

Our Journey to Mobile

Driving Organizational Change in a Technology Landscape

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Who is OCAS?



We offer shared services for Ontario's public colleges:



Multilingual
Contact Centre
Services



Financial
Services



Data Collection,
Analysis and
Reporting



BI and Statistical
Inquiry



Automated
Academic
Document
Management



Technology
Expertise and
Consulting

Who is OCAS?



We also provide a centralized application service:

ontariocolleges.ca
Apply Today. Change Tomorrow.



Process 200,000 applications and 140,000 confirmations processed.



Post 8.5 million high school grades.



Manage 270,000 customer interactions via chat, email and telephone.



Receive over 5.5 million website visits.



Perform over 3.5 million program searches.

Why the Push for Mobile?



“Make it easier for tablets”

— 12/21/2014



“Ended up having to switch to a desktop”

— 09/05/2015



“Make it phone friendly”

— 1/21/2015



OUR JOURNEY TO MOBILE

Changing our culture in five (reasonably easy) steps.

Corporate Culture - Cliff Notes



Where the changes began:

- New CEO with a fresh, new vision
- A shift in mindset from “what do you want?” to “what do you think?”
- Gained buy-in and support from our Board of Directors
- Transparency and ongoing communication across the organization



Focused on five key areas:



Operational Stability



Talent Repatriation



Architecture Refresh



Process Building



Partnership Approach

Methodology



Motivators

The pain points driving change.



Actions

The steps we took to drive the outcome.



Achievements

Payoff for the hard work.

1. Operational Stability



Motivators:

- Efficiency and effectiveness debt.
- Too many bugs.
- Too many workarounds.
- Missing features.



1. Operational Stability



Actions:

- Strategized a two-year push to correct and rebuild.
- Directed budget and resources toward stabilization.
- Creating backlogs and prioritizing immediate fixes.



1. Operational Stability



Achievements:

- Stable work platform.
- Savings from right-sizing service contracts and software.
- Time spent on fixing directed to customer service.



2. Talent Repatriation



Motivators:

- Internal knowledge gaps.
- Heavy reliance on vendors.
 - Inflated overhead, control over business processes.
- Constraints on velocity and time to market.



2. Talent Repatriation



Actions:

- Deconstructed and realigned our existing org structure.
- Established new departments in key areas:
 - QA, Product Management, Project Management, Development
- Converted temporary positions to full-time.
- Recruited new talent.



2. Talent Repatriation



Achievements:

- More in-house knowledge = more control over contract and vendor performance.
- Stronger, more effective teams = higher employee morale.
- Greater strategic focus = faster, high-quality results.



3. Architecture Refresh



Motivators:

- “Black Box” architecture:
 - Unnecessarily complex
 - Small changes required large impacts
 - Reliance on external support for maintenance
 - Lack of flexibility for integration and enhancement



3. Architecture Refresh



Actions:

- Created a new layer-based architecture to run in parallel.



3. Architecture Refresh



Achievements:

- Reusable, repurposable technology.
- Consistency across new product builds.
- Greater interconnectivity between systems.
- Faster, cheaper, higher-quality delivery.



4. Process Building



Motivators:

- Undefined organizational vision.
- Struggle with consistency in delivery.
- A need to get our heads around the new world.



4. Process Building



Actions:

- Introduction of automated releasing and testing.
- Coordinated bug and backlog management.
- Exploration and adoption of Agile methodology.
- Investigation of contract management lifecycle.



4. Process Building



Achievements:

- One- and three-year project roadmaps.
- A suite of over 100 automated test cases.
- More engaged, efficient, focused staff.
- Continuous enhancement flow for all systems and services.



5. Partnership Approach



Motivators:

- Limited to one-size-fits-all deliverables.
- Difficulty gaining buy-in to move projects forward.
- Inflated consultation processes and review periods.
- Delays in project delivery.



5. Partnership Approach



Actions:

- Solicited smaller groups of engaged partners.
- Moved to a prototype-to-pilot delivery model.
- Designed products to work on an opt-in basis.



5. Partnership Approach



Achievements:

- Stronger, more effective partner relationships.
- Greater transparency on project work.
- Trust in our ability to deliver on time and on budget.
- Partners now eager to work with us on new projects.





TECHNOLOGY OVERVIEW

New thinking, new technologies and
a whole bunch of benefits.

New Technologies



 Visual Studio Online


SendGrid


Microsoft®
.NET4.5

 Microsoft
Azure



Service Bus Relays



Blob Storage



Cloud Services

Algolia
Build RealTime Search

 **BlazeMeter**



BrowserStack

fastly

{JSON}

BCNET
Conference 2016
CONFERENCE 2016



- Used for development, with added benefits from MSDN licensing.
- Connected public cloud to our private cloud with Azure Service Bus Relay.
- Multi-datacentre deployments for scale and redundancy using Azure Cloud Services to handle new frontend load.



Platform-as-a-Service



Right-sized, right-priced, delivering only capabilities we need.



Algolia

Saved weeks of work augmenting program catalogue search.



SendGrid

Superior email delivery rate, integrated well with new applications.



Right-sized caching service, dramatically reduced costs.

Development Collaboration



- Easier collaboration with external teams (contractors, agencies).
- Shared source control, ticket viewing and progress tracking.
- New features available immediately.
- No system maintenance.



REST APIs



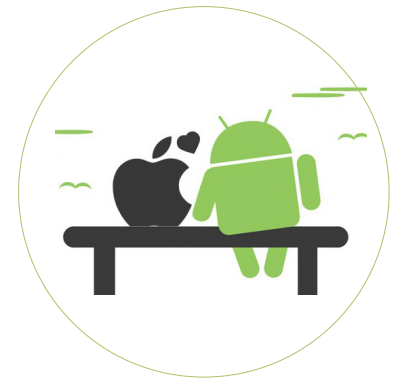
- REST API-ized our service.
- Created using .NET WebAPI framework with C#.
- Simplified technically complexities through REST endpoints.
- Mobile app ready and highly reusable.



Mobile Development



- Built a native app for both iOS and Android.
- Created a common code library in Java, and used [J2objc](#) to convert to ObjectiveC.
- Saved time and cost, resulted in higher quality.
- Only 50% there – still had to develop UI functionality in native languages.



Continuous Integration and Testing

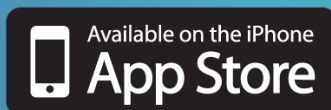
- Continuous code check-ins, automated testing and deployment.
- Made new features available for QA and stakeholders to test faster.
- VSO for housing code, executing builds and tests.
- BlazeMeter SaaS for load testing.
- BrowserStack for automated testing of device, browser and OS combinations.

The logo for BlazeMeter, featuring a red icon of three horizontal lines with a small gap, followed by the text "BlazeMeter" in a dark blue sans-serif font.The logo for Visual Studio Online, featuring a white icon of a stylized 'V' inside a dark purple circle, followed by the text "Visual Studio Online" in a white sans-serif font.The logo for BrowserStack, featuring a colorful circular icon with a stylized eye, followed by the text "BrowserStack" in a dark blue sans-serif font.

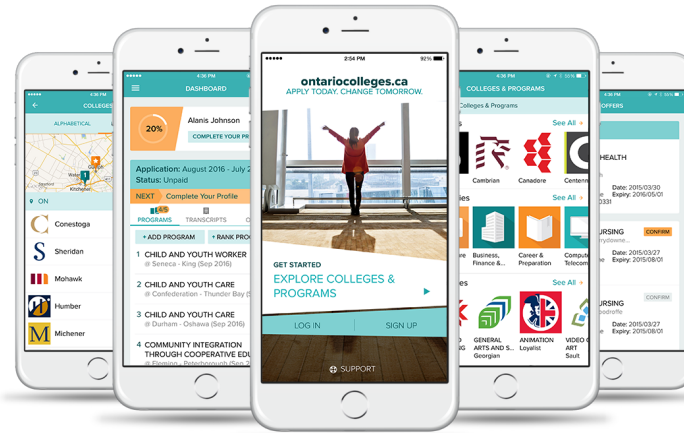


THE ONTARIOCOLLEGES.CA APP

Find it in the App Store and on Google Play.



Stats to Date (April 6, 2016)



25,000+ installs
since Dec. launch
date.



1226 new
accounts
created.



2433
application
payments
made.



Used in 90+
countries.



25+ 5-star
ratings.



Top 10 ranking
in App Store's
Education
category for
week of Feb. 1.

Reviews



“Superb, I love it”

User Review, 01/01/2016

“Great app! I was pleasantly surprised how easy this app is to navigate and use to apply for colleges”

User Review 01/02/2016



“...I was hesitant to use the app but hey it was easier than the site and now I’m off to college!”

User Review 03/30/2016



WHERE WE ARE TODAY

What we learned and what we gained.

Lessons Learned



Growing Pains:

- Long-term, company-wide investment.
- Took a leap of faith, didn't have all the answers.
- Not a 9-to-5 endeavor.
- Blood, sweat and tears.



Bonus Gains



Technology and Innovation:



College-Branded User Interface

SAME CORE APPLICATION, ENTIRELY YOUR BRAND



Easily add your logo, colours and digital assets.



Embed one-click Apply links in your program listings and digital collateral.



Modern responsive design for phones, tablets and desktops.



A seamless experience for applicants applying to your programs.



No changes to your processes for transcripts, payment and offers.

Bonus Gains

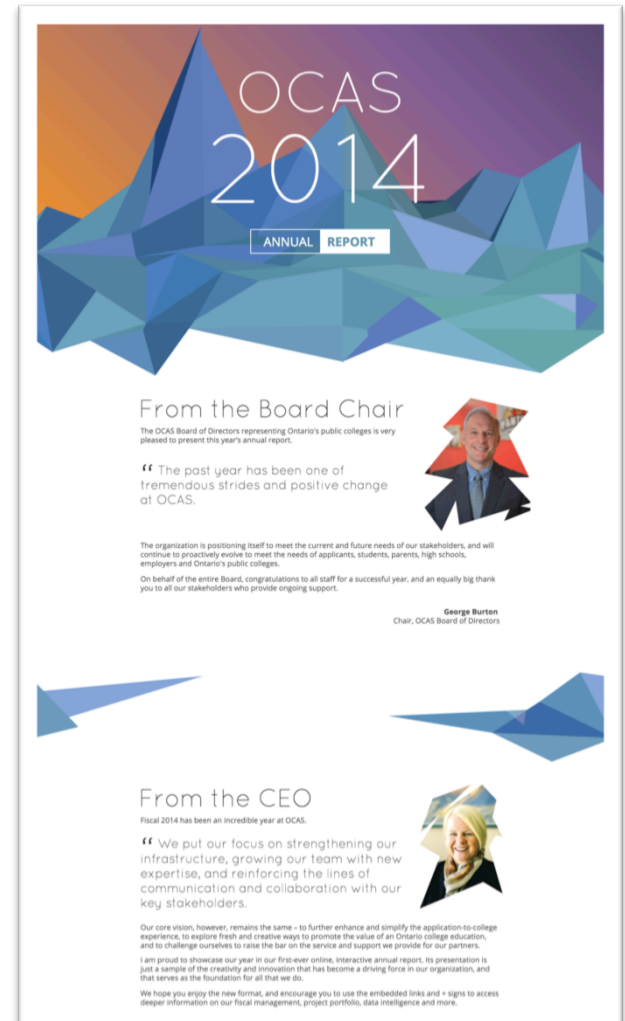


Virtual Annual General Meeting:

- Attended by 25 colleges.
- Live presentation of our online, interactive Annual Report

“Congratulations on your Annual Report – it is without doubt the easiest and most compelling annual report I have ever read!!”

- College President Feedback



Bonus Gains



Employee Morale:



83% of employees say they are proud to work for OCAS.



92% of employees are personally committed to achieving OCAS goals.

92% of employees would recommend OCAS as a great place to work.



Bonus Gains



Employee Morale:



**WATERLOO AREA'S
TOP EMPLOYERS
2016**



THANK YOU

Any questions?