

Closing the Pilot-to-Scale Gap in Intelligent Mobility

*A Three-Part Series on Understanding and Closing the Pilot-to-Scale Gap
in Transportation Technology*

Introduction

In a risk-averse industry such as transportation, deploying innovative technology can be described as a marathon, not a sprint. The hardest step of this technology deployment marathon isn't necessarily getting up the hill of the first pilot. It is crossing the distance between proven and pervasive by moving past the "messy middle" where a promising technology has demonstrated value/benefit but has not yet become sufficiently repeatable, economically or fiscally sustainable, trusted to achieve widespread adoption or become standard practice.

This messy middle is where scale fail can happen not because the technological innovation lacks promise or because it is inherently unviable, but because the infrastructure, data, standards, funding, governance, workforce, trust and/or partnerships (or some other factor or combination of factors) surrounding it have not yet aligned.

No single stakeholder can force the transition from pilot to scale. Getting out of the messy middle and closing the *pilot-to-scale gap* requires more than another successful demonstration and more than any one agency, company or decision-maker can deliver alone. Scaling becomes possible only when multiple conditions reinforce one another and create momentum across the broader ecosystem. These conditions can include reducing uncertainty, lowering the cost and risk of adoption and giving agencies and deployers the evidence they need to make decisions confidently.

In this series, Battelle explores the factors that can ignite momentum toward scale and break down barriers that continue to hold connected, AI-enabled, and autonomous transportation back from scalability.

Together, these executive briefs ask a defining question for the next era of intelligent connected mobility technologies: what will it take to move from *successful somewhere* to *replicable everywhere*?

Read Brief 1: The Hardest Mile: Understanding the Pilot-to-Scale Gap to understand where scale breaks down, why the messy middle matters and how coordinated action can help transportation innovations move from *successful somewhere* to *replicable everywhere*.