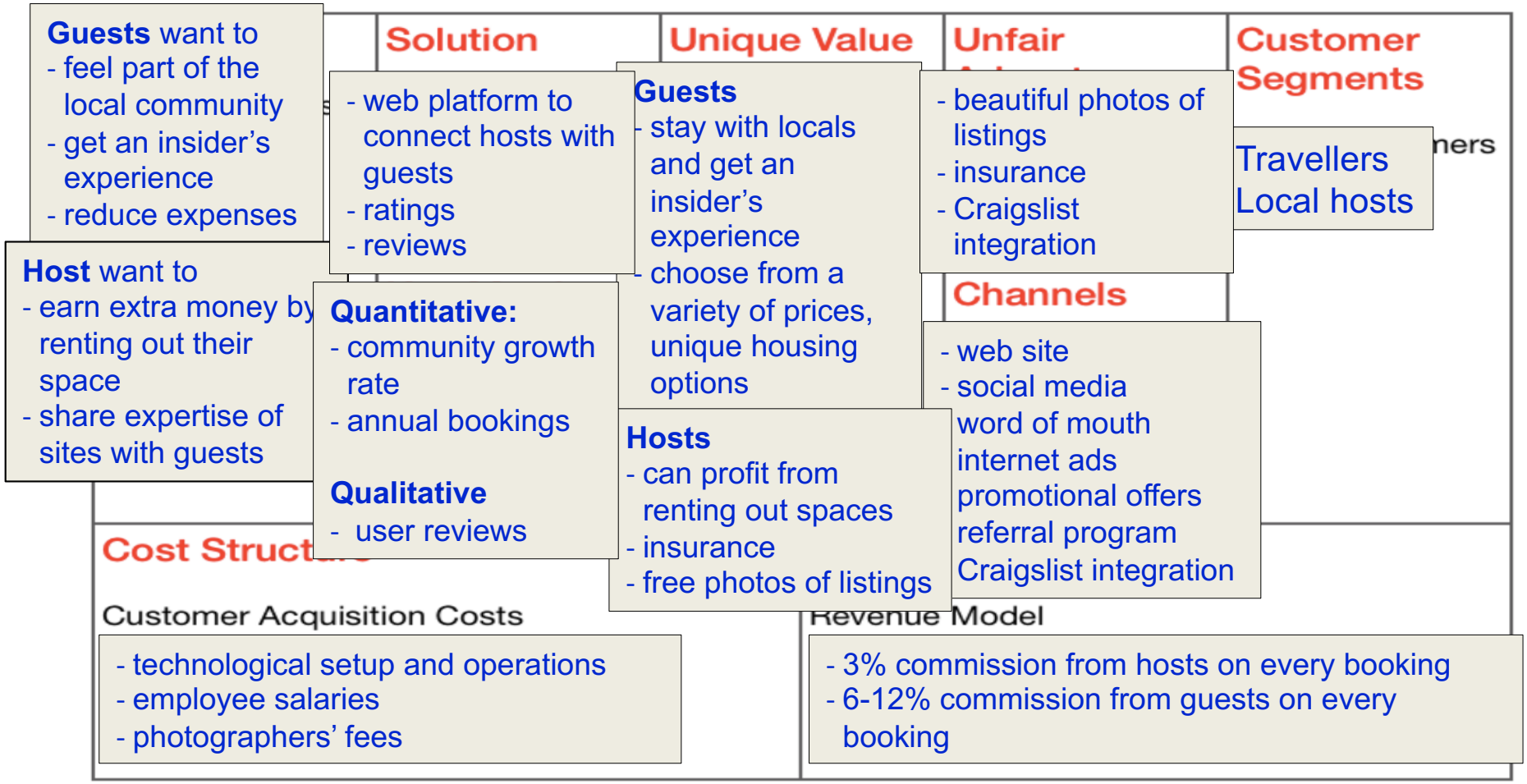
CS445 / ECE451 / CS645 / SE463

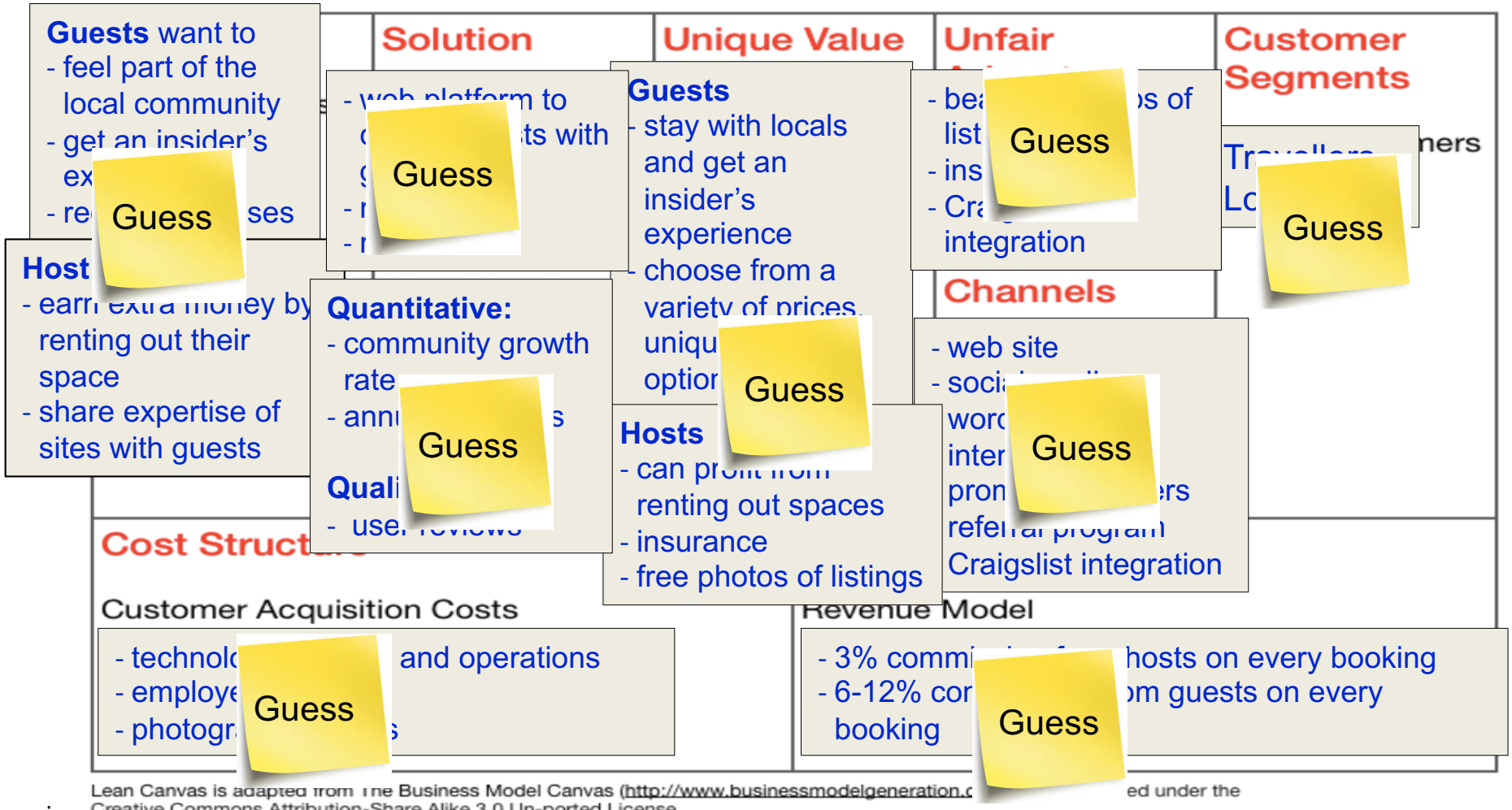
Software Requirements Specification & Analysis

Hypothesis Testing

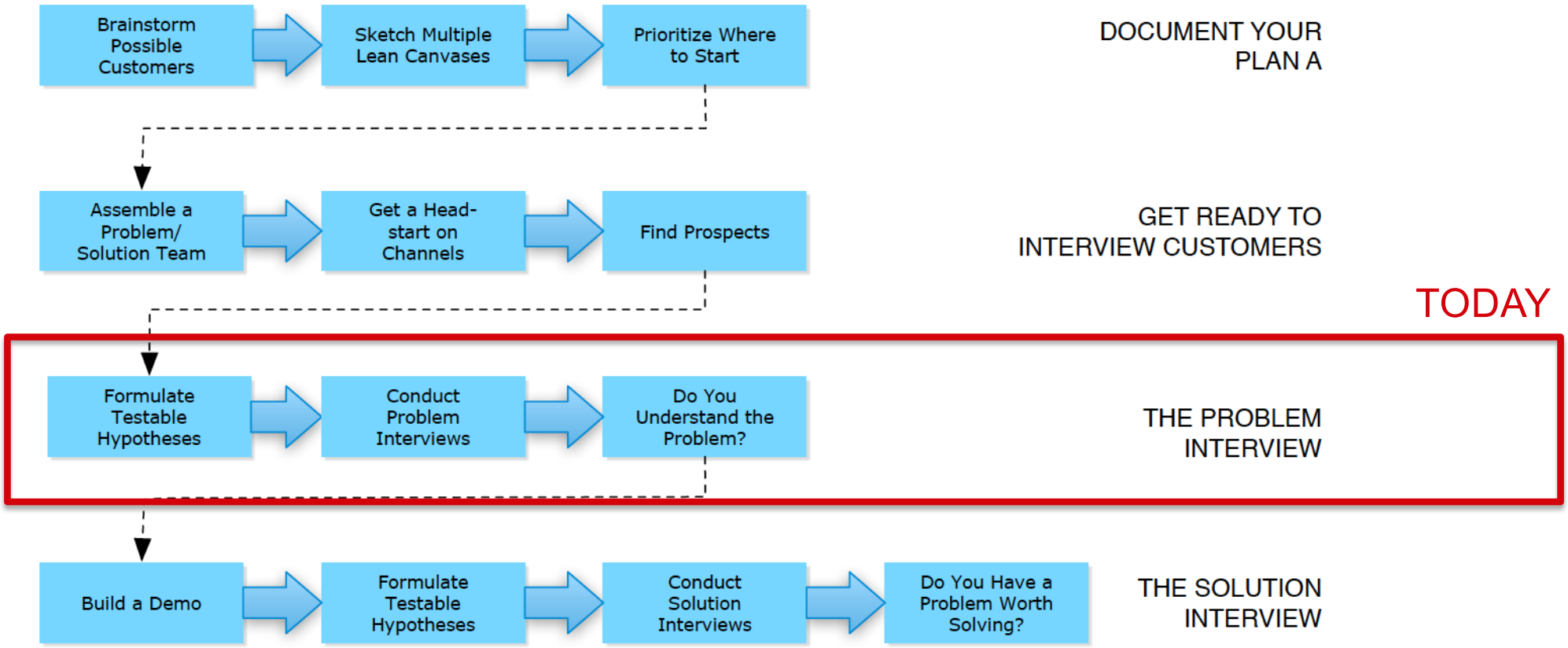
AirBnB



AirBnB



Problem / Solution Fit



Hypothesis Testing

A hypothesis is a tentative guess about a phenomenon of interest that is testable and falsifiable.

- Dependent Variable – phenomenon of interest
  - Characteristics of target customer segments
  - Characteristics of customer problems
- Independent Variables – things that affect the phenomenon of interest
- Testable – it must be possible to observe evidence of predicted effects of independent variables on the dependent variable
- Falsifiable – it must be possible to disprove the hypothesis

Hypothesis is Scientific?

Hypothesis A:

If a tree falls in a forest, and there is no animal or device to “hear” it, it doesn’t make a sound.

Hypothesis A is not testable (no observations)

Hypothesis is Scientific?

Hypothesis B:

There are other inhabited planets in the universe.

Hypothesis B is not falsifiable

Hypothesis is Scientific?

Hypothesis C:

Students want to view WaterlooWorks postings late at night because the system response time is faster

Hypothesis C is a scientific hypothesis

Falsifiable Hypothesis

A falsifiable hypothesis is a statement that can be clearly proven wrong.

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Too vague

Having a fast response time is an important problem.

Specific and testable

Having a response time of within 2sec is the most critical problem of student users.

AirBnB

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Guests want to
- feel part of the local community
- get an insider's experience
- reduce expenses

Host want to
- earn extra money by renting out their space
- share expertise of sites with guests

Existing alternatives
- Tripadvisor
- Expedia
- Star.wood
- Booking.com
- Homeaway
- Homestay
- Trivago

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Solution

- web platform to connect hosts with guests
- ratings
- reviews

Quantitative:
- community growth rate
- annual bookings

Qualitative
- user reviews

Unique Value

Guests
- stay with locals and get an insider's experience
- choose from a variety of prices, unique housing options

Hosts
- can profit from renting out spaces
- insurance
- free photos of listings

Unfair

- beautiful photos of listings
- insurance
- Craigslist integration

Channels

- web site
- social media
- word of mouth
- internet ads
- promotional offers
- referral program
- Craigslist integration

Customer Segments

Travellers
Local hosts

①

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Revenue Model

- 3% commission from hosts on every booking
- 6-12% commission from guests on every booking

References

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