

# Software Project Management (10 - 20190430)

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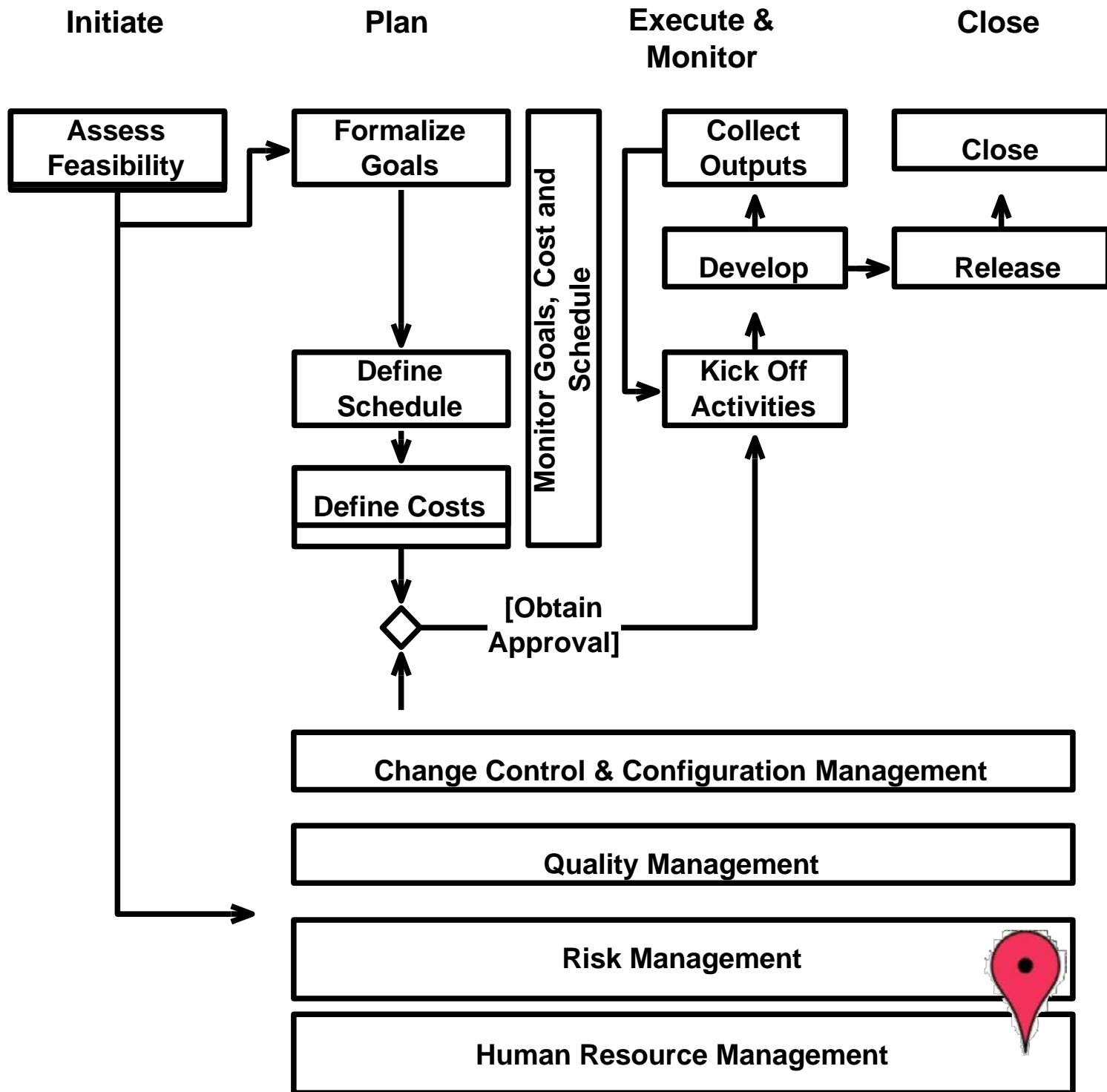
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# Managing People

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Selecting the best people and managing people working as individuals and in groups



# The Basic Process

- Four main activities in managing human resources:
  - Define staff requirements
    - \* Skills
    - \* Numbers
  - Select staff
    - \* Internal or external
    - \* Full or part-time
  - Manage staff
    - \* Make a team out of individuals
    - \* Motivate resources to perform
    - \* Make sure capabilities grow
  - Release staff

# Getting Started: Define Staff Requirements and Select Staff

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# Define Staff Requirements

- The goal of this activity is identifying the skills necessary in a project
- It “transforms” the project goals and tasks into human resource requirements and competences needed
- Some of the information:
  - Characteristics and competences (e.g., hard and soft skills)
  - Level of experience
  - Involvement (effort and timeframe)
- Input for staff selection

# Define Staff Requirements

- Hard skills
  - Specific technical abilities that can be taught and are measurable
  - Example: the ability to write software in C
  - Can be taught and learned
  - Can be measured
- Soft skills:
  - Characteristics depending on personality
  - Examples: empathy, thoroughness, and creativity
  - More difficult to learn and teach
  - More difficult to quantify

# Project Team Acquisition

- Two choices: internal or external
- The actual choice and selection can be influenced by
  - Availability
  - Timeframe
  - Organizational structure and procedures of the performing organization
  - Project priority and relevance affects
  - Project stakeholders (sponsor) and politics
  - Peer managers (competing for the same limited resources)



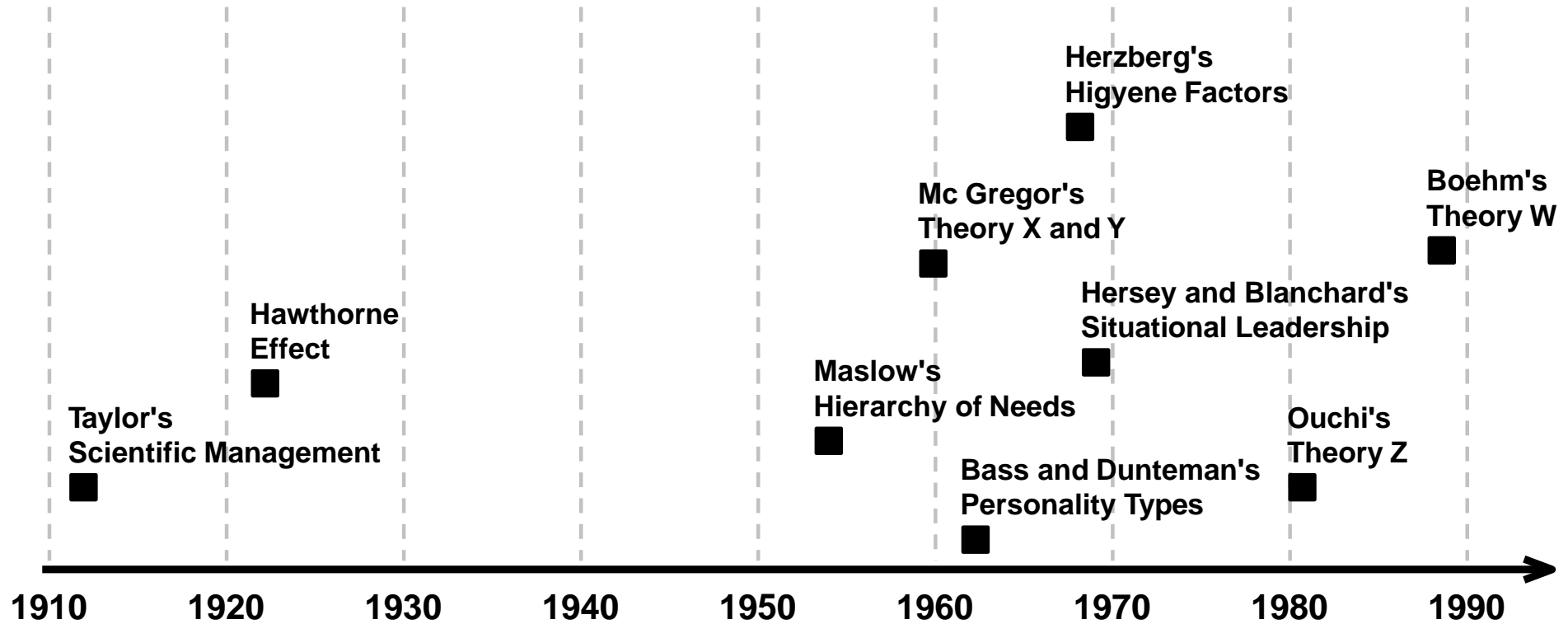
# Selecting External Staff

- Goal: selecting the candidates with the appropriate soft and hard skills
- The process:
  - Define a job description
  - Advertise the position
  - (Wait an appropriate amount of time)
  - Analyze the received resume
  - Interview the candidates
  - Select the personnel to hire
- Information from candidates: resumes, motivational letters, endorsement letters, previous employers, network and friends
- Process in collaboration with Human Resources

# Managing People

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# Timeline



# Motivational Factors

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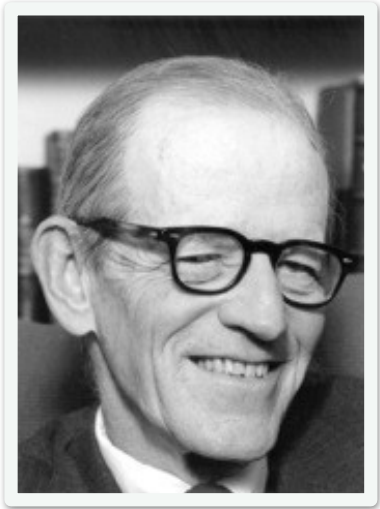
# Scientific Management

## Taylor (1911)

- First systematic theory on management. Most of it obsolete by the 30's, but seminal
- Main objective is improving economic efficiency and labor productivity
- Considerations about workforce:
  - \* Most workers who are forced to perform repetitive tasks tend to work at **the slowest rate that goes unpunished**.
  - \* Workers **could not be relied upon** for talent or intelligence and all workers behave similarly: high control is needed
  - \* Need for better pays (linked to outputs)
  - \* Breaks are necessary, but simply as a way to improve efficiency



# Hawthorne Effect

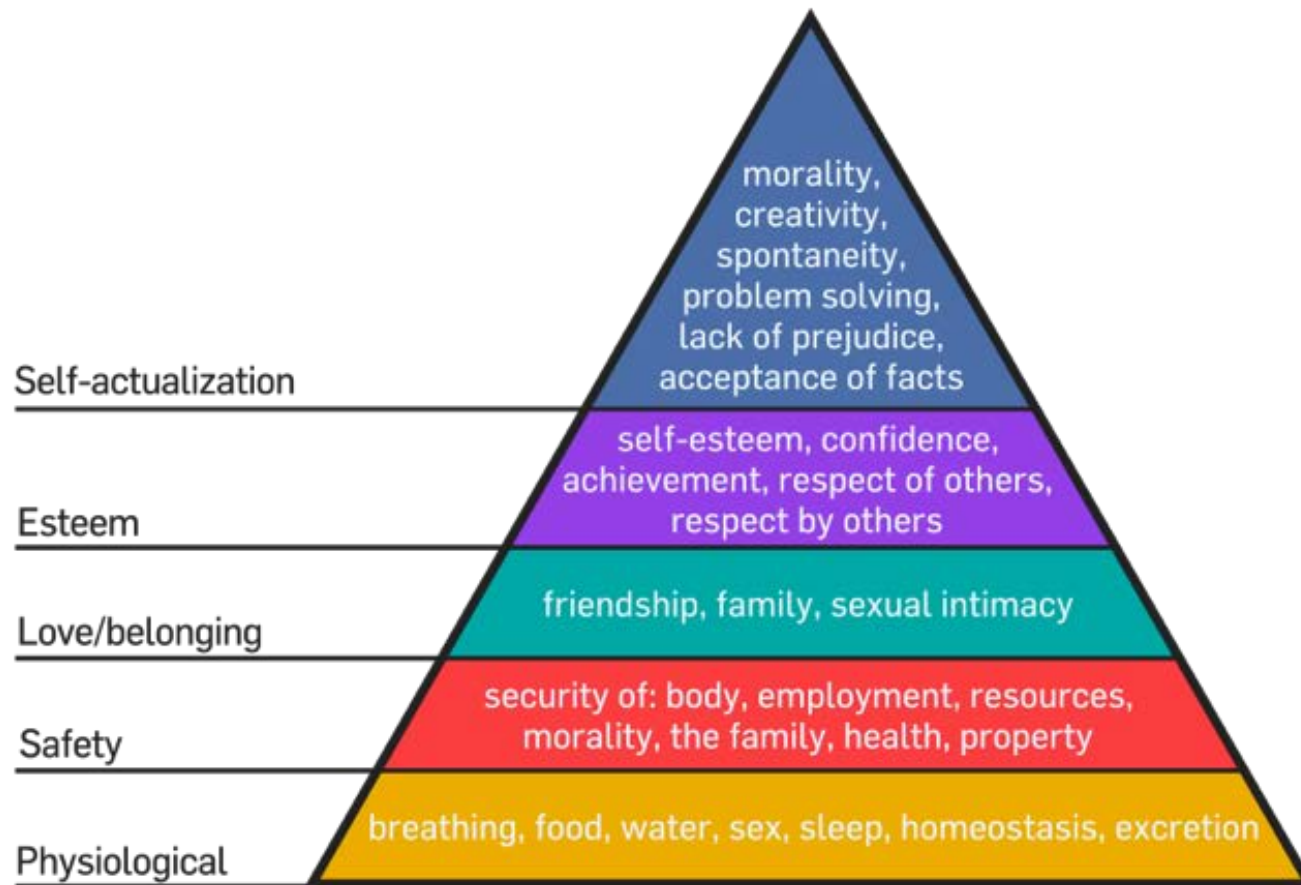
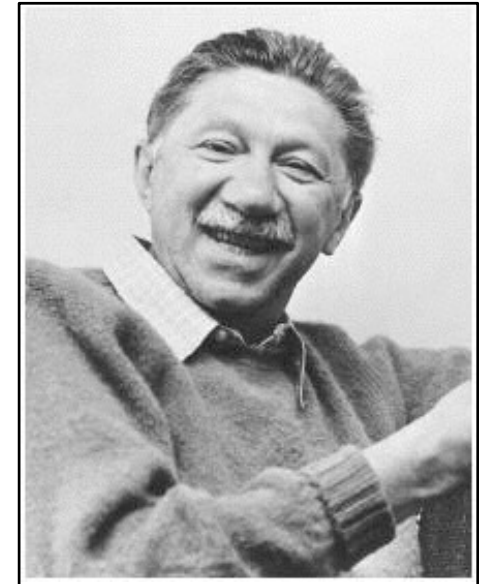


George Elton Mayo

- Studies conducted in the twenties to understand the effect of different lighting conditions on productivity
- Results indicated that increasing or decreasing lighting conditions improved workers' performances
- Conclusion: attention and feeling to be part of something important is what really matters
- Seminal work which would be later criticized (small numbers of workers involved)

# Maslow's Hierarchy of Needs

## Maslow (1954)



Source: [http://en.wikipedia.org/wiki/File:Maslow%27s\\_Hierarchy\\_of\\_Needs.svg](http://en.wikipedia.org/wiki/File:Maslow%27s_Hierarchy_of_Needs.svg), released under a CC license

# Maslow's Hierarchy of Needs

- Lower level of the hierarchy: d-needs (deficiency needs). If not met, distress
- Higher level of the hierarchy: fulfilment
- A sound management ensures that:
  - d-needs are satisfied
  - Higher levels of the hierarchy are achieved



# Theory X and Theory Y

## McGregor (1960)



### – Theory X:

- \* Human beings have **little interest in working** and they will try to avoid it if possible
- \* The majority of people is **not ambitious and not interested in taking responsibilities**
- \* Human beings are **poorly creative** in solving organizational problems
- \* Motivation is mainly related to **satisfying physical/security needs**

### – Theory Y:

- \* Working is a **natural activity**, like playing and resting
- \* People are, on average, **very creative**
- \* Motivation is often **self-realization** and **self-esteem**

# Theory X and Theory Y

- The two theories entail different styles of leadership:
  - Theory X entails an autocratic leadership
  - Theory Y entails a climate of trust
- Managers will apply theory X or Y management style according to their opinion of the people they deal with

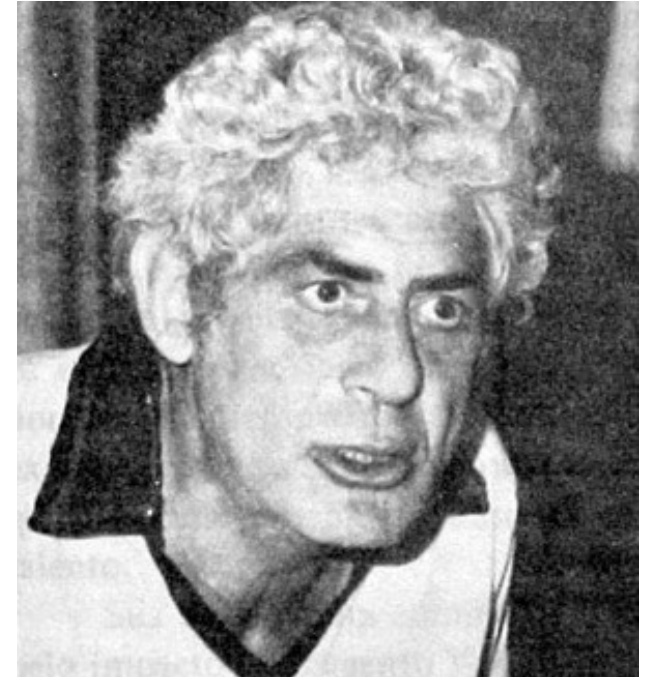
# Herzberg's Hygiene and Motivational Factors

## Frederick Herzberg

(1968)

—Three prevailing philosophies:

- \* Organizational theorists think humans are irrational. The only way is organizing work
- \* Industrial engineers believe that humans are mechanistically oriented and economically motivated
- \* Behavioral scientists believe in creating a cozy environment



# Motivation and Hygiene Factors

- The **opposite** of **job dissatisfaction** is not job satisfaction, but **no job dissatisfaction!**
- Frederick Herzberg proposed the “**Two Factor Theory**”
  - **Motivational Factors**: largely internal to an individual and generally have a direct impact on that person’s performance.
  - **Hygiene Factors**: they surround a job and are controlled by the company or organization at a high level.
- The task of an organization is ensuring the hygiene factors are met and work on the motivational factors

# Motivational and Hygiene Factors

Motivational Factors	Hygiene Factors
Achievement	Company Policy and Administration
Recognition	Supervision
Work itself	Relationship with supervisor
Responsibility	Work Conditions
Advancement	Salary
Growth	Relationship with peers
	Personal life
	Relationship with subordinates
	Status
	Security

# Personality Traits/ Interaction Types

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# Personality Traits

- People are made of different character traits
- The balance among these traits changes depending on personal circumstances and external factors
- The traits determine how we react to different stimuli
- Choosing the wrong stimulus can yield to the wrong reaction

# Personality types

## Bass and Duntleman (1963)

### – Task-oriented

- \* Self-sufficient, resourceful, aloof (cool and distant), introverted, not aggressive, competitive, independent
- \* The motivation for doing the work is the work itself (intellectual challenge)

### – Self-oriented

- \* Disagreeable, aggressive, competitive, introverted, jealous, dogmatic
- \* The work is a means to an end which is the achievement of individual goals - e.g. to get rich, to play tennis, to travel etc.

### – Interaction-oriented

- \* Not aggressive, considerate, helpful, low need for autonomy and achievement
- \* The principal motivation is the presence and actions of co-workers. People go to work because they like to go to work.



# Social Styles

**Dr. David W Merrill and Roger Reid 1964**  
**TRACOM Group 2004 (made it a <sup>TM</sup>)**

– **Analytical**

\* Attention to details, scarcely inclined to risk, requires time to take a decision

\* Need: to be right

– **Amiable**

\* Loves to collaborate, team worker, does not take decision, does not like risk

\* Need: personal security

– **Driver**

\* Intransigent, goal oriented, controlling, efficient, likes risk

\* Need: results

– **Creative/Expressive**

\* Does not like details, ambitious, likes risks, enthusiast

\* Need: approval

# Management Styles

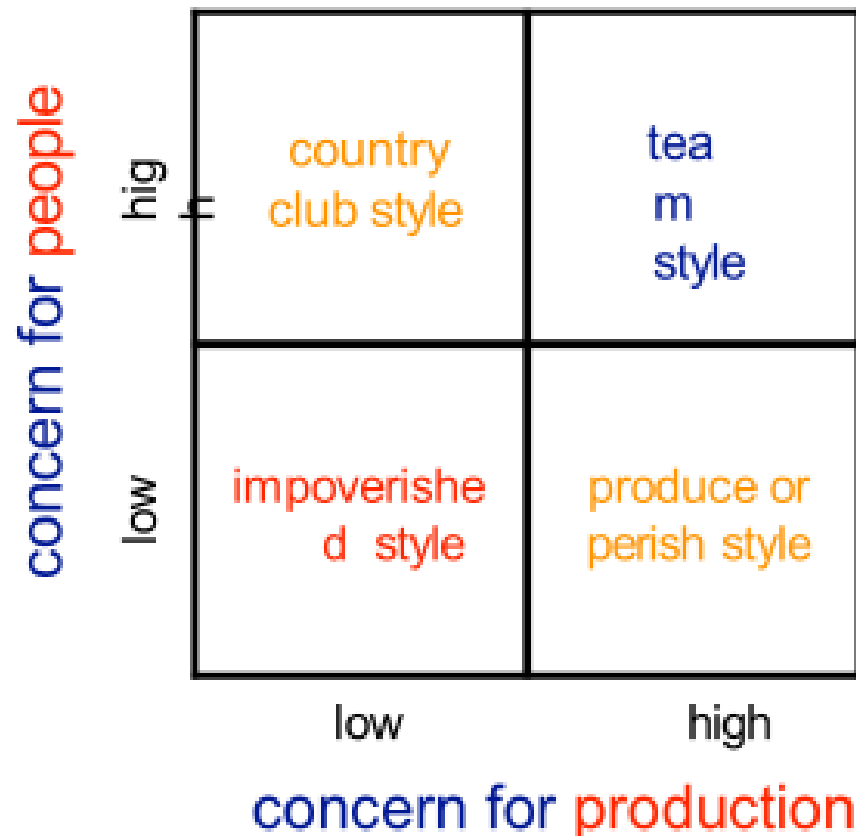
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# Management Styles

- **Autocratic:** the manager takes all the decisions; sub-cases: paternalistic, permissive or directive.
- **Persuasive:** the manager convinces subordinates to do the work (still autocratic)
- **Consultative:** the manager involves the personnel in the decision process, while retaining control over the decision process
- **Democratic:** the manager allow personnel to take part in the decision process
- **Laissez-faire** and **chaotic:** the manager is a mentor. Employees are given complete freedom on the decisions they take. Flexibility and creativity

# Managerial Grid Model

## Robert Blake and Jane Mouton (1964)



- **The impoverished style**
  - Low concern for both people and production.
  - Goal: avoid getting into trouble. Low profile, gives little, enjoy little, try to preserve job and seniority
- **The country club style**
  - High concern for people and a low concern for production.
  - Goal: friendly atmosphere (in the hope it will increase production)... but not necessarily that productive.
- **The produce or perish style**
  - High concern for production and a low concern for people
  - Employee needs unimportant; they provide their employees with money and expect performance back. Managers using this style also pressure their employees through rules and punishments to achieve the company goals.
- **The middle-of-the-road style**
  - Managers using this style try to balance between company goals and workers' needs. By giving some concern to both people and production, managers who use this style hope to achieve acceptable performance.
- **The team style**
  - In this style, high concern is paid both to people and production.
  - Encourage teamwork and commitment among employees. This method relies heavily on making employees feel as a constructive part of the company. (Based on theory Y)

# Situational Leadership

## Blanchard and Hersey (1969)

- There is no single management style: it depends upon the managed people
- the leadership style of the leader must correspond to the development level of the follower - and it's the leader who adapts.
- Styles and Commitments:
  - \* **S1. Telling/Directing**
    - high guidance and little backing/support
    - people with low competences and low commitment / unable and unwilling or insecure
  - \* **S2. Selling/Coaching**
    - high guidance and high backing/support
    - some competences, low commitment / unable but willing or motivated
  - \* **S3. Supporting/Participating**
    - little guidance and high backing/support
    - high competences, variable commitment / able but unwilling or insecure
  - \* **S4. Delegating/Observing**
    - little guidance and little backing/support
    - high competences and high commitment / able and willing or motivated

# Questions

