

Template for COMP3297C: IcyReward.

For the IcyReward project we can omit or combine various sections of the full Vision sample for the COS. This template reflects those omissions.

To use the template, replace everything shown between < > pairs. Adjust the page numbering in the Table of Contents page accordingly.

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# Vision Document

for

# IcyReward

Version 1.0

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## Revision History

Name	Date	Reason For Changes	Version
Group P	28/2/24	Initial draft	1.0

# 1. Business Requirements

## 1.1. Business Opportunity

A fun and interactive system is essential for efficiently and accurately tracking attractions visited by guests at IcyWorld, facilitating adjustments by the Park Management team to consistently improve the overall guest experience. Current methods of collecting guest feedback, such as surveys, are both time-consuming and inaccurate. Implementing such a system would not only save labor by eliminating manual tracking methods but also improve the accuracy of data on guest behavior. This enables Park Management to make data-driven decisions and improve operational efficiency. Through this seamless and interactive system, IcyWorld's strategic directions can better align with visitor trends, thereby enhancing guest satisfaction and driving revenue growth at the theme park. Additionally, a future extension to the system enabling tracking of visitors at external local parks would provide IcyWorld with a broader view and provide the potential to attract visitors who have visited other parks through volume inter-park reward agreements.

## 1.2. Vision Statement

For the park management team at IcyWorld tasked with analyzing customer behavior, the IcyReward system serves as an integrated system that continuously tracks user attractions data on a daily basis. It offers clear diagram displays of data for selected periods of time. Park visitors benefit from more efficient operational services and a fun experience of earning reward points and redeeming gifts.

By eliminating the need for traditional survey methods to collect user attraction data, the management team can utilize the IcyReward system to gather data more efficiently and with higher accuracy, which saves both time and labor while providing visualized data for instant analysis.

## 1.3. Business Assumptions and Dependencies

AS-1: Sufficient NFC terminals will be available for installation at the entrance or exit of every attraction in IcyWorld.

AS-2: Sufficient NFC bands (IcyBands) will be prepared for delivery at the main entrance to accommodate the large volume of customers. They shall be collected at the exit of IcyWorld.

AS-3: The redeem shop is equipped with enough display devices, such as screens, to showcase the redemption price of every available item. These displayed prices are subject to settings and changes within the IcyReward System.

DE-1: If an attraction has its own NFC entrance or other ticket-constrained entrance, the IcyReward system must be able to interface with it.

DE-2: If there is a gift shop system in place, the IcyReward system must be able to interface with it.

DE-3: If there is a management analyzing system in place, the IcyReward system may be able to interface with it.

# 2. Scope and Limitations

## 2.1. Major Features

FE-1: Read NFC bands with unique IDs for each customer at any attraction and automatically add points to the user's total accordingly.

FE-2: Summarize and display Reward Points earned for the day.

FE-3: Display all available gifts in stock that can be redeemed using Reward Points.

FE-4: Confirm the purchase, offering options to add, remove and adjust the quantity of gifts redeemed, and indicate if points are insufficient after calculating the total points needed.

FE-5: Upon successful purchase, points will be deducted accordingly, and gifts will be dispensed to the customer.

FE-6: Indicate success or failure when the customers scan their NFC bands.

FE-7: Record time of customers' visits at each attraction using the timestamp feature.

FE-8: Restrict visitors from scanning the NFC band again within a 5-minute interval to prevent abuse of the Reward Points system.

FE-9: Display the collected data in charts based on the selected period.

FE-10: Add, remove and adjust the price (in terms of Reward Points) for the gifts available.

FE-11: Update the points and visited facilities for each band ID at the end of each day.

FE-12: Review and report on the utilization of NFC at the gift shop and trends in reward redemption.

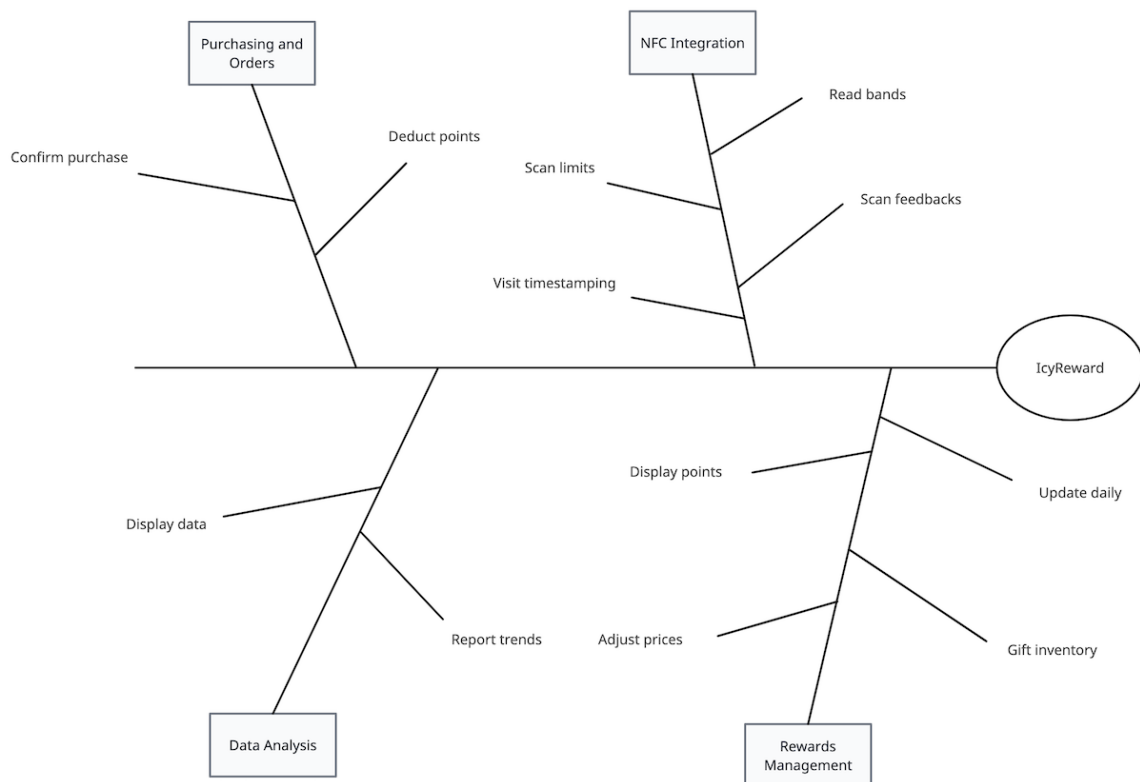


Figure 1. Partial feature tree for the IcyReward

## 2.2. Limitations and Exclusions

LI-1: We have yet to address the storage of data regarding the most popular gifts among customers.

LI-2: Gifts can only be redeemed on the day of the visit.

LI-3: Gifts can only be redeemed at the kiosk located at the IcyWorld Official Gift Shop.

## 3. Stakeholders

### 3.1. Stakeholder Profiles

Stakeholder	Major Values	Major Interests
End Users	Personalized, meaningful rewards for loyalty and engagement	Easy redemption processes; adds fun to the visit; a wide range of rewards; a seamless user experience
Participating Businesses (companies that produce products for the IcyWorld gift shop)	Increased customer loyalty and increase in sales	Marketing effect. Potential to increase sales of related products
IcyReward Management and Staff	Enhancing customer experience, building a sustainable, profitable business pattern that leads the market	Operational efficiency; high user engagement rates; data accuracy and collecting efficiency
Regulatory Bodies	Promoting solutions with no risk of privacy issues (as the bands used are anonymous); Adhering to consumer and data protection standards	Compliance and the ethical operation
Investors (of IcyWorld)	Financial return on their investment; Growth potential of IcyReward	Strategic decisions that maximize profitability and market share

## 4. Delivery

### 4.1. Product Roadmap

Release 1: All features listed in Section 2.1. Delivery: 03/04/2024

### 4.2. Release Plan

Release 1:

Sprint 1 (March 20)	Sprint 2 (April 3)
<b>Gift Redeem</b> (All Scenarios, including NFC recognition, checking point balance, basic successful redeem, checking remaining point balance, and checking remaining gifts in the kiosk) <b>Gift Catalog Management</b> (Edit price and stock for each gift, add or remove gift item) <b>Logging Visits</b> (Records visits to attractions)	<b>Logging Visits</b> (All remaining features, including recording timestamp of visits, avoids duplicate taps at a same site, empties the remaining points at the end of day) <b>Visitor Data Analysis</b> (All features, including authenticating staff, presenting tables and charts to the staff) <b>Gift Catalog Management</b> (All features, including authenticating staff, changing gift catalogs)