REPUBLIC® SERVICES

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Our Blue Planet®
2019 GRI Report

We work for Earth.®

Document References

Unless the context requires otherwise, all references in this 2019 GRI Report to "Republic," "the Company," "we," "us" and "our" refer to Republic Services, Inc. and its consolidated subsidiaries.

Coverage of the company's publicly available economic, governance, environmental and social indicators is for 100% of our business operations where data is available, unless otherwise noted.

Throughout this report, we make references to several publicly available documents. Below is a list of these documents and where they can be located.

Investor Relations Website

2019 10-K

2019 Proxy Statement

2020 Proxy Statement

2019 Sustainability Report

2019 SASB Report

Corporate Governance Guidelines

Code of Business Ethics & Conduct

Human Rights Policy

Political Contributions Policy

Management Development and Compensation Committee Charter

Nominating and Corporate Governance Committee Charter

Sustainability & Corporate Responsibility Committee Charter

Sustainability Website

[2019 Sustainability Report](#)

[2019 SASB Report](#)

[Environmental Policy](#)

[Safety Policy](#)

[Mecklenburg ISO 14001: 2015 Environmental Management System (EMS) Certification](#)

[2019 Greenhouse Gas Inventory Assurance Statement](#)

[2019 GRI Report (this report)](#)

About this Report

This report highlights the GRI General and Topic-Specific Standard disclosures relevant to our business. Although we report in accordance with the GRI Standards: Core Option, in many cases we provide disclosures and context that go beyond the requirements of Core to share additional insights into our sustainability performance. The Core Topic-Specific Standards are indicated in tier 1 of our Materiality Matrix in disclosure 102-47 List of relevant sustainability topics.

Disclosure Regarding Forward-Looking Statements

This report contains certain forward-looking information about us that is intended to be covered by the safe harbor for "forward-looking statements" provided by the Private Securities Litigation Reform Act of 1995. Forward-looking statements are statements that are not historical facts. Words such as "guidance," "expect," "will," "may," "anticipate," "plan," "estimate," "project," "intend," "should," "can," "likely," "could," "outlook" and similar expressions are intended to identify forward-looking statements. These statements include information about our sustainability targets, goals and programs in addition to our plans, strategies, expectations of future financial performance and prospects. Forward-looking statements are not guarantees of performance. You should not place undue reliance on any forward-looking statement. These statements are based upon the current beliefs and expectations of our management and are subject to significant risk and uncertainties that could cause actual results to differ materially from those expressed in, or implied or projected by, the forward-looking information and statements. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot assure you that the expectations will prove to be correct. The inclusion of information in this report should not be construed as a characterization regarding the materiality or financial impact of that information. More information on factors that could cause actual results or events to differ materially from those anticipated is included from time to time in our reports filed with the Securities and Exchange Commission, including our Annual Report on Form 10-K for the year ended December 31, 2019, particularly under Part I, Item 1A - Risk Factors, and in our Quarterly Reports on Form 10-Q. Additionally, new risk factors emerge from time to time and it is not possible for us to predict all such risk factors, or to assess the impact such risk factors might have on our business or sustainability programs and goals. We undertake no obligation to update publicly any forward-looking statements whether as a result of new information, future events or otherwise, except as required by law.

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GRI Content Index

GRI 102: General Disclosures

Organizational Profile

General Disclosures	Description	SASB Reference	Cross-Reference / Direct Answer
102-1	Name of the organization		Republic Services, Inc.
102-2	Activities, brands, products, and services		Item 1, page 2 2019 10-K
102-3	Location of headquarters		18500 North Allied Way Phoenix, AZ 85054
102-4	Location of operations		Disclosure 102-2 Activities, brands, products, and services
102-5	Ownership and legal form		Cover page 2019 10-K
102-6	Markets served		Item 7, page 30 2019 10-K
102-7	Scale of the organization	IF-WM-000.B IF-WM-000.C IF-WM-000.D	Disclosure 102-7 Scale of the organization
102-8	Information on employees and other workers		More than 99% of our workers are full-time employees
102-9	Supply chain		Item 1, pages 9-11 2019 10-K
102-10	Significant changes to the organization and its supply chain		Item 1, pages 3-4 and 9-11; Item 7, pages 33-40; and Item 8, pages 80-82 2019 10-K
102-11	Precautionary Principle or approach		Disclosure 102-11 Precautionary Principle or approach
102-12	External initiatives		Disclosure 102-12 External initiatives
102-13	Membership of associations		Disclosure 102-13 Membership of associations

Strategy

General Disclosures	Description	SASB Reference	Cross-Reference / Direct Answer
102-14	Statement from senior decision-maker		Page 3 2019 Sustainability Report – Message from Don Slager, CEO
102-15	Key impacts, risks, and opportunities		Disclosure 102-15 Key impacts, risks, and opportunities

Ethics and Integrity

General Disclosures	Description	SASB Reference	Cross-Reference / Direct Answer
102-16	Values, principles, standards, and norms of behavior		Ethics and Integrity discussion and Code of Business Ethics & Conduct
102-17	Mechanisms for advice and concerns about ethics		Code of Business Ethics & Conduct

Governance

General Disclosures	Description	SASB Reference	Cross-Reference / Direct Answer
102-18	Governance structure		Governance discussion; Sustainability & Corporate Responsibility Committee Charter; and Pages 32-37 2020 Proxy Statement
102-19	Delegating authority		Pages 29-37 2020 Proxy Statement and Sustainability & Corporate Responsibility Committee Charter
102-20	Executive-level responsibility for economic, environmental, and social topics		Pages 32-34 and 37 2020 Proxy Statement and Sustainability & Corporate Responsibility Committee Charter
102-21	Consulting stakeholders on economic, environmental, and social topics		Disclosure 102-15 Key impacts, risks, and opportunities and Page 24 2020 Proxy Statement
102-22	Composition of the highest governance body and its committees		Pages 12-13 and 18-28 2020 Proxy Statement
102-23	Chair of the highest governance body		Page 29 2020 Proxy Statement

102-24	Nominating and selecting the highest governance body		Page 28 2020 Proxy Statement
102-25	Conflicts of interest		Code of Business Ethics & Conduct; Nominating and Corporate Governance Committee Charter; and Corporate Governance Guidelines
102-26	Role of highest governance body in setting purpose, values, and strategy		Sustainability & Corporate Responsibility Committee Charter and Pages 11, 29-30, and 32-37 2020 Proxy Statement
102-27	Collective knowledge of highest governance body		Page 26 2020 Proxy Statement and Sustainability & Corporate Responsibility Committee Charter
102-28	Evaluating the highest governance body's performance		Corporate Governance Guidelines and Pages 26-27 2020 Proxy Statement
102-29	Identifying and managing economic, environmental, and social impacts		Disclosure 102-15 Key impacts, risks, and opportunities and individual relevant topic disclosures for management approaches
102-30	Effectiveness of risk management processes		Disclosure 102-15 Key impacts, risks, and opportunities and Sustainability & Corporate Responsibility Committee Charter
102-31	Review of economic, environmental, and social topics		Disclosure 102-15 Key impacts, risks, and opportunities and Sustainability & Corporate Responsibility Committee Charter
102-32	Highest governance body's role in sustainability reporting		Sustainability & Corporate Responsibility Committee Charter
102-33	Communicating critical concerns		Disclosure 102-15 Key impacts, risks, and opportunities and Sustainability & Corporate Responsibility Committee Charter
102-34	Nature and total number of critical concerns		Disclosure 102-15 Key impacts, risks, and opportunities and Sustainability & Corporate Responsibility Committee Charter

			Pages 38 and 54-69 2020 Proxy
102-35	Remuneration policies		Statement
102-36	Process for determining remuneration		Management Development and Compensation Committee Charter
102-37	Stakeholders' involvement in remuneration		Page 56 2020 Proxy Statement
102-38	Annual total compensation ratio		Page 84 2020 Proxy Statement
102-39	Percentage increase in annual total compensation ratio		Page 79 2019 Proxy Statement

Stakeholder Engagement

General Disclosures	Description	SASB Reference	Cross-Reference / Direct Answer
102-40	List of stakeholder groups		Disclosure 102-15 Key impacts, risks, and opportunities
102-41	Collective bargaining agreements	IF-WM-310a.1 IF-WM-310a.2	Item 1A, page 23 2019 10-K and page 2 Human Rights policy
102-42	Identifying and selecting stakeholders		Disclosure 102-15 Key impacts, risks, and opportunities
102-43	Approach to stakeholder engagement		Disclosure 102-15 Key impacts, risks, and opportunities
102-44	Key topics and concerns raised		Disclosure 102-15 Key impacts, risks, and opportunities

Reporting Practices

General Disclosures	Description	SASB Reference	Cross-Reference / Direct Answer
102-45	Entities included in the consolidated financial statements		Item 8, page 67 and Exhibit 21.1 2019 10-K
102-46	Defining report content and topic Boundaries		Disclosure 102-46 Defining report content and topic Boundaries
102-47	List of relevant sustainability topics		Disclosure 102-15 Key impacts, risks, and opportunities
102-48	Restatements of information		Disclosure 102-48 Restatements of information
102-49	Changes in reporting		Disclosure 102-49 Changes in reporting
102-50	Reporting period		2019 calendar year unless otherwise stated

102-51	Date of most recent report		June, 2018
102-52	Reporting cycle		We issue our GRI report on an annual basis
102-53	Contact point for questions regarding the report		Jamie Bohan at jbohan@republicservices.com
102-54	Claims of reporting in accordance with the GRI Standards		This report has been prepared in accordance with the GRI Standards: **Core option**
102-55	GRI content index		Disclosure 102-55 GRI content index
102-56	External assurance		Disclosure 102-56 External assurance

Sustainability Strategy

General Disclosures	Description	SASB Reference	Cross-Reference / Direct Answer
	Blue Planet® 2030 Sustainability Goals and alignment with UN Sustainable Development Goals (SDG)		Our Strategic Goals

Topic Specific Standards

GRI 200: Economic Topics

GRI 201: Economic Performance

General Disclosures	Description	SASB Reference	Cross-Reference / Direct Answer
103-1,2,3	Management approach		2019 10-K
201-2	Financial implications and other risks and opportunities due to climate change		Disclosure 201-2 Financial implications and other risks and opportunities due to climate change
201-3	Defined benefit plan obligations and other retirement plans		Pages 98-102 2019 10-K

GRI 205: Anti-Corruption

General Disclosures	Description	SASB Reference	Cross-Reference / Direct Answer
103-1,2,3	Management approach		Disclosure 103-1,2,3 Management approach
205-3	Confirmed incidents of corruption and actions taken		Disclosure 205-3 Confirmed incidents of corruption and actions taken

GRI 300: Environmental Topics

GRI 301: Materials

General Disclosures	Description	SASB Reference	Cross-Reference / Direct Answer
103-1,2,3	Management approach		Disclosure 103-1,2,3 Management approach
301-4	Materials returned to the economy (recycling)	IF-WM-420a.2 IF-WM-420a.3 IF-WM-420a.4	Disclosure 301-4 Materials returned to the economy (recycling)
301-5	Biogas beneficial reuse	IF-WM-110a.2	Disclosure 301-5 Biogas beneficial reuse

GRI 302: Energy

General Disclosures	Description	SASB Reference	Cross-Reference / Direct Answer
103-1,2,3	Management approach		Disclosure 103-1,2,3 Management approach
302-1	Energy consumption within the organization	IF-WM-110b.1	Disclosure 302-1 Energy consumption within the organization
302-2	Energy consumption outside of the organization		Disclosure 302-2 Energy consumption outside of the organization
302-3	Energy intensity		Disclosure 302-3 Energy intensity
302-4	Reduction of energy consumption	IF-WM-110b.2	Disclosure 302-4 Reduction of energy consumption

GRI 305: Emissions

General Disclosures	Description	SASB Reference	Cross-Reference / Direct Answer
103-1,2,3	Management approach		Disclosure 103-1,2,3 Management approach
305-1	Direct (Scope 1) GHG emissions	IF-WM-110a.1	Disclosure 305-1 Direct (Scope 1) GHG emissions
305-2	Energy indirect (Scope 2) GHG emissions		Disclosure 305-2 Energy indirect (Scope 2) GHG emissions
305-3	Other indirect (Scope 3) GHG emissions		Disclosure 305-3 Other indirect (Scope 3) GHG emissions
305-4	GHG emissions intensity		Disclosure 305-4 GHG emissions intensity
305-5	Reduction of GHG emissions	IF-WM-110a.3	Disclosure 305-5 Reduction of GHG emissions
305-7	Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions	IF-WM-120a.1	Disclosure 305-7 Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions

GRI 306: Effluents and Waste

General Disclosures	Description	SASB Reference	Cross-Reference / Direct Answer
103-1,2,3	Management approach		Disclosure 103-1,2,3 Management approach
306-1	Water discharge by quality and destination	IF-WM-150a.1 RSG-ML-02	Disclosure 306-1 Water discharge by quality and destination

GRI 307: Environmental Compliance

General Disclosures	Description	SASB Reference	Cross-Reference / Direct Answer
103-1,2,3	Management approach		Disclosure 103-1,2,3 Management approach
307-1	Non-compliance with environmental laws and regulations – air and odors	IF-WM-120a.3 RSG-AQ-01	RSG-AQ-01 2019 SASB Report
307-1	Non-compliance with environmental laws and regulations – leachate, water, and hazardous waste	IF-WM-150a.3 RSG-ML-01	RSG-ML-01 2019 SASB Report

GRI 400: Social Topics

GRI 401: Employment

General Disclosures	Description	SASB Reference	Cross-Reference / Direct Answer
103-1,2,3	Management approach		Disclosure 103-1,2,3 Management approach
401-1	New employee hires and employee turnover		Disclosure 401-1 New employee hires and employee turnover

GRI 403: Occupational Health and Safety

General Disclosures	Description	SASB Reference	Cross-Reference / Direct Answer
103-1,2,3	Management approach		Disclosure 103-1,2,3 Management approach
403-1	Occupational health and safety management system		Disclosure 403-1 Occupational health and safety management system
403-2	Hazard identification, risk assessment, and incident investigation		Disclosure 403-2 Hazard identification, risk assessment, and incident investigation
403-5	Worker training on occupational health and safety		Disclosure 403-5 Worker training on occupational health and safety
403-9	Work-related injuries	IF-WM-320a.1 IF-WM-320a.2 IF-WM-320a.3	Disclosure 403-9 Work-related injuries

GRI 404: Training and Education

General Disclosures	Description	SASB Reference	Cross-Reference / Direct Answer
404-1	Average hours of training per year per employee		Disclosure 404-1 Average hours of training per year per employee

GRI 405: Diversity and Equal Opportunity

General Disclosures	Description	SASB Reference	Cross-Reference / Direct Answer
103-1,2,3	Management approach		Disclosure 103-1,2,3 Management approach
405-1	Diversity of governance bodies and employees		Disclosure 405-1 Diversity of governance bodies and employees

GRI 413: Local Communities

General Disclosures	Description	SASB Reference	Cross-Reference / Direct Answer
103-1,2,3	Management approach		Disclosure 103-1,2,3 Management approach
413-1	Operations with local community engagement, impact assessments, and development programs	IF-WM-120a.2	Disclosure 413-1 Operations with local community engagement, impact assessments, and development programs

GRI 415: Public Policy

General Disclosures	Description	SASB Reference	Cross-Reference / Direct Answer
103-1,2,3	Management approach		Disclosure 103-1,2,3 Management approach
415-1	Political contributions		Disclosure 415-1 Political contributions

General Disclosures

Organizational Profile

102-7	Scale of the organization	
Total Number of Employees	36,000 employees as of December 31, 2019; Refer to Item 1, page 4 of our 2019 10-K for more information.
Total Number of Operations	See Disclosure 102-2 – Activities, brands, products, and services.
Net Revenues	Refer to Item 8, page 63 of our 2019 10-K for more information.
Quantity of Products or Services Provided	Refer to Item 1, pages 9-11 of our 2019 10-K for more information.

102-11	Precautionary Principle or approach

Consistent with the precautionary principle, we advocate a risk-based approach to our operations through our enterprise risk management process, as described in Disclosure 102-30 Effectiveness of risk management processes.

102-12	External initiatives

We leverage the following best practice standards, guidelines and frameworks when developing our own sustainability strategy and associated policies and practices:

- Global Reporting Initiative (GRI),
- UN Sustainable Development Goals (UN SDGs),
- Science Based Target Initiative (SBTi),
- CDP,
- Climate Disclosure Standards Board (CDSB),
- Sustainability Accounting Standards Board (SASB),
- Task Force on Climate Related Financial Disclosures (TCFD),
- International Integrated Reporting Council (IIRC),
- International Organization for Standardization (ISO).

Republic has also joined several coalitions and committees to impact third-party distracted driving. We believe that as the operator of the eighth largest vocational fleet in the country,

we play a large part in influencing safe driving practices. See [403 Occupational Health and Safety](#) in this year's report for more details.

102-13	Membership of associations

- National Waste & Recycling Association (NW&RA)
- Institute of Scrap Recycling Industries (ISRI)
- Environmental Research and Education Foundation (EREF)
- Several other national, state and local organizations both governmental and non-governmental

Strategy

102-15	Key impacts, risks, and opportunities

Sustainability Materiality Assessment Process (also applies to [102-29 Identifying and managing economic, environmental and social impacts](#))

In 2014, Republic conducted a materiality assessment to identify and prioritize our sustainability impacts, risks and opportunities and to understand the needs and expectations of our key stakeholders. Subsequent to this exercise, the parameters of our sustainability program were established based on a strategic assessment of the issues of greatest impact to our business strategy, relevance to our stakeholders and the ability to make a positive impact within the communities that we serve. We initiated an update to the 2014 materiality exercise in late 2017, through the first half of 2018. In between the two formal assessment processes, Republic also continued to evaluate its most relevant sustainability issues through the ongoing engagement of internal and external stakeholders against sustainability mega-trends.

Our formal sustainability-specific materiality assessment aims to:

- Gather input on critical risk and opportunity drivers and sustainability issues across our business
- Evaluate the nature of specific impacts and our ability to affect those issues both directly and indirectly
- Provide context and review prioritized drivers for transparency and disclosure of sustainability risks and opportunities
- Identify gaps in our risk and opportunity assessment to inform our materiality-assessment process in subsequent years
- Suggest actions to enhance sustainability and corporate programs as well as improve our transparency and effectiveness in reporting

Together, the topics identified and prioritized through our materiality assessment process make up the foundation of our sustainability program, called Blue Planet®. This program is based on five foundational elements that inform our sustainability efforts and around which we align our sustainability reporting:

SAFETY
Nothing is more important than safety. The nature of our business model requires us to be uncompromising on safety. A sustainable planet is only possible if everyone works and lives together...safely.

PEOPLE
We believe an engaged and diverse workforce is the greatest indicator of our success. Our people make Republic a preferred place to work and help our communities to be strong and vibrant.

OPERATIONS
With one of the largest fleets in the nation and more than 5 million pickups per day, we know it's important for us to continuously leverage technology to reduce emissions while increasing efficiency.

MATERIALS MANAGEMENT
Our experience, passion and ethical standards drive us to do more, solve more, innovate more and turn waste into solutions that deliver a valuable product or service while also protecting our planet.

COMMUNITIES
Investing in the communities where we live and work is important to us. We provide financial support, volunteer our time and provide in-kind donations to help our communities thrive.

All of our sustainability topics are organized under one of these five elements. Understanding and prioritizing the topics that matter most to our stakeholders and our business enables us to address the right topics in our sustainability strategy and guide communication on these topics.

Materiality Assessment Process

Our materiality assessment process includes issue identification, stakeholder mapping, prioritization of sustainability issues and final analysis, resulting in our materiality map.

Issue Identification	Stakeholder Mapping	Prioritization	Analysis & Matrix	Gap Analysis & Strategy	Validation
Developed initial list of potential sustainability aspects for consideration. List was generated through discussions with internal and external experts, and research on relevant industry standards (e.g. GRI, SASB) and emerging trends and issues.	Identified and prioritized key internal and external stakeholders. Stakeholders were prioritized according to the nature of their relationship, knowledge of the business, knowledge of key risks and opportunities, and their interest and influence on the organization.	Stakeholder surveys and interviews to gather information and prioritize issues. In 2017, interviews were conducted with internal and external stakeholders. We also sent a survey to 65 Republic managers and 22,000 external stakeholders.	Analysis of interview results and survey outputs. Key outputs included a list of significant impacts and aspects, and stakeholder perspectives, needs and expectations related to those topics.	Gap analysis to help determine strategy and action plan for significant impacts and aspects. Understand current strengths and weaknesses, and compare stakeholder perspectives with objective data and information.	Validate results of materiality assessment and planned responses / actions with key internal stakeholders.

Issue Identification

Potential sustainability topics are identified through the following activities:

1. The 2014 stakeholder engagement process and cumulative input from stakeholders since that time, including our updated 2017/2018 stakeholder survey.
2. A value chain and business model mapping exercise, leveraging the International Integrated Reporting Council (IIRC) methodology for assessing dependencies on, and impacts to, the five capitals beyond financial, which include natural, human, intellectual, social, and manufactured capital.
3. Monitoring of sustainability guidelines and standards that have the potential to impact our business and our stakeholders' assessment of our business. These include the Sustainability Accounting Standards Board (SASB) guidelines which identify potentially material sustainability topics for each industry, the Sustainable Development Goals (SDGs), the most recent Global Reporting Initiative (GRI) standards, etc.
4. Assessment of global sustainability trends as identified through various channels, such as the World Economic Forum (WEF) Global Risk Reports, sustainability ratings benchmarks like the S&P SAM Corporate Sustainability Assessment (CSA), various conferences and consultancies, etc.

Stakeholder Mapping (also applies to 102-21 Consulting stakeholders on ESG topics)

The stakeholder engagement process we undertook, as part of our overall materiality assessment and updated for our next generation sustainability program, references the guidance provided in GRI 101: Foundation Standard (2016).

102-40 List of stakeholder groups

The stakeholder outreach we conducted in 2017-2018 was significantly broader than in 2014. We reached out to over 20,000 external stakeholders and close to 65 internal managers at Republic and invited them to participate in a web-based survey of 30 potential economic,

environmental and social topics. We also conducted one-on-one interviews with select stakeholders. In addition to our internal employees, the external stakeholder groups included:

- Customers
- Municipal
- Commercial
- Residential
- Industrial

- Supply chain partners
- Community representatives
- Non-governmental organizations
- Governmental organizations
- Thought leaders

102-42 Basis for identifying and selecting stakeholders

The stakeholder groups were chosen based on the constituents that are most prevalent across our value chain. The goal was to ensure that key stakeholder types had an opportunity to participate in the engagement process and to obtain a diverse set of perspectives to inform the assessment.

Specific contacts were selected at random, where possible, using internal databases and account lists. Others were curated based on personal contacts and recommendations. We did not shy away from our more vocal stakeholders, yet we also made sure to include those that may not have felt they previously had a voice.

102-43 Approach to stakeholder engagement

Digital survey participants were asked to respond to the following:

- The importance of sustainability to participant / their organization
- Rate list of 30 sustainability topics in terms of significance (Low Significance/Medium Significance/High Significance/I Don't Know), and insights into why any topics were ranked as "High Significance"
- Rate how well each sustainability topic is currently being addressed by Republic (Not Addressed/Somewhat Addressed/Fully Addressed and Effective/I Don't Know)

We developed an interactive dashboard to help visualize, analyze, and make sense of the magnitude of data we were able to collect from stakeholders on how they would prioritize each of the sustainability topics in the survey for our business and their perception of our performance on those topics.

One-on-one interview participants were also asked to rate the sustainability topics presented in the digital survey. We then engaged in dialogue to better understand the reasoning and rationale driving their ranking and explored their insights on the top issues. These discussions helped to illuminate stakeholder perceptions, as well as, drivers and emerging trends.

In addition to the digital survey and one-on-one interviews, we conduct the following on-going stakeholder engagement activities which complement the approach described above:

Employees

- Employee Engagement Survey: Through an annual employee engagement survey, an open-door policy, and our human capital development programs, we listen to our employees, show them we care, and most importantly, demonstrate our commitment to making Republic a great place to work for everyone. See [401-1 New employee hires and employee turnover](#) for more information on our employee engagement scores. By completing our annual Republic Listens employee engagement survey, employees are able to provide valuable insight that allows us to take action on the things that matter most to them. The survey is administered by Willis Towers Watson, an outside vendor that specializes in employee surveys and research. They develop the survey questions and compile the results while ensuring that responses stay confidential. Employees can participate in the survey either online or on paper at their location. The results are shared throughout the Company, allowing leaders the opportunity to see and understand them. Each department and Business Unit is responsible for discussing the results, as well as developing and executing action plans, with their teams. Broader companywide findings are addressed by our Human Resources teams, executives and the appropriate leaders.
- Market Planning Process: In this local and asset level review, leaders are looking at the current and potential list of assets, competitive threats, strengths and weaknesses, risks and opportunities, growth plans, regulatory and legislative changes, and other key local market factors. In order to validate the assessment at the local and asset level, we engage employees to identify relevant sustainability issues that are either potential risks or opportunities to the business.

Customers

We listen to our customers on a daily basis and respond, as well as, anticipate their wants and needs through dedicated account management teams. In addition to our daily interactions, we employ the following strategies to inform customer-specific risks and opportunities:

- Directly engage with our customers on the topic of what issues are most important to them and how Republic can contribute to a positive impact. We make on average 5 million pickups per day across the United States. These range from multi-national companies with multiple sites across the U.S., to "mom and pop" local businesses; from large municipalities representing millions of residents to single, rural homeowners. Each and every customer can contact Republic with feedback through various publicly available

communication channels. In addition, we proactively seek input directly through our sales and customer service channels.

- Actively participate in industry organizations, including the National Waste & Recycling Association, Institute of Scrap Recycling Industries, Environmental Research and Education Foundation, and many, many other national, state and local organizations both governmental and non-governmental.
- Solicit feedback and reflection through focused interviews with select customers to hear their perspective on key sustainability issues for Republic.

Communities, Municipalities, and Organizations

We're committed to each and every community we serve, and that commitment is strengthened through our partnerships with local municipalities serving the interests of their communities. We are able to enhance our understanding of both local and global trends impacting our business, customers and communities around the world through these partnerships and programs. As a part of our materiality assessment process, we actively engaged with a selection of relevant municipalities to better inform the assessment of our company's risks and opportunities related to society and sustainability at-large. The viewpoints of the municipalities with which we spoke ranged from the most environmentally progressive cities in the world to those with severe economic, environmental and social challenges.

We also reach out to non-governmental organizations (NGOs) who often are leading the charge with scientific expertise on various sustainability issues. It is important to us to understand these issues with the broader lens that NGOs typically represent, as well as the deep dive that they are able to offer. We look to partner with NGOs where interests align.

Investment Community

We have developed a broad shareholder engagement program that provides us with valuable insight and feedback from shareholders throughout the year. During 2019, we engaged directly with shareholders representing approximately 53% of shares outstanding as well as one proxy advisor. During these meetings, we discussed Republic's business strategy, financial performance, new sustainability goals, and human capital management, as well as our governance practices and executive compensation program. The feedback we receive is shared with the Board and considered during deliberations, particularly with regard to Board governance, compensation and sustainability practices. For more information, please see our [2020 Proxy Statement](#).

In addition to this focused outreach, Republic monitors the "Integrated Reporting" movement, which includes standards and recommendations from SASB, Task Force on Climate Related

Financial Disclosures (TCFD), Climate Disclosure Standards Board (CDSB), Integrated International Reporting Council (IIRC) and others. Not only do these bodies provide insights on what investors are seeking in terms of how to disclose, but they also contain insights on what to disclose. In some cases, as with SASB, the stakeholders included in the process align closely with Republic's stakeholders and thus provide a robust source of materiality inputs. Given the maturing nature of this trend, we have begun implementation of various relevant aspects of these guidelines/ standards. We anticipate that this will be a multi-year effort to determine how/ what to adopt, where to disclose, and to develop data integrity and controls for any additional sustainability disclosures that may be integrated with current SEC reporting documents.

Supply Chain Partners

We believe it's important to engage with our supply chain partners both downstream and upstream from our company. This helps us to better understand risks and opportunities to us and our stakeholders as a result of the actions of others. It also provides us with an opportunity to influence and educate our partners where we see gaps in sustainability activities. Where possible or needed, we engage with our supply chain partners to mitigate risks, take advantage of opportunities and/or strengthen our partnerships.

Broader Society

In 2015, the United Nations General Assembly set a collection of global goals for the year 2030. These are known as Sustainable Development Goals (SDGs), and they are designed to meet the urgent environmental, political and economic challenges facing our world. We took these goals into account as we evaluated our risks and opportunities.

102-44 Key topics per stakeholder group

Survey and one-on-one interview respondents were asked to rank potential sustainability topics as outlined above. Responses were tracked by stakeholder groups, with finer breakdowns amongst customer types in the commercial and industrial categories. Topics that are considered most relevant in our findings were generally amongst the top choices by all stakeholder groups. The primary differences were found in the medium and low priority topics. Our approach to address the results of our stakeholder engagement process is described below.

Prioritization Process

Results of the updated stakeholder engagement survey formed the starting point for the materiality assessment. External stakeholder rankings of topic significance were mapped against internal stakeholder/ business assessment of significant sustainability impacts. The IIRC capitals analysis, SASB topics, and global trend implications that were conducted in the

beginning of the process, were then layered back onto the stakeholder ranked topics. This resulted in a three-tier stratification and approach to the 30 potential sustainability topics.

Materiality Map

102-47 List of relevant sustainability topics (also applies to 102-31 Review of economic, environmental and social topics, 102-33 Communicating critical concerns, and 102-34 Nature and total number of critical concerns)

Our materiality assessment process resulted in a suite of sustainability topics of significance to Republic. All topics listed in our materiality diagram below are deemed to be important to Republic and include impacts within and outside our organization.

Republic's Significant Sustainability Topics

	SAFETY	PEOPLE	OPERATIONS	MATIERALS MANAGEMENT	COMMUNITIES
Tier 1	• Fatalities • Safety (GRI 403) 8 DECENT WORK AND ECONOMIC GROWTH	• Employee Engagement (GRI 401) 8 DECENT WORK AND ECONOMIC GROWTH	• GHG Emissions (GRI 305) 13 CLIMATE ACTION	• Recycling • Biogas Capture and Reuse (GRI 301) 12 RESPONSIBLE CONSUMPTION AND PRODUCTION	• Healthy Communities (GRI 413) 11 SUSTAINABLE CITIES AND COMMUNITIES
Tier 2		• Employee Relations	• Fuel Usage (Energy) • Air Emissions • Leachate Handling • Compliance		• Ethics/Breaches • Political Contributions • Facility Siting
Tier 3		• Diversity • Training • Wellness • Recruitment • Retention • Compensation • Benefits	• Water Use • Materials Used in Operations • Waste Generated • Supply Chain • Groundwater		• Physical & Cyber Security • Community Resilience

Tier 1 – these topics ranked the highest in our materiality assessment. Each of these topics has a new public goal to demonstrate our commitment to reduce these risks and/ or develop these opportunities. We also provide full disclosure on the management practices associated with these topics and our plans for reducing these impacts. Each of these topics are aligned with a Sustainable Development Goal (SDG), as well. These topics are detailed in the topic-specific section of this GRI report.

Tier 2 – these topics ranked slightly lower in our materiality assessment. These topics do not currently have public goals associated with them, however, we do provide performance data and/or management approaches for these topics in this report and/or our 2019 Sustainability Accounting Standards Board (SASB) Report.

Tier 3 – these topics ranked lowest in our assessment. We will continue to manage these topics internally and will look to provide disclosures on our management approach in the future, primarily for the purpose of educating our stakeholders on our efforts in these areas.

We anticipate the general sustainability materiality assessment process to be an ongoing initiative that stays current with emerging broader sustainability trends and the ongoing growth and evolution of our company.

102-30 Effectiveness of risk management processes

Enterprise risks and opportunities are managed through our Enterprise Risk Management (ERM) function, which includes involvement of key managers throughout the business, our leadership team and our Board of Directors. For more about the Board's involvement in risk management, see our 2020 Proxy Statement, pages 29-30. The ERM register is populated with risks and opportunities from across the business, including those related to sustainability (environmental, social and governance) topics. Aggregated risks and opportunities are then assessed and prioritized based on their impact to the strategy and organization. Finally, the outcome of the ongoing ERM process is provided to the Senior Leadership team as inputs to strategy development and to ensure the resilience of our strategy with respect to long-term value creation objectives. The most significant business risks and opportunities are reported publicly through our annual 2019 10-K.

Many topics that impact our business, such as fuel and electricity consumption, emissions from our fleet, and emissions from our landfills, are directly linked to the environment and climate change. Many other topics, such as safety, employee engagement, and community health are directly linked to broader social and governance challenges in the communities we serve. The Sustainability function at Republic has a stand-alone process for identifying, quantifying and prioritizing risks and opportunities related to environmental, social and governance topics (see materiality assessment process above). This process is unique in that it handles medium to long term risks and seeks to quantify non-financial risks to help the ERM team and the broader business understand the sustainability risks in the context of the business strategy. Risks identified by this team are combined with those from the broader business function and integrated into the ERM process for assessment, management and monitoring.

The effectiveness of the ERM is represented by the various disclosures and performance results contained in our 10-K, 10-Q and GRI reports.

Ethics and Integrity

We are guided by our core values — to be Respectful, Responsible, Reliable, Resourceful and Relentless in all we do, every day. By upholding these values, we maintain a culture of strong ethics and compliance. Our culture allows us to be our best in support of our people, customers, investors and communities and to maintain their trust. We believe that acting ethically and responsibly drives positive change throughout our business and advances our sustainability commitment. We continually work to both represent and expect the highest levels of ethics, compliance and excellence in all areas of our business — not because we have to, but because we want to.

Our Code of Business Ethics & Conduct represents who we are and is the foundation of our shared values and commitment to ethics and compliance. We monitor employee feedback and behaviors to ensure we take all necessary actions to foster and elevate Republic's culture and promote teamwork and trust throughout our business.

Our Human Rights Policy is one example of our core values in action: "Respectful — We value others and demonstrate that in everything we do." This is the standard for our employees, and we expect the same from our business relationships, including our partners and suppliers. Embedded in this value is the commitment to respect human rights — the fundamental rights, freedoms and standards of treatment to which all people are entitled. We reinforce this commitment by conducting business and making decisions in an ethical and responsible manner and require that our practices never infringe on human rights.

Open communication is an integral part of maintaining our highly ethical and compliant culture. We are committed to fostering dialogue between employees and management that is based on trust and mutual respect, and without any fear of retaliation. We encourage all employees to promptly speak up if they have a question, concern, or suspect misconduct. If they are uncomfortable speaking directly to their supervisor, any other member of management or wish to remain anonymous, they have the option to contact the AWARE line, Republic's employee hotline, which is operated by an independent reporting service.

Our achievements have been recognized externally, and in 2019, Republic was honored for the third consecutive year by being named to the elite World's Most Ethical Companies® List by the Ethisphere Institute, a global leader in defining and advancing the standards of ethical business practices. The award is based on how companies score in the "Ethics Quotient," a

proprietary, quantitative tool developed by Ethisphere that assesses a company's performance in an objective, consistent and standardized manner. It is Ethisphere's belief that global corporations operating with a common rule of law are now society's strongest force to improve the human condition.

1. Economic Innovation Group: 2018 Distressed Communities Index

Governance

We continuously monitor developments and best practices in corporate governance and enhance our practices as warranted and based on shareholder feedback. Key features of our corporate governance practices are noted below:

CORPORATE GOVERNANCE HIGHLIGHTS

✔ Shareholder Engagement Program	✔ Board Sustainability & Corporate Responsibility Committee
✔ Proxy Access Right	✔ Thoughtful Board Evaluation Process
✔ Independent Board Chairman	✔ Formal Onboarding Program for New Directors
✔ Director and Executive Succession Planning	✔ Majority Vote Standard
✔ Substantial Majority Independent Board (9 of 10 director nominees)	✔ Deferral of Compensation for Directors (restricted stock units or cash)
✔ No Supermajority Vote Requirements	✔ Code of Business Ethics and Conduct
✔ Shareholder Action by Written Consent	✔ Political Contributions Policy
✔ Independent Board Committees	✔ Stock Ownership Guidelines for Directors and Senior Management
✔ Annual Director Elections	✔ Anti-Hedging and Anti-Pledging Policies
✔ Human Rights Policy	✔ One Share, One Vote Structure

Reporting Practices

102-46 | Defining report content and topic Boundaries

The parameters of this GRI report are established based on a strategic assessment of the issues of greatest impact to our business strategy, relevance to our stakeholders and the ability to make a positive impact within the communities that we serve – as developed through our Materiality Assessment, described in detail in Disclosure 102-15 – Key impacts, risks, and opportunities.

102-48 | Restatements of information

We have restated some of our environmental aspects, specifically 2016-2018 energy data for 302-1 as well as 2013-2018 emissions data for 305-2, 305-4, and 305-5 as related to

Scope 2 emissions and 305-3a as related to Scope 3 emissions. These restatements are due to the following:

- Electricity energy and emissions associated with a rooftop solar project at one of our sites in Las Vegas that were previously omitted from our Scope 2 totals were included for 2016-2018. Additionally, electricity emissions associated with our sites in Puerto Rico that were previously omitted due to an incorrect emission factor were included for 2016-2018. Emission factors for a number of our sites were also updated to reflect the latest eGRID regions per the U.S. EPA Power Profiler Tool impacting our historical electricity emissions. Total electricity emissions are approximately 2% of our total Scope 1 and 2 emissions, and these changes represented less than 1% of electricity emissions in 2018. However, we have updated the historical Scope 2 emissions to correctly reflect Republic's operations.
- The historical 2017-2018 Scope 3 FERA emissions were corrected to account for the changes to electricity as explained above. The 2018 Scope 3 Business Travel emissions were corrected to include new available data for rail travel. Scope 3 FERA and Business Travel are roughly 13% of total Scope 3 emissions, and these changes represented less than 1% of total Scope 3 emissions in 2018.

| 102-49 | Changes in reporting |

The scope and boundary, as well as relevant sustainability aspects that are identified and reported upon in our 2019 Sustainability Report and within this GRI Content Index, represent an ongoing expansion to our year over year reporting. Republic adopted and integrated the GRI Standards to guide its reporting and moved away from the GRI G4 reporting framework in 2018. We have also expanded the coverage of indicators and level of data and detail reported where possible within specific GRI indicators and topics, guided by our materiality assessment refresh, as described in Disclosure 102-15 – Key impacts, risks, and opportunities. Due to these efforts this GRI report is now in accordance with GRI Standards: Core option.

| 102-56 | External assurance |

Republic has completed a third-party verification of its publicly reported 2013 through 2019 Scope 1, 2 and 3 (Business Travel and third-party/subcontractor hauling only) GHG emissions in accordance with the ISO 14064-3 Standard. The assurance statement is available on our Sustainability website. Republic has not sought external assurance of this GRI Report or its 2019 Sustainability Report.

Sustainability Strategy

From climate change and resource scarcity to an evolving workforce and distressed neighborhoods, our Blue Planet continues to evolve. In 2018, Republic unveiled ambitious sustainability goals designed to address many of these global macrotrends, generate long-term value for our stakeholders and mitigate relevant risks to our business.

Our 2030 Strategic Sustainability Goals

SAFETY

Safety Amplified: **0** Zero employee fatalities

Reduce our OSHA Total Recordable Incident Rate (TRIR) to 2.0 or less by 2030

PEOPLE

Engaged Workforce: **88%** Achieve and maintain employee engagement scores at or above 88% by 2030

OPERATIONS

Climate Leadership: 35% Reduce absolute Scope 1 and 2 greenhouse gas emissions 35% by 2030 (2017 baseline year) ★ SBTi APPROVED[1] ★

MATERIALS MANAGEMENT

Circular Economy: **40%** Increase recovery of key materials by 40% on a combined basis by 2030 (2017 baseline year)

Regenerative Landfills: **50%** Increase biogas sent to beneficial reuse by 50% by 2030 (2017 baseline year)

COMMUNITIES

Charitable Giving: **20M** Positively impact **20 million people** by 2030

1. SBTi is a collaboration between CDP, the United Nations Global Compact (UNGC), World Resources Institute (WRI) and the World Wide Fund for Nature (WWF). At the time the report was published, the Climate Leadership goal was aligned with SBTi and since that time, the goal has been approved.

Our strategic 2030 goals, which we launched in our 2018 Sustainability Report, are centered around the most significant business risks and opportunities identified though our Sustainability Materiality Assessment as discussed in Disclosure 102-15 – Key impacts, risks, and opportunities.

In 2015, the United Nations General Assembly set a collection of global goals for the year 2030. These are known as Sustainable Development Goals (SDGs), and they are designed to meet the urgent environmental, political and economic challenges facing our world. We've aligned our new Company sustainability goals with the SDGs that are most relevant to our business and where we foresee the greatest opportunity to create value at scale.

We describe our management approach and provide performance data for each of the tier 1 topics from our materiality assessment in this report. Progress against these goals is reported annually in our Sustainability Report and GRI Report.

Our 2019 Sustainability Goal Progress
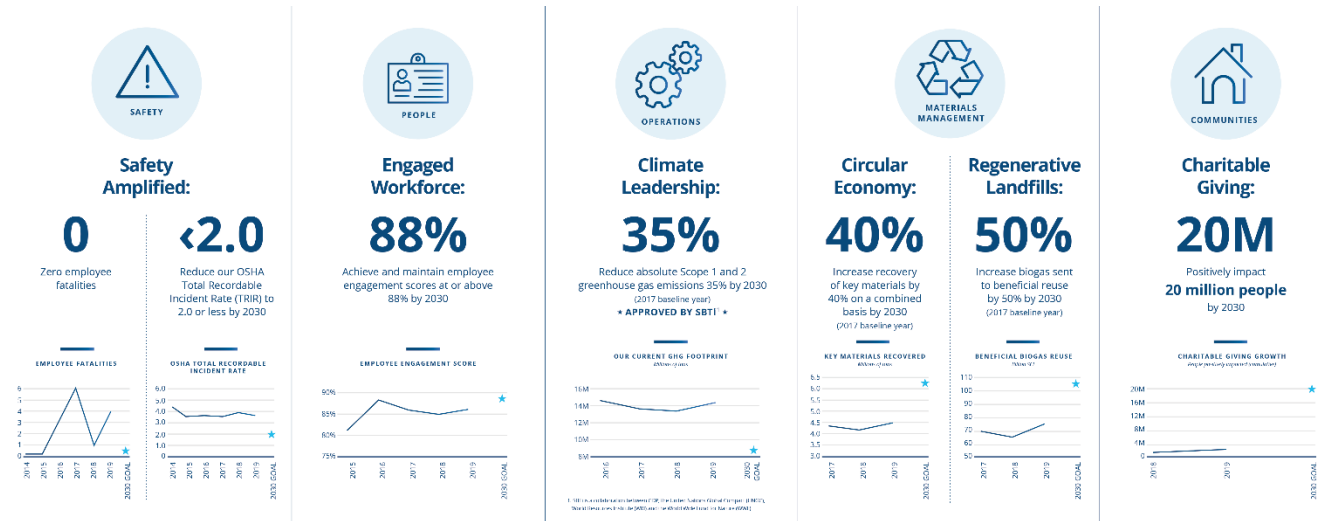
We are inspired by the strategic sustainability goals and progress discussed in this report and our 2019 Sustainability Report. They are ambitious by design and may pose challenges that require us to think and act differently if we are to succeed. They may also evolve over time as experts discover more about our planet, technology advances, consumer expectations and behaviors change, and we transform our business.

Topic-Specific Standards

Our Performance: Economic Topics

201 Economic Performance

201-2	Financial implications and other risks and opportunities due to climate change

Refer to Item 1, page 13 and Item 1A, pages 16 and 18-21 of our 2019 10-K for risks and associated impacts to Republic related to climate change.

Refer to Item 1, pages 3-4, 7, and 10-11 of our 2019 10-K, pages 29-30 and 32-34 of our 2020 Proxy Statement and 102-30 Effectiveness of risk management processes of this report for the methods used to manage these risks.

Refer also to our annual CDP response for more detailed information on climate change risks, opportunities, implications and management approach at cdp.net.

205 Anti-Corruption

103-1, 2, 3	Management Approach

Republic's values and priorities reflect our ongoing commitment to legal and regulatory compliance, integrity and business ethics at every level within our organization. We have worked diligently to maintain a culture that values teamwork, trust and integrity with an unwavering commitment to uphold the highest ethical standards in our business practices. Our intensity to maintain a strong ethical culture while always choosing to do the right thing for our people, customers, shareholders, communities and environment, are foundational to our values and represent the highest standards of integrity and excellence we have set for every Republic employee and extended to our industry.

Coverage

Coverage of the company's publicly available anti-corruption indicators applies to our employees, Board of Directors, independent contractors, consultants and other third parties when acting on behalf of the Company to the extent sections of our Code of Business Ethics & Conduct are applicable to the services being provided.

Approach

Our Code of Business Ethics & Conduct exemplifies our values and is the cornerstone to sustaining a strong ethical culture. We continue to monitor employee feedback and behaviors to ensure we take all necessary actions to foster and elevate Republic's ethical culture and ethics and compliance program as a whole.

This includes raising concerns about potential violations of our Code of Business Ethics & Conduct and related policies. The Republic AWARE Line (confidential toll-free and web access employee hotline) is available for all employees to raise concerns if they are uncomfortable speaking directly with their supervisors or any other member of management or wish to remain anonymous. Any concerns are addressed using a robust internal process whereby we investigate, respond and take appropriate corrective actions if warranted. We regularly update our policies and practices based on our findings. Additionally, in our unionized workplaces, employees also may raise grievances with regard to some types of workplace issues in accordance with their specific location's applicable grievance procedure.

We do not permit retaliation or intimidation against anyone who reports a concern, raises a compliance question, seeks advice or cooperates in an investigation. Anyone who retaliates or attempts to retaliate will be subject to disciplinary action, up to and including termination of employment.

205-3	Confirmed incidents of corruption and actions taken

For the reporting year 2019, we did not have any material violations or breaches of our Code of Business Ethics & Conduct.

Refer to page 30 of our 2020 Proxy Statement for more information.

Our Performance: Environmental Topics

All of the management approaches described below for our environmental topics are guided by our Environmental Policy, which can be found on our website at:
https://www.republicservices.com/cms/documents/sustainability_reports/EMSPolicy.pdf.

301 Materials

103-1, 2, 3	Management Approach

Our [Environmental Policy](#) guides our efforts to extract value from the waste stream and return it to the economy. This includes an increased focus on recycling of key commodities and innovation to drive the circular economy. In addition to recycling, we also focus on extracting as much biogas from our landfills as possible while maintaining a stable operating environment. When viable, this renewable gas can then be used for heat, electricity or transportation fuels.

One of our greatest responsibilities as a leading recycling and waste company is managing a very complex and diverse waste stream. By extending the life of the materials we handle, we help reduce the environmental and societal burden of the growing use of raw materials. Our experience, passion and ethical standards guide our vigorous pursuit of opportunities to deliver recovered and renewable materials and energy back into the economy.

The world's consumption of raw materials is expected to nearly double by the year 2060 as the global economy expands and living standards rise. This dramatic increase would place twice the pressure on the environment than is experienced today.[1] At the same time, some studies estimate that our population currently consumes resources 50 percent faster than they can be replaced.[2]

This means that the resourceful handling of waste and extraction of as much value from the waste stream as possible have never been more important. We handle roughly 114 million tons of material each year, and much of this material still has value prior to being disposed of in a landfill. We are continuously evaluating ways to extract more value from this material using processing and diversion systems and programs. Whether it's through reuse, recovery, refurbishment or recycling – we're actively contributing to a circular economy.

Circular Economy

A system that facilitates keeping materials circulating longer in the economy to extract maximum value from them, as opposed to disposing of them after one use. This is accomplished through the design of products or markets that enable products to be maintained for a longer life, refurbished, remanufactured, redistributed, reused or recycled.

We believe our innovative business practices and deep understanding of scalable circular economy solutions will position us well to accomplish two very ambitious goals related to Materials Management.

Goal #1

Circular Economy: Increase recovery of key materials by 40 percent on a combined basis by 2030 (from a 2017 baseline)

The circular economy reduces the need for raw materials, which reduces their associated environmental and social burden. We're invigorating our circular economy practices to provide products and services that help reduce the demand our customers and society place on our planet.

Materials of focus include:

- Cardboard (OCC)
- Plastics
- Metals
- Organics
- Biogas
- Oil

KEY MATERIALS RECOVERED
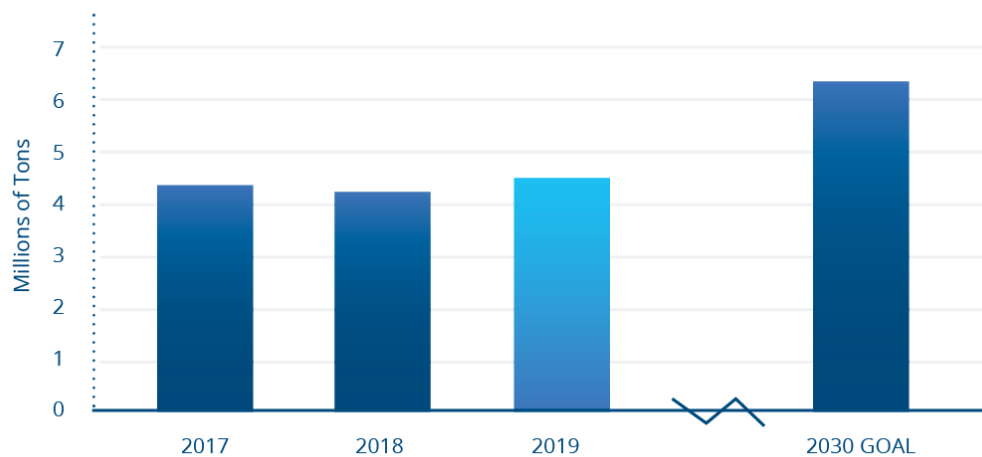
Goal #2

Regenerative Landfills: Increase biogas[3] sent to beneficial reuse by 50 percent by 2030 (from a 2017 baseline)

When food waste, yard debris and other organic materials are disposed of in a landfill, they generate biogas through a naturally occurring biological process. Our modern landfills already capture a large portion of this gas to prevent fugitive emissions. This 2030 goal represents our increased effort to use more of this biogas for beneficial purposes, such as renewable energy and fuel.

BENEFICIAL BIOGAS REUSE
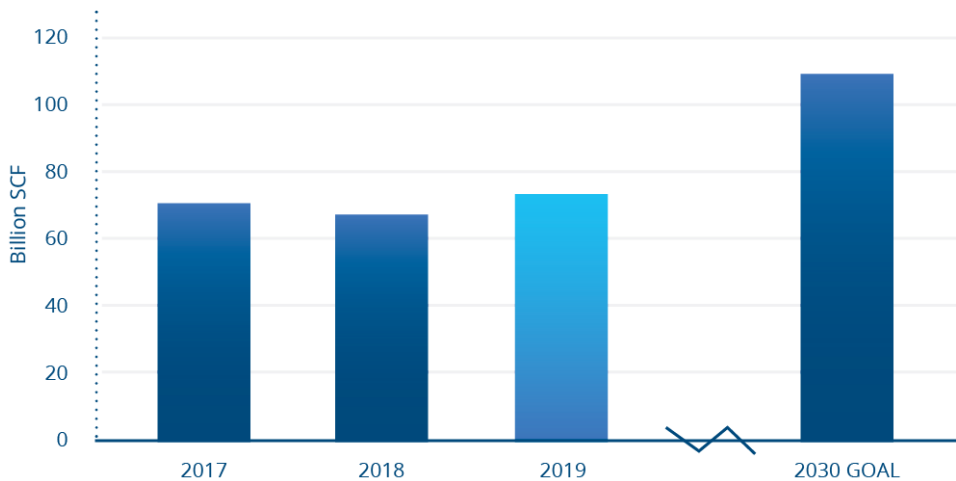
These goals align with the United Nations "Responsible Consumption and Production" Sustainable Development Goal, 12.2 – sustainable management and efficient use of natural resources.

How We'll Get There

We have a long history of incorporating technology and innovation to help our customers achieve their sustainability goals and leverage our scale to deliver value to all stakeholders.

Scalable Solutions

1. Recycling

One area of the circular economy model that we can significantly impact is through our recycling and recovery services. Our 79 recycling facilities provide the infrastructure and market reach to make a substantial impact on the recovery of valuable materials from the

ever-evolving waste stream. We process roughly 6.0 million tons of recyclable materials per year, making us one of the largest processors of recovered residential and commercial recyclables in the world. By recycling these recovered commodities, we are helping reduce lifecycle greenhouse gas emissions. Today, this amounts to approximately 18 million metric tons of carbon dioxide equivalents (MTCO$_2$e) per year. But the challenge is bigger than greenhouse gas emissions.

The mining and growing of raw materials, combined with the processing, manufacturing and distribution of products from these various materials to markets worldwide, results in a wide range of additional harmful environmental and human health impacts. These include water and air pollution, energy and land use, and habitat destruction. When coupled with the population's increasing global resource consumption, the positive benefits of recycling become even more significant.

Positive Impacts of Our Circular Economy Goal

By increasing our recovery of key materials by 40 percent, we will:

- Increase the amount of recovered commodities available for remanufacturing
- Mitigate the associated negative impacts of virgin materials
- Reduce upstream impacts of drilling through oil recovery technologies
- Significantly reduce lifecycle greenhouse gas emissions associated with recovered commodities

2. Beneficial Biogas Reuse

Republic is continuing to explore new and emerging beneficial uses for landfill biogas. We are engaged in 75 renewable energy projects at our landfills and brownfields nationwide. This biogas is used by many commercial, industrial and manufacturing companies for process fuel. It also is utilized in large scale electrical generators, providing baseload renewable electricity for multiple utilities. In addition, we are proud of the progress we're making in converting biogas into a renewable transportation fuel – contributing to a circular economy by powering our Compressed Natural Gas (CNG) collection trucks.

Renewable energy and renewable transportation fuels share many positive environmental attributes and contribute to various renewable and low carbon fuel standards, renewable electrical portfolio standards and carbon cap and trade systems. However, we recognize there's no playbook for innovation, so we continue to explore and support the development of new and emerging beneficial uses for landfill biogas.

For example, we brought a Renewable Natural Gas (RNG) project online with our energy partners at our Southeast Oklahoma Landfill in 2018. At this facility, landfill gas is processed

into pipeline quality gas used to power homes and businesses and to fuel natural gas vehicle fleets, including our own trucks.

3. Product as a Service

One of our newest efforts to advance circularity is related to the containers and compactors customers use to hold their waste and recyclables on-site between services. We leverage three models of circularity to help customers reduce their impact from these products: maintenance, product as a service and refurbish/remanufacture.

By offering these products through a lease program, we can help extend the life of the asset through additional services such as monitoring systems and ongoing preventative maintenance. For example, our compactor refurbishment program extends the life of a 10- to 15-year asset by an additional seven years on average, saving metal and other materials used to build the assets.

Market-Specific Solutions

Due to the local nature of waste and varied needs of the communities we serve, we often develop solutions for our customers that are applied on a limited basis only. Several of these offerings support circular economy principles, including food rescue, food for animals, composting and pre-processing of organic material for anaerobic digestion.

4. Diverting Food Surplus

As a partner with social services organizations like Food Finders and World Harvest, Republic is demonstrating our commitment to a sustainable future by connecting surplus food from commercial grocers to food banks that help feed families in need. In 2018, these efforts hit a significant milestone: 1 million pounds of food recovered, or over 800,000 meals served.

In Southern California, Republic teamed up with local nonprofits to pick up surplus food from restaurants and supermarkets and deliver it to community food banks and soup kitchens. Despite these efforts, there was still surplus fruits and vegetables going to waste. Our partnership with World Harvest facilitates the distribution of 10 tons of fresh produce every month to feed the local zoo's animals. Food that is unable to be distributed to families or animals is sent to our composting facilities where it is turned into a nutrient-rich soil additive.

5. Organics

Organics management continues to be a fast-growing opportunity in select markets. According to the EPA, food waste and yard waste are two of the largest categories of municipal solid waste sent to landfills, accounting for approximately 30 percent of the overall waste stream. Diverting food waste, yard waste and other organic materials to local organics

programs creates renewable energy, enhances soil and preserves the nutrient value in these waste streams.

Republic offers pre-processing of commercial organics in California, a process that effectively separates contamination from food waste. This organic material is largely derived from restaurants and grocers and is usually highly contaminated with packaging materials. Once pre-processed, the food waste can be transported to a composting facility or an anaerobic digestion facility to make biogas or can be used for animal feed in specific situations.

Republic's composting facilities across the country recycle yard and food waste to create natural fertilizer, nutrients and other products to enhance soil.

Reviewing our Progress

We're very excited that we were able to increase the recovery and resale of targeted commodities, especially given the difficult market drivers for recycling in 2019. We increased our focus on food and yard waste recovery and continued to invest in traditional recycling. In addition, we were able to increase the beneficial reuse of landfill biogas through targeted efforts to extract more biogas and the creation or optimization of additional uses for the resulting gas. See our 2019 Sustainability Report for highlights on the above activities as part of our Materials Management goals. We will continue to monitor the progress we are making on these strategic goals and assess trends in data and impact. We will adjust our investments, and level of activity in each area, to meet our objectives as effectively, and efficiently as possible. Progress against our circular economy and beneficial biogas reuse goals are reported publicly annually in our Sustainability Report and in our GRI Report.

1. Organization for Economic Cooperation and Development (OECD), 2/12/2019. Global Material Resources Outlook to 2060: Economic Drivers and Environmental Consequences
2. GreenBiz, Megatrends that will unleash value in the circular economy, 4/20/2015
3. Biogas normalized to 50% methane (natural gas)

301-4 Materials returned to the economy (recycling)

	2017	2018	2019	2030 Goal
Key materials recovered (tons)	4,393,250	4,342,762	4,501,706	6,150,549

301-5 Biogas beneficial reuse

	2017	2018	2019	2030 Goal
Beneficial biogas reuse (billion scf)	73.6	71.5	74.9	110.4

302 Energy

The greatest use of energy at Republic lies within our use of transportation fuel.

2019 Total Organization Energy Consumption

Energy Outside Organization 17%

Energy Inside Organization 83%

2019 Energy Consumption Inside Organization

Buildings 15%

Transportation 85%
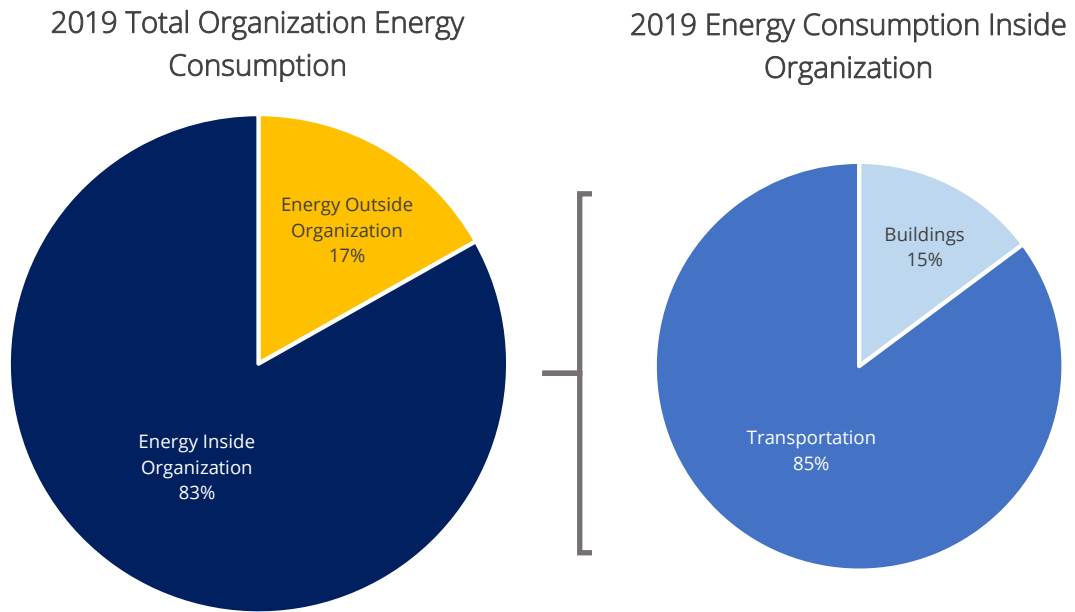
We have close to 26,000 vehicles and equipment, including recycling and waste collection vehicles, heavy equipment used at our facilities to move and manage waste, and support vehicles, all used in the service of our customers across the country. Of this transportation energy use, collection and support vehicles are the largest consumers. Collection of municipal solid waste is an essential societal service and Republic does not control the generation of waste nor the service design in most municipalities. Therefore, our ability to innovate can be limited, however, we are making good progress in the areas described below.

A primary focus area is on reducing fuel use in our vehicle fleet. We have several initiatives that have resulted in a decrease in energy intensity for our recycling and waste collection operations (see Disclosure 302-3 Energy Intensity for more information). These include:

Energy Intensity (Vehicles)

GJ/millions revenue

Year	Value (approx.)
2013	2,285
2014	2,245
2015	2,215
2016	2,070
2017	1,985
2018	1,960
2019	1,855
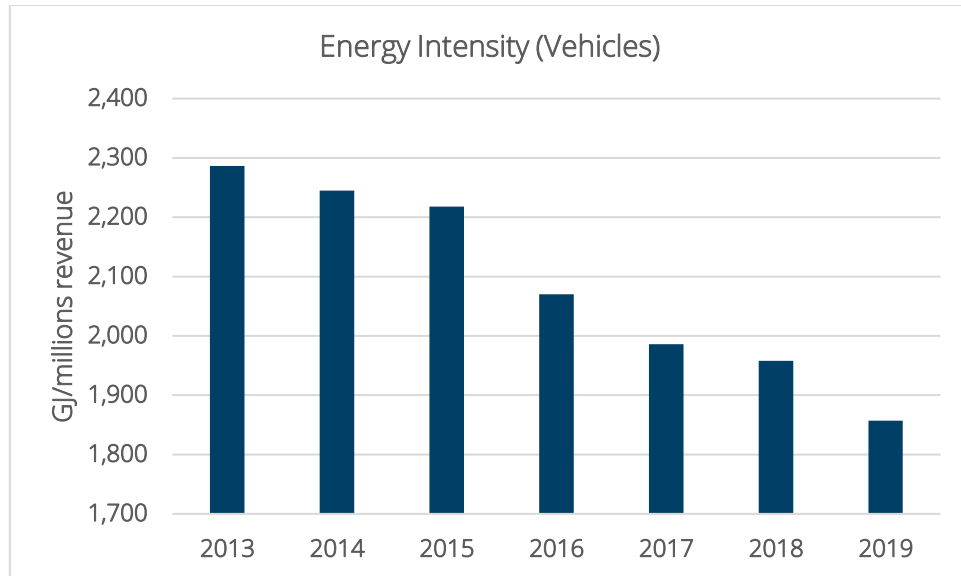
Fleet Automation

Approximately 76% of our residential routes have been converted to automated single-driver trucks. These trucks can complete a route faster, with less idling time, because the driver doesn't have to wait for the helper to empty carts. By converting our residential routes to automated service, we not only reduce our fuel use and associated emissions, but we also reduce labor costs, improve driver productivity and create a safer work environment for our employees. Additionally, communities using automated vehicles have higher participation rates in recycling programs, thereby complementing our initiative to expand our recycling capabilities.

Standardized Maintenance

Based on an industry trade publication, we operate the eighth largest vocational fleet in the United States. OneFleet, our standardized vehicle maintenance program, enables us to use best practices for fleet management, truck care and maintenance. Through standardization of core functions, we believe we can reduce our fuel use and minimize variability in our maintenance processes, resulting in higher vehicle quality and a lower environmental footprint, while extending the average service life of our fleet. We believe operating a more reliable, greener, safer and more efficient fleet will lower our operating costs. The entire fleet was certified under OneFleet by the second quarter of 2017.

Advanced route planning technology

Every day our fleet is servicing communities across the country. Finding the most efficient route helps ensure we are protecting our Blue Planet. We continue to advance our route planning technology for the betterment of our drivers and environment. Calculating smart and efficient travel plans decreases fuel consumption, vehicular emissions and travel time.

Fleet Conversion to Compressed Natural Gas (CNG)

Approximately 20% of our fleet operates on natural gas. We expect to continue our gradual fleet conversion to CNG as part of our ordinary annual fleet replacement process. Approximately 13% of our replacement vehicle purchases during 2019 were CNG vehicles. We believe using CNG vehicles provides us a competitive advantage in communities with strict clean emission initiatives that focus on protecting the environment. Although upfront capital costs are higher, using CNG reduces our overall fleet operating costs through lower fuel expenses. In addition to converting to CNG trucks, we're also building CNG fueling stations for our fleet. As of December 31, 2019, we operated 39 CNG fueling stations.

Over the past four years, we've complemented our conversion to CNG vehicles with the use of renewable natural gas (RNG). We are able to use both natural gas and RNG in our CNG trucks. These fuels have a higher energy density as compared to diesel, which enables us to get more miles for the same unit of energy, thereby reducing our use of diesel fuel (see Disclosure 302-4 Reduction of energy consumption for details).

We are also monitoring and influencing a number of alternative fuel technologies, such as electrification, to improve the total cost of ownership of our fleet and reduce our environmental impact through lower use of fossil fuels.

302-1 | Energy consumption within the organization

	2016	2017	2018	2019
Energy consumption within the organization (GJ)	26,884,415	26,241,207	27,391,497	26,223,991

302-2 | Energy consumption outside of the organization

	2016	2017	2018	2019
Energy consumption outside of the organization (GJ)	3,985,789	3,957,468	5,314,404	5,308,870

302-3 | Energy intensity

	2016	2017	2018	2019
Vehicle energy intensity (GJ)	2,070	1,986	1,958	1,857

The intensity numbers are calculated by dividing the total fuel use from collection and service vehicles by our annual revenue as reported in our annual 10-K filings, which can be found on our investor website.

302-4	Reduction of energy consumption				
		2016	2017	2018	2019
	Diesel fuel consumption (GJ)	16,196,557	15,875,374	15,441,004	14,762,132

305 Emissions

103-1, 2, 3	Management Approach

Our Environmental Policy guides our commitment and efforts to continuously improve our environmental performance and reduce our impacts. We are committed to pollution prevention and we were the first in the industry to set a science-based GHG emissions reduction target (SBT) to ensure that we're doing our part to combat global warming. From landfills and vehicles to equipment and buildings, we use our assets to provide essential and valuable services to thousands of communities. Yet the operation of these assets has the potential to negatively impact people and the environment. We believe our scale and strength put us in a unique position to provide safe, responsible recycling and waste disposal services while protecting the planet and our communities. The result is long-term value creation for our stakeholders.

Climate Change

Scientists predict that the greatest physical impacts from climate change will occur if the average global temperature rises beyond 2°C (3.6°F) above pre-industrial temperatures. This means more damage and human toll from hurricanes, wildfires, flooding and droughts, as well as health impacts and food shortages. Given our position, regulatory and market developments related to climate change present us with the potential for strategic business opportunities. Offsetting operational emissions is not enough. We're taking a bold position to leverage innovation and lead the industry in combating climate change.

Greenhouse Gas (GHG)

A gas that acts to trap heat in the atmosphere. The primary greenhouse gases in Earth's atmosphere are carbon dioxide, methane, nitrous oxide and fluorinated gases.

Landfill methane emissions, vehicle and equipment emissions, and building electricity all contribute to climate change. That's why we've adopted an aggressive target for reducing our operational GHG emissions, aligned with the Science Based Targets initiative (SBTi).

Goal: Reduce absolute Scope 1 and 2 greenhouse gas emissions 35 percent by 2030 (2017 baseline year)[1]

Our Current GHG Footprint
2019 Total Emissions by Scope

19%

1%

79%

■ Scope 1   ■ Scope 2   ■ Scope 3

SCOPE 1 AND 2 GREENHOUSE GAS EMISSIONS

Emission Category (MTCO$_2$e)

■ Landfills   ■ Fleet   ■ Scope 2 (Buildings)   ■ Total
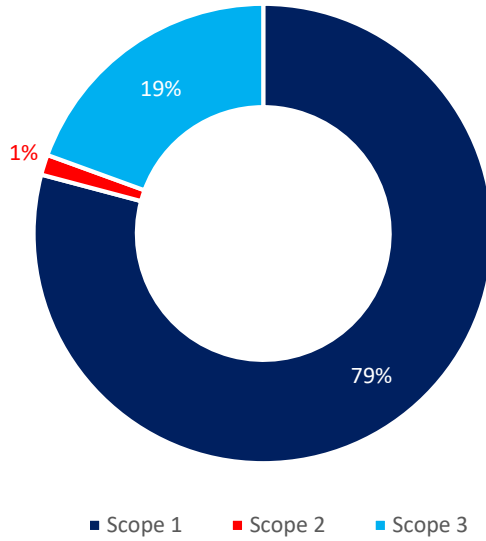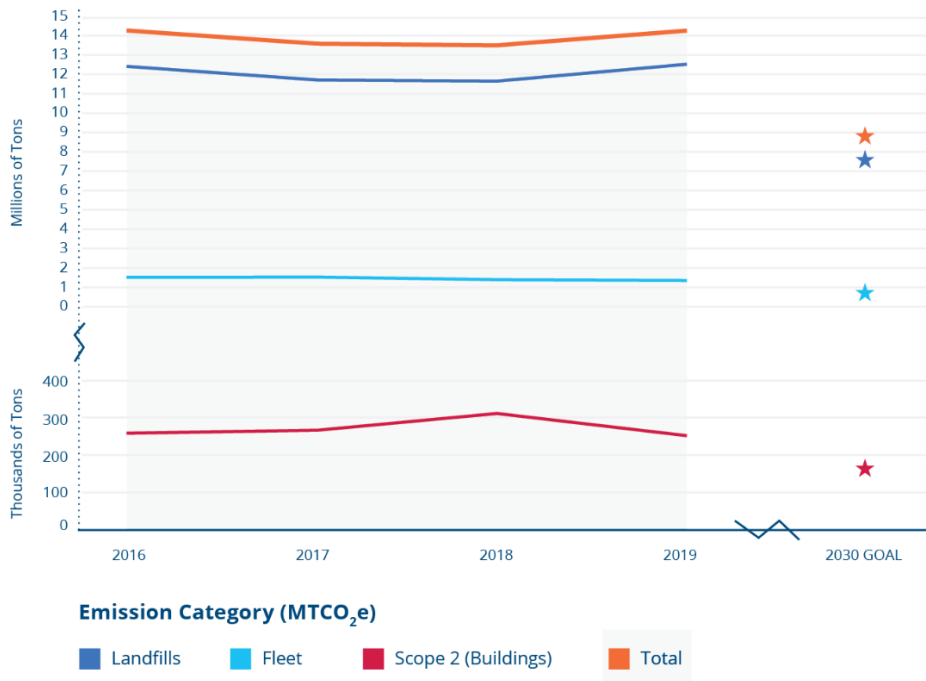
Our work in this area aligns with and supports the United Nations "Climate Action" Sustainable Development Goal, 13.2 – reduce greenhouse gas emissions.

How We'll Get There

1. Reducing Emissions Through Landfill Innovation

Our modern landfills are complex, highly controlled biological systems. Our engineers design these structurally stable facilities to ensure we maximize the decomposition of waste in a manner that manages byproducts and minimizes impact to the environment today, and for years to come. Considerable science, engineering and technology go into the design of our landfills – long before they become operational.

We strive to maximize the collection of gas within the landfill to minimize potential fugitive emissions and maintain landfill health. Fugitive emissions are approximately 50 percent methane – a recognized greenhouse gas. Highly efficient landfills such as ours collect most of this gas for beneficial reuse or processing, turning an impact into an opportunity. However, to further manage our fugitive emissions and meet our goal, we'll be looking at new technology and operating practices while ensuring that landfills remain stable and secure for decades to come.

2. Reducing Fleet Emissions

Our recycling and waste collection trucks are complex, high-performance machines designed to be safe, comfortable and efficient. As we retire and replace older trucks, we are able to take advantage of advancements in alternative fuels in addition to safety technology and other modern efficiencies. Trucks running on alternative fuels and RNG emit lower emissions and are less carbon intensive, which is why we continue to transition our fleet toward natural gas.

In 2018 we announced a partnership with Mack® Trucks to build and operate a fully electric Mack LR collection truck to help us achieve our ambitious emissions goal. The benefits of fully electric trucks are plentiful:

- Virtually zero carbon emissions
- Reduced maintenance
- Regenerative braking
- Reduced noise
- Fewer overall impacts in the communities we serve

But there are also unique challenges including battery size, weight and recharge time. We believe electrification of our fleet is the future and look forward to learning more when our Mack pilot hits the road in 2020.

3. Reducing Emissions When We Build

Our commitment to sustainable practices extends throughout our operations and into our buildings and facilities. Our new building construction and retrofits adhere to the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) standards. This includes using energy reduction, water conservation measures and the use of sustainable materials and design principles that enhance comfort. With this design philosophy at the forefront of our facility projects, we are making our working spaces more environmentally responsible and productive.

Simply put, our ambitious target reduction in greenhouse gas emissions is designed to keep the global temperature increase well below 2°C. However, the path we'll take to achieve this goal is anything but simple.

Positive Impacts of Climate Leadership

There is no doubt our projects and plans will evolve over the next decade, as we learn more about the environment and leverage new technology and data. While we may see some setbacks along the way, we believe that our Climate Leadership goal is the right thing to do for the environment and our business, and that we have the scale and the team to deliver results. We will be monitoring and measuring a number of advancements related to this goal and sharing results in future reports.

Benefits of this goal include:

- Reduced operating costs
- Minimized risks to our physical assets
- Moderates the impact of fuel-price volatility or future carbon tax
- Attracts customers in a low-carbon economy

Operational Transparency

We are committed to educating our stakeholders on how we manage key operational metrics related to protection of the environment beyond greenhouse gas emissions. Republic's local landfill teams are responsible for maximizing the collection of landfill byproducts safely and efficiently within these sophisticated structures. Our operational procedures leverage the latest innovations in landfill equipment and technology to ensure the proper handling of the water, or leachate, and gases that are created by the decomposition of waste.

We install extensive systems to draw out the leachate that collects at the bottom of the landfill to safely treat it and return it back to the water cycle for reuse. This practice also prevents impacts to surface water and groundwater resources. See Disclosure 306-1 Water discharge by quality and destination.

When beneficial reuse of landfill gas is not an option, our teams adhere to strict operational procedures to thermally destruct gas on-site. The gas flaring process safely destroys harmful pollutants while significantly reducing greenhouse gas emissions. See Disclosure 305-7 Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions.

Reviewing our Progress

As explained when we introduced our SBT goal in 2019, we're focused on reducing GHG emissions from our landfills, fleet, and buildings. We're excited to say that we've made progress in all three areas. See our 2019 Sustainability Report for highlights on the progress we are making on our SBT through the three focus areas we have identified. As we monitor trends in data and impact, we will continue to adjust our investments, and level of activity in each area, to meet our objectives as effectively, and efficiently as possible. Progress against goals will be reported publicly annually in our Sustainability Report and our GRI Report.

1. SBTi is a collaboration between CDP, the United Nations Global Compact (UNGC), World Resources Institute (WRI), and the World Wide Fund for Nature (WWF)
2. Carbon dioxide equivalents

305-1 | Direct (Scope 1) GHG emissions

Scope 1 emissions reported are independent of any GHG trades, such as purchases, sales or transfers of offsets or allowances. The inventory includes CO_2, CH_4 and N_2O emissions from fuel consumption. HFC emissions from refrigerant use, PFCs, NF_3 and SF_6 are not included as Republic does not use these compounds at a materially reportable level. Emissions factors used for electricity and other fuels are subregion-, country- or region-specific where applicable using the latest databases from governmental sources (i.e., U.S. EPA's eGRID and UK's Defra for mobile sources to supplement eGRID data gaps).

Emission Category ($MTCO_2e$)	2016	2017	2018	2019
Total Scope 1 Emissions	13,979,024	13,486,262	13,199,147	13,930,867
Landfill Methane	12,404,374	11,981,159	11,741,891	12,506,584
Fleet	1,521,928	1,467,576	1,367,973	1,340,408
Non-Fleet/Other	52,723	37,527	89,283	83,875
Biogenic Emissions	6,660,382	7,232,596	7,575,173	7,404,894

Republic reports emissions to the U.S. EPA of all sites that were owned, leased, or operated by Republic. This includes voluntary reporting of emissions from closed sites as well as sites that don't meet the federal GHG Reporting Program (GHGRP) threshold of 25K $MTCO_2e$. Our Landfill Gas Emissions are reported every year to the U.S. EPA, following 40 CFR part 98, Subpart HH. Republic calculates the GHG emissions from landfills using the equations and methods set forth in the federal regulations. See 40 CFR part 98. The rule does not require control of GHGs, rather it only requires that sources above certain threshold levels are monitored, and the emissions and other related data are reported.

The workflow for calculating landfill emissions involves site-level data collection and compilation by independent air compliance consultants with site-level expertise; followed by data aggregation and initial reporting by an independent third-party GHG inventory/reporting consultant; and review by Republic's local engineering staff. Local environmental managers review year-over-year reporting roll-up summaries for each of their sites and upload their validated GHG data to a collaboration workspace. The Division/Area Environmental Managers approve and confirm data from each area by spot-checking site data, as necessary. The GHG consultant then collates the data for electronic reporting to the U.S. EPA. At a corporate level, a final validation of the data is done by Engineering to evaluate the data for consistency. This includes follow-up questions regarding data consistency and responding to the U.S. EPA follow up communications. The GHG consultant is responsible for compilation of the reporting information and supporting Republic teams.

Republic reports mobile sources and equipment emissions for fuel consumed in owned and leased vehicles and stationary / heavy equipment. The U.S. EPA's GHG Inventory EFs are used as well as the IPCC GWPs. Refrigerant emissions from vehicle and building air conditioning are currently not calculated and are considered de minimis.

Biogenic carbon emissions are relevant to Republic and include:

1. CO_2 from the combustion of landfill gas via flares

2. CO_2 passing through on-site combustion devices

3. Fugitive CO_2 generated from the biological decomposition of waste in landfills

4. CO_2 as a product of CH_4 oxidation in the landfill cap

5. Mobile combustion of biodiesel and biomethane.

The five sources of biogenic carbon emissions listed above are reported in aggregate as "Biogenic Emissions" and treated separately from Scope 1 in accordance with the GHG Protocol. The first three sources comprise 92% of Republic Service's biogenic emissions.

Republic considers these as a part of our Scope 1 emissions but reports them separately (per GHG Protocol) as they are biogenic in nature or not in the scope of U.S. EPA reporting requirements for landfills. Republic follows guidance from U.S. EPA on determining emissions of these sources of solid, gaseous, liquid and biomass fuels from: Mandatory Reporting of Greenhouse Gases Final Rule, 74 Fed. Reg. 56260 (Oct. 30, 2009). *See* Tables C1 and C2 at 56409 and 56410. Republic also follows guidance from U.S. EPA on revised emission factors for selected fuels from: Mandatory Reporting of Greenhouse Gases Final Rule, 75 Fed. Reg. 79091 (Dec. 17, 2010).

We also have carbon from municipal solid waste that is permanently biologically sequestered by the landfill, thereby removing it from the carbon cycle. However, this total is not shown in our inventory as it does not impact our footprint. It includes carbon from municipal solid waste (MSW) that is permanently biologically sequestered by the landfill which acts as a sink, and as such, emissions from MSW are avoided. The annual MSW waste input figures reported by Republic have been used to calculate the carbon sequestered using a 2008 U.S. EPA waste characterization study.

The results of the above reporting process form the basis of our Scope 1 GHG emissions inventory.

305-2	Energy indirect (Scope 2) GHG emissions

Emission Category (MTCO$_2$e)	2016	2017	2018	2019
LOC	286,507	265,661	304,056	242,878
MKT	284,021	286,278	300,149	254,973

Indirect emissions sources include electricity and estimated natural gas used in buildings and facilities.

Republic follows the operational control consolidation approach.

305-3	Other indirect (Scope 3) GHG emissions

Emission Category (MTCO$_2$e)	2017	2018	2019	Emissions calculation methodology
Purchased goods and services	1,939,272	1,912,163	2,005,961	Republic uses Environmentally Extended Economic Input Output (EEIO) analysis based on its annual supplier and procurement spend data. The spend data was mapped to corresponding industry sectors and is then multiplied by cradle-to-gate emission factors for the activity to

				provide estimated carbon emissions associated with the extraction, production and transport of purchased goods and services acquired or purchased by Republic in the reported year. Supplier spend activity that was already included in Scope 1 or 2 (such as electricity purchases from leased buildings) and other Scope 3 categories (such as upstream transportation and distribution) that could be further defined to a GHGP Scope 3 category or could be supplemented with actual data were removed from the Purchased Goods & Services category to prevent double counting. This may represent an under- or over-reporting of emissions in certain supplier categories and specific suppliers based on available spend data due to the nature of cost and accrual accounting. The emission factors used are taken from Carnegie Mellon's Economic Input-Output Life Cycle Assessment tool, US 2007 Benchmark Model. Spend data is also adjusted to account for inflation since the Carnegie Mellon tool was released. We anticipate improving the methodology and availability of data in the future which will impact our year-on-year reporting and trends over time.
Capital goods	447,954	490,155	516,148	Republic uses Environmentally Extended Economic Input Output (EEIO) analysis based on its annual supplier and procurement spend data. The spend data was mapped to corresponding industry sectors and is then multiplied by cradle-to-gate emission factors for the activity to provide estimated carbon emissions associated with the extraction, production and transportation of capital goods acquired or purchased by Republic in the reported year. We

				have elected to use this methodology over using a single generic emissions factor (EF) for 'all' capital goods as reported, to enable better visibility into specific capital good categories by spend and carbon impact. Supplier spend activity that was already included in Scope 1 or 2 (such as electricity purchases from leased buildings) and other Scope 3 categories (such as upstream transportation and distribution) that could be further defined to a GHGP Scope 3 category or could be supplemented with actual data were removed from the Capital Goods category to prevent double counting. This may represent an under- or over-reporting of emissions in certain supplier categories and specific suppliers based on available spend data due to the nature of cost and accrual accounting. We anticipate improving the methodology and availability of data in the future which will impact our year-on-year reporting and trends over time.
Fuel- and energy-related activities	406,523	428,909	406,356	Emissions were calculated for fuel-and-energy-related activities (not included in Scope 1 or 2) by totaling activity data for each Scope 1 fuel type and Scope 2 electricity consumption by country. These totals were multiplied by their relevant specific emission factors from UK Defra / DECC 2019 Conversion Factors for Company Reporting; except in the case of electricity Transmission and Distribution Loss emission factors, for which emission factors from UK Defra/DECC 2017 Conversion Factors for Company Reporting were used, as UK Defra/DECC ceased publishing these in 2018. (Next year Republic will move to using the IEA emission factors for electricity Transmission

				and Distribution Loss, as recommended by Defra/DECC.
Upstream transportation and distribution	280,739	376,417	377,745	Republic maintains detailed cost data for third-party hauler and subcontract collection services that it uses to support its collection services. An assessment of spend on fuel as a percent of total spend on third-party hauling has been made and is used to determine the quantity of fuel consumed by the third-party fleets using the 2019 DOE national average for Ultra Low Sulfur Diesel (ULSD). These total gallons of third-party fuel used are then used for these upstream transportation and distribution emission calculations. Fuel used by subcontract collection vehicles is also calculated. The fuel spend estimate is similarly converted to gallons of diesel using the 2019 DOE national average for ULSD, which is then used to calculate GHG emissions. U.S. EPA Climate Leaders: Emission Factors for Greenhouse Gas Inventories, 2019 were used to calculate the emissions. Republic also uses Environmentally Extended Economic Input Output (EEIO) analysis based on its annual supplier and procurement spend data for rail expenses. The spend data was mapped to corresponding industry sectors and is then multiplied by cradle-to-gate emission factors for the activity to provide estimated carbon emissions associated with the extraction, production and transportation of upstream transportation and distribution acquired or purchased by Republic in the reported year. Supplier spend activity that was already included in Scope 1 or 2 (such as electricity purchases from leased buildings) that could be further defined to a GHGP Scope 3 category or could be

				supplemented with actual data was removed from the Upstream Transportation and Distribution category to prevent double counting. This may represent an under- or over-reporting of emissions in certain supplier categories and specific suppliers based on available spend data due to the nature of cost and accrual accounting. We anticipate improving the methodology and availability of data in the future which will impact our year-on-year reporting and trends over time.
Waste generated in operations	77,668	71,386	90,767	Republic uses Environmentally Extended Economic Input Output (EEIO) analysis based on its annual supplier and procurement spend data. The spend data was mapped to corresponding industry sectors and was then multiplied by cradle-to-gate emission factors for the activity to provide an estimate of carbon emissions associated with the extraction, production and transportation of leachate waste generated in operations by Republic in the reported year. Supplier spend activity that was already included in Scope 1 or 2 (such as electricity purchases from leased buildings) and other Scope 3 categories (such as upstream transportation and distribution) that could be further defined to a GHGP Scope 3 category or could be supplemented with actual data were removed from the waste generated in operations category to prevent double counting. This may represent an under- or over-reporting of emissions in certain supplier categories and specific suppliers based on available spend data due to the nature of cost and accrual accounting. We anticipate improving the methodology and availability of data in the future which

				will impact our year-on-year reporting and trends over time.
Business travel	10,094	8,342	9,089	Annual data for air travel, rail travel, and rental car travel is provided by Republic's travel agency. Air travel data is broken out by each flight leg and the distances, which is used to calculate total short, medium and long-haul miles (Short flights (<300 mi), Med. flights (300-2300 mi), Long flights (>2300 mi). Republic's travel agency in 2019 was able to provide miles by cabin class. UK DEFRA 2019 emissions factors with radiative forcing are used to calculate the air travel GHG emissions, based on distance threshold and cabin class. Rail travel data was provided in terms of distance traveled. U.S. EPA Climate Leaders: Emission Factors for Greenhouse Gas Inventories, 2019 were used to calculate the emissions from the rail travel mileage. The rental car report in 2019 provided fuel volumes. U.S. EPA Climate Leaders: Emission Factors for Greenhouse Gas Inventories, 2019 were used to calculate the emissions from the rental car gasoline.
Employee commuting	13,912	15,959	13,466	Republic uses Environmentally Extended Economic Input Output (EEIO) analysis based on its annual supplier and procurement spend data. The spend data was mapped to corresponding industry sectors and then multiplied by cradle-to-gate emission factors for the activity to provide estimated carbon emissions associated with the transportation of its employees for relocation during the reported year. This may represent an under- or over-reporting of emissions in certain supplier categories and specific suppliers based on available spend data due to the nature of cost and

				accrual accounting. We anticipate improving the methodology and availability of data in the future which will impact our year-over-year reporting and trends over time.
Upstream leased assets	3,620	4,674	4,224	Republic uses Environmentally Extended Economic Input Output (EEIO) analysis based on its annual supplier and procurement spend data. The spend data was mapped to corresponding industry sectors and is then multiplied by cradle-to-gate emission factors for the activity to provide an estimate of carbon emissions associated with the extraction, production and transportation of upstream leased assets purchased by Republic in the reported year. Supplier spend activity that was already included in Scope 3 categories (such as rental vehicles for business travel) that could be further defined to a GHGP Scope 3 category or could be supplemented with actual data were removed from the upstream leased assets category to prevent double counting. This may represent an under- or over-reporting of emissions in certain supplier categories and specific suppliers based on available spend data due to the nature of cost and accrual accounting. We anticipate improving the methodology and availability of data in the future which will impact our year-over-year reporting and trends over time. The total emissions for this category also include the electricity emissions associated with overhead electricity at Republic's colocation data centers (colos). The overhead electricity was calculated using the IT equipment electricity and the colo's power usage effectiveness (PUE). The market-

				based emission factors were used to calculate the emissions.
Use of Sold Products	10	10	10	This figure represents a portion of the composted tonnage sold to downstream users, and the corresponding emissions from transporting and turning compost piles, but does not include the negative emissions savings associated with the carbon storage resulting from the compost application to soils. We have estimated the full lifecycle emissions impacts from our sold products, mainly recycled commodities (2.64M tons sold in 2019, including 220k tons of compost). The number reported represents the positive portion of the emissions associated with the use of sold compost. Total lifecycle emissions impacts, however, result in a negative 7.8M $MTCO_2e$ (avoided) emissions, which we are not accounting for in our total Scope 3 emissions figure. Lifecycle emissions include upstream mining, processing and transportation of materials that enter the waste stream, transportation and recovery/processing of commodities/compost by companies like Republic, as well as, downstream processing, transportation, and re-manufacturing where applicable. Emissions from recycled materials and compost sold are calculated using methodologies and emission factors from the U.S. EPA's Waste Reduction Model (WARM), version 14. Recycled materials sold is based on the percent of various commodities as sold by Republic in 2019. GWPs are from the IPCC (2007) Fourth Assessment Report. This model

	bases its emissions calculations on a life-cycle analysis, including emissions from the long-term decomposition of waste in a landfill and upstream sources/sinks. Further emissions savings are realized through the collection, processing and sale of recycled commodities. Data quality is considered consistent with inputs from our database on sustainability metrics.

Refer to our CDP Report for additional details on the standards, methodologies and assumptions used to calculate the data reported in this Indicator. Other categories not reported herein are considered not relevant to Republic.

The inventory includes CO_2, CH_4 and N_2O emissions from fuel consumption and purchased electricity and landfill emissions. HFC emissions from refrigerant use, PFCs, NF_3 and SF_6 are not included as Republic does not use these compounds at a materially reportable level.

305-4	GHG emissions intensity

	2018	2019	Percent Change
Revenue ($USD millions)	$10,041	$10,299	3%
Scope 1 Emissions ($MTCO_2e$)	13,199,147	13,930,867	*6%
$MTCO_2e$/$M Revenue	1,315	1,353	3%
Scope 2 Emissions ($MTCO_2e$)	300,149	254,973	-15%
$MTCO_2e$/$M Revenue	30	25	-17%
Scope 1&2 Emissions ($MTCO_2e$)	13,499,295	14,185,840	*5%
$MTCO_2e$/$M Revenue	1,344	1,377	2%

*Note that an increase in Scope 1 emissions, driven primarily by landfill fugitive emissions, may occur until accurate, continuous methods of measurement are available. These current EPA calculations are not as well suited to tracking progress or reductions at individual landfills. This is due to several simplifying assumptions to compensate for the lack of a current method available to accurately and continuously measure fugitive landfill emissions. As noted in our sustainability report, we will continue to use the EPA calculations to reflect our landfill emissions until we develop a method for accurate and continuous measurement, which we have committed to investigate in support of our science-based GHG emissions target.

305-5	Reduction of GHG emissions

Scope	2017	2018	2019	Percent Change (2017-2019)
Scope 1	13,486,262	13,199,147	13,930,867	3%
Scope 2	286,278	300,149	254,973	-11%
Total	**13,772,540**	**13,499,295**	**14,185,840**	**3%**

Totals do not add due to rounding. See notes above on table 305-4. See also management approach for this topic for more information about Republic's efforts to reduce Scope 1 and 2 GHG emissions.

305-7	Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions

Landfill air emissions were calculated using measured landfill gas flows at individual open or enclosed flares as reported to the U.S. EPA under the Greenhouse Gas Reporting Program (GHGRP), engineering calculations, and mass balance calculations. These same gas flows are used in Republic's annual greenhouse gas reporting. It should be noted that the emissions factors and calculations used below are based on the aggregate gas flow across the company and we are not using individual site emission factors and calculations. Calculations were based only on device type (i.e. open flare or enclosed flare) and did not consider other site-specific information such as permit limits, source test results, or other factors.

Air Emissions (metric tons)	2017	2018	2019
NOx (excluding N_2O)	1,304	1,400	1,438
SOx	314	339	347
Volatile organic compounds (VOCs)	31	33	34
Hazardous Air Pollutants (HAPs)	49	53	54

306 Effluents and Waste

103-1, 2, 3	Management Approach

Leachate is a by-product of waste decomposing in landfills. Leachate is any liquid that has passed through or come from waste in a landfill. Republic is dedicated to doing what we can to protect the watersheds within our communities. This means thoughtfully and responsibly designing leachate collection systems at each of our sites, and pretreatment systems, where

beneficial. In addition, by removing liquids from within a landfill, site operators can improve the efficiency of landfill gas extraction wells and other interrelated operating systems.

Our leachate collection systems collect and process liquids to ensure that our landfills have a minimum impact on watershed regeneration.

In addition to our collection systems, we operate 24 major pretreatment facilities across the country.   Upon removal from the landfill, liquids are often-times routed to an onsite pretreatment facility to eliminate constituents. Once the pretreatment process is complete, liquids are typically discharged or transported to municipal treatment facilities, much like every day wastewater. The most common form of pretreatment is aeration. This process involves introducing air into the liquids to accelerate the elimination of constituents. Two other techniques include chemical precipitation, which adjusts the water chemistry to remove constituents, or advanced biological treatment, which uses microorganisms to consume constituents in liquids. At select landfills, we have even eliminated our liquids disposal through two unique techniques: phytoremediation, which uses green plants to absorb liquids, and evaporative treatments, which involve applying heat to vaporize liquids as steam.

| 306-1 | Water discharge by quality and destination |

Our leachate collection systems collect and process water to ensure that landfills have a minimum impact on watershed regeneration. In 2019, 2.043 billion gallons of leachate was collected and treated at Republic's active and closed landfill sites through a comprehensive leachate treatment program or sent to third-party treatment systems.

	2017	2018	2019
Leachate collected and treated (billion gallons)	1.745	1.817	2.043

The increase in leachate in 2019 over 2018 was due to increased rainfall during the 2019 calendar year.

307 Environmental Compliance

| 103-1, 2, 3 | Management Approach |

Republic exercises the utmost responsibility in our operations. This includes our fleet, our buildings, our landfill technology and the day-to-day activities we conduct in the community. We're working hard to understand and measure our impact to the air, water and land to minimize or eliminate any negative consequences, where possible.

In 2014, we launched our Blue Planet initiative, which is our sustainability platform. Blue Planet represents our dedication to preserving a cleaner, safer, and healthier world where people thrive, not just for today but for future generations. This initiative continues into 2020 and beyond.

Given the nature of our business it is essential for us to be in compliance with environmental laws and regulations. Non-compliance can put our employees, our brand or our environment at risk. We strive to conduct our operations in compliance with applicable laws, regulations and permits. Our facilities and operations are subject to a variety of federal, state and local regulations that regulate, among other things, the environment, public health, safety, zoning and land use.

Republic leverages an environmental management system (EMS) to ensure compliance, which has been in place for many years. In 2015, we engaged a consultant to assess our current system as compared to the ISO 14001:2015 Environmental Management Systems standard, with the goal of preparing the company to seek certification. The consultant completed a document review alongside interviews with key stakeholders who own the management and implementation of policies related to the ISO 14001:2015 criteria. A new Environmental policy was formally issued on June 10, 2016 as a result of this assessment and includes the following items:

✓ Production operations / business facilities

✓ Selection / on-going evaluation of suppliers / service providers and contractors

✓ Development of new products and services

✓ Product distribution / logistics

✓ Management of waste

✓ Engineering / maintenance

The policy is publicly available on our Sustainability website, originally highlighted in our 2015 Sustainability Report to demonstrate our commitment. Our policy is an overarching public statement, signed by our CEO, signaling our intentions toward an ISO certified and comprehensive EMS aligned with our sustainability initiatives.

Republic is upgrading our EMS and intends to seek ISO certification as a pilot, at targeted sites, to focus on improving specific aspects of Recycling and Landfill operations and to build ISO support throughout the organization. The pilot approach to seeking ISO certification provides a platform to efficiently build and test EMS tools while proving value. In addition, the target sites will serve as "beacons" for the company. The pilot will inform our strategy and

design of a multi-site EMS program, with the vision of ultimately scaling the system to cover key operations and potentially seek multi-site ISO 14001:2015 certification. We upgraded from ISO 14001 to ISO 14001:2015 at the Mecklenburg recycling facility, in January of 2018. We maintained our certification in 2019. The certificate can be found on our [Sustainability website](#).

Republic Service's EMS is overseen by the Vice President, Engineering & Environmental Compliance, reporting to our SVP Operations Support. The Vice President, Engineering & Environmental Compliance sits on the Ethics and Compliance Committee with a dotted line reporting matrix to the Executive Vice President, Chief Legal Officer, Chief Ethics & Compliance Officer, Corporate Secretary. The Engineering & Environmental Compliance team is responsible for environmental compliance, engineering and environmental management. The EMS is managed under the Corporate Environmental Compliance Policy and is implemented in the field through Republic operations with the oversight of our Corporate team. The field teams are staffed with a Director of Engineering Field Operations who provides support to the Area and local division engineering and environmental management activities. The company is now organized into 11 Areas, each with an Area Environmental Manager that oversees multiple Environmental Managers responsible for the implementation of the items described in the Corporate Environmental Compliance Policy. Environmental Managers also manage the services of multiple Environmental Specialists and Environmental Technicians within each Area.

The Corporate Legal Department with the support of Corporate Environmental Compliance is responsible for documenting, storing and tracking all environmental enforcement issues including inspections, Notices of Violations, Letters of Warning and other information related to environmental compliance with federal, state and local regulations. Operations Management is responsible for ensuring that all employees, contractors, vendors, and visitors to our facilities actively comply with our policies. Managers are also required to timely report, manage, and resolve all environmental enforcement violations. Given its importance, we have established Absolutes and Standards around environmental compliance. Our Absolutes and Standards are non-negotiable. They support a culture of consistency and policy compliance and further strengthen our Environmental Management System.

Our EMS program consists of several policies, manuals, standard operating procedures, reporting forms, tracking databases, to ensure compliance with the Company's policy. Key pieces of our EMS program are listed below.

Corporate Environmental Compliance Policy: As mentioned above, this is the overarching policy for our EMS. Third-party facility approval and request processes are also part of this

policy. Republic guidelines require the use of approval procedures that must be followed for all agreements involving the use of non-Republic disposal, transfer station, and recycling sites. The use of the Republic Third Party Facility request form is required to initiate this process.

Landfill Air Compliance Program Standard: The purpose of the Standard is to provide guidance and a consistent approach regarding air compliance services performed for Republic. This document is used by the company's Engineering and Environmental Management team and related third-party consultants - i.e., all personnel are responsible for conducting air compliance services and supporting such activity at Republic landfills.

Landfill and Transfer Station Operating Standard and Best Practices User Guide: The Standards Manuals are designed to provide practical and comprehensive information to understand the operating standards of all Republic active landfills and transfer stations. The guides contain field-tested best practices describing policies and procedures that guide facility managers on how to comply with the standard.

Procurement Policy: Republic has a centralized procurement team to manage and guide the company's procurement effort. Their policy is to provide professional procurement and supply chain management services through effective teamwork and communication with stakeholders and suppliers and by sourcing goods and services that meet the Company's needs at the highest quality and the lowest total cost.

Special Waste Management Policy: Republic has in place a Special Waste Management Policy to meet all applicable federal requirements under the Resource Conservation and Recovery Act and implementing regulations (40 CFR Part 261) and the Toxic Substance Control Act and implementing regulations for polychlorinated biphenyl waste (40 CFR Part 761), along with any applicable state or permit requirements to prevent the acceptance of wastes not eligible for management at Republic landfills. For those wastes that are deemed acceptable, additional SOPs (e.g. Liquid Waste Solidification, Treated Medical Waste, and Radiation Monitoring) have been developed to help facilitate the proper handling, transportation and disposal of Special Wastes managed by the Company.

Engineering Policy: This policy establishes guidelines for Corporate and Field personnel on the procedures for using the landfill and environmental budget model, project management practices, and environmental due diligence. It also includes landfill gas, leachate management, and air compliance SOPs. Due diligence, M&A and business development are also addressed.

In addition to seeking ISO certification, Republic conducts a number of different types and levels of audits for environmental compliance.

We participate in CHWMEG independent auditing at a cross section of facilities on an annual basis. This covers roughly 10% of our landfills annually. CHWMEG, Inc. is a non-profit trade association comprised of manufacturing and other "industrial" companies interested in efficiently managing the waste management aspects of their environmental stewardship programs. One aspect of CHWMEG, Inc. includes conducting comprehensive, independent reviews of commercial facilities that treat, store, dispose, recycle, or transport waste. The facilities included in the CHWMEG facility review program are selected by the members, and the evaluations are performed according to a standard protocol by independent and experienced environmental firms under contract to CHWMEG, Inc. The cost of the facility review reports is shared by the member companies.

We also provide standard checklists and review questionnaires for our safety, operations and compliance teams to use while visiting sites. These assessment templates provide a standardized framework for self-evaluation of facility performance in the applicable EH&S focus areas.

Certifications

Republic's Energy Services operates businesses serving the oil and gas production industry. Some of the materials hauled have the potential of being defined as DOT hazardous; therefore, all field operations are required to train and maintain HM-181 training records for drivers that haul hazardous materials in accordance with 49 CFR 172.704. Within this Area, 100% of field operations personnel are trained in accordance with 29 CFR 1910.1200, Hazard Communication requirements.

Evaluation

The Sustainability and Corporate Responsibility Committee was formed on April 22, 2015. Per the Charter of this Committee: The Sustainability and Corporate Responsibility Committee (the "Committee") is appointed by the Board of Directors (the "Board") to assist the Board in fulfilling its oversight responsibility and to act in an advisory capacity to the Company's management with respect to significant issues, strategic goals, objectives, policies and practices that pertain to (i) Republic's sustainability performance; (ii) Republic's corporate responsibilities that are of significance to the Company and its role as a socially responsible organization; and (iii) enterprise and other risk, including cyber security, climate change, safety, environmental and reputational risks and opportunities, facing the Company and the practices by which these risks are managed and mitigated.

Our Performance: Social Topics

All of the management approaches described below for our social topics are guided by our Human Rights Policy.

401 Employment

103-1, 2, 3	Management Approach

Our Human Rights policy and our values form the foundation of the culture that we've created at Republic. Based on this foundation, we offer numerous programs to develop and enhance employee engagement from recruiting to ultimate fulfillment of each individual's purpose at work. Although we already have outstanding engagement scores, we've set an aggressive goal to ensure that we don't lose sight of what's most important to the success of our business – our people.

Our people are the heart of our Company. They embody our values, embrace our vision and are united by a shared dedication to our customers, our communities and our Blue Planet – working every day to make the world cleaner, safer and healthier. An engaged, diverse and inclusive workforce – one where our employees use their unique experiences and backgrounds to drive change and differentiation – is essential to our success.

The workforce is changing, and we embrace these changes. Thirty-five percent of the labor force is comprised of millennials today, a trend that's expected to increase to 75 percent by 2025.[1] Nearly 80 percent of mature millennials consider a company's social and environmental commitments when deciding where to work.[2]

Additionally, the number of drivers available to meet demand is falling, and the American Trucking Association projects a shortage of 174,000 drivers in the U.S. by 2026.[3] Given the relatively high average age of truckers today, this potential shortage makes our workforce and millennial engagement goals even more important for long-term success as our Company grows.

Our employees' unique ideas, experiences and backgrounds help us connect our business to the external world – making everything we do for our customers, community and planet possible. As we work to combine meaningful experiences and programs that develop and motivate employees with attractive compensation and benefits packages, we're creating a company where the best people want to work and are engaged every day.

Goal: Achieve and maintain employee engagement scores at or above 88 percent by 2030[4]
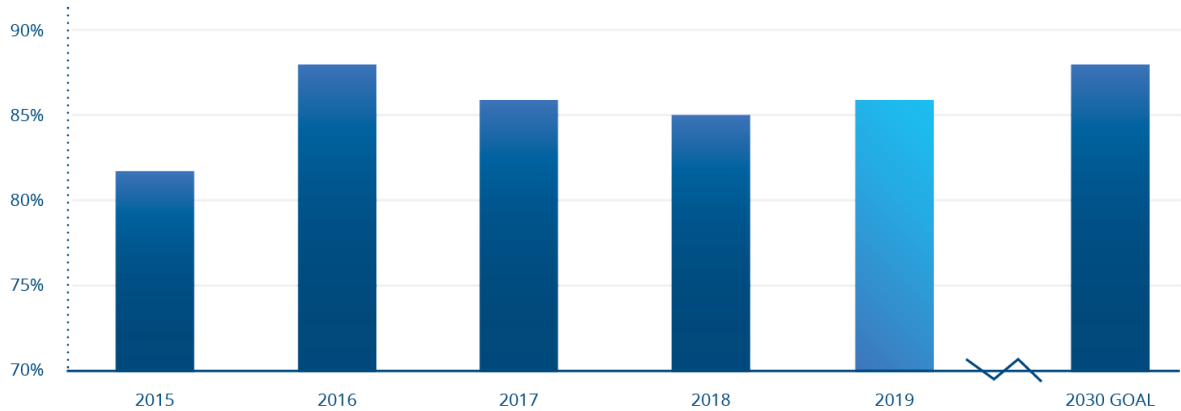
This goal – and our related commitments and activities - aligns with the United Nations "Decent Work and Economic Growth" Sustainable Development Goal, 8.5 — creating a safe, diverse and equitable work environment.

Why It's Important

Research shows that companies that score in the top 25 percent in engagement realize a 41 percent reduction in absenteeism. In addition, highly engaged business units see 59 percent less turnover.[5] Perhaps even more important is that engaged employees are paying attention, and they're passionate about their work, their customers and each other. At Republic, Business Units with higher engagement have fewer safety incidents, fewer missed pickups, better environmental performance and are more likely to meet our strategic business objectives.

How We'll Get There

We've developed strategic, long-term programs to attract, onboard, develop, engage and retain the best employees. We want all employees, regardless of location, function, level or background, to feel good about the job they do and our Company.

Our efforts to increase our employee engagement scores to high-performance norms include:

1. Engagement and retention programs that create a genuine connection with employees, provide competitive compensation and benefits and create an inclusive culture where all employees have a voice.

For example, our We work for Earth employee engagement campaign reinforces our commitment to being an inclusive employer of choice. We're educating employees on sustainability, elevating their sense of pride in their work and improving engagement.

2. Learning and talent development programs aligned with business outcomes, experiential new employee onboarding and investments in high-potential, high-performing talent. (See Standard 404 – Training & Education)

Programs such as Driver Training Center, Supervisor Onboarding and Sales Acceleration provide the fundamental skills each employee needs to succeed in his or her role. Our Leadership Fundamentals, Leadership Trainee and General Manager Acceleration programs help ensure that as our leaders progress, they are accumulating the skills necessary to be successful at each level.

Our Leadership Fundamentals program received the **2018 Brandon Hall Group Excellence in Leadership Development Award.**

3. Diversity and inclusion programs focusing on inclusive leadership behaviors and a diverse recruiting strategy. (See Standard 405 – Diversity & Equality)

MOSAIC is Republic's Mission of Supporting an Inclusive Culture. Led by a council of leaders from across the Company, MOSAIC guides our efforts to ensure that diversity and inclusion are always at the core of our culture and business practices. Additionally, we know that leadership in this area starts at the top, and we have demonstrated a commitment to diversity through the people who guide our Company. In 2019, 60% of our Board nominees were either women or minorities, a rarity among other organizations of our size.

Business Resource Groups (BRG) are designed to bring employees who share a commonality together while supporting business objectives by helping solve workplace and industry challenges. Women of Republic was our first company-approved, employee-led BRG. In 2019, we launched our Veterans, Advocacy, Learning, Outreach and Recruiting (V.A.L.O.R.) business resource group, which is focused on creating an inclusive culture that attracts, retains, develops and values veterans and their families throughout the organization and in our communities. At the same time, we intensified our efforts to hire veterans.

In 2018, Republic launched SheDrives – a recruitment campaign designed to educate recruiters and hiring managers in an effort to broaden the driver candidate pool and increase the number of women hired for driver positions. In just one year, the hiring rate of women drivers increased by one-third, placing Republic above the national average for female drivers.

Positive Impacts of an Engaged Workforce

Hiring the best people is crucial to delivering shareholder value, but it's more than just a good business strategy. It's fundamental to who we are. Our employees bring our long-term company values to life, setting Republic apart from the competition. We believe that by achieving our engaged workforce goal, we will:

- Improve our safety record and operating performance
- Strengthen our customer relationships
- Reduce costs related to turnover

Reviewing our Progress

We continue to outperform industry benchmarks and are delighted that in 2019 we improved our overall employee engagement score by 100 basis points to 86 percent, which is well above national norms and is high-performing for the industry.[4]

See our 2019 Sustainability Report for highlights on our activities aimed at attaining high levels of employee engagement. As we continue to monitor trends in data and impact, we will continue to adjust our investments, and level of activity in each area, to ensure we meet our objectives as effectively and efficiently as possible. Progress against goals is reported publicly annually in our Sustainability Report and in our GRI Report.

1. https://www.pewresearch.org/fact-tank/2018/04/11/millennials-largest-generation-us-labor-force/
2. 2016 Cone Communications Employee Engagement Survey
3. https://www.trucking.org/article/New%20Report%20Says-National-Shortage-of-Truck-Drivers-to-Reach-50,000-This-Year
4. "High performance" best practice norm is equal to or greater than 87% as reported by Willis Towers Watson for 2019
5. https://www.gallup.com/workplace/231602/right-culture-not-employee-satisfaction.aspx

401-1	New employee hires and employee turnover

	2016	2017	2018	2019
Employee engagement scores	88%	86%	85%	86%
• Ethnically diverse				88%
• Female				85%
• Male				86%
Turnover rates				
• Driver and technician turnover				18.6%

Due to the criticality of drivers and technicians to our business, the management of turnover amongst these two large employee groups is critical to our business operations, thus, we report on turnover amongst these employees.

403 Occupational Health and Safety

103-1, 2, 3	Management Approach

Republic is guided by our overarching safety policy and comprehensive safety management program, which require us to put safety first, every moment. We've set aggressive goals to ensure that we keep safety top of mind.

Nothing is more important than safety, and no job is so urgent that we cannot take the time to do it safely. The success of our safety program is directly dependent on our people: employees with strong operational know-how, attention to detail and a consistent focus. Republic's drivers, operators, technicians and other employees make up a large portion of our total company workforce — and well over half of our employee population is on the road each day.

Republic took an ambitious leap forward in safety in 2018 with a program we call Safety Amplified and the introduction of new safety goals. Our goals are designed to enhance safety for our employees and the communities we serve.

Goal #1: Zero employee fatalities

It goes without saying that catastrophic events have a significant impact on our employees and their families, as well as the trust our communities have in our brand. Simply put, our goal is zero work-related employee fatalities every year.

EMPLOYEE FATALITIES

	2014	2015	2016	2017	2018	2019	2030 GOAL
OSHA Reportable	0	0	0	2	0	2	0
Operating Collection Vehicles	0	0	3	4	1	2	0

Goal #2: OSHA Total Recordable Incident Rate (TRIR) of 2.0 or less by 2030[2]

OSHA TOTAL RECORDABLE INCIDENT RATE
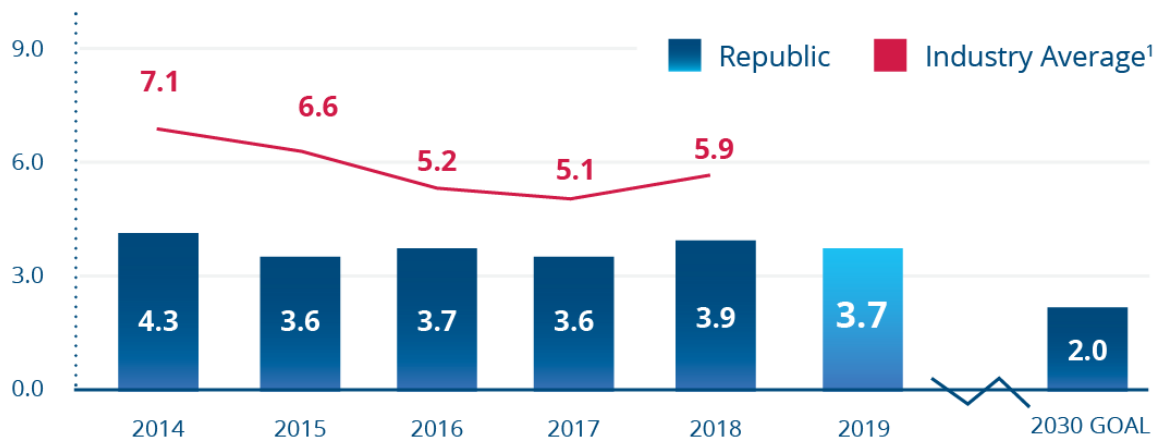
1. and 2. Occupational Safety and Health Administration (OSHA) is the main federal agency charged with the enforcement of safety and health regulations. The OSHA Recordable rate shown is the Total Recordable Incident Rate (TRIR) and is a function of the number of recordable incidents and the total numbers of hours worked. Published OSHA data lag 1 calendar year.

Positive Impacts of Safety Amplified

We believe our Safety Amplified goals will deliver additional positive impacts for our Company and stakeholders.

- Help preserve our license to operate in our communities
- Enhance customer trust
- Streamline operational processes and increase productivity
- Deliver a reputational advantage, including positioning our Company as an employer-of-choice
- Build and sustain a safety culture in all areas of business
- Contribute to employee engagement

Challenge

Unfortunately, many safety features in today's passenger vehicles are not yet available in heavy-duty refuse trucks. We're working with equipment manufacturers to incorporate safety elements such as seatbelt alarms, blind spot awareness, lane departure alarms and other potentially lifesaving equipment in our fleet.

Our Safety Amplified initiatives have been developed to continually improve our safety record and reduce incidents. OSHA's TRIR is best-in-class, and we hold ourselves accountable to this metric.

8 DECENT WORK AND ECONOMIC GROWTH
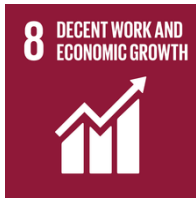
These goals support the United Nations "Decent Work and Economic Growth" Sustainable Development Goal, 8.8 – creating a safe and healthy workplace.

How We'll Get There

Safety Amplified, our health and safety management system, provides more tools and drives greater awareness to help our teams better execute our safety standards. Continual training, multifaceted programs and strategic partnerships are the key components of our platform. It's simple by design and comprised of actions and activities that ensure safety is embedded in all we do. These six initiatives work in conjunction to help deliver the results necessary to achieve our short and long-term safety goals.

Focus Together
This program has helped our drivers reduce six types of serious incidents. We have extended the scope and reach of the program to include employees across the company.

Innovate Together
We leverage the latest technologies, including automation, and take a data-driven approach to support our employees. These innovations include rear cameras, in-cab backing alarm systems and event recording systems throughout our fleet.

Lead Together
This focus area brings best-in-class communication channels to our employees and includes communications training for all supervisors and managers.

6
INITIATIVES TO ACHIEVE OUR SAFETY GOALS

Analyze Together
We analyze real-time data to make short- and long-term decisions and identify opportunities for improvement. Examples include analysis of roadway awareness training, data mapping and other employee protection and preparedness insights.

Partner Together
We're initiating more frequent and higher quality leadership visits and interaction with frontline employees.

Celebrate Together
We take great pride in celebrating employees who demonstrate a relentless commitment to our safety best practices — the Dedicated to Safety and Dedicated to Excellence awards are employee favorites!

SAFETY AMPLIFIED ELEMENTS

Focus Together

Focus Together gives foundational safety training to prevent crashes and injuries for all employees regardless of tenure. Training is delivered through instructor lead classroom sessions, weekend refresher courses and hands-on skills practice.

The Focus Together program addresses six specific claim types: Backing, Intersections, Strain/Sprain injuries as a result of Push/Pull/Lift, Rear Collisions, Rollover and Pedestrian Incidents.

- Training is provided monthly internally and is conducted by the Operations Manager and Supervisors for each Division. General Managers typically attend and Area Safety Managers train and coach employees who deliver the training.
- The program includes both classroom and skills-based training. The classroom portion of the training includes a video facilitated by a field leader. The skills-based portion of the training is held in the truck yard outside the training classroom or individually on route with drivers.
- Various methods are used to reinforce the training message, including:
    - Monthly Posters
    - Supervisor-Facilitator Guide to encourage/facilitate interaction in training with employees
    - Weekly safety tips
    - Ride-a-long activity and skills training focus on one-on-one interaction
- Seasonal Safety programs (depending on the need)
    - 101 Days of Summer is a summer safety program that includes key themes such as watching out for children and drinking plenty of water
    - 90 Days of Winter is a winter safety program for areas with severe winter weather and focus on areas with seasonal residents and travelers

New Driver Training

New driver training is a standardized training for all new drivers hired into Republic.

- All Driver Training Mangers are internally certified to perform the training.
- The program includes internal certification for each step of the training process. Each new driver must successfully complete both classroom and field skills training to move on to the next step of training.
- Republic has 22 training centers that provide safety training for new drivers.

- Core Content includes, but is not limited to:
  - Work Familiarity – After the initial basic safety training, new employees ride with an experienced employee, in addition to spending time in dispatch, maintenance and on route with a supervisor, to ensure a clear understanding of the job, climate and requirements.
  - Classroom Training – Training on Republic Safety Programs and Defensive Driving Techniques, including the Smith System 5 Keys to Safe Driving. The Smith System is a highly recognized third-party defensive driver training program.   The 5 Keys are:
    - ✓ Aim High in Steering – Improves following distance and awareness in front of the truck
    - ✓ Get the Big Picture – 360-degree awareness around the truck at all times
    - ✓ Keep Your Eyes Moving – Always scan mirrors and avoid a fixed stare
    - ✓ Make Sure They See You – Ensure third-parties recognize your truck
    - ✓ Leave Yourself an Out – Have a backup plan to avoid a collision
  - Line of Business Specific Training – Training specific to the type of equipment the employee will operate.
  - Skills Course Testing – All employees must demonstrate the ability to safely operate the equipment prior to being released to a route. Each Skills Course Test is pass/fail. If a trainee is ultimately not able to pass a test, they are terminated from the company.
  - Behind the Wheel (BTW) Instructor Training – All employees ride with a BTW trainer for a period of 1 to 4 weeks, based on past experience, to apply the skills learned at the center to an actual route.
  - Follow-up Certification – All employees receive a 30, 60- and 90-day follow-up meeting with their supervisor to ensure a clear understanding of the training.

The New Driver Development Process:

Annual Defensive Driver Training

Annual defensive driver training is an ongoing, interactive, internally-developed, and standardized training for all of our existing drivers.

- The four-hour training is typically provided by a third-party consultant, recognized as an expert in the area of driver training. Republic has maintained an agreement with Safety Research Consultants to provide the training since 2009. Each driver annually receives training at their respective division or an off-site location.   The instructors consist primarily of active and retired police officers. All trainers are certified and all attendees receive certificates of training from the program. Content includes a review of the Smith System 5 Keys to Safe Driving and Hazards of Distracted Driving trainings.

LEAD TOGETHER

One-on-Ones

Formal one-on-ones are an employee observation and engagement program developed to improve the overall performance of our drivers. Each driver supervisor is responsible for completing two ride-alongs per week where they are encouraged to have open dialogue to discuss all obstacles preventing the driver from achieving success. The ultimate goal of this

initiative is to create a culture where supervisors develop a relationship with and change the behavior of employees, focused on:

- Safety
- Customer Service
- Operational Effectiveness
- Performance Management
- Maintenance

Employees are scheduled for observation by Supervisors based on criteria including but not limited to; tenure, job changes, risk exposure, and route/work area concerns.

Safe Actions for Excellence Booklet

The Safe Actions for Excellence or SAFE Booklet is a step-by-step guide of standardized safety procedures to be followed while performing job duties. It includes procedures for all job positions including Drivers, Helpers, Technicians, Heavy Equipment Operators, Laborers, Sorters, and Office Employees.

Information provided within the booklet aids the supervisor or manager with the proper techniques to execute specific duties. The booklet is intended to be used as a guide to coach and mentor employees so that they can complete their tasks without incidents and injuries.

Red Cross First Aid/CPR Training

All field safety professionals are certified First Aid/CPR providers. Additionally, all operation supervisors are certified in First Aid/CPR response. In the event of an incident, our structure allows for quick emergency medical response.

Absolutes and Standards

In 2017, Republic enhanced key safety compliance programs to ensure management involvement and front-line employee compliance including Seat Belt Use, Personal Protective Equipment, Company Uniforms, Fleet Security and Lock Out Tag Out. We added to this list in 2018 with Focus Together and our Incident Investigation programs which are both described in this section. In 2019, we began auditing our business units for compliance with Absolutes and Standards.

Coalition Activities

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Paving the Way for Safer Roadways

In an industry that ranks as the fifth most dangerous in America,[1] it's critical that safety always tops our list of Company priorities. Distracted driving is becoming one of the most common causes of accidents for our drivers, which can have disastrous results. Our trucks weigh as much as 25 tons when fully loaded. If traveling 60 mph, it will take approximately 312 feet — the length of a football field — to come to a complete stop.

While we can't control everything on the roadways, we will continue to do as much as we can when it comes to safety. This includes working with external partners to help educate the public and other companies about safe driving.

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1. According to the U.S. Bureau of Labor Statistics' 2017 National Census of Fatal Occupational Injuries

Republic has joined several coalitions and committees to impact third-party distracted driving. We believe that as the operator of the eighth largest vocational fleet in the country, we play a large part in influencing safe driving practices. Below is a selection of the organizations we partner with.

- Together for Safer Roads (TSR) – An innovative coalition that brings together global private sector companies to focus on improving road safety and reducing deaths and injuries by road traffic collisions. Its founding members are Anheuser-Busch InBev, AIG, AT&T, Chevron, Ericsson, Facebook, IBM, iHeartMedia, PepsiCo, and Ryder. TSR uses the knowledge, data and technology, and global networks of members to promote safer roads, vehicles, drivers, systems, advocacy and thought leadership.

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A safe, incident-free work environment requires a true commitment to safety — Republic's entire team working together to achieve a common goal. But we know we can't do it alone.

We're proud of our collaboration with partner organizations, including Together for Safer Roads (TSR), a leading coalition of global private sector companies working to improve roadway safety.

In 2018, TSR identified a gap in knowledge regarding safety standards, training and federal compliance in small- to mid-sized fleet companies. Republic played a lead role on a task force dedicated to developing standardized procedures and best practices for these companies based on our extensive experience and expertise in this area. As a result, TSR's Safer Fleets initiative which launched in 2018, and this vital information are now available at no cost to all U.S.-based small- to mid-sized fleet companies.

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- National Safety Council (NSC) – This organization saves lives by preventing injuries and deaths at work, in homes and communities, and on the roads through leadership, research, education and advocacy. The NSC has partnered with AAA and the University of Utah on a study showing the correlation between cognitive distraction and driving safety and they have developed awareness materials to educate the public.
- Direct Delivery Leadership Council (DDLC) – The mission of the DDLC is to identify, establish and promote "best practices" for improving and integrating safety leadership, productivity and profitability for the direct delivery and service industries. The DDLC was established by a group of companies that are committed to the improvement of route-based operations. These industry leaders believe that through cooperation, research, analysis and planning, members can achieve a better world for our drivers and for the communities they serve.
- National Waste and Recycling Association (NW&RA) – The National Waste & Recycling Association provides leadership, advocacy, research, education and safety expertise to promote the North American waste and recycling industries, serve as their voice and create a climate where members prosper and provide safe, economically sustainable and environmentally sound services.

PARTNER TOGETHER

Operations Summit

An operations summit for our field leadership group was held with safety as a key focus area for 2018 and beyond. As a result of the summit, several new initiatives are currently being developed with a goal of reducing our serious incidents. Some of these key initiatives include:

- Analytics Deep Dive – Comprehensive review of safety data points compared to overall operations metrics, such as maintenance, customer service and efficiency. The review will be completed to identify correlation between data points and to develop a predicative model of safety performance.
- Employee Insights Project – Focus groups and one-on-one discussions with front-line employees at several divisions around the country. We expect the project to provide insights as to what we can do to improve communications, safety programs and the environments employees work in.
- Internal and External Best-in-Class Benchmarking – Outreach to our high performing locations and to outside organizations based on key findings generated by the Employee Insights Project described above. Using these findings, existing safety programs will be updated to ensure they fulfill their intended purpose.

- Collision Avoidance Technology – A comprehensive review to determine collision avoidance technology options. Existing vendors of trucks and equipment will be engaged to spec Republic trucks with technology that is currently available on passenger vehicles.

Monthly Compliance Training

This is a standardized monthly training in a classroom atmosphere utilizing videos. Topics include, but are not limited to:

- Lock Out Tag Out and Electrical Safety
- Hazard Communication
- Emergency Response Plan Procedures
- Personal Protective Equipment Training
- Heat Stress
- Confined Spaces
- Fire Extinguishers
- Seat Belt Use
- DOT Drug/Alcohol Substance Abuse Compliance

Standardized Maintenance

Fleet Management impacts everything we do as a company. We have enjoyed a significant level of success in maintenance; therefore, our aspirations are to move from "good" to "great" in the journey toward operations excellence. The key objective to continued improvement is ensuring consistent execution and durability across the network.

Our standardized maintenance program provides a standard approach and structured tools to implement best practices and processes for fleet management, truck care and maintenance. The vision of the program is to create one, standard best-in-class fleet management system that makes fleet management foundational and the cornerstone of the "Republic Way". This program minimizes variability in fleet operations through standardized procedures and consistent execution to improve reliability and fleet availability.

There are 6 Operating System Pillars in the program:

- Preventive Maintenance – A consistent preventive maintenance program in which properly trained technicians perform all preventative maintenance repairs on time; quality is assured through regular spot checks.
- Planning and Scheduling – Improve shop capacity and productivity significantly by introducing maintenance planning, scheduling and standard best practices across all sites.

- Workplace Organization – Ensure that each site optimizes its layout and organization based on its unique footprint to reduce waste and improve productivity.
- Repair Quality and Training – Establish standard work procedures and times for the most common repairs, with operating procedures, part needs, quality requirements, and a safety focus.
- Driver Practices – Introduce standardized driver practices that build on the current Operations - Maintenance partnership with increased accountability from drivers.
- Parts Management – Leverage best-in-class practices across the company to manage inventory – including external vendor management – to improve parts availability, reduce waste and lower costs.

Corporate Priority Visits

Historically, corporate priority visits were based on negative safety trends in order to conduct a deep-dive into the division or business unit data to identify opportunities for improvement. That process will continue but we will also be coordinating site visits based on positive trends. The corporate safety team will partner with local Area Safety Managers to conduct both of these sets of visits and help the location build a performance plan to either improve their safety or communicate their best practices to other locations.

These visits will include personnel from the following functions:

- Corporate Safety
- Area Collections Management
- Human Resources

By including others outside of the safety function, we're able to obtain different perspectives on how to overcome any challenges being faced.

INNOVATE TOGETHER

Vehicle Safety Devices

By implementing select vehicle safety devices, Republic trucks are more visible. We continue to explore multiple safety devices and features and enhance those currently implemented. Examples of some of our current safety devices include.

- Rear Cameras (except roll off trucks and pick-up trucks)
- In-cab backing alarm system (primarily in front load and residential trucks) in addition to back-up alarms
- Enhanced strobe lights increase visibility of trucks (all route trucks)
- Enhanced visibility tape (all route trucks)

- Mirrors on trucks (all trucks)
- Side impact rails (route specific trucks)

In-Cab Event Recording

Republic also has in-cab event recording systems in numerous vehicles throughout our fleet. In-cab event recording helps us achieve the following objectives:

- Identify critical/unsafe driving behavior, including sudden stopping or starting, increased acceleration, and actual crashes;
- Record any incident from multiple perspectives;
- Use as a supervision and coaching tool for drivers to identify unsafe behaviors (e.g., distracted driving, lack of seatbelt) and promote safe choices (seatbelt usage, defensive driving techniques); and assist in addressing third-party claims, including those for property damage.

ANALYZE TOGETHER

Serious Incident Notifications

All serious incidents, regardless of fault, must be reported to Republic's Corporate Risk Management team as quickly as possible. Serious incidents may include, but are not limited to the following:

- Fatality
- Amputation
- Individuals taken from the scene with serious/life threatening injury
- Individuals taken from the scene via air-flight
- Multiple injuries
- Property damage, e.g. fire, tornado, earthquake, etc., over $100,000
- Incidents that have or could attract major media attention

In the event of a serious incident or fatality, the Risk Management team promptly holds a conference call with Safety, local operations and other interested company stakeholders to ensure proper response and enhance early intervention.

Human Factors Analysis and Classification System (HFACS)

Republic began to utilize the HFACS in August of 2014. The goal of the program is to identify active and latent issues that could lead to incidents. Our corporate and field Safety and Human Resources teams are certified in the process. To date, we have completed 400+ analyses. In implementing HFACS, we have increased accountability and prevented crash re-

occurrence. The process includes the following considerations and findings are reviewed on a regular basis with Executive Management:
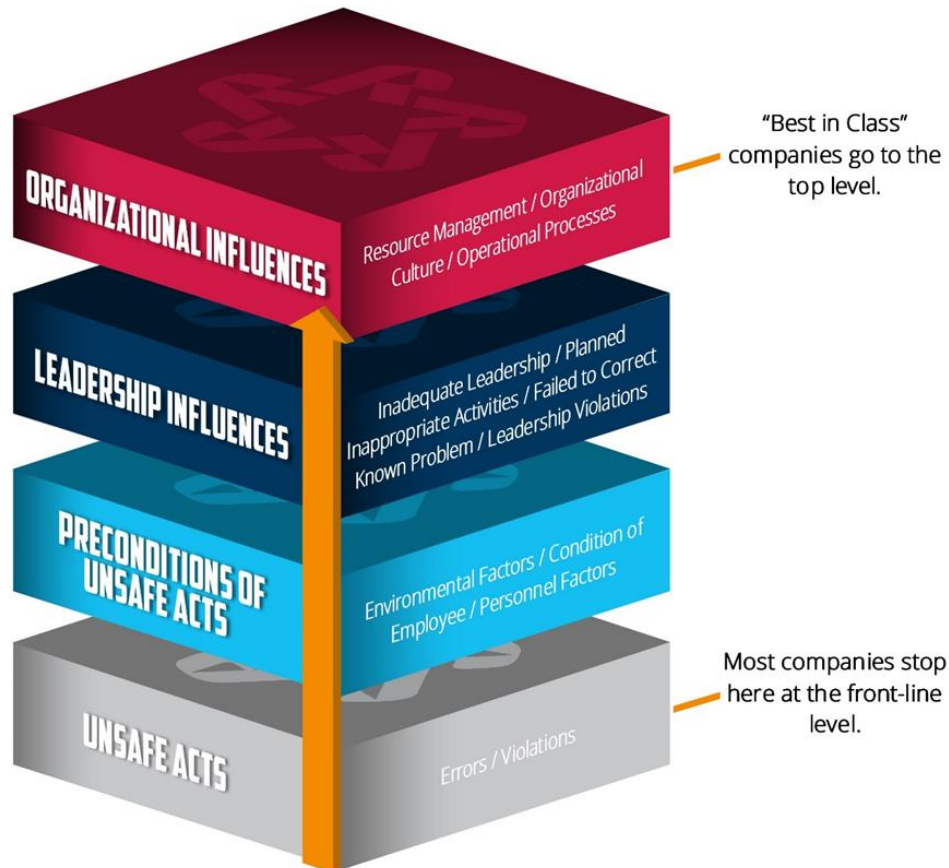
Trend Reports

Trend reports are performance data tools used to rank each area and business unit based on year-over-year progress. Based on results, site visits are scheduled to build development plans for the location to follow. The report is updated monthly and provides local management and safety personnel a snapshot of performance to help align priorities and guide resources for support.

Incident Investigation Training

A thorough incident investigation process leads to prevention. When an incident is properly investigated, business and safety decisions can be improved. A timely and thorough investigation allows the Operations team to work with their employees and others to prevent reoccurrences and make improvements to internal processes, equipment and technology.

Incident investigation training at Republic is provided during the Supervisor Onboarding training program and supplemental information has been provided as part of a new Republic Standard for all existing employees.

CELEBRATE TOGETHER

Driver/Operator of the Year

The National Waste & Recycling Association is the trade association representing private-sector U.S. waste and recycling companies, as well as the manufacturers and service providers that do business with those companies. The National Waste and Recycling Association Driver of the Year Award is a means to achieve public recognition within the industry for safe driving. All divisions at Republic participate in this program. The safest driver is awarded a new truck with their name and a driver of the year sticker on the door. Additionally, winners receive a cash prize and all-expense paid trip to Waste Expo with a guest. Since 2009, Republic has won 70% of the Driver of the Year Winners in the large truck category. In 2019, we also received our first Operator of the Year award. Our most recent winners are as follows.

2009
Donny Lederer (Commercial)
John Thomas (industrial)

2010
Ken Aldrich (Commercial)
Anthony Lucious (Industrial)
Rodney Poe (Residential)

2011
Keith Pilot (Residential)
Danny McIntyre (Commercial)

2012
Brett Popke (Industrial)
Jesus Pena (Commercial)
Mike Buczkowski (Residential)

2013
Daniel Parker (Industrial)
Terrance Johnson (Residential)

2014
Quemene Perea (Commercial)
Florentino Castrellon (Industrial)
Johnny Caine (Residential)

2015
Todd Colarusso (Commercial)

2016
Efren Lopez (Residential)
Dave Bedford (Industrial)

2017
Javier Verduzco (Commercial)
Jesse Pena (Industrial)

2018
Chuck Thorpe (Residential)
Toribio Gonzalez (Industrial)

2019
Michael Juhan (Commercial)
Robert Hernandez (Landfill Operator)

Dedicated to Safety/Excellence

The Dedicated to Safety/Excellence program at Republic is a recognition and reward program for safety sensitive employees. Through this program we have standardized safety recognition and offer a single program to award the best of the best employees considering not only safety but customer service, attendance, and operational performance.

Monthly awards points are provided for employees that go incident-free which can be used to purchase items for themselves or for their family.

Reviewing our Progress

We're encouraged that our TRIR, an indicator of overall safety performance, improved in 2019 as compared to 2018. However, we experienced a particularly difficult year related to employee fatalities. We've redoubled our efforts and you'll read about some of these initiatives in the following pages. See our 2019 Sustainability Report for highlights on our progress. We seek continuous improvement of our Safety Amplified Initiative. As we monitor trends in data and impact, we will continue to adjust our investments, and level of activity in each area, to meet our objectives as effectively, and efficiently as possible. Progress against goals is reported publicly annually in our Sustainability Report and our GRI Report.

403-1 | Occupational health and safety management system

a. Republic has created a comprehensive health and safety management system, called Safety Amplified, described above. Our commitment to safety begins with our overarching Safety Policy and includes underlying policies, procedures, manuals and expectations.

Our Commitment to Safety

Republic has multiple policies, programs and procedures in place to incentivize, educate and prioritize safety for our front-line employees. The success of these programs is centered around the word "together." All of our employees, including our front-line, supervisory and upper management work *together* to make these programs successful.

Republic has a professional staff of corporate and field safety professionals. The primary function of the staff is to create a culture of safety, improve overall safety performance, direct field safety activity, facilitate OSHA, Environmental and Department of Transportation matters, and provide statistics for performance standards to company goals.

Field Safety Staff:

- 11 Area Safety Managers
- 9 Business Unit Level Safety Managers

- 11 Safety Representatives
- 22 Area Driver Training Managers

Corporate Safety Staff:

- Senior Vice President, Safety (reports to the Chief Operating Officer)
- Director, Safety
- Sr. Manager, Safety
- Manager, Safety
- 1 Sr. Safety Analyst

Safety is at the top of Our Priorities statement (refer to our Code of Business Ethics & Conduct) and Republic's Chief Operating Officer is responsible for ensuring our policies, practices and procedures are top of mind for every employee. Executive management is involved in leading safety throughout the organization and includes safety in Board Meetings, Corporate Sr. Management meetings, Area Management Meetings and Division Management Meetings. Additionally, the Corporate Risk Management Department meets periodically with the Safety Department to discuss safety programs and initiatives.

Safety Amplified is voluntary and follows Occupational Safety & Health Administration (OSHA) safety and health management program guidelines and recommended practices.

b. The scope of Safety Amplified includes all employees of Republic, at Republic owned and operated facilities, for all company activities described in our 10-K. In addition, any contractor or third-party conducting business at our facilities are included in the scope of Safety Amplified.

403-2	Hazard identification, risk assessment, and incident investigation

Assessment	Number completed - 2019
On an annual basis we perform a risk assessment and identify priority divisions. We then conduct a review of safe work practices in audits completed by our corporate internal audit team at those divisions.	30 divisions

In addition, each of our divisions is expected to complete an annual self-assessment and/or receive an annual safety site visit and assessment.

403-5	Worker training on occupational health and safety

Type of Training	Number Trained - 2019
New driver safety training at our Driver Training Centers	3166 drivers

Annual defensive driver training	16,292 drivers and 1,412 managers

In addition, contingent employees received safety training at time of assignment in 2019 and then twice per month for the remainder of the assignment. Third party contractors working on our sites receive initial site-specific safety rules training and then again if any site rules change.

403-9 Work-related injuries

	2015	2016	2017	2018	2019	2030 Goal
OSHA Total Recordable Incident Rate (TRIR)	3.6	3.7	3.6	3.9	3.7	2.0

In 2019, Republic had 2 OSHA reportable employee fatalities and 2 employee fatalities while operating collection vehicles. We deeply feel employee losses and endeavor to provide not only best in class safety programs, but also the training and know-how to leverage these programs. Because we are not satisfied until each and every one of our employees return home at the end of every day, we continue to intensify our efforts and commitment to safety. At Republic, we're well-aware that the nature of our business presents safety challenges to both our employees and our communities. That's why we prioritize safety above all else and work hard to design, implement and continuously improve safety programs for our employees.

Over the past 10 years, our safety performance has been 39 percent better than the industry average, based on Occupational Safety and Health Administration data.

404 Training and Education

404-1 Average hours of training per year per employee

Our learning and talent development programs are focused on alignment with business outcomes, experiential new employee onboarding and investments in high-potential, high-performing talent.

Onboarding and Sales Acceleration programs focus on providing the fundamental skills each employee needs to succeed in his or her role. Our Leadership Trainee program, an 18-month rotational experience for recent college graduates, is another example of our commitment to providing opportunities for growth.

Developing our leaders is also a critical part of our people and talent agenda. From our Leadership Fundamentals program, a program for all leaders of people, to our Leadership

Trainee and General Manager Acceleration programs for early career leaders, we have developed programs and experiences to help ensure that as our leaders progress, they are accumulating the skills necessary to be successful at each level. Our Leadership Fundamentals program was awarded the 2018 Brandon Hall Group Excellence award for best advancement in leadership development. Our Leadership Trainee program has enabled us to place new leaders in key positions in the field and at our Phoenix headquarters.

Our General Manager Acceleration program is designed to enable its participants to become the next generation of General Managers. Ongoing support for leaders is provided by way of a bi-weekly leadership video-cast that reinforces the concepts from our leadership trainings, challenges employees to continue to apply the key learnings, and offers ongoing tools for addressing the more seasonal aspects of leading throughout the year. Over the last four years, more than 5,182 leaders have completed our Leadership Fundamentals program, creating a common language and toolkit for how we coach and develop employees.

Driver training is addressed in 403-5 Worker training on occupational health and safety.

Average Onboarding Classroom Training Hours per Role	2019
Drivers - 24 hours classroom and 8 hours of closed course skills training during onboarding	32
Customer Service Agents	120
Leadership	64

People are our most important asset. What differentiates Republic? A strong focus on onboarding new employees in key functions: Drivers, Customer Service Agents and Leadership roles. We are emphasizing this data as these critical positions account for 80% of our employee base. To ensure our newly hired employees are effectively oriented to the Company and their function, as well as, assimilated within their roles, we provide customized classroom training for each function. Classroom training shown above does not include on-the-job experience, training provided by a third-party vendor, or mentoring.

Ongoing Training	2017	2018	2019
Average hours per FTE of training and development	16	16	16

The average amount spent per full time employee (FTE) is the cost for development of content at corporate/all FTEs. It does not include travel and living expenses, overhead and capital to staff and run our driver training centers, training materials, etc. These costs are carried by the local offices.

405 Diversity and Equal Opportunity

103-1, 2, 3	Management Approach

Our approach to diversity and equality is driven by both our Human Rights Policy and our Code of Business Ethics and Conduct. We strive to create an inclusive and diverse culture where all employees can thrive and feel welcomed and valued. Our Mission of Supporting an Inclusive Culture (M.O.S.A.I.C.) is driven by our office of inclusion and diversity and supported by the M.O.S.A.I.C. Council. Our approach enables us to continue to develop new strategies and activities to create a more inclusive work environment and diverse workforce. Through these efforts, we can leverage our best thinking to improve our culture and better serve our customers. In 2017, the M.O.S.A.I.C. Council launched the Women of Republic business resource group, which was developed to provide a platform to empower members and enrich a diverse culture that values, develops and advances women in leadership. Advancing women in leadership roles will provide greater diversity of thought and perspective which has been proven to drive better decision making.

In 2019, we launched our Veterans, Advocacy, Learning, Outreach and Recruiting (V.A.L.O.R.) business resource group, which is focused on creating an inclusive culture that attracts, retains, develops and values veterans and their families throughout the organization and in our communities. We believe there is no better way to protect our planet than to recruit and hire the heroes who have protected our country. We actively recruit and hire veterans - those transitioning from military life as well as those long discharged from active duty. We value the skills, experience and operational excellence they bring to our organization, as well as their commitment to a better tomorrow. Historically, we have had great success hiring veterans, who serve in a variety of roles, ranging from drivers to senior leaders. In 2020 and beyond, we expect to launch additional business resource groups.

With respect to diversity relating to Board candidacy, our Corporate Governance Guidelines state that directors will be selected in the context of assessing the Board's needs at the time and with the objective of ensuring diversity in the background, experience, and viewpoints of Board members. To assist in promoting such diversity, the Board shall take reasonable steps to ensure that new Board nominees are properly drawn from a pool that includes diverse candidates. The Board and the Governance Committee will continue to assess the need to expand the breadth of experience, expertise, and viewpoints represented collectively by our directors and continue to seek top-quality candidates to fill any identified gaps.

405-1	Diversity of governance bodies and employees

Gender Diversity	2019
Board of Directors	33.3%
Female share of total workforce	18.6%
Females in all management positions, including junior, middle and senior management (as % of total management workforce)	21.6%
Females in junior management positions, i.e. first level of management (as % of total junior management positions)	21.0%
Females in top management positions, i.e. maximum two levels away from the CEO or comparable positions (as a % of total top management positions)	17.4%

Breakdown of workforce based on other minority group(s), e.g. age, nationality, disability, etc.)

Age Diversity	2019
Centennials	11.3%
Millennial	29.5%
Gen X	35.1%
Baby Boomers	23.6%
Traditionalists / Silents	0.3%
Unknown	0.2%

Ethnic Diversity	2019
Non-white (excluding ethnically unknown)	47.3%

Approximately 7% of our workforce are veterans.

413 Local Communities

103-1, 2, 3	Management Approach

Our Human Rights policy defines our commitment to be good neighbors in the communities in which we live and work. This commitment is brought to life through our charitable giving

foundation, National Neighborhood Promise, and our ambitious goal to impact the lives of 20 million of our neighbors by 2030.

We stand for strong neighborhoods and investing in the communities where we live and work is important to us. To be America's preferred recycling and waste services partner, we must first be a good neighbor in all of the communities we serve. And being a good neighbor goes far beyond delivering superior customer service and environmental compliance. It requires a commitment to the vitality of the entire community.

We live in challenging times, with more than 50 million people, or one in six, living in economically distressed zip codes across the United States.[1] According to the Economic Innovation Group, people residing in these areas experience lower graduation rates, increased incidents of crime, disproportionate health problems and unemployment or underemployment.

Republic is committed to helping the communities in which our employees and customers live and work. We believe strong communities create a ready labor pool, drive housing and business growth, and foster a desire for consumers to handle recycling and waste in the most responsible way.

1. Economic Innovation Group: 2018 Distressed Communities Index

Goal: Positively impact 20 million people by 2030

CUMULATIVE CHARITABLE GIVING GROWTH
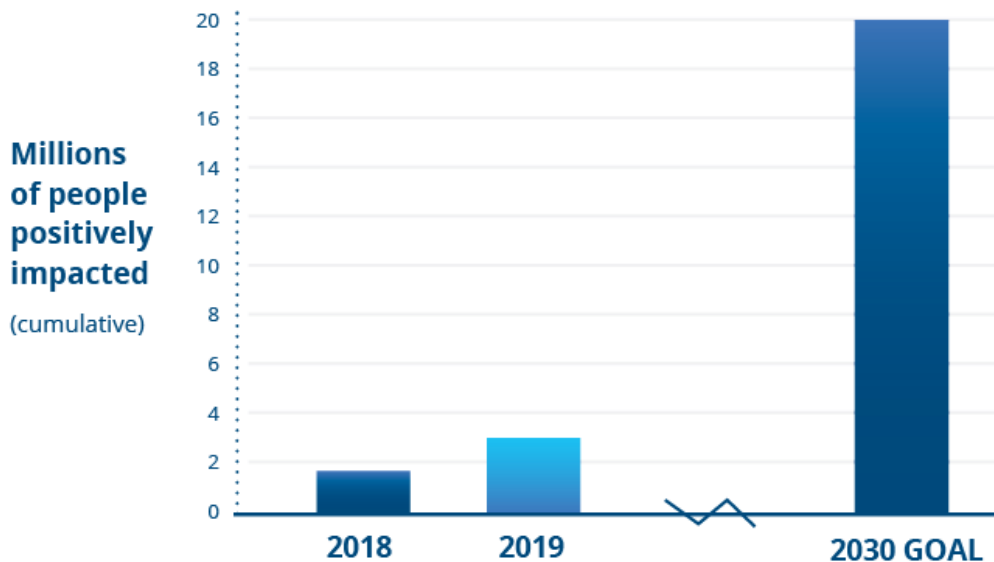
The work we do to strengthen neighborhoods across the country is a meaningful reflection of our Company values and commitment to driving long-term change. We know that people care deeply about making their neighborhoods better and stronger, but they often don't have the tools or resources to bring their ideas to life. Through partnerships with local nonprofits, Republic is committed to making a durable and meaningful impact in our communities. As we increase our investments in neighborhood revitalization, we drive long-term value for all of our stakeholders.

This goal aligns with the United Nations "Sustainable Cities and Communities" Sustainable Development Goal, 11.7 – rebuild, restore and revitalize places and spaces in need.

How We'll Get There

Through our charitable giving platform, we support organizations across the country that seek to strengthen the neighborhoods we share. Our contributions vary in form – we provide financial support where it is needed, volunteer our time and provide in-kind donations of products and services in an effort to sustain our planet and make it better for generations to come.

While our primary focus is neighborhood revitalization, we also support nonprofit charitable organizations that demonstrate community impact in the areas of safety, disaster relief and social services.

In 2018, the Republic Services Charitable Foundation awarded its first grants to nonprofit organizations that are committed to making their local neighborhoods stronger — and we were just getting started. Through our charitable giving platform, we support organizations across the country that work to improve the neighborhoods we share.

Our local business units across the country are empowered to support local communities in multiple ways, which benefits the specific needs of their customers and the greater community.

Through our National Neighborhood Promise™ program, funded by the Republic Services Charitable Foundation, we are making a promise to increase our efforts to help rebuild, revitalize and restore places and spaces where our employees live and work, ultimately creating stronger neighborhoods that sit at the heart of our Blue Planet.

Our focus is on projects and programs within our neighborhoods that can make a lasting impact, like providing critical home repairs, overhauling or building local neighborhood parks

and green spaces, safety improvements to school playgrounds, community cleanups of town centers, beautification efforts through planting trees and flowers, and constructing community gardens, to name a few.

> ### Our commitment to communities includes:
>
> - Grants to nonprofit charitable organizations funded through the Foundation or our local business units
> - In-kind contributions of our products and services
> - Employee volunteerism

Positive Impacts of Charitable Giving

- Healthy communities are good for our employees, our customers and our business
- Opportunities for employee involvement drives their connection to our workplace and each other

Reviewing our Progress

We continue to ramp up our charitable giving activities, and in 2019 we supported 23 additional neighborhood revitalization projects through our Foundation and National Neighborhood Promise. See our 2019 Sustainability Report for highlights on our charitable giving activities. We will continue to monitor the progress we are making on our strategic community investment goal. As we assess trends in data and impact, we will continue to adjust our investments, and level of activity in each area, to meet our objectives as effectively, and efficiently as possible. Progress against goals is reported publicly annually in our Sustainability Report and our GRI Report.

| 413-1 | Operations with local community engagement, impact assessments, and development programs |

100% of our operations have local community engagement and/or local community development programs available to them via the three giving pathways described above.

Cumulative	2018	2019	2030 Goal
People positively impacted	1.8 million	2.8 million	20 million

Republic gave approximately $6.1 million back to the communities it serves in 2019.

	2018	2019
Cash Contributions	$3,744,583	$4,068,177
In-Kind Giving	$2,042,505	$2,037,342

See disclosure IF-WM-120a.2 of our [2019 SASB Report](#) for more insight on community impact.

415 Public Policy

103-1, 2, 3	Management Approach

We recognize the importance of transparency related to political contributions for our stakeholders. The company and its sponsored PAC follow all applicable federal, state and local campaign finance regulations regarding public disclosure. Reports are filed with applicable agencies which are then made available to company employees and the public at large via websites or via request as dictated by the agency. In addition, we have a publicly available policy regarding political contributions, which describes our protocols for political engagement, our PAC and our involvement with trade organizations. The policy can be found online at our [Investor Relations website](#).

Republic Service's national focus areas are related to solid waste, environment, energy, transportation, labor, and taxes. We work closely with our trade associations, lobbying teams and other partners to develop and maintain positions on these matters that are consistent with our corporate strategy and sustainability objectives, where possible.

Refer to pages 88-89 of our [2019 Proxy Statement](#) for more information.

415-1	Political contributions

In 2019, Republic spent the following:

	2018	2019
Federal lobbying	$247,000	$242,000
Local, regional, national political campaigns/organizations/candidates	$944,968	$611,824
Trade associations/Tax-exempt groups	$372,848	$426,440

Significant contributions (above $200,000 per year) include the following:

1. West Front Strategies, Inc, for $242,000. West Front Strategies represents Republic on legislative and regulatory matters via advocacy efforts at the federal level.

2. We also contributed to an industry association, National Waste & Recycling Association (NW&RA) in the amount of $426,440. The mission of the NW&RA is to provide leadership, advocacy, research, education and safety expertise to promote the North American waste and recycling industries, serve as their voice and create a climate where members prosper and provide safe, economically sustainable and environmentally sound services.