



## BIZ-OPS DASHBOARD

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

# AGENDA

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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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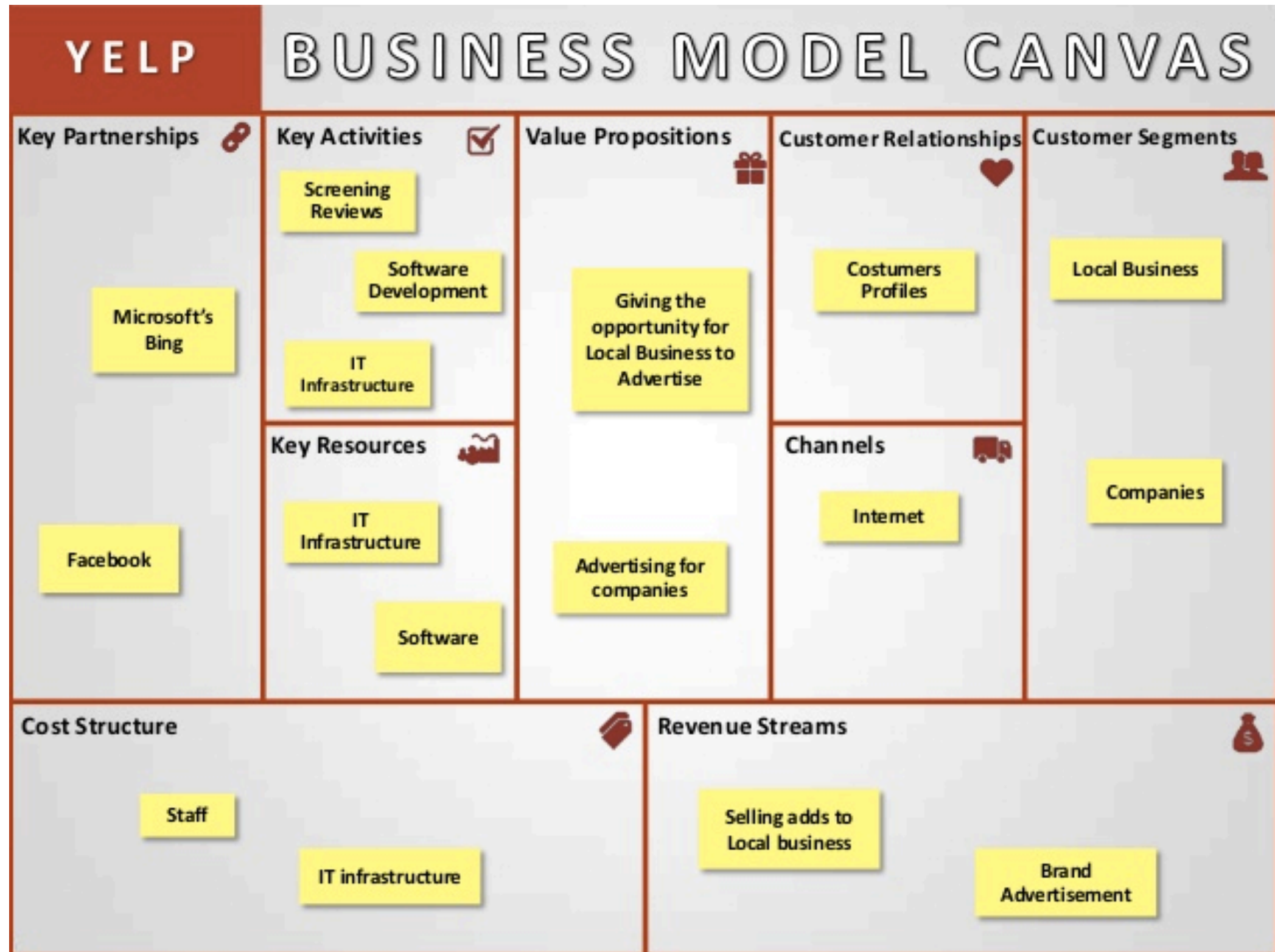
*Who we are & why we did this project*

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



# YELP'S BUSINESS MODEL – HIGH LEVEL WALKTHROUGH

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# 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

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- What we know:
  - Yelp's code code (3 million lines or so) 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

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*R/RStudio*

*Apache Drill/Sergeant*

*Shiny/Flexdashboards*





## ADVANTAGES OF THIS TECH LAYER

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- 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



# BIZ-OPS CASE #1: EXTERNAL DECISION-SUPPORT (CUSTOMER FOCUS)

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# BIZ-OPS CASE #2: INTERNAL DECISION-SUPPORT (FIRM FOCUS)

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# DASHBOARD DEMO

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# BEHIND THE SCENES

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*A look at our code &  
Github repository for this  
project*





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<https://github.com/mgd1984/Yelp-Analytics-Dashboard>

# POTENTIAL APPLICATIONS

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*A look at our code &  
Github repository for this  
project*







# POTENTIAL BIZ-OPS USE CASES

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- \* **Marketing**: new & more efficient ways to acquire customers, and how R could be used to enhance market-mix modelling techniques
- \* **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**: taping in to existing tools developed by Yelp's engineering team such elastalert, mrjob, paasta, or undebt.



## POTENTIAL BIZ-OPS INTEGRATIONS

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- \* 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

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