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Should Lars outsource R&D?

Five commentators offer expert advice.

Feed R&D—or Farm It Out?

by Nitin Nohria

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RLK Media built its reputation on brilliant innovation in high-end consumer electronics. But with customers defecting to mass-market products, RLK has to rethink its approach. Will outsourcing R&D save the company or destroy it?

HBR CASE STUDY

Feed R&D—or Farm It Out?

by Nitin Nohria

"OK, just sit there. No, right there, in the La-Z-Boy. Don't move." Lars sank into the battered Naugahyde chair at the edge of the audio-engineering lab, wondering vaguely if there was anything on the cushions that might stick to his suit. As CEO of RLK Media, he gamely participated in these periodic demos. It was a good way to connect with the R&D team—and, besides, sometimes they actually surprised him.

Lars checked his watch and then settled his gaze on Ray Kelner, RLK's founder and chief scientist, who was fidgeting at a workstation. "Ray, can you get this show on the road? I'm out of here in ten!"

"Two seconds, Lars. Two seconds!" Ray cursed under his breath as he snapped a patch cable into an Ethernet switch. A tangle of wires looped from the workstation to a top-heavy rack of audio and video hardware. Duct-taped braids of colored cables snaked across the floor. Lars wearily surveyed the mess. This better be good, he thought. Another gorgeous camcorder nobody wants, and we're sunk.

"Comfortable? Good. Now—put these on." Ray handed Lars a headset with goggle lenses and a ribbed aluminum frame. He slid the headset into place. As the engineering team looked on, Ray snapped a Firewire cable into a port on the goggles. Swiveling around to his keyboard, he tapped in a command and watched a blur of code scroll up the screen. "Showtime," he whispered to himself.

Nothing. Lars sat expectantly for a few seconds and was reaching to take the headset off when a crisp, panoramic image formed before him, a desert scene with distant mountains. Nice graphics, he thought. He had just opened his mouth to speak when the deafening scream of jet engines exploded from the back of the room and rocketed inches over his head on the tails of twin fighters, as they hurtled out in front

HBR's cases, which are fictional, present common managerial dilemmas and offer concrete solutions from experts.

of him toward the horizon.

"No way!" Lars shouted, ripping the headset off and shooting to his feet. "Where the hell did that come from?" The assembled team burst into whooping applause.

"Neat, huh?" said Ray. "It's directional sound—an entire home theater surround sound system built into the headset frame! And only you can hear it. I told you you should see this before the board meeting."

"I knew you were tinkering with this, Ray, but I had no idea," Lars replied. "This could be huge."

"Yeah, but I'll tell you what's really going to clinch the deal." Ray lifted a paperback-sized device from the rack and held it aloft, wires dangling. "This," he said "is the engine—and it makes the iPod sound like your grandmother's AM radio. Shrink this baby down, crank out the compression code, write the directional sound drivers, and nobody's going to be able to touch us. You can put a thousand movies, HD TiVos, music videos, vlogs, games—anything video—in your pocket and watch them anytime, anywhere with earthshaking surround sound—" Ray paused for dramatic effect. "And you can have it by Christmas 2006. All I need is to double my software team."

In fact, Ray wasn't so sure he could pull it off that soon. The project had been plagued by software snafus, and it was just plain lucky the demo had gone as well as it did. But, he reasoned, if he got a green light to hire the celebrity engineers he had in mind, he'd at least have a decent shot.

As Lars considered the pitch, his executive assistant appeared in the doorway, beckoning furiously. "Look, Ray, I can't stay," he said backing out of the lab. "But we'll talk. This is good. This is really good."

And, he thought, it could make or break the company.

Out to Lunch

Lars stepped from RLK's cool offices into a blast of July air. Squinting into the sun, he walked hurriedly to his waiting limo. Keith Herrington, RLK's chairman, was in town for an emerging-technologies conference and had invited Lars to lunch on short notice. Lars wasn't looking forward to the meeting. The swordfish, he thought, wouldn't be the only thing getting grilled.

As the car headed down Route 128 toward the Pike, Lars ticked off the high-tech start-ups that had made it big on America's Technology Highway. Not long ago, RLK was running with the same pack.

It was a familiar story: Fresh out of MIT in 1985, Ray Kelner had launched RLK Media in a converted muffler repair shop in Waltham, ten miles west of Boston. The lab's radical speaker designs quickly attracted affluent audiophiles, who would pony up $20,000 for a pair of RLK's custom-made towers. In the 1990s, Ray recruited the company's first CEO, who rapidly parlayed RLK's single-minded focus on pricey, handcrafted, highly branded products into a billion-dollar business. After expanding the company's offerings into other high-end consumer electronics—amplifiers, receivers, and audio- and videodisc players—he had left RLK at the top of its game for a better package at a bigger company.

Lars Inman filled the vacancy in 1998, moving east from a Silicon Valley peripherals business. Soon after taking the helm, he had led the acquisition of Opticon LCD Labs, positioning RLK to compete at the high end of the emerging home theater market. But he'd underestimated the ability of the Japanese consumer electronics giants to lure away RLK's core customers with their increasingly high-quality, competitively priced products. Unable to compete in the fast-growing, high-volume home theater business, RLK, Lars knew, had to refocus its energies on its core competence: innovation.

When Lars arrived at Olivier's Bistro, Keith was already seated. The maître d' ushered him to a table by the window overlooking Newbury Street.

"Lars. Good to see you." Keith extended his hand across the table. "Glad you could make it." As a waiter circled with water and menus, the two exchanged pleasantries. Lars was just beginning to relax when the chairman leaned forward and fixed him with a let's-get-down-to-business look. "Lars, I know you've been working like a dog. Do you even go home on weekends?"

"Sometimes," Lars lied.

"Here's the problem. To be frank, it doesn't really matter if you're working hundred-hour weeks. Your margins have evaporated. You're missing your numbers. The problem is not that you guys aren't working—the whole damn place is like a bunch of college kids pulling all-

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nighters. The problem is people aren't buying the old product—no matter how good it is—and you don't have anything new. Even Sony's doing an end run around you."

"I'm aware of that, Keith," Lars said testily. "But we've still got brand equity. People still recognize the quality. RLK is synonymous with high-end audio-video design. And they get that we design and build our own products in our own facilities right here in the U.S."

"But they're still not buying. What I want to know, Lars, is what's the plan? Brand equity isn't going to save the brand. What, exactly, are you going to do? Invent the iPod? It's a little late for that, don't you think?"

"Well, we have a very promising product in the pipeline," Lars ventured, unsure of how much he wanted to say about Ray's prototype. "Actually, it's a new direction for us, a new technology, and it's going to completely change the game." Lars figured he might as well go for broke. "I haven't done the arithmetic yet. But we'll need to expand R&D—"

Keith thrust out his hand. "Hold it. You need to what?"

"Ray's been developing this video headset with directional sound," Lars explained.

"Directional sound? What's that?" Keith was clearly annoyed by the trajectory of the conversation. "Let me get this straight. While every damn company around you is downsizing and outsourcing R&D, you want to expand? What you need to do, Lars, is stop tinkering in the lab and do some marketing! Find out what the customers want and give it to them. I don't want to put too fine a point on it, but if you can't stop this slow bleed and turn the company around in a year, we're going to bring in someone who can."

"If you can't stop this slow bleed and turn the company around in a year, we're going to bring in someone who can."

The waiter glided up to the table and turned attentively toward Lars. "Have you had a chance to decide on your order, sir?"

Lars considered for a second. "I'll have the grilled swordfish," he said. "Well done."

Doing the Numbers

Lars turned the iVid headset over in his hands and glanced at the boxy engine sitting on his desk. It wasn't exactly beautiful—it was ugly, in fact—but he knew what it could become. Over the years, Lars had marveled at how Ray's engineering and design teams could collaborate like bees in a hive to deliver one gorgeously built product after another. It may look chaotic down there, he thought, but the deliverables were always stunning.

There were two quick raps at the door. "Come on in, guys," Lars said. The door swung open, and Ray, in his signature jeans and long-sleeved T, strode in and dropped into a chair. Denise Tan, RLK's CFO, followed him in.

"Thanks for coming up, Denise, Ray. Grab a seat." He gently put the headset down. "I'll get right to the point. We all know we're not the only ones working on iVid technology. Pycosonics, among others, is fairly far along. But we've got unique product development expertise located under one roof, a prototype that's proof of concept, and an audio technology that no one else, as far as we know, is integrating into the product. The question is, How do we put this," he hefted the engine for emphasis, "into a package that'll fit into your shirt pocket and get it in Best Buy before Pycosonics or anyone else?"

"Packaging isn't really the issue," Ray replied. "I've got the best mechanical and electrical engineers and designers in the business. What I don't have is the software firepower I need. When I started this company, you didn't need software engineers to make consumer electronics. Today, you can't get out of the starting gate without them. We haven't kept up. If you want to put an Omnimax theater into a four-ounce headset, we can do that—but I need ten of the best embedded-software engineers on the planet, starting with Gary Bell and Lucy Velman at VerisData."

Lars turned to Denise. "What would a crew like that cost, fully loaded—salary, benefits, hiring bonus, options?"

"Well, if you're talking about Gary Bell—" Denise did a quick calculation, "You're talking a minimum of $250k salary, 30% benefits on top of that, 50 grand signing bonus, probably another $250k in options. First year, for ten of those? Over $6 million."

Lars wrinkled his brow. "Denise—do we have $6 million around here somewhere?"

"If we had to, we could find the money. But we'd have to deliver the product in, I'd say, 12 months—absolutely no more than 18—and it would have to be an instant hit. If Ray can't deliver, or the product stalls on launch, we're bankrupt." No one spoke. "But what if we outsourced this? That could save us time and money we don't have."

"Whoa there, Denise. Time out!" Ray wheeled

around in his chair. "First, we're not talking about writing inventory code here. Nobody's ever written anything like what we need. This *is* rocket science, and we're starting from scratch. You can't farm this out to a bunch of high school grads in Bangalore—"

"Cut it out, Ray," Lars interrupted. "You know better than that. You've been fighting outsourcing tooth and nail for years. But it's not 1995. There are boutique software shops in Gurgaon that have more PhDs per capita than you do downstairs, and they're not writing code for coffeemakers. These guys are doing embedded avionics software. And the price advantage is one to five. Sometimes one to ten."

"OK. Even I buy that. But here's the thing: My designers and engineers don't work in cubicles. They're spread around. They sleep on the floor. They talk to each other. They fight with each other. They keep each others' creative juices flowing. We've got an ecosystem down there. That's the ecosystem that invented the multichannel headset, the auto space-tuning speaker, and the RLK AVRouter. And it's the one that created the iVid prototype that, if we do this right, will put RLK back on the map. If you put my software group in Bangalore—I don't care how good those guys are—*it just won't work*. Trust me. Outsource this, and you can kiss the iVid goodbye."

"There are boutique software shops in Gurgaon that have more PhDs per capita than you do downstairs, and they're not writing code for coffeemakers."

The Deal in Delhi

Lars peered out the cabin window as the plane descended through the gritty haze over India's sprawling capital. Ray had put up a spirited fight—as he had for years—against the outsourcing option, but the harder Lars looked at the numbers, the less viable RLK's insulated R&D culture seemed. His competitors were outsourcing increasingly more-sophisticated engineering and design work, in some cases quietly handing off virtually every aspect of product development to Asian engineers. On the other hand, RLK's competitors didn't tie their brand to American design, and they didn't have RLK's unique creative culture to contend with.

A driver with a hand-lettered sign was waiting for Lars when he cleared customs. He led Lars through the midmorning throngs to a cab parked at the curb not far from the airport's main entryway. Lars had been warned about the ride from Delhi to Gurgaon, but as the cab careened south on the NH-8, he clenched the hand rest tighter with each near miss. Gurgaon, an exploding metropolis of glass and steel high-rises, was home to Inova Laboratories, a small R&D-outsourcing firm with a reputation for exacting standards—among other things. Lars had approached Rajat Kumar, the lab's young chief executive, about the iVid project, and the proposal he'd received a few weeks later had convinced him that he needed to visit the labs himself.

"Lars Inman! Welcome to Inova." Rajat clasped Lars's hand in both of his. "It's a pleasure to put a face with the voice on the phone. Your flight went smoothly, I trust?"

"Smooth as could be," Lars said, as he took in the gleaming lobby. "But the drive from the airport—"

I know!" Rajat laughed. "It always gives visitors a fright. Here, come to my office. Let me get you a spritzer, and we can chat. Then I'll take you on a tour."

Unlike some of the sprawling job shops that India was famous for, Inova was small and particular. With a ten-person executive team and 100 elite engineers, it had built a reputation for speed, precision, and specialized knowledge of video and audio compression and displays. The company also had a reputation, Lars reminded himself, for being headstrong, as evidenced most recently by its breakup with consumer electronics giant Pycosonics. Inova had delivered the client's gaming headset software, as required by contract, but pulled out of negotiations for future work, citing—at least as the trade press reported it—creative differences. Inova may be fickle, Lars thought, but when it severed ties with Pycosonics, it kept a lot of intellectual property. Even with noncompete terms in effect, IP leakage from the Pycosonics work to the iVid project would be inevitable. That made Inova the obvious shop for the job.

Rajat ushered Lars through a smoked-glass door and into the spacious main lab. Under bright fluorescent lights, rows of cubicles stretched the length of the room. Flat-panel monitors glowed in each pod, and the soft buzz of clicking keys drifted upward. Somehow, Lars thought, it seemed more like a library than a lab.

"This is where it all happens," Rajat said, with a sweeping gesture. "But let me introduce you to Vinita Nair, our chief scientist. She's the woman that makes the trains run on time." Rajat steered Lars down a corridor between

the pods to an open area of workstations at the far end, where four engineers were gathered around a monitor. "Vinita," Rajat tapped the nearest on the shoulder. "Lars Inman's here. From RLK."

"Just a moment," Vinita responded, holding an index finger aloft as she studied the monitor. She tapped the screen. "There's your problem. You didn't decode the iframe when you inserted the clip." She straightened and turned toward Lars and Rajat. "Mr. Inman," she said, shaking Lars's hand. "I'm a great fan of your RLK 20s. I have a pair in my home. They still sound superb. The technology has aged well indeed."

Rather a backhanded compliment, Lars thought, as they headed for the elevator. The tour circled through Inova's three floors of software development, testing labs, and offices. At each stop, as Vinita explained the functions of her teams, Lars was struck by the pervasive order. Even in the systems integration labs, where hardware and racks of test equipment crowded the benches, each item had its place.

Back in Rajat's office, Lars pulled Inova's dog-eared proposal from his briefcase and clasped his hands on the table in front of him. "You have a disciplined group here, Rajat," Lars said.

"And a creative one, I hope you would agree."

"Yes, creative and, to be blunt, rather famous for its autonomy."

"You are referring to the dustup with Pycosonics. That was unfortunate, but they didn't seem to grasp where our business began and theirs ended."

"Let me explain," said Vinita. "My engineers are the best in the world. Twenty of the 100 you saw have doctorates. We have one of the lowest turnover rates in the business and a global reputation for innovation. We don't just write code, Mr. Inman. We invent it. We're disciplined, process oriented, fast, and, yes, independent. We're an R&D lab, not a job shop."

"But you *do* do contract work."

"Yes," Rajat jumped in. "And if we join with you to develop the iVid technology, we will exceed your expectations. We will give your engineers ideas they might never have thought of. It's a give-and-take process. We will teleconference with your team as often as necessary to get the job done and work hand in hand with your mechanical- and electrical-engineering people to create a perfectly integrated system.

"But we are equal partners in the product development process, and, as such, as you saw in our proposal, we're willing to put our money where our mouth is. We are so confident we can deliver, we charge much less than our competitors do but take a 5% royalty on the products we develop with you. Contract with us, and in two weeks you'll have a fully staffed software-engineering function working 24/7 on your iVid. And if your team can keep up with us, you'll be volume manufacturing in under 12 months. Pycosonics won't know what hit it."

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Stirring his drink as the plane cruised west over the Atlantic, Lars ran the numbers again in his head. He could procure the software skills he needed from Inova for one-fifth what they'd cost in the States. But there were transaction costs and royalties to consider.

If he hoped to beat Pycosonics to market, outsourcing to Inova, rather than bringing people in, seemed to be his best bet—if the two teams could get along. If the marriage failed, not only would he lose the race to market, he could irrevocably damage the R&D culture that had been RLK Media's soul from the start.

Should Lars outsource R&D? • Five commentators offer expert advice.

See **Case Commentary**

Case Commentary

by Larry Huston

Should Lars outsource R&D?

RLK's CEO, Lars Inman, sees innovation as the salvation of his company. Its chairman, Keith Herrington, sees the solution in divining customers' needs. They're both right. Instead of asking, "Should we outsource to get the iVid to market ahead of competitors?" Lars needs to go back to basics and ask, "What do our consumers want, and what are our strengths and assets?"

Ultimately, Lars's strategy must connect what's needed with what's possible. Certainly RLK should exploit its brand equity as an innovator and the innovation capabilities it does have. But Lars needs to abandon the notion that what's possible is narrowly defined by what chief scientist Ray Kelner—with or without outsourcing—can deliver.

Lars needs to lead a massive culture change at RLK and create an environment where external ideas are invited to compete with internal ones.

Lars has to open up RLK's innovation process and invite the world in. He must aggressively solicit ideas wherever they are. RLK's future offerings may already exist as prototypes or ready-to-launch products in an inventor's garage, they may be sitting on a VC's desk in Silicon Valley or on a lab bench in an engineering school in India, or they may be with an ex-employee or even a competitor.

Reaching out this way may seem like a tall order for a company like RLK, but consider how it's worked at Procter & Gamble. In 2000, CEO A.G. Lafley set the goal of bringing in 50% of P&G's innovations from external sources—what we call our "connect and develop" strategy (to complement "research and develop"). P&G employs 7,500 people in R&D. Through connect and develop, we've added the equivalent of thousands of innovators to the function, largely through networks. We were a pioneer user of InnoCentive, an online network of 75,000 chemists. We helped launch YourEncore, a network of high-performing retirees from 150 companies, as well as NineSigma, which helps companies source innovation globally. And we built our own internal network of 50 technology entrepreneurs who seek out opportunities for us around the world. Today, we estimate that 35% of our innovations come from outside sources. As a result of this and other efforts, our R&D productivity—sales per R&D person—is up 40%.

RLK is obviously very different from P&G. But there is no reason that this same strategy can't scale to meet RLK's needs. Connect and develop requires a change in corporate mindset, focused and visible leadership, and disciplined execution. Lars needs to lead a massive culture change at RLK and create an environment where external ideas are invited to compete with, or supplement, internal ones. To do this, he has to change the metrics by which performance is measured, rewarding people not for the innovativeness of the ideas they find or develop but for the success of those ideas in the marketplace. Gee-whiz technology ideas are a dime a dozen. Proven concepts, successfully commercialized, are not.

The biggest potential obstacle to this essential change may be Ray, who has long resisted outside involvement in his R&D operation. He's not going to take well to a flood of external ideas competing with his own. Probably Lars's best bet is to appeal to Ray's devotion to the company and try to convince him that RLK's survival depends on radical change. If Ray can get behind the new strategy, he should be pulled out of the day-to-day operations of the R&D labs and put into an executive role to help implement it. If Ray can't fully embrace the new strategy, he should be moved into a role that takes him out of the management ranks but still taps his considerable expertise. Ray won't be happy about the reassignment, but Lars should do what he can to keep Ray's skills in the company.

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Case Commentary

by John Seely Brown and John Hagel III

Should Lars outsource R&D?

By outsourcing, RLK will engage in collaborative learning, never a smooth process but one that has a huge potential upside—productive friction.

Lars risks falling into the trap that many Western executives encounter when they evaluate offshore outsourcing options. Too often, they think narrowly of outsourcing as a way to achieve near term operating results like cost savings. Instead, they should evaluate this option from a strategic perspective: Lars should ask whether outsourcing will help RLK accelerate the building of its own distinctive capability. And he should determine whether *both* parties will end up developing deeper capabilities, if the relationship ends after this project, than they would have had they chosen other partners or not collaborated at all. The promise of great mutual benefit creates incentives for both parties to remain in the relationship and, at a minimum, reduces exit costs.

So Lars needs to decide where RLK's distinctive edge will be in the future and structure any outsourcing relationship with that in mind. To regain leadership in product innovation, one option would be to focus on product design and seek world-class capabilities in software engineering outside. Another would be to develop a distinctive capability in software design, in which case Lars ultimately will want to bring the software-engineering talent in. In either case, there are good reasons to outsource to a software firm like Inova for the iVid project.

An outsourcing relationship will give RLK insight into the specific software capabilities it will need, one way or another, down the road. And by outsourcing, RLK will engage in collaborative learning, never a smooth process but one that has a huge potential upside—productive friction. It takes careful management to turn the potentially destructive friction of learning into a force that drives innovation. Well-managed teams that work together with high levels of productive friction, we've found, share several attributes: a clear, common goal; aggressive performance targets; "action points"—junctures where actions must be taken and disagreements resolved; a prototype or other device as a common basis for communication and problem solving; relevant and equivalent skill sets; and mutual respect among members.

Many of the ingredients for productive friction appear to be in place in an RLK-Inova partnership. The iVid prototype can help the teams communicate in engineering and design negotiations. There is a clear goal and implied action points in the aggressive deadline for product launch. The two teams have complementary skills and an equivalent level of skill—although Lars will want to do more due diligence regarding Inova's capabilities, since he'll need to be very compelling in selling them to his own R&D team. What's uncertain is whether such dissimilar teams can muster the mutual respect that productive friction requires. It's encouraging that Inova describes the relationship as a give-and-take process. But unless the RLK team adopts the same approach, friction is all they'll get.

Although both teams' skill sets are world class, the skills themselves are different. So are their work styles and national cultures. And they're separated by enormous geographic distance. Technology can help bridge the miles, but it will be little help in bridging the rest. Lars will have to ensure that the two teams spend time up front building common ground and establishing trust. Even though the schedule is aggressive, going slow at the outset will enable the teams to go much faster in the months ahead.

Given the stakes and the challenges of bringing two proud groups together across great distance, Lars and key members of his R&D team had better plan on spending many hours on planes to India and white-knuckling the drive to Gurgaon (having been on similar drives in India, we'd recommend they review their auto insurance policies), especially in the early stages of the project. Lars simply cannot afford to hand this one off.

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Case Commentary

by Jean Lipman-Blumen

Should Lars outsource R&D?

Ray Kelner leads a "hot group," an assemblage of smart, creative, impassioned individuals totally dedicated to—even in love with—their task. As Hal Leavitt and I found, hot groups willingly work 24/7, with an intensity that ordinary teams or working groups rarely reach. Hot groups are turned on by cutting-edge problems and seemingly impossible challenges, and they believe that achieving their goal will change the world. But, as Lars seems about to discover, hot groups are fragile and require exceedingly careful management.

Lars's disastrous venture into the home theater market persuaded him to return to the company's core competency: innovation. Clearly, he needs his hot group now more than ever. Yet, he is all thumbs when it comes to the process and culture of hot groups. Facing the threat of his own ouster, Lars is on the verge of assuring it by stifling the hot group's creativity or, possibly, provoking the members' en masse departure to create their own start-up, with Ray as their leader.

Lars has repeatedly failed to understand his business and, crucially, its culture.

Several issues are entangled here. First, Lars myopically sees Inova as a cheap and speedy solution. He does not foresee the longer term risks. Introducing new members into an established hot group takes a delicate touch. That's better left to the hot group members, who usually can identify appropriate and compatible individuals. (Indeed, Ray has already identified two outstanding and presumably well-matched U.S. software engineers, and he could probably quickly recruit others.) If Lars outsources software engineering to Inova, he will abruptly introduce unknown—and not obviously compatible—personalities into the hot group and force its members into a distasteful joint custody arrangement for "their baby." The built-in difficulties of such forced handoffs could easily destroy the hot group's morale and its enthusiasm for this—and future—projects.

Second, Inova's and RLK's organizational cultures are radically different: one tightly disciplined, the other freewheeling. The larger Indian/American cultural disparity, not to mention time zone differences and distance, will further complicate RLK's task. The lack of face-to-face interaction may dampen the brainstorming and debate that pump the life juices through hot groups. Clearly, successful virtual hot groups do exist, and there are ways to integrate the participants from different locales; however, when time is critical, experimenting with new relationships takes its toll.

Another cultural issue looms, one that relates to RLK's branding. Ray founded RLK Media with "a radical speaker design" well received by a market that appreciated "handcrafted, highly branded products." So, much of RLK's brand equity stems from consumers' expectations of high-level products, designed and produced in the United States. That expectation is also central to RLK's culture—to which RLK's outstanding creative engineers and designers are deeply committed. Outsourcing to Inova would violate this valued cultural and branding expectation, further destabilizing the hot group, sowing anxiety about job security throughout the firm, and depriving customers of an important basis for differentiating RLK's products.

Finally, outsourcing poses a threat to RLK's intellectual property. Contractual arrangements rarely completely protect IP, as Inova's questionable interaction with Pycosonics demonstrated. Lars's presumption that important Pycosonics IP remained with Inova after the breakup raises the possibility that RLK could suffer a similar loss if the relationship with Inova went sour.

Lars is in a bet-the-company situation and has only one chance to get it right. Even if he unexpectedly makes the smart decision to keep his hot group intact, he has repeatedly failed to understand his business and, crucially, its culture. It's pretty clear, whatever happens, Lars needs to spend more time with his "family."

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Case Commentary

by Azim Premji

Should Lars outsource R&D?

Lars has gotten himself into a tough situation. It seems that his company's survival depends on the success of a single product that it doesn't have the expertise to develop. He's right that RLK needs to recruit that expertise—and fast—but he's making a mistake in thinking that the only solution is to either outsource the whole of software development or bring the entire function in-house. Neither choice is optimal.

Outsourcing software development can be highly effective. But it's very risky to outsource for the first time when your company's survival hangs in the balance. Inova's capability and talent aren't at issue here: It's done cutting-edge work for RLK's main rival, Pycosonics. What is at issue is whether RLK, with no prior outsourcing experience, can make the relationship work. Not only is the chief scientist hostile to such collaboration, the R&D team lacks the process-oriented mind-set that's necessary for smooth collaboration. How, exactly, would the processes, governance, and escalation of the collaboration work?

Lars is making a mistake in thinking that the only solution is to either outsource the whole of software development or bring the entire function in-house.

That said, it would also be risky to give Ray carte blanche to hire his own staff of software engineers. Ray's cloistered approach to innovation may have worked in the 1980s and 1990s, but the world has changed. No company can afford to wall off its R&D from the creative thinking of innovators dispersed across the globe. If Ray brings in a software team and slams the door shut behind it, he will have some new capability, but it will be absorbed into a closed R&D culture that is becoming increasingly outmoded. RLK might see a short-term gain, but this is a dicey long-term strategy.

So, how to make a collaboration work and minimize risk? Lars first needs to get Ray on his side. Ray obviously cares about his company and team, but he seems to be unaware that his closed and unstructured research approach is putting RLK in jeopardy. Lars needs to show Ray what's at stake, bring him into the strategy loop, and offer him a collaborative R&D model that he can accept.

Unfortunately, Lars didn't invite Ray to accompany him on his initial visit to Gurgaon. He should have. The sooner Lars introduces Ray to the reality of collaboration, the better. Lars should give Ray the green light to hire two or three elite software engineers to strengthen RLK's long-term in-house capabilities and aid in future collaborations; at the same time, Lars should transfer a few of his R&D leaders to Gurgaon for the intensive 12-month iVid development process, both to monitor Inova and to facilitate communication. While Ray may balk at first, he should also appreciate that this model expands his team and puts insiders at the heart of the outsourced portion of the project.

For all its innovativeness, Ray's R&D group could probably benefit from some discipline, both creatively and operationally. Collaboration, particularly across time zones and cultures, requires crystal clear communication. The very act of fleshing out ideas so that both teams understand them forces precise thinking. And multilocation development requires disciplined processes and documentation that make the process efficient.

Lars is smart to contract with Inova because its reputation and track record with Pycosonics show that it can meet RLK's challenge. However, it's clear Inova understands the value of the intellectual property it creates and is not averse to walking away from an unsatisfactory partnership. Lars should make sure that any contract with Inova aggressively protects his company's IP.

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