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MATRIX SOLUTIONS IS WELL POSITIONED IN SUSTAINABILITY & ESG AS A MIDDLE MARKET CONSULTING FIRM IN CANADA

Matrix Solutions is a 100% employee-owned pure play environment and engineering consulting firm of about 500 people based in Calgary, Alberta, Canada. For nearly 40 years, the company has developed innovative, pragmatic, and sustainable solutions for public and private sector clients operating across North America. Core markets range from infrastructure and mining to renewable energy and oil and gas. Areas of deep-domain expertise include: Assessment, remediation, and reclamation; Environmental planning and regulatory approvals; Integrated water resource management; Data management and predictive modelling.

Matthew Sutton is an environmental industry leader who joined Matrix Solutions in 2021 as President and CEO, bringing more than 30 years of executive experience from the world's top environmental and engineering consulting firms. Mr. Sutton has led CH2M's Environment and Nuclear Management Business as President; served as Chief Executive, Global Environmental Engineering Services at AECOM; and directed Operations as Executive Vice President at Arcadis. He has a passion for bringing innovative technologies to environmental challenges and joined Matrix from ehsAI—an environmental compliance artificial intelligence start-up—where he was a principal investor and Senior VP for Corporate Development. He remains a member of the ehsAI board of directors.

EBJ: Congratulations on your new position at Matrix! Why were you interested in becoming the CEO of a company like Matrix? Why do you believe is a good match for you and the company?

Sutton: Thank you, I'm really excited about this opportunity! I previously had known Matrix from a competitor standpoint and respected the company's strong technical pedigree, particularly in remediation and reclamation, environmental planning and permitting, and water resources – and its focus on sustainability. These are critical services for the integrated solutions required for today's environmental challenges like climate adaptation and resiliency.

Matrix is an employee-owned middle-market company and in my experience that size allows the best opportunity to really get to know the people you work with – which is an important part of having fun at work. So, for me this opportunity offers the best combination for professional and personal satisfaction.

With a firm this size, there is also the opportunity to implement some of the things I've learned over the years from leading environmental companies that can have a positive impact to change and position the organization for the better and for growth. I believe Matrix can be the technical and client-centric gold-standard of middle-market performers in the Canadian environmental industry and beyond.

EBJ: Tell us about Matrix's culture?

Sutton: I'm still getting to know everyone, but it's clear Matrix's culture is shaped by environmental scientists and engineers whose technical desire and passion for solving complex problems fuels an impressive level of deep domain expertise. Their dedication mirrors my passion for innovation and finding science-based sustainable solutions for the challenges facing communities and industries.

The company is unique as a 100% employee-owned middle-market pure play environment and engineering firm. As owners, employees are very collaborative and committed to evolving our solutions and team structures to optimally support client needs. It's a very intelligent group that is also down-to-earth and committed to Matrix's values – including putting health and safety above all else.

EBJ: Tell us about your experience at ehsAI and how will you be incorporating new technologies into Matrix?

Sutton: At ehsAI, we saw an opportunity to use artificial intelligence and machine learning to greatly reduce the time it takes practitioners to find and interpret relevant environmental, health, and safety information applicable to their project or operation. This is done using an advanced algorithm to scan vast amounts of regulatory, permitting, standards, and procedural documents to efficiently extract the relevant data and free up resources to focus on other work and services to complete projects.

Matrix is already doing some industry leading work with data management and geomatics to visualize and decipher the vast amounts of environmental field data that our teams collect and analyze providing clearer, more informed paths for project solutions.

The company is also known for predictive groundwater and surface water modelling work. One of my priorities is to make sure we're making the investments we need in technologies that will keep us ahead of the pack and at the leading edge for sustainability.

EBJ: What are some highlights of your climate change practice?

Sutton: When we think about helping clients respond to climate change, we think of it in the context of climate adaptation. Our practice in this area applies to two main dimensions: services to help our clients evaluate and mitigate potential effects of a changing climate on their opera-

tions, and services to help our clients transition to a lower-carbon future.

Our evaluation and mitigation practice deals with both greenhouse gas emissions and the resilience of natural systems and infrastructure. Matrix has an integrated team of air quality engineers, environmental and water resources engineers, geoscientists, and ecologists with a unique ability to collaborate at the level required to address the complexities of climate adaptation holistically.

Our team is knowledgeable about addressing GHG emissions as well as auditing standards and practices needed to serve our clients. Our professionals dealing with climate resilience synthesize information from a myriad of global and regional climate models and translate those models into potential effects on our environment and infrastructure using complex surface water, groundwater, and ecologic models. Engineers and natural system designers then translate the information gleaned from these models into resilient designs for infrastructure and waterways.

Matrix's energy transition practice focuses on the planning, permitting and assessment of new capital projects that support decarbonization, electrification and zero-carbon fuel development.

Our teams have extensive experience working with clients to develop projects using emerging and innovative technology that wasn't contemplated by existing regulations. We effectively communicate complex scientific principles to help regulators, stakeholders and Indigenous communities understand the potential impacts and benefits of these projects, which helps our clients to de-risk their investments.

As a middle-market company we differentiate ourselves by having the capacity to execute complex work while still being nimble enough to provide customized solutions for each client.

Our systems are robust enough to service multi-national companies like Shell and TC Energy, and our people have the entrepreneurial mindset that aligns well with emerging companies like Greengate Power and E3 Metals.

EBJ: What are some market trends related to climate adaptation services in Canada and how is Matrix meeting these challenges?

Sutton: In the public sector, big drivers include Infrastructure Canada's Climate Lens, as well as emerging requirements by provincial governments to include climate change considerations within their environmental assessment processes. In both cases, the ultimate objective is to estimate GHG emissions reductions (or increases) associated with the new infrastructure project, and to consider design alternatives that will result in more resilient infrastructure. Climate evaluation and mitigation services are certainly going to be in demand in mining, power, midstream and oil and gas sectors, as investors seek to better understand the viability of these assets in a future where extreme weather events are more frequent.

One market trend that is driving investment into decarbonization and energy transition is the establishment of a nationwide carbon offset program. The Government of Canada has committed to reaching a net-zero greenhouse gas state by 2050, and its 2020 Strategic Assessment of Climate Change dictates that any proposed project that will operate beyond 2050 needs to describe a credible plan that aligns with the net-zero target. In 2021, the generation of carbon offsets—through pathways such as carbon sequestration, renewable energy generation, or zero carbon fuel production—appears to be the most viable approach.

Another trend in the deregulated electricity market in Alberta is the emergence of virtual power purchase agreements (VPPAs). Over the past three to five years, dozens of renewable energy projects have been permitted, but not constructed due to the lack of an appropriate commercial framework. The creation of VPPAs has resulted in substantial capital investment from companies like Amazon, Labatt, Shell, and Pembina Pipelines, which has spurred the construction of several large-scale renewable projects that had been awaiting sanction. Related to this continued trend towards increased electrification is the increased demand for batteries to help store and transfer electricity that is being produced more commonly by intermittent generation sources. The battery supply chain includes several critical metals that are present in Canada, including lithium, nickel, and cobalt, and the demand for these metals is projected to increase significantly in the years ahead.

Each new mining project developed to procure these metals will also need to be designed to align with a net-zero operating future, which will require the reimagining and reshaping of conventional mining techniques. Matrix's expertise in planning, permitting, assessment, and environmental monitoring will be in critical demand as

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Canada increases its production of critical metals.

EBJ: Can you talk about the regulations that are shaping the climate adaptation industry in Canada?

Sutton: When we think about climate evaluation and mitigation, we really need to separate the industry into public and private sector clients. For the public sector, there is a clear need and movement to incorporate climate resilience into the design and construction of Canada's future infrastructure – to harden assets; and the regulations affecting infrastructure reflect this.

As I mentioned earlier, the first example facing the public sector is the Canadian Federal Government's Climate Lens assessment, which is required for most applications for federal infrastructure funding. A Climate Lens assessment has two components: the GHG mitigation assessment, which measures the anticipated GHG emissions impact of an infrastructure project, and the resilience assessment, which employs a risk management approach to anticipate, prevent, withstand, respond to, recover, and adapt from climate related disruptions or impacts.

When it comes to infrastructure, there are many new municipal and provincial regulations that are influencing the way we design for climate resilience. Requirements for Low Impact Development approaches for handling stormwater are commonplace, and Matrix has demonstrated a unique ability to utilize advanced modelling capabilities to illustrate how our designed solutions can help maintain natural systems, including wetlands and streams, that will be resilient to changes in future climates.

There are also developing regulatory frameworks driving decarbonization at both the federal and provincial levels. The federal Greenhouse Gas Pollution Pricing Act was introduced in 2018 to establish a national backstop approach to carbon pricing to maintain a minimum price across all provinces. This federal framework has been upheld by the Supreme Court and further implementation is underway in each province.

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The minimum carbon price is currently $40/tonne, rising to $50/tonne by 2022, and is projected to rise as high as $170/tonne by 2030. As the price of carbon increases, the cost of ongoing oil and gas production will also increase. At the same time, various decarbonization approaches—such as carbon sequestration from existing fossil fuel-fired facilities—will likely become more commercially viable.

The oil and gas sector will be heavily impacted by changing carbon pricing and it has been one of the largest contributors to both the Canadian economy and the success of Matrix over the past 20 years. It is undeniable that the Canadian oil and gas market must adapt to reduce GHG emissions. It is also apparent that Canadian oil and gas operators are keen to demonstrate the innovation and collaboration needed to meet this challenge.

Canada's oil and natural gas resources are among the most responsibly produced energy sources on the planet, and Matrix has played a key role in supporting the responsible planning and development of the resource, and the reclamation of oil and gas well sites that are no longer in production. As an environmental service provider to Canada's energy industry, Matrix is well-positioned to serve our clients as they continue to reduce the climate-related risks to the industry.

One more key regulatory driver in Canada, where Matrix is well-positioned to support, is the introduction of a federal clean fuel standard, slated to come into effect at the end of 2022. If this standard is implemented as designed, it will require ongoing reductions in the carbon content of all liquid fuels – such as gasoline, diesel, and kerosene. This new standard could spur further investment in zero-carbon fuels such as hydrogen or ammonia, or could further advance the pace of electrification.

Greater electrification may also be supported by new investments in small modular nuclear reactors. The premiers of Alberta, Saskatchewan, Ontario, and New Brunswick have already signed a memorandum of understanding to collaborate on small modular reactor technology that may displace fossil fuel-fired electricity and align with the federal clean fuel standard.

EBJ: What are the most outstanding climate adaptation projects that Matrix has conducted recently?

Sutton: Matrix has completed numerous Climate Lens assessments to support applications for federal funding of infrastructure projects. We recently completed an assessment for a major rapid transit project in the Greater Toronto Area. Our team developed a technique to evaluate the climate risks to people, to the local economy, and to the environment. The process allowed Matrix to recommend mitigation measures for all high-risk situations, and we are now working with the client to incorporate those mitigation measures into the engineering design process.

In terms of supporting energy transition, Matrix is proud to have worked with Greengate Power since 2016 on development of the Travers Solar Project located southeast of Calgary. When complete, Travers will be the largest solar project in Canada, with most of the power generated contracted to Amazon through a virtual power purchase agreement.

Matrix's role on this project has included constraints and siting analysis, baseline studies, and environmental evaluation, permitting, and regulatory engagement. We are currently providing construction oversight with the expectation that the project will be in service by 2022, at which point Matrix aims to provide ongoing environmental monitoring support.

We now know the frequency and intensity of major environmental events is going to continue increasing. My family and I experienced this firsthand when we were

forced to evacuate our home during the Lefthand Canyon fires near Boulder, CO in October 2020. Matrix's work in climate adaptation draws on all of our technical capabilities to find solutions that help build increased resiliency into assets. For example, Canadian municipalities have been preparing for an increased frequency and intensity of riverine and overland flooding. Matrix's water resources engineers work with local governments on flood mitigation studies that not only reduce the risk to the public from future flooding, but also reduce the risk of flooding in urban areas, which has the added benefit of unlocking the value of real estate that has historically been undevelopable due to flood risks.

Our Ontario team has been working with the City of Brampton, near Toronto, on its Riverwalk project, which is a strategic planning effort to revitalize the City's downtown – an area that lies within a floodplain. Government policies around flood risk management restrict the type and amount of development that can occur there today. Our water resources engineers have been working with the City to engineer long-term solutions to the flood risk, which will unlock the potential for urban growth and development. Our ecologists work with the engineers to put the creek back at the heart of the downtown area.

EBJ: Where does Canada stand when it comes to ESG?

Sutton: Canada is a natural resource-based economy in which ESG performance is an increasingly important consideration in accessing capital. The country is proud to have some of the most stringent environmental and social standards regarding environmental development; and is aligned with international trends in reducing critical carbon emissions, waste generation, and water consumption. Regulatory processes in Canada are designed to minimize impacts to air, land, and water and the federal government recently signed the UNDRIP Act, which commits Canada to align federal legislation with the principles included in the United Nations Declaration on the Rights of Indigenous People.

At the same time, we recognize that (like many parts of the world) Canadian companies still have a lot of room to improve ESG performance. Many companies have work to do to ensure business leadership better reflects the needs of a diverse population and to partner with Indigenous and non-Indigenous communities in ongoing resource development.

Canada is looking to increase its participation in producing and exporting global commodities and we know that the international community will continue to use ESG performance as a key metric in allocating investment dollars. To that end, Canadian companies have been committing substantial human resources and capital investment into improved ESG performance. Environment and sustainability professionals are in high demand in Canada and we expect this trend to continue.

Matrix is an integral part of Canada's ESG Performance improvement. We continue to grow our technical expertise to provide the services needed to help our clients and communities meet their ESG goals. At the same time, we are reviewing our internal policies and developing and implementing plans to improve our own ESG performance. We are confident that this trend will continue and that investment in the environment and our communities will lead to ongoing benefits and a more sustainable future. □

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