



# MTP2 SUMMER INTERNSHIP 2024

ALEX SCHWARTZ  
BUSINESS: WHOLE AND NOURISHED  
ADVISOR: ALISTAIR STEWART



# SELF-INTRO



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R&D with a focus of optimization and efficiency





## WHOLE AND NOURISHED

“WE PREP YOUR MEALS FROM SCRATCH, SO YOU DON’T HAVE TO. GET DELICIOUS AND HEALTHY, FULLY-PREPARED MEALS DELIVERED TO YOUR DOOR.”

Industry: Food Service (food prep, and delivery)

Owner: Heather

Expressed Challenges: High employment turnover rates



# W&N SUSTAINABILITY

Glass Packaging: Reused glass packaging with reusable cooler

Compostable Packaging: All other packaging is compostable

Compost: All food scraps are composted or used as livestock feed



# FOOD SERVICE AND PREP IMPACTS

## Impacts

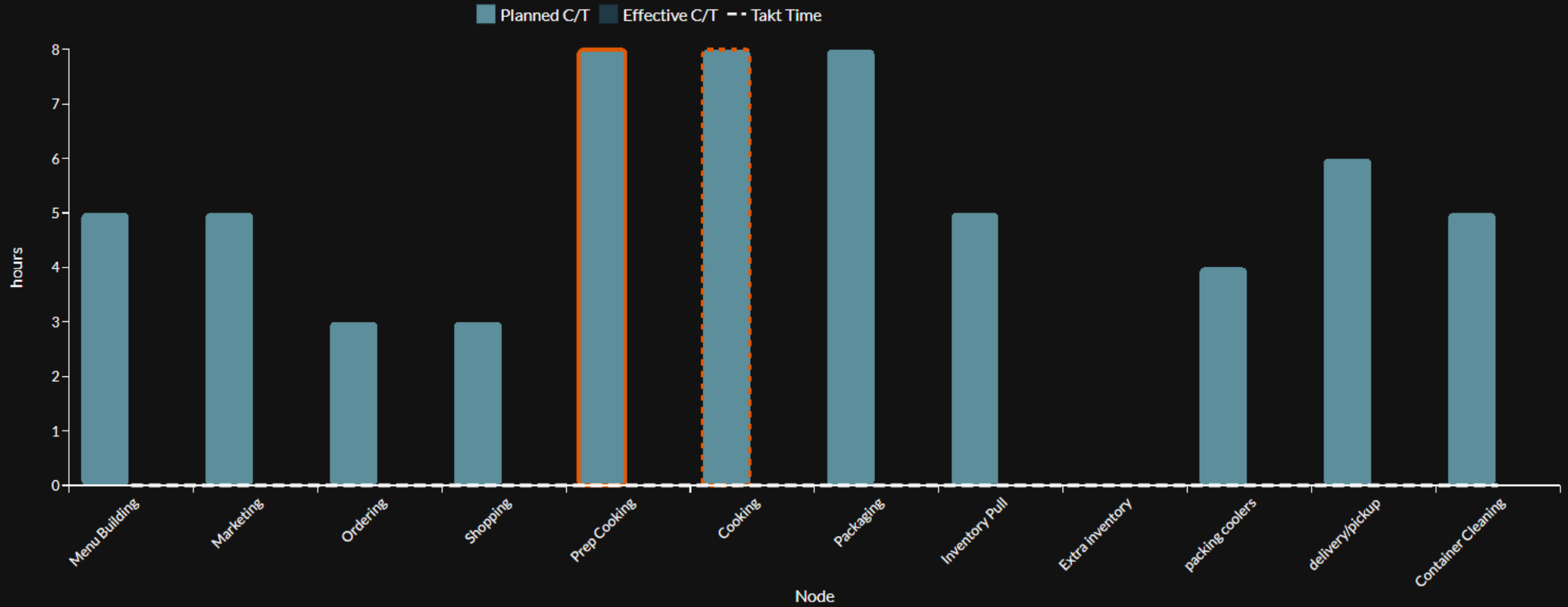
- **Industry:**
  - Food Prep/Delivery
- **Environmental Impacts:**
  - Vehicle emissions and usage
  - Food waste
  - Mild water usage
  - Energy consumption for various machines
- **Economic Impacts**
  - Local farms and businesses
  - Community building
  - Sustainable sourcing



# VSM



# VSM CONTINUED



# AREAS OF FOCUS

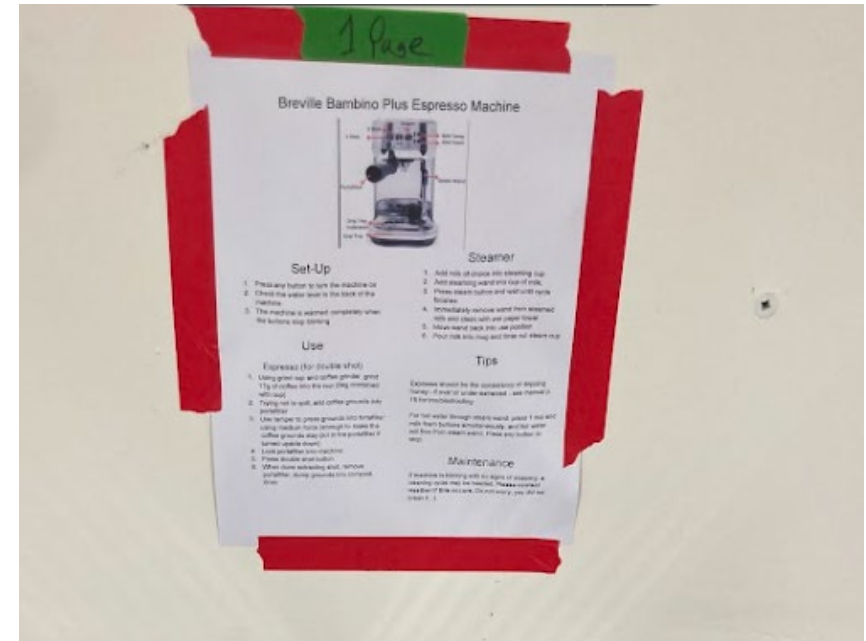
1. Creation of standards and methods
  - a. One pagers
2. Standardization of training
  - a. Master document
3. Organization
  - a. Shadow board
  - b. 5S Audits
4. Education
  - a. Lean Lessons



## Operations Manual

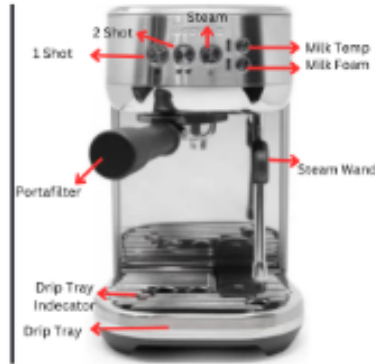
**Main focus: WORK EFFECIENCY AND ORGANIZATION**

Energy consumption and water waste solutions were minimal





# Breville Bambino Plus Espresso Machine



## Set-Up

1. Press any button to turn the machine on
2. Check the water level in the back of the machine
3. The machine is warmed completely when the buttons stop blinking

## Use

### Espresso (for double shot)

1. Using grind cup and coffee grinder, grind 17g of coffee into the cup (54g combined with cup)
2. Trying not to spill, add coffee grounds into portafilter
3. Use tamper to press grounds into portafilter using medium force (enough to make the coffee grounds stay put in the portafilter if turned upside down)
4. Lock portafilter into machine
5. Press double shot button
6. When done extracting shot, remove portafilter, dump grounds into compost, rinse

## Steamer

1. Add milk of choice into steaming cup
2. Add steaming wand into cup of milk.
3. Press steam button and wait until cycle finishes
4. Immediately remove wand from steamed milk and clean with wet paper towel
5. Move wand back into use position
6. Pour milk into mug and rinse out steam cup

## Tips

Espresso should be the consistency of dripping honey - if over or under-extracted - see manual p. 15 for troubleshooting

For hot water through steam wand: press 1 cup and milk foam buttons simultaneously, and hot water will flow from steam wand. Press any button to stop.

## Maintenance

If machine is blinking with no signs of stopping, a cleaning cycle may be needed. Please contact **Heather** if this occurs. Do not worry, you did not break it. :)

# ONE PAGERS

- Increase machine use accuracy, dependability, and efficiency
- Save training time (~5 hours total per person)
- Decreases work variability leading to increase in product consistency
- More consistency = less waste!



## **EMPLOYEE HANDBOOK**

### STANDARD MANUAL

- Save training time (~10 hours total per person)
- Decreases work variability leading to increase in product consistency
- Less time training = less time using equipment and energy

5S ScoreCard		Area:	Prior Score:	1=No Evidence 2=Little Evidence 3= Main processes meet requirements 4=Main and a few auxiliary processes meet requirements 5=All processes meet requirements					
Date:		Auditor:	Score:						
		NO.	Evaluation Criteria	1	2	3	4	5	Observations/Evidence
Sorting Total= ___ / 5 = ___ *Keep only what is needed*	1	"Junk" drawers and catch-alls have been eliminated.							
	2	Obsolete documentation is purged from area. All information posted on the bulletin boards/walls is current.							
	3	All tools and supplies are in regular use.							
	4	All excessive inventory has been eliminated.							
	5	Evidence of regular sorting exists. If a Red Tag area exists, it is clearly marked and has schedule for disposition posted.							
Simplify Total= ___ / 5 = ___ *Arrange and identify for ease of use, organize*	6	Equipment/supplies are located at the point of use and by frequency of use.							
	7	All shelves, frequently used items, etc. are clearly labeled as to content and responsibility of control and revision.							
	8	Common areas and aisles are identified and clearly marked.							
	9	Clear indicators of max. and min. inventory quantities exist. Storage areas contain clear replenishment instructions.							
	10	Open storage of all raw material, WIP, and finished goods is well organized and labeled.							
Sweeping Total= ___ / 5 = ___ *Managing at a glance, a visual sweep*	11	Common areas and aisles are kept clean and orderly. Fire Extinguishers, exits, and control panels are unobstructed.							
	12	All shelves, desks are kept clean. No items are unidentified or laying on top of cabinets/shelves/tables.							
	13	It is visually obvious what items are ready for work, what items are in work, and what items are finished.							
	14	The current status of the area is visually obvious. Is the area ahead, behind, how does the work flow?							
	15	Due to the use of visual control methods it is easy to distinguish what belongs in the area and what does not.							

## 5S AUDIT

- A clean space is an efficient space
- Creates a standard process of organization
- Promotes constant improvement



## ORGANIZATION

- Shadow boards increase worker efficiency and cleanliness
- Label system increases workers standard processes and efficiency
- Efficiency matters (less energy and waste)



## Lean Intro: Lesson 1 of 4

### Overview and Value Add vs. Non-Value Add

Lean Lesson 2: 8 Wastes and Kaizen (Continuous Improvement)

Lean Lesson 3: 5S, Standard Work

Lesson Lesson 4: One Piece vs. Batch, Poka Yoke (Mistake Proofing)

#### Welcome to The Whole and Nourished Lean Course!

This course consists of 4 lessons. You will be paid for at least 1 hour to complete each lesson; so please take your time to review the material and consider how you can implement Lean into your work and life.

#### What is Lean?

Lean refers to a set of practices, principles, and tools that help an individual or business to maximize productivity while minimizing waste. Lean is all about making things simple. It doesn't matter if it is grocery shopping, managing email, making coffee, or planning your day, Lean is about reducing struggle.

At home or at work, you'll learn to "notice what bugs you," recognize which "waste" is occurring, adjust your actions to reduce the waste, and watch the natural gains in efficiency.

#### Why is Lean important to Whole and Nourished?

This course is intended to help you understand and implement daily tasks as simply and efficiently as possible. Lean makes work easier for you and seeks to provide a better product to our customers without sacrificing cost or quality.

Whole and Nourished currently has over 300 recipes in our library; some recipes are used just once a year! The amount of variability week to week is huge and can feel overwhelming. This means that standardizing our processes and learning good habits, not exact recipes, is what is going to make your day easier and more manageable. Lean is the foundation of these good habits.

Lean is a part of our culture, and it is most effective when we all participate, working together to continuously improve our recipes, processes and environment. These lessons will provide you with a common language with your co-workers to communicate potential areas of improvement.

Lean has nothing to do with "going faster" and must never sacrifice quality or safety. Make it easy, make it fun, and improve just a little every day.

## EDUCATION

- Paid LEAN Manufacturing Lessons
- Increase conscience actions towards a more efficient workplace
- Again; efficiency is key!

## FOOD WASTE EDUCATION

“Fossil energy use is always an important consideration for sustainability, but that used in cattle production is less than 1% of the total use in the U.S. Perhaps one of the more important considerations in the sustainability of beef, as well as all foods, is consumer waste where the estimated waste of 20% increases all metrics or measures of the sustainability of beef consumption by 25%.”

# OUTCOMES

## P2 RECOMMENDATIONS

Recommended Pollution Prevention (P2) Actions	Cost to Implement	Annual Savings From P2 Action	Annual Waste (lbs.)	MTCO <sub>2</sub> e (tons)	Barrier to implement	Plans to Implement within 5 years pick (Y/N)
Food Waste Educational Campaign	~\$500	NA	~20062.1 (beef alone)	~9.1 (for beef alone)	Employee help	Y
Standardized Training	\$100	~\$1500	NA	NA	NA	Y
Monthly 5s Audits	>\$100/month	~\$2000	NA	NA	NA	Y
Note: "~" indicates an estimated number. The accuracy of the estimations vary but are within +/- 5% of the total number. All estimations are based off of a mix of real observed data, online research (please see citations), and current costs associated with data (labor, material, etc...)						

# REFLECTIONS

## Personal Learning:

- Importance of wholistic approaches to business efficiency and looking at the big picture
- Continuous improvement (Kaizen)
- Importance of organization

## Future P2 interns:

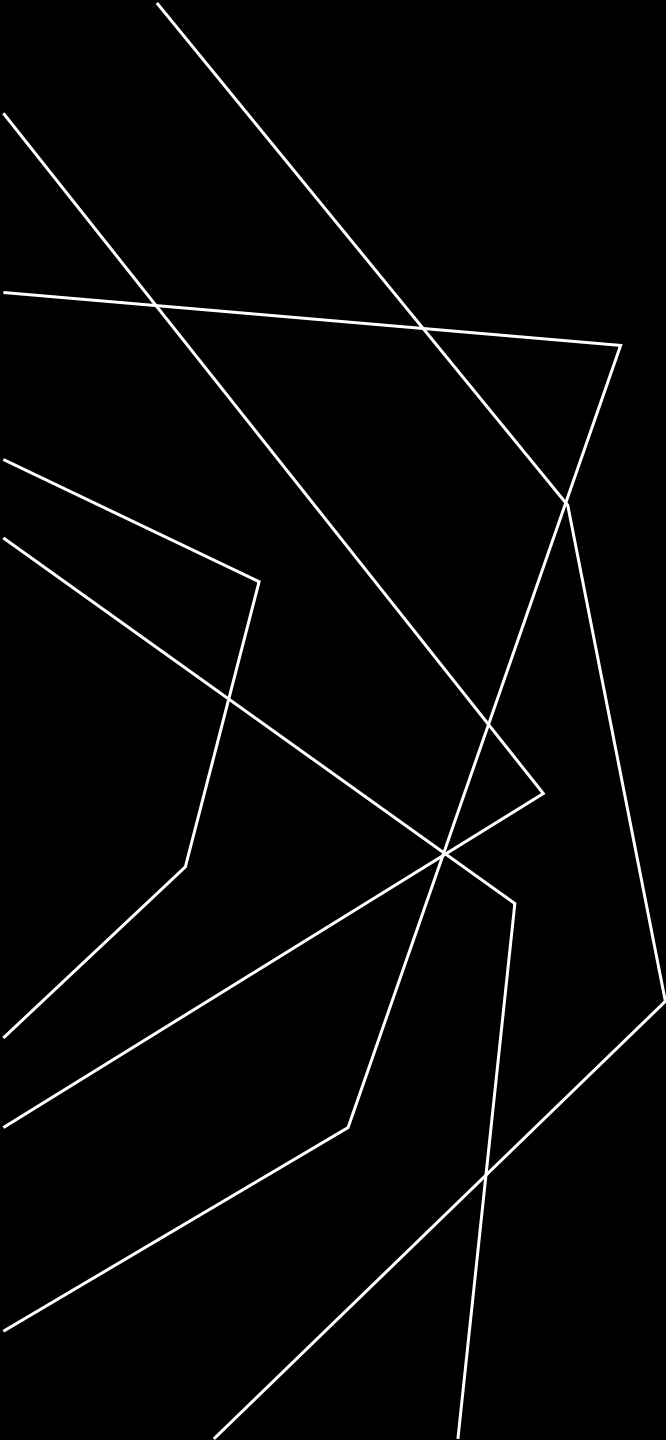
- Ask questions!!!
- Observe and experience everything, get your hands dirty



## ACKNOWLEDGEMENTS

Thank you to Montana State University, the MMEC, the United States EPA, Whole and Nourished, and many more who made this program and experience possible!

Additionally, Montana State University stands on the ancestral lands of indigenous peoples, who have a proud heritage, a vibrant present, and a bright future. We honor the Assiniboine, Blackfeet, Chippewa Cree, Crow, Gros Ventre, Kootenai, Little Shell, Northern Cheyenne, Pend d'Oreille, Plains Cree, Salish, Sioux, Hidatsa, Mandan, Arikara, and other indigenous nations of this region, acknowledging their presence and contributions across time. We recognize that this rich human tapestry is integral to our mission of learning, discovery, and engagement.



# THANK YOU

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