Customer Experience and CI/CD: Who knew they were related?

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Today’s Speakers

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Great CX Drives Business Results

5.1x
Revenue growth of CX leaders over laggards

HP
12% increase in net revenue

4.5x
Willingness to pay a price premium of customers who have excellent versus very poor experiences

Emirates NBD
3.75x growth in unsolicited positive comments from customers

10.6x
Stock growth of CX leaders over laggards

Southwest
46 consecutive years of profitability
The Business Impact Of Improving CX Index Scores By 1 Point
How Customer Experience Drives Business Growth, 2019

$18M
Retailers

$44M
Hotels (upscale)

$107M
Banks (multichannel)

Note: Annual incremental revenue.
Bad CX Drives Customers away

53% of mobile sites were abandoned because their page load time was greater than 3s.

Every additional 1s load time led to 10% of users leaving the BBC website.
The pressure to transform and improve customer experience is forcing faster iterations
Many Teams Can’t Keep Up

Target Zone: Daily or Weekly

Base: 3,228 Developers (2018) and 3,294 Developers (2019)
Source: Forrester Analytics' Business Technographics Global Developer Survey, 2018 and 2019
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Release Frequencies Remain Virtually Unchanged

"How often does your team or teams release applications?"

Base: 635 (2015), 719 (2016), and 546 (2017) Global developers who work for a software company, as a game developer, for internal IT or technology services and 3,228 (2018) and 3,294 (2019) Developers

5 Steps to Improving Customer Experience
1. Shift From Project To Product

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Product-Centric Devs Are More Likely to Adopt Modern Practices Than Siloed Dev teams

- 46% Use design thinking (versus 25%)
- 61% Use Agile (versus 52%)
- 48% Use DevOps (versus 30%)
- 33% Use Value Stream Management (versus 14%)

Base: 3,228 US developers
Source: Forrester Analytics Global Business Technographics® Developer, 2018
2. Break Down Silos

Executives
Vision
Strategy
Business priorities
Market knowledge

AD&D
Designs
Limitations
Innovations
Data

Executives
Vision
Strategy
Business priorities
Market knowledge

AD&D
Designs
Limitations
Innovations
Data

Product
organization

Customers
Sentiments
Preferences
Concerns
Revenue

Customers
Sentiments
Preferences
Concerns
Revenue
Invites All Stakeholders

Product owners

Are we delivering the right value?
Is our release pace adequate?

Security

Is there PII Data?
GDPR Issues?
Encryption?

Developers

How can we reduce cycle time?
How well is our code performing?

QA

Is test coverage adequate?
What’s the feedback from the live site?

Ops

What are the system requirements?
Which KPIs should we monitor?
3. Connect Teams to Value

Increased customer lifetime value

Reduce customer churn from 25% to 10%

Product
- Higher NPS
- Higher CX Index

Dev
- Lower PLT
- Lower MTTR

Operations
- Higher availability
- Lower time-to-restore-service

Business value measure

Product OKRs that feed into business value

KPIs that track progress toward OKRs
Use Value Streams To Optimize Value Delivery
4. Use Agile + DevOps To Speed Continuous Improvement
5. Measure Customer Experience

Direct User Testing

A/B Testing

Feature Flags
Summary

- To improve CX, teams need to focus on outcomes, not output
- Automation alone won’t transform your business; it compliments transformational practices
- Instrument all your applications to capture customer-centric performance data
- Welcome and engage all stakeholders, you’re all on the same team!
- Remember, a bad experience is hard to recover from
Pardon the interruption - we’d like to ask you a quick question.

Are you currently automating the deployment of your software onto your production servers?

❏ Yes.
❏ No.
The Problem

• Configuration drift
• Manual deployment
• Not reproducible
• Can’t see outcomes ahead of time
• Can’t easily rollback state
The Goal

• Services can be easily reproduced
• Services are consistent
• Processes are repeatable & predictable
• Configuration is continuously tested
• Visibility and actionability
How?

• Declare our service configuration in code
• Configuration is maintained in VCS
• Small changes get tested and continuously integrated
• Deployment is automated on every change
Recommendations

• Focus on what will drive most value
• Think about the business value that your features provide
• Allow yourself to pivot as your industry landscape evolves
Business Insider: Before CI/CD

- We deployed one massive release every two weeks
- Late night, entire team involvement - fragile
- Hours of bug fixes, patches and rollbacks
- Specific features, or the entire site could go offline

Result

- Users, writers, and the business had little trust and sub-par experience
Business Insider: After CI/CD

• Deploying multiple times a day
• Small changes, less bugs, more resilient
• Features delivered much faster
• Engineers got their lives back again

Result

• Users, writers, and the business had way more trust and a much better experience
This customer used Fastly to test new features with select groups of users by serving different content on the same URL. This helped them reduce complexity and preserve SEO benefits.

**Benefit**

This customer used Fastly to test new features with select groups of users by serving different content on the same URL. This helped them reduce complexity and preserve SEO benefits.

1. Users request same page and are tracked via cookies
2. This customer hosts one version of regular page (variant A) and one version of new page design (variant B) using same URL
3. VCL buckets users into 2 distinct groups and consistently serves them variant A or B. More users are moved to new test page (variant B) pending engagement levels.
Feature Flagging

Benefit
This customer used Fastly to test features in production before implementing them by segmenting deployments to a subset of readers.
# of VCL deployments per month on the Fastly platform

600,000
Behind the best of the web
Summary

- Manual deployments are not reproducible and you can’t easily rollback
- Automatic deployments can be reproduced, are consistent and repeatable
- Small changes should be tested and continuously integrated
- Focus on what will drive the most business value to improve your customer experience
- Allow yourself to pivot as your industry landscape evolves
Q & A
Thank you

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Real World: CI/CD deployments at Fastly
Real World: Behavior Driven Testing Fastly

Lote 2
Servicio del dominio
✓ should allow HTTP
✓ should allow HTTPS
Servicio del dominio:
- should not allow HTTP
- should allow HTTPS
✓ should not cache anything
✓ should redirect iPad from /css/*desktop* to https://ss/$1tablet$2
✓ should redirect Android tablet from /css/*desktop* to https://ss/$1tablet$2
✓ should redirect BlackBerry devices from /css/*desktop* to https://ss/$1mobile$2
✓ should redirect Opera Mini devices from /css/*desktop* to https://ss/$1mobile$2
✓ should redirect Mobile devices from /css/*desktop* to https://ss/$1mobile$2
✓ should redirect Skyfire devices from /css/*desktop* to https://ss/$1mobile$2
✓ should redirect Maemo devices from /css/*desktop* to https://ss/$1mobile$2
✓ should redirect Windows Phone devices from /css/*desktop* to https://ss/$1mobile$2
✓ should redirect Palm devices from /css/*desktop* to https://ss/$1mobile$2
✓ should redirect IEMobile devices from /css/*desktop* to https://ss/$1mobile$2
✓ should redirect Symbian devices from /css/*desktop* to https://ss/$1mobile$2
✓ should redirect Fennec devices from /css/*desktop* to https://ss/$1mobile$2
✓ should redirect J2ME devices from /css/*desktop* to https://ss/$1mobile$2
✓ should redirect Android Mobile devices from /css/*desktop* to https://ss/$1mobile$2
✓ should redirect iPhone devices from /css/*desktop* to https://ss/$1mobile$2
✓ should redirect iPod devices from /css/*desktop* to https://ss/$1mobile$2
✓ should return CORS Access-Control-Allow-Credentials: true
✓ should return CORS Access-Control-Allow-Methods: GET, POST, OPTIONS
✓ should return CORS Access-Control-Allow-Headers: x-requested-with, content-type, x-http-method-override
✓ should return CORS Access-Control-Allow-Origin: