



DEVELOPER-CENTERED | ENTERPRISE-FOCUSED | FUTURE-READY

# CURRENT BEST PRACTISES FOR BUILDING ENTERPRISE MOBILE APPLICATIONS

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**RHOMOBILE SUITE**  
IT'S ALWAYS WHAT'S NEXT

# DIFFERENCES BETWEEN ENTERPRISE AND CONSUMER APPS



- Focus is on productivity
- Need to help complete tasks more effectively and efficiently
- Design is often secondary
  - Compare with Stripe.com or MailChimp for well designed enterprise applications
- Enterprise app developers have less 'wiggle room' when considering design
- Involve customers



# HOW DO WE MEASURE PERFORMANCE?

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Focus is on productivity

- Time spent navigating
- Time user spends interacting on screen
- Latency of app reactions
- Latency of device capabilities
- Data download time
- App startup time



# TOP WAYS TO BUILD PERFORMANT APPS

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- Local data
- Use asynchrony well
- Use context
- Flatten the app
- Simplify app scope
- Use libraries appropriately
- Rapidly iterate on bottlenecks





# PROVIDE LOCAL DATA

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- Where are your users “watching the dial”?
  - Most often we see is “waiting for download / data”
- You don’t have to do it this way
  - Use background threads to sync data ahead of time
  - Data is ready and waiting for user
- Why doesn’t every app work this way?
  - Building your own sync is difficult
  - Sync servers can be complex and expensive
- Benefits to user in performance
  - Data is available whenever user wants it
  - Side benefit: its also available when offline





# USE ASYNCHRONY WELL

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- Never block waiting for a device
- Try not to block waiting for data
  - In most usage this occurs
- Always use callbacks
- Avoid time intensive work in the callback itself
- Always keep user experience and use cases at the forefront of design





# USE CONTEXT

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- Use GPS location to pick neighborhood, city, state
- Use date and time to always set default values
- Use contacts to allow easily picking other people and users
- Use pictures from device for any descriptive information





# FLATTEN YOUR APP

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- Older mobile apps are “CRUD viewers”
  - List the objects
  - Drill down on object
  - Edit/update/delete object
- This style is now dated... NOW
  - Avoid the drilldown metaphor when possible
  - List all objects and allow in-place editing without leaving main navigation
- Remember: vertical scrolling is now good







# SIMPLIFY APP SCOPE

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- Apps should focus on a single “business object” & a handful of tasks
- Smaller mobile apps have faster startup
- Users don’t need a “top level navigation item”
- Consider top level as map or graphic metaphor
- Examples:
  - Field service: Top level map of jobs
  - CRM: Map of customers nearby





# USE LIBRARIES APPROPRIATELY

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- Most JavaScript libraries were designed for desktop web
  - Don't blindly use them on mobile
- “Modern” JS frameworks (Angular, Backbone, Ember) are designed for absolute latest devices
  - Don't use them on WM or CE
- Possible to create bad experiences even on the latest consumer devices



# RAPIDLY ITERATE ON BOTTLENECKS

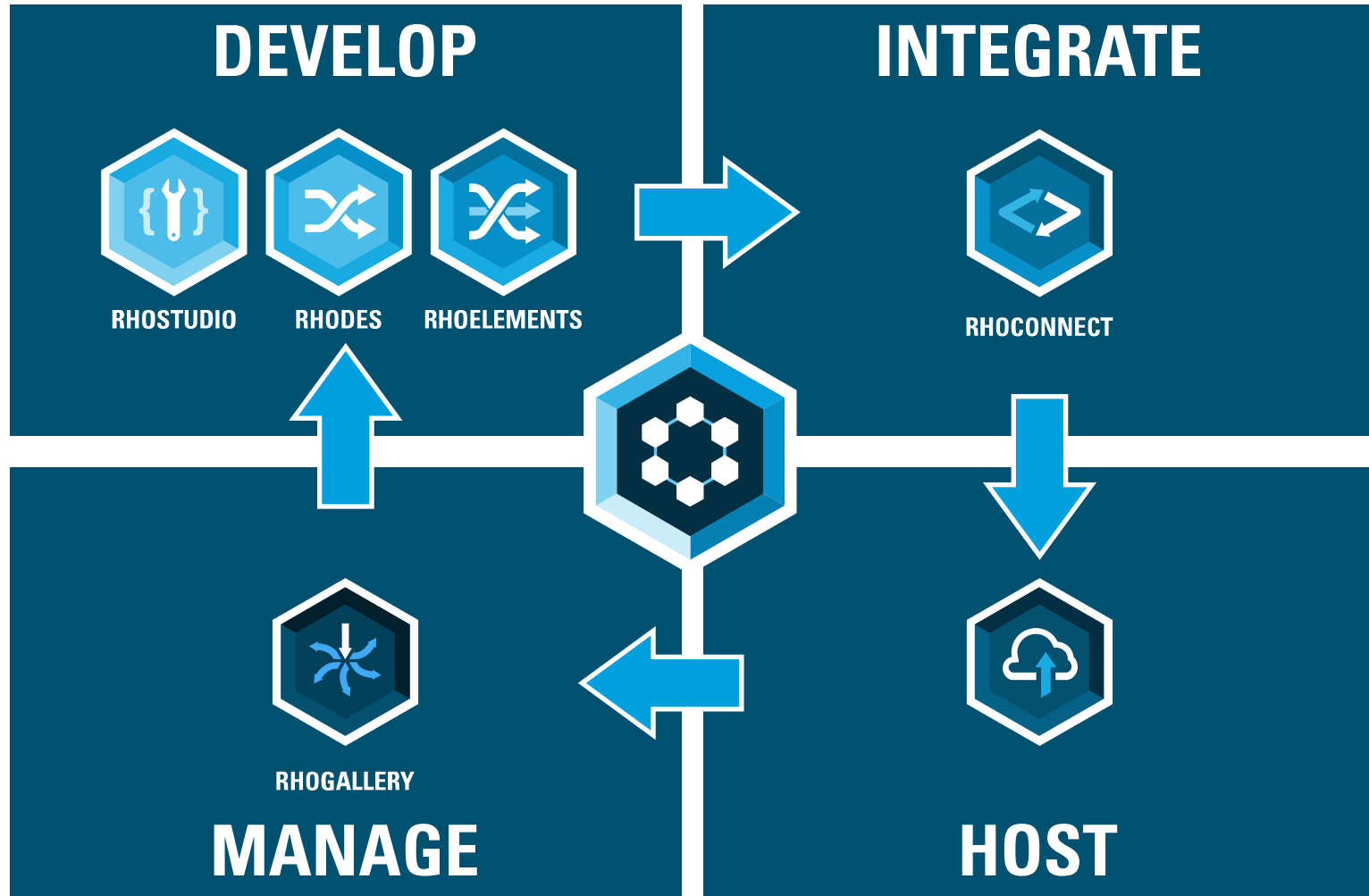
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- Very difficult on Android
  - Consider using something like RhoSimulator with almost instant response time
- Use a tool with an IDE and interactive debugger
  - Doesn't apply to all Cross platform frameworks
- Logging vs. Debugging



# RHOMOBILE SUITE SIX COMPONENTS





# RHOMOBILE SUITE

## TOP 5 KEY PRODUCT THEMES, FEATURES AND BENEFITS



### PORTABILITY

True write once, run anywhere capability on all major mobile computers, smartphones and tablets (including iOS, Android, Windows)



### WEB SKILLS

Build native apps using HTML 5, CSS and JavaScript or Ruby. The only cross platform framework with a Model View Controller pattern and Object Relational Mapping for complex, information-centric apps.



### EXPLOIT DEVICE CAPABILITIES

A single set of APIs that extend across all device types and operating systems. Access GPS, PIM data, camera, mapping, barcode, signature capture, NFC/RFID.



### SECURITY

Automatically encrypt data on the device. The only application development framework with PKI encryption.



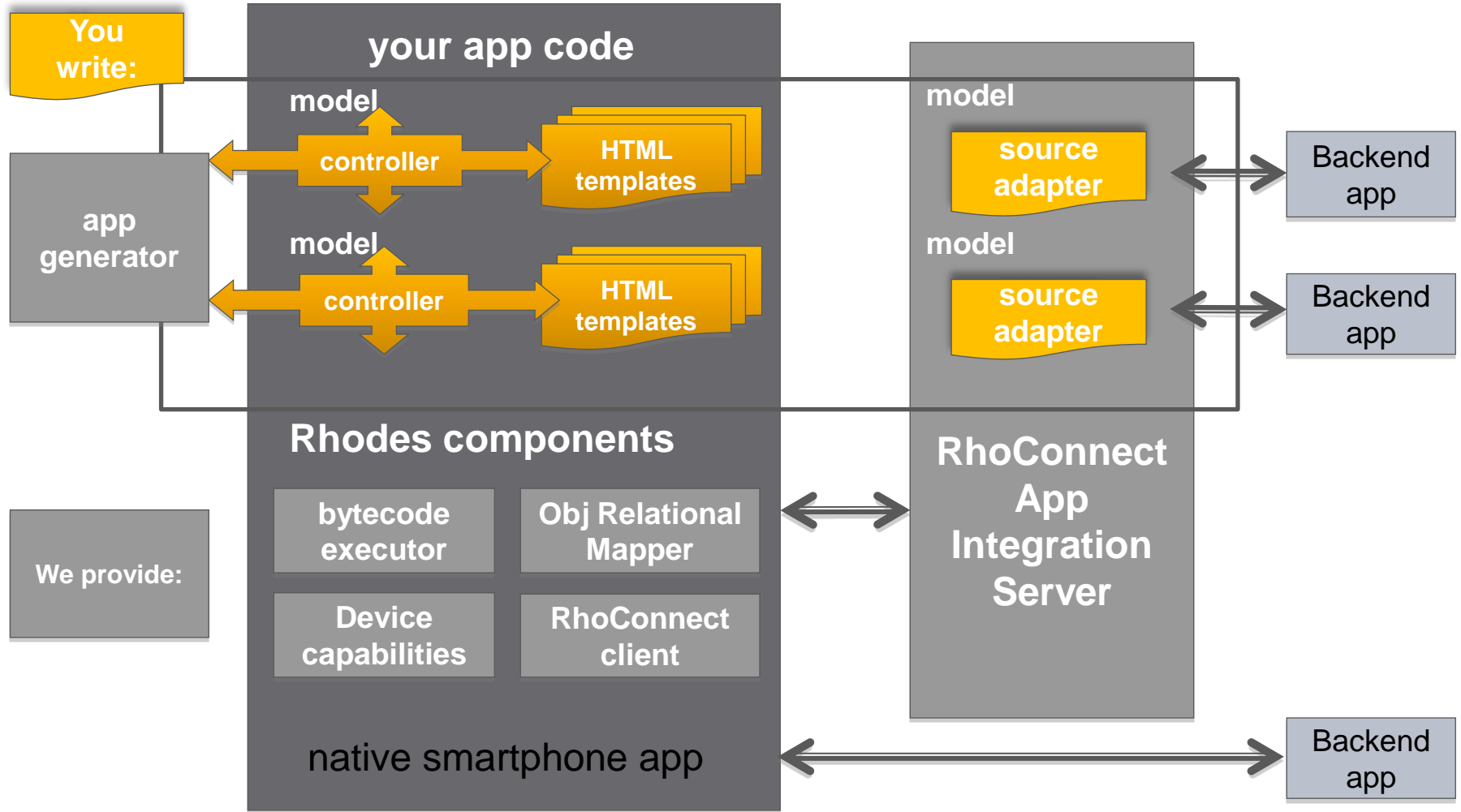
### OFFLINE DATA

Automatically sync devices. Uses robust SQL data storage locally on device.





# RHOELEMENTS ARCHITECTURE



# **RHOMOBILE SUITE 5.0**

## ***SIMPLIFYING WITH THE CLOUD***

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- **Simple, clear, and transparent pricing and licensing**
  - The simplest and most transparent in the industry
- **Cloud build everywhere**
  - Massive server upgrades
  - Support for recent releases
  - Command line and RhoStudio cloud build
- **RhoConnect oriented to cloud components**
- **The cloud is central now to all components**
  - So RhoMobile.com replaces rhohub.com
  - Everyone purchases and uses rhomobile.com





# RHOMOBILE SUITE PRICING

## Choose a plan

Free  
\$0/month

Silver

\$299/month  
\$2,995/year  
(free for 30 days)

Gold

\$999/month  
\$9,995/year  
(free for 30 days)

RhoStudio



Rhodes (local build)



RhoElements



Cloud Build



Visual Studio Plug-in



Sync (RhoConnect)

1,000 Devices

Unlimited

Push Notifications

1,000 Devices

Unlimited

App Management (RhoGallery)

1,000 Devices

Unlimited

Support

1 Day Response

4 Hour Response (24/7)

Sign Up

Sign Up

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As your coupon code when signing up for a developer account to receive a **25% discount**

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# SMART, MODERN APPS WITH RHOMOBILE



# THANK YOU

