

# POLICY SOLUTIONS FOR MORE INNOVATION

## A Policy Primer for Emerging Technology in Ohio



By Logan Kolas



ECONOMIC RESEARCH CENTER  
at THE BUCKEYE INSTITUTE

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## EXECUTIVE SUMMARY

Emerging technologies have a lot to offer Ohio—better pay, better jobs, better healthcare, better transportation, better education, better lifestyles. Outdated regulations, unclear rules, and short-sighted tax schemes threaten many of the potential gains that new technologies offer. Fortunately, Ohio has already begun improving its regulatory code and state policymakers should build upon policy reforms designed to promote economic growth and encourage entrepreneurship and innovation. Recent efforts include expanding broadband access, extending telehealth availability, preparing workers for technology-related jobs, simplifying redundancies in Ohio’s regulatory code, and testing nontraditional pilot programs. Unfortunately, despite these successes, Ohio’s regulatory regime for cutting-edge technologies lags behind other states. State policymakers should explore improving regulatory and tax policies across several key areas as more reform work remains to be done.

New policy choices arise as new technology develops, and some guiding principles and actionable policy ideas can help lawmakers keep pace. Policies governing emerging technologies should pursue three goals: transparent and shared data collection across jurisdictions; government coordination to reduce bureaucratic red tape; and limited regulatory burdens on businesses and technology entrepreneurs. Legislative efforts should be as transparent as possible, and should encourage multi-jurisdictional data sharing at every level of government. Successful policies will harmonize and streamline burdensome local, state, and federal rules in order to free entrepreneurs from needless restrictions. Following these guiding principles and adopting a flexible, “soft law” presumption for emerging technology will protect consumers without stifling valuable innovation.

Opportunities to improve Ohio’s emerging technology policies abound. Other states, for example, have already built “regulatory sandboxes” that allow companies to experiment with new technologies under regulatory supervision, giving regulators the chance to craft well-suited rules for broader use. Ohio has not. Ohio has deployed a wise broadband strategy, but a digital divide persists and must be overcome so that rural Ohio does not forego online advances in education and telehealth. In Ohio, Tesla enjoys monopoly power in direct sales of electric vehicles due in part to legal exemptions that limit competition. Ohio’s corporate carveouts should end and be replaced by free-market competition. Drone operators and property owners need clear rules governing public and private property rights. The revolutionary drone technology depends on it. Other states have passed (but not yet implemented) harmful, innovation-killing taxes on digital services and the fledgling companies that offer them. Ohio should not. Instead,

Ohio should continue pursuing free-market solutions that promote competition, reward innovation and risk-taking, and use a light, flexible regulatory touch that encourages emerging technologies.

Sound regulatory and tax reforms designed to encourage rather than restrict emerging technologies will make Ohio more competitive nationally and internationally, create jobs, attract new citizens, and improve the quality of life for families across the state. The time for action is now.

# INTRODUCTION

The last year and a half illustrate the axiom that “necessity is the mother of invention.” The 2020s have already spearheaded new innovations and technologies in a variety of fields. Coronavirus mRNA vaccines, for example, not only helped tame a deadly virus but show positive signs for long-term medical research.<sup>1</sup> Recent advances in driverless car technology by Waymo and Tesla may soon offer a new, safer type of driving.<sup>2</sup> United Airlines and Boom Supersonic have agreed to partner on supersonic planes, which offer faster and more environmentally friendly air travel.<sup>3</sup> The Cincinnati/Kentucky International Airport—a technology and innovation leader—is experimenting with ThorDrive’s autonomous vehicle technology, and Cincinnati’s Blue Water Vaccines is developing a potentially lifelong universal influenza vaccine to protect against numerous strains of the flu.<sup>4</sup> These and other advances across industry sectors will continue transforming ordinary life,<sup>5</sup> and Ohio should have the right rules and policies in place to capitalize on them in a rapidly evolving economy.

Ohio lawmakers have already pursued sound innovation and technology policy over the past decade, but new policy choices will arise as new technology develops. Some guiding principles and a list of actionable policy reforms can help lawmakers keep pace and make Ohio a better place to live and work. As Ohio looks to compete economically in the Midwest, across the United States, and against international competitors, following these principles and policy recommendations will help make Ohio more competitive, which means more and better jobs, higher pay, and a higher standard of living for Ohioans across the state.

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<sup>1</sup> Eli Dourado, **Notes on Technology in the 2020’s**, Eli Dourado’s blog, December 31, 2020.

<sup>2</sup> *Ibid.*

<sup>3</sup> **United Goes Supersonic**, Boom Supersonic (Last visited August 13, 2021).

<sup>4</sup> Skip Descant, **Cincinnati Airport Tests Autonomous Luggage Vehicle**, Aviation Pros, May 24, 2021; and Blue Water Vaccines, Inc., **Blue Water Vaccines Announces the Appointments of Former Congressman Theodore S. Yoho as the Head of Business Development and Manufacturing Expert Andrew D. Skibo as the Global Head of Biologics Operations**, Blue Water Vaccines, Inc. press release, June 17, 2021.

<sup>5</sup> Tyler Cowen, **What Might An End to the Great Stagnation Consist Of?**, Marginal Revolution, December 13, 2020; Caleb Watney, **Cracks in the Great Stagnation**, Agglomerations, November 23, 2020; and Noah Smith, **Techno-Optimism for the 2020s**, Noahpinion Substack, December 3, 2020.

# GUIDING PRINCIPLES FOR REGULATING EMERGING TECHNOLOGY

Sound policy for governing emerging technologies should pursue three primary objectives: transparent and shared data collection across jurisdictions; government coordination to reduce bureaucratic red tape; and limited regulatory burdens on businesses and technology entrepreneurs. Following these guiding principles will help make Ohio a prosperous home for businesses and consumers.

## Transparency and Breaking Down Data Silos

Like all taxpayer-funded initiatives, state-sponsored technology programs should be transparent and easily accessible to taxpayers, businesses, and regulators, making it clear how tax dollars are being used. Inspired by The Buckeye Institute's searchable salary database, Ohio already maintains the Ohio Checkbook, which shows how state tax dollars are spent<sup>6</sup> and improved Ohio's ranking by U.S. PIRG Education Fund from 46<sup>th</sup> to first.<sup>7</sup> Following its own example, Ohio should also create a new (or adjust an existing) platform so that local municipalities can contribute their own statistical records and data to a larger, state-managed database. That state-level database should transparently and specifically delineate all taxpayer-funded technology projects by name, dollar amount, and project duration.

Ohio's effort should also work to dismantle data silos that needlessly restrict access to valuable data. Despite Ohio's reputation as a data transparency leader, many local jurisdictions do not manage their records and data properly, and even those jurisdictions with well-maintained records too often silo their data from other agencies, officials, and researchers. Local criminal justice data, for example, have been poorly maintained and gone unshared by many local jurisdictions. Ohio Supreme Court Chief Justice Maureen O'Connor has even called a statewide sentencing database a necessary first step for criminal justice reform in Ohio.<sup>8</sup>

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<sup>6</sup> Greg R. Lawson, research fellow, The Buckeye Institute, Testimony Before the Ohio Senate Government and Agency Review Committee, "**Ensuring Government Transparency**," November 6, 2019.

<sup>7</sup> R.J. Cross, Linus Lu, and Andre Delattre, *Following the Money 2019: How the 50 States Rank on Online Economic Development Subsidy Transparency*, Frontier Group and U.S. PIRG Education Fund, December 2019.

<sup>8</sup> Anne Yeager, **Justices Call for Statewide Sentencing Database**, Court News Ohio, July 15, 2020.

Lawmakers and companies would benefit from a widely available technology database similar to DataOhio—an interactive data archive of more than 226 different datasets<sup>9</sup>—that would break down data silos by allowing local municipalities to contribute their data to a larger database. Ultimately, new rules and regulations for data collection in Ohio’s burgeoning technology sector should be carefully tailored to spur innovation, not thwart it.

### **Local, State, and Federal Harmonization**

Wherever possible, government regulation should be coordinated across federal, state, and local jurisdictions. Emerging technology regulations are no exception to this general rule. Uncoordinated regulations may inadvertently trap innovative ideas with a sticky, complex web of restrictions. Although localities certainly have their own roles to play, state lawmakers should coordinate policy across Ohio’s local municipalities and avoid the potential for thousands of competing, conflicting, and confusing regulations. Existing laws should be applied to emerging technology before new laws are proposed, and any new regulations should be carefully crafted to balance freedoms and restrictions in the marketplace.<sup>10</sup>

Drones, for example, are one emerging technology that could use a more coordinated, state-level regulatory approach. Although Ohio law wisely allows state authorities to lease airspace over state roads, Ohio’s airspace lease laws have created ambiguity as to whether drones may legally fly over local roads.<sup>11</sup> Instead of waiting for more than 900 municipalities to quilt a patchwork of confounding local rules, state lawmakers should assert jurisdiction and authorize and regulate commercial drone use over local roads.

The Ohio Constitution’s “home rule amendment” complicates statewide regulatory codes by empowering municipalities to “exercise all powers of local self-government” as long as local policy does not conflict with the state’s “general laws.”<sup>12</sup> But the Ohio Supreme Court’s interpretation of this amendment provides a useful guide for ensuring that state regulatory policy does not violate the amendment. According to the court, a “general law” that preempts local policy must be “part of a statewide and comprehensive legislative enactment” that applies uniformly across the state and sets forth regulations, not simply an act that grants

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<sup>9</sup> **About DataOhio**, DataOhio (Last visited August 13, 2021).

<sup>10</sup> **Principles for Lawmakers: How to Think About Emerging Technologies**, Pelican Center for Technology and Innovation Policy, February 11, 2020.

<sup>11</sup> Brent Skorup and Connor Haaland, **Which States are Prepared for the Drone Industry? A 50 State Report Card**, Mercatus Center, January 14, 2021.

<sup>12</sup> Oh. Const. Art. XVIII, Sec. 3.



or limits local government power.<sup>13</sup> Thus, state policymakers can and should enact constitutional statewide policy that creates coordinated, regulatory certainty for technology innovators.

### **Light-Touch Regulation**

Technology is constantly and rapidly evolving. States must consistently adjust their regulatory codes to remove unnecessary barriers to innovation and entrepreneurship, while carefully crafting rules and guidelines to protect consumers. Wherever possible, Ohio should shift its regulatory regime away from strongly codified law and toward a “permissionless innovation” system of “soft law,” or informal rules and flexible guidelines more capable of regulating rapidly advancing technology.<sup>14</sup> More stringent, codified laws and regulations—although sometimes necessary for consumer safety—are often ill-fitting and obsolete protective measures quickly outpaced by technological progress.

Ohio should strike a more appropriate regulatory balance by creating a baseline of necessary protections through more formal regulation while regulating parts of emerging technology through a targeted “soft law” approach. Regulatory sandboxes, for example, provide supervised and controlled regulatory environments in which firms can temporarily experiment with new, innovative products and services.<sup>15</sup> Utah has been a trendsetter in building regulatory sandboxes for fintech, insurance, legal services, and a statewide industry-agnostic sandbox. Similarly, Pennsylvania has adopted regulatory guidance instead of stricter legislative requirements for autonomous vehicles.<sup>16</sup> Ohio should draw inspiration from both states and responsibly reform its regulatory code to unlock innovation from the shackles of government mandates.

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<sup>13</sup> *State ex rel. Morrison v. Beck Energy Corp.*, 143 Ohio St.3d 271, 275-76 (Ohio 2015).

<sup>14</sup> Jennifer Huddleston, Adam Thierer, and Ryan Hagemann, **‘Soft Law’ Is Eating the World: Driverless Car Edition**, The Bridge at the Mercatus Center, October 11, 2018.

<sup>15</sup> Logan Kolas, **Policy Solutions for More Innovation: Build a Regulatory Sandbox for Financial Technology Innovators**, The Buckeye Institute, March 29, 2021.

<sup>16</sup> James Czerniawski, **How Utah Aims to Help Business Flourish After Pandemic**, *U.S. News and World Report*, March 25, 2021; and Jennifer Huddleston and Adam Thierer, **Pennsylvania’s Innovative Approach to Regulating Innovation: Autonomous Vehicles Policy Offers a Case Study in Soft Law**, The Bridge at the Mercatus Center, September 5, 2018.

# IMPROVING OHIO'S EMERGING TECHNOLOGY REGULATIONS: A CHECKLIST

Ohio has adopted some sound technology policy over the past decade, but more work remains to be done. The DeWine Administration deserves credit for efforts to expand broadband access, expand telehealth availability, and prepare workers for technology-related jobs. It also took more creative steps to use emerging technologies to simplify redundancies in Ohio's regulatory code and tested nontraditional pilot programs like Starlink satellites to connect rural Ohioans to the internet.<sup>17</sup> But in overseeing other areas of cutting-edge technologies, Ohio's regulatory regime lags behind other states. According to the Mercatus Center, Ohio ranks 30<sup>th</sup> in drone readiness,<sup>18</sup> for instance, despite news reports of Ohio businesses manufacturing and testing new drones.<sup>19</sup> Drone technology is just one of several significant emerging technologies ripe for regulatory reform and innovation. In addition to drone law, state policymakers should explore improving regulatory and tax policies in six other areas: regulatory sandboxes; broadband access; autonomous and electric vehicles; digital services; data privacy; and appropriate work visas for skilled immigrants.<sup>20</sup>

## Regulatory Sandboxes

Ohio needs to build regulatory sandboxes—which are controlled regulatory and consumer-centric environments in which approved firms may experiment, temporarily exempt from specified government regulations, while supervised by subject matter expert regulators.<sup>21</sup> Regulatory sandboxes ease access to investment capital by removing regulatory ambiguities that make investments in startup firms

<sup>17</sup> **Lt. Governor Husted Launches AI Tool to Analyze Ohio Regulations**, Innovate Ohio press release, February 13, 2020; and **New Satellite High Speed Internet Service Will Connect Underserved Households and Businesses in Central Ohio**, Innovate Ohio press release, December 16, 2020.

<sup>18</sup> Brent Skorup and Connor Haaland, ***Which States Are Prepared for the Drone Industry? A 50 State Report Card***, Mercatus Center, March 19, 2020.

<sup>19</sup> Nick Blizzard and Thomas Gnau, ***Kroger to Launch First Autonomous Drone Delivery in Centerville***, *Dayton Daily News*, June 6, 2021.

<sup>20</sup> Ohio Legislative Service Commission Office of Research and Drafting, ***Bill Analysis of Senate Bill 101***, 134<sup>th</sup> General Assembly.

<sup>21</sup> Logan Kolas, ***Policy Solutions for More Innovation: Build a Regulatory Sandbox for Financial Technology Innovators***, The Buckeye Institute, March 29, 2021.

more difficult.<sup>22</sup> And they provide a learning period for lawmakers and regulators to better understand new technologies and services and therefore tailor a better fitting regulatory regime.<sup>23</sup>

The financial technology or fintech sector would be a logical first regulatory sandbox for Ohio to construct. The state has a ready supply of labor market talent, a sophisticated network of universities and trade schools, and boasts one of the five largest financial services sectors in the country—all materials necessary for building a successful regulatory sandbox that will make it easier for fintech firms to call Ohio home, hire Ohio workers, and serve Ohio communities.<sup>24</sup> Lawmakers can then build sandboxes for other sectors such as legal services, insurance, and drones.

Other states already have regulatory sandboxes. Utah’s sandbox has proven so successful that the legislature unanimously passed bipartisan legislation to expand its sandbox to all sectors of the economy. Tennessee and Mississippi have also explored industry-agnostic sandboxes in which all industry sectors may apply for safety-friendly regulatory relief.<sup>25</sup> Ohio, meanwhile, remains on the sideline of this innovative regulatory reform and that needs to change.

### **Broadband, Internet Access, and the Digital Divide**

Nearly one million Ohioans still lack access to high-speed internet<sup>26</sup>—a problem that has created a digital divide between urban centers and rural areas of the state. That divide is deepest in Southeast Ohio and Appalachia where a recent regional study found that 80 to 90 percent of “rural expanse” households in eight counties had no access to broadband services.<sup>27</sup> Without broadband or internet access, these communities lack access to telemedicine and online learning and education resources, and continue to fall behind in other forms of technological skill

<sup>22</sup> Giulio Cornelli, Sebastian Doerr, Leonardo Gambacorta, and Ouarda Merrouche, **Inside the Regulatory Sandbox: Effects on Fintech Funding**, Bank for International Settlements working paper No. 901, November 3, 2020; and Jayoung James Goo and Joo-Yeun Heo, **The Impact of the Regulatory Sandbox on the Fintech Industry, with a Discussion on the Relation between Regulatory Sandboxes and Open Innovation**, *Journal of Open Innovation: Technology, Market, and Complexity*, June 19, 2020.

<sup>23</sup> *Ibid.*

<sup>24</sup> Terry Gore, **Banking on Ohio as a Fintech Leader**, CIOReview.

<sup>25</sup> Matthew Nicaud, **Regulatory “Sandbox” Reforms Advance Across the Nation**, Mississippi Center for Public Policy, June 23, 2021.

<sup>26</sup> Innovate Ohio, **Ohio Broadband Strategy** (Last visited August 13, 2021).

<sup>27</sup> Buckeye Hills Regional Council, Ohio University Voinovich School, and Athens County Economic Development Council, **Ohio Broadband Efforts: Observations and Suggestions**, November 20, 2019.

development. State policymakers can help bridge this digital divide and bring broadband internet to more Ohio households in several ways.

First, as The Buckeye Institute has suggested previously, Ohio should continue to resist government-owned and controlled networks (GON) that waste taxpayer money on low quality broadband that is difficult to upgrade.<sup>28</sup> Lawmakers should place guardrails on GONs by, among other things, restricting them to truly unserved areas and requiring formal business plans for their use.<sup>29</sup> Washington's recent infrastructure spending plan would send states at least \$100 million in broadband funding through the National Telecommunications and Information Administration (NTIA).<sup>30</sup> The federal legislation wisely requires the NTIA funds to serve unserved areas first.<sup>31</sup> With some recent reporting suggesting that the federal spending and restrictions do not preempt state guardrails,<sup>32</sup> Ohio can and should restrict GONs to unserved areas and avoid disbursement policies that would put local governments in competition with private sector participants.

Instead of using the government to compete with the private sector, Ohio policymakers should use targeted public grants and other cost-saving measures to make it more affordable for broadband companies to extend internet access to rural areas.<sup>33</sup> Installing high-speed fiber-optic cable costs up to \$8,000 per home, but approximately 90 percent of that cost is digging up roadways, not laying the cable.<sup>34</sup> Ohio lawmakers should adopt a "dig once" policy to have plastic pipe conduits for fiber-optics installed during road construction activity rather than in

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<sup>28</sup> Greg R. Lawson, *Policy Solutions for the Pandemic: Expanding Broadband to Underserved Areas*, The Buckeye Institute, May 4, 2020; and William Rhinehart, *Are Government-Owned Broadband Efforts Effective?*, The Center for Growth and Opportunity, October 23, 2020.

<sup>29</sup> Ohio Legislative Service Commission Office of Research and Drafting, *Bill Analysis of House Bill 110*, 134<sup>th</sup> General Assembly, pp. 84-86; and Anna Staver and Jessie Balmert, *Ohio Lawmakers Send Budget with Tax Cuts, New School Funding Formula to Gov. DeWine's Desk*, *The Columbus Dispatch*, June 28, 2021.

<sup>30</sup> Christopher J. Armstrong, Lauri A. Hettinger, Hannah M. Coulter, et al., *Infrastructure Investment and Jobs Act: Summary of Bipartisan Infrastructure Legislation*, Holland & Knight, August 10, 2021.

<sup>31</sup> Daniel Lyons, *Building Broadband in the Infrastructure Bill: The Good, The Bad, and The Uncertain*, AEI Ideas, August 13, 2021.

<sup>32</sup> Christiano Lima, *The Technology 202: Biden Won Big on Broadband, but Allies Fear Local Governments Lost Out*, *The Washington Post*, August 11, 2021.

<sup>33</sup> Greg R. Lawson, *Policy Solutions for the Pandemic: Expanding Broadband to Underserved Areas*, The Buckeye Institute, May 4, 2020.

<sup>34</sup> Tyler Cooper, *Dig Once: The Digital Divide Solution Congress Squandered and Policy that Could Save \$126 Billion on Broadband Deployment*, *BroadbandNow*, August 7, 2019.

subsequent excavations.<sup>35</sup> Policymakers should also re-examine state and local laws and regulations that affect how broadband companies provide internet access through utility poles. Those regulations should be amended to avoid service delays and reduce project costs.<sup>36</sup>

Second, Ohio should exempt broadband service providers from unnecessary fees assessed on deploying their equipment. Louisiana, for example, charges \$5,000 for cable that violates the right-of-way, even if that cable is harmlessly deployed under the highway.<sup>37</sup> Ohio wisely exempts telecommunication companies from the state's right-of-way fees, but any future fees and penalties associated with broadband installation should be transparent and reserved for only significant violations. Ohio should also consider the New Albany Company's recommendation to deposit related right-of-way fees into a fund designated for bringing internet access to underserved areas.<sup>38</sup>

Finally, Ohio should find creative ways to expand internet access without laying fiber-optic cable. One proposal would use the state's sizable infrastructure—home to the nation's second largest inventory of bridges and fourth largest interstate system—to extend fixed wireless technology by connecting communications equipment to a network of service towers.<sup>39</sup> Another would explore more pilot programs like Starlink satellite broadband to bridge the digital divide with satellites.<sup>40</sup>

Creative options for regulatory reforms to help extend broadband to underserved communities abound and Ohio policymakers would be wise to consider them.

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<sup>35</sup> **Pelican, Partners Release Policy Solutions to Close State Digital Divides**, Pelican Institute Center for Opportunity Policy press release, May 18, 2020; and '**Dig Once' Policies**, North Carolina Department of Information Technology, Broadband Infrastructure Office (Last visited August 13, 2021).

<sup>36</sup> Connect The Future, **The Backbone of Broadband Infrastructure: Understanding the Importance of Utility Poles**, YouTube video, April 16, 2021.

<sup>37</sup> **The State of Broadband in Louisiana and Mississippi: And What Policymakers Can Do About It**, Pelican Institute for Public Policy and Mississippi Center for Public Policy, June 29, 2021.

<sup>38</sup> *Ibid.*

<sup>39</sup> *Ibid.*; and Jon Husted, Lt. Governor of Ohio, **Ohio Broadband Strategy**, Innovate Ohio, December 19, 2019. p. 15.

<sup>40</sup> **New Satellite High Speed Internet Service Will Connect Underserved Households and Businesses in Central Ohio**, Innovate Ohio press release, December 16, 2020.

## Telehealth

Ohio should secure and expand successful health care reforms adopted during the COVID-19 pandemic, especially the state's liberalized use of telehealth technology. Health care regulations should be amended permanently to allow telehealth medical visits for getting second opinions and consulting with medical experts in other states.<sup>41</sup> Telehealth technology relieves pressure on health care systems, improves care quality and outcomes, and cuts medical costs.<sup>42</sup> Rural communities perhaps benefit the most from expanded telehealth options, as rural hospitals have closed and only 10 percent of physicians practice in rural areas that account for 20 percent of Ohio's population.<sup>43</sup> The telehealth technology and policy gains achieved during the pandemic should be advanced, and allowing web-based medical care should remain a priority.

## Autonomous and Electric Vehicles

Led by Tesla, electric vehicle sales have skyrocketed over the past decade.<sup>44</sup> General Motors has committed to eliminating gasoline and diesel light-duty cars, vans, and SUVs by 2035,<sup>45</sup> and other car makers are sure to follow. The automobile's status quo will soon change. State policymakers can and should help facilitate the coming transportation revolution, and sound policy will go much further than mere cash handouts.

<sup>41</sup> Rea S. Hederman Jr., vice president of policy, The Buckeye Institute, Testimony Before the Ohio House Insurance Committee, "**Ohio Can Improve Access to Health Care Through Telehealth**," March 10, 2021.

<sup>42</sup> Ambar Kulshreshtha, Joseph C. Kvedar, Abhinav Goyal, et al., "**Use of Remote Monitoring to Improve Outcomes in Patients with Heart Failure: A Pilot Trial**," *International Journal of Telemedicine and Applications*, Volume 2010 (May 2010); Stanley M. Finkelstein, Stuart Speedie, and Sandra Potthoff, "**Home Telehealth Improves Clinical Outcomes at Lower Cost for Home Healthcare**," *Telemedicine and e-Health*, Volume 12, Number 2 (April 18, 2006), p. 128-136.; and E. Ray Dorsey and Eric J. Topol, "**State of Telehealth**," *The New England Journal of Medicine*, Volume 375, Number 2 (July 14, 2016), p. 154-161.

<sup>43</sup> James B. Woodward, Ph.D., "**Access to Health Care Made Easier: Promoting Best Practices in Ohio's Telehealth Policy**," The Buckeye Institute, September 23, 2020; 172 Rural Hospital Closures: January 2005 – Present (130 since 2010), ShepCenter.UNC.edu, (Last visited July 22, 2021); and Urban Percentage of the Population for States, Historical, ICIP.IAState.edu (Last visited July 22, 2021).

<sup>44</sup> DriveOhio, **2020 DriveOhio Annual Report**, August 25, 2020; and **U.S. Plug-in Electric Vehicle Sales by Model**, Transportation Research Center at Argonne National Laboratory (Last updated January 2020).

<sup>45</sup> Steven Mufson, **General Motors to Eliminate Gasoline and Diesel Light-Duty Cars and SUVs by 2035**, *The Washington Post*, January 28, 2021.

Ultimately, transportation policymakers should focus on proven transportation and infrastructure options with well-defined, near-term objectives, and allow private sector entrepreneurs and innovators to experiment with ground-breaking projects and technologies.<sup>46</sup> More will be done and be done well if the public and private sectors simply stay in their lanes. To that end, policy changes should increase—not restrict—private sector competition, and reward—not penalize—innovation. Tesla, for example, currently enjoys a government-made monopoly on direct sales of electric vehicles in Ohio because although state law bans vehicle manufacturers from selling directly to consumers, Tesla received a state-sanctioned exemption for three store locations.<sup>47</sup> Compared against free-market outcomes, such exemptions and other regulatory carveouts limit competition, raise consumer prices, and create an unfair disadvantage for competitors like Lucid Motors and Rivian.<sup>48</sup> Policies that play favorites and pick market winners and losers should be repealed or replaced in favor of policies that facilitate more robust competition.

Electric vehicles require a compatible network of vehicle charging stations. The private sector—which has every incentive to build more and better chargers—has taken the lead meeting the needs of electric vehicle owners, and the government should be in no hurry to interfere. Ohio currently has 784 electric vehicle charging stations and more than 1,700 charging station ports.<sup>49</sup> Tesla has been rapidly adding to their station count and recently announced that other electric vehicles may now charge at their “supercharger network.”<sup>50</sup> This private sector success means a more limited need for publicly-funded charging stations.

But if state governments insist on funding charging stations, they should at least understand what to fund. A Michigan State University study for the Michigan Energy Office<sup>51</sup> found that although the initial cost for the 150kw stations may be higher, they offer the lowest overall system cost to accommodate demand for

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<sup>46</sup> Marc Scribner, **Smart Columbus and the Limits of Smart Cities**, Reason Foundation, July 12, 2021.

<sup>47</sup> Daniel A. Crane, **Reforming Michigan Vehicle Direct Sales Laws**, *Regulation*, Summer 2021.

<sup>48</sup> Aria Alamalhodaie, **EV Rivals Tesla, Rivian Unite to Target Direct Sales Legislation**, *TechCrunch*, March 3, 2021.

<sup>49</sup> **Alternative Fueling Station Counts by State**, AFDC.energy.gov (Last visited on August 16, 2021).

<sup>50</sup> **Map of Tesla Superchargers**, Tesla.com (Last visited August 5, 2021); Katie Ott Zehnder, Scott Lowry, Santos Ramos, Sam Spofforth, and Andrew Conley, **Electric Vehicle Charging Study**, prepared for DriveOhio, June 2020; and Lora Kolodny, **Elon Musk Says Tesla Supercharger Network Will Be Open to Other Cars This Year**, CNBC, July 20, 2021.

<sup>51</sup> The Michigan Energy Office has since been merged into the Michigan Department of Environment, Great Lakes, and Energy (EGLE).

electric vehicle charging stations by 2030.<sup>52</sup> That study also used mathematical modeling to determine how direct current fast charging stations should be placed to lower the infrastructure cost and the time-cost to users. Its methodology would complement DriveOhio's 2020 study,<sup>53</sup> which helped show how to ensure that charging stations are within a 50-mile radius of other stations on interstates—a requirement for Federal Highway Administration funding.<sup>54</sup> Ohio should commission another academic study on charger placement that accounts for infrastructure costs, consumer demand, and variations such as natural weather patterns. And although Ohio should not publicly fund additional charging stations, any public allocation it does make should go where funds are most needed and resources will not be wasted. Funds for charging stations at top state attractions, for example, should be tied to the amount of time typically spent at those locations to ensure vehicles are given time to charge and that resources are not ill-spent.

To encourage private sector innovation and attract private equity, Ohio should build a regulatory sandbox for emerging electric and autonomous vehicle technologies. In 2016, Nevada's onerous registration regulations drove the autonomous vehicle company Otto out of the state. Otto relocated in Ohio<sup>55</sup> because it could test in different traffic and weather scenarios.<sup>56</sup> Policymakers should build on that success and invite similar companies to take advantage of Ohio's natural elements and experiment in a well-designed regulatory sandbox.

Ohio should *not* repeat the policy mistakes of Smart Columbus—a \$50 million failure to revolutionize the transit system by outfitting the city with autonomous vehicles, smart mobility kiosks, transit apps, and a new data analytics platform.<sup>57</sup> Officials learned the hard way that building the infrastructure of the future takes more than money. Smart Columbus delivered only eight projects after initially promising 15.<sup>58</sup> It abandoned the city's ideas for truck platooning due to

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<sup>52</sup> Michigan State University principally investigated by Dr. Mehrnaz Ghamami, *Electric Vehicle Charger Placement Optimization in Michigan: Phase I – Highways*, Michigan Agency for Energy, Michigan Energy Office and Michigan State University, February 13, 2019.

<sup>53</sup> Katie Ott Zehnder, Scott Lowry, Santos Ramos, Sam Spofforth, and Andrew Conley, *Electric Vehicle Charging Study*, prepared for DriveOhio, June 2020.

<sup>54</sup> *Ibid.*, p. 23 and p. 70.

<sup>55</sup> Adam Thierer, *Innovation Arbitrage, Technological Civil Disobedience, & Spontaneous Deregulation*, The Technology Liberation Front, December 7, 2016.

<sup>56</sup> Roosevelt Leftwich, *Self-Driving Semi? See How It's Being Tested on the Ohio Turnpike*, Fox 8 News, December 1, 2016.

<sup>57</sup> SMRT Columbus, *Final Report for the Smart Columbus Demonstration Program*, June 15, 2021.

<sup>58</sup> *Ibid.*; and Aarian Marhsall, *America's 'Smart City' Didn't Get Much Smarter*, *Wired*, June 28, 2021; and SMRT Columbus, *Performance Measures Results for the Smart Columbus Demonstration Program*, May 28, 2021.



“technological limitations and complications with the private partner.”<sup>59</sup> Mobility apps for the cognitively disabled and pregnant women saw only a few dozen users, and the smart mobility kiosks were used to plan just eight trips during the one-year demonstration period.<sup>60</sup> By any objective measure this government-led project was a resounding failure. The private sector, by contrast, has proven itself time and again up to the task of marketable innovation that provides products and services that consumers actually want to use.

## Drone Deployment

Drone technology can revolutionize package and medical supply delivery, advance American geopolitical interests, reshape travel, improve agricultural production, and much more.<sup>61</sup> Advances in commercial drone delivery used for business operations are already happening in Ohio. Cincinnati-based Kroger, for example, is partnering with Drone Express and their Monroe hub to test grocery deliveries up to five pounds to the location of customer smartphones.<sup>62</sup> And although these test runs may be just the beginning for commercial drone use, rules and regulations at the state and federal levels complicate widespread use and development of emerging drone technology. Regulatory compliance costs can be prohibitive and ultimately are passed on to consumers or prevent new products from ever coming to market.

Ohio can do little to change federal aviation law, but the state does have broader discretion regulating lower-altitude airspace. The Federal Aviation Administration regulates airspace above 400 feet, states may regulate airspace below 400 feet—or “uncontrolled airspace.”<sup>63</sup> This makes federal and state regulatory coordination

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<sup>59</sup> Marc Scribner, **Smart Columbus and the Limits of Smart Cities**, Reason Foundation, July 12, 2021.

<sup>60</sup> SMRT Columbus, **Final Report for the Smart Columbus Demonstration Program**, June 15, 2021; and Aarian Marhsall, **America’s ‘Smart City’ Didn’t Get Much Smarter**, *Wired*, June 28, 2021; and SMRT Columbus, **Performance Measures Results for the Smart Columbus Demonstration Program**, May 28, 2021.

<sup>61</sup> Lee Seok Hwai, **Africa’s Drone Medical Delivery Service Saves Lives in Lockdown**, Operations – Blog, June 12, 2020; John Croxton, **This Is the Real Reason We Don’t Have Flying Cars**, *The Salt Lake Tribune*, July 12, 2021; and Jack Brown, **Drone Uses: The Awesome Benefits of Drone Technology**, Drone Lab.

<sup>62</sup> **Kroger Joins Drone Delivery Race with pilot from Ohio Store**, *Crain’s Cleveland Business*, May 3, 2021; **Kroger and Drone Express Partner to Provide Grocery Delivery by Drone**, Kroger, Company Release, May 3, 2021; and Thomas Ricker, **Kroger Begins Testing Drone Deliveries for Baby Products and S’mores: Partnering with Drone Express in Ohio, then California**, *The Verge*, May 3, 2021.

<sup>63</sup> **Principles for Lawmakers: How to Think About Emerging Technologies**, Pelican Center for Technology & Innovation Policy, February 11, 2020.

exceedingly important and highlights the need for Ohio to craft clear, unambiguous, pro-innovation rules for drone manufacturers and operators. Emerging technology makers—and the public—will be much better at following the rules if they know what the rules actually are.

According to the Mercatus Center, Ohio ranks 30<sup>th</sup> in regulatory drone readiness in part because it lacks laws protecting drone users from nuisance and trespass laws “even if their drones do not disturb people on the ground.”<sup>64</sup> Such laws must be carefully crafted to protect the property and privacy rights of all involved without discouraging drone innovation. Ohio should create “avigation easements” giving drone operators rights to fly over certain properties as is often the case with airplanes.<sup>65</sup> It should also amend airspace lease laws to allow commercial drones to fly over local roads as well as state roads.<sup>66</sup> And lawmakers should insist that existing laws—such as peeping Tom laws—are enforced to protect privacy.<sup>67</sup>

As with electric and autonomous vehicle innovation, Ohio should construct a regulatory sandbox for developing drone technology. Regulatory sandboxes are most beneficial to emerging products or services in sectors with unclear legal and regulatory codes. Drones fit that criterion. Creating a regulatory sandbox for emerging drone technology will allow drone businesses to safely experiment with their promising new technology, and provide lawmakers an opportunity to tailor appropriate regulations, such as altitude restrictions and property rights within uncontrolled airspace.

### **Digital Service Taxes**

Ohio should resist the rising trend to tax certain online digital services. The United States boasts seven of the top e-commerce firms in the world,<sup>68</sup> and some states have explored taxing their success, with Maryland passing but not yet implementing such legislation in early 2021, and nine other states subsequently

<sup>64</sup> Brent Skorup and Connor Haaland, *Which States are Prepared for the Drone Industry? A 50 State Report Card*, Mercatus Center, January 14, 2021.

<sup>65</sup> Zacc Dukowitz, *Proposed Avigation Easement Laws Could Create Toll Roads in the Sky for Drone Operations*, UAV Coach, May 12, 2021.

<sup>66</sup> Brent Skorup and Connor Haaland, *Which States are Prepared for the Drone Industry? A 50 State Report Card*, Mercatus Center, January 14, 2021.

<sup>67</sup> *Principles for Lawmakers: How to Think About Emerging Technologies*, Pelican Center for Technology & Innovation Policy, February 11, 2020.

<sup>68</sup> *Global E-commerce Jumps to \$26.7 Trillion, Covid-19 Boosts Online Sales*, United Nations Conference on Trade and Development press release, May 3, 2021.

introducing laws to tax digital advertising.<sup>69</sup> Other proposals have suggested taxing sales of digital services or customer data generally.<sup>70</sup> Digital service taxes can take many forms, but they invariably create perverse pyramiding effects whereby businesses pay outsized taxes compared to the success of their company. These legally problematic and constitutionally dubious taxes should be abandoned completely as an inefficient tax burden on investment and innovation.<sup>71</sup>

Although digital service taxes typically target corporate conglomerates, those firms shoulder little of the tax burden. Instead, the burden is passed along to the service users—often technology startups with thin profit margins,<sup>72</sup> or consumers themselves. In France, for example, the large internet companies paid only five percent of the French digital services tax,<sup>73</sup> while 40 percent was borne by businesses that use the digital services (such as blooming technology startups), and the remaining 55 percent was passed along to consumers.<sup>74</sup>

Instead of levying new tax burdens on digital services, Ohio and other states should reform their tax codes—making them simpler, transparent, and fair—so that emerging technology firms can survive and grow in a rapidly evolving economy.<sup>75</sup>

## Data Privacy

As more and more personal information and data are stored and shared online, federal and state regulators have explored regulatory options for safeguarding data and securing data privacy for consumers. Such concerns must be balanced against the costs and burdens imposed on companies making good-faith efforts. Some states have achieved better regulatory results than others, and Ohio should learn from other state and federal mistakes and prioritize securing its own data before rewriting regulations for voluntary interactions between technology companies and their users.

<sup>69</sup> Jared Walczac, *States Consider Digital Taxes Amidst Conflicting Rationales*, Tax Foundation, May 10, 2021; and Jennifer Huddleston and Liam Fulling, *Examining State Tech Policy Actions in 2021*, American Action Forum, July 21, 2021.

<sup>70</sup> EY Americas, *How the Digital Services Tax Will Impact the Technology Sector*, EY, June 8, 2021.

<sup>71</sup> Jared Walczac, *Worse Than Advertised: The Legal and Economic Pitfalls of Maryland's Digital Advertising Tax*, Fiscal Fact no. 70, Tax Foundation, March 16 2020.

<sup>72</sup> The Engine Team, *Startups Stand to Lose as Countries Implement their Own Digital Services Taxes*, Engine, May 4, 2021.

<sup>73</sup> Julien Pellefigue, *The French Digital Services Tax: An Economic Impact Assessment*, Deloitte and Taj, March 22, 2019.

<sup>74</sup> *Ibid.*

<sup>75</sup> Rea S. Hederman Jr., Tom Lampman, Greg R. Lawson, and Joe Nichols, *Tax Reform Principles for Ohio*, The Buckeye Institute, February 2, 2015.

Federal and state governments already struggle to secure the private data they collect. In 2021, ProPublica, for example, used illegally obtained IRS data to supposedly expose how little America’s wealthy pay in taxes.<sup>76</sup> ProPublica’s “exposé” was much ado about nothing, but the feloniously leaked or breached IRS data breaks the public’s trust that governments will properly handle and secure confidential information.<sup>77</sup> Similarly, Ohio recently reported that Ohio Medicaid providers may have had private data breached due to unauthorized access to a web-based application.<sup>78</sup> Such examples highlight the need for governments to examine and amend their privacy rules and associated penalties to secure their own data and deter leaks and breaches of confidential information.

Instead, California passed controversial consumer privacy legislation<sup>79</sup> that its own Department of Justice estimated will cost roughly \$55 billion or just under 1.8 percent of California’s gross state product.<sup>80</sup> California would later enact additional privacy legislation under Proposition 24. Virginia and Colorado have already followed California’s lead,<sup>81</sup> and five states—Massachusetts, New York, North Carolina, Pennsylvania, and Ohio—currently have draft legislation under consideration or in committee.<sup>82</sup>

Ohio’s recent data privacy proposal—the Ohio Personal Privacy Act—is better than laws passed or considered in California and Florida, but needs improvement. The Act regulates how larger and data-centric businesses handle and use private data, and rightly tries to protect consumer data privacy, while not crushing small businesses under the weight of rigid, expensive compliance requirements.<sup>83</sup> It also creates “safe harbor” protection for businesses that comply with National Institute

<sup>76</sup> Jesse Eisinger, Jeff Ernsthansen, and Paul Kiel, **The Secret IRS Files: Trove of Never-Before-Seen Records Reveal How the Wealthiest Avoid Income Tax**, ProPublica, June 8, 2021.

<sup>77</sup> Erica York and Garrett Watson, **Taxing Consumption Progressively Is a Better Way to Tax the Wealthy**, Tax Foundation, June 8, 2021; and Chris Edwards, **ProPublica Analysis of Taxes on Wealthy**, Cato at Liberty blog, June 10, 2021.

<sup>78</sup> Kaitlin Schroeder, **Ohio Medicaid Providers’ Data May Have Been Exposed from Data Breach**, *Dayton Daily News*, June 22, 2021.

<sup>79</sup> Greg Bensinger, **A Privacy Measure That’s Hard to Like**, *The New York Times*, October 28, 2020.

<sup>80</sup> Berkeley Economic Advising and Research, LLC, **Standardized Regulatory Impact Assessment: California Consumer Privacy Act of 2018 Regulations**, prepared for Attorney General’s Office, California Department of Justice, August 2019. p. 11.

<sup>81</sup> Sarah Rippey, **US State Privacy Legislation Tracker**, International Association of Privacy Professionals (Last updated July 28, 2021).

<sup>82</sup> *Ibid.*

<sup>83</sup> **Ohio Personal Privacy Act**, House Bill 376 (2021); and **Ohio Introduces Consumer Data Privacy Bill**, Thompson Hine, July 15, 2021.

of Standards and Technology (NIST) standards,<sup>84</sup> and it avoids messy legal issues associated with granting “private rights of action” for individuals to sue technology companies for data privacy violations.<sup>85</sup> Those limits are important for preventing rampant litigation that could chill access to innovative technologies or remove some products or services from the market entirely.<sup>86</sup> Instead, the Act wisely vests the state attorney general with enforcement authority and discretion to pursue violators.

Data privacy compliance, however, is expensive for technology companies, especially companies with operations spanning multiple states with competing or inconsistent regulatory codes. Ohio should work with other states to harmonize their data privacy laws and enforcement to minimize compliance costs for smaller business and consumers.

### **State-Based Visas for the Heartland**

State-based immigration work visas have the potential to reverse Ohio’s economically harmful population decline. Ohio should work with Washington to craft an immigration system that fits Ohio’s needs, prioritizing highly skilled immigrants, and giving the state more say over who lives and works here. Under a state-based visa system, Ohio would submit petitions to Washington requesting admission for certain working immigrants for a specified period.<sup>87</sup> After background checks, immigrant information would be registered in partnership with Washington, and those immigrants would be free to live and work in the state.<sup>88</sup>

Population loss damages housing markets, local government finances, productivity, and economic dynamism. According to one study, “a 1 percentage point decline in a country’s population growth rate is associated with a 2-3 percentage point decline in its startup rate over the past decade.”<sup>89</sup> Increasing high-skilled immigration would not only help reverse Ohio’s worrisome declining

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<sup>84</sup> **New Proposed Laws include Safe Harbor when Aligned with NIST Privacy Framework**, JD Supra, August 4, 2021.

<sup>85</sup> *Ibid.*

<sup>86</sup> Jennifer Huddleston, ***A Primer on Data Privacy Enforcement Options***, American Action Forum, May 4, 2020.

<sup>87</sup> David J Bier, **Chapter 5: State-Sponsored Visas**, in *12 New Immigration Ideas for the 21st Century*, Cato Institute, May 12, 2020.

<sup>88</sup> *Ibid.*

<sup>89</sup> Adam Ozimek, Kenan Fikri, and John Lettieri, ***From Managing Decline to Building the Future: Could a Heartland Visa Help Struggling Regions?***, Economic Innovation Group, April 2019. p. 27.

population but also help increase the state's technological innovation. Apple, Google, Amazon, Facebook, Oracle, and more than 60 percent of America's most valued technology firms, for example, have all been founded by first- or second-generation immigrants.<sup>90</sup> Immigrants are twice as likely as the native-born to work in the technology sector, start new businesses, and even hold patents.<sup>91</sup>

As Ohio continues to up-skill its labor pool through programs such as TechCred, access to high-skilled immigration shows great promise for ameliorating some of Ohio's more immediate labor needs. New census data show that nearly two-thirds of Ohio counties lost population over the last decade,<sup>92</sup> and the state is projected to lose another congressional seat in Washington.<sup>93</sup> As the population declines so does Ohio's labor supply. Total nonfarm employment remains more than 292,000 employees, or 5.2 percent, below its mark in January 2020 just before the pandemic—even though job openings across the country are setting new records.<sup>94</sup> Ohio businesses need access to more skilled workers. Coordinating a state-based visa program with Washington would provide short-term relief for Ohio businesses and long-term economic growth for the state.

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<sup>90</sup> Nickie Louise, **These are the 25 U.S.'s Biggest Tech Companies Founded by First and Second Generation Immigrants**, TechStartups, June 28, 2020.

<sup>91</sup> David J Bier, **Chapter 5: State-Sponsored Visas**, in *12 New Immigration Ideas for the 21st Century*, Cato Institute, May 12, 2020; FWD.US, **The Case for Protecting Legal Immigration Against Recent Attacks**, April 2019, p. 2; and Jennifer Hunt and Marjolaine Gauthier-Loiselle, **"How Much Does Immigration Boost Innovation,"** *American Economic Journal: Macroeconomics*, Volume 2 (April 2010), pp. 31-56.

<sup>92</sup> Mark Ferencik, Bill Bush, and Marc Kovac, **Census: Two-thirds of Ohio Counties Lose Population; Columbus passes 900,000 Residents**, *The Columbus Dispatch*, August 12, 2021.

<sup>93</sup> *Ibid.*

<sup>94</sup> Authors calculations from Federal Reserve Bank of St. Louis, **All Employees: Total Nonfarm in Ohio** (Last visited August 13, 2021); and Federal Reserve Bank of St. Louis, **Job Openings: Total Nonfarm** (Last visited August 13, 2021)

## CONCLUSION

Emerging technologies offer new opportunities for entrepreneurs, businesses, workers, and consumers. Outdated regulations stymie those opportunities and inhibit innovation. A more nuanced and flexible regulatory regime is needed—one that provides transparent data, states clear and unambiguous rules, and reduces regulatory overlap by harmonizing local, state, and federal laws. To promote innovation and emerging technologies, Ohio should construct regulatory sandboxes, enhance internet connectivity, encourage new transportation options, and attract a skilled labor force. Policymakers must carefully craft regulations and avoid levying taxes on fledgling technologies so that entrepreneurial technology ventures can survive and flourish. Sound regulatory and tax reforms designed to encourage rather than restrict emerging technologies will make Ohio more competitive nationally and internationally, create jobs, attract new citizens, and improve the quality of life for families across the state. The time for action is now.

# ACTIONABLE REFORMS

## **Transparency and Breaking Down Data Silos**

1. Breakdown data silos by creating or adjusting a state-level platform to more effectively display local data.
2. Within the new or adjusted Ohio database, list all taxpayer-funded technology-related projects, expected project durations, and amounts of Ohio taxpayer funding.

## **Local, State, and Federal Harmonization**

3. Use the Ohio Supreme Court's interpretation of the home rule amendment to enact uniform statewide law on technology policy.

## **Regulatory Sandboxes**

4. Create regulatory sandboxes for financial technology, autonomous and electric vehicles, and emerging drone technology.
5. Create a regulatory sandbox for all industries.

## **Broadband, Internet Access and the Digital Divide**

6. Place guardrails on government-owned and controlled networks to avoid wasting taxpayer money on low-quality broadband that is difficult to upgrade.
7. Pass a "dig once" policy so that high-speed fiber-optic cable can be laid during other construction activity.
8. Re-examine pole attachment procedure laws and regulations that cause excessive delays, increase project costs, and hinder internet access.
9. Fees associated with Ohio's right-of-way rules should be transparently implemented and reserved for significant violations.
10. Consider the New Albany Company recommendation to deposit right-of-way fees into a fund used to provide more Ohioans with internet access.
11. Use fixed wireless technology equipped to service towers along roads and bridges to provide rural Ohio areas with internet access.
12. Continue testing and funding Starlink or other satellite technology to bridge the digital divide.



### **Telehealth**

13. Allow Ohioans to use telehealth technology to get second opinions and consult with medical experts across state lines.
14. Make recent telehealth reforms permanent.

### **Autonomous and Electric Vehicles**

15. Eliminate anticompetitive regulations that hinder car sales to consumers.
16. Do not subsidize electric vehicle charging stations with public funds.
17. Commission another academic study on electric vehicle charger placement and capacity.
18. Tie charging station funding at state attractions to time spent at those locations to ensure efficient and effective use of taxpayer dollars.

### **Drone Deployment**

19. Disentangle “uncontrolled airspace” disputes by enacting an aviation easement law that allows commercial drones to fly over certain properties.
20. Reform or clarify airspace lease laws so aerial drones may fly over local roads.
21. Apply existing laws—such as Peeping Tom laws that protect privacy and prevent spying—to emerging technologies, such as drones, to avoid regulatory overlap and unneeded restraints on innovation.

### **Digital Service Taxes**

22. Avoid levying digital service taxes and instead reform the tax code in accordance with The Buckeye Institute’s principles of tax reform.

### **Data Privacy**

23. Reassess penalties for breaching or leaking government records.
24. To reduce compliance costs and litigation risk, coordinate data privacy legislation with other states to limit private rights of action and instead vest enforcement power in state attorneys general.

### **State-Based Visas for the Heartland**

25. Coordinate with Washington to increase skilled-labor immigration through state-based visas.

## ABOUT THE AUTHOR



Logan Kolas is an economic policy analyst with the Economic Research Center at The Buckeye Institute where he researches and writes about state and local taxes, state-level budgets, technology and innovation policy, and labor market issues.

Kolas has conducted state-level tax modeling and budget research for states such as Iowa, Louisiana, New Hampshire, and North Carolina. He has authored policy papers, book chapters, blog posts, and op-eds on how creating regulatory sandboxes can bring technological innovation to the heartland, the effects of federal and state labor market policies on work, and the impact of regulations and government spending on the economy. He is the author of ***Policy Solutions for More Innovation: Build a Regulatory Sandbox for Financial Technology Innovators*** and has conducted **multiple analyses** estimating the number of state-level jobs lost to a \$15 per hour minimum wage.

Kolas has testified to legislative committees on free-market policy and his commentary has been published by *Crain's Cleveland Business*, *The Lima News*, *St. Louis Post Dispatch*, Daily Signal, and the Foundation for Economic Education, amongst others.

Prior to joining Buckeye, Kolas was a research associate at the Herbert A. Stiefel Center for Trade Policy Studies at the Cato Institute, where his research focused on how employment is impacted by international trade, the effect of international trade taxes on state and federal government policies, and the regulatory burden imposed by government on American businesses and families.

Kolas is native of Cincinnati and throughout his career has focused on researching Ohio-related policies. He earned his Bachelor of Science in economics and political science from George Washington University and holds a Master of Science in applied economics from the University of Maryland.

*Policy Solution for More Innovation: A Policy Primer for Emerging Technology in Ohio*

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