Beta edition

Running Lean Kitchens

Using Lean to Unlock Efficient/ Predictable/ Profitable Catering, Banquet, and Restaurant Operations

Vijay Goel, MD

Founder, Chefalytics

Co-owner Bite Catering Couture

chefalytics

Better Data ▸ Better Decisions ▸ Business Results

Test Running Lean Kitchens

Using Lean to Unlock Efficient/ Predictable / Profitable Catering, Banquet, and Restaurant Operations

Vijay Goel, MD

Contents

Preface

This book is an experiment in taking the amazing work done in lean operations and applying it to the amazingly complex operational environment that is the commercial kitchen.

The publication via Softcover offers a tremendous opportunity to put thoughts "to paper" in an online format and receive instantaneous feedback. I thank you in advance for your reactions and contributions and I apologize to early readers for the errors and lack of clarity that you will undoubtedly be subjected to. Please feel free to send stories, issues, and suggestions to leankitchens AT chefalytics DOT com

I hope that after a series of iterations this becomes a useful resource to anyone looking to improve their business, career, and customer results by applying principles I have been very lucky to learn by the happenstance of wondering why such crazy things happened in hospitals. I thank the many very patient people who have mentored me in the journey since!

About the author

Vijay Goel, MD, is author of Running Lean Kitchens and founder of Chefalytics, a lean operations platform built to improve the operations and profitability of catering companies, restaurants, and banquets. Chefalytics sprung from efforts to improve operations at a top Los Angeles caterer, founded by his wife (and pastry chef), Elizabeth.

Vijay previously was an independent consultant leading lean and innovation projects at clients including Amgen, United Rentals, Farmers Insurance, and Iron Mountain.

Before that, Vijay was an executive at X PRIZE Foundation and ran projects for the Fortune 500 as an Engagement Manager at McKinsey & Co.
He earned his B.S. at UCLA, his M.D. at USC-Keck and his startup stripes at the school of hard knocks with his initial company, HealthShoppr. He lives with wife Elizabeth in sunny Manhattan Beach, CA.

Copyright

Chapter 1

Overview

1.1 Introduction - Why We Moved to a Lean Kitchen

> *If you dont know where you are going, you will probably end up somewhere else.*
>
> -Lawrence J. Peter

How in the f*$% did our $50 meze platter cost out to >$40?

I felt sick and I was sick of it. It was the fall and we were embarking on some basic costing and recipe standardization work. We had recently run our financials and kitchen margins were nowhere near target, which meant that all the work that had gone into growing sales had added a lot of new customers and revenue... none of which had translated to the bottom line.

I hated that there was nothing to show for all that hard work. I was frustrated that there was no way for us to tell if we were up or down tens of thousands of dollars until 6-8 weeks after the fact. I was afraid of what the miss did to our cash flow and what that meant for my next few months to close the gap.

I was embarassed. As a former consultant at McKinsey, one of the premier firms in the world, this kind of stuff wasn't supposed to happen under my roof (my wife and I owned the catering company). I had fixed much worse than this for others... so what made this so different when it was our company?

I was perplexed at the state of the kitchen. Our kitchen team was overworked and pulling lots of overtime and our marketing and sales team were upset at lost opportunities with the kitchen "out of capacity". People were tired and mistakes were being made that turned the day to day kitchen from the calm but purposeful place it should be into a daily fire drill. This certainly wasn't sustainable and it was terrifying to think that the holiday rush was just around the corner.

Changes had to be made, or the chaos and bad energy currently in the kitchen could escape our walls and impact our customers, a non-option for staying alive in the insanely competitive Los Angeles food scene.

We needed to get to the bottom of the margin gap, so we pushed pretty hard on some core recipes for our most popular products. What we found wasn't pretty.

Errors in ordering drove ad hoc shopping trips. Errors in math on ingredient quantities per portion drove high built-in ingredient costs. Errors in communicating order volumes drove our team to prep the same recipes over and over and use a ton of packaging. In the meze platter example, this included having up to 5 packages within the tray (each > $1), sourcing expensive olives, and putting labor into multiple steps in a tapenade that was supposed to be a simple condiment.

As we regained control over our kitchen, we found that most of the "fires" originated with a lot of guesstimates that turned out to be wildly incorrect – guestimated ordering, guestimated recipe quantities, guestimated scheduling... the list goes on and on, with each underage driving a fire drill and each overage wasting money. No wonder everyone was working too hard and margins were bad!

The one tangible place to start was the customer orders... so we started there (in lean this brings you toward a "pull model"). We used the orders to lay out the catering schedule. We used that schedule (and inventory) to create a production plan and ordering list. We added more detail to recipes to make the planning and ordering and scheduling more accurate. (A trip to a Mexican restaurant and an open conversation over Margaritas didn't hurt.) Morale, capacity, and profits quickly headed in a positive direction and we had our best December to date!

This was the start of our kitchen truly heading down the journey of "lean operations". While I had learned of lean as a consultant at McKinsey & Co and used these same tools in consulting projects with the Fortune 500, anytime my wife had brought in a kitchen manager/ managing chef it tended to get dropped as things got busier…the action oriented chef couldn't afford to spend time planning.

As our wildly fluctuating profit numbers can attest, this is hogwash…failure to prepare is preparing to fail.[1] The only way a kitchen can scale profitably AND deliver great product to its customers AND keep a liveable schedule for its team is to plan effectively.

The following pages lay out a lean operations system as we (including the team at Bite) best understand it today (and it will change with your feedback and a better understanding in future versions so please subscribe!). I'll mix theory with practical application and give you a starting point for understanding how a lean operation can work successfully in YOUR kitchen and business.

I hope you find the material useful and I look forward to your comments. Please feel free to share your thoughts by emailing to leankitchens AT chefalytics DOT com

1.2 Who Should Read and Why

This book is primarily aimed at individuals and teams who want to improve the operational performance of their kitchen but already have in place the basic recipes, equipment, and health department compliance procedures to have a kitchen that can operate legally and safely. Much of this material will be too advanced if those basics haven't already been put in place, although it may guide how you initially set them up.

[1] Proverb attributed to John Wooden, the winningest men's college basketball coach with 10 NCAA National Championships, including 7 in a row and an 88 game winning streak.

1.2.1 Owners, General Managers, and Investors

We'll tie together an overview of running a lean kitchen and how it works across your sales and kitchen teams to bring together to improve overall performance, including:

- Improving overall revenue through expanded capacity
- Improving profits through increased productivity and reduced waste
- Improving customer satisfaction (and repeat business) through better product standardization, reduction in errors, and better delivering on their specific requests

1.2.2 Catering Sales and Front of House Executives

We'll help walk you through the black box of what happens in the kitchen and improve the precision of communication between the kitchen and sales. We'll help you deliver on:

- Ensuring service occurs flawlessly
- Ensuring customer requests are communicated clearly and executed
- Increasing sales productivity through increased capacity
- Identifying opportunities to reduce costs, enabling an increase in margins or reductions in price

1.2.3 Executive Chefs

We'll introduce a more structured production planning flow and recipe template that will help you to better link the activities and orders in your kitchen with the specific recipes being ordered, enabling you to:

- Better track and control weekly production costs

- Understand which recipes have the most potential to drive improvements
- Improve overall kitchen productivity
- Highlight where sales demands (tastings, discounts, large number of small orders) may be impacting kitchen profitability numbers

1.2.4 Kitchen Managers and Sous Chefs

We'll walk through some detailed production planning, staffing, ordering, and recipe costing to help you escape the daily fire drills and drive:

- Faster production planning and ordering - letting you spend your time more wisely
- Higher productivity in kitchen prep
- More predictable schedules for core team members
- Reduced errors and omissions on orders going out
- Reduced ingredient waste

1.2.5 Personal Chefs

While you may not be able to assign tasks to different people, you have immense control over your approach to selling menus and preparing events. This material is likely to enable you to:

- Improve your productivity in ordering
- Work on reducing unnecessary steps and non value-add time
- Reduce errors by thinking through customer requirements

Chapter 2

What a Lean Kitchen Looks Like

The chaotic kitchen of Anthony Bourdean's Kitchen Confidential, the screaming chef embodied by Gordon Ramsey's Kitchen Nightmares, and the last minute scramble of cooking competitions or Robert Irvine's challenges all have something in common... you don't actually want your kitchen to run this way!

A daily fight for survival is the opposite of the lean kitchen, where work is standard and predictable, pace is sustainable, and time for immaculate planning has already been allocated. The net result isn't boring... it's a foundation that enables normal humans together to achieve superhuman things.

2.1 What you can expect to see in a lean kitchen

As you determine whether a lean kitchen is the right goal for you and your team, let me describe to you what a lean kitchen looks like:

2.1.1 Everyone is operating off a plan... and the kitchen is focused

Weekly, with daily updates, your team will generate a plan based on the orders placed and/ or projected for the week. This plan will cascade down to give each

member of your team a plan to start every day.

An experienced team can start with a huddle and then get to work on their assignments.

The yelling and interruptions of a normal kitchen are not here... it's much more quiet. With a simple glance, a sous chef can see where each prep chef is and if they're on schedule.

2.1.2 There is minimal running around

For the most part, people are hard at work at their assigned stations. What they need is either at hand during a setup step or is generally within reach at their station.

Movement is primarily between steps or to setup a recipe.

2.1.3 The recipes are used everyday

In many kitchens, recipes are stuck somewhere in a binder where they languish, horribly out of date.

The lean kitchen is continuously refining recipes – adjusting quantities due to errors discovered downstream, tweaking setups to reduce time, modifying packouts to improve quality experienced by the customer, and finding ways to reduce the time requirements on the day of the event.

The focus is on getting more efficient, producing a product of higher quality, or reducing finishing steps... all so we can provide the best product that a client wants to pay for at a speed that quickly produces food for hundreds of hungry guests!

2.1.4 The work is standard

For some of your team members, this work is fairly consistent based on Standard Operating Procedures (SOP) - for example the hood maintenance, end of day cleaning, restrooms, etc).

For others, the recipes provide a standard but the actual work will vary tremendously based on the actual menus being produced in any given day.

In either case, the standard work enables each team member to know exactly what they are supposed to do, when, and how long it should take.

2.2 How you might transition to a lean kitchen

2.2.1 Wave 1: Simple Production Planning

We started by just ensuring that every week we knew what food we would be producing before the week started and that it was updated 2 weeks out to prevent surprises. This by itself enabled us to book key team members ahead of time, making their schedules clearer and enabled us to have enough time to source/ schedule/ batch base ingredients ahead of heavy weeks.

This simple step was enough to get us through the holidays while keeping our team from burning out and getting overtime back under control.

2.2.2 Wave 2: Costed/ Timed Production Planning

The second step is to begin to accurately forecast how long the food is going to take to prep and how much it will cost to buy the ingredients to make it... and bake this into your recipes.

We used this to create an individual prep list for each chef on each day, with timing and sequencing. We did use a couple of tricks to make the timing accurate at different production volumes... we'll cover that later in the book.

A few things happened at this stage:

1. **Timing to make things becomes clear.** This makes staff scheduling easier... we could tell which people weren't hitting the mark and which recipes were causing problems. This allowed for coaching to close the gap, further review of the recipe in question, and the ability to engage our team on opportunities to make things faster.

2. **Unplanned overtime started to come way down.** Now that we had accurate timing on recipe production, and the ability to spot which people couldn't, after coaching, work at the appropriate pace, we started to see

unplanned overtime go down – both because people were running at the right pace and the ones who weren't were not hiding behind the strong workers.

3. **The schedule started to spread out.** Because we now had times laid out, we could start to work on the recipe "components" and separate them from the event-specific recipes (e.g., our mini burger buns don't need to be made in conjunction with the burgers themselves). We could spread out production and also fill in the schedule with recipe costing, recipe innovation, and other things that are part of our chefs' performance evaluations.

2.2.3 Wave 3: Order Ingredients as you Need Them

Our refrigerators and freezers tended to fill up... and we often ordered new the stuff that was already jammed in there because if it got put in the wrong place, we didn't know it was there.

As we switched to a "pull" model, based on orders coming in as we are ready to do the prep work or the event, the freezers and refirdgerators started to empty. The "par" model would leave a number of bins always ful. The "pull" model leaves us with much less space tied up in inventory and more capacity to store product tied to events going out that week.

2.2.4 Wave 4: Innovation around Opportunities and Issues

We're just beginning our Lean journey, and we can see how much there is to do.

Our current focus is in cleaning up and costing a number of the recipes that don't incorporate all the equipment and all the techniques we know we can use to improve the product, enable us to deliver it faster to the customer, and take out the steps and work required.

2.3 Key Concepts

We'll review all of these concepts in more detail in future chapters. However, these basic concepts underpinning lean are important to start thinking about up front.

2.3.1 Value defined by the customer

In many organizations, determining what creates value is unclear. Lean methods start with the assumption that value definitions start with the customer. The objective is then to identify and remove "waste" external to the value-added steps that provide value to the customer.[ˆ]

2.3.2 Continuous improvement

There is never a "perfect" state in any organization. Changes in customer demands, product mix, supplier mix, scale, competitive positioning and more can change the desired end state.

A continuous improvement model means that errors are always a treasure to be examined, and every process is always open to questioning and evolution and that better is always possible.

The continuous improvement model requires that there is a mechanism to communicate the changes that impact any particular job and that there is a reference that makes it easy to understand what one is to do (vs relying on how they've done it before).

2.3.3 Metrics/ Key Performance Indicators

We manage only that which we measure. The more a kitchen runs off of metrics that make a difference and "frame" the different tradeoffs being made,the better one will be able to see if performance is in the right range. As an example, cost is generally balanced against quality. If measurement is one-sided or doesn't appropriately depict the right range of activities, you end up "saving" money on food cost by spending twice as much on labor in the fix.

2.3.4 Go see the work/ Observation

What does it look like when your people do the work? You may have some idea on paper or at a high level... but have you seen it in action?

We saw that our recipe costing was going fairly slowly... we could very easily have had a performance review or had a fit or a number of typical "behind the desk" management reactions. A quick initial observation highlighted that our team had not yet discovered Ctrl-F in excel... a 30 second observation multiplied our recipe costing/ week by a factor of more than 3.

2.3.5 Waste reduction

The 8 wastes we'll focus on can be remembered with an acronym DOWN-TIME:

- Defects
- Overproduction
- Waiting
- Non-utilized employees
- Transportation
- Inventory
- Motion
- Extra-processing

2.3.6 Visual control

How can you tell in an instance if things are in the right place? Visual controls help you do this – isn't it amazing that a few lines of paint in the middle of a road will get millions of people driving in the right area of this patch of

concrete. A quick look at a road in India will tell you the impact of a visual control on helping people figure out what they are supposed to do.

In catering, simple things like yellow lines in danger areas, labels, signs, color coded ties on event staff are all examples of visual controls that can improve your ability to spot issues intuitively at events.

2.3.7 Visual management

Visual management is a public display of a board showing how you're doing. In many sales rooms, a simple visual management tool lists the sales by salesperson (sometimes in descending order and sometimes vs quota).

Lean operations makes heavy use of putting tracking metrics for a new operation onto a visual management board. For example, tracking the number of unplanned overtime hours per week against an initiative to reduce unplanned overtime... with initiatives to solve and their status and responsible individual.

2.3.8 Load balancing

Spreading loads evenly and consistently enables a stable system and work force. In catering this is often difficult due to the episodic nature of the events handled. Restaurants tend to be more even day to day but need to find ways to balance loads across peak time rushes. Finding ways to spread the work out so that workers can maintain a consistent pace is a focus in later chapters.

2.3.9 Standard work

Sometimes seen as recipes or "Standard Operating Procedures", Standard Work takes a team to write down the steps of

2.3.10 Pull system

A pull system starts with the customer order and works it's way back through the rest of the organization... a customer pulls the product or service all the

way through each of the places where value is added. In practice, it means that while there may be a buffer of material to cover a specific cycle time, inventory is brought in only to replace that which made its way into a sold product.

In practice, it's the opposite of the par system which tops up material based on its absence vs. its replacing it after it's been consumed in a value-added step.

2.3.11 Just-in-time

Chapter 3

Basics of Kitchen Operations

Kitchens come in many shapes and sizes and evolve into their current format for many reasons, from historical accident to mechanics particular to an existing set-up to the training and experience of the lead chef or kitchen manager. Setting up a basic kitchen operation is beyond the scope of this book. However, it is helpful to briefly review how different formats drive specific choices in the basic operational requirements of a kitchen and the elements and incentives it should optimize.

3.1 Basic Elements of Kitchen Operations

3.1.1 Prep Production

Prep production is the unsung hero in the success of restaurants and catering companies. A well-designed prep plan ensures that the team succeeds in front of customers due to: * Sufficient quantities of prepared ingredients on hand to fulfill customer orders * High quality of ingredient at the right temperature, consistency, thickness, saturation, shape, resiliency, etc

It also helps the business to be more successful by:

- Reducing the number of staff required to be present at one time to execute service or events (which allows for use of smaller kitchen facilities, reduces overtime, etc)

- Reducing the number of steps that need to be performed during service
- Enables menus including food that require time to cook, marinate, etc
- Consolidating work that needs to happen across multiple recipes (e.g., common ingredients)

3.1.2 Finishing

Finishing is when the pressure is on! Customers may be standing right in front of you or their ticket may be on your board. The team's ability to finish multiple orders, group them together where necessary for parties, and deliver them with the right presentation and at the right temperature is often the difference between a rabid fan and a disappointed former patron.

Finishing quality adds the distinctive tastes, textures, and presentation that often helps clients to distinguish your food, and can literally be your "secret sauce".

However, finishing speed and equipment is often forgotten as a potential bottleneck for capacity as you scale or during peak service hours, and will be addressed in later sections.

3.1.3 Packaging

Packaging is often given little thought, but a well-designed packaging step can have a large impact on:

- **Ingredient waste**: Things like locking in moisture for herbs/ vegetables, locking out moisture for breads and crackers, and reducing handling damage can dramatically improve the shelf life and yield of perishable goods. At another level, techniques like canning and cryovac can change the way ingredients are ordered
- **Perceived product quality**: Packaging's first function is to deliver the contents inside in appropriate condition. Anyone who has ordered takeout and opened a steaming package of soggy fries at home has seen a