WORKFORCE TECHNOLOGY SOLUTIONS PLAYBOOK SERIES:
DINING ROBOTICS

Solution Purpose: Efficiency and Convenience

- Reduce step count during food delivery and table bussing.
- Enable dining room employees to remain in the dining space and available to residents.
- Improve consistency with food delivery timeliness and maintaining food temperature.

Budget:

- Purchasing a robot will cost between $13,000 - $20,000. This includes freight, delivery, training, and installation.
- Leasing a robot will cost $650-$1,000/month. Some leases offer affordable buy-out options after a certain period.

Specific pricing for each vendor is not included in this playbook because the fees structures vary significantly. Contact information for each solution is included in the matrix to access accurate pricing for your operations.

LeadingAge® MN
FOUNDATION

SOLUTIONS MATRIX

	Servi	Bellabot	MATRADEE L
Robot Features			
Training Included in Set Up Cost?	✔	✔	✔
Active Presence in MN?	✔	✔	✔
Relevant System Integrations	LRS Table Tracker; Automatic Door Openers		
Physical Dimensions	17.5" x 17" x 41"	22.3" x 21.2" x 50.8"	20.71" x 19.41 x 51.97"
Tray Capacity	5-7 entrees	4 trays; 22lbs./tray	3 trays; 22lbs./tray
Battery Life (from full charge)	8-12 hours	12 hours	12-15 hours
Battery Charging Time	2-4 hours	4.5 hours	3.5-6 hours
Elevator Navigation?	X	X	X
Door Navigation?	✔ Requires hardware and integration	🟠 In Testing Phase	🟠 In Testing Phase

VENDOR MATRIX

Vendors	Bear Robotics	Girard's Business Solutions*	Martin Bros. Distributing*
Robot Solutions (*all solutions can perform food delivery and bussing tasks*)	Servi	Bellabot MATRADEE L	MATRADEE L
Implementation Support (*Provided by solution representative*)	• 2-3 day initial onsite training for service and management teams. • Robot installation. • Site specific workflows. • Continued live remote support & onsite assistance.	• Staff and supervisory personnel training. • Robot delivery. • Facility mapping. • Programs stored in robot and cloud. • Extended service coverage per call or via service contract.	• Implementation strategy prior to installation. • Hands-on training after installation. • Revisits for changes or additional employee trainings
Key differentiator (*Provided by solution representative*)	Bear owns every step of the process from production to implementation. Assistance provided throughout the life of the relationship	Large capacity for food or dishes. Can play music, "talks" to users and has "cat" and display "eyes" which are aesthetically pleasing. Bellabot also uses colored lights for warning	Active support with customers prior, during and after installation through implementation, training and marketing support.
Contact	Doug Lane 612-730-1242 dlane@bearrobotics.ai	Nate Girard 952-890-4827 nateg@girardsinc.com	Rob Fiori 319-859-9580 rfiori@martinbros.com
Website	Bear Robotics	Girard's Business Solutions	Martin Bros. Distributing

* Indicates LeadingAge Minnesota Business Parnter

Key Personnel for Successful Implementation

Project Lead(s): (responsible for internal coordination and vendor communication):
Personnel to consider for Project Lead role: dietary director, dietary supervisor, or administrative intern

Note: Recommend co-leads to maintain continuity if change in employment, illness, etc.

End-users: (Individuals and groups who will interact with the software)
- Food prep employees who place food on the plates
- Dining staff who assist with seating, taking food orders and serving meals in the dining space
- Dietary director/supervisor
- Employees who assist residents who require assisted dining support
- Volunteers who assist with meals
- Residents who will have their food delivered to their table via robot
- Resident families who join for meals

Vendor Selection Team: (Key stakeholders who should be part of the decision-making process because they have a vested interest or expertise)
- Project Lead
- Administration
- IT/Tech support
- Plant maintenance
- Dietary director/supervisor
- End-user representative(s)

Team/Staff to Support Product Launch: (Key stakeholders who will play a vital role with training, troubleshooting and will be ambassadors of the changes needed)
- Project Lead
- Operations/administration/executive director
- Dietary director/supervisor
- Staff education/training role
- IT/Tech support
- Plant maintenance
- End-user representative

Follow-up Supporting Coalition Team: (Individuals who play a key role with reinforcing the rollout success because of their job description and/or leadership responsibilities)
- Department leadership
- Operations/administration/executive director

Best-Practice Implementation

Key software integration/compatibility: Dining robots do not require integration with other enterprise systems. However, considerations can be made for the following when selecting a solution to improve and expand capabilities:
- eMenu compatibility
- Automatic door and elevator compatibilities

Infrastructure/equipment requirements:
- Standard 110v/120v outlet for charging. No special electrical accommodations are required.
- Wi-Fi is not required for the robots to fulfill food delivery. However, strong Wi-Fi is required for the following:
  * Initial setup
  * Software updates (periodically completed during downtime for new features or navigation improvements)
  * Remote tech support
  * Usage reporting

Expected timelines after vender is selected: *Approximately 6 months*
- Two-four weeks for robot order and delivery
- Two-three weeks for setup, dining room mapping
- Three-four months for workflow development
- Two weeks of advanced oversight and monitoring after roll-out to ensure success
- Four weeks follow-up and check-in touchpoints

Location Needs: Dedicated parking location for charging and storage while not in use. Refer to attached comparison chart for robot dimensions.

Policies/Procedures impacted: It is recommended that the entire dining process be redesigned to take full advantage of the robot capabilities.
- Food delivery processes
- Bussing processes (if used for bussing)
- Food prep/plating processes
- Food order intake process
- Housekeeping process in dining space (tables must be returned to their specific location to support the robot's navigation)
- Infection control: ensure a cleaning procedure is in place after each use. If using your robot for both food delivery and bussing, ensure it is fully disinfected between those tasks.
- Orientation/onboarding – embed training and new processes into new employee orientation at time of launch

What to expect post-implementation:
- Reduction of employee trips to and from the kitchen during meals
- Increased staff availability to attend to resident needs during meals
- Dining employees able to serve a larger section of tables

IMPLEMENTATION

Tips:

- Develop new job descriptions that reflect a new workflow and dining process:
  - * How to utilize the robot for its core functions of food delivery and/or bussing
  - * How to maintain the robot including proper cleaning, maintaining, charging and storage
  - * Position dining staff in zones where they can welcome residents and carry out their serving duties while the robot brings out meals for them to serve.
- The robot does not replace an employee. It provides a supplement to the serving process to make the employee's jobs easier and can reduce the need for staff hours because of time-savings related to the trips back and forth to the kitchen.
- During training, be sure all employee end-users and leadership team learn how to reset/reboot the robot. This can be required occasionally, can be completed within minutes and is a simple process. Include this training in new employee orientation for all employees who assist in the dining room.
- Though capability to navigate doors and elevators is possible, it isn't widely available and will depend on elevator systems and automated door compatibility. These features may also add cost to the product.
- Consider supplementing your robot implementation with the following:
  - * 2-way radio headsets between servers and dining staff to update short-order requests and meal order details.
  - * Create support carts in the dining room that hold common beverages, condiments, replacement silverware and cups to enable servers to manage those requests while the robot manages the meal delivery.
- Offer a "meet the robot" opportunity for residents and their families. Provide an introduction, demo of the robot in action and an opportunity to help name the robot. This generates energy and support, allows for questions and answers and sets the stage for requesting patience from the community as the new technology is introduced to the dining experience.

What's next for this technology?

- Robotics will continue to advance with capabilities to navigate doors, elevators and more complex environments.
- Robotics are being used beyond the dining room. These solutions will continue to be adopted for cleaning, supply/package delivery, and other tasks to reduce step counts for employees.

Playbook development and disclaimer:

This playbook was developed to assist care providers and operators in the understanding of dining robotics but cannot include all systems that may be available. Products mentioned in this playbook serve as illustrative examples and were included because of the following:

- Recommendations from LeadingAge members
- Information gathering from solution providers
- Product demos and Q&A meetings with solution providers
- Information gathered directly from active users of scheduling software
- Provider case studies

Please use this playbook as a general guide in understanding functionalities and capabilities of these solutions as well as a means to implement your chosen solution more successfully. These solutions have not been tested or verified by LeadingAge Minnesota. Providers are strongly advised to verify functionalities of vendor solutions prior to final selection through demonstrations, site visits, reference checking and other due diligence.