How to Ask for Tech Funding?

Secure funding for your hardware upgrade.

Time has passed and now your hardware is lagging during day-to-day design use. You're ready to implement new technology but you need a more powerful system to run it. Finding a reason to invest in new technology is easy, but conveying the value of these investments to your superiors is more difficult.

Follow these tips — including how to translate time savings into financial terms and speak the right "language" to reach upper management — to help you get the backing you need for any implementation project.

Writing a Good Proposal = Getting the Money!

Keeping up with the demands of a quickly evolving industry is a never-ending task — AEC firms must periodically upgrade their capabilities if they want to stay competitive. This includes the workstations required for more powerful and feature-rich applications.

Problem Statement. No matter what your needs are for funding, you must start with a strong problem statement with a list of goals. This explains what the issue is that your company needs to solve and why. Good problem statements include answers to: who, what, when, where, and why. Getting the details down to these basics gives management a full picture of your proposal. It also helps define really what you're asking for.

Your problem statement can include issues such as reduced productivity due to lagging technology. Where are you losing productivity? Can you quantify it? Perhaps you need more data storage to accommodate growing project files; or you're equipping your client liaisons with virtual reality setups for a more immersive visualization experience; or your design team needs more powerful processors and graphics to take advantage of new generative design (GD) workflows.

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Include in your proposal why implementation would speed or benefit your workflow and in turn benefit your firm, plus consider what components are required and who would be involved. Next, put yourself in senior management's position for a moment and think about the terms that make sense to them and what they need to make an educated decision.

Return on Investment. The most persuasive tool at your disposal in this discussion is an estimated return on investment (ROI) — a prediction of how much financial benefit the company can expect to realize from money invested in implementation of new technology. That investment may include software, hardware, and training. The savings or revenue generated by using the new technology — thanks to more efficient workflows or increased workload capacity, for example — must exceed the total costs of implementing the upgrade if you want senior management to say, "Yes!"

If new technology won't increase efficiency and save money, then why bother? If the results aren't favorable, you must have an exceptional reason to pursue the project further. The numbers must make sense for your particular situation.

How to calculate ROI. To express ROI in equation form, we could say this:

$$\text{ROI} = \frac{\text{Savings} - \text{Costs}}{\text{Costs}} \times 100\%$$

Looking at the equation, you see that: Savings must be greater than the investment costs in order to achieve a positive return.

Like many new investments, the ROI may be negative in the first year as initial investment, training, and ramp-up time are factored in. The question then becomes: Does the annual savings in future years pay well enough to justify the up-front investment? Don't limit your analysis to looking at just one year! See our sample proposal on the next page.

Time and training. Timing for upgrades can be tricky. Be sure to plan to implement at a time when your team is not under a big deadline. If you want your boss to okay such a project, it must be rolled out in relation to the company's needs as well.

Set aside a day or two for training once IT has installed both software and hardware. If you need to plan a phased installation, start with your expert users first. They will be technology advocates when it's time to bring the whole team along. Plus, they can help iron out the kinks as they learn.

Delivering the Pitch

Once you have developed your proposal and set a meeting, it's time to deliver your pitch.

Sample Proposal

A&B Specialty Interiors
Proposal for Upgrading to Generative Design

Problem Statement, goals, who is impacted:
A&B Specialty Interiors is not keeping up with its competitors with options of product design. Implementing a GD tool with new workstations for all designers would help us:

- speed our design and workflow
- create exciting new designs for tables, fixtures, and finishes for our projects
- realize optimal shapes that can also lead to reduced material and shipping costs.

Investigating ROI:
Implementing technlogy will require user training and ramp-up time, as well as hardware and software updates for our marble milling machine interface so it can accept data from the GD output tool.

COSTS (INVESTMENTS)*	SAVINGS*
Software: $2,200/year	$5,500/year in raw materials
Hardware: $4,000/designer	$4,000/year in shipping
Training: $750 for a two-day course	
Productivity decrease (ramp up time): ~$1,100/designer (includes 16 hr training, 2 weeks at 25% lower productivity at $55 per hour)	
YEAR 1 COSTS: $8,050/designer	**ANNUAL SAVINGS: $9,500**
FUTURE YEAR COSTS: $2,200/designer	

Here's where the story gets interesting. In Year 1, the ROI is somewhat positive at about 18%. But then, in subsequent years, the savings explodes to 332%, making it impossible NOT to upgrade.

— **Year 1 ROI = ($9,500 - $8,050) * 100% / $8,050 = 18%**

— **Year 2–N ROI = ($9,500 - $2,200) * 100% / $2,200 = 332%**

*All numbers are estimates. Use information specific to your own company to manage expectations.

- To educate your boss about what a hardware upgrade can do for your company's workflows, you must communicate it in clear layman's terms. If you're a CAD manager or power user, you likely have a lot of jargon and technical terms in your vocabulary — now is the time to filter those out.
- Your audience has many other concerns on their agenda, so condense and keep your proposal concise! Simplify and clarify everything as much as you can, while still being thorough.

- Explain benefits in terms of efficiency and hours saved, not technical details.
- Provide a specific example or two, mentioning the impact that using the new technology could have made on a recent high-profile project, for example.

Turning No into Yes

What happens if management says no? If management turns down the department-wide rollout you've pushed for, you may be able to get approval for a smaller-scale implementation instead. Be ready with a few more examples. If you can get even one user outfitted with the new technology and the hardware to run it, that person can experiment with the impact of the technology on your firm's types of projects and document their experiences. If the results are favorable, that hands-on reporting might persuade your superiors in a way that no marketing brochure can.

Be sure to keep asking open-ended questions. "Tell me more," "What are you concerned about?" and "Are you concerned about the up-front costs or the time needed to train?"

Address each objection in turn, such as, "I understand we have a tight schedule. I believe that we can address that concern because if we take a day to train, we will end up saving time over the next month." If you address the concerns at the source, you are more likely to receive funding and support for your initiative.

Given company's budget cycles, you may need to wait a bit longer to receive funding, but keep your ideas in front of management so that your project gets a line-item on the next cycle. Keep talking about it with your users and management alike, so everyone keeps abreast of the technology as it develops. ◆

» ***Image source (front page):*** *Robert McNeel & Associates' Rhino® Grasshopper® generative design tool helped global architecture firm Gensler resolve the split parabolic curve of the Shanghai tower.*

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