FW Tools Feature Documentation (English)

# % complete	65
Trạng thái	Hoàn tất

FW Tools - Slide Content Guide

> Purpose: This document contains detailed content for presentation slides, user guides and introduction to each module of the FW Tools web app - a tool to enhance data collection efficiency for quantitative online surveys.

FW Tools Overview

General Information

- **Application Name**: Data Collection Pro - FW Tools
- **Purpose**: Enhance data collection efficiency for quantitative online surveys
- **Author**: dien.pham
- **Technology**: Web app (HTML/CSS/JS) + Firebase (Auth, Firestore, Storage) + Alchemer API

Main Modules (8 modules)

1. 🏠 **Dashboard** - Project overview
2. 📥 **Import Data** - Import data from various sources
3. 🌐 **URL Import** - Import from online URLs

4. 📊 **Projects** ⭐ - FW project management
5. 📋 **Filter & Batch** ⭐ - Filter and batch marking
6. 📤 **Export** - Export data
7. ⚙️ **Config** - System configuration
8. 📧 **Auto Report** - Automatic reporting

Module 1: 🏠 Dashboard

Purpose

Provides an overview of the current project and recent activities.

Key Features

1.1 Stats Cards

Statistic	Description
Total Rows 📊	Total number of imported data rows
SMS Marked 📱	Rows marked for SMS batch
Email Marked 📧	Rows marked for Email batch
Pending ⏳	Unprocessed rows

1.2 Batch History Chart

- Displays history of marked batches
- Track processing progress over time

1.3 Recent Actions

- Log of recent activities
- Track who did what, when

1.4 Quick Actions

Button	Function
📥 Import File	Navigate to Import Data
📱 Mark SMS 500	Mark 500 rows for SMS immediately
📧 Mark Email 500	Mark 500 rows for Email immediately
📤 Export Latest	Export the latest batch

1.5 Starred Projects

- List of favorite projects
- Click to quickly switch to project

How to Use

1. After login, Dashboard is the first screen
2. Quickly view statistics
3. Use Quick Actions for fast operations
4. Click on favorite projects to switch

Module 2: 📥 Import Data

Purpose

Import respondent data from various sources.

Import Tabs

2.1 📁 Import File (Default)

Supported formats: CSV, Excel (.xlsx, .xls)

How to import:

1. Drag and drop file into drop zone
2. Or click "Choose File" to select
3. Configure options:
    - **Sheet**: Select sheet (for multi-sheet Excel)

- **Header row**: Row containing headers (default: 1)
- **Auto detect columns**: Automatically map columns

4. Click "Import" to confirm

Preview: View first 10 rows before importing

2.2 🌐 Import URL

- Enter direct URL of online CSV/Excel file
- Useful when file is hosted on server

2.3 🔗 Alchemer API

Features:

- Connect directly with Alchemer (SurveyGizmo)
- Test connection before use
- 2 main functions:
  1. **Update Response Status**: Update status (Complete/Partial/Disqualified) from Alchemer
  2. **Fetch Full Survey Data**: Download all responses from survey

How to use:

1. Enter API Token and API Secret
2. Enter Survey ID
3. Click "Test Connection" to verify
4. Click "Save Credentials" to save

Module 3: 🌐 URL Import

Purpose

Import data from online URLs with history management.

Features

3.1 Import Form

- **File URL**: Enter path to CSV/Excel file
- **Project name**: Name for new project
- Shows progress bar while loading

3.2 Import History

- Save imported URLs
- Click to quickly re-import
- Delete individual items or all

3.3 Data Table

- Display imported data
- **Filter**: Filter by column and value
- **Column Visibility**: Show/hide columns
- **Pagination**: Page through data (25/50/100/200 rows)

Module 4: 📊 Projects ⭐ (Main FW Module)

> [!IMPORTANT]
> This is the most important module for Fieldwork project management

Purpose

Manage information and quotas for FW projects.

2-Panel Interface

- **Left panel**: List of all projects
- **Right panel**: Details of selected project

Detailed Features

4.1 Create New Project

Required information:

Field	Description	Required
Project name	Display name	✅
Survey ID	ID from Alchemer	✅ (for quota fetch)
Target	Target quantity	❌
Criteria	Screening criteria	❌
Notes	Additional notes	❌
Vendor links	URLs for vendors	❌

4.2 Quota Status (Important Feature)

How to use:

1. Select project from list
2. Click 🔄 **Refresh** to fetch quota from Alchemer
3. Displays:
    - List of each quota with progress bar
    - Completes / limit count
    - **Total completed**: Sum of all completes
    - **Remaining**: Count needed to reach target

Example display:

```
Quota 1: 150/200 (75%) ███████░
Quota 2: 80/100 (80%)  ████████░
──────────────────────────────────
Total completed: 230
Remaining: 70
```

4.3 Project Data

- Shows number of imported rows
- Import data directly for project

4.4 Actions

Button	Function
✏️ Edit	Edit project information
🗑️ Delete	Delete project
📥 Import Data	Import data for project
⭐ Set as Active	Set as current working project

Projects Tips

1. **Always enter Survey ID** to enable quota fetching
2. **Star projects** you're working on for quick access from Dashboard
3. **Refresh quota regularly** to track progress

Module 5: 📋 Filter & Batch ⭐ (Main FW Module)

> [!IMPORTANT]
> Most important module for batch sample sending

Purpose

Filter data and mark batches for SMS/Email sending.

Interface

5.1 Toolbar

Tool	Function
🔍 Filter Toggle	Show/hide filter panel
Search box	Quick search
🔀 Shuffle	Randomize row order
👁️ Columns	Select visible columns
🔄 Refresh	Refresh data

5.2 Filter Panel (Important)

How to create filter:

1. Click 🔍 to open filter panel
2. Click **+ Add Condition** to add criteria
3. Select:
   - **Column**: Column to filter
   - **Operator**: Comparison type (equals, contains, in, empty, not empty...)
   - **Value**: Filter value (or select multiple values)
4. Click **Apply** to apply

Operators:

Operator	Description
equals	Exact match
not equals	Different from
contains	Contains text
starts with	Begins with
ends with	Ends with
in	In list (select multiple values)
is empty	Empty
is not empty	Not empty

Preset filters:

- Not yet batched
- SMS not sent
- Email not sent

🔄 **Defaults**: Reset to default filters (province, year, fincome, SMS_Batch)

5.3 Data Table

- Display data with applied filters
- **Showing X / Y**: X visible rows / Y total rows

- Pagination: 25/50/100/200/500 rows

5.4 Batch Actions (Important Feature)

SMS Batch:

Button	Function
Mark 500	Mark next 500 rows as new batch
Mark 1000	Mark 1000 rows
Custom...	Enter custom number

Email Batch:

- Same as SMS Batch

Remind SMS & **Remind Email**:

- Used to mark reminder batch for those already sent but not completed

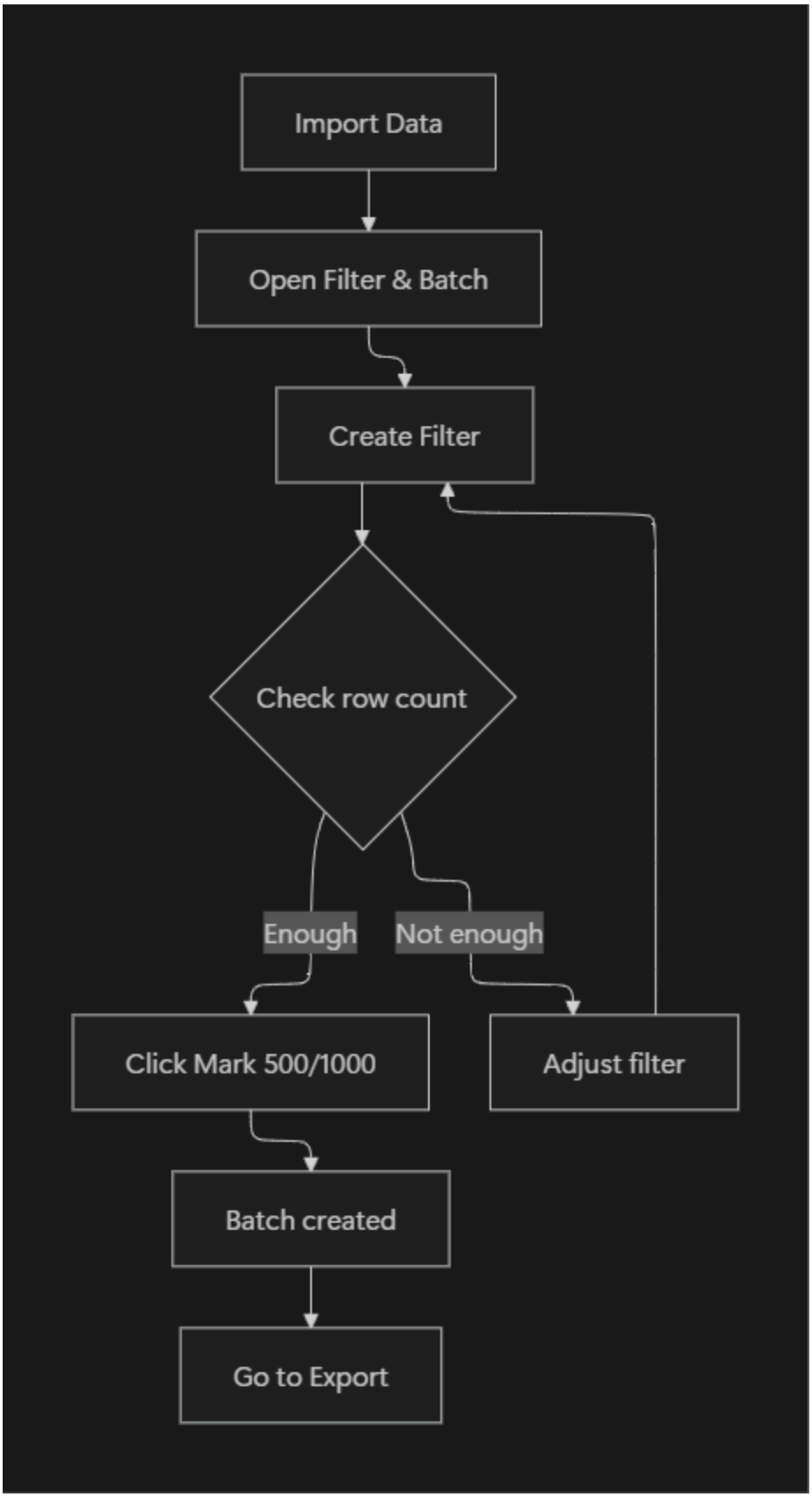
🗑️ **Delete Batch**:

1. Select type (SMS/Email)
2. Select batch number
3. Click Delete to remove batch (clear column values)

5.5 Undo/Redo

- ↶ **Undo**: Undo last action
- **Redo** ↷: Redo undone action

Standard Batch Marking Flow


Import Data
Open Filter & Batch
Create Filter
Check row count
Enough
Not enough
Click Mark 500/1000
Adjust filter
Batch created
Go to Export

Filter & Batch Tips

1. **Always filter before marking batch** to avoid mistakes
2. **Use Shuffle** to randomize order before marking
3. **Check "Showing" count** before marking to know remaining rows
4. **Use Undo** immediately if marked incorrectly
5. **"Not yet batched" preset** is most commonly used

Module 6: 📤 Export

Purpose

Export marked batch data for sample sending.

Export Tabs

6.1 SMS Export

- Select SMS batch to export
- Shows row count to be exported
- Export columns: Phone (Column A), SMS Content

6.2 Email Export

- Select Email batch to export
- Export columns: Email, SGUID Link

6.3 Custom Export

- Select any columns
- Filter options:
  - All rows: Entire dataset
  - Visible rows only: Only currently displayed rows

Export Format

- **Excel (.xlsx)**: Default format
- **CSV (.csv)**: For other applications

Export History

- History of exports
- Shows: Type, Batch, Rows, Filename, Time

Export Tips

1. **Verify row count** before exporting
2. **Name file clearly** including batch number
3. **Keep Export History** to track what was sent

Module 7: ⚙️ Config

Purpose

Configure column mapping and system settings.

Configuration Sections

7.1 Column Configuration

Configure important columns in data file:

Setting	Default	Description
Source Column (sguid_link)	E	Column containing survey link
Content Column (SMS)	P	Column containing SMS content
SMS Batch Column	Q	Column for SMS batch marking
Email Column	H	Column containing email
Email Batch Column	S	Column for email batch marking
Email Link Column	E	Column containing links for email
Remind SMS Batch Column	T	Column for SMS reminder batch
Remind Email Batch Column	U	Column for email reminder batch

Setting	Default	Description
Respondent Status Column	V	Status column (Complete/Partial)

7.2 Alchemer API Credentials

- Enter API Token and Secret to connect to Alchemer
- Used for Projects module and Update Status

7.3 Template Management

- Create and save SMS templates
- Variable `{link}` will be replaced with Source Column value

7.4 Advanced Options

Option	Description
Overwrite existing batch	Overwrite old batch when marking
Auto export after mark	Automatically export after marking batch
Default batch limit	Default quantity (500)

When to Configure?

- When data file has different structure from standard template
- When changing default columns
- After initial system setup

Module 8: 📧 Auto Report

Purpose

Automatically send quota progress reports via email on schedule.

Main Sections

8.1 Report Configuration

Field	Description
Select Project	Project to report on
Survey ID	Survey ID from Alchemer
FW Start Date	Fieldwork start date
FW End Date	Fieldwork end date
Recipient Emails	Email list (comma separated)

Schedule (multi-select):

- 7:00 AM
- 8:00 AM
- 9:00 AM
- 12:00 PM
- 5:00 PM
- 8:00 PM

8.2 Report Preview

- Preview email content before sending
- Displays:
  - Total completes and target
  - Overall progress bar
  - Pacing info (on track/behind/ahead)
  - Daily timeline
  - Individual quota list

8.3 Send Now

- Click "📧 Send report now" to send manually
- No need to wait for schedule

8.4 Send History

- Shows report send history
- Time and status

Email Report Content

📊 Daily Quota Report - [Project Name]
━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━

📅 Date: [Current Date]
📋 Survey ID: [ID]
🎯 Target: [X] completes

OVERALL PROGRESS
━━━━━━━━━━━━━━━━━

[Progress bar]
Completes: [X] / [Target] ([%])

PACING
━━━━━━

[Status: On track / Behind / Ahead]
[X] days remaining
Need [Y] completes/day

QUOTA DETAILS
━━━━━━━━━━━━━

[Detailed quota table]

RECOMMENDATIONS
━━━━━━━━━━━━━━━

[Quotas needing focus]

System Architecture Optimization

🛡️ Security Enhancement & API Key Management (Server-side Migration)

The transition of API Key management from Client-side (Browser) to Server-side (Firebase Cloud Functions) introduces several critical improvements to the system's architecture:

1. Maximum Security

- **Previous state:** API Keys (Token and Secret) were stored in the browser's `localStorage` or entered manually by users. This posed a risk of exposure if the user's device was compromised or via XSS (Cross-Site Scripting) attacks.
- **Current state:** API Keys are securely stored in **Firestore** (within the `config/alchemer` collection) with restricted access limited to Administrators. The frontend source code and client-side storage are now completely free of sensitive credentials.

2. Centralized Management

- **Zero Configuration:** Users no longer need to manually input API Keys every time they use the tool or after clearing browser cache.
- **Unified Updates:** When an Admin updates the API Keys in the Firebase console, the changes are instantly applied across the entire application for all users, eliminating the need for individual manual updates.

3. "Secure Proxy" Mechanism

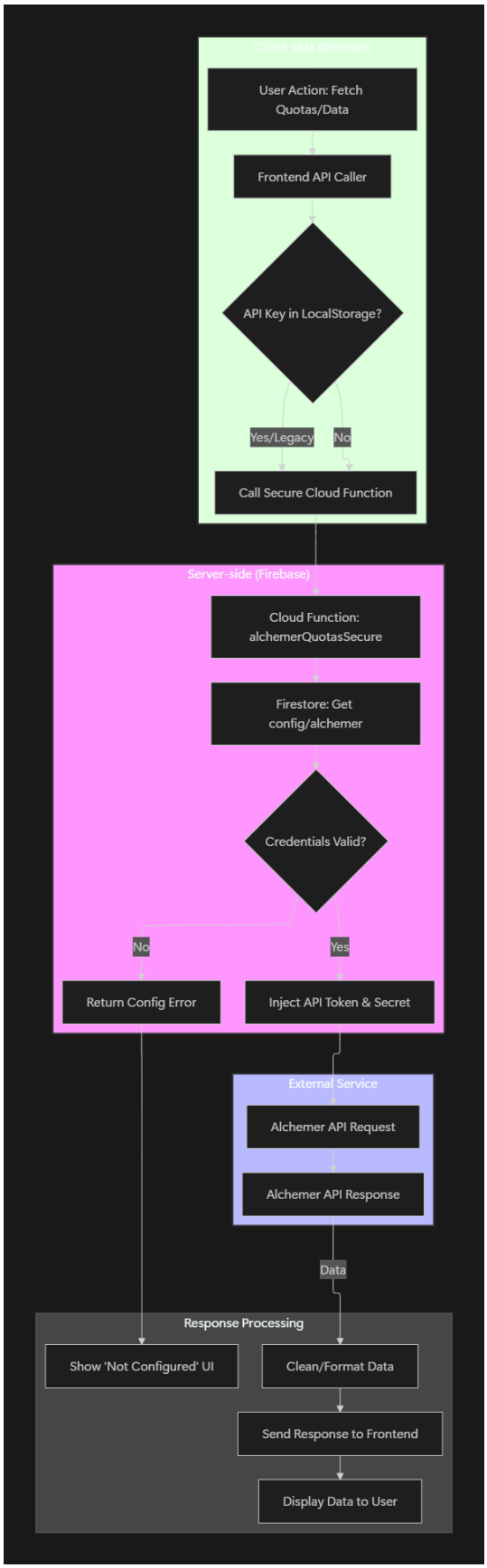
- The system implements a robust intermediary layer (Proxy Layer) through **Firebase Cloud Functions**:
  - `alchemerTest`: Verifies API connectivity.
  - `alchemerSurveys`: Retrieves survey lists.
  - `alchemerResponses`: Fetches survey response data.
  - `alchemerQuotasSecure`: Retrieves quota information securely.
- When the frontend requests data, the Server automatically retrieves the credentials from Firestore, injects them into the request, and handles the communication with Alchemer. All data is sanitized on the server before being sent back to the client.

4. Improved User Experience (UX)

- **Seamless Integration:** The system automatically detects and applies the API configuration upon user login.
- **Cleaner Interface:** Complex and technical input fields have been removed from the UI. Users are now presented with a simple, real-time connection status (✅ Connected / ❌ Not configured).
- **System Stability:** Reduces errors caused by human factors, such as typos, incorrect key formatting, or expired credentials.

This content can be utilized in the "Technical Architecture" or "Security Compliance" sections of your project documentation.

FLOWCHART:


Client-side (Browser)
User Action: Fetch Quotas/Data
Frontend API Caller
API Key in LocalStorage?
Yes/Legacy
No
Call Secure Cloud Function
Server-side (Firebase)
Cloud Function: alchemerQuotasSecure
Firestore: Get config/alchemer
Credentials Valid?
No
Yes
Return Config Error
Inject API Token & Secret
External Service
Alchemer API Request
Alchemer API Response
Data
Response Processing
Show 'Not Configured' UI
Clean/Format Data
Send Response to Frontend
Display Data to User

📝 Key Flow Steps:

1. **Frontend Request:** The browser sends a request to a managed endpoint (e.g., `/api/alchemer/quotas-secure`) without sending any sensitive keys.
2. **Server Authentication:** The Firebase Cloud Function retrieves the production API Keys directly from a secure document in **Firestore**.
3. **Proxy execution:** The server acts as a proxy, attaching the hidden credentials and performing the request to Alchemer on behalf of the user.
4. **Secure Return:** The results are sanitized and sent back to the browser for rendering.

Common Features

Header Bar (Top)

- **Project Selector**: Select/switch project
- ⭐ **Star**: Star favorite project
- 💾 **Save**: Save current project
- **+ New**: Create new project
- 🗑️ **Delete**: Delete project
- **User Info**: Logged in email + Logout
- 🔔 **Notifications**: System notifications

Sidebar (Left)

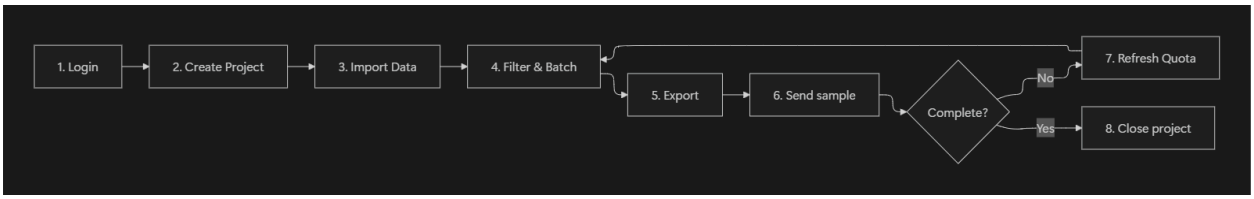
- Navigation between modules
- **VI/EN**: Switch language
- 🌙: Dark mode
- Version: v1.0.0

Data Sync

- Data saved locally (localStorage) and synced to Firebase

- Can work offline, syncs when internet available

Standard Workflow



Step Details:

1. **Login**: Use admin-approved email
2. **Create Project**: Enter project info, survey ID
3. **Import Data**: Upload respondent file
4. **Filter & Batch**: Filter by criteria, mark batch
5. **Export**: Export batch file for sending
6. **Send sample**: Send SMS/Email outside app
7. **Refresh Quota**: Check progress, repeat if needed
8. **Close project**: When sample complete

Tips and Shortcuts

Advanced Tips

1. **Large imports**: For files >10K rows, split by batch
2. **Efficient filtering**: Use "in" operator to select multiple values
3. **Backup**: Periodically Custom Export all data
4. **Quota tracking**: Setup Auto Report to stay updated

Common Troubleshooting

Issue	Solution
Cannot fetch quota	Check API credentials in Config
Data not displaying	Check if filter is active
Export file empty	Check selected batch number
Cannot save	Check internet connection

Q&A / Contact

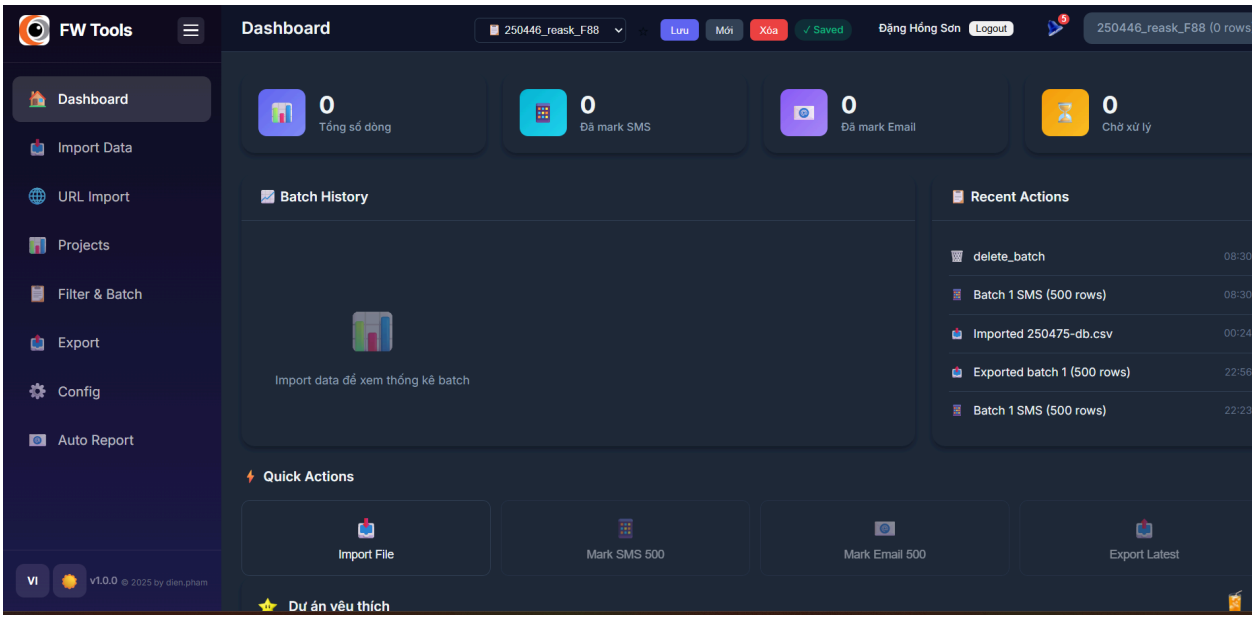
- **Author**: dien.pham
- **Copyright**: © 2025 by dien.pham
- **Report Bug**: [Contact admin]

SCREEN INTERFACES OF THE FW TOOL SOFTWARE

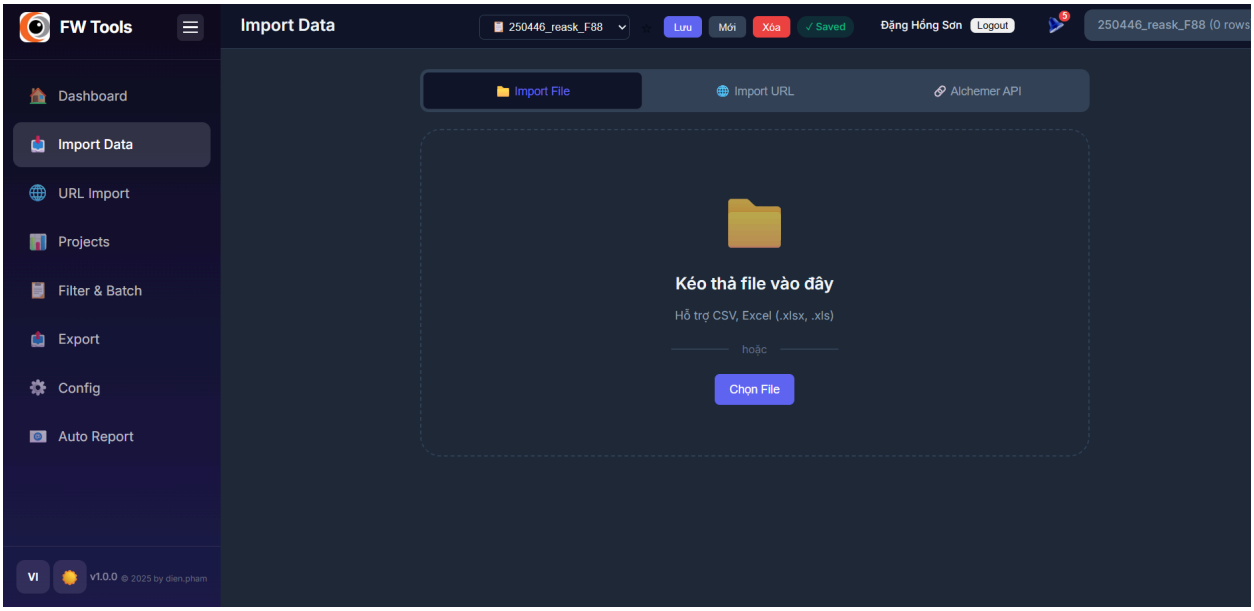
This section presents the main user interface screens of the FW Tool software.

Each image illustrates the actual interface of a specific module, helping users quickly recognize features and navigate the system effectively during daily operations.

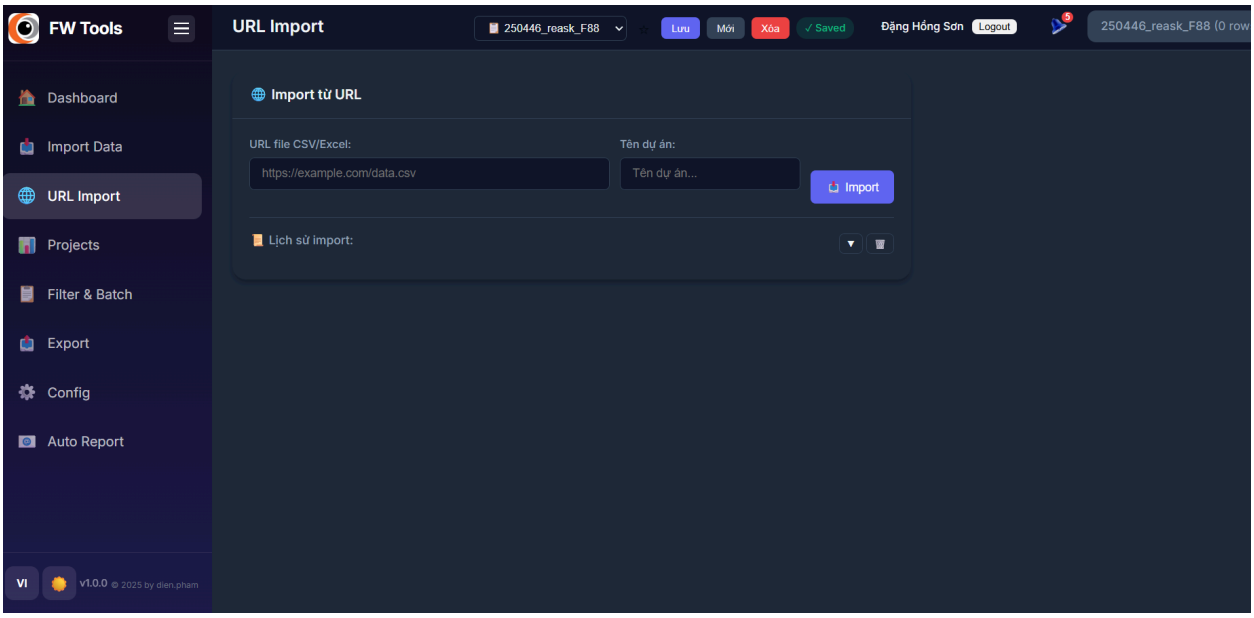
DASHBOARD



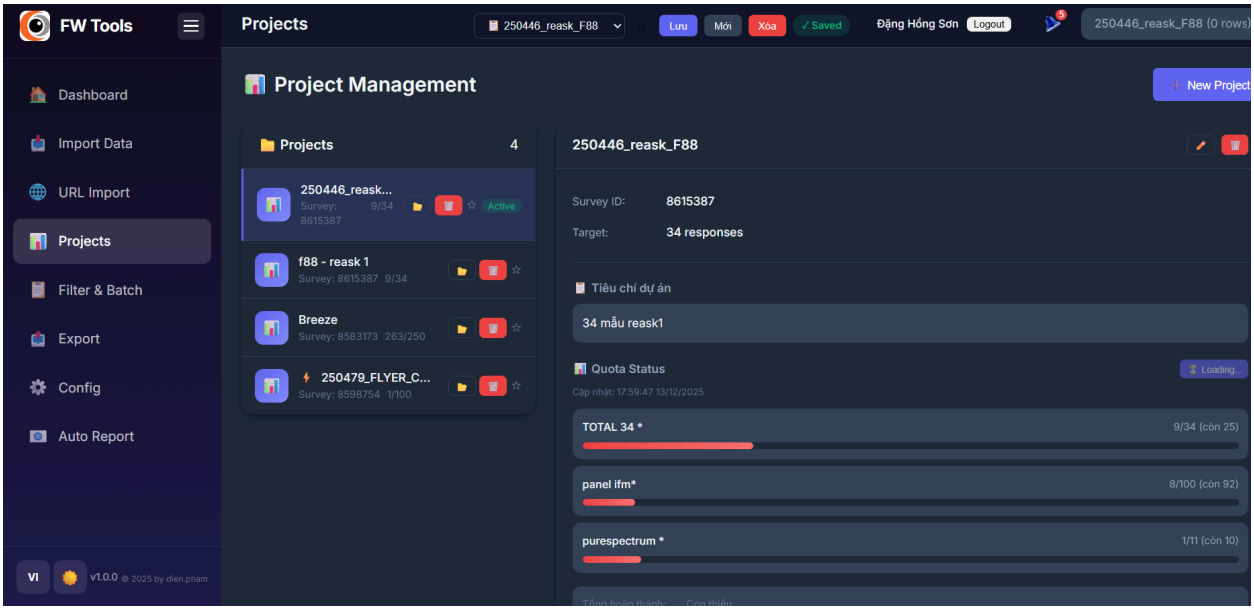
IMPORT DATA



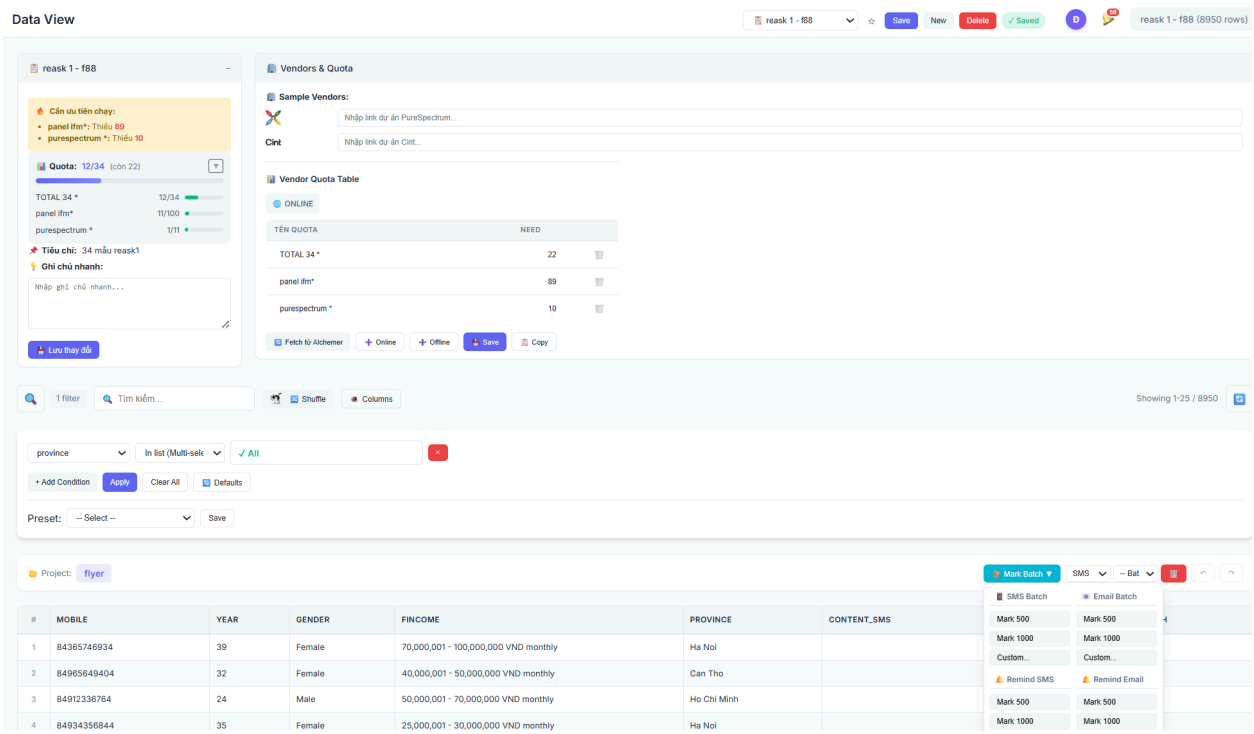
URL IMPORT



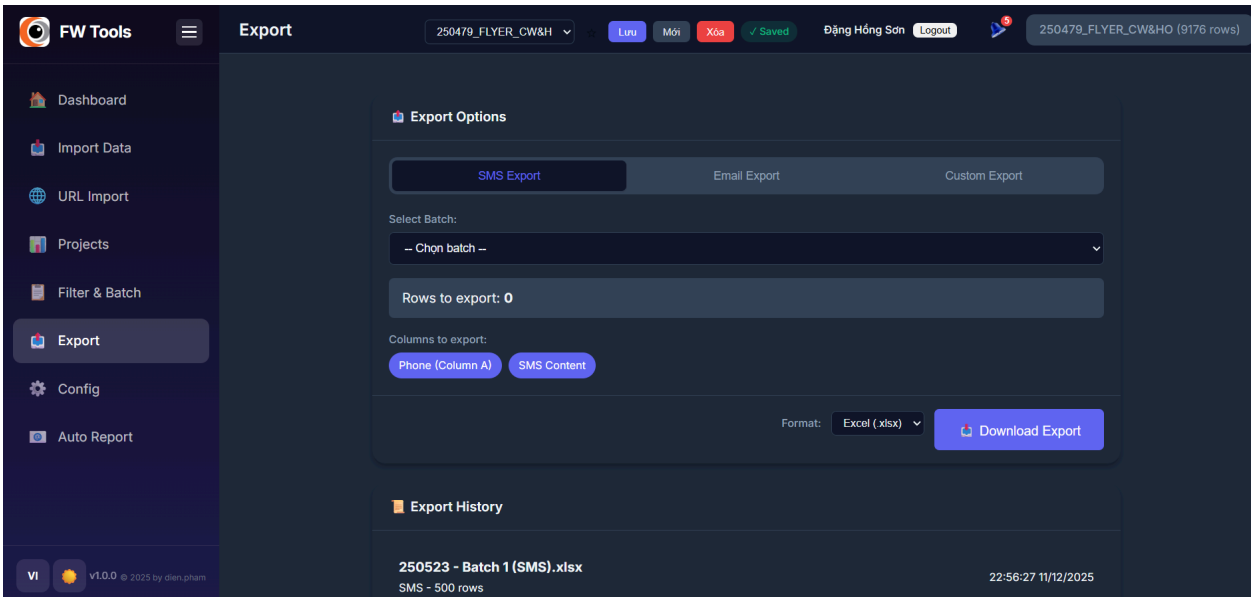
PROJECTS



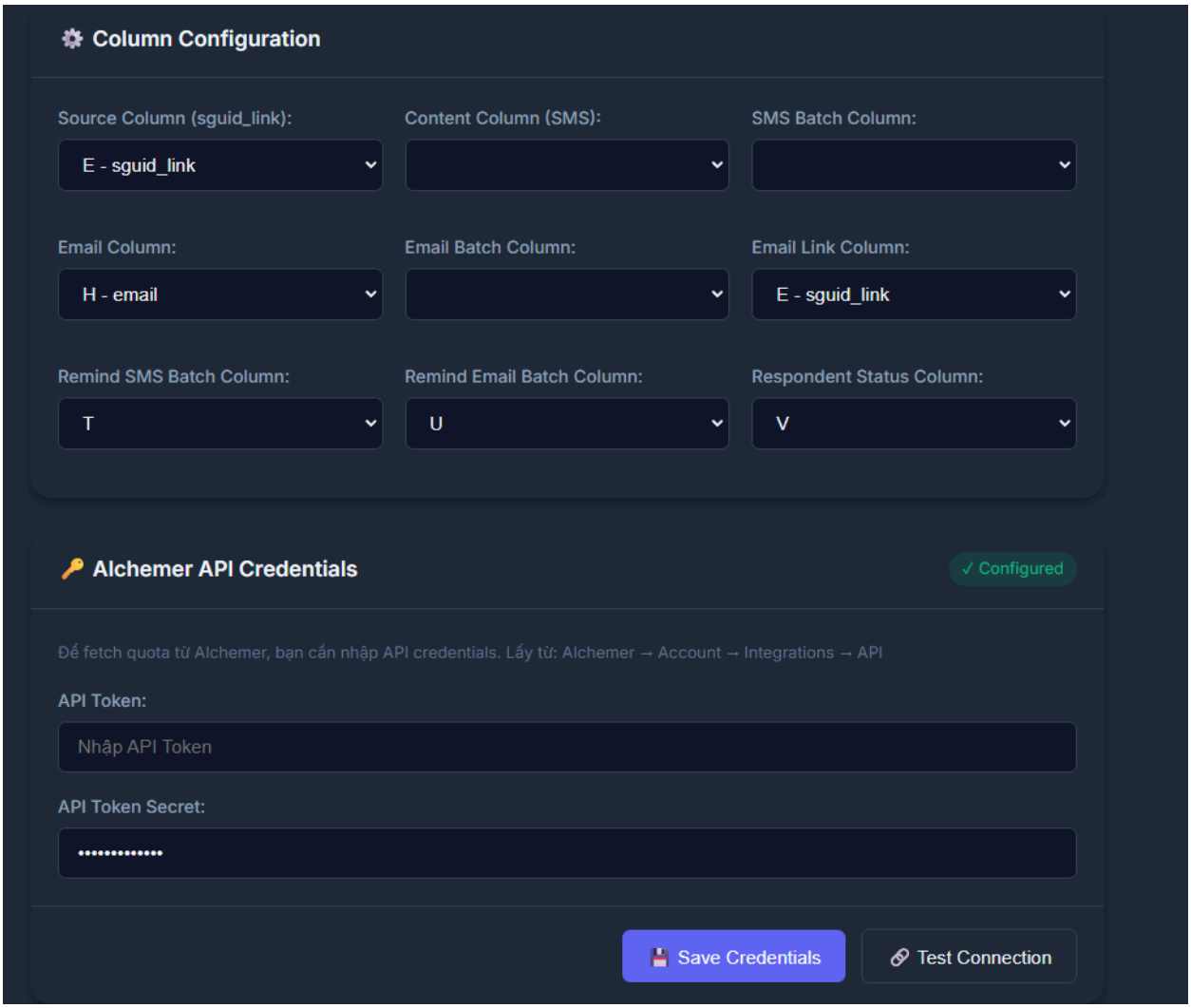
FILTER AND BATCH

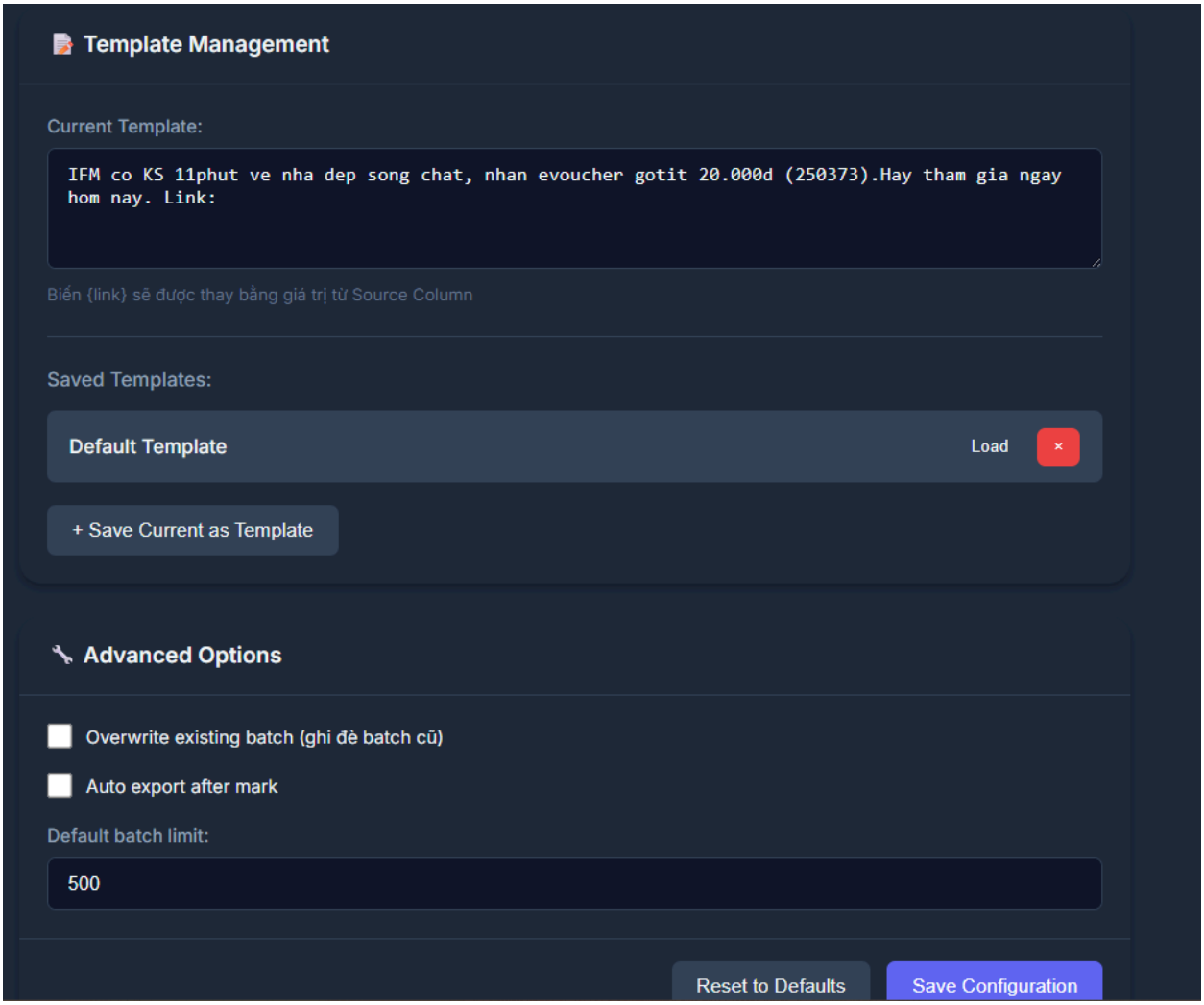


EXPORT

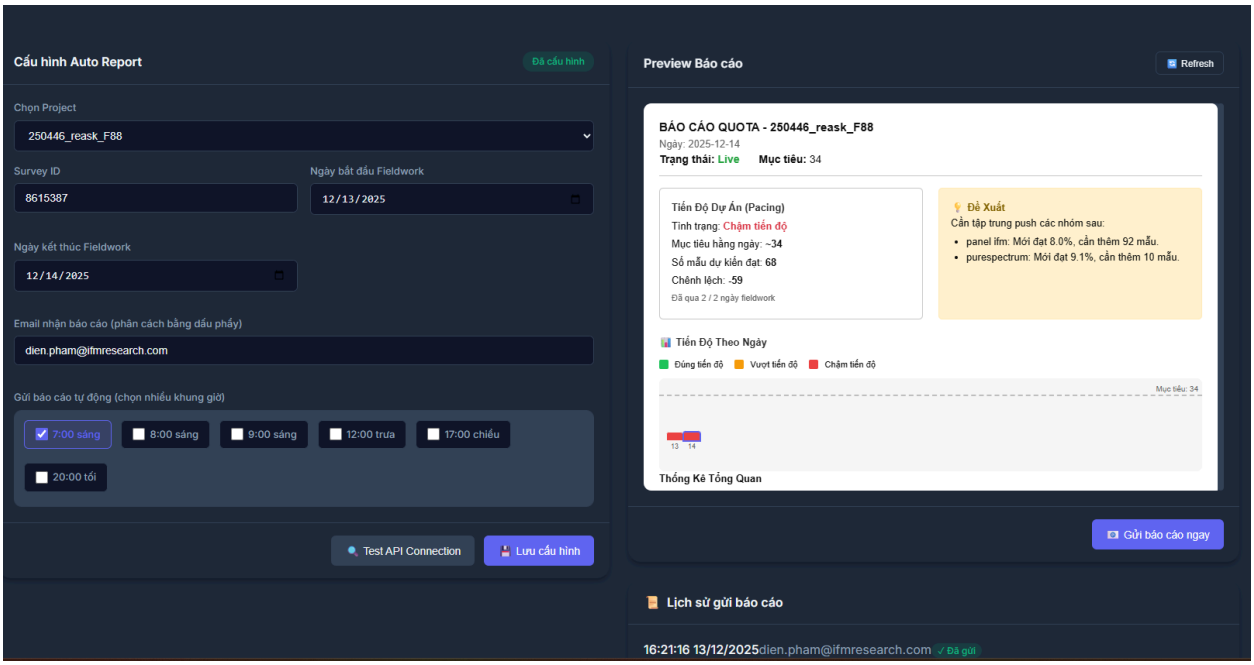


CONFIG


Column Configuration
Source Column (sguid_link):
E - sguid_link
Content Column (SMS):
SMS Batch Column:
Email Column:
H - email
Email Batch Column:
Email Link Column:
E - sguid_link
Remind SMS Batch Column:
T
Remind Email Batch Column:
U
Respondent Status Column:
V
Alchemer API Credentials
✓ Configured
Để fetch quota từ Alchemer, bạn cần nhập API credentials. Lấy từ: Alchemer → Account → Integrations → API
API Token:
Nhập API Token
API Token Secret:
Save Credentials
Test Connection

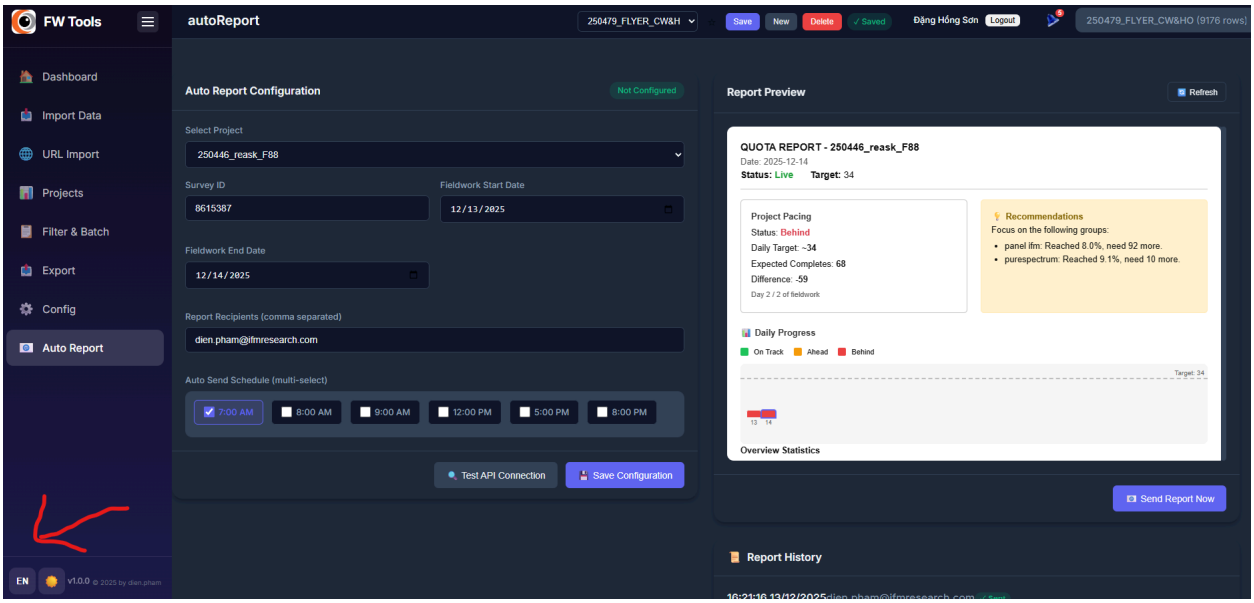

Template Management
Current Template:
IFM co KS 11phut ve nha dep song chat, nhan evoucher gotit 20.000d (250373).Hay tham gia ngay hom nay. Link:
Biến {link} sẽ được thay bằng giá trị từ Source Column
Saved Templates:
Default Template
Load
×
+ Save Current as Template
Advanced Options
Overwrite existing batch (ghi đè batch cũ)
Auto export after mark
Default batch limit:
500
Reset to Defaults
Save Configuration

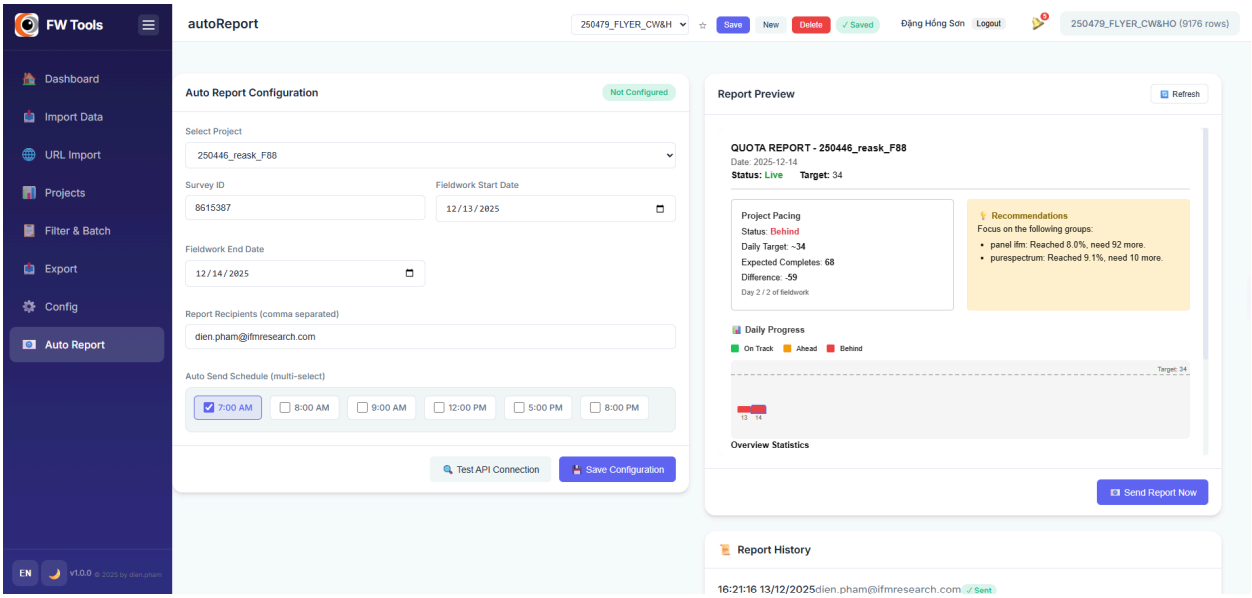
AUTO REPORT



Additional Features

The web application includes additional features such as **multi-language support** and **light/dark mode**, allowing users to customize the interface based on their preferences and working environment.




FW Tools
autoReport
250479_FLYER_CW&H
Save
New
Delete
✓ Saved
Đặng Hồng Sơn
Logout
250479_FLYER_CW&HO (9176 rows)
Dashboard
Import Data
URL Import
Projects
Filter & Batch
Export
Config
Auto Report
EN
v1.0.0
Auto Report Configuration
Not Configured
Select Project
250446_reask_F88
Survey ID
8615387
Fieldwork Start Date
12/13/2025
Fieldwork End Date
12/14/2025
Report Recipients (comma separated)
dien.pham@ifmresearch.com
Auto Send Schedule (multi-select)
7:00 AM
8:00 AM
9:00 AM
12:00 PM
5:00 PM
8:00 PM
Test API Connection
Save Configuration
Report Preview
Refresh
QUOTA REPORT - 250446_reask_F88
Date: 2025-12-14
Status: Live
Target: 34
Project Pacing
Status: Behind
Daily Target: ~34
Expected Completes: 68
Difference: -59
Day 2 / 2 of fieldwork
Recommendations
Focus on the following groups:
panel ifm: Reached 8.0%, need 92 more.
purespectrum: Reached 9.1%, need 10 more.
Daily Progress
On Track
Ahead
Behind
Target: 34
Overview Statistics
Send Report Now
Report History
16:21:16 13/12/2025dien.pham@ifmresearch.com
✓ Sent