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CARLYPSO: OVERCOMING BUMPS IN THE ROAD IN THE USED CAR INDUSTRY

Christopher Coleman and Nicholas Hinrichsen, cofounders of Carlypso, stared with great intent at their computer screens, anxious about what would unfold over the coming minutes. It was July 2013, and the two were tracking a car out for a test drive as it drove down U.S. Highway 101 in Northern California. For Carlypso, this was a groundbreaking moment. It was the first “solo” test drive conducted by the fledgling company, which provided an innovative approach to buying and selling used cars. Instead of operating a used car lot, Coleman and Hinrichsen had developed a way for potential buyers of a used car to access the car’s keys using a lockbox. The seller could leave the car anywhere, and would then simply indicate to Carlypso when the car was available for a test drive; buyers could test drive cars on their own schedule. Having installed a lockbox/GPS device in each car, Carlypso could track the cars via computer. Coleman and Hinrichsen believed this approach to test drives, along with other improvements to the process of buying and selling used cars, would permanently disrupt the industry.

As Coleman and Hinrichsen continued to track the car from Hinrichsen’s Palo Alto home, they realized the car had come to a complete stop in San Jose. Anticipation quickly turned to dismay as they feared the worst. To Coleman and Hinrichsen, it was clear that the potential buyer was attempting to steal the car. Coleman and Hinrichsen’s minds began to race. What would happen if he located the GPS device? Were solo test drives feasible given the constant threat of cars being stolen? If not, how could Carlypso create a scalable business model? Just days before, Coleman and Hinrichsen had raised several hundred thousand dollars from investors who were thrilled about this concept. What would Coleman and Hinrichsen say to them, and would they be able to generate financial returns if this approach proved a failure?

Ryan Kissick (MBA 2014) and Peter Reiss, MBA Class of 1963 Professor of Economics, prepared this case as the basis for class discussion rather than to illustrate either effective or ineffective handling of an administrative situation.

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As Coleman and Hinrichsen scrambled to figure out their next steps, the car started heading back towards Palo Alto. With an audible sigh of relief, Coleman mustered hopefully, “Maybe he’s not stealing the car?”¹

COMING UP WITH THE IDEA

Background

Chris Coleman

Christopher Coleman was born and raised in Richmond, Virginia. His father was a car enthusiast, and he infused Coleman with a passion for cars from an early age. Upon receiving his driver’s permit at age 15, Coleman began driving a DeLorean that he and his father had rebuilt together over the course of two years, an experience that further reinforced his love of cars. In order to pursue this interest further, Coleman decided to study mechanical engineering at the Massachusetts Institute of Technology (MIT), hoping that his studies could land him a job with the McLaren or Ferrari Formula One racing teams. Upon graduating from MIT in 2007, Coleman decided to postpone this pursuit in order to gain more business knowledge, so he took a job with the consulting firm McKinsey & Company.

After working at McKinsey for two years, Coleman joined the electric car start-up CODA Automotive in Los Angeles. Despite early promise, it became clear to Coleman after a year that the company was not on a path to growth. Thus, Coleman decided to attend the Stanford Graduate School of Business (GSB) in 2011 to explore other entrepreneurial opportunities in the automotive industry.

During the summer between his first and second year of business school, Coleman interned at McLaren. However, despite finding his dream job, Coleman realized that he would prefer to work in a start-up environment. Thus, he spent much of his second year discussing opportunities with classmates, including friend Nicholas Hinrichsen.

Nicholas Hinrichsen

Nicholas Hinrichsen was born and raised in Munich, Germany. Growing up, Hinrichsen was a skilled and avid golfer. From an early age, Hinrichsen dreamed of playing golf professionally, and after high school he played on the German national golf team for four years. During this time, Hinrichsen realized that while he enjoyed golf, he did not want to pursue it professionally. Instead, he opted to attend college at the European Business School Oestrich-Winkel (EBS) in Germany, where he earned a degree in finance.

After graduating from EBS, Hinrichsen knew that he wanted to work in growth-oriented companies, and he became involved in a number of entrepreneurial ventures. His first pursuit was at a renewable energy start-up that invested in solar, hydro, and biomass power projects in China and India. The job involved frequent travel, and Hinrichsen spent a significant amount of time in India.

¹ Interviews conducted with Christopher Coleman and Nicholas Hinrichsen on December 1, 2014 and January 26, 2015. All quotations are from these interviews unless otherwise noted.

While in India, Hinrichsen realized that he could assist one of his good friends from Germany who worked as a fashion designer. He sourced a variety of leather accessories from India to sell in Germany, and shortly thereafter the two founded an online fashion label called knights & roses. In less than six months, they had expanded to more than 50 retail stores across Germany. Hinrichsen explained that “It was really fun growing knights & roses. However, I knew I wanted to pursue even bigger things. That’s why I decided to move to the Bay Area and attend the Stanford GSB.”

Hinrichsen spent much of his time at Stanford exploring entrepreneurial ideas and opportunities across a wide variety of industries. In March 2013, during Stanford’s spring break, Hinrichsen travelled to Vietnam with several classmates. Among them was Coleman, who expressed his desire to explore ventures in the car industry. During their time in Vietnam, the two brainstormed multiple ideas related to cars. The more they talked, the more convinced they became that there were massive opportunities to shake things up in the used car industry, specifically within peer-to-peer sales and independent dealerships. Coleman and Hinrichsen were excited at the possibilities and eager to test their ideas when they returned to campus.

The U.S. Used Car Market

In 2013, approximately 40 million used cars were sold in the United States at an average sales price of \$9,800 per car. These cars were sold in roughly equal volumes across three sales channels: franchise dealerships, independent dealerships, and peer-to-peer transactions (see **Exhibit 1** for a summary of the U.S. used car market in 2013).²

Franchise dealerships had contracts with automobile manufacturers (e.g., Toyota), and could provide manufacturer warranties to customers. Independent dealerships, on the other hand, did not have an affiliation with a particular manufacturer, and therefore could not provide warranties. Both independent and franchise dealerships bought used cars across two primary sources: directly from end customers (trade-ins) and at nonpublic dealership auctions. After purchasing a used car, dealerships would typically make any necessary fixes to the vehicle, and then sell it back to the public with the goal of achieving a 15 percent return on capital within 30 days.

Peer-to-peer transactions utilized a wide variety of channels, including online, newspaper, or in-person interactions. Popular online sources included Craigslist, Autotrader, and Cars.com, although used cars were sold across dozens of websites.³ Peer-to-peer transactions frequently resulted in prices that were preferable for both buyers and sellers as compared to transactions with dealerships; however, peer-to-peer transactions also tended to take more time to complete and were riskier (both financially and in terms of personal safety) than those with dealerships.

Buy Here, Pay Here

Upon returning from Vietnam in April 2013, Coleman and Hinrichsen began investigating several opportunities within the used car industry. As Hinrichsen recalled, “We had a ton of ideas, and a bunch of them were just terrible. In fact, one of our advisors told us that if we

² Carlypso internal materials.

³ Many of these sites, including Autotrader and Cars.com, sold cars from dealerships as well as private parties.

pursued one of these ideas, we'd probably get shot. But we ultimately narrowed the list down to a few ideas we liked."

Top on the list was an idea related to independent "Buy Here, Pay Here" (BHPH) car dealerships. BHPH dealerships offered credit to car buyers, specifically targeting those who had poor credit histories and would have had a difficult time getting loans from traditional financing sources. These customers were willing to accept the higher interest rates charged by BHPH dealerships, as they oftentimes had no other option to purchase a car.

In 2013, the BHPH industry was extremely fragmented, and Coleman and Hinrichsen believed there was an opportunity to run BHPH dealerships more efficiently. Coleman recalled:

We felt like there was an opportunity to use a search fund model for "Buy Here, Pay Here" dealers. We thought we could bring more structure to customer credit analysis, the purchasing process, and the overall management of dealerships. After visiting a bunch of dealers in April and May, we realized that these dealerships are actually run pretty efficiently. We also learned that this isn't really the space for "nice guys"—sometimes things operate a little differently than most MBAs are used to when dealers need to collect on their loans. So we decided to look at other opportunities within the industry.

I Need to Sell My Car!

Fortunately for Coleman and Hinrichsen, they did not have to look far to find another opportunity. As graduation approached in June 2013, Coleman and Hinrichsen discovered that dozens of their classmates would be selling their cars in the next month. Coleman explained, "As we got closer to the end of the school year, a number of our classmates approached me, the car-nut, with the same question, 'What is the best way to sell my used car after graduating?' Our classmates were the impetus and also the perfect audience to test some of our thoughts and ideas."

As Coleman and Hinrichsen talked to their classmates in more depth, they heard loud and consistent frustration with the process. Coleman expanded further:

People hated selling their cars. They felt like they couldn't trust anyone, and they also felt like they had to make a choice between time and money. Either they sold their car to a dealer for way less than market value, or they sold privately in a painstaking peer-to-peer process that could take weeks. Very few people enjoy intense negotiations with strangers—not to mention most people have no idea how much their car is even worth since it's so hard to find an accurate comp.

Knowing that Coleman was an expert in cars, classmate Andres Gavito asked Coleman if he would be willing to sell his car. He believed that Coleman had greater knowledge of the car's value as well as a better understanding of the best sales channels. Thus, he believed Coleman could sell the car in a more efficient and cost-effective manner. As part of the arrangement, he would give Coleman five percent of the proceeds, knowing he would still receive more money than if the car was sold to a dealer. Coleman recalled:

It was a Toyota Rav4 that was worth between \$19,000 and \$20,000. The dealer who sold Andres his car offered \$14,500 for the vehicle, which I found ridiculous—the car had very low mileage and Andres had bought the car only a year earlier for about \$22,000. Through selling the car privately, we managed to get Andres \$19,600. Andres was thrilled at the final sales price, especially since he didn't have to do the work.

Having pocketed nearly \$1,000 from the sale, and knowing there were dozens of other classmates like Gavito, Coleman and Hinrichsen were excited to see if they could turn this concept into a full-fledged business.

FROM HOBBY TO COMPANY

Knowing they could assist classmates while simultaneously investigating their business idea, Coleman and Hinrichsen jumped at the opportunity to sell cars for other classmates. Hinrichsen recalled:

Our primary goal was to figure out how big of a pain point this really was for people. We kept coming back to something that Andy Rachleff—one of our professors at Stanford—consistently told us. He believes the most difficult thing for new companies is finding a product or service that people *really* value. If you can find real value, then you can make a business out of it. We wanted to see how much value our model really had.

Amongst their classmates, the model proved to be extremely popular. By the end of June, more than a dozen people agreed to let Coleman and Hinrichsen sell their cars. Further, several people left their cars with Coleman and Hinrichsen, trusting that the duo would successfully close the sale. To Coleman and Hinrichsen, this served as proof that their service had value, at least within their community of MBA classmates. Hinrichsen described the process:

We spent a lot of time selling cars around graduation, and it wasn't always the most fun work—creating the listings on Craigslist or Autotrader, scheduling test drives, showing up to test drives, negotiating the price, handling the paperwork—yet we were really successful in making it happen, and our classmates were thrilled. Almost everybody referred other customers to us, which was a really positive sign that we were providing a valuable service.

Yet even after selling more than 15 of their classmates' cars, both Coleman and Hinrichsen had questions about whether their idea could flourish beyond the business school environment. Coleman explained:

By July, we knew that our service—finding the right comps, assessing the objective value of the car, listing the car in the right places, scheduling test drives with buyers, closing sales, and verifying payments—was something that our classmates would pay money for. But we weren't sure if this would translate to

sales outside of the GSB community, let alone if this was something we should pursue full time. Sure, we found a pain point, but could this be a real business? Unfortunately, both Coleman and Hinrichsen faced time pressure in deciding whether to pursue this endeavor full time. Coleman was to begin work at a mid-market private equity fund at the beginning of September, while Hinrichsen's student visa was set to expire within a couple months. As such, they quickly needed to assess whether their concept had legs beyond the Stanford GSB. Would sellers outside of their circle of friends be willing to trust Coleman and Hinrichsen to sell their cars? And if so, how could they turn the idea into a scalable business?

Carlypso is Born

In an effort to validate their concept, Coleman and Hinrichsen utilized a wide variety of methods to find new customers. Coleman remembered that, "We found one person in Sausalito through Google AdWords™, and another person through flyers in south San Jose. We also thought that this might be a concern for people as they moved into assisted living homes. Sure enough, after putting up a few flyers at an assisted living home near Sand Hill Road, we had someone reach out within a few days." Furthermore, Coleman and Hinrichsen contacted the local Tesla dealer to learn more about how they dealt with trade-ins. Hinrichsen noted, "When we talked to the sales people at Tesla, they explained that they really didn't have a good solution for trade-ins. This was great for us, and the sales people actually started referring customers to us. So after finding a bunch of good leads in just a couple of weeks, we felt confident we were solving a universal issue."

In addition to confirming demand for their service, Coleman and Hinrichsen also discovered a key challenge in their model. Coleman explained:

One day in July, we scheduled a test drive with a potential buyer for the car in Sausalito and another for the car in San Jose. After driving to Sausalito, we got a last-minute call from the potential buyer saying he had to cancel the test drive. We then drove all the way to San Jose, and that person cancelled as well. From our experience, we knew this was relatively common—people were consistently cancelling or late to test drives—and we also knew that it usually took several test drives before a car was sold. But our business model just didn't work if we had to spend 10 hours per car on test drives.

Coleman and Hinrichsen knew they needed to address this "test drive" challenge if they wanted to turn their idea into a scalable business. One option was to bring all of the cars to a central location where potential buyers could test drive the car of their choice. However, these solutions already existed. Coleman explained, "If we brought the cars to a central location, we would have just been another dealer or consignment lot, and we knew other people could run these businesses better than us."

Another option was to figure out a way to reduce the time required for test drives. In the middle of July, Coleman and Hinrichsen brainstormed during a lunch about how they could accomplish this. During the discussion, Coleman brought up the possibility of operating like Zipcar, a car rental company that allowed customers to gain access to the car without a human representative. Hinrichsen was intrigued and the two investigated this possibility further. Upon researching the

idea in more detail, Coleman and Hinrichsen discovered they could make it happen by installing a GPS system along with an electronic device that would allow potential buyers to unlock the car in a secure fashion.

During a career advice lunch with Rachleff, Hinrichsen described his new “hobby” to his professor:

I had actually intended to talk about other potential job options during my meeting with Andy, but we ended up talking about the Zipcar idea nearly the whole time. I was really excited to tell him about our solution for the test drives and how we could build a business around it. At one point, Andy interrupted me and said, “Based on how you’re talking about this, it’s pretty clear you’ve already made a decision about where you want to work. And to get you and Chris going, I’ll give you \$50,000 in seed money.” From that point, I was working full time on Carlypso.

Shortly thereafter, Coleman decided to forego his private equity job and committed full time to working with Hinrichsen. They named their venture CarFree, but later changed the name to Carlypso. They started fundraising immediately so that they could implement their newfound solution as quickly as possible. Coleman and Hinrichsen estimated that they would need to raise \$750,000 in order to develop the idea at scale. They enlisted Hinrichsen’s mother, a hobby graphic designer, to help them create a fundraising presentation that they could send to friends, family, and relevant connections within the Stanford GSB (see **Exhibit 2** for a summary of Carlypso’s initial investor presentation). Hinrichsen recalled the initial financing push:

My mom was really great in helping us finalize the presentation, which was more like a comic book than a traditional fundraising deck. Once it was ready, we sent it to a bunch of people on a Friday. We were hopeful, but we had no idea what kind of response we would get. By Monday morning, we had commitments of \$380,000. Within a few weeks we had raised \$1.2 million, which was way more than we anticipated. The good news was that it gave us a long runway as well as some really smart investors who could serve as mentors and advisors.

Having secured sufficient financing, Coleman and Hinrichsen opened an office in San Carlos, just south of San Francisco, and launched Carlypso, eager to test their model with customers.

EARLY BUMPS IN THE ROAD

Using parts purchased on Amazon, Coleman and Hinrichsen developed the first prototype of their GPS/lockbox device by the end of July. Shortly thereafter, they asked one of their friends if they could borrow his car for a beta test. Despite some initial hesitation, the friend agreed to lend his car to Carlypso. Coleman explained, “Obviously, one of our friend’s concerns was how we would prevent the car from being stolen. We knew this was going to be an issue for anyone selling their car with us, so we installed a fuel shut-off in addition to the GPS and the lockbox used to access the car’s keys. That way, if it looked like someone was trying to steal the car, we could easily cut off their fuel and locate the car.”

Coleman and Hinrichsen also anticipated that sellers would be concerned about potential damages, and even more worried about the potential for personal injuries incurred during test drives. However, under California law, the registered owner's insurance follows the car under a permissive use (e.g., a test drive). Thus, any damages and liability claims during test drives would be paid for by the registered owner's insurance. Coleman and Hinrichsen also purchased additional liability insurance for Carlypso, knowing this would further ease the concerns of potential sellers.

With measures in place to make sellers feel more comfortable, Coleman and Hinrichsen were ready to test the model. They listed their friend's car on Craigslist with no reference to their innovative approach to test drives. Only when they received calls from potential buyers did they explain how this experience would be different. Coleman described a typical response:

When people called, I explained that we had this great new device that would allow them to test drive the car on their own. Most people immediately hung up on me, and everyone thought this was a scam. They just didn't believe this was possible. We definitely didn't anticipate this reaction, but we knew we needed to figure out how to get people to try it out.

To overcome buyer skepticism, Coleman and Hinrichsen decided that they would not tell the next potential customer about the device until he arrived at the car. Once the buyer was standing next to the car, they figured it would be much easier to convince him to try the solo test drive. Their hunch proved right, and the driver happily agreed to test the car on his own. Less than half an hour later, the car was at a complete stop in San Jose, which is how Coleman and Hinrichsen found themselves scrambling to recover their friend's "stolen" car. Hinrichsen explained this first test run:

We parked the car outside my house so we could see what happened when he arrived. After he showed up, he called my phone to see where I was. I told him I was on another call, but he could access the keys in a lock box and take the car for a 20-minute test drive. Sure enough, he was fine with that, and he drove away. We tracked him on GPS as he drove down the 101 freeway. But all of a sudden the car stopped in San Jose. After 15 minutes, we thought, "Oh no, he's looking for the GPS device and he's going to steal the car—what a disaster." As we talked about what we should do, the car started heading back in our direction. He dropped the car off and apologized for being late. It turns out he had just been waiting for drive through at In-N-Out Burger. He loved the experience of test driving the car on his own and was ready to buy the car. We couldn't sell him our friend's car, but we were thrilled by his enthusiasm.

After this experience, they began testing the device with actual sellers. Although they continued to deal with resistance among potential buyers, they became much more adept at convincing people to try out their model. Coleman explained, "After talking to dozens and dozens of people, we started to develop a script. It was a lot of trial and error, but after practicing enough times, we felt pretty confident we could convince people to test drive the car." After selling a few cars in this manner, Coleman and Hinrichsen also began to benefit from customer reviews and referrals. Sellers loved that they could sell their cars for a good price without having to put

in any effort, and buyers loved the convenience of test driving the car by themselves and on their own schedules.

ADDITIONAL SCALING OBSTACLES

By January 2014, Carlypso was selling 15 to 20 cars per month at an average sales price of \$13,000 per car and commissions averaging \$750 per car. Coleman and Hinrichsen had hired Carlypso's first employee, Brendan Stiffle, and sellers were approaching the company faster than they could keep up. On the one hand, this growth was exciting for the company—and a confirmation that Carlypso provided significant value to customers. On the other hand, Coleman and Hinrichsen took this as a sign that they needed to scale their operations. While the unique approach to test drives helped solve the most glaring issue in buying or selling used cars, they faced a number of additional impediments to serving more customers. The most significant challenge was pricing. Coleman explained:

It was really hard for us to get more customers into the top of the funnel because of how long it took to price each car. We knew that a lot of our value stemmed from finding the right comps so that we could price each car appropriately. But until this point, we had been doing all of our pricing manually, creating spreadsheets with hundreds of car listings. This took up to half an hour per car, so we knew we needed to automate the process. We did this by hiring our lead engineer in March, and he was able to automate all of our manual pricing steps within a month.

Having solved the pricing challenge, Coleman and Hinrichsen quickly ran into another issue related to listing newly available cars. Coleman elaborated:

After we automated pricing, the tricky thing for us was avoiding the anti-spam provisions on Craigslist, which was by far our biggest sales channel. Because we weren't a dealer, we were limited in the number of listings we could create per month—when we started posting more, that's when the spam filters got us. This literally happened overnight, and all of our classified listings were "ghosted"—we could see them, but nobody else was able to browse them. As a consequence, we weren't getting any buyers to call us, and the sellers became increasingly impatient. Initially, it took us one to two weeks to sell a car. When our listings became ghosted and oftentimes flagged for removal, the selling process became a three to four week adventure. Figuring out how to avoid this was a huge pain.

A third issue was installing the Carlypso GPS/lockbox devices on the seller's car. For the first several cars, Coleman and Hinrichsen were able to install the devices themselves. However, they knew this would not be feasible as they increased sales and expanded beyond the California Bay Area. To solve this issue, they decided to mail the hardware to sellers, who were instructed to take the car and the device to a mechanic. The mechanic would then install the hardware, inspect the vehicle, develop an official inspection report for buyers and sellers, and take several photographs—all of which was paid for by Carlypso. This would ensure that the devices were installed properly and would also provide Carlypso with updated photographs when they listed the car for sale.

Finally, Coleman and Hinrichsen found themselves spending several hours per sold car communicating with buyers. Hinrichsen explained:

Car buyers are always nervous and require lots of handholding, regardless of whether you're selling a Honda Civic or a Ferrari. As we sold more and more cars, we learned ways to speed up the process. For example, cleaning the engine bay of cars before offering them for sale reduced the number of test drives from an average of three or four per car to one or two per car. Buyers usually know almost nothing about cars, so they use the cleanliness as a proxy for its condition. We also learned that mechanics make people really nervous. If you hire a mechanic, their job is to find something wrong with a car. It just becomes a "Where's Waldo" mission for finding things that are wrong—and if the buyer and seller each have their own mechanic, then the negotiations never end. So we decided we wouldn't allow buyers or sellers to use their own mechanics—instead we relied on the initial inspection report—and it actually made everybody feel better. Finally, we just got better at talking to buyers, figuring out ways to handle their objections and close the sale.

In addition, Coleman and Hinrichsen learned that poor-quality cars took approximately five times longer to sell than the average car because of prolonged negotiations and discussions with buyers. Thus, Coleman and Hinrichsen decided that if a car was not of a certain quality, they would refuse to sell it to a private party, and would instead dispose of it through other channels. Given all of these process improvements, Coleman and Hinrichsen were able to reduce the amount of time spent communicating with buyers from more than four hours on average to less than two hours per car sold. Over the course of a few months, they had made great strides in scaling their model, yet they wondered if this would be enough to sustain a nationwide business.

Y COMBINATOR

Anything You Can Do, I Can Do Better...Right?

By April, Coleman and Hinrichsen felt confident that they had addressed the majority of Carlypso's scaling challenges, and they wanted to determine how big the company could become in its current format. Coleman recalled, "We were excited about the infrastructure we'd put in place, and we wanted to push ourselves to grow as fast as possible. In doing so, we'd find out if scaling was just a matter of hiring more people—for example, we knew we could always hire a team of people to talk to sellers and buyers. Or, we'd discover fundamental flaws in our model that we needed to address."

In order to achieve this type of growth, Coleman and Hinrichsen decided to apply to Y Combinator, a well-known start-up incubator in Mountain View, California—less than 20 miles from their office in San Carlos. Y Combinator was renowned for its ability to accelerate the growth of early-stage companies. In addition, Coleman and Hinrichsen believed Y Combinator could help Carlypso recruit new talent while providing valuable publicity. Hinrichsen noted, "We knew how hard it was to attract engineers in Silicon Valley, so we felt like this experience could give us an advantage in hiring the best people, which we desperately needed. We also felt

like the publicity could be a great way to meet new investors and hopefully find a bunch of new customers.”

Added motivation to apply to Y Combinator came from an unexpected source. In October 2013, Carlypso had sold a car to a Stanford undergraduate student. The student, who was pursuing a degree in engineering, was thrilled with Carlypso’s service and intrigued by their model. During the sales process, he asked numerous questions about Carlypso’s technology and operations. Wanting to please their customer, especially one within the Stanford community, Coleman and Hinrichsen answered each of his questions thoroughly. Unbeknownst to Coleman and Hinrichsen, the student would use this knowledge to create a replica of Carlypso’s business. On top of that, he was applying to Y Combinator. Coleman explained the stunning development.

We first found out what he was doing in March 2014, when he reached out to us through Craigslist asking if he could help us sell a car that we had listed using his innovative technology solution. He didn’t know we had been the ones to post the listing, so you can imagine his shock when we confronted him. But he didn’t really care that we were upset, and he had no intention of stopping. He made it clear that he would keep pursuing the business, which included applying to Y Combinator.

A month after the confrontation, Coleman and Hinrichsen found themselves waiting outside of a Y Combinator meeting room in Mountain View, preparing for their upcoming interview. Suddenly the door opened, indicating that another interview had just concluded. Out of the room walked the Stanford undergraduate. Although Coleman and Hinrichsen were confident in what they had built over the previous nine months, they wondered if perhaps they should be worried about this new Carlypso copycat.

Turning up the Dials

Much to the excitement of Coleman and Hinrichsen, Carlypso was accepted into Y Combinator. They began the three-month program in May, and immediately focused their efforts on increasing sales. Coleman explained:

During Y Combinator, we were encouraged to grow by 10 percent per week. Before May, we probably were selling 15 cars per month. During the three months we were at Y Combinator, we sold 23, 39, and 47 cars. It was exhausting, and quite frankly things fell apart for us. Selling the 47th car was harder than selling the 46th, which shouldn’t be the case if your model scales well. On top of that, the customer experience was getting a lot worse with each new car we sold. We felt like we were spending the entire three months on the phone with customers, and none of them were happy. Buyers thought they paid too much, sellers thought they got too little, and both parties hated us as the middlemen.

Coleman and Hinrichsen were able to pinpoint several reasons for Carlypso’s struggle to scale. In order to sell more cars, Carlypso needed to be less picky about the cars they sold. However, as they had learned previously, cars in worse condition took longer to sell. They believed this was because these cars tended to have a much larger gap between buyer and seller expectations.

This, in turn, led to extended negotiations. Furthermore, Coleman and Hinrichsen realized that there were far more unique cases within the industry than they had anticipated. Coleman explained:

It turns out there are a lot of special circumstances in selling a car, and we just couldn't continue providing the special attention that each case deserved. As an example, for each car that was sold, the buyer had to go to a credit union in order to get a loan. Each credit union had a different process, and buyers chose their own credit unions. Because of that, we had to learn a new process with each new sale—there was almost no knowledge sharing from one credit union to the next.

Despite their efforts, Coleman and Hinrichsen could not find a way to reduce the amount of time that they talked to customers without dramatically impacting the customer experience. Moreover, they agreed that if they were unable to solve this problem, it would be impossible to grow Carlypso in the way that they had originally hoped.

However, during their time in Y Combinator, Coleman and Hinrichsen also discovered an interesting new insight. Hinrichsen remembered discovering an important trick of the trade:

Of the cars we could find at a reasonable customer acquisition cost, 8 out of 10 were just bad—really poor quality. Most of these cars were impossible to sell in peer-to-peer transactions. For those that did sell, we had to spend a ton of time educating buyers. But even still, buyers wanted a huge discount. The business just couldn't work that way. Yet we learned something interesting in the process. For these crappy cars, we found that dealers would actually offer more than private buyers, because they knew exactly how much it would cost to fix the car, whereas private buyers had no clue. We thought, "How can it be that dealers are willing to pay more for these things?" While private buyers always suspect the worst and discount crappy cars by thousands of dollars, it turns out that dealers would make the fixes for a few hundred dollars and then sell the cars back to customers for several thousand more. This was a light bulb moment for us. Let's say a dealer was willing to buy a car from someone for \$10,000. They would fix it for \$750 and sell it back to the public for \$13,000. Moreover, we found that in a competitive environment, dealers were offering even more than \$10,000 for the exact same car. Having recently gotten our dealer license, we started selling these crappy cars at auctions that were closed to the public. At these auctions, we knew we could sell this same car to dealers for up to \$11,000 and hence provide value to the private sellers. We were able to get sellers more money than they would have otherwise been able to get. Plus, it was instant cash and a much more convenient experience.

Carlypso's ability to access nonpublic auctions opened other opportunities as well. First, this route provided Carlypso with a huge database of transactions, which helped them to price sellers' cars more accurately. In addition, it opened up a new potential revenue source for private buyers on top of the opportunity for sellers. Coleman said, "Let's say someone wanted to buy a 2010 Audi A6. We knew exactly how often these cars were sold at auctions, so we could guarantee the buyer that she could get the car within a certain time frame. Not only that, we could buy the

car for her, and we could do it cheaper than traditional dealerships because we had lower overhead and a committed buyer. Thus, we could sell it to the customer for less.”

WHERE SHOULD THEY HEAD NEXT?

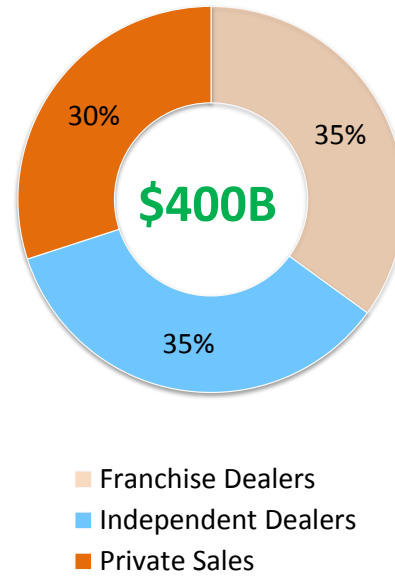
In August 2014, Coleman and Hinrichsen knew Carlypso was at an interesting crossroads. They had spent more than a year building upon the model they had started in business school. They had identified a clear pain point, and had demonstrated an ability to solve that pain point through their unique peer-to-peer sales model. Both buyers and sellers loved Carlypso’s “Zipcar” technology, and Coleman and Hinrichsen had figured out a way to make their approach as efficient as possible. Yet after their Y Combinator experience, they were left with doubts as to how rapidly this model could grow.

Thus, Carlypso’s new “auction” revenue opportunities were extremely encouraging to Coleman and Hinrichsen. For sellers, Carlypso could offer instant cash as well as up to 40 percent higher prices than they would get at a dealership. For buyers, Carlypso could guarantee the ability to buy almost any used car significantly below the prices of traditional dealers. Coleman and Hinrichsen believed this approach would scale more easily than their peer-to-peer method, as transactions took significantly less time. At the same time, they realized this new approach represented a drastic departure from the model they had perfected over the past year.

With these thoughts in mind, Coleman and Hinrichsen were confronted with some critical questions. Could Carlypso pursue both peer-to-peer and auction sales? If not, which should they choose? If they stuck with the existing Carlypso model and technology, how could they scale more effectively? Was it just a matter of hiring more people? And if they decided to abandon the peer-to-peer model, how would they communicate this to investors, customers, and the Carlypso team? What capabilities would they need to develop to optimize the company’s operations for this new approach? They knew the answers to these questions would impact Carlypso’s ability to create sustainable disruption in the used car industry.

Exhibit 1
Summary of U.S. Used Car Market in 2013

- 40.2 million used car sales in 2013
- Average price \$9,800
- Franchise Dealers provide extra value through Certified Pre-Owned Warranties



Source: Carlypso company materials.

Exhibit 2
Summary of CarFree/Carlypso's Initial Investor Presentation

----- Thanks for not shopping this deck around -----



Get the money of a private sale
with the experience of a trade-in.

Chris Coleman – Chief Car Enthusiast
Nicholas Hinrichsen – Chief Get Stuff Done

----- Thanks for not shopping this deck around -----

Let's be honest, selling a
used car is a huge hassle and
most of the time is a
terrible experience.

Exhibit 2 (continued)
Summary of CarFree/Carlypso's Initial Investor Presentation

You don't know **where to list**
you car, ...



... how to **determine a fair**
value ...



Exhibit 2 (continued)
Summary of CarFree/Carlypso's Initial Investor Presentation

... and waste time with **low-ballers** and **tire-kickers**.



The **only option: trade-in** ...
for a ridiculously low price.



Exhibit 2 (continued)
Summary of CarFree/Carlypso's Initial Investor Presentation

Isn't **getting ripped-off** the worst of all feelings?



There must be **a better way**, right?



Exhibit 2 (continued)
Summary of CarFree/Carlypso's Initial Investor Presentation

CarFree.co removes the hassle
from selling a used car.



We detail, inspect, and
photograph your car ...



Exhibit 2 (continued)
Summary of CarFree/Carlypso's Initial Investor Presentation

... we price it based on comparables and list your car.



How?? We look at cars with similar mileage & condition:

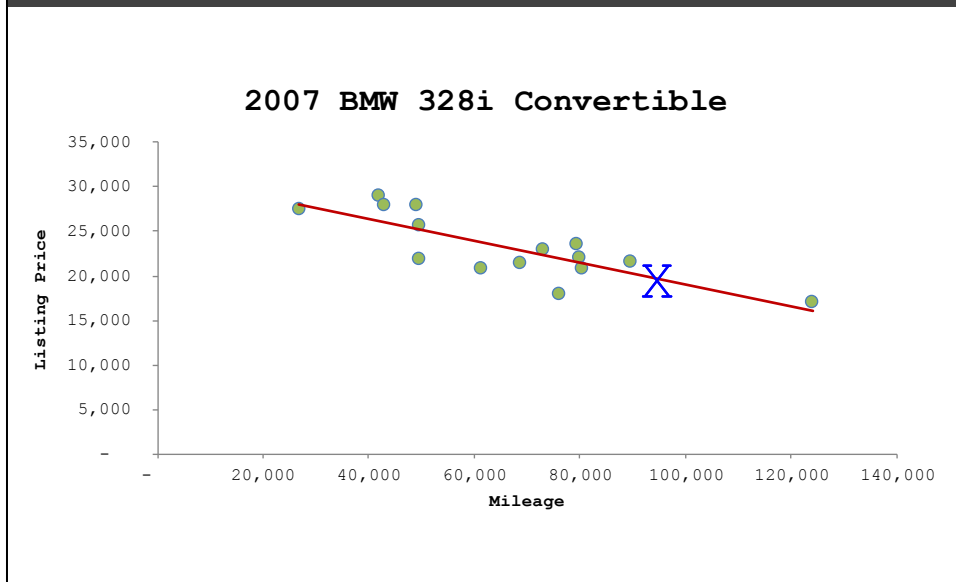


Exhibit 2 (continued)
Summary of CarFree/Carlypso's Initial Investor Presentation

We also take care of test-
drives and haggle for you ...



... until buyer and seller
are happy.



Exhibit 2 (continued)
Summary of CarFree/Carlypso's Initial Investor Presentation

Finally, we take care of the
paperwork . . .



. . . and verify payments for
you.



Exhibit 2 (continued)
Summary of CarFree/Carlypso's Initial Investor Presentation

So what's the catch?

We charge 5% commission or
25% for every dollar above a
written trade-in offer.

We make \$750 per car on avg.

While we give an estimated
market price over the phone



Exhibit 2 (continued)
Summary of CarFree/Carlypso's Initial Investor Presentation

... partners inspect your car
and install a CarFree© device



So while you're not using
your car, ...

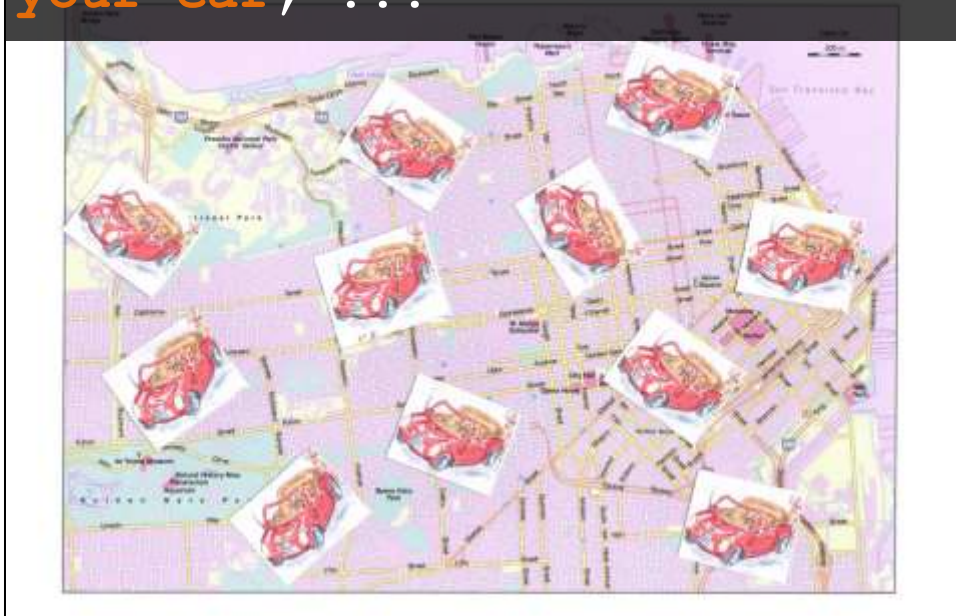


Exhibit 2 (continued)
Summary of CarFree/Carlypso's Initial Investor Presentation

... we can **send buyers to it**
for test-drives.



Our **inspection report** points
at all the flaws of the car.



Exhibit 2 (continued)
Summary of CarFree/Carlypso's Initial Investor Presentation

Buyers go on test-drives on
their own while we monitor.



After the test-drive, we
haggle over the phone.



Exhibit 2 (continued)
Summary of CarFree/Carlypso's Initial Investor Presentation

We partner with an escrow service for the paperwork . . .



. . . and inform the seller when we sold her car.



Source: Carlypso company materials.