

Monozukuri  
Ventures

Monozukuri Ventures Presents

# Launching Hardware Startups with Monozukuri, The Art of Making Things in a Creative Way



**Presented by**  
**Nobuhiro Seki**  
**Monozukuri Ventures**  
**(Tepper 2002)**

**WORD FOR WORD:**  
**Nobuhiro Seki (MBA 2002)**

If you want to be a writer, you have to write every day. The consistency, the certainty and all the vagaries and passions are covered by this daily ritual. But journalist Nobuhiro Seki knows that our most precious

ability, the knack of creation, is also our most fleeting resource.

Before coming to GSIA, Seki was an editor and contributed stories to *Nikkei Computer*, a bi-weekly information technology magazine in Tokyo.

He interviewed such Silicon Valley luminaries as Steve Case of America Online and Netscape's Jim Clark.

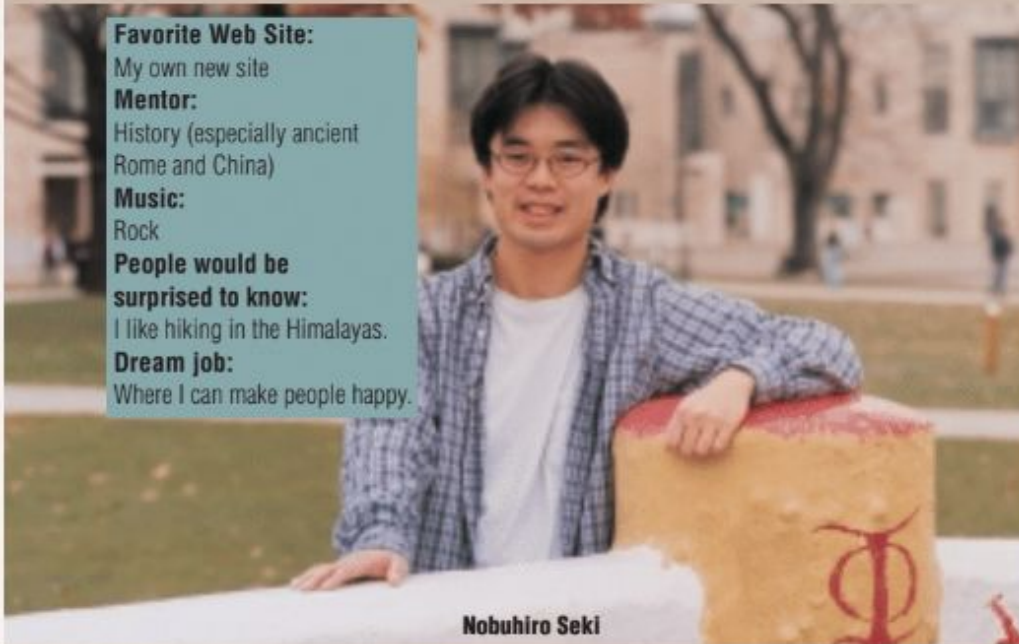
"I came to Carnegie Mellon because the school is at the core of this new exciting tech-driven economy," Seki said. "Those who are committed to the

information technology industry know Carnegie Mellon leads in research and academic excellence."

A first-year B-school student, Seki said his first few courses have been filled with helpful analytical and problem-solving challenges. "I look forward to future mini courses where we can apply what we learn to real business situations," he said.

In the past two years, much of Seki's job involved reporting and writing about e-commerce. He spent a lot of time writing about companies based in San Jose, Calif.

"I plan to go back to my editing job after graduation," he said. But he also plans to use his GSIA education to help connect great ideas with entrepreneurs interested in starting new ventures.



**Favorite Web Site:**  
My own new site  
**Mentor:**  
History (especially ancient Rome and China)  
**Music:**  
Rock  
**People would be surprised to know:**  
I like hiking in the Himalayas.  
**Dream job:**  
Where I can make people happy.

**Nobuhiro Seki**



## **My (tangled) career to date**

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- **BS in Engineering (rusting process of stainless steel)**
- **Editor in Tokyo/SF Bay (interviewed dot-com founders)**
- **Dot-com bubble burst (Only a few took entrepreneurship; only team to be sent to business plan competitions)**
- **Mobile game platform in the real world (“Americans will never use cellphones for games,” joked by a judge)**
- **Recruited for an exec for a startup in SF Bay (Employee #3)**
- **Sold the company twice within 6 months (Gained 15 lbs)**
- **Co-founded a few startups and made a few angel investments**
- **Moved to NYC and became an investor**



# We Make Hardware Startups Together

Empowering people to build high-quality products

## About Monozukuri Ventures

Monozukuri Ventures is a venture capital firm based in Japan and North America specializing in hard tech. In addition to the investment, we have a dedicated team to support hardware prototyping, mass production, and business development. We aim to create a world where entrepreneurs and startups can quickly produce and sell high-quality products, even in small quantities.

- **Co-founder & Chief Investment Officer, Monozukuri Ventures**
- **Started in 2017, we invest in hardware startups and manufacturing-tech companies**
- **Based out from NYC; we used to invest in startups in NYC & Pittsburgh only, but now anywhere**

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# **Inconvenient Truth of Hardware Startups**

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# “Hardware is Haaard”

*“It's called hardware  
for a reason”*

*- Marc Andreessen*



# Y-Combinator Execs Talk about Hardware Startups

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***“Investors have a deep-seated bias against hardware companies”***

— Paul Graham, Founder, Y-Combinator



***“Silicon Valley is built to fund software companies, not hardware”***

— Michael Seibel, Ex-CEO, Y-Combinator



# Why investors don't like us; more chances of failure!

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## Complexity

- **Organization**
  - You need hardware engineers and designers
  - Also, software engineers in most cases
- **Supply-chains**
  - You need to work with vendors outside

## Capital Intensity

- **More cost due to overhead**
- **More capital for production**

## Affordability

- **SaaS: no upfront cost; \$3 monthly**
- **Traditional Hardware: \$250 upfront for hardware; \$3 monthly**

# Why Investors like software startups more. Return.

	Software	Hardware
Exit Valuation	\$50M	\$50M
Seed Investment	<u>\$1.5M</u>	<u>\$2.5M</u>
Required Return (50% @ 5 years)	\$11.7M	\$18.6M
Exit Ownership	23%	37%
Follow-on Investments (Dilution)	\$4.2M	\$11.9M
<b>Required Seed-Stage Ownership</b>	<b>28%</b>	<b>68%</b>

**Solution?**

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**HAX**

**NEXTFAB**

 **alphalab gear**

  
**MHUB**

**Newlab**

Quite a few started in mid 2010s, but many are gone...

# Even Investors Need Expertise

MANUFACTURING

## The Top 40 Investors In Industrial Tech: How Investments In Transformative Solutions Using AI, Cloud, And Edge Act Like Probiotics For Manufacturing

# Industrial VCs

## The top players

AE Industrial Partners (AE HorizonX)	Lux Capital
Bolt	mHUB
Boost VC	<u>Monozukuri Ventures</u>
Construct Capital	New Enterprise Associates (NEA)
Eclipse Ventures	OSS Ventures
Emerald Technology Ventures	SOSV
Founders Fund	Speedinvest
Heartland Ventures	The Engine
Khosla Ventures	White Star Capital
Lemnos Labs	

### OnRamp Manufacturing (Indianapolis, IN)

- 300+ manufacturing tech startups participate in the conference
- Started in 2019, the conference takes place in Indianapolis in Fall
- OnRamp is hosted by gener8tor, a startup accelerator in Madison, WI



### Some examples...

- When you hire advisors
  - **FAST Agreement (fi.co)**
- When you raise from angels
  - **SAFE (ycombinator.com)**
- When you raise for the seed round
  - **Series Seed (seriesseed.com)**
  - **Cooley GO (cooleygo.com)**



**Lots of things you don't know, like...**

- **How to raise money**
- **Who to talk to**
- **Terms good for you**
- **Affordable manufacturers**
- **Right pricing**
- **Hiring with stock option**
- **How to develop business**



**You have no time to stop and study. Ask them!**



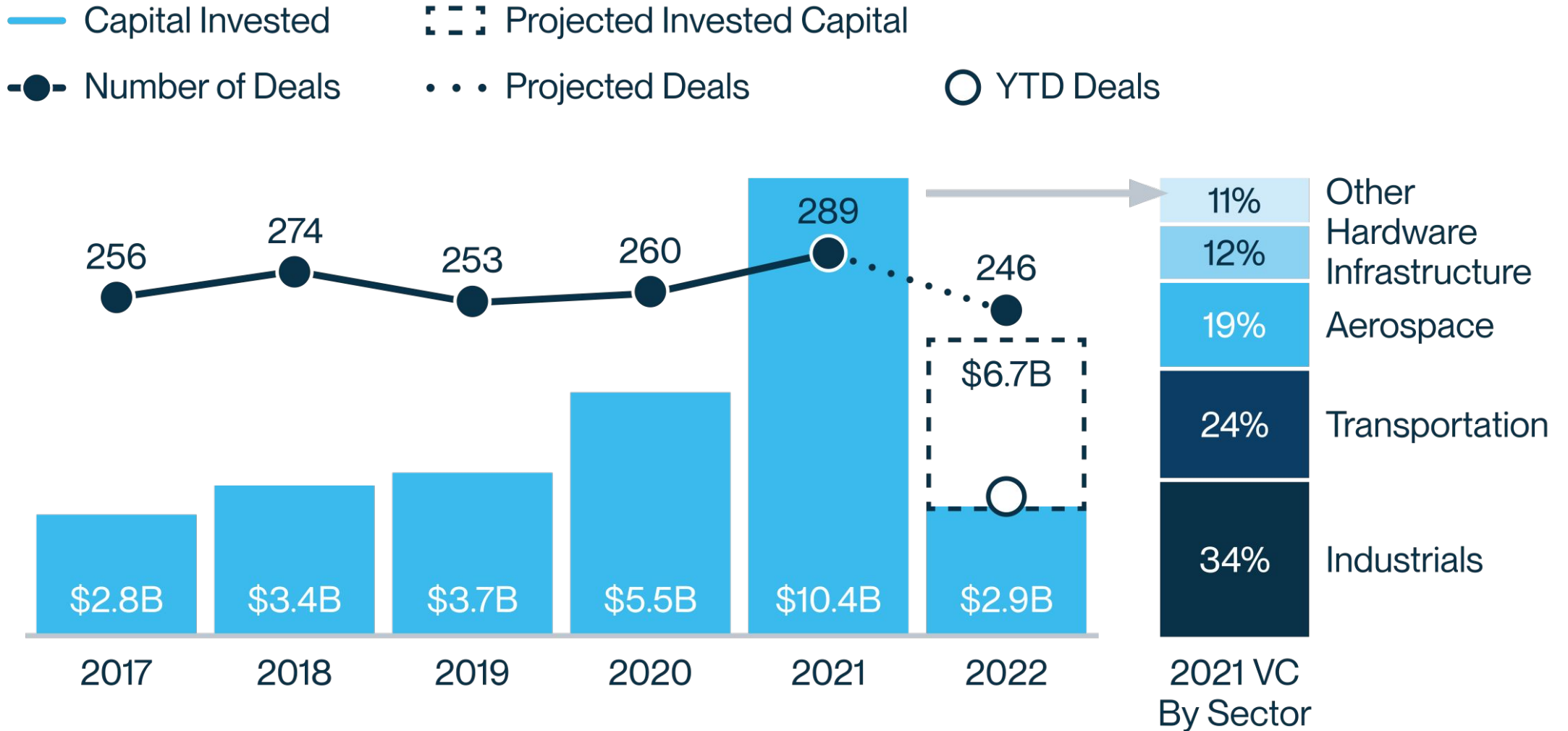
**Some New Idea**  

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**For Hardware Startups**

# Rise of HaaS

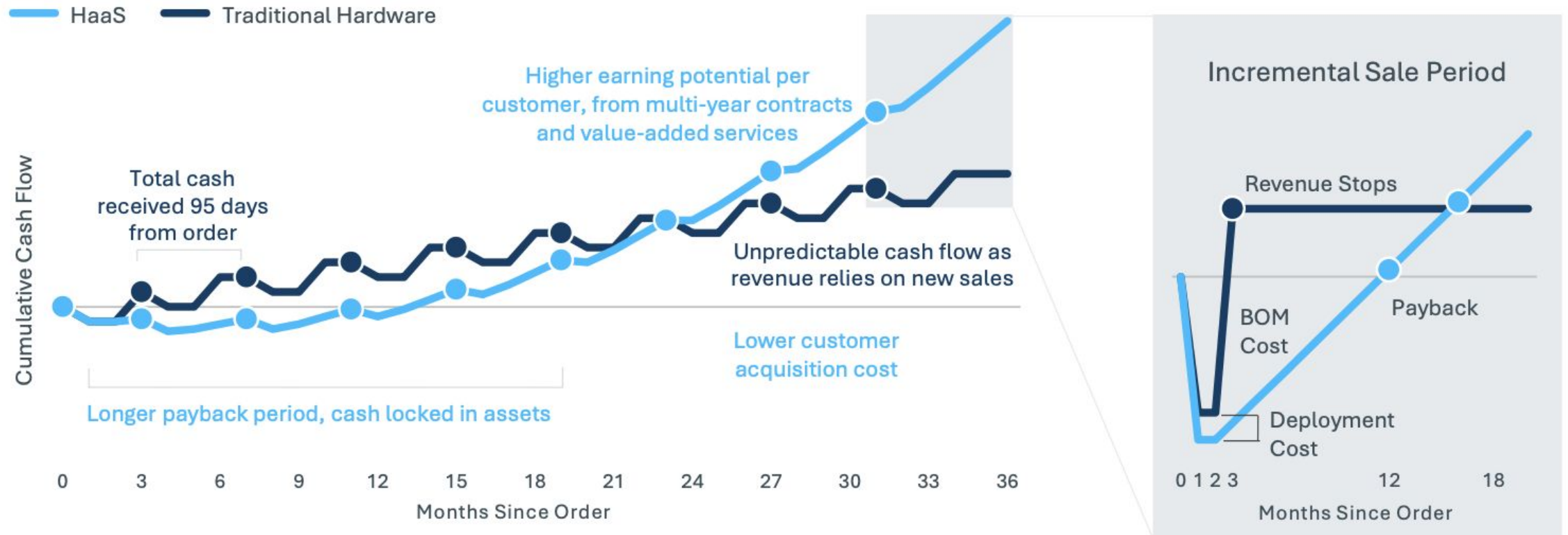
## Capital invested in HaaS doubled in 2021



# What is HaaS?

## More sustainable, but more capital intensive

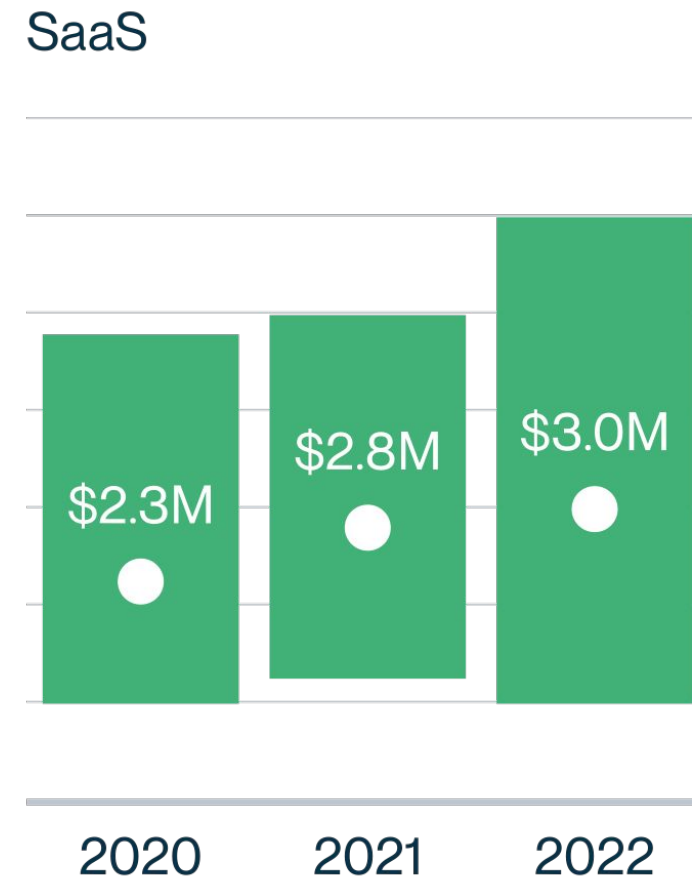
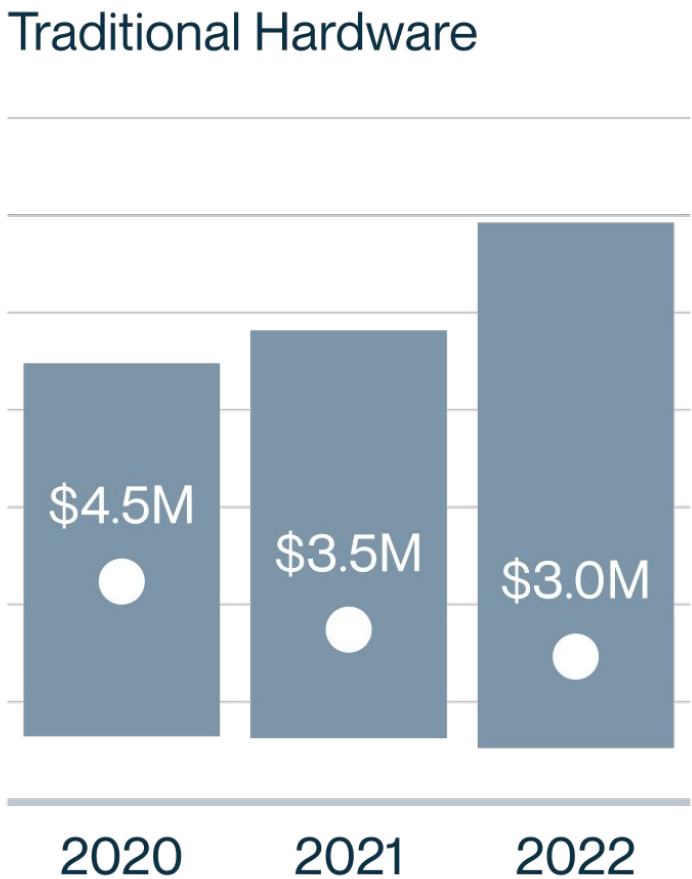
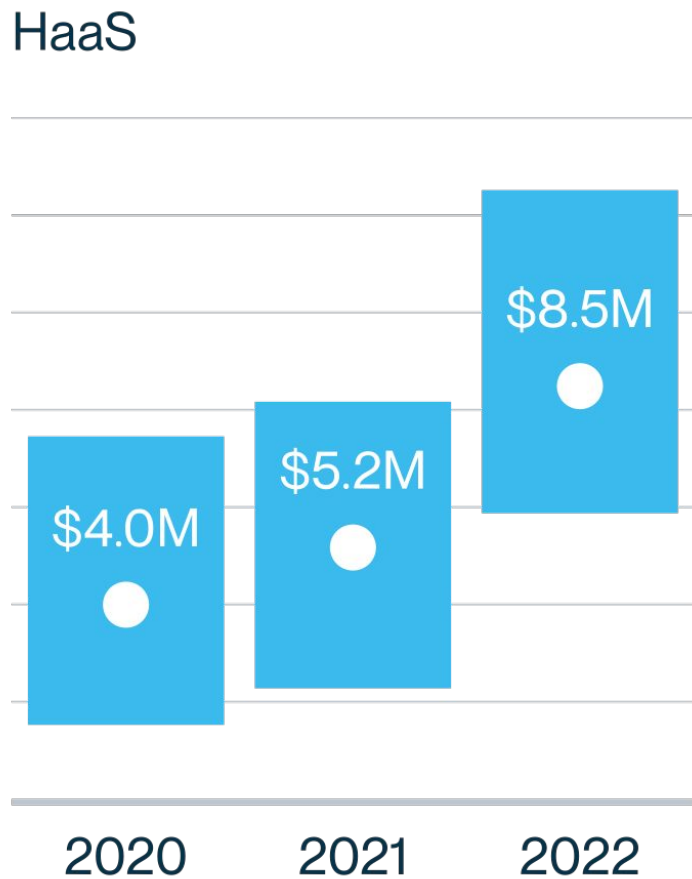
- HaaS (Hardware-As-A-Service): Pay-as-you-go model for hardware
- Traditional Hardware: Customers pay upfront for hardware



## Investors started choosing HaaS

■ Middle 50% of Companies

● Median



# Why not popular? HaaS is more difficult to operate

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- More capital intensive
  - Need to raise more capital in earlier time
- More operational burdens
  - Better financial operations



# **For HaaS, Think about Debt Financing ahead**

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- **Revenue-based Financing**
- **Venture Debt**
- **Purchase Order Financing**
- **Asset-based Financing**
- **Venture Leasing**
- **Project Finance**
- **Structured Finance**

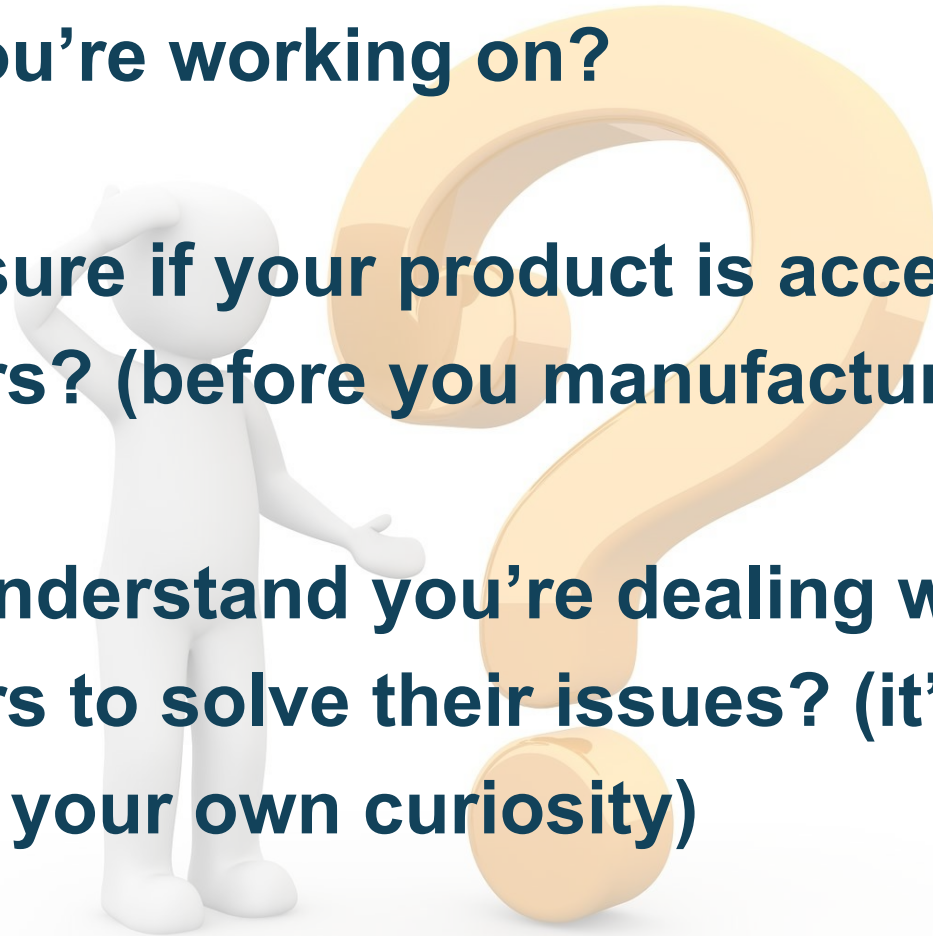
**Last but not Least**

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# Should you be a hardware startup? Think about it.

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- Do you really need hardware products to solve the issues you're working on?
- Are you sure if your product is accepted by customers? (before you manufacture the product)
- Do you understand you're dealing with your customers to solve their issues? (it's not research study for your own curiosity)







**Thank you**

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