

# The Ultimate Creativity Machine: How BMW Turns *Art* into Profit

by Chris Bangle



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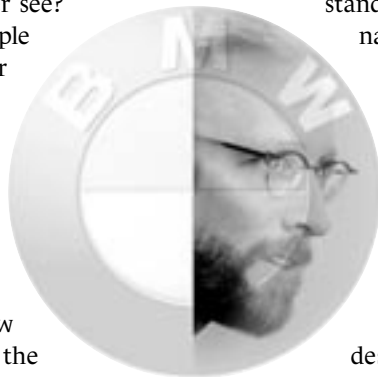
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# *The Ultimate Creativity Machine*

## How BMW Turns Art into Profit

by Chris Bangle

**I**T WAS A TENSE MOMENT FOR ME in the color-and-materials studio of BMW. A senior manager in the finance department was grilling me: why, he wanted to know, did my team insist on using costly materials that the customer would never see? Didn't I know that people buy our cars for their looks and their fine engines? Just at that moment, a visibly distressed senior designer walked up to us, carrying a preproduction middle console from one of our new sedans. Disregarding the finance manager, she opened the console lid, reached her fingers into a dark pocket deep inside, and asked me to do likewise. "Feel this," she said. "The supplier is having a terrible time getting the texture right in here. The surface is not good, Herr Bangle." As she waited for my response, the finance manager watched me intently.



That moment crystallizes the persistent, inevitable conflict between corporate pragmatism and artistic passion that I manage at BMW. The designer was right—the texture inside the pocket didn't meet BMW's exacting design standards. And yet the finance manager was also right: would customers know the difference? His job was to put the brakes on costly, seemingly insignificant design details. We are a business after all.

My job as director of design, overseeing 220 artists at BMW, is to mediate between the corporate and artistic mind-sets within the company. What I do is not unique to BMW. Plenty of companies face the challenge of balancing art with commerce: movie studios, fashion design firms, and luxury goods manufacturers struggle with the same thing. But BMW is an example of the

*Many companies position themselves at the intersection of art and commerce, but few as successfully as the famous German carmaker BMW. It's no accident. The executive who manages the relationships among designers, engineers, and corporate managers says three operating principles guide their way.*



intersection of commerce and art writ large. Our fanaticism about design excellence is matched only by the company's driving desire to remain profitable. And those objectives have required me to develop a unique set of operating principles.

Three principles in particular have stood me in good stead. First, protect the creative team—that is, shield them from the unproductive commentary of others in the company. This is necessary because artists intrigue other people as much as they confound them. Everyone at BMW wants to know what the designers in my group are up to, but that interest very rarely gets communicated to the designers in a constructive way.

Second, safeguard the artistic process. By this, I mean that my managers and I have to construct a barrier around model development so that time-to-

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market pressures don't disrupt or harm the actual work. Over the years I have found that safeguarding the process takes a lot of effort, but it is necessary because it guarantees that BMW's design is never compromised. And that design is what makes both our artists—and our customers—intensely loyal.

Third, be an inventive communicator. In any organization dependent on art and commerce finding common ground, managers must have unusual powers of persuasion. Unless they do, they can never be good mediators—and mediation is what managing at the intersection of art and commerce is all about.

### The Soul of the Machine

Before I explore these principles further, some background is in order. I'm an American-born car designer who learned my craft from great European masters. I joined BMW as design director in October 1992 after spending several years in the design studios of Opel and Fiat. The studio where I work is part of BMW's sprawling, 140,000-square-

foot research and development campus in Munich. During my tenure, this design group, along with BMW's daughter company, Designworks USA, has produced exterior and interior designs for BMW's current 3 Series family of cars. The group designed the 5 Series Touring, Z3 M-Coupe, X5, and Z8, as well as the M cars, concept car Z9 models, and BMW's motorcycles. BMW's Mini car was born here, not to mention designs for dozens of other products, such as watches, sunglasses, bicycles, luggage, and clothing.

From the moment I arrived in Munich, I understood the company's core value: to be an engineering-driven company whose cars and motorcycles are born from passion. We don't make "automobiles," which are utilitarian machines you use to get from point A to point B. We make "cars," moving works of art that express the driver's love of quality. This may sound like New Age hokum, but it is a powerful core belief at BMW. Because we believe it, we insist on design honesty. We're convinced that



ILLUSTRATION BY DAVID BRADY

if we mislead our customers by using walnut-colored plastic on the dashboard instead of real wood, those customers will wonder how else we're snookering them. So we use expensive, difficult-to-mold, real wood veneers. BMW has one of the most successful business models in the manufacturing world precisely because many people are eager to pay a small fortune to experience a car as we define it.

But in 1992, the company was undergoing a fundamental change. On one hand, it was streaking toward record-breaking revenues. The new 3 Series sport limousine and coupe were just about to be enhanced by the launch of the new Cabrio. The new 7, the E38, was in its final wrap-up. The fabulously successful Z3 and 5 Series were in the oven. It was a time of incredible optimism. On the other hand, the design department was on the verge of stagnation. Having operated for some time without a design director, the designers, modelers, and technicians that make up the team lacked focus and vision. They

had worked hard on scores of design iterations, most of which died in the difficult process of elimination. That's a normal part of the design cycle, but for two years, no one was around to shepherd the designers through the excruciating experience of creative birth, life, and death.

To make matters worse, communications with the engineering group were strained. The designers saw perfection as an ephemeral, almost spiritual, quest—a goal to be achieved in stages; for the engineers, perfection was physical and measurable—something to be done right the first time. Constant altercations over the best approach slowed down the development cycle and sometimes derailed design. My task was clear: to ensure a future of successful design at BMW, I had to speak up for design. I had to raise awareness and build acceptance of design's importance within the company—and elevate the team's spirits. I had to find a management approach that would allow the group to do its job.

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### **The Fortress**

I quickly put my first principle into practice—that is, protecting creative resources by managing around the psychological vulnerability of the artists. Emotional, sensitive, often egocentric artists don't respond to cold, rational arguments. They must be shielded from the comments of people who don't understand them or the artistic process. They need support and empathy—they

don't respond well to dictatorial management. For designers to do their best work, they must be guided by their own strong sense of artistic quality, and they must be convinced that their superiors' critiques make good design sense.

Protecting artists means shielding them from the unintended, but sometimes hurtful, criticism of those who don't understand their art. Expose an artist to too much premature resistance, and he'll simply quit—essentially eviscerating the project he's been working on. Designers are as emotionally attached to their creations as mothers are to their children, and a careless comment can be extremely damaging. A while back, an engineer told a designer that one of his designs would require too much retooling. The engineer was just doing his job, but his bluntness hurt. The designer was so devastated that he took several sick days—time he may well have spent working on his résumé.

To avoid such problems, we strictly monitor entry to the design department, walling off sensitive models and using “Stop: No Entry” signs on the doors of the studio. Engineering and cost analysis groups aren't allowed inside unaccompanied; when they are invited in, it's usually when the modelers are at lunch. Before a project starts, my managers and I hold briefings with the uninitiated to sensitize them to the negative effects of uncensored criticism. And when the designers need intensive feedback from the engineers, design team managers act as go-betweens.

Occasionally, I've had to protect the designers even from myself. In 1996, as our X5 sport utility vehicle was being readied for production in America, we were already wondering what the progeny of the X5 might be. I wanted our team to come up with something completely new. To do that, they needed to be cut free. Working closely with our platform chief in charge of specialty vehicles, I carved out a seven-figure budget to send a select group off for a six-month workshop away from BMW. Offsite, they could work out the plans for the next big post-X5 thing. The idea was for

them to work out their designs away from prying eyes and questioning voices, including mine. To make certain that no one could possibly trample on the seeds they were planting, I instructed the group to keep their whereabouts a secret—even from me.

If you were to accuse me of coddling my designers, you'd be absolutely right. But I'm not just trying to make their lives easier; I'm also trying to draw the best designs out of each artist. Being a design chief is like managing several competing baseball teams. While engineers and finance people aren't rivals in the same game, designers are. When was the last time you saw a finance man-

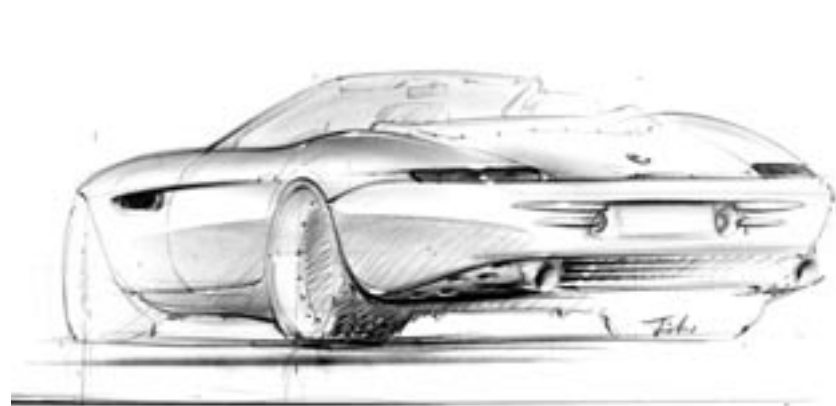


ILLUSTRATION BY BMW DESIGNER HENRIK FISKER

ager assign three or four of his accountants to write the same position paper? Each artist on my team competes with the others to create the winning design. This makes the job of coaching designers that much more complex, particularly when one artist's design is chosen over another's. “The frustration is all part of the process,” I've been known to say. “One of your designs will triumph one day, and millions of people will be driving it.”

But like any coaching job, positive reinforcement is only part of the formula. You also need to steadily nurture creativity. You can't simply eliminate the players who don't score home runs because it's impossible to predict whose design will be hot the day after tomorrow. It takes a lot of personal coaching to keep a designer fresh and ready for his turn at bat. You have to pay a designer a handsome salary at the out-

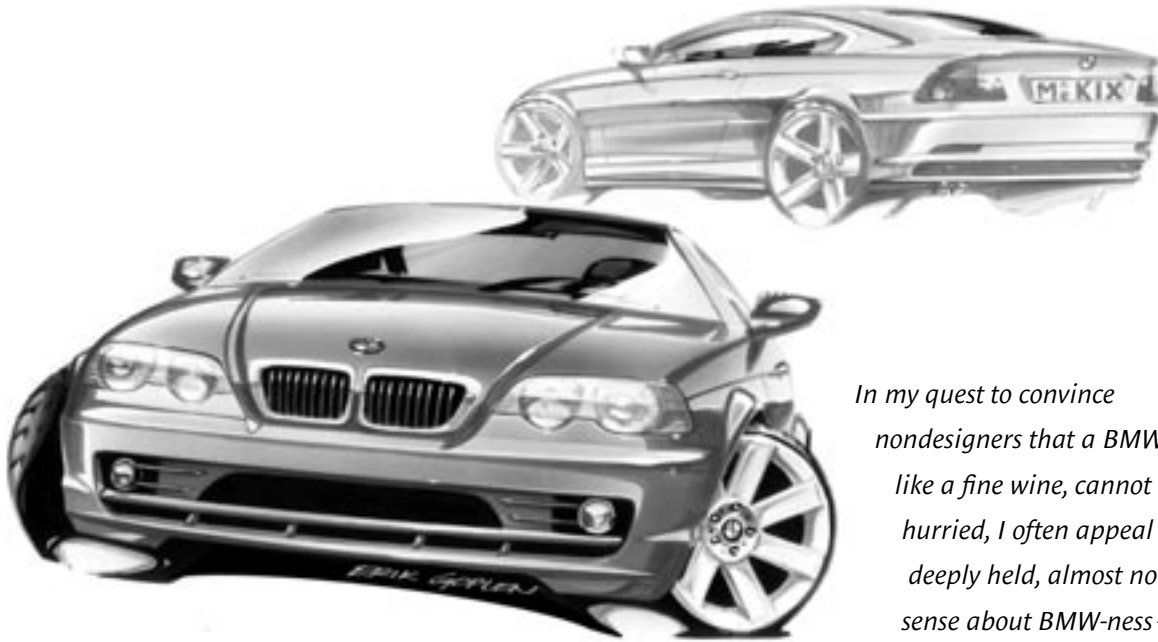
set and put him in a lofty, well-lit work space with state-of-the-art equipment. You offer him a play area—a special studio where he can goof around with expensive tools and toys alongside expensive expert modelers. Then you back off and let him practice. When he drops the ball, you think, “He'll never make it on the team.” And then one day, usually when your back is turned, he hits the ball out of the park.

I don't just coddle the designers, I also stand up for their designs when I believe in them. I have to prove that I will fight like hell for a great design in order to earn their faith. Take the case of that devastated designer: I knew his design

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would require some costly retooling, but I also knew the overall product was something customers would pay for. I had a choice: I could tell the designer to simply accept the engineer's opinion, or I could argue the designer's case. I chose the latter because I believed in the design. I called a meeting with the tooling and construction staff and got them to admit that with a tweak here and there we could create the corner as the designer intended. Then I went to

ILLUSTRATION BY BMW DESIGNER ERIC GOPFLEN



*In my quest to convince nondesigners that a BMW, like a fine wine, cannot be hurried, I often appeal to a deeply held, almost nonverbal sense about BMW-ness—a certain pride of product shared by everyone in the company.*

the manager responsible for the global costs and development of the car, and he agreed to the change. Despite all that effort, which I made in good faith, I ultimately eliminated the designer's car from the final running. I had to deliver the brutal news that I'd chosen not to recommend his car for approval. But my fight for his design in the early stages had won me his respect and earned me the right, in his eyes, to make that final, painful decision.

Despite all this coaching, artists really only learn to create winning designs by trying over and over again; their professional growth occurs almost invisibly as they carve away at their models. Of course, I have to evaluate my employees' performance just like any other manager. And while I assess my people on the basis of their performance, I also have to rely on subjective criteria. I praise their work, their potential, their leadership qualities, and their value to the organization. But when their work isn't going well, I can't prod them the way a manager in another department might. Artists don't respond to traditional dictums or push tactics. I can't say, "Your last design lost, so do it my way." I have to let the art manage the artist. This means making the artist

come to terms with his design. I tell the designer to listen to his creation and to talk back to it; the brilliant car hiding inside his head will somehow speak loudly enough to get itself built and sold. And if the design has what Tom Wolfe calls "the right stuff," then its DNA will enrich the corporate bloodline and provide the basis for future derivations. If not, then we all know that the failure lay in the design, not in the politics of the moment.

### **A Priceless Process**

I also have to protect the process itself, which is subtly different from protecting the designers. While the designers are still asking themselves, "Should this dashboard be made of walnut or cherry?" the engineers and planners are clamoring for decimal points and detailed specs. A big part of my job is to make sure that we don't shift the focus from design to engineering too soon. In my quest to convince nondesigners that a BMW, like a fine wine, cannot be hurried, I often appeal to a deeply held, almost nonverbal sense about BMW-ness—a certain pride of product shared by everyone in the company that expresses itself in the classic quality of our cars, from the purring en-

gines to the buttery seats. Every employee here knows that if a car doesn't have these things, it's simply not a BMW—and customers won't buy it.

I use this cultural value to keep others from trying to overindustrialize our design methods. I spend a lot of time educating nondesigners about the design process, which consists of three fundamental steps: understanding (arriving at the final choice by involving upper management in the process); believing (perfecting the design); and seeing (focusing on details from the customer's point of view and correcting impurities in the final design phases).

Each step can take anywhere from months to more than a year. In the understanding phase, we use whatever models we can—mock-ups, computer simulations, scale models, seating and driving rigs—to help nondesigners understand the concept and build consensus so that decisions won't have to be reversed later at great expense. When executives were having difficulty understanding how our 3 Series differed from its predecessors, it just wasn't enough to say we'd changed the hood line by x number of centimeters. So we built

a special working model that transformed itself from the classic BMW 2002 to the proportions of the new 3 Series. When the executive pushed a certain button, the doors dropped from the 2002 level to the new 3 Series level. When he pushed a different button, the level of the instrument panel changed, as did the car's other major surfaces. When he pushed still another button, the rear deck rose and lowered. This complex device gave the design team a platform to experiment with what the 3 Series meant to different people. It also helped the executives feel comfortable with the design and give it the stamp of approval it needed.

Once we all understand the design we are working toward, we enter the year-long believing phase. During this phase, car designers still use the oldest medium of all to develop their ideas. Here's what happens: after sketching out the design,

difficult and costly. In January 1998, for example, I convinced management that we needed to see the clay models of all the 3 Series design variants in the sunlight—a difficult-to-find commodity around midwinter Munich. Rather than view the models in the artificial light of our design space, I argued, we needed to ship them in special containers to our test track in southern France and fly the entire modeling team out on the corporate jet to look at them. The reason? To see the models in actual sunlight at the same distances a customer would see them. Had we not seen the models this way, we might not have noticed defects in the lines and forms that might have been perpetuated right up into the car's tooling—at which point, changes would have been very costly.

By educating managers in our methods, we keep them from overstepping creative boundaries. Interestingly, I also

the process. Many artists actually thrive under pressure: once they understand that a particular phase of the model must be finished in three weeks, they work like dogs to get it done.

Sticking to deadlines also means being honest with engineers and others about our progress. They usually understand that it is in their own interest to let us deal with mistakes or to ripen the design. If groups outside design receive information about the car too early, they may be forced to deal with costly fixes later on.

### The Art of Communication

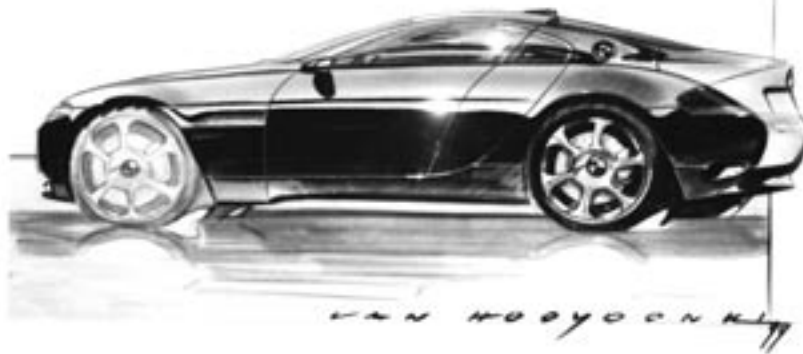
Managing at the intersection of art and commerce means translating the language of art into the language of the corporation. Even as I make sure our design group understands and complies with corporate requirements, budgets, and deadlines, I have to make sure that nondesigners understand why we make certain artistic choices.

For this, I call on all my powers of communication. That does not mean tricking people into liking this or that model, but rather helping them understand both the larger context and the subtleties of a design. Persuasion is always important in business situations, but because of the restricted time I have, I try to keep people focused on the most important things. I use several techniques to get an idea across.

First, I keep things concrete. In a board meeting or at a technical discussion, for instance, words like “tension,” “stance,” “proportions,” and “attitude”—all expressive characteristics of a car—usually leave people confused. So I rely on a repertoire of descriptive, often amusing postures, gestures, and noises to get ideas across. The front end may “loom.” The rear bumper may sag “like a waddling baby with a full diaper.” The squint of the headlights and the grimace of the front air intake may give the viewer the impression of “a chipmunk with gas.”

Second, I show rather than tell. In my case, pictures really do say a thousand words, especially given the fact that I'm working in a company whose business

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the artist literally hand-sculpts the model in clay—a method that hasn't changed since the Renaissance. Working with car-sized blocks of clay, the artists try to “release the form within,” as Michelangelo once noted. In stroking and pulling the clay, a sensual relationship develops between the creator and the object, and gradually a design emerges.

After the management chooses the winning design, we enter the seeing phase, during which we zero in on a design's defects. That phase, too, is dif-

have to safeguard the design process from the designers themselves. Design doesn't have a natural end and, left on their own, the designers will tweak and tinker forever. That can't happen, of course: despite our wish to let our “wine” mature at its own pace, we have to recognize marketplace exigencies. Designers hate it when the decision to freeze the design is made before the car has come as close to perfection as possible. To keep that from happening, I impose strict deadlines at each step of

language is not my native tongue. It's useless to try to articulate creative concepts with prepared PowerPoint slides; a quick, sweeping sketch or a cartoon works much better. The key is to be inventive in finding ways to bridge the communication gap. If technicians want to talk with me about making a minor, but disagreeable, change to a design, I might start our chat by showing them a picture of a *Vogue* cover model. Then

*The design group, the engineers, and the business managers are like three meshed gears. If the gears are separated and spinning solo, nothing happens. If the gears turn the same way, they freeze up. They have to be interconnected and turning in opposite directions. But as we rotate, we transfer power to one another.*

I'd pull up a picture of the car we're designing. "If we make that minor change to the front end," I'll say, "the car will end up looking like this." Then I'd show them an identical picture of the *Vogue* model, with a tooth blackened out.

Third, I focus on the big picture. If a nondesigner asks me why we've included a particular feature in the new Mini and not in the 7 Series, I can't convince him of my point of view by arguing about the particular characteristics of the feature itself. I have to start

with the brand. "What is a Mini?" I'll ask. We agree that it is a completely different brand than a BMW; its driver wants a different set of features than the driver of a 7 Series. All the decisions related to the accessory have to fall from the branding concept. We simply don't build cars the other way around.

And finally, I rely on my own departmental experts—people who speak the language of the engineers and the accountants better than I do. For example, my department hired an associate design strategist who is working on his doctorate in economics. When the financial managers came to us with efficiency models showing us how we'd extended ourselves beyond our budget, I had our resident economist look them over. Then we had a talk with the purse holders. The finance people appreciated being able to communicate in their own language. And because our economist could massage a spreadsheet as well as any of them, he used their own methodologies to show that our efficiency had actually increased by more than 400%.

Working groups within large companies often misunderstand one another, but they also have every reason to collaborate. I'm a big fan of metaphors, even blunt ones. I like to tell my design team that they, the engineers, and the business managers are like three meshed gears. If the gears are separated and spinning solo, nothing happens. If the gears turn the same way, they freeze up. They have to be interconnected and turning in opposite directions. But as we rotate, we transfer power to one another. If I've learned anything from standing at the precarious intersection of art and commerce, it's that communication is the grease that keeps the

gears engaged and running smoothly. All my protection and persuasion tactics are in the service of the car that will be created and built, bought and loved. If I do my job well, the gears will engage for the good of that car, and things will begin to move.

Art and commerce will never be on the same side of the street, but they can be on the same journey—with some help from folks like me. The story at the beginning of this article explains why. As the finance manager in the color-and-materials studio scowled at me and at the designer holding the console, I talked to him. I used a simple metaphor to bring him back to the BMW-ness that we all hold dear. I pointed to one of the color boards that pictured a beautiful, ancient Gothic cathedral in Munich. "Those cherubs cost a lot to put on the church," I said. "But can you imagine the cathedral without its cherubs?" When he shook his head, I continued, "Funny thing about Gothic churches. You get cherubs regardless of whether you look at them or not. Making cherubs is how the craftsmen of the time honored their religion. So is your problem with the cherubs or with the church?" Then I handed him the console, and told him to poke his fingers inside the dark pocket. As he did so, his eyes glimmered with sudden comprehension.

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