



APPLAUSE[®]
WINNING APPS GET IT

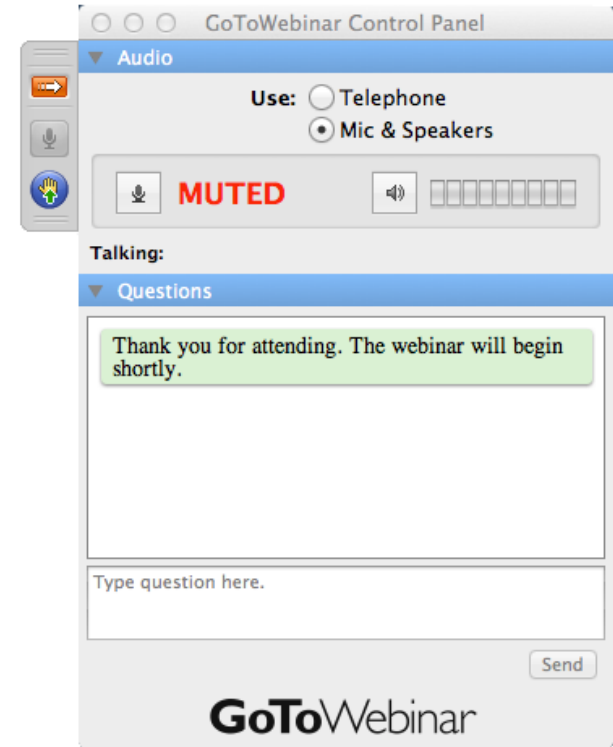
YOU'RE DOING IT WRONG! HOW TO GET AUTOMATION RIGHT

WEBINAR FEATURING FORRESTER INC.

July 22, 2015



- **Today's webinar will be recorded. You will be emailed a link.**
- **We welcome your feedback.**
- **Please enter your questions in the Questions box. We will answer as many as possible at the end.**
- **If you're having technical difficulties, try logging in with a different browser.**





Kurt Bittner
Principal Analyst
Forrester Research
kbittner@forrester.com



Ken Paetzold
App Quality Evangelist
Applause
kpaetzold@applause.com

A photograph of a cemetery with various tombstones in the foreground and a picnic table in the background. The image is dimmed to serve as a background for the text.

“The average lifespan of a company listed in the S&P 500 index of leading US companies has decreased ... to just 15 years”

“By 2020, more than three-quarters of the S&P 500 will be companies that we have not heard of yet.”

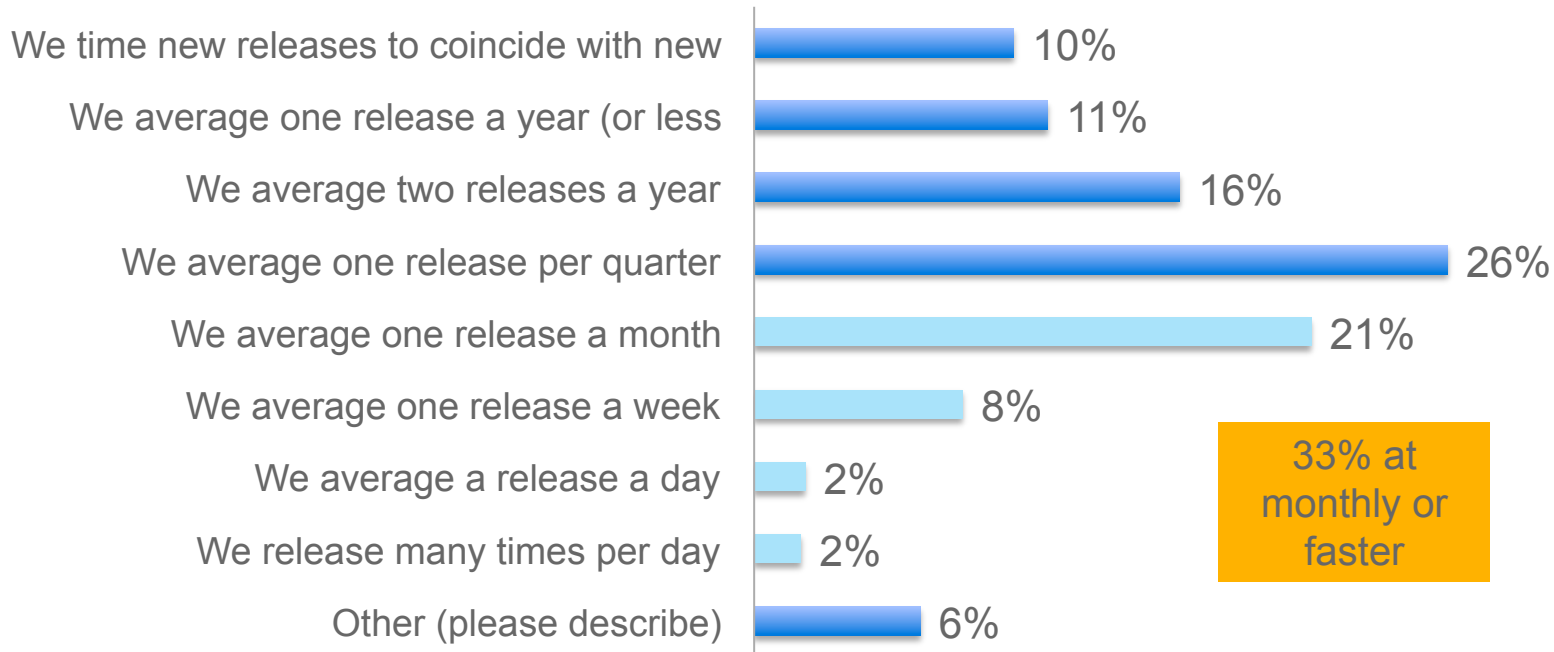
Why?



<http://blog.m-ize.com/blog/bid/199822/Perspective-Engaging-Mobile-and-Social-Consumers>

Release Velocity Is Increasing

How often does your team or teams release applications?



Base: Sample Size = 635

Source: Forrester Business Technographics Global Developer Survey, 2015



NETFLIX

Watch TV shows & movies anytime,
anywhere.

Plans from \$7.99 a month.

**The future is already here — it's just not
very evenly distributed.**

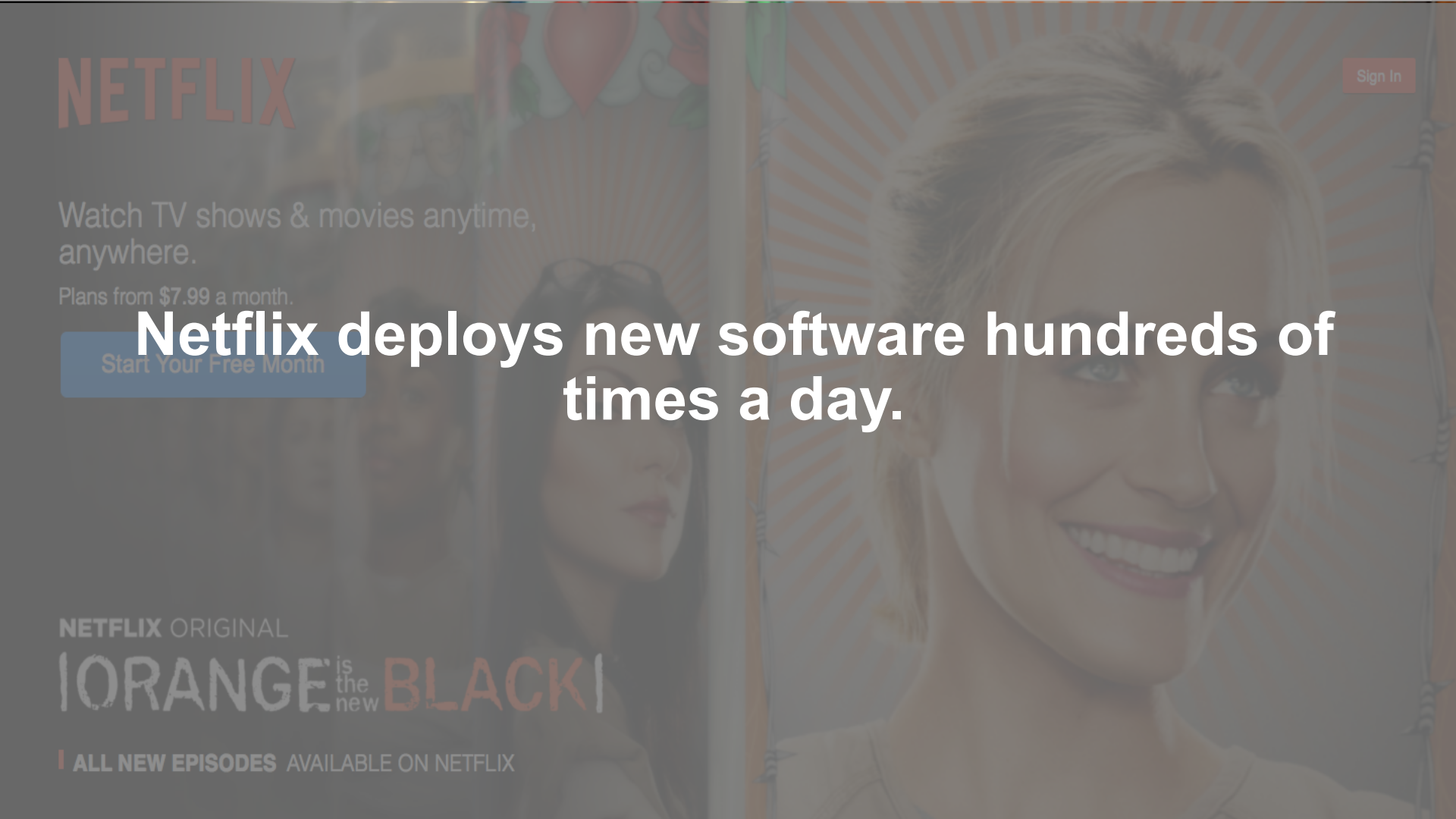
Start Your Free Month

William Gibson

NETFLIX ORIGINAL

1ORANGE is the new BLACK1

ALL NEW EPISODES AVAILABLE ON NETFLIX

The background of the entire advertisement is a promotional image for the TV show 'Orange Is the New Black'. It features a group of women in an orange-striped prison uniform. On the right side, a woman with blonde hair is smiling. On the left, a woman with dark hair is looking off to the side. The Netflix logo is in the top left corner.

NETFLIX

Watch TV shows & movies anytime,
anywhere.

Plans from \$7.99 a month.

Netflix deploys new software hundreds of
times a day.

Start Your Free Month

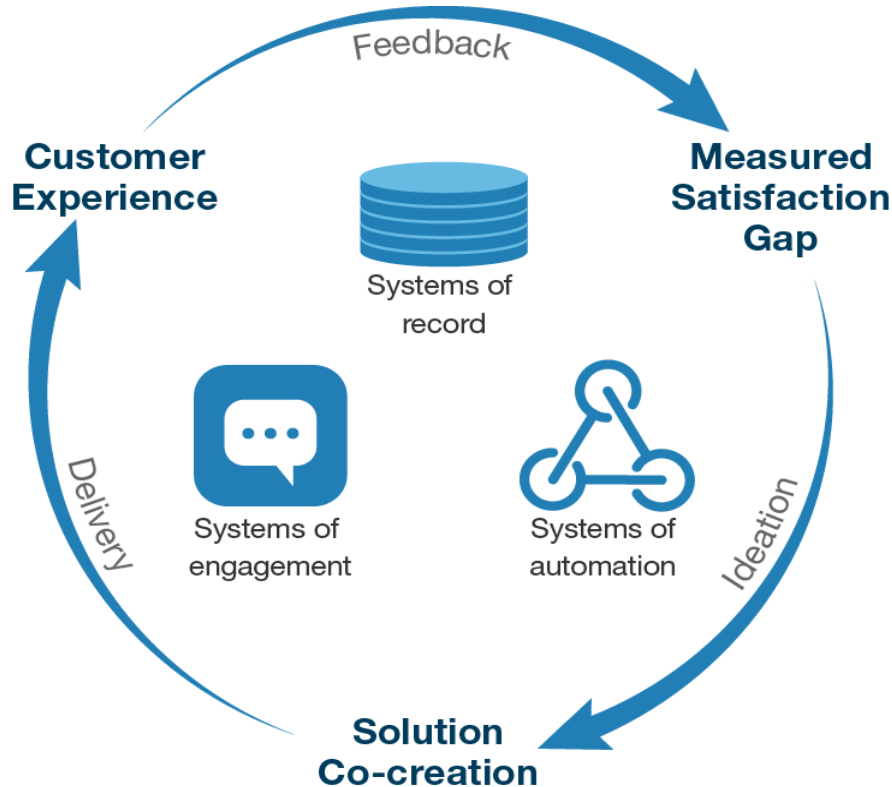
NETFLIX ORIGINAL

ORANGE is the new **BLACK**

ALL NEW EPISODES AVAILABLE ON NETFLIX

Sign In

The Software-Powered Value Delivery Cycle



› Faster cycles result in:

- + Less risk
- + Less waste
- + Lower cost
- + Happier customer
- = Better business results

But how to get there?

Some examples

- **Increased deal close rates.**

Trane deployed a mobile tablet application that helps sales reps walk through quotes with customers, leading to closing rates soaring from 35% to 65%

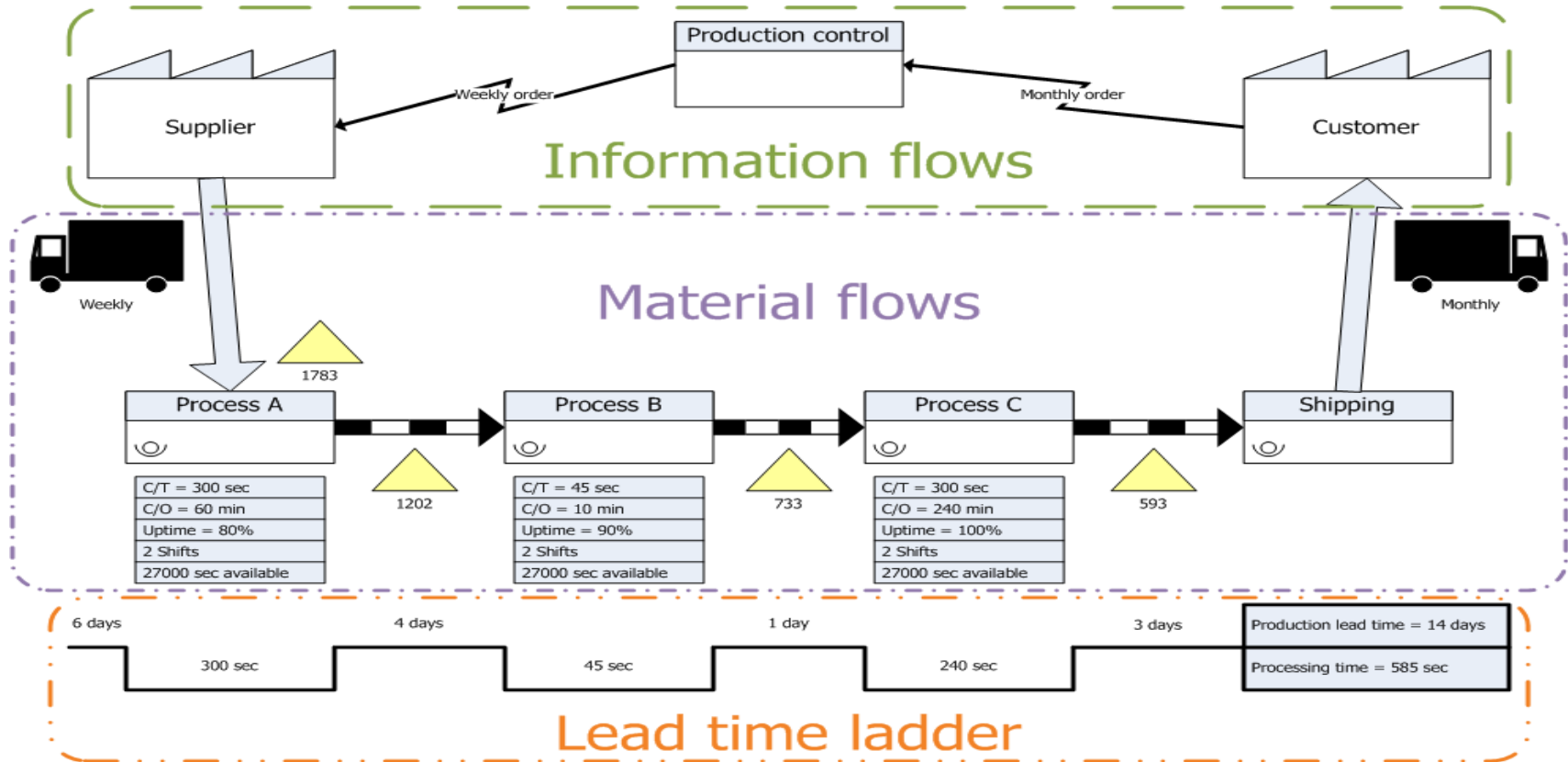
- **Increased revenue.**

InterContinental Hotels Group doubled mobile app booking rates in 4 years by releasing new improvements on regular interval.

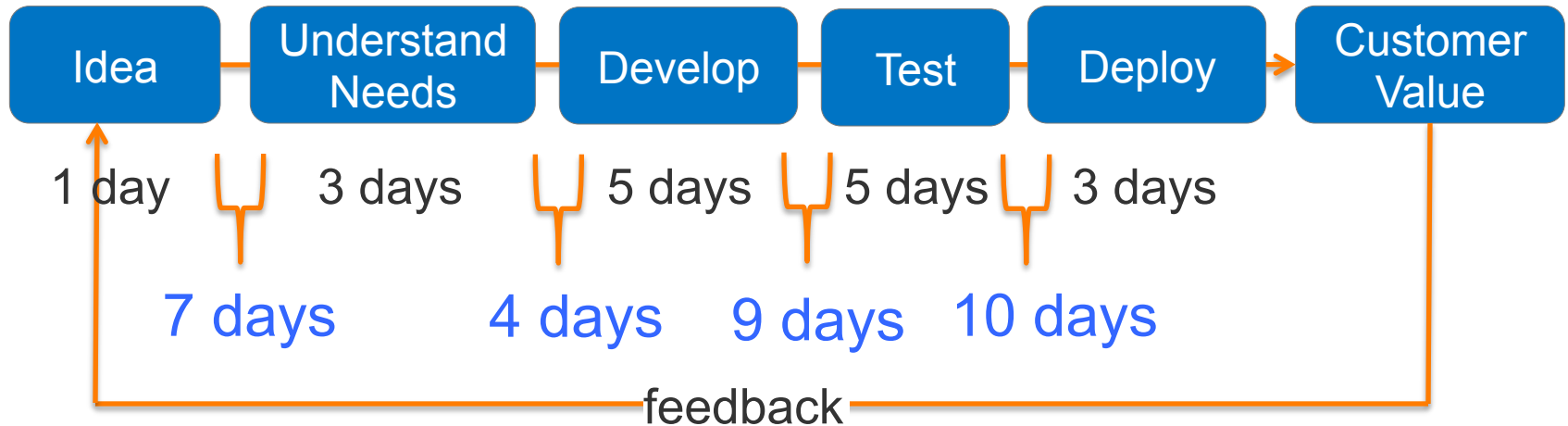
- **Increased customer satisfaction.**

Tesla Motors' customers demonstrate loyalty that borders on zealotry. Tesla fixes product recalls without even requiring owners to visit the service center; they simply update the software, wirelessly. Similarly Nest Labs, now owned by Google, updates its thermostats while they're attached to the wall.

Lean Value Stream Mapping

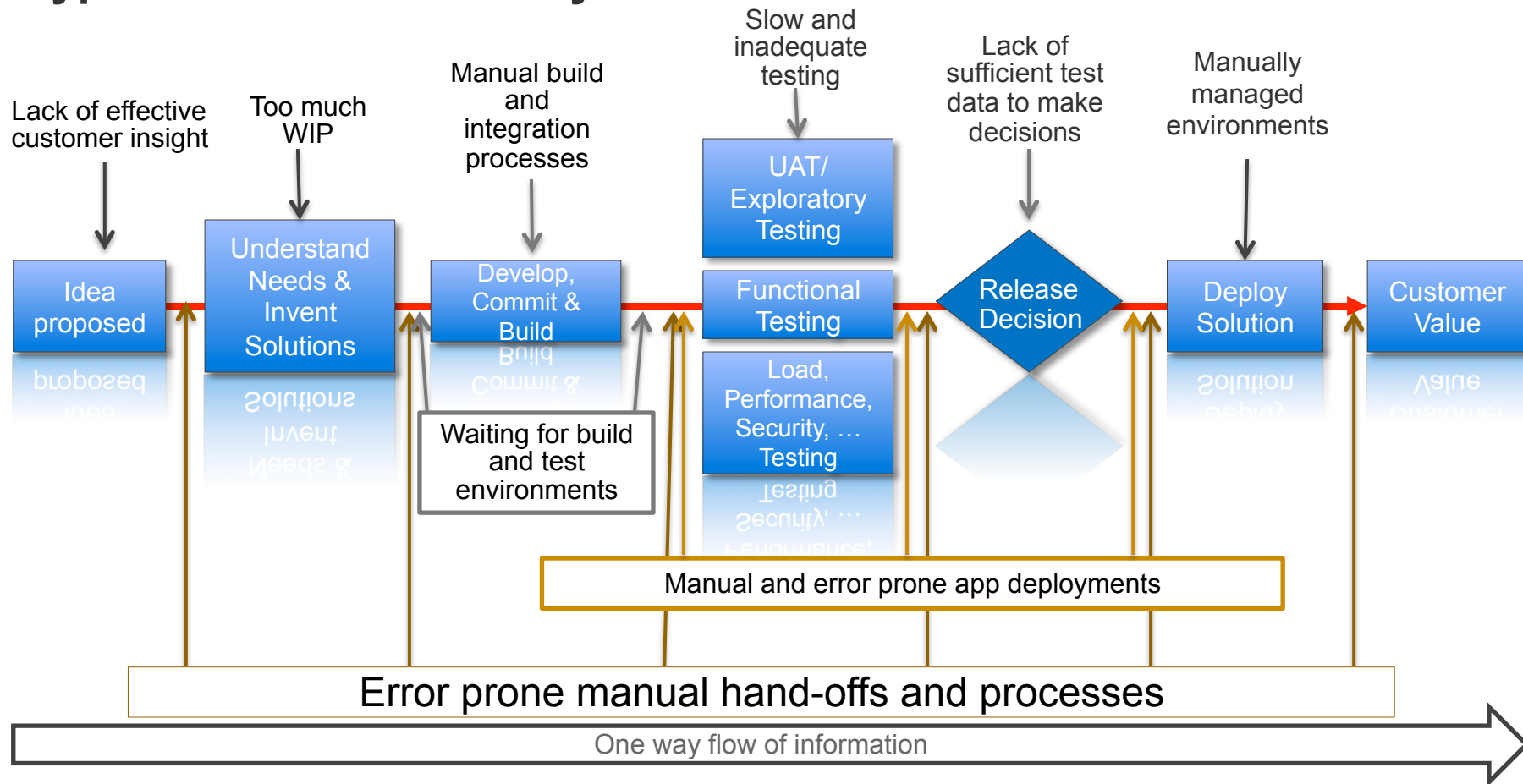


Example Value Delivery Stream



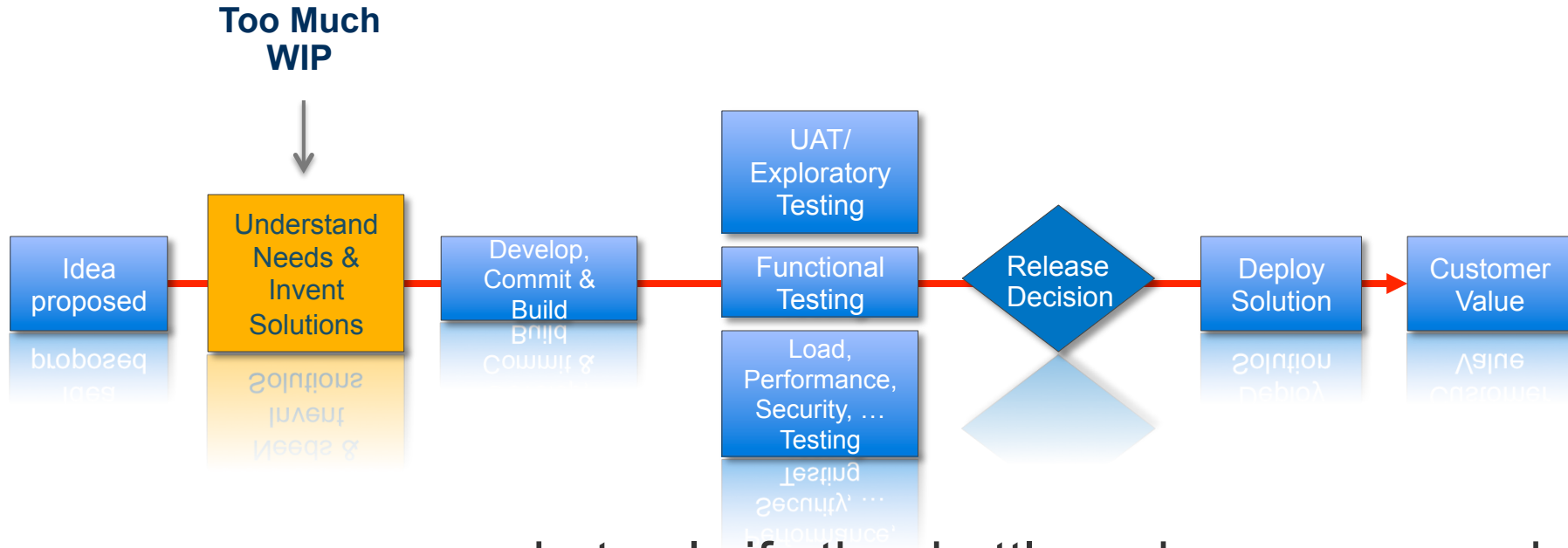
Total = 47 days

Typical Software Delivery Bottlenecks



Many organizations try to start with Agile

Agile reduces release sizes, which *can* speed delivery..



... but only if other bottlenecks are removed

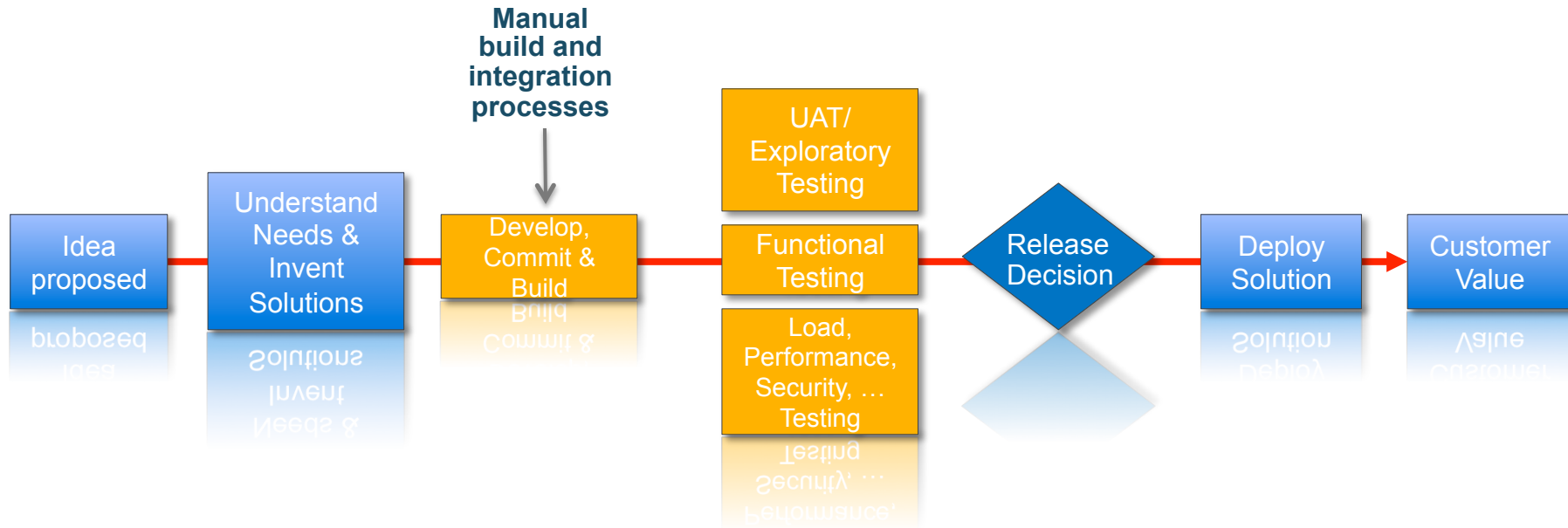
Testing is particularly challenging with Agile

- › Extreme time pressure and resource constraints
 - *There seem to be never enough time for testing or enough testing resources in a sprint*
- › Teams need to automate but the target moves too quickly

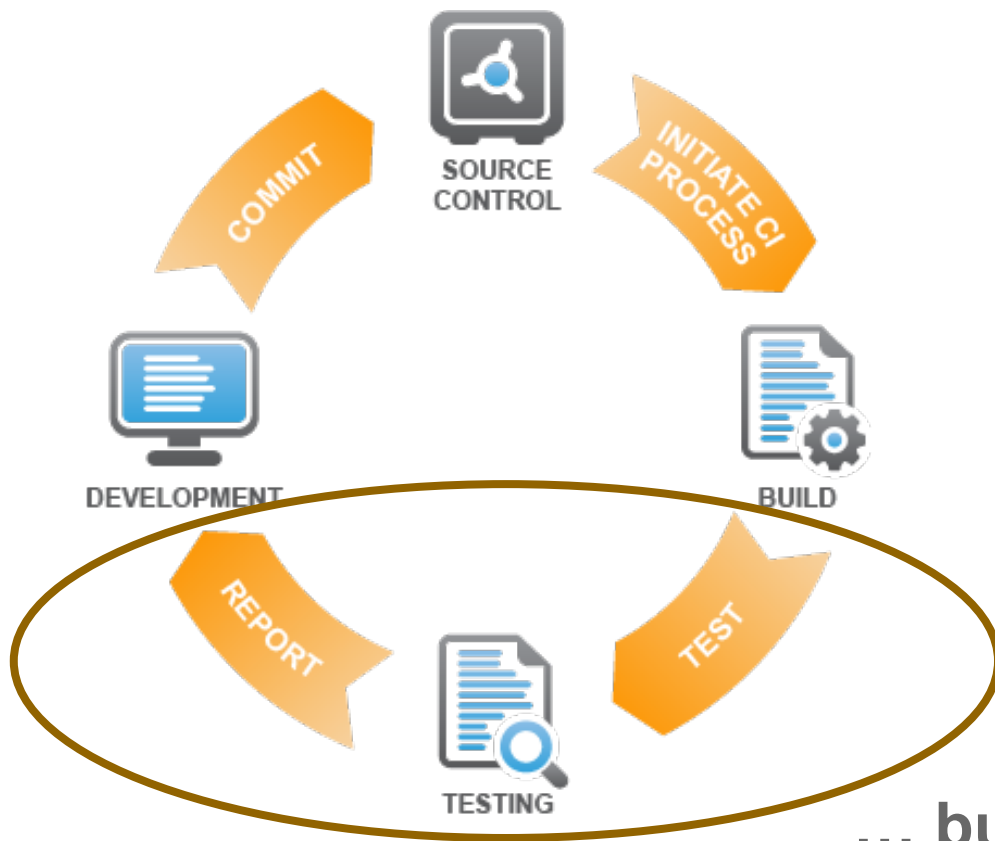


<http://www.drdoobs.com/managers-manage/184414912>

They often add Continuous Integration + Testing to improve delivery speed ...



CI-driven Automated Testing improves delivery speed ...



- › Typically API-driven
- › Starts with Unit Tests
- › Expands to:
 - Functional
 - Performance
 - Scalability
 - Security
 - Reliability
- › Includes static analysis (code scans) to assess code quality

... but there are practical limits

Multiplying mobile devices make managing testing environments challenging

- Combinatorial explosion of device + OS + app + network + ... mean complex test configurations and test scenarios

CI-based test automation can only go so far

› It demands that everything has an API

- Every feature must be accessible through an API
- This is a great practice, but few applications are built this way, yet...

› It means that testers have to be developers

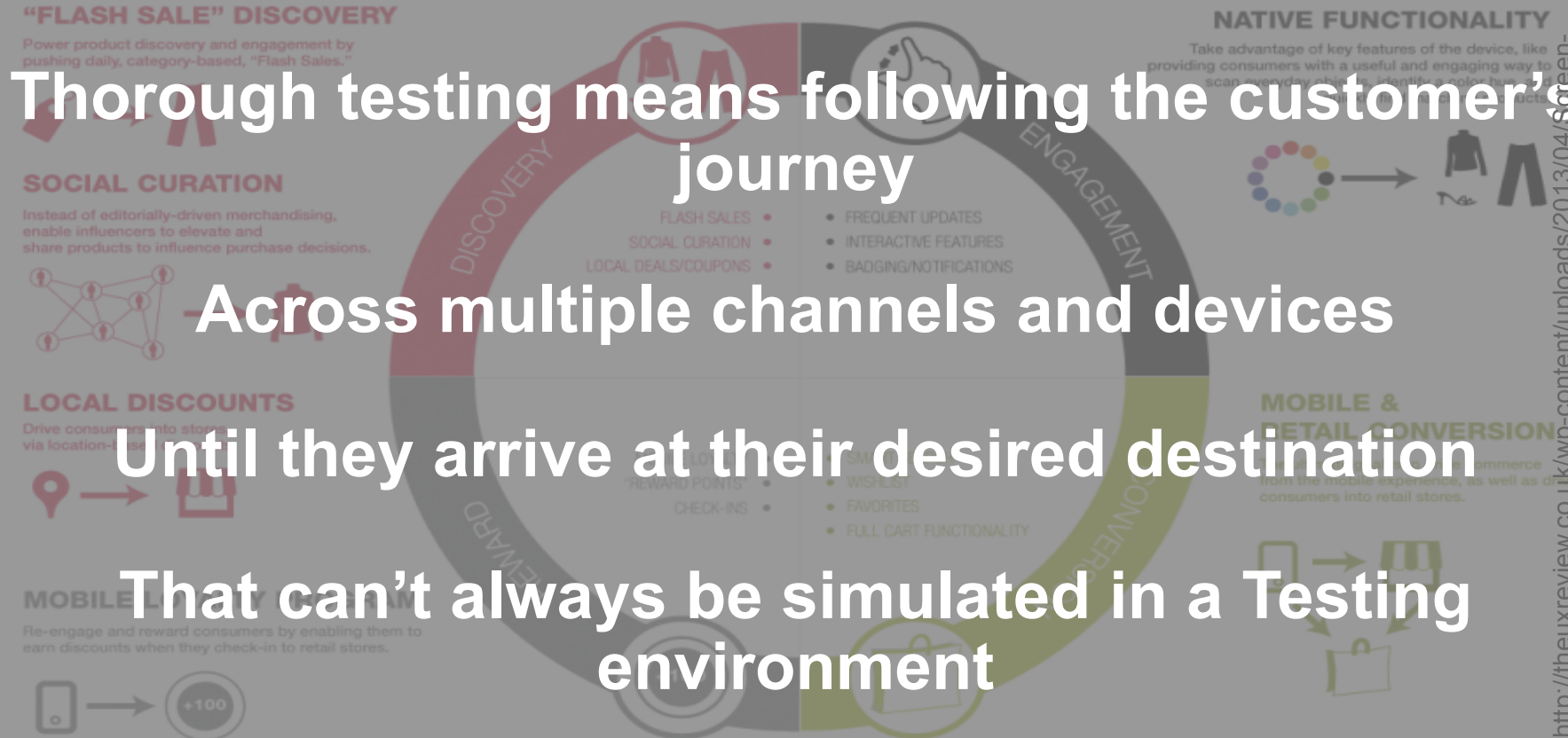
- or at least be able to write and manage application code
- Skill shortages mean that finding enough staff is challenging

› Not everything can be tested in a testing environment

- Testing environments can't completely replicate the real world
- Exploratory, usability, security, performance, load and scalability testing need to be done in the real world

Other test automation challenges

- › Emulators are useful but not the same as the real world
 - Emulators are great for early feedback
 - As functionality matures, testing shifts to the real world
- › Scripting is coding
 - Scripts need to be maintained, structured, and tested just like all other code
 - Scripting can have unforeseen dependencies on application interfaces and UIs, causing them to break unexpectedly. Keeping track of dependencies is essential.
- › UI test scripting requires expertise in both testing tools and UI technology
 - These skills can be scarce and can be expensive to acquire



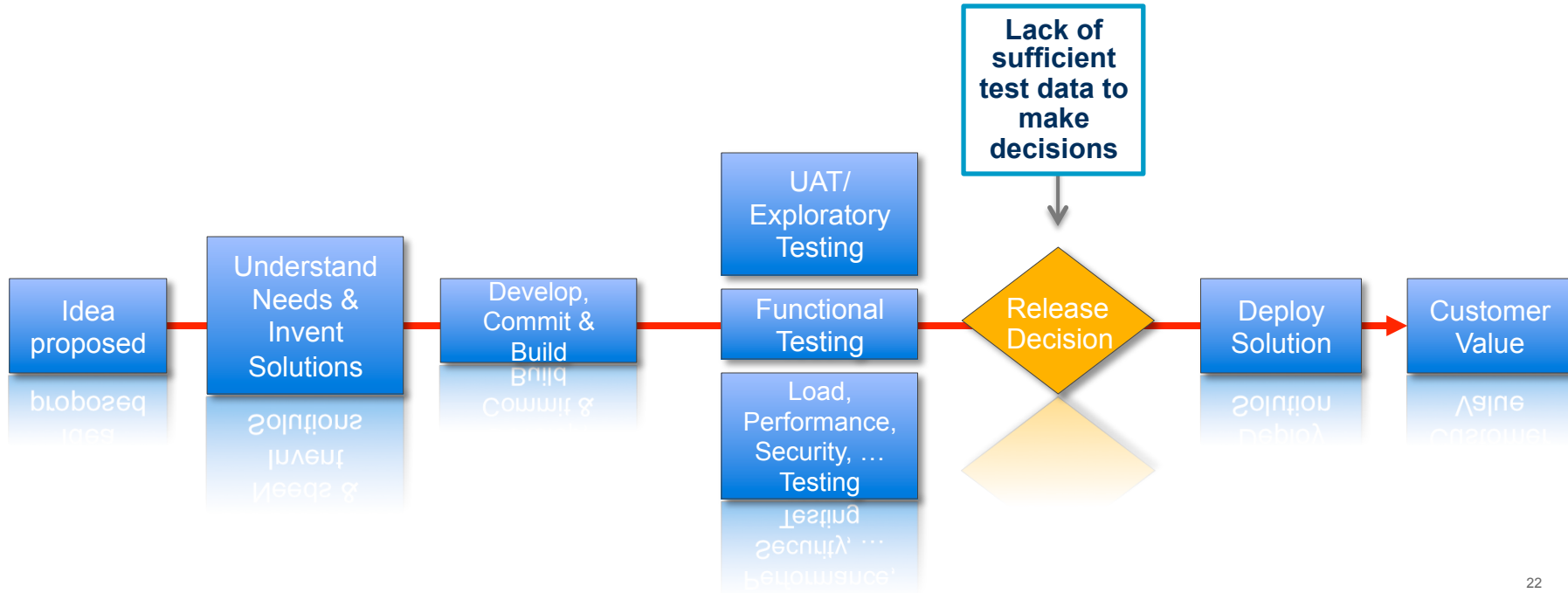
Thorough testing means following the customer's journey

Across multiple channels and devices

Until they arrive at their desired destination

That can't always be simulated in a Testing environment

With improved testing, release decisions become easy



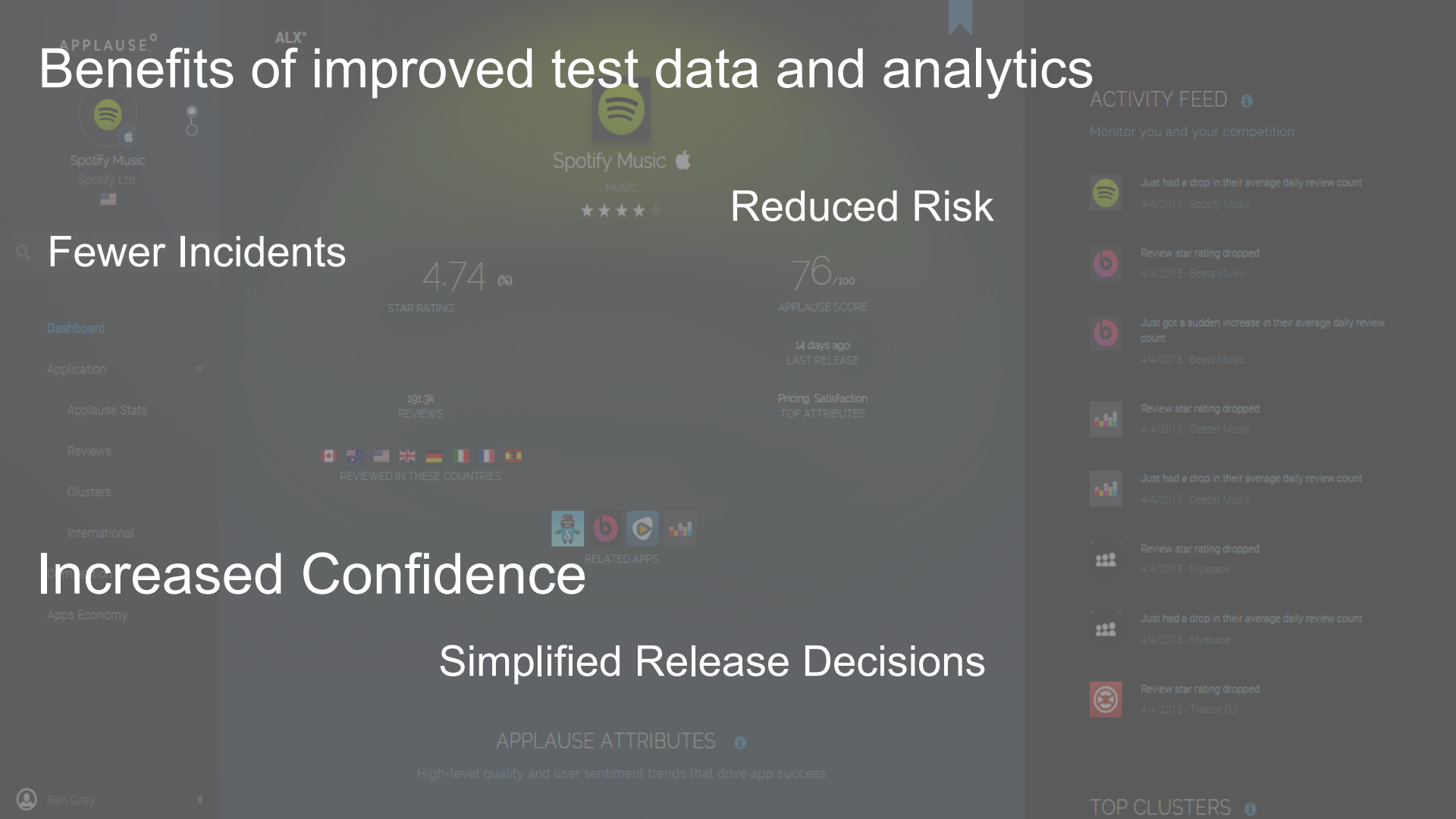
Benefits of improved test data and analytics

Fewer Incidents

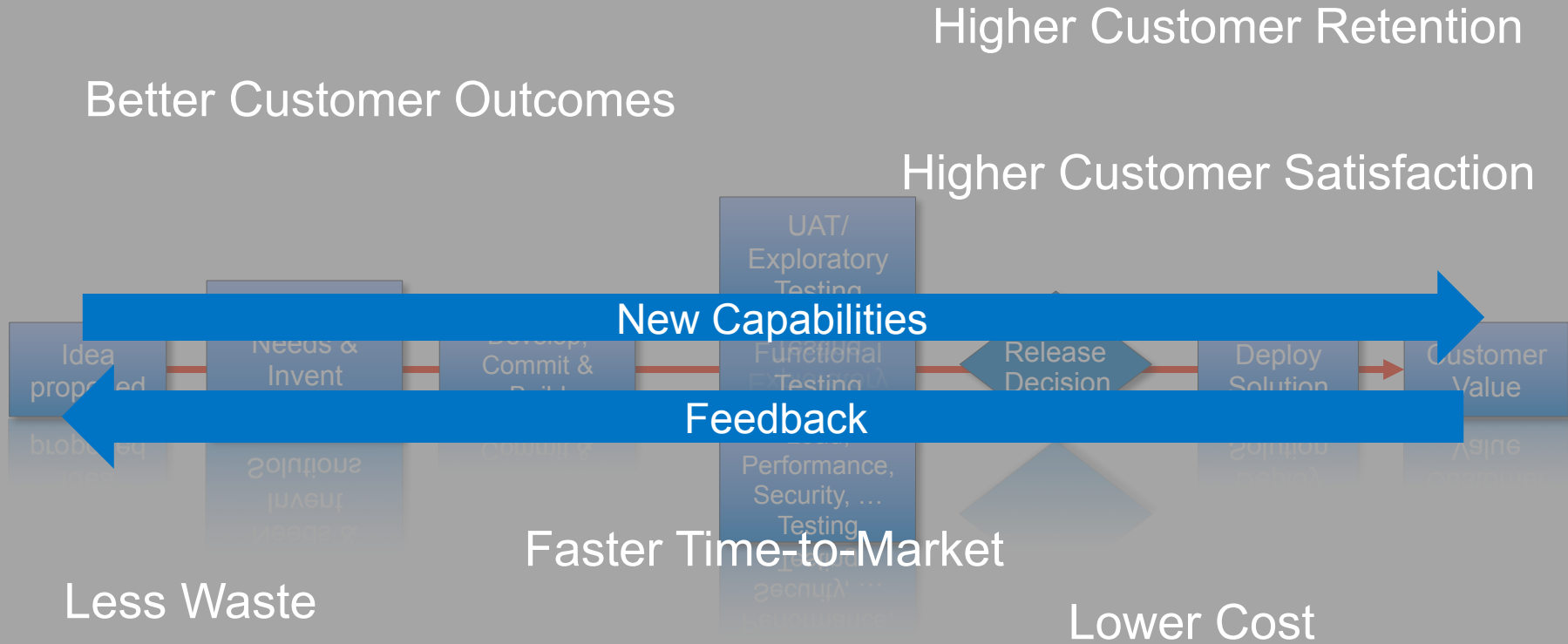
Reduced Risk

Increased Confidence

Simplified Release Decisions



Drive Better Results With Feedback



Getting test automation right

› CI-based API-driven test automation (every build)

- Automate test environment provisioning
- Unit testing
- Functional testing
- Static analysis
- Basic security testing
- Basic performance and load testing
- Provide developers with fast feedback

› Real-world testing (as solution stabilizes)

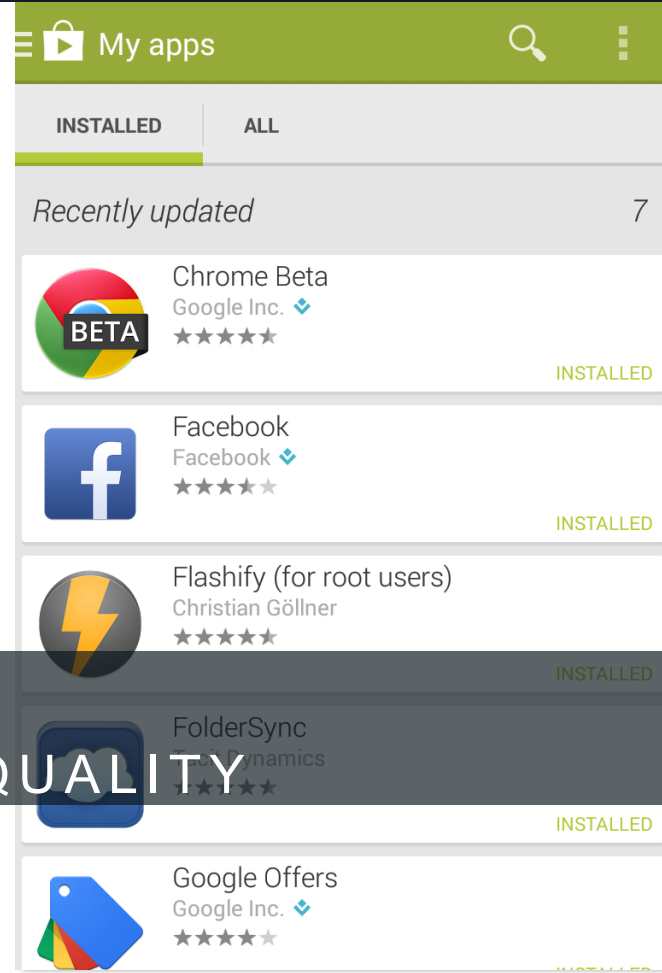
- Multi-channel end-to-end test cases
- Exploratory testing
- Real-world security testing and ethical hacking
- Usability testing
- Anything that needs to fully evaluate the real experience of users



WE WANT NEW FEATURES
...AND WE WANT THEM NOW
...AND THEY HAVE TO WORK



RELEASE MORE OFTEN
...WITHOUT SACRIFICING QUALITY





7/11/2015 Anthonyx82x -

Needs A lot of Fixing. Latest updates are making the app laggy (no it's not my internet) and very very slow. If you're gonna release an update make sure it's actually a fix lol makes no sense to update something if it doesn't work correctly.

Signals: Slow

Attributes: Performance



7/11/2015 average_joe24 -

Awful. Can't even use. This app needs a serious update. I can't even use it without the app constantly crashing. For having updates ever 2 weeks, they can't seem to be updated with anything worthwhile. Please fix so I can actually use the app WITHOUT it crashing.

Signals: Awful

Attributes: Elegance



6/30/2015 jamison haugen -

Update ruined app I read the other recent reviews and agree. The new menu options are terrible. I wish I could uninstall the update to the previous version. If this is not fixed I will be cancelling my subscription.

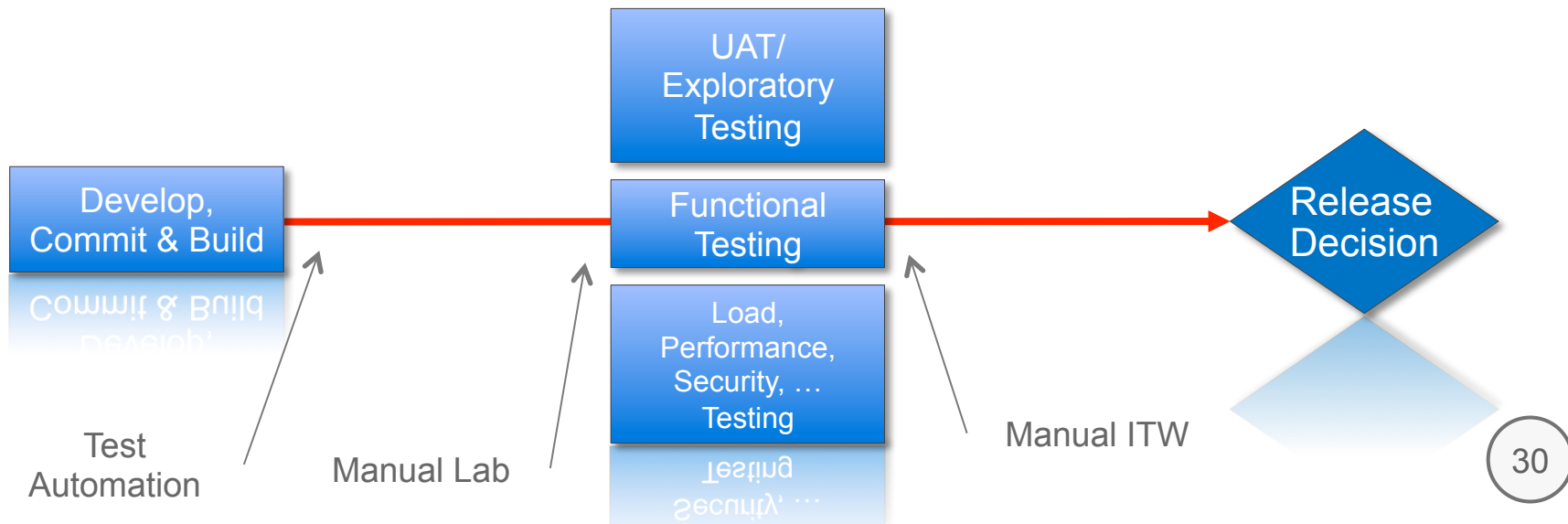
Signals: Terrible

Attributes: Elegance



A SILVER BULLET?

- **More testing = better quality**
 - But traditional testing approaches take too much time
- **Blend automation, manual lab, and in-the-wild testing at the right times**



- Is your app mature enough?
- Do you have test cases?
- How often do you build?
- Are you using CI?
- Who is going to build/maintain your automation?

```
*/
 * AccountLoginView class represents the application view used for
 * logging in with a customer based account. This view has two separate
 * entry points.
 */
public class AccountLoginView extends AbstractDeviceView {
    private static Logger logger = Logger
        .getLogger(AccountLoginView.class);

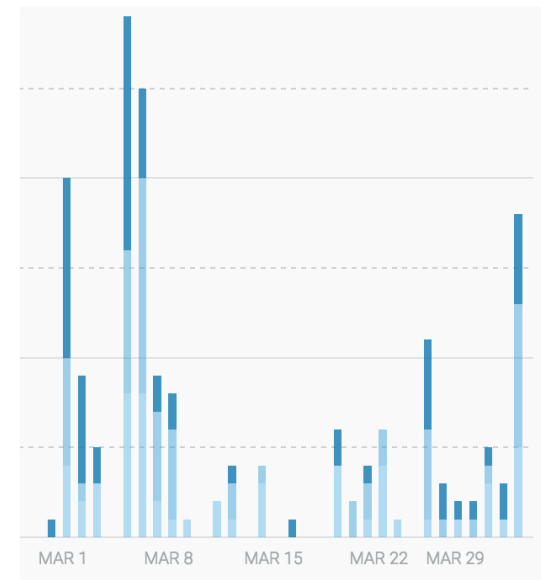
    private Link resetPasswordLink;
    private TextBox emailTextBox;
    private TextBox passwordTextBox;
    private Button submitButton;

    // text editing buttons
    private Button selectAllButton;
    private Button cutButton;

    /**
     * public constructor to instantiate AccountLoginView object.
     *
     * Validate email text box, password text box and submit button
     * on view load.
     */
    public AccountLoginView() {
        syncHelper.waitForElementToAppear(getEmailTextBox());
        syncHelper.waitForElementToAppear(getPasswordTextBox());
        syncHelper.waitForElementToAppear(getSubmitButton());
        snapshotManager.takeScreenshot("Account_Login_View_");
        getDriver();

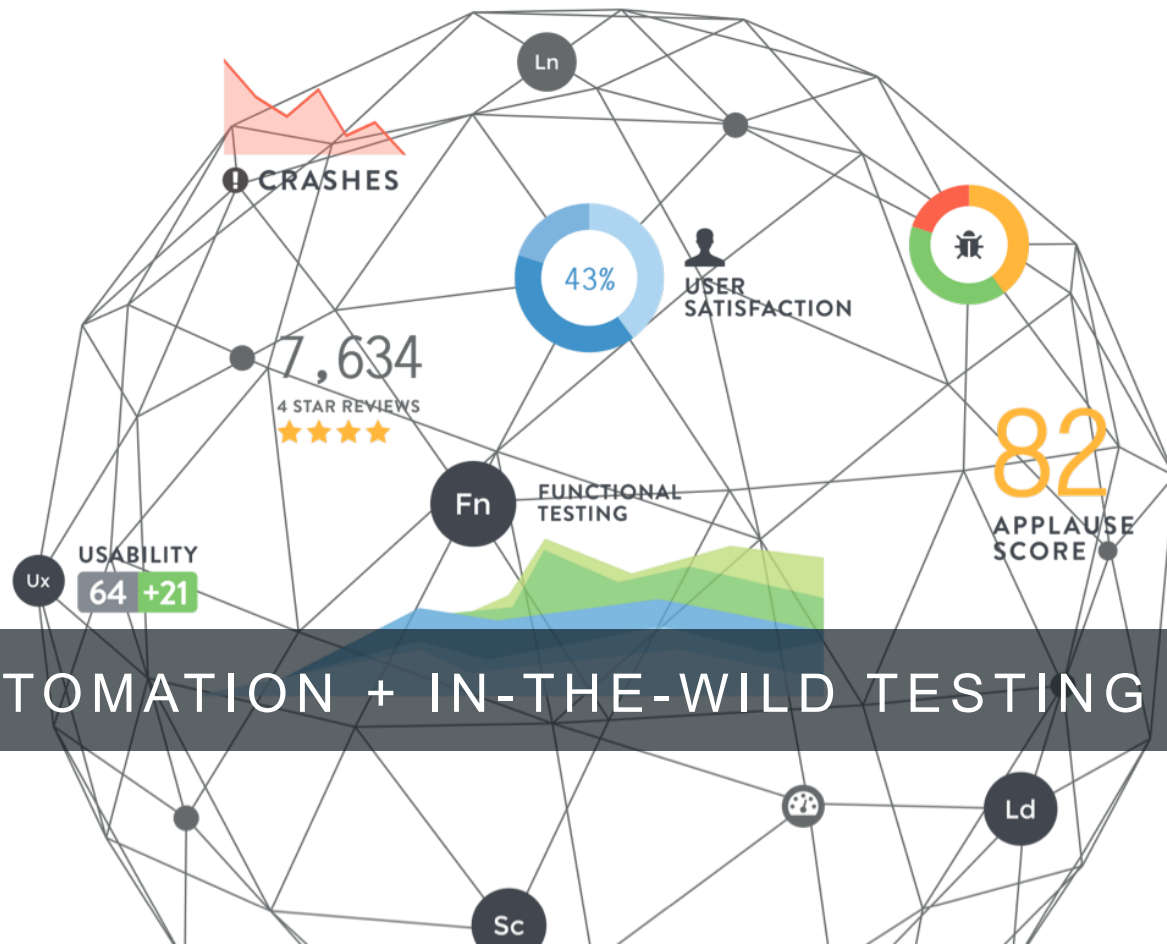
        logger.info("Created Account Login View.");
    }
}
```

- **Build your app for testability**
- **Plan, plan, plan**
- **Properly set expectations**
- **Understand the requirements and limitations**
 - Don't build shelfware
- **Test on real devices**
- **Accessible data for stakeholders**



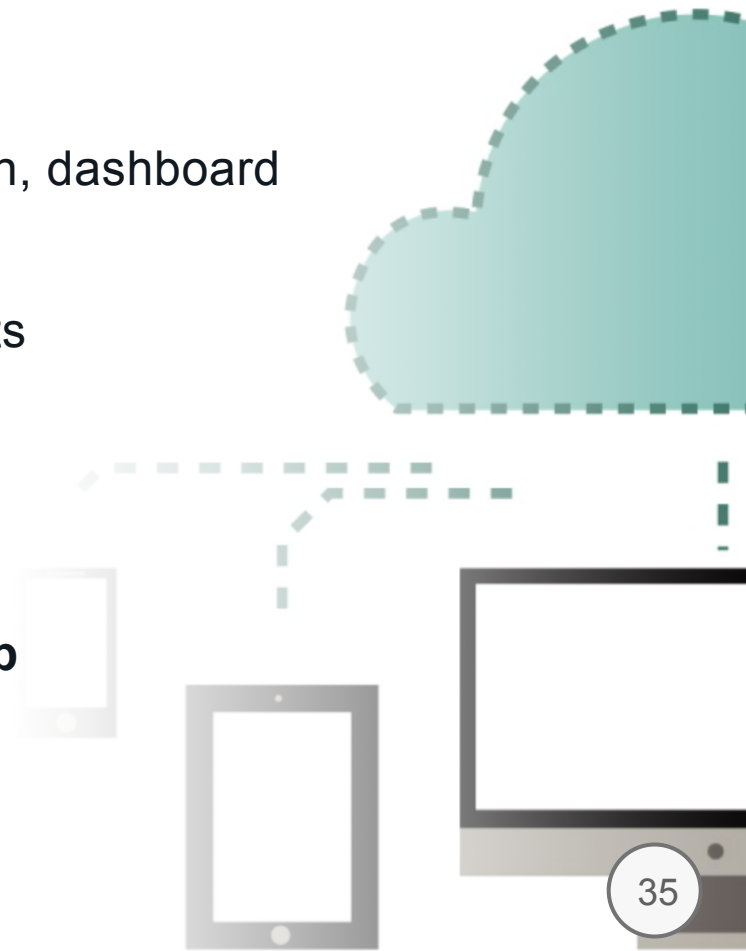


DO IT RIGHT THE FIRST TIME



TEST AUTOMATION + IN-THE-WILD TESTING

- **Full service offering – Applause provides:**
 - Engineers, framework, devices, integration, dashboard
 - Write test cases, scripts, abstraction layer
 - Nightly execution and maintenance of tests
- **Automate UI and API tests**
- **Single Framework for iOS, Android, and Web**



- **Web App**
- **Challenge:** Regression tests took 4 days to run through manually
- **Goal:** Reduce test cycle time



- **Mobile App**
- **Challenge:** Limited in-house resources to handle automation maintenance and device coverage
- **Goal:** Free developers from testing



Thank You!

- Visit **www.applause.com**
- Email **sales@applause.com**
- Download our eBook – 5 Ways to Win with Mobile Automation
 - **go.applause.com/5-ways-to-win-with-mobile-automation**
- Speak with an app quality advisor
@ 844.300.2777

Kurt Bittner

Principal Analyst

Forrester Research

kbittner@forrester.com

www.forrester.com

Ken Paetzold

App Quality Evangelist

Applause

kpaetzold@applause.com

www.applause.com