



Essential insight for leaders
of the digital economy.

Agile IT in a World of Mobile Apps.

November 18, 2014.

Introduction



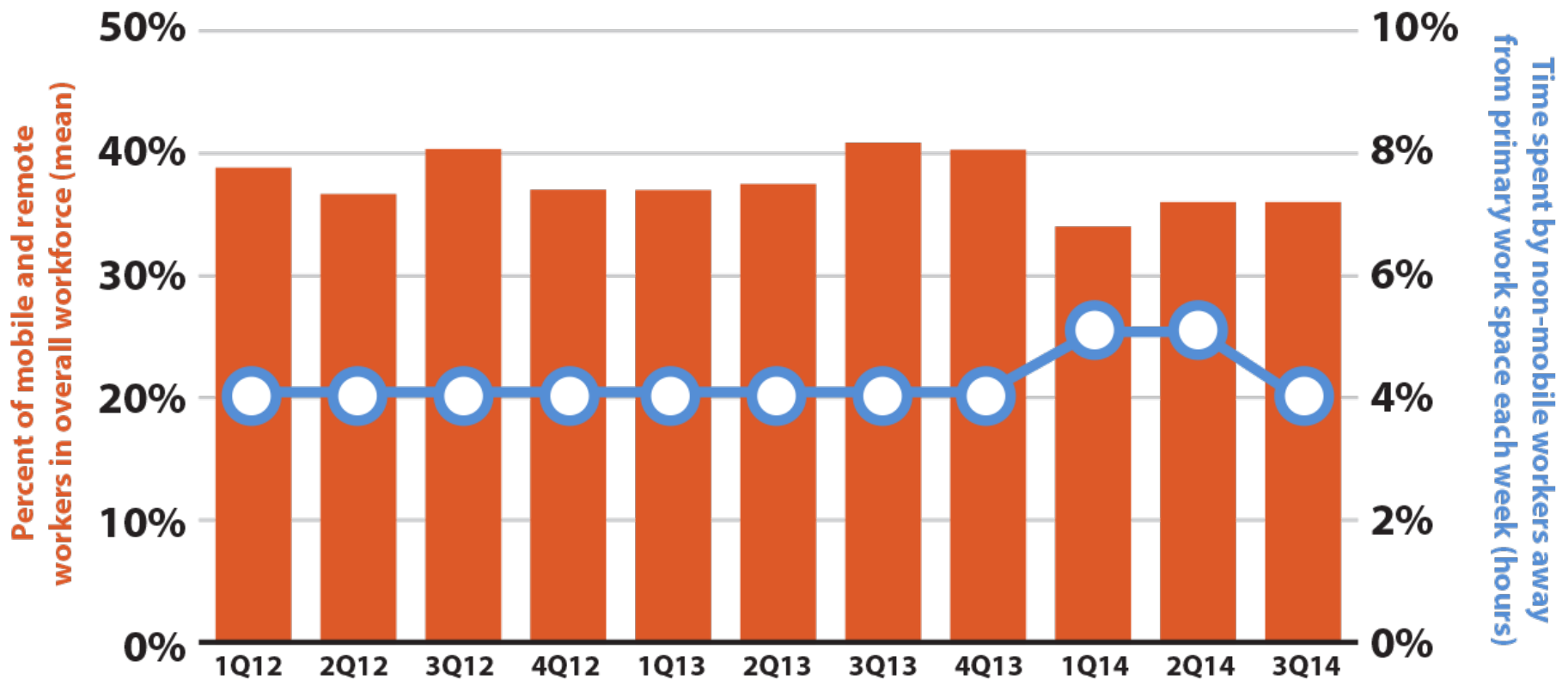
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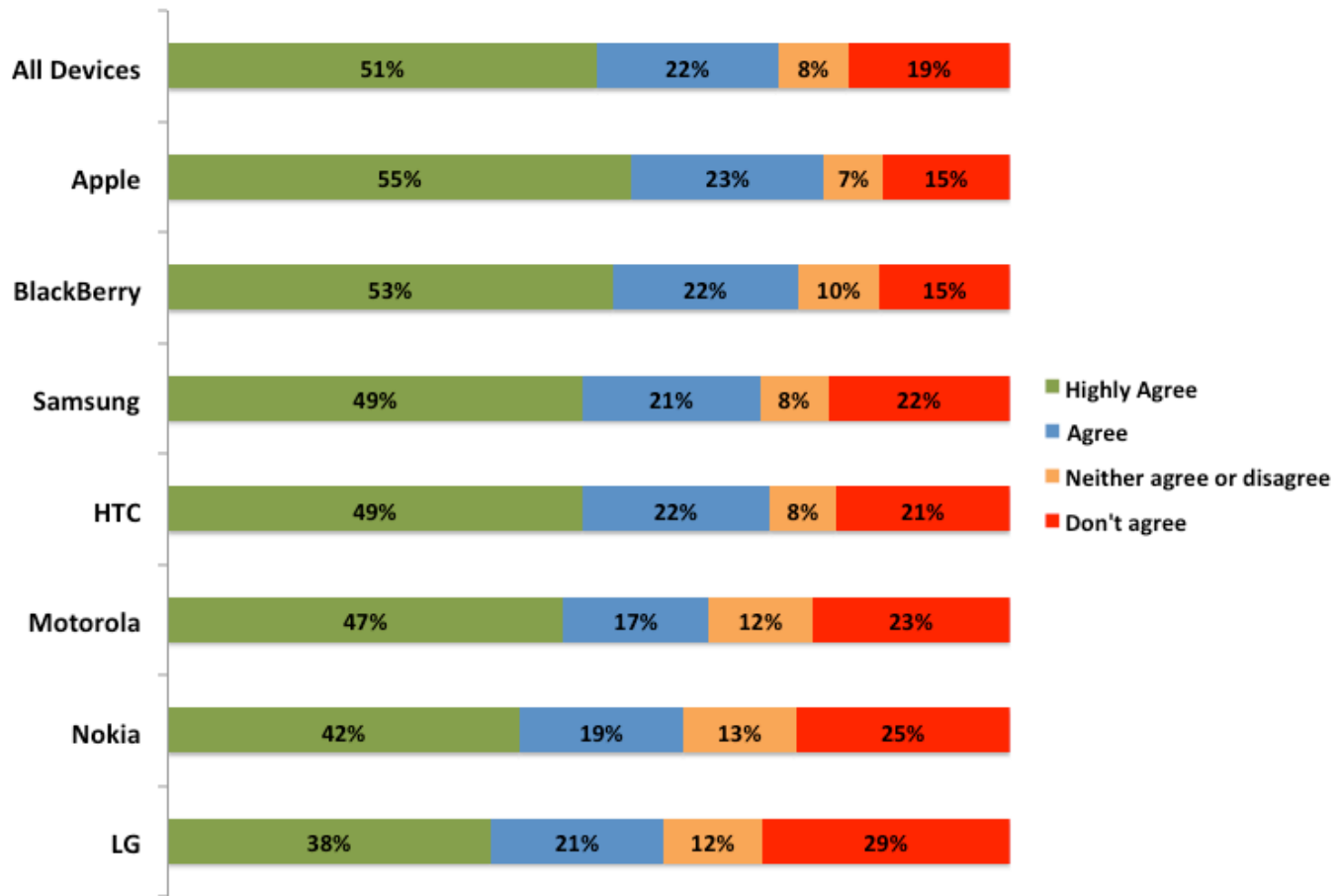
The Workforce is No More Mobile Than Three Years Ago.

What percentage of your current workforce is composed of remote and mobile workers?



Employee Productivity Means More Than Mobile Devices.

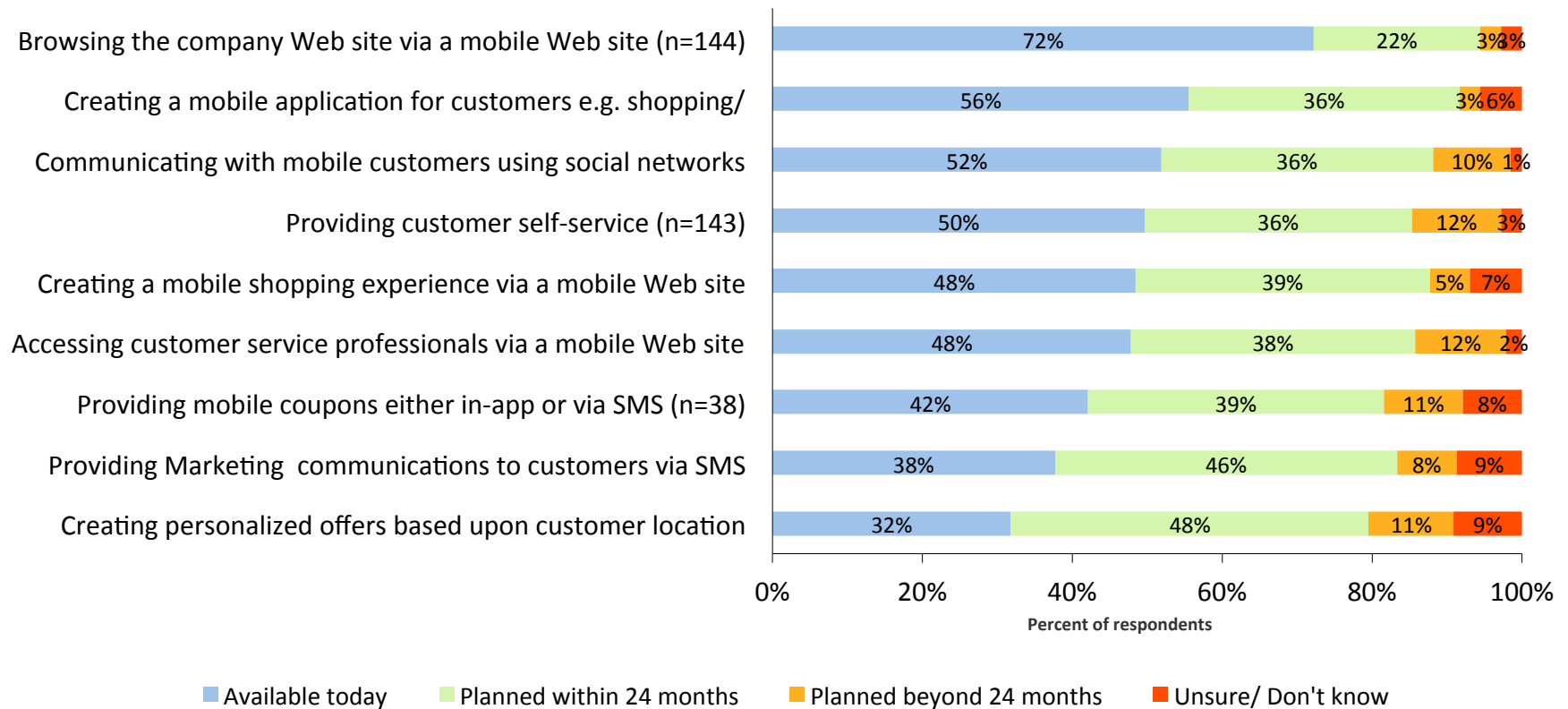
The degree to which full-time employees believe their mobile device allows them to get work done.



Source: 451 Research, US Connected Device Survey, June 2014. Base: Fully employed; N = 3,071

Customer Mobility is Still Niche and Weak.

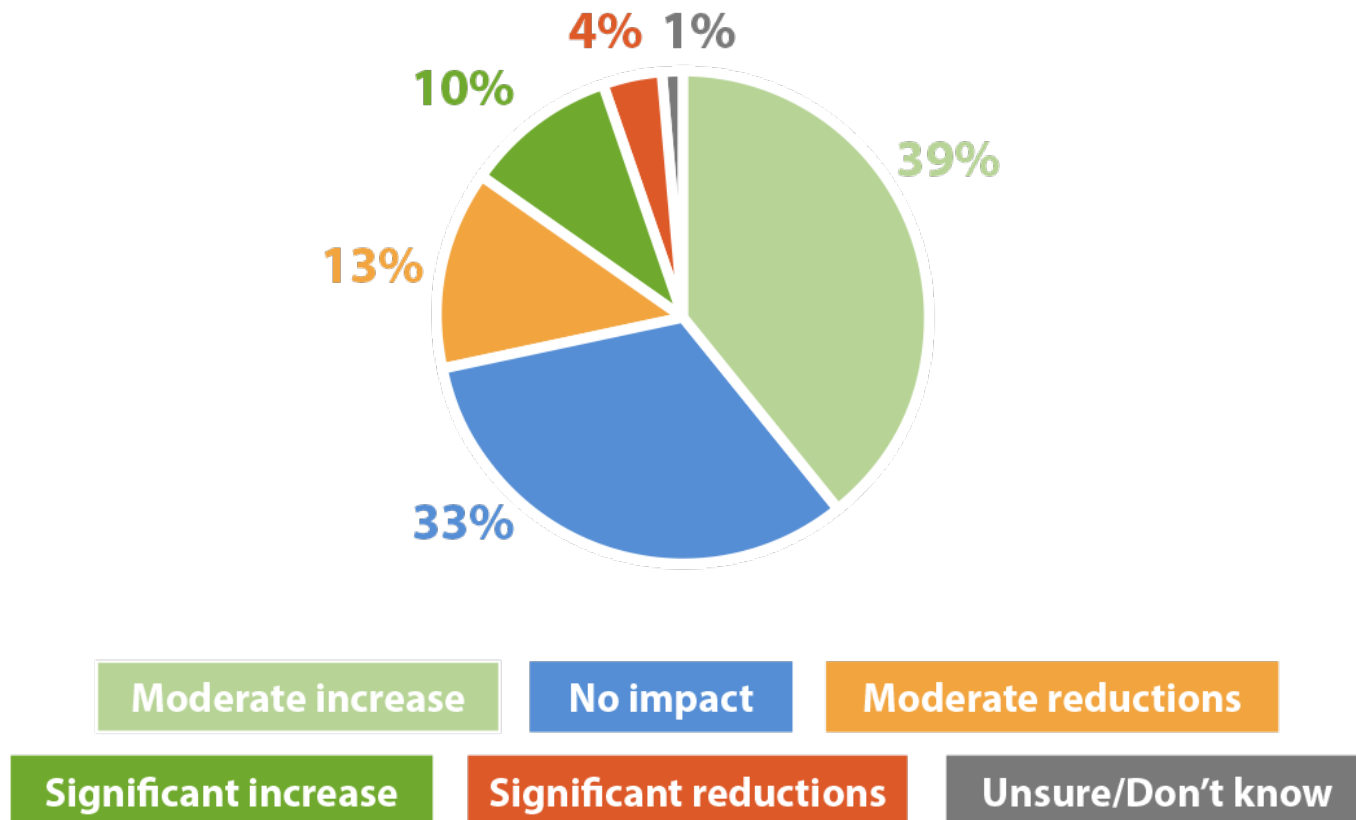
Within what time frame would you be interested in providing the functionality to your customers?



Source: 451 Yankee Group US IT Decision Maker Survey. Base: Asked those considering mobilizing customer activities important.

Companies Are Growing Their Budgets for Mobility.

How will this outlook impact your investments in enterprise mobility?
Would you say you expect... (Please select one) (n=512)

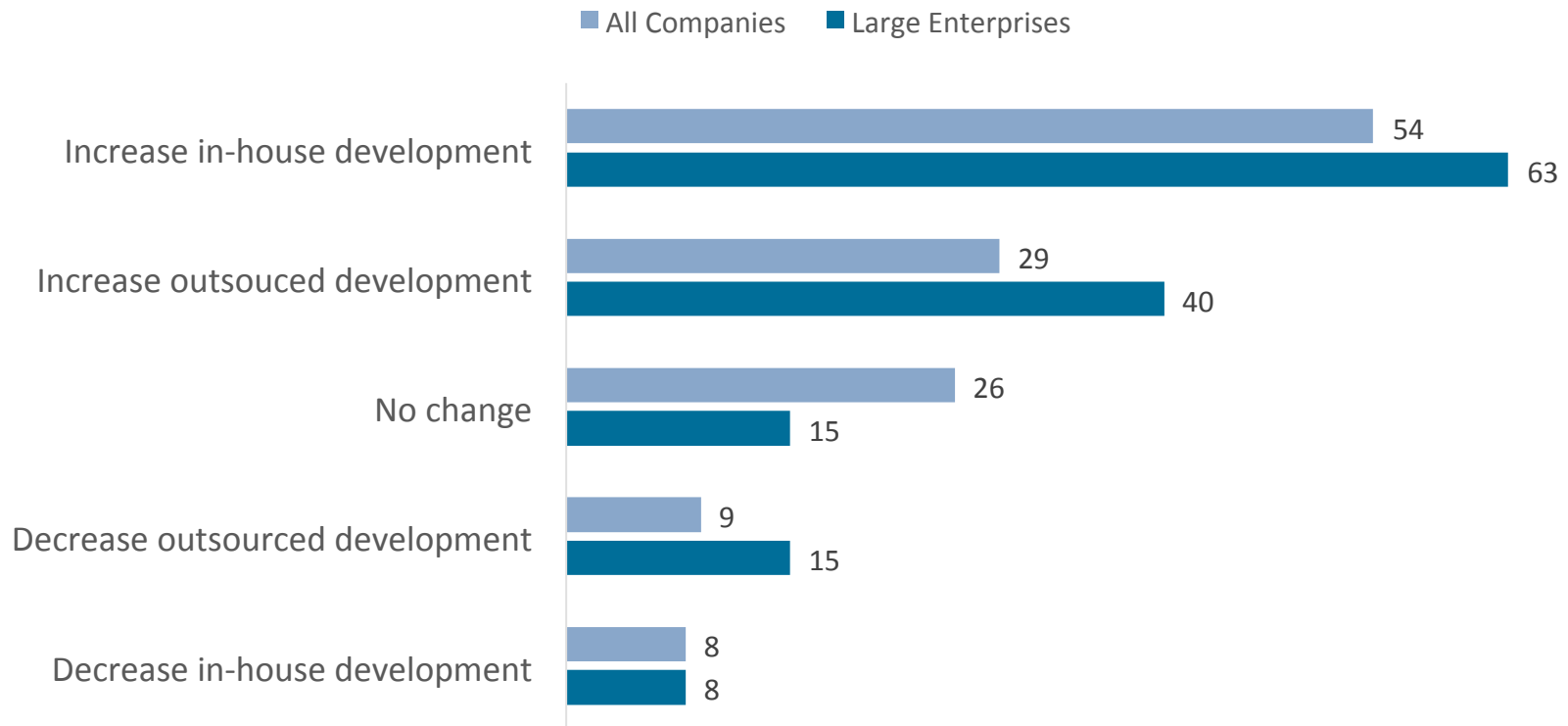


Source: 451 Yankee Group US IT Decision Maker Survey, March 2014. Base: Asked everybody

Research

The Number of Apps Grows But it is Uncoordinated.

How will your mobile application development strategy change over the next 12 months?

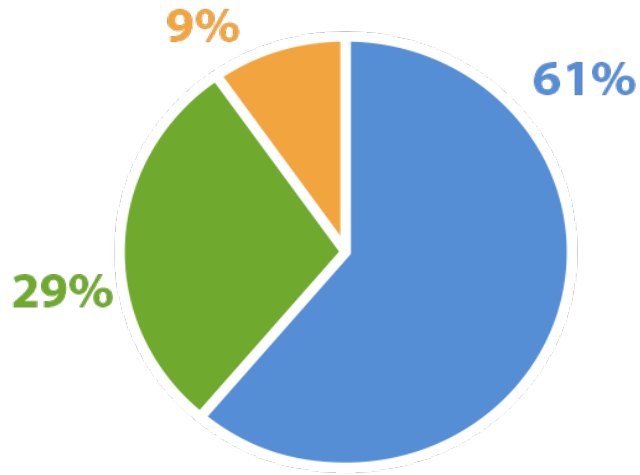


Source: 451 Yankee Group US IT Decision Maker Survey, September 2014

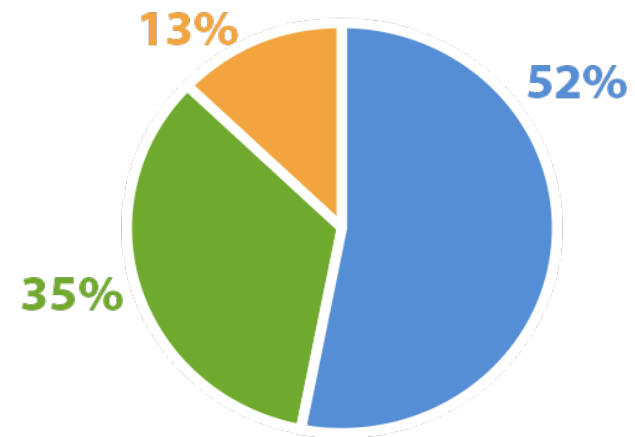
Base: Asked everybody

More Money Without More Coordination is Dangerous.

Do you have a comprehensive mobility strategy for the enablement and delivery of mobile assets and services to your customers and employees? (n=2,032)



Do you have in place a Mobility Center of Excellence, a Mobility Council or another such body with representation from the different lines of business across your company to govern the strategy? (n=1,839)



Yes

No, but in the process

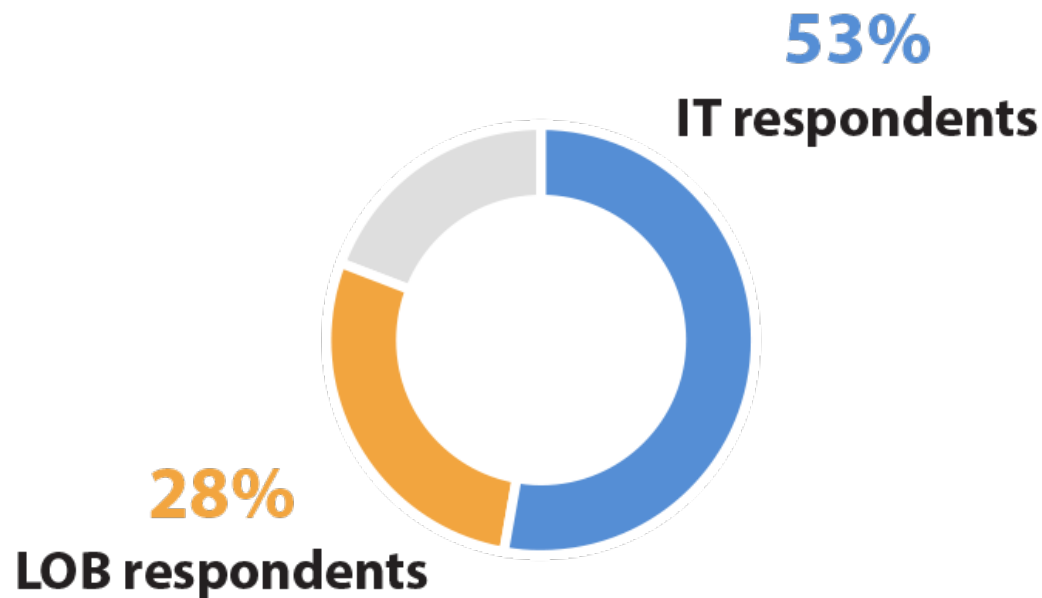
No

Source: 451 Yankee Group US IT Decision Maker Survey, June 2014
Base: Asked everybody

Source: 451 Yankee Group US IT Decision Maker Survey, June 2014
Base: Asked everybody with or in the process of creating a mobile strategy.

Confusion Without Unifying Infrastructure and Governance.

Percent of each of IT and LOB respondents saying
IT is central to the companies' mobile strategy

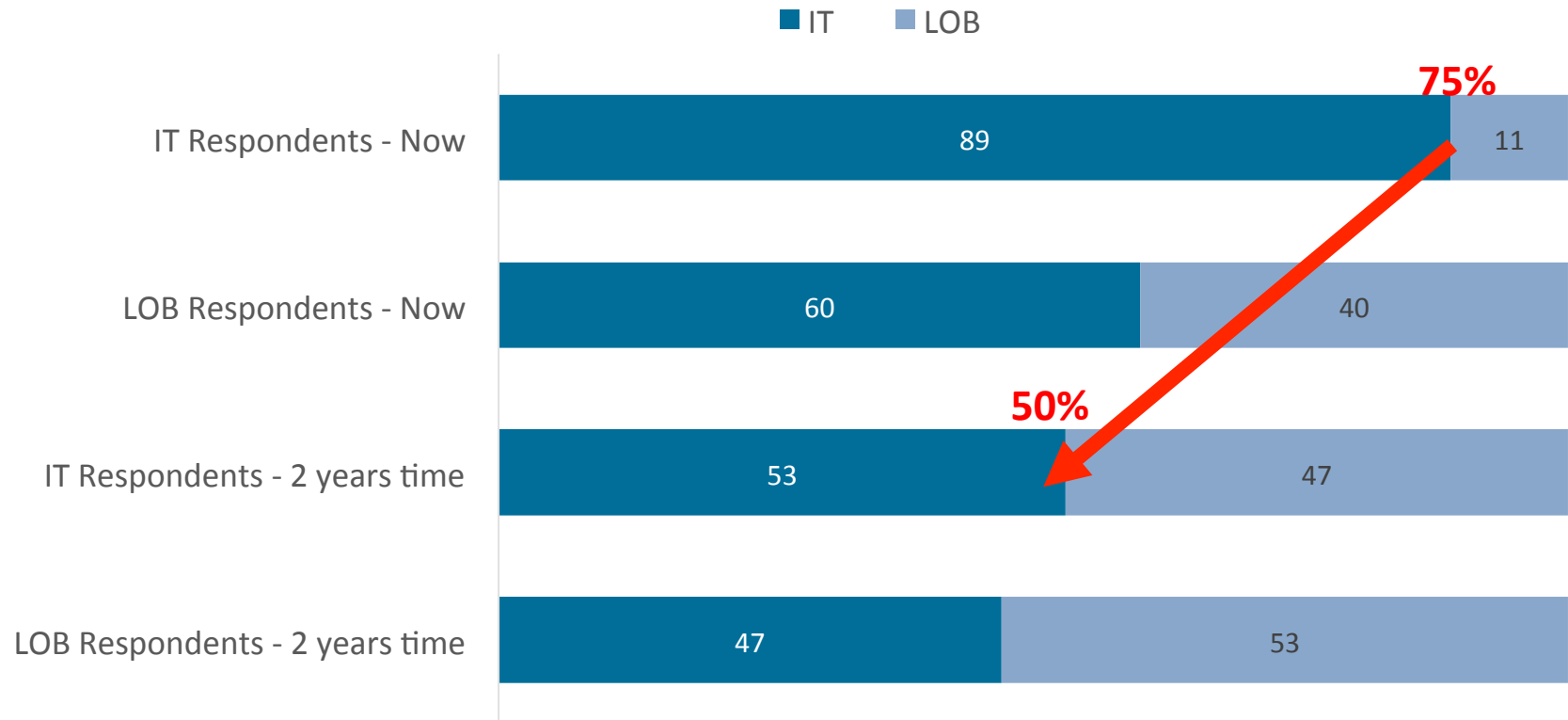


Source: 451 Yankee Group US IT Decision Maker Survey, March 2014

Base: Asked everybody

The Confusion is Compounded by Shifting Budgets.

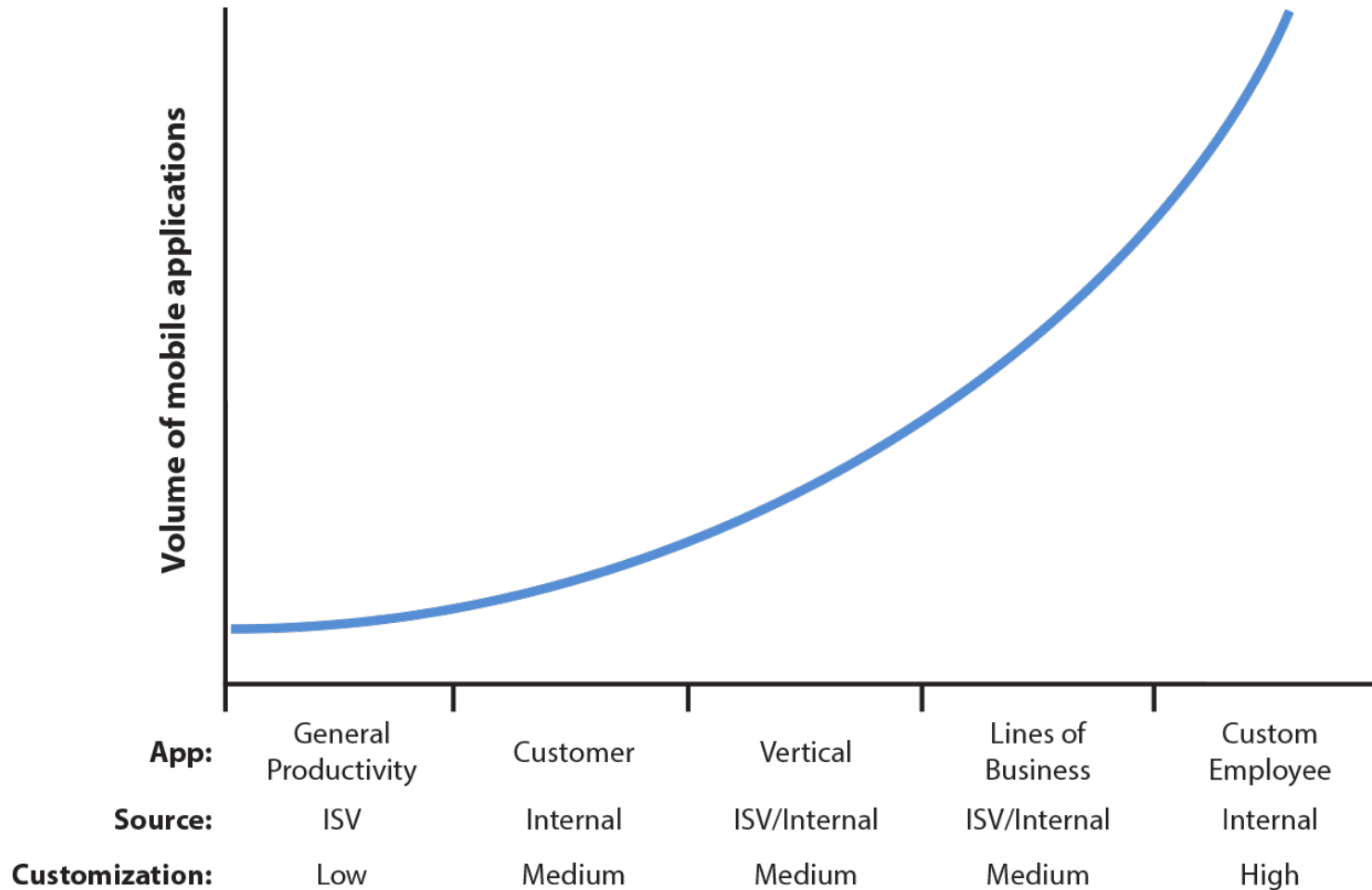
Area in charge of defining and setting mobile technology expenses: Now and in Two Years.




Source: 451 Yankee Group US IT Decision Maker Survey, September 2014

Base: Asked everybody

The App Landscape Could Not be More Heterogeneous.



Leading Edge Companies Focus on Mobile Architecture.



	Opportunistic	Strategic	Mobile-First
Proportion of companies	The majority of companies	A small minority of companies	Very few, if any, companies
Mobile strategy center of gravity	A reactive IT department	Mobility Center of Excellence: C-level attention, self-empowered lines of business, a responsive IT department	Organization-wide strategic focus
Level of business model innovation	Low	Medium	High
Users	Siloed employee classes, typically field and sales forces and applications addressing basic customer interactions	Addresses large subsets of both dedicatedly and occasional mobile workers and more sophisticated offerings to customers	Affects all mobile workers and internal activities and sophisticated customer engagement
Architecture	Limited extendibility of architecture	Common architecture for mobility	Common architecture for mobility and integrated into most IT business processes
Technologies	Siloed point solutions	Sophisticated administration and management tools; voice, data and integrated communications services	Integrated platform capabilities and ubiquitous connectivity
Policies	Few formal policies with decisions heavily user-influenced	Policy-driven approach for management, security and compliance	Policy-driven and “factory” approach to mobile innovation, re-casting business workflows

They Think About Mobile Apps Differently.

1. Mobile data is no longer the be-all-and-end-all.
2. User context becomes all important.
3. Data flows in near-perpetual and recyclable motion.
4. Usage and performance insights become flows.
5. Application experiences are continuously iterated.
6. The application lifecycle democratizes.
7. Your data becomes your inventory.
8. Flat thinking, organization, practices, infrastructure.
9. The user drives flexible business modelling.
10. Monetization and productivity are quickly moving targets.

They Look to Unify People, Process and Technology.



- Native, HTML5, hybrid.
 - Ensuring offline access.
 - Securing mobile assets.
 - Mobile vs multichannel.
-

- What 'mobile strategy' means.
- Segmenting 'mobile workers'.
- Rethinking user engagement.
- Changing departmental roles.
- Scaling SDLC processes.
- Measuring ROI.
- Modern mobile infrastructure.

They Follow Agile and 'Factory' Methods.

- **Waterfall is very messy in mobile**
- **Rapid prototyping, preview, feedback**
- **Factories setup, disbanded for specific app types**
- **Internal and external developer programs**
- **Governance as the hub to the spokes**
- **Continuous iteration, not 'big bang'**

Source: Getty from <http://www.express.co.uk/sport/cricket/480188/Selector-James-Whitaker-to-make-sweeping-changes-to-England-Test-squad>, June 5, 2014

Agile Methods Need an Agile Architecture.

More people...		...doing more things...
Professional, citizen developers & beyond		Agnosticism to data
Internal and external developer programs		Object modelling & flexible business logic
...more flexibly.		
Flexible backend infrastructure	Agnosticism to infrastructure across the lifecycle	Reusable templates, components & microservices
Everything API accessible	Portable front & backend code	Integrate-able lifecycle services
Automatic versioning	Crossplatform compatible	

Final Thoughts.

- Early days, complexity will persist.
- Technology, people and process are fusing.
- Your interface is the product, data the inventory.
- Waves of apps are coming.
- Deploy your surf boards...

Development Expectation Challenges

LESS
TIME



Development cycles down to 6-8 months or less, from 12-18

LESS
BUDGET



Development budgets not increasing to match mobile needs

MORE
COMPLEX



Complexity across **Front-end, back-end** and **secure, scalable integration**

MORE
DYNAMIC



Development, Design, Develop, Test
all work on the same cadence: **Rapid Prototyping and Ongoing Updates**

Mobile Development Trends

Then (2007-2011)

- iPhone launched in 2007
- First Android phone launched in 2008
- App Store launched 2008
- Fragmented smartphone market
- Poor browser and device support for HTML5
- Immature mobile native and web development tools
- Shortage of modern mobile development skills in market



Development frameworks were
used in lieu of native tools

Now and Beyond (2013+)

- Apple and Google worldwide smartphone market share exceeds 80% and growing
- Improved native development tools (iOS Storyboard, etc.)
- Strong HTML5 support across modern smartphones
- Mobile backend services become critical
- Developers have more experience developing for modern mobile platforms



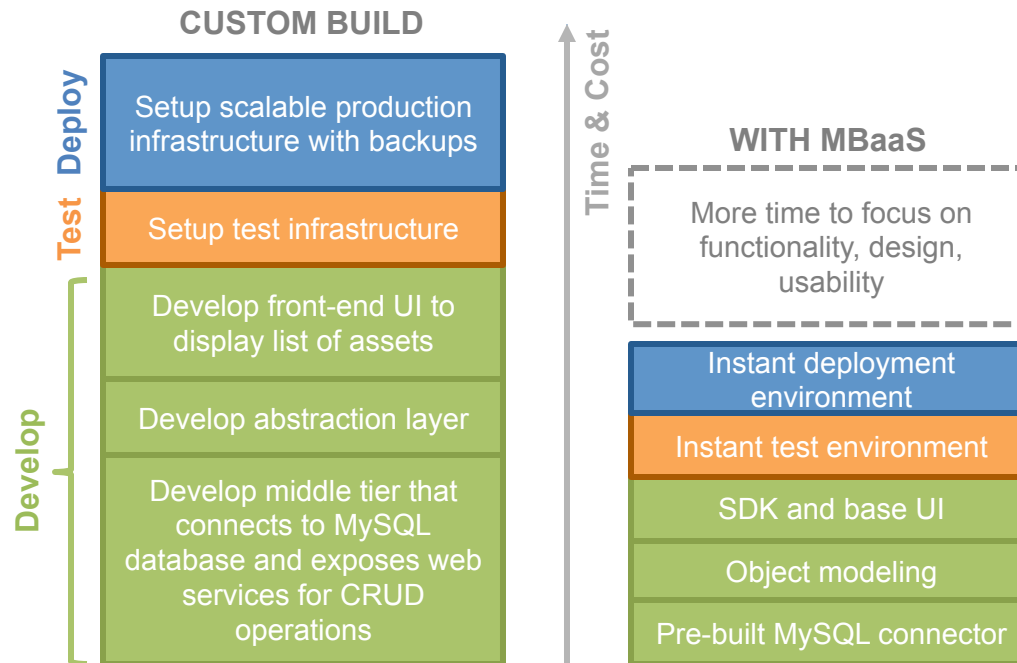
Development frameworks must
complement native tools

Focus on Functionality, not the Plumbing

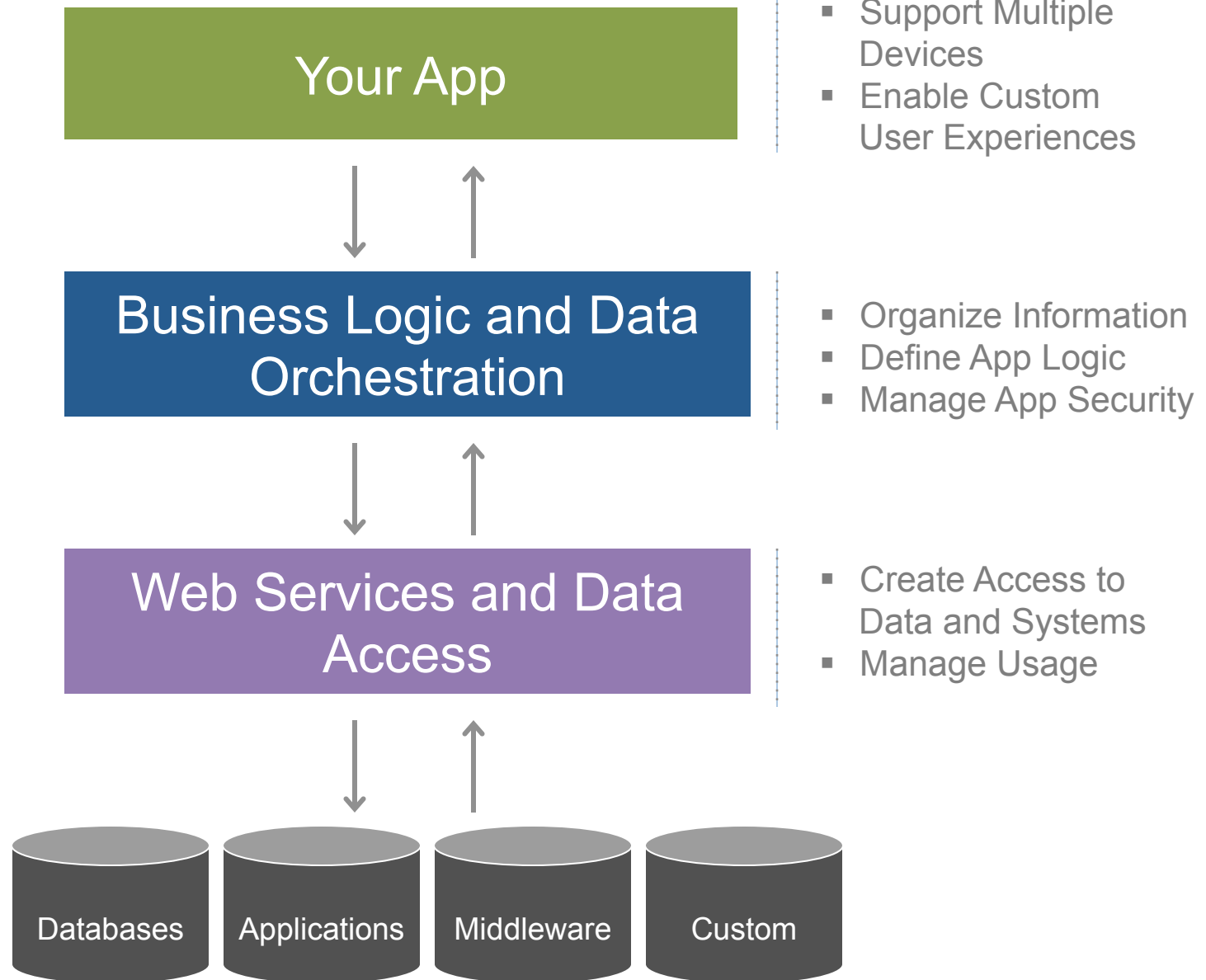
An MBaaS approach **reduces time, cost, and risk** across several stages of the app development lifecycle

Total cost of ownership (TCO) savings are realized across multiple aspects of a mobile solution; **in both the development of the back-end server and front-end client**

Example Scenario: Mobile app that displays a list of assets from a MySQL database.



Modern App Architecture



AnyPresence Platform Approach

Smart SDKs

*Cross-Platform
Client Accelerants*



Custom Object
Classes,
Docs, and
Test Scripts

Use MVC
Libraries
For HTML5
Apps

Leverage
Native
Platform
Tools

Minimize
Client-Side
Business
Logic

SEPARATE UI FROM DATA MGMT, AVOID PROPRIETARY UI

MBaaS

*Application Services
and Connectivity*



Push
Notifications,
SMS
Messaging

App
User Roles
and Access
Control

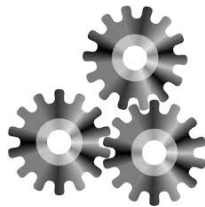
App
Specific
Business
Logic

Object
Model
Abstraction

LEVERAGE MOBILE SERVICES, ENABLE “COMPOSITE” APPS

App Gateway

*On-Premise
RESTification Layer
(Coming Soon)*



Web Service
Transformation
Logic
SOAP to REST

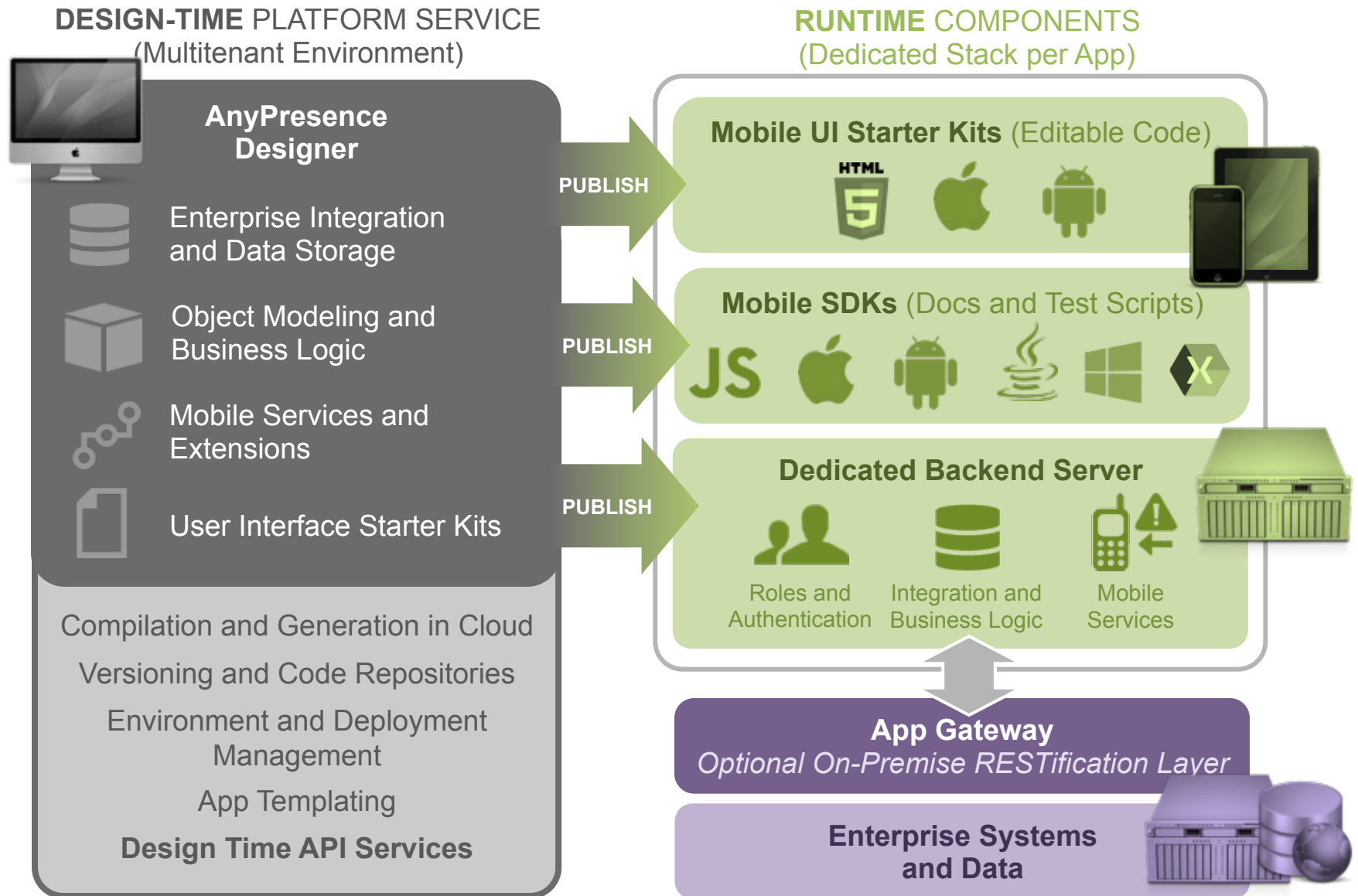
API Key
Management

Entitlements
and Rate
Limiting

Usage
and Error
Logging

CREATE, MANAGE, ACCESS RESTful WEB SERVICES

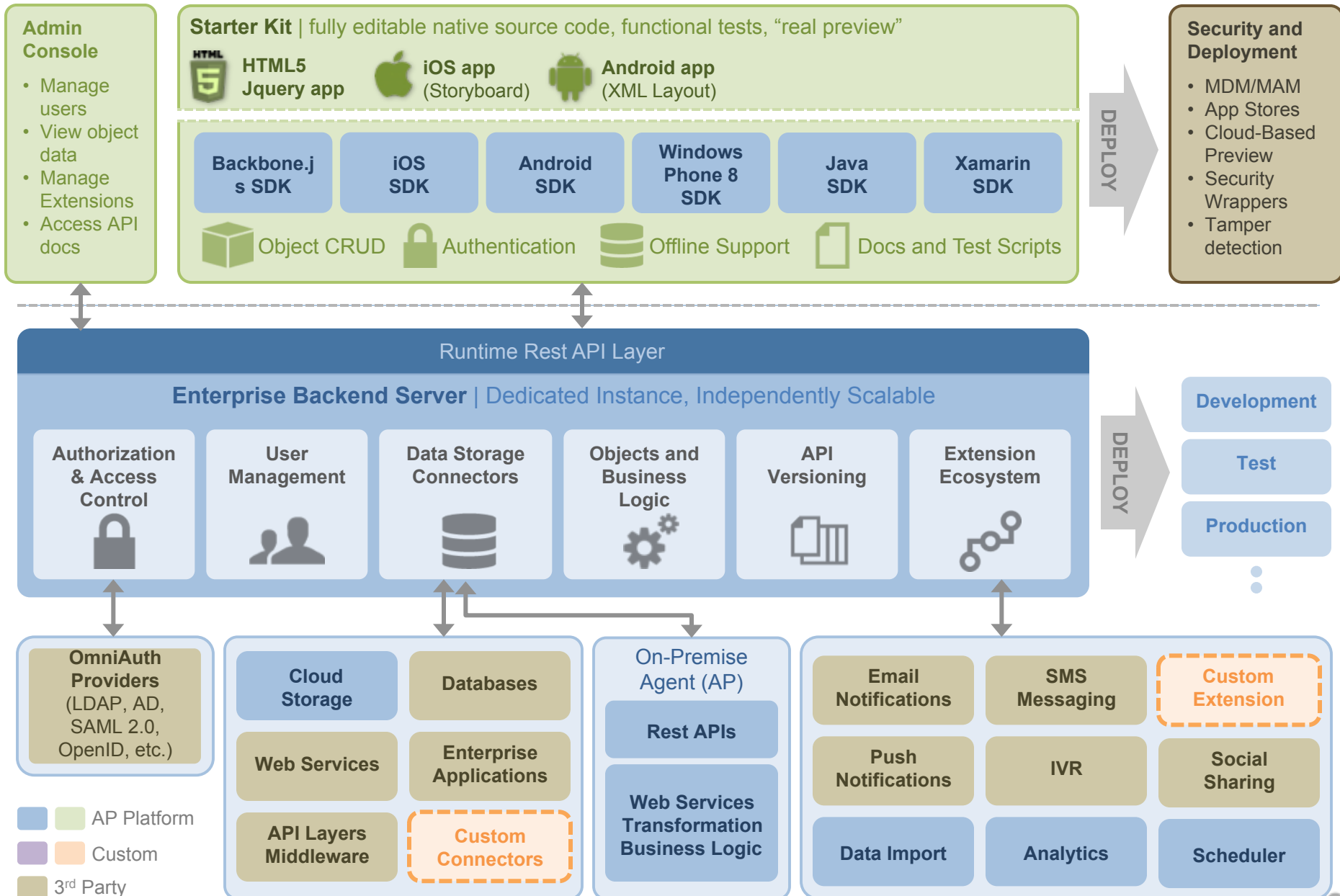
AnyPresence Solution Overview



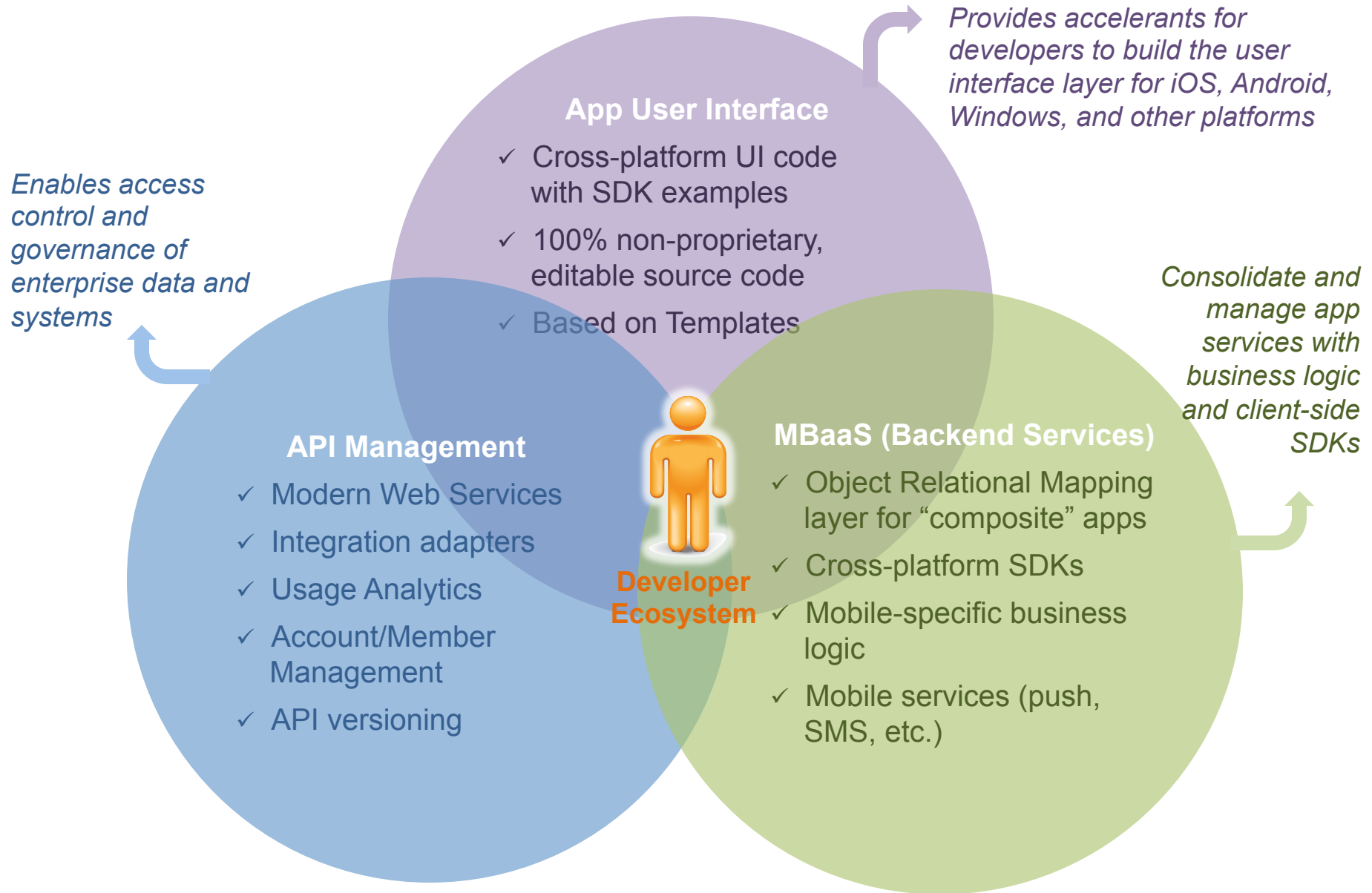


Brief Demonstration

Example Reference Architecture for Agile IT



Summary: Modern App Infrastructure for Agile IT





Thank You! Questions?

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