



SHOULD YOU START A COMPANY?

At the Center for Innovation, Commercialization, and Entrepreneurship, our mission is to facilitate the transition of research products from the confines of the university into the realm of real-world adoption.

This handbook's intent is to act as an interactive guide for you to consider if you'd like to spin a company out of UAF.

Should you decide on this path, we will give you full access to our office, University resources, and larger Alaska start-up ecosystem.

Let us know if you'd like help talking through this decision.

Sincerely,



Mark Billingsley
Director, Alaska Center ICE



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\$693K
DOLLARS DISTRIBUTED

15
PATENTS FILED

7
COMPANIES CREATED


9
LICENSES EXECUTED

Part I: Assess



**Is building a start-up the
right move for me and for my
invention?**

This handbook borrows heavily from the work of the University of Washington, 49SAF, and AKV3. We'd like to thank them for their graciousness and acknowledge their hard work.

What is a start-up?



A startup is a company designed to grow fast. Being newly founded does not in itself make a company a startup. Nor is it necessary for a startup to work on technology, or take venture funding, or have some sort of “exit.” The only essential thing is growth. Everything else we associate with startups follows from growth.



If you want to start one it's important to understand that. Startups are so hard that you can't be pointed off to the side and hope to succeed. You have to know that growth is what you're after. The good news is, if you get growth, everything else tends to fall into place. Which means you can use growth like a compass to make almost every decision you face.

- Paul Graham, Ycombinator



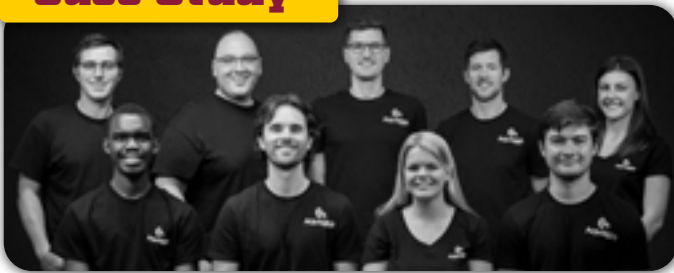
Initial questions to begin your start-up reflections

Starting a business is an exercise in faith and self reliance. You have to trust that you have something of value and that you can build out this idea during your busy teaching, research, work, and/or study schedule. The decision to do so requires deep reflection. Consider starting here.

Questions to ask yourself -

- Do you find yourself thinking about your idea while you're in the shower?
- Are you willing to work on this idea for the next two to three years without tangible results?
- How do you deal with rejection? Are you willing to adjust your idea based on what customers are saying?
- What do you have to lose if you do decide to start a company and it doesn't work out? Write it out.

Case Study



Aquagga harnesses the unique properties of hot, compressed water to remove PFAS. Aquagga was the first Alaska-based team to access the national I-Corps program after leveraging several of Center ICE's programs including its entrepreneur in residence who has now joined the company as CEO. Aquagga has raised over \$4M through private investment, grants and contracts, and was recently awarded a phase II EPA SBIR grant, launching them to the top 5% of deep technology start-ups.

Questions to ask the market -

- What type of market are you planning to enter?
- How large is the market?
- Is this industry growing?
- If I am able to successfully build this, how many people would actually use it?
- How intense is this problem for the customer that I have in mind?
- Do I have evidence that what I'm building is actually needed? Or, do I just like the idea?
- Who else is building this solution? How is what I'm proposing different and can I compete with the others building similar solutions?

A startup founder is in effect an economic research scientist. Most don't discover anything remarkable, but some discover relativity.

- Paul Graham

Considerations on the importance of the idea and your willingness to work on it over time

It's not possible to go it alone with just an idea. The success of a start-up is dependent on the merit of the idea and - perhaps more importantly - the resilient effort of a dedicated start-up team willing to bring it to reality at all costs. Here are the next few questions to consider. Write it out and reflect.

What is your idea and why do you think it is important to bring it to the world?

Who on your team is committed to spending time working on this?

How much time do you and your current team think you can spend per week on this project? Is your team willing do this over 3+ years?

Is your team capable of building a company?

A high performing team displays...

- A **shared and purposeful** objective collaboratively defined by the team
- **Clear and targeted** performance objectives derived from the shared purpose
- A diverse range of **complementary skills** within the team
- A resolute **commitment** to the methods and processes employed
- **Collective responsibility** and mutual accountability



Explanation for how to score your current team's capability: To assess each criterion condition, assign a score based on the degree to which the condition is fulfilled: 1 for “non-existent” to 6 for “industry expert”. Sum up the scores to calculate the total score. The max score is 42 and anything above a 30 is considered strong. If the team has glaring gaps in it, think about how these gaps could be filled.

What skills does your team possess? If there are gaps, what can you do to fill the gaps?

Assessing the bigger picture

Unfortunately, an effective start-up is more than the individual pieces. It's not just a great team and a good idea. It's the ability of the team to execute on the idea in a dynamic and complex economic environment. Success requires holistic assessment of your idea. Fill this out below.

Explanation for how to score your potential start-up: To assess each criterion condition, assign a score based on the degree to which the condition is fulfilled: 1 for "not met," 2 for "partially met," and 3 for "fully met." For the "Level of confidence" score, use a range of 1 to 3, where 1 represents low confidence and 3 represents high confidence. Multiply these two scores to obtain the Weighted Score, which should be entered in the third column. Finally, sum up all the weighted scores to calculate the total score.

Market Readiness	Extent to which condition is met	X	Level of Confidence	=	Weighed Score
• Significant and quantifiable benefits are offered by the technology.	<hr/>		<hr/>		<hr/>
• The product/process possesses clear advantages over competing products.	<hr/>		<hr/>		<hr/>
• Future applications are possible	<hr/>		<hr/>		<hr/>
• There is a tangible product in the market.	<hr/>		<hr/>		<hr/>
• Accessible and well-defined market exists.	<hr/>		<hr/>		<hr/>
• The market is extensive in size.	<hr/>		<hr/>		<hr/>
• The market is experiencing growth.	<hr/>		<hr/>		<hr/>
• Immediate market utility is present	<hr/>		<hr/>		<hr/>
• Technology is poised to be the first to market.	<hr/>		<hr/>		<hr/>
• Feasibility of manufacturing determined.	<hr/>		<hr/>		<hr/>
Market Readiness maximum score: 90			Subtotal		<hr/>

Technology Readiness	Extent to which condition is met	X	Level of Confidence	=	Weighed Score
• Technology represents a novel, non-obvious invention.	<hr/>		<hr/>		<hr/>
• Exhaustive patent and literature search has been conducted and is clear.	<hr/>		<hr/>		<hr/>
• No dominant patents are held by others.	<hr/>		<hr/>		<hr/>
• The technology represents a state-of-the-art breakthrough.	<hr/>		<hr/>		<hr/>
• The technology serves as a core or platform technology.	<hr/>		<hr/>		<hr/>
• No pending publications (Canada only).	<hr/>		<hr/>		<hr/>
Technology Readiness maximum score: 45 or 54			Subtotal		<hr/>

Commercial Readiness	Extent to which condition is met	X	Level of Confidence	=	Weighed Score
• Identification of potential licensees	_____		_____		_____
• Inventor possesses industry connections	_____		_____		_____
• Availability of financial support from licensees for further development and patenting	_____		_____		_____
• Access to venture capital	_____		_____		_____
• Anticipation of a favorable return on investment	_____		_____		_____
• Expectation of positive net present value from royalty/licensing income	_____		_____		_____
• Low marketing expenses are anticipated for initial traction	_____		_____		_____
• There is availability of government support for additional development	_____		_____		_____

Commercial Readiness maximum score:

54, 63, or 71

Subtotal _____

Management Readiness

	Extent to which condition is met	X	Level of Confidence	=	Weighed Score
• Inventor will champion as a team player	_____		_____		_____
• The inventor has realistic expectations for success.	_____		_____		_____
• The inventor is recognized and established in the field	_____		_____		_____
• Commercialization skills are available	_____		_____		_____
• Management capabilities are available	_____		_____		_____
• University holds patent	_____		_____		_____

Management Readiness maximum score:

44 or 54

Subtotal _____

Grand Total _____

What the Scores Mean:

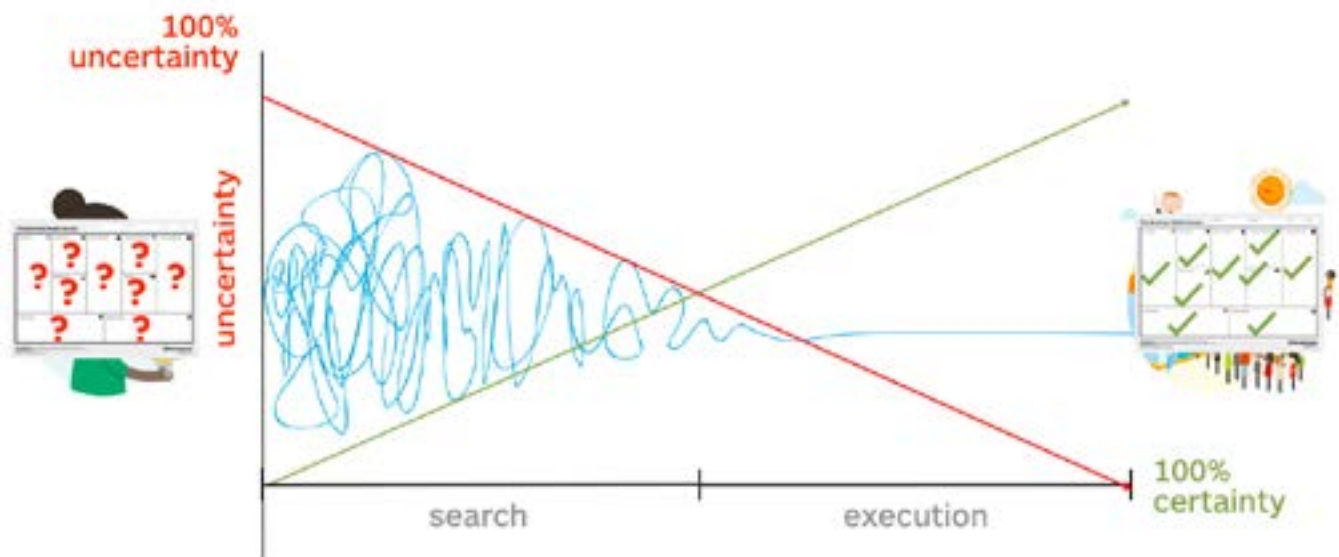
Like all numeric data numbers only matter in their interpretation. The higher the score, naturally the more robust your chances are for success as a start-up. However, these reflection underlie a more important point: starting a company is a personal choice based on a belief that you can build something of value and that this value can be successfully converted into a sustaining business model. If this assessment doesn't help you in your consideration, [watch this video \(17-min\)](#). If still you have yet to make a decision, [contact us](#) and we'll talk through it with you.



Part 2: Begin

**Ok, I want to start a company.
What will it look like? What are
the steps?**

Starting a company is an exercise in reducing uncertainty. You start out knowing very little about your company and market. Then, through testing, building, and lots of learning, your company will emerge. The job of the founder is to steer that learning.



Start-Up Stages for Success

Each start-up passes through six distinct but interconnected phases. The mastery of each stage ratchets up your growth piece-by-piece until you discover sustainability.

Ideate

During the ideation phase, the start-up employs customer-focused exploration techniques such as ideation, customer discovery, design thinking, and sprints to identify the underlying motivations and needs of customers. The goal is to develop a [customer-validated value proposition](#) by addressing challenges, opportunities, and desires. This stage involves the early team and the creation of a prototype.

Model

In the model phase, the focus shifts to testing the business model itself. Techniques like [Lean Launch](#) and [Startup Weekends](#) help determine the “what” of the business and ensure desired outcomes. The business validates the model, seeks mentors, and works toward developing a minimum viable product ([MVP](#)) that generates early revenue.

Strategy

The strategy phase revolves around testing the market and engaging with customers. This phase aims to verify the business model by validating the market segment and establishing strategic partnerships to acquire this segment. The advisory board plays a crucial role helping pilot projects and growing customer revenue.

Plan

In the planning phase, the focus is on designing the path for growth and scalability. This involves setting clear goals, identifying internal and external resource requirements, and creating a comprehensive business operating and financial plan. The aim is to make the business investible, attracting both the right team and investors who align with the long-term vision of the entrepreneur.

Finance

Next is the finance phase, which involves creating stakeholders through investment pitching (if necessary) and securing agreements with necessary partners. The desired outcome is to secure the resources for the business that unlock growth. This phase culminates in successfully closing a funding round and meeting the minimum financial requirements. Product development, sales targets, and cash milestones drive this stage.

Launch

Finally, in the launch phase, the business moves into execution mode, running and operating as a stable and sustainable enterprise. The main objective is to achieve the desired return on investment and meet predefined objectives. The business aims to secure working capital and ensure a positive return on investment in this phase.

Ultimately a successful start-up is driven by good growth ([see why](#)). You're likely in stage 1 - where little is known but much is possible. We're here to guide you along the path and we look forward to working with you. Go to the next stage and let's get started.

Anatomy of an S-curve



Immediate steps to get started

We have dedicated technology commercialization specialists in both intellectual property and market analysis as well as numerous programs for you to utilize. It's best to start by getting organized and meeting with the right team.

Start with the following:

1) Reach out to the technology transfer team

Alaska Center ICE has a market research specialist and intellectually property specialist dedicated to train and assist you through the process of starting your own company. By emailing both [David Park](#) and [Huckleberry Hopper](#), they will both join your team in the appropriate capacity for your needs.

2) Download the “How to Start a Technology Company Checklist” and read it.

Organization is everything in a start-up. By downloading this checklist, you'll be able to get your company formed quickly and accurately. This will help you stay on-track as you continue to build your company over the next few years and will set you up for investment from day 1.

3) Ask Center ICE to order the learnings on the next page and sign up with all of the Alaska specific resources available to you.

Entrepreneurship is a skill set in of itself. Some skills are innate. Others can be learned. By ordering all these resources (see resource page) you'll set yourself up for long-term problem solving and success. Beyond that, get connected to the Alaska resources and mentor networks. If you don't know the answer someone else will.

Finally, we look forward to working with you and wish you luck on your new venture.



Appendix

Resources for success

FOUNDATIONAL CONCEPTS OF ENTREPRENEURSHIP

Starting a company out of a university has a few distinct advantages - one of which is knowing what you need to know. We're experts in educating entrepreneurs, and we highly recommend the below texts to get you started.

By reading these you'll avoid hundreds of mistakes when building your company (email us to order. We recommend a read in this order):

1. **The Lean Start-up:** an approach to building businesses based on the belief that entrepreneurs must experiment, test, and iterate as they develop products.
2. **Business Model Generation:** teaches you how to systematically understand, design and differentiate your business model.
3. **Value Proposition Design:** helps you tackle a core challenge of every business — creating compelling products and services customers want to buy.
4. **The Start-Up Owners Manual:** a comprehensive guide that provides aspiring entrepreneurs with a step-by-step road-map to building a successful startup. It emphasizes the importance of customer development, validated learning, and agile methodologies to help founders navigate the challenges of launching and scaling a business.
5. **Venture Deals:** shows entrepreneurs the inner-workings of the VC process (raising money), from the venture capital term sheet and effective negotiating strategies to the initial seed and the later stages of development.

CURATED LEARNINGS TO ADDRESS START-UP SKILL GAPS

**Navigating and
leveraging the Alaska
start-up ecosystem**

**Understanding start-up
finance and the process
of raising funds**

**Mastering the process of
discovering, converting,
and growing your
customer base**