BIZ-OPS DASHBOARD

Demonstrating the combined power of R, Apache Drill, and flexdashboards

AGENDA

1. Intro's, Project Background, Business Model Overview

2. Discussion About Yelp's Current Approach to Data

   ➤ pain points, exiting tools, technologies, workflows

3. Overview of Tools Used for Project

4. Dashboard User Scenarios

   ➤ Internal Customer

   ➤ External Customer

5. Yelp Analytics Dashboard Demo

6. Github & RStudio - A Look Behind the UI

7. Potential Future Applications

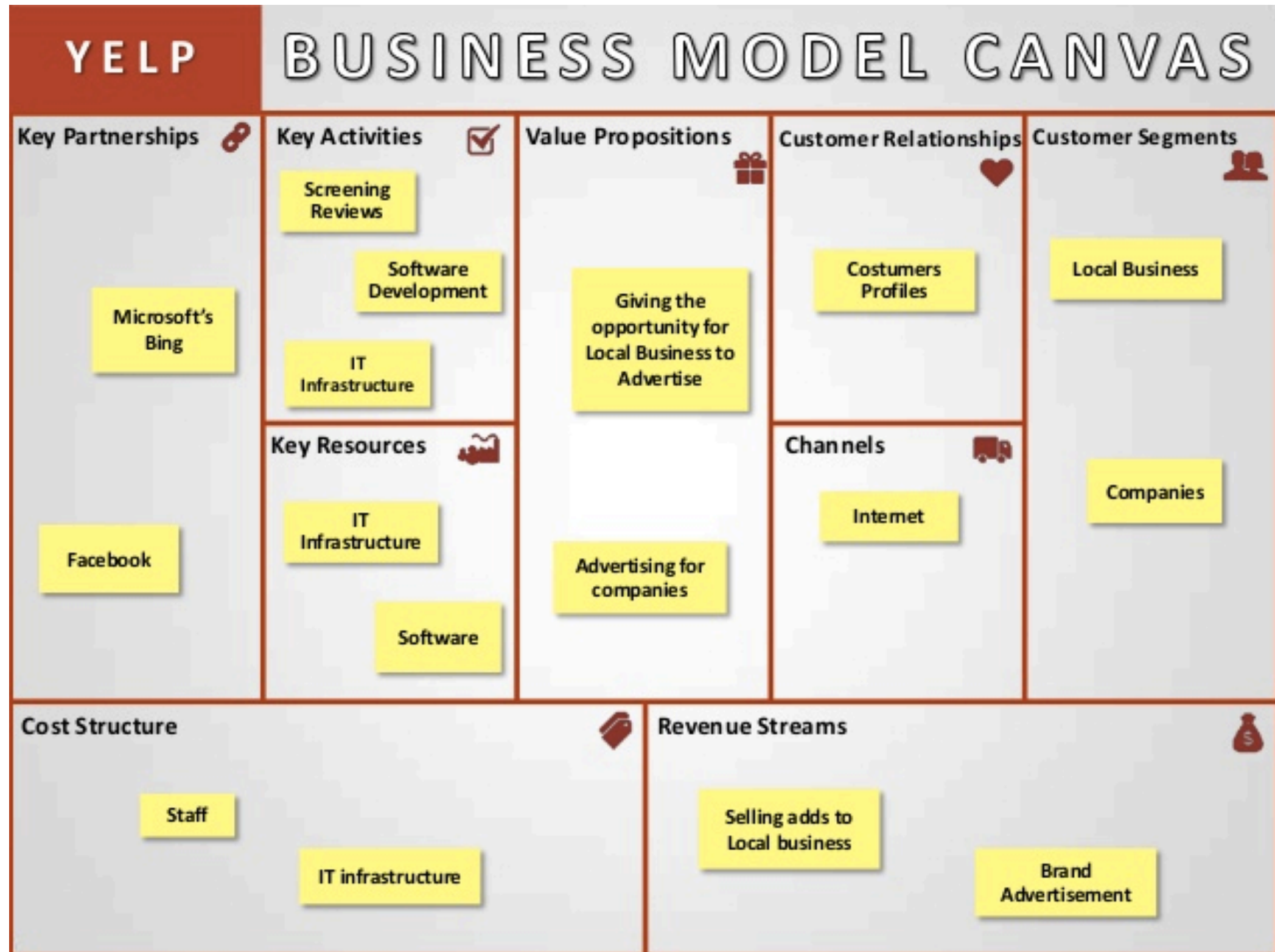8. Gauge Interest & Explore Opportunities

PROJECT BACKGROUND

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Who we are & why we did this project

A quick discussion about Yelp's overall business model and strategy.

YELP'S BUSINESS MODEL – HIGH LEVEL WALKTHROUGH

CURRENT APPROACH

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How is Yelp's data currently being used to support decision-making?

What pain points could a new approach potentially solve?

TELL US A BIT ABOUT YOUR DATA

➤ What we know:

    ➤ Yelp's code code <u>(3 million lines or so)</u> is written mostly in Python

➤ Engineering team uses:

    ➤ Python, MySQL, WHAT ELSE?

➤ Biz Ops team uses:

    ➤ Excel, Tableau, Salesforce & Google Analytics, WHAT ELSE?

NEW TOOLS

R/RStudio
Apache Drill/Sergeant
Shiny/Flexdashboards
Tidyverse

ADVANTAGES OF THIS TECH LAYER

➤ **Apache Drill & Sergeant** - agile, flexible and open-source SQL query engine for Big Data exploration. Allows for data analysis without any ETL or up-front schema definitions

➤ **Shiny & Flexdashboards** - combined with R Markdown and R Studio provides a framework for creating powerful, interactive web documents.

➤ **R** is an open-source programming language and software environment for statistical computing & graphics in wide use among data scientists & miners

DASHBOARD DEMO

DASHBOARD DEMO (FRONT PAGE)

Yelp Toronto | About Yelp | Map | Popular Places | Places and Stars | Bar Graphs Top 10

Our purpose To connect people with great local businesses

10 Facts About Yelp

1. Yelp was founded in 2004 to help people find great local businesses like dentists, hair stylists and mechanics
2. Yelp had a monthly average of 26 million unique visitors who visited Yelp via the Yelp app and 73 million unique visitors who visited Yelp via mobile web in Q1 2017.
3. Yelpers have written more than 127 million reviews by the end of Q1 2017
4. In addition to reviews, you can use Yelp to find events, lists and to talk with other Yelpers.
5. Every business owner (or manager) can setup a free account to post photos and message their customers.
6. Yelp makes money by selling ads to local businesses - you'll see these clearly labeled "Yelp Ads" around the site.
7. Paying advertisers can never change or re-order their reviews.
8. Yelp uses automated software to recommend the most helpful and reliable reviews for the Yelp community among the millions we get. The software looks at dozens of different signals, including various measures of quality, reliability, and act Yelp. The process has nothing to do with whether a business advertises on Yelp or not.
9. You can access Yelp via iPhone, Android, and more - see the full list of mobile apps here.
10. The Local Yelp brings locals updates on the latest and greatest business openings & other happenings.

BIZ-OPS CASE #1: INTERNAL DECISION-SUPPORT

➤ Use heatmaps to identify hot/cold spots on a map to uncover hidden sales & marketing opportunities

BIZ-OPS CASE #2: EXTERNAL DECISION-SUPPORT

Connect to Email Marketing Data to Build Market Mix Models

Photo by Teri C – Super six pack from Glory Hole

A Hole That Only Donuts Can Fill

The Local Yelp - Toronto. Change location

Donut worry, everything is going to be alright…as long as you go and get yourself some deep-fried dough covered in icing stat. Should you accept

POTENTIAL APPLICATIONS

A look at our code & Github repository for this project

POTENTIAL BIZ-OPS USE CASES

* **Marketing**: to find new & efficient ways of acquiring customers, R could be used to enhance market-mix modelling techniques, and track campaign effectiveness

* **Sales**: how R could improve Yelp's compensation system & pilot new products/price points

* **Community Management**: identify new ways to encourage contributions from Yelp users & conduct sentiment analysis of Yelp user reviews

* **Product**: using R to identify new products opportunities & priorities

* **Engineering**: tapping in to existing tools developed by Yelp's engineering team such elastalert, mrjob, paasta, or undebt.

POTENTIAL BIZ-OPS INTEGRATIONS

* Packages to connect to Google Analytics (RGoogleAnalytics), Salesforce (RForcecom), SQL (Drill + Sergeant), and other tools used at Yelp (Excel, Tableau) are readily available through open-source networks such as CRAN

GAUGING INTEREST & EXPLORING OPPORTUNITIES

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A look beyond the data & dashboard to the implications and opportunities this approach may open up.

QUESTIONS & COMMENTS

BEHIND THE SCENES

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A quick link to our Github repository

GITHUB REPO FOR PROJECT