

BusinessConnect and SolutionsConnect

It's time to make bold moves.

*Mobile Application Development
with Speed and Quality*



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Agenda

- 1** Mobile application development challenges
- 2** Overcoming the challenges with a MADP
- 3** Client examples



Companies struggle with the design and development of mobile applications

Challenges In developing/acquiring mobile applications

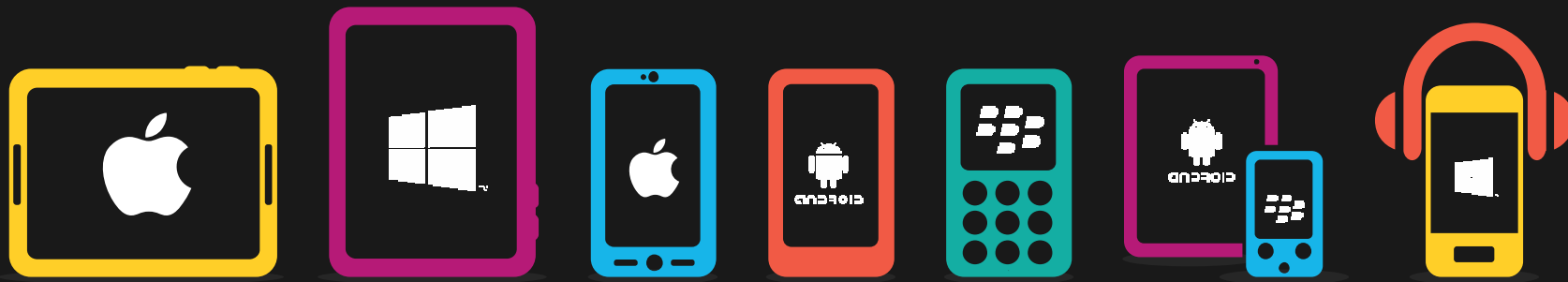


“ For the end customer, it is not easy to get the right orientation, look and feel; usability is the next thing. ”

Executive | Automobile company

Source: Institute for Business Value, Mobile Enterprise Study, Q11.
Please select the top challenges your organization faces today when developing or acquiring mobile applications. Select up to 5.

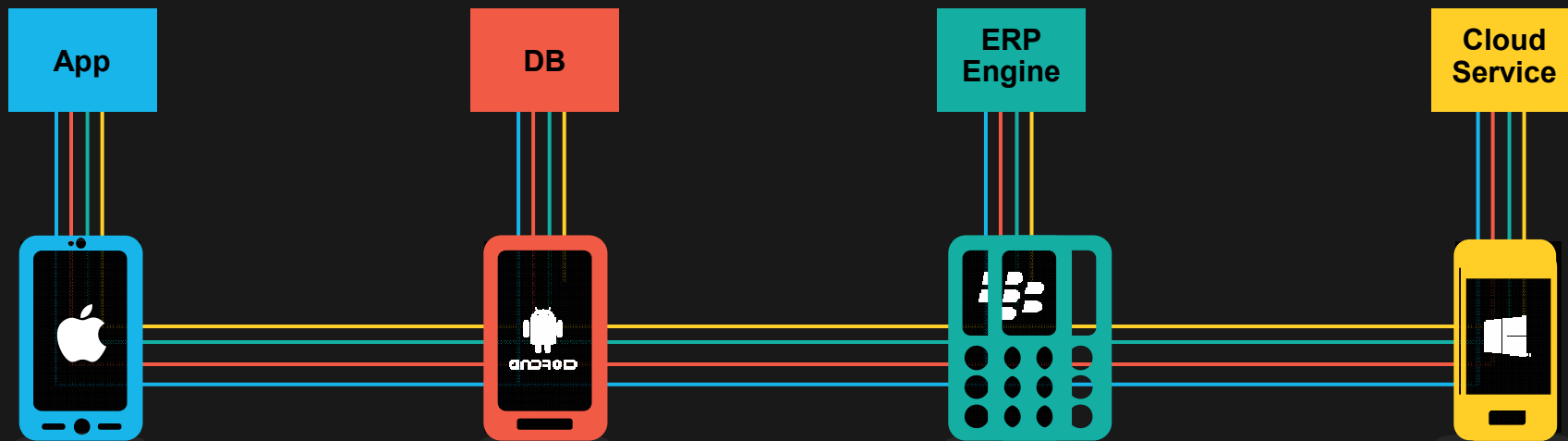
They struggle with **multiple mobile OS platforms** and devices?



They struggle **creating the best UX** using best of breed open frameworks?



They struggle with **integration**?



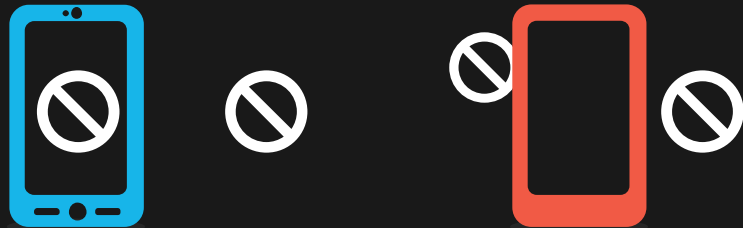
They struggle with **security**?



They struggle with **testing**?



They struggle with **analytics**?



They struggle with **mobile operations**?



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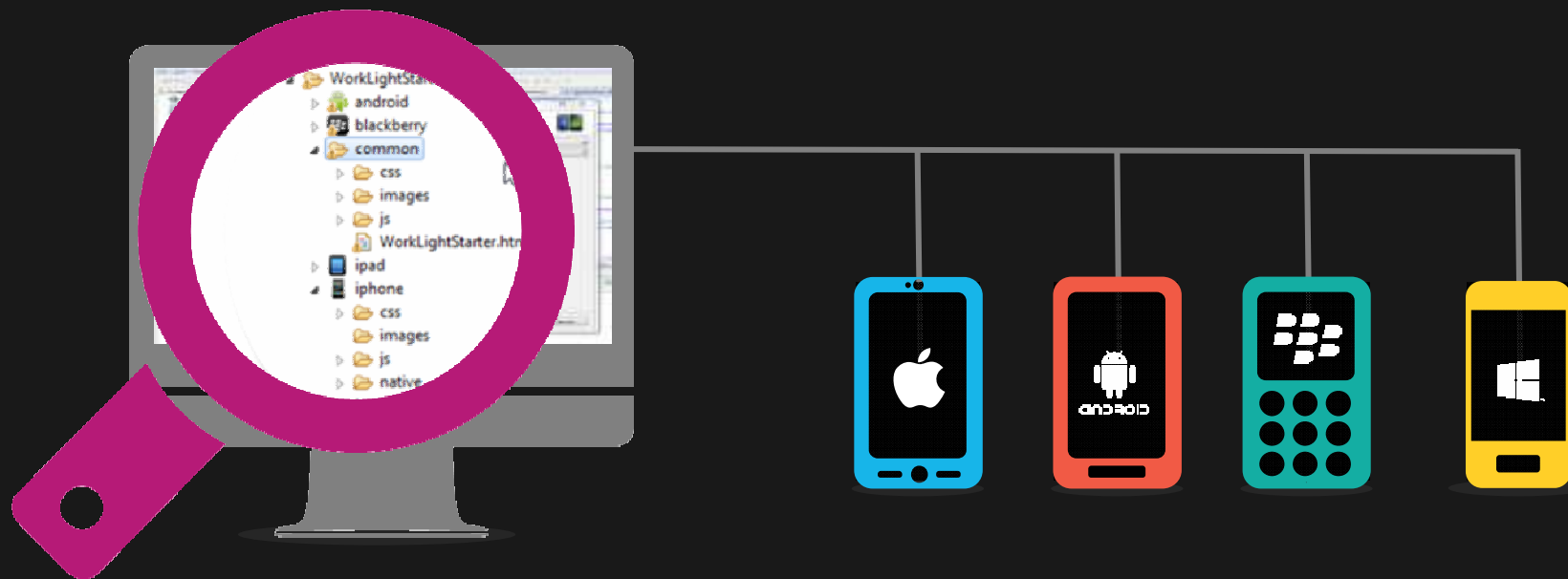
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**How do we
overcome these
*challenges?***

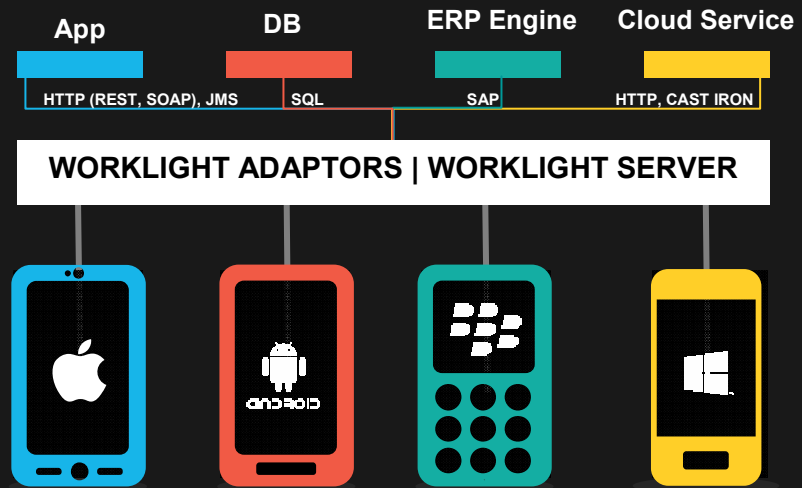
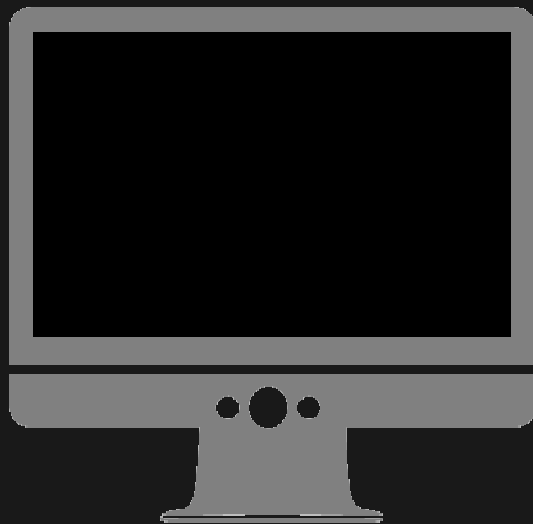
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Multi-platform development – Environment optimisation for maximum code reuse



Connectivity – streamlined, transparent & mobile optimised.



Instant Preview Testing – Mobile Browser Simulator.

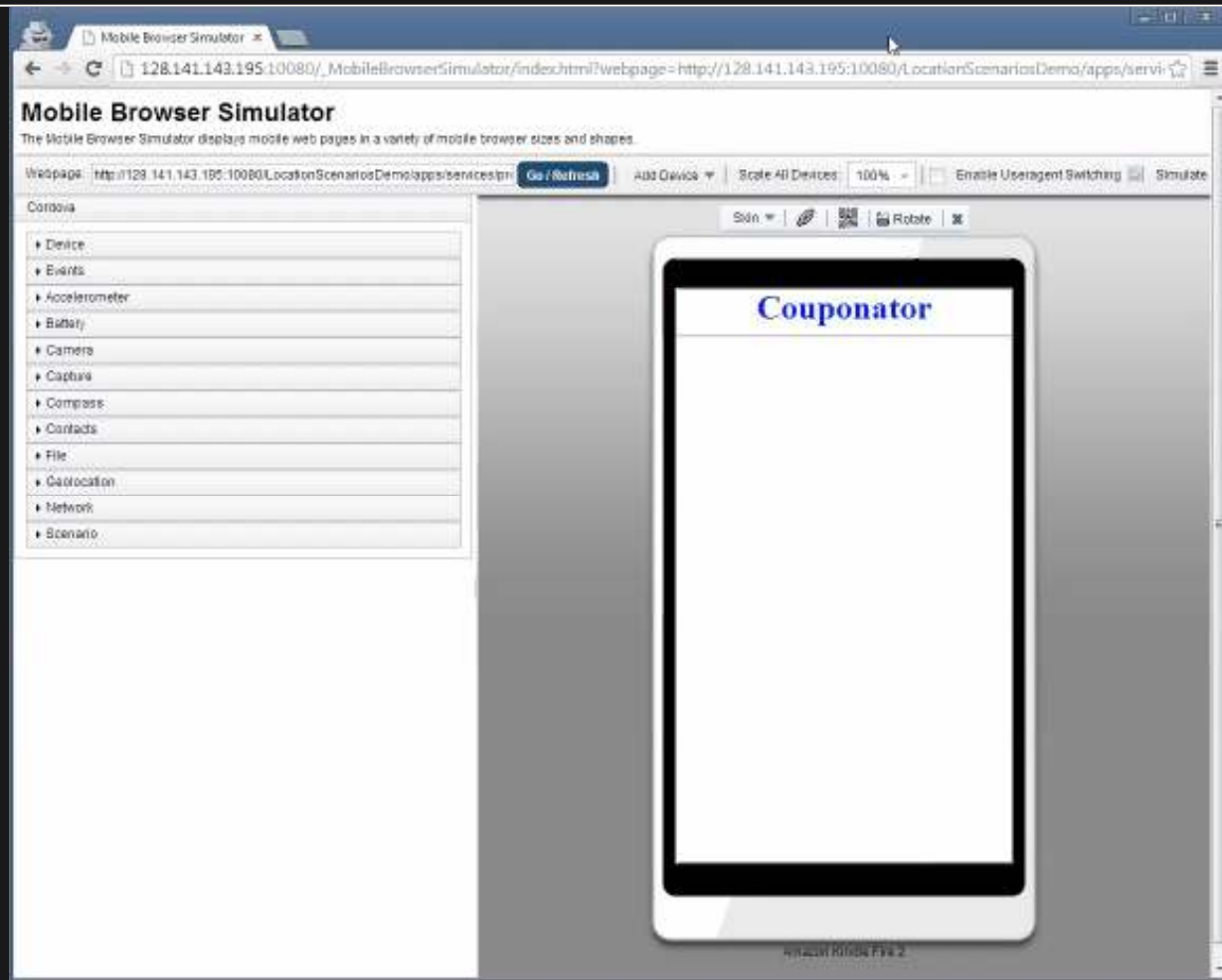
Mobile Browser Simulator

The Mobile Browser Simulator displays mobile web pages in a variety of mobile browser sizes and shapes.

Webpage: Add Device ▾ Scale All Devices: 100% ▾ Enable Useragent Switching Simulate

MyScenario

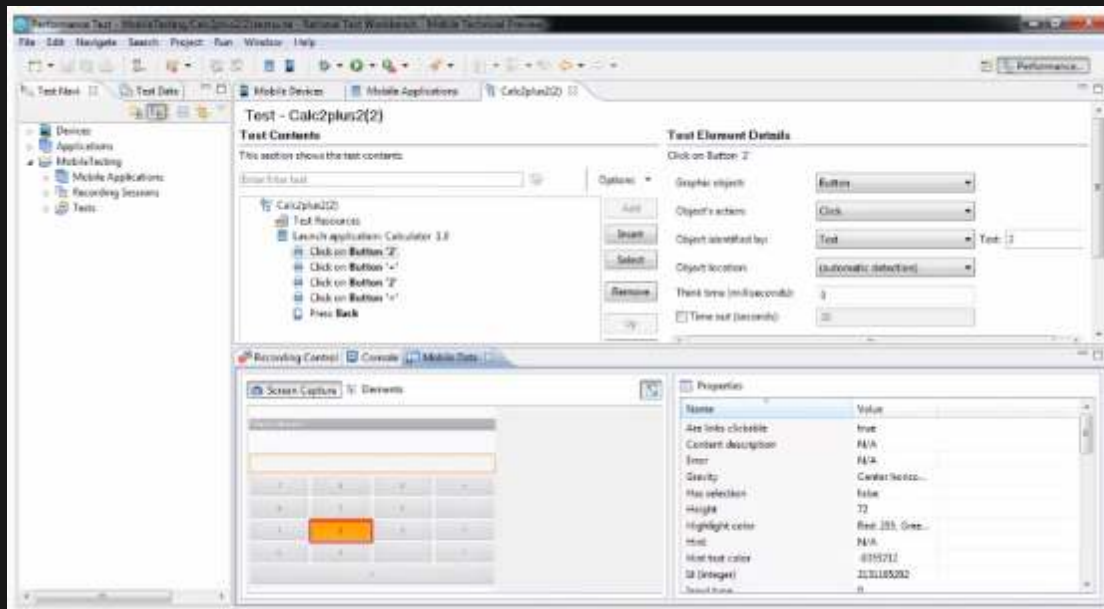
Instant Preview Testing - Mobile Browser Simulator





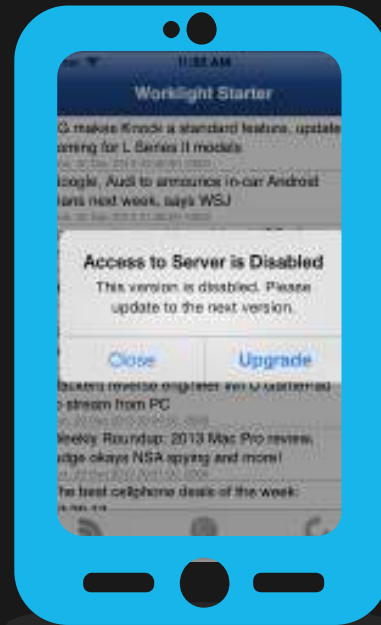
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Regression Testing - Mobile Test Workbench

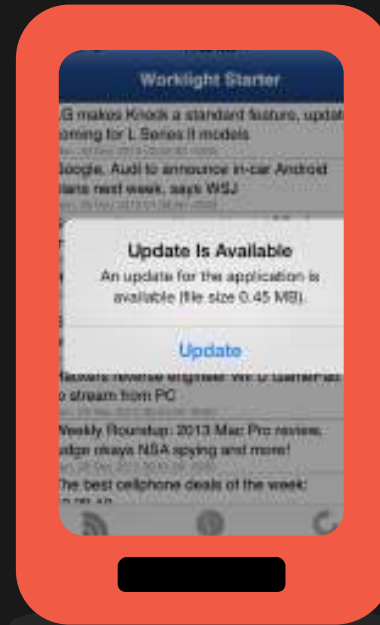


Enforcing security updates

**Remote
disable**



**Direct
update**



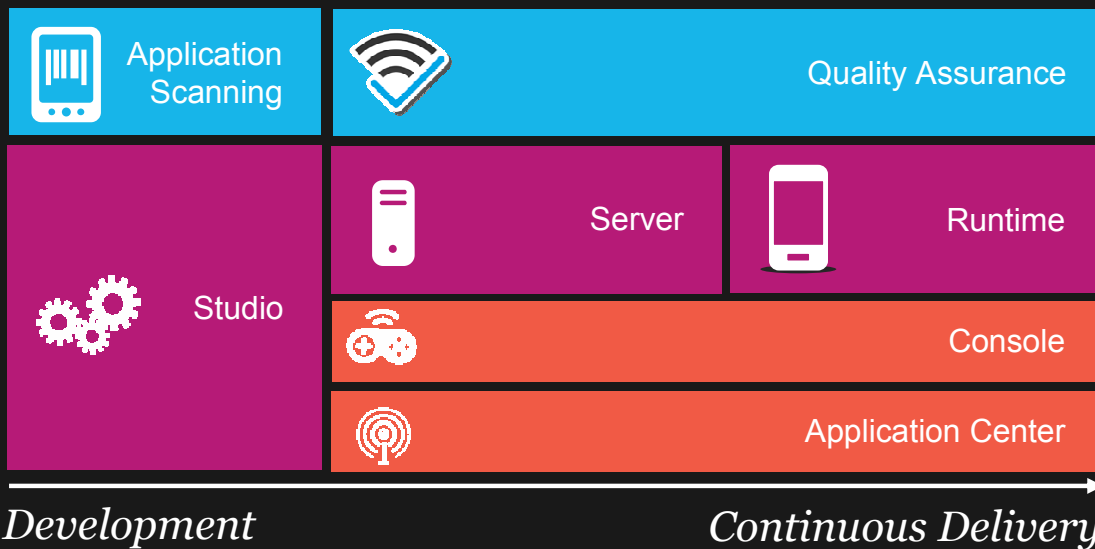


Operational Analytics



The screenshot shows an 'Analytics Dashboard' with a 'Server Logs' section. Below the title, there is a search bar and a 'Filter' button. A table of logs is displayed with the following columns: Message, Severity, Status, and a 'View' link for each entry. The table contains several rows of log entries with varying severity levels (Warning, Error, Info) and status indicators.

Mobile Application Development Platform (MADP) Architecture



Application Scanning

Detect code security vulnerabilities at the time of development

Quality Assurance

Collect beta test feedback, crashes and analyze user sentiment

Foundation

Development, Runtime, Operations Console & Private Store

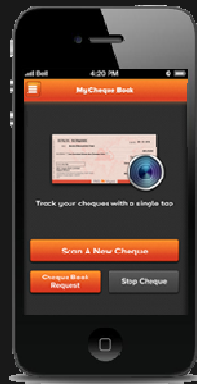
Rohde & Schwarz cuts mobile development costs by 60%

“ After lots of evaluations, we decided that Worklight seems to fit best with our environment and our needs. Now we are able to deliver exceptional apps in weeks instead of months ”

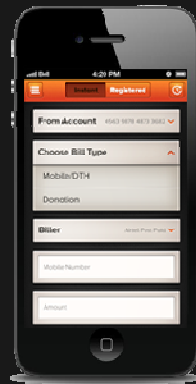
Manfred Metz | corporate mobility manager | Rohde & Schwarz

ING Vysya Bank increases customer satisfaction by 50%

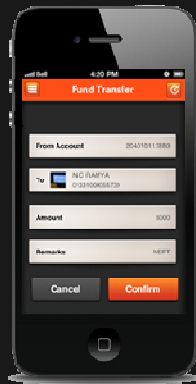
Save
Cheque



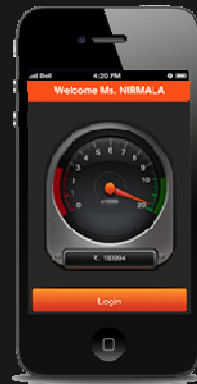
Bill
Payments



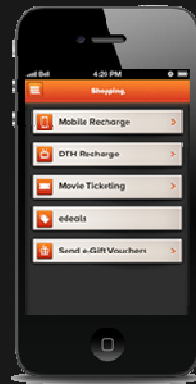
Funds
Transfers



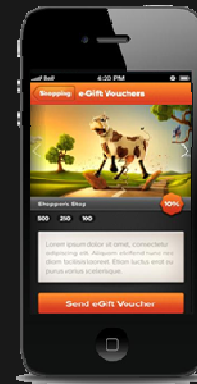
Balance
Meter



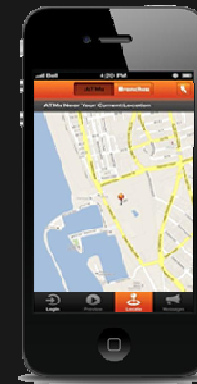
One-click
shopping



Balance
Meter

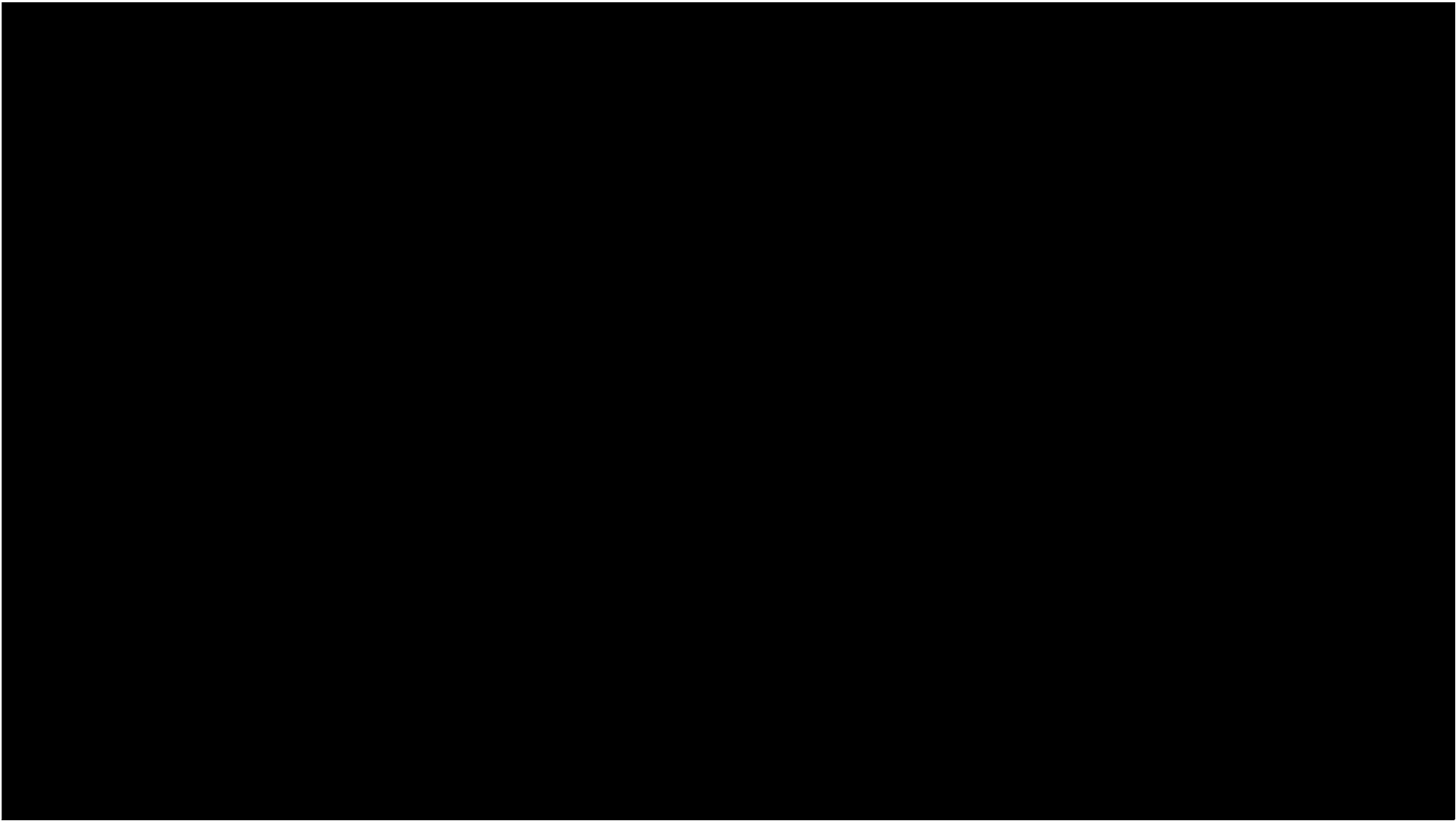


Branch /
ATM





**So how important is the
end user experience?**



Visibility into the customer mobile experience to improve conversions and grow revenue

Industry-leading customer experience management solutions to mobile websites, native applications, and hybrid apps including support for HTML5.

- **Capture and high-fidelity replay of mobile gestures*** for mobile web sessions on iOS and Android-based devices help optimize users' experiences on mobile web applications .
- **Analyze mobile user behaviors and quantify business impact** of user struggles with IBM Tealeaf integrated solutions
- **Add-on Heatmap, Link Analytics, Form Analytics, and Attention Map analytics** for mobile-web applications



Expectations vs. Realities

85% of adults who have completed a mobile transaction in the past year *expect the experience to be better than using a laptop or desktop* computer

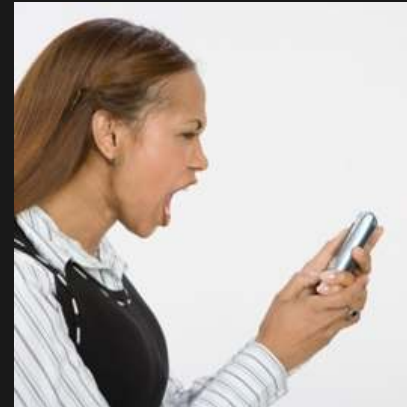
Yet **41%** of comments about the top mobile companies expressed frustration

Consumer Mobile Expectations Are High



Top consumer struggles

1. Inability to complete a transaction
2. Search functionality
3. User interface



63% of all online adults would be less likely to buy from a company via other purchase channels if they experienced a problem conducting a mobile transaction.



How do you find out about bad customer experiences?

@pstarmans #SmarterCommerce

Mobile Commerce: Utter Frustration



@bevan - _____ mobile is down. Not letting me checkout. CS says it's a known problem. On BlackFriday? I just missed two deals!!



@gdomdom - @_____ Your app sucks for trying to shop!!! Get your mobile act together



@christenfolsen - Dear _____, please fix the mobile version of your website or I am going to kill you.



**“The Companies That Focus on Customer
Experience Are The Ones That Will Win”**

M&M Direct

Mobile Commerce: Pure Delight



@beccbrown - Wow, just did half my #Christmas shopping on the bus, using my #iPhone _____ app. #ihearttech #blackfridaybedamned



@LiveLoveLaugh88 - I'm like a fiend with these _____ deals... setting alarms on my phone and checking _____ app every 15 mins. #BlackFriday



@eclat521 - Well- that's my boy's Xmas presents ordered, from my phone, thanks to _____ app. Too easy!

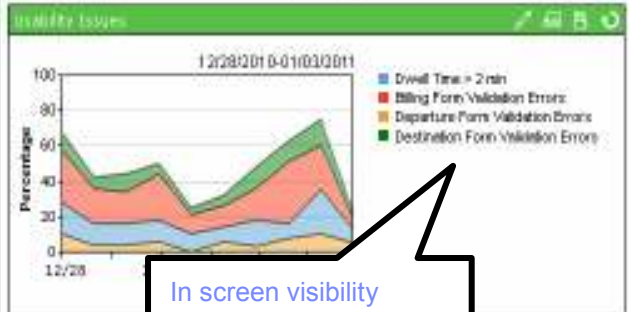
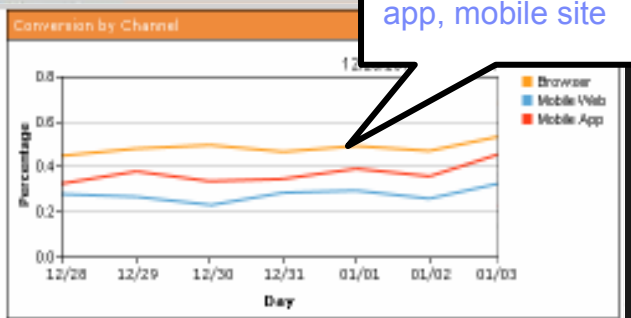


Mobile dashboard

Automatic detection of mobile customer struggle



Cross channel analytics: web, app, mobile site



In screen visibility (orientation, swipe, form entry, clicks) to track usability issues



Complete experience capture: user actions, application, environmental and network data

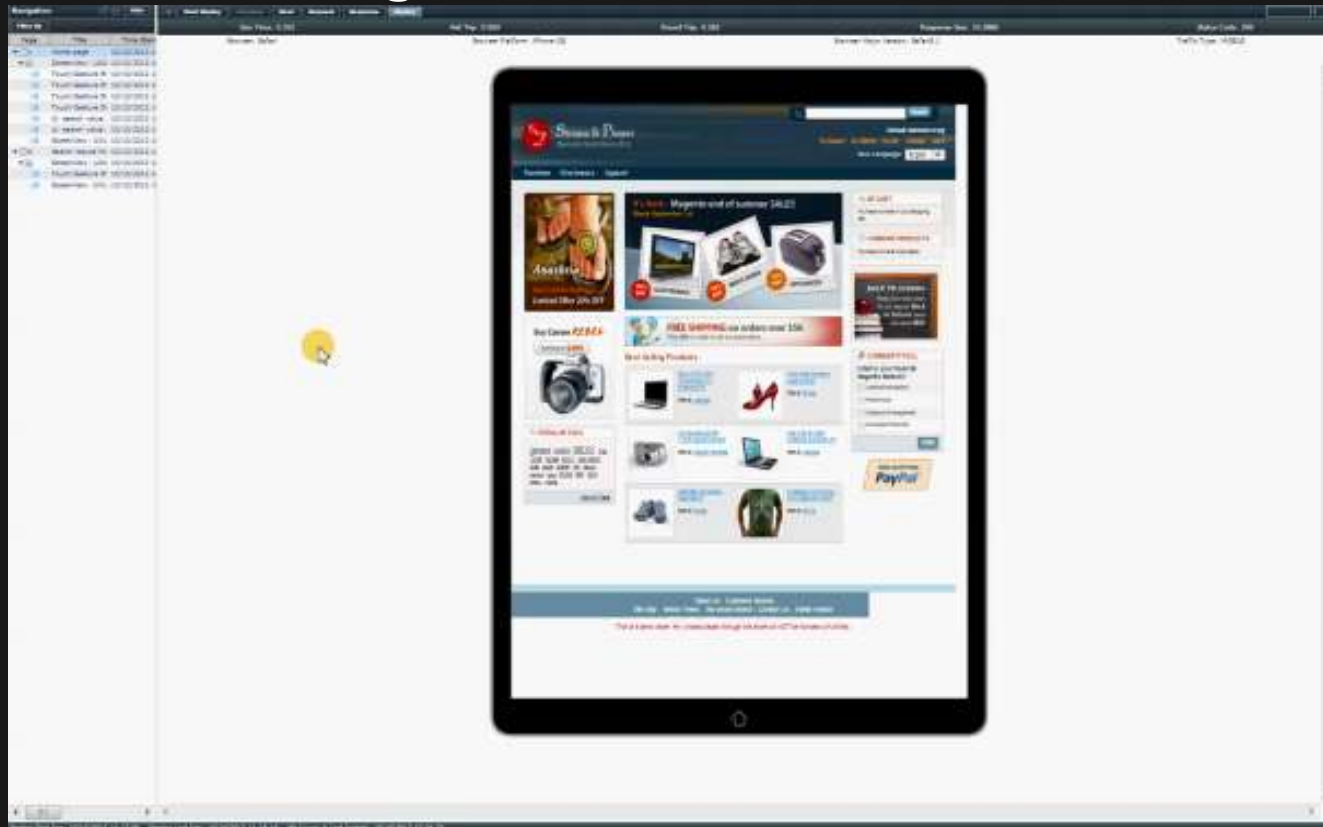
Mobile Web



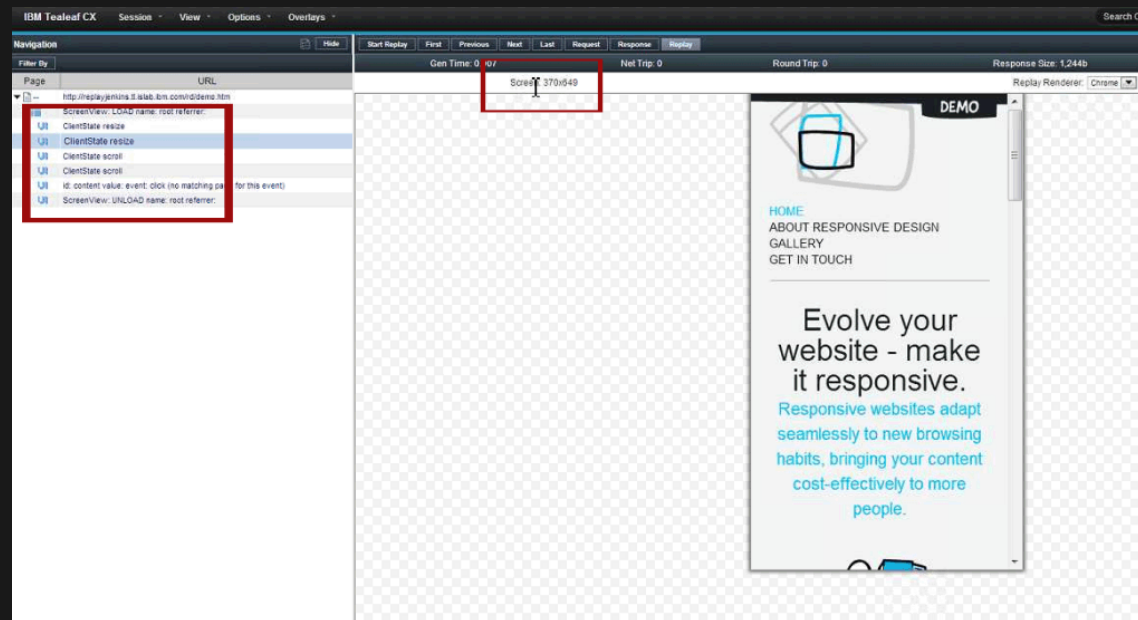
Orientation-Specific Enhanced Mobile Replay



Mobile DOM Rendering



RWD Replay

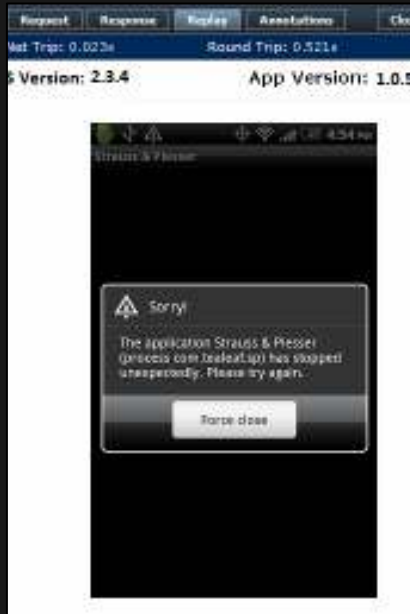


- UI Events appear for changes, resize and scroll
- Screen size is displayed
- Replay view adjusts to match user's experience

Mobile Usability



Native Apps



```
Browser: NullSecurityException
Traffic Type: HTML

Request:
Host: 192.168.1.104
Content-Type: application/json
Content-Length: 1024
Accept: */*
Accept-Encoding: gzip, deflate
Accept-Language: en-US;q=0.8,en;q=0.7
User-Agent: Mozilla/5.0 (Linux; Android 4.0.4; Nexus S Build/IML74K) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/30.0.1599.92 Mobile Safari/537.36

Request Body:
{"messageVersion": "0.0.0.2", "sessions": [{"startTime": 1333644402148, "id": "4879AEF5170446D3B5AD99B4EE66754C", "offer": "15479", "type": "6", "contextOffer": "4821", "exceptions": [{"description": "divide by zero", "stackTrace": "java.lang.ArithmeticException: divi..."}]}]}

Response:
HTTP/1.1 200 OK
Content-Type: application/json
Content-Length: 1024
Accept: */*
Accept-Encoding: gzip, deflate
Accept-Language: en-US;q=0.8,en;q=0.7
User-Agent: Mozilla/5.0 (Linux; Android 4.0.4; Nexus S Build/IML74K) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/30.0.1599.92 Mobile Safari/537.36
```

Native Replay

The screenshot displays the IBM Tealeaf CX Replay interface. On the left, a 'Navigation' pane lists various events with their IDs and URLs. The selected event is 'id: 200590000 value: Simpson event: change 15'. The main area shows a mobile application screen with a form titled 'Request Information'. The form contains the following fields and values:

- First Name: Alyssa
- Last Name: Simpson
- Email: (empty)
- Phone: (empty)
- Company: (empty)
- Job Title: Select One
- Job Role: Select One
- Industry: Select One
- Country: United States
- State: Select One

A 'Submit' button is located at the bottom right of the form. The interface also shows session details at the bottom: 'Session First Use: 10/20/14 10:59:40 AM - Session Last Use: 10/20/14 11:05:11 AM - Page Count: 31 - Last Update: 10/20/14 11:45:49 AM'.

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THANK YOU



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