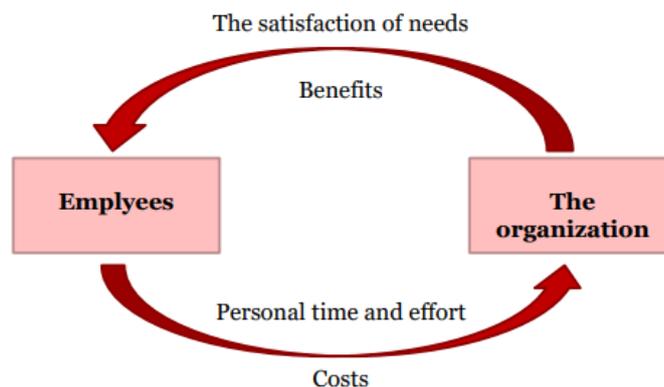


Chapter 4. The human resources management

General objectives of human resources management:

- Create, maintain and develop a group of people with suitable skills and motivation;
- Create, maintain and develop the organizational conditions that allow the achievement of individual objectives;
- Achieve the organization's efficiency and effectiveness through human resources that are available;

The reciprocity between employees and the organization

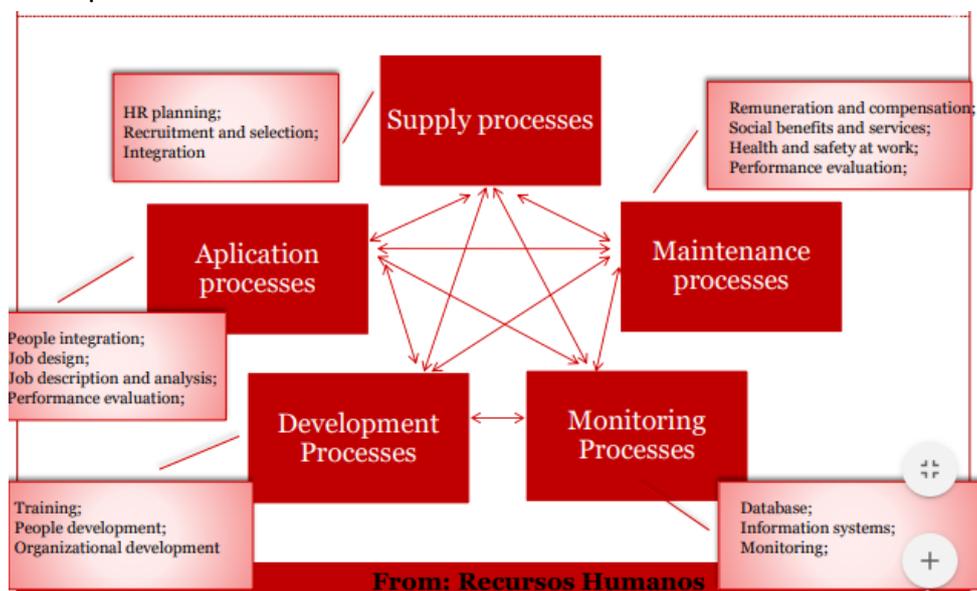


Companies to survive need to have a good management of their human resources.

Main difficulties of human resources management:

- HRM deals with means rather than ends;
- HRM deals with living, extremely complex, diverse and variable resources that are people. What works in a company may not work in another.
- HR performance and quality standards are complex and differentiated;
- HRM does not directly generate revenue sources;

HR management as a process



Supply process

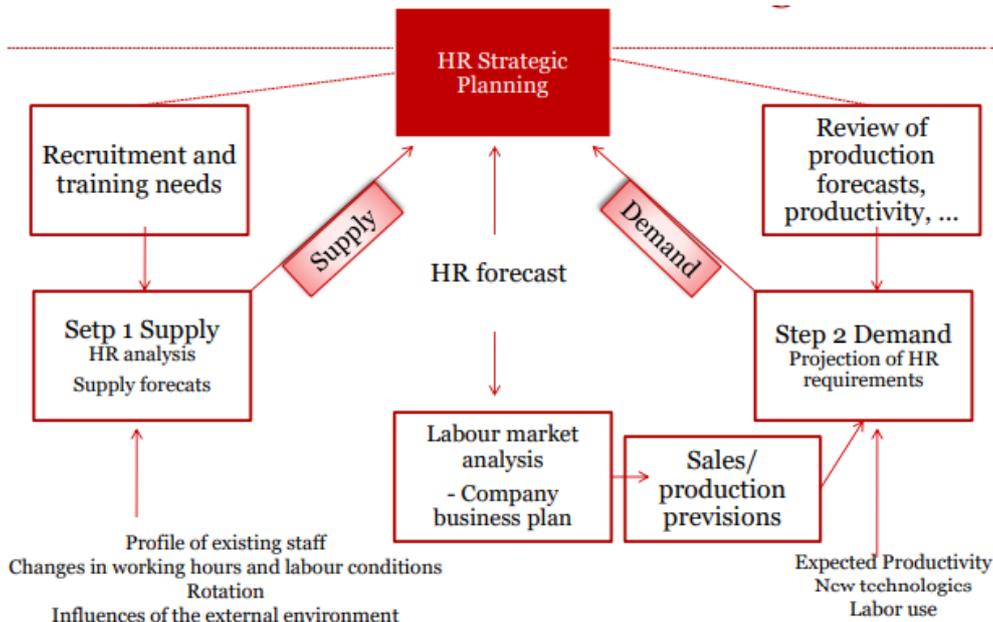
1. Human resources planning

- To forecast future needs in terms of HR;
- Includes the analysis of future employees' availability;
- Allows you to identify critical points in advance that are most likely to occur:
 - HR shortage, overstaffing or inefficient staff use;

According with the company strategy forecast how our HR will be in the next 3 years

Examples:

- In the next 3 years, 10 of our employees will be retired, so we need to replace them;
- If we predict a sales increase, we will need more employees;



HR planning allows to:

- Assess recruitment needs and its scheduling;
- Detect redundancies, find out reconversion's opportunities and avoid unnecessary layoffs;
- Forecast training needs;
- Predict the impact of introducing new forms of work at the organization;

HR planning is critical to strategy

Benefits:

- Can help reduce uncertainty
- Allows the integration of different HR policies and practices
- Can foster flexibility

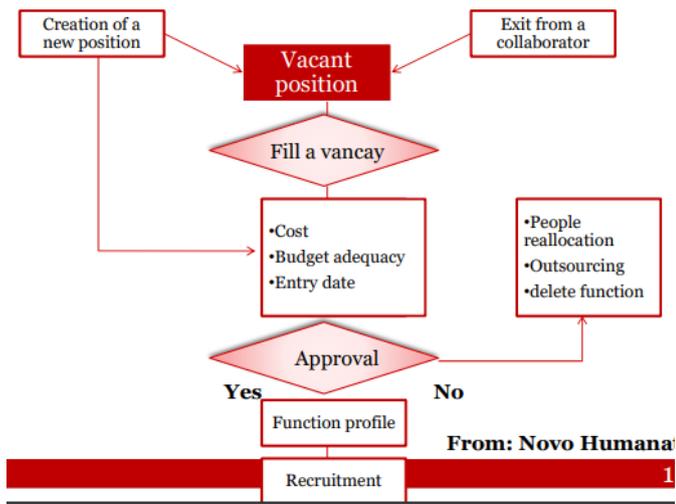
Disadvantages:

- Difficulty of forecasting, mainly due to the turbulence of external environment;
- Difficulty to design rigorous plans due to lack of data about and / or unclear business plans;

2. Recruitment and selection

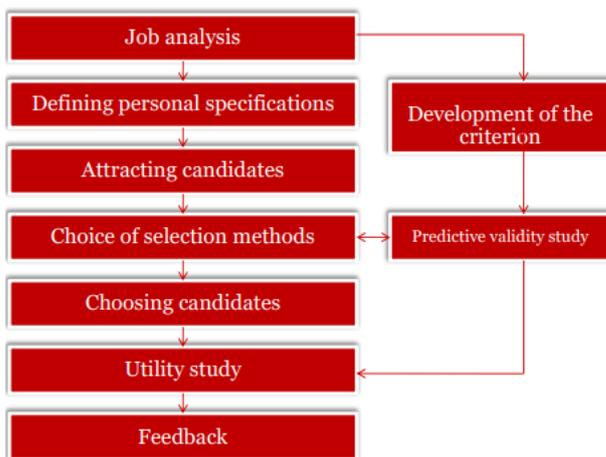
Recruitment: Search and obtain a set of candidates in number and quality appropriate to the company's needs. When we communicate to the market an available job.

Selection: Predict and choose the candidate(s) who best suits the function.



People relocation: An employee that already work in the company, the company change him to another position.

Outsourcing: look for another person outside the company.



Who do we want?

- Analyse the different alternatives
 - Job analysis and specification of appropriate personal characteristics
- Person job-fit; Development of criteria (performance standards)

How can we attract them?

Internal recruitment

- Informal methods: -Direct selection (management

appointment)

- "Recommend a friend"

- Formal methods: -Internal competitions published by newspaper, intranet, ...
- File Scanning;
- Career Plan;

Advantages: Less risk and more information; Greater motivation and stability perception for employees; Less investment in training and recognition;

Disadvantages: Offer of candidates with insufficient qualifications; Wave effect; Conflict of interests; Loss of creativity and innovation; It can increase bureaucracy;

External recruitment

- Informal methods: - Database
- Previous employers
- Trainees

- References
- Cooperation program with universities
- Formal methods: -Direct (by media)
 - Indirect (employment centres, recruitment companies, head-hunters)

Advantages:

- Innovation; Satisfies rapid organic growth requirements;
- Lower training costs;

Disadvantages:

- More expensive; Consumes more time; Lack of knowledge of the candidate;
- Can frustrate employees' career expectations;

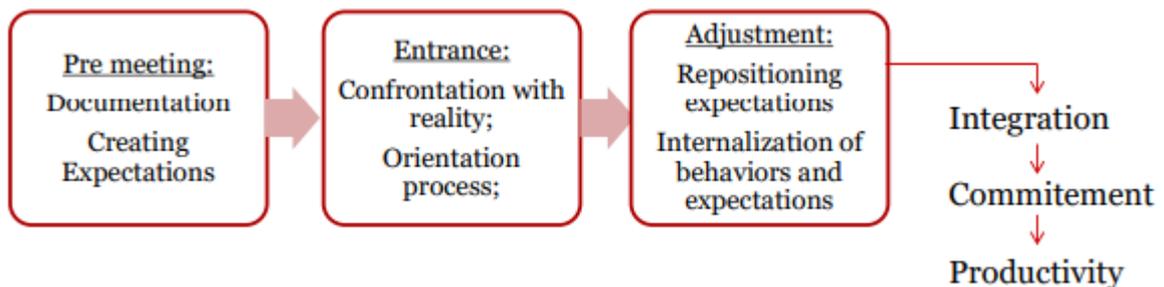
How can we identify them?

The selection process purpose: to detect the candidate suitability for the job.

Measurement - Decision making - Evaluation

→ How important is the selection?

- **Selection tools- Measurement of the differences between candidates**
 - Standard forms; Curriculum Vitae and letter of candidacy; other questionnaires of biographical information;
 - Tests: of aptitude tests, personality, honesty, group, medical analysis, ...
 - Situation tests;
 - References
 - Assessment centres
 - Interview
- **The act of selection**
 - Presentation of the proposal to the candidate, negotiation and acceptance by the candidate;



How do we know we have done well? (value of the recruitment and selection processes)

- Selection efficiency
- The standard deviation of performance
- Costs associated with the process

Application processes

1. Job description and analysis

→ An organization can be seen as a "role system"

Job: set of tasks (tasks or attributions previously determined) that occupy a formal position in the organization chart

→ The systematic and intentional process of collecting information

Job description:

- A process that consists of listing the tasks or duties that make up a position and make it different from all other positions in the organization
- Refers to intrinsic aspects (the content of work):
 - What does the occupant do, when does he/she do, how does he/she do it, and why does he/she do it? (i.e., assignments, methods and objectives)

1. Function title

2. Position of the function in the organization

- a) Function level
- b) Subordination
- c) Supervision
- d) Collateral communications

3. Job content. Tasks or assignments (Daily, Weekly, Monthly, Annual, Sporadic, In substitution)

Job analysis:

- It consists in determining the qualitative demands, responsibilities and conditions required by the position
- Refers to extrinsic aspects, i.e. requirements that the position imposes on its occupant

1. Specification factors

- a) Mental Requirements
- b) Physical requirements
- c) Responsibilities involved
- d) Work conditions

Implication of job description and analysis:

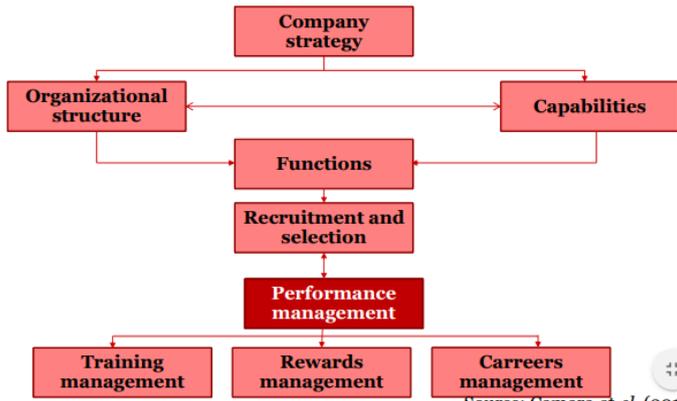
- Implications for human resources policies and practices, such as:
 - Recruitment and selection
 - Development and evaluation
 - Remuneration

2. Performance management systems

Objectives:

- The rationale for human resources decisions: Compensation, training, promotion, etc.
- Communication instrument: of the organization's norms and values

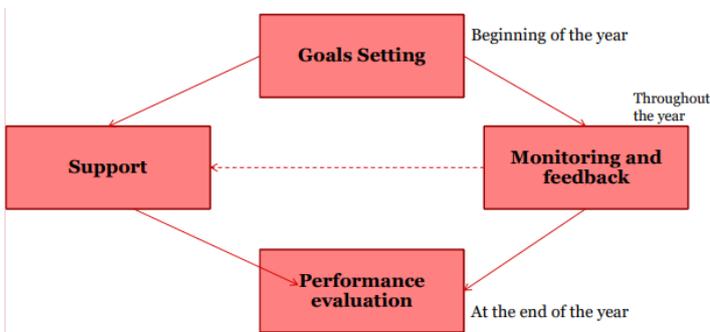
- An instrument used to validate other practices: for example: selection and / or training
- Optimize employee contribution to the business results



Advantages of using performance management systems:

- Align individual goals with organizational goals
- Make clear to each employee what is expected of him/her and how his/her performance will be measured
- Increase employee commitment
- in the achievement of the agreed objectives
- Track and support the employee
- Reward the employee for the achievements
- Create an opportunity for personal development according to identified weaknesses
- Fostering a performance culture

Generic model for performance management



3. Performance evaluation

Evaluation tools:

- Assessment scales
- Comparison with the objective
- Critical incidents
- Narrative report
- Assessment scales based on behaviours

Main potential problems:

- Difficulty in defining evaluation parameters
- Different rigor parameters in the evaluation

- The halo effect: The halo effect is a type of cognitive bias in which our overall impression of a person influences how we feel and think about his or her character. Essentially, your overall impression of a person ("He is nice!") impacts your evaluations of that person's specific traits ("He is also smart!"). Perceptions of a single trait can carry over to how people perceive other aspects of that person. One great example of the halo effect in action is our overall impression of celebrities. Since people perceive them as attractive, successful, and often likable, they also tend to see them as intelligent, kind, and funny.
- Similarity error
- The low motivation of the evaluator
- The tendency to level by the average
- The creation of stereotypes
- Inflationary pressures
- A prior decision on classification
- Contrast effect
- Effect of clemency

Who is responsible for evaluating?

- Hierarchical superior (our boss): the most common, make sense because it's the one person that has better access to our performance and tasks that we are supposed to do.
- Self-evaluation
- The pairs
- The Human resources department: is the one that has better preparation to do it
- Others

360° Evaluation: The mix of all above mentioned, to have a more detailed information about the performance

Maintenance

1. Reward system
 - Range of material and immaterial counterparts that employees receive in return for the quality of their performance.
 - Used to retain and maintain the optimal level of employee performance
 - Promotes the alignment of employees with the strategic objectives of the company

Objectives of the reward system

1. Attract, retain and motivate the best professionals
2. Be financially sustainable in the medium term: try to have a better profit by motivating the employees
 - Fixed component
 - Variable component
3. Be perceived as fair by its recipients

Components of the reward system

- Intrinsic rewards (Distinctive factors):
 - Job design
 - Management style
 - Recognition mechanisms

- Development opportunities
- Career progression
- Extrinsic rewards (competitive factors):
 - Salary
 - Incentives
 - Benefits: not financial but, for example, health/ medical assurance, phones for free. Sometimes to optimized benefits we choose not to receive all in money, because of taxes, but received other benefits like medical assurance
 - Status symbols

Advantages of using incentives

- Allow for greater synchronization between the staff costs and the business cycle
- Remuneration based on the performance of the employee
- Link individual performance to business results
- Circumscribe the range of benefits assigned

Development processes

1. Training and development

To survive, the organization must:

- Be flexible
- Be competitive
- Be innovative
- Be aware of technological developments
- Focus on quality
- Be customer oriented
- Improve continually

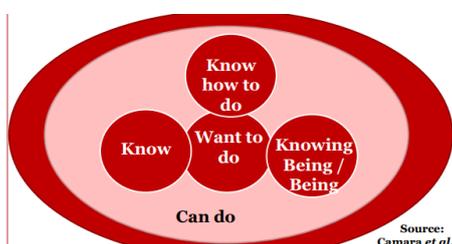
Purpose:

- Training: Improve the performance of the current job
- Development: Acquisition of new knowledge and skills

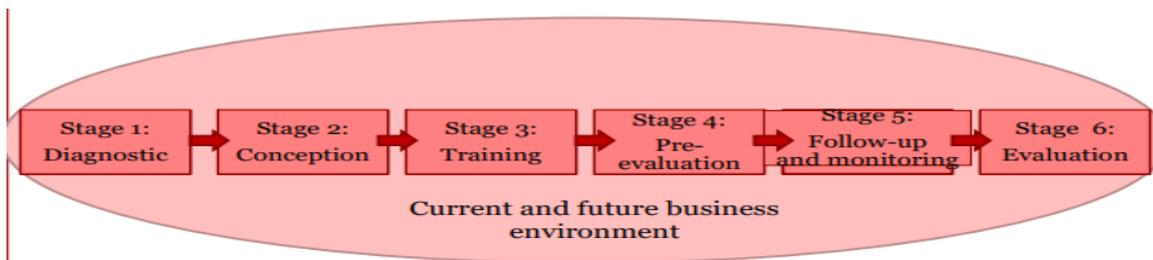
Learning

- The learning process implies: acquisition, experience and feedback
- What can we learn in organizations?
 - Motor skills
 - Theoretical and technical knowledge
 - Relational skills
 - Attitudes and values

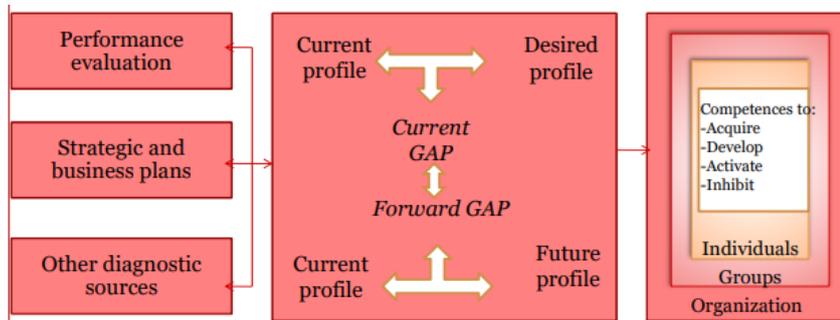
Competences development:



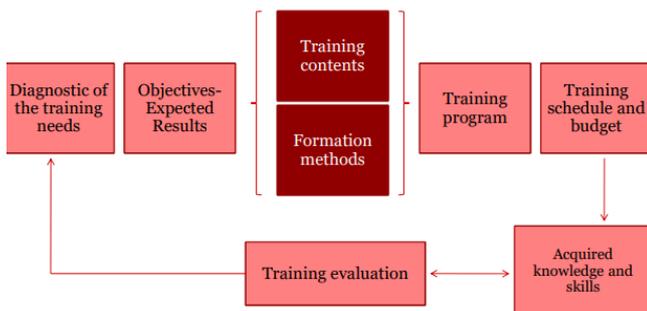
Stages of the training process:



- **Diagnostic of training needs**



Steps for drawing up a training plan

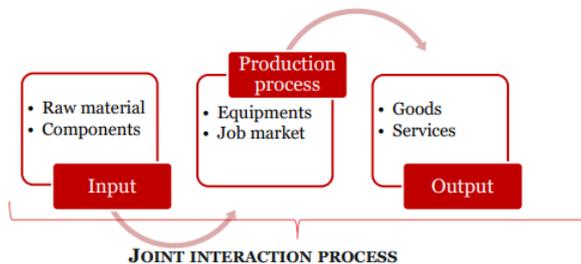


Training methods

- **Expositive:**
 - Lessons and courses
 - Computer aided training
 - E-learning
- **Simulations:**
 - Case studies
 - Role playing
 - Simulators
 - Virtual reality
 - Assessment centres
- **Training on-the-job:**
 - Orientation
 - Socialization
 - Rotation
 - Apprentices
 - Coaching

Chapter 5. Suppliers, production planning, stocks and services management

Production and operations



Production management

objective:

- ensure the achievement of company objectives
- through the integrated use of resource

Major concerns

- Maximizing the efficiency of the production process
- Given the desired level of effectiveness
- Increasing flexibility and adaptability

The transformation process:

Industrial versus service company main differences:

- Tangibility (services are generally intangible)
- Period of time between production and consumption (in services, production and consumption occur simultaneously)
- Level of interaction with consumers (higher for services)
- Possibility of stocking and resale of the product (just possible in the industrial companies)
- Output uniformity (low in services)
- Work intensity (higher for services)
- Possibility of automation (higher in industrial companies)
- Productivity measurement (most difficult in services)

Different types of production:

→ According to customer relationship

- Production to stock
- Production to order

→ According to the processes

- Continuous production: production or assembly lines
- Intermittent production: shops working to orders

Main factors in which they differ:

- Equipment

- Specialization of the machinery
- Production flow
- Processing at every moment
- Input elements
- Number of manufacturing orders executed simultaneously
- Sequence of operations
- Units produced of each type
- Work conditions
- Planning
- Destination of production made

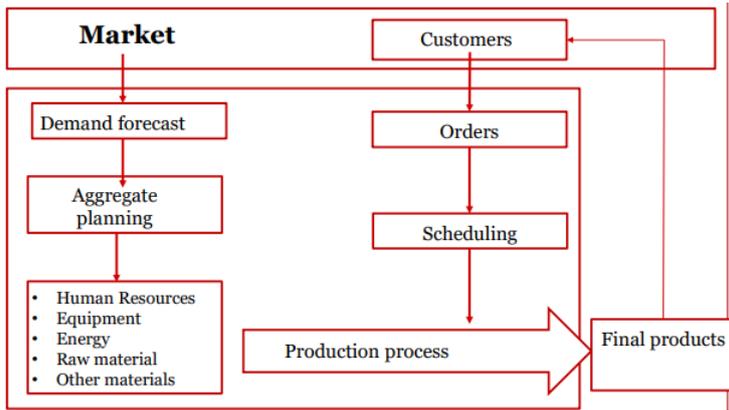
Intermediate models for production management:

Production: by order, by lots, in series/ mass production, in fluids

Some of the decisions to be taken in the area of production management:

Area	Main issues to deal
Goods and services design	<ul style="list-style-type: none"> • What goods and services to offer? • How should we design these products and services?
Quality management	<ul style="list-style-type: none"> • How do we define quality? • Who is responsible for quality?
Definition of capacity and processes	<ul style="list-style-type: none"> • What processes and capacity do these products need? • What technology and equipment do these processes need?
Location	<ul style="list-style-type: none"> • Where should we locate the facilities? • What are the criteria for deciding the location?
Layout definition	<ul style="list-style-type: none"> • What should be the arrangement of the facilities and what is the flow of materials? • To pursue the plan what should be the size of the facilities?
Human resources and job design	<ul style="list-style-type: none"> • How to create a reasonable working environment? • How much can the employees produce?
Supply chain and management	<ul style="list-style-type: none"> • Should the company produce or buy the components? • Who are the suppliers?
Stocks, material requirements, JIT	<ul style="list-style-type: none"> • What stock is required for each item? • How to place orders?
Intermediate and short-term planning	<ul style="list-style-type: none"> • Should the company hire employees or use work overtime? • What order should the company do next?
Maintenance	<ul style="list-style-type: none"> • When should the company perform maintenance? • Who is responsible for maintenance?

Flowchart of the productive activities



Scheduling

Purpose: ascertain, according to a given criterion, the sequence a set of orders to efficiently utilize available equipment

Production planning: aims to find the appropriate way to manage the productive resources needed for the transformation of raw materials and other materials

Production Planning

Objectives: Prepare the plans which will guide production and guide its control

Consequences of lack of planning:

- Delays during the production process
- Several stopovers due to misallocation
- Dead times
- Increases in production costs
- Exaggerated stock level
- Increase in manufacturing lead times

Demand forecast

- When there is a time interval between awareness of an event or need and its occurrence
- It is important to planning and forecasting.
- In management, planning and forecasting are important because the lead time of decision making goes

From:

Some years —————> investment in fixed capital

To:

Some hours —————> production programs

Forecasting helps to do plans

We can classify the forecast according to the time horizon:

- Short-term (existing resources) - Up to 1 year, usually less than 3 months:
 - Tends to be more accurate than longer term forecasts
 - Purchase schedule, production schedule, ...
- Medium/term (additional resources) - From 3 months to 3 years
 - Sales planning, production planning, budgeting, ...
- Long-term (desired resources) - 3 or more years
 - New products, capital budgeting, R&D, expansion,

General forecasting process:

1. Determine the motivations to forecast
2. Select the items to forecast
3. Determine the forecast horizon
4. Select the forecast model or models
5. Collect the required data
6. Prepare the forecast
7. Validate and implement results

Main approaches to forecasting:

Qualitative methods: Used when the situation is vague and there is little data. Involve intuition, personal experience

For example: new products, new technologies (e.g. internet sales)

Quantitative methods: Used when the situation is "stable" and there is historical data. Involve mathematical models

For example: Existing products and technologies (e.g., colour television sales forecast)

Aggregate planning strategies

Options related to capacity:

Strategy	Advantages	Disadvantages	Comments
Change in stocks	Changes in human resources are few or none. There are no sudden changes in production.	Stock hold costs may increase. Stock disruptions may lead to sales lost.	Applies to industrial companies only (and not to service companies)
Labour force change through hiring and firing	Avoid the costs of other alternatives.	Hiring, firing and training costs could be significant.	Used only when work teams are large.
Change in the production rate by using overtime or stopping time	Allows to cope with seasonal fluctuations without hiring and training costs.	Overtime pay; Employee fatigue may not be able to cope with rising demand.	Allows flexibility in aggregate production planning
Subcontracting	Provides flexibility and allows you to adjust the company output	Reduction of quality control capacity; reduction of profit margin	It applies mainly to the industrial context.
Use of part-time employees	It's less expensive and more flexible than resorting to fulltime employees.	High turnover and high training costs; It may affect the quality; Difficulty in scheduling.	High turnover and high training costs; It may affect the quality; Difficulty in scheduling.

Options related to demand:

Strategy	Advantages	Disadvantages	Comments
----------	------------	---------------	----------

To affect the demand level	Seeks to make use of excess capacity; Discounts attract new consumers	Uncertain demand Difficult to match supply level with demand;	Foster the generation of marketing ideas
Use of ordering systems	Allows to avoid overtime and maintain constant capacity	Although some customers may be willing to wait, the number of customers will decrease.	Many companies use the ordering system
Production of goods against seasonal products	Full use of resources; Provides a stable workforce	May require skills or equipment outside company comfort area	Risk of finding products or services with an opposite demand pattern

Stocks

"Stocks should always be the result of decision making, not random product accumulation, without any rationality or connection to the company's objectives."

Different types of stocks

- Classification according to the materials nature:
 - Raw material
 - Finished products
 - Work-in-process products
 - Consumables
 - Replacement components

The function of stocks

- Satisfy the demand
- Avoid breakage in the manufacturing process
- Eliminate dependency on third parties
- Absorb demand fluctuations
- Buy in the most economical way
 - Quantity to buy (quantity discounts)
 - Purchase moment
- Avoid loss sales for lack of products

The supplier function: someone is responsible for acquire the goods that are necessary. If we don't have quality resources we will not be able to produce quality products at the price we want it.

Main responsibilities:

- Acquire the good or service needed
- At the desired quality level
- In the desired amount
- Within the expected deadlines
- Best service conditions and security of supply

Stock management

It could be divided into three functions:

- **Material management**- related to the way stocks are stored (e.g. packaging, protection against theft and movement in the warehouse); make sure that the products are in a good place to preserve their quality as much as possible.
- **Administrative management**- related to all the computer support that aims to ascertain the existing stock levels in the warehouse and also the provision of information to all sectors within the company; all computer support that allows us to work properly and make a good management of the stocks (know the exact number of products that we have)
- **Economic management**- aims to rationalize systematize the supply of stocks to meet the demand in a timely manner at minimum cost. Decide what is the best number of products to stock, have stocks in excessive is expensive and having few stocks will forces us to constantly purchase the necessary products/goods and that is expensive to.

Main stocks costs

- Purchase cost
- Ordering costs
- Costs of starting a new batch (set up costs)
- Holding costs
 - Capital costs
 - Storage costs
 - Cost of obsolescence (o produto passa de moda logo o preço baixa), deterioration or breakages
- Breakage cost
- Other costs:

Lean Production and Just in Time

Lean productions key principles:

- Achieving perfect quality at first
- Minimization of waste
- Continuous improvement
- Flexibility
- Long term relationship with suppliers

Suppliers

Supply chain strategies:

- Negotiation with multiple suppliers, is usually based on a "quote" request;
- Few suppliers, based on a long-term relationship;
- Vertical integration, develop the capacity to produce goods or services previously purchased from a supplier;

Supplier selection:

Decision making process about who to buy the goods or services from. It involves a three phases process:

1. Suppliers evaluation
2. Suppliers development
3. Negotiation

Suppliers evaluation:

- It involves looking for potential suppliers and determining the likelihood that they will be good suppliers.
- It implies the development of evaluation criteria and the weighting they will assume in the decision
- Examples of selection criteria:
 - Strategic adjustment, supplier competencies, deliverability, quality management, location, distribution, financial and management stability, integrity, etc.

Suppliers development

- Related to actions that aim to integrate the supplier into the company's system.
- Includes questions such as:
- Training;
 - Help for engineering and production;
 - Information transfer procedures;

Negotiation:

- Critical aspect for the contractual relationship to occur; It often includes the definition of the terms related to quality and delivery, and payment system elements.
- Classic negotiation strategies:
 - Cost based pricing model;
 - Market based pricing model;
 - Bidding / quotation request;