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Top 4 takeaways from the Jax Infrastructure Innovation Summit

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City and industry leaders met at the Prime F. Osborn III Convention Center last week to wrestle with the biggest disruptors coming to energy, transportation and infrastructure, from microgrids to artificial intelligence to blockchain. The Infrastructure Innovation Summit exposed some key insights about what JEA and the Jacksonville Transportation Authority will look like in the future.

1 - JEA's "portfolio of services"



Engineer testing solar panels at sunny power plant

CAIAIMAGE/TREVOR ADELINE

Utilities across the country have seen flat or declining electric sales since 2008. Now, the agencies - including JEA - or looking for new services they can provide to make up for lost revenue. For JEA, new services could include converting waste water into drinking water, becoming a residential solar panel installer and more.

"Stop thinking about a utility company," said interim CEO Aaron Zahn. "That's the JEA of the past."

The utility has formed an innovation lab to explore new services and technologies, like using sound waves to detect small water leaks and energy signatures to detect appliances that are about to fail, according to JEA President Melissa Dykes.

2- Wind and solar will proliferate

"Virtuous learning cycles" will continue to make wind and solar energy the cheapest forms of energy, according to Glen Hiemstra, founder of Futurist.com. These cycles continue to make the technology needed for wind and solar more efficient and affordable.

Utility scale wind and solar farms generate energy at less than three cents per kilowatt hour, less than half the cost of a natural gas powered plant. Batteries, an essential component of a wind/solar grid, have already reached half the price of a Department of Energy price projection for 2050.

"We are in fact in the era of exponential energy," said Hiemstra.

3 - JTA as "transportation integrators"

Transit authorities across the country have lost riders to rideshare companies like Uber and Lyft. Couple that with Jacksonville's minuscule adoption of transit and with the high cost of adding transit infrastructure, and it's clear JTA needed an innovative approach, according to CEO Nat Ford.

Ford had already called for JTA to become transportation integrators at the State of JTA in May, and the summit's panelists and speakers unanimously supported that vision. JTA is building a transportation center that will house bus rapid transit, intercity buses, rideshares, bikeshares, commuter rail and autonomous vehicles. It is also converting the 2-mile Skyway into a paved artery for a 10-mile autonomous vehicle network connecting downtown to Springfield, Brooklyn, San Marco, TIAA Bank Field and more.

JTA is one of many city agencies applying for a federal grant to turn Bay Street into a proof of concept for the shuttle system. Ford estimated that within two years of getting the grant, the road would be serviced by 15 autonomous shuttles.

"We are already on the path of developing what has already gotten national attention – not an autonomous shuttle, but an autonomous system," said Ford. "We're hoping that Jacksonville will be the first city that does the first full deployment of a network."

4 - Data can do as much harm as good

Futurists often praise the virtues of the data-dominated world we now live in. When autonomous vehicles, smart infrastructure and other sensors start poring terabytes of data every hour into the integrated data exchanges needed for autonomous vehicle networks, an exchange the North Florida Transportation Planning Organization is currently building, the amount of available data will explode, according to Melba Kurman, author and former Microsoft (Nasdaq: MSFT) analyst.

This could be a very good thing. Autonomous vehicles hold the potential to nearly eradicate vehicular deaths and drastically reduce city air pollution. Automation of freight deliveries could also solve congestion issues and bring down shipping costs, making products more affordable and shipping more reliable. Data could support preventative policing, identify food deserts, discovery cancer clusters and other disease concentrations and much more.

This could also be a very bad thing. The same data could support an unprecedented surveillance state, Kurman warned. By integrating infrastructure onto an Internet of Things, power grids, cars and buildings would also become susceptible to cyberattacks.

Kurman called for cities to be forward thinking in making data available to support innovation while ensuring data privacy, policing bad actors and deploying high-level cybersecurity.

"Whether they like it or not, cities are the ground zero," said Kurman.

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