Building The 21st Century Library Needs Assessment & Building Programming

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Technology & Management Solutions for Libraries

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Overview

• We are going to discuss the considerations you must give technology at the programming stage.
• We are not going to discuss specific technologies used in actual construction.
• We are not going to discuss technologies that do not affect the building.
Libraries & Technology

- Technical Services
- Circulation
- Public access
- Reference
- Business operations
Technical Services

- Acquisitions, Cataloging, Serials Control, Interlibrary Loan
- Standard PCs in an office environment
- Lots of flat workspace
- Consider material flow, e.g., book trucks
Technical Services
Business Operations

Finance, Payroll, Personnel

Standard PCs in an office environment
Circulation

- Circulation workstation
  - Terminal device
  - Barcode reader
  - Receipt printer
- Theft detection
Saving Space
Circulation - Self Service

• Why?
  – Privacy & efficiency

• Location
  – Think ATM or supermarket

• Counter space adjacent to the machines is essential
Self Checkout

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Public Access

- Why does the public use your PCs?
  - Fast Internet connection
  - Restricted database access
  - Social interaction
Public Access

• What do they do on your PCs?
  – Look up things in the OPAC
  – Surf the web, chat, play games
  – Search databases
  – Email
  – Run applications like Word, Excel
  – Socialize
Is This Your Mission?
Public Access

Seat time

– Definitely not the same as the traditional “seat time” historically used in programming
– Varies according to the activity
Public Access

- ADA
- Multi person PCs
- Stand up workstations
- Line of sight control
- Home schooling
- “Excuse me, where do I plug my laptop into the Internet?”
Stand Up Workstation
Public Access - Location

- By type of patron
  - Adult, children, YA
- Distributed
- Clustered
- By type of use
  - Individual, small group, larger group
Public Access - Scheduling

Systems exist to:

- Schedule time on public PCs
- Limit an individual’s time
- Control and/or charge for printing
- Limit access by patron type
Charging for Printing
Reference

- Standard PCs
  - Dual monitors
- Desk arrangement to allow librarian and staff to view the same display
- Roving reference
- Reference center
Computer Lab/Training Room

- Not a traditional library service
- Are you ready for the headaches?
- Do you allow individual use when no class is scheduled?
- Is this room available when the library is closed?
Computer Lab/Training Room

- Room orientation
- Entry
- Students view
- Display technology
- Line of sight control
- Look at new college classrooms
Computer Lab/Training Room
Meeting Rooms

- Why?
- Uses
  - Staff only
  - Staff with public
  - Public working together
  - Community groups
Technology Center

- Photocopying
- High end printing
- Scanning
- High capacity removable storage
  - Zip, Jazz, CD-R
Types of Buildings
Types of Buildings

- Central
- Branch
- Administrative
Central Library

- Houses your servers
- Houses your IT staff
- May be large enough to require wiring closets
Branch Library

- Also applies to a central library where computer services are delivered by a consortium
- Has at least a telecommunications room
- May house print, file and/or management servers.
Administrative Building

- No public computers
- Typically houses administration and technical services
- May house servers
- More like a commercial office building than a library
Technology Infrastructure and Support
Computer Room

- Houses servers and telecommunications equipment
- Your principal computer room should be at least 10x20 feet
- Centrally located is better
- Requires conditioned power
- May require separate HVAC
- Does not house people

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Computer Room
Computer Room
Computer Room
Telecommunications Room

- Houses telecommunications equipment for a branch and may house servers
- Should be at least 10x10 feet
- Entry point for telco service
- Centrally located is better
- Requires conditioned power
- May require separate HVAC
- Does not house people
Structured Wiring

Wiring closets

– Usually one per floor
– At least 10x5 feet
– All devices served must be within 100 wire meters
– Conditioned power
– Single purpose, i.e., not also the janitor’s closet
Wiring Closet
Vertical Wiring

- Connects wiring closets
- May be UTP copper but is more likely to be fiber optic cable
Horizontal Wiring

- Connects devices to wiring closet
- Usually copper UTP
- May run in walls, floor or ceiling
Structured Wiring

1. Vertical Wiring
2. Intermediate Hub
3. Horizontal Wiring

Basement

Main Hub

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Wiring
Wiring
IT Office Space

- Not in computer room
- Workstations with room for large monitors
- Conference room with whiteboards
- Professional book collection

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Staging Area

• Used for
  – Staging PCs and servers
  – Equipment testing and repair
  – Equipment and parts storage
  – Test networks

• Configured with stand up counters and storage cage
Staging Area
Staging Area
Help Desk

• Some libraries have a dedicated central location to receive and log trouble calls.

• May be staffed on a permanent or rotating basis.
Printers

- Staff and public
- Networked or stand alone
- Managed or not
- Location
Furniture

- Use furniture with built in cable management
- Consider furniture with monitors below the work surface
- Don’t build custom furniture around a particular technology
Cable Management - NOT
Cable Management
Cable Management
Furniture
Furniture
Custom Furniture
Custom Furniture
Electrical Power

- All electronic equipment should be provided conditioned power on circuits not shared with other types of equipment.
- Conditioning can be at the circuit or outlet level.
HVAC

- Although most computers used in libraries today say they will operate in an “office environment”, that does not mean an enclosed closet. Additional cooling may be required.
- Both a PC and a laser printer produce as many BTUs as a person.
Material Handling

- Automated warehousing technology is being used to provide material handling systems for libraries.
Material Handling
Material Handling
Material Handling
Material Handling

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Material Handling
Security & Surveillance

- Keycard entry systems require data cabling, too
- Surveillance video systems require monitoring and recording areas as well as the cameras themselves
Telephones

- Use Cat5 UTP for telephones
- Voice over IP allows voice and data to flow over the same network
- Consider wireless headsets for reference staff
Antennas

- Satellite dish on roof or on lawn to receive broadcasts
- Tower for wide area network wireless network