

A decorative header banner featuring a repeating pattern of colorful, semi-transparent geometric shapes, including triangles and polygons in shades of red, yellow, green, and blue.

# **ITU-T Kaleidoscope 2009**

## **Innovations for Digital Inclusion**

# **Government Role in Information and Communications Technology Innovations**

**DongBack Seo**

**University of Groningen, The  
Netherlands ([D.Seo@rug.nl](mailto:D.Seo@rug.nl))**

**Mostafa Hashem Sherif (AT&T)**

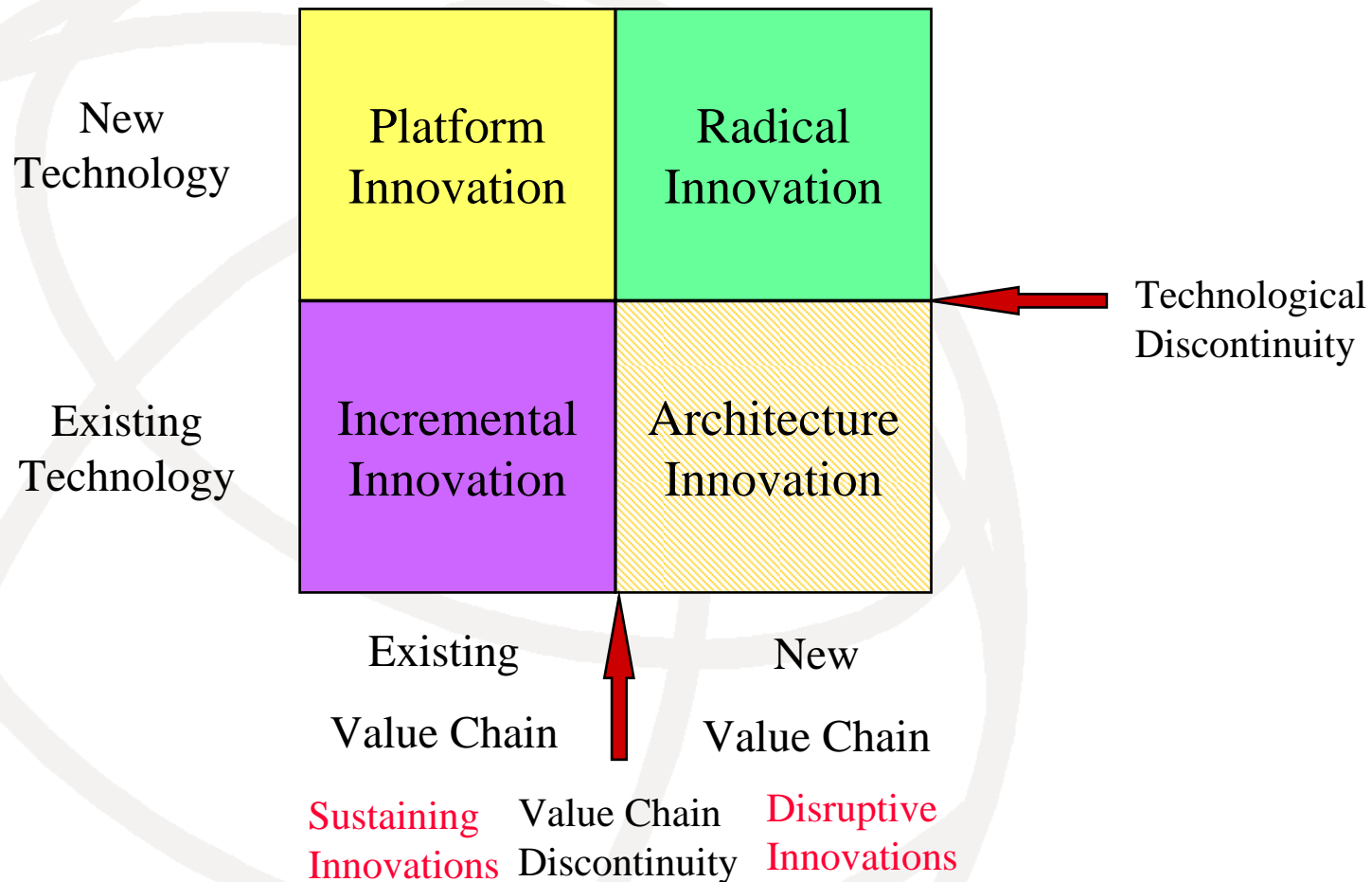
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**Mar del Plata, Argentina, 31 Aug – 1 Sep 2009**

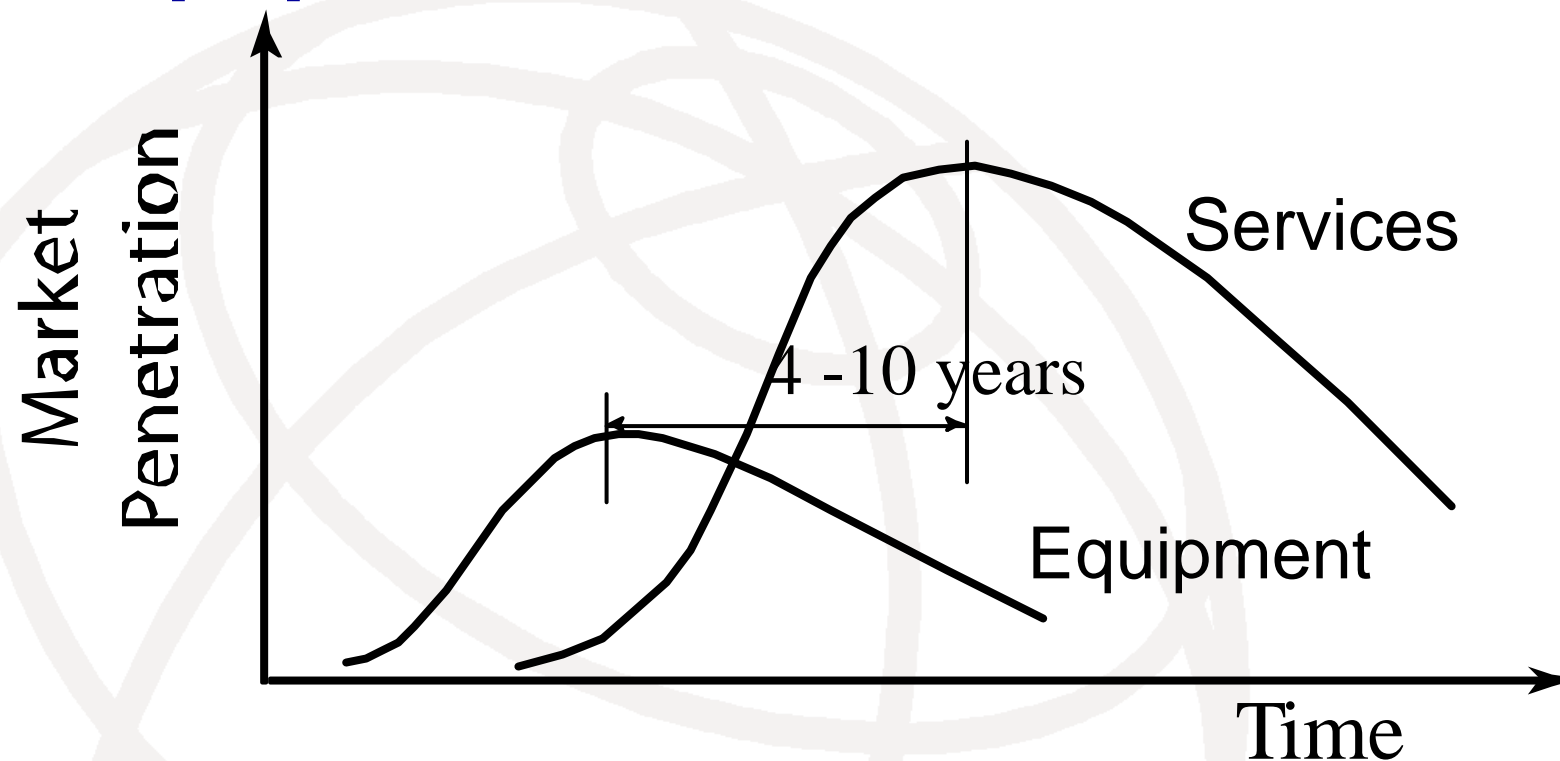
# Outline

- Purpose of the presentation
- Classification of innovation
- Government role in promoting ICT innovation
- Government role in ICT standardization
- Conclusions

# Classification of Technology Innovations

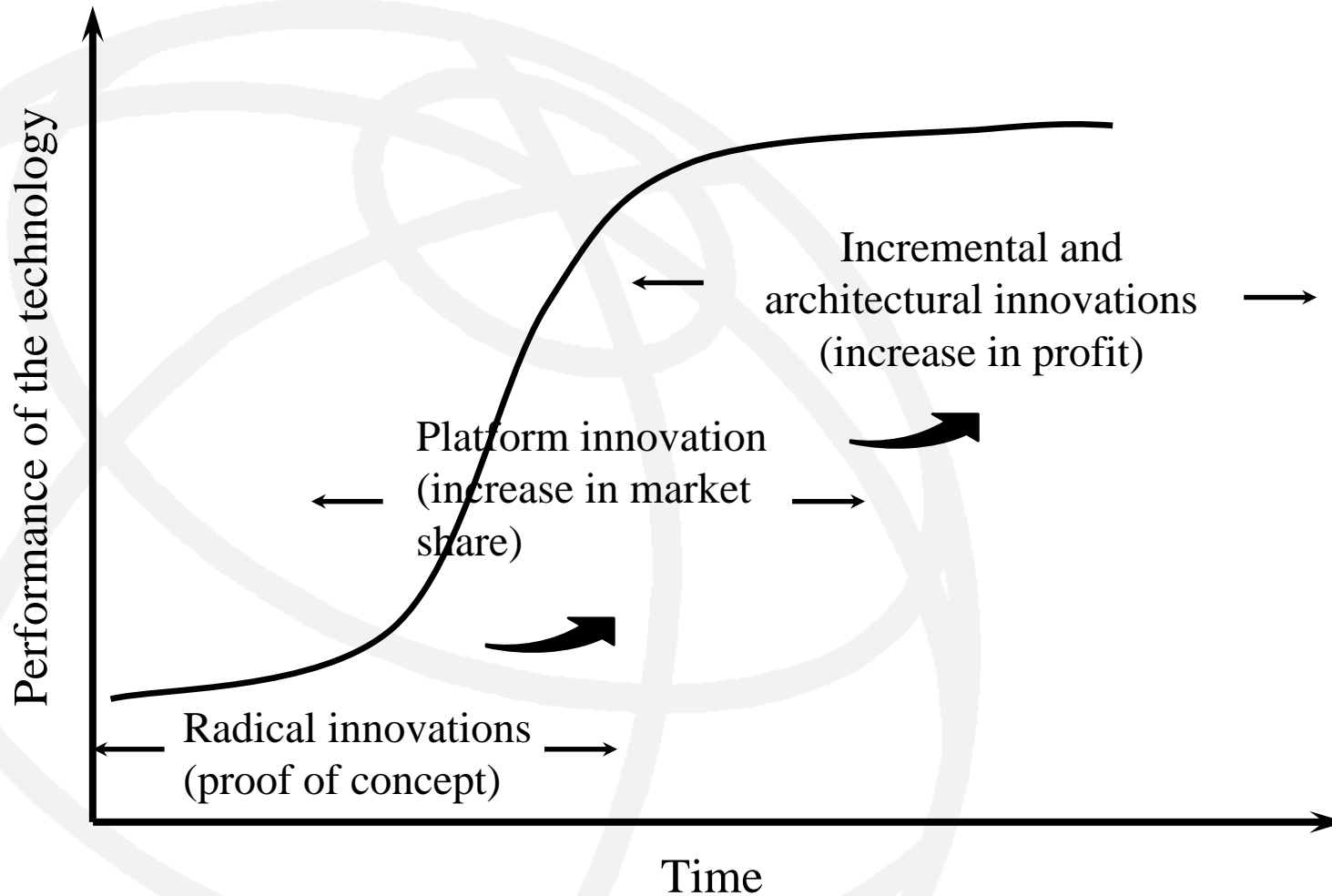


# Equipment vs. Service Innovation



- Policies for equipment and services should take into account the time lag shown in the figure

# Timing of Government Intervention



# Government Role in Incremental ICT Innovations

- A stable environment and a dominant design Government role:
  - Promote an environment in which firms can be innovative in expanding their market share
  - Encourage technology upgrades in products and services.
  - Education of consumers
  - Promote quality as demanding buyer

# Government Role in Architectural ICT Innovation

- Create a market pull through the following actions:
  - Promotion of collaboration among parties.
  - Liberalization to encourage attention to market needs
  - Deregulation to allow combination and adapt technologies from other fields to develop new products or services.

# Government Role in Architectural ICT Innovation (continued)

- Japan (1960s-1970s)
- Korea (1970s-1980s): development policies
- US (HDTV)



# Government Role in Platform ICT Innovation

- The main success factor in the platform innovation is a technology push.
- Government role
  - encourage the involved parties to agree on a single or at least, compatible standards and avoid standards wars.
- Examples:
  - 2G Cellular: Europe, Japan, Korea, and U.S.

# Government Role in ICT Radical Innovation

- The main concern in radical innovation is to minimize risks.
  - Four types of risks: technical, resource, organizational, and market uncertainties.
- Government role in risk reduction
  - support and fund for research activities
  - Initiate and maintain specialized education programs

# Government Role in ICT Radical Innovation (continued)

## ■ Examples:

- ➡ US: Federal agencies from 1945 to the early 1980s
  - ARPA (Advanced Research Project Agency)
- ➡ Japan and Korea versus Europe and U.S.A.: frequency allocation for 3G wireless technology

# Governments and Technology Standards

- When the standard-setting strategies of organizations are different and sometimes in conflict, this situation could lead to standard wars.
- From a public policy perspective, it may be the general interest that a government intervenes so that the involved parties do not waste significant resources on the standards battle.

# Governments and Technology Standards (continued)

- Public authorities may have to intervene to facilitate or to impose a common set of rules that would take into account public interests
- Resist lobbying efforts by the manufacturers if they do not support long-term service plans

# Conclusions

- Not all innovations are of the same type
- Government intervention should be based on the type of technology innovation
- Policies should take into account the differences between success factors for equipment and service innovations.

## Conclusions (continued)

- The life cycle of the technology should be considered
- The short-term needs of manufacturers vs. the long-term needs of service providers should be balance
- Success factors as guides to Policy makers and practitioners

# Q & A

*Thank you!*