

WPI

Development of a Cloud-Based Enterprise Resource Planning System for Gompei's Goat Cheese



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Gompei's Goat Cheese

Gompei's Goat Cheese (GGC) is a non-profit, student-run business at Worcester Polytechnic Institute. GGC sells goat cheese produced by Westfield Farm in Hubbardston, MA. The students of GGC volunteer year-round to learn the intricacies of running a small business. GGC handles processing orders, promoting products, and managing customer relations, but does not interact with the production nor shipping of the cheese to the customer.

“To support WPI global scholarships, learn entrepreneurial skills, and interact with the WPI and Worcester community by selling award-winning goat cheese so that we can be a part of something meaningful that impacts our community.”

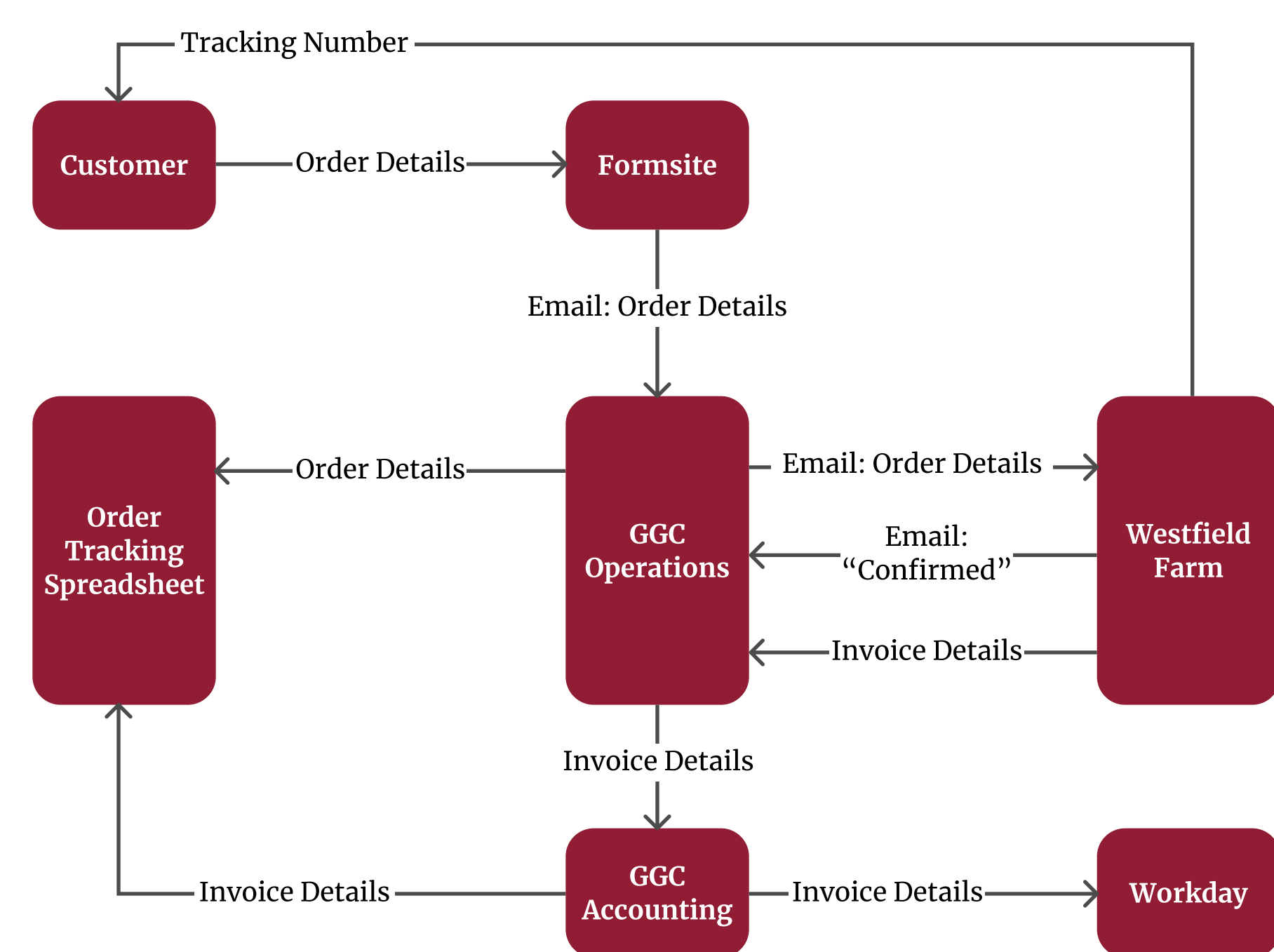
69.7%

GGC's Mission Statement.

Increase in sales between 2019 and 2020.

Current Operations

Currently, the GGC Operations and Accounting teams use Google Sheets to store order information and email to communicate both internally and with Westfield Farm. This existing operations structure within GGC creates harmful inconsistencies and has limited GGC's opportunities for growth.



Data Flow Diagram (Level 0) of GGC's Current Operations System.

Pain Points to Note:

- No shared order reference number between GGC and Westfield Farm
- Communication with the farm only occurs through the operations team
- Customer places order with GGC but gets a tracking number from Westfield Farm
- Emails sent to the farm have been lost (no email reply with "confirmed")

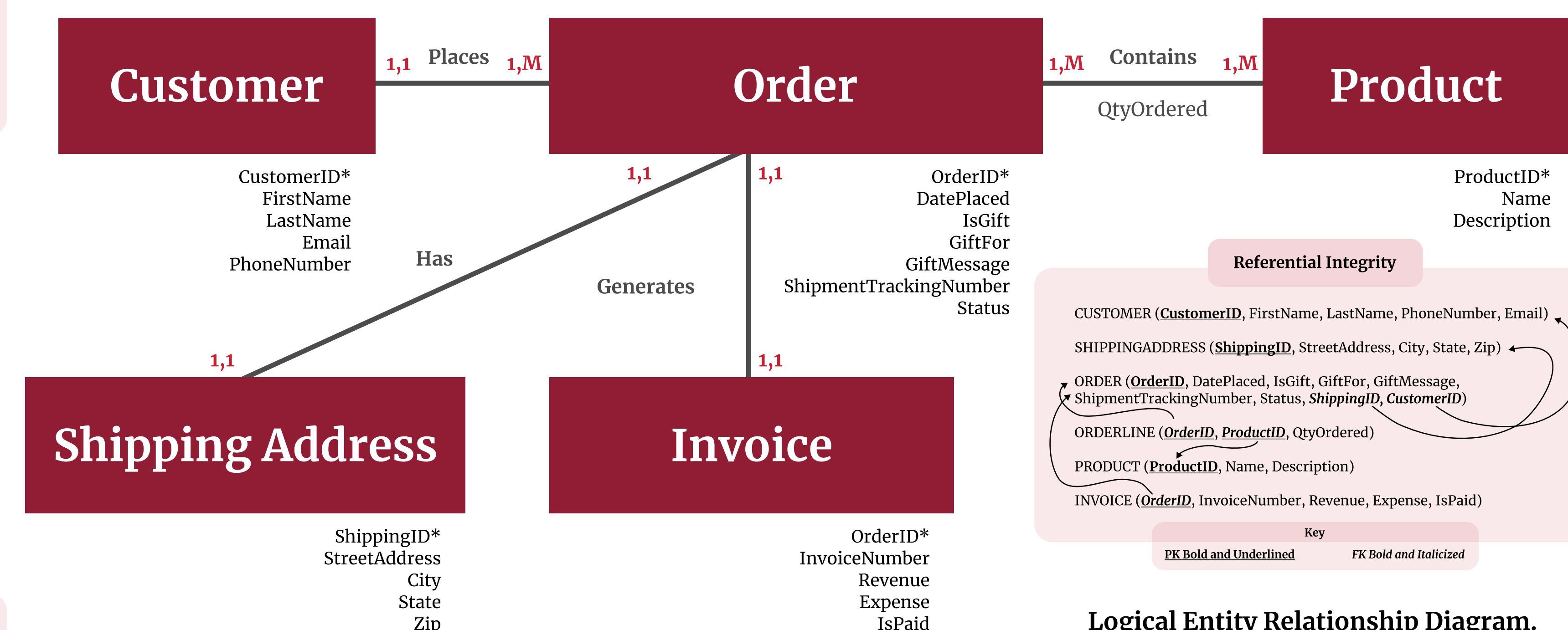
The Inside Scoop

During the requirements elicitation phase of our project, we interviewed members of GGC and Westfield Farm and identified critical feedback to consider when designing the new operations system.

- Both GGC and Westfield Farm prefer to use desktop applications, rather than mobile, when using their respective operations systems.
- Interaction with the current GGC operations system ranges from a few times a semester to nearly every day.
- The GGC system is simple and easy to use, and everyone has access to it except for Westfield Farm.
- GGC and Westfield Farm use different reference numbers to track orders in their respective systems.
- Westfield Farm processes Gompei's Goat Cheese orders manually, rather than automatically like with its normal orders.
- For both GGC and Westfield Farm, processing information into their current systems takes too long; there is a lot of redundancy.

System Design

The goal of our project was to begin development of a new order and invoice tracking system for GGC so that they may improve and grow operations.



Logical Entity Relationship Diagram.

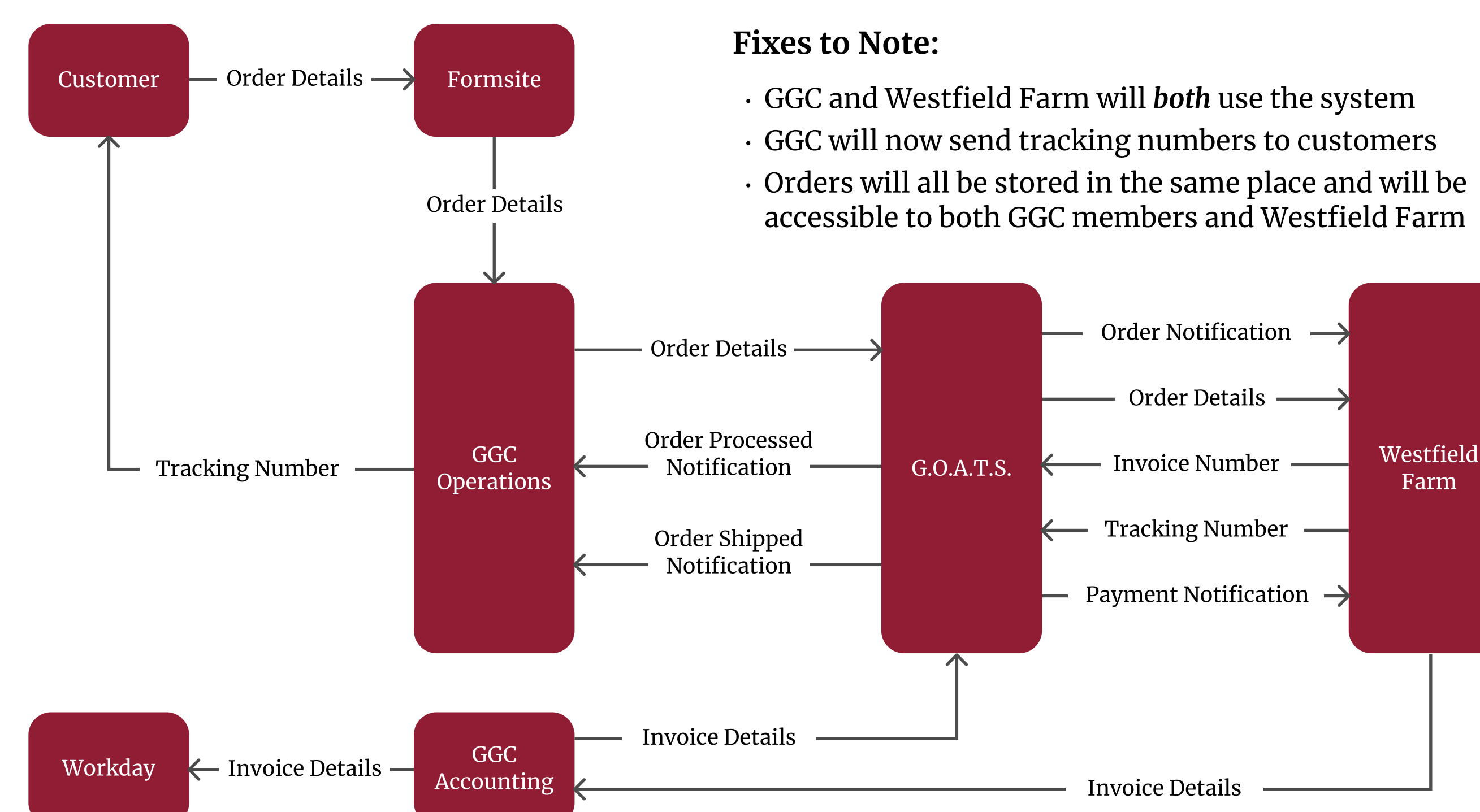
The System Name

In true GGC fashion, we came up with a system name that matches their brand identity, and also explains the purpose of the system.

GOATS

Gompei's Operations and Accounting Tracking System

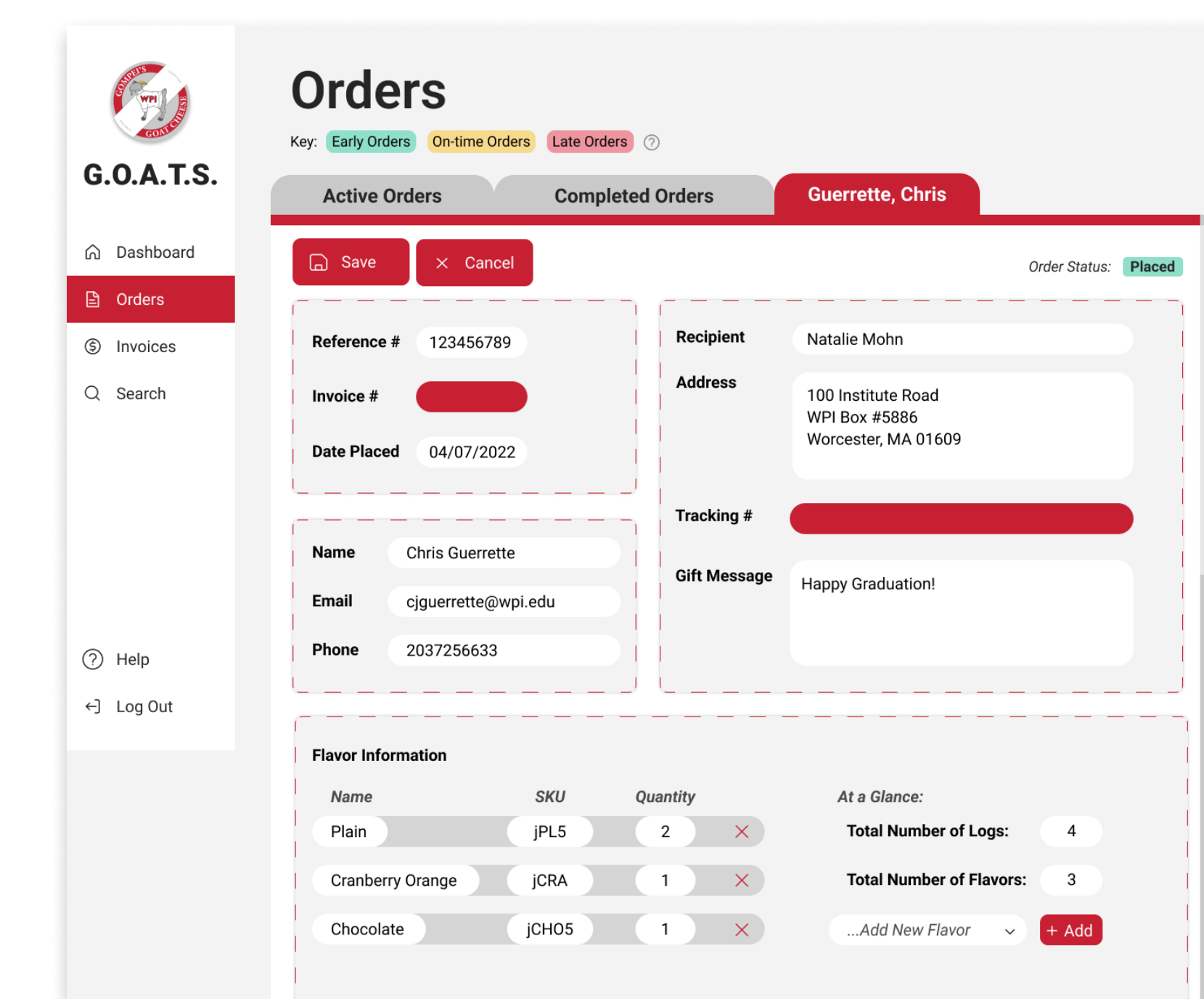
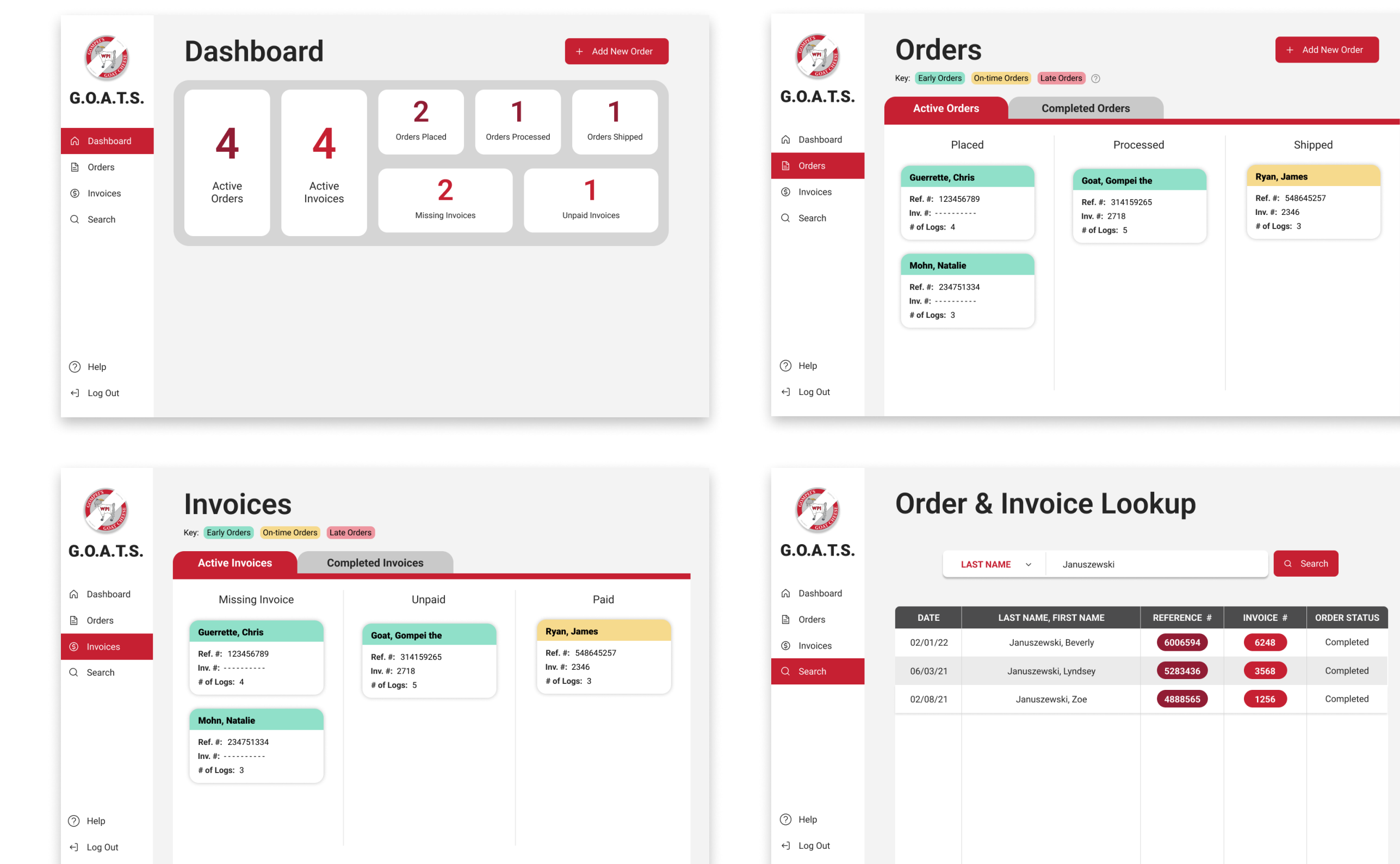
The Future System Data Flow



Fixes to Note:

- GGC and Westfield Farm will **both** use the system
- GGC will now send tracking numbers to customers
- Orders will all be stored in the same place and will be accessible to both GGC members and Westfield Farm

System Mockups



The Future of G.O.A.T.S.

We believe that this system will provide Gompei's Goat Cheese with benefits such as improved transparency, centralized order and invoice tracking, and more effective communication with their partner farm. As a project team, we completed research with the Gompei's Goat Cheese team and their partner farm, created system requirements for how the system should function, designed many system mockups and a hi-fi prototype, started production of the front end of the site, and created documentation to help GGC continue the project in the future.

Acknowledgements

Thank you so much to the Gompei's Goat Cheese team and Westfield Farm for helping us start this project by taking time out of their busy schedules to interview them. Also, congratulations to GGC, who is approaching their 10-year anniversary on April 18, 2023! We wish them the best and hope to see them thrive in the coming years.

We would also like to thank our advisors, Professor Jim Ryan and Professor Therese Smith, for supporting us through this experimental MQP. We are grateful for your guidance and for your positivity throughout this past year.