2017 SUSTAINABILITY

International Post Corporation

POSTAL SECTOR SUSTAINABILITY REPORT 2017

Moving towards a low-carbon delivery industry

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INTRODUCTION

Holger Winklbauer
Chief Executive Officer, IPC

Since the adoption of the Paris Agreement and the UN Sustainable Development Goals (SDGs) in 2015, the global sustainability landscape has evolved markedly. Now, more than ever, businesses have a critical role to play in realising these wide-ranging ambitions. Given the significant achievements of the postal industry to date, I have confidence that we as a sector can continue to evolve our sustainability strategies and rise to the challenges on the global sustainability agenda.

Since 2008, IPC's Environmental Measurement and Monitoring System (EMMS) programme has demonstrated the postal sector's dedication to improving carbon management practices and reducing carbon emissions. Not only have EMMS participants already achieved the programme's 2020 target of a 20% reduction in Scope 1 and 2 (owned vehicles and buildings) carbon emissions, but we are also on track to reach our Carbon Management Proficiency target ahead of the 2020 deadline. These achievements also present a solid business case through significant cost savings. The group is also making strides towards improving letter mail and parcel delivery efficiency amid a changing postal market characterised by rapid growth in parcel volumes and declining in letter mail volumes. Going forward, we will look to build on this success and continue to evolve our sustainability programme. In doing so, we intend to solidify the postal sector's position as a frontrunner in its efforts to advance global sustainability action.

Eight years on from the start of the programme, EMMS participants continue to demonstrate their commitment to improving carbon management and achieving associated emissions reductions. Participants are increasingly switching to 100% renewable electrical power supply, with 30% of posts having made this impressive transition already. Many are also focusing on further improving building energy efficiency. Meanwhile, participants continue to increase their use of alternative-fuel vehicles for postal delivery, with these types of vehicles now accounting for 16% of the postal sector's entire 662,000-strong fleet. The group's commitment to transitioning to low carbon transport illustrates participants' dedication to ensuring that the inevitable rise in emissions driven by rapid growth in the parcel sector is kept to a minimum. This dedication is reflected in the continuous annual improvement in parcel delivery efficiency from the 2013 baseline.

It is admirable to once again see so many examples of our participants' impressive sustainability activities in the 'Case Studies' section in this report. While recognising the extensive environmental advantages of these activities and initiatives, participants are also seeing considerable returns on their investments. Since 2008, using conservative estimates the group has achieved a financial saving of €1,484m (US$1,642m) through reduced fuel and electricity consumption.

> "€1.5bn cost savings since 2008 through reduced fuel and electricity consumption

Collaboration is the key feature that helps enable the EMMS programme to be such a success. Indeed, the attendance of 13 EMMS participating posts from four continents at this year's Sustainability Workshop highlights the importance of this aspect of the programme. By inviting participants to share best practice and individual experiences, our annual workshop provides a platform to facilitate the EMMS group to further improve their carbon management and reduce their carbon emissions. The consistently high level of attendance at our two-day Sustainability Workshop illustrates that members value the benefits of the EMMS programme in facilitating information exchange, shared learning, and collaboration to support and encourage continuous improvement.

Meanwhile, IPC's International Drivers' Challenge provides an opportunity for EMMS participants to share best practice on reducing emissions from transport. At the same time, the Drivers' Challenge is providing posts the possibility of promoting their sustainability activities undertaken in an international arena, while offering a long lasting motivational event for high performing postal employees. Eight postal companies participated in the fourth edition of IPC's International Drivers' Challenge in November 2016 (held at the legendary Spa-Francorchamps Formula 1 track in Belgium), benefitting from this unique opportunity to exchange knowledge and experiences in economic and fuel efficient driving behaviour. Following the success of our last IPC's International Drivers' Challenge, the fifth edition will be held in Estoril, Portugal in April 2018, in partnership with CTT Portugal Post.

As postal companies begin to maximise efficiencies in their own operations, engagement with suppliers and subcontractors presents a significant opportunity to further improve their sustainability performance. Indeed, since the introduction of our delivery efficiency target in 2014, postal companies are increasingly having a positive influence on their value chain. The inclusion of outsourced transport in our Science Based Target is especially important given the rapid increase in the numbers of packages and parcels currently being experienced by the sector. Largely driven by the growth in e-commerce, this rise in parcel and package volumes has increased the demand for outsourced road and air transport. Our new target therefore ensures that the supply chain is a priority focus for improving sustainability.

As one of the few global sector-wide initiatives committed to improving carbon management practices and reducing carbon emissions, collaboration and communication have been key to the success of the EMMS programme. Through continued engagement and innovation, the postal sector is striving to provide an increasingly sustainable service for its customers. Our customers recognise our positive environmental achievements. In a stakeholder research exercise undertaken between December 2016 and March 2017, our stakeholders (which included our customers) identified the postal sector as a frontrunner in terms of its sustainability performance, noting the EMMS programme's ambitious targets and impressive achievements.

While our stakeholders identify low carbon transport and Greenhouse Gas (GHG) emissions as key areas in which the postal sector can have a positive environmental impact, they also recognise the important role business has to play in achieving the targets set out in the UN SDGs. By evolving the EMMS programme to align with these global sustainability objectives, and also the objectives of the Paris Agreement, we will uphold our commitment to our stakeholders and continue to drive positive and concrete sustainability action within the postal sector.

1. EMMS

1.1 PROGRAMME
A CONTINUOUSLY EVOLVING INITIATIVE

1.1.1 THE CURRENT EMMS PROGRAMME

IPC's Environmental Measurement and Monitoring System (EMMS) programme is a sector wide initiative acting to mitigate the impacts of global climate change via a collaborative approach to reduce carbon emissions. The EMMS programme was developed in 2008 in response to stakeholder and CEO requests for the postal sector to minimise its carbon footprint. This followed concerns regarding the contribution of the sector to greenhouse gas emissions. The EMMS programme is a global initiative, consisting of 20 participants from five continents – Africa, Asia-Pacific, Europe, North and South America. The 2017 IPC Postal Sector Sustainability Report analyses data reported for the 2016 calendar year.

Following a pilot in 2008, the full EMMS programme was launched in 2009, capturing data and measuring progress for the 2008 calendar year. In line with the programme's aim to reduce carbon emissions across the sector, IPC and the programme's original 20 participating posts together set two ambitious targets to be achieved collectively by the EMMS group by 2020 (from the 2008 baseline year):

- To achieve a score of at least 90% in carbon management proficiency
- To reduce combined carbon emissions from own operations by 20%

The group reached the 20% emissions reduction target in 2014, six years ahead of schedule. Nonetheless, further progress on absolute carbon emissions reductions beyond the 20% target will still be reported until 2020. Meanwhile, recognising participants' continuous improvement in carbon efficiency, a new Science Based Target was introduced for the group in 2014, which broadened the scope of the EMMS programme to include outsourced transport:

- To achieve a 20% reduction in carbon emissions (Scope 1, 2 and 3 – outsourced transport) per letter mail and per parcel by 2025, from a 2013 baseline year

The underlying principle of the EMMS programme is that significant, systematic, and sustainable carbon emissions reductions can only be achieved through a comprehensive approach to carbon management. The programme provides a common carbon measurement and reporting structure that enables participants to share their carbon and environmental management strategies, performance, and achievements.

There are multiple stages of data collection involved in the EMMS process. The first stage is a qualitative section, which requires participants to complete a comprehensive self-assessment Carbon Management Proficiency questionnaire. Ten management pillars are considered, including Policy and Procedures, Activity, Measurement and Verification, and Targets. The next stage of the process is the quantitative section, which requires participants to report carbon emissions and other operational data in order to measure carbon efficiency and thereby assess the efficacy of participants' carbon management systems.

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PARTICIPANTS SUBMITTED DATA TO THE EMMS PROGRAMME IN THE 2016 REPORTING YEAR

An Post (Ireland), Australia Post (Australia), Austrian Post (Austria), bpost (Belgium), Correios (Brazil), Correos (Spain), CTT Portugal Post (Portugal), Deutsche Post DHL Group (Germany), Le Groupe La Poste (France), New Zealand Post Group (New Zealand), POST Luxembourg (Luxembourg), Poste Italiane (Italy), Posten Norge (Norway), Posti (Finland), PostNL (The Netherlands), PostNord (Denmark & Sweden), Royal Mail Group Plc (United Kingdom), South African Post Office (South Africa), Swiss Post (Switzerland), United States Postal Service (United States)

In the 2016 reporting year, 20 participants submitted data to the EMMS programme. Please see Annex 'Exclusions and Estimations' on page 57 for more information on the EMMS programme participants.

1.1.2 THE FUTURE EMMS PROGRAMME: LOOKING TO 2020 AND BEYOND

IPC's EMMS programme was developed following extensive stakeholder engagement in 2008. This exercise aimed to improve IPC's understanding of best practice carbon management among global companies, and to establish expectations for postal companies' carbon management proficiency. The global sustainability agenda has evolved markedly since that point, underscored by recent developments including the adoption in 2015 of both the Paris Agreement and the UN Sustainable Development Goals (SDGs). As such, stakeholder priorities are likely to have changed, necessitating a reassessment of their opinions. IPC therefore commissioned Verisk Maplecroft, an independent global risk analytics and advisory firm, to undertake a survey to ascertain the opinion of key stakeholders regarding the future direction of IPC's sustainability strategy. Moreover, with the EMMS programme now in its eighth year, and with one of the programme's key targets already achieved, feedback was also sought on the performance of the programme to date.

Between December 2016 and March 2017, 40 global stakeholders (including customers, suppliers, subcontractors, and NGOs) were asked for their opinion on:

- The performance and achievements of the current EMMS programme
- The postal sector's sustainability performance in comparison to other sectors
- Their expectations for the sustainability performance of the postal sector
- The Sustainable Development Goals they deem most relevant for the postal sector
- The future strategy and direction of IPC's sustainability programme

Further information and a discussion of the results of the stakeholder research exercise can be found in the 'Aligning the EMMS programme's evolution with the SDGs' section on page 12 of this report.

1.2 2008 – 2016 RESULTS

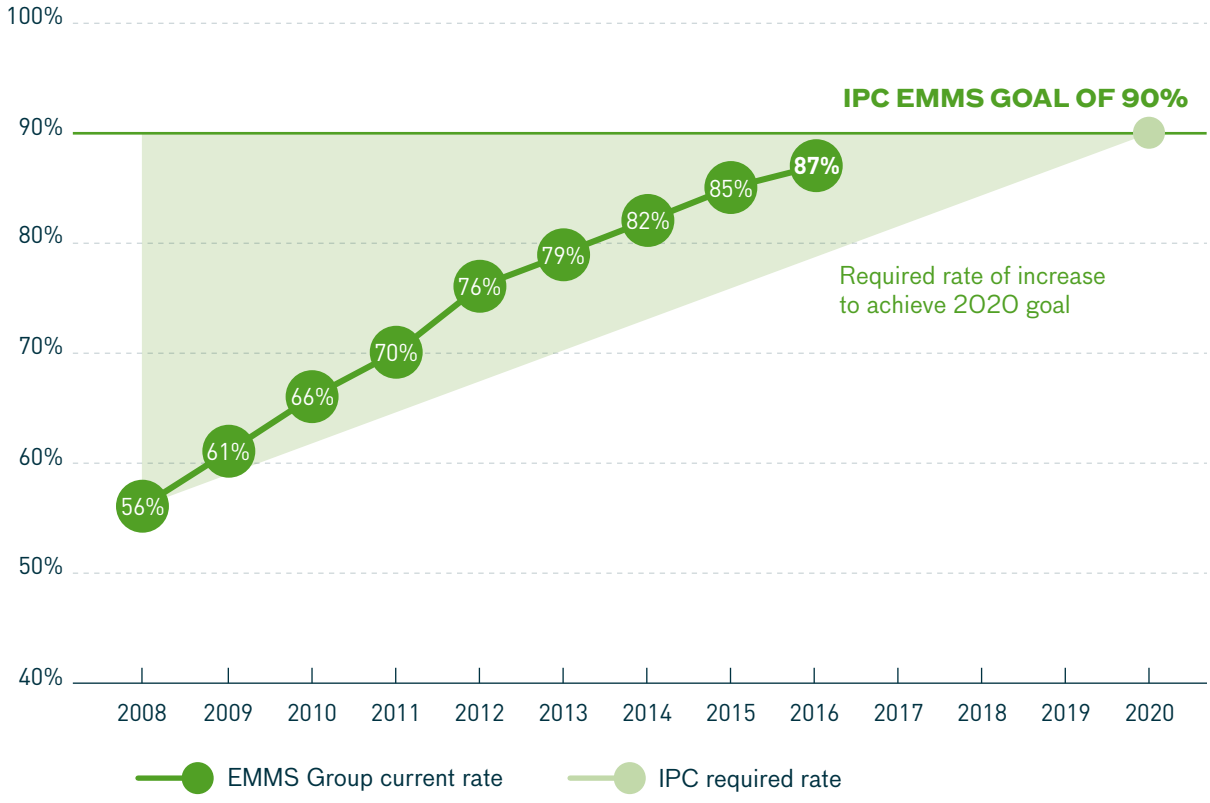
PROGRESS TOWARDS TARGETS CONTINUES TO EXCEED EXPECTATIONS

1.2.1 CARBON MANAGEMENT

Following consistent annual improvements in the EMMS group's score since 2008, the group is on track to achieve the 90% Carbon Management Proficiency target before 2020. In 2016, EMMS participants achieved an average of 87% (2015: 85%). This represents an increase of 31 percentage points since 2008, equating to an annual average increase of 3.9 percentage points. While we recognise that achieving further improvements becomes even more challenging as participants attain higher scores, with only a further three percentage points required to reach the target we are optimistic that the group can achieve this goal in the next four years. Indeed, the group's 2.2 percentage point improvement between 2015 and 2016 exceeds the 0.8 percentage point rate that is required to reach the 2020 target within the next four years. For detailed results, see the 'Technical Analysis' section.

Alongside the impressive collective achievements of the group, many posts stand out at an individual level. Several posts have already surpassed the 90% target, while a further nine have achieved overall scores of at least 80%. Moreover, our highest scoring participant scored 100% in five of the ten management pillars. While individual results are not published in this report, all participants report on carbon management and emissions in the public domain. We do, however, within the 'Case Studies' section of this publication, showcase best practice examples of carbon management initiatives underway at individual posts.

Figure 1: 2008-2016 Overall Carbon Management Proficiency results



1.2.2 DELIVERY EFFICIENCY

Having achieved the 2020 reduction target for total volumes of Scope 1 and 2 carbon emissions in 2014, a new group target was introduced in the same year: to achieve a 20% reduction in Scope 1, 2, and 3 (where Scope 3 includes outsourced transport only) emissions per letter mail and per parcel by 2025, from a 2013 baseline. The group's letter mail delivery efficiency has improved from 36.9 grams of CO_2 per item in 2013, to 35.8 grams per item in 2016. Meanwhile, parcel delivery efficiency has seen a significant improvement from the baseline year, with the group reporting 436.0 grams of CO_2 per item in 2016 compared to 505.0 grams per item in 2013. This represents a 14% decrease in emissions per parcel in just three years.

Table 1: Letter mail and parcel delivery efficiency 2013 - 2016

Delivery Efficiency	2013	2014	2015	2016	2025 Target
Letter mail (grams CO_2 per item)	36.9	37.2	35.9*	35.8	**29.5**
Parcel (grams CO_2 per item)	505.0	468.7	449.8*	436.0	**404.0**

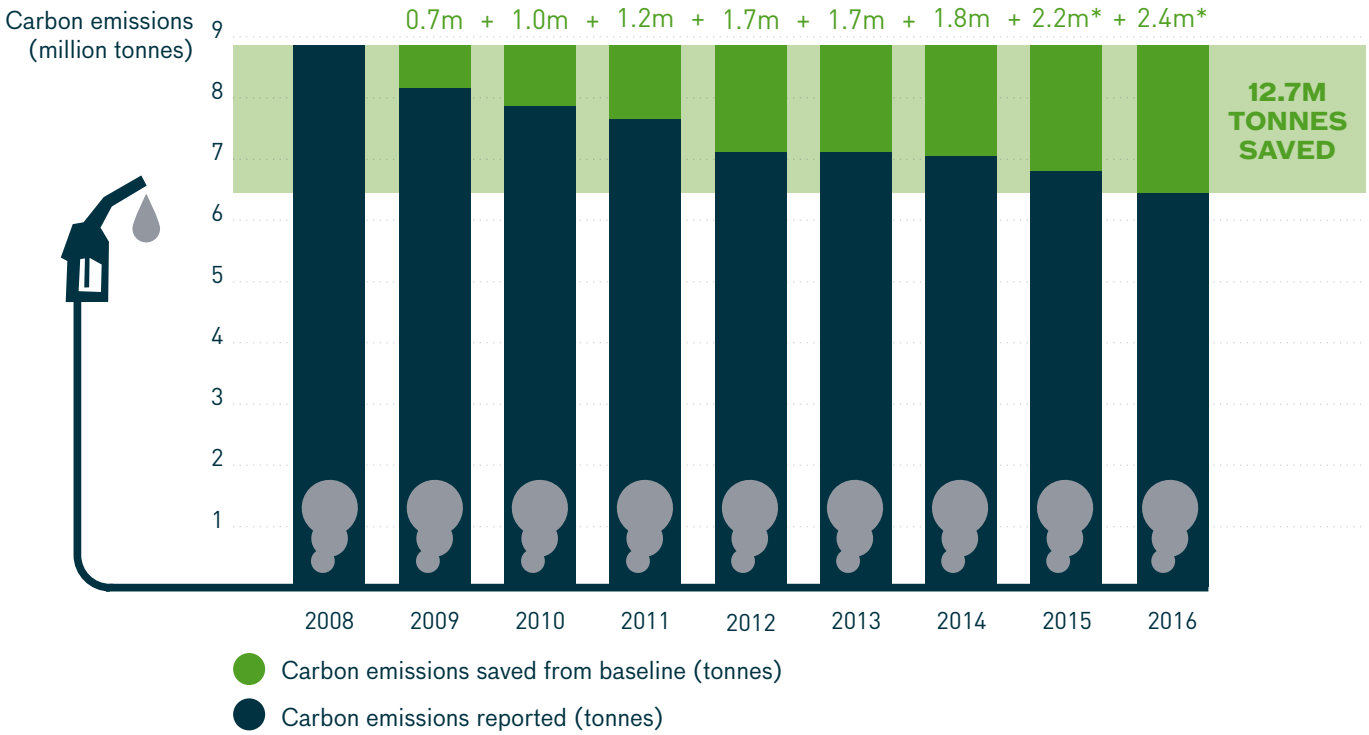
Despite the year-on-year decline in letter mail volumes, delivery efficiency has improved from the 2013 baseline as a result of the group reducing emissions associated with letter mail delivery by almost 1m tonnes. Nonetheless, the continuing decline in letter mail volumes presents a growing challenge for participants in improving letter mail delivery efficiency. Meanwhile, the growth of e-commerce is driving a rapid increase in parcel volumes. As a result, while the group's emissions associated with parcel delivery increased between 2015 and 2016, the number of parcels delivered increased at a much greater rate.

* 2015 group figures reflect a restatement from one participant which is primarily driven by the transition from a location-based Scope 2 emissions accounting methodology to the market-based approach recommended by the GHG Protocol. EMMS participants are continually seeking opportunities to more accurately measure their carbon performance, which in some cases results in updated approaches and calculation and measurement methodologies. By retrospectively updating historical figures to account for material changes we ensure that the EMMS group figures remain comparable over time. Please see the 'Methodology and Definitions' section on page 44 of the Technical Analysis and Annex 'Restatement Details' on page 58 for further information.

1.2.3 CARBON EMISSIONS

Having reached the 20% absolute Scope 1 and 2 emissions reduction target in 2014 – six years ahead of schedule – the group continues to translate their improved carbon management into further emissions reductions. The group's emissions have decreased by an impressive 26.9% since the start of the programme, from 8,830,000 tonnes in 2008 to 6,458,000 tonnes in 2016 (see Figure 2). This equates to aggregated savings of more than 12.7m tonnes of carbon emissions since 2008, equivalent to the CO_2 emissions from over 1.3m US homes' energy use in 2015.[1]

Figure 2: Carbon emissions reported and accumulated savings compared with the baseline



> The EMMS group's ongoing efforts to enhance building energy efficiency and increase their use of renewable electricity has contributed to a 45% reduction in Scope 2 electricity emissions since the start of the programme.

Group emissions decreased by 207,000 tonnes, or 3.1%, between 2015 and 2016. This was primarily driven by a 7% decrease in Scope 2 electricity purchased (198,000 tonnes), which was achieved via participants' considerable efforts to enhance building energy efficiency and increase their use of renewable electricity. Indeed, posts' ongoing progress in these areas has contributed to a 45% reduction in Scope 2 electricity emissions since the start of the programme. Assessing the achievements of individual participants, in the 2016 reporting year, 17 posts have already reached the 20% reduction target. Please see the 'Technical Analysis' section for a more detailed examination of results.

1. United States Environmental Protection Agency, 2017, Greenhouse Gas Equivalencies Calculator. Available at https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator [Accessed 8 September 2017]

* 2015 group figures are restated. Please see the 'Methodology and Definitions' section on page 44 of the Technical Analysis and Annex 'Restatement Details' on page 58 for further information.

1.2.4 BUSINESS CASE

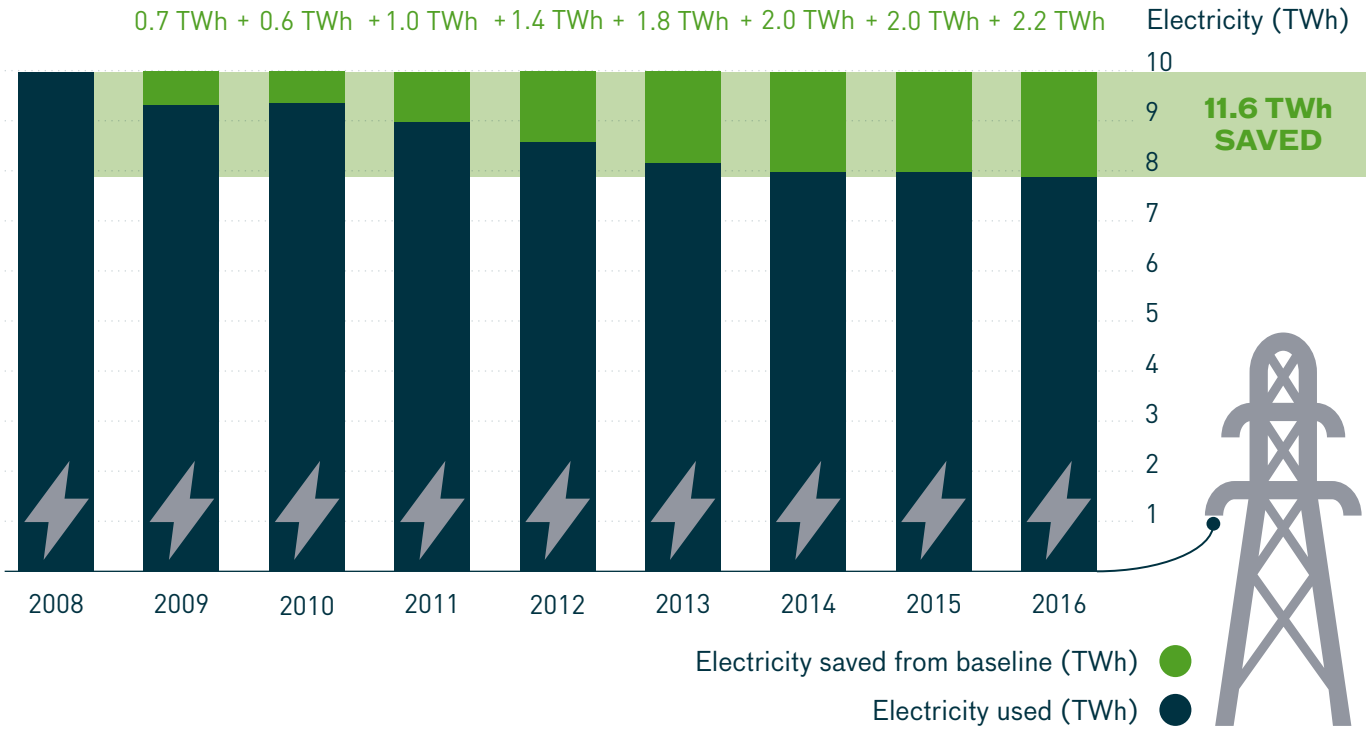
FUEL CONSUMPTION

Fuel consumption and electricity use are the most significant contributors to the group's carbon emissions, and their reduction presents opportunities for participants to realise considerable financial gains. Over the eight years of the programme, the group has achieved an accumulated saving of 1.3m tonnes of carbon emissions from own transport. Using a conservative conversion factor for diesel, this equates to 460m litres of fuel saved, and represents a financial saving of €403m (US$446m).[2,3]

ELECTRICITY CONSUMPTION

The group's electricity consumption has reduced by over a fifth since the start of the programme, decreasing from 9.95 TWh in 2008 to 7.77 TWh in 2016. This translates into an accumulated saving of 11.6 TWh over eight years. Using a conservative factor for the cost of electricity this corresponds to a saving of €1,081m (US$1,196m).[4]

Figure 3: Electricity consumption and accumulated savings compared with the baseline



2. The Wold Bank conversion factor of US$0.97per litre (http://data.worldbank.org/indicator/EP.PMP.DESL.CD)
3. OECD currency conversion of US dollars to Euros (https://data.oecd.org/conversion/exchange-rates.htm)
4. US Energy Information Administration (EIA), Electric Power Monthly, Average Price of Electricity to Ultimate Customers: Total by End-Use Sector (cents per Kilowatthour) (http://www.eia.gov/electricity/monthly/epm_table_grapher.cfm?t=epmt_5_03)

1.3 THE ROAD AHEAD FOR EMMS

ALIGNING THE EMMS PROGRAMME'S EVOLUTION WITH THE SDGS

The global sustainability agenda is rapidly evolving. The adoption of the United Nations Sustainable Development Goals (SDGs) in 2015 initiated a transition in global sustainability action, and it has become evident that businesses have a crucial role to play in achieving these Goals by 2030. In order to support and advance sustainable development, it is the responsibility of global business to ensure that the objectives set out in the UN SDGs are integrated into long term growth strategies. With this comes an opportunity for companies to emerge as leaders in sustainability action; an opportunity that, given their front-runner status, the postal sector is well-placed to seize.

40 COMPANIES PARTICIPATED IN THE STAKEHOLDER RESEARCH, INCLUDING:

AIR Worldwide, American Airlines, Blue Tree Systems, British Gas, Carlson Rezidor Hotel Group, Centrica, DB Schenker, Doddle, Forest Stewardship Council, Freight Transport Association, IPIECA, Kier Group, KYBURZ Switzerland AG, LKAB, National Express, Pitney Bowes, Qantas, Repsol, Royal BAM Group, Societe Generale, Telecom Italia, Univeristy of Oxford, Wildlife Works, World Wildlife Fund

Since the beginning of the EMMS programme in 2008, the group has been committed to improving carbon management and reducing carbon emissions across the postal sector. Owing to the continued dedication of participants, the group has made commendable progress towards the targets set eight years ago. Indeed, not only has the 20% carbon emissions reduction target already been accomplished, the group achieved 87% in Carbon Management Proficiency this year, and is therefore well on its way to achieving the 90% target ahead of the 2020 target date.

The EMMS group has also embraced the new delivery efficiency targets adopted in 2014, through which participants aim to achieve a 20% efficiency increase in Scope 1, 2, and 3 (outsourced transport) emissions per letter mail and per parcel by 2025, from a 2013 baseline. Approved by the Science Based Target initiative (a partnership between CDP (formerly the Carbon Disclosure Project), the UN Global Compact (UNGC), the World Resources Institute (WRI), and WWF (World Wide Fund for Nature) intended to increase corporate ambition on climate action), these targets place greater emphasis on efficiency, while also broadening the scope of the programme to include outsourced transport. While letter mail volumes are declining, the rapid growth of e-commerce is driving a steady increase in the volumes of packages and parcels. Amid this transitioning postal market, improving carbon efficiency is becoming ever more important and challenging.

CONTINUING TO MEET STAKEHOLDER EXPECTATIONS

The EMMS group's achievements to date are indicative of the postal sector's commitment to sustainability. IPC intends to build on these successes and evolve the programme in order to drive further sustainability action. As a first step in shaping the future direction of IPC's sustainability strategy, we engaged with our key stakeholders to understand their future expectations for our sector. A similar exercise was undertaken in 2008 and was instrumental in developing the EMMS programme. We recognise that the sustainability priorities of our stakeholders will have changed since that point, and as we look to evolve the EMMS programme stakeholder engagement is considered a critical step. Therefore, between December 2016 and March 2017, 40 global stakeholders (including customers, suppliers, subcontractors, and NGOs) were asked for their opinion on the success of the current EMMS programme, and their view on the future strategy and direction of IPC's sustainability programme.

In general, the achievements of the EMMS programme exceed stakeholder expectations, and the programme is viewed as a mature and successful initiative. The current programme targets are considered to be ambitious, while stakeholders also recognise the significant achievements that have been made to date. The most successful aspects were identified as encouraging positive climate action and improving carbon management. While acknowledging the progress already made in low carbon transport and reducing GHG emissions, stakeholders consider these areas also to offer the greatest opportunity for the postal sector. This further endorses the current emphasis of the EMMS programme and indicates that an enhanced focus and improvement in the area of low carbon transport in particular is anticipated.

Overall, the results of the stakeholder engagement show that the EMMS programme is viewed very positively and the postal sector is considered a front-runner in terms of its sustainability performance. However, it is clear that in order to retain that status the postal sector is expected to evolve its sustainability initiatives and strategies in a way that can support and advance the objectives of the UN SDGs. Stakeholders believe that IPC's future sustainability strategy can have the greatest positive impact on **Climate Action** (Goal 13), followed by **Sustainable cities and communities** (Goal 11), and **Responsible consumption and production** (Goal 12). These same Goals, as well as **Decent work and economic growth** (Goal 8), and **Industry, innovation and infrastructure** (Goal 9), have been identified by EMMS participants as those offering the greatest opportunity for the postal sector to advance global sustainability efforts.

> "For individual organisations it is difficult to align objectives with the SDGs, therefore a collective approach (like the IPC EMMS) is a good way to approach it. By increasing the scale of the movement you can achieve a greater positive impact.
> Jesse Putzel, Royal BAM Group

Building on these findings, it is IPC's ambition to evolve its sustainability strategy in alignment with the UN SDGs. In doing so, we must ensure that sustainability considerations become integrated into business policy, processes, and long term strategy, thereby ensuring that the sector's sustainability actions influence all aspects of the supply chain. As we have learnt from the very beginning of the EMMS programme, the key to continuing the success of our programme will be the support and collaboration of our dedicated group of participants.

The SDGs encompass a broad spectrum of sustainability issues from eliminating poverty, ensuring sustainable water use, to taking action to mitigate climate change and its impacts. IPC's stakeholder research exercise identified the Goals which our stakeholders and participants consider to present the most significant opportunity for the postal sector to support and advance. Following on from this important step, it is now time to focus our future strategy to ensure that we deliver on these sustainability objectives.

Over the next year, through continued communication and engagement with our stakeholders we intend to take a collaborative approach to mapping the SDGs across the postal sector value chain. Following this, we will be in a position to target the issues on which the postal sector can influence the most positive change, and begin to report on our progress and action in these areas. Many individual postal companies are already undertaking this process, and through the EMMS programme are sharing experience and knowledge with other posts to help them do the same. We expect that through communication and knowledge sharing within our programme, we will be fully equipped as a sector to integrate the SDGs into our long term sustainability strategy.

IPC is also committed to strengthening our external collaboration and partnerships in order to further our positive sustainability outreach, and solidify the EMMS programme's position as a leading sustainability initiative on the global stage. IPC already participates in successful collaborative initiatives including the UN Global Compact, the UN's Caring for Climate, Science Based Targets, WWF's Climate Savers, the We Mean Business coalition, and the UNFCCC's Climate Neutral Now. As the sustainability agenda evolves, we will continue to engage in partnerships and collaborative ventures, recognising the importance of such initiatives in driving robust sustainability action.

International Post Corporation

SUSTAINABLE DEVELOPMENT GOALS

Goal:
Take urgent action to combat climate change and its impacts.

Targets include:
- integrating climate change measures into policies, strategies and planning and raising awareness on climate change mitigation.

Postal sector opportunities:
- improve carbon management, increase carbon efficiencies, and reduce carbon emissions across postal operations;
- increase renewable energy use in buildings and transition to more sustainable modes of transport, such as walking, cycling, and investing in alternative-fuel vehicles;
- integrate climate change and energy considerations into operational policy, strategy, and long term planning.

13 CLIMATE ACTION

Goal:
Ensure sustainable consumption and production patterns.

Targets include:
- ensure sustainable management and efficient use of natural resources;
- reduce waste generation;
- integrate sustainability information into reporting cycles.

Postal sector opportunities:
- engage with suppliers and customers to promote sustainable and efficient use of postal products;
- introduce initiatives aimed at reusing and recycling used postal equipment and materials;
- increase the use of reusable and recyclable products to reduce waste generation;
- ensure that sustainability forms the basis of all procurement decisions
- publicly report on sustainable consumption and production metrics in annual reporting.

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

Goal:
Make cities and human settlements inclusive, safe, resilient and sustainable.

Targets include:
- ensure safe and sustainable transport systems and improve road safety;
- reduce the environmental impact of cities by focusing on air quality and waste management;
- implement integrated policies and plans centring on resource efficiency and climate change mitigation.

Postal sector opportunities:
- enhance sustainable transport and postal delivery by encouraging walking and cycling and investing in alternative-fuel vehicles, minimising the use of carbon-intensive modes of transport;
- engage with employees and transport subcontractors on the importance of economic and fuel efficient driving behaviour and road safety;
- enhance waste management, introducing measures to reduce waste generation and maximise reuse and recycling of postal products, materials and equipment.

11 SUSTAINABLE CITIES AND COMMUNITIES

8 DECENT WORK AND ECONOMIC GROWTH

Goal:

Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.

Targets include:

- promote policies that support decent job creation, creativity and innovation;
- strive to decouple economic growth from environmental degradation;
- achieve full and productive employment and decent work for all, and equal pay for work of equal value.

Postal sector opportunities:

- ensure a safe, secure, healthy, and fair working environment for all employees;
- promote resource efficiency and sustainable resource use;
- embed sustainability within long term economic growth prospects.

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

Goal:

Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.

Targets include:

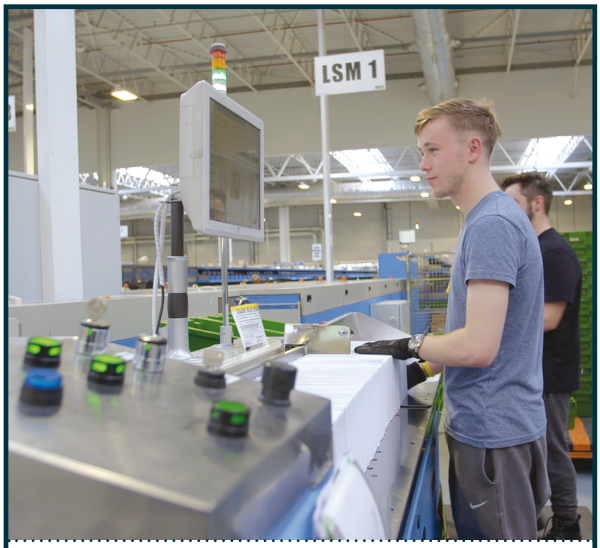
- develop sustainable and resilient infrastructure;
- increase resource efficiency of industry and ensure environmentally sustainable technologies and processes.

Postal sector opportunities:

- increase efficiency of postal operations, processes, and facilities;
- ensure sustainable use of resources;
- encourage innovation and enhance infrastructure to ensure environmentally sustainable industrial processes are adopted in postal facilities and operations.

2. POSTS' BEST PRACTICE CASES

LED UPGRADES HELP AN POST TO DELIVER ON ITS ENVIRONMENTAL PERFORMANCE



AN POST INSTALLED A SMART LED LIGHTING SYSTEM, WHICH WORKS IN TANDEM WITH DAYLIGHT HARVESTING

As part of its commitment to achieving energy efficiencies throughout its business, An Post has rolled out an LED Smart Lighting system across its four Mail Centres over the last two years. The project is part of a broad reaching energy efficiency drive underway at An Post.

Through the LED Smart Lighting initiative, existing internal and external lighting systems are being upgraded to reduce power consumption and improve lighting design. Smart lighting controls are also being installed for both timed and motion sensor lighting, leading to reduced power consumption and extending the life of the new light fittings. In conjunction, enhanced maintenance plans have been developed to enable greater efficiency in the management of lighting systems.

The project has already generated significant cost savings as well as delivered considerable environmental gains. An Post anticipates that energy use will be over 1,000,000 kWh lower in 2017 as result of the LED Smart Lighting initiative. Since the project began in 2015, an overall energy reduction of 14% has been achieved on baseline energy-use and the project is expected to pay back on capital investment within three years of completion. As a result An Post has trimmed its carbon emissions by 384 tonnes per annum, with savings expected to reach 530 tonnes once the initiative is rolled out more widely across the business.

SDG 12: Ensure sustainable consumption and production patterns
SDG 13: Climate action

AUSTRALIA POST: INSPIRING COLLABORATIVE ACTION TO ADVANCE THE CIRCULAR ECONOMY

Australia Post's approach to corporate responsibility is to consider the role the organisation plays in broader society and to act in innovative ways to create new forms of economic, social and environmental value. The business is also committed to contributing to the United Nations Sustainable Development Goals (SDGs) and finding opportunities to address these through innovation and collaboration.

It is within this context that Australia Post sees the importance of playing a role in helping organisations build and evolve solutions that advance the circular economy. This is particularly relevant to supporting SDG goal 12: ensuring sustainable consumption and production patterns.

With a network of over 4,000 post offices and 15,000 post boxes, Australia Post has collection points nationwide and the processes and systems in place to move billions of items a year. Participating in the circular economy by providing logistics to underpin the movement of materials is a natural part of what Australia Post already does every day.

In November 2016, Australia Post established the Revamp Network to provide a collaborative forum for stakeholders to share ideas and participate in opportunities that help drive better circular economy outcomes.

AUSTRALIA POST – THE BACKBONE OF AUSTRALIA'S CIRCULAR ECONOMY

Revamp formed following the success of a design forum organised by Australia Post in July 2016. The forum saw approximately 70 customers and key stakeholders from a range of organisations come together to identify ways to create value from unwanted materials, with a particular focus on e-waste and textiles.

To further increase knowledge and understanding of the circular economy, Australia Post is also developing research and thought leadership papers, and undertaking pilots focused on the return of high-value second-hand goods, uniforms and modems.

SDG 12: Ensure sustainable consumption and production patterns

ÖSTERREICHISCHE POST AG

AUSTRIAN POST IMPLEMENTS ENVIRONMENTAL MANAGEMENT SYSTEM AT VIENNA LETTER CENTRE

PHOTOVOLTAIC PLANT ON TOP OF THE PRODUCTION HALL

In December 2016, Austrian Post implemented its first certified environmental management system at its largest operational unit, the Vienna Letter Centre. The system applies the internationally-recognised standard, ISO 14001:2015. This constitutes a major step forward in the post's approach towards sustainability.

The objective of introducing the environmental management system is to minimise the occurrence of any negative environmental impacts associated with the company's activities, as well as to increase employee awareness of best-practice environmental management. The new management system will be externally audited every year to ensure it is objectively validated and that, ultimately, the operational unit achieves the strongest environmental performance possible.

During the first few months after the implementation of the management system, an improvement on the environmental performance of the Letter Centre was observed. There has been a reduced demand for electricity and waste separation has improved – mainly due to increased employee awareness of best practice approaches to environmental management. Following these successes, Austrian Post has already begun expanding its use of the certified environmental management system, with its daughter company Medien.Zustell GmbH currently working on the implementation of ISO 14001:2015.

SDG 12: Responsible consumption and production;
SDG 7: Affordable and clean energy

BPOST DRIVES ENVIRONMENTAL AWARENESS AMONGST ITS EMPLOYEES BY HOSTING BEE COLONIES ON THE ROOF OF ITS HQ

In 2016, bpost established bee colonies on the roofs of the post's headquarters in Brussels. This pilot project, known as 'BeePost', was undertaken in partnership with the 'Made in Abeilles' cooperative organisation, a non-profit that works to protect bees and support beekeepers across Belgium. The aim of the project is to help solve the massive bee mortality and take action against the loss of biodiversity. It also fits into bpost's overall company sustainability strategy linked to the United Nations Sustainable Development Goals.

BPOST BEEHIVES IN BRUSSELS

The project promotes better use of the roofs of the company's buildings and enhancing biodiversity in the surrounding area, on top of the regular energy reduction initiatives already taken to reduce its ecological footprint. The project is also a means by which bpost sensitizes its staff and involves them in the company's environmental policies and initiatives, by raising awareness on biodiversity and the importance of bees. The BeePost project also demonstrates how companies can use their facilities to achieve socially-beneficial objectives, and thus strengthen its community and customer relations.

Furthermore, as a semi-public company, bpost believes it should set positive examples which can be followed by other companies.

Since its initiation, the BeePost project has been highly successful in raising awareness about the importance of protecting bees and biodiversity. The BeePost Facebook page has attracted over 700 followers, and the initiative has clearly caught the attention of the post's employees. At internal conferences, employees rated the project as the most effective for educating staff about the different ways in which bpost can address environmental opportunities and challenges. Through the project bpost also achieves a yearly local production of 100 pots of honey.

SDG 15: Life on land

CORREOS CONTINUES IMPLEMENTATION OF A LOW CARBON AND LOW NOISE DELIVERY SYSTEM

APPLICATION OF LIQUEFIED GAS (LPG) INSTALLATION ON A CORREOS TRUCK

Throughout 2017, Correos has continued to implement its 'POSTLowCIT' project, which was initiated in 2016. The project, which is co-financed by the European Union, aims to develop a delivery system with low emissions of CO_2, NOx and noise, thereby improving inner-city air quality and reducing congestion.
This ambitious objective is being achieved through the following project activities:

- Incorporating the use of electric vehicles in Correos' last mile delivery model.
- Validating the application of liquefied gas (LPG) in long-distance delivery routes and promoting it as an alternative fuel.
- Developing a more efficient distribution network model that takes advantage of advanced technology and information systems, so as to eliminate critical bottlenecks in the freight transport network.

To achieve these objectives, the project has been structured in two major phases. Firstly, an in-depth logistics study was conducted in collaboration with the Universidad Politécnica de Madrid, via the Cátedra-Correos. Following this, the second phase will see the development of several pilots, which will enable Correos to analyse the impact of using alternative fuels and more efficient delivery routes on emissions, traffic congestion and, importantly, service quality standards.

With assistance from the University of Deusto, these pilots will also assess the most effective means of introducing a route optimiser, as well as analyse the viability of the technology to manage the thousands of shipments that travel through Correos' logistics network every day.

When the POSTLowCIT project is completed in 2019, Correos hopes to have:

- Gained enough information to determine which technology is optimal for each type of route, based on the distribution area and time requirements – as well as understand the variables that can impact performance.
- Taken the first steps to optimise the use of charging of electric vehicles by evaluating their integration into micro-networks, which could result in improving the energy efficiency of our buildings.
- Laid the foundations of an information infrastructure that interacts with traffic data in real time.

SDG 7: Affordable and clean energy;
SDG 11: Sustainable cities and communities;
SDG 13: Climate action;
SDG 15: Life on land

CTT PORTUGAL POST JUMP-STARTS ITS ELECTRIC VEHICLE AMBITIONS

As part of its ambition to cement itself as one of the country's most sustainable brands, in July 2017 CTT Portugal Post road-tested the first of a new type of electric vehicle that it hopes to introduce into its already impressive 323-strong 'green' delivery fleet.

The pilot project has been rolled out in the northern city of Aveiro, which will be the first location to see postal deliveries arrive in what CTT Portugal Post describes as a distinctive, 'avant-garde' and 'egg-shaped' electric vehicle.

Produced by UOU mobility, a Portuguese start-up based in the town of São João da Madeira, the electric vehicle has been specially adapted to meet the needs of the postal service. It can carry an estimated 75 kg of deliveries and cover approximately 45 km, a distance equivalent to 230 stops during a standard delivery round.

CTT Portugal Post has announced that the pilot scheme will run throughout the summer of 2017, during which time the pilot vehicle will be closely monitored to evaluate its efficiency as well electricity consumption.

If deemed successful, the introduction of a new set of electric vehicles into its delivery fleet will help the postal service continue to trim its annual CO_2 emissions, which have already been reduced by 75% between 2008 and 2016.

CTT PORTUGAL POST'S 'EGG-SHAPED' ELECTRIC VEHICLE IS ADAPTED TO MEET THE NEEDS OF THE POSTAL SERVICE

SDG 7: Affordable and clean energy;
SDG 11: Sustainable cities and communities;
SDG 13: Climate action

Deutsche Post DHL Group

DEUTSCHE POST DHL GROUP ACHIEVES CARBON EFFICIENCY TARGET EARLY, SETS AMBITIOUS NEW GOALS

MORE THAN 3,400 STREETSCOOTERS HAVE BEEN DEPLOYED SUCCESSFULLY TO DATE

In 2016, Deutsche Post DHL Group achieved its target of improving the carbon efficiency of its operations by 30% compared to a 2007 baseline. The Group achieved this goal an impressive four years ahead of schedule, underlining the success of its 'GoGreen' environmental protection plan. Following this achievement, Deutsche Post DHL Group has established a target to reduce all logistics-related emissions to zero by 2050.

Under the GoGreen programme, the Group has introduced numerous emissions-reducing initiatives in recent years, including supplier engagement aimed at optimising the Group's logistics network; the roll out of energy efficient lighting systems at production facilities and upgrading the Group's aircraft and ground vehicle fleets with newer, more efficient equipment.

One of the most important initiatives has been the integration of electric vehicles into Deutsche Post DHL Group's logistics network. The Group designed and produced its own purpose-built electric-powered delivery vehicle, the StreetScooter. The roll out of the vehicle has been a huge success – at the end of 2016, 2,500 StreetScooters have been in operation across Germany, and the Group plans to double this number by the end of 2017.

Following the early achievement of its carbon efficiency target, Deutsche Post DHL Group has established a new goal of reducing all logistics-related emissions to zero by 2050. This objective is supported by four interim milestones, to be achieved by 2025. These are:

- Increasing the carbon efficiency of its own activities and those of its transport subcontractors by 50%, compared to the 2007 baseline.
- Implementing clean transport solutions at the local level, operating 70% of its own first and last mile services with clean pick-up and delivery solutions.
- Incorporating Green solutions in over 50% of sales.
- Training 80% of its employees to become certified GoGreen specialists and get them involved in environmental and climate protection activities. This includes joining partners to plant 1m trees every year to protect the forests.

To achieve these ambitious goals, the Group will undertake a range of measures, including the increased use of its StreetScooter vehicle; training 80% of its workforce to become specialists in green logistics by 2025; and continuing to develop climate neutral and circular economy solutions to support the climate efficiency efforts of the Group's customers.

SDG 7: Affordable and clean energy;
SDG 11: Sustainable Cities and Communities;
SDG 13: Climate action

LE GROUPE LA POSTE FINANCES FORESTRY AND AGROFORESTRY PROJECTS ACROSS FRANCE

Le Groupe La Poste has taken concrete steps to contribute to climate change mitigation and adaptation by partnering with La Banque Postale to finance the Climat + Territoires programme. The programme, launched in 2015, supports innovative projects that create social and environmental value in France and has three main goals:

- Reducing of the Group's environmental footprint
- Delivering environmental benefits and employment across France
- Promoting efforts to adapt to climate change

As part of the programme, six projects across France have been financed by Le Groupe La Poste and La Banque Postale. These were selected for their environmental benefits, their relationship with the local community and their potential to deliver long-term sustainability benefits. Five of these are forestry projects, covering approximately 12,000 acres of forest in total. The projects are carried out in partnership with the interregional public interest group for the development of the Massif Central (GIP Massif central) and the national center of forestry property (Centre national de la propriété forestière). The sixth, an agroforestry project named 'Agr'eau', was launched by the French agroforestry association (Association Française d'AgroForesterie), and represents 120 acres of silviculture work. The project is reliant on local farmers and relevant technical partners.

REFORESTATION PROJECT IN PUY-DE-DÔME (AUVERGNE, FRANCE)

The capture and sequestration of carbon is a key environmental benefit resulting from these projects. The forestry project represents a total sequestration of 10,830 tonnes of carbon over the duration of a silvicultural cycle, while the agroforestry project equates to the sequestration of between 1,920 and 7,200 tonnes of carbon each year. Other environmental and societal benefits associated with these projects include the protection of biodiversity, erosion control, development of environmentally-friendly forestry techniques, as well as the retention and creation of jobs in the forestry and agricultural sectors.

SDG 13: Climate action;
SDG 15: Life on land

NEW ZEALAND POST SEEKS TO REDUCE WASTE AND IMPROVE ENERGY EFFICIENCY THROUGH STAFF ENGAGEMENT

MOTIVATIONAL POSTER FOR NEW ZEALAND POST'S 'LET'S SORT IT' CAMPAIGN

In 2016 New Zealand Post initiated a new campaign called 'Let's sort it', through which it encourages and helps its staff to reduce waste and make efficient use of energy. The campaign aims to:

- Raise employee awareness of the achievements New Zealand Post has made in this area in the past.
- Reinforce the message that employees need to keep doing their part.
- Show employees how they can get involved in reducing waste and using energy more efficiently.

Engagement takes place via the internal distribution of videos and other information on a quarterly basis. Staff also receives encouragement and feedback on their site's performance, as well as resources to help facilitate improvements.

This initiative was started as New Zealand Post recognised that waste and energy efficiency are areas where the post could improve performance and that this could be achieved through effective staff engagement. This is because:

- Waste and energy are tangible inputs and outputs that staff can directly influence.
- Staff were already seeking feedback from management about how their sites were performing in these areas and were keen to understand the steps that could be taken to make improvements.
- Surveys had indicated that staff were unaware of New Zealand Post's past achievements in reducing waste and energy consumption.

The campaign is ongoing, and although it is currently too early to assess its impact, New Zealand Post expects the benefits of this initiative to be considerable. In addition to reduced levels of waste to landfill and increased energy efficiency, other expected benefits include: increased staff engagement on sustainability, improved staff morale and pride in their work, as well as the generation of new ideas about how the Group can improve efficiency.

SDG 12: Responsible consumption and production;
SDG 13: Climate action

POST LUXEMBOURG SWITCHES TO NEW ECO-FRIENDLY PREMISES

In an effort to reduce its carbon emissions, POST Luxembourg has over the course of 2017 taken significant steps to improving energy efficiency at both its corporate headquarters as well as at its main distribution centre in Luxembourg City.

At the beginning of the year, 700 POST Luxembourg staff members moved into the new Mercier building situated close to the Grand Duchy's central train station. POST Luxembourg has provisionally obtained a platinum pre-certification rating from the German Sustainable Building Council (DGNB) for its new headquarters, and hopes to have this officially confirmed by the beginning of 2018.

Elsewhere, the postal service has also moved its main distribution centre in Luxembourg's capital to a new eco-friendly building situated in the southern suburb of Cloche d'Or.

Both of POST Luxembourg's new premises are characterised by their green and eco-friendly architecture and design, and the switch to these new buildings provides further evidence of the company's long-term commitment to reducing energy consumption and carbon dioxide emissions across its business.

POST LUXEMBOURG'S NEW HEADQUARTERS NEAR THE CAPITAL'S RAILWAY STATION AND NEW SUBURBAN DISTRIBUTION CENTRE

SDG13: Climate action;
SDG11: Sustainable cities and communities

Posteitaliane

POSTE ITALIANE INTRODUCES LED LIGHTING ACROSS ITS FACILITIES

IN ORDER TO REDUCE ELECTRICITY CONSUMPTION FROM LIGHTING, POSTE ITALIANE IS INSTALLING LED LIGHTING ACROSS OVER 1,000 OF ITS FACILITIES

In May 2017, Poste Italiane implemented a project to replace fluorescent light fittings in over 1,000 of the post's facilities with LED lighting technology. This on-going initiative aims to reduce electricity consumption from lighting at the post's facilities by around 50%, as well as to substantially reduce energy costs.

This project originates from an internal energy diagnostic survey carried out in 2015, as per the requirements of Legislative Decree no. 102/14, under the European Directive EU 27/2012. The survey highlighted the considerable advantages of using LED lighting. Another motivating factor was the reduction in the cost of LED lights, which has fallen by approximately 60% since the initial testing carried out by Poste Italiane in 2013. As a result, the company estimates that the return on the investment costs associated with this initiative will be less than four years.

The installation of LED lighting across Poste Italiane's facilities is expected to yield annual energy savings of over 32 GWh, and a subsequent reduction in CO_2 emissions of 11,000 tonnes per year.

SDG 12: Responsible consumption and production;
SDG 13: Climate action

POSTI TRIALS COMBINED POST AND SOCIAL CARE MODEL IN KUOPIO

In 2020, Finland will be home to Europe's oldest population. The increasing numbers of elderly people across the country has led to a growth in demand for home care services – including assistance with housekeeping and food preparation, as well as providing companionship for individuals living alone.

The growing pressure to increase services, personnel and resources for home care has created a need for new service innovations. To ensure adequate provision of these services, a multipurpose model is required, in addition to wide cooperation between service providers.

Posti is well-placed to form part of this solution. It reaches 2.8m households every weekday, meaning that it can provide various kinds of assistance in the home, even to those living in the most remote and sparsely populated areas of Finland.

Furthermore, by providing combined postal and care services, Posti is providing a more cost-efficient solution for Finland's municipalities, while providing the flexibility and choice necessary to ensure the customer's individual needs are fully taken into account.

SEEING THE FAMILIAR FACE OF A POSTI EMPLOYEE SHOULD BE THE HIGHLIGHT OF A CUSTOMER'S DAY

Throughout 2017, Posti has tested this multipurpose model with the City of Kuopio. The trial, which has been highly successful and has involved Posti employees helping elderly people across the city with household tasks and personal care. All employees involved in this work have completed specialised training provided by Posti and the local government.

Posti expects home services to become an important growth area for the company in the coming years, an expectation underlined by Posti's acquisition of home care service provider HR-Hoiva Oy in January 2017.

SDG 3: Good health and well-being

POSTNL ROLLS OUT ELECTRIC DELIVERY BIKES ACROSS AMSTERDAM

ZERO EMISSIONS WITH ELECTRIC TRANSPORT BIKES

In June 2017, PostNL began delivering small parcels across Amsterdam using electric-powered delivery bikes, instead of diesel-powered vans. The aim of this initiative is to reduce CO_2 emissions and costs associated with delivery vans, as well as to help to reduce the negative impacts associated with inner-city traffic congestion (including delays, noise, reduced parking availability and air pollution). So far, 60 electric delivery bikes have been put into service in Amsterdam, replacing 100 delivery routes that were undertaken by vans. If the Amsterdam project is successful, PostNL plans to implement it across more large cities across the Netherlands.

PostNL estimates that delivering mail by using electric delivery bikes will reduce CO_2 emissions by 310 kg per route per year compared to delivery by diesel van. Across Amsterdam, this represents a reduction of 31 tonnes of CO_2 per year in total.

There are also significant financial benefits expected with this initiative, with the cost of using electric delivery bikes estimated to be 15% cheaper than using a delivery van. This includes lease costs, maintenance, fuel and labour costs.

The initiative has been received positively by members of the community in Amsterdam, many of whom welcome the desire to reduce inner-city pollution and traffic congestion.

SDG 7: Affordable and clean energy;
SDG 11: Sustainable cities and communities;
SDG 13: Climate action

POSTNORD PIONEERS IN ELECTRIC ROAD TRANSPORT

Sweden's first fully electric truck will operate between Arlanda airport and PostNord's largest terminal in Rosersberg starting late autumn 2017. The distance is 10 km and the truck will be powered by a 2 km long electrified rail in the road.

The electrified road is a result of the eRoadArlanda project, which started in 2013 through the collaboration of stakeholders including construction firm NCC, KTH Royal Institute of Technology and Elways, an organisation that develops mobile charging solutions. PostNord joined the consortium the following year.

The electricity is transmitted from the rail in the road to the truck via a moving arm mounted on the truck. The arm identifies where the rail is located and connects automatically when the vehicle passes over the rail. When leaving the electric road the connector automatically retracts and the truck continues in battery mode.

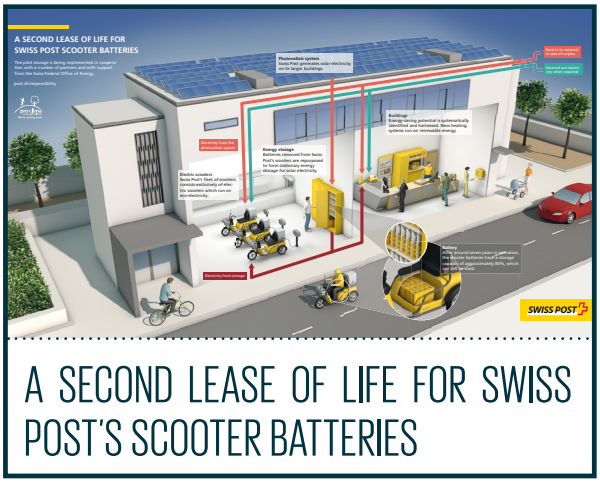
"This could be a solution for us in the future, as we have many types of vehicles and the technology works for both heavy and light vehicles. The electrification of transport is a crucial part of our efforts to create an energy efficient low carbon distribution system," says PostNord Sweden's Head of Environment, Mårten Sjölin.

AN ELECTRIC RAIL IN THE ROAD TRANSMITS ELECTRICITY TO THE TRUCK VIA A MOVING ARM MOUNTED ON THE TRUCK

The eRoad Arlanda is an important component in creating a sustainable logistics solution for the area. It starts with the aircraft landing at Arlanda using emissions reducing Green in-flight. The goods are then transported by the electric truck on the electric road to PostNord's Green Building certified terminal in Rosersberg, with one of Sweden's largest solar panel arrays on the roof. The terminal is connected to the railroad network and further transportation of the goods to other terminals will be conducted by train powered by renewable energy.

SDG 7: Affordable and clean energy;
SDG 13: Climate action

SWISS POST GIVES ITS ELECTRIC SCOOTER BATTERIES A SECOND LEASE OF LIFE



A SECOND LEASE OF LIFE FOR SWISS POST'S SCOOTER BATTERIES

In spring 2017, Swiss Post undertook a pilot project aimed at recycling batteries from the post's fleet of two- and three-wheeled electric delivery vehicles. The objectives of this project – to reuse and repurpose equipment no longer fit for their intended use; reduce waste; and support renewable energy consumption – are closely aligned with the post's new 2017-2020 Corporate Responsibility Strategy.

In 2016, Swiss Post took its last petrol-powered scooter out of service, meaning that all its delivery scooters (around 6,300) are now powered electrically exclusively with certified green power from Switzerland. In doing so, the post has reduced its CO_2 footprint by 4,600 tonnes per year. The initiative formed an important part of the post's sustainability programme, "pro clima – we're acting now".

After approximately seven years, the batteries used by the scooters have a storage capacity of about 80%, meaning that they are no longer able to be used in mail delivery.

One pilot storage scheme utilises old scooter batteries at the Umwelt Arena Schweiz in Spreitenbach. The project is presented as part of an educational exhibition, focused on the production of solar electricity, as well as the post's electric scooters and the energy storage units from their batteries.

Another pilot storage scheme reuses old scooter batteries in a stationary energy storage unit located at a Swiss Post post office in Neuchâtel. The unit stores power generated by solar cells installed on the roof of the building and powers the post office itself and recharges scooter batteries.

SDG 7: Affordable and clean energy;
SDG 11: Sustainable cities and communities;
SDG 13: Climate action

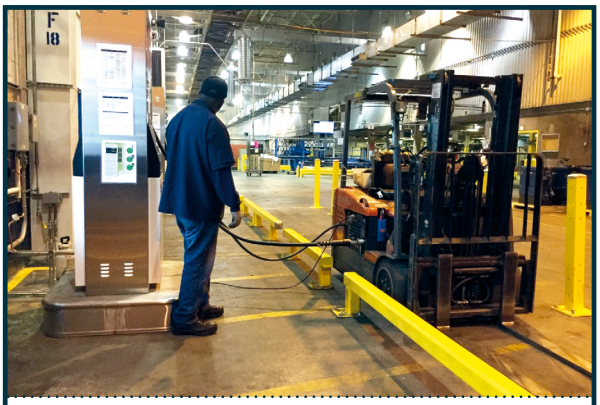
USPS POWERS-UP ITS HYDROGEN FUEL CELL AMBITIONS

In 2016 the United States Postal Service (USPS) piloted the use of hydrogen fuel cells in place of lead-acid batteries to power industrial vehicles (forklifts, pallet jacks, tow motors, for example) used at its National Distribution Center in Washington DC.

Currently, lead-acid battery systems power over 23,000 industrial vehicles across the company's operations and are used to move mail and empty equipment. Unfortunately, lead-acid batteries have limited run-time capabilities, long recharging cycles, and are costly to operate and maintain.

Since launching the pilot scheme, USPS has observed several benefits to making the switch to hydrogen fuel cells. These include: improving operator, equipment, and warehouse efficiency; recovering thousands of operational hours; and reducing energy consumption. Replacing lead-acid batteries with hydrogen fuel cells has also helped to mitigate the occupational health and safety risks posed to USPS employees, by removing on-site regulated waste from the use of lead-acid batteries by over one hundred tonnes.

USPS continues to monitor the technology's performance with a view to finalising the performance evaluation of the hydrogen fuel cells' efficacy. In addition, the postal operator's sustainability team will look to validate the business case for hydrogen fuel cells over lead-acid batteries and demonstrate its positive return on investment for the organisation.



USPS WASHINGTON NATIONAL DISTRIBUTION CENTER HYDROGEN PRODUCTION, STORAGE, DISPENSER AND FUEL CELL SYSTEM IN USE

SDG 12: Responsible consumption and production;
SDG 13: Climate action

3. TECHNICAL ANALYSIS

This chapter presents the results and analysis of the two core areas of the EMMS programme: Carbon Management Proficiency (CMP) and Carbon Performance Indicators (CPI). The fundamental principle of the EMMS programme is that a comprehensive approach to carbon management is essential to achieving significant, systematic and sustainable year-on-year reductions in carbon emissions. Effective carbon management involves the implementation of appropriate business principles and systems, clear accountability at senior levels, effective employee engagement, and comprehensive and transparent public reporting.

A comprehensive Carbon Management Proficiency (CMP) questionnaire constitutes the first stage of the EMMS annual reporting cycle. This qualitative assessment evaluates participants' performance against ten management pillars. The second phase, Carbon Performance Indicators (CPI), is a quantitative assessment of participants' carbon efficiency. During this process participants are required to report on their carbon emissions and other organisational data, including renewable and non-renewable electricity consumption, transport modes and distances (own and outsourced), postal quantities, and numbers of alternative-fuel vehicles.

Since 2008, IPC annually collects, aggregates, and analyses these data at the group level and transparently reports the results in the form of publicly available IPC Postal Sector Sustainability Reports. These reports illustrate the EMMS group's progress towards our three programme targets, as well as other important performance areas. IPC works closely with Verisk Maplecroft to develop and deliver the annual Sustainability Reports and broader EMMS programme. Verisk Maplecroft undertakes inspections of participant data via multiple rounds of plausibility checks and review of supplementary evidence in order to ensure consistently high levels of accuracy. We ensure our data is accurate and credible through a third-party review from our external accountant, PwC, providing us with limited assurance (see page 60).

To promote continuous improvement, each participant in the programme is also provided with an individual analysis of their own CMP and CPI results in the form of customised Scorecards and detailed Assessments which include recommendations for further improvement. In addition, a Briefing Deck is provided, which includes anonymised information about the performance of all of the programme's participants, enabling posts to benchmark their performance against the rest of the group. Each individual participant receives a rating based on progress made towards both improving their carbon management and reducing emissions.

3.1 CARBON MANAGEMENT PROFICIENCY (CMP)

The CMP questionnaire considers the following ten management pillars:

1. Principles & Standards
2. Management & Strategy
3. Policy & Procedures
4. Employee Engagement
5. Activity
6. Measurement & Verification
7. Targets
8. Performance
9. Disclosure & Reporting
10. Value Chain Management

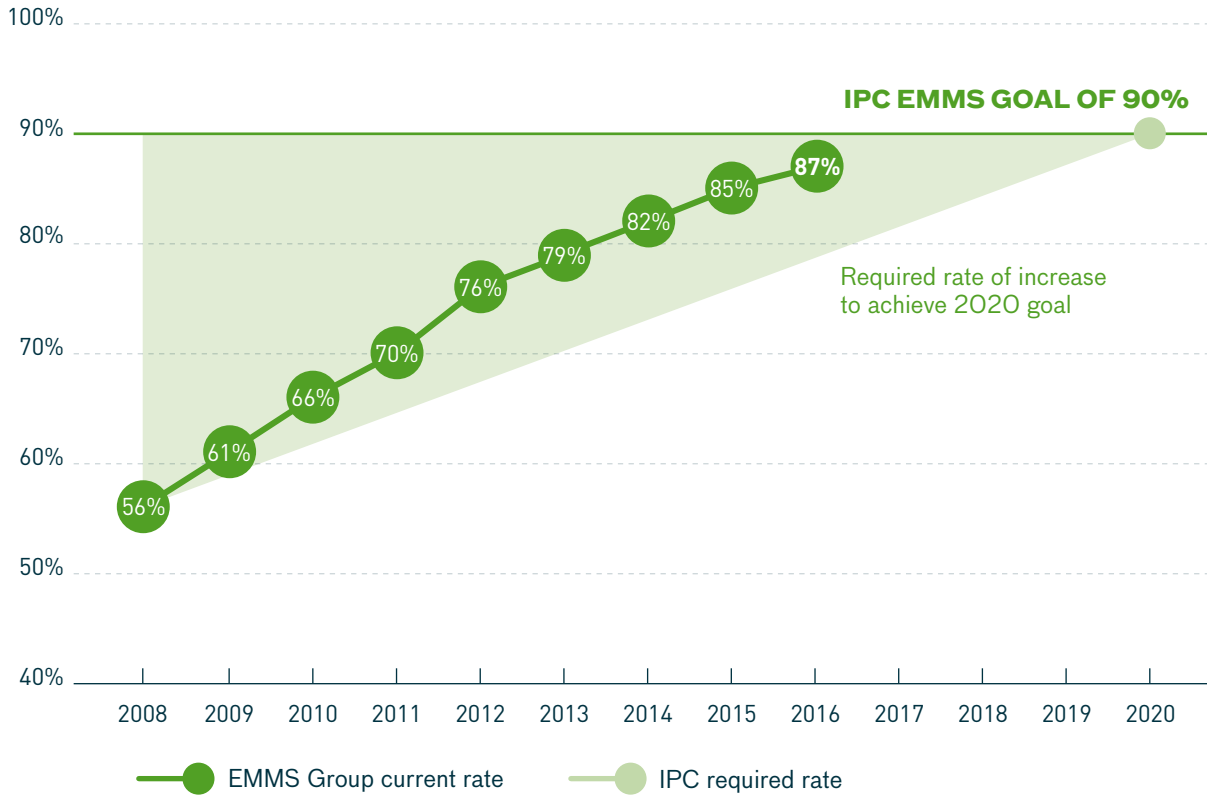
By responding to questions within each of the pillars, participants can obtain a maximum of 100 points. Participants are provided with a comprehensive Guidance Document which provides background information and guidance to support the accurate completion of the CMP Questionnaire and consistency in reporting. During a plausibility review, responses are compared with those of the previous year in order to identify significant differences in participants' responses. This ensures that the questionnaire is completed consistently, and that evidence of substantial improvements is provided where necessary. Overall results are validated by our external auditor PwC.

In the CMP analysis, we distinguish between the results of the 18 participants within the EMMS group that joined the programme prior to 2010, and the wider group of 20 participants which also includes posts that joined the EMMS programme two or more years after it began. This distinction, which is applied for all years back to and including 2010, is made because the scores for newer participants are typically relatively low in their first few years of reporting. However, we are happy to note that the rate of improvement of the newer participants is in line with the rate of improvement of the wider EMMS group. Through participation in the EMMS programme, we are confident that new participants will continue to improve their scores from their individual baselines and achieve the shared goals of the EMMS programme.

3.1.1 OVERALL RESULTS

Based on the EMMS group's performance to date, it is on target to reach our goal of a 90% average CMP score by 2020. In 2016, participants achieved an average CMP score of 87%, improving on 2015's score of 85%. Overall, the group has increased its score by 31 percentage points since 2008. Importantly, the EMMS group's average increase of 2.2 percentage points between 2015 and 2016 is higher than the 0.8-percentage point annual increase required to reach the 90% target in the remaining four years. Based on this rate of improvement, and that of previous years, we are confident that the group will achieve the 90% target ahead of schedule. If the two newest participants are also included, the group of 20 achieved an average CMP score of 85% (compared with 83% in 2015).

Figure 4: 2008 - 2016 Overall Carbon Management Proficiency results



OVER ONE THIRD OF THE EMMS GROUP ALREADY SURPASSING 2020 TARGET

> Implementing the programme across five continents with different set ups and involving 20 different companies demonstrates that the programme has been successful in sharing knowledge and best practice.
>
> Michael Greig, British Gas

In 2016, in addition to the seven posts that have already surpassed the 90% target, a further nine posts obtained average scores of at least 80%. This year, our highest-scoring participant scored 100% in five of the ten management pillars, over 90% in four other pillars, and 80% in a further pillar. The EMMS programme is a partnership, and as such IPC strongly encourages best-practice sharing in order for posts to assist others in improving their approach to carbon management. IPC provides a number of platforms to facilitate information and knowledge sharing, including seminars, webinars, and the annual two-day Sustainability Workshop. A selection of our participants' best practice examples can be found in the 'Case Studies' section of this report.

3.1.2 RESULTS BY PILLAR; EMMS GROUP EXCEEDING 75% IN ALL CARBON MANAGEMENT PROFICIENCY AREAS

The 2015 reporting year marked the first year since the start of programme that the EMMS group scored over 70% in all ten carbon management pillars. Following concerted effort this was improved upon in 2016: **the EMMS group scored over 75% in all ten pillars**. Moreover, this year saw the group improve its performance across all ten carbon management pillars.

In line with previous years, in 2016 the group performed best on issues relating to:

- Policy and Procedures (2016: 99%; 2015: 96%)
- Management and Strategy (2016: 92%; 2015: 91%)
- Targets (2016: 92%; 2015: 89%)

Following further improvement in the EMMS group's score in **Policy and Procedures** this year, the group is now only one percentage point away from achieving 100% in this pillar. Not only do all EMMS participants now have a comprehensive carbon management policy in place, but all participants' policies include a commitment to reducing carbon emissions and provide a framework for achieving objectives and targets. This impressive score demonstrates that participants remain committed to implementing strong policy elements which ensure effective and far reaching carbon management.

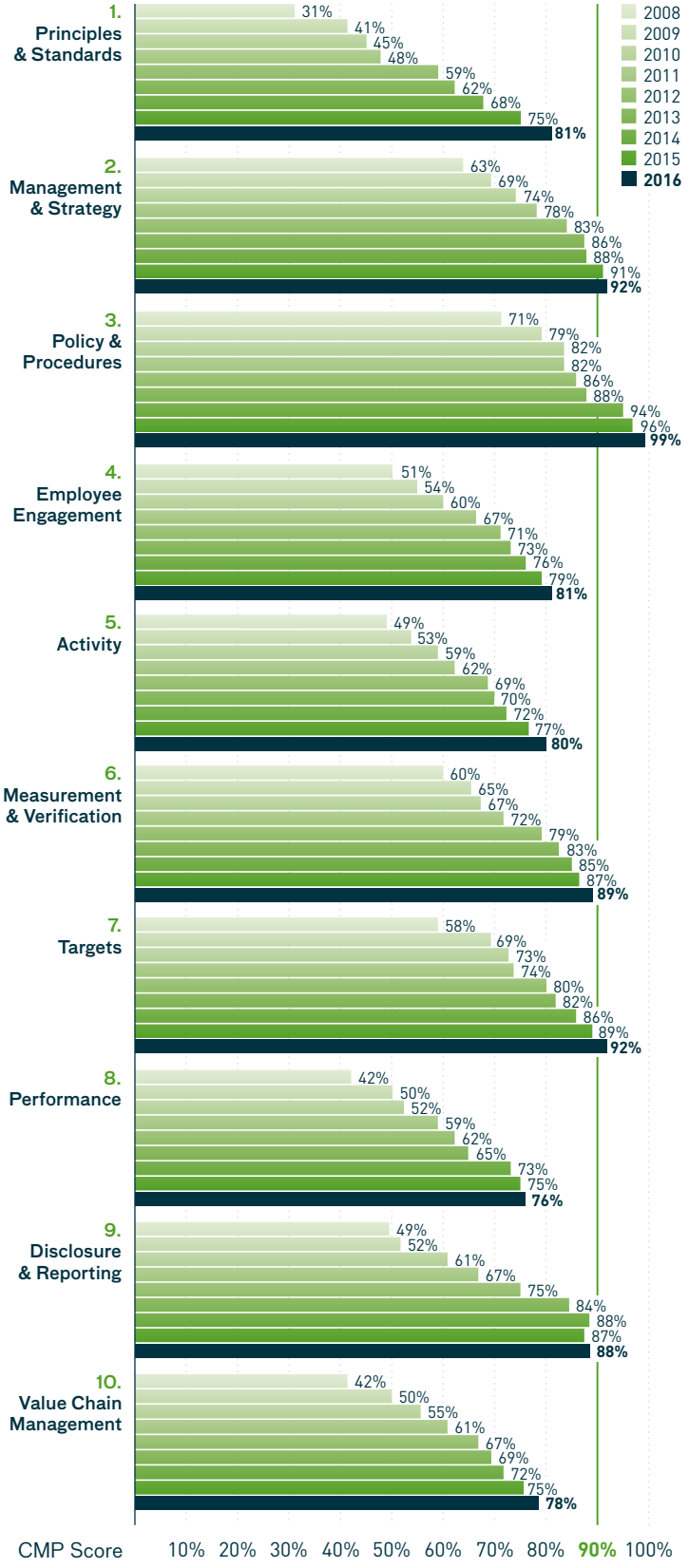
As in previous years, the group also performed well in the areas of **Measurement and Verification** (2016: 89%; 2015: 87%) and **Disclosure and Reporting** (2016: 88%; 2015: 87%). Within the Disclosure and Reporting pillar, 15 participants are referencing their reports against the Global Reporting Initiative (G4 or GRI Standards). Currently, 13 posts are referencing their reports in accordance with the GRI core option, and two in accordance with the comprehensive option (which carries maximum points for the related question in the CMP Questionnaire). While we recognise the additional work required for companies to transition to GRI comprehensive reporting, we are confident that more participants will strive to achieve this in the coming years.

Participants are also making year-on-year improvements in their scores in the **Activity** pillar, despite the challenges faced in this area (see 'Improvement Opportunities' section for further information). Indeed, this year the EMMS group achieved a three-percentage point increase in this pillar (2016: 80%; 2015: 77%). This not only reflects the leadership demonstrated by participants and their substantial efforts in reducing their carbon emissions, but also the significant benefits of best practice and information sharing, and the importance of the EMMS programme in facilitating this collaboration.

Employee engagement is another area in which participants have focused their efforts this year, with the group's score in this pillar increasing from 79% in 2015 to 81% in 2016. Many posts recognise the value of company-wide engagement and the importance of embedding sustainability within a business, and are taking proactive measures in this area. For example, in 2016 **New Zealand Post** introduced a campaign to encourage staff to improve their energy efficiency and reduce waste. Not only does New Zealand Post expect to see considerable improvement in energy efficiency and a reduction in waste-to-landfill, but the company's ongoing campaign seeks to increase staff engagement and raise awareness of the importance of employee support in embedding sustainability within all levels of the company.

Employee Engagement was also a focus area at this year's Sustainability Workshop, with participants sharing best practice examples of how they have been actively engaging with employees to achieve sustainability objectives across the business. Participants identified training, information sharing, media campaigns, and internal and external competitions as important measures to raise employee awareness of the importance of sustainability and build support within the employee base. Our annual Sustainability Workshop provides a platform for participants to share best practice and individual experiences, which we hope will facilitate the EMMS group to further improve their carbon management and achieve relative emissions reductions.

Figure 5: 2008 – 2016 CMP results by pillar



Participants also discussed their experiences in improving performance in the **Principles and Standards** pillar, with the group having increased their score in this pillar by just under 7% this year (2016: 81%; 2015: 75%). Nonetheless, IPC will continue to support participants in making further improvements in this area. For example, as an active UN Global Compact (UNGC) participant, IPC will continue to encourage the remaining posts to become signatories. In 2016, 14 posts (78%) reported that they have endorsed the UNGC (16 when including the two newest members of the EMMS group), showing significant improvement from the six reported in 2008. Meanwhile, 14 participants are currently reporting to the CDP and/or other equivalent initiatives. While in previous years we have only reported on the number of participants reporting to the CDP, in order to recognise the investment and technical expertise involved in submitting information to carbon accounting and reporting frameworks, this year we broadened the scope to include local/regional/national programmes which are equivalent to the CDP.

> By encouraging efficiencies at the lowest levels, IPC could create a culture of efficiency, and a culture of best practice, having secondary effects not only on the performance of each member organisation but also their employees and communities.
> Trevor Durnin, Blue Tree Systems

Table 2: 2016 CMP Progress Highlights

Pillar	CMP Question	Number of participants
Principles & Standards	Endorsed the United Nations Global Compact (UNGC)	14
	Submitted data to the Carbon Disclosure Project (CDP) and/or other equivalent initiatives	14
Management & Strategy	Environmental management system developed, documented and communicated	16
	Responsibility for climate change, carbon management, energy and emissions defined at operational level and board / executive level	18
	Estimated future emissions and carried out emissions scenario modelling for future energy options	13
Policy & Procedures	Company carbon management policy publicly available	17
Employee Engagement	Documented training provided to employees on the company's carbon management policy	15
	Carbon management objectives linked to at least 90% of managers' performance appraisals and performance-related pay schemes	7
Activity	Purchasing or generating at least some renewable electricity for buildings	18
	Purchasing or generating between 90% and 100% renewable electricity for buildings	12
	Diverted some amount of post from air travel in the last five years	13
Measurement & Verification	Publicly report energy and emissions indicators, enhancing transparency in the sector	18
	Indicators for CO_2 from the production of consumables in the supply chain	13
Targets	Publicly stated targets for the reduction of carbon emissions	18
	Plan to be carbon neutral...	9
	...in the long term	4
	...by a defined date	5
Performance	Achieved at least a 10% reduction in total company emissions per item since 2008, of which...	16
	...achieved at least a 25% reduction	9
	...achieved at least a 50% reduction	1
	...are carbon neutral	2
Disclosure & Reporting	Produce a report that has been prepared in accordance with the GRI Standards	15
	Core option	13
	Comprehensive option	2
Value Chain Management	Specific energy or carbon requirements in place for suppliers / subcontractors	13
	Initiatives with both customers and suppliers to improve their carbon management	13

IMPROVEMENT OPPORTUNITIES

As in previous years, the pillars which registered the lowest scores were:

- Activity (2016: 80%; 2015: 77%);
- Performance (2016: 76%; 2015: 75%);
- Value Chain Management (2016: 78%; 2015: 75%)

Outlined below are some of the key areas for improvement within the lowest-scoring pillars, along with the challenges associated with making those advancements. However, it is important to acknowledge that while there is still ground to be made, the average increase of 34 percentage points across the three pillars since 2008 demonstrates that participants are committed to ensuring continuous improvement in all of these areas. Illustrating participants' dedication; between 2015 and 2016 participants achieved a 3-percentage point increase in **Activity**, and an increase of just over 3 percentage points in **Value Chain Management**.

PERFORMANCE AND ACTIVITY

Despite steady progress in the **Performance** and **Activity** pillars since the start of the programme, a number of improvement opportunities still exist in these areas. However, in a changing postal market characterised by declining letter mail volumes and the steady growth in parcel delivery, postal companies face significant challenges in making carbon efficiency improvements and reducing their emissions. The growth in parcel volumes – which is largely driven by the rise of e-commerce – is increasing the requirement for larger delivery vehicles, often over greater distances. In conjunction with the higher carbon footprints of parcels compared to letter mail, achieving efficiency improvements is becoming ever more challenging. Recognising this ongoing shift in the letter-to-parcel ratio, the EMMS group's delivery efficiency target was introduced in 2014 to specifically aim at reducing the group's emissions per letter mail and per parcel item. Reporting on the efficiency of letter mail and parcel delivery individually ensures that we can enhance transparency, monitor trends, and enable participants to direct their improvement strategies towards the areas in which they can make the most significant efficiency gains.

Indeed, it is extremely positive to see participants implementing innovative solutions to address these challenges, particularly in terms of logistics. Posts have shown their commitment to increasing the use of alternative-fuel vehicles within their delivery fleets, with participants reporting the use of 104,000[5] vehicles of this type in 2016 (29% of which were electric vehicles). There are many examples of posts' impressive activities in this area. For example, **CTT Portugal Post** is road-testing a new type of electric vehicle which is specifically adapted to meet the needs of the postal service. The vehicle, which CTT Portugal Post hopes to introduce to the company's already operational 'green' delivery fleet of 323 vehicles, can carry 75 kg of deliveries and cover around 45 km. Meanwhile, **PostNL** has begun replacing diesel-powered vans with electric-powered bikes for the delivery of small parcels across Amsterdam. With 60 electric bikes so far in service, replacing 100 delivery routes previously undertaken by vans, PostNL estimates that the initiative will contribute to a reduction of 31 tonnes of CO_2 per year across Amsterdam. Moreover, the company expects to yield significant financial gains due to the lower cost of using electric bikes compared to diesel delivery vans.

> "The per letter and per parcel intensity targets are highly ambitious; once you have picked the low hanging fruit it gets harder and harder to achieve further emissions reductions."
> Tom Opderbeck, American Airlines

5. Figure excludes self-propelled bicycles

While considerable progress has been made in improving the efficiency of postal delivery over the last-mile, participants are now beginning to extend their sustainable transport strategies, implementing more extensive measures to improve the carbon efficiency of their delivery services beyond the last-mile. Starting in late autumn 2017, **PostNord** will begin transporting goods using Sweden's first fully electric truck, which runs on a 2 km electric highway between Arlanda and Rosersberg. In addition, **Correos** is investigating the use of liquefied gas (LPG) as an alternative fuel for use in long-distance delivery routes. These initiatives reflect postal companies' dedication to finding a solution to the increasing demand for heavy vehicles. However, given the aforementioned trend of rising parcel volumes, further investment and innovation in more advanced, long-term efficiency measures remains a priority.

We do, of course, acknowledge that obstacles remain in terms of implementing transport emissions reductions initiatives. For example, while we encourage participants to divert as much mail as possible away from air transport (given the current challenges associated with increasing the efficiency of this carbon-intensive mode of transport), we recognise that in many cases transport via air is unavoidable. However, there are measures available to improve efficiencies; for example, **Deutsche Post DHL Group** is upgrading the Group's aircraft fleet with newer models that are more efficient. Also, posts aim to ensure that the full capacity of aeroplanes is utilised; in 2016, the EMMS group reported 8,000 dedicated flights compared to 2,358,000 shared passenger flights. Compared to 2015, this illustrates a reduction in the total number of flights of 85,000, of which the group reported 4,000 fewer dedicated flights, and 81,000 fewer shared flights.

We also recognise that the economic viability of some developments involving alternative-fuel vehicles may be restricted by a lack of national infrastructure, such as a lack of ports to charge electric vehicles. Posts may also be constrained by the nature of the routes that vehicles must travel, while alternative fuel vehicles may also not necessarily be suitable or viable over greater delivery distances. However, posts could look to collaborate with external organisations, such as manufacturers, governments, and other major transport users, or investigate other opportunities that may become available to overcome these challenges and enable posts to expand their use of alternative-fuel vehicles. Indeed, our stakeholders consider low carbon transport to be one of the key areas in which the postal sector can have positive environmental impact, presenting an opportunity for the postal sector to emerge as a leader in this area.

Logistics is not the only area in which participants are making substantial efforts to improve their carbon efficiency. Indeed, the Paris Agreement made a call for businesses to invest in more extensive and long-term measures to guarantee significant emissions reductions from both transportation and buildings. Highlighting the postal sector's commitment in this respect, EMMS participants are continuously increasing their renewable energy use; in 2016, 12 EMMS participants reported sourcing between 90% and 100% renewable electricity for buildings, of which six have already made the impressive transition to 100% renewable electricity.

Moreover, despite progress already made to improve building energy efficiency, EMMS participants continue to implement further measures in this area. **Austrian Post's** recent implementation of the internationally-recognised ISO 14001:2015 standard at the Vienna Letter Centre, its largest operational unit, is illustrative of the company's continued efforts to improve the sustainability of its operations. The introduction of the company's first certified environmental management system marked a significant step in Austrian Post's sustainability strategy, with the company already reporting the environmental benefits, including a reduction in electricity demand. Meanwhile, **POST Luxembourg** has re-located both its corporate headquarters and its main distribution centre to new, eco-friendly premises. These developments highlight the company's ongoing commitment to improving building energy efficiency and reducing emissions across its business. **United States Postal Service** is also introducing innovative measures to increase operational efficiencies. In 2016, the company piloted the use of hydrogen fuel cells in place of lead-acid batteries to power industrial vehicles (which include tow motors, forklifts and pallet jacks) at its National Distribution Center in Washington DC. The company observed several benefits of hydrogen fuel cells, including reduced energy consumption and improved operator, equipment, and warehouse efficiencies.

Companies can also make efficiency gains by promoting the reuse and recycling of products and equipment used in postal operations. For example, **Swiss Post** has undertaken a pilot project aimed at recycling batteries from the company's electric delivery vehicles. As part of the project, old electric scooter batteries are reused in a stationary energy storage unit located at the company's post office in Neuchâtel. This stores power generated by solar cells installed on the roof of the building, powering the post office itself and recharging the batteries of Swiss Post's electric scooters. Meanwhile, **Australia Post** has developed pilot projects focused on the return of high-value second-hand goods, uniforms and modems. Participants can also introduce initiatives to enhance the sustainability of products and services, such as by encouraging the use of recycled paper in direct mail. Ensuring sustainable use of other materials within the postal supply chain, such as mail bags, tie wraps, elastic bands, mail trays in sorting centres, and rolling containers, should also be a priority focus for postal operators. Commitment to sustainable production and consumption of products and equipment utilised in postal operations supports the aims of UN SDG 12 (Ensure sustainable consumption and production patterns), while also aligning with the principles of a Circular Economy.

VALUE CHAIN MANAGEMENT

The inclusion of Scope 3 emissions within the EMMS programme's delivery efficiency targets places greater emphasis on the need to concentrate on emissions reductions within the entire postal value chain. As a first step in enhancing their value chain influence, posts must ensure that adequate carbon management standards and requirements are in place for suppliers and subcontractors. It is therefore extremely pleasing to report that 13 participants currently have specific energy or carbon standards/requirements of their suppliers (an increase from 11 in 2015). Meanwhile, nine posts actively favour at least primary suppliers and subcontractors with lower carbon footprints or effective carbon management strategies. Of the nine, six posts extend this to also include secondary tier suppliers and subcontractors. In order to effectively influence carbon management within the supply chain, engagement and collaboration with subcontractors and suppliers must become a principal component of posts' emissions reduction strategies. Reflecting this emphasis, 16 posts are actively communicating with customers and suppliers on these issues, while 13 have introduced carbon management initiatives with customers and suppliers.

With road and air transport contributing 39% and 35% of Scope 3 emissions, respectively, collaboration with transport subcontractors will be critical in reducing Scope 3 emissions. Recognising the importance of building collaborative relationships, under **Deutsche Post DHL Group's** GoGreen programme, the company is working with its subcontractors to realise its 2025 target of a 50% improvement in carbon efficiency in its outsourced transport (compared to a 2007 baseline).

The postal sector's value chain influence must also extend to the management of consumables within the supply chain, such as paper and packaging. Indeed, we encourage posts to engage with suppliers of these products, and also with customers as the product end-users, to promote sustainability within the whole lifecycle of post. Postal companies are increasingly looking for ways to optimise the use of products and reduce waste through increasing recycling and reuse, thereby aligning with the principles of a Circular Economy. For example, **Australia Post** established the Revamp Network in November 2016 in order to provide a collaborative forum for stakeholders to share ideas and participate in opportunities that help drive better circular economy outcomes. Communication with suppliers and customers is essential in order to improve sustainability within all aspects of the postal value chain. While yielding significant environmental benefits, postal companies can also realise substantial financial savings and increased competitive advantages.

THE VALUE CHAIN AND BEYOND

With the introduction of the UN SDGs, it is becoming ever more apparent that businesses have a duty to enhance sustainability not only within their own organisation, but to extend this commitment into all areas of their operational reach. Our participants are clearly demonstrating that their sustainability initiatives are not only restricted to their own operations, and are implementing innovative measures to drive positive sustainability action on a wider scale. For example, **Posti** has introduced a sustainability initiative which combines postal delivery with home care assistance for those in need. Posti's coverage of 2.8m households in Finland every weekday means that the company is well-placed to ease the increasing pressure on home care services driven by the growing elderly population, providing a cost-efficient solution for Finland's municipalities. Posti's multi-purpose model, which has already undergone a successful trial in the city of Kuopio, therefore makes a positive contribution to the community.

Meanwhile, in addition to carbon emissions reduction efforts, posts are also having a positive environmental impact in other ways. **Le Groupe La Poste's** initiative through La Banque Postale on the Climat + Territoires programme demonstrates the company's commitment to creating social and environmental value in France. The forestry and agroforestry projects financed so far under the programme not only enhance carbon capture and storage, but also contribute to the protection of biodiversity and the creation of jobs in the forestry and agricultural sectors. **bpost** is also focusing on enhancing biodiversity as part of its sustainability commitment. In 2016, bpost established several bee colonies on the roofs of the post's headquarters in Brussels as part of its 'BeePost' project, which aims to act against the loss of biodiversity in the region, while also providing an effective tool to educate employees about the different ways bpost can address environmental opportunities and challenges.

3.2 CARBON PERFORMANCE

3.2.1 METHODOLOGY AND DEFINITIONS

The Carbon Performance Indicators (CPI) section of the EMMS enables IPC to assess quantitative elements of participants' carbon management, including carbon emissions and electricity use. The results presented in this report primarily focus on mail and parcel activities, excluding peripheral express and logistics services. We track emissions according to international greenhouse gas accounting standards, in particular the World Resources Institute Greenhouse Gas (GHG) Protocol. In line with this protocol, we refer to direct and indirect emissions using the following Scope 1, Scope 2 and Scope 3 terminology.

Scope 1	All direct GHG emissions from operations that are owned or controlled by the company, including those from buildings and transport
Scope 2	Indirect GHG emissions from the generation of purchased electricity, heat, steam, or cooling consumed by the company
Scope 3	Other indirect emissions from sources within the company's value chain, including transport-related activities by vehicles not owned or controlled by the reporting entity, business travel and employee commuting, outsourced activities, etc.

Since the boundaries of Scope 3 emissions are potentially very broad, the Guidance Document provided to participants by IPC outlines specific reporting procedures. Building on the framework set out in the GHG Protocol Corporate Value Chain (Scope 3) Standard this provides a consistent set of parameters for industry-wide reporting of Scope 3 emissions. Our current focus is primarily on transport-related impacts. In response to participant feedback and analysis of past years' data, we continue to use a well-defined data collection coverage that encompasses the following four core categories, which collectively make up over 95% of total Scope 3 emissions:

- Outsourced or subcontracted road transport
- Outsourced or subcontracted air transport
- Employee commuting
- Business travel

The further 11 GHG Protocol categories, such as capital goods and use of sold goods, are excluded as they are currently considered immaterial to the postal sector.

In order for the EMMS participants to better understand the implications of their corporate activities on their value chain carbon emissions, it is important to establish Scope 3 inventories. Data on emissions from the sources listed above are examined in this publication as part of our commitment to continuous improvement and in order to build a more comprehensive and accurate account of carbon emissions across the EMMS group.

Unfortunately, several posts are currently unable to collect data on employee commuting for privacy/legal reasons. As such, where considered appropriate, national averages have been used instead. In these instances company mitigation activities focused on employee commuting will not result in measurable decreases in emissions from this source. As this is a significant source of Scope 3 emissions, we will continue to strive for more complete reporting of all participants.

Although IPC recognises subcontractors as having primary responsibility for their carbon emissions, we know that EMMS participants can have a positive influence on this component of the value chain. Moreover, posts are encouraged not to reduce Scope 1 emissions at the expense of increasing Scope 3 emissions through outsourcing and subcontracting. To this end, our new delivery efficiency target includes emissions from subcontracted transport.

Over the duration of the programme, there have been a number of changes to the composition of the group of participants. Five new participants have joined since 2009, two posts have merged to make one post, while four posts did not submit any data to the programme for the 2016 reporting year. In order to ensure that the programme remains dynamic and progressive, the aggregated results of the 20 participants that reported in the 2016 reporting year are presented (unless otherwise stated). Figures from posts that did not report data for this year have therefore been excluded, including data for previous years (back to and including the baseline year), so that a direct comparison can be made. We believe that this will enable us to more accurately track the reporting group's progress towards the EMMS programme's carbon emissions targets. In order to achieve this we have used the earliest data reported by the new participants and assumed these figures to be stable for all previous years to estimate 2008 baseline figures. Please see Annex 'Exclusions and Estimations' for EMMS participants' reporting details on page 57.

In addition, circumstances may also arise in which participants need to restate their data from previous years. This may be due, for example, to internal methodology changes or to a change in a participant's reporting scope. In cases where these restatements have a material impact on the EMMS group figures we will restate the EMMS group figures for previous years to include this revised data. This ensures transparency and consistency of reporting and enables an accurate assessment of the group's emissions reduction progress. It is in line with this policy that in the 2017 Sustainability Report we present 2015 emissions figures that incorporate a restatement from one participant within the group. This restatement reflects revised figures for: Scope 1 heating emissions due to an overstatement of natural gas; Scope 1 road transport emissions due to an overstatement of diesel fleet fuel; and Scope 2 electricity emissions due to the transition from a location-based accounting methodology to the market-based approach recommended by the GHG Protocol. One participant has also adopted a new emissions allocation methodology in 2017, which better reflects the company's organisational structure. The availability of data also supports the use of this allocation methodology for 2015 data. As a result of these changes, both the 2015 delivery efficiency and absolute emissions reduction figures presented in this report differ from the figures reported in the 2016 Sustainability Report. Subsequent sections of this report detail the difference between figures published in this year's Sustainability Report and the 2016 Sustainability Report, with a further breakdown provided in Annex 'Restatement Details' on page 58.

EMMS participants are continually seeking opportunities to more accurately measure their carbon performance, which in some cases results in updated approaches and calculation and measurement methodologies. For example, in the 2016 reporting year, one participant updated its methodology to measure natural gas consumption to real time consumption, which resulted in a reduction in consumption figures.

3.2.2 PROGRESS TOWARDS TARGETS

DELIVERY EFFICIENCY

The postal sector is currently experiencing a rapid increase in parcel volumes, largely due to the rise in e-commerce. This growth is leading to a greater need for transport, which is driving an increase in outsourcing. Recognising this trend, in 2014 – the year in which we achieved our 2020 reduction target for total volumes of carbon emissions – a new delivery efficiency target was introduced for the EMMS group: to reduce CO_2 emissions (Scope 1, 2 and 3 – outsourced transport) per letter mail and per parcel by 20% by 2025, from a 2013 baseline. This target broadens the coverage of the programme's carbon reduction objectives to

include Scope 3 emissions generated by subcontracted and outsourced transport, while also placing greater emphasis on efficiency. This target was approved as a sectoral benchmark by the Science Based Targets (SBT) initiative's Steering Committee in January 2016, recognising that our targeted emissions reductions align with the reductions that are required to meet the Paris Agreement's goal of limiting global warming to a maximum of 2°C.

The delivery efficiency target includes Scope 1, 2 and 3 (outsourced or subcontracted road and air transport), and excludes Scope 3 emissions from business travel and employee commuting. IPC and EMMS participants agree that these sources represent substantial parts of the sector's carbon footprint, despite being unrelated to core business processes. However, after lengthy discussion it became clear that they needed to be excluded from the group target-setting, although figures will continue to be reported. One of the key reasons is that several posts in Europe cannot collect data on employee commuting for privacy reasons and therefore have to use national estimates. Emissions reduction efforts would therefore not be reflected in figures, which jeopardises the robustness of the group's data. The feasibility of including business travel and employee commuting in a group target will be continually assessed. IPC also encourages posts to set individual company targets for these emissions, implement measures to achieve them, and share best practice.

As Table 3 shows, the 2025 target of a 20% improvement in delivery efficiency corresponds to CO_2 emissions of 29.5 grams per letter mail item and 404.0 grams per parcel item. This table also illustrates participants' progress towards the 20% targets to date. For details of the methodologies used by participants to allocate their emissions to letter mail and to parcel categories see Annex 'Allocation methodologies for letter mail and parcel emissions' on page 59.

Table 3: Letter mail and parcel delivery efficiency 2013 – 2016

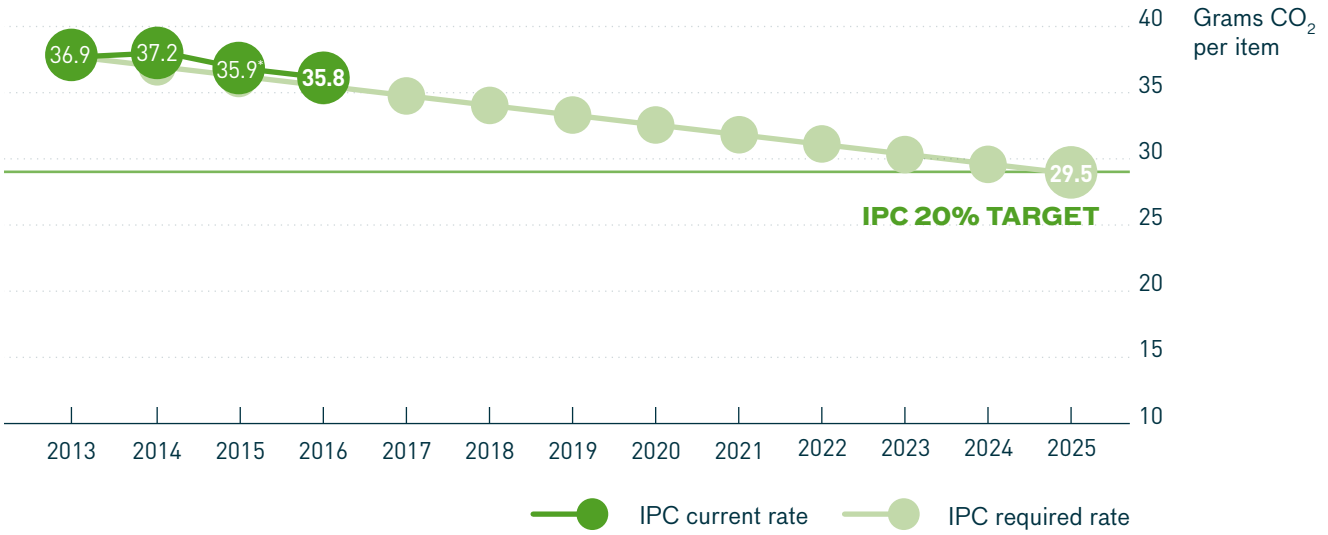
Delivery Efficiency	2013	2014	2015	2016	2025 Target
Letter mail (grams CO_2 per item)	36.9	37.2	35.9*	35.8	29.5
Parcel (grams CO_2 per item)	505.0	468.7	449.8*	436.0	404.0

DELIVERY EFFICIENCY: LETTER MAIL

As illustrated in Figure 6, EMMS participants are making headway in improving letter mail delivery efficiency, with the group reporting 35.8 grams of CO_2 per item in 2016 compared to 36.9 grams per item in 2013. This progress shows that while participants face the ongoing challenge of declining letter mail volumes, they are rising to the task and continuing to improve the efficiency of their letter mail operations. The rate of decrease in emissions associated with letter mail processing and delivery between 2013 and 2016 is greater than the rate of decline in letter mail volumes. This illustrates the group's commitment to enhancing operational efficiencies. Although there is still some way to go to reach the 2025 target of 29.5 grams, based on the group's progress to date and with eight years left until the target date, we are optimistic that this is an achievable goal.

* 2015 group figures reflect a restatement from one participant which is primarily driven by the transition from a location-based Scope 2 emissions accounting methodology to the market-based approach recommended by the GHG Protocol. EMMS participants are continually seeking opportunities to more accurately measure their carbon performance, which in some cases results in updated approaches and calculation and measurement methodologies. By retrospectively updating historical figures to account for material changes we ensure that the EMMS group figures remain comparable over time.

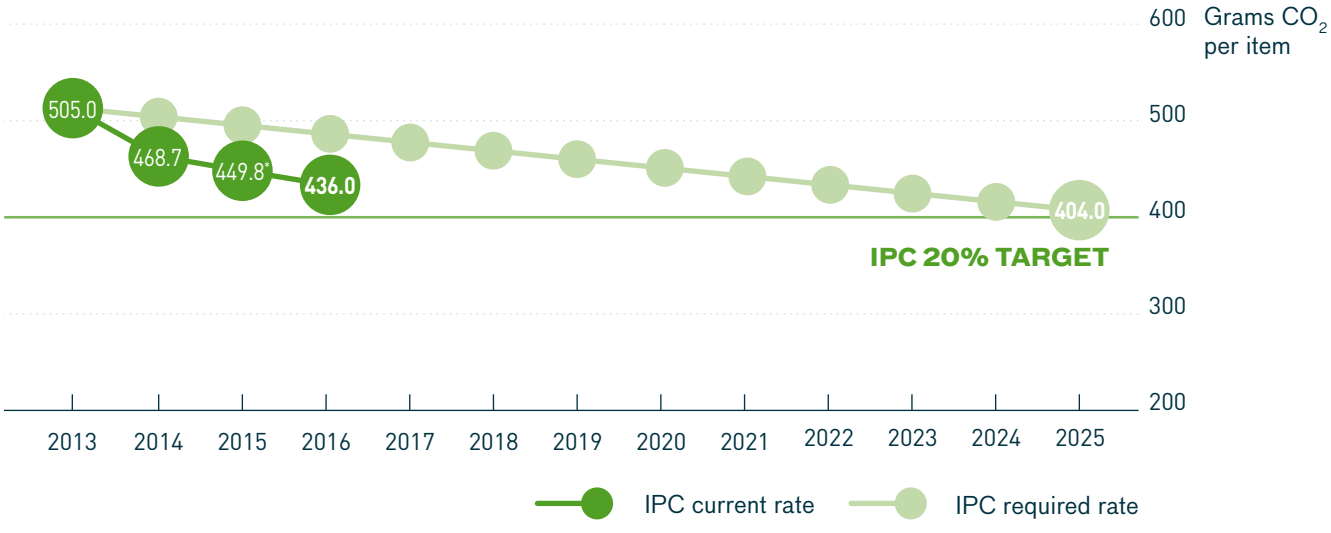
Figure 6: Letter mail; carbon emissions intensity pathway towards a 20% improvement in delivery efficiency (grams CO_2 per item)



DELIVERY EFFICIENCY: PARCEL

We see a significant improvement again this year in parcel delivery efficiency; 436.0 grams of CO_2 per item in 2016 compared to 449.8 grams per item in 2015, as illustrated in Figure 7. This represents a 14% decrease in just three years. This trend is impressive given the growth currently being experienced within the parcel sector. Indeed, while parcel volumes again increased between 2015 and 2016, emissions associated with parcel delivery increased at a slower rate. **The continuous annual improvement in parcel delivery efficiency from the 2013 baseline illustrates EMMS participants' dedication to ensuring that the inevitable rise in emissions driven by rapid growth in the parcel sector is kept to a minimum.**

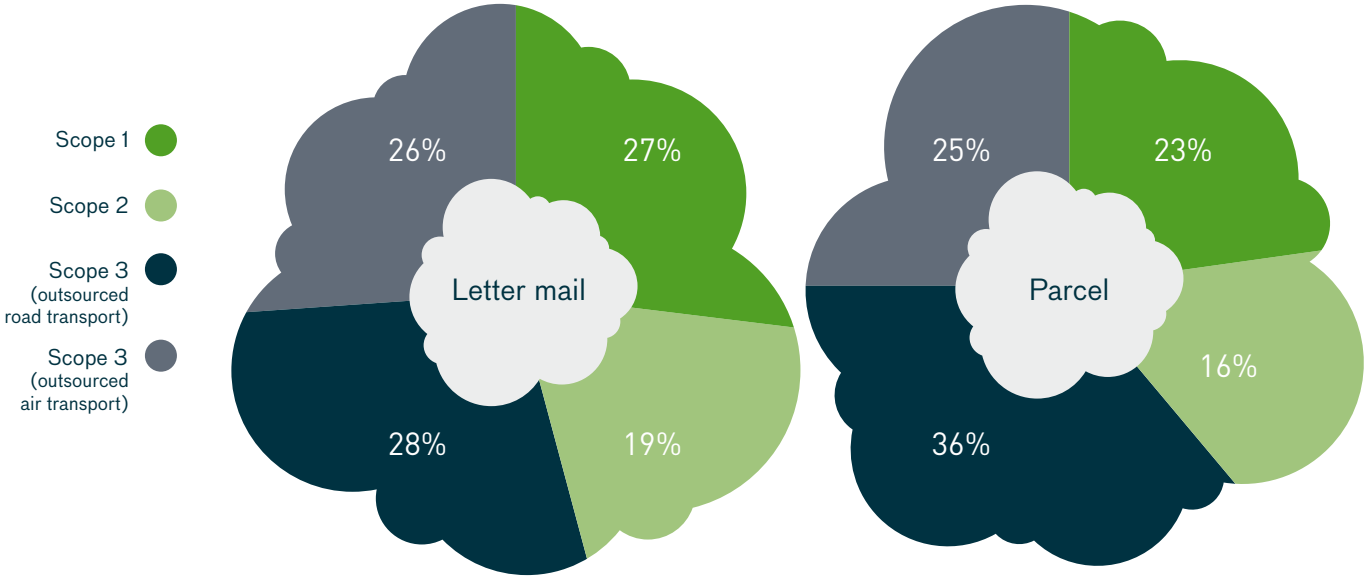
Figure 7: Parcel; carbon emissions intensity pathway towards a 20% improvement in delivery efficiency (grams CO_2 per item)



* 2015 group figures are restated. Please see the 'Methodology and Definitions' section on page 44 of the Technical Analysis and Annex 'Restatement Details' on page 58 for further information.

While the EMMS group has made commendable progress towards improving both letter mail and parcel delivery efficiency, it is clear that there remain considerable opportunities for posts to make further progress in minimising their carbon footprint. IPC broadened the scope of the EMMS programme targets to include outsourced transport in order to emphasise the importance of driving improvement in this area. This is particularly crucial considering that outsourced transport constitutes the most significant proportion of emissions associated with letter mail and parcel delivery, as illustrated in Figure 8. With growth in the parcel market continuing to accelerate, participants will need to increase their communication and collaboration with transport service providers to improve carbon efficiencies.

Figure 8: 2016 letter mail and parcel emissions by scope



When analysing progress towards the delivery efficiency targets, it is important to recognise the constraints that some participants face in this new phase of the programme. For example, national regulations under which our participants operate often include a Universal Service Obligation (USO) to make daily deliveries to every household by law. The ability of participants to improve the efficiency of their operations may therefore be impeded by such regulations. Further challenges to efficiency improvements stem from other politically driven positions, such as an obligation to retain post offices in each town or village, or having an imposed obligatory maximum distance between street post boxes. Moreover, business growth is inevitable. We encourage participants to consider environmental sustainability within their business development; however, we also recognise that short term results may not reflect the long term carbon management strategies companies have implemented.

ABSOLUTE CARBON EMISSIONS

Since successfully reaching the EMMS programme's target of a 20% reduction in Scope 1 and 2 carbon emissions from the 2008 baseline in 2014, the group has remained committed to further reducing its collective carbon emissions. In 2016, the group reported total Scope 1 and 2 CO_2 emissions of 6,458,000 tonnes, compared to 6,665,000 tonnes in 2015. As discussed in the following sections, this was largely driven by the considerable progress made in reducing Scope 2 emissions from electricity used in buildings (198,000 tonnes, or 7%).

Overall, the group has achieved a reduction in Scope 1 and 2 emissions of 26.9% (2,372,000 tonnes) from the 8,830,000 tonnes reported in 2008. A significant reduction has been made in Scope 2 electricity of almost 2m tonnes (45%) since the start of the programme, and also in Scope 1 heating of 459,000 tonnes (39%). The overall reduction in Scope 1 and 2 emissions since the start of the programme represents a group annual average decrease of 297,000 tonnes.

The group's Scope 2 emissions reductions have occurred at a faster rate than Scope 1 reductions. Between 2008 and 2016, Scope 1 emissions have reduced from 4,359,000 tonnes to 3,941,000 tonnes at an average of 52,000 tonnes per year, while Scope 2 emissions have reduced from 4,471,000 tonnes to 2,517,000 tonnes at an average of 244,000 tonnes per year – over four times the rate of Scope 1. Significant reductions in Scope 2 emissions are primarily attributed to a reduction in emissions produced from electricity consumption (largely as a result of participants' ongoing efforts to increase their use of renewable electricity), as discussed further in the 'Emissions analysis: Scope 2' section.

EMISSIONS ANALYSIS: SCOPE 1

Within the EMMS programme participants report on Scope 1 emissions produced from buildings (including from electricity generation sources and heating) and transport (including road, rail, ship, and air). In 2016, emissions from buildings accounted for 19% of Scope 1 emissions, while emissions from transport accounted for 81%. In 2016, total Scope 1 emissions amounted to 3,941,000 tonnes – an increase of 62,000 tonnes (or 2%) compared with 2015 emissions.

Emissions produced from buildings increased marginally between 2015 and 2016. This may be related, at least in part, to the colder winter conditions experienced in this reporting year in certain parts of the world where participants are located, which caused an increase in emissions from heating. Meanwhile a more substantial increase in emissions from road transport of 2% (65,000 tonnes) was observed. This is in contrast to air transport emissions, which decreased by 4% (5,000 tonnes).

Despite the increase observed between 2015 and 2016, Scope 1 emissions have decreased over the period during which the programme has been running. Indeed, by comparing 2016 figures to the 2008 baseline, total Scope 1 emissions have decreased by 418,000 tonnes (10%) While we find that posts' own transport emissions have increased by 14,000 tonnes (0.4%) over the course of the programme, largely attributed to the challenges identified previously, emissions from heating have decreased by 459,000 tonnes (39%), highlighting the benefits of participants' extensive efficiency improvements.

An increase in emissions from road transportation has been observed since 2014, reflecting the current trend of decreasing letter mail volumes in contrast to the rising number of parcels, which, due to their greater weight and volume, have a higher carbon footprint than letter mail. Amid this changing postal market, reducing emissions from transport is becoming more and more challenging for posts. Due to the growth in parcel deliveries many participants face challenges in transitioning away from emissions intensive forms of road transport, such as heavy goods vehicles, towards alternative-fuel vehicles. For example, while e-vehicles and scooters are a popular choice in urban areas as charging stations can be installed and their range and loads need not to be extensive, these types of vehicles may not necessarily be viable over greater distances or where heavier loads are involved. While other renewable energy sources are also used by EMMS participants, such as biogas, usage is not yet on a scale that has had significant impact on group results (see 'Alternative-fuel Vehicles' section).

Another way in which participants can achieve emissions reductions from own transport is via improving driving behaviour and encouraging eco-driving. Many of our participants are already making progress in this area, and have introduced eco-driving initiatives for delivery drivers. Moreover, the participation of eight postal companies in IPC's fourth International Drivers' Challenge in November 2016 illustrates participants' ongoing commitment to reducing emissions from transport. Through this event, which was hosted at the legendary Spa-Francorchamps Formula 1 track in Belgium, IPC aims to emphasise the importance of economic and fuel-efficient driving behaviour, and to demonstrate the benefits of investment in eco-driving initiatives. Following

the success of the event, the fifth edition of the International Drivers' Challenge will be hosted by CTT Portugal Post in April 2018 in Estoril, Portugal. Other measures that posts can focus on to improve the efficiency of their transportation include route optimisation. Indeed, as part of the company's 'POSTLowCIT' project, **Correos** is focusing on optimising routes and developing a more efficient distribution network model in order to reduce the environmental impact of the company's transportation, while also improving the service it provides. Route optimisation was also a topic at this year's Sustainability Workshop.

EMISSIONS ANALYSIS: SCOPE 2

In 2016, emissions from electricity use in buildings accounted for 98% of the EMMS group's total Scope 2 emissions, while emissions from heating contributed 2% of total emissions. Between 2015 and 2016, Scope 2 emissions declined by 269,000 tonnes (10%) to 2,517,000 tonnes. This was largely a result of the significant decrease in emissions from electricity used in buildings (198,000 tonnes, or 7%).

Participants have made significant progress in reducing their electricity usage via a number of methods. Many posts have reported substantial reductions in electricity consumption as a result of improving energy efficiency in buildings. For example, **An Post**'s roll-out of an LED Smart Lighting system across its four Mail Centres has reduced energy consumption by 14% since the project began in 2015, corresponding to a reduction in carbon emissions of 384 tonnes per year. Meanwhile, **Poste Italiane** implemented a project to replace fluorescent lights with LED lighting technology in over 1,000 of the company's facilities. The company expects to reduce CO_2 emissions by 11,000 tonnes each year as a result of annual energy savings of over 32 GWh. Participants are also increasingly switching to purchasing electricity from renewable energy sources, with six of our participants having already transitioned to purchasing 100% renewable electricity - a highly impressive achievement. Posts are also increasing their renewable electricity usage through generating renewable energy on company owned buildings by, for example, installing photovoltaic systems (solar panels).

The group has maintained its dedication to reducing Scope 2 emissions since the start of the programme, illustrated by the reduction of 1,954,000 tonnes (44%) since 2008. As discussed above, this commendable progress has been achieved by the group's commitment to reducing electricity consumption and sourcing increasing amounts of renewable electricity. Indeed, the group's electricity consumption has decreased from 9.95 TWh in 2008 to 7.77 TWh in 2016 (see section 'Business Case' on page 11 for related financial savings), while the proportion of renewable electricity used in buildings increased from 15% to 28% in 2008 and 2016, respectively.

EMISSIONS ANALYSIS: SCOPE 3

Subcontracted road and air transport contribute the largest component (74%) of the EMMS group's total Scope 3 emissions in 2016, followed by employee commuting (25%), and business travel (1%). Between 2015 and 2016, total Scope 3 emissions increased by 346,000 tonnes (or 3%). While emissions from employee commuting and business travel increased by 41,000 tonnes (1%), the most significant driver of the observed increase in Scope 3 emissions was the rise in emissions from outsourced transport of 305,000 tonnes (4%). As discussed in previous sections of the report, this trend of increasing emissions associated with subcontracting is expected as postal companies strive to remain competitive amid the growing parcel volumes associated with an expanding global e-commerce market. It was for this reason that Scope 3 subcontracted transport emissions were included within the new delivery efficiency target, thereby placing greater emphasis on efficiency and to encourage posts to enhance their value chain engagement.

Table 4: Carbon performance data in tonnes of CO_2 (table subject to PwC limited assurance assignment)

Indicator	2008 baseline	2015	2016
Scope 1: Transport (vehicles, aviation, rail)	3,175,000	3,129,000*	3,189,000
Scope 1: Heating (gas, heating, fuel, oil, steam)	1,184,000	721,000*	725,000
Other Scope 1	-	30,000	27,000
Scope 2: Electricity (including electric vehicles)	4,471,000	2,669,000*	2,472,000
Other Scope 2	-	117,000	45,000
Sub-total: Scope 1 and 2	8,830,000	6,665,000*	6,458,000
Scope 3a: Outsourced road and air transport	-	7,849,000	8,154,000
Sub-total: Scope 1, 2 and 3a	-	14,514,000*	14,612,000
Scope 3b: Employee commuting and business travel	-	2,849,000	2,890,000
TOTAL		**17,363,000***	**17,502,000**
Percentage of renewable electricity used in buildings	15%	25%	28%
Percentage of alternative-fuel vehicles in fleet	10%	14%	16%
Please see Annex for more information on indicator definitions, details on reporting participants, and the PwC assurance report.			

* 2015 group figures are restated. Please see the 'Methodology and Definitions' section on page 44 of the Technical Analysis and Annex 'Restatement Details' on page 58 for further information. Please see Annex for more information on indicator definitions, details on reporting participants, and the PwC assurance report.

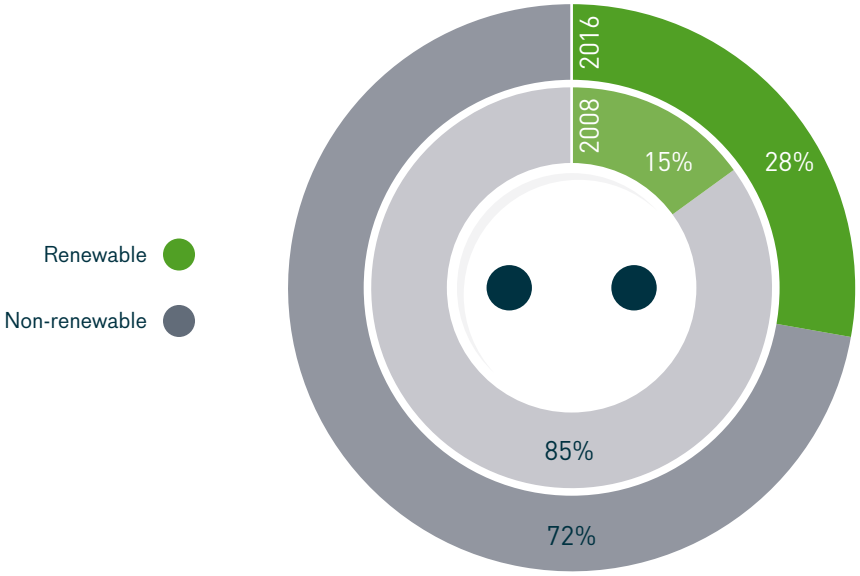
3.3 ACTIVITY INDICATORS

3.3.1 RENEWABLE ELECTRICITY

In 2016, the group reported that 28% of total electricity used was considered green electricity, up from 25% reported in 2015. This substantial growth in renewable electricity use from 15% in 2008 has contributed to the significant decrease in Scope 2 electricity emissions, as discussed in the 'Emissions analysis: Scope 2' section. While the percentage of renewable electricity use in buildings varies throughout the group, it is notable that 95% of EMMS participants reported purchasing or generating some form of green electricity this year. Moreover, six participants have already made the impressive transition to using solely renewable electricity.

Nonetheless, while recognising this commendable achievement in increasing renewable electricity usage, there remain 2.5m tonnes of emissions associated with non-renewable electricity use left to be reduced. As such, there are further opportunities available for participants, such as switching to a green electricity provider, or developing their own renewable energy supplies. **If this maximum reduction in Scope 2 electricity emissions were to be achieved, total Scope 1 and 2 emissions could be reduced by a further 28% of the 2008 baseline, in addition to the 27% reduction that has already been accomplished.** It is therefore IPC's aim to encourage and support participants in furthering their efforts to increasingly switch to purchased or self-generated renewable electricity in order to achieve immediate and substantial emissions reductions.

Figurer 9: Proportion of renewable electricity usage in buildings (2008 vs 2016)



3.3.2 ALTERNATIVE-FUEL VEHICLES

For the sixth successive year, EMMS participants were required to provide disclosure and categorisation of their alternative-fuel vehicles. Participants report on the numbers of alternative-fuel vehicles under the following 11 categories: CNG, LNG, LPG, E85, M85, Electric, Hybrid, Hydrogen, Bioethanol, Bicycles, and Other. Traditional bicycles (self-propelled vehicles) are excluded from total alternative-fuel vehicles figures to enable better comparison between trends in technology use and development. E-bicycles are included under electric vehicles; to show the speed of electric vehicle integration within the fleet.

From an environmental and employee health perspective, when transitioning to more sustainable modes of transport, where feasible, posts should prioritise delivery by bicycle or foot. With this in mind, we encourage participants to avoid replacing normal bicycles with e-bicycles, and where possible replace vans and cars with normal bicycles rather than electric models. The application of these recommendations will result not only in the removal of unsustainable models from fleets, but could reduce the total number of vehicles in operation as opposed to shifting numbers from the non-alternative to alternative category (which excludes traditional bicycles).

Since 2012, the total number of vehicles has increased by 77,000 (13%), while the total number of alternative-fuel vehicles has increased by 31,000 (42%). In 2016, alternative-fuel vehicles account for 15.7% of the group's combined fleet, compared to 12.5% in 2012. Between 2015 and 2016, the total number of vehicles increased by 10,000, while the number of alternative-fuel vehicles increased by 12,000. This reflects a decrease in both the number of non-alternative-fuel vehicles and also traditional bicycles, and demonstrates participants' ongoing efforts to increase the proportion of alternative-fuel vehicle models within their vehicle fleets.

Table 5: 2012 – 2016 comparison of % of alternative-fuel vehicles

	2012	2015	2016
Total vehicles	585,000	652,000	662,000
Total alternative-fuel vehicles	73,000	92,000	104,000
% of alternative-fuel vehicles in current EMMS group	12.5%	14.2%	15.7%

The number of electric vehicles reported increased by 3,200 between 2015 and 2016, such that electric models now account for 29% of all alternative-fuel vehicles and 4.6% of the total vehicle fleet. In comparison, globally only 0.2% of all cars in circulation are electric vehicles[6]. Many participants are increasing the number of electric vehicles in their delivery fleets. For example, **Deutsche Post DHL Group**'s StreetScooter, the company's purpose-built electric-powered delivery vehicle, showcases the Group's efforts to integrate electric vehicles within its logistics network. With 2,500 of these vehicles already in operation across Germany, the Group intends to double this number by the end of 2017. Meanwhile, after taking its last petrol-powered scooter out of service in 2016, **Swiss Post**'s fleet of around 6,300 delivery scooters are now powered with certified renewable energy. These examples of participants' commendable efforts are illustrative of the postal sector's position as a leader in the transition to low carbon transport. For more information and for other examples, please see the 'Case Studies section' of this report.

> "The proportion of electric vehicles in the EMMS group's vehicle fleet is more than 20 times greater than the proportion of electric vehicles within all cars on the road globally.

Within the EMMS group, none of our participants are reporting the use of M85- (methane-), hydrogen, or LNG vehicles. This could be a result of factors such as purchase costs, availability of national infrastructure, energy efficiency, and range. There is a small amount of usage of other renewable energy sources, such as biogas, however, not yet on a scale that would have significant impact on group results. While research, development, and piloting of new models are occurring in partnership with manufacturers, the investment required is often substantial, which can be prohibitive for some posts. This is often the case if the fuel is not already widely available through national infrastructure.

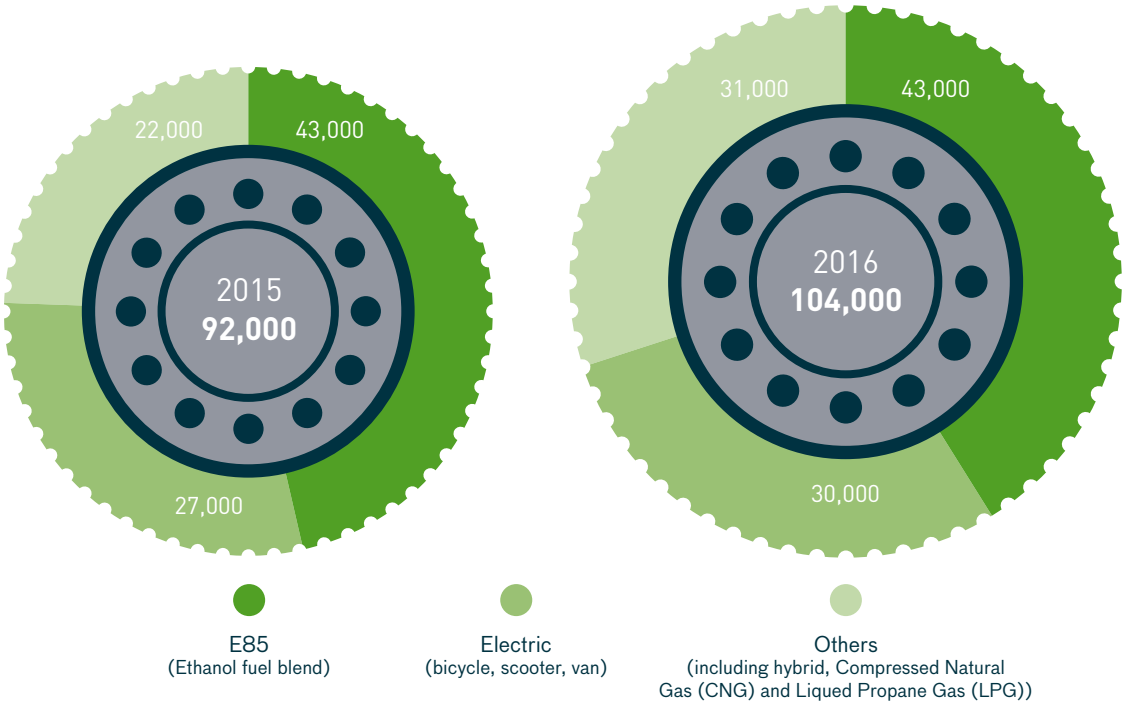
6 International Energy Agency (IEA), 6 June 2017, Tracking Clean Energy Progress 2017. Available at https://www.iea.org/publications/freepublications/publication/tracking-clean-energy-progress-2017.html [Accessed 8 September 2017].

IPC applauds that many posts are leading the way in adopting alternative-fuel technologies in their respective countries, and will continue to support posts in reducing emissions from transport. IPC aims to continue to encourage posts to use alternative-fuel capable vehicles through best practice sharing and initiatives such as the IPC International Drivers' Challenge. Moreover, in October 2017, IPC hosted a Best Practice Seminar on alternative transport and vehicles. This event provided a platform for participants to share information and best practices, and also featured guest speakers to augment this knowledge exchange.

Table 6: 2015 – 2016 comparison of alternative-fuel vehicles types

Type	2015	2016	2015-2016 Change
E85 (Ethanol fuel blend)	43,000	43,000	0.0%
Electric (bicycle, scooter, van)	27,000	30,000	+11.1%
Others – including hybrid, Compressed Natural Gas (CNG) and Liquid Propane Gas (LPG)	22.000	31,000	+40.9%
Total alternative-fuel vehicles	92,000	104,000	+13.0%

Figure 10: 2015 - 2016 comparison of alternative-fuel / alternative fuel-capable vehicles types



Meanwhile, just over 113m km of postal deliveries (distance includes both owned and subcontracted postal delivery) were travelled by foot in 2016 – equivalent to walking the circumference of the Earth approximately 2,830 times – illustrating participants' commitment to utilising the most sustainable transport modes available. Transport will continue to contribute a major source of the EMMS group's emissions as the parcel market continues to grow. Thus, by maintaining their commitment to minimising fuel demand and reducing the proportion of carbon-intensive vehicles within their fleets, participants are making a considerable contribution to reducing the carbon footprint of the postal sector and advancing the transition to low carbon transport.

“

There are now over 100,000 alternative-fuel vehicles in the EMMS group’s fleet.

4. ANNEXES

INDICATOR DEFINITIONS

DELIVERY EFFICIENCY: TOTAL CO_2 IN GRAMS PER LETTER MAIL AND PER PARCEL (SCOPE 1, 2 AND 3 – OUTSOURCED TRANSPORT):

Calculation of CO_2 emissions from Scope 1, Scope 2, and Scope 3 outsourced transport sources per letter mail and per parcel. Letter mail and parcel CO_2 emissions expressed in grams are divided by the total number of letter mail and of parcel items processed, respectively. For details of the methodologies used by participants to allocate emissions to letter mail and to parcel categories see Annex Table: 'Allocation methodologies for letter mail and parcel emissions' on page 59.

PERCENTAGE OF RENEWABLE ELECTRICITY USED IN BUILDINGS:

The percentage of additional electricity purchased or self-generated that is obtained from renewable sources, i.e. it does not typically include renewable electricity already present in the national grid. Included are all sources of purchased and self-generated renewable energy (e.g. solar, wind, hydro, geothermal). Nuclear power, peat, and natural gas are not considered renewable energy sources.

PERCENTAGE OF ALTERNATIVE-FUEL VEHICLES IN FLEET:

Includes the total number of alternative-fuel vehicles within the postal vehicle fleet. This number is expressed as a percentage of the total number of vehicles in EMMS participants' collective delivery fleet. Alternative-fuel vehicles are vehicles that run on fuels other than standard petrol and diesel. This includes electric vehicles, hydrogen vehicles, vehicles that run exclusively on biofuels or that that run on LPG and CNG. It excludes vehicles that run on bio/mineral fuel mixes that are at or below the nationally agreed minimum content of bio/mineral fuel. It also excludes traditional bicycles.

EXCLUSIONS AND ESTIMATIONS

The table below provides details of the EMMS programme participants, including their submissions to the programme in 2016, EMMS joining year, and any exclusions and estimations relevant to their reporting.

EMMS Participant	Carbon Management Proficiency (CMP)	Carbon Performance Indicators (CPI)	EMMS joining date	Exclusions & estimations
An Post	✔	✔	2008	Excludes subsidiaries, and sub contracted retail and delivery service units
Australia Post	✔	✔	2008	Excludes subsidiaries and joint ventures.
Austrian Post	✔	✔	2009	Excludes Scherübl and all subsidiaries outside Austria.
bpost	✔	✔	2008	
Canada Post Corporation	✖	✖	2008	
Correios	✔	✔	2012	
Correos	✔	✔	2008	
CTT Portugal Post	✔	✔	2008	Excludes sub-contracted air transport for express-international.
Deutsche Post DHL Group	✔	✔	2008	Exclusion of express and logistics business
Hellenic Post ELTA	✖	✖	2008	
Le Groupe La Poste	✔	✔	2008	Excludes small subsidiaries.
Magyar Posta Zrt	✖	✖	2008	
New Zealand Post Group	✔	✔	2008	Excludes associate companies and express/ logistics operations in Australia
Nigerian Postal Service	✖	✖	2012	
POST Luxembourg	✔	✔	2008	
Poste Italiane	✔	✔	2009	
Posten Norge	✔	✔	2008	
Posti	✔	✔	2008	Excludes Russian mail communication
PostNL	✔	✔	2008	
PostNord	✔	✔	2008	Energy consumption related to buildings is for 7% based on estimations. Express and logistics included.
Royal Mail Group Plc	✔	✔	2008	Excludes subsidiaries and joint ventures.
South African Post Office	✔	✔	2010	Electricity consumption partly based on estimations
Swiss Post	✔	✔	2008	
United States Postal Service	✔	✔	2008	15% of electricity consumption is estimated; 21% of natural gas consumption is estimated

RESTATEMENT DETAILS

Within the IPC EMMS programme reporting, circumstances may arise in which participants need to restate their data from previous years. This may be due, for example, to internal methodology changes or to a change in a participant's reporting scope. In cases where these restatements have a material impact on the EMMS group figures we will restate the group figures for previous years to include this revised data. This ensures transparency and consistency of reporting and enables an accurate assessment of the group's emissions reduction progress on a comparable basis.

In the 2017 Sustainability Report, we present 2015 emissions figures that incorporate a restatement from one participant within the group. This restatement reflects revised figures for: Scope 1 heating emissions due to an overstatement of natural gas; Scope 1 road transport emissions due to an overstatement of diesel fleet fuel; and Scope 2 electricity emissions due to the transition from a location-based accounting methodology to the market-based approach recommended by the GHG Protocol. One participant has also adopted a new emissions allocation methodology in 2017, which better reflects the company's organisational structure. The availability of data also supports the use of this allocation methodology for 2015 data. As a result of these changes, both the 2015 delivery efficiency and absolute emissions reduction figures presented in this report differ from the figures reported in the 2016 Sustainability Report. EMMS participants are continually seeking opportunities to more accurately measure their carbon performance, which in some cases results in updated approaches and calculation and measurement methodologies. By retrospectively updating historical figures to account for material changes we ensure that the EMMS group figures remain comparable over time.

The tables below provide a breakdown of the EMMS group's 2015 figures as reported in the 2016 Sustainability Report, alongside the restated 2015 figures as reported in this year's Sustainability Report. Figures for 2014 and 2016 are also provided to enable comparison between reporting years.

Letter mail and parcel delivery efficiency 2013 – 2016

Delivery Efficiency	2014	2015		2016
		Figures reported in 2016 Sustainability Report	Restated figures reported in 2017 Sustainability Report	
Letter mail (grams CO_2 per item)	37.2	37.2	35.9	35.8
Parcel (grams CO_2 per item)	468.7	439.9	449.8	436.0

Carbon performance data in tonnes of CO_2

Indicator	2014	2015		2016
		Figures reported in 2016 Sustainability Report	Restated figures reported in 2017 Sustainability Report	
Scope 1: Transport (vehicles, aviation, rail)	3,020,000	3,180,000	3,129,000	3,189,000
Scope 1: Heating (gas, heating, fuel, oil, steam)	774,000	733,000	721,000	725,000
Other Scope 1	31,000	30,000	30,000	27,000
Scope 2: Electricity (including electric vehicles)	3,056,000	2,791,000	2,669,000	2,472,000
Other Scope 2	119,000	117,000	117,000	45,000
Sub-total: Scope 1 and 2	**7,000,000**	**6,852,000**	**6,665,000**	**6,458,000**
Scope 3a: Outsourced road and air transport	7,424,000	7,849,000	7,849,000	8,154,000
Sub-total: Scope 1, 2 and 3a	**14,424,000**	**14,701,000**	**14,514,000**	**14,612,000**
Scope 3b: Employee commuting and business travel	2,786,000	2,849,000	2,849,000	2,890,000
TOTAL	**17,210,000**	**17,550,000**	**17,363,000**	**17,502,000**
Percentage of renewable electricity used in buildings	16%	25%	25%	28%
Percentage of alternative-fuel vehicles in fleet	13%	14%	14%	16%

ALLOCATION METHODOLOGIES FOR LETTER MAIL AND PARCEL EMISSIONS

The table below provides details of the methodologies used by EMMS participants to calculate and allocate their emissions to letter mail and parcel categories.

Post	Items	Building emissions	Transport emissions	Subcontractor emissions
An Post	Actual	Allocation is based on split in revenue between letter mail and parcel operations.	Allocation is based on split in revenue between letter mail and parcel operations.	Allocation is based on split in revenue between letter mail and parcel operations.
Australian Postal Corporation	Actual	Allocation is based on costs (at an individual product level) between letter mail and parcel operations.	Allocation is based on finance expenditure (at an individual product level) between letter mail and parcel operations.	Allocations are based on expenditure and the finance allocations process. For the StarTrack business the allocation is based on a combination of expenditure and revenue allocation.
Austrian Post	Actual	Allocation is based on the split according to the number of square meters (settled payment unit) per business unit.	Vehicles are assigned to either the letter mail or parcels division. When vehicles are used for both letter mail and parcels cost allocation is used to split the emissions.	Subcontractor emissions for letter mail are based on kilometer data. Emissions for parcel subcontractors are estimated using the number of kilometres travelled, derived by a ratio calculation comparing parcel numbers with the subcontractor parcel numbers.
bpost	Actual	Allocation is based on the split according to the number of square metres, which are re-invoiced to the different business units.	Business activities are assigned to either letter mail or parcels.	Business activities are assigned to either letter mail or parcels.
Correios	Actual	Allocation is based on revenue split between mail and parcel operations.	Allocation is based on revenue split between mail and parcel operations.	Allocation is based on revenue split between mail and parcel operations
Correos	Actual	Allocation is based on costs between letter mail and parcels operations.	Allocation is based on costs between letter mail and parcels operations.	Allocation is based on costs between letter mail and parcels operations.
CTT Portugal Post	Actual	Allocation is based on weight.	Allocation is based on weight.	Allocation is based on weight.
Deutsche Post DHL Group	Actual	Buildings are allocated to either letter mail or parcel operations and following this allocation, energy use data, m^2 area data and costs are assigned to the individual units, enabling emissions calculations.	The allocation is being performed on a vehicle level and where vehicles transport both letter mail and parcels, costs and fuel use data are allocated to the responsible unit who would then recharge the other.	Kilometer data forms the basis for the allocation of subcontracted road emissions (adjusted for the specific truck types). Emissions for domestic air travel are calculated using fuel data from the airline partner. Emissions for international air travel are calculated on an individual trip level taking into consideration specific routing, aircraft type and load utilization.
Le Groupe La Poste	Actual	Letter mail and Parcel have their own delivery organisation and process.	Letter mail and parcel have their own delivery organisation and process. Allocation for air transportation is based on freight rates (weight and number of items). For international air or maritime transportation the allocation is based on the split in carrying weight.	Letter mail and parcel have their own delivery organisation and process. Allocation for air transportation is based on freight rates (weight and number of items). For international air or maritime transportation the allocation is based on the split in carrying weight.
New Zealand Post Group	Actual	Most of the buildings in the network are either for letter mail or for parcels. If they are dual use emissions are allocated to the letter mail side of the business.	Allocation for domestic air freight and ground fuel (both related to delivery) is done using the financial control method drawing on cost information from within the business.	Allocation for domestic air freight and ground fuel (both related to delivery) is done using the financial control method drawing on cost information from within the business.
POST Luxembourg	Actual	Allocation is based on revenue split between mail and parcel operations.	Where not directly allocated to a category, emissions are allocated based on the actual numbers of items and distinction between letter mail and parcel divisions through the delivery stage.	Where not directly allocated to a category, emissions are allocated based on the actual numbers of items and distinction between letter mail and parcel divisions through the delivery stage.
PostNord	Actual	Allocation is based on actual weight of letter mail and parcels.	Allocation is based on actual weight of letter mail and parcels.	Allocation is based on actual weight of letter mail and parcels.
Poste Italiane	Actual	Allocation is based on revenue split.	Allocation is based on revenue split.	Allocation is based on revenue split.
Posten Norge	Actual	Allocation of emissions is based on m^2 usage of letter mail and parcel divisions.	Emissions from business activities is clearly assigned to letter mail, parcel (etc.) categories.	Business activities are assigned to either letter mail or parcel. Volumes (items and kg) used to calculate emissions. Weight is calculated by multiplying sales volumes by the maximum weight.
Posti	Estimation	Buildings are assigned to either letter mail or parcel divisions using an estimation based on actual figures.	Allocation based on actual volumes of items and distinction between letter mail and parcel divisions through the process stage.	Allocation based on actual volumes of items and distinction between letter mail and parcel divisions through the process stage.
PostNL	Actual	Emissions based on clear separation of letter mail and parcel divisions.	Emissions based on clear separation of letter mail and parcel divisions.	Emissions based on clear separation of letter mail and parcel divisions.
Royal Mail Group Plc	Actual	Allocation is based on revenue split.	Allocation is based on revenue split.	Allocation is based on revenue split.
South African Post Office	Actual	Allocation is based on the volume of letter mail and parcels.	Allocation is based on the volume of letter mail and parcels.	Allocation is based on the volume of letter mail and parcels.
Swiss Post	Actual	Emissions from business activities clearly assigned to letter mail, parcel (etc.) categories. Building emissions are calculated using meter readings and split among different business units based on their assigned area.	Emissions from business activities clearly assigned to letter mail, parcel (etc.) categories. Transport emissions are calculated using the actual fuel use per business unit.	Emissions from business activities clearly assigned to letter mail, parcel (etc.) categories. Transport emissions are calculated using fuel use that is stipulated in the contract with the subcontractor.
United States Postal Service	Actual	Allocation is based on revenue split.	Allocation is based on revenue split.	Allocation is based on revenue split.

To the members of the board of the International Post Corporation, Amsterdam

INDEPENDENT ASSURANCE REPORT ON THE IPC POSTAL SECTOR SUSTAINABILITY REPORT 2017

This report has been prepared in accordance with the terms of our engagement contract dated 8 December 2014, whereby we have been engaged to issue an independent limited assurance report in connection with the Postal Sector Sustainability Report 2017 (the "Sustainability Report") as of and for the year ended 31 December 2016 of the International Post Corporation (the "Association").

MANAGEMENT'S RESPONSIBILITY

The Board of Directors of the Association is responsible for the preparation of the Sustainability Report in accordance with the criteria stated in the Environmental Measurement and Monitoring System (EMMS) Guidelines issued by the Association (summarised on page 44 and 45) ("the Criteria").

This responsibility includes the selection and application of appropriate methods for the preparation of the Sustainability Report, for ensuring the reliability of the underlying information and for the use of assumptions and estimates for individual sustainability disclosures which are reasonable in the circumstances. Furthermore, management's responsibility includes the design, implementation and maintenance of systems and processes relevant for the preparation of the Sustainability Report.

AUDITOR'S RESPONSIBILITY

Our responsibility is to express an independent conclusion about the 2016 performance data disclosed on page 51 of the Sustainability Report ("the Subject Matter Information") based on our work performed. We have conducted our work in accordance with the International Standard on Assurance Engagements (ISAE) 3000 "Assurance Engagements other than Audits or Reviews of Historical Financial Information".

This standard requires that we comply with ethical requirements and that we plan and perform the engagement to obtain limited assurance as to whether nothing has come to our attention that causes us to believe that the Subject Matter Information is not fairly stated, in all material aspects, based on the Criteria.

The objective of a limited assurance engagement is to perform the procedures we consider necessary to provide us with sufficient appropriate evidence to support the expression of a conclusion in the negative form on the Subject Matter Information set forth in the Sustainability Report. The selection of such procedures depends on our professional judgment, including the assessment of the risks of management's assertion being materially misstated. The scope of our work comprised, amongst others the following procedures:

- Assessing and testing the design and functioning of the systems and processes used for datagathering, collation, consolidation and validation, including the methods used for calculating and estimating the Subject Matter Information at Association level and at member level;
- Conducting interviews with responsible officers at Association and member level (6 IPC EMMS participants were visited: Australia Post, Correios, Correos, Posti Group, Swiss Post, and the United States Postal Service);
- Inspecting internal and external documents.

PwC Bedrijfsrevisoren cvba, burgerlijke vennootschap met handelsvorm - PwC Reviseurs d'Entreprises scrl, société civile à forme commerciale
Risk Assurance Services - Maatschappelijke zetel/Siège social:Woluwe Garden, Woluwedal 18, B-1932 Sint-Stevens-Woluwe
T: +32 (0)2 710 4211, F: +32 (0)2 710 4299, www.pwc.com - BTW/TVA BE 0429.501.944 / RPR Brussel - RPM Bruxelles
ING BE43 3101 3811 9501 - BIC BBRUBEBB / BELFIUS BE92 0689 0408 8123 - BIC GKCC BEBB

We have evaluated the Subject Matter Information against the Criteria. The accuracy and completeness of the Subject Matter Information are subject to inherent limitations given their nature and methods for determining, calculating or estimating such information. Our Limited Assurance Report should therefore be read in connection with the Criteria.

OUR INDEPENDENCE AND QUALITY CONTROL

We have complied with the independence and other ethical requirements of the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants (IESBA), which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour. Our audit firm applies International Standard on Quality Control (ISQC) n° 1 and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

CONCLUSION

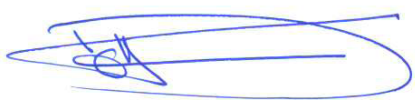
Based on our work, as described in this Independent Limited Assurance Report, nothing has come to our attention that causes us to believe that the Subject Matter Information, is not fairly stated, in all material respects, in accordance with the Criteria.

RESTRICTION ON USE AND DISTRIBUTION OF OUR REPORT

Our assurance report has been made in accordance with the terms of our engagement contract. Our report is intended solely for the use of the Association's Board of Directors in connection with the Subject Matter Information set forth in the Sustainability Report as of and for the year ended 31 December 2016 and should not be used for any other purpose. We do not accept, or assume responsibility to anyone else, except to the Association for our work, for this report, or for the conclusions that we have reached.

Sint-Stevens-Woluwe, 10 November 2017

PwC Bedrijfsrevisoren bcvba
Represented by



Marc Daelman*
Registered auditor

* Marc Daelman BVBA
Board Member represented by its fixed representatives
Marc Daelman

IPC'S SUSTAINABILITY PERFORMANCE

IPC is an active member of the United Nations Global Compact, and as such is committed to taking a precautionary approach to environmental challenges. We endeavour to continually improve our performance by engaging in initiatives to promote environmental responsibility and encouraging the use of environmentally friendly technology. While this report focuses on how we put this into practice through our efforts with EMMS participants, we also ensure that our own operations are in line with these commitments.

IPC'S OWN CARBON EMISSIONS REDUCTION MEASURES AND RESULTS

In 2016, our own carbon emissions amounted to 608 tonnes of CO_2. This represents a 14% decrease from 704 tonnes in 2015. Emissions from road travel (business and commuting), heating, and business air travel all decreased between 2015 and 2016, while emissions from public transport increased marginally. Notably, emissions from business air travel decreased by 21% (83 tonnes). Meanwhile, emissions from electricity consumption remained zero due to IPC's continued use of 100% renewable electricity. Of IPC's 2016 emissions, 53% were associated with business air travel, while 39% were associated with road travel (business and commuting). The remaining 8% were associated with heating, paper usage, and public transport. In order to help reduce emissions from business travel, we place an emphasis on the use of alternative options, such as teleconferencing and remote presentation technologies (for example, WebEx and webinar techniques).

ICROA
INTERNATIONAL CARBON REDUCTION AND OFFSET ALLIANCE

THE GLOBAL COMPACT

WE SUPPORT

Climate Neutral Group

CARBON EMISSIONS COMPENSATED

For the ninth consecutive year we have partnered with the Climate Neutral Group to compensate our carbon emissions. The last seven years of emissions have been fully offset with Gold Standard credits from Cookstove projects in Africa. In 2016, credits were used from the Cookstove Project in Uganda. This project has a positive impact on both climate and local communities. In co-operation with local communities, efficient charcoal ovens are developed and made available for the poorest households. Production and sales of the ovens takes place through a network of local companies, while local people are employed to provide information and training on the use of efficient stoves. By replacing traditional cooking with fuel efficient stoves carbon emissions are reduced, while the project also provides significant health benefits, with efficient cookstoves reducing smoke inhalation by to up to 70%. This project allows households in Uganda to cut fuel bills, thereby making a significant contribution to poverty alleviation in the region.

IPC's collaboration with Climate Neutral Group to compensate our emissions contributes to the UN Sustainable Development Goals (SDGs) by enhancing climate change action and improving the living conditions of others. In particular, this project makes a positive contribution to the following SDGs:

- **Goal 1: No poverty** – In Uganda, household expenditure on fuel (wood or charcoal) is on average 30% to 50% of the household income. The use of efficient cookstoves and water filters reduces fuel consumption by up to 50% on average, generating an income saving of 15%. Savings can be used for other essential needs, such as food and education.
- **Goal 3: Good health and well-being** – Efficient cookstoves release up to 70% less harmful substances compared to cooking on open fires. Through the use of efficient cookstoves, local communities experience substantial health improvements and the prevalence of lung disease is significantly reduced.
- **Goal 7: Affordable and clean energy** – The provision of more fuel efficient cookstoves reduces the energy consumption of households, helping poor families to save time and money and improve their health.
- **Goal 8: Decent work and economic growth** – The cookstoves project provides jobs for local people and ensures good working conditions, stimulating economic growth without generating negative environmental impacts.

- **Goal 13: Climate Action** – IPC's investment in the cookstoves project in Uganda supports climate change mitigation both by reducing greenhouse gas emissions and by educating local Ugandan communities on the positive environmental benefits of cookstoves and reduced fuel consumption.
- **Goal 15: Life on land** – By reducing the use of wood and charcoal by an average of 50%, the cookstoves project contributes to reducing deforestation and land degradation, while also supporting biodiversity conservation.

WASTE MANAGEMENT EFFORTS

Reductions in our paper use are driven through the continued implementation of a minimal printing policy and – unless there are good and pressing reasons – IPC encourages the printing of documents in black and white and on double-sided paper only. Our printing paper is 100% Forest Stewardship Council (FSC) and EU Ecolabel certified. In addition, continued provision of recycling facilities in our communal areas enables employees to recycle glass, cardboard and plastic.

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Project leaders
Pieter Reitsma, Manager Sustainability, IPC; Eva Wouters, Manager International Media & PR, IPC

Review team
Herbert Götz, Director Markets, IPC; Mark Harrison, Head of Markets, IPC; Thierry Dieu, Head of Communications, IPC; Indiah Miller, International Communications Specialist, IPC; Alice Newman, Analyst, Environment and Climate Change, Verisk Maplecroft; Richard Hewston, Principal Analyst, Environment and Climate Change, Verisk Maplecroft; Justus Koek, Sustainability Auditor, PwC

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International Post Corporation

Avenue du Bourget 44
1130 Brussels, Belgium

Tel +32 (0)2 724 72 11
Fax +32 (0)2 724 72 32

www.ipc.be
info@ipc.be