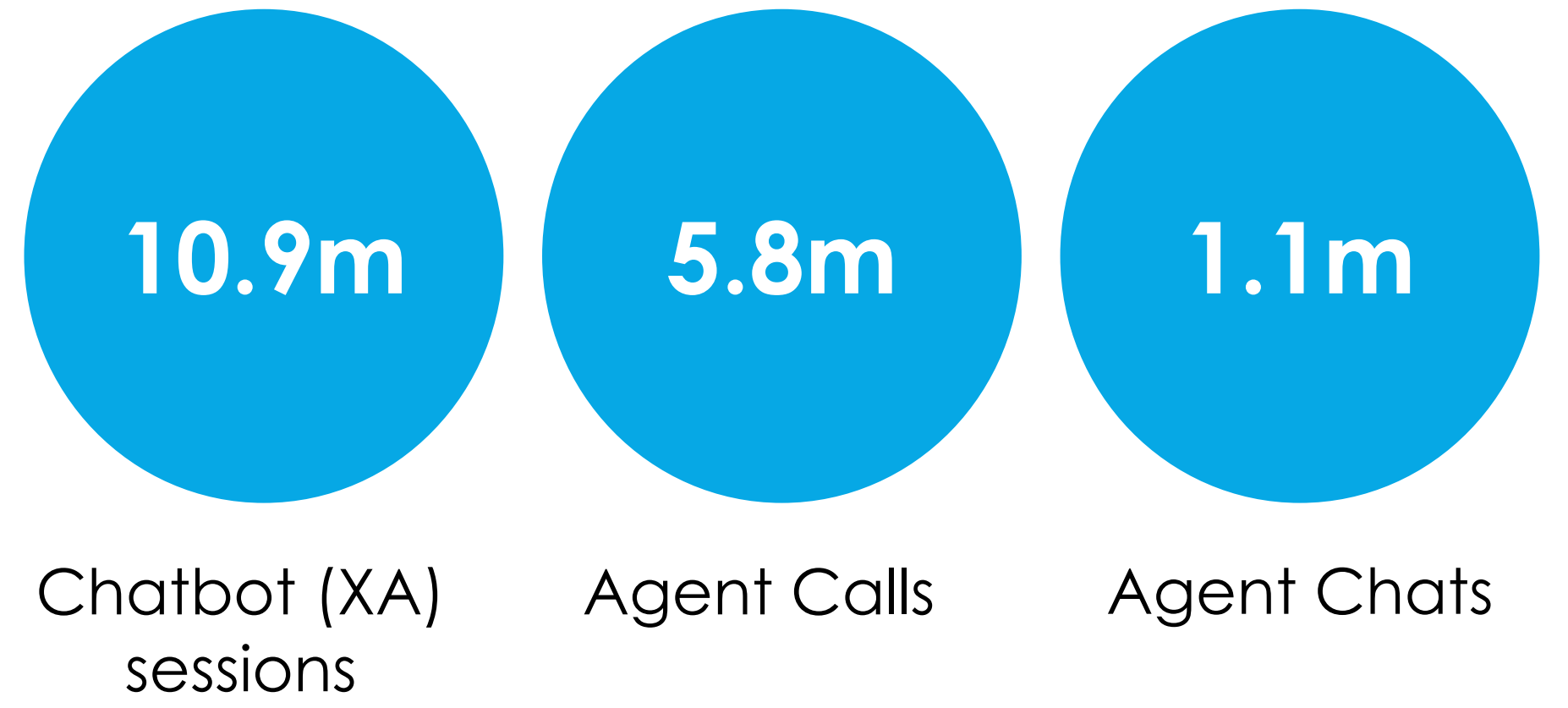




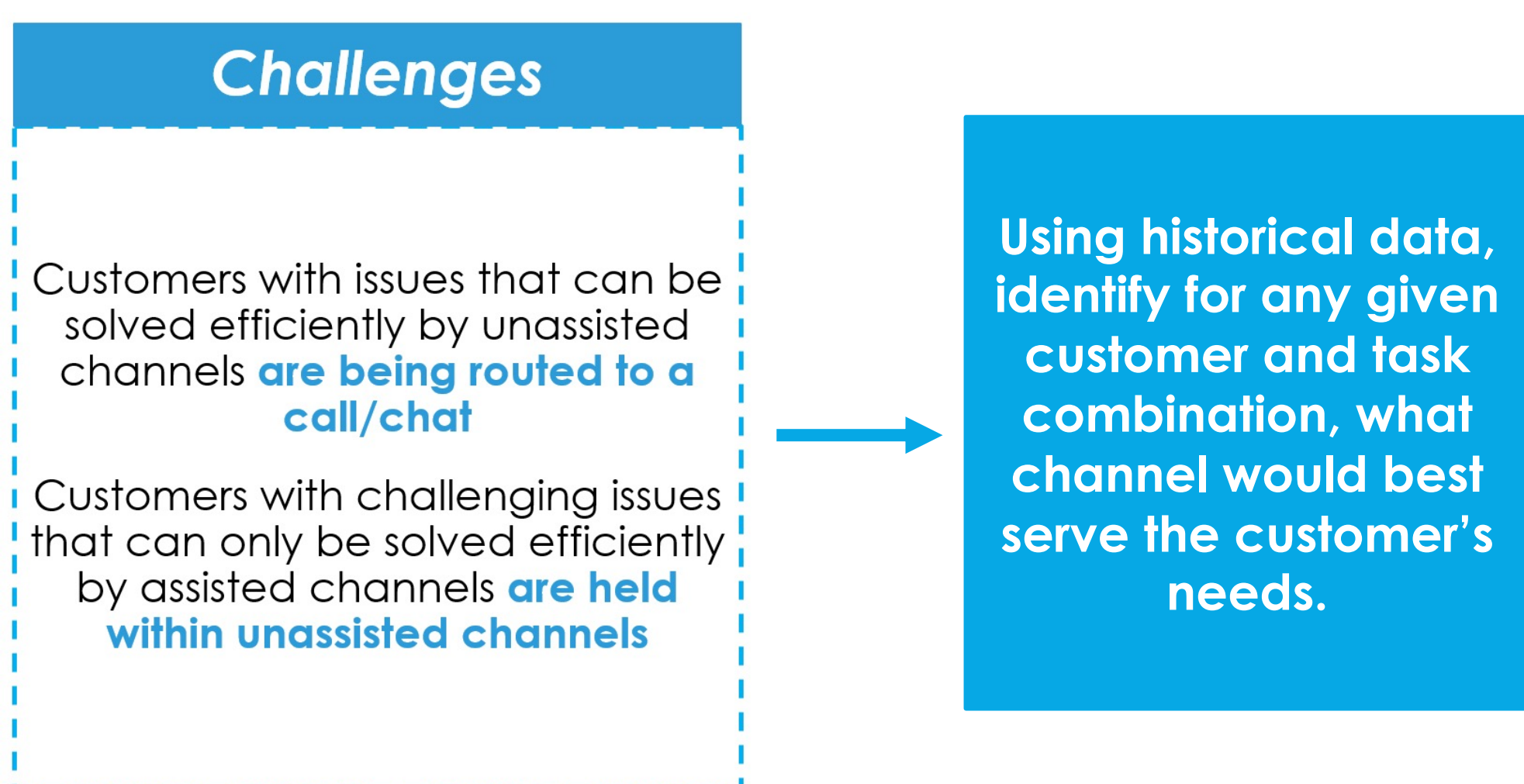
Customer Care Context

Tasks/Issues Examples	Primary Channels
View/pay bills Reset Wi-Fi modem Schedule repair appointments Add equipment Add/Remove premium channel	Unassisted Xfinity Assistant Chatbot (XA) Dotcom Desktop My Account App Assisted Agent Chat Agent Call

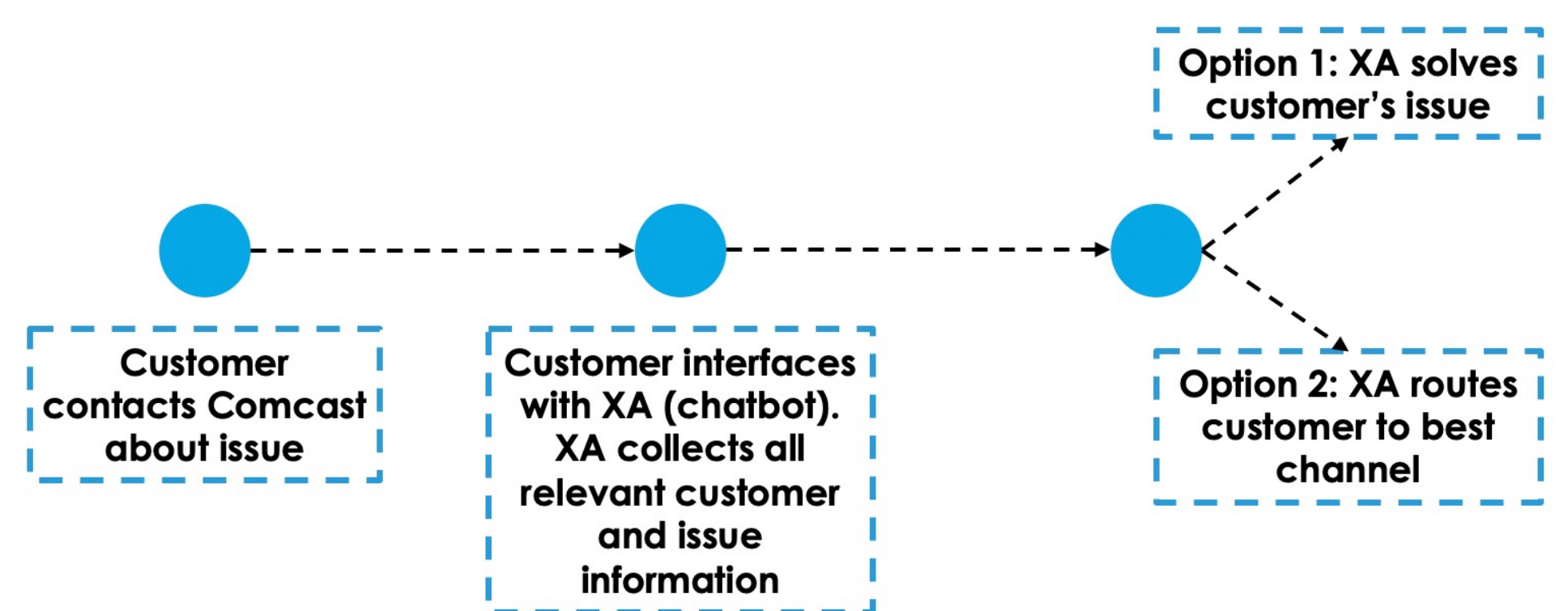
Current Landscape (June 2021)



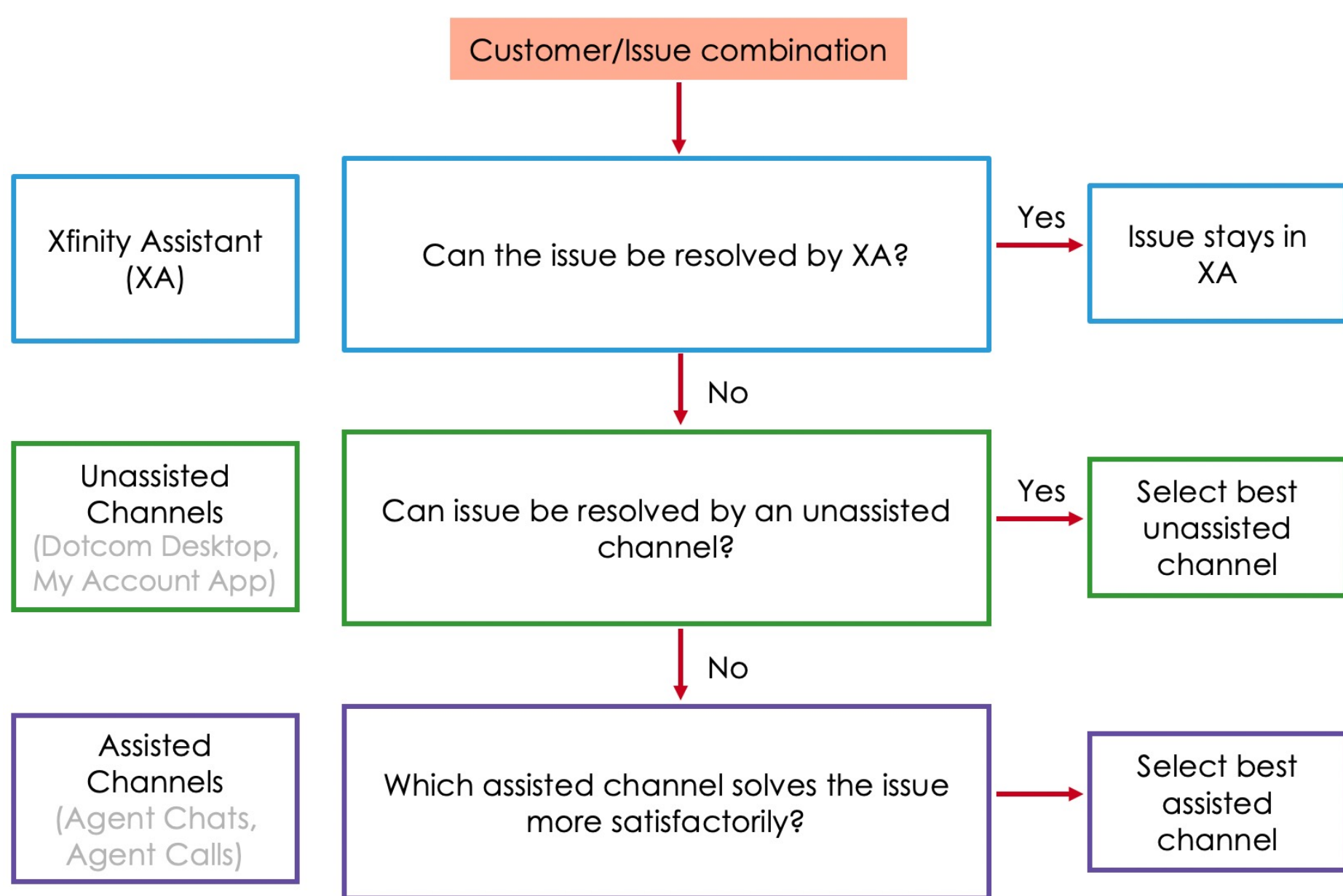
Challenges and Objective



Long-term 'Digital First' Goal



ML-Driven Solution Framework

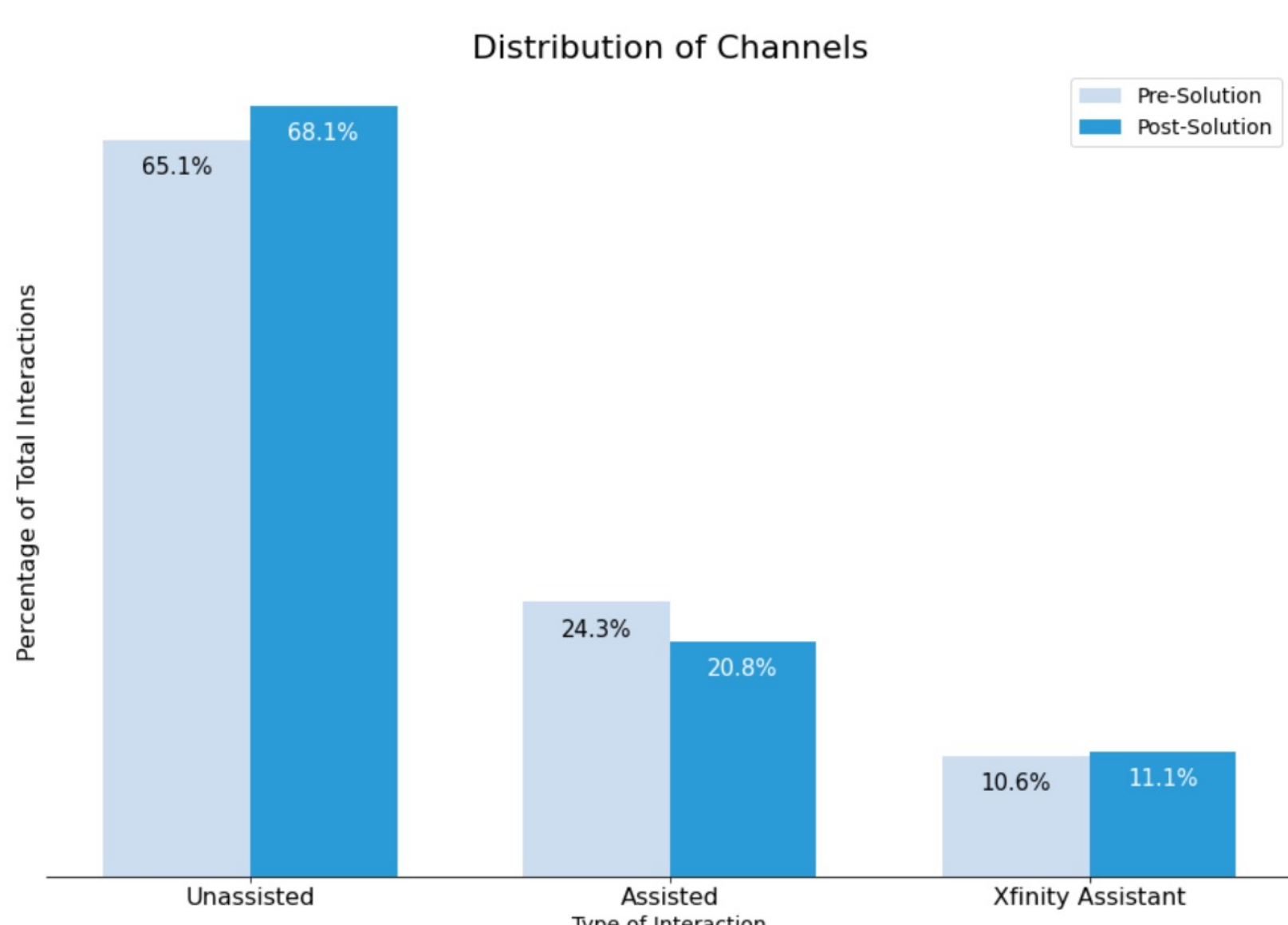


Channel selection at each step takes place by comparing the probability outputs of classification models to a pre-defined threshold

Model Specifications

Model	• Gradient Boosted Trees (LightGBM), Grid Search with 5 fold CV
Predictors	• Task: Task Subgroup, Journey, Same Issue • Customer: Product Mix, Income Bracket, Geographic Region, Monthly Recurring Cost, Tenure
Response	• XA: End Status != Agent and Contact Flag != 1 • Unassisted Channels: Digital Fallout > 0 • Assisted Channels: Unresolved if customer contacts in the next 24 hours • Assisted Channels: Unsatisfactory if customer spends more than 30 mins
Class Imbalance	• Varies. Undersampled majority class if more than 95% of data
Performance	• Metric: AUC • Out-of-sample range: 0.67-0.83

Solution Impact

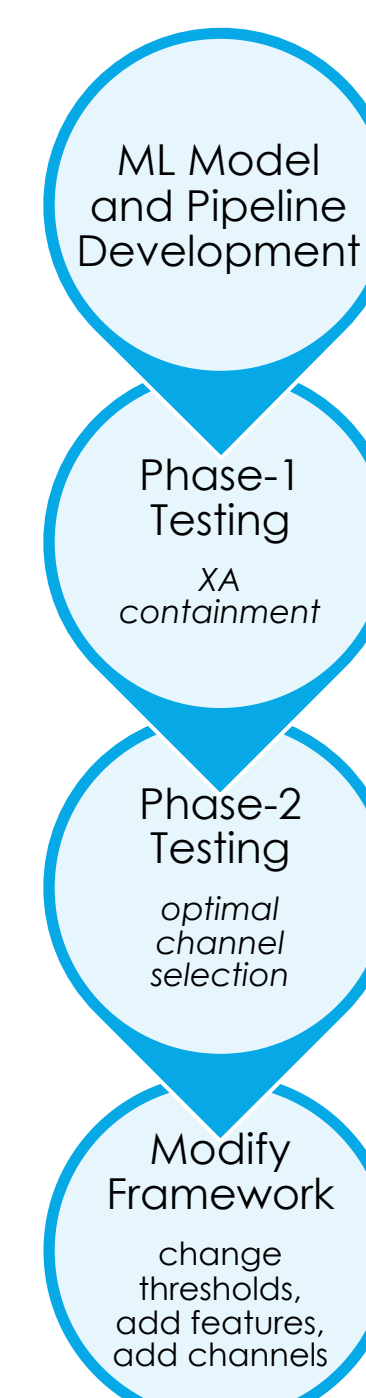


300k to 650k
\$2.7m to \$5.9m

Deflected Assisted Interactions per Month

Monthly Cost Savings

Testing Plan



Hypothesis: The proportion of interactions contained in unassisted channels is higher in the treatment group

Treatment: Multiple treatment groups with varying thresholds (aggressive/moderate/conservative)

KPIs: Containment, Proportion of assisted interactions deflected, rNPS