

The Azerbaijan Model of Technology Leapfrogging

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What is Technology Leapfrogging?

Technology Leapfrogging is defined as the implementation of **a new and up-to-date technology** in an application area in which at least the previous version of that technology has not been deployed (Davison et al. 2000)

Why Leapfrog?

- Achieve cutting edge connectivity **quickly** and **cost effectively** (i.e. without having to invest in successive generations of ICT – Liu & Yuan 2015)
- **Avoid risks** of experimentation and R&D
- Gain from the **experience and expertise** of developed countries (Gray & Sanzogni 2004)
- **No inertia** from legacy ICT infrastructures

Technology Leapfrogging in Azerbaijan

Phenomenally successful in terms of National ICT Infrastructure Development and Connectivity

- 77% Internet Penetration, 62.4% of households have a computer, 112 mobile subscribers per 100 citizens

Occurred in **4 phases**: Analogous to a physical leapfrog

Psyching



Planting



Propelling



Perpetuating



Phase 1: Psyching

Formulating a **strategy** for National ICT Development

Initiatives of Azerbaijan:

1. National ICT Strategy (2014-2020)
 - The **“Blueprint”**: Overall objectives, strategic thrusts
 - Signal of government commitment
2. State Program for Strategy Implementation (2016-2020)
 - The **“Action Plan”**: How ministries and government agencies will work together to carry out the plan



Phase 2: Planting

Establishing the **foundation** for National ICT Development

Initiatives of Azerbaijan:

1. Seek foreign expertise
 - E.g. eGovernment training in Estonia
 - Achieving **Legitimacy** and **Knowledge Transfer**
2. Taking stock of existing capabilities
 - Pockets of **local knowledge**
 - E.g. Data Processing Centre
 - Identify entities in related roles that can be **repurposed**



Phase 3: Propelling

Enacting the **Initiatives** of National ICT Development

Initiatives of Azerbaijan:

1. Capability Development and Application

- Infrastructural Development
- New ICT-Enabled Services

2. Bricolage

- Use of **local experts** to provide strategic direction
- Repurposing and empowering entities for **advanced roles**



Phase 4: Perpetuating

Maintaining the **trajectory** of National ICT Development

Initiatives of Azerbaijan:

1. Demonstrate Success

- Showcase **benefits** and **outcomes**
- Generating **buy-in** and **goodwill** for future projects

2. Monetize developed initiatives

- e.g. Sell access to infrastructure, facilitate ICT-enabled businesses
- Use ICT-enabled development to generate **socioeconomic impact**



Conclusion

Technology Leapfrogging is a means of achieving the **cutting edge** in connectivity and ICT development

Technology Leapfrogging can bring about a number of **significant benefits**

Technology Leapfrogging is a process consisting of **four phases**

The Process Model developed based on the case study of Azerbaijan can be used as a **step-by-step guide** and reference for informing ICT Development in LLDCs

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