

# Instructional Device Upgrade (IDU)

## *Instructional Device Upgrade District Readiness Checklist:*

A Guide for Kentucky School Districts



October 6, 2006



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## Table of Contents

Introduction .....	3
Executive Summary .....	3
Delivery Readiness Requirements .....	3
IDU District Readiness Checklist/Timeline .....	3
Impacts of the Initiative.....	3
Conclusion .....	3
Appendix A: .....	3
Appendix A: Continued .....	3
Instructional Device Upgrade Authorization Form.....	3



# Instructional Device Upgrade (IDU) District Readiness Checklist – A Guide for Kentucky School Districts

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## Introduction

This document has been designed to guide Kentucky school districts in making final preparations for the introduction of new instructional devices to its district inventory.

After thoroughly reading this document, districts must confirm every Readiness Requirement listed below to ensure that it is prepared to receive the allotment of new instructional devices that it has purchased. Once readiness have been confirmed, the district will meet with its KETS Engineer to verify each requirement and establish appropriate date(s) for delivery of and installation new instructional devices within a 15-30 day period no later than June 1, 2008.

Based upon input and recommendations from the IDU Advisory Committee (see Appendix A for a list of the members), this document outlines what activities are now needed to prepare for the implementation of the solution and describe impacts of the process for which districts should be prepared. Districts are encouraged to contact their KETS Engineer if they need assistance.

After the readiness requirements are completed and verified, the district CIO must complete the authorization form at the end of the document and submit it to the respective KETS Engineer no later than two weeks prior to when the district places its order for purchase.

## Executive Summary

**Background:** In 2006, \$50 million in bond funds were appropriated by the General Assembly for an education technology pool with the intent to provide modern instructional appliances, stationary or mobile for public K-12 schools. Strategically, this project will achieve objectives identified in KETS Master Plan, as it will address issues such as technological equity, standards-based planning and accountability.

**Rationale:** A Technology Tools Readiness Survey performed in 2005 by the Office of Education Technology showed that approximately 70% of the instructional devices in use at KY schools were outdated and need to be replaced. The objective of this initiative, known as the Instructional Device Project, is not only to replace these old devices but to also provide a complete solution that will help advance student learning through new instructional technologies. The IDU initiative is critical to enable the integration of technology into district's comprehensive learning plans and to help ensure its alignment with the 2007-2012 KETS Master Plan for Education Technology.

**IDU Benefits:** An infusion of new instructional devices will provide many benefits, including:

- **Prepare Infrastructure for Technology based Initiatives** - \*50-70% of KY school districts require communication network and instructional device upgrades to accommodate large-scale technology applications and ongoing initiatives (i.e. Online Assessment, SIS, KIDS, ILP, etc.)

# Instructional Device Upgrade (IDU) District Readiness Checklist – A Guide for Kentucky School Districts

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- **Provide Adequate Technology Access** - ensure the availability and accessibility; students benefit from technology throughout school day
  - **Equalize Technology Access** - enable high-quality technology experiences to students who would have less access to technology in their homes
  - **Reduce maintenance costs** - required to support outdated, non-standard instructional devices, improve slow response time

## Delivery Readiness Requirements

This section provides a list of requirements that must be in place before districts will be ready to accept delivery based on whether the devices represent a net gain or no net gain to the current inventory. KETS Engineers will review this list with their respective districts to ensure completion of all readiness requirements tasks by the date specified. Detailed explanations of each readiness requirement is as follows:

1. **Electrical Power** – Are there enough electrical power outlets and amperage to support devices? Many classrooms have access to power, but not always in a location where new devices will be placed; if not, how will this be addressed?
2. **Furniture/ Placement** – Is there sufficient furniture or location for placement of new devices?
3. **Internet/Network Connection** – Is current network capacity at local level sufficient to maximize performance of the new devices (i.e. high speed, hardwired connection to the school network and to the Internet; 100 Mbps Fast Ethernet TCP/IP; static IP address; Ethernet cables)?
4. **Wireless Capability** – Does current wireless configuration allow for new mobile devices (i.e. 802.11b minimum or 802.11g recommended)?
5. **Installation/Disposal** – Does district have sufficient resources to install new devices within 15-30 days of receipt? Does district have sufficient resources to cleanse and dispose of old devices?

**Definition of an “old” instructional device** – has less than the following new standard minimums specifications:

### Wintel

**Desktop:** Pentium 800MHz, 512 MB RAM, 20GB HD (15 GB Free)

**Laptop:** Pentium 800MHz, 512 MB RAM, 20GB HD (15 GB Free), 802.11b internal wireless

# Instructional Device Upgrade (IDU) District Readiness Checklist – A Guide for Kentucky School Districts

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## Macintosh

**Desktop:** PowerMac G4, 800 MHz, 256 MB Ram, 40 GB Hard Drive, and NVIDIA GeForce with 64 MB Ram Graphic Card

**Laptop:** PowerPC G4, 1.2GHz, 256MB RAM, 30GB Hard drive and ATI Mobility Radeon 9200 with 32MB RAM

6. **Imaging** – Does district have sufficient resources to create district standard image and install on all new devices or will outside vendor resources be required?
7. **Support and Maintenance Capability** – Does district have sufficient resources to support and maintain new devices if there is a net gain to their current inventory?
8. **Insurance** – If district is purchasing new mobile devices, will it have to develop a policy regarding taking these devices home? How will insurance of these mobile devices be funded?
9. **Secure Staging Location** – Have schools identified a secured area (preferably out of immediate sight) for delivery and configuration of new devices?
10. **Software Licensing** – If there will be a net gain of devices, do additional licenses for Virus protection, Office productivity suite or Server cal need to be purchased?
11. **Support Instructional Plan** – Does the purchase plan for new devices (ratio of devices per student, accessibility and percentage of stationary to mobile devices) support district educational plans?
12. **Communications plan to inform all district users of impact of new device implementation** –Districts should ensure that all of their end users are aware of the installation date and the potential impacts on them. In particular, users should be made aware of the expected duration of the service interruption or impacts on functionality and network performance.
13. **Data Backups may need to be performed** – Before installing new devices, it may be necessary to back up required email archives and address book. Also, favorites (bookmarks) and critical data files including pictures, music or documents from your My Documents folders should be considered for backups. Always consult the help files for each program to find out how to back up data. Take your time with this and be thorough to make sure nothing important is left behind. Please note that this may only apply to teachers' devices.
14. **Test or verify technical specifications of educational software on new instructional devices prior to delivery** – While most software will be compatible with the new devices, some may not be able to function properly or as most users are accustomed with the new operating systems and productivity software that will be included with the new image that will be installed. Before rolling out new computers, please verify the specifications of district/school educational software to ensure the new devices will work as expected and meet the needs of the end users. Also, please verify the specifications of district/school

educational and assistive technology software and hardware (i.e. older assistive technology devices such as alternative keyboards, communication device alpha smarts, switch adapted mice, no-hands mice, printers and scanners may need to be upgraded to support USB connections.)

15. **Plan for fairness in distribution of devices across grade levels and for all students** – teachers have expressed the need to have a more equitable distribution of newer computers across grade levels, while replacing the oldest computers in the building. For example, newest devices should not automatically go to high school grades; also, needs of grade PreK-8, special population students and needs of specialty classes (i.e. languages, arts, etc.) should be considered.
16. **Plan for local purchasing of associated items that are not included in the districts' allotment of the \$50M.** Please refer to this list of items which specifies what IDU district allotments can and cannot be used for:

Item	IDU/Locally* Funded	District Funded
Laptops	X	
Desktops	X	
Tablet PCs	X	
Monitors	X	
Processor	X	
Memory (RAM)	X	
Hard drive	X	
Service and Warranty	X	
Video Card	X	
CD/DVD/Floppy	X	
Battery	X	
Serial/Parallel/AC Adapters, Computer Cables	X	
Keyboard and Mouse	X	
Wireless adapters	X	
Upgrade options	X	
Sound Card/ Speakers/Headphones (if not included)	X	
Operating System Software	X	
Install	X	
Image	X	
White Boards and peripheral devices		X
Electrical upgrades		X
Furniture (desks)		X
Disposal (if not included)		X
Software Licenses		X
USB Flash Drives		X
Wireless carts		X
Wireless access points		X
Professional Development		X
Student/Teacher Training		X

\* Will be able to be funded from the IDU Allotment or may be funded with local KETS funds.

# Instructional Device Upgrade (IDU) District Readiness Checklist – A Guide for Kentucky School Districts

## IDU District Readiness Checklist/Timeline

Readiness Requirement	Stationary Devices	Mobile Devices	District Completion Date	District Completion Sign Off	KE Verification Date	KE Verification Sign Off
<b>* Electrical Power</b>	<b>X</b>	<b>X</b>	Four months prior to delivery	Select One	One month prior to delivery	Select One
<b>* Furniture/ Placement</b>	<b>X</b>	<b>X</b>	Four months prior to delivery	Select One	One month prior to delivery	Select One
<b>Network Capacity</b>	<b>X</b>	<b>X</b>	Four months prior to delivery	Select One	One month prior to delivery	Select One
<b>Wireless Capability</b>		<b>X</b>	Four months prior to delivery	Select One	One month prior to delivery	Select One
<b>Installation/Disposal</b>	<b>X</b>	<b>X</b>	One month prior to delivery	Select One	Two weeks prior to delivery	Select One
<b>Resources Available for Imaging</b>	<b>X</b>	<b>X</b>	One month prior to delivery	Select One	Two weeks prior to delivery	Select One
<b>Support Capability</b>	<b>X</b>	<b>X</b>	Four months prior to delivery	Select One	One month prior to delivery	Select One
<b>Insurance</b>		<b>X</b>	One month prior to delivery	Select One	Two weeks prior to delivery	Select One
<b>Secure Staging Location</b>	<b>X</b>	<b>X</b>	One month prior to delivery	Select One	Two weeks prior to delivery	Select One
<b>* Software Licensing</b>	<b>X</b>	<b>X</b>	Four months prior to delivery	Select One	One month prior to delivery	Select One
<b>Devices planned for purchase support instructional plan</b>	<b>X</b>	<b>X</b>	One month prior to delivery	Select One	Three weeks prior to delivery	Select One
<b>Communications plan</b>	<b>X</b>	<b>X</b>	One month prior to delivery	Select One	Two weeks prior to delivery	Select One
<b>Data Backups</b>	<b>X</b>	<b>X</b>	One month prior to delivery	Select One	Two weeks prior to delivery	Select One
<b>Test or verify technical specifications of educational software</b>	<b>X</b>	<b>X</b>	One month prior to delivery	Select One	Two weeks prior to delivery	Select One

\* This readiness requirement may not be necessary if this initiative will not result in a net gain in the number of instructional devices in the district inventory.

***PLEASE NOTE: Disbursement of bond funds provided by the IDU initiative may be allocated in phases; therefore, a district's purchases may be staggered. For example, one scenario may be that a district will purchase 50% of its total devices in the current fiscal year (2006-2007) and 50% in the following fiscal year (2007-2008).***

# Instructional Device Upgrade (IDU) District Readiness Checklist – A Guide for Kentucky School Districts

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## Impacts of the Initiative

This section describes ways that the delivery of new devices may impact the districts. These are not items that must be prepared in order to accept delivery of new devices, however, districts should be aware of these considerations.

### **1. Client upgrades may be necessary to use all new functionality and/or receive full support.**

As to be expected with any PC upgrade, full features and functionality often require an upgrade to both operating system and application on client machines. While this is often not mandatory for basic functionality, all districts are encouraged to upgrade as many clients as possible to the most current versions on existing PCs. For Windows/Intel platforms, Windows XP is the preferred client due to its speed improvements, high optimization and increased security.

### **2. Integrate Technology into Core Education Mission Activities**

Research has shown that the greatest return on investment in education technologies occurs when organizations ensure their investments are aligned with the strategy and mission of the organizations. In order to achieve maximum return from these new devices, educators will have accessibility to the professional development and instructional integration resources to ensure that these new devices will help advance student learning and achievement.

**3. Network performance on web based applications or other educational use that require connection to the *Internet*, may not be optimal if workstations are installed prior to district WAN (Wide Area Network) upgrade that will be delivered via the KEN initiative.**

Wherever possible, we will schedule delivery of new instructional devices following the installation of the KEN WAN upgrade project. However, as this may not always be possible, please help set district expectations to be aware that while users will experience overall speed improvements with their new instructional devices, network performance will not be improved until the WAN is upgraded.

**Please note that applications which run from the hard drive and/or web-based applications that are connected via the *Intranet* should expect improved performance provided the district has sufficient bandwidth at the LAN (Local Area Network) level.**

**4. End user training on new user interfaces may be required**

The appearance of a new or upgraded operating system and office productivity suite will be different from what users are accustomed with their old versions.

# **Instructional Device Upgrade (IDU) District Readiness Checklist – A Guide for Kentucky School Districts**

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## **Conclusion**

The members of the Instructional Device Upgrade Advisory Committee, KETS Engineers, Office of Internal Administration and Support as well as the Office of Educational Technology teams are working to deliver a complete solution that will help advance student learning through new instructional devices that will enable the implementation of key technologies. It's important to note that all testing activities have been based around standard product functionality and KETS specific requirements as delivered from our assembled district Advisory Committee. As these activities have been specifically contained within our various test labs; the pilot phase of the project will be used to validate the architectural design integrity, readiness clarity, end-user/client documentation, and supportability processes.

We appreciate the patience of all of our customers as we near the implementation stage of the project, and clearly recognize that many districts have aging and sometimes failing instructional devices. Our guidance to any district that has reached this point is to leverage whatever resources they currently possess to sustain these older devices until their scheduled delivery and installation date. Additionally, we would recommend that old devices be disposed of as they increase the demands of technical support resources and increase the district's total cost of ownership.

As always, districts should be comfortable in directing any questions specific to this initiative to their respective KETS Engineer and/or Advisory Committee member. These folks have served the Commonwealth well in keeping all districts informed - on a monthly basis - of the ongoing issues and status, and also in sharing the concerns of districts, schools and communities with the IDU Project leadership.

# Instructional Device Upgrade (IDU) District Readiness Checklist – A Guide for Kentucky School Districts

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## Appendix A:

### Instructional Device Upgrade Advisory Committee Members

The following individuals have been assembled to represent the voice of the end user stakeholders and are cast into the role of an active member of our internal project team to ensure balance between stakeholder requirements and IT capabilities. These individuals representing diverse roles and districts have been actively engaged since July of 2006 providing customer feedback, outlining business requirements, updating their respective regional peers and providing critical input on key decision points.

Role	Name	County/District
<b>District Assessment Coordinator</b>	Pat Rosenthal	Clark
<b>Assistive Technology</b>	Gerald Abner	Jessamine
<b>Superintendent, Asst. Superintendent or Principal</b>	Roger Marcum	Marion
	Joyce Phillips	Corbin Ind. HS
	Matt Thompson	Fayette
	Amy McVey	Fayette
	Janie Tomek	Christian
<b>Technology Resource Teacher</b>	Cary Williams	Ashland Ind.
<b>KVHS Student</b>	Will Barnes	Daviess
<b>Technology Student Reps</b>	Dustin Robinson	Nicholas Co. HS
	Kaitlin Johnson	Owen Co.

# Appendix A: Continued

## Instructional Device Upgrade Advisory Committee Members

Role	Name	County/District
<b>Technology Reps - CIO's</b>	Pat Stewart	Warren
	Cary Peterson	Jefferson
	Yvonneda Gosser	Somerset Ind
	John Maxey	Morgan
	Maritta Clark	Pike
	Vickie Fields	Kenton

# Instructional Device Upgrade (IDU) District Readiness Checklist – A Guide for Kentucky School Districts

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## Instructional Device Upgrade Authorization Form

This Authorization Form signifies that appropriate district staff has read and understood the entire pre-migration checklist and will complete the necessary steps to meet the KDE Instructional Device Upgrade Implementation Plan and Schedule. The undersigned affirms that:

- District will complete the IDU District Readiness Checklist prior to confirmed delivery date.
- District will coordinate a delivery and installation date with respective KETS Engineer.
- District will comply with all existing and future KETS design and architectural standards regarding new instructional devices.
- District understands district responsibility for appropriate licensing of antivirus, operating system and server cal software.
- District understands Network performance for access outside of the local area network (i.e. Internet-based applications) may not be optimal if workstations are installed prior to district WAN upgrade that will be delivered via the KEN initiative

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Chief Information Officer

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Date