

ANNUAL REPORT

Financial Year 2019/2020



Ministry of Information Technology,
Communication and Innovation

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LIST OF ABBREVIATIONS

ADU	Application Development Unit
AI	Artificial Intelligence
BPO	Business Process Outsourcing
CAMP	Cybersecurity Alliance for Mutual Progress
CERT - MU	Computer Emergency Response Team of Mauritius
CIB	Central Informatics Bureau
CISD	Central Information Systems Division
DPO	Data Protection Office
DYEP	Digital Youth Engagement Programme
FY	Financial Year
GES	Government Email Services
GINs	Government IntraNet System
GOC	Government Online Center
ICT	Information and Communication Technologies
ICTA	Information and Communication Technologies Authority
ICTAT	Information and Communication Technologies Appeal Tribunal
IoT	Internet of Things
ITSU	Information Technology Security Unit
ITU	International Telecommunication Union
KPO	Knowledge Process Outsourcing
MPL	Mauritius Post Limited
MRIC	Mauritius Research and Innovation Council
MITCI	Ministry of Information Technology, Communication and Innovation
NCB	National Computer Board
NIP	Network Infrastructure Provider
SME	Small and Medium - sized Enterprises
SWOT	Strengths, Weaknesses, Opportunities and Threats
UN	United Nations

STATEMENT FROM MINISTER OF INFORMATION TECHNOLOGY, COMMUNICATION AND INNOVATION (MITCI)



Looking back on the fiscal year ended 2019 - 2020, we see there was a myriad of technological changes in the ICT sector as well as a major unexpected and unwanted contingency. The recent COVID-19 pandemic has had a tremendous impact on economic and social activities in Mauritius. It was a bookmark period for the entire world, as this global health crisis brought all of humanity to a virtual standstill. Governments, across the world, took bold steps to save lives and put a floor under the world economy. The new normal born of this unprecedented situation has upended society and simultaneously provided a major opportunity to accelerate change.

As we closed the books on this financial year, the ICT sector emerged as one of the most resilient ones. There was an increased and urgent need for tools and technology to support activities in this new distributed environment. Timelines or implementation of new communication and collaboration tools were accelerated with the goal of ensuring business

continuity for both the public and private sectors and that they had access to the tools and training needed to accomplish job duties remotely.

We have also accelerated the creation of the website “*fasil.mu*” regrouping major e-Services providing online payments to various Government services, hence avoiding long queues at service counters. In the same context, we had started the process of completely revamping the Government portal, giving the public an upgraded experience through the different ministries, departments and government bodies.

This Annual Report reflects the policy decisions taken and capacity development of the Ministry before and during the pandemic. It also highlights how we have continued to deepen our work for the digitalisation of our economy and how the digital transformation of Mauritius is being significantly accelerated across various sectors.

We will continue to move forward with yet greater vigour, together with the citizens and the Government, sharing a faith in the future as we aim to sustainably delivering services to the public more efficiently and effectively through ICT, including the emerging ones.

Hon. Deepak Balgobin

Honourable Minister

*Ministry of Information Technology,
Communication and Innovation*

STATEMENT FROM PERMANENT SECRETARY OF MINISTRY OF INFORMATION TECHNOLOGY, COMMUNICATION AND INNOVATION (MITCI)



It is a great pleasure and privilege for me to be associated with the release of the Annual Report for the year 2019 / 2020 on the functioning of the Ministry of Information, Technology, Communication and Innovation (MITCI). The more so, as I joined the Ministry only in early March 2020 as a newly appointed Permanent Secretary, the year 2019 / 2020, though marked by the spread of the Covid - 19 Pandemic, has been a year of transformation whereby the essential aims and purposes of the Ministry were re-evaluated and repurposed in line with the goal of achieving a growth of 6% in the ICT Sector. This is reflected in the dynamism, hope and potential that are pitched on the sector. Emphasis has been laid on the 'Innovation' aspect which is, in accordance with the vision of the Government, to position Mauritius as a '**Regional ICT Hub**'.

The major realisations and achievements of the Ministry during the year 2019 / 2020 are as follows:

- (i) Proclamation and operationalisation of MRIC Act 2019 in order to allow the

- Council in the advancement of high-quality research and boosting innovation;
- (ii) The creation of a Data Protection Training toolkit which is a self-learning tool for Data Controllers / Data Processors on Data Protection Principles and promoting awareness on the General Data Protection Regulation (GDPR) and the Data Protection Act;
- (iii) 176 Primary Schools were connected with High Speed Internet Connectivity and maintenance were carried out on the Government IntraNet System (GINS) which provide centralised internet access to Governmental departments;
- (iv) The Digital Youth Engagement Programme (DYEP Secondary) was introduced which provides beginner level Coding to secondary school students at Grade 9;
- (v) Introduction of E-Payslip system to ease governmental payroll processing and also to allow Government employees to access their payslips online;
- (vi) Information Technology Assistants were recruited at post offices to man the Public Internet Access Points (PIAP) in partnership with the Citizen Support Unit (CSU) in order to better serve the public and promote access to e-services for the public;
- (vii) A Workshop on "Leading Innovation in Business and Government Services through Artificial Intelligence" was

organised so as to examine how Artificial Intelligence (AI) could become a keystone of the next development model of Mauritius by exploring its ability to improve growth, productivity and the quality of life;

- (viii) One of our divisions namely CISD was recertified for ISO 9001:2015 and ISO 27001:2013 to ensure a higher efficiency in delivery of quality service and higher resilience in respect of security respectively; and
- (ix) Launching of Fasil.mu, a digital platform that brings together 48 Government Online Services to promote the use of these services and to avoid long queuing ups at various Government Departments;
- (x) In time of the Covid - 19 Pandemic in 2020, the Ministry in collaboration with NCB, has used the 3D Printing to increase the production capacity of the face shields to overcome the propagation of the Covid - 19; and
- (xi) The more so, the Ministry has launched the JITSI platform in order to promote meetings through

videoconference instead of the physical traditional meetings so that to limit human contact and thereby limiting the propagation of the deadly virus.

The ICT Sector will undoubtedly be anticipated to play an extremely important part in the country to transmute its economy with a view to achieving a higher national income and in so doing improve the living standard of the Mauritian citizens. This annual report is a summary outlining the Ministry's stride towards its vision.

I hereby dedicate my admiration and gratitude to all members of staff of MITCI for their dedication, endeavour and numerous attainments during the fiscal year 2019 / 2020.

Miss Marie Joelle Sandrine VALERE
Permanent Secretary
MITCI

PART I

ABOUT MITCI

Part I sets out the vision, mission and objectives of the Ministry, its roles and functions as well as its organizational structure and a Gender Statement.

VISION, MISSION AND OBJECTIVES

WHO WE ARE. WHAT WE DO.

OUR MISSION

A well connected, knowledge-based and inclusive high income society, through a culture of innovation and the adoption of technology.

WHAT WE ASPIRE TO BE

OUR VISION

Boost the digital economy and broaden the delivery of ICT - enabled public service in an innovation-driven society.

WHAT WE AIM TO ACHIEVE

OUR OBJECTIVES

- Formulate appropriate policies and provide the necessary legal framework for the development of ICT and its optimal use across all sectors;
- Facilitate, through the implementation of an E-Government programme, the provision of Government services electronically anytime anywhere for the greater convenience of the public;
- Promote and facilitate the development of the ICT sector;
- Ensure that the ICT culture permeates all levels of the society to bridge the digital divide to the extent possible;
- Promote the development of ICT enabled services including e-business;
- Encourage the adoption of new technologies and best practices in the ICT sector;
- Promote capacity building in ICT; and
- Promote and facilitate innovation.

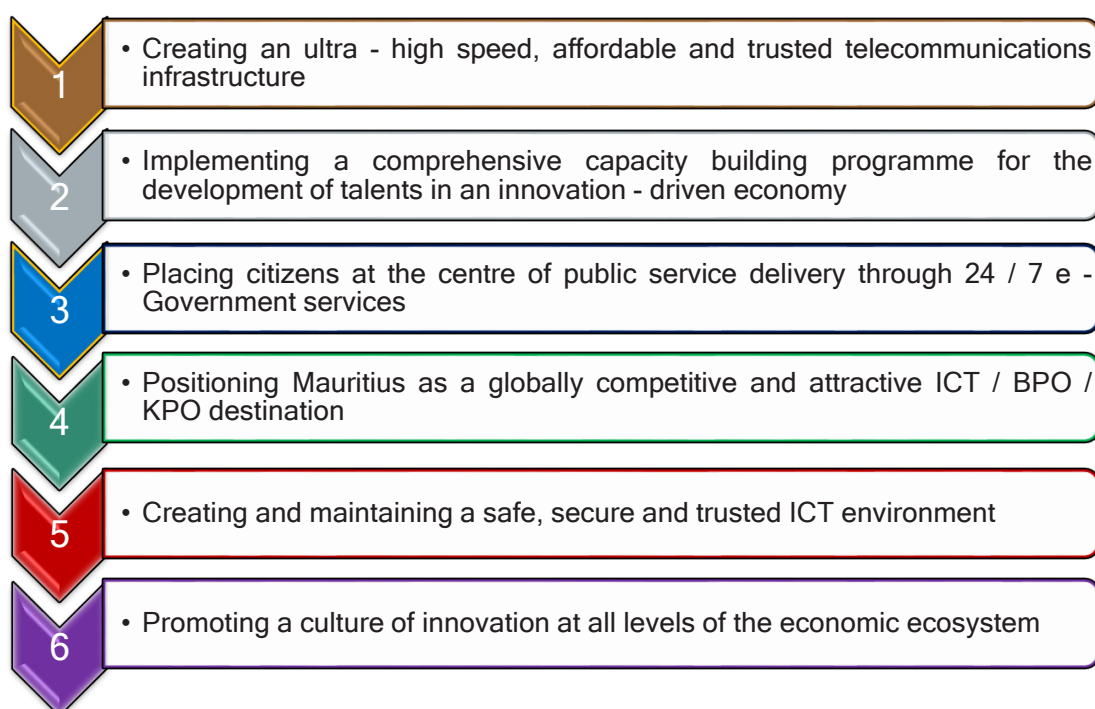
ROLE AND FUNCTIONS OF THE MINISTRY OF INFORMATION TECHNOLOGY, COMMUNICATION AND INNOVATION (MITCI)

ROLE OF MITCI

MITCI is playing a key role in ensuring that information and communication technologies trigger socio-economic development across the whole spectrum of our daily life and promoting high quality research and innovation.

The Ministry is spearheading the making of a Smart and Intelligent Mauritius which will be instrumental in the transformation of our country into a high income economy and an all - inclusive knowledge driven Information Society. In this context, the Ministry, in collaboration with all players in the sector, is focusing on the following strategic waves in order to ensure that the right ecosystem is created to realize the targets set by the Government.

KEY FUNCTIONS OF MITCI



SENIOR MANAGEMENT TEAM

The following Officers constitute the Senior Management Team of the Ministry:

SN	NAME	GRADE
HEAD OFFICE		
1.	Miss Marie Joelle Sandrine VALERE	Permanent Secretary
2.	Mr Rajnish HAWABHAY	Chief Technical Officer, ICT
3.	Mr Navindsing JUGMOHUNSING	Deputy Permanent Secretary
4.	Mr Ramesh BHEEKHOO	Deputy Permanent Secretary
5.	Mrs Nazia Begum ALLY HOSSEN	Assistant Permanent Secretary
6.	Mrs Oomeswaree MOTAH	Assistant Permanent Secretary
7.	Mrs Shaveenatree Devi WOODUN - MAHADEA	Assistant Permanent Secretary
8.	Miss Bibi Fadiilah BODHEEA	Assistant Permanent Secretary
CENTRAL INFORMATICS BUREAU		
9.	Dr Mahen SOOBRON	Director, CIB
10.	Mr Poornanund RAMNIAL	Lead Programme Manager, CIB
IT SECURITY UNIT		
11.	Mr Bhunjun BISSESSUR	Head, IT Security Unit
CENTRAL INFORMATION SYSTEMS DIVISION		
12.	Mr Vigneshwar BOODHUN	Director, CISD
13.	Dr Aneerav SUKHOO	Deputy Director, CISD
14.	Mr Mohammud Abu Dawood MULUNG	Technical Manager, CISD
DATA PROTECTION OFFICE		
15.	Mrs Drudeisha MADHUB	Data Protection Commissioner
ICT APPEAL TRIBUNAL		
16.	Mr Henry Denis VELLIEN	Chairperson, ICTAT

DEPARTMENTS AND OTHER BODIES UNDER THE AEGIS OF MITCI

CENTRAL INFORMATICS BUREAU (CIB)	DATA PROTECTION OFFICE (DPO)	IT SECURITY UNIT (ITSU)
The Central Informatics Bureau provides project management services, consultancy and advisory services to Ministries and Departments for the successful implementation of e-projects.	The Data Protection Office (DPO) became operational on 16 th February 2009 when the Data Protection Act came into force. The DPO ensures that the right environment exists for the safeguarding and processing of personal data.	The ITSU performs IT security audits in the Civil Service based on International Standards on information security and industry best practices, facilitates the implementation of information security management systems (ISMS), and handles IT security incidents in Ministries / Departments and conducts sensitization campaigns for the promotion of IT Security to Government employees.
INFORMATION AND COMMUNICATION TECHNOLOGIES APPEAL TRIBUNAL (ICTAT)		
<p>The Information and Communication Technologies Appeal Tribunal provides to any party, who feels aggrieved by a decision of the Information and Communication Technologies Authority, the Postal Authority and the Commissioner of the Data Protection Office, an opportunity to seek redress and to ensure that these institutions exercise their duties and powers in a judicious and fair manner.</p> <p>Every appeal before the Tribunal is dealt with as expeditiously as possible.</p>		
CENTRAL INFORMATION SYSTEMS DIVISION (CISD)	MAURITIUS RESEARCH AND INNOVATION COUNCIL (MRIC)	NATIONAL COMPUTER BOARD (NCB)
The CISD provides ICT Support Services to Ministries and Departments. These support services include fixing hardware and software problems, database administration, network administration, email administration, processing of the Government payroll, commissioning of computer equipment, software development, maintenance of the Government Intranet System, provision of specialized technical support in the Oracle environment and data entry.	The Mauritius Research and Innovation Council (MRIC) acts as a central body to advise Government on Science, Technology and Innovation issues. The MRIC also funds research and innovation projects in areas of national priority and encourage strategic partnerships for research and innovation.	The National Computer Board (NCB) was set up in 1988 by the National Computer Board Act (Act No.43) to promote the development of Information and Communication Technologies (ICT) in Mauritius. The NCB also operates the Government Online Centre (GOC) which functions as the Data Centre of Government and the Computer Emergency Response Team of Mauritius (CERT-MU) which promotes a Cybersecurity culture and aims at protecting the Cyberspace of Mauritius.
MAURITIUS POST LTD (MPL)		
The role of the Mauritius Post Ltd is to provide quality, reliable and innovative postal services to its valued customers.		

KEY RESPONSIBILITIES OF DEPARTMENTS / PARASTATAL BODIES FALLING UNDER THE AEGIS OF MITCI

CENTRAL INFORMATICS BUREAU (CIB)

- The Central Informatics Bureau (CIB), is a department of the Ministry of Information Technology, Communication and Innovation whose main functions are to plan and coordinate computerization within the Civil Service. The CIB team comprises of a number of programme managers supported by administrative personnel.
- The skill and competency set at the Central Informatics Bureau allows it to offer a number of services to the different Ministries and Departments. These include:
 - (i) **Consultancy Service**
Assisting Ministries and Departments in identifying opportunities for improving the delivery of their respective services through ICT.
 - (ii) **Programme Management**
Ensuring that ICT projects are properly managed in collaboration with end - users and all other stakeholders.
 - (iii) **ICT Advice**
Providing advice to user Ministries and Departments regarding technical aspects of IT processes, including hardware, software, architecture and services as well as adoption of new technologies and trends.

IT SECURITY UNIT (ITSU)

- The IT Security Unit (ITSU) performs IT security audits in the Civil Service based on international standards on Information Security and industry best practices. These security audits provide the organisation with an overall assessment of its IT security level, and provide guidance and make recommendations to enhance IT security.

- With a view to enhancing knowledge of ICT security measures for a safer ICT usage, the IT Security Unit undertakes several activities, namely:
 - conduct of IT Security Awareness sessions on site in Ministries and Departments;
 - issue of various IT security - related publications such as one - page pictorial fact sheets; and
 - sensitisation of public officers using electronic means including a virtual learning platform.
- The IT Security Unit also spearheads the adoption of an Information Security Framework in Ministries and Departments based on ISO / IEC 27000 - set of international standards. The framework formulates a business risk approach to implement and improve information security leveraging on best practices on information security management, risks and controls.
- The IT Security Unit (ITSU) acts as a key contact point for managing and providing guidance on ICT security related incidents which are reported within Ministries / Departments. The specialist Government Security Incidence Response Team (G-SIRT) has also been established at the level of the Unit. The G-SIRT responds effectively to ICT Security incidents in the Civil Service. It provides both reactive and proactive services in order to combat cyber threats.
- Under this initiative, the ITSU / MITCI was accepted as a founding member of the international Cybersecurity Alliance for Mutual Progress (CAMP) aiming to serve as a building block to halt ever-growing online threats to enhance resolution of cybersecurity issues. The Unit monitors and controls an Automated ICT Security Incident Handling System to achieve better tracking and timely resolution of incidents.

CENTRAL INFORMATION SYSTEM DIVISION (CISD)

- The Central Information Systems Division (CISD), created in 1971, is a division of the Ministry which is responsible for the operational aspects of ICT projects. It provides ongoing ICT technical support services for all computerised systems in Ministries / Departments within the Civil Service.

- The CISD has 2 main sections namely the Technical section (comprising Officers of the Analyst cadre) and the Operations section (comprising Officers of the Technical Support and Data Entry cadre).
- The CISD provides its services to all Ministries and Departments and is responsible for, inter alia, the following:
 - Maintenance of the Government Payroll System;
 - Development and Maintenance of Government Websites;
 - Administration of the Government Email Services (GES);
 - Troubleshooting and maintenance of the Government IntraNet System (GINS);
 - Technical assistance in the choice of computer hardware, software and related services;
 - Application Development, implementation and maintenance;
 - Database, System and Network Administration;
 - Provision of Oracle Technical Support in computer systems;
 - Application Software Maintenance;
 - Commissioning of ICT equipment;
 - First-Level technical support on PC hardware and software;
 - Provision of Central Backup Service for data in Ministries and Departments;
 - Computer Operations;
 - Data Capture;
 - Proactive Monitoring of critical Government Systems; and
 - Operationalisation of the Commissioning Application system which allows CISD Officers to commission computer and ICT related equipment on site and online and send electronic data to Head Office for Commissioning Report finalisation and issuance.

DATA PROTECTION OFFICE (DPO)

- The Data Protection Office (DPO), operating under the aegis of the Ministry, became operational since 16th February 2009 and enforces the provisions of the Data Protection Act 2017 (DPA).

- It is the authority which ensures that those who keep personal data comply with the provisions of the Data Protection Act and also safeguard the privacy rights of all individuals.
- The DPO regulates the processing of personal data and enforces the provisions of the Data Protection Act.
- The office serves private and public sectors as well as the public in general. It also plays a major advisory role in the development and smooth running of government projects such as Info Highway, Cybercrime Online Reporting System, Safe City Project, Citizen Support Portal, Human Resource Management Information System, Smart Mobile Apps, API, Passenger Name Records (PNR) Project, E-Passport Project, E-Health Project, Bonus Malus System and the Trade in Services Agreement (TISA) amongst others.
- As a regulator with enforcement powers, the DPO has the following functions:
 - Ensures compliance with the DPA and any regulations under it;
 - Issues or approves codes of practice or guidelines for the purposes of the DPA;
 - Maintains a register of controllers and processors;
 - Exercises control on all data processing operations, either of its own motion or at the request of a data subject, and verifies whether the processing of data is done in accordance with the DPA;
 - Promotes self-regulation among controllers and processors;
 - Investigates any complaint or information which gives rise to a suspicion that an offence may have been, is being or is about to be, committed under the DPA;
 - Takes such measures as may be necessary to bring the provisions of the DPA to the knowledge of the general public;
 - Undertakes research into, and monitor development in data processing and ensures that there is no significant risk or adverse effect of any developments on the privacy of individuals;
 - Examines any proposal for automated decision making or data linkage that may involve an interference with, or may otherwise have an adverse effect, on the privacy of individuals and ensures that any adverse effect of the proposal on the privacy of individuals is minimised;

- Engaging in sensitisation campaign to create and promote awareness and provide assistance; and
- Cooperates with supervisory authorities of other countries, to the extent necessary for the performance of its duties under the DPA, in particular by exchanging relevant information in accordance with any other enactment.

ICT APPEAL TRIBUNAL (ICTAT)

- Section 39 of the Information and Communication Technologies Act 2001, Section 15 of the Postal Services Act 2002 and Section 51 of the Data Protection Act 2017 provide for a right of appeal before the Information and Communication Technologies Appeal Tribunal known as ICT Appeal Tribunal to any party who feels aggrieved by a decision of the Information and Communication Technologies Authority, the Postal Authority and the Commissioner of the Data Protection Office. Every appeal shall be lodged within a period of 21 days from the date of notification of the decision to the aggrieved person. But the Tribunal may entertain an appeal after the expiry of the said period of 21 days if it is satisfied that there was sufficient cause for not lodging it within that period.
- The ICTAT has the following mission:
 - to offer to the general public an opportunity to seek redress, whenever they feel aggrieved by any decision of the three abovementioned institutions; and
 - to ensure that these institutions exercise their duties and powers in a judicious and fair manner and that every appeal before the Tribunal is dealt with as expeditiously as possible.

MAURITIUS RESEARCH AND INNOVATION COUNCIL (MRIC)

- The Mauritius Research and Innovation Council (MRIC) is a corporate body set up on the 01st of September 2019 through the proclamation of the Mauritius Research and Innovation Council Act 2019. The Council acts as the apex body which advises the Government on matters concerning applied research,

innovation and research and development issues. The new Act empowers the Council in the promotion of high-quality research and in fostering innovation. The MRIC also funds research and innovation projects in areas of national priority and encourages strategic partnerships for research and innovation.

- In line with its main role of a funding agency, the Council has constantly reviewed its funding schemes to meet the changing needs of the country. The MRIC moved away from its traditional research funding schemes to focus on schemes for the promotion of innovation and commercialization. New schemes were developed to respond to the need for applied research aimed at wealth creation and job creation. The schemes advocate a risk sharing and matching grant approach to funding research and innovation projects.
- The schemes currently being promoted by the Council are:
 - Social Innovation and Research Grant Scheme (SIRGS);
 - Collaborative Research and Innovation Scheme (CRIGS);
 - Proof of Concept Scheme (PCS);
 - National SME Incubator Scheme (NSIS);
 - Intellectual Property Promotion Scheme (IPPS);
 - Pole of Innovation Grant Scheme (PoIGS); and
 - Research and Innovation Bridges (RIB).

NATIONAL COMPUTER BOARD (NCB)

- The National Computer Board (NCB) was set up on 11th January 1989 by the National Computer Board Act (Act No. 43 of 1988) to promote the development of Information and Communication Technologies (ICT) in Mauritius. It is a parastatal body administered by a Board of Directors and operates under the aegis of the Ministry of Technology, Communication and Innovation. Its core mission is to accelerate the transition of Mauritius into a regional ICT hub and ensure the swift realization of Government's objective to make the ICT sector a key pillar of the economy and to e-power people, businesses and the public sector by developing and promoting ICT.

- The National Computer Board has the following two departments which fall under its purview:

(a) Government Online Centre (GOC)

The Government Online Centre is considered as one of the most critical sites that forms part of the Government Infrastructure. Operational since May 2005, it is the centralised Tier - III Compliant data centre to provide Government services to citizens, businesses, government officers and non-citizens abroad. Over the years, the GOC has grown from a server room of 5 racks of servers to a full - fledged data centre of over 80 rack - space capability for servers and equipment.

Member of the Data Centre Alliance of the UK and a holder of a NIP (Network Infrastructure Provider) license from the ICTA, the GOC is considered equivalent to an Internet Service Provider such as Mauritius Telecom Ltd or Emtel, in Mauritius. As a matter of fact, the GOC is the 2nd largest Email Provider in Mauritius and the only data centre with a park of over 100 servers and network infrastructure ranging from different complexity.

(b) Computer Emergency Response Team of Mauritius (CERT-MU)

The Computer Emergency Response Team of Mauritius (CERT-MU) promotes cyber security culture and coordinates Cybersecurity issues at the national level. CERT-MU handles security incidents and monitors security problems occurring within its constituency (constituency includes entire cyber community of the country). Regular incidents are reported and resolved pertaining to cybercrime and cyber security. Numerous awareness sessions are conducted throughout the year in schools and colleges to sensitize youths on the Internet Safety. In addition to resolving incidents and raising awareness, the CERT-MU also assists the Ministry of Information Technology, Communication and Innovation in formulating cybersecurity policies and strategies.

- NCB provides the following main services under its 3 core poles:

(i) E - Powering People

- Digital Youth Engagement Programme (DYEP)
- Citizen Engagement Programme (CEP)
- Universal ICT Educational Programme (UIEP)
- Cyber Security awareness
- 3D printing sessions for students
- e-Services for Citizens

(ii) E - Powering Business

- 3D Printing & Design
- Awareness on Emerging Technologies
- Digital Start-ups Programmes
- Tech talks, Workshops and Training
- Organise B2C and B2B events
- Online Database of ICT Operators
- ICT Indicators website
- Cyber security assistance, audits & drills
- Catalysing adoption of Open Source
- Open Data and Geo-Spatial portals

(iii) E - Powering the Public sector

- Managing the Data Centre of Government
- Hosting of Websites and Back Office applications of Ministries and Departments
- Web and Applications development
- E-mail service for Public Service
- Hosting and managing of Government Portal
- Internet access on the Government Intranet Network Systems (GINS)

MAURITIUS POST LIMITED (MPL)

- The Mauritius Post Ltd wants to be recognized as a world class provider of trusted, innovative and quality communication services. Also the MPL is committed to provide reliable, efficient and trusted services to all citizens.
- Strategic objectives of MPL:
 - Improves the Inter-operability of network infrastructure;
 - Ensures sustainability and modern products through diversification and e-Commerce strategies; and
 - Fosters effective market sector functioning.

GENDER POLICY STATEMENT

"We strongly believe in diversity and acknowledge that equality is part of valuing our employees and vital for our greater efficiency"

The Ministry of Information Technology, Communication and Innovation seeks to attract, develop and retain the right people with necessary capabilities without any gender discrimination.

Commitment	We are committed to a gender-inclusive and equitable workplace and to developing and implementing solutions to remove any practices hindering that goal.
Aspiration	We aspire to instil the culture that encourages and enables all employees to thrive, regardless of gender.
Responsibility	We are all responsible for the creation of a gender-inclusive and equitable workplace.
Driving the Change	<p>By working together, to understand and break down potential barriers, we will drive the change we seek, by:</p> <ul style="list-style-type: none"> ➤ ensuring all genders are equally included, valued, empowered and rewarded; ➤ ensuring gender equality is understood and embraced at all levels; ➤ fostering an environment of authenticity and openness which allows all employees to fully participate and have every opportunity to succeed; ➤ providing gender neutral outcomes where all employees benefit; and ➤ actively challenging and addressing structural and cultural impediments to enhance gender equality through career progression.

ABOUT OUR PEOPLE

STAFFING POSITION OF MITCI AS AT 30 JUNE 2020

GRADE	NUMBER OF OFFICERS	REMARKS
Permanent Secretary	1	
Chief Technical Officer	1	
Deputy Permanent Secretary	2	
Assistant Permanent Secretary	4	
Chairperson, ICTAT	1	
Data Protection Commissioner	1	
Director, CIB	1	
Head, IT Security Unit	1	
Senior Adviser on Technology, Communication and Innovation	1	
Adviser on Information Matters	1	
Adviser on Project Implementation & ICT Promotion	1	
Deputy Director, CIB	Nil	
Lead Programme Manager (CIB)	10	
Programme Manager, CIB	21	1 on Leave Without Pay
Programme Manager, IT Security Unit	20	
Principal Data Protection Officer	1	
Data Protection Officer / Senior Data Protection Officer	5	
Systems Analyst	2	
Procurement and Supply Cadre	4	1 Assistant Manager, Procurement and Supply 1 Principal Procurement and Supply Officer 1 Procurement and Supply Officer 1 Assistant Procurement and Supply Officer

GRADE	NUMBER OF OFFICERS	REMARKS
Finance Cadre	6	1 Manager, Financial Operations 1 Assistant Manager, Financial Operations 2 Financial Officers 2 Assistant Financial Officers
Human Resource Cadre	3	1 Manager, Human Resources 1 Senior Human Resource Executive 1 Human Resource Executive
Internal Control Cadre	2	1 Assistant Manager, Internal Control 1 Internal Control Officer
Assistant System Analyst	2	
General Services	52	6 Office Management Executive 11 Office Management Assistants 10 Confidential Secretaries 22 Management Support Officers 3 Word Processing Operators
Computer Support Officer / Senior Computer Support Officer	1	
Head Office Auxiliary	1	
Receptionist / Telephone Operator	3	
Driver	7	
Office Auxiliary / Senior Office Auxiliary	10	
Stores Attendant	1	
TOTAL	165	

STAFFING POSITION OF CISD AS AT 30 JUNE 2020

GRADE	NUMBER OF OFFICERS	REMARKS
Director	1	
Deputy Director	1	
Technical Manager	2	
Senior Systems Analyst	18	CISD (17) and RGD (1)
Systems Analyst	32	CISD (27) and Other Ministries / Departments (5)
Assistant Systems Analyst / Senior Assistant Systems Analyst	63	
Operations Manager	Nil	Filled by promotion from AOM. Present AOM is not yet qualified for the post.
Assistant Operations Manager	1	
Computer Operations Controller (on roster)	2	
Data Entry Controller	1	
Data Entry Controller	1	
Computer Support Officer / Senior Computer Support Officer (on roster)	54	
Data Entry Supervisor	2	
Senior Data Entry Officer	2	
Data Entry Officer (Personal)	9	
Technical Assistant (Ex-SMEDA)	1	
Driver	1	
Assistant Manager, Financial Operations	1	
Assistant Manager, Human Resources	1	
Financial Officer / Senior Financial Officer	Nil	
Assistant Financial Officer	1	
Human Resource Executive	1	
Office Management Executive	1	
Office Management Assistant	2	
Procurement and Supply Officer / Senior Procurement and Supply Officer	1	

GRADE	NUMBER OF OFFICERS	REMARKS
Management Support Officer	6	
Confidential Secretary	2	
Word Processing Operator	Nil	
Head Office Auxiliary	1	
Office Auxiliary / Senior Office Auxiliary	4	
TOTAL	211	CISD (205) and Other Ministries / Departments (6)

PART II

ACHIEVEMENTS AND EVENTS OF MITCI

*Part II highlights the Major Achievements and Events of MITCI
for Financial year 2019 - 2020*

MAJOR ACHIEVEMENTS FOR FINANCIAL YEAR 2019 - 2020

Proclamation of MRIC Act 2019

- Transformation of the Mauritius Research Council into the Mauritius Research and Innovation Council (MRIC) through the proclamation of the MRIC Act 2019 in September 2019. The new Act empowers the Council in the promotion of high-quality research and in fostering innovation.

High Speed Connectivity and Government IntraNet System (GINS)

- High Speed Connectivity project for Primary Schools: 176 sites commissioned, Maintenance of GINS and other Government Networks (288 routers and 25 core switches).
- 10 application systems developed by ADU.

Government Data Portal

- New website creation and portal migration: 175 websites migrated, 225 website updates, 100 Government portal updates and 510 troubleshooting requests.

Guide on Data Protection and Media

- The DPO has published a guide on data protection and media which explains how media organisations should comply with data protection principles while maintaining a free and independent role.

ePayslip System

- CISD maintained service delivery remotely for several services even during confinement in the wake of the COVID-19 Pandemic including Payroll processing of over 55,000 Government employees. The ePayslip system, allowing public officers to access their payslips online, was being massively used.

ISO 9001:2015 Certification and ISO 27001:2013 Certification

- CISD obtained ISO 27001:2013 certification with regard to Information Security Management.
- The operations section of CISD was recertified ISO 9001:2015 with respect to Quality Management Operationalisation of the Command and Control Centre of CISD for monitoring several Government sites leading to proactive and informed decision making to prevent disruptions in information systems of the monitored sites. The monitored systems include the Info Highway system.

Special Call for Proposals

- A Special Call for Proposals was launched by the MRIC to encourage entrepreneurs, academics, researchers, enterprises and start-ups to implement short and medium term projects that aim at improving and accelerating the Government's response to the challenges posed by the Coronavirus (COVID-19) and eventually contribute to counter the impacts and planning beyond this deadly pandemic. Support under this Special Call was targeted on two fronts, namely:
 - I. Technology-based products and services; and
 - II. Social and policy measures.

Following evaluation of the proposals, the MRIC has approved the funding of 26 projects to the tune of **MUR28.6 million**. The private sector will contribute **MUR10.6 million** towards the funding of the projects while MRIC's contribution will be of **MUR17.97 million**. The approved projects cover a broad range of areas such as: food security, e-learning, protective equipment, medical services related, impact assessment, improved and targeted support to vulnerable groups, products and solutions for reducing the effects and containing the virus.

Data Protection Training Toolkit

- The DPO embarked on the development of a training toolkit on data protection since 2018 as one of its major sensitisation activities. It is a self-learning tool on the DPA which will be available freely on this office's website.

Digital Youth Engagement Programme (DYEP Secondary)

- The National Computer Board (NCB) has been implementing the Digital Youth Engagement Programme (DYEP Secondary) which comprises introductory course modules on Coding to secondary school students at Grade 9.
- The NCB was collaborating with the Ministry of Education, Tertiary Education, Science and Technology for the delivery of Coding sessions in secondary schools targeting the Grade 9 students. The learners are provided with 18 - hours training on Coding by the Secondary Educators in Computer Studies and the hands-on training was delivered during school vacations in the Computer Labs.
- The learning benefits of programming at a younger age help the youngsters to gain advantages in critical thinking, computational thinking, creativity skills, problem-solving and to act in an innovative manner. A number of coding skills were thus imparted to the students.
- The modules taught include 'Introduction to Scratch Programming', 'Coding with HTML and CSS' and 'Introduction to BBC Micro-Bits'.
- A 'train-the-trainer' workshop intended for Secondary Educators (SSS & PSEA) was organised in October 2019.
- For the period 2019 - 2020, 1,943 students were trained on DYEP secondary. As at date, a total of 3,328 secondary students (Grade 9) have been provided with the DYEP secondary training.

Public Internet Access Points (PIAP) and Citizen Support Unit (CSU) Partnership

- Formalised employment of IT Assistants to operate Public Internet Access Points (PIAP) at Post Offices to bridge digital divide and promote access to e - services.
- The Citizen Support Portal is currently accessible to all internet users at Post Offices and also at Citizen Advice Bureaus around the island.

- Promotion of Postcode across local Authorities along their installation of Street names with the respective Postcode to facilitate identification and delivery services. (Beau Bassin / Rose Hill Municipal Council and Moka District Council up to now).

Online Banking Services

- Introduced Online services for basic banking transactions for MauBank Ltd at MPL (was only manually operated before). MauBank has also concluded a strategic partnership with the Mauritius Post for the introduction of Online and Real Time transaction processing for its services.

e - Commerce Delivery Enhancements

- MPL has introduced SMS notification at a few selected Post Offices to notify customers upon receipt of their parcels with a view to modernising and provide a new look to our e-commerce platform.
- The Mauritius Post is coming up with conveyance / delivery proposals for e-commerce companies. Eventually, Mauritius Post has partnered with the MTML to deliver Chili SIM cards at the doorstep of potential customers of MTML across Mauritius.

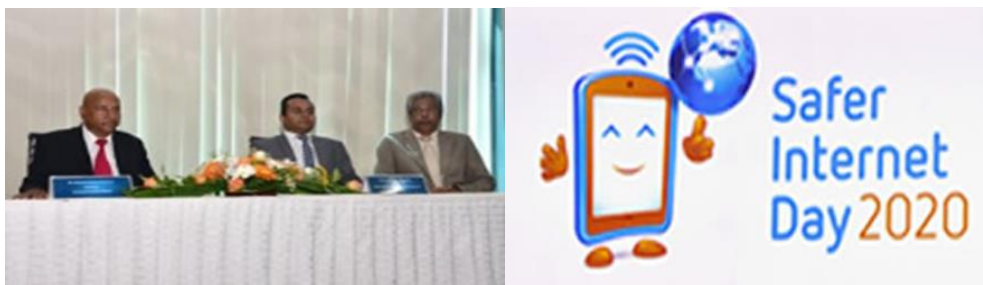
MAJOR EVENTS FOR FINANCIAL YEAR 2019 - 2020

Leading Innovation in Business and Government Services through AI



- A Workshop on “**Leading Innovation in Business and Government Services through Artificial Intelligence**” was organised on 13th November 2019 by the Mauritius Research and Innovation Council in collaboration with the Embassy of the United States of America. 123 delegates attended the workshop, 65 from 43 different private sector companies and 58 from 34 public institutions.
- The objective of the Workshop was to explore how Artificial Intelligence (AI) could become a cornerstone of the next development model of Mauritius by recognising its potential to improve growth, productivity and the quality of life.

Safer Internet Day 2020



- Safer Internet Day (SID) is an international education and awareness-raising effort celebrated to promote safe and more responsible use of online technology and mobile phones, especially amongst youngsters.

- The Computer Emergency Response Team of Mauritius (CERT - MU), a division of the National Computer Board (NCB) organised a full day workshop on the 12th February 2020. The theme for year 2020 Safer Internet Day was **“Together for a better Internet”**. The Day was focused towards the sensitisation of tertiary level students from universities across Mauritius.
- The main objective of the event was to educate and discuss on the latest technology trends and threats affecting the youngsters. The workshop also emphasized on the social media use as an attack surface.

Data Protection Conference



- The Data Protection Office organised a conference on 16th January 2020 with the theme **‘Data Protection Today- Breaking the Iceberg’**. The Conference aimed at promoting awareness on the General Data Protection Regulation (GDPR) and the Data Protection Act 2017 and to assess the implementation stages of the DPA 2017 in Mauritius.

National Cybersecurity Strategy Seminar 2020

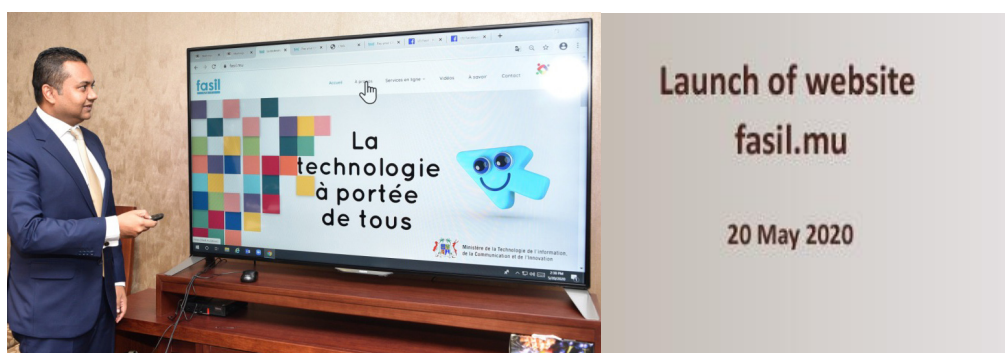
- A 2 - day Seminar on **“National Cybersecurity Strategy Seminar 2020”** was held at Pearle Beach Resort, Flic en Flac on the 3rd March 2020. The event was organised by the Cyber Resilience for Development (Cyber4D) Project, of the European Union, in collaboration with the Ministry of Information Technology, Communication and Innovation.



- The objective of the project was to increase the cyber resilience of countries through raising awareness on cyber threats and develop national cyber security strategies, among many other activities.
- The Cybersecurity Strategy Seminar was held -
 - (a) to discuss the gaps of existing cybersecurity and cybercrimes strategies and propose the best practices based on the Estonian experience; and
 - (b) on the basis of the inputs received from the seminar, to formulate a comprehensive National Cybersecurity Strategy.

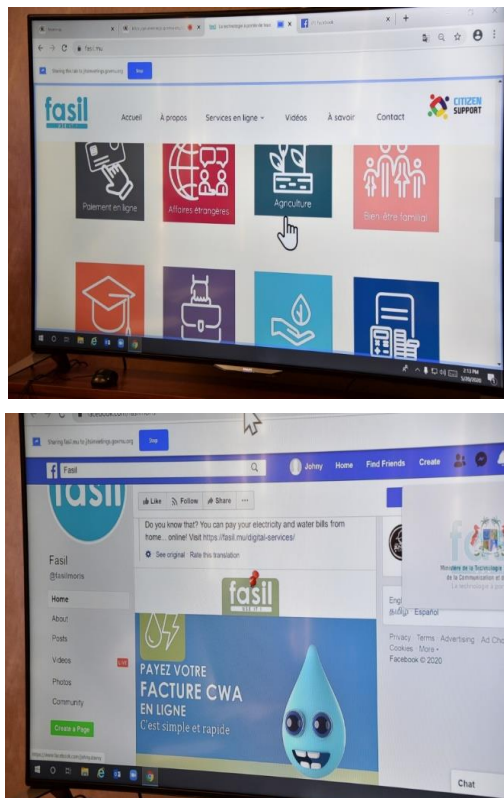
Launch of website Fasil.mu

- The Ministry of Information Technology, Communication and Innovation officially launched the website "**fasil.mu**" on Wednesday, 20th May 2020.



- This digital platform brings together forty eight government services that are available online and which are most in demand during this period. The objective is to promote the use of these services and to avoid long queuing ups at various

government departments. The portal, as a one-stop shop, makes it possible for Mauritians to pay, for example, their utility bills, pay their taxes to the Mauritius Revenue Authority or applying for a "Learner's license" among others.



The more so, the Ministry has launched the JITS! platform in order to promote meetings through videoconference instead of the physical traditional meetings so that to limit human contact and thereby limiting the propagation of the deadly virus.

6th e - Governance Conference

- The 6th Annual Conference on e - Governance was held virtually from 18th to 21st May 2020 and the theme was **"Giant leaps start with small steps."** The Conference laid more emphasis on the importance of digitising the public services so that to provide better rapid services to citizens through digitalization.
- The objective of the Conference was to promote e - Governance and digital transformation and also the international cooperation for digital developments.

Webinar International Telecommunications Union (ITU) and United Nations (UN)

- A webinar was organised on 06th May 2020 by ITU and the Office of the Secretary - General of UN in collaboration with Secretary to Cabinet of the UN. The webinar had as theme “**Online Safety and Security during Covid 19.**”
- Discussions were raised on the specific challenges related to cybersecurity that the country has faced during the pandemic Covid 19 and the strategies and tactics deployed to safeguard the usage of internet and cybersecurity.



- The objective of the webinar was to ensure a safer access to digitization during the pandemic and also to protect users as well as children.

3D Printing

- Following the awareness session held in June 2019 by NCB themed “**Empowering SMEs to adopt 3D Printing**”, a two phased training session was held in August 2019 at the NCB 3D Printing Centre in Coromandel. 11 SMEs were trained.
- Awareness sessions were held in the following secondary schools targeted to Design and Technology Students of Grade 10:
 - (i) Phoenix SSS - 5 March 2020
 - (ii) College du St Esprit - 9 March 2020
- NCB, in collaboration with Sun Resorts and the University of Mauritius, provided 3D - printed bases and artificial reefs for coral breeding in nurseries.

- The following table illustrates the key actions and 3D print services offered:

SN	3D Printing Centre - KEY ACTIONS	FY 2018 - 19	FY 2019 - 20
1	Print services to secondary / tertiary students	1,200	252
2	Print services to SMEs and Startups		185
3	Awareness / Training on 3D Printing Technologies for SMEs and Startups	45	11
4	Awareness / Training on 3D Printing Technologies Students	114	240

PROTOTYPES OF 3D PRINTING

- Ministry of Environment, CIB and the University of Mauritius have used the 3D printing casings for IoT atmospheric sensors to monitor air quality.
- NCB in collaboration with MSF “Morisien Sans Frontière” and the Mauritius Makers Community produced face shields for front liners during the Covid 19 pandemic. NCB contributed to increase the production capacity of the face shields. 500 face shields were printed during the lockdown period.



- During the confinement period, the University of Mauritius sought the collaboration of the National Computer Board to produce 3D Printed parts for a ventilator. The ventilator was mounted and tested at UoM.

PART III

FINANCIAL PERFORMANCE OF MITCI

Part III provides the financial highlights for the Financial Year 2019 - 20 and an analysis of significant changes in financial results. It also includes statements of revenue and expenditure.

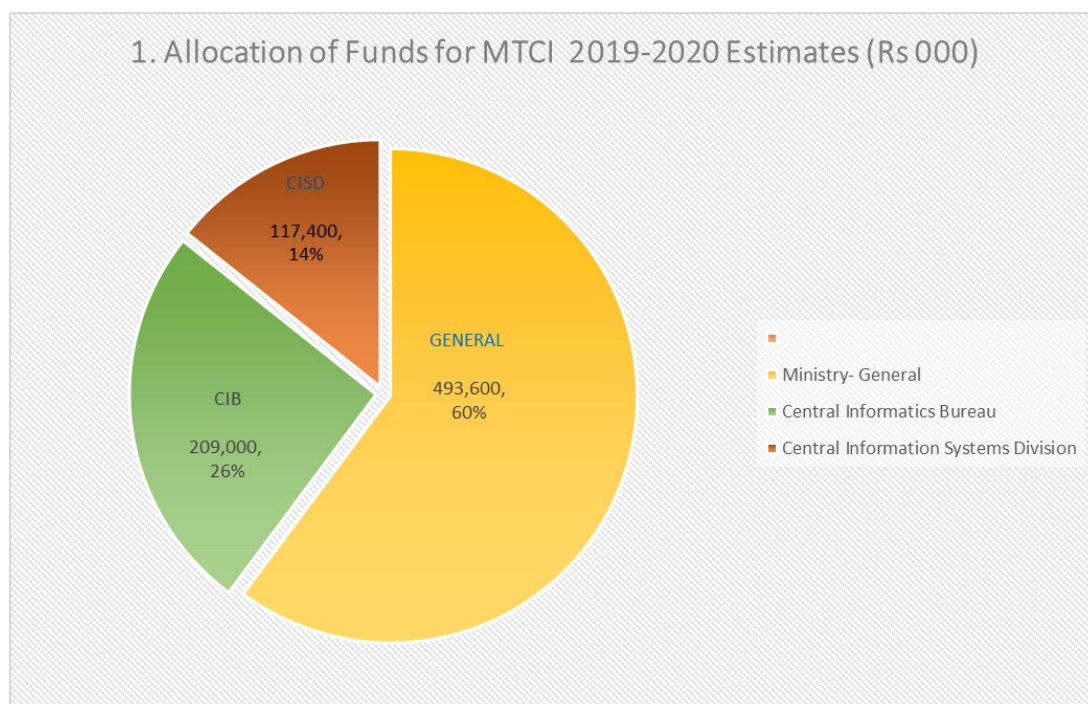
FINANCIAL HIGHLIGHTS

In the Estimates 2019 - 2020, the Ministry of Information Technology, Communication and Innovation was divided in 3 main Sub - Heads, namely:

- (i) General that is the Administration, Finance, Human Resource, IT Security Unit, Data Protection Office and Procurement Sections;
- (ii) The Central Informatics Bureau (CIB); and
- (iii) The Central Information Systems Division (CISD).

Details	2019 - 2020 Estimates (Rs)
VOTE 6 - 1 - TOTAL EXPENDITURE	820,000
<i>of which</i>	
Recurrent	638,300
Capital	181,700
Sub - Head 6 - 101: GENERAL	493,600
Recurrent Expenditure	339,700
Capital Expenditure	153,900
Sub - Head 6 - 102: CENTRAL INFORMATICS BUREAU (CIB)	209,000
Recurrent Expenditure	189,000
Capital Expenditure	20,000
Sub - Head 6 - 103: CENTRAL INFORMATION SYSTEMS DIVISION (CISD)	117,400
Recurrent Expenditure	109,600
Capital Expenditure	7,800
TOTAL	820,000

Allocation of Funds for MITCI in 2019 - 2020



STATEMENTS OF REVENUE AND EXPENDITURE

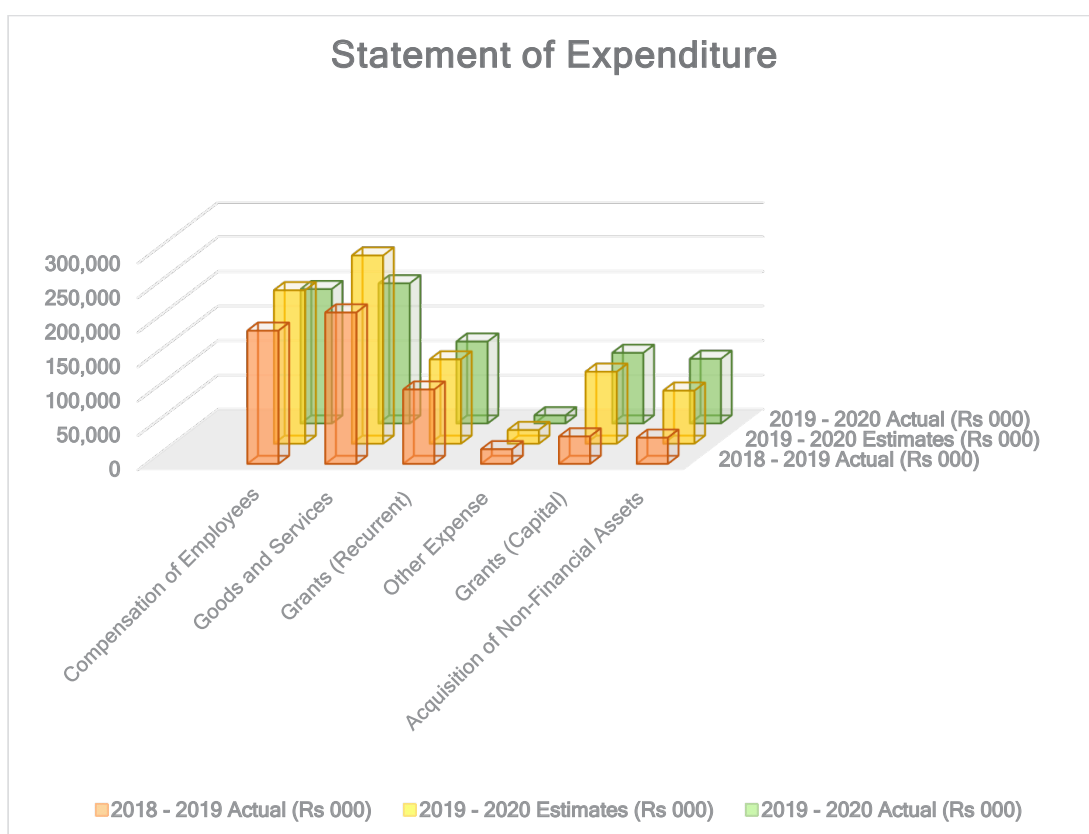
1. Statement of Revenue

Revenue (Rs 000)	2018 - 2019 Actual (Rs 000)	2019 - 2020 Actual (Rs 000)	2020 - 2021 Estimates (Rs 000)
Data Protection Office	6,983	6,983	7,000

Revenue collected by the Ministry are fees payable for Registration and Renewal of Licenses at the Data Protection Office.

2. Statement of Expenditure

Head / Sub - Head of Expenditure	2018 - 2019 Actual (Rs 000)	2019 - 2020 Estimates (Rs 000)	2019 - 2020 Actual (Rs 000)
Compensation of Employees	193,606	222,753	195,117
Goods and Services	219,932	272,997	203,399
Grants (Recurrent)	108,099	122,550	119,115
Other Expense	21,376	20,000	13,015
Grants (Capital)	40,018	104,600	102,691
Acquisition of Non - Financial Assets	38,196	77,100	94,015 (Virement)



The total performance of the Ministry turned around 89% in 2019 - 2020.

PART IV

WAY FORWARD OF MITCI

Part IV provides a fundamental analysis of the environment in which MITCI operates and which impacts on its service delivery. It also includes the strategic directions to realise the Ministry's vision, objectives and desired outcomes.

TRENDS AND CHALLENGES

A SWOT Analysis taking into consideration the conditions under which MITCI is operating and trends and challenges it is facing, is shown below:



STRATEGIC DIRECTIONS

Strategic Directions



Increase in availability of international bandwidth in Mauritius and Rodrigues



Promote Technological convergence



Strengthen cybersecurity



Promote a supportive environment for start-ups as well as business in terms of data availability



Secure electronic transactions and increased e-commerce



The transition of Mauritius to an innovation - driven nation



Encourage effective interaction of citizens with Government through user - friendly public e - service



Enhance protection of personal data



Secure business continuity of Government services

ENABLERS

Enablers



Two additional submarine cables will be operational



Set up a new merged entity regulating ICT and broadcasting to create an enabling regulatory framework



Set up a Cyber Threat Monitoring System to facilitate the reporting of incidents and counter illegal online activities



Government will release additional open datasets (including geo-spatial datasets) and open Application Program Interfaces (APIs)



Set up a Certification Authority for issuance of digital signatures
Encourage companies to adopt data protection certification seals



The Research and Innovation pole supports projects with private partners aiming at knowledge transfer and stimulation of innovation
Further facilitate innovation among start-ups through the National SME Incubator Scheme



Create a Mokloud platform for issuance and verification of documents and certificates in a digital way
Revamp the government portal to offer more responsive, mobile friendly and citizen-centric eservices



GDPR

Enforce the Data Protection Act in line with the EU General Data Protection Regulations



Set up Disaster Recovery Site for the Government Online Centre

