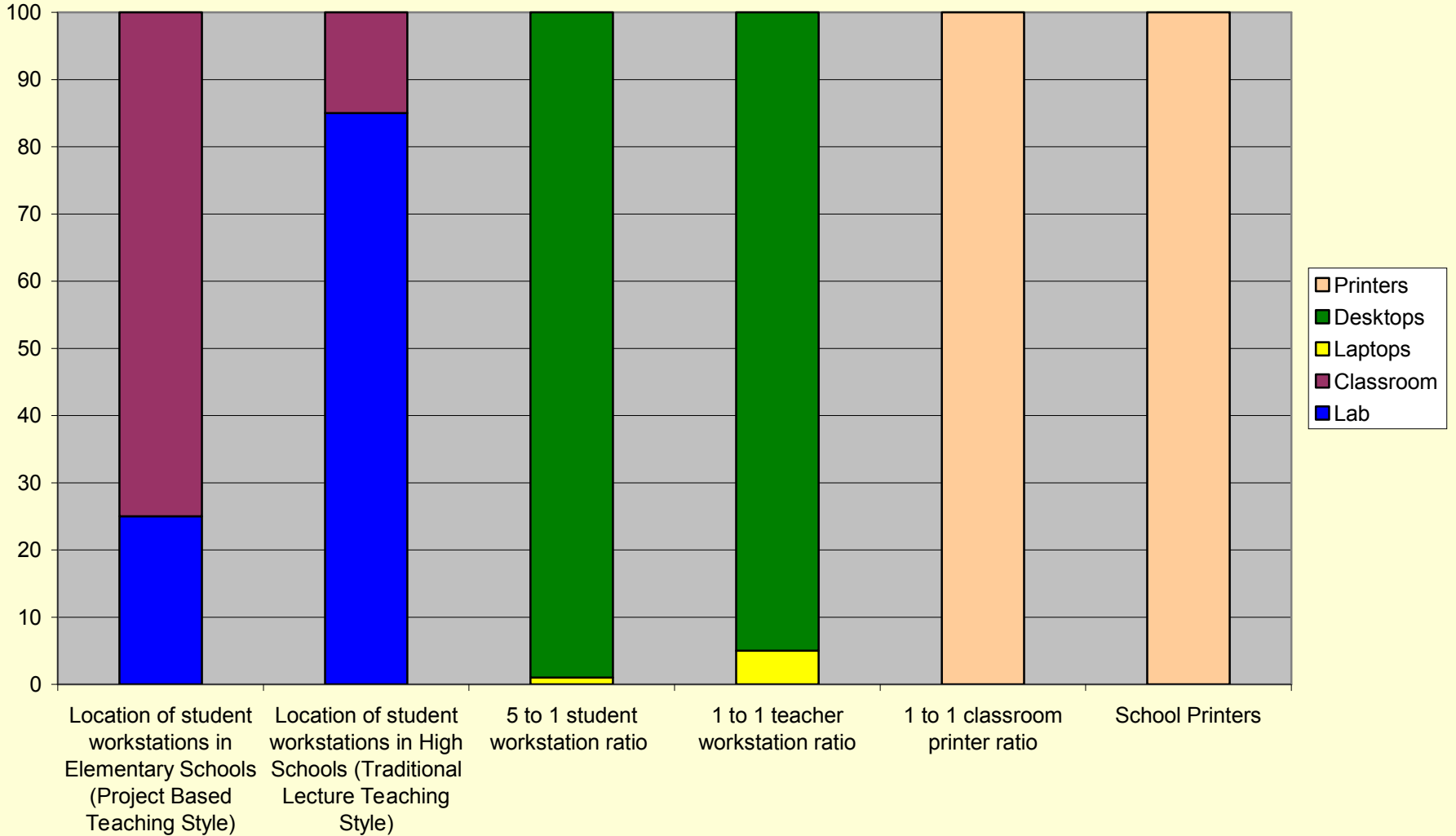
## Percent of Schools Where at Least Half the Teachers have School-Based E-Mail Addresses



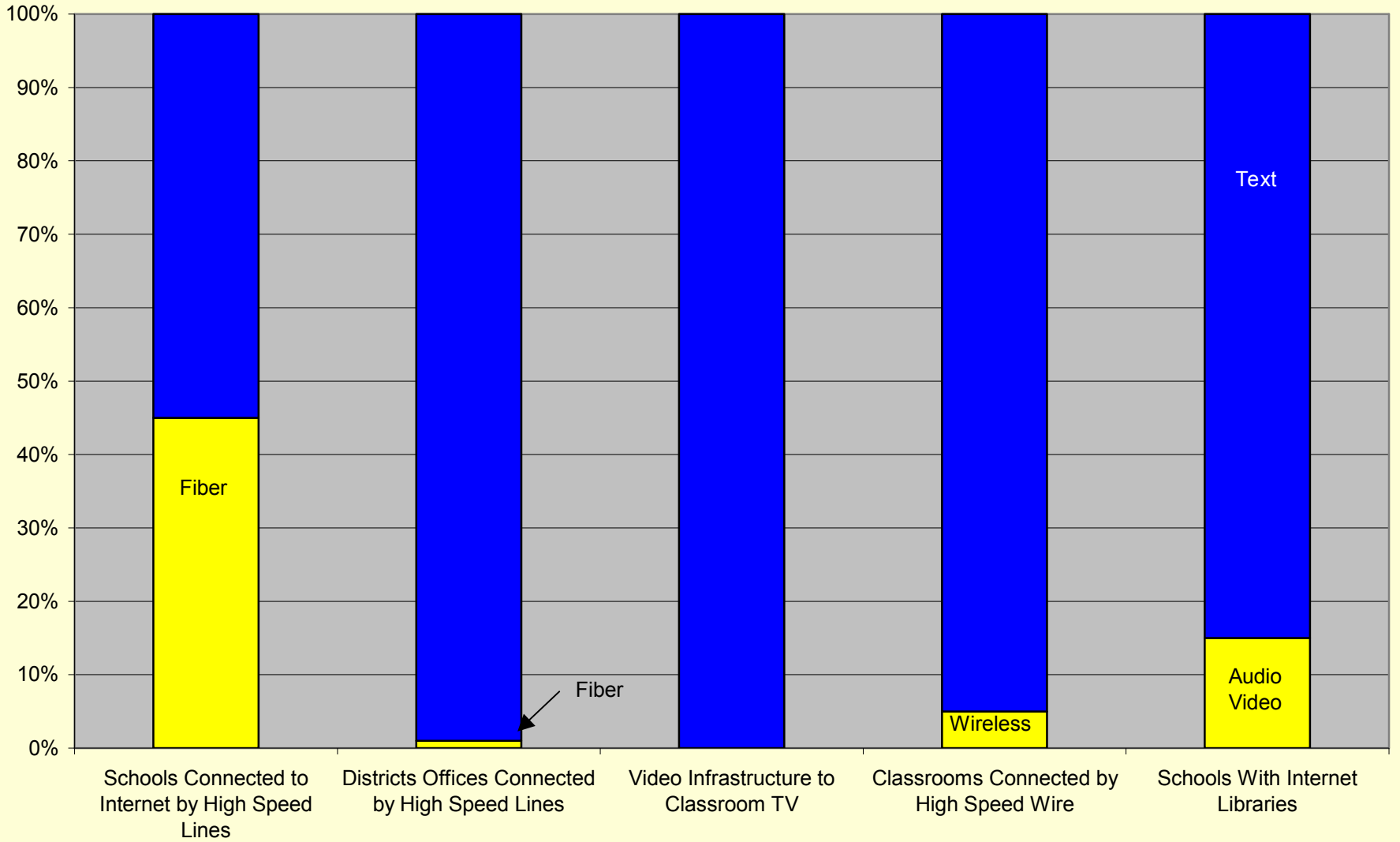


# Ease of Access

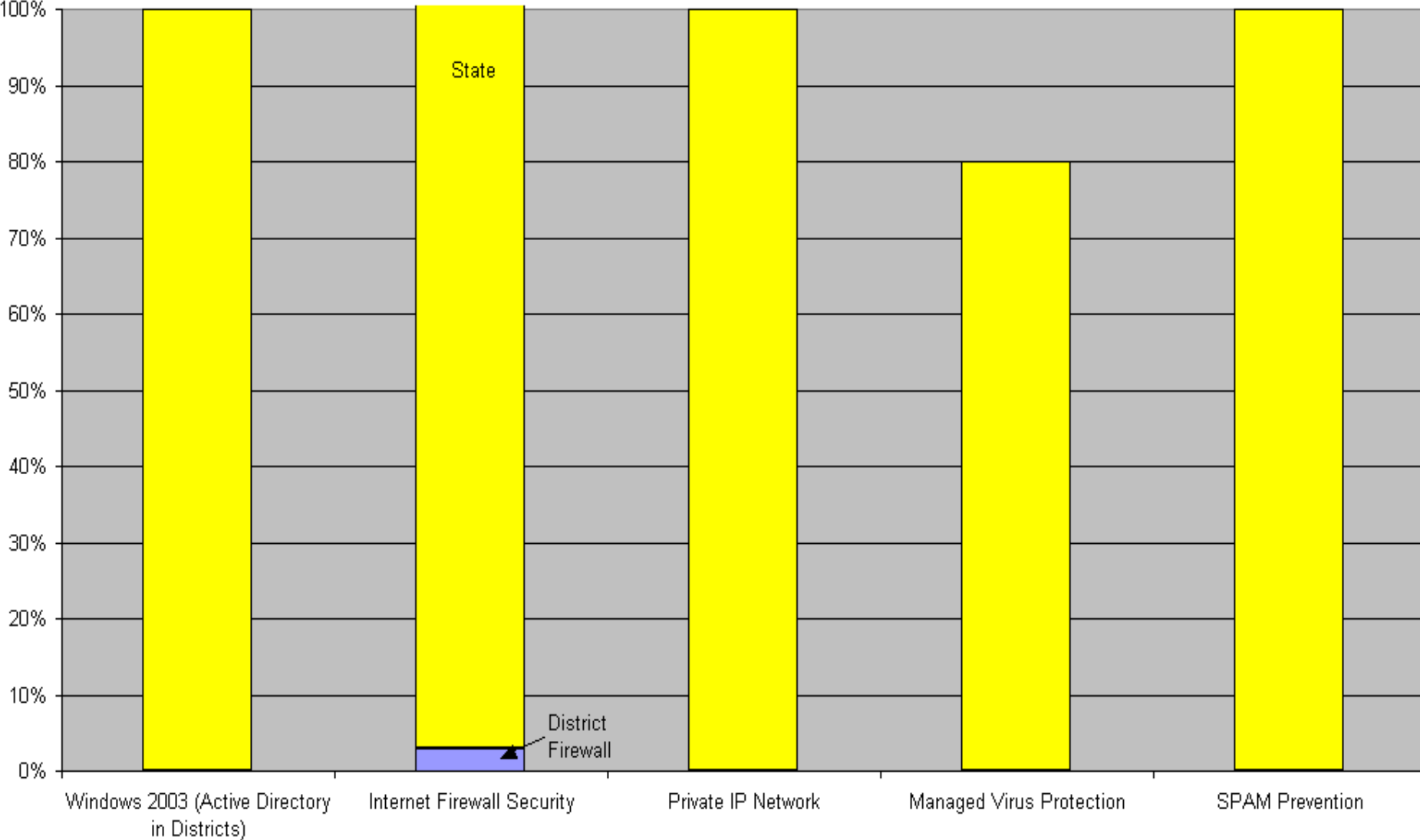
## Ratios, Mobility and Placement of Technology Tools



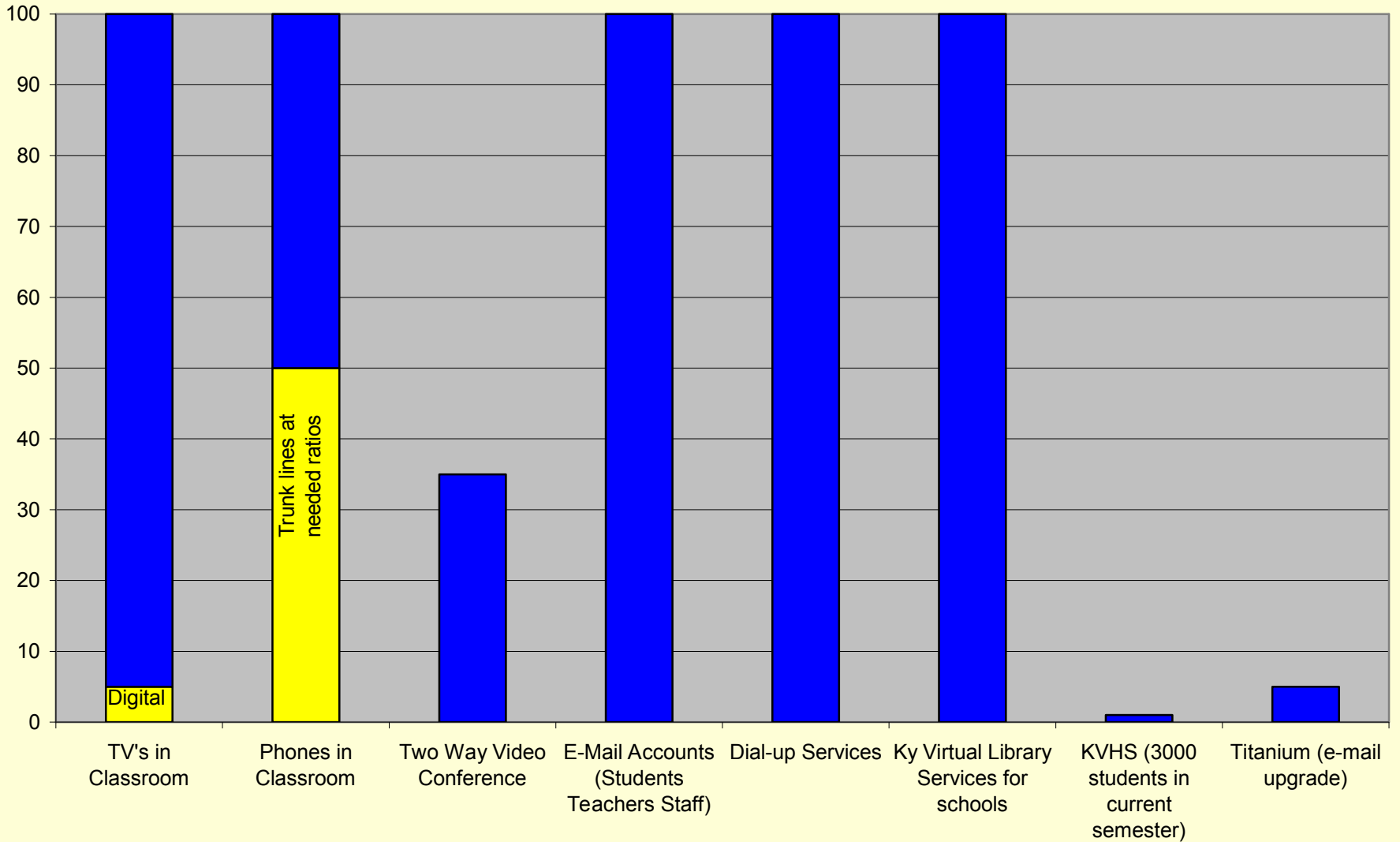
# Network Infrastructure



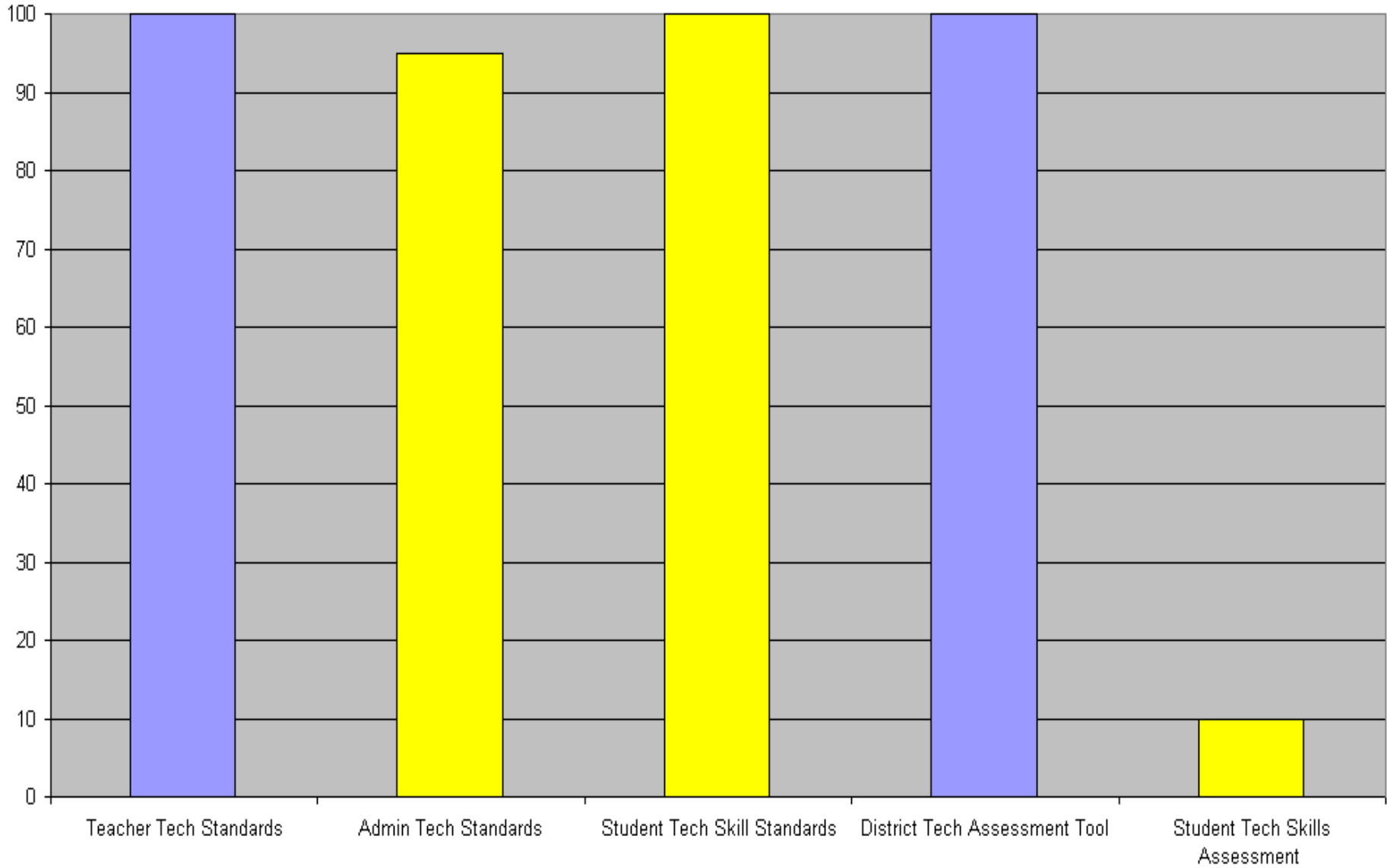
# Network Security Infrastructure



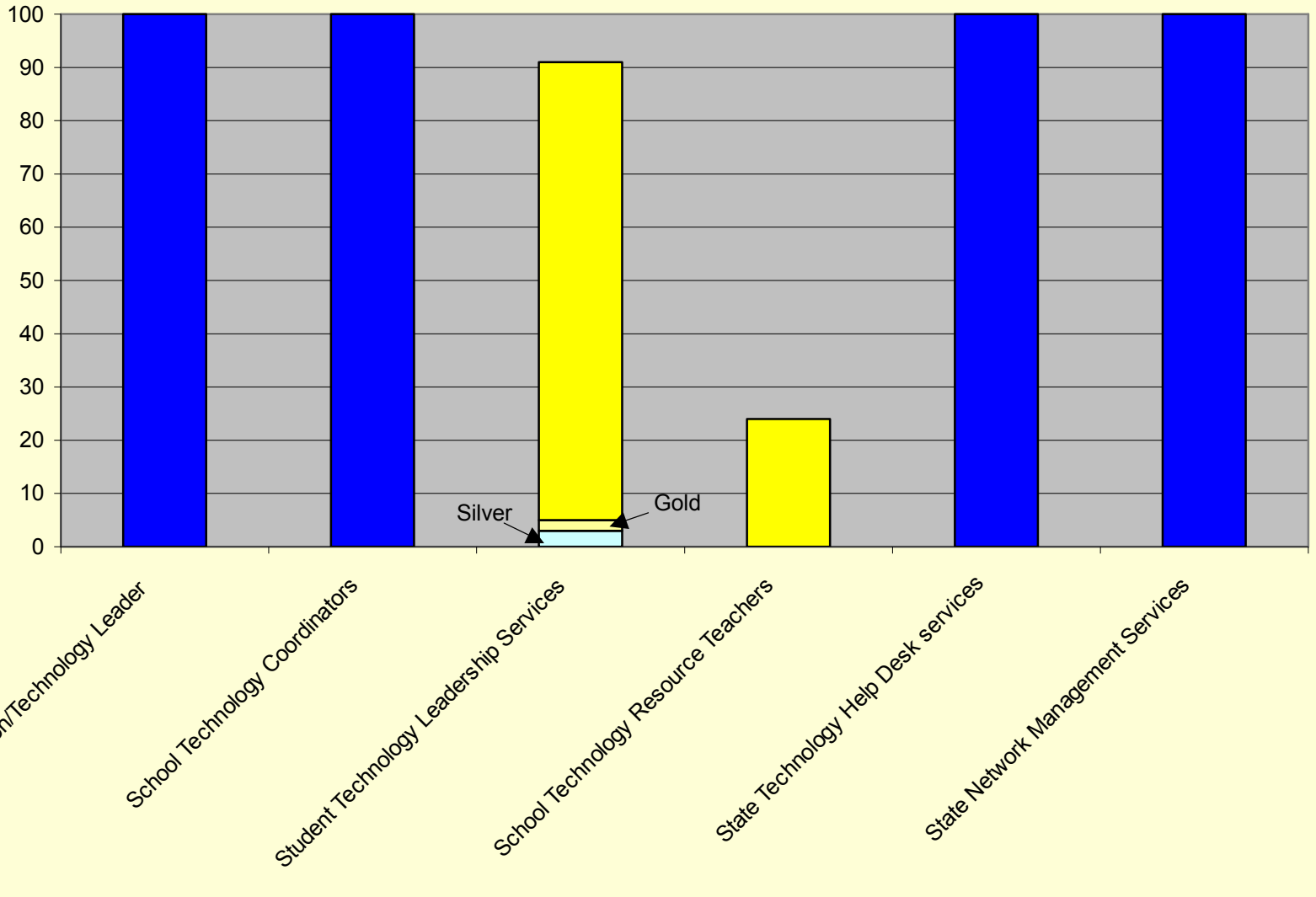
# Voice / Video / Communications Applications



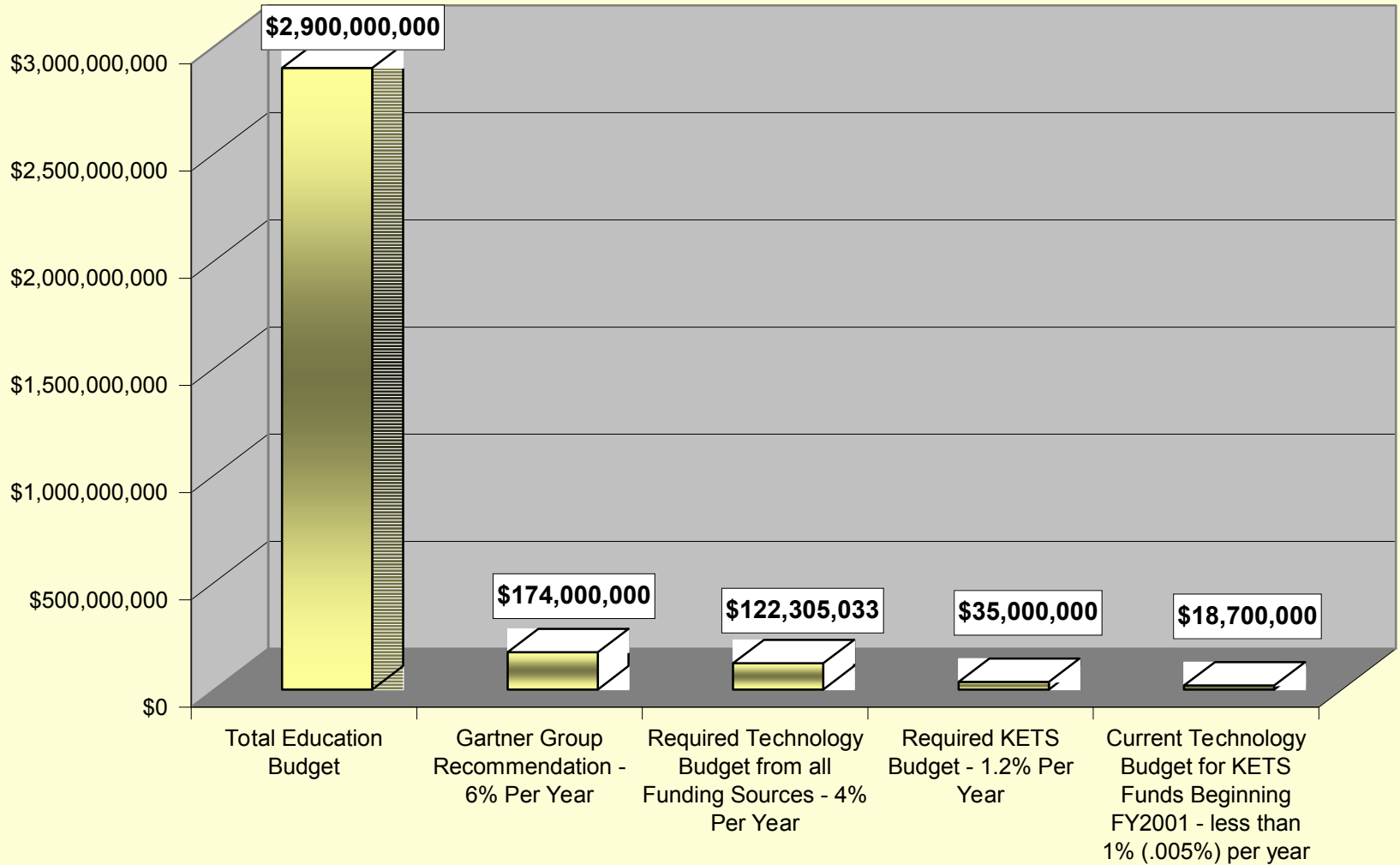
## Technology Skills Infrastructure



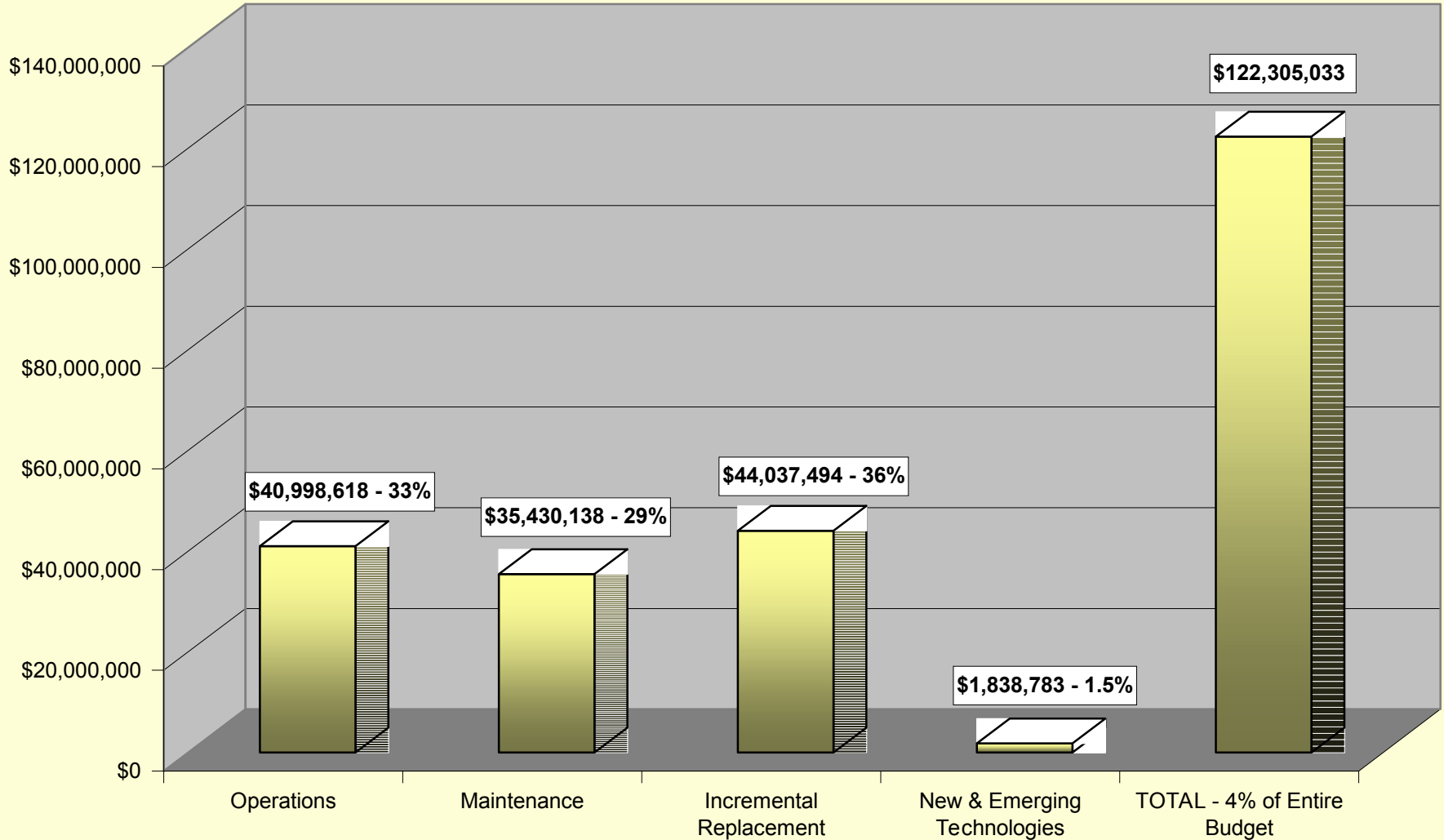
# People Support Structure



# Estimated Requirements of Technology Budget Per Year

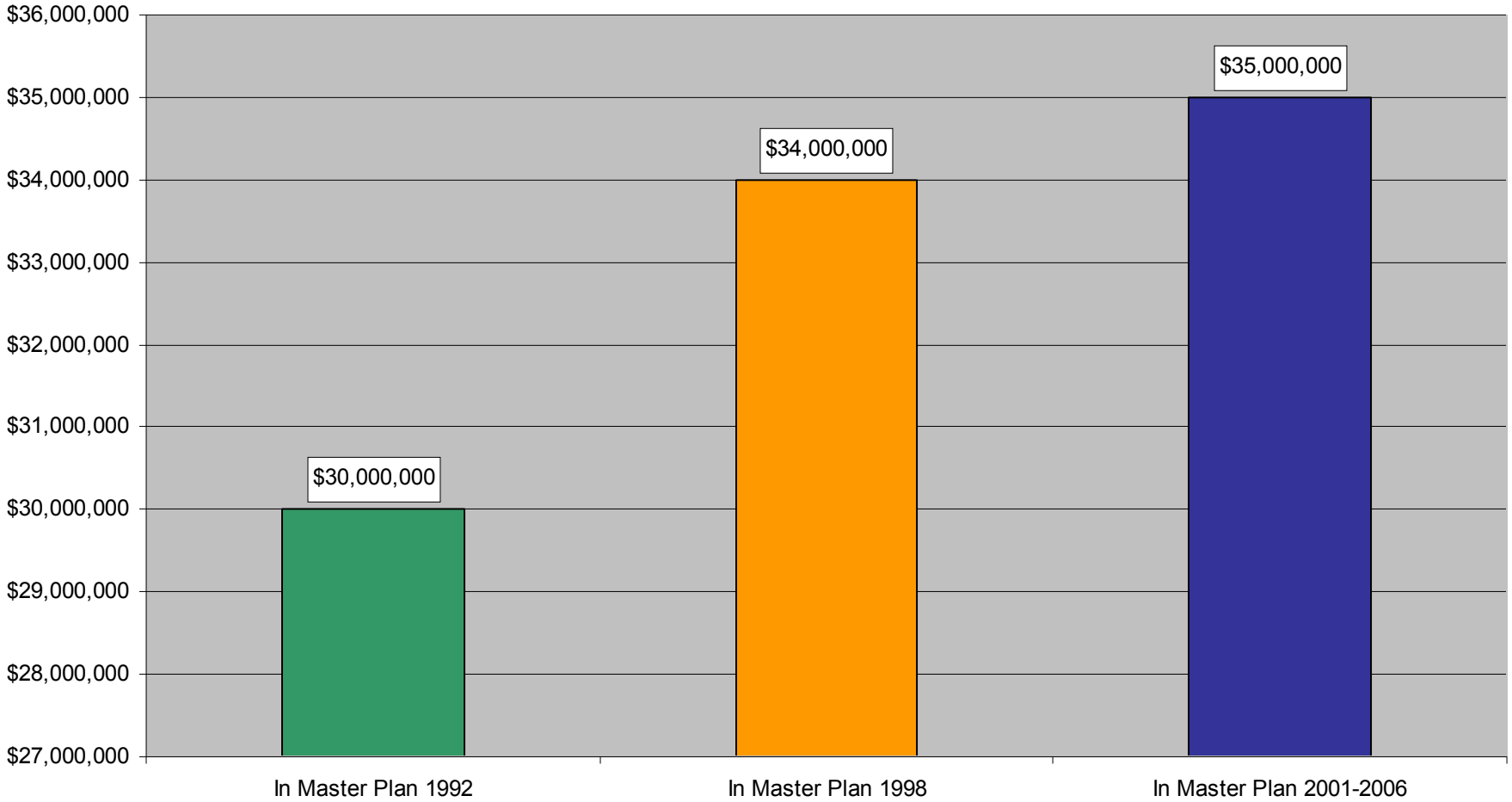


# Annual KETS and Technology Budget by Functionality

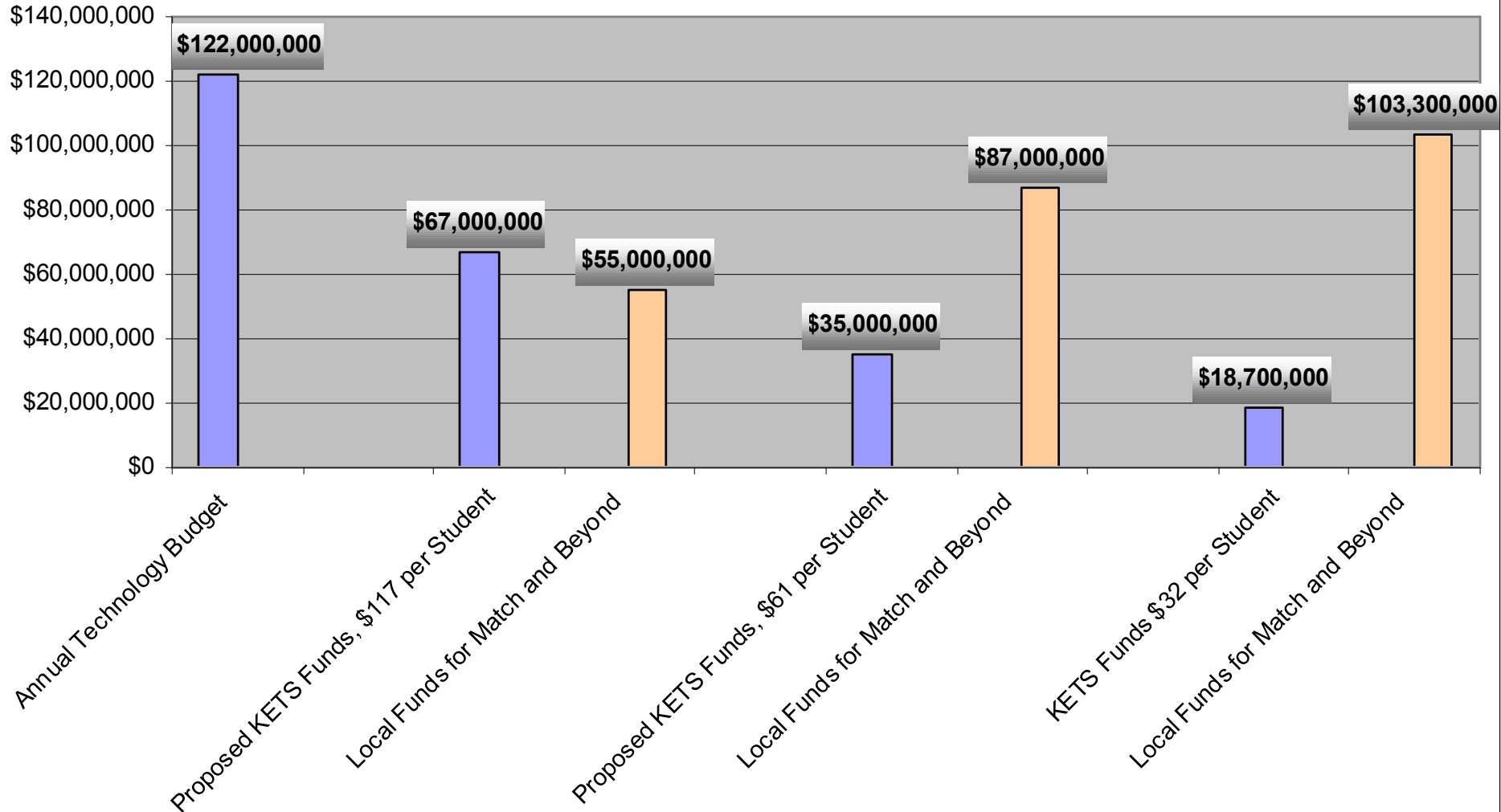




# Estimated KETS Funding Required Per Year



# KETS and Technology Funding Required to Sustain Adequate Technology Support of Education (Per Year)






# Technology Funding Opportunities

- Federal Technology Programs
    - NCLB EdTech Grant
    - E-Rate
  - KETS Funds
    - State Shared Services
    - District Offers of Assistance
  - Other
    - Multiple Funding Sources
- 



# NCLB EdTech Grant

- Approx. \$8.3M
  - Based on District Poverty Rate from Census Data
  - Formula Grant Status – Continued Utilization by all Participating Districts
  - Competitive Grant Status
- 



Local funds that are used to equally match KETS offers of assistance funds. This is up to \$7.4M.

Governor's additional technology funds of \$3.2M that are strongly encouraged to be used to go above the local funds that the district uses for a local match to the KETS offer of assistance; however, these can be used for other purposes.

Federal No Child Left Behind (NCLB) Technology Funds. \$8.3M per year. 50% of these funds are given out noncompetitively; therefore, every district receives a portion of them and the other 50% are federally required to be competed, which means not every district receives them.

Federal E-rate funds that districts apply for. This is approximately \$20M per year.

Federal E-rate funds in the amount of \$1.9M that state applied for in FY04 that will be available in KETS offers of assistance in FY05.


State School Facility Construction Funds for new construction or renovations. Funds can go towards (1) internal wiring of voice video and data lines within the school, (2) phone systems (including phone handsets), and (3) video projectors or televisions. This is approximately up to \$10M per year.

**TOTAL: \$50.8M**





# E-Rate Program Status

- Projected Annual Value to Kentucky? - \$20M
  - Status of the Program? – Questionable but Currently Continuing
  - Dependence? – Continues to Provide High Levels of Contributing to Kentucky Technology Efforts
  - Current Concerns – Continued State & Federal Contract Reviews
- 



# KETS Offers of Assistance

- FY2005
  - \$6.80 / ada (1<sup>st</sup> Offer) – in process
  - \$6.20 / ada (2<sup>nd</sup> Offer) – Feb. 200





# Other Funding Sources

- General SEEK Funds
- Textbook Funds
- PD Funds
- Special Ed. Funds
- Other ???
- Federal Grant Funds (not tech. specific)
- Corp. Support Funds
- Local Tax Funds







# State Shared Services

- KETS Operations Plan / Budget
    - Instruct. & Admin. Software Licenses
    - Instruct. & Admin. Help Desk Services
    - Internet & E-mail Services
    - Distance Learning for Schools & District Offices
    - Enterprise Database & Application Management
    - Student, Teacher, & Administrator Tech. Standards & Skills
    - School & District Product Evaluations, Standards, & Discounts
    - Student Technology Leadership Program (STLP)
    - KETS Leadership, Engineering, & Planning for Schools & District Offices
- 



# OET Services

## Transferred/Discontinued

- Conference Management
  - On-site Technology Impact Reviews
  - Instructional Software Reviews
  - Library Management
  - Technology Skills part of Core Content by 2004 and CATS by 2007
  - RSC's Abolished
- 

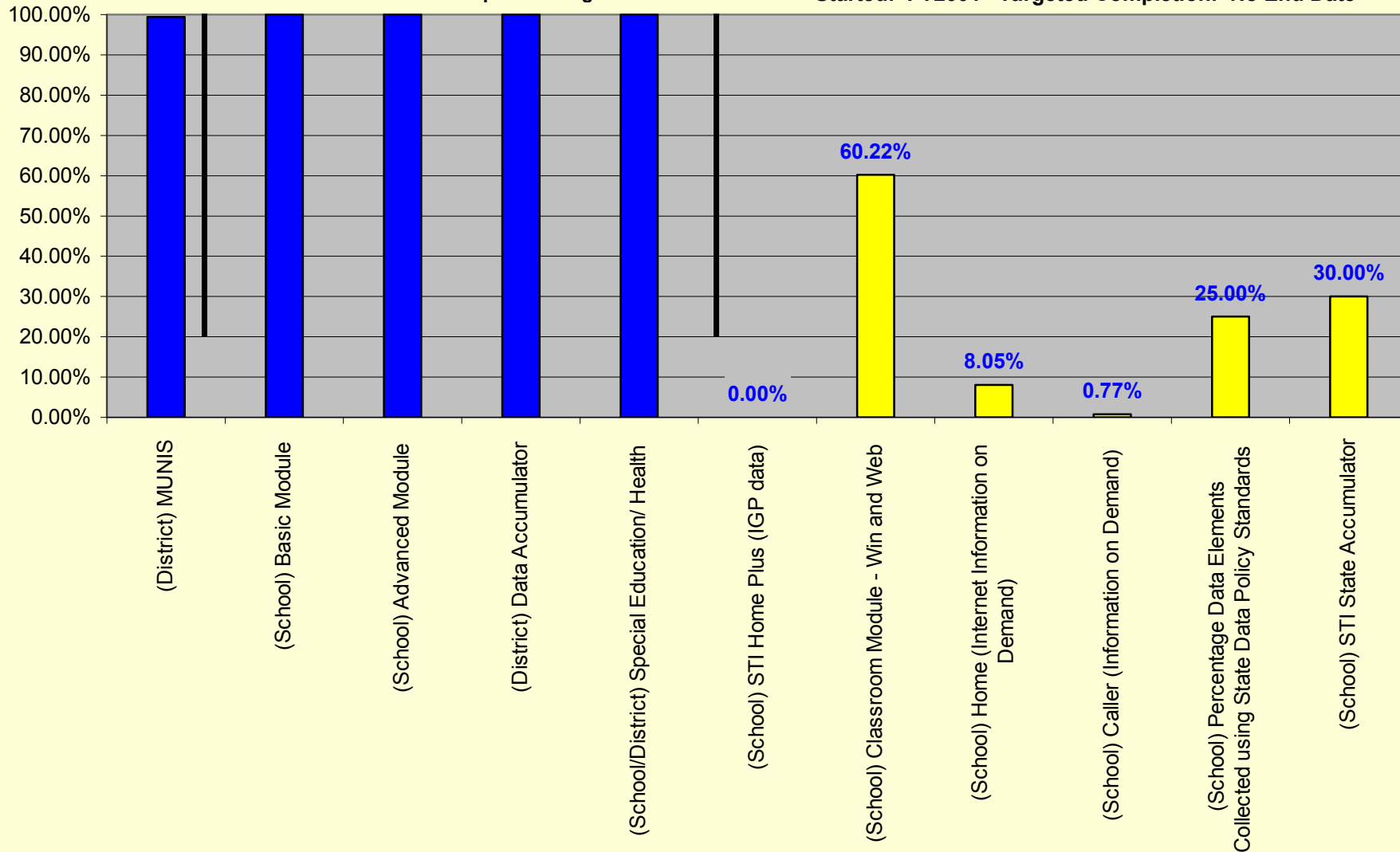
## Data Systems Implementation Status

### Required KETS MUNIS & STI Modules

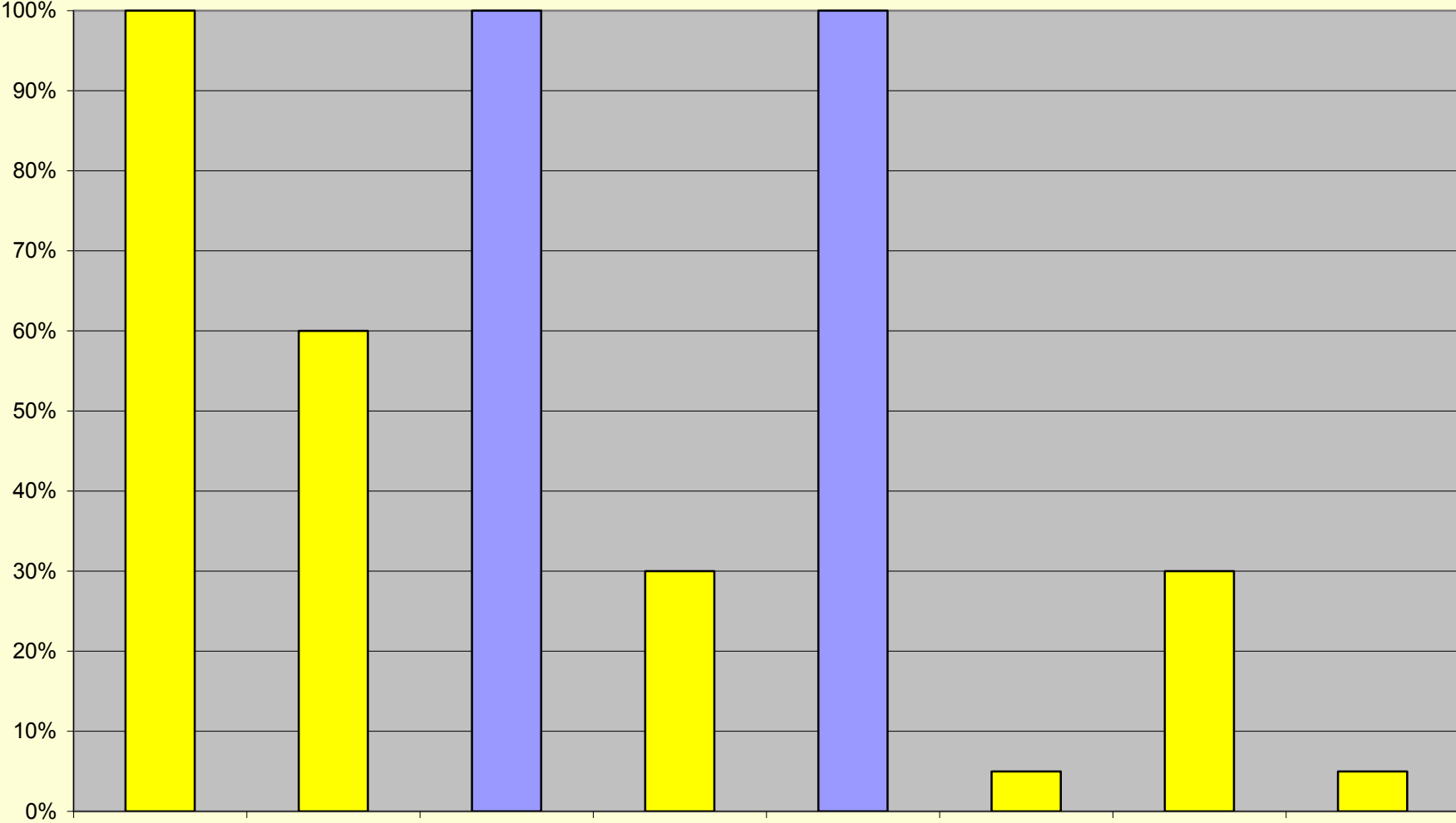
Started: FY1992    Completed: August03

### KETS Phase 2

Started: FY2001    Targeted Completion: No End Date



# MAX Componets



MaxView 1.5

MaxView 1.75

Munis

STI State  
Accumulator

STI District  
Accumulator


CATS in MAX

ESPB in MAX

CPE in MAX




# The Vision of Max

- Max will provide an interface for all interested parties and stakeholders, such as - parents; students; teachers; education administrators; as well as the general public - to access detailed education data in order to make more timely and better informed decisions.
- 



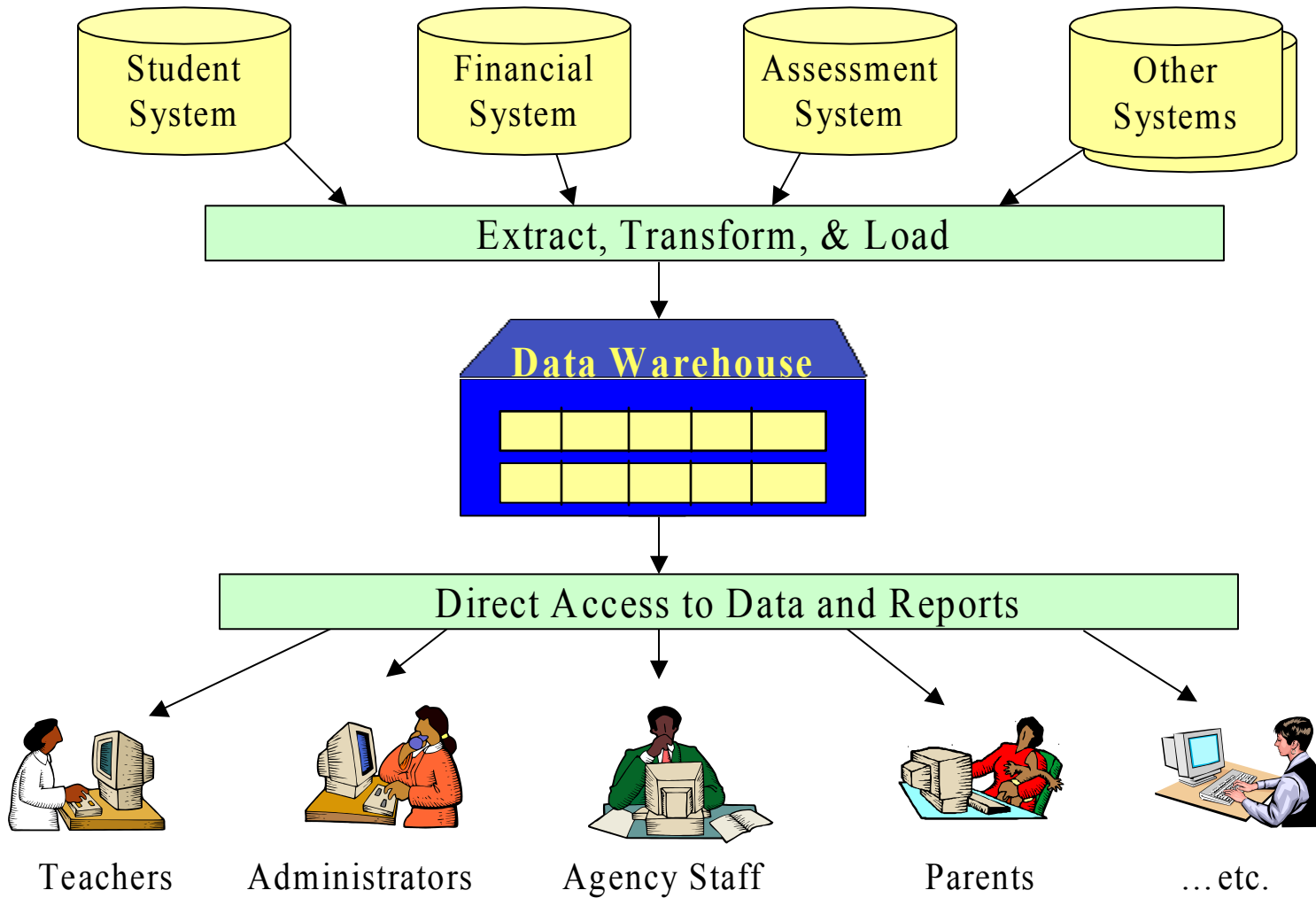
# MAX

## The Education Enterprise Data System

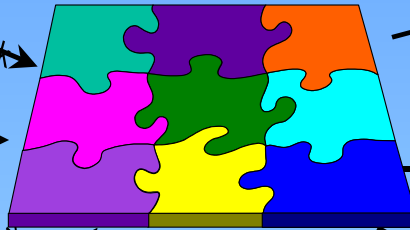
- Business Processing/Standards & Data Standards/Accuracy Implications
  - Data Analysis / System Utilization
  - Sources of Data Delivery (single source)
    - MUNIS, STI, CTB/CATS, Other Web Apps.
  - Reporting (single source)
    - MAXView
- 

# Data Warehouse Architecture

---



# Max The Education Enterprise Data Base System



## Dept of Ed (Fed) Data

- Grants
- Reports
- Statistics
- Etc.

← KETS Network  
(Secure)



← KETS Network  
(Secure)

## Dept of Ed (State) Data

- Legislator requests for information
- Public requests for information
- Financial Data
- Reports
- Teacher Quality
- Teacher Credentials
- Reports
- Quality Assurance
- Analysis
- Statistics



← KETS Network  
(Secure)

## Local District Data

- |                  |                   |                                |
|------------------|-------------------|--------------------------------|
| - Financial Data | - IEP             | - Exceptional Children         |
| - Teacher Data   | - Fixed Assets    | - Writing Portfolio Management |
| - Demographics   | - Personnel       | - Assessment Administration    |
| - Attendance     | - Food Services   | - Scheduling                   |
| - Reports        | - Testing         | - Guidance & Counseling        |
| - Purchase order | - Disciplines     | - Curriculum Management        |
| - Payroll        | - Transportation  | - Facilities Management        |
| - General Ledger | - Health Services | - School Report Card           |

→ Web Based Access  
(Secure)



State and Federal Access

→ Web Based Access  
(Secure)



Local Districts Access

→ Web Based Access  
(Secure)



Public Access

### Enterprise Data Base Provides:

- Virtual Database Transparent to Users
- Eliminates Redundancy
- Improves Reliability of Data
- Combines Numerous Systems
- Allows Analysis of Statewide Data
- Improvement of accuracy in time lines
- Share data across organizational lines for decision making.
- Data collection becomes a bi-product of daily procedural activities.
- Allows Analysis of *school district and* Statewide Data.





### Cumulative View of Data From All Data Systems

**Legend**

- In place as of Sept 03 and ongoing maintenance
- In place by July 04 with FY04 funding sources
- Future Software Development
- On Hold

- Legislators
- Researchers
- Parents/Students
- Community Member
- District Staff
- State Government
- Federal Government
- Teachers
- School Administration

