

TOGETHER, WE TAKE PEOPLE PLACES

Rail & Transit





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WHO WE ARE

We're AtkinsRéalis, a world-class engineering services and nuclear organization. We connect people, data and technology to transform the world's infrastructure and energy systems.

Together, with our industry partners and clients, and our global team of consultants, designers, engineers and project managers, we can change the world and engineer a better future for our planet and its people.

In this brochure you'll find a snapshot of our expertise, services and experience in Rail & transit. For further information visit: atkinsrealis.com/rail-and-transit



WHAT WE DO & WHY WE DO IT

Our rail and transit engineering solutions inspire better travel. Travel that is faster, more sustainable, and better connected to other transport modes. By applying the knowledge we've acquired through decades of working on major projects, we're improving the passenger experience for individuals worldwide and connecting communities in innovative ways, fit for the future.



CONNECTING PEOPLE AND COMMUNITIES

Improving rail and transit is vital: public transport is among the most sustainable ways of getting people from A to B. Better travel improves daily lives, too. Our work in planning, designing, building, and operating rail and transit systems – ones that are sensitive to end-user differences – helps people around the globe work, study, and connect with others. It's a rewarding way to apply the data and technology expertise we believe is all-important for major engineering projects.

TAKING THE COMPLEXITY OUT OF MAJOR PROJECTS

Public funds are under more pressure than ever. We have a proven track record in delivering complex rail and transit projects, learning from each other and from global projects to reduce risk and deliver better solutions in every region.

As experts in all technical railway disciplines, we can provide full turnkey services on projects or specialist expertise at any stage. Our ambitious designs – underpinned by flawless execution – produce intelligent, integrated systems. Plus, strong governance and strict ethical standards ensure everything we do is safe and trustworthy. With us on board, ideas transform into technical reality. It happens naturally when you combine the best and brightest people with a company-wide collaborative mindset, decades of engineering experience, and advanced use of technology.





OUR SERVICES AND CAPABILITIES

YOUR PARTNER FOR THE ENTIRE JOURNEY

We've worked on major projects worldwide and are known for our ability to handle the entire project lifecycle, and for the way we collaborate with clients, partners, and suppliers.

Our rail and transit expertise include:

- Buildings & depots
- Building Lifecycle Management
- Rolling stock
- Traction, power, supply & distribution
- Track & civil engineering
- Systems integration & assurance
- Train control & communications

But this is far from an exhaustive list. We bring our expertise to every project, regardless of its location, size or complexity. Our ideas for rail and transit systems that inspire better travel are endless.

Let's work together to take people places.





OUR END-TO-END CAPABILITIES

We pride ourselves on delivering exceptional rail and transit solutions through our end-to-end capabilities.



Planning & feasibility studies

From inception to execution, we ensure projects and programs are both strategically viable, practical and realise our client's ambitions.



Design & engineering

We turn our clients' concepts into reality with innovative designs and our systems engineering expertise.



Project & program management

We work alongside our clients and partners to manage timelines and resources effectively to keep projects and programs on track.



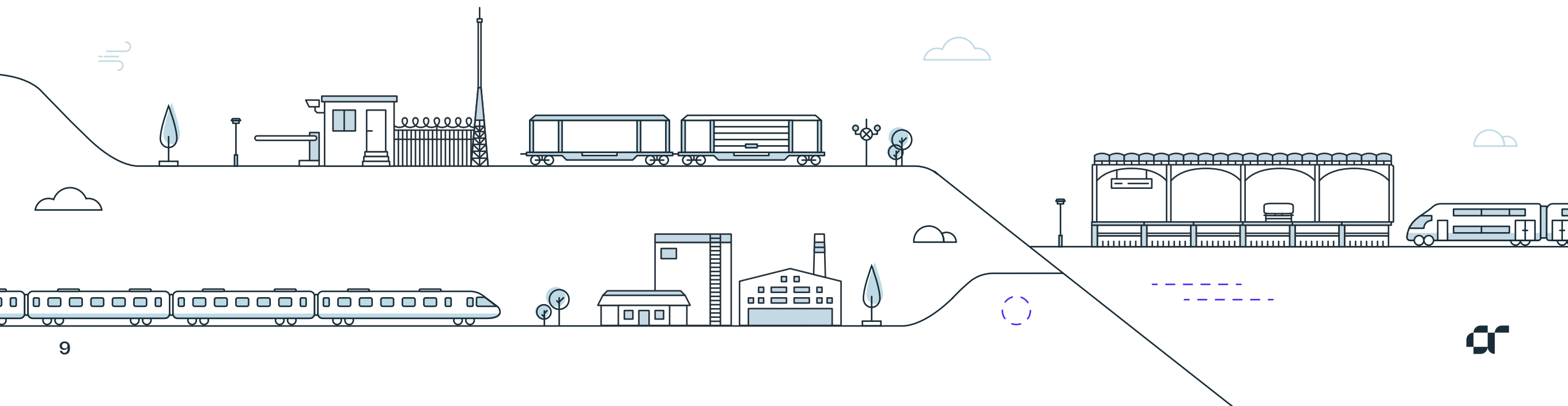
Project delivery

We coordinate every aspect of delivery to maintain quality throughout the crucial phases of a project.



Operations & maintenance (O&M)

We develop O&M solutions that maximize the value from an asset over its lifecycle whilst minimizing the cost and disruption of maintenance.





OUR END-TO-END CAPABILITIES (CONTINUED)

Our dedicated team ensures every aspect of a project and program is managed with precision, from concept to completion.



Environmental & social impact

We integrate eco-friendly practices and assessments to ensure that projects promote sustainable development.



Technology & innovation

We implement cutting-edge technologies and data-driven approaches to enhance efficiency, the passenger experience and that optimise O&M of projects for peak performance.



Safety & compliance

We put safety at the heart of everything we do and ensure all project elements meet relevant standards and regulations.



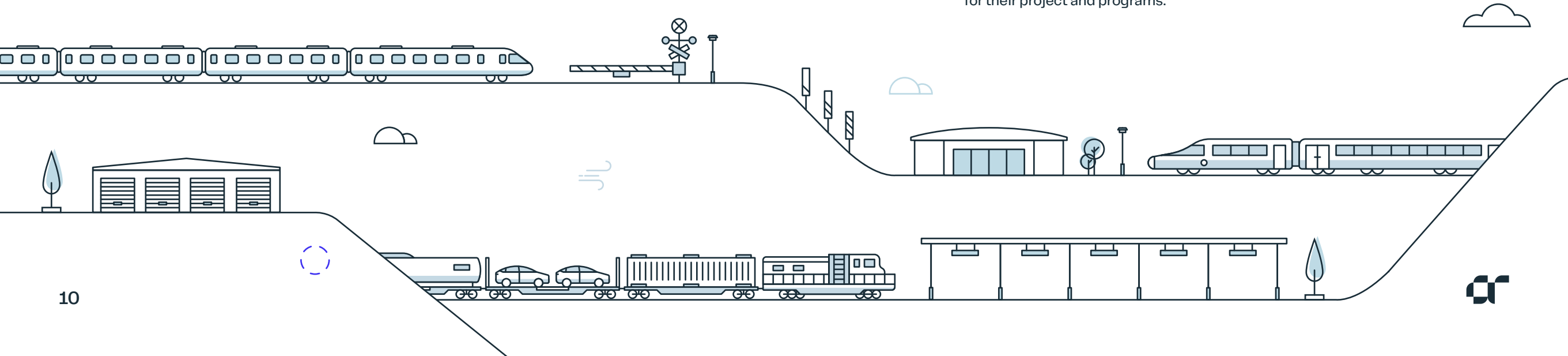
Commercial advisory & financing

Our accurate cost estimates and financial plans support project success. With our deep industry knowledge and extensive network of financial partners, we assist clients in finding and maintaining avenues of funding for their project and programs.



Training & development

We develop comprehensive training programs to equip project teams with the essential skills required to maintain projects.





Driven by our purpose to engineer a better future for our planet and its people, we are committed to maximizing our impact through our Environmental, Social, and Governance (ESG) efforts.

[Find out more about our ESG strategy](#)



OUR EXPERIENCE

We deliver innovative engineering solutions on projects across the globe.

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Canada Line, Canada

Taking transportation into the future with Canada's fully automated commuter rail line.

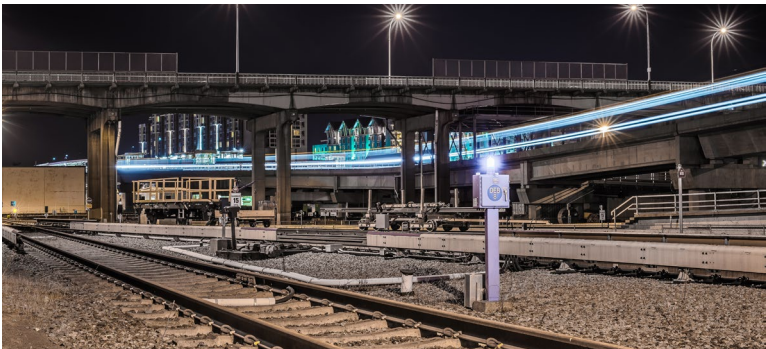
The Canada Line is North America's most efficient commuter rail line. It is a 19 km, fully automated commuter rail line and part of Vancouver's SkyTrain network, one of the largest of its kind in the world. It connects downtown Vancouver with existing heavy rail lines, bus services, commuter rail, sea bus and the airport. The driverless system includes eight underground, six elevated and two at-grade stations, as well as an operations and maintenance centre.

For over a decade we've provided asset management and operations and maintenance solutions for Canada's rapid transit line, ensuring an industry-leading efficient, safe, secure and sustainable public transport system. Our work has extended through every part of the project lifecycle – from engineering, procurement and construction to partial-finance, and the operation and maintenance services we provide today. At the end of 2022 we successfully delivered The Canada Line Digital Twin.

19 km	99.8%	150K	400+
rail line	average availability rate	daily passengers	design, supply and construction contracts

Completion date: 2009 (Ongoing maintenance)

Client: TransLink



The Canada Line Digital Twin enables track assets to be monitored remotely, reducing operational costs and removing the need for frequent physical inspections.



Doha Metro, Qatar

Designing Qatar's fully automated rapid transit system.

The Doha Metro forms an integral part of Qatar's 2030 vision and was crucial for the FIFA World Cup 2022. Phase 1 included 65 km of tunnel and 32 underground stations.

AtkinsRéalis was the preliminary designer for the Red Line, responsible for the multidisciplinary design, functional planning of tunnels, shafts and track alignment, and providing fire and life safety strategies. For the Gold Line, AtkinsRéalis' handled architectural design, station planning, structural designs, geotechnical analysis, excavation support, fire and life safety strategies, and mechanical and electrical building services design.

Both lines were designed to high sustainability standards, resulting in improved the passenger experience, reduced station volume and excavation needs, lower OPEX costs, minimized traffic impact and enhanced operational planning.

32

underground stations

65 km

of tunnel

Completion date: 2022

Client: Qatar Rail

Collaborators: QVDC JV & ALYSJ JV



The Doha Metro forms an integral part of Qatar's 2030 vision.

[Find out more](#)



Dubai Metro, United Arab Emirates

Lead designer for Dubai’s modern, driverless urban rail transportation system.

The Dubai Metro is the single longest automated driverless system in the world and was introduced to ease traffic congestion, reduce commuter travelling time, and improve mobility within the burgeoning city of Dubai. Today over 600,000 passengers use Dubai’s Metro each day. AtkinsRéalis was appointed as the lead designer responsible for all civil works associated with the first lines of the Dubai Metro – the Red and Green Line.

We provided full multidisciplinary design and management of the civil works including geotechnical and site investigations, bored tunnels, cut-and-cover tunnels, viaducts and route alignment, elevated, at-grade and underground stations, depots and additional specialist services such as fire and ventilation, environmental impact, concrete durability, noise and vibration reduction, and landscaping.

Our work also included design coordination with the rail systems side and close working with the contractor to facilitate timely construction to programme.

75 km	45	15 km	45
of urban metro	stations	of tunnel	pedestrian bridges

Completion date: 2013

Client: Japan Turkey Metro Joint Venture



We deployed upwards of 100 people within the first month of project execution and at its peak some 1,500 of our people were working across the globe in support of the delivery of this project.

[Find out more](#)





East West Rail (EWR), United Kingdom

Working together to transform the UK's strategic rail network.

The EWR scheme is a transport improvement programme to develop a strategic rail transport link connecting East Anglia with central, southern, and western England. The programme will revitalize the economic heartland, regenerating the area by making jobs and exports for the UK economy.

We are in contract partnership with Network Rail, Laing O'Rourke and VolkerRail, forming the EWR Alliance, to deliver the programme with a target cost of £1.2bn.

Our work has included upgrading of existing single track to dual track; and creating the foundations for future electrification. Our engagement included the early development works for improvements to existing stations at Islip and Bicester and the delivery of a brand-new station at Water Eaton.

£1.2B	15 km	£60M	11 month
project	of existing single to dual track	capital cost and risk saving	reduction in overall delivery programme

Completion date: Oxford–Bedford: 2025
Bedford–Cambridge: mid 2030s

Client: Network Rail

Collaborators: Network Rail, Laing O'Rourke, and VolkerRail



Through BIM principles, we have built a consensus around costing, sequencing of works, interdisciplinary communication using design, and more.

[Find out more](#)





Eglinton Crosstown Light Rail Transit (ECLRT), Canada

Engineering Canada's largest public-private partnership in the public transit industry.

The ECLRT in Toronto is part of a 25-year transportation plan to provide an integrated transportation and transit system within the region. By offering reliable, efficient, and sustainable public transportation, the ECLRT will address traffic congestion, enhance city connectivity, reduce greenhouse gas emissions, and benefit residents, commuters, and visitors. Additionally, it's expected to promote economic and urban development along its route.

AtkinsRéalis is part of the consortium awarded the contract to design, construct, maintain and partially finance this project, which is Canada's largest public-private partnership in the public transit industry.

At surface, the light-rail transit line will move people up to 60% faster than existing bus services and handle more than 10 times as many passengers. For transit users, it will provide 25 new stations and stops, linking up to 54 bus routes, three subway stations and various GO Transit lines.

19 km	25	25-year	60%
light rail transit line	stations	transportation plan	faster than current travel times

Completion date: Ongoing

Client: Infrastructure Ontario, Metrolinx

Collaborators: ACS-Dragados, Aecon, EllisDon



ECLRT is being built in the busy heart of a major city, so minimizing disruptions to traffic and the community is a priority.

[Find out more](#)





Elizabeth Line, United Kingdom

Contributing nearly 25 years of expertise to the Elizabeth Line, from its inception to its opening, ensuring successful delivery.

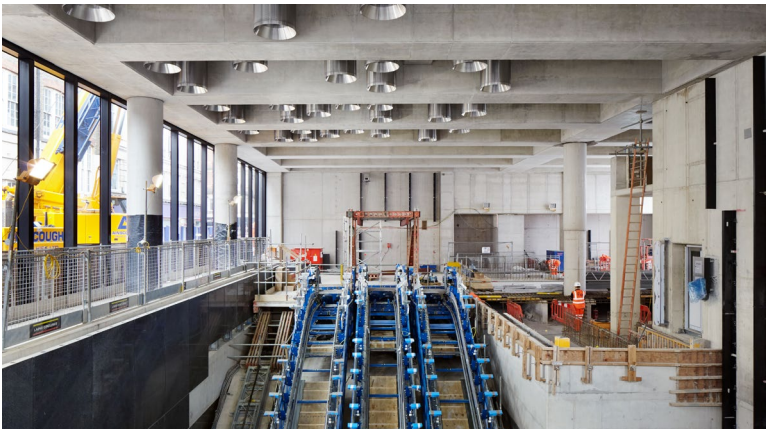
Opened in 2022, the Elizabeth Line is an underground railway that runs across London from west to east. With 41 accessible stations, including upgrades and connections to Heathrow, Reading, and central London, the line is integrated into London's transport network and will increase rail capacity by 10%, benefiting 1.5 million commuters. More than 200 million passengers annually are expected to experience faster and improved journeys.

AtkinsRéalis has dedicated nearly 25 years to this project, showcasing innovation and collaboration. Hundreds of experts contributed thousands of hours, leaving a lasting legacy of skills transfer and technological advancement.

200M passengers each year	41 accessible stations	10% rail capacity boost	25 years of collaboration
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Completion date: 2023

Client: Crossrail Ltd



AtkinsRéalis has worked closely with Crossrail Ltd and our delivery partners for nearly 25 years to help to transform people's lives by bringing together the best design and engineering expertise.

[Find out more](#)





Federal Way Link Extension, United States

Project management services to make sustainable mass transit a reality.

The Federal Way Link Extension project is designed to create faster, more reliable transportation options for the growing southern portion of King County, Washington. This 7.8-mile extension of the Link light rail line, featuring three elevated stations, is Sound Transit’s largest design-build contract at \$1.4 billion. It extends service from Angle Lake Station to Federal Way Transit Center, with new stations at Kent Des Moines Road, South 272nd Street, and the Federal Way Transit Center, set to open in 2024.

Managed by South County Transit Partners, a joint venture of Mott MacDonald and AtkinsRéalis, the project includes project oversight, resident engineering, construction management, scheduling, change management, technical support, inspection, and quality assurance for Phase 2B.

7.8-mile

extension of the Link light rail line

\$1.4B

design-build contract

3

elevated stations

Completion date: 2024

Client: Sound Transit

Collaborators: Mott MacDonald



We draw on our ability to work with our partners and stakeholders to make sustainable mass transit a reality for the citizens and communities of the Central Puget Sound region.

[Find out more](#)



Guangzhou-Shenzhen-Hong Kong Express Rail Link, Hong Kong

Designing Hong Kong-Mainland cross-boundary link.

AtkinsRéalis played a pivotal role in the development of the Guangzhou-Shenzhen-Hong Kong Express Rail Link, providing preliminary and detailed design services for the Express Rail Link tunnels and associated structures. The project, initiated in 2010 and opened to the public in 2018, stands as a testament to collaborative efforts between MTR Corporation Limited and AtkinsRéalis. This high-speed rail link not only facilitates efficient travel but also symbolizes the region's commitment to economic growth, connectivity, and cultural exchange.

26 km tunnel	8 ventilation buildings	<200 km/h train operating speeds
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Completion date: September 2018

Client: MTR Corporation Limited

Collaborators: Arup (Preliminary design)



AtkinsRéalis mobilised resources both in Hong Kong and from overseas to meet the challenge, including arranging regular technical reviews of the design by recognized experts and an Independent Expert Panel.

[Find out more](#)



High Speed 2 (HS2), United Kingdom

Putting communities at the heart of design as Engineering Delivery Partner on Europe’s largest infrastructure project.

HS2 is set to connect Britain’s major cities, slashing journey times and boosting network capacity. By enhancing connectivity and spurring economic growth along its route, it aims to revolutionize travel. Phase One will see up to 18 trains per hour racing from London to Birmingham at speeds of 360 km/h.

AtkinsRéalis, in partnership with Jacobs and SENER, holds the Engineering Delivery Partner role, overseeing Phase One with a contract valued at £250-350 million until completion in 2026. Our duties encompass engineering, environmental services, and project support across various domains, including civil engineering, rail systems, and station design. This involves everything from technical specifications for rolling stock to transport economics advice, all contributing to the project’s success.

360 km/h	£250-350M	18
speed of travel	contract value	trains per hour

Completion date: Ongoing

Client: HS2 Ltd

Collaborators: Jacobs and SENER



Our Industrial Design and Human Factors teams have helped to ensure inclusivity and passenger experience remain central during the development of HS2.





Purple Line, United States

Improving mobility and connecting communities as lead designer for Washington DC’s first direct suburb-to-suburb rail link.

The Purple Line is a new 16.2-mile, east-west light rail transit line, providing connectivity between Bethesda and New Carrollton across two of Maryland’s fastest growing counties. The system is expected to begin a 30-year operation and maintenance period in late 2027.

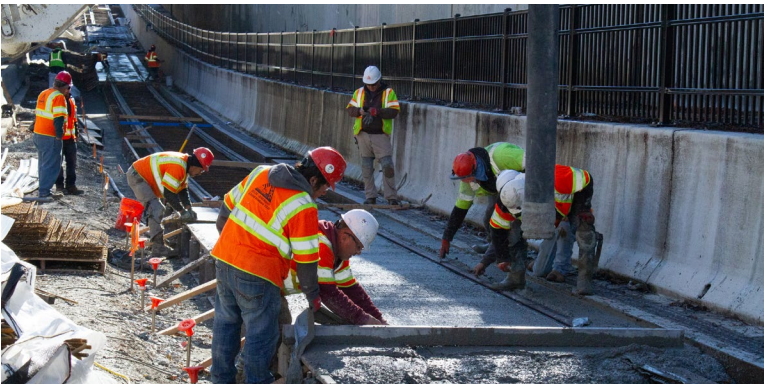
As lead designer, for this public-private partnership (P3) project, we are assisting Maryland Transit Solutions by providing design and engineering services for the project under a design-build subcontract. Our scope of work includes overseeing the design, delivery and on-site inspection of light rail vehicles along with the design.

16.2-miles	21	1,000-foot	20
rail transit line	stations	tunnel	bridge structures

Completion date: Ongoing

Owner: Maryland Transit Administration

Client: Maryland Transit Solutions
(Dragados USA Inc. and OHL USA Inc. joint venture)



With a projected daily ridership of 69,000 in 2030 and growing to 74,000 by 2040, it is expected to replace an estimated 17,000 cars on the road daily within the next 20 years, saving one million gallons of gas annually.

[Find out more](#)





Réseau express métropolitain (REM), Canada

Delivering the largest public transit project undertaken in Québec in the last 50 years.

The REM is an electric and fully automated light metro network in Montreal. It provides efficient and sustainable public transportation that connects people and reshapes communities. It supports economic development along its routes. Two consortiums were selected to design, build, operate and maintain the automated light metro system.

As part of the NouvLR general partnership, AtkinsRéalis was awarded the prestigious engineering, procurement, and construction mandates. The Groupe des Partenaires pour la Mobilité des Montréalais (GPMM) consortium, which includes AtkinsRéalis, was responsible for delivering a complete automatic and driverless light metro system, including rolling stock and signalling, as well as operation and maintenance services for a period of 30 years.

The South Shore Branch, which is the first 16.6 km segment of the light metro system, began commercial operations on July 31, 2023.

67 km	26	24,000	\$5B
of double track	stations	passengers per hour per direction	contract value

Completion date: Ongoing

Client: CDPQ Infra Inc

Collaborators: NouvLR general partnership and GPMM



The combined knowledge and expertise of AtkinsRéalis greatly contributed to delivering an optimized design for an efficient and integrated new transit system that will benefit generations to come.

[Find out more](#)



Riyadh Metro, Kingdom of Saudi Arabia

Designing the world’s largest public transport network project.

Riyadh Metro, which is the largest public transport network project in the world, will address the growing transportation needs of the city of Riyadh. The project aims to provide a modern, efficient, and sustainable public transportation system to improve mobility, reduce congestion, and enhance the overall quality of life for residents and visitors. It is part of the broader vision to diversify the economy and promote sustainable development in the Kingdom of Saudi Arabia. It is an integral part of the King Abdulaziz Public Transport Project, which is dedicated to building, operating, and developing a world-class rapid transport network for Riyadh, providing comfortable, affordable, and time-saving mobility options for all people living and visiting the city.

AtkinsRéalis has delivered program management and supervision services for the operations & maintenance of Riyadh Metro.

6	86	64.6 km	£75M
metro lines	metro stations	of metro lines	design contract

Completion date: Ongoing

Client: Arriyadh Development Authority



Once complete, Riyadh Metro will reduce congestion and pollution while offering people sustainable, attractive and fast public transport choices for the first time.

[Find out more](#)



Sydney Metro, Australia

Integrated delivery partner for Australia’s biggest public transport project.

Sydney Metro is revolutionizing how Australia’s biggest city travels, connecting Sydney’s north-west, west, south-west and greater west to fast, reliable turn-up-and-go metro services with fully accessible stations. By the end of the decade, Sydney will have a world-class metro system with 46 stations and more than 113 km of railway, revolutionizing work, recreation and leisure commuting.

Appointed as Integration and Delivery Partner for the AUD 11 billion Sydney Metro – Western Sydney Airport project, under the terms of a six-year contract, AtkinsRéalis and its local partners are supporting Sydney Metro’s in-house resources to undertake project integration and delivery of multiple mandates for the driverless railway, which includes six new stations linking residential areas with employment hubs.

The 23 km line – which forms part of program – will become the transport spine for Greater Western Sydney, connecting communities, businesses and travellers with the new Western Sydney International Airport and the growing region.

23 km	AUD 11B	6-year
metro rail line	total project cost	contract

Completion date: 2028

Client: Transport for NSW (TFNSW)



As we begin rapid mobilization of this project, we will leverage our global expertise and leading-edge project management services that help increase the predictability of infrastructure delivery, as well as whole-life value.

[Find out more](#)





What makes us different
is the way we work,
and the way we think.

[Read our latest articles](#)





OUR GLOBAL MARKETS AND SERVICES

From designing entire cities to delivering nuclear power stations, we focus on areas that greatly enhance the way we are all housed, connected, powered, and protected.



MARKETS

From designing entire cities to delivering nuclear power stations, we focus on areas that greatly enhance the way we are all housed, connected, powered, and protected. Our primary aim is to deliver value across high-growth, high-quality end markets in infrastructure and nuclear:



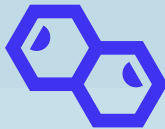
**Buildings
& places**



Defence



Industrial



**Minerals
& metals**



Nuclear



**Power
& renewables**



Transportation



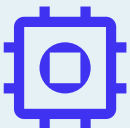
Water

SERVICES

We deploy global capabilities locally to our clients and deliver unique end-to-end services across the whole life cycle of an asset including:



**Consulting, strategy
& advisory**



**Engineering
& design**



**Project & program
management**



**Project
delivery**



**Operations
& maintenance**



Capital



Decommissioning



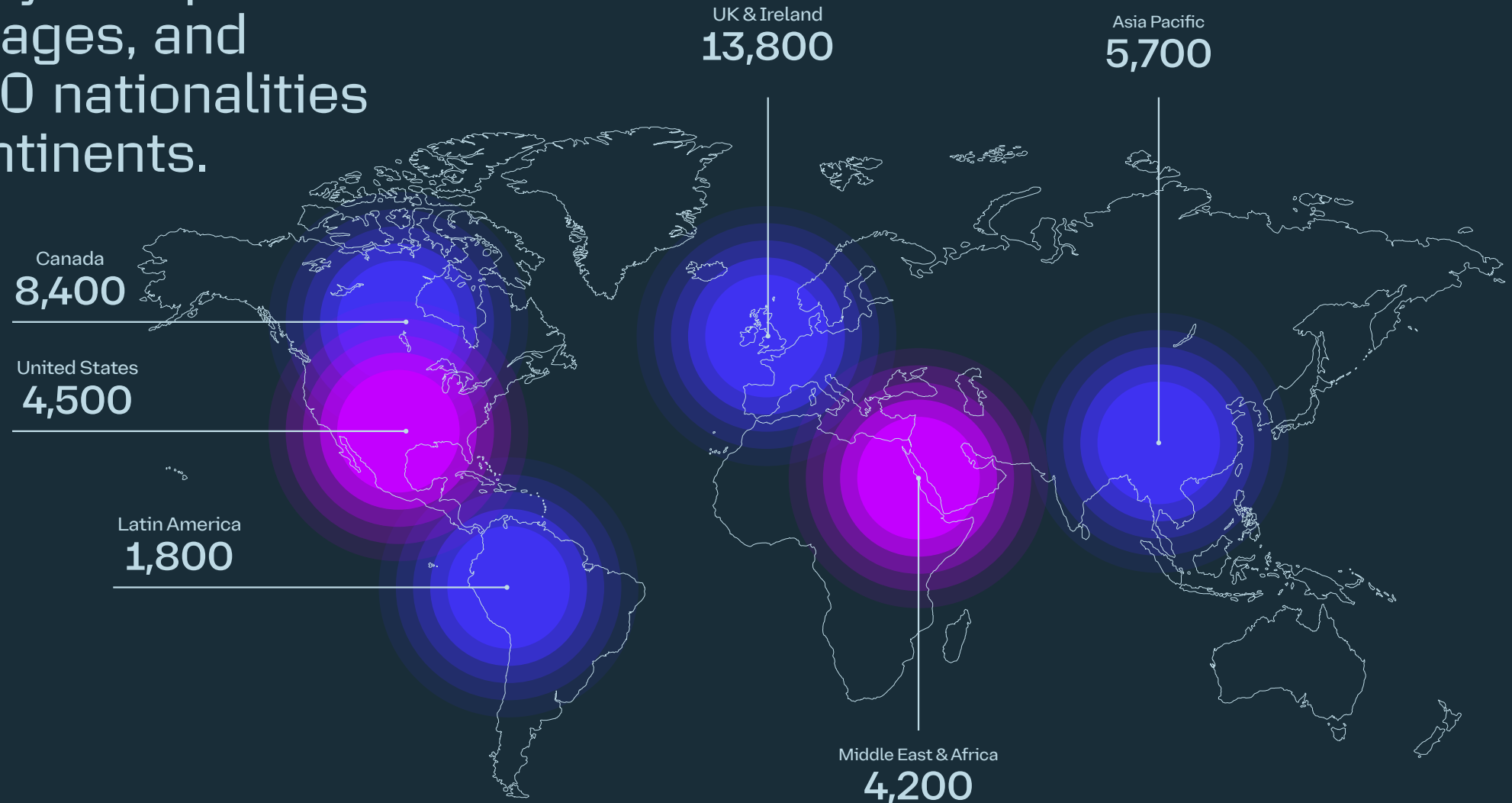


Every day, we're striving to be more inclusive, more collaborative and more innovative in how we drive change. To us, different makes a difference.

[Find out more](#)



Our global team of over 38,000 employees speaks over 70 languages, and represents 130 nationalities across six continents.





OUR VALUES

Our values are the essence of our company's identity. They represent how we act, speak and behave together, and with our clients and stakeholders.

Safety

We put safety at the heart of everything we do to safeguard our people, assets, and the environment.

Collaboration

We work together and embrace each other's unique contribution to delivering amazing results for our clients, our communities, and our planet.

Innovation

We redefine engineering by thinking boldly, proudly, and differently.

Integrity

We do the right thing, no matter what. We are accountable for our actions.

Excellence

We are proud to do our best, achieve high standards, creating environments where all can thrive.



Engineering a better future for our planet and its people.

atkinsrealis.com/rail-and-transit

