

Chapter 2: The Systems Approach

Food service industry

All establishments where food is regularly served outside the home

- Examples...
- Very fast changing and expanded industry

What factors that affect the growth of food service industry ??

1. The changing status of women

Increased number of working women , especially in food service

2. The large number of single person households

Tend to spend a larger portion of their food budget on meals away from home

3. Slow population growth

- Fewer young people , increased number of older persons → need for more healthcare facilities...
- Not necessarily applicable !

4. Increase in the Asian and Hispanic population

- Married with children → decrease the number of meals eaten away

5. The shift from manufacturing to technology and service industries

- Contract food service business is increasing
- More leisure time in weekends

6. Increased interest in the health and wellbeing of people

- All types of food service are trying to offer more healthy choices

7. Shortage of qualified foodservice personnel

FOOD SERVICE INDUSTRY

- Characteristics :
 - High number of workers
 - Low productivity
 - High level of labor turnover
 - High labor cost
 - Lower salary for workers and high for managers

Training the labor force

- Millions of people are employed every year in the food service industry .
- Much of the new labor was recruited from “off the streets”
 - **Job duties are learned by experience !!!**

Education standards

- **The Club Managers**

Association → developed educational program that must be taken by any member to be titled as **CM (certified manager)**

Labor education

1. Community college
 - Vocational courses , economics and management training
2. Four year programs are offered in :
 - College of business
 - College of home economics
 - College of food technology
- Followed by **internship**

Roles of Manager

- The manager role in the operation:
 - Establishing goals
 - Planning
 - Job description
 - Directing
 - Staffing

Classification of food service establishments

1. Commercial

2. Non commercial

3. Military

1. Commercial

- Restaurants
- Supermarkets
- Convenience stores
- Delis
- Snack bars
- Other retail food establishments

2. Noncommercial (institutional, on-site)

- Educational
- Governmental
- Correctional organizations that operate their own foodservice

Scope of services

- The number and types of business units offered through individual food service operations
 - Mix of **retail** and **non-revenue**-generating units
-
- Figure 2.3

Large Urban Hospital		
Patient Services	Retail	Nutrition Services
Tray Service Room Service Nourishments	Employee/Visitor Cafes Vending Catering Satellite Units –Kiosks	Inpatient MNT/Ed Outpatient MNT/Ed Community Education Research Diets

Community-based Hospital			
Patient Services	Employee Foodserv.	Community Foodserv.	Nutrition Services
Tray Service Room Service Nourishments	Cafeteria Vending Catering	Mobile Meals Child Care Ctr Adult Care Ctr	Inpatient MNT/Ed Outpatient MNT/Ed Community Education

School		
USDA Child Nutrition Program	Retail	Other
Breakfast Lunch After School Snacks Summer Feeding	A la Carte Vending Food Court	Employee Meals Catering

College/University	
Resident Halls	Retail
Dining Halls Room Service	Kiosks Faculty Executive Dining Delis Convenience Stores

Figure 2.1 Examples of scope of services of four foodservice organizations.



Foodservice operations

- All organization must have a written **mission statement** → to guide the organizational decision making
- **Mission statement** : a summary of an organization's purpose, customers, products, and services
- To achieve this mission effectively, the organization must develop **specific objectives**

Management Definition

The effective, efficient
integration and coordination
of resources to achieve the
desired objectives of the
organization

Functions performed by foodservice manager

- Selection, orientation, and provision of ongoing training and supervision of staff
- Monitoring of staff workload and performance and designation of assignments appropriately
-
- Development and control of operational and capital budgets
- Preparation of financial reports.
- Ensuring quality, safety, and sanitation of all food prepared

Organizations are systems

- **A system is a set of interdependent parts that work together to achieve a common goal.**
 - A foodservice organization is a system.
- **The interdependent parts are called subsystems**

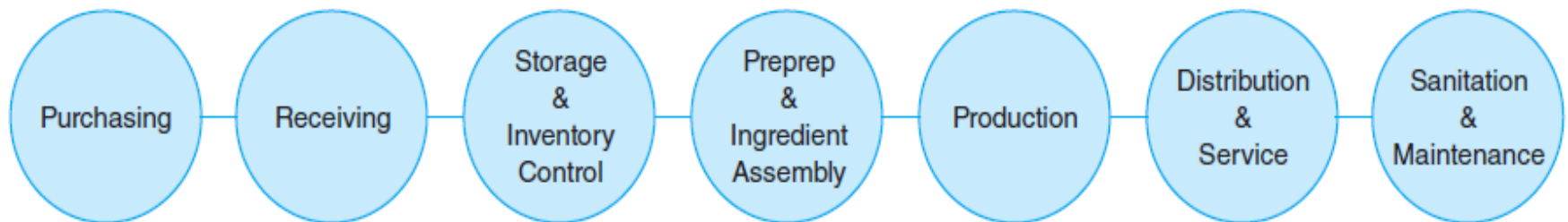


Figure 2.4 The functional subsystems of a traditional foodservice operation.

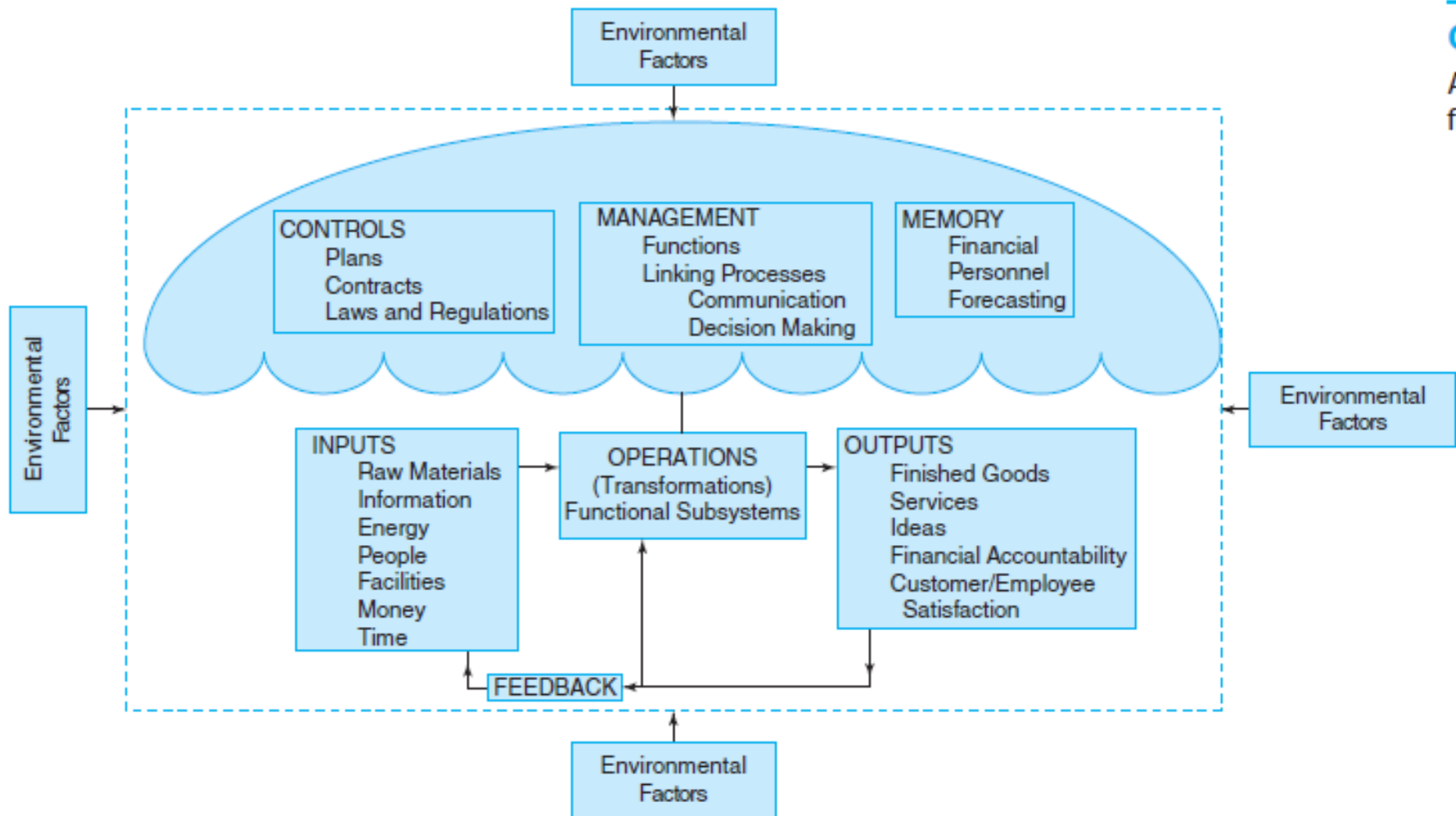


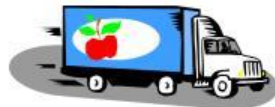
Figure 2.3 The systems model.

Types of Foodservice Operations

- **Conventional (cook/serve)**



- **Commissary**



- **Ready prepared (cook/chill)**



- **Assembly/serve (thaw/serve)**



Types of food service systems

- Based on differences in:
 - Location of preparation
 - Amount of holding time
 - Method of holding cooked foods
 - The purchase form of the food
 - Required labor and equipment

1. Conventional system

- Menu items are prepared in the kitchen in the same facility where meals are served and held a short time, until serving
- Over the years, the conventional system has modified ...

1. Conventional system

- Due to:
 - Labor shortages
 - High labor costs
 - Availability of new forms of food
- To reduce costs, they began to purchase some foods with “built in” labor

The modified conventional system

- Ready to cook meats
- Portioned meat
- Bread and bakery are purchased or prepared from mixes
- Frozen foods
- Canned foods

Foods with varying degrees of processing

Most effective when...

- When labor supply is adequate
- Low cost labor
- Available sources for food supplies especially raw foods
- When adequate space is allocated for equipment and activities

Typical for ...

- Small foodservice operations such as:
 - Independent restaurants
 - Schools
 - Colleges
 - Hospitals and health care facilities
 - Homes for specialized groups
 - In-plant employee feeding

Advantages

- Quality control
- More adaptable to the regional, ethnic, and individual preferences of its customers
- Greater flexibility in making menu changes to take advantage of good market buys and seasonal fluctuations
- Less freezer storage is required → save energy
- Distribution costs are minimal

Disadvantages

- Stressful workdays → caused by meal period demands
- The menu differs each day, the workloads vary → difficult to achieve high productivity
- Skilled workers may be assigned tasks could be completed by non-skilled one just to fill the time between meal periods

2. Ready prepared (cook/chill or cook/freeze)

- Foods are prepared onsite, then chilled or frozen and stored for use later
- The distinct feature: **the separation between time of preparation and service**
- The place of preparation are not the place of service !
- The food are not for immediate use

2. Ready prepared system

1. Cook/ chill method

2. Cook freeze method

1. Cook/ chill method

- The food is prepared and cooked by conventional methods
- Then it's chilled to 37 F (2.7 C) in 90 minutes and refrigerated to use later

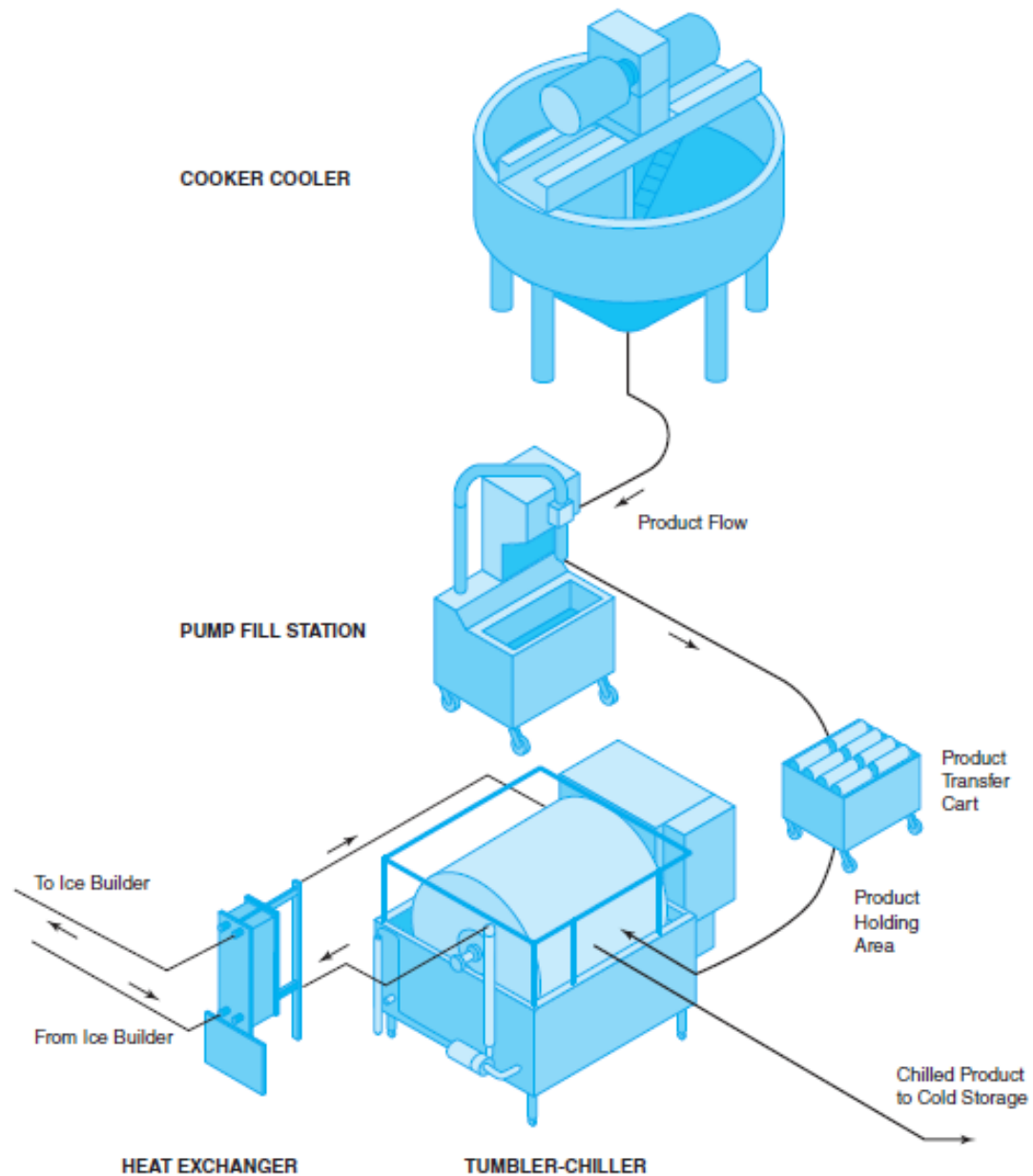


Figure 2.5 One method of cook/chill food preparation using a pump fill station, tumbler-chiller, and cook-chill tank.
Courtesy of Chester-Jensen Co., Chester, PA.

2. Cook / freeze method

- Food is prepared and cooked by conventional or other methods, then frozen for use later
- Stored in bulk



Advantages

- Reduce peaks and valleys of workloads
- Production scheduling to build up the menu item inventory (8 hours a day, without early and late shifts)
- Decreased turnover of workers and easy recruitment of new employees

Advantages

- Reductions in production labor costs
- Improved quality and quantity control
- Improved nutrient retention by decreasing time food is held within the serving temperature range
- Balance use of equipment throughout the day

Disadvantages

- Need for large cold storage and freezer units
- → which add to energy costs
- Expensive equipment
- Control for food safety is essential
- Modifications should be done to recipes to avoid structural and textural damage of the frozen foods

Effective in ...

- Large volume institutions
 - Health care units
 - Employees feeding facilities
 - Airlines
 - Correctional institutions

3. Commissary system (central production kitchen)

- Large, central production kitchen
- centralized food purchasing
- delivery of prepared foods to service for final preparation

3. Commissary system (central production kitchen)

- Prepared foods may be stored frozen, chilled, or hot held
- May be distributed as bulk hot, bulk cold, frozen for reheating and portioning , or pre-portioned and pre plated.

Typical for...

- Airline caterers
- Large city school systems
- Chain restaurant organizations

Advantages

- Save costs
 - large volume purchasing
 - reduced duplication of the labor and equipment that would be required if each serving unit prepared its own food
- Utilize the space for other services
- Effective quality control with only one unit to supervise

Disadvantages

- Safety concerns of the distributed foods
 - Many critical points
 - Should employ food microbiologist
- Requires special equipment for transportation of foods to maintain them in the correct temperature and appearance
- Delivery truck breakdowns (bad weather, accidents...)
- High cost of purchase, maintenance, and repair of the sophisticated equipment

4. Assembly / serve

- **No on-site food production**
- Termed as **kitchenless kitchen**
 - Fully prepared foods are purchased
 - Require only storage, final assembling, heating and serving
- With the development of a variety of high quality frozen food products
- Reducing the labor costs
- use only “single use” disposable table ware → no need for dishwashing unit

Typical for...

- Hospitals
- Some health care institutions and restaurants

Advantages

- Fewer personnel are required
- They don't have to be highly skilled or experienced
- Procurement costs are lower
 - Better portion control
 - Less waste
 - Reduction in purchasing time
- Minimal requirements for equipment and space

Disadvantages

- Limited availability in some markets of a good menu items
- Higher cost of prepared foods
- The quality of available prepared products and customer acceptability
- Additional freezing units are required
- Recycling or disposal of the large quantities of packaging materials and single use table ware

How to select ??

- Factors to consider when choosing a system ?
 - Cost comparisons
 - Availability of foods in all forms
 - Quality, and the nutritional value of the prepare foods
 - Customer needs
 - Acceptability
 - Equipment and space requirement
 - Energy use