

Forecasting What Difference Does It Make Anyway?

Council of Logistics Management
San Diego, CA



REM Associates

Today's Presentation

Our presentation today is planned to include

- REM Associates perspective on forecasting
- Forecasting's relation to logistics functions and business management
- Key requirements for successful forecasting
 - Level of detail
 - Timing of the forecast
 - Level of accuracy
- Basic approach to forecasting
- Examples of successful forecasting
- Making forecasting work for your business

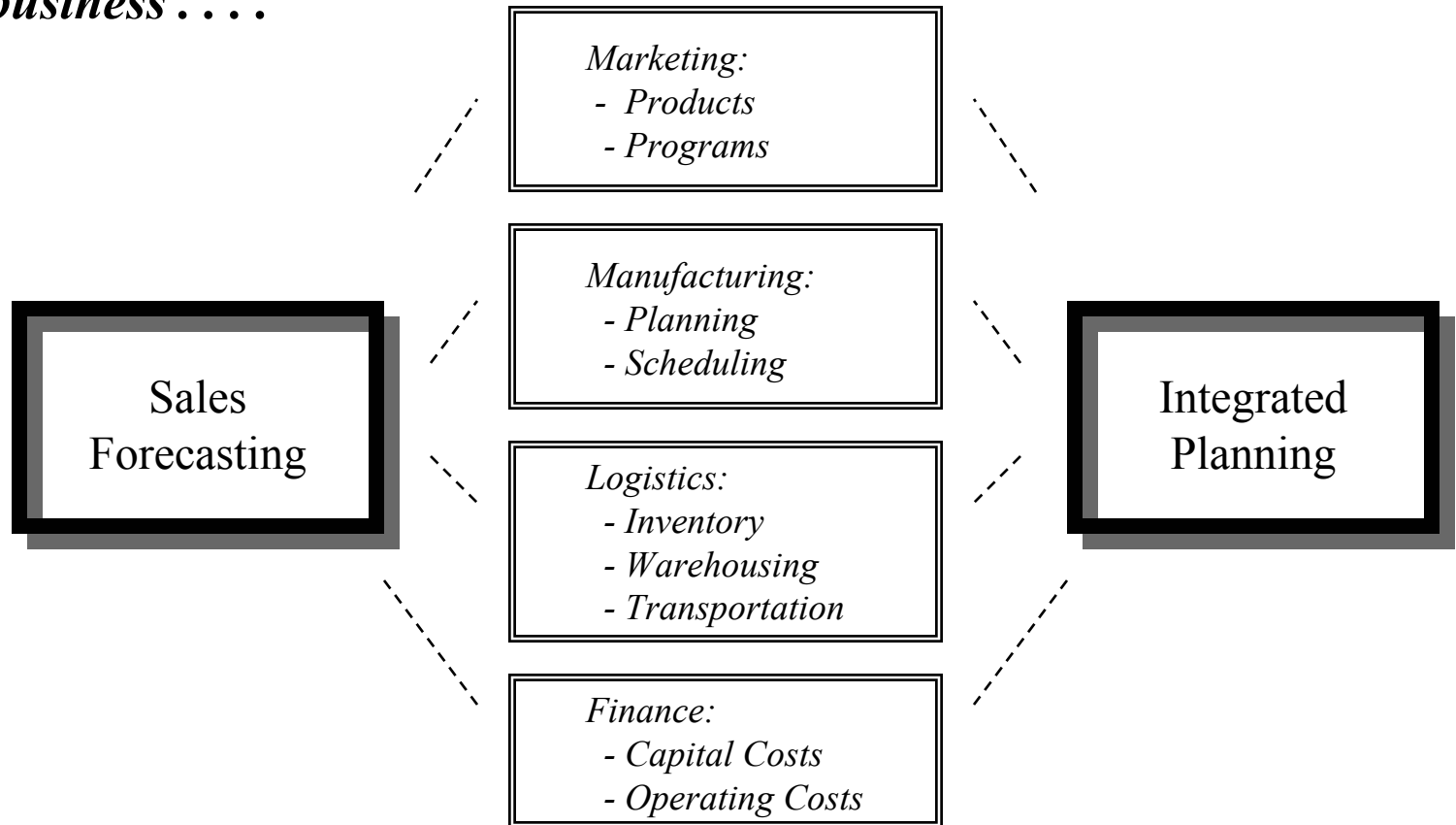
REM Perspective on Forecasting

Forecasting creates a natural conflict between sales and operations management

- “We never trust those sales guys, so we make what we think they will sell.”
- “We can’t afford to lose this business/customer, so let’s keep plenty of inventory on hand.”
- “Don’t set the numbers too high or I won’t make quota/budget.”
- “Why can’t those guys make it when we need it. Maybe we need to increase the numbers.”
- “We have to set the numbers higher than last year to show a plan increase.”
- “You can’t do business from an empty wagon. You need to fill it with something - What forecasting?”
- “We must make all the product prior to the promotion.”
- “Tell us what you need and we will have it - the machine went down.”

Forecasting's relation to business management

Forecasting provides the base logic for integrated planning and operating the business

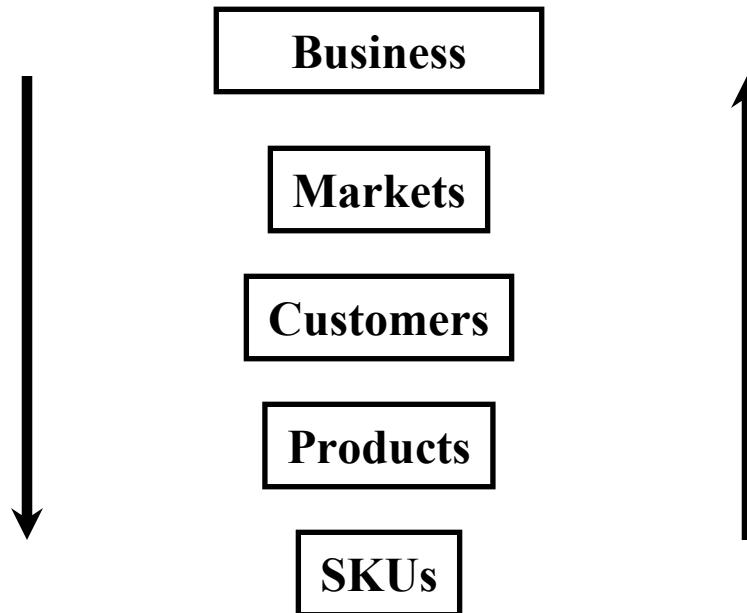


Forecasting's relation to business management

Two methods of forecasting are employed in most businesses. Which one is best

Top Down

Bottom Up



The correct choice is to use both. Start with top down based on plans and anticipated factors, then build the bottom up based on history and known facts.

Forecasting's relation to business management

A good forecast is the first step toward effectively planning the resources needed to support your organization's business plan

- Forecasts expressed in units control the flow of inventory
- Forecasts expressed in currency help your marketing organization detect trends and also assist the financial staff plan cash flow requirements
- Forecasts expressed in pounds or cubic feet assist warehouse and transportation managers

Forecasting's relation to business management

Forecasting is the key to monitor, manage, and control change in today's business environment

HISTORY:

Actual Date

**Performance
Measurement**

TODAY:

Market Data - Share

Competitive Data

FUTURE:

**Goals and
Objectives**

**Resource
Plans**

RESOURCES:

Capital



Operating

Key requirements for successful forecasting

Three key requirements for successful forecasting include

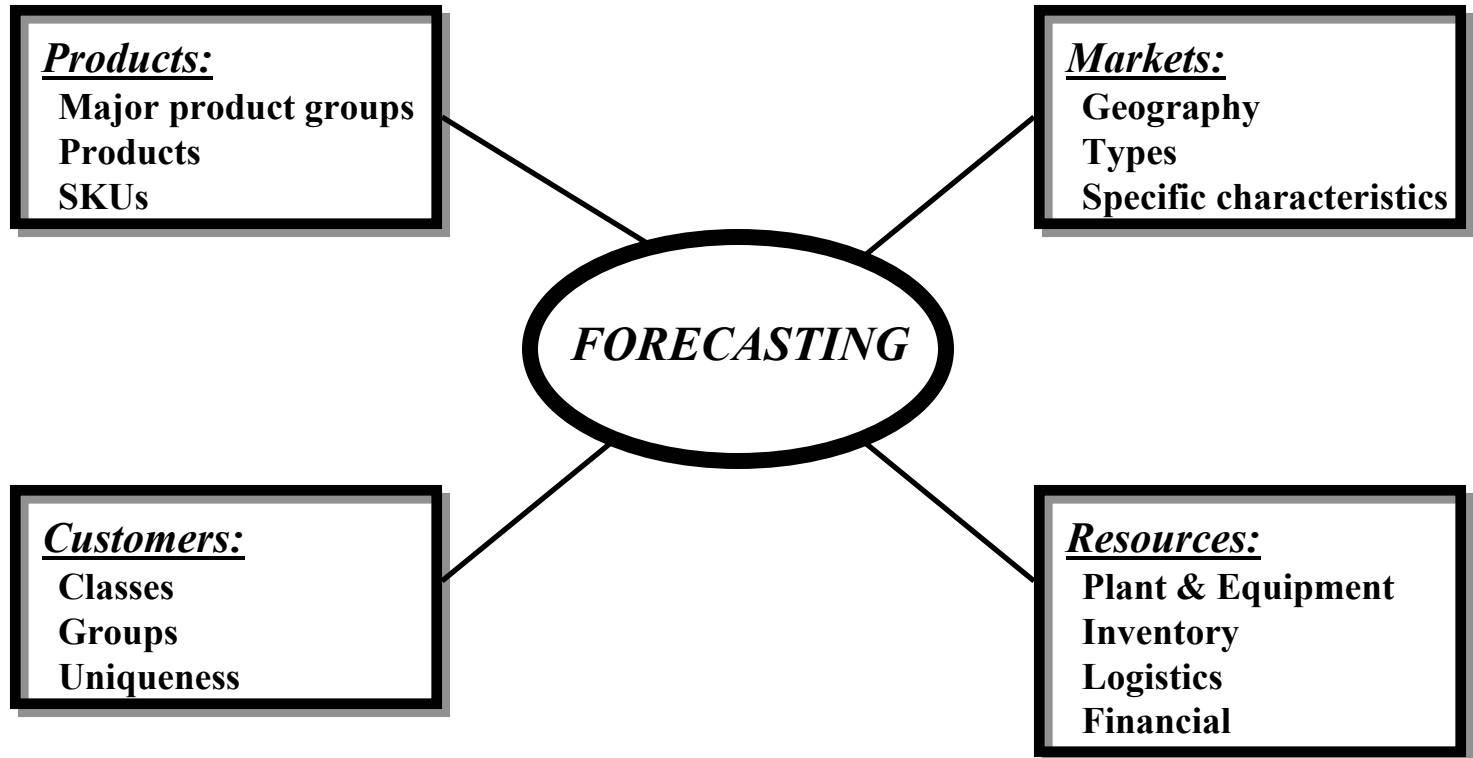
- Segmentation - Level of detail
 - Product groups
 - Geographic markets
 - Customer classes

- Timing and responsibility of the forecast

- Forecast performance - Level of accuracy

Key requirements for successful forecasting

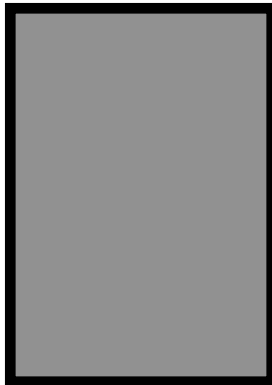
Segmentation is the first key for successful forecasting



Key requirements for successful forecasting

Timing is the second key to successful forecasting

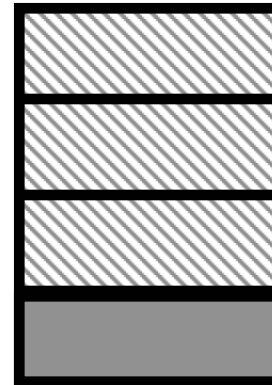
ANNUAL



PERIODIC



ROLLING



CONTINUOUS



Forecasting is a process - not a product

*Responsibility must include all affected functions and organizations:
Sales, Marketing, Operations, Finance*

Key requirements for successful forecasting

The third key requirement for successful forecasting is performance measurement and accuracy

- Track historical sales and compare to forecast
- Continue to revise forecasts to reflect change but “fix” prior to final plans
- Isolate product and market promotional activities
- Choose statistical methodology based on forecasting accuracy
- Use level of accuracy to focus forecasting:
 - Problem areas
 - Exception reporting

Basic approach to forecasting

The approach to forecasting begins with a sound data base of history. . . .

- Forecasting estimates future events by casting forward past data
- Past data is modeled in a systems approach to estimate the future

Forecasting versus Prediction:

- Prediction estimates future events based on subjective criteria

Basic approach to forecasting

A sound approach to forecasting must consider the type of forecast. . . .

	Strategic Planning	Operational Planning	Inventory Replacement
Forecast Frequency	Annual	Annual With Update	When Re-order is Necessary
Time Horizon	Two to Five Years	One Year	Replacement Lead Time
Degree of Accuracy	Order of Magnitude	Minimum	Maximum
Level of Detail	Critical Items Families	Key Items Families	By Item
Statistical Approach	Judgmental	Analytical	Mechanical

Basic approach to forecasting

The steps in a forecasting process are

- 🕒 Identify the objective and use of the forecast
- 🕒 Determine the forecasting period
- 🕒 Select an appropriate forecasting approach
- ↪ Collect the data and related information required
- ↪ Prepare the forecast
- ↪ Monitor the results relative to errors, reliability, and need for revision/update
- ↪ Make necessary revisions as needed

Basic approach to forecasting

The approach to forecasting must also consider. . . .

- Types of demand
 - Independent demand
 - Dependent demand

- Demand Patterns
 - Normal patterns
 - Trends
 - Product life cycle
 - Seasonal
 - Erratic

Examples of successful forecasting

At Foot-Joy, Inc., forecasting was key due to the long lead time for product logistics and competitive pressure in a fashion market

- Simple product line - complicated by extensive size width SKU requirements
- Three-to-four month lead time from sourcing to market
- Global operating resources used for golf shoes and gloves
- Block production planning for golf shoes
- Close coordination between:
 - Product development
 - Marketing planning
 - Procurement and production
 - Product logistics
- Continuous joint management decision making
- High degree of logistics responsiveness - key to market share in a fashion business

Examples of successful forecasting

Extensive product promotion at ABI makes forecasting essential to maintaining sales and market share

- Segmentation of normal versus promotional demand
- Separate sales history into normal, seasonal, and promotional - store historical data net of promotional activity
- Model new product sales based on similar product histories
- Make use of highly sophisticated systems and models - “Monthly RP”
- Use of more responsive and simpler models to plan production and distribution - weekly
- Isolate “C&D” brands for periodic production and larger safety stock inventories
- Closely monitor forecast deviations and accuracy

Examples of successful forecasting

At Scott Paper, extensive modeling planned timber harvesting to marketplace product movement

- Forecasting input drove a “RUM Model” to plan tree harvesting, pulp, paper, and finishing operations, and product warehousing and transportation to customer markets
- Sales force compensation greatly influenced sales patterns
- Quarterly business objectives influenced sales spiking
- Unique production resources required extensive stock transfers
- High levels of competition caused significant sales promotion and variability
- Monthly inventory monitoring planned operational product movement
- Conflicting objectives - unit product costs vs. meeting customer demands

Examples of successful forecasting

At General Mills Restaurants, Inc., sales data is gathered daily from field locations based on actual consumption

- At 7am each day consumption data is assembled from over 800 restaurant locations as of close of business for the previous day
- Bill of materials systems breaks down sales data into component parts
- Purchasing is based on consumption data and planned promotional programs
- Extensive promotional programs require close coordination between marketing planning and product procurement
- Product procurement must anticipate promotional activity
- Seasonal product availability causes increased inventories
- Issue: Volume promotion versus product promotion

Examples of successful forecasting

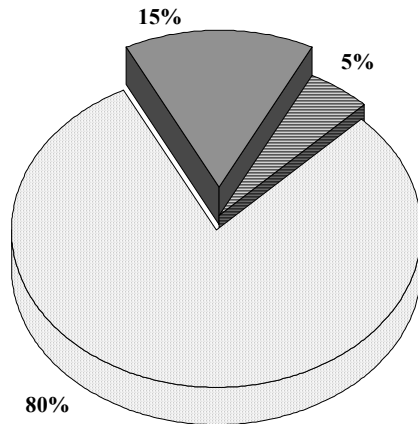
Additionally, broader based examples include

- Climate related forecasting influences consumables in resort areas
- Life and death drugs
- Sports events - playoffs
- Food canning “in the bright”
- Paint distributors
- Precious metals - jewelers
- Industrial products

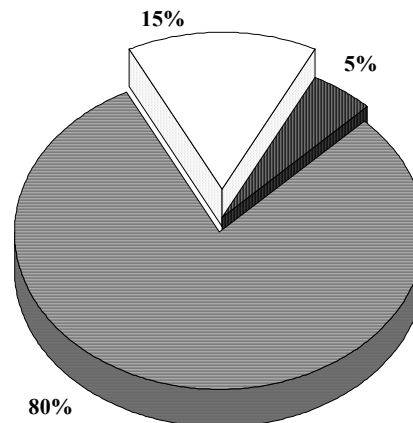
Making forecasting work for your business

Making forecasting work for your company begins with segmenting the different aspects of your business

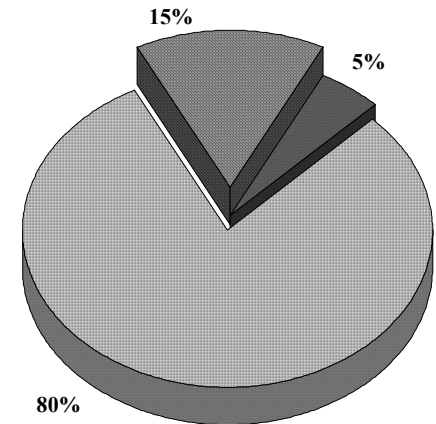
Products



Sales



Markets



Making forecasting work for your business

Forecasting requires a single common base of data

- Sales history data base

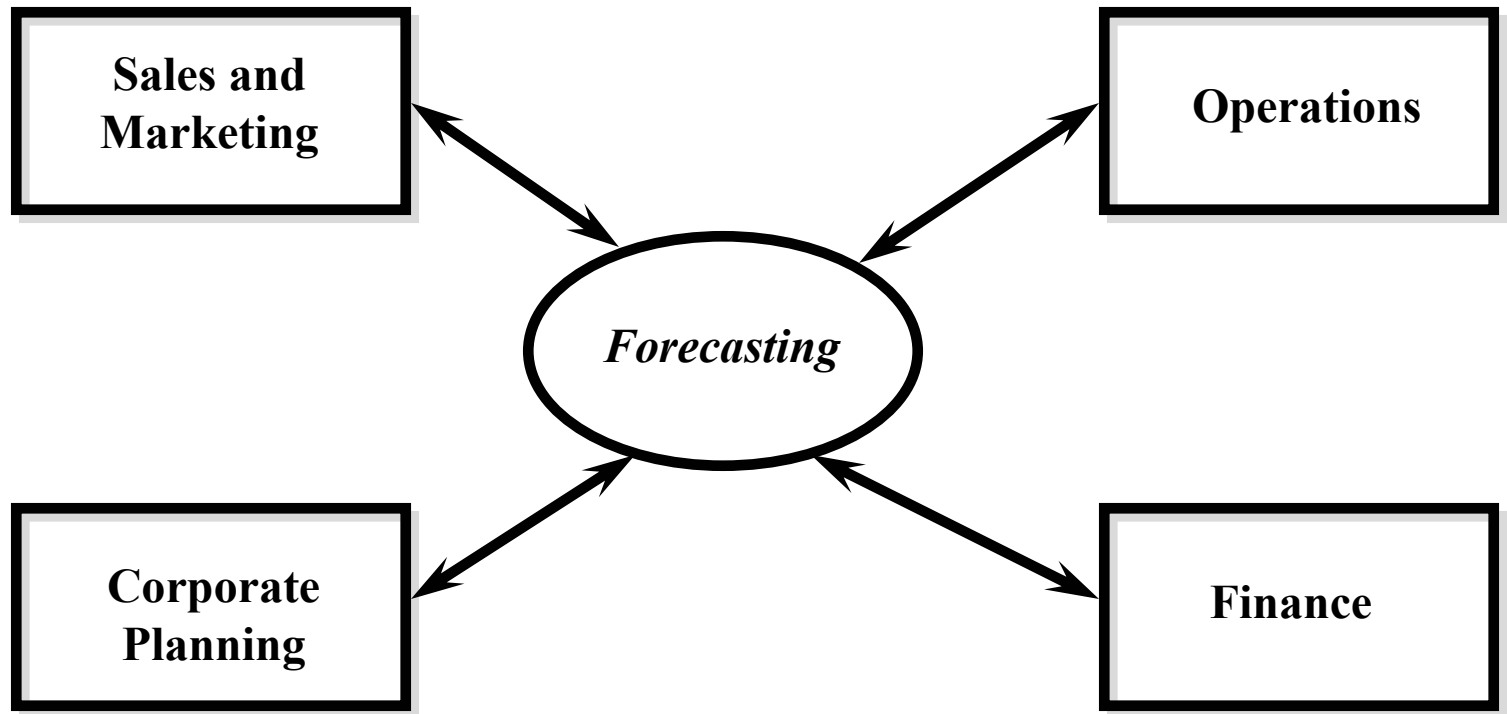
- Variation in demand cycles:
 - Product promotion
 - Seasonality
 - Production shutdown
 - Unique events
 - Customer and marketplace changes

- Sales and marketing plan

- Business goals and objectives

Making forecasting work for your business

Forecasting needs to be the sole responsibility of one business function/organization



Making forecasting work for your business

Forecasting needs to be focused on the most critical elements

- Product and market segmentation
 - Product groups
 - Geographic markets
 - Customer classes

- Measurement and accuracy
 - Immediate past periods
 - Long-term trends

- Exception reporting

Making forecasting work for your business

Forecasting needs to be an integral part of the management of the business

- Each business function must endorse the forecast:
 - Sales and marketing
 - Operations
 - Finance

- The forecast must be:
 - The basis of all planning - short and long-term
 - Revised as necessary as conditions change
 - Monitored closely for accuracy

In Summary

Yes, forecasting does make a difference

- Forecasting is a vital necessity for all successful business operations
- All operations and management personnel need to “use” forecasting
- The key problems are:
 - Use of common data
 - Single responsibility
 - Belief in the forecast
 - Use of the forecast
- Forecasting is the critical link in strategic and tactical planning

In Summary

The key to successful forecasting will be your ability to

- Use forecasting as a process - not a product
- Focus your forecasting efforts
- Assign a single source for forecasting responsibility
- Measure forecast accuracy
- Manage according to your forecast



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