Strategies to Finance Digital Transformation Programs

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Turhan Muluk, Regional Manager

Agenda

- Funding mechanisms
- Strategies, examples
- Recommendations

General Financing Models (Source: Prof. Raul Katz)

- **Public-utility Financing Model**
- **Public-Private Financing Model**
- **Central government funding:** government funds through grants, low rate loans from a development banking source, or a Universal Service Fund
- **Operator-funded:** Operator funds from the capital budget, sometimes complemented by borrowing from lender at a rate reflecting the company's WACC (Weighted Average Cost of Capital) or even issuing of a bond.

Public-utility Financing Model

- Borrowed from electric utility industry
- Funding entails a municipality, an investor (e.g. bank, pension fund) and lender
- Municipality provides certain financial and non-financial contributions (e.g. feasibility study, right of way permits, ducts access)
- Investor provides funding for equity
- Lenders require a collateral interest in assets, including rights to receive senior pledge of revenues

Public-Private Financing Model

- A PPP financing model requires investors (construction companies, banks, pension funds, infrastructure funds) and lenders (private sector project finance banks)
- Usually entails creation of a special purpose vehicle (lending is based on the projected income from the project)
- Lenders “ring-fence” revenues and hold collateral against project assets
- Project contracts are critical in mitigating against performance risks of equipment vendors
- Official sector (development banks) contribute to mitigate risk

Universal Service Fund

- Universal Service Fund is an opportunity for the funding. Many countries have USFs but not all countries are effectively using them.

Therefore,

- Develop successful USF projects for Digital Transformation.
- Use USF Projects as a model for National Scale Projects.
- Consider to deploy USO (Universal Service Obligation) for the licences. 700 MHz is a very good opportunity. Germany successfully deployed this strategy for LTE 800 MHz (licenced operator can start to offer service in the cities after completing the mobile broadband coverage of predetermined rural areas).

Examples for USF Funded Projects

- UAE: Smart Learning Program
- Saudi Arabia: Rural Area Broadband Connectivity
- Morocco: ICT in Education Projects
- Turkey: Effectively using USF for the ICT in Education
- Costa Rica: Connected Homes
- Senegal: Digital Transformation for Higher Education - Senegal Student PC program
- Rwanda: National ICT projects
- India: National Fibre Network (4 billion US Dollar)
- Colombia: National Connectivity Project (includes free access to the Internet in educational institutions and community access).
- Malaysia: Netbooks to low income family students at underserved areas

Government Budgets

How can we increase the percentage of ICT in Annual Budgets?

- Educate ministries (including Prime Ministry and Presidency) on the economical/social importance and benefits of Digital Transformation.
- Work very closely with Ministries of Planning, Finance/Economy, Education (and also with other Ministries).
- Provide the inclusion of Digital Transformation projects in government budgets for the ICT projects

Support from President and Prime Minister

- Get political support from President and Prime Minister
- Deploy pilot applications are important to get political support.
- Collaborate with the ICT decision makers at the Presidency and Prime Ministry.

Pilot Projects

- Develop a pilot project together with relevant Ministries and departments.
- Launch pilot project with a media activity.
- Invite President/Prime Minister and other relevant Ministers to show the benefits and get their support.

Finance support from Banks

- Develop projects together with World Bank and other Regional Banks such as Islamic Development Bank, African Development Bank.

Example Projects

- World Bank - eGabon Project (57.5 Million US$): Digitization of health services.
- Islamic Development Bank – Tunisia: Develop Ultra-Fast Broadband (UFB) in Tunisia
- African Development Bank: Billions of US dollar for regional and international backbones and financing ICT in health, education and agriculture projects.

Regional Projects (ITU and Arab League, African Union)

Prioritize Digital Transformation in the regional programs to secure the budgets

- Arab League
- ITU Regional Initiatives
- African Union Plans, Projects

Municipality Projects

Municipality Budgets (Example: Istanbul's 2016 Budget is 5.3 Billion US Dollar)

- Smart Cities
- ICT infrastructures
- ICT Demand Programs
- Digitization (e-services)

Licenses

- Open door for the investors (mobile, fixed and others) and provide licenses
- Assign broadband spectrum to operators. Spectrum is key for the investment
- Consider USO (Universal Service Obligation) in the licenses.

Vertical Projects:

Use vertical projects and their funds as a tool for the inclusion of ICT and Digitization.

- Health Projects
- Transportation Projects
- Agriculture Projects
- Education Projects
- Energy/Industry projects
- Municipality Projects

World Bank Projects in Morocco

- Morocco Urban Transport Project (P4R) Smart Transport?
- MA-Large Scale Irrigation Modernization Project Smart Irrigation?
- Clean and Efficient Energy Project Smart Energy?
- MA-Health Sector Support Project Smart Health?

Attract Investors

- Develop legislations/regulations to accelerate the ICT investments.
- Provide incentives to investors
- Create attractive ecosystem for the investors
- Provide very good broadband infrastructure

Enabling Environment

(Source: ITU-Report - Financial Mechanisms for ICT for Development)

- Attracting investment in ICT depends crucially upon a supportive environment and a level playing field for business as a whole,
- ICT policy and regulatory environment that encompasses open entry, fair competition and market-oriented regulation.
- Broad-based deployment of ICT also depends on a supportive development policy environment particularly the establishment of national e-strategies and the integration of ICT into other national development strategies.
- Policy and regulatory incentives and more open access policies are also needed for private investment

Korea Example (Source: World Bank)

Supply and demand-side policies, such as:

-Plans for public investment in broadband infrastructure and incentives for private investment.
-Initiatives to aggregate and expand demand for broadband services.
-Policies to promote universal access to broadband.
-Supporting industrial policies.

Since 1996 the government has established a number of master plans to develop an information society:

-1996–2000: First National Informatization Promotion Plan
-1999–2002: Cyber Korea 21
-2002–06: e-Korea Vision 2006
-2003–07: Broadband IT Korea Vision 2007
-2006–15: u-Korea Master Plan (phase 1, 2006–10; phase 2, 2011–15

In addition, the government created an Informatization Promotion Fund to finance projects.

-The fund includes contributions from both the government and the private sector, through spectrum licensing fees, revenue-based contributions from operators, and earnings from the operation of the fund, including loans.
-Between 1993 and 2002 the total value of the Fund was $7.8 billion, almost half of which came from the private sector. The rest came from the government budget and sources such as spectrum auctions.
-Money from the fund is used to support ICT-related R&D, develop and encourage standardization in the ICT industry, train ICT human resources, promote broadband network rollout, and promote e-government.

Korea Example (cont'd)

Supply-side policy
Through its informatization master plans; promoted supply-side broadband policies that can be categorized as:
-Infrastructure and application development policies.
-Content promotion policies.
-Industrial policies
-Regulation and competition policies.

The government invested more than $900 million in the Korea Information Infrastructure project.

-The project is an excellent example of the government's integrated, ecosystem-oriented approach to broadband.
-It was initiated in 1995 and included construction of a national high-speed public backbone, development of ICT applications, and promotion of R&D and IT-related pilot projects.
-The project fostered public-private partnerships, supported network rollout through certification programs, and established an information promotion fund that encouraged private firms to make long-term investment.

Much of the funding for Korea's broadband infrastructure projects has come from the private sector rather than the public sector. Whilst the Government invested more than US$900 million in the KII project, this is a small proportion compared to the total investment in KII of US$33 billion overall.

Broadband Commission Report

CREATING A FAVOURABLE ENVIRONMENT FOR ATTRACTING FINANCE AND INVESTMENT IN BROADBAND INFRASTRUCTURE

Report of the working group on finance and investment

Broadband Commission Report (cont'd)

- **Area of action 1: Gaining access to low cost finance**
- **Area of action 2: introducing effective policy and regulation for the ICT sector**
- **Area of action 3: Devising appropriate tax policies for the sector**
- **Area of action 4: selecting and implementing other interventions to underpin the investments**

Broadband Commission Report (cont'd)

Gaining Access to Capital Infrastructure funds

- **Sovereign wealth funds**
- **Bilateral and multilateral development banks**
- **The role of credit ratings**
- **What will help attract these sources…**

Broadband Commission Report (cont'd)

Creating the right telecoms regulatory environment for private investment

- **The stability and transparency of the regulatory framework**
- **Avoiding of regulatory capture**
- **Dealing with market power**
- **Access to spectrum**
- **Minimising obstacles, such as roll out difficulties (planning permissions etc.)**

Broadband Commission Report (cont'd)

Tax and other payments to the Government by mobile operators

- **-Taxes & spectrum charges**

Intervention tools

- **-Roll-out requirements in spectrum auctions**
- **-Universal Service Funds (USFs)**
- **-Public/private partnerships (ppps)**
- **-Input or infrastructure sharing**
- **-Innovation**
- **-Demand management**

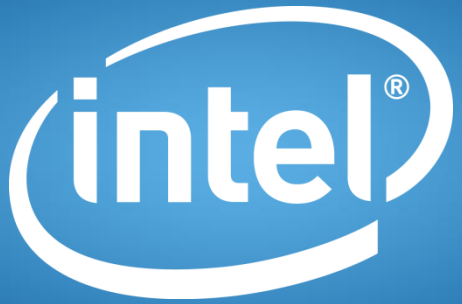
ITU GSR11 Best Practice Guidelines

Funding mechanisms for promoting the deployment of broadband infrastructure

- *Leverage partnerships*
- *Modernize universal service programmes and funds*

Fostering private investment in broadband through incentive regulation

- *Provide overall direction through a national policy*
- *Rationalize licensing regimes*
- *Make spectrum available for mobile broadband*
- *Remove barriers to broadband build-out and access to broadband networks*
- *Granting tax incentives*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