2020 Startup Themes

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13-17 minutes

Below are some interesting markets and themes for the year. I use “themes” in a broad sense, both for specific markets as well as broader societal changes in the seed ecosystem.

There are 11 of these.

1. The Law of Advertiser Atrophy

Ad companies are governed by a rule as durable as gravity: they must make their products worse over time. Corporations must produce profit, and the fastest path to increase revenue is at the cost of user experience. Amazon and Google used to feel powerful and sleek. Now they’re like Costco on Black Friday. Noisy, tacky and ad-riddled. And more profitable! (For now.)

This increase in revenue comes at the cost of long-term customer satisfaction, but nobody knows how to really measure that, so investors don’t care. Now Instagram has too many ads and finding a genuine phone charger on Amazon requires a degree in investigative journalism.

As this chewing gum loses flavor in the coming year, there might be an opportunity for startups to traverse previously impassable peaks and attack an incumbent head-on. A new search engine. A new social network. It’s been a while since we had a new consumer startup, and it might just happen next year.

Who’s left holding the bag? Timing is the ultimate catalyst for a short trade, and it would be unwise to bet against Amazon today. But one wonders if and when this will change. If the incumbent will manage to maintain relevance while the Great Man, the one responsible for overriding the short-termism of the free market, is off building rockets or at Burning Man.

2. Saying Yes to NoCode

NoCode startups were the defining theme of 2019. The idea behind NoCode is to make a new abstraction for software engineering. Just like Javascript made programming more accessible to a broader audience. If that were possible, new enterprise software could be constructed at a fraction of current costs. Who needs a Stanford graduate if you can build your widget with a few clicks? There are dozens of teams and seed-stage companies working on variants of this now. The market segments into two:

RPA (“Robotic Process Automation”). The idea is to automate mundane, repeated actions that information workers are doing by observing their actions and then mimicking them, like a human would do. UIPath is the darling of this world, with many small startups in its wake.

Lego Software. Instead of “watching” a human and “automating” their needs, lego software companies make it possible to compose a symphony by clicking and dragging. What previously took three Stanford undergrads can be done with a mouse. Zapier allows builders to move data between different services with a few clicks. Airtable and Notion enable advanced storage and manipulation of data through a simple interface. Glide super-charges those databases by enabling builders to turn them into mobile apps, a skill previously relegated to an elite few. Retool offers related “assembly” functionality for the desktop. See more in our 2019 Themes Post.

Who’s left holding the bag? Many of these companies are eating away at the fringe of software consultancy giants like Accenture and Deloitte. It’ll be interesting to see if any of the darling startups eat up material share of these giants.

3. The New Meme: Enterprise Search

“Enterprise search” is shaping up to be in 2020 what RPA was in 2019. A startup idea that hits the seed ecosystem like a fashion fad, with a surprising number of founders suddenly all wearing the same ripped jeans. I’ve seen about a dozen teams and companies working on next-generation enterprise search in the past few weeks. They’re all attempting to build the same thing: a search/feed/discovery product that helps you find things amongst Slack, Gmail and Salesforce clouds.

I’ve yet to see anyone properly tackle the more rudimentary, “boring” and lucrative approach: an on-prem search appliance, similar to GSE, that indexes internal intranet, wikis as well as email. On-prem software is annoying to build, something many founders shy away from.

Either way, this category will be one to watch. Just like photo-sharing apps were in 2011, the Californian startup optimism moves in fixed fashion fads, and this one is about to become Trending.

4. Digital Trade War

I find Lark very interesting. Lark is a mobile-first clone of Microsoft Office and Slack that quietly launched this year. Here’s the twist: it’s made by Bytedance, the Chinese company that created TikTok.

While far from perfect, Lark is surprisingly well built. What happens when it gets popular in the America? Will Microsoft / Google petition to ban it, the beginning of the Great American Firewall? Alternatively, how would success in China affect Microsoft Office revenue?

The market has priced in the trade war in atoms, but not in bits. A digital trade war is yet to come. TikTok has already been banned by the US Military. Will it be in the US App Store by years end?

5. The Privacy Headfake

There’s lots of excitement around building a better Google. DuckDuckGo is small, but it’s growing 50% year-over-year. As of last week, it is also a search option on every European Android device. If the growth rate were to double, DDG would surpass Google in 6 years. That’s at least mildly interesting. Cliqz has been gaining traction amongst a more technical crowd. The Brave browser has been growing (though with interestingly poor retention) and Privacy.com has been doing well.

This excitement aside, it’s not clear to me that privacy is an actual value proposition to customers. Privacy might be the digital spinach: something you know that’s good for you, beloved by regulators, but not a primary driver for anyone but the most extreme health consumers. I suspect we’ll see a lot of startups pitch privacy, but I’m not certain of the adoption they’ll get.

While consumer privacy might be overrated, enterprise ephemerality is underrated. In an era of constant breaches and hacks, retaining all of your corporate (and personal) information might be seen as a bug rather than a feature. What opportunities does this open up?

6. UAI (Useful AI)

We talk about machine learning a lot, but few (if any) successful startups have managed to apply it in a non-incremental, breakthrough product. That’s beginning to change. Klarity is a digital paralegal, turning contracts into forms and annotating legal documents. Rossum is a software filing cabinet, using deep learning to structure and organize contracts. OpenAI’s GPT-2 model is approaching the point where it can replace Demand Media.

More is on the cusp. Live, auto-generated closed captioning works now. Given free transcription and the drive of remote work to video conferencing, we’re about to witness a Cambrian explosion of cataloged meeting information. What was previously oral knowledge will be automatically documented by machines. We’ll see many opportunities come out of this.

Finally, while one might think value at the lower layers of the stack would accrue to incumbents, challenger startups continue to show promise, both at the API (AssemblyAI, cheaper and better speech API) and silicon layers (Cerebras, GraphCore, Groq).

7. Radar

Autonomy, 5G and other factors have created a relaxed regulatory environment for radar, which is seeping over to other industries. Startups like Zendar, Arbe, Vayyar and Leo Labs are all examples of radar-first companies in the aerospace and autonomy market.

It might expand beyond that too: Apple has its Ultra Wideband Technology. Amazon's Sidewalk uses radar to build a location-based mesh network. Google's Project Soli uses radar to turn hand gestures into keyboard input. (Interestingly, regulators have taken note — the Pixel 4 is banned in India due to the spectrum this radar uses.)

Relatedly, Software-defined radio has become recently cheap enough for anyone to experiment. You can build your own cell tower spoofer for $15. You can jam satellite signals. Many interesting military and consumer applications to come.

8. Remote & Collaboration

"So, where are you going to settle your company?"

This used to be a trick question. Investors would penalize founders who answered anything other than "San Francisco". That's changed over the past year. Remote is acceptable, even encouraged. This might be due to good video conferencing, Bay Area housing, and perhaps most importantly — GitLab and Zapier's success, providing proof of "fully distributed unicorns".

Regardless, remote is in vogue and founders are rushing to build all parts of the distributed startup supply chain: Terminal helps generate remote teams, Tandem and There attempt to create a remote "office", and Loom helps teams share their work over video.

Fueled by this trend, collaboration products continue to be popular. Notion is increasingly the wiki of choice for teams. Coda and Threads are building new hybrid variants of Google Docs, bringing the best of Slack and documents together. Figma remains an ever-popular multiplayer Photoshop (and a growing home to many lonely emails from investors).

Parts of the stack are owned by incumbents (Slack, Hangouts, Zoom). I'm not certain their position is infinitely stable. Zoom, for example, has a fantastic "molecule moat": the IP is hard to create. But there's no tax on switching. It's just a link you share over Slack. You could imagine a new Zoom getting adopted very quickly if it was better[1].

9. Developer Tools

Last year GitHub was acquired for $7.5B. Like cracking open a Coke on a hot summer day, Microsoft immediately whetted the appetite of investors for this category. In Q3 2017 the median fundraise for a startup in this category was $1.6M. By Q3 2019 tripled to $5.5M.

While GCP and AWS are great at the "dumb end" (compute, storage), their top-of-the-value-chain solutions are awful[2]. Using GCP or AWS's console like trying to sprint through molasses.

This leaves an opening for youthful startups to build: Zeit is increasingly a default choice for small team deployment. Repl.it is a hybrid playground for running and experimenting with code. I increasingly see Sidekiq (job queue for Ruby) and Metabase (a dashboard builder) open in founders' tabs.

AI is eating the software that ate the world, and specialized ML tools are growing with it. Deepnote and Streamlit are working on better versions of Jupyter, a popular open source workbench for ML. Weights and Biases is building a Tableau for data scientists.

[3]

10. The Enterprise Dabblers

Eternal September describes how Internet forums worsened as the web became popular. This effect is also true for ideas. A scene is best when it's the unknown frontier. In 2018, RPA was a bit of a secret. Few knew about it. By working on it, a founder self-selected themselves as disagreeable and driven. They were climbing Everest before it was popular.

As we discussed earlier, the secret is now out: from Airtable to UIPath to Retool, the new darlings of "NoCode" have caught the attention of young founders who want to build empires. The scene has become popular, and commensurate with that the quality has gone down. As of today (January 2019), we see a half dozen pitches a week for automation software. Most lack deep insights on the market. They just want to join the party.

What used to be a signal of originality is now a signal of conformity.

This trend will continue into the next year. The seed market is as hyperactive as a 10 year old guzzling Mountain Dew. There's an infinite number of fresh fund managers who will gladly deploy capital to these enterprise dabblers in the hopes of the team "figuring it out later". Don't get me wrong – we're always happy to take a bet on a team. But once an idea becomes popular, selection becomes harder. We have a strong aversion to the lack of crisp, rigorous thinking that seems to be so rampant right now.

11. Carbon & Climate

The climate startup scene has gone from being frigid and lonely to a raging inferno of activity. Consumer-facing companies like Joro and NetZero that are working on nudging consumers to buy sustainable products with point programs. We know branded credit cards cultivate loyalty to Target or American Airlines. Assuredly they can achieve a similar effect for Earth! Get 2X the points if you bring your cup to Starbucks. (I don't know how much of a planetary impact this will have, but that's another issue.)

GreenGovernance is creating a drop-in replacement for BlackRock and Vanguard. Hold the same assets, but use shareholder power to entice companies to lower emissions. Carl Icahn, but focused on the planet.

Another theme is geo-engineering, with one popular approach of capturing carbon by using olivine or other means. Bill Gates-backed Carbon Engineering is the startup-incumbent, having recently raised $68M. Prometheus claims it'll convert carbon into fuel next year(!). Charm Industrial (started by the founders of Segment and Firebase) is working on creating cheap, carbon-neutral hydrogen. Climeworks is making a giant air filter for Earth.

And plenty more pre-launch teams. Feels like we're just warming up.

Hopefully this list was interesting! Thank you for reading. If you have any questions, feel free to shoot me an email at d@dcgross.com.

Check out https://pioneer.app if you want to get funded for any of these ideas.

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[1] What would make a better Zoom merits another post, but proof we can do better is reality. Video conferencing is not as pleasant as meeting in the real world. Why? Lots to consider here.

[2] Tales of Google's internal infrastructure tools are legendary. Yet GCP's web console moves slower than a sleepy elephant. Dissecting why this is possible, structurally, is a very interesting question. Organizations are great at promoting agreeable, consensus-seeking individuals. These people build agreeable, "just OK" products. The disagreeable and driven rarely get sufficient authority to do anything radical. Hence startups.

[3] I have mixed emotions about this category. Despite frenetic activity, one should remember the basic laws of market physics. I use these products daily, but I'm an engineer. One of a lucky few. There aren't enough of me, and I always wonder how large these markets are.

On the other hand, there's still so much to be built. Making software is still hard compared to what it should be. Packages never install properly. DNS is a mess. Constant data leaks. Etc.