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# Facility Management Data, Tracking and Reporting Simplified Using Forge

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## Learning Objectives

- Learning Objective 1: Transform multiple AutoCAD drawings and Database information into intelligent resources
- Learning Objective 2: Publish Intelligent Facility Management Data for resource to web
- Learning Objective 3: Learn how to capitalize on the power of Forge for accessing, modifying, and viewing facility management data
- Learning Objective 4: Learn best practices in CAFM (computer-aided facility management)

## Description

Discover smarter ways to collaborate on your AutoCAD drawings through the Forge web app.

- Find an easy way to publish drawings from multiple disciplines into a single intelligent model thus making it available for collaboration
- Explore the power of Forge by viewing the published drawing in a viewer-friendly format
- Further, understand what it means to create an intelligent resource by combining live data from the database along with the published edits
- Collaborate real-time with live data access and view through Forge Viewer in faciliCAD web

## Speakers

Varun Bhartiya, CEO, and Co-founder at nCircle Tech.

Varun established this company to enable passionate innovators in the AEC and Manufacturing industry to create impactful 3D engineering & construction solutions. Leveraging nCircle's domain expertise in CAD-BIM, the company provides solutions that reduce time to market and meet business goals. Each of nCircle's CAD and BIM Software solutions is meant to provide you ease, convenience, time, and cost-saving so that you can focus on things that matter more.

Bill Kilp, President, faciliCAD

Bill is the President at faciliCAD; a software development company specializing in Facility Management software and consulting, founded in 2001. As the co-owner of faciliCAD, Bill supervises Product Design and Development, Software Implementation, Project Management, Technical Support, Sales, and all of the day to day business activities. Before this, he had established a company named Facility Solutions in 1990. Bill has been consulting, training, and implementing Computer Aided Drafting, Space Planning and Facility Management software and solutions since the beginning of this firm and has over 30 years of experience in the CAD/ CAFM industry.

**Audience Definition:** Facility Manager, Owners

**Audience Description:** People looking to manage the facilities and large sites on the cloud

## The Story So Far

Traditionally, facility data was managed using paper drawings and post notes. This was tedious and required extra efforts to ensure all the drawings with post notes were intact at all times with the need to have duplicates for all team members' accessibility. This later evolved to using CAD software like AutoCAD and static spreadsheets. However, this has its limitations with file accessibility and opening file formats on different systems. It means having the software installed on the system and real-time changes are a challenge. Collaboration over the web has become commonplace.

## How Can You Make This Better

By making all the data available and accessible at all times every time through the cloud. This can be fetched through a web-based app.

## Cloud-based CAFM solution - the need of the hour in the industry

Let's understand why a cloud-based Computer-Aided Facilities Management (CAFM) solution is an integral call from the industry now.

- ✓ **No CAD Experience Required**

In a web-based CAFM solution, end users can open, view, query, hatch, print drawings with virtually no hands-on CAD experience

- ✓ **No IT integration required**

There is no requirement for software to be installed on your desktop. This eliminates the need for IT coordinating installs on your local PCs. You can be on-site or with a client or anywhere else and access the data and drawings. This is particularly important in a pandemic like now.

- ✓ **Reduces Dependency**

This app is designed with management teams and non-CAD team members in mind. With an application like this, the managers do not have to depend on the facilities team to get drawings and reports. This eliminates a remarkable dependency. Not having to depend on another person for this data, changes the game and increases speed as well as efficiency and thereby the decision-making process.

Additionally, the DNA of the workforce is changing. You are working with people who want to access data and information through an agile system, on any device. To cater to this demand, your software has to be evolved equally.

The sites are comparatively huge. Multiple people are operating at the same time on the same data set. This is now possible with the help of a cloud-based application like this.

**Learning Objective 1:** Learn how to transform multiple AutoCAD drawings and database information into intelligent resources.

For an accurate account of your space, your CAD is essential in virtually any CAFM solution. Equally as important is that the CAFM solution is compatible with industry-standard CAD files, like AutoCAD or REVIT. This is particularly important for communication with vendors, like your Architectural firm for instance.

By referring to the video demonstration you will see how a CAD application can be used to link spatial boundaries in FM drawings that are in turn using architecture drawings as reference files.

Once linked, additional information can be added and managed from the CAD app, or a Web app, for non-CAD people in an organization.

**Note:** It's important to note that before the Web application, both graphic and tabular data are created and managed from the CAD application.

Delight Point: This application is built on Forge. Forge accelerated the development and provided many out of the box features suitable for CAFM.

**Learning Objective 2:** Learn how to publish intelligent facility management data to the web.

To fulfill this objective you will see how the CAD application is used to prepare and publish intelligent drawings and data to the local Web application server. This in turn sends the drawings to the Autodesk Forge server for translation and then a round trip back to the local Web application server for use in a Forge-based Web application.

This can be better understood with the help of the video demonstration.

To understand the occurrence withing the program better, let's look at a concise explanation of how it has been designed.

- First, all the entities from the boundary objects (polylines for the AutoCAD users), are transferred to a geometry field for each room record in the database
- Next, all the referenced discipline drawings are combined into one AutoCAD file and then sent to the local Web application Server
- The Web application Server then sends the "Seed files" to the Forge server
- As the files reach the Forge server, they are encrypted for client security
- The Seed file is then translated to a Forge file (2Df Files) and sent back to the local Web server to be used as graphics files in the Web application using the Autodesk Forge viewer
- Lastly, the seed file and translated file is deleted from the user's account on the Autodesk Forge server

Note: The data is always in transit and does not get saved on the Autodesk server. This ensures that the data is well protected on your servers. Additionally, it is important to note that, once the files are converted, there is no additional cost for the viewing of these files. So your operating costs are minimal.

**Learning Objective 3:** Learn how to capitalize on the power of Forge for accessing, modifying, and viewing facility management data

The video demonstration here helps you realize how you can use a Forge based Web application to view, edit, query, report, extract, and print live data linked to the previously published drawings.

We will look at this with the help of 3 scenarios explained at length in the video demonstration.

- ✓ **Scenario #1 Locating and Moving an Employee**

Wayfinding can be useful for many of you in an organization, take a helpdesk for example.
When an employee calls with an issue, the helpdesk can easily find the location of that employee along with information about that location.

- ✓ **Scenario #2 Creating and Applying Custom Queries**

What if someone were trying to find a particular conference room or maybe the location for all the personal computers in a particular building? Custom queries can be created on the fly or be saved and recalled at a later date.

- ✓ **Scenario #3 Accessing both Graphic and Tabular Reports using Live Data**

Your reports can be created or required in many forms. Most commonly requested from facility people in an organization are either graphic and tabular reports.

- ✓ **Scenario #4 Using Tools in Forge Viewer to Zoom, Pan, Measure, and Select Rooms to Display Live Data**

Forge comes with several innovative tools. Here's the time to use them, go all out and cater to your big and small requirements.

- ✓ **Scenario #5 (Printing Results of Graphics Display)**

Although a Web-based CAFMsolution allows you to cast and present your drawings on a large screen, there are many instances when a paper drawing is preferred. This is the time when this scenario explanation and operation comes in handy.

It is sincerely recommended to watch the class video to get in-depth learning of the cloud-based web application. Bill has explained all the objectives and scenarios in great detail.

The entire demo video entails a comprehensive journey beginning from an AutoCAD drawing, followed by preparing the data for Facility Management, moving on to publishing it for the web in a single click where anyone from within the organization can access, operate, control, and analyze the data.
You will also fall in love with the clarity of the data visually and appreciate how effective and faster it is to read it!

"The show must go on!", Haven't we heard of it many times before? Well, this what is enabled for you and your team through this innovative workflow. You have

- ✓ All-time access to data
- ✓ Successfully empowered your teams for fruitful collaboration
- ✓ The power to process the data through cloud lending ease, speed, and convenience

This makes it a lot clearer why someone would prefer using CAFM as a solution on cloud!

## The Best Practices

Here's a list of definite Do's to make this workflow ease your work and work smartly.

- ✓ Plan all the stages of your facilities well so that multiple people can collaborate simultaneously and effectively
- ✓ Prefer and refer to graphical visualization of the data when using reports. It is much more effective than tabular information
- ✓ Standardize the methods for data input and management
- ✓ A good CAFM solution should not create a dependency on their product for basic CAD edits. Some CAFM solutions have their built-in drafting package so AutoCAD and REVIT drawings need to be inserted instead of using the native AutoCAD or REVIT solutions. In most cases, those files do not make clean round trips back to the AutoCAD or REVIT files and require a great deal of cleanup for compatibility with vendors

These are some of the many examples of best practices when selecting and using a Web-Based CAFM solution.

## What Makes faciliCAD One of Its Kind

Data integrity and data accuracy are acute for a CAFM solution's functioning. Since this workflow depends on Autodesk technologies, AutoCAD followed by Forge, you have no reason to doubt the data accuracy. This makes Facilicad truly unique.

At the moment, faciliCAD web is the only CAFM solution using Forge and this is what makes it a truly innovative solution and workflow.