

Boiling frogs

By

Jason Hill milled into the “conference room,” which was the size of an auditorium, along with his friend David Perez and a few hundred of their coworkers at RFG Health. An emergency all-essential-personnel meeting had been scheduled Sunday night, and Jason was glad he’d checked his email. The notification stated that anyone not at the meeting would be terminated. The meeting was first thing Monday morning, so Jason would’ve normally expected the room to be subdued, but the opposite was true; everyone was abuzz with excitement. Jason and David were excited too, for the same reason as everyone else: this had never happened before.

The CEO of RFG Health, Raymond Lynch, was a pretty reclusive guy. He was ex-military, but he was the opposite of a heavy-handed micromanager, as some former army personnel get the stereotype of being. He wasn’t one of those “no one is actually sure if he’s real,” mythically distant CEOs either, but he *never* gave public statements, and he even addressed his own company quite infrequently. He conducted his research on the betterment of the company privately, with a handpicked team that worked in their own wing in the southern side of company headquarters. They had their own little cafeteria, their own receptionist, their own security guards, and even their own entrance and exit from building. The system was designed so that they would talk to as few people from the rest of the company as possible, and it worked. Anyone who even stepped in the South Wing had to sign a non-disclosure agreement. Even the janitor.

Jason was one of the most senior actuaries at the company, and he was in charge of a team of roughly 100 others. He oversaw the underwriting for individual insurance policies, and his day was always busy. Yet despite his prominent position, even Jason had no clue what went on in the South Wing. He’d heard rumors that they sliced up dead bodies to gain a better understanding of how the human body reacts to different circumstances, but he didn’t really believe that. Even if it was true, it’s not like pre-med students in the average university didn’t do that anyway.

In any event, Jason and David were excited for the meeting. Jason was glad that he had found David in the lobby before the doors opened. David was his right-hand man at RFG and they were friends outside of work too. If there was one person Jason could count on for a friendly hand, a nice conversation over drinks, and an endless stream of jokes, it was David. True to form, as they strolled into the conference room, David started making wisecracks.

"It's too early for me to be awake," he said. "I better get a bonus for being here."

"Oh, hush," replied Jason good-naturedly. "Be glad I called you to get up this morning so you didn't get fired."

"Speaking of that," David replied, "don't you think that mandate was a little harsh? It's not like they gave us a whole lot of time to prepare anyway. This conference room is probably a good 50 people short. 50 firings for nothing... that's not going to be great for the operations of the company. Maybe this is just his way of downsizing."

"Yes," Jason conceded, "it does seem like a bit of a boot-camp tactic. I honestly have no clue what this is all about, they never tell me anything."

David shrugged. "Think of the HR nightmare this is going to be. No one is going to just lie down and accept being fired from a cushy actuarial job with great benefits because they didn't show up for a meeting with less than half a day's notice. We could get hit with discrimination lawsuits for this too. Everybody's not going to love Raymond."

Jason rolled at his eyes at the pop culture reference -- and at the annoying smirk on David's face as he said it -- and he plopped down in a seat near the front of the room. David sat down next to him and the two made small talk about their personal lives for a few minutes. Pretty quickly though, the doors to the room were shut and locked. *This guy really isn't messing around with his commitment to punctuality*, Jason thought. The lights dimmed and a projector displayed the word "Introducing..." onto the giant screen on the stage. The crowd immediately hushed.

Raymond Lynch entered from stage left and strode towards the podium, also on the left of the stage. There was no applause. Lynch walked quickly, with both purpose and precision. This was a man who knew what he wanted to do and how to efficiently do it. *I suppose that's a good profile for a CEO to have*, Jason thought to himself. When Lynch reached the podium, he

turned on his heel to face his assembled actuaries and analysts. He looked over the crowd with a furrowed brow for a moment.

“Look at that buzzcut,” David whispered. “I guess you can take the man out of the military but you can’t take the military out of the man.”

Jason hushed him. He felt the heaviness and anticipation in the room. What happened here was going to be important.

“Thank you for coming,” Lynch barked, with the harsh cadence of a drill instructor. “This meeting is important. That’s why you are here.”

“He has such a way with words,” David whispered, but again Jason silenced him with a dismissive hand gesture.

“What is the main problem with underwriting, pricing, insurance in general?” Lynch asked, though his tone implied that he already knew the answer. Unsurprisingly, he answered it himself immediately: “It’s adverse selection. More precisely, it’s asymmetric information. As long as the consumer knows something we don’t, he’s got an advantage over us.”

“But what if I told you we could fix that problem? What if I told you that we could have *more* information than the consumer even has about themselves? Then *we* could be the ones selecting what benefits *us* the most, and increase our profitability as a company.”

Lynch then hit a button, and the next slide appeared. It was labeled “RFGH 1.0.” Underneath the title was a picture of a small bit of circuitry sitting next to a dime (presumably for a size comparison) and a rudimentary diagram of the human body with a red dot in the left tricep.

“The RFGH 1.0 does all of that,” Lynch stated authoritatively. “It is a small, health-tracking implant. Think of it as a Fitbit, with more capabilities, that you never have to remember to put on in the morning.

“Here’s how it works. Step one: a consumer buys the RFGH 1.0 and gets it surgically implanted. The cost of the implant and the procedure may be a bit pricey, but we’ll pay for it

ourselves. Luckily, we'll even be producing the implant ourselves, so it's not like we'll have to pay retail costs.

“Step two: we start analyzing the data. With updated information on the status of our consumers' health, we can make much more informed decisions. Every renewal period, we can connect to their implant and download the data from the previous year. We'll be able to see how healthy they are right now, and generally how healthy they've been over the prior term.

“We're going to use this data to what we are calling a “health index.” Underwriters, that means no more using any demographic information to try and guess how healthy someone is or will be. No more reliance on gender, occupation, income level, anything you'd normally want to price on except for age. Our new prices will be based solely on health index and age. Our research has shown that the optimal projection seems to be creating a “health rating” equivalent to the health index generated by the RFGH 1.0, times the consumer's age over 100, times the natural log of their age. You'll receive more detailed information on the formula shortly; there's no need to get lost in the minutiae right now. As time wears on and we get even more data, we'll fine tune the formula to become an even better predictor.

“Now for the final step, step three: we share this data with the actual healthcare providers. They have been providing us with health information about our consumers in the form of claims for years; it's time we provide *them* with some information. When we review the consumers' health information every renewal period, we can recommend that they see one of our health providers for a checkup immediately. We can pass our information to the doctor, who can make better informed decisions than ever before. Even for high-risk individuals, we can give a slight discount just for attending the checkup because we know they'll have just received important medical advice tailored to their specific needs, whether it be high cholesterol or increased risk of strokes.

“At first, we considered the problem of essentially reverse adverse selection. Perhaps only the healthiest people would choose to go for this option, since they know that their rates will be reduced. But even accounting for this, the project is still worth it. For instance, we can assume that those who *don't* opt for it are higher risk individuals. It's almost like they're self-identifying instead of us having to figure out who's high- or low-risk, so we can slightly raise premiums for those that don't opt in as a result. Furthermore, the plan will attract a ton of low-risk individuals that we'll be able to add to our risk pool, so we'll be able to offer them low

rates safely. This has the dual effect of increasing the number of lives covered and having a lower-risk pool overall, and both should make our business more profitable and less risky. Progressive introduced their Snapshot tool years ago for cars: plug it in, drive safe, get a discount. The RFGH 1.0 is the Snapshot for humans: implant it, live healthy, get a discount. The concept is not new, it's just a new application.

“Obviously, the RFGH 1.0 makes everyone's job here significantly easier. As such, we don't need as many hands on deck, so those not at this meeting will be terminated. Everyone here will get a 10 percent increase in annual salary as we head into this new and exciting time for RFG Health.”

At this, the crowd erupted. *Looks like everyone loves Raymond right now*, Jason admitted mentally. He couldn't help but smile a bit himself. An extra 10 percent of his salary was probably equal to what the janitors made for the whole year.

“Looks like it's gonna be much easier to pay for my daughter's college tuition!” David exclaimed, beside himself with joy. Jason couldn't blame him.

Lynch waited for the crowd to quiet down before he could speak again. Somehow, throughout the whole presentation thus far, he'd maintained a gruff demeanor. He hadn't smiled, nor had his eyebrows really lifted to reveal his eyes. Eventually, the RFG employees all settled down and he continued.

“We named the RFGH 1.0 after the company, obviously,” Lynch boomed. “It stands for “Resource for General Health.”

“Not sure why he had to call it that,” David mused. “You don't see IBM naming all of its products “Integrated Basic Mainframes” or something. Clearly he doesn't have a background in marketing.” Jason ignored him.

“We've carried out a beta testing phase in secret, not because we don't trust all of our valuable employees, but for obvious concerns over protecting this intellectual property. We successfully applied for a patent late last night though, hence this meeting. In addition to the salary bump everyone will receive, we will begin offering the RFGH 1.0 to all employees on a non-contributory basis. Other than our beta testers, you employees will be the first to receive the

benefits of this revolution in healthcare! And don't worry, since we're mandating that everyone get it, we won't raise any of your rates for 10 years, other than budgeted inflation increases."

Enthusiastic applause broke out across the room and Lynch had to stop again as he waited for it to die down. Someone in the front stood up, and then someone else did, and soon Jason and David found themselves on their feet and clapping as passionately as everyone around them.

When the room settled itself for the second time, Lynch was able to conclude his speech. "New positions will be created to oversee this transition, and some of you will also receive promotions based on the firings which should be calculated after we take thorough attendance of this meeting. The segment of our business most heavily affected will be individual underwriting, so I would like to speak with the man in charge of that department, who will have a new title shortly. Jason Hill, please meet me outside of the South Wing at the conclusion of this meeting. Everyone else, please file out the back of the room. We've brought in some doctors to begin the RFGH 1.0 procedures right here, right now, so you can immediately start living in the future. After you're done with the procedure, take the day off. Work starts anew tomorrow, different than ever before. You're dismissed."

The room erupted into excited and nervous conversation as people talked with their neighbors and flowed towards the back of the auditorium.

David actually hugged Jason, and said "Congratulations, man! Hey, maybe they'll give me *your* old job!" and he added a wink for good measure.

Jason smiled and gave a polite laugh, and then darted out of a side exit and started the long walk to the South Wing. He had a lot swimming in his head, and he was glad to get away from the crowd to sort it all out. The most prominent feeling was one of anticipation. All things considered, this really *was* going to change the healthcare industry. RFG would be the best underwriting company in the world and they'd be making a positive difference in the health lives of many. Their consumers' claims would probably go down as they received the most pertinent information for their own health situation, which is another way the company would be more profitable but more importantly, they'd be making the whole world healthier. Not to mention a promotion, raise, and free healthcare benefit didn't hurt. All in all, Jason had never been happier or prouder to work for RFG Health in his entire career.

When Jason was almost at the entrance to the South Wing, he was stopped by a security guard and a man in a lab coat. Apparently, they wanted to perform the procedure right now, before he went in. "I'm told you're about to be a very busy man," the doctor said, "it's best to take care of this now." Jason shrugged. *The sooner the better*, he supposed. An hour later, he was waking up from the anesthesia with a numb left arm and the security guard was escorting him the final distance to the South Wing. Still a little out of it, Jason checked in with the receptionist through a haze.

After he provided his credentials and signed an NDA, Jason sat back down. As he fully woke back up, he took the time to soak in these forbidden surroundings. It pretty much looked like a regular office. The decorations were minimal and unremarkable. The walls were colored simply: the bottom half was painted charcoal gray, and the top half was a pale mint green. Those were RFG's colors (Jason had worn mint ties with a gray suit more than he'd care to admit), but it still surprised Jason for some reason. He'd expected things to be all white in this wing.

After a short time, Lynch appeared. He attempted a polite smile, but his face didn't seem accustomed to the movement. Jason rose to greet him, and the handshake Lynch delivered could be described only as "crushing."

Lynch escorted Jason through the facility, pointing out various aspects of it. Here was Lynch's office. Here was where some of the engineers slept if they felt like pulling an all-nighter. Here was the product development room where RFGH 1.0 was actually built. Here was a small medical room where the test patients were operated on. It was all interesting, but Jason couldn't totally focus. So much had happened today, it was tough to take it all in.

However, he snapped to attention when they came to the end of the hall. A heavily fortified door loomed large and it was flanked by a guard on either side. Unlike most of the run-of-the-mill guards throughout the building, these two were equipped with submachine guns instead of tasers. In order to sign in, Lynch had to punch in a 10-digit code, swipe his ID card, scan his thumbprint, and scan his iris. *Talk about overkill*, Jason thought.

When they opened the vault-like door, there was a small vestibule that led to another similar door. They closed the first one behind them, so no one could even get a peek as to what happened inside, and then Lynch went through the same password procedure again.

As they stepped inside the final room, into the very heart of the South Wing, Jason's breath was taken away. The place looked like a NASA mission control center, but more sophisticated, if that was even possible. The walls were black and there were screens everywhere with data flowing across. The largest screen by far had a map of the United States, with a bunch of glowing red dots on it, centered around Minnesota. Jason didn't know what the map was for, but it made sense that there'd be a bunch of dots there. After all, RGF's headquarters (a.k.a. this building) was located in Saint Paul.

Luckily for Jason, he didn't have to ask for an explanation because Lynch offered one swiftly. He stared up at the big board and smiled for real this time, though it wasn't a particularly pretty sight. It looked more like he was a wolf, defending his prey, than a happy man.

"You like that, huh?" Lynch asked. "I do too."

"It's, uh, very nice," Jason stammered, "but what is it? What is *all* of this?"

Lynch bared his teeth again. "Well, it's the point of all of this. The RFGH 1.0 is so much more capable than you know. Here, let me show you."

With that, Lynch went to stand behind one of the nearby computers. He hit a few buttons and the big map zoomed farther and farther in on Minnesota. Now, Jason could see that the dots actually were in the RFG headquarters, but more interestingly, they were all moving around. Some took off from the building at a high speed, while others seemed to meander slowly inside it. Still others blinked into existence before Jason's very eyes.

As Jason took it all in, Lynch asked him, "Do you know what this is?" but Jason just shook his head in confusion. He couldn't synthesize what he was seeing fast enough.

Now it was Lynch's turn to shake his head, but in disapproval instead. "I thought you'd be smarter than that, Jason. They're tracking devices. We'll know where each consumer is at all times. Here, watch this."

He then zoomed in on one dot that was separated from the rest. Unlike the others, this one was in the South Wing. Lynch clicked on it and a bunch of data came up. Some sort of ID appeared -- Jason.Hill.00001 -- and a bunch of other graphs and numbers. The only one Jason

recognized was what looked like an ECG, which was starting to spike rapidly. As it did, the dot on the screen started to pulsate.

Lynch looked over at Jason. "Calm down," he said, "what are you so worried about."

Jason couldn't answer for a second. A lot of possibilities were swimming in his head right now. He decided to give Lynch the benefit of the doubt.

"So, this is part of the health benefits?" Jason finally managed to croak. "You know where they are and track their health at all times so we have more information, so if someone is dying or something, you can send emergency response teams to them? It's like always having life alert on and implanted, which could save us a lot of money on life insurance policies if we can get to people before they die."

Lynch gave Jason a strange look. "I guess so..." he said, "but you're missing the point. You were closer the first time; it's all about more information."

Jason didn't like the sound of that but he tried to press on: "I don't know why you didn't announce this all at once at the meeting, this is even more revolutionary than I thought."

Lynch had a response at the ready. "You ever heard the story about boiling frogs? It's said that if you put a frog into boiling water, it'll jump right out. But if you put one into lukewarm water and slowly raise it to a boil, they'll never notice. They'll be cooked before they know what's happened. It just so happens that you and I are boiling sheep instead of frogs."

Jason was even more confused now, but a sense of dread was beginning to creep over him. "I'm not sure what you mean," he said. "If people don't want to be tracked yet and you want to introduce them to the product slowly, I get that, but we're not 'cooking' people. Or sheep, for that matter."

Lynch shook his head again. "You really don't get it, do you?" he claimed. "We're not sharing this data with insurance providers. We're *selling* it. We're not keeping track of their location for anything even remotely related to sending an ambulance to them. It's data that can be gathered; it's *valuable* data that can be sold. We'll be putting an implant into people that they can't remove or turn off, that records and transmits their every location in real time. And the best part is, they're going to be *signing up* for it! It's almost too easy."

Jason couldn't believe what he was hearing. It didn't make sense in conjunction with anything he'd ever done over the course of his career, especially at RFG Health. He tried one last time to feign innocence but he was beginning to understand the scope of what Lynch was saying.

"But," Jason began, "why would you do all of this just for insurance? Track someone's location, record real time health data, sell it all. How does this make us a significantly better insurance company?"

Lynch chuckled, or at least tried to. It sounded more like marbles in a blender than anything resembling joy. "Oh Jason," he growled with a sinister smile on his face, "what makes you think this has anything to do with insurance?"