

Investing In Connectivity Is Great



Investing in connectivity is great: But only with the relevant applications

By Damien Fernando

Significant investments are made and foreign exchange spent by the government and private sector on telecommunications and internet connectivity. In addition, the amount of foreign exchange used annually to import mobile phones and other hardware could be as high as US$100 million. While a lot of effort and money is spent on hardware and connectivity, very little thought or investment goes towards the development and use of the systems that run on that hardware so that internet connectivity can truly benefit the nation. Connectivity and hardware could-and should-be used to improve the transparency of systems significantly, enhance system integrity, eradicate bribery, drastically reduce government expenditure, and detect and prevent the wasteful spending of government funds. Similarly, they could be used to provide convenience to the public, to improve fairness to a great extent in the distribution of education and business opportunities, and to offer a vast improvement to the filtering of benefits to those in need. If these objectives are not achieved, enhancements to aid access to technology will not be fully realised as technology will be used for entertainment purposes alone.

When considering any burning issue in the country, such as the lack of higher education opportunities and corruption in school admissions, one can see that there are ways of addressing the challenge through technology. The following are a few possible ways to develop and implement programmes that would make great strides towards addressing some of the issues facing our country.

1. Delivery of higher/technical education at a much lower cost and with greater accessibility. With the on-going advances in communication technology, the number of people physically attending classroom training all over around the world for higher education will dwindle within this decade. As a country that does not have sufficient opportunities for higher education, technology could be used to significant effect in Sri Lanka.

Much has been written on the subject of the lack of opportunities for higher education. Anyone who is familiar with YouTube would know that it is like an encyclopaedia where one can learn about any technical subject or acquire any skill.

There are structured lectures on almost any subject one can think of. What is lacking, however, is a system to acquire certification for the knowledge one has obtained through YouTube (or by any other means). State sector universities could introduce external diploma and degree programmes for people who self-study. Information on the syllabus, the requisite level of theory and practical application, and the depth of knowledge required to cover the course requirements as well as links to appropriate online videos would be sufficient for suitably motivated students. Theory and practical examinations held each quarter would allow external students of all ages to earn university-issued qualifications. Apart from a few specialised fields, such as medicine and nursing, there are not too many other areas for which one could not acquire the necessary skills and knowledge through YouTube and similar websites.

The number of people below 30 years of age who have not had access to higher education over the last ten years could be as high as two million (almost 10% of the population). A large proportion of these people would welcome the opportunity to obtain a certificate-level, diploma-level, or degree-level qualification using the proposed system. This would in turn produce a major shift in the type of jobs that Sri Lankans obtain overseas. Instead of being housemaids and labourers, the number of quantity surveyors and other technical professionals would increase because of the qualifications received using this system. Within a few years, it could boost the amount of foreign exchange the country earns from these expatriate workers.

2. Showcasing Sri Lankan products, services and skills to the world. The Sri Lanka Standards Institute, the Export Development Board and the Bank of Ceylon, which is a fully fledged state-owned exporting body, together with a ‘Sri Lankan produce portal’ could link local producers with international buyers. Purchasing a product that is quality- guaranteed by a legitimate standards authority through a state-owned body could instil international buyers and consumers with the much sought-after confidence in Sri Lankan products and services. Furthermore, such direct orders could bring larger margins than usual. Sri Lankan gems, cinnamon, skilled manpower, flowers, fresh vegetables, handicraft, furniture, degrees from Sri Lankan universities, quality hotel rooms, etc., could be similarly showcased/exported/sold through this channel. The placement of advertisements in local publications through embassies as well as in international magazines such as

The Economist would direct leading buyers and users of such products and skills to the ‘state-sponsored’ Sri Lankan produce portal. The main advantage of such a portal, which would be backed by government institutions, would be its ability to bridge the trust gap for buyers from Western countries when they look to buy products from sellers in developing countries. To maintain the appropriate level of confidence, the products and manufacturers listed or introduced through the portal would be required to undergo regular quality checks and other verifications.

3. Transparent marketplace for small-time producers and growers. A state-managed portal could be implemented to link small and medium-scale producers and growers with large-scale users, retailers and exporters of such produce. This will increase the income of the producers and growers enormously while helping to bring down the cost of food items and the like to the public. Such a system, coupled with a fast courier system, would also reduce or eliminate the waste of perishable items. A reputable software company in the country has already developed such a system but is still knocking on the doors of decision-makers.

4. Eliminating corruption in school admissions. If all hospitals and registrars of births were linked to a single system, the same database could be used to centrally allocate schools to children. Linking the Education Department to this national database would give schools a five-year lead to plan admissions. The system could randomly allocate children to schools and publish this information on a website accessible to parents. Parents would additionally receive a short message (SMS)-and an email for those who have provided email addresses-to notify them of the admissions. Such allocations could allow mutually agreeable swaps. If there were a financial benefit, it would go to the parent who was swapping for a school with a lesser demand, and not to school principals.

There could be a reallocation of schools based on the results of grade 5 scholarship examinations. This too could be done through the proposed system rather than having parents apply directly to schools. The Education Department could enhance the capacities of ‘reputable schools’ by linking smaller schools in the vicinity of the larger schools and appointing the smaller schools as feeder schools to the main schools.

This would also enable the Education Department to maintain a centralised database of students in the schooling system. The system could further be extended to have an attendance register for students and teachers. The system could inform parents via a text message if and when their children do not attend school. Gaps in the distribution of teachers would be instantaneously visible to the education authorities rather than currently where such shortages are communicated by the relevant principals. Lapses by principals, regional education authorities etc., would be immediately apparent to senior officials in the department, and corrective action could be taken. This would also provide an opportunity to implement a transparent teacher transfer system that would not affect students. The Education Department could additionally use the system to monitor the progress made by schools in covering the required curricula and provide temporary teachers to schools that fall behind.

5. Increasing the efficiency of vehicle usage by state institutions. The transport logistics software used by taxi services such as Uber has been available for some time. Such software could easily be used to introduce an efficient system to meet the transport needs of state institutions. It would be necessary to transfer and manage all vehicles currently owned by state institutions to one single entity (under the CTB). Users in state institutions could then pre-order chauffeur-driven rides for their use (24-hour notice for regular use and one hour for unplanned travel). This would substantially increase the efficiency of vehicle usage in the state sector. The current requirement for each and every state sector institution to keep spare parts in stock and have drivers and repairmen on the payroll would disappear. A designated administrative officer in each unit of the state sector institutions would be responsible for ordering the rides required by his or her unit. Actual vehicle requirements for this purpose would be far less than the current number of vehicles owned by state institutions. Hence, such a company could hire out vehicles to the private sector as well as for individuals, tour operators, etc., thereby enhancing the utilisation of these vehicles, which are all imported. Some of the vehicles could be sold via web bidding. Additional drivers and related people who would be attached to the transport company could be seconded to the CTB to enhance their services. Incidentally, if this were to be done, there would be a massive reduction in the abuse of state vehicles.

6. Increasing the government revenue. There are many areas in which

technology could be used to enhance government revenue significantly. First is the introduction of an online lotto or lottery system. The current system of lottery distribution predominantly reaches the lower and middle segments of the population. The majority of Western countries have online lotto systems where adults can pre-register by providing proof of age. Most affluent people in the country would be able to invest larger sums on a draw (say Rs 2,500-10,000) compared to the average Rs 20 weekly investment by individuals from the lower segments. There is a possibility that lottery sales would increase by 25-40% if tickets could be purchased online. The government would further save costs on both the printing and distribution of additional tickets. If this were to be done without significantly increasing prices, the entire additional revenue from online sales could be deemed as profit for the government.

7. Reducing corruption in licensing, tax clearance and issuing permits. The Bribery Commission is attempting to do a good job by making hotlines available for people to report incidents of bribery. Unfortunately, this will only work in the case of an unwilling giver. In most instances, the person who pays a bribe is doing so willingly in order to obtain an undue benefit from another person. Several activities, such as bus routes, timber transportation and the extraction of sand from rivers, are still governed by permits. For example, the Forest Department charges Rs 200 per transport permit. A person familiar with the trade would know that Forest Department officers have to be paid Rs 5,000 for each permit. It is said that this amount is shared between the Senior Forest Officer, the Forest Officer and the office staff, among others. For a load of timber, which is sometimes worth over Rs 1,000,000, transporters do not mind paying Rs 5,000 for a permit.

Another example is when an individual acquires a piece of land or a valuable vehicle. The Department of Inland Revenue (IRD) sends a directive to the buyer to submit a tax return or the tax file number. It is known among many that, by paying a sum of money, these inquiry files can be made to disappear. The Bribery Commission will never receive complaints about monies that change hands for timber or sand transport permits or for making IRD files disappear as long as the givers are participating willingly.

If the Forest Department were to have a central web-based system where a person could pay online and obtain a permit, it could control the number of permits issued.

Furthermore, the Forest Department could charge Rs 5,000 or more for an online permit as it would also save the transporter a lot of time. Similarly, if the IRD made it compulsory for any person who has combined net assets (land, vehicles, shares, etc.) of say Rs 10 million or more to file a simple online tax return, the recovery of taxes would be much higher than at present. Thereafter, if a person needed to register a car or land in his or her name, a permit for such registration could be issued online. This information would then go directly to the tax file of the individual concerned. At the end of the year, the person would have to file another return at which time the system would compare the changes to the assets held by the person with the assets of the previous year and the income generated in the current year. Reducing human involvement would reduce corruption. Reducing human involvement would increase government revenue. Reducing human involvement can be achieved using currently available technology.

8. Convenience and value-added services to the public and the introduction of system integrity

A. Passports, NICs and driver's licences. Anyone who has had to fill out a paper application to obtain a passport will have realised the utter inefficiency of the system. People who have access to the internet should be allowed to complete the forms online. This would eliminate the need for department officers to re-enter application details on the system. Applying for state services, such as the issuance of passports, driver's licences, birth certificates, pensions, provident funds and income support, could be made available through the web. While the internet-savvy will be able to do this themselves, others would need to get their children or friends to help them. This would also give rise to opportunities for small-scale entrepreneurs to help others make online applications for a small fee.

The Department of Immigration and Emigration still depends on paper birth certificates. In the one-day service, there would not be any possibility of verifying the authenticity of birth certificates. If the person's registry were to be maintained online, the same system could be linked to the passport office, national identity card (NIC) office, driver's licence office, etc., and this would increase the integrity of the whole system. The registration of births and deaths should also be carried out online, and entering the current paper data would create a comprehensive database of citizens. Whoever has access to the internet could be asked to enter their birth certificate, NIC, driver's licence and passport data into the system on

their own. The government body in charge of the central database could then verify the details from the respective departments and authenticate same. The data not entered by people would have to be completed by the respective departments.

If Parallel Investments Are Not Made To Develop And Implement Systems In The Aforementioned Areas, The Vast Investments Made By The Government And The Private Sector On Connectivity Will Continue To Be Mostly Used For Entertainment Purposes.

As NICs and passports would be linked, similar to the system in Singapore, people returning from overseas would be able to access the electronic system using their NICs. This would reduce the large queues at the immigration and emigration desks at airports. A connected electronic system could also be used to manage the entrances to state departments using NICs. The system could alert individuals when their passports are used to enter or leave the country. Individuals could similarly be notified via SMS when their passports or driver's licences are nearing expiry, for instance. Integrated systems could sell lottery tickets, bus and train seats, toll charges on highways, entrance tickets to archaeological sites, and rechargeable common electronic travel tickets for use on trains, state buses, and private buses. They could also be used to pay for government services, etc.

B. National job bank and employment registry. The system could be extended to include a national job bank. The government has given an undertaking to create a million jobs by 2020. To ensure that all segments of society have an equal chance of benefiting from this initiative, a national unemployment registry should be set up with links to the aforementioned registration system. The Examination Department should then conduct a test similar to the SAT, which tests IQ levels etc., for all registrants. This database could be marketed to the local and foreign private sectors for their recruitment needs. The database could also provide details of the areas where unemployment is higher than the national average. Such information would assist in providing investment incentives to direct local and foreign investors to such areas. To maintain the integrity of the system, providing false information to the system could be made a punishable crime. Government officers, such as Gramasevakas, who provide false certification on unemployment etc., could then be investigated and removed from service.

C. Linking the employment database to other databases for the provision of housing and selection of foreign employment opportunities. At present, the Samurdhi scheme, Gam Udawa (or building houses for the poor) and the Ministry of Foreign Employment are working independently of each other. Using a common database would enable the Ministry of Foreign Employment to channel a significant number of foreign job opportunities to people in the unemployment register and to those who are receiving Samurdhi benefits. Once linked, the abuse of Samurdhi subsidies by people who are working abroad or with substantial assets would be eliminated. Furthermore, when private sector employers provide employment for people from the unemployment register, such names (and families) could be removed from the Samurdhi benefit entitlements.

D. Guiding the lower segments to higher education opportunities. The Education Department and Examination Department could also link their systems to the national database to planning school capacities and use the electronic NIC to eliminate impersonations in examinations, etc. The relevant ministries could use the details of performances in examinations to direct people via SMS to apply to nursing schools, technical schools, German technical schools, teacher training schools, etc. This would eliminate the issues faced by people from lower segments who lack direction regarding non-university higher education opportunities.

9. Increasing the transparency and efficiency of purchasing and spending in the state sector

A. Purchases of goods and services by the public sector.

The amount of money spent by state sector institutions eats into a substantial portion of the Sri Lankan economy. Due to corrupt practices, most contracts for supplies to the government are made at high prices and by a few connected companies and individuals. The actual producers of most of the products are paid very little. If all purchases were to be made through a common state sector portal, manufacturers, small and medium enterprises and small-scale manufacturers could be educated to bid directly for government tenders.

Trading portals such as Amazon, eBay and similar sites have been in existence for a long time. A similar portal for purchases by state institutions (it could also be opened to the private sector) would provide a transparent, direct link between the producers and users. While the buyers would get an attractive price, the producers

(especially from the lower segments of society) would receive a larger profit for their produce. As the quantities, description of the goods purchased and the amount paid would be in the public domain, despite cutting out the middle man, such a system would also enable the public to know the levels of spending in state institutions.

B. Centralised state payment system. It is no secret that there is huge wastage of public funds in state institutions, such as state corporations, local government authorities, etc. The aforementioned centralised purchasing system would look after one side of this. Any person who is familiar with supplying goods and services to state institutions will know of the difficulties in obtaining payment. A few will know how to deal with the purchasing officers and accountants of these institutions to ensure that their payments are received without any delays or difficulties.

A centralised national payment system would be similar to the shared services units established by large local and foreign conglomerates. Once a supplier is selected from a transparent bidding system (as explained above), the institution would be required to upload the invoices and update the system regarding the items received. Thereafter, a payment voucher would be prepared by the national payment office. This would trigger a request for audit approval. The staff of the Auditor General's department, who would have access to the system, would need to log in to the system and track the uploaded payment documents.

As all payments for all state institutions would be processed through the system, the system would provide the auditors with price comparisons of similar products purchased by other institutions. If there were a suspicion regarding the purchase or payment, an auditor could trigger an alert to the local audit office closest to the location of the buying institution to initiate a physical inspection of the goods supplied or the service provided. The Auditor General's office and its branches would also require experts in other fields, such as IT, civil engineering and automobile engineering, who would be sufficiently competent to audit a supply or service. Once the auditor has cleared a payment, the central payment authority would remit the funds directly to the bank account of the supplier. The IRD would also have access to the same system to provide it with the total value of the services supplied by a company or individual to the state sector.

10. National land database and systems to manage land ownership. I am not certain whether the government has a centralised database of state-owned assets. Most likely, the land deeds and other such important documents that are available are kept at various government agencies and local bodies. Sooner rather than later, land-related matters should be entered into a central system, and the government should make arrangements to ensure the future safety of these public assets. Such a database could also be used to recoup assets that have been fraudulently acquired by the powerful. Additionally, to enhance the integrity of the deeds and the details and history of ownership of all state and private lands in the country, the information should be entered into a common system. Similar systems have been in use in many developed countries for over a decade. The implementation of this system locally would also, to a great extent, reduce litigation over land ownership.

If parallel investments are not made to develop and implement systems in the aforementioned areas, the vast investments made by the government and the private sector on connectivity will continue to be mostly used for entertainment purposes. Consequently, this will reduce the productivity of the country rather than increase it.