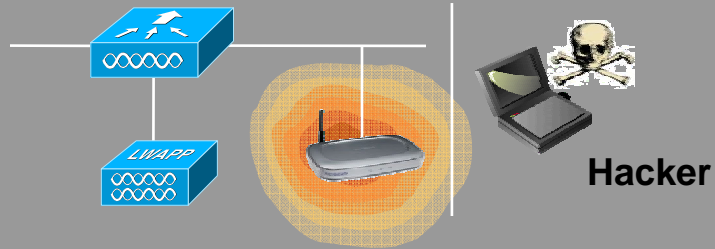


Top 4 Reasons Every CXO Needs a Pervasively Deployed Wireless System

Security



Rogue APs—Employees create opening to enterprise network unknowingly
FTC FINES

Guest Access

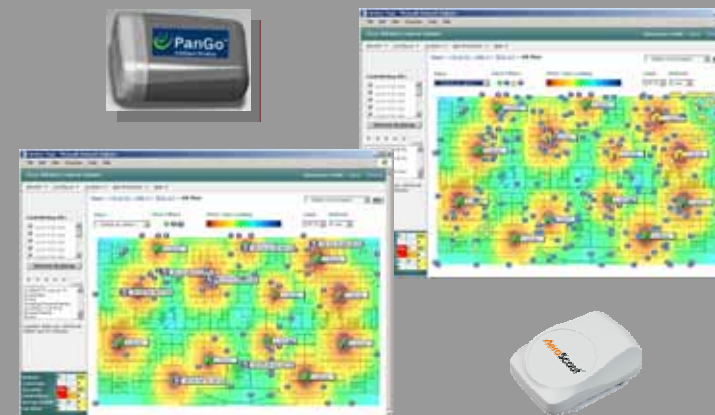


Voice

- WiFi enabled voice
- 7920, Blackberry, Treo
- Better coverage
- Reduced Cost
- Integrated with IP PBX

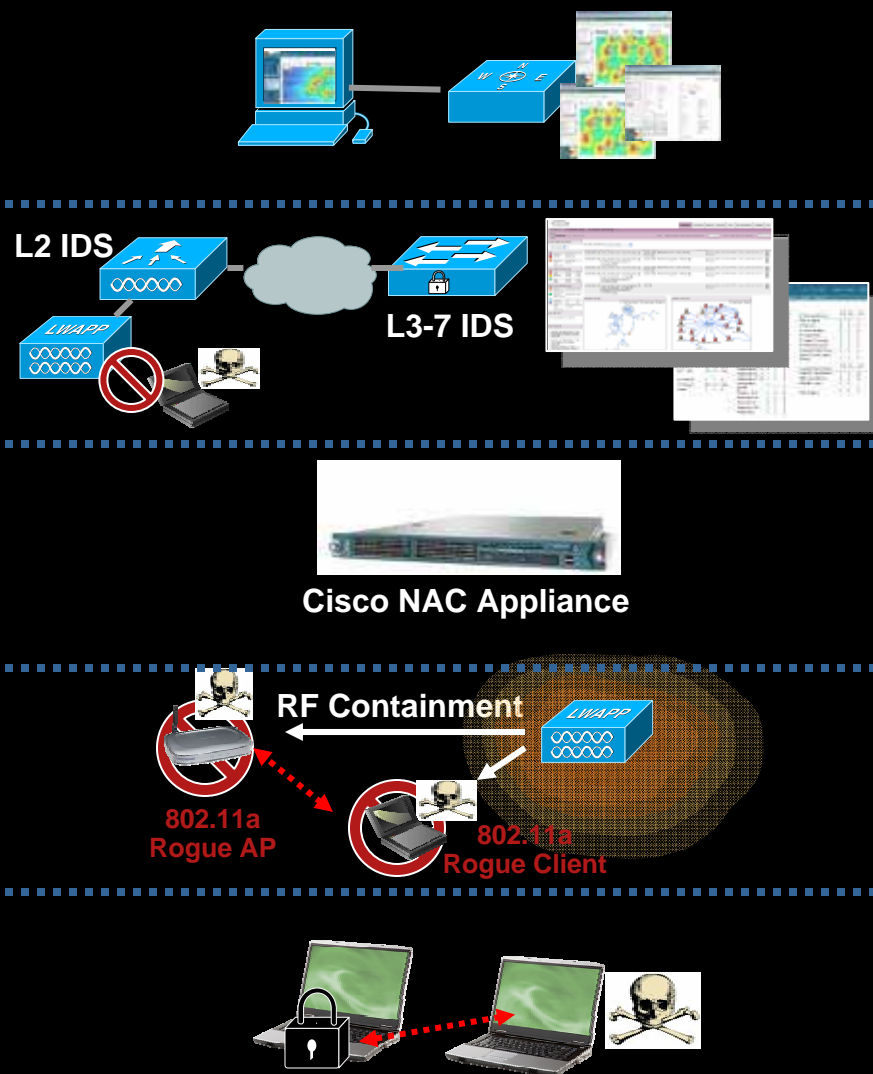


Location



Cisco Unified Wireless Security Solution

End-to-End, Unified – Only Cisco



Fine-grained Mapping and Authentication

Location services enable precise mapping of clients and threats, allowing fine-grained authentication and quick removal.

Wired IDS Integration

Unified wired and wireless IDS ensures malicious wireless clients are disconnected from the network.

Wireless Endpoint Compliance

Cisco NAC prevents wireless endpoints from introducing viruses, spyware, malware, etc.

Wireless IDS/IPS

Comprehensive wireless threat identification and over-the-air prevention.

Offsite Endpoint Protection

Cisco Secure Agent detects and prevents offsite wireless threats such as ad hoc networks.

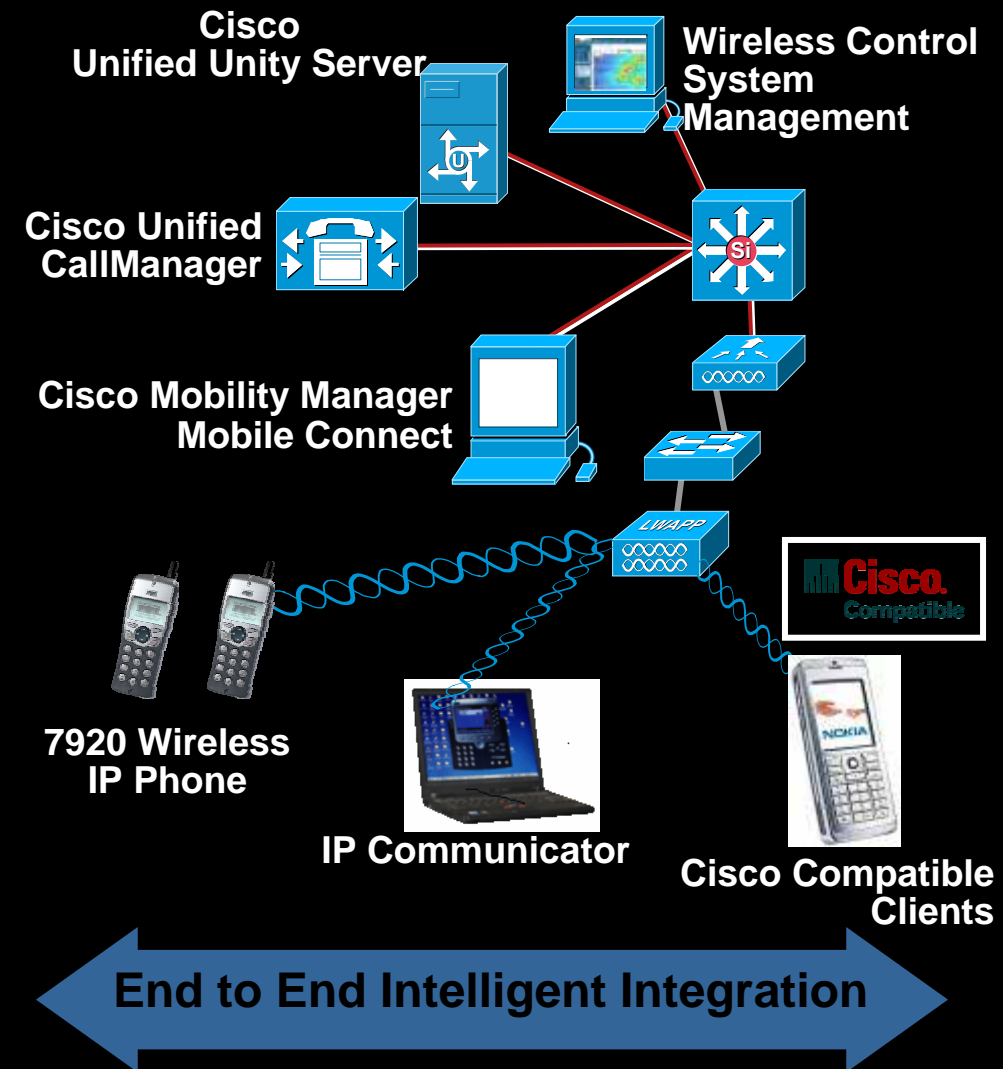
Voice Services Business Challenges

- Long decision times arising from inability to connect the first time
- Lost revenue opportunities due to missed phone calls
- Poor customer satisfaction due to long hold times or funneling to voicemail box
- Lack of control over telecommunications expense resulting from zero visibility into cellular bills
- High cost of cellular use in the office to reach other colleagues
- Excessive time spent managing multiple voice mailboxes



Cisco Unified Wireless Network Voice Services Solution

- Seamless mobile voice communications across the enterprise
- Only end-to-end unified wireline and wireless voice solution
- Rich selection of enterprise-class and industry specific voice clients
- Increased call capacity, higher network availability and improved performance



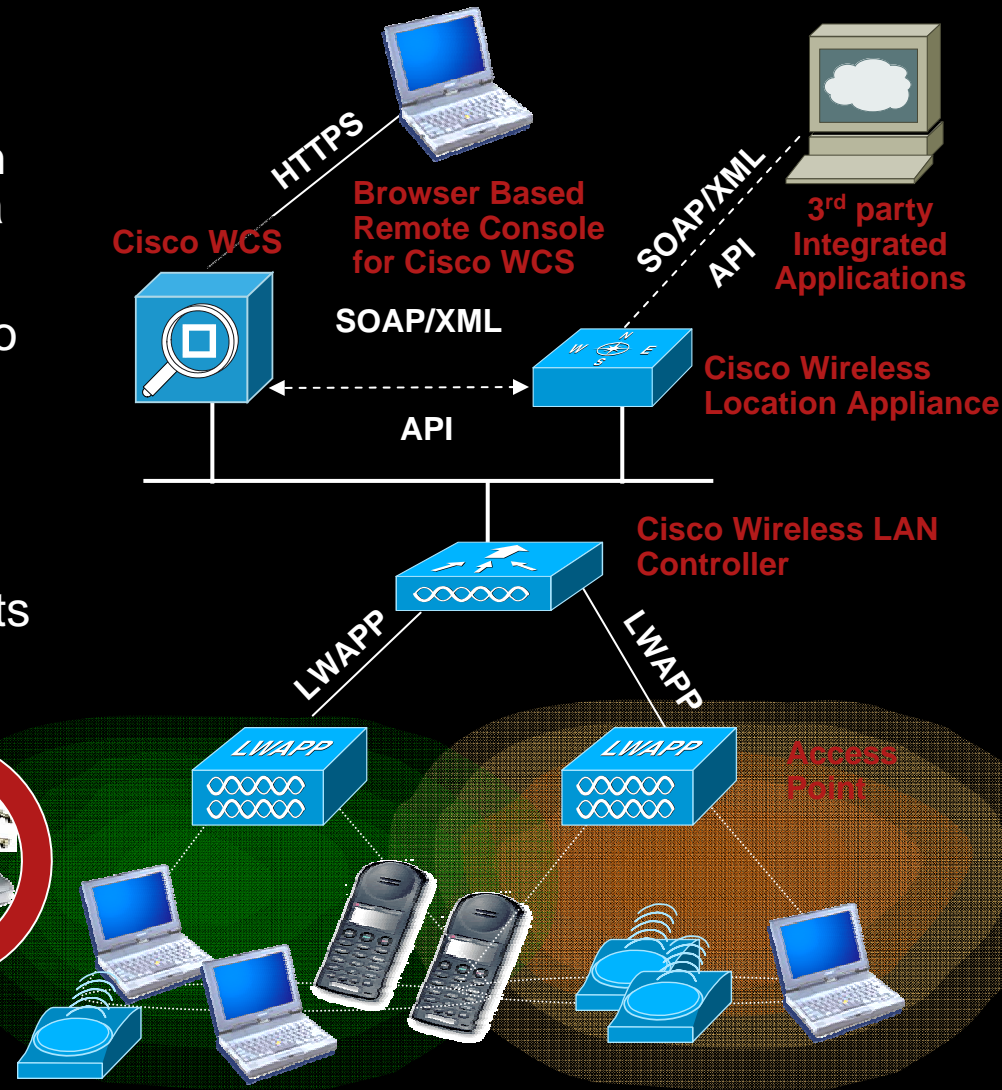
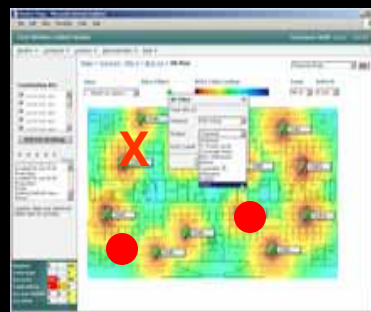
Location Services Business Challenges

- **Lack of visibility** into the location of valuable assets and important people
- **Inefficient allocation** and use of people and equipment
- **Excessive cost** of leasing & equipment purchases to offset losses & theft
- **Unsatisfactory service** resulting from long wait times & wasted search times
- **Security issues** linked to lack of insight into the location and movement of goods and people



Cisco Unified Wireless Network Location Services

- 1st integrated location solution
- Advanced RF Fingerprinting for high accuracy location resolution within a few meters
- Rich location information available to 3rd party applications
 - E911, asset tracking, workflow automation, content distribution and retrieval
- Quick location of rogue access points and other wireless threats



Simple, Secure Client Connectivity

It All Starts with the Client

- Over 90% of Wi-Fi silicon is Cisco Compatible
- Tested interoperability for business-class reliability

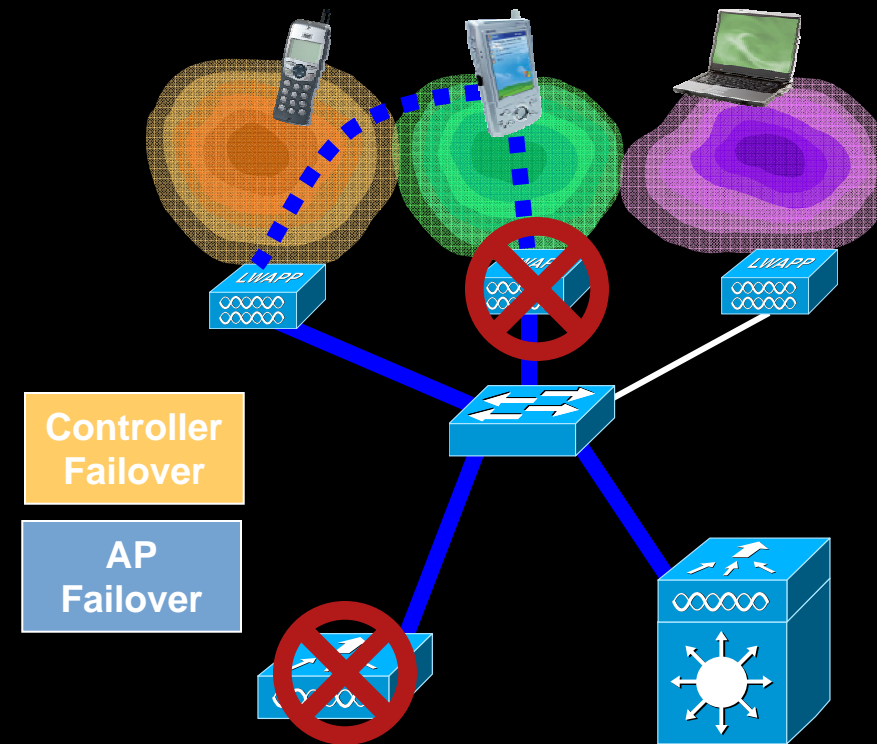


Benefits

- Simplified deployment of mobility services
- Tested compatibility with Cisco Infrastructure
- Accelerates new features while supporting standards
- End-to-end security

Business-Class Reliability for Mission Critical Mobility

- **Maximized system availability**
 - **Controller redundancy**
 - **Access point failover**
- **System level management automates failover to guarantee availability**



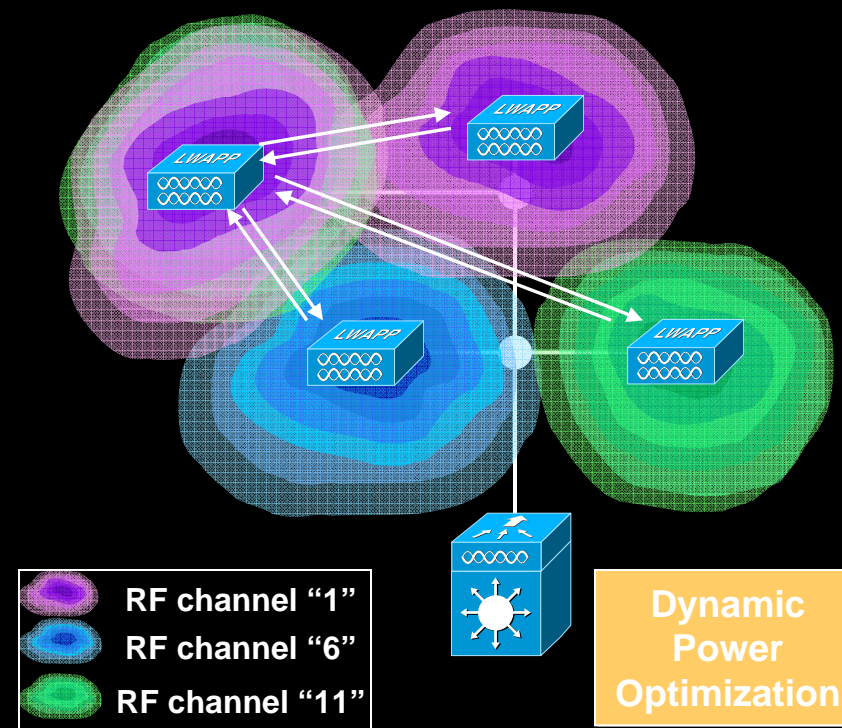
Benefits

- **No single point of failure**
- **Automated network failover decreases support and downtime costs**
- **Wireless network reliability on par with wired**

Radio Resource Management

Real-Time RF Management

- The RF domain is an ever changing environment
 - Users are mobile
 - Interference prone
- The controller has a system level view of the RF domain and adjusts individual access points to optimize coverage and network availability



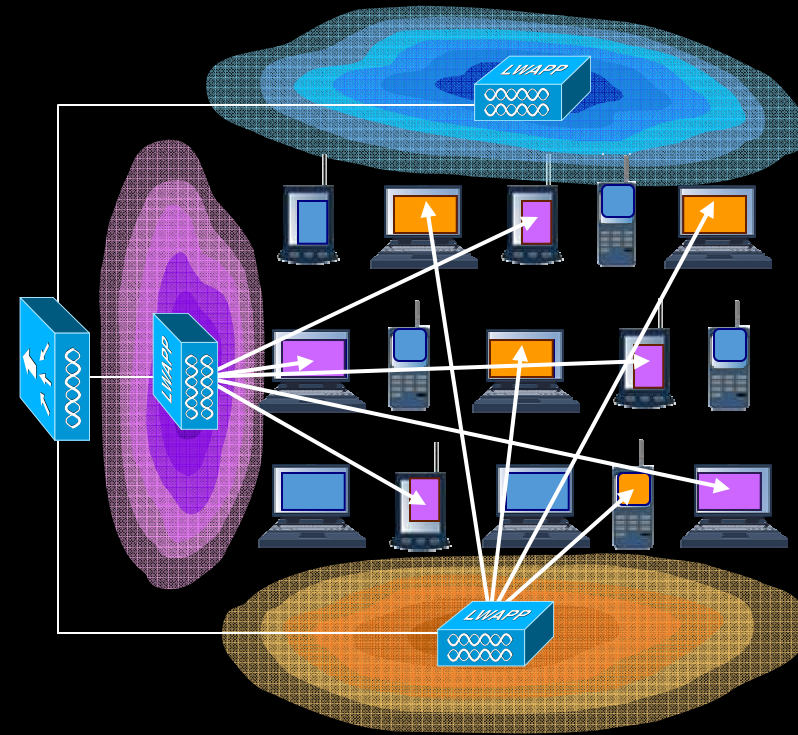
Benefits

- An optimized RF environment allows for superior application performance and higher network availability
- Complete RF management without specialized RF skills
- No RF recalibration required – decreased support costs

Radio Resource Management

Enterprise-Class Network Performance

- **Dynamic client load balancing**
- **Solving performance & capacity problems in high density areas**
e.g. conference rooms, cafeteria...
- **Clients and infrastructure determine optimal load balancing**



Benefits

- **Preserves application and network performance**
- **Guarantees bandwidth and lower latency for network sensitive applications (e.g. voice over IP)**
- **Decreased support costs; increased user satisfaction**

Cisco Compatible Extensions

The Standard for Client Advancement

Over 90% of client devices Cisco Compatible



<http://www.cisco.com/go/ciscocompatible/wireless>

Client Devices

Features

- Assured compatibility with 400+ devices
- Standards-based
- Enhanced security, mobility, and performance
- Supports Mobility Services ie. Location, voice

Benefits

- Accelerates innovation
- Supports diverse enterprise applications
- Ensures multi-vendor interoperability
- Enables simplified deployment of mobile WLAN clients

Single Client for Uniform Security and Services

- **Key Features:**

- 802.1X authentication for wired and wireless devices**

- Windows XP/2000 support**

- **EAP:**

- EAP-FAST, EAP-MD5, PEAP-MSCHAP, PEAP-GTC, EAP-TLS, EAP-TTLS, Cisco LEAP**

- **Encryption:**

- WEP, Dynamic WEP, TKIP, AES**

- **Standards:**

- WPA and WPA2**



Cisco Secure Services Client

Features

- Unified wired and wireless client
- Support for industry standards
- Endpoint integrity
- Single sign-on capable
- Enabling of group policies
- Administrative control

Benefits

- Reduces client software
- Simple, secure device connectivity
- Minimizes chances of network compromise from infected devices
- Reduces complexity
- Restricts unauthorized network access
- Centralized provisioning

Proven Platform for Mobile Access

Indoor Access Points



1130AG



1000



1121BG

Indoor Rugged Access Points



1240AG



1230AG

Outdoor Access Points/Bridges



1500



1400



1300

Access Points

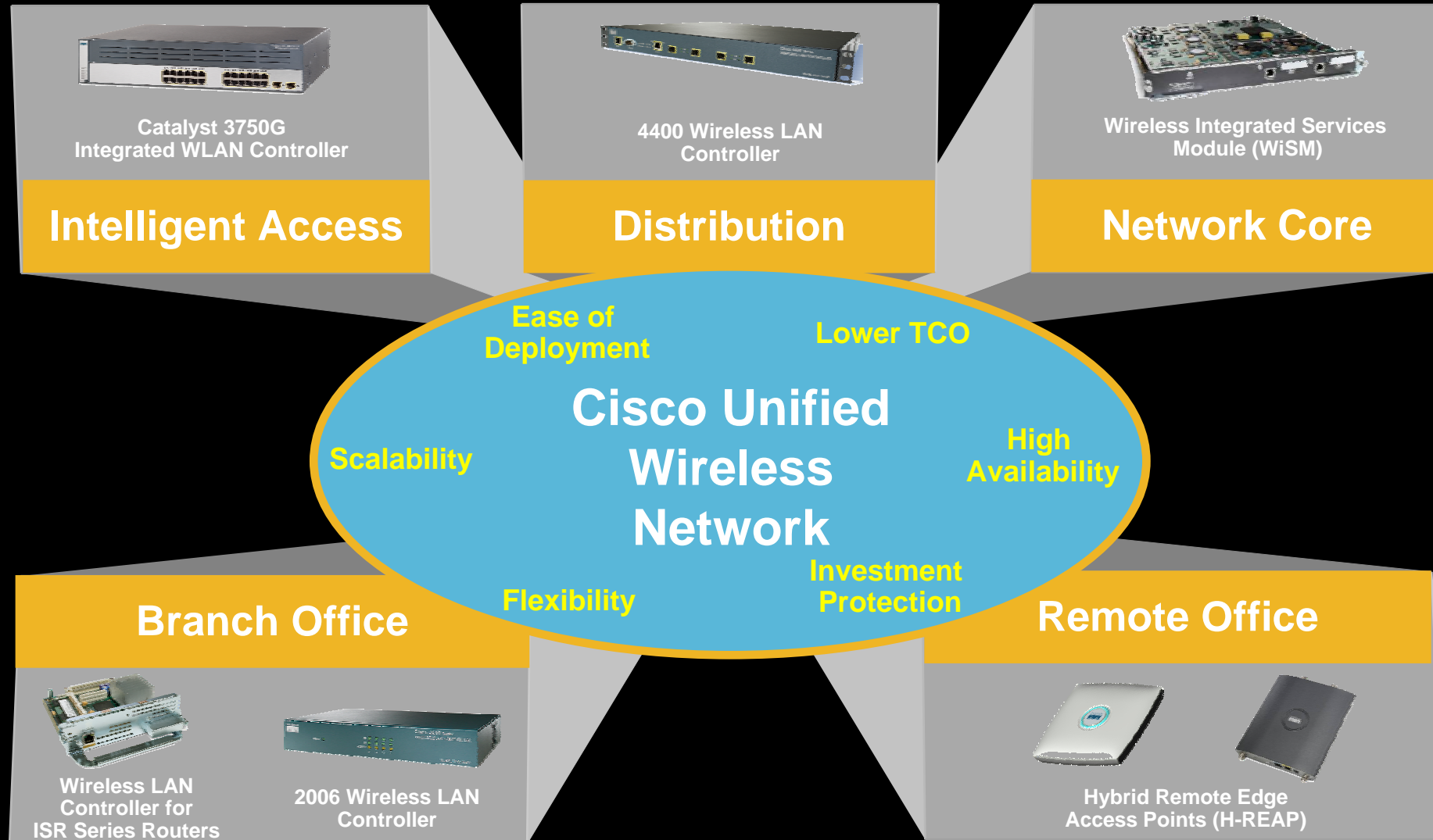
Features

- Industry's best range and throughput
- Enterprise class security
- Many configuration options
- Simultaneous air monitoring and traffic delivery
- Wide area networking for outdoor areas

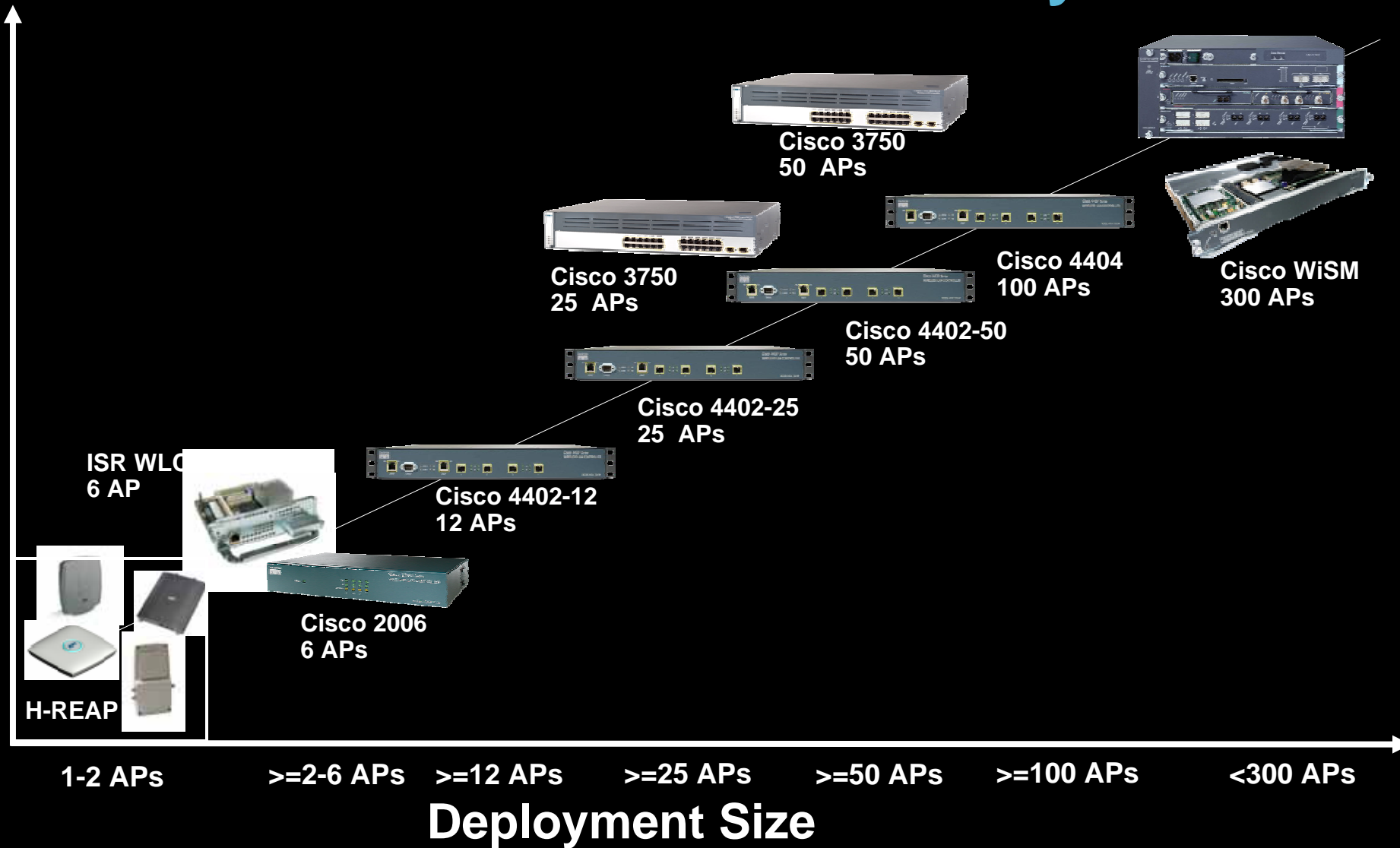
Benefits

- Zero touch management
- No dedicated air monitors
- Supports all deployment scenarios (indoor and outdoor)
- From secure coverage to advanced services

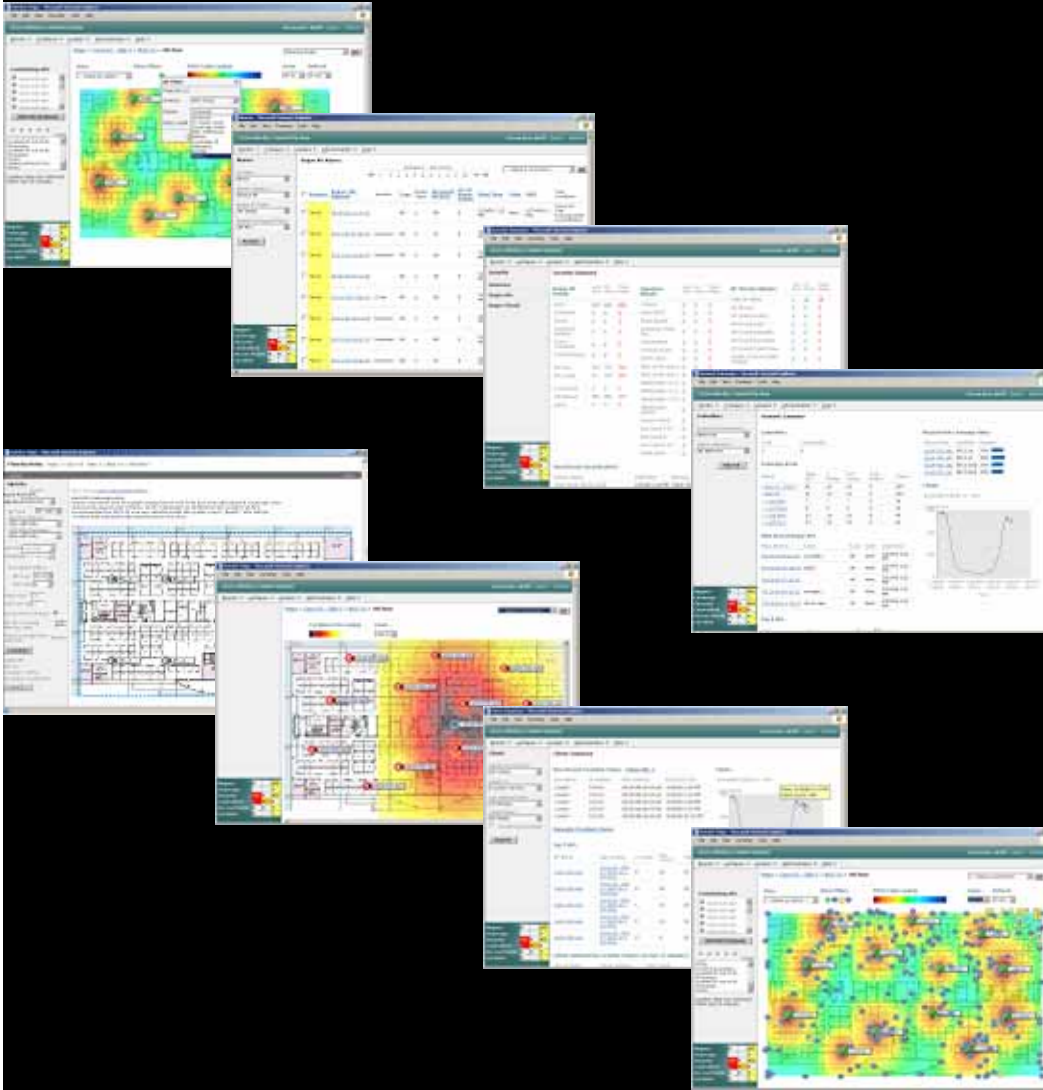
Delivering Network Unification



Cisco Wireless Controller Family



Cisco Wireless Control System (WCS)



World-Class Network Management

Features

- Client troubleshooting (via CCX)
- Planning, configuration, monitoring, location, IDS/IPS, and troubleshooting
- Hierarchical maps
- Intuitive GUI and templates
- Policy based networking (QoS, security, RRM, etc.)

Benefits

- Lower OPEX and CAPEX
- Better visibility and control of the air space
- Consolidate functionality into a single management system
- Determines location and voice readiness

Voice over WLAN

Requires end-to-end intelligence



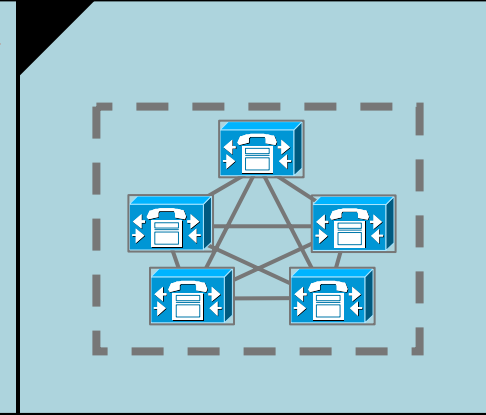
VoWLAN Clients



Voice Ready WLAN Infrastructure



Unified Wired/Wireless LAN Infrastructure



Cisco CallManager & Mobility Applications

Today

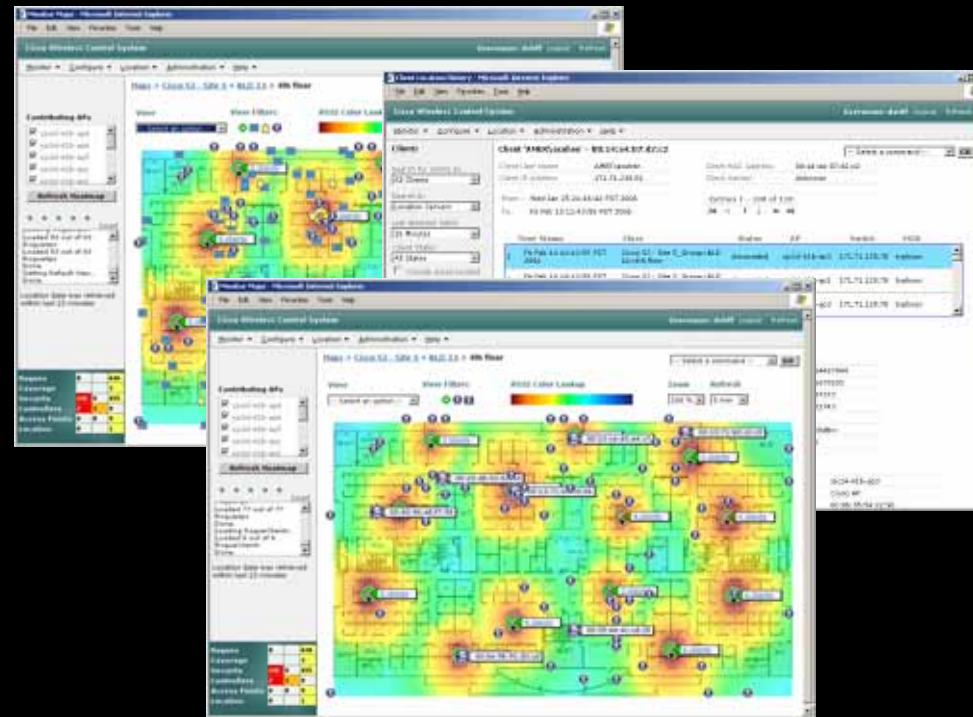
- Comprehensive on campus solution
- Dedicated clients, soft phones
- CCX enables QoS, Fast Secure Roaming
- IEEE 802.11b easy to use wireless IP phone
- Pixel display provides intuitive access to features and applications

Future!

- Mobility on / off campus
- Dual 802.11 and cellular phone
- Partners: Nokia, RIM
- Additional voice clients

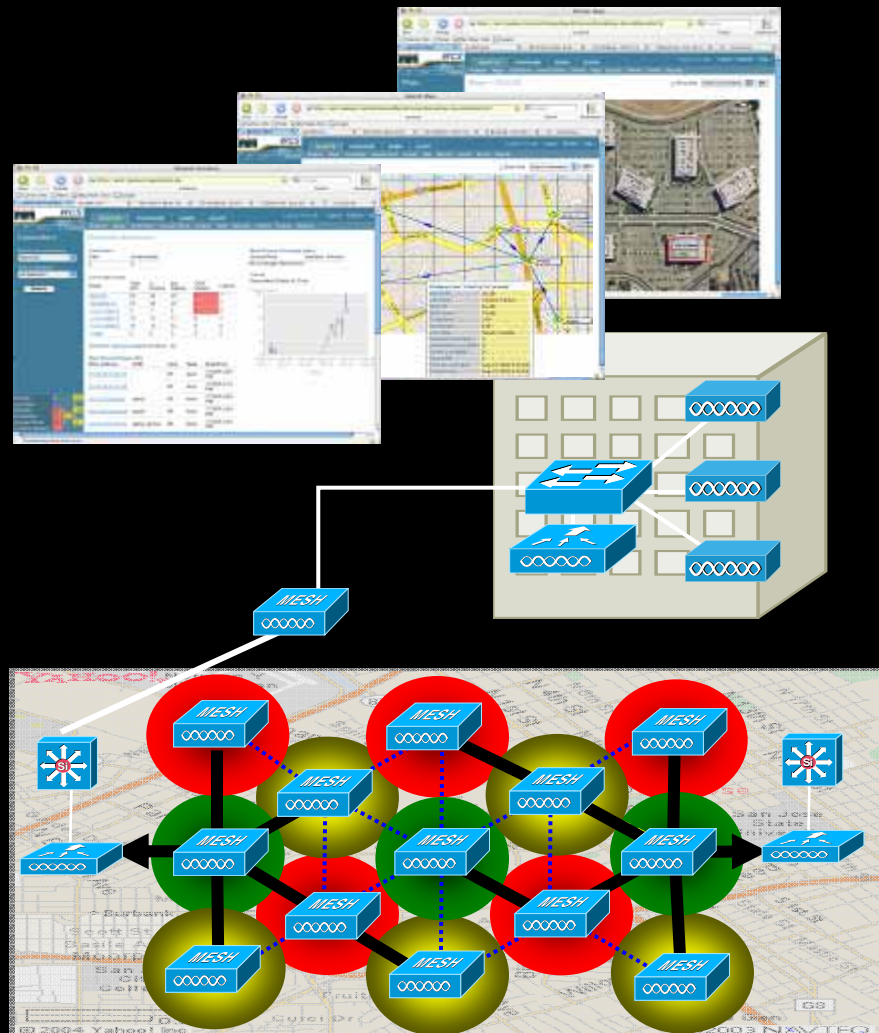
Location Tracking Services

- 1st integrated location solution
- Real-time location services
 - Asset tracking
 - Rogue AP and device location
 - E911 services
- Advanced RF fingerprinting for greater accuracy
- Simultaneous real-time tracking 10,000+ devices
- API Third Party Applications
- RF capacity management
- Intuitive management GUI



Cisco 2700 Series Wireless Location Appliance

First Unified Indoor and Outdoor Wireless Solution



- Cisco Wireless Mesh Solution
- Single management platform eases deployment and ongoing maintenance
- Self-Configuring, Self-Healing
 - Zero-Touch Configuration
 - Cisco's new Adaptive Wireless Path (AWP) Protocol
- Engineered with Ease of Deployment and Management as Top-of-Mind
- Robust Embedded Security
- Seamless Mobility
- Deployment
 - Point-to-Point Bridging
 - Point-to-Multipoint Bridging
 - Outdoor Wi-Fi Extension
 - Wireless Mesh Networking

Cisco on Cisco

A case study on ubiquitous deployments

- Cisco end to end solution

- 3100+ Access Points
- 60,000 wireless clients
 - 2,000 wireless VoIP phones
 - 10,000 wireless PDAs



- Ubiquitous coverage

- 380+ Sites in 85+ Countries

- Mobility Services

- Voice over WLAN
- Guest Services
- RF IDS / Rogue AP detection



Proof Points

- 43% use the WLAN as their PRIMARY network
- 30% say WLAN is critical to job
- 50% say WLAN is highly useful to job

User Experience

- 70% rate WLAN service as good or excellent
- 28% want more coverage
- 25% want more bandwidth

*Source: Internal Cisco IT Survey
7000 Employees surveyed
March, 2006*

Proven Customer Track Record

- Close to 4 Million Cisco APs deployed worldwide
- 128,000+ Cisco WLAN customers worldwide
- 95% of Fortune 500 companies use Cisco products
- Largest Cisco deployment with dual-band APs at 1,200 Home Depot stores
- Cisco ranked Top 10 Most Powerful Networking Company by Network World
- Cisco # 1 for Innovations In IT by InformationWeek 500



Shaping the Industry

- Wi-Fi Alliance founding member
- Initial author of 802.11 and LWAPP (and subsequent resources on the subject)
- Chair of numerous IEEE Committees (802.11i, 802.11r, 802.11m)
- Founding contributors to Network World's "Wireless Wizards" column
- Award winning CCIE Program



The Right Pieces for Success

- Global Support Organization
 - 24-hour, global access to a team of expert engineers
 - 120 countries geographic coverage
 - Technical Support Services - 390+ CCIEs
 - Onsite field engineers
- Global Partnerships
 - 200,000 World Wide Partners
 - 4000 Specialization Badges
 - IBM, Intel, HP, EDS, CG&Y, Microsoft
- Full Services Portfolio - Lifecycle Support
 - Advisory Services
 - Advanced Services
 - Technical Support Services



The Cisco Wireless Strategy

