

An Insight to the Secret Startup that Saved the Worst Website in America



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Outline

- HealthCare.gov was a broken website that was fixed by the MarketPlace Lite (MPL) team.
- Despite MPL expertise, Government start-up mentality was underdeveloped.
- Implementation of Valuable Sub-agency Technologies and Poor Communication of Project Strategies justified MPL expertise.
- Positive Results followed the Implementation of the Insurance Application, App 2.0, and HealthCare.gov Website
- Significance and Implications of the MPL Project

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Introduction to the website

- Healthcare.gov started in the Obama Administration as one of the preliminary steps for implementing the Affordable Care Act¹
- Notably thought of as “The biggest startup in the world without anybody to start it.”²
- Healthcare.gov is an insurance website that allowed customers to apply for - and receive federal health insurance.¹
- The goal was for the consumer to easily input their financial status and have the website output a quote for their federal health care qualifications.¹

1. <https://www.healthcare.gov>

2. <https://www.theatlantic.com/technology/archive/2015/07/the-secret-startup-saved-healthcare-gov-the-worst-website-in-america/397784/>



The Problems with Healthcare.gov

- 91% uptime rate: meaning that the site was only working 91% of the day²
 - Ex: Google stopped working for two hours everyday
- Six successful sign ups on the first day¹
 - Out of thousands attempting to register
- \$250 million to build and \$70 million to maintain ¹
- 2-10 seconds for each login request ¹



The Birth of MarketPlace Lite

- From the problems stated in the earlier slide, Marketplace Lite (or MPL) was a team who was given the task to revamp and fix the website.
- The facilitator for Marketplace Lite was Calvin Wang.
- Loren Yu was then asked to help be the main facilitator for the website.
- The team was intentionally kept small, as they believe that smaller teams work more efficiently.

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The Work - Life Balance of MPL workers

- Loren Yu remembers his time as, “There’s no life, it’s just work”²
- Worked 10 hours a day, 7 days a week
- They worked in the lobby, dining tables and hotel rooms of the DoubleTree in Baltimore, Maryland
- Used “temporary” offices at CMS (Center for Medicare & Medicaid Services), which meant “borrowing” desks while employees went to meetings
- To create a stable office setting, the MPL members rented a suburban house in Maryland to down housing costs.
- Where they slept is where they worked.



The Tension between Government and MPL

- The Government is used to using systematic implementations such as Gantt Charts to gauge the completeness of a project ¹
- The MPL team, because of their small size, is able to work at a quicker and more sporadic pace enabling them treat problems quicker as they arise
- The Government wanted to have the project done in their fashion, however this does not work in a small software development team

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The details of Amazon Web Services

- Amazon Web Services (AWS) is a³
 - secure cloud services platform
 - offering compute power
 - database storage
 - content delivery
- Would allow HealthCare.gov to store data remotely and cheaply
- Would handle domain-name routing, i.e. faster runtimes
- Was not approved by government until nearly six months
 - Used Akamai in the meantime.

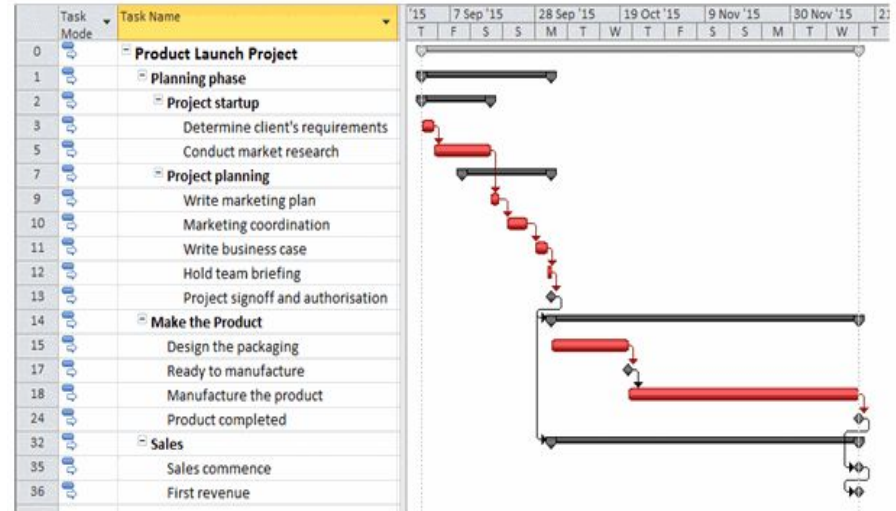


The details of HipChat

- Similar to Slack, as an instant messaging chat room for employees ¹
- Prevented long attachment emails to be sent between team members.
- Allowed instant access to questions and clarifications between the team

Details of the Waterfall Approach

- The Government wanted to instantiate a waterfall approach for how projects ought to be done.
- Basically, the project is broken up into stages, and the next stage can only start when the previous stage has been fully tested





The difference between the Waterfall and Agile approach

- The agile approach is much more fluid in its philosophy
- The agile approach believes in multiple people working on multiple parts of the project allowing for more mistakes
- The philosophy is to get a working beta out in market and patch it from the Beta

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The implementation of App 2.0

- **App 2.0** is the MPL insurance application that allowed users to sign up and in more quickly than the original application.
 - Users could finish in **9 minutes** versus the original **20 minutes** ¹
 - Users only had to go through **16 pages** instead of **76 pages** ¹
 - A record **85%** of users were able to finish the registration versus the previous **55%**. ¹
 - Login request times reduced to **30 milliseconds** instead of **2-10 seconds** ¹



The implementation of App 2.0 (cont.)

- MPL decided to release the app in stages:
 - First, 0% to users
 - Then, 10% to users
 - Then, 20% to users
 - Until all the way to 100%¹
 - These stages meant the developers could fix and develop the website in manageable pieces rather than all at once

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The implementation of the website

- The MPL team utilized the Amazon Website Service to deal with the computational parts of the website
- The MPL team implemented chat boxes for immediate help for customers
- They revamped the login website fixing a variety of bugs



Overall Results from project

- Reduced cost from **\$250 million** to build to **\$4 million**
- Reduced cost from **\$70 million** to maintain to **\$1 million**
- Login request times reduced to **30 milliseconds** from **2-10 seconds**
- **85%** of users were able to finish the registration versus the previous **55%**.
- Users could finish in **9 minutes** versus the original **20 minutes**
- Users only had to go through **16 pages** instead of **76 pages**¹


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The significance of the MPL project

- Made one of the government's worst websites extremely more efficient and cost effective
- Demonstrated the importance of dedication and hard work and how it pays off
- Shows how alternative ways of thinking lead to better efficiency



How we plan to take their experience and use it for our own implementation

- Communication, communication, communication
 - Talk with partners from the beginning
 - Set goals, ask questions and clarify deliverables
- Dynamically work on parts of the project, rather than all at once or waiting on partners
- Adapting the **agile** strategy our group will allow us to set realistic goals and adjust for road blocks.

In Summary

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Questions