

Why We Plan

Planning a Network

Why do we do it?

- Many small and medium businesses utilize an ad hoc network design with a break-fix mentality

Ad Hoc Networks with a Break-Fix Mentality can Lead to Issues

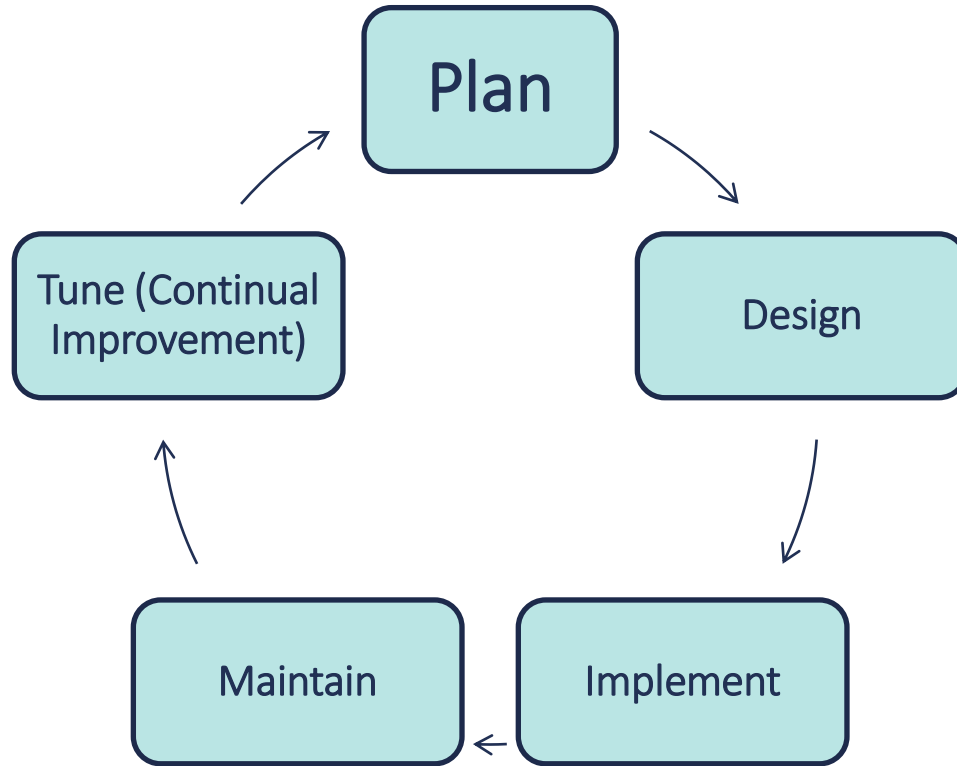
- Troubleshooting issues
- Scalability issues
- Reliability issues
- Security issues
- Data loss issues
- Costly repairs

Planning a Network

- Business downtime → Decreased Revenues & Profitability, Tarnished Reputation and Loss of Customers
- Keeps the Process Focused and Organized
- Good Plans Produce the Best Results
- Clients and Employers Expect It

The Overall Process

The Overall Process



Understanding the Business

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- You Must Understand the Business to Properly Plan and Design a Network for It
- Business and Regulatory Requirements Drive Technical Needs
- What are the Business's Core and Strategic Competencies?

You Should Perform the Following:

- Business Process Analysis: Understand Business Processes
- Business Impact Analysis: Define Essential Business Processes
- Key Stakeholder Interviews: Analyses Established via Interviews
- Examine Regulatory Requirements: Review all Regulatory Requirements

Establishing a Business Need

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Ask, How Can IT and a Network Help the Organization?

- Increased Operational Efficiencies via Business Process Improvement
- Decreased IT and Operational Costs
- Increasing Profitability, i.e., the Bottom Line
- Ensure we Meet Regulatory Requirements
- Increased Network Security Posture

Where Is the Positive ROI Coming From?

Defining Specific Areas of Improvement

Define Specific Areas of Improvement

Some Areas of Improvement

- Improved Communications and Data Sharing
 - Knowledgebase Software or Service
 - Interoffice Chat System (Video / Audio)
 - Voice Over IP (VoIP) Phones
- Automated Business Processes
 - Digitize Antiquated Paper-Based Processes
 - Automate Essential Business Processes
 - Automate Reporting with On-Demand Dashboards

Define Specific Areas of Improvement

Some Areas of Improvement

- Implementation of Business Intelligence Solutions
 - Business Objects
- Implementation of a Data Backup System
 - Ensure Data is Properly Backed Up and Restorable
- Enhanced Information Security
 - Better Protect the Company Against Network and Data Breaches

Buy-in and Resources

Buy-In & Resources

- Obtain Management / Customer Approval & Buy-In
 - Initial Proposal
- Obtain the Necessary Resources
 - Funding
 - Personnel
 - Time

Hidden Costs

Understand the Hidden Costs

- Planning a Network Involves More than Just
 - Designing the physical and logical network
 - Planning equipment purchases
 - Selecting necessary software
- Networks Change the Way People Work (Process Improvement & Change Management)
 - Resistance to change and instituting change management
 - Training costs (end-users and administrators)
 - Documentation & ongoing support costs
 - Transition planning

It's more than just designing and building the network

Other Considerations

Some Considerations

- Assess your needs against available technologies
 - What are the latest trends?
 - Virtualization
 - Cloud Computing
- Pick the solutions that best fit your needs
- Weigh your solutions options against your financial budget

More Considerations

Bandwidth Requirements

- High or Low Bandwidth?
- 100Mbps or Gigabit Speeds?

Security Needs

- Regulations & Requirements
- Encryption?
- Physical & Logical Security?
- Twisted Pair or Fiber Optics?

Size and Scalability

- Plan for Further Growth?
- Equipment will Handle Size and Growth?

Specialized Software Requirements

- What are They?

Planning Questions

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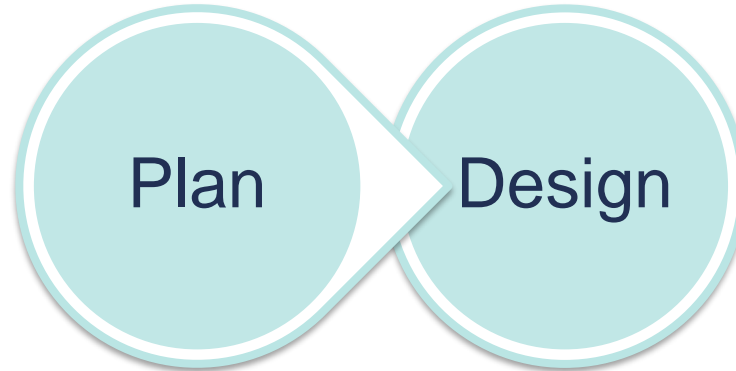
You should ask questions regarding the following:

- **Network Type** (Peer-to-Peer or Client-Server)?
- **Network Cabling** (UTP, STP, Fiber Optic, Wireless)?
- **Printer Requirements** (Centralized or not)?
- **E-mail Requirements** (Internal or External)?
- **Data Requirements** (Centralized)?
- **Network Security Requirements** (Logical & Physical)?

Whatever you do, stay within your cost constraints!

The Next Steps

What's Next



The Network Design Process

Transform Plans into Design

Physical Topology Design

Physical Layout

Logical Topology Design

Define Design
Specifications