



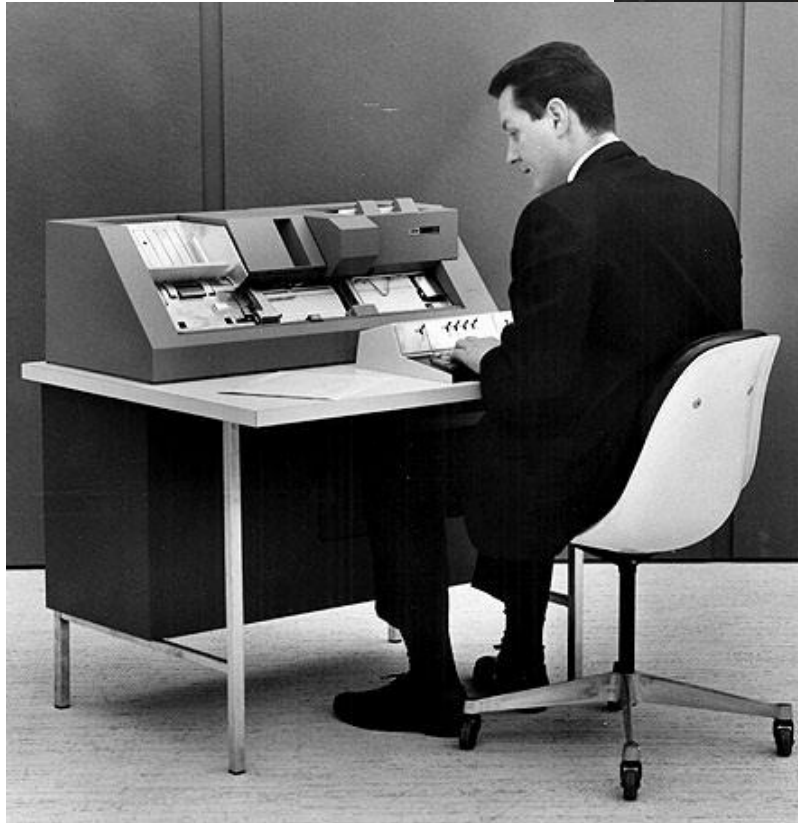
A GUGGENHEIM PARTNERS COMPANY

Mobile Applications for Service Delivery Professionals

TECHNOLOGY PLATFORMS ARE EVOLVING



Remember this...?



That became this...



That then became one of these...



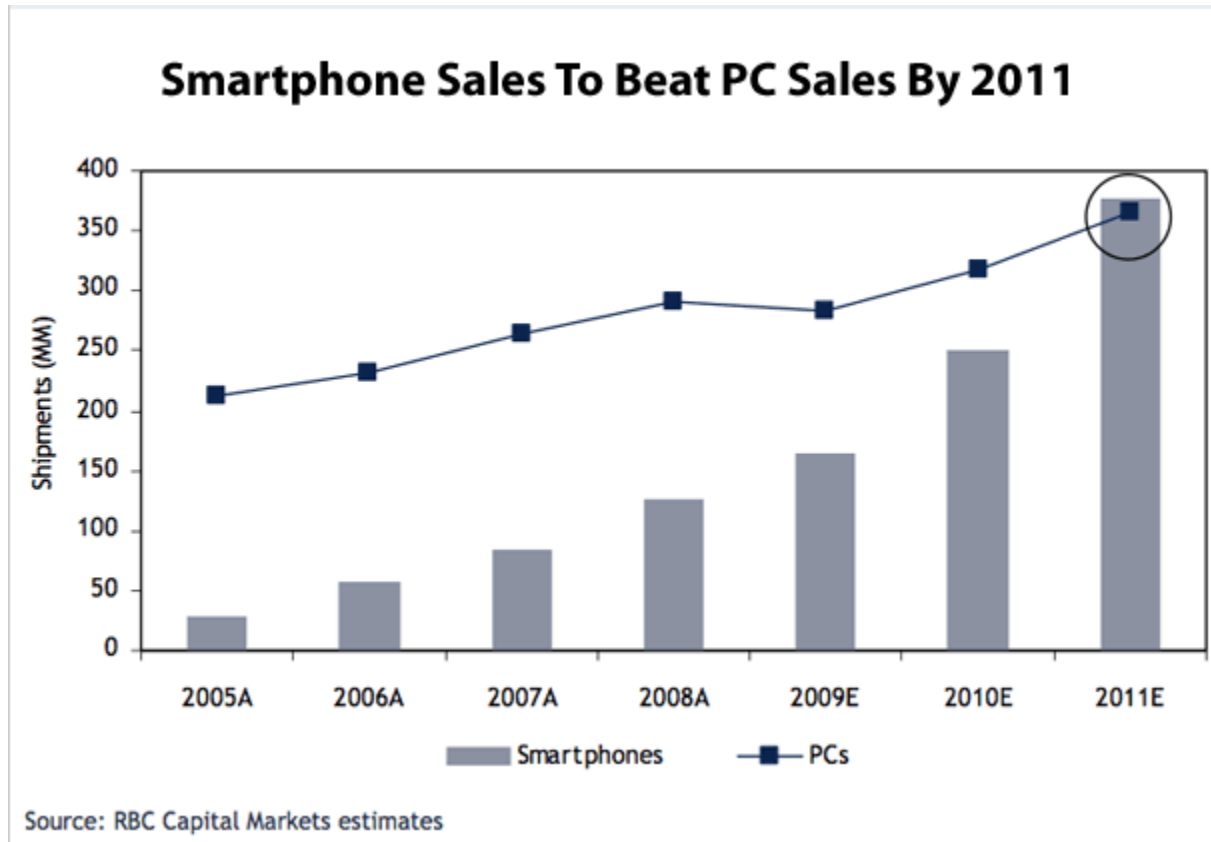
Now is becoming many of these...



Very quickly!

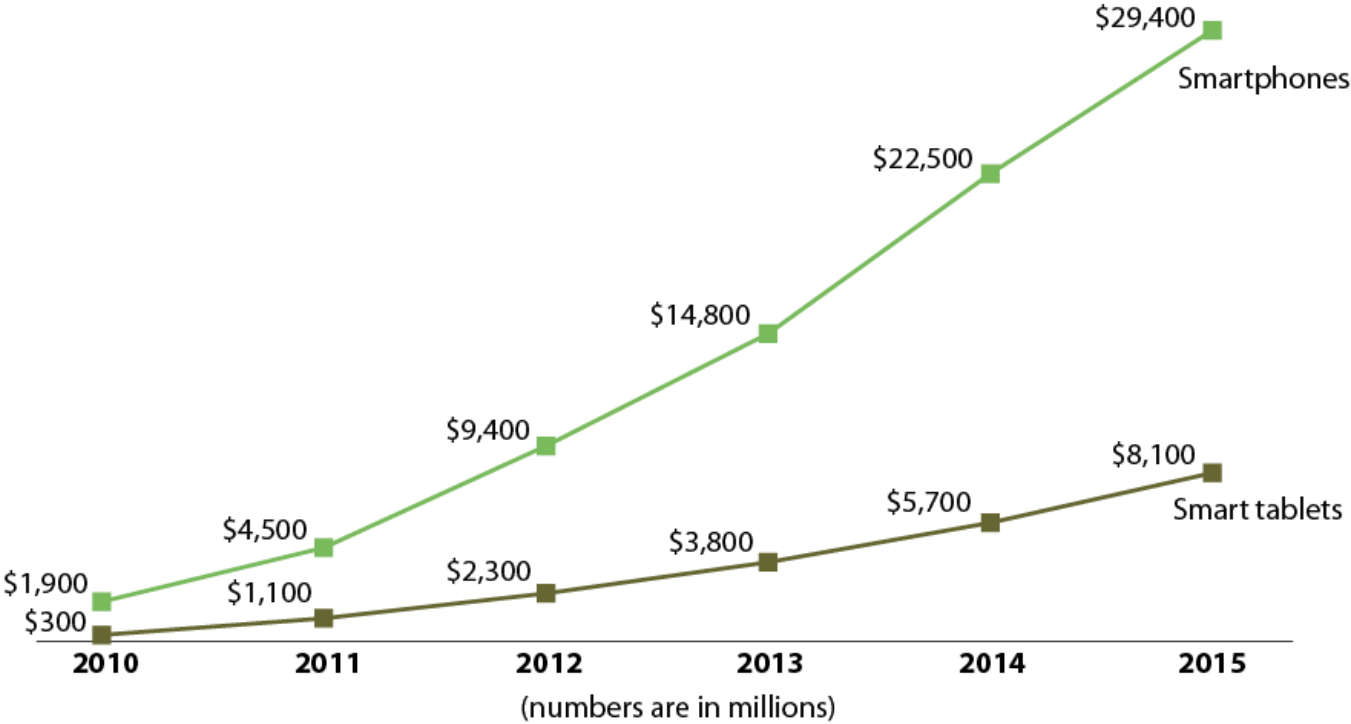


Smart Phone Sales are ahead of PC's



The Trend is Accelerating

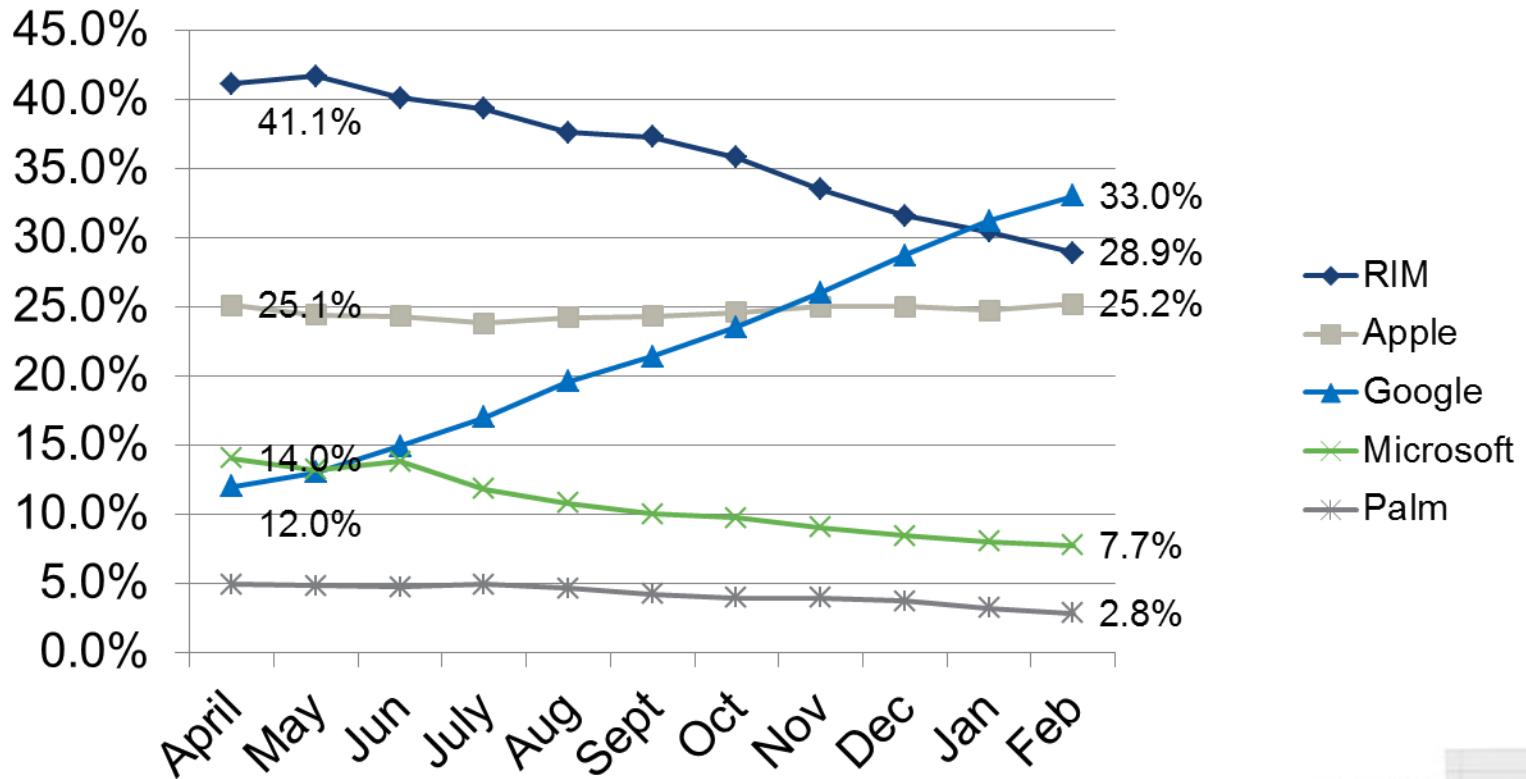
Global Smartphone And Tablet App Shipments In US\$



Source: Forrester Research, February 2011 "Mobile App Internet Recasts The Software And Services Landscape"

Apple and Android are the Platforms

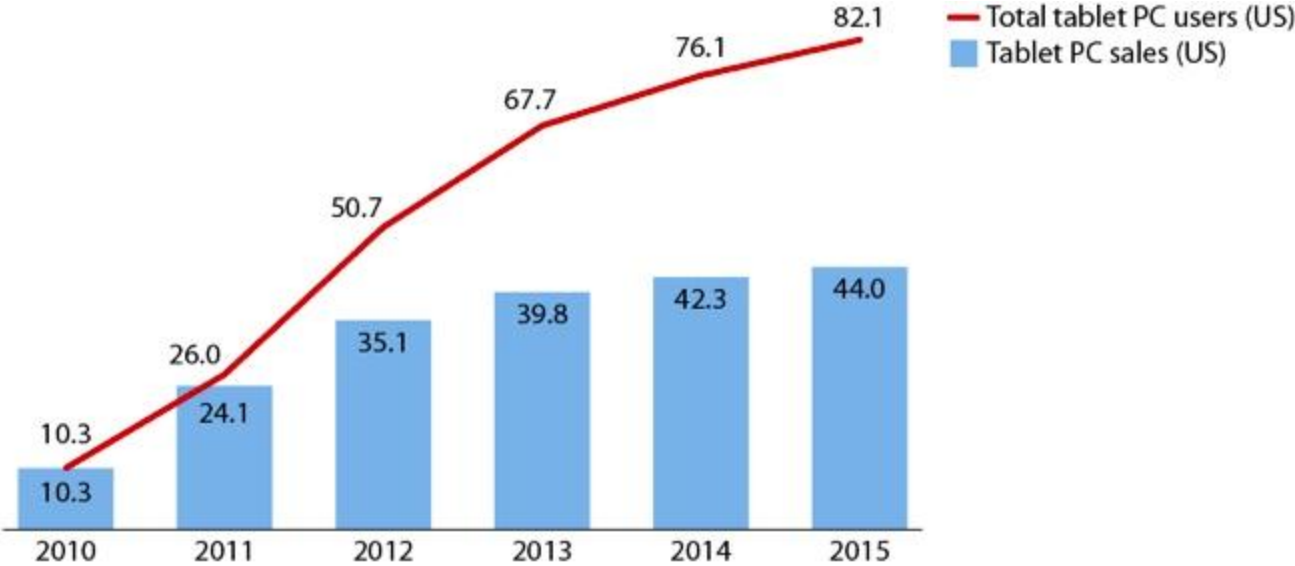
Top Smartphone Platforms: 3 Mo. Avg. Total U.S. Smartphone Subscribers Ages 13+



Source: Comscore MobiLens



Tablets Are Here to Stay



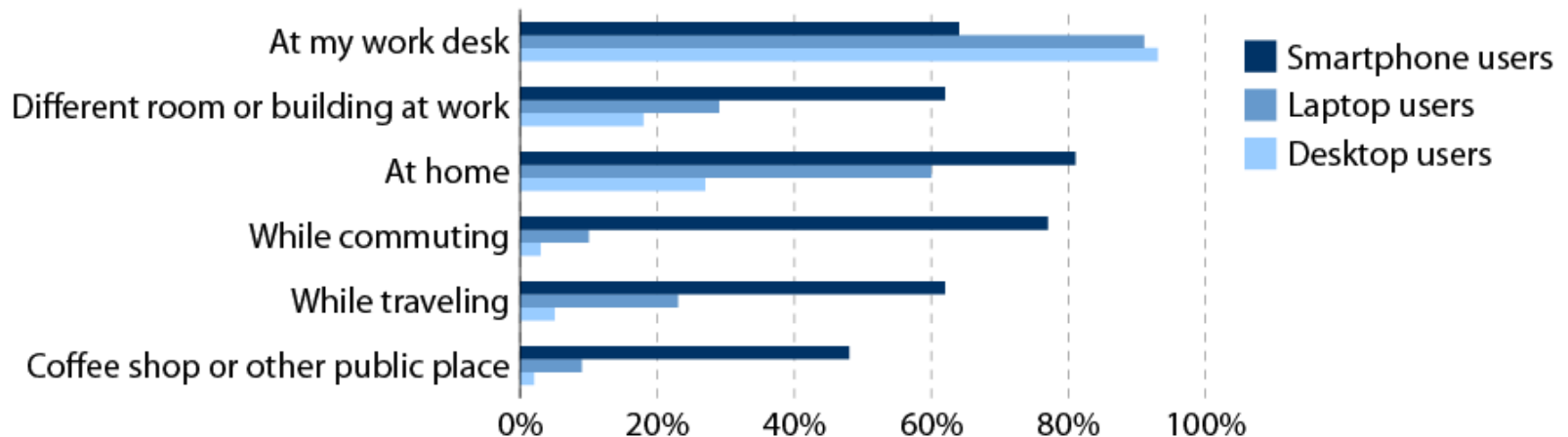
Source: Forrester Research eReader Adoption Forecast, 2010 To 2015 (US)
Note: All numbers in millions of US adults



Knowledge Workers Rely on Their Devices

The proof is in the data: smartphones = work from anywhere

“Where do you use a computer (or smartphone) for work in a typical week?”



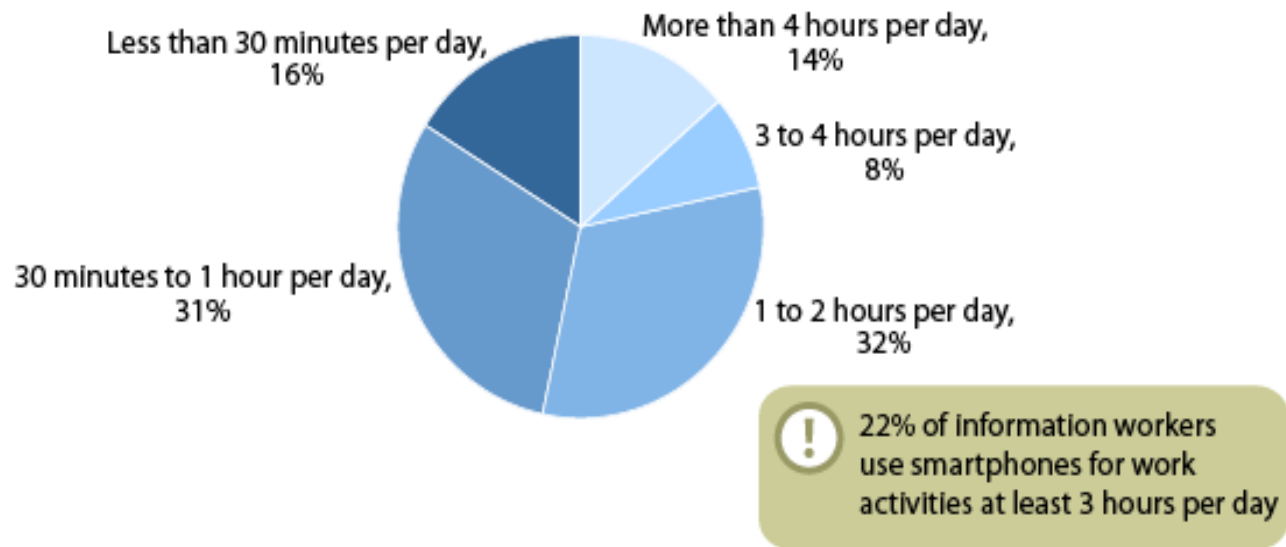
Base: 2,001 US information workers that use each device at least weekly for work (multiple responses accepted)

Source: Forrester's Workforce Technographics® US Benchmark Survey, Q2 2009



More than 1/2 use Their Device an Hour a Day

"How many hours do you use your Smartphone for work in a typical day?"

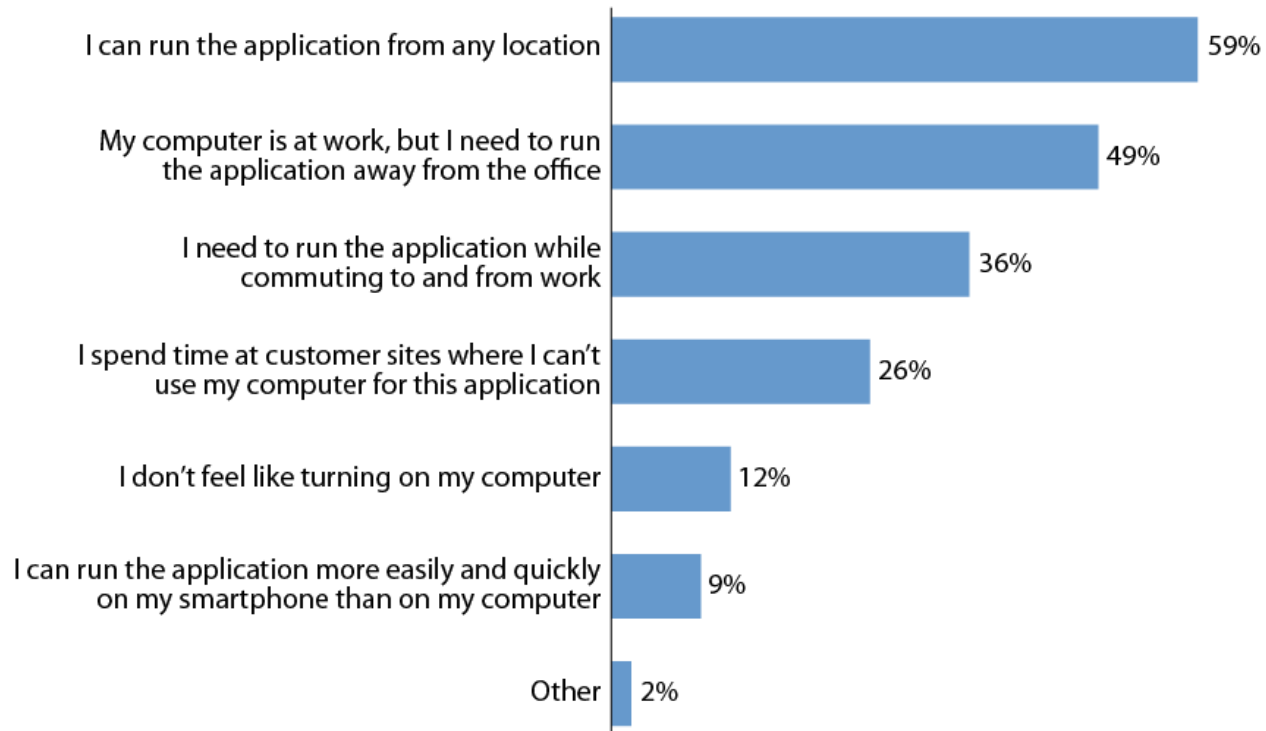


Base: 503 US, Canada and UK information workers at companies with more than 100 employees

Source: Workforce Technographics®, US, Canada, and UK Survey, Q3 2009

Location Flexibility is Driving Usage

“Why do you use your smartphone to run work applications instead of a computer?”



Base: 486 US, Canadian, and UK information workers at companies with 100 or more employees (multiple responses accepted)

Source: Workforce Technographics®, US, Canada, and UK Survey, Q3 2009

WHAT CAN MOBILE PLATFORMS DO?



Remote Desktop

□ Citrix

- XenDesktop or XenApp hosted apps on mobile devices
- Platform: iPhone, iPad, Android, WinMo, Blackberry



Virtual Meeting

□ Mobile WebEx

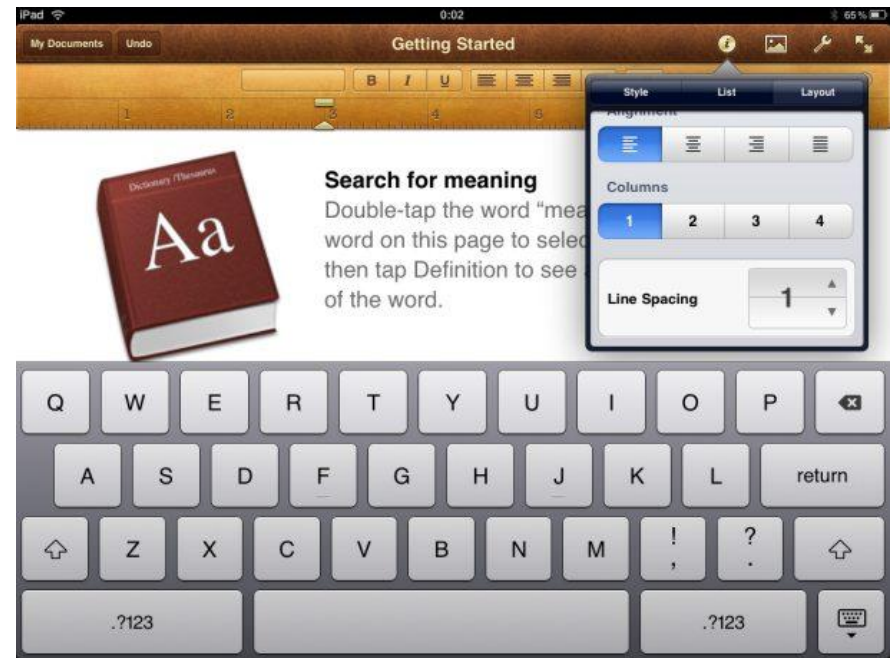
- Extends audio/video conf to iPhone/iPad/Blackberry
- Call back, URL/PIM integration
- Integrated slide show support
- Flow control of meeting for hosts



Desktop Type Applications

□ Office Suites

- Word, Excel, PowerPoint
- Read, Edit, Export/Sync
- Slide Show/Projection Support
- iPhone, iPad, Blackberry, Android



Your Office, Soon...



TECHNICAL PLATFORM AND DEVELOPMENT CAPABILITY



The Big Questions

- Which platforms and devices?
- HTML5 or native applications?
- What skills to build mobile apps?
- What security and management policies?
- What about global device and network diversity?



Where Not to Start

- Our COO came to work with an iPad, now what?
- I've built a native app, now what?
- We have to do something with mobile.
- I'm too busy with my day job.



What We Considered

- Native Client
 - iOS – iPhone, iPad
 - Android

- Mobile Middleware - Pyxis Mobile

- HTML 5



What We Didn't Consider

- J2ME
 - Being displaced by Android
- Rich Internet Application (RIA)
 - Being displaced by HTML 5
- Windows Mobile
 - Market share currently too small but, may change
- Mobile Web - WAP, XHTML-MP
 - Being displaced by HTML 5



Our Approach

- Create Working Prototype with Each Technology (Bake Off)
 - Develop and Deploy the Same Application with Each Technology
 - Requirements from COO and Sr. Managers in Service Delivery
 - Provide Developers with Training and Access to Vendors Technical Support
 - Validate Results and Conclusions with Industry Analysts



WHAT WE FOUND



Native Development

- Application and web developers were quickly able to master native development environments.
- Q/A and Beta deployment was difficult and required specialized tools and methods.
- Accessing database and web services is reasonably straight forward, Android's Java heritage likely eases some pain in the enterprise.
- UX and Design support is needed to get first quality results
 - Remember you're being compared to Angry Birds
- App Stores are a nightmare for enterprise developers
 - Uncertainty and loss of control in distribution
 - Multiple license and business arrangements
- On your own for security
- **Too many specific platform versions and issues**



Best for customer applications where App Store distribution helps to reach new or existing markets.

CONCLUSION: NATIVE APPS



Mobile Middleware Development

- ❑ Learning curve was about the same or a little better for application developers.
 - Systems developers may have an easier time compared to Native.
- ❑ Better abstraction of underlying platform
- ❑ Vendor support is much stronger
 - Consulting
 - Alignment of Incentives
- ❑ Q/A and Beta deployment very straight forward.
- ❑ Really helps with accessing enterprise services
 - Many prebuilt plugins
 - connectors for ESB and package applications.
- ❑ Security built in by Vendor
- ❑ Eases some of the distribution difficulty with App Stores but, initial setup and business arrangements may be a challenge.



Real winner for shops with complex legacy, ESB or package applications.

Or where little easier learning curve makes economic sense.

CONCLUSION: MOBILE MIDDLEWARE



HTML 5 Development

- Learning curve was much better for Java/.NET skilled developers
- Functionality very close to Native
- Slight performance Loss over Native
- Abstracts, almost completely, the underlying platform
- Vendor support is better than Native
 - Consulting
 - More formal/informal training
- Q/A and Beta deployment not an issue
- Web applications support for accessing enterprise services already exists
- Leverage existing web security platform and methods
- No distribution difficulty



Best option for Enterprise Applications in environments without a lot of legacy and web platform/skills are strong.

CONCLUSION: HTML 5



SERVICE DELIVERY SUPPORT APPLICATION



Service Delivery Dashboard Application

- Real Time
- Multi-Platform
- HTML 5 Based
- Business Processing Metrics
 - Operational Performance
 - Financial Performance
- Call Center Performance Metrics
 - SLA
 - Peak Demand
- Technology Platform Health
- Messaging
 - Leadership
 - Business Partners



Call Center Prototype

Call Center - SB Group - SLA Data Source: [Green Dot]

Queue	On	Avl	Wt	Avg Wt	Old CI	Hnd	<SL	SL %
AN	12	0	0	0:00:24	0:00:00	135	110	81
AN Rep								
Annuity Tier								
Claims								

Source

Source	Percentage
CW	69 %
FAPLIC	77 %
SB	81 %
PL	85 %
PSU	84 %

Group - SLA

Queue	On	Avl	Wt	Avg Wt	Old CI	Hnd	<SL	SL %
AN	14	4	0	00:10	00:00	177	165	93
AN Rep	13	4	0	00:09	00:00	133	119	89
Annuity Tier2	18	5	0	00:04	00:00	3	3	100
ms	6	0	0	00:54	00:00	43	29	67
Rep	12	3	0	00:09	00:00	33	32	97
	6	0	0	0:01:18	0:00:00	5	4	80

Nick Xidis
nick.xidis@securitybenefit.com

THANK YOU

