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Why Information and Communication Technology Work Matters

In the early 1950s when an influx of early office technology was produced and adopted during the Third Industrial Revolution it lacked a defined title, workers in the field inherited the title 'Data Processor' from the legacy data processing units that managed tape records in the previous era. The term Information Technology did not appear until 1958 Harvard Business Review authors Harold J. Leavitt and Thomas C. Whisler stated "The new technology does not yet have a single established name. We shall call it Information Technology". The Phrase "Information Communication Technology" was an expansion on Information Technology used in academic circles as early as the 1980s to include telecommunications and digital media. The abbreviation "ICT" was made famous after it was used in a report to the UK government by Lord Dennis Stevenson in 1997. ICT includes software development, web design, data processing, ICT training, and software solutions.

Since then, the world's dependence on ICT has steadily increased over the years and the overall wealth of the world increased tremendously as a result. Hundreds of thousands of businesses and industries were created along with millions of jobs. This was due in no small part to the advancements made in the technology and forward-thinking individuals like Konrad Zuse (inventor of the modern computer), Dennis Ritchie (Inventor of C programming language), Sir Tim-Berners Lee (Inventor of the Internet), and John Blankenbaker (Inventor of the personal computer), to name a few.

In my experience, most leaders in Trinidad and Tobago failed to see the real value of ICT, though not uncommon elsewhere in the world. Due to a lack of understanding of the complexities of this emerging field it appeared that, to many, the value was found in the simplest of tasks like fixing a paper jam, helping users to login to their email or finding something on their phone.

Prior to the Covid-19 pandemic the correlation between ICT and productivity was not closely linked - a sore error made not only in Trinidad and Tobago but also the United States in the 1990's. Companies calculated productivity, excluding technology as a contributing factor and as a result the contribution of ICT was often understated, underappreciated, and underpaid. Slow-working computers and internet connections, poor internal and external communication channels, suboptimal processes, low productivity, and less

than desirable customer satisfaction levels were the result. Until the retail and wholesale sectors changed their design to include an ICT framework, improvements to manufacturing processes accelerated their productivity and growth.

The true value of ICT is complex problem-solving through innovation and technology. ICT professionals strategically use technology to help organizations reach strategic objectives or when necessary, create new technology to create new avenues of income and keep its competitive edge.

During Covid-19, ICT became an organization's most important resource. Many companies scrambled to survive through lockdowns and public panic. How would they survive if they were unable to reach their customers through conventional means? An organization's survival during this period was based on how well and how fast they were able to adapt. Many organizations transitioned to work from home largely due to the strategic action of their respective ICT Departments, who, through the means they had, were able to securely allow users to remotely access resources and services and ensure communication with stakeholders was always possible.

For example, at Cipriani College of Labour and Cooperative Studies we were able to seamlessly transition to a 100% online learning and work from home because the ICT Department's focus was the future-proofing of the organization and the introduction to online tools, but most importantly ICT had the support of the Director. This transition gave CCLCS the added benefit of being more accessible to the local and regional market. Similarly, other organizations have found unintended benefits after being forced to innovate their business or suffer, and at this point, finally saw strategic ICT as a major contributor.

While the work from home model has made mixed reviews post-Covid-19 both the private and public sector saw the value in the new possibilities through ICT. The reduction in operational cost, improved customer satisfaction, creation of new services, and increased productivity is hard to ignore, and as such many organizations to include digital transformation into their strategic plans and bring ICT to the forefront of almost every industry.

In all new industrial revolutions new crimes are introduced, whether it was embezzlement or fare-dodging, advancement in technology meant that there would be people who would try to cheat the system and harm others. The Fourth and Fifth Revolution are no different, with a large push for digital transformation new cybercrimes threaten not just organizations, but countries as well. A ransomware attack can mean significant disruptions in business operations, loss of customer trust, and long-term financial damage. The role of ICT in protecting organizations from these cyber-attacks is key to the longevity of sectors. ICT ensures that an organization's data is insulted from such attacks, its staff educated about cybersecurity threats, safeguards against possible intrusions, and a response plan if all else fails.

ICT work matters because technological advancements are a key factor in economic growth by creating increasingly more efficient means of production for more and better goods and services. The strategic application of these advancements is the deciding factor between success and failure. ICT work matters because it solves problems others don't see coming.

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