

A close-up photograph of a person's hands working at a computer workstation. The left hand is positioned on a black keyboard, and the right hand is on a black mouse. The person is wearing a gold ring on their right ring finger. In the foreground, a white scanner or document feeder is visible, slightly out of focus. The background shows a blurred computer monitor and desk. The overall scene is brightly lit, suggesting an office environment.

# How to Save Money on Software Licensing

# How to Save Money on Software Licensing

Step-by-step instructions to maximize your company's software use.

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# Introduction

*“Companies don’t know what they don’t know.”*

In conversations with industry leaders, we’ve learned that companies are frequently unaware of how much they do not know about their software use and costs. Many companies don’t see the gaping deficiencies in knowledge and data when it comes to software licensing. They pay the bills, and assume all is well if employees aren’t complaining about a lack of licenses.

**What they don’t know:** everything that is installed on each computer and laptop, how frequently applications are actually used, what’s worth paying for, who is using the applications, where licenses should be placed on servers, and much more.

**Why is this knowledge important?** It can optimize business processes, maximize efficiency, ensure legal protection, and primarily, **save money**.

Thankfully, there are solutions to all of these unknowns. This e-book aims to help companies understand what they don’t know and use this knowledge to improve their bottom line. We explain the software challenges facing AEC firms and offer practical, **step-by-step solutions** to each with data examples from Cetrus.

We hope the solutions to each challenge help you understand how to seize opportunities to improve your business processes and increase profit.



Please reach out with any questions or comments.

We would love to hear about your challenges and success with implementing our solutions!

Email: [marketing@cetrus.com](mailto:marketing@cetrus.com)

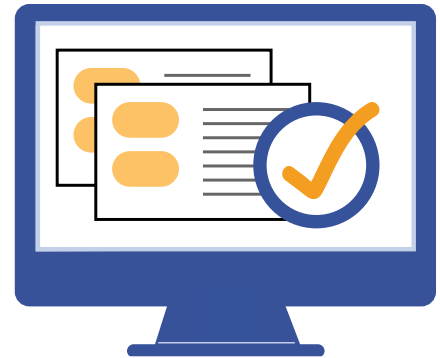


# Executive Summary

## What you can do to save money on software licensing:

### 1. Buy Only What You Need:

- Invest in a software licensing tool that will provide exact use data
- Analyze application use to optimize licensing levels and reduce the number of idle licenses
- Implement systems to increase efficiency and ensure you get the most out of your software licensing tool



### 2. Contain Software Costs:

- Run regular inventories to maintain compliance
- Eliminate software licensing overages by restricting license use to the exact number purchased.

### 3. Recoup Licensing Costs:

- Invest in a tool that can associate application use to projects
- Treat software like an asset and bill projects for application use
- Analyze use to optimize the cost per hour of each application
- Create a written approval process for new licenses including new steps for data and software profit analysis



# Chapter 1: Buy Only What You Need

## Challenges Overview

Firms are at the mercy of software providers. Licensing methods are becoming more complicated, and companies often don't know what software they own or how many application licenses they need. IT Managers and Financial Officers must believe what software providers tell them, and rely on their employees' imprecise accounts of what licenses they have and need.

If you are **under licensed**, employees get frustrated and project progress slows down. They may even "park" applications on their desktop for an entire day to ensure they'll have access. In some cases, employees who feel like they can never get a license will attempt to pirate an illegal copy of the application, putting you at legal risk.

If you are **over licensed**, you waste valuable resources. In a TechRepublic report, Brandon Vigliarolo warns: "As much as **38 percent** of enterprise software is going to waste. That accounts for billions of dollars a year, and it's probably affecting you too." If you don't know what applications you are using, it is impossible to accurately determine how many licenses to eliminate.

Ron Cordon states the issue best in a ComputerWeekly.com article:

*"...companies struggle to maintain control over their software [licenses]. Some may use unlicensed software, leaving themselves open to fines and public ridicule at the hands of software vendors. Others may overcompensate and buy extra [licenses] to be on the safe side. Most firms end up doing a combination of both..."*

Lastly, expensive applications like gINT, AutoCAD, and Revit aren't getting any cheaper. For example, Autodesk's website states: "The price to renew maintenance will **increase 10% in May 2018 and 20% in May 2019**. In addition, the price to switch from maintenance to a subscription will increase 5% in 2018 and another 5% in 2019."<sup>1</sup> (Account Management: The Price to Move) Of course, the switch to subscription licensing is a complicated process on its own, further preventing companies from knowing exactly what to buy.

*"Software licenses and maintenance are big line items in most IT budgets. Upwards of 30% of IT budgets are dedicated to software projects"*

Eric Feldman  
Senior Product Marketing Manager of Flexera (Kealy, 2018)

<sup>1</sup> See Autodesk's example pricing charts on their website [HERE](#)

# The Solutions

## Step 1: Get a Software Management Tool

Consider this an investment. Without a tool to gather accurate data, you risk making poor business decisions that could waste valuable resources and money. As in many areas of business, you need information and analysis to save time, remain competitive, and increase efficiency. This is why Software Asset Management (SAM) is so important.

*“Without SAM in place, software vendors will continue to turn up each year demanding more money, since [organizations] **aren’t able to prove correct usage.**”*

Geoff Worsley  
SAM Enterprise Architect for Aspera (Kealy, 2018)

*“Business management software should be evaluated and viewed as a **strategic investment**. Based on your goals for growth, improved efficiency, and higher profit margins, technology is the cheapest and best way to achieve these goals”*

June Jewell  
Find the Lost Dollars, 2017

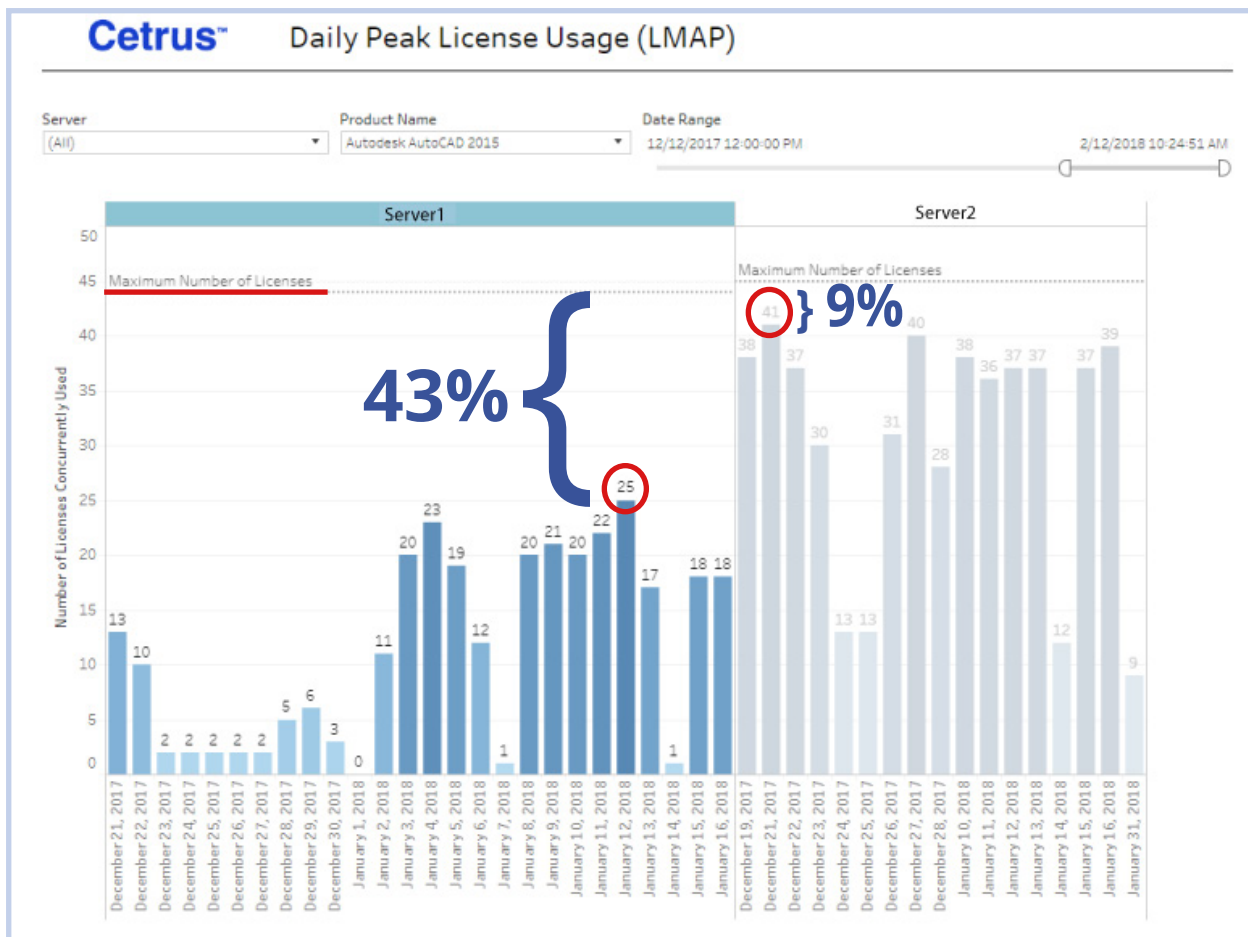
In this E-Book we will use report examples and case study data from [Cetrus™ Process Meter](#) demonstrate the crucial analysis needed to lower your costs. You can test it out, and start collecting data with the Cetrus Process Meter (CPM) [30 day FREE trial here](#).



## Step 2: Analyze Your Peak Use

Once you start to collect application use data, you need to compare the number of licenses you have purchased with your average peak use.

Check out the report below of an actual company. They have 44 purchased AutoCAD licenses on Server 1, and 45 licenses on server 2. However, the average peak use on Server 1 is ~11 while the average peak use on Server 2 is ~30. Assuming this is typical use over time, the number of licenses on Server 1 can be reduced by at least 19 to get down to the highest peak of 25 (**43% reduction!**) In addition, the number of licenses on Server 2 can be reduced at least by 4, to hit its highest peak of 41 (9% reduction).



Knowing this information **saves time and money**. It allows companies to accurately determine software needs, plan for the future, and justify the cost of new licenses to management.

Research suggests that companies tend to be **at least 30% over licensed**. Recently Cetrus helped MG2 reduce their Autodesk licenses by **46%**; see the case study [HERE](#).

## How do you know exactly what the new maximum should be?

We recommend your peak use occasionally reach (and attempt to surpass) your maximum purchased licenses. As we outlined in the Challenges Overview, being under licensed can cause just as many problems as being over licensed.

*“As a general rule, we like to see our maximum licenses wall hit about twice a week, maybe three times during busier seasons. This means that we are causing minimal frustrations to our employees but are still saving as much money as possible.”*

Cory Montini  
IT Manager





### Step 3: Analyze How Often Licenses are Left Idle

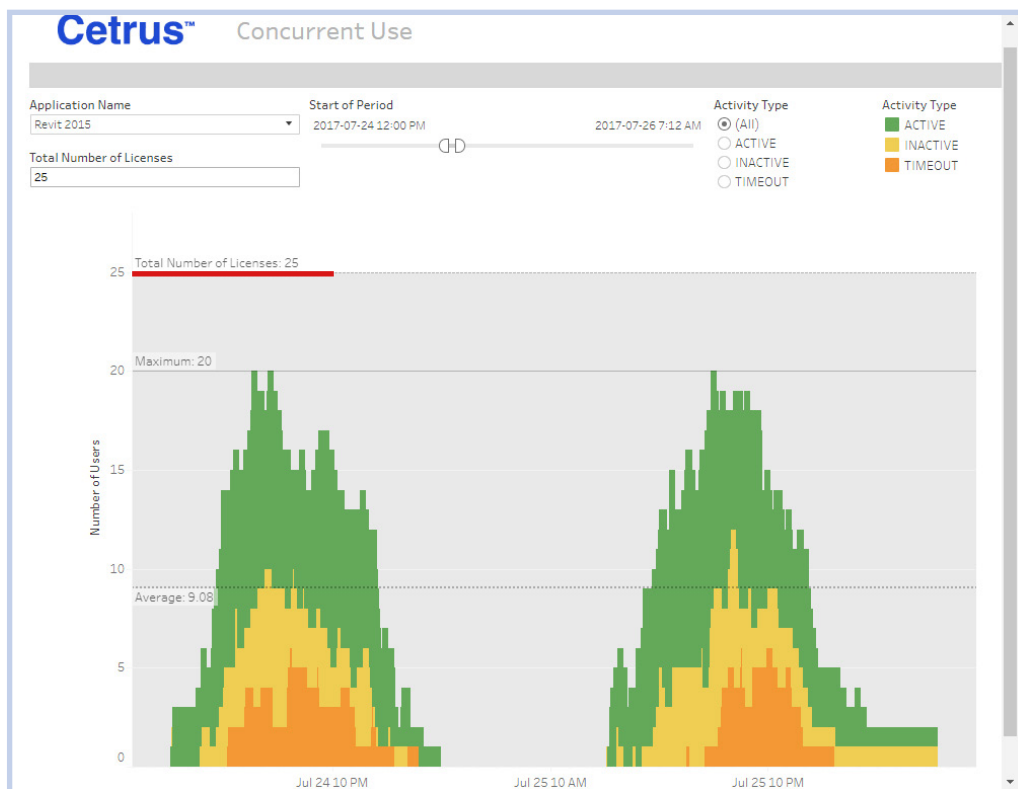
Let's say you have successfully lowered your licenses based on your peak use. Now, it's time to make sure employees are not opening licenses without actively using them. This is crucial in making sure your licenses are optimized and you are saving as much money as possible.

*"The average large enterprise is wasting approximately **\$7.4 million every year on under- and unused software**. While that number will be smaller for companies with less than the 30,000 seats that they use as their average the numbers are still high."*

Brandon Vigliarolo  
Tech Republic, 2016

Take a look at the report below. Cetrus Process Meter (CPM) has three Activity Types:

- **Green bars** – Active time, when an application is actively being used.
- **Yellow bars** – Inactive time, when an application is open, but not actively used.
- **Orange bars** – Timeout, when an application has sat idle for a long period of time.



This company has 25 purchased Revit licenses, and the peak use for each day is 20 licenses. However, if you look at the activity states, you can see that although the peak is 20, about **half are either in an Inactive or Timeout state**. There are many understandable reasons that an employee leaves a license open, like getting distracted by a phone call, waiting on project news, or going out to lunch and forgetting to exit the application. Regardless, the fact remains that for each day the maximum number of active licenses is only about 10.

## What actions can you take?

If you see that you frequently have Inactive and Timeout sessions, one option is to create an awareness program to help employees remember to exit the application as soon as they are done. This can have varying effectiveness, so sometimes a more direct, targeted approach is necessary on a case-by-case basis.

Cetrus allows those with administrative access to manually release licenses (other CPM reports show exact application use by employee). This is a good option for a variety of scenarios. For instance, if an employee leaves for vacation, but forgets to exit an application, his/her manager could release the license for others to use.

However, you must use caution with this approach, because it could cause the user to lose unsaved work, and create frustration. Eric Feldman, Senior Product Marketing Manager at Flexera recommends you speak to the individual *“before uninstalling any software from their device...take the list of users that aren’t actively using the software and send them an email pointing out that they’re not using the software and asking whether they need it any longer”* (Kealy, 2018). The same principle should be applied to releasing licenses too. Doing so ensures all work gets saved, and minimizes the potential for employee frustration.

## Step 4: Optimize Business Operations

*“Change comes hard, and those that **embrace strategic change** at every turn build a business to last, and are continually successful.”*

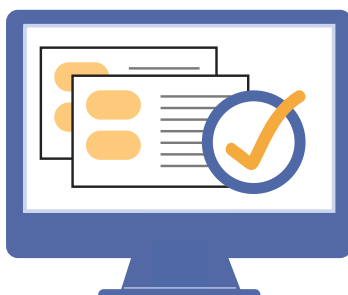
June Jewell

Find the Lost Dollars, 2017

The number of applications you need could change quarter to quarter, depending on your company’s busy season. We suggest analyzing the data on a bi-weekly or monthly basis to remain current.

Once you have several months of data, you can compare averages and cycles of use for improved planning. Knowing your company’s typical use patterns will help you determine what type of licenses you should be buying, and over what period of time.

Software licensing management tools like Cetrus Process Meter (CPM) have many other reports for further analysis, optimization, and monetary savings. The two we reviewed in this chapter are just the basics for getting started, and potentially the biggest money savers. Check out other report examples in the Appendix or on [www.cetrus.com](http://www.cetrus.com).



# Chapter 2: Contain Software Costs

## Challenges Overview

Even if you optimize your licenses, costs can still get out of control in two primary ways:

**1.** If you are not **compliant** with software regulations, your company risks facing a huge lawsuit. For example, back in 2015, Forever 21 faced a lawsuit for copyright infringement from Adobe, Autodesk and Corel. In an article from the Verge, Russell Brandom reports:

*“Forever 21 pirated 63 different instances of Adobe software including copies of Photoshop, Acrobat, and Illustrator. Autodesk and Corel also joined Adobe in the suit, based on pirated copies of Autodesk, WinZip and PaintShopPro, among others. According to the complaint, Forever 21 ‘continued their infringing activities even after being contacted by Adobe regarding the infringement.”* (Brandom, 2015)

**2. Bentley’s “Trust-Based” licensing** method often results in huge, unexpected bills at the end of the quarter, and prevents companies from effectively predicting software expenses. If you’re unfamiliar with Bentley’s “Trust-Based” licensing, here is how it works:

An engineer opens MicroStation on their desktop using a license key, but you only have 5 purchased MicroStation licenses, and all of them are already in use. Bentley will let the user access another MicroStation license, but will charge your company for the 6<sup>th</sup> license at the end of the quarter.

Bentley advocates this style of licensing because it *“...ensures users have access to mission-critical software whenever they need it”* (Anderson, 2007). This is true; when users can access the application when they need it, you avoid project delays. This single benefit may be small, however, when compared to the problems that “Trust-Based” licensing creates.

Companies are frustrated because there is not an option to opt out of “Trust-Based” licensing, and sometimes companies have no other choice than to use Bentley applications like gINT.

*“We have considered other alternatives to gINT to **avoid** expensive Trust-Based licensing, but gINT has monopolized the Borelog Application space because **the government requires** that specific project activities use gINT for quality control.”*

Scott Lagerbom  
Network Administrator of ENGEO

# The Solutions

## Step 1: Compliance

Can you say with 100% certainty that your company is compliant? If not, you are in the majority. We recommend knowing exactly what software (and hardware) you have installed so you are prepared for an audit at any time. To do this, simply run an inventory report like the one below, and compare the results with your payable records.

*“No one is safe...Now is the time for [organizations] to start addressing their software estates and taking software licensing seriously. We keep saying it, but now is the time to start implementing ITAM [Information Technology Asset Management] and addressing the software risks within the [organization].”*

David Foxen,  
IT Asset Management Review, 2015

**Cetrus™** Software Counts by Application

Software Vendor: (All) Application Name: (All) Version: (Multiple values) Identifying Number: (Multiple values) Installs: 1 to 191

Software Vendor	Application Name	Version	Identifying Number	Installs
3D Systems	CubePro	1.72.721	{60352650-3c3e-4774-a864-cefe67e4214e}	1
3D Systems Corp	3D Modeling Accelerator	5.1.3480.0	{3805DFF1-E887-44CC-B251-1992E8D6211A}	3
	CubePro	1.72.721.0	{97DEDE06-8785-48E4-AEE6-4DE6CE406732}	1
Absolute Software Inc.	Computrace	8.0.932	{8DA5754C-34B4-47B6-BDD9-4F13D183C155}	11
		8.0.944	{6B95EA5F-74EC-4D29-B49A-7521AB6D9A0E}	34
Act-3D B.V.	Lumion 6.5	6.5	Lumion 6.5_is1	4
	Revit To Lumion Bridge for Revit 2016 (ver. 1.6.1)	1.6	{8634DDB6-E4C3-48D1-8BD3-97D153A4843F..}	1
	Revit To Lumion Bridge for Revit 2017 (ver. 1.6.1)	1.6	{8634DDB6-E4C3-48D1-8BD3-97D153A4843F..}	1
Adobe	Microsoft_VC80_CRT_x86	8.0.50727...	{92D58719-BBC1-4CC3-A08B-56C9E884CC2C}	4
	Microsoft_VC90_CRT_x86	1.00.0000	{08D2E121-7F6A-43EB-97FD-629B44903403}	4
Adobe Systems Incorporated	Adobe Acrobat X Pro - English, Français, Deutsch	10.1.1	{AC76BA86-1033-F400-7760-000000000005}	1
	Acrobat DC 09142016	1.0.0000	{8B30546C-9A5C-4F95-8B32-4878975536EE}	19
	Adobe Acrobat DC	15.009.200...	{AC76BA86-1033-FFFF-7760-0C0F074E4100}	2
		15.017.200...	{AC76BA86-1033-FFFF-7760-0C0F074E4100}	18
		17.009.200...	{AC76BA86-1033-FFFF-7760-0C0F074E4100}	4
	Adobe After Effects CC 2015.3	13.8.1	AEFT_13_8_1	3
	Adobe AIR	3.1.0.4880	{FE23D063-934D-4829-A0D8-00634CE79B4A}	3
			Adobe AIR	3
	Adobe Bridge CC 2017	7.0	KBRG_7_0	28
	Adobe Bridge CC (64 Bit)	6.1.1	{359F8007-6486-429C-A8C5-D67F6897C88C}	3
	Adobe CC Design Standard 102115	1.0.0	{03A1090B-0AE0-407C-824A-CABD4D4D1817}	1
	Adobe CC POP Apps 09082016	1.0.0000	{332E0834-589C-4CFC-980C-84FB3DEB5D86}	3
	Adobe CC POP Apps 11122016	1.0.0000	{0683D5E7-E241-47B9-BF3F-52420D02E324}	21
	Adobe Creative Cloud	3.4.3.189	Adobe Creative Cloud	1
		3.6.0.248	Adobe Creative Cloud	2
	Adobe DC	1.0.0	{1208817-96A0-4F51-AE75-B8A883A4683F}	4
	Adobe Designer Standard 05052016	1.0.0	{42D25F84-5851-49E3-B9E0-6634D09F3FFC}	4
	Adobe Flash Player 18 ActiveX	18.0.0.209	Adobe Flash Player ActiveX	7

## Step 2: Application Restriction

Bentley continues to acquire other software vendors, so we predict that the frustration of “Trust-Based licensing” won’t be disappearing any time soon. In April 2018, Bentley published a press release on their website about **acquiring Plaxis and SoilVision** (Anderson, 2018).

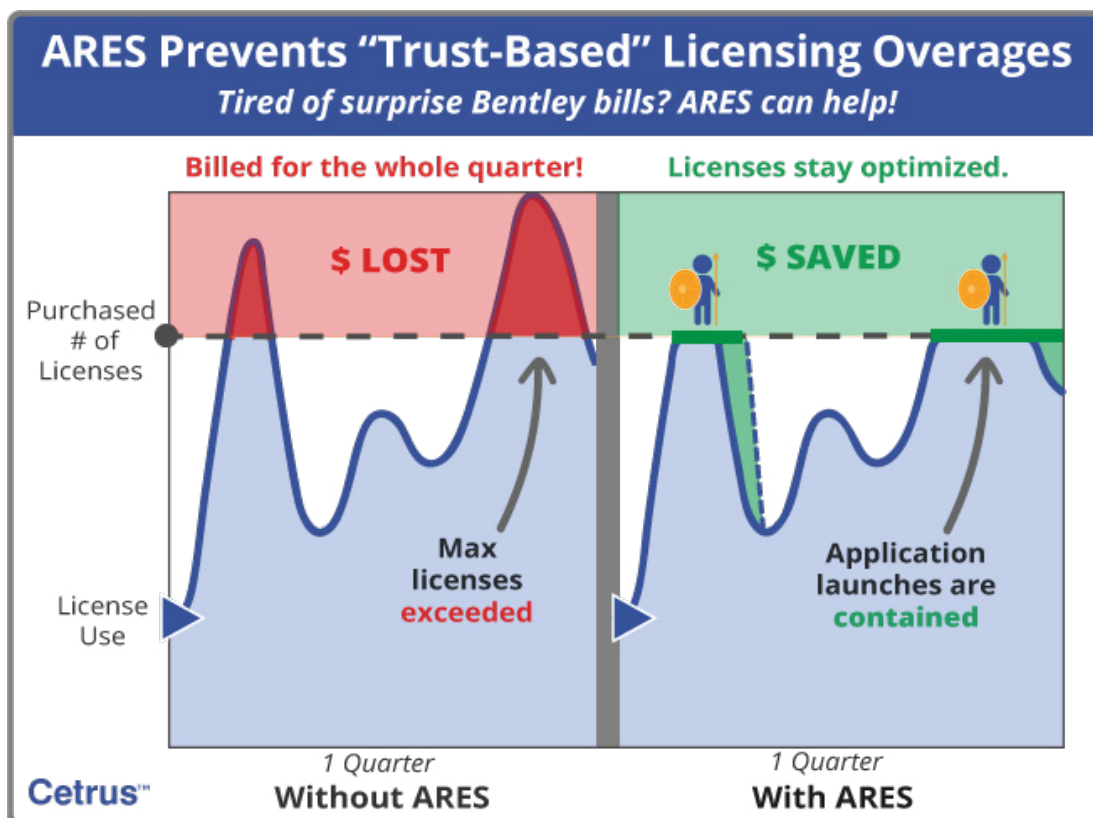
To solve this problem, you need a specific tool. In fall 2018, Cetrus is releasing a Plug-in to the CPM platform called Application REStriCTOR (ARES). When a user clicks on an application, ARES will restrict it from launching if the current number of running applications exceeds the maximum number of applications allowed. This will restrict license use to the exact number purchased, preventing additional charges for surpassing your maximum.

*“Having something like ARES is **a huge benefit** because it allows us to contain our costs, while having more flexibility where the application is installed.”*

Scott Lagerbom

Network Administrator of ENGEO

Take a look the graphic below to see how the ARES functionality works over time. As you can see, ARES prevents too many applications from being launched, causing the license use curve to shift, thus maximizing application use and reducing waste.





# Chapter 3: Recoup Licensing Costs

## Challenges Overview

As mentioned in Chapter 1, software is a growing expense that isn't getting any cheaper. Software licensing is typically lumped into overhead, **but should it be?** It is a tool you use to complete a project, much like a construction worker uses a bulldozer to move dirt and rocks on a site. Essentially, **software licenses are assets**, just like the bulldozer, so why can't you bill for them?

In our experience, we have seen three major reasons:

- 1.** Many companies are not aware of this possibility.
- 2.** You need a precise way of measuring how long an application is actively used on a specific project, otherwise you cannot accurately charge for the use.
- 3.** Billing for software is not a standard of industry. Firms are concerned that their clients will be unhappy with the additional charge and will dispute the expense.

In Autodesk's Blog Redshift, Jeff Yoders lists "Software Rental Costs" as the **number one cost you can pass along to clients** and thus reduce your overhead. Even Autodesk knows and admits that their software prices have a major negative impact on a company's profit.

*"The costs of doing business for a small architecture firm can threaten to **blow the profit margin** of even the most lucrative projects. If these costs are adding value to your clients' projects, you should be passing at least some of those costs along to them."*

Jeff Yoders  
Autodesk Redshift, 2013



# The Solutions

## Step 1: Get the Right Tool

Once again, this is where a software management tool becomes indispensable. Cetrus offers a Plug-in to the CPM platform called Expense-2-Project (E2P). It associates application use to projects at the file level, providing data that show exact use for each project.

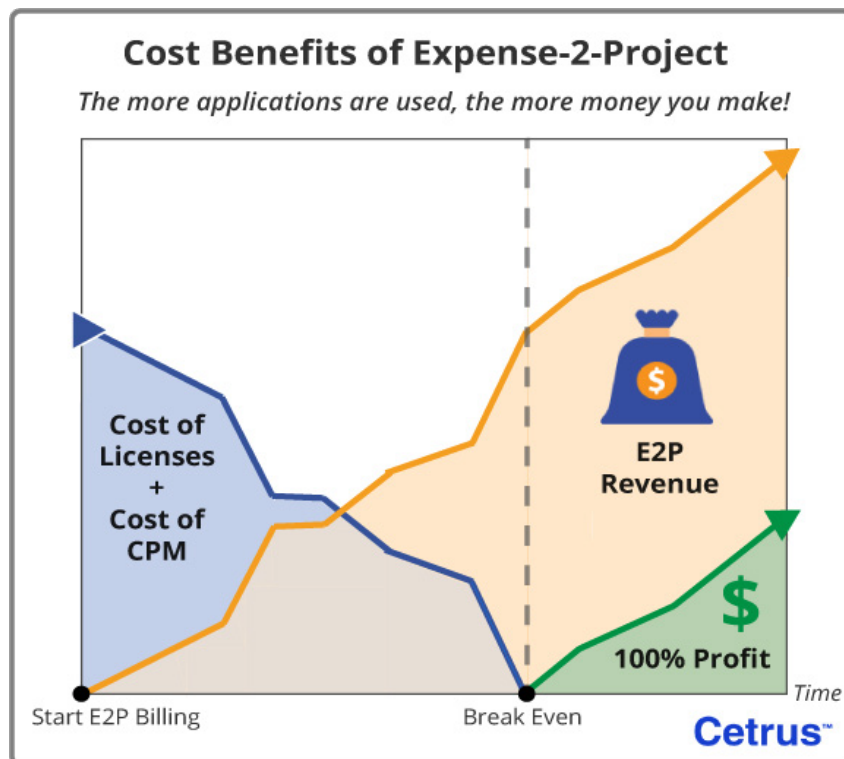
### How does the tech work?

E2P pops up a window with cached project information. The user selects a project name/number, and the association begins. With CPM's ability to monitor activity states, only active time spent on the application will be charged, at a rate defined by the Cetrus customer.

### Concerned about your clients?

As mentioned in the Challenges Overview, some people avoid software billing because they fear it will affect customer relations. To put your mind at ease, Uri Eliahu, President of ENGEO, explains *"Our customers have **never questioned** the additional software fee. The E2P software billing is small compared to the total invoice for engineering services, and clients are generally aware of the high cost of software."*

Take a look at the graphic below. With software billing not only do you recoup licensing costs, you have the opportunity to generate revenue, too. This is why it is so beneficial to companies in high-cost spaces like architecture and engineering.

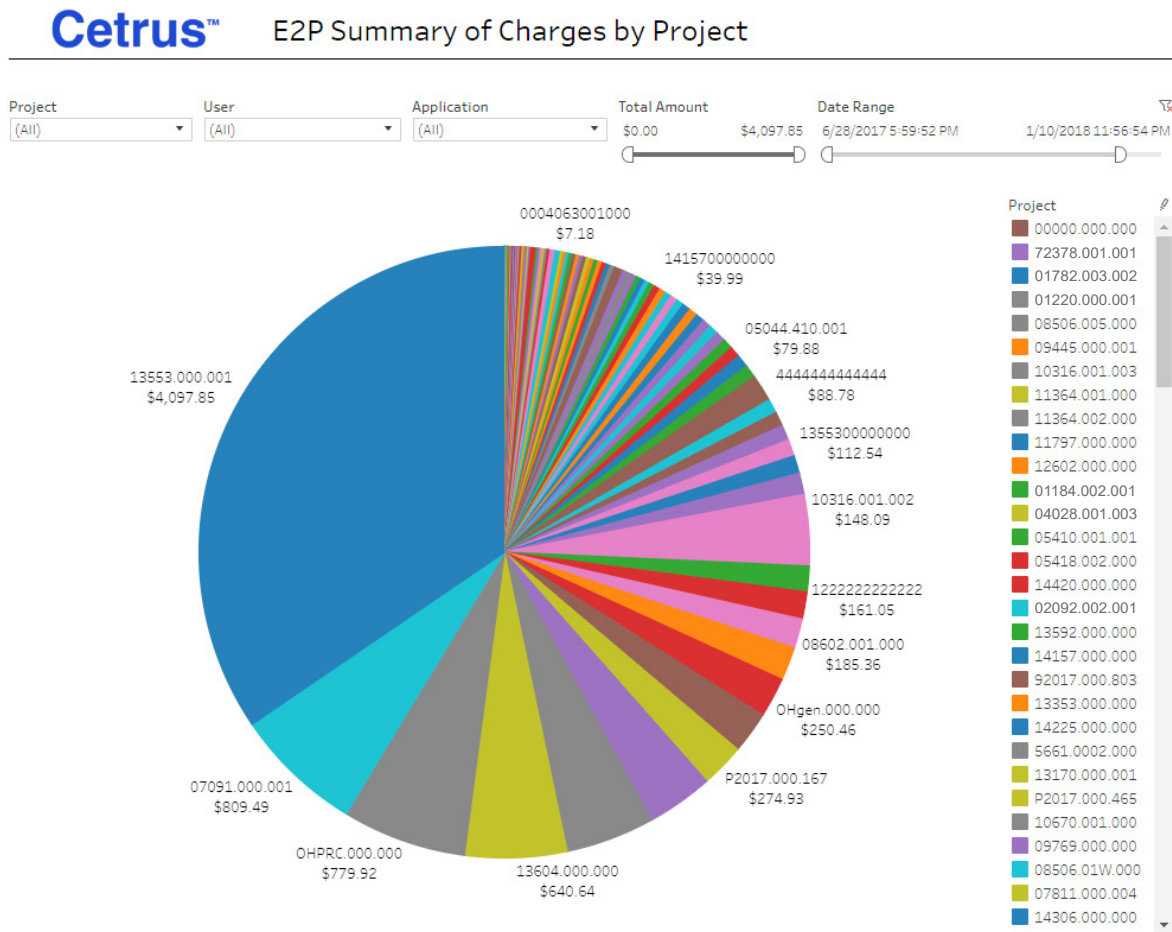


## Step 2: Analysis and Maximization

### Analysis

The report below is a perfect example of how application billing makes each project more profitable. It shows the amount (in US dollars) that each project at a small company was able to bill for application use over about 6 months. **These are thousands of dollars added to a company's pocket** that is being left on the table by most AEC firms.

E2P data allow executives to analyze and compare overall project profitability. Notice that there are several filtering mechanisms that allow one to compare revenue by application and user, for even deeper analysis.

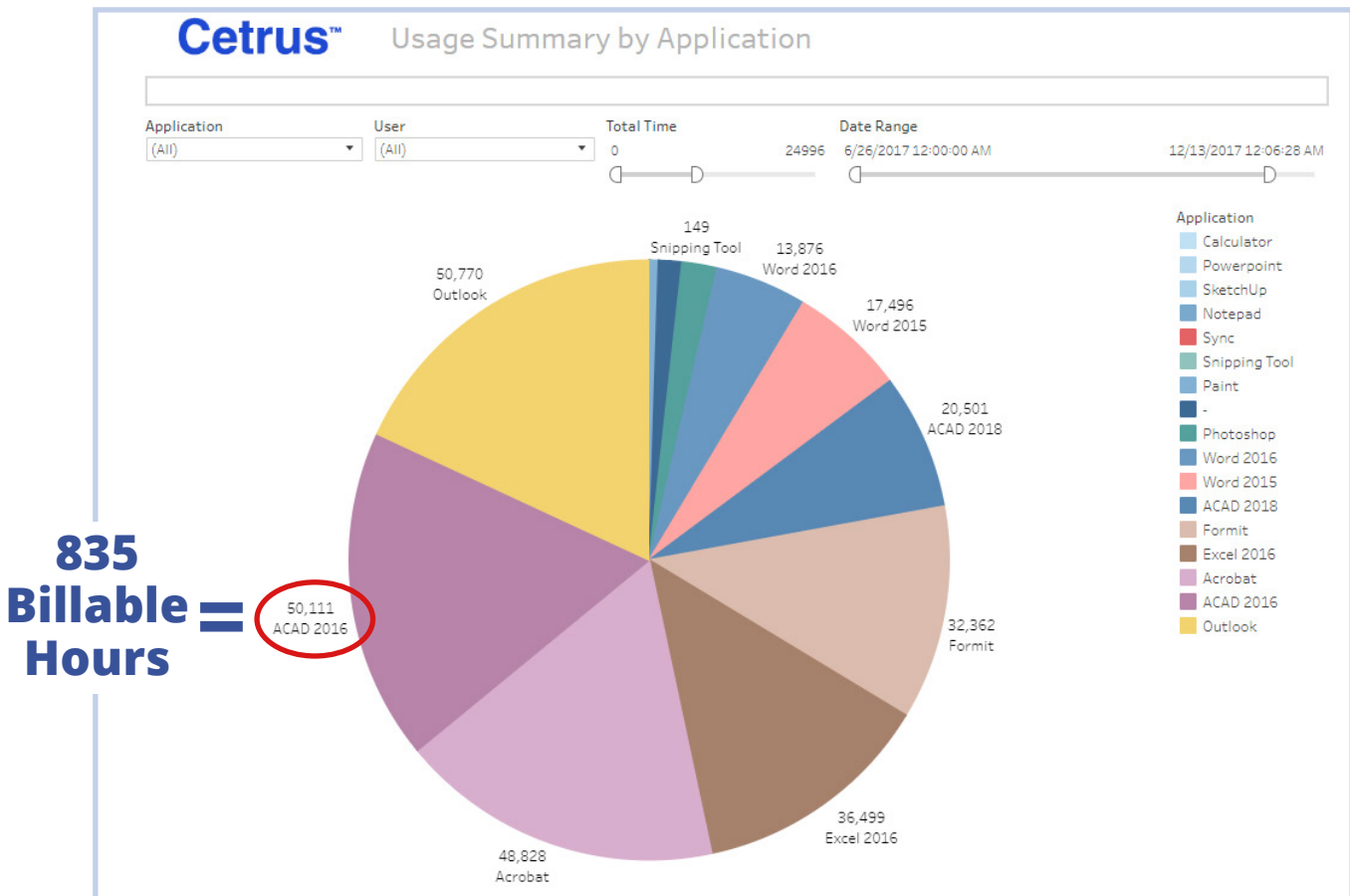


## Maximization

With a tool like E2P, you decide which applications will be tracked. You can choose to bill for everyday software like Excel, or only bill for the most expensive applications like AutoCAD and Revit. Then you determine what rate (price-per-hour) each of the applications should be billed for. We recommend testing different price points over time to find your optimal billing rate for each application.

Reports like the one below help with this. Here you see a pie chart for a small company that shows the amount of time (in minutes) that applications are billed to projects over approximately 6 months. In these sample data, AutoCAD is eating up a lot of time, with 50,111 minutes of use. That's approximately **835 hours** that you could easily invoice.

To maximize your price point, compare the amount of time that applications are used with the cost of licenses and the number of projects that require them. Sometimes you may have a highly specialized application that is only used on one or two projects. In this case you can justify billing the project at a higher rate, because you needed to purchase software specifically for that project.



### Step 3: Billing on Fixed-Bid Projects

Technically, you can bill for software costs on fixed-bid projects too. Simply estimate software costs and factor it into your bid, just like you would for construction equipment. Developing an accurate estimate requires a few months of data and considerations on estimated project length, but it will still result in saving your company a lot of money.

Or, as noted under Maximization, if a project requires specific applications you are only going to use on that project, you can bill the project for the whole license subscription. This is one instance where the subscription licensing method can work to save you money!

*“...renting software opens up the opportunity to **pass software-access costs to clients** by including them in project estimates.”*

Jeff Yoders

Autodesk Redshift, 2013

### Step 4: Optimize Business Operations

Now that you are recouping licensing costs, the way you get approval for purchasing new licenses is likely to change. We recommend outlining your current approval method, from who puts in requests to who approves the final expense. Then create a new outline that includes a step to analyze and evaluate CPM data so you can make the best business decision. With E2P data, buying new licenses can be easily justified, making the jobs of IT Managers and Financial Officers stress-free.

*“With E2P we recover the cost of one AutoCAD yearly subscription license in under 100 hours of billable use time. When licenses are in high demand, buying more becomes a **no-brainer**. We easily pay for the licenses just by using them.”*

Dave Borde

CAD/GIS Manager of ENGEO





# Summary/Final Thoughts

## Your to-do list to save \$\$\$:

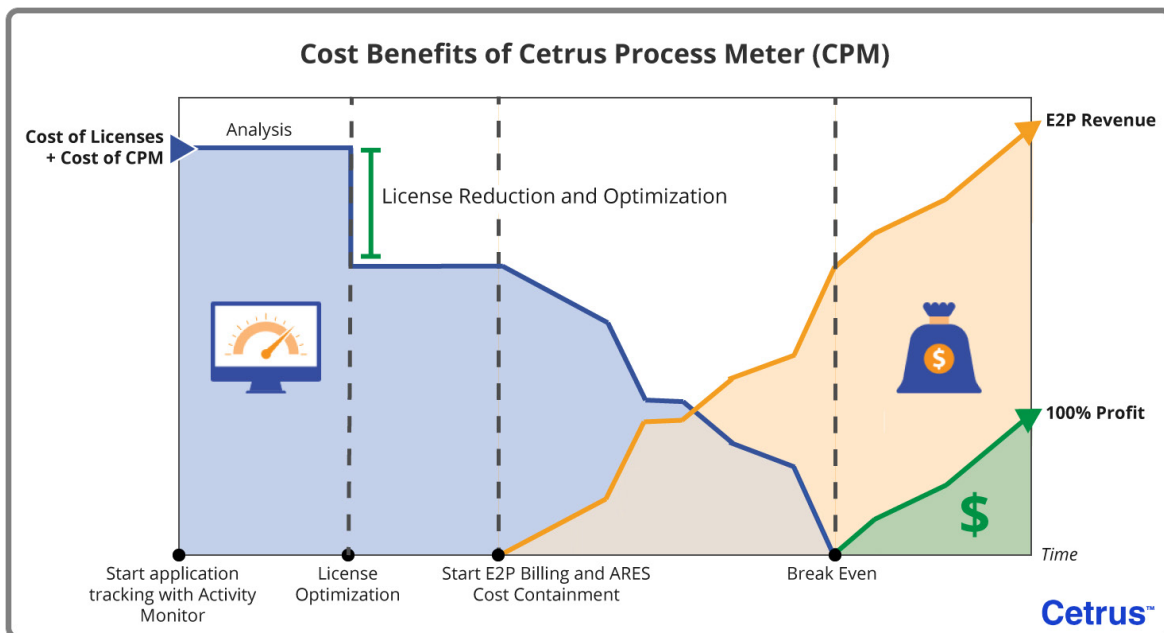
1. **Invest** in a software management tool like Cetrus Process Meter
2. **Optimize your licenses** by only purchasing what you need
3. **Manage your costs** by preventing overages and ensuring compliance
4. **Generate revenue** by billing application use to projects wherever possible
5. **Organize and outline** business processes to maximize efficiency and improve planning

*"Systems can make your life easier, and if implemented effectively, they can provide synergy, streamline processes, and improve operations."*

June Jewell

Find the Lost Dollars, 2017


The savings process as outlined by Cetrus:



There are many ways to save money in business. Sometimes you just need to find creative ways to save that you may not have previously considered. We hope this e-book helped you learn a couple of ways to save money on software licensing.

**Thanks for reading!**

Written and Designed by: [Cat McGuire](#) | Marketing Manager, Cetrus

A photograph of a desk setup featuring a black Dell monitor, a black keyboard, and a black telephone. The monitor is the central focus, displaying white text. A large orange rectangular box is positioned in the foreground, partially obscuring the keyboard and telephone. The background is a light, out-of-focus wall.

**Want to save money  
on software  
licensing?**  
*(And make your job easier?)*

# Appendix

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