



The Connected Nation: Driving Change and Growth for Countries in Transition

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Point of View: Connected Nation

Developing countries can become more globally competitive and productive by investing in broadband connectivity and ICT. At a macro level, Cisco's notion of the Connected Nation centers on the interconnectivity of a nation as a unified and coordinated unit that orchestrates the aggregation of supply and demand through public-private partnerships.

This means tapping into the unmet needs of citizens and businesses by delivering education, healthcare, government, and other specialized services through a national info-structure.

Underpinned by sound business and operating models that are fluid, and the development of a comprehensive solution ecosystem for the value chain, nations will be able to benefit from economies of scale and new sources of revenue.

In Emerging Markets, Cisco IBSG works with leaders of key national and regional government agencies, businesses, communities, multilateral institutions, and NGOs to turn their technology investments into strategic national assets. Serving as trusted advisers in varied assignments spanning broadband connectivity, digital inclusion, smart communities, and business productivity, IBSG aligns ICT to support socioeconomic development in these countries. Connected Nation is IBSG's strategy and framework for harnessing the power of ICT to serve the national transformation agenda.

Executive Summary

Growing nations face the challenge of competing successfully in the globalized economy while meeting the immediate demands of their citizens for improved standards of living. In a global economy that is increasingly driven by the Internet, technology has a critical role to play in accelerating the economic success that feeds a better way of life.

Nations that have invested in a national "info-structure," with ubiquitous broadband penetration and ready access to information and communications technology (ICT), have been able to compete better in the global marketplace while raising the standard of living at home.

The Cisco® concept of the Connected Nation centers on the notion of a national info-structure. It is concerned with connecting citizens, government, and businesses; enabling knowledge economies; providing better quality-of-life services; and supporting the flow of commerce.

Within the Connected Nation concept are key areas of focus that contribute to the success of the strategy. They include specialist sectors, such as health, education, and government, but also encompass the idea of **Connected Communities**, which deliver and manage the power of the info-structure within a predefined geographic, economic, or residential zone. This, in turn, helps the **Connected SMB** by empowering small and medium-sized businesses that are the engines of economic growth and entrepreneurship.

Connected Nation is the first step to building a knowledge-based society, delivering universal services across a dependable infrastructure, and driving economic success toward a better way of life.

Introduction

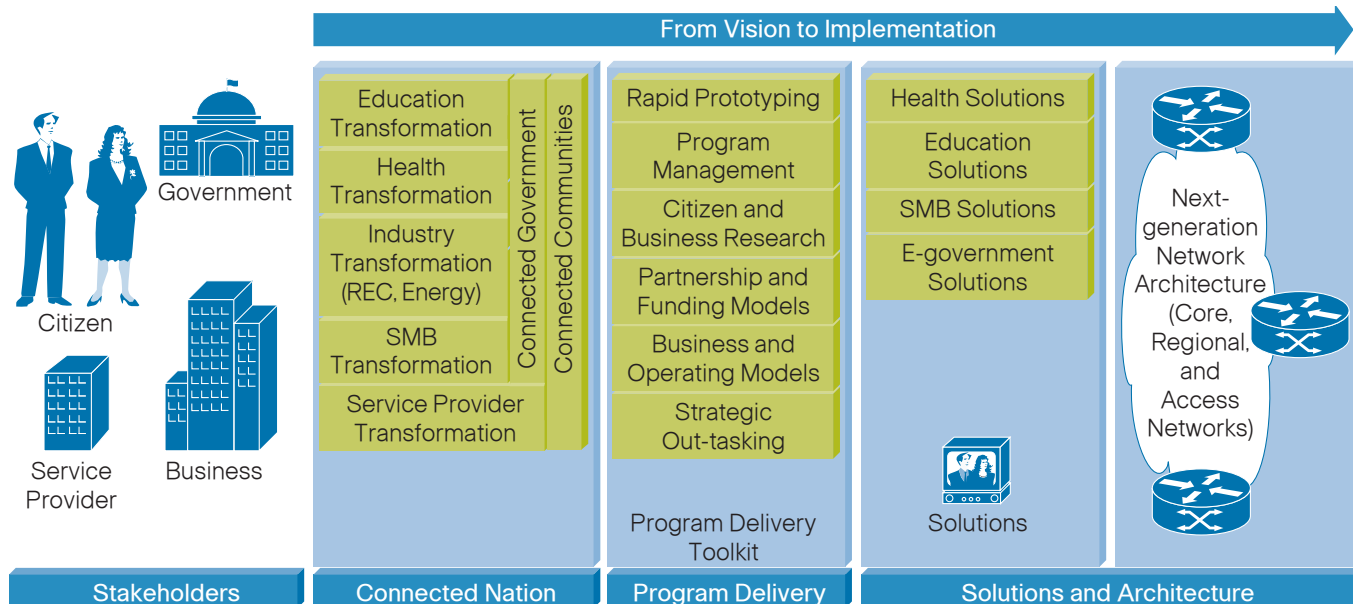
A Connected Nation is one that can harness the power of broadband and ICT to drive sustainable socioeconomic progress.

According to the World Economic Forum's Global Competitiveness Index, both broadband penetration and ICT investment as a percentage of GDP have been shown to have a high correlation to a country's global competitiveness. Net impact studies show that governments can improve productivity sevenfold by deploying and managing business processes over the network. If a country can improve its productivity by 5 percent per year, it can double its standard of living in just four years.

But many nations must overcome the challenges of recurring poverty, overpopulation, a lack of essential skills, and many other issues before implementing a true Connected Nation strategy. The dilemma always focuses on the trade-off between the demand from all sides for resources and the available budget.

Cisco's Connected Nation program initiatives were conceived to support the transformation of these countries. They are designed to enable the delivery of an affordable, integrated ICT infrastructure that helps people, communities, small businesses, and organizations connect and collaborate with each other as a unified and coordinated state—one not bound by geography or social hierarchies. Placing the

Figure 1. Cisco Connected Nation Program Initiatives: from Vision to Implementation



Source: Cisco IBSG, 2007

unmet needs of citizens and businesses at the core, Cisco works hand-in-hand with public and private stakeholders to implement a coordinated info-structure, using ICT and the broadband network as a platform. The Connected Nation concept is designed to help nations move from vision to reality in achieving their development goals.

Issues and Challenges

All fast-growing economies are affected by the pressures of demographics and globalization. The sheer size of the population often is a key issue. Worldwide, urbanization is accelerating, resulting in increased environmental degradation and government funding being taken away from rural infrastructure development. This, in turn, slows development, exacerbating conflicts over resources such as water and energy.

Poverty not only reduces the capacity to tackle these environmental challenges, but also leads to poor health and an increased school dropout rate. Those who do succeed in getting an education and acquiring valuable skills often migrate in search of more lucrative opportunities, leaving their home nation with a chronic skills shortage.

To compound this issue, globalization has brought about a paradigm shift in the way business is carried out. Outsourcing, atomization, and personalization are having an impact on all the world's economies. Although small and medium-sized businesses are recognized as the lifeblood of a nation's economy, SMBs, in many nations, still are under-represented in global economies due to their lack of readiness for global business environments and shortage of financial and basic management capabilities. To succeed, SMBs need supportive governments, favorable trade/labor laws and policies, access to technology, skilled workers, and improved management competencies.

Existing business models designed to address these issues tend to focus on specific sectors, such as health, education, or agriculture. Health initiatives, for example, may be concerned with specific diseases or services, rather than general public health systems and processes.

Yet, where a broadband and ICT infrastructure is in place, new opportunities quickly arise, as can be seen from the booming knowledge economies of India and China. The sustained success of economies such as these suggests that the Millennium Development Goals¹ do not place enough emphasis on the role of broadband penetration and a well-coordinated info-structure, with the integration of resources, services, and commerce that flows from it.

1. The eight Millennium Development Goals, which range from halving extreme poverty to halting the spread of HIV/AIDS and providing universal primary education, all by the target date of 2015, form a blueprint agreed to by all the world's countries and all the world's leading development institutions.

Where communications are good, understanding can improve and the propensity for conflict can be reduced. Supporting the development of more open and transparent societies helps fight corruption. An encouraging trend has been the recent rapid uptake in the use of mobile phones in developing countries, which has produced improvements in local economies and social cohesion. Even then, much must be done to transform the regulatory and competitive environment of the telecommunications space to enable a robust broadband economy.

Clearly, no single solution exists to the diverse challenges facing many growing economies. It is helpful, however, to consider the four classifications that can be applied to nations in transition to gain an understanding of their transformational needs as they commit to a Connected Nation strategy.

- **Energy.** These are wealthy countries with plenty of cash from the demand for natural resources such as oil. Yet many still struggle with the challenges of urban and rural divides, as well as pockets of socio-economic marginalization. These countries want to create new and sophisticated info-structures that will put them ahead in the global competitive environment. They also are investing the money they have now to create economies that diversify and reduce their dependency on oil.
- **Industrial.** These economies are fairly developed and have various industries as drivers. They can afford to fund their ICT agendas through taxation.
- **Commodity.** These economies are driven by trading of commodities like copper, gold, and diamonds. ICT investment is funded by a combination of tax and external donor organizations.
- **Agricultural.** These economies usually have the greatest need for help with competitive growth. ICT agendas are funded mostly through donor organizations.

Every country has a mix of economic sectors, but each can be considered in terms of four levels of governmental mandate: federal, state, city, and municipality. The key question for a nation in transition is how much, how fast, and how well it can change. The Standish Group, which specializes in IT value research, estimates that up to 40 percent of all large-scale ICT projects in a country typically fail; 30 percent are considerably challenged; and only about 30 percent actually succeed.



To ensure success in the transition of a Connected Nation, Cisco typically works with each level of government to evaluate the following parameters:

- Does the executive-level leadership and vision of ICT-enabled socioeconomic development have a designated champion?
- Is that vision shared by all principal sectors and supported by a clear mandate to collaborate between ministries and departments?
- Have associated cost and revenue issues been analyzed to build sustainable business and operating models for service and content providers?
- Have the vision and roadmap for implementation been communicated to orchestrate and obtain the cooperation and partnerships with industry and other private stakeholders?
- Do the vision and roadmap reflect the various needs of citizens and communities?
- Is there a clear understanding of the skills required? What are the recruitment options?

A Point of View: Delivering the Connected Nation

It is not enough simply to make broadband connections available. Demand will come only when the application services required by citizens and businesses are delivered and backed by tools that enable local ownership and further development. The challenge is to make these services affordable, so that communities and societies are interconnected to create a true human network, giving every citizen a richer quality of life and bringing about true transformation at a national level. In particular, closing the gap between rich and poor regions can make a vital contribution to fostering social harmony and stability.

The Connected Nation program comprises transformational initiatives that encompass every interrelated sector. Partnership with city, regional, or country government, as well as with service providers, industries, and non-governmental organizations (NGOs), is essential for the provision of an ecosystem of solutions that countries and their constituent organizations actually need. Equally important is an integrated broadband and ICT infrastructure that favors personalized services, affordability, and economic sustainability. Underpinned by these two criteria, the Cisco Connected Nation program constitutes an integrated blueprint that helps take a country from its ICT vision to an interconnected reality.



Connected Communities are aimed at supporting governments and their constituents to build self-sustaining and empowered intelligent communities, founded on a robust, broadband-based economic model. Intelligent communities are sometimes known as Digital Cities, Smart Cities, or Knowledge Societies. These zones may extend from rural communities to towns, cities, provinces, states, countries, and even special economic zones. They typically incorporate broadband and the ICT platform through a sustainable operating model, orchestrated by the government and provisioned by different service and content provider partners. These partners commit to delivering against the national economic and social agenda of stimulating job creation, commerce, better public services, education, and health access, as well as improved public safety.

Connected Government is the next-generation e-government, taking into account the changing role of governments in the knowledge economy. The goal of Connected Government is to create public value by placing individuals, families, and communities at the center of responsive networks of knowledge, service, trust, and accountability, while reaping the benefits of lower costs, improved service delivery, and increased capacity and transparency. Connected Government presents an integrated face to the public by connecting disparate government departments, agencies, and functions to provide more mature customer and citizen-centric services.

Complementary initiatives, such as Connected SMBs, Connected Health, and Connected Learning, are built on the framework of Connected Government. They address issues of infrastructure, systems, and process that are specific to vertical and global supply chains, and to the health and education sectors. These specialized programs support delivery of an ecosystem of solutions and services via an infrastructure that is part of an integrated approach to the development of communities. This addresses affordability issues by aggregating demand for services—such as health, education, government services, vocational training, and support for businesses—over a network that can deliver quality broadband services.

Service providers must have a central role in any Connected Nation transformation initiative. The Cisco Connected Nation Service Provider Transformation initiative works with SPs to support their transition in the face of a changing landscape. It enables greater market penetration and opens subprime markets that are aligned with the country's economic and social ambitions. These include educating the different government

stakeholders, as well as developing strategies for new service creation and grassroots demand, usually around a vertical market.

As part of the effective transition to a transforming Connected Nation model, the core benefits of an advanced infrastructure always will be aggregated across all sectors that can benefit from it. The accessibility of all of these services depends on the ability of service providers to deliver them at affordable rates, and for federal public executives to create and orchestrate a favorable environment in driving the development of new delivery models, such as the use of universal funds to subsidize broadband and communications interconnectivity.

Cisco's formula supports countries in transition by incorporating best practices, pooling intelligence and experience from other parts of the world, and deploying repeatable, preintegrated solutions developed in response to unique customer demands and sector-centric applications. The approach is highly advantageous because it boosts productivity, optimizes returns on investments, synergizes efforts, speeds time to market, and accelerates socioeconomic development.

Conclusion

The Cisco concept of Connected Nation embodies a unique partnership among government, citizens, and commercial interests. It enables countries and citizens to reap the rewards of a transformed and flourishing economy, with improved productivity and a better standard of living for all. A Connected Nation is the first step to building a knowledge-based society, delivering universal, high-quality services across a dependable infrastructure, and driving economic success toward a better way of life.

Notes

More Information

The Cisco Internet Business Solutions Group (IBSG), the global strategic consulting arm of Cisco, helps Global Fortune 500 companies and public organizations transform the way they do business—first by designing innovative business processes, and then by integrating advanced technologies into visionary roadmaps that improve customer experience and revenue growth.

For further information about IBSG, visit <http://www.cisco.com/go/ibsg>



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