THE BROOKINGS INSTITUTION

ADVANCING OPPORTUNITY FOR BLACK COLLEGIANS IN TECH AND BUSINESS

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Opening Remarks:

ANDRE M. PERRY
David M. Rubenstein Fellow, Metropolitan Policy Program
The Brookings Institution

RODNEY SAMPSON
Chairman and Chief Executive Officer
The Opportunity Hub

Presentation:

MARK MURO
Senior Fellow and Policy Director, Metropolitan Policy Program
The Brookings Institution

Panel - Fostering an Entrepreneurial Ecosystem for Black Collegians:

RODNEY SAMPSON, Moderator
Chairman and Chief Executive Officer
The Opportunity Hub

AISHA BOWE
Co-Founder and Chief Executive Officer
STEMBoard

SHERRELL DORSEY
Founder, ThePLUGDaily.com

ISAIAH GRIGSBY
Senior, Clark Atlanta University

JEFF MAZUR
Executive Director, Launch Code

Panel - How Higher Ed Can Innovate to Encourage Entrepreneurship:

ANDRE M. PERRY, Moderator
David M. Rubenstein Fellow, Metropolitan Policy Program
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TIFFANY BUSSEY
Founding Director, Morehouse College Entrepreneurship Center
Lead, Ascend2020 Atlanta

CHANELLE HARDY
Strategic Outreach and Public Policy Partnerships
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RONALD MASON
President
University of the District of Columbia

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Closing Remarks:

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Fellow, Governance Studies, Center for Technology Innovation
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P R O C E E D I N G S

MR. PERRY: Good morning, family.

GROUP: Good morning.

MR. PERRY: How are you? I'm Andre Perry. I'm a David M. Rubenstein Fellow for the Metropolitan Policy Program. And I want to thank you all for coming. On behalf of the entire Metro program, it's my honor to introduce this important topic.

And I wanted to lay out some context for you, and explaining how we got here. My area or program focus is on majority black cities. There are 1,200, approximately 1,200 census-designated places that are 50 percent or more African-Americans.

In each of those places there are entrepreneurs, there are real estate assets, there's infrastructure, there's skill, yet these cities are treated like black people. When you think of Baltimore, Detroit, Memphis, what do you think of? You think of deficit, you think of problems, but you will -- as you will learn, in many cities there are -- there is talent, skill and ability.

Part of my job, at Metro, and this is what we do at think tanks in general we make the case for cities. We lay out the institutions, the people, who, if coordinated can make things happen. We see this in Pittsburgh, we see it in Indianapolis, we see it in San Diego, our efforts to make the case for a city can bring it to national prominence.

Unfortunately, we also produce a lot of information about disparities. And when you do that, it helps reinforce the narrative that black folk are problems. And no one invests in deficits and problems, you invest, and generally, in white folks to fix those problems.

Again, my job is to lay out a new context. This is not about wearing rose-colored glasses, this is about identifying and developing talent that is there, and that's going to be my work moving forward.

There are, in the 1,200 places, there are 50 that have an HBCU, and it's amazing, HBCUs, of all the graduates, produce about a third -- of all the black students, about a

third major in business and/or STEM fields. A third are basic -- of our students are doing what we tell them to do to make money, but the gaps persist. In addition, they produce the overwhelming lion's share of STEM graduates in particular.

And so there are assets that we need to build upon in HBCUs. That's why we are here. I met Rodney who, by the way, it's my honor to now introduce him as a senior nonresident fellow of the Brookings Institution in the Metropolitan Policy Program. Give that man a hand. (Applause)

And I met him at the Bayou Classic in New Orleans, we were having a good time and amidst the football game there was a pitch competition, because he had the foresight to say, while folks are playing football there's an audience to see another kind of game being played.

And so Rodney is an asset, we would have lost mightily if we didn't bring him to Brookings. There are many other assets out there in this audience, in Detroit, in Memphis, in Indianapolis, in Pittsburgh that are ignored.

So, I just want to introduce Rodney so he can also provide some context for today. Thank you.

MR. SAMPSON: Wow! Good morning. How's everyone doing?

GROUP: Good.

MR. SAMPSON: All right. I grew up in the Pentecostal Apostolic Church, and you've got to talk back to be a little bit better than that. How is everyone doing?

GROUP: Good!

MR. SAMPSON: All right, very good. Welcome to Brookings.

MR. PERRY: That's right. That's right.

MR. SAMPSON: Andrew, thank you for your introductory remarks. I wanted to be intentional about helping set the stage for the conversation we are about to have. And I think

just looking at the historical context of how Brookings has contributed, from a bipartisan perspective, to the development of policy that impacts our nation, I think is incredibly important. Policy is the precedence for everything, and policy formation is also that precedence.

Research as well provides the thesis for why policy should become a reality, and so you've led in that area; and I think the new opportunity is this intersectionality of policy formation -- research policy formation in practicum.

And as we do the work, studying the work, and studying the outcomes of the work so we can tweak, you know, in the startup world we call that product market fit, right. We keep tweaking, we keep tweaking, we keep tweaking until we get the product to a point where the market is like, I want it, I want it, I want it. And I think that that intersection is exciting.

So, I'm excited to be here. Another overarching precedent, and I'm sure most of us read the Duke University Study about what we have gotten wrong about addressing the racial wealth gap, and the ten myths that are put forth there are incredibly humbling, but a reality that we know too well. And so, I encourage you to, you know, to read that.

And so in response to, you know, a prediction that the average net worth of a black family will be zero by 2053, that's pretty daunting, and when you read that study it says, at the end of the day, as an aggregate, education won't change that number, personal responsibility won't change it, it even says entrepreneurship won't change it, at the aggregate level.

Quote/unquote "solid families" won't change it. You know, there's a narrative around that as well, but what's been promising is that through the innovation economy we have seen men and women, young men and women, and men and women of all ages create multi-generational wealth with no reliance on pre-existing multi-generational wealth.

So, the last 20 years we've seen black men and women run to tech, and then we ran into another wall, we ran into another barrier. And so it's pretty lonely being the outlier.

Like when you hear these stories about a founder who raises a C-round of a million dollars, but then there's no follow up when they run out of money because they couldn't raise a Series A, or they couldn't get, you know, customers.

We've been talking a lot about the outliers when that coder gets a top job at a tech company, but then because of the hostile environment at that respective company, they're not promoted because they don't get the sponsorship, the mentorship or the coaching that is typically and generously offered, you know, to our White and Asian colleagues, in general, in the technology ecosystem.

And so it's important, and this is why this dialogue and this conversation is important, it's because even when we go back to Carter G. Woodson's "The Mis-Education of the Negro," and the thesis he was making around the importance of entrepreneurialism, and productizing our pain coming out of slavery, coming through Jim Crow after deconstruction, and how it was important that our entrepreneurs were entrepreneurs because then they were also the job creators, respectively.

And so the opportunity I see, is we have these institutions whether, in this case, today it is our minority-serving institutions, predominately HBCUs, but not exclusively HBCUs, there's also the Black church, there's also our associations, there's also the certifying organizations, right. All of these institutions that have been built since slavery, since deconstruction, since Jim Crow, et cetera, where we've won many battles, and now we have a new economy that our outliers alone will not be able to solve.

And we desperately require the intentional immersive investment of our institutions if we are actually going to have an accelerated opportunity to experience opportunity, in itself, in the new economy. The new economy of work, this new skills-based economy, this forthcoming gig economy, there's so much disruption and transformation is happening at such an exponential, path where we don't even know what the jobs of the future will look like, because

candidly the robots and the AI haven't told us yet.

And so with that, and because technology is one of the most major contributors also to income inequality and segregation, it's incredibly important that our institutions really turn up the juice, right, and start investing resources and ensuring that black people, and Hispanics, and Latinx, and all socially disadvantaged communities are represented, included equitably at every construct of the innovation economy.

MR. PERRY: Well, you got the context. I'm going to encourage you to tweet this information out. You see the hashtag TechWhileBlack; I want to thank my colleague, Martha, for pulling that together for us.

MR. SAMPSON: That's pretty (inaudible).

MR. PERRY: Yes. But again this is a tech -- a panel, so utilize social media.

At this time I want to bring up my neighbor, my professional neighbor, Mark Muro, who has done tremendous work in identifying the talents, the issues that are facing people of color, that are facing all Americans, and so I would like Mark to introduce research on this important topic. (Applause)

MR. MURO: It will be great. Thanks so much, guys. And it's great you all could be here. I'm really privileged to participate here. So, I'm Mark Muro, a senior fellow at the Metro Program, I work 10 feet away from Mr. Andre Perry.

And I have a simple question to get us going here. Let's all just ask ourselves what does it -- what does tech mean for black enterprise and prosperity, right?

I ask because I think that despite the hype, we are not quite seeing the full opportunity before us, and maybe the threats of missing it. So, I think that's where we to talk a little bit today.

So, what I'm going to do is highlight some new work from Brookings on how digital technologies are changing the talent equation, and opportunity equation for all people in

all cities. And along these lines I'm going to say some things about what digitalization is, why it

matters, and how underrepresented communities are doing with it.

And then I want to look at how black people, in particular, are doing in tech, and

some ways black people can do for themselves as far as obtaining the skills to get a leg up and

capitalize here. Because there's no doubt there is a huge opportunity here, technology

empowers, but it also has a darker ability to polarize.

So, I think we -- I just want to put these facts on the table. I'm going to give

some sort of, you know, factual framework here, and then you guys can take off, and then I'll get

out of your way.

Let's start out with what digitalization is and why it matters. You know, basically

digitalization is the pervasive application of software and IT to every field to transform business

and add value.

And why does it matter so much? Digitalization matters because digital

technology is special, it's not just another technology, its core capability is essentially to manage

information, manage transformation of information, but especially to amplify the ability of people

to add value.

It's an incredibly powerful technology, as we know, and in this return -- and with

regard to the explosion of digital skills, it's transforming nearly every aspect of the economy. On

the technology side, mobile networks, apps, cloud computing, artificial intelligence, are enabling

the scale-up of, you know, a blizzard of technically-enabled new business models.

Ubiquitous e-commerce, sharing models, the gig economy we just were talking

about, fintech and e-health, data analytics, online comparison sites, and now artificial

intelligence on your desktop. Yikes! But it's coming it's very soon.

And the workplace is being transformed, cloud-based enterprise management,

services like Salesforce are everywhere. This isn't a remote issue; every worker may be

working in this environment, every retail operation, every,   you know -- these are ubiquitous so they affect all workers as well, social collaboration tools like Slack and Skype, job search platforms like LinkedIn and Monster are how you find a job. And think of the whole sharing economy in general, this is pervasive, it's ubiquitous, it's not something you can opt into, it's everywhere.

So much is happening it's really hard to assess the whole onrushing scene, and this is why we put together a new analysis on how digital skills are changing the world of work. Again, a lot of hype, a lot of vague discussion, let's drill down to what it really means.

So, we use the very granular Department of Labor dataset based on thousands of interviews with real workers, in real jobs, to rate the digital content of about 545 occupations, gave everyone as skilled, from one to a hundred a rating, it's one to a hundred, how much tech, how much digital knowledge is required in your job?

So, to give you a feel, software developers came out near the top of the list on this one to one hundred scale with 94, as pretty -- a registered nurse though is now -- is 55 on this scale, and then a construction laborer came in at 17. That's just to give you the range. Once we did that, we sorted these occupations into high, medium, and in low digital bands, and compared what's been going on since 2002.

What did we find? Well, firstly you say, digitalization is proceeding really fast. This is, again, not an optional trend. Every occupation, every job is transforming, looking at aggregate, nationally at all jobs, the share of jobs with high or medium digital skill now has increased since 2002. Just 45 percent of jobs now, in 2002, required high or medium skills, now 71 percent. That means just 30 percent of jobs now are accessible for someone with no or low skills. So, you've got to get tech skills; that's a starting point.

And it's getting harder to find a job if you don't know one's way around basic computer environments. Beyond the rapid increase, though, look at this. These technologies

empower the workforce but they also divide it. This shows the kinds of rewards of these digital

skills these skills augment productivity of those possessing them, and to that extent, highly-

digital jobs pay about twice what low-digital job positions do.

And yet, so there's a tremendous upside here. This is the reward for these

skills. This isn't an abstract thing, the more digital your job is, the more your activity or your firm

the likely -- the better rewards. Now, let's see. And then -- you know, but so you can see, twice,

about two-to-one from high to low. So, just as digital firms -- digital empowers workers and

firms, these skills are not evenly distributed, which polarizes outcomes, so this is the challenge.

Most notably, the uneven distribution of digital skills across groups translates

into disparate participation in the best-paying industries, the best opportunities, and exacerbates

economic disparities. This is the downside of uneven acquisition.

Here, you can see digital know-how varies among groups, whites and Asian's

lead, blacks middle in digital skills, and Hispanics lag significantly. And you can here, see how

this is playing out in the job market.

Overall non-white groups are underrepresented in the top most-highly digital

and most highly remunerative industries. But blacks especially have managed a solid presence

in the middle health, transportation, social service occupations. So, the bottom line here,

differences in technology adoption are playing a big role in shaping outcomes. This is just part

of the reality, part of the opportunity structure.

So, economic inclusion now depends on digital participation. So, you're not

wrong to want to have a conversation about that today.

So let's look at -- let's drill down now on blacks in tech specifically, let's focus on,

you know, and talk a little about how African-Americans can do for themselves to gain power

and prosperity in that space.

Overall, you can see blacks make up about 12 percent of the population, but

account for about 8 percent of the computer and math jobs, that's genuine progress here, but they remain underrepresented. And the pictures varied. Blacks have increased their presence in several important tech occupations, such as the big programming, you know, a big important industry and occupation, and blacks now are -- have greatly increased their presence.

Operations research the same; and they are actually over-represented in network architecture jobs, so a very important occupational base. So, there's the true inroads made here. Yet, with that said, the presence of blacks in computer and math jobs remains insufficient, and is actually moving in the wrong direction in aggregate, amid continuing evidence, I would say, of institutional racism, and really the tech kind of "brogrammer" culture is, I think, a problem for even the acquisition of skills and the reward thereof.

So, looking across the country, moreover, you reveal -- you see more variation across metropolitan areas, it's not the same everywhere; blacks share of computer math deployment falls -- employment falls short of the workforce in a large number of the 97 largest metros, and is substantially lagging in places like Jackson, Mississippi, Memphis, Richmond.

And yet, with that said, blacks are nearly or fully represented in a good number of metros, Deltona, Florida; Las Vegas; Greenville, South Carolina. Washington is actually a bright spot, blacks make up about 24.5 percent of the population, 19 percent of computer math employment, so it's only moderate under-representation, and D.C. is the sixth fastest improvement of black representation. So, this is a good place to have this conversation. There's momentum here, and I think there's momentum in a number of -- a pretty sizable number of metropolitan areas.

So, let's talk a little bit about what this means, and I'll wrap up.

What should the community do to participate more widely in the next phase of digital prosperity? I see, you know, two specific agendas involving digital skills on the one hand, then an additional one that's a broader question, or priority. To start with the skills building, we

think it needs to involve both higher-end coding and professional IT skills. No substitute for that. And though, digital exposure for everyone, we need to be much more -- broader in that.

This is this one of the key skills, and so we need to both get good at the IT coding end of it, but also get better at a broader exposure. In terms of the professional IT pipeline, you know, we think the way forward is coming into focus in many cities. It's about minority-serving universities and community colleges, develop (inaudible), and relevant professional degree and pipeline programs.

I think this is a good part of the conversation this morning. And I'm really looking forward to hearing the conversations here. But it's also about scaling up nontraditional accelerated learning models, it's not just about the colleges, the universities, it's about micro-credentials, the apprenticeships. What are the boot camps doing? Are there enough code skills? Are those accessible? And, you know, I think that's another piece of the picture, and we have panelists to represent that.

And then, it's about wide-reaching efforts to build up a broad inclusive pool of young talent trending towards the IT pathway. Here, we are talking about computer science concepts in, not high school, not middle school, elementary school, exposure early, make this fun, you know.

And then I think building out middle school math science curriculum. So there's solid work going on, but it needs to be scaled up and with a stronger focus on including underrepresented populations.

Turning to the broader inclusion challenge, I would say this has received less attention, but it's also important to make this durable. Companies, educators, nonprofits, neighborhood groups need to develop unprecedented initiatives that mount super-relevant, compelling exposure campaigns in schools and media, massively scaled-up, hands-on experiences with modern office tools in school, early.

And expand entry-level tech training to allow underrepresented populations to go into computer support and network technician roles. There are a lot of these jobs, they're decent-paying, that are going to be around for the next 20 years, notwithstanding automation.

So, get people into a toehold there. Byte Back, a great D.C. organization, had a national model of doing this, thousands of jobs available with some basic skills in the region, this is an opportunity for even sub-baccalaureate workers, are good opportunities there.

Now, this brings me to my last point, and I want to kind of touch on some of the things that I think Rodney is talking about, and Andre. In the end, the way forward probably isn't just about tech skills, and it's not just about gaining a place in corporations.

In addition, the reality of the of pervasive tech sector bias, and institutionalized racism even, argues that black people need to embrace entrepreneurship to create their own tech enterprises, free of those barriers. It's telling that black presence in high-tech occupations remains patchy, despite the investment of something like 1.2 billion over the last five years alone, in pipeline diversity programs, including nonprofits and universities.

That's not to say we -- that we need to scale those back, of course not. But we are saying that it shows the limits, you need and at the same time aside -- along with the skill's pathway, you need an entrepreneurial pathway. So, that tells me that true inclusion will only incur when Blacks accrue genuine power in tech and business.

And I would say, and I mean this is just my advice, is that that will happen fastest when more blacks are building their own tech-powered enterprises. I think that's the fundamental -- (Applause)

So, I think that's one of -- the second fundamental here. So it's about tech skills, and it's about entrepreneurship. And this is really how I read Rodney Sampson's great hashtag, BuildSomethingFromNothing.

Black people, have got to leverage the digital revolution, we've seen how

important it is, but leverage that to building new businesses that circumvent barriers, and generate new wealth.

So, with that, I want to hand this over to Rodney, who knows as much about it as anyone. And he's going to instigate a discussion here with our first panel, right? So, instigate. (Laughter) (Applause)

MR. SAMPSON: Let's give Mark another hand for data and his remarks. (Applause) So, we are going to have a conversation now about fostering an entrepreneurial ecosystem for black collegians.

That word "ecosystem" has become one of the new buzzwords, just like innovation, disruption, change. And let me give you a quick deep dive on when we refer to ecosystem what we mean. So, most cities and municipalities have a focus on economic development, and traditionally economic development has been used to attract companies to a respective city.

We started to see a phenomenon, mostly highlighted by San Francisco with Silicon Valley, then New York, then Boston, then Seattle, then Austin, then Atlanta. Tony Hsieh in Vegas, Dan Gilbert in Detroit, where these incredibly successful, exited start-up founders now turned investors, now turned ecosystem builders, were reinvesting some of their own money, raising money, buying buildings, setting up co-working spaces, setting up tech hubs and entrepreneurship centers, launching accelerators, partnering with universities.

And were really networking and connecting this startup ecosystem around net new job creation that is hyper local to a community, versus the attraction of companies. There's a balance of both, you attract companies in. What we've seen with the attraction of companies and the promise of jobs, is that the local constituents, traditionally, don't get access to those jobs because the companies are hiring at such an accelerated pace.

So that's an ecosystem, or a start-up ecosystem, or a tech system. And we are

going to introduce the construct of an inclusive entrepreneurship, or startup, or tech ecosystem.

And now we are going to have a conversation on how do we foster that amongst Black

collegians?

So, joining me for this conversation is Jeff Mazur of Launch Code. Welcome!

MR. MAZUR: Thank you.

MR. SAMPSON: Sherrell Dorsey, founder of ThePLUG, soon-to-be graduate of

Columbia University, and Founder of BLKTECH Charlotte. Welcome!

MS. DORSEY: Thank you.

MR. SAMPSON: Isaiah Grisgby who -- is it official Isaiah, last day of class? Is

it official?

MR. GRIGSBY: Last day of class. (Laughter)

MR. SAMPSON: All right. Graduating senior at Clark Atlanta University, in

Atlanta, Georgia, and has been an intern at the Opportunity Hub, and was a part of HBCU at

South by Southwest. Welcome.

MR. GRIGSBY: Thanks.

MR. SAMPSON: And Aisha Bowe, founder and CEO of STEMBoard.

Welcome!

MS. BOWE: Thank you.

MR. SAMPSON: So, so very quickly, I'd like each of you, I'm going to start with

you, Aisha.

MS. BOWE: Okay.

MR. SAMPSON: To give a lightning introduction of who you are, your work, and

some context for this conversation; lightning, everyone. Thank you.

MS. BOWE: Thank You. Thank you, Rodney, and thank you to the Institute for

having me. As was mentioned, my name is Aisha Bowe, I'm the CEO of STEMBoard, and what

seems like almost another life, I was an aerospace engineer at NASA Ames Research Center in Silicon Valley.

My bread and butter from my graduate program at the University of Michigan was building nano-satellites, and so we were focused on, how do you create satellites the size of a shoebox? But in my tenure as a government employee, I also would have to review SBIRs, so small business innovative research grants are things, which I was reluctant to do. I wanted to work on engineering; I didn't want to review proposals from individuals.

But I learned during that process that there was quite a bit there, and why was I not doing that? So, fast-forward to now, I own a company called STEMBoard, who many of you have not yet heard of us. But we have two parts. We actually are technology provider for the Department of Defense, getting into that, and that means a lot more later. We do custom engineering solutions for them. We also run a full-time education outreach initiative and under the STEM Content provider for Inroads.

MR. SAMPSON: Thank you. Welcome.

MR. GRIGSBY: Awesome. Thanks, Rodney, for that. My name is Isaiah Grigsby. I'm a senior at Clark Atlanta University studying computer science. As Rodney said, I went to HBCU at South by Southwest last year, and I've also interned with The Opportunity Hub for the past couple months. Right now, I'm the OHUB@ Lead for Opportunity Hub.

What that is, it's we are expanding the platform or model of our company on to college campuses across the world. So, we are building out entrepreneurship, innovation and technology labs across schools across the world. So we actually opened up our first lab at Morehouse College about two weeks ago. That's pretty exciting. (Applause) Our goal is to, you know, for this entire year is to keep pushing across college campuses, not just HBCUs, but PWIs and HSIs as well. Thank you.

MR. SAMPSON: You're welcome.

MS. DORSEY: Thank you, again, Rodney. And thank you, Brookings, for having me. My name is Sherrell Dorsey. I'm the founder of ThePLUGDaily.com, the first daily tech newsletter that covers innovators, founders and investors of color. I also run BLKTECH Charlotte, which is the first tech hub for communities of color in Charlotte, North Carolina.

A lot of our work centers around the idea that we are in a majority-Black city, majority-minority city, and yet there was no space or place for black technologists. We have a ton of HBCUs within the area graduating at an astronomical rate, engineers, folks in STEM, and yet we only saw about a 12 percent representation within employment within the STEM field in Charlotte.

And so we are working to connect our city to both employers, resources and also students, and so we are actually absorbing the city of Charlotte's technology program for high school students to get tech training skills and then be placed in tech internships.

And then just a little bit about my background. I'm originally from Seattle Washington. I learned how to code in a high school program started by a retired Microsoft millionaire black woman at the Technology Access Foundation. Worked at Microsoft every summer in high school, and that was kind of the basis and the foundation for the work that I do today.

It's totally possible to create these spaces and places, and that program was started in 1996. So, the foresight of seeing the challenges that we see today is definitely apparent, and we have to continue to create those spaces.

MR. MAZUR: I'm Jeff Mazur. I'm the executive director of a nonprofit called Launch Code. We are headquartered in St. Louis. As Mark's research notes, there's an awful lot of opportunity in technology, and historically there's only a very narrow representation of folks who've been able to actually access that opportunity. And so Launch Code started about four-and-a-half years ago to try and be a part of the solution to that problem by knocking down some

of the key barriers that keep people out, including access to skills, so we teach people to code for free, a job-focused curriculum. And then we match people with employers.

We use apprenticeship, we use other de-risking mechanisms to get employers to think differently about the people they bring in to do the jobs of software developer, computer programmer, so we can expand access and give people an opportunity to really grab onto these jobs that are providing upward mobility, and access to the middle class.

MR. SAMPSON: Good! Thank you. Thank you, all, for being here. So, I think, you know, history is also precedence for the future, right, and when you look at black colleges who serve predominantly black people, or minority-serving institutions who also serve black people, the concept of ecosystem and building networks is not foreign.

Like, it's happened, whether it's been organically, some of it being documented, some of it being stealth, because coming along in those days you had to move more discreetly. Some of the stuff that we do on social media today would not have been tolerated by institutionalized and personalized, you know, racist constructs, or what have you. So, there's a freedom in that that should not be discounted as well.

And I want to go on record and say that I believe our colleges are, many times, the first safe space for many black people. In addition, it can be first line of exposure beyond what a child or a student has been exposed to, prior to entering into higher education.

That said, sometimes we matriculate into a safe space that has walls and barriers around it, and we are not venturing outside of that strategically to see what the future of work looks like, or the future of opportunity, the future of income building, or actually more importantly, the future of asset building.

And so I wanted to start off, Aisha, by asking you a question because in Atlanta we hear a lot of about the commercialization of research, technology transfer, one of the, if not the largest company in my investment portfolio, began as research that was commercialized and

the initial funding came from an SBIR grant.

So, from your vantage point, what are you seeing today candidly with PWIs, predominantly white institutions, and their approach to the commercialization of tech transfer and research; and/or historically black colleges and universities, or minority-serving institutions? A kind of a quick comparative analysis, candid, and then what should we be doing to actually increase the opportunities for the commercialization of tech transfer, and research that's coming out of our institutions of higher learning?

MS. BOWE: Okay. Wow. Whew! Let's see. Where should I start? So, let's say I did not matriculate into a safe space. Both of my degrees are from the University of Michigan, in aerospace engineering, of which I can say I was one of a very few African-Americans, let alone African-American females throughout that entire experience. It was also when the university decided that they were going to do away with affirmative action, and that brought quite a lively bit of conversation in the libraries.

That being said, I want to provide that sort of backdrop of having a nurturing environment, because the university, while it was not inclusive of individuals like myself, they were very inclusive when it came to technology laboratory space and environment.

I received outstanding education not only in the discipline, but how to go into business in that discipline. My master's classes were MBA electives, for my engineering program that was like almost mandated by the program, so when I went from NASA one of the things that I think that PWIs do very well, is they decrease that gap between your degree and the job.

And the reality is that once I was in NASA, I mean, we kind of sit around and we go, okay, we are going to hire you but we realized it might be two years before you could actually function in your role without babysitting. And I mean extensive babysitting. We expect you to bring things but we are going to watch you. Whereas, other institutions, my colleagues

were more reluctant to hire from because they felt like, well, I don't know what they're really teaching in that community, and for that program at NCA&T, for example, in computer science.

And I think that that's a big thing. Yes, HBCUs are graduating a lot of individuals in the STEM fields, but the curriculum alignment, in my observation, is not there. And I've seen this from being somebody in government, I've seen this from being an organization that has funded an HBCU to do research, only to go in and have to teach the professor what he needed to know to teach the students the assignments that we provided them. There was a lot of hand-holding from the top down. So, I think that's one thing.

I mean, yes I want to talk about commercialization, and yes I think it's important, I think it provides a lot of opportunity to build businesses and not startups, which I think is a focus area that we as a minority community cannot afford to overlook, continue to overlook shall I say.

There's a lot of interest in, oh, you know, let's go build this product, but the reality is that, they're kind of like dating, right. I mean we are chasing this guy that may not want to call us back, when you talk about Sand Hill Road and venture capitalist, and in investment from wealth basis we don't have in our community when we are not leveraging organizations like the U.S. Government who has programs and agencies that are designed to support us.

So, I kind of want to yield there, because that's a topic that I can delve into quite a bit, but in terms of commercialization on a high level with these government programs, they essentially take a phased approach, where they will receive a proposal from you, they will evaluate it for its merit, they will award you money. And along the way as you mature that technology, you will have to work on a commercialization strategy, so, whether that's commercialization, leveraging the government in that space, or commercialization to the external community.

And there are a lot of companies that are quite well known that have gotten their

start, and including Google which was the Digital Library Project. And if you really look into a lot of major organizations they're not -- they don't turn their back on federal money.

MR. SAMPSON: Thank you for your comments. And I'm going to move around a little bit and jump Isaiah in into this. Do, you know, of any current HBCUs that are focused on SBIR development today?

MR. GRIGSBY: Hmm --

MR. SAMPSON: Well, I'm sorry, I'm coming to you Isaiah, but that's for you, Aisha.

MS. BOWE: Yeah. So, there are three that are at the top of my head, Alabama A&M; they have an HBCU conference that many in this room have attended and participated in, and they have representation from most of the major leading federal organizations, Bowie State, Morgan State, those HBCUs have been very active in recognizing that there's opportunity here, but also capturing that opportunity, getting NBCU -- sorry, getting a SBIRs and transitioning some technologies.

MR. SAMPSON: Okay. Thank you. Thank you for that. And to that point I think, I said this earlier, technology, startups and high-growth companies are sort of the outlier effect that we are seeing. But we can't abandon the opportunities we've had in doing business with the government, doing business with major corporations, whether it's through the procurement or the supply diversity programs that exist, or even doing business with our own institutions.

When you look at the suppliers, that even an HBCU or a, you know, Black association, or what have you, or a church for that regard, they hire suppliers as well. So, there's business opportunities in the culture, and there's business opportunities for entities and constructs that have been open to doing business with us, because when you do go down that rabbit hole of tech, there's an exclusion and a loneliness that often, you know, us Black founders

don't talk about, and we should talk about that.

So, we shouldn't just say, everybody needs to go build an app, and everybody needs to have an MVP. I think there needs to be a balance of what problem you're solving, and who can you sell it to, and then you start your business from there. I have been impressing, and you'll hear a little bit from Tiffany Bussey in the next panel about some of the mentor protégé programs that Morehouse College and how they've been mentoring small businesses, and helping them to grow and to scale.

Isaiah, is what Aisha saying true? You know, you're a computer science major, graduating with Clark Atlanta University. Can you code?

MR. GRIGSBY: I can code. (Laughter)

MR. SAMPSON: Okay, all right.

MR. GRIGSBY: I can code.

MR. SAMPSON: What languages do you code in?

MR. GRIGSBY: Python, JavaScript, Java, (Inaudible), not mobile though, I'm going to get there.

MR. SAMPSON: Okay. Did you learn that in your curriculum, or did you self-teach? How did you learn to actually code in modern languages?

MR. GRIGSBY: Yes. So, I think a lot of it came with like internships, and kind of just jumping out in the web. I think HBCUs don't really prepare -- they didn't prepare me really, and a lot of my colleagues they had to learn like after internships or, you know, kind of take on a mentor who has actually been in the field. And it's like, hey, if you want this software engineering job that I have, then you have to learn this, this, this. So, yeah I haven't learned much in school. I wouldn't say it's a waste, but I think like the foundation of, you know, what I've learned at school has actually helped me to, you know, be a pretty good programmer.

Especially when it came to like IT, and learning about operating systems, and

computer architecture, that type of stuff is really good, especially when you get into like technical interviews, and speaking about just like the methodologies and everything.

MR. SAMPSON: Good. Thou shall not Google today, they are going to be represented as well. So, you know, if you were talking to that incoming freshman that's matriculating into Clark, and what would you tell them to do in terms of navigating perhaps, you know, an older computer science curriculum? Well, you make -- you'll get into the computational thinking.

MR. GRIGSBY: Right.

MR. SAMPSON: You're going to get the foundation.

MR. GRIGSBY: Right.

MR. SAMPSON: But knowing that they won't get the modern skills, what would you tell them specifically to pursue, and to where to go, and what to do?

MR. GRIGSBY: So, I'll tell them, honestly, it's like see the angle, and kind of take on a mentor. I think that's been huge for me kind of moving forward, and I wish I would have gotten a mentor that was really influential in my career early on in college.

I think those play a huge, you know, role whether that be, whether your career, whether it be personal. I just say, you know, take on a mentor, someone who's been in the same field as you, and kind of navigate that space.

MR. SAMPSON: To that point, mentors, sponsors and companies, and coaches. Now, I think to be totally transparent and candid, we also have to understand that Black people matriculating out of our universities, whether it be HBCUs or PWIs, are not playing by the same rules, because there's a space where entry-level, you know, engineers or majors

are being hired every day and companies are having to teach them when they get there.

So, for us to have to always come out of school and be a rocket scientist shouldn't be the precedent or the rule. Yes, you should be up with your education, yes you should be exposed, yes you should be on your game, but there's a conversation to be had with employers that, you know, give our students that have done the work the same opportunity to come in at that entry-level position, and have the opportunity to learn, to find mentorship, to find sponsorship, and to find a coach and be able to make mistakes without being penalized for it, because of bias, intentional or non-intentional.

So, we also must agree that we are not playing according to the same rules. If the rules are the same, and the rules are fair, we have a history of winning the game, but when the rules aren't fair, particularly in the hiring, so we can do all we do to funnel, and to train, give skills, but when they get to that interview, and it's, well, I don't know if I really want to have a beer with him or her.

You know, and that's still happening in the hiring process, so that's something we have to be clear about, whether you went to a PWI or HBCU, and that person of color shows up, we still have challenges there. Sherrell, in your research, in Charlotte --

MS. DORSEY: Yes.

MR. SAMPSON: -- what are you seeing HBCUs in that area do to align with the inclusive ecosystem building strategy that you're putting forth in that region?

MS. DORSEY: We are still early on. I think we are still starting to see the conversation of Black talent as investment versus charity, to be quite honest. So, a lot of the initiatives that are being led, not just by HBCUs, but a lot of these kinds of programs that are working on reducing the digital divide in some of our most challenging zip codes and area codes. And this could be true for other cities that are also tasked with some of the same issues around access to technology.

We are still trying to figure out proper language, and how to address these things, and then what does it look like to have an ecosystem that's not just kind of filled with the clutter of, let's do pitch competitions and, you know, let's kind of have these kind of dog and pony shows of, you know, meetups and, you know, what have you, that ultimately lead nowhere.

So, with BLKTECH Charlotte we are extremely data-driven. So we've actually partnered with UNC's, the University of North Carolina at Charlotte Informatics Department specifically to start diving into our data. So, we launched, at the end of December 2016. And we kind of had that meet-up model, but we wanted to have more of an understanding of what were Black technologists in our -- the students came through.

They came with their résumés, and they're like, we are going to get a job after this, and they showed up. And what we saw was, you know, well we anticipated about 40 individuals coming to this first meetup, and we had over 125 people RSVP. So, that was kind of that first key signal that something's missing and people are feeling disconnected. And so we spent the last year starting to collect data on over 1,000 local technologists, and trying to then go and share some of that data with our local schools, including some of the HBCUs.

But again, you know, the challenge being that: what is our goal? What is our goal as a city? Charlotte is still trying to define itself. And so, again, part of that is looking at the employers that are saying, listen, we want to diversify our teams because we can't even hire in Charlotte because we don't have a tech talent. And that was further put forth by the fact that Charlotte was not chosen as a top city for the consideration of Amazon's HQ, but Raleigh and Durham was, and it was just up the street.

So, there's a disconnect and an awakening that's starting to occur. In BLKTECH Charlotte, as we start to dive into our data, and really start to understand: what does that gap look like? Why are people who are graduating from these programs not staying in Charlotte?

Part of my research thesis for my program at Columbia, I'm in a data journalism program, is talking about this idea around black brain drain, where majority of the black graduates that are, you know, graduating from schools in and around Charlotte, are leaving and going to The Bay.

So, now we don't even have that base of talent, that staying there, or feels that they have enough opportunity. So, even if I get a job, so let's say when I first got to Charlotte, I was the marketing manager for Uber, and then I eventually went on to Google Fiber. So, after that unless I wanted to work in a bank, there were no other options. So, I'm going to have to actually pick up and leave.

And so, how do we prevent that? I think the larger conversation is, there has to be a complete pipeline. And then for HBCUs to definitely work with employers around: how can I help this person navigate their entire career, and get them to stay here, buy a home here, invest in their communities, and raise their families here? How do we keep Black talent within our city?

MR. SAMPSON: As a follow-up to that, you're absolutely correct, there's a lot of focus on what some would call the entertainment effect of the startup world.

MS. DORSEY: Yes.

MR. SAMPSON: The Hollywoodization of entrepreneurship where, you know it's, oh, wow, they have thousands of IG followers, but they don't have a product.

MS. DORSEY: You're right.

MR. SAMPSON: You know, they are on every conference speaking, but they don't have a customer, you know. And the moment someone makes an announcement that they won one pitch competition, and they won $25,000, but then they want 50,000 in these ambiguous services, the next thing you know, they are on every stage in America talking about black tech.

And there's been so much focus on the semantics of ecosystem building and not the actual work of ecosystem building with measurable outcomes, which are: how many jobs did you create? How much capital did you raise? How much revenue did you generate? Like, those are concrete metrics.

MS. DORSEY: Right.

MR. SAMPSON: What metrics, as an ecosystem builder? And just to let the room know, in our research, we've identified less than 10 black ecosystem builders in the world. And when I say ecosystem builders, you have a safe space, or have had a safe space for people to work and build without bias, you run programs that advance careers, or advance entrepreneurship, and you invest, or you facilitate investment. Those are the three criteria.

Not that you have the biggest meetup, or you have the biggest tech conference. And that stuff is important in terms of socializing and this, but we've identified less than 10 compared to hundreds and even thousands around the world, of these ecosystem builders. But what metrics have you set in place in Charlotte to measure the outcome of your eco system?

MS. DORSEY: That's a good question. First, we look internally, we believe a great deal in transparency, you know, again as a journalist that specifically focuses on data, language is extremely important, so that also means that, again, we look at our community as our customers. The people that decide to become members, so we have a paid membership model, for $99 for the year you get access to all of our programming.

We do twice-monthly learning labs so that can center on career mapping, because some people don't want to be entrepreneurs, but they want to get to the C-Suite, and they need a roadmap for that. So, we start kind of there, with monthly learning labs.

We found, in our first year, through our data, there are folks, even if they were aspiring to start businesses they're not ready, they're nowhere near ready, and a lot of the ideas around what kind of businesses to start were still centered around barber shops, salons, you

know, maybe they're a dentist, what have you, which is fine, but we are also in one of the second largest financial hubs, and we have a large health care system.

So, how do we get people moved into working and building opportunities in fintech or healthtech. So, we are trying to help bridge that gap, but our learning labs can range from anything from emotional intelligence and how do you hire the right team, to how do you start preparing for funding.

It's not just going and saying, here's my deck, to an investor. We have a very small venture capital pool in Charlotte, so a lot of our folks have to go to Atlanta, they have to go to New York, they have to go to San Francisco to get their money, and hopefully they bring it back to Charlotte, otherwise, again, they're going to get up and leave.

So, our internal metrics are measuring where our folks work, what their titles are, what zip codes that they live in, kind of some of the basic, some of the basic questions that we ask, in addition to: what kind of mentorship are they seeking?

When we look at evaluation across the spectrum for our company the idea, too, is to figure out who is raising money, because there's about five or six black tech entrepreneurs that are coming from engineering backgrounds from top companies, like Salesforce, AvidXchange, that are really the only ones that we can highlight, have actually done some of those things, like, hire people, create internship programs, have like direct impact on the local economy.

On a broader scale, and this is what our data scientists, graduate students are going to work on with us, is really starting to measure through a collection of public databases, and some research and interviews that we'll conduct over the summer, what does the black tech ecosystem look like in Charlotte.

And then we can also extend that throughout the growing Latino population, the eastern corridor of Charlotte is highly -- is highly Asian, and there's a complete conversation that

is not happening in terms of entrepreneurship there.

So, we are trying to set that stage by asking some of the more deeper questions about what, what's preventing connection to financial resources, be that through venture capital or local government programs, what does participation actually look like. How have the resources been spent in Charlotte, specifically geared towards some of the money that they have dedicated to entrepreneurship and yet have not spent? And that's been a five-year discussion.

So, we are starting to look at both again, internally and then some of the public databases that we have access to.

MR. SAMPSON: Okay. Good, very good. Yes, Aisha, you wanted to come in.

MS. BOWE: Yes. I want to -- the comment about metrics is an excellent one, and I hope that that conversation could be looked at again in the community. And from personal account I will tell you I'm on a mailing list about 50 of the most visible African-American female founders in technology. And they're always calling: who has raised a million dollars? Who has raised two million dollars, et cetera?

We have raised no outside capital, but when I made the million dollars I asked them, is anybody tracking that? Is anybody tracking growth? And they said no, that's not something that they actually are looking at. They are looking for raises and not revenue.

MS. DORSEY: Yes.

MS. BOWE: And that, to me, I think there's a huge segment of the Black tech population who are building businesses and not necessarily startups who are not being captured.

MS. DORSEY: Absolutely!

MR. SAMPSON: That's an incredibly good point because again, you know, when we play a game and the rules aren't fair, like we all articulate the data points, less than 1

percent, and I'm not going to even regurgitate it, you already know the data around Black access to Private Angel and venture capital.

And that means there has to be a shift from focus on raising capital to revenue generation, and a balance of the two, because we do understand that capital can accelerate you, but I think there's so much from that zero to one million that, you know, build something that you can build and go sell, and if you need someone else's money to build it maybe you should sell something else before you go and build that.

MS. BOWE: Right.

MR. SAMPSON: I think that's how we can learn from the alum that have come out of our historically Black colleges and universities, like the Janice Brian Howards of the world. How they built a traditional staffing company and then they invested heavily into technology, and now they make the majority of money through an algorithm they created to Fortune-50 companies.

Or, when you look at how pioneering Morehouse has been with their Mentor Protégé Program, how Howard had a SBDC, you know, decades ago and was building those small businesses. We can't ignore that foundation of small business development. So I appreciate the balance there.

Jeff, I want you to jump in, and we are going to have some fun down this road. Both you and I have been bullish in terms of pushing the accelerated path to software development jobs, making the case that to learn Java, or Python or Swift, now Solidity blockchain-based platforms, that a terminal degree is not required to get that skill.

MR. MAZUR: Yes.

MR. SAMPSON: From your vantage point what does the employability look like for a person that comes through Launch Code, a person of color that comes through Launch Code? That's the first part of the question.

MR. MAZUR: Sure.

MR. SAMPSON: And then what's the balance? Because we believe that our colleges are safe spaces, there's importance in having terminal degrees, particularly when companies still require you to have a terminal degree to even be considered for employment, and you've got to have the skill as well. What's the balance between accelerated certs, yet in micro degrees and terminal degrees?

MR. MAZUR: Yeah. I think the index problem that Launch Code was created to help solve was this notion that there's a prototype that we don't think is actually very good, that people use to hire people for these kind of software development, and other jobs. And that means typically someone who has a four-year degree often in computer science, or a technical field, oftentimes the better -- the better the institution that degree comes from the better the employer views that.

And, you know, as we heard, Aisha talked a little bit about, and Isaiah, oftentimes the skills that are being learned in those programs don't really track very well to the skills that are actually needed in those jobs. So this degree; this need to have a degree, and in when we are hiring, it doesn't really make sense.

It's a proxy for something that has nothing to do with job readiness, and what it does, it serves as a barrier, it serves as an opportunity for people who can get the degree simply as a component of signaling, to get into these institutions and get these jobs, and we don't think those are very good ways to get people ready to do practical work, and to provide people to employers that can actually do the jobs that they need doing,

And so, how do you -- how do you go at that? Well, you can go at that that degree need and hurdle a couple different ways. You can try to get as many people from underrepresented communities who historically haven't had access to a degree, to get a degree so they can leap over that barrier, which is something we should do, and we should do more of,

that's important.

But, you know, we often go at it from the other perspective, which is -- the way to attack it is to get rid of that hurdle as a necessary component of what's generally considered readiness for those jobs. You don't need to have a degree to be a software developer in most instances, and that's what Launch Code is set up to provide.

To say that there's a tremendous amount of risk that goes into throwing oneself into a four-year degree program, and if, you know, that you want to be a software developer, there are faster, cheaper, easier ways to get the skill that will allow you to do that, that don't require going down the four-year degree route.

Again, which isn't to say we shouldn't have four-year degrees, or you shouldn't encourage people to do that, but only that for people who aren't coming from generational wealth, for whom the debt burden that they oftentimes have to take on to get that degree, for whom the opportunity cost of going to school in lieu of doing something more abbreviated, more accelerated, that's a lot of risk that affects black learners and black job seekers in a way it may not affect white job seekers.

And so trying to mitigate that risk and find pathways that are different, that are accelerated, that are free, that are cheap, that people can get that skill to get them down that road, is really where Launch Code is centered.

You know, I mean in terms of balance, you know, the balance is, it's not either/or, it's both and, right. There's opportunity for more access, for more and better opportunities to be provided via historically black colleges, for more people to have access to college.

But for people who either are on the fence about whether they should make that leap, and they don't really feel comfortable doing it, there should be accessible pathways outside of that line, that will allow them to get to the same end point, when in the end, what we find,

increasingly, is that degree isn't really a key component of readiness for that job.

MR. SAMPSON: It sure offers some good status though.

MR. MAZUR: Sure.

MR. SAMPSON: Right, a terminal degree?

MR. MAZUR: Absolutely. And part of that is about changing expectations. So, we talked a little bit about employer expectations, and why that drives this, what we are saying is, we should work with employers, and employers should understand that the status that's been conferred upon those things, maybe it's important for its own sake, but it shouldn't be important for purposes of an employer determining someone's readiness for a job.

MR. SAMPSON: This reminds me of that that visual where it shows like, you know, we see this a lot in entrepreneurship, like it says, oh, the path of entrepreneur, I have an idea to exit, or an idea to IPO, and it's like a straight line, and then the reality of it is like this, right?

And I think we are entering into -- or we are, you know, we are in an economy whereby even learning tours, you know, the ship from income building to asset building. Like if you're focused on asset building, you know, we've seen young men and women come out of our workforce program, a 12-month resident space coding and entrepreneurship program, that had dropped out of school, or didn't go to school, they learn Java, got an entry-level Java job at a university, because universities are hiring engineers now, and that same person after a year, is able to go get their -- work towards their terminal degree.

So, I may not come out of high school and go straight, you know, matriculate straight to college, but if the end game is to stack learning for the rest of our lives, I may go get a skill, go into the workforce, and the company then pays for me to go to school

MR. MAZUR: Yes. We think that's key, I mean shifting that burden from the frontend and saying to someone, you need to put money on the table as a gamble, about

whether this is going to pay off, that particularly as the scaling that employers expect people to

get through a college process, becomes more explicit, becomes more specific to the things that

employers want to hire for.

That that burden, rightfully, ought to shift in the direction of the employer for

providing access to the skills, and covering the cost of doing that, because that's a big gamble

for a person to take if they're not sure it's going to pay off.

MR. SAMPSON: Good. We are going to open it up for a couple of questions

before we conclude. We should also drive home the importance, and Aisha, you said this on our

onboarding call, industry and the importance of industry.

MS. BOWE: Yes.

MR. SAMPSON: If you say you want these skills then invest in the talent

development. Do you want to comment real quickly before we open it up?

MS. BOWE: Yeah, I actually, and that tags on to what Jeff was saying. I mean

from an industry perspective I think that there's this third space, and that's creating whether it's a

standard or a guideline, something that says, what are the skills that you actually need to have in

order to do this job? Because oftentimes those things are nowhere in the curriculum, so things

like Docker, OpenShift, Kubernetes, containerization, all those stuff I do with my job on a daily

basis, but that is not in a CS curriculum.

And you may not even find it in coding camp. So, I think sometimes these

things are dangerous because they say, oh, learn how to code, and it's like, okay, what

language you're learning? Where is that going to get you? Is there an employer who has said

they need this particular skill for this reason? And so that's a space I'd like to see more activity

in.

MR. SAMPSON: Yeah, definitely balance is the key. And also updating our

narrative, I mean who goes and applies for an entry-level STEAM job, right? So, there's a lot of

focus on, you know, academic-base program development, and then we drive that narrative, and then parents are like, well, okay STEAM, I get it, science, technology, engineering, art, some people say agriculture, you know, and math. And it's like well what does that actually translate in terms, like what's the rubric for that construct to the actual skills?

So, we have time, we can have how many questions, two, two or three?

SPEAKER: Two or three, but depends on how long the answers are.

MR. SAMPSON: Okay. Very good! We'll start with the gentlelady in the front.

MS. SEGERO: Thank you so much for your presentations. My name is Rosemary Segero. I am president of a company called Segeros International Group. I focus on STEM, and also on manufacturing. I'm part of the U.S. Congress and Senate Manufacturing, and also the World Bank Digital and fintech.

So, looking at what you have just said, and looking at how do we develop, and how do we collaborate with the HBCUs. I've seen many events, I go to many events of HBCUs, like State Department, they don't come, any event, because I wanted to know how can HP's black people be in a manufacturing? Many of them are researchers, innovators, but you don't see them out there.

At the World Bank, I was on this event on fintech exchange where you have blockchain, where we have lab tech, where we have -- I never saw, I'll share with you, the conflict, I never saw any black people on this project. So, how can we bring ourselves out of this? We need from the daycare, kindergarten, high school, and instead of just saying we are in college, and then that's -- that's how the manufacturing, the tech will go on.

So, how do we collaborate helping and supporting the black schools from kindergarten to the colleges, looking at apprenticeship, a curriculum like General Motors , they never all went to university for degrees, but they are now working in high tech companies? So, how do we collaborate and work together with the HBCUs, the institutions, the moneymakers,

and everybody, to make this happen? Thank you.

MR. SAMPSON: Let us let our youth lead us in a response, our future. Isaiah, and then perhaps Sherrell, do you have comments on that?

MR. GRIGSBY: Yes. So, to answer your question, I think HBCUs, a lot of students that do attend these schools and then graduate, one part of it is actually seeing someone actually do it, and then them just following on. Like for instance, someone that goes to Morehouse that graduates, they are consistently rolling out students who are, you know -- like who succeed.

So, is this going to, like be a pipeline? Clark Atlanta for instance another one that's, you know, there's rarely ever any, you know, big-name or anyone that's actually doing something and, you know, technology, or even like business, something like seeing someone that's actually doing it will actually help build that pipeline. And then like the work that I'm doing with like OHUB@ at colleges, that also helps build a pipeline for students who are not necessarily getting those skills in class, but they can also translate that into like the real world.

MS. DORSEY: If I can just say a few things. I also think the challenge around interconnectivity within a city that ecosystem from the public, private sectors and the educational institutions, that communication structure is ill-defined.

And so things that we are trying to do in Charlotte is like have something as simple as a Slack channel, you know, where people can start posting jobs, training opportunities. How do we start having conversations? Because not everyone's going to be on the same Listserv, not everyone is reading the same newsletters. And so sometimes that barrier to information is what hinders us the most.

In Charlotte, specifically, we have an issue around resegregation of schools. So, when we are talking about getting students access to what -- what they could potentially be like, a lot of times that has fallen on the weight of nonprofits. We don't even have -- we haven't

even agreed that, like, computer science in schools as part of the everyday curriculum; is something that should be universal.

MS. BOWE: Yeah. Right!

MS. DORSEY: So, those are some of the barriers that we are up against, and you have organizations like NSBE, and Urban League, and all of these kinds of Legacy organizations that are trying to tackle that issue. But if you're looking at school districts with children of, you know, fifty to a hundred thousand students, and you have these organizations serving such a small sector, then there has to be some other ways that we can hack how information spreads across our cities.

So I think that that's something that we are trying to tackle and understand, especially as we walk into, I'm doing a tech training program for high school students, because the mentorship, and even the networking skill, because that's a skill set, and I've watched a lot of -- a lot of friends, be it HBCUs, or what have you, not even know how to go and find themselves a mentor, or be able to show up at some of those kinds of events.

So, we can start that process early on, you know, starting with middle school, starting with high school, and then being able to show people like, here are the resources you actually have in your city, you can actually go ahead and walk up to a company and say, I want an informational interview, or I want to be able to shadow you.

Those are skill sets that also take that investment, but I think it starts first with how do we actually share what's happening in our cities, because we are all having the same events on the same day, we are replicating work, which again, like wastes resources, we are all competing for the same attention, the same audience, what have you, and so we have to figure out -- figure out that part of the equation.

MR. SAMPSON: So, just to round that out, you know, we are looking at those problems and looking, how do we productize them at the intersection of highly influential people,

and opportunities that people don't know about? And I mean, to make that playing like, we are partnering with a young guru, who is Jay Z's engineer on this smart app, where people can go, and say like -- see, you know, like STEAM, but every parent wants their kid to be smart. Like that's a simple construct. I want Johnny to be smart, you know, I want Pam to be smart, or what have you.

But they need to see what smart looks like in the future economy, and we need influence to drive people, you know, then we released this ecosystem Wealth app, and if you see the mural that we have in our Morehouse Lab, it starts with showing the pyramids of Africa, and then the artist, he puts some, well, content in that.

And I said, what does that mean? He says, that's kind of forever, right. And he drew that in the mural, but it goes from there to shows us this breaking out of slavery, through, I am a man, and then it comes to the Hub, and it goes all the way to blockchain, to the fringes, and it's like mural. So, when students come in they are asking like: oh, wow, it was like, forget building unicorns, let's build pyramids. We think there's about, you know, if you look at, you know, 20 million households 40 million people who somehow need to know that there's a future of opportunity that they may not know about.

So how do we get our rap stars, and our artists, and our athletes to align with us just to drive exposure, right? And then we know that about, at probably at any given time there's five million U.S. census, boys and girls of color that over the next -- you know, the last census says there's five million, and we know they're going to go into the workforce later. Like, that's five million, that's who we've got to educate, right.

But we've got to have more than 200 young black women -- young black girls taking a computer science exam. Like, the following went from 20 million households to 200. And what's supposed to come out of that? So, we've got to build like, literally build this pyramid in steps all -- you know, all the way up, and we've got to use technology and influence to do that.

I'm going to go -- I'm coming to you, as the second person, and all the way in the back, and go to that gentleman in the back, and then I'll come back to you, and I think we'll wrap up.

SPEAKER: You have time for two. Yes, you have time for two.

MR. SAMPSON: For two?

SPEAKER: Yes.

MR. SAMPSON: Okay. So, is that one more, or are there are two more?

SPEAKER: Two more.

MR. SAMPSON: Two more?

SPEAKER: But quickly.

MR. SAMPSON: Okay. All the way in the back, you, sir, next, yes you. Yes, you.

QUESTIONER: Hi. Good morning. I'm Chinodo Ineqwe , I'm a partner at the Center for -- Hello? Sorry. My name Chinodo Ineqwe, I'm partner at Affinity BC. We are backed by some of the most prominent black investors, and most of them are, to be on 100 percent honest, most of them are black contractors there were technology contractors, that now have decided that they're going to start to do this.

So, I wanted to -- you guys mentioned it, and I thought that there's probably some more that you can explore in that, that there's black technologists, especially in the D.C. area that are really doing their thing pretty much, and I think you guys can explore more of that conversation. So, that's all I really wanted to bring up.

MR. SAMPSON: Yes. I'll let Aisha address that. I want to say, like, once a year I recruit one black supplier, contractor, airport concessionaire, to tech investment. But that's just one, like we need thousands of them that have benefited from ADA certification, government contracting, supplier diversity, to see the opportunity for reinvesting. Aisha?

MS. BOWE: Yes. I think my comment is, I actually think that many of us are not being tracked. So, we've graduated from the Mentor Protégé Program, we are getting ready to become an ADA, as I mentioned, we didn't take any outside capital, and we've, you know, crossed that watermark of being able to generate millions of dollars a year in revenue, and grow a team organically that is HBCU, PWI, everything, right.

And I think that the first thing would be cataloging us, and elevating our visibility in the Black and tech space, and sharing our stories, because the roadmap to success is shareable. I think we all would like to see more African-Americans, even if you want to start a startup, I'm all for that, but you can diversify your revenue foundation by leveraging government opportunities along the way.

MR. SAMPSON: Excellent! The last question; to the gentlelady right there.

MS. RIZER: Hi. I'm Monique Rizer. I'm in between jobs; formerly the executive director of Opportunity Nation. Hi, Aisha, it's good to see you.

MS. BOWE: Hi.

MS. RIZER: This is such a great conversation to be having. There's one overlooked influencer that I feel like we never hear about, and it's parents. I have two sons one is studying a STEM degree at James Madison University, and my fourteen-year-old is building computers on his own but -- and I've come to realize, having moms of teens, that they actually still do listen to their parents, or at least they are heavy influencers on their kids.

And that our family members are the ones in the home every day, whether their parents or grandparents, and they have a huge influence on what our children do. And if they get mentors, or what classes they take, and I realize it takes a certain level of savvy having -- being a parent, just how to navigate a complicated school system.

So, could you talk a little bit about how do we get to family members who can be hugely influential on -- Sherrell, you were talking about being in high school doing this work that

set you up for success. How do we get to parents who are at the front lines of helping these

children make these decisions and exploring interests at a very early age that will stick in the

long term?

MS. DORSEY: Yeah, absolutely. My mom stuck me in a program, I was like,

what, I've got to go do this and school, this is, like too much. And I talk to parents all the time

who are bringing their kids -- actually I had a parent move from Rocky Mount, North Carolina, to

Charlotte specifically because she wanted her daughter to have opportunities to participate in

some of the STEM programs that were taking place in the city.

And so I think that -- I think part of the challenge is reducing the knowledge gap

for parents, because I know that it can be intimidating, especially if that's not your field. And I've

heard parents say that all the time, like I know that my kid needs this thing, but I don't know what

this thing is, and how can I evaluate the program quality.

And I think that, again, is up us to be able to start talking about what we are

doing, why it's significant, why it's important, and then also looking at -- looking at what is your

kid actually going to be doing during the day, and in what ways can you help to participate.

I'm not a parent myself, so I'm just going to go from the level of like the services

that we are providing, but I feel like parents are taking advantage of the resources that are

available. One thing I tried to do a couple years ago was map out STEM programs summer

camps, low-cost summer camps, I'd like to have more of a database for that, because we get

emails through ThePLUG all the time of, listen, you know, I have four kids, they all need

something to do for the summer, I want them in STEM, but I don't know where to go within my

neighborhood, and within my community.

So, even for those who offer these kinds of programs, or have access, how do

you make that visible in public to your circle so that people do have the access to the resources?

Because there's not like a huge database, and a lot of cities don't publish them, but I think just

simple access to information can also go a long way.

MR. SAMPSON: And now, as I close this out. I am a parent, a parent of six, and my wife is here, and our oldest daughter is here.

The responsibility does come back to us as parents. I think we have to do some generation visioning, you know, in terms of doing that. I mean our daughter is headed to Spelman in the fall.

GROUP: Yeah! (Applause)

MR. SAMPSON: But she's already a full-stack software developer, certified, an Oracle, Java developer. Went through three adult boot camps, and it wasn't easy but we pushed her, and we pushed her, and then after a while she was pushing us, right. So, I think, back to that point, we've got 20 million black families that just need to know what the opportunities are.

But where do these families go every day, a lot of them? Most of them go to some job, so industry you can help us. They go to a social event, fraternity, sorority, what have you, their church, in neighborhood group.

We've got to get those groups pushing en masse, so that the challenge we'll be talking about in the future, is we got so many people in industry, there's a demand on the system not that, where's the funnel of that. We know the pipeline is there, but how do we get them all in that respective funnel?

I want to thank our esteemed panelists for their thoughtful remarks. (Applause) And please join me welcoming Andre Perry for the next conversation. (Applause

MR. PERRY: I'm going to go ahead and start introducing folks. To my immediate left, we have Tiffany Bussey, founding director, Morehouse College Entrepreneurship Center and Lead and Ascend 20/20 Atlanta. To her left, we have Ron Mason, president of the University of the District of Columbia. To his left, we have Chanelle Hardy, strategic outreach

and public policy partnerships for Google and rounding out we have Chad Womack, the national director for STEM Initiatives at UNCF. Please give them a warm welcome.

You know I'm going to get right into it is because what I heard from the last panel is that higher ed must change to adapt to the needs of entrepreneurs. I'm going to direct this to Ron Mason first as sort of a broader perspective. What is preventing colleges and universities from taking on a more accelerated model in everyday curriculum?

MR. MASON: Well, I'm glad you asked that question because we're actually going through that process now. We have a strategic plan that we're going to be bringing to the board in June called the Equity Imperative. It's really structured around two basics facts. One is that we are an urban university with the only urban land grant exclusively in the country. So in the next 50 years, 80 percent of the people in the world are going to be in urban areas. A lot of people in very small spaces and they're going to have a lot of problems that are going to require solutions that are going to offer a lot of opportunities.

The other fact that we've accepted is that America is really, and all American institutions are really built around a basic philosophy which is a philosophy of white privilege. If we are going to find ways to develop black and brown talent which are these vast pools of untapped resources that America really needs but this challenge of white privilege gets in the way of us being able to see, extract and develop that talent. We're going to have to be able to become much more flexible, have many more on and off ramps, find alternative paths to developing that talent because the traditional educational path really hasn't been able to do that, which brings entrepreneurship into the picture.

MR. PERRY: Right, I actually met you while I was a professor at the University of New Orleans and I come from, I'm a former faculty member. How do faculty need to change. Because what do you tell a faculty member like me who has a tenure position that they're going to have to accelerate their program or adjust their program to develop more entrepreneurs?

MR. MASON: So what we're telling them is that the days of being of sage on the stage are really long gone. You also have to be a guide on the side. Because today, these young people that we faculty are working with are coming from an entirely different world from the one that we grew up in, even you grew up in. And we have as much to learn from them as they do from us and it is the teaching learning approach to life that really is going to enable our institutions which are change resistant in the first place. Tenure faculty have lifetime contracts, what is the incentive to change. But it's embracing this new mentality of teaching and learning and understanding that the world is changing too fast for you to know everything every time and you can learn from your students. I think that's going to offer the opportunity and the path to change that even the faculty will be able to embrace.

MR. PERRY: Now Tiffany, you are the founding director of Entrepreneurship Center at Morehouse. Can you talk about how that evolved and what you're doing to meet the needs of future startup companies and student entrepreneurs?

MS. BUSSEY: Sure. So this has been 15 years in the making at Morehouse. It is my own entrepreneurial journey. The leadership of Morehouse recognized very early that we're not just creating or building the next Dr. Martin Luther King or the next Spike Lee but also the next Paul Judge. Your article, Andre, caused quite a stir for me on campus because you referenced others. We were like well we have an alumni base that also are doing tech and whatever.

So we recognized early that we had to do something and address this problem. It is in our DNA to do that. So what we've been doing at Morehouse and was referenced in the first panel is not only how we do it but also what we're doing. We've broadly defined entrepreneurship and that also kind of reflects on the question that you just asked about a faculty.

As a faculty member, I spent about ten years moving that needle with our

colleagues and understanding that this whole question around entrepreneurship it is not just

starting businesses but the way our students think. Creating things, understanding the

innovation process that I can still be a STEM major and be entrepreneurial. I can still be my

humanities major and understand problems that need to be solved with those. I'm not telling you

you're not going to grad school, I'm not telling you to stop to start a business. But really

understanding that whole process of what innovation is and that framework around innovation.

Yes, we would like others to start businesses at some point but we want them to

understand the way of thinking. We have more employers coming to us saying we're looking for

those that are entrepreneurial. So we want to teach what that means to be entrepreneurial.

Understanding problems, creativity, looking at things that really solve issues that are out there

and that's how we've tackled it.

On the other part in how we're paying for it because that's a big barrier and why

we're not doing this was referenced. So the Entrepreneurship Center actually is a consulting

shop within the construct of higher ed. We actually do, we're a third party provider under the

DOD Mentor Protégé Program. Nice program because it actually allows for HBCUs to work with

the IBM's and the Lockheed Martin's to help that supplier chain. And we've heard many

reference who are technology companies. Right here is many of them in the Washington, D.C.

areas that are suppliers to large federal contracts.

So I would say, over the last 15 years, we've worked with over 200 of these minority tech

companies in allowing what we call, technical assistant in solving back office type issues for

them. From accounting to marketing to business development. The beauty of it is that students

are always involved. So not only are they seeing people that look like them owning these

businesses and they are all probably driving about over $5 million in revenue in the tech space

but also bringing them in the classroom and having these students as interns always on these

programs. It really gives us a national footprint because it is not only in Georgia. As a matter of

fact, I have no business in Georgia. We charge a market fee for those services of which the agreement is everything above cost then comes back to support the student entrepreneurial activities that we do and we can talk a bit more about what looks like in building out that ecosystem.

MR. PERRY: Excellent. After hearing that, there is still this issue of debt. What I heard also from the last panel that there is a risk in going to a four year college that you may not have to take. Can you address that issue? For the most part, and I'll ask this to the audience. Who here has a college degree? Wow. So for this circle, it's important. But many students are now saying, I can't take that on. What is the value proposition particularly for private four year colleges nowadays?

MR. WOMACK: Let me first say, thank you for inviting me. I am a very proud Morehouse College graduate. Also a very proud graduate of Morehouse School of Medicine. Both of my parents went to an HBCU Chaney State and I'm very happy and proud to be a member of the UNCF team where the mind is a terrible thing to waste but a wonderful thing to invest in.

At the UNCF, we think about this all the time. How do we support the post-secondary aspirations of African American students and their families in this country as they seek to transition into some four year institution. We have, as a core value and mission statement, to support our member institutions and to support historically black colleges and universities as a whole. In the audience somewhere is a good friend and colleague of mine, Scott Lilly. Scott works for Thurgood Marshall College Fund. They are similarly focused on HBCUs and making sure that African American students are able to get to college at HBCUs and successfully transition to and through school.

But I think I don't want to so much focus on the debt issue. I think it is an issue, I'm not dismissive of it. But I really want to get to the core fundamental question which I don't

think we have articulated quite well yet and that is why do HBCUs exist? We live in the post-Civil Rights era. It's not post-racial but it's post-Civil Rights. The doors are open, you can go anywhere. You may not want to go everywhere but you can of course, constrained by money, sometimes geography.

But here is the deal. Our institutions were built with the intent to lift up our community post slavery. There are historically black colleges besides my own, Morehouse, but there are some absolutely phenomenal stories. Dillard University was built by a former slave, brick by brick. These are institutions, they belong to us. They represent our cultural aspirations and who we are and who we've been and therefore who we have yet to become. So I think in the context of tech and the digital economy and so forth from an institutional standpoint, HBCUs are it with regards to authentically African American institutions that reflect who we are as a people.

MR. PERRY: But is it becoming more expensive to provide that safe space? That's where I'm getting at. What point does it become too risky?

MR. WOMACK: Let me flip your question and ask the inverse. Would it be more expensive if we didn't have HBCUs. What would be the cost. Let's do a thought experiment and wipe away all the HBCUs, all 102. What would happen? Well, black American's would go to majority institutions. Some would do very well with or without an HBCU. The majority would encounter some resistance, depending upon where you are would reflect the degree of resistance that you would encounter. They would start to turn towards each other and say gee, how do we create the safe space. And then eventually the conversation would turn to, why don't we have our own institutions.

So whether we take the extreme, which is obviously not a reality, thankfully, that we don't have HBCUs or we take the opposite where all black students which was the case some 50, 60, 70 years ago had no other option than to go to HBCUs. The question is not either

or but both and. How do we balance that reality and how do we make sure that regardless of where black students want to go that they can afford it and that they have the resources and access to the kind of quality, teaching and learning environments that are going to prepare them for post baccalaureate success.

I do, just as a professional and personal position, take the view that having a four year degree is a good thing. What you do with it is another matter. So what I do for a living is connect our HBCUs, our faculty and most importantly our students to places like Silicon Valley, the HBCU ICE Initiative where we bring over 100 African American computer science majors out to the valley to connect with companies like Google. We're appreciative of the reach back that Google has provided.

But other companies like Facebook, eBay, interestingly in places like the valley, you've got some pretty high-powered African Americans, some from my illustrious alma mater who actually sit in positions of importance in these companies. I think of Damion Hooper Campbell who is a Morehouse grad who is the chief diversity officer of eBay, as an example. They are actively trying to reach back to the HBCU community to build those bridges that allow students to be in the kind of environments where they can learn. Not just how to program, that's obviously important and a requisite skill but how do you then engage in that professional work environment to launch your career path in the tech industry.

MR. PERRY: Before I get to Chanelle, I want Ron to address this. Is a two year HBCU experience becoming more competitive in the market?

MR. MASON: So here's the numbers. In the district, a high school degree will get you $30,000 a year. The median salary is $60,000 a year and a bachelor's degree will get you $65,000 a year. So the big prize is the bachelor's degree if you're trying to build pathways to the middle class. There is on and off ramps along the way. The challenge for the privates especially, the business model is that the market that you're serving doesn't have the wealth and

income to keep up with the cost of running the institution. That's a real challenge and that goes back to what I was saying about the structural challenges. HBCUs are really just institutional reflections of black people. So we have the same challenges that the people we serve have which becomes a real issue down the line.

So at UDC, for example, we're building a new kind of institution where you can come in through a workforce training door. That workforce training door will prepare you to go into an associate's degree program. That associate's degree program will give you a pathway to a bachelor's degree. We've had students that have come in through the workforce training and the light went off and they ended up getting that bachelor's degree. Every student that comes in our door, we want to enable them to reach their highest level of human potential.

But in the long run, we have to build, and this is why we're core planning now with the public school system in the district. Because we have to build a pipeline all the way down to the mothers really, that doesn't have the leaks that the current pipeline has of all of this black and brown talent. So by the time they get to the college level, most of them have already leaked out of the pipeline. That goes back to what I was saying about accepting the reality of the fact that America is built on a philosophy of white privilege and if you accept that philosophy than by definition, it's going to be very hard to develop and allow black talent to thrive in that kind of a philosophy.

MS. BUSSEY: I think the answer is not necessarily for us to build two year colleges but partner with them. So it does two things. It answers the first question that you asked about cost. It also cuts that individuals costs by half. You're doing your two year in community college per se and then by partnering with them you become the pipeline and then they're into HBCUs now and now they're only paying that two year tuition as opposed to four. They still end up at an HBCU matriculation in terms of a graduation and they're able to still become part of that community. I think that's a win-win both for the universities to partner with

the community college to create that pipeline and then it's a win for the students, those that are participating, because it cuts costs for them also.

MR. PERRY: You know Chanelle, Google recognizes the value of HBCU grads. You guys established a partnership with Howard University and Howard West. The numbers are clear. HBCU grads particularly in STEM are very productive. Talk about that relationship, why does it exist. What are you trying to get out of it?

MS. HARDY: Yes. If I could, I also want to just quickly step back and add one thing to the conversation. I'm a lawyer who is definitely not a STEM graduate but maybe STEAM because I majored in English and piano. I think it's important for us to note in the conversation about skill building and tech that there are huge numbers of jobs in the tech sector that are not for those with a STEM background necessarily. There are certainly folks like one of my colleagues and dear friends at Google who is a black man who has an engineering degree and a law degree so he is just like crushing it in a couple of powerful ways. But certainly at our company, nearly half the roles do not require a tech background. I think that's also an important part of the conversation. I have more I can say on that maybe later.

In terms of Howard West, I think what's great about that story is it kind of started from, you were talking about high-placed black individuals in Silicon Valley. You might have heard of our head of corporate development for Alphabet, our parent company, but David Drummond, black man. And Forbes did a profile on black men in the C-suite a few years ago where they talked about what GM did. Where GM really partnered very, very closely historically with HBCUs such that the gentlemen who was, at the time of the article, VP of design for GM. He had literally written to GM as a little boy with a drawing of a Cadillac that he found inspiring and said, how do I get a job there. They said, keep practicing your drawing and go to Howard. Because the teachers there have such a relationship, the faculty there, that they could help design a curriculum that would make him competitive for GM.

That was an example that David used in helping us take our first foray of partnerships with HBCUs which was the Google Learn Residence Program. That's where we took volunteer engineers and embedded them in HBCUs to work on some of those curriculum mashing issues that we talked about. And then with more, and honestly this is kind of Google culture, but also in additional to kind of wanting to expand the pipeline you also had these strong black leaders internally that were saying, we need to try to not only address the curriculum gap but some of those culture and relationship building fit issues that we talk about as well.

We worked with a lot of great folks to bring our first class out to the valley last year. It was 26 students. They did a semester program with a highly motivated, enthusiastic group of Googlers. At the end of that, 14 of them applied for the software engineering internship, 5 were given an offer and 5 accepted. That was the example of, we tried it, it worked well, so now we announced we'll be expanding it. In September, we'll begin a year-long program. We'll be expanding it to additional schools.

MR. PERRY: Do you think that's a future part of higher ed?

MS. HARDY: I think so.

MR. PERRY: I can definitely see that. I want to actually stay with you and get into the skills. You said there are multiple jobs in Google and similar companies.   What are some of the skills you look for in a student coming from college that you expect them to have. And to add to that, what are some gaps you see in students coming from college?

MS. HARDY: So again, since I'm not in HR at all, I'm going to give you some high level thoughts. I would say that what I find inspiring and a reason for optimism as a very proud HBCU law school grad is that a lot of the skills are things that I think HBCUs are particularly good at teaching. There is a good article I wanted to reference where it released our top eight, because we're always data driven, top eight set of skills that we're looking for in employees. Any guesses of how many of them had to do with tech? One. So the skills were,

being a good coach, communicating and listening well, possessing insights into others,

particularly others of different values and points of view. Having empathy toward and being

supportive of colleagues and being a good critical thinking and problem solver and being able to

make connections across complex ideas.

So the entrepreneurial spirit and creativity is extremely important in Google.

There is definitely always encouragement to come up with a great idea. Whether it's a great

product idea, a product enhancement or an idea on how we just do business more effectively.

So those skills are some of the top skills. I think as a result of that, it is to the extent that I

participate in conversations where there are gaps, I think there are definitely gaps honestly even

in confidence. That the interview process can be daunting and that the process of becoming

effective can also be daunting. And that having those opportunities to practice, to have

mentoring and networking and relationship building with folks who are in those roles are super

important.

MR. PERRY: Tiffany, about this mindset training. Tell me what you're doing in

the Entrepreneurship Center and how is that influencing Morehouse, the larger college?

MS. BUSSEY: Sure. I think to the points that were made, exposure, exposure,

exposure. We can't have enough of that. Definitely getting our students out to Google. We

participate with Chad and his program in exposing these students. But also bringing the

entrepreneurs on campus. Rodney mentioned our new launch of the OHUB space on campus,

that's very, very key for us. We've had little silos and pockets of things happening. This whole

idea of creating this space where students can now come and collaborate and create a

community is very key. I think once they start people that look like them, start seeing other

students that have the same ideas, it creates that generation of ideas and things like that. So

we're definitely doing it with what I call, core curriculum program such as teaming with the

OHUB.

The other side is the curricula program. So we don't have a major or a minor, we're moving towards a minor, not that I am a really big fan of that. Because the students that really want to embrace entrepreneurship and to go out and start businesses are not necessarily the ones doing it for credit part. We would love the credit part because that helps you matriculate through your program.

We do have three classes that we offer. The Fundamentals of Entrepreneurship, which Rodney will be teaching in the fall. So we're very happy to have him as an adjunct professor doing that. We have Social Entrepreneurship which we talk about social ventures and getting into all those other opportunities. And for us which also is going to be new is how early do we touch our students with this whole mindset of understanding how to think and bring in the critical thinking piece. We have to touch them earlier. So we're launching as part of our gen ed curriculum, this whole idea of entrepreneurial mindset and touching all freshman. So once you graduate, you would have had at least one touch point with understanding what this mindset is about and critical thinking, working in teams, understanding that wherever my background or major is, I can do it.

So the idea is to integrate these programs and not necessarily to kind of segregate them out but to infuse it with the political science, to infuse it with the STEM, to infuse it in those particular classes. Those are some of the ways we're looking to really redesign our curriculum around that.

MR. PERRY: Ron, you have a capital builders program.

MR. MASON: I was going to say, it's an interesting project we just became involved in. We're partnering with Thurgood Marshall College Fund and the Gallop Organization. Gallop has these assessment tools that they've developed that identify strengths. And they have one called BP 10 which is supposed to identify young people with a high knack for entrepreneurship. So we will test every high school graduate in the district and we're going

to find the top 20 who have these entrepreneurial talents. And we're going to put them in a full ride scholarship program with a computer and a suit and give them a credit bearing course of study. And then give them the opportunity to leave at the end of 18 months if they're able to and start a business.

We think this is going to be very interesting because these assessments, unlike most standardized tests do no correlate to race and class. And so, what I find most interesting is that when we gave these last round of assessments, if you know the district, wards seven and eight are the highest concentrations of poverty and people of color so we don't get a lot of students from there because they don't go to college. When we ran this assessment, most of the high performers came out of ward seven and eight.

So when I was saying about being able to find other ways to identify, extract and develop talent, those are the kinds of things we're looking at. Because if we can do 20 of these a year, and you understand that economies are built off of small businesses and you build an entire university around small business opportunities and sustainability needs of cities. Engineers who have an entrepreneurial mindset while they're going to school and then develop products that start businesses once they graduate. We're shaping this whole university around other ways to identify, extract and develop talent that don't necessarily rely on the normal ways of doing that.

MR. PERRY: Chad, I want you to quickly, because we're going to get to questions generally shortly. I'm also interested in HBCUs changing the culture of entrepreneurism. Because for me, the historical value of HBCUs was the sense of we're keenly aware of white supremacy, bigotry, racism and capitalism hasn't been our greatest friend in a lot of ways. In terms of this mindset, what are students bringing to the marketplace that could enhance the overall ability for folks to be absorbed fairly.

MR. WOMACK: Let's make some observations. One, every market that African

Americans have entered, we've transformed it, every single one. And with 44, President

Obama, we've transformed the political landscape as well. Unfortunately, that didn't last,

hopefully it will resurface two years from now. We don't enter a space and leave it the same

way it was before we enter. The last frontier is what we're talking about, in my opinion. And my

observation is that black students regardless of whether they are at HBCUs or majority

institutions, understand that they are African American well in the society well before they arrive

on campus.

I think we bring our culture with us wherever we go. So that interaction between

who we are as a folk and the environment that we're in is the space in which entrepreneurship

can flourish. It's up to us as folks who operate programs and institutions and organizations to

help identify. So what President Mason is talking about with that interesting program is

fascinating to me. It is not surprising me that ward seven and eight would have the highest

index of entrepreneurship. If you went to Philly, it would be west Philly and north Philly. If you

went to Baltimore, it would be east Baltimore. If you went to Chicago, it would be south. We try

to figure out how to survive wherever we are.

I would say this too because you asked this other question. I want to give a

shout out to people who every day think about this stuff and are actually rolling up their sleeves

getting to work. So what Tiffany is doing at Morehouse and what Rodney is doing in Atlanta,

what folks are doing around the country. What Aisha and Jarvis are doing with STEM board,

what the KPOR Center out in Oakland is doing. There is an ecosystem of folks out there doing

some really cool, interesting and powerful stuff. My comment to my own community is that

they're not connected and that's a problem. We also need to fund in a sustainable way, these

efforts so that folks aren't operating hand mouth.

Having said that, our institutions could serve as hubs that could help drive

ecosystem development that would then connect to regional ecosystems if not national and

global. But we ourselves have to have a different mindset and we're going to have to figure out how to work together and leverage the resources and capital that we have to make sure that that transformational thinking. And I think Tiffany's point about entrepreneurial mindset is on point. We need to have that mindset within our own community.

MR. PERRY: Chanelle.

MS. HARDY: I just wanted to quickly make a point. When Mark was giving the presentation and talking about the two keys where one, building these high IT pipeline systems but then also having pipelines for basic digital skills for underrepresented communities. I just wanted to quickly note that that's one of the things that we've also made a commitment to do much, much better to the tune of a billion dollar commitment over the next five years.

One example I wanted to share because I think it really speaks to the tremendous motivation and drive that folks have to develop these basic digital skills. One thing that we noticed when you're looking at that kind of opportunity and skills match, was the need for folks who can do IT tech support in the tech sector. And these jobs are at least $52,000 a year on average and does not require a four year degree. So we partnered with Coursera which offers online trainings to offer an 8 to 12 month IT tech support training which would give you a recognized credential at the end and then we would work to do an employer match.

So we launched this very, very recently, I need to get the exact date. There was just a few stats that I thought spoke to it. One is it was the largest first day launch of first time users in Coursera's history and the majority of those who enrolled were from non-traditional backgrounds. There are 30,000 people enrolled so far. There are nine employers in the hiring consortium so far and it continues to grow. Even though this is an 8 to 12 month program and we're only 3 months in, 500 people have already completed the program. So I think it just speaks to the fact that if you can, we talked a lot about exposure and making this information available as soon as folks find out, really will take advantage of those opportunities.

MR. PERRY: We're going to go to questions. I already have one right here, my colleague Makada Henry Nicki. She's also working on these issues.

MS. HENRY-NICKI: Hi, I'm Mikada Henry Nicki, a Rubenstein fellow, as Andre said, here in Brookings' Governance Studies. So I am also a proud gradate of the HBCU Howard University. Everything I hear you say about Howard, my heart warms because I love that institution so much. Here's my question though and it's about the social contract between HBCUs and the majority of African American students that attend HBCUs as well as the trend that I've seen HBCUs beginning to lose their accreditation. Because the context, the skills market, the labor market, the economic market has changed and put the fundamentals of HBCUs at great risk.

Two years ago I read an article about a student suing her law school because of those inflated job to salary numbers that are mixed with high profile attorney positions but with attorneys who failed and became bar tenders and waitresses and all those numbers are mixed in together. Her case made it to trial and that's pretty significant. Because the social contract for her failed between her and the university that she selected.

So the question is, Isaiah and, I think, Jeff's comments, made me think about how you came out your IT's coding skills. How you accumulated Python and R. So Google can take IT and maybe list it as one of five because you're a market maker. For the rest of the employers who are not market makers and are takers, the social contract is really important around what are the kinds of skills, what are the kinds of standardized skills that we're endowing our graduates with. Because the pipeline is a symptom, it is not the root cause of the issue. I really would like to hear about the social contract between the HBCUs and us as students entering as well as among HBCUs as a very small ecosystem. We're seeing some of us failing, falling out and that doesn't activate Howard or Morehouse.

MR. PERRY: Chad, can you address that?

MR. WOMACK: Sure, I think it's a great question. Let me say this, at the UNCF, we have endeavored to answer that and address that issue in a couple of different ways. I brought a program called the HBCU Start Up and Innovation Initiative out of the White House to the UNCF that eventually rolled up with Thurgood Marshall College Fund and APLU, Association Public and Land Grant Universities in the form of a program called ICE, Innovation, Commercialization and Entrepreneurship. At the core of the HBCU initiative was this issue of how do we address the changing landscape of the tech workforce and the demands that tech companies put on the skill sets that are required to enter the digital economy through workforce.

How do we address those needs as they are moving with the needs for African American students who are in STEM majors? To Chanelle's point, for every one STEM major there is probably two or three students, non-STEM who also should have similar opportunities to get into the tech industry as well. But there are a core set of skills and literacies, if you will, that are required in order to succeed at that level.

So the work that we've been doing for the past five to six years has been connecting our campuses, our faculty and our students to Silicon Valley, to companies like Google and others to address that head on. Howard West and now there is another initiative that we're working on that will broaden the aperture of engagement with HBCUs called HBCU West that will involve also more companies is an initiative that we have been working on with Thurgood Marshall and APLU to address.

The second thing I'll say is at UNCF, we've been working on trying to identify what are those specific skill sets across industries and knowledge domains. That initiative is called the Career Pathways Initiative. So if you go to UNCF's website and look up CPI, you'll see that. That's now, I think in year three. It is headed up by Dr. Brian Bridges and a whole team of folks that are working with companies and with HBCUs to address that gap. I want to make sure that we know, your question is a very good one but we are trying to address that head on.

The last point I'll make is this. Dealing with faculty at any institution is a challenge. The reason why I say that is not to berate faculty and I think President Mason smiles because I'm sure he's had some battles on his campus. Here's the deal. There are faculty on our respective campuses that want to change, that are trying to align their curriculum with not just what students need to know but know how to do. Because the rest of the world could care less so much about the piece of paper. What they care about is, what value are you bringing, how you add value to the business bottom line.

So that is a conversation, I think, are higher eds are having. I don't want us to pick on HBCUs. I think predominately white schools struggle with that. Let's remind ourselves, the great Harvard University let two billion dollar companies walk off its campus. So even Ivy League institutions struggle to change. By definition, institutions are conservatively structured and organized so it is hard. I want to leave this point with some positive affirmation that there are faculty and leaders like President Mason and others that are actually trying to make change. So what we need to do is help support them and make those connections real between academic universities and industry.

MS. HARDY: Can I just say one thing in defense of HBCUs and I'll be super short. I actually transferred from PWI Law School to Howard University School of Law. I am confident that I would not be where I am today had it not been for that change. I went from being in an institution where law was very depressing, frankly, to going into an institution where we were taught that a lawyer had two alternatives, to be a parasite on society or a social engineer.

So that is what has given me the ability to think critically and passionately. And with enthusiasm about what opportunities are available to me as someone who was legally trained and why I have almost entirely not worked in the practice of law. I have had a series of opportunities that have been extremely empowering and have allowed me to serve the community and to be able to be a social engineer. So I look back at that and say, I finally paid

off those loans last year but I am really grateful that I had a the opportunity.

MR. PERRY: We only have time for one question before closing remarks and we'll go with my man. Sorry, I apologize but it has been engaging. It has to be quick, it has to be right on.

MR. VALENTINE: I'm a Morehouse man, so it's hard to do that. Curtis Valentine with the Progressive Policy Institute. My question is, how do we use what we talked about today to make the lives of others who are not in tech better. I think about Morehouse College. I live at the west end of Atlanta. Morehouse main will graduate 500 Morehouse men in less than two weeks. 99 percent of them are going to leave. The west end has been the same way for the last 50 years. How do we as alumni, as Morehouse men, as HCBU grads take what we're talking about today to help the K-12 system in Atlanta and everywhere around the country? How do we reduce food deserts, create healthcare returns. How do we do that to make sure that we're not just the ones talking about this in a silo that everyone benefits?

MR. PERRY: Great question.

MS. BUSSEY: I'm going to quickly say that we are addressing that. Yesterday we had a conference on campus looking at entrepreneurship and mass incarceration. One of the programs that we currently do is working right outside our gates with the west end community as you pointed out through Ascend 2020. We didn't get a chance to talk about that which is a program funded by JP Morgan Chase. We are working with community businesses along with tech businesses. One of the premises that we could not address this issue just looking at tech companies so we're looking at main street businesses also.

They actually come on Morehouse campus. We select 20 of the neighborhood businesses and we take them through a program of understand the back office of running what it is that they're solving within those community. Two things it does. It also introduces our students to support those businesses because we had that gap also. Our students were taking

Uber to go to Buckhead to the businesses there. Now they understand the businesses right outside our gates and to help that community. That is going to be part of it.

The other is how do we scale what we are doing at Morehouse. I appreciate the applause and the recognition but I think it's important to take it beyond Morehouse to all the HBCUs to other communities and we need to answer that question. How would we scale and take what we're doing and to replicate at these other institutions and that's probably how we solve part of what we're talking about.

MR. PERRY: That's a great way to close this session because again, going back to the opening, this is about how can we leverage colleges and universities for communities for at large. This is about building upon the assets in communities for communities. Please give this panel a warm thank you. It is my deepest honor to welcome one of the smartest women I know, Dr. Nicol Turner-Lee, our resident technologist who is going to close us out with some remarks.

DR. TURNER-LEE: First of all, can we just give Andre a big round of applause. Andre has been working on this forever and I'm glad to see it in fruition. I see my buddy Rodney Sampson here doing his deal and I understand some great things happening at Brookings. I'm going to keep my remarks brief because when you're closing, I'm between you and your other meetings and you all have been patiently sitting here.

My name is Dr. Nicol Turner-Lee. I actually am a fellow here at Brookings in the Center for Technology Innovation and Governance Studies. I know some of you because I started my career in civil rights. I now work on a portfolio that includes regulatory and legislative policy, artificial intelligence, algorithms predictive analytics as well as the digital divide. I have a book coming out in 2019 on the digital divide.

Andre asked me to summarize what I think came out of this and to offer any new insights. New insights I have which I will do my best not to be like a black preacher and

take a long time. I'll keep my points about three. I do want to share what I think came out of this which is really important. I think that this conversation has really come a long way.

Eight years ago I sat I on a panel with an administrator from an HBCU. I didn't go to an HBCU but my father went to Howard and my mother went to Lincoln. I was a 1968 baby so we had to go to a PWI because my father said I marched too hard and broke the soles of my shoes girl for you not to go. Well my sister next generation actually went to an HBCU. But I share with that, when I sat on this panel eight years ago, the administrator at this particular university said, we don't need mobile phones within the classroom. This is basically his statement. We need our students to focus on reading, writing and arithmetic so they can be competitive in the new world.

Fast forward eight years and that whole premise of leaving technology outside of the classroom proves false. Technology is changing the way that we live, we learn, we earn, we communicate. It is actually creating verticals within our economy that are driving the economic sector. 6.2 percent of the new economy is being driven by digital. It is not just the mainstream IT jobs, basic technical skills but it is the layers of effect, the sharing economy, Uber, Air BNB, it's the effect of actually servicing those, customer service centers. It is the effect of being the construction industry about building next generation 5G networks. Technology is changing in and the layered effect of that, we are either going to be in it or we're going to become digitally invisible.

What I heard today is that I think we're all in glaring agreement that the skills gap needs to be closed. HBCUs as an asset versus a deficit in communities actually serves that pathway for such. But for us to get there and to ensure that the competitiveness, because the new digital economy now includes big data. I don't care what anybody says in this room, you are all part of the natural resource of the new economy. Your information is what is fueling everything that we see in the tech sector. I tell people for people who are on the wrong side of

the digital divide, even if they are not online, they are still part of the digital economy because that's where services do not go because they're not listed.

So given that, what do we do to ensure that HBCUs can be competitive? Coding was the language of two years ago, it still is; data science has made of the language of the years to come. We don't have enough people that are actually engaged in those fields and let alone HBCUs are finding themselves, if you heard on the panel, at a disadvantage of ensuring that we graduate people to be competitive in those fields.

So I was really happy to speak about this because a few years ago I went to see my favorite congresswoman, Alma Adams, who sits as a member of Congress who always advocates for HBCUs. If you ever hear her, the words that always come out of her mouth are, what are we doing for the HBCUs. I would say, and I'll leave it with this, my three points. The first thing that we really have to focus on is the federal appropriation of dollars to HBCUs. The National Science Foundation, the Department of Education, despite all of the great statistics that we actually heard today, they still give less than 3 percent of research and development grants to historically black colleges and universities.

Let me share why that's a problem. You can't get endowments. Professors aren't able to come. Accreditation gets challenged. The linkage between the professors that will teach you in those schools don't have the research money to actually bring that expertise and that value to their students to do the things that Rodney's daughter is going to be doing at Spellman. We need more federal appropriations to go to HBCUs on an equitable basis. That's the first thing from a policy perspective.

The second thing is, we need the tech sector to embrace HBCU graduates. 30 to 40 percent of African Americans that come out of HBCUs not only have high STEM and engineering degrees but they've got good emotional well-being. Meaning they can adapt into any environment and still stand against the brazen attacks of unconscious bias because they

know who they are. Clearly, am I right about it Rodney, they know who they are. We heard

about waiting while black, what about working while black. You want to be able to have the tech

sector. I know Chanelle is here and if it wasn't for Chanelle, we need to give her a big round of

applause at Google. I know from whence she came we would not see the type of initiatives that

come out of there. I think Charmaine is here from Apple, I've got to meet. We need to see that

type of commitment of the tech sector to do that. 2 percent at Google, 3 percent at Twitter.

Morgan State graduates the most engineers, North Carolina State, but they can't get jobs.

So what are we saying about the mismatch between who our colleges are

graduating and where they are actually being placed? The National Urban League will be

releasing the State of Black America report in a couple of days. A few of us contributed to that

publication. It is all about the digital revolution and reinventing tech diversity. When we get

there, we've got to stay. When we get there, we've got to stay.

Finally, I'll just end it here because Rodney knows I can on and on and on but

I'm going to keep it brief. The final thing I'd like to say is, the other reason why this conversation

is really important and I want to close by really staying within the context of what my colleague

has done with regards to shifting from a deficit to an asset model. Is that HBCUs have led the

way historically for some of the greatest and most prominent scientists and teachers that we

know. George Washington Carver was a Tuskegee graduate. Katherine Johnson, the "hidden

figure," went to West Virginia State. The list goes on and on and on. We need to remind

ourselves, my daddy, was an architect from Howard University. Think about the people that you

know that came out of HBCUs.

Part of shifting this deficit to asset model helps us to remind ourselves that the

skills gap in the things that my colleagues, Mark, talked about in terms of digitization, may have

disparities. But one of the greatest gifts that we'll have of shifting the model is reminding

ourselves of who actually came out of those schools and what new tech entrepreneurs like

Chanelle and others are doing, to recreate the vision and the pathway.

I had the opportunity to actually sit on a panel that Rodney had at South by Southwest and this has stuck with me since I left. There was a tech entrepreneur, I think, on one of the panels who said, we're creating a rework in the heart of our city and we've got a big glass wall. So that when the kids walk through this neighborhood brazen with liquor stores and pawn shops, they can see makers on their way home from school. We forgot that.

I close my comments by saying, the next Carnegie Woodson, the next Katherine Johnson, the next black entrepreneur is in that we work that's sitting in that community. They're part of that inclusive economy, they're part of those HBCUs where I'm sending my kids are sitting. They are part of this next generation that is going to move forward, not just the economic aspects of capital that is generated through the new economy but the cognitive as my colleague Makada always talks about, the cognitive ability of people of color to be on the right side of history versus figuring out how to get on the turn to page. I'll leave it at that and say thank you all for allowing me the opportunity to give these final remarks.

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