

Engineering Management Methods BMEVITMAK47

Electrical Engineering BSc Major

Computer Engineering BSc Major

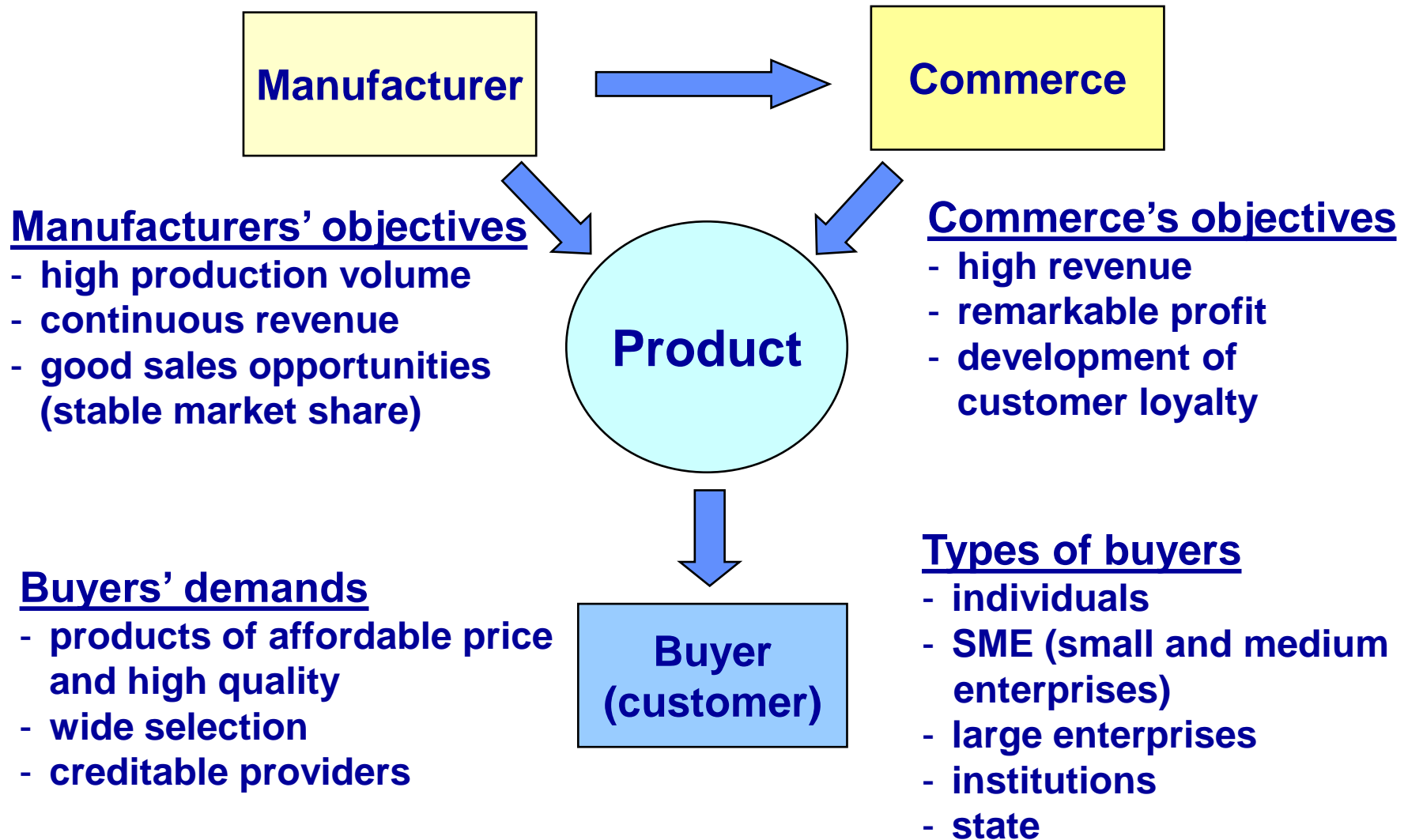
PRODUCT MANAGEMENT

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MARKET PLAYERS



THE PRODUCT

The product

is the whole of

- physical,
- aesthetic and
- symbolic

components (behaviour) to meet the customers' demand.

*„In the factory we produce cosmetics,
in the shop we sell hope.”*

(Revlon)

Product types:

- materialised (tangible) product (food, smartphone, car, etc.)
- intellectual product (novel, music, software)
- services (in a restaurant, in telecommunication, car repair)
- experience (theatre, concert)
- event (sport)

PRODUCTS IN INFOCOMMUNICATIONS

ICT products

Hardware

- Mainframe computer, server
- PC, workstation
- Business informatics equipment
- Telecommunications CPE (terminals)
- Switching equipment
- Transmission equipment
- Mobile radio systems
- Data communication equipment
- ICT equipment for private networks

Software

- System (operation) software
- Application software

ICT services

Informatics services

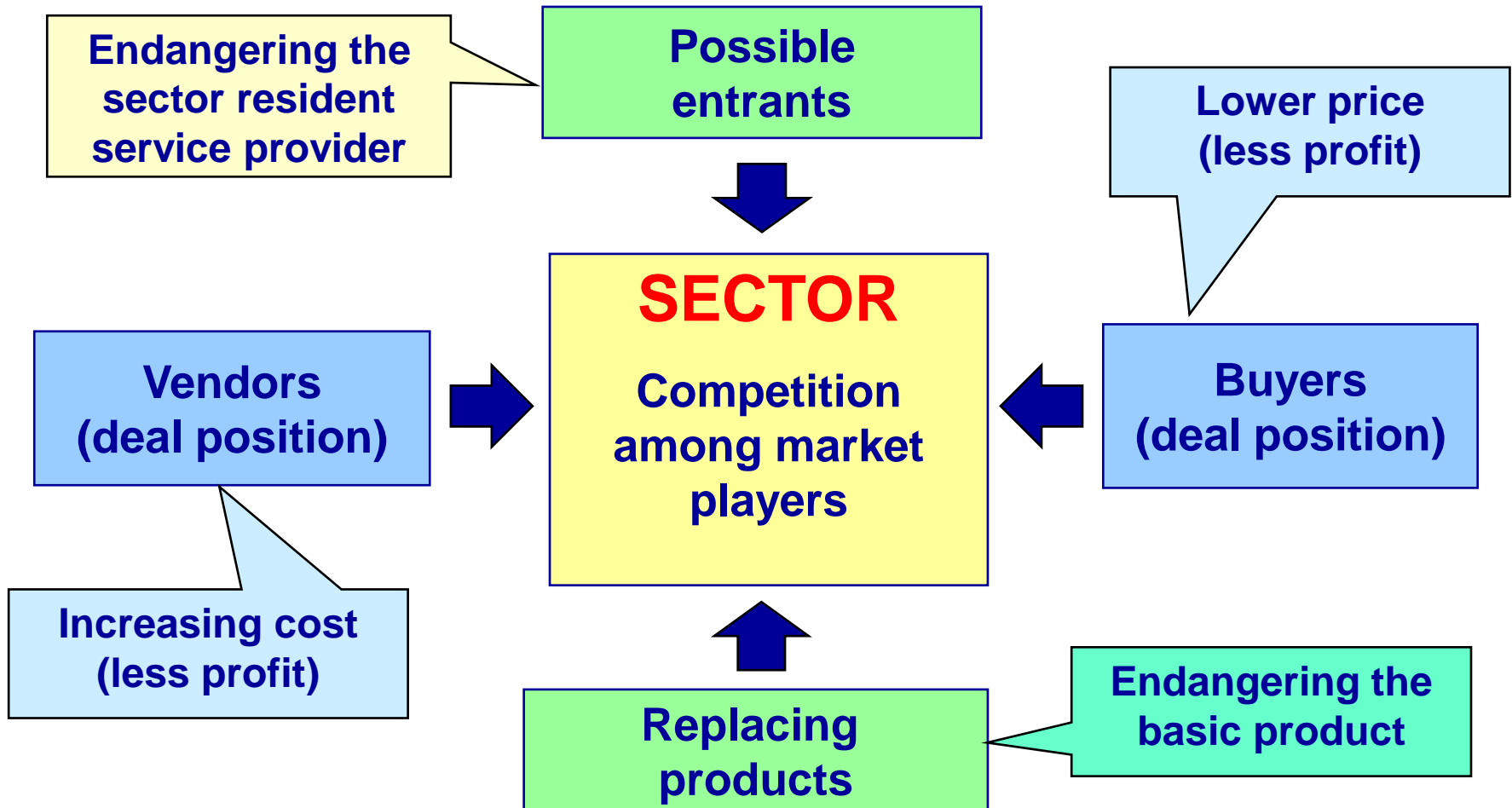
- IT design
- IT consulting
- IT deployment
- IT system management
- IT support, maintenance

Telecom services

- Fixed phone services
- Mobile phone services
- Data and leased line services
- Internet and online services
- CATV services

COMPETITIVE MARKET ENVIRONMENT

Porter diagram

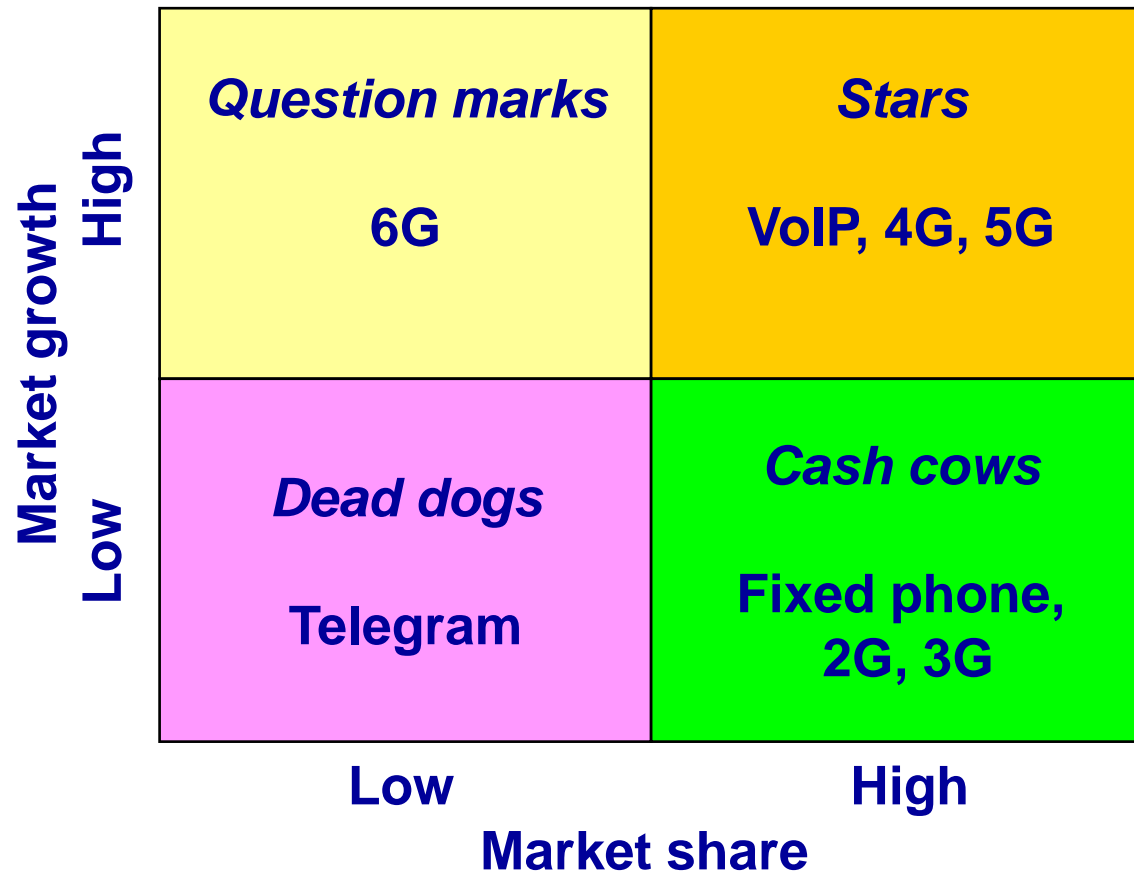


METHODS TO INCREASE REVENUE

- **Selling existing product**
 - on new (geographical) markets,
 - for new customer group.
- **Improvement of existing products**
 - adding new features,
 - with new packaging.
- **Launching new products**
- **Entering new business areas, sectors**
- **Starting new types of activities**

MARKET POSITION OF PRODUCTS

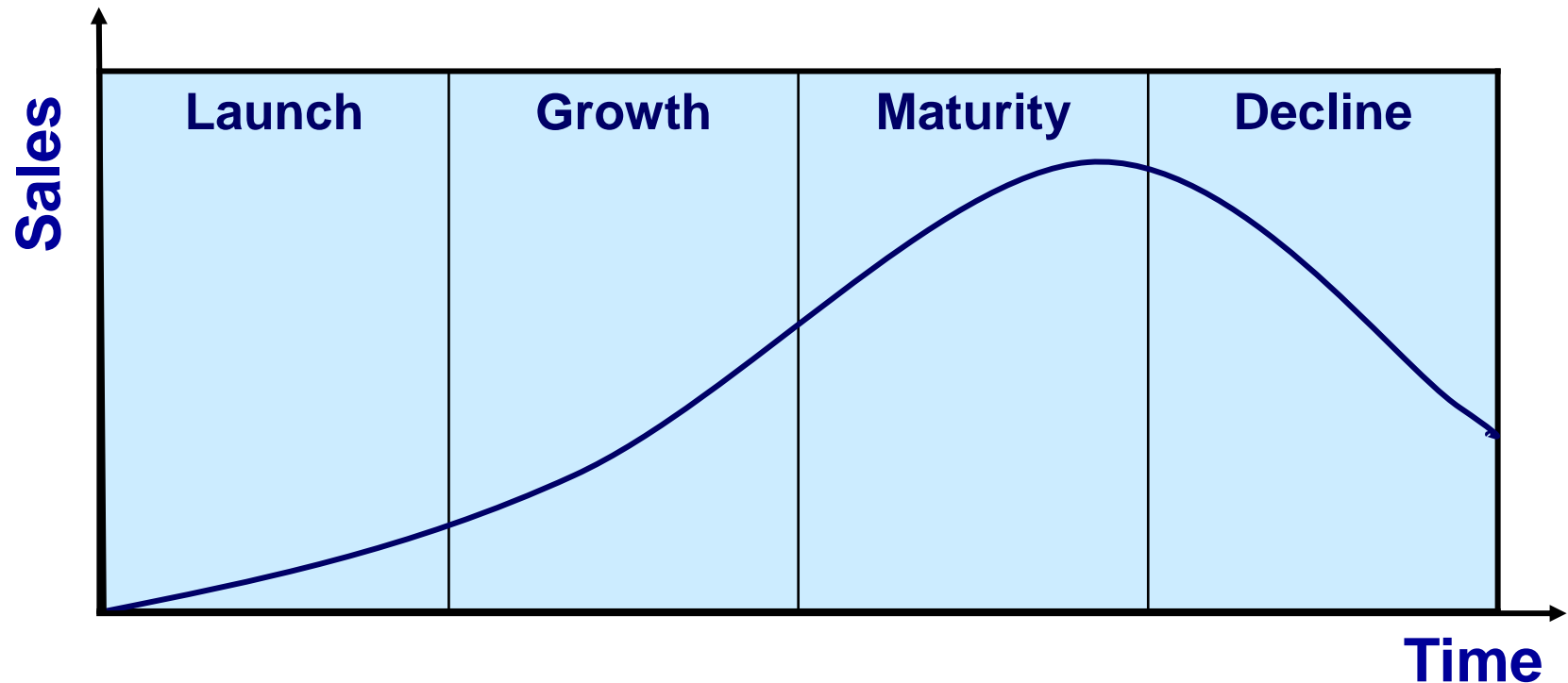
BCG matrix (Boston Consulting Group)



PRODUCT LIFE CYCLE

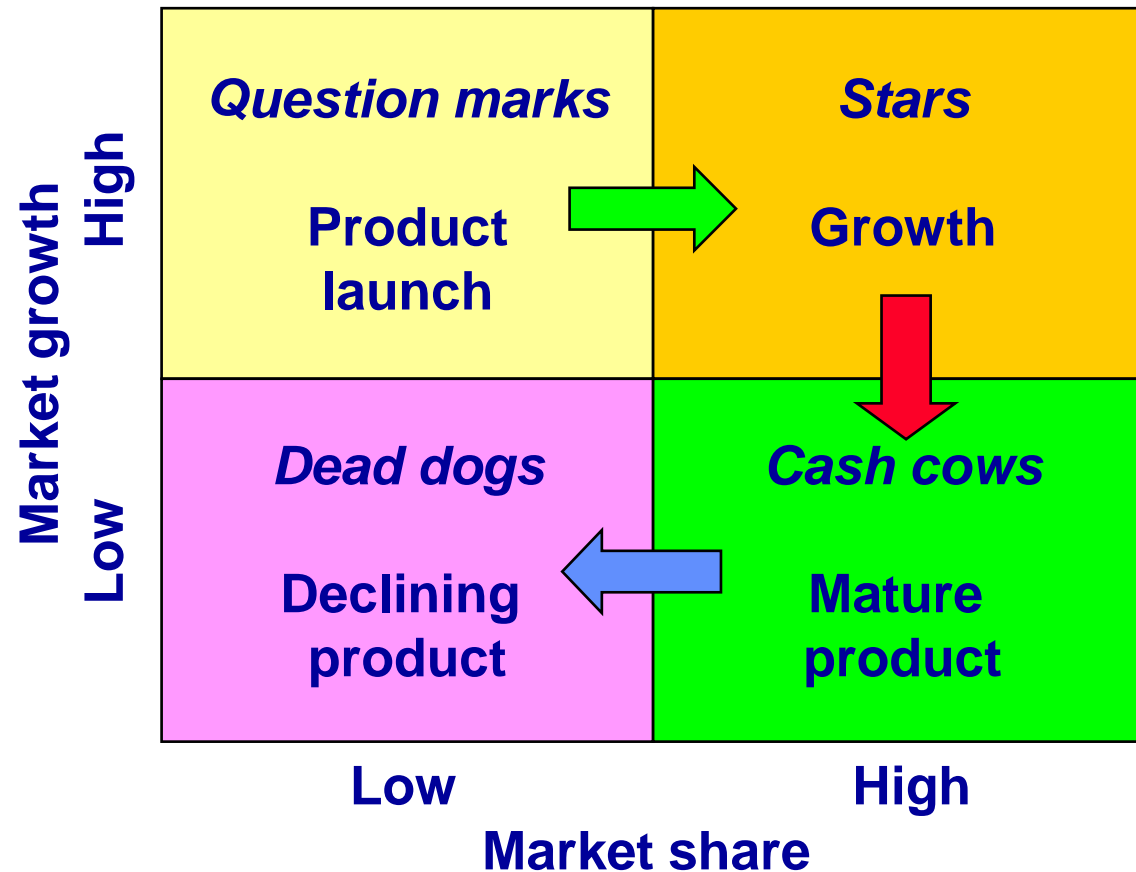
To represent the sold amount of the product

- from market launch
- until withdrawing from the market,
as a function of time.

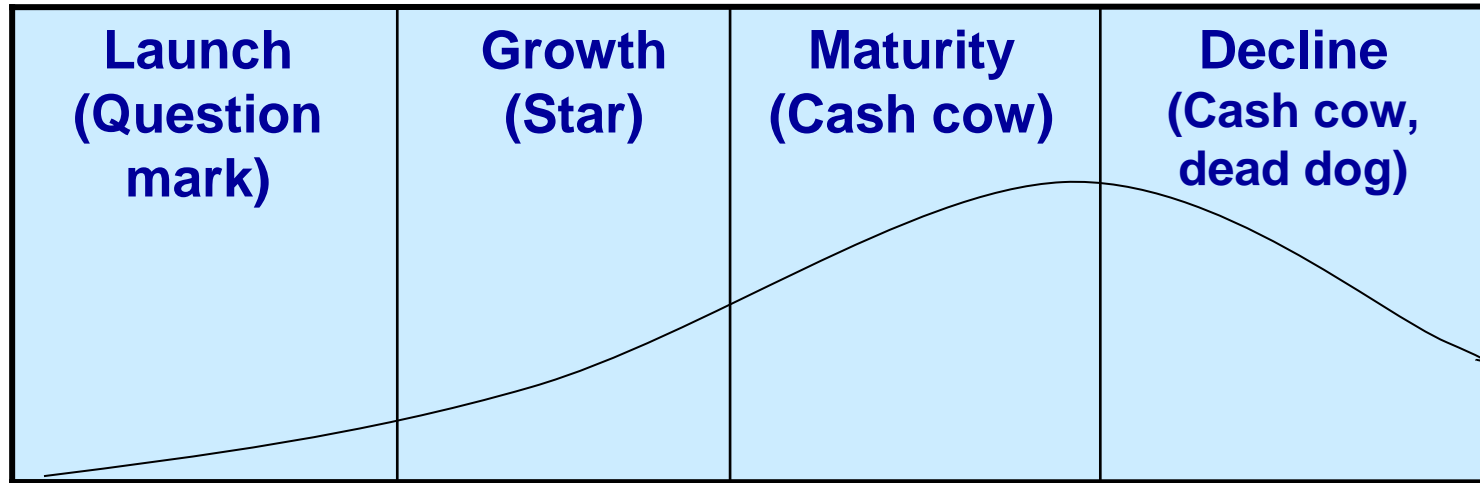


LIFE PHASES OF PRODUCTS

BCG matrix (Boston Consulting Group)



Features of life phases



Sales volume	low	fast growing	maximal	decreasing
Cost	high	average	average	low
Profit	negative	growing	high	decreasing
Buyers	innovators	early users	average customers	late users

PRODUCT POLICY

In a given time period

- what kind of products should be **developed**,
- which products should be **manufactured and sold**.

Tasks of product policy

- product development
- life cycle management
- brand decisions
- packaging
- forming product range (family)

PRODUCT DEVELOPMENT

The aim of product development

- meeting the changing and increasing customer demands,
- to increase market share,
- to ensure enterprise growth,
- to keep and grow competitiveness,
- to generate profit.

Product development types

- initiating: new, still unknown product on the market,
- following: already known product on the market,
- product enhancement: adding new features,
- product variation: different products by market segments.

PRODUCT DEVELOPMENT PROCESS

- Idea management (collecting and selecting ideas)
- Preparing product proposals (product concepts)
- Preparing business plan (product description, market segments, price, marketing methods)
- Realization (product manufacturing, cost analysis, market research, price setting)
- Product launch on the market
- Testing launch effectiveness
- Product correction, finalization

In each step business estimations should be taken into account.

BUYERS (CUSTOMERS)

Buyers

- All the individuals, enterprises and institutions buying products and services **to meet their own demands.**

Buyers' decision process

- Problem emergence (need for something)
- Collecting information (possibilities, choice)
- Evaluation of alternatives (compare possibilities)
- Decision for buying (based on own knowledge and others' experience, advices)
- Post purchase behaviour (,we have got what we wanted, shall we propose to others, or keep back others from buying')

TYPES OF BUYER BEHAVIOUR

Rational behaviour

- strong cognitive effect,
- optimized buyer's decision.

Keeping daily habits behaviour

- buying automatism (routine),
- no search for novelties.

Impulsive behaviour

- fast decision on an emotional basis.

Socially dependent behaviour

- watching and listening to others (friends, relatives).

CUSTOMER VALUE

Customer acquisition and retention

- customers' acquisition costs about ten times more than their retention
- „tailored” customer care at each customer segment, e.g. personal customer manager for key customers
- discounts, actions, bonus points, bonus programs
- handling customer complaint (by customer service channels)

Customer life-time

- goal is to maximize customer life-time
- maintenance of customer loyalty

Customer profitability

- revenue level from a customer (+)
- cost of ”customer care” (-)

PRODUCT PRICING

Price is an amount of money for which a given product can be sold or bought.

Price calculation methods

- **cost based pricing** (conventional prices)
 - manufacturers: cost + profit
 - sales enterprise: purchase price + margin
- **demand oriented pricing** (customer oriented prices)
 - price based on the buyers' price expectation (market research)
- **competition oriented pricing** (competitive prices)
 - prices competing with the other market players' (competitors') ones (large enterprises – price leaders, small enterprises – price followers)

CONSUMERS' PRICE SENSITIVITY

Price estimation

- based on the features of the product (cheap, expensive, suitable)
- compared to similar products, substitutes, supplementary products (cheaper, more expensive, similar)

Price change estimation

- price elasticity coefficient: showing how the demand reacts to the price change (generally if the price decreases then the demand increases and vica versa)

$$\text{price elasticity coefficient (E)} = \frac{\text{demand change in \%}}{\text{price change in \%}}$$

- The price is non-elastic, if $0 < |E| < 1$
- The price is elastic, if $|E| > 1$

SELLER, SERVICE PROVIDER

In order to meet the buyers' need the seller, service provider analyzes the market (4P)

- **Product:** definition of the product itself
- **Price:** setting up prices
- **Place:** organizing the sales on the market
- **Promotion:** tries to influence the buyers

MARKET SEGMENTATION

Market segmentation – splitting the market into pieces

- according to products or product groups,
- according to customer types.

Product criteria

- product function
- product price
- product reputation, image

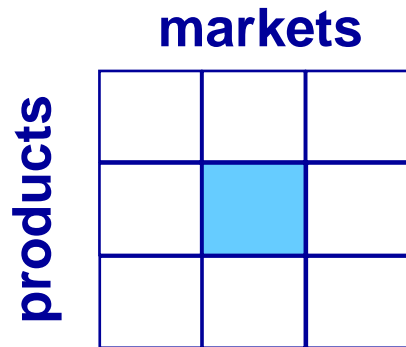
Customer criteria

- Location: type (town/village) and size of settlement
- Demographic: age, sex, family, (nationality)
- Enterprise type: micro, SME, large enterprise, institution, state
- Societal: occupation, education, income, life style
- Behaviour: product usage, loyalty, personal interest

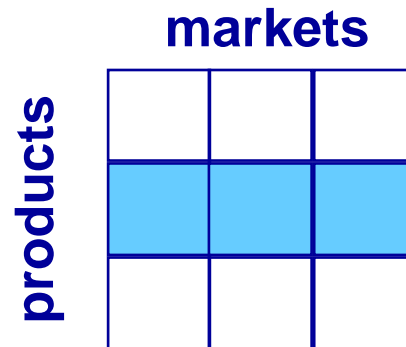
MARKET SEGMENTATION

Markets		Individuals	Small enterpr.	Medium enter.	Large enterpr.
Products	Fixed phone				
	Mobile phone				
	Internet access				
	CATV				
	Data services				
	Private network				

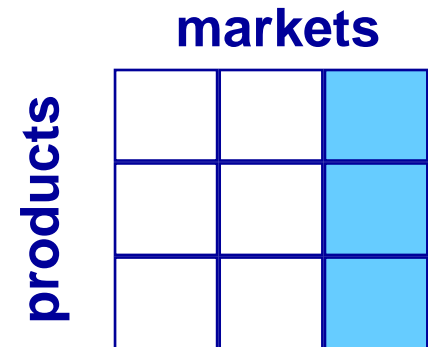
SELECTION OF TARGET MARKETS



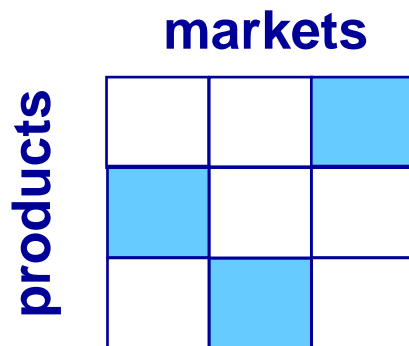
Single segment
concentration



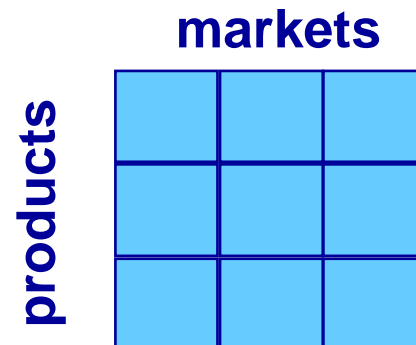
Product
specialization



Market
specialization



“Selecting”
specialization



Full market
coverage

MARKET RESEARCH

- Organized systematic research of market phenomena
- Exploration of the market opportunities of the enterprise

Market research methods

Primary

- Data collection on the market (field research)
- Acquisition of new, still not known original data

Secondary

- Desk research
- Reuse of data collected earlier by others

PRODUCT ATTRACTIVENESS

Quality

- The whole of the characters of the product meeting the customers' expectations
- Only the **good quality** is the basis of **long term success** accompanied by the continuous growth of sales.

Brand

- A **distinguishing name** of the product, referring to the quality as well
- **Trademark** is the legally protected form of a brand (text, picture, logo)

Design

- **The final aesthetic form** of the product as it appears for the customers
- It should be in harmony with the functionality and the way of use of the product

Packaging

- Expresses the character of the product, provides the necessary information
- Catching the eyes, raising intention for purchase

SALES METHODS OF PRODUCTS

Sales

- Handing over the product to the buyer against agreed price

Sales methods

Production oriented (demand driven market)

- demand > offer, „everything” can be sold
- in order to meet the demand it is necessary to increase production

Sales oriented (offer driven market)

- demand < offer, necessary to raise the interest for the product (promotion)
- the salespeople must sell the product on the market

Customer oriented (competition for the customers)

- „His/Her Majesty the Customer”
- creating products with respect to user demand
- catch the customers, build customer loyalty
- preferences, actions, loyalty programmes, ect.

SALES PROMOTION

- Direct promotion of customers for buying, salespeople for selling products
- Offering additional value (e.g. zero entrance fee) to motivate purchase

Sales promotion methods

Promoting customers

- Prize winning actions
- Preferential applications
- Coupons
- Presents
- Bargain prices

Promoting salespeople

- Keeping contact
- Training
- Product shows
- Premium payment
- Price reimbursement

PRODUCT ADVERTISEMENT

Advertisement

- is a non-personal communication activity, aiming to influence the selected target group

Advertisement methods

Visual

- website
- newspaper
- poster
- public board
- flyer
- catalogue

Audio

- radio broadcasting
- public loudspeaker

Audiovisual

- television broadcasting
- cinema

TYPICAL MARKETING COMBINATIONS

Product

Price

Sales

Promotion

**Mass
product**

**Low
price**

**Many
shops**

**Bargain sale
advertisement**

**High quality
product**

**High
price**

**Exclusive
saloon**

**Prestige
advertisement**

LITERATURE

**Philip Kotler – Kevin Lane Keller:
Marketing management,
Pearson Higher Education, 2012.**

(The „Bible” of marketing people)