

Enhancing Country Environment for Innovation

Clarence J Mann, JD, Dr. jur.
University of Maryland
University College

Exchange Faculty Program

Universitas Terbuka – University of Maryland University College

UPBJJ JAKARTA 4 October 2009

Enhancing Country Environment for Innovation

**Clarence J. Mann, JD, Dr. jur.
University of Maryland University College
Graduate School of Management & Technology**

Innovation Imperatives

- **For the Country** –

*Increasing Productivity and Standards
of Living for All*

- **For the Enterprise** –

*Increasing Productivity and Competitive
Advantage*

in an

*Intensely Competitive Global
Environment*

National Comparative Advantage

“Innovation and Imagination give an economy or a company that extra edge. Today, wealth is generated by new Ideas”

Goh Chok Tong, former Prime Minister,
Singapore

Difficult to Measure *Innovation*?

Countries Vary Significantly

- Quantitatively – e.g., patents, proportion of scientists and engineers; different types (e.g., soft and hard)
- Qualitatively – e.g., innovation intensity
 - Complex Process – i.e., ability to create and then commercialize new products, processes
 - shifting the innovation frontier (Porter)
 - “Healthy rate of innovation” – Porter
 - Effects – depend on users perspective

What is *Innovation*?

- **New combinations applied in the market place**
- **Ability of Individuals, Companies and Entire Nations to Continuously Create Their Desired Future**
- **Process of –**
 - **Harvesting Knowledge**
 - **Generating New Products, Services, Processes & Business Models**
 - **Applying to Change Existing “Ways”**

Innovation Occurs at All Aspects & Levels of Society

- R&D Centers
- Enterprises
- Government Agencies
- Educational Institutions
- Provincial & City Government
- Rural Areas & Villages

Types of Innovation

- **Products/Services & Processes**
- **Operations & Management**
- **Public & Private Sectors**
- **Sustainable & Disruptive Effects**

Global Drivers of Innovation

Nations & Enterprises Alike

- 1. Intensifying Competition @ business models, technology, value propositions**
- 2. Diversity of Geography @ scattered centers of excellence - transparency**
- 3. Multiplicity of Value Networks @ chess game, locking in advantages**

Question to Consider

**What Should Guide
Nations & Enterprises**

in

Building Innovative Capacity?

- *Holistic Systems Thinking*
 - *National Priorities*

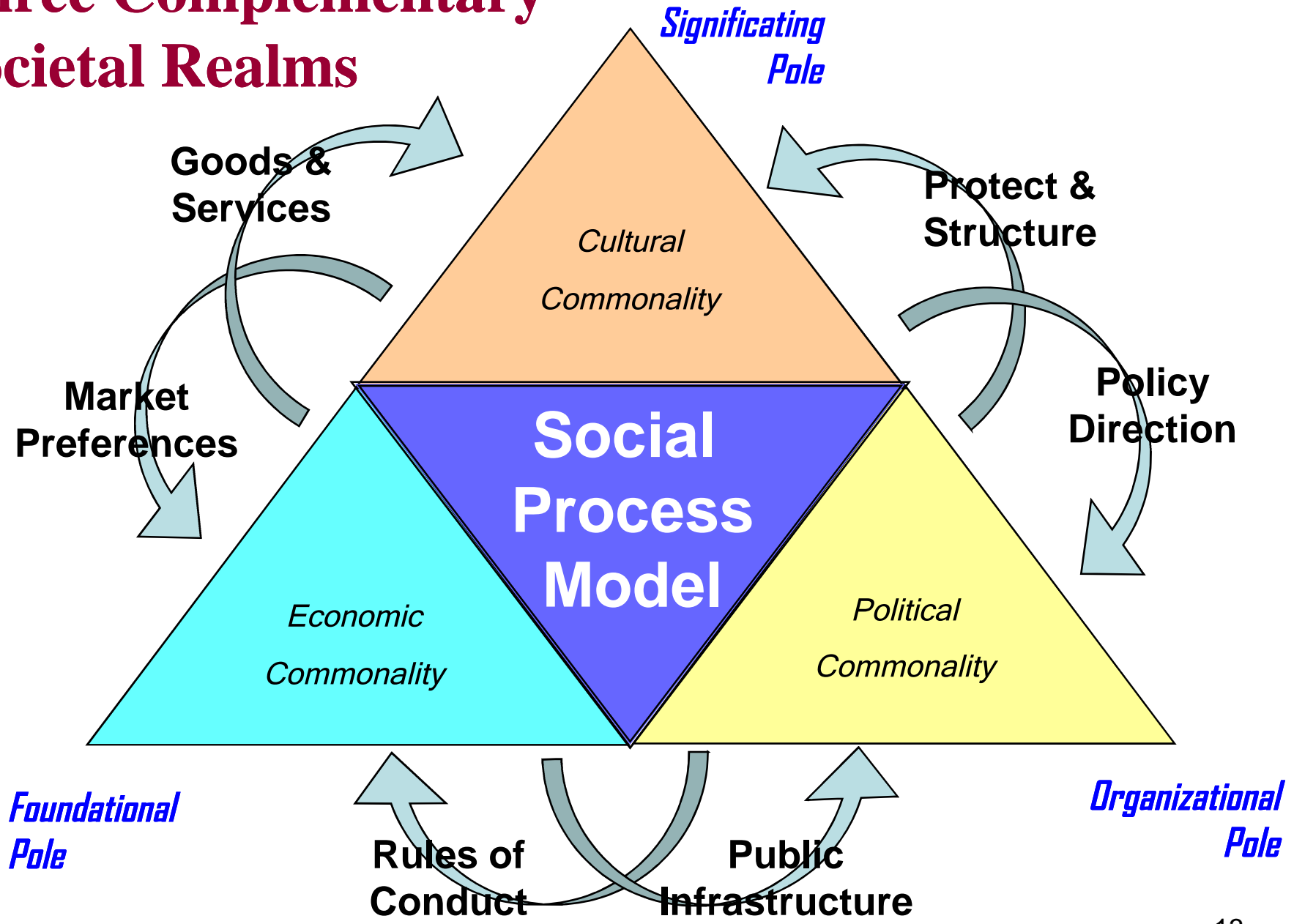
Three Part Analysis

- I. ***Systems Models*** - addressing issues holistically
- II. **Building *Country Climate* for Innovation**
- III. **Strengthening *Enterprise Innovative Capacity***

Part I.
Systems Models
for Assessing the Climate
of
Innovation

- 1. Social Process Model @
Country Environments**
- 2. Corporate Process Model @
Organizational Environments**

Three Complementary Societal Realms



Social Process Model Rationale

Comprehensive – all societal aspects

Universal – every society

Analytical – critical components

Relational – 3 functional perspectives

Interactive – 3 inter-dependent realms

Transparent – underlying dynamics,
not institutions

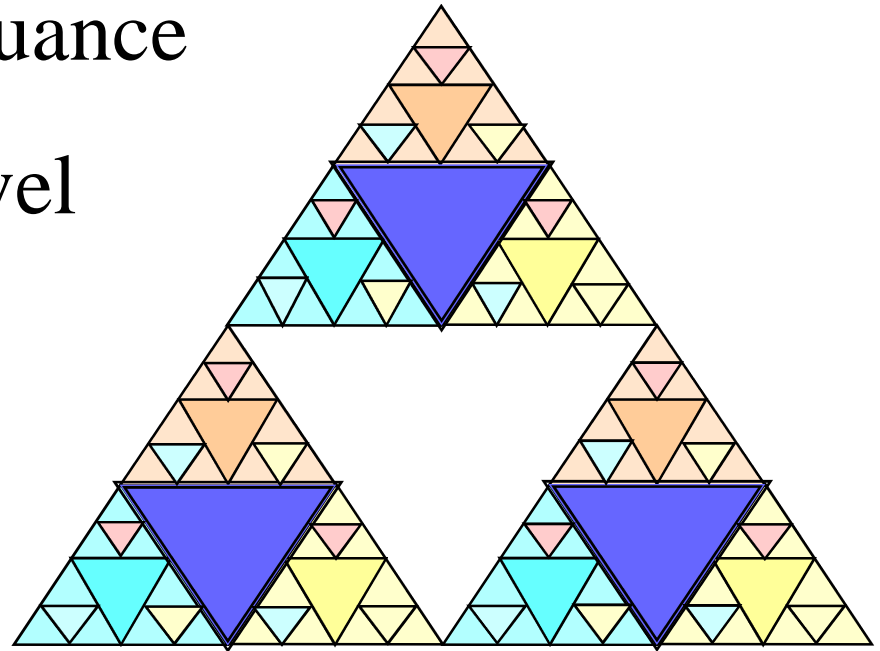
Component Subsets

Fractals of Parent Dynamic

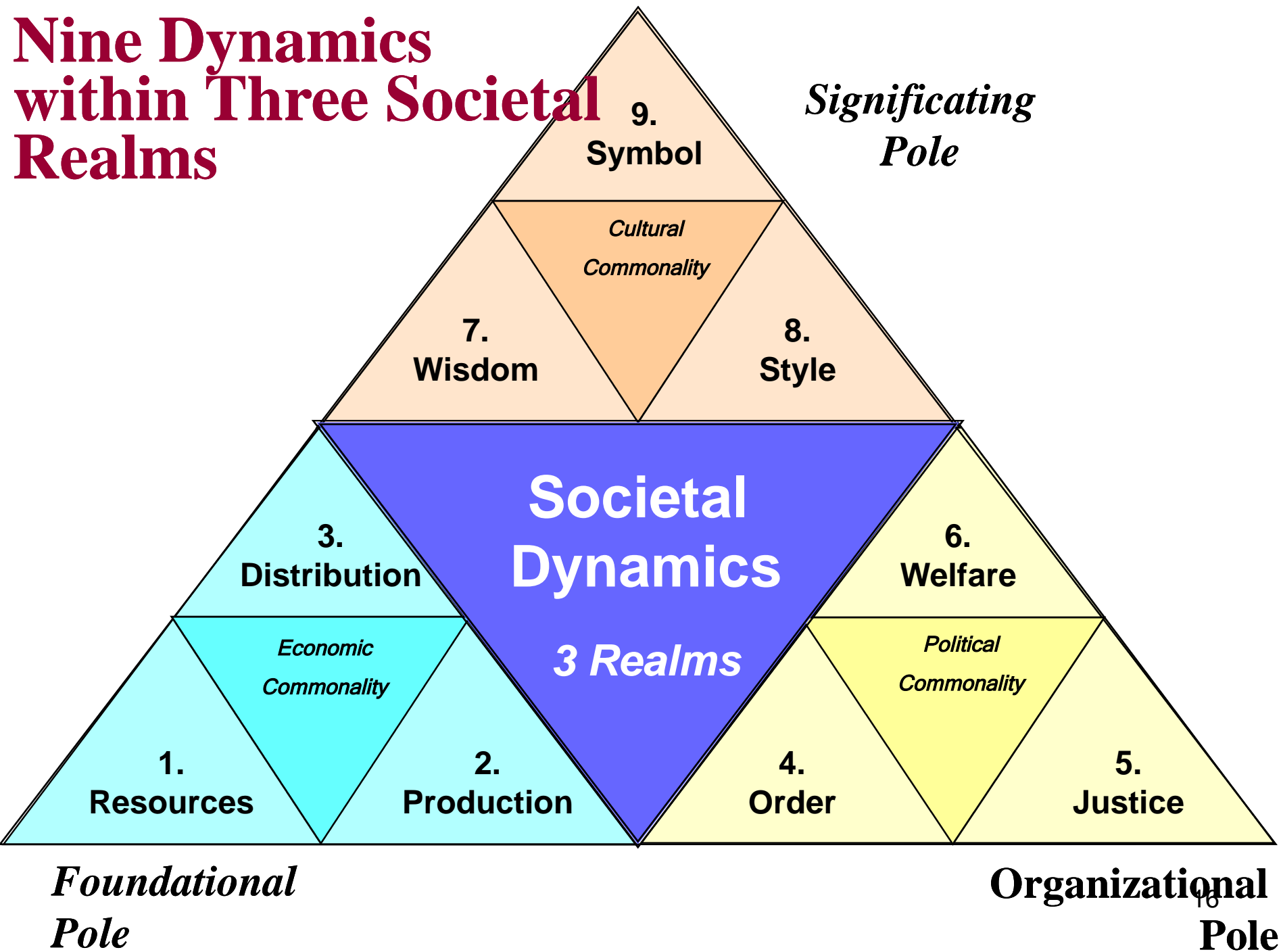
Contain All Three Poles

Reveal Depth and Nuance

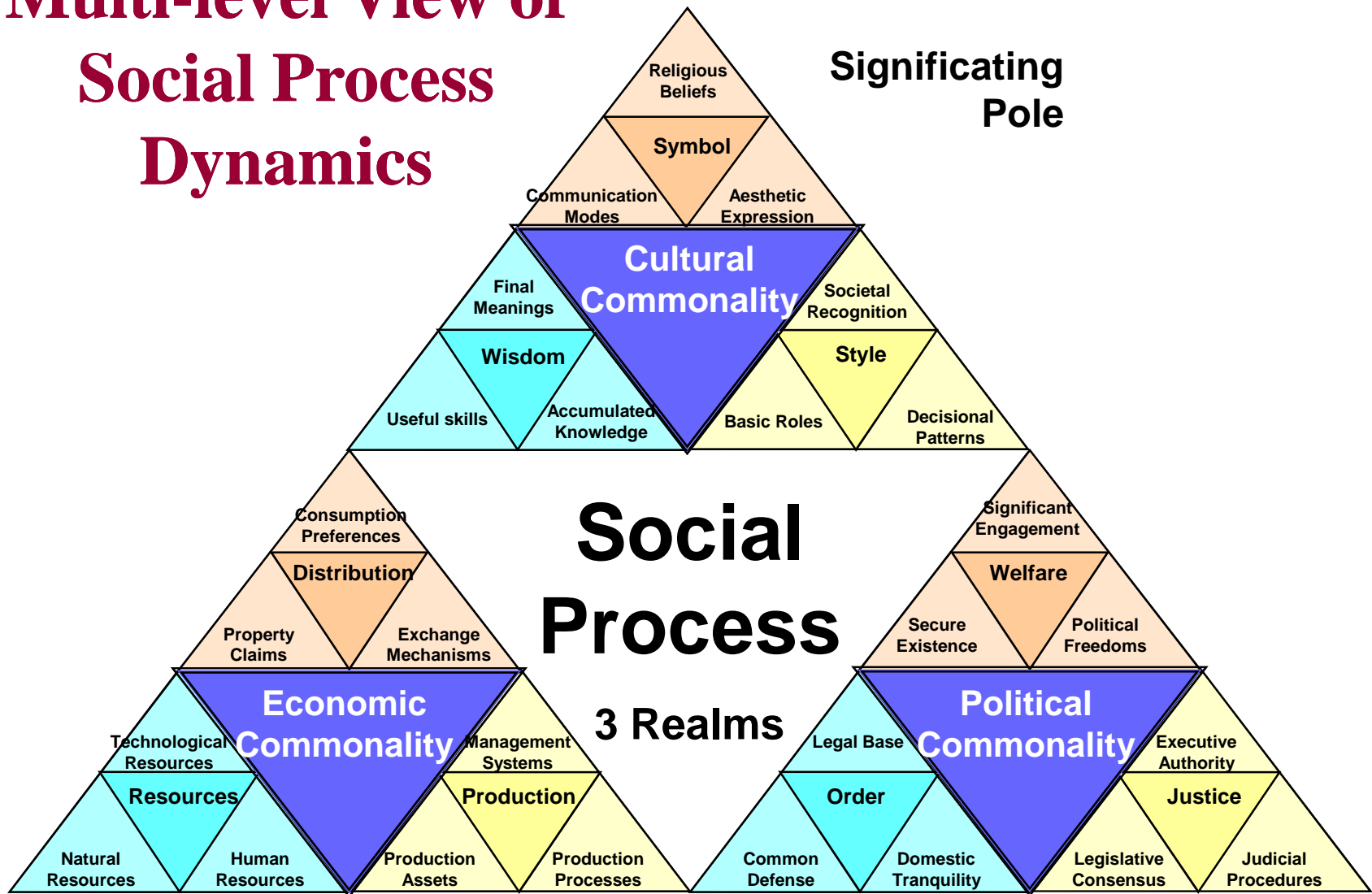
Enable Multi-Level
Analysis



Nine Dynamics within Three Societal Realms



Multi-level View of Social Process Dynamics

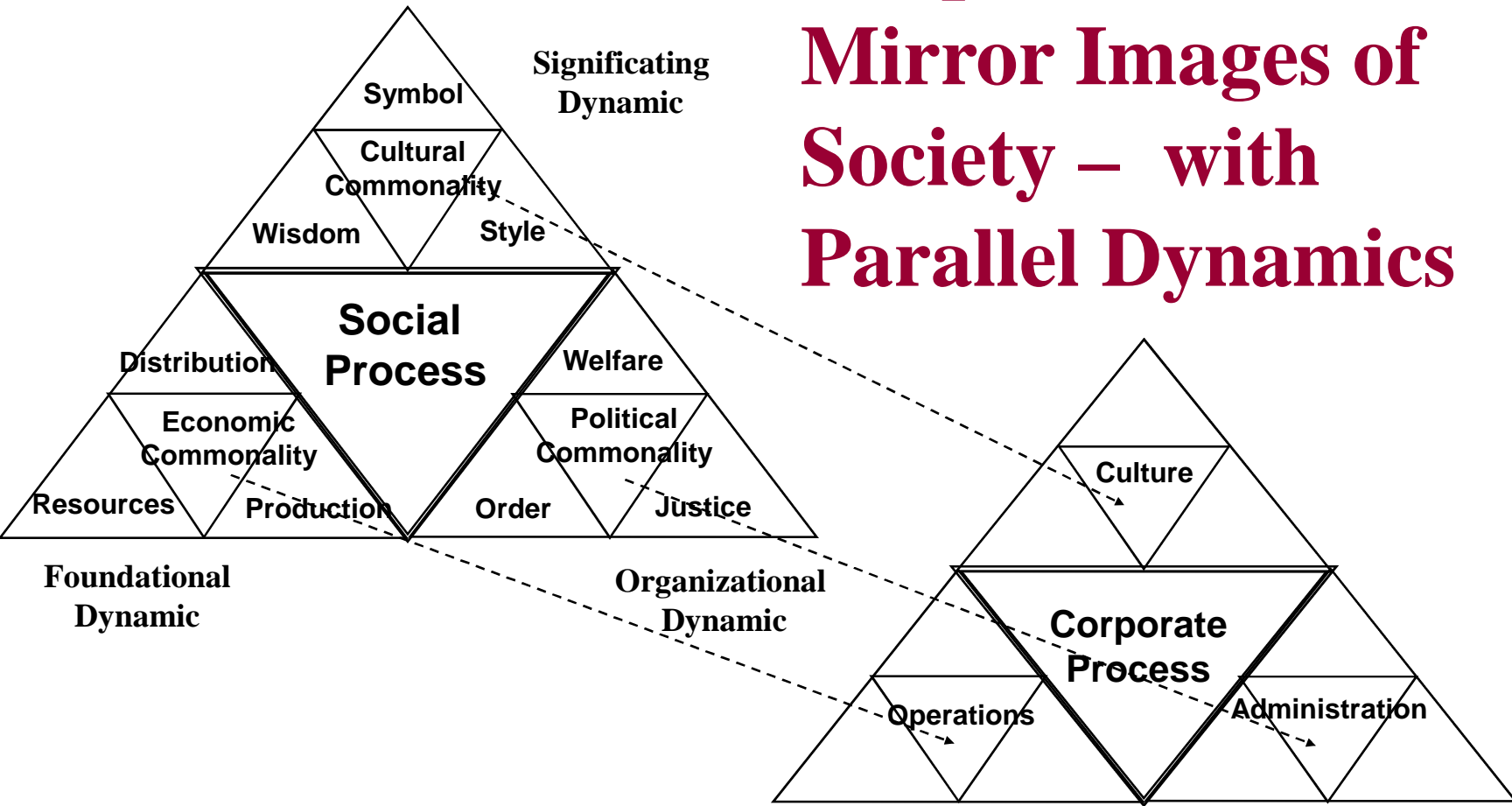


Foundational Pole

Constructed using Fractals of each higher level

Organizational Pole

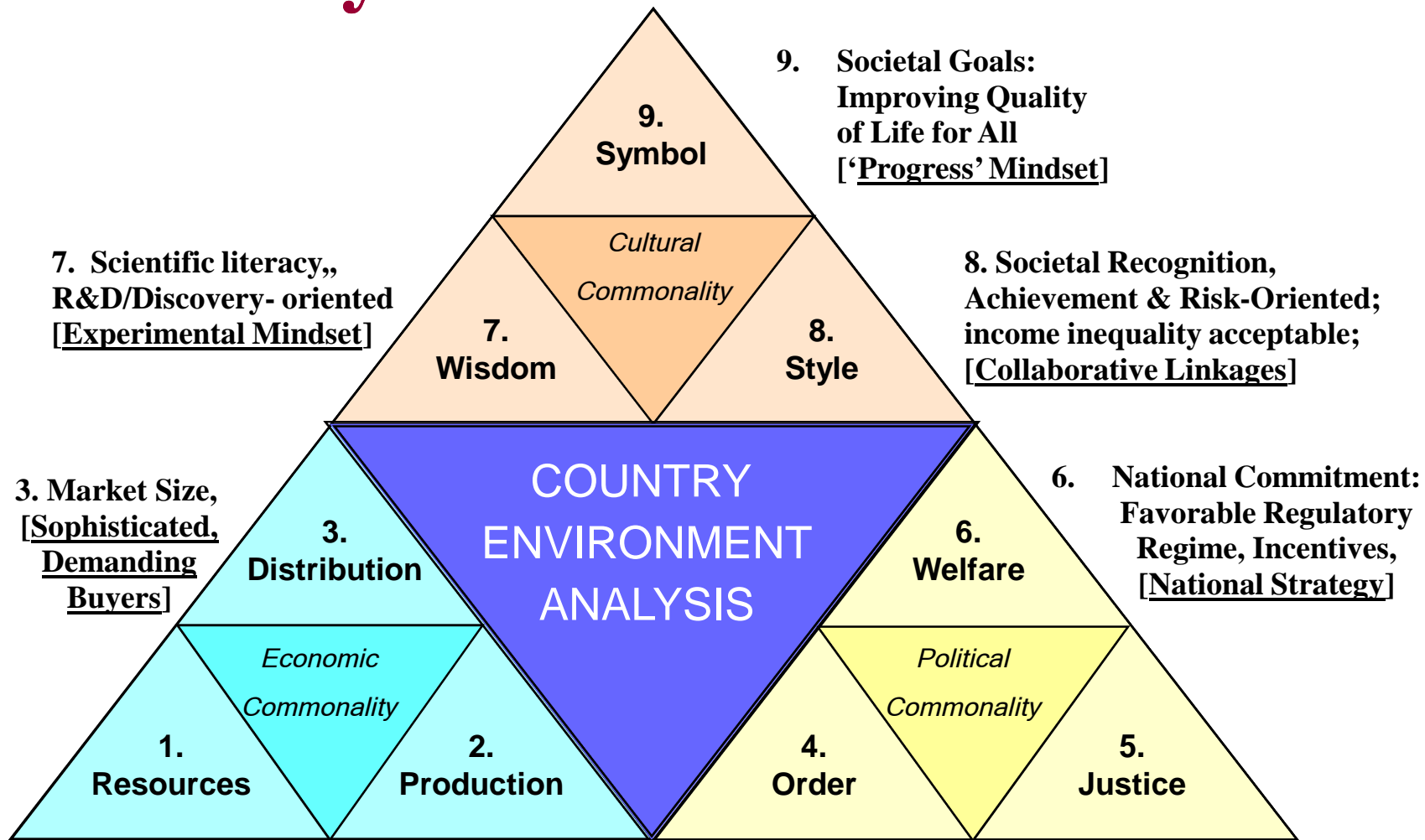
Corporations as Mirror Images of Society – with Parallel Dynamics



Part II

Country Environment Analysis

Country Innovation Indicators



**9. Societal Goals:
Improving Quality
of Life for All
[‘Progress’ Mindset]**

**7. Scientific literacy,,
R&D/Discovery- oriented
[Experimental Mindset]**

**8. Societal Recognition,
Achievement & Risk-Oriented;
income inequality acceptable;
[Collaborative Linkages]**

**3. Market Size,
[Sophisticated,
Demanding
Buyers]**

**6. National Commitment:
Favorable Regulatory
Regime, Incentives,
[National Strategy]**

**1. Skilled Labor, Tech-
nological Readiness,
Supporting Networks of
Industries [Reliable
Infrastructure]**

**2. Risk Capital, unfet-
tered competition;
results-oriented mngt.,
e.g., kaizen, Six Sigma
[Management Systems]**

**4. Transparent markets;
consistent, predictable
system of anti-trust law
& property rights
[Effective Institutions]**

**5. Rationale, transpar-
ent decision-making;
Stable, predictable
system of governance;
[Stable Governance]** 20

Three Rules for Assessing Country Environments

**Significating
Dynamic**

Cultural
Commonality

Rule of Effectiveness

Collaborative Trust

**Social
Process**

Economic
Commonality

Rule of Market

Competitiveness

Political
Commonality

Rule of Law

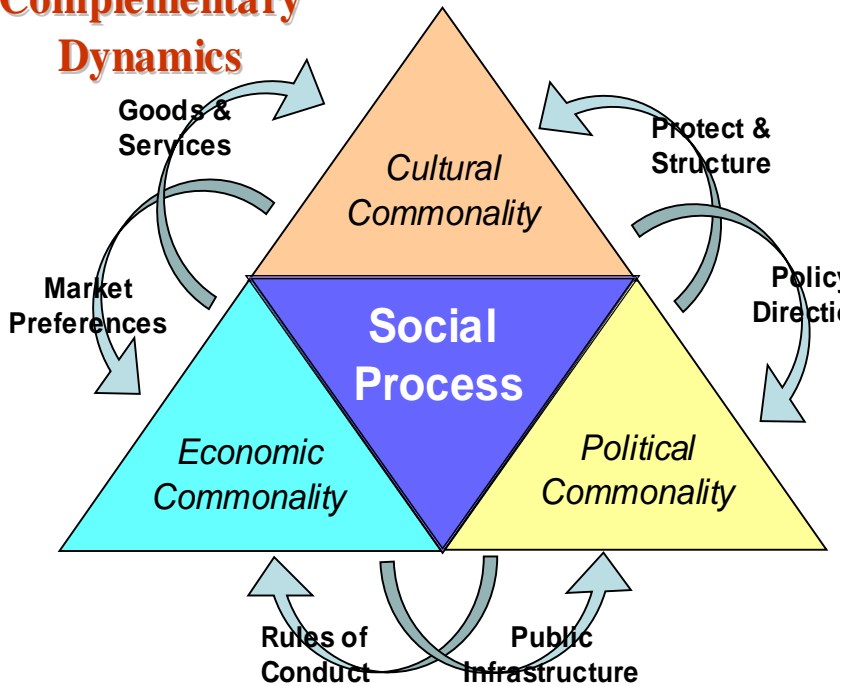
Stability/Predictability

**Foundational
Pole**

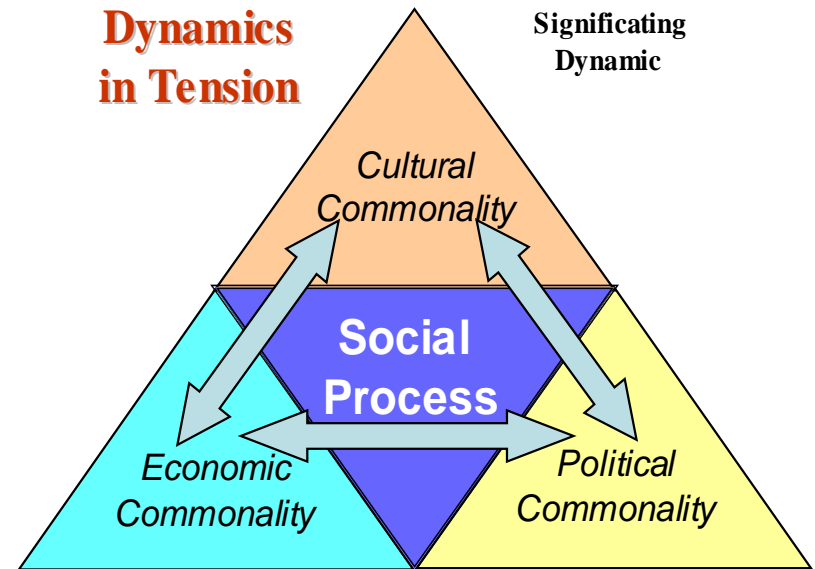
**Organizational
Pole**

Three Complementary Realms in Tension

Complementary Dynamics



Dynamics in Tension



Foundational
Dynamic

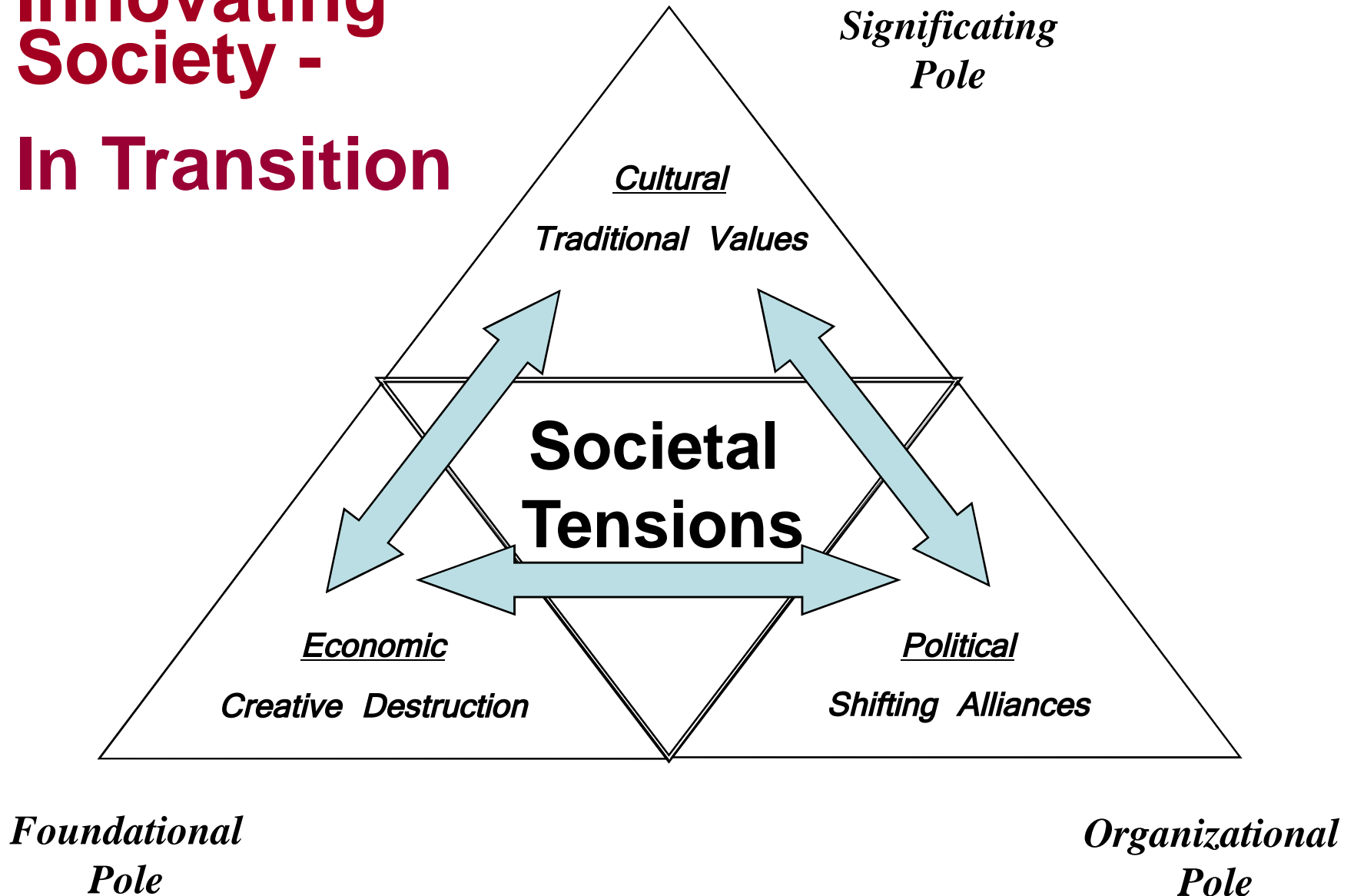
Organizational
Dynamic

Ideological Tension

Among the Three Realms

- **Economic Realm – *functional rationality*:
Efficiency vs. fairness**
- **Political Realm – *legitimacy*: informed
Consensus vs. coerced acceptance**
- **Cultural Realm – *harmony, identity*
High vs. low trust**

Innovating Society - In Transition



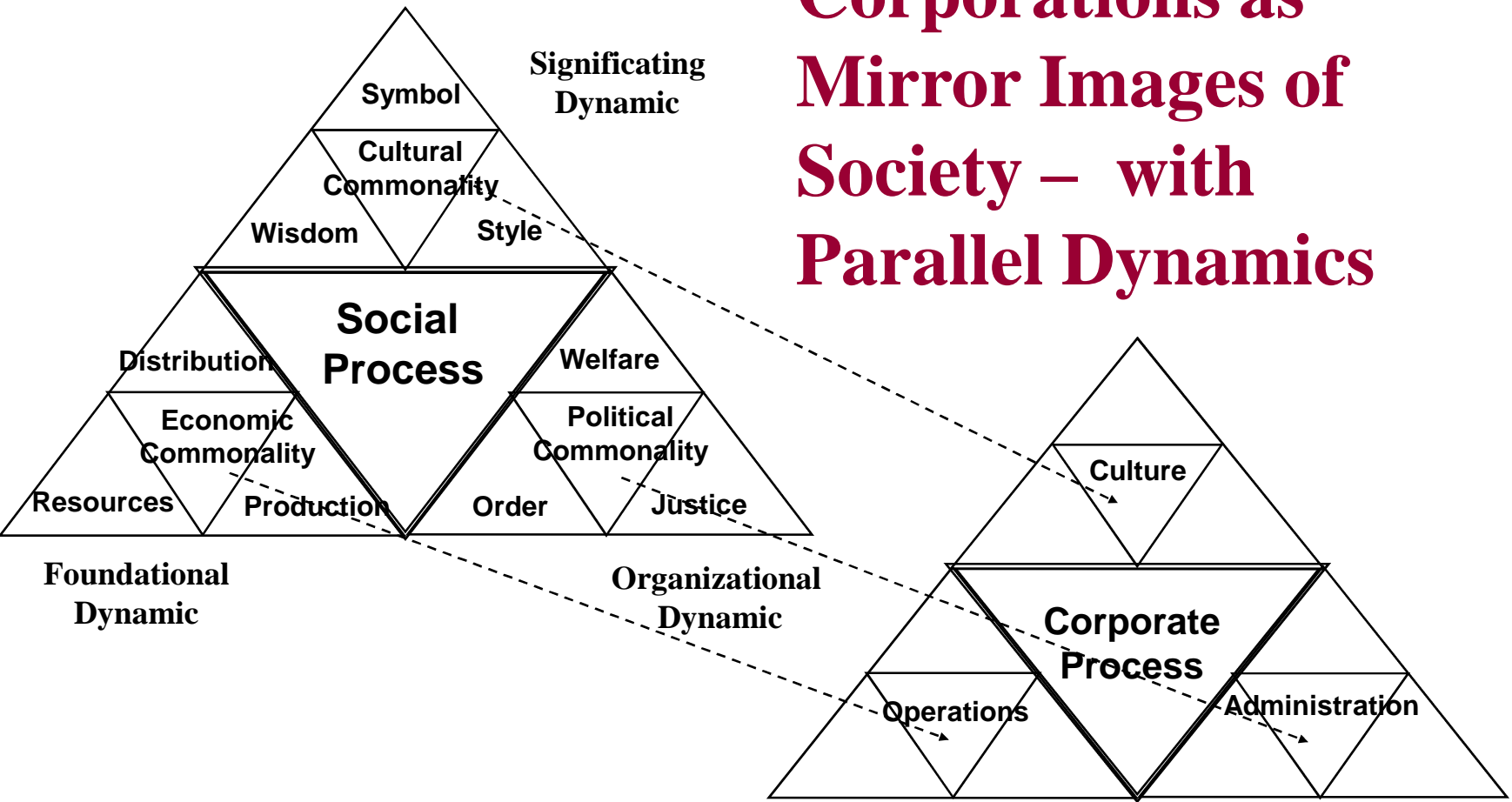
Harmonizing 3 Realms

- **Supportive Industry Clusters**
- **Promote Centers of Excellence**
- **Encourage FDI Inflows**
- **Align Institutions**
- **Societal Commitment –
“Running in a New Direction”**

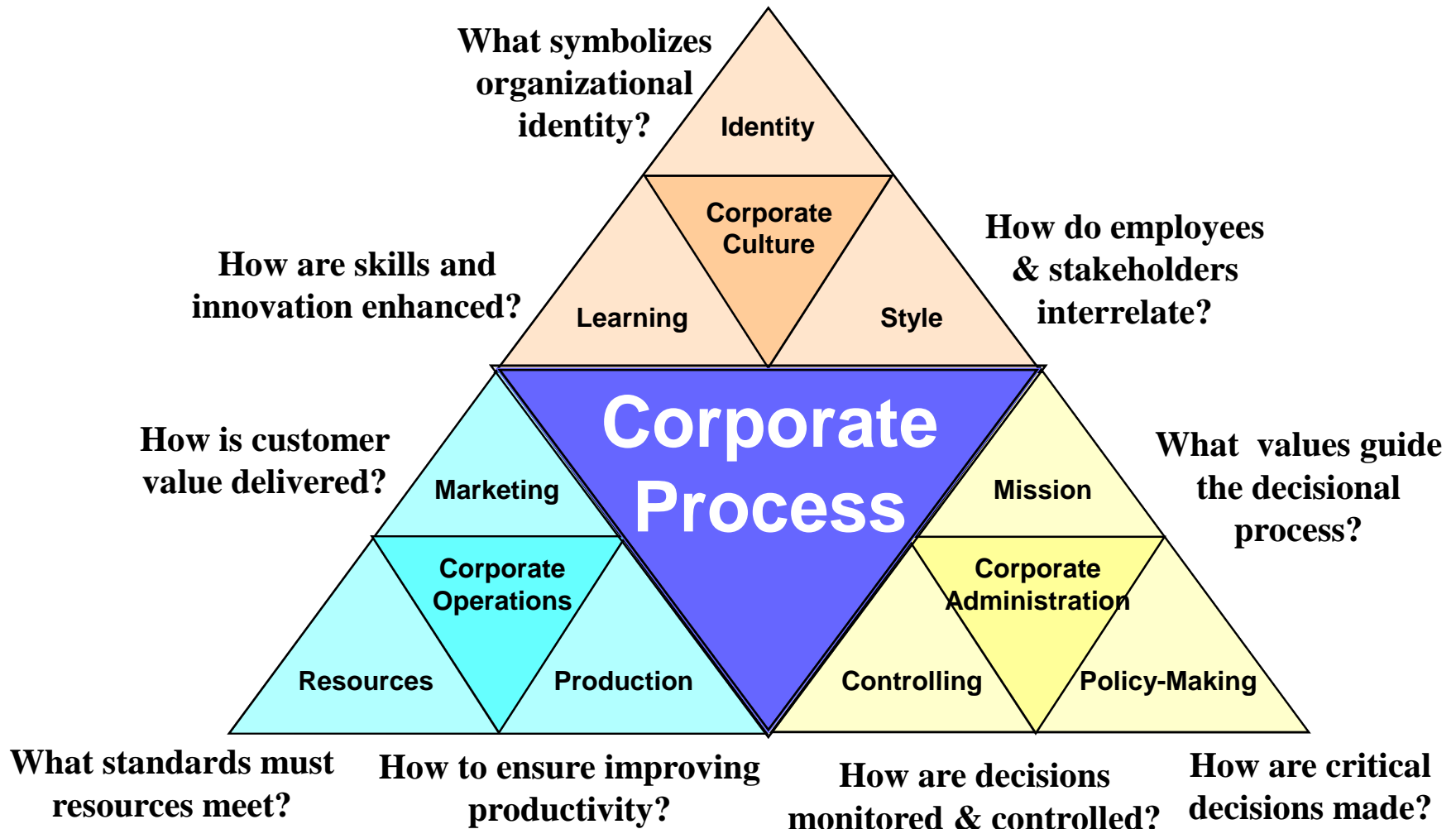
Part III

Enterprise Analysis

Corporations as Mirror Images of Society – with Parallel Dynamics



Organizational Profile Indicators



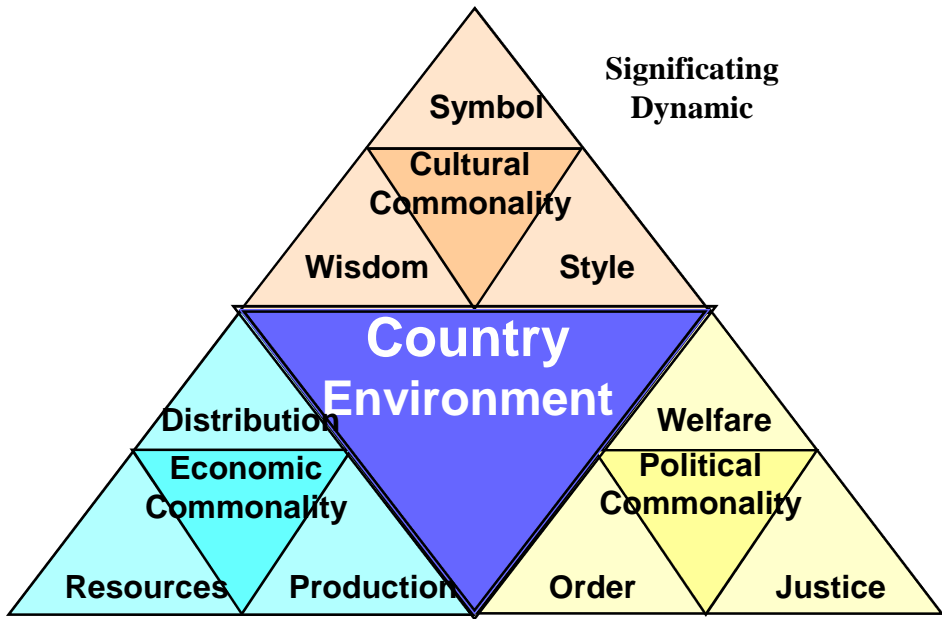
Performing a Corporate Innovation Audit

Aligning Nine Dimensions
of
Organizational Dynamics
with
Corporate Vision

Innovation Organizational Audit

Four Steps

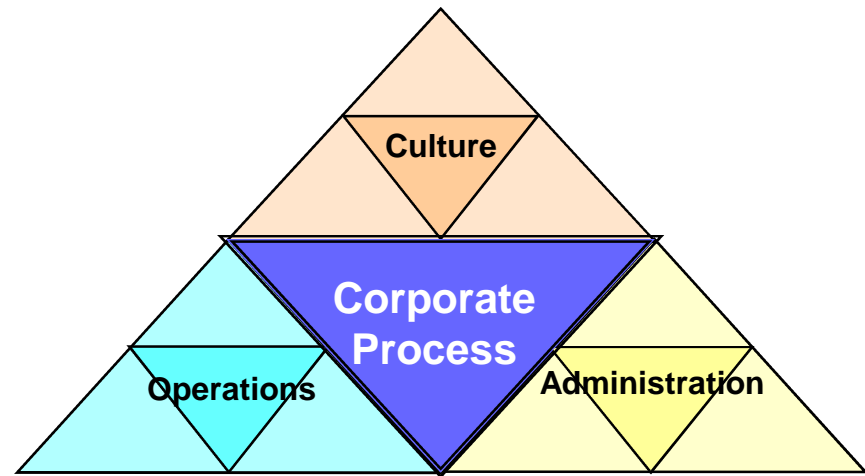
- 1. Practical Vision – Images of Success**
- 2. Assess Future-Critical Gaps/Needs
Especially Core Competencies**
- 3. Assess Country-Specific
Environmental Constraints**
- 4. Build Strategic Pathway**



Foundational Dynamic

Significating Dynamic

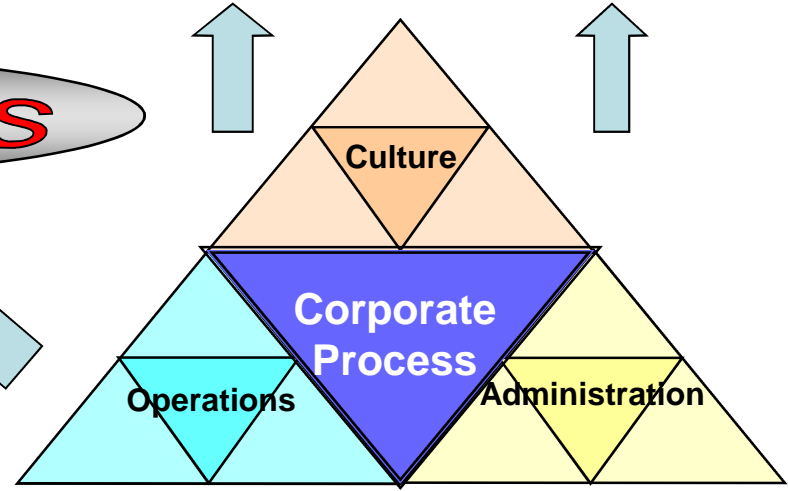
Organizational Dynamic



Envisioned Corporate Profile

Constraints

Gaps



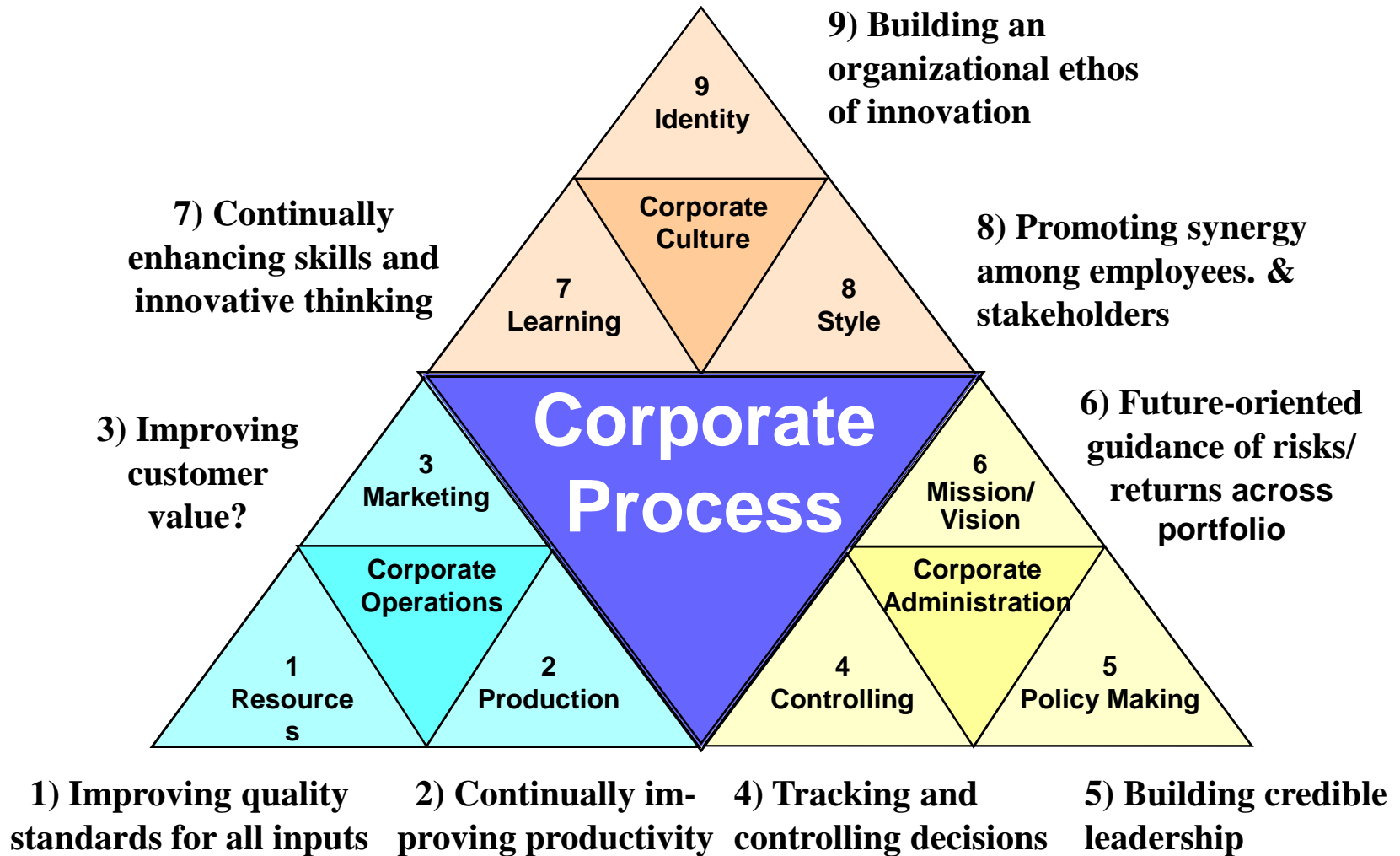
Present Corporate Profile

Triangulating the Corporate Future for Innovation

Triangulating Future Organizational Requirements Two Assessments

- 1. Present Capacity of Firm
vs. Future-Critical Needs**
- 2. Future Organizational Needs
vs. Country Environment**

Organizational Innovation Indicators



Part I

Organizational Constraints

- **Limited Vision**
- **Reluctant Leadership**
- **Short Term Thinking**
- **Investment Costs**
- **Organizational Rigidities**

Strategic Innovation Dimensions

1. **Internal Focus** – strengthen innovative capacity of the firm
2. **Location Focus** – leverage the firm's environment - multiple locations?
3. **Alliance Focus** – build the firm's international value network

**Consider Now
the Nine Corporate Dynamics
for Building Innovation
Capacity**

Org'l Innovation Dynamics

Corporate Operations

- Resources Dynamic – quality standards
- Production Dynamic – kaizen, Six Sigma
- Marketing Dynamic – customer value

Org'l Innovation Dynamics

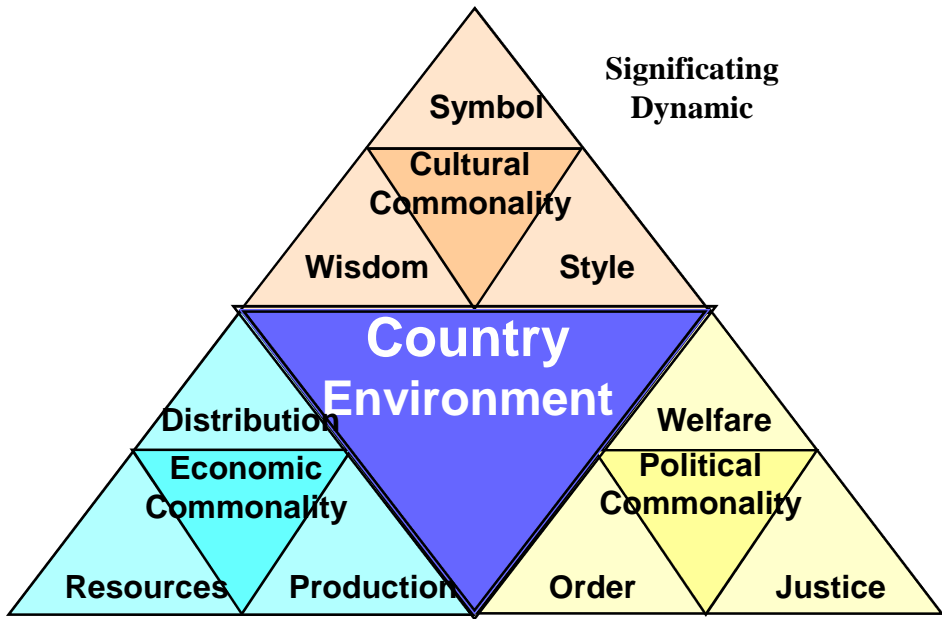
Corporate Administration

- Controlling Dynamic – measuring appropriate results
- Policy-Making Dynamic – credible leadership
- Mission/Vision Dynamic – balanced values

Org'l Innovation Dynamics

Corporate Culture

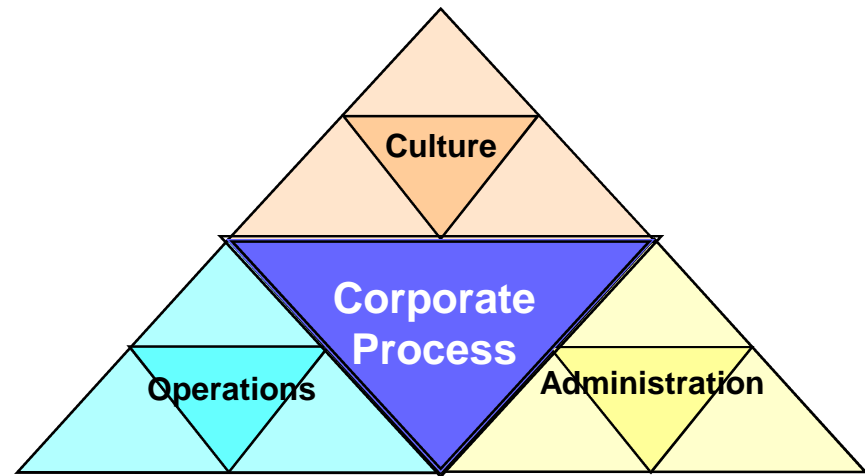
- Learning Dynamic – enhancing skills and creative thinking
- Style Dynamic – promoting synergy
- Identity Dynamic – building innovation ethos



Foundational Dynamic

Significating Dynamic

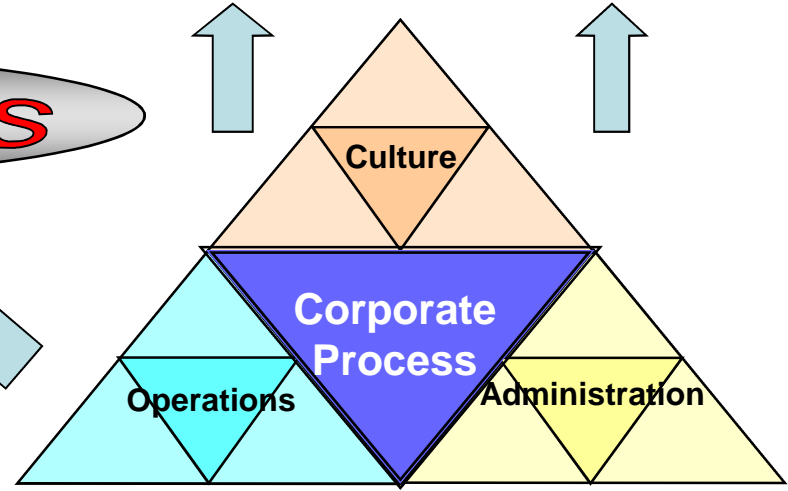
Organizational Dynamic



Envisioned Corporate Profile

Constraints

Gaps



Present Corporate Profile

Triangulating the Corporate Future for Innovation

Questions & Comments