RUBICON

2023

Corporate Citizenship Report

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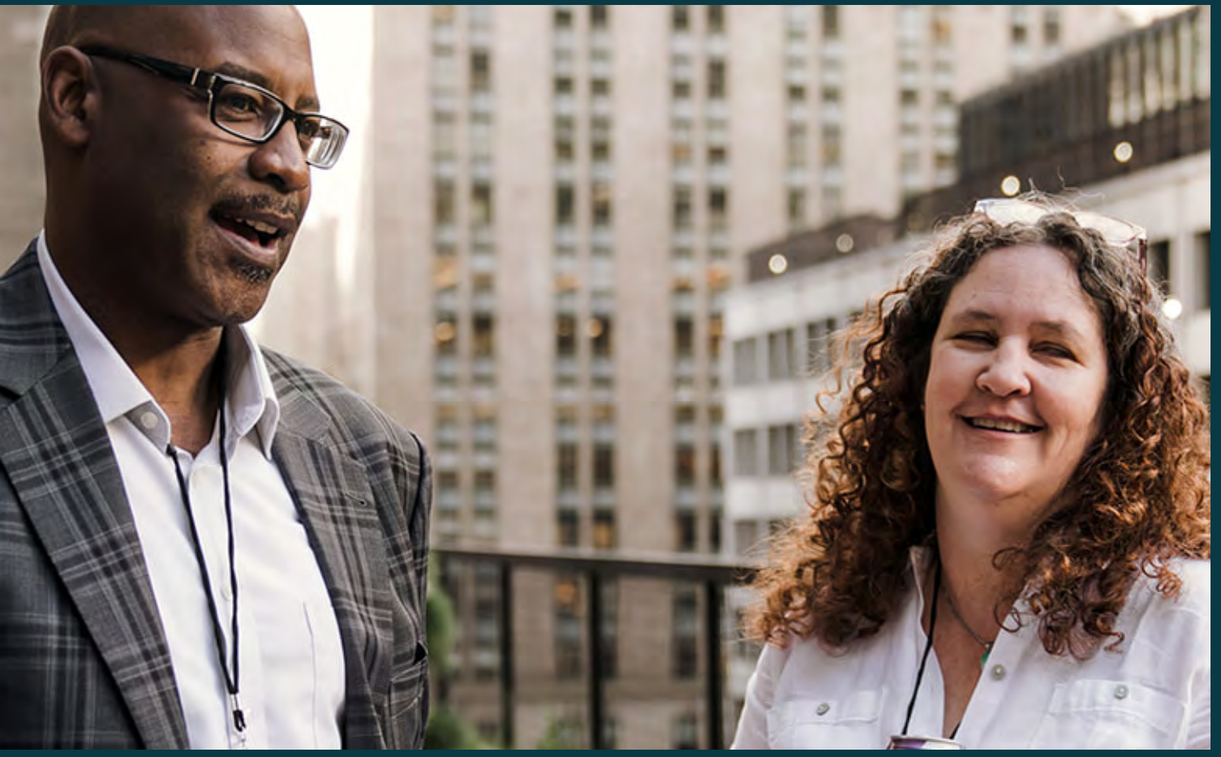

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Letter from the CEO

It gives me great pleasure to share Rubicon's 2023 Corporate Citizenship Report.

I joined Rubicon in 2015, spending my first seven years with the company leading our technology team and developing the cutting edge digital platform for which our company is now known. From our founding, Rubicon set out to transform waste and recycling through technology, driving change in a complex industry largely untouched by innovation. However, we saw the opportunity for transformation early on and set about building the tools that both our waste generator customers and our valued hauler partners needed to optimize their operations, save money, meet the evolving needs and buying preferences of their customers, and deliver better environmental outcomes.

As Chief Technology Officer, and now as Chief Executive Officer, the release of this report each year presents an opportunity to reflect on how far we have come.

This year's report looks back on 2021 and 2022 and provides details on our performance against key environmental targets, internal governance and policy developments, updates on our technology offerings, and key success stories with our commercial and government customers.

While markets, customer needs, and technology continually change, some things remain the same. First and foremost is our company mission and the imperatives that drive our work every day. The protection and preservation of our environment continues to be one of the most pressing issues of our time, and it is one that has driven so much of Rubicon's work since our founding more than a dozen years ago. From our products and services to our operations and culture, our commitment to our planet is woven into the fabric of our business. Our suite of products helps our customers in the public and private sectors manage and mitigate their environmental impact by reducing waste, conserving resources, and ultimately improving their operational performance.

However, our dedication to our world extends beyond environmental initiatives. We also believe that it is important to invest in programs that benefit our employees and the communities in which we operate.

Our employees are the foundation of our organization, and we are committed to creating a positive and inclusive work environment that fosters their growth, development, and well-being. This includes the continued investment of both time and resources into internal initiatives such as our Affinity Groups and other employee engagement programs. We also create opportunities for our employees to participate in external programs that improve their home communities and those across the country. We support a range of social projects that are aligned with our company's values and have established partnerships with organizations dedicated to environmental conservation and protection. We believe that by contributing to these initiatives, we can help build stronger, healthier, and more resilient communities that can thrive over the long term.

As a public company, we understand the importance of sound governance practices and the need to maintain high levels of accountability and transparency. We have implemented best-in-class processes and internal controls to ensure that we operate ethically and responsibly and that we comply with all regulations that apply to our business. Our Board of Directors is actively involved in overseeing the company's environmental, social, and governance (ESG) efforts with an established committee providing formal oversight and guidance on our sustainability initiatives and partnerships.

All of the above represents a significant investment of time and resources which we believe will enable us to achieve our ultimate goal of delivering the definitive platform for ending waste. As CEO, I am proud to say that we are committed to being a responsible and sustainable business that actively contributes to the well-being of our customers, employees, communities, and the planet as a whole.

We are steadfast in our belief in the positive impact of business in society, and in the constructive role companies like ours can and should have on the world. While significant challenges remain, I believe that through our suite of technology products, the hard work and dedication of our team, and the productive partnerships with have with our customers and partners, we can create a cleaner, safer, and more sustainable future for generations to come.

Sincerely,
PHIL RODONI
Chief Executive Officer
Rubicon Technologies, Inc.

Key takeaways

01

Rubicon conducted a refreshed materiality assessment in 2022 to guide its corporate citizenship agenda as a newly public company.

- The high impact materiality topics are:
- Sustainable technology and innovation
- Circular economy
- Waste management
- Greenhouse gas (GHG) emissions
- Climate change resilience, strategy
- Transparent reporting
- Leadership accountability
- Diversity, equity, and inclusion (DEI)
- Talent attraction, retention, development

02

Rubicon created a Corporate Citizenship Committee of its Board dedicated to ensuring topics of environmental, social, and governance (ESG), corporate citizenship, and impact remain at the forefront of the company.

03

Management developed a Corporate Citizenship Policy that defines core principles and mechanisms of oversight and implementation of ESG priorities.

04

Rubicon's policies and activities are informed by the guidelines of standards and frameworks such as the Sustainability Accounting Standards Board (SASB), the Global Reporting Initiative (GRI), CDP (formerly known as the Carbon Disclosure Project), and the Taskforce on Climate-Related Financial Disclosures (TCFD), reflecting our commitment to incorporating leading ESG practices into our business.

05

In 2022, Rubicon received an A-score on our CDP Climate Change submission, placing Rubicon in CDP's "Leadership band" and reflecting our leadership in implementing current best practices in climate governance.

06

We established the InfoSec Leadership and Continuity Committee (ILC2), comprised of the CEO, President/Chief Information Security Officer (CISO), Vice President of Cybersecurity, and the Vice President of SaaS/Enterprise Technology. The ILC2 focuses on organizational risks including security, privacy, business continuity and resiliency, and fraud and insider threats.

07

Rubicon receives independent validation of our security, privacy, and business continuity processes and protocols through SOC Type 2 audits, GPDR and CCPA privacy assessments, and ISO 22301:2019 certification.

08

Rubicon achieved our SBTi emissions reduction goal for Scopes 1 and 2 GHG emissions in 2020, 10 years ahead of our target year for such reductions, and have continued to reduce these emissions, with a decrease in overall Scope 1 and 2 emissions by 82% from 2019 to 2022.

09

In 2022, we completed a robust climate-related scenario analysis as part of our efforts to increase awareness of our potential climate-related impacts and align our disclosures to TCFD.

10

Established partnerships with organizations dedicated to environmental conservation and protection such as National Wildlife Federation and the Arbor Day Foundation.

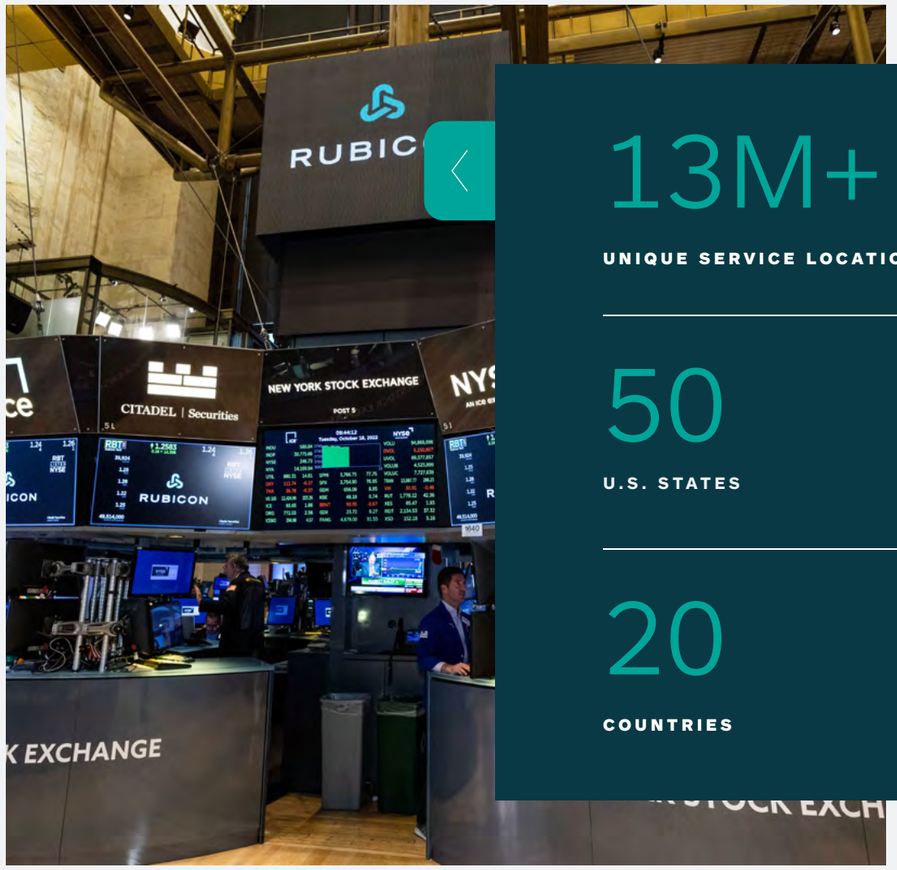
RUBICON

About Rubicon

Rubicon Technologies, Inc. (NYSE: RBT) is a digital marketplace for waste and recycling, and provider of innovative software-based products for businesses and governments worldwide. Striving to create a new industry standard by using technology to drive environmental innovation, the company helps turn businesses into more sustainable enterprises, and neighborhoods into greener and smarter places to live and work. Rubicon's mission is to end waste. It helps its partners find economic value in their waste streams and confidently execute on their sustainability goals.

Rubicon is the key platform for eliminating waste, with our reach extending across the waste and recycling ecosystems to encompass waste generators, haulers, processors, and local governments. Our products unlock value by processing valuable commodities, diverting materials, and generating profitable revenue streams. We enable our customers to optimize their waste and recycling services, reducing wasted trips and the associated CO2 emissions.

Our market-leading software products combine proprietary technology and extensive waste and recycling industry expertise to help our partners find economic value in their waste streams and confidently execute on their sustainability goals. We continue to enhance our products, taking advantage of breakthroughs in machine learning and artificial intelligence (AI).



13M+

UNIQUE SERVICE LOCATIONS

50

U.S. STATES

20

COUNTRIES

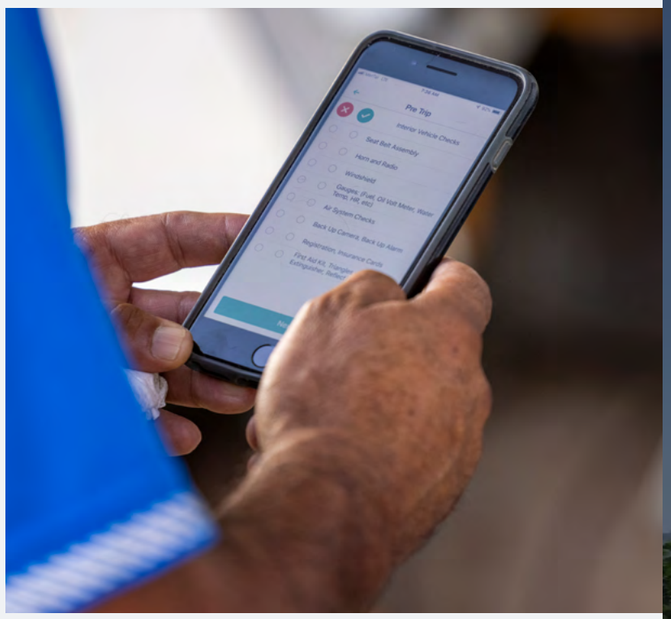
OUR SOLUTIONS

RUBICONConnect™

RUBICONPremiere™

RUBICONPro™

RUBICONSmartCity™



RUBICONConnect™

A portal for multi-location commercial businesses providing a one-stop-shop for waste collection transparency, diversion reporting, and service optimization through data and analytics designed to help businesses achieve their waste, recycling, and sustainability goals

RUBICONPro™

An all-in-one fleet management platform that enables independent haulers to manage and optimize their operations by continuously and accurately monitoring a multitude of performance and safety metrics, saving time, money, and labor hours.

RUBICONSmartCity™

A proprietary, cloud-based technology suite that helps local governments run faster, smarter, and more effective waste, recycling, and heavy-duty municipal fleet operations. RUBICONSmartCity helps existing government-owned fleets improve neighborhood streetscapes by monitoring vehicle health, improving driver behavior, and ensuring that materials are collected efficiently. The results: fewer vehicle accidents, less road wear, and safer communities.

RUBICONPremier™

A third-party logistics solution for companies outside of North America that integrates vehicle tracking and confirmations directly into back-office operations, offering a single application with different views for customers, service providers, and back-office staff.

Rubicon provides digital waste, recycling, and sustainability solutions to customers in all fifty U.S. states and in twenty countries around the world. With more than eight million service locations and a network of over 8,000 partners, our solutions bring a greater level of transparency to the waste and recycling category—encouraging customers to make data-driven decisions that lead to more efficient and effective operations and more sustainable outcomes.

Materiality

In 2022, Rubicon conducted its second sustainability materiality assessment, a process of identifying material ESG topics that have—or can potentially have—a direct impact on us or our stakeholders. The work resulted in a map, known as a materiality matrix, with a prioritization of material topics. The matrix plays an important role in informing how we integrate ESG into our business strategy, risk mitigation and associated disclosures, including this Corporate Citizenship Report.

Informed by GRI guidance on stakeholder selection, a set of nine stakeholder categories were identified: customers, suppliers/partners, investors, industry associations, raters and rankers, regulators, employees, our executive leadership team, and the Board of Directors. More than 240 stakeholders across the nine stakeholder groups took part in the assessment, providing feedback via interviews, surveys, and desktop research.

Stakeholder and business engagement resulted in a recommended prioritized map of Rubicon's material ESG topics. Topics were classified as having high, medium, and low impact—defined as both impact to Rubicon, and where we can have the most impact on the economy, environment, and people.

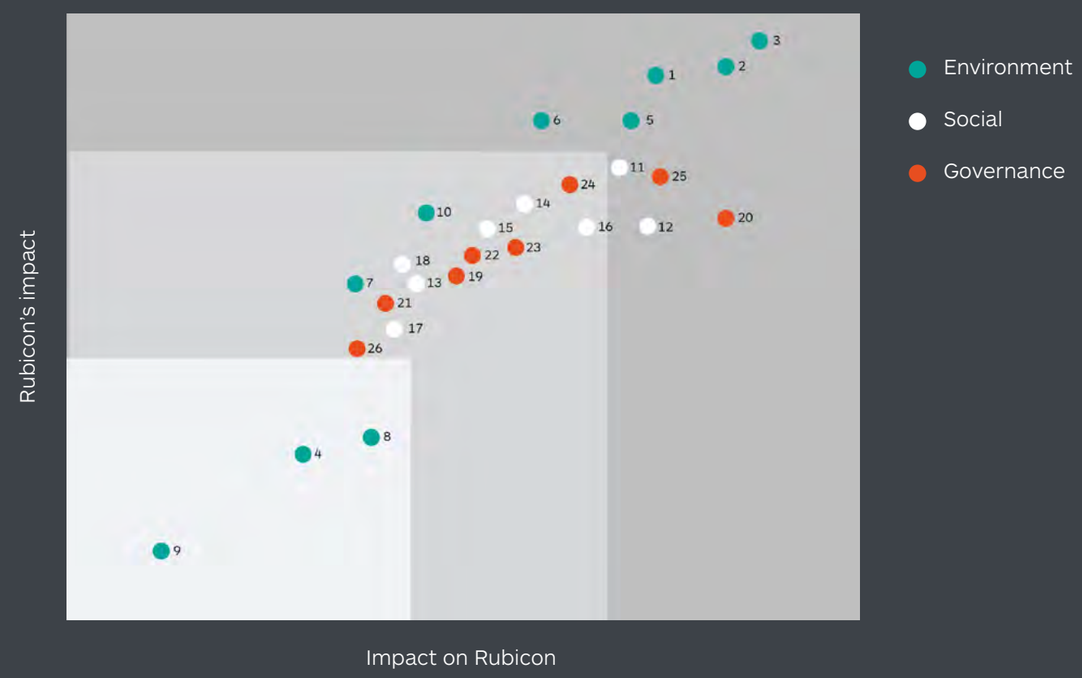
Our high-impact topics include:

- Sustainable technology and innovation
- Circular economy
- Waste management
- Greenhouse gas (GHG) emissions
- Climate change resilience and strategy
- Transparent reporting
- Leadership accountability
- Diversity, equity, and inclusion
- Talent attraction, retention, and development

Compared to Rubicon's 2020 assessment, the 2022 study revealed three new high impact topics: Sustainable technology and innovation and climate change resilience and strategy, as well as the circular economy, which is already an area of focus for our company. The remaining high impact topics identified in the 2022 assessment were also included in the high impact topics in our 2020 materiality results.

While the matrix is the primary output of the assessment, the process also yielded extensive insights through interviews, surveys, and desktop research. These insights will guide Rubicon as it addresses the material topics identified across all three impact areas. The results of this assessment have directly shaped the topics we address in the report sections that follow[2].

MATERIALITY MATRIX



ENVIRONMENT

1. Climate change resilience and strategy
Commitment to combat climate change, promote responsible environmental services, such as reducing landfill dependency, while protecting the planet and communities, and efforts to use alternative fuel vehicles in hauler network and employee business travel (considering mode of transport, frequency, and distance). Further includes financial implications and other risks and opportunities due to climate change and direct economic value generated and distributed.

2. Sustainble technology and innovation
Developing and investing in technology solutions to help build more sustainable, resilient and efficient operations and enterprises. Further includes partnerships with organizations which work to support and advance ethical technology and innovation.

3. Waste management
Waste mitigation through proper transportation, handling, and recovery of waste and recycling streams, waste processed as waste-to-energy, food waste processed as waste-to-energy and food waste processed as compost.

4. Water management
Commitment to reduce water use and use water responsibly, including considerations for water use at data centers.

5. Circular economy
Considerations made to recover, recycle and remove materials from the waste stream through the use of technology. Further includes the addition of emerging closed-loop solutions such as reuse, inventory management and material marketplaces.

6. GHG emissions
Commitment to measure and reduce greenhouse gas (GHG) emissions in the short-term, meet reduction targets and assist customers to reduce their GHG emissions footprints.

7. Energy and energy efficiency
The use of energy and energy efficiency measures in own operations and outside operations. Further includes implementing structured energy reduction practices, including efforts to increase renewable energy usage.

8. Biodiversity
Identifying and reducing significant impacts of operations, solutions, and the value chain on biodiversity (the variety and abundance of life).

9. Air quality
Activities made to help protect human health and the environment from the harmful effects of air pollution.

10. Sustainable procurement
The use of responsible procurement and sourcing practices. Further includes maintaining procurement policies that considers environmental impact, safety, quality, and risks.

SOCIAL

11. Diversity, equity, and Inclusion
Efforts to create and maintain a workforce that is diverse, inclusive, engaged and value-driven. Includes crafting hiring systems which prioritize diversity and equity and partnering with organizations that drive change for communities of color. This also includes well-defined internal initiatives and programs to help show measurable actions to sustain a diverse, equitable and inclusive environment.

12. Talent attraction, retention and development
Efforts to enhance workforce by attracting and retaining talent through learning and development programs, recognition and competitive compensation and benefits.

13. Employee health, safety and well-being
Promoting a safe and engaged workforce by providing benefits to employees and their families and engaging employees in safety practices such as trainings, policy compliance and technology change to prevent hazards and unsafe conditions.

14. Community engagement
Commitment to having a positive impact on the people within the communities of operation and work through environmental stewardship, direct charitable donations, volunteer work, and other means of contribution.

15. Customer relationships
Addressing customer concerns and creating a culture of care by meeting customer expectations over sustainable practices through technology and engagement.

16. Supply chain management
Continuous engagement with the Company's supply chain for ethical alignment of vendor behavior with Rubicon's ESG

goals, as well as creating an equitable and sustainable supply chain through supplier diversity. Includes routine reviews for supplier compliance with code of conduct and reevaluation of relationships with vendors not in compliance. This also includes culture of continuous improvement in supply chain through enhanced emissions management and reporting.

17. Employee engagement

Establishment of a strong and cohesive work culture, workforce management, and tools to support efforts that affect employee satisfaction. Maintaining mechanism for employee feedback so that employee voices are heard and thoughtfully considered.

18. Human rights and labor

Practices Establishing principles related to human rights and fair labor practices within the Company and its supply chain.

GOVERNANCE

19. Ethics and Integrity

A commitment to conducting business honestly and ethically. Seeking out opportunities to improve the quality of services, products and operations while maintaining a reputation for honesty, fairness, respect, responsibility, integrity, trust and sound business judgement. Includes compliance with external laws and regulations, while maintaining a culture of integrity within the organization.

20. Leadership accountability

Emphasis on leadership development so that employees can be better equipped in current and future roles within the organization. Includes equipping leaders with tools for effective management and tone at the top.

21. Public policy and advocacy

Participate in advocating for a strong and coordinated response to social and political issues including equity and sustainability. Includes transparency around political contribution and advocacy efforts.

22. Risk oversight and management

Process for actively identifying emerging and enterprise risks and opportunities; oversight of process by Company management and the board. Includes analyzing trends, studying key performance metrics, and measuring the capabilities of peers to unlock innovation and drive long-term value creation.

23. Corporate governance

Ensure corporate governance, control, and risk management responsibilities including ESG risks. Further includes commitment to having diverse governance bodies and efforts to make the world a better place for stakeholders through ESG business practices.

24. Data privacy and security

Commitment to transparent descriptions of policies and practices relating to behavioral advertising and user privacy and a transparent approach to identifying and addressing data security risks, including use of third-party cybersecurity standards. Further includes management of intellectual property protection and anti-competitive business practices.

25. Transparent reporting

Includes transparent performance reporting related to financial and ESG metrics and communication to internal and external stakeholders.

26. Stakeholder engagement

Formal processes and structures for engaging with, and taking feedback from a 360-degree list of stakeholders, such as customers, suppliers, investors, employees, etc. Includes participation in discussion of topics that impact operations and society.

This Materiality Assessment is intended solely for the information and internal use of Rubicon Technologies, Inc. (Rubicon) and should not be used or relied upon by any other person or entity. No other person or entity is entitled to rely, in any manner, or for any purpose, on this deliverable.

Transparent management & governance

Rubicon's Board of Directors (the "Board") selects the Chief Executive Officer (CEO) and senior management team, who are responsible for operating the Company's business, and assesses their performance on a regular basis.

CORPORATE GOVERNANCE

As set out in our Principles of Corporate Governance, its responsibilities include oversight of company strategies, the integrity of financial statements and reporting, risk management, and regulatory and legal compliance. The Board also engages in succession planning for the Board and senior management, shapes effective corporate governance, and provides advice and counsel to management on significant business issues and corporate actions.

The standing Board committees include:

- Audit Committee
- Compensation Committee
- Nominating and Corporate Governance Committee
- Corporate Citizenship Committee (described in more detail under "ESG Governance," below)

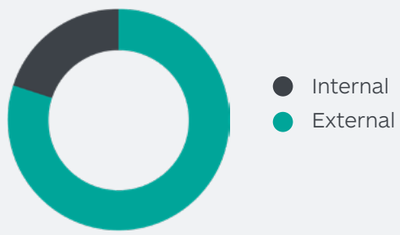
The Board's work is guided by Rubicon's Code of Business Conduct and Ethics, which applies to all of our board members, officers, and employees. The Code addresses key issues such as ethical conduct, conflicts of interest, confidentiality, legal compliance, prevention of insider training, anti-corruption measures, record-keeping, political contributions, and protection of company assets. It also outlines procedures for reporting potential violations.

The majority of the Board consists of independent directors, as defined by New York Stock Exchange (NYSE) standards of independence. The Board's Nominating and Corporate Governance Committee assesses the composition of the board annually, evaluating the skills, experience, and characteristics represented. In considering board composition, the Nominating and Corporate Governance Committee actively seeks to achieve a diversity of occupational and personal backgrounds and viewpoints, including diversity with respect to demographics such as gender, race, ethnicity, geography, age, and sexual orientation.

Our current Board consists of ten total members and the following board member attributes:

GENDER REPRESENTATION

BOARD INDEPENDENCE



UNDER-REPRESENTED GROUPS

50%

of board members

ESG GOVERNANCE

Rubicon is distinctive among public companies in having a standing Corporate Citizenship Committee—a committee of the Board comprised of Directors with professional experience in sustainability and climate-related issues, and dedicated to ensuring topics of ESG, corporate citizenship, and impact remain at the forefront of the company. The Committee assists our Board in its oversight of our policies, programs, and related risks that concern key sustainability initiatives, engagement, and issues, including climate-related issues. The Committee also advises on public policy matters, including public issues of significance to Rubicon and our stakeholders that may affect our business, strategy, operations, performance, or reputation, including charitable contributions, maintaining safe and secure communities, and corporate social responsibility.

When it comes to assessing and managing climate-related impacts, ownership of the process is shared across our company. Rubicon's Chief Sustainability Officer (CSO) advises our CEO on ESG and sustainability issues, including climate-related initiatives. The CSO meets quarterly with leaders from all departments, including Finance, Legal, Human Resources, and Smart Cities, to identify, assess, and manage climate-related risks and other ESG topics and integrate them into our overall company risk management approach. Our CSO also meets at least quarterly with the Corporate Citizenship Committee to provide updates on our climate-related initiatives and environmental metrics, such as customer waste generation/diversion and carbon emissions. The Committee is responsible for providing guidance on climate-related risks and opportunities to the wider Board, which in turn is responsible for incorporating this guidance into its oversight of risk management for the company. At Rubicon, we believe that cross-functional ownership results in better management of critical risks and opportunities.

To articulate our company mission and core values as they relate to ESG, we recently formalized a companywide corporate citizenship policy. The policy

describes the core principles that underpin our ESG and corporate citizenship activities, outlines the mechanisms for its oversight and implementation,

and explicitly defines the stakeholders responsible for those oversight and implementation activities.

ALIGNING INCENTIVES

Rubicon is a leading example of how a market-based business can drive positive environmental and social outcomes by properly realigning incentives in the marketplace. We monetize recyclable commodities diverted from landfills, incentivizing recycling efforts and reducing total net customer waste spend. In 2021 and 2022, we implemented net revenue-generating waste and recycling programs for over seventy of our enterprise-level customers, including large-scale operations like Dollar General and Wegmans.

In most cases, we believe we achieve improvements in our own financial performance when we divert materials from landfills. While landfilled materials usually represent a cost to us with limited financial upside, recycled materials—particularly high-value commodities like OCC (old corrugated cardboard) and wood pallets—drive considerable incremental profitability. Our adjusted gross profit margins on recyclable commodities were double those for landfilled waste through the end of 2022, presenting a clear financial incentive for continuous improvement in our customer diversion rates.

Another market-based approach to driving positive environmental outcomes is through our compensation practices. We tie executive and employee bonuses to our annual goal for the total share of customer waste diverted from landfill.

In 2022, we received an A- score on our CDP Climate Change submission

BENCHMARKING AGAINST LEADING FRAMEWORKS

Rubicon's policies and activities are informed by the guidelines of standards and frameworks like the Sustainability Accounting Standards Board (SASB), the Global Reporting Initiative (GRI), CDP (formerly known as the Carbon Disclosure Project), and the Taskforce on Climate-Related Financial Disclosures (TCFD), reflecting our commitment to incorporating leading ESG practices into our business.

These frameworks and guidelines serve as roadmaps as we strive to be exemplary corporate citizens and advance transformational ideas that drive positive change—both within our organization and in the world. They also provide a vital role in assessing our performance and benchmarking against peer companies.

In 2022, we received an A- score on our CDP Climate Change submission, a rigorous, environmental data-driven assessment. This score places Rubicon in CDP's "Leadership band" and reflects our leadership in implementing current best practices in climate governance, placing us well above the average scores for our industry and region. In particular, CDP recognized our work in emissions reductions, governance, risk management and disclosure, and scenario planning.

DATA SERVICES & SECURITY

Rubicon recognizes the importance of maintaining leading data management and cybersecurity practices. To this end, we have established the InfoSec Leadership and Continuity Committee (ILC2), which is comprised of the CEO, President/Chief Information Security Officer (CISO), Vice President of Cybersecurity, and the Vice President of SaaS/Enterprise Technology.

The ILC2 focuses on organizational risks including security, privacy, business continuity and resiliency, and fraud and insider threats. In addition, the ILC2 reports on data management and cybersecurity matters to the Audit Committee of the Board while updates on these issues are provided to the broader Board of Directors on a biannual basis.

DATA RISK MANAGEMENT

Rubicon manages a Risk Register that focuses on the categories mentioned above. We evaluate the categories against a series of objectives outlined in the Register, considering the likelihood and impact of an identified risk to assess a risk rating. Next, we evaluate our risk handling strategy—we elect to mitigate, avoid, accept, or transfer the risk. For each objective, we review the safeguards, controls, and monitoring activities associated; identify action items and continuous improvement efforts; and evaluate the residual risk.

SECURITY

Rubicon's security program is supported by 42 policies and 130 controls. The overall framework encompasses themes including access control, server and serverless security, encryption, asset management, internal audit, privacy and data protection, mobile device management (MDM), data and information handling, acceptable use, data classification, retention, and disposal, change management and software development lifecycle (SDLC), personnel security, corporate ethics, incident response, vulnerability management, and more.

Our activities to support overall security include:

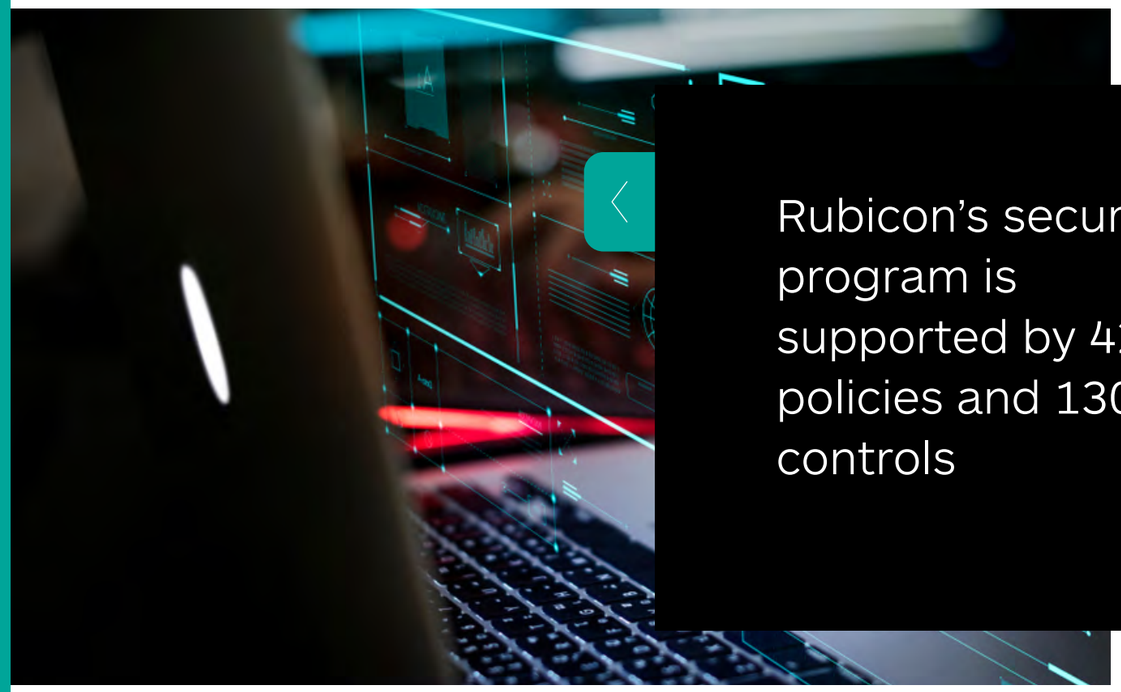
- Annual assessments of policies and controls to verify their accuracy and operational effectiveness
- Annual internal audits conducted to ensure such controls are operating as outlined
- Routine evaluation of both general user access and privileged and administrative access to core systems, networks, and applications
- Password complexity deployed to applications and computing hardware
- Defined processes and procedures for planned and emergency changes to production environments, including segregation of duties
- Mandatory security awareness training when employees are onboarded and on an annual basis
- Documented and tested incident response procedures
- Deployment of single sign-on (SSO) and multi-factor authentication (MFA), where feasible
- Continuous vulnerability scanning on workstations and cloud infrastructure through deployed vulnerability agents
- Quarterly penetration testing conducted by an independent third party
- Encryption of data at rest and in transit using 256-bit encryption and a key management system (KMS)
- Mobile device management (MDM) program for all company workstations to support policies including password complexity, routine security updates to operating systems, restriction of removable media ports, application download restrictions, and more
- Endpoint security deployed to all workstations and cloud endpoints, in addition to a zero-trust agent deployment to all workstations
- Documented role-based access control (RBAC) matrix for all users of Rubicon's information assets
- Security information and event management (SIEM) tool for near-real-time analysis of events and alerts for core services

PRIVACY

Rubicon is committed to protecting customer and company data to the best of our abilities. Our privacy program focuses on the guidelines and regulations outlined as part of the General Data Protection Regulation (GDPR) and the California Consumer Privacy Act (CCPA). We continue to monitor privacy regulations both domestically and globally for changes to customer and consumer data protection.

Our privacy program encompasses the following controls:

- Annual review of our published privacy policy, in addition to reviews of all other privacy-related polices including data protection; internal privacy; data classification, retention, and disposal; data and information handling; and access control
- Obtained data collection consent from customers and consumers
- Defined procedures for data requests and response to inquiries, including the rejection of non-legally binding privacy requests
- Ensuring customer and consumer data is not used in non-production environments, retained in the applicable jurisdiction where the customer or consumer resides, and processed and handled according to customer requirements and/or applicable law
- Standard 256-bit encryption of data in transit and at rest and the use of a key management system (KMS)
- Internal audit focusing on the effectiveness of privacy policies and controls completed annually, or as needed



Rubicon's security program is supported by 42 policies and 130 controls

BUSINESS CONTINUITY AND RESILIENCY

Rubicon has implemented a business continuity management system (BCMS) which focuses on the delivery and maintenance of its SaaS products and services. The BCMS employs key pillars for continuity and resiliency that include business impact analyses (BIA), business continuity plans (BCP), our business continuity policy, program governance, crisis management, internal audit, and our statement of applicability. The BCMS spotlights the impact of processes, procedures, and activities to SaaS products and services in the event of an incident or disruption considering financial, operational, reputational, and legal and regulatory outcomes.

FRAUD AND INSIDER THREATS

Rubicon understands the critical nature of financial compliance and the importance of financial security. We continue to drive improvements in fundamental controls supporting logical security, physical security, change management, technology operations, access management, and data protection. Our activities to support fraud prevention and insider threats include:

- Initial creation of Rubicon's Insider Threat Program
- Table-top exercises for fraud detection and activation of insider threat activities
- Standard operating procedures (SOPs), workflows, and functional knowledge of managing litigation holds and e-discovery campaigns
- Policies to address areas such as insider threats, access control, incident response, change management, third-party management, backup and restoration, and processing integrity
- Controls for supporting access authorization, review, and revocation; change authorization and management; data migration; emergency changes; segregation of duties; segregation of environments; password complexity; vendor management; reporting; interfaces and protocols; code of conduct; and more
- Environmental restrictions for data sharing through removable media, zero-trust agent deployment to all workstations, and restrictions on data collaboration through the Microsoft product suite to mitigate against data loss
- Background and reference checks on all full-time employees (FTEs)

INDEPENDENT ATTESTATION AND CERTIFICATION

By participating in audits and obtaining certifications, Rubicon receives independent validation of our security, privacy, and business continuity processes and protocols. Those include SOC Type 2 audits, GPDR and CCPA privacy assessments, and ISO 22301:2019 certification.

Reimagining & delivering solutions

Rubicon's products and solutions serve a wide range of customers including haulers, recyclers, and entities that generate waste—such as cities and businesses. We work with organizations ranging from small businesses to Fortune 500 companies, small municipalities to large city agencies, all seeking to optimize their waste and recycling programs. Through implementing our technology products, customers find economic value in their physical waste streams, minimizing wasted time, money, and energy while successfully executing their sustainability goals.

By combining proprietary technology with deep knowledge of the waste and recycling industry, we are reimagining the customer experience. The RUBICONConnect™ platform enables our commercial customers to make data-driven decisions, leading to more efficient and effective operations, improved economic results, and better environmental outcomes. The platform is the epicenter of their interactions with us, allowing for optimized logistics and maximized route density, cost minimization, centralized bill auditing and payments, sustainability reporting, service-level agreement monitoring, and increased diversion—all within a digital turnkey solution. This digital, transparent customer experience enables improved environmental performance and efficiencies that create significant economic upside.

RUBICONPREMIER: WASTE SOLUTIONS IN INTERNATIONAL MARKETS

Waste issues are global, requiring cooperation and collaboration between innovative thinkers around the world. RUBICONPremier™ allows us to bring Rubicon's solutions to international markets by licensing our customer-facing, back-office, and integrated fleet technology to leading providers in their respective territories.

Our partners include Odakyu Electric Railway Co., Ltd. ("Odakyu"), a leading transportation, retail, and real estate company operating in Japan since 1948. Odakyu works collaboratively with Japanese municipalities and industry leaders to identify and solve local and national waste challenges. When Odakyu wished to begin offering waste and recycling services, they partnered with us on a pilot program. Odakyu leveraged RUBICONPremier to support the Japanese waste and recycling industry in moving toward a more integrated circular economy. The pilot was successful, leading to a long-term, nationwide technology licensing agreement in Japan.[3] Through our partnerships, Odakyu was able to launch its offering in less than six months under the Wooms brand.

Through our suite of technology solutions, we have helped Japanese communities such as Zama City improve operational efficiency and reduce waste incineration while creating shared value. Together, our goal is to promote sustainable waste solutions across Japan.

We also serve many international customers through FleetRoute™, a software solution we added through our acquisition of CIVIX in countries including Germany, France and the United Kingdom.

EXPANDING CAPABILITIES THROUGH ACQUISITION

In 2021, Rubicon acquired CIVIX, a routing software and solutions company based out of Germany, that helps our partner haulers eliminate waste and inefficiencies. CIVIX's FleetRoute product provides route optimization and strategic planning software and associated technologies for data collection, in-cab navigation, dispatching, tracking, performance monitoring, and messaging. The acquisition expands and enhances the routing capabilities of Rubicon's products for municipal and private fleets while also helping drive our growth and expansion outside the United States.[4]

FleetRoute's geographic information system (GIS) and cloud-based route optimization software solves complex high-density routing problems through advanced network algorithms developed specifically for the municipal services, utility, and street surveying industries. With customers in North America, Europe, and the Middle East, FleetRoute's book of business includes local governments and municipalities, private companies, public utilities, and federal and regional government agencies.

Through route optimization, FleetRoute provides many environmental benefits, including reduced fuel use and vehicle-related CO2 emissions. While FleetRoute optimizes for time, many customers see a reduction in distance traveled as well, as these are often highly correlated. It also reduces the number of vehicles needed for customer fleets.

Similarly, FleetRoute's strategic options analysis leads to notable environmental savings. The product provides decisionmakers with the estimated resources and consequent costs required for a multitude of operating scenarios, which vary with each other, on factors such as type of waste streams collected, container and vehicle types, facilities used, service frequency, and employee schedules. This allows them to evaluate options based on not only cost and human resources required but also total distance traveled, the number and types of vehicles needed, the amount of fuel consumed, and total CO2 emissions produced. When services are optimized, resources previously dedicated to waste collection—both financial and human—can be redeployed to expand recycling services.

OUR HAULER NETWORK

Rubicon's platform brings together thousands of businesses and independent haulers that effectively function as our fleet throughout the United States and around the world.

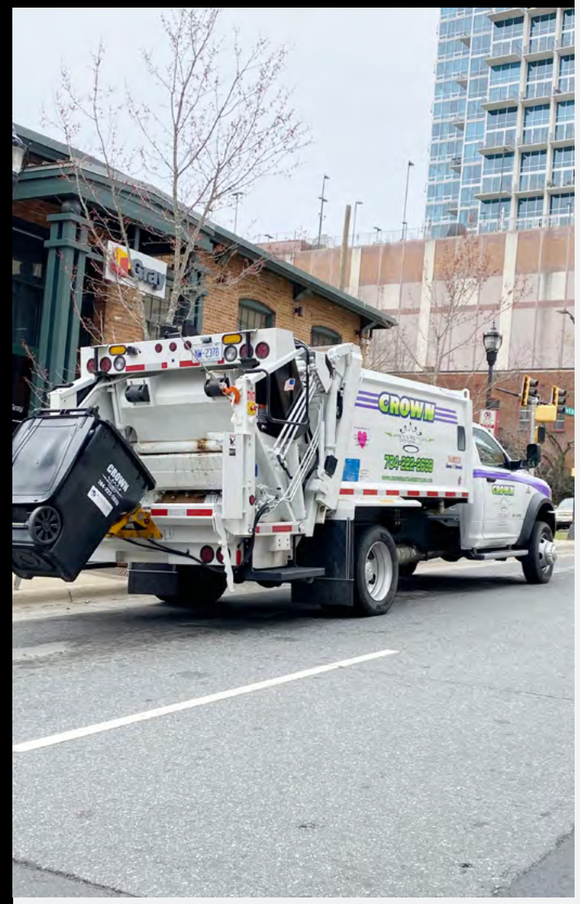
More than 8,000 partners provide services such as recycling, upcycling, and reuse services to Rubicon. These haulers are at the heart of our efforts, and we are proud to be their champion.

Our platform streamlines operations for smaller, independent waste haulers by digitizing their infrastructures with a technology platform that offers all-in-one fleet management, including back-office management with service confirmations and a verifiable data trail. Our technology provides our haulers with smart routing that uses optimized routes and increased route density from artificial intelligence (AI)-powered job allocation, further improving efficiency. Our platform also provides our independent hauler network access to national customers and volume, giving these local players access to national chains that might otherwise have been unattainable. Partnering with us offers smaller independent haulers a more efficient and effective path to value and economic opportunity.

In addition, Rubicon's vendor portal—the interface between us and our haulers—allows us to survey and screen our haulers to verify that they follow relevant laws and follow responsible and sustainable business practices. We also provide a hauler newsletter focused on safety through the portal. In addition, we track hauler partners and suppliers that are minority-, veteran-, or women-owned through our vendor portal as we work to continuously increase diversity across our vendor base.

HAULER CASE STUDY

Crown Waste & Recycling Systems



CHALLENGE

Based in New York, Crown Waste runs eight vehicles that pick-up waste and recycling from over 2,000 commercial customers. In 2021, the company decided to expand into Charlotte, North Carolina, more than 1,000 miles away. Owner Chris Antonacci reached out to Rubicon to support their expansion and help:

1. Create and amend efficient routes
2. Keep track of truck locations
3. Monitor truck maintenance needs
4. Notify customers of service

SOLUTION

Our solution resolved all of these challenges. Our system operates on smartphones, providing drivers with current data on route completion, turn-by-turn directions, and the opportunity to provide input on issues such as missed and blocked bins. Routes are optimized, new pickups can be assigned to the closest truck, and customers receive automated text messages when their location is serviced. Since drivers input their mileage and other vehicle data into the app, Crown Waste catches any truck maintenance needs early. In just two years, Crown Waste has landed nearly 300 commercial accounts in North Carolina, a big win for Crown Waste—and for its happy customers.

2,000

COMMERCIAL CUSTOMERS SERVED

300

ACCOUNTS LANDED IN N.C. SINCE 2021

RUBICONSMARTCITY

The RUBICONSmartCity™ platform, originally designed to focus on waste and recycling fleets, can now be deployed across virtually any fleet to improve local government operations in a variety of ways, including more efficient routing, reduced go-backs, digitized routes and operations, route optimization, fewer 311 calls, and safety gains.

Our local government partners can also use our technology to proactively improve the lives of their residents. Through the platform, our partners cut down not only on waste generated but also on wasted time, resources, energy, and most of all, wasted tax dollars.

Our technology verifies that service has occurred, enabling cities to reduce missed pickups and unnecessary go-backs. Go-backs can represent a significant expenditure, averaging $50 per address for our partner cities, so minimizing go-backs provides a significant cost benefit. Through RUBICONSmartCity, many of our partner cities have reduced unnecessary go-backs by enabling customer service representatives to educate citizens on why their waste was not picked up—for instance, if bins were not set out on time, or if recycling was contaminated with non-recyclable items.

With the RUBICONSmartCity platform, cities do not collect just waste as they are running their routes: they also collect data. Waste and recycling trucks are some of the only vehicles that visit nearly every street in a city weekly. With our technology, these vehicles can uniquely serve as a city's eyes.

Drivers can note anomalies—such as potholes, graffiti, vacant homes, and other issues—directly into the RUBICONSmartCity app while running their routes and send those insights to the departments in charge of addressing those issues, transitioning a city from reactive to proactive.

In addition to data collection, cities can recognize improvements in safety since our platform provides insights on driver behavior, vehicle telematics, and fault codes in near-real-time. With this information, cities can proactively identify driver- or vehicle-related issues, reducing maintenance costs and on-route vehicle breakdowns. With detailed safety metrics to inform targeted driver coaching, cities can realize additional cost savings through avoided collisions and reduced vehicle wear and tear. With critical fault code data and digitized pre/post-trip inspections, cities can also save on maintenance costs with improved preventative maintenance. The results: fewer vehicle accidents, less road wear, and safer communities.

All these features help cities save taxpayer dollars. Michael Shaw, the Director of Public Works in Kansas City, Missouri, explained, "Since we joined with Rubicon, we have seen citizen satisfaction increase in solid waste collection by 17 percent. It is really helping us to be far more on time and on task and to be far more efficient. We have seen over two million dollars [in] cost savings in delivering those services in just trash collection alone."[5]

In July 2022, Rubicon conducted a study with 10EQS Consulting Services to assess the taxpayer savings that cities could achieve by partnering with RUBICONSmartCity. The study modeled savings in six key areas where we help cities' operations: improved route efficiency, reduced go-backs, reduced burden on customer service, reduced running costs, reduced accident costs, and landfill diversion. We applied our cost savings model in the cities where we had deployed our solution at that time and modeled the adoption of RUBICONSmartCity technology in approximately 850 U.S. cities with a population of 50,000 or more.

Since the launch of RUBICONSmartCity, we estimate our city partners have saved as much as $70 million. Looking towards the future, we estimate that Rubicon has the potential to save cities up to $750 million over the next three years, $2 billion over five years, and $6 billion over ten years.[6]

CUSTOMER STORY

Santa Fe, New Mexico

Solid waste poses many environmental issues, and proper waste hauling represents a large portion of budgets for local governments across the United States. Humans have been burying waste as a strategy of disposal for centuries. Although modern landfills are designed to protect groundwater and air as much as possible, in the long-term they are expensive to manage, becoming harder to site, and represent a lack of planning for reuse of our precious natural resources.

Landfills slow decomposition of natural materials, but eventually, as these materials do decompose, they create methane gas, which is more than twenty-five times as potent as carbon dioxide (CO2) at trapping heat in the atmosphere.[7] Reducing methane emissions is critical to mitigating the warming of our planet.

The City of Santa Fe, New Mexico and Rubicon have been partners since early 2017. Each of Santa Fe's trash vehicles collect garbage and recycling from 800-900 locations per day. Drivers utilize a tablet mounted in the truck running Rubicon's proprietary app, which provides optimized collection routes and live telematics information, and streams data back to city headquarters via the cloud. Managers and supervisors can track the service status at every home in the city, monitor route progress, and address issues in the field—all essential insights for efficient program operations. Using cloud technology, RUBICONSmartCity is also turning Santa Fe's fleet of garbage trucks into mobile data collection centers, enabling them to complete additional tasks such as detecting potholes or graffiti.

In addition, the City has tested Rubicon technology that strives to detect recycling contamination at the source through machine learning. If a load is contaminated, we identify the problem as the recycling goes into the hopper. That provides an opportunity to target recycling education materials and improve their effectiveness.

Working with us, Santa Fe has improved customer service for residents by reducing the number of missed pickups, eliminating paper route sheets, automating tracking of customer issues, and saving taxpayer dollars by reducing fuel consumption and wear and tear on vehicles.

"These efficiencies will reduce our carbon emissions associated with service delivery, moving us toward Santa Fe's goal of carbon neutrality by 2040

SHIRLENE SITTON
Environmental Services Division Director
Santa Fe, NM

37,544
FEWER MILES TRAVELED ANNUALLY

10.9
METRIC TONS OF CO2E AVOIDED ANNUALLY

The City has also completed a fleet optimization project with us with the goals of making routes more efficient and reducing the number of collection days for its residential trash and recycling routes from five to four. The optimized trash routes achieved a 38% reduction in miles driven with an overall reduction of 36% of all routes combined, leading to an estimated reduction of 5,044 miles driven annually. This reduction translates to 10.9 metric tons of CO2e avoided annually. Additionally, the transition to four collection days per week has reduced overtime by 58% and led to an estimated 37,544 fewer commuter miles traveled annually, as drivers commute to the yard one less day each week. Perhaps most significantly, the three-day weekend has led to fewer call-ins and boosted employee morale.

"These efficiencies will reduce our carbon emissions associated with service delivery, moving us toward Santa Fe's goal of carbon neutrality by 2040," said Shirlene Sitton, Environmental Services Division Director for the City.[8]

CUSTOMER STORY

Harrisonburg, Virginia

To increase route efficiency and digitize its paper-based processes for logging trips, the Public Works Department of Harrisonburg, Virginia, turned to Rubicon. A city of 53,000 people, Harrisonburg lacked established collection routes, instead taking a "flock approach" to services for residents. As a result, it struggled with the service inconsistencies, missed pickups, and other issues. The department was also concerned about fuel costs and worker safety.

We worked with the City of Harrisonburg to digitize and help optimize driver routes by giving each driver a smartphone pre-loaded with an in-cab interface (ICI) device that monitors vehicle location, route completion, and service verification in real time. The ICI also provides weight ticket logging and allows drivers to relay problems along their route and, if needed, assist other drivers with unfinished routes. Using RUBICONSmartCity, Harrisonburg saves up to 61 minutes of drive time for each route. Route mileage has been almost cut in half, from an average of 63 to 33 miles per route. These reductions in route duration and mileage translate to more than $194,000 in annual savings. In addition, the reduced mileage accounts for approximately 230,000 pounds of CO2 emissions avoided, the equivalent of taking 20 passenger vehicles off the road each year.

$194,000

SAVED ANNUALLY DUE TO OPTIMIZATION

230,000

POUNDS OF C02 EMISSIONS AVOIDED

The most satisfying improvement of all: workers' compensation claims from sanitation employees have been cut approximately in half, indicating that the work environment is now safer due to our technology.[9]

MAKING CITIES SMARTER

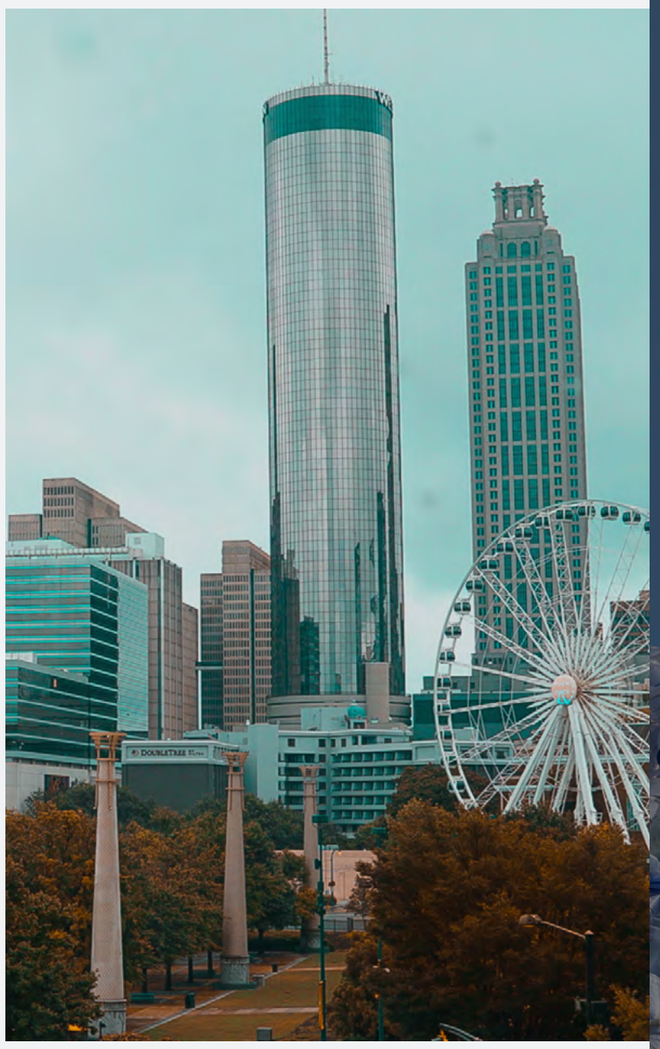
In 2022, Rubicon hosted our inaugural RUBICONSmartCity Next Summit, bringing together our current and prospective partners to learn from our team and one another, share best practices, and explore ways to further maximize the potential of our Smart City technology. Attendees and speakers included the former mayors of Indianapolis and Philadelphia, as well as municipal operations leaders from over 20 cities across the United States, along with representatives of Rubicon and our business partners.

The Next Summit included rich discussions that led to valuable insights. The key takeaways included:

- RUBICONSmartCity is doubling down on new features: Through our acquisition of CIVIX, a routing software and solutions company, we can further improve our routing capabilities. We also introduced a route template builder, a 311 connector, and a feature to support snow removal.
- Resilient cities are built on a foundation of equitable public service: The Honorable Michael Nutter, former Mayor of the City of Philadelphia, spoke about the importance of listening to citizens and using that feedback to identify where a city should focus its efforts. He reminded attendees that innovation often stems from borrowing successful ideas from other cities—a collaborative approach at the heart of the Next Summit.
- Garbage trucks can access infrastructure while en route: In Kansas City, Missouri, our camera technology allows garbage trucks to identify potholes while on their routes. The information is relayed back to the City, allowing officials to quickly dispatch street maintenance crews.
- Cities can save tax dollars while delivering a better customer experience: During the height of the COVID-19 pandemic, the City of Kansas City hired more than 80 new drivers, many of whom had not previously driven or operated garbage trucks. Our technology helped train the new employees and expedite the onboarding process. The City saw a 17% increase in customer satisfaction and savings of over $2 million.
- Implementing Rubicon has been a smart move for the largest U.S. cities: The City of Houston needed a technology solution that could help provide more effective service for residents and make their solid waste operations more efficient. The City chose Rubicon, which fully launched in the Solid Waste Department's 391-vehicle fleet in just under 73 days. With Rubicon, the City digitized 1,061 residential waste and recycling routes, reducing the need for paper and optimizing waste and recycling operations with near real time vehicle tracking and customer service data.

We shared key insights from Next Summit through a series of blog posts on our website. Building on our successful launch, we look forward to hosting the second annual Next Summit in June 2023.

Throughout the year, Rubicon partners with and maintains memberships with a variety of national associations. We collaborate on industry events and educational efforts that highlight opportunities for cities to digitize their waste operations—leading to taxpayer savings and a more sustainable future.



ASSOCIATION PARTNERSHIPS

Lowering environmental impact

Supporting the creation of a circular economy is at the core of Rubicon's business. A circular economy encourages and rewards the reuse of natural and man-made materials through repurposing and recycling, enabling a product's components and materials to provide value indefinitely. The circular economy is imperative to the health of people and our planet.

We strive to make a difference for our customers by partnering with them to succeed environmentally and financially. We believe the data we aggregate through products such as RUBICONConnect and RUBICONPremier offers a central source of information that generates necessary insights for the transition to a circular economy. However, this transition requires dramatic changes to the current waste management status quo.

LEADERSHIP IN CIRCULARITY

In 2021, Rubicon launched the Circular Economy Working Group (CEWG). The CEWG is a cross-functional team focused on incubating and productizing solutions that go beyond recycling and into the most cutting-edge areas of the circular economy, such as upcycling, material marketplaces, and reusable packaging programs. The team includes experts from our finance, commercial, smart city, and commodities teams.

Working collaboratively with our customers and internal teams, the CEWG develops solutions that look upstream to minimize waste, pool resources, and circulate materials at their highest value. The CEWG also acts as a bridge between start-ups offering creative circular economy solutions and consistent sources of expected business, enabling these solutions to scale. The team is currently working with tech-enabled reusable systems providers to reduce packaging waste and help our customers participate in the transition to a circular economy. Looking forward, the CEWG is uniquely positioned to forge valuable connections between our customers and companies with data-driven solutions for product design and material substitution, inventory management, and resale logistics.

EMISSIONS

As waste degrades, it can give off emissions that threaten our quality of life and the world's ecosystem. Landfills are the third largest industrial emitter of methane gas—a GHG with more than 25 times the global warming potential of CO_2.[10] Rubicon is working to raise awareness of the link between waste and GHG emissions and has committed to near-term company-wide emission reductions in line with SBTi (the Science-Based Targets Initiative).

To align with the emissions reductions necessary to limit a global temperature rise to 1.5°C, as defined by SBTi, Rubicon must decrease its Scope 1 and Scope 2 GHG emissions by 46% from our 2019 baseline by 2030.[11] We are committed to achieving these targets. Our emissions target for Scopes 1 and 2 was formally approved by SBTi in 2022.[12] Alongside our SBTi target, we are a signatory to The Climate Pledge, co-founded by Amazon and Global Optimism, to be net-zero by 2040.[13]

We are pleased to announce that we achieved our SBTi emissions reduction goal for Scopes 1 and 2 GHG emissions in 2020, 10 years ahead of our target year for such reductions, and have continued to reduce these emissions, with a decrease in overall Scope 1 and 2 emissions by 82% from 2019 to 2022. These emissions reductions were achieved primarily through renewable energy purchasing and downsizing our office space. We are encouraged by this progress and continue to innovate to address our Scope 3 emissions, which comprise nearly all of our total emissions.

THE CLIMATE PLEDGE

We achieved our SBTi emissions reduction goal for Scopes 1 and 2 GHG emissions in 2020, 10 years ahead of our target year for such reductions, and have continued to reduce these emissions, with a decrease in overall Scope 1 and 2 emissions by 82% from 2019 to 2022

Partnering with suppliers who measure and reduce their emissions-generating activities is a key component of reducing our Scope 3 emissions. One company that has been an important partner in this effort is our data center and hosting supplier, Amazon Web Services (AWS). By utilizing AWS to optimize our sustainability across our systems, we were able to transition our network to 100% cloud based with no on-premises datacenters. Prior to partnering with AWS, we relied upon datacenters in our Atlanta office to host a small portion of our system. Along with being entirely cloud based, we also host our SaaS solution in the cloud within the same regional area as our customer. Rubicon currently services SaaS customers in the U.S., Europe, and Asia-Pacific (APAC). Our close partnership with AWS is critical as we work to improve the energy efficiency of our cloud systems with the goal of achieving carbon neutrality across our network. AWS is committed to net zero by 2040 and is on track for its target of being powered by 100% renewable energy by 2025.[14]

We are currently developing a plan to achieve net-zero emissions, including Scope 3 Category 1 emissions from the transportation and disposal of our customer's waste, which we anticipate completing by 2025. Achieving this goal will require close partnership with our customers, many of whom have their own goals for emissions from waste generated in operations (Scope 3 Category 5). We believe that when we reduce our Scope 3 Category 1 emissions, our customers will see a reduction in their Scope 3 Category 5 emissions. Most total corporate emissions originate from Scope 3 sources, so accurately reporting them is crucial for companies. These are also the most complex emissions to accurately track and receive scrutiny by stakeholders. Therefore, we are working to collect accurate data that is compatible with the reporting needs of our customers.

RUBICONConnect streamlines the capture and calculation of waste-related emissions data that typically span hundreds of material types collected multiple times a week over thousands of site locations—for a single customer. Beginning in 2017, we partnered with S&P Global Sustainable1, a leader in carbon and environmental data and analysis, to verify our methodology to determine our landfill diversion rate, which measures the magnitude of GHG emissions that our clients avoid by choosing non-landfill solutions, and their Scope 3 Category 5 emissions. S&P Global Sustainable1 validated the methodology most recently in July 2022.

GHG EMISSIONS INVENTORY[15]

GHG protocol using the operational control approach

SCOPE	CATEGORY	2019[1] (MTCO2e)	2020[2] (MTCO2e)	2021 (MTCO2e)	2022 (MTCO2e)	% CHANGE FROM 2019[3]
1	Natural Gas	72.71	88.40	60.13	80.05	.10
2	Electricity (LB)	464.23	325.48	191.78	272.98	(.41)
2	Electricity (MB)	531.67	378.57	228.33	273.35	(.49)
2	Electricity (MB) with RECs	531.67	215.17	55.14	22.23	(.96)
3	Purchased Goods and Services – Waste & Recycling	2,251,591.05	1,962,826.98	1,734,526.26	2,019,753.17	(.10)
3	Purchased Goods and Services		2,577.50	3,778.50	4,892.06	.90
3	Fuel and Energy Related Activities	111.02	87.20	53.39	74.54	(.33)
3	Business Travel	1,354.72	275.22	749.00	1,337.48	(.01)
3	Employee Commute	755.06	160.55	5.36	4.79	(0.99)
3	Employee Commute – Work from Home		262.25	524.03	289.56	.10
3	Waste	5.05	0.74	0.11	0.12	(0.98)
	Total (Location-Based)	**2,254,353.83**	**1,966,604.31**	**1,739,888.56**	**2,026,704.76**	**(.10)**
	Total (Market-Based)	**2,254,421.28**	**1,966,493.99**	**1,739,751.92**	**2,026,454.01**	**(.10)**

1 Emissions values for our baseline year of 2019 were recalculated following identification of an error in the conversion methodology used to account for emissions from natural gas heating. This same methodology change was applied to all subsequent years of emissions accounting. 2019 emissions value for Scope 3 Cat 1 waste has been revised considering updated waste emissions factors from the EPA.

2 2020 emissions value for Scope 3 Cat 1 waste has been revised considering updated waste emissions factors from the EPA.

3 Rubicon's Scope 1 emissions for 2022 rose due to natural gas usage in one of our corporate office buildings. In the future, Rubicon is committed to leasing office space that does not use natural gas.
Rubicon's Scope 3 Category 1 (Purchased Goods and Services) emissions for 2022 rose due to increased spending on services to support remote work and consulting services in preparation for going public.
Rubicon's Scope 3 Category 7 (Employee Commute Work from Home) emissions for 2022 rose due to employees working remote for a full calendar year.

TASKFORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES (TCFD)

As a provider of products and services designed to produce positive environmental impacts (reduced waste generation, improved diversion of waste, reduced emissions, and more), Rubicon recognizes that a systematic approach to the identification, assessment, and management of our climate-related risks and opportunities is a critical component of our business continuity planning.

In 2022, as part of our efforts to increase awareness of our potential climate-related impacts and align our disclosures to TCFD, we completed a robust climate-related scenario analysis.[16] We reviewed each category of climate-related risks across the short, medium, and long term. Using semi-structured interviews with key stakeholders (board members, the executive leadership team, research and development and supply chain leadership, account management leads, and sustainability leads), we assessed the magnitude of those risks and the impact on our business. Based on our findings, we conducted a scenario analysis assessing both physical risks, which relate to the physical impacts of climate, and transition risks, which relate to the potential transition to a lower carbon economy. Finally, to identify possible financial impacts, we explored the possible business impacts of those risks and opportunities.

For our physical risk scenario analysis, we used two scenarios: the Maximum Hazard Exposure (SSP5-8.5) and the Middle-of-the-Road Hazard Exposure (SSP2-4.5). We applied them to 20 latitude and longitude data points, including our Kentucky and New York offices, our top ten revenue-generating regions, and eight work-from-home proxy locations based on the zip codes with our highest employee density. We evaluated exposure to several acute and chronic physical climate risks, including wildfire susceptibility, inland flooding, heatwaves, sea level rise, drought, and cyclones. Based on the exposure results, we investigated the possible business impacts of these physical hazards and found them to be low due to employee and client distribution and remote working capabilities, as well as our track record in handling severe weather events for our clients.[17]

The transition analysis assessed our exposure to risks of potential mandatory carbon pricing under two scenarios: first, achieving our emissions reduction goals of 46.2% from the 2019 baseline followed by a net zero target by 2050 (the Net-Zero Scenario), and second, entirely unmitigated emissions. In conducting the transition analysis and carbon price modeling, we identified the potential cost of carbon taxes under the International Energy Agency's (IEA) NZE 2050 Scenario. We found that by achieving our emissions reduction targets, the cost of carbon pricing for us could peak in 2040 and then decrease, according to the model. The results of this model show an immediate financial benefit to aligning with Net Zero goals and reducing emissions early on, as carbon prices will likely increase in the future, as opposed to an unmitigated emissions pathway.

Our scenario analysis and climate-integrated enterprise risk management process resulted in the identification of the following key risks and opportunities that we believe will drive our climate mitigation efforts and contribute to our environmental strategy.

Although we identified certain risks, none of them met our threshold for substantive financial or strategic impact on our business in the short-, medium- and long-term time frame.[18]

Risks covered by our climate-related risk assessment

RISK TYPE	DESCRIPTION
Transition Risk: Current and Emerging Regulation *Extended producer responsibility (EPR) and waste reduction focused legislation*	Waste and recycling practices have climate-related implications with profound impacts on global emissions. As a response to this, we are witnessing regulatory changes in our industry. As of the publication of this report, multiple U.S. states have implemented mandatory organics recycling laws, with many more considering the passage of similar laws. Moreover, a handful of states have passed extended producer responsibility (EPR) laws, while more than a dozen single-use plastic bag bans have been implemented in cities and states across the country. Although we believe the transition risks to our business posed by current regulation would be minimal—not representing a substantive financial or strategic impact for Rubicon—our Public Policy Team regularly monitors the regulatory landscape to ensure our compliance with existing regulations and readiness for contemplated or potential regulations, and the team reports this information throughout the company.
Transition Risk: Technology *Technological innovation*	We believe growing awareness of climate-related risk has accelerated the development of technologies designed to reduce climate-related risk exposure. In our industry, climate risk has resulted in growing demand for technologies that facilitate waste reduction and diversion, such as camera-based material identification technology; materials innovations, such as bioplastics; and circular business models, such as reusables platforms. Each may have the potential to disrupt current waste management practices. Given Rubicon's commitment to technological innovation and adaptable, technological-focused solutions, we do not believe we currently experience substantive risk to our business performance. We have designed our software platform to be adaptable and capable of integrating many of these technological innovations, which we expect to bolster our overall value proposition.
Transition Risk: Legal *Climate-related disclosure requirements and requests*	Uncertainties around the final rules that the U.S. Securities and Exchange Commission (SEC) has proposed in relation to Scopes 1, 2, and 3 GHG emissions disclosures for public companies in turn create uncertainties for businesses striving to comply with regulations.
Transition Risk: Market *Low carbon products and services*	While we anticipate that climate change will continue to affect consumer preferences, such as increasing demand for low-carbon services and products, we believe we are well-positioned in our markets to take advantage of such changes and to continue to address these risks through increased emphasis on low-carbon product development. We believe we are well-positioned to meet market demands given our commitment to continuously increasing the capabilities of our technology products—such as RUBICONSmartCity and RUBICONPro—which are designed to help our customers (including local governments) and independent haulers operate in a more environmentally sustainable manner by reducing fuel consumption, increasing capture of quality recyclables, and reducing waste contamination. We expect that demand for these products will continue to grow considering the transition to a low-carbon economy.
Transition Risk: Reputation *Growing scrutiny by customers and consumers over sustainability impact*	As companies and local governments continue to set zero waste targets and prioritize finding solutions for climate-related impacts, we believe we are a likely partner due to our emphasis on waste diversion services and experience delivering tailored waste reduction plans. Though we consider this area to be low-risk, we expect to continue to prioritize our commitment to circular economy-based solutions to remain responsive to increased concern and demand from stakeholders.
Physical Risk: Acute and Chronic Physical *Increased severity and frequency of extreme weather events*	Rubicon's operating footprint spans a large geographic area—we service millions of unique service locations (USLs) across the United States and Canada, and our predominately remote workforce is distributed across much of the same footprint—and may be vulnerable to disruptions from a spectrum of climate-related events. For example, a severe flood caused by a hurricane could make roads impassable and prevent our independent hauler partners from reaching our customers. Similarly, a wildfire or tornado could result in conditions that make servicing our customers dangerous to our independent hauler partners, resulting in service disruptions. We assessed our exposure to physical risks with the help of third-party consultants. In our scenario analysis, we assessed our exposure to acute physical climate-related risks, including wildfire burned area fraction (BAF), wildfire susceptibility, inland flooding, heatwaves, sea level rise, drought, and cyclone. Due to the distributed nature of our workforce and customer sites, however, that analysis found that our overall risk regarding extreme weather was generally considered low.

Climate-related opportunities identified

OPPORTUNITY TYPE & DRIVER	DESCRIPTION	POTENTIAL IMPACT AND RUBICON'S STRATEGY TO REALIZE OPPORTUNITY
Products and Services *Development of climate adaptation, resilience, and insurance risk solutions*	As climate change accelerates, we believe cities across the United States could face an increased risk of severe weather events. Rubicon, particularly our RUBICONSmartCity product, offers relevant solutions to municipal fleets that help local governments scale up their ability to respond to natural disasters and extreme weather by ensuring efficiency of fleet operations and providing data on local conditions. As cities become aware of the risks posed to them by extreme weather, we believe they may become more willing to invest in technology that can assist with response and clean-up. Our offerings present a potentially attractive option to assist in climate adaptation and resilience planning for cities.	We see potential to capture new business that will likely result from cities looking to invest in technology that can support extreme weather response and clean-up. We intend to grow our footprint with municipalities and continue to invest in new product capabilities— with the aim of continuously improving our products to best meet the specific needs of municipalities. Through engagement with municipal leaders on climate-related and resiliency challenges, we believe we can help them to understand the value that our products deliver.
Markets *Use of public-sector incentives*	We anticipate that with growing climate and recycling regulations, the demand for diversion-related services is likely to continue. Increased requirements for recycling programs and regulatory enforcement, alongside increased consumer demand for environmentally friendly practices, will likely result in growing customer demand for Rubicon's landfill diversion services. These include commodities sales, organics services, specialized recycling programs and reuse offerings.	Our overall business model and cost-competitiveness is predicated on our ability to divert material from the landfill for our waste generator customers. Accordingly, we are prioritizing expansion of the portfolio of diversion services we can offer our customers. We have established several internal working groups tasked with continually monitoring the landscape of circular economy solutions and developing strategies to integrate those that are commercially viable into our portfolio.

COMMODITIES

Commodities are the engine for Rubicon's diversion activities. Our approach creates efficiencies for our customers and allows us to earn large rebates for them. For some of our customers, we focus exclusively on recycling and diversion. Rubicon currently handles close to 70 commodities, with the top four being OCC (old corrugated cardboard), wood pallets, plastic film, and metal.

Recycling commodities is a key component of the circular economy since it keeps materials circulating for as long as possible. We are proud to lead in this area, providing significant value for both our customers and society. The distinctive features of our approach include the following:

- Deep expertise: Our Commodities Team has a combined 100 years of experience in the field.
- Powered by partner relationships: With more than 1,600 recycling partners nationwide, we can obtain higher premiums, ensure consistent movement, and handle large volumes day in and day out.
- Technology-enabled: Our auto-dispatch capabilities eliminate lag time between requests and pickups.
- Targeted reporting: Our RUBICONConnect portal provides customers with detailed diversion and carbon emissions reporting specific to their commodities.
- **Mill-direct:** Rather than work with intermediaries, we take a mill-direct approach for most commodities. This increases efficiency since we avoid double-handling materials, and it reduces transportation-related emissions.

We are honored to work with many leading U.S. retailers to recycle commodities and develop closed-loop solutions. A few examples include:

- **Walmart:** We manage baled plastic film generated by Walmart, representing more than 1,000 tons monthly. Baled film has a variety of uses such as wire and cable covering, computer parts, trays and pots, protective sheeting, and container lids.
- **Best Buy:** We manage commodities such as baled plastic film for Best Buy. We send some of the baled film to plastic recyclers, who break the material down to produce air pillows for packaging and other plastic protection items. Best Buy purchases a portion of those materials back for its use, closing the circle.

HARD TO RECYCLE MATERIALS

Every pound of material that is recycled is a pound that does not go to a landfill. The process of diversion protects the environment, can save money, and helps businesses meet environmental compliance requirements. Moreover, diversion provides business benefits, from identifying new revenue opportunities and sparking innovation to engaging employees, increasing customer loyalty, and protecting a company's brand and reputation. Our expertise in diversion encompasses:

- Mail-back programs
- Sustainable materials management (SMM or "zero waste") services
- Material characterizations (or "waste audits")
- Electronics recycling

MAIL-BACK PROGRAMS

Mail-back programs allow companies to properly manage regulated or hard-to-recycle waste materials by returning them by mail to the manufacturer or a designated facility. These programs are typically used for products such as batteries, electronics, and other regulated materials that cannot be disposed of through traditional means. Businesses can also establish mail-back programs for more common materials such as plastic, paper, and cardboard. These programs offer a convenient and cost-effective way for customers to reduce their environmental impact and comply with regulations, such as those mandated for universal waste.

Rubicon's expertise extends to both regulated and non-regulated programs:

- **Regulated mail-back programs** support customers in meeting the regulatory requirements of the states in which they operate. These requirements include sending some materials to recycling such as cardboard, plastic, and glass, or universal waste, which includes batteries, light bulbs, and aerosol cans. Additionally, retailers may be required to provide recycling collection bins for customers.
- **Non-regulated mail-back programs** allow businesses to manage items that require special handling, such as single-stream recycling (SSR) and personal protective equipment (PPE). These programs help to divert these materials from landfills in areas where diversion programs are not required or may not exist. Small outlets without space for a dumpster or wheel cart can establish a non-regulated mail-back program to ensure materials are managed responsibly.

Mail-back programs positively impact the environment by keeping regulated and hard-to-recycle materials out of landfills—and incorporating them into the circular economy for reuse and recycling. They also make sound business sense: in many cases, fines and penalties for improper management of regulated waste lead to greater costs than participating in a mail-back program.

Rubicon's expertise ensures that materials are safely packed and shipped to their destination—and once received, we ensure they are properly recycled, reused, or repurposed. Once implemented, Rubicon can also support customers in measuring the success of their program and making meaningful improvements over time. That may include tracking participation rates, analyzing employee and customer feedback, and adjusting the program to address concerns or opportunities.

Our mail-back partners and customers include:

- **g2 revolution:** We partner with g2 revolution to plan and implement mail-back programs across businesses. Customers find new uses for materials, realize opportunities for savings, and develop sustainable systems that benefit the environment and local communities. Since beginning our partnership in 2019, Rubicon and g2 have recycled 158,904 pounds of materials.
- **Specialty Discount Retailer:** A specialty discount store with more than 1,100 locations works closely with us to manage universal waste streams such as batteries, aerosol cans, cosmetics, light bulbs, lamps, and electronics. They have increased their mail-back material tonnage by 26% in the past year and 75% over the past two years—a result of both program expansion and new store openings. In 2023, they plan to implement regulated waste recycling programs at all of their new California locations.
- **Snooze A.M. Eatery:** This chain established a mail-back program with Rubicon and g2 revolution for the crayons provided to children at their restaurants. Their employees collect discarded crayons in a bucket provided by Rubicon. Once full, the crayons are shipped to g2 revolution for sorting, weighing, and recording, and are then shipped to a specialized waste-to-energy facility. Snooze receives an empty bucket in return, and the process begins again.

SUSTAINABLE MATERIALS MANAGEMENT

Rubicon is a leader in developing, implementing, and managing sustainable materials management (SMM) (or "zero waste") programs. These initiatives are led by our team of circular solutions professionals, advisors, and subject-matter experts.

We define SMM as a progression of methodologies intended to identify, prevent, and reduce a customer's waste stream to its smallest possible volume. We do this by adopting upstream sustainable business practices and downstream waste reduction and recovery methodologies—all while seeking to reduce operating costs, maximize commodity revenue, minimize environmental impact, and protect the customer's brand. The idea of a "progression" is critical: we view SMM as a journey that can be continually customized and iterated until the customer achieves their goals.

SMM requires an all-encompassing, companywide commitment to sustainability goals. It can lead companies to modify their management, operational, procurement, and financial practices—and requires the entire workforce to be engaged and accountable in creating a true culture of sustainability. Within the SMM framework, each decision must consider sustainability as a critical factor; for example, when considering a potential purchase, its "end-of-life' disposition is front and center. Ultimately, SMM requires customers to fully embrace a new way of decision-making.

Our Circular Solutions Team tailors each program to reflect the client's goal, budget, and the unique nature of their operations. Our expertise extends beyond downstream diversion and, depending on the customer's specific needs, can support the development and implementation of upstream policies, procedures, and practices. We expect that these programs should provide clients with new revenue possibilities while lowering operating costs and building a solid platform for future expansion.

Through our programs, several of our clients now divert more than 90% of their generated waste, representing thousands of tons of materials that now become a new product or biofuel source or are otherwise beneficially reused. However, positive environmental impact is one of many advantages. By identifying, preventing, and even eliminating waste and wasteful practices, we can improve customer operations and financial performance, providing a crucial competitive advantage. SMM programs can benefit a company's brand, support talent acquisition and retention, create new revenue opportunities, provide a platform for innovation, and strengthen stakeholder relations.

We have partnered with national electronics retailer Best Buy to identify waste reduction opportunities to help achieve their waste diversion goal. In 2021, Best Buy's Reverse Logistics Center in Chino, California, earned the company's first TRUE certification for zero waste, recognizing its 99.67% diversion rate. Over the past two years, four additional Best Buy facilities have earned TRUE certification. To earn TRUE (Total Resource Use and Efficiency) certification at a facility, a company must achieve an average diversion rate of 90% or greater from landfill, incineration (waste-to-energy), and the environment at large for non-hazardous solid waste for a period of twelve months.

Through our programs, several of our clients now divert more than 90% of their generated waste, representing thousands of tons of materials that now become a new product or biofuel source or are otherwise beneficially reused.

Wegmans: An SMM program anchored in company values

Wegmans is a regional supermarket chain with 110 stores stretching from New York to North Carolina. With a mission of helping people live a healthier, better life through exceptional food, Wegmans has a strong commitment to its values.

The company's sustainability initiatives reflect its commitment to protecting the resources we have today. Wegmans focuses on the areas where it can make the greatest impact: eliminating waste, improving the sustainability of packaging, and reducing its carbon footprint.

To bring its deep companywide commitment to sustainability to life, Wegmans partners with Rubicon on a sustainable materials management (SMM) program that includes OCC (cardboard), food scrap donation, de-packaging, anaerobic digestion, composting, mixed recycling, plastic film recovery, regulated waste (including pharmacy), and nicotine recovery.

"We're committed to working toward a greener future," said Wegmans Sustainability Manager Chris Foote. "We recognize there is always room for improvement, so we continuously seek new ways to reduce waste, increase our recycling rate, and help make a difference in every community we serve." Wegmans landfill free initiatives are an excellent example: starting as a one-store pilot in 2016, it has

now expanded to work toward eliminating all forms of waste at every store.

Other highlights of our partnership include:

- **Minimizing food waste at the source:** Wegmans follows the U.S. EPA's Food Recovery Hierarchy, which prioritizes actions organizations can take to prevent and divert wasted food. The stores begin by minimizing food waste at the source, then donating unsaleable food to local food banks—totaling 19.6 million pounds in 2020 alone.
- **Turning food scraps into animal feed:** Wegmans stores gather trimmings from fresh-cut fruit and vegetables and unsaleable bakery items for donation. Local farmers, animal organizations, zoos, parks, and animal sanctuaries pick up the items from participating stores and use them as feed. In 2020 alone, this program provided 1,254 tons of scraps for feed.
- **Using less plastic:** Wegmans has committed to reducing in-store plastic packaging made from fossil fuels and other single-use plastics, by 10 million pounds by 2024. It is eliminating some current plastic packaging and replacing it with materials made from plant-based renewable fiber. For example, egg cartons are now made from 100% post-consumer recycled newsprint and paper rather than polystyrene foam, and fruit trays now use recyclable fiber inserts. Through these changes, Wegmans eliminates 625,000 pounds of foam from stores each year.

Wegmans' overall diversion rate has increased from 62% in 2016 to 80.3% in 2022. In 2022, it diverted over 141,745 tons of materials that formerly went to landfill. Through continuing to partner with Rubicon, Wegmans is on track to reach a 95% diversion rate by 2025.

625,000

POUNDS OF FOAM ELIMINATED FROM STORES ANNUALLY

141,745

TONS OF MATERIALS DIVERTED FROM LANDFILL

18%

INCREASE IN DIVERSION FROM 2016

MATERIAL CHARACTERIZATIONS

To set and achieve sustainability goals, companies must understand the content of their material streams. Through engaging in a material characterization, or waste audit, we help clients obtain precise data about items in their material streams, assess stakeholder adherence to existing programs, and plan for both downstream disposition and upstream review.

A material characterization determines the composition of a select material stream at a defined point in time. Our methodology includes three predefined levels:

- **Site assessment:** This facility walk-through is designed to identify material types, collection processes, signage, immediate service needs, and visible gaps or concerns.
- **Material characterization:** An audit that quantifies the types, volume, and weight of materials generated at a specific location, creating an accurate representation of the waste stream and current diversion practices.
- **Material mapping:** An audit that tracks types of waste and where they are generated upstream (e.g., buildings or departments).

Once complete, we provide the customer with a written material characterization report summarizing key findings, identifies data trends, and noting irregularities or anomalies.

Unlike traditional waste audit reports, our material characterization reports provide direct, specific recommendations for the objectives needed and waste materials observed. We also help customers align the stakeholders within their organizations through communication and action plans. A material characterization can serve as a first step towards a SMM program, as described earlier in this section.

Our work with a Controlled Environment Agriculture company illustrates the impact that material characterizations can make. In May 2021, we began working with a Controlled Environment Agriculture company who was interested in becoming more sustainable and wanted to divert as much of their discarded materials as possible from landfills. During the greenhouse site visit we learned about each of their material streams: landfill, recycling, and organics. Our findings indicated that most of their generated materials were organics, and while a local farmer took much of the material, its capacity was limited. We recommended and implemented an organics program to ensure the large volume of organic material would be composted. We also tapped one of our hauling partners, Atlas Organics, to help. They began picking up spent growing medium and vegetative material from this location to turn into compost products. Atlas sells large volumes of finished compost to local organizations of all sizes for horticulture and agriculture, where it has many benefits including improving soil health, combatting the effects of drought, and preventing erosion. Since the program started in November 2021, over 2,500 tons of organic material have been sent to compost, representing a 92% diversion rate.

ELECTRONICS RECYCLING

With nearly every business having electronics to discard, proper recycling is critical to protect sensitive information and reuse valuable resources. We are consistently tasked with finding solutions for used electronics nearing the end of their initial intended purpose. This broad category includes computers and peripherals, phones and chargers, audio equipment, other office technology, and almost any item with a plug.

In the United States, 25 states currently have electronics recycling laws.[19] Rubicon supports compliance by setting up services for electronic items, tracking and reporting activities, and providing documentation of destruction or recycling. Depending on the items and customer preferences, electronics can be managed in the following ways:

- **De-manufacturing:** dismantling electronics to market recyclable commodities
- **Shredding:** loading items into shredding equipment to extract materials
- **Refurbish/resale:** extending the life of a product through refurbishment and resale after removing sensitive data via wiping, purging or shredding storage media

Rubicon provides our customers access to a network of accredited vendors to support the responsible recycling and handling of electronics. In evaluating accreditation, we look for one of the two standards encouraged by the U.S. Environmental Protection Agency (EPA): the Responsible Recycling ("R2") Standard for Electronics Recyclers or the e-Stewards Standard for Responsible Recycling and Reuse of Electronic Equipment ("e-Stewards").

One of our trusted vendors is Yesterday's Business Computers, Inc. ("YBC"), led by CEO Tom Tsivgas. For over 25 years, YBC has provided certified IT asset disposal and mobile technology services to Fortune 500 companies. A U.S. Army veteran who served four years on active duty and attended college through the G.I. Bill, Tsivgas actively supports military charities and causes. YBC partners with the Children of Fallen Patriots Foundation, a charitable foundation that provides college scholarships and educational counseling to military children who have lost a parent in the line of duty.

ORGANICS RECYCLING

Over recent years, Rubicon has seen tremendous growth in organics recycling, both in terms of customer demand and the network of hauling and processing vendors working to meet their needs. As with other types of recycling, demand for organics recycling arises from both regulations and our customers' own sustainability goals.

Food has tremendous impacts on sustainability, affecting land use, air quality, and water use; food and organic waste sent to landfill emits methane during decomposition. While food waste represents a large percentage of organic waste— 40% of food in the U.S. is wasted— the category also includes garden or lawn waste, wood pieces, and compostable products.[21]

By reducing and recycling organic waste, businesses not only create a positive impact on the environment but can also save money—whether it is thoughtful purchasing to reduce waste upfront, reducing the volume and frequency of trash pickups and their associated cost, or claiming tax benefits by donating healthy, safe food. Food donation also addresses the needs of the 50 million Americans living in food-insecure households and using organic waste as animal feed can be viable for many farms.[22] Organic waste can be composted to improve soil, processed to create renewable natural gas, or converted to fuel to prevent methane emissions.

However, the United States does not yet have a standardized, uniform, nationwide model for organics recycling. Rather, there is a patchwork of programs that customers must navigate. Adding to the complexity, access to composting varies widely,

affecting both our municipal and commercial customers, and many areas still lack service providers. Another challenge is inconsistency around acceptable items, types of containers, and fee structures.

HOW RUBICON HELPS SOLVE THE CHALLENGE

To help solve these challenges, Rubicon has built relationships with vendors with expertise in hauling and processing organics—creating business opportunities for haulers while finding suitable homes for customer waste. We connect customers seeking organics recycling with haulers and processors asking where the demand is.

Our organics and food waste recycling services enable our customers to recycle animal or plant-based materials, including paper towels, oil and grease, and certified compostable foodservice ware, converting these materials into compost or renewable energy. We also offer de-packaging and certified product destruction services that allow customers to divert their packaged food products from the landfill. We source the most economical freight vendors and end-destination options, such as composting, anaerobic digestion, animal feed or food donation, and arranges for timely and convenient pickups.

Our partnership with the City of San Antonio showcases our innovative approach to organics recycling. To tackle contamination challenges in the City's green bins, we created and piloted a beta waste contamination detection tool. The tool integrates camera, computer, and edge-computing software to identify contamination, using focused data filtering to share only the most relevant data. By identifying contamination hotspots, the city can target its education efforts—and drivers can focus on safety rather than identifying contamination. Ultimately, the data collected will be integral in increasing participation in organics recycling while helping to decrease contamination levels.

We also work with a national fast-casual restaurant chain to increase organics recycling. Our partnership includes 948 organics programs as of May 2023. From 2019 through the end of 2022, Rubicon handled 79,215 tons which translates to -48,502 metric tons of CO2e avoided. Continuing education is crucial to the partnership, with hauler, customer and Rubicon teams working to ensure the use of bins and reduce contamination.

PARTNER SPOTLIGHT

Green Bucket Compost

Rubicon works with organics haulers across the United States—often small to medium-sized businesses with a strong focus on the local communities they serve. Based in New Jersey, Green Bucket Compost is a Black-owned business. As one of the few organics haulers in the Garden State, it creates critical recycling infrastructure in its region.

Green Bucket's goal is to divert as much food waste from landfills and incinerators as possible, working with anaerobic digestion facilities such as Trenton Renewables in Trenton, New Jersey. Anaerobic digestion is one of the EPA's preferred methods for processing food waste, supplying both renewable energy and digestate that can be composted. Green Bucket serves businesses, households, institutions, and municipalities, earning kudos for friendly customer service and going above and beyond to provide solutions.

> "I started this business because I wanted to help everyone live a more sustainable life. We can all reduce our waste by separating organics at their source.

ISAIAH GREEN
Founder and CEO, Green Bucket Compost

CUSTOMER STORY

Using mushrooms to decarbonize construction waste

According to the EPA, 11-13 million tons of asphalt shingles are added to landfills each year, where they take more than 300 years to break down. After seeing the large amount of waste generated from asphalt shingles at a nearby re-roofing project, Rubicon, proposed an innovative pilot program in partnership with Lendlease, Mycocycle, and Rockwood Sustainable Solutions. This pilot applied mycology, the use of mushrooms for bioremediation, to roof shingles to transform the shingles into material that can be reused.

Shingle samples were gathered and transported to Rockwood's facility, where Mycocycle mixed the sample with three strains of fungi, a process called mycoremediation. The fungi broke down complex carbons in the shingles, creating a renewable byproduct that can ideally be manufactured into new products—an excellent example of the circular economy.

Following the successful end of the pilot in 2022, the team is looking to expand. It is working with manufacturers across the building industry to encourage them to focus R&D efforts on using mycoremediation byproducts as replacements for virgin materials. This would reduce carbon emissions from the manufacture of building materials and make our supply chain more sustainable.

11-13M

ASPHALT SHINGLES ADDED TO LANDFILL ANNUALLY

300

YEARS TO BREAKDOWN

Our employees & communities

Rubicon's company culture centers on our shared commitment to eliminating waste in all its forms. We are passionate about our people, the heart of our company, and honored to show our gratitude by providing industry-leading benefits. The employees we attract and retain are committed to our mission and passionate about being good stewards to the planet and its people, and their successes are celebrated by all of us.

We hold high standards for ethics and professionalism. Upon hire, we provide all employees with copies of key policies, including our terms of employment, Code of Business Ethics and Conduct, and No Discrimination or Harassment Policy. Employees also have the option to anonymously report concerns through our Ethics hotline. This toll-free and online system is always available for employees to report their observations in real time and allows the company to respond and provide updates while maintaining the anonymity of the reporting employee. From day one, we ensure employees understand and embrace Rubicon's zero-tolerance policy for offensive, nonprofessional behavior.

COMPANY CULTURE AND PROGRAMS

Our company values are the touchstone of our culture. They include:

- **Impact:** We are on a mission to end waste. Our team is committed to creating a cleaner, healthier, and safer world for all.
- **Ownership:** We are dedicated to serving our customers, our communities, our shareholders, and our planet. Accountability to each of these constituents drives our work.
- **Excellence:** We are never satisfied with the status quo. Our team consistently seeks out ways to better serve our customers in the knowledge that each day provides an opportunity to improve.
- **Unity:** We are one team. Working together is the proven path to accomplishing our goals, and inclusivity, respect, and mutual support underpin everything we do at Rubicon.

We introduce prospective employees to our culture and values at the first interview and continue to emphasize our mission throughout their entire tenure at Rubicon. Employees' well-being is part of our foundation, and we regularly collect employee feedback to ensure continuous improvement.

In 2021 and 2022, we utilized our annual Great Places to Work engagement as our most formal method of employee engagement. Through the Trust Index© Survey that Great Place to Work® administers and their Great Place to Work Trust Model©, our 2022 results indicated that 86% of our employees say Rubicon is a great place to work, compared to 57 % of employees at a typical U.S.-based company.[23]

CREATING COHESION AND COMMUNITY IN A REMOTE-FIRST ENVIRONMENT

While we have been successful as a majority-remote workforce, we continue to seek ways to address the challenges—and enhance the opportunities—of remote collaboration. We are constantly seeking and tweaking ways to bring our people together for business, bonding, or both. Over the past two years, our regularly scheduled All Hands meetings have become a key engine for our culture and team cohesion. These meetings provide our team with the opportunity to gather regularly and learn about key developments across the company. We also bring in external experts to speak on employee health, well-being, and productivity.

We foster virtual connections through other company-hosted activities including our employee Affinity and Resource Groups, Friends from Work initiative, and local volunteerism efforts. At least monthly, Rubicon offers a virtual teambuilding event where employees can connect for activities such as bingo, trivia, painting, cooking, and planting succulents.

Our Remote Hire Resource Group provides a dedicated community for Rubicon staff who have always worked remotely and thus have limited opportunities to meet colleagues face-to-face. It provides opportunities to connect with colleagues across teams and provides a forum for questions, support, and fun.

EMPLOYEE DEVELOPMENT AND RECOGNITION

We recognize that training and development not only increases our capacity to adopt new technologies and increase efficiencies in processes but also increases job satisfaction and morale, along with helping us gain and retain the top talent that makes Rubicon the company it is today. In 2021, Rubicon launched a series of courses on personal development within Lessonly, our learning management system. These courses included an individual contributor track that offers courses on systems, software, and procedures as well as soft skills, such as communicating in a remote world and preparing for an interview. We also offered a manager track, which includes courses on how to lead in a remote environment, have a crucial conversation, and identify high-potential employees. In addition, we offered virtual seminars throughout the year on topics of financial wellness, physical wellness, and mental health.

With a distributed workforce, ensuring that our teams' accomplishments are recognized and celebrated is especially important. In 2021, we launched ICON, our employee rewards, and recognition platform. As an accompaniment to our intranet, RUBI, and our employee learning platform, Lessonly, ICON enables teams across the company to celebrate their colleagues' contributions by awarding points that can be used to claim rewards. ICON also offers access to company-provided discounts, health, and well-being resources and supports the commemoration of work anniversaries, birthdays, and other important milestones during the year. ICON has become a crucial component of our culture and helps reinforce team cohesion.

What our employees say

95%

BELIEVE WE HAVE SPECIAL AND UNIQUE BENEFITS

93%

SAY THAT PEOPLE ARE GIVEN A LOT OF RESPONSIBILITY

93%

FEEL GOOD ABOUT THE WAYS WE CONTRIBUTE TO THE COMMUNITY[24]

EMPLOYEE AWARDS

We also have several special awards that recognize Rubicon employees whose contributions and accomplishments reflect our values and reinforce our culture. Each award is named after a famous American, and over recent years, we have expanded the number of categories.

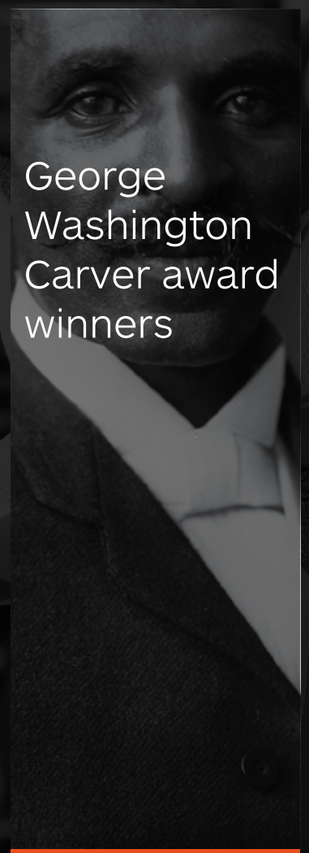
The George Washington Carver Award was our first, named after George Washington Carver (1864-1943), an agricultural chemist, experimenter, and inventor. By developing new products from peanuts, sweet potatoes, and soybeans, he helped revolutionize the agricultural economy of the South. For much of his career, Carver taught and conducted research at the Tuskegee Normal and Industrial Institute in Alabama. The Award went to Jordan Pilsch, Director of Key Account Management, in 2021 and Damla Meral, Key Accounts Manager, in 2022.

In 2021, we added two new awards: the Thomas Edison Award and the Clara Barton Award.

- Thomas Edison (1847-1931) was an American inventor and businessman often described as America's greatest inventor. He developed many devices in fields such as electric power generation, mass communication, sound recording, and motion pictures, including electric lights, the phonograph, and the fluoroscope. The inaugural winner of the Edison Award in 2021 was Aman Malhotra, Director of Product Development. Atta Hassan, Commercial Operations Manager, received the 2022 Award.
- Clara Barton (1821-1912) was an American nurse who founded the American Red Cross. She was a hospital nurse in the Civil War, a teacher, and a patent clerk. Since nursing education was not yet truly formalized, she did not attend nursing school, instead teaching herself the necessary skills and techniques. The inaugural winner of the Barton Award in 2021 was Ya Daba Njie, a coordinator on the Marketing Team. Makeda Guillory, Circular Economy Specialist, received the 2022 Award.

In 2022, we expanded our award program further with the Theodore Roosevelt Award. The 26th President of the United States, Theodore Roosevelt (1858-1919) is the youngest president in U.S. history, at just 42 years of age at the start of his presidency in 1901. Some of President Roosevelt's most noted achievements were in conservation: he significantly expanded national forests in the western United States, reserved lands for public use, and fostered great irrigation projects. The inaugural winner of the Roosevelt Award was Keith Brooks, Operations Manager on the Innovation and Hauler Management Team.

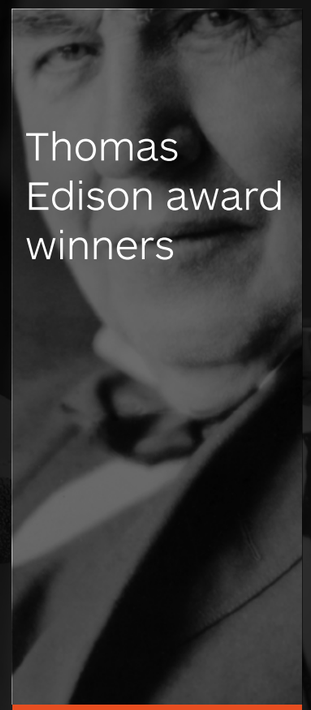
AWARD WINNERS



George Washington Carver award winners

2022
Damla Meral

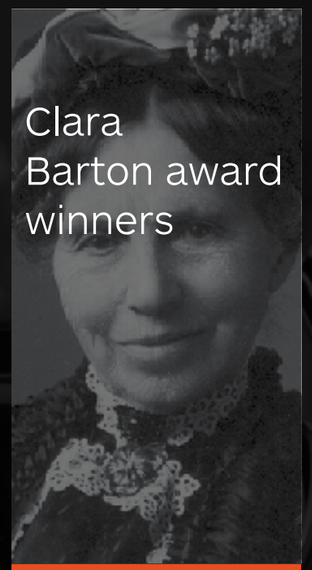
2021
Jordan Pilsch



Thomas Edison award winners

2022
Atta Hassan

2021
Aman Malhotra



Clara Barton award winners

2022
Makeda Guillory

2021
Ya Daba Njie

Diversity, Equity, and Inclusion (DEI)

Rubicon is committed to advancing diversity, equity, and inclusion in the workplace.

Our affinity groups play a vital role in bringing together employees who share identities and interests and supporting cohesion in our remote-first environment. We currently have six affinity groups: African American, Asian American and Pacific Islander (AAPI), Latin American and Caribbean, LGBTQ+, Veterans, and Women in Leadership, as well as the Parent Resource Group and the Remote Hire Resource Group.

We also continually review our employee benefits and programs to ensure they respond to the needs of our employees. As an example, we introduced an adoption leave program to ensure that we provided adoptive parents with the time to bond with their children and build their new family.

While providing an inclusive environment for our employees, we also focus on recruitment to draw from a broad array of talent. We post open positions to websites that are targeted to diverse audiences, such as veterans, racial and ethnic communities, and the LGBTQ+ community. Diversity in hiring not only reflects our commitment to our communities but also allows us to serve our diverse customers more effectively.

Inclusion also means ensuring that all employees have a voice with management. In 2022, we introduced ELT roundtables that invited employees to share their feedback and ideas with Rubicon's Executive Leadership Team, including CEO, Phil Rodoni. We also initiated a virtual "suggestion box" on RUBI, our intranet, to foster additional dialogue.

While the above demonstrates small strides to advance DEI at Rubicon, we recognize that this topic requires dedication and continual commitment to bring about meaningful change.

AFFINITY GROUPS

- African American
- Asian American and Pacific Islander (AAPI)
- Latin American and Caribbean
- LGBTQ+
- Veterans
- Women in Leadership

RESOURCE GROUPS

- Parent and Caregiver
- Remote Hire

COMMUNITY PARTNERS AND PROGRAMS

Given our dedication to corporate citizenship, Rubicon has a responsibility to not only tread lightly on our planet but also to educate and inspire others to do the same. We engage in a variety of programs designed to protect the environment, and we cultivate partnerships that allow us to amplify our message.

We have a wide range of memberships and sponsorships in organizations that serve diverse populations across ethnic and economic lines, such as United Way of Greater Atlanta, the American Red Cross Kentucky Region Chapter, and the African American Mayors Association. Through these partnerships, we demonstrate our ongoing commitment to underserved communities across the United States.

TRICK OR TRASH

Through our highly successful "Trick or Trash" Halloween recycling program, we educate the next generation on the importance of recycling. Created four years ago, Trick or Trash helps communities combat the abundance of trash that accompanies Halloween each year. Through the program, Rubicon provides custom candy wrapper recycling boxes to schools and retailers, so that they can help collect the wrappers of the more than 600 million pounds of candy purchased each year for Halloween—and direct those wrappers away from the landfill and into recycling. In 2022, 5,000 boxes—up from 2,000 boxes in 2021—were hosted in locations across every U.S. state, empowering communities big and small, urban and rural, to recycle, and inspiring them to explore more circular solutions year-round. We partnered with the National Wildlife Federation (NWF), g2 revolution, Mars, Inc., and Cox Enterprises to promote and manage Trick or Trash.

PARTNERS

NATIONAL WILDLIFE FEDERATION

Our partnership with NWF is now in its fourth year. In 2021 we began collaborating on Trick or Trash, joining forces in 2022 to expand the program to high schools and higher education institutions, significantly expanding its educational footprint and the number of participants. The program was also introduced to the NWF's Eco-Schools USA network and Earth Tomorrow program. Rubicon also worked with NWF on a recycling and circular economy curriculum. Our team of sustainability and circular economy experts created live and recorded video lessons, allowing us to reach more curious students in their classrooms.

The Campus Race to Zero Waste competition, another NWF initiative, has helped college campuses minimize waste and improve their recycling efforts since 2001. Rubicon is proud to serve as the official education partner for the 2022/2023 competition. We have provided expert insights on food waste, contamination, and recycling innovations through webinars and by sponsoring "game day" recycling activities and education opportunities at select events across ten campuses during the 2023 basketball season.

Although the COVID-19 pandemic reduced on-site campus activities during the 2021-2022 academic year, participants in the 2023 Campus Race to Zero Waste competition "donated, composted, and recycled 29.4 million pounds of waste, and kept more than 205 million plastic containers out of the landfill. In eight weeks, participants prevented the release of 29,108 metric tons of carbon dioxide equivalent into the atmosphere, which is equal to avoiding the annual emissions from 6,128 cars."[25]

ARBOR DAY FOUNDATION

Trees are crucial in helping address the critical issues our planet faces. They help slow climate change, filter our air and water, foster biodiversity, improve human health and wellbeing, and strengthen our communities. That's why, in partnership with the Arbor Day Foundation, Rubicon planted over 4,000 trees in 2022. Our strategic planting projects drive meaningful, measurable impact in the places that need it most, unlocking the unique power of trees for the people, animals, and ecosystems that depend on them.

As good neighbors, supporting the communities where we live and work is important to us. In 2022, our tree-planting efforts focused on the Cumberland Plateau, which stretches from West Virginia to Alabama and covers most of eastern Kentucky. The Plateau is a former surface mining site, which stripped the land of trees and soil and made it nearly impossible for the landscape to regenerate on its own. Restoring these forests has become a key conservation priority, and we were honored to support the Arbor Day Foundation's goal of planting more than 120,000 native trees across the Kentucky section of the Plateau.

In 2023, we are expanding our reach with the Arbor Day Foundation and planting trees in areas of need in California and North Carolina.

ADDITIONAL COMMUNITY HIGHLIGHTS

Rubicon supports our local communities through both giving and volunteering, supporting great nonprofits while providing employees with meaningful opportunities to give back.

- Over the past several years, we have taken part in the annual "Sweep the Hooch" event organized by the nonprofit Chattahoochee RiverKeeper. Our employees join upwards of 1,000 Atlanta area volunteers to collect trash and recyclables from 54 cleanup sites along the river.
- In New York City, Rubicon volunteers planted vegetables and weeded plant beds for GrowNYC, a nonprofit that improves the quality of life for residents through environmental programs
- We participated in the Blue Grass Community Foundation's Good Giving Challenge, matching giving dollar-for-dollar to sustainability-focused initiatives throughout the region, including Bluegrass Greensource, Bluegrass Land Conservancy, Central Kentucky Audubon Society, Kentucky Natural Lands Trust, Kentucky Resources Council, Organic Association of Kentucky, and Woods & Waters Land Trust.
- We supported USA Cares, a Louisville-based, national nonprofit that provides post-9/11 military veterans, service members, and their families with emergency financial assistance and skills training, and enjoyed bringing many of Rubicon's own veterans to celebrate at USA Cares' annual gala.
- We partnered with the Kentucky Law Enforcement Memorial Foundation in Richmond, Kentucky, which maintains the statewide monument listing every known fallen law enforcement officer in Kentucky's history and provides relief to officers and their families.

As our company footprint evolves, so too will our community involvement effort—reflecting our philosophy of supporting the communities where our employees live and work and the importance of local communities as company stakeholders.

Closing

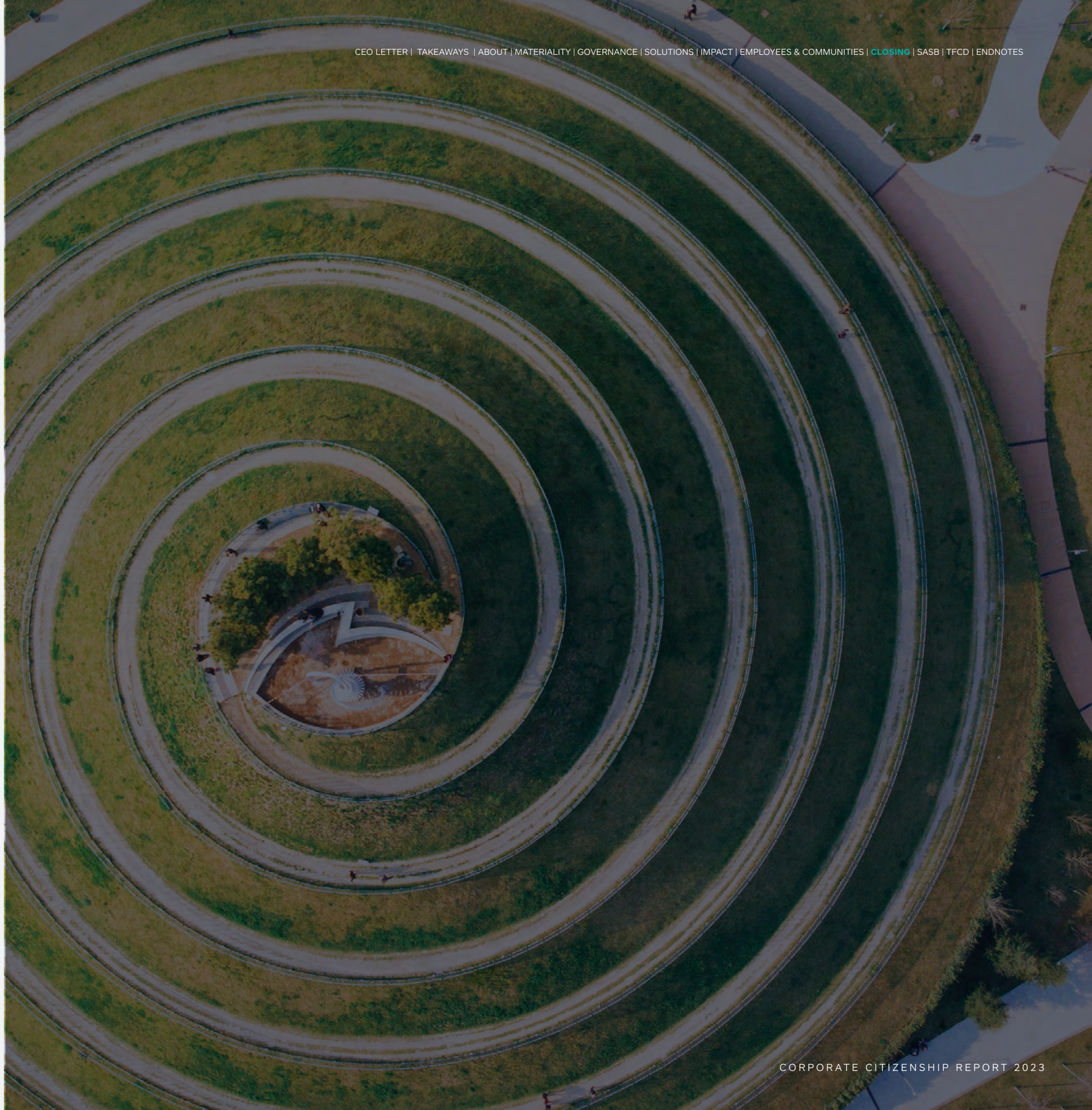
ABOUT THIS REPORT

This is the third annual Rubicon Corporate Citizenship Report.

This report focuses on the calendar years of 2021 and 2022 while including some previous sustainability data and content, along with forward-looking goals and aspirations. Please refer to our disclaimer regarding forward-looking statements on page [·] of this Report.

CONTACT INFORMATION

For any questions, comments, or feedback, please contact Rubicon's Sustainability Team at sustainability@rubicon.com



SASB summary table

Software and IT services

TOPIC	ACCOUNTING METRIC	CODE	RUBICON RESPONSE/SECTION & PAGE #
Environmental Footprint of Hardware Infrastructure	(1) Total energy consumed, (2) percentage grid electricity, (3) percentage renewable	TC-SI-130a.1	CY2022 (1) 1,159 MWh (2) 61.89% (3) 56.09% CY2021 (1) 975.0 MWh (2) 65.9% (3) 50%
	(1) Total water withdrawn, (2) total water consumed, percentage of each in regions with High or Extremely High Baseline Water Stress	TC-SI-130a.2	This is not a material topic for Rubicon and, therefore, not applicable.
	Discussion of the integration of environmental considerations into strategic planning for data center needs	TC-SI-130a.3	Lowering Environmental Impact: Emissions
Data Privacy & Freedom of Expression	Description of policies and practices relating to behavioral advertising and user privacy	TC-SI-220a.1	Transparent Management & Governance: Data Services & Security
	Number of users whose information is used for secondary purposes	TC-SI-220a.2	Rubicon outlines what information may be collected and shared for secondary purposes in our privacy policy. Note, the number of users changes regularly.
	Total amount of monetary losses as a result of legal proceedings associated with user privacy	TC-SI-220a.3	$0
	(1) Number of law enforcement requests for user information, (2) number of users whose information was requested, (3) percentage resulting in disclosure	TC-SI-220a.4	Zero

	List of countries where core products or services are subject to government-required monitoring, blocking, content filtering, or censoring	TC-SI-220a.5	Zero
Data Security	(1) Number of data breaches, (2) percentage involving personally identifiable information (PII), (3) number of users affected	TC-SI-230a.1	Zero
	Description of approach to identifying and addressing data security risks, including use of third-party cybersecurity standards	TC-SI-230a.2	Transparent Management & Governance: Data Services & Security
Recruiting & Managing a Global, Diverse & Skilled Workforce	Percentage of employees that are (1) foreign nationals and (2) located offshore	TC-SI-330a.1	CY 2022 (1) 7.6% (2) 1.4% CY 2021 (1) 8% (2) 0% Note: Employees classified as located offshore are through an Employer of Record (EOR) as Rubicon does not have international payroll or benefits capabilities for Germany or Greece where these employees reside.
	Employee engagement as a percentage	TC-SI-330a.2	Our Employees & Communities: Company Culture & Programs
	Percentage of gender and racial/ethnic group representation for (1) management, (2) technical staff, and (3) all other employees	TC-SI-330a.3	CY 2022 Gender (1) 44% female; 56% male (2) 21% female; 79% male (3) 78% female; 22% male Ethnicity (1) 73% white; 10% Asian; 11% Black or African American; 4% Hispanic or Latino; 2% Two or more races (2) 36% white; 52% Asian; 3% Black or African American; 6% Hispanic or Latino; 3% Two or more races (3) 59% white; 7% Asian; 23% Black or African American; 7% Hispanic or Latino; 1% Native Hawaiian or Other Pacific Islander; 3% Two or more races CY 2021 Gender (1) 41% female; 59% male (2) 47% female; 53% male (3) 64% female; 36% male Ethnicity (1) 60% white; 7% Asian; 15% Black or African American; 16% Hispanic or Latino; 2% Two or more races (2) 41% white; 25% Asian; 24% Black or African American; 6% Hispanic or Latino; 4% Two or more races (3) 49% white; 1% American Indian/Alaskan Native; 2% Asian; 34% Black or African American; 7% Hispanic or Latino; 7% Two or more races
Intellectual Property Protection & Competitive Behavior	Total amount of monetary losses as a result of legal proceedings associated with anticompetitive behavior regulations	TC-SI-520a.1	$0
Managing Systemic Risks from Technology Disruptions	Number of (1) performance issues and (2) service disruptions; (3) total customer downtime	TC-SI-550a.1	Zero
	Description of business continuity risks related to disruptions of operations	TC-SI-550a.2	Transparent Management & Governance: Data Services & Security

TCFD content index

THEME	RECOMMENDATION	REFERENCE
Governance Disclose the organization's governance around climate-related risks and opportunities.	a. Describe the Board's oversight of climate-related risks and opportunities.	Corporate Citizenship Report: Transparent Management & Governance: ESG Governance
	b. Describe management's role in assessing and managing climate related risks and opportunities.	Corporate Citizenship Report: Transparent Management & Governance: ESG Governance
Strategy Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy and financial planning where such information is material.	a. Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.	Corporate Citizenship Report: Lowering Environmental Impact: Taskforce on Climate-related Financial Disclosures (TCFD)
	b. Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.	Corporate Citizenship Report: Lowering Environmental Impact: Taskforce on Climate-related Financial Disclosures (TCFD)
	c. Describe the resilience of the organization's strategy, taking into consideration different climate related scenarios, including a 2°C or lower scenario.	Corporate Citizenship Report: Lowering Environmental Impact: Taskforce on Climate-related Financial Disclosures (TCFD)
Risk Management Disclose how the organization identifies, assesses and manages climate-related risks.	a. Describe the organization's process for identifying and assessing climate-related risks.	Corporate Citizenship Report: Transparent Management & Governance: ESG Governance; Lowering Environmental Impact: Taskforce on Climate-related Financial Disclosures (TCFD)
	b. Describe the organization's process for managing climate-related risks.	Corporate Citizenship Report: Transparent Management & Governance: ESG Governance; Lowering Environmental Impact: Taskforce on Climate-related Financial Disclosures (TCFD)
	c. Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management.	Corporate Citizenship Report: Transparent Management & Governance: ESG Governance; Lowering Environmental Impact: Taskforce on Climate-related Financial Disclosures (TCFD)
Metrics and targets Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.	a. Disclose the metrics used by the organization to assess climate related risks and opportunities in line with its strategy and risk management process.	Corporate Citizenship Report: Lowering Environmental Impact: Taskforce on Climate-related Financial Disclosures (TCFD)
	b. Disclose Scope 1, Scope 2 and, if appropriate, Scope 3 greenhouse gas (GHG) emissions and the related risks.	Corporate Citizenship Report: Lowering Environmental Impact: Emissions
	c. Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.	Corporate Citizenship Report: Lowering Environmental Impact: Emissions

Endnotes

1 Rubicon engaged Deloitte to conduct a refreshed ESG materiality assessment. Rubicon's materiality assessment was conducted in line with SASB and GRI frameworks; any references to "materiality" in this report are not meant to be references to SEC materiality and are separate from an SEC materiality assessment.

2 The materiality matrix featured is meant for SASB and GRI purposes only and is separate from SEC materiality.

3 https://www.rubicon.com/news/rubicon-enters-nationwide-technology-agreement-with-japanese-transportation-conglomerate-odakyu/

4 https://www.rubicon.com/news/rubicon-acquires-civix-routing-software-and-solutions-company/

5 https://www.rubicon.com/wp-content/uploads/RUBICONSmartCity-Case-Study-KCMO.pdf

6 Future benefits projections are significantly greater as the technology matures, adoption rates increase, and cities' ability to fully benefit from the technology's potential grows.

7 https://www.epa.gov/gmi/importance-methane#:~:text=Methane%20is%20more%20than%2025,due%20to%20human%2Drelated%20activities.

8 https://www.government-fleet.com/10160278/santa-fes-smart-technology-benefits-highlighted-in-docuseries

9 RUBICONSmartCity-AWS-Case-Study-Harrisonburg [37].pdf

10 https://www.epa.gov/gmi/importance-methane#:~:text=Methane%20is%20the%20second%20most,trapping%20heat%20in%20the%20atmosphere.

11 Rubicon used the World Resources Institute's Greenhouse Gas Protocol and operational approach to track our Scope 1, 2, and 3 emissions.

12 https://sciencebasedtargets.org/companies-taking-action#dashboard

13 https://www.theclimatepledge.com/us/en/Signatories

14 https://sustainability.aboutamazon.com/

15 Rubicon utilizes the World Resources Institute's Greenhouse Gas Protocol and operational approach to track the company's Scope 1, 2 and 3 emissions. Rubicon's Scope 1, 2, and selected 3 (upstream and downstream) emissions are verified by an independent party, annually. Rubicon's 2019, 2020 and 2021 greenhouse gas emissions data were verified by Stacks Data. Rubicon's 2022 greenhouse gas emissions data was verified by Cameron-Cole. The emissions verification is conducted in accordance with the ISO 14064-3 standard, to a limited level of assurance and consistent with the agreed verification scope, objectives, and criteria.

16 Rubicon engaged Agendi, a sustainability consulting group, to conduct a scenario analysis.

17 By running the analysis under the parameters detailed in this section, each site was assigned a value of "Low", "Medium", or "High" exposure to risk. Of the 20 sites assessed, 76% of scores were rated 'Low exposure' over long term, while 20% of scores were 'Medium exposure' and the remaining 4% were 'High exposure' under SSP5-8.5. Of the sites that received a score of 'Medium exposure', the hazard predominantly came from 'Heatwave' for 19 of the 20 locations. The 'High exposure' results were 'Cyclone' for a client site in Florida, and 'Sea Level Rise' for three areas of high employee density in New Jersey.

18 Determining the financial and strategic significance of climate-related risks involves evaluating the potential impacts of those risks on our overall business operations/viability. As with other (non-climate-related) risks, climate-related events might have consequences on any of a variety of aspects of our business, including our reputation, legal/compliance status, our ability to attract and retain talent, and our relationships with customers. In quantifying/rating the magnitude of potential impact of any climate-related risk event, Rubicon considers all relevant financial and strategic implications associated with that event. For CY2021, Rubicon's quantitative threshold for substantive financial and strategic impacts is 10% of our Adjusted Gross Profit. On an annualized basis, this amounts to approximately $5M.

19 https://www.ecycleclearinghouse.org/contentpage.aspx?pageid=10

20 https://www.epa.gov/smm-electronics/certified-electronics-recyclers

21 https://www.usda.gov/foodlossandwaste/why

22 https://www.feedingamerica.org/sites/default/files/2020-10/Brief_Local%20Impact_10.2020_0.pdf

23 https://www.greatplacetowork.com/certified-company/7005929

24 https://www.greatplacetowork.com/certified-company/7005929

25 https://www.nwf.org/Home/Latest-News/Press-Releases/2021/05-04-21-Campus-Race-To-Zero-Waste-2021