

Technology's Role in Developing Intellectual Capital

by

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For a long time I was convinced that Dominica's problem was primarily one of capital. In reflection, I see that I was right and wrong. Namely, when I thought capital was the problem, I saw capital primarily in financial terms - money, credit and the like. Lately I have come to believe that far more important to Dominica is the island's stock of intellectual capital. The intellectual capital here mentioned should not be limited to or confused with human capital. Intellectual capital has been defined as follows:

Intellectual Capital = Human Capital + Structural Capital + Customer Capital

Human Capital:

The educated stock of an organization. The capabilities of an organization's members necessary to provide solutions to a clientele, to innovate and to renew. In addition to individual capabilities, human capital includes the dynamics of an intelligent (learning) organization in a changing competitive environment, its creativity, and innovativeness.

Structural Capital:

The skeleton and glue of an organization. Its value depends on how well it enables an organization to package, move, and use human capital in service to specific goals. This includes the organizational capabilities to meet market requirements. Structural capital also includes the quality and reach of information technology systems, organizational images, databases, organizational concept and documentation.

Customer Capital:

The relationships with people with whom an organization does business. Although this usually means clients and customers, it can also mean suppliers.

Clearly, Dominica lack many aspects of intellectual capital per the above description. As a society we may have talented, educated individuals and hence elements of human capital. But it is those other aspects of intellectual capital that are sorely missing from the system. In particular; our innovativeness, our creativity in using knowledge we already possess, our management philosophies, our corporate cultures, our management processes, our information technology systems, our networking systems, our external customer savvy and relationships, all suffer from an "idea gap". We need new ideas. We need new concepts. We need new ways of

thinking about the world and development if Dominica is to escape poverty and develop the full human potential of all its citizens. That is the point. The only point. Forget foreign aid. Forget new agricultural markets, and better varieties of "fig". If we do not infuse new ideas, renounce the agrarian, primary producer worldview, then we may never achieve a sustainable economy. Dominica's future lies in our minds and that what makes the possibilities so exciting!

But first we must recognize as true that the primary problem with Dominica is the lack of the ability to think outside the box. And there is a reasonable explanation for this. Increasingly, sociologists and development psychologists are realizing that knowledge and creativity are largely social. People will think, act, innovate, and create with those dominant ideas and concepts, which they inherit during their social development. Innovativeness, creativity - all crucial for true sustainable development - are largely social and cultural phenomena. Without a greater exposure to worldwide best practices and interesting ideas, Dominica - along with many small states - is left with a limited "idea set" to choose from. It is not that Dominicans are not intelligent people, but simply that we are suffering from that serious "idea gap" when compared to progressive nations.

That then is what I see as the main benefit of a science and technology based economy. And a science and technology based economy does not simply imply an economy based solely on advanced scientific endeavors, but really implies adopting a scientific approach to problem solving in all disciplines. These new industries and their associated concepts will introduce a new culture, a new modus operandi, and a context in which innovation, professionalism, and global competitiveness is cultivated.

- A technology-based economy will force us to lift our eyes from the banana fields and start thinking again.
- A technological economy will force us to train our young people with useful skills in school instead of following a mindless, pointless neo-colonial education.
- A technological economy will call forth, with a sense of urgency, the need to develop our college systems with a specific agenda in mind - well trained 21st century professionals.
- A technological economy will stimulate and introduce new management approaches galvanizing a transformation of most of our social institutions.

We must develop industries that are relevant in today's knowledge economy. There should be no need for us to clunk through the traditional development process, via low wage industrialization. We can and should leap frog that phase directly into the era of knowledge work - the most valuable asset in economies today. The most valuable asset that Dominica has is intelligent, determined, hardworking people. We must thus ensure exposure of our society to cutting edge concepts and the building of momentum to nurture and develop a sustainable intellectual base. Let us gain that

insight, and focus on developing that intellectual capital as the new Dominican commodity.

That then is where Dominica should capitalize on its expatriates and where the expatriate community is most valuable - in fact invaluable - to Dominica. We have well trained technologists, scientists and other professionals around the world. Let us utilize and organize that talent into a coherent force. Let us use these resources to expand Dominica's idea set thus infusing new concepts, new philosophies, and new energy into the island. Beyond the financial capital that expatriates can bring to bear, it is that most needed other capital which expatriates are well suited for bringing to the table. The wide dispersion and excellent placement of the Diaspora means that we have a worldwide net exposed to best practices around the world. Expatriates should be sourced as conduits funneling ideas and innovative approaches back home. An organized effort like that cannot help but light a fire, build a momentum, to that tantalizing future which all Dominicans have always felt in their bosoms is possible.

Let us do these things then. Let us imagine and innovate an exciting future for our nature isle. Let us blend that extraordinary Dominican warmth, humanity, and love for island, with an aggressive push for innovative, knowledge based, approaches to economic development. Let us do these things well and economic prosperity will be simply a natural, almost inevitable consequence.

Bernard Hurtault: Born in Roseau, Dominica. Attended the St Mary's Academy and the six-form college in the late eighties. Graduated from Midwestern State University in 1996 with bachelor's degree in chemical technology and manufacturing engineering. Undergraduate awards included junior man of the year, who's who in American universities, national dean list, outstanding young American scholar, and chemical honor society inductee. Upon graduation, worked as a manufacturing supervisor and product engineer at Howmet Corporation - a manufacturer of advanced aircraft engine turbine blades. In 1998, awarded a Texas fellowship to pursue a master's degree in microelectronic engineering at Texas Tech University. Awards from Texas Tech include induction into the national society of college graduate scholars. Subsequently served as chairman (region V) of the National Society of Black Engineers (NSBE), as well as southern representative for the National Black Graduate Students Association. Completed dual masters degrees in semiconductor engineering and systems and engineering management at Texas Tech University. Currently employed as a project leader in new product development at Texas Instruments inc. (semiconductor division) with responsibilities for supervising engineering teams in the manufacture of high-speed communication line drivers. Also has responsibilities as a campus champion, and involved in corporate recruiting of up and coming minority talent. Presently, in the dissertation stage of completing a PhD in systems and engineering management with a focus on technology transfer. Recently selected as most outstanding delegate (economic development committee) SBC's model OAS conference held in San Antonio,

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