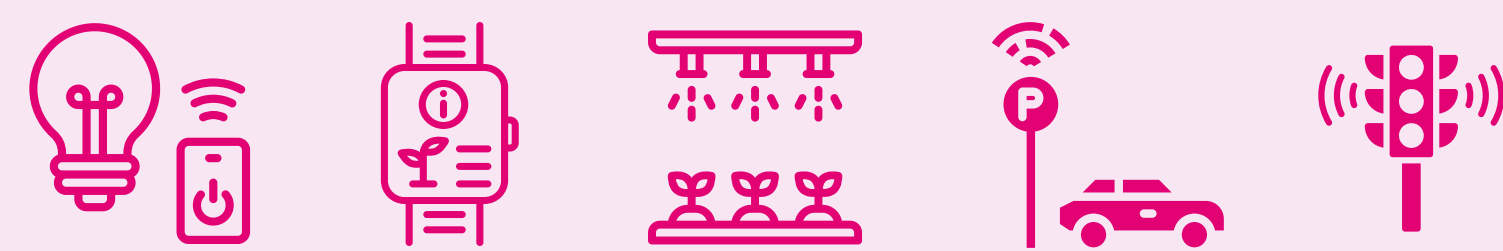


## PROBLEM

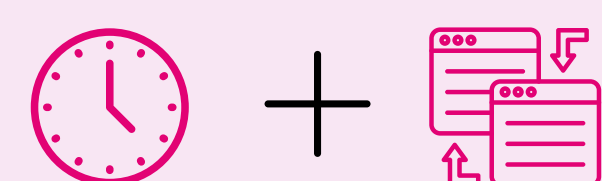
01

The customer support model for T-Mobile's IoT (Internet of Things) customers is inefficient for both T-Mobile customers and the support teams themselves

### Examples of IOT:



How do we **reduce average time** to solve tickets and **number of redirections** to make the IoT support experience better for T-Mobile customers?



## CURRENT SYSTEM

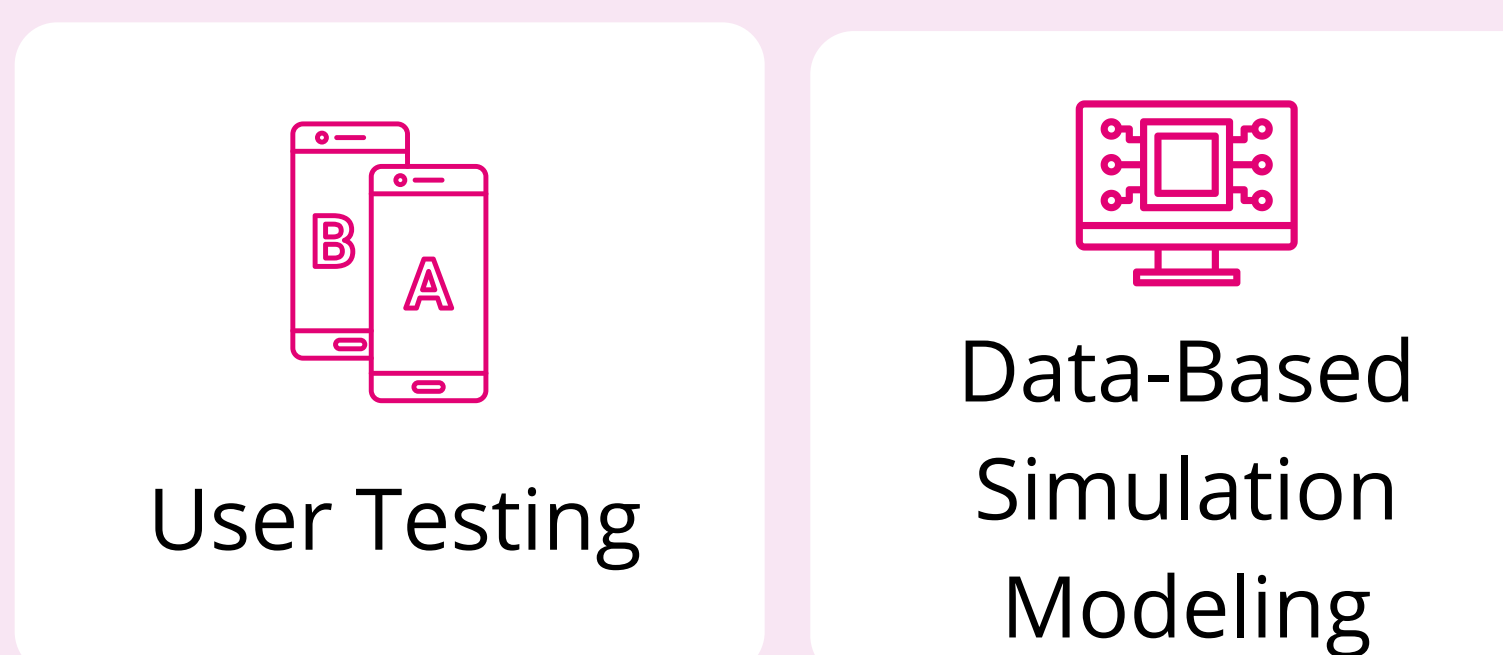
02

- 1 → Too many redundant options that make it complicated to file tickets
- 2 → Average MTTR (mean time to resolution) of **5 days** to solve an IOT issue
- 3 → Average of **48%** of tickets being sent to the wrong team the first time
- 4 → Lack of user testing and feedback

## OBJECTIVE

03

To gather evidence through:



to support changes to the current support system that will improve the efficiency of solving customer IoT network issues

## METHODS

04

### Data Collection and Analysis

- 01 Fit data collected to distributions in our SIMIO Model and to brainstorm changes to implement to the new ticketing website

#### Collected 1 year of past ticket data which includes:

- MTTR
- Number of tickets filed a year
- Number of redirects
- Most frequently filed ticket
- Repeated issues

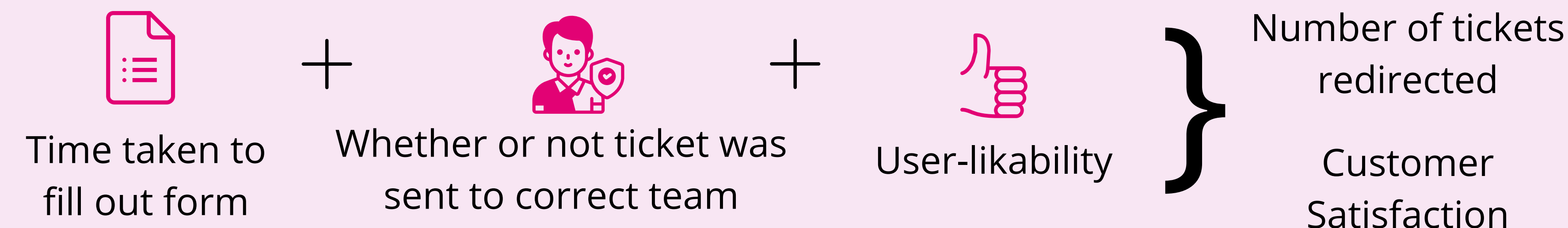
### A/B User Testing

Created a copy of current ticketing system and made a new ticketing portal website based on the comments and data from past years' worth of tickets



Old Website New Website

#### Keep track of:



### SIMIO Testing

Developed model to reflect current system and run experiments based on our recommendations and to see how system holds up with increase in IOT customers



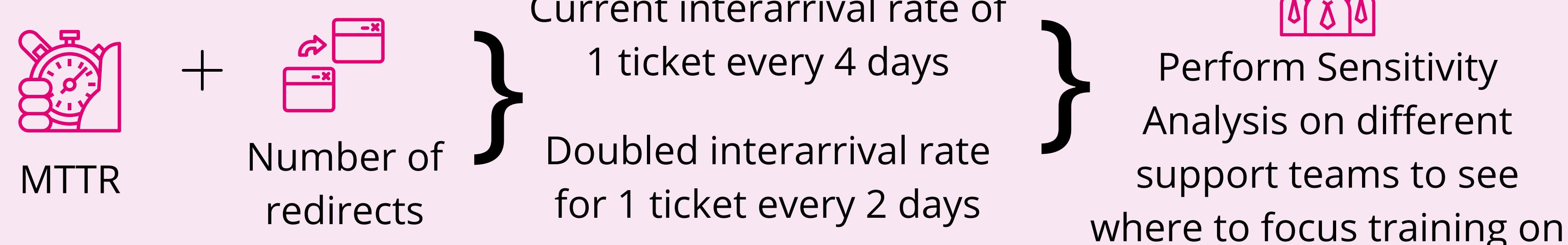
SIMIO Models

#### Created three different models:

- 1 Model of the current system using the 1 year of past ticket data
- 2 Model of the recommended system with only support team handling all tickets instead of multiple teams
- 3 Model of the recommended system using data collected from A/B user testing
  - No redirected tickets increased by 20%

Carried out all simulations with a run time of 24 weeks and 50 replications

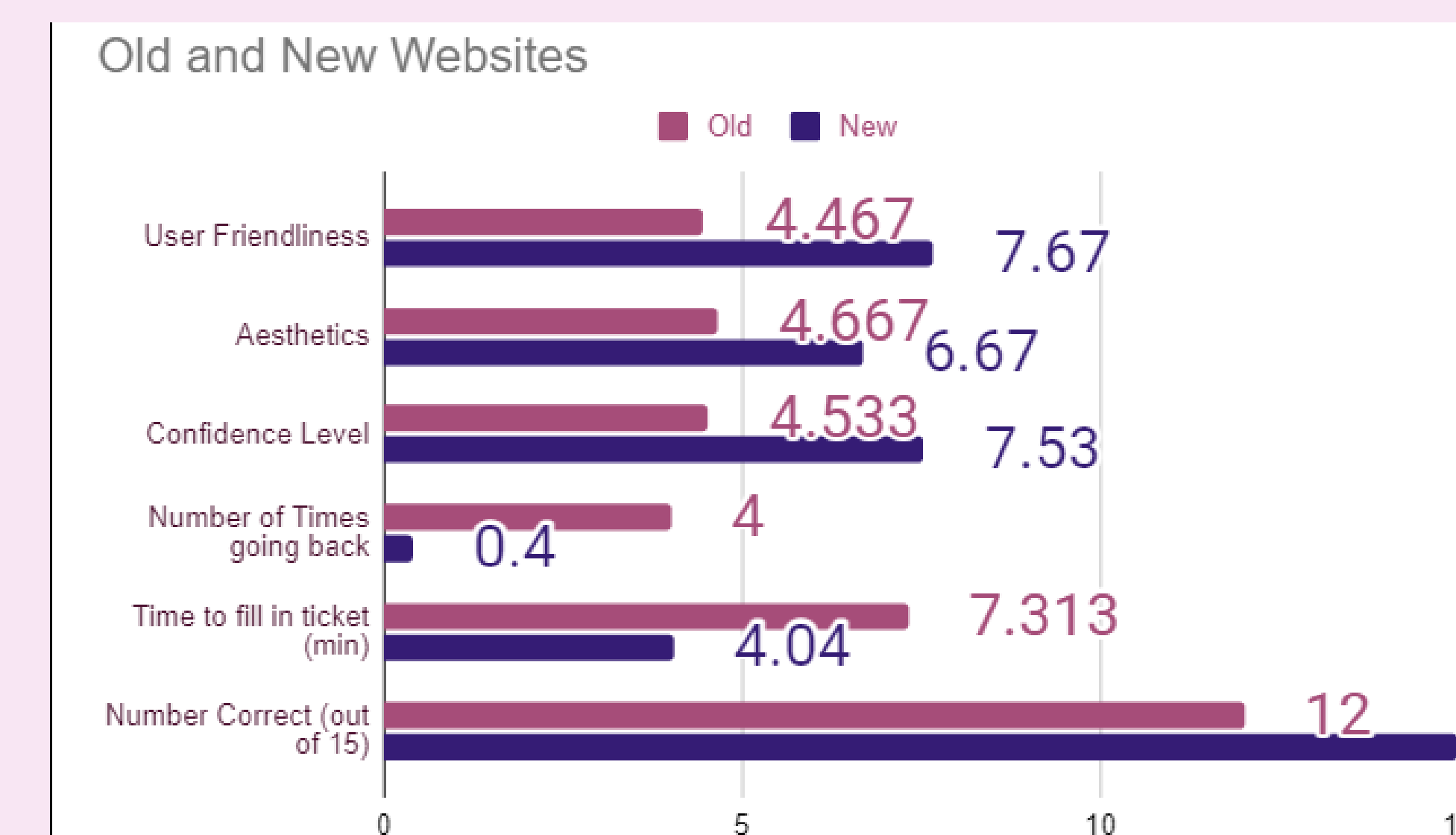
#### Collect data on:



## RESULTS

05

### 1 A/B User Testing



### 2 SIMIO Testing

#### Current Model vs Model w/ Single Support Team (Future Set-Up)

**18.6% DECREASE** in MTTR for all tickets → **Saves ~\$31,345** per year

- Having a **single support team** is better, but doesn't meet MTTR goals
- **Billing, Roaming, NTAC (National Technical Assistance Center) and Engineering** teams affect MTTR the most

#### Current Model vs Model with A/B Testing Data

**47.69% to 69.30% INCREASE** in tickets w/ zero redirects → **Saves ~\$307** per year

## RECOMMENDATIONS

06

1. Implement ticketing system and fix-flows focus on top three ticketing categories with updates every quarter and have more training for customer support regarding common billing, roaming, and NTAC issues.
2. Keep Voice of Customer open and notify the customer when the engineer reaches out for more information.
3. Keep time records on smaller steps such as queue times and processing times to more accurately identify where bottlenecks are occurring.