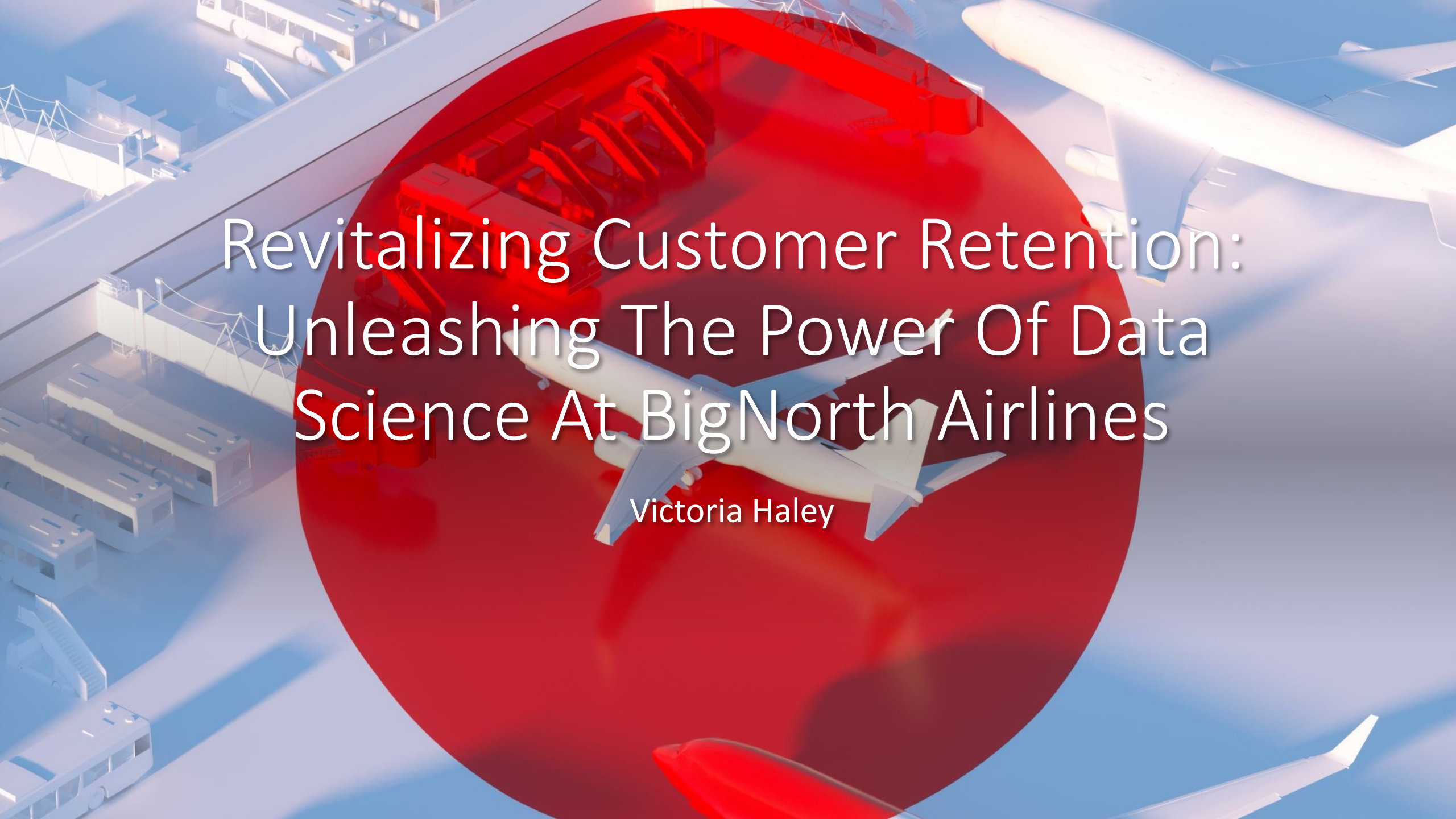


Revitalizing Customer Retention: Unleashing The Power Of Data Science At BigNorth Airlines

Victoria Haley

New Project – Reducing Churn

Impact of loss: Affects profitability, market share, and customer satisfaction

Data-driven approach: Leveraging data science to gain valuable insights

Targeted strategies: Implementing proactive measures to get ahead of the loss

Enhancing retention rates drives sustainable growth for BigNorth

Current Challenges

The current approach is inefficient and has caused other BigNorth organizations to lose faith in the data science team.

Limited Data Culture

Data driven decision making is not fully embraced or integrated into the organization's process

Data Accessibility

Inadequate data infrastructure throughout different sources within the organization

Ineffective and Inefficient Communication and Collaboration

Leads to lack of clear objective

Limited data science team stretched too thin

Proposed Data Science Process Overview

- Modified CRISP-DM workflow using Data Driven Scrum (DDS) coordination framework.
- Modified CRISP-DM Workflow Steps:
    1. Ask an interesting question
    2. Business understanding – Ensure team understands business objective
    3. Data understanding – What data is available and how can it be used towards goal?
    4. Data preparation
    5. Modeling – Are results meaningful? Can it be improved?
    6. Evaluation – Does the model scale?
    7. Deploy
    8. Monitor & Maintain – Does the model drive business strategy?

- The pace of each iteration of the project will be set by DDS principles.
- 5 events:
    1. Iteration planning
    2. Iteration review
    3. Daily meeting
    4. Retrospective
    5. Increment review

Roles and Responsibilities

Product owners

Someone outside of data science team who defines the project's vision, setting priorities, and ensuring data science solution aligns with business objective

Process experts

Team leads who drive iterations by providing guidance and expertise on process framework, ensure team follows the defined process, and help address any challenges that may arise

Functional and Program Managers

Head of Data Science who will provide leadership and support to team members, responsible for day-to-day activities, coordinating work, and ensuring team's success

Will need to work with Product Owners to prioritize projects

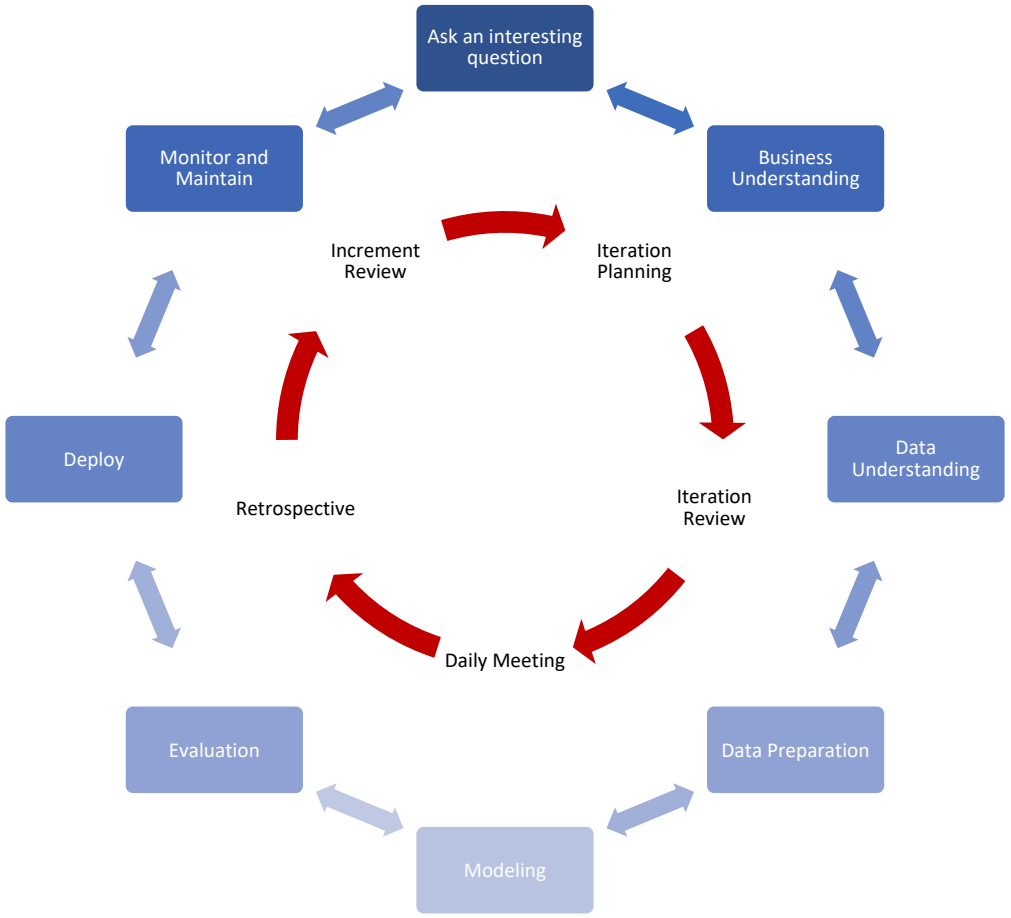
Developmental Team

Contribute their expertise and skills towards completing tasks within iterations

Artifacts and Deliverables

- Hypotheses
  - Help frame the problem and define the expected outcomes
- Data Reports
  - Include descriptive statistics, data visualizations, and key findings
- Model Documentation
  - Details chosen algorithms, feature engineering techniques, and model paraments to ensure transparency, reproducibility, and knowledge transfer throughout the team
- Project Roadmap
  - Visual representation of project timeline, milestones, and deliverables
- Iteration Reviews
  - Summaries of the feedback and insights gathered during the iteration
- Retrospective Reports
  - Capture lessons learned, process improvements, and any adjustments made based on team's reflections
- Documentation Templates
  - Key processes, findings, and methodologies to ensure consistency and streamline project documentation
- Presentation Decks
  - To communicate project updates to stakeholders

Roadmap and Implementation



- Estimated Timeline
  - Hypothesis and Business Understanding: 2 weeks
  - Data Understanding and Preparation: 3 weeks
  - Modeling and Evaluation: 4 weeks
  - Deploy, Monitor & Maintain: Ongoing
- Required Resources
  - Data Scientists and Analysts
  - Data engineers
  - Subject Matter Experts for business knowledge and validation
  - Computing Resources (servers, cloud infrastructure)
  - Data Science Platforms and Software
  - Collaboration Tools (communication, project management)

Benefits of the New Process

✓ Enhanced Decision Making To Effectively Address Churn

✓ Improved Retention Rates

✓ Proactive Intervention To Retain Valuable Customers

✓ Optimized Resource Allocation

✓ Increased Customer Satisfaction

✓ Enhanced Business Strategy

✓ Measurable Results

✓ Continuous Improvement

✓ Competitive Advantage

Assumptions

Availability of relevant and adequate data for analysis and modeling

Data quality issues are manageable and data consistency is feasible to achieve

Organizational support and willingness to adopt new process

Availability of skilled personnel

Effective communication and collaboration across organization

Allocation of sufficient resources

Organization’s adaptability to change

Key Challenges

Limited Data Culture

Challenge: Limited adoption of data-driven decision making within BigNorth

Mitigation Strategies:

- Conduct data literacy training and awareness programs
- Advocate for the importance of data-drive insights
- Encourage cross-functional collaboration

Data Accessibility

Challenge: Limited accessibility to relevant data sources.

Mitigation Strategies:

- Establish robust data infrastructure
- Encourage data sharing and collaboration
- Implement data governance policies

Unclear Objective Definition

Challenge: Lack of clear and well-defined objective for reducing churn

Mitigation Strategies:

- Engage key stakeholders to define measurable objective
- Conduct thorough analysis
- Align objectives with overall business goals

Summary

Proposed data science process framework empowers BigNorth to make informed decisions to effectively reduce churn.

Targeted strategies derived from data-driven analysis enable proactive measures to retain valuable customers.

By adopting new process, BigNorth can leverage data-driven insights to optimize resource allocation and drive sustainable growth.

The continuous improvement aspect of the process ensures the ability to adapt and refine strategies over time.

Next Steps

Schedule follow-up meetings to discuss the implementation plan in more detail

Identify key stakeholders and establish cross-functional teams for effective collaboration

Allocate necessary resources for successful implementation

Thank you!