

# Driving Innovation

## New Technologies in Private and Public Sector Mobility

---

Odiraa Okala<sup>1</sup>  
<sup>1</sup>Orange Sparkle Ball

First Published: August 10th, 2023  
The Mobility Series: Article #4



**ORANGE SPARKLE  
BALL**

## INTRODUCTION

We will be examining mobility challenges in the public and private sectors. While the challenges of addressing the last mile are similar in both the private and public sectors, there are distinct differences and points of emphasis in the public sector. These differences can impact the likelihood of finding a solution. We'll review some mobility challenges facing both sectors and what possible solutions might exist. Finally, we'll discuss how our public sector work helps address those challenges.

## PRIVATE SECTOR

We previously discussed the last mile problem generally and the issues that come with it. As a reminder, the last mile problem is the problem of delivering goods and services to the distant edges of a network. In the private sector, this means delivering goods to the customer's front door, or a service to hard-to-reach populations. For example, [providing high quality broadband internet to rural areas](#) (Rouse, 2021) is a common last mile problem both here and abroad. In fact, it's such a critical issue, the U.S. government has [committed the better part](#) (USDA, 2023) of a trillion dollars to address the issue.

Supply chain issues are also a large mobility challenge in the private sector. In particular, they have also been exacerbated by the COVID-19 pandemic. [Brookings says](#), during the pandemic, demand for consumer goods rose faster than manufacturing demand could meet them (West, 2022). For example, medical needs like masks and other protective personal equipment were in short supply, and at various periods so were basic consumer goods like [toilet paper, various foods, computer chips, and even coins](#) (Hernandez & Wagh, 2022).

These scarcity issues took a tremendous toll on the economy during the pandemic. Supply chain disruptions resulted in higher prices, [shortages, inflation, factory closures, and goods waiting at ports to be unloaded](#) (Martin, 2021). The downstream effects were even more nefarious, as national security, the economy, and the environment were all adversely affected by these disruptions.

However, in the aftermath of the pandemic, a different problem has emerged: labor shortages. [According to McKinsey](#) (Bhattacharjee et al., 2021), labor shortages are causing massive value chain disruptions as economic demand recovers post-pandemic. As the U.S. Chamber of Commerce has noted: whether it's healthcare, manufacturing, or food services, [many industries are still struggling](#) with retention and labor shortages (Ferguson, 2023). Companies, regardless of industry, have to face these challenges head-on and they know that. According to one survey, [93% of managers](#) (Liberty Mutual, 2022) surveyed plan on making their supply chain more resilient and agile.

The good news is that there are several solutions to both material and labor issues. Whether

that's finding ways to increase redundancy in supply sources or looking for alternatives to various materials along the supply chain, resilience is a prerequisite for surviving the current moment.

## **PUBLIC SECTOR**

In the public sector, last mile issues present differently from the private sector. The issue revolves less around goods management than around service delivery. This has large implications for the types of solutions that are needed and the risks of failing to do so.

As [Sean McDonald at the Centre for International Governance notes](#) (McDonald, 2020), more technology may not always be the solution. In fact, introducing new technologies to a public sector issue can create more problems than it solves, including a rather large one: technology theater. Based on a logical extension to the phrase 'security theater', technology theater is "the use of technology interventions that make people feel as if a government — and, more often, a specific group of political leaders — is solving a problem, without it doing anything to actually solve that problem." As noted in the essay a prime example of this during the pandemic was the surge in government-produced contact tracing apps. The rollout was often clunky at best; his description of those apps as "entirely ineffective and often outright dangerous technologies" is fairly accurate.

Yet, the last mile issue in the public sector runs even deeper than that. As [Catarina Tully writes in Apolitical](#) (Tully, 2022), the 'last mile' problem in public sector innovation may have a 'first mile' solution. She defines the last mile problem as one where "innovators run the risk of using all their energy to get new approaches through the bureaucracy but fail to galvanize organizational will for change." This can result in innovation theater; a phenomenon similar to security theater and technology theater above, whereby lots of seemingly useful innovation is happening (slick dashboards, beautiful reports, new languages, operating processes, and new technologies with handoff plans) and people feel like a problem is being solved when it actually isn't. The consequences can be immense.

As McDonald observes, in many ways the ramifications of innovation or technology theater in the public sector can be equally, if not more, damaging than in the private sector. After all, in the private sector there are far more accountability mechanisms than there are in the public sector. Given that most agencies are primarily administered by civil servants outside the election cycle, when problems remain unaddressed by poor or ineffective technology implementation there really isn't a way for people to be held accountable for those failures. This can lead to widespread institutional distrust or apathy, or civil liberties infringements. For example, if an app illegally collects information or data from a user, this could be a violation of a user's right to privacy. As he concludes: "The ultimate vulnerability for democracy isn't a specific technology, it's when we stop governing together".

## THE PUBLIC SECTOR'S LAST MILE PROBLEM: TOO MUCH PAPERWORK AND NOT ENOUGH BENEFITS

While the examples above do a nice job illustrating the philosophical and theoretical issues with last mile problems and attempts to solve them, they are slightly abstract. Luckily, there are several examples of these problems in real life, particularly in the public sector.

In her [2021 essay in the Atlantic](#), Annie Lowrey writes about the “time tax”. The “time tax” is the collective administrative burden that poor families and other more disconnected individuals face in receiving governmental benefits. Most of the essay focuses on how Code for America works to end those discrepancies, particularly around benefits. Yet, the larger point of the essay is especially salient here: those costs and missed opportunities, while disproportionately affecting the poor and those who most desperately need to access services, impact us all.

*“This expansion is just one part of a much larger effort to unwind the administrative burdens that annoy and impoverish countless families and erode trust in the country’s institutions.” – Annie Lowrey*

## SOLUTIONS

The solution isn’t simply introducing various technologies into existing ecosystems, finding different use cases, or more paperwork. While Orange Sparkle Ball doesn’t have a one-size-fits-all solution to the problems detailed above, there are certainly some principles we can take from the way we work and apply to these situations:

1. **Define the problem well.** In many cases, problems are defined in the way that makes them most likely to be solved, not as they impact people in real life. But when problems are defined poorly or in a way that divorces them from reality, the resulting solutions will not be nearly as helpful. For example, a problem might be defined as “How can we reduce the number of clicks required to complete this form?” rather than “How can we make it easier for customers to get their benefits using this application?” The former problem definition may lead to a solution that simplifies the clicks, but the latter might lead to a more user-friendly solution.
2. **Co-design solutions.** In all of our projects, we put an emphasis on co-designing solutions. Design plays an important role here, with its emphasis on iteration and flexibility. “Co” also does plenty of work here, as we involve as many people impacted by the issue as possible and make sure to prioritize diverse experiences.
3. **Play the long game when testing technology.** Here at Orange Sparkle Ball, we work quickly but not myopically. Instead, through a quick series of pilots that allow us to test expanding use cases, we consistently make sure to attack all aspects of a problem, including those that only appear during real-world deployments of a particular

technology. This is true for both our autonomous technology deployments and our non-autonomous deployments.

## HOW OSB WORKS IN EACH OF THESE SECTORS

We have a public sector working group here at Orange Sparkle Ball. Typically, our ‘last mile’ work revolves around ensuring hard-to-reach populations have access to services. One example is our work [with the Atlanta Regional Commission](#). In this project, we helped communities express their priorities to encourage government response. Another example is [the PWR Project](#), where we worked to provide open innovation support to communities as they rebuilt, and improved resilience after a natural disaster.

Beyond individual projects and case studies, we also want to highlight our ongoing partnership with our friends at the [Center for Public Partnerships and Research at Kansas University](#). In partnership with them, we’ve been working to address childcare shortages, developmental health, and other vital issues. We’ve also co-hosted a conference with them that will focus on leveraging technology to improve community resilience.

## CONCLUSION

In both the private and public sectors, digital technology offers a wide range of opportunities to increase efficiency and productivity. Organizations must take full advantage of modern technology to remain competitive in today's business environment and to provide better customer service and communication. Simply adopting new technologies is not always the best solution, however. Introducing new technologies, either poorly or at the cost of other, more difficult solutions, can carry enormous consequences and divert attention and resources away from better solutions.

Organizations and individuals across both the public and private sectors need to consider a range of solutions, not simply the easiest or flashiest, and must always invest in sufficient training and support so that their staff are proficient in using their technologies. Failing to do so can lead to costly errors and inefficiencies, as well as unhappy customers. Solving the issue of mobility has been an ongoing challenge and won't be resolved today. It will require innovative solutions tailored to each unique ecosystem.

## WORKS CITED

- Bhattacharjee, Dilip, et al. "Navigating the Labor Mismatch in US Logistics and Supply Chains." McKinsey & Company, 10 Dec. 2021, [www.mckinsey.com/capabilities/operations/our-insights/navigating-the-labor-mismatch-in-us-logistics-and-supply-chains](http://www.mckinsey.com/capabilities/operations/our-insights/navigating-the-labor-mismatch-in-us-logistics-and-supply-chains).
- "Biden-Harris Administration Provides \$759 Million to Bring High-Speed Internet Access to Communities Across Rural America." USDA, 27 Oct. 2022, <https://www.usda.gov/media/press-releases/2022/10/27/biden-harris-administration-provides-759-million-bring-high-speed>. Accessed 9 Aug. 2023.
- Ferguson, Stephanie. "Understanding America's Labor Shortage: The Most Impacted Industries." U.S. Chamber of Commerce, 12 July 2023, [www.uschamber.com/workforce/understanding-americas-labor-shortage-the-most-impacted-industries](http://www.uschamber.com/workforce/understanding-americas-labor-shortage-the-most-impacted-industries).
- "The Global Supply Chain Crisis - What's behind the Shortages?" Liberty Mutual Business Insurance, 31 Aug. 2022, [www.business.libertymutual.com/insights/the-global-supply-chain-crisis-whats-behind-the-shortages/#domino-effect-of-rising-costs](http://www.business.libertymutual.com/insights/the-global-supply-chain-crisis-whats-behind-the-shortages/#domino-effect-of-rising-costs).
- Hernandez, Daisy, and Manasee Wagh . "These 19 Items Are in Short Supply Due to COVID-Related Supply Chain Issues." Popular Mechanics , 23 Sept. 2022, <https://www.popularmechanics.com/culture/g38674719/covid-shortages/>. Accessed 9 Aug. 2023.
- Martin, Bradley. "Supply Chain Disruptions: The Risks and Consequences." RAND Corporation, 15 Nov. 2021, [www.rand.org/blog/2021/11/supply-chain-disruptions-the-risks-and-consequences.html](http://www.rand.org/blog/2021/11/supply-chain-disruptions-the-risks-and-consequences.html).
- McDonald, Sean Martin. "Technology Theatre." Centre for International Governance Innovation, 13 July 2020, [www.cigionline.org/articles/technology-theatre/](http://www.cigionline.org/articles/technology-theatre/)
- Rouse, Margaret. "Last Mile Technology." Techopedia, 16 Nov. 2021, [www.techopedia.com/definition/26195/last-mile-technology](http://www.techopedia.com/definition/26195/last-mile-technology).
- Tully, Catarina. "Public Sector Innovation Has a 'First Mile' Problem." Apolitical, 18 Dec. 2022, [www.apolitical.co/solution-articles/en/public-sector-innovation-has-a-first-mile-problem](http://www.apolitical.co/solution-articles/en/public-sector-innovation-has-a-first-mile-problem).
- West, Darrell M. "Six Ways to Improve Global Supply Chains." Brookings, 12 July 2022, [www.brookings.edu/articles/six-ways-to-improve-global-supply-chains/](http://www.brookings.edu/articles/six-ways-to-improve-global-supply-chains/).