

Solar Online

User Documentation

CHAPTER 1

Introduction

This report discusses the work done in the development of the online data entry system for solar sales.

Background and motivation

The system that was being used to record product and sales data for Last Mile Entrepreneurs (LMEs) was a Microsoft Access based data entry system/database. A copy of the system was needed on every data-entry personnel's computer in order for them to use it. Also, data transfer was only via flash memory disks or email.

Objective

The final goal of the project was twofold

1. To make it easier to generate reports and statistics.
2. Allow access to the system from anywhere as long as the computer has an internet connection.

To make it easier for LME sales data to be entered and shared, an online system based on PHP, MySQL, HTML and CSS web technologies was implemented.

Data can be entered from any computer as long as the computer has an internet connection. The data can be easily shared in CSV, Excel, PDF or print format on the click of a button.

Methodology

To implement the above goals the following methodology needs to be followed

1. Specifying the various components required for the application.
2. Specifying how the components connect with each other.
3. Analysis. Specifying the data required for analysis and generation of report.
4. Identifying the technologies that will be used to build the system.

CHAPTER 2

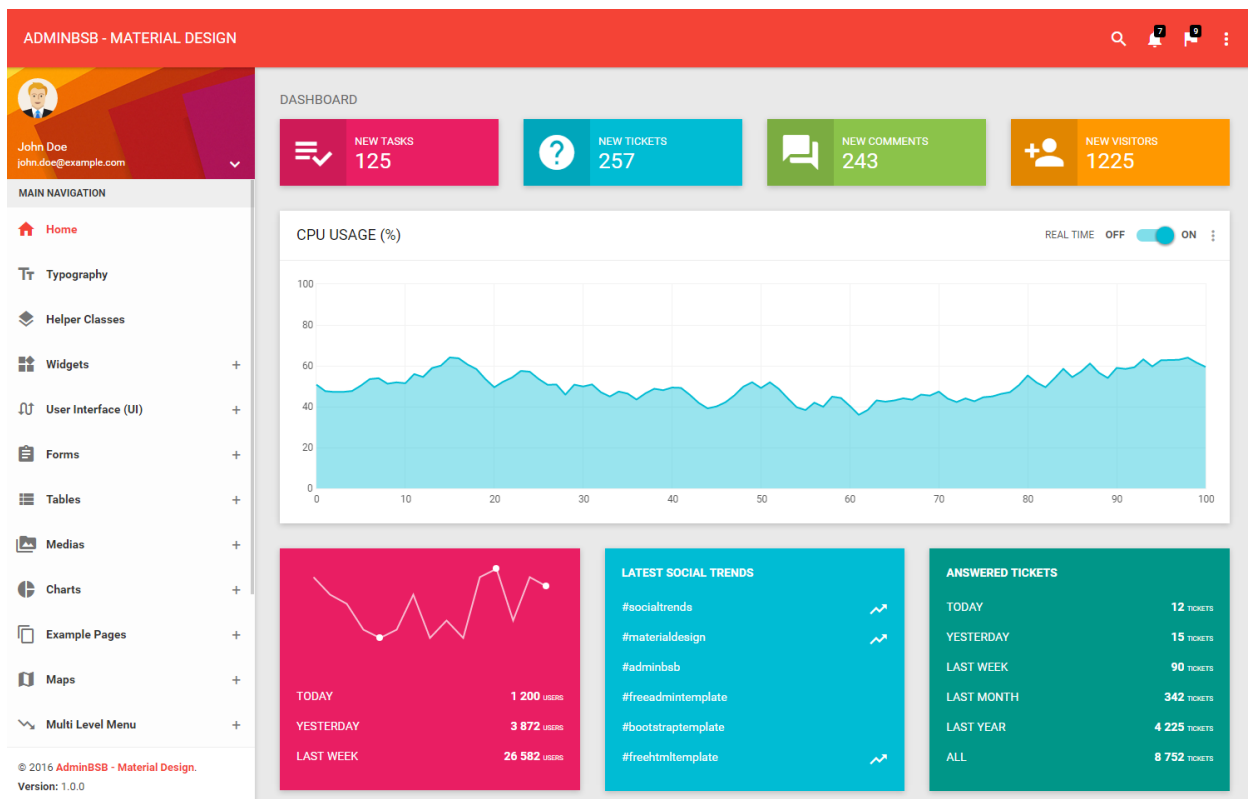
TOOL DESCRIPTION

User Interface

The interface is very user friendly and is built using the following technologies

HTML/CSS/JavaScript

AdminBSB - Material Design



AdminBSB - Material Design is a fully responsive and free admin template. It was developed with Bootstrap 3.x Framework and Google Material Design of powers.

It's really easy to customize and usage. You can use for from 320px to large resolution pixels of new generation screens and mobile devices. (Fully Responsive Material Design)

[Here's the link to the source code](#)

CodeIgniter

CodeIgniter is a powerful PHP framework with a very small footprint, built for developers who need a simple and elegant toolkit to create full-featured web applications.


[Here's the link to the source code](#)


Specification


Application Specification


Account creation

1. A user creates a data entry account first by filling in the following details


 First Name

 Last Name

 Username

 Phone Number


County



Mombasa

▼


Sub County



Ainabkoi


▼


Cluster




Central

▼

 Email Address

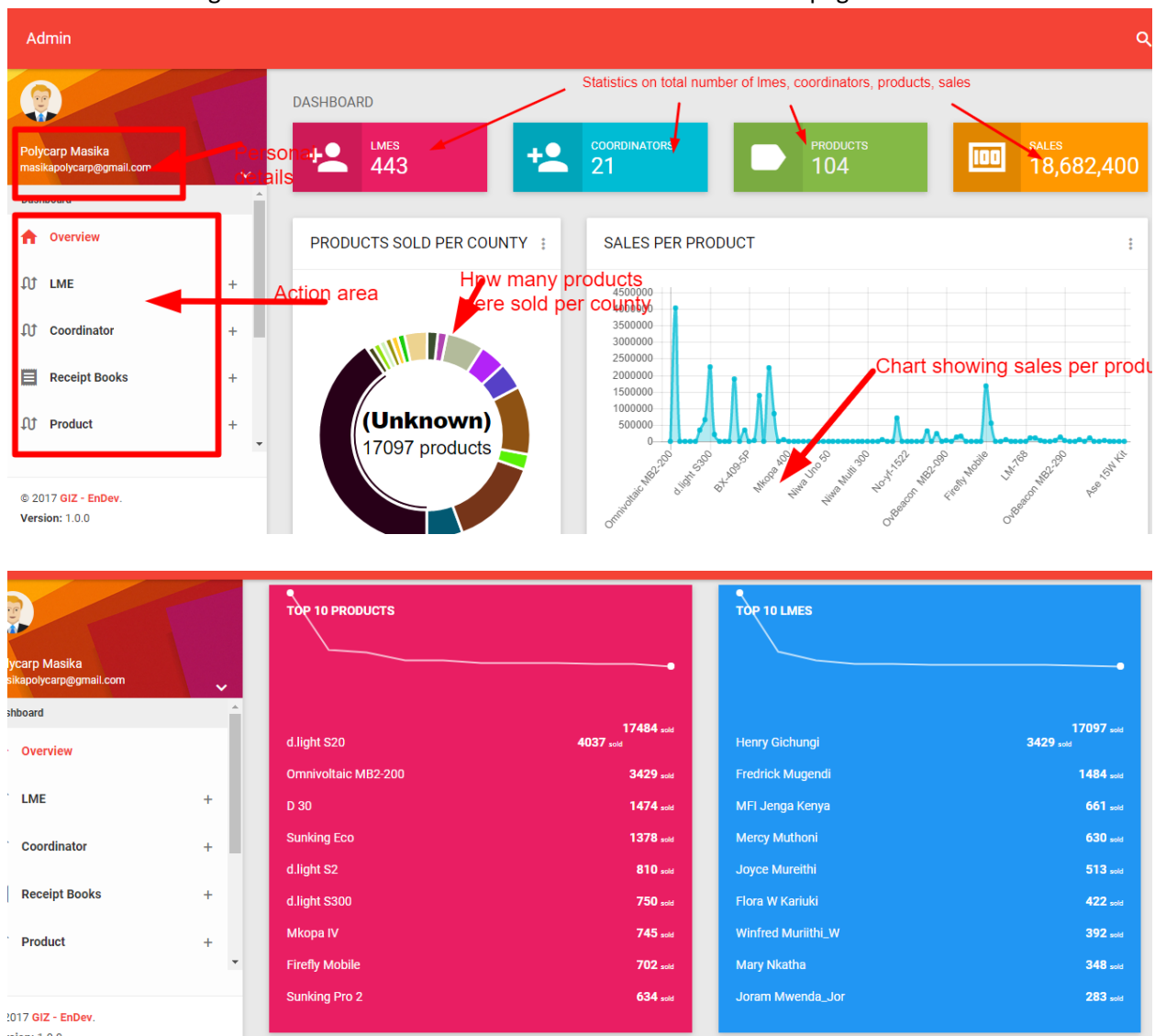
 Password

 Confirm Password

SIGN UP

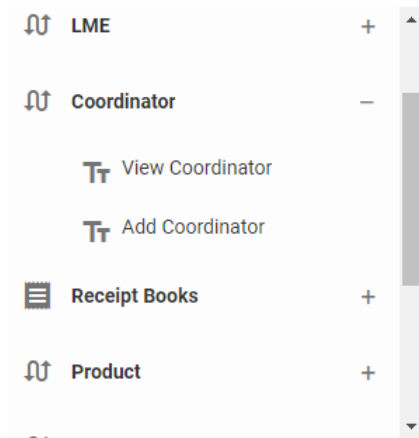
Dashboard

- After successful registration the user will be redirected to the **dashboard** page.



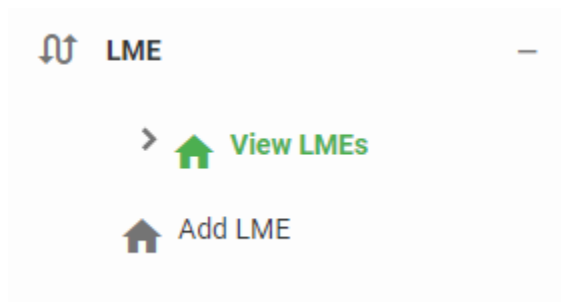
The major components are highlighted in the images above

Action area



This is a scrollable area that contains the functionality to add/view/edit/delete a record from the system. Clicking on the + expands all the available actions.

Lme Action Area



Clicking View LMEs loads a list of all lmes

A list of all lmes

← Actions that allow you to export the data in various formats

Search:

#	LME	Cluster	County	Coordinator	Sub County	Phone Number	Category	
1	Fredrick Mugendi	Central	Embu	Gregory Nzomo	Manyatta	728324457	Other	<div> <div>Edit</div> <div>Delete</div> </div>
2	Gabriel Kinyua	Central	Embu	Gregory Nzomo	Runyenjes	724985825	Other	<div> <div></div> <div></div> </div>
3	Nancy Murugi 2	Central	Embu	Gregory Nzomo	Mbeere North	792019946	Other	<div> <div></div> <div></div> </div>
4	Mary Muthoni	Central	Embu	Gregory Nzomo	Mbeere North	721125601	Freelancer	<div> <div></div> <div></div> </div>
5	Justin Ngungi	Central	Embu	Gregory Nzomo	Mbeere North	717330288	Freelancer	<div> <div></div> <div></div> </div>

Clicking Add LME loads the add interface for lme

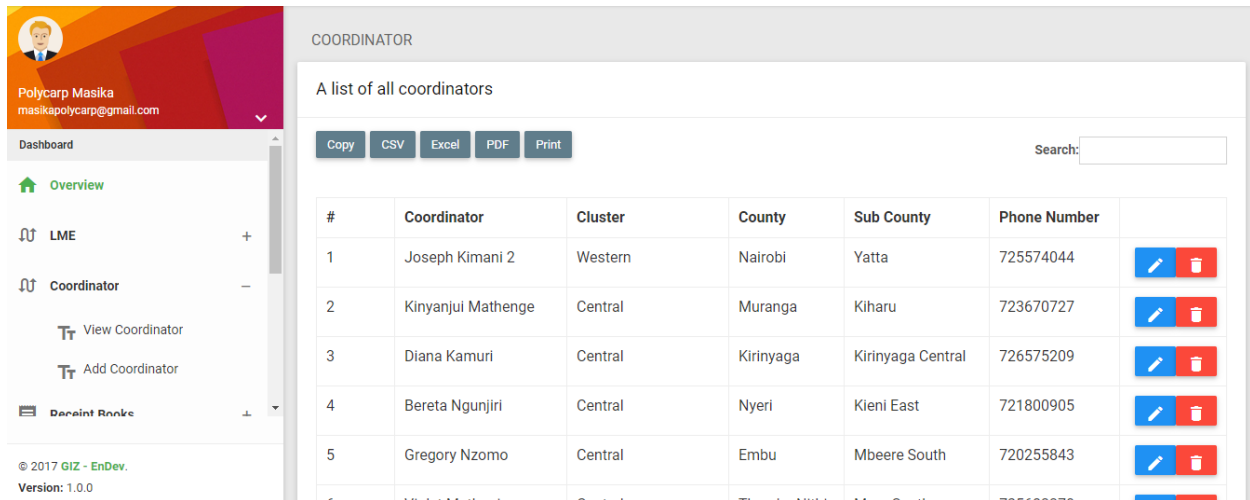
ADD (Last Mile Entrepreneur) LME

Please enter the details below











LME First Name <input type="text"/>	LME Last Name <input type="text"/>
County <input type="text" value="Mombasa"/>	Cluster <input type="text" value="Central"/>
Coordinator First Name <input type="text"/>	Coordinator Last Name <input type="text"/>
Phone Number <input type="text"/>	Sub County <input type="text" value="Ainabkoi"/>
Category <input type="text"/>	

Coordinator Action Area

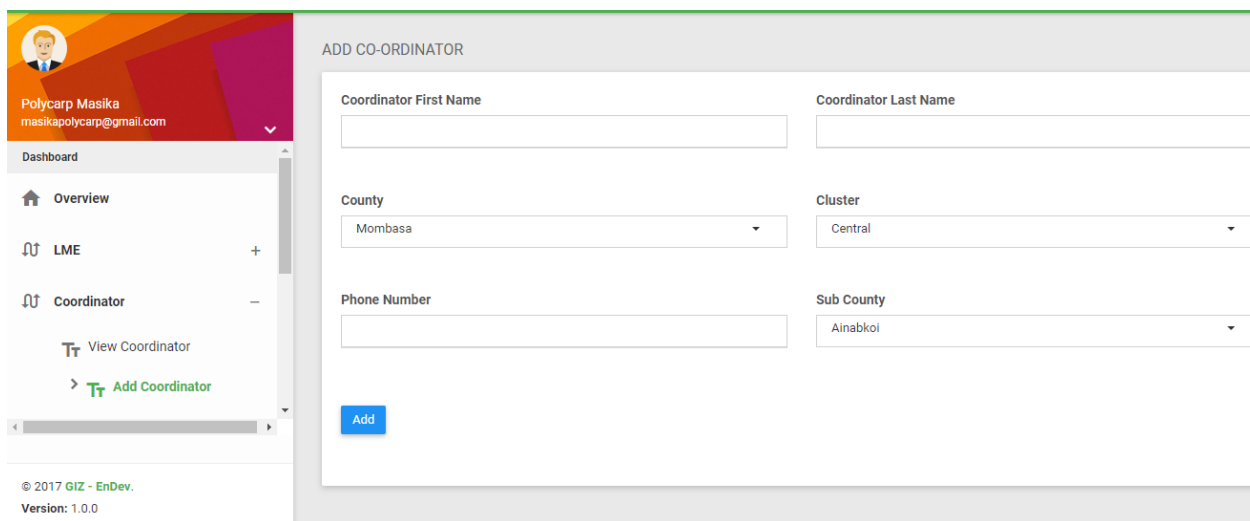
Clicking view coordinator lists all coordinators



The screenshot displays the 'COORDINATOR' section of a web application. On the left is a sidebar with a user profile for Polycarp Masika and a menu with options like Overview, LME, Coordinator, View Coordinator, Add Coordinator, and District Ranks. The main area is titled 'COORDINATOR' and contains a sub-header 'A list of all coordinators'. Below this are export buttons (Copy, CSV, Excel, PDF, Print) and a search bar. A table lists five coordinators with columns for ID, Name, Cluster, County, Sub County, and Phone Number. Each row has edit and delete icons.

#	Coordinator	Cluster	County	Sub County	Phone Number	
1	Joseph Kimani 2	Western	Nairobi	Yatta	725574044	 
2	Kinyanjui Mathenge	Central	Muranga	Kiharu	723670727	 
3	Diana Kamuri	Central	Kirinyaga	Kirinyaga Central	726575209	 
4	Bereta Ngunjiri	Central	Nyeri	Kieni East	721800905	 
5	Gregory Nzomo	Central	Embu	Mbeere South	720255843	 

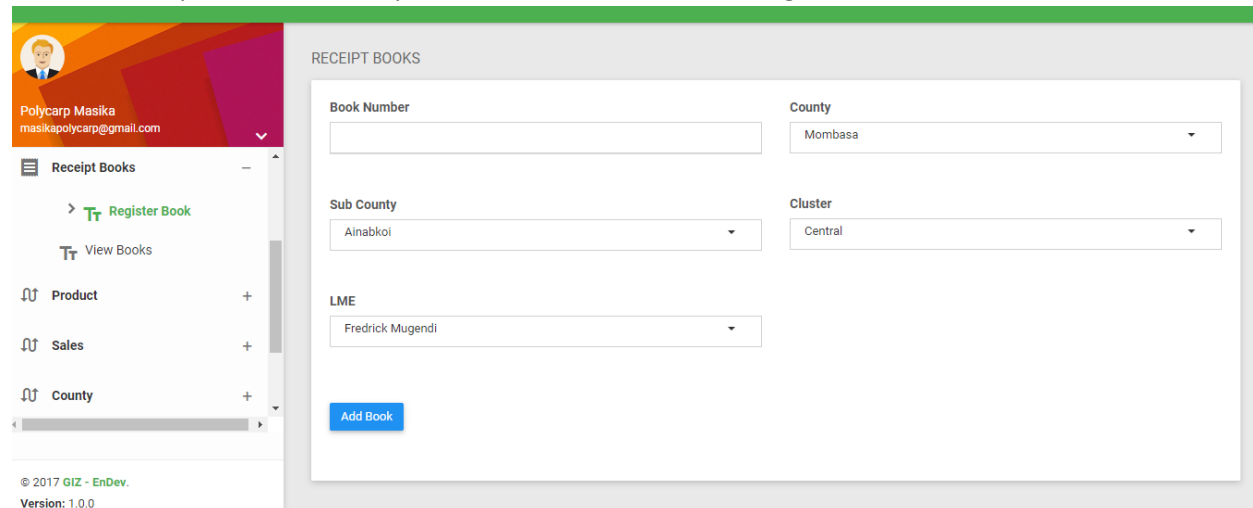
Clicking add coordinators brings up the add coordinator interface



The screenshot shows the 'ADD CO-ORDINATOR' form. The sidebar is identical to the previous screenshot, but the 'Add Coordinator' option is highlighted. The main form has fields for Coordinator First Name, Coordinator Last Name, County (dropdown), Cluster (dropdown), Phone Number, and Sub County (dropdown). An 'Add' button is at the bottom left.

Receipt Books Action Area

To add a receipt book click receipt books action menu and the register book



RECEIPT BOOKS

Book Number

County

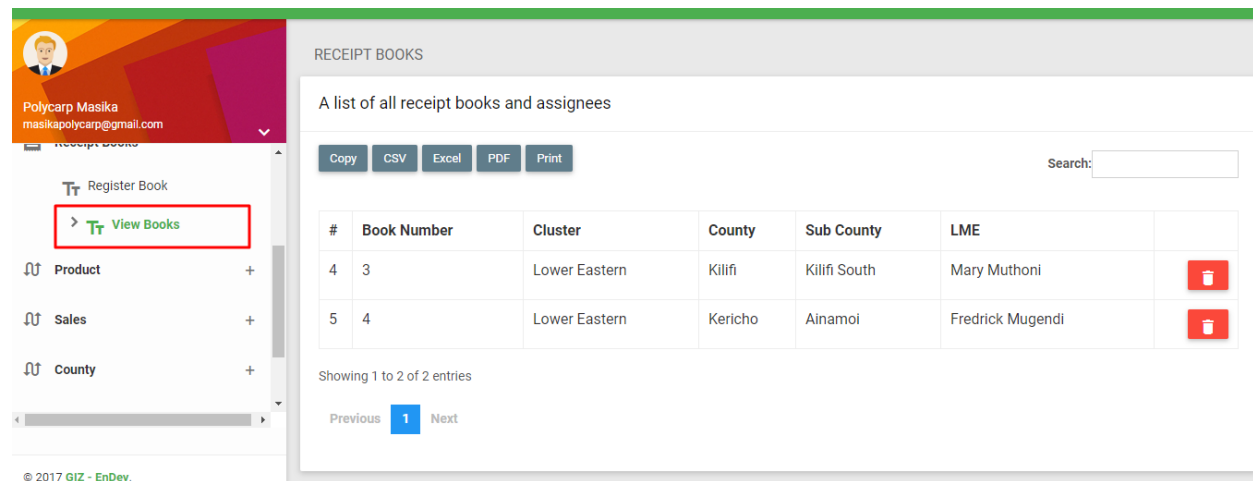
Sub County

Cluster

LME

[Add Book](#)



To view books click view books link on the action menu



RECEIPT BOOKS

A list of all receipt books and assignees

[Copy](#) [CSV](#) [Excel](#) [PDF](#) [Print](#) Search:

#	Book Number	Cluster	County	Sub County	LME	
4	3	Lower Eastern	Kilifi	Kilifi South	Mary Muthoni	
5	4	Lower Eastern	Kericho	Ainamoi	Fredrick Mugendi	

Showing 1 to 2 of 2 entries

Previous [1](#) Next

Products Action Area

View products Interface

PRODUCTS

A list of products

Copy CSV Excel PDF Print Search:

#	Name	Category	Certification	Certification Status	RRP	
1	d.light S300	Multi-functional small solar system	Lighting Africa	Valid	3000	
2	d.light S20	Solar Lantern	Lighting Africa	Valid	1000	
3	d.light S2	Solar desk/task lamp	Lighting Africa	Valid	800	
4	Firefly Mobile	Solar desk/task lamp	Lighting Africa	Valid	2500	
5	Powapack Junior Matrix	Multi-functional small solar system	Lighting Africa	Expired	5500	

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Version: 1.0.0

Add Product Interface

Admin

ADD PRODUCT

Please enter the details below

Product Name

Category

Certification

Certification Status

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Version: 1.0.0

Edit Product Interface

Admin

Dashboard

- Overview
- LME
- Coordinator
- Receipt Books
- Product

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EDIT PRODUCT

Product Name

Category

Shop/Kiosk

Certification

None

Certification Status

Not Applicable

RRP

Product Distribution Interface

Dashboard

- Product
- Sales
- County

2017 GIZ - EnDev.
version: 1.0.0

PRODUCTS

Product Distribution

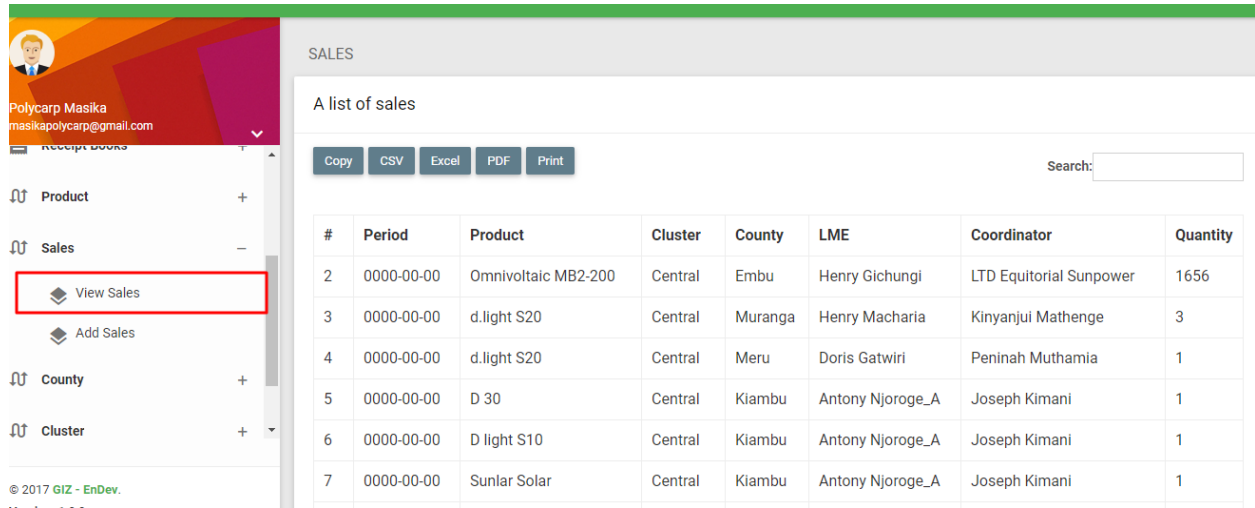
Copy CSV Excel PDF Print

Search:

#	Period	Cluster	County	LME	Coordinator	Customer County	Customer Sub-County	Quantity	
1	0000-00-00	Central	Muranga	Mary Kibui	Kinyanjui Mathenge	Muranga	Kiharu	2	
2	0000-00-00	Central	Meru	Mary Inombabu	Joseph Wamiti	Meru	Igembe Central	21	
3	0000-00-00	Central	Meru	Joseph Wamiti_J	Joseph Wamiti	Meru	Igembe North	14	
4	0000-00-00	Central	Nyandarua	Joseph Maina_Jo	Kinyanjui Mathenge	Nyeri	Nyeri Town	1	

Sales Action Area

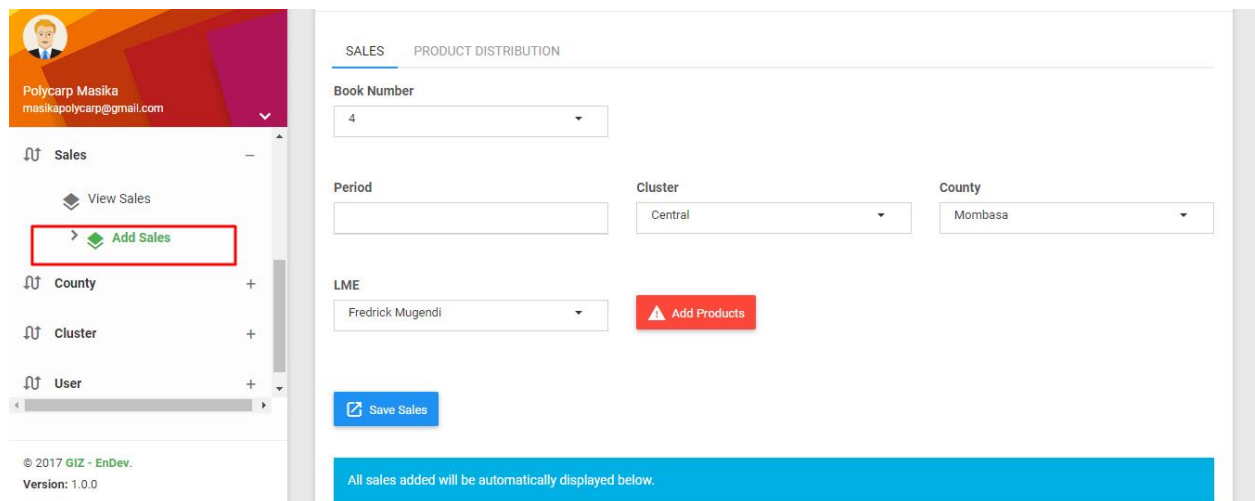
View Sales Interface



The screenshot shows the 'View Sales' interface. On the left, a sidebar contains a menu with 'View Sales' highlighted in a red box. The main area is titled 'SALES' and 'A list of sales'. It includes a search bar and buttons for 'Copy', 'CSV', 'Excel', 'PDF', and 'Print'. Below these is a table with the following data:

#	Period	Product	Cluster	County	LME	Coordinator	Quantity
2	0000-00-00	Omnivoltaic MB2-200	Central	Embu	Henry Gichungi	LTD Equitorial Sunpower	1656
3	0000-00-00	d.light S20	Central	Muranga	Henry Macharia	Kinyanjui Mathenge	3
4	0000-00-00	d.light S20	Central	Meru	Doris Gatwiri	Peninah Muthamia	1
5	0000-00-00	D 30	Central	Kiambu	Antony Njoroge_A	Joseph Kimani	1
6	0000-00-00	D light S10	Central	Kiambu	Antony Njoroge_A	Joseph Kimani	1
7	0000-00-00	Sunlar Solar	Central	Kiambu	Antony Njoroge_A	Joseph Kimani	1

Add Sales Interface



The screenshot shows the 'Add Sales' interface. On the left, a sidebar contains a menu with 'Add Sales' highlighted in a red box. The main area is titled 'SALES' and 'PRODUCT DISTRIBUTION'. It includes a 'Book Number' dropdown set to '4', a 'Period' input field, a 'Cluster' dropdown set to 'Central', and a 'County' dropdown set to 'Mombasa'. Below these is an 'LME' dropdown set to 'Fredrick Mugendi' and a red 'Add Products' button. At the bottom, there is a blue 'Save Sales' button and a blue banner that reads 'All sales added will be automatically displayed below.'

Add sales workflow

- Enter all lme details first

Book Number
3

Period
2017-09-07

Cluster
Central

County
Embu

LME
Mary Muthoni

Step 1

Add Products

Fill in all empty textboxes

Save Sales

- Add all the products for that lme by clicking add products button

Add Products

When you click add products button the following screen pops up

Add products for Mary Muthoni

Product Name
Barefoot Go 250

Quantity
21

Add

#	Product Name	Quantity
---	--------------	----------

SAVE CHANGES **CANCEL**

Mary Muthoni

Add Products

Save Sales

- Choose the product name from the “product name” dropdown and enter the quantity.

After entering the above details click **"Add"** button. The product will be automatically displayed bellow the form

The screenshot shows a form titled "Add products for Mary Muthoni". At the top, there are two input fields: "Product Name" with a dropdown menu showing "Barefoot Go 250" and "Quantity" with a text input showing "21". To the right of these fields is a blue "Add" button with a plus icon. Below the inputs is a table with the following structure:

#	Product Name	Quantity	
0	Barefoot Go 250	21	<button>Delete</button>

At the bottom right of the form are two buttons: "SAVE CHANGES" and "CANCEL". At the bottom left, outside the form, is a blue "Save Sales" button with a plus icon.


If you change your mind you can delete the product by clicking on the delete button. You can add as many products as you wish




The screenshot shows the same form as before, but now with multiple products. The "Product Name" dropdown shows "Omnivoltaic MB2-200" and the "Quantity" input shows "4". The "Add" button is still present. The table below the inputs now contains four rows, with the last three rows highlighted by a red rectangular box:


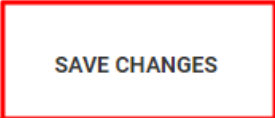

#	Product Name	Quantity	
0	Barefoot Go 250	21	<button>Delete</button>
1	BBOXX BB17	2	<button>Delete</button>
2	Fosera SCANDLE 200	26	<button>Delete</button>
3	Omnivoltaic MB2-200	4	<button>Delete</button>

At the bottom right of the form are two buttons: "SAVE CHANGES" and "CANCEL".

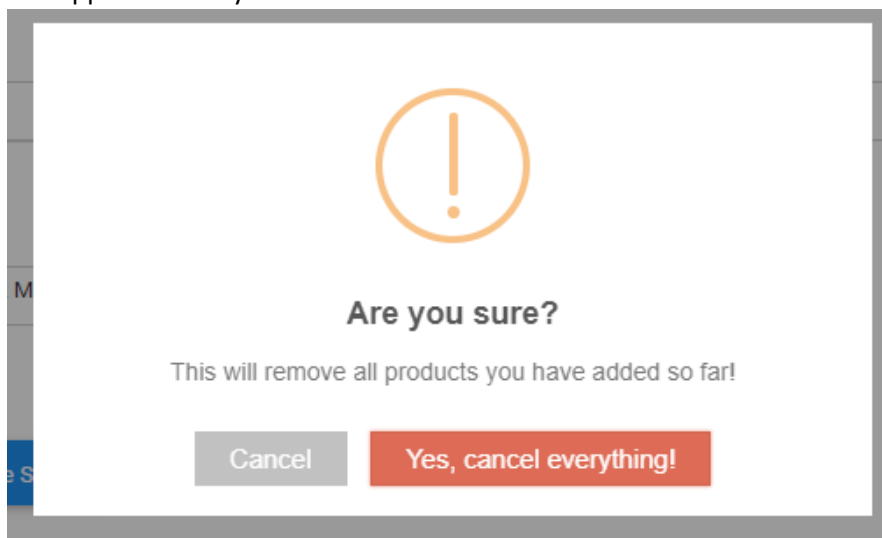
- After adding all the products click save changes to effect what you have done

Omnivoltaic MB2-200 4 

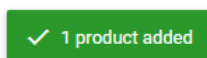
	BBOX BB17	2	
1	Fosera SCANDLE 200	26	
2	Omnivoltaic MB2-200	4	

Clicking cancel removes all the changes you have made. To avoid accidental removal a confirm box appears when you click cancel



Once you have saved changes the “Add Products” button changes to the following button showing how many products you have added



- You can now click save sales and the data will be posted to the database.

SALES PRODUCT DISTRIBUTION

Book Number
3

Period
2017-09-07

Cluster
Central

County
Embu

LME
Mary Muthoni

✓ 1 product added

[Save Sales](#)

- After the data is posted you will automatically be taken to the distribution where the product distributions are posted

SALES **PRODUCT DISTRIBUTION 01** Total number of products added

Period
2017-09-07

Cluster
Central

County
Mombasa

LME
Mary Muthoni

[Add Distributions](#)

[Post Data](#) The LME for which the products were added

All data posted will be automatically displayed below. Click on any of the fields to edit values.

To add distribution data (where the individual products were sold) click “Add Distributions Button”. The following pops up.

Add distributions for Samuel Muchangi

Customer County
Mombasa

Customer Sub County
Ainabkoi

Quantity

[Add](#)

#	Customer County	Customer Sub County	Quantity

SAVE CHANGES CANCEL

Choose the Customer County, Sub-County and the Quantities sold for that location the click “Add”. The distribution will automatically be added to the table below.

Add distributions for Samuel Muchangi

Customer County


Customer Sub County

Quantity

Samburu ▾

Awendo ▾

10

 Add

#	Customer County	Customer Sub County	Quantity	
0	Taita-Taveta	Awendo	2	<div>Delete</div>
1	Samburu	Awendo	10	<div>Delete</div>

SAVE CHANGES

CANCEL

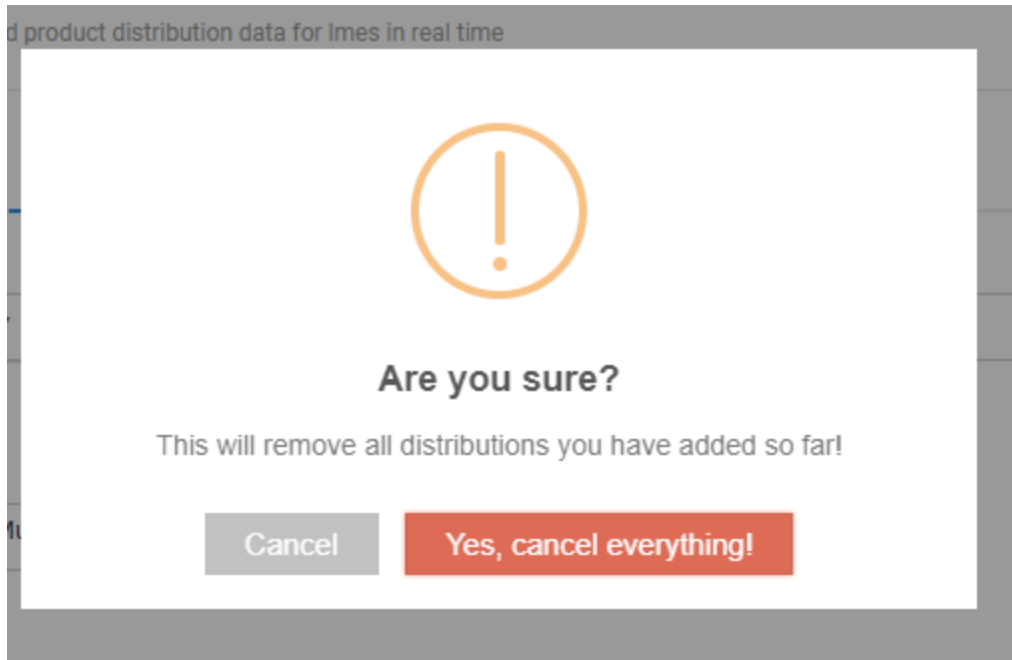
- After adding distributions click save changes to save what you have done

#	Customer County	Customer Sub County	Quantity	
0	Taita-Taveta	Awendo	2	<div>Delete</div>
1	Samburu	Awendo	10	<div>Delete</div>

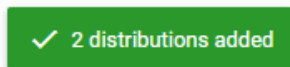
SAVE CHANGES

CANCEL

Clicking cancel removes all the changes you have made. To avoid accidental removal a confirm box appears when you click cancel.



Once you have saved changes the “Add Distributions” button changes to the following button showing how many products you have added



- Click “Post Data” button to save your changes to the database

Period	Cluster	County
<input type="text" value="2017-09-07"/>	<input type="text" value="Central"/>	<input type="text" value="Mombasa"/>
LME		
<input type="text" value="Samuel Muchangi"/>		
<div style="border: 2px solid red; padding: 5px; display: inline-block;"> </div>		

All data posted will be automatically displayed below. Click on any of the fields to edit values.

- After the data is posted all your changes will be displayed in the table below the button

- If the posted distribution quantities do not match with the sales data quantities you will be given a warning message to check your data

#	Period	Cluster	County	Coordinator	LME	Customer County	Customer Sub-County	Quantity	
1304	2017-09-07	Central	Mombasa	Gregory Nzomo	Samuel Muchangi	Samburu	Awendo	10	

This number

PRODUCT DISTRIBUTION 65

Cluster

7

Central

Should be equal to the totals of

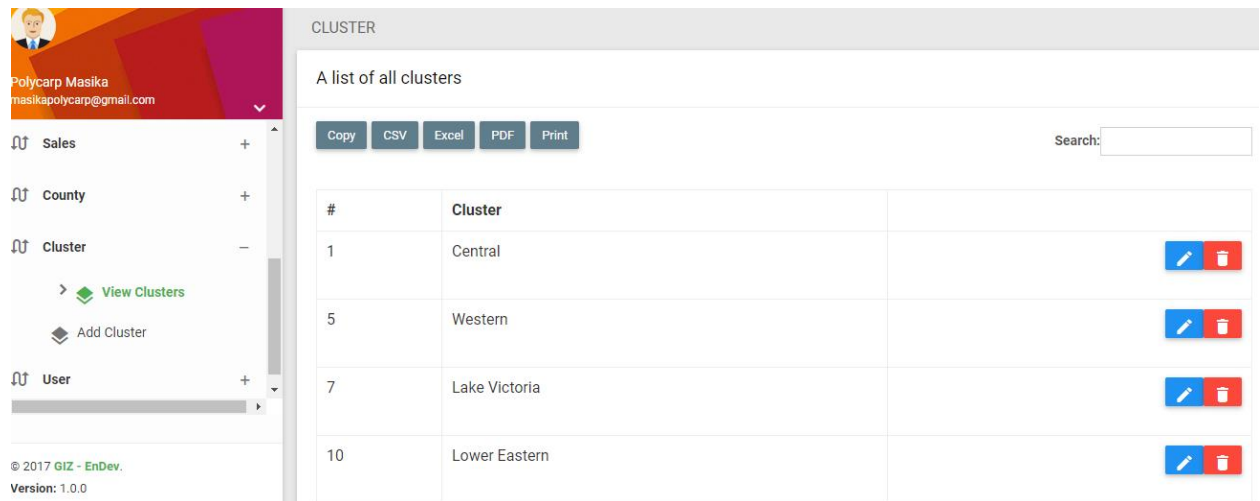
#	Period	Cluster	County	Coordinator	LME	Customer County	Customer Sub-County	Quantity	
1304	2017-09-07	Central	Mombasa	Gregory Nzomo	Samuel Muchangi	Samburu	Awendo	10	
1303	2017-09-07	Central	Mombasa	Gregory Nzomo	Samuel Muchangi	Taita-Taveta	Awendo	2	

If they are not equal you can't proceed with the data entry process.









If all distributions are entered you will be redirected back to the Sales tab to post sales for another lme.

Cluster Action Area

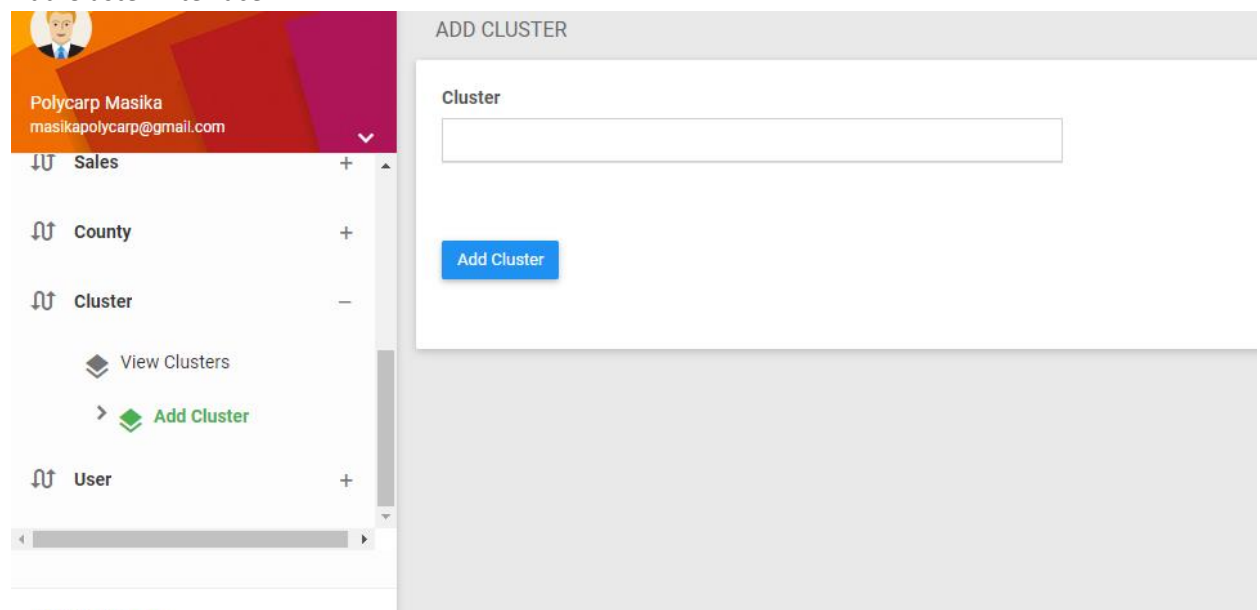
View Cluster interface



The screenshot shows the 'View Cluster' interface. On the left is a sidebar with a user profile for Polycarp Masika (masikapolycarp@gmail.com) and a menu with options: Sales, County, Cluster (expanded), User, and Add Cluster. The main area is titled 'CLUSTER' and contains a table of clusters. Above the table are buttons for 'Copy', 'CSV', 'Excel', 'PDF', and 'Print', and a search bar. The table has columns for '#', 'Cluster', and actions (edit and delete icons). The data rows are: 1 Central, 5 Western, 7 Lake Victoria, and 10 Lower Eastern.

#	Cluster	
1	Central	 
5	Western	 
7	Lake Victoria	 
10	Lower Eastern	 

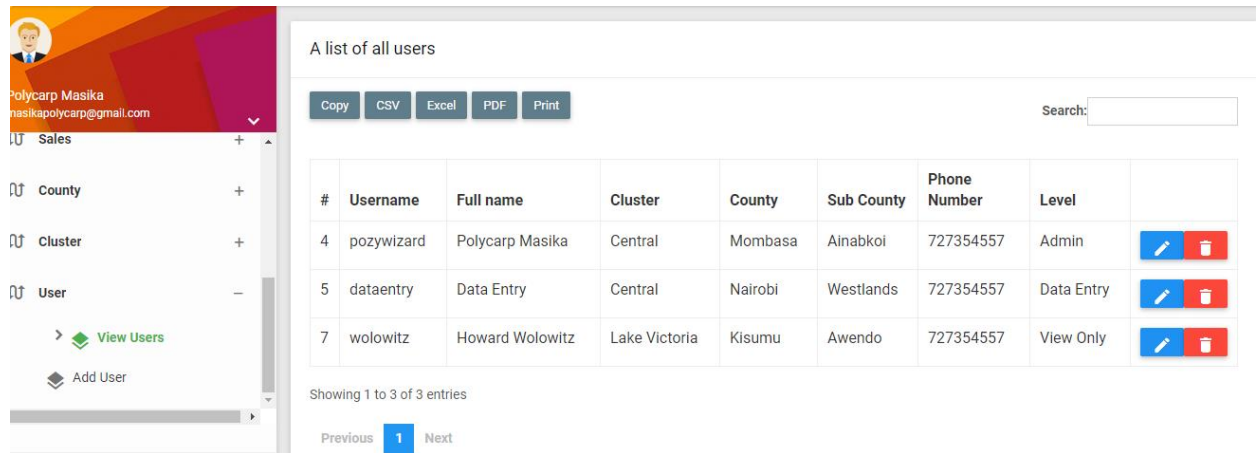
Add Cluster Interface



The screenshot shows the 'Add Cluster' interface. The sidebar is identical to the previous view, but the 'Add Cluster' option in the menu is highlighted. The main area is titled 'ADD CLUSTER' and contains a single text input field labeled 'Cluster' and a blue 'Add Cluster' button.

User Action Area







View Users Interface



The screenshot shows the 'View Users Interface' with a sidebar on the left and a main content area. The sidebar includes a user profile for Polycarp Masika, navigation links for Sales, County, Cluster, and User, and buttons for 'View Users' and 'Add User'. The main content area displays a table of users with columns for #, Username, Full name, Cluster, County, Sub County, Phone Number, and Level. Below the table are pagination controls showing 1 to 3 of 3 entries.

A list of all users

Copy CSV Excel PDF Print Search:

#	Username	Full name	Cluster	County	Sub County	Phone Number	Level	
4	pozywizard	Polycarp Masika	Central	Mombasa	Ainabkoi	727354557	Admin	 
5	dataentry	Data Entry	Central	Nairobi	Westlands	727354557	Data Entry	 
7	wolowitz	Howard Wolowitz	Lake Victoria	Kisumu	Awendo	727354557	View Only	 

Showing 1 to 3 of 3 entries

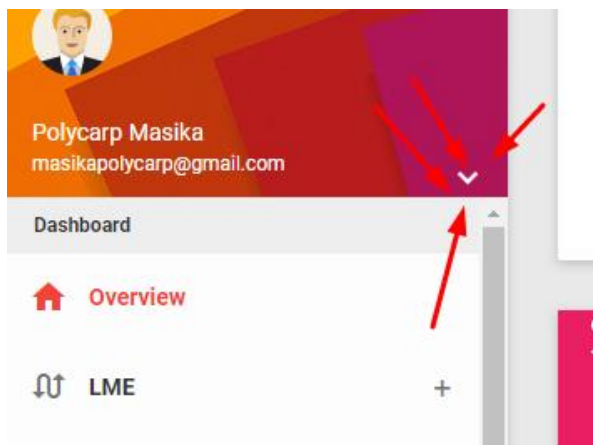
Previous **1** Next

Use levels

- Admin
This user has complete control of all functionality and can add and remove other users as well as perform all data entry functions.
- Data Entry
This user can only perform data entry functions but can't delete or add users.
- View Only
This user can only view data but cannot perform data entry functions like adding/deleting data.
This user can't add or delete other users.

Logging Out

To logout click on the arrow on the left sidebar



Click **"Sign Out"** and you'll be logged out of the system

