

PX-80 FOR FLOOR PLANS

Time & cost savings of handheld SLAM lidar



AkitaBox

AkitaBox's innovative plan-view software offers facility owners and operators a better way to manage their buildings. The company uses PX-80 to provide floor-plan capture services that help clients of all sizes get started with the software and begin automating facilities-management tasks.

“Using the PX-80 has been life changing. Point blank, without it we wouldn't be able to get the price point low enough that it's a no-brainer for bigger customers to say, Yeah, I really want that information, let's go get it.”



Josh Lowe

Co-founder & Chief Customer Officer, AkitaBox

AkitaBox was contracted to capture outbuildings of a new healthcare campus and generate a floor plan in advance of detailed data collection to ensure accurate placement of floor pins.

AkitaBox used PX-80 to capture and generate 2D floor plans for 13 buildings in only 12 hours and with 2 people. The company estimates that they completed the scanning portion of the project 15X faster than they would have with a terrestrial system, enabling savings of 10-20X.



PX-80 in action

SCAN

- **EXTERIOR**
perform one scan for each building exterior
- **INTERIOR**
break up scans depending on building size, density, and complexity

FIELD NOTES

- AkitaBox breaks larger interiors down into scans of 10,000 to 40,000 square feet.
- The company performs these interior scans with overlap in major areas to ensure easy registration later.
- The field technician closes the scan loop (optional to achieve higher accuracy).
- Since AkitaBox can scan at about 50,000 square feet per hour using the PX-80, **a single 100,000 square foot asset would take about 2 hours total to capture.**



Transfer data via USB 3.0

PROCESS

- Process the scans and load the data onto a thumb drive

FIELD NOTES

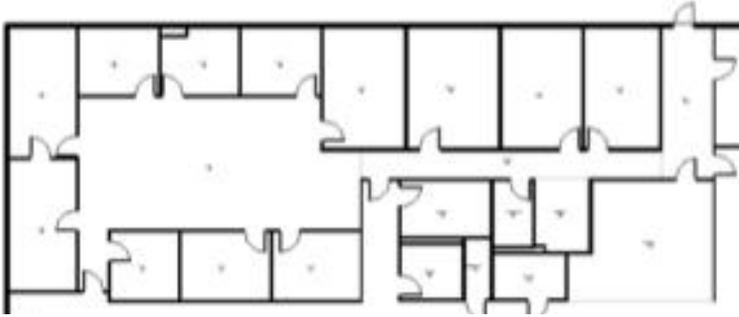
- *The automatic processing time is about 4X the scan time, and can be performed after each scan, or in a batch at the end.*
- *This is inactive time—the processing can be left to run overnight, or while you do other work.*

REGISTER

- Open the scans on a computer back in the office, load them into CloudCompare, and align the models manually using the areas where they overlap to ensure that they're on the same relative coordinate system.

FIELD NOTES

- *AkitaBox estimates that the process takes about 10 minutes per scan for manual alignment and QA/QC.*
- ***Total alignment time for a single 100,000 square foot asset is approximately 2-2.5 hours.***

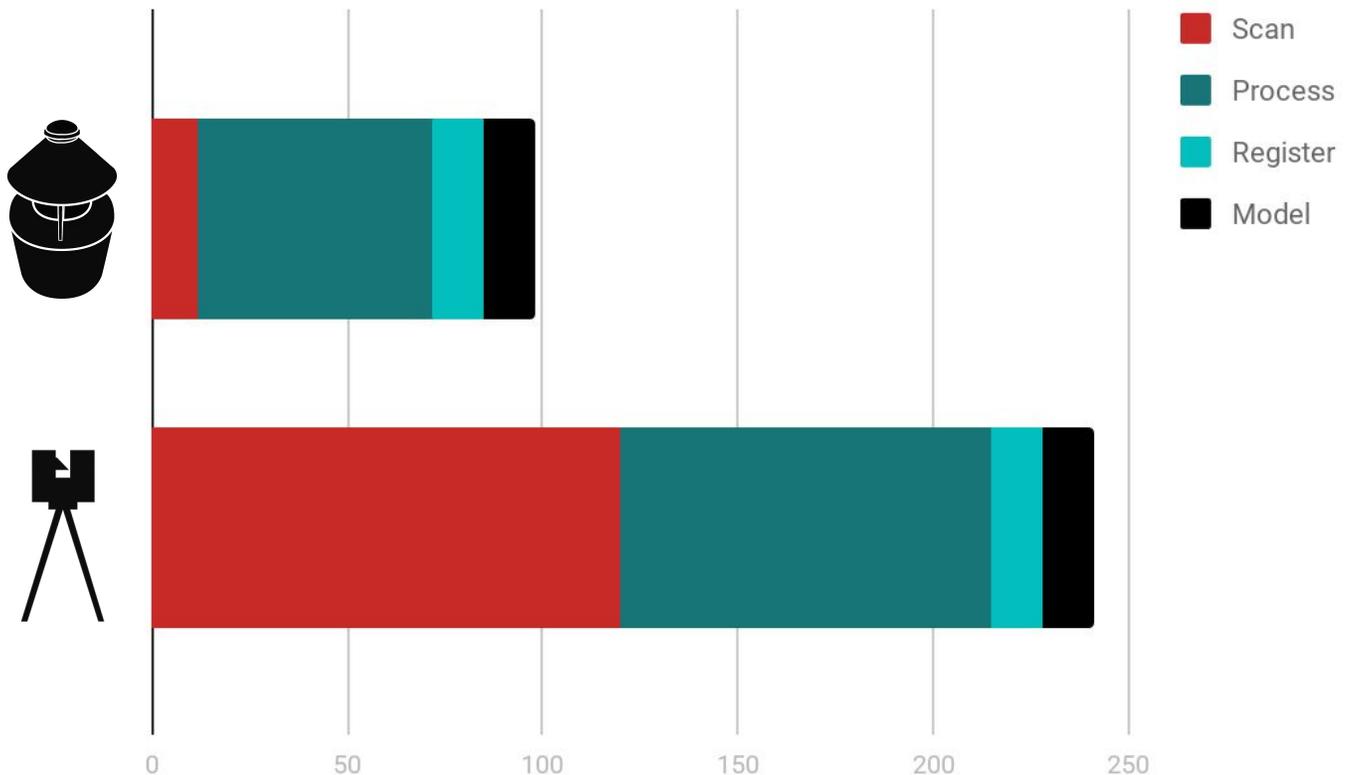


A finalized 2D floor plan

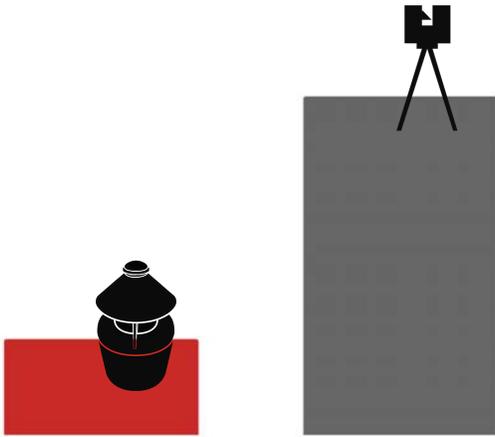
MODEL

→ Open the .LAS files in ReCap, convert them to RCP format, import them into Revit as a group, then draw floor plan over plan view of point cloud.

TOTAL WORKFLOW IN HOURS



TOTAL COST TO PRODUCE 2D PLAN VIEW



PX-80 PROVIDED A

71%

COST REDUCTION

SCANNING COST PER SQUARE FOOT



TERRESTRIAL SCANNING IS

3.5X

MORE EXPENSIVE



ABOUT PARACOSM

Paracosm develops portable lidar-capture and visualization technologies that anyone can use to document indoor and outdoor spaces in rich 3D. Its small SLAM-based lidar scanner, the PX-80, has become a favorite for professionals who use 3D capture in ways it has never been used before, as well as those looking to develop fast new workflows in forestry, facilities management, indoor and outdoor survey, and construction progress monitoring. Paracosm was founded in 2013 in Gainesville, FL and became part of Occipital, Inc. in 2017. To learn more, visit paracosm.io



ABOUT JOSH LOWE

With a degree in Architecture, a background in construction, and a penchant for pushing the boundaries of new technologies, Josh is leading the way in the building industry. He literally helped write the book on Building Information Modeling (BIM) as a contributing author to "Mastering Autodesk Revit Architecture: 2011 & 2012" and has consulted on several BIM and facility management technologies.

In 2016, he co-founded AkitaBox: a SaaS application for proactive building management. AkitaBox automates maintenance, planning, and inspections to simplify building management.

CONTACT

PARACOSM

12 South Main Street
Gainesville, Florida 32601
United States



(352) 505-1971



sales@paracosm.io



paracosm.io