State of the Art: Regulatory Priorities 2007

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Characteristics of 21st Century Network Economies & Information Societies

- Driven by the services sectors
- Founded on info/communication networks – next generation Internet; e-economies
- Dependent on effective reforms in the telecom sector – information infrastructure
- Strengthening links among local, national, regional, international networks and markets
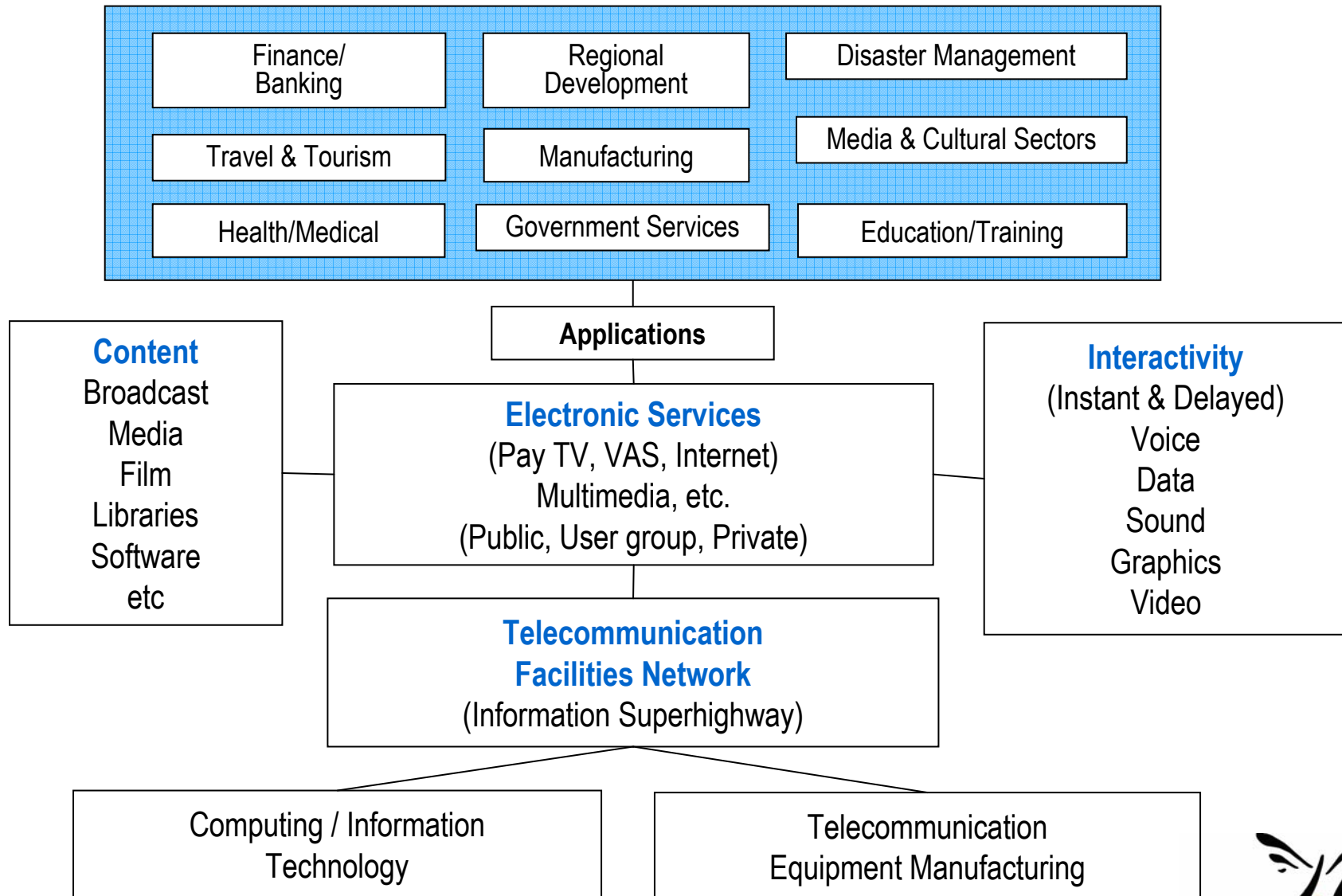
Stages of Telecom / Information Sector Reform

- Telecom Liberalization (participation, universal access)
- Expanding Network Capacity (voice; broadband)
- Preparing the Network Foundation for New Services (IP)
- Developing New Services – Applications Everywhere
- Applying Services Productively in Different Societies
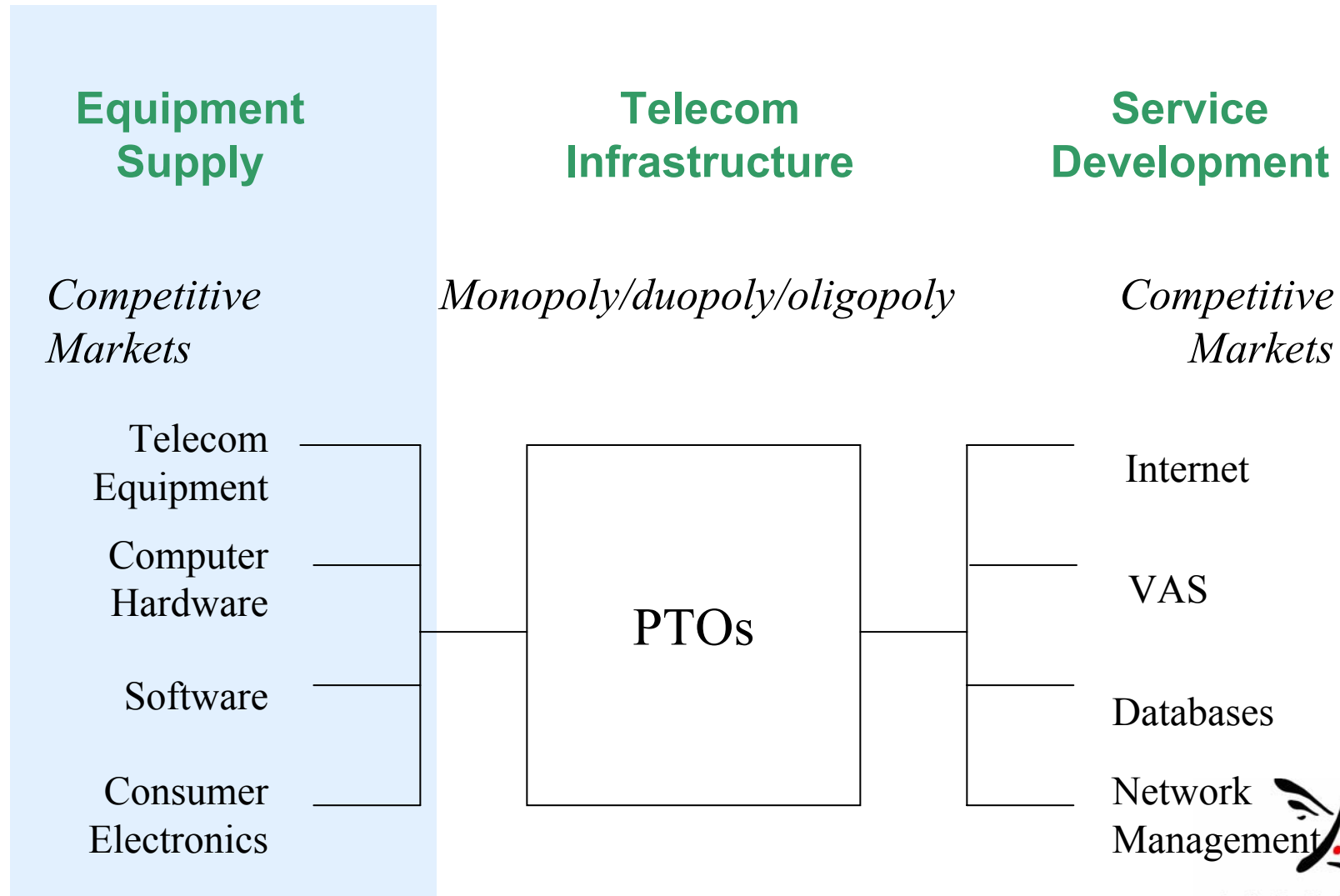- Telecom Reform & Regulation – Key Driver for Implementing Policy Reforms

Criteria for Economic Growth
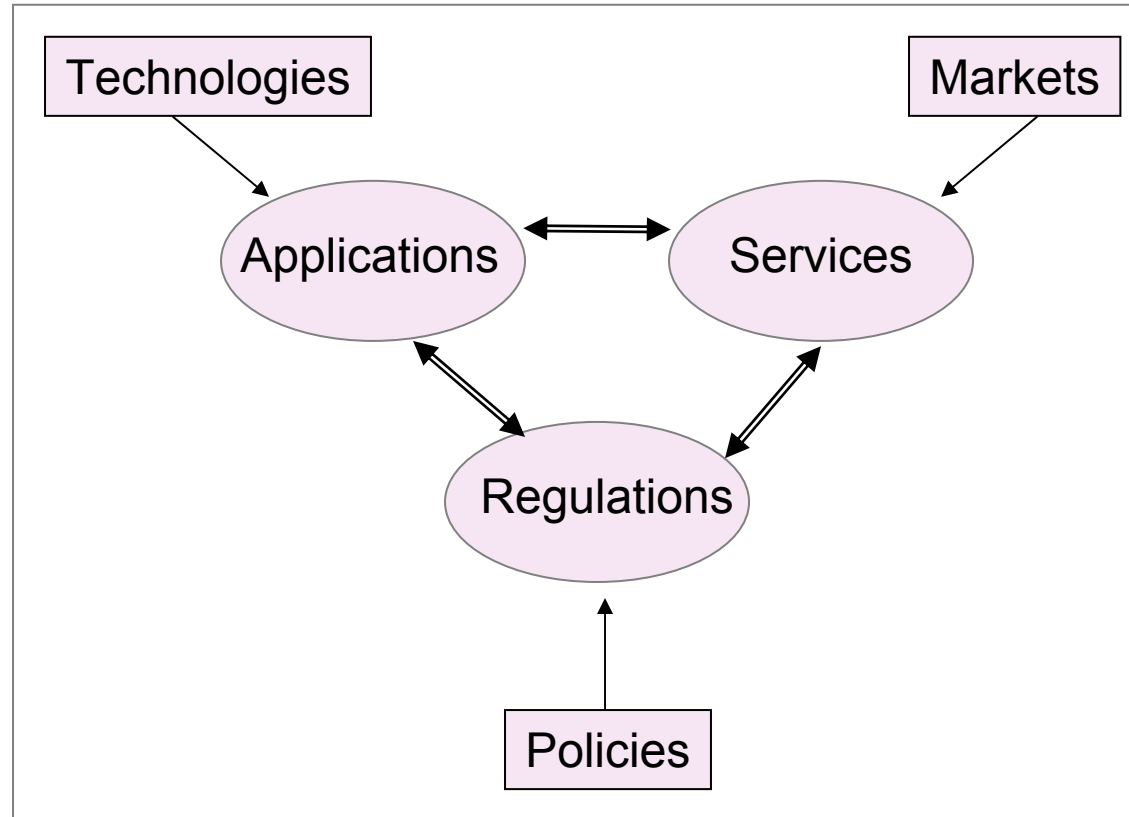
Policy & Regulation: Catalyst for – or constraint upon – network development?

INFORMATION INFRASTRUCTURE

The telecom sector value chain

Equipment Supply

Competitive Markets

Telecom Equipment

Computer Hardware

Software

Consumer Electronics

Telecom Infrastructure

Monopoly/duopoly/oligopoly

PTOs

Service Development

Competitive Markets

Internet

VAS

Databases

Network Management
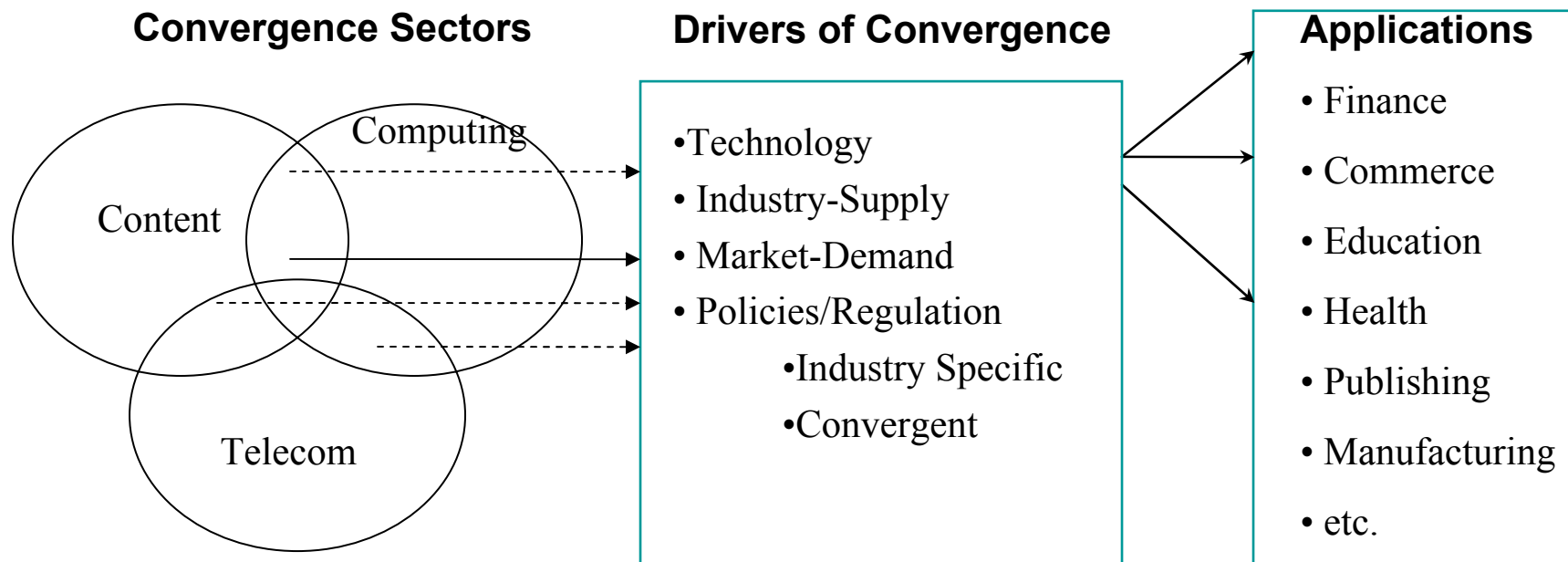
Significance of Network Unbundling

- Industry Sectors - Equipment, Operator Networks, Services
- Fixed and Mobile
- Basic Network Layers

  *Content
  *Communication Services
  *Network Protocols & Management
  *Raw Facility Capacity

The Dimensions of Convergence on the Information Infrastructure

Convergence Sectors

Computing

Content

Telecom

Drivers of Convergence

• Technology
• Industry-Supply
• Market-Demand
• Policies/Regulation
  •Industry Specific
  •Convergent

Applications

• Finance
• Commerce
• Education
• Health
• Publishing
• Manufacturing
• etc.

Progress with Telecom Reform

- Now Most Countries have Telecom Regulatory Authorities
- WTO Commitments to Liberalization
- Industry Specific Focus of Reforms
- Successes, Failures, Unanticipated Difficulties, Continuing Delays
- Regulatory Reform is Proceeding at a Much Slower Pace than Technology Development or Market and Service Potential

Progress with Telecom Reform

- Lack of effective regulation is often the limiting factor constraining economic growth in the ICT sector
- It is not a simple matter of removing regulations or eliminating regulators. It is enhancing their competence, credibility and capabilities.
- Sound regulatory foundations are needed to attract investment, foster applications of new technologies and development of new services.
- The speed of regulatory reforms must increase and they must be directed to providing a foundation for network-based e- Economies.

Information Infrastructure: Investment 1990s

- Mobile - licenses - operating; spectrum
    - network development
- Privatising telecom incumbents
    - licenses – operating; IPO
    - network development obligations
- Competitive network operators
    - fibre transmission
    - city / business LANs
- Software, services and content (e.g., Internet)

Information Infrastructure: Investment Deficiencies 21st C

- Local - basic services access
    - broadband access
- Universal access - fixed
    - broadband
- Internet - local services and content
- Applications - e-economy; e-society

Policy, Regulation and Network Investment

- Licensing - paying for the privilege
- Annual Fees and charges
- Restrictions on investment opportunities
- Price and/or profit regulation
- Policy & regulatory risk

Next-Generation Internet - High Speed Access

- Role of the Market

- Digital Divide

- Role of Government
  *Promote Competition
  *Direct Regulation
  *Public Sector Applications
  *Public Investment - eg., Broadband

- At What Level Should Gov't Intervene?

Moving to Convergence Regulation

- Security, Privacy
- Intellectual Property Rights
- Digital Signatures & Contracts
- Micro payments and Funds Transfer
- Network Quality – e.g., e-commerce standards
- Consumer Protection
- More

New Paths to Universal Access

- Voice - prepaid mobile and informal markets
- Internet, e-economy, e-society
  - fixed & wireless network extensions
  - new operators – energy, transport
  - radio and TV distribution networks
  - retail service suppliers, ISPs, VANS
  - greater role for intermediaries

Internet Governance

For the next Generation Internet-based e-Economy

- Direct Internet-specific issues, eg., ICANN
- ICT sector convergence and information infrastructure development issues, e.g., national telecom regulators-*mach 2*
- Trade- related issues in the e-economy, e.g., WTO, WIPO
- Challenge: Making regulatory institutions credible at both national and international levels.

Infrastructure For Digital Economies

- Higher Capacity Facilities - Broadband?

- Access to High Speed Networks?

- Access to Minimal Level of Universal Services?

- Access to Minimal Levels of Information?

Toward Open Playing Field Regulation

- A transition from monopoly/oligopoly direction to maximizing participation via open access

- Target is not technological neutrality, but maximum development of all technology & services advantages

- Maximum opportunities for competing firms to achieve public interest goals

- Maximum stimulation to market development through both private and public participation

Policy/Regulation Reassessment to Stimulate Network Development (1)

- *Structural Adjustment, Phase 2*
  - empowering regulator as change agent
- *Horizontal Market Definitions*
  - unbundling layers; monopoly nodes
- *Reassessing Licenses*
  - what needs licensing, why, how?
  - removing service restrictions
- *Application of Competition Principles*
  - from regulating firms to regulating markets

Policy/Regulation Reassessment to Create Investment Opportunities (2)

- *Interconnection/Access* in Converged Markets
  - from minutes to Gbits
- *Pricing and Revenue Settlement Standards*
  - wholesale/retail; origination/termination
- *Allocation/Use of Public Resources*
  - spectrum, numbers, names, right of way
- *Public Service Requirements*
  - emergency, security, QoS
- *Social Subsidy Mechanisms*
  - USO, ADC, etc.

Required: *Proactive Policy & Regulation*

- Create a favourable investment environment for physical & human capital
- Minimize barriers to participation
- Facilitate demand as well as supply
- Apply skills and strategic management to achieve the spirit of the policy objectives
- Can only be done if regulatory structure is transparent and credible