



How to stay competitive

in precast concrete sales



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In the sales phase, it's sink or swim: you've got one shot to prove to a potential client that precast concrete—and your precast concept in particular—is the best choice. Here's how, with the right tools, you can


**win more bids,
improve profitability
and optimize your
entire workflow.**



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There's more demand than ever for leaner, greener and faster concrete, and the precast industry is growing—and yet, precast fabricators still face multiple obstacles in the sales phase.

● Not only does your sales team have to beat out competing precasters with a carefully thought-out concept, but you also need to **convince potential clients that precast is a better choice than other construction methods** like cast-in-place concrete or steel.

○ This isn't an easy task when so many owners and developers have yet to fully embrace the many benefits of precast concrete.

○ With the right **information management process**, you can easily find the **optimal precast concept**, present it to your client and not just win the bid, but improve your entire workflow from beginning to end.



Bid with confidence

Precast concepts need to be especially well-planned in the estimation phase. The whole process from sales to erection, including details about material and labor costs and erection and production scheduling, must be taken into account. This may take a little extra time and effort, but if you're using the right tools, every minute will be well invested.

With a model-based information management process, you have the opportunity to focus on **value engineering and optimizing the concept**. You can prove to the client that you've put thought into the project and have even improved the original concept, and you know it like the back of your hand and will deliver the most profitable concept. Likewise, you will benefit from investing in the early phase of the project—once the project progresses, **you'll have a major head start** thanks to all the information you've already created.

A model-based process is more than just a tool for streamlining design and detailing—when used throughout



the entire precast process, it can open up an entirely new world of unrealized potential.

With a model-based information management process, you can quickly **design and compare different structural solutions** to choose the best concept, **get quantities for accurate cost estimates, manage changes, and visualize the concept and schedule for the client**.

This helps you to bid with confidence and win the right projects without risking their bottom line—or yours.

Create faster, more accurate precast concepts

Every year, precast fabricators create hundreds of concepts and cost estimations. Because requests for tender often focus on cast-in-place rather than precast, you face a few extra steps before you can bid. You have to develop a precast concept, create estimates, and then convince the client to choose

precast over cast-in-place. Because both methods have their own unique strengths, it's not always ideal to create a precast frame that's based exactly on a cast-in-place concept. This means you also need to convert the design documents into a structural frame system that works for precast.



2D methods mean more time and less accuracy

Using traditional 2D methods that are less accurate than 3D means you'll need to work harder to create a competitive concept and compare estimates in order to find the best, most cost-effective solution. To make up for 2D's inevitable inaccuracies, you'll also probably want to pad your cost estimates with higher risk margins. And, of course, there's always the possibility of internal misunderstandings—the estimator, engineer and sales manager might understand the project intent differently. All this means that you might risk putting yourself out of the competition for the most profitable projects out there.

Optimize your concepts

With an information management process—or, a Building Information Modeling (BIM) process—which has purpose-built precast tools to model the structure, you can quickly create accurate, constructible concepts right on top of the reference files.

You can choose which objects you want to convert from the architect's or engineer's files directly to your precast concept or use intelligent precast tools, which allows you to **easily develop and optimize your precast concept**. Quantities are automatically generated along with the model, making it fast and easy to find a concept that satisfies both you and your client.

You can also take important planning factors into account when developing your precast concept, which will help you **avoid unpleasant surprises** later on. Using the model, you can quickly and easily split the original cast-in-place concrete

frame to precast elements according to manufacturing limitations such as weight, size and onsite limitations such as crane capacity.

Creating a model in the sales phase also helps everyone working on the bid, including the estimator, engineer and sales team, have a clearer understanding of the concept and the structure being built right from the get-go. Precast requires a unique understanding of structures and processes, and everything needs to be carefully designed, detailed and fabricated to avoid errors and rework. Constructibility issues that aren't caught early can turn into taxing challenges during construction that put project profitability at risk, as it's a slow, expensive or even impossible task to modify precast elements on site.

With a model, however, you can **spot potential constructibility issues earlier** in the process and fix them before costs skyrocket.



Compare concepts to find the best solution

You, the owner and the contractor all want to find the best concept possible, but your points of view about what “the best concept” means may differ. You’ve got to balance production cost, capacity and client needs while still turning a profit. Your client, on the other hand, needs to consider factors such as aesthetics, functionality, scheduling, and, of course, cost. If you can prove that using precast means **lower maintenance costs and faster erection**, the cost of the frame is no longer the only deciding factor.

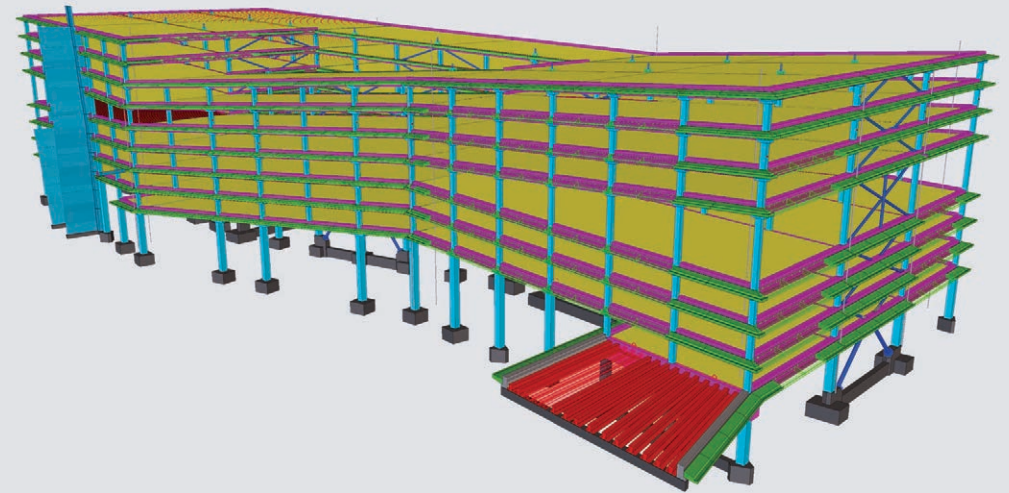
Take, for example, a precast wall-slab system, which might be more expensive than a cast-in-place column-slab system, but can be erected faster. This could allow your client to **complete construction earlier than originally planned and start generating rental revenue sooner**—for instance, in time for the busy holiday shopping season — which from their perspective, is more profitable.



There's no parameter too small

To find the optimal concept that suits both you and your client, you need to be able to weigh the pros and cons of a variety of parameters. With a model-based information management process, you can easily compare alternative concepts with as many parameters as needed, such as number of elements, concrete volumes, on-site crane capacity needs or limitations, transport costs and small details like amount and cost of embedded objects.

You can create one model, make changes, and easily see how it affects the project's cost and schedule—and, in fact, sometimes something as small as finding just the right element size can make a huge difference to costs. This way, you can present different structural variations, each with its own estimations, to your client. They can then **easily compare side-by-side visualizations and weigh the benefits of each variation** to find the right solution for the project.



Take, for example, a concept for a parking garage. Although the original plan might use a cast-in-place slab, using a precast slab with a longer span could allow you to remove an entire column line.

Using the 3D model, you can show the client how this **benefits everyone**: end users get more space for parking and therefore a better user experience, and the client saves time and money by needing fewer elements, which **reduces construction time, lifts and deliveries**.



Create accurate quantity takeoffs and cost calculations

Without easy access to the right information, it can be difficult and time-consuming to accurately estimate costs, materials needed, and project scheduling, making it next to impossible to strike the right balance between cost and profit.

Guesswork means rework

Estimators often can't create accurate takeoffs quickly enough to bid competitively using drawings, and even the most experienced estimator risks making errors when there's so much repetitive manual work involved. This, in turn, puts you at **risk of over or underbidding**. What's more, during the tendering phase, the structural concept will likely change more than a few times, which, if you've calculated quantities using 2D tools or pen and paper, is a headache waiting to happen.



In 2D, it's difficult to “show your work” when **managing change orders**. It takes hours, even days, of manual work to adjust your takeoffs to changes, while trying to trace earlier takeoffs and the origin of the quantities often proves impossible. To be sure your takeoffs are accurate, up-to-date and the scope is correct, it can be easier to just start all over again—and even then, there's still probably quite a bit of guesswork involved.



Automatic quantities mean more accuracy

With a model-based process, however, you can **automate quantity takeoff**. You can generate quantities for estimation when you create the model, as each element will contain the necessary information like concrete volume and formwork area. This also makes it much easier to manage changes when they pop up. Geometry-based quantities are parametric, which means weight and volume automatically adjust when you make changes. You can automatically detect changes on revised reference models, manage element information and track it from estimation to the final calculation for a more accurate look at costs, and extract information to third party cost estimation software for the actual cost calculation. What's more, you can **trace costs throughout the project, from the proposal to the final result**, and see where cost differences have occurred and why. This is fantastic for explaining to your client why costs have increased or decreased.

Quantities and the 3D model are directly linked, which means you can ensure everything has been included and nothing is



duplicated. You can see your quantities highlighted and color-coded in the model, so there's no risk of errors or rework.

Better workflows in the long run

All of this can then be put to use to fine-tune and improve your estimation process for future projects. It might take a little extra work to create templates and macros to streamline repetitive tasks, but it will make your job far easier in the long run when you no longer have to reinvent the wheel with every project. The improvements in workflow speed and accuracy leave you with more time to plan your concept, compare alternative solutions and find the **optimal concept for the client—without risking your own profitability**.



Visualize your concept for sales presentations

A little extra effort put into value engineering can go a long way when competition is tight. It can help anticipate client's questions and prove that your concept is wellthought through.

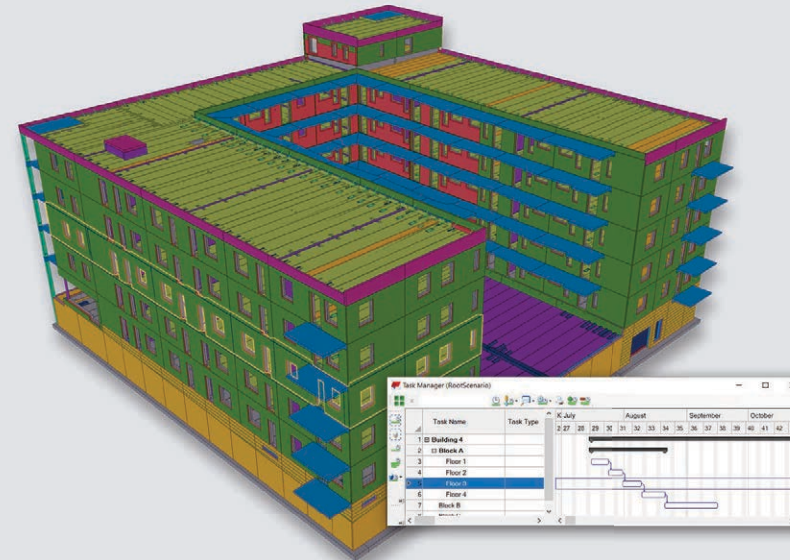
All the work and effort you've put into creating the concept can go to waste if you cannot communicate it in an efficient way. A 3D model can be **a powerful tool for sales demonstrations**, letting you showcase your understanding and know-how of the project, and the benefits of your concepts to potential clients in an **easy-to-understand** way.

What you see is what you get

With a 3D model, you can visualize your concept, show your client alternative options, and explain the differences and benefits of each option. It's also a great way to clarify what will and will not be included in your delivery by showing exactly which elements will be precast. You can also visually demonstrate your erection plan, including the schedule and sequences, using 4D animations.

This way your client can see that a precast structure can be erected faster than a cast-in-place structure, giving **a quicker return on investment**.

Model rendering can be the cherry on top that offers your client a realistic glimpse of the final result.





One workflow, one tool

A model-based information management process means you can continue using the same tool throughout the whole project, which benefits everyone involved. Information can be passed on to other stakeholders in a **format that everyone can easily understand, which saves both time and money.**

When working in 2D, all of your hard work done in the estimation phase goes to waste. Valuable knowledge doesn't accumulate and dies in the bidding stage, which means you must recreate information again once you start planning the work in more detail.

If all your information is in spreadsheets, it's more difficult to ensure data quality and pass the right information down the line.



Information without an expiration date

Using a model-based information management process, you won't need to start from scratch once you've been awarded the project. All of the information you've created during the bid phase can be put to use throughout the rest of the project workflow, and your bid-phase 3D model can be developed into a fully-detailed, production-ready structure.

Having a visual representation of all the project information builds confidence and transparency for people downstream and lets them put the available information to use. It's easy to get a big picture view of the entire project or zero in on small details like quantities.

Information management processes offer powerful tools for production planning and project progress follow-up, too. You can, for example, define and follow from the model important project phases such as the **erection sequence, production and logistics**. Once construction has begun, the site manager can minimize waiting time and delays by simply checking the **status of any element directly from the model** to find what has been produced and is ready for delivery.

The model can even save time and money by optimizing transportation. You can plan **loading and element placement**, depending on parameters such as weight and erection sequence, to ensure installation is as swift as possible. And when it's time to do post-calculations, it's easy to spot any **differences between the estimation and the final calculation**. The model is the only way to truly see where things may have gone wrong and where they were calculated correctly.

Win big with an optimized workflow

A model-based information management process—the BIM process—can do far more than design and detailing, and the sales phase in particular can benefit from a better workflow.

With the right tools, you have everything you need to prove to potential clients that you're the best choice for the job, win the right bids, and optimize your processes for bigger, better wins in the future.





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