Digitalization Strategy

Team 3

Our Team
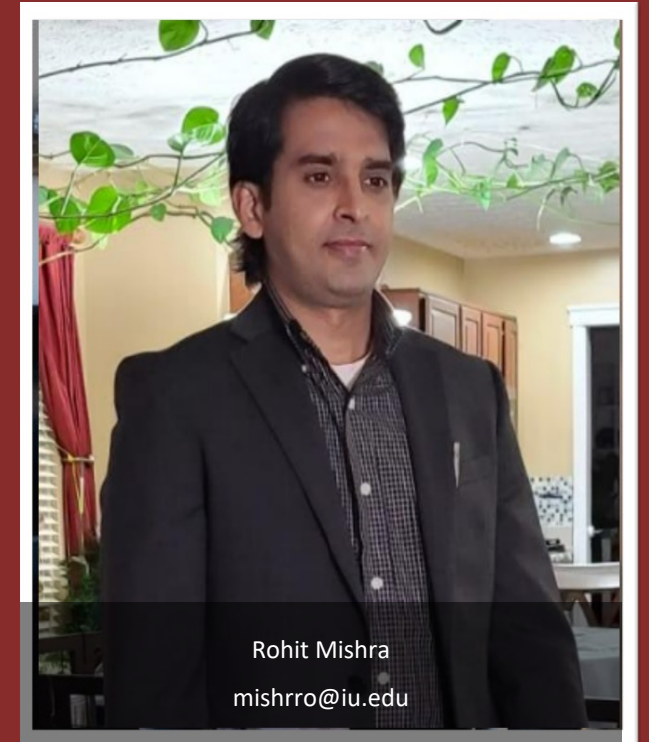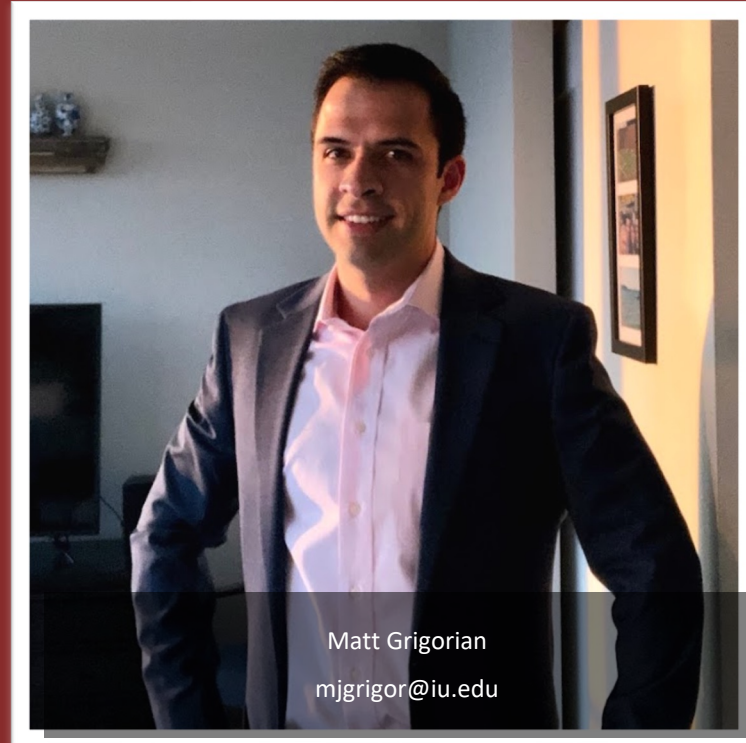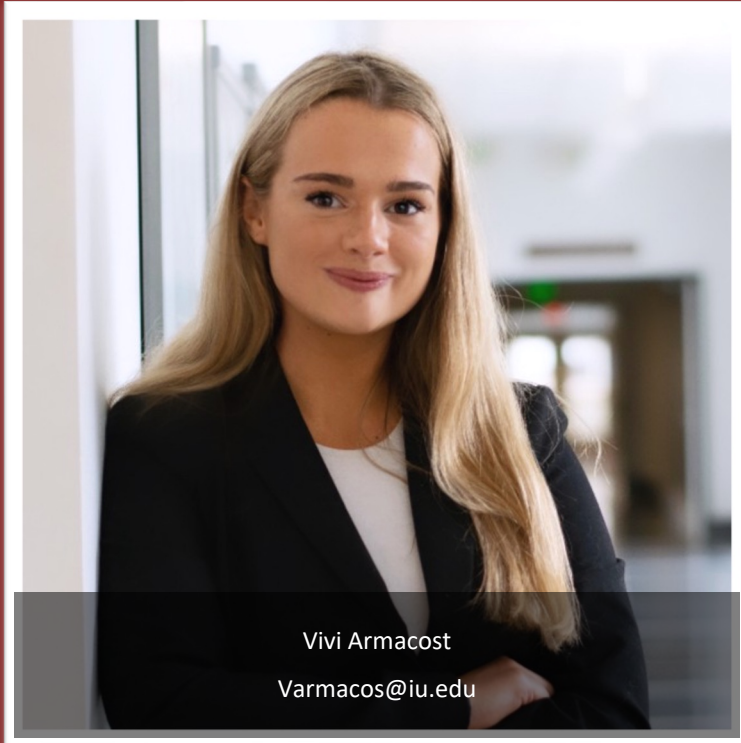
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Embracing the next wave of Kroger's digital strategy involves a commitment to customer experience and positive brand image association

"All of this [transformation] work starts with our customer obsession focus" - Rodney McMullen

Situation	Complication	Question
The COVID-19 pandemic has accelerated many digital trends that were already occurring in today's global business environment. As such, Kroger's digital strategy has begun to age.	As other retailers use the trends to drive their customer engagement, Kroger has lagged its competitors in capturing this momentum.	How can Kroger utilize big data to refresh their digital strategy to increase its customer engagement?

Kroger should implement the following three use cases of big data analytics to enhance its customer experience and improve its sustainability index in order to rise above competitors.

(1) Food Sustainability Algorithm
Detail: Use AI to improve its sustainability footprint and provide fresher food to in-store customers

(2) Smart Marketing
Detail: Implement location-based marketing algorithms to target to loyalty customers

(3) Price Matching
Detail: Develop capability to assess local competition's prices to price-match in real time

Kroger can utilize Artificial Intelligence in their current SAP system to prevent food waste and have fresher food more available to customers in their brick-and-mortar stores

"Kroger's Success has always depended on our availability to proactively address changes by focusing relentlessly on our customers" - Rodney McMullen

Data → **Analytics** → **Fresh Food**

SAP systems have the ability to initiate informed decisions from big data using the artificial intelligence from KPIs

Create data-driven decisions by utilizing data about products from SAP system

- Current Kroger SAP systems store information about product age, purchase history, & availability

- KPIs can be used to make assumptions about when food will go bad and make suggestions about actionable plans to prevent food waste

Connect KPI dashboard to communicate with brick-and-mortar stores

- Connecting analytics on when food will go bad to the hands of employees will allow them to market products that are likely to go bad sooner to consumers

- Managers can utilize food positioning to make products more available to consumers

Leveraging Data Analytics for fresher food within the bounds of procurement

- KPIs can utilize data about when food is ordered and sold to gauge how much should be bought in the future

- Store managers can be suggested alternatives to throwing away food through AI

Automation of KPI Analytics can be utilized to launch marketing campaigns for products based on location through current customer relationship model

Create a mutually beneficial relationship between Kroger & customers while diminishing food waste

Data from the KPIs will automatically be communicated to Kroger's Customer Relationship Software. Coupons will be sent to customers via email based on geographic location to the Kroger. Customers will be encouraged to support Kroger's cause to diminish food waste through loyalty program.

KPI automation

- Connect SAP analytics to CRM in order to send coupons for products more likely to go bad based on customer location

Encourage consumers to sign up for loyalty program

- Consumers can support anti-food waste cause by using coupons, and will save money

CRM Metrics

- Kroger can gauge how well digital strategy is performing with CRM analytics
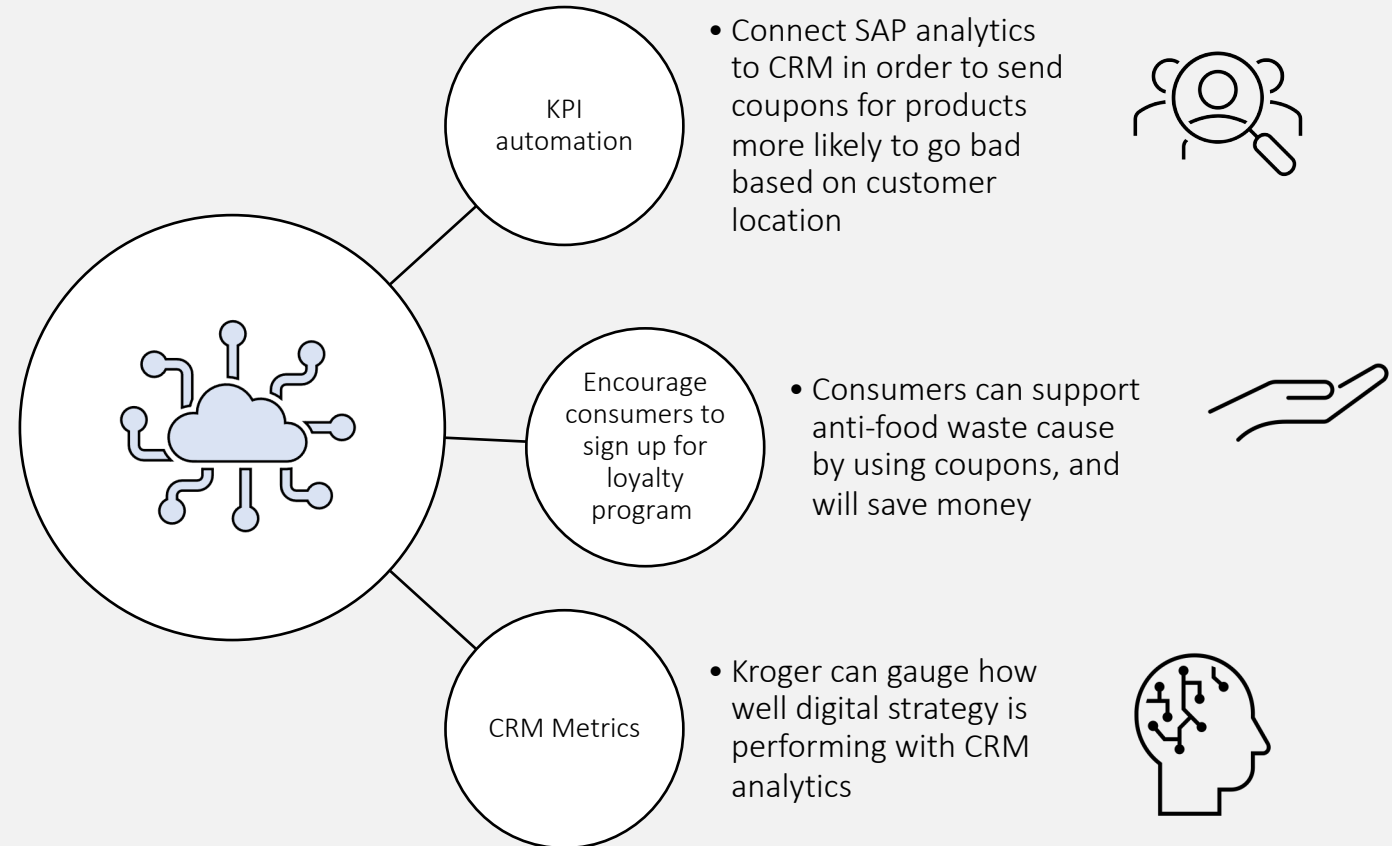
Implement in-store and online price matching algorithms to compete with local competition, ensuring perishable foods are priced effectively

Operational Details

- Update pricing algorithm to consistently monitor prices within a certain geographic radius (for in-store) and against its competitors (online)

- Using these two factors, offer the lowest price available.

- This requires harmonization of technical team and pricing team

Rationale & Outcomes

- Dynamic price matching is rooted in game theory

- Customers benefit from being guaranteed the lowest price available

- Kroger benefits as they will reduce their competitions desire to undercut prices

- This ensures food that is close to expiration will be priced competitively

Costco Gas price matches the lowest price it can find within a certain radius of each individual warehouse every morning.


Best Buy implemented an aggressive price matching strategy in response to Amazon's expanding reach in electronic and gaming sales.

Kroger will make the decision to upgrade their SAP system to provide optimal analytics on food waste with little implementation costs

Example SAP Dashboard

SAP

Dashboard

| Bloomington South Kroger Food Waste | Sales | Ordering- 12 MO |
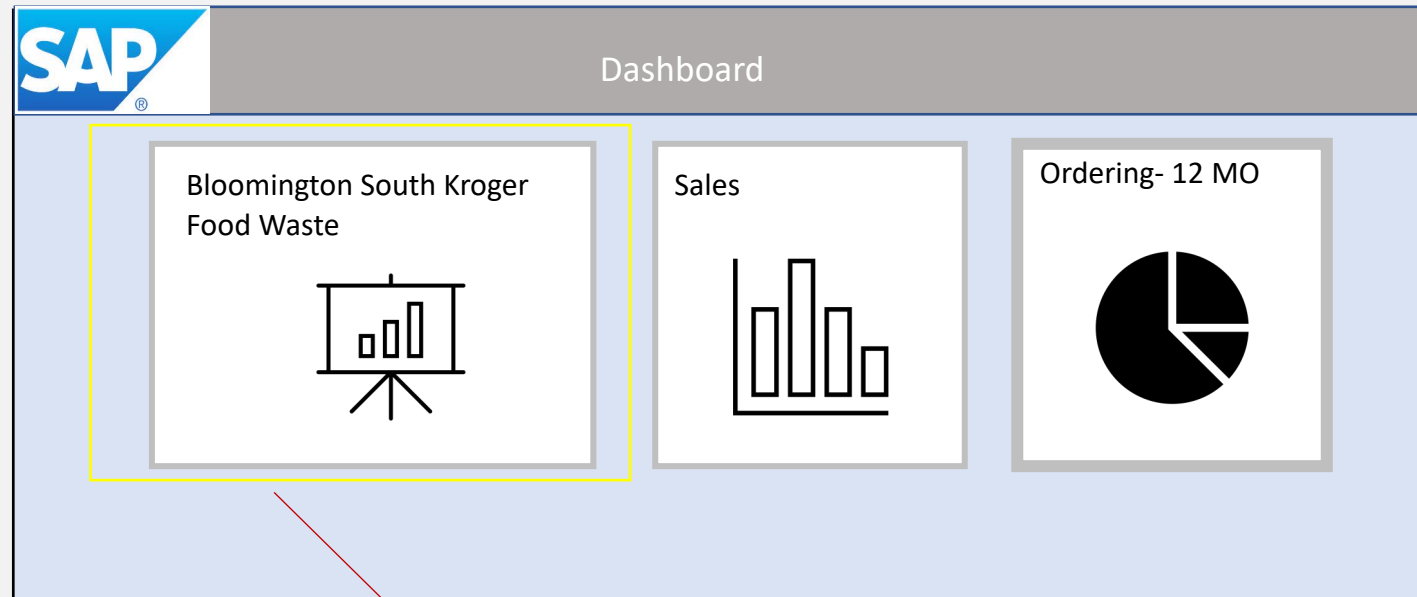
Additional SAP KPI's will be implemented into current system. In addition to presenting information, they will be able to suggest action plans for store management to use in addition to automated features

Steps to Implement KPIs

1. Define business goals and data needed for successful KPI use
2. Outline derived value of KPIs
3. Define run time procedures.
4. Communicate between IT team and business consultants for information, no need for external consultants in this process
5. Teach users about new KPIS how to make informed decision based on metrics
6. Launch KPIs
7. Support users

Data Strategy Integration Timeline

Initiative	2022 Timeline											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Food Sustainability			Today	● Assess Current SAP's KPIs	● Connect KPIs to central dashboard	● Roll out to stores	● Define procurement Best practices	Model Refinement				●
Smart Marketing				● Assess Current Loyalty Program	● Connect SAP to CRM	● Launch Smart Marketing	Rebranding & Outcomes Monitoring					●
Price Matching				● Begin Model Build	● Integrate w/ Existing Algorithm	● UAT	● Launch	Model Refinement				●

5 Year Financial Commitment to Improve Customer Engagement

① Food Sustainability[1]
- Incremental Cost: $75,000
- Includes:
    - Implementation of AI into SAP systems
    - Operational build – i.e. rollout of new process in store

② Smart-Marketing[1]
- Incremental Cost: $50,000
- Includes:
    - Full rollout of marketing campaign
    - Integration into existing loyalty program
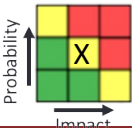
③ Price Matching[1]
- Incremental Cost: $105,000
- Includes:
    - Model build, refinement, maintenance
    - Integration into existing pricing algorithms

Total Investment
$230,000
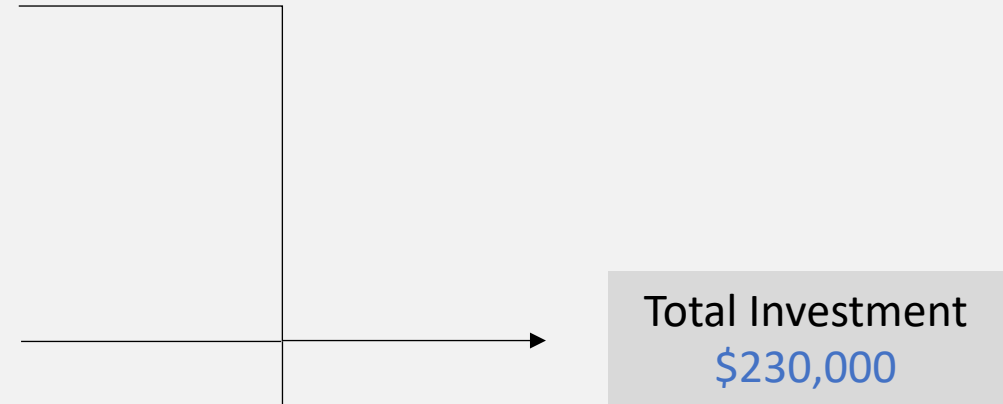
[1] Financial market research provided in appendix

Risks & Mitigations

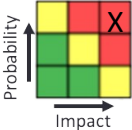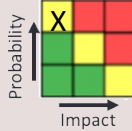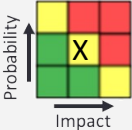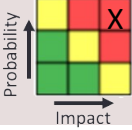| Recommendation	Risk	Impact	Mitigation
Sustainability Algorithm	Residual supply chain impacts limit ability to supply fresh produce		Develop secondary and tertiary supplier list to limit disruptions
Sustainability Algorithm	Algorithm pushes product that is past "Sell by Date," causing food safety issues		Ensure algorithm logic will not push product that is nearing immediate expiration
Smart Marketing	Targeted marketing does not drive additional sales		Engage in focus groups to understand what works and what doesn't, refocus marketing campaign
Smart Marketing	Shared, third-party geo-location data becomes more challenging to collect due to data privacy laws.		Develop a backup plan to capture geo-location data using Kroger app, even if limited
Price Matching	Competitors undercut price; profit turns negative		Price at cost, limit instances where this occurs

> Kroger has had to recover from two recent data breaches in the last two years that have negatively affected finances and brand reputation. With cyber security being one of the largest risk factors for organizations in recent years, Kroger can help mitigate future attacks through an appropriate response plan, breach detection software, and employee education.

Embracing the next wave of Kroger's digital strategy involves a commitment to customer experience and positive brand image association

Recommendation Summary

① **Food Sustainability**
- Cost: $75,000
- Implementation: 4 months

② **Smart Marketing**
- Cost: $50,000
- Implementation: 2 months

③ **Price Matching**
- Cost: $120,000
- Implementation: 3 months

As the impacts of the COVID-19 pandemic subside, customers now expect companies to remain flexible and adaptable. An opportunity exists to leverage existing big data to meet these expectations.

Investing in these three initiatives will benefit both Kroger and its customers, allowing the company to fully adopt an improved customer experience and further commit to reducing food waste.

Leveraging the existing infrastructure and making direct upgrades to its SAP system will allow Kroger to implement all three of these initiatives within 4 months time.

Should Kroger choose to invest in these three initiatives, it should consider the associated risks with each and proactively plan to mitigate where possible.

Appendix

Example KPI Dashboard

Issue Tree

Hypothesis Tree

Financial Market Research

Sustainability Initiatives & Competitor Food Waste

Kroger Data Strategy – Issue Tree

```
                                          ┌──────────────────────┐
                                          │  No connection to    │
                                   ┌──────│  drivers around Kroger│
                    ┌──────────────┐      └──────────────────────┘
                    │ Lack's ability│
                    │ to deliver    │      ┌──────────────────────┐
                    │ groceries to  │──────│  Slower inventory    │
                    │ customers     │      │  turnaround          │
┌──────────────┐    └──────────────┘      └──────────────────────┘
│ Kroger falling│
│ behind        │
│ competition in│
│ terms of      │
│ customer      │    ┌──────────────┐      ┌──────────────────────┐
│ engagement    │    │ Online sales │      │ Lack of forward-     │
└──────────────┘     │ usage        │──────│ looking data strategy│
                     │ lower than   │      │ to drive customer    │
                     │ competition  │      │ engagement           │
                     └──────────────┘      └──────────────────────┘

                                           ┌──────────────────────┐
                                           │ No international     │
                                           │ market sales         │
                                           └──────────────────────┘
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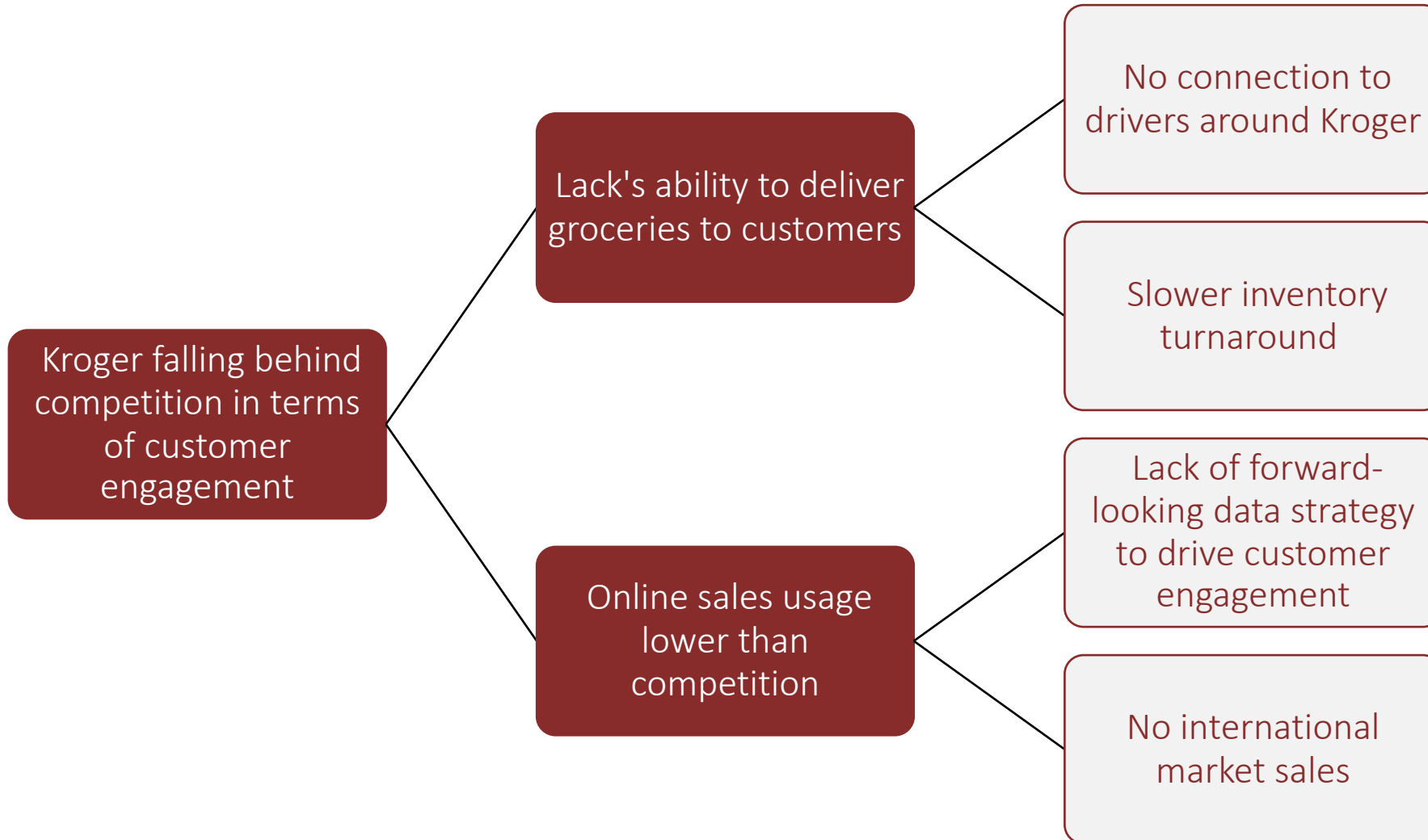
Kroger Data Strategy – Hypothesis Tree

```
Create forward              Improve customer          Drive customer engagement and improve
looking data strategy to    engagement through        brand image through sustainability
drive customer              marketing initiatives     initiatives
engagement
                                                      Implement price matching algorithms to
                                                      drive online and in-store sales

                            Focus on how big data     Utilize big data to minimize food waste
                            can further benefit sales
                            in brick-and-mortar stores
                                                      Track customers' brand loyalty to remove
                                                      brands which don't sell well

                            Enable easier access to in- Offer delivery service by coordinating
                            store shopping              with existing ride-share services

                                                      Develop real-time inventory tracking to
                                                      highlight out of stock products
```

KPI Dashboard Examples Continued

https://www.boldbi.com/dashboard-examples/sales/sales-kpi-dashboard
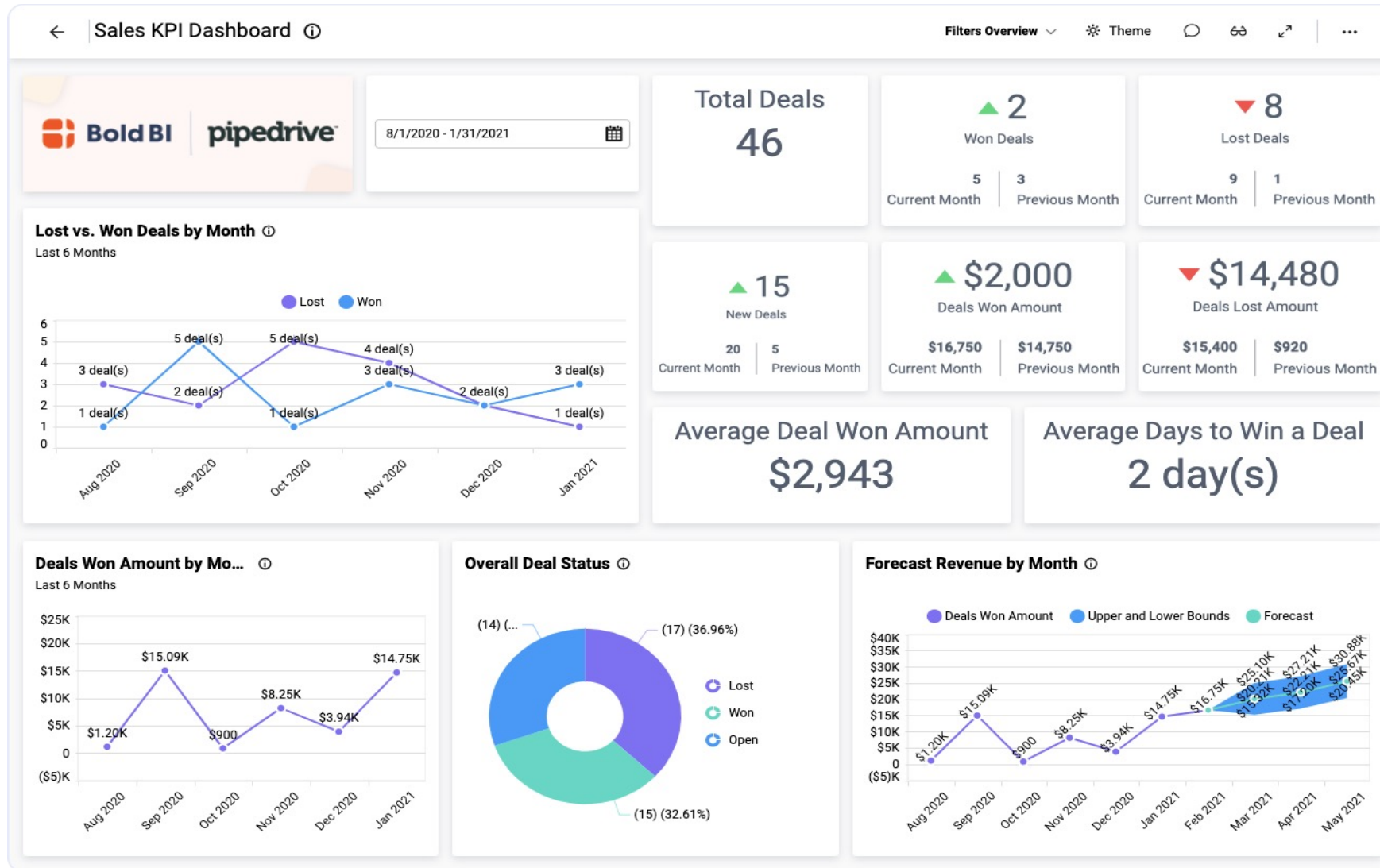
- Sustainability Initiatives
  - Sustainability Through Cost Savings
  - Sustainability Initiatives in Business

- Marketing Campaign
  - How Much Should Your Digital Marketing Campaign Cost

- Price Matching
  - Cost of Deploying and Maintaining a ML Model

U.S.

Dumpster Diver Shows Amount of Food Thrown Out by Whole Foods Store

BY **KATE FOWLER** ON 10/17/21 AT 5:58 AM EDT

https://www.newsweek.com/whole-foods-food-waste-bread-tiktok-dumpster-diving-1639659

Example of negative public backlash for food waste at one of Kroger's largest competitors.

https://www.thekrogerco.com/wp-content/uploads/2021/07/Kroger-2020-ESG-Report.pdf