



# STANFORD

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## GRADUATE SCHOOL OF BUSINESS

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### PROJECTSHED (A)

Scott Brady, Dave Leeds, Harpinder "Harpi" Singh Madan, and Eric Botto met at the Stanford Graduate School of Business (GSB) at the height of the dot-com boom.

Harpi and Dave first met in 1998 as first-year students in Stanford's MBA program. Both came from operating backgrounds: Harpi was most recently in product development at Oracle and Dave had come to Stanford from Lexmark, where he led strategic planning for Lexmark's most profitable business division.

Scott and Eric met a year later in Stanford's year-long Sloan Fellowship program for experienced executives and managers. Scott had been a co-founder and CTO at two publicly traded software companies – Clarus and SQL Financials. Eric had undergraduate and master's degrees from Stanford in Electrical Engineering and had significant experience leading large engineering teams at Quantum Corporation and HP Labs.

The four came together as a team during their final quarter at the GSB in the entrepreneurship class "Formation of New Ventures" (**Exhibit 1: Founder Profiles**). Each of the four had arrived in Silicon Valley at different times, for different reasons, with different backgrounds; as they approached graduation, however, all were focused on a common goal of building a substantial and unique business.

It was spring 2000, and the market's appetite for entrepreneurship had changed. The NASDAQ had lost substantial value as the tech "bubble" burst, venture capital was drying up, and fewer graduates were pursuing start-up opportunities. Nonetheless, each of the founders remained committed to pursuing an entrepreneurial venture and focused on finding the right opportunity. Each had a desire, as Harpi put it, "to be part of something meaningful, something that reflected our values."

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Research Associate Janet Feldstein prepared this case under the supervision of Professor Garth Saloner, Jeffrey S. Skoll Professor of Electronic Commerce, Strategic Management, and Economics, as the basis for class discussion rather than to illustrate either effective or ineffective handling of an administrative situation. This revision was prepared by Arar Han (MBA '09) under the supervision of Lecturer Jim Ellis. The revisers gratefully acknowledge Ben Suppe (MBA '01) for his invaluable assistance.

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## FORMATION OF THE TEAM

Throughout the spring quarter, the four entrepreneurs challenged one other in class and recognized in one other an ability to bring a distinct perspective to discussions. They gravitated toward each other out of interest and respect, developing their partnership through a series of informal breakfast meetings. Topics of conversation included various themes in leadership, team formation and business strategy, as well as specific ideas that each entrepreneur was considering. As the quarter progressed, the idea arose to join forces as the founding team of a start-up company. The founders saw in one other the potential for a strong alliance built on a variety of personalities and complementary skills. As Eric put it:

Part of what made our partnership interesting was that everybody had a very different background and a different perspective. We all brought different skills to the table. It would have been a lot easier had we picked four people with similar skills. We probably could have made better progress in the beginning, but I don't think we would have made it to where we are today.

After several weeks of consideration, each person's commitment to a combined effort grew. The group's meetings became more structured and targeted toward specific goals. Dave described a "pivotal discussion" the team had in April 2000:

We met for breakfast at the Peninsula Creamery for a very explicit conversation around a few key questions: What is it you actually want to do? Do you want to focus on entrepreneurship? What kind of company do you want to create? Do you want to create something long term, or to create something to flip it? And finally, is this the right team?

The four agreed that everyone had a shared vision to build a company with a focus on long-term value. And so the team was born, adopting the working name ProjectSHED (Scott, Harpi, Eric and Dave).

## Practical Matters

In June 2000, ProjectSHED set up its first 'office' in Scott's on-campus apartment in Stanford's Escondido Village. The founders committed to devoting six months to find and begin an entrepreneurial venture. They also agreed to an equal partnership, with a 100 percent working time commitment from everyone. In addition, until the company received funding, the entrepreneurs would work without salary.

The lack of income had a disparate impact on the teammates. Of the four, Scott and Eric were married and financially secure, with no immediate need for a paycheck. Of the two MBAs, Harpi was married and Dave was in a committed relationship. Both had student debt and limited personal resources, and were mindful of the personal opportunity cost of pursuing their entrepreneurial dream. That said, the team ultimately felt that the experience of pursuing their dream was worth their time and effort. Eric explained:

Of course we were taking a big risk. But even if the company didn't get off the ground we all felt like the six-month experience would be a great learning opportunity: how to organize ourselves, clarify our objectives, develop the business plan, sell it and ourselves effectively to the VC and investing community, establish valuable relationships and, most importantly, learn from each other. As long as we were willing to take the personal and financial risks, we saw this as a no-lose proposition.

The founders made a point of documenting not only the company's legal aspects, but also the cultural elements they viewed as critical to a successful venture. Scott explained:

We had all just been in careers that weren't exactly what we wanted. So given the fact that this time there would be nobody to blame but ourselves, we had the mandate to take the time up front to articulate what we wanted that was important for the company.

The team's objectives for the company could be broken down into "Whats" as well as "Hows":

What	How
Be challenged	Build a High Performance Team
Maximize learning	Common goals
Build something special: impactful, long term, change an industry	Complementary skills and experiences
Build unique culture	Setting a high bar for the business idea
	Shared Core Values

### Working Norms

At the outset, the team met each Friday to define and review its work plan for the week, and to set targets for various points along the project's six-month timeline. Dave explained:

During the first month we were doing broad theme analysis, so when we hit Friday, we could look back at the week and it wouldn't be clear that we'd actually done anything. We wanted to find a way to measure progress so we wouldn't feel like we were spinning our wheels. Sometimes that meant just making sure that we had a conference scheduled or had set up a specific conversation about an industry, so we could get to the end of the week and say, "Yes, we met the objective." I think that really helped us make forward progress.

Each founder also made an explicit commitment to provide and receive constant, open and regular feedback within the team. The inspiration came from the GSB class High Performance Leadership (HPL) that three of the founders had taken together. HPL was an intense ten-week course offering students insight into and improvement on their leadership and communication styles. A major component of the course was ongoing participation in a weekly discussion group called a Skill Development Group (SDG) in which students learned to give and take frank, direct feedback while executing ongoing group projects. The founders decided to replicate the SDG experience in their own group. According to Dave:

From the outset, we've been doing SDG-style feedback sessions. Many negatives as well as positives have come up in these sessions, and I think they have really helped us deal with potential issues that could have broken the team apart.

Scott recalled that, as the only founder who had not taken HPL, the feedback sessions were “kind of a rude awakening,” but ultimately a positive experience:

It was amazing for Eric and me, because we had been out in the business world for so long but had never gotten honest feedback. You know, I had an image of myself and of what I brought to the table; it turned out to be pretty different from what these guys saw. But it was a great process because these were people whom I trusted. Regardless of what happens with the company, we would like to get better at what we do and we think this is the most effective way to do it.

## **SEARCHING FOR THE BUSINESS IDEA**

### **From known solutions to unknown problems**

The founders' basic plan was, as Harpi put it: “to become the management team for a group of world-class technologists.” They started off by identifying opportunities through venture capitalists, computer science and electrical engineering professors, and others in their personal networks. Scott explained:

We had a lot of friendly contacts with VCs, so we would have lunch with them and ask them questions. What made us attractive to them was that we were a team with the time and ability to do due diligence. They would give us a list of the companies they were currently evaluating and we'd work with the technologists and provide a fairly detailed analysis to the VC.

As it turned out, this approach was time-consuming and bore little fruit. The team estimated that 80 percent of its time in the first three months was consumed with due diligence, leaving little time for original idea generation. Furthermore, VCs were primarily interested in members of the team as individual executives rather than as founding partners.

Attempting to tap universities for technologists in need of business skills proved equally difficult. The team soon realized that there was more myth than reality to the stereotype of the brainy scientist with great ideas but no management know-how. Dave explained:

We had a vision of discovering a new technology being worked on by professors whom nobody had paid attention to. We expected we could find a diamond in the rough. But we found that good professors were extraordinarily savvy and that the engineering guys were already talking to VCs.

As the team looked at existing opportunities, they found themselves increasingly frustrated that they were always coming “too late to the party.” Promising technological advancements always seemed to have existing advisors and funding.

The four decided that looking for cutting-edge technological solutions that could be applied to existing problems was not the right search plan. According to Scott:

We realized we needed to look for untapped ideas. We had learned that looking for solutions and then applying them to problems wasn't going to work because other teams would already be there doing the work we wanted to do. Looking for a well-known problem was not a good search either. By the time a problem is understood, there is someone already working on a solution, even if you don't know they are. We needed a problem that wasn't understood well yet. The problem could not be too obvious.

Moreover, said Harpi, the team needed solutions that would be important in the future, versus the present:

We concluded that any business we were looking at now would end up looking very different two years out. Businesses that obviously made sense already existed, and it wasn't clear we could develop any sustainable competitive advantage in those areas. What we needed to do was figure out problems that weren't yet obvious so we could devise and deploy a solution a year or two out.

### **From hitting the books to hitting up conferences**

Thus resolved, the team devised a list of criteria for evaluating a business opportunity (see **Exhibit 2**). They would use the list to vet potential ideas, and also to serve as the benchmark for what they expected one another to know about an opportunity before pursuing or rejecting it.

The founders decided that with their technical aptitude and diverse backgrounds, many industries were within their collective reach. Of those, four looked the most promising: storage, optical networking, internet infrastructure, and wireless. Since they were also four people, the team adopted a 'divide and conquer' strategy; each founder would take one industry to probe in depth for latent problems, particularly those that could be solved with new technology. They would continue to convene each week to bring one other up to speed on their research findings (see **Exhibit 3** for a visualization of the search process).

The SHED team began their research by tapping friends in the investment analyst community for industry studies and by using Stanford's library resources. Traditional research proved to have limited use in targeting the next generation of technology in any industry. As Scott explained:

Anything we were reading was already so dated that we couldn't use it as a barometer for what was really *going* to happen. The only way to get a true perspective on what was happening was to go straight to engineering teams in high-tech companies. And the only way to do that cost effectively was to catch them at conferences.

The founders actively sought out "highly technical" conferences with a high density of "nuts-and-bolts" engineers to tap for information and inspiration. The conferences proved to be gold mines in both regards. As Scott recalled:

We would skip all of the keynotes and just spend every minute of every day on the floor going from booth to booth, talking to the engineers about what made their jobs hard, or what would make their jobs easier.

As they became more familiar with the industries they researched, the team tried to grasp what the opportunities were. Their questions evolved, noted Eric: “If what you are doing is successful, then what is the next bottleneck? What future products and services will be required?”

Pleased with their progress, the team decided to attend more conferences to continue interviewing other attendees, to kick the tires, and to sleuth around for key technology problems that would arise in the next several years. Ideally the team would home in on three or four ideas to pitch to each other, with an ultimate “bakeoff” to decide on one idea.

### **SELECTING THE BUSINESS IDEA**

Over time, the SHED team identified four early-stage problems for which they could create and sell a technology solution:

- Eric learned by talking to his former coworkers that an increasing problem in digital subscriber line (DSL) network management was “crosstalk,” or the unintended transmission of data signals across channels. As DSL service providers pushed an ever-increasing volume of signals through their wires, the signals could become garbled. If SHED could create a “smart” DSL cable box or retrofit current equipment to tell apart real signals from crosstalk noise, it could potentially sell the box to DSL providers across the country.
- The expected rise in video streaming posed another problem to Harpi: managing the outflow from a database perspective. Most databases maintained by internet service providers and companies like Comcast were general purpose and inefficient at handling specialized server requests like video streaming. If SHED could produce a specialized video database, it could become the provider of choice for any internet content provider with video inventory.
- The proliferation of small electronic media devices led Dave to seriously consider the storage needs of such devices. There were already substitutes to floppy disks like “thumb” drives, but they were not robust or capable of high-volume storage, and failure rates were high. If SHED created an external hard drive optimized to mobile devices, it could be the first to play in the growing market.

At the 2000 National Fiber Optic Engineering Conference in Denver, Scott and Dave came across a fourth opportunity. Scott explained:

We started talking to a systems engineer from one of the big telecom equipment companies. He was explaining his work to us, and we kept pressing him on the key issues: “Where is it hard? Where do you have a problem? What’s the bottleneck? What’s the critical path for getting this done?” Finally the guy started talking about “backhaul” for wireless networks. He had come from the cell tower industry and he said the biggest problem associated with building wireless networks had nothing to do with the *technology* from a wireless perspective. It was *connecting* the wireless networks back into the existing wired network.

The pair returned to California and briefed the team on their findings. Harpi remembered, “We all kept pursuing our individual paths of research, but we kept coming back to that idea.”

### **The Wireless “Backhaul” Problem**

When a mobile handset was in use, a wireless voice or data signal was generated. The signal was picked up by equipment at a nearby “cell site,” which was typically located on a freestanding tower or on a building rooftop. The traffic was then transmitted from the wireless carrier’s cell site back to its mobile switching center (MSC), where it was processed and routed toward its destination. For example, a voice call might be routed at the MSC to the local phone company, which would then route it to a telephone. Wireless data might be routed onto the Internet. The transport of voice and data between the cell site and the MSC was called “backhaul.”

Backhaul was an essential and increasingly strategic component of a wireless carrier’s network. Multiple factors drove increased demand for backhaul services, including the expected implementation of third generation (3G) technology, increased usage of high-bandwidth data applications and voice minutes, and expansion of wireless carriers’ geographic coverage.

Major wireless carriers in the United States tended to own or control their MSCs, which were well connected through high-capacity fiber optic lines to other MSCs, other telecommunications networks, and the Internet. However, the vast majority of backhaul traffic between cell sites and MSCs in the United States traveled through a wired infrastructure, typically copper-based T-1 circuits provided by local phone companies.

There were several important problems with the dominant copper T-1 backhaul solution:

- **Lack of scalability:** Each T-1 line could carry only a fixed volume, so there was a limited amount of capacity in the bundle of copper cables running out to most cell sites. If a wireless carrier exhausted the existing wired capacity, the local phone companies could lay additional cable, but at a high fixed cost. With skyrocketing growth in demand for wireless phone usage,<sup>1</sup> there was no end in sight to the growth of backhaul.
- **High cost:** A highly competitive market for wireless carriers meant that the service plans offered to consumers continually offered more and more minutes of use (MOUs) to customers for the same monthly fee. Unfortunately, as the revenue per MOU continued to fall, the cost to backhaul each MOU remained constant. This presented an impending gross margin problem for wireless carriers.
- **Unreliability:** Wired backhaul was operationally the least reliable part of the network. When a T-1 line failed there was essentially no actionable information available to the wireless carriers to repair the problem.
- **Deployment bottleneck:** When a wireless carrier wanted to erect a new cell site or lay additional wire, the lead time required by local phone companies could be measured in months. This was often the determining factor in how quickly a carrier could turn up new cell sites.

### **A Possible Solution**

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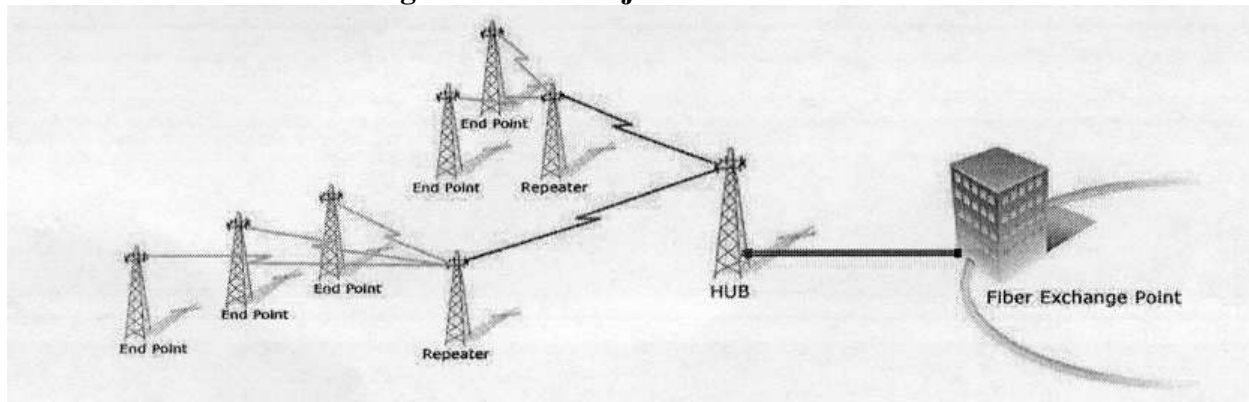
<sup>1</sup> In addition, the relatively low penetration rate of wireless phones in the United States (compared with Asia and Europe) laid the expectation of significant ongoing growth in demand.

The wireless industry's issues with wired backhaul amounted to a problem for which SHED could potentially provide a technological solution. According to Scott:

You had a really interesting set of issues happening. The growth in wireless subscribers was accelerating and new technologies were driving rapid increases in demand for backhaul services. A new entrant in the industry had aggregated key tower assets. The backhaul networks that were originally provisioned to the tower couldn't scale to meet future demand, yet the cost of going back and fixing that problem was prohibitively high.

The idea was that ProjectSHED would provide a wireless, microwave-based alternative to the current wired backhaul solution that the local phone companies provided. This alternative could allow wireless carriers to convey signals from their cell sites directly back to their own switching centers, entirely bypassing the existing wired backhaul network (see **Figure A**).

**Figure A: The ProjectSHED Network**



Source: Company records

In short, ProjectSHED's solution would provide backhaul capacity that was far more reliable and scalable than the existing solution, and at a lower price (see **Exhibit 4** for an extended description of ProjectSHED's services).

## Moving Forward

The SHED team decided to join forces and focus on the backhaul opportunity. As stated in their business plan:

The demand for high-speed backhaul, key structural changes in the industry, and the need to build across multiple tower portfolios all provide an attractive opportunity...to build and operate a...high-speed backhaul solution.

The founders' next step was to gather the intellectual capital that would form the foundation for their business. They first built a geographic database that included the locations and capacities of MSCs, tower operators, and wireless carriers across the United States. Then, they analyzed the data to produce a "density rate" that quantified the most economically efficient method to design and deploy the envisioned wireless network.



The team determined that none of the major tower companies individually had enough tower density to impact the backhaul problem of any one major wireless carrier. Two companies' towers combined, however, passed the hurdle; the combined assets of any two of the major players made it economically viable to construct a network across the portfolio of assets (**Exhibit 5** profiles major tower companies and wireless carriers). ProjectSHED aspired to become the neutral third party to lead the development of a shared backhaul infrastructure.

Convinced that their idea was structurally viable, the team built a financial model examining the economics of building their backhaul network. The model established the price points, demand requirements, and customer deployment hurdles to be met or exceeded to justify a build. The team also built a detailed blueprint of the network architecture. They evaluated over a dozen technologies to deploy in the network before ultimately selecting an optimized combination of tested and proven technologies. These technologies were recognized and promoted as core company assets.

### **SELLING THE PLAN TO THE INDUSTRY**

Though the team was convinced that they had a feasible concept, they recognized that their plan depended on their ability to access the real estate where carrier cell sites were located. In order to deploy their network equipment and connect to the carriers, ProjectSHED needed the cooperation of the tower operators that owned this real estate. Once achieved, these relationships would also form a significant barrier to entry for potential competitors.

At the urging of their advisors, the team went to the annual Tower Summit trade show to meet the key players: top executives from tower operator and service firms, and analysts who served as industry thought leaders. Convincing the tower operators to sign on with ProjectSHED was a major challenge. As Scott explained:

The CEOs in the tower industry were entrepreneurs who had built companies with multibillion dollar market caps in just three to four years. When we pitched to them, we learned that each of the companies had their own perspective on solving the backhaul problem. We had to do significant education about density and show them why an independent entity could do it better and more economically, and would be more favored by a carrier. In retrospect, they all liked the concept; they just didn't like the idea of working with their competitors.

The tower companies also questioned the notion that industry "outsiders" like ProjectSHED could get the job done. The tower industry executives told them, "You guys are really smart. But you're not from the industry, so why you?"

Even when the tower companies became convinced of the idea's merit, they tended to want the SHED team to come on board as employees and develop a company-owned solution. The founders were firmly opposed to the idea of being absorbed into a large company. They continued to believe that a neutral third party was critical to building out a backhaul solution across networks and geographies.

As time wore on without a clear path to execution, self funding was draining the team's emotional and financial resources. The MBAs in particular felt the anxiety of being a few months out of school with neither an income nor a secure career plan. Harpi explained:

At this time, Dave and I felt like if we didn't make at least a thousand dollars a month, our significant others were going to kick us out. We had been operating without salaries for four or five months, and we weren't independently wealthy.

At a crossroads, the four founders pondered their options: Should they continue with their data backhaul idea or search for an easier business to launch? Another idea was to have the founders with greater resources fund the project going forward. The team wondered for how long and at what price this would stay a viable option. As they discussed the forward course, a deeper, more unsettling question remained: Had the SHED team's approach to entrepreneurship run its course?

## Exhibit 1 ProjectSHED Founder Profiles

### Scott Brady, Cofounder and CEO

#### Experience

- 13 years of general management and technology experience
- **Clarus Corporation (NASDAQ:CLRS)**: Cofounder and CTO
- **SQL Financials International (NASDAQ:SQLF)**: Cofounder and CTO
- **Andersen Consulting**: complex strategic planning and technology deployment

#### Education

- Stanford Graduate School of Business: MS in Management (Sloan Fellow)
- University of Florida: BSBA in Finance (high honors)

### Eric Botto, Cofounder and VP Engineering

#### Experience

- 15 years of product development, engineering management, and general management experience
- **Quantum Corporation**: Engineering Program Manager, led 64 engineers and 7 engineering managers. Responsible for \$20mm budget and \$500mm revenues.
- **Quantum, Plus Development, and HP Labs**: R&D Engineer

#### Education

- Stanford Graduate School of Business: MS in Management (Sloan Fellow)
- Stanford University: MS and BS, Electrical Engineering

### David M. Leeds. Cofounder and VP Marketing

#### Experience

- 8 years of worldwide operations and strategic planning experience
- **Lexmark International**: responsible for \$200mm high-end printer supplies business
- **TwoLeeds**: founder, operations consulting company in Southern China

#### Education

- Stanford Graduate School of Business: MBA
- University of Vermont, University of Copenhagen: BSBA, International Finance (honors)

### Harpinder Madan, Cofounder and VP Business Development and Strategic Alliances

#### Experience

- 6 years of technical, team-building, sales, and operations experience
- **Oracle Corporation and Bull-Honeywell**: Product Development Lead
- **Think Business Networks**: cofounder and CTO
- **Doll Capital Management**: Venture Associate for \$1bn telecom VC fund

#### Education

- Stanford Graduate School of Business: MBA
- Indiana University, Bloomington: MS, Computer Science (honors)
- Institute of Technology, BHU, India: BS, Computer Science (President's Gold Medal for graduating #1 in university)

Source: Company records

## Exhibit 2

### Opportunity Evaluation Criteria

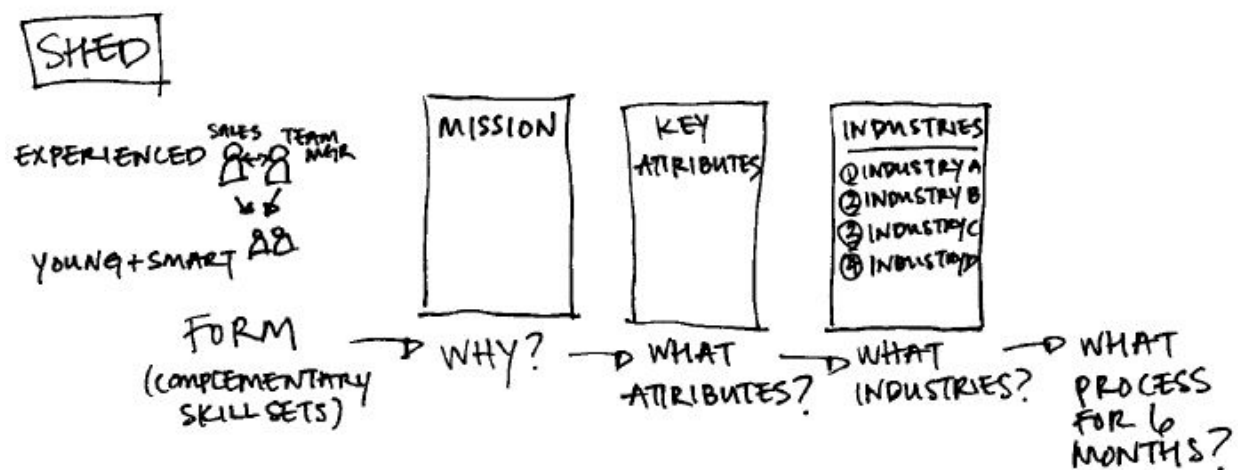
		Sample Idea
<i>Opportunity</i>	<i>Rate each criterion on a scale of 1-10, with 10 being best.</i>	
1	Year 5 revenue potential in excess of \$50mm	5
2	Defensible business with solid barriers to entry	8
3	Poor availability of direct substitutes	6
4	High-growth market in excess of GDP growth	8
5	Solve a problem 2 years out; solve a durable problem	9
6	Solve an innovation problem or drive improvement (vs. being fundamental breakthrough)	9
7	Exit possible in 5 years	4
8	IP, Quantitative, and/or Analysis heavy	10
9	Business aligns with either technology background or functional expertise of team	5
10	Passion for opportunity	8
<i>Team</i>	<i>Decide yes or no.</i>	
1	SHED member able and willing to serve as CEO	Yes
2	No single investor owns greater than 49%	Yes
3	Business we can found and build out of West Coast	No
4	Proud parent test: happy to tell others, reputation of likely staff in industry good, ease of transition to next opportunity	Y/N/Y
<i>Other</i>	<i>Rate each criterion on a scale of 1-10, with 10 being best.</i>	
1	Not too many externalities out of our control	3
2	Likely to be funded based on comparative deals in industry and informal consultation with likely funders	6
<b>Total</b>	<b>Sum all of the above numeric ratings.</b>	<b>81</b>

**Gut check**    **Is it fun, fundable, and on the right trajectory?**

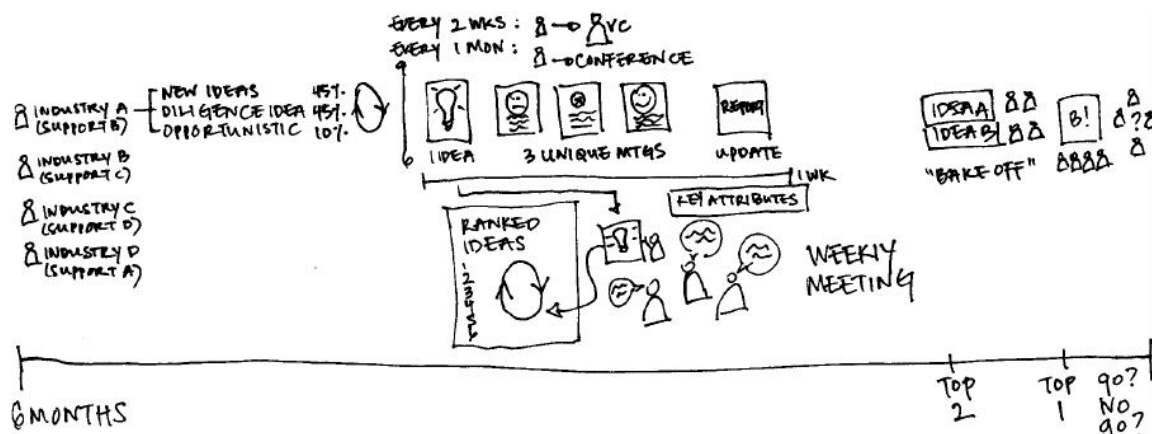
Source: Company records

### Exhibit 3 Visualization of SHED Search Process

#### Overview



#### Industry and Idea Selection



Source: Corey Ford of Runway at Innovation Endeavors (used with permission).

## **Exhibit 4**

### **ProjectSHED Info Sheet**

#### **Who is ProjectSHED?**

ProjectSHED has brought together experts in wireless design and deployment, network management, and general management to focus specifically on improving the weaknesses in the backhaul portion of wireless networks.

The ProjectSHED solution is a cost effective, high capacity, shared infrastructure that employs a unique combination of microwave and fiber to directly lower operating expenses, enhance revenue generating capability and increase overall operating efficiencies.

From its inception, the company has worked intimately with wireless operators to clearly understand customer and quality requirements. The result is a well architected custom-made solution that will meet demanding carrier metrics.

#### **What are the weaknesses in backhaul today?**

Wireless operators express significant frustration with today's backhaul infrastructure. Greater than 25% of operating budgets are spent on provisioning and maintaining backhaul, provisioning times are painfully slow leading to delayed time to market, legacy networks are unreliable, and customer service from T1 vendors has reached an unacceptable level. Operators are no longer able to move forward effectively, and are uncertain how the current infrastructure will support increased capacity and data needs in the future.

#### **What does ProjectSHED do?**

ProjectSHED has designed and created a network consisting of high capacity point to point microwave, existing redundant fiber rings, and a robust operations and network management suite. ProjectSHED's technology is designed to support existing voice applications and address future data needs.

ProjectSHED's network bypasses the existing copper local loop infrastructure by implementing a scalable wireless system. The company is custom engineering this network in selected markets from the ground up, incorporating local engineering requirements and insuring high end to end network reliability. All design and maintenance is done by ProjectSHED, minimizing response and repair time for customer service issues.

#### **What are the advantages of the ProjectSHED solution?**

- Reduces total cost of backhaul through a simplified, shared backhaul infrastructure that benefits from wireless operator collocation
- Provides increased reliability through network designed and built with proven microwave and fiber optic technologies
- Reduces long provisioning time by providing pre-provisioned circuits
- Offers quantifiable improvements in customer service by eliminating legacy systems, simplifying processes, and implementing proactive customer management

#### **Why ProjectSHED?**

ProjectSHED believes there is a fundamental need for change in the backhaul network. The team consists of wireless industry experts with a proven track record of success. The ProjectSHED team has had specific experience designing, building, managing and maintaining cellular and PCS networks. Team members have built, operated, and maintained the largest microwave backhaul networks in North America. ProjectSHED is funded and advised by leading architects, industry veterans and influencers in the wireless industry.

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Source: Company records

**Exhibit 5**  
**Profiles of Key Partners and Customers**

**Tower Operators \***

(\$ '000)	American Tower	Crown Castle	SpectraSite
Ticker	AMT	CCI	SITE
Towers Owned	12,846	14,435	7,550
Stock Price	\$8.80	\$10.89	\$3.03
Market Capitalization	\$1,739	\$2,364	\$510
2001E Revenues	\$1,111	\$874	\$490

\* Current as of 11/30/01

**Wireless Carriers\*\***

(\$ '000)	AT&T Wireless	Sprint PCS	Nextel
Ticker	AWE	PCS	NXTL
# Subscribers	18,064	13,729	8,656
Stock Price	\$17.31	\$20.44	\$24.75
Market Capitalization	\$33,856	\$24,427	\$8,262
2001E Revenues	\$13,642	\$9,751	\$6,996

\*\* Current as of 12/21/01

Source: Company records