WHAT IS KOBOTOOL BOX?
5th June 2025

KOBOTOOLBOX APPLICATION FOR WASTE DISPOSAL SITES RECORDING PURPOSES

1. OBJECTIVES:

- Use of the Kobotoolbox Application to digitize waste disposal sites incoming waste information.

- How to setup up your Waste Disposal Site Recording System.

- How to extract the data and information for management and planning purposes.

- What you need to set up and run your system.

- Other Data Collection purposes.

1.1.What is Kobotoolbox.

An open-source online platform:

- Was developed by the Harvard Humanitarian Initiative.
- Designed for collecting, managing, analyzing, and visualizing data in the field.
- Allows users to gather data offline or online using mobile devices and web browsers.
- popular tool for humanitarian, development, and environmental research projects.

1.2. Key Functions:

- It creates digital forms for data collection.

- Collect data on mobile devices even without internet connection.

- Review data in real-time, and generate reports and visualizations for rapid decision-making purposes.

1.3. Key features:

•Offline data collection capability

•Customizable forms with various data types (text, numbers, dates, locations, photos, videos, audio, documents, etc.)

•Real-time data review and validation

•Data visualization tools including maps and charts

•Data export options in various formats like CSV, XLS, KML

2. COMMON METHODS OF WASTE RECORING IN PICS

MANUAL	ADVANTAGE	DISADVANTAGE
1. **Paper based system**	• Cheapest and easiest setup.	• Level of accuracy depends on the recorder`s judgment. • Time consuming to enter the data in a computer. • Information is usually not entered in many cases in PICs. • Information is usually lost
2. **Weighing Bridge**	• More accurate. • Does not rely on the operator`s judgment	• Expensive to setup. • Expensive to operate and maintain. • Cannot operate without a power
3. **Kobotoolbox**	• Easiest to use. • Can record many information • Information is accessible online. • The recorded data can be analysed within minutes	• Level of accuracy depends on the operator`s judgment.

Both Kobotoolbox and Weighing Bridge System promotes Digitizing Data and information.

Collecting, managing and storing records in electronic formats. It involves creating, organizing, and preserving records throughout their lifecycle.

Why use digital record keeping?

•**Efficiency**: Digital record keeping can make it easier to organize, access, and preserve information.

•**Collaboration**: Digital record keeping can make it easier for people to work together on projects.

•**Reduced paper use**: Digital record keeping can reduce the need for paper

ACCURACY

COST

High

High

Low

Low

DIGITAL RECORDING
Using Weighing Bridge with Computer Software

DIGITAL RECORDING
Using Kobotoolbox & other applications
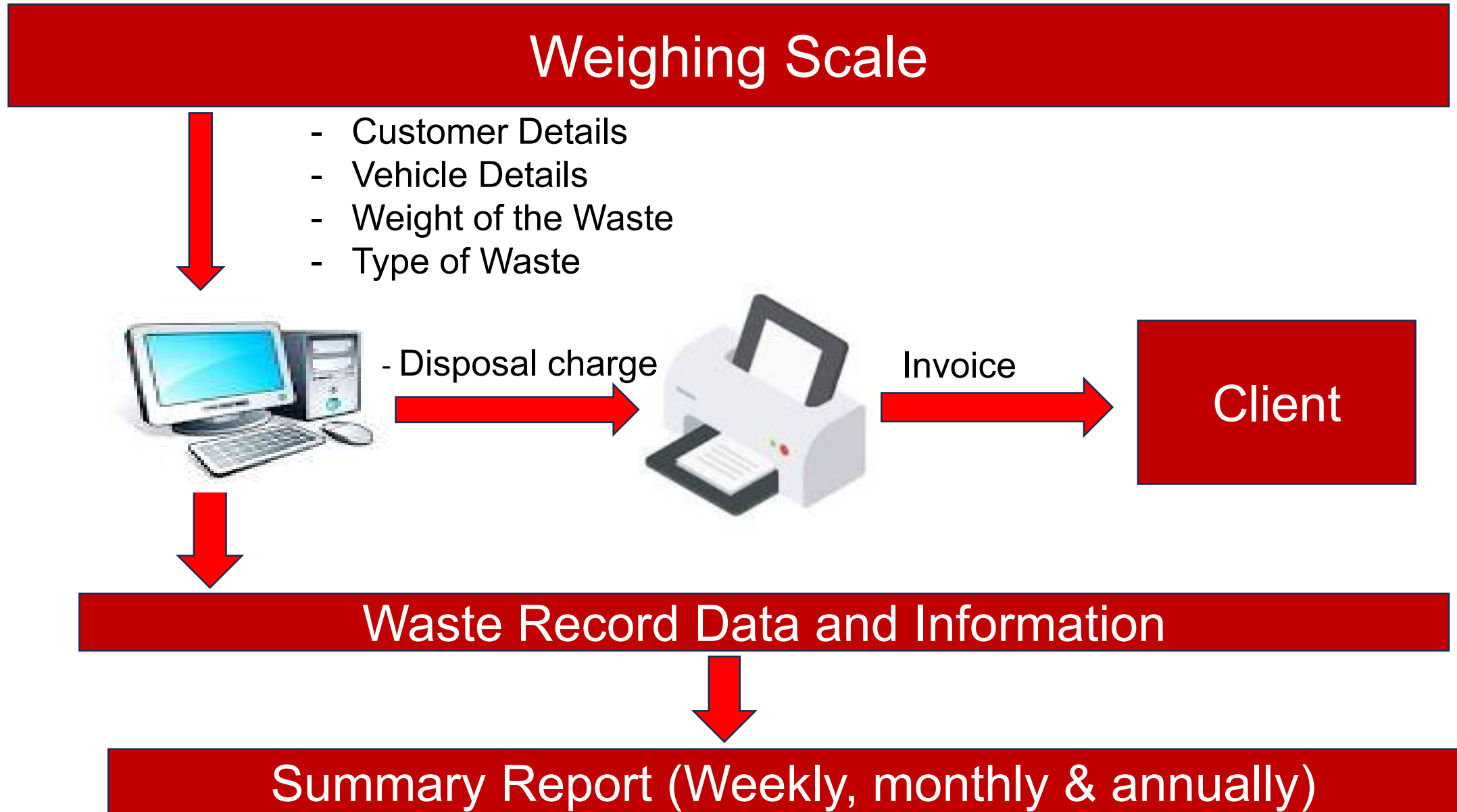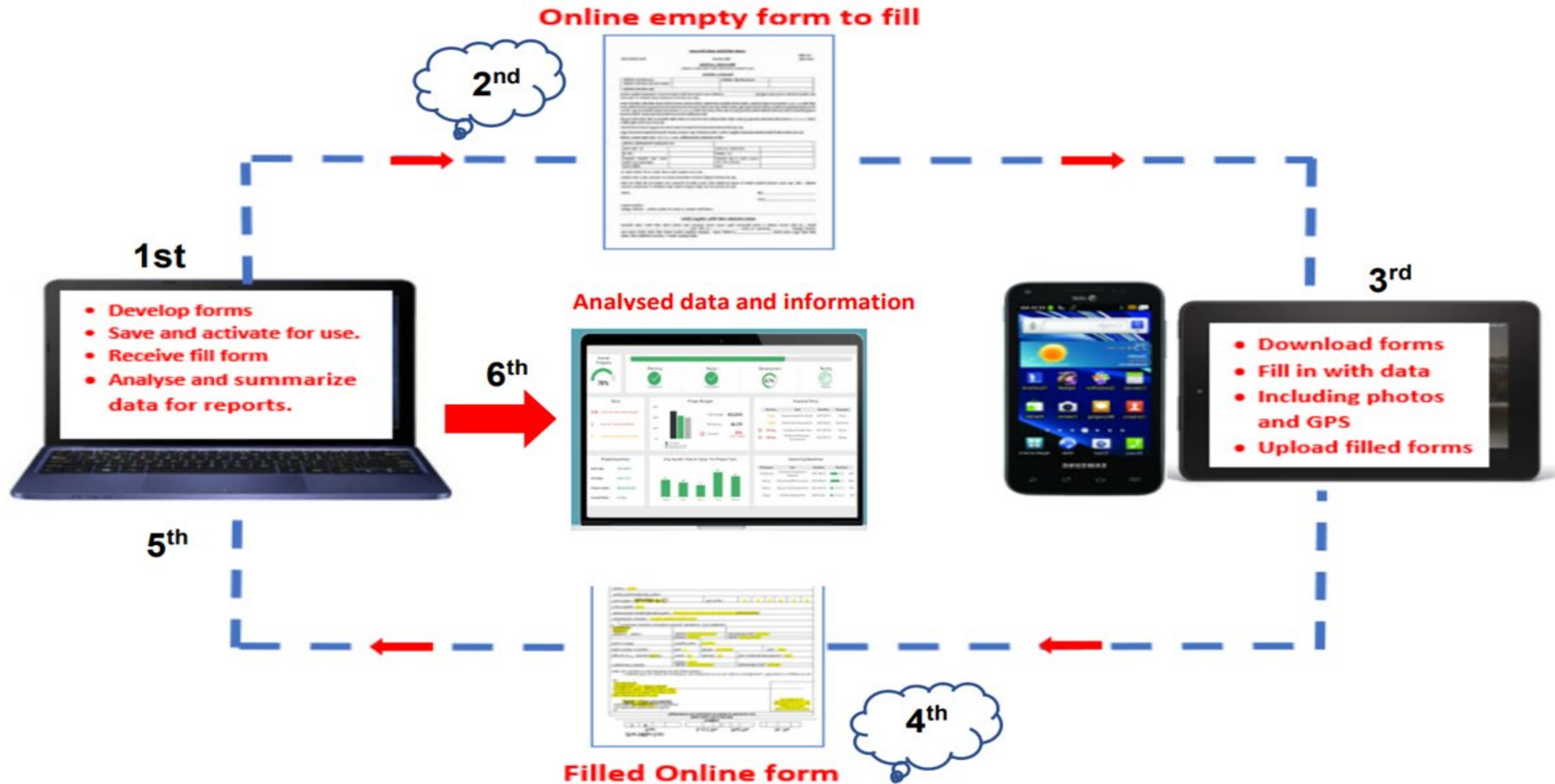
MANUAL RECORDING
Using Paper formats

Electronic Weighing Bridge System

Weighing Scale

- Customer Details
- Vehicle Details
- Weight of the Waste
- Type of Waste

- Disposal charge

Invoice

Client

Waste Record Data and Information

Summary Report (Weekly, monthly & annually)

Vunto Waste Landfill, Lautoka, FIJI

3.   KOBOTOOLBOX SYSTEM.

Online empty form to fill

2nd

1st
- Develop forms
- Save and activate for use.
- Receive fill form
- Analyse and summarize data for reports.

6th

Analysed data and information

Download forms
- Fill in with data
- Including photos and GPS
- Upload filled forms

3rd

5th

4th

Filled Online form

1st YOUR COMPUTER – AS THE SERVER

A **server** is a **computer** that provides data to other computers and android devices like smartphone and tablets.

- Develops data collection forms, activate and make available for gathering data remotely using computer or android devices (smartphones and tablets).
- Receives filled forms with data and information submitted from other computers, smartphones and tablets.
- Analyzes and summarizes the received data and information, which can be used for reporting and decision making purposes.

2nd CLOUD – INTERNET OR NETWORK

It is a technology that uses remote servers on the internet to:

- Store, manage, and access data online.
- The data can be anything such as files, images, documents, audio, video, more.

3rd SMARTPHONES, TABLETS AND COMPUTERS.

Computer and other android devices such as smartphones and tablets used to feedback the needed data and information (i.e. Documents, images, videos, audio, etc.).

- The Kobotool Collection Forms can collect all of the above – documents, images, videos, audio, etc.
- Download the Kobotool Form and fill with all these data.
- Upload and send the completed forms back to the server.

4th CLOUD – INTERNET OR NETWORK

Online storage of the filled forms with the collected data and information uploaded from the smartphones, tablets or computers in the field.

5th YOUR COMPUTER - SERVER

Receives the uploaded filled forms, analyzes the received data and information and can be extracted for reporting purposes.

6th ANALYSED AND SUMMARIZED DATA AND INFORMATION

Gathered information provides the basis of key reporting documents for organizations and government decision makings.

EXAMPLE OF A DEVELOPED SYSTEM FOR TONGA

Tapuhia Waste Landfill - Tongatapu Island

Eua Waste Disposal Site

Form

Data

KOBO SERVER – At WAL Headquarters in Tongatapu

Form

Data

Form

Data

Waste Disposal Site – Ha`apai Island

Waste Landfill, Vava`u Waste Landfill

Form

Data

Sharing forms or questionnaires for filling
Data Transfer to the main server at WAL
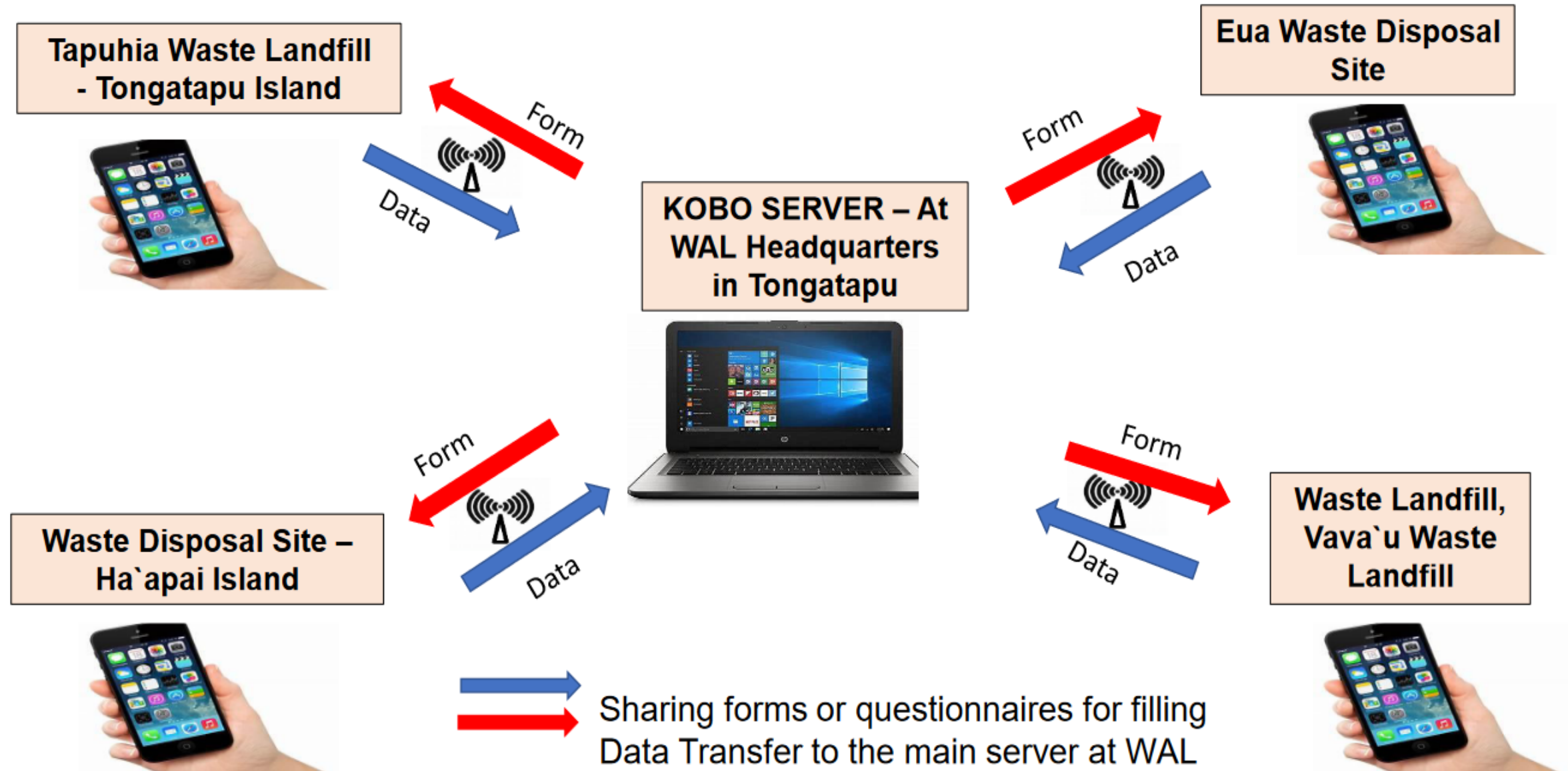
Central System for all the Waste Landfills in Tonga

NEW

Deployed 4
Draft 1
Archived 10

Deployed

Name	Shared by	Created	Last Modified	Submissions
TAPUHIA LANDFILL DATA - SEPTEMBER Waste collection form at the landfill		August 31, 2022	Yesterday at 5:01 PM	226
HA`APAI LANDFILL - SEPTEMBER Waste collection from at the landfill		August 31, 2022	August 31, 2022	20
VAVAU LANDFILL DATA - SEPTEMBER Kalaka Data Entry Form		August 31, 2022	August 31, 2022	97
EUA LANDFILL DATA - SEPTEMBER Waste collection from at the landfill		August 31, 2022	August 31, 2022	40

Draft

Name	Shared by	Created	Last Modified	Submissions
Clone of Tapuhia Entry Data (FOOMU MATAPA) Foomu Matapaa		March 18, 2022	March 18, 2022	0

Archived

Name	Shared by	Created	Last Modified	Submissions
TAPUHIA LANDFILL DATA - MARCH - JUNE Waste collection form at the landfill	sulieti_ofa2022	March 15, 2022	Today at 7:06 AM	3811
TAPUHIA LANDFILL DATA - AUGUST Waste collection form at the landfill		July 12, 2022	September 5, 2022	1260
EUA LANDFILL DATA - AUGUST Waste collection from at the landfill		July 2, 2022	August 31, 2022	95
VAVAU LANDFILL DATA - AUGUST Kalaka Data Entry Form		July 31, 2022	August 31, 2022	249

Record of incoming vehicles on a daily basis

Value	Frequency	Percentage
2022-03-26	24	0.63
2022-03-28	41	1.08
2022-03-29	46	1.21
2022-03-30	40	1.05
2022-03-31	40	1.05
2022-04-01	38	1
2022-04-02	11	0.29
2022-04-04	25	0.66
2022-04-05	31	0.81
2022-04-06	37	0.97
2022-04-07	52	1.36
2022-04-08	42	1.1

Vehicles arriving at specific time

Value	Frequency	Percentage
11:20:00.000+13:00	29	0.76
12:20:00.000+13:00	28	0.73
10:40:00.000+13:00	25	0.66
09:25:00.000+13:00	25	0.66
12:05:00.000+13:00	24	0.63
12:00:00.000+13:00	23	0.6
12:30:00.000+13:00	23	0.6
09:00:00.000+13:00	23	0.6
11:40:00.000+13:00	23	0.6
10:50:00.000+13:00	23	0.6
11:10:00.000+13:08	22	0.58
08:15:00.000+13:00	21	0.55
12:25:00.000+13:00	21	0.55

Locations of the Collected Waste

Value	Frequency	Percentage
Kolo	396	10.39
Folaha	217	5.7
Tofoa	205	5.38
Tongatapu 3	131	3.44
Tt6	124	3.25
Tt2	114	2.99
Vaini	106	2.78
Maufanga	82	2.15
Tt4	78	2.05
Tt3	59	1.55
Havelu	57	1.5
Fasi	57	1.5

Incoming Waste Generating Sources

Value	Frequency	Percentage
Waste Management	157	4.12
Household	87	2.28
Vaitohi	71	1.86
MEIDECC	27	0.71
Ministry of Health	11	0.29
Lisiate Raas	10	0.26
BIN-GO	9	0.24
Richard Rass	7	0.18
Rich Rass	7	0.18
Bin - Go	7	0.18
Tonga Airport Limited	6	0.16

Frequency by specific trucks and vehicles

J9420	232	6.09
L26911	195	5.12
J10295	190	4.99
J9978	178	4.67
J9434	172	4.51
J9864	167	4.38
J8320	164	4.3
J9474	159	4.17
J9224	152	3.99
J5383	114	2.99
J9732	90	2.36
J9303	54	1.42
J7767	51	1.34
J8306	42	1.1

Disposal Fee Estimate

Value	Frequency	Percentage
BW 2m3 - $40.00	33	3.06
MW 1m3 - $15.00	27	2.5
MW 2m3 - $20.00	27	2.5
MW 4m3 - $30.00	6	0.56
MW 3m3 - $25.00	4	0.37
BW 3m3 - $50.00	2	0.19
BW 4m3 - $60.00	1	0.09
MW 5m3 - $35.00	1	0.09

Date

TYPE: "DATE". 3008 out of 3010 respondents answered this question. (2 were without data.)
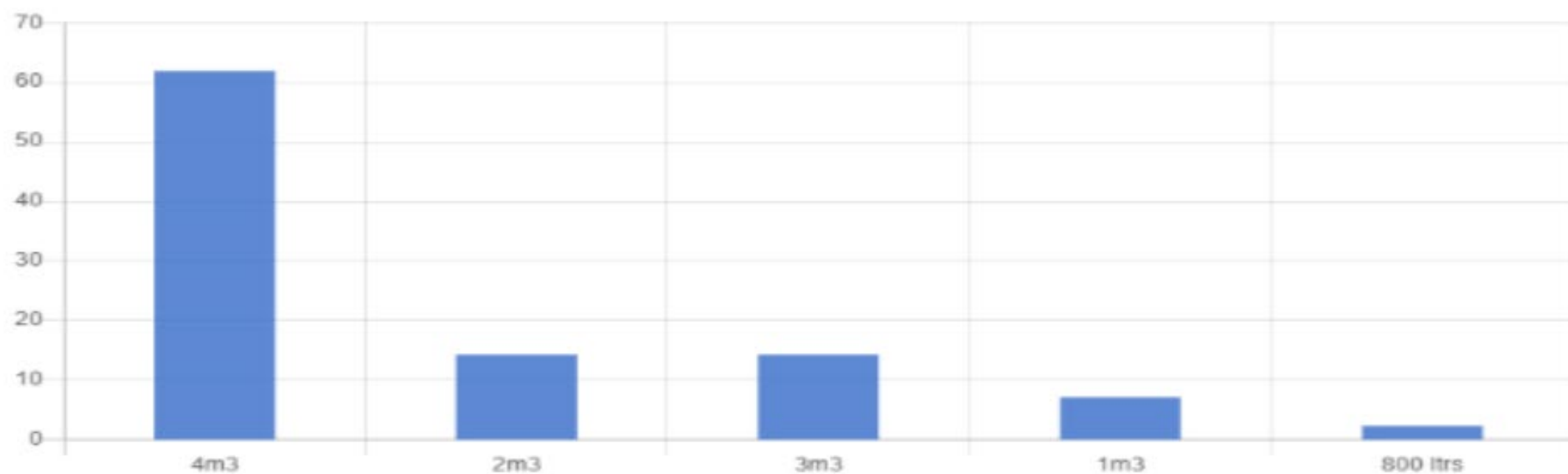
Volume of Waste

Value	Frequency	Percentage
4m3	26	61.9
2m3	6	14.29
3m3	6	14.29
1m3	3	7.14
800 ltrs	1	2.38

#	Date	Waste Origin	Incoming Trucks	Vehicle Type	Customer	Truck Registration	Volume of Waste	Volume	Photo	Type of Waste	Reference Form
1	Date	Waste Origin	Incoming Trucks	Vehicle Type	Customer	Truck Registration	Volume of Wast	Volume	Photo	Type of Waste	Reference Form
2	2022-07-01		WAL Services (Loli Veve WAL)	WAL Compactor Truck (Loli komipekitaa WAL)			1				1
3	2022-06-24	Kolomotu'a	WAL Services (Loli Veve WAL)	WAL Septic Truck (Loli pamu Sepitiki WAL)		J8650		4/4	https://kc.kobotoolbox.org/media/	Septic Waste (Veve Sepitiki)	2
4	2022-06-24	Fanga / Havelu	Others (Ikai koe Loli Veve ae WAL)		Vaitohi	L26911	3		https://kc.kobotoolbox.org/media/	Mix Waste (Veve Mix)	3
5	2022-06-24	Kolo	Others (Ikai koe Loli Veve ae WAL)		Lisiate Rass	J9732	4		https://kc.kobotoolbox.org/media/	Mix Waste (Veve Mix)	4
6	2022-06-24	Tofoa	WAL Services (Loli Veve WAL)	WAL Compactor Truck (Loli komipekitaa WAL)		J10294	3		https://kc.kobotoolbox.org/media/	Mix Waste (Veve Mix)	5
7	2022-06-24	Tofoa	WAL Services (Loli Veve WAL)	WAL Compactor Truck (Loli komipekitaa WAL)		J9420	2		https://kc.kobotoolbox.org/media/	Mix Waste (Veve Mix)	6
8	2022-06-24	Tofoa	WAL Services (Loli Veve WAL)	WAL Non Compactor Truck (Loli veve 1- 3 toni)		J9434	3		https://kc.kobotoolbox.org/media/	Mix Waste (Veve Mix)	7
9	2022-06-24	Kolo	Others (Ikai koe Loli Veve ae WAL)		Ana Gift	J9910	3		https://kc.kobotoolbox.org/media/	Mix Waste (Veve Mix)	8
10	2022-06-24	Lavengatonga / Tofoa	WAL Services (Loli Veve WAL)	WAL Compactor Truck (Loli komipekitaa WAL)		J9420	2		https://kc.kobotoolbox.org/media/	Mix Waste (Veve Mix)	9
11	2022-06-24	Tofoa	WAL Services (Loli Veve WAL)	WAL Compactor Truck (Loli komipekitaa WAL)		J10294	3		https://kc.kobotoolbox.org/media/	Mix Waste (Veve Mix)	10
12	2022-06-24	Kolo	Others (Ikai koe Loli Veve ae WAL)		Waste Management	J5383	2		https://kc.kobotoolbox.org/media/	Mix Waste (Veve Mix)	11
13	2022-07-01	Tofoa	WAL Services (Loli Veve WAL)	WAL Compactor Truck (Loli komipekitaa WAL)		J10294	3		https://kc.kobotoolbox.org/media/	Mix Waste (Veve Mix)	12
14	2022-07-01	Tofoa	WAL Services (Loli Veve WAL)	WAL Non Compactor Truck (Loli veve 1- 3 toni)		J9434	3		https://kc.kobotoolbox.org/media/	Mix Waste (Veve Mix)	13
15	2022-07-01	Kolo	Others (Ikai koe Loli Veve ae WAL)		Rich Rass	J9732	5		https://kc.kobotoolbox.org/media/	Mix Waste (Veve Mix)	14
16	2022-07-01	Tofoa	WAL Services (Loli Veve WAL)	WAL Compactor Truck (Loli komipekitaa WAL)		J10294	3		https://kc.kobotoolbox.org/media/	Mix Waste (Veve Mix)	15
17	2022-07-01	Tofoa	WAL Services (Loli Veve WAL)	WAL Compactor Truck (Loli komipekitaa WAL)		J10295	4		https://kc.kobotoolbox.org/media/	Mix Waste (Veve Mix)	16
18	2022-07-01	Kolovai mo Houma	WAL Services (Loli Veve WAL)	WAL Non Compacetor Truck (Loli veve 4- 6 toni)		J9474	4		https://kc.kobotoolbox.org/media/	Mix Waste (Veve Mix)	17
19	2022-07-01	Havelu	Others (Ikai koe Loli Veve ae WAL)		Vaitohi	L26911	4		https://kc.kobotoolbox.org/media/	Mix Waste (Veve Mix)	18
20	2022-07-01	Matahau	WAL Services (Loli Veve WAL)	WAL Non Compactor Truck (Loli veve 1- 3 toni)		J9434	3		https://kc.kobotoolbox.org/media/	Mix Waste (Veve Mix)	19
21	2022-07-01	MAtahau mo Houma	WAL Services (Loli Veve WAL)	WAL Compactor Truck (Loli komipekitaa WAL)		J10294	3		https://kc.kobotoolbox.org/media/	Mix Waste (Veve Mix)	20
22	2022-07-01	HOuma	WAL Services (Loli Veve WAL)	WAL Non Compacetor Truck (Loli veve 4- 6 toni)		J9864	5		https://kc.kobotoolbox.org/media/	Mix Waste (Veve Mix)	21
23	2022-07-01	Ha'atafu mo Houma	WAL Services (Loli Veve WAL)	WAL Non Compacetor Truck (Loli veve 4- 6 toni)		J9978	4		https://kc.kobotoolbox.org/media/	Mix Waste (Veve Mix)	22
24	2022-07-01	Kolo	Others (Ikai koe Loli Veve ae WAL)		Waste Management	J5383	2		https://kc.kobotoolbox.org/media/	Mix Waste (Veve Mix)	23
25	2022-07-01	Tano'a	WAL Services (Loli Veve WAL)	WAL Septic Truck (Loli pamu Sepitiki WAL)		J8650		3/4	https://kc.kobotoolbox.org/media/	Septic Waste (Veve Sepitiki)	24
26	2022-07-01	Ha'asini	WAL Services (Loli Veve WAL)	WAL Compactor Truck (Loli komipekitaa WAL)		J10295	4		https://kc.kobotoolbox.org/media/	Mix Waste (Veve Mix)	25
27	2022-07-01	Kolo	Others (Ikai koe Loli Veve ae WAL)		Rich Rass	J9732	4		https://kc.kobotoolbox.org/media/	Mix Waste (Veve Mix)	26
28	2022-07-01	Ha'asini mo Nakolo	WAL Services (Loli Veve WAL)	WAL Non Compacetor Truck (Loli veve 4- 6 toni)		J9474	4		https://kc.kobotoolbox.org/media/	Mix Waste (Veve Mix)	27
29	2022-07-01	TANO'A	WAL Services (Loli Veve WAL)	WAL Septic Truck (Loli pamu Sepitiki WAL)		J8650		3/4	https://kc.kobotoolbox.org/media/	Septic Waste (Veve Sepitiki)	28
30	2022-07-01	Veitongo	Others (Ikai koe Loli Veve ae WAL)		Household		2			Asbestos (Esipesitosi)	29

Month	Bulky Waste (m3)	Mixed Waste (m3)	Sewage (L)
Apr-22	954	1,587	454,000
May-22	721	2,523	445,300
Jun-22	218	2,145	365,800
Jul-22	293	2,268	460,200
Aug-22	734	2,328	413,606
Sept 22	389	2,034	468,200
Sub-Total	3,309	12,885	2,607,106 L (2,607 m3)

Figure 2: Incoming Waste (by Key Category)
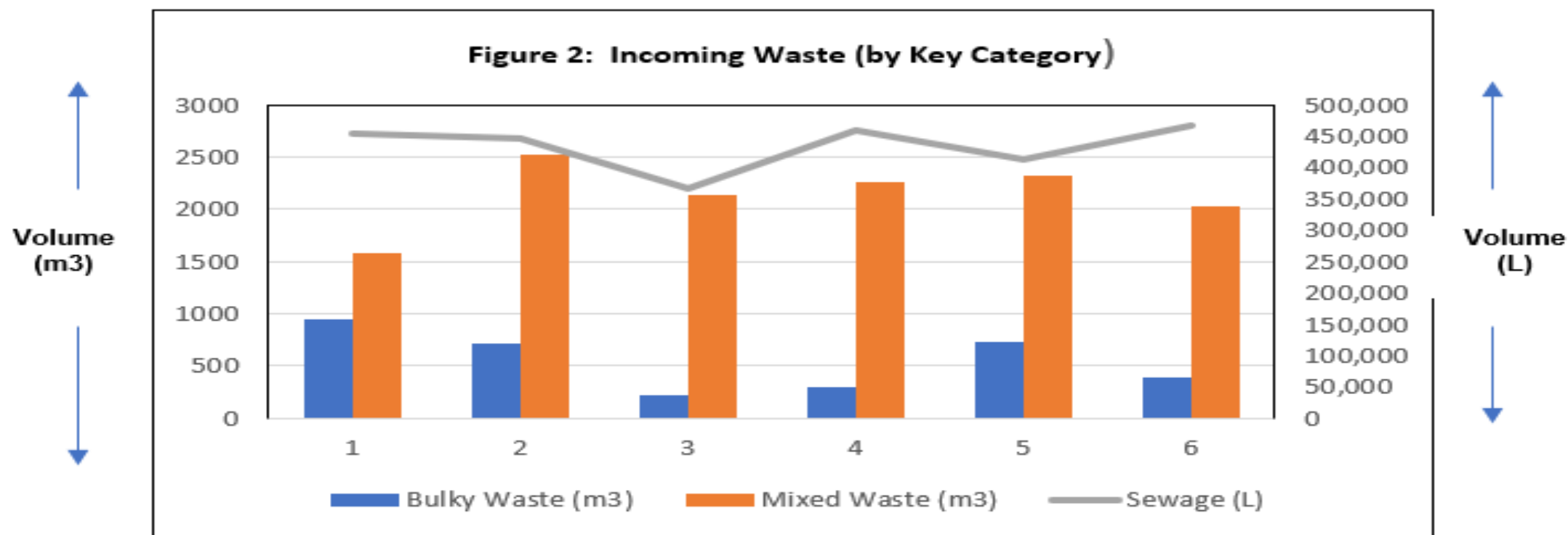
SETTING UP OF YOUR WASTE LANDFILL RECORDING SYSTEM

Step 1: Go to https://www.kobotoolbox.org/
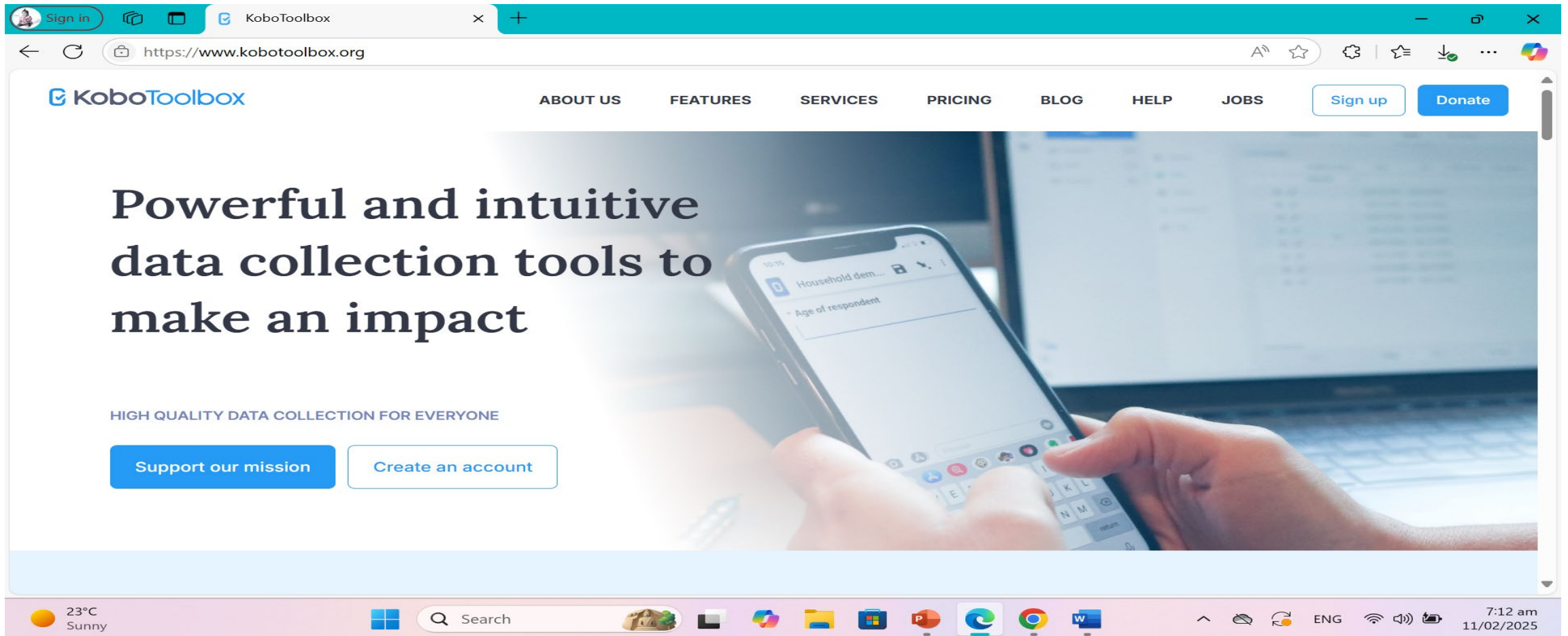
STEP 2:   Go to the SIGN UP Icon (Top left corner of your screen)

KoboToolbox

ABOUT US   FEATURES   SERVICES   PRICING   BLOG   HELP   JOBS   Sign up   Donate

Sign in or create an account

Global KoboToolbox Server
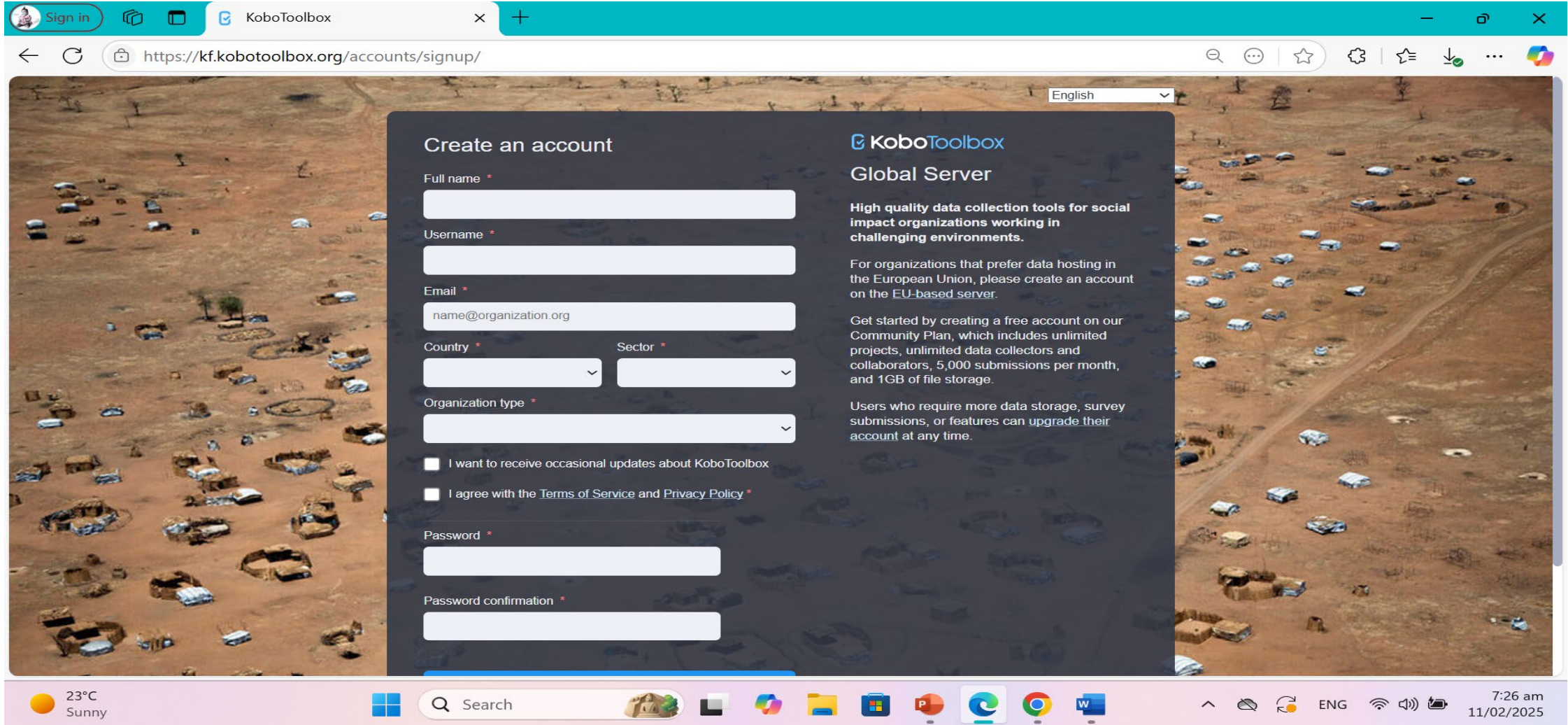
Most people use our global KoboToolbox server. Get started with a free account today.

European Union KoboToolbox Server

The European Union-based server is hosted in Ireland. This server is used by organizations that require or prefer data hosting in the European Union. Get started with a free account today.

23°C
Sunny

Search

ENG

7:21 am
11/02/2025

STEP 3: Go to the Global Kobotoolbox Server & Select the CREATE AN ACCOUNT

STEP 4: Fill the Form

1. Full Name: Faafetai Sagapolutele
2. Username: <u>name of your landfill</u> + <u>year</u> (ranadi2025)
   your organization + date today (sprep2025)
3. Email: faafetais2018@gmail.com
4. Country: Samoa
5. Sector: Environment
6. Organization Type: Government
7. Website: Your organization website address
8. Tick the two boxes – Receiving Updates & Agreeing with the
   Policy
9. Password: landfill2025
10. Password landfill2025
11. Press Create Account Icon

English

KoboToolbox
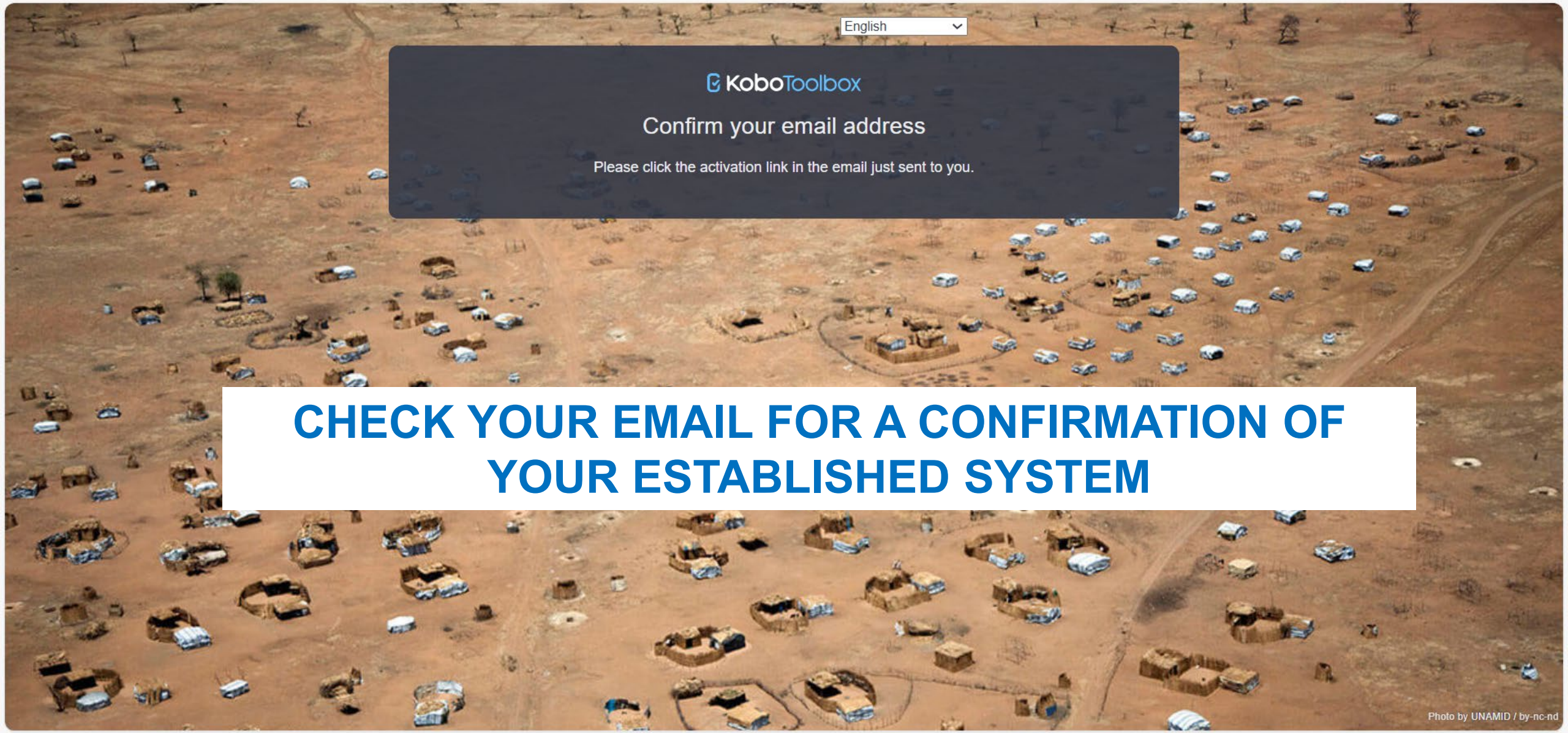
Confirm your email address

Please click the activation link in the email just sent to you.

CHECK YOUR EMAIL FOR A CONFIRMATION OF YOUR ESTABLISHED SYSTEM

Photo by UNAMID / by-nc-nd
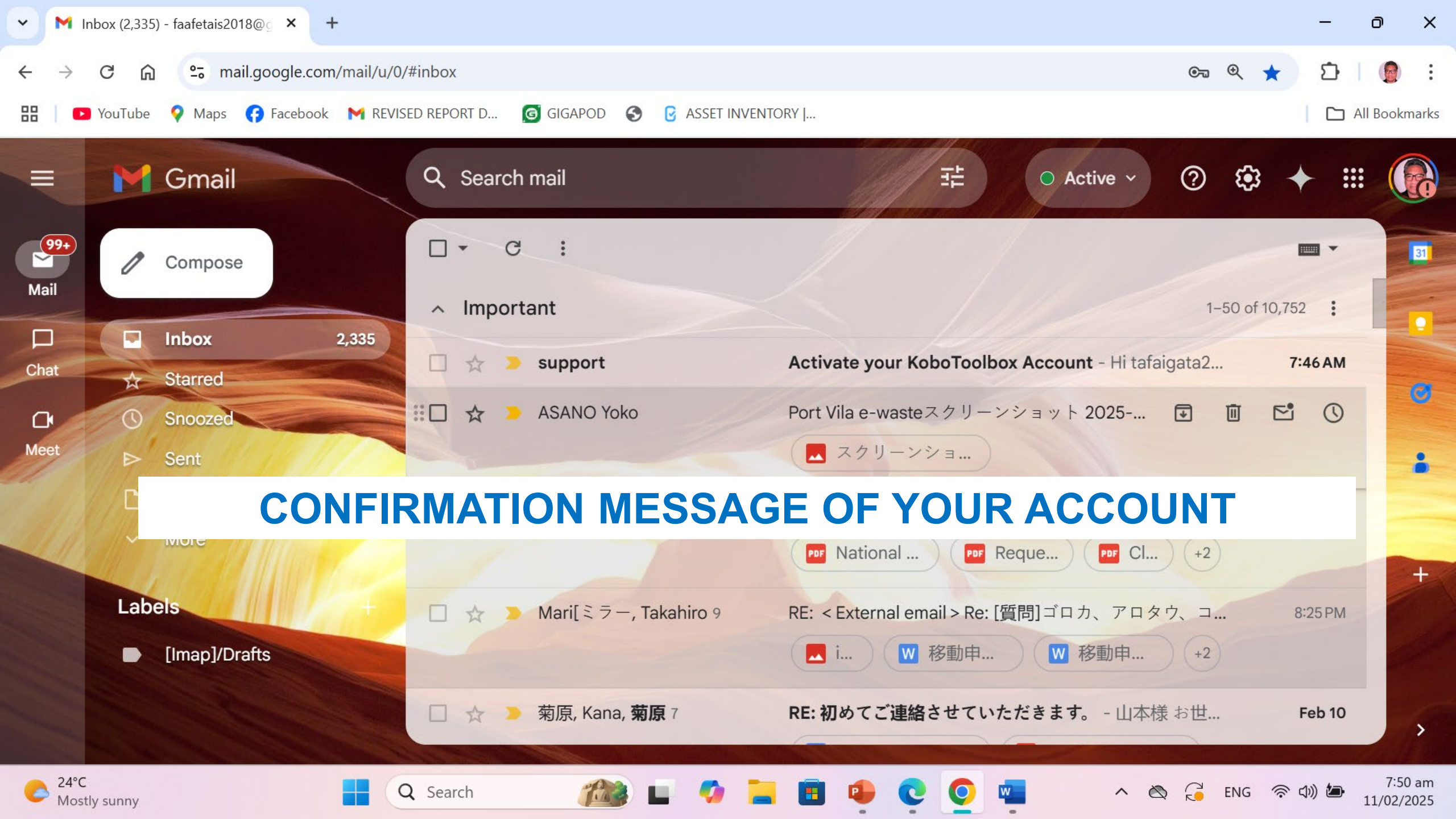
CONFIRMATION MESSAGE OF YOUR ACCOUNT

mail.google.com/mail/u/0/#inbox/FMfcgzQZTCnHVJRcZjGfTcDrGpbCptlf

YouTube | Maps | Facebook | REVISED REPORT D... | GIGAPOD | ASSET INVENTORY |... | All Bookmarks

Gmail

Search mail

Active

Compose

Mail

Chat

Meet

Inbox 2,334

Starred

Snoozed

Sent

Dr

Mo

Labels

[Imap]/Drafts

1 of 10,752

Activate your KoboToolbox Account   Inbox ×

support@kobotoolbox.org   7:46 AM (4 minutes ago)

to me

Hi tafaigata2025,

Welcome to KoboToolbox! To activate your account, follow the link below:

CLICK ON THE LINK TO YOUR ESTABLISHED SYSTEM

9FvWVvZbVcvC0YesJKPPA/

To get started, check out these resources and join the community:

• Help Center: Find answers to your questions in our Help Center's extensive library of support articles. Visit the Help Center: https://support.kobotoolbox.org/

• Online Learning: For a comprehensive introduction to KoboToolbox, we offer the online self-paced KoboToolbox

24°C
Mostly sunny

Search

ENG

7:51 am
11/02/2025

STEP 5: Create your Data Collection Form Project

STEP 6:   Go to NEW at the left top corner (for NEW PROJECT)

STEP 7: START DEVELOPING YOUR FORM

STEP 8: ADD QUESTIONS TO THE FORM

SELECT THE TYPE OF DATA YOU WANT TO ENTER - NAME (TEXT FORM) or DATE (Number form) OPTION (Choice), etc

Suggestions for practice:

1). **DATE** -   Number form

2). **TIME** -   Number form

3). **VEHICLE PLATE** – Text (Mixture of Letters and No)

4). **SIZE OF VEHICLE** – Choose One Option Question

5). **TYPE OF WASTE** - Choose More than One Option

6). **NAME OF CLIENT** - Text Form question

7). **PHOTO OF THE WASTE** – Photo question

project

Landfill Data

SAVE *

Add from Library

Layout & Settings

Enter a date

Question hint

Sign in

https://kf.kobotoolbox.org/#/forms/agi6rNXaDkcs34HCCiKiet/edit

25°C
Partly sunny

Search

ENG

8:51 am
11/02/2025

project

Landfill Data

SAVE

Add from Library   Layout & Settings

DATE
Question hint

TIME
Question hint

VEHICLE TYPE
Question hint

▾ **ESTIMATE VOLUME (m3)**
Size of Vehicle

1	AUTOMATIC
2	AUTOMATIC
3	AUTOMATIC
4	AUTOMATIC
5	AUTOMATIC
6	AUTOMATIC
7	AUTOMATIC
8	AUTOMATIC
9	AUTOMATIC
10	AUTOMATIC

+ Click to add another response...

▾ **TYPE OF WASTE**
Question hint

Green waste	AUTOMATIC
Plastics	AUTOMATIC
Papers	AUTOMATIC
Scrap Metals	AUTOMATIC

REFER TO THE KOBOTOOLBOX MANUAL FOR MORE INFORMATION

N.B. **In the manual, the two main servers available in the past were for**
- Individual Researchers.
- Humanitarian Organizations

Now being replaced with:
- Global Server
- European Server

FOLLOW UP INDIVIDUAL REMOTE SESSION CAN BE ARRANGED FOR THOSE WHO ARE INTERESTED TO LEARN MORE ON FORM DESIGNING, SHARING OF FORMS, FILLING OF FORMS, SENDING FORMS, DATA ANALYSIS, REPORTING, ETC.,

Email for more information and support: faafetais2018@gmail.com