

WHITEPAPER

# The What and Why of Reality Capture Proof-of-Concepts: Five Frequently Asked Questions



If your firm needs to gather information about existing conditions and store them in digital form, then reality capture may be something your team has considered. From a hardware perspective, there are different types that fit different projects. Some firms need laser scanners; others prefer to use aerial LiDAR or UAV based photogrammetry to capture project data. However, reality capture is more than just buying a scanner or drone. It encompasses a multi-step workflow that includes hardware, as well as software to facilitate data management, collaboration, and more.

Before taking the leap into reality capture, it may make sense to work with IMAGINiT on a reality capture proof-of-concept. Here are answers to five frequently asked questions which may help you determine whether a proof-of-concept is right for your organization.

**1. What is a reality capture proof-of-concept anyway?**

A reality capture proof-of-concept is a multi-day, paid engagement that proves how hardware and software perform in a true environment. During a proof-of-concept, you get deep insight into the capabilities of reality capture hardware and software, as well as the workflows that are needed to efficiently transform a point cloud into a finished, digital model. Firms come away with an understanding of which tools and techniques are critical to success.

**2. Isn't a proof-of-concept the same as a demo?**

A proof-of-concept is very different from a sales demo. In reality, every laser scanner, LiDAR device, or drone will do well during a one hour demo in a conference room with a pristine marketing dataset. But, how will they do under real-world environmental conditions and different types of lighting?

A proof-of-concept gathers real project data and a skilled instructor acts as a tour guide, bringing the team through each and every step in the workflow. Teams learn about the benefits of reality capture technology and how to avoid common pitfalls. Unlike a demo, a reality capture proof-of-concept is an education investment.

**3. What are some common reasons why firms initiate a reality capture proof-of-concept?**

One of the primary reasons that firms hire IMAGINiT to conduct a proof-of-concept is because they want to reduce the risks associated with investing in reality capture. The proof-of-concept illustrates what is possible with technology before making a purchase.

Some firms rent hardware and software, with the idea that they can conduct their own proof-of-concept. Unfortunately, this approach overlooks the role that skilled users play in the overall success of the workflow. Technology alone does not translate into efficient reality capture – trained users are also essential.

Without a proof-of-concept and a clear understanding of an efficient reality capture workflow, firms may either overinvest or underinvest in the necessary tools and training. In addition, a proof-of-concept shows the entire end-to-end reality capture process. With this information, firms can decide which parts of the process they want to take on and which parts they may outsource.

#### 4. If I outsource scanning, why would I bother with a proof-of-concept?

Some firms outsource laser scanning, rather than performing that work themselves. Although you may think that a reality capture proof-of-concept wouldn't be valuable under these circumstances, that is not the case. When outsourcing, firms must clearly define how scanning should be done. Without this direction, the point cloud deliverable may not be beneficial for the project.

IMAGINiT tailors its reality capture proof-of-concepts to serve the needs of each client. A proof-of-concept for a firm that is outsourcing data collection will look very different from a proof-of-concept for a firm that plans to do its own scanning and data processing. For example, when working with a client that plans to outsource data collection, we will devote part of the proof-of-concept to the proper ways to specify data quality, purpose, and 3D positional accuracies for vendors. This ensures that point cloud data will be delivered in a form that will be usable.

#### 5. After the proof-of-concept is done, what tangible results will my organization have?

All the data generated during a reality capture proof-of-concept is left with you. That information and the resulting representational environment can be used in marketing materials as the firm promotes reality capture to customers. In addition, the data that is captured can be used internally as a training data set for employees. Employees can translate the skills and takeaways from the proof-of-concept to different client projects.

If your firm is considering expanding its portfolio to include reality capture services, the following questions may help you determine whether a proof-of-concept would be beneficial. Answering "no" to one or more of these suggests that you should consider a proof-of-concept:

- **Does your firm have experience with both the reality capture hardware and software needed to transform point clouds into usable models?**
- **If your firm outsources reality capture data collection...**
  - Does the team know how to specify the data quality and 3D positional accuracies for the vendor?
  - Once you get a large data set back from a vendor, does the team know which workflows to use to efficiently generate a usable model?
- **Do you have real-world reality capture data that can be used for training purposes?**
- **Does your team understand the "ins and outs" of reality capture well enough to market it effectively to clients?**

To learn more about reality capture and how it can benefit your business, feel free to **contact us**.

## About IMAGINiT Technologies

IMAGINiT Technologies, a Rand Worldwide Company, is a provider of enterprise solutions to the engineering community, including the building, manufacturing, civil and mapping industries. With over 25 years of experience, and more than 40 offices throughout North America, we provide the expertise, training and support to help companies realize the full power of design technology, maximize ROI and gain competitive advantage.

IMAGINiT is a leading provider of Autodesk software solutions and the largest North American Autodesk Authorized Training Center (ATC) partner. All of our locations are supported by a vast pool of engineering resources focused on developing real-life business solutions for our local clients.



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