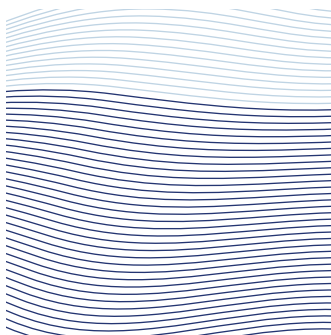


Still buffering

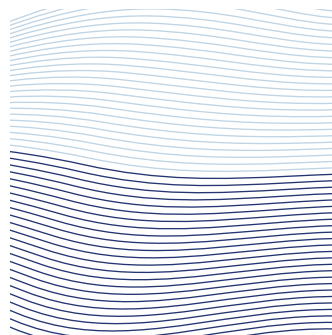
Time for a smart city reboot

Despite their technological allure, smart cities have progressed in fits and starts due to funding bottlenecks, technology-related pitfalls, consumer trust issues, and societal polarization across the digital divide. Building a truly "smart" city is ambitious and fraught with risk. For many cities burdened by legacy infrastructure, the humbler aspiration of an incrementally smarter city is more likely to succeed technologically and more likely to secure sufficient community trust.



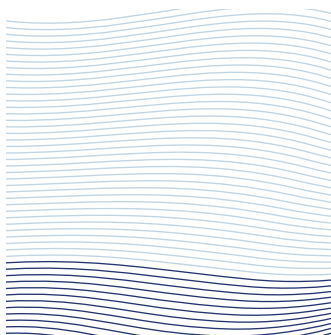
70%

Urban dwelling expected by 2050 (compared to 56% now). This is driving bold modernization efforts from governments to manage a sustainable growth while enhancing the quality of urban life and digital interconnectedness



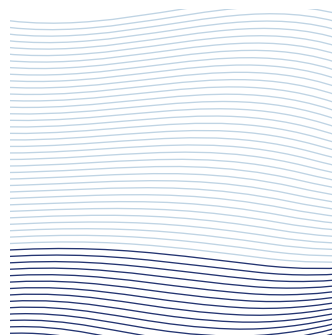
>50%

Of the world's cities have a smart city roadmap, but only 16% have mature projects running



24%

CAGR expected from global smart cities market between 2022-2030 (reaching almost US\$7 trillion by 2030).



30%

Of current smart city projects will likely be discontinued by 2023

This report unpacks the most problematic challenges that impede progress and adoption: funding and planning gaps, technology and operational hurdles, and flagging stakeholder motivation and alignment. The report also provides a variety of solutions for choosing the most appropriate innovation approach and funding mechanisms, managing technological complexity and governance challenges, protecting privacy, addressing workforce needs, and enhancing community engagement and adoption.

Charting the path

Finance and planning

As governments, city planners, and businesses embark on the next wave of smart city upgrades, they need to consider the long implementation time that these projects demand and the potential for cost overruns, while taking steps to establish reliable funding mechanisms to support them throughout.

Challenges faced by smart city funding and planning

Declining investor appetite

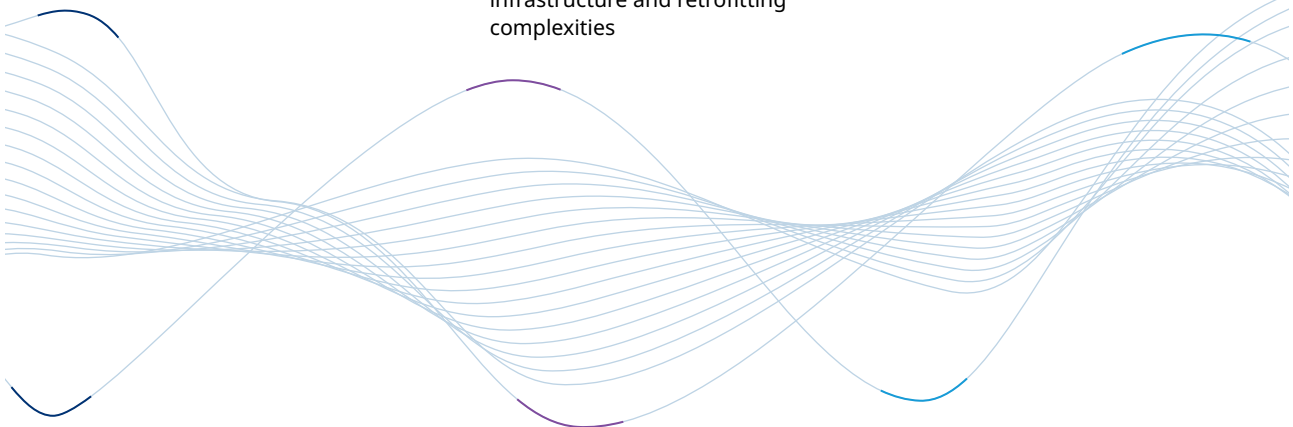
- Business case uncertainty for unproven technology
- Difficult to account for qualitative outcomes in a business case

Lengthy project duration

- Difficult to plan for long term repairs and maintenance
- Legacy cities face the issue of balancing phaseout of infrastructure and retrofitting complexities

Cost overruns

- Failure to anticipate unique contingencies
- Need to prepare for emergency responses to external events



US\$34 million

Funding shortfall for 2022-2023, and an inability to secure further grants, led to the suspension of Peterborough's smart city program in the UK

US\$52 billion

In overlooked maintenance and repair backlogs were discovered in Ontario, impacting the functionality of 45 percent of municipal assets

2x

Its original cost Minneapolis' light rail project (for smart mobility) has fallen 9 years behind schedule due to costly scope/design changes and unanticipated construction delays

How we can help

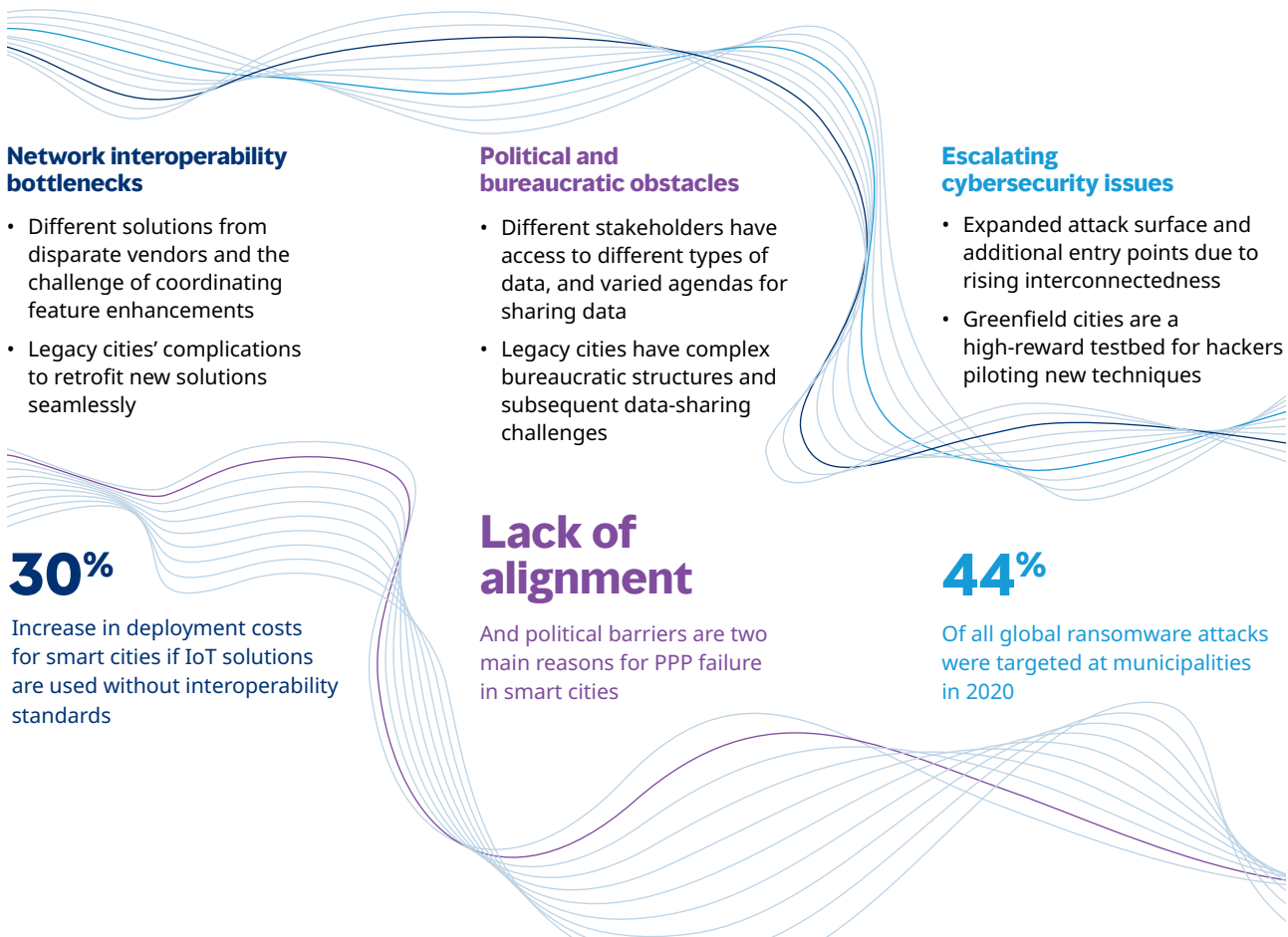
Marsh's Risk Advisory can help with services such as contingency planning, crisis management planning, event risk analysis, and operational readiness exercises. Each city will face operational, financial, strategic, and regulatory risks. Risk management has become a fundamental requirement of good management in every aspect of all organizations. Marsh recognizes that no two organizations or cities are the same and can design bespoke risk management solutions tailored to each city's operations.

Removing roadblocks

Technology enablement and operations

Technology suitability and execution-related risks often impede the timely, budget-minded rollout of smart solutions. Governments and city planners must work with technology providers and citizens to minimize cyber risks and interoperability challenges, share technological know-how, and encourage targeted data sharing.

Challenges in technology enablement and operations



How we can help

Oliver Wyman's Digital, Technology & Analytics practice combines deep industry expertise with all the necessary capabilities to guide digital transformation for cities. It helps de-risk and accelerate lasting digital transformation in client business models, technology, capabilities, and culture. It can help guide city planners through their digital transformation journey, while incubating innovative ventures in the face of changing industry headwinds.

Building bridges

Community, stakeholder, and workforce mobilization

Governments and city planners frequently find it hard to establish community awareness and trust in smart solutions. Meanwhile, a widening digital divide and workforce challenges add to their woes. To address these challenges, they should enhance policymaking transparency and encourage citizens to adopt smart solutions and deploy strategies to attract and retain talent.

Challenges in addressing community, stakeholder, and workforce mobilization

Citizen mistrust and lack of awareness

- Citizens hesitant to adopt smart city solutions, if they are not aware of benefits, or if governments and providers are not transparent
- Greenfield cities have unique adoption challenges; citizens must relocate to new urban areas and adapt to technology-enabled lifestyles

Widening digital divide

- Characterized by the gap between access to connected devices and digital literacy across community demographics
- Lack of digital access exacerbates socioeconomic gaps among the city's most vulnerable communities

Evolving workforce needs

- Shortage of smart-city urban designers and aggressive competition for technology/construction talent
- Pandemic influenced employees' preferences for where, how, and why they work
- High attrition rates on projects drain intellectual capital and valuable expertise



46%

Of US respondents feel apprehensive about living in smart cities

2.9 billion

People lack opportunities to go online across the world, and engage with the digital economy

>40%

Of workers in construction and technology are planning to leave their sectors

How we can help

Mercer's workforce strategy and analytics solutions can help create a lasting competitive advantage for cities to optimize their workforce investments and results. It helps cities and businesses facing increasingly complex challenges to strengthen workforce retention, and ensure productivity and innovation, and achieve pay equity. Strategic workforce planning and the future of work can help plan for the city's future by assessing the current labor supply against anticipated future demand.

The way forward

Marsh McLennan’s “Still buffering: Time for a smart city reboot” provides a variety of solutions for choosing the most appropriate innovation approach and funding mechanisms, managing technological complexity and governance challenges, protecting privacy, addressing workforce needs, and enhancing community engagement and adoption. Below are select recommendations from each chapter. Read the full report [here](#).

1. Long-term financial viability and contingency planning



USE PROOFS-OF-CONCEPTS (POC) MORE EXTENSIVELY

To enhance investor confidence, demonstrate project achievability and de-risk the transition to new technologies



ANTICIPATE THE UNEXPECTED

By engaging a wider lens for risk assessment, including analysis of third-party vendors, event risk modeling and pilot programs to ensure viability when scaled

2. Enabling technological collaboration and strengthening cybersecurity



ENCOURAGE TARGETED DATA SHARING

By identifying mutually beneficial opportunities and incentivizing various parties to engage more deeply and share information.



INCREASE RIGOR FOR CYBERSECURITY PRACTICES

By enacting policies to compel technology providers to undertake “security-by-design” directives (e.g. due diligence checks, emergency breach protocols, etc.)

3. Establishing trust and transparency



BUILD TRUST AND DRIVE ADOPTION THROUGH TRANSPARENT GOVERNANCE

Combined with a deepened engagement with citizens' concerns and aspirations



NEW EMPLOYMENT MODELS TO ADDRESS WORKFORCE NEEDS

Such as youth engagement (including internship programs), non-financial benefits, and knowledge management programs can help attract and retain talent

LEARN MORE ABOUT HOW MARSH MCLENNAN CAN HELP

Marsh

Risk mapping and quantification, crisis management, insurance coverage support, organizational resilience strategies, cyber risk mitigation

Guy Carpenter

Climate risk assessment, digital migration strategies, traditional and alternative risk transfer solutions, risk analytics and underwriting

Mercer

ESG and responsible investment advisory, asset management services, workforce analytics and strategy, Business Impact Modeling (BIM)

Oliver Wyman

ERM frameworks, digital transformation strategies, cyber resilience strategy, change management advisory

To speak with a Marsh McLennan expert about how we can help, contact us at advantagemarketing@mmc.com. Follow us on [LinkedIn](#) and [Twitter](#) or subscribe to [BRINK](#).