Chapter 16: Location & Layout

**Location, Layout, and Physical Facilities**

Choosing a Location

- The right region of the country
- The right state in the region
- The right city in the state
- The right site in the city

Logic of Choosing a Location

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Choosing the Region: Sources of Information

- U.S. Census Bureau - [www.census.gov/](http://www.census.gov/)
  - American Community Survey
  - Economic Census

- American Demographics
- AmeriStat
- Demographics USA
- Lifestyle Market Analyst
- Rand McNally's Commercial Atlas and Marketing Guide

- Sourcebook of County Demographics
- Sales and Marketing Management's Survey of Buying Power
- Editor and Publisher Market Guide
- Small Business Development Centers
Geographic Information Systems (GIS)

- Computerized programs combining map-drawing with database management capability
- Example: Census Bureau's TIGER file
- Search through a database and then plot the results on a map
- Visual display reveals otherwise hidden trends

Selecting the State

Factors to consider:
- Proximity to markets
- Proximity to needed raw materials
- Labor supply
- Wage rates
- Business climate
- Tax rates
- Internet access

Sample State Evaluation Matrix

<table>
<thead>
<tr>
<th>Location Criterion</th>
<th>Weight 10-high</th>
<th>Score 5-high</th>
<th>Weighted Score (weight x score)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Score</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quality of labor force</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wage rates</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Union activity</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Energy costs</td>
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<td></td>
<td></td>
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<tr>
<td>Tax burdens</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Educational/Training Assistance</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Start-up incentives</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quality of life</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Availability of raw materials</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Assign to each location criterion a weight that reflects its relative importance (10-high to 1-low). Then score each state on a scale of 1 (low) to 5 (high). Calculate the weighted score (weight x score) for each state. Finally, add up the total weighted score for each state. The state with the highest total weighted score is the best location for your business.
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Selecting the City
- Population trends
- Population density
- Competition
  - Clustering
- Costs
- Local laws and regulations
  - Zoning
- Compatibility with community

Selecting the City
- Quality of life
- Transportation networks
- Police and fire protection
- Public services
- Location’s reputation

Retail and Service Location Considerations
- Trade area size
  - Retail compatibility
  - Degree of competition
  - Transportation network
  - Physical, cultural, or emotional barriers
  - Political barriers
Index of Retail Saturation

A measure of the potential sales per square foot of store space for a given product within a specific trading area

\[ IRS = \frac{C \times RE}{RF} \]

Where:
- \( C \) = Number of customers in the trading area
- \( RE \) = Average expenditure per person for the product
- \( RF \) = Total square feet of selling space allocated to the product

Reilly’s Law of Retail Gravitation

An estimate of a site’s ability to attract customers

\[ BP = \frac{d}{1 + \left( \frac{P_a}{P_b} \right)} \]

Where:
- \( BP \) = Distance in miles from location A to break point
- \( d \) = Distance in miles between locations A and B
- \( P_a \) = Population surrounding location A
- \( P_b \) = Population surrounding location B

Retail and Service Location Considerations

- Customer traffic
- Adequate parking
- Expansion potential
- Visibility
Retail and Service Location Options

- Central Business Districts (CBDs)
- Neighborhood locations
- Shopping centers and malls

Shopping Centers and Malls

- Neighborhood Shopping Centers
  - 3 to 12 Stores; anchor is supermarket or drugstore
- Community Shopping Centers
  - 12 to 50 stores; anchor is supermarket, super-drugstore, or discount department or variety store
- Power Centers
  - Combines drawing power of a mall with convenience of neighborhood shopping center
- Theme/Festival Centers
  - Employ unifying theme (often entertainment) and frequently target tourists

Shopping Centers and Malls

- Outlet Centers
  - Rather than use anchor stores, rely on manufacturer's and retailers' outlet stores to draw shoppers
- Lifestyle Centers
  - Anchor is upscale specialty chain store; designed to emulate a village main street
- Regional Shopping Malls
  - 50 to 100 stores; anchor is one or more major department stores
- Super-regional Shopping Malls
  - Trade area stretches up to 25 miles
Retail and Service Location Options

- Near competitors
- Outlying areas
- Home-based businesses
  - 49% of U.S. businesses are run from home

Manufacturing Locations

- Foreign trade zones

Figure 16.2. How a Foreign Trade Zone (FTZ) Works

Without FTZ

- Imported Parts and Materials
- Duty Paid
- Store
- Assemble
- Package
- Manufacture
- Process
- Mix
- No Duty Paid

With FTZ

- No Duty Paid
- U.S. Sales
- Exports
- Duty Paid
- Exports
- Duty Paid
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Manufacturing Locations
- Foreign trade zones
- Enterprise and empowerment zones
- Business incubators

Business Incubators
- Locations that combine low-cost, flexible rental space with a multitude of support services for their small business residents
- 1,400 incubators operate across the U.S.
- They work!! Firms that “graduate” from incubators have a success rate of 87%

Business Incubators by Category

Source: National Business Incubation Association
Layout: External Factors
- Size and adaptability
- External appearance
  - Create proper image or “personality” in customers’ eyes
- Entrances
  - Invite customers to come in
- Americans with Disabilities Act
- Signage

A Business Sign
- Tells potential customers who you are and what you’re selling
- Must comply with local sign ordinances
- Should be visible, simple, and clear
- Should be changed periodically to avoid becoming part of the background
- Should be legible both day and night
- Must be maintained properly

Building Interiors
- Ergonomics is an integral part of any design
- Proper layout and design pays off in higher productivity, efficiency, or sales
- Careful selection of colors can create the desired impressions among customers and employees
- Proper lighting is measured by what is ideal for the job being done
Building Interiors

- Scents can have a powerful impact in retail stores
  - Scent marketing
- Sound
  - Background music can be a selling tool
  - Classical music encourages shoppers to slow down and makes them feel more affluent

Layout for Retailers

- The arrangement of merchandise and fixtures
- “The stage on which a retail company functions” – Paco Underhill
- Well-designed layout takes customers past plenty of displays of items they may buy on impulse
  - 65% to 70% of purchase decisions are made after a customer enters a store

Three Layout Patterns

- Grid
  - Rectangular with parallel aisles; formal; controls traffic flow; uses selling space efficiently
  - Supermarkets and self-service discount stores
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Grid Layout

Free-Form Layout

Three Layout Patterns

- Free-Form
  - Free-flowing; informal; creates “friendly” environment; flexible
  - Small specialty shops
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Three Layout Patterns

- Boutique
  - Divides store into a series of individual shopping areas, each with its own theme; unique shopping environment
  - Small department stores

Boutique Layout

Layout Guidelines

- Know your customers buying habits and plan your layout accordingly
- Display merchandise as attractively as your budget will allow
- Display complementary items together
- Use music to set the mood
- Recognize the value of floor space; never waste valuable selling space with non-selling functions
Factors to Consider in Manufacturing Layouts

- Type of product
- Type of production process
- Ergonomic considerations
- Economic considerations
- Space availability within the facility

Manufacturing Layouts

- Product layout
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**Product Layout**

- Assembly
- Testing
- Troubleshoot and Packaging

**Manufacturing Layouts**

- Product layout
- Process layout

**Process Layout**

- Receiving
- Lathes
- Arc Welding
- Cutting Tools
- Drill Presses
- Heat Treating
- Packaging and Shipping
Manufacturing Layouts

- Product layout
- Process layout
- Fixed position layout