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Enterprise Mobile Development Best Practices for 2015

December 4, 2014

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Webinar

Enterprise Mobile Development Best Practices for 2015

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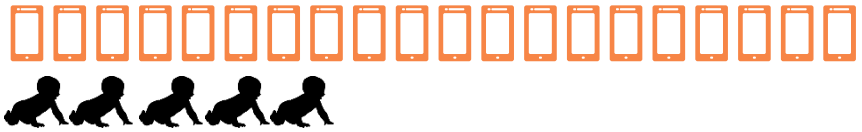
Rapid Pace of Evolution



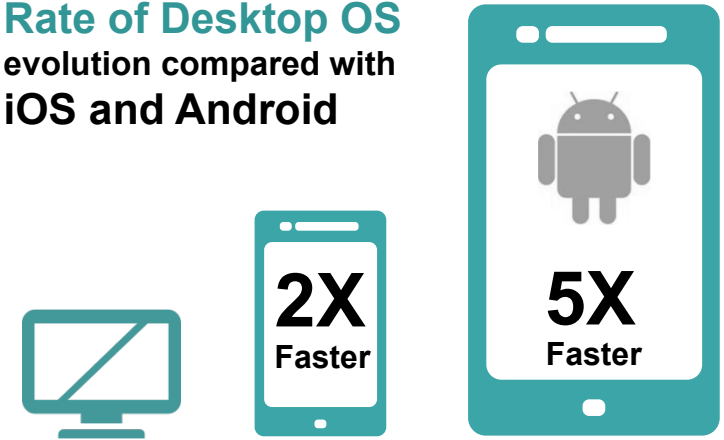
More Smart Phones are Activated Daily

than Babies Born Worldwide

Rate of Desktop OS

evolution compared with

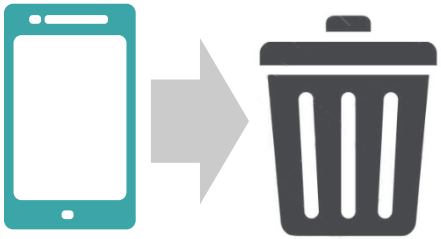
iOS and Android



Rate that Apps are updated

Every 6 Weeks

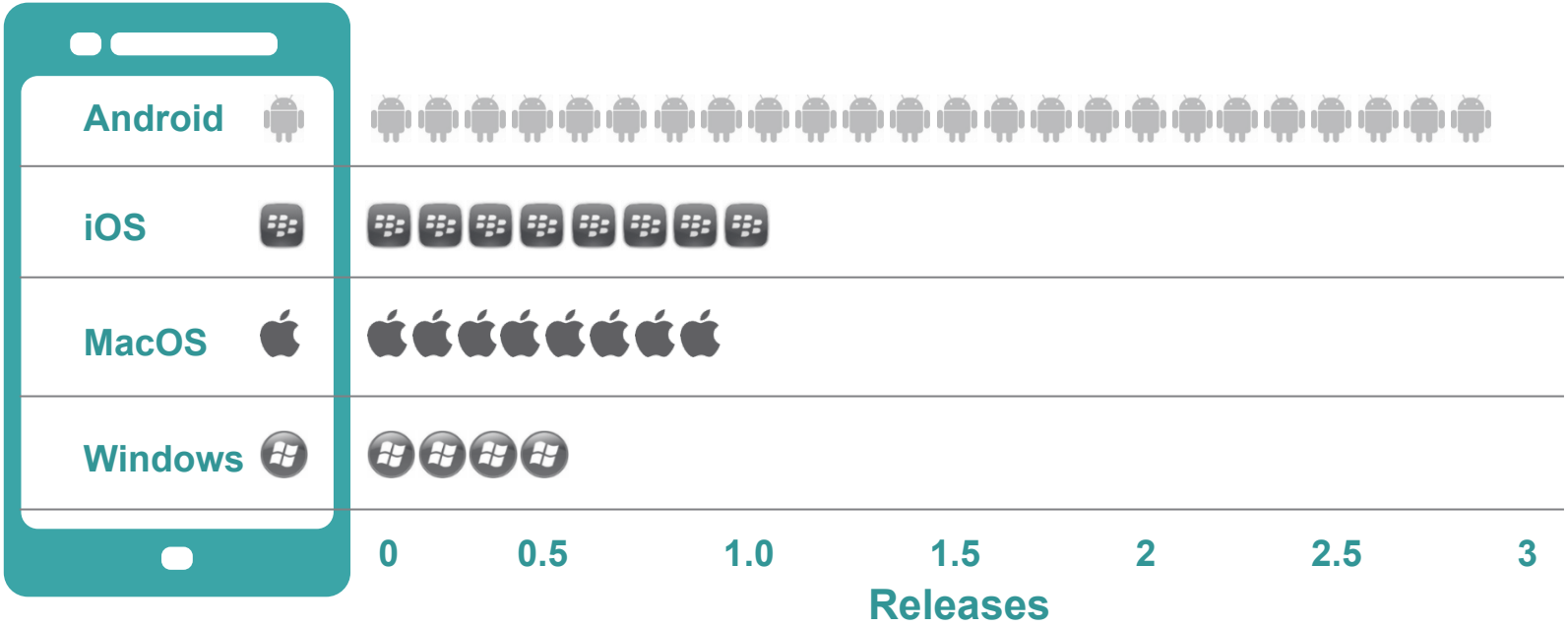
Phone Device lifecycle



18 Months

Rapid Pace of Evolution

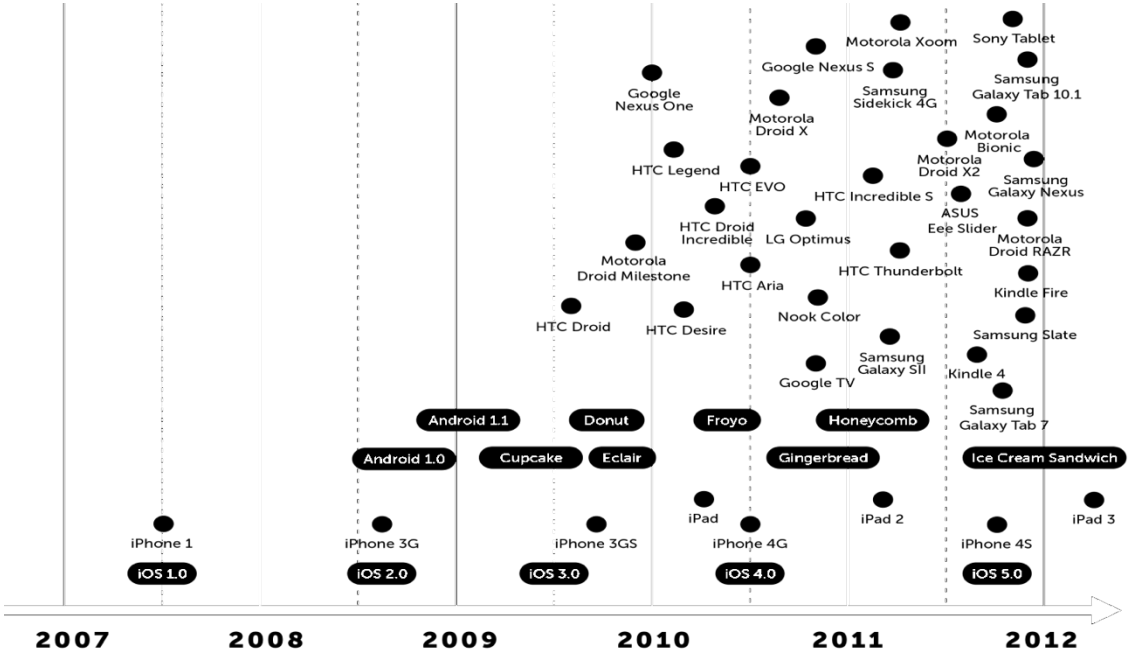
Average Number of OS Releases per Year

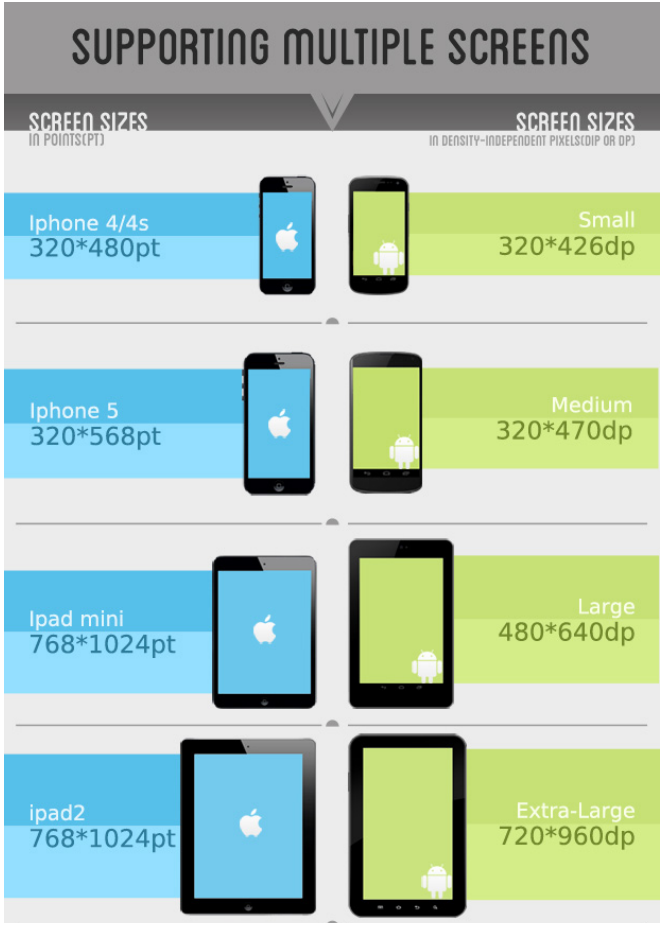


Source: Ship dates obtained from wikipedia.org

New Paradigm for User Interaction

Increasing Complexity





Source: dates from wikipedia.org; screen images courtesy of http://theappentrepreneur.com/

Part of an Ecosystem, not a Standalone Device

Challenges Facing Mobile App Developers

Distinct presentation style, interaction style and software stacks

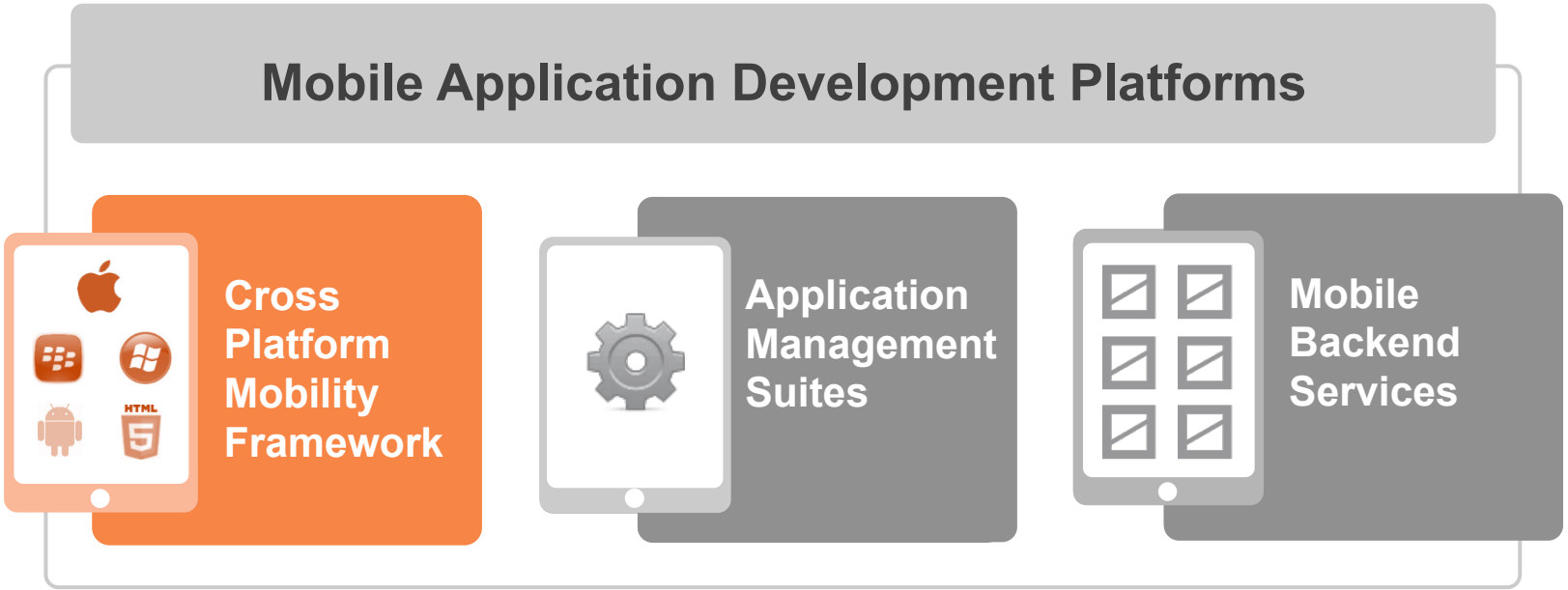
Varying screen-sizes and hardware capabilities

Rapid OS and device upgrade cycles

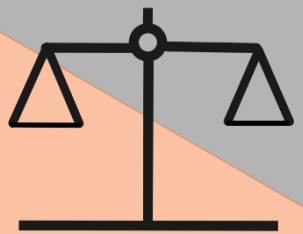
Optimized apps for varying usage scenarios

Rapidly evolving standards based on usage trends

MADP | Cross Platform Mobility Frameworks



Application Development Approaches

Browser Based	Cross Platform Frameworks	Native Toolkits
Code once Compile **once** Deploy **once**	Code once Compile **many** Deploy **many**	Code many Compile **many** Deploy **many**
• Universal platform support • Well established web technologies • Lacks access to Native features • Centralized application hosting		• Supports single platform • Experience optimized for the target platform • Full access to Native Capabilities • Publish and distribute

Cross Platform Frameworks

Hybrid Cross-Platform

- **Reliant on HTML5** based frameworks for rendering UI
- Provides a bidirectional **Native to JavaScript bridge** for platform feature access

Native Cross-Platform

- **Orchestrates** the **Native Object Model** through a common high level language (e.g. JavaScript, C++ / C#, etc.)
- Access to Platform specific Object Model, allows the app to render a **truly native user interface**, and **device capabilities**

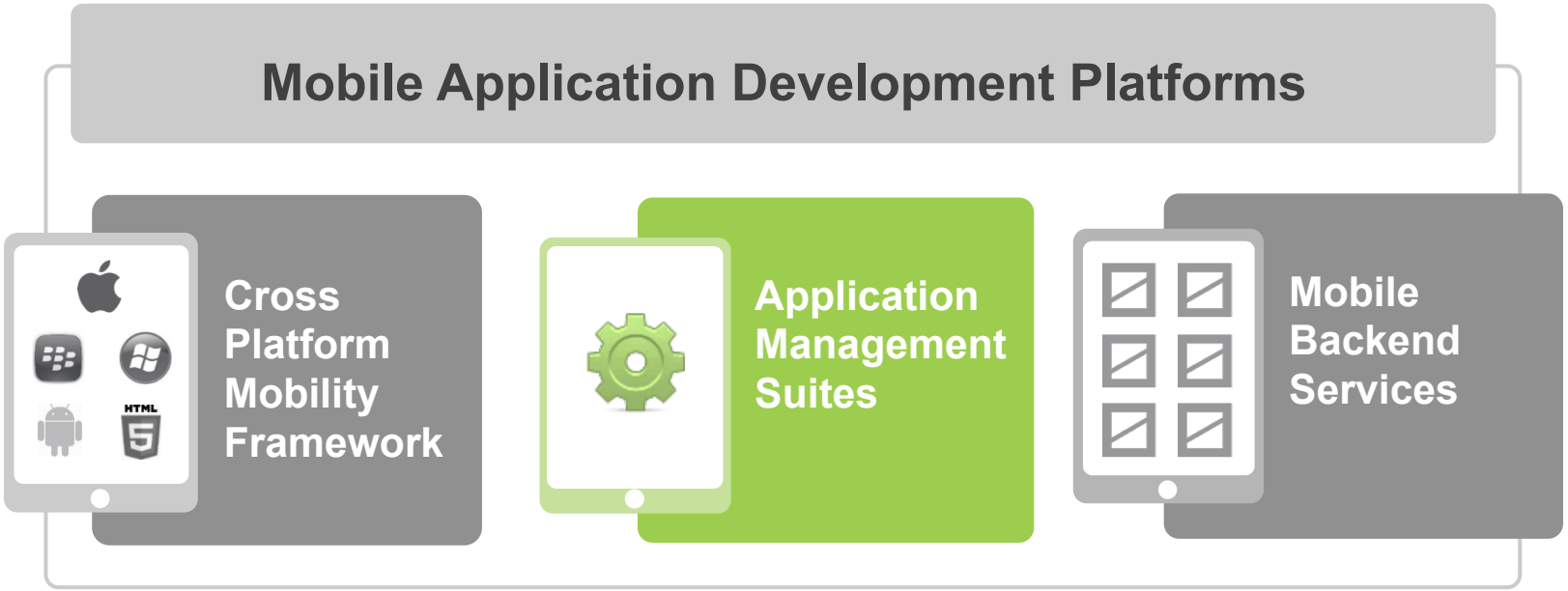
Which Path to Take | Considerations

Value of Platform Agnostic Approach

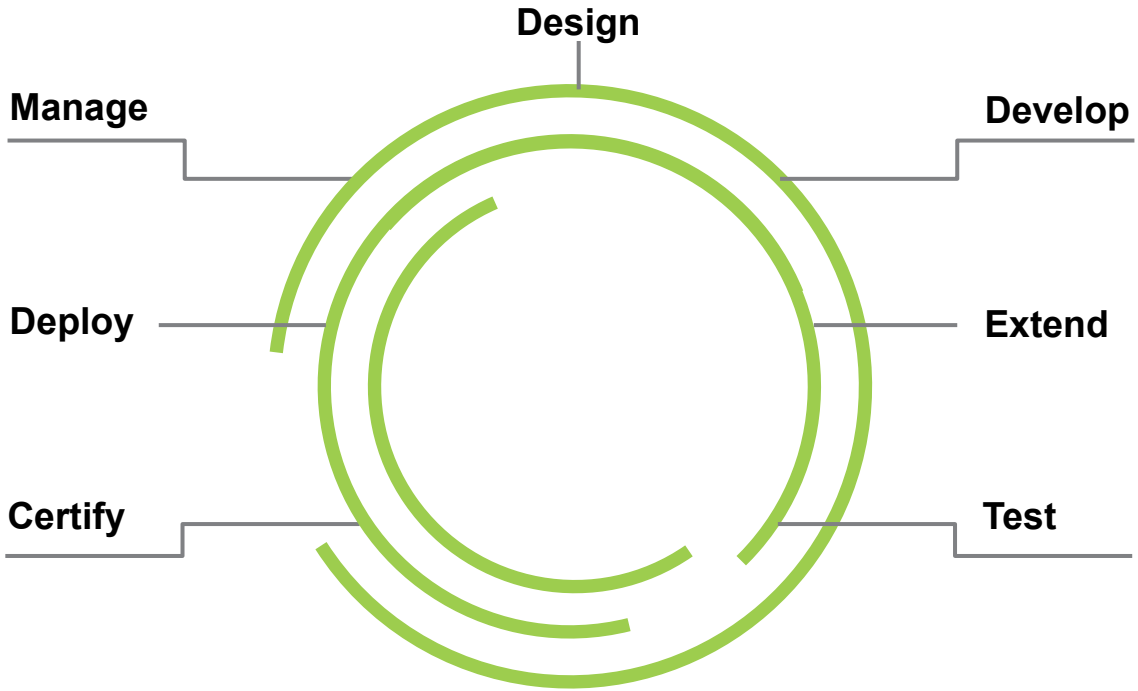
Value of Platform-Specific Approach

	Inform (Brochureware)	Engage (Interact)	Transform (New Services)
Business Goal			
Device Class	Smartphone	Smartphone Tablet	Smartphone Tablet Embedded / M2M Smart TVs
Number of Apps	1	2-3	10+

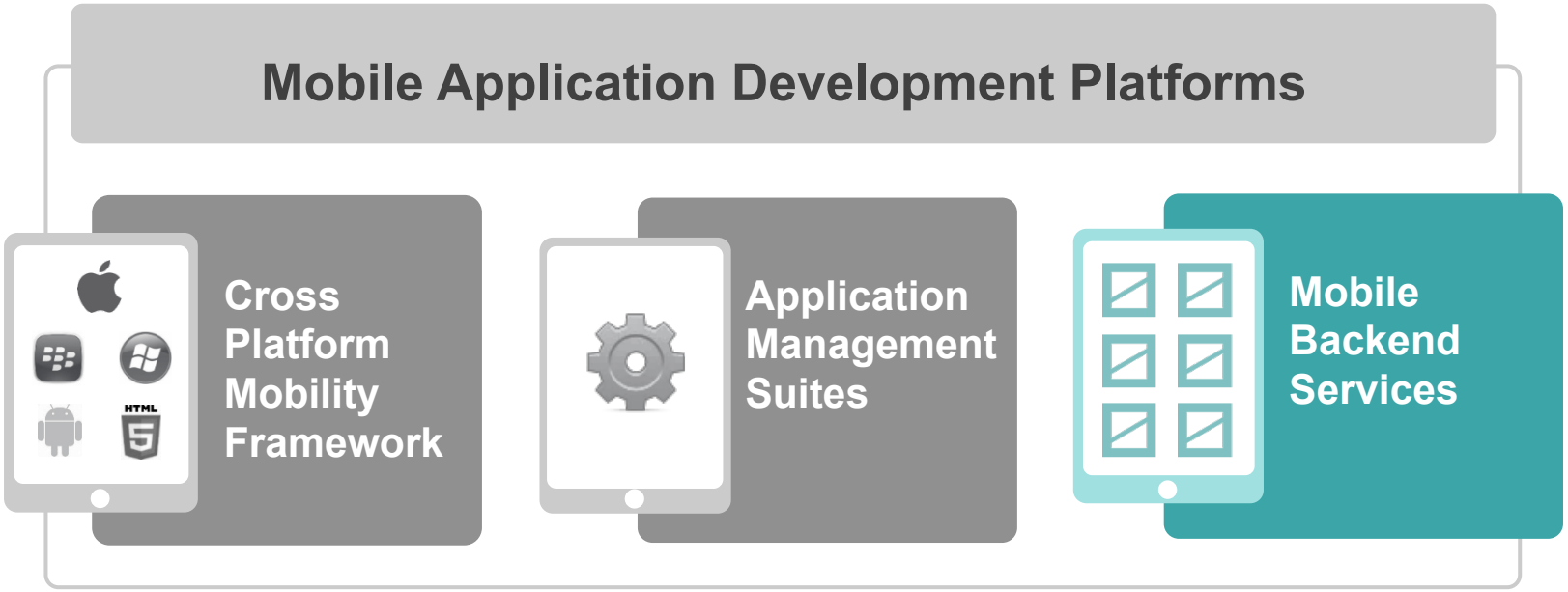
MADP | Lifecycle Management Suite



Mobile Lifecycle Management Tools



MADP | Mobile Backend Services



Mobile Backend Platforms

Reduce Complexity

- Focus on creating great experiences
- Leveraging existing APIs and frameworks
- Automate infrastructure provisioning (MBaaS)

Rapid Scaling

- Autoscale capabilities
- Manage concurrency traps
- Optimize performance continuously

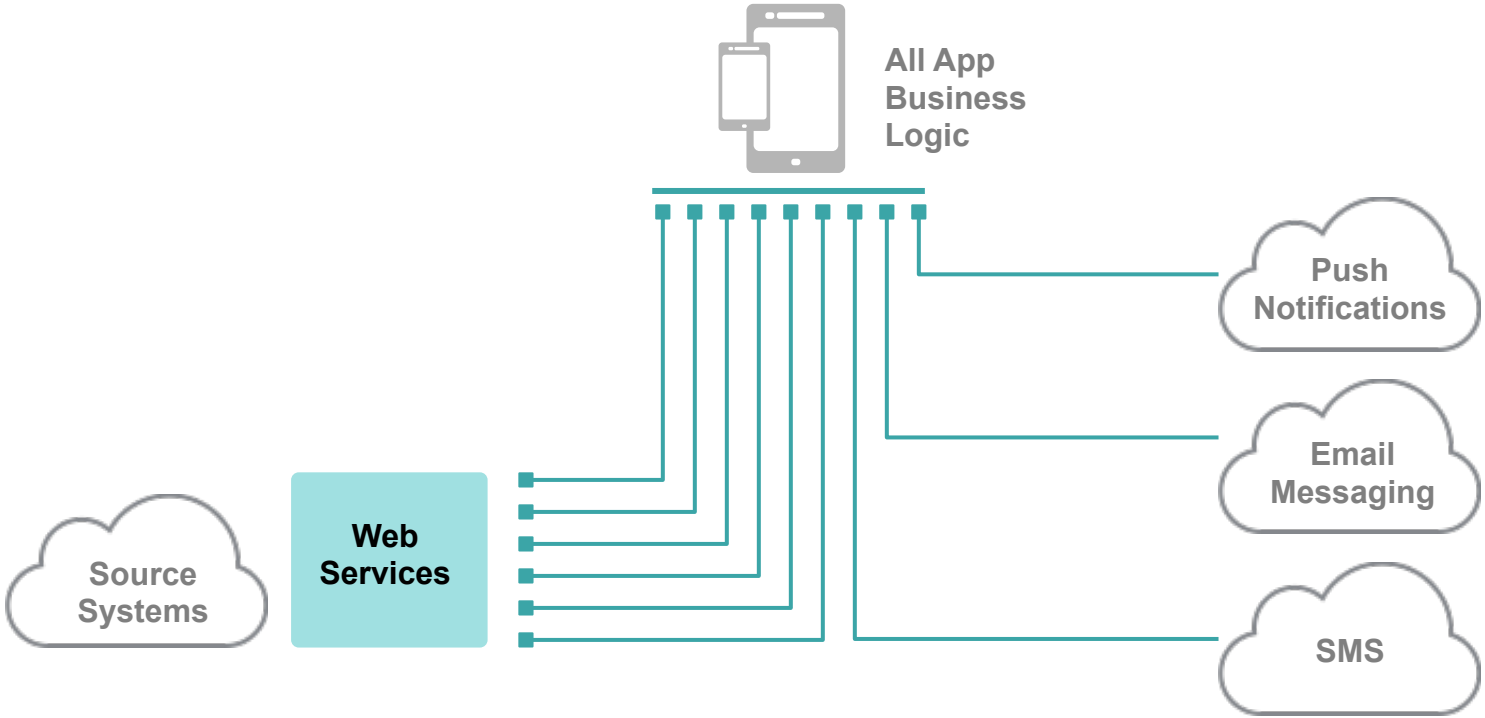
Data Integration and Synchronization

- Optimize data for mobile consumption
- Align with MDM strategy

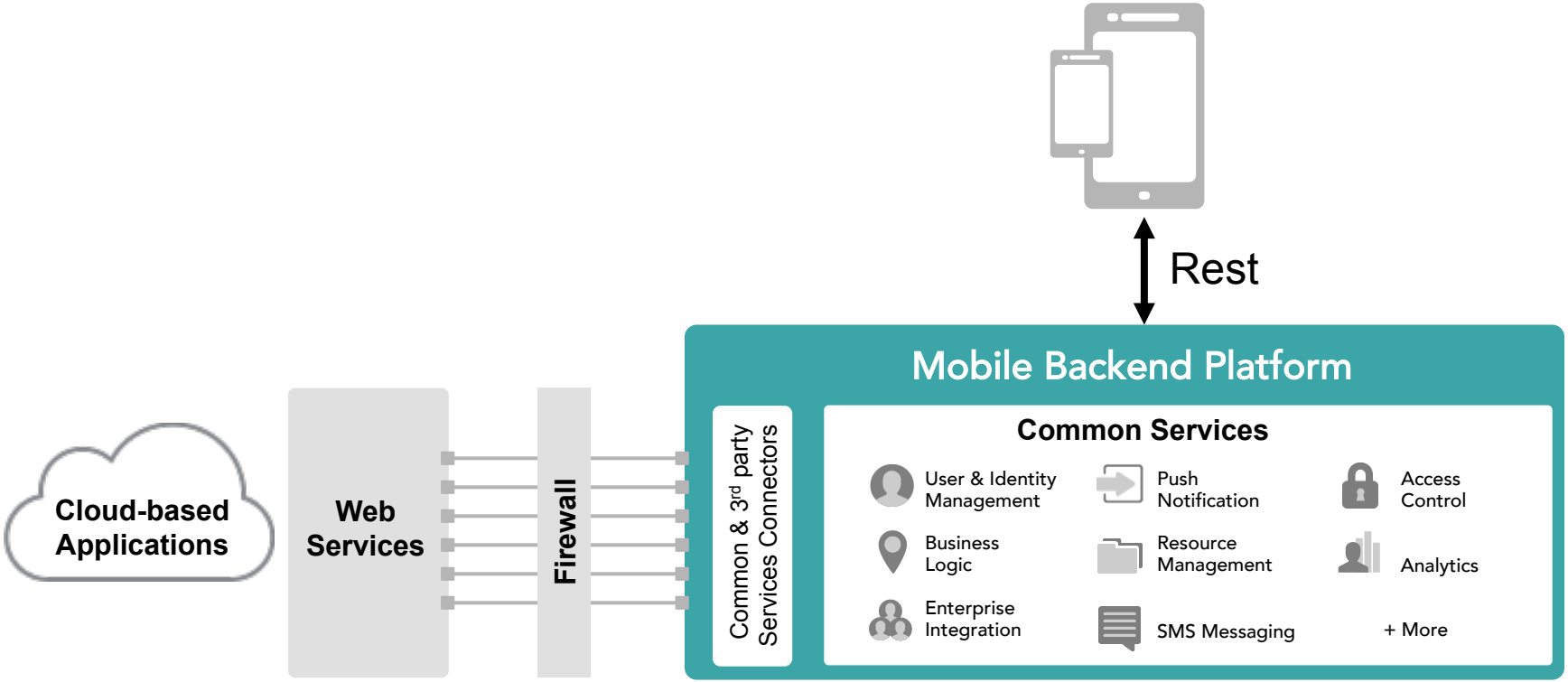
Track and Measure

- Log business events
- Collect and visualize integrated metrics across apps

Traditional Architecture



“Mobile-First” Architecture



Common Enterprise MBaaS Services

- User Management
- Business Logic Workflow
- Data Persistence
- Enterprise App Integration
- Database Connectors
- Push Notifications
- SMS

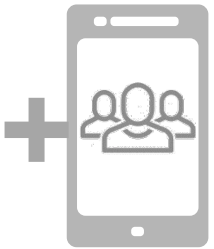
- Object Relational Modeling (data virtualization)
- Administrative Console
- Version Management
- Environment Management
- Cloud and On-Premise Deployment Options

Lean Application Development Roadmap

Start lean, with minimum viable product (MVP)

Leverage development frameworks

Continue to improve and introduce new features



- Evolve features
- Continue to invest
- Add platforms and people

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**

Source: Forrester Research

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

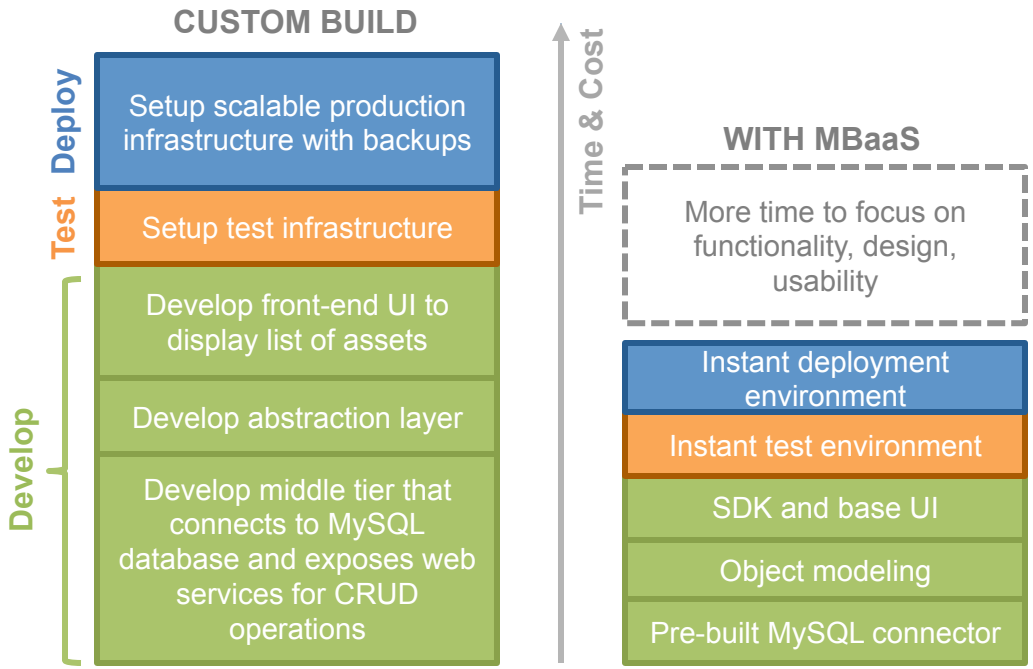
Development frameworks must ***complement native tools***

Focus on App Functionality, not the Plumbing

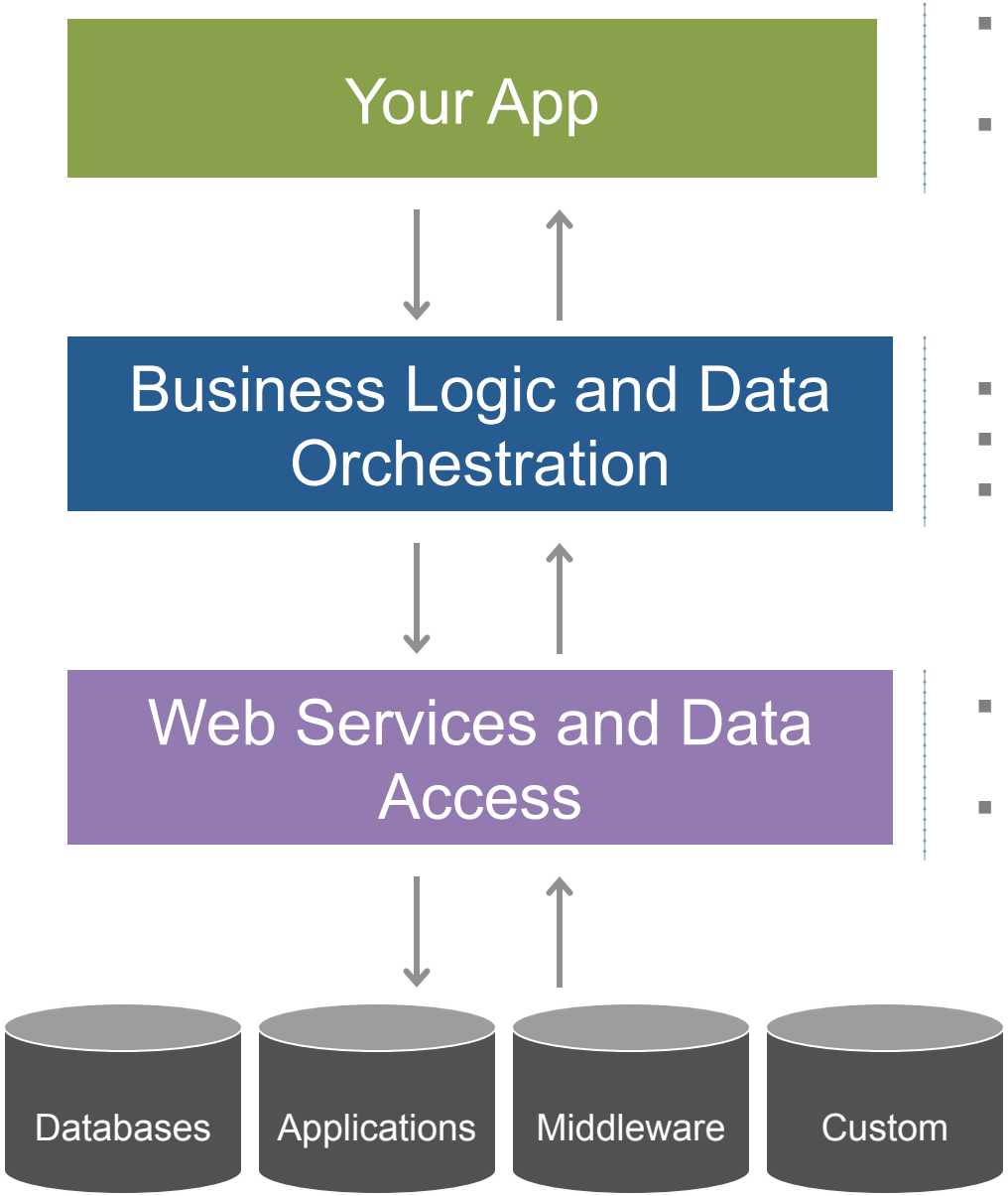
An MBaaS approach **reduces time, cost, and risk** across several stages of the app development lifecycle

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



- Support Multiple Devices
- Enable Custom User Experiences

- Organize Information
- Define App Logic
- Manage App Security

- Create Access to Data and Systems
- Manage Usage

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

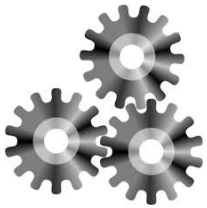
Application Services and Connectivity

- 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

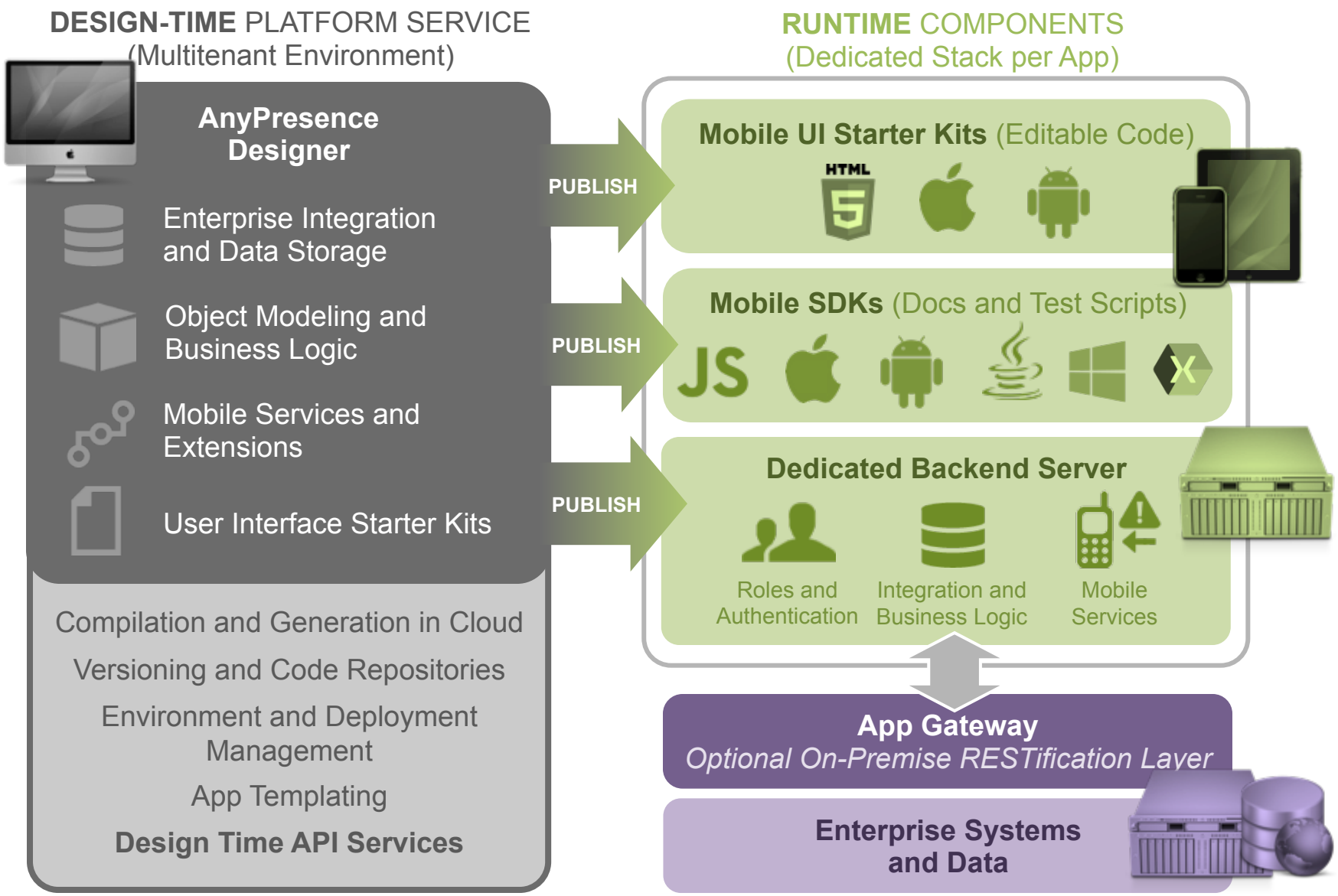
On-Premise RESTification Layer (Coming Soon)



- 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

Independent MBaaS Technical Evaluation

In-depth AnyPresence review: http://bit.ly/1waE9rJ

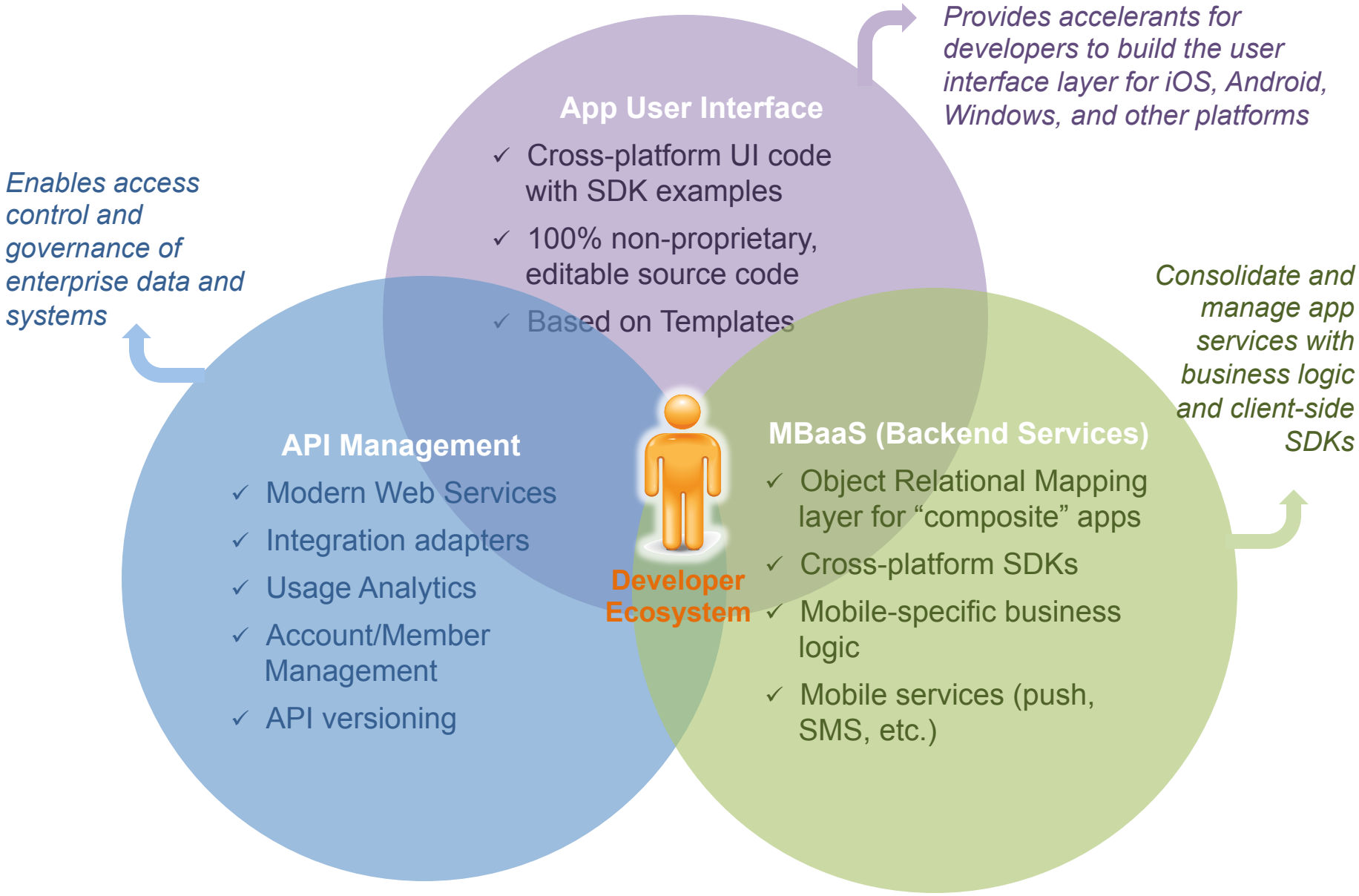
InfoWorld Scorecard	Integrations (20%)	Client support (20%)	Value (10%)	Back-end services (20%)	Ease of use (20%)	Monitoring (10%)	Overall Score
AnyPresence (InfoWorld Editor's Choice)	10	9	9	9	9	8	9.1 ★★★★★
FeedHenry 3	9	9	8	9	8	8	8.6 ★★★★½
Kinvey	7	9	9	9	8	8	8.3 ★★★★½
Appcelerator Platform 2.0.0	7	8	7	8	8	9	7.8 ★★★½

"AnyPresence… offers more value than these competitors for enterprises that need to integrate their existing systems with mobile applications. It is especially valuable for enterprises that wish to expose their APIs to partners..."

Martin Heller,
Contributing Editor,
InfoWorld

InfoWorld

Summary: Modern App Infrastructure for Agile IT



Thank You! Questions?

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