

Ipswich Technology Transformation



Ipswich IT Team

Technology Department

- Technology Specialists
 - Diane Arsenault
 - Derek Deacon
 - Bill Ford
- IT Director – Jeannie Frash

Technology Integration Specialist/Coordinator –
Chris Burke

Objectives

Significant Accomplishments 2014

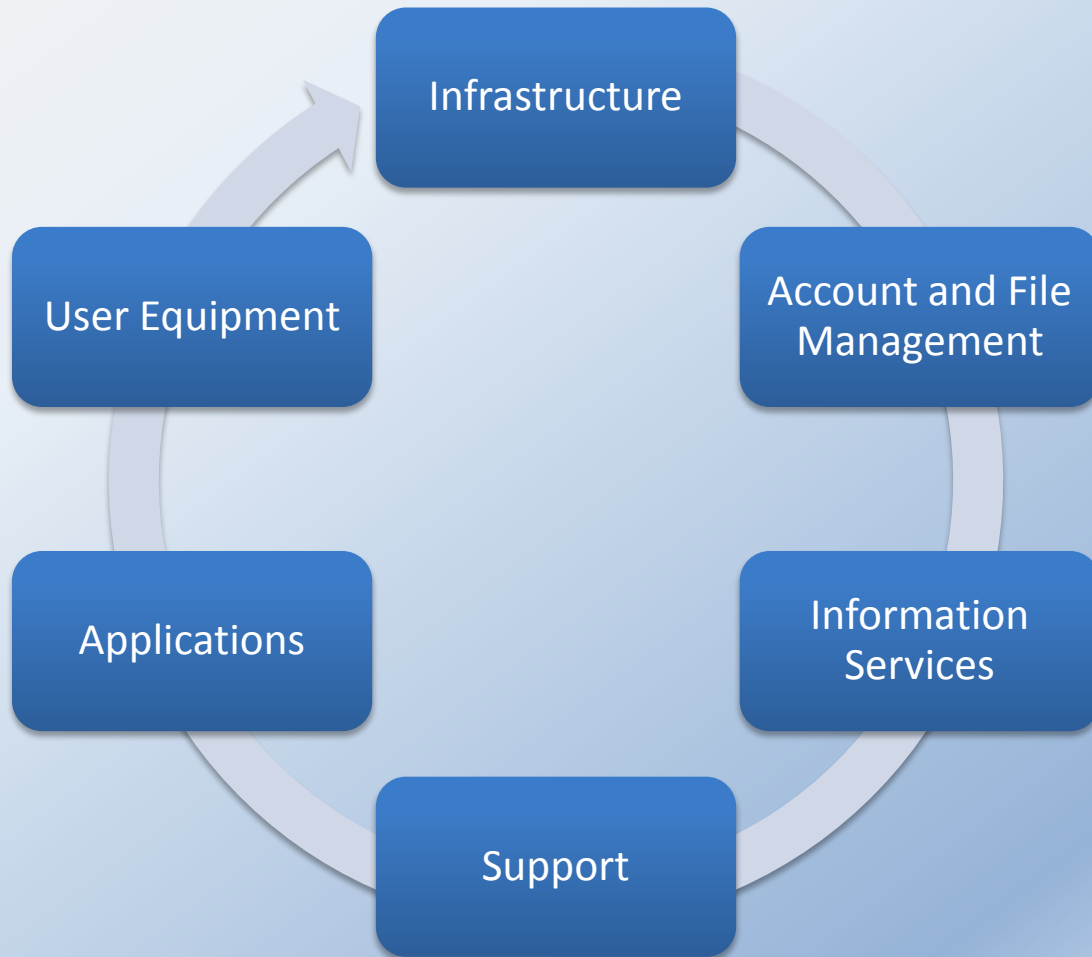
Project Details

- Description
- Current & Future State
- Realized Benefits

Upgrade Status

- Phase 1 Infrastructure
- Phase 2 Classroom

IT Core Areas



Infrastructure

- Fiber connected schools
- High-capacity switches
- High-speed network cabling
- Secure wireless system
- Virtual server system
- Robust dedicated firewall
- 5x faster internet access
- Centralized antivirus server



Account and File Management

- Single domain structure (ipsk12.net)
- Automated account creation
- Centralized print server
- Centralized multipurpose file sharing
- Email and files migrated to new domain
- Email archiving
- Other service accounts integrated



Information Services

- Destiny - new library catalog system
- NutriKids - new school lunch program
- Blackboard Connect - new notification system
- Edline - new website is functional
 - Additional content migration in progress
- Aspen - new student information system



Support



- Inventory database of equipment
- Server based computer imaging system
- Online registration forms for BYOD
- FAQ webpage for staff
- Work order system with online form
- Real-time network monitoring system

Applications

- Latest version of Solidworks (CAD)
- Latest version of Adobe Creative Cloud (Art)
- Google Apps for Education
- Apple apps for iPads



New Classroom Equipment

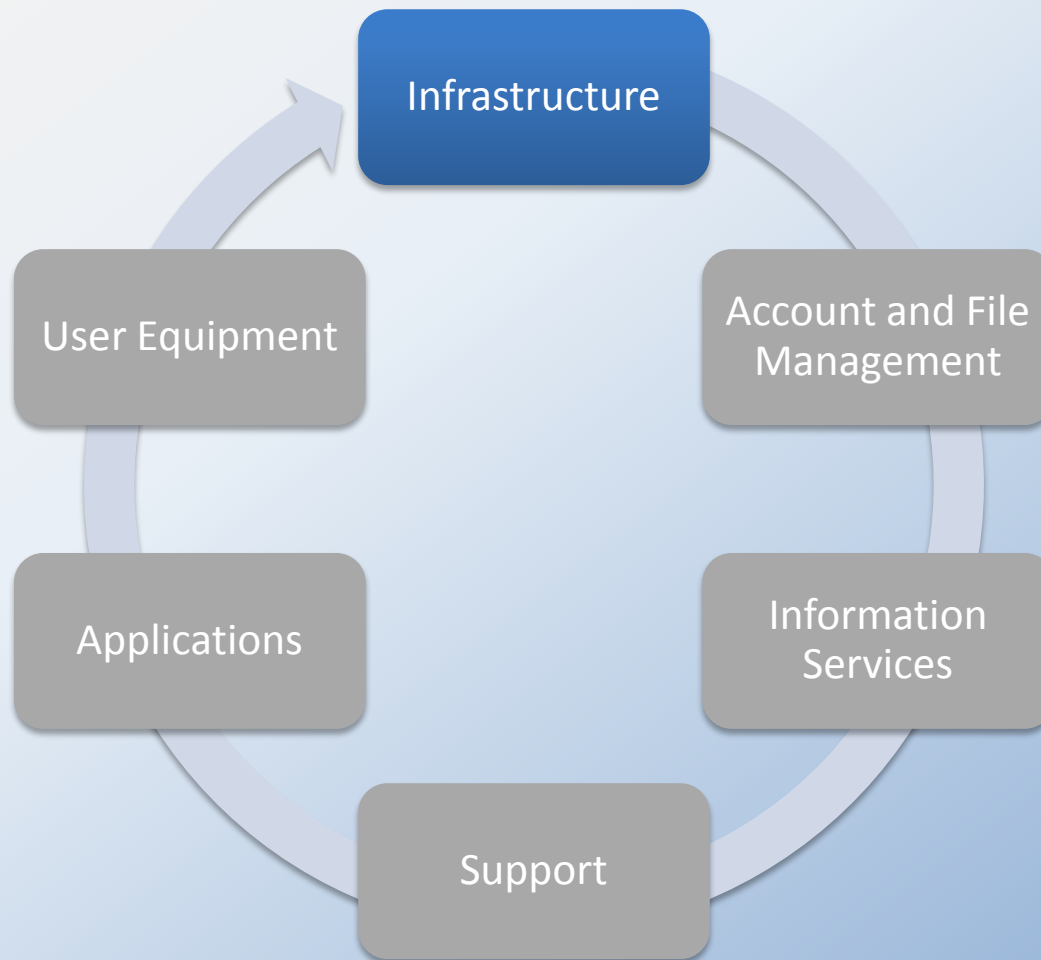
- **160** of 185 thin clients in classrooms and libraries
- **25** high performance CAD lab computers
- **8** high performance iMacs in art rooms
- **64** of 65 interactive or ceiling projectors
- **350** chromebooks in **15** charging carts
- **26** iPads with syncing station in music lab
- **200** laptops in **8** charging carts
- **53** of 76 teacher laptops
- **55** Google Nexus Tablets ready to distribute



Project Details

- Description
- Current & Future State
- Realized Benefits

Technology Services Description



- Foundation
- Framework
- Behind the scenes
- Crucial for all other components

Components of Infrastructure



Servers

Switches

Routers

Firewalls

Wireless Access Points

Battery Backups

Wiring

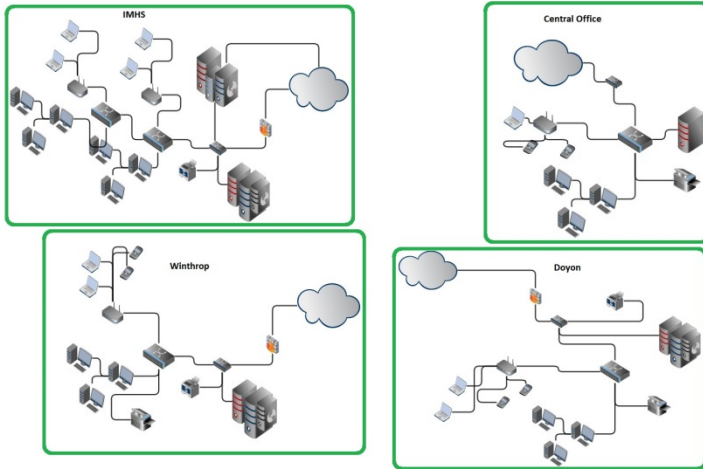
Internet Service

Backup System

Security

Improvements in Infrastructure

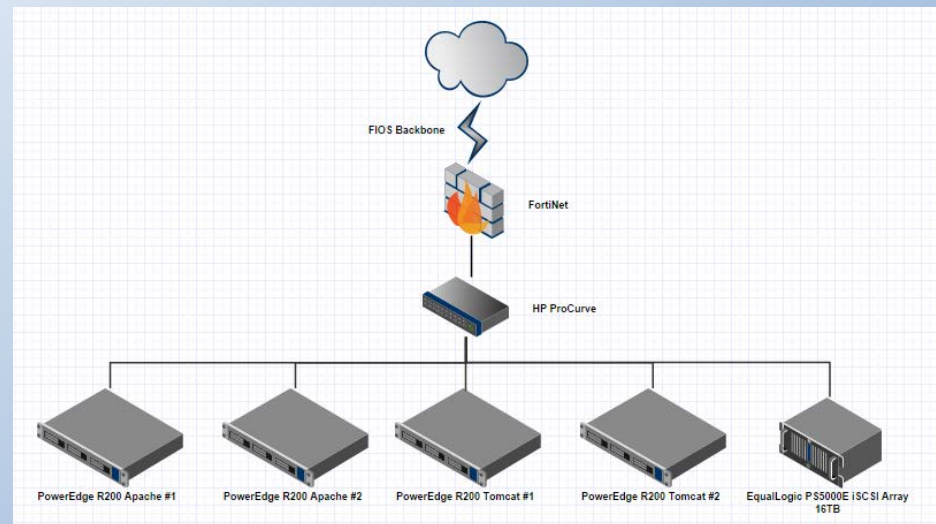
Before



- Centralized all schools into one fiber connected network
- Upgraded all network hardware to a more robust version
- Secured and extended the wireless system

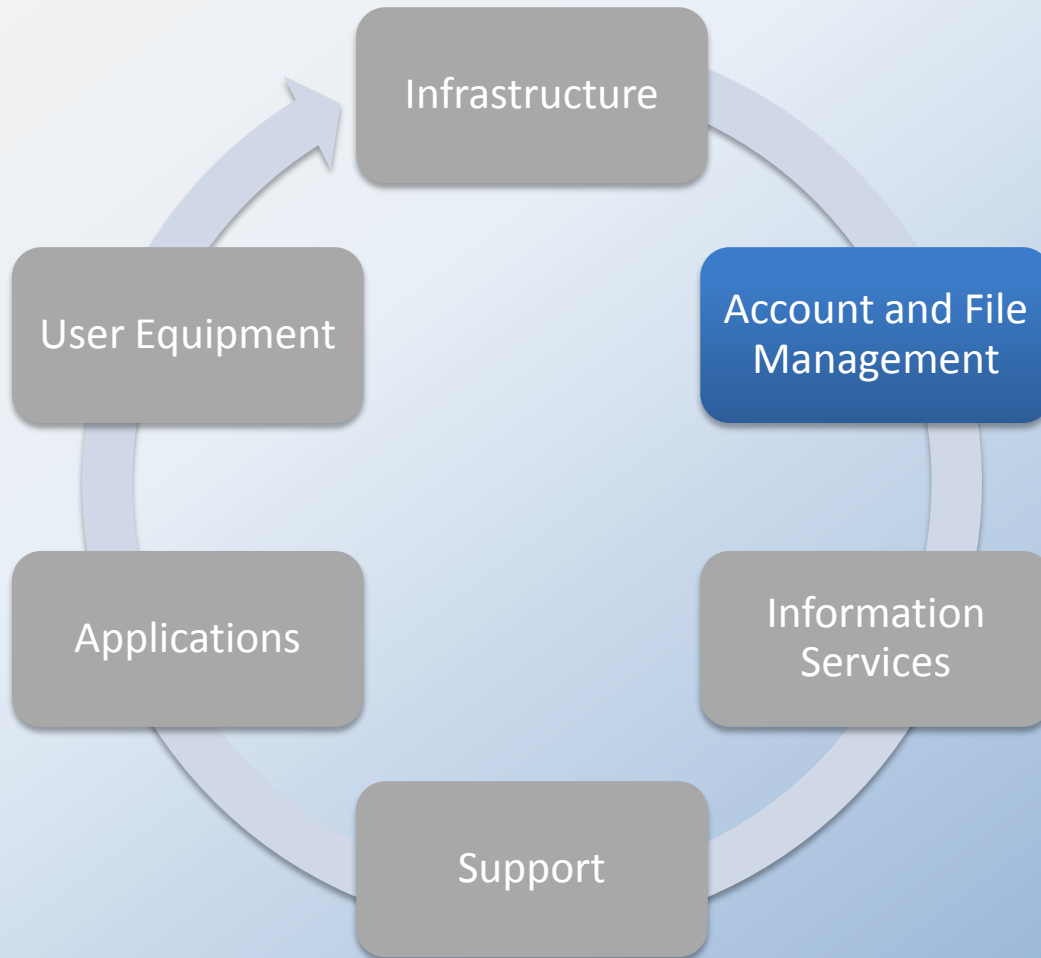


After



Improved reliability, security and performance

Technology Services Description



- Security
- Access to resources
- Access to communications
- Project collaboration
- Crucial for all other components

Types of Accounts

Active Directory

Email

Aspen

Edline

Destiny

Google Apps for Edu

Blackboard Connect

File Locations

Network Folders

Email Folders

Shared Folders

Portfolios

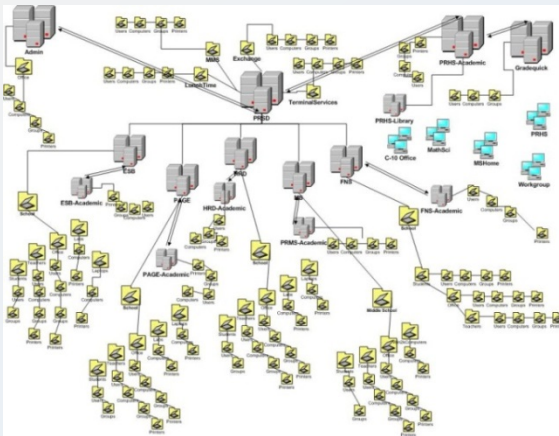
Reports

Published Documents

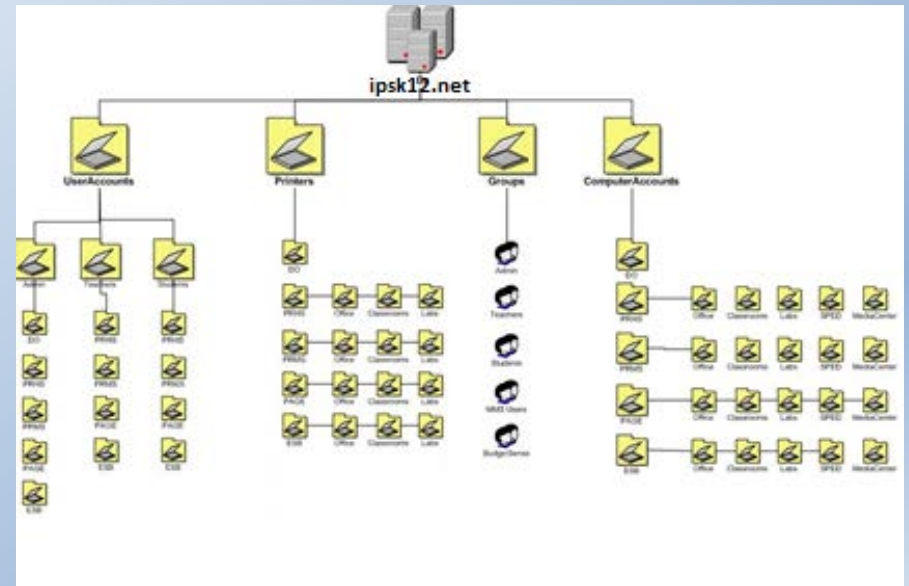
Google Drive

Improvements in Account and File Management

Before



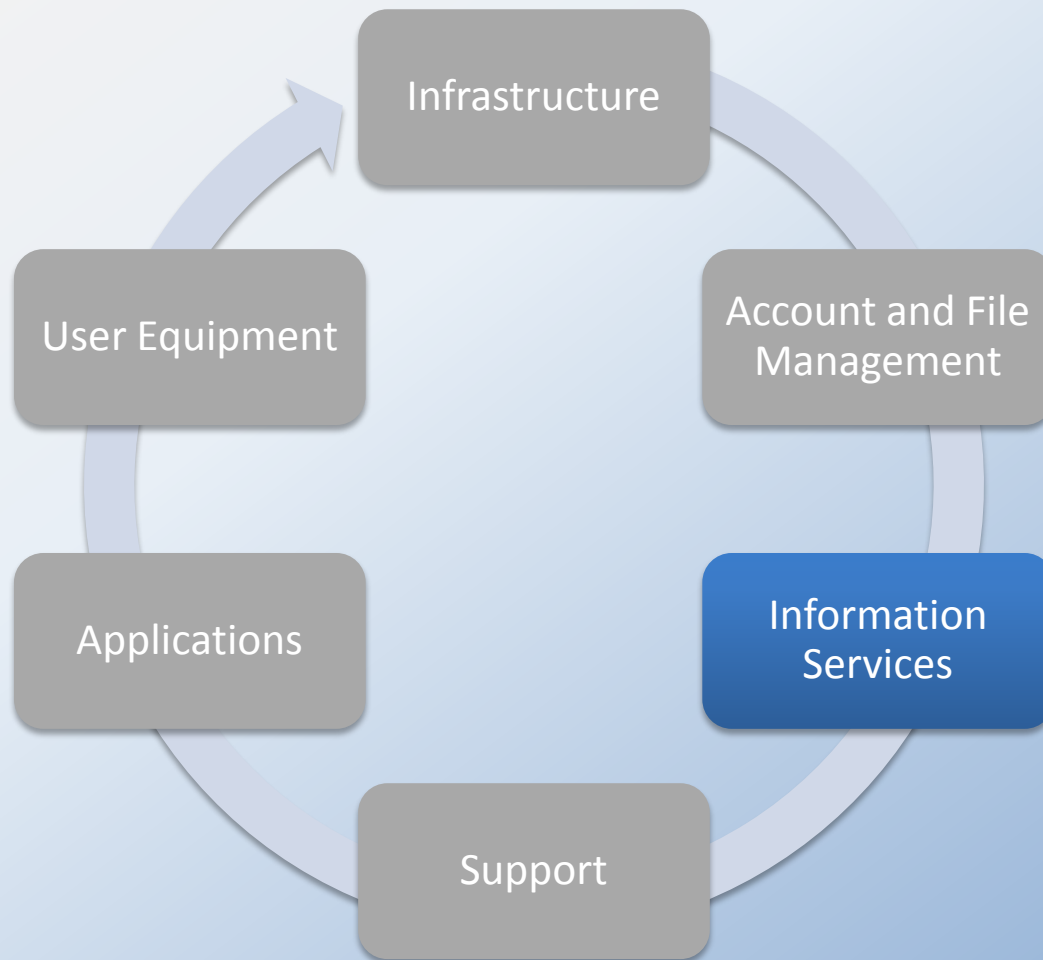
After



- Consolidated domain structure
- Automated account creation
- Integrated with applications
- Setup file and video sharing

Simplified login procedure and file access

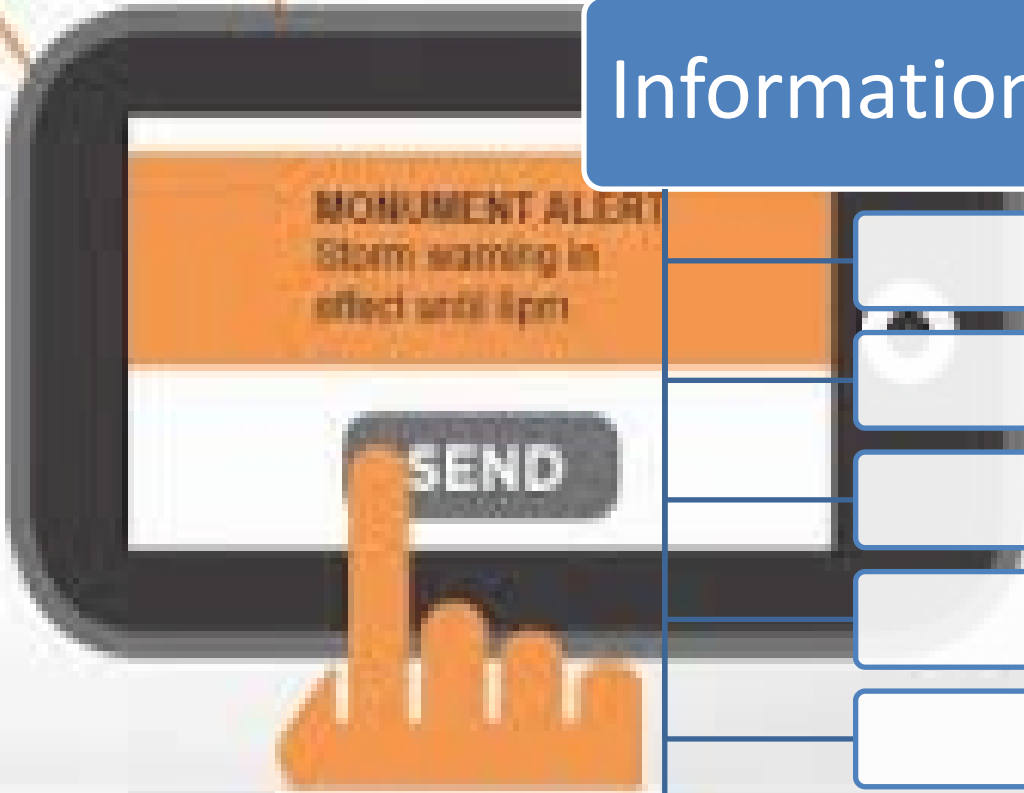
Technology Services Description



- Critical applications necessary to maintain all school functions
- Student enrollment, schedules, grades, contact information, health information, lunch transactions, accounting, communications



Information Services



Aspen

NutriKids

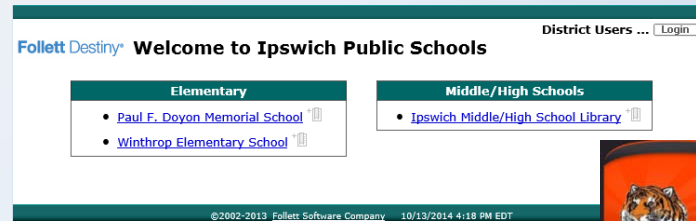
Destiny

Email

Edline

Blackboard Connect

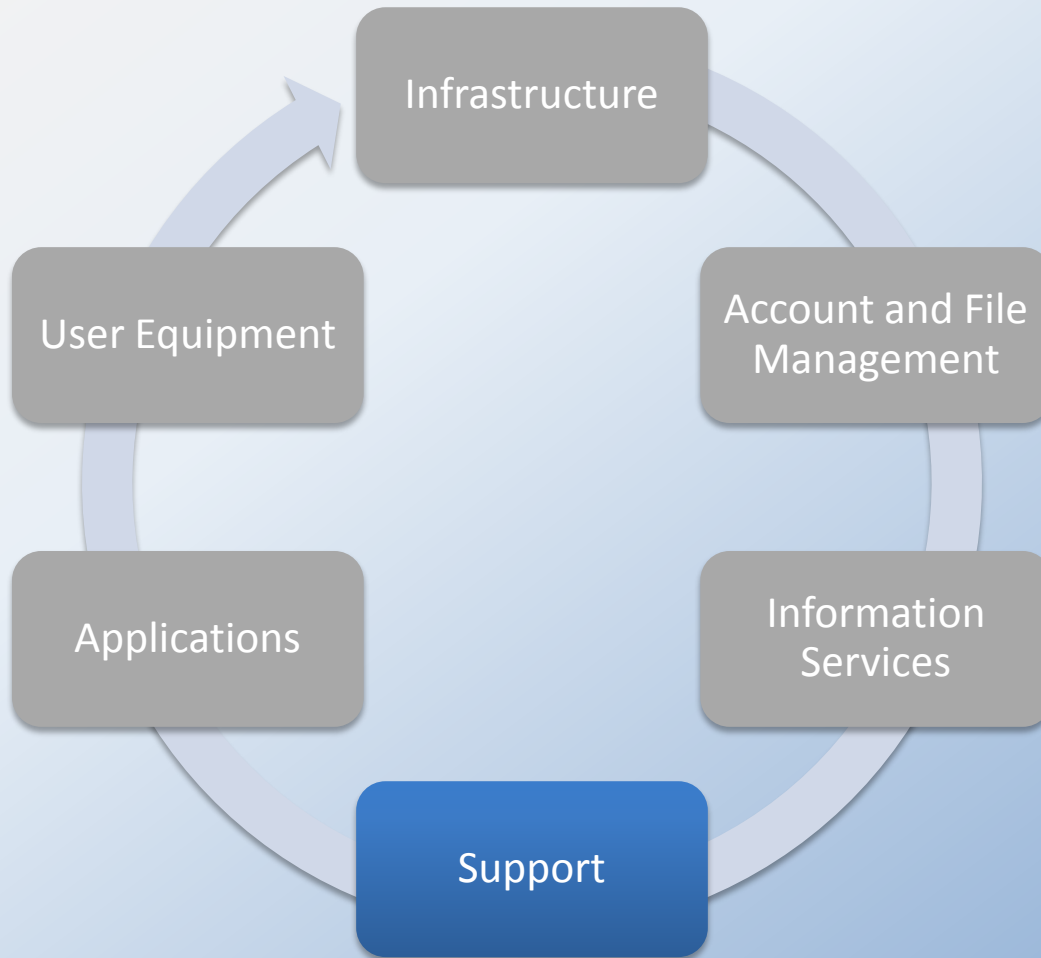
Improvements in Information Services



- Converted the student information system
- Centralized food service POS
- Consolidated library system
- Integrated the Website
- Synchronized email accounts

Centralized district wide applications

Technology Services Description



- Technology staff
- Tools used to maintain the helpdesk
- Tools used to keep track of equipment
- Tools to maintain the system and infrastructure

Support

Help Desk

Hardware Technician

Technology Specialist

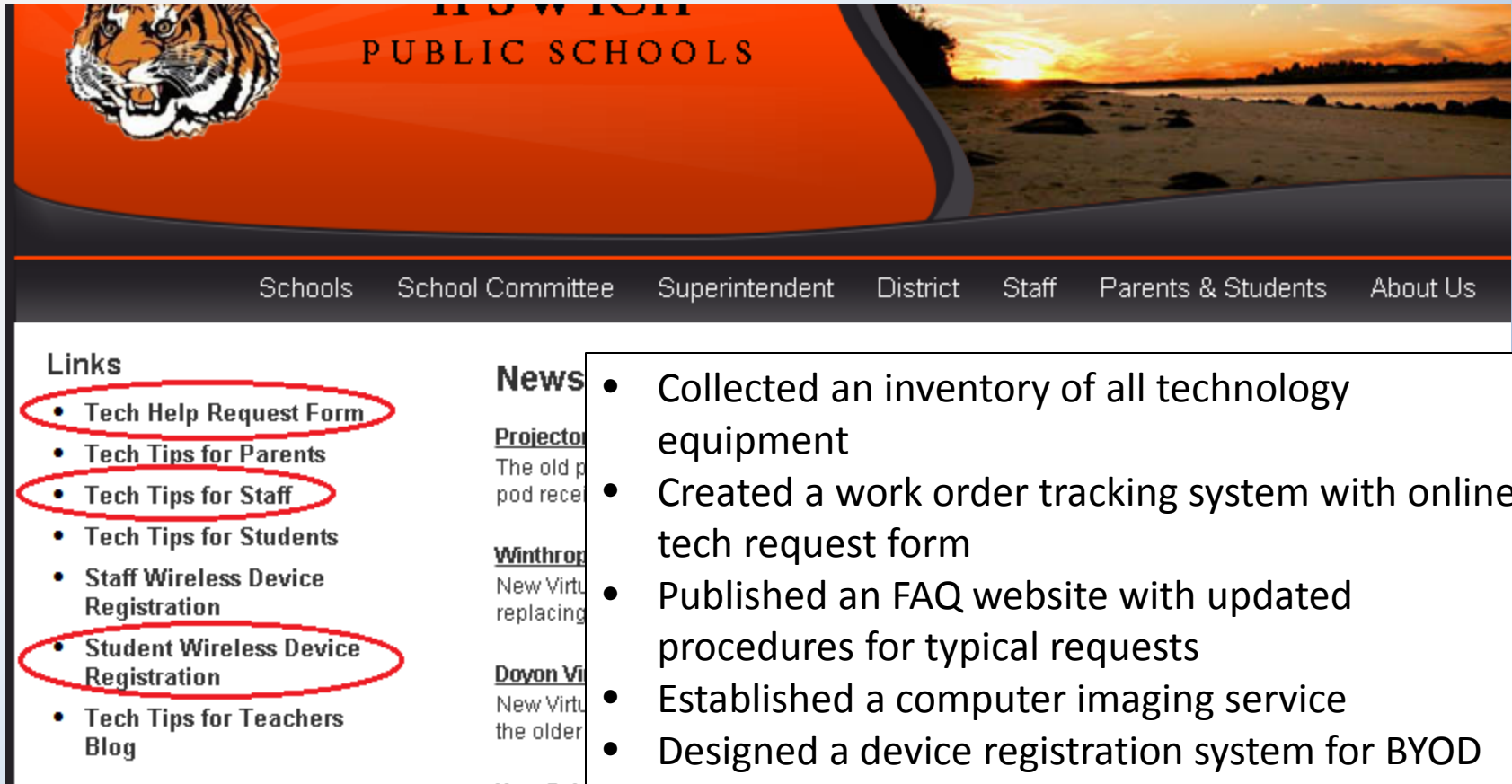
Database Manager

Account Manager

Network Administrator

IT Director

Improvements in Support



HOWICK PUBLIC SCHOOLS

Schools School Committee Superintendent District Staff Parents & Students About Us

Links

- **Tech Help Request Form**
- Tech Tips for Parents
- **Tech Tips for Staff**
- Tech Tips for Students
- Staff Wireless Device Registration
- **Student Wireless Device Registration**
- Tech Tips for Teachers Blog

News

Projector
The old p
pod rece

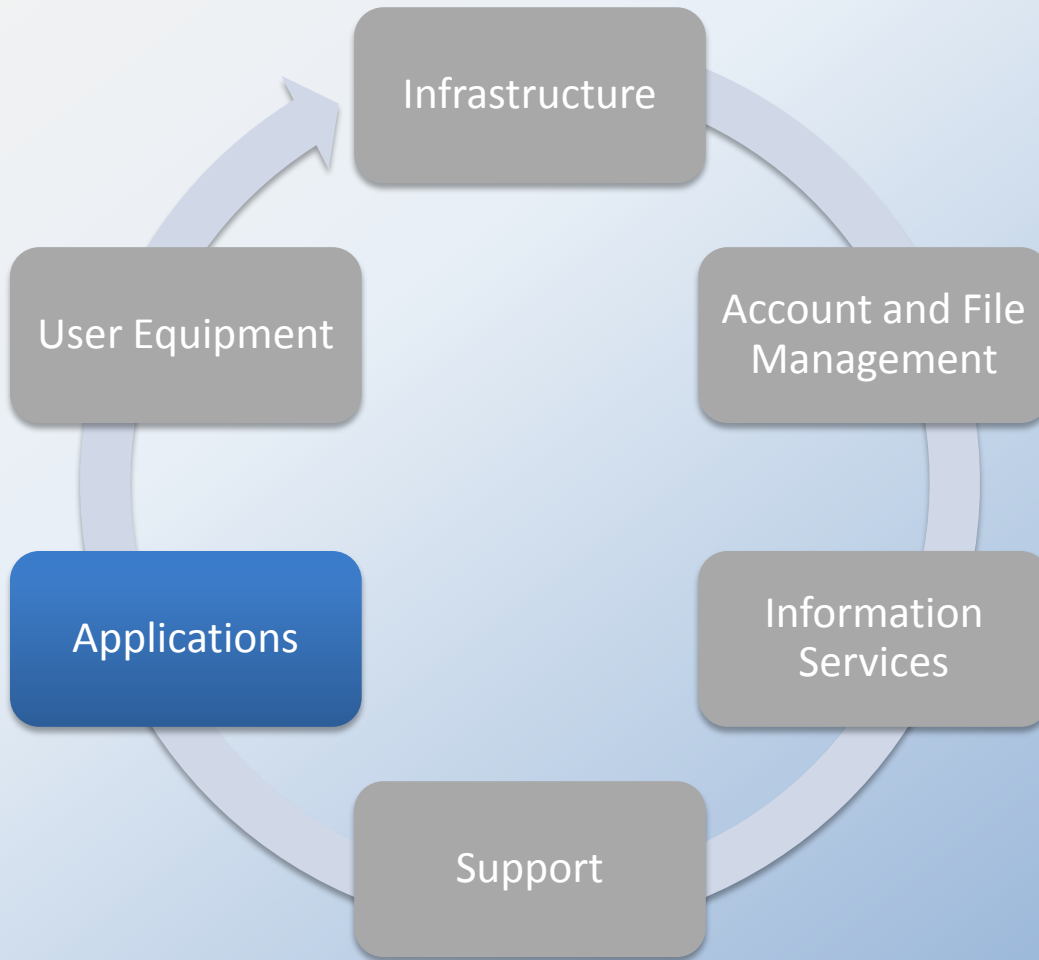
Winthrop
New Virtu
replacing

Doyon Vi
New Virtu
the older

- Collected an inventory of all technology equipment
- Created a work order tracking system with online tech request form
- Published an FAQ website with updated procedures for typical requests
- Established a computer imaging service
- Designed a device registration system for BYOD

Technology support is more responsive and accessible

Technology Services Description



Programs used for instruction and learning in all schools

User Applications

Office (Word/Excel)

Adobe Suite

SolidWorks

Music Apps

Math/Science

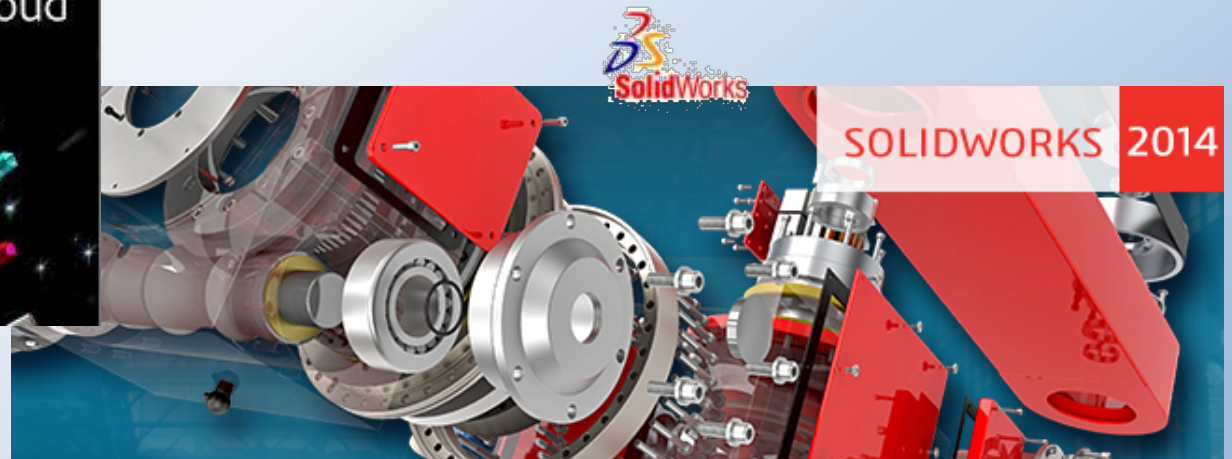
Elementary Apps

Special Education

Web Apps

Apple Apps

Improvements in Desktop Applications

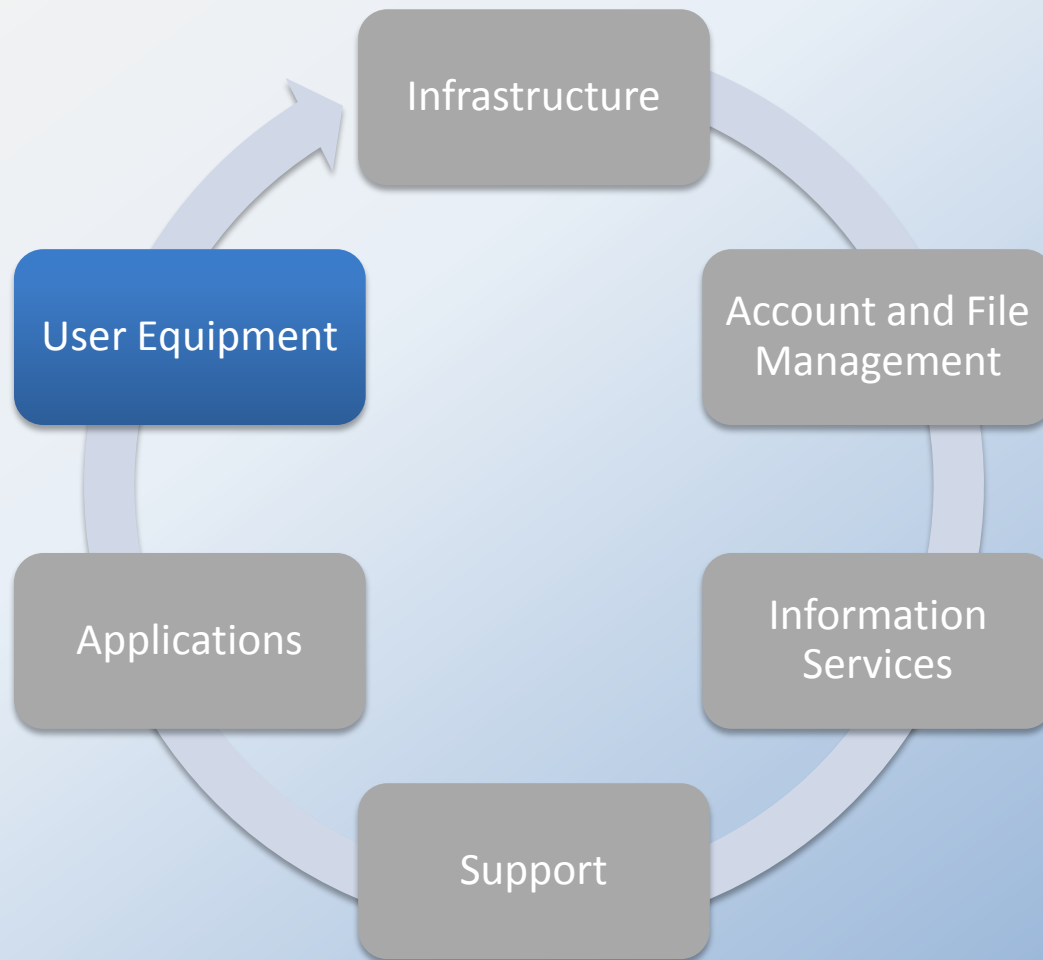


- Site licenses for Adobe Creative Cloud
- Latest version of SolidWorks CAD program
- Google Apps for Education
- Apple Volume Purchasing program for the district



Consolidated and upgraded desktop applications

Technology Services Description



- All types of equipment used in classrooms, labs, offices, common areas, cafeterias, and even at home

User Equipment

Desktops

Laptops

Monitors

Printers

Projectors

Whiteboards

Document Cameras

iPads/Tablets

Handheld Devices

Sound Systems

Improvements in User Equipment



- Converted Library labs to virtual desktop labs
- Upgraded CAD lab and Music Lab
- Created a new Art Lab
- Built new mobile laptop and chromebook carts
- Installed classroom interactive projectors
- Tablets for younger students

Repaired and updated classroom technology tools

Upgrade Status

- Challenges
- Phase 1 Infrastructure
- Phase 2 Classroom Equipment

Implementation Challenges

- Sheer number of critical upgrades needed simultaneously
- Inconsistencies within the district
- Condition of original classroom equipment
- Conducting the SIS conversion to Aspen
- Diverse demands from mini grants (161 devices)
- Supporting a school district in session (ie: addressing over 1500 work orders in the past 2 months)



Assembly of Equipment



Technology in Use

