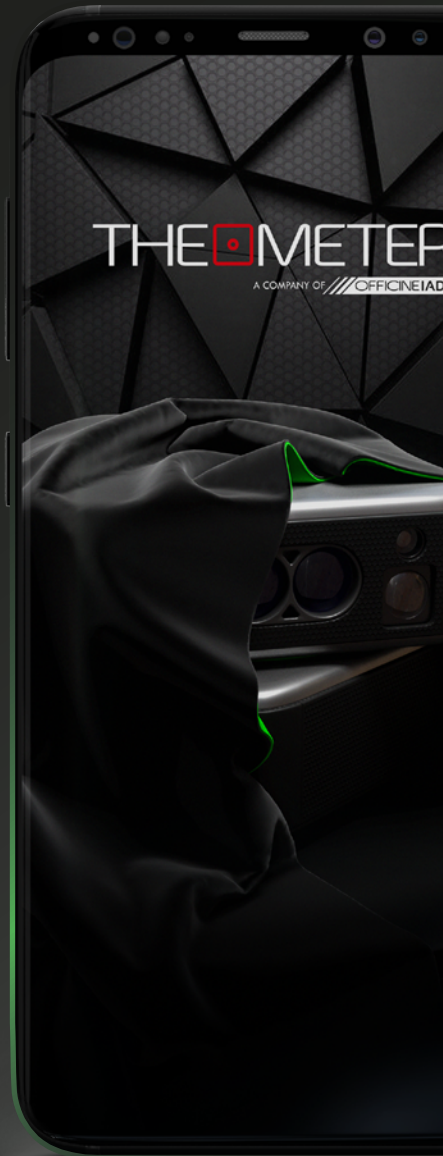









THE MODES: AUTOMATIC

GUIDE



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TIP



ADVICE

INTRODUCTION

Welcome to the **Automatic Mode** guide, we will explain all the functionalities; alternatively you can also watch our video tutorials of the modes, you can find them on our youtube channel or by scanning the QR code on the right!

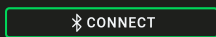
YouTube



SCAN ME!

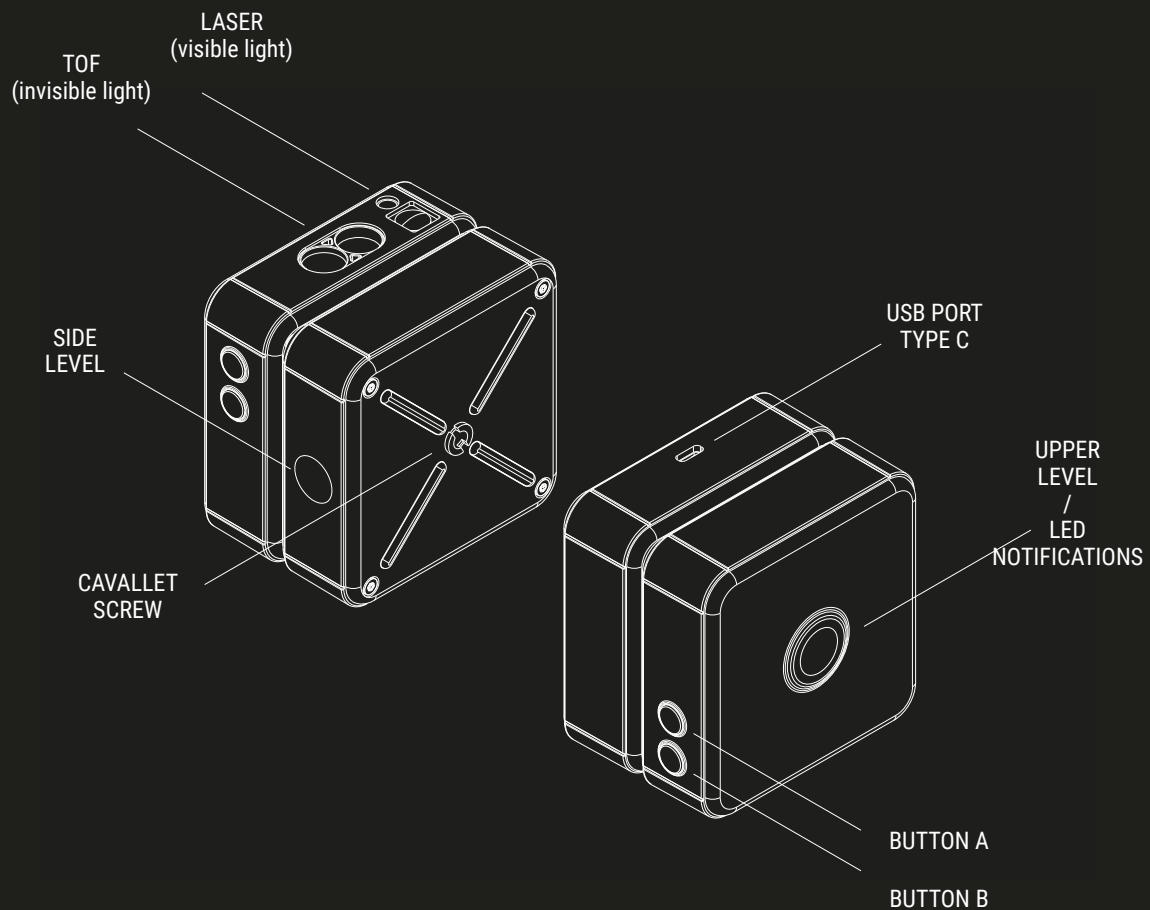
Automatic Mode

With this mode, your **CUBE** performs surveys and sections of your spaces autonomously by rotating 360°, returning a planimetric point cloud. Through the app you will have a preview in points, to which you can add markers and comments; The DXF file will also contain several simplifications of the survey via polyline

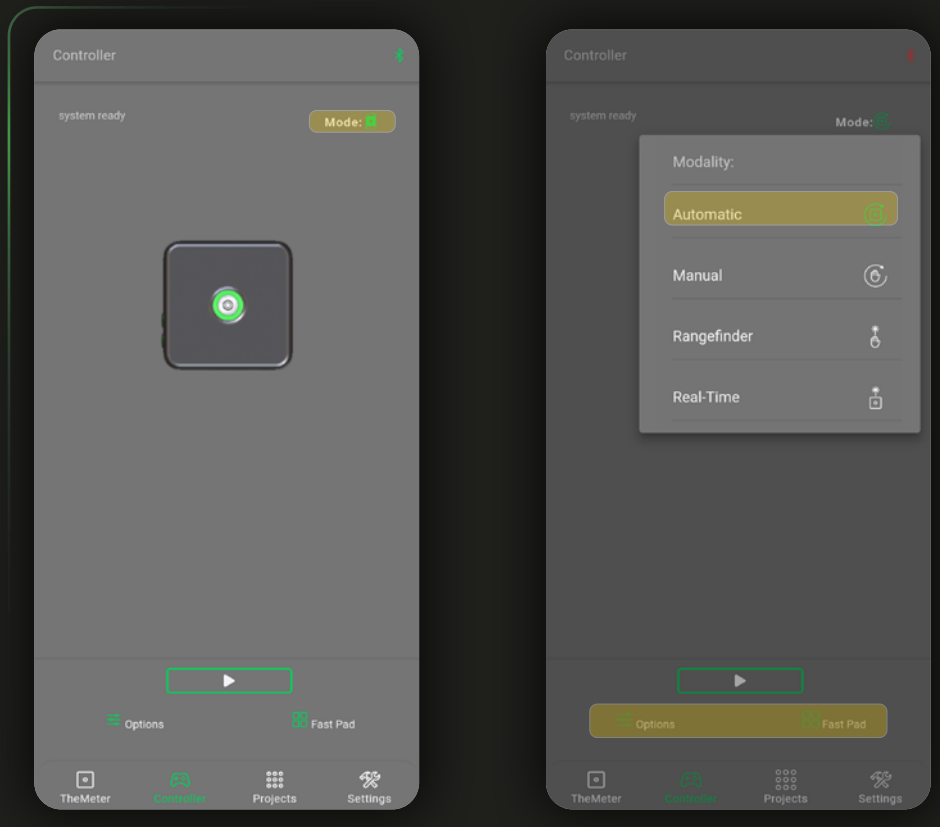
To start, turn on your **CUBE**, holding down the button A until the LED turns green, then click  on the App



What is your **CUBE** made up of? Here below the hardware component list




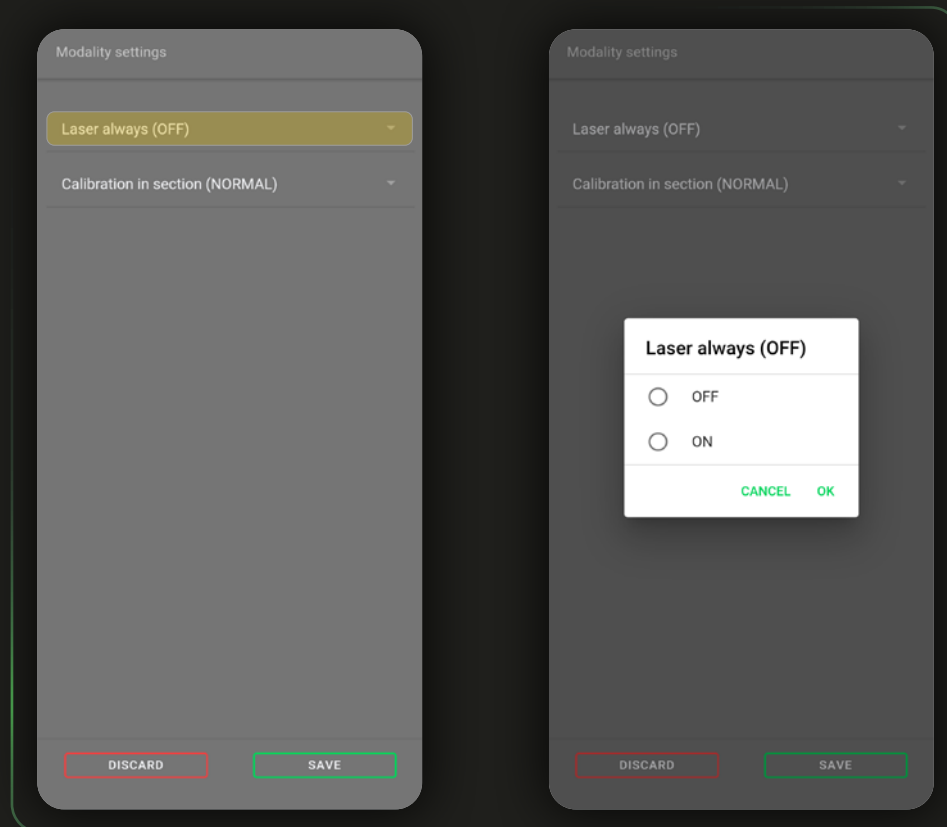
Switch to Controller 🎮 screen and select the automatic mode by clicking on **Mode:**



From this screen you can take your measurements and manage settings and mode functionalities via Options 🛠️ and Fast Pad 📄

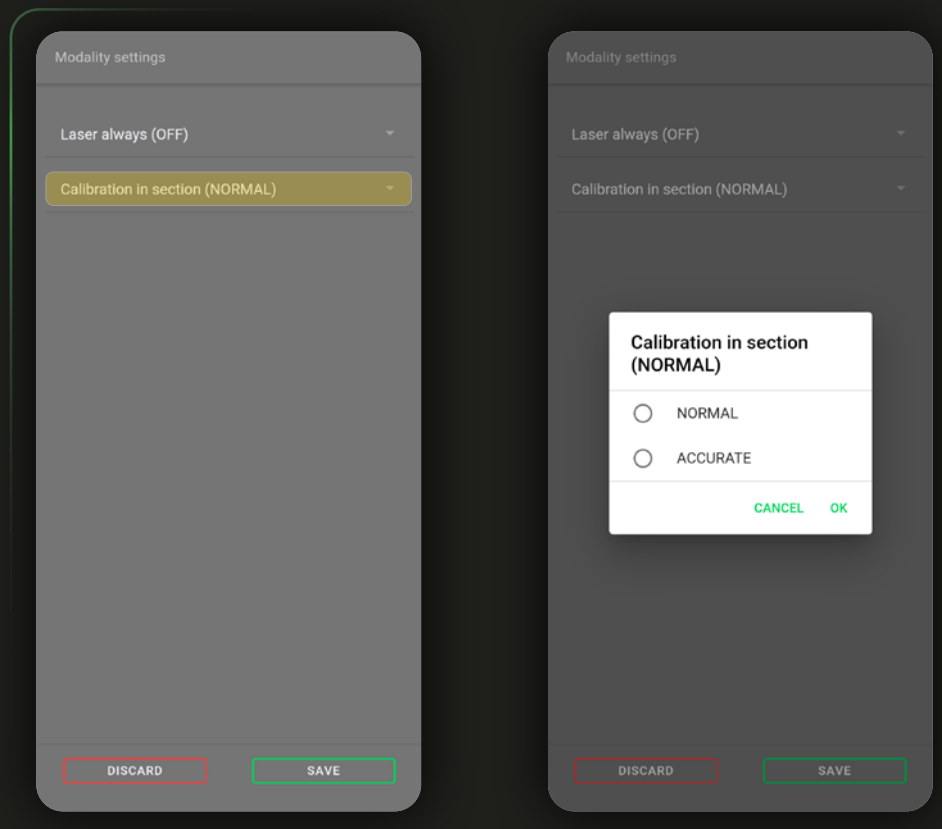
OPTIONS 

In Options  you can set the laser pointer off or on (Laser always OFF / ON) during the automatic SCAN






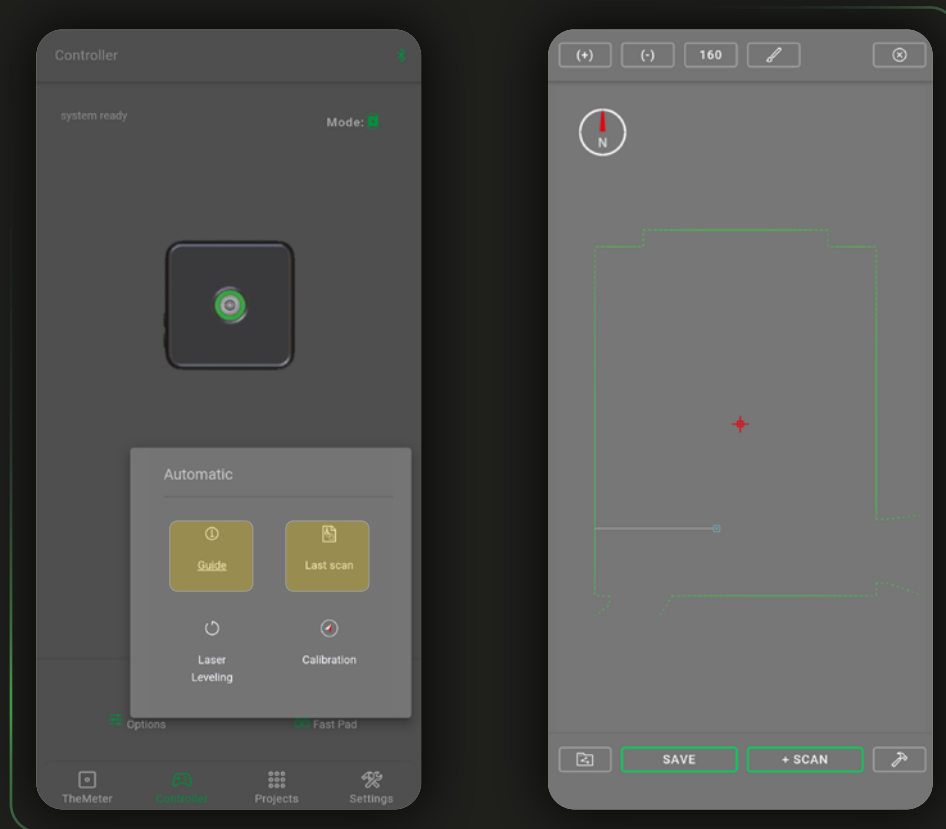
TOF, the tool by which the device performs the automatic measurements, is not visible to the human eye, and does not allow the evaluation of the acquisition path

Through calibration in section you can set the method by which **CUBE** will identify the ground line in sectional surveys; in Normal mode the calibration is carried out through a faster rotation




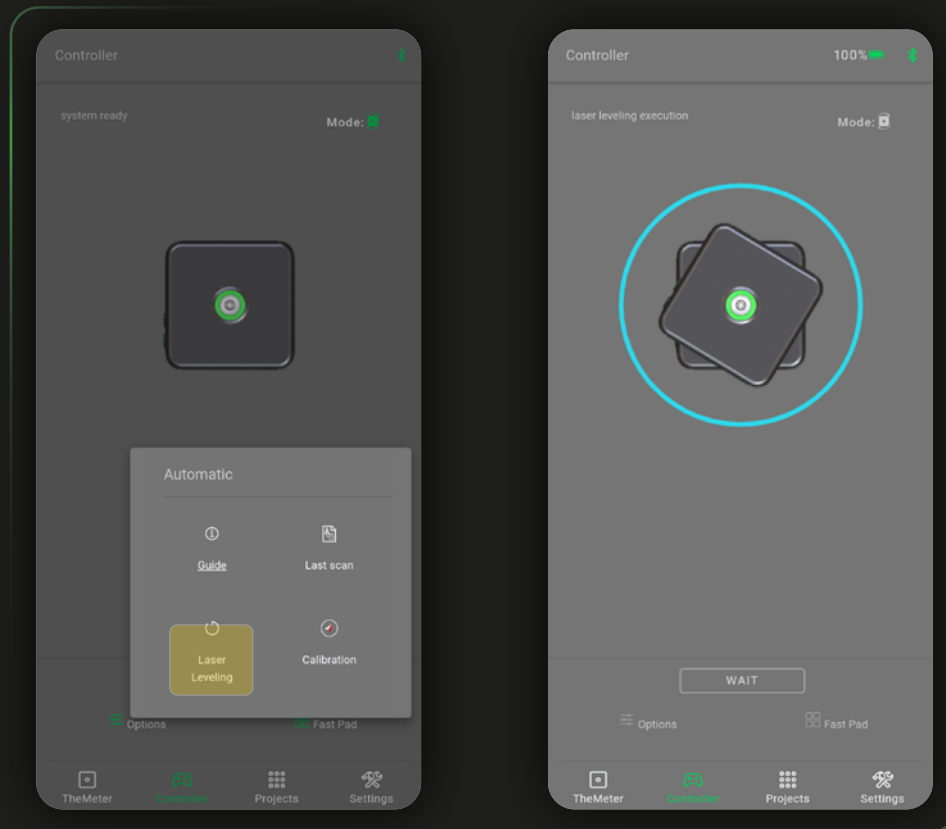
In Accurate mode it performs a full calibration by performing a rotation of 360°, positioning the ground line as accurately as possible in the scan

In Fast Pad  you can find four available buttons: Guide  refers to the online guide of currently active mode, Last survey  allows you to open the last scan performed



You can review it, save it, or expand it by multiple SCAN, and interact with it by using all the features available in the app, which we will explain in detail later in the guide


Activating the Laser Level  will make the head of the **CUBE** perform a 360° rotation with the laser on, so that you can check at what height the device will perform the survey and evaluate the scan path before launching a survey

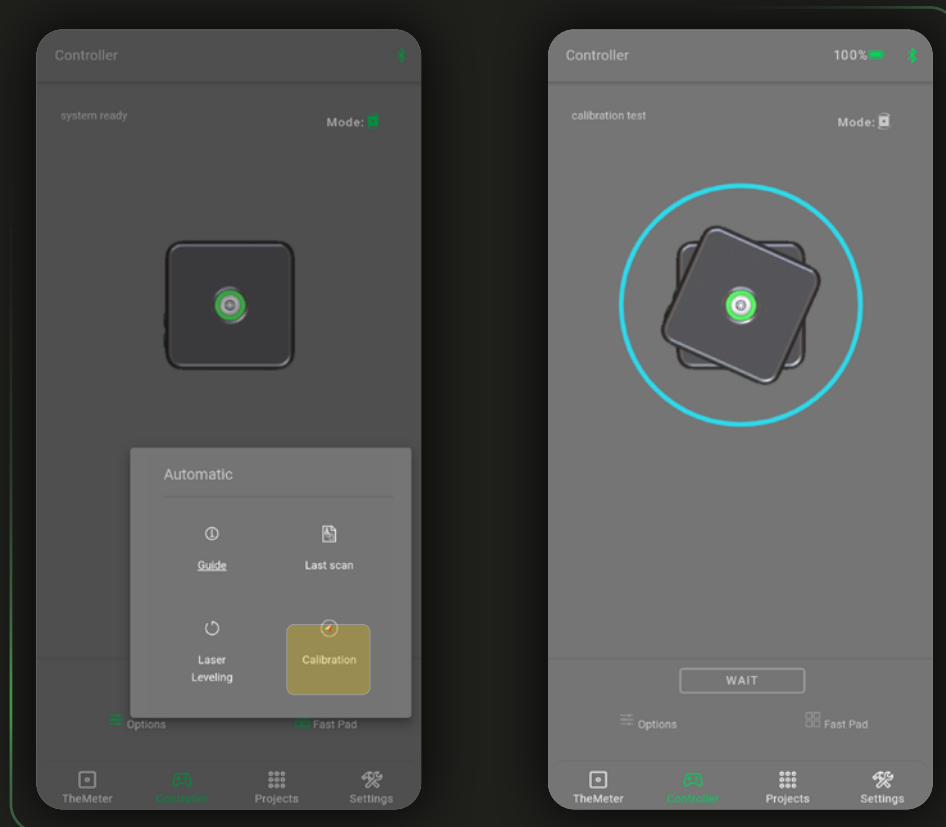


Consider for evaluation a deviation of
+/- 10 cm from the visible laser pointer

10cm


10cm

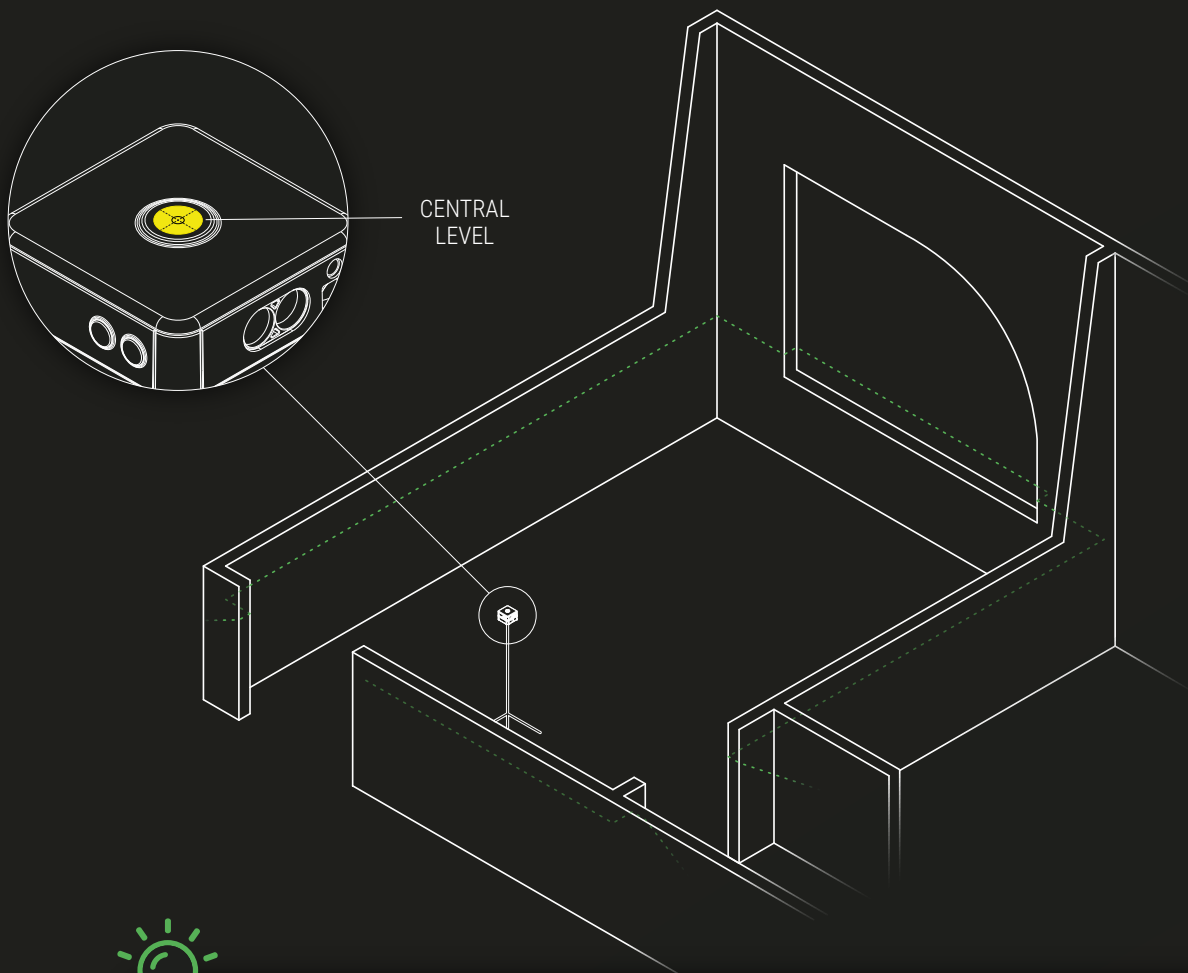
With the last button  you will start the calibration test of the compass; if it is successful you will be able to continue with your scans without any problems, otherwise the app will alert you if the **CUBE** orientation is not correct.



At this point you can choose to perform a manual calibration of the device (see device guide), or to continue with your surveys but having the wrong North indication within the surveys

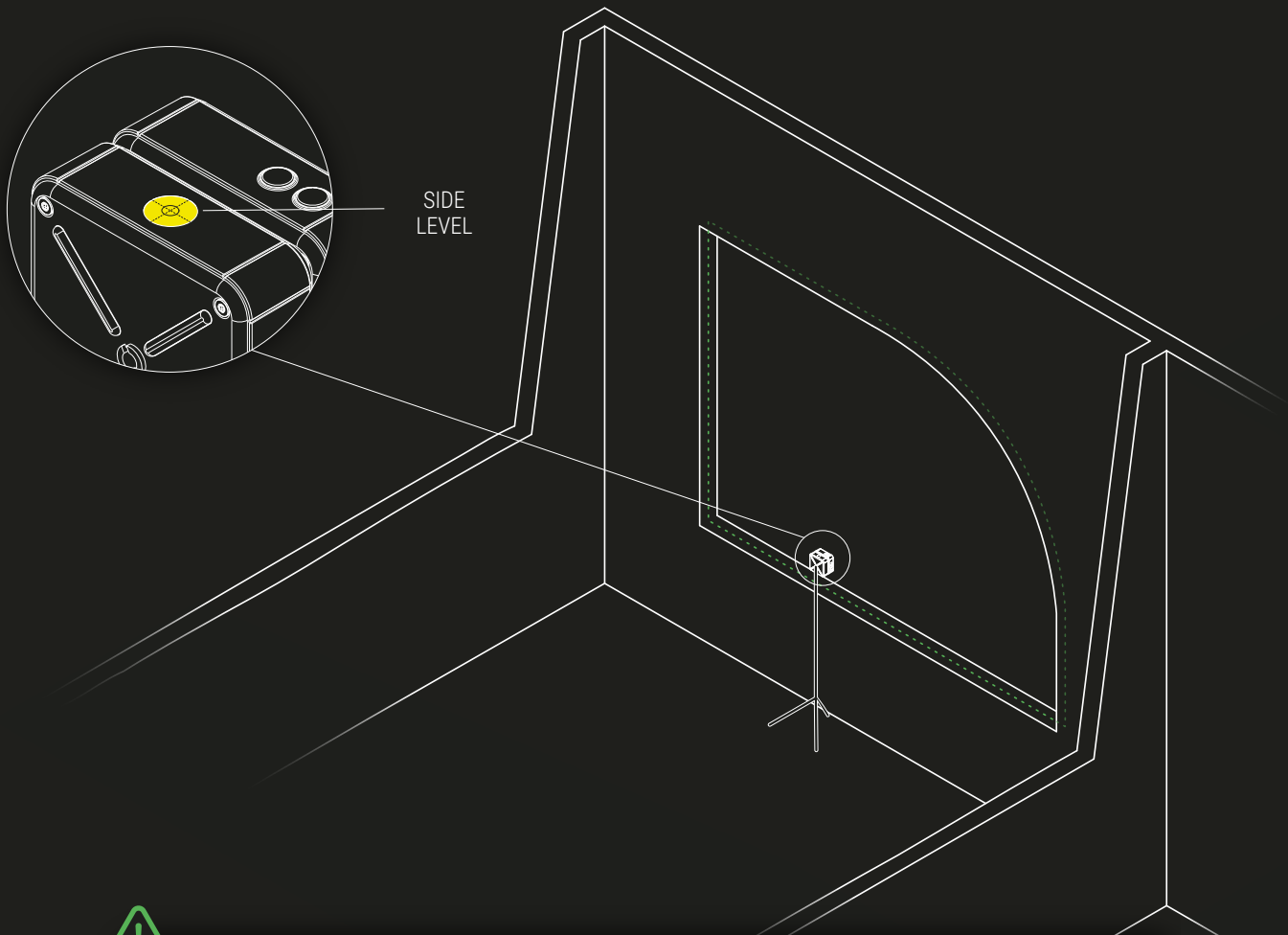
SCAN 

Once you have chosen your settings and made the necessary checks, click  to start automatic SCAN




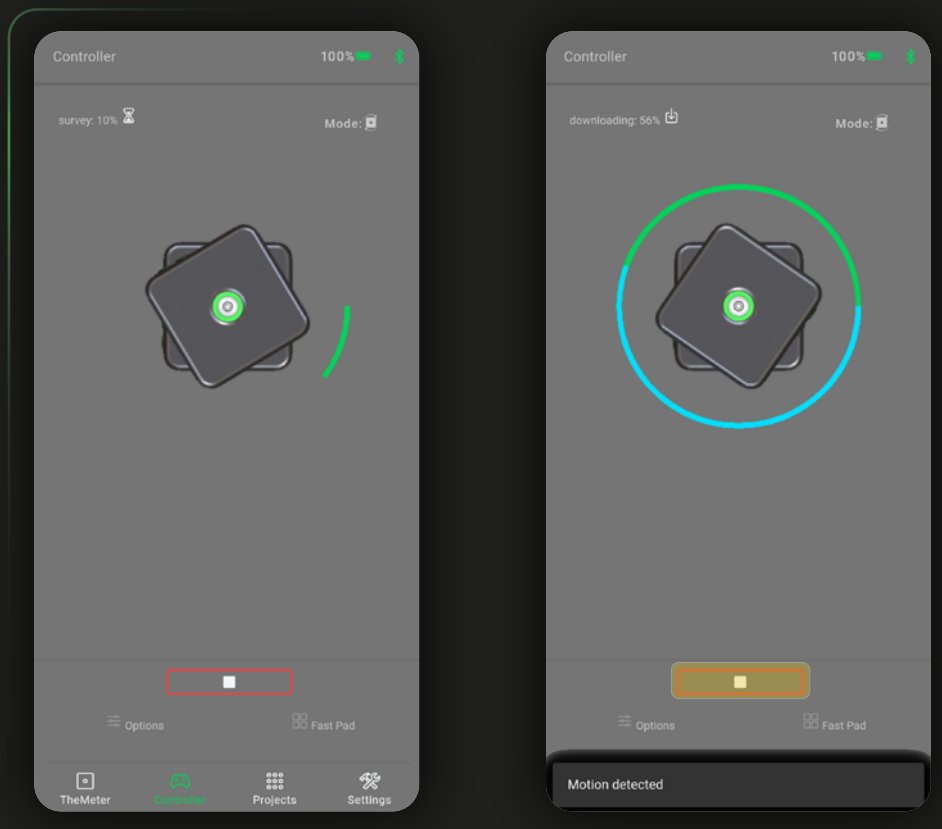
Place your **CUBE** ensuring correct levelling of the device, at the most useful point to take all the details of your scan.

With the same mode you can also perform sectional surveys, it will be necessary to rotate the orientation of your **CUBE**, placing it with the side level upward



Scans are always returned in front view to the central level; In this case the section will turn out to be reversed (see p.13)

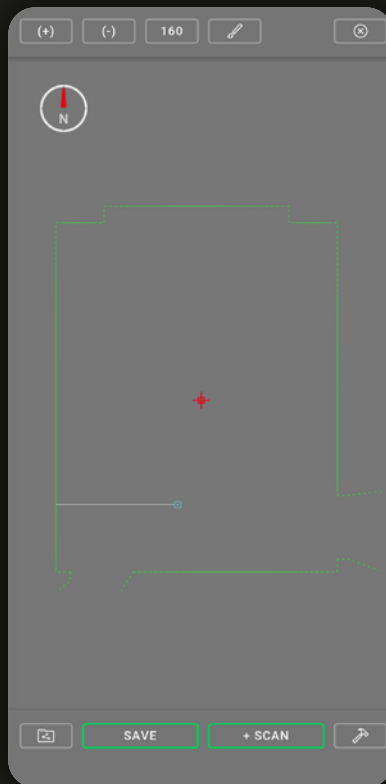
The survey is performed at 360 degrees and acquires 1600 points obtaining a detailed preview which, once the scan is finished, will be downloaded from **CUBE** to view it; until the download is complete you can cancel the scan at any time by clicking on 



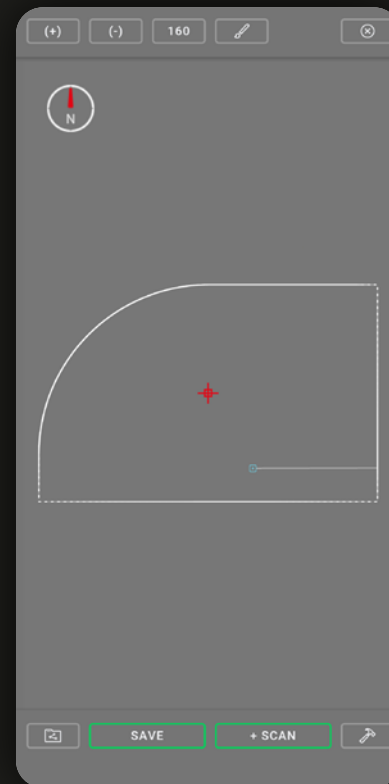
“Motion Detected” warning will be displayed on the screen, during downloading, if a significant movement to the device will be detected by the sensors during SCAN.

Once the scan is finished, a preview of the result will be displayed and you can interact with it. It's oriented with North upward and it's green in case of the floor plan. It's with the floor downward and white in case of section


Floor plan

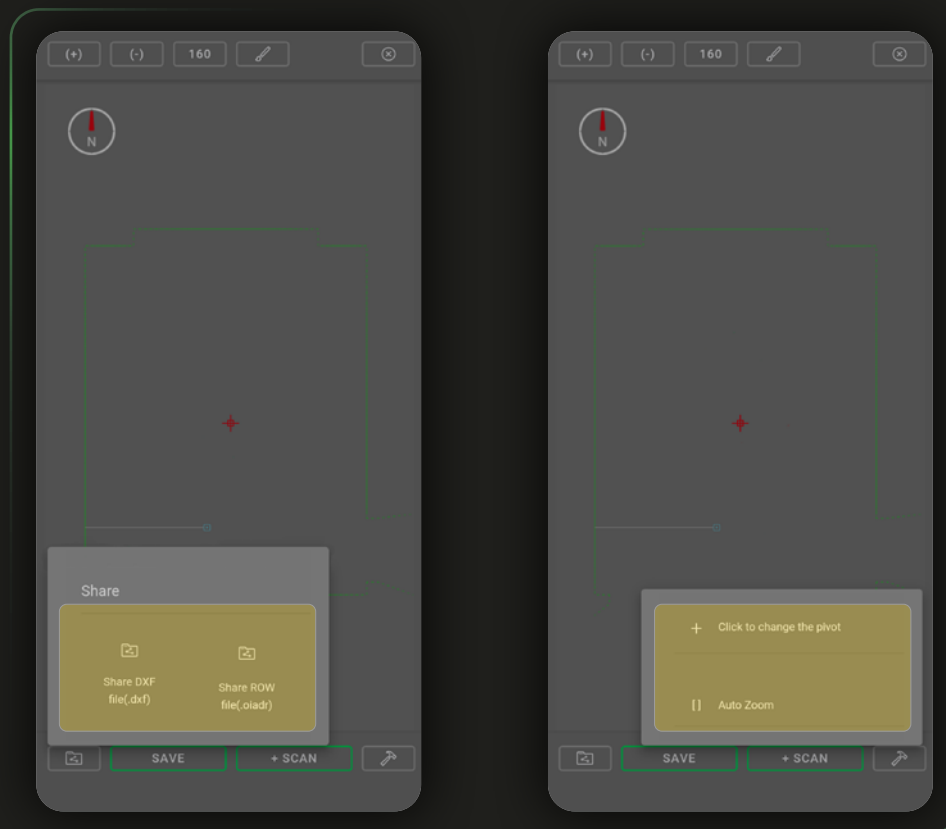







Section






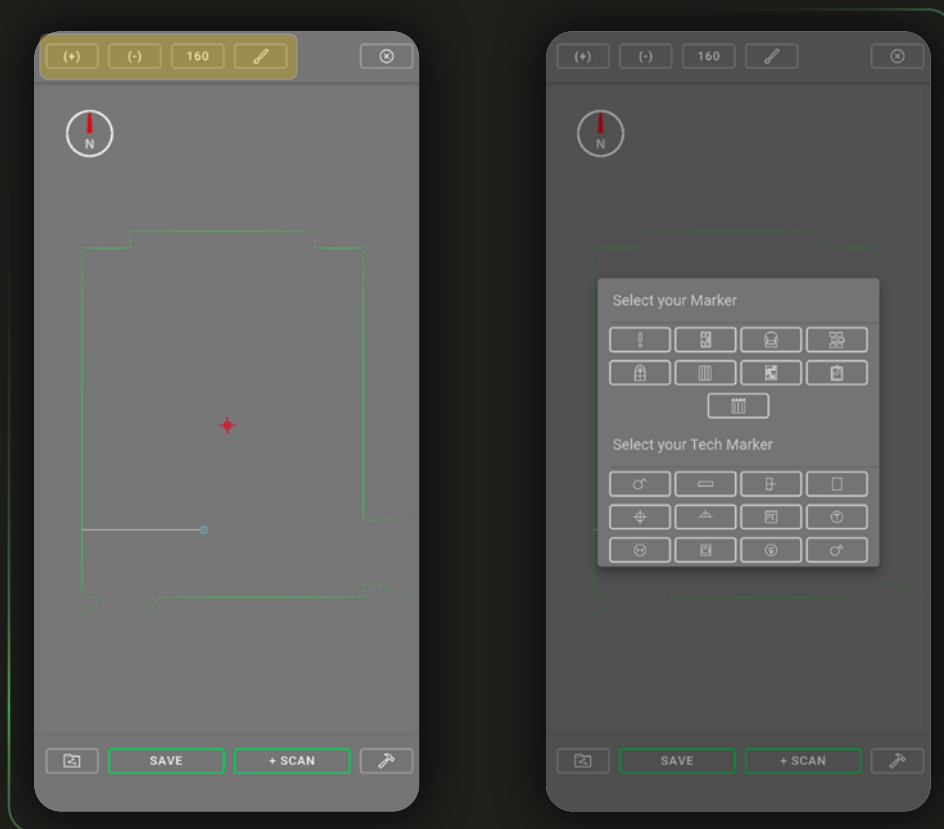
An estimate of point reliability is returned in the preview through a color scale from **Green/White** (reliable) to **Yellow, Orange** and finally **Red** (less reliable)


With  you can send or share the scan (DXF file) via email, via messaging and social networking; the .oiadr file is a RAW file useful for diagnosis for THEMETER Support Team in particular cases of product support.




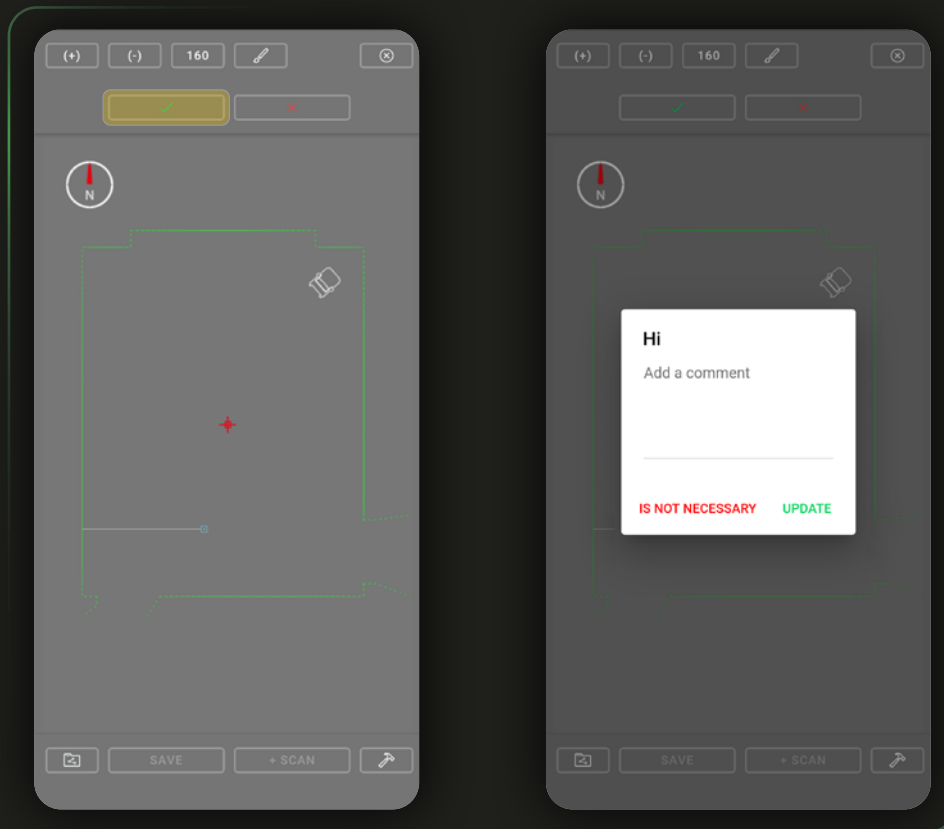
The  button gives you the option to change the pivot  (anchor point to zoom and rotate the floor plan) from the cursor  to the point central of **CUBE**  . With automatic zoom  It's possible to fit the width of the survey to that of the screen

With the app's interactive tools, you can also interact with the survey: With  and  You change the zoom, with  you can increase or decrease the number of points displayed






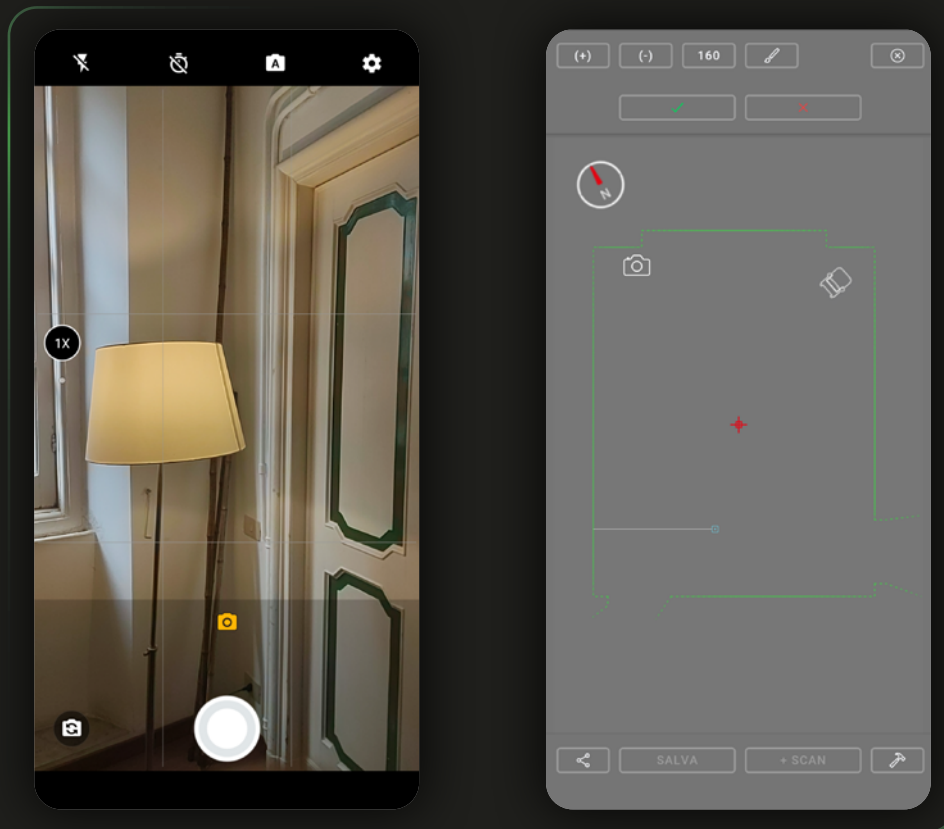
The  button allows markers and photographic documentation to be added to the floor plan, to report the presence of items such as radiators, furniture, electric sockets etc. Choose the one that best meets your needs!

Adding markers is very simple: by clicking on the chosen icon it will be displayed in the center of the screen and you can move the floor plan on the background to place it; to finish the placement, once placed, click . If necessary you can add a comment associated with that marker




Markers and related comments will be included in the DXF in a dedicated layer called "Marker"

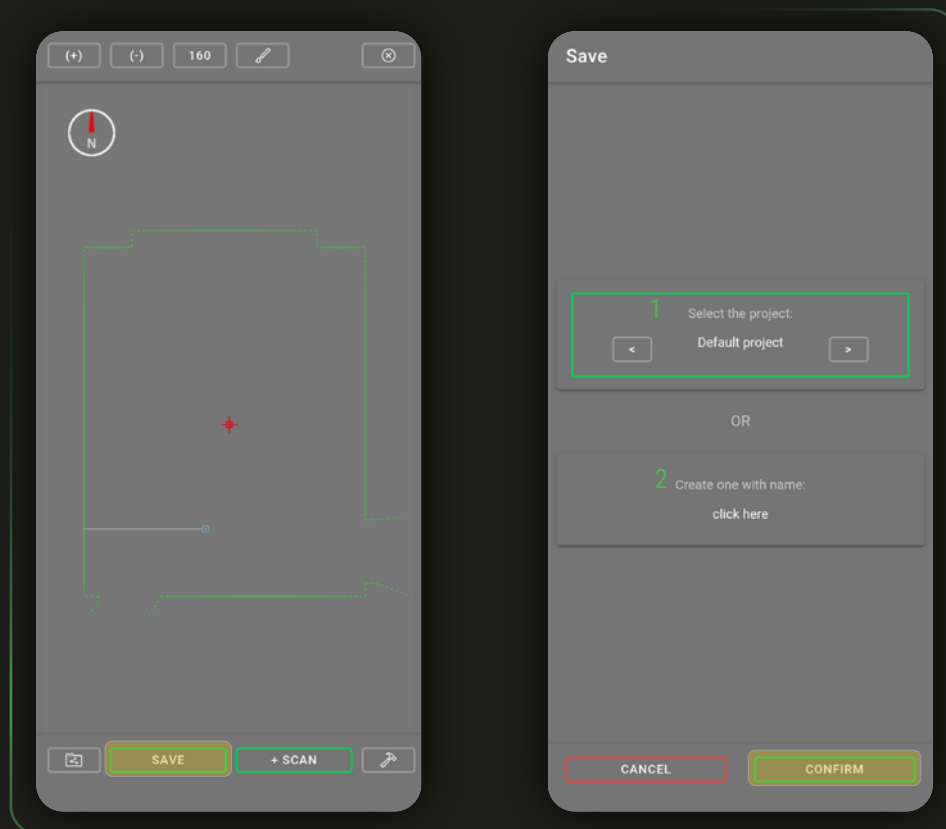
To add photos click on the icon : the camera of the phone or tablet with which to capture the point of interest will be opened. Once the capture is confirmed, to finish the insertion you will have to place the icon  like any marker and then click on . The marker will have the name of the photo, if necessary you can add a comment

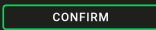


The presence in the DXF file of the photographic documentation will depend on the plan export settings, more details and information in the App guide



SAVING 

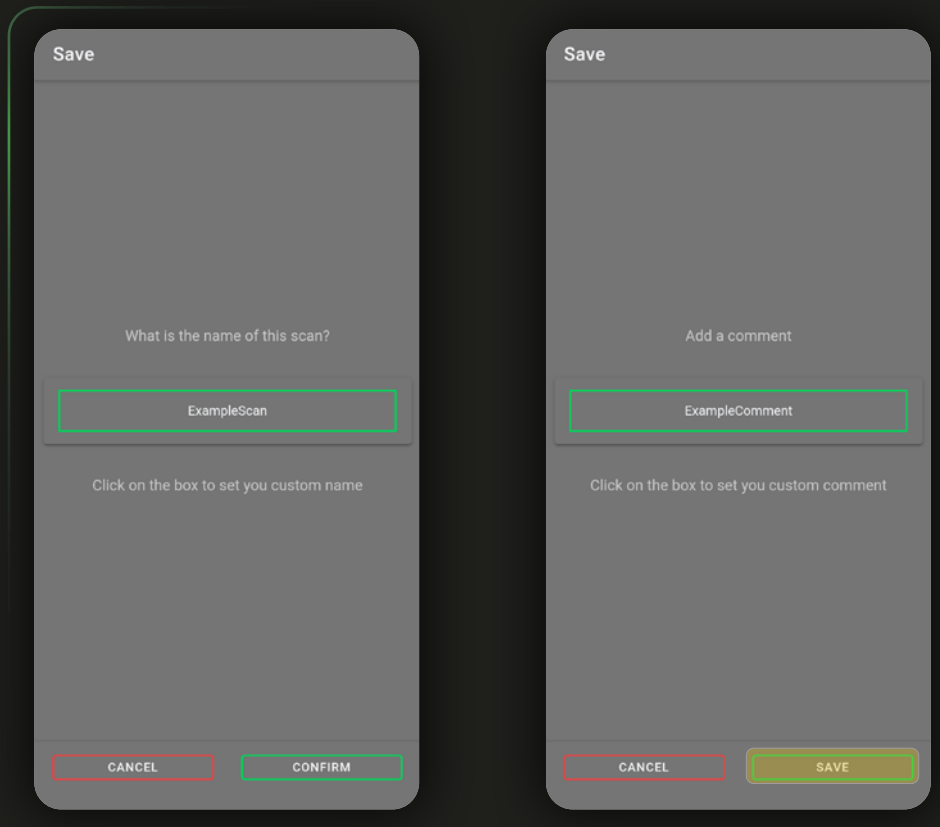
If you are happy with the result of your scan, but you don't want to share it immediately, you can store it locally using ; As a first option for saving you can decide which project to assign the scan to



You can select one from existing ones¹ or create a new one ad hoc for saving the current survey². Once the project to store the survey is chosen click 

SAVING 

You can name your scans (by default it will consist of “scan dd/mm/yy hour:min:sec”); finally you can add a comment, after which you can complete the save with  or cancel it with 

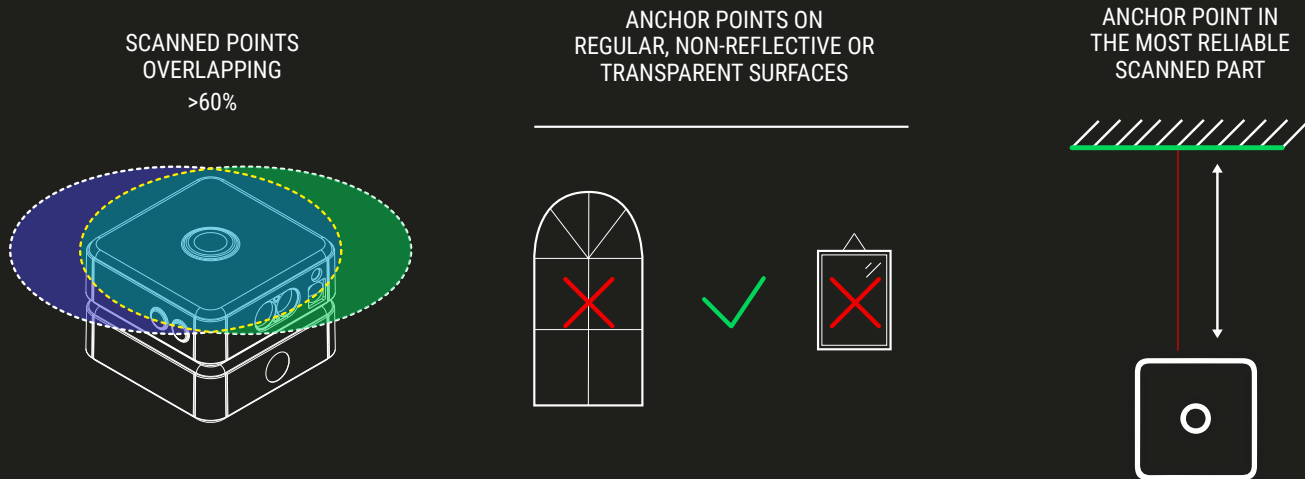


The image displays two sequential screenshots of a mobile application's 'Save' dialog box. The first screenshot, titled 'Save', asks 'What is the name of this scan?' and features a text input field containing 'ExampleScan'. Below the field is the instruction 'Click on the box to set you custom name'. At the bottom, there are two buttons: 'CANCEL' (red) and 'CONFIRM' (green). The second screenshot, also titled 'Save', asks 'Add a comment' and features a text input field containing 'ExampleComment'. Below the field is the instruction 'Click on the box to set you custom comment'. At the bottom, there are two buttons: 'CANCEL' (red) and 'SAVE' (green).

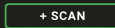


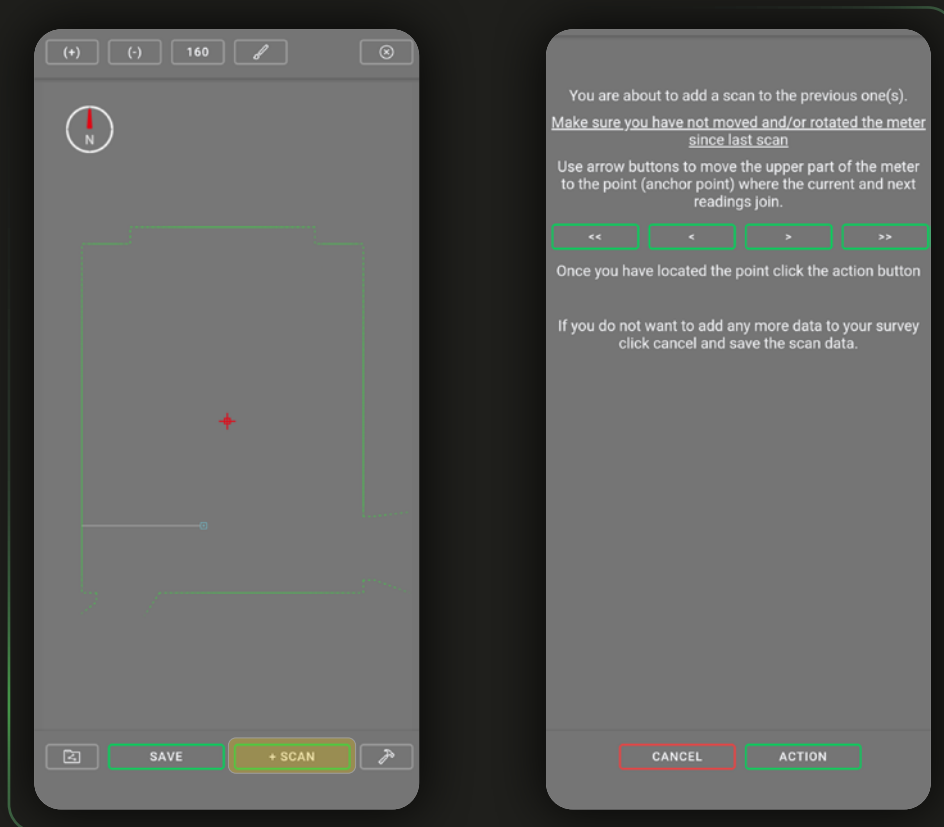
The saving information will be entered into the “Date” layer of the DXF file.

Multiscan is the function that allows multiple surveys to be merged into a single .DXF file by overlapping points in common between different scans. Before starting the surveys, it is essential to carefully examine the overall environment you're going to scan in order to identify the optimal path to follow, considering the following criteria for placing of the device for the various scans:




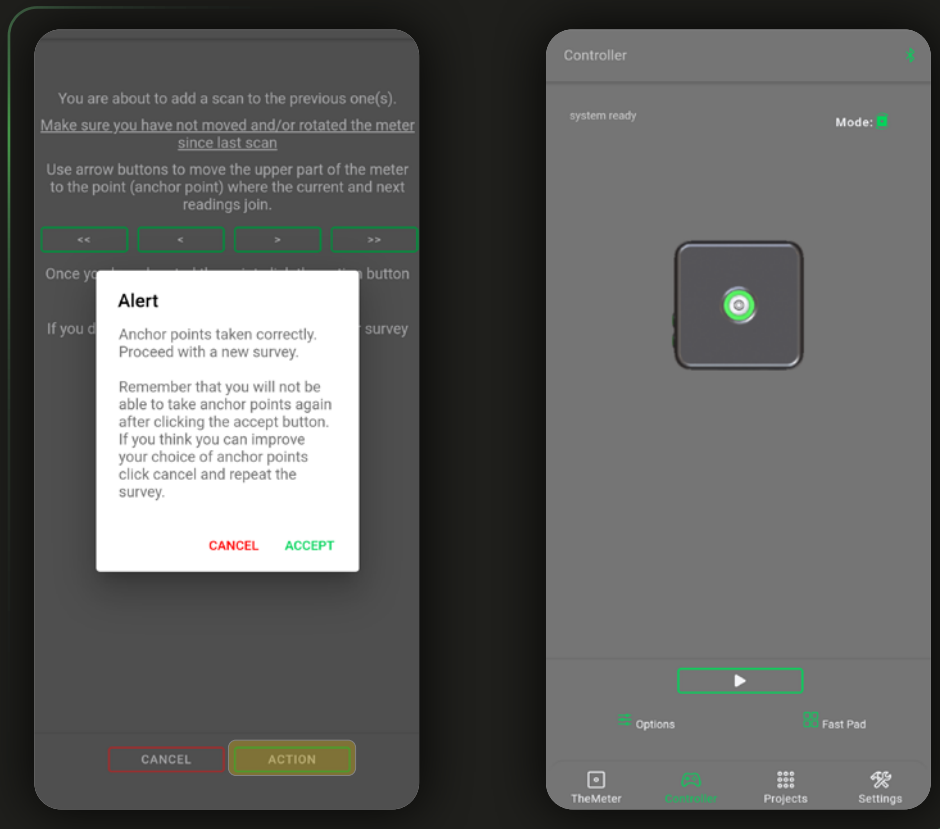
It is necessary to maintain, between the current scan and its previous, at least 60 percent points in common and to place anchor points on regular, non-reflective surfaces or transparent. Also try to maintain good perpendicularity and a small distance range between the instrument and the surface on which you will place the anchor point, this ensures that you put it in the part of the scan that is richest in reliable data

To start a Multiscan, run the first survey and then click ; the red laser will light up. Making sure not to touch your **CUBE**, use the arrow button in app to rotate the instrument head and choose via the laser where to record the anchor point that will work as a reference for the following scan




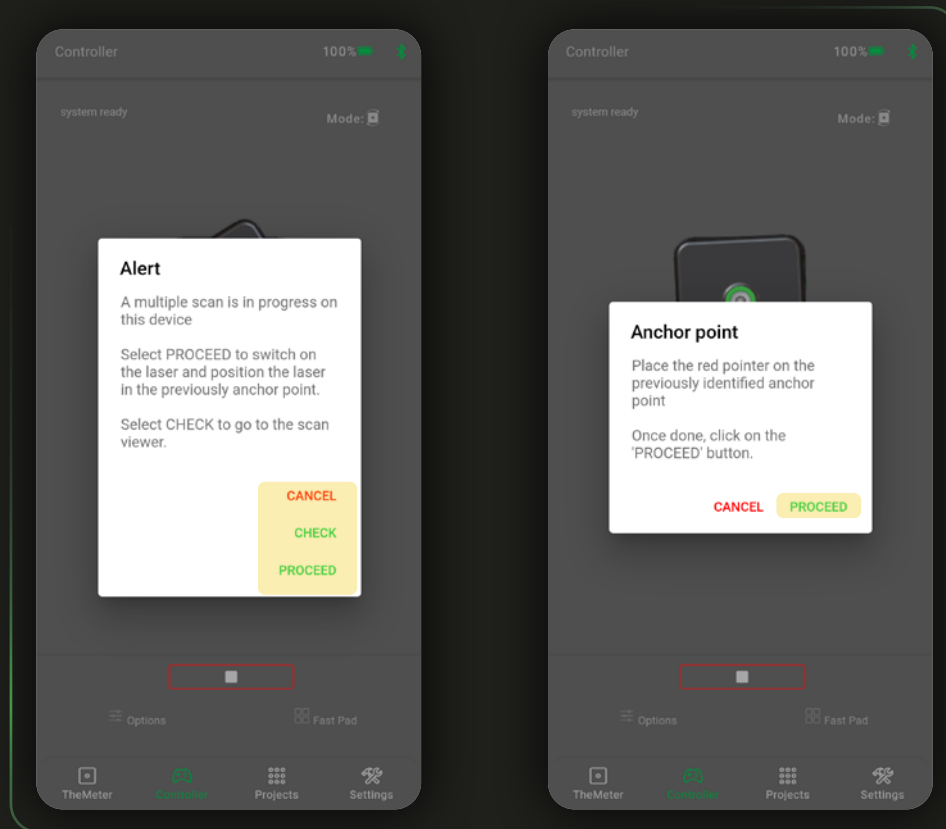
Mark with a target the location of the anchor point on the wall before continuing, it will be essential to reposition the laser in the exact same spot for the next scan

Clicking on **ACTION** the device will record additional reference points. You can accept the points and proceed or cancel them to register them again, after which you will come back to the controller screen  to continue with the new scan



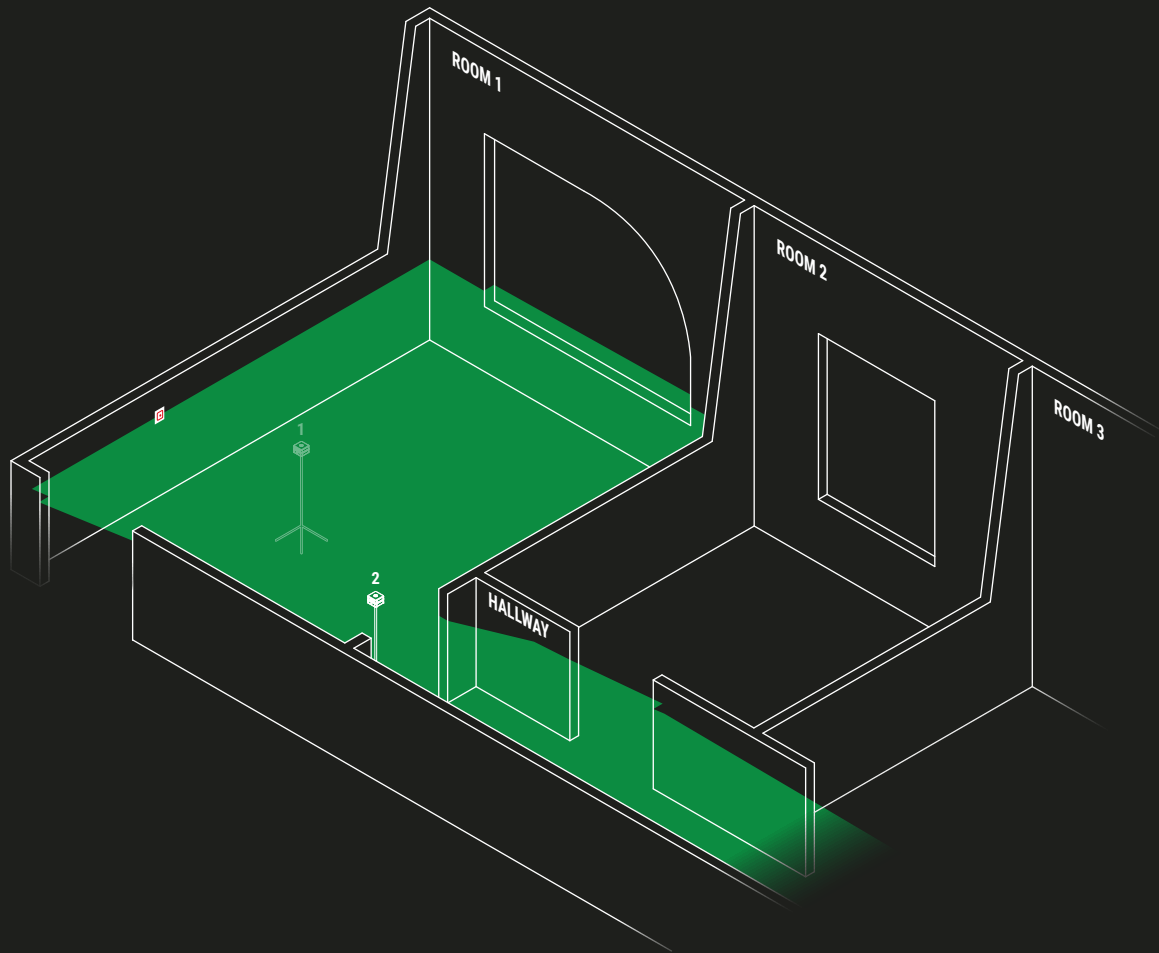
Once you click on **ACCEPT** the anchor point will no longer be editable

To continue click on ; You can view the anchor points in the model by clicking on **CHECK** or move on by clicking on **PROCEED**. You can move the **CUBE** in the new spot, manually realign it to the target with the laser pointer and then click on **PROCEED** to start the new scan



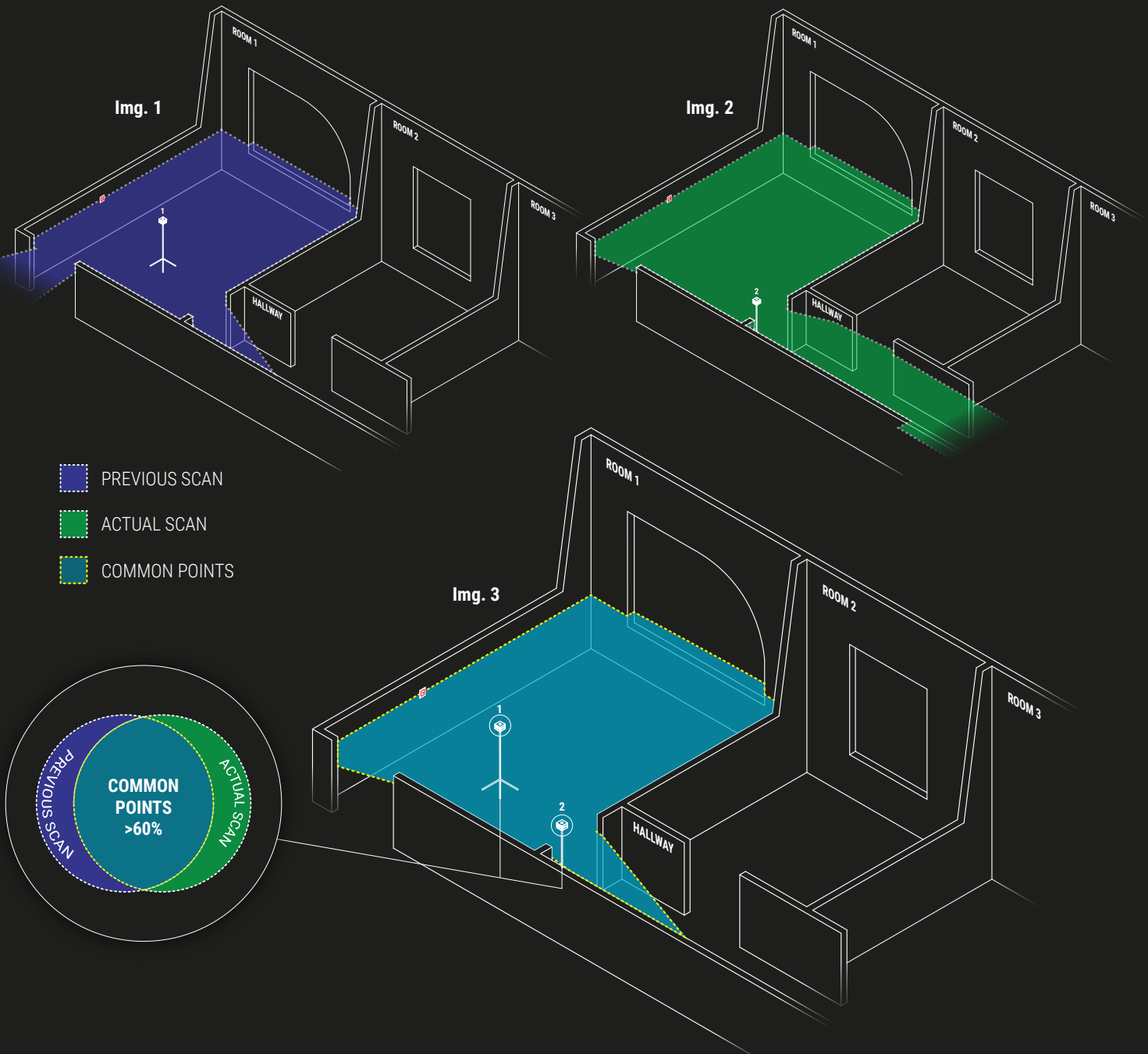
CANCEL closes only popups; to close the current Multiscan save the scan from the screen **CHECK** !

Your **CUBE** will repeat the scan process

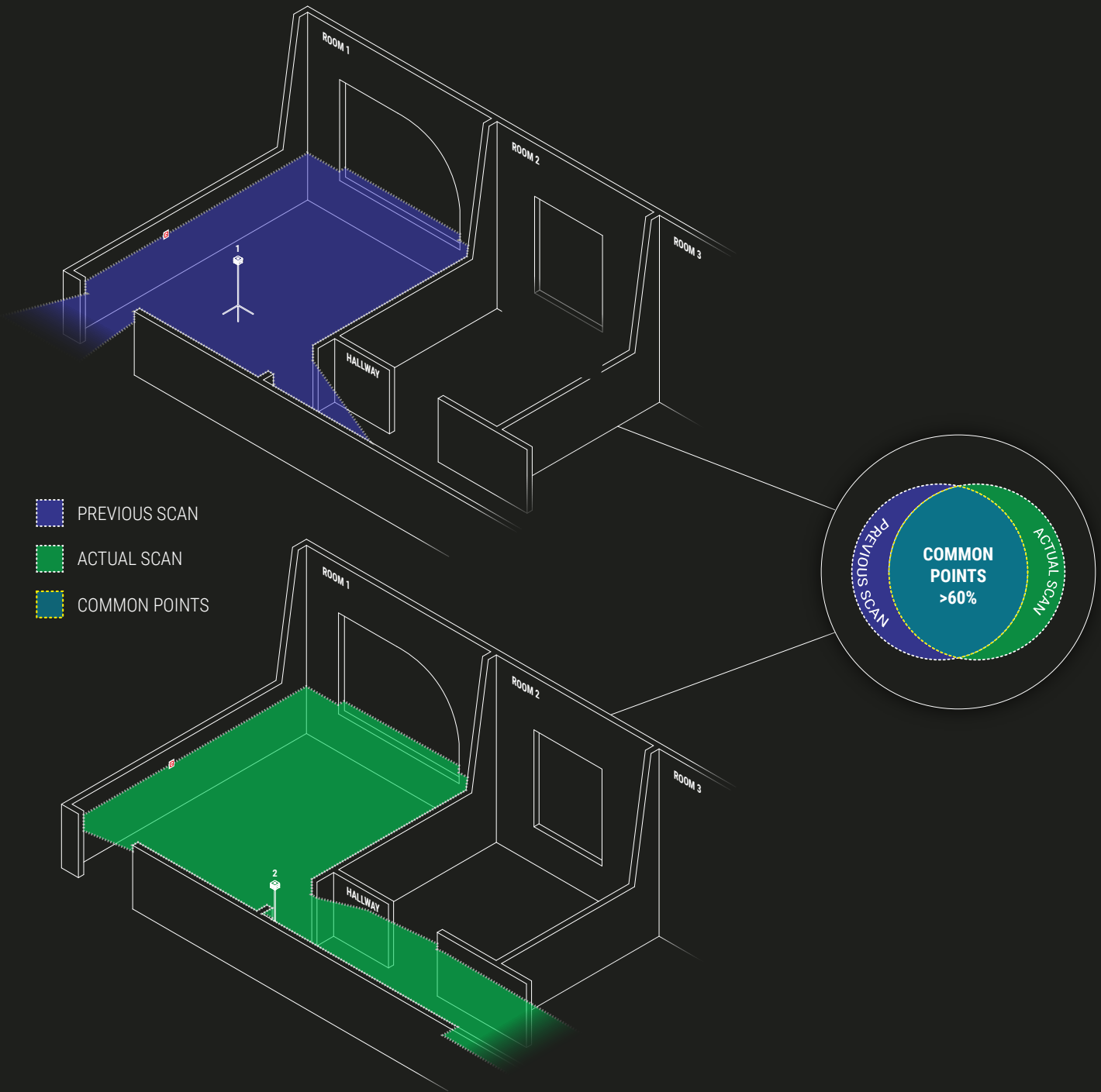


As you can see from the example images (p. 26), for the transition from ROOM 1 to HALLWAY the positioning of the second scan (Img. 2) in relation with the first (Img. 1) is designed to maintain an overlap of points greater than 60%, as highlighted in Img. 3

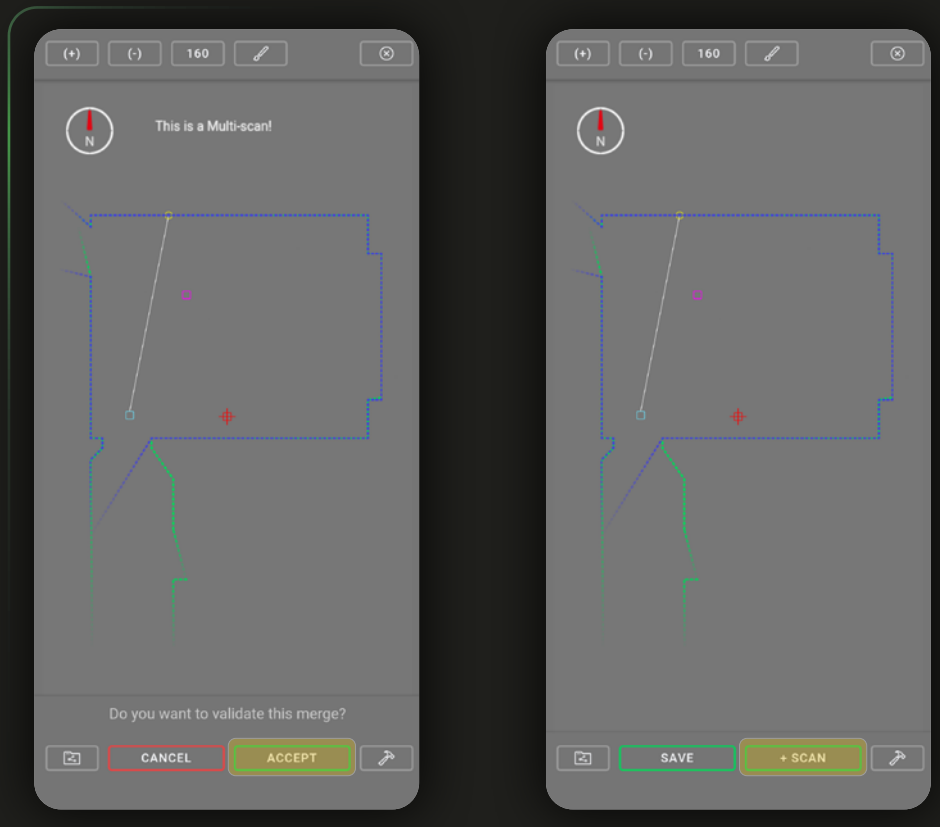
MULTISCAN 



MULTISCAN 

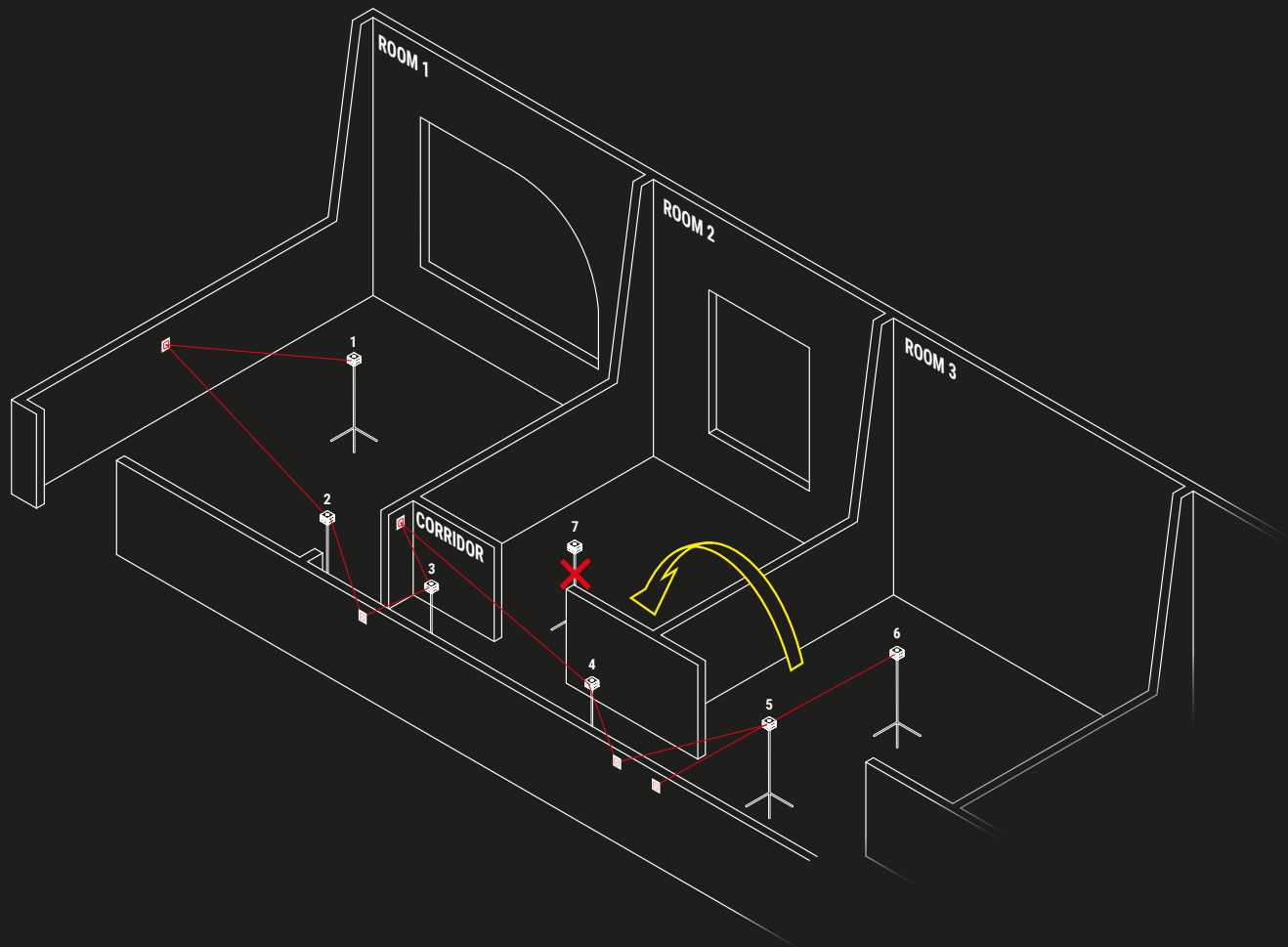


If you are satisfied with the union between the scans result, you can conclude the process by clicking on **ACCEPT** ; At this point you can continue with the next scans by clicking again on **+ SCAN**



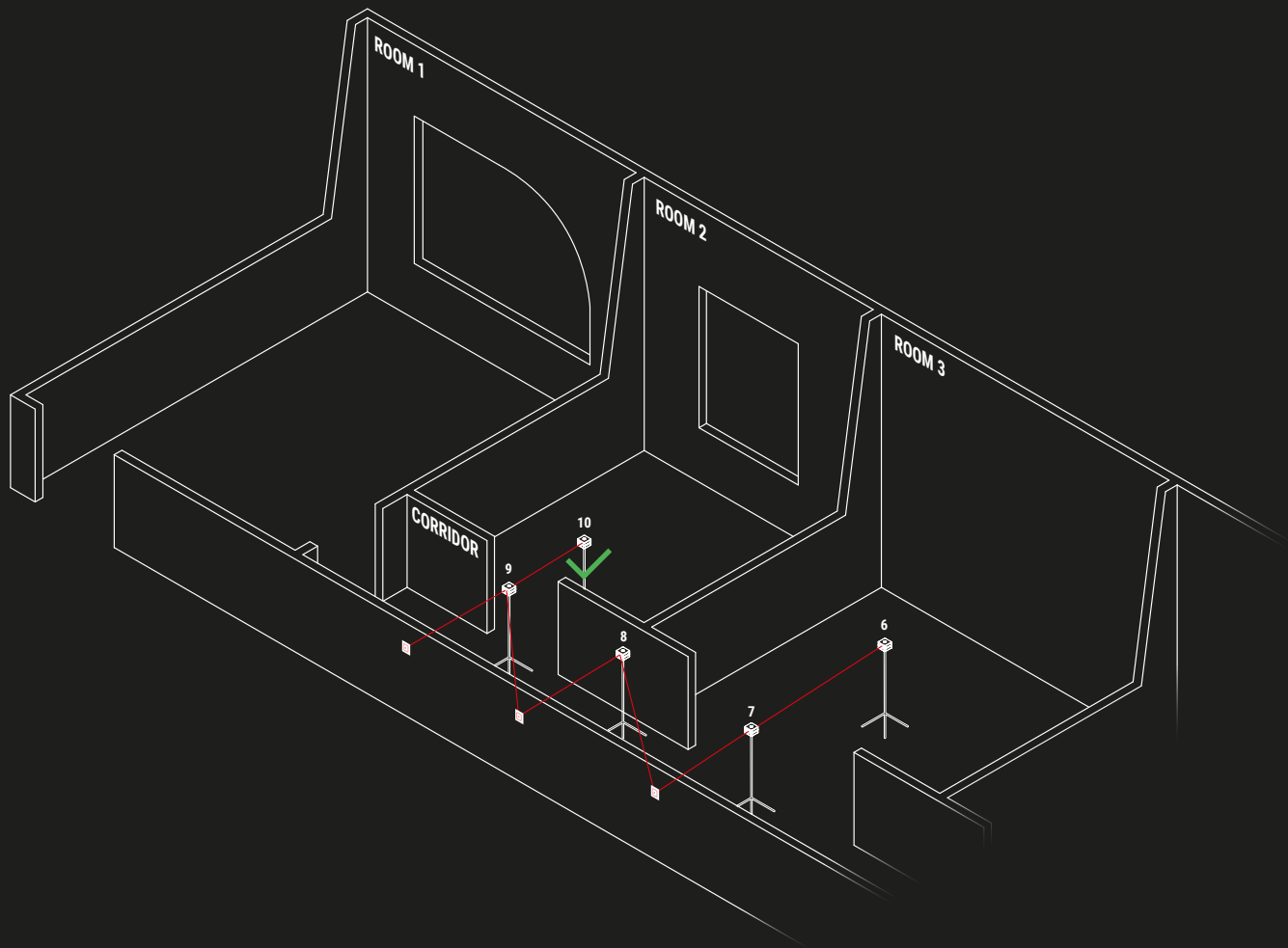
For optimal results, we recommend increasing the number of scans by reducing the distance between them


Remember that you have to apply all the placement criteria for each additional scan you are going to run, since the tool does not consider the entire environment scanned up to that point but only the last scan performed.

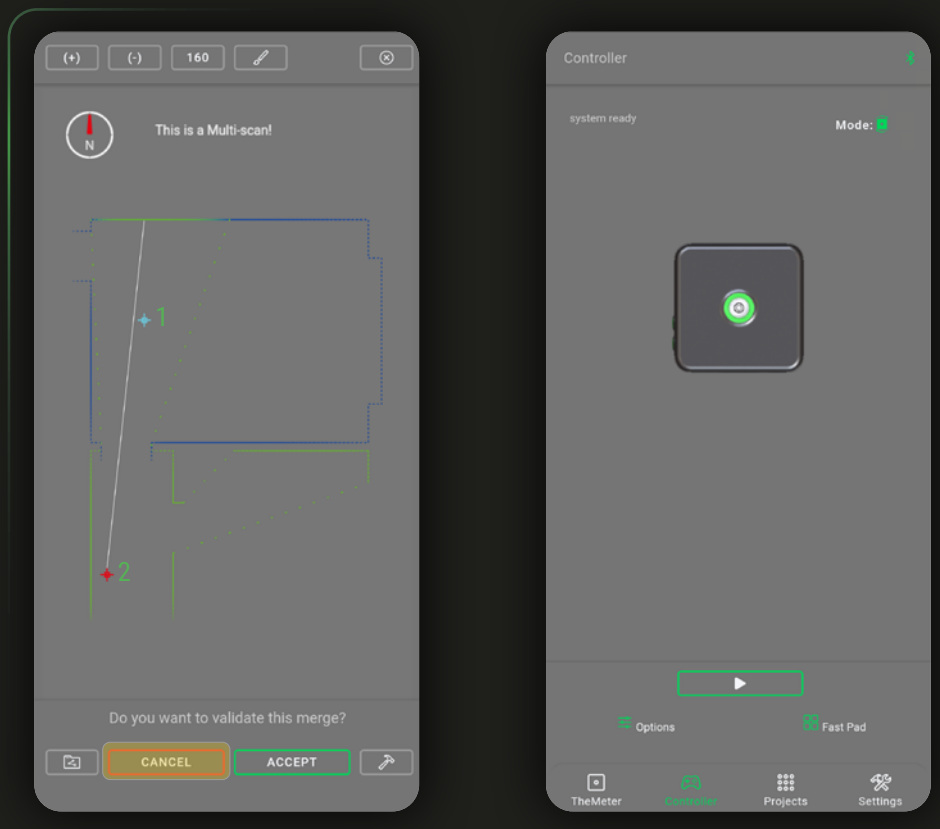


As shown in the image, if you need to move from ROOM 3 to ROOM 2 you will not be able to do so in one step

So it will be necessary to recreate a path of scans as shown in image

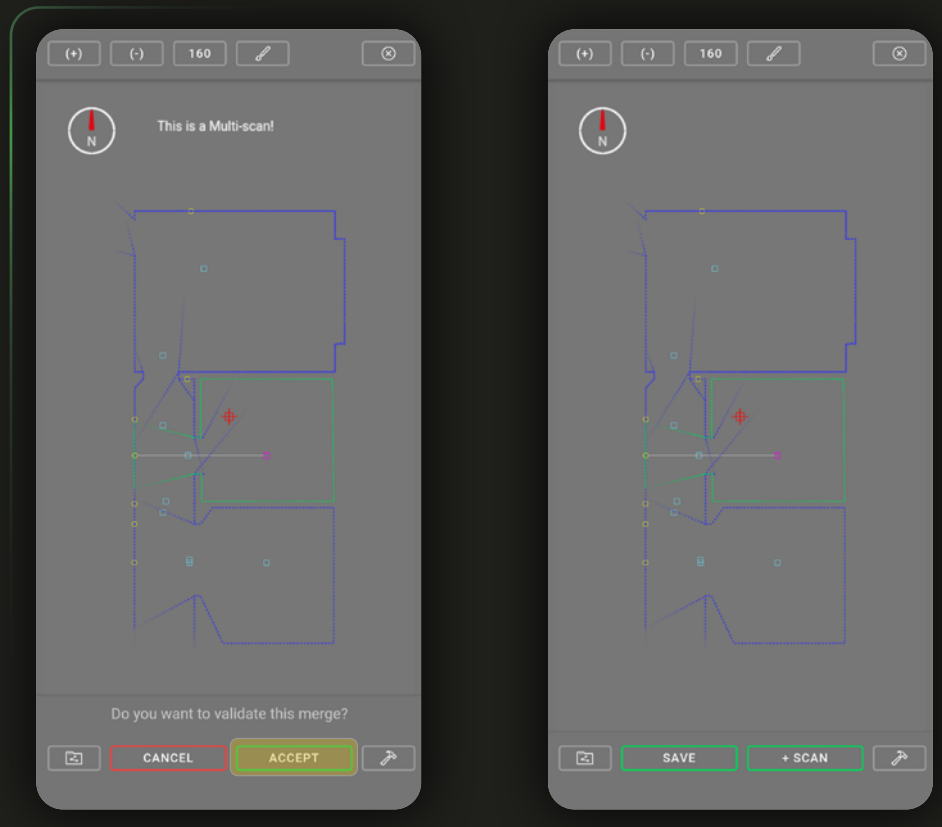


If your scan is incorrectly, you can repeat the process by clicking **CANCEL**, starting again from Controller  and following the same steps described in the previous pages



The anchor point will be the same previously set

Once you have completed merging all the scans you have made, you can interact with the model through the same tools already explained for individual ones and then save or share your .DXF files



OUTPUT

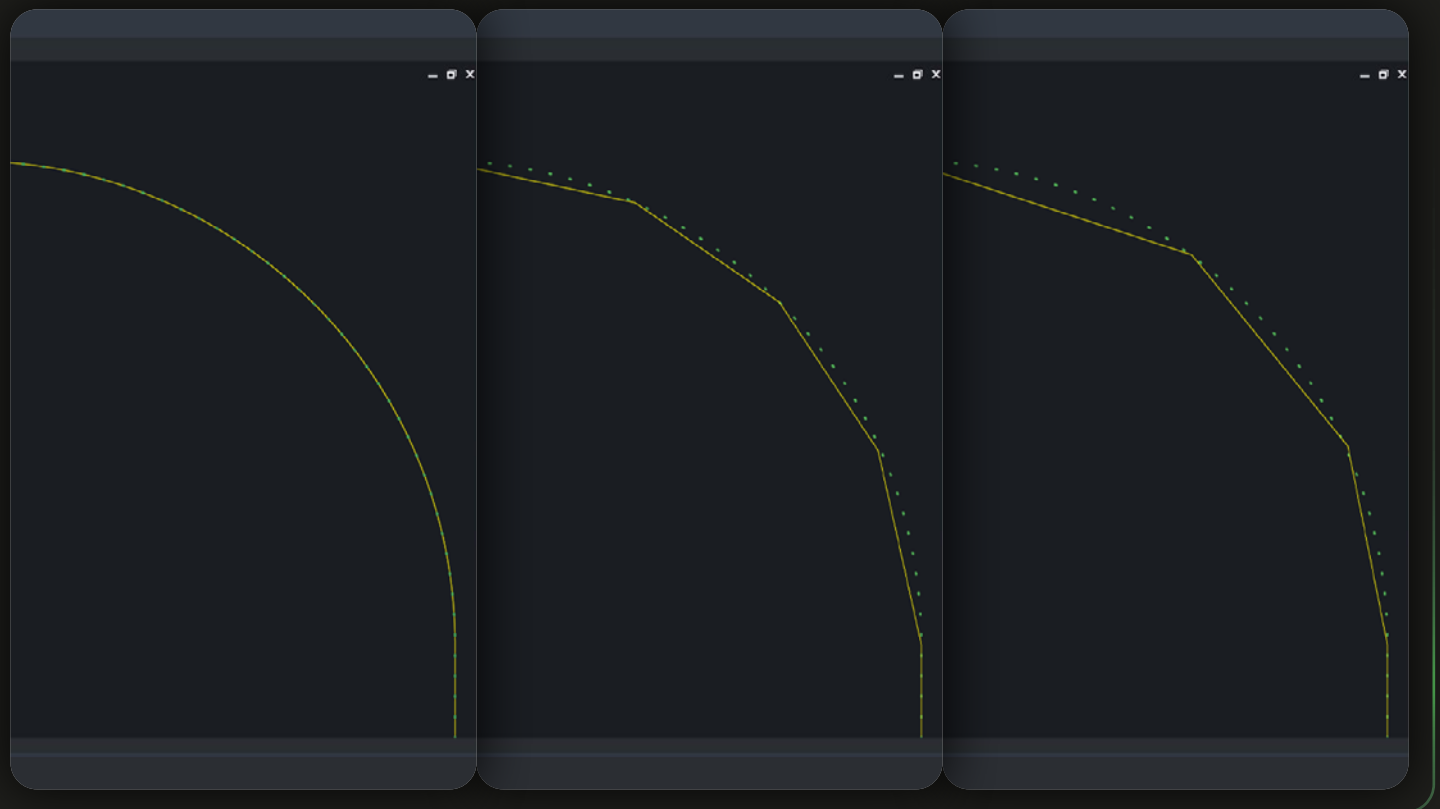
Once the survey operations are completed, your **CUBE** provides you with a complete and digital floor plan in DXF file, containing all collected data and editable using any CAD software.



The drawing is divided into levels: “Data”¹ contains the generic data associated with the file, “Markers”² all tags added; “Points”³ contains the scan points, three simplifications layer in polyline, Simplify “Hard”⁴, “Medium”⁵ or “Soft”⁶, “TheMeter”⁷ contains the position of **CUBE**

OUTPUT

The simplifies are simplified representations of the acquired points; using polylines those degree of rigidity is indicated by Soft, Medium, Hard level.




Simplify_Soft

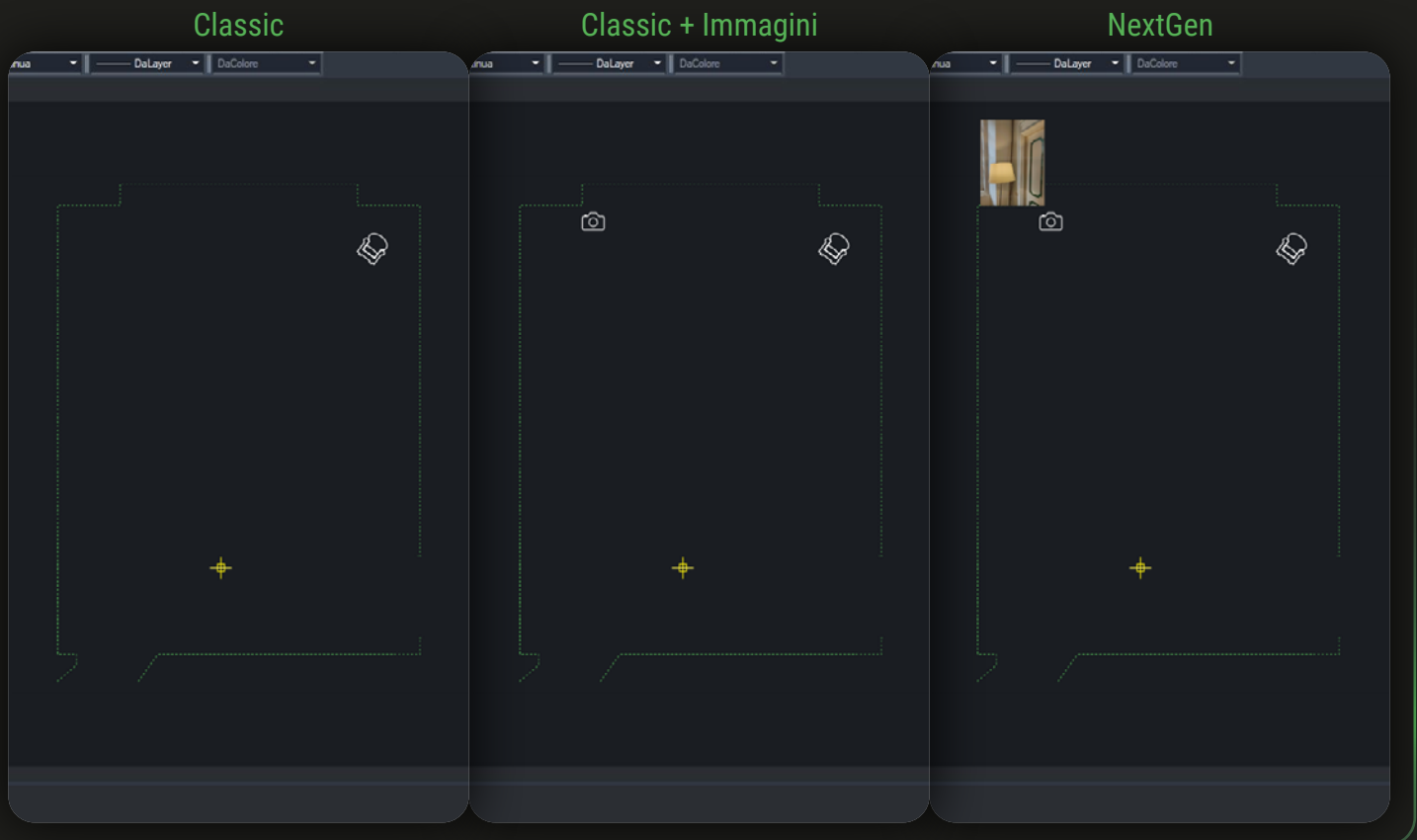
Simplify_Medium

Simplify_Hard

Less reliable points of red color will not be considered when creating polylines, while the remaining ones will be connected with three different degrees of approximation

OUTPUT

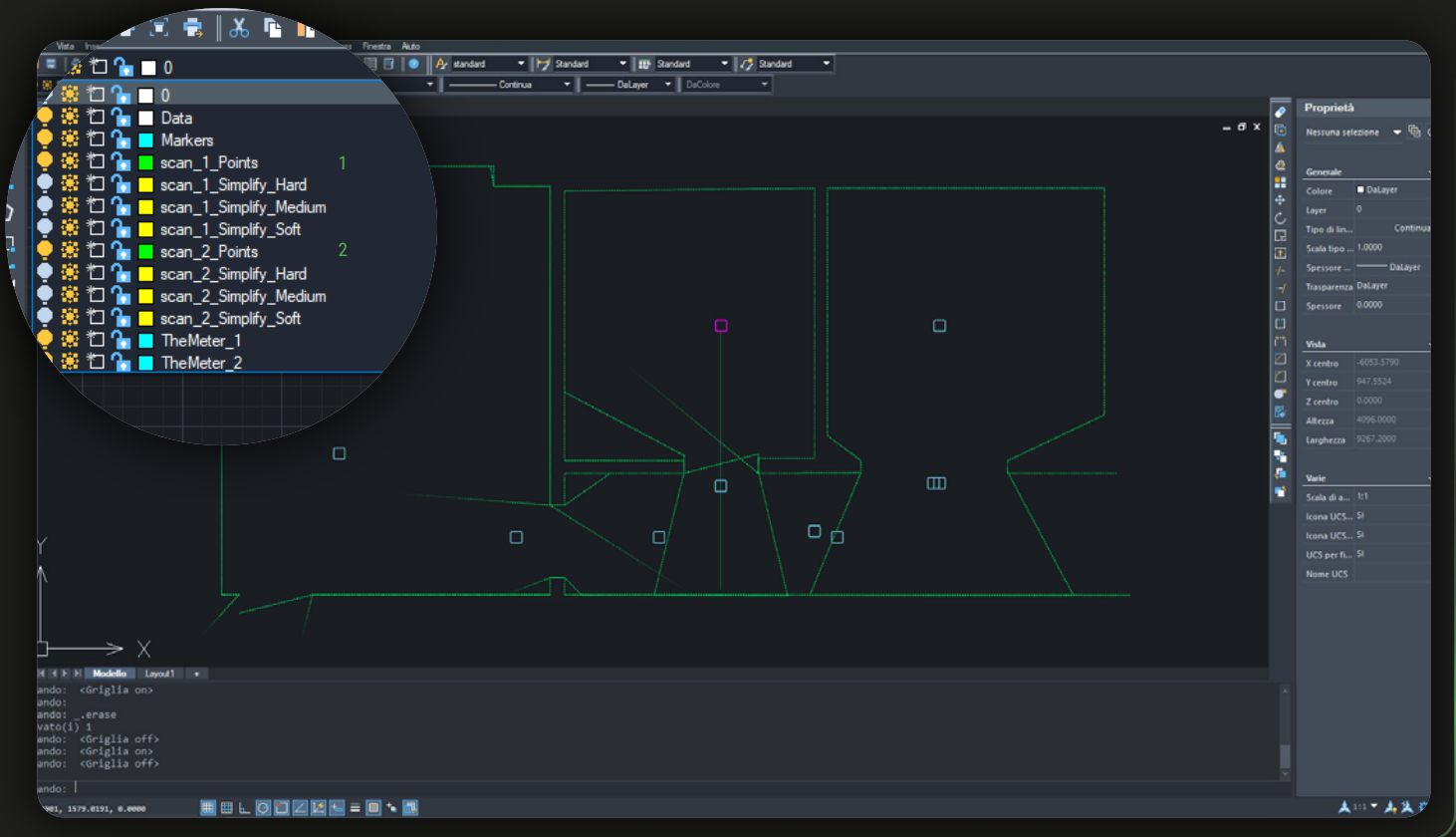
If you've added photos to your survey, to keep them in CAD you'll need to pay attention to the DXF file export settings, found in Settings . Classic exports the DXF only, Classic + images exports both the surveys in DXF format and the images taken in a single zipper file, NextGen exports the DXF file with the images embedded in it



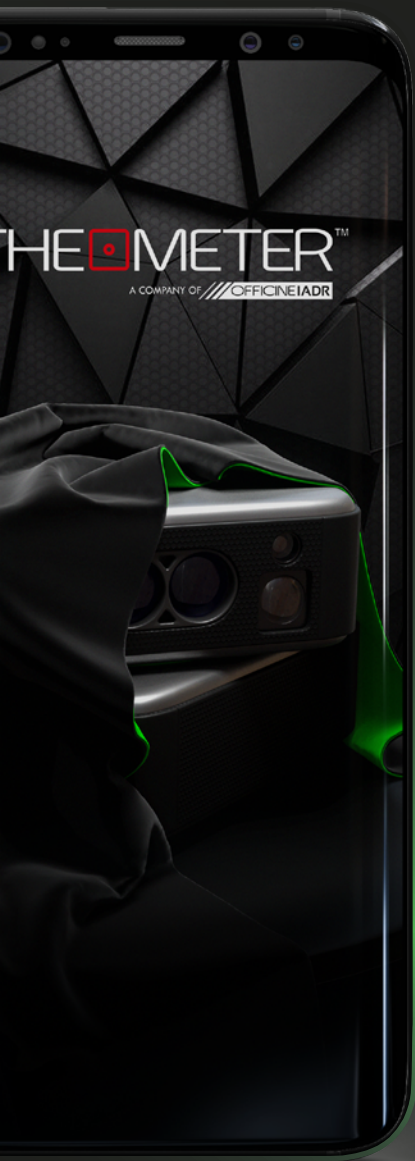
Not all CAD software correctly reads DXF files with integrated photo documentation. More details and information in the App Guide

OUTPUT

The digital floor plan of a Multiscan will contain the same division of levels,
Also identified, where necessary, by the indication of the scan
of belonging (“scan_1_Points”¹, “scan_2_Points”² etc.)



As with single scans “Data” contains the generic data associated with the file, “Markers” all tags added, “TheMeter” locations of **CUBE** ; You can view each scan by points in “Points” and in three polyline simplifications in Simplify “Hard”, “Medium” or “Soft”



Images used are for illustration purposes only, may differ from reality
Some features are not available in all regions.

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