

Technology Policy Organizations

Session 12:

Technology Policy Organizations

Concluding Materials

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Course Objectives

Part I: Technology Policy Organizations

- Understand the nature and operation of technology policy organizations in the 21st Century – utilizing alternative lenses, tools and methods
- Build leadership skills associated with aligning organizational strategy, structure and process in support of technology policy objectives
- Ground knowledge of technology policy organizations in the complex realities of organizational life – through integration of personal experience and field data collection

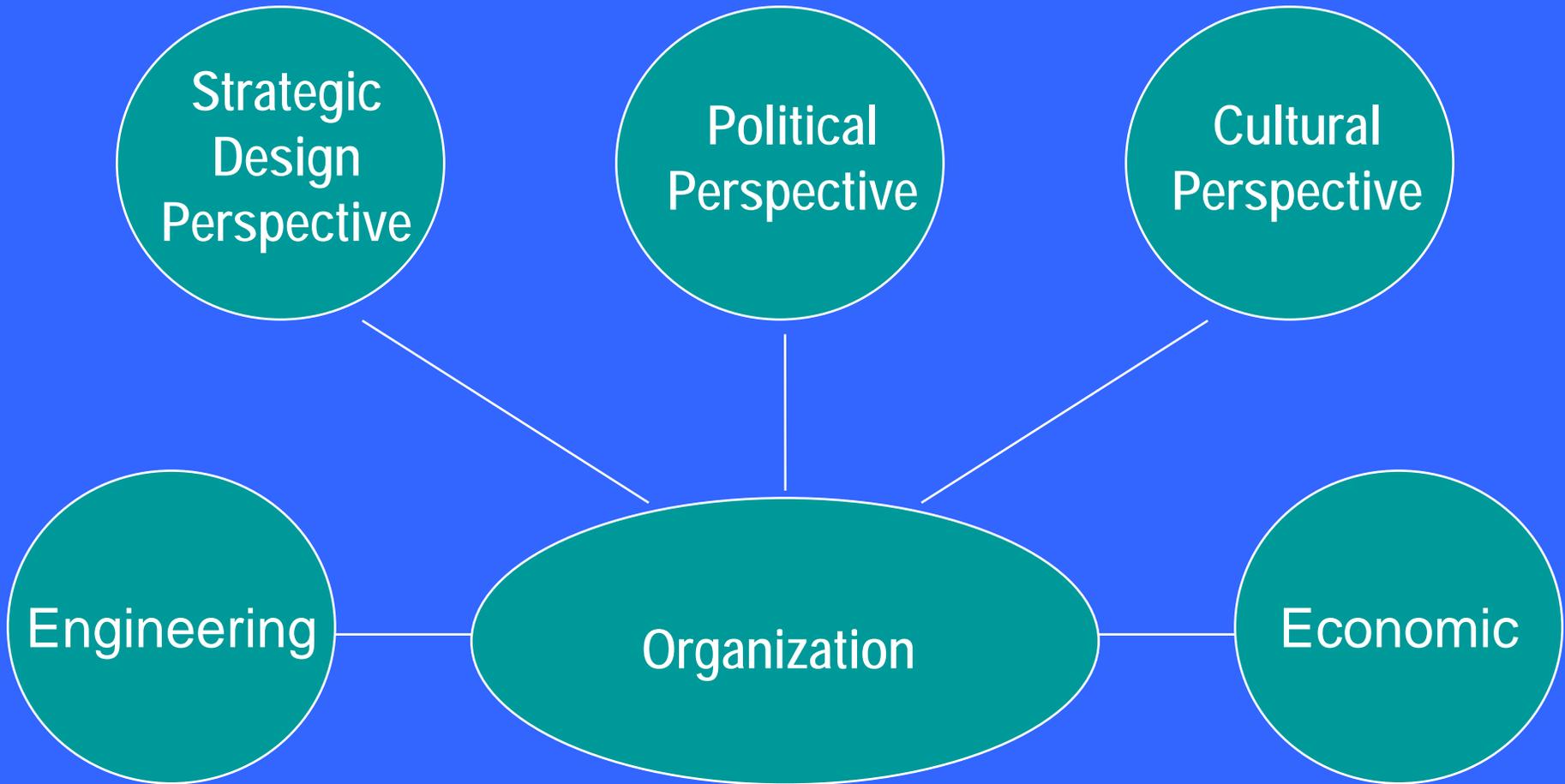
Part II: Technology Policy Negotiations and Dispute Resolution

- Build interactive skills associated with effective negotiations on technology policy issues
- Understand the nature and operation of dispute resolution systems in the technology policy context
- Develop the wisdom to establish constructive “rules of the game” in the technology policy context

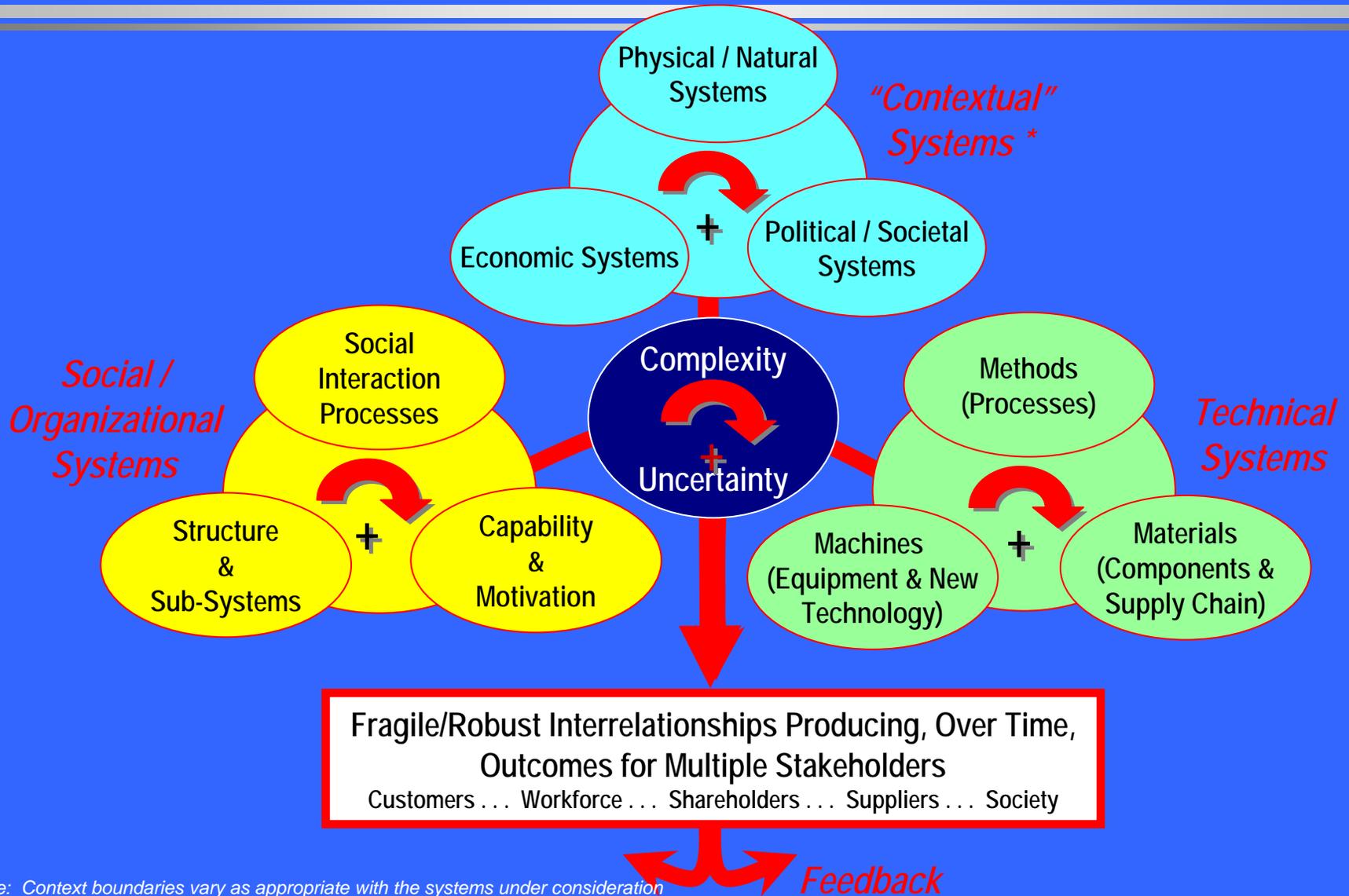
Elements of the “New” Organization

Networked	→	Managing with & across Teams
Flat	→	Negotiating & Managing Conflict
Flexible	→	Managing Change
Diverse	→	Gaining through Diversity
Global	→	Learning across Borders

Three/Five Perspectives on Organizations



Social and Technical Systems Framework

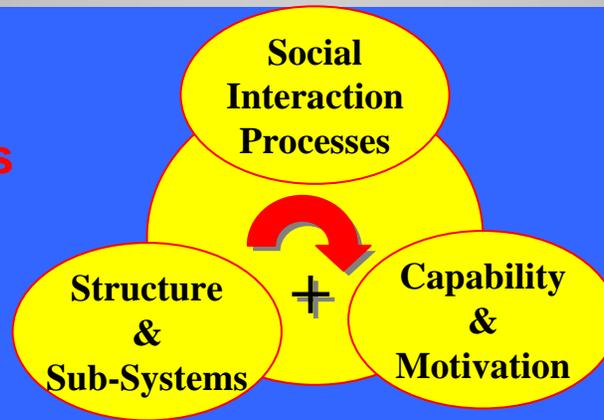


* Note: Context boundaries vary as appropriate with the systems under consideration

Focus on Social / Organizational Systems

Structure & Sub-Systems

- Structure
 - » Groups
 - » Organizations
 - » Institutions
- Sub-Systems
 - » Communications
 - » Information
 - » Rewards & reinforcement
 - » Selection & retention
 - » Learning and feedback
 - » Conflict resolution



Social Interaction Processes

- Leadership
- Negotiations
- Problem-solving
- Decision-making
- Partnership

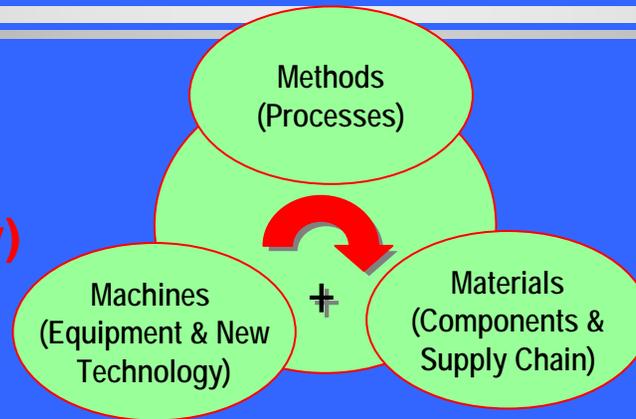
Capability & Motivation

- Individual knowledge, skills & ability
- Group stages of development
- Fear, satisfaction and commitment

Focus on Technical Systems

Machines (Equipment & New Technology)

- Equipment and machinery
- Physical infrastructure
- Information technology
- Nano-technology, bio-technology, and other developments at the frontiers of science



Methods (Processes)

- Job design/office design
- Work flow/process mapping methods
- Value stream mapping
- Constraint analysis
- Statistical Process Control (SPC)
- System optimization and decomposition methods

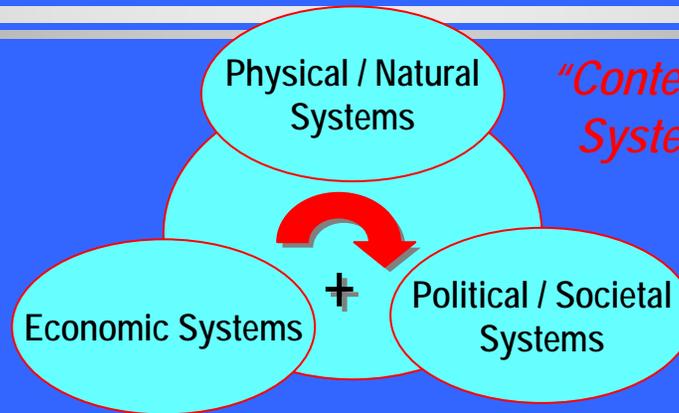
Materials (Components & Supply Chain)

- Assembly – Interchangeable parts and mass production systems
- Logistics – Just-In-Time delivery (JIT) systems and Synchronous material flow systems
- e-commerce and supply chains

Focus on Contextual Systems

Economic Systems

- Markets
- Incentives
- Trade relations
- Public, private, and non-profit sectors
- Industry structures
- Product/firm/industry life-cycles
- Externalities and other “market failures”



Physical / Natural Systems

- Atmospheric systems
- Geo-thermal systems
- Aqueous systems
- Biological systems
- Chemical systems
- Bio-chemical systems
- Sub-atomic systems
- Laws of physics
- Extra-terrestrial systems

Political / Societal Systems

- Regulatory systems
- Standards and protocols
- Institutional arrangements
- History
- Cultures and sub-cultures
- Values and assumptions

* Note: Context boundaries vary as appropriate with the systems under consideration

Organizational Assumptions

- **Theory X and Theory Y Perspectives:**
 - **Assumptions about employees and their motivations**
- **20th and 21st Century Models of the Organization:**
 - **Assumptions about people, work, technology, leadership, and goals**
- **Review Each Pair to Discuss Process of Shifting from 20th to 21st Century Assumptions**

Core Assumptions: People, Work, Technology, Leadership, Goals

<u>Assumptions</u>	<u>20th Century Model</u>	<u>21st Century Model</u>
People	Labor Cost	Human Asset
Work	Individual	Collaborative
Technology	Substitution	Integration
Leadership	Technical Experts	Distributed Leadership
Goals	Unitary	Multi-Stakeholder