

REPUBLIC OF KIRIBATI



Asia-Pacific Young Professional and Students Programme (APTYPs 2024)



ICT Boot Camp 2024 Programme Completion Report

THIS REPORT WAS COMPLETED BY THE DIGITAL
TRANSFORMATION OFFICE UNDER THE MINISTRY OF
INFORMATION, COMMUNICATIONS AND TRANSPORT

Table of Contents

- Executive Summary.....2***
- Acknowledgements.....3***
- Introduction.....4***
- Objectives4***
- Theme4***
- Program Overview.....5***
- Organisers6***
- Content and Images of the Bootcamp.....7***
 - Content Overview 7***
 - Images from the Bootcamp..... 8***
- Outcomes and Impact..... 10***
- Conclusion 10***
- Appendices 11***

Executive Summary



The Kiribati ICT Bootcamp, held from August 19th to 21st, 2024, at the Kiritimati Island Fish Limited boardroom in Ambo Tarawa, was a comprehensive initiative aimed at empowering young individuals with essential ICT and cybersecurity knowledge. Organized under the theme "Building a Secure Digital Future," the bootcamp engaged 35 high school students from Forms 6 and 7 in a dynamic learning environment focused on digital literacy, cybersecurity, robotics and web development.

The bootcamp's primary objectives were to provide participants with a foundational understanding of ICT concepts and practices, introduce fundamental cybersecurity principles, develop practical skills through hands-on experiences, and promote a culture of lifelong learning in technology. Over the course of three days, participants attended workshops, seminars, and interactive activities designed to enhance their understanding of digital technologies and inspire them to pursue further education and career opportunities in the field.

By the end of the bootcamp, participants demonstrated a significant improvement in their knowledge of ICT and cybersecurity, showcased their skills through various projects, and actively participated in discussions and debates on relevant topics. This report outlines the activities conducted during the bootcamp, the outcomes achieved, and the overall impact on the participants.

Acknowledgements

We would like to extend our deepest gratitude to the Asia-Pacific Telecommunity (APT) for their generous funding and support, which made the Kiribati ICT Bootcamp possible. Their commitment to empowering young professionals and students in Kiribati through the Young Professionals and Students Programme has been instrumental in enhancing digital literacy and cybersecurity awareness among our youth.

We would also like to acknowledge Mr. Adli Wahid, from the Asia Pacific Network Information Centre (APNIC) for the technical support provided throughout the ICT Boot Camp. Your support enabled us to provide a well-run program smoothly. Our sincerest gratitude as well for helping us set up the Capture the Flag program for the students which proved to be a fun and effective way to teach cybersecurity skills and increase awareness.

The support you provided enabled us to provide a comprehensive educational experience, equipping participants with valuable knowledge and skills in ICT and cybersecurity.

The successful implementation of this bootcamp would not have been possible without your dedication to fostering a secure digital future for young people in the Asia-Pacific region. Thank you for your unwavering support and for helping us build a brighter, more secure digital future for Kiribati's youth.

Introduction

The Kiribati ICT Bootcamp, held from August 19th to 21st, 2024, at the Kiritimati Island Fish Limited boardroom in Ambo Tarawa, was designed to provide 35 high school students from Forms 6 and 7 with foundational knowledge in Information and Communication Technology (ICT) and cybersecurity. The theme, "Building a Secure Digital Future," focused on preparing young people for the challenges and opportunities of the digital age while emphasizing the importance of security.

Objectives

The bootcamp aimed to achieve the following objectives:

1. **Understand ICT Fundamentals:** Participants gained knowledge of basic ICT concepts, including computer hardware, software, networking, and web development.
2. **Develop Cybersecurity Awareness:** Participants learned about common cybersecurity threats, attacks, and best practices for safeguarding digital assets and information.
3. **Acquire Hands-On Skills:** Through hands-on labs, projects, and activities, participants developed practical skills, enabling them to apply their knowledge in real-world scenarios.
4. **Promote Lifelong Learning:** The bootcamp aimed to cultivate an interest in technology and cybersecurity, encouraging participants to pursue further education and career opportunities in these fields.

Theme

The theme "Building a Secure Digital Future" emphasized the importance of equipping young people with the skills and knowledge needed to navigate the digital world securely and responsibly. The focus was on fostering a mindset that prioritizes cybersecurity while leveraging technology for personal and professional growth.

Program Overview

The bootcamp schedule was structured to provide a mix of theoretical knowledge and practical experience, covering a range of topics from ICT fundamentals to cybersecurity and web development. Below is a summary of the key activities:

- **Day 1:** Introduction to ICT, DTO (Digital Transformation Office), Cybersecurity, and Web Application
- **Day 2:** Web Development with HTML, CSS, and JavaScript, including hands-on sessions
- **Day 3:** Cryptography sessions, cybersecurity debates, Robotics, Capture the Flag (CTF) activities, and certificate presentations

Date	Time	Activity	Responsible
19 th September	09:30 - 09:35	Opening Prayer	Bongraoi Arebaio
	09:35 - 09:45	APT Opening Remarks	Secretary General Masanori Kondo
	09:45 - 09:55	MICT Opening Remarks	Secretary Mitateti Mote Tira
	09:55 - 10:25	DTO Introduction	DTO OIC Domingo Kabunare
	10:30 - 11:00	Group Photo and Morning tea	Everyone
	11:00 - 11:45	Introduction to Bootcamp	Bongraoi Arebaio
	11:45 - 12:30	Introduction to ICT	Renga Teannaki and Atanrerei Kabiriera
	12:30 - 1:30	Lunch	Everyone
	1:30 - 2:30	Cybersecurity Introduction	Terianna Kourabi
	2:30 - 3:30	Introduction to web application	Harry Gibbs
	3:30 – 4:00	Afternoon tea	Everyone
	4:00	Wrap up	Bongraoi Arebaio
20 th September	09:30 - 09:35	Opening prayer	Terianna Kourabi
	09:35 - 10:35	Demonstration of HTML, CSS and JS	Ngaai Toabwa
	10:35 - 11:05	Morning tea	Everyone
	11:05 - 12:35	Web development continuation	Students
	12:35 - 1:35	Lunch	Everyone
	1:35 - 2:35	Continuation of website building	Students
	2:35 – 3:35	JavaScript integration	Students
	3:35 – 4:15	Afternoon Tea	Students
	4:15	Wrap up	Bongraoi Arebaio
21 st September	09:00 - 09:05	Opening prayer	Bongraoi Arebaio
	09:05 - 09:35	Cryptography session	Bongraoi Arebaio
	09:35 - 10:35	Hands-on cryptography	Students

10:35 - 11:05	Morning Tea	Everyone
11:05 - 12:05	Cybersecurity debate: - Topic: Cybersecurity education in schools: Should cybersecurity be mandatory in schools to address the growing cyber threats?	Bongraoi Arebaio and Terianna Kourabi
12:05 - 12:25	Robotics Introduction	Robotics Team Kiribati 2024
12:25 - 1:30	Lunch	Everyone
1:30 - 3:30	CTF Activity Introduction	Adli Wahid
	CTF	Students
3:30 - 3:45	Wrap up	Bongraoi Arebaio
3:45 - 4:00	Afternoon Tea	Everyone
4:00 - 4:15	Certificate presentations	DTO
4:15 - 4:25	Evaluation and Group Photo	Students
4:25 - 4:35	Closing remarks	DTO OIC Domingo Kabunare

Organisers

The Kiribati ICT Bootcamp would not have been successful without the support from the people who helped organised it.

Our deepest gratitude to the Ministry of Information, Communications and Transport, our Secretary Mr. Mitateti Mote Tira for his support throughout the program and Ms. Betty Mapuola for her support in organising this activity.

A sincere gratitude to all of these people as well for their support without which, the program would not have been successful.

Name	Designation	Organisation
Mr. Domingo Kabunare	Officer in Charge for the DTO	MICT (DTO)
Mrs. Atanrerei Kabiriera	Chief Digital Services Officer	MICT (DTO)
Mrs. Renga Teannaki	Senior ICT Policy Analyst	MICT (DTO)
Mrs. Terianna Kourabi	Senior Information Security Analyst	MICT (DTO)
Ms. Ngaaia Toabwa	ICT Officer	MICT (DTO)
Mr. Harry Gibbs	Australian Volunteer for the DTO	MICT (DTO)
Ms. Bongraoi Arebaio	Information Security Analyst	MICT (DTO)

Content and Images of the Bootcamp

The Kiribati ICT Bootcamp provided an enriching experience for all participants, combining theoretical learning with practical activities. This section highlights the key content covered during the bootcamp, along with images that capture the spirit of the event.

Content Overview

The bootcamp was designed to cover a broad range of ICT and cybersecurity topics, tailored to meet the learning needs of high school students. Here is an overview of the main content areas:

- **Introduction to ICT:** This session introduced participants to basic ICT concepts, including an overview of computer hardware, software, networking, and the fundamentals of web development.
 - **Key Topics:** Computer systems, software applications, components of a computer and the internet.
- **Introduction to Digital Transformation Office (DTO):** Participants learned about the structure and function of the Digital Transformation Office.
- **Cybersecurity Awareness:** This session focused on raising awareness about cybersecurity threats, such as phishing, malware, and social engineering, and teaching best practices for protecting digital assets.
 - **Key Topics:** Cyber threats, data privacy, secure password practices, and digital hygiene.
- **Web Development:** A hands-on session where participants learned the basics of HTML, CSS, and JavaScript, culminating in the creation of their own simple web pages.
 - **Key Topics:** HTML structure, CSS styling, JavaScript basics, and responsive design.
- **Cryptography:** Participants were introduced to the basic principles of cryptography, including encryption and decryption techniques, followed by a practical hands-on session.
 - **Key Topics:** Symmetric and asymmetric encryption, keys, and cryptographic algorithms, Caesar Cipher and using CyberChef.
- **Robotics Introduction:** Participants were introduced to the world of robotics by the Robotics Team representing Kiribati in the FIRST Global Challenge this year.
 - **Basic concepts** were introduced, theme for this year's competition and programming language used to program the robot.
- **Cybersecurity Debate and Capture the Flag (CTF):** An interactive debate on the importance of cybersecurity education in schools, followed by a CTF activity where participants applied their cybersecurity skills in a simulated environment.

- Key Topics: Cybersecurity education, ethical hacking, problem-solving, and teamwork.

Images from the Bootcamp

The following images capture the excitement and engagement of participants throughout the bootcamp:

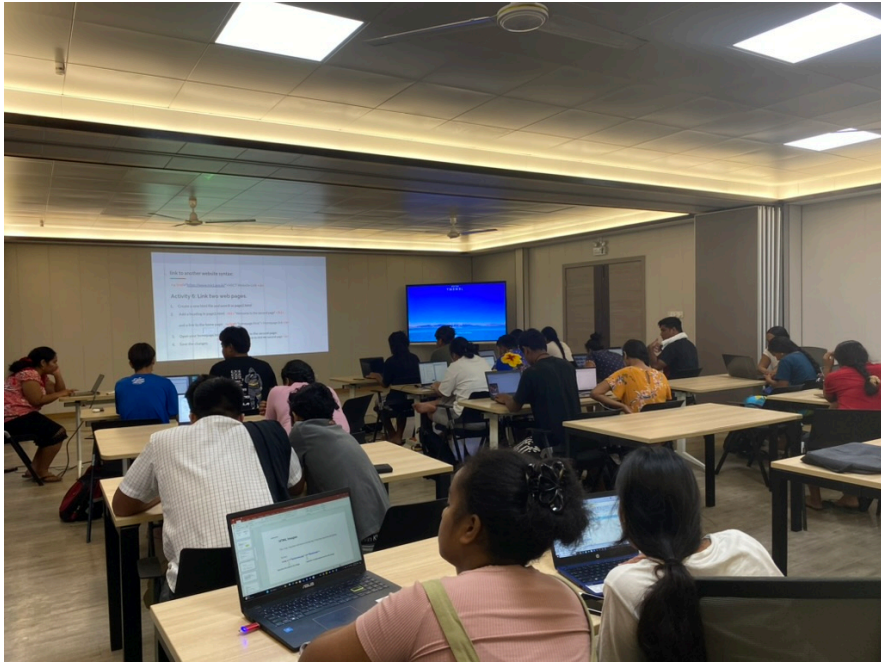
Opening Session: A group photo of all participants and facilitators taken after the opening remarks.



ICT Introduction: Students listening attentively to the presentation on ICT Introduction



Web Development Workshop: Students working on laptops during the web development session, coding their first web pages.



Cybersecurity Debate: Students passionately preparing for the debate on whether cybersecurity education should be mandatory in schools, showcasing their understanding of the topic.



Capture the Flag Activity: Participants collaborating in teams to solve cybersecurity challenges, demonstrating their skills in a competitive but fun environment.



Robotics session: Participants taking a group photo with the robot being built by the Robotics Team Kiribati 2024



Outcomes and Impact

By the conclusion of the bootcamp, participants had developed a foundational understanding of ICT and cybersecurity. They actively engaged in discussions, showcased their projects, and demonstrated an eagerness to explore further learning opportunities in these fields. The bootcamp successfully met its objectives by providing a platform for young individuals to learn, practice, and discuss critical aspects of ICT and cybersecurity, ultimately contributing to the development of a secure digital future for Kiribati. We also conducted an evaluation by giving anonymous evaluation forms for the participants to fill out. The results from the evaluation forms were positive with a few recommendations for improvements.

Conclusion

The Kiribati ICT Bootcamp was a successful initiative that not only equipped participants with essential ICT and cybersecurity knowledge but also inspired them to pursue further education and career opportunities in the digital world. The program's success highlights the importance of continuing such educational initiatives to build a more secure and technologically adept future for Kiribati's youth.

We would like to again extend our sincere thanks to the Asia-Pacific Telecommunity (APT) for their generous funding and support. APT's contribution was instrumental in making this event possible and ensuring its success, helping us provide valuable learning experiences that will benefit the youth of Kiribati for years to come.

Appendices

Appendix 1: Registered participants

Name	Surname	Form/Grade	School	Gender	What do you hope to learn from this bootcamp? What are some of your expectations?
Rinataake	Taetoka	Form 7	William Goward Memorial College	Male	I want to learn more about the fundamental of Computer world as we are part of it
Retiani	Temaiana	Form 7	KGV & EBS	Female	I hope to gain a broader knowlegde on technology and the digital world which would highly contribute to the development of my country.
Tutana	Mwakin	5	KGV & EBS	Female	I hope to develop my understanding of ICT and learn new things.
Lachlan	Andrew	5	MHS	Male	I hope to learn and enhance skills and knowledge on technology to create a better future for my country.
Simon Vincent	Stuart Manwaring	Form 6	KGV & EBS	Male	To learn new skills on ICT
Uenren	Naatan	Form 7	William Goward Memorial College	Female	Able to learn and develop a variety of new skills and knowledge. To be able to learn new technology and develop a variety of new skills and knowledge.
Tebura	Tione	Form 6	William Goward Memorial College	Female	To communicate with others and to expand a knowledge about a ICT
Teraaka	Benaia	Form 6	William Goward Memorial College	Male	To widden more knowlegde on ICT and also cybersecurity.
Tooma	Tamaeru	Form 6	Saint Patrick College	Male	I ready from this bootcamp
Tebakia	Kaietaro	Form 6	ST Patrick College	Male	
Mote	Tira	Form 6	Moroni High School	Male	I hope to learn advanced ICT skills and practical applications while networking with professionals and fellow students at the Kiribati ICT Bootcamp and maybe even find some delicious food during the workshop!
Terri	Tiorina	Form 7	KGV & EBS	female	better understanding of cybersecurity
Kairaman	Tiitana	Form 6	KGV/EBS	Female	I want to learn more on practical rather than the Theory part. I want to be a computer literate.

Bwatetika	Ioane	Form 6	KGV/EBS	Female	I want to get more improvements and knowledge on computer. I wish to learn it just for my future career.
John	Itaaka	Form 7	King George V & Elaine Bernacchi School	Male	Hopefully I can learn a bit more on the technical work part of ICT and broaden my understanding in ICT in general.
Vidyut	Kumar	Form 6	Moroni High School	male	
Joseph	Titon	Form 6	MHS	Male	Hopefully anything new
Ereere	Iareto	Form 7	Moroni High school	female	To be able to learn more on the impact of ICT that can have to our lives especially to our Future.
Buara	Beia	Form 7	Moroni High School	Female	I expect to learn more skills on ICT that will help me to improve my knowledge for the future.
Reretaake	Tebania	6	SLHS	Male	New skill and knowledge
Aribo	Fay	Form 7	Sacred Heart College	Female	To learn new things and in experience, and to gain the requirements skills for the foundational knowledge in ICT and Cybersecurity. Not only that, but it will also boost my knowledge in computer science and learn to meet new people along the way (Bootcamp).
Beretita	Tamwennang	Form 6	Saint Louis High School	Female	When attending a bootcamp, I would hope to learn practical skills that can be immediately applied in real world scenario. This could include hands on experience with the latest tools technologies, understanding of best practices in field, and the ability to work on projects that simulate actual work environment. Some of my expectations would include is practical experience means opportunities to work on projects or problems that mirror challenges industry and so many more.
Tinraoi	Baraniko	Form 7	Sacred Heart College (SHC)	Male	Building my capacity on computing skills
Susana	Emiu	Form 6	St Louis High School	Female	
Taeang	Antonio	Form 6	St Louis High School	Female	
Ereti	Teiwaki	Form 6	Santa Maria College	Female	I hope to learn the hardware,Software,Networking and other computer knowledge
Iatinta	Tingo	Form 6	Santa Maria College	Female	I want to learn more Skills of technology
Aroiti	Berenato	Form 6	Santa Maria College	Female	To learn some of technology or learn to build the secure of the digital for the future generation.
Toonga	Boraing	Form 6	Santa maria college	female	I hope to learn about hardware, software, networking and other computer programs

Kario	Kaieata	Form 6	saint patrick college	male	I want to learnt more computer
Riite	Arona	Form 6	ST Patrick College	Female	I want to earn more about computer
Akanisi Melinda	Rabune	Form 7	Sacred Heart College	Female	I hope to learn new skills that would be beneficial to in my future career
Jr Kokoria	Pima	Form 7	William Goward Memorial College	Male	To learn how to code and develop more knowledge of computing.

Appendix 2: Evaluation forms

ICT Bootcamp Evaluation

Instructions: Please rate each statement from 1 to 5, where: 1 - Strongly Disagree 2 - Disagree 3 - Neutral 4 - Agree 5 - Strongly Agree

Content and Sessions

1. The overall organization of the sessions was clear and effective.
 - 1 2 3 4 5
2. The topics covered were relevant to my interests and needs.
 - 1 2 3 4 5
3. The pace of the sessions was appropriate.
 - 1 2 3 4 5
4. The instructors were knowledgeable and able to communicate effectively.
 - 1 2 3 4 5
5. The learning materials (slides, handouts) were helpful.
 - 1 2 3 4 5
6. I feel more confident in my understanding of ICT concepts after Day 1.
 - 1 2 3 4 5

Practical Sessions and Exercises

7. The hands-on exercises were engaging and useful.
 - 1 2 3 4 5
8. The group activities promoted collaboration and learning.
 - 1 2 3 4 5
9. Technical support during practical sessions was readily available.
 - 1 2 3 4 5
10. The practical sessions enhanced my understanding of ICT applications.
 - 1 2 3 4 5
11. The workshops provided valuable insights into real-world applications of ICT.
 - 1 2 3 4 5
12. My team's final project allowed me to apply what I learned during the bootcamp.
 - 1 2 3 4 5
13. The closing session and wrap-up were informative and well-organized.
 - 1 2 3 4 5

Overall Bootcamp Experience

14. The duration of the bootcamp (3 days) was adequate for covering the topics.
 - 1 2 3 4 5
15. I would recommend this bootcamp to others interested in ICT.
 - 1 2 3 4 5
16. Additional comments or suggestions for improving future bootcamps:

|

Thank you for your participation! Your feedback is invaluable to us.

