

BYOD Enabling Technologies

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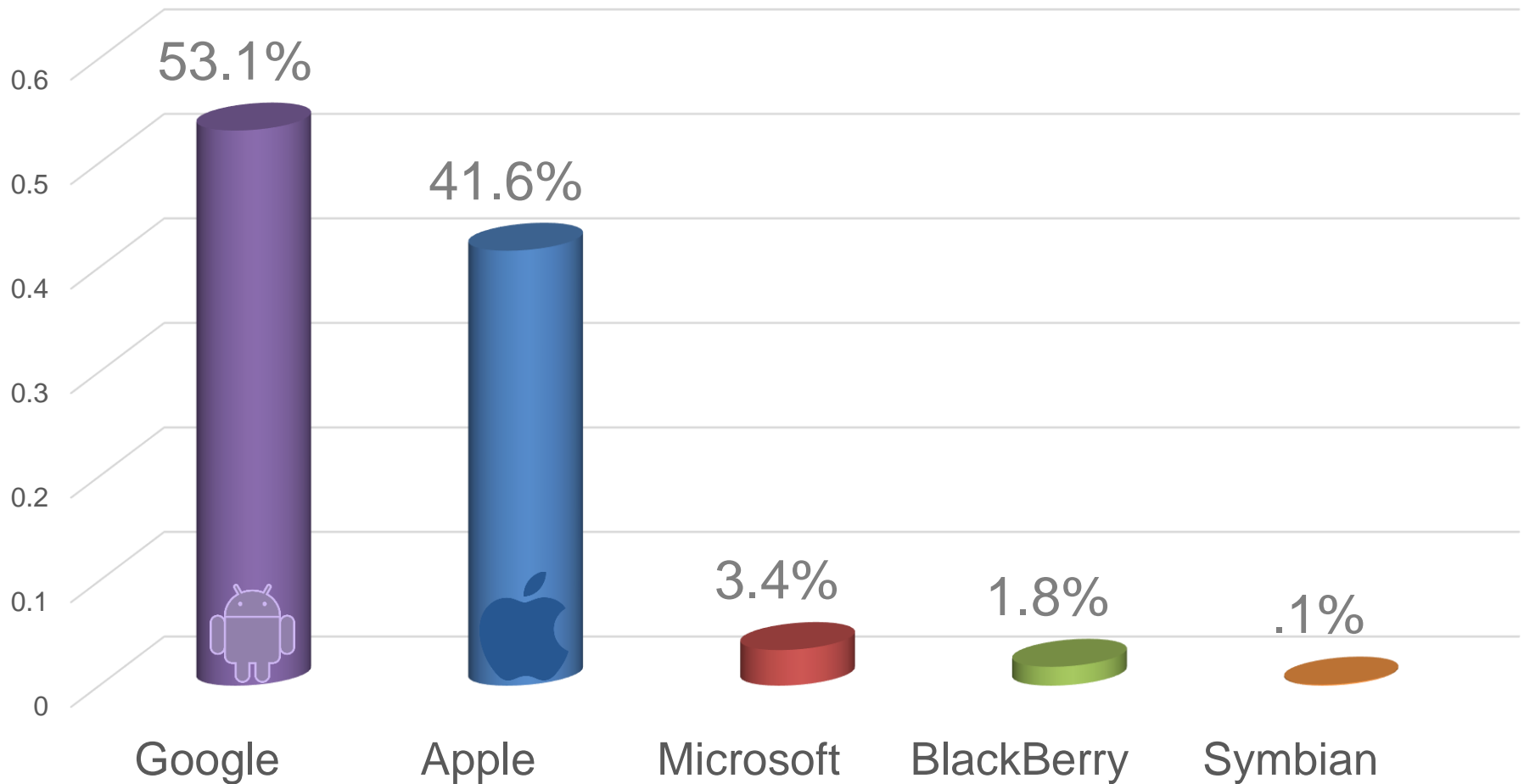
How Are New
Technologies Enabling

BYOD?

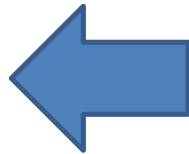
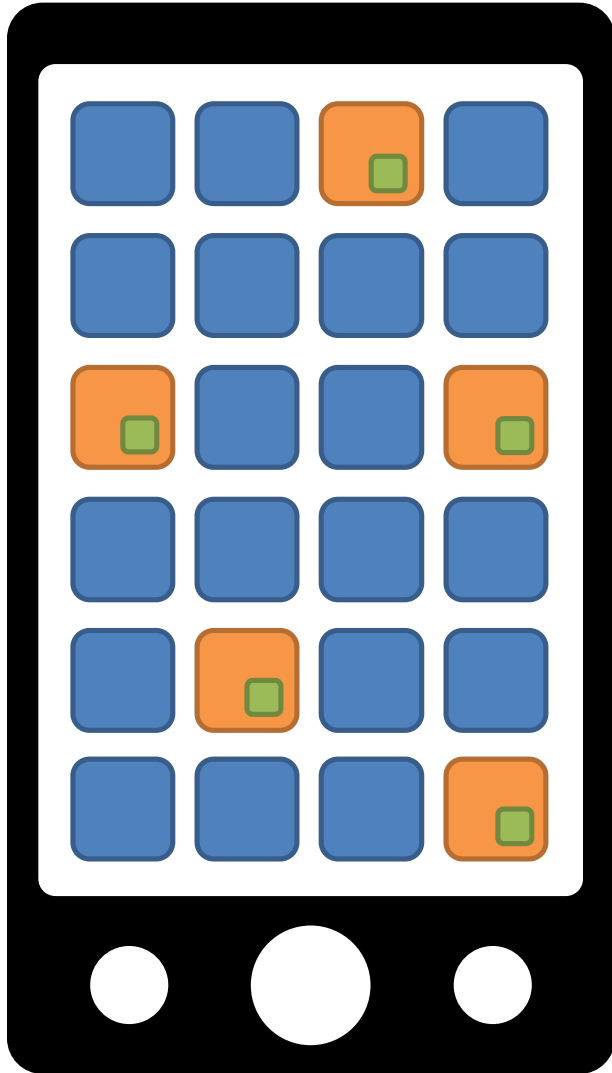
The BYOD Challenge – Platform Diversity

U.S. Smartphone Platform Market Share, December 2014

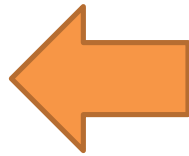
Source: comScore MobiLens



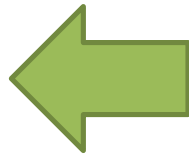
The BYOD Challenge – Consumer vs. Enterprise



**Consumer Devices,
Individual Liability**



**Government Apps,
Network Endpoints**



**Respondent Data
(e.g. – Title 13)**

Key Requirements to Achieve Mission Success

User Acceptance

- Platform and Device Choice
- Personal and Business Separation
- Transparent Privacy Protections

Comprehensive Security

- User Authentication
- Data Encryption
- Data Loss Prevention

Enterprise Control

- Provisioning and Decommissioning
- Policy Enforcement
- Monitoring and Alerts

Current BYOD Technology Alternatives

- 1 Enterprise Mobility Management (MDM, MAM)
- 2 App Wrapping and SDKs
- 3 Dual Persona Containers
- 4 Virtualization (VDI, VMI)
- 5 Data Wrapping

Enterprise Mobility Management (MDM, MAM)

Technology Focus	Enterprise Devices (GFE)
Key Benefits	<ul style="list-style-type: none">▪ Supports at least 95% of current mobile devices▪ Provides greatest number of policy and device configuration controls▪ Provides app catalogs
Challenges and Limitations	<ul style="list-style-type: none">▪ Proprietary solutions▪ Lacks privacy controls expected by end users▪ App protection limited to black and white lists with policy-based actions▪ Devices are limited to one MDM profile▪ Requires app wrapping or SDK solution to address all security requirements

Technology Focus

Apps and End Point Security

Key Benefits

- Supports 95% of current mobile devices
- Protects access to file system, networks and data sharing
- Performs authentication and data encryption at the app-level
- Provides separation between business and personal environments
- Protects user privacy
- Automates provisioning and removal of apps

Challenges and Limitations

- Proprietary solutions
- Currently limited to iOS and Android platforms
- **Requires app binaries thus reducing the availability of public apps**
- App may need to be wrapped every time a new version is released
- **Often requires an MDM that adds complexity and user privacy concerns**

Dual Persona Containers

Technology Focus

Secure Containers

Key Benefits

- Protects access to file system, networks and data sharing
- Provides separation between business and personal environments
- Often include additional security controls at the OS or hardware layer
- Protects user privacy
- Automates provisioning and removal of apps

Challenges and Limitations

- Proprietary solutions
- **Limited platform and device choice based on OS and OEM**
- Often requires app wrapping or an SDK
- **Often requires an MDM that adds complexity and user privacy concerns**

Technology Focus	Virtualized Infrastructure
Key Benefits	<ul style="list-style-type: none">▪ Supports at least 95% of current mobile devices▪ Does not store any data on the device▪ Provides secure connection to virtualized environment▪ Provides separation between business and personal environments▪ Protects user privacy▪ Automates provisioning and removal of apps
Challenges and Limitations	<ul style="list-style-type: none">▪ Proprietary solutions▪ Does not support partially disconnected operations▪ VMI currently limited to Android platform

Technology Focus

Data and End Point Security

Key Benefits

- Supports 95% of current mobile devices
- Protects access to file system, networks and data sharing
- Does not require an SDK or app wrapping
- Protects user privacy
- Provides app catalogs
- Automates provisioning and removal of apps

Challenges and Limitations

- Proprietary solutions
- Currently limited to iOS and Android platforms
- Currently limited to free commercial and in-house developed apps
- **Technologies are new and undergoing review for compliance with applicable Federal standards**

Viability of BYOD Enabling Technologies

- **Enterprise Mobility Management (EMM)** and **Dual Persona Container** technologies are best suited for managing government furnished mobile devices
- **Virtualization** technologies, such as virtual mobile infrastructure, are designed for use cases in which the user will have a persistent network connection such as a business campus or urban environment
- **Data** and **app wrapping** technologies when coupled with enterprise app stores and virtual private networks have the highest overall viability for supporting a BYOD approach

Key Takeaways



Mobile Strategy ◆ **Mobile Security Framework** ◆ **Operational Support Model**
Mobile App Development Environment ◆ **Data/App Wrapping**
Enterprise App Catalog ◆ **Virtual Private Network** ◆ **Authentication Method**

Benefits of a BYOD Approach

- Eliminates the cost and logistics of acquiring mobile devices
- Expedites deployment of mobile surveys and start of data collection activities
- Reduces training requirements for mobile platforms and devices
- Improves the user experience and employee job satisfaction

Thank You



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