

What Is a Laboratory Information System?

A laboratory information system (LIS) is a computer system used in a laboratory to manage and store construction data, test results, and sample information. The data can include, but is not limited to, construction site data, concrete test results, and inventory information. An LIS can also be used to manage and track laboratory workflows.

What's a laboratory information system's purpose in construction?

Laboratory information systems are essential for organizing and managing information in various organizations. LIS systems are used in a variety of industries, including construction.

The construction industry uses LIS systems to manage blueprints, designs, and other related documents. You can also use laboratory information system software to manage construction workers, project schedules, and other project-related data.

Engineers can use a laboratory information system to improve communication and coordination among construction workers. Builders can also use LIS software to enhance communication between construction workers and management.

LIS systems can assist construction companies to save money and improve their efficiency. LIS systems can also help construction firms meet safety and compliance requirements.

What's the difference between a laboratory information system and laboratory information management software (LIMS)? Are they the same?

There is a lot of overlap between laboratory information system software and LIMS, but there are also some key differences. For example, an LIS is typically used to manage and store construction materials, while a LIMS collects and stores information about laboratory samples and results.

LIMS systems are usually more complex and have more features than an LIS. Businesses can use them to track samples from receipt through analysis and results. They can also generate reports, track inventory, and manage data files.

What are the critical features of LIS and LIMS systems?

While many laboratory information system vendors offer distinct platforms, LIS and LIMS tools regularly share a few key features. For example, LIS and LIMS can both create and manage laboratory schedules, track inventory, and manage data from different instruments. They can also help ensure compliance with regulations and standards.

You can customize LIS and LIMS to meet the specific needs of a laboratory, and many include features such as:

- Data tracking and management
- Sample tracking

- Test result tracking
- Inventory management
- Laboratory schedule management
- Instrument data management
- Compliance tracking

Finding appropriate laboratory information systems can give you greater insight into your construction data and help you achieve more favorable, compliant project outcomes.

ForneyVault provides a comprehensive LIMS platform for construction.

If you're looking for the best laboratory information system software for your money, we're here to help. ForneyVault CMT software comes with a reporting solution, ForneyTools, that allows you securely access, analyze, and report on ForneyVault material testing results if you don't have your own LIMS. Contact us today to learn more about LIS, LIMS, and other practical construction industry tools.

What Is The Use of Material Testing?

Material testing is the process of evaluating a material's properties and performance. You can do this through various methods, including physical testing, chemical analysis, hazardous materials tests, and mechanical testing.

By understanding a test material's properties, construction engineers and designers can align with materials testing consultants and select the best material for a given application, ensure that the material meets performance requirements, and troubleshoot any issues that may arise. Material testing can also help to improve the quality and reliability of structures developed from these materials.

What is material testing for construction?

Different materials have varying levels of durability and resistance to other environmental factors, so it is essential to know what to expect from each type before you make a purchase. Additionally, materials testing methods can vary, so it is vital to be familiar with the most common types of material testing to ensure that the materials you select are suitable for a given construction process.

For example, you can use construction materials testing to determine a substance's compressive strength, tensile strength, impact resistance, and weathering resistance. Additionally, you can test construction materials for density, thermal conductivity, and thermal expansion.

How is material testing used in the field or on a construction site?

Testing the material in the field is critical to ensure that the material will hold up in the environment that it will be used. The material will be subjected to different weather conditions

and tested to see if it can withstand the wear and tear of the job site. Field technicians will also test the material to see if it is resistant to fire and other possible hazards.

How is material testing used in a laboratory environment?

Lab testing construction materials is an integral part of ensuring the quality and durability of buildings. By choosing suitable materials and testing them thoroughly, we can create safe, healthy, and efficient structures. In addition, laboratories typically offer more advanced testing methods to determine construction materials' properties.

Standard laboratory tests recommended by the American Society for Testing and Materials include destructive and non-destructive tests, weathering simulations, particle analysis, and more granular testing methods that field testing can't always encompass.

ForneyVault offers robust material testing tools for the construction industry.

If you're ready to learn more about the value of accurate, efficient material testing for your construction projects, contact ForneyVault today. With one platform, you can access all of your pertinent CMT data, quickly log results, and mitigate the risk of human error during data entry or interpretation. Connect your machines, automate your workflow, and see how ForneyVault can help you reshape your existing testing processes.

Which Is the Best Software for Construction Management?

When looking for the best construction management software that can take the guesswork out of structural development, it's often difficult to know where to start. While you can likely find bargains, freeware, and limited-access platforms, these won't offer you the same value as the best construction management software. So, if you're looking to get the most significant return on your investment, here's what you should know.

What is construction management software?

Construction management software is a type of software that is designed to help construction professionals manage their construction projects. It can help them track the project's progress, manage the budget, schedule tasks, and more.

There are various construction project management software programs available, and each one offers its unique set of features. Choosing a program that will meet the specific needs of your construction project is crucial.

What's the difference between construction materials testing software and construction management software?

Though construction materials testing software and construction management software seem like two interchangeable concepts, they have several key differences which make each better suited for unique applications than the other.

Construction materials testing software is used to test the properties of construction materials to ensure they meet the required standards. This software can quickly log results, cut out redundant data collection processes, and deliver a more timely, accurate report of your chosen materials.

Construction management software is used to manage the construction project, including scheduling, tracking progress, and managing resources. Those resources regularly include the tested materials from your testing platform, meaning that you should establish an effective pipeline from your testing process to your construction project management software.

What makes a software solution the “best?”

When you're looking for the best construction management software for your business, you'll want to prioritize a few features and utilities that lesser solutions may not provide. Often, it helps to prioritize the following when you're looking for construction management softwares:

- Ease of use
- Affordability
- Feature-richness
- Compatibility

While this isn't an exhaustive features list, it can guide you toward the ideal software solutions for your development, testing, and construction needs.

The ForneyVault solution gives you access to world-class construction management tools.

If you're looking for the best construction management software for your upcoming projects, ForneyVault is here to help. We provide an industry-leading construction management software platform with added LIMS capabilities, so you can get the most from your software without overextending your budget or development resources. Contact us today to learn more about the ForneyVault solution and see why it's the best construction management software for your needs.

What Is Field Data Capture?

Field data capture (FDC) is the process of gathering data in the field instead of in a laboratory or office setting. This data can be used for various purposes, such as scientific research, market research, or data entry for a database.

While you'll often see field data capture through focus groups, peer research, and independent studies, FDC has numerous applications in the construction industry, and field technicians depend on this practice for most structural designs. From FDC's applications within the construction market to practical software tools that enhance field data capture, here's what you need to know.

What does field data capture mean in the construction industry?

Field data capture in construction is an essential process for documenting the progress of a project. Field data can include measurements, photographs, and other construction site documentation. You can use this data to create as-built drawings, track progress, and troubleshoot problems.

There are several tools and methods for field data capture in construction. One common tool is a construction camera, which is a camera specifically designed for documenting project progress. You can use construction cameras to take photographs or videos of the construction site. These images can be used to create as-built drawings or to document changes or problems on the site.

ForneyVault's ForneyField streamlines field data capture.

Though several field data capture apps exist, one of the most effective field data capture software solutions is ForneyVault's ForneyField.

ForneyField is a ForneyVault-enabled mobile app used by field technicians to track sample and site data from the field to the lab and beyond, ensuring a complete chain of custody for all project stakeholders.

With tools like ForneyField, field technicians can quickly sync results with ForneyVault and filter samples by project ID, sample data, and project status. ForneyField relies on an easy-to-follow pipeline:

- Capture: Use our field data capture systems to quickly input sample data.
- Claim: Drive job site accountability for managers and field technicians.
- Locate: Easily find specimens on the job site.
- Validate: Ensure you can trust the quality of your materials on a construction project.

What data do field technicians commonly collect?

Field technicians that incorporate tools like ForneyField into their repertoire often look for a few key data points. This data may include sensor readings, event logs, or materials testing results. By analyzing this data, technicians can often determine the source of a problem and fix it.

In many cases, technicians also collect data to create documentation for future reference. For example, if a construction issue is recurring, the technician may document the steps they took to fix it so that another field technician can follow the same process.

ForneyVault can guide you toward leading field data capture tools.

Field data capture is an essential part of construction projects. The data collected can be used to document progress, track problems, and create as-built drawings. There are several tools and methods for field data capture, but tools like ForneyField stand above the rest. Contact us today to see ForneyField in action and learn how our software tools can amplify your testing and data collection procedures.

Why Are Construction Materials Tested?

Construction material testing is a critical part of the engineering and construction process. By ensuring that the materials used in a construction project are of the highest quality, engineers can minimize the chances of a faulty project and ensure that the finished product is safe and reliable.

Of course, when builders don't follow rigorous testing protocols, it can lead to significant consequences for the project and a structure's inhabitants. Here's what you should know to learn more about the necessity of high-quality construction materials and building material testing.

What is the purpose of material testing in construction?

Construction material testing evaluates the properties of construction materials to ensure that they meet the required standards. The properties that are typically tested include strength, durability, and resistance to weathering and corrosion.

In addition to ensuring the quality of the materials, construction material testing can also be used to help troubleshoot problems with existing structures. If a material fails a test, the construction professional can investigate the cause of the failure and take appropriate corrective action.

What happens when construction materials aren't adequately tested?

Regarding the safety of the people occupying a building, it's of the utmost importance that construction materials be rigorously tested before use. Materials that haven't gone through testing may not meet safety standards and could lead to severe injuries or fatalities in the event of an accident.

Some of the dangers of using untested materials in construction include:

- **Falling debris:** If materials haven't been tested, there's no way to know how they will behave in a fall. Hazardous materials could lead to a deadly collapse.
- **Fire:** Untested materials could easily ignite and lead to a dangerous fire.
- **Collapse:** A building constructed with untested materials is at risk of collapsing, which could lead to severe injuries or fatalities.

The risks of using untested materials in construction are too significant and have even led to several high-profile incidents where poor materials testing was the culprit. For instance, the Tacoma Narrows Bridge project opted for less-expensive plate girders, which threw off the build's depth-to-width ratio, leaving the bridge structurally unsound. Likewise, the Skyline Apartment project in Virginia used poor-quality concrete, which led to a partial collapse.

These are a few incidents that directly resulted from lax construction material testing standards.

What are top materials testing use cases?

Materials testing is done to measure materials' physical and chemical properties, which means that it has dozens of applicable use cases. This information is used to select materials that meet the requirements for a particular application.

Depending on the properties that need to be measured, there are various construction materials testing lab methods that developers can use. The most common methods include mechanical testing, chemical analysis, and thermal analysis.

ForneyVault can help you rethink your existing CMT processes.

Before you rush to search “construction materials testing near me,” start by looking into effective software solutions like ForneyVault. Our industry-leading CMT and construction management tools can help you take control of your testing process, mitigate project risks, and narrow your margin of error. By selecting the highest-quality materials for your construction build, you can craft a stable structure that's durable and safe.