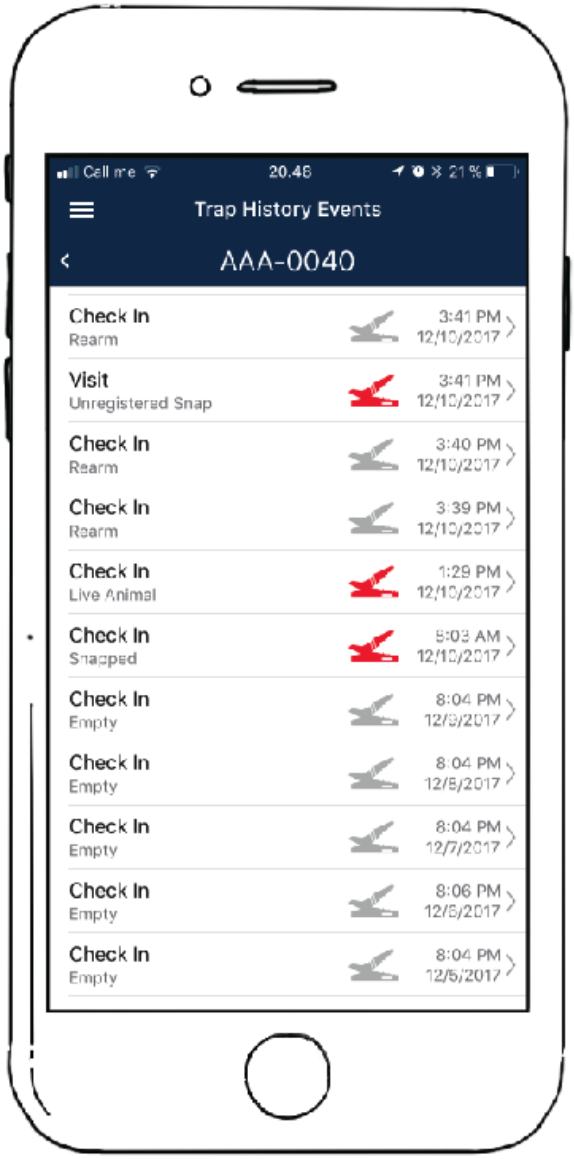
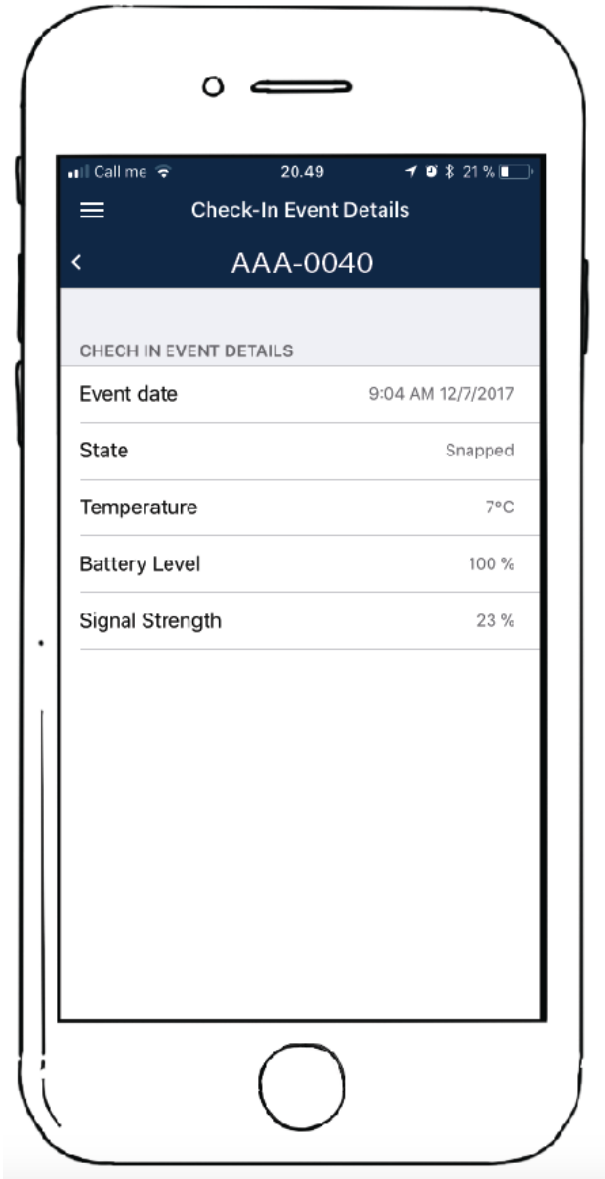
Standard Check in Report

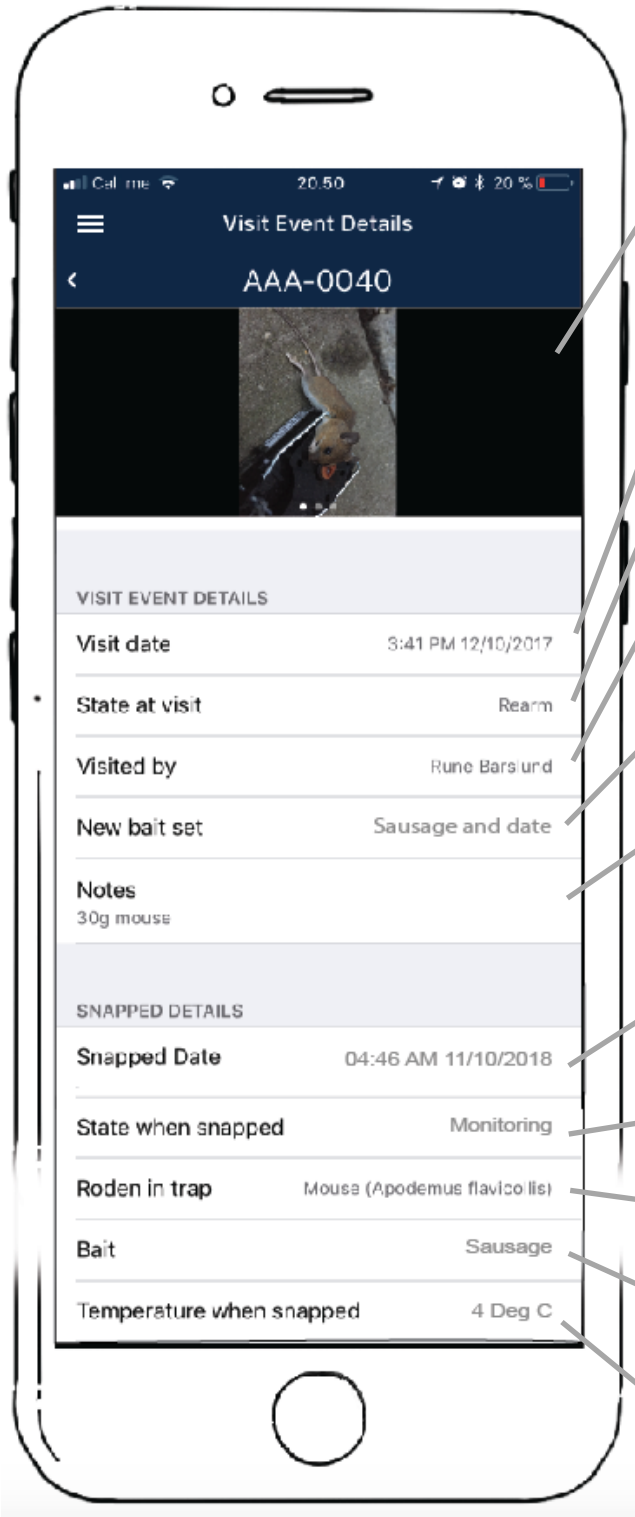




By clicking on each event a more detailed view of the information can be seen. This can be used to check the status of the trap as well as seeing the temperature on site at the time of check in. Check in occurs 24hrs after the trap was set out, and again every 24 hors after that.

Visit Report

Going in to the History and the visit reports will allow you to see what were the last animals caught by the RATMO in that area of the location. The following details can be seen



PICTURE

Up to 3 picture can be stored when clearing a trap.

DATE AND TIME

The date and time of the visit

STATE OF TRAP

The state of the RATMO at visit is recorded here, this is for statistical purposes.

VISIT BY

As more that one user can be assigned to a location, this shows which user serviced or cleared the RATMO

NEW BAIT SET

Here you can see which bait type has been put in the trap.

NOTES

This can be what ever you think is important, weight, sex, or even diseases noticed.

SNAPPED DATE

The date and time the trap snapped. Used for recording feeding trends

STATE WHEN SNAPPED

Used for statistical purposes.

RODENT IN TRAP

The recorded rodent in the trap

BAIT

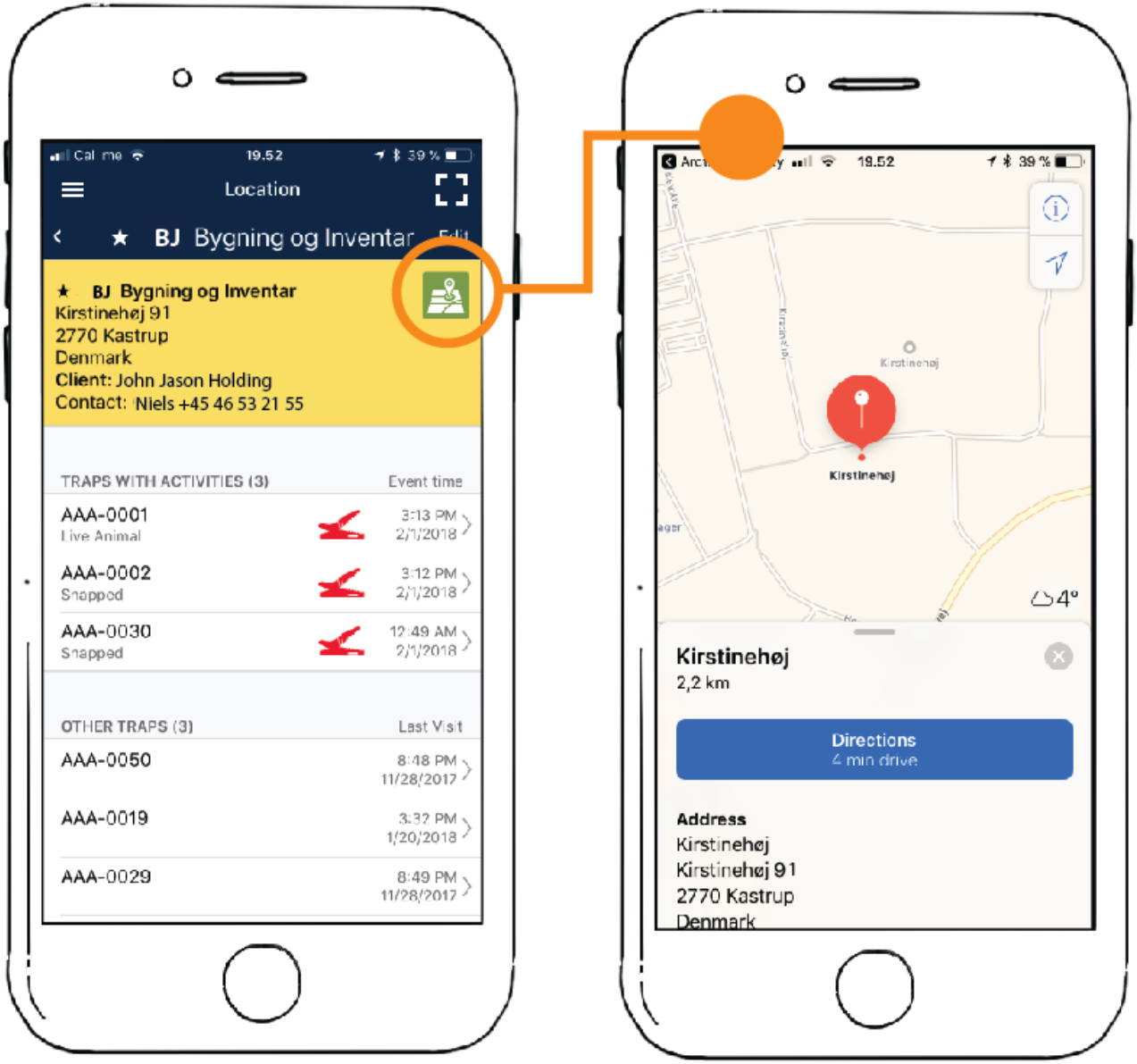
For creating a statistical overview of the preferred baits in a location

TEMP. WHEN SNAPPED

This is also a useful tool for discovering feeding trends in the locations you are working

ROUTE PLANNING

The Smart City App can help you get to the next client efficiently, saving you time and cutting down on those carbon emissions. With a little help from Google Maps your directions can be generated in 2 simple steps.

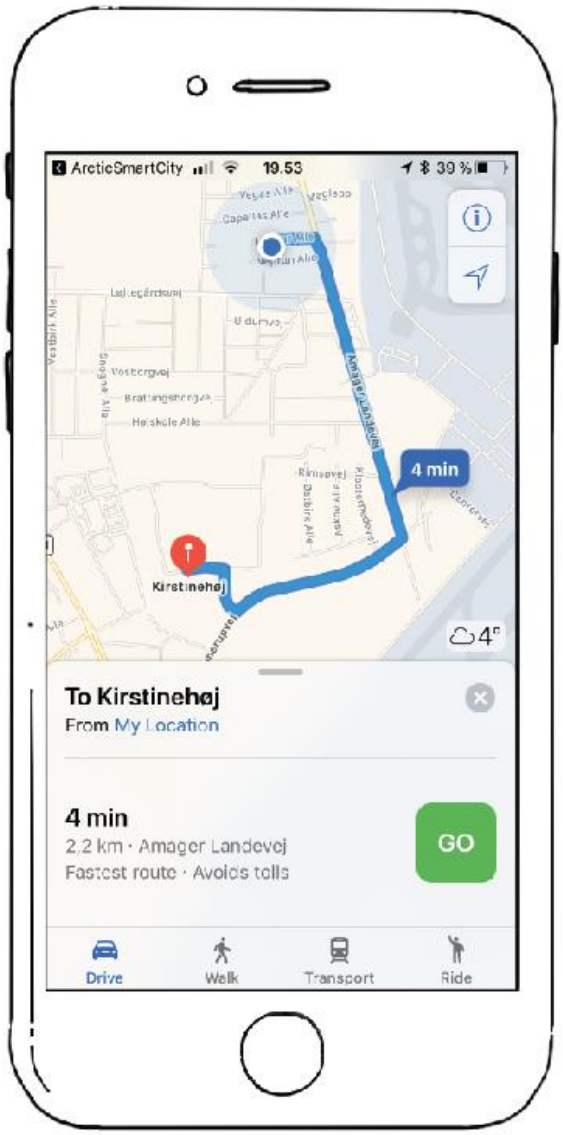


CLICK ON THE MAP ICON

In the client menu select the client you wish to visit, then select the green **Map Icon**, in the upper right hand corner. This will bring you into the map view, and show you the wished location with a marker pin. Press the blue **Directions** button to get directions to the next location.

PRESS GO!

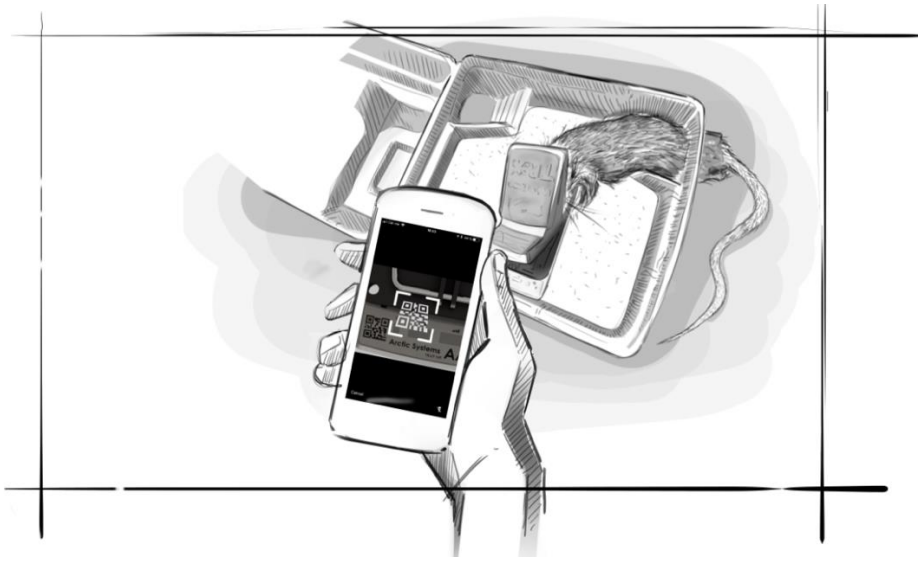
To begin you journey press the green Go button and follow the directions on screen. We recommend mounting a phone holder in your vehicle so that you phone is held safely and is charged for your next visit.



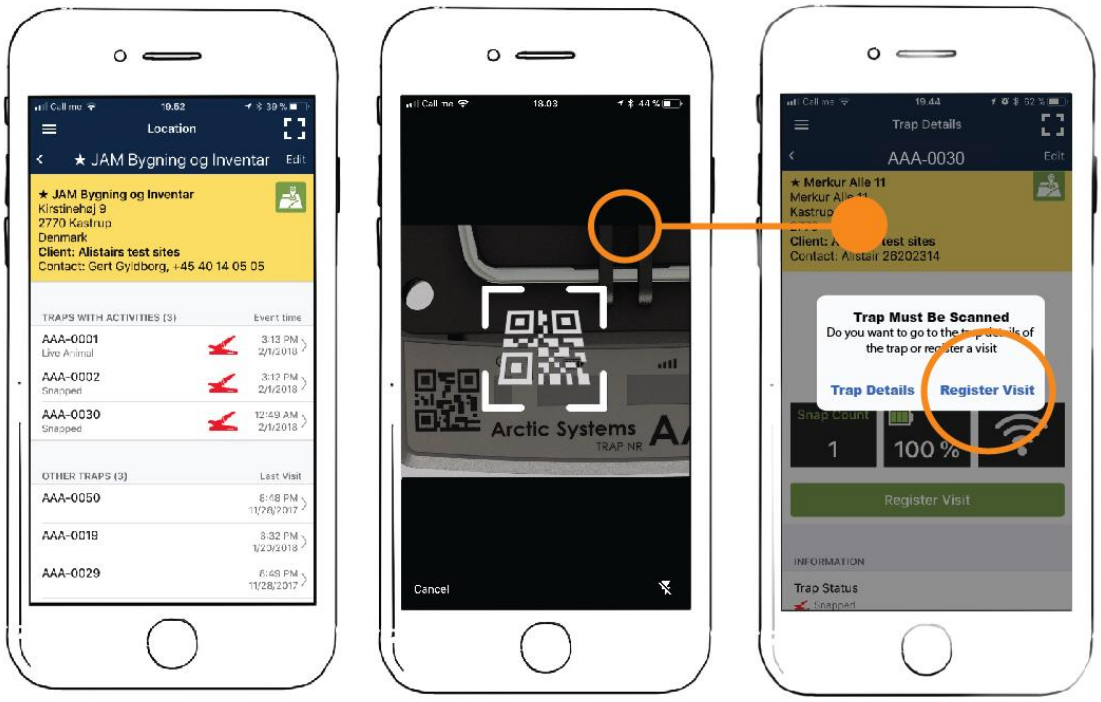
Drive safely!

SITE VISITS

The easiest way on site is to select the **SCAN** function from one of the menus and scan the RATMO you will then be asked if you want to to see **Trap Details** of **Register a Visit.**



Scanning the trap will bring you directly into the trap you are standing by.



ACCESSING REGISTER VISIT REQUIRES THE TRAP

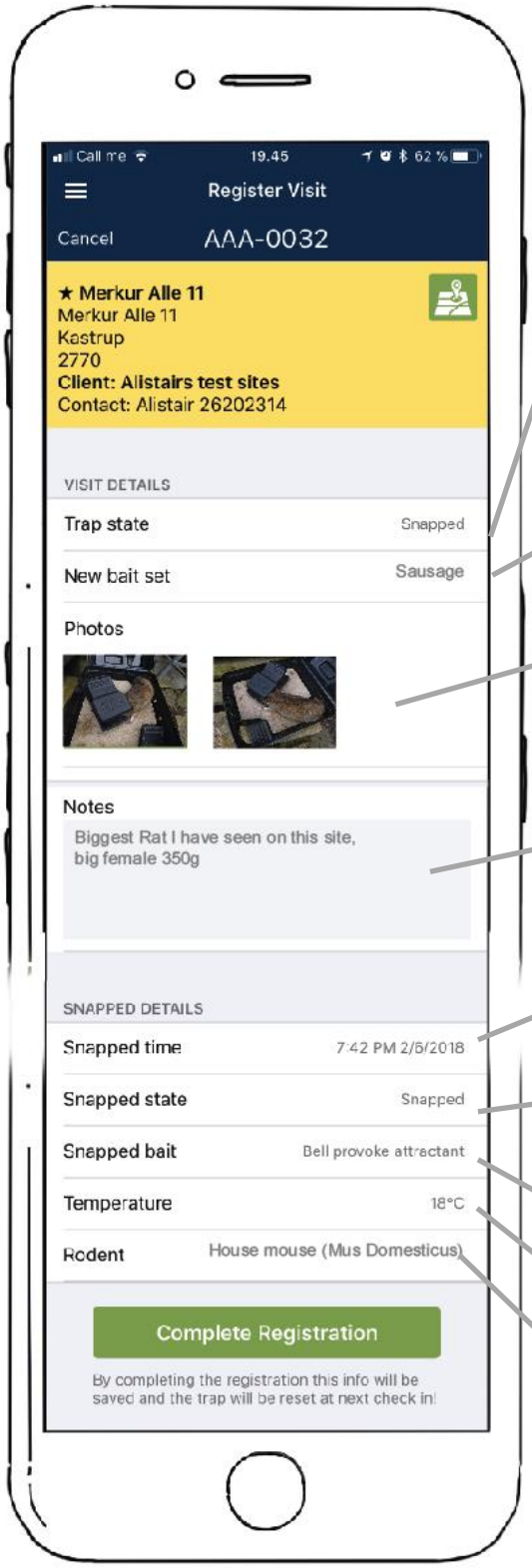
To register a visit, you have to scan the RATMO.

This means there is no access to the **Register Visit** page unless the RATMO has been scanned.

As you can see above, if you go directly from the **Location** page to **Trap Details** and press the green button you will be asked to scan the trap.

This function has been added to ensure no false site visits are entered into the system

THE REGISTER VISIT FORM



TRAP STATE

You can record a visit to a RATMO that is in any state. Fully Functional, Snapped, Live Animal in Trap, Low Battery etc. A visit maybe to refresh bait, or just check the trap. These can be logged as well as the visits to empty the traps and can be shown on the customer audit reports to show the level of service.

NEW BAIT SET

If you are re-arming the trap you can select the new bait here.

TAKE SOME PICTURES

Customers don't exactly love rodents, the more pictures you can take the better they will feel about all the vermin removed from site

NOTES

Record those extra details that can help you in the future.

SNAPPED TIME

Shows the time when the RATMO last

SNAPPED STATE

Is used to catch the few cases when the trap has not performed at expected.

SNAPPED BAIT

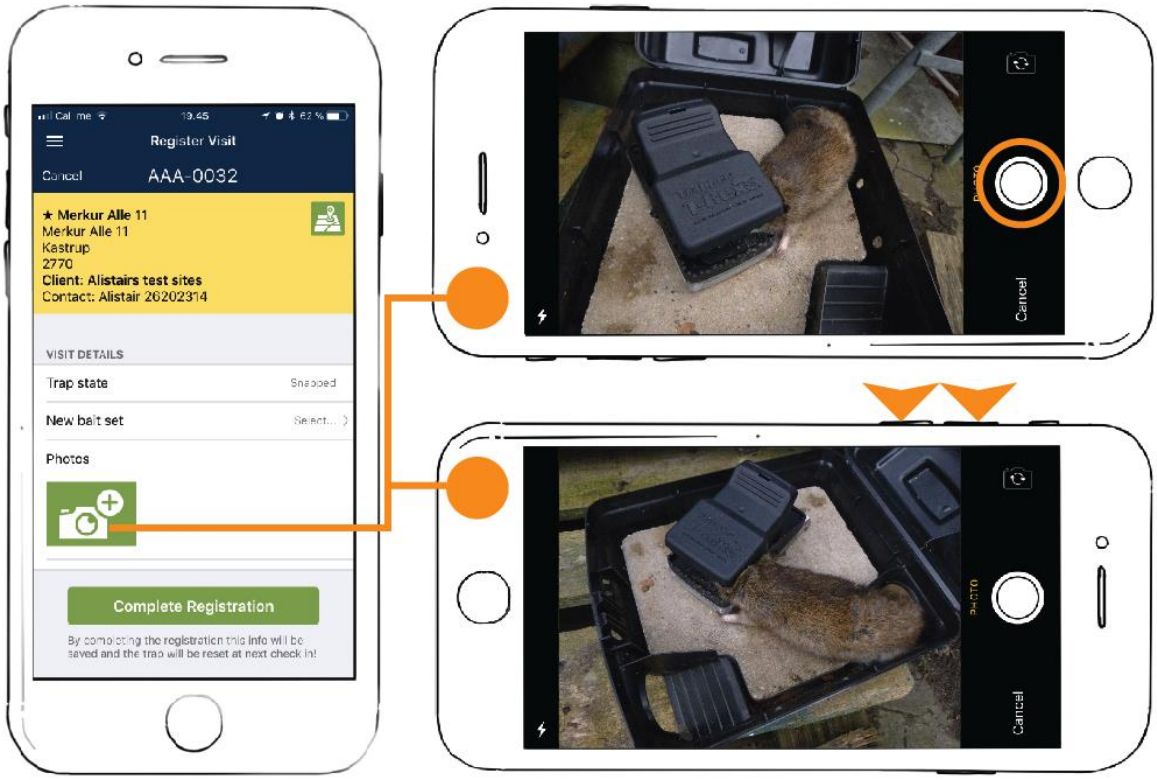
The bait in the trap at the time of the snap

TEMPERATURE

Temperature at the time of snap.

RODENT

Used to record the rodent or other, this is caught in the trap.

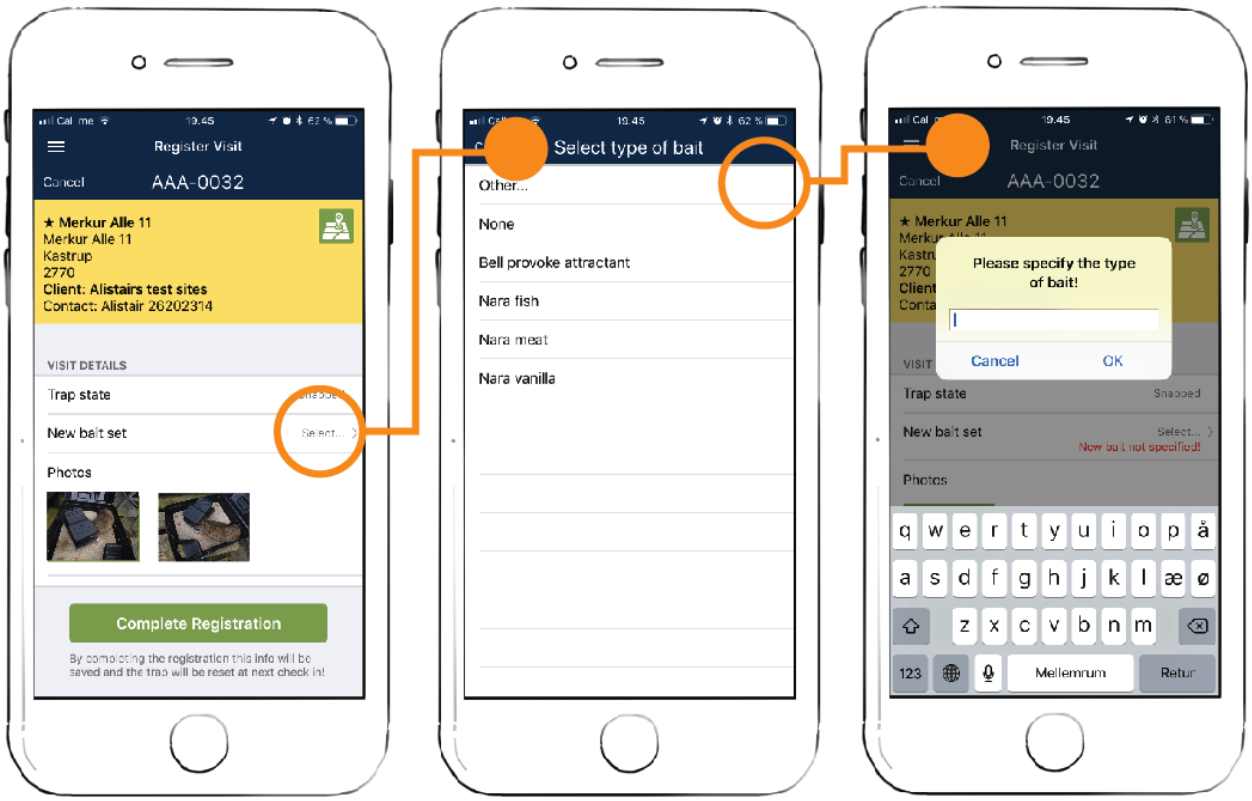


TAKE SOME PICTURES

It's important to document your catches well. By recorded the type of animal in the trap and size it will be possible to establish trends and more effectively target rodent infestations. Pictures of rodents is also a great way of creating audit reports to show the effectivity of the work in progress. Click on the green **Camera Icon** to access the camera. We recommend taking 3 picture of each rodent from different directions.

TIP # Pictures are best taken in portrait format. Remember that the volume buttons on the Iphone can also be used for the camera.

When you have taken a picture press **Use Photo** to use the picture or press **Retake** to go back to the camera and try again.



SET THE NEW BAIT

If the trap will continue in service, then the bait can be set or changed here. Click on the bait or click on **Select**, to enter the **Bait Menu**. Here you can press on a standard bait in the list or choose **Other**. **Cancel** will take you back to the **Register Visit** menu.

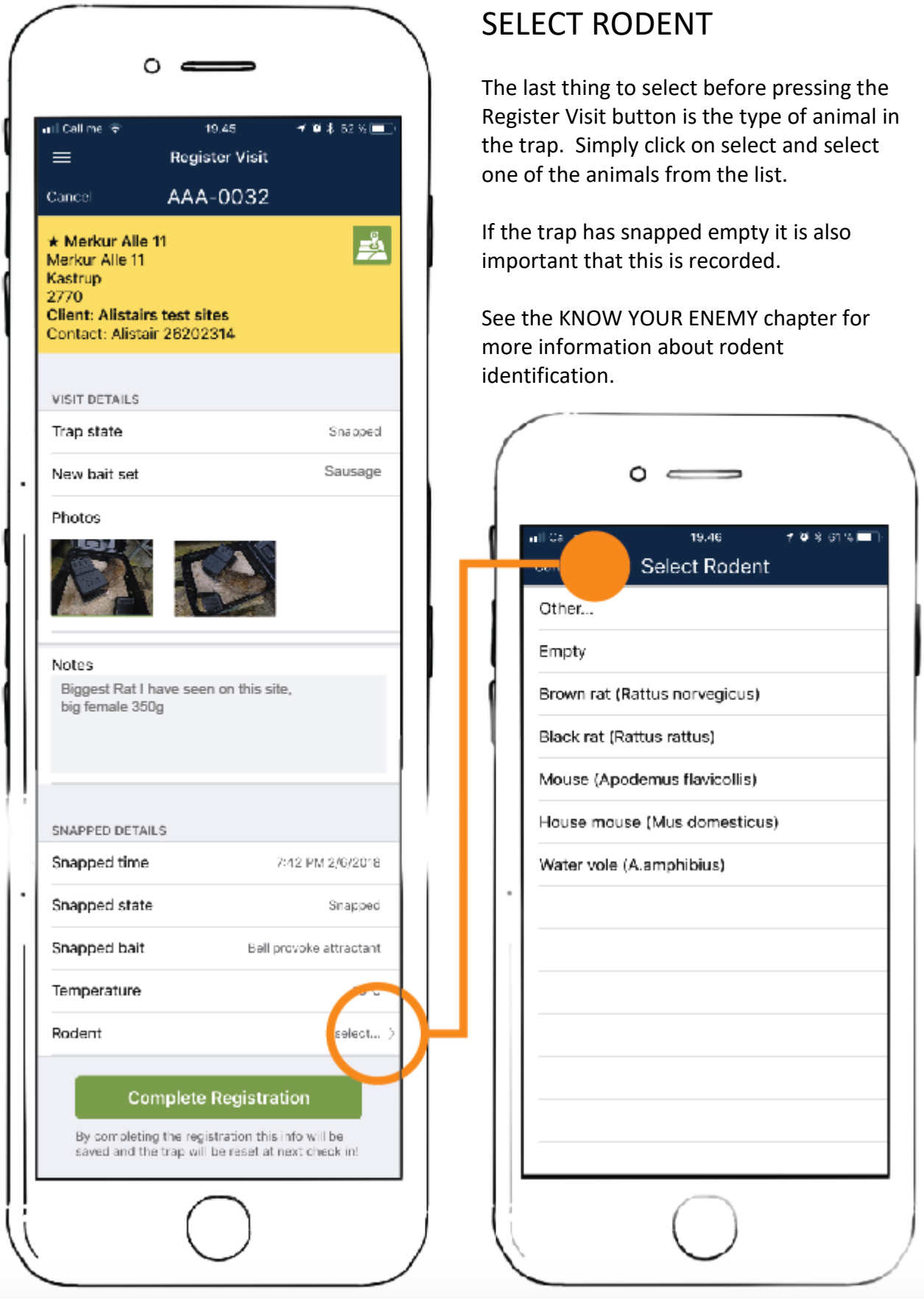
If you choose **Other** you will be presented with a new window where you can type your custom bait. Select **OK** to enter the bait into the trap or select **Cancel** to come out of the menu.

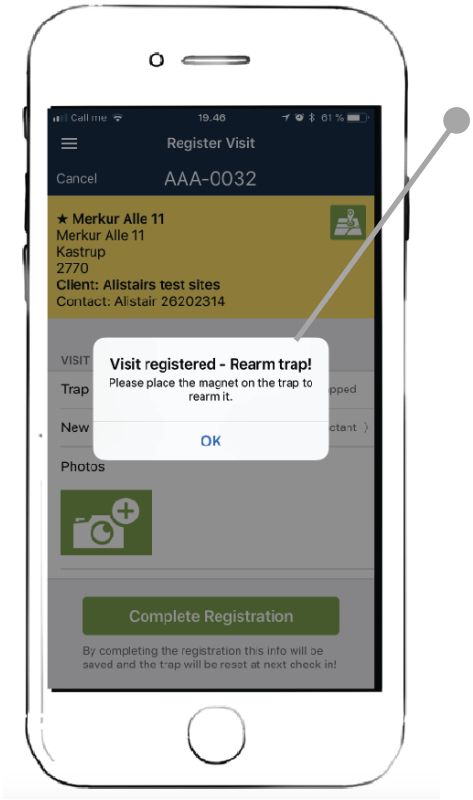
SELECT RODENT

The last thing to select before pressing the Register Visit button is the type of animal in the trap. Simply click on select and select one of the animals from the list.

If the trap has snapped empty it is also important that this is recorded.

See the KNOW YOUR ENEMY chapter for more information about rodent identification.





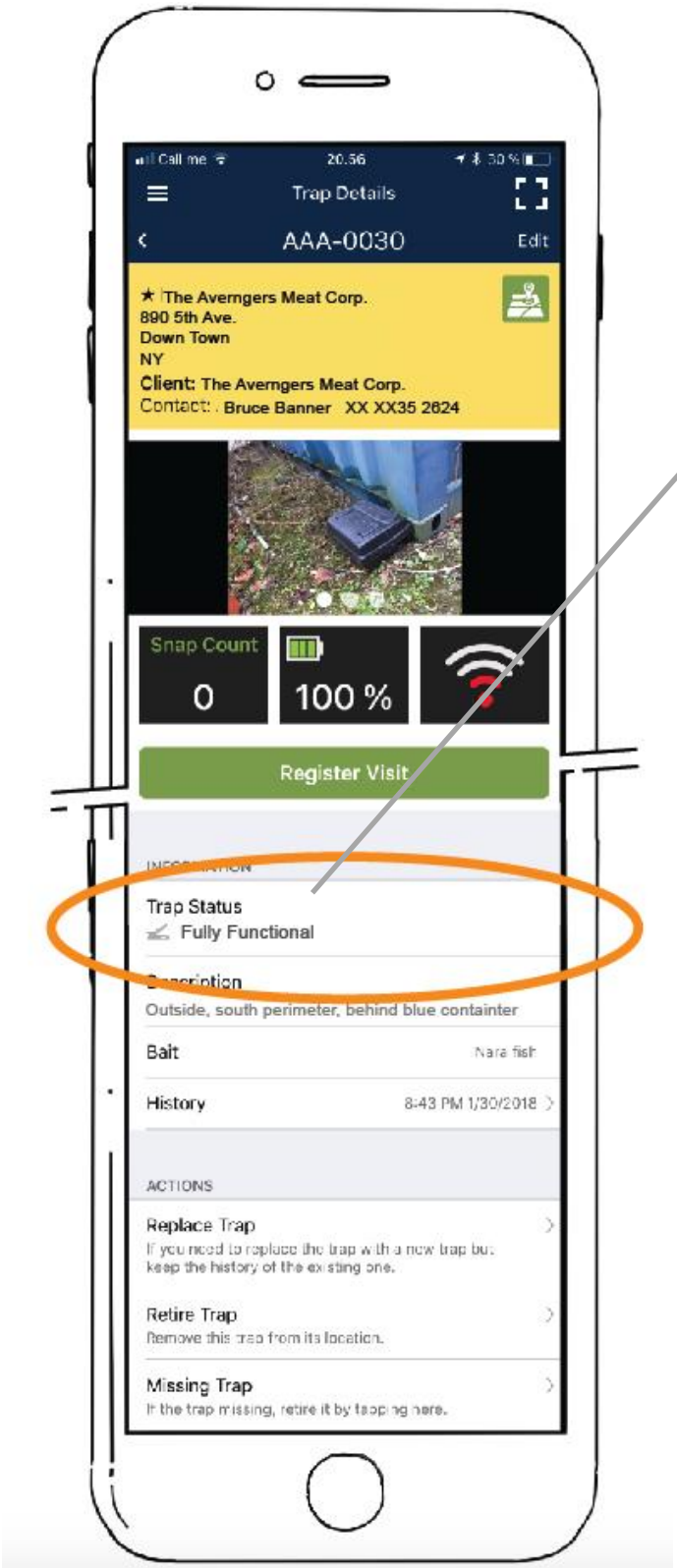
RE-ARM TRAP

Used to record the rodent or other, this is caught in the trap.

COMPLETE REGISTRATION

Press the green COMPLETE REGISTRATION button to complete the registration. There will be a small pop up window to remind you to re-arm the trap. The trap should now be re-armed using the activation key.

 # TIP Always check TRAP STATUS, and OVERVIEW before leaving the site..



TRAP STATUS

As soon as the RATMO has called into the back end the TRAP STATUS will change to Fully Functional.

TIP Always check that traps are working as intended before leaving the site..

OTHER OPTIONS

RETIRE

Retire – this removes the RATMO from the system. *(Choosing retire means when the trap rings in next time it will retire.)*

REARM

Rearm – Puts the trap back into service at the same location point.

REPLACE

Replace – A procedure that allows a new trap to take over the history and position of an old trap, for instance if batteries are low and the data collect from that point in the building should be continuous.

Reporting a unsnapped trap

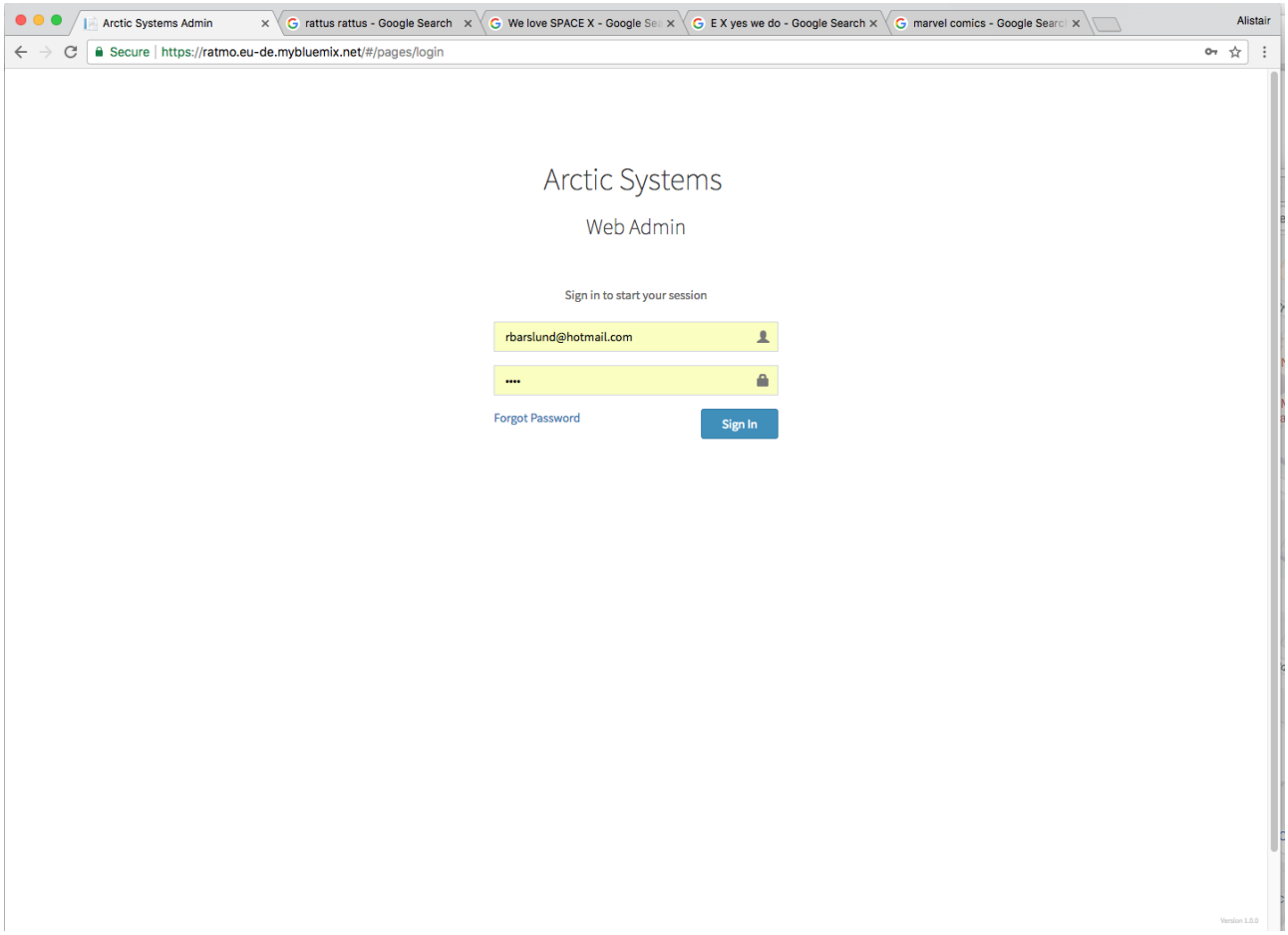
In the rare occasion that you find that a RRATMO has snapped, (with or without a rodent) there is the option to register a trap as snapped. This will help us improve our algorithm. Scan the trap as normal, you will see the extra green button to register the system malfunction. We pay special attention to these events and appreciate you help.

Smart City Terminal

The whole platform can be accessed through a web portal on the following address…

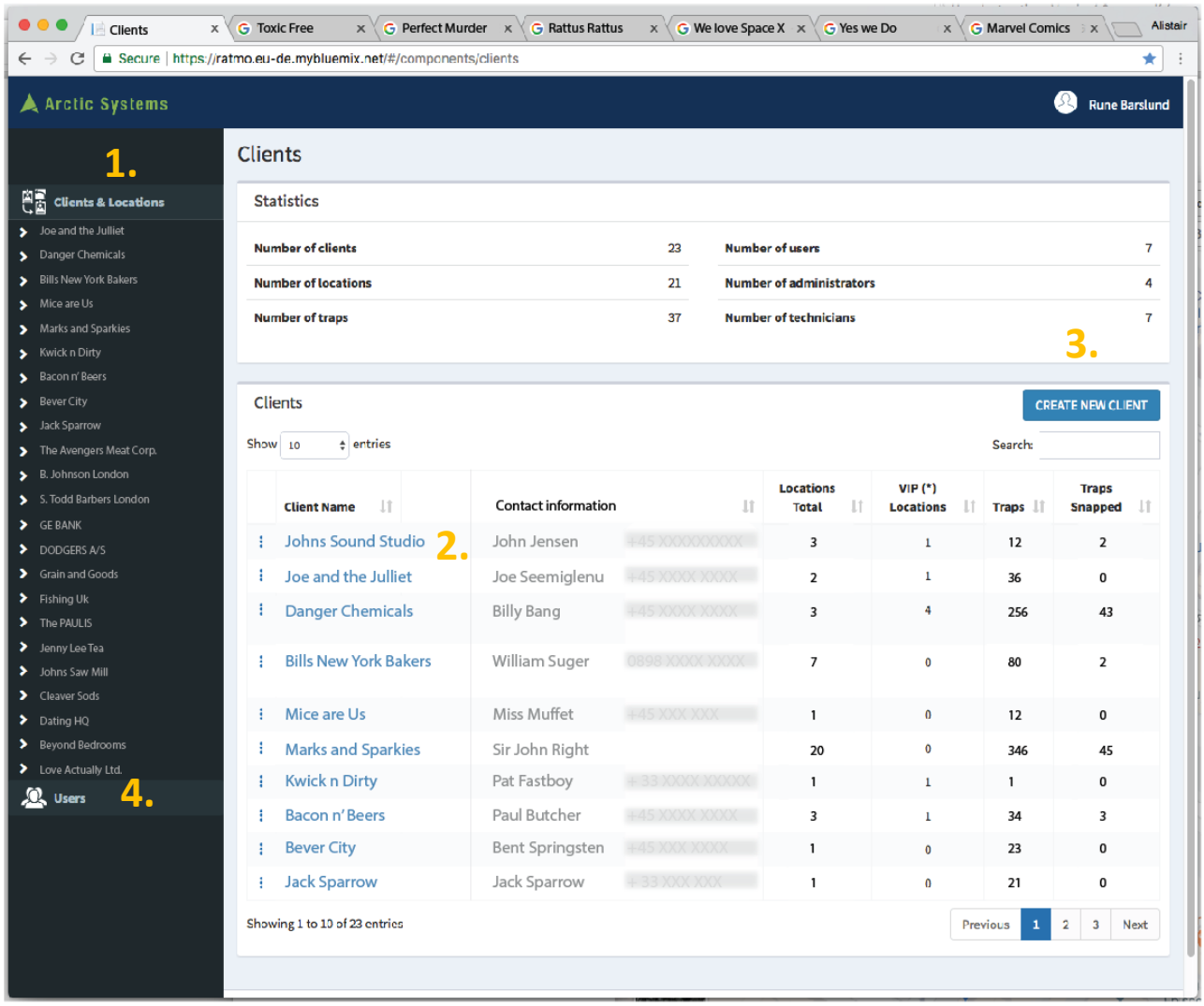
Option 1 - https://ratmo.eu-de.mybluemix.net/ .
Option 2 - admin.arctic-systems.com

Type your supplied log on details into the Smart City Web Terminal and logon



TOP LEVEL CLIENT OVER VIEW

On logging in you will be able to see the clients overview with a TOP LEVEL overview of the number of LOCATIONS, VIP LOCATIONS, TRAP and SNAPPED TRAPS per Client



1. Clients and Locations Menu, clicking on these clients here will bring you to the LOCATIONS LIST for that specific CLIENT.
2. The Clients and statistics, here clicking on the clients will bring you into the LOCATIONS LIST for that specific CLIENT.
3. CREATE NEW CLIENT button
4. The USERS menu, this is where new USERS (Technicians or Administrators) can be added into the system.

CREATE NEW CLIENT

By pressing CREATE NEW CLIENT on the top level overview it is possible to add a new client.

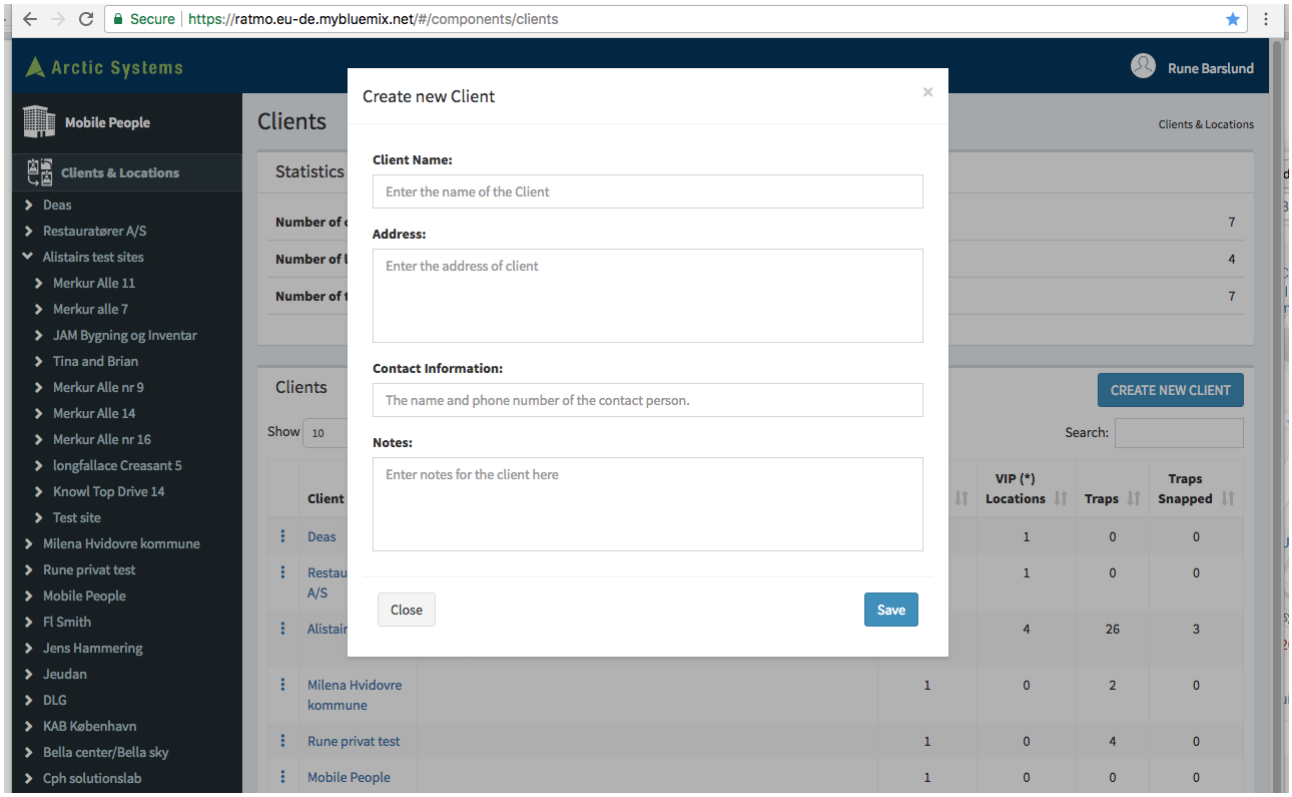
The following data should be added.

Client name – The Name of the client or company paying the invoice.

Address – The address where the invoice should be sent.

Contact information – The name and number of the client.

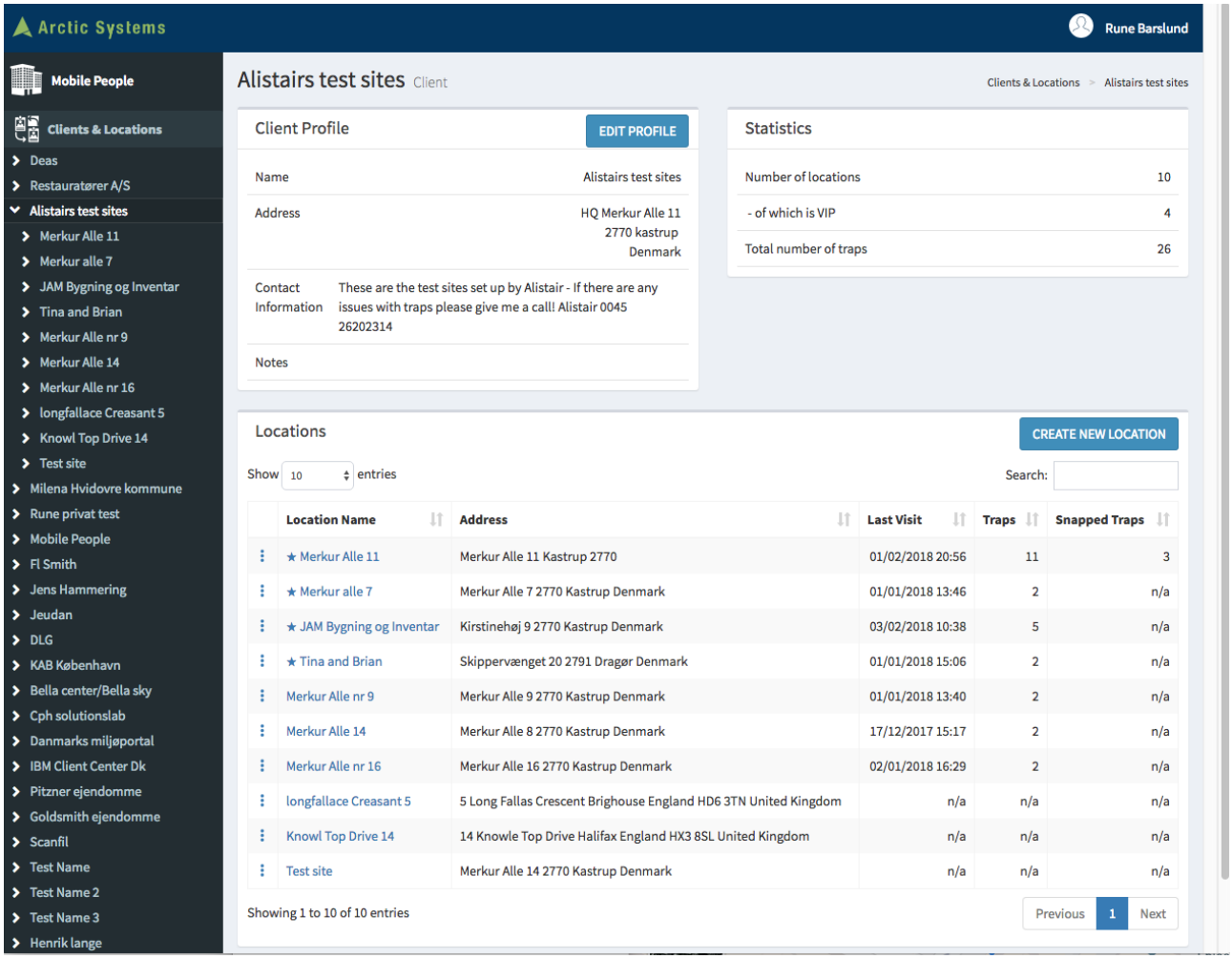
Notes – This might also contain an email for the invoice or any other client information.



Press SAVE to save the updated information, or CLOSE to exit without saving.

CLIENT LOCATIONS

Clicking on any of the CLIENTS in the left menu of the TOP LEVEL OVER VIEW, or in the list on the TOP LEVEL OVER VIEW will give a breakdown of the LOCATIONS that CLIENT has.



This page also gives access to edit the client profile by pressing the EDIT PROFILE button.
There is also the option to ADD a new location by pressing the CREATE NEW LOCATION button.

EDIT CLIENT

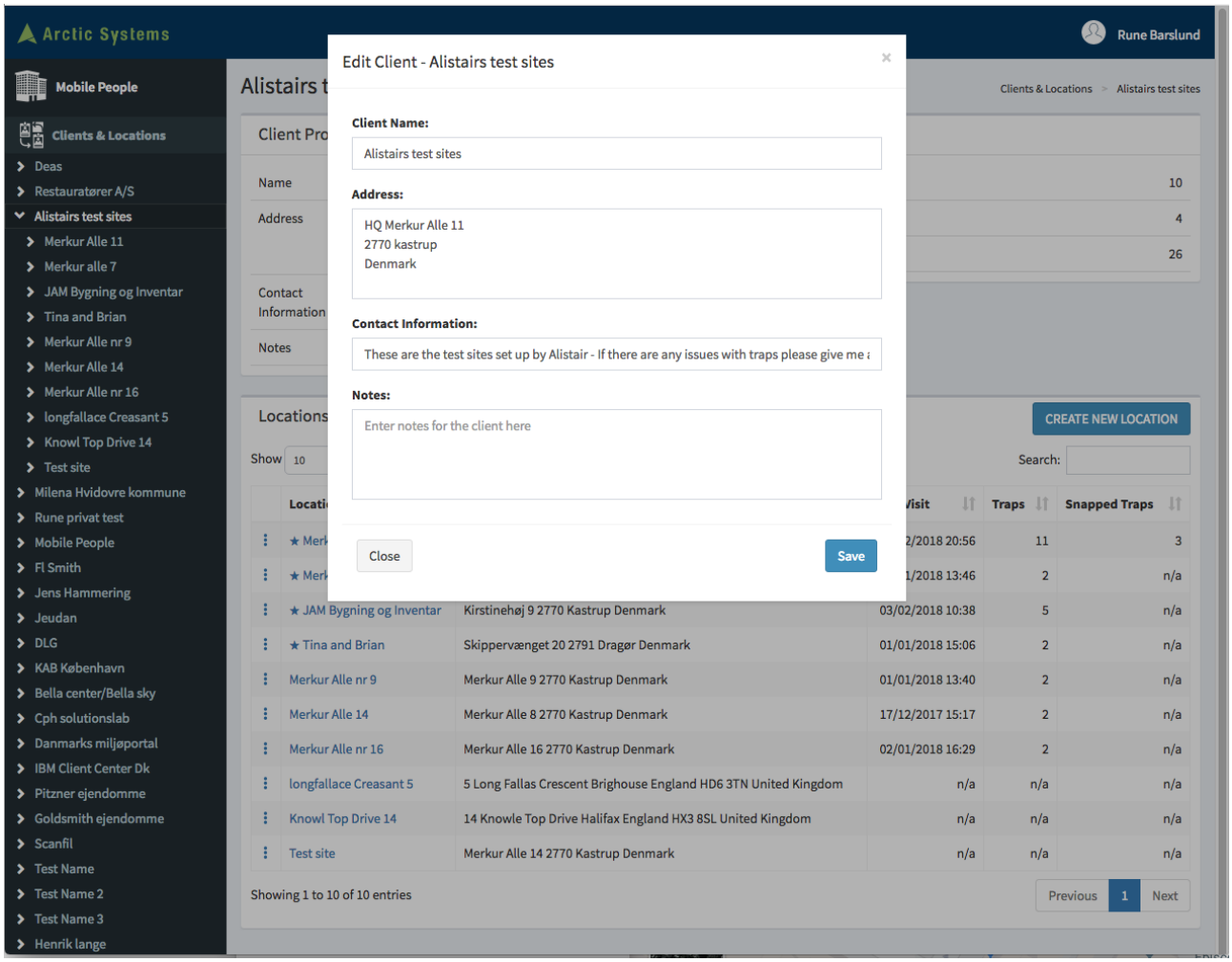
By pressing the EDIT PROFILE button from the previous page there is the option to edit the client profile.

Client name – The Name of the client or company paying the invoice.

Address – The address where the invoice should be sent.

Contact information – The name and number of the client.

Notes – This might also contain an email for the invoice or any other client information.



Press SAVE to save the updated information, or CLOSE to exit without saving.

CREATE NEW LOCATION

By pressing ADD LOCATION in the LOCATIONS OVERVEW page it is possible to create a new location, typing the address into the address box will automatically pull up the address on Google Maps.. Note this location will automatically be added to the client in the behind window.

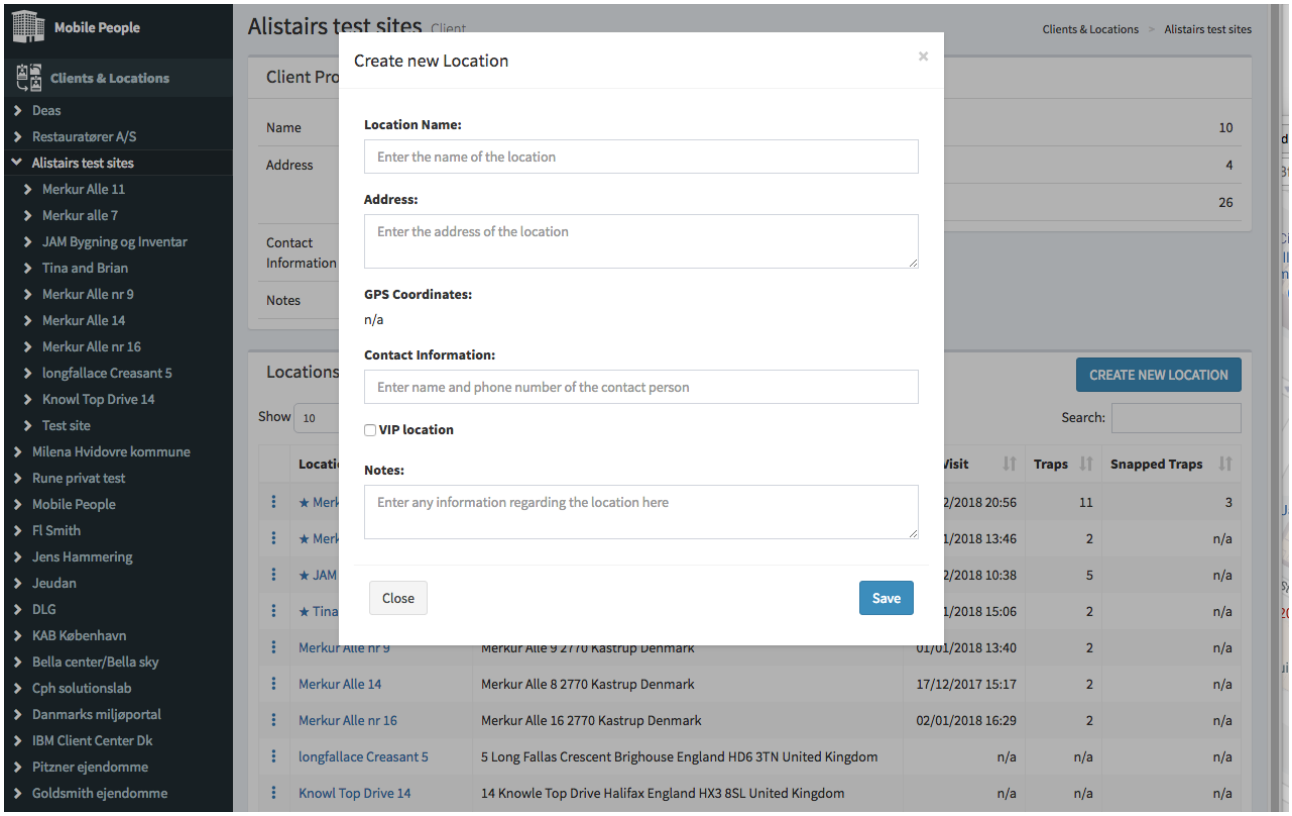
Location Name – This is the location of the client, it can be one of several locations, or if the client has only one location it could be the same as the billing address of the client.

Address – when the address is entered correctly it will automatically look up the address on google and enter it on to the customer map data base.

Contact information – This is the address of the “gate keeper”, the person we need to contact who has responsibility for grating access to the site or the person with the responsibility for rodent control

VIP – Is this a VIP location with elevated privileges.

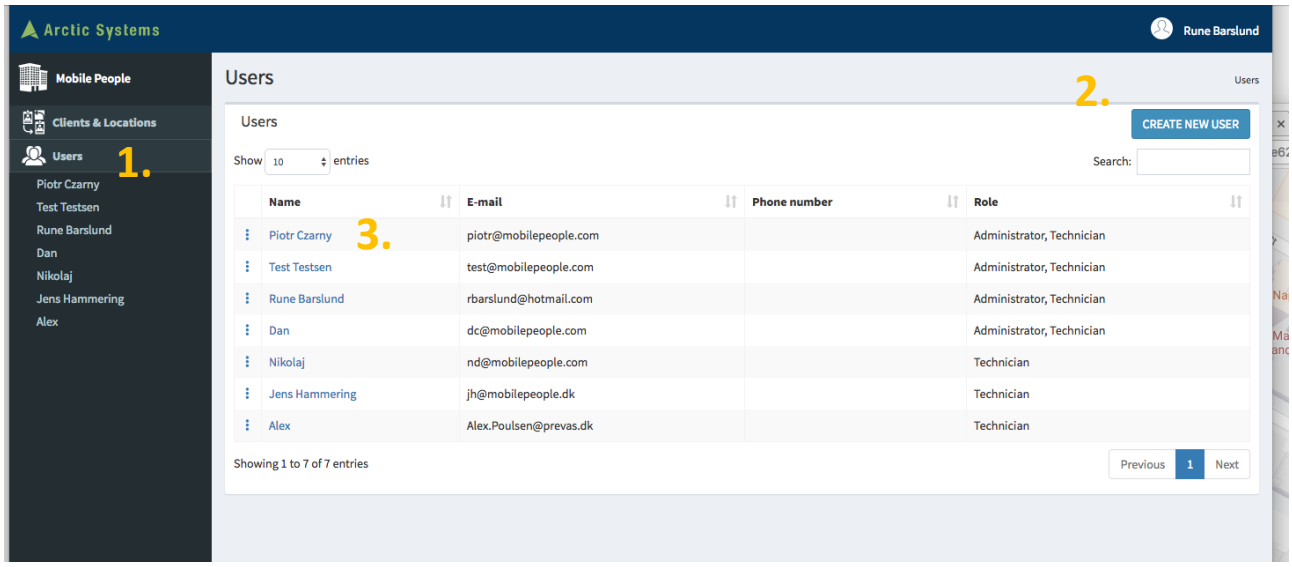
Notes – is there anything special about this location, then it should be added here. Access times, special things to remember, special safety requirements etc.



Press SAVE to save the updated information, or CLOSE to exit without saving.

THE USERS MENU

Clicking on the USERS menu in the left menu bar gives a list over view od all the users. There is the option to create a new user or the option to click on each individual user to get an overview of the users traps and sites.



1. USERS menu selection button in main menu, the USER data can be accessed by clicking the USERS in the list.
2. CREATE NEW USER.
3. USERS, click on the individual users to access the user data. Each user's data can also be sorted according to the different coulombs by clicking on the small arrows.

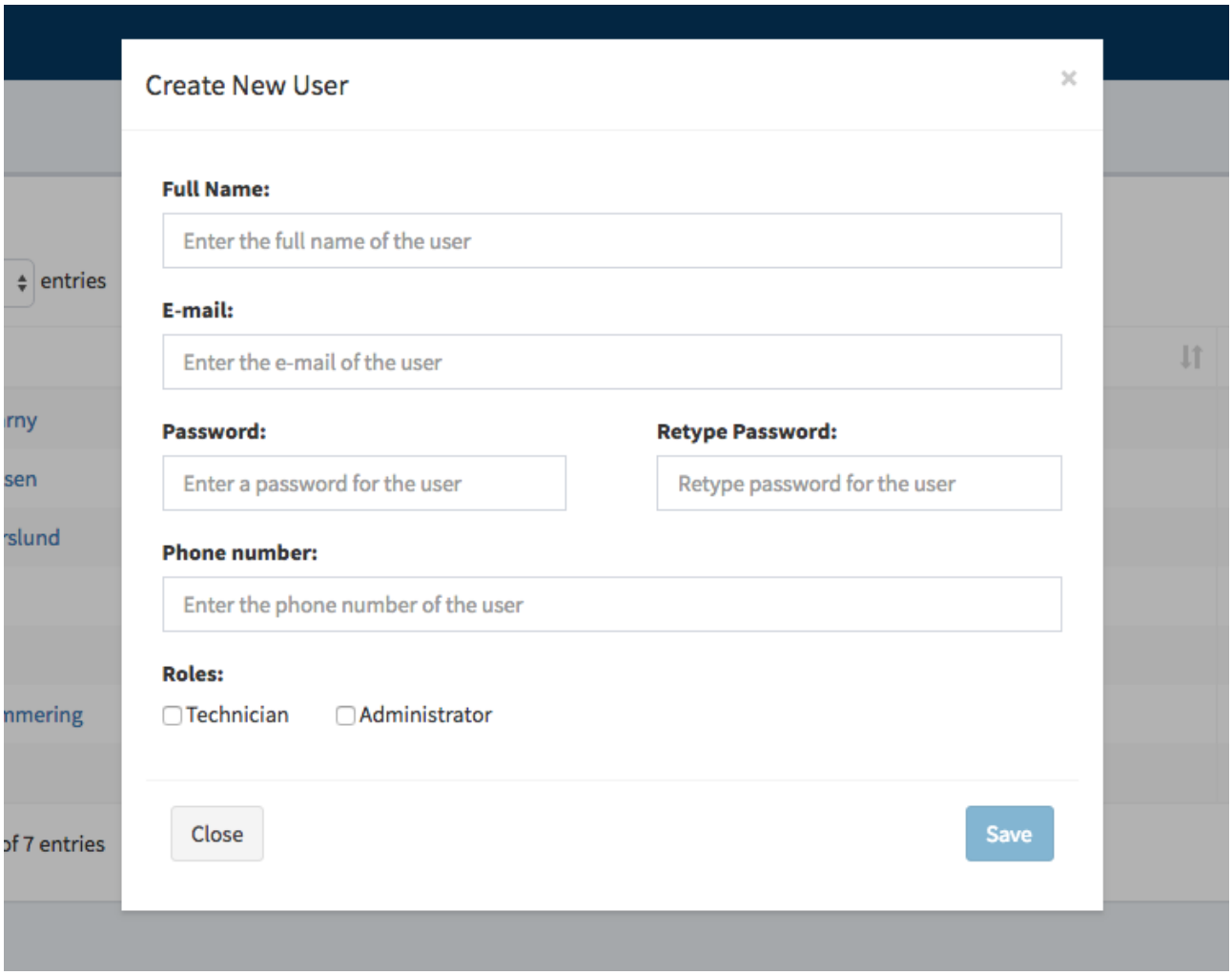
CREATE NEW USER

By clicking on CREATE NEW USER in the USER overview the CREATE NEW USER window is activated.

The following information should be added.

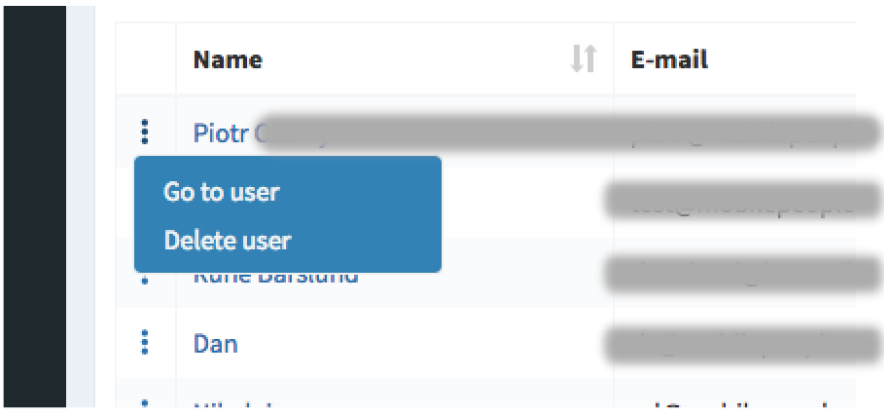
Full Name – The full name of the user.
E-mail – The e-mail address the user can be contacted on.
Password – This is where the password is set for the user and should be typed twice
Phone Number – The contact number to get hold of the user.
Roles:

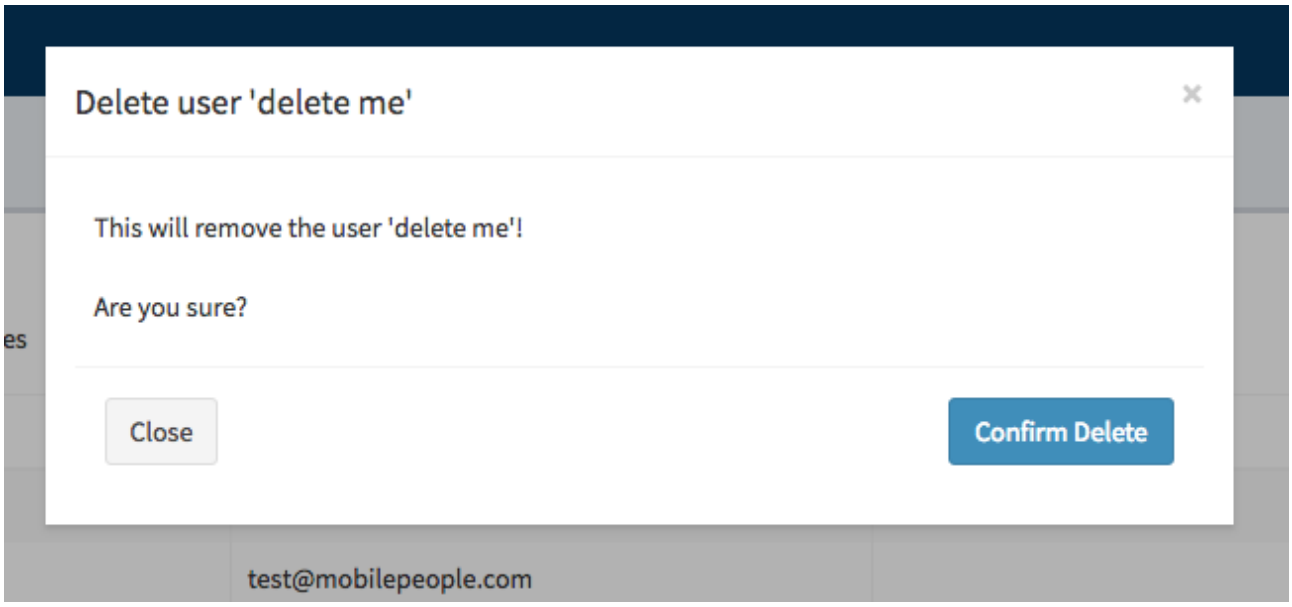
Technician – Gives access only to the Smart City APP
Administrator – Give access to the Smart City Web Terminal and APP.



DELETING A USER

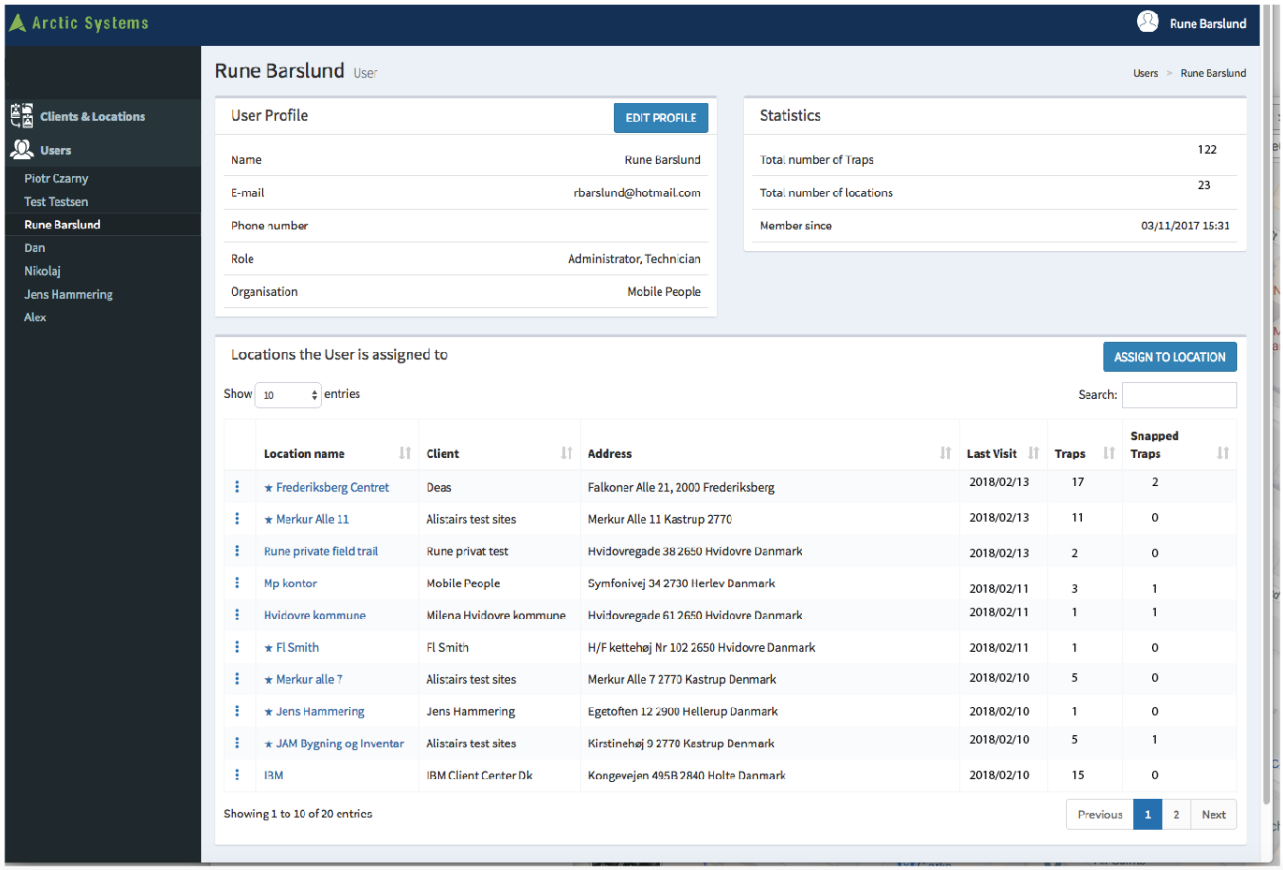
By clicking on the 3 blue dots at the left of each name in the USERS MENU it is also possible to delete or go directly to each user.





INDIVIDUAL USER OVERVIEW

By clicking on and individual user in the users menu its possible to see the locations each user has. It is also possible to edit the user profile and also to assign the user to new locations.



ASSIGN THE USER TO LEW LOCATIONS

By selecting the ASSIGN TO LOCATION button, it is possible to assign new locations to a user. A location can have more than one user, if more than one technician will be working a location.

By selecting the 3 blue circles it is also possible to remove a LOCATION from a USERS menu.

Top Tips for Trap Placement

Place your traps in an approved bait box, this will reduce the number of birds, cats, hedgehogs etc that get caught in the traps.

Place your trap somewhere that will not be disturbed. RATMO is sensitive to the vibrations made by the snap. It will also register if the bait box receives a hard knock or is moved violently, again a good reason to go out and inspect the traps

Look around you on site, what foods are available, are you near a butchers then the chances are its some type of meat waste the rodents are used to eating. Are you near a cinema then see if they like popcorn.

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Battery life.

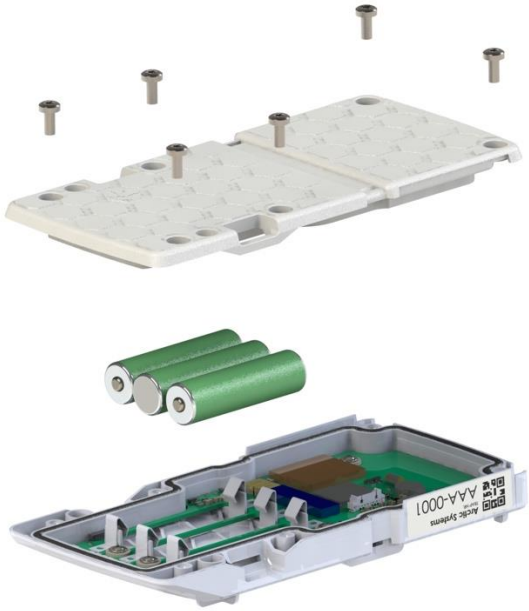
The RATMO is designed to have a battery life of 2 years. This is based on one rat every other day, at 20 Deg C.

More extreme temperatures will result in a shorter battery life. With that said, we have tested the RATMO and can see that the battery life at the extreme temperature of -20 deg C is over 1 year.

Replacing the battery.

The following procedure must be followed.

Wear gloves and a mask when working with dirty traps.



0. For traps with cable ties round the channel of the lid the trap must be removed. Eg KNESS
1. Recommended – Wash the RATMO in a weak bleach solution to remove any harmful germs.
2. Remove the 6 screws that secure the lid to the chassis with a Tx10 screwdriver.
3. Remove the battery lid, take care not to damage the seal.
4. Remove the old batteries and dispose of them in the correct manner according to your countries laws and regulations.

Battery Orientation

5. Add 3 quality AA batteries, note the polarity. The polarity is marked on the PCB and also on the plastic parts.

6. Using a small brush add some silicone grease (approx 1g) to the o-ring.
7. Mount the lid, make sure it is mounted in the correct way
8. Fasten the 6 screws in place. Make sure the screws are tight, over tightening can cause damage to the threads.
   (Tip – If using a torque measuring screw driver set Max torque to 1.5 Nm)

Fault Finding

Trap does not register a snap.	1. Check that the batteries have sufficient power. Low battery level will not provide enough power to contact the back end. 2. If you are testing the trap on your desk check on the App if the trap is in Live Animal Mode, in live animal mode the trap will sleep and wake up occasionally to check if the animal is still shaking the trap 3. Was there a signal at the site? On rare occasions the network may be down when the trap snaps.
RATMO registered a snap but the trap is still physically armed. (False positive)	1. Is the trap placed in a site where there can be large vibrations or where it can get knocked? The level of vibration needed to give a false positive is high and is equivalent to the bait box been knocked or tampered. Consider moving the bait box to a less exposed area. Register the snap as a false positive and we will note it in our back end.
Trap is turned off when coming to site.	1. Was the trap armed correctly, did you hear the final arming tone before leaving site. Did you check all the traps were armed before leaving the site? 2. Was the trap disarmed remotely by accident, this is possible from the app. 3. Is the trap damaged, is there moisture in the unit.
I am not catching any rats, but they are in the area.	1. Look at what the rodents are eating naturally in your area. Adjust your bait accordingly. 2. Clean traps will not attract rodents as much as used traps, do not clean your traps too often. 3. Place your traps up against a wall or in corners. 4. Rats do not like new things, consider using unarmed traps to allow them to

	get used to feeding from devices before ramping up and arming. 5. Black rats are vegetarian, brown rats omnivores eating both plats and meat. Rats coming down from trees and roofs (black rats) like peanut butter. Rats coming from under the house or sewers chocolate spread/Nutella, or smelling cheese. 6. Rats like tunnels, use bait boxes or card tubes to give them somewhere nice to eat.
I cannot see the traps update on my App.	1. Check your smart device is online with a data connection. Some times when going from building where the phone has been on WIFI can cause your phone to loose the data connection.

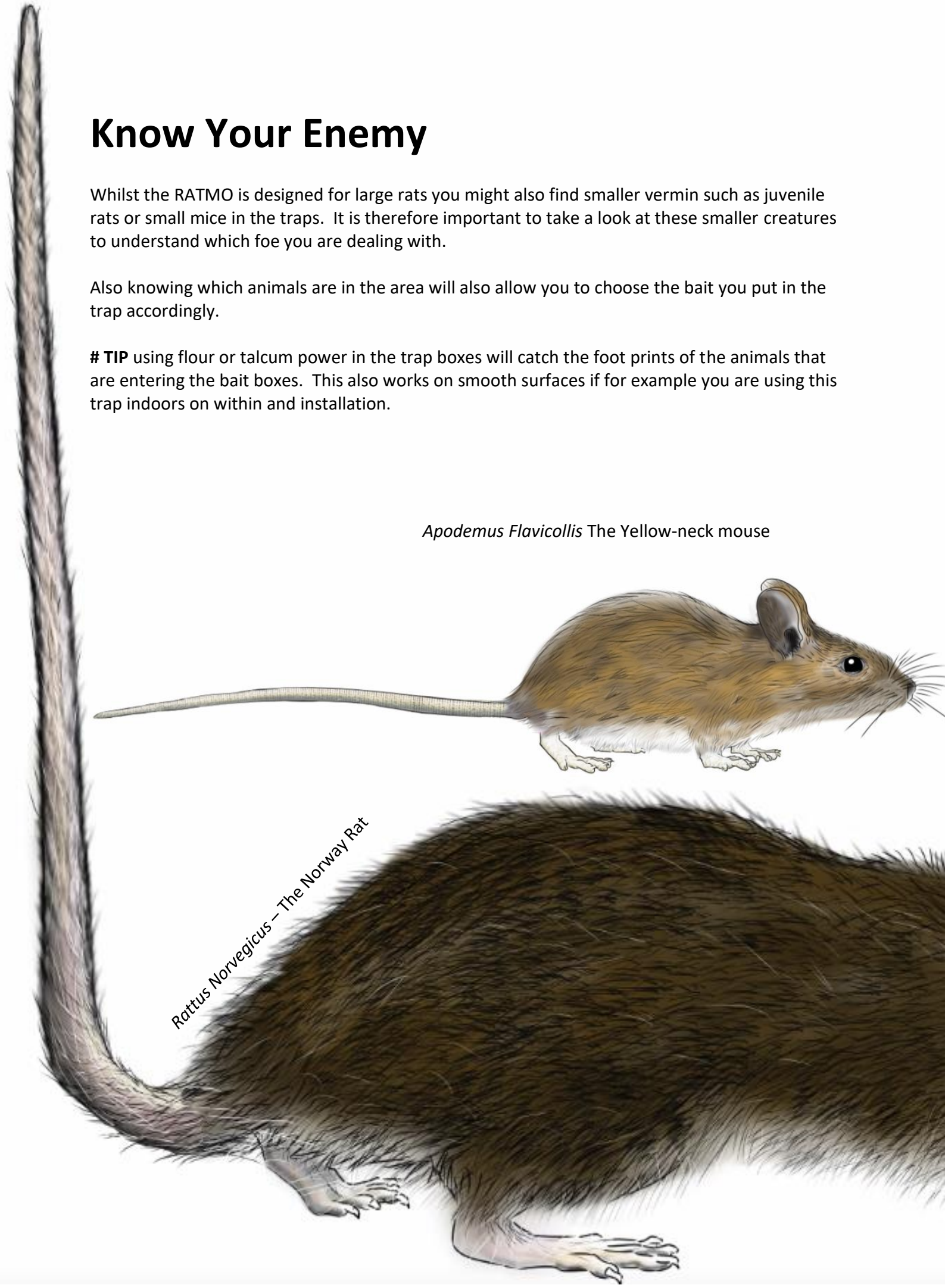
Know Your Enemy

Whilst the RATMO is designed for large rats you might also find smaller vermin such as juvenile rats or small mice in the traps. It is therefore important to take a look at these smaller creatures to understand which foe you are dealing with.

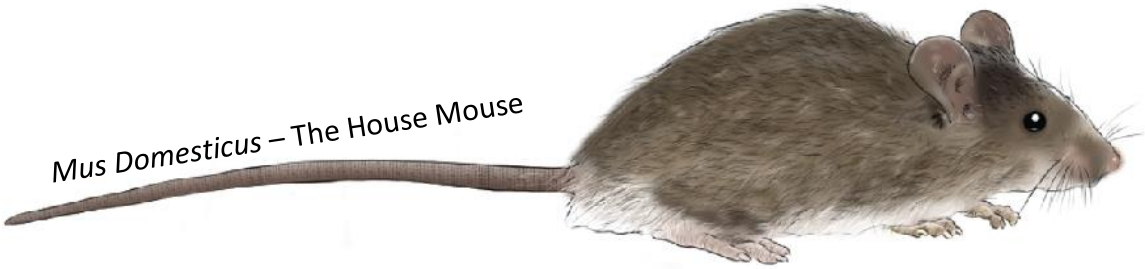
Also knowing which animals are in the area will also allow you to choose the bait you put in the trap accordingly.

 # TIP using flour or talcum power in the trap boxes will catch the foot prints of the animals that are entering the bait boxes. This also works on smooth surfaces if for example you are using this trap indoors on within and installation.

Apodemus Flavicollis The Yellow-neck mouse



Arctic Systems



Norway Rat
Rattus Norvegicus
Average length 18mm with

Black Rat
Rattus Rattus
Average length 12mm with
slightly pointed ends

House Mouse
Mus Domesticus
Average length 6mm with
slightly pointed ends

THE NORWIGIAN RAT (*Rattus Norvegicus*)

Also known as, brown rat, common rat, sewer rat and Hanover rat. This is one of the largest rats with a body up to 25cm long (10 in) the tail can also grow to a similar length giving a total length from head to tail of 50cm (20in). The average mail weighs approx. 350g (12oz) with the female slightly smaller at 250 g (9oz).

The Norwegian rat is a good digger and often maker burrows for living in.

Note the shape of the ears and the long front teeth.

The underside can be light in colour all the way under the chin.

Short little front legs with with a thin layer of hairs and small sharp nails.

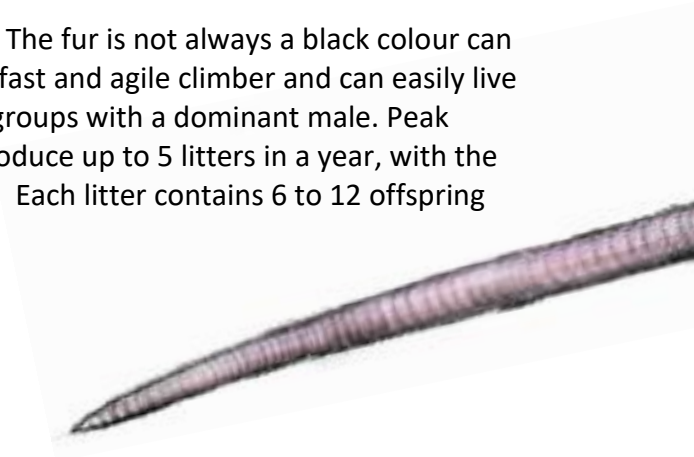
Note the shape of the mouth and the teeth.

Thought to have originated in northern China, this rodent has now spread to all continents except Antarctica, and is the dominant rat in Europe and much of North America—making it by at least this particular definition the most successful mammal on the planet alongside humans.[2] With rare exceptions, the brown rat lives wherever humans live, particularly in urban areas.

Juvenile rats can look quite similar to mice, note the white underside on this rattus norvegicus, and also the shape of the “long” hind legs.

THE BLACK RAT (*Rattus Rattus*)

The black rat, or roof rat as its also know is a slenderer rat than the brown rat. The tail of the black rat is also longer than that of the brown rat and is one of the best ways to tell them apart. The black rat's tail will be generally longer than its body.
Also note the slenderer body than that of the brown rat. The fur is not always a black colour can cannot be used to identify the species. The black rat is a fast and agile climber and can easily live in loft space in a building. The black rats my form social groups with a dominant male. Peak breading occurs in summer and autumn. Females can produce up to 5 litters in a year, with the new born able to reproduce within 3 – 5 months of birth. Each litter contains 6 to 12 offspring with an average of 8.



Body Length	16-24 cm
Tail Length	18-26 cm
Total Length	34-50 cm
Weight:	100 -300g
Average weight:	225g
Dropping size av.	9mm long with slightly pointed ends
Food	Fruit and seeds, stems leaves, fungi, invertebrates and vertebrates. Any type of animal food, cow, swine dog and cat food. Similar to a squirrel with nuts and fruits. Can cause damage on farms from feeding on crops.
Age	12 Months in the wild

THE HOUSE MOUSE *(Mus Musculus Domesticus)*

The western field mouse has a small pointed head and a long almost hairless tail. Although a wild animal they live mainly in urban areas with humans. They vary in colour from light to dark brown They tend to have short hair and can in some cases have a light belly. They hind feet are short compared to the field mouse. They are good jumpers.

Body Length	7-10 cm
Tail Length	1-10 cm
Total Length	8-20 cm
Weight:	40 - 45g
Dropping size av.	6 mm long with slightly pointed ends
Food	
Age	

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THE FIELD MOUSE *(Apodemus Flavicollis)*

The yellow necked field mouse is slightly larger than the house mouse and is caperble of climbling trees. Whilst it looks cute, it can harbour several dieses that can be fatal to humans. Breeding does not occur during winter where a group of mice may huddle together to keep warm. They may burrow and make extensive tunnel systems.

Body Length	9-13 cm
Tail Length	9-13 cm
Total Length	18-26 cm
Weight:	28 - 43g
Dropping size av.	6 mm long with slightly pointed ends
Food	Fruit and nuts, seeds, and sometimes small invertebrates.
Age	12 Months

Appendix

Approved Traps

Bell laboratories T-Rex

Kness Big Snap-E

Approved Bait Boxes

Bell EVO Express

CLEANING

Lightly spay the RATMOs with a weak bleach solution. Bleach is a strong and effective disinfectant and is effective at killing bacteria and viruses.

As bleach irritates mucous membranes, the skin and the airway, decomposes under heat or light and reacts readily with other chemicals, caution should be exercised in the use of it. Improper use of bleach may reduce its effectiveness in disinfection and also lead to accidents which can be harmful to health. Overuse of bleach or using a bleach solution that is too concentrated results in the production of toxic substances that pollute the environment and disturb ecological balance.

Protective gear required:
Mask, rubber gloves, plastic apron and goggles (recommended).

PROCEEDURES

Ensure good ventilation in the working area
Use protective gear, avoid contact with skin.
Use cold water as warm water causes the Bleach to break down and become ineffective

Bleach containing 5.25% sodium hypochlorite should be diluted as follows -
1:49 diluted household bleach (mixing 10ml of bleach with 0.5litre of water)

Spray the RATMO devices water and wipe dry.
Cleaning tools should be soaked in diluted bleach for 30 minutes and then rinsed thoroughly before reuse.
Finally, wash hands with liquid soap, then dry hands with a clean towel or disposable towel.

PRECAUTIONS

Avoid using bleach on metals, wool, nylon, silk, dyed fabric and painted surfaces.
Avoid touching the eyes. If bleach gets into the eyes, immediately rinse with water for at least 15 minutes and consult a doctor.
Bleach should not be used together or mixed with other household detergents as this reduces its effectiveness in disinfection and causes chemical reactions. For instance, a toxic gas is produced when bleach is mixed with acidic detergents such as those used for toilet cleaning. This could result in accidents and injuries. If necessary, use detergents first and rinse thoroughly with water before using bleach for disinfection.
As undiluted bleach liberates a toxic gas when exposed to sunlight, it should be stored in a cool and shaded place out of reach of children.
Sodium hypochlorite decomposes with time do not use old bleach.
For effective disinfection, diluted bleach should be used within 24 hours after preparation as decomposition increases with time if left unused.

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