Improving Customer Support Model for IOT Customers

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**Problem**

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:

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

**Objective**

To gather evidence through:

- User Testing
- Data-Based Simulation Modeling

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

**Current System**

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

**Methods**

**Data Collection and Analysis**

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 redirects
- Most frequently filed ticket

**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

Keep track of:

- Time taken to fill out form
- Whether or not ticket was sent to correct team
- User-likeability

Number of tickets redirected

**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

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

**Collect data on:**

- MTTR
- Number of redirects
- Current interarrival rate of 1 ticket every 4 days
- Doubled interarrival rate for 1 ticket every 2 days

**Results**

1. A/B User Testing

2. SIMIO Testing

**Recommendations**

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.

Keep Voice of Customer open and notify the customer when the engineer reaches out for more information.

Keep time records on smaller steps such as queue times and processing times to more accurately identify where bottlenecks are occurring.