Inside BYOD in Schools
Managing the Mobile Takeover

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Today's Goals

- Introductions

- The Mobile Takeover

- BYOD in Schools

- Opportunities

- Challenges

- Where to Go from Here

A Little About Me

- Graduated from the University of New Mexico with a bachelor's degree in Computer Science

- Worked on large scale deployment of IT networks for the United States Air Force

- Joined Marco in 1999

- Became CTO/CIO 2004

- Digital immigrant turned native

Chief Information Officer & Vice President of Professional Services

History of Success

- **1930** **The Typewriter Shop**
- **1973** Marco
- **1975** Copiers
- **1985** Voice & Data Networks
- **1997** ISO Certification
- **2001** 100% ESOP
- **2002** Audio/Video Systems

  Document Management/Workflow
- **2005** Managed Services
- **2010** Lean Continuous Improvement
- **2012** New Corporate Headquarters
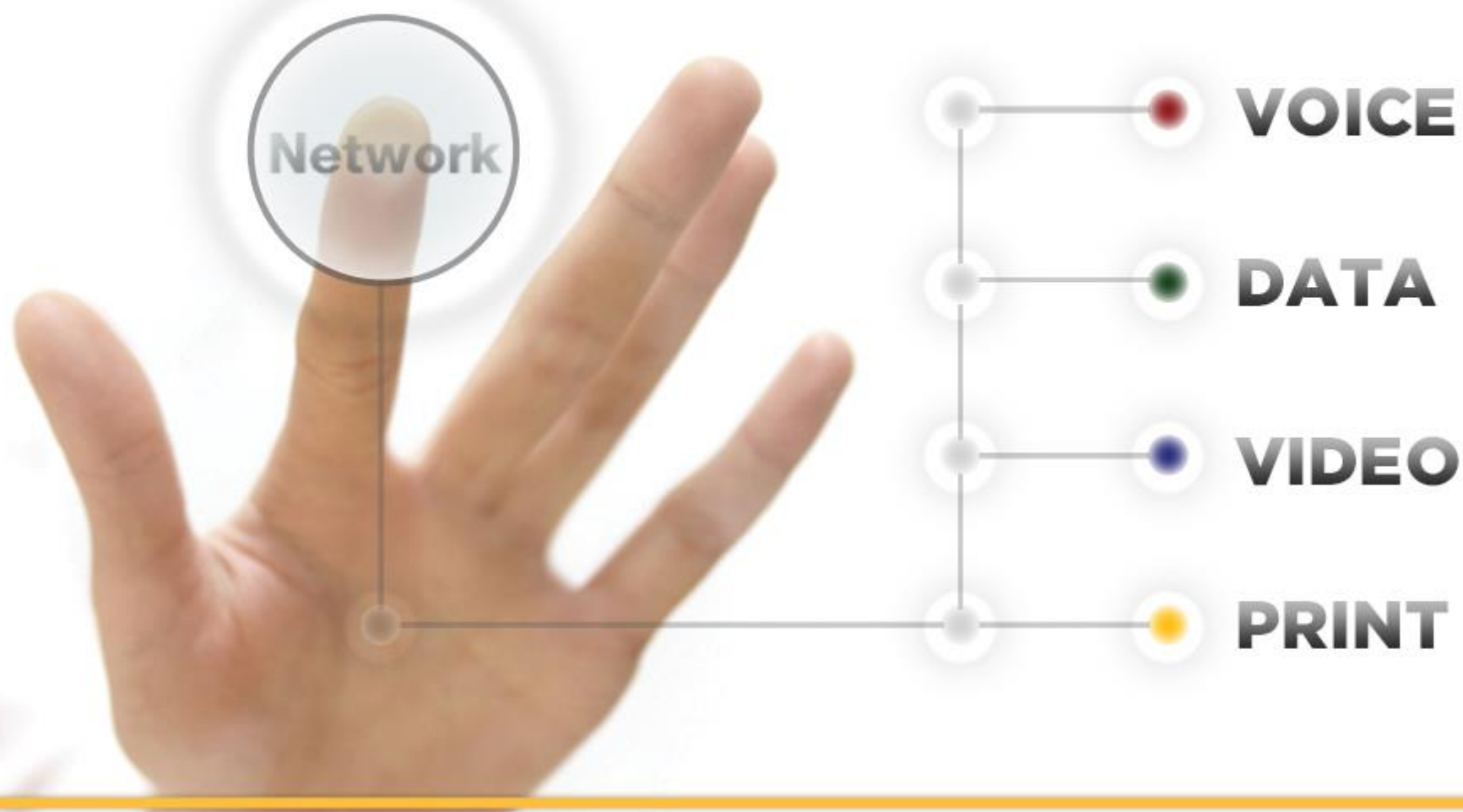
Vision

To be a growth-driven technology services company admired for its people and performance.

Mission

To help our customers effectively apply technology that contributes to their success.

Local, Regional and National Sales, Service and Support

Marco Locations

MARCO SERVES OVER
18,000
CLIENTS THROUGHOUT THE UPPER MIDWEST AND NATIONALLY.

Minnesota
- Alexandria
- Bemidji
- Brainerd
- Detroit Lakes
- Mankato
- Marshall
- Minneapolis/St. Paul
- Rochester
- St. Cloud
- Thief River Falls
- Willmar
- Worthington

North Dakota
- Bismarck
- Dickinson
- Fargo/Moorhead
- Grand Forks
- Minot

South Dakota
- Aberdeen
- Pierre
- Rapid City
- Sioux Falls
- Watertown

Iowa
- Cedar Rapids
- Decorah
- Des Moines
- Fort Dodge
- Mason City
- Quad Cities
- Sioux City
- Waterloo

Wisconsin
- Eau Claire
- La Crosse
- Madison

Flash Back – 10 years

- There was no iPhone. No Android.
  - No one had a smart phone – or even heard the term

- Few leaders used PDAs.

- Major players were Blackberry and Palm.

- App store hadn't opened.

- "The Cloud" was something in the sky.

Shift at Work & School

- Then…
  - Employers equipped employees with the tools – cubicles, desktops, laptops.
  - Schools provided computer labs (then computer carts).

- Tools were better than those at home.

- Now …
  - 3 of 5 workers say they don't need to be in the office anymore to be productive. (Cisco Study, 2012)

  - 51% of all students are carrying a smartphone to school with them every day by the time they enter high school (Grunwald & Associates Kid Mobility Study, 2013)

Students Say...

Survey of elementary, middle and high school students …

- **92%** believe that mobile devices will change the way students learn in the future.

- **90%** believe make learning more fun.

- **69%** would like to use mobile devices more in the classroom.

- **44%** have used a smartphone for school work.

Source: Pearson Study 2013

Rise in Mobility

- Dramatic shift started in workplace
    - Driven by expectations of Gen Y'ers
    - Grew up with Google, Facebook, YouTube

- Move by manufacturers to cater to consumers
    - First iPhone in 2007
    - First iPad in 2010

- Led to rise in consumer technology.

Think Like a "Digital Native"

"You do my website and I'll do your homework."

- Did not see the birth of the Internet.

- Grew up in tech-infused world.

- Blend their online life with their offline life.

- Text and Facebook customers.

- Prefer Hulu/Netflix over cable TV.
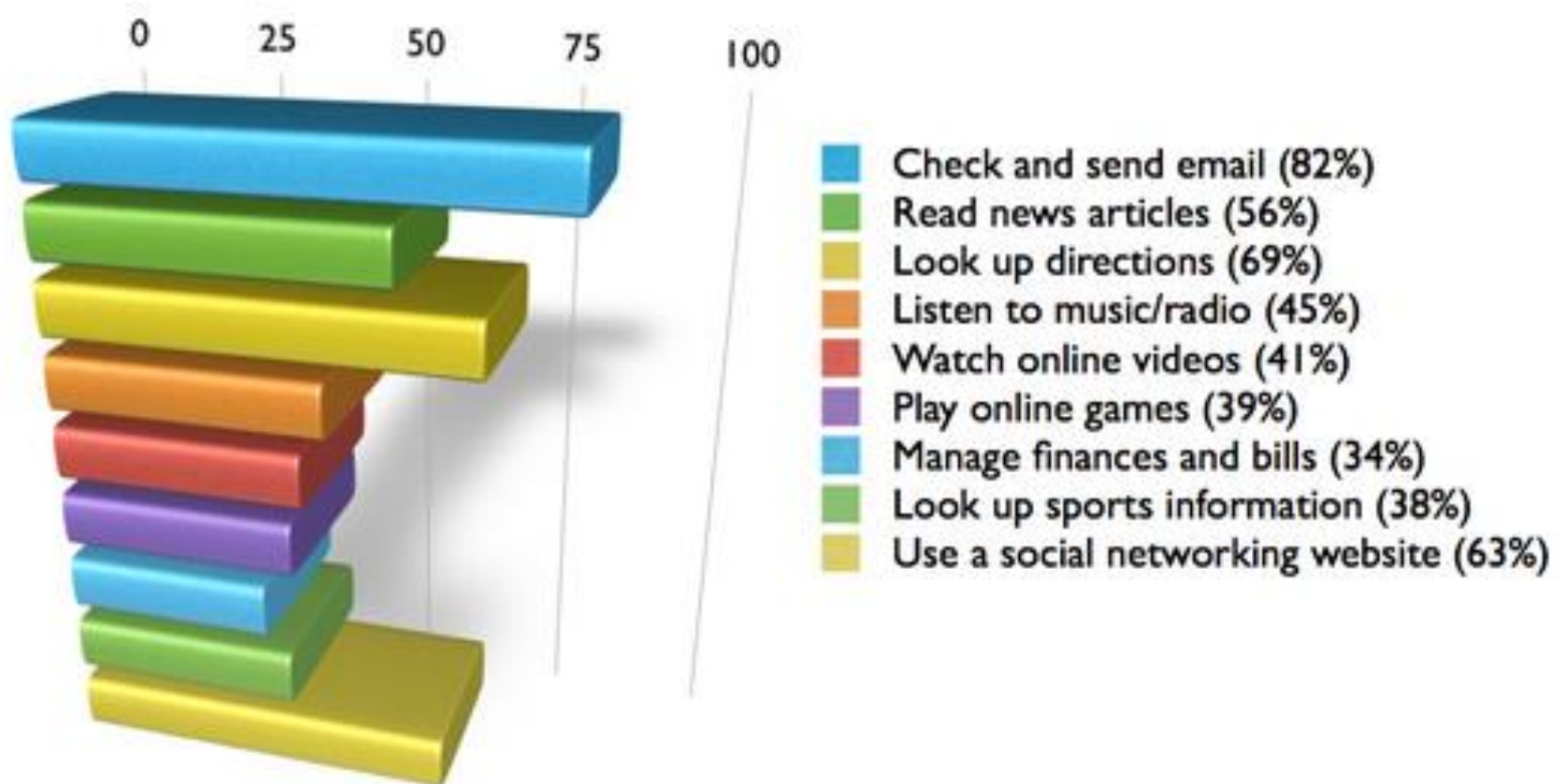
BYOD In Your Schools

89% of Smartphone Users Use their Smart Phones throughout the day

How People Use Smartphones

Check and send email (82%)
Read news articles (56%)
Look up directions (69%)
Listen to music/radio (45%)
Watch online videos (41%)
Play online games (39%)
Manage finances and bills (34%)
Look up sports information (38%)
Use a social networking website (63%)

Source: The Mobile Movement Study

Tablets Take Off

- First iPad only in 2010
  - Represented about 80% of tablet market in 2011

- Windows Surface released in February 2013

- 11% tablet penetration today

- 90 million tablet users expected by 2014 in the United States alone.

77% USE THEIR TABLET DAILY
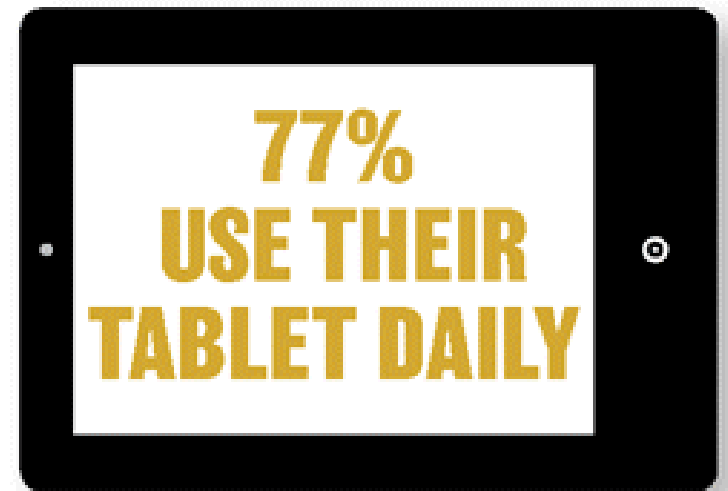
Now What?

- Presents new opportunities.
  - Anywhere
  - Anytime
  - Real time
  - Email outdated

- Poses new challenges.
  - BYOD (Bring Your Own Device)
  - Security
  - Control
  - Policies

- Your schools have gone mobile
 – with or without you.

New Opportunities

- Increased mobility = More learning.
  - Anywhere, anytime access

- Rising opportunities to increase:
  - Efficiency
  - Productivity
  - Engagement
  - Accuracy
  - Accessibility
  - Save money

- Apps are changing the way we learn and do business.

Why in the Classroom?

- Show on the big screen

- Manage the classroom

- Assess student work

- Interact with students

- Access files

- Make instructional media and tools

- New learning opportunities
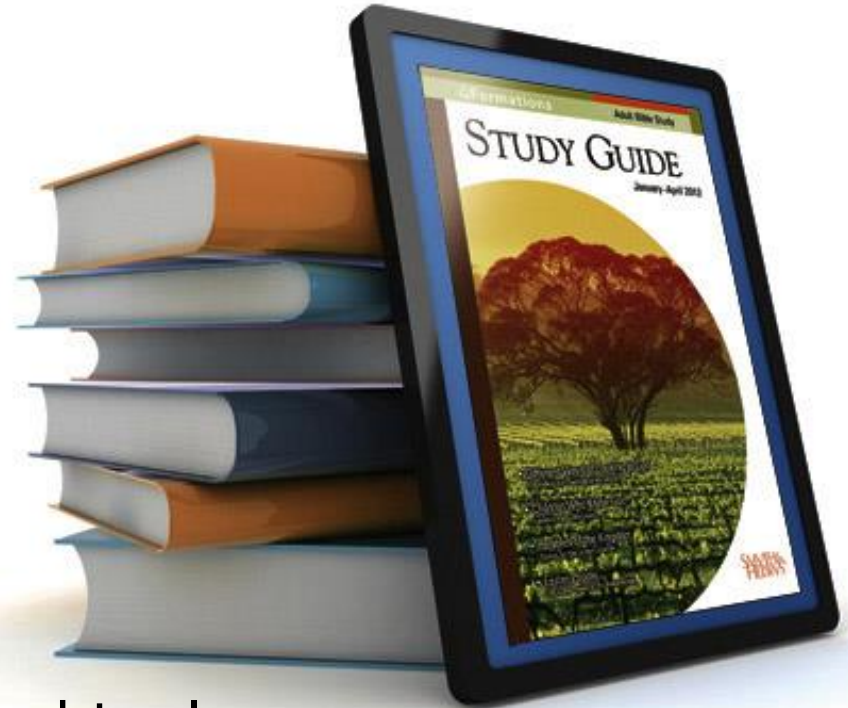
Challenges of Mobility

- Always connected…Hyper-connectivity.

- Rapid adoption of BYOD…Expectation for fast Wi-Fi.

- Accessibility for all students…Leading to 1:1 initiatives.

- Poses a serious security threat.
  - Gain access to email or network with push of button
  - Put financial, confidential information at risk

- Most security breaches (80%) caused by insiders who don't even know they are causing a problem.
  - One-third of organizations face more than 5 "attacks" from the inside a year

Considerations for Schools

- Consumerization of IT
  - Growing tendency for new information technology to emerge in consumer market and then spread into business

- Economic shift:
  - Who Buys
  - Who Owns
  - Who Pays

- How employees, students and volunteers access data

- How to integrate varying devices (different)
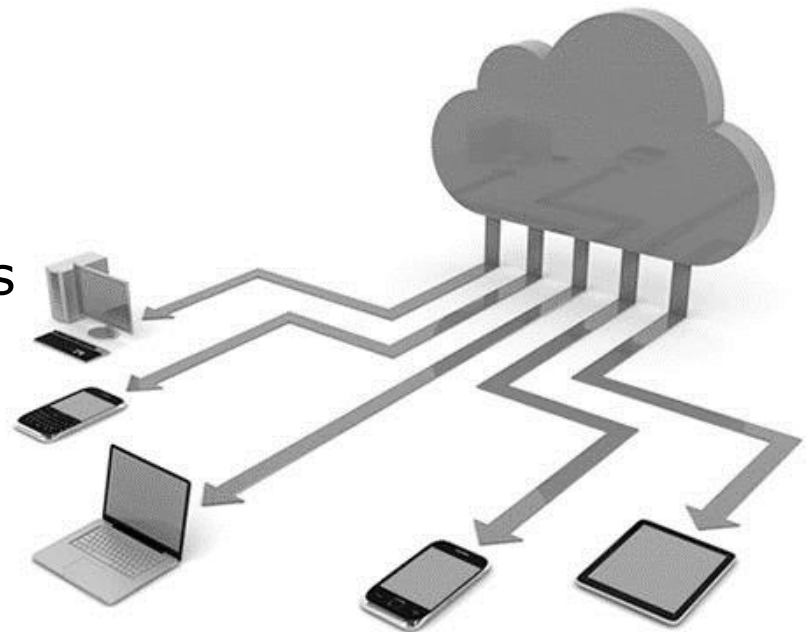
Managing Mobile Devices

- How are you managing the mobile device takeover of your network?

- BYOD and Mobile Device Management (MDM).

    - BYOD: People bringing their mobile devices into your facilities and tapping into your network

    - MDM: How those devices can access your network and what they have access to

- Varying levels of solutions available based on needs.
    - i.e.: Airwatch, Meraki, Cisco ISE (who, what, where , when)

Why Manage?

- Remote Control Over Data
  - Remotely access and wipe information

- Resource Management
  - Bandwidth, access points

- Security
  - Automate virus scans
  - Limit access based on set of rights by user

- Metrics Reporting
  - Pull and analyze (Big Data)
  - Track traffic patterns (where students congregate at certain times during the day).

Who Owns?

- Biggest question regarding technology in schools today.

- Answer varies by district.
    - Alexandria Public Schools initiated BYOD
    - Sartell Public Schools initiated 1:1

- Key Considerations:
    - Accessibility for all students
    - Security
    - Control

Laptops, Tablets, Smartphones...

Which one is best – for you and your schools?

- How and where do you need them most often?

- What applications do you need?

- What does the district support?

- How will you connect?

Tablets & Laptops

Top Tablets
- Apple IOS
  - iPad (and mini)
  - Most popular in schools
- Google Android
  - Samsung Galaxy
  - Google Nexus 7, 10
  - Kindle Fire HD
  - Tablet and Laptop Options
- Microsoft (among others)
  - Surface (RT) and Pro
  - Pro - Best for business now

Laptops - Lots of options, including convertibles with removable or twist keyboards

Making it Work: Virtual Desktop

"VMWare View"

- Provides virtual desktop. A desktop that follows you – across devices.

- Make your tablet - or any device - like a PC.

- PCoIP focused on providing uncompromised user experience.

- End user gets freedom.

- IT retains control.

Guess What?

This entire presentation was shown on my iPhone 5 running:

- VMware View
- Windows 7
- Office 2010

More Questions

- Check out my CIO Insider Blog

- Submit your technology question

- Sign up to receive e-notifications about new posts

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