

# menuVis Proposal

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## 1.0 Introduction

### 1.1 Design Intent

We are proposing menuVis, a small but effective menu costing and performance tool that helps visualize the cost benefit analysis of menus and recipes on a wide spectrum of granularities, using modern data visualization techniques. In designing specifically for the tasks of creating, editing, and evaluating menus, menuVis will help chefs better leverage the data available to them so that they may design more effective menus, and spend more time confidently creating delicious recipes instead of book keeping.

### 1.2 Domain Knowledge

Silver has 8 years of experience working in the food service industry as a server. During this time he has cultivated close professional relationships with head chefs, as well as their cooking staff. menuVis is a product of the observations Silver has made and the numerous discussions he has had with chefs. He is currently a Master's student in Computer Science, working primarily in computer graphics, and continues to work in food service.

Margot is a Master's student in the Library and Information Science. She has been taking courses in HCI. She wants hands-on experience in designing for a real-world use case. She has no experience in food service or programming.

## 2.0 Data & Tasks

### 2.1 Data

We gathered data from a food prep and delivery service, a local bar-and-grill, and a local diner. The data from each business is formatted differently and at varying granularities, reflecting the difference in both management and business strategies between them. The basic data they have in common are monthly sales, recipes, and ingredient pricing.

#### 2.1.1 Domain Specific

- Sales reports

- Time-varying data at the granularity of: dishes, units (dishes) sold, sale price. Derived data: percentage of sales.
- Time granularity is variable (months, weeks, days).
- Revenue target supplied as goal.
- Usually there are four to a dozen of categories, and a dozen to less than fifty dishes for sale.
- Recipes
  - Name, volume of ingredients, price of ingredients, price of the dish.
  - Can include prep dishes (e.g., salad dressings) which themselves have recipes.
  - A recipe usually has less than a dozen of ingredients.
- Ingredients
  - Name, category, supplier, price (by amount), and ordering date.
  - Usually there are 5 to 7 categories, and less than 100 specific types of ingredients in use in a restaurant.

### 2.1.2 Abstraction

- Sales Reports
  - Time-series flat tables with categorical attribute (dishes) and quantitative attributes (units sold, sale price, percentage of sales).
  - Separate numerical value specifies revenue goal.
- Recipes
  - Flat tables with categorical attribute (name) and quantitative attributes (volume of ingredients, cost of ingredients).
  - Separate numerical value specifies sale price.
- Ingredients
  - Time-series flat tables with categorical attributes (name, category, supplier) and a quantitative attribute (price).

## 2.2 Tasks

We conducted semi-structured interviews with the owner and chefs of the three businesses to gather their requirements. Based on the interviews, we broke down their requirements into following tasks.

### 2.2.1 Domain Specific

- Costing

- Recipe costing, calculating expected cost of a recipe.
- Ingredient costing, inspecting updated costs of ingredients to find price fluctuations (supplier dependant).
- Creating Recipes
  - Creating new recipes with ingredients and ingredient amounts.
  - Comparing costs of different choices of ingredients.
  - Pricing new recipes based on expected costs of ingredients.
- Editing Recipes
  - Editing ingredients used, ingredient amounts, or price of a recipe based on new expected costs of ingredients or feedback from customers and staff.
- Performance Reporting
  - Calculating recipe statistics (cost and sales) over time.
  - Calculating current total food costs and total sales against revenue targets.
  - Calculating popularity and profitability of recipes over time.
  - Looking for low popularity or low profitability recipes.
  - Looking for inaccuracies in data between sales and inventory.

## 2.2.2 Abstraction

Not all tasks can be done through visualization. For those vis related tasks, we analyzed them in the what-why-how framework in *Table 1*.

	What?	Why?	How?
Ingredients costing over time	Time-series flat tables	Present	
		Lookup, identify	Select
Comparing costs of different choices of ingredients	Flat tables	Compare	Juxtapose
Recipe costs and sales over time	Time-series flat tables	Present	
		Lookup, identify	Select
Current total food costs and total sales against revenue targets	Flat tables	Present	
		Lookup, identify	Select
Popularity and profitability of recipes over time	Time-series flat tables	Derive	Encode
		Lookup	Select
Searching for low popularity or low profitability recipes	Time-series flat tables	Identify	Arrange
Searching for inaccuracies in data between sales and inventory	Flat tables	Identify	Encode

Table 1: Task abstractions.

### 3.0 Visualization Solution

#### 3.1 Visual Encoding and Interaction Idioms

We plan to use an ingredients view, a recipe view, and a performance view to tackle the tasks mentioned above.

To have a close look at certain ingredients, a line chart where users can filter the categories of ingredients will be used.

For recipe composing/editing, we plan to use a stacked bar chart. The users will input the dish category, ingredients, ingredient volume, a fixed price or an expected profit rate. The stacked bar chart will interactively showing how the choice of ingredients will affect the profit or the price. Different versions of the recipe will be juxtaposed for comparison.

To monitor the performance of recipes, we plan to show both yearly overview and monthly or weekly details. We haven't decided which exact vis idioms to use.

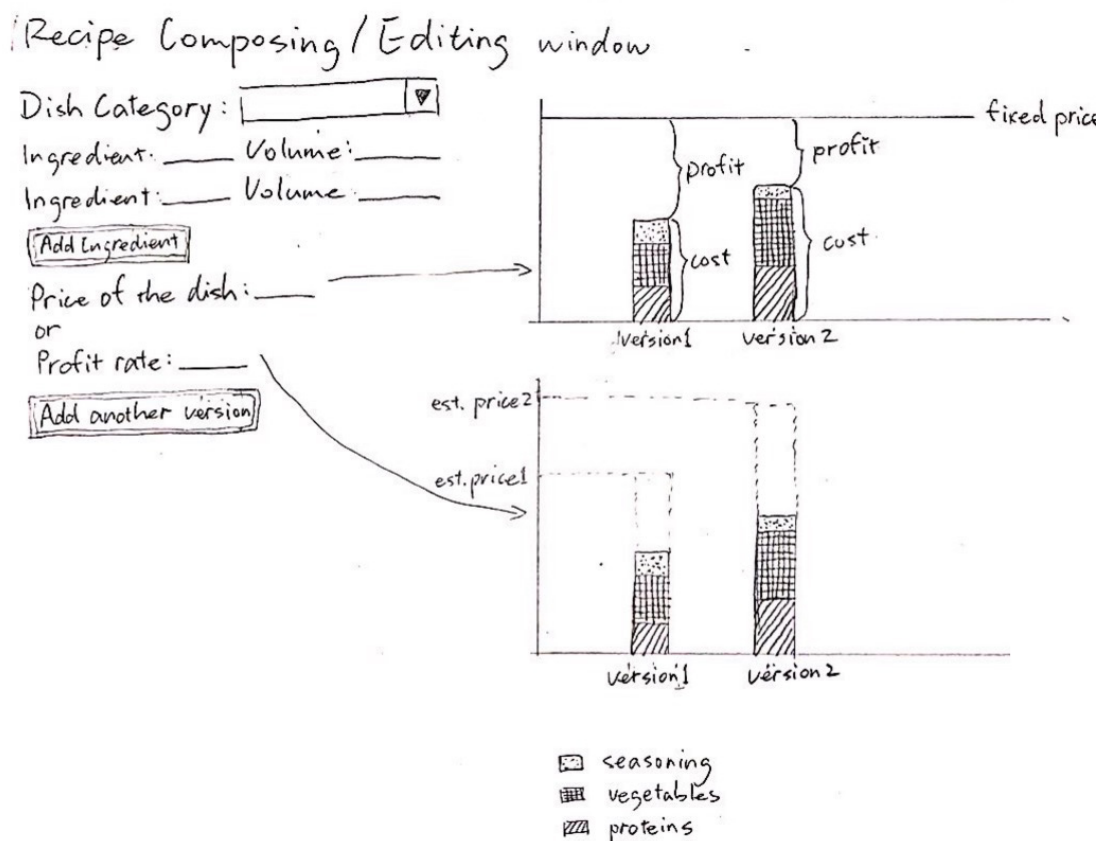


Figure 1: The recipe composing/editing window view in menuVis.

#### 3.2 Scenario of Use

Jane is a chef. She wants to create new dishes for December specials. She first goes to the Menu Composing/Editing window (Figure 1). She inputs the dish category, ingredients, ingredient volume, a fixed price

Ingredient window.

Ingredient Category:

- romaine lettuce
- green pepper
- cauliflower
- brussels sprout
- kale
- cabbage

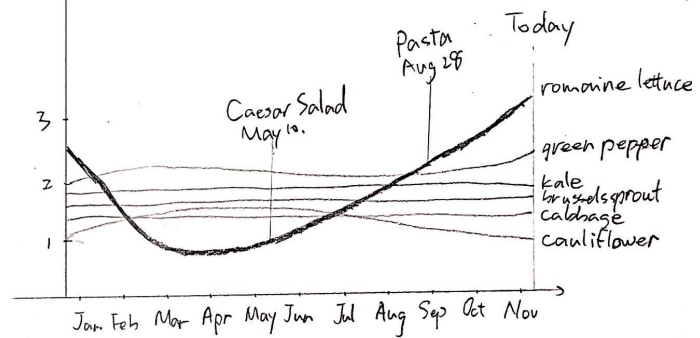


Figure 2: The ingredient window view in menuVis.

or an expected profit rate. A stacked bar chart will show the total cost of each recipe with a breakdown of each ingredient.

Jane is not sure about the choice of some ingredients. To inspect a specific ingredient and find potential alternatives, she double clicks the sub-component on the stacked bar representing the ingredient and opens the Ingredient window (Figure 2).

In the Ingredient window is a line chart showing the price of ingredients in the same group over time. For example, Jane is looking up romaine lettuce. The chart will show price of vegetables in use in Jane's inventory, with romaine lettuce highlighted. All dishes using romaine lettuce will be annotated at the point when they are created, giving Jane a sense of whether there is a change of cost in these dishes.

## 4.0 Implementation

### 4.1 Development Environment

We will be developing menuVis in C++ with OpenGL, using the GLEW and GLFW libraries for loading OpenGL functions and windowing interactions.

### 4.2 Platform

The target platform for menuVis is the desktop, given the unanimous preference for a desktop application we received from chefs during our contextual inquiry.

### 4.3 Toolkits

Qt will be our primary toolkit, as it is a cross-platform application development framework written in C++, and an open source widget toolkit for creating graphical user interfaces. Qt includes widgets for data charts, which we expect to use for our more straight forward visualizations, and 3D data visualization widgets which we do not expect to use. For more specialized 2D data visualizations we plan to use Qt's OpenGL support,

which gives developers access to an OpenGL display buffer where they can use the OpenGL API to render content.

Figma will be our secondary toolkit used specifically to prototype potential user interface designs, as well as potential interaction and visual encoding idioms.

## 5.0 Project Milestones & Schedule

### 5.1 Schedule

Discover & Refine			
Milestone	Est. Time	Deadline	Description
Contextual inquiry	1 week	11/04/19	<ul style="list-style-type: none"> <li>* Meet with 2 Guys with Knives for contextual inquiry.</li> <li>* Meet with Two Parrots for contextual inquiry.</li> <li>* Meet with The Diner* for observational study.</li> <li>* Identify domain situation and user requirements.</li> <li>* Gather enough data for meaningful initial data analysis and data abstraction.</li> <li>* Identify additional potential data.</li> </ul>
Task analysis	3 days	11/04/19	<ul style="list-style-type: none"> <li>* Derive notes from contextual inquiries and observational study into common tasks.</li> <li>* Summarize contextual inquiry and observational study notes.</li> <li>* Cross check summaries with derived common tasks.</li> <li>* Analyze common tasks into <i>what-why-how</i> framework.</li> </ul>
Data acquisition	1 week	11/05/19	<ul style="list-style-type: none"> <li>* Contact suppliers GFS, Centennial, and Sunco for example inventory pricing sheets and API's where possible.</li> <li>* Gather more time series data outlined in 2.1.1 and any identified additional data from chefs.</li> </ul>
Data analysis	1 day	11/06/19	<ul style="list-style-type: none"> <li>* Brain storm possible functionalities given additional data.</li> <li>* Review domain data and data abstractions for possible adjustments in lieu of additional data.</li> </ul>
Initial design	1 day	11/07/19	<ul style="list-style-type: none"> <li>* Ideate visual encoding idioms and interaction idioms with post-it brainstorming method.</li> <li>* Make paper prototype of final choices.</li> </ul>
Prototype and test	2 days	11/11/19	<ul style="list-style-type: none"> <li>* Translate paper prototype to Figma.</li> <li>* Prepare skeletal usability report template.</li> <li>* Prepare development report template</li> <li>* Meet with all chefs to do usability testing with prototype.</li> <li>* Make usability prototype report input to <math>\gamma</math> implementation phase.</li> </ul>

Development & Testing			
Milestone	Est. Time	Deadline	Description
Implementation $\gamma$	1 week	11/15/19	<ul style="list-style-type: none"> <li>* Translate Figma prototype visualizations into template app in the Qt framework based off prototype report, use static data.</li> <li>* Program data input read automation into database for digital inventory price sheets.</li> <li>* Program recipe creation and saving.</li> <li>* Make development <math>\gamma</math> report input to <math>\gamma</math> usability testing phase.</li> </ul>
Usability testing $\gamma$	3 days	11/18/19	<ul style="list-style-type: none"> <li>* Meet with all chefs to do usability testing with <math>\gamma</math> phase implementation.</li> <li>* Make usability <math>\gamma</math> report input to <math>\alpha</math> implementation phase.</li> </ul>
Implementation $\alpha$	1 week	11/22/19	<ul style="list-style-type: none"> <li>* Link input read data to basic visualizations.</li> <li>* Program menu creation and saving.</li> <li>* Basic implementation complete.</li> <li>* Use usability <math>\gamma</math> report to direct development goals.</li> <li>* Make development <math>\alpha</math> report input to <math>\alpha</math> usability testing phase.</li> </ul>
Usability testing $\alpha$	3 days	11/25/19	<ul style="list-style-type: none"> <li>* Meet with all chefs to do usability testing with <math>\alpha</math> phase implementation.</li> <li>* Make usability <math>\alpha</math> report input to <math>\beta</math> implementation phase.</li> </ul>
Implementation $\beta$	1 week	11/29/19	<ul style="list-style-type: none"> <li>* Use usability <math>\alpha</math> report to direct development goals.</li> <li>* Make development <math>\beta</math> report input to <math>\beta</math> usability testing phase.</li> </ul>
Usability testing $\beta$	3 days	12/02/19	<ul style="list-style-type: none"> <li>* Meet with all chefs to do final usability testing with <math>\alpha</math> phase implementation.</li> </ul>
Presentation	5 days	12/10/19	<ul style="list-style-type: none"> <li>* Collate all reports together for qualitative analysis.</li> <li>* Create menuVis presentation of findings and results.</li> </ul>
Final paper	1 week	12/13/19	<ul style="list-style-type: none"> <li>* Resolve paper thesis.</li> <li>* Plan outline of paper.</li> <li>* Finish readings for related works section.</li> <li>* Review collated usability report data.</li> <li>* First draft.</li> <li>* Second draft.</li> <li>* Review paper.</li> <li>* Final draft.</li> </ul>

Table 2: Milestone breakdown and scheduling for iterative development and testing of menuVis.

## 5.2 Work Distribution

The development of menuVis has been structured into two stages. First, the discovery and refinement stage to direct domain abstractions and initial prototyping. Second, the development stage consisting of three iterations of implementation and usability testing phase pairs. Each phase creates as input reporting data to the next phase to supply direction for refinement; either refining the implementation goals or the usability

testing questions and strategies.

In the discovery and refinement stage, both Silver and Margot will work together on milestones. In the development stage, while both will complete milestones individually communication will be essential in maintaining proper iterative work flow. Silver will handle all programming of the menuVis tool and prepare implementation phase reports for subsequent usability testing phases, while Margot will handle all usability testing of the menuVis tool and prepare usability phase reports for subsequent implementation phases.

## 6.0 Participating Businesses

### 6.1 2 Guys with Knives

2 Guys with Knives provides food prep and delivery, including juices, smoothies, meals, and snacks. The two business owners are a nutritionist and chef who decide the menu, manage the kitchen, and handle book keeping.

They change menus every week. There are both fixed items available for several months, and rotating items changing every week. The owners use a spreadsheet to keep track of weekly product performance. They don't have a costing tool, and although the cost of ingredients can be extracted from invoices there is a misalignment between their inventory pricing sheet and actual costs.

### 6.2 Two Parrots

Two Parrots is a bar-and-grill. It changes special items on the menu monthly during its busy season (Apr-Sep). The chef has access to sales reports generated by the POS (Point-of-Sale) system, but there are no details on costing.

### 6.3 The Diner\*

This is a restaurant providing food and drinks. The chef uses Optimum Control, a restaurant management software, to create and edit recipes, order ingredients, manage inventory, and inspect the health of business. The chef requested we maintain their businesses anonymity, therefore we will refer to the name of their business as *The Diner\**.

## 7.0 Initial User Research

### 7.1 Interviews and Contextual Inquiries

We conducted semi-structured interviews and contextual inquiries with the owner or chefs of the three participating businesses. The general notes from our interviews as well as question responses are listed in *Table 3 - Table 10* on the following pages.



Interview & Contextual Inquiry Notes	
2 Guys with Knives	<ul style="list-style-type: none"> <li>* A lot of costing software is developed for windows, they use all mac environments.</li> <li>* Ingredients costing fluctuates every week.</li> <li>* Have a performance report showing percentage of sales of each item. Costing is not linked to the report.</li> <li>* For performance report, employee creates highlights.</li> <li>* Only costs things if launching products or proposing a new product for wholesale.</li> <li>* Social media affects product performance a lot.</li> </ul>
Two Parrots	<ul style="list-style-type: none"> <li>* Suppliers may mention big changes of ingredients price. Small changes need to be detected by hand.</li> <li>* Annotates ordering sheet with how much needed and if needed. Ordering sheet has most ordered but can be annotated with other inventory items.</li> <li>* Inventory monitoring wouldn't work because of servers and requirement of physically seeing items.</li> <li>* Had to change recipes when some ingredients were too expensive.</li> <li>* Weekend specials moved to monthly specials (because of ingredient costs).</li> <li>* Specials can become static on menus depending on customer feedback.</li> <li>* Pub environments must balance alcohol and food sales (depends on primary liquor license - drinks with food only). Create monthly special new dishes during busy season (April-September).</li> <li>* Has waste sheet for thrown out dishes.</li> <li>* Non-standard measurements for some ingredients (eg. cheese).</li> </ul>

Table 3: Notes taken from interviews and contextual inquiries with participating businesses.

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Interview & Contextual Inquiry Notes

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The Diner*	<ul style="list-style-type: none"><li>* Likes to manually check inventory (tech issues from past using iPad).</li><li>* Sysco is primary by large margin.</li><li>* Restaurants are typically not profitable.</li><li>* Labour is one of the biggest costs, industry is hard for turnovers and make sure not breaking bank.</li><li>* Therefor keep food and liquor costs low to leverage against labour costs.</li><li>* Uses same ingredients over dishes to reduce cost burden.</li><li>* Inventory counts both prep and ingredients, actual raw ingredients are calculated from this and correlated with sales.</li><li>* Gather information of four levels on Optimum Control: sales, products, prep, items.</li><li>* Floods affect costs the most for produce.</li></ul>
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Table 4: Cont. notes taken from interviews and contextual inquiries with participating businesses.

2 Guys with Knives	
How do you build a new dish?	<ul style="list-style-type: none"> <li>* Base structure of every dish: lean protein component, low glycemic component, vegetable component;</li> <li>* Decide flavour: what works with base ingredients, what's trending, what's requested by customers;</li> <li>* Ingredients costing.</li> </ul>
How do you evaluate your recipes?	<ul style="list-style-type: none"> <li>* Performance</li> <li>* Customer feedback</li> <li>* Costing</li> </ul>
Range of products - how many dishes producing per week, how many ingredients expected to use per week?	<ul style="list-style-type: none"> <li>* 5 regular sized entrees, 5 macros, 3 salads, 3 breakfasts, 3 desserts, 5 high protein snack items.</li> <li>* Huge amount of ingredients used per week (including spices).</li> </ul>
How would you bin your ingredients by type (meat, dairy, seasonings, etc.)?	<ul style="list-style-type: none"> <li>* Dairy, poultry/seafood/meat, frozen, canned and dry, produce.</li> </ul>
What format of pricing information (inventory pricing) do you receive from your main suppliers? Can you request from them these files?	<ul style="list-style-type: none"> <li>* Place orders by online portal.</li> </ul>
What ingredients fluctuate the most in price? How often do they change noticeably? How much do you use these ingredients?	<ul style="list-style-type: none"> <li>* Most fluctuating: cauliflower, lettuce (romaine), sweet potatoes, brussels sprouts, salmon.</li> <li>* Most stable: zucchini, yams, green beans, broccoli (uses a lot), bell peppers (red bell pepper) (buys a crazy quantity), proteins.</li> <li>* Stable with a contract price: chicken.</li> </ul>
Which data or indicator do you care most about?	<ul style="list-style-type: none"> <li>* Feedback and requests from customers;</li> <li>* Rotating menu has 5 entrees each week that change, looks at top performers (for example, putting seafood on menu will underperform; people may customize chicken to fish if wanted);</li> <li>* Product performance report;</li> <li>* Costing;</li> <li>* Seasonal changes of customers' preference;</li> <li>* Trending fitness nutrition;</li> <li>* Types of majority clients at time.</li> </ul>

Table 5: Interview responses from 2 Guys with Knives.

2 Guys with Knives	
Would you prefer a web based tool or a desktop tool?	* Desktop.
What type of logging work do you do every week?	* Ingredients suppliers invoices. Ideally it should be linked to recipes. * Menu items don't have real time costing. Only do costing when launch new products.
Is there anything you'd like us to be aware of when designing this tool with regard to your work needs?	* Want to know comparison between costing of new recipe in design and existing recipes; * Want the tool to help to choose ingredients by cost.

Table 6: Cont. interview responses from 2 Guys with Knives.

Two Parrots	
Range of products - how many dishes producing per week, how many ingredients expected to use per week?	<ul style="list-style-type: none"> <li>* No exact figures;</li> <li>* Receive sales report from another chef. Order ingredients on Mon and Wed.</li> </ul>
How would you bin your ingredients by type (meat, dairy, seasonings, etc.)?	<ul style="list-style-type: none"> <li>* Meat, dairy, produce (fresh veg), seasonings, dry, canned, breads, frozen.</li> </ul>
What type of logging work do you do every week?	<ul style="list-style-type: none"> <li>* Logs amounts of dairy and cheeses, also dependent on games and long weekends.</li> <li>* Logs inventory (most used).</li> </ul>
What format of pricing information (inventory pricing) do you receive from your main suppliers? Can you request from them these files?	<ul style="list-style-type: none"> <li>* Make annotations on a sheet and call to order.</li> <li>* Price may change daily or weekly.</li> <li>* Physically receives invoice. Can also get pricing in a PDF.</li> <li>* Sysco sends inventory files.</li> </ul>
What ingredients fluctuate the most in price? How often do they change noticeably? How much do you use these ingredients?	<ul style="list-style-type: none"> <li>* Most fluctuating: lettuce, salmon, tomato, limes, avocado, lemons, celery, red peppers (but not green peppers).</li> <li>* Most stable ingredients: kale, cabbage, burger patties, chicken, fries, eggs, all canned products.</li> <li>* Big price fluctuations happen twice a year.</li> </ul>
Which data or indicator do you care most about?	<ul style="list-style-type: none"> <li>* Mostly price of ingredients and labour costs.</li> </ul>
How do you evaluate your recipes?	<ul style="list-style-type: none"> <li>* Directly from customer feedback (a lot of regulars).</li> <li>* Also look into sales data but not regularly.</li> </ul>
Would you prefer a web based tool or a desktop tool?	<ul style="list-style-type: none"> <li>* Desktop.</li> </ul>
Is there anything you'd like us to be aware of when designing this tool with regard to your work needs?	<ul style="list-style-type: none"> <li>* Needs to see prototype.</li> <li>* Want a waste sheet (discounts, throw outs, server mistakes, kitchen mistakes, customer returns).</li> <li>* Inventory monitoring (will need daily sales).</li> </ul>

Table 7: Interview responses from Two Parrots.

The Diner\*

How do you read the Optimum Control reports?	<ul style="list-style-type: none"> <li>* Use it monthly. Occasionally weekly.</li> <li>* Reports include sales, usage summary, menu engineering report, etc.</li> <li>* Depending on what report looking at, there are different bins of time periods.</li> <li>* Looks at reports every time doing inventory, will pull sales data, menu generation worksheet.</li> <li>* Sales report also includes missing items.</li> <li>* Menu engineering report is the most important report. It shows ingredients cost, and the percentage of total cost.</li> <li>* Star, Dog, Workhorse, Challenge categories for profitability and popularity.</li> <li>* Usage summary reports issues where sales and usage don't match up.</li> <li>* Waste has not been imported, some number of bugs however good program (cheapest out there but very expensive).</li> <li>* Approximate value is for variance, ending value is for what is reported.</li> <li>* Calculate how much items out based on the values of the report (wants daily granularity).</li> <li>* For invoice entry, Sysco imports invoice (invalid items are new items that need to be added manually, mismatched totals need tax adjustments).</li> <li>* Prep functionality does costing for items based on recipe.</li> <li>* Ideally use current cost not invoice to cost recipes, leverage invoice against current prices to find price fluctuations.</li> </ul>
What do you not like or use in OC? How would you change it?	<ul style="list-style-type: none"> <li>* Have to pay for too many unused features (e.g., buffets tool).</li> <li>* When notice mistakes, can't fix at one place and sync the change.</li> <li>* Price cost issues are not automatically notified for.</li> <li>* Like the breakdown of data. Don't like it's very deep and hard to get there.</li> <li>* Like breakdown data, don't like hard to get there.</li> <li>* Want more interaction, rather than going through multiple tabs.</li> </ul>

Table 8: Interview responses from The Diner\*.

The Diner*	
What do you like or use most often in OC? What do you like about it?	<ul style="list-style-type: none"> <li>* User friendly but beta tested most recent version, more comfortable with it (about 20yrs experience).</li> <li>* Shows what ingredients are used for each recipe (e.g., bacon is used in x, y, z).</li> <li>* Likes control over data but not laborious method to view it.</li> <li>* Likes inventory counting and ordering sheets that are customizable in terms of layout (matches these to kitchen layout).</li> <li>* It's cheap comparing with other similar services.</li> </ul>
Range of products - how many dishes producing per week, how many ingredients expected to use per week.	<ul style="list-style-type: none"> <li>* Moderate amount of ingredients used.</li> <li>* Repeatedly uses same ingredients in different dishes.</li> </ul>
How would you bin your ingredients by type (meat, dairy, seasonings, etc.)?	<ul style="list-style-type: none"> <li>* Dairy, dry goods (incl. cans), protein, food (prep stuff), frozen, produce.</li> </ul>
What format of pricing information (inventory pricing) do you receive from your main suppliers? Can you request from them these files?	<ul style="list-style-type: none"> <li>* Optimum Control sales reports (need to update and pull from Sysco).</li> <li>* Can't download pricing information from Sysco source.</li> <li>* Easier access by invoices.</li> </ul>
What ingredients fluctuate the most in price? How often do they change noticeably? How much do you use these ingredients?	<ul style="list-style-type: none"> <li>* Fresh produce fluctuate the most in price (romaine lettuce, celery, etc. Depends on where they harvest from).</li> <li>* Protein is most stable.</li> <li>* Dairy is fairly stable.</li> <li>* Noticeable changes happen around spring and start of winter.</li> </ul>
How do you build a new dish?	<ul style="list-style-type: none"> <li>* Have a concept first, then consider cost effectiveness.</li> <li>* Balancing what makes customers happy and what is profitable.</li> <li>* Can have one or two dishes that can be more expensive if you balance with lower cost dishes.</li> <li>* Demoing dishes to see what people like.</li> </ul>
Which data or indicator do you care most about?	<ul style="list-style-type: none"> <li>* Costs.</li> </ul>
How do you evaluate your recipes?	<ul style="list-style-type: none"> <li>* Costs. Yearly performance.</li> </ul>

Table 9: Cont. interview responses from The Diner\*.

The Diner*	
How do you evaluate your menu?	<ul style="list-style-type: none"> <li>* Categories from OC tells what to remove and what to adjust.</li> <li>* Monthly data may not reflect yearly (e.g., turkey stack does well overall for the year as star category, but over summer does not).</li> <li>* Revenue targets would be right after recipe costs. Check if dishes pull in enough revenue to maintain.</li> <li>* Ideally 25% food costs and 30% liquor costs in sales.</li> </ul>
Would you prefer a web based tool or a desktop tool?	<ul style="list-style-type: none"> <li>* Desktop.</li> </ul>
Is there anything you'd like us to be aware of when designing this tool with regard to your work needs?	<ul style="list-style-type: none"> <li>* Touched bases on everything that Chef wants through questioning.</li> </ul>

Table 10: Cont. interview responses from The Diner\*.