Cie Peterson

DRAFT - July 20, 2023
Written on behalf of Ken Jaycox, SVP & Chief Commercial Officer at U. S. Steel

The Green Steel Mile

Today, corporations of every size in every corner of the world are taking action to address what is arguably the most pressing and inexorable "projects" humankind has ever faced: the need to achieve net zero in time to ward off irreversible damage from climate change. The journey is complex, multifaceted, and largely uncharted, and the bullseye we're aiming for is not only encircled by countless other targets, it is also at the nexus of a complex web of supply chain providers, end users, and countless upstream and downstream contributors who all have a hand in producing scope 1, 2, and 3 emissions.

In other words, just as no single company or product caused the current environmental crisis, no single company or product can remediate it. If ever there was a we're-all-in-this-together moment, this is it, which is why we all need to contribute whatever tools we have at our disposal that are best equipped for the job at hand. At U. S. Steel, that tool is steel.

Adaptable, infinitely recyclable, and essential to so many industries and products vital to leading the charge to net zero (think solar panels and electric vehicles, just as a start), we have been reimagining "green steel" for years. We know that it is a transformative improvement that will help others meet their own decarbonization objectives, and that steel, and green steel in particular, has a tremendous role to play in furthering the sustainability goals of companies across the globe.

We also know that strategic, purposeful partnerships are crucial to our collective success. Some are obvious. They develop organically from mutually beneficial relationships already in place, such as the one we have with GM. As a long-time U. S. Steel customer seeking to meet their own ESG goals, when they approached us about green steel, we saw it as a game-changing first step in automotive manufacturing. Now we are providing them with hundreds of thousands of tons of verdeX® green steel, which is produced with far fewer emissions and comprised of almost exclusively recycled content.

There are also the less obvious alliances that yield no-less profitable results, which is why we need to be relentlessly creative in how we perceive and initiate associations that support our overarching common goal, extending them beyond familiar partner companies and organizations in the supply chain. One example of that at U. S. Steel is the impactful collaboration we've established with Purdue University Northwest. Together, we are working on a project that has significant potential to reduce CO2 emissions and has garnered attention and support from the U. S. Department of Energy.

Still, given supply constraints, right now there is only so much green steel that can be produced; that makes it incumbent upon us to plan carefully and forecast wisely because meeting the need for green steel is one of the biggest challenges we face. The limited amount of this product available in the marketplace, particularly as customers from across industries need more of it to meet their own commitments to reduce carbon emissions and achieve net zero: automobile manufacturers, renewable energy suppliers, and other manufacturers who are looking for low-carbon-based products and sustainable solutions and supply chains, requires us to think differently and partner differently.

Steel has been around since the bronze age. It is wholly integral to human society, and it is essential to our future. Naturally, then, as chief commercial officer of a steel manufacturing corporation, I ponder the future state of a steel industry that is carbon neutral. I am certain we must start with judicious planning, long-term conversations, strategic partnerships, and a determined, righteous view of where we want to be in the future. We must make public, bold statements about our intentions and steadfast

commitments to the environment and sustainability. We must set up new supply arrangements, find capabilities that allow us to work together, make changes from what we've known and done to what is new, and adapt emerging technologies that support the journey we must make for the sake of humankind and our shared planet. Our customers and partners expect these kinds of solutions from us, and the world deserves for us to answer that charge.

At U. S. Steel, we vigorously employ what we call our Best for All® strategy. It focuses on delivering profitable steel solutions because we are first and foremost a business, but it derives from a deep understanding that being profitable and doing what is right for people and the planet can – and must! – exist in harmony with each other. We believe the continued health and success of our business depends on it, but we also believe a sustainable, global, Best-for-All future depends on it as well.

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FINAL - June 6, 2022
Written on behalf of the technology vertical at Quest Global

How Technology is Making the World a Cleaner Place

We live in a time filled with paradoxes: Collectively, we know far more than perhaps all the generations that preceded us combined, and yet individually we have far more unanswered questions than ever before. We have more capacity to solve problems than our forebears could have possibly imagined, and yet new challenges arise at such an alarming rate that we barely seem able to address them.

That's why at Quest Global, we apply cool-headed engineering excellence to meet every challenge we face and to continue solving the problems of today that stand in the way of a better tomorrow.

Leveraging next-gen technologies for a cleaner tomorrow

While it doesn't take an engineer to know that contamination of our one Earth is chief among the major concerns currently plaguing humanity, it does take engineering excellence to know how to fix it. That is why in the last several years, technologies like IoT, AI, and big data have emerged as promising change agents and why government agencies and private investors alike are collaborating with technology providers to develop infrastructure and design solutions that will make cities smarter, urban transport systems more sustainable, and public spaces cleaner.

Quest Global: Engineering digital solutions for cleaner and safer cities

With deep domain expertise in mechanical engineering and digital technologies, Quest Global delivers solutions that combine software, hardware, and edge IoT technologies with engineering and security capabilities to make cities and transportation systems cleaner and safer. In addition, we deliver connected intelligence across transport networks and public infrastructure to ensure enhanced user experiences and sustainability.

Problem: Negligence and damage

Machine and camera vision-based systems: Machine learning-based camera systems and sensors can accurately and immediately identify mass transit concerns, such as trash and damage recognition, air filtration system failure, machine operator negligence, lost belongings, vandalism, and passenger vehicle issues.

Problem: Trash accumulation

Mechanical design and development: Material selection and meticulous attention to the design of vehicle interiors and public spaces can severely curtail trash accumulation while ensuring user ergonomics and optimum space usage.

Problem: Poor air quality

Air quality management system: Sensors and actuators capable of detecting critical particles and neutralizing them for improved air quality are vital to creating a healthy environment in shared vehicles, trains, metro stations, convention centers, theaters, and more, thereby improving our collective wellness.

For 25 years, Quest Global has focused on being the most trusted partner for the world's hardest engineering problems. Today, as people increasingly make urban areas their home, Quest Global's smart city solutions will lead the charge for providing the kind of critical remediation government and civic authorities worldwide will need to meet the ever-growing demand for clean and sustainable public infrastructure. Building a brighter future and believing that the best is yet to come... that's Quest Global at work.

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FINAL - June 29, 2023
Written on behalf of Tara Carraro SVP & Chief Communications Officer at U. S. Steel

Culture: It's What's for Breakfast

Influential thinker, author, and educator Peter Drucker famously said, "Culture eats strategy for breakfast." It is a simple expression of a complex idea that is indispensable to the success of not only any corporate strategy, but also of any corporation itself. It is a mandate that springs from the clear understanding that when people are connected, energized, and moving together with purpose, there are no limits to where they can go and what they can achieve.

Yet, too often, culture is not afforded the attention it deserves, not embedded in the systems, processes, and structure that drive success. It is treated as an add-on, rather than the cornerstone of strategy. When that occurs – and particularly when it is coupled with a failure to recognize the vital role communications plays in elevating culture – strategy can't help but be undermined.

On the other hand, businesses that see communications as the gateway to culture and recognize it as the bridge between culture and strategies that lead to desired business outcomes, are well poised to realize their most aspirational aims. They leverage communications to align employees with organizational goals, provide visibility into how each team and each member contributes to the broader vision, and drive results that serve all stakeholders.

So how can a company leverage communications to activate culture and reap those rewards?

There are several ways, but one of the most impactful is through the creation of culture champions, people whose trusted voices within functions, departments, and the company-at-large help amplify the messages you want to impart and model the behaviors you want to see. These employees exist in every organization, and there are partnerships the communications department can forge that will help identify and onboard them, starting with HR, organizational leaders, and employee resource and affinity

groups. Together, they can discover which employees throughout the organization are influencers – the people that other folks go to, to ask, "What do you think about this?"

The network is strengthened with the addition of team and department heads. I have worked at several organizations over the past 30 years and conducted countless employee surveys; inevitably, they confirm that the most credible source of information for employees is their immediate leader, so people leaders are essential to delivering internal messages that will be both heard and believed.

Once a stronghold of reliable, internal influencers is formed, give them the training and tools they need to cascade messages through your organization and enroll employees in the culture you're nurturing. Welcome them to participate in determining and developing what the future state will be, for that ownership will inspire them to articulate to others why those decisions are critical in terms of driving business results.

In addition, be strategic about using your communications platforms to meet employees where they are. For example, find creative ways to reach a non-wired workforce on the factory floor, rather than sending them e-newsletters they won't get to read.

Think about the broader systems and processes that need to change as well. Evaluate performance with consideration for not only what was accomplished but also how it was achieved. Be specific about the behaviors you want to see and that align with the culture you want to create, and publicly reward and recognize people who exemplify those ideals. If culture is owned by every person in your organization, you will be laying out a strategic roadmap for preserving it, while also driving business results and delivering great success not only for the company but for all its stakeholders as well.

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DRAFT - July 06, 2023

Written on behalf of Rich Fruehauf, SVP, Chief Strategy & Sustainability Officer at U. S. Steel

Need for Steel Standards

In the early 20th century, as business and commerce began developing on a large-scale in a segmented world, the need for standards became clear. They set specifications, guidelines, definitions, and parameters. They ensured consistency, codified safety, and facilitated commerce. They managed expectations, promoted cooperation, and safeguarded quality. In fact, our modern global economy exists and thrives in large part because of the painstaking efforts that countless organizations and agencies have assumed over the years for developing and proliferating standards across industries.

And yet, today, as we collectively tackle an environmental crisis that is arguably the greatest challenge humankind has ever faced – one that we know cannot be redressed without the steel products that, while not wholly blameless in getting us here, are wholly essential to changing the course of our future – we cannot align on standards that would create the same kind of unification within our industry as they provided when industrialization was budding and steel fabrication was new.

Obviously, the current climate crisis is much more abstruse in origin and obscure in resolution than was the challenge of standardizing screw threads or high-precision tools, but just as our forebears responded to the need for interchangeable parts by setting known and knowable expectations, we must respond to the need for responsibly sourcing and producing steel by setting known and knowable expectations.

That is why we need standards, and in our case, global ones. After all, we have much higher stakes on the line than our predecessors did. Luckily, we also have far more intellect (both human and artificial), empirical data, and technology at our disposal to make things right, which begins with net zero.

We all understand net zero: the ideal state in which the amount of greenhouse gases (GHGs) being released into the atmosphere is negated by the amount of GHGs being removed. And, in broad strokes, we all agree on the need to achieve that. What we lack, however, is industry-wide consensus on nearly every aspect of how, and even when, to get there, specifically the interim steps we need to take, the critical benchmarks we need to satisfy, and the definitive timeline we need to meet.

Our variances are understandable. The current climate change crisis is unprecedented, and the net-zero goal is a moving target. Even well-orchestrated, multinational efforts to prescribe climate remediation, like the Paris Agreement, struggle to stand pat on aims set forth only several years ago amid ever-changing conditions that impel reassessment and revision.

But understandable and acceptable are not the same, and if we reference the Paris Accord again, we find more evidence in the case for standards in the treaty's need for nationally determined contributions (NDCs), a vital accommodation to ensure developed countries help carry the weight of less endowed, more vulnerable countries. NDCs are a humanistic imperative given the vast disparities in capacity, economics, and resources that exist amid the nearly 200 countries in the pact. But the truth is that the inconsistencies that arise from NDCs impinge on our shared ability to reach a target that scientists and climate experts declare is non-negotiable.

So, what is preventing us in the steel industry, with no such imperative and an abundance of assets and knowledge, from establishing a single set of standards we can all agree on and adhere to? Certainly, it is not for lack of options. One could argue that like cooks in the kitchen, there are actually too many of them, the earnest output of myriad "domestic and international groups [that] are studying and developing calculation approaches to determine GHG emissions from steel production in order to develop standards, policies, procurement frameworks, and decarbonization roadmaps."[1] And yet, those efforts have still yielded no definitive standard because "while there is some collaboration, significant differences remain and continue to evolve in the scope, system boundaries, assessment basis, and other key aspects of the resulting GHG calculation methodologies"[2] they are developing.

All the while the clock is ticking and time is running low.

That is why, at U. S. Steel we did our due diligence and recently adapted the ResponsibleSteel™ standard. We believe it is not only best for our organization, but also best for our industry, which is why we are leading the charge as the first U.S. steelmaker to sign on and the first steel mill in North America to receive their site certification for our Big River Steel (BRS) plant in Osceola, Arkansas. Our affiliation with ResponsibleSteel is based on a common belief in principles (*link?)* that we deem decisive and authoritative when it comes to manufacturing cradle-to-gate steel, principles that challenge us to meet the highest standards of environmental, social, and governance performance across the supply chain not only at BRS, but at every other U. S. Steel mill as well.

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[1] Steel Production Greenhouse Gas Emissions Calculation Methodology Guidelines; American Iron and Steel Institute; Nov. 3, 2022; p. 2.

[2] IBID.

There are many actions whose time has come; as corporate leaders we discuss many of them on a regular basis... in meetings and PowerPoints, on reports and social platforms. We don't need to discuss standards anymore; we need to determine and implement them. It is only by reaching worldwide, industry-wide consistency in what sustainability looks like for steel, and how we calculate, monitor and report it, that we can and will deliver profitable, sustainable steel solutions for our people, communities, and planet for many years to come.

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DRAFT - November 10, 2023
Written on behalf of Ben Caryl, Assoc. General Counsel of International Trade & Public Policy at U. S. Steel

The Case for Steel: From Hamilton to Today

You don't need to be in the steel business to be aware that steel is an essential part of American life. From the cars we drive and bridges we cross, to the buildings we work in and places we return home to at the end of the day, steel is everywhere. It is, and has been, the building block of modern civilization, and, today, as the global demand for steel-dependent, sustainable energy sources like wind turbines, solar panels, and electric vehicles grows, it is even easier to see how essential steel will continue to be in our future.

But beyond the steel we interact with at every turn, our American way of life depends on less-visible steel that accounts for more than half our total demand. It is the steel that keeps our transportation systems running; our energy, waste, and water infrastructures operating; and our defense, communications, and information technology networks functioning. It is the steel that supports the "16 critical infrastructure sectors," identified by President Obama in his Presidential Policy Directive 21, whose systems and assets are "so vital to the United States that the incapacity or destruction of such systems and assets would have a debilitating impact on security, national economic security, national public health or safety, or any combination of those matters." [1]

Every one of those 16 critical infrastructure sectors relies on steel.

That is why protecting our domestic steel industry – especially in a global market that is subject not only to the caprices of economic up and down turns, but also to the self-interest, and even greed, of foreign manufacturers – is as imperative today as it was at our country's founding, when Treasury Secretary Alexander Hamilton spelled out, for the edification of our young country's legislators, how and why domestic manufacturing is essential to national security. He argued that the safety of our land does not depend solely on military readiness and defense, but, rather, that it is achieved only when our domestic industries and national economy are equally well defended, roundly protected, and in a perpetual state of readiness.

His argument is as valid today as it was in 1791. Or perhaps even more so, especially as countries around the world, seeking to strengthen their own domestic steel industries, produce steel (sometimes of questionable quality) in too much quantity, leading to "overcapacity" and an unfair trade practice known as "dumping."

In the most basic terms, dumping refers to the selling of steel products for either less money than they cost to produce or less than they sell for in the manufacturer's own country. Overcapacity, as the name implies, is the act of producing more steel than the market can handle or the world needs, typically as a

measure to keep steel mills running in countries where government subsidies support or encourage production without regard for market demand and in economies where the goal is to keep workers working regardless how superfluous their output may be.

Consider this quantification: The Organisation for Economic Co-operation and Development (OECD), a 38-member, intergovernmental consortium working to stimulate economic progress and world trade, estimates that the world's annual *demand* for steel is roughly 1.9 billion tons, but the world's annual *production* of steel is almost 2.5 billion tons. That is an overcapacity of 600 million tons, or nearly six times the annual production of the entire U.S. steel market, meaning that global overcapacity could inundate the U.S. market multiple times over without diverting even one ton of existing product.[2]

Of course, there are legal means for addressing these types of unfair trade practices, such as subjecting offenders to strict anti-dumping and countervailing duties (AD/CVD), but landing a winning blow is a bit like playing a game of Whac-A-Mole: once hit, the worst offenders concoct workarounds that allow their overcapacity steel to show up in a new place or form. They might ship hot rolled coil to a less restricted country that will cold roll process the steel into a more legitimate import product, or their steel might find its way into our country as a component of a steel-intensive good not subject to AD/CVD.

Still, decades of government actions by multiple administrations, supported by bipartisan consensus that domestic steel production is vital to national security, continues to ensure the viability of the American steel industry. In recent years, that has been evidenced by the enacting of strong legal measures to address the unique threats posed by steel imports, such as the Trump Administration's 2018 implementation of section 232 of the Trade Expansion Act of 1962 – a law empowering the president to impose restrictions for imports that threaten national security – to levy a 25% tariff on all steel imports. Since then, negotiations with certain countries have resulted in modifications to this practice, like substituting volume limits for tariffs, but under President Biden the overall program has remained intact and continues to provide a much-needed remedy against global steel overcapacity. In addition, we continue to seek international solutions with our allies, and while an Oct. 20 summit between negotiators from the U.S. and EU failed to produce an agreement for addressing overcapacity in non-market economies such as China, both parties are determined to reach a deal by year's end.[3]

When Alexander Hamilton delivered his seminal report on the subject of manufacturers to the first Congress, he beautifully articulated why domestic manufacturing, which is built on steel, is essential for national security. In the centuries since, through World Wars, recessions, technological advancements, and even pandemics, steel has proven itself to be a strategic industry as essential to national safety and security as it has ever been. That is true, however, not only for the U.S., but for countries everywhere, which is why ensuring a sustainable, resilient, domestic steel industry is as necessary as it is complex.

Today we rely on unilateral measures, like rigorous trade enforcement, constant vigilance, Section 232, and government action to keep the U.S. steel industry in a strong, steady place. But we must also do everything we can in partnership with our allies to get to a global, enforceable solution that significantly reduces the 600 million tons of excess capacity currently in circulation. There is much work to be done, but for the sake of our security and American way of life, we must continue to support the fight against unfair trade at every turn.

1. https://obamawhitehouse.archives.gov/the-press-office/2013/02/12/presidential-policy-directive-critical-infrastructure-security-and-resil
2. IBID
3. https://www.reuters.com/world/eu-aims-resolve-us-steel-dispute-by-year-end-2023-11-09/#:~:text=BRUSSELS%2C%20Nov%209%20(Reuters),Vera%20Jourova%20said%20on%20Thursday