

Insect Capture and Monitoring Mobile Application Development Specification Document

1 Project Overview

- Project Name: Insect Capture and Monitoring Mobile Application
- Target Platforms: iOS and Android + Web-based Backend
- Development Languages: C#, Python, etc. mainstream, aggregated platform development
- Backend: Django / Flask

2 Technical Architecture

2.1. Frontend Architecture

- iOS and Android: MVVM aggregated platform development
- Shared business logic: Consider using Kotlin Multiplatform

2.2. Backend Architecture

- Language: Python or C#
- Framework: Django / Flask
- Database: PostgreSQL / MySQL
- ORM: SQLAlchemy (Python)
- File Storage: Amazon S3

2.3. API Design

- RESTful design principles
- Use JWT for authentication
- API version control: Use /api/v1/ in URL

3 Data Models

(All tables need to add logical deletion field bool, creator and last modifier UUID, creation and last modification time Timestamp)

3.1 User Group Table (UserGroup)

- ugid: UUID
- uname: String
- ugdescription: String

3.2 Access Rights Table (AccessRight)

- arid: UUID
- arname: String
- arpage: String
- arfunction: String

3.3 Enterprise and Organization (organization)

- OrgID: UUID
- OrgParentID: UUID (FK: organization)
- OrgName: String
- OrgAddress: String
- location: GeoJSON Point
- OrgAdmin: UUID (FK: User)
- OrgComments: String

3.4 User (User)

- uid: UUID
- uname: String
- email: String
- password_hash: String
- OrgID: UUID (FK: Organization)
- ugroup: ugid (FK: UserGroup)
- Title: String
- Department: String
- Mobile: String

3.5 Group Access Table (GroupAccess)

- ugid: UUID (FK: UserGroup)
- arid: UUID (FK: AccessRight)
- gacomments: String

3.6 Monitoring Area Definition Table (Repository)

- repid: UUID
- OrgID: UUID (FK: Organization)
- repname: String
- repmap: String (path save for picture)
- uid: UUID (FK: User)

3.7 Trap Type (TrapType)

- ttID: UUID
- ttName: String
- ttComments: String

3.8 Trap (Trap)

- TrapID: UUID
- OrgID: UUID (FK: organization)
- uid: UUID (FK: User)
- repid: UUID (FK: Repository)
- location: GeoJSON Point
- qr_code: String
- ttID: UUID (FK: TrapType)
- install_at: Datetime
- invalid_at: Datetime
- inactive_at: Datetime
- status: Enum (active, inactive)

3.9 Bug Registration Table (Bugs)

- bgid: UUID
- bg_ParentID: UUID (FK: bugs)
- bgName: String
- bgNameEn: String
- bgNameLatin: String
- bgDemageLevel: (FK: DemageLevel)
- uid: UUID (FK: users)

3.10 Pest Control Suggestions (PestControl)

- pcid: UUID
- bgid: UUID (FK: bugs)
- pcExpert: String
- pcExpertTitle: String
- pcExpertOrg: String
- pcPreventSug: String
- pcKillSug: String
- pcComments: String
- uid: UUID (FK: users)

3.11 Bug Image Table (BugImages)

- biid: UUID
- bgid: UUID (FK: bugs)
- biPath: String
- uid: UUID (FK: users)

3.12 Inspection Definition Main Table (routing)

- rtid: UUID
- uid: UUID (FK: users)
- rtfromdate: date
- rtenddate: date
- rtcomments: String
- rtid: UUID (FK: users)

3.13 Inspection Definition Sub-table (routingreg)

- Rtrid: UUID
- rtid: UUID (FK: routing)
- repid: UUID (FK: Repository)
- rtcomments: String

3.14 Inspection Record Table (RoutingRec)

- rrid: UUID
- uid: UUID (FK: users)
- rrdatetime: datetime
- rr_url: string (storing inspection photos)
- rr_qr: string (storing inspection QR code)
- rr_exception: bool
- rr_discription: string

3.15 Capture Main Record (Capture)

- cid: UUID
- trap_id: UUID (FK: Trap)
- user_id: UUID (FK: User)
- Cap_Location: String
- species: String
- count: Integer
- cap_date: Datetime
- image_url: String
- notes: Text
- auditor_id: UUID (FK: User)
- auditor_comments: String

3.16 Capture Sub-record (CaptureDetails)

- cdID: UUID
- cid: UUID (FK: CaptureImages)
- ccid: UUID
- found_id: UUID (FK: User)
- bgid: UUID (FK: bugs)
- count: Integer

- bsID: UUID (FK: bugStatus)
- etid: UUID (FK: BugEecotype)
- lsid: UUID (FK: BugLifeStage)
- bsid: UUID (FK: bugSize)
- sfid: UUID (FK: surface)
- cdDiscription: String
- capture_date: Datetime
- image_url: String
- notes: Text
- auditor_id: UUID (FK: User)
- auditor_comments: String

3.17 Capture Photos (CaptureImages)

- Ciid: UUID
- Image_url: String
- Image_Discription: String
- created_at: Timestamp
- updated_at: Timestamp

4 API Endpoints

4.1 User Authentication

- POST /api/v1/auth/register
- POST /api/v1/auth/login
- POST /api/v1/auth/logout
- GET /api/v1/auth/user

4.2 Trap Management

- GET /api/v1/traps
- POST /api/v1/traps
- GET /api/v1/traps/:id
- PUT /api/v1/traps/:id
- DELETE /api/v1/traps/:id

4.3 Capture Records

- GET /api/v1/captures
- POST /api/v1/captures
- GET /api/v1/captures/:id
- PUT /api/v1/captures/:id
- DELETE /api/v1/captures/:id

5 User Interface Specifications

5.1 Color Scheme

- Primary Color: #007AFF
- Background Color: #FFFFFF
- Secondary Color: #F2F2F7
- Warning Color: #FF3B30
- Success Color: #34C759

5.2 Fonts

- iOS: San Francisco
- Android: Roboto
- Font Sizes:
 - Heading: 20sp
 - Subheading: 18sp
 - Body: 16sp
 - Caption: 14sp

5.3 Icons

- Use SF Symbols (iOS) and Material Icons (Android)
- Unified icon size: 24x24dp

5.4 Layout

- Use Constraint Layout
- Margins: 16dp
- Element spacing: 8dp

6 Functional Module Development Specifications:

6.A Backend Functional Modular

6.1 Organization Registration

- Register organization when user selects organization during registration
- Allow users to set up hierarchical management of organizations (tree display)
- First-time registration administrator defaults to current registrant
- Organization registration allows administrator to change all information
- Summary and detailed query of historical inspection/pest records for each organization

6.2 User Registration Module

- Implement local token storage
- Use Keychain (iOS) and EncryptedSharedPreferences (Android) to store sensitive information
- Implement auto-login functionality
- New registered users who enter an existing organization code must be reviewed and granted permissions by the administrator before use
- Summary and detailed query of historical inspection, inspection, and pest discovery records for each user

6.3 Organization User Permission Management

- Organization user administrator sets function permissions for newly registered users
- Custom permission groups can be defined for easy use by users with the same type of permissions
- Specific permissions can be modified arbitrarily, and can also be modified individually after inheriting from a group
- Users can be activated and deactivated, but not deleted

6.4 Trap Management:

- Users can manually enter or scan QR code for new trap registration
- Can register trap location directly during registration or supplement later
- Can scan trap QR code to query/modify trap information at any time
- Location identification method is pixel position on map image (simultaneously record percentage position from leftmost and topmost)
- User clicks on map image position to automatically obtain location, stored in JSON
- Summary and detailed query of historical pest records for each trap

6.5 Map Module Management:

- ~~Use MapKit (iOS) and Google Maps SDK (Android)~~
- Users can upload images within specified size and resolution range
- Uploaded images can be logically deleted, not allowed to modify
- Record image length, width, size, and resolution
- Support image zoom and pan
- For map images with traps, mark valid trap locations with green dots; for traps about to expire (within one month), mark with red

6.6 Pest Management:

- Can register newly discovered pests individually
- Pests need tree-structured hierarchical management
- Can enter prevention and elimination measures for pests at the time of registration
- Registrant can modify pest-related information, can only logically delete

6.7 Inspection Management

- Can set inspection tasks for designated employees
- Designated employees will receive reminders, one day before work and 15 minutes before
- Inspection employees can select designated inspection area map for trap-by-trap inspection, scanning QR codes and taking photos
- Each trap inspection needs to indicate if there are any abnormalities, if abnormal, need to fill in abnormal content
- Can inspect according to map, each completed inspection marked with a green checkmark on the original marker, abnormal ones marked with a red X
- Uninspected traps should have prompts. Area completion needs confirmation, forced completion possible for areas with uninspected traps but reasons must be provided.

6.8 Pest Discovery and Registration

- Conduct photography first, then registration on the pest discovery page
- Provide registration description for each photo
- If a new pest is discovered, can register new pest; if it's an already registered pest, can select the discovered pest
- For pest damage levels, can provide corresponding level reminders and color indicators based on the level
- Discoverer or organization administrator can modify new pest discovery information
- For multiple pests found in the same trap, can take photos and register separately

6.9 Camera Module

- Use AVFoundation (iOS) and CameraX (Android)
- Support auto-focus and flash control
- Implement image compression to optimize upload

6.10 QR Code Scanning

- Use AVFoundation (iOS) and ML Kit (Android) for QR code scanning
- Support scanning from photo album

6.11 Offline Data Synchronization

- Use Core Data (iOS) and Room (Android) for local data storage
- Implement background synchronization mechanism
- Handle synchronization conflicts

6.B Frontend Functional Modual

7 Performance Optimization

7.1 Image Loading

- Use Kingfisher (iOS) and Glide (Android) for image loading and caching
- Implement lazy loading for images

7.2 List Optimization

- Use UICollectionView (iOS) and RecyclerView (Android)
- Implement view recycling and reuse

7.3 Network Requests

- Use Alamofire (iOS) and Retrofit (Android) for network requests
- Implement request caching and failure retry mechanism

8 Security Measures

8.1 Data Encryption

- Use AES-256 to encrypt sensitive data
- Implement secure key management

8.2 Network Security

- Use SSL Pinning to prevent man-in-the-middle attacks
- Implement request signature mechanism

8.3 Code Obfuscation

- Use ProGuard (Android) for code obfuscation
- Use compile-time obfuscation (iOS)

9 Unit Testing

9.1 Unit Tests

- Use XCTest (iOS) and JUnit (Android)
- Target code coverage: 80%

9.2 UI Tests

- Use XCUITest (iOS) and Espresso (Android)
- Cover all key user flows

9.3 Integration Tests

- Use Fastlane for automated testing
- Configure CI/CD pipeline (e.g., Jenkins or GitLab CI)

10 Documentation Requirements

10.1 Code Documentation

- Use Jazzy (iOS) and Dokka (Android) to generate API documentation
- Follow standard comment formats

10.2 README

- Include project setup instructions
- List of dependencies
- Build and run instructions

10.3 Changelog

- Record changes for each version
- Follow semantic versioning conventions

11 Version Control

- Use Git for version control
- Follow Git Flow workflow
- Use meaningful commit messages, adhering to conventional commit standards

12 Delivery Standards

- Source code (including frontend and backend)
- Database schema and migration scripts
- API documentation
- User manual
- Deployment documentation
- Test reports
- Performance benchmark reports

UI Design

Web Management

Do you already have
an account?

That's awesome! You can login by clicking on
the button below. To skip this next time, you can ask
us to remember your login credentials.

Email
marcelpatoulachi@gmail.com

Password
••••••••

Remember me.

Log in

Welcome to SIPM.

Create your account by filling the form below.

Email
marcelpatoulachi@gmail.com

Password
••••••••

Remember me.

Sign up

Medium security

A good password is a mix
with letters and numbers,
lorem ipsum dolor sit amet
et unc secetur.

login and signup page

DASHBOARD ADMIN

- Dashboard
- Data Management
- Trap Management
- Dashboard 3
- Analysis
- Tables
- Forms
- Members

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trap data

Add New Trap | Delete

Floor Maps

Traps in the map: 11 Total traps: 200

Total Caught: 20

ID: R1002 1.365/8.3753

Silverfish-Lepisma saccharina:	8
Beetle - Anthrenus verbasci carpet beetle:	6
beetle - Elateridae Agrypnus click beetle:	1
Spider - Sitticus pallidus - jumping spider:	5

Nov 05, 2018

Silverfish-Lepisma saccharina:	2
Beetle - Anthrenus verbasci carpet beetle:	5
Spider - Sitticus pallidus - jumping spider:	1

Oct 10, 2018

Silverfish-Lepisma saccharina:	4
Beetle - Anthrenus verbasci carpet beetle:	1
beetle - Elateridae Agrypnus click beetle:	1
Spider - Sitticus pallidus - jumping spider:	3

Sep 1, 2018

Silverfish-Lepisma saccharina:	1
Spider - Sitticus pallidus - jumping spider:	1

Aug 15, 2018

Silverfish-Lepisma saccharina:	1
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select each trap on the trap list to show the trap detail

DASHBOARD ADMIN

3 10

trap data

Add New Trap Delete Add to dashboard

Floor Maps

Traps in the map: 11 Total traps: 200

Repository 1 +

Repository 2
Repository 3
Repository 4
Repository 5
Repository 6
Repository 7
Repository 8
Repository 9
Repository 10
Repository 11
Repository 12

ID Coordinate QR Code Risk level Current Critical Limits Repository

R1001 1.365/8.3753 Create Print

R1002 1.365/8.3753 Create Print

Edit Delete

Traps overview and management platform - add a new trap:

1. Create a trap ID by clicking "Add a new trap" and then generate a QR code for a new trap.
2. Print the QR code and stick it to a new trap. The trap coordination will show n/a at this stage.
3. Place the trap in the desired location and use the app to scan the code to retrieve the coordination.
4. After completion, each trap will have its own ID and coordination in the platform

Lisa Shulta reported 1 Whole size of dead adult Carpet Beetle - Anthrenus Verbasci (Pest) at 1.365/8.3753 on the floor

Nelly Watson reported 1 Whole size of dead adult Carpet Beetle - Anthrenus Verbasci (Pest) at 1.365/8.3753 on the floor

User Activity

Repository 4

LS Lisa Shulta Incidental Capture reported 1 Whole size of dead adult Carpet Beetle - Anthrenus Verbasci (Pest) at 1.365/8.3753 on the floor 4 minutes ago

KM Kristy Mccullough Routine Inspection reported 1 Whole size of dead adult Carpet Beetle - Anthrenus Verbasci (Pest) at 1.365/8.3753 on the floor 1 ago

KM Kristy Mccullough Active Monitoring reported 1 Whole size of dead adult Carpet Beetle - Anthrenus Verbasci (Pest) at 1.365/8.3753 on the floor 1 ago

CA Samuel Spencer Active Monitoring reported 1 Whole size of dead adult Carpet Beetle - Anthrenus Verbasci (Pest) at 1.365/8.3753 on the floor 55 minutes ago

CA Carlos Arvealo Active Monitoring reported 1 Whole size of dead adult Carpet Beetle - Anthrenus Verbasci (Pest) at 1.365/8.3753 on the floor 1 hour ago

NW Nelly Watson Incidental Capture reported 1 Whole size of dead adult Carpet Beetle - Anthrenus Verbasci (Pest) at 1.365/8.3753 on the floor 1d 30h ago

user activities overview (leader board)

DASHBOARD ADMIN

- # dashboard >
- data management
- trap management
- dashboard 3
- # analysis >
- # tables >
- # forms >
- # members >

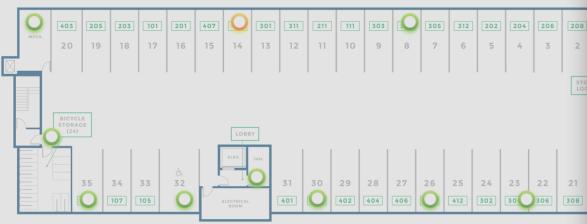
#
3
 ● 10
 ●

trap data

Add New Trap
● Delete

Floor Maps

Traps in the map: 11
Total traps: 200



ID	Coordinate	QR Code
R1001	1.365/8.3753	Create Print 
R1002	1.365/8.3753	Create Print 
R1003	n/a	Create Print 
R1004	1.365/8.3753	Create Print 

Add
 Cancel

Add New Trap

Clear all data

Trap ID

Traps overview and management platform - add a new trap:

1. Create a trap ID by clicking "Add a new trap"

- dashboard >
- data management
- trap management
- dashboard 3
- analysis >
- tables >
- forms >
- members >

Overview >

today

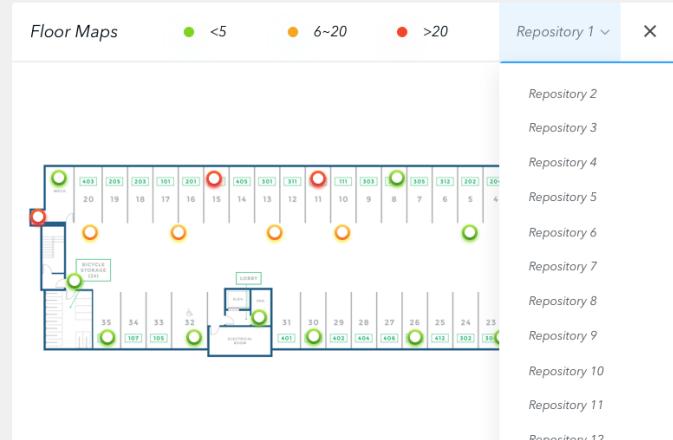
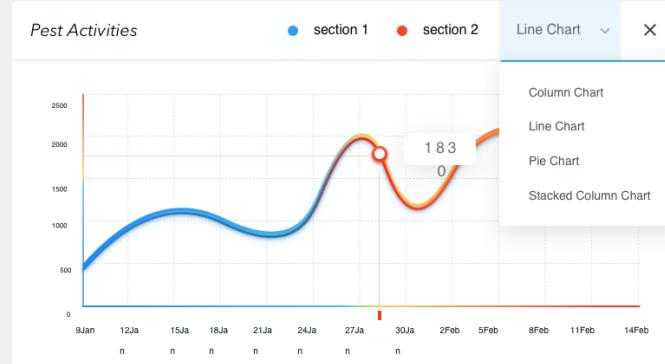
month

year

Log Out



Data Analysis >



User Activity
Lisa Shulta report 1 incidental ... 4 minutes ago
Kristy McCullough report 1 Routine I... 20 minutes ago
Kristy McCullough report 1 Active Mo... 30 minutes ago
Carios Arvealo report 1 Active Mo... 55 minutes ago
Carios Arvealo report 1 Active Monito... 1 hour ago
Nelly Watson report 1 incidental C... 1d 30h ago
Richard Li report 1 incidental C... 1d 45h ago

The main dashboard shows the overview of pest activities within the organisation, including pop-up notifications (incidental capture, hot spot detection, critical limit warning ...etc)

DASHBOARD ADMIN

- dashboard
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Pest data

Pest Type	ID	Name	Location
beetle	001	Anthrenus verbasci carpet beetle	
beetle	002	Lasioderma serricorne - cigarette beetle	
Centipede	003	Lithobius microps	
Silverfish	004	Lepisma saccharina	

Add New Pest Clear all data

Pest Type
[Text input]

Name
[Text input]

Risk level

Critical	High
Medium	<input checked="" type="checkbox"/> Low

Critical Limits

Number:

Add **Cancel**

Manual new pest data entry interface.

DASHBOARD ADMIN

- dashboard
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- members

Location data

Pest Type	ID	Name	Maps
	001	Repository 1	
	002	Repository 2	
	003	Repository 3	

Edit Location

Location Name
Repository 1

Floor Map

Add New Floor Map
*accept png,jpg,bmp only

Preview

Done **Cancel**

edit the existing map interface.

DASHBOARD ADMIN

- dashboard
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- members

Pest data

Pest Type	ID	Name	Location
beetle	001	Anthrenus verbasci carpet beetle	
beetle	002	Lasioderma serricorne - cigarette beetle	
Centipede	003	Lithobius microps	
Silverfish	004	Lepisma saccharina	

Edit manually uploaded pest data interface.

DASHBOARD ADMIN

- dashboard
- data management
- trap management
- dashboard 3
- analysis
- tables
- forms
- members

Location data

Pest Type	ID	Name	Maps
	001	Repository 1	
	002	Repository 2	
	003	Repository 3	

Map management section - clients are required to upload their floor maps for their organisation so users can choose the areas in the app. Only the members of the organisation can access their maps.

DASHBOARD ADMIN

3 10

Pest data

Add New Type Delete

Pest Type	Location	Name	Risk level	Current Critical Limits
001	beetle	Anthrenus verbasci carpet beetle	High	8
002	beetle	Lasioderma serricorne - cigarette beetle	Low	10
003	Centipede	Lithobius microps	Medium	
004	Silverfish	Lepisma saccharina	Critical	3

Pest dataset - The default pest dataset will be provided. However, clients can also manually insert the pest types for users to choose from the app. These data will merge with the default pest database as part of data collection strategies.

Add to dashboard

Form

Name	Location	Surface
Carpet Beetle - Anthrenus Verbasci	Repository 1	Floor
Status Number Ecotype Size Date Lifestate Action	Dead 1 Pest Whole 5 November 2018 Adult Activate CARCRM	Search Delete
Date ↑ Name ↑	Ecotype ↓ Status ↓ Lifestate ↓ Size ↓ Number ↓ Action	Notes
11 - 05 - 2018 Carpet Beetle - Anthrenus Verbasci Pest Dead Adult Whole 1	Staff notification	N/A
11 - 05 - 2018 Carpet Beetle - Anthrenus Verbasci Pest Dead Adult Whole 1	Activate CARCRM	not sure what is this
11 - 05 - 2018 Carpet Beetle - Anthrenus Verbasci Pest Dead Adult Whole 1	Activate BCP	
11 - 05 - 2018 Carpet Beetle - Anthrenus Verbasci Pest Dead Adult Whole 1	Reactive inspection	
11 - 05 - 2018 Carpet Beetle - Anthrenus Verbasci Pest Dead Adult Whole 1	Quarantine	
11 - 05 - 2018 Carpet Beetle - Anthrenus Verbasci Pest Dead Adult Whole 1	Pheromone trap	
11 - 05 - 2018 Carpet Beetle - Anthrenus Verbasci Pest Dead Adult Whole 1	Extra blunder traps	
11 - 05 - 2018 Carpet Beetle - Anthrenus Verbasci Pest Dead Adult Whole 1	Staff notification	
11 - 05 - 2018 Carpet Beetle - Anthrenus Verbasci Pest Dead Adult Whole 1	Commercial pest treatment	
11 - 05 - 2018 Carpet Beetle - Anthrenus Verbasci Pest Dead Adult Whole 1	In-house pest treatment	
11 - 05 - 2018 Carpet Beetle - Anthrenus Verbasci Pest Dead Adult Whole 1	Freezing	
11 - 05 - 2018 Carpet Beetle - Anthrenus Verbasci Pest Dead Adult Whole 1	Modify environment	
11 - 05 - 2018 Carpet Beetle - Anthrenus Verbasci Pest Dead Adult Whole 1	Anoxic	
11 - 05 - 2018 Carpet Beetle - Anthrenus Verbasci Pest Dead Adult Whole 1	Heat treatment	
11 - 05 - 2018 Carpet Beetle - Anthrenus Verbasci Pest Dead Adult Whole 1	Entomologist referral	
11 - 05 - 2018 Carpet Beetle - Anthrenus Verbasci Pest Dead Adult Whole 1	Additional cleaning	
11 - 05 - 2018 Carpet Beetle - Anthrenus Verbasci Pest Dead Adult Whole 1	Disposal of contaminated material	

pest activities overview

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- dashboard
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- forms
- members

Samuel Spencer

03 Total activity

Cards Table

Incidental Capture

Habenus Verbsci

753 >

> >

Traps overview and management platform - add a new trap:
1. Create a trap ID by clicking "Add a new trap"

DASHBOARD ADMIN

- dashboard
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Location data

Pest Type	Location
<input type="checkbox"/> 001	Repository 1
<input type="checkbox"/> 002	Repository 2
<input type="checkbox"/> 003	Repository 3

Add New Location

Location Name

Add New Floor Map

*accept png,jpg,bmp only

Preview

Add Cancel

Manual map entry interface.

DASHBOARD ADMIN

- dashboard >
- data management
- trap management
- dashboard 3
- analysis >
- tables >
- forms >
- members >

Samuel Spencer
sasp@egament.com
Creative Director

03
Total activity

Cards **Table**

5 November 2018 Incidental Capture

Carpet Beetle - Anthrenus Verbasci

Status: Dead
Ecotype: Pest
Lifestage: Adult
Size: Whole
Location: 1.365/8.3753
Surface: Floor
Number: 1

Note:

5 November 2018 Incidental Capture

Carpet Beetle - Anthrenus Verbasci

Status: Dead
Ecotype: Pest
Lifestage: Adult
Size: Whole
Location: 1.365/8.3753
Surface: Floor
Number: 1

Note:

5 November 2018 Incidental Capture

Carpet Beetle - Anthrenus Verbasci

Status: Dead
Ecotype: Pest
Lifestage: Adult
Size: Whole
Location: 1.365/8.3753
Surface: Floor
Number: 1

Note:

member activity - pest capture history

DASHBOARD ADMIN

- dashboard >
- data management
- trap management
- dashboard 3
- analysis >
- tables >
- forms >
- members >

Health Status

CRITICAL RISK 1 🐞 **HIGH RISK** 24 🐞 **MEDIUM RISK** 123 🚨 **LOW RISK** 166 🐞 **TOTAL Affected** 314

Pest Activity

01/20/2017 ~ 01/20/2018

Lepisma Saccharinum Sliverfish
Elateridae Agrypnus Click Beetle
Lasioderma Serricorne Cigarette Beetle
Heteropodidae Huntsman Spider
Acheta Assimilis Cricket

Monitoring Hist..

01/20/2017 ~ 01/20/2018

Location	January 2017
Kitchen 1	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28
Foyer	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
Repository 1	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28
Repository 2	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28
Kitchen 2	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
Repository 3	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28

data analysis interface

DASHBOARD ADMIN

- dashboard
- data management
- trap management
- dashboard 3
- analysis
- tables
- forms
- members

3 10 Settings

Members Add

Cards Table

 Samuel Spencer sasp@egament.com Creative Director	 Kit Laframboise kila@egament.com Data Analyst	 Abagael Enno anhu@egament.com Product Manager
Report activity 03	Report activity 07	Report activity 13
Overall activity	Overall activity	Overall activity
 Amy Dettmering amde@egament.com Project Manager	 Carl Durk cadu@egament.com UX Designer	 Luciano Niswander luni@egament.com Full-stack Developer
Report activity 03	Report activity 03	Report activity 03
Overall activity	Overall activity	Overall activity
 Amy Dettmering amde@egament.com Project Manager	 Carl Durk cadu@egament.com UX Designer	 Luciano Niswander luni@egament.com Full-stack Developer
Report activity 03	Report activity 03	Report activity 03
Overall activity	Overall activity	Overall activity

member management platform

Mobile APP



Richard Li
Conservator
Preservation services

Routine Inspection

Active Monitoring

Incidental Capture

Main dashboard - button availability is based on the access level of members, which can be setup in the backend (web-management interface)

In-house Pest Treatment
the difference between active monitoring and incidental capture is that active monitoring request designated staff to perform the task on the regular basis, while incidental capture is available for all staff to report the incidental finding any time.



CREATE ACCOUNT

Name

First name

Last name

Title

Unit

Email

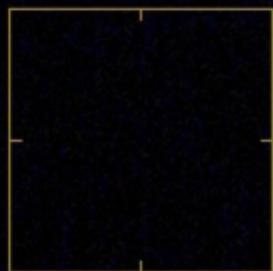
Password

Sign up page - user can take photo using their camera

SIGN UP



HDR



TIME-LAPSE

PHOTO

SQUARE

PANO

take pest images for identification (max 5 images)



Sketch 9:41 AM * 100%

[Back](#) Pest Data

 [Photo](#)

Name: Carpet Beetle - Anthrenus Verbasci

* Status: Dead Ecotype: Pest

This Field is Required

Lifestage: Adult Size: Whole

Location Surface

< > Done

Sun 6 Sep	7	57
Mon 7 Sep	8	58
Tue 8 Sep	9	59
Wed 9 Sep	10	00
Thu 10 Sep	11	01
select correct date	12	02
Sat 12 Sep	13	03
Sun 13 Sep	14	04

Sketch 9:41 AM 100%



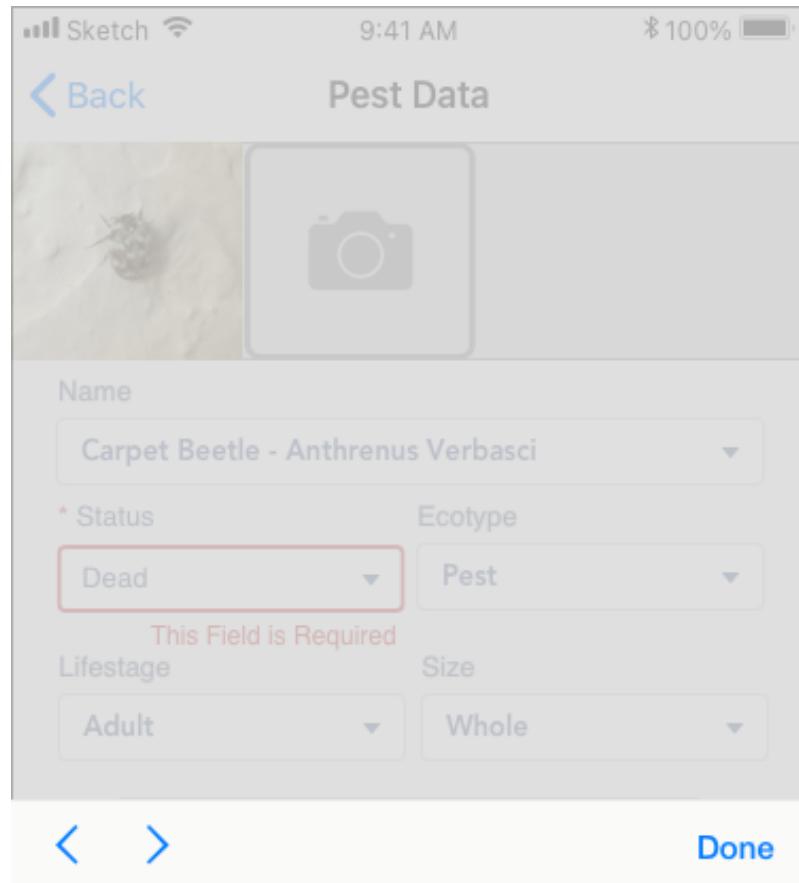
Trap Scanning

Place the QR code inside area



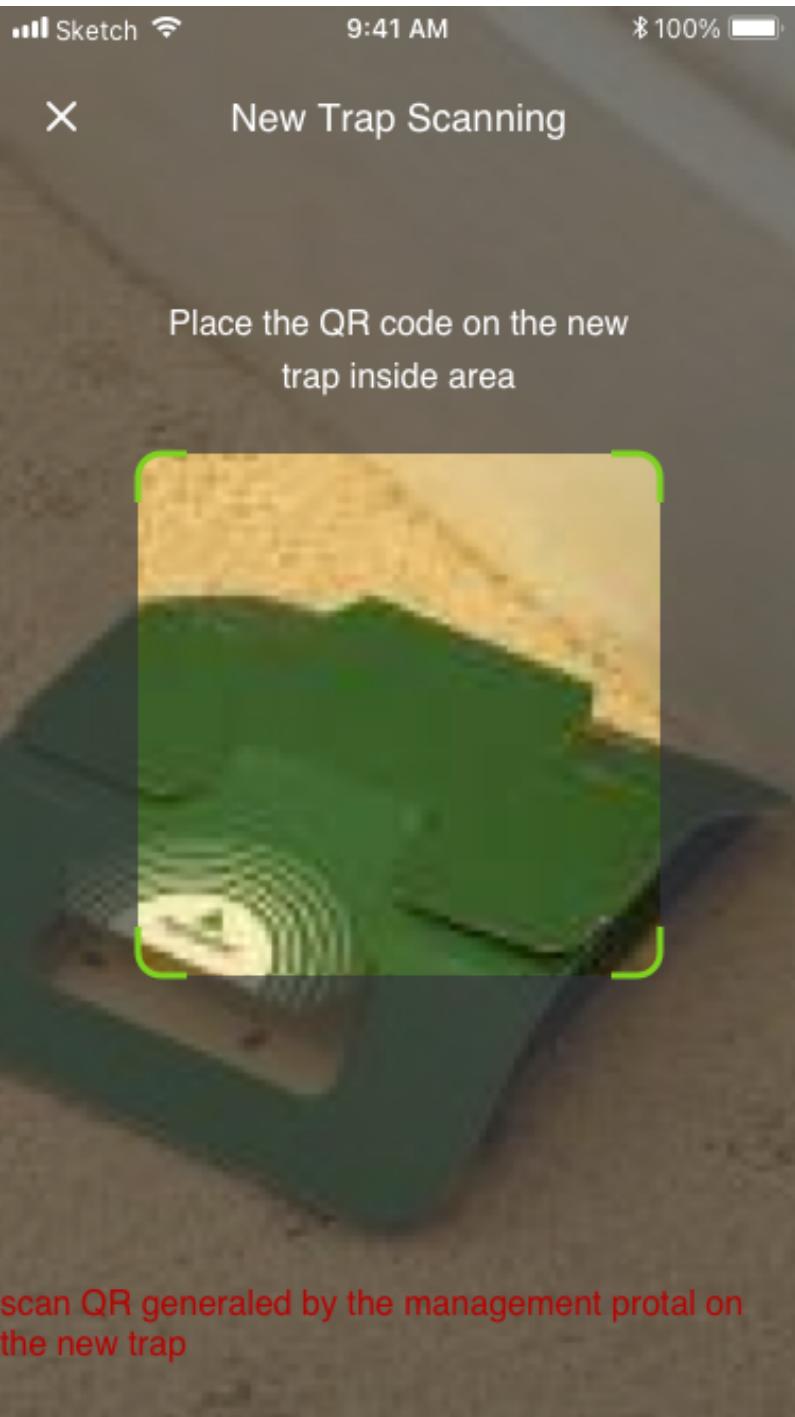
Scan QR on an existing trap

* Status	Ecotype																																								
Dead	Pest																																								
This Field is Required																																									
Lifestage	Size																																								
Adult	Whole																																								
<hr/>																																									
Location	Surface																																								
1.365/8.3753	Floor																																								
Date	Number																																								
5 November 2018	1																																								
Note																																									
<div style="border: 1px solid #ccc; padding: 5px; height: 40px;">found on the floor near door</div>																																									
<input type="text"/>																																									
<table border="1" style="width: 100%; border-collapse: collapse;"><tr><td style="padding: 5px; text-align: center;">Q</td><td style="padding: 5px; text-align: center;">W</td><td style="padding: 5px; text-align: center;">E</td><td style="padding: 5px; text-align: center;">R</td><td style="padding: 5px; text-align: center;">T</td><td style="padding: 5px; text-align: center;">Y</td><td style="padding: 5px; text-align: center;">U</td><td style="padding: 5px; text-align: center;">I</td><td style="padding: 5px; text-align: center;">O</td><td style="padding: 5px; text-align: center;">P</td></tr><tr><td style="padding: 5px; text-align: center;">A</td><td style="padding: 5px; text-align: center;">S</td><td style="padding: 5px; text-align: center;">D</td><td style="padding: 5px; text-align: center;">F</td><td style="padding: 5px; text-align: center;">G</td><td style="padding: 5px; text-align: center;">H</td><td style="padding: 5px; text-align: center;">J</td><td style="padding: 5px; text-align: center;">K</td><td style="padding: 5px; text-align: center;">L</td><td></td></tr><tr><td style="padding: 5px; text-align: center;">▲</td><td style="padding: 5px; text-align: center;">Z</td><td style="padding: 5px; text-align: center;">X</td><td style="padding: 5px; text-align: center;">C</td><td style="padding: 5px; text-align: center;">V</td><td style="padding: 5px; text-align: center;">B</td><td style="padding: 5px; text-align: center;">N</td><td style="padding: 5px; text-align: center;">M</td><td style="padding: 5px; text-align: center;">✖</td><td></td></tr><tr><td style="padding: 5px; text-align: center;">123</td><td colspan="5" style="padding: 5px; text-align: center;">space</td><td colspan="4" style="padding: 5px; text-align: right;">Go</td></tr></table>		Q	W	E	R	T	Y	U	I	O	P	A	S	D	F	G	H	J	K	L		▲	Z	X	C	V	B	N	M	✖		123	space					Go			
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A	S	D	F	G	H	J	K	L																																	
▲	Z	X	C	V	B	N	M	✖																																	
123	space					Go																																			
<p>take extra note if needs.</p>																																									
<p> </p>																																									



Hector	Bigha
Kattha	
Ropani	Kattha
Daam	Ropani
	Daam

select correct pest name (the name can be pre-identified for selection via management portal)



Incidental Capture

< Back

Incidental Capture

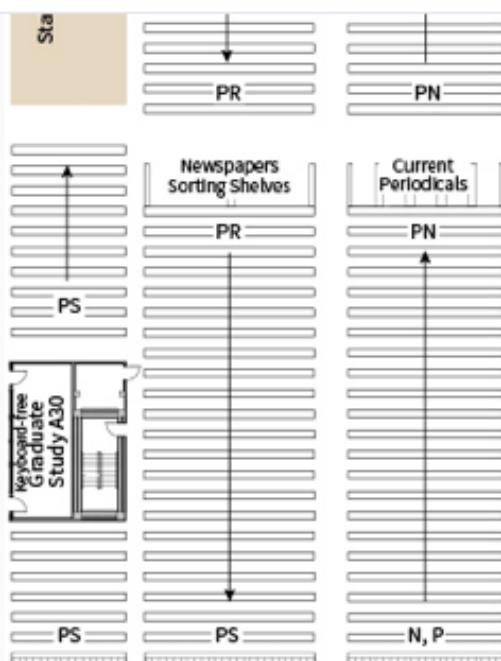
Inspection Area

Repository 1

Repository 2

Repository 3

Repository 4



shift between the area to locate the correct map
(maps need to be imported from the management portal)

[Edit](#)[Preview](#)

Name: Carpet Beetle - *Anthrenus Verbasci*

Status: Dead

Location: 1.365/8.3753

Ecotype: Pest

Surface: Floor

Lifestage: Adult

Date: 5 November 2018

Size: Whole

Number: 1

Note:

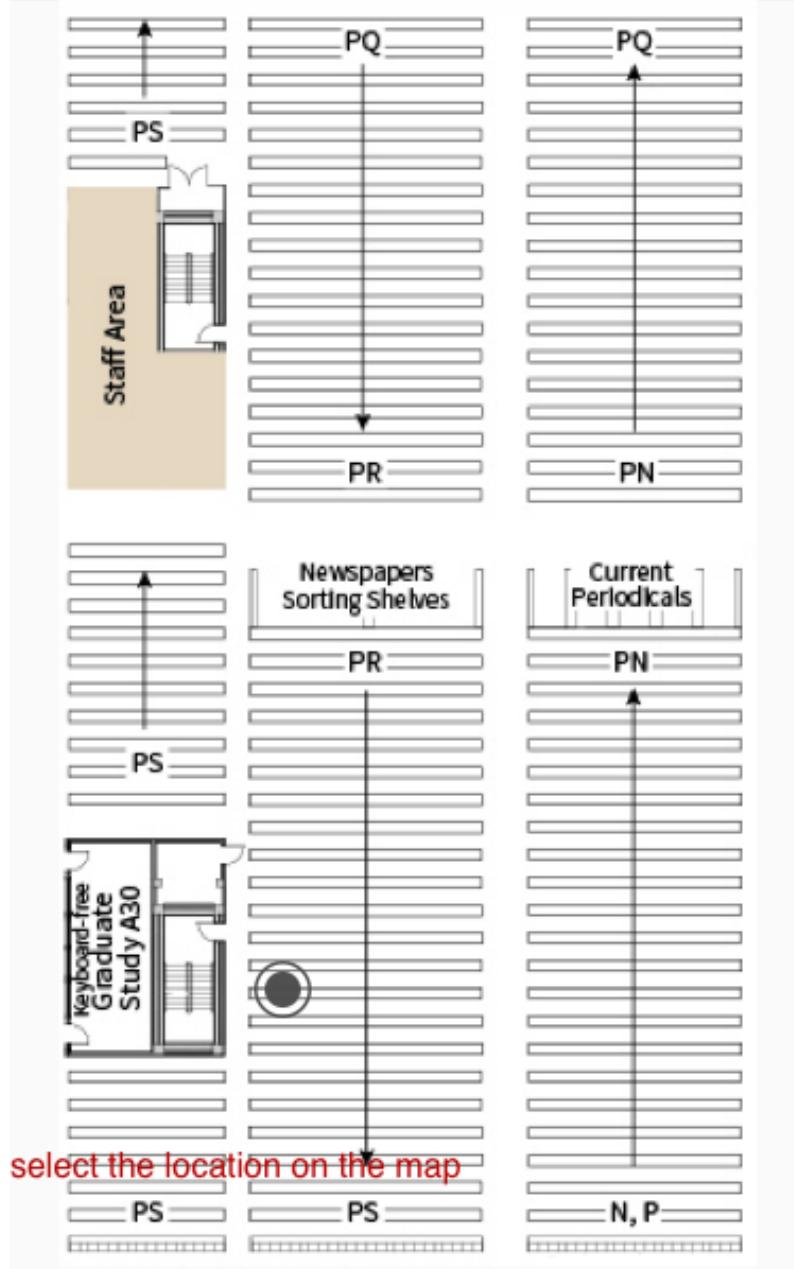
found on the floor near door

confirm input data and, review capature images

SUBMIT

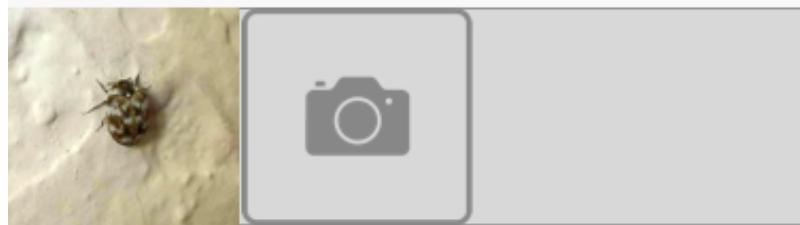
[Back](#)

Repository 1



< Back

Pest Data



Name

Carpet Beetle - Anthrenus Verbasci

* Status

Dead

Eco Type

Dry

This Field is Required

Life Stage

Adult

Size

Whole

Location

1.365/8.3753

Surface

Floor

Date

5 November 2018



Count

1

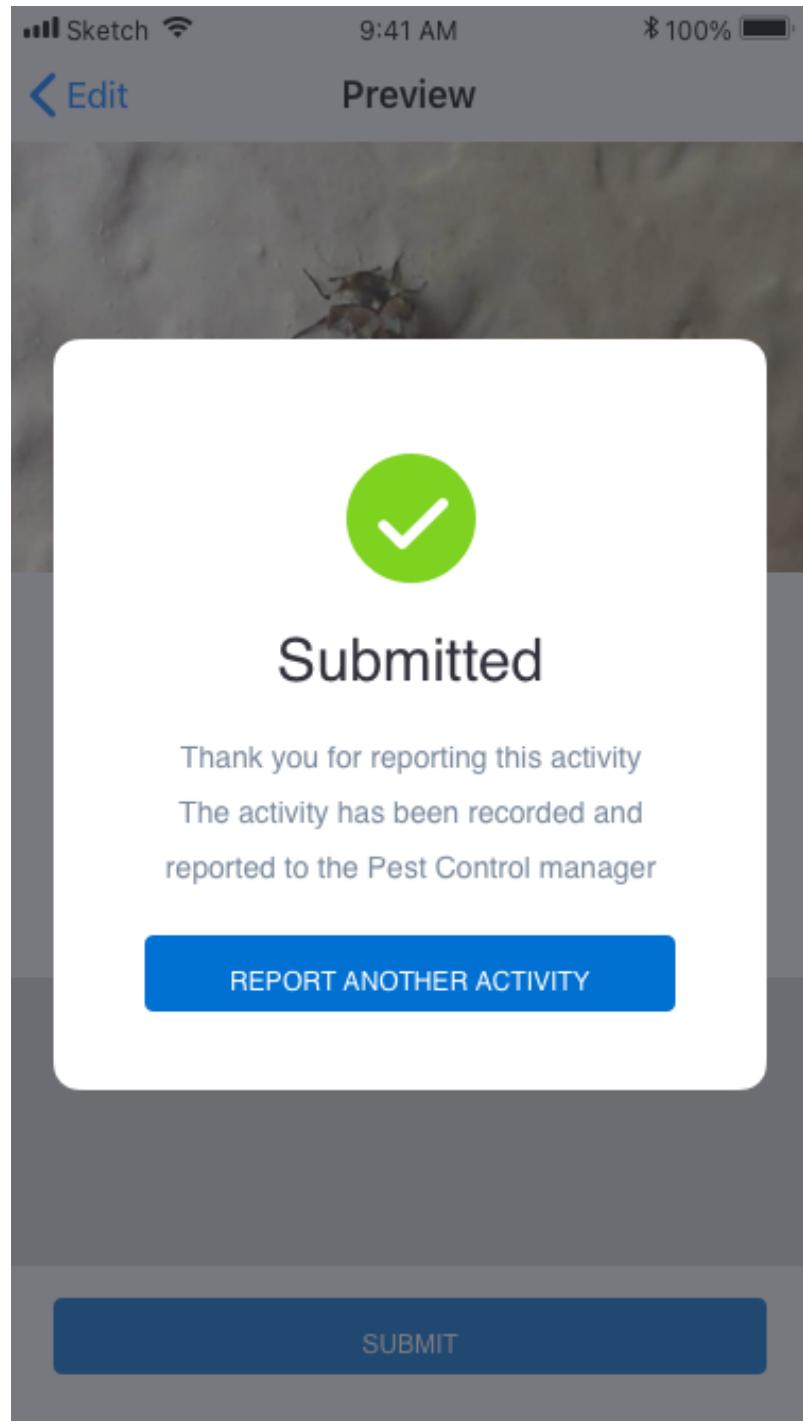
Note

found on the floor near door

data input and image capature (max 5 images)

PREVIEW

SUBMIT



Rountine Inspection

[!\[\]\(05abdec45d3d9667a7f3c64e46754c68_img.jpg\) Back](#)

Rountine Inspection



Scan Trap



Add New Trap

User can scan the QR on the existing trap to access the trap data and record the new finding. They can also register a new trap before allocate them to a new location (QR code can be generated on the management portal)



Deleted

The trap has been deleted successfully.

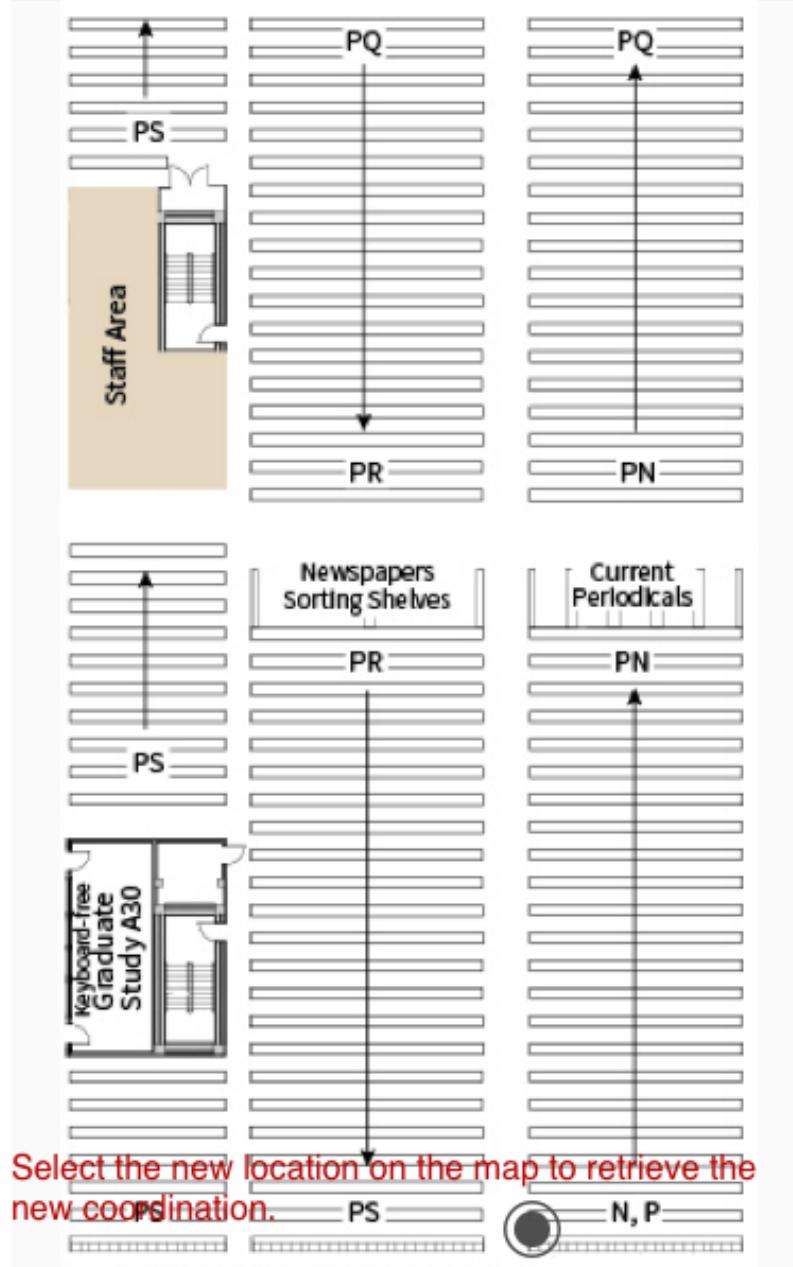
Please make sure the deleted trap is
removed from the current location

DONE

confirm delete

[Back](#)

Repository 1



[Back](#)

Select New Location

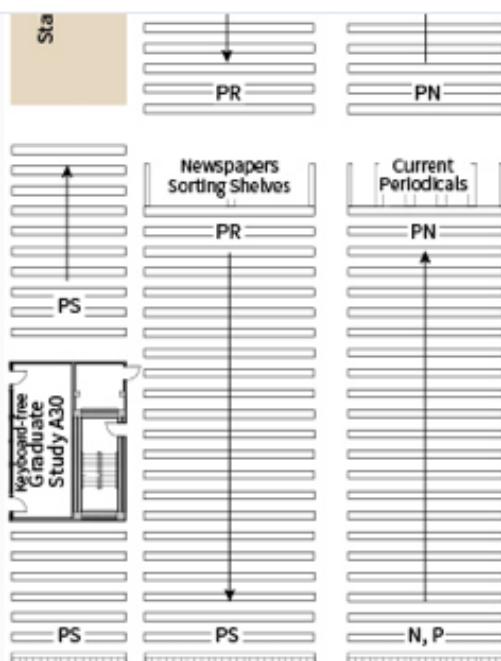
Inspection Area

Repository 1

Repository 2

Repository 3

Repository 4



shift between different areas for a new trap

NEXT



Done

The trap coordination has been
changed to the new location

OK

Confirm movement.

< Back

Select New Location

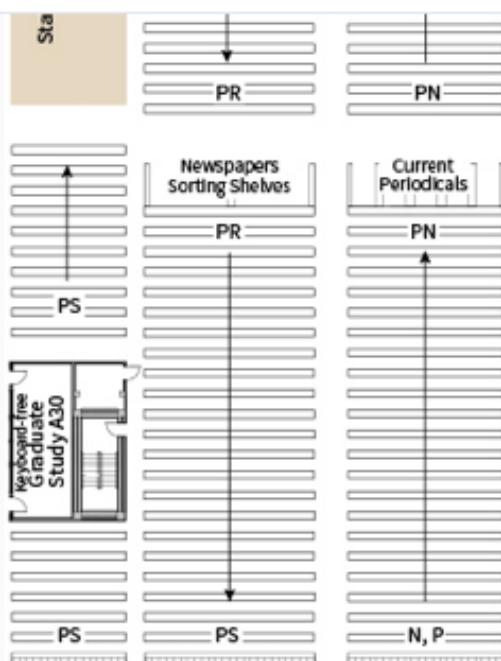
Inspection Area

Repository 1

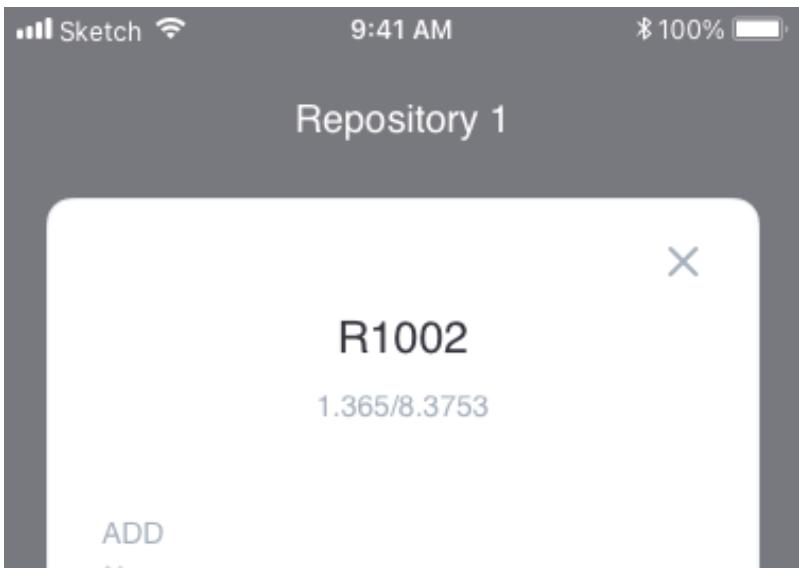
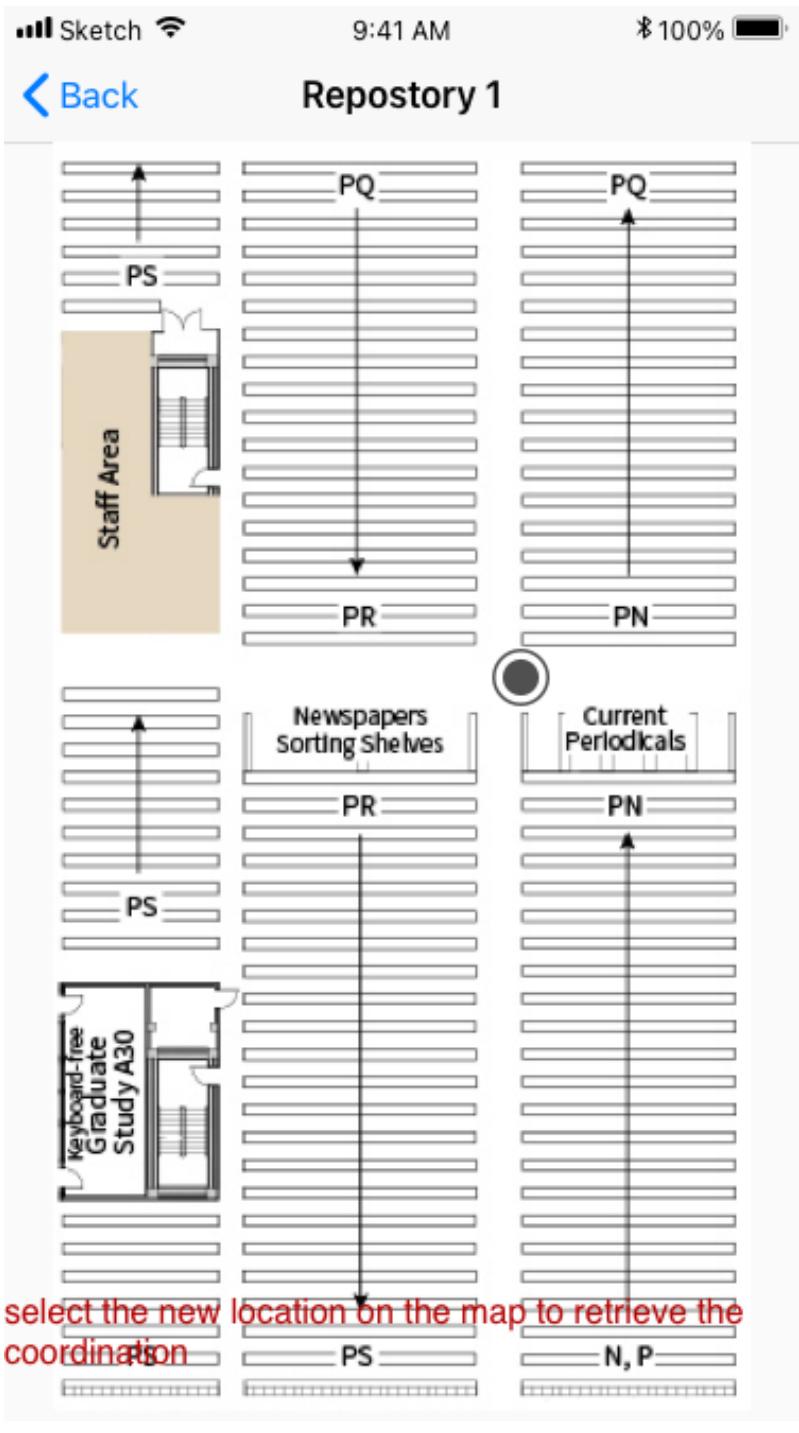
Repository 2

Repository 3

Repository 4



Shift between the map to select the new area.



Name

Carpet Beetle - Anthrenus Verbasci

Number

1

12 December 2018

Silverfish - Lepisma Saccha...

1 X

total

1

7 November 2018

Carpet Beetle - Anthrenus V...

2

Silverfish - Lepisma Saccha...

1

Centipede - Lithobius Microps

1

total

4

Total Catched

36

Enter new finding, retrieve trap data. You can also move trap to new location or delete them if you would to retire the trap

DONE

MOVE

DELETE TRAP

New Trap

X

Trap ID

R1002

Location

Repository 1

Coordination

1.365/8.3753

confirm the trap coordination

ADD



Added

The trap has been added to the new
location successfully

ADD ANOTHER TRAP

DONE

Confirm add a trap

X

R1002

will be moved from

Repository 1

1.365/8.3753

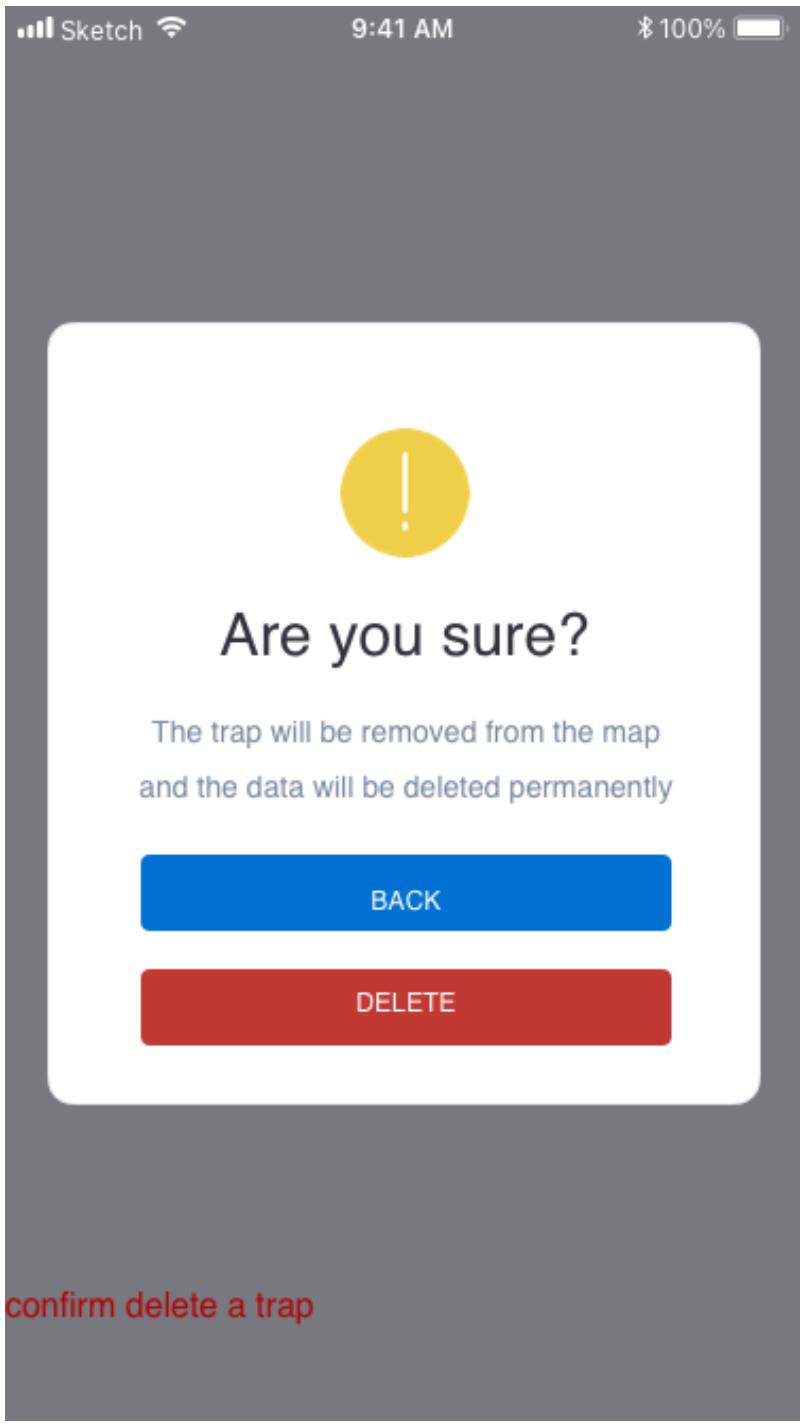
To

Repository 2

4.365/4.5389

CONFIRM

Confirm the coordination and relocation.



[Active Monitoring](#)

< Back

Active Monitoring

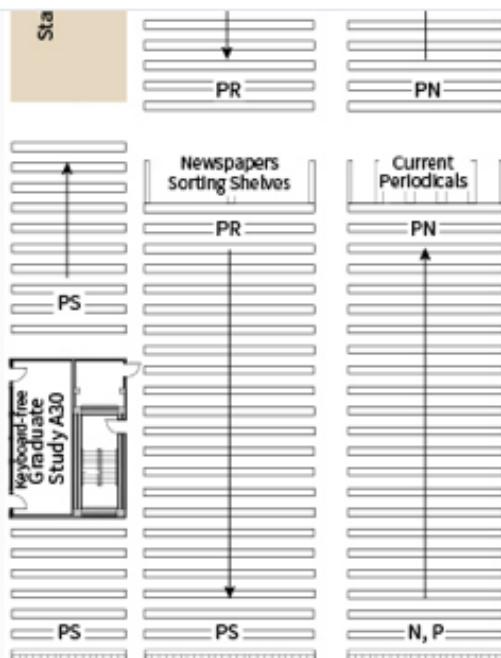
Inspection Area

Repository 1

Repository 2

Repository 3

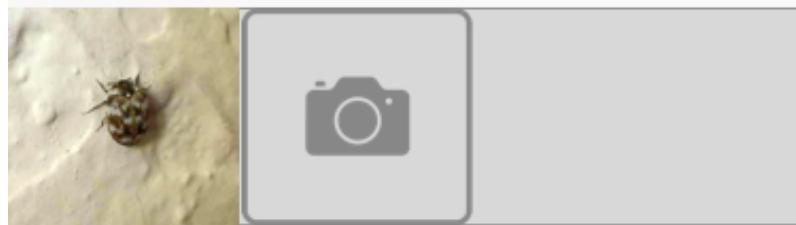
Repository 4



shift between the area to locate the correct map
(maps need to be imported from the management portal)

< Back

Pest Data



Name

Carpet Beetle - Anthrenus Verbasci

* Status

Dead

Eco Type

Dry

This Field is Required

Life Stage

Adult

Size

Whole

Location

1.365/8.3753

Surface

Floor

Date

5 November 2018



Count

1

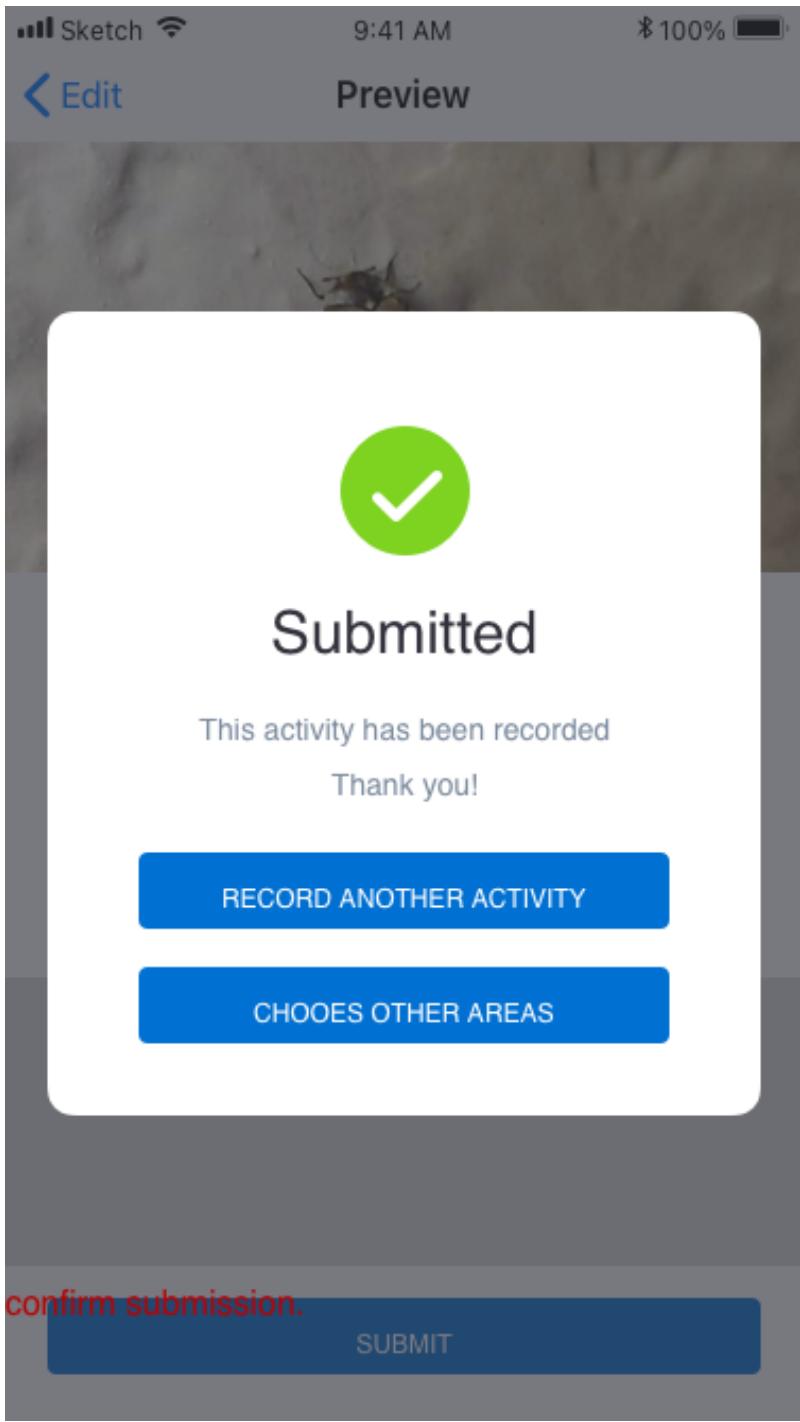
Note

found on the floor near door

data input and image capture (max 5 images)

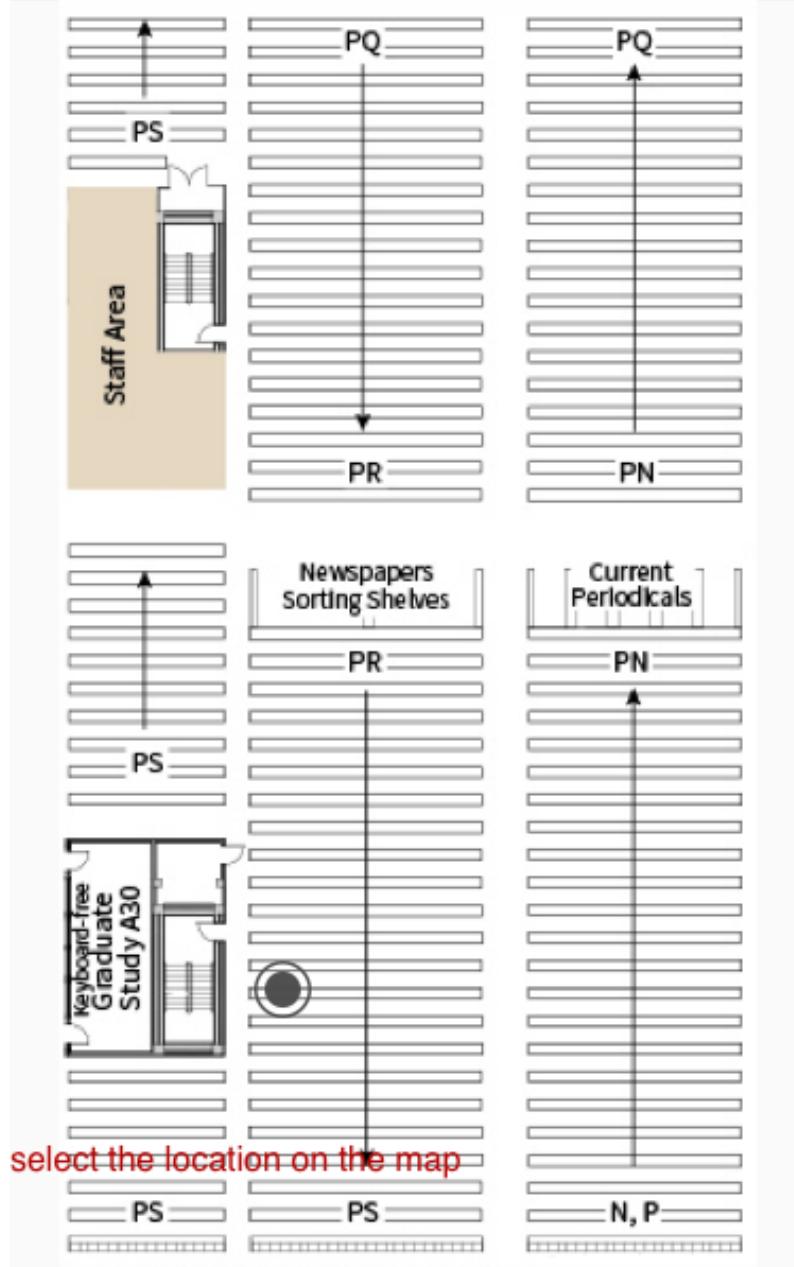
PREVIEW

SUBMIT



[Back](#)

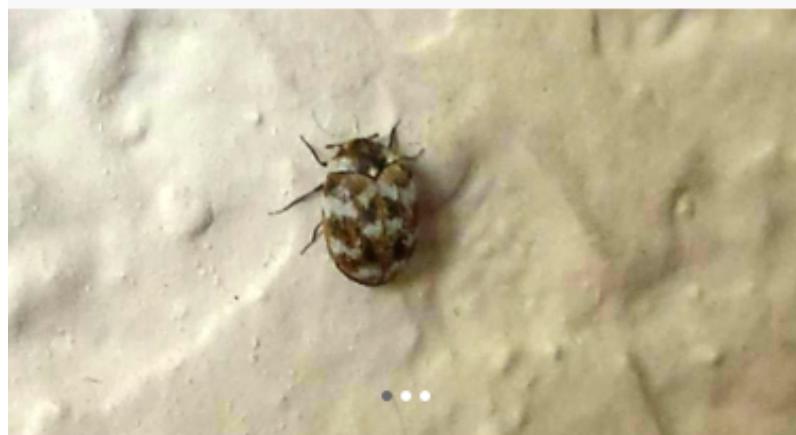
Repository 1



Sketch 9:41 AM 100%

< Edit

Preview



Name: Carpet Beetle - *Anthrenus Verbasci*

Status: Dead

Location: 1.365/8.3753

Ecotype: Pest

Surface: Floor

Lifestage: Adult

Date: 5 November 2018

Size: Whole

Number: 1

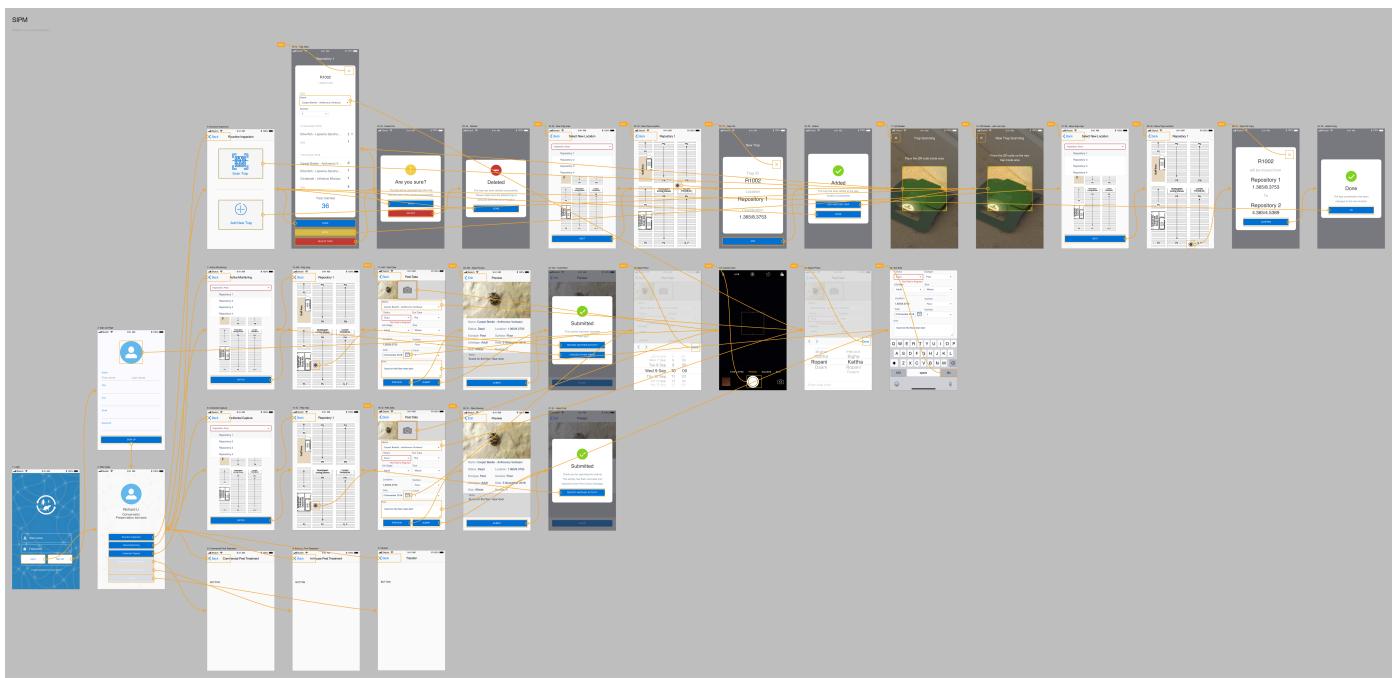
Note:

found on the floor near door

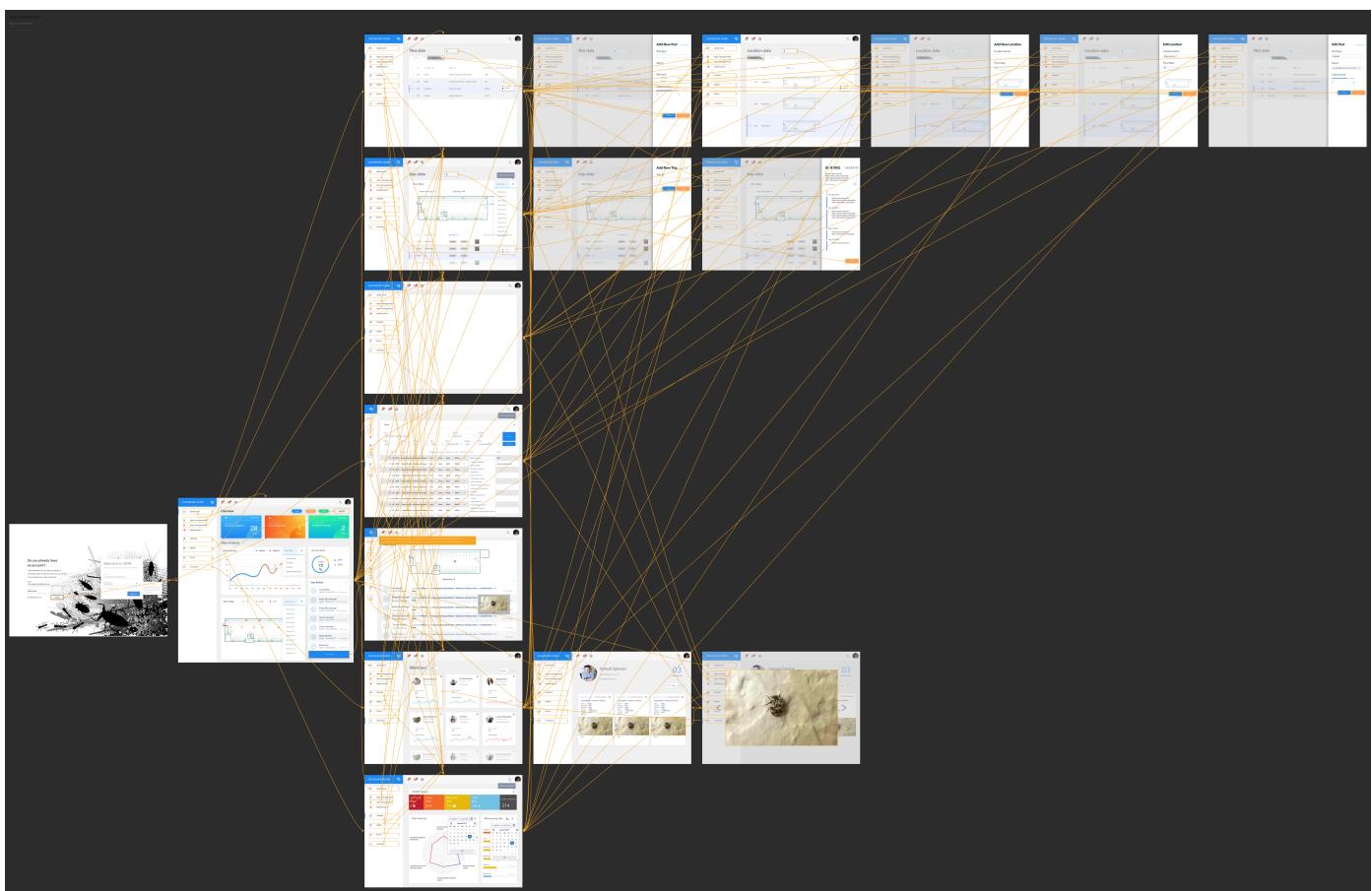
confirm input data and, review capature images

SUBMIT

Mobile APP - Flows



Web Management - Flows



14 Other