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Opportunities in 2020 and beyond: APIs, Genomics, Communities, Video and good old SaaS — Startup Hacks by Alex Iskold

Feb 9 Written By Alex Iskold

14-18 minutes

I've been investing now for 6 years, first as the Managing Director in Techstars in NYC and now as a Managing Director at 2048 ventures. I now backed over 110 startups at the earliest stage,While I don't believe in thematic portfolio construction at the pre-seed stage, I also believe that having focus areas, themes, trends you are really excited about is helpful when investing.I've been thinking a lot about what I am excited about now and why and decided to blog about.

1. Data and API based businesses

I love businesses that leverage data and APIs. Specifically, aggregation and storage of large data sets that offer API access to this data, as well as additional compute services.Our recent investments like Airspace Link and Ratio.city as well as my previous investment in Skywatch are examples of these kind of businesses.Airspace Link provides data infrastructure and APIs for local drone flights.

Governments use Airspace Link software to define no-fly zones and offer flight authorization and route API to commercial and private drones.Ratio.city is another example - they offer analytics and search for modern cities. The company aggregates public and private data sets and offers access to this data via an app and APIs.There are 3 reasons I find these businesses exciting.

API Business Model

I believe that APIs is the best business model ever invented.Charging per API call creates a simple and a natural way to scale based on the usage and utility. This is the model like a high volume marketplace, with software on both sides. It is an ultimate manifestation of Fred Wilson's First Law of Internet Physics.

Think about Amazon Web Services (AWS). This business for Amazon went from 0 to over $25B in revenue in just 15 years. AWS constantly enjoys negative revenue churn - companies start with smaller packages and then expand as their revenue grows.

Data Network Effects

Matt Turck wrote a seminal post back in 2016 about the power of Data Network Effects. In this post Matt argued that non-linear additional value can be delivered to more customers through accumulation of data.That is, the product will get better because you have data from a broad set of customers. The stronger moat emerges naturally, as more and more data gets added.

More APIs on top of Data

While Data Network Effect allows the company's product to be better, data and more data naturally lends itself to more computation.The more data you have the more you can compute against it, not just internally, but externally.The businesses with lots of data can now naturally offer more APIs to their customers.So Data and API Business Model create a flywheel - more data lends itself to more APIs and more APIs naturally push the company to expand their data offering.

2. Biotech and Genomics

To put it simply, I think that Biotech will be the next Tech.That is, the Biotechnology revolution will be bigger and will have broader implications than Technology revolution.This revolution is fueled by modern science, which is advancing at an exponential speed.On one hand we are now able to fully sequence each individual, analyze proteins, biomarkers, body systems, and brains with incredible precision. On the other hand, we are able and re-engineer ourselves.CRISPR technology is just one example, but its implications are profound.

We are on not only making incredible progress in curing cancers, we are effectively in a position to genetically alter humans.The implications of these advances are broad and profound. We are about to significantly expand the human Lifespan, optimize human performance, design and grow babies in the lab, widen the gap between rich and pour, just to name a few things.There is a mind boggling array of opportunities and possibilities. Here is where I believe the value will accrue in the biotech and genomics space:

Data and Infrastructure Layer

As I've written above, I am a huge fan of businesses that aggregate, and generate data and then offer data and computes on top of this data as an API.The biggest winners in the genomics space will be infrastructure and data businesses that will gather the data as a result of its business, and then productize themselves via a set of APIs.

Some of the examples from 2048 ventures portfolio include companies like nplex and Humane Genomics.nplex is a proteomics company working to build the world's fastest method for measuring proteins at-scale. As the company scales they will have the biggest data set of various biomarkers as they related to diseases. In a way, by scaling its core sequencing business, which itself is an API, nplex will become a data and an API company.

Humane Genomics is working to engineer viruses that target cancer cells. They take natural virus as a base, and modify it using, literally, a genetic 3D printer. As Humane Genomics scales it will expand library of synthetic viruses and will offer them via an API for different applications.

My last example is an imaginary company I would love to invest in.This would be a company in a rapidly growing Microbiome space. Start with compiling publicly available microbiomes. Add to this database a catalog of potential bacteria that can reside in our gut, and offer both of these data sets via an API.Next, use ML to start computing correlations between gut bacteria and various diseases like IBS, arthritis and cancer. This is an example of Data and API business on top of microbiome.

Replacing physics with software

Many of the things we talk about in this post are just flavors of what Marc Andreessen coined as Software is Eating the World.Here are just a few examples of this trend in medicine and pharma:ML models are paired up with doctors to help read radiology scans, aid at reading electronic medical records, predicting stages of the decease and much more as Eric Topol described in Deep Medicine.

Drug development is being accelerated because companies like, one of my investments, Generable, are creating sophisticated predictive models to help analyze patients data in clinical trials and predict success or failure.Similarly, biotech and pharma companies are now routinely using software simulations and models in the labs to reduce costs and improve predictability of efficacy of specific formulations while developing drugs.

And even patient recruitment is changing dramatically. 2048 Ventures portfolio company, Citrus Labs, is using apps and software to deliver superior patient experience and dramatically improve conversions for clinical trials. At the core, a complex, manual, and unpredictable process is getting replaced with apps and software.But which of these businesses are actually good venture investments ?It is unclear if an algorithmic business - ML/AI-based, is defensible long term.

My bet is that the true defensibility has to come from unique and differentiated data sets that are being produced and accumulated via an algorithm.What is clear here, is that big pharma is likely to benefit from this explosion of innovation and software eating the world.Historically, pharma companies have done well, but their businesses, because of physics and complexity, never had the kind of growth and multiples that software businesses had.

For comparison, Johnson and Johnson market cap increased 3x to $400B in the last 20 years, while Google increased 1,500 to $1T.But when you listen to podcasts like this one with a16z and the CEO of Novartis, you realize that modern pharma companies are well positioned to become the next gen of technology giants.They have a ton of cash, they understand innovation, and they recognize efficiencies

that can come from software. If they play the game correctly they should be in a position to consolidate, capture and benefit from the massive amount of innovation - on both, physics and software side.

3. Networks, Communities, and Marketplaces

I've written recently about the need to re-think Customers as a Community or a Network.To put it simply, I believe that IF the company can organize its customers into a network, it will be able to dramatically reduce CAC and extend LTV.Rebecca Kaden, Managing Partner at Union Square Ventures wrote about this recently as well, and I did a tweetstorm about her blog post.So where are the opportunities ?

CRM as a Network

There is an immediate opportunity to re-imagine CRM as a network.This would be a piece of infrastructure used by any D2C company and B2B companies that in addition of serving as a traditional CRM, would natively organize the customers into a network.In addition it would power the new outbound marketing and referrals, become a smarter input into advertising engine, and plug into conversion flow. That is, it would permeate all aspects of customer lifecycle.

Vertical Networks

Existing horizontal networks aren't great. Facebook feels like yesterdayware.Vertical communities are springing everywhere and there are still more opportunities here.At 2048 Ventures we are seeing startups working on communities for women, healthcare professionals, students, product managers, and of course general business professionals.Linkedin is under assault because it hasn't innovated in a long time, and frankly is just not useful.2048 Ventures portfolio company Bridge is focused on creating the next generation Linkedin starting with introductions. The core of Bridge is exactly opposite of the core of Linkedin - it is network-first, it is all about connectors and connecting.

Marketplaces

I remain bullish and very interested in Marketplaces. Marketplaces are API-like businesses with network affects and strong potential for moats.Uber and Airbnb are the canonical examples of consumer marketplaces. What can compare to their scale ? We've been thinking a lot about food marketplaces. I previously was an investor in now defunct Homemade, but remain excited and bullish on this space.Beyond consumer marketplaces, which aren't as easy to think of these days, we remain interested in marketplaces for SMBs, especially around supply chain.

4. Video is eating text

Whether we agree with it or not, video is becoming a dominant form of information consumption, rapidly replacing text.Ironically I foretold this trend in my post 12 years ago. Video is eating the text.Every single brand is producing increasing amount of video to promote itself to customers.2048 Ventures portfolio company soona is helping brands create fast casual and affordable video.

soona stores are magical experience where customers can interact and engage in the process of video creation. soona's Anytime offering allows brands to send products to soona, and quickly get back awesome quality videos and photos.Companies turn to video to help recruit. My portfolio company Altru is helping brands tell authentic stories via video.

Video Resume and Video Pitch

Everyone who follows my blog knows that I am a huge fan, and an advocate for video as a form of pitch. Check out Pitchtape for an example of a service that does it.There is an increasingly clear opportunity to create a video resume.Imagine a different kind of Linkedin profile where you briefly narrate what you did at each of your jobs, where you can request a video references from people you worked with. No doubt in my mind this will happen, and we will be so much better for it !

Scannable Video

When I first wrote about replacing pitch decks with video there was a pushback in venture community. VCs said - no thank you, I want to be able to quickly scan through the deck.The problem is that today's video players are clunky and not useful.Imagine being able to scan through the video as easy as we scan through a book or slides. Thats exactly where we are heading.Here is a recent tweetstorm I did,

and here is recent product from Vimeo called Chapters. Chapters is an incremental step in the right direction. What we need is a complete overhaul of a video player.

Video for Remote workers

Yet another big opportunity for video is in the area of remote work. Loom just raised $30M from Sequoia, and is going after simple way to communicate and share work via video.On the other spectrum of improving remote work, companies like Owl Labs are making distributed communication better and more inclusive by combining video and AI.It feels like there are a lot more opportunities for video to help with remote work and of course a lot more remote work software opportunities in general.

5. Software-First Experiences

I am really excited about using software to completely re-imagine physical experiences.Take company like Forward. They are re-imaging general practice as software and data first.The founders didn't ask what would happen if we augmented doctors with software and data. Instead, they asked what would the practice that started with software and data first look like ?

The results are startling and obvious. Forward offers the vision of healthcare where no decision is ever made without data and soon, without an AI algorithm.It feels immediately obvious once you think about it.What other physical experiences can be reimagined using software-first approach ?

The natural answer is Gyms.

For Forward-like alternative check out Hackd in NYC. It is early, but clearly headed in the right direction. Hackd reduces the amount you need to exercise to just 40 minutes a week. It is based on cutting edge biohacking, and equipment that tracks every exercise.Much like Forward is pushing for precision medicine, companies liked Hackd will pave the way to precision fitness.We are going to see a lot of physical experienced re-imagined through software, including retail, entertainment and travel.

6. The good old SaaS

We are still bullish and very excited about SaaS businesses.For example, Vitally, which I backed twice - both through Techstars and 2048 Ventures, is delivering an exceptional quality SaaS product focused on customer success. This is an essential product that helps anticipate customer churn. Vitally's customers, including Segment, Close, Zapier, and Gorgias, find it indispensable.

Another SaaS company that I backed twice is a GlossGenius - a platform for stylists and other beauty professionals. GlossGenius app is an essential companion for customers who use it to manage their entire business.So what is the common theme and the moat ?

It starts with the best in class SaaS product that creates stickiness.Beyond SaaS revenue, we are excited about companies that can create additional moats and stickiness from transactions, and additional products and services.Take, for example, another one of my investments,

Bento Box, which created world's best platform for restaurants. BentoBox started with the product that helped restaurants design and maintain their web sites. They later added other product and services and recently launched ability to order food.For BentoBox, the SaaS piece creates stronghold, and they are now able to up-sell on top of it.

And there is a whole lot more!

This post doesn't really scratch the surface of all the exciting things and opportunities we are seeing. Synthetic humans, digital cemeteries, ambient monitoring, longevity, synthetic food, robotic kitchens, and so much more.The future is so exciting and I feel incredibly privileged to be able to think about it and partner with incredible founders to make it actually happen.If you are a founder looking to connect, but don't have a common connection, here is how to best pitch me and 2048 ventures.