

# Leadership in Engineering Organizations

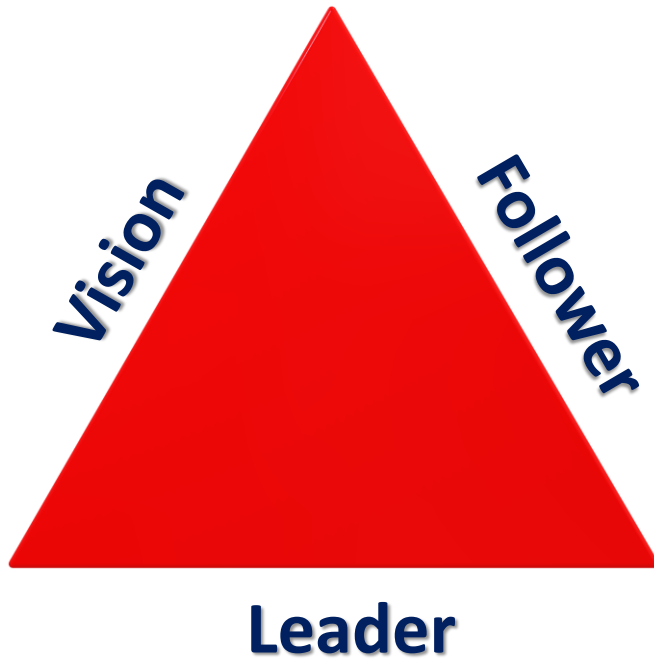
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# What is Leadership?



# Characteristics of Engineering Organizations

- Continuously Seeks to Improve
- Creativity and Innovation
- Insatiable Curiosity
- Problem Solving
- Teamwork
- People with Analytical Abilities Plus Logical Thinking
- Attention to Detail
- Adaptability to Change
- Optimism

# Manager VS Leader

- Subordinates VS Followers
- Short Term VS Long Term
- Order VS Consensus
- Effectiveness VS Efficiency
- Do the Right Things VS Do Things Right
- Predictability VS Variability
- Static VS Dynamic Environment
- Authority VS Multidisciplinary Influence

# Types of Influence

- Enthusiastic Commitment
- Indifferent Compliance
- Reluctant Obedience
- Insurgency

# Managerial Roles – Mintzberg's Taxonomy of Roles

- **Information Processing Roles**
  - Disseminator
  - Monitor
  - Spokesperson
- **Decision-Making Role**
  - Entrepreneur
  - Disturbance Handler
  - Resource Allocator
  - Negotiator
- **Interpersonal Roles**
  - Liaison
  - Figurehead
  - Leader



**Role Conflicts**

# Determinants of Managerial Work

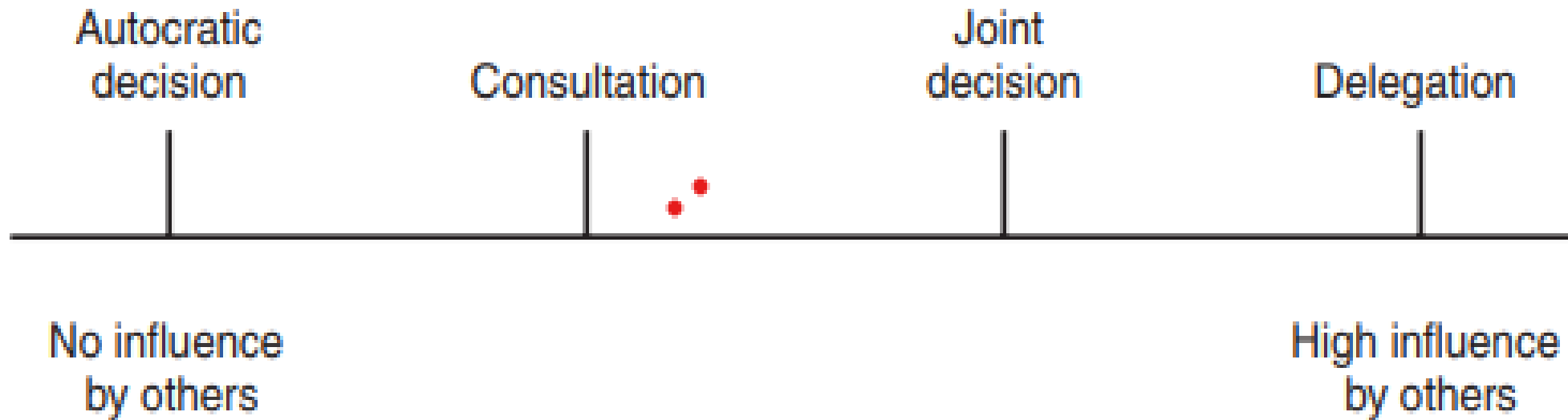
- Level of Management
- Size of Organizational Unit
- External Dependencies
- Crisis Situation
- Stage in the Organizational Life Cycle
- Social Changes

# Behavioral Leadership

- Task Behavior
- Relationship Behavior
- Change-Oriented Behavior
- Participative Behavior
- Transformational Behavior
- External Leadership Behavior
- Supportive Leadership



# Continuum of Leadership Decision Making



# Leading Change & Innovation

- Internal Creation of New Knowledge
- External Acquisition of New Knowledge
- Exploration & Exploitation
- Knowledge Diffusion & Application
- Learning Organization

# Personality Traits for Effective Leadership

- Energy Level & Stress Tolerance
- Internal Locus of Control
- Emotional Maturity
- Personal Integrity
- Socialized Power Motivation
- Moderately High Achievement Orientation
- Moderately High Self Confidence
- Moderately Low Need for Affiliation

# The Big Five Personality Traits

- Surgency
- Conscientiousness
- Agreeableness
- Adjustment
- Intellectance

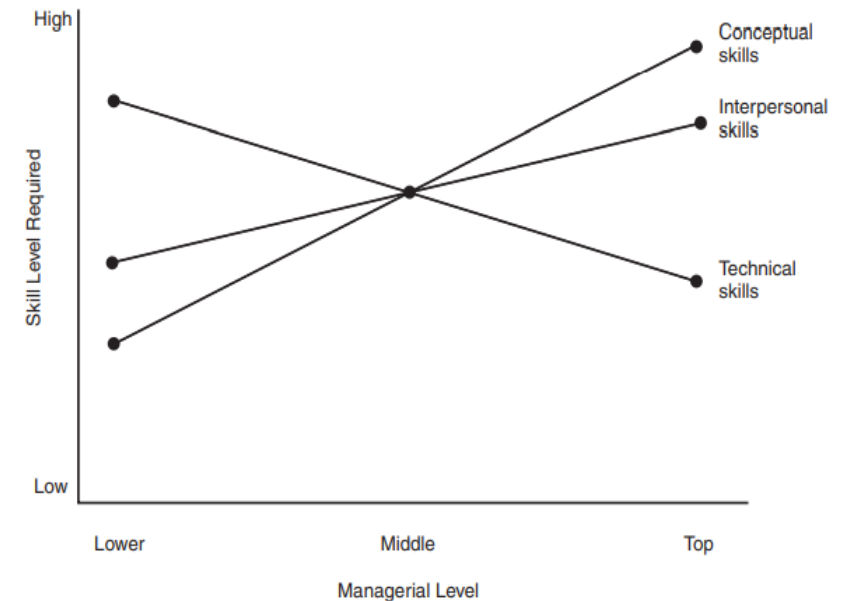
# Skills & Competencies for Success

- **Skills**

- Technical Skills
- Interpersonal Skills
- Conceptual Skills

- **Competencies**

- Emotional Intelligence
- Social Intelligence
- Learning Ability



# Power Sources of Leaders

- **Position Power**

- Legitimate Power
- Reward Power
- Coercive Power
- Information Power
- Ecological Power

- **Personal Power**

- Referent Power
- Expert Power

# Proactive Influence Tactics

- Rational Persuasion
- Apprising
- Inspirational Appeals
- Consultation
- Exchange
- Collaboration
- Ingratiation
- Personal Appeals
- Legitimizing Tactics
- Pressure
- Coalition Tactics

**Combining & Sequencing Tactics**

# Self-Management Strategies

- **Behavioral Strategies**

- Self-Goal setting
- Self-Monitoring
- Manipulation of Cues
- Self-Reward (or Criticism)
- Rehearsal

- **Cognitive Strategies**

- Self-Talk
- Mental Imagery



# Team Leadership

- Commitment to Strategies
- Members Skills
- Role Clarity
- Internal Organization & Coordination
- External Organization & Coordination
- Resources & Political Support
- Cooperation & Mutual Trust
- Collective Efficacy & Potency
- Accurate, Shared Mental Models
- Member Diversity
- Team Formation

# Strategic Leadership in Organizations

- Adaptation to the Environment
- Efficiency & Process Reliability
- Human Resources & Relations
- Competitive Strategy
- Management Programs, Systems & Structures

# Different Types of Leadership

- Charismatic Leadership
- Transformational Leadership
- Ethical Leadership
- Servant Leadership
- Spiritual Leadership
- Authentic Leadership
- Level 5 Leadership