



STEP 1 Prove the concept

With a little investment of your time, even the smallest ideas and can turn in to a great design. This is where you need to show off your engineering prowess and prove out your idea. Evaluating the viability of some early concepts can go a long way towards getting buy-in and overcoming those early objections.



THE SKETCH

Sketch out a couple of different options that you can share, this is important to get input and to get more team members excited about the project.



ADD JUST ENOUGH DETAIL

Keep in mind that this does not have to be final, you probably don't need to have free body diagrams and a full engineering report (yet), but you do want them to know you have given this design serious thought. If you want to go the extra mile pull some graphics together in a presentation, create a rough model in your CAD software, or create something you can iterate on live with them in the room.

So now you have their interest, what's next?



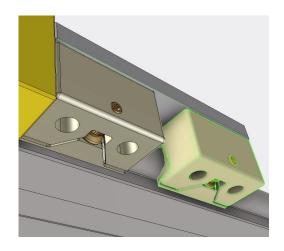
STEP 2

Make your idea shine

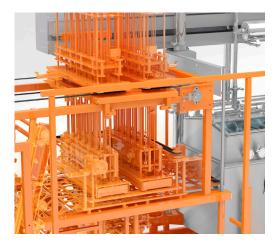
The more complex your idea is, the more important it is to make sure you're conveying the intent and inner workings of your design in the clearest way possible. Focus on showing the function it will perform, and take a few extra minutes to make it beautiful.



Take a cue from the automotive industry and how they propose new concept cars. They create beautiful images that convey a feeling for a car that is years away from production.



Nothing is more clear than a great 3D model. Create the model with enough detail so it shows off what it can do and then capture imagery from compelling angles.



Add realistic materials and lighting. You want your models to pop as you create screen captures and animations.

STEP 3

Show it in action

Many designs have moving parts, linkages, or motion paths with clearances. If it oscillates, sways, swings, or pushes and pulls, show it in action by animating critical or new parts of the design. Showing what your design does adds greater value and further proves the concept.

Most design tools allow you to output a video directly from the software. If not there are plenty of free or inexpensive video capture tools out there. Capture the action on screen and then embed into presentations for some extra sizzle.

STEP 4 Put it in context

If what you're designing goes inside of something or connects to something else, put it in context. One option you may consider is to do a laser scan of the existing facility. Not only does this speed up the workflow of capturing existing conditions but it will also add great visual details adding greater context to your design.

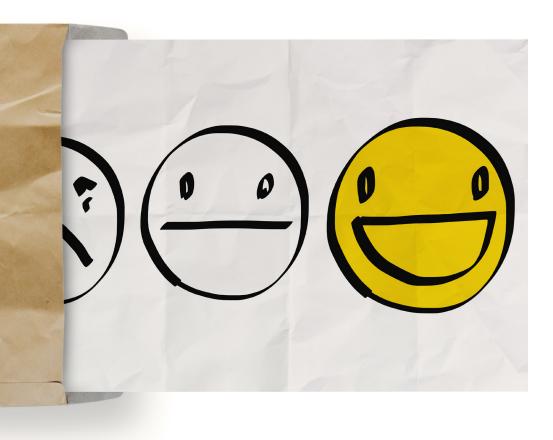
Other options for creating context:

- Can you borrow something from a website or marketing brochure?
- Are the models on sites like GrabCAD or Creative Commons?
- What it be practical to 3D print your design?









STEP 5

Show the customer value

This is where you may have to take off your engineering hat and think a little more like a salesperson. "Speeds and feeds" and technical specifications are important, but that's not always what sells a customer on a new design or improved design.

Try to understand and pitch what your customer values in the product:

- Does the industry they serve have any new regulations?
- What are their key corporate initiatives?
- What corporate goals can you align this product to?
- · Where would their business realize the benefit?
- How have their customers needs changed?

BONUS TIP

Align with your company's strategy

Your company does what it does for a reason — build on that strength. Knowing where your idea fits into the product portfolio is critical. If your company tends to be an innovator, make sure to highlight the innovative aspects of your idea. Fast followers? Be ready to explain how this will improve your standing against the competition. When your design idea is aligned with company strategy you will be seen as more than just a technical resource, but rather an innovative engineer ready to solve problems.



Selling ideas internally can be a challenge for even the most experienced engineers. Make sure you do your homework. You don't want to go in front of your boss with a half-baked plan.



Spend some time making it look good. Show it in action and out it in context. Make sure you prove enough of the concept to show that the design is feasible. Make sure you are solving a customer problem and adding business value at the same time.



If you can do all of this and fit within your company's corporate strategy chances are you'll be bringing that design to life in no time.



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