



# K-12 CTO Council

A Professional Organization for  
School District  
Chief Technology Officers

## Best Practices for IT Management Consortium for School Networking (CoSN) Texas CTO Council June 23, 2009

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# Best Practices for IT Management



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## Clinic II

- Compare **Benchmarks** from your district with other similarly sized districts.
- Share **Best Practices** in the following areas:
  - System Availability
  - Cycle Time
  - Productivity
  - Staffing Ratios
  - Satisfaction
  - Cost per Student
- **Time Schedule:**
  - 30 minutes for an introductory presentation
  - 1 hour discussion on establishing benchmarks
  - 30 minutes (10 min per group) to share benchmarks and best practices





## Best Practices for IT Management



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# First!

We must define **benchmarks**  
before we can share **best practices.**





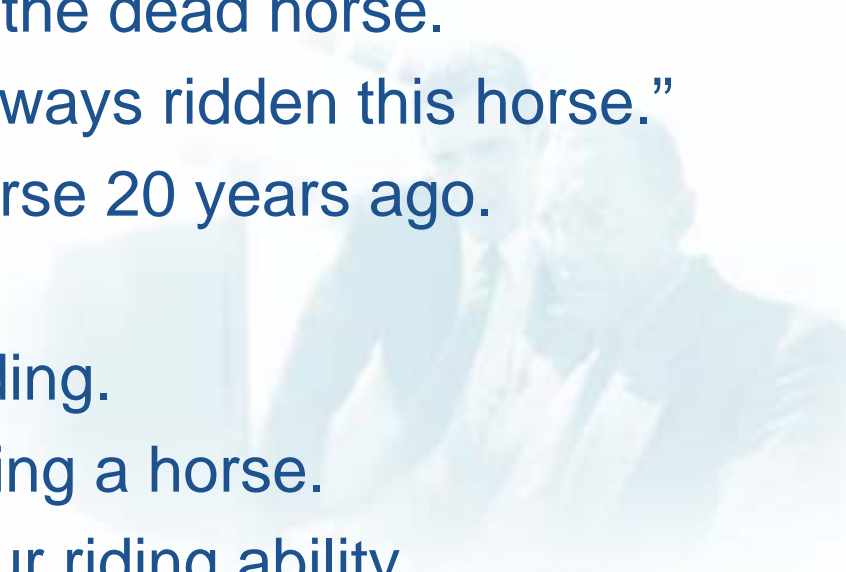
# Best Practices for IT Management



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## What is a **Best Practice**?

- **Example - *To get a horse to ride faster, what do you do?***
  - Buy a stronger whip.
  - Try a new bridle.
  - Switch riders.
  - Appoint a committee to study the dead horse.
  - Say, "This is the way we've always ridden this horse."
  - Compare how we rode the horse 20 years ago.
  - Blame the horse's parents.
  - Come up with new ways of riding.
  - Increase the standards for riding a horse.
  - Create a test for measuring our riding ability.





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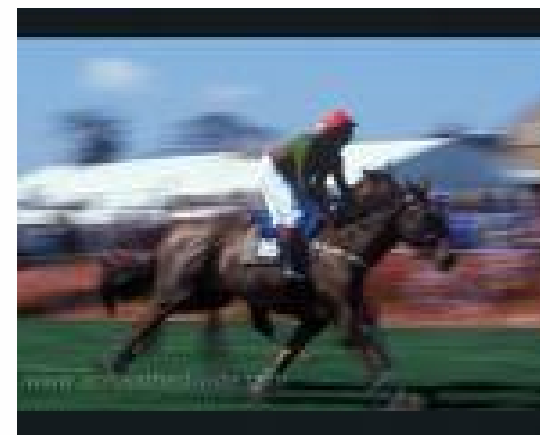
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### ■ OR YOU COULD:

- Benchmark

- Ask an **expert**:

- How do you identify an expert?
- Where do you find an expert?
- How do know they are an expert?



- That is sharing of **Best Practices!**





# Best Practices for IT Management



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- **Best Practices ARE:**
  - A technique or methodology that, through experience and research, has **proven to reliably lead to a desired result.**
  - The winning strategies, approaches, and processes that **produce superior performance** in an organization. A best practice is a by-product of a successful end-result.
  - An activity or procedure that has produced outstanding results in another situation and **could be adapted** to improve effectiveness, efficiency, ecology, and/or innovativeness in another situation.



## Best Practices for IT Management



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- And, **Best Practices** Are:
  - The methods and **achievements of the recognized leader(s)** in a particular field.
  - **Identifying and matching** the best performance of others.
  - The **best possible way of doing something**; it is commonly used in the fields of business management, software engineering, and medicine, and increasingly in government.



# Best Practices for IT Management



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- Who Uses **Best Practices**?
  - Organizations that are serious about improving their performance **continually search** for better business practices.
    - The fastest and easiest way to improve is to compare and learn from other successful organizations
    - ***“There’s no point in re-inventing the wheel.”***
  - Organizational best practices **are embedded beliefs and behaviors** found in high performing organizations.



# Best Practices for IT Management



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- What are the challenges to using **Best Practices**?
  - **Having sufficient knowledge** of your own systems and processes to be able to compare against others.
  - Getting **buy in** from stakeholders.
  - Knowing whether a particular practice is **suitable** for your situation.
  - **Adapting** the practice to your organization.
  - **Finding the time and the resources** to look for best practices and **finding the time to implement them**.
  - Knowing where to **find best practices**.



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- SO - What is a **Benchmark**?
  - Processes and results that **represent Best Practices** and performance for similar activities.
  - Benchmarks are one form of **comparative data**.





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- **Benchmarking is a systematic process** for identifying and implementing a best practice. There are two main types of benchmarking:
  - **Performance benchmarking;**
    - Comparing the performance levels of organizations for a specific process.
  - **Best practice benchmarking;**
    - This is where organizations search for and study organizations that are high performers in particular areas of interest.
- Best practice benchmarking **involves the whole process** of identifying, capturing, analyzing, and implementing best practices.



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## Examples from Aldine and Katy ISD





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## The Process:

1. Define each benchmark
2. Describe how the benchmark is measured
3. Identify the target benchmark
4. Develop a method of collection and reporting
5. Develop a roadmap for future benchmark collection
6. Define methods for sharing best practices





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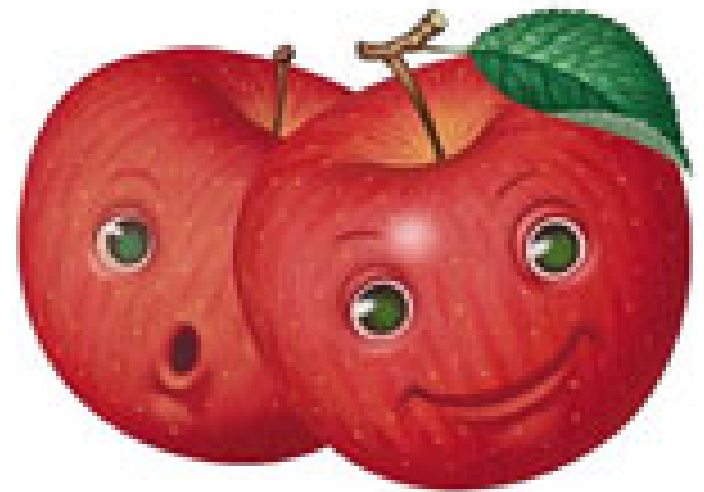


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## 1. Define Benchmarks



How do we define  
benchmarks so we can  
understand each other?





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## For Each Benchmark, Complete the Following:

Benchmark:	<b>System Availability</b>
Definition	System Availability is defined as the period during which the system is available to fulfill its designated function(s). Alternately, System Availability can also be defined as the period during which the System was not “down.”
Example Benchmark	<b>% System Availability (up-time) for Internet, WAN, E-Mail</b>
How to Measure	Using 1440 minutes in a given day (of 24-hours – hence $24 * 60$ ) and in an ideal world, the system would be available for use all 1440 minutes, every day of the week, every week of the month and every month of the year. Any deviation from that would in effect be its downtime and would help determine its availability. If a system is down for 20 minutes any given day, its percentage availability would therefore be $1420/1440 * 100 = 98.611\%$ .
Target Benchmark	Strive to achieve the 4 nines (99.99%) or better still, the 5 nines (99.999%) and this is the statistic that determines whether such a target has been met.
Method of Collection	Through an online work order tracking system, track hours down
Method of Reporting	Monthly, column chart by month, by year showing trend
Notes:	Should scheduled and other pre-defined downtimes (such as regularly scheduled maintenance activities) be factored in to the equation?



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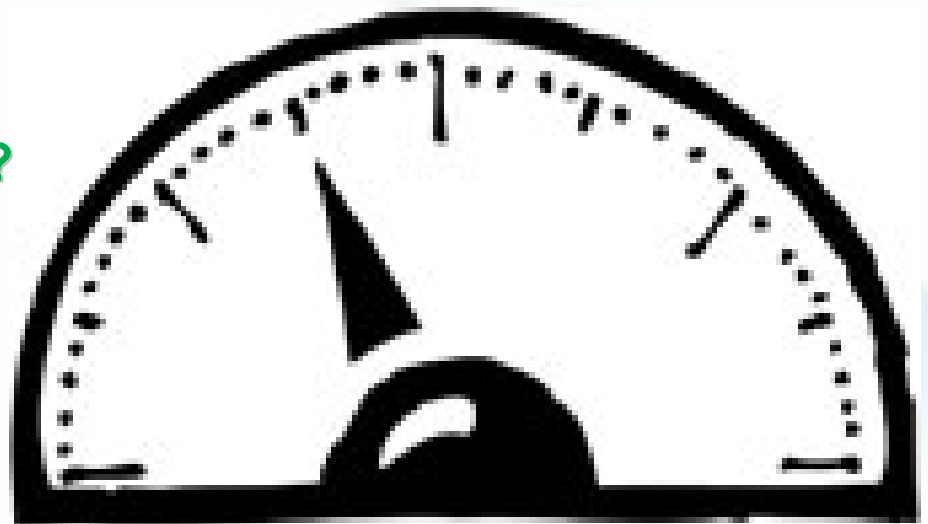


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## 2. Describe How the Benchmarks Are Measured



How do we measure  
benchmarks with consistency?





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## For Each Benchmark, Complete the Following:

Benchmark:	Cycle Time
Definition	The term “cycle time” refers to the time required to fulfill commitments or to complete tasks. Cycle time improvement might include the time to respond to changing student and stakeholder needs, design time for new programs and processes, and other key measures of time.
Example Benchmark	Work order response time by priority
<b>How to Measure</b>	<b>Number of hours between the time the work order is requested to the time the work order is completed.</b>
Target Benchmark	By priority (critical = 4 hours, emergency = 1 day, instructional = 3 days, administrative = 4 days)
Method of Collection	Through an online work order tracking system, track hours aged
Method of Reporting	Monthly, column chart by month, by year showing trend
Notes:	Are holidays and weekends included?



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### 3. Identify the Target Benchmarks



What level of performance  
do we want to achieve?





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## For Each Benchmark, Complete the Following:

Benchmark:	Productivity
Definition	The term “productivity” refers to measures of the efficiency of resources used to meet the organization’s objectives. What is the difference in performance? The term “performance” refers to outputs and their outcomes obtained from processes, programs, and services that permit evaluation and comparison relative to goals, standards, past results, and other organizations.
Example Benchmark	Resource effectiveness
How to Measure	Number of work orders completed by purpose and complexity. Number of technology requests served.
<b>Target Benchmark</b>	<b>Establish a list of purposes and assign a complexity parameter, for example, computer installation = complexity of 2 (on a scale from 1 – 5) with a target benchmark of 2 hours.</b>
Method of Collection	Through an online work order tracking system, actual hours expended.
Method of Reporting	Monthly, column chart by month, by year showing trend
Notes:	Define a clear set of purposes with a standard set of benchmarks by complexity.

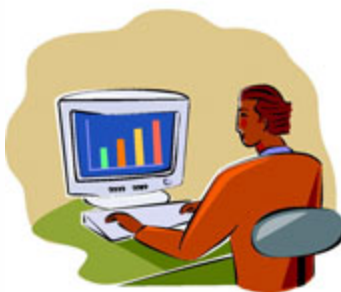
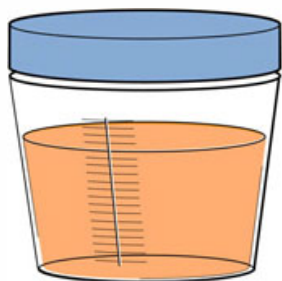


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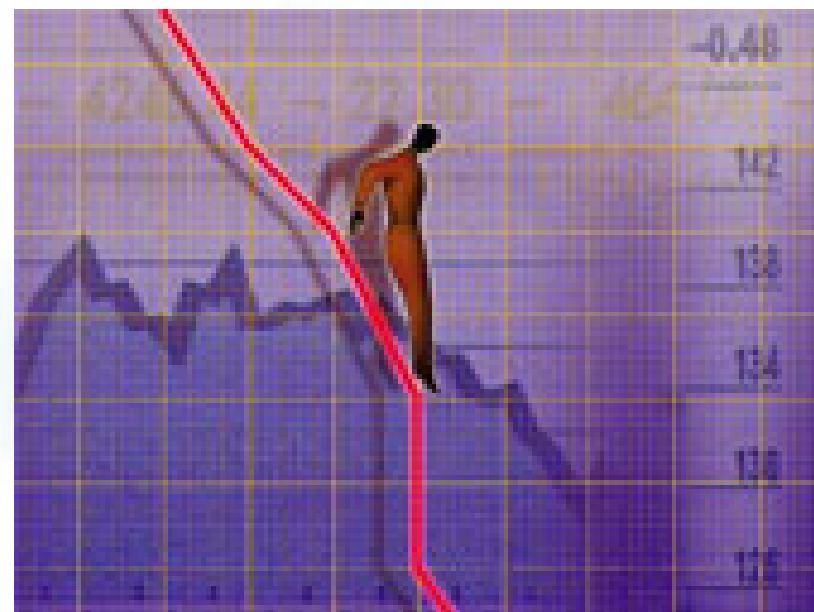


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## 4. Develop a Method of Collection and Reporting



What methods do we use  
to collect and report the  
benchmark results?





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## For Each Benchmark, Complete the Following:

Benchmark:	Satisfaction
Definition	A key performance indicator, satisfaction refers to a measure of how products and services supplied by the district meets or surpasses stakeholder expectations.
Example Benchmark	Customer Satisfaction, Employee Satisfaction, Vendor Satisfaction
How to Measure	Survey stakeholder satisfaction based on a standard set of question and rating scale.
Target Benchmark	Outstanding service, e.g. satisfaction = 5
<b>Method of Collection</b>	<b>Follow-up surveys, online surveys, telephone surveys</b>
<b>Method of Reporting</b>	<b>Monthly, column chart by month, by year showing trend</b>
Notes:	



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### In the large group:

- Brainstorm ideas for benchmarking
- Prioritize list
- Select a benchmark to work on





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## In Groups:

### Do the following:

- ✓ Complete a Worksheet for the **Benchmark**
- ✓ Develop a Roadmap for Future Benchmark Collection
- ✓ Define Methods for Sharing Best Practices
- ✓ Report Back to the Group





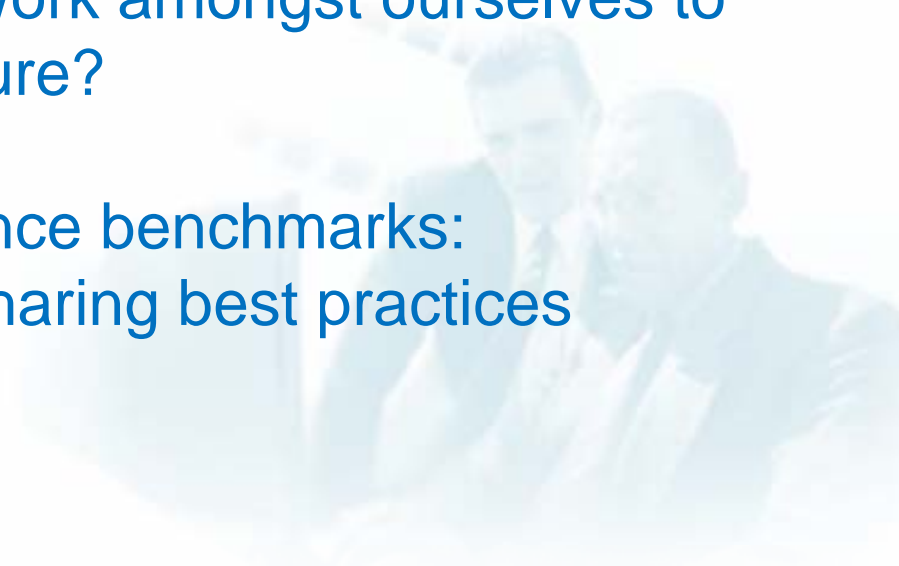
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## Come Back Together From Workgroups

- Discuss benchmark findings
- Develop a roadmap for future benchmark collection
  - Can we create a network amongst ourselves to collect data in the future?
- Based on high performance benchmarks:
  - Define methods for sharing best practices
- Discuss Next Steps





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## For Each Benchmark, Complete the Following:

Benchmark:	<b>Staffing Ratios</b>
Definition	"Staffing Ratio" is the number of IT staff designated for each functional area.
Example Benchmark	Computer to Technician Ratio, Network Servers to Network Manager Ratio
How to Measure	Assess the district's IT organizational chart identifying the total number of staff members in functional area. Inventory the numbers of services or equipment being supported in each functional area. Divide the total number of staff members by the number of services in each area to come up with a ratio.
Target Benchmark	For each functional area, establish target benchmarks.
Method of Collection	Count the positions by function and the number of services/equipment provided and supported.
Method of Reporting	Monthly, column chart by month, by year showing trend
Notes:	Define a clear set of functional areas in a standard IT staff/organization.



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## For Each Benchmark, Complete the Following:

Benchmark:	<b>Cost Per Student</b>
Definition	The total cost spent to educate students based on the weighted average daily attendance as defined by the state. Related to technology, total cost per student includes all technology salaries, hardware, software, annual support and maintenance, repair, and operating expenses.
Example Benchmark	Cost per student ratio spent on technology
How to Measure	Take percent spent on technology as compared to all costs spent to educate students.
Target Benchmark	\$80
Method of Collection	PEIMS and TEA Finance Data compared to peer districts
Method of Reporting	Yearly, column chart by month, by year showing trend
Notes:	



# Best Practices for IT Management



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### Benchmark Definitions

Benchmark:	
Definition	
Example Benchmark	
How to Measure	
Target Benchmark	
Method of Collection	
Method of Reporting	
Notes:	