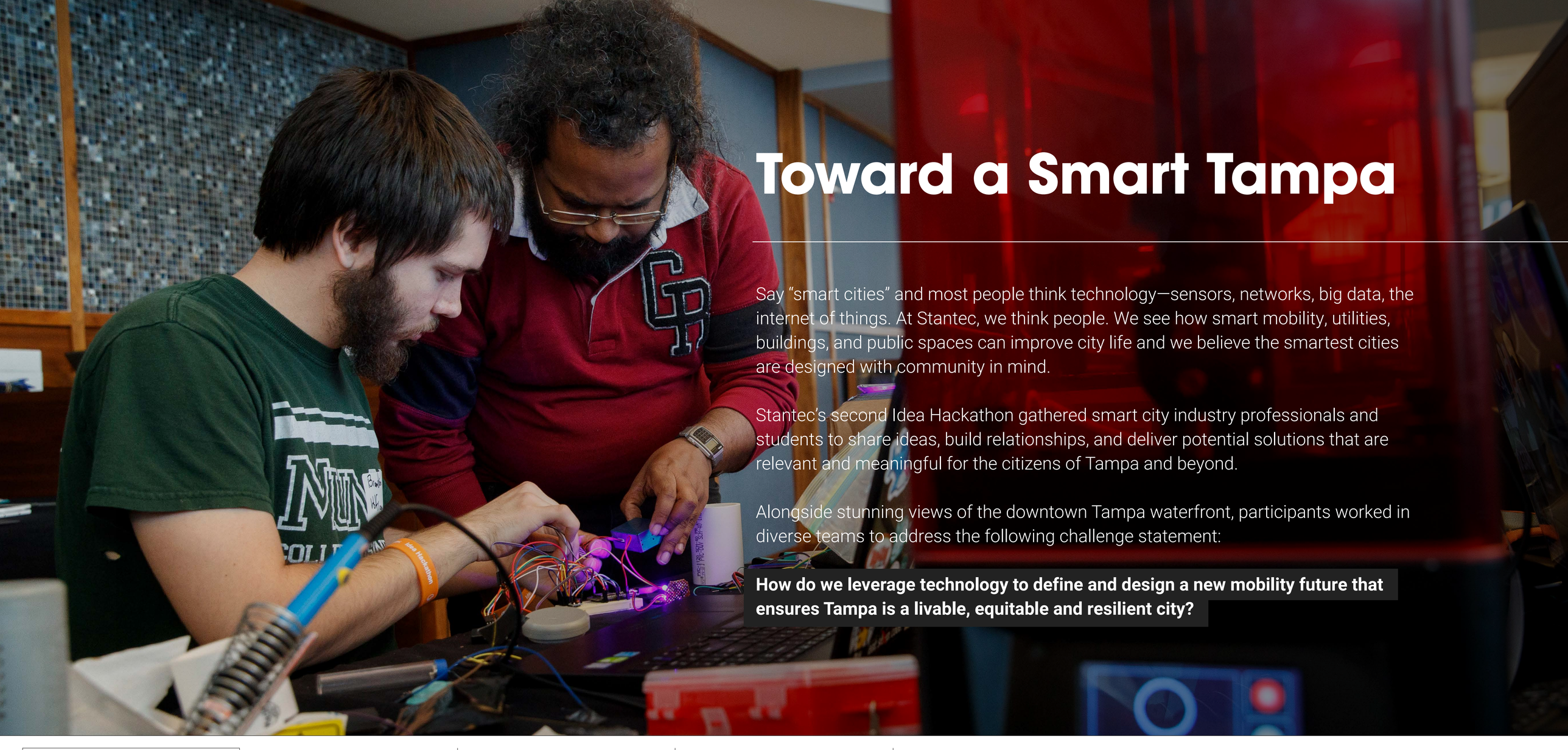

Stantec
IDEA
HACKATHON
TOWARD A SMART TAMPA
TAMPA, FLORIDA, MARCH 9 – 10, 2020



Toward a Smart Tampa

Say “smart cities” and most people think technology—sensors, networks, big data, the internet of things. At Stantec, we think people. We see how smart mobility, utilities, buildings, and public spaces can improve city life and we believe the smartest cities are designed with community in mind.

Stantec’s second Idea Hackathon gathered smart city industry professionals and students to share ideas, build relationships, and deliver potential solutions that are relevant and meaningful for the citizens of Tampa and beyond.

Alongside stunning views of the downtown Tampa waterfront, participants worked in diverse teams to address the following challenge statement:

How do we leverage technology to define and design a new mobility future that ensures Tampa is a livable, equitable and resilient city?

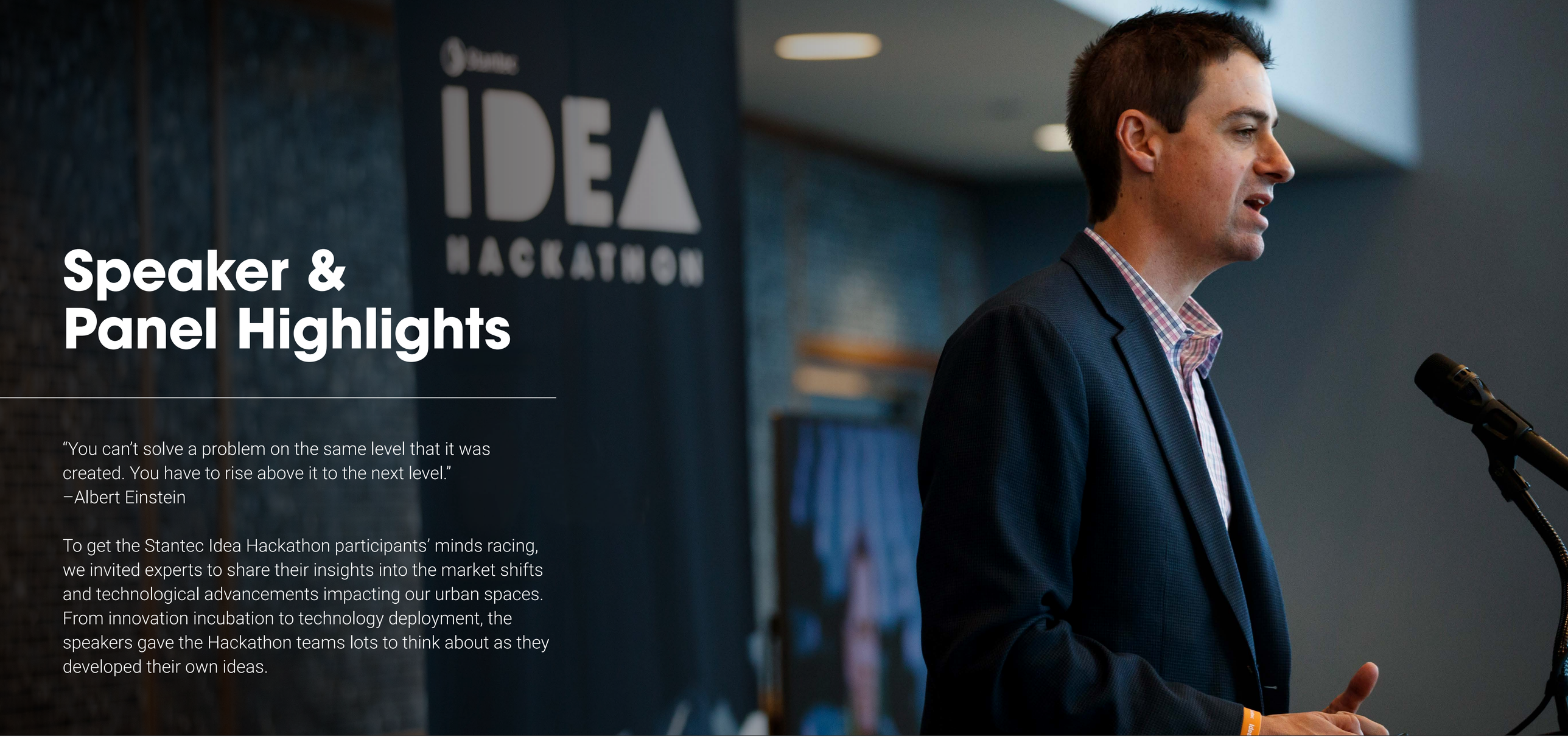
Comments from Stantec Vice President Nancy MacDonald

Tampa is a dynamic, growing city. If you look around the United States, the average growth rate of cities is about 1.5 percent. In Tampa, it's 2 percent. It's a city full of people, ideas, opportunity, and a place where innovation and creativity thrive. It's what we urban planners would call a magnet.

That's an important thing for businesses. They look for cities like Tampa with a great quality of life, a great place to live, and a great place to run a business. But with growth comes challenges, one of which is mobility.

Stantec has a strong presence in Tampa, with a lot of great partners, including the Tampa Bay Lightning. We have deep roots in the community. So, this was a logical place for us to explore new ideas on mobility and cities, how we build the future and enhance quality of life.

The best solutions that happen in a city are never the product of just one group. We're here because the Idea Hackathon is an opportunity to put diverse groups from the community together to solve problems in ways that wouldn't normally happen. That's why we decided Tampa is a great place to be. Our challenge here is to explore how we can leverage technology to define and design a new mobility future that ensures Tampa is a livable, equitable, and resilient city.



Speaker & Panel Highlights

"You can't solve a problem on the same level that it was created. You have to rise above it to the next level."
–Albert Einstein

To get the Stantec Idea Hackathon participants' minds racing, we invited experts to share their insights into the market shifts and technological advancements impacting our urban spaces. From innovation incubation to technology deployment, the speakers gave the Hackathon teams lots to think about as they developed their own ideas.

SPEAKERS

Vik Bhide

City of Tampa
Director of Transportation and Stormwater Services

The challenge is very clear when it comes to mobility. Mobility is pretty much at the core of liberty. It's the ability to move from one place to another. And how we move about is shaped by how we are developed. What do our spaces look like? Are we suburban and are we urban?

Jason Schrieber

Stantec
Senior Principal, Urban Places

Transportation design has to be equitable. And we have to be able to make sure that we can get all of these services into anybody's hands - of any background, age, or financial ability.

Brian Kornfeld

Synapse
President and Founder

We can get things done by thinking differently, and that's how we can innovate in a big way. So as you go forward, continue to think, continue to push each other. There is no wrong answer in this room. There's just a lot of right answers.

Please note that the speaker and panelist quotes have been edited and condensed yet faithfully represent the speakers' ideas.

Ideas

They came from tech start-ups, graduate programs and diverse corners of the community. Ten teams tackled the challenge statement of how to use technology to ensure Tampa's mobility future is livable, equitable, and resilient for all. And they delivered. Thank you to all of the participants—for your passion, your creativity, and your contribution to the Tampa community.

FIRST PLACE: TEAM ZERO

Fresh Air: Protecting air quality in public spaces and transportation

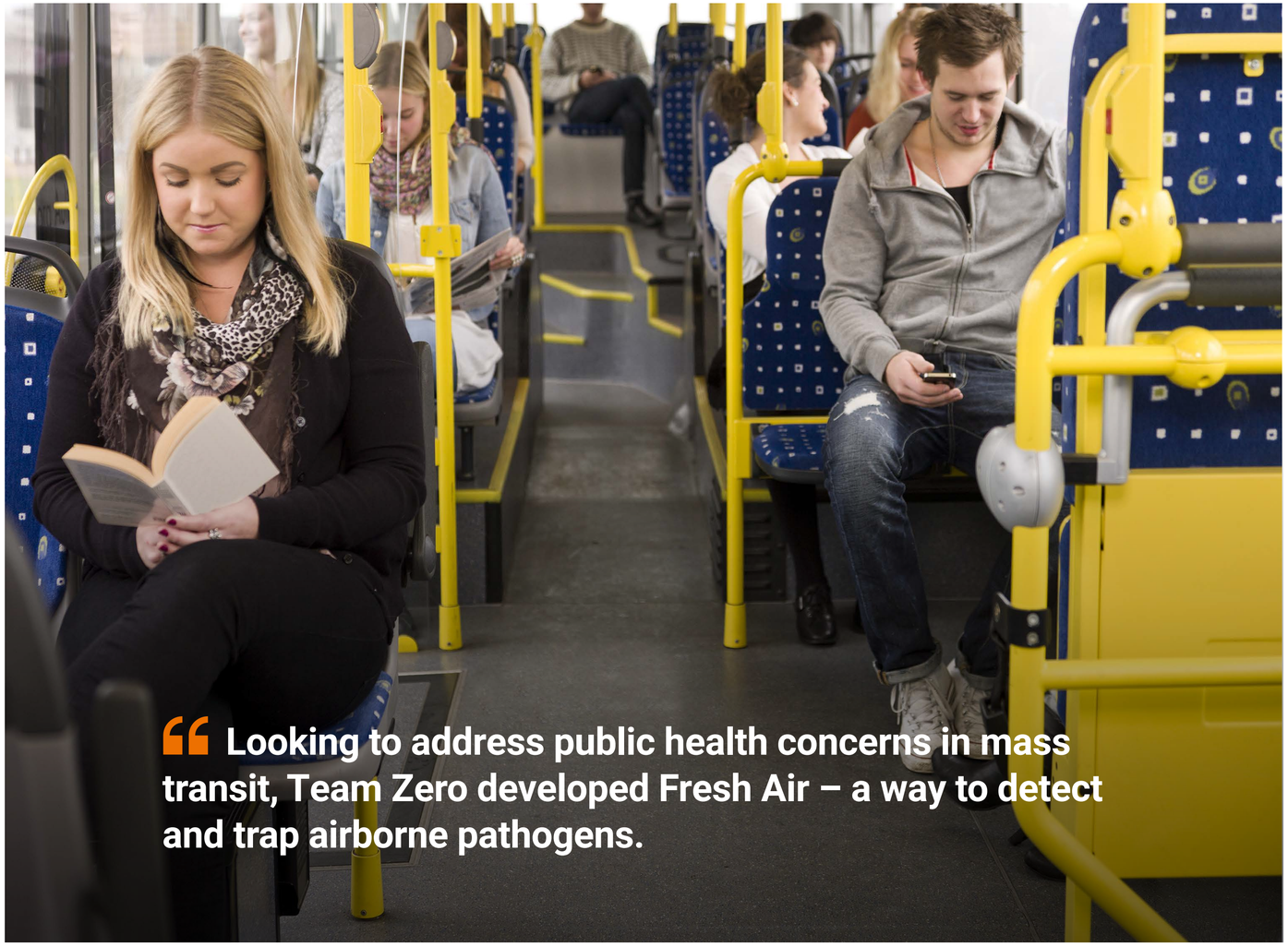
TEAM MEMBERS
MUNTASER SYED
BRANDON WOLFRAM

Air quality has always been a focus for technological innovation, whether in public spaces, buildings, or vehicles. But the COVID-19 pandemic put the issue of pathogen testing and transmission on the forefront of public agendas across the world.

Looking to address public health concerns in mass transit, Team Zero developed Fresh Air – a way to detect and trap airborne pathogens. An ion chamber capable of eliminating airborne pathogens is paired with sensors that monitor air quality and enable real-time data mapping and notifications. The data collected is available through an online customizable dashboard.

Fresh Air can be mounted on personal protective equipment for individuals in higher risk situations, such as healthcare providers or transit operators. There is potential to integrate it into HVAC and HEPA filter systems for wider deployment on buses, trains, or airline cabins. In addition to pathogens, Fresh Air can detect harmful or flammable gases such as carbon monoxide and volatile organic compounds.

The ability to monitor, isolate, and direct an early response to air quality issues has the potential to increase public safety and avoid the shutdown of critical services. This is particularly useful for mass transit, where social distancing is challenging. Keeping people moving safely is critically important to a city's economy as well as its social fabric.



SECOND PLACE: TAMPA BAY MOBILITY

Enabling two-way communication and solutions for all mobility users

TEAM MEMBERS:
TRACY INGRAM

Pedestrians and other mobility users face distinct challenges from people who drive cars. Tampa Bay Mobility aims to provide a plaform to individuals to give direct feedback on bike paths, scooters, and bus stops to identify where and when there are problems in mobility.

By starting simple – with text messages – user input can be integrated into a hub that connects to existing systems, links to forms, and enables transit agency outreach. Effectively, the hub brings together transit commuters, cyclists, transit agencies, and public works staff. The hub also makes the connection across different levels of government – city, county, and state.

Mobility outreach can be challenging and fragmented. Making the right connections enables agencies to boost outreach and receive feedback on projects to improve mobility experiences for all citizens.

“ By starting simple – with text messages – user input can be integrated into a hub that connects to existing systems, links to forms, and enables transit agency outreach.

OTHER IDEAS

GO 4 Team

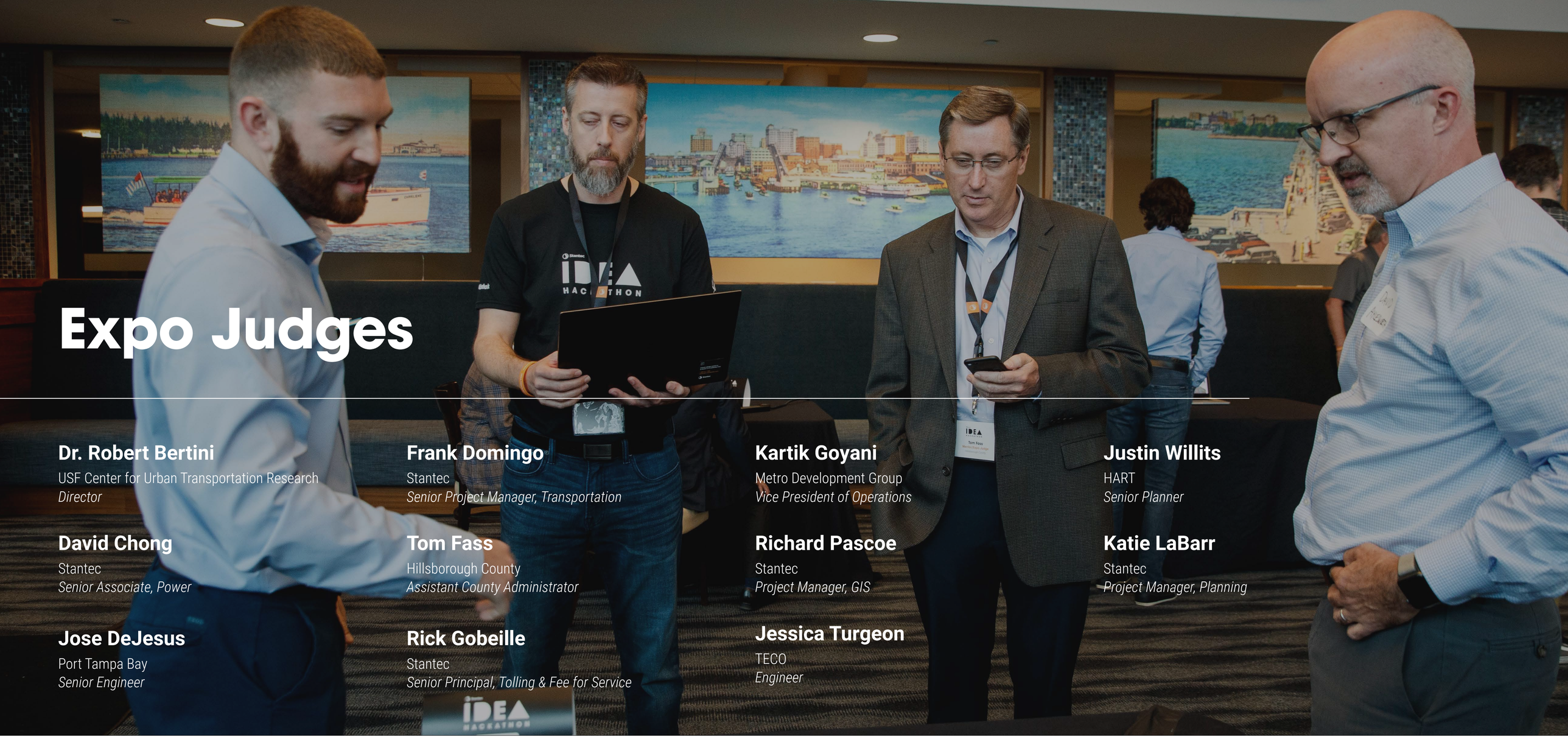
The team from the University of South Florida looked to address underutilized parking and carpooling options while improving curbside management. Their idea was to develop a mobile app to leverage mobility hubs, carpooling apps, 5G networks, and vehicle to infrastructure connectivity for a more integrated parking and transportation experience. The team had the foresight to look at emerging technologies such as autonomous vehicles and drones, both of which will play an important role in our mobility future.

The Mode Shifters

The team proposed Move Tampa: a way to incentivize alternative transportation modes through data collection, analysis, and mobile alerts. Move Tampa would integrate with Agile Mile, a transportation demand management software that would help learn and influence mobility choices. The team's aim was to increase livability in Tampa by making more transportation mode choices viable, making transportation more equitable by shifting away from the personal vehicle, and improving resilience through reduced pollution and a more diverse transportation system.

Team EPT

Team EPT (Efficient Public Transit) looked to address common deterrents to adopting public transit: longer travel times, unreliable arrival time forecasts, and a lack of flexibility in route choice. Focusing on bus service, the team proposed installing connected sensors within bus stops to better track fleet movement and arrival times. Sensor data would be integrated with mobility apps to provide better, more accurate information for passengers who may need different route options or require additional accessibility. Ultimately, the proposed outcome was to improve the transit experience for all users and grow ridership.



Expo Judges

Dr. Robert Bertini
USF Center for Urban Transportation Research
Director

David Chong
Stantec
Senior Associate, Power

Jose DeJesus
Port Tampa Bay
Senior Engineer

Frank Domingo
Stantec
Senior Project Manager, Transportation

Tom Fass
Hillsborough County
Assistant County Administrator

Rick Gobeille
Stantec
Senior Principal, Tolling & Fee for Service

Kartik Goyani
Metro Development Group
Vice President of Operations

Richard Pascoe
Stantec
Project Manager, GIS

Jessica Turgeon
TECO
Engineer

Justin Willits
HART
Senior Planner

Katie LaBarr
Stantec
Project Manager, Planning

Finale Judges

Jason Schrieber
Stantec
Senior Principal, Urban Places

Beth Alden
Hillsborough County Metropolitan Planning Organization
Executive Director

Vik Bhide
City of Tampa
Director, Transportation and Stormwater Services

Mike Kennedy
Stantec
Executive Vice President

Brad Cooke
Strategic Property Partners
Vice President

Mentors

Frank Domingo
Stantec
Senior Project Manager, Transportation

Brett Maternowski
Synapse
Director of Corporate Engagement

Lauren Prager
Synapse
Vice President for Community Engagement

Justin Willits
Hillsborough Area Regional Transit Authority (HART)
Senior Planner

Philip Winters
USF Center for Urban Transportation Research (CUTR)
Transportation Demand Management Program Director

Rick Gobeille
Stantec
Senior Principal, Tolling & Fee for Service

Bob Dixon
qualifiedMEETINGS
Chief Operating Officer

Wes Lehman
Urban Buffalo Marketing
Founder

Richard Pascoe
Stantec
Project Manager, GIS

Johnny Wong
Hillsborough County MPO
Senior Planner

Jose DeJesus
Port Tampa Bay
Senior Engineer

Chris Evanich
Schneider Electric
Program Director, Energy as a Service

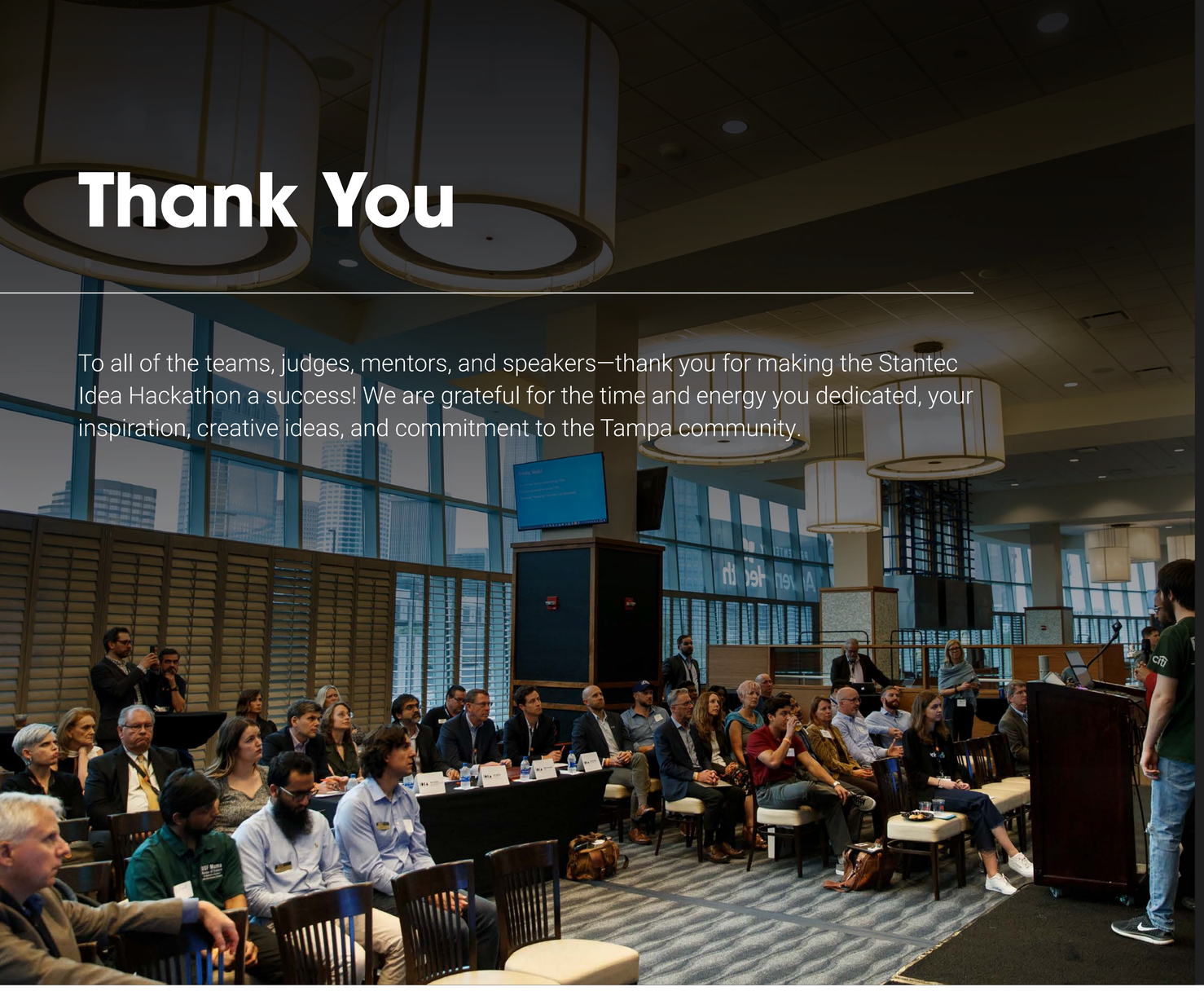
Tom Fass
Hillsborough County
Assistant County Administrator

Danni Jorgenson
City of Tampa
Chief Transportation Planning Engineer

David Robinson
Tampa Bay EDC
Economic Development Manager

Thank You

To all of the teams, judges, mentors, and speakers—thank you for making the Stantec Idea Hackathon a success! We are grateful for the time and energy you dedicated, your inspiration, creative ideas, and commitment to the Tampa community.



PARTICIPATING ORGANIZATIONS:

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Hillsborough County
Hillsborough County MPO
Metro Development Group
Port Tampa Bay
Schneider Electric
Strategic Property Partners
Synapse
Tampa Bay Lightning
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