IBM SolutionsConnect 2014

A New Era of Smart

March 13, 2014 | EDSA Shangri-La Hotel

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MobileFirst in Action: Fresh Concepts in Mobile Application Development

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IBM Singapore

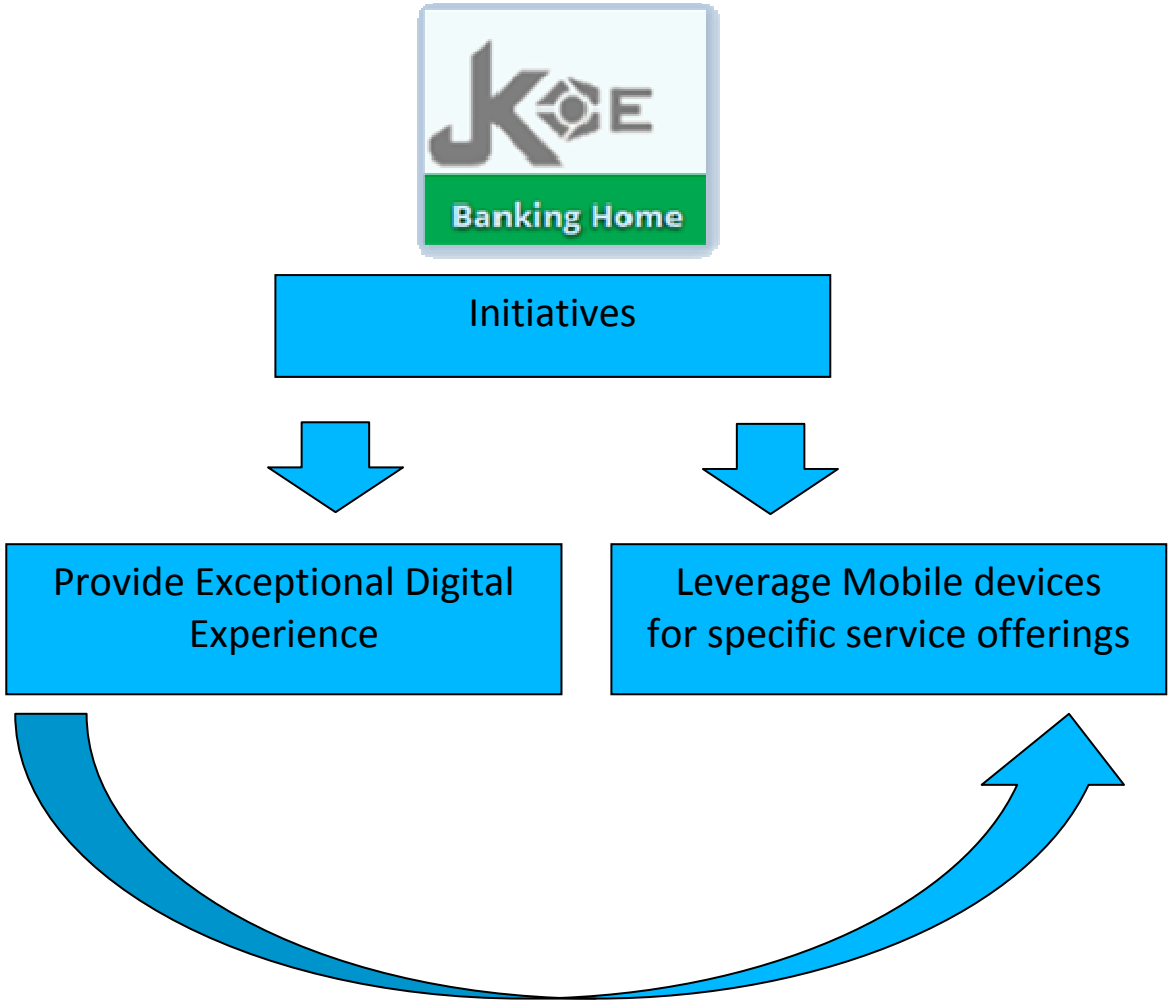
Poll Question – 1

Do you have a mobile content strategy?

A. Yes
B. No
C. We are going to have one soon.

Scenario Context

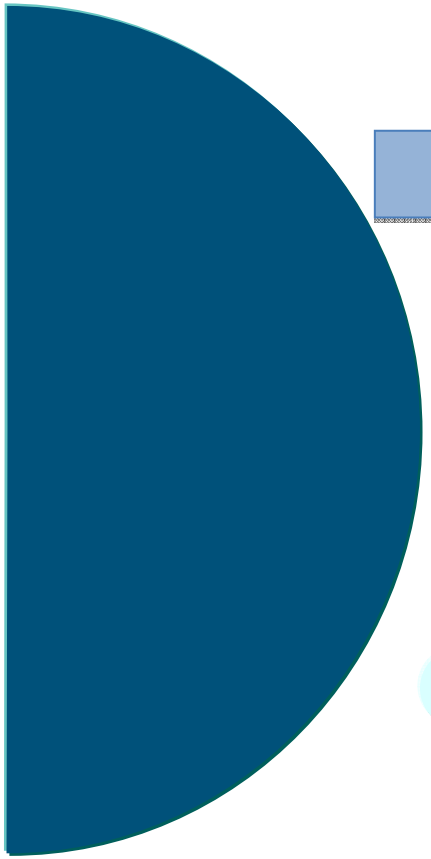
- JKE Bank is a global financial institution serving clients across the world.
- JKE Bank provides a set of web-based, self-service applications, enabling its customers to access account information and other important services, minimizing the need to contact a call center or walk into a branch
- JKE Bank would like to build it's brand image by revamping the digital experience on all their channels
- JKE is embarking on a transformation program to provide exceptional digital experience to their customers
- This would involve creating great user experience on their web portal, regardless of form factor, as well as offer specific services leveraging inherent capability of mobile devices



Continuously Build and deliver application

JKE Banks primary initiatives

- Provide **Exceptional Digital Experience** to its customers and staff on multiple channels
- **Build interactive and responsive** applications that it can deliver to the market faster, better and cheaper
- **Continuously deliver** the experience which the user wants



1 ***Mobile Analytics***

2 **Responsive UI Design**

3 **Mobile Application Delivery**

Poll Question -2

How do you know if your customers are struggling with your web or Mobile App ?

A. Don't Know
B. Call center complaints
C. Social Media complaints
D. Poor rating and comments

A Day in the Life of Customer Experience Management…

- Catherine is a world class marketeer who works for JKE Bank. She serves in the bank's eChannels division.
- Catherine leads a team that recently started promoting its banking services portal on tablet devices.
- Catherine sources most of the marketing execution and support of the bank's public websites and social media to digital agencies.
- JKE Bank, with the help of its agency, made the decision to *leverage its standard web portal for tablet audiences*, as well

A Day in the Life of Customer Experience Management…

- Catherine receives an email which alerts her to a mounting problem with the bank's tablet users.
- Catherine turns to her dashboard and drills down on the issue that indicates customers are increasingly spending an *unusually long time on the website but failing at trying to login*.
- As she replays and employ usability analytics features, *Catherine detects struggle using the heat map and scroll map overlays on the pages.*

A Day in the Life of Customer Experience Management…

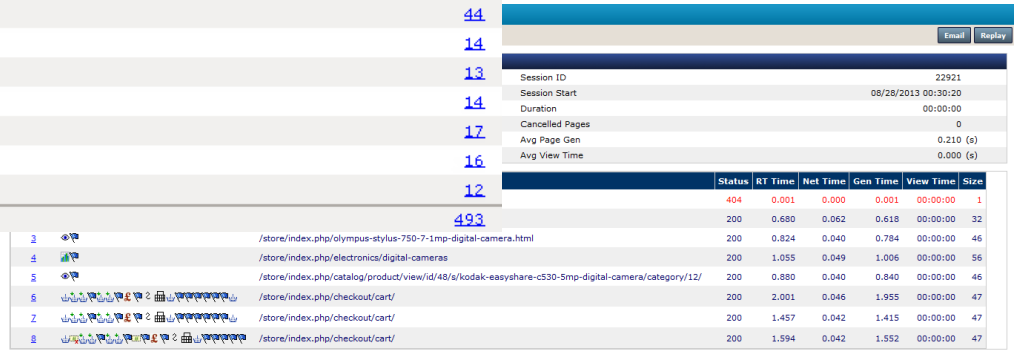
- She sees that users are repeatedly failing at the login screen. Next, Catherine observes that most of these users are also ultimately not scrolling to the area where the log-in error message is located because the user is zoomed in too tightly.

- Catherine then is able to isolate the issue to a segment of users for which the usability and content layout is not optimized for tablet experiences, especially mini tablet form factors.

A Day in the Life of Customer Experience Management…

- Catherine determines this is a worthwhile issue to fix based on the inordinately high number of users affected.
- She has the system email a sample offending session to Peter, the website project manager with one of the bank's digital agency.
- Peter then accesses the replay and proceeds to redesign the page for a more optimal experience on tablets based on access to qualitative behavioral analytics.

Global Error Page	No	18
Global Error Page	Yes	16
Unknown Obstacle	No	329
Unknown Obstacle	Yes	44
Slow Response Time	No	14
Slow Response Time	Yes	13
Status Code Error	No	14
Status Code Error	Yes	17
Unhandled Exception	No	16
Unhandled Exception	Yes	12
Totals		493



Collaborate by email sample offending sessions to IT

Report > Session List > Page List

Email Replay

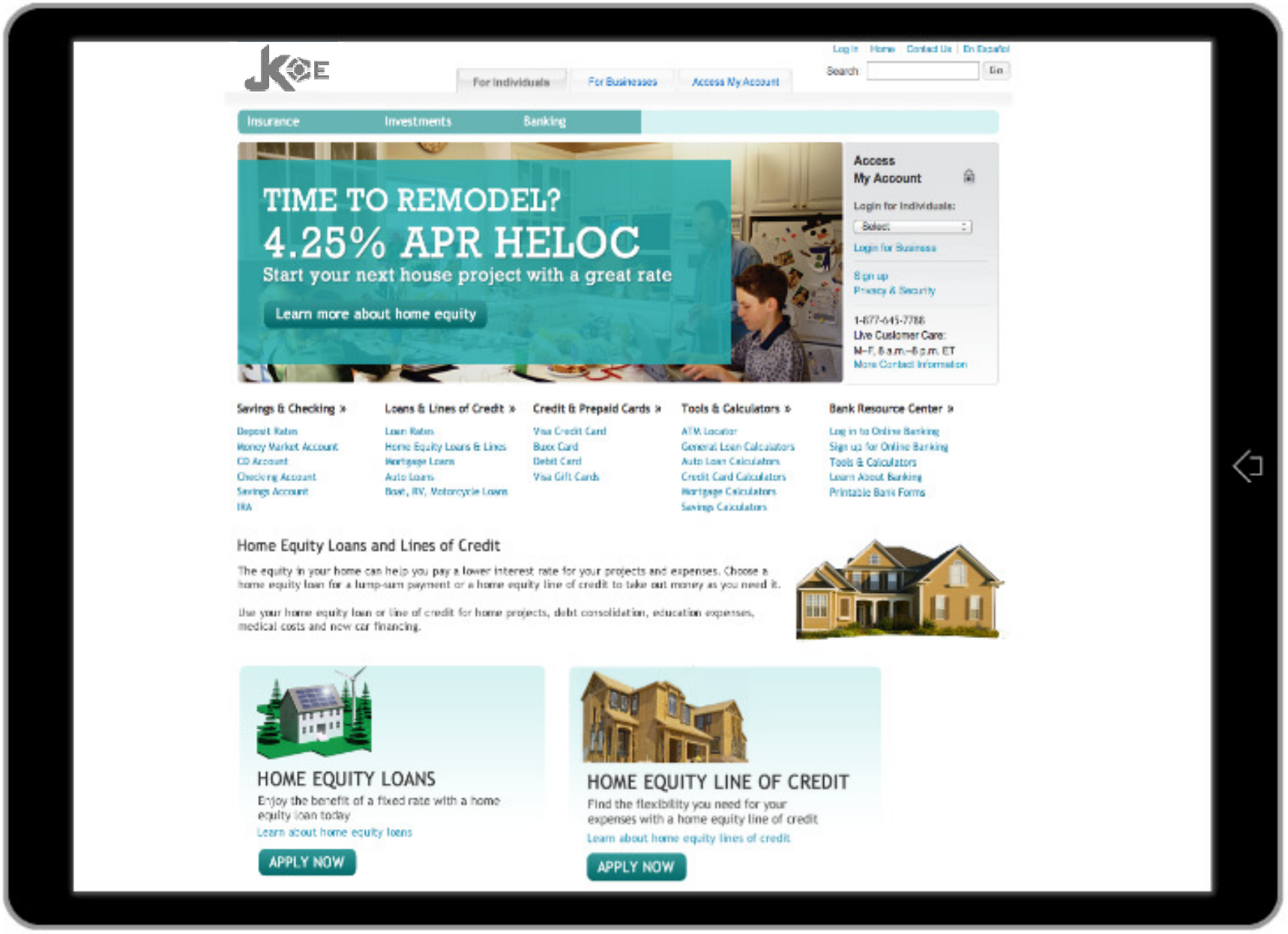
Show query strings

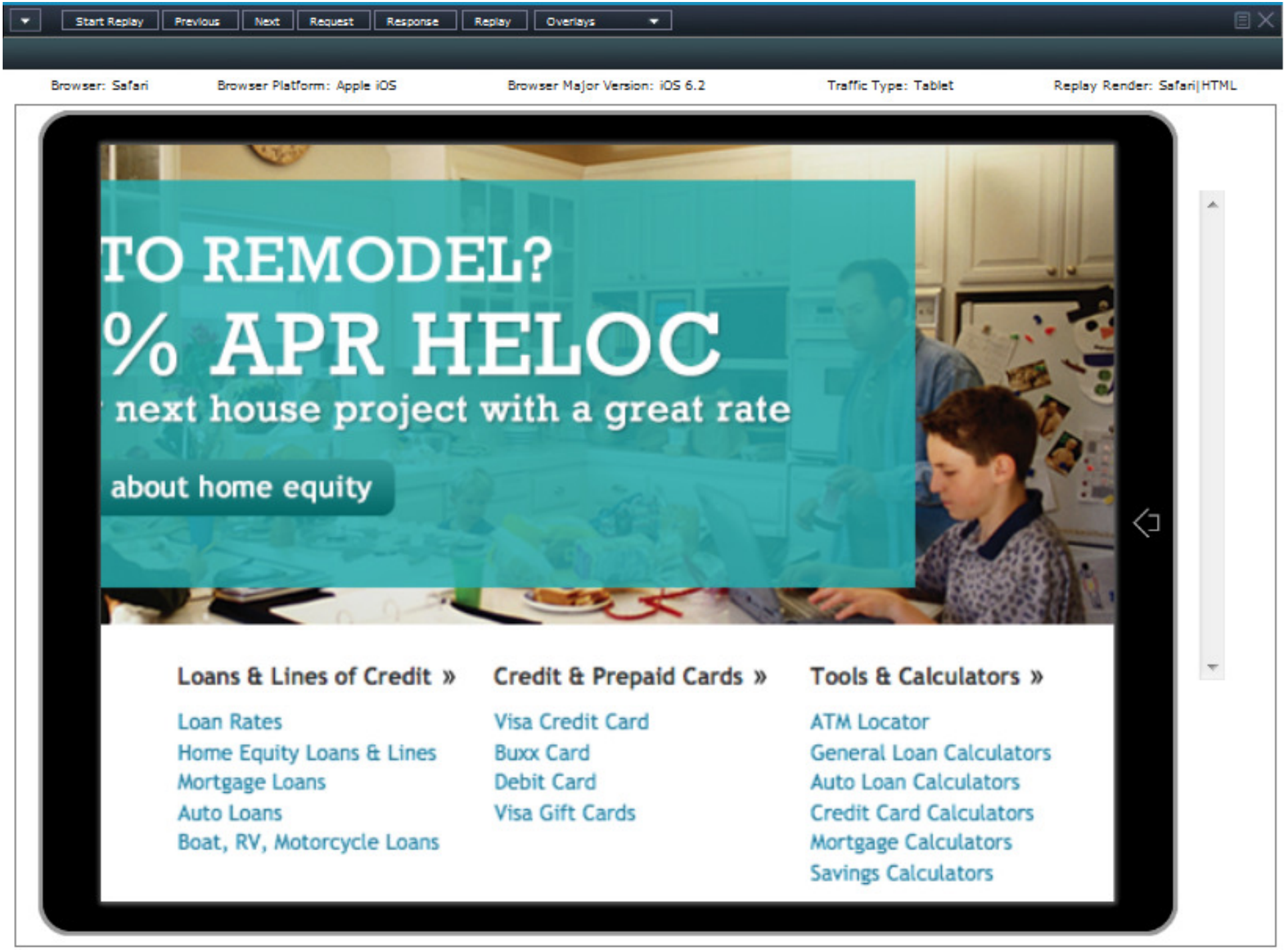
Session Summary			
TLTSID	3ECE27EB63405EA03DFE570DA44D9074	Session ID	22921
Page Count	8	Session Start	08/28/2013 00:30:20
Total Events	73	Duration	00:00:00
Connection Type	DSL	Cancelled Pages	0
Avg Round Trip	0.218 (s)	Avg Page Gen	0.210 (s)
Avg Network Trip	0.000 (s)	Avg View Time	0.000 (s)

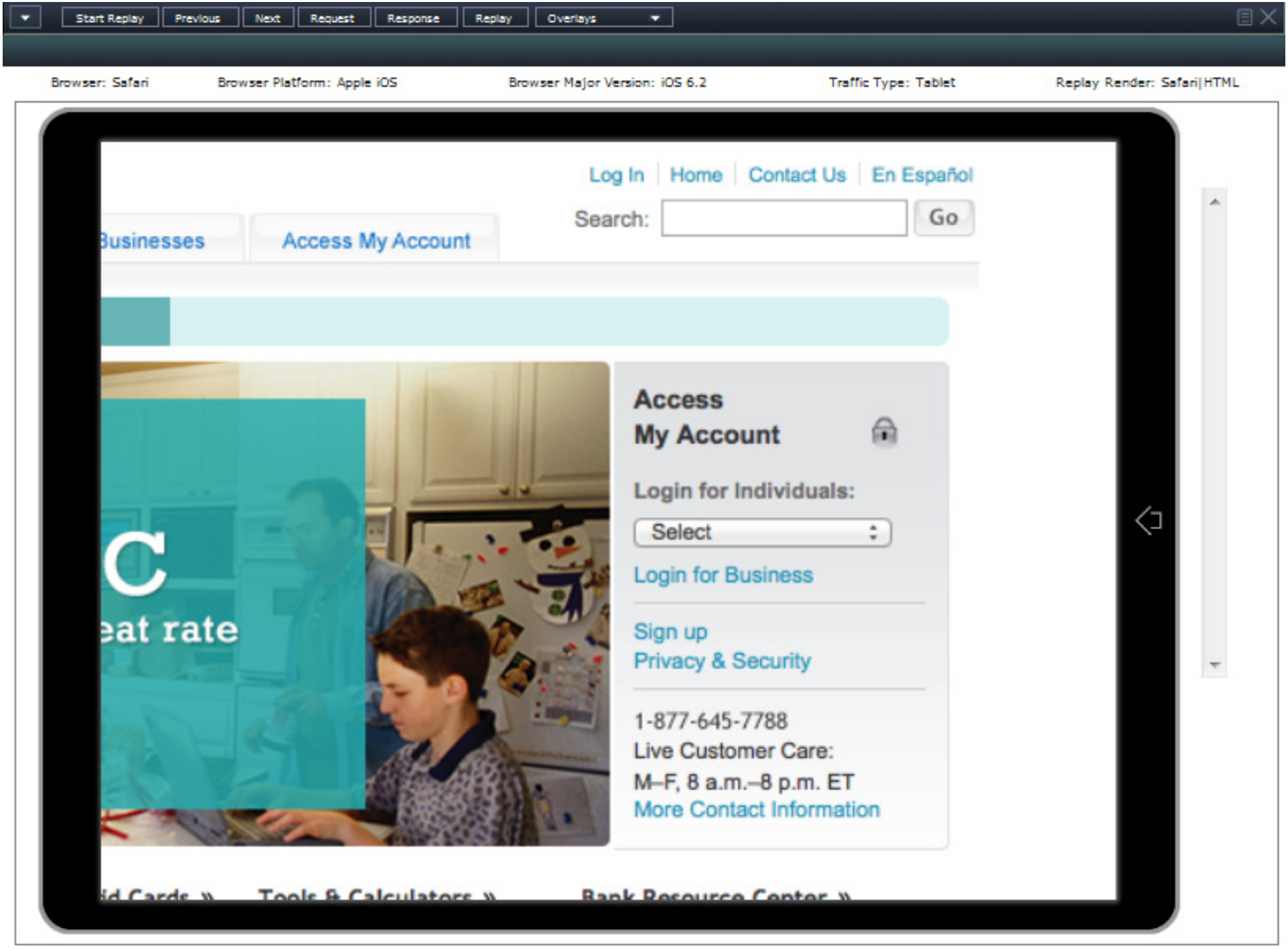
Page	Events	URL	Status	RT Time	Net Time	Gen Time	View Time	Size
1		/spholiday	404	0.001	0.000	0.001	00:00:00	1
2		/store/	200	0.680	0.062	0.618	00:00:00	32
3		/store/index.php/olympus-stylus-750-7-1mp-digital-camera.html	200	0.824	0.040	0.784	00:00:00	46
4		/store/index.php/electronics/digital-cameras	200	1.055	0.049	1.006	00:00:00	56
5		/store/index.php/catalog/product/view/id/48/s/kodak-easyshare-c530-5mp-digital-camera/category/12/	200	0.880	0.040	0.840	00:00:00	46
6		/store/index.php/checkout/cart/	200	2.001	0.046	1.955	00:00:00	47
7		/store/index.php/checkout/cart/	200	1.457	0.042	1.415	00:00:00	47
8		/store/index.php/checkout/cart/	200	1.594	0.042	1.552	00:00:00	47

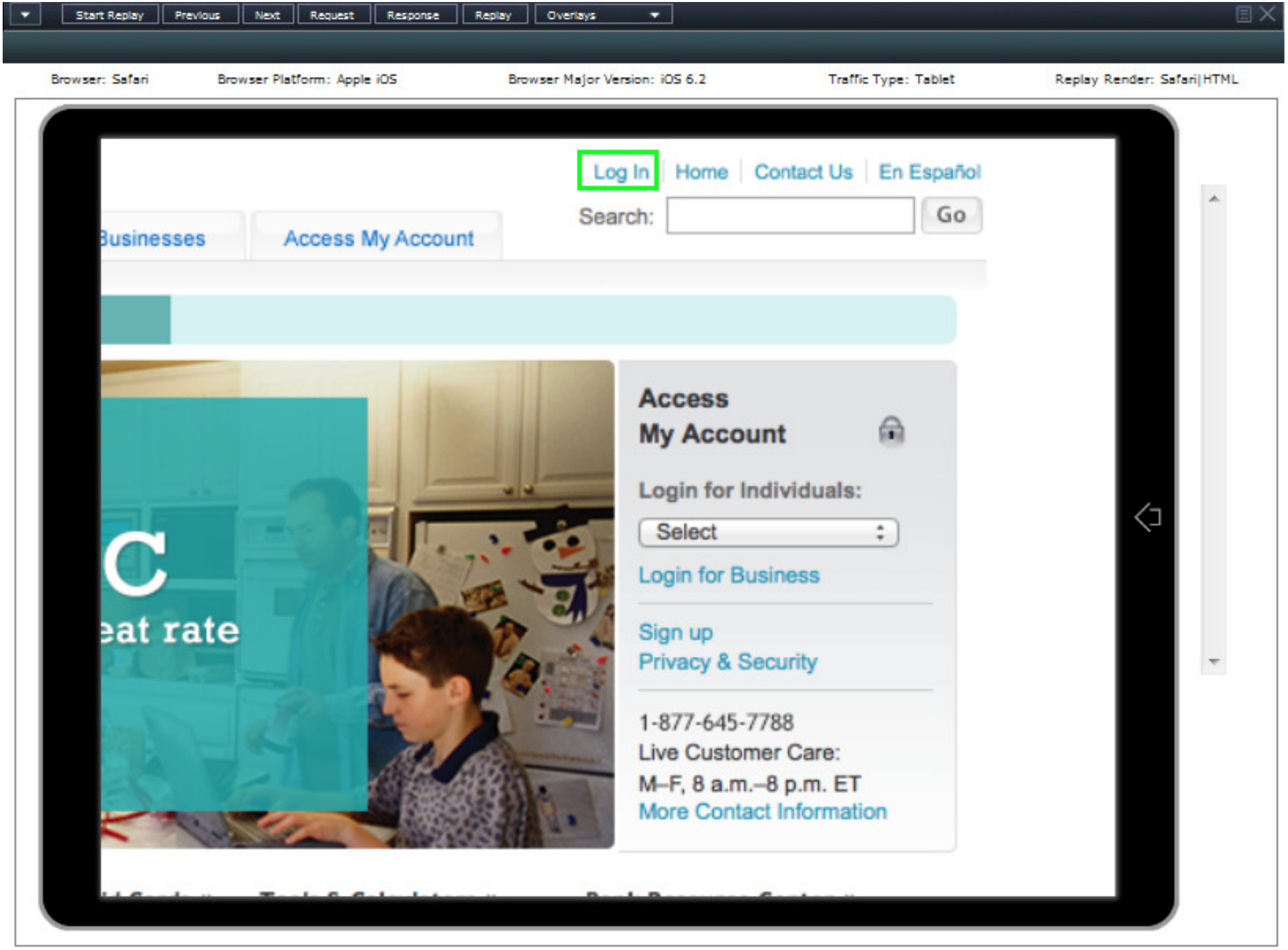
Start Replay | Previous | Next | Request | Response | Replay | Overlays

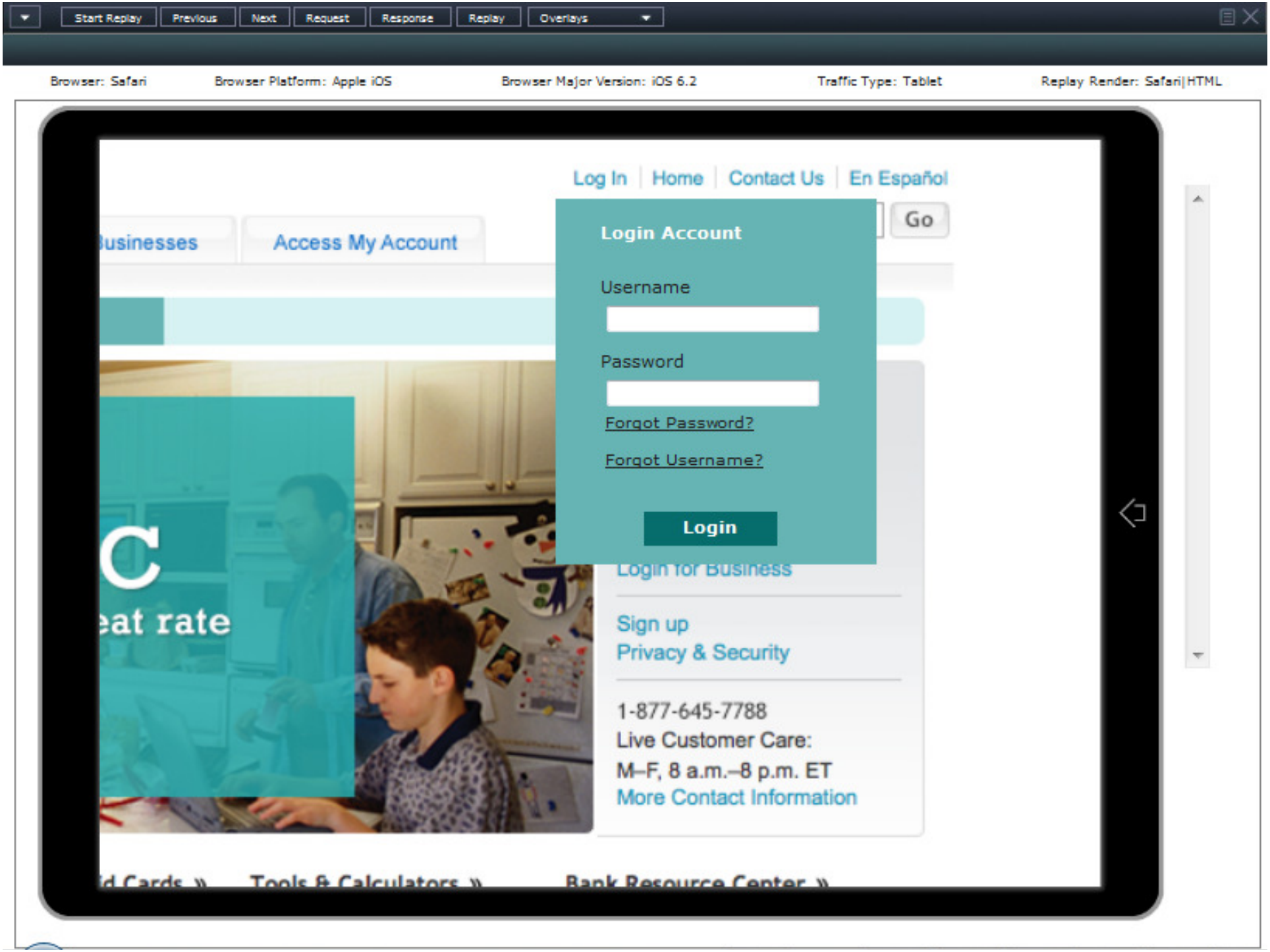
Browser: Safari | Browser Platform: Apple iOS | Browser Major Version: iOS 6.2 | Traffic Type: Tablet | Replay Render: Safari|HTML




Start Replay
Previous
Next
Request
Response
Replay
Overlays
Browser: Safari
Browser Platform: Apple iOS
Browser Major Version: iOS 6.2
Traffic Type: Tablet
Replay Render: Safari|HTML
TO REMODEL?
% APR HELOC
next house project with a great rate
about home equity
Loans & Lines of Credit »
Loan Rates
Home Equity Loans & Lines
Mortgage Loans
Auto Loans
Boat, RV, Motorcycle Loans
Credit & Prepaid Cards »
Visa Credit Card
Buxx Card
Debit Card
Visa Gift Cards
Tools & Calculators »
ATM Locator
General Loan Calculators
Auto Loan Calculators
Credit Card Calculators
Mortgage Calculators
Savings Calculators


Start Replay
Previous
Next
Request
Response
Replay
Overlays
Browser: Safari
Browser Platform: Apple iOS
Browser Major Version: iOS 6.2
Traffic Type: Tablet
Replay Render: Safari|HTML
Log In
Home
Contact Us
En Español
Search:
Go
Businesses
Access My Account
Access
My Account
Login for Individuals:
Select
Login for Business
Sign up
Privacy & Security
1-877-645-7788
Live Customer Care:
M–F, 8 a.m.–8 p.m. ET
More Contact Information


Start Replay
Previous
Next
Request
Response
Replay
Overlays
Browser: Safari
Browser Platform: Apple iOS
Browser Major Version: iOS 6.2
Traffic Type: Tablet
Replay Render: Safari|HTML
Log In
Home
Contact Us
En Español
Search:
Go
Businesses
Access My Account
Access
My Account
Login for Individuals:
Select
Login for Business
Sign up
Privacy & Security
1-877-645-7788
Live Customer Care:
M–F, 8 a.m.–8 p.m. ET
More Contact Information


Start Replay
Previous
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Request
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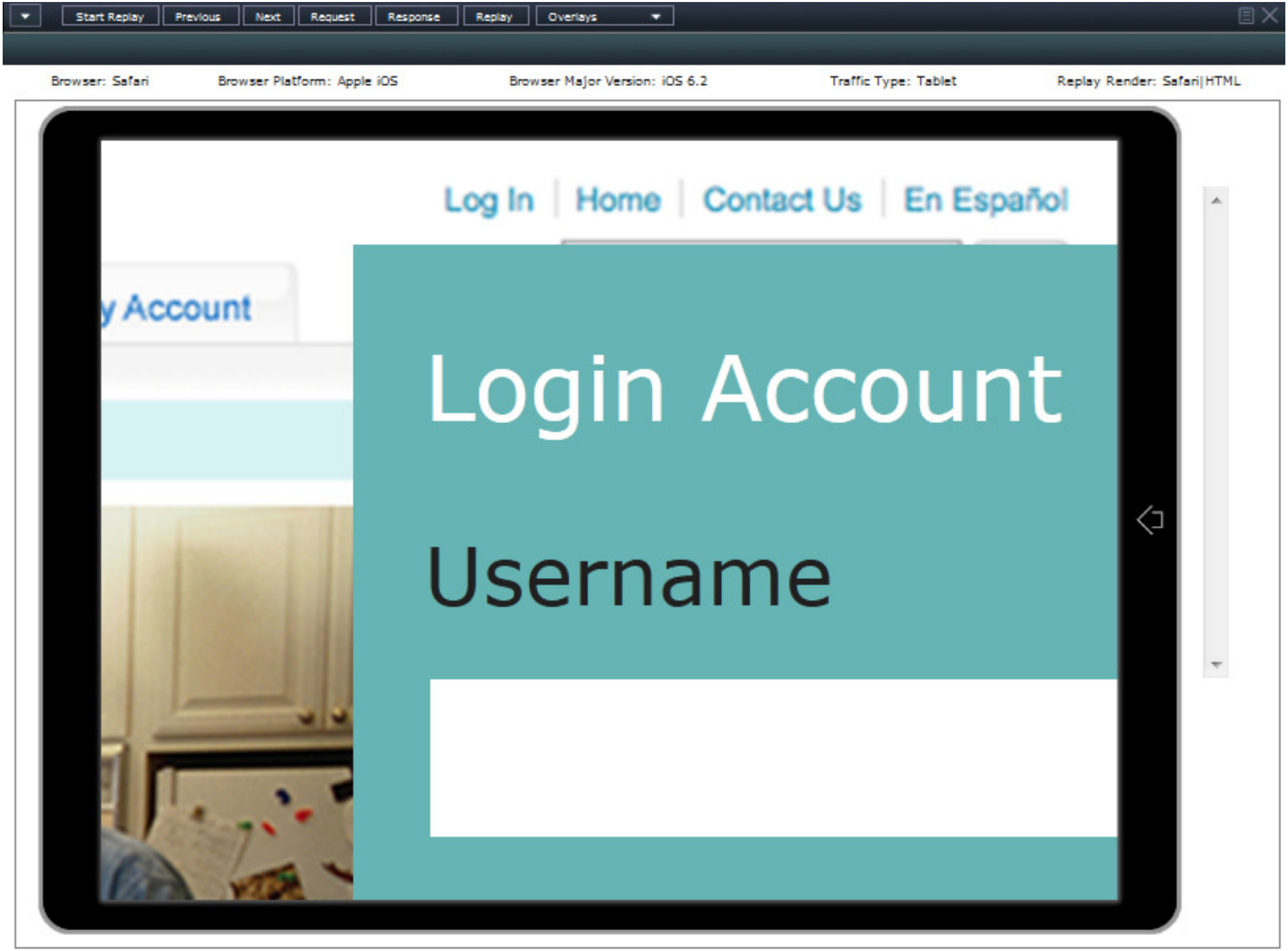
Replay
Overlays
Browser: Safari
Browser Platform: Apple iOS
Browser Major Version: iOS 6.2
Traffic Type: Tablet
Replay Render: Safari|HTML
Log In
Home
Contact Us
En Español
Go
Access My Account
Login Account
Username
Password
Forgot Password?
Forgot Username?
Login
Login for Business
Sign up
Privacy & Security
1-877-645-7788
Live Customer Care:
M–F, 8 a.m.–8 p.m. ET
More Contact Information


Start Replay
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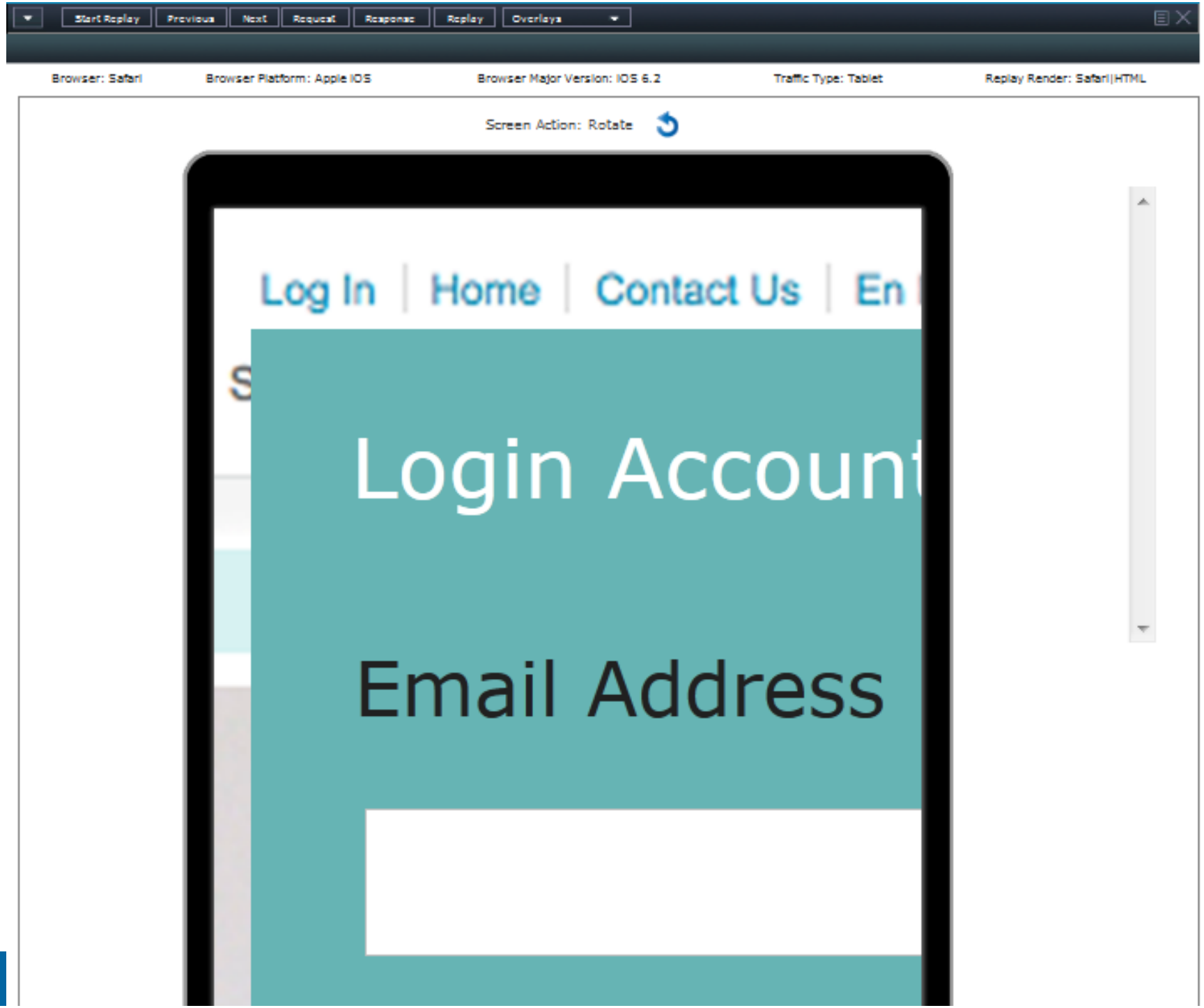
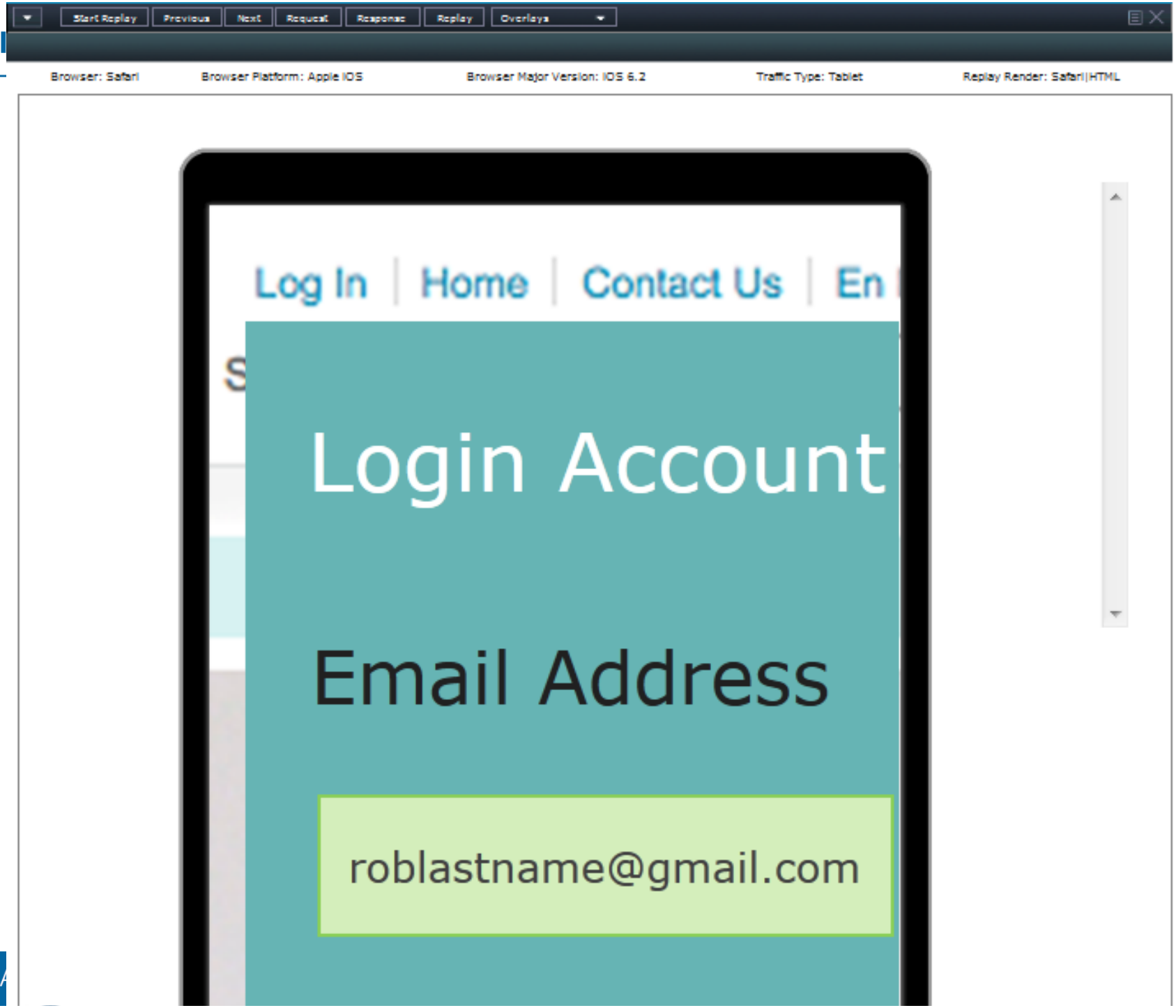
Request
Response
Replay
Overlays
Browser: Safari
Browser Platform: Apple iOS
Browser Major Version: iOS 6.2
Traffic Type: Tablet
Replay Render: Safari|HTML
Log In
Home
Contact Us
En Español
y Account
Login Account
Username


Start Replay
Previous
Next
Request
Response
Replay
Overlays
Browser: Safari
Browser Platform: Apple IOS
Browser Major Version: IOS 6.2
Traffic Type: Tablet
Replay Render: Safari|HTML
Screen Action: Rotate
Log In
Home
Contact Us
Login Account
Email Address


Start Replay
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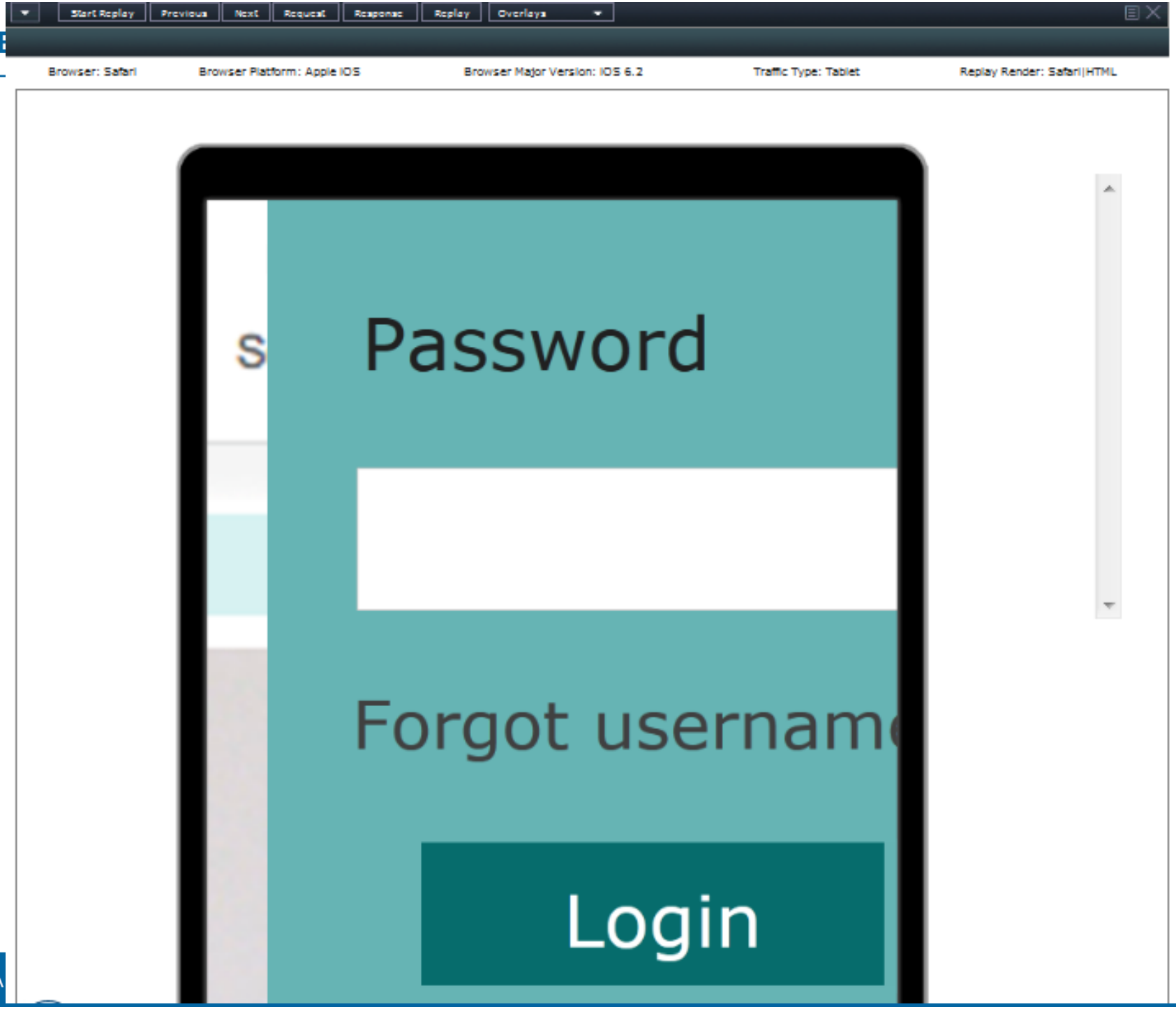
Request
Response
Replay
Overlays
Browser: Safari
Browser Platform: Apple iOS
Browser Major Version: iOS 6.2
Traffic Type: Tablet
Replay Render: Safari|HTML
Log In
Home
Contact Us
Login Account
Email Address
roblastname@gmail.com


Start Replay
Previous
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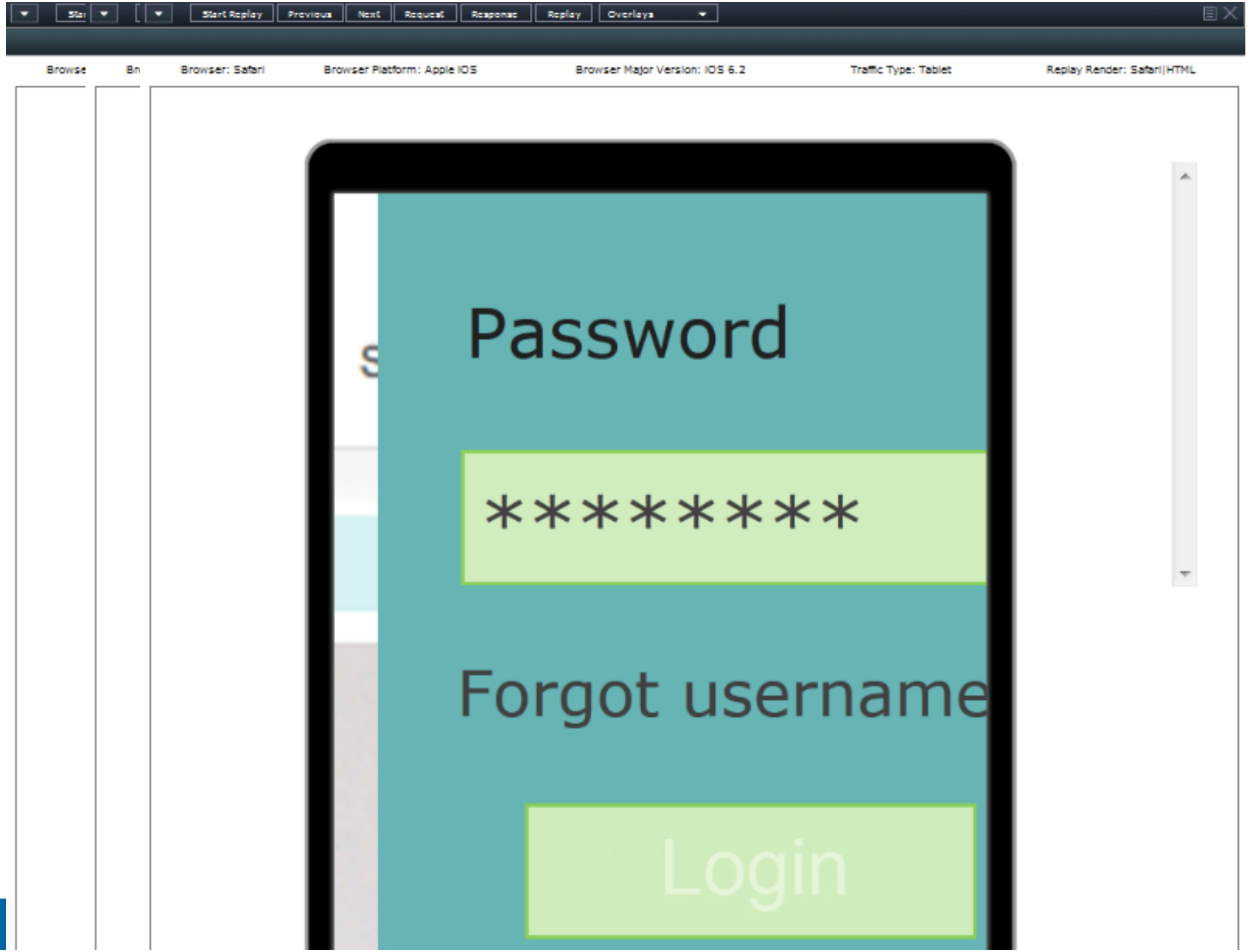
Request
Response
Replay
Overlays
Browser: Safari
Browser Platform: Apple IOS
Browser Major Version: IOS 6.2
Traffic Type: Tablet
Replay Render: Safari|HTML
Password
Forgot usernam
Login


Start Replay
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Response
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Overlays
Browse
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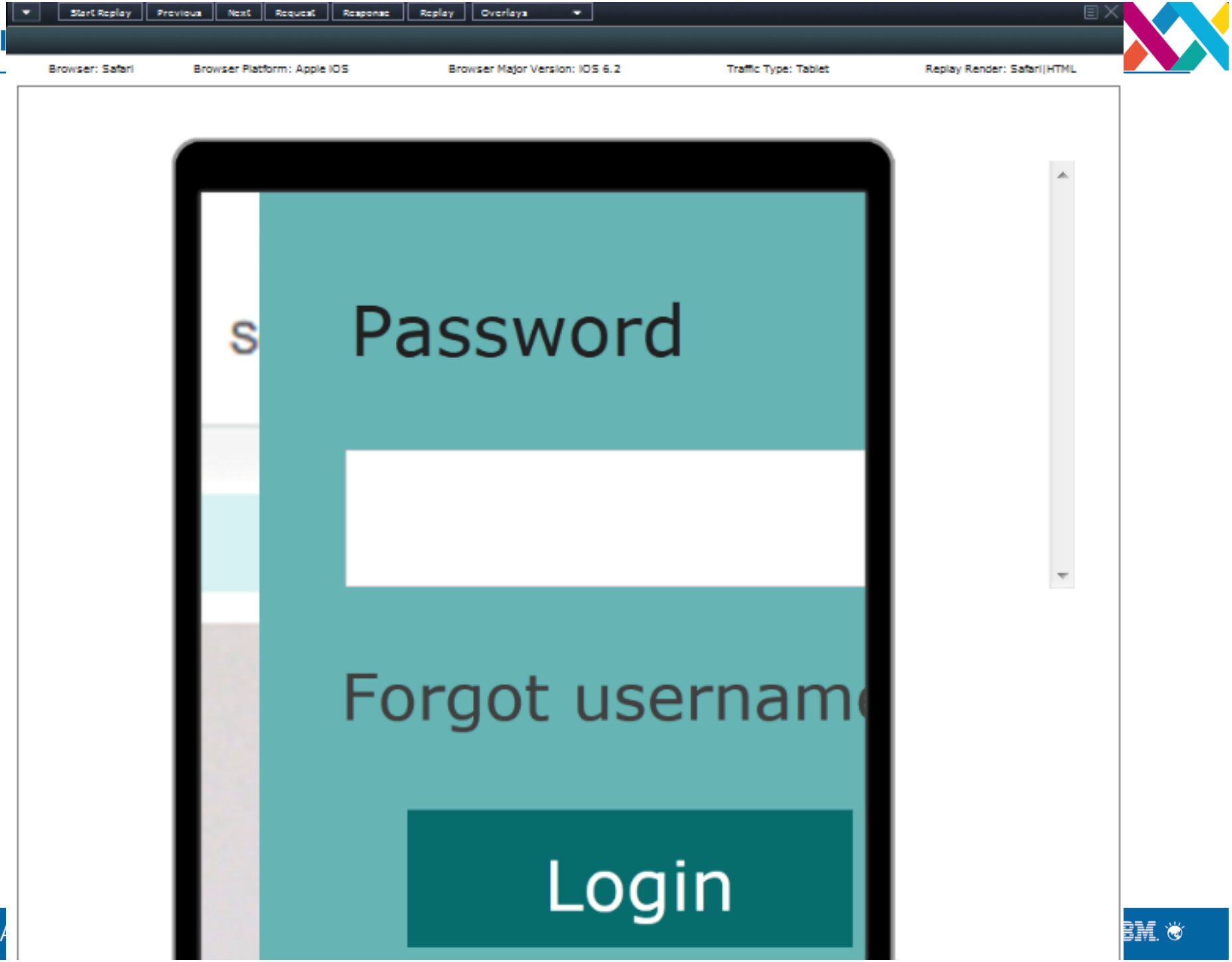
Browser: Safari
Browser Platform: Apple IOS
Browser Major Version: IOS 6.2
Traffic Type: Tablet
Replay Render: Safari|HTML
Password
****
Forgot username
Login


Start Replay
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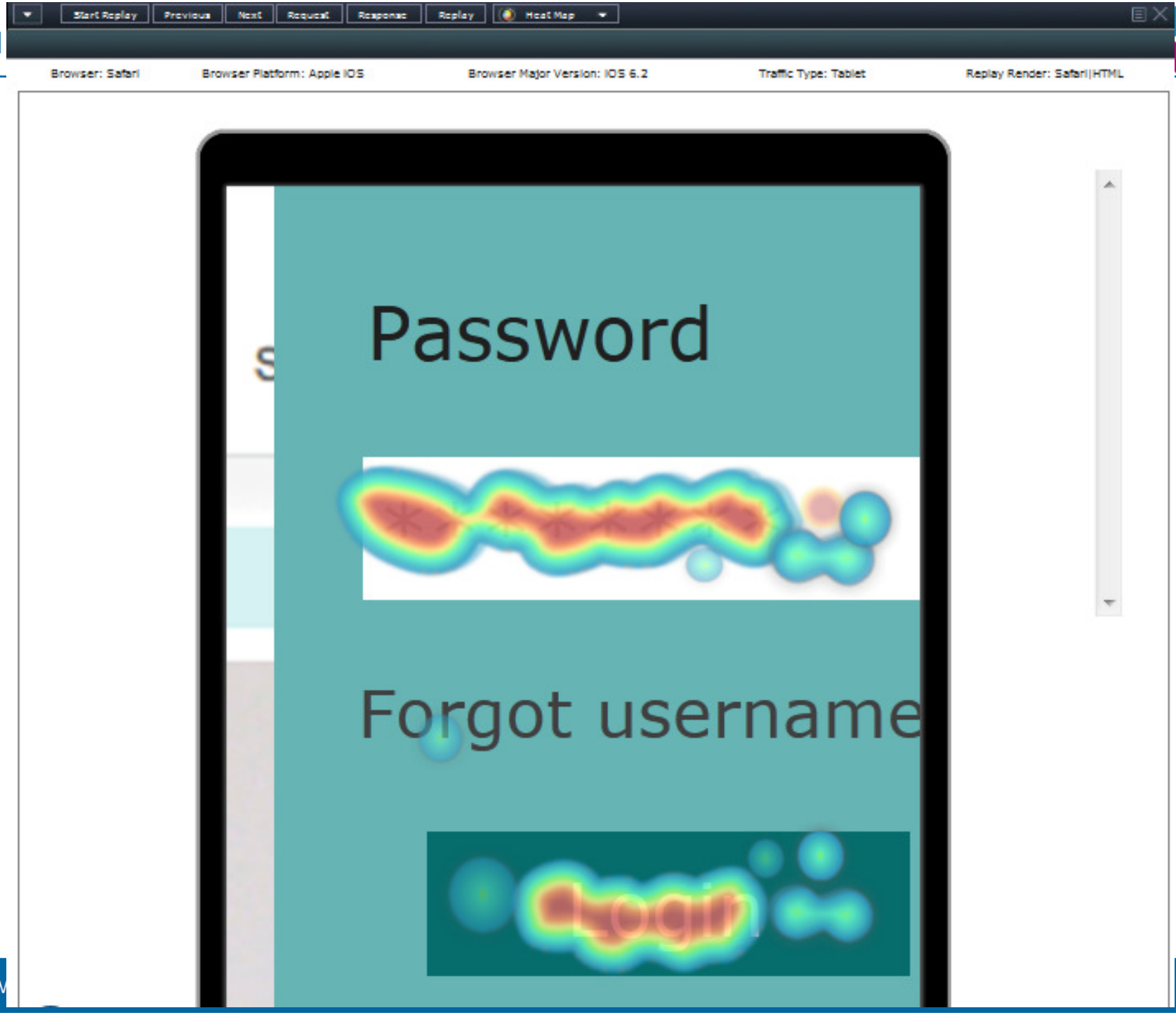
Replay
Overlays
Browser: Safari
Browser Platform: Apple IOS
Browser Major Version: IOS 6.2
Traffic Type: Tablet
Replay Render: Safari|HTML
Password
Forgot usernam
Login


Start Replay
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Next
Request
Response
Replay
Heat Map
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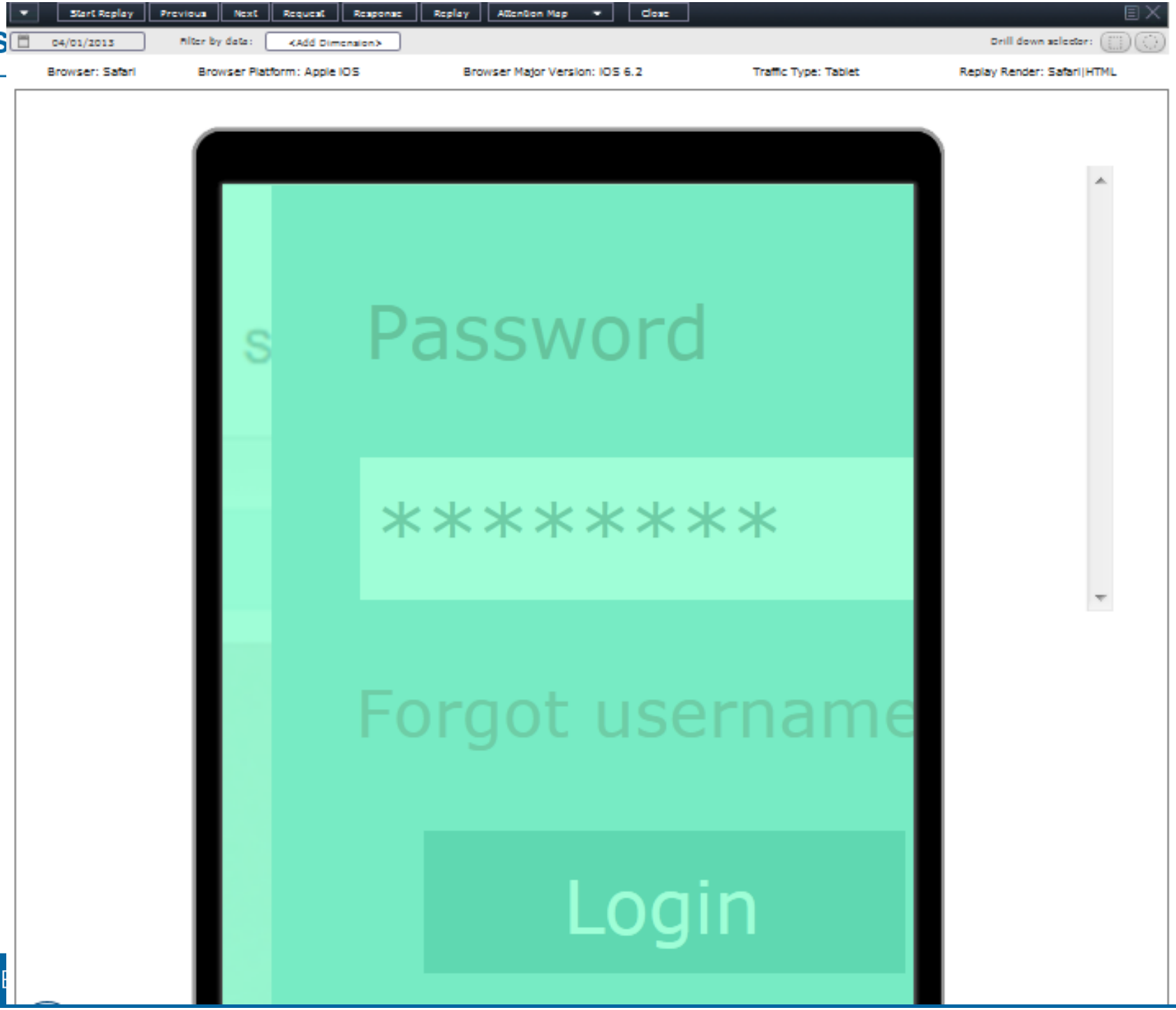
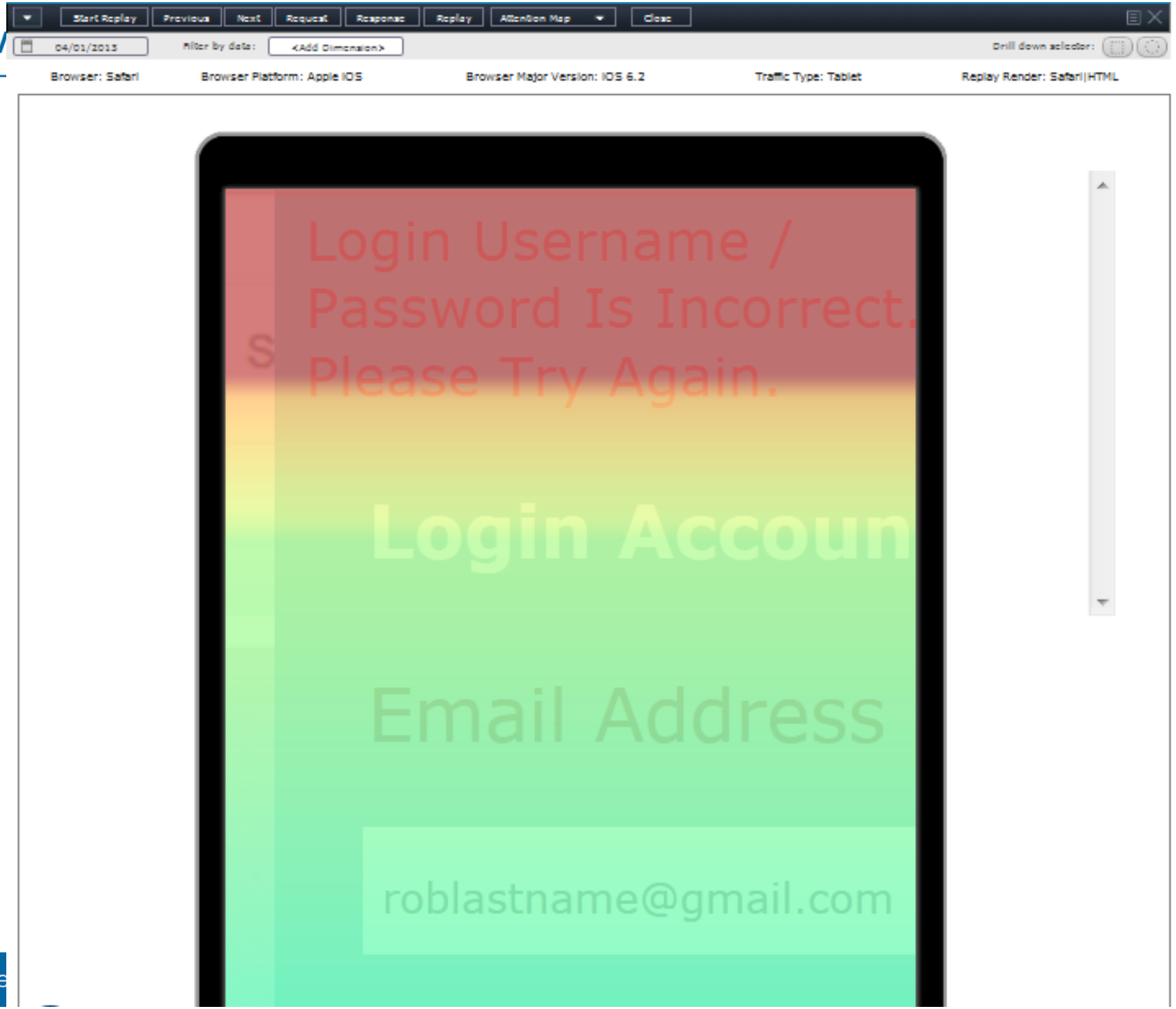
Browser Platform: Apple IOS
Browser Major Version: IOS 6.2
Traffic Type: Tablet
Replay Render: Safari|HTML
Password
Forgot username
Login


Start Replay
Previous
Next
Request
Response
Replay
Attention Map
Close
04/01/2013
Filter by date:
<Add Dimension>
Drill down selector:
Browser: Safari
Browser Platform: Apple IOS
Browser Major Version: IOS 6.2
Traffic Type: Tablet
Replay Render: Safari|HTML
Password
****
Forgot username
Login


Start Replay
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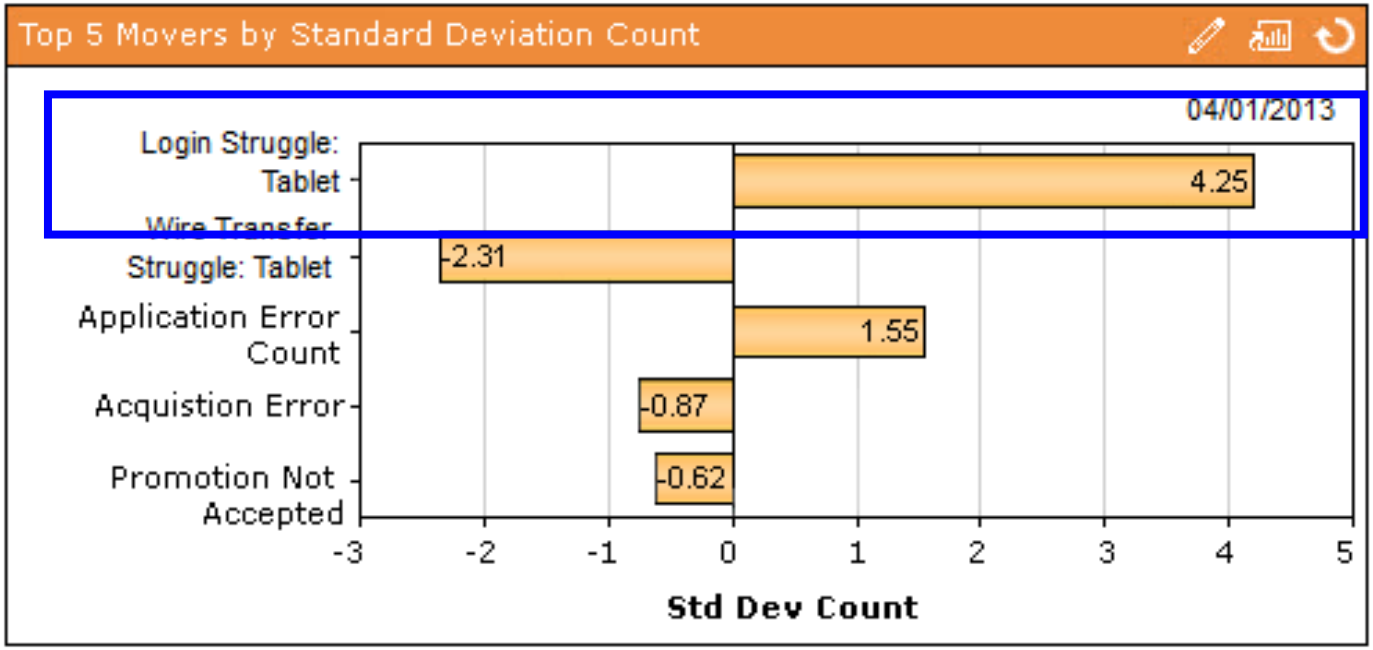
Request
Response
Replay
Attention Map
Close
04/01/2013
Filter by data:
<Add Dimension>
Drill down selector:
Browser: Safari
Browser Platform: Apple IOS
Browser Major Version: IOS 6.2
Traffic Type: Tablet
Replay Render: Safari|HTML
Login Username /
Password Is Incorrect.
Please Try Again.
Login Accoun
Email Address
roblastname@gmail.com


Top 5 Movers by Standard Deviation Count
04/01/2013
Login Struggle: Tablet
Wire Transfer Struggle: Tablet
Application Error Count
Acquistion Error
Promotion Not Accepted
4.25
-2.31
1.55
-0.87
-0.62
-3
-2
-1
0
1
2
3
4
5
Std Dev Count

1 Mobile Analytics

2 ***Responsive UI Design***

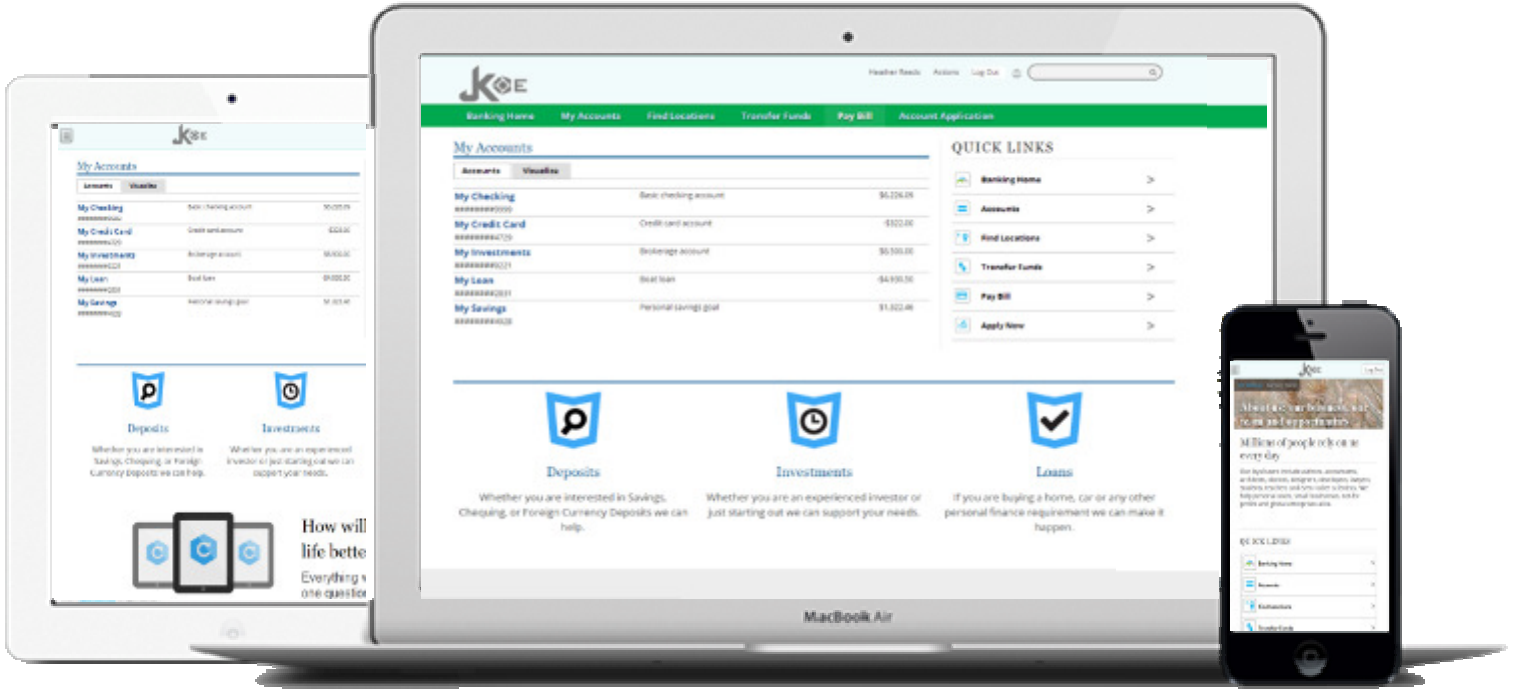
3 **Mobile Application Delivery**

Poll Question -3

Have you identified key services and information to serve the mobile interfaces you will target?

A. Yes
B. No
C. Can't say

Let's See How JKE Bank can Address this Business Problem…

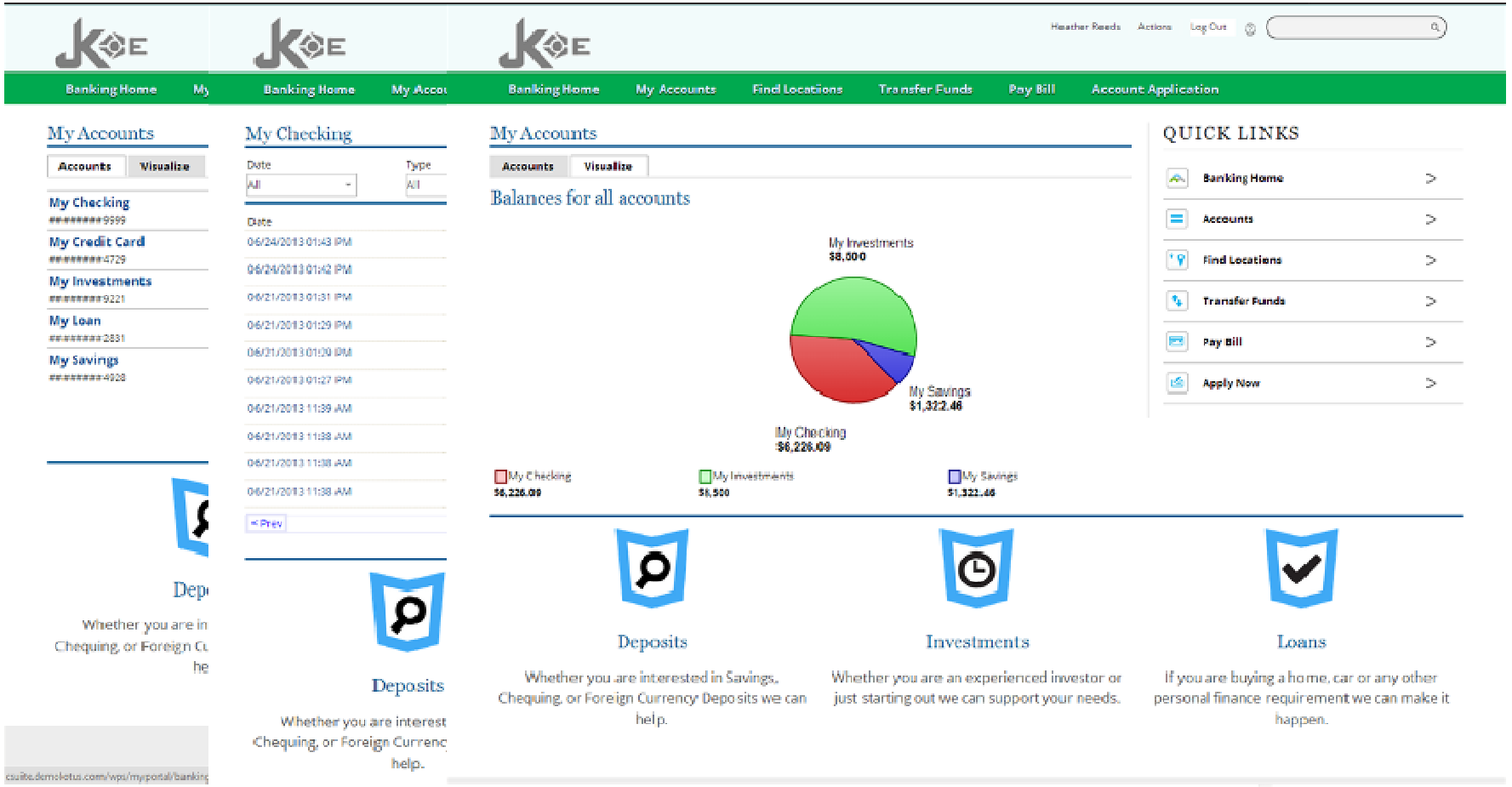


Meet Sandra

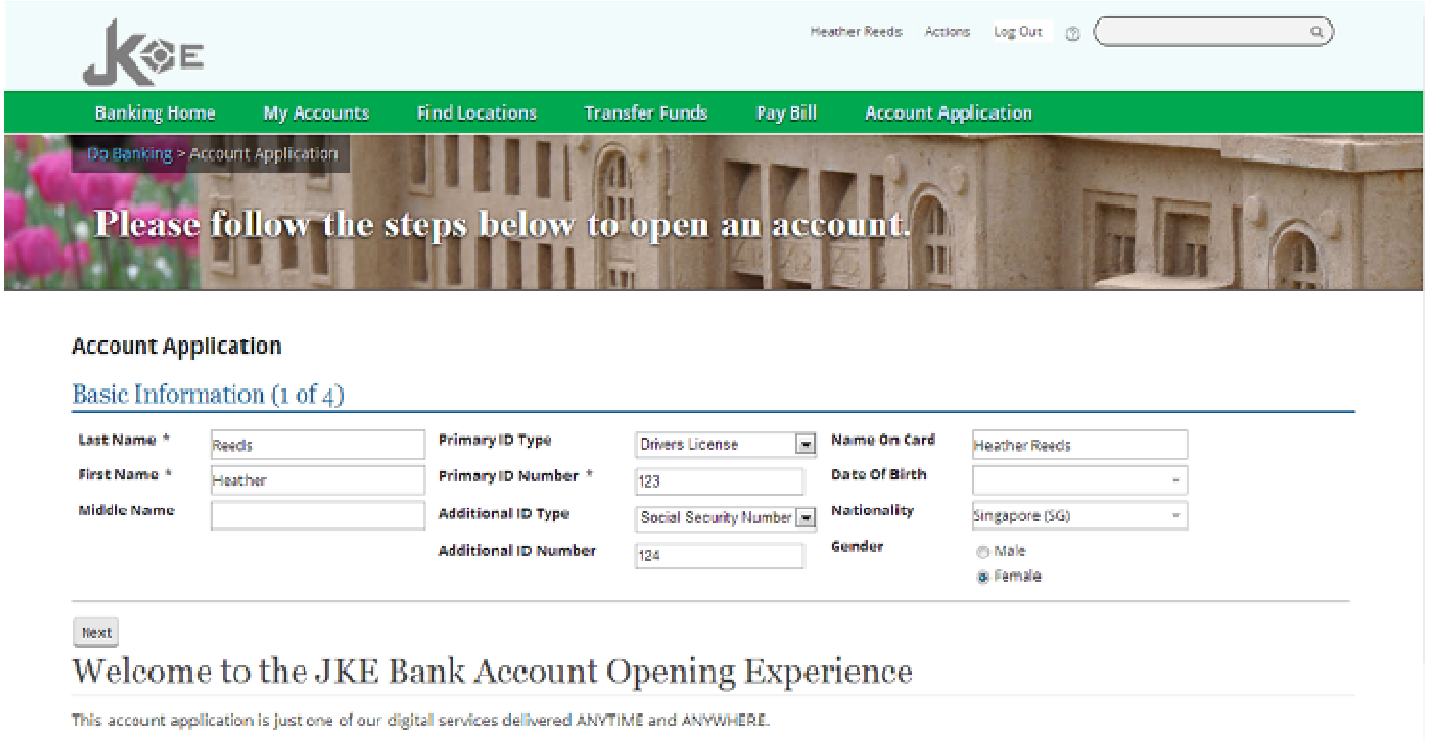
She is a valued customer

She needs an Exceptional Digital Experience while banking anytime and anywhere

Her banking details on her laptop

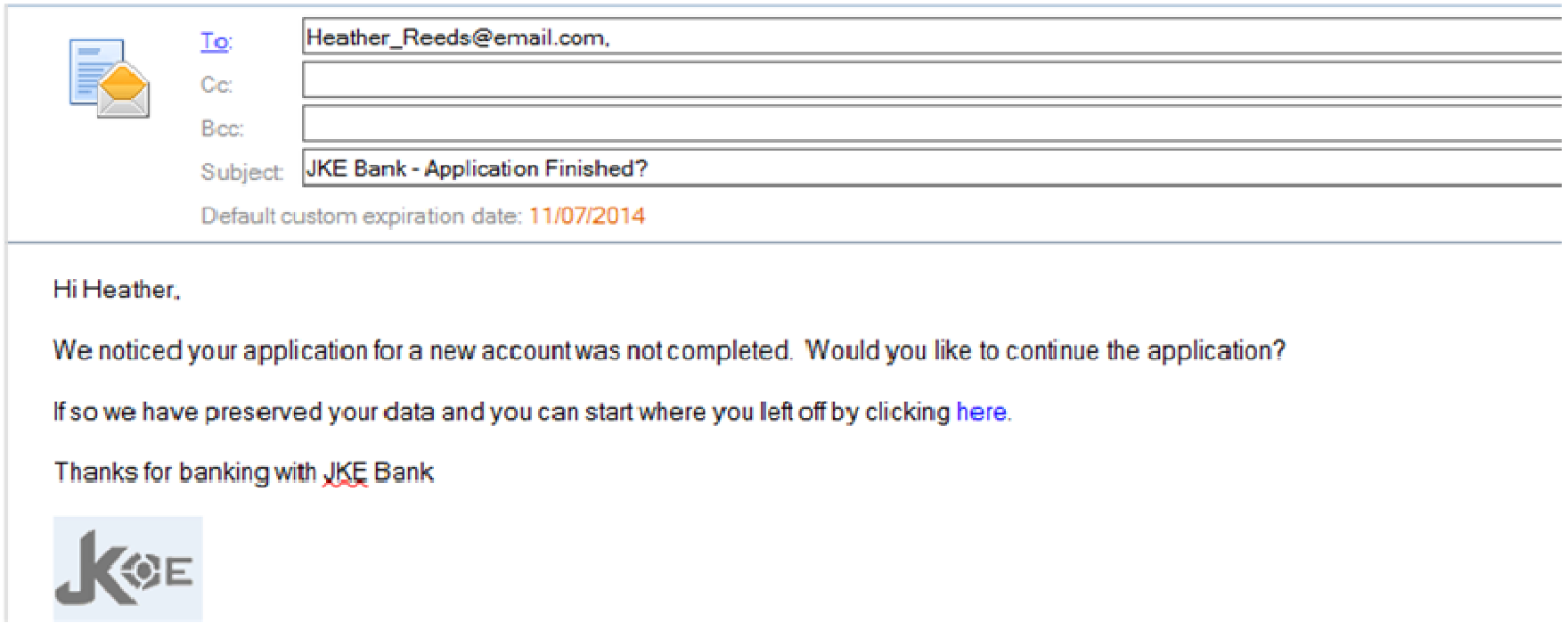


She starts a new account application at home

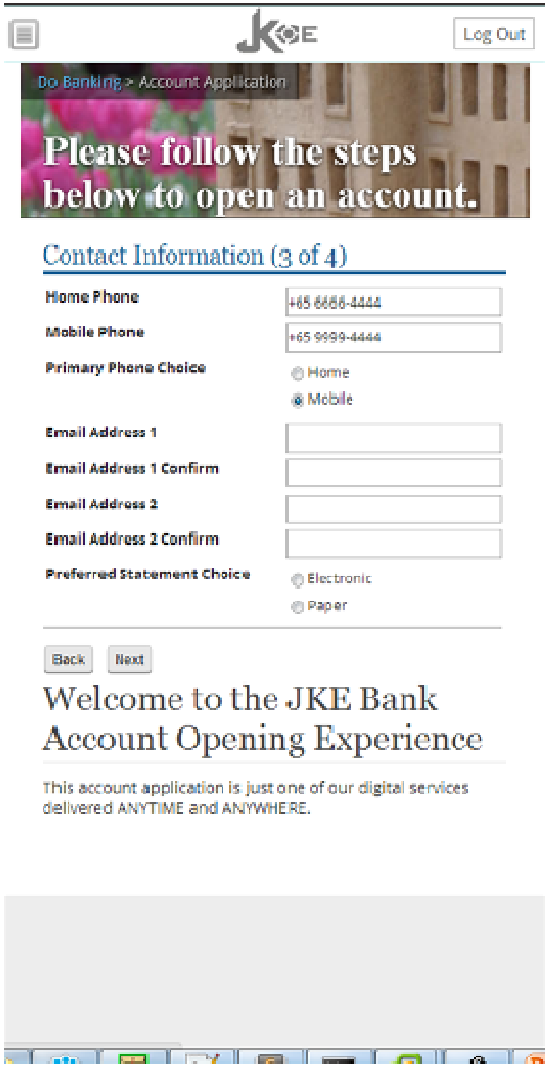


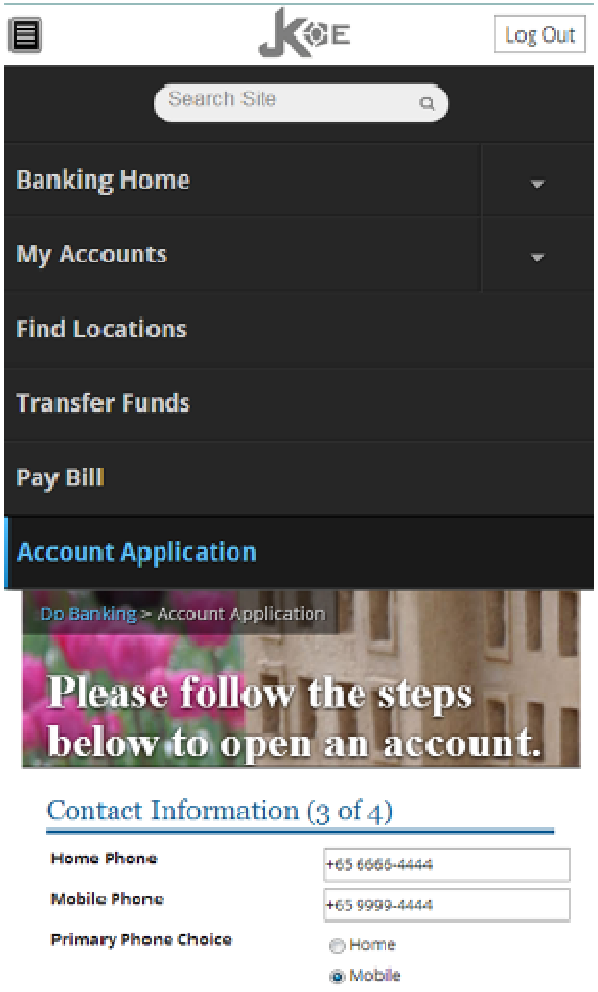
But realizes she has an appointment…

An email to re-engage

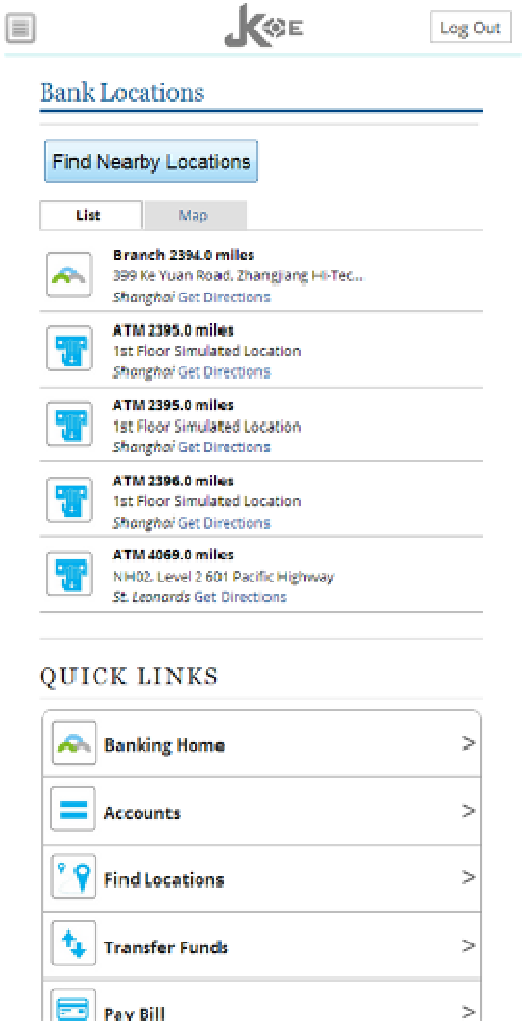


Smartphone to enter details? No problem.

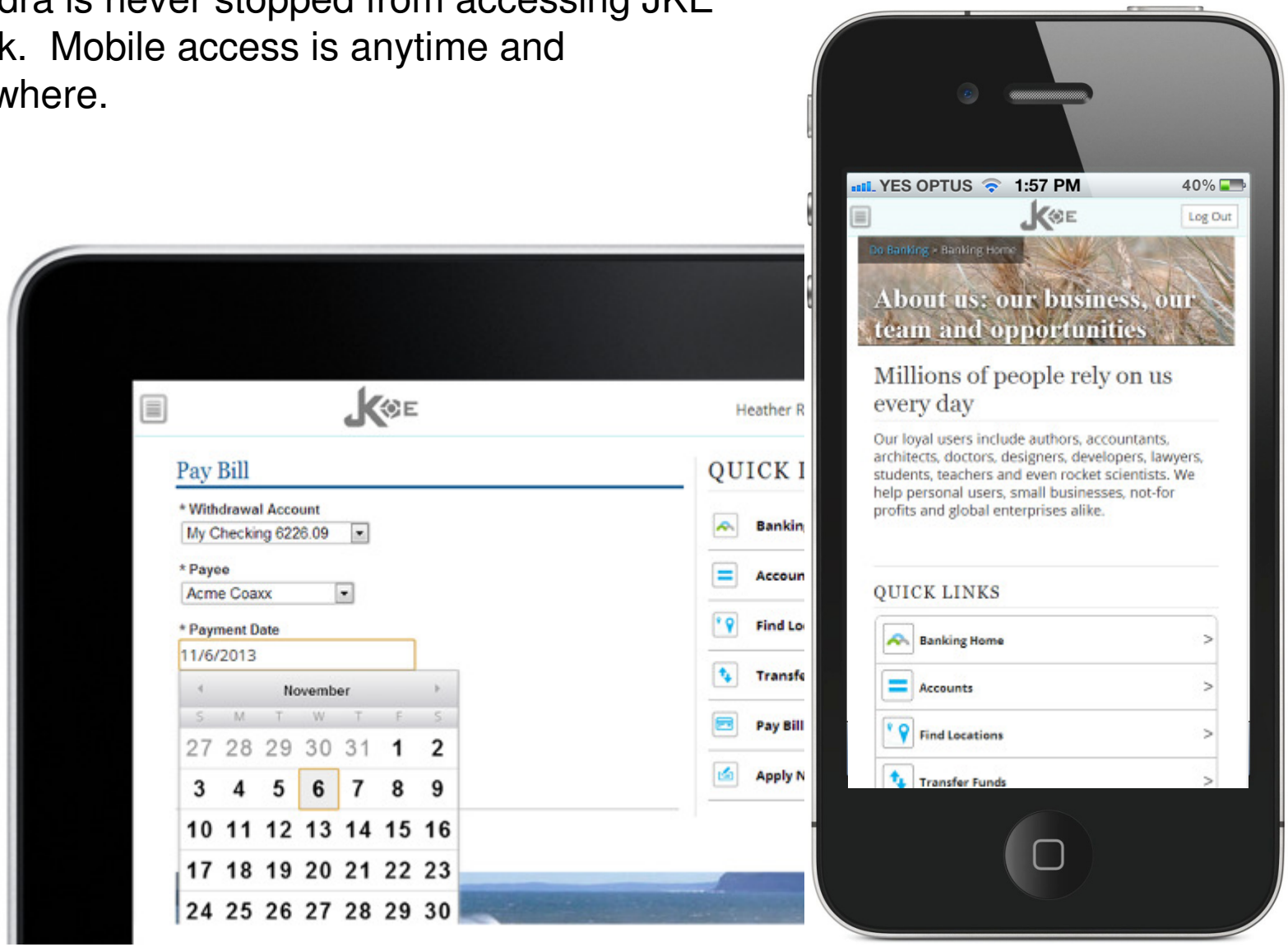




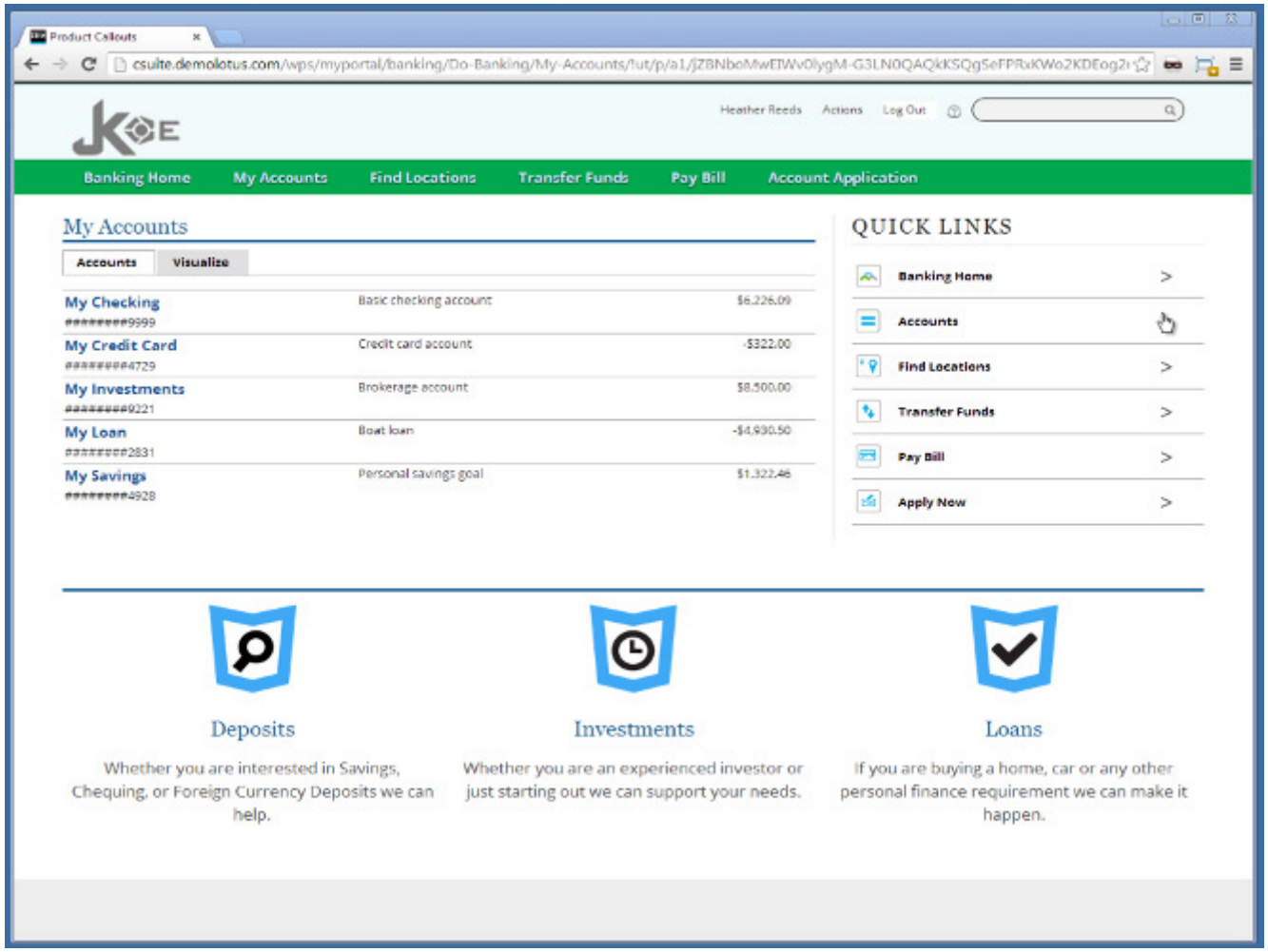
Sandra can complete the details on-the-go and get aided by her GPS on the closest branch where she can finalize process.



Sandra is never stopped from accessing JKE Bank. Mobile access is anytime and anywhere.



Quick interlude…let's see it in action

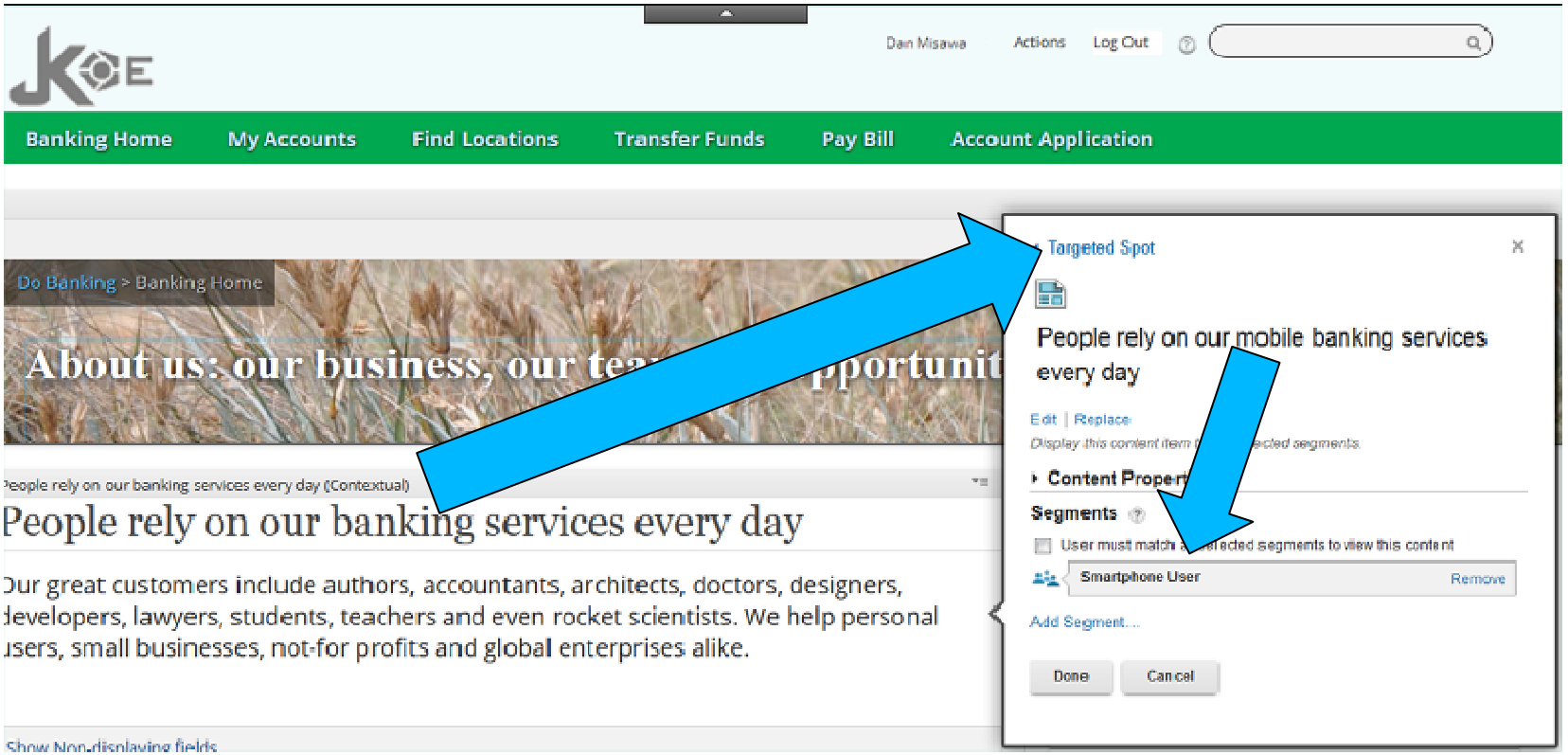


Meet Garland

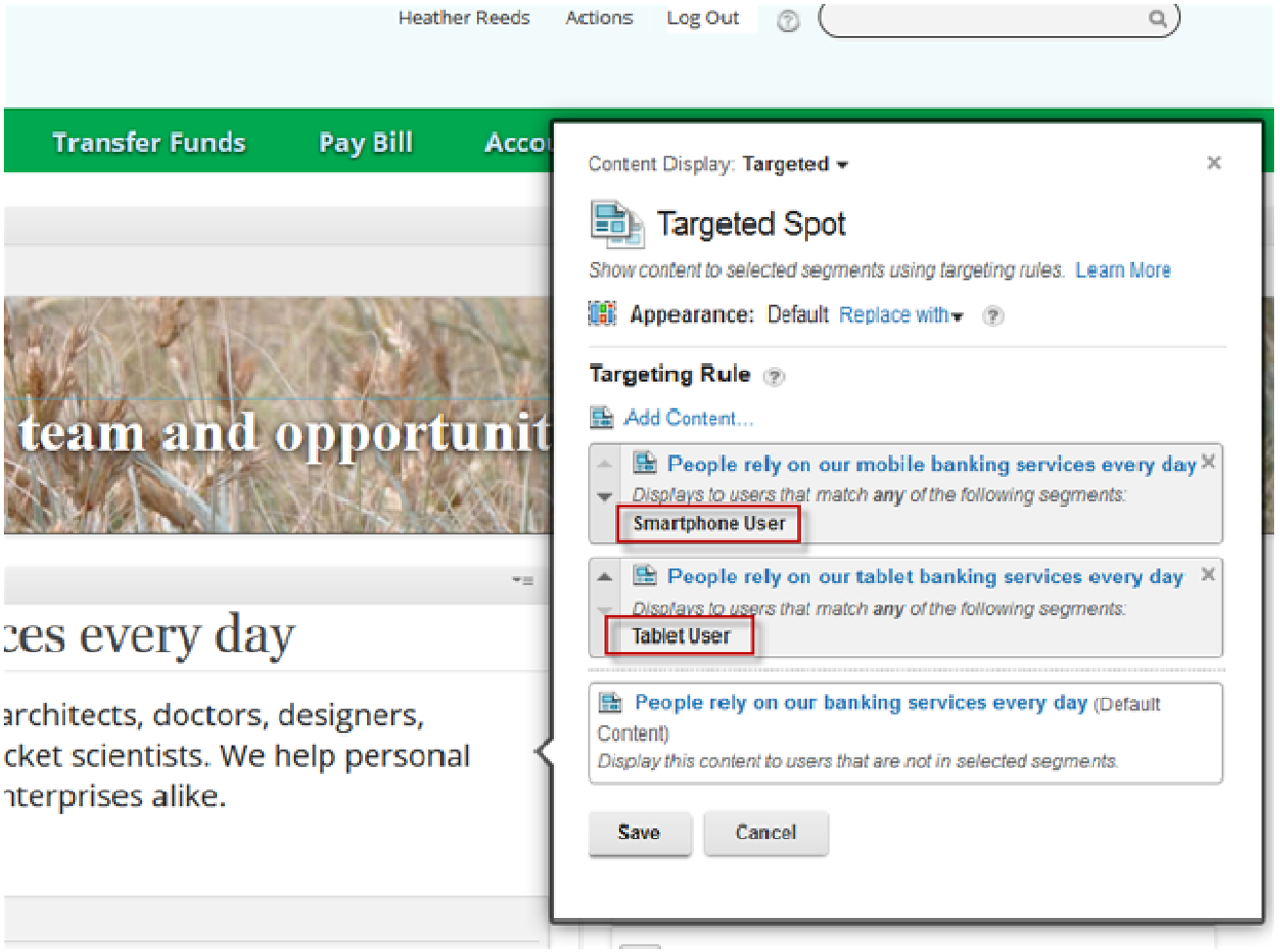
He is a Channels Representative

He needs the bank to have the right message for the right channel

Garland needs to make his content appropriate for the channel with targeting features



Garland configures the targeting in WYSIWYG interface and inline to the page



Garland gets a message that is consistent and tailored to a MobileFirst orientation

1 Mobile Analytics

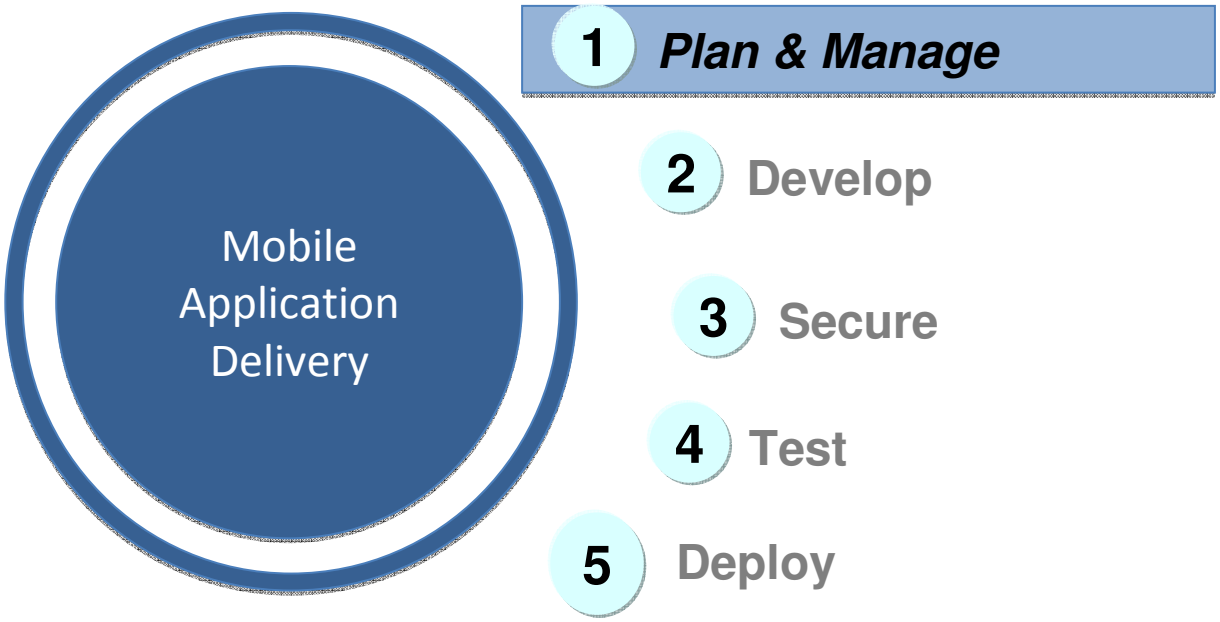
2 Responsive UI Design

3 ***Mobile Application Delivery***

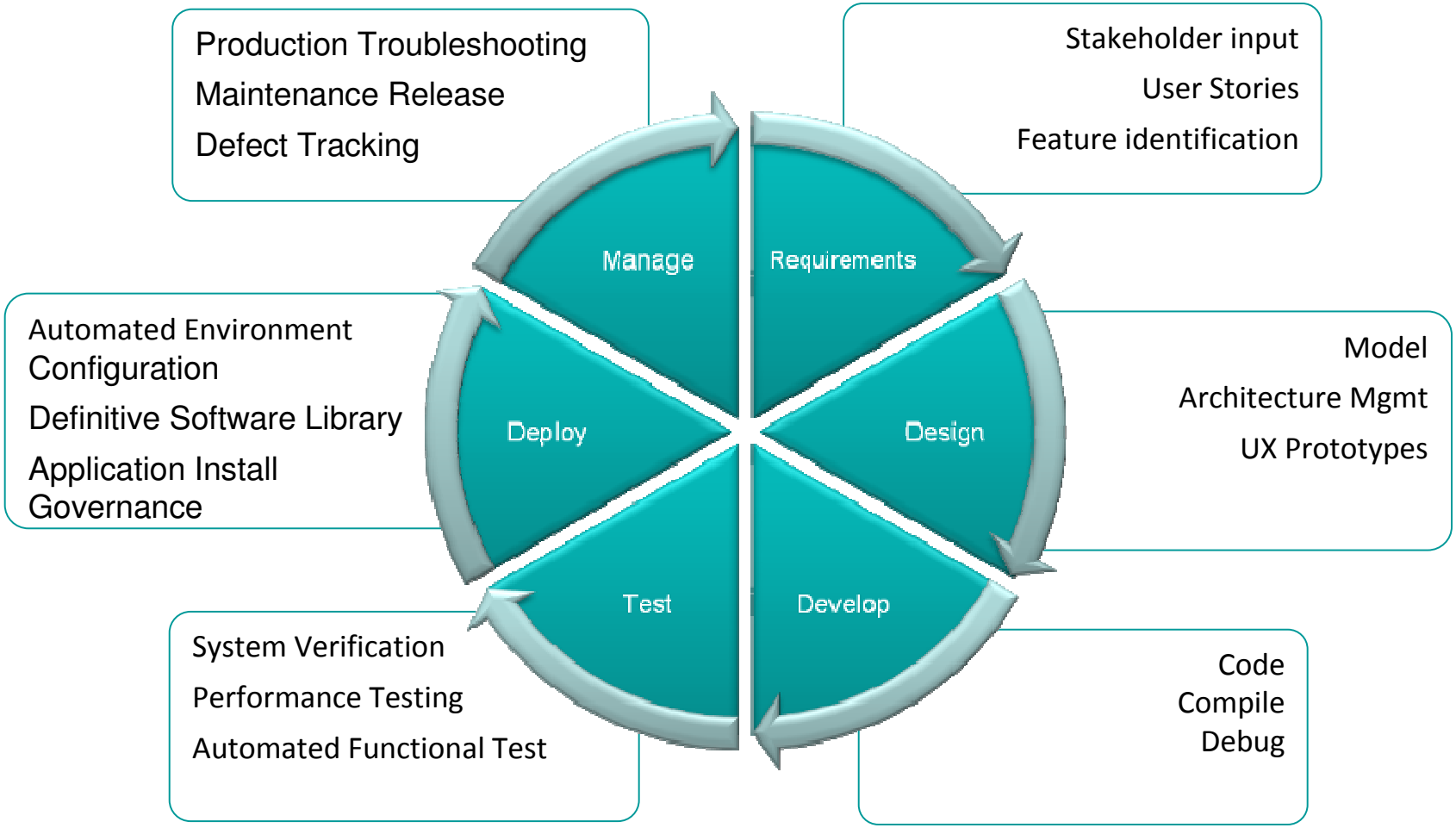
Poll Question -4

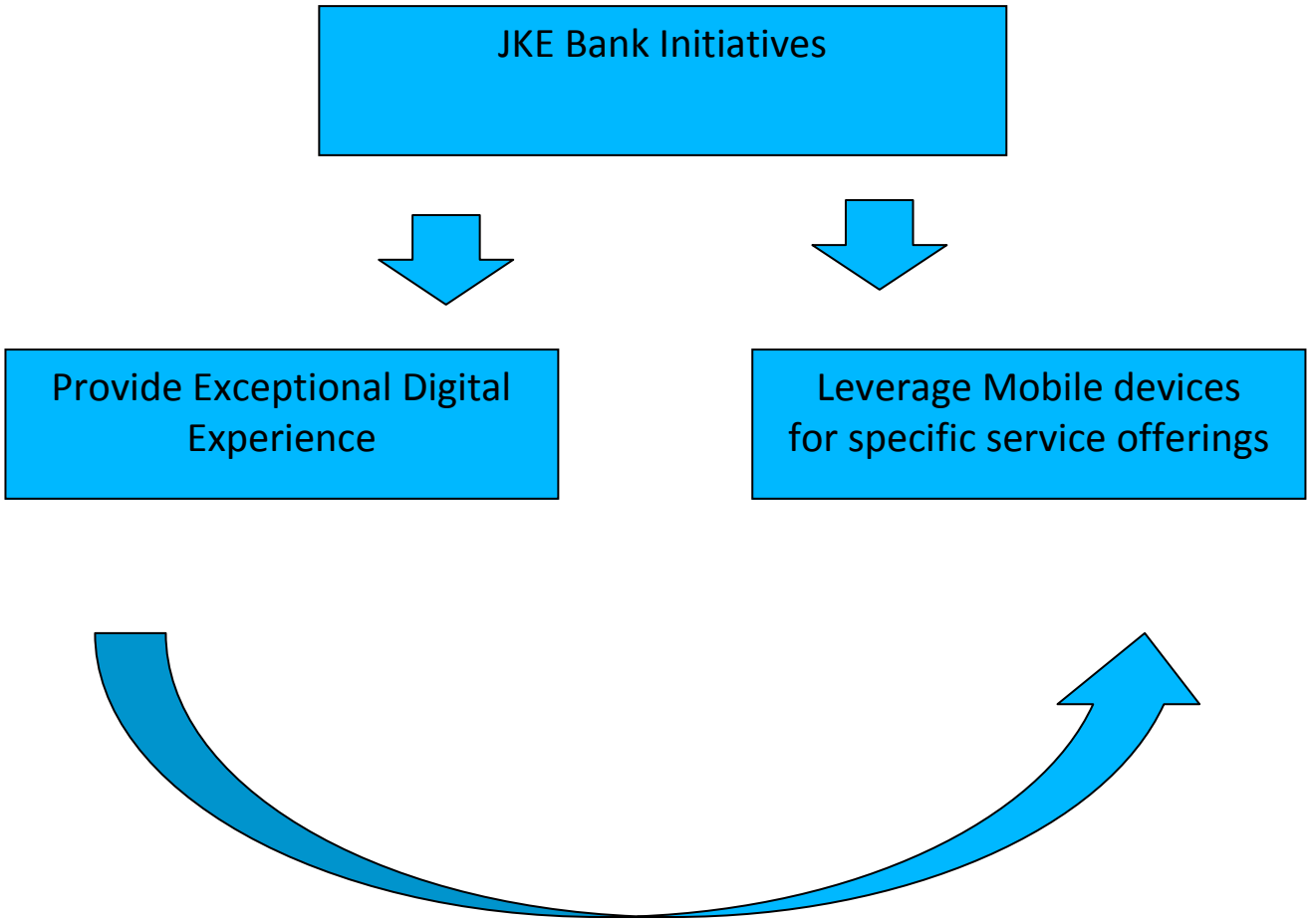
Mobile Application Developers in my organization :

A. Less than 5
B. Between 5 -10
C. More than 10


Mobile Application Delivery
1 Plan & Manage
2 Develop
3 Secure
4 Test
5 Deploy

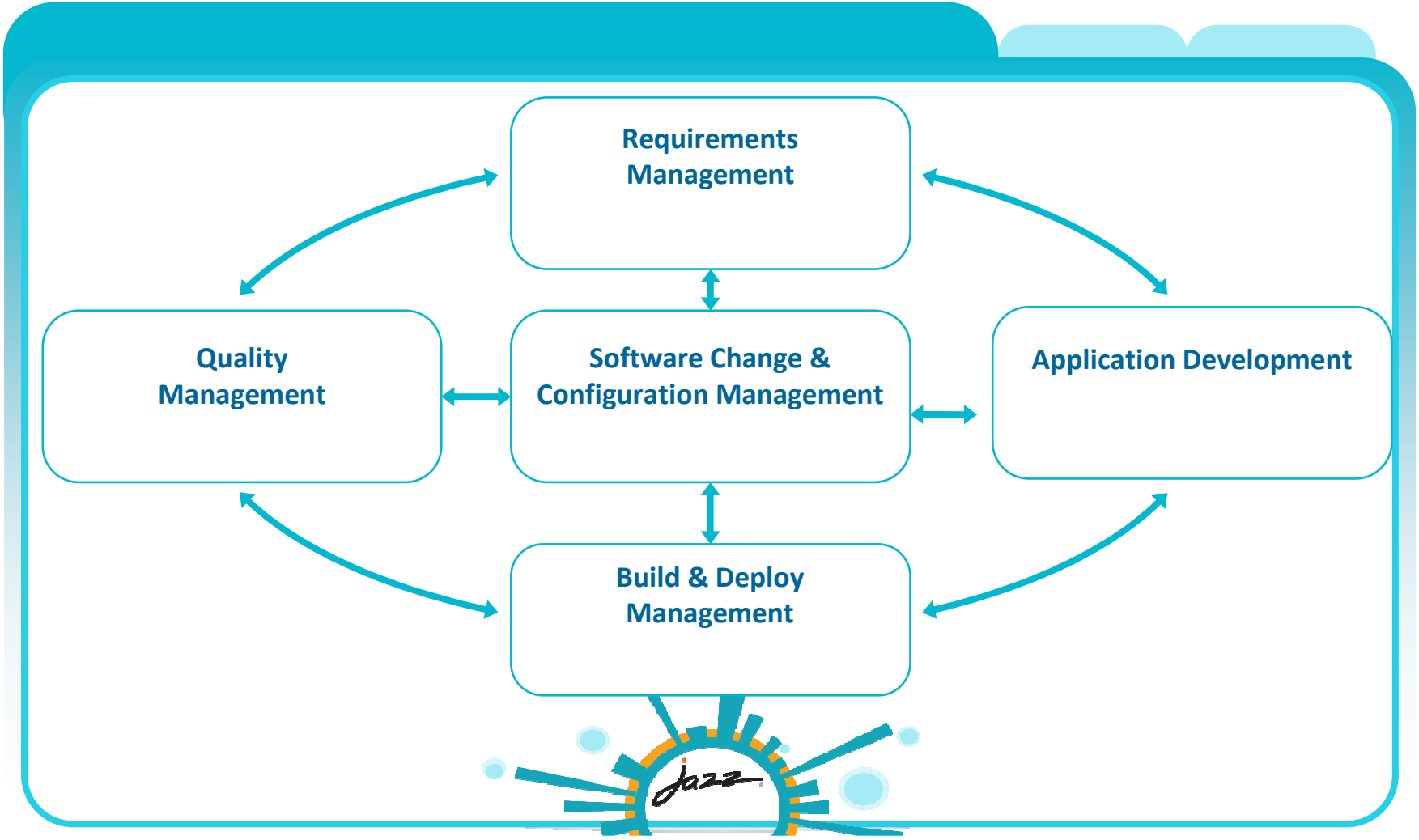
Multichannel Software Development is MORE than Coding



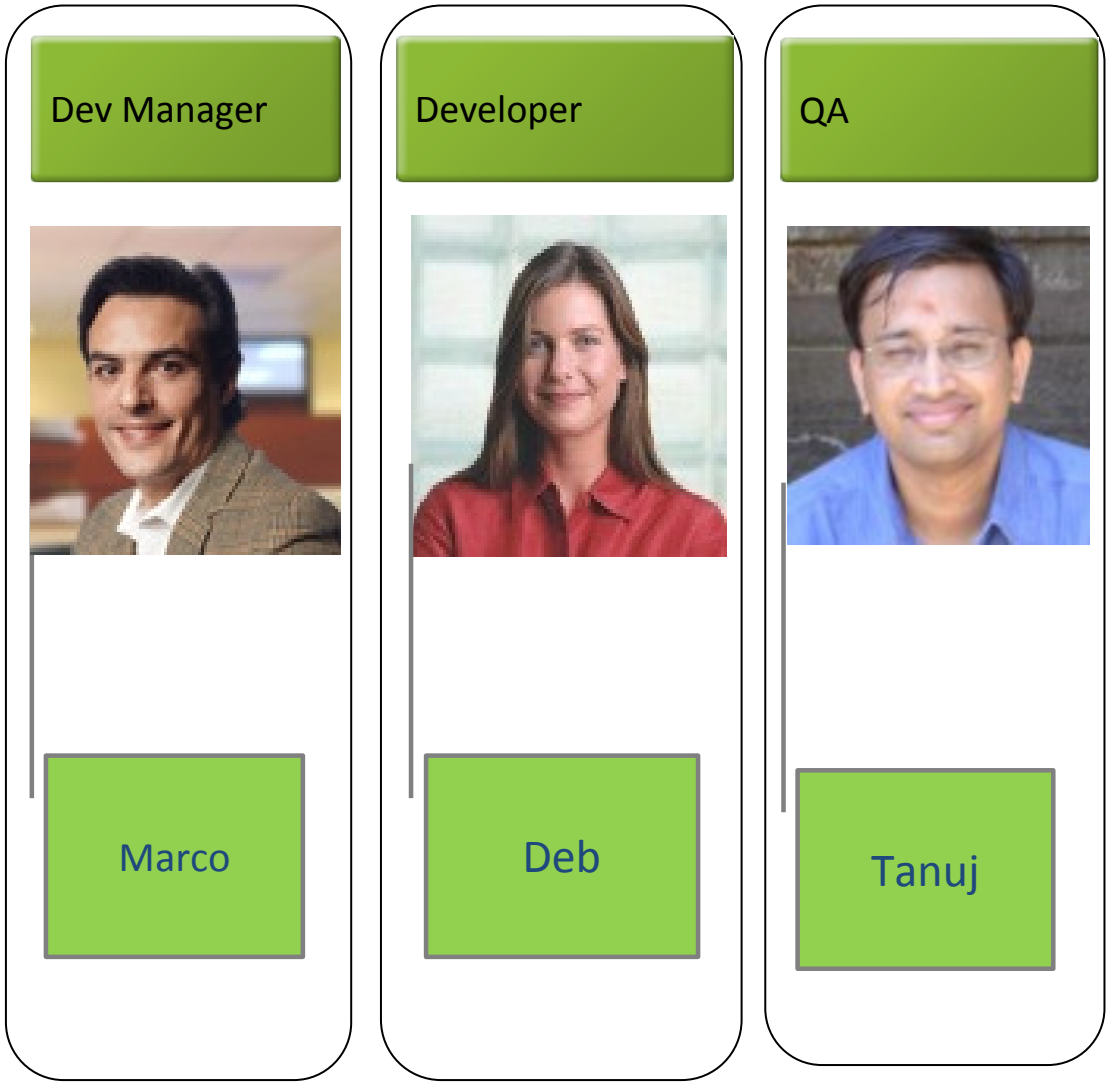


Continuously Build and Deliver Application

IBM Solution for Application Delivery on Multichannel



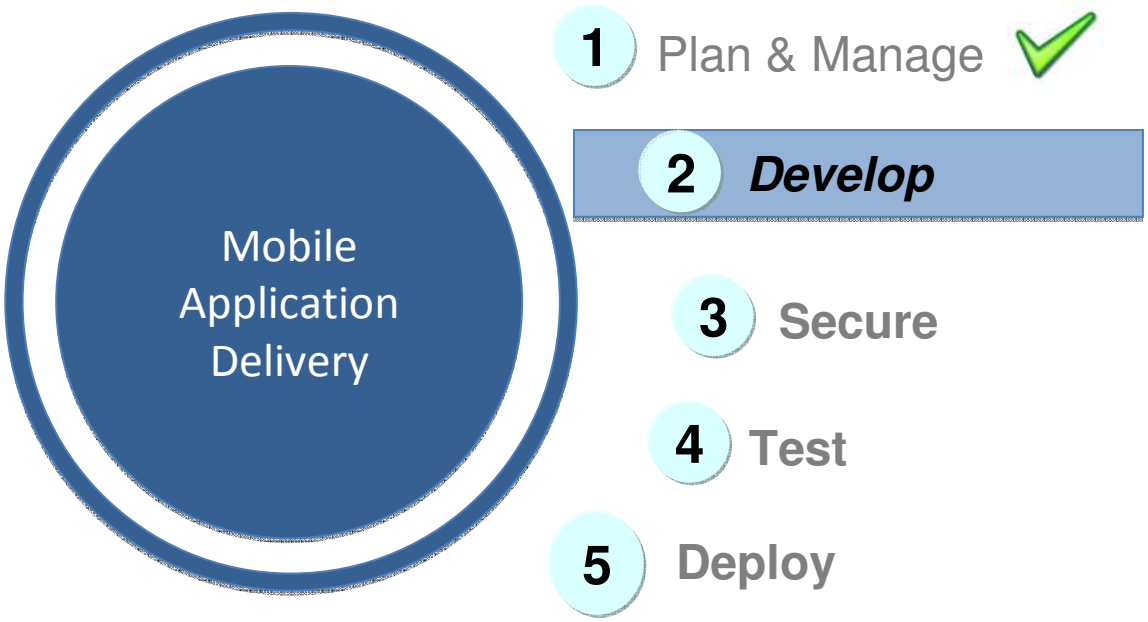
Building Exceptional User Experience on Multiple Channels



Continuously Build and Deliver Application

Scene 1

- It has been noticed that there are many users who are struggling with the mobile application because there are several dozen charities to choose from.
- There also have been request from many that they would like to donate to charities that nearby to their location so that they can contribute to community – aligned to a requirement previously captured but not yet implemented.
- Both the initiative has been passed on to development to incorporate into the **next release of the mobile application**.
- The development manager **Marco** looks at the new request and passes it on to a Business Analyst. Business Analyst documents the complete requirements document.
- **Marco** approves the requirement after a review and gives it to user experience designer.
- The UI designer creates UI Sketches. **Marco** approves the UI Sketches and assigns the **Deb** to implement the story.


Mobile Application Delivery
1 Plan & Manage
2 Develop
3 Secure
4 Test
5 Deploy

Poll Question -5

Do you have a standardize Mobile Application platform for developing enterprise Mobile application ?

A. Yes
B. No
C. Can’t say

Leverage Mobile Devices for Services offerings

Scene 2

- **Deb** gets a notification of a new task on her dev environment. She looks at Use Case requirements, User Sketches, Traceability links and understands the impact of the change. Deb accepts the task and provides an estimate of the effort.

- **Deb** checks out project file from source control configuration , builds the UI , codes and does unit testing. Deb also checks the vulnerability of the application code that she is writing.

- **Deb** then delivers the modifications to merge with code of other people.

IBM MobileFirst Platform: Build, Connect, Run, Test

Windows 8 Phone

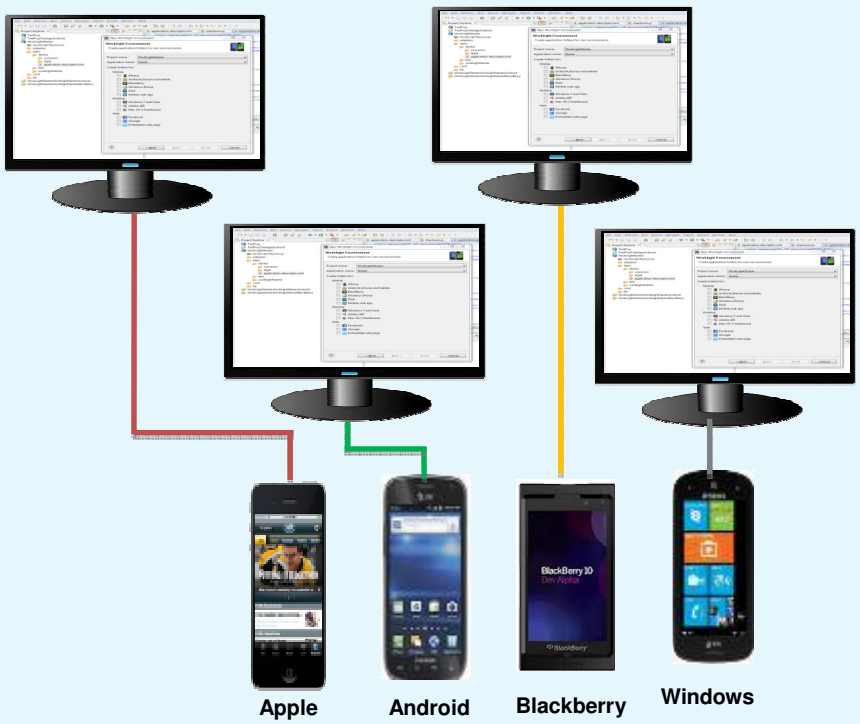
BlackBerry

ANDROID

Multi-platform Development with a Shared Codebase

From the complexity of many…

- Multiple sets of tools & frameworks
- Four codebases to develop and maintain



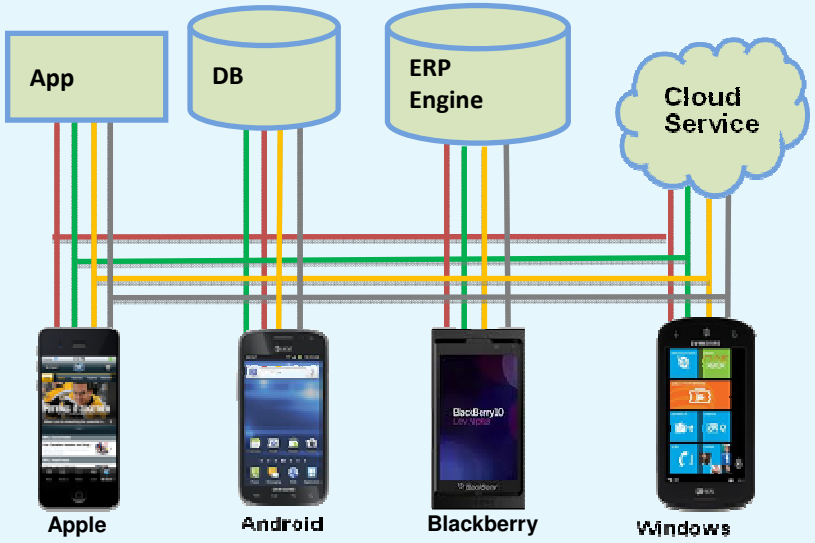
To the simplicity of one

- One development environment
- One codebase to develop and maintain

Controlled Back-end Integration

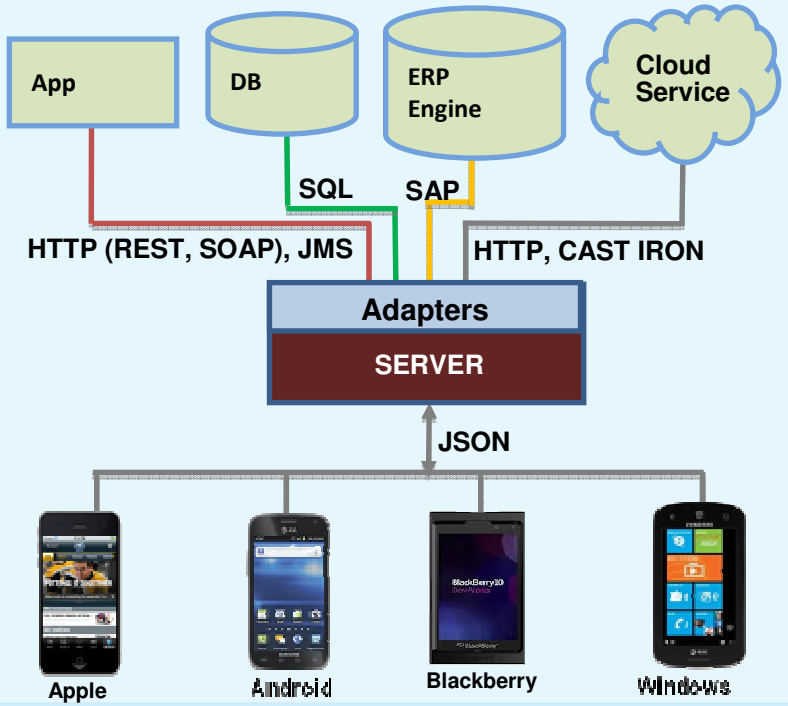
From multiple point-to-point integrations

- Multiple sets of integrations to enterprise resources to build and maintain
- YOU manage caching, synchronization and end-to-end encryption

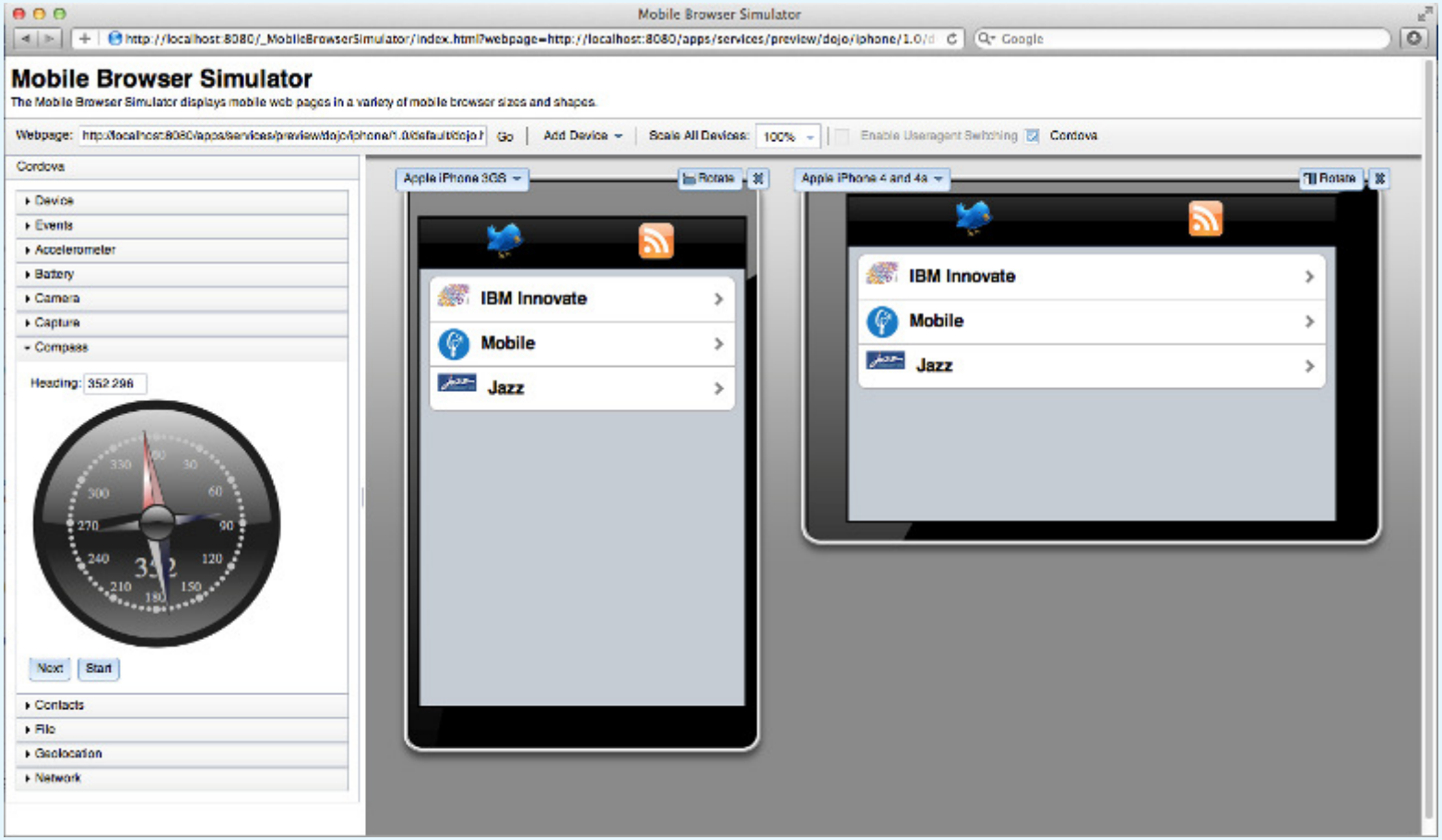


To streamlined, transparent access

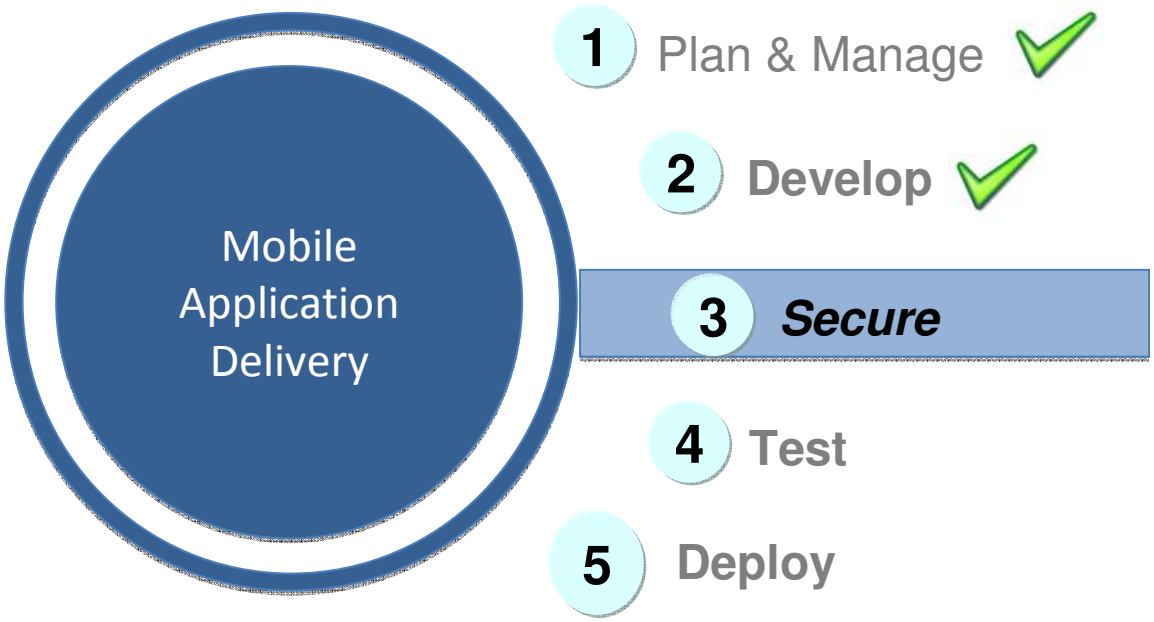
- Transforms enterprise data into mobile-friendly, JSON format
- The server manages update, data synchronization and end-to-end encryption



Rich Mobile Simulator for Hybrid Applications



Simplify first step of testing during development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Poll Question -6

What is your current approach to testing the security requirements for mobile applications?

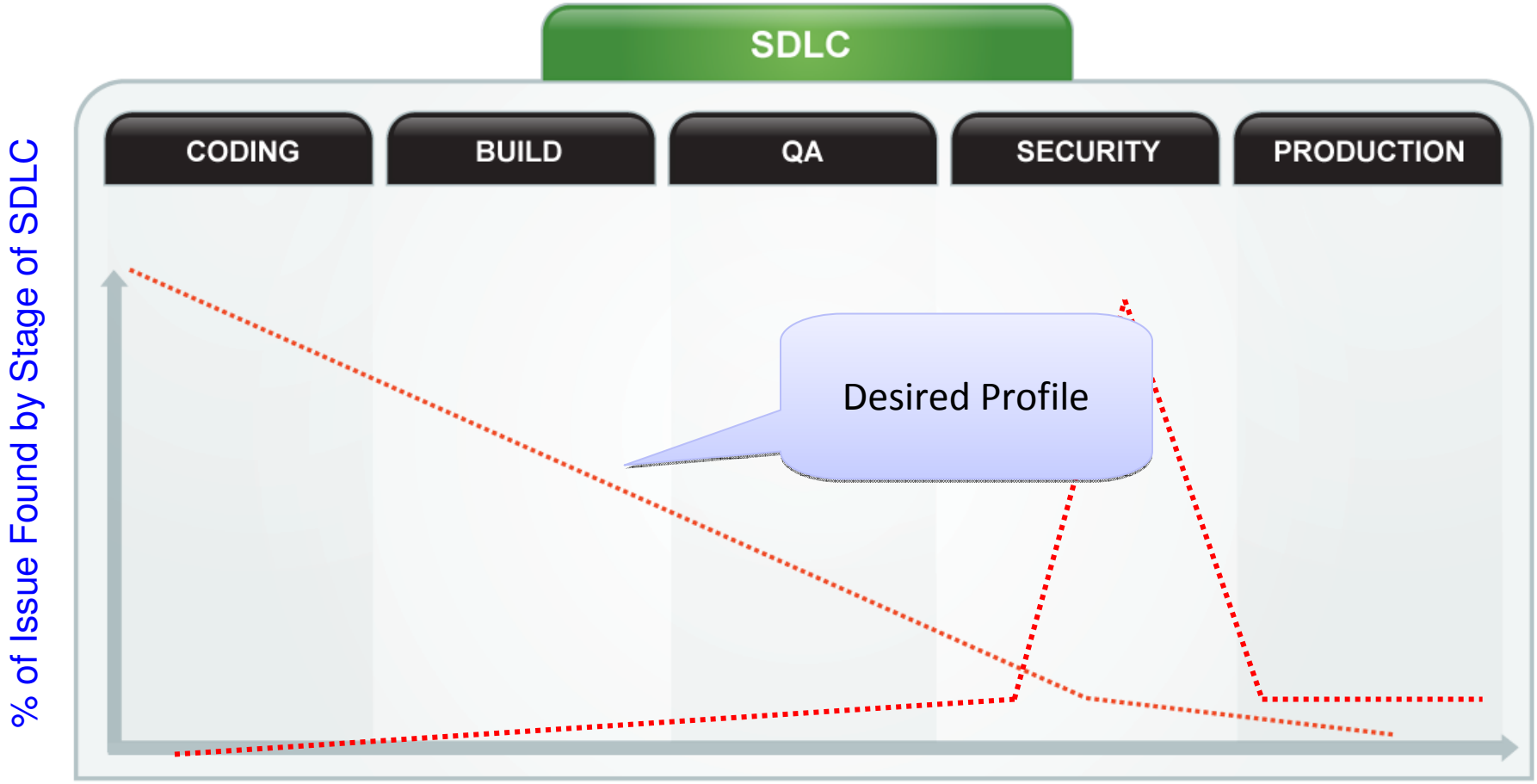
A. Perform a manual test on infrequent basis
B. Testing using outsourced pentest services on periodic basis
C. Incorporated into SDLC through automated tools
D. No specific testing specifically for security use cases

IBM MobileFirst's Approach to Security

Device Management	Network, Data, and Access Security	Application Layer Security
Security for endpoint device and data	Achieve visibility and adaptive security policies	Develop and test applications

Security Testing within the Application Cycle

Security Testing within the Application Cycle



IBM MobileFirst Security: Make Application Secure by Design

Advanced Security Assessments

Dynamic Analysis

- Analysis of a running/ deployed application
- Key requirements
  - Threat coverage: WASC, OWASP Top 10, etc
  - Web Services/ SOA
  - Web 2.0 & Rich Internet Applications

Static Analysis

- Scanning source code for security issues
- Key requirements
  - Application/language support
  - Ease of use for non-security users (developers and build managers)

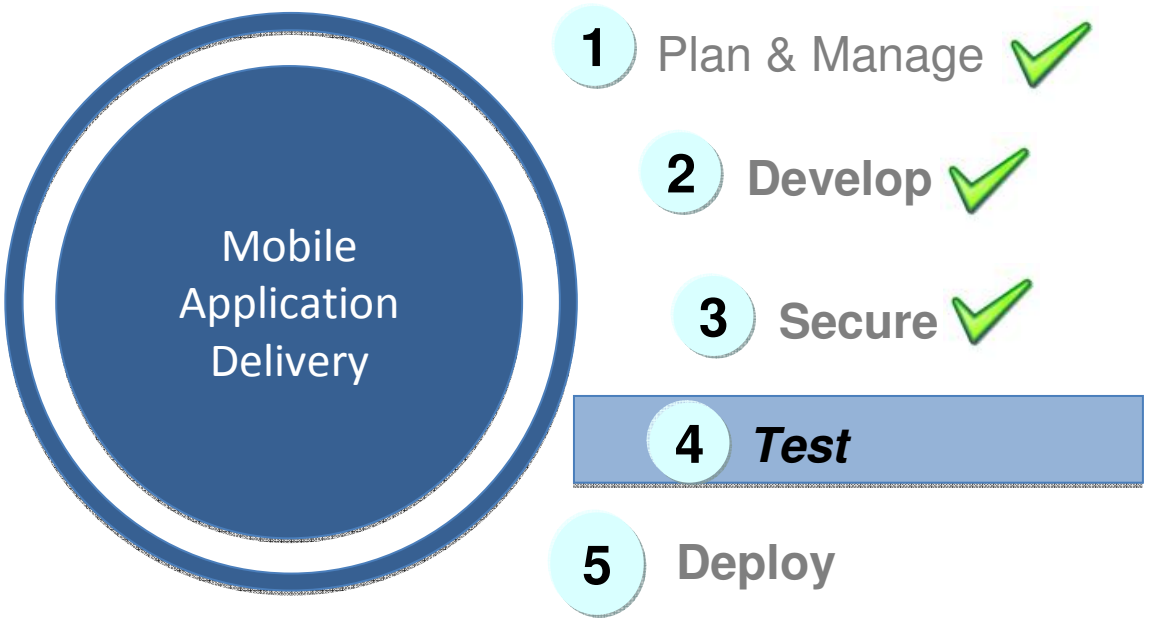
Runtime & Hybrid Analysis

- Glass box testing with runtime analysis
- Automated correlation of static & dynamic results
- Key requirements
  - Precise & Actionable results
  - Broad threat coverage

Collaboration & Governance in Application Lifecycle

Security testing, shared results, assign ownership

Track corrections and integrate with development systems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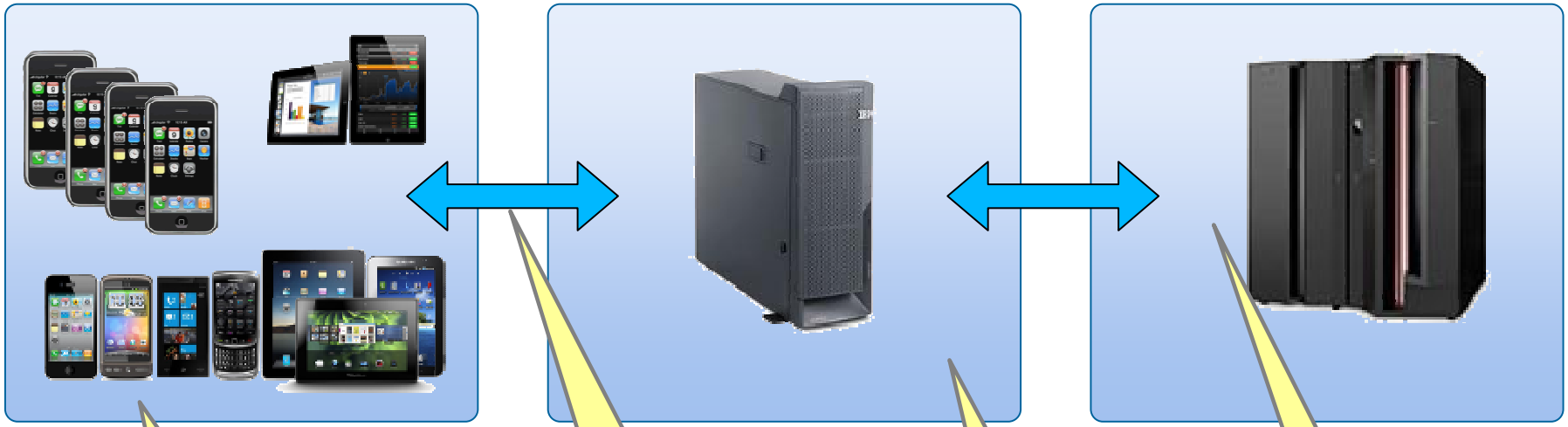
Leverage Mobile Devices for Services offerings

Scene 3

- **Tanuj** now needs to test the application which is already built and deployed on the server.
- **Tanuj** does the regression testing of the mobile application on various devices.
- **Tanuj** then rechecks by running the automated test scripts and approves of the quality
- The application is ready to be deployed

Testing the End-to-end Mobile and Web Solution



Mobile & Web Functional Test

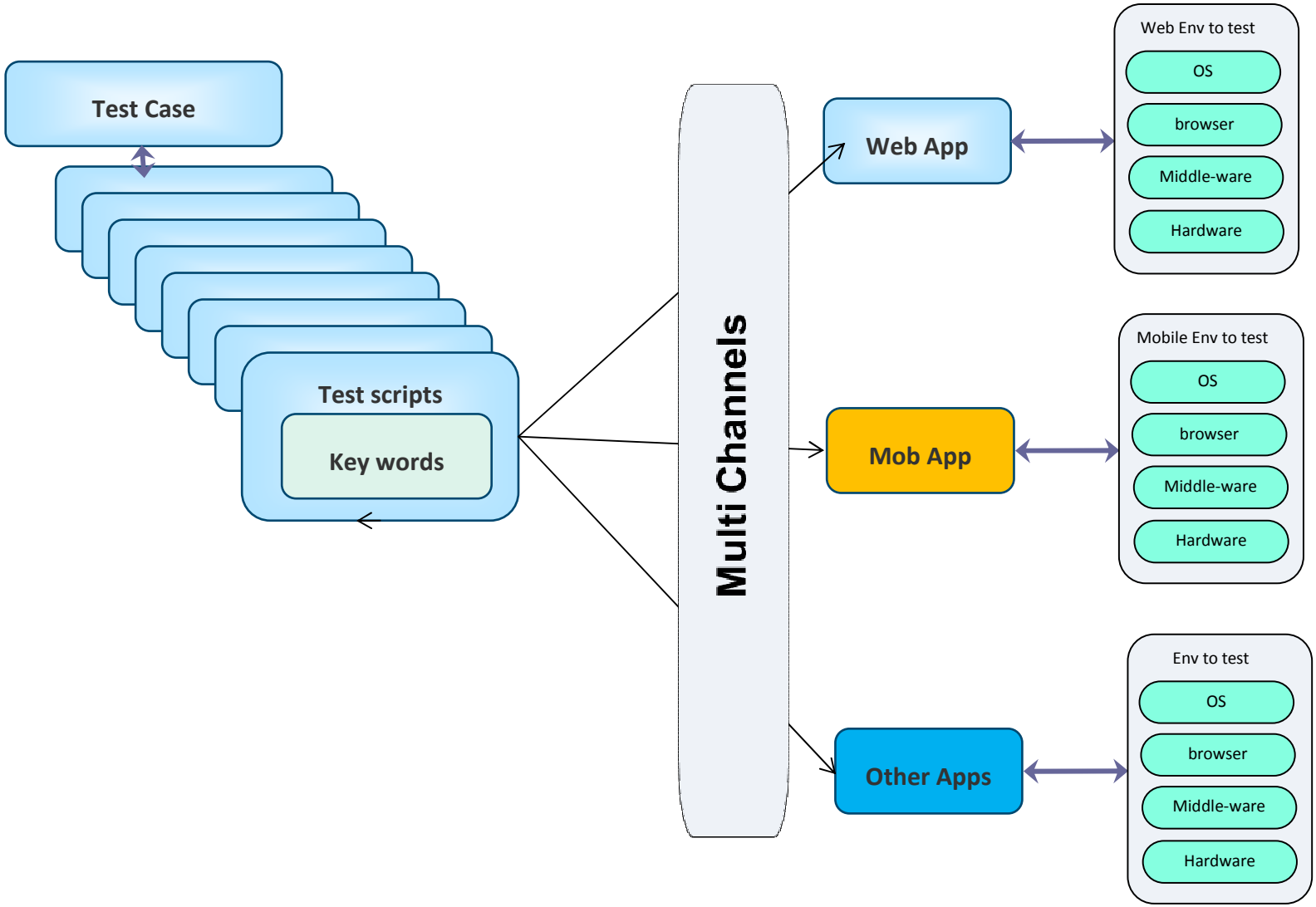
Service Functional Test

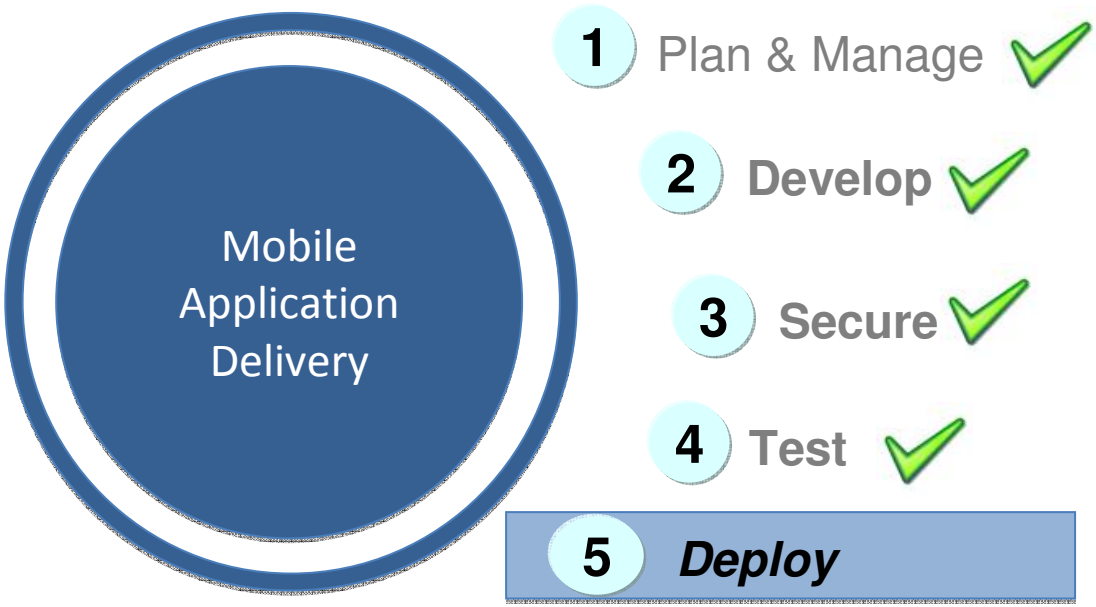
Performance Test

Service Virtualization

Quality Management

Meeting the Challenge of Multichannel Testing

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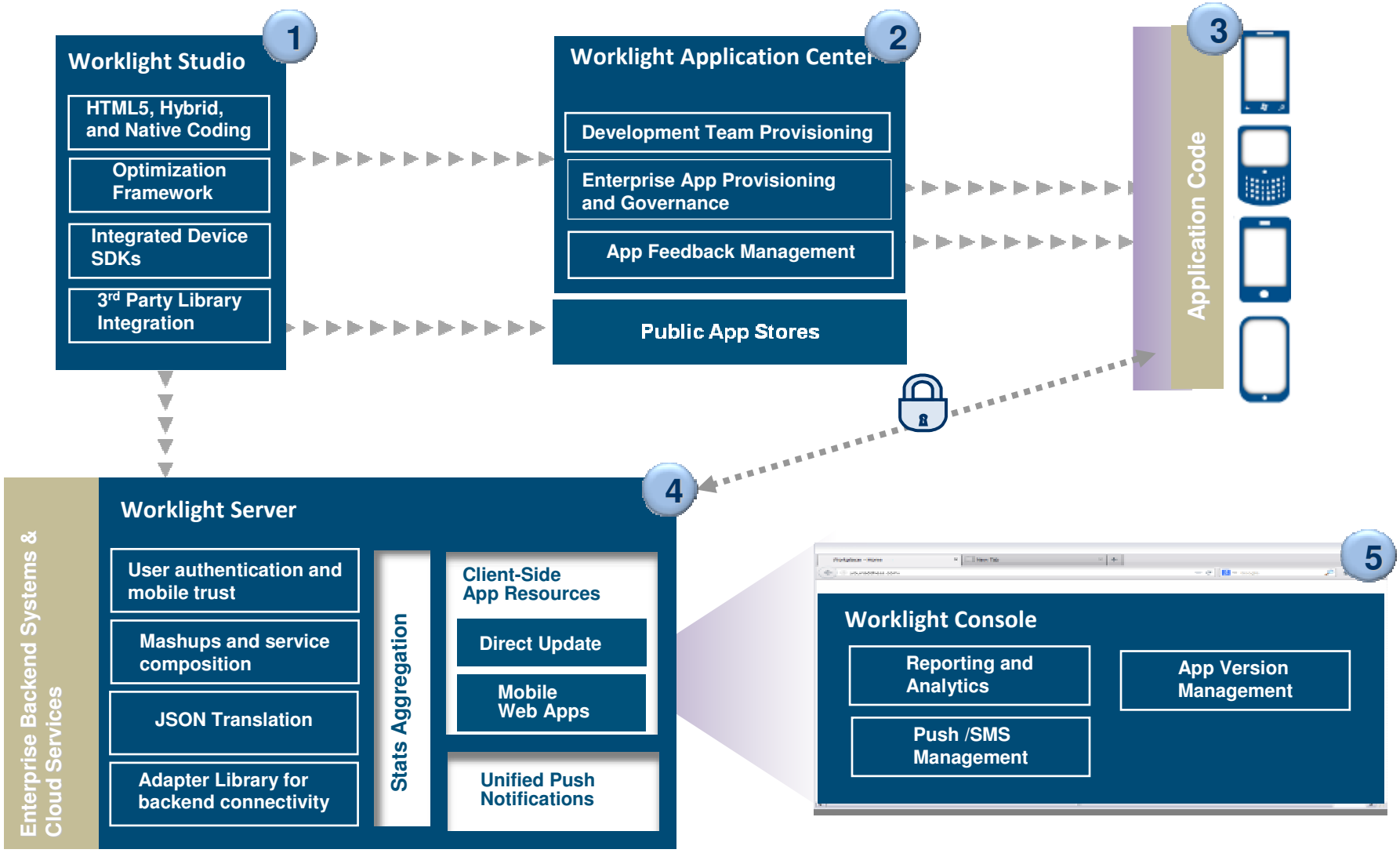
IBM Mobile Application Deployment



1. Mobile Analytics
2. Responsive UI Design
3. Mobile Application Delivery

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Thank You