



INFORMATION AND COMMUNICATION TECHNOLOGY AGENCY OF SRI LANKA

DIGITAL ECONOMY STRATEGY 2020 – 2024



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Sri Lanka has entered a new era of development, one which strives to create a truly progressive country that leaves no one behind. With the conclusion of the 2019 Presidential Elections, the people of Sri Lanka have backed a vision to build a resurgent and prosperous country, with a citizen centric digital government at its core. However, at an unprecedented time such as this where Sri Lanka along with the rest of the world is facing increasingly complex challenges as a result of the prevailing global pandemic brought on by COVID-19, we are at a crucial juncture in our country's digital transformation journey. **At such a catalytic time, it is vital that the country focuses its attention on harnessing the powers of innovation, digital technologies and the ingenuity of young people (youth) to galvanise a steadfast pathway to achieving her development targets.**

It is here that innovation plays a key role in a country's ability to resolve critical and complex problems, such as those continuing to present themselves in our current context, which in turn will directly contribute to Sri Lanka's economic growth. The current Digital Transformation Landscape of Sri Lanka is fertile for opportunities that can create a systemic transformation, consolidating and improving upon existing efforts undertaken by all sectors. The private sector has taken up the process of developing technological innovation for many industries such as but not limited to: agriculture, tourism, transport and manufacturing sectors. Further, the banking sector is also moving towards digital banking solutions with cash deposit machines, internet and mobile banking solutions, and digital payment apps. Building capacity of citizens will enable their participation in the Digital Economy resulting in economic benefits to the household and increase quality of life.

The Digital Industry of Sri Lanka, one of the fastest growing sectors, employs more than 100,000 knowledge workers and earns more than USD 1 Bn of FOREX revenue. Mature economies in America, Europe, UK, Asia Pacific as well as emerging economies in Africa, East Asia and South Asia are already being served by the Industry and Digital transformation being imperative globally opens an exponential growth opportunity. A fast-growing tech start-up ecosystem also exists in Sri Lanka and several organisations have initiated interventions towards supporting start-ups. **Co-working spaces** (Hatch, Home Tree, Colombo Corporative, Hub9, etc.), **investment organizations** (Lanka Angel Network, Lanka Impact Investment Network, Crowd Island, etc.), **funding programmes** (Spiralation, Venture Engine, etc.), and **other start-ups events and programmes** (Disrupt Asia, Start-up Weekend, Start-up Grind, Seedstars, HackaDev, ImaginEF, Entrepreneurship Caravan, etc.) occupy the current ecosystem.

However, due to the lack of a comprehensive strategy, these interventions have not resulted in system-wide changes or brought about scalable impact as one would have hoped. Therefore, this Digital Economy Strategy looks to utilize existing programmes and all relevant partners in the eco-system to develop and **implement an integrated Digital Economy transformation in Sri Lanka that will pave the way for a thriving and effective digital economy, with higher operational efficiency, lower costs and better services and outcomes for its citizens.**

This Strategy is built on four main pillars – namely, **Technology Industry Development; Technology Diffusion; Capacity Building;** and, **Regional Cluster Development** – under which its unique goals and action points are listed respectively.

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TECHNOLOGY INDUSTRY DEVELOPMENT

GOALS



Goal 1: Reach \$ 3Bn of annual foreign exchange revenue generated via knowledge services sector and electronics sector by the end of 2024

Goal 2: 1000 tech and tech enabled start-ups in operation by the end of 2024

Goal 3: A total of 700 technology companies (IT + BPM + Electrical & Electronics) in operation by the end of 2024

OBJECTIVES AND ACTION ITEMS



1. Increase in Foreign Direct Investment (FDI) and new tech companies via FDI promotion and facilitation

- a. Setting up a specialised unit for targeted FDI, brand promotion and market development facilitation – captive operations, sourcing and investment in digital disruptors
- b. Formulate an attractive offering for foreign companies/Start-ups to set up in Sri Lanka packaged with concessions on tax, readymade teams, available workspaces, etc.
- c. Setup process for direct and continuous engagement with foreign missions to streamline FDI promotion and facilitation, for example, developing and sharing a short quarterly newsletter which is easily accessible to all
- d. Establish an ambassador network where suitable and interested individuals are appointed from the diaspora as 'Ambassadors' providing country promotion material in order to leverage potential partnerships within their networks
- e. Build strong relationships with the IT Associations in the regions ensuring that Sri Lanka is positioned well in any and all international events and initiatives in the future

Global Case Study

Israel's Positioning Efforts to Foster FDIs – It has been the Israeli government's explicit goal to position Israel at the core of the knowledge economy. The government lay the foundations for private industry to support innovation and made heavy investments in building much-needed human capital. The key to innovation is the capability to establish and cultivate a culture in which young people are not afraid to establish their own start-ups. This requires capable human capital as well as a supportive business environment, including strong and timely foreign investments and cross-country collaborations. As a result of Israel's efforts in positioning itself as a leader in ICT, today, multinational companies account for a significant portion of the research spending in the Israeli industry, which in turn fuels extensive growth in the ICT sector. Corporations such as Intel, IBM, Google, Cisco, Motorola, Philips, Apple, and many others have brought in large sums of foreign direct investment (FDI) and set up research centres in Israel in order to take advantage of the local talent.

- f. Implement a global roll-out of the 'Island of Ingenuity' brand while customising USP to regions. For instance, a social media campaign on '5 reasons Why You Should Invest in Sri Lanka'
- g. Host at least 1 to 2 world-class tech summits, such as AWS Summit, RedHat events, Oracle events, and others which attract a lot of foreign delegates. These large-scale events could potentially be held in Colombo or Hambantota, where we can attract visitors from the region, including noteworthy industry leaders from India, Singapore and others
- h. Additionally, Sri Lanka to host its own conferences – convening global industry experts and thought leaders to further position Sri Lanka as an 'Island of Ingenuity', with a focus on the digital economy
- i. Organise inbound tours of decision makers and influencers, for example CIOs, journalists and others
- j. Position Sri Lanka in publications such as Gartner and AT Kearney by inviting analysts or by funding country supplements; Place IT-BPM industry in global business and trade media
- k. Hire an international agency and assign the task of bringing 5 to 10 IT sector and global MNCs (such as HSBC) through a targeted investment promotion programme, including Government-to-Government (G2G) approaches

2. Increase in Direct Exports of Existing Tech Companies

- a. Increasing Competitiveness
 - i. Identify global trends and disseminate information to local companies from time to time through a unit at ICTA in order to align with these trends and increase the value offering
 - ii. Encourage investment in research by facilitating collaboration with universities
 - iii. Champion builder programmes targeted at export growth for IT-BPM large, and small and medium enterprises (SMEs), with special attention given to product companies
 - iv. Export readiness capacity building of IT SMEs. Further, hold business clinics for IT SMEs and provide support in exploring export markets
 - v. Local market access support including reforms in Government procurement procedures to source local products
 - vi. Multiple initiatives for continuous learning and upskilling of IT sector through incentivised certification programmes, and others
 - vii. Formation of mini IT associations in clusters to be the voice for those clusters
 - viii. Work with tech companies and industry associations to formulate retention strategies to minimize brain drain
 - ix. Work with tech companies and industry associations to formulate strategies to create a conducive work environment for women

- x. Tech Cafés to be set up and operationalized
- xi. Increase the visibility for the 'freelancers' that engage in tech development and provide more opportunities for them to contribute to the local tech industry
- b. Provide overseas market opportunities
 - i. Set up a process to connect foreign missions to technology companies visiting foreign markets for business
 - ii. Form G2G linkages through foreign missions to position Sri Lankan built technology products
 - iii. Set up industry representatives or business matchmakers (individual consultants or firms) in targeted markets
 - iv. Organize trade missions, roadshows, business meetings in collaboration with foreign missions for IT – BPM companies visiting foreign markets for business; this to also include establishing a network with the diaspora and leveraging their networks
 - v. Introduce structured mechanisms to have at least two B2Bs and targeted match-making meetings per industry segment per year on both local and international levels

Global Case Study

Jordan's Matchmaking Series – Jordan's efforts in encouraging more interest for their local businesses to attract more investment are producing results. Many regions, aside from its capital Amman, are reaping the benefits of targeted investments being made on the local start-up community. The Government of Jordan is currently hoping to build on recent success with a series of activities designed to highlight Jordan's potential and to more effectively target potential investors. In recent times, it had conducted a series of investment seminars, including some in Malaysia, the UAE, Kuwait, China and Chile among others. These included one-on-one matchmaking meetings to allow investors to learn more about potential partnership opportunities, with a focus on the ICT, tourism, pharmaceutical and health sectors.

- vi. Facilitate matchmaking with potential players who are likely to invest in mature tech companies leading to an exit

3. Promotion and Enhancement of the Start-up Ecosystem

- a. Setting up a specialised unit for tech start-up and innovation ecosystems to oversee activities related to start-up growth and community building/education at the local and global spaces
- b. Act as the 'Host' destination for start-up and cutting-edge technology events, such as Disrupt Asia, Seedstars, AIAsia, NeXtwork Jaffna etc.
- c. Maintain updated data on local and global ecosystems for decision makers and other interested parties

- d. Promote and showcase local data in start-up ecosystem related international publications and further strengthen local and international promotion efforts
- e. Support acceleration/going global initiatives for scale-ups. This includes activities such as matching funds and Government investment into tech start-ups under 'spiralation – growth', encouraging start-ups to go global, and initiate start-up exchange programmes with global incubators and accelerators
- f. Use a common platform to verify start-ups in the country in order to provide benefits such as endorsements for banks, provide access to regional start-up/tech hubs to verify start-ups in that province and support start-ups by performing as a knowledge/mentorship platform

Global Case Study

Start-up SG – Established in 2017, Start-up SG was created to showcase Singapore's vibrant start-up ecosystem both locally and overseas. It represents the shared interests of the start-up community and unifies efforts to support the ecosystem under its various initiatives and programmes. With Start-up SG, start-ups and ecosystem partners can more easily discover and access available avenues of support. In 2018, Start-up SG Network was launched to bring Singapore's tech start-up ecosystem even closer together and encourage the proliferation of innovative and collaborative partnerships. A virtual ecosystem of entities in Singapore's tech start-up community, the platform allows local tech start-ups to profile and put themselves on the radars of both local and global ecosystem players, expanding their opportunities for growth.

- g. Coordination with the FDI unit on start-up investments through G2G linkages targeted at increasing start-up exits
- h. Support for existing players and those just setting up in the start-up investment ecosystem via policy changes, co-funding mechanisms, tax concessions, increasing availability of funds, investor education programs and targeting start-up exits
- i. Coordinate with Policy and Legal pillars to create a conducive environment for start-up ecosystem growth (e.g. investment related matters, reverse IP registration, identify IP and Patent related barriers, bank loans for tech start-ups, new loan schemes for entrepreneurs, etc.)
- j. Cultivate and recruit local talent and take action to attract experienced technology experts and entrepreneurs to the country. (e.g. visa for start-ups, etc.)
- k. Form strong relationships with the Start-up ecosystems in the region ensuring Sri Lanka's positioning as a dynamic actor in all international events in the future; for examples RISE in Hong Kong, Techsauce in Thailand, and Youth CO Lab in the Asia Pacific
- l. Support and empower incubators/ accelerators, design labs and start-up supporting facilities including but not limited to mentorship programs, funding opportunities (e.g. matching funds), connecting to global networks etc.
- m. Accelerate the increasing trend of women engaging as technology entrepreneurs and foster an inclusive environment

- n. Create a strong linkage with the innovation ecosystem including but not limited to events, cross-promotion, and sharing of resources
- o. Increase output of entrepreneurs
 - i. Directive by HE the President on the entrepreneurship drive for Sri Lanka
 - ii. Entrepreneurship initiatives at university and tertiary institutes targeting 10,000 ideas to be pitched by the end of 2024 through platforms and initiatives such as, ImagineIF, Start-up Weekend, HackaDev, VF Caravan, eSwabhimani, and other start-up competitions in the country
 - iii. Support pre-incubation and incubation of start-ups through: (i) start-up exchange programmes with global incubators and accelerators; (ii) enhance financial support, continuous mentoring and business matchmaking for early – stage IT start-up companies under the ‘spiralation’ programme; (iii) provide up to LKR 2 million each for 50 companies
 - iv. Entrepreneurship as a subject to all students in grade 9 and 10 as highlighted through the recommendations identified through broader Government efforts in reforming Sri Lanka’s Education Affairs
 - v. Design thinking and basic entrepreneurial skill development programmes for every student who sits for A/Ls (after A/L)



An abstract graphic in shades of orange. It features a central circular element containing a network diagram with a central node and six peripheral nodes connected by lines. This central element is surrounded by several concentric, curved lines of varying thickness. Some of these lines have segments with diagonal hatching. The overall composition is dynamic and modern.

TECHNOLOGY DIFFUSION

GOALS



- Goal 1:** Technology adoption in core business which increases efficiency and productivity for a total of 750 SMEs by the end of 2024
- Goal 2:** 500 new technology Start-ups in operation as a result of the Technology Diffusion strategy by the end of 2024
- Goal 3:** Sri Lanka's competitiveness ranking to have increased by 30 compared to the baseline in 2019 (WEF)



OBJECTIVES AND ACTION ITEMS

4. Creation of New Technology Products via Research and Development

- a. Setting up of ICTA GovTech labs for co-creation to solve government and societal issues
- b. Setting up of physical infrastructure for ICTA Innovation Labs in different verticals in universities specializing in these verticals with prototyping facilities (AgriTech, Nanotechnology, IOT, AI etc.), and a coordination team at ICTA
- c. Promote large MNCs, such as Intel, and IT companies to invest in research and development (R&D) labs in universities, with a vertical focus
- d. Through public-private partnerships, bring in top foreign universities to set up satellite campuses in Sri Lanka to enhance advanced skill levels and local R&D capability (for example, Carnegie Mellon University, Massachusetts Institute of Technology, etc.)

Global Case Study

Partnerships between universities and MNCs in China – Collaboration between universities and industries (U-I) is widely recognised as one of the key factors which contribute to the improvement of innovative capabilities of companies, and the development of innovative countries. As multinational companies (MNCs) are taking research and development (R&D) globalization strategies and setting up R&D centres in China, the cooperation between universities and companies are gradually increasing across national boundaries. For example, there is cooperation between Chinese universities and foreign MNCs or their subsidiaries (e.g. Microsoft Joint Master Programs in some Chinese universities), as well as more and more cooperation between Chinese MNCs and foreign universities (e.g. the strategic alliance between Sinochem Group, China and University of Leeds, UK in 2010). It has been revealed that the R&D activities of MNCs in China contribute to the development of Chinese national innovation and ICT systems.

- e. Formulate advisory groups comprising of industry experts in verticals such as Agriculture, Tourism, Health, Education, Manufacturing via University Business Linkages (UBL)

- f. Establish a mechanism for university and industry collaboration to prototype technology via UBLs
- g. Collaboration with the local and foreign Innovation Ecosystem and multiple research institutes to use already existing research in order to be adapted for use by local industries

5. Technology Diffusion to Local Businesses and Packaging for Export

- a. Facilitation of monetization through start-up spin offs or technology transfer via UBL units
- b. Facilitate tech transfer to local industry to scale production
- c. Setting up regional Tech Diffusion (TD) cells to liaise with University cells and ICTA to provide technology products to SMEs, and work in close coordination with a dedicated team at ICTA
- d. Gather data to benchmark current technology adoption among SME's for core business efficiency and productivity
- e. Collaborate with industry to provide access to existing technology products for core business improvement (coupled with business incubation, accelerations and grants) for SMEs to use via TD cells
- f. Coordinate with technology industry development to provide market access to products with successful technology diffusion
- g. Promotion of digital payment avenues and digital financial economy

6. Business Transformation through Technology Adoption

- a. Programmes to increase know-how, access to technology, affordability and trust among businesses to ensure technology adoption via regional TD cells
- b. Leverage on ground-level stakeholders (regional/sector-specific) to carry out awareness building programmes and hands-on technology adoption workshops for businesses
- c. Facilitate access to local/international digital platform/s (e.g. Alibaba's e-World Trade Platform etc.), and establish online marketplaces and shared service platforms that would give local businesses a direct channel to market(s) in and outside Sri Lanka



CAPACITY BUILDING

The scope will include Technology education at primary, secondary and tertiary levels which will produce enough supply to cater to the demand of a 300,000 ICT Workforce by 2024. ICT skills for Citizens to be built throughout every Grama Niladhari Division. Building strong technology teams within state entities by placing highly capable CIOs as an executive-level interface between the technology department and the rest of the business of a particular entity.

GOALS



Goal 1: a 300,000 ICT workforce employed in multiple sectors, with a supply of 150,000 skilled individuals

Goal 2: 500 Government CIO's deployed to various Government organizations

Goal 3: Building small IT divisions and teams in all government organizations

Goal 4: 75% Citizen IT Literacy achieved

Goal 5: 100% Public Sector IT Literacy achieved

OBJECTIVES AND ACTION ITEMS



7. Increase Output of Employable Recruits to the Technology Sector

- a. Capacitating youth to be more employment ready via short term, professional, diploma and conversion level programmes
- b. Create and support to scale alternative IT education programmes targeted at direct employment through initiatives e.g. UKI, Re:startSL etc.
- c. Utilize multiple use of resources, and facilitate summer terms, weekends and evenings in order to facilitate effective and accessible blended programmes
- d. New programmes to be deployed at tertiary and vocational institutes like ITUM, SLIATE etc.
- e. Re-skilling and up-skilling ICT programmes developed to be offered to all youth populations around the country by repurposing the existing infrastructure networks located around Sri Lanka (i.e. Nenasala, Vidatha Centres, CRCs etc.). With a special focus on providing these programmes to youth from marginalized communities, such as the estate sector, those who pursue other careers after their A/Levels or students who drop out of school
- f. Loans to be provided to students who study at vocational and non-state universities
- g. New international level state and non-state institutions to be established at regional clusters
- h. Build on the existing technology curriculum developed for students, and repurpose this to provide a

compulsory curriculum for primary school children so they are aware of and exposed to ICT from a very young age, which will increase their curiosity and interest as they grow older

i. Development of a National Skills Platform

- i. Develop an online platform for mentoring and developing soft skills (a self-guided approach)
- ii. Get all students to maintain their login in the national skills platform and enhance their personal capacities through the courses offered

Global Case Study

Introduction and mainstreaming of STEAM subjects – in addition to implementing an integrated education system, with an emphasis on information technology education, they have taken steps to mainstream Science, Technology, Engineering and Aesthetics subjects at primary and secondary schools. Most secondary schools also have a state sponsored IT innovation lab.

- j. Encourage IT companies, through tax deduction or incentives, to provide and/or support scholarship programmes, trainings, internships, and other ICT focused opportunities for young individuals
- k. Make IT one of the most preferred career choices through a mass media advocacy campaign highlighting the opportunities in the industry along with the skills needed to excel and accessible paths in terms of education
- l. Continuous engagement with career guidance officers on ICT Industry to create awareness of its opportunities
- m. Facilitate increased engagement of the private ICT sector with the TVET sector through existing entities (i.e. Skills Council, YouLead etc.)
- n. Promote and encourage tech companies to have engineering and research internships for interested students
- o. Promote world-class post graduate level education programmes based on the market trends and demands
- p. Create a conducive environment in education institutes to onboard people with disabilities by promoting and utilizing Assistive Technology, which is any item, piece of equipment, software programme, or product system that is used to increase, maintain, or improve the functional capabilities of persons with disabilities. This growing and dynamic field will provide greater independence to people with disabilities and empower them to engage in more economic activities through digital means

8. Increase percentage of females selecting ICT Sector as a career choice

- a. Use of unique role models to feature in mass media sharing their journey and how they overcame challenges. Through this also explain the need for more women in the IT sector and its unique selling points for more women engagement
- b. Mass media campaign targeted at parents to encourage girls to choose IT Industry as a career choice

- c. Positioning IT as one of the best career choices for young girls among teachers and career guidance officers
- d. Short courses/camps for young girls in order to develop basic IT skills and specialized skills (eg: Digital Marketing, Website development, Animations and Graphics, 3D visuals, Game Development, App making etc.)
- e. Roll-out unique IT employer brands for females
- f. Build on the work and create strong relationships with the Presidential Task Force on Sri Lanka's Education Affairs to further strengthen and create a comprehensive skill building offer aimed at encouraging young women in ICT



9. Attracting diaspora for key strategic roles in the technology sector

- a. Identify key strategic roles which require these skill sets
- b. Formulate a special package to attract the diaspora to work in Sri Lanka under Mode 4 guidelines with national treatment

10. Increase in usage of technology by citizens

- a. Ensure provision and facilitation of necessary infrastructure for engagement in ICT solutions for the most vulnerable communities in Sri Lanka in order to minimize the 'Digital Divide'

Global Case Study

Bridging the 'Divide' in Bangladesh – the Government of Bangladesh, in collaboration with UNDP, has established more than 5,400 digital centres as one-stop information and service delivery outlets for its citizens to visit and utilize. These digital centres ensure that the underprivileged – regardless of their literacy, ICT literacy, locality, gender, mobility, etc. – can access information and services vital to their livelihood, with just their fingerprint.

- b. Collaborate with regional Technology Diffusion cells on technology adoption programmes for citizens
- c. Develop and roll-out a mass media campaign for citizens on the digital government solutions and ways to use them
- d. Facilitate awareness/training on digital marketing/freelancing/digital content etc.
- e. Selection of established technology lifestyle/productivity applications to be encouraged for use by citizens

Global Case Study

Subscription-based models for consumption/consumerism – facilitation of subscription services to digital platforms in Norway that provide citizens with information, news and entertainment and the facilitation of online payments. This system has also allowed dying models of business to find new avenues of revenue – for instance, print media. This model is not unfamiliar to most developed countries where it has been adapted to a range of industries. For instance, meal subscription services in the US and Australia where you can select family meals for fresh produce to be delivered to you. Similar subscription services have also allowed small businesses dealing in small batch production of goods to find a steady source of income by carving an easily accessible niche market.

- f. Use of existing programmes skills development and learning to convene and execute efforts to build know-how, increase access to technology, affordability and develop trust among citizens to ensure technology adoption via numerous fronts. This will include interventions such as comprehensive skills offered on digital literacy, digital adoption, taking your business digital, telecommuting, online media literacy, digital finance ecosystem and so forth, available as workshops and modularised programmes to further develop these aspects. Established community networks such as Social Circles, HackaDev Academy, etc. are to be used in implementing such programmes
- g. Mass and digital media campaigns on new innovations to be used by the general public (this may be at a subsidised cost)

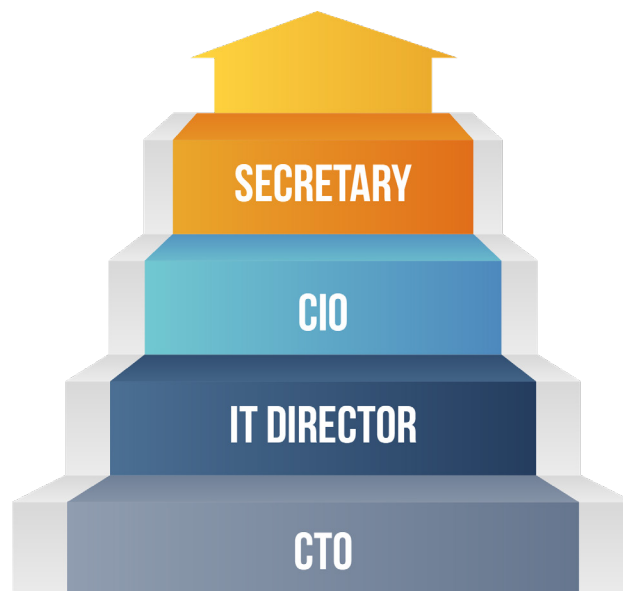
11. Strengthening government organizations for better public service

- a. Establishing teams in government organisations for IT governance
 - i. Appoint/ reinstate/ groom CIOs who will lead the technology strategy of the entity, in collaboration with other C-level executives

- ii. Define IT roles and job titles for the Government cadre by institutionalizing the role of technology into public service
- iii. Establishing important IT roles in Government organizations to be attractive career choices for IT professionals
- iv. Suitable compensation packages for expertise in IT roles
- v. Government CIO Development

The changing role of a CIO;

- The CIO will be an executive-level interface between the technology department and the rest of the business of a particular entity
- The CIO will be responsible for setting up the broad strategy and managing the relationship with the wider business, including how technology can help to streamline/optimize the processes
- The CIOs to be more outward-facing and more concerned with strategy and leadership of the entity whereas IT directors tend to be focused on day-to-day operations
- CIOs need to keep an eye on the systems and services ensuring that those are up and running as well as understanding technology trends
- CIOs need to be able to understand the broader business requirements and prioritize using technology
- CIO should be able to build and maintain an effective and motivated team



- Existing CIOs to better understand the changing role of a CIO who will have a team reporting to them across a range of areas that could potentially include items such as IT security, procurement, maintenance, development, integration, maintenance, support etc...

- b. Assess capacity building requirements of CIOs according to CIO skills framework and facilitate training programmes to cater to their requirements. Such as;
 - i. Design thinking and social innovation exposure with the goal of each CIO being able to design an IT

Strategy and Roadmap for their specific Line of Business (LOB)

- ii. CIO grooming camps for selected officers representing multiple LOBs
- iii. Design and deliver tailor-made workshops on innovation and human-centered design approaches to innovation by utilizing existing programmes
- iv. Design and deliver 'Train the Trainer' programmes for the CIOs on innovation tools and human-centered design approaches
- v. CIOs to be responsible for the IT skills of the respective Government Department and take the lead in the Department's innovation approaches

12. Increase in usage of technology by government staff

- a. Skill building of government staff to be conducted through CIOs
- b. Facilitating shared solutions and LOB services adoption for government staff
- c. Adopt Gov HRCB competency framework in all government organizations
- d. Deploy the Government eLearning Platform (GeLP) in all government organizations
- e. Initiate e-governance training for all government staff

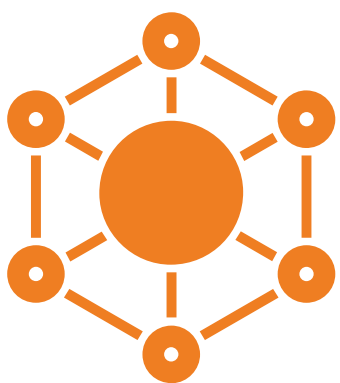
Global Case Study

Capacity building of Government officials in Serbia – The Government of Serbia is engaging in carrying out a capacity building initiative with the support of UNDP, aimed at up-skilling the Information Technology and e-Government officers for effective coordination and implementation of the digital government strategy. This programme also supports the establishment of ICT platforms for provision of user-focused e-services, and in working towards improving ICT infrastructure to support digital transformation of the public administration. UNDP is also supporting the Government of Serbia in the growth of the IT and innovative industries in line with the IT council agenda, while assisting the Government in maintaining close relationships with key stakeholders and the public





REGIONAL CLUSTER DEVELOPMENT



Five regional clusters will be set up namely in the Northern, Central, Southern, Western and Eastern provinces near an existing university. Each cluster includes a cohort of Technology education institutes, Technology companies, shared working spaces with incubation facilities, a government arm and a technology diffusion cell. ICTA will establish a liaison office within the cluster.

All the objectives and action items will directly aid to ensure that each cluster has an active eco-system which will support the implementation of the strategy. The regional development unit will be the managing arm of all the regional clusters and will be closely liaising with TD, TID, Capacity Building and Start-ups & Innovation units wherever necessary.

As the infrastructure development for regional clusters would take some time, existing infrastructure, possibly from an existing university or other government organization could be used to establish the key components of each cluster.

GOALS



Goal 1: Build 5 Regional Tech/ Edu Hubs which consist of a Technology Diffusion cell

Goal 2: Facilitating the setting up of regional arms of a minimum of 8 main local/ international IT/BPM companies in the clusters

Goal 3: Facilitate setting up of 5 start-up hubs with necessary infrastructure for start-ups and innovation

Goal 4: Facilitate 750 selected non-tech SMEs to use technology in their core business

Goal 5: Facilitate setting up 5 IT education institutes with international standards (1 per cluster)

Goal 6: Facilitate the implementation of basic digital literacy programmes for the 15 - 60 year age group

OBJECTIVES



13. Assessing the readiness of each cluster based on the matrix labelled as 'Figure 1'

- a. Development of the objectives for each cluster

Note: Based on the result of the above assessment, the numbers and effort will vary.

14. Regional infrastructure development

- a. Acquiring necessary infrastructure to establish regional cluster offices (business/ meeting/conference/ shared workspaces etc.)

- b. Acquiring suitable human resources for the effective functioning of the hubs
- c. Set related IT infrastructure within the cluster (connectivity, devices etc.)
- d. Development of regional innovation centres (production facility)

15. Decentralization of main IT companies

- a. Concessions and grants for large IT companies who opt to set up in regions
- b. Tax breaks/ concessions and other benefits for IT experts who want to go into regions
- c. Part-funding for internships for the students in the same cluster

16. Creation of education hubs

- a. Grants/ Tax concessions for the IT institutes expanding to regions (other clusters) or new affiliated IT Universities setting up
- b. Special perks for Sri Lankan IT expats coming into Sri Lanka as lecturers
- c. Special facilities/ perks for trainers and visiting IT lecturers from the industry
- d. Organizing student exchange programmes (international)
- e. Partnering/ engaging with international events (i.e. - Google I/O, Imagine Cup etc.)
- f. Specific interest free loan schemes for students attending technology institutes in a cluster

17. Technology diffusion

- a. Facilitate setting up of Technology Diffusion cells – help the clusters build collaboration with IT companies, SMEs and government entities within the cluster for a smoother diffusion of technology
- b. Building a knowledge and support hub for all business / IT related needs (Business Hub)
- c. Funding/grants schemes for technology transformation of the core businesses
- d. Specialized resource allocation for training programmes of the above

18. Building a knowledge and support hub for all business / IT related needs

- a. Support programmes for investor attraction for SMEs or diversifying businesses
- b. Export market ready programmes (Coaching and mentoring)
- c. Policy level reforms to help the regional ICT suppliers (prioritizing, tax concessions etc.)
- d. Funding/ grants for training on social media marketing and digital marketing

19. Instilling entrepreneurship and innovation

- a. Facilitate mini start-up conferences and events (eg: design sprints and bootcamps, start-up bootcamps,

and idea auditions at the grassroots level)

- b. Promote entrepreneurship via funding and implementation
- c. Build 5 main incubators/accelerators with R&D spaces in universities (may be ICTA innovation lab and/or vertical based innovation labs by the industry) and connect them with global incubator networks as satellite setups
- d. Organize entrepreneurship programmes inside schools, universities and tertiary education institutes and recognize those entities with the best entrepreneurship culture.
- e. Start-up Clinics to take place around the country on different aspects where people can bring their questions and get solutions, along with possible mentorship opportunities
- f. Mass media campaigns to promote entrepreneurship and an innovation ecosystem by reaching out to a larger audience in every region of the country



Global Case Study

Scaling based on feedback – receiving feedback either as an existing start-up or simply one in the making is crucial in ensuring effective service provision. As such, in many African countries, they have found it useful to create digital means of engaging with customers and tracking their preferences in local niche markets throughout the continent. Some examples include: Torque, Data Systems and Evolve (Rwanda), Delivery Science (Nigeria), Uhasibu and Microclinic Technologies (Kenya), and 50lomi (Ethiopia). This works well since these individuals and digital enterprises are able to learn from customers iteratively, continuously adapting products and conducting maintenance in response to direct requests for improvements. The same principle can be replicated during clinics whereby enterprises, and individuals, are given the feedback necessary to scale up their ideas and/or enterprises according to expert advice and feedback.

20. Technology adoption of citizens

- a. Mass media campaigns on the e-government solutions & product/ e-services campaigns through smaller groups
- b. Provide necessary infrastructure facilities (public WIFI, kiosk machines to do payments, industry specific information centres, etc.)
- c. Appointment of a dedicated personnel to guide, promote, consult on the use of e-government services

21. Increasing digital literacy in the country

- a. Development of Edu-Tech platforms for schools
- b. Introduce technologies which are user-friendly and useful for the general public, i.e. digital marketing/ Digital Content/ Freelancing etc.
- c. Implement workshops for all citizens between the ages of 16 to 60, including school leavers, housewives, differently abled people, senior citizens, etc.

22. Career guidance for students

- a. Aid to connect with associations for career guidance on both IT as a business and IT as a career stream
- b. Creation of the online platform (National Skills Platform) to build the soft skills required

23. Capacity building for Government staff

- a. TOT programmes
- b. Building design thinking/ social entrepreneurial skills of government staff/CIOs
- c. Include IT/ digitalization related modules in corporate exams

24. Recognition

- a. Platform to recognize the high impact regional clusters (i.e. e-swabhimani)

