

Helping people, places
and economies thrive

North American
Edition
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The Review

Spotlight
Making our cities
more gender
inclusive

Climate change
Adapting to a
climate resilient
future

Infrastructure
Meeting the
world's growing
infrastructure needs

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Movement Matters is a series of inspirational thought leadership events exploring new ideas about people, places and economies. Drawing on experience from leaders around the globe, these sessions provide a burst of fresh thinking and a great opportunity for industry networking.

Read more about our international program of events across the USA, Canada and UK.

INFRASTRUCTURE INVESTMENT FOR A NEW ECONOMY

London, UK
November 27, 2019

This high-profile event centers around the recently launched Infrastructure Finance Review following the Chancellor's announcement of the PFI/PF2 mechanism ending. In advance of the consultation findings being reported, we have created a forum to debate how to increase the flow of infrastructure investment with a particular focus on the key trends influencing our economy, such as:

- Technology changes
- Brexit
- Climate change adaption and prevention
- Security and resilience

With these influences impacting on trade, logistics, industry and the economy, the infrastructure project pipeline is going to change dramatically over the short-to-medium term, resulting in projects that are complex, have significant technological risks and are likely to be large in scale.

These projects are therefore likely to require effective partnerships between the public and private sector, where risks are carefully shared, and move beyond previous public procurement models.

We have seen this work well in sectors such as offshore wind, where Government set the framework to allow a market to develop and thrive, so how can this successful model be applied to other sectors?

Invited speakers and perspectives



Shona Henderson
Head of Transactions Services,
Infrastructure and Projects Authority

Exploring the policy-making perspectives of the IPA needs and its implications for delivery capabilities.



Deborah Zurkow
Global Head of Alternatives, Allianz

Offering a financial institution's perspective on investing in infrastructure in an increasingly uncertain and dynamic environment.



Howard Dawber
Managing Director, Strategy,
Canary Wharf Group

Presenting the practical insights of a developer looking to finance the delivery of infrastructure to support its estate investment.



Andy Mitchell CBE
Chief Executive Officer, Tideway

Adding his experience of delivering major infrastructure projects using complex finance structures to meet anticipated needs in the global city environment.



Jeremy Westlake
Chief Financial Officer, Network Rail

Offering the perspective of an operator of a network, and exploring what infrastructure delivery and management in the future will require from public funders and private financiers.

ALTERNATIVE DELIVERY MODELS

New York, USA
Spring 2020

Industry experts will talk about alternative models for financing and delivering infrastructure projects and their potential for take-off. They will consider private sector delivery as well as public involvement, and will try to provide an answer to questions such as how best to manage the risks and impacts of change and how to increase the confidence from design to operations to ensure whole life value for money.

CHANGING TRAVEL BEHAVIOR

Los Angeles, USA
Spring 2020

As we continue to plan for transit-oriented districts and make strides in reducing physical barriers, should we also be thinking about how to create lasting behavior change, increasing transit ridership and decreasing single occupancy vehicle travel? Our panellists will discuss mobility shifts and how to capture the greatest return on the region's investment.

steer

Welcome

Welcome to the latest edition of *The Review*.

Infrastructure investment is critical to economic growth and the development of cities, but the challenge of how we can increase the flow of infrastructure investment still remains. With key trends influencing our economy such as technology changes, climate change adaptation and the large impact on trade, logistics, and economic changes, we explore the 'infrastructure gap' and how Steer is gearing up to play its part.

In this issue, we also explore our ambition to stretch beyond transportation into other related sectors, such as energy and climate change, that have clear and connected interfaces with transportation. We investigate the different challenges women in cities face with public transit facilities and the solutions to make cities more gender-inclusive. Alongside thought pieces and project insights, we bring you a compelling interview with Ellen Smith from BART in San Francisco, offering a global look at its current transportation challenges and opportunities.

Finally, I would like to invite you to join our series of global thought leadership seminars, Movement Matters. In their third year, these popular seminars take place across North America, UK/Europe and Latin America, and bring together industry experts to explore new ideas about places, people and economies.



Hugh Jones
CEO

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New faces



Rachel Brisley
Associate Director

Rachel joins Steer Economic Development as an Associate Director. Rachel is an expert in climate resilience, with over 25 years' experience in the private, public and voluntary sectors, working in social, economic and physical regeneration. She is well-placed to advise clients in all sectors on climate resilience.



Karen Letten
Associate Director

Karen joins as an Associate Director leading the European Rail market at Steer. Karen has liaised with other international railways on successive projects to consolidate the Eurostar and Thalys businesses, and has extensive experience working on commercial ventures and value creation.



Jonathan Thurlwell
Associate Director

Jonathan joins Steer to develop a new line of business focused on energy regulation. Jonathan has 24 years' experience in the energy and utility markets providing market design and regulatory economics advice to governments, national regulatory authorities and energy utility companies.



David James
Associate

David joins our London office to form part of our new energy regulation line of business. He has over 30 years' experience in the energy and utility markets, providing regulatory advice, capacity-building support and economic and financial analysis to governments and private sector entities.



Daniel Loschacoff
Associate

Daniel joins our team in Toronto. He brings more than 20 years' experience in strategic and commercial planning for large infrastructure projects in Canada and internationally. Daniel's expertise encompasses business case development and modeling, franchise and concession bidding, procurement and market development.



François Tomeo
Associate

François joins our Toronto office. He is a transportation planner with 20 years of experience, solving transportation problems for government, municipal and private sector clients. At Steer, François will lead the development of our transportation planning and traffic engineering practice in Eastern Canada.



Andrew Desautels
Associate

Andrew rejoins Steer in the USA as a transportation consultant with broad experience in demand forecasting, market analysis, transit planning, transportation policy, and small-scale software development in the aviation, highway, trucking, public transit, and passenger rail sectors.



Raffael Massa
Associate Director

Raffael joins as an Associate Director in our Bologna office. Raffael has over 20 years' experience in infrastructure advisory, project financing and business modeling. He brings in-depth industry experience in the energy and renewable energy, aviation and transportation services sectors.

Looking to move?

If you are considering your future and are looking for somewhere to make a real difference, Steer has much to offer. Our firm continues to grow in North America and throughout the world. To find out about current opportunities, visit our website: steergroup.com/careers

Company updates

New climate change and energy offer

We are delighted to be expanding into the climate change and energy sectors, which have clear and connected interfaces with transportation.

We welcome Rachel, an experienced climate resilience consultant, to help grow our presence in this new sector, playing an important role in the diversification and strengthening of our global offer.

We also welcome two experienced energy sector professionals, Jonathan and David, whose remit at Steer is to grow our energy and utilities market. Together, they will lead our new Energy Regulation team, who will grow a successful business, providing leading advice and expertise. Initially, the team will focus on key energy and utility clients, particularly existing relationships, and selectively target key frameworks and opportunities. The team are also keen to explore areas for collaboration within the wider Steer group, utilizing our expertise in transportation.

Steer celebrates milestone anniversaries

This year, our offices in Italy, Colombia, and Mexico are celebrating milestone anniversaries. The Bologna and Colombia offices are celebrating their twentieth anniversaries and Mexico is celebrating its tenth anniversary.

We would like to take this opportunity to thank all our clients and partners for the projects we have worked on together and will continue to work on together in the near future.



The Steer R&I program continues

At Steer, we actively invest in developing new ideas and ways of working through our Research and Innovation program. We encourage our staff to think creatively about their work and how we can help our clients maximize opportunities.

Recent significant successes for our R&I program include: widely reported research about the effect of AVs on urban design; software for recording the movement of pedestrians through spaces such as stations; and research on the value of train numbers on tickets and timetables.

Our R&I Club meets every two weeks and allows anyone to bring ideas, problems and solutions for debate. We've held almost 160 R&I Club meetings and our booklet describing 32 of our favorite R&I projects carried out since the Club was established can be downloaded here: www.steergroup.com/about/research-innovation

Our latest showcases and innovations were presented by our consultants at our London and Leeds Movement Matters events in Summer, where we explored:

- the effects of long-term trends on travel demand;
- understanding the impacts of timetable design and autumnal effects in rail performance and forecasting;
- the implications of a cashless society;
- the further evolution of our Urban Dynamic Model;
- the changes to the urban form and public realm in the age of the driverless car; and
- mapping potential PPP opportunities in Mexico.

You can find out more about our previous Research and Innovation events here: www.steergroup.com/events

Climate resilient future

By Rachel Brisley

Climate change is no longer something that might happen in the future. It is happening now and bringing major challenges to economies, communities, infrastructure and places across the world. Its impacts will be wide-ranging and irreversible.

In recent years, climate change and its impacts have risen on the political, economic and societal agendas. The 2018 Fourth National Climate Assessment, published by the US Global Change Research Program, stated that without "substantial and sustained reductions" in greenhouse gas emissions, climate change will negatively affect people, economies and infrastructure across the USA. However, it also highlighted that the worst impacts could be avoided by putting more focus into adapting to a warmer world and future climate change could be lessened (but not avoided) by working to reduce emissions across all sectors and localities.

Impacts for economies, places and infrastructure

Extreme weather events present a challenge to the resilience of our infrastructure now, and this is likely to increase in the future. Media stories of heatwaves, increased and persistent wildfire, severe storms, and melting glaciers have hit the headlines worldwide. Drought, wildfire, flooding and major storms have all affected the USA and Canada this year. Category Five storms (such as Katrina and, more recently, Dorian) have devastating impacts for people, economies and infrastructure and these may become more frequent requiring major efforts to improve resilience to extreme weather events.

These storms have huge implications, both in terms of the primary human costs and also financial impacts in terms of insurance and repair/rebuild:

- The human costs from extreme events are far reaching, with the mental and broader health impacts from extreme weather events widely recognized, leading to increased mortality and increases in demand for health services.
- Financial institutions are also increasingly aware of the potential challenges that climate change and the need to reduce emissions could have on the way that the economy functions. There is the potential for increased disruption of energy and transportation



systems leading to more frequent and longer-lasting power outages, fuel shortages and service disruptions with cascading impacts across other key sectors. Investors will need to shift away from carbon fuels, and banks and insurance companies could face substantial losses

Steer taking up the gauntlet

At Steer we are supporting businesses to become aware and resilient through strategy, action, investment and insurance, while also recognizing the need to both reduce our contribution to climate change and prepare for its impacts.

Climate resilience is increasingly becoming embedded in economic and infrastructure planning, and we are developing a forward plan to ensure that climate resilience is prioritized in all of our projects. We understand climate science and can explain this science in a way that is accessible to non-technical audiences and relevant to their interests.

We can help organizations identify the risks they face and measures they can take to adapt to these risks, as well as enhancing their adaptive capacity, using tools such as the recently published international standard on adaptation to climate change (ISO 14090).

We are committed to developing climate resilient places, infrastructure and economies in North America and internationally and look forward to providing future updates on this crucial initiative.



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A new Transbay Rail Crossing for San Francisco



Ellen Smith
Manager of Strategic & Policy Planning at BART

We spoke with Ellen Smith, Manager of Strategic and Policy Planning at Bay Area Rapid Transit (BART). We quickly discovered that her role as lead on the New Transbay Rail Crossing is much more than developing new rail infrastructure. Ellen's appetite for creating development around rail transit stations will help to tackle the Bay Area's 'extreme' traffic congestion.

Ellen Smith has a master's degree in urban and regional planning from the University of Southern California (1983), and after ten years of consulting, including at Leigh Fisher Associates and KPMG, the allure of public sector work brought her expansive skills and passion to BART. Just over 25 years later, Ellen is responsible for developing BART's strategy for this multi-billion-dollar investment.

The Bay Area consists of 7.75 million people living in nine counties, and is the sixteenth largest economy in the world. It's not hard to see why. The Bay Area, widely known for its Silicon Valley economic engine, is home to some of the world's biggest and most profitable companies, including Apple, Facebook and Google. This economic powerhouse is projected to grow significantly over the next 20 years with the Bay Area's population expected to grow by 2.1 million. The northern California megaregion stretches even further, with links to Sacramento and surrounding suburban counties.

What's glaringly apparent for people living in one of the world's most vibrant

economies is that traveling to work — or anywhere for that matter — in the Bay Area is a daily lesson in logistics and patience. The motor car is the dominant means of getting from A to B and its use is on the rise. Getting stuck in traffic congestion is a huge source of irritation for most Northern Californians. The proliferation of super-efficient and smart electric — and soon to be fully-autonomous — cars will not preclude traffic congestion and the resultant days we lose in productivity each year. What's to be done?

"Allowing traffic congestion and current levels of transit overcrowding to threaten the Bay Area's prosperity and quality of life is not an option," says Ellen. She believes that one of the essential solutions to curb excessive traffic congestion is to create the right mix of high-density urban land use — residential, leisure, commercial and workplace — around existing and future transit stations. She eagerly described how BART's Transit Oriented Development Policy has already resulted in less car use around stations. So far, 13 high-density mixed-use developments have been built around BART stations, with four already under construction and seven in the pipeline. BART owns approximately 250 acres of land near its stations, and wants to intensify use on these properties.

It's a smart move by BART bosses to have an urban planner with a grounding in politics positioned at the helm of the New Transbay Rail Crossing. Although it sounds like the public transit authority have

predetermined their infrastructure goal, it's not that simple. In fact, in June this year, BART's Board of Directors appointed a consortium, led by US-based infrastructure consultants HNTB and supported by Steer, to advise and guide the complex planning for this investment. The solutions must improve connectivity around the Bay Area and the megaregion. BART is partnering with Capitol Corridor, which uses standard-gauge rail, to evaluate how the megaregion can best be served with an enriched rail network. The consulting team will bring best practices and lessons learned from other complex rail projects from around the world to BART and Capitol Corridor.

Over the next few years a thorough examination will be undertaken to understand the diverse stakeholder priorities: what the second crossing should look and feel like; will it serve the complex rail-gauge mix of heavy rail (including Caltrain), BART and California's future high speed rail?; which funding mechanisms will be used?; and, importantly for company executives considering Silicon Valley for their next big investment, when will construction begin and end?

"Urban planning is expansive, that's what I love about it — it brings everything together, the economy, society and the environment", Ellen enthused. Strategic urban planners with the right skills, commitment and vision are few and far between and Ellen has proven she is in the right place at the right time.



Mind the gap: Meeting the world's growing infrastructure investment needs

By Matt Bull

Well-designed, delivered and functioning infrastructure is crucial to achieving economic growth and prosperity in both developed and emerging economies. However, despite these demonstrated benefits, investment in infrastructure is lagging and has been particularly slow to recover since the global financial crisis. The Global Infrastructure Hub [an initiative of the G20] estimates that the world is now facing a \$15 trillion gap between projected investment and the amount needed to provide adequate infrastructure provision.

This 'infrastructure gap' has the potential to worsen as climate change, technological change, and increasing urbanization will place further pressures on existing infrastructure. Governments and international institutions (such as the UN and World Bank) are increasingly aware of the growing scale of this challenge and are mobilizing to direct more resources to addressing it.

Steer is gearing up to play its part by continuing to build our financial advisory capability in the infrastructure space to provide solutions to both public sector and private sector clients seeking to access investment in their infrastructure projects and businesses. Working as part of cross-discipline teams with our engineers, economists and planners, our financial advisory professionals provide a range of services that are crucial in unlocking investment in projects and businesses.

Project preparation and structuring

A major obstacle to increasing infrastructure investment is the perception that there is an insufficient pipeline of high-quality, well-prepared projects being brought forward by governments. Governments need high-quality advice to ensure the long-term success of the project but also to ensure knowledge is transferred to the client, allowing a program of subsequent projects to be developed.

The importance of high-quality project preparation is perhaps most striking when governments are seeking private investment in their projects through Public Private Partnerships [PPPs/P3]. Private investors subject projects to stringent due diligence to ensure that stable returns are achievable against an acceptable risk profile. Failure to prepare a project that does not meet investor expectations or alternatively does not provide value for money for the taxpayer has the potential to lead to costly failures in procurement and delivery.

Our experts have vast experience of working for both the public and private side on a range of global PPP/P3 projects. This 'dual-side' experience is important to our offer and provides us with a unique perspective on the deal-structuring challenges that always face national, regional or local governments.

Raising finance and transaction services

As demand for their services continue to grow, infrastructure businesses are frequently considering ways by which they can finance much-needed expansion and improvement of their assets. Infrastructure businesses are therefore frequently exploring a range of financing mechanisms to provide the cash and assets to meet their growth aspirations. This includes bond issuances, share offerings, acquisitions and asset disposals. This is accompanied by a growing interest in investors in infrastructure as an asset that can provide long-term, stable and inflation-proof investments, particularly institutional investors such as pension funds and insurers. The combination of these factors has led to a very active corporate finance market in recent years with significant global deal flow.

Steer has been a key player in supporting clients in this marketplace, particularly through our due diligence services. This has seen us recently ranked number one in the Inframation league tables for transaction advisors. We are increasingly expanding our offer in this space to provide more financial advisory services, including complex financial and business modeling, valuation and assisting with the finance raising process. We also provide financial model review services to provide third-party assurance around a project or business's financial forecasts.

Regulatory finance

Long-term, sustained investment in infrastructure at a reasonable and affordable cost is only possible if there is a stable regulatory environment in place. Transparent and fair economic regulation of infrastructure, particularly large, natural monopolies, is crucial in providing comfort to investors that the prices charged to customers will remain reflective of the costs of developing and maintaining the assets and the risks to which investors are exposed to.

Regulating these assets is complex, requiring in-depth understanding of the relevant pricing mechanisms and detailed analysis of the finances of the regulated entities. Likewise, regulated companies require support in complying with these regulations and optimizing their revenues within the regulatory constraints.

Our financial experts work alongside our regulatory economists to provide a range of quantitative services to this market including financial modeling and assistance with price controls and determinations.

We have highlighted below three case studies demonstrating our breadth of experience across our global financial advisory services:

Anillo Vial Periférico – Peru

Steer has been appointed by Proinversión, the Peruvian investment promotion agency and infrastructure project promoter, to advise in the financial structuring, demand forecasting and technical due diligence of a large PPP urban toll road in Lima. This is an example of an engagement where our financial specialists work alongside our economists, technical experts, engineers and planners to provide a holistic solution to governments so that they can bring a well-structured and well-prepared project to market and thus maximize the chances of leveraging private investment into the country's infrastructure. Our work includes shadow bid financial modeling, development of the project risk allocation and value for money analysis, structuring of the public funding contribution (through a complex bond instrument) and assistance in negotiation with the bidders for the project sustainable partnerships with the private sector.

Airport privatizations and transactions

Steer has extensive experience providing advice to international investors (buy-side), governments and development institutions (sell-side), and lenders on airport privatizations across all major geographical regions. Taking the buy-side as an example, our typical support would cover opining on all technical and business plan issues, and evaluating information provided in data rooms as well as through third party sources to create long term traffic, aeronautical and non-aeronautical revenue, and capital and operating cost forecasts to support the bid. Through developing operating and operational models to best practice standards, we are able to test the robustness of these forecasts against a battery of stress tests. Combining this with the financial knowledge of our team members enables us to have fluent discussions with financial advisers and play a key role in helping shape the structure of cash flows to optimize bid parameters.

Control Period [CP] 6 Charging review

Steer is lead technical advisor to the UK Department for Transport (DfT) in its implementation of the change to regulated track access charges and performance regime payments from franchised train operators to Network Rail during CP6 [2019-2024].

Periodic reviews are one of the principal mechanisms by which the UK's rail regulator (ORR) holds Network Rail, the owner and infrastructure manager of the country's rail network, to account and secures value for money for users and funders of the railway. Through the recent 2018 periodic review, ORR determined what Network Rail should deliver in respect of its role in operating, maintaining and renewing its network in the next control period (CP6) and how the funding available should be best used to support this.

Our work involves estimating the impact of the change using the contracted financial models submitted by franchised operators, developing methodology and calculating revised inputs based on the new price lists, and supporting DfT in negotiations.



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A changing face of P3 transportation infrastructure investments?

By Daniel Loschacoff

Long-term reliable rates of return have made transportation infrastructure P3 investments, primarily in toll roads and urban transit systems, popular with institutional investors, such as pension funds. In recent years, P3 projects in these sectors have typically been based on the private partner being remunerated through long-term government payments (so-called 'availability payments') rather than through user payments (such as fare and toll revenue). This has meant that the demand risk for these projects has been retained and managed by the public sector. However, as institutional investors seek higher returns, there is evidence of a gradual evolution in the investor market towards alternative P3 structures which are developed with early private sector involvement and increasingly involve the transfer of more demand risk.



The North American transportation infrastructure P3 market has in recent years been characterized for investors by 'government-pays' rather than 'user-pays' projects. The key risks transferred to the private sector under these projects are construction risks (e.g. construction delay and cost overruns) and operational risks, rather than demand risks. Under these projects, once construction is successfully completed and the project is operational, the risk profile of the project changes dramatically with significantly less risk to their shareholders during the operational period. Income is stable and inflation mitigated through indexation. These core assets are well understood by public sector project promoters and a perfect fit for many institutional investors with a predictable payment obligation to their members.

However, these core assets are becoming less attractive to investors because of downward pressure on returns. There are two potential reasons for this:

- Demand for these core assets is greater than the supply and availability of projects available in the market to invest in. This is because returns on other safe, stable investments such as government bonds have dropped significantly since the financial crisis, so investors are looking more and more to infrastructure as an alternative asset class with higher returns. This is evidenced by the creation of new infrastructure funds, many of whom are competing for the same set of assets and this is pushing returns downwards.

- Sellers of these assets (typically construction firms) are demanding higher prices for these assets to compensate for the risks they have taken through the construction period and the need for them to raise as much from the sale as possible so they can recycle funds into new projects. This has the further effect of pushing down rates of return on these assets for investors.

The consequence of this is that returns on core assets have gone down.

To the benefit of all, an alternative structure for the core asset class of investments may be taking off, one that is characterized by early private sector involvement, private finance and long-term demand risk transferred to the private side. In this structure, investors enter into an exclusive agreement with a public authority, such as a county or city, to assess feasibility of a transportation infrastructure solution and develop a plan and conditions to deliver. The agreement should clearly stipulate the route to award and would normally also include compensation for costs made in case of pre-award termination. The public side will always have the final say in a go/no-go decision. Early examples were unsolicited toll roads such as the California 91 Express Lanes and the Washington D.C. Beltway (I-495).

Lately they also include public transit solutions. Montreal's Réseau Express Métropolitain (REM), a 67 kilometer rapid transit system under construction

is a prime example of early private involvement, speedy feasibility and decision-making, private financing (over 6 billion CAD) and long-term demand risk to the investor, CDPQ. Although the direct award to CDPQ drew criticism that others may have been equally well placed, the negotiated agreement allowed CDPQ to apply its global capacity and experience on similar urban transit projects, develop the project and run the procurement in a record time of less than two years to contract signature. CDPQ will assume both construction and long-term usage risk and is remunerated with a commercial return on its multibillion-dollar investment.

Whether this contractual P3 structure with early private sector involvement, private finance and long-term usage risk transferred to the private side really expands the portfolio of transportation infrastructure projects being delivered is dependent on the project promoter's appetite to explore this alternative to the traditional core asset structure and the ability of investors to forecast and control development costs, usage and revenues. The various project examples that are now being developed provide evidence to suggest that the new P3 structure may indeed take off.



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Car travel: a paradigm shift

By Rachel Forseth

The traditional approach to solving traffic over the past half century has been to protect the personal "right" to car travel, and to invest in auto infrastructure and freeway expansion. What is the result of car-centric lifestyles? Urban sprawl, cement jungles, air pollution, more parking lots than parks and, ironically, more traffic in every major city in North America. So, how can TDM shift commuters out of their cars and into a ride share?

The true solution to traffic congestion remains the same – fewer cars, more mass transit, and cities designed to support it. But the continued investment in the auto industry has ensured that car travel is embedded in society, and is not leaving our cities anytime soon.

While planners, policymakers and consultants seek to shape the future through autonomous vehicles and new mobility, Transportation Demand Management (TDM) practitioners have a responsibility to prepare the commuters themselves for the onset of changes soon to come. The imminent world of autonomous vehicles (which is expected to increase demand for car-based travel rather than reduce it) offers a crucial challenge and opportunity – the absolute need to share rides and for that to be the behavioral norm. If single occupant travel continues to be the default, driverless cars will make traffic significantly worse. The question is: what behavioral adjustments are necessary to shape for the largest disruption ever to hit the roads? How do we prepare the travelers of today for the shift to driverless vehicles? The most important way is to raise the comfort level with sharing rides.

Why is it that commuters have no issue sitting shoulder to shoulder between strangers on a five-hour flight, but do not feel comfortable sharing a 10-minute car trip across town? Air and rail travel have a standard of shared space, but present-day vehicle design is not intended for traveling among a group of strangers. If Transportation Network Companies of the future provide more "personal space", then sharing cars will become the norm.

Vehicle design and marketing must also evolve with the new expectations of car travel in order for behavioral changes to follow suit. This will pave the way for people to approach their commute communally.

This challenge is complex: car travel



continues to be portrayed as the epitome of freedom, flexibility and privacy. Car ads feature empty roads, not smog-filled gridlock. Because of this propaganda, the hardest mode shift for passengers to make is from driving alone to carpooling. Sharing a car is counterintuitive to every message the car industry sells. Statistically, the lower the rate of car ownership, the higher the rate of willingness to share a car. It makes sense; people who don't own a car are more willing to share rides.

When it comes to TDM, we know the carrot is more effective than the stick. Incentivizing good behaviors has a greater impact than punishing bad ones. The real call for TDM practitioners is to change the culture and to encourage people to act in the best interests of their communities. Commuters still fail to make the connection between traffic congestion and their own personal driving habits. Helping commuters recognize their role in congestion issues and their ability to help solve the problem through choices is an urgent priority of twenty-first century mobility planning. Steer is in the business of behavior

change, and that's where to start.

Marketing ridesharing needs to appeal to commuters' needs and desires. When polled, people indicate that flexibility and convenience are more valuable than cost^[1]. Pro-high-occupancy vehicle (HOV) policies, infrastructure investments, and ridesharing systems could help tilt the "convenience" away from single-occupancy travel so people see ridesharing as being more convenient than driving alone. But these physical, technological and policy changes around HOV travel will be more effective if they're coupled with a change in paradigm around sharing rides. What's the implication? If we create a culture shift, the modeshift will follow.



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[1] Victoria Transport Policy Institute (2019), Evaluating Public Transit Benefits and Costs, Best Practices Guidebook. Available at: <https://www.vtpi.org/tranben.pdf>

The future of parking in the evolution to autonomous vehicles

By Anita Mauchan

The effects of Connected and Autonomous Vehicles (CAVs) on parking will depend on the adopted ownership model, public policy and demand. If privately owned, the number of car parking spaces could be equivalent to today's number, or slightly increased due to higher mobility rates, but if shared ownership prevails, fewer vehicles will require parking. Notwithstanding the ownership model of the future, CAVs can be parked more efficiently and consume less space, reducing demand for parking close to one's destination.

What will this mean for those who invest in parking assets, operate parking lots, plan new developments and operate CAV fleets?

Who will feel the impact?

We have identified four broad groups of parties that will be affected by the changes to parking which will arise with the roll-out of CAVs. This includes investors/owners, parking lot operators, real estate developers and CAV fleet operators, all affected in different ways. The challenges and new opportunities available to each will vary according to asset location, profitability and services provided at each parking facility. These factors will also impact the rate of change of parking provision and implementation of new technology.

Location, location, location

The widespread take-up of CAVs will greatly impact the spatial distribution of existing and future parking asset.

- For investors/owners and operators, existing assets may no longer be profitable due to their location and/or improved capacity resulting from CAV technology at nearby parking lots. Underutilized assets could be converted for alternative purposes or diversified to offer a broader set of services (such as servicing, charging, holding areas), to CAV fleet owners depending on location.

- For developers, parking lots could be relocated to cheaper land (subject to planning consent), away from real estate developments and arrival locations, or at an optimized location within the development. With less need for parking, integration of adequate pick-up and drop-off facilities across real estate will be critical. Minimum parking requirements at new developments could also be abolished.
- CAV fleet operators will be looking to find the optimal location to service, charge and hold their vehicles to ensure maximum availability and minimum time wasted without a fare.

Evolving needs and profitability

Since the capacity of parking areas will increase, for some operators parking revenues might also increase, depending on location. At the same time, upfront investment will be required to attract customers beyond simply location, and merely safeguarding your car while you are busy elsewhere, and will need to evolve to offer a range of new services, such as EV charging points, servicing/cleaning and secure delivery of online shopping to your vehicle.

Digital infrastructure will be critical to enable occupancy to be monitored and managed. It is anticipated that the majority of investments in the parking industry will go to improve efficiencies in parking. This will include integrating low-cost technology solutions to streamline and improve the customer experience through the smartphone and the connected car.

- There will be opportunities for investors/owners and operators to diversify their service offer and potential to stratify their services to cater for a range of ownership models: from high-end private CAVs to low-cost fleet servicing contracts.



- Developers will need to incorporate flexibility in the design and configuration of parking infrastructure (to accommodate new technology, higher vehicle capacity and potential change of use in case of local overprovision). Their chosen designs and locations for parking facilities will optimise commercial attractiveness.
- CAV fleet operators will seek parking which caters to their needs, in the locations of their choice, and at an attractive cost. Indeed, CAV fleet operators may even become asset owners and developers themselves. We could see parking assets purchased by Uber or Google, abstracting revenue from public and private owners/investors.

Impact on revenues will largely depend on the eventual CAV ownership model, location, capacity, and ability of investors/owners and operators to diversify services and make technological upgrades. If shared-multiple occupancy usage increases over time, less capacity for car parking will be needed – this will lead to overprovision and potentially reduced revenues at locations which find it difficult

to diversify, such as airport parking lots. However, shared/fleet ownership of CAVs also offers the potential to move towards fleet contracts and revenue guarantees against service Key Performance Indicators (KPIs) targeted at operators of optimally-located parking lots.

The Last Word

It is clear that the introduction of CAVs onto our streets will significantly impact the future of parking. This impact will be felt most prominently in our urban areas. Investors/owners, developers and CAV fleet operators should be looking to understand and monitor this market now, so they can move to optimize their investment. Transformation will, however, take time; assets will need to be designed with flexibility in mind in order to react to changing future demands for parking provision.

There is likely to be a movement away from parking managed in isolation, to partnership arrangements leveraging enhanced opportunities to satisfy the changing needs of the market, such as enhanced service offerings and fleet contracts. Owners/investors and

operators should be proactively looking for partnering opportunities as these trends are spotted. It is easy to imagine that your future choice of CAV fleet provider will be governed by the speed by which the vehicle can reach you, and partnerships with the owners of optimally-located parking with a full-service offer will be key to achieving this.

Changes to the way parking is provided and managed are likely to trigger a wider process of urban transformation, as Steer describes in "Who's Driving" available here: <https://bit.ly/2DJ0bd2>

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News in brief

Creating the City of Mississauga's first transportation master plan

Mississauga in the province of Ontario is Canada's sixth largest city and has steadily grown over the last 40 years, maturing into a regional economic center. In the future, the City plans to use its existing and funded rapid transit to help spur targeted intensification and so identified the need for a transportation plan to support the growing city.

The City of Mississauga commissioned Steer to create its first transportation master plan, which will guide the development of the transportation system over the next 25 years, as the city reorients itself from historic automobile-dominated development and travel patterns.

Drawing on the City's aspirations, the desires of stakeholders and the public, and the needs identified in our technical analysis, our team developed an overarching Vision for the city's transportation system. We created a set of six Goals that provide additional direction to implement the Vision. We then detailed more than 90 Actions that provide the means to deliver the Plan's Vision and Goals, guiding the City's investment in its transportation infrastructure and services.

The transportation master plan was approved by the City Council in May 2019.

Japan Rugby World Cup advisors

Steer has been advising the Japan 2019 Rugby World Cup organizers to help understand the transportation requirements and mitigation measures needed to ensure the 2.5 million ticket holders can get to each game and home again.

The project team at Steer utilized their extensive events knowledge, their experience in planning and delivering the operation for the 2015 Rugby World Cup, to identify risks for the Organizing Committee in Japan. Rail networks in Japan are notoriously busy, so it was essential to identify where reinforcement of existing services will be needed to support each game day or where Transportation Demand Management strategies were required to try to minimize background demand on the transit network. Critical to this understanding was the development of a demand forecasting tool to predict the busiest times on the local transit network before and after each of the 48 games.

Planning for women in our cities

By Liliana Pereira

At the end of the 90s, the city of Vienna decided to run a survey to gauge how residents used public transit. It was all pretty routine until they began to notice something surprising: men were completing the questionnaires in just a few minutes while the women seemed to take forever.

The reason for this, it turned out, wasn't anything to do with men being more business-like and women chattier, or any other sexist stereotype, but something much simpler. Women, they discovered, simply have more complex lives when it comes to moving around in cities. While a man would typically use a car, train or bus twice a day to travel to and from work, a woman would often be making multiple different journeys using multiple modes of transportation, combining work, childcare and domestic tasks in complex patterns. Women use public transit more, they make more and shorter journeys, and they do much more walking. They are far more likely to be burdened with shopping or children and are highly aware of inadequacies in infrastructure such as handrails, steps and ramps as well as streetlighting and the width of walkways. In some ways, the two sexes hardly seemed to be living in the same city at all.

The Viennese findings have since been borne out in investigations in very different urban environments. A recent study run by Steer for the CAF (Development Bank of Latin America), for example, found that women used public transit in Mexico City very differently from men, and in similar ways to their Viennese equivalents. Journeys undertaken for caring purposes, such as picking someone up or taking children to school, account for 35% of women's journeys, and these tend to be short distances with much more, about 58% in Mexico City, traveled on foot. Unlike the men in their lives these women are also much more likely to be encumbered with either children or shopping or elderly relatives, and that makes a big difference to what they are looking for from their transportation, as anyone who has tried to get on a bus with a toddler, a day's shopping and a stroller will tell you.

The implications of these findings are far-reaching for just about every aspect of transportation planning. Integrated fare structures can have a far greater impact on women users, for example, because they are making many more 'chained' trips – journeys chopped into smaller segments using a variety of transportation modes. The greater emphasis that women place on security – because of the greater risks faced by women in most cities – means that improving cycling infrastructure can have a disproportionately positive effect on encouraging women to cycle.

The challenge for planners is how to adapt so that we are no longer making designs that discount the needs of half of our users. Now that we have begun to understand the depth and breadth of the issues, we have the opportunity to make cities that are truly inclusive, to the benefit of both women and men and marginalized groups made up of both and neither. Everybody wins when the barriers to participation are knocked down, but, to do it, we must learn to ask the right questions. The trouble with entrenched differences such as gender is that they are sometimes invisible, or hard to articulate, even to the affected individuals, but even small changes to practice can tease them out. When we change user surveys to ask if the individual is traveling alone or accompanied, we get a completely different picture of how a mode of transportation is being used and why. Steer is putting these ideas into practice in Mexico, as part of the Future Cities program, and beyond. Future Cities, a consortium led by PwC, is a three-year project which aims to transform public transportation provision in the target cities in Mexico. It is not the first public transportation project with transformational aspirations, but it may be the most ambitious yet in terms of gender equality. We hope that the trail we blaze will set a standard that will radically alter how gender is perceived in planning across the world.

It is difficult to overstate the benefits to women and other marginalized groups that thoughtfully planned gender-aware places might bring. In many parts of the world, women still feel under serious

threat when traveling alone, even in daylight hours, and that fear places a limit on freedom. Cities designed more thoughtfully for women can go far towards reducing that danger and liberating their female citizens, and other marginalized groups. In Mexico City, where a recent UN report found that 77% of women felt unsafe using public transit, for example, Steer has helped to redesign the night bus system which until recently has been predominantly the preserve of men, but the safety focus is only one part of a much broader strategy. Too often, in the past, women's safety was understood as a discrete problem to be solved with lighting, CCTV, and segregation, but we need to learn to think of it as part of something much bigger, just one part of a network of ideas that keeps women at the center of planning and design.

When Vienna discovered its invisible women, it responded with energy and imagination, improving access to public transit, adding ramps, widening walkways and providing better lighting. But the most important change it made was to build an awareness of gender difference into all future planning, as part of their 'mainstreaming gender' initiative. From now on, the question would always be asked: 'does this also address women's needs?' That is where Steer and our partners start from: asking the right questions.

Women make up half the world, but do not always take up half of its resources. Putting that right is going to be as exciting as it is challenging. The legacy will be places to live that are everywhere subtly transformed, where everyone, at last, is treated with equal respect, to be seen and heard, where nobody is invisible anymore.



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News in brief

Working to deliver three major Prosperity Fund programs

Steer is delighted to have secured roles over the last six months within delivery partner teams for three major multi-year Prosperity Fund programs. These are located in Mexico (Future Cities Program), India (Sustainable Cities for Shared Prosperity) and Colombia (Global Infrastructure Program).

The Prosperity Fund, administered by the Foreign and Commonwealth office, aims to improve economic development to help build long-term inclusive growth. As a secondary benefit this will open market opportunities for international businesses.

Working with lead partners PwC (Colombia and Mexico) and Mott MacDonald (India), Steer combines teams with local market knowledge in each country with international good practice to deliver effective and implementable advice, training, and pilot projects.

In Mexico, the objective of the Future Cities program is to support urban development in selected cities that results in safer, resilient and more sustainable mobility services for citizens, particularly for women and girls. The implementation phase started in September 2019.

In India, the objective of the Sustainable Cities for Shared Prosperity is to support urban development in selected cities across seven states with a potential to unlock the finance needed to revolutionize the development of these cities, fostering inclusive economic growth and improving the lives of its citizens. The implementation phase starts in December 2019.

In Colombia, the objective of the Global Infrastructure Program (GIP) is to support sustainable infrastructure development in Colombia. The project aims to adapt UK methodologies that allow for better planning, delivery and management of major infrastructure projects to the Colombian context. The implementation stage will involve the development of adapted guidance and training materials together with a comprehensive training program to government officials within Colombia.



Driving subtle change to electricity regulation

By Jonathan Thurwell

Electricity, with monopoly elements, has been a regulated industry since it was restructured and unbundled from the 1980s onwards. The regulatory frameworks and market structures have evolved since then, which has helped the industry in most jurisdictions to decarbonize successfully. However, wider decarbonization objectives, particularly for transportation, will have an impact on the sector and raise new questions of its regulatory framework.

Electric Vehicles (EVs) are seen as a key element in the decarbonization of transportation. However, expected take-up of EVs could be hindered by consumers' concerns regarding cost and the convenience of recharging. Governments face questions of regulatory approach and how the recharging infrastructure should be provided. For example, should investments be subsidized or provided by customers of electricity utility companies? This article identifies the type of infrastructure required to recharge EVs and considers how the regulatory approach might have to evolve to facilitate this investment.

In most countries, the infrastructure required to recharge EVs already exists in the form of an electricity system consisting of a complex network of interconnected generating plants and transmission and distribution wires owned by private and/or public entities. Nevertheless, widespread adoption of EVs will require investment in:

- **Electricity generation.** New capacity will be required to serve the additional electricity demand, particularly if EVs draw electricity from the system during peak periods, although this can be mitigated by encouraging charging at a time when existing capacity is underutilized.
- **Distribution network upgrades.** Additional connections, upgrades or reinforcement may be required to regional distribution systems. The extent of this will depend on existing capacity, the density of EV owners in a local region and the type of charging undertaken. Again, this can be mitigated by encouraging charging at times when the network is underutilized.

- **Charging infrastructure.** EVs can be connected to the network at a variety of locations using either slow, fast or ultra-fast chargers. EV users can also be categorized as residential (where charging is undertaken at the home, en-route or at destination) or commercial (e.g. fleets of EV vans or buses). For residential users, the home is expected to be the principal charging location, although public ultra-fast charging could be a necessary component to enable widespread adoption.
- **Infrastructure to enable time-variable or "Time of Use" pricing.** Key enablers for such pricing include smart meters that collect real-time electricity usage data, and the two-way digital communication infrastructure between the meter and the retail supplier, network operator and other authorized third parties.

The high-level regulatory framework will not be changed solely to accommodate EVs. However, to facilitate the investment required to drive the growth of EVs, authorities may need to consider their regulatory approach:

- **Generation.** New demand from EVs will trigger investment in new generation in the same manner as any other source of electricity demand. This suggests no change in regulatory approach.
- **Distribution.** Such infrastructure is characterized as a natural monopoly and is often price-regulated. The load imposed on the network by individual residential connections will be marginal, though collectively they could prompt the need for an upgrade. This implies the continued adoption of the regulatory principle that the costs related to such upgrades should be spread across the customer base and socialized. For commercial connections and upgrades, which individually can impose much greater loads, the principle that beneficiaries should pay for the costs for which they are directly responsible would apply, although the authorities may consider offering subsidies if this approach discourages EV take-up.

- **Charging infrastructure.** At home or vehicle depot, the principle that beneficiaries bear their direct costs would apply, and users would be expected to pay for their charging systems, although subsidies may be required to encourage take-up. Recovering the cost of public charging infrastructure is more complex. The infrastructure could be owned by (i) the government/local authority; (ii) the network; or (iii) private entities. Ownership or involvement in the business by the network may be problematic due to its monopoly position – regulatory intervention may be required to ensure non-discrimination between providers. Ownership by the public sector could disadvantage private entities if the former is subsidized by the taxpayer. As each approach may have a different impact on the growth of EVs, it may be prudent to keep regulatory intervention to a minimum to allow infrastructure solutions to develop.
- **Smart meters/communications infrastructure.** Many countries are already rolling out smart meters and related infrastructure for reasons unrelated to EVs. However, additional technology which enables communication between the charging equipment and the meter may be required to enable EV-specific pricing and to facilitate possible future vehicle-to-grid systems. Key questions are whether all EV owners should be required to have this technology, and who should bear its cost. Again, given that this technology is at its formative stage, it may be prudent to keep regulatory intervention to a minimum.



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The benefits of a digital parking offer to airports

By Steve Van Beek

Building, operating and maintaining infrastructure are imperative for airport owners and operators. Investing in new airside, terminal and landside capacity has always required a careful balancing of investment risk with maintaining superior service levels for aircraft, passengers and vehicles operating at the airport. Striking that right balance at the right time has always been and remains one of the greatest challenges for airport management.

Next to concrete, buildings and roads, the still-developing digital economy, particularly in the airport business, might appear soft and certainly less familiar. Its mix of internet and web-based tools and businesses, however, have the potential to improve nearly every operation and business practice as well as create new offers for airports.

Knowing an airport's customers

For years, airlines, security agencies, and federal authorities have collected digital information on their passengers and

have created increasingly sophisticated profiles that enables them to sell air travel and ancillary products and graduate the risk of any individual traveler. For the most part, airports have been absent from this process, knowing less about their customers than their tenant airlines, security agencies, and federal authorities.

Airports have started to implement digitization strategies, such as for passenger wayfinding and facilitating operational improvements. However, many have not collected passenger information at the level of detail that has been collected by airlines and federal agencies.

In the last year, however, this has begun to change. Several US airports, including Boston, Dallas Fort Worth, Denver, Hollywood-Burbank and Los Angeles, are implementing Customer Relationship Management (CRM) strategies that entail the collection of passenger information, including email accounts, telephone, and social media accounts as well as flight schedules. With this information, airports have a better opportunity to tailor their

operations and business processes and, ultimately, increase revenue.

The most frequent mode of collection is through parking reservations, where customers can "pre-book" or reserve airport parking services in advance of their flight. This provides certainty to the customer that a service will be available when they arrive for their flight — something otherwise uncertain during many mid-weeks at several busy airports. For the airport, this also provides detailed customer and operational data; properly mined, and combined with past transaction histories of parking services, it can provide a rich set of data for airport operations (i.e., what should our staffing be on Thursday?). It can also form the foundation of a next generation digital parking and ground transportation offer.

The value of a digital strategy

One of the greatest concerns identified by airport CEOs and executive teams is the loss of ground transportation market share to airports. The rise of Transportation

Network Companies (TNCs), such as Uber and Lyft, has quickly led to reduced parking and lost revenue per-passenger. Combined with off-airport parking providers at many airports and increases in airport pick-up and drop-off (PUDO) trips, airports today face a much more competitive environment for airport access than they did five years ago.

It is not only about lost revenue. At many airports the growth in TNCs and PUDOs, which generate as many as twice the number of trips as parkers, have contributed to congestion issues on roadways and curbs, and reduced service levels.

Understanding the economics of airports and its competitors is fundamental to the new strategy. Fixed daily parking rates, whether for premium, daily or economy parking, is a losing strategy in today's digital age. For example, a fixed \$35 a day rate for a mid-week two-day stay in a garage adjacent to the terminal may work for the business traveler but does not appeal to value-seeking leisure travelers

going on their vacation for a week, especially when TNCs offer a rate half that and provide home-to-curb access where the family doesn't have to schlep their bags.

Airport parking and ground transportation experts

Airports can today manage parking pricing dynamically, using what airlines and hotels call yield management. For airports this means pricing by the total cost of transaction, not by daily rates, and joining that with filling those unused spots during low utilization periods — typically during the Monday and Friday "shoulders" and the off-peak weekend.

Practicing full yield management to start with is a big leap, but industry-leading airports are today making significant gains by collecting passenger information, mining transaction histories, and improving their pricing and product mix to win back ground transportation market share.

With our decades-long experience supporting airports with pricing and

product strategies in the UK, Europe, and abroad, we are helping to bring digital strategies to several North American airports. Depending on the airport strategy, we are helping with procuring new operators and commercial managers, advising on technology, optimizing rates and introducing new product mixes to airports. This work has already enabled many airports to achieve their goals and objectives of improving customer experience, addressing congestion, and increasing airport revenues.



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A decade of ferry demand modeling in the New York Harbor

By Mario Scott



The process for developing expansive demand forecasting models can be quite time- and cost-intensive. An effective way to balance this is by building a model in stages that mirror the steps many new transit services go through. Our team applied this process when developing the forecasting models used in the recent 2018-2019 NYC Ferry Expansion study.

As a result of the success of NYC Ferry's initial six-route system, there was citywide interest in further expanding the study and widening the ferry service to potential new landings and routes. The study presented the opportunity to implement another round of improvements to the demand models, which were initially developed in 2009 and updated in 2013. This most recent round of updates included the incorporation of GPS-based trip data, location-specific mode choice models, and the fine-tuning of model parameters based on the existing service and recent customer surveys.

While the updates themselves were fairly typical of periodic updates to demand models, they represented a significant jump in the model's capabilities. With these updates, the model was able to predict non-commuting trips, which allowed our

team to forecast weekend, evening and tourism ridership. The original models were initially focused on understanding commuter demand, limiting their ability to forecast ferry demand for a wide range of trip purposes/market segments.

The initial models developed in 2009 focused on forecasting commuter demand for ferries, which is a, if not the, key to understanding the viability of a new urban transit system. This is a practical way in terms of the level of effort, to develop only as much modeling capability as you need for assessing a service's feasibility. While focusing on predicting ridership for the core service, the initial model development included the time- and labor-intensive survey exercises required to develop the core behavior choice parameters. This step is often one of the costlier aspects of developing a mode choice model, so it was prudent to focus this first survey on the core commuter markets.

Following the initial model development and the initiation of the East River Ferry (ERF) as a pilot route, a more comprehensive planning study was undertaken in 2013, which included necessary model updates. These updates incorporated lessons learned from the first ferry service as well as an update to

the underlying demographic and growth data. The models were also calibrated and validated against the known ridership of the ERF, increasing their accuracy. The 2013 study resulted in the implementation of NYC Ferry's first six routes.

Between the 2013 and 2018-2019 studies, a separate effort was undertaken to develop standalone choice models for Staten Island. This was as a result of Staten Islanders exhibiting different modal choice preferences than residents of other areas of New York City. These Staten Island models were also incorporated into the demand models used for the 2018-2019 study.

The decade-long process of periodic step-wise updates was an excellent example of how a core model can be developed as part of a potential service's feasibility study, and then be incrementally improved and expanded as a new transit service grows.



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Moving projects forward through effective integration

By Laura Sidi

Most transit and metropolitan planning agencies are tasked with the monumental goal of developing, shaping, scoping, progressing and sponsoring projects. This ranges from the early planning stages through design, procurement, funding and financing, implementation and, ultimately, to operation and maintenance. Given the long lead times, the complexity of the projects and the outreach and permitting processes, this is rarely a straightforward path, so what can be done to keep projects moving forward through inevitable transitions?

The challenges can often be exacerbated by the changing skill sets needed through the different phases of this life cycle, resulting in changes to project personnel both internal to the agency and from supporting consultants, not to mention the wider political and economic environment. As the team changes, the original project objective, desired outcomes and rationale behind decision-making can often be lost.

Further, major projects are complex and involve the integration of many different disciplines with associated dependencies. This often adds to the communication challenges of setting out a clear and compelling story of what the project is about, and why the project is what it is, in order to deliver all the benefits and outcomes.

These issues can often result in material changes to the project (and its outcomes) without an understanding of the previous work and decision-making that resulted in the original proposal or design. It can also result in unintended effects on other projects and investments further impacting the design, leading to rework, increased cost, and potentially, a failure to deliver the original desired outcome or purpose. It can, ultimately, lead to an increased level of effort to understand and return to the original proposal. All of which can negatively impact budget, schedule or, worse, public, stakeholder and funder buy-in.

There is also immense pressure on agency project managers to ensure that there is cohesion between their consultants, across their organizations, and often with wider stakeholders. In short, project integration is not simple or a task to be undertaken lightly. However, its success can help push projects forward.

At Steer, we help our clients manage these project transitions by focusing



on the underpinning rationale for the project and rigorous analysis to test and confirm the (changing) project's ability to deliver the wider policy objectives through the project outcomes.

Steer has been working for more than a decade in the Canadian rapid transit market to help agencies identify and develop their major projects to successful outcomes. Many of these assignments have started as planning projects but, with our experience across the full project development life cycle, have resulted in the team being retained to support our clients move the projects forward through to procurement and, ultimately, implementation.

Our long-running involvement not only provides our clients with a full multidisciplinary perspective on the project's objectives, risks, benefits and opportunities, but also helps agencies maintain the institutional and historical knowledge of the projects as client staff may change or projects move between departments. Our more recent project experience includes:

- working with TransLink in Vancouver to transition Surrey-Newton-Guildford LRT from planning to procurement;
- supporting Metrolinx and the local cities develop both the Hamilton and Hurontario LRT projects (both currently in procurement);

- helping the City of Edmonton to develop their long-range LRT network plan; and
- acting as a Project Sponsor for Metrolinx in Toronto.

Introducing Project Sponsorship roles is one key way of ensuring that the original goals are realized in the final phase of the project. This validates the need to have more continuity throughout projects and has resonated with several of our clients, including Sound Transit in Seattle. Peter Rogoff, CEO of Sound Transit, recently presented at our Movement Matters session in Toronto, noting that the agency has changed the way they develop projects to enhance communication and collaboration through the project life cycle. They include planning, engineering, construction and operator staff as participating project team members during all project phases, ensuring that these perspectives are a continuous thread even during transitions.



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