

Manufacturing, Autonomy, & The Future of American Defense | Dhruva Rajendra (Podcast Ep. 11)

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SUMMARY

The discussion revolves around the evolving landscape of military technology, particularly the role of drones and the F-35 fighter jet in modern warfare. The speakers express concern that the U.S. may lag in drone technology and tactics, emphasizing the need for rapid adaptation and investment in small drones as a critical component of future conflicts.

- The F-35 remains relevant in current military engagements, but future warfare may see a shift towards autonomous drones.*
- Small drones are increasingly important, and the U.S. may be unprepared for conflicts that prioritize drone technology.*
- The speakers critique the bureaucratic processes that hinder rapid innovation and adaptation in military technology.*
- There is a belief that the U.S. can mobilize quickly in a crisis, but this relies on removing artificial constraints in the defense sector.*
- The conversation highlights the need for a robust consumer drone market to support military applications and innovation.*
- Historical examples show that the U.S. has successfully adapted to threats in the past, but the current pace of change may not be sufficient.*
- The potential for drone swarms to dominate future battlefields raises questions about the effectiveness of traditional military assets like the F-35.*
- The discussion concludes that while there are significant challenges, the U.S. has the capacity to adapt and innovate if the right conditions are created.*

there's absolutely a place for the F35 if we're dealing with them as like our primary uh kind of enemy and of course we will want to be prepared for that next thing which might be an F35 except it has no pilot in it I think that the small drones are incredibly important and I think that if there's a conflict in the next 5 years a conflict that we actually like really care about I think we will be behind on it

[Music] Steve it's it's a machine gun not an assault rifle you idiot and I was like dude I know it's live like honestly he called it an assault rifle first and I just went with it cuz it was I didn't want to correct him on air like there was a whole thing but it was great honestly like the M we were on for 25 minutes chatting and and the um basically the on Spotify they that's

live and then on Spotify and on um Apple podcast they they cut it down they cut each segment down so basically if they're doing this week in stars for three hours they'll cut down to an hour and post it so if you go watch my segment on one of them it's like seven or eight minutes down from 25 and it's interesting to see what parts they cut yep of what I said and what not and you know I didn't hit all the all

the Talking Points the pr team has for me so yeah yeah yeah yeah so I was mad at myself I give myself like a B I do have one episode of that podcast that I have listened to multiple times it's the Trevor Milton interview do you remember this no this was the company Nicola I think they did like they were claiming they had like hydrogen powered uh vehicles that would compete with Tesla and in 2021 I think you went public by a

spack or something like that and the stock was really pumping but there was like a lot of questions around the company they just signed a deal with GM I was actually thinking about shorting it because as you know I have this like side hobby yeah and uh he went on this week in startups and Jason to his credit like kind of tapped into whatever uh investigative journalist uh uh thing he has where he just let this guy talk and

it is the most fascinating car crash I've ever witnessed on a podcast where this guy like if like if you were Prosecuting this guy didn't end up going to jail uh over over like uh Nicola or whatever but like Jason honestly crushed he just kind of let him talk I remember n i remember remember wait he's having speaking of that like he's trying to Jason thinks he's like an investigative journalist or something so he's like having I mean after that he

kind of is right he kind of is honestly yeah so he's having on the micro strategy guy Michael sailor or whatever have you seen this I I've heard mic our strategy chart we gotta look at the chart thanks Jack it's like you know this you know the grip this guy's doing well I I know yeah explain the trade again basically he's just he's buying Bitcoin on margin I mean tldr like he's he's buying Bitcoin on margin well cuz

before he was like this is my treasury strategy this is how I'm going to avoid inflation or something he says a lot of words to buy Bitcoin on margin and it's a by the way it's awesome I'm I'm here for it I think he's gonna crush it I mean he is crushing it yeah I mean go to fiveyear fiveyear I mean numbers numbers don't lie dog bald don't lie here's a fun one go to Max real quick go go back to 1999 yeah okay

there it is so there it is yep you know about this right no he was he he at the time I think had the record for most like net worth lost in a day or something like that when the dotom bubble burst and so he went all the way down and micr strategy's been hiding in Tyson's Corner basically what a record what a record to hold it has to be like I mean this guy's back to ac World Champ

right here I mean you know how the story is going to end everyone knows how the story is going to end I mean it's going to go all the way up right I mean it's crashing back down to earth and then there'll be another 20-year Wilderness period and then it'll come back dude this guy's awesome we need to get this guy in our company like we need to figure out how to hire this guy you should you should this is our

CFO he is your Quant be this is my quantitative yeah dude 20 look at that look at that run what was he doing for 20 years well he had some interesting things in the middle you know alarm.com was kind of a spin out of the company yeah yeah big public company uh it was started by the CTO of micro strategy who came back in and and another woman who was at micr straty like incubated it there they bought the

domain name or something like that they spun that out and I mean you don't have to pull that one up but like that's another multibillion dollar company yeah so this guy's awesome he kind of I think strikes me as the guy who's like he's uh crazy like a fox like he knows when something is coming like he's like oh iot there's going to be something here maybe stumbles through the exact exec but then every you know I mean Bitcoin might just

be the right instrument for him like cuz honestly the Zeitgeist like worldwide Bitcoin is just taking off it's huge and he's just like he's hopping on with margin do you think the us is going to add it to its strategic reserves or make it a strategic Reserve asset I don't know I could see Trump doing a rug pool like just like for fun you know like you know he's been like a big proponent of it leading up to the election just

through the I could see the real question is where does Trump said on CU if bar wants it to happen it'll happen man I don't know yeah so anyways yeah I had a pretty good weekend I went and sell um Wicked how was that I mean you know I'm a big Ariana Grande fan obviously it was amazing great did you see it I I just saw I was curious like how it was doing it was like 96% or

something on Rotten Tomatoes or something yeah I didn't see it it was really good it has um who's the guy from Independence Day Jeff gold Blum oh yeah Jeff gold plays Oz yeah by the way I didn't know the story like do you know the story well wasn't it like kind of a prequel this is why no but this is why it was really good cuz I had know I never saw it on Broadway never seen I never read about it so like

it was all new to me which was good I think a lot of people didn't have that okay like people go in they know the whole story basically it's like there's the witch the Wicked Witch of the West like her going to school and she meets the popular other witch Ariana Grande and they become friends and then like they go and take on The Wizard or whatever got it did you see yourself in the story is that where this is no

actually is the theme of the story that I took and this is actually kind of this may be like a roar shock test or whatever but basically the whole point of the movie to me is that Oz is the like the tyrannical State like he's trying to surveil everyone it's a surveillance State whoa he wants to basically control everyone with the witch's power he wants to like um you know change all the monkeys into Griffins they fly around and they have

flying surveillance and can make sure everyone's safe he wants to keep everyone safe safe from what just like he wants to keep everyone safe from animals and stuff because animals can talk oh so it's like big government and then the witches are taking on big government wow that's my take on it interesting it's I mean it really is now I need to watch it I guess yeah because Oz is trying to like he's trying to consolidate power and make sure he has

the yell Brook Road yep and he's just trying to make sure everyone's safe and that he's the one on top watching everyone huh yeah and then um the witch wants everyone to be free so then she she Rebels against Oz no I mean it's that's I mean that's awesome yeah it's really it's really thematic yeah well The Wizard of Oz had a lot of allegory you know a lot of stuff in it too right yeah yeah yeah I

mean all the good books and movies I mean that's obviously like Lord of the Rings you know that's like why andil and paler and what's the other one we have defense companies named themselves valanor all all of them have like a Middle Earth name because they they like the themes I guess yeah like what was the I guess what was the point like there's Mordor there got Sauron yeah there was uh paler is the seeing Stone yeah yep Ander is like some sort

of armor it was the I think it was the sword yeah what's Val look at what valanor is I mean they basically just have like a c I think like all the executives have like a copy of the sil marilan and they just like randomly pick a name out for a new company right that's what they do oh here we go the land of Valor oh right yeah I do remember this Kingdom of alarin after the

destruction of two lamps not really sure what this is we need to get the valanor um woman on the podcast I forget what can you look up valanor CEO we need to get her I think right when they did their announcement I reached out to her actually Bryce are Chief's noser oh really yeah I think she was trying to hire him but I'm not I'm not sure but uh they wrote back like I'm heads down building I hate when I get

that message by the way heads down building I think I said that to you I know I hated you for that all right first of all it wasn't actually true the best part your LinkedIn says building on it still I hate that can we we got oh I'm not I'm not changing that it's so oh building it always gets me every time come on how often are you looking me up on LinkedIn dude all the time I'm I'm

like a LinkedIn psychopath you yeah or no no really no you don't have a banner I spend too much time on X I do need a banner I can fix that it's great you need to get a deterrence Banner yeah I updated this after our last podcast because you ripped it at uh it was like your it was the first week first episode yeah yeah I see that I'm also the first person to see the new sign too we need

some magnesium I'm firing um this episode sponsored by Aloe magnesium spray apparently you told me off air here that uh magnesium is to calm you down yes so that's what I maybe I need some of that I'm sure you feel calm now there we go there you go smells great it does smell great smells really good what else is going on in your world oh wow let's see hiring you know

bringing on uh Engineers spending more time in Austin you know just trying to get the uh next generation of bullfrog pumped out here by you know hopefully by like March um yeah I saw it in person yeah since the last time we were on it was great it was awesome yeah very impressive it is yeah your product is hard to like video in a weird way which I didn't appreciate until I got there cuz You' sent me I'd

seen clips of it obviously before getting out there but you don't really appreciate any of it unless you're out there cuz the Drone is small and like it's a far distance and yeah yeah I well I'll tell you Luke got really mad about our Market our recent Market video because he the one shot he wanted was the the camera crew flies a drone behind the Drone we're going to shoot and then that camera is looking at the Drone and

in the distance the truck yep and he wants that full shot to show it and they didn't get that and he's like that feels like a hard shot to get it's a hard shot to get he's really mad he's like that's the one shot I wanted yeah and you failed us and look honestly his name's on the company placard you know it's Allen control system so when he's not happy dude when he's not happy marketing the marketing team is we're in trouble

we're in trouble that's right that's right the one shot he needed you know yeah I don't know so that's pretty much it with us what's up with you guys like what's the latest I know you Clos you certainly just closed a new funding round can you talk about that yet not yet um can't talk about I can't talk about that yet but on the team have added a few more folks um uh I think last time I was on team was still small

like I think we were just a few months in yeah didn't even have her link page been running until the day after the Pod um but brought on a new sales brought on a new sales hire uh his name's Patrick comes over from paler you saw I troll him on LinkedIn you I did not see that today did you see I B think had about a link did feed I guess man you missed it I'll go check it um I was texting with

him on the way over he's he's on a flight to he's actually on a flight to Austin for a conference so you'll probably see the troll when he lands or something what conference uh I forget off the top of my I think it was like an ndia one no I don't remember yeah okay no anyways so he's on his way to Austin um yeah added added him uh Ed a woman named Andrea who worked with Brian and I

at our last company uh to kind of lead like some of our uh research on Gen 2 products um before latch she worked at Amazon Robotics and then prior to that she actually did spent some time in the space industry added a few other folks from Tesla uh we're over I think you know this but like our development shop is in Fremont so from Tesla HQ so we pulled in a few fol uh guy Nam Justin Veron uh shro um and

so yeah team's starting to get a little bit bigger and you know stuff starting to happen and you know we're hoping that uh you know sort of like in going into next year we're still to be producing our first product which are primers and starting to expand out from there yeah I know all about the primers actually we talked about primers on the last episode so people can go go back and reference that I wanted to actually chat about

just a little bit about fuses cuz that kind of intrigued me this morning you're talking about fuses I know you're not building anything there yet but like what is the you mentioned that the current State of the art in is pretty busted right now we we spend a lot of time talking to so you know we're a little different in that a lot of the people we spend time with we we certainly like go to government customers try to understand like where

demand is going and things like that but we spend a lot of time with um companies trying to build other products right so with primers we're not actually s we we theoretically will at some point sell primers directly the government but most of our customers are actually other uh mostly small and midsize primes and so which is Sweet By the way which is great yeah yeah yeah um and you know when we've been talking to folks about other

thing other ways we can use the platform uh that we're building uh to accelerate what they're doing on the road maps yeah fuses comes up a lot like there's uh from a few different pieces one there's not a ton of people that have that expertise so I think like just finding someone who knows fuses is isck material is in a fuse like what do it depends on the round so like you know I think one round we looked at a bunch was the uh is

like the 40 mic mic round right 40 mic mic rounds there's different fuses for different platforms but um you know one of the ones that we saw which was like I I looked at it and I was like well I understand why reliability can be challenging and why this is so hard to make and all this other stuff it's because if you look at it you're like I this is borderline indistinguishable from like a Swiss watch or something

like that it's a super when people think fuses they think like cartoonish like Tom and Jerry like you light a fuse and yeah it's not really like that though it's not that and also I think fuses are going to get innovated on more and more because the missions are changing right so like uh procs fuses have been around for a long time but I mean you're in the Drone business there's a lot of different cool ideas that folks have for

like proximity based fuses that'll go off when you want them that kind of stuff proximity rounds are like yeah like microcontroller based or something programmable fuses like there's a lot of anyway so we' we've we've noticed that um yeah there's just not a lot of people who who do them it's another area of the industrial base that maybe needs more investment um Northrup Armament systems have like a subcontractor that makes the fuses for their proc rounds maybe or do they do

that all in house I don't know with North R but I know a lot of other companies there's they're stitching it together or something like that I should ask them I'm just curious yeah just tweet I'm assuming they have a full supply chain of small companies below them that help them mostly especially something like fuses or again like primers like yes you're stitching it together with smaller small shs and that's the other thing is like a lot of

just like any energetic category probably most defense categories I guess like the people who know it the best are like retiring out and there's not a clear like succession path plan happening especially if they're in the small shops if it's a small shop situation it's not like it's not like North where they can like oh let's like move someone around and train them on this and you can be the VP of fuses or whatever north of Grumman they can't

escape me like it's family business my I mean they're just they're going to have to deal right till the end of this like look I'll tell you the big primes like the big primes are so slow they would even admit like I'm in meetings with them and they're like guys we just we're not a startup you know we move pretty slow but we want to work with you guys and I'm like guys I'm going to be around

for a long time I'm 38 that's I always I'm like look we we could do this partnership in 10 years from now I'll still be doing this [_] they probably love that they love it when you're just like I'll be slower than you this is the point be slower than you totally I mean we we've been um yeah like even the small shops that we work with they I think there's another Dynamic which is

they do want other like new smart folks like yourself to kind of come into the market bring new ideas that kind of thing energy and so anyways like that's that's just something we've observed as we've hops got to the country I just think that you'll you'll probably come to find since you're doing this way more than me is that these big primes yeah the supply they're not doing it all themselves it's it's a full there's a

full supply chain there's a full set of companies and there's plenty of opportunities to like break in for sure tot totally totally and I think there'll be more midsize primes I think like you know we talk a lot about like we're going to move away from a big four or five or whatever to you know 20 different companies but there'll be like a lot of a pretty healthy this is actually a perfect segue great consolidation air environment all right

pull up that merger air environment Blue Halo I was trying to get um and the Blue Halo people probably just think I'm kind of a loser I was like I've been like messaging them I'm like hey guys congrats like where's the holiday party in DC I'll be there I'm like trying to get invited to their party like yeah guys bring me in dude yeah they're like Steve shut up I mean out I had some thoughts on this but

okay all right here we go hold on don't you just keep it there for a second so this is more of a it's more of a merger you know more of a pure was the most surprising thing when I opened the deck it was like a 6040 or something like that deal so it is it's pretty much a merger yeah but I I'm interested because I I basically like Blue Halo has way more product breadth right like that high level like for

people who don't know listening like they have a lot of products I think more more than air environment probably like I've saw the deck like there's a lot of them and air environment has the much more successful product the switchblade switch blades printing cash so my take and this is very rudimentary probably but it's like hey we have this we have this product that's printing cash like let's also like diversify into y like a larger product Suite now yeah like when

your currency is worth the most basically because this product is hot diu contracts switch H yeah yeah my my take yeah I mean that was the thing that was surprising to me or not I mean yeah I mean I'm sure there's a lot by the way there's you know in the financial engineering world like there's probably a that's very rudimentary like product strategy lens I'm sure there's I'm sure there's all kinds of like crazy financialization scheme that make this

smart it's well I think like m&a deals usually are trying to answer like a boardroom question right and they're usually either mostly off off and like you're mostly playing offense or you're mostly playing defense right so they're typically defensive though well it I mean Facebook buying Instagram was absolutely like more defensive than offensive right like and it ended up being it ended up being both though really well that's my point it's it's

never like one of the other it's like

always like mostly like cuz you're also selling the upside of a deal there's like the like Facebook I'm sure the first bullet was if we do this we might lose mobile and they just become a public company and like that I mean if you remember the HTML 5 Facebook app they had it was terrible they were getting smoked they buy Instagram that answers the question of like what's your mobile thing that was horrible yeah and then an offensive one would be like you

know uh I don't know like Google YouTube right like YouTube uh is starting to become a thing Google looks at them they say we have the ad Network we have the servers we can basically take losses on this thing for a long time yeah and that is more offensive that but in hindsight it was almost a little too CU if they could you imagine Google not in video I mean that would be the first thing get

on their you know in their board meetings all the time so I think for this one I mean combining two companies like this my my first thing and again like with air being the mer uh the the more majority thing in my view it's probably what you along lines of what you said it's like kind of like what's next so like an more offensive play and also they probably are looking around and seeing other companies starting to

like come into the space so they're like how do we make sure we play a little bit of Defense but like also take as full advantage as we can of the lead we maybe have in some of the stuff yeah one of the things I'm thinking of is like like the commoditize your compliments business strategy like look the switchblade is loitering munition Blue Halo is known for counter drone technology they have lots of different counter drone products you know they

have the they have RF they have lasers you know they're doing a bunch of different stuff there one of the things I think they could do that's interesting with this merger is start lowering the price on all those products wait which products counter drone stuff acquire this counter drone company Blue Halo and then start more more or less giving it away not for free because government doesn't take things for free but make it a lot cheaper and start really pumping

it down the sales Channel and kind of putting a a lot of pressure on the other counter drone companies like Ander yeah so that's a that's a commoditize your compliments and then and then win in the loitering munition space where you're printing money but totally that kind of Drive the counter drone products to zero could be I mean could it go the other way too I mean like I guess my question would be like where is there more price

sensitivity like right now we've we both know people who are pitching cheaper and cheaper and cheaper drones with roughly AER vibrates so is that also going to be the other way where it's like we we'll take we'll switch blades is 20% off if you uh also buy all this other stuff yeah I mean I'm just throwing crazy ideas out there I don't actually I mean look I'm not a journalist but I think that yeah there's interesting plays all around I actually

think overall I'm very very positive on it on I think it's a smart play Crazy year for air environment too weren't they down like 50% at the beginning of this year or like a year must have been like a year ago now that the stock got just punished I don't know I think they are you sure it's been crushing I thought oh no no no it's been crushing since like I think they're back and Beyond wherever that dip was uh oh yeah

but I I remember I mean you could probably pull up this chart too but I think like I want to say it was eight months ago I suck at timeline so could have been like for longer than that but I'm pretty sure that the stock took a big hit a few quarters ago and now you've got a merger which is basically um yeah so go one year real quick one year yeah I guess it's been pretty much

like kind of well so go back see that little that first Mountain uh right right right right right right yep there yeah then it then it went down yeah it's kind of just yeah yeah and then it kind of came all the way back up I think now I mean look didn't even really take much of a beating since the acquisition to be honest like you know usually with a merger like that your stock price really tanks right but

I think investors are I think they're liking it I mean look five five and a half billion market cap you know it's a third of the price of Andel and it's got a lot of upside I mean yeah you're a buyer I mean I'm a buyer you're a buyer I mean how can you not be the diu is a buyer I'm a buyer yeah well I mean again this is this was this is sort of my point like like I think they

got they they like tempered also it's our honestly like it says it's American defense company headquartered in Arlington so is Blue Halo you got Arlington Capital part I mean to be to be real it's in our home court it is in our home court yeah we we should really just Beast Coast bio East Coast West Coast battle exactly but yeah no like to your point I mean this is a company that again I think got uh lost a lot of value in this

built it all the way back up this year and now they're executing a pretty big and complicated merger yeah I think yeah yeah I think we've done a disservice to ourselves if we don't get into one of their Christmas parties in Arlington like what are we doing are we really Founders if we can't get into the air environment Blue Halo Christmas party that's right like can we we got to hang up our cleats we haven't done it right

so I don't know I think it's a deal where do you think this company is five years from now I mean compounding still 50 billion market cap they're 10x like I think they're on I think they're crushing it was there any like deals like this that were in defense at that I was I was trying to think about the closest I got was like and Martin merged well the closest one I got was like um yeah that's probably a good one CU it

was like more of a merger uh well didn't nor do T TDW and then that put them in a new tier and they've sort of been compounding since then that was a big deal do you remember that uh I don't remember that exactly but yeah like early 2000s nor had a lot of huge mergers yeah like on the way to northr Grumman yeah yeah and yeah and anyways they got to a point where they just got

bigger and they could keep competing on stuff so yeah anyway this is big news I think this is the this has been the big we were supposed to do an emergency podcast when this news dropped but we you know schedules didn't didn't was of emergency we're not we're not really a breaking news podcast anyway no I don't think that would work it's more of a variety show right I don't think people come to the the Drone Wars for the

breaking news well the the other big one uh did you see the uh the F35 on X you spending too much time on LinkedIn I may be spending too much time on LinkedIn honestly the customer on LinkedIn dude I know you're an X Maxi but uh can we pull up the I think I did see this the F35 uh we should we should discuss this because I think that saw it elon's probably wrong here right I think

I did see this uh there it is the first one actually both of them yeah I mean either one's here we go so I think that okay I'll let you go first you got I I got a take here but oh well please please take so I think he's just trying to be provocative like I think Elon does know the F35 is a good like an important like you want fighter jets they do a lot different thing than

a drone the Drone swarm like they fly much higher much faster they're delivering like massive missiles onto targets you know like it's just a different they do a lot of stuff that you nobody knows about because they're not allowed to I think the contrast with the Swarms is provocative it's just like saying hey I think at the high level he's saying hey like let's actually invest our money in like future warfare products not just like continuing to

build the F35 which is right across 150 districts 150 Congressmen have like money in the you know have their hand in the honey pot right stupid like let's stop doing this so I think like I think it's just mostly a provocative thing he's trying to go for right right well I think I think you're probably right but then the question is like what is he trying to provoke so I think there there's like a there's a question like

will will autonomy get good enough that in 20 years the pilot does seem like not you know helpful basically and like I'm not I'm definitely not the person to answer that question but I think that is the question that he's pressing on which will mean that like you know yeah if if he is correct at some point in the next 50 years but Elon is also very bad at time scales right so like you know he

might be right in like 30 or 40 years in which case the F-35 will still have value uh if you will right so I mean just out though like just war game it out you could have a you see that you remember that wall of drones that he linked is that under here or is that there's a couple it's on it's like you'll find it in a second but you know the wall of drones yep like okay imagine

an F35 coming out a wall of drones dude they're going to shoot a missile right through that wall of drones nothing can stop [__] like F35 yeah yeah we posted of maybe sell you on LinkedIn well we're definitely okay on the top I of drone Warfare we're definitely ahead of Elon like elon's busy doing neuralink space like do like the dude's got like 15 things he's leading on y I mean he can give us one

thing you know like come on right come on yeah this okay like so do you think actually do you think a wall of drones could get sophisticated enough to kind of envelop any sort of F35 munition cuz if that's the case then maybe Elon is right I just don't think like these things stop like a but but these things are not also not static so my assumption would be that whomever is like managing F35 would see

that this is coming and then start to iterate on like ways to counter that all right here's a dumb question Jack this makes me look like I don't know defense but maybe I don't F35 payloads can we look up a variety of the different Munitions that go on in F35 I'm okay to get educated with the audience like I don't I have no shame like I don't you know it's not like I have to know everything oh Luke actually this is one

of funniest things because Luke watches all these podcasts he loves them Y and he's always critiquing me and he's like I love how Steve you have guests on and you pretend like you know what they're talking about and then you ask them he goes you ask them to like say the acronym for the audience but it's for you and he's like you do it so naturally and I'm like you're like got caught caught I mean Luke knows me better than

anyone so yeah okay let's look at some of the payloads here okay hold on what are you trying to look for I want to know like which like what missiles they put on an F35 uh Sidewinder okay go go down there's there's a I think I saw the list there it is on the left maybe uh yeah Jack one of the feedback I have for you is you do more image searches yeah image search first more image searches and fewer like

these like text blocks you give me is that it you're getting there Jack though don't worry all here we go okay so okay the okay so I knew that they had the the Jdam and then they have the Glide bombs you see the Glide bombs I mean they have a lot of options they have a lot of stuff okay and it looks like basically you can put like one two three yeah well

and this kind of I think is the Crux of the debate right so so a lot of the people who came out against we or like for the F35 guess and against what Elon and Mark Andreessen and all the rest of them were saying like they're kind of living in the next few years here and they're looking around the world and they're saying like you know our peer adversaries like there's absolutely a place for the F-35 if we're dealing with

them as like our primary uh kind of enemy and of course Mark and Elon live their whole lives 30 years in the future right yeah and so like in their mind the future is like kind of already here it's happening again probably all technologists are kind of bad a timeline so like I'm also on that list of people who sucks at that but point is is like you know that they both could be kind of like a little right right where it's

like yes if you look around the world today you want to be you want to you want this thing you know kind of fully loaded up for the missions it might have to take in Asia in the Middle East or wherever um but at the same time in like 30 40 years just like all technology becomes eventually obsolete like we will want to be prepared for that next thing which might be an F35 except it has no

pilot in it or whatever right I'm just wondering like well yeah I agree with all that I'm just wondering if like the you let's just say you're going to scramble a bunch of f-35s to Moscow made up a thing and they have like a drone swarm uh wall no they have a drone swarm wall protecting their city like do you think that that can actually intercept like these missiles I think maybe I think probably I mean if you had no off from near like

he was on his vision of the future whether it's right or wrong is that there are so many of these in the sky that they actually operate as Shields too they attack that that's so like that's the steel man for Elon being 100% right yes yeah which again like if you project forward to the future 10 15 20 years that that could just be the thing well I ask how do you keep these in the air so

long then it's not like they can just stay up there as a shield and he says like well there's just like they're constant replacing themselves one comes back down toy especially I mean they're so cheap now right like they're cheaper than artillery shell like they're the cost is going down quite a bit and I also think like um there was a video I saw this was actually crazy it was in China it was like a drone doing a um I

think I sent it to you actually drone doing like uh um food delivery yeah into like a vending machine kind of setup or whatever and like we don't have that here yet so my first reaction was like it is crazy that because of regulation and all the other stuff we can't actually get that done here which that's a whole other uh Dro Dro timated podcast to talk through but the point is is like yeah if there's going to be more and

more commercial use cases that get green lit like the cost of these things will go down and eventually it won't make any sense to build like it's like it's like the smartphone right like everyone you talk to like there's not like a custom government phone uh that they all have in their pockets it's iPhones yeah so I I think that mostly that yeah like we're going to have a situation where it's mostly drone swarms counter drone

products and maybe like Hypersonic missiles and this is kind of sits in between those two things it's not a Hypersonic missile it's like slower than that yeah and kind of pointless yeah yeah El's probably right he's right again it's over it's it's over what time frame right again like for the next two years uh I wouldn't really want to like start wanting these things I mean how many do we have Jack how many f35s do we

have built like you know well it's not just we've built a bunch but we've also given them to other people that's I think like if we let's say we have a 100 I don't know how many we have but like obviously it's cool we have a hundred of them like we could really [_] [_] up with a 100 of these I mean yeah do we need another 100 well that's the question right

like well it's not just us again right so it could be for allies for if you're trying to create like a sheared yeah you know uh common thing but it's it's like to your point it is provocative it does make you think about like well yes from this is what he does he's like from first principl does this make sense anymore right yeah and look I think the F35 design started in the 90s if I'm not mistaken I mean a long time

ago it's been it's been a while and so like yes things have obviously changed in essentially a quarter Century we got a thousand so that means we probably have like 250 or 300 of them or something we've probably given a bunch out right right and then I think the other thing too will be like Talent like if you you're a young up incomer you're in the Navy you're in the Air Force do you want to bank your career on I mean

fly good D F35 sounds awesome that sounds sweet sounds very cool I'm sure another Top Gun sequel will create a whole batch of new people excepted to jump into a cockpit but yeah and it's some point do you also have those people start to say I'm going to go do something else because I mean it sounds way cooler to fly an F35 than it is to like sit on your couch and drive a drone swarm around no it does and like I

control this drone swarm and I don't want to like I hope I hope this doesn't get cut the wrong way but I did hear somebody I think it was I don't remember but was some podcast I heard where somebody said like at some point we should keep the pilots actually but they should be like um uh and I'm not saying I agree with this I'm just saying this is what he said but it was interesting point I'm provoking uh if you will uh

kind of like how in like European parades they have like you know guys on horses and stuff like that or like at the at Buckingham Palace you got the guards standing out front like those CS are obviously not there for protection anymore yeah um just like the horses aren't there to like you know uh for real defense purposes so the argument was that the pilots become a little bit like almost like for parades and stuff like that like they're more there for

show so you'll have air shows and stuff like that and that'll be where you put folks um but they won't be actually the people who go fight Wars like will have move to drones and stuff like that yeah yeah I mean you know the future war is like the uh did you read that book the white sun war or whatever no okay that's like the it's like 80 page it's short okay but like all the war is in the

future for him is it's robots on robots drones or you know bullfrog type things and then there's repair technicians that have to go into the battlefield and repair this stuff oh wow and then the Drone the whole game is how many how efficiently you can kill the repair Texs yeah that's what that's the that's like how the book's laid out and so like that's the future battle space huh I think he's right probably like that's that makes sense like you've got like

autonomous look at all these autonomous vehicle companies yep you have to imag imagine they're going to succeed right I mean if they don't succeed then then this guy this guy's book is totally wrong right right right but I imagine the the autonomous vehicles will succeed and I imagine there will be autonomous guns on those Vehicles yeah well then the qu I mean I don't I didn't read the book obviously but you know then you could eventually get into a spot where

you have like drones reping drones and stuff like that so it's just kind of like never ending supply chain basically that's like self-healing self-repairing then you really get closer to Terminator so I guess that's the yeah I just think that like the well like it's hard to get like repair like you'd have to be a pretty adroit a drit Droid to like

repair a robot so like I think humans are going to have to do it for a while could be I

mean you know better than me you're better with the robot hands than I am I guess yeah this is all like speculative but in the future I think yes hands like will become more and more of a like you there's a BN bunch of stuff that's happened in the last like especially two to three years in robot hands yes um like like people talk a lot about like like open AI had a couple demos of like

folding laundry and stuff like that a couple years like a year or so ago maybe again terrible times but like you can see that this stuff is starting to get better and better and better like we're going to get to a point like there is no human hand on to one replacement to your point however there are a bunch of people like now that's where a lot of like energy and talent is going is to like creating that I mean I you'll know

when the sex robot industry knows like they're going to be first obviously maybe we'll see you don't think they're going to be first well I think um they're always first yeah maybe maybe uh I think I think like there's I I think you'll see it a lot in manufacturing I think you'll see it in some like weird places maybe in manufacturing because over before sex industry because the the incentives are so great in manufacturing to make it work robots are good at

things that are dull and dangerous like that's what you want right I can see I can see manufacturing leading the way here for once so there was a stat I think uh I saw I didn't I didn't actually verify it but I saw it this morning it was like 10% of South Korea's Workforce is now robots or something like that I have no idea how they calculated it it sounds kind of like border un fake but the point is like

they are trying to rapidly replace uh you know their aging Workforce uh with robots right and so like I think that when you're talking about Robotics and Manufacturing you're talking about like GDP scale yeah it's huge incentives huge incentives and you don't yeah the the alternative is like death and destruction yeah terrible you if you don't repair an industrial basee right so um or existential yeah so I think yes you'll see maybe maybe the sex robots

will be a thing manufactur I think you made a good case for manufacturing being ahead being ahead of the sex industry yeah yeah yeah again dull and dangerous jobs robot should be doing um and yeah they're getting smarter and smarter about like handling edge cases and things like that like once they like manufacturing robots have obviously been around for a very long time solving like very deterministic tasks right uh at some point like they're I mean they are

getting better at like probabilistic type things where there's environments involved and stuff like that and I think as that kind of goes up I mean going back to Elon like he sees that a lot he's got Tesla doing two things basically on the vision front that are letting like machines understand the space around them and re reading and reacting and stuff like that so anyways like I think manufacturing will be one of the like big areas that you see a lot

of robots try to deploy R really fast yeah you know sense yeah speaking of manufacturing I had uh I had Dan mag on you see that you watch episode you didn't watch it uh not yet I'm behind my podcast honestly it was it was pretty good I think he's he's uh he's got a good stage presence you know he's it's great he was born in 1986 like me I realized that we're 86 kids that's great yeah is there are you 86 kid no what are

you I'm an 89er you're an 89er you're younger than me I am younger than you that's [__] bro yeah damn it yeah you thought I was older than you I thought you were way older than me oh crap it's the facial hair you got the Grays in it yeah I like color those just to make me feel damn it I thought I had something on you uh you do have aloe you know the wordrobe on me for

sure um yeah so 86 kids 86 kids you know we always Vibe so we we vibed you VI that's I had to give him the Drone Wars name back though I was going to say you've got a new sign oh yeah the the music what happened to Y sign I would have taken that it's outside there yeah okay hook you up okay you want as a souvenir no I don't want it okay I said I said it immediately he was like no you

don't want that [__] yeah so he's got the name back I don't know if he's actually released an episode yet has he has he released an episode yet check but he got the name yeah but I I think drone ultimatum scales better you know I think drone I'm a big Jason Bor person I'm Jason B yeah yeah yeah yeah as soon as you told me you're switching it I think like for a flight I

downloaded uh the born Supremacy just like rewatch it dude every couple years I watched the whole trilogy I mean it's so good so good what are they they're on like a fifth now though right I don't like the other ones with 's the I watched the fourth oh Jeremy rener I kind of like him but I I just you know he's not as good as you can't you can't top Matt D you can't top mat D you just

really can't he became that character dude what's the scene in the first one where he's like why can I like he's like I know the license plate I know like he's sitting in the coffeee shop with the CH he's like he's like I know all these things but I don't know my name or whatever yeah can you can you you know like let's see if Jack's good at his job it's it's the it's born identity coffee shop like scene where he

recites the like YouTube's good enough where you can Google it like that yeah yeah this is perfect can we can we watch this clip oh it comes through our headset oh no it doesn't these are real this is awesome who's this chick who has a safety money and six passports and a gun who has a bank account number in

their hip I come in here and the first thing I'm doing catching the sidelines and looking for an exit I see the exit too I'm not I mean you were shot people do all kinds of weird and amazing stuff when they escape I can tell you the license plate numbers of all six cars outside I can tell you that our waitress is Left-Handed and the guy sitting up at

the counter weighs 215 lbs and knows how to handle himself I know the best place to look for a gun is the cab of

the gray truck outside and at this altitude I can run flat out for a half mile before my hands start shaking now why would I know that how I know that not know who I am that's badass I mean we're g I'm gonna rewatch all these I mean obviously we crushed it with the name born the borne series you

know lightweight copyright infringement on the on the born series I think it's okay it's artistic interpretation right I think though the name scales like it's the Drone ultimatum like meaning this is the world Elon says it like this is where the world's headed yeah like the countries that do the best with small drones are going to dominate the next battle space it doesn't matter if you have a \$860 billion doll annual defense budget if you don't Master small drones

you're getting smoked and that's going to happen to us like the US yeah and I do not think there's enough urgency with our government no I mean like you mean within the Pentagon or like in general all of it like we the Congress the Pentagon industry yeah like I don't even like yeah that some of the startups are trying to move quickly but I think overall we are like a lumbering sleepy giant well the question is like

typically we're building f35s basically building F35 right but I think I think like the question is like can you is it too late or can we still snap back cuz that is the historical American thing we kind of like walk up to the edge and then okay now we've got to try basically we get our [_] together I don't think I I don't know uh I certainly think we might be able to because I think other countries won't

use the time and strike now like you know obviously China's got a huge lead China's got a lot going on too they got a lot going on yeah so but like yeah will we catch up I hope so I mean that's what we're all trying that's what we're all here for that's why that's why I left restaurant Tech that's why you left uh prop Tech we're here we're here to work on this problem yeah well and I

think if yeah I mean if you break the problem down it's like you've got to solve autonomy actually feel pretty good that the US is good at I mean that's where Weare autom if we're not good at software like we should we should just give up we got then it's like manufacturing supply chain and design and actually to take the last one like actually think we're pretty good at design I mean this is this is design at

the back of this I think still says like design in California maybe somewhere else whatever we got design got autonomy and then you've then the two big questions to answer would be supply chain and Manufacturing can you do it at scale um doesn't matter if it's like a bu of little folks or if it's a vertically integrated monster Factory I think you're missing a key one what's that tactics and Doctrine yeah I think that the actual

problem isn't even Tech it's mostly change management within the military like I think we're going to be like going into the next one and being like herf the derf got my Bradley's my Abrams I'm coming for you yeah getting smoked yeah well then yeah I mean I think though it's like rate of improvement though right because end I think like historically speaking the US military is actually pretty good at uh it's like they're they're able to adapt quite

quickly when stuff starts flying around maybe like I was in the Navy as you know sure and I think we're pretty good at like operating the nuclear reactor safely 75 years no reactor accidents yeah we're good at that and like we're good at you know running our carrier strike groups got our Virginia class submarines underwater protecting the carriers we've got our Boomers out there in the Pacific with our nukes you know ready to deliver the payloads like we've

got all this like these Navy things we've been doing for the last you know 100 200 years MH but like can we update their tactics to incorporate a bunch of ponc boats I don't know yeah we could ask seric we see what they say but like I mean my point is the change bement thing is a real thing for sure for sure um B I'm saying the tech is actually not the hard part yeah the tech is not the hard

well the tech is it is going to be hard to I think crack all these things but I think like yes you're right the change management how do you like actually get people along the curve here plus these systems have like different interfaces too which is I think like like you're not um yeah it's like your your rle your uh not your Sheed gut obviously is like a perfect example of this right you're moving away from like just looking down

the S ma my machine gun can't say assault rifle call you up and get mad yeah exactly um uh I'll get debanked no U so like yeah going from machine sites to reoc you know like a tele operator or whatever to like nope no one's in the loop right like that's an in to your point that's a change management thing where it's like yeah we're just going to roll this thing out once you turn on it's going to be looking around so fig

that I think it's going to involve one of our allies getting totally overrun for us to like do the full change management yeah like that'll like so hopefully like if there's if there is a conflict which I hope there isn't but if there is one and like you know like like Ukraine for example like luckily it's kind of like a stalemate right now apparently you know obviously like both sides are talking about ending it now but like in a situation in a different

timeline where like Russia used a bunch of Dron forms and totally overtook it then I think we would learn our lesson better um you know I think that from the lessons we're learning there now are you know helpful but because it wasn't really a total Victory on either side like I think that we won't change because of it you know what I mean yeah like I think we'll kind of be like that was interesting we learned some stuff

there drones are kind of important but not that important yeah do you think we're taking the right lessons from Ukraine I think we're not I think we're I think actually drone swarm well drones and then swarms which is like swarm's not a product swarm's a tactic which is a lot of drones okay I think that we're not appropriately internalizing how important small drones are yeah and I think that because Ukraine ended up in kind of a

stalemate on the Eastern front on the Eastern side of Ukraine like I think most people will point to it and say like most analysts most think tanks will say interesting War drones were a new type of munition mhm they did some damage on both sides and it's just another part of a larger product Suite of different products that will affect the battlefield in the future I think it's just like basically we're going to take it as like there was a new

interesting product there right but not nothing transformational let's keep with our same doctrines yeah that's what I think is going to happen and I think you know Trump comes in maybe a peace deal gets brokered and people say like all right that was kind of interesting but drones aren't that big yeah do you think like Allied countries or countries who have like more like uh you know Eastern European countries who are now looking around saying oh we might have to do our

you know pay for own defense do you think they're taking the right lessons I mean I think ukrainians are I think that you know like Pat you know Pat blumthal he was I was talking to him the other day I'm got to get him back on the podcast Jack actually but like they the Drone makers there know like I think that they know that drones are incredibly important and are going to be much bigger in the next War than they

even were in this one so like I think that there's interesting companies being built there on that um so yeah I think they're taking the right lessons yeah I think I think people watching not experience like we're not experiencing it no so we're so I'm not like bashing us I'm just saying like we're not in it so we're not getting the exact like data transfer knowledge transfer yeah so so your answer would be like probably not

or like no are we getting the right lessons back yeah if we were getting the right lessons we would you would see a much more aggressive push into large scale small drone Manufacturing in the US yeah which correct me if I'm wrong I don't see any really uh there's still I mean not so this is an interesting question because I think there's like a there's a piece of it where people you know there's like this whole like we're going to

reindustrialize the United States bring manufacturing back there's like a broad Trend that probably started like somewhere in the middle of the Trump Administration right like we're it's like okay well we're not going to be able to we maybe can't rely on an Asian based Supply and then Co obviously like really made us all to your point like Co was the first like tangible visible oh [_] if I have my supply chain uh all over the place like if something happens

like I might not be able to run my business or provide PPE to people and all that kind of stuff right so during covid what happened the government actually did do a bunch of stuff to actually Kickstart manufacturer really quickly especially in like medical sector yeah and so I think like to your point maybe the for like are we taking this threat seriously or not is do like huge dollars basically go into like chip sack level dollars go into kickstarting

manufacturing roads you the but I have the data you have the data I've looked at it we're pouring less than probably as a full country a billion a year into small drones yeah less than I bet I mean honestly if you add up like how much andreil spent on R&D on bolt plus how much neros has and startup funding plus there's like one or two other companies what was one what was the one M pulled Orca pull that up again plus maybe like

environment switchblade it's not even really a it's not really like a drone like a quadcopter that I'm Orca okay you add up this company there is one other one but cat black cat Red Cat Red Cat and then there's like obviously fly by robotics which is which is not a military drone flyby I need to get them on the podcast I think I think they are coming on aren't they yeah February okay yeah okay anyway you add

up like the sum total of a bunch of these small startups plus anders budget plus maybe like some prime budget like maybe maybe locked has a project it's got to be less than like a billion a year oh totally and I think like I wonder how much DJI spends in a month like come on I mean that's my point like just from a pure Capital allocation standpoint we are clearly not learning any lessons we're we're not taking it

seriously and I think the other thing too is like goes back to the supply chain thing right like these Supply chains like Supply chains are very like I mean it's an obvious thing I guess to say that they're like complicated especially when you're patching together suppliers and stuff like that um and I think that the thing that people haven't really internalized is the world we're moving to uh is like kind of like a trusted trade model right so like you we

will we're not going to like stop trading with China on everything like that doesn't make sense but there are going to be like critical things where we obviously need to have our own you know of again the pp example kind of comes to mind there um or chips or something else so we're going to move to trusted trade where you have some stuff where it's like as long as you play by the rules we will trade with you um and

then you'll have like critical stuff that you want to restore here right and so the the real question is can you move again drone Supply chains people just think of drones as like the finished product but there are things under it brushless motors batteries like yeah the pcbs the micro controllers correct so so it's not just like a hey we're going to move one big PCB Factory it's like a bunch little pieces so I think I I know

there are people who have who have talked about this a lot and I'm sure there are some projects going that you know I'm maybe not read into or whatever but like there does need to be like billions of dollars that are whipped into standing up this capacity yeah pull up the blue uas list from diu because the other lesson in Ukraine is the drones change like every week right like the the specs and stuff like that so like we're it's not just like

how few drones we're producing it's how many revs yeah that I think need to be I say this is somebody who is not in the Drone bus but like no first of all we're all in the Drone business yeah that's okay it's the Drone I mean even what you do is going to be in the Drone business yeah no that's not wrong but but the point is like you have to do you have to be increase the scale and you have to

increase the ability to scale iterations too or or to uh iterate quickly what's the IE V2 Jetty cck that one the Blue Halo one over there left left yeah what is that oh yeah here we go a link to not their product Okay Google image search it uh yeah I just want to see like do do you think this will be like

kind of winter take olish yeah I mean for sure winner take most you do 100% yeah okay so this kind of looks like a qu copter yeah I think that it will it should be winner take most mhm um because that's what supports getting the cost down yeah competition will kill like the like DJI

has win or take all in China basically I mean there's other companies but like they have 80% of the Chinese

market once you vertically integrate it's really tough to for other folks yeah and think that yeah so I would hope it is but I mean who knows like it depends on how I mean the main buyer is the government I guess for the military one so if they want competition yeah well I think it's the government it's law enforcement there's

other folks who probably will become customers soon if I had to guess yeah I mean if the FAA gets a little bit more comfortable coming up here with that stuff and there's a bunch of cool stuff happening in like a tech I think what's the go back to the cleared what does it mean to be on the cleared list what does even mean go go up about yeah yeah I mean I read stuff like this and I'm like

can we just lose now policy compliant commercial once vetted by the blue uas onramp effort do not require an exception to policy ETP reducing the administrative burden on end users so what the blue us program is not exclusive path for government of U as p and ETP is a valid I feel like when you're like China reading this you're just like okay we got them

what I mean I I honestly like there's a lot I have a lot of friends in the diu it's I I love the people there it's just like when you read stuff like this you're like dude what's all this yeah can we simplify it like China and just have it be like look just bribe us and we'll you know I had a startup I can't name the name cuz like they want me to invest but I had a startup call me the other day

and they were like Steve we're on the new you blue we're on the new blu-ray uas list we got in and that's like part of our moat and I was like honestly that is pretty cool maybe I will invest but it's a cool name well no I'm just like they got in the like meaning like this is an artificial Moe you know what I mean and so like the startup was saying like part of their value is they they're

on the new one got it and it's kind of cool I guess from an investor standpoint but obviously like from a citizen standpoint I hate this like I don't want some artificial Mo like I want competition you know yeah I mean there's probably like a bounce right I mean this is another big push on uh what it do on Doge right like simplify procurement and that's like a big press and so like it shouldn't I mean maybe a different way to put it it

shouldn't take like more time to do the paperwork than it does to actually build a product would be like my rough thing like my first job at a school I worked at a government Contractor Building software for NIH FDA like a bunch of these agencies right I spent a bunch of time like that a lot of my first year was like just writing out a proposal for an idq yeah I heard like six years later I was on like my second company from

there that we won or something like that crazy like it it's like those types of Cycles like are not conducive not just to like it's not just like bad for the company but like how can you invest in a company like that you know what I mean like it's oh yeah we're going to like fill a piece of paperwork in like six years from now we maybe will be getting money out from this program it's like

okay I've got other ways I can AI that are more efficient yeah yeah I I think that um I guess the intent I mean

there's a lot of words on this page but the intent behind it is they're they're trying to say like hey we've we've vetted these companies and their supply chains are safe I have no problem with stuff like this if it's if it's clear the vetting process is clear you know what I mean like if it's like here are

the boxes you're going to check and if you check them you get in you get in and it's not like a whole thing like do you remember but I kind of I kind of want it to be really hard after I invest in one of these companies well okay do you have your citizen hat on or investor hat on which one do you want um well with my citizen hat on I want it to be easy with my

investor hat on I'm trying you could have a high bar but make it like fast too you know what I mean yeah like do you remember back in the day when you trying to get an app uh into the App Store and it was like totally a black box on if you would get approved or not they come back and say something is broken on your app what's broken on your app no idea can't tell you but like fix

it and now it's like I I haven't launched an app in a long time but like I think now it's like a lot more programmatic and it's just kind of like you go as long as you're not doing something like gambling or whatever you can kind of like get in quickly and I think like that's kind of the evolution that these systems should take where it's like it's not necess like apple didn't I don't think change any of the

bars uh for getting into the App Store they just made it programmatic and easy it's still about as hard to get into the App Store as it was years ago but the time delay is like much less from a paper from like a just from a knowing perspec that makesense yeah like I would rather like when we when we started to do our own proposals stff like that I'd rather just like an instant no on some of these

just like yeah we read it and like an instant no would be nice to be honest I I um I I know that the blue uas list is can be um a source of great consternation for Founders in the space though CU I had the um orb Arrow kid on uh teal fellow I you saw that episode's coming out it's not clearly I'm realizing how behind him I honestly this is we we're the number one defense the number one defense podcast

everyone knows actually Jack made a whole new website for us and everything it looks sick um anyway so we had him on and he was like kind of upset about this this list and I can I can tell why like if you're pouring your whole life into your Dr drones and then you got to have like some agency like bless you yeah could be frustrating I can see that yeah and I think like yeah you know uh you

want to be able to just compete on like qu you know it's you want to like price and like performance to at the end of the day like that's only one component of a business startup business you know like it's not just about price and product quality well I mean like like it's playing the game you know what's that it's about playing the game it is about playing the game I mean I think where it gets subject if you

introduce like more subjectivity into it that's where I think where it gets tricky right like SpaceX is significantly

cheaper than anything else it comes down to it is cheaper and can get your stuff up right yeah but did you see that NASA just gave like blue origin the moon contract or whatever Uh I that was a while ago right it was it yeah yeah anyways Point making I'm CLE not in the space Tech World okay I'm a drone

I'm a drone this is drone ultimat but but actually the space the the moon one might be a good example where it's like okay this the you need to get into space that is the mission there's there's like again I'm obviously oversimplifying it but like it's pretty simple now when we're going to the Moon there's new requirements like there's NASA astronauts involved there's like a bunch of other stuff and so you create more wiggle room for stuff so I'm sure like

again if it if it can be more price performance kind of oriented right like that's where capitalis it's actually capitalism right that makes sense not like whatever we've got you know yeah I think that I think what we're going to find well one of the big scare and this is back to the original topic that we've been kind of talking about this for the last 15 minutes which is like one of the re I don't think we're learning the

right lessons yep I think our bureaucratic apparatus is making it harder I think that the small drones are incredibly important and I think that if there's a conflict in the next five years a conflict that we actually like really care about I think we will be behind on it um you know can't snap your fingers and make this stuff happen for sure yeah and so I mean this is why we started not to like infomercial my

company but like one of the reasons we started ACS was because Luke and I actually knew we weren't going to catch up mhm and we were like well maybe we can give the government a gun that shoots down drones in the meantime we actually do think the most important product is actually the small drones though but we didn't build that prod like our product is like a stop Gap we think it's incredibly important to have autonomous guns that can shoot drones

and people yep you know it's like a very important product line yep but it's mostly like also to help the US in the interim while we figure out our small drone solution oh so it's a stop you view it almost like a stop I mean we have I mean we think it's going to it's a stop Gap it's also a product that's going to last 203 you know it's going to be around a long time autonomous guns

it's like simple you know like you have to be able to it is the logical progression of that of a gun basically obviously like it's it's it's one of the clearest products yes you you did it's like a dumb gun and then you got a sensor in it which is maybe like the prior generation now it's going to be a like the product's so obvious that I figured it should have existed by now beon but then the drones were the thing

that you believe is more important to get right as a country if as a country yeah we need a solution to this I don't have the I'm not building it right now but like I think that the way we're going about it is totally wrong like I think that we don't we need to like do something more drastic like I don't know what that is by the way like maybe it is like the did they like the obviously

Banning these maybe it's like really propping up a consumer drone Market here I'm not not exactly sure I don't I don't actually have the right solution you two things I mean one episode I did listen to was the episode you did with Bryce and I thought him built talking about building a head require of requirement is like is kind of the game right like you sort of see where this thing could go and you kind of try to

get out ahead of where you think the dod will eventually get to uh to the earlier point that like eventually they do kind of you know figure it out it just might take a little bit time because it's a big it's a big thing and then yes I think the the if if you are trying if you believe that like this is where the world is going and it's where the US needs to take more seriously I think the

most important thing you can do do is actually figure out how to open up uh kind of like consumer uh basically get like the FAA and whatever other relevant agencies on board with allowing a bigger consumer drone market right like this the stuff that drones are doing for consumers in in Asia and other markets it's like it's crazy it's like a time machine to the Future and then when you come back here and you can't fly you can

you have to get like a pilot's license to fly past uh you know line of sight or whatever like that's that's not going to work I yeah I like I said I I want to like ra I'm like raising the alarm I guess yeah but we're not even close like it's not even close yeah and we're and the things we're doing right now aren't even close like we got ander's like bolt is what like 20 grand a piece I've heard or

something you know even the neros drones are like I think going to be kind of expensive like yeah we're talking we need the F have you seen like on Alibaba the \$500 they can hold an RPG yeah and they go 80 M hour mhm that cost like we're not we're not even close like it's not it's we're not even the same ballpark we're not even even our startups and our companies aren't even close yeah well and again if you pull it apart it's not

just can't just think about the end product you got to think about where the stuff is coming from right so it's like brushless motors batteries that are not uh based in a place they shouldn't be based in kind of thing just starts to add up if you're Pete Heth or whoever is going to be the head of the dod like what do you got to come in and do something about this I think like something drastic I I think like I think

you do a few things I think one thing you do is you start the wheels to turn on like hey this you know remember the chip sack that was super important for us to like build a resilient supply chain that was a very popular bipartisan thing I would start like a drone equivalent of that rless motor supply chain EX and then the second I would do is pi up the phone and call wh's running the all the commercial agencies drone

stuff today that are preventing like drone startups and things like that from popping up all over the place I would I would call the ahead of lobbying it is it Amazon air that's their like uh delivery uh thing I'd probably call like Chick-fil-A because I'm sure Chick-fil-A Chick-fil-A always is Chick-fil-A probably has a great air air drone idea and door Dash I mean door Dash would be great but I think chick chick Chick-fil-A is when you really it the

Chick-fil-A bump would the real thing could you imagine like how big of a drone Market we'd have if Chick-fil-A uh had drones that delivered on Sundays through history of food Tech and defense Tech aligning obviously par PR ticker symbol public company they have a food Tech they have there's preced I would do all those things and I would basically create the conditions so that like if you go spend 50 billion dollars on drones in a vacuum

like yeah the wheels will start to turn but you need to make it aable it needs to be like hey we can build drones for defense use cases that is obviously sort of P1 but it also can be you know we've got we've opened up new opportunities for folks to do uh uh yeah like to to have drones run wild on other use cases and stuff like that yeah I mean it's going to be interesting to see like I I

think that this is a big this new DOD Administration coming in has a lot of work to do here I do still think though it'll take us uh really getting whacked in a conflict before we before we fully learn it I mean so it might not happen you know for a while cuz like could take time I think there are enough people agitating well my I'm I'm an optimist I guess I would think I think there are

enough people who see what's coming whether those people can actually like press through what maybe needs to happen like it's that's sort of a separate question I guess yeah the issue is I think all I'm with you on all of that I think there are a lot of smart people that see what's coming they see it all that's not the problem I think the problem is is that to do this well it needed to spawn from a commercial use

case and we don't have that that's that's the problem is like it's not we're not going to be able to like solve it from the government making and mandating cheap quadcopters yeah like it needed to be a commercial thing and it's you know we're a decade behind on that yeah um so I'm not really sure where we go from here on that because like the actual product is very cheap quadcopter and how do you get that without consumer

scale purchasing yeah yeah I I think um I don't know it has to be consumer scale and your point then there's a fear component like if something happens like look the assassination attempt on President Trump uh over the summer the guy flew a drone around for however long to like kind of scout the location and stuff like that that should have been like a wake call like an assassination of an presidential candidate was essentially by drone surveilling with a

drone totally I mean there's this there's the the article about the stuff happening in Virginia that's been floating around but like I don't know like uh imagine I'm not you know this isn't a unique one what you know a lot of people talk about like well what happens like could you imagine a shipping container opening and hundreds of drones kind of pouring out of that and like yeah you know what kind of panic would could you imagine like

you're sitting mining your own business and LA or whatever a shipping container opens up it's got all these drones and they're flying around like that would create that would create Panic yeah and that would create probably a huge like okay time to go do something about this drone problem yeah you know maybe what we do is we uh we just tell China like Hey we're on we're allies now let us get a bunch of these drones dude can we buy

10 million of them take take two that's 2V1 the world yeah see I'm I'm like the true contrarian who comes up with [__] like that people hate that like literally someone's GNA listen to this and be like Steve is an [__] Steve Simone said he's going to he's going to Ally with our biggest enemy he's such a dick like that's like literally yeah people can't handle a true contrarian thought that's what I was saying to you n earlier I was

like if you're a real contrarian you only get three likes on Twitter like for example if you have like some hot take on Twitter and it gets thousands of likes that's not really a contrarian no no Twitter Twitter might have ended contrarianism to some degree yeah it's just so fast that those opinions just become mainstreamed true contrarianism is let's Ally with DJI yeah I think that would I'm GNA have to let you run I'm actually I'm not running up that

hill I'm obviously joking yeah but the um yeah like I just we have to think outside of the box for like and not to you know to use the dumb phrase but like we need some solutions here and it's it's going to be tight I don't know it's going to be di it's going to be tight yeah there's a lot and again there's like there are I think the thing that to stay optimistic on is like there are

multiple timelines from here to we figure it out that could work and could play out right again uh big push in the US could really help um big push with our allies where it's like hey we need you to get like really good at you know brushless mots or whatever and we can we can basically uh uh like guarantee a market for you or something like that right like there's a few of these that I think just one has to be really right

the last thing I'll yeah the last thing I'll say on it is that we can get a little lucky too like the obviously in Ukraine they were the small drones were really important or still are in you know Iran is Iran Israel it's like group three it's like bigger drones that are more important because it's like a much they're much further away and they're just kind of lobbing slow missiles out each other um so like depending on where

the next conflict is I you know we we don't know where it's going to be but like that changes what's important like the different conflicts have different important weapons like if it's in Tai if it's in Taiwan you know maybe it's some other maybe it's not small drones anyway yep depends if they're actually like invading yeah like a lot of variants right yeah so like maybe like to Steelman the US side of their inaction like uh you you letting all the

everything happen before you like make a bet yeah I was saying like depending on where the conflict is you know the next conflict might it might be a little less involved with small drones so then you know we get away with we dodge a bullet there that could be the thing too like I I I obviously this is the one of the biggest problems we have in the military but you know in the next three four

years maybe it's not as large depending on the conflicts well I think the only way to be prepared is to like uh to use the cliché like abundant mindset just try to do it all you know what I mean like be in a position that no matter which of these sort of paths plays out you have the manufacturing figured out supply chain you have Theon the answer to the autonomy question and whatever uh the you know change management obviously

it's like I guess the point you brought up but like you just kind of got to be like ready that no matter which way this thing goes we are like ready which is the ironically the same thing like the F35 kind of promises when you think about it it's like it's kind of ready for everything right like it can it's multi-service it's like it's got all these got all these different iuns he can carry like well there what was the

um it was Eisenhower and maybe it was Kennedy I forget which one actually said it but one of the postures like you don't want to always be ready for the next conflict it's too expensive to like maintain a posture of like War so like they always say like you know maybe we get forget I forget whose Doctrine it was but like you get we get struck first like and then you awaken the Giant and we mobilize and Crush you back like

that's the more of like so a lot of people would say Steve you're just kind of crying wolf like you're overreacting like if there's an actual conflict like we'd retool all of our factories and make tons of drones right that's what people would say like that's the other side of this is like Steve shut shut up like it's going to be fine the the counter to that would be like which factor we talk about retool Lake like

all the ones in Michigan and stuff but my point is like the let's just say it was like the Eisenhower in the Eisenhower era we had a bunch of factories that you could reindustrialize or like what you're saying is like that doesn't hold anymore cuz we have no we don't have it no I mean this right now like there's there's uh yeah yeah it's what I'm saying is like we don't we don't quite have the same assets that we

could to like relever basically or like re retrofi I guess but you got to believe like let's say we're making two Virginia class submarines a year right now I think we're making half of what okay let's just say we're making two we're supposed to make two right um in a real war we could make 30 I just think people would work harder you know like well yeah all shipyards we got we got the Miss in the Gulf we got

shipyards we got obviously shipyards on the East Coast on the west coast we would just like man up and start building well there yeah I mean I guess the Ste the that's what that's what people would say that's what people would say and they would also say like again like CO's a good example of this where we went from I'm not going to like get into vaccine politics but like we we did go zero to vaccine in like ninth

like a pretty fast ex humans mobilize well humans mobilize and also the artificial constraints that are on the system disappear very quickly yeah like the FDA when was the last time the FDA took like a year to to get something out the door like never right yeah and so yeah to your point like there are reasons that building in the US has been hard historically in the last like few decades right those probably vanish really quickly if it's like well no

existential threat like we have to get this we have to get going kind of thing yeah so like I think that's the other side of the argument about starting we started this conversation recall like saying that we're [_] cuz these drones are going to be there right and we're not ready for it but the other side is no no no we'll mobilize when we need to yeah I mean yeah so the real question is almost like removing the

artificial constraints whether they're like the blue uas list well yeah the that or like you know the barriers that do really exist to building a factory in like in the US right now like does that remove all that does that actually mean we could then just you know snap our fingers and get going look let's let's do a thought experiment great like in in an actual Total War where we're in the fight for our lives I don't think

we're waiting around to see if we get the blue U list approval no totally and just like uh what's the the fish and wildlife service stopped SpaceX from launching the uh Starship because of some rare endangered bird or whatever like let's just say it wasn't a Starship it was like a I don't know missile testing facility like in the fight of your lives the fish and wildlife service is going to take a back seat they're probably not in the car actually yeah so

I I think that we have the people you know maybe what maybe what we've just arrived at is that maybe we're just doing it right right now we're kind of right down the middle we got like we got like bureaucracy we're kind of trundling along yeah but we don't want to like go too hard at it anyway because it's not a real war we don't want to like spend too much money on this yeah and maybe elon's

coming in and they're going to cut the defense budget we have the highest density of people who are like resilient figure it out and people who are nuts yeah yeah have I ever made you read The hypomaniac Edge oh you told me about it I have to read it it's so good yeah but this is kind of the point of the thing it's like the reent America able the Reon America is also like dysfunctional which is basically what you're

describing this whole drone problem that you poting it's like we are dysfunctional but then when push comes to shove we will be crazy we will be we will do crazy [_] to get back yeah yeah yeah we're not we we our pendulum swings really far uh I think we just kind of I think we just kind of solved it on the podcast today think we did I think we're pretty much on the right track you were

solved you're welcome I started provocative that we're not on the right track and we ended he we're probably on the right track yeah our our we're on our little special Journey where we landed up it is a special Journey that's right all right well in that note I got to get my haircut plus blowing up my phone now yeah you're a popular guy all right bro all right good to see you good to see you dog

[Music]