# TECHNOLOGY CONSULTING
## IN THE GLOBAL COMMUNITY

## Final Consulting Report
### The Office of the Attorney General, Republic of Palau

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**Carnegie Mellon University**

cmu.edu/tcingc

# The Office of Attorney General, Republic of Palau Executive Summary

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Community Partner, Ernestine K. Rengiil

## I. About the Organization

The Office of the Attorney General for the Republic of Palau (referred to as the Office or OAG, hereafter) is an executive office which handles prosecution for all crimes within the Republic of Palau (ROP). OAG is housed by the Ministry of Justice, which is a part of the executive branch in ROP. The mission of the Office is to:

> *(1) provide legal services to the entire executive branch in a professional and timely manner, (2) protect the public by fairly and vigorously prosecuting all criminal cases, and (3) handle all civil cases filed on behalf of and against the executive branch.*

OAG is headed by the Attorney General (AG) to ROP Ernestine K. Rengiil, and employs eight assistant attorney generals and three administrative staff.

## II. Develop a Sex Offender Registry System for ROP

The Office is motivated to maintain an operational Sex Offender Registry for the following reasons:

1. To ensure all sex offenders within the Republic are registered with the Office
2. To keep track on activities of the Sex Offenders within the Republic
3. To provide the public with access to public information of the Sex Offenders.

The factors considered for developing a Sex Offender Registry system were low or no code solution, cost effectiveness, time effectiveness, and data security. To meet the client's requirements a Sex Offender Registry structure was developed on Airtable, which is a cloud based no-code platform.

The maintenance of the Sex Offender Registry would ensure law enforcement, reduce repetitive sexual offenses by criminal offenders, and make the Office's Sex Offense crimes database management more convenient and easy to maintain. The structure developed during this project period is a basic structure and will be improved in the future by the Office admin managing the system. In the future, the system can be improved by adding automations to allow the system to automatically create reminders and notifications, and track the progress of the Sex Offenders registration process.

## III. Develop an Automatic Sex Offender Registration Notice Generation System

Despite the legal requirement for Sex Offenders in Palau to register with the Office, most Sex Offenders are not registered because they are either unaware or ignorant of the registration requirement. The first step to developing a Sex Offender Registry in any place, is to get all existing Sex Offenders to register with the Office. Similar to task I, the factors considered for developing the automatic Sex Offender Registration Notice generation system were low or no code solution, cost effectiveness, time effectiveness, and data security. For this, a semi-automatic solution was developed with a Google Sheets template that helps generate registration notices by entering details of receivers and making a few clicks on the spreadsheet.

In order to save more time, making the Google Sheets completely automatic in a way that only requires the manual action for data entry would be recommended for the future.

## IV. Additional Recommendations

### Airtable as a one-stop solution for all tasks related to Sex Offenses

It would be really helpful for the Office admin, who is managing the Sex Offender Registry, to use a single platform to track activities of the Sex Offenders and generate the Sex Offender Registration Notice. I recommend looking at possibilities of integrating all these operations into Airtable. This would increase time efficiency and make it easy to maintain too.

**Consulting Partner**

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Republic of Palau

**About the Consultant**

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Anupama is a rising senior in Information Systems.

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# Final Consulting Report

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## I. About the Organization

### Organization

The Office of the Attorney General (referred to as the Office or OAG, hereafter) for the Republic of Palau (ROP) is an executive office which handles prosecution for all crimes within ROP. The Ministry of Justice, which is a part of the executive branch in ROP, houses the OAG. The Office is located on the second floor of the Supreme Court building within the court complex in downtown Koror, which is the most populated part of the state and the country. The mission of the Office is to:

*(1) provide legal services to the entire executive branch in a professional and timely manner, (2) protect the public by fairly and vigorously prosecuting all criminal cases, and (3) handle all civil cases filed on behalf of and against the executive branch.*

OAG is headed by Attorney General (AG) Ernestine K. Rengiil, and employs eight assistant attorney generals and three administrative staff. The Office's annual budget for Fiscal Year 2023 is slightly above $700,000.

### Facilities

The Office is located on the second floor of the Supreme Court building which is a part of Palau's court complex in the state of Koror. The Office is well equipped with lighting, air conditioning, a common washroom, a staff pantry and other necessary facilities. Everyone working in the office has their individual desk setup. A printer and scanner are set up at the administrator's office for common use. AG has a room to herself with a desk, chair, desktop computer, printer and scanner, seating arrangement for guests, and storage cabins. Attorneys in the office have individual cubicles with an office table, chair, desktop computer, white board with board markers, storage cabins, and a trash can. Administrators, Ms. Toribiong and Ms. Kailang, share a common workspace in a room next to the office reception which is equipped with individual desk setups for both of them, physical documents that are often referred to for work by all staff, the office server, and a staff pantry setup. The staff pantry setup consists of a table, a mini fridge, a water dispenser, a microwave oven and a few supplies such as coffee powder and sugar. Recently joined admin, Ms. Dianne, uses a currently vacant cubicle for her work. In addition to these facilities, the office has a conference room for conducting meetings in the office premises with clients, other government officials or guests.
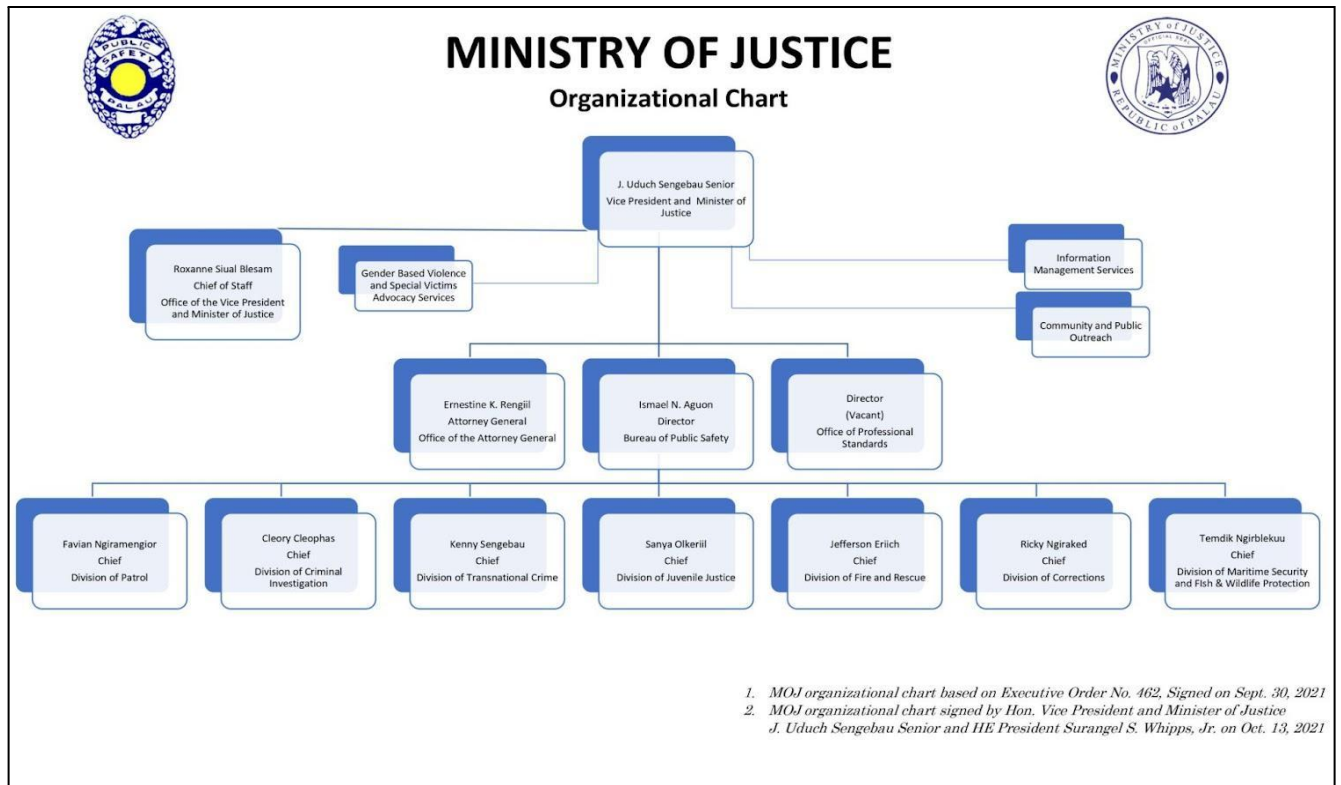
All systems used in the office, except the one dedicated for the Sex Offender Registry, are equipped with a bootleg version of Microsoft Office for work purposes. All these systems are connected to the Office WiFi which is provided by Palau National Communications Corporation (PNCC). The network speed of this WiFi connection is relatively slow.

As the court complex was built starting 1922 by the Japanese administration during Japanese settlement in Palau, the infrastructure is getting weaker. And so, the court complex will be

undergoing renovation starting mid August 2023 and the Office will be temporarily moving to a new building near the Bank of Guam in downtown Koror.

## Programs

The Office of the Attorney General of Palau is housed by the Ministry of Justice of ROP which is an executive branch of the Republic. The roles of the Office of the Attorney General of Palau include protecting the public by prosecuting all criminal cases, providing legal advice to the executive branch of the government, and representing the country in legal matters. They work with all offices under the government, but most of their services are concerned with the Bureau of Public Safety and the Judiciary.



**MINISTRY OF JUSTICE**
**Organizational Chart**

J. Uduch Sengebau Senior
Vice President and Minister of Justice

Roxanne Siual Blesam
Chief of Staff
Office of the Vice President and Minister of Justice

Gender Based Violence and Special Victims Advocacy Services

Information Management Services

Community and Public Outreach

Ernestine K. Rengiil
Attorney General
Office of the Attorney General

Ismael N. Aguon
Director
Bureau of Public Safety

Director
(Vacant)
Office of Professional Standards

Favian Ngiramengior
Chief
Division of Patrol

Cleory Cleophas
Chief
Division of Criminal Investigation

Kenny Sengebau
Chief
Division of Transnational Crime

Sanya Olkeriil
Chief
Division of Juvenile Justice

Jefferson Eriich
Chief
Division of Fire and Rescue

Ricky Ngiraked
Chief
Division of Corrections

Temdik Ngirblekuu
Chief
Division of Maritime Security and Fish & Wildlife Protection

1. MOJ organizational chart based on Executive Order No. 462, Signed on Sept. 30, 2021
2. MOJ organizational chart signed by Hon. Vice President and Minister of Justice J. Uduch Sengebau Senior and HE President Surangel S. Whipps, Jr. on Oct. 13, 2021

## Staff

The office is currently staffed by the Attorney General Ernestine K. Rengiil, her eight assistant attorney generals and three administrative staff. Currently occupied positions are as follows:

**Attorney General**: Ernestine K. Rengiil - She has served as Palau's Attorney General for the terms of 1992-93, 2009-13 and 2017 to present. She is the first Palauan woman to be a member of the Palau bar association and also the first Palauan woman to be an Attorney General.

**Criminal Division Assistant Attorney Generals**:

AAG - Felony Criminal - Rebecca S. Sullivan,  Laisani N. Tabuakuro, Hila D. Asanuma, and Poseci W. Lalabalavu

AAG - Misdemeanor - Lavinia LM David

Rebecca L. Schuster (additionally legal counsel for the Environmental Quality Protection Board (EQPB))

**Civil Division Assistant Attorney Generals:**

AAG - Civil - Kathleen M. Burch, Christiaan D. Mitchell

**Administrative supportive staff**:

Administrative Officer II - Nanumi Toribiong

Administrative Assistant II - Sheila Kailang, Dianne K. Brewer

Refer to Appendix A for the organizational chart of the Office.


## Technology Infrastructure

The office staff are provided with individual desktop computer setups and a shared WiFi network. A detailed description of the technology infrastructure in the organization is given below:

| Hardware | 12 Dell desktop computers (i7 processors) 3 Canon Printers/copiers |
|---|---|
| Software | Microsoft Office Professional Plus 2019 |
| Internet Connection | WiFi by Palau National Communications Corporation |
| Communication | Professional Email (Gmail) |
| Operating Systems | Windows 10 Operating Systems |
| Server | A physical server is maintained in the office which automatically backs up all data daily |


## Technology Management

At the Office, technology support is provided by Mr. Blekuu Sbal, an employee of the Ministry of Finance's Information Systems Support Services (ISSS). Operational tasks of the Office are handled on an ad-hoc basis by Mr. Sbal as per the requests made by the Office administration. He is appointed by ISSS as the head and the sole employee of MOJ's Information Management Services (IMS). Mr. Sbal is called in by all the offices under MOJ for various technical issues which may range from restarting a system to advising on technology infrastructure improvements. Sometimes it might take up to two or three days for Mr. Sbal to make a visit and check the issue after a technical assistance request has been made. This is because he works mostly in the Immigration Office in Koror and his schedule includes visits to all offices under MOJ that have made a request for assistance. These Offices may be located in different states of Palau. This dependence on Mr. Sbal

for even trivial system maintenance tasks is mainly because many of the employees are not familiar with basic maintenance of machines and he is the only technical support person assigned for the entire MOJ. At times, based on Mr. Sbal's recommendations, the Office also contacts private companies offering technical services to install new machines in the Office.

For maintaining soft copies of important files and other office documents, a server is set up in the Office. The server automatically backs up every day. There is no other hardware to back-up what is stored in the server and there is no regular maintenance of the server. If the server runs into any issues, Mr. Sbal is contacted to look into the issue and fix it.

## Technology Planning

As mentioned earlier, the Office receives most of its technical support from Mr. Sbal, who is appointed to MOJ's IMS office by ISSS. ISSS is responsible for developing, administering and maintaining the central computer system of the Republic to assure its integrity and usefulness, and to provide technical assistance and archived documents as records of accountability. And so, Mr. Sbal is responsible for managing and centralizing the technology infrastructure of all offices under MOJ in order to improve their operations. Mr. Sbal also works with the Division of Immigration and visits offices under MOJ following a schedule he prepares based on the technical support requests he gets. There is no budget earmarked for IMS or for technology management and planning within MOJ. Technical support requests are made to Mr. Sbal by the office via email or phone call.

Currently, most organizations in Palau use Microsoft Access or SQL for database management and the same applies for OAG. The Office maintains its own criminal records database on Microsoft Access, though it is not completely reliable. Multiple admins have handled the system in the past years. And so, existing data has different formats and cleaning existing data is difficult while administrators do not have enough time to finish data entry. Current data analysis practices such as filtering crime records based on their law sections are done using time consuming steps like exporting the available data to excel sheets and manually grouping them and going through the description of each case file.

## Communication

Internal and external communications of the Office are made through emails, phone calls and transfer of documents between different office locations.

For email communications, AG, AAGs and admins use their Gmail accounts that they have created only for their professional communication. The staff accesses the internet in the office using the office WiFi. Though the WiFi is not very efficient or reliable because of the slow speed, email communications can be performed using it. For phone calls there are three office SIMs which are registered under the government. One of them is used by the AG and one by admin Ms. Toribiong, and the remaining one is not being used currently. All other staff use their personal local phone numbers for official phone calls too. A directory of all internal and external phone numbers and emails is maintained by Ms. Toribiong.

Within the Republic's offices, the common practice for external transfer of documents is physically transferring them between different office locations by the admins. An example of external

communication at the Office is filing of cases. In the event of a law violation being found, a police officer prepares a citation (refer to Appendix B for definition). Two copies of the citations are prepared, one to be submitted to the court and the other one to be submitted at OAG. The AG goes through all citations submitted to the Office and assigns cases to AAGs accordingly. From then on, all collected information which includes details of defendants, victims (if involved), evidence and other related information are all recorded as hard and soft copies for reference purposes. Information is recorded with different details in different offices but most of the data is the same and useful for all offices involved.

One of the main reasons this type of document transfer between office locations is practiced in the Republic is that offices want to ensure the security of the sensitive information in the documents.

Currently OAG does not have a website, but intends to develop one in the near future.


## Information Management

Information management practices that are currently in use in the offices under MOJ are not reliable. As there is no budget for IMS, all the services offered by IMS are mostly donations from other countries or softwares downloaded from the internet with Mr. Sbal's assistance. When the current admin Ms. Toribiong joined the Office in 2019, the currently used Microsoft Access criminal records database and an unused web database system were already in place. The web database system developed for OAG is called Office of Attorney General Information System (which will be referred to as OAG-IS hereafter), and it was developed by a Taiwanese company to help IMS centralize the operations of the offices of BPS, OAG and Marine Law. This integrated system was expected to centralize operations of the three institutions because they often work hand in hand. However, only the BPS uses this database. In the past, a TCinGC student consultant made a few improvements to the BPS database and BPS started using this system in 2023. The reason why OAG administrators do not use the system is because they find the system to be not as helpful as the existing Microsoft Access database. According to the admins, the OAG-IS does not offer easy to use database features like search, filter and more. As a result, they continue to use their database on Microsoft Access which is a familiar system that meets their needs for database management. According to the Office administrators, the use of the OAG-IS is time consuming and less convenient despite its goal to increase productivity and reliability of the three offices.

Database management is the most concerning issue of the office. OAG works closely with other government services like the court and police to ensure law enforcement in the Republic. Most of the information exchange between these services happen through transfer of documents between office locations. While ensuring the immediate actions are taken in regards with these documents, admins of the Office also have to deal with the time consuming data entry process. It is a time consuming task because the admins have to manually go through the documents and enter data into their office-wide shared folders. Different administrative staff from different times might have entered data into their respective office database systems in different ways, and that is one main reason that database management becomes difficult within these offices. Multiple attempts to use better database management systems were in vain because the systems did not meet the office's needs for database management. Use of outdated information management practices are slowing down the operations of the office because the information that is being managed is increasing with

time and can no longer be managed using decentralized information management practices. Current databases are incomplete as data from previous years are still pending to be recorded. Data entry would take away time from the admins who have many other tasks in hand already. A more systematic, organized, interactive and low maintenance digital database management system can help the office to reduce their time spent on managing information.

## Business Systems

Staff working hours are recorded by the Time Clock, which is a biometrics system that records clock in and clock out times of all employees using their fingerprints. The worked hours are calculated on a bi-weekly basis. All other expenses of the Office including purchases and repairs are discussed with AG and documented. All of these documents are then forwarded to the Payroll Office of the Ministry of Finance to process.

# II. Develop a Sex Offender Registry[1]

## Motivation

A Sex Offender Registry is a system that is maintained to allow government officials to keep track of activities of Sex Offenders. Sex Offenders are individuals who have committed crimes that fall under the category of sex crimes in the country (Wikipedia, 2023). Out of 195 countries in the world, around 30 of them maintain a Sex Offender Registry (Refer to Appendix A to see the list of countries currently maintaining or considering maintenance of a Sex Offender Registry in the near future, as of 2016). OAG is required to maintain a Sex Offender Registry according to the most recent version of Chapter 17 of Palau's Penal Code, updated in 2013. This chapter also requires OAG to make the registry accessible to the public within the Office premises. Recently, the citizens of the Republic have been showing concern towards this law not being enforced yet, and there has been repetition of sex offenses by Sex Offenders after their release from sentence for their previous sex offenses. To ensure law enforcement and to address the concerns related to it, the Office decided to set up a Sex Offender Registry in the Office.

In the past, when a request was made for information about Sex Offenders or Sex Offenses in the Republic by government offices or citizens, the Office admin manually went through case records on the Office's Microsoft Access Criminal Records database. As the database has been in use for a long time and has been handled by multiple admins, crime descriptions on the database do not follow any specific format. They have either been recorded as they were written by reporting police officers in citations[1] or as law sections. This makes searching on the database based on specific crime categories difficult even though a search based on case files, or by filtering for other specific keywords is possible. Ms. Toribiong, the office admin, created a spreadsheet on Microsoft Excel with data collected regarding past Sex Offenders registered with the Office. Now that a majority of sexual offenses are moved to a new Excel sheet, it is easier to clean them or search for more information about them in existing databases or physical files. An additional advantage is that compared to the total crimes recorded in the country, sex offenses and offenses against minors are fewer in number. In the year of 2019, among 2058 crimes in the Republic, only 8 Adultery and Sexual Assaults were reported (PalauGov.pw, n.d.).

[1] Refer to Appendix B for definitions of legal terms and laws with reference to ROP used in this section

Following the Penal Code, a Sex Offender Registry must be maintained in the Office of the Attorney General for following reasons:

1. To ensure all sex offenders within the Republic are registered with the Office
2. To keep track on activities of the Sex Offender within the Republic
3. To provide the public with access to information that can help protect themselves and their close ones from sex offenders in the country, provided they do not use the information to harm anyone.

Until mid June 2023, only 44 sex offenders had registered with the Office, while others were either negligent or unaware of such a legal requirement. And so, in the past few years, AG and her Office have been working on setting up the Sex Offender Registry.

## Outcomes

### Activities & Outputs[2]

I utilized the first three weeks of the Project duration for research, initial interviews with stakeholders and finalizing solutions. To understand the project requirements and nature of the project, I familiarized myself with legal terminology and studied the Palau Penal Code chapters titled "Sexual Offenses" and "Registration of Sex Offenders and Other Covered Offenders and Public Access to Registration Information". Then, I met with the key stakeholders, which include the AG, admin Ms. Toribiong, and Mr. Sbal. Meeting with them a few times, one on one and as a group, helped me to understand their requirements and expectations for the project. Ms. Toribiong, who will be the admin in Office maintaining the Sex Offender Registry, took me through the existing legal procedures for Sex Offenses, provided me with required documents for the project, and reviewed existing registry websites with me to identify what features in them were or were not of interest for the Office's registry. While researching Sex Offender Registries of other countries I focused on the US, other neighboring Pacific islands, and a few additional countries with whom the Republic maintains political relations. Mr. Sbal helped me understand existing technology management scenarios, ensure the legal feasibility of the final solution for the project and find what possible technical aspects must be kept in mind to propose solutions that would be best for the Office. The Attorney General and her assistants helped me understand the nature and proceedings of criminal cases in Palau with more focus on the Sexual Offenses.

This was not the first time an effort was made for developing a Sex Offender Registry for ROP. On OAG-IS, a separate database for records of Sex Offenses in the Republic was made. A few years before Ms. Toribiong had joined the Office, Mr. Sbal worked on publishing online the details of the Sex Offenders from this database. However, he had to take it down later as the Penal Code mentions the public could access the records at the Office only. The OAG-IS provides benefits such as cloud storage, data security and ease of data entry. However, the Office admins never returned to this database after 2021. Their main reasoning for why they did not want to use this database was that they were not familiar with the new database and it did not offer them useful features such as search and filter. For them, using Microsoft Access was much easier as it provides search, filter, and many other features that this database did not offer.

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[2] Refer to Appendix B for more details on the process.

The initial interviews and research helped finalize the project requirements of the Office for the Sex Offender Registry and they were that the Registry:

- Should assist Office admin in tracking activities of Sex Offenders in the country.
- Should visualize the information in forms of charts, graphs or tables.
- Should provide AG with read-only access to the database remotely in addition to her access at the Office.
- Should allow access to the Registry for individuals of the public at the Office.

The factors to be considered for finding possible solutions to offer were:

- <u>Low or no code</u>: There are not many programmers in Palau, however, IT support is available for hardware and basic software support.
- <u>Cost efficiency</u>: There is no allotted budget for technology planning or management within MOJ.
- <u>Time efficiency</u>: Only one administrative staff of the Office will be maintaining the system, while also fulfilling other responsibilities. And so, it would be helpful for the staff to have a system that would cost them less time.
- <u>Data security</u>: An important concern expressed by the Office for the solution was security. Considering the event of malware attacks in other offices within the country in the past, the Office stressed on the need for a secure system.

To find the functionalities required for the system, I employed the MOSCOW prioritization technique (refer to appendix A for the MOSCOW table). Based on the results of the MOSCOW technique, I found three solutions to offer, which were Google Sheets, an improvised version of OAG-IS, and Airtable. To select a final solution, I used a decision matrix comparing cost, time, risk and maintenance aspects of all solutions. A solution whose features best matched with the requirements of ROP's Sex Offender Registry, was the cloud based no-code platform Airtable. Airtable will provide the admin the ability to perform the following activities in the Sex Offender Registry:

- Create, Read, Update and Delete (CRUD) records.
- Create different views of the records (for example, case trends in the past five years).
- Create interfaces that will visualize data to provide individuals from the public read-only access to public information of the sex offenders as defined by the law.
- Backup the records as per requirement.

Considering the stakeholders requirements and feasibility of the solution, two types of accesses are provided for the developed Sex Offender Registry and they are:

1. <u>Admin</u>: Can perform all CRUD operations on the entire database and can manage the interface of the system that will be made visible to the public.

2. <u>Guest</u>: Can view the interface of the database which will only display public information as stated in the Penal Code.

After finalizing Airtable for the solution, the remaining weeks were spent on learning Airtable, creating a sample Airtable base and interface, user testing, training the admin and handing over the samples developed.

### *Outcomes & Indicators*

Similar to the goal for the previous task, considering the sensitivity of the registry's content, it was decided that I would only develop a sample structure for the Sex Offender Registry and train Ms. Toribiong on the same. After the project period ends, I would hand over the sample Airtable to Ms. Toribiong along with a user manual and other documents that will be required for maintaining the system in the future. These documents would help to populate the system with information of sex offenses, and the involved offenders and victims. This plan was followed, and Ms. Toribiong was trained on how to use Airtable, and provided with a user manual and source documentation to maintain the system in the future.

Until mid June 2023, only 44 Sex Offenders had registered with the Office. To start working on the Sex Offender Registry, the Office will first notify unregistered Sex Offenders about registration requirements. As the registration of Sex Offenders progresses, the collected details will be filled into the Airtable. The current practice of recording Sex Offenses is adding details of Sex Offenses along with other criminal cases into the criminal records Microsoft Access database. This data entry practice often led to human errors such as deletion of data while editing or searching, or missing data because multiple admins were handling the records. This way it often became difficult to find who edited which record or what exactly the error is in the first place. Through Airtable, the admin will not only be able to keep track of activities of Sex Offenders but also of users using Airtable base. This way, the admin can always look back to check for human errors in data maintenance and make necessary amendments. With this new system on Airtable that is dedicated to maintaining details of Sex Offenders, the Office will be able to easily track the activities of the Sex Offenders in the country.

Through the development of a Sex Offender Registry the major goal is to abide by the Penal Code and keep track of the activities of Sex Offenders in the Republic. Public demand for the Sex Offender Registry has increased. There is also an increase in the instances of Sex Offenders within the country and those deported into the country committing multiple similar offenses after they are released into the public. If there is enough information on activities of Sex Offenders within the country, it is easier to take legal measures to reduce repetition of sex offenses and also protect the Sex Offenders from being harmed by the public. This tracking of activities of Sex Offenders is possible through the maintenance of the Registry. The Penal Code requires the Sex Offenders to report with the Office every year within 30 days of their birthday. This way, the public information of the Sex Offenders such as their recent photograph, current address, contact information, vehicles used, current employment, and more will be updated on a yearly basis. The Office will be able to keep track of yearly reporting. In addition to law enforcement, the registry will also help the public keep an eye on similar offenses or offenders around them by checking for any such information at OAG, provided they do not intend to harm anyone on the registry.

### *Outcomes that were not achieved*
Taking into account the occurrence of a few unexpected events and the short period for the Project, there are a few goals that were proposed for the Project but could not be achieved. A few unexpected events that occurred during the project duration were the consultant facing health issues during the program duration, stakeholders being off island for other work, and four working days of internet outage caused by the repair of the underSea internet cable that was damaged by a typhoon in the nearby area. The unachieved goals were:

- Creating automations to notify the admin of yearly reporting dates of Sex Offenders.
- Completion of training of admin and IT support personnel.

## Recommendations

In order to ensure data security, it is recommended to practice the following:

- Use only the PC setups within the Office to access the database.
- In case of remote use, do not use unsecure open WiFi networks to access the internet while accessing Airtable.
- Logout immediately after using the database.
- Maintain unique, strong passwords for the accounts.
- Only the admin must maintain credentials of all Airtable users (Admin, AG, and public accounts).
- Change passwords of all accounts on a yearly basis.
- Do not store passwords on shared devices or unsecure devices.

The Sex Offender Registry developed on Airtable would be much easier to maintain if Google Sheets were integrated with it. This way, instead of manually creating records on both Google Sheets and Airtable, creation of new records in Airtable could be automatic, and to start records the basic information from Sheets could be used. The following are a few benefits of this integration:

1. Google Sheets could be integrated with Airtable to ensure that all individuals who have received the registration notice have registered with the Office. This can be done by creating an automation in Airtable that would create a new record for sex offenses everytime the status of a record in the Google Sheets changes to 'Registered'.
2. Airtable automations can be used to create reminders for yearly reporting dates for all registered Sex offenders.
3. Airtable automations can be used to create notifications to fill in incomplete fields for new records that have been created from records that have 'Registered' status on Google Sheets.

These recommendations might take some time to implement, but they can be helpful in making tasks related to recording Sex Offenses and related data time-efficient with ease of maintenance for future use.

# III. Develop an Automatic Sex Offender Registration Notice generation system

## Motivation

There are only a very few Sex Offenders (44 offenders), from the existing Sex Offenders in the Republic, that had registered with the Office in the past. According to Ms. Toribiong, most of the Sex Offenders who are not registered yet are either unaware of the registration requirement or ignorant of the law. The initial step to getting a Sex Offender Registry populated in Palau, is to get all existing Sex Offenders to register with the Office. According to AG and Ms. Toribiong, the Office admins are already busy with multiple administrative tasks. The task of finding unregistered Sex Offenders and preparing individual registration notices for all of them is a time consuming task. The Office hopes to turn this time-consuming task into an easy and possibly automated process.

And so, a system or service that can automatically generate Registration Notice for Sex Offenders would be really helpful for the Office. In this way the Office would save time and effort.

## Outcomes

### *Activities & Outputs[3]*

For this task, initially I worked on understanding the Office's formalities and procedures with regards to notifying an individual about Sex Offender Registration with the Office. Ms.Toribiong walked me through the procedures and provided me with a template for the Notice. The functionalities and requirements for a Sex Offender Registration Notice generating system were that it:

- Should assist Office admin in collecting information of Sex Offenders to be notified about the requirement to register with the Office.
- Should keep track of the receiver's response and the Office's actions taken accordingly.
- Should be accessible only to the Office admin dealing with Sex Offender Registration process.

The factors to be considered for finding possible solutions were similar to those for developing the Sex Offender Registry. They were:

- Low or no code
- Cost efficiency
- Time efficiency
- Data security

Considering the time available for doing this task, along with the major task of developing the Sex Offender Registry, an appropriate solution was developing a system that is both easy to build and maintain. The best solution to offer considering factors like cost, time, sustainability, and feasibility turned out to be Google workspace services such as Google Sheets, Google Docs and Google Drive. Using these services, a final solution of a semi-automatic notice generating spreadsheet was developed. Below is a brief description of how services from Google were used for the system:

- A Google Doc file with a Sex Offender Registration Notice template.
- A Google Sheets spreadsheet to store basic information of recipients and generated documents.
- On the Google Sheets spreadsheet, a Google Apps Script was integrated which is a scripting platform developed by Google for light-weight application development. This helped automate the system for generating the Registration Notice.
- A Google Drive to store the template document, spreadsheet and newly created personalized notice documents.

The major activities for this task were learning how to create scripts on Google Apps Script and automating the Google Sheets spreadsheet. It was fairly easy to learn Google Apps Script as it is a scripting language similar to JavaScript. Keeping in mind the lack of programmers available for the system's maintenance in the country, the Office was provided with source documentation which consists of codes used in the Google Apps Script for future reference and backup.

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[3] Refer to Appendix B for more details on the process.

As mentioned earlier, Ms. Toribiong's newly created spreadsheet with details of all Sex Offenders has already served as a starting point for the project. Compared to the earlier process of finding sex offenders in the country, it would now be easier for the admin to find details of unregistered individuals in this existing Excel spreadsheet. However, if the Office admin was to start creating Sex Offender Registration notices from scratch, it would take them a few days to create individual notices with care given for proper data entry. With the newly developed semi-automatic system the Office admin can save more time to create these personalized notices. In order to create new Sex Offender registration notices the following steps are to be followed:

- Open the Google Sheets.
- Enter basic information about the receiver(s) and associated Sexual Offense case file into a new empty row.
- Select the row(s) for which the notice has to be generated.
- Click on the function 'Build new notice' from the toolbar.

For each selected row, this action would perform the following steps:

- Create an individual Google Doc copy of Sex Offender Registration Notice template in the Google Drive folder that is accessible only by the admin.
- Assign addressee name and document number to document name.
- Fill in basic information of the addressee and the associated sexual offense into the document.
- Fill in the selected row in the Google Sheets spreadsheet with associated document number, document creation date, and URL to the created Sex Offender Registration notice.
- Update the document number to be used for the next document in the system.

And this way multiple Sex Offender Registration Notices can be generated at the same time.


### *Outcomes & Indicators*

Similar to the task of developing the Sex Offender Registry, the goal for this task was also to to create only a sample structure rather than use of a system with real data. And so, I created a Google Sheets template that could be used to generate multiple notices at the same time, and tested it with Ms. Toribiong and Mr. Sbal.

To compare the indicators of improvement of the Notice generation process, there is no clear knowledge of past practice of notifying the Sex Offenders about registering with the Office. Ms. Toribiong, who joined the Office in 2019, understands that the offenders were either unaware of or carelessly ignored the legal requirement to register with the Office as a sex offender. And for this reason she considers the possibility of them not having received a notification with clear mention of the consequences of disobeying the legal requirement. The final conclusion I reached regarding the past notification procedure is that individuals who had to register as sex offenders with the Office were made aware of the registration requirement. However, this might have been verbally by their legal advisor after they have finished serving their sentence. With this new system that would generate notices for all sex offenders to be registered, the Office would be able to:

- ensure that the document is generated in time.
- ensure the document is received by the Sex Offender

- see if the sex offender has registered within the 30 days] period they were given for registering with the Office after they have been notified. If they have not registered within the 30 day period, that will also be noted on the system, and they will have to go through other legal procedures which may include additional legal charges.

And this way, the system helps in law enforcement with regards to registration of Sex Offenders with the Office. The developed documents would help to populate the system with information of sex offenses, and the involved offenders and victims. This plan was followed and Ms. Toribiong was trained on how to use Airtable, and provided with a user manual and source documentation to maintain the systems in future.

The developed system saves a lot of time for the Office admin managing the Sex Offender Registry. After the end of the project, I handed over the Google Sheets template, and the Google Drive folder that would serve as a collective storage for the templates and newly generated documents to the Office.

### *Outcomes that were not achieved*

As mentioned in the earlier task, due to the occurrence of a few unexpected events and the short period for the Project, a few goals for this task was also left unachieved. The unachieved tasks were:

- Automating the whole spreadsheet
- Integrating with Airtable database
- Creating functions to generate other necessary notice/letters such as notifying police, yearly reporting reminder notice for covered offenders, etc.

## Recommendations

In order to ensure the data security, it is recommended that admin ensure safe usage of the Google Workspace. The following practices need to be kept in mind:

- Use only the PC setups within the Office to access the Google account
- In case of remote use, do not use unsecure open WiFi networks to access the internet while accessing Airtable
- Logout immediately after use
- Maintain unique, strong passwords for the Google account
- Only the admin must maintain credentials of all Airtable users (Admin, AG, public)
- Change passwords of all accounts on a yearly basis
- Do not store passwords on shared devices or unsecure devices

# IV. Additional Recommendations (if any)

## Airtable as a single solution for all the tasks

It would be really helpful for the Office admin, who is managing the Sex Offender Registry, if they could use a single platform to track activities of the Sex Offenders and generate the Sex Offender Registration Notice. I would recommend looking at possibilities of integrating all these operations

into Airtable. As mentioned earlier, the Office's administrative staff do not have a lot of time in hand to dedicate solely towards managing the Sex Offender Registry.

In order to integrate these systems, it would be useful to understand the structure of both systems and go through Airtable's documentation. The current structures of both the systems are very basic.

## About the Consultant

Anupama Anilkumar is a rising senior in Information Systems with a minor in Global systems and Management at Carnegie Mellon University. She will be taking part in the Technology Consulting in the Global Community internship over the summer and return in the fall to complete her senior year.

# V. Appendix A
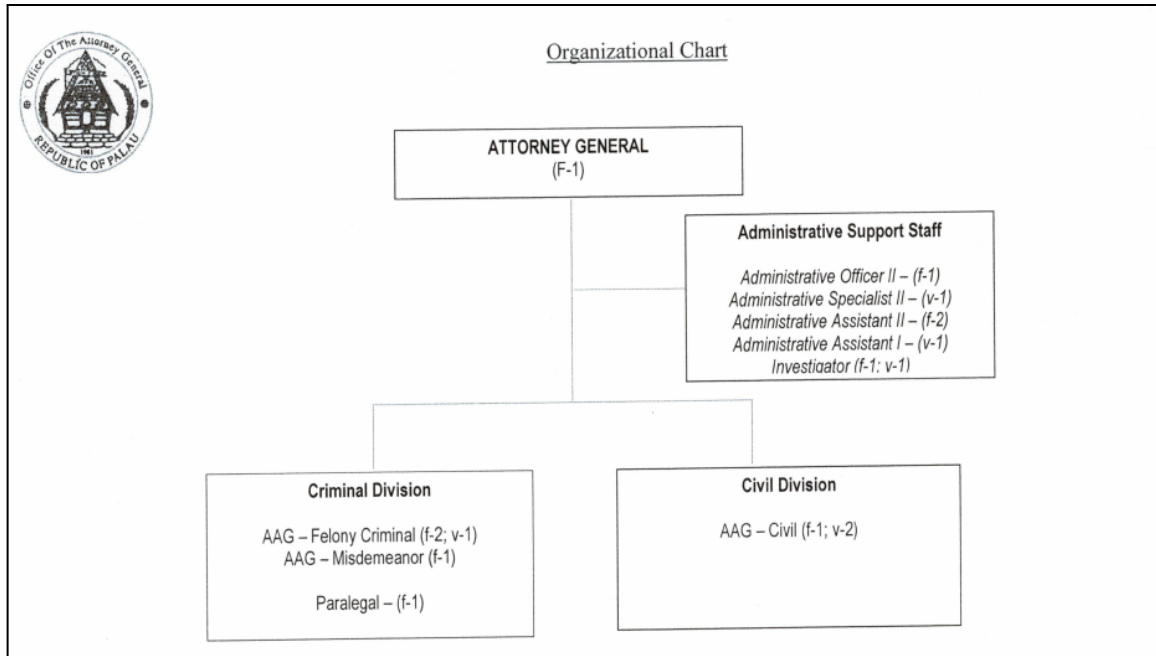


Fig 1. The Organizational Chart of the Republic of Palau's Office of Attorney General.
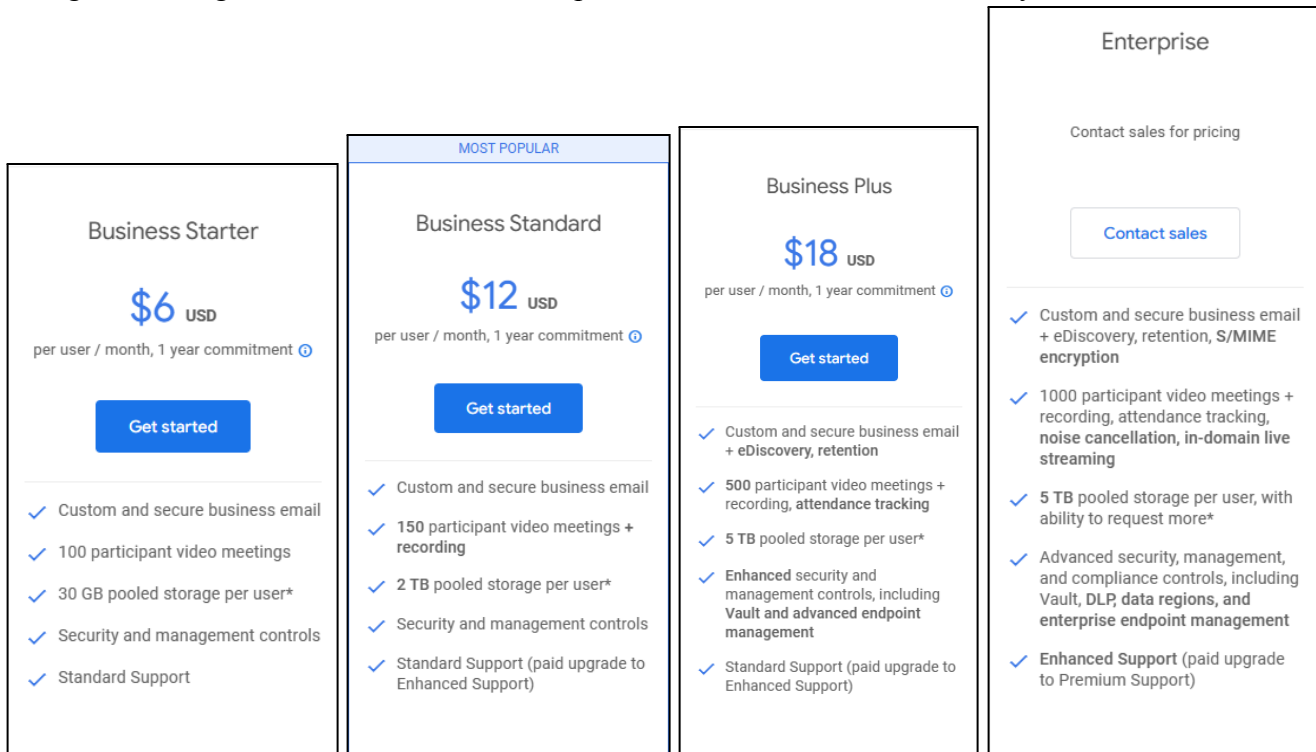


Fig 2. Google Workspace Pricing

Fig 3. Airtable pricing packages

## Crime and Offenses

Information on crimes and offences committed has been provided by the Bureau of Public Safety, Ministry of Justice. These statistics highlight the changing patterns of criminal activity detected over the past five years.

Crime Statistics by Category: 2012 to 2019

| Type of Crimes | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | | | 2018 | | | 2019 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | Total | Total | Total | Total | Total | Male | Female | Total | Male | Female | Total | Male | Female |
| **TOTAL** | 1,235 | 1,558 | 1,284 | 1,222 | 2,787 | 3,524 | 2,970 | 554 | 3,053 | 2,924 | 129 | 2,058 | 1,996 | 62 |
| FELONY CRIMES 1/ | 473 | 79 | 371 | 187 | 454 | 104 | 89 | 15 | 66 | 52 | 14 | 30 | 29 | 1 |
| *Adultery and Sexual Assaults* | 1 | - | 7 | 10 | 11 | 14 | 14 | - | 13 | 6 | 7 | 8 | 8 | - |
| Rape & Attempted rape | 1 | - | 1 | 1 | 2 | 1 | 1 | - | 3 | - | 3 | - | - | - |
| Sexual abuse & assaults | - | - | 6 | 9 | 9 | 13 | 13 | - | 7 | 3 | 4 | 8 | 8 | - |
| *Child Abuse* | - | - | 3 | - | 1 | - | - | - | 3 | 3 | - | - | - | - |

Fig 4. An excerpt from ROP's crime statistics 2012-2019

| Countries that have laws governing sex offender registration systems at the national and/or provincial level | Countries that have considered or are considering sex offender registration and notification laws |
|---|---|
| Argentina<br>Australia<br>Bahamas<br>Canada<br>Chile<br>Cyprus<br>France<br>Germany<br>India<br>Republic of Ireland<br>Jamaica<br>Kenya<br>Maldives<br>Malta<br>New Zealand<br>Nigeria<br>Portugal<br>South Africa<br>South Korea<br>Spain<br>Taiwan<br>Trinidad & Tobago<br>United Kingdom and Commonwealth Nations (Bermuda, Gibraltar, Guernsey, Isle of Man, Jersey, and the Pitcairn Islands)<br>United States | Austria<br>Barbados<br>Belgium<br>Belize<br>Cayman Islands<br>Fiji, Finland<br>Hong Kong<br>Israel<br>Malaysia<br>Poland<br>Samoa<br>St. Lucia<br>Switzerland<br>United Arab Emirates<br>Zimbabwe |

Table 1. List of countries currently maintaining or considering maintenance of a sex offender registry in near future (as of 2016)

MOSCOW analysis: **must**-have, **should**-have, **could**-have, and **won't**-have, or will not have right now.

| Features to consider for ROP Sex Offender Registry | MOSCOW analysis |
|---|---|
| Database of sex offense cases and details alongwith gender and age of victim (for statistical purpose) | Must Have |
| Database with details of sex offenders | Must Have |
| Database of offenses against minors cases and details alongwith gender and age of victim (for statistical purpose) | Must Have |

| | |
|---|---|
| Database with details of offenders against minors | Must Have |
| Timely alerts for generating notice and reports for each offender or case | Must Have |
| Generating notices and reports for offenders | Could Have |
| Search feature to find sex offenders and offenders against minors currently living in the country | Should Have |
| Table with state wise sex offenders and offenders against minors | Must have |
| Map showing presence of sex offenders in the country | Won't have |

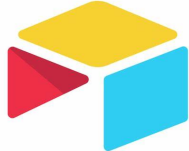Table 2. MOSCOW analysis for features to consider for ROP Sex Offender Registry

| Google Sheets | Attorney General Information System | Airtable |
|---|---|---|
|  | REPUBLIC OF PALAU ATTORNEY GENERAL INFORMATION SYSTEM |  |
| - Google workspace plug-in<br>- All CRUD operations, import and export features available for database<br>- Can create an interactive UI for analytics view<br>- Can be shared with any google account<br>- Accessibility can be specified for different types of users (accessible sheets and role: editor, viewer, commenter)<br>- Pricing plans in appendix | - Developed and maintained by a Taiwanese company<br>- If any additional features which OAG does not find here will need to be requested to the Taiwanese company to be added<br>- Mr. Blekuu is the point of contact for ROP<br>- All CRUD operations are available but import and export features are not available<br>- Interactive UI for data analytics needs to be developed separately<br>- Accessibility can be specified for different types of users<br>- With many change requests price charged will be higher | - No-code RDBMS system<br>- All CRUD operations, import and export features available for database<br>- Can create an interactive UI for analytics view<br>- Can be shared with any email account<br>- Accessibility can be specified for different types of users<br>- Pricing plans in appendix |

Table 3. Solution options for developing a secure system for Sex Offender Registry

| Alternatives for ROP's Sex Offender Registry | Cost | Time | Risk | Maintenance |
|---|---|---|---|---|
| **Google Sheets** | Medium - Plans affordable for OAG are available | Medium - Time might be needed for learning creation of UI for the sheets | Medium - security depends on use of personal email or purchase of new google workspace | Medium - UI developed on sheets might need manual timely upgrades |
| **Attorney General Information System** | High - Might need many changes to be made which might be charged | Medium - Depends on response from the Taiwanese company | Medium - Managed by the Taiwanese company | Medium - Depends on if Mr. Blekuu or the Taiwanese company is available |
| **Airtable** | Low - Starts with: - Free package - Plus package: $10 per seat / month | Low - Easy to learn and develop the database and UI | Low - Data is secured on cloud | Low - Updates are automatic and help feature can be used if needed |

Table 4. Decision Matrix for choosing system to develop ROP's Sex Offender Registry

Airtable was chosen because it offered the following:

- Low cost: Can start with the free package that offers many features. Is an affordable solution for the office, considering lack of funds for technological planning and management along with the shortage of staff.
- Time efficient: Easy to learn and develop the database and UI. Can be built in the time available for this project
- Low risk: Data is secured on cloud storage. Be used to export data as needed.
- Easy maintenance: Updates are automatic and do not disturb content, online help is available 24/7. Visualize data and help in providing analytical reports. Be used for performing all database operations and offer enough cloud storage for the same (taking into consideration there are not many offenses or offenders in the country).

# VI. Appendix B

Definitions of legal terms used:

Excerpts from

<div align="center">

17 PNCA § 1701   PENAL CODE

§ 1701.  Definitions.

</div>

(f)  "Crime against minors" excludes "sexual offenses" as defined in this section and means a criminal offense that consists of:

(1)  Kidnapping of a minor, by someone other than a parent;

(2)  Unlawful imprisonment in the first or second degree that involves the unlawful imprisonment of a minor by someone other than a parent;

(3)  An act, as described in 17 PNC Division 2 of this Penal Code, that is an attempt, criminal solicitation, or criminal conspiracy to commit one of the offenses designated in paragraph (1) or (2); or

(4)  A criminal offense that is comparable to or which exceeds one of the offenses designated in paragraphs (1) through (3), if the criminal offense was committed in another jurisdiction.

(g)  "Mental abnormality" means a condition involving a disposition to commit criminal sexual offenses with a frequency that makes the person a menace to others.

(h)  "Offender against minors" means a person who is not a "sex offender", as defined in this section, and is or has been:

(1)  Convicted at any time of a "crime against minors" as defined in this section; or

(2)  Charged at any time with a "crime against minors" as defined in this section and who is found unfit to proceed and is released into the community or who is acquitted due to a physical or mental disease, disorder, or defect pursuant to Chapter 5 of this Penal Code and is released into the community.

(i)  "Parent" means a parent, legal guardian, or a person who has a substantial familial or relationship based on custom, with the minor.

(j)  "Personality disorder" shall have the same meaning as the term is used in the Diagnostic and Statistical Manual of Mental Health Disorders: DSM-IV, American Psychiatric Association, Diagnostic and Statistical Manual of Mental Disorders (4th ed. 1994).

(k)  "Predatory" means an act directed at:

(1)  A stranger; or

(2)  A person with whom a relationship has been established or promoted for the primary purpose of victimization.

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(o)  "**Sex offender**" means:

(1)  A person who is or has been convicted at any time of a "sexual offense"; or

(2)  A person who is or has been charged at any time with a "sexual offense" and is or has been found unfit to proceed and is or has been released into the community or who is acquitted due to a physical or mental disease, disorder, or defect pursuant to 17 PNC Chapter 5 of this Penal Code and is released into the community.

(p)  "**Sexual offense**" means an offense that is:

(1)  Set forth in 17 PNC chapter 16, 17 PNC sections 4803(a)(1), 4803(a)(2), 4804(a), or 21 PNC sections 602 and 608, but excludes conduct that is criminal only because of the age of the victim, as provided in 17 PNC chapter 16 if the perpetrator is under eighteen years of age;

(2)  An act defined in 17 PNC section 1501 if the charging document for the offense for which there has been a conviction alleged intent to subject the victim to a sexual offense;

(3)  An act that consists of:

(A)  Criminal sexual conduct toward a minor, including but not limited to an offense set forth in 17 PNC section 1808;

(B)  Solicitation of a minor who is less than eighteen years old to engage in sexual conduct;

(C)  Use of a minor in a sexual performance;

(D)  Production, distribution, or possession of child pornography chargeable as a felony under 17 PNC section 1802, 1803, or 1804;

(E)  Electronic enticement of a child chargeable under 17 PNC section 1806 if the offense was committed with the intent to promote or facilitate the commission of another covered offense as defined in this section; or

(F)  Solicitation of a minor to practice prostitution;

(4)  Convicted at any time of a violation of privacy under 17 PNC section 4413; or charged at any time with a violation of privacy under 17 PNC section 4413, who is currently or was previously found unfit to proceed against the charges, and is currently or was previously released into the community or who is currently or was previously acquitted due to a physical or mental disease, disorder, or defect pursuant to 17 PNC Chapter 5 of this Penal Code, and is currently or was previously released into the community;

(5)  A criminal offense that is comparable to or that exceeds a sexual offense as defined in paragraphs (1) through (4) if the criminal offense was committed in another jurisdiction; or

(6)  An act, as described in 17 PNC Division 2 of this Penal Code, that is an attempt, criminal solicitation, or criminal conspiracy to commit one of the offenses designated in paragraphs (1) through (5).

(7)  Or any predecessor offenses of the above.

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§ 1702.  Registration requirements:
(c)  Each provision of this chapter applicable to sex offenders shall also be applicable to offenders against minors, unless offenders against minors are specifically excluded.  Whenever a covered offender's public information is made publicly accessible, separate registries shall be maintained for:
(1)  Sex offenders; and
(2)  Offenders against minors.

§1703. Access to registration information:

(c)  To facilitate community notification, after a covered offender registers or updates a registration, the Attorney General may provide public information in the registry about that offender to any organization, company, or individual who requests such notification pursuant to procedures established by the Attorney General through rules adopted pursuant to 6 PNC Chapter 1, the Administrative Procedure Act.

(f)  Public access authorized by this section shall be provided by both public internet access and on-site public access; provided that on-site public access shall be provided for each covered offender at the office of the Attorney General and at one or more designated police stations in the Republic of Palau, to be designated by the Attorney General through rules adopted pursuant to 6 PNC Chapter 1, the Administrative Procedure Act, between the hours of 8:00 A.M. and 4:30 P.M. on weekdays, excluding holidays.

(i)  The following message shall be posted at both the site of internet access and on-site public access locations:

"Information regarding covered offenders is permitted pursuant 17 PNC sections 1701 to 1710. Public access to this information is based solely on the fact of each offender's criminal conviction and is not based on an estimate of the offender's level of dangerousness.  By allowing public access to this information, the Republic of Palau makes no representation as to whether the covered offenders listed are dangerous.  Any person who uses the information in this registry to injure, harass, or commit a criminal act against any person included in the registry may be subject to criminal prosecution, civil liability, or both."

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## RULES OF CRIMINAL PROCEDURE FOR THE COURTS OF THE REPUBLIC OF PALAU

### II. PRELIMINARY PROCEEDINGS
**RULE 3. COMPLAINT OR CITATION.**
(b) **Citation**. A citation is a written order to appear before a court at a time and place named therein to
answer a criminal charge briefly described in the citation. It shall contain a warning that failure to obey
it will render the accused liable to have a complaint filed against him upon which a warrant of arrest may
be issued.

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