APTA 2020 APTAtech Abstracts Topics Austin Texas August 31-September 2	
Abstract Topics	**Abstract Descriptions**
5G	The 5G challenges are pretty much known by now such as latency and reliability, something of a holy grail. Shaving latency down to 1ms for a host of applications from virtual reality games to providing increased visibility and control over transit systems will be another one of the toughest challenges of 5G. How will 5G impact transit? Are we ready for it?
Application of Artificial Intelligence, Machine Learning, and Deep Learning in Transit	People talk about "Artificial Intelligence" as if it's still in the future. Today, Artificial Intelligence is already proliferating in our lives. From robotic pets that we buy as the latest toy for our kids to the robotic surgeon that's performing our family member's next scheduled surgery, to the recommendation systems that learn our preferences for transit routes, fare payment, and scheduling. Share with us your take-aways of AI. Delve into how Machine Learning changes our behavior and expectation in the Public Transit environment.
Automated (AV) and Connected Vehicles (CV) Technologies	Whether it is for partial automation for L2/3 systems or reaching the full autonomy of L4/5 systems, Autonomous and Connected Vehicles (AVs and CVs) will revolutionize our Public Transportation Systems. Converting fleets to integrate new AVs and CVs isn't without challenges. What are the lessons learned from AV and CV Public Transit projects in North America and Internationally? What are the most effective Public Transit use cases and the technology challenges we are facing in the many ongoing pilots. "What is coming next" in terms of technologies to address these challenges.
Cash vs. Credit - cost review, reporting and challenges	The benefits to cashless fare options include data collection, incentivizing travel behavior, allowing dynamic pricing strategies, and seamless use across multiple systems. The drawbacks of a cashless public transit system primarily deal with ensuring equity. What are benefits and challenges for transit systems when balancing cash vs credit?
Cloud Services in Action	What is the role of today's enterprise public cloud market in Transit? How do cloud platforms have a solution for security, access, and storage? Share your successes and challenges of cloud-based transit technologies.
Cybersecurity	Most organizations are working through the changes of developing Cybersecurity departments. Cybersecurity is viewed broadly and includes not only the classical area of information security but embraces the necessary enforcement and outreach activities as well. Share with us the lessons learned, best practices and food for

	thought as cybersecurity grows. Share how agencies can create policies and practices that support the transit agency in reducing and addressing cybersecurity attacks.
Data Management and Analytics	Share your experiences and techniques to make big data more useful and usable. Are there best practices in the transit industry? Who is doing is right? How do we address practice vs. policy?
Fare Policy - Pushing the Revenue Agenda within the Agency and Out	Contribute to the discussion of how fare systems impact many stakeholders inside and outside the agency. This can include system procurements, fare policy changes, system expansions, etc. Address internal preparations and implementation activity, marketing, operations training, security issues, external partners, etc.
IoT/Real Time Telemetry Ingestion and Processing	Data ingestion is a process by which data is moved from a source to a destination where it can be stored and further analyzed. How is real-time data ingestion and processing messages from IoT devices into a big data analytic platform being used in transit?
Innovation Initiative	Share your experiences on the emerging and innovative technology trends in operations, security, signaling. Expand on technologies that may transform daily operations, including new energy management, automation, construction, and other innovations.
Mobile Apps	Mobile apps have many benefits in transit from real time information, location, route planning, payments and general information. Does every agency need an app? Should agencies partner with an app developer or build one on their own? What are the benefits and challenges of having a mobile app?
Mobile Ticketing	Account-based ticketing has the potential to achieve the vision of a seamless, frictionless experience that is also interoperable and intermodal, serving both people who live, work and visit cities as well as the transportation companies that serve them. What are the keys to its adoption and success for transit operators?
Mobility as a Service (MaaS)	The Adoption of MaaS. Is MaaS for real or is it too complex? Information Platform vs. Fare Platform…what's better for transit?
Open Data, Open APIs and Open Source for Collaboration	What being “open” means for your agency will depend on practical and technical constraints, security and privacy concerns, and the dynamics of the people and networks in your space. What does this mean for transit?
Operational Technologies	Many transit agencies have been at the forefront of public transit innovation. Over the last 20 years, digital innovation has improved rider experience – making public transit easier to use, more reliable, faster to use, and more transparent. However, problems with operational practices have recently reached a critical point creating difficulties, but also many opportunities moving forward. What are opportunities for transit in adopting new technologies to enhance operational performance?

Safety & Security Technologies	Safety & security technologies are critical issues in an environment with expanding risks. What are best practices addressing safety and security as key operating objectives of all transit providers? What's new and effective and how can we improve as an industry?
Technology Workforce Development	The workforce is changing, and technology implementation is changing the way we work. Chances are it'll be very different very soon thanks to fast-evolving technologies that are changing the nature of work, the dynamics of the workforce, and the notion of the workplace. What do we need to understand the impact of emerging technologies on the future of work?
Zero Emission Bus Technologies	Zero emission bus technologies are evolving and improving? What are the new and innovative technologies used to reduce emissions and improve reliability?
Wireless Communication Technology	Wireless is here and becoming more pervasive. Once upon a time it was just voice, but today's radio has expanded to offer CAD/AVL, maintenance data, customer Wi-Fi, security, onboard payment systems and much more. In this session we ask you to look at the legal and regulatory aspects of guaranteeing wireless service availability for transit, while also discussing emerging technologies and how they fit into the existing framework.
COVID-19	How has COVID-19 changed Public Transportation