Institut belge des services postaux
et des télécommunications

# Communication du Conseil de l'IBPT du 19 septembre 2025 concernant l'étude relative à la durabilité des réseaux de télécommunications en Belgique

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# TABLE DES MATIÈRES

# 1. Contexte

1. Dans le cadre de ses compétences en tant que régulateur fédéral du marché des communications électroniques, l'IBPT a fait réaliser en 2025 une mise à jour de l'étude relative à la durabilité des réseaux de télécommunications en Belgique. L'étude a été effectuée par EY-Parthenon et donne un aperçu clair et objectif des performances environnementales, des objectifs et des initiatives des principaux acteurs des télécommunications sur le marché belge. La présente édition inclut tant les fournisseurs de réseaux fixes que mobiles actifs sur le marché belge, à savoir : *Telenet*, *Proximus*, *Orange*, *Digi*, *Eurofiber*, *Fiberklaar*, *BT et Verizon*[1].

2. Un certain nombre d'opérateurs contactés n'ont pas été inclus dans l'étude en raison d'une quantité insuffisante de données pour la Belgique, de la pertinence limitée ou parce qu'ils n'ont pas réagi à la demande d'informations :

   2.1. *Edpnet* a été exclu en raison de l'acquisition récente par *Citymesh*, faisant qu'il n'était pas possible de fournir des données en matière de durabilité distinctes pour la Belgique ;

   2.2. *Colt* disposait uniquement de chiffres de rapportage globaux, rendant impossible la collecte de données distinctes concernant la Belgique ;

   2.3. *Unifiber* ne dispose pas encore de données distinctes en matière de durabilité. Toutefois, en ce qui concerne les objectifs et les initiatives, l'on peut observer ceux des sociétés mères, à savoir Proximus et Eurofiber ;

   2.4. *euNetworks* n'a pas réagi à la demande d'informations ;

   2.5. Les fournisseurs de connectivité uniquement actifs dans le segment B2B tels que *Dstny* et *WAN Connect* ne sont pas pris en compte, conformément aux objectifs de cette étude ;

   2.6. De plus, les opérateurs de réseau mobile virtuel (MVNO) sont souvent repris intégralement dans les rapports du MNO dont ils utilisent le réseau mobile et n'ont par conséquent pas été interrogés séparément.

3. La présente étude s'inscrit dans le prolongement des éditions précédentes[2] et comprend, outre une évaluation quantitative des performances environnementales axée sur les émissions de $CO_2$, la consommation énergétique, les déchets et le recyclage, un examen qualitatif des initiatives des opérateurs en matière de durabilité. L'on a ainsi examiné de près les évolutions dans le temps et les différences entre les opérateurs, en accordant une attention particulière aux domaines principaux au sein du cadre européen en matière de durabilité (CSRD[3], SBTi[4]). Il convient toutefois de souligner que la comparabilité des données rapportées entre les opérateurs est limitée. Les différences concernant les

[1] Verizon n'a transmis que des donnés qualitatives, étant donné qu'elle ne pouvait pas fournir ou mettre à disposition de données spécifiques à la Belgique. En effet, ses rapports ESG sont basés sur des informations mondiales et régionales.

[2] Communication du 19 décembre 2023 concernant la durabilité des réseaux de télécommunications en Belgique | IBPT et Communication du 29 novembre 2022 concernant l'étude relative à la durabilité des réseaux de télécommunications en Belgique

[3] La CSRD (« Corporate Sustainability Reporting Directive ») est une directive européenne qui oblige les grandes entreprises à publier des informations transparentes concernant leur impact en matière de durabilité (performances environnementales, sociales et de gouvernance).

[4] La SBTi (Science Based Targets initiative) est une initiative internationale qui aide les entreprises à fixer et à valider des objectifs climatiques ambitieux et fondés scientifiquement.

pratiques de rapportage, le degré de détail (granularité) des données disponibles et les structures des groupes (internationaux) ont un impact sur l'exhaustivité, la portée et l'interprétation des chiffres.

4. À l'aide de la présente publication, l'IBPT souhaite favoriser la transparence et la comparabilité concernant les efforts en matière de durabilité au sein du secteur, conformément aux attentes grandissantes de la réglementation et de la société. Le présent rapport a pour objectif d'encourager le secteur à prendre des mesures supplémentaires en matière de performances environnementales mesurables et contrôlables, et de servir de base pour les futures initiatives politiques en matière de durabilité dans le secteur des télécommunications.

5. L'étude révèle que des améliorations sont nécessaires sur le plan de la qualité des données, de la granularité et de la normalisation des rapports. L'IBPT encourage tous les acteurs à poursuivre leurs efforts à cet effet, afin que la Belgique reste en phase avec les normes les plus élevées au niveau européen.

6. L'étude constitue pour l'IBPT une base essentielle pour déterminer, en concertation avec toutes les parties concernées, quelles actions supplémentaires en matière de durabilité sont recommandées au sein du secteur. En outre, l'étude sert de base pour des conseils politiques, un suivi annuel et le benchmarking, avec une attention particulière pour la poursuite de l'amélioration de la qualité des données, de la normalisation et de la transparence des rapports en matière de durabilité au sein du secteur belge des télécommunications.

## 2. Résultats

7. L'étude se consacre à la composante environnementale (le « E » d'ESG) et s'articule autour de trois thèmes principaux : **émissions de $CO_2$**, **consommation énergétique** et **déchets & recyclage**.

8. Des **informations quantitatives** (telles que les données de consommation, les émissions) et **qualitatives** (objectifs, initiatives) ont été demandées pour la période 2021-2024, en mettant l'accent sur les rapports européens/CSRD. Tous les opérateurs n'ont pas été repris : seules les entreprises avec des activités substantielles et des données pertinentes en Belgique (comme Proximus, Telenet, Orange, Digi, Eurofiber, Fiberklaar, BT et Verizon[5]) ; les autres (par ex. edpnet, Colt, Unifiber, euNetworks) ont été exclues en raison de données manquantes ou d'absence de réponse.

9. Les données ont été collectées en plusieurs étapes avec un suivi via des réunions bilatérales. Dans le cadre de l'étude, l'on a utilisé des données qui ont été directement fournies par les opérateurs, complétées par des recherches documentaires propres notamment sur la base de rapports annuels, rapports de durabilité et d'autres sources publiques. **Toutes les données ont été normalisées afin que les performances environnementales puissent être comparées via une échelle à 100 points sur la base de tendances nationales**, le benchmarking ayant lieu principalement dans le cadre belge.

10. La qualité et l'exhaustivité des données disponibles ont toutefois connu des **limites**. Ainsi, il n'était pas toujours possible d'obtenir des données complètes et suffisamment détaillées. Tant les groupes internationaux que nationaux peuvent rarement totalement isoler leurs données en matière de durabilité pour la Belgique. De plus, les analyses de matérialité changent avec le temps, faisant que certains indicateurs n'étaient pas disponibles ou comparables chaque année, et les fusions ou acquisitions ont parfois entraîné des trous ou sauts dans les rapports. Comme les données fournies et collectées n'ont pas été vérifiées séparément pour des raisons pratiques par l'IBPT ou son consultant, la fiabilité et la comparabilité des résultats dépendent fortement de la qualité et de la granularité de ces données.

11. Il ressort de l'étude que les opérateurs de télécommunications s'engagent clairement en faveur de la durabilité et ont déjà pris **diverses initiatives**, comme l'utilisation d'énergie renouvelable et l'électrification de leur flotte de véhicules. Toutefois, la **maturité sur le plan de la mesurabilité est limitée** : aucun opérateur n'a pu présenter d'indicateurs quantitatifs pour suivre objectivement l'effet des initiatives en matière de durabilité. Cela indique un besoin d'une plus grande professionnalisation. Actuellement, les performances environnementales ne sont mesurées et rapportées que de manière limitée et hétérogène.

### 2.1. Tendances sur le marché belge des télécommunications

12. Ces dernières années, le marché belge des télécommunications s'est caractérisé par un **mouvement de rattrapage au niveau du déploiement de la 5G et de la fibre optique** (« fiber-to-the-home »). Le déploiement avait au départ accusé un certain retard

[5] Verizon a uniquement transmis des données qualitatives étant donné qu'elle ne pouvait pas fournir ou mettre à disposition de données spécifiques à la Belgique.

en raison de la mise aux enchères tardive du spectre et des débats sur les champs électromagnétiques, d'une part, et de la bonne qualité du réseau de cuivre et coaxial existant, d'autre part. Toutefois, la couverture 5G a fortement augmenté en 2024 (97 %) et le déploiement de la fibre optique connaît une forte croissance bien que la connexion à la fibre reste encore en dessous de la moyenne européenne. Cela engendre une transition plus lente vers des technologies plus efficaces d'un point de vue énergétique.

13. La **consolidation du marché** et des **projets d'infrastructures partagées** sont des tendances marquantes, avec des collaborations comme MWingz (Proximus-Orange) et l'acquisition de VOO par Orange comme principaux exemples. Cela favorise les économies en termes de coûts et d'énergie ainsi qu'une utilisation plus efficace des réseaux. Parallèlement, des règles de durabilité européennes plus strictes telles que la CSRD et la taxonomie de l'UE imposent aux opérateurs une plus grande transparence et normalisation concernant la publication d'informations et les performances environnementales.

14. Bien que les consommateurs et la société mettent davantage l'accent sur la transparence, la pression concurrentielle continue de porter principalement sur les performances techniques telles que la vitesse et la couverture. L'**équilibre entre le progrès technique et l'impact environnemental constitue un défi permanent** au sein de la configuration actuelle du marché.

## 2.2. Analyse des activités économiques et des performances environnementales des industries belges

15. Entre 2021 et 2023, on constate en Belgique un net recul des activités de production industrielles dans pratiquement tous les secteurs. Bien que le volume de production total ait considérablement baissé, les chiffres indiquent que les performances environnementales qui y sont liées – comme la production de déchets, les émissions de $CO_2$ et la consommation énergétique – n'ont pas reculé au même rythme. Cela révèle des inefficacités structurelles en ce qui concerne les améliorations des performances environnementales en cas de baisse de l'activité économique.

16. La quantité totale de **déchets** générés par les divers secteurs a baissé d'environ la moitié de ce que l'on aurait pu attendre sur la base de la perte de volume de production. Cet écart suggère que **de nombreuses entreprises ne sont pas encore tout à fait capables de réduire de manière proportionnelle leurs volumes de déchets en cas de diminution de la production**. Ce constat est confirmé par une analyse plus poussée par secteur : là où le secteur des services d'utilité publique enregistre des progrès considérables en matière de réduction des déchets, le secteur industriel connaît même une augmentation du volume de déchets malgré une diminution de la production. De telles tendances indiquent des inefficacités cachées et laissent une certaine marge pour des efforts supplémentaires en matière de gestion des déchets.

17. Une évolution similaire est perceptible au niveau des **émissions de gaz à effet de serre**. Entre 2021 et 2023, l'indice de croissance de la production s'est contracté d'environ 14 %, mais les émissions de $CO_2$ n'ont diminué que d'environ 10 %. Cela signifie que **le rythme de la baisse des émissions est plus faible que celui de la diminution de la production**. Il s'agit à nouveau d'une indication d'inefficacités dans la conversion du ralentissement économique en meilleures performances environnementales. Le secteur des services d'utilité publique contribue le plus à la diminution des émissions, alors que le

secteur du transport connaît justement une faible augmentation au cours de la même période.

18. En ce qui concerne la **consommation énergétique**, on observe une tendance similaire : entre 2021 et 2023, la consommation énergétique des industries belges a baissé de plus de 10 %, alors que le volume de production a diminué d'environ 14 %. Cela signifie que les **économies d'énergie ne correspondent pas tout à fait à la baisse de la production**. Du point de vue des secteurs, presque toutes les branches d'activité montrent une diminution de la consommation énergétique, à l'exception du transport routier qui connaît une légère croissance. Cela indique une tendance structurelle vers une efficacité énergétique accrue, mais le plein potentiel de cette tendance n'est pas encore exploité.

19. **En résumé**, les secteurs belges affichent une tendance à la baisse en ce qui concerne le volume de production, la production de déchets, les émissions et la consommation énergétique. Toutefois, **les diminutions affichées par les indicateurs environnementaux sont à la traîne par rapport à la diminution de la production**. Cela souligne l'importance d'une analyse approfondie et de mesures complémentaires afin de lier davantage les prestations environnementales à la tendance à la baisse des activités de production. Outre les exemples positifs du secteur des services d'utilité publique, d'importantes optimisations sont possibles dans l'industrie et les transports, entre autres, en matière de gestion des déchets, de consommation d'énergie et de réduction des émissions.

## 2.3. Évaluation quantitative des prestations

20. Le Tableau 1 présente les performances environnementales des principaux opérateurs de télécommunications en Belgique, montrant par opérateur les principales évolutions en matière d'émissions de $CO_2$, de consommation énergétique et de déchets & recyclage. Pour des représentations plus approfondies et des graphiques détaillés de ces performances, veuillez consulter le rapport en annexe.

| Opérateur | Émissions de $CO_2$ | Consommation d'énergie | Déchets & recyclage |
|---|---|---|---|
| | Entre 2022 et 2024 :<br>• Scope 1 : -30 % (grâce à l'électrification du parc automobile)<br>• Scope 2 : pratiquement réduites à zéro (grâce à l'énergie renouvelable)<br>• Scope 3 : -13 % | Entre 2022 et 2024 :<br>• Augmentation grâce à l'électrification, à la croissance des données et aux acquisitions<br>• >80 % renouvelable | • 94 % recyclés ou réutilisés |
| proximus | Entre 2023 et 2024 :<br>• Scope 1 : -16 % grâce à l'écologisation de la flotte<br>• Scope 2 : totalement vert<br>• Scope 3 : +0,5 % (suite aux acquisitions)<br>• Moins de compensation, plus de décarbonisation | Entre 2021 et 2024<br>• Baisse continue<br>• 77 % renouvelable | • 98 % recyclés ou réutilisés |

| | | | |
|---|---|---|---|
| orange | Entre 2023 et 2024<br>• Scope 1 : stable<br>• Scope 2 : stable<br>• Scope 3 : +11,6 %<br>• Part VE et hybride augmente (26 % → 46 %) | Entre 2023 et 2024<br>• Forte augmentation (+9,2 %)<br>• >94 % renouvelable | • 90 % recyclés |
| DIGI | Uniquement données pour 2024 :<br>• Scope 1 = 39 % ; scope 2 = 3 % ; scope 3 = 58 %<br>• 10 % de la flotte électrique<br>• Augmentation attendue à la suite de la croissance du réseau et du détail | • 11 % renouvelable | • 8 % recyclés ou réutilisés |
| eurofiber | Entre 2022 et 2024 :<br>• Scope 1/2/3 = -22 % (répartition égale)<br>Entre 2021 et 2024 :<br>• Forte augmentation de la part de VE (16 %→68 %) | Entre 2021 et 2024 :<br>• Baisse<br>• 26 % renouvelable | • Pas de données distinctes sur les déchets (électroniques) pour la Belgique |
| Fiberklaar | • Pas de données $CO_2$ spécifiques<br>• Parc automobile 100 % électrique/hybride | • 100 % renouvelable | • Pas de chiffres pertinents (scope limité, phase de déploiement jeune) |
| BT | Entre 2021 et 2024 :<br>• Scope 1 = -45 %<br>• Scope 2 = -43 %<br>• Forte augmentation de la part de VE (5 %→53 %) | Entre 2021 et 2024 :<br>• Forte baisse<br>• 100 % renouvelable | • 72 % recyclés |

*Tableau 1. Aperçu des émissions de $CO_2$, de la consommation énergétique et de la gestion des déchets des opérateurs de télécommunications belges (2024)[6].*

## 2.4. Évaluation qualitative des objectifs et des initiatives

21. **La durabilité est aujourd'hui ancrée structurellement dans la stratégie d'entreprise des opérateurs de télécommunications**. Ils fixent des objectifs net zéro (souvent à l'horizon 2040/2050) plus stricts, souvent scientifiquement fondés (SBTi), accélèrent l'électrification des flottes de véhicules, investissent dans l'achat d'énergie verte et misent davantage sur des modèles commerciaux circulaires (reconditionnement, leasing, retour des appareils).

22. Malgré ces ambitions et les nombreuses initiatives concrètes, le professionnalisme du rapportage et le suivi des KPI concrets (tant sur le plan environnemental que financier) restent limités. **De nombreux opérateurs ne parviennent pas encore à transposer systématiquement leurs initiatives en indicateurs de performance mesurables et objectifs ou à fixer les évolutions de manière robuste sur plusieurs années**. Des mesures supplémentaires sont principalement nécessaires concernant les émissions du Scope 3, les chaînes de valeur circulaires et l'application de KPI de détail dans les structures de rapportage. Il reste donc difficile de quantifier en détail l'impact réel des

[6] Disclaimer : la comparabilité des données rapportées entre les opérateurs est limitée. Les différences concernant les pratiques de rapportage, le degré de détail (granularité) des données disponibles et les structures des groupes (internationaux) ont un impact sur l'exhaustivité, la portée et l'interprétation des chiffres.

mesures de durabilité et de les comparer à des références externes. De nouvelles obligations européennes en matière de publication des informations et une professionnalisation accrue des processus internes seront essentielles pour progresser dans ce domaine au cours des prochaines années.

23. Ces efforts seront évalués ci-dessous selon les trois thèmes principaux : émissions de $CO_2$, consommation énergétique et déchets & recyclage.

### 2.4.1. Évaluation qualitative concernant les émissions de $CO_2$

24. Le Tableau 2 présente un aperçu par opérateur de télécommunications des objectifs de durabilité et des initiatives concernant les **émissions de $CO_2$**. Pour des informations plus détaillées, veuillez vous référer au rapport en annexe.

| Opérateur | Objectif | Initiatives |
|---|---|---|
| | • Net zéro en 2040<br>• Scope 1&2 : -70 % en 2030 (vs. 2022)<br>• Scope 3 : -55 % en 2040 (vs. 2022) | • Investir dans des programmes de compensation carbone<br>• Déploiement durable de la 5G<br>• Électrification du parc automobile (100 % électrique) |
| proximus | • Émissions de gaz à effet de serre net zéro sur l'ensemble de la chaîne de valeur pour 2040<br>• Scope 1&2 : -66 % en 2030 (vs. 2020)<br>• Scope 3 : -42 % en 2030 (vs. 2020) | • Réduire au moins 90 % des émissions totales directes et indirectes<br>• Réduire le $CO_2$ pour les émissions restantes (<10 %)<br>• Décarbonisation du parc automobile et des bâtiments<br>• Implication de la chaîne d'approvisionnement |
| orange | • -45 % d'émissions de gaz à effet de serre en 2030 (vs. 2020)<br>• Réduire scope 1&2 | • Électrification du parc automobile (84 % pour 2030)<br>• Étude de faisabilité pour les véhicules restants |
| DIGI | • Réduire les émissions de $CO_2$ (et la consommation d'énergie) grâce à l'achat d'énergie durable, à la modernisation des infrastructures et à une plus grande efficacité énergétique. | • Politique de télétravail (2 jours par semaine)<br>• Formation en écoconduite pour les collaborateurs du service extérieur<br>• Bureaux près d'une gare<br>• Composants actifs économes en énergie |
| eurofiber | • « Race-to-zero »<br>• Réduire scope 1&2 d'ici 2030<br>• Réduire scope 3 d'ici 2040 | • Indicateurs de transition circulaire<br>• Électrification de la flotte de véhicules<br>• Encourager les fournisseurs à rendre les produits plus durables et plus circulaires<br>• Favoriser le train à la place de l'avion pour les voyages d'affaires<br>• Analyses du cycle de vie lors de l'achat |
| Fiberklaar | / | / |

| | | |
|---|---|---|
| BT | • Intensité en carbone : -87 % d'ici 2031 (vs. exercice 2017)<br>• Entreprise net zéro scope 1&2 en 2031<br>• Scope 3 (approvisionnement) : -42 % en 2031 (vs. exercice 2017)<br>• Scope 3 (approvisionnement & clients) : net zéro en 2041 | • Électrification de la flotte de véhicules<br>• Réduire l'empreinte écologique du réseau |
| verizon | • Émissions opérationnelles net zéro pour 2035<br>• Scope 1&2 : -53 % en 2030 (vs. 2019)<br>• Scope 3 : -40 % en 2030 (vs. 2019) | / |

*Tableau 2. Aperçu des objectifs de durabilité et des initiatives concernant les émissions de CO2 par opérateur de télécommunications (2024)[7].*

### 2.4.2. Évaluation qualitative concernant la consommation d'énergie

25. Le Tableau 3 présente un aperçu par opérateur de télécommunications des objectifs de durabilité et des initiatives concernant la **consommation d'énergie**. Pour des informations plus détaillées, veuillez vous référer au rapport en annexe.

| Opérateur | Objectif | Initiatives |
|---|---|---|
| | • 100 % d'électricité renouvelable d'ici 2030 (pour les propres contrats)<br>• Améliorer l'efficacité énergétique | • Centres de données : PUE ≤ 1,5<br>• Accélérer le remplacement d'anciens appareils de clients (réduction de consommation de 80 %) |
| proximus | • 100 % d'électricité renouvelable au niveau du groupe ; zéro émission du scope 2<br>• Améliorer l'efficacité énergétique de manière structurelle au sein du réseau, des bâtiments et des centres de données | • Étudier le potentiel de la flexibilité de la demande et stockage de l'énergie<br>• Abandon progressif des anciennes technologies (par ex. cuivre)<br>• Modernisation du réseau (par ex. déploiement de la fibre) ou utilisation partagée |
| orange | • 100 % d'électricité renouvelable d'ici 2030 | • Objectif d'efficacité atteint, l'électricité provient déjà totalement de sources renouvelables<br>• Augmentation de la part d'électricité renouvelable aux lieux détenus par des tiers (location) |
| DIGI[8] | • Réduire la consommation énergétique (et les émissions de $CO_2$) grâce à l'achat d'énergie durable, à la modernisation des infrastructures et à une plus grande efficacité énergétique. | • Politique de télétravail (2 jours par semaine)<br>• Formation en écoconduite pour les collaborateurs du service extérieur<br>• Bureaux près d'une gare<br>• Composants actifs économes en énergie |

[7] Disclaimer : la comparabilité des données rapportées entre les opérateurs est limitée. Les différences concernant les pratiques de rapportage, le degré de détail (granularité) des données disponibles et les structures des groupes (internationaux) ont un impact sur l'exhaustivité, la portée et l'interprétation des données.
[8] Digi Belgium développe une stratégie de durabilité et une structure de gouvernance ESG. Des indicateurs clés de performance environnementaux (KPI) seront intégrés dans le cadre stratégique et surveillés pour une amélioration continue.

| | | |
|---|---|---|
| eurofiber | • 100 % d'électricité verte | • Utilisation de 100 % d'électricité verte pour les bureaux, centres de données et installations locales |
| Fiberklaar | / | / |
| BT | • Augmentation de l'efficacité énergétique | • Diminution de la consommation énergétique |
| verizon | • 50 % d'électricité renouvelable en 2025<br>• 100 % d'électricité renouvelable d'ici 2030 | / |

*Tableau 3. Aperçu des objectifs de durabilité et des initiatives concernant la consommation énergétique par opérateur de télécommunications (2024).*

### 2.4.3. Évaluation qualitative concernant les déchets & le recyclage

26. Le Tableau 4 présente un aperçu par opérateur de télécommunications des objectifs de durabilité et des initiatives concernant les **déchets & le recyclage**. Pour des informations plus détaillées, veuillez vous référer au rapport en annexe.

| Opérateur | Objectif | Initiatives |
|---|---|---|
| | • Augmentation de l'économie circulaire<br>• Utilisation d'emballages écologiques | • Recyclage et reconditionnement CPE (modems & décodeurs)<br>• Recyclage et réutilisation du matériel de tiers (tablettes, GSM et équipement IT)<br>• Transition vers des emballages intelligents et écologiques |
| proximus | • Plan pour la circularité d'ici 2030<br>• Utilisation d'emballages écologiques | • Prolongation de la durée de vie des appareils via l'écoconception, le reconditionnement, la réutilisation et le recyclage<br>• Recyclage de l'ancien réseau de cuivre<br>• Modèles de leasing pour les clients professionnels<br>• 20 % de plastique en moins dans les emballages et choix de matériaux recyclés |
| orange | • Augmentation de l'économie circulaire | • Programme OSCAR pour les équipements IT et de réseau[9]<br>• Programme RE pour les appareils mobiles et fixes[10] |
| DIGI[11] | • Extension des initiatives pour la récupération et le recyclage de déchets électroniques d'équipements de clients | • Pratiques d'économie circulaire, comme le reconditionnement et la réutilisation d'appareils |

[9] Dans le cadre de cette initiative, les appareils désuets ou anciens (comme les routeurs, switches et serveurs) sont réutilisés.
[10] Cette initiative se concentre sur la prolongation de la durée de vie des smartphones et des appareils fixes via la réparation, l'achat d'appareils reconditionnés, la reprise et le recyclage.
[11] Digi Belgium développe une stratégie de durabilité et une structure de gouvernance ESG. Indicateurs clés de performance environnementaux (KPI)

| | | |
|---|---|---|
| eurofiber | / | / |
| Fiberklaar | / | / |
| BT | • Augmentation de l'économie circulaire | • Réutilisation de matériaux d'emballage<br>• Utilisation de mugs au lieu de gobelets en plastique/papier |
| verizon | • Augmentation de l'économie circulaire | • Éviter 100 % de déchets électroniques via la réutilisation/le recyclage<br>• Au moins 50 % de papier avec 10 % de fibres recyclées/PCW |

*Tableau 4. Aperçu des objectifs de durabilité et des initiatives concernant les déchets & le recyclage par opérateur de télécommunications (2024)[12].*

## 2.5. Recommandations

27. L'étude formule des recommandations axées sur l'introduction d'un cadre unique pour le rapportage et les mesures concernant la durabilité dans le secteur des télécommunications, en accordant en outre de l'attention à l'information des consommateurs concernant les performances environnementales. Les recommandations par groupe cible sont présentées ci-dessous point par point.

28. Concernant les **opérateurs**, le rapport conseille de formuler des objectifs clairs et d'utiliser des normes internationales lorsqu'ils mesurent ou publient des informations sur les performances environnementales. Cela améliorera la crédibilité des résultats rapportés ainsi que la transparence. Le rapport souligne l'importance d'appliquer un cadre de rapportage cohérent et d'introduire régulièrement des contrôles et vérifications, pour renforcer la confiance des parties prenantes. En outre, le rapport conseille d'accorder une attention supplémentaire aux émissions du scope 3 en collaborant avec toutes les parties de la chaîne de valeur, dans le but de réduire plus efficacement les émissions de $CO_2$ totales. De plus, le rapport souligne l'importance d'investir dans des sources d'énergie renouvelables et de fixer des objectifs concrets à cet effet, contribuant ainsi au développement durable du secteur. Il est également recommandé d'informer activement les consommateurs concernant les performances environnementales des différentes solutions, afin qu'ils puissent effectuer un choix éclairé.

29. Concernant les **régulateurs**, le rapport recommande de suivre les normes les plus actuelles pour le rapportage en matière de durabilité, comme le futur code de conduite de l'UE pour la durabilité des réseaux de télécommunications. Le rapport recommande de fixer des KPI mesurables en collaboration avec les opérateurs, afin de pouvoir évaluer et suivre de manière cohérente les performances environnementales. Il propose également de promouvoir la durabilité et la transparence en publiant des informations sur les principales mesures environnementales et en établissant chaque année une étude concernant la durabilité. Cela permet de mieux comprendre les performances du secteur, d'identifier les points à améliorer et de mettre en avant les leaders. Enfin, le rapport conseille de développer des outils interactifs permettant aux consommateurs de comparer facilement

[12] Disclaimer : la comparabilité des données rapportées entre les opérateurs est limitée. Les différences concernant les pratiques de rapportage, le degré de détail (granularité) des données disponibles et les structures des groupes (internationaux) ont un impact sur l'exhaustivité, la portée et l'interprétation des données.

les performances environnementales des différents fournisseurs, pour ainsi encourager les choix durables.

30. Concernant les **consommateurs**, le rapport souligne l'importance de ne pas uniquement faire attention aux performances techniques lors du choix d'un fournisseur de télécommunications, mais aussi de tenir compte des performances environnementales. Les consommateurs peuvent ainsi encourager le marché à investir davantage dans les options durables.

31. Les recommandations formulées dans le rapport visent à soutenir une amélioration de la professionnalisation de la politique de durabilité des opérateurs et contribuent au développement d'un cadre de la durabilité à l'épreuve du temps et transparent pour le secteur belge des télécommunications.

## 3. Conclusion

32. Le secteur belge des télécommunications fait preuve d'un engagement fort en faveur du développement durable, avec des initiatives telles que l'utilisation d'énergies renouvelables et l'électrification des flottes de véhicules. Malgré ces efforts, il manque souvent des indicateurs de performance mesurables et des rapports standardisés, ce qui explique que la maturité de la gestion environnementale reste faible.

33. Les émissions du scope 3, qui englobent l'ensemble de la chaîne de valeur constituent le défi principal et nécessitent la collaboration de toutes les parties prenantes. Les performances varient fortement selon l'opérateur : certains parviennent à améliorer leurs émissions de $CO_2$ et leur mix énergétique, tandis que d'autres affichent au contraire une augmentation de leurs émissions en raison d'acquisitions ou de changements méthodologiques. Les tendances sur le marché comme le retard du déploiement de la 5G et de la fibre optique, ainsi que la forte concurrence technique, influencent également les progrès en matière de durabilité. Les consommateurs sont principalement intéressés par les performances techniques, ce qui rend difficile la promotion à grande échelle d'alternatives respectueuses de l'environnement.

34. Le secteur se trouve dans une phase de transition vers plus de maturité en matière de gestion de la durabilité. Des normes claires et une coopération plus active entre toutes les parties concernées sont nécessaires pour atteindre de nouveaux gains environnementaux.

Bernardo Herman
Membre du Conseil

Peggy Valcke
Membre du Conseil

Stefaan Vyverman
Membre du Conseil

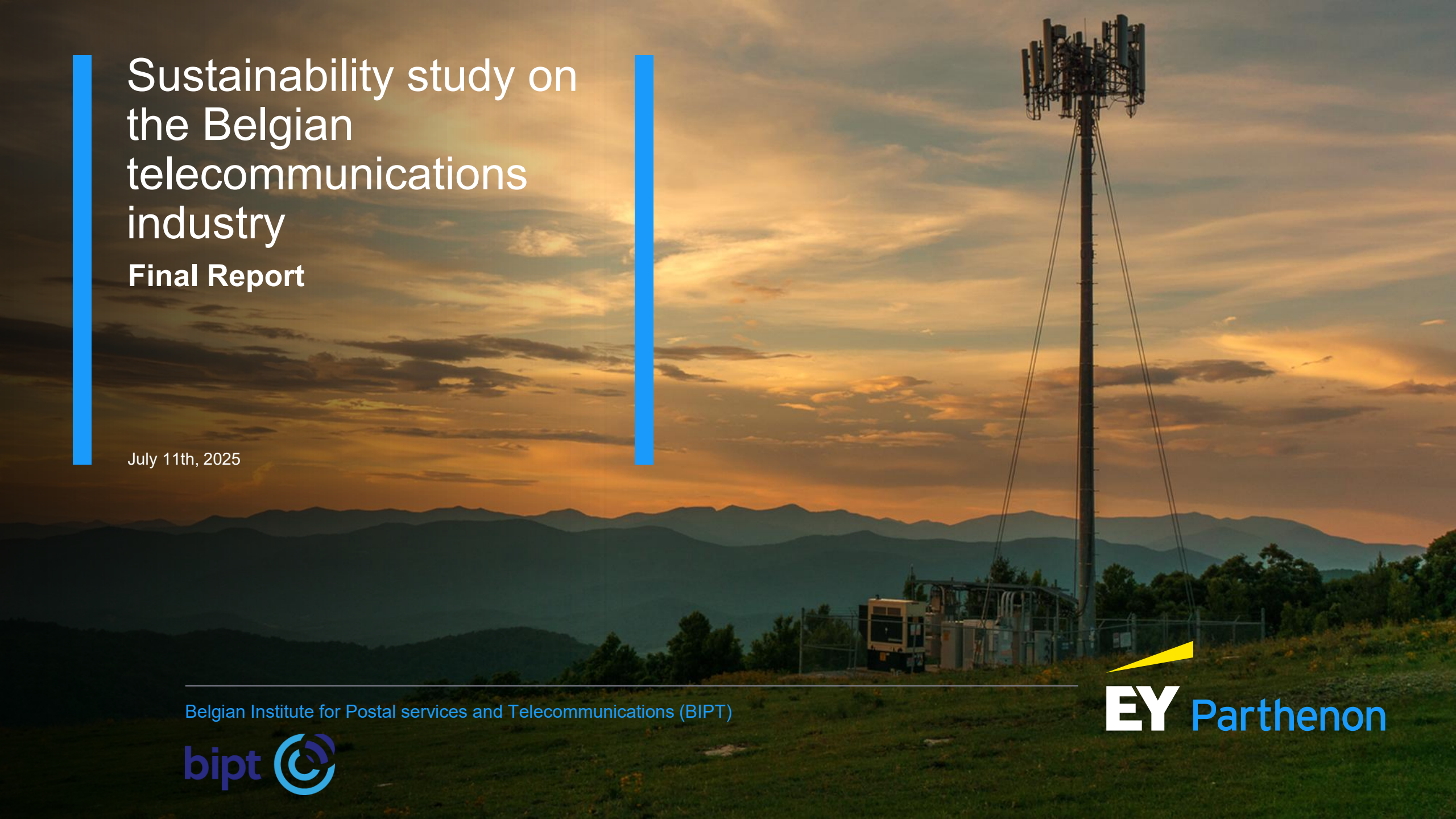
Michel Van Bellinghen
Président du Conseil

# Annexe 1. Rapport descriptif

# Sustainability study on the Belgian telecommunications industry

## Final Report

July 11th, 2025



Belgian Institute for Postal services and Telecommunications (BIPT)

bipt

EY Parthenon

# Table of content





EY Parthenon

# Disclaimer

- This study has been commissioned by the Belgian Institute of Postal and Telecommunications Services (BIPT) to conduct a comprehensive analysis of the sustainability performance of the Belgian telecommunications market. The primary objective of this study is to measure and understand the environmental performance of telecommunications players over time. EY-Parthenon (EYP) has been engaged to carry out this analysis on behalf of the BIPT, with the mission of providing an objective and factual overview of the environmental performance of telecommunications operators in Belgium.

- In pursuit of this objective, EYP has ensured that the findings presented in this report are based solely on factual data and a neutral standpoint. To enhance the understanding of operators' performance, EYP, in collaboration with the BIPT, conducted follow-up interviews with operators to gather qualitative insights into the factors driving their performance. It is important to note that EYP's analysis is based on the data provided by the operators, and EYP was not responsible for independently auditing this data.

- EYP's responsibilities are strictly limited to the scope of work agreed upon with the BIPT and do not extend beyond the preparation of this report. Consequently, EYP shall not be held liable for any decisions, actions, or consequences arising from the use of the information contained in this report by the BIPT or any third parties. The findings and conclusions presented herein are intended solely for the purpose of informing the BIPT and relevant stakeholders about the environmental performance, objectives and initiatives of the telecommunications sector in Belgium.

EY Parthenon x bipt

# Key recommendations emphasize a consistent use of environmental frameworks and the importance of educating consumers about environmental value of solutions

## Key observations

- Interactions with market players have demonstrated a **strong commitment and motivation** to improve their environmental performance, along with **consciousness towards sustainability** that is embedded in their strategies. Most operators have already taken **tangible steps with concrete initiatives** to enhance their sustainability performance (e.g., using renewable energy as a preferred source of energy consumption, which positively impacts Scope 2 emissions, electrifying vehicle fleets to reduce Scope 1 emissions, etc.).
- Despite this strong sense of motivation towards sustainability, it became apparent that **the maturity level is relatively low**, as no operators were able to provide **quantitative metrics** and key performance indicators on how their initiatives are measured in terms of environmental and financial returns on investment. This has been quite surprising as only rigorous tracking of initiatives can ensure they deliver the expected results and justify the investments made.
- While gathering information on the environmental performance of telco players, it became clear that **market players are struggling with emerging standards for sustainability measurement and reporting**. Some operators faced challenges in retrieving the required data to provide values for different years associated with specific KPIs, indicating that environmental measurement and reporting are still relatively new to most market players and that their maturity is not yet fully developed.
- As new regulations evolve and **consistent sustainability reporting standards** (e.g., CSRD and upcoming EU Code of Conduct for the sustainability of telecom networks) are introduced from a regulatory perspective, this will **facilitate future measurement and reporting on environmental performance by providing a continuous and consistent framework** and a set of KPIs to adhere to. Another observation from engaging with market players is the tendency of consumers to focus too much on comparing the technical performance of offerings, which pressures operators to compete on a technical basis rather than opting for sometimes more environmentally friendly alternatives.

## Recommendations

- **For operators**:
  - Establish clear environmental performance targets and utilize **specific and consistent metrics to improve the maturity of sustainability reporting and measurement** of initiatives. Adopting recognized frameworks like the SBTI will enhance the credibility of environmental performance and efficiency of initiatives.
  - Implementing a **standardized framework for environmental reporting**, such as the CSRD standards, is essential. Regular reporting cycles and periodic audits ensure compliance, accuracy, and build stakeholder trust through consistent and continuous assessments of environmental performance.
  - Given that Scope 3 emissions constitute the largest share of total CO2e emissions for all operators, **engaging stakeholders across the entire value chain** is crucial for collectively reducing environmental impact and emissions beyond individual operators' direct sphere of control
  - Continuing investments in renewable energy sources is vital for minimizing environmental damage. Setting **ambitious targets for renewable energy usage** and exploring partnerships with renewable energy providers can further enhance sustainability performance.
  - **Educating consumers** about the technical and environmental performance of offerings is essential to empower consumers to make informed decisions
- **For regulators**:
  - Collaborate with operators to jointly define KPIs for consistent assessment of environmental performance over time, ideally aligned with the latest sustainability reporting standards like CSRD.
  - Continue to promote sustainability by making it mandatory for operators to report annually on various environmental performance metrics and publicly share results, thereby holding them accountable for their environmental impact and educating consumers about the performance of their network providers.

# 01

## Scope

# 1.1.

## Context and objectives

# Context and objectives of the study

## Introduction, objectives, and scope

### Context

The Belgian Institute for Postal Services and Telecommunications (BIPT) is the federal regulator responsible for overseeing the electronic communications market, the postal sector, the electromagnetic radio frequency spectrum, as well as audiovisual media services and video-sharing platforms in the Brussels-Capital Region.

In recent years, sustainability has become an increasingly important priority, driven not only by growing public awareness but also by evolving legislative frameworks at both national and international levels.

In this context, BIPT published studies in 2022 and 2023 examining the sustainability of telecommunications networks in Belgium. Building on those efforts, BIPT aims in 2024 to gain a more comprehensive understanding of the various dimensions in which telecom operators are - or are not - implementing sustainable practices.

### Objectives

The objective of this new study is twofold:

1. To quantitatively map the sustainability performance of telecom networks in Belgium.
2. To offer a qualitative perspective by cataloging the sustainability initiatives undertaken across the Belgian telecom sector.

Ultimately, the report aims to formulate concrete recommendations for both operators and consumers to help advance sustainability across the industry.

### Initial study scope vs ultimate scope

As elaborated in the methodology section, the initial scope of this study included five performance metrics ($CO_2$ emissions, energy consumption, waste & recycling, water consumption, and land use) within the environmental dimension of the ESG framework. However, this had to be adjusted to focus on only three metrics ($CO_2$ emissions, energy consumption, and waste & recycling) due to data availability concerns, resulting in a clear distinction between "must-have" and "nice-to-have" data points.
Consequently, the analysis of environmental performance in this report is limited to the final scope defined in collaboration with BIPT and the operators.

# 1.2.

# Methodology

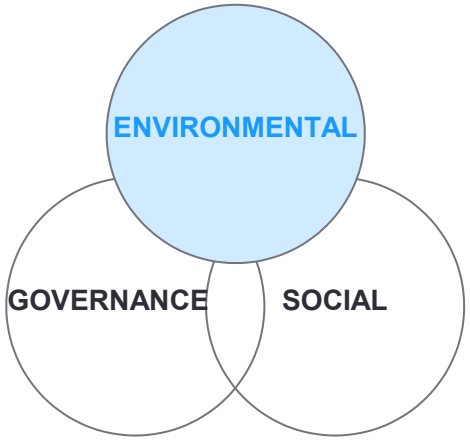
# To evaluate sustainability in the telecom industry, we redefined the scope of the ESG framework and concentrated on the most relevant environmental components

## Environmental study scope

### "E" of ESG as study scope

To assess sustainability in a structured and comparable manner, the **ESG framework** was adopted as the guiding structure for this study. This choice enables alignment with previous sustainability assessments conducted by BIPT and ensures continuity over time. **Within the ESG framework, the focus was placed specifically on the Environmental (E) dimension**.

**Five environmental themes** were initially selected for **in-depth analysis**, based on their relevance and the fact that similar thematic foundations are commonly applied in other international sustainability reports. This approach supports both internal consistency and external comparability.




### Refinement of environmental scope[1]

"Must have"

**CO2 emissions**

The telecom sector aims to **reduce CO2 emissions** by optimizing network operations, using energy-efficient technologies, and offsetting emissions through climate projects, thereby contributing to the fight against climate change

"Must have"

**Energy consumption**

Telecom companies **consume significant amounts of energy** to keep data centers, network equipment and transmission towers running, with a focus on increasing energy efficiency & integrating renewable energy sources to reduce their environmental footprint.

"Must have"

**Waste and Recycling**

Telecom companies are **responsible for managing electronic waste**, such as discarded mobile devices and network equipment, and are committed to recycling programs and making their products and materials circular to reduce waste and reuse resources.

"Nice to have"

**Water consumption**

Although **water use is less prominent** in the telecom sector, it is still used for cooling systems in data centers and offices, with companies striving to reduce water consumption and implement water-saving technologies.

"Nice to have"

**Land use**

The **telecom sector requires infrastructure** such as transmission towers, data centers and cable networks, which impacts land use and the surrounding environment. Companies strive to minimize their physical footprint by making more efficient use of existing sites, sharing infrastructure and innovating with solutions such as underground or integrated networks.

1. The rationale behind the "must-have" and "nice-to-have" categories, along with specific data points, is explained on page 11. As outlined in the overview of the following slides, the environmental scope had to be adjusted during the study to address concerns regarding data availability

# Based on these 5 environmental themes, an exhaustive information request was drafted, which was shortened throughout the course of the study

## Overview of the information request

### Original extent of the information request

This study aimed to do a comparative analysis of telecom operators, recognizing that similar foundational metrics and frameworks are commonly employed across various international sustainability reports. The objective was to develop a robust framework that not only tracks sustainability initiatives but also supports the identification and definition of the appropriate steps required to achieve established environmental targets. To this end, a comprehensive **Information Request Letter (IRL)** was designed, **incorporating both quantitative and qualitative** elements to ensure a holistic understanding of the sustainability landscape within the sector.

The data collection initially spanned a timeframe from 2018 to 2024, with a granular approach to data segmentation. For example, in the case of access networks, the analysis did not only distinguish between mobile and fixed networks but also further disaggregated mobile technologies by generation, differentiating between 2G/3G/4G and 5G. As provided in the overview on the right, the level of granularity had however to be adapted due to data availability issues. The overall structure of the data request was initially organized as follows:

| | | |
|---|---|---|
| 1 **Quantitative data** | Company-specific information | *Key metrics such as revenue, network capacity and length of cable infrastructure* |
| | Environmental data | *1. $CO_2$ emissions*<br>*2. Energy consumption*<br>*3. Waste and recycling*<br>*4. Water consumption*<br>*5. Land use* |
| 2 **Qualitative data** | Firmographics | *Detailing the type of network operator, legal affiliations with other operators, and related organizational characteristics* |
| | Environmental objectives | *Specific targets and ambitions set by each company per environmental theme* |
| | Deep dives initiatives | *Overview of the concrete actions undertaken to meet the stated sustainability goals* |
| | Governance | *Insight into how sustainability performance is monitored, managed and reported within each organization* |

### Reshaped information request

When the initial information request was distributed, it became evident that **telecom operators** were often **overwhelmed by the rapidly evolving sustainability regulations**. Many lacked sufficient in-house capabilities to fully respond, and reporting practices varied significantly across organizations. Despite this limited maturity in data availability and standardized reporting, there was a notable willingness among operators to contribute to this study.

Following several collaborative meetings, a consensus was reached to adjust the level of data granularity and narrow the scope to ensure practicality and **alignment with the Corporate Sustainability Reporting Directive (CSRD) requirements**. This led to a clear differentiation between “must-have” topics—mandatory fields necessary for this study—and “nice-to-have” topics, which were optional and not strictly required to be completed.

Key scope adaptations included:

- **Reference framework:** The study was anchored in the CSRD reporting standards
- **Data timeframe:** Focused on the period from 2021 to 2024
- **Granularity:** For example, distinguishing between mobile and fixed networks was mandatory, whereas further subdivision of mobile technologies into 2G/3G/4G vs. 5G was not required

A detailed overview of the finalized information request is provided in the appendix.

# After identifying shared network infrastructure and establishing the best method to prevent double counting through segmentation, an IRL was sent to a selected group of operators

## Operators in scope

| network infrastructure \ Operators with spectrum | | proximus | orange | | Other operators |
|---|---|---|---|---|---|
| FIXED NETWORKS | Own legal entity | unifiber, edpnet | | wyre | eurofiber, DIGI, BT, colt, verizon, euNetworks |
| | Part of a group | Fiberklaar, MOBILE VIKINGS | voo | BASE | |
| MOBILE NETWORKS | Own legal entity | DIGI | | | CITYMESH |
| | Part of a group | MOBILE VIKINGS | voo, hey! | BASE, TADAAM | |

### Who is included in the study

The objective of this study is to assess the sustainability performance of the entire Belgian telecom sector, including both mobile and fixed network operators. The primary focus is on operators that are actively providing services within Belgium.

**Several operators were excluded** from the scope for the following reasons:

- **EDPnet**: Recently acquired by Citymesh; no meaningful standalone data is available, and they have therefore been excluded
- **Colt**: Could not provide Belgium-specific data; only global figures were available and thus not included in the analysis
- **euNetworks**: Did not respond to the request for information and are therefore excluded.

In calculating emissions of Belgian operators, we considered that some operators share infrastructure with major players and that some MVNOs (Mobile Virtual Network Operators) are integrated into the reporting of their parent companies.

The scope excludes B2B-only connectivity providers such as Dstny and WAN Connect, as they fall outside the objectives of this study.

Each operator provided data to the extent possible, based on the scope of CSRD and related frameworks. A detailed overview of which operator submitted what data is available in the appendix.

# Data gathering process involved multiple follow-ups to address missing information, after which the data was cleaned and used to develop a sustainability dashboard and report

## Data gathering and analyses

### Data gathering process

The **data collection process spanned the period from April to June** and involved multiple follow-ups and meetings to clarify submissions and address information gaps. Key milestones in this process were as follows:

**April**

- **April 18th:** The initial data request was issued by EY-Parthenon (EY-P) in collaboration with the BIPT, including a formal cover letter from the BIPT addressed to the operators. The deadline for submission was set for May 2nd
- **April 23rd:** As no confirmations of receipt had been received by that date, a follow-up email was sent to the relevant stakeholders
- **April 30th:** A coordination meeting was held with Proximus, Telenet, and Orange to simplify the data input template (IRL). Following this, EY-P circulated a revised version of the IRL along with an updated submission deadline of May 9th

**May**

- **May:** Additional meetings were organized between the BIPT and several operators to discuss missing data points and incomplete submissions in the IRL.

**June**

- **June 18th:** During the initial analysis phase, the BIPT and EY-P identified a number of data points and insights requiring further clarification. To facilitate this, meetings were scheduled between June 19th and July 3rd. It was communicated that this would be the final opportunity for discussion prior to the publication of the final report.

Furthermore, it was noted that several questions regarding the rationale behind certain data entries had arisen during the collection process. These uncertainties contributed to significant gaps in the submitted data. To address this structurally and improve future data requests, the BIPT and EY-P announced plans to hold a dedicated session with each operator in September 2025. Operators were asked to provide their general availability in advance to facilitate scheduling.

### Data analysis

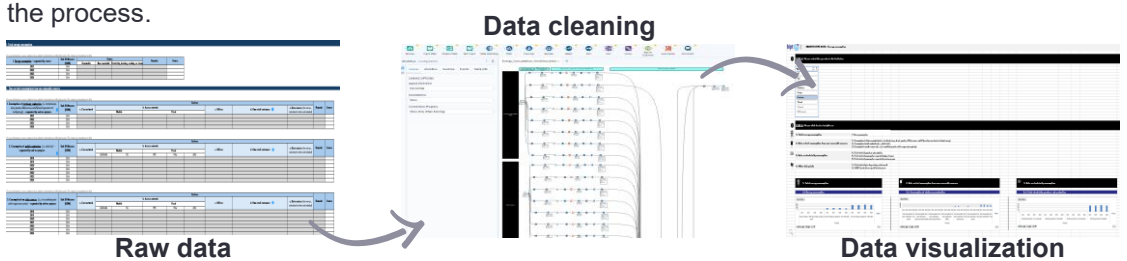
#### Datapoints as point for normalizations

To enable a meaningful comparison of sustainability performance across operators, a set of **specific data points was initially requested to serve as the basis for normalization**. However, due to incomplete submissions from several operators, direct cross-operator comparison was ultimately deemed unfeasible.

To still provide an evaluative perspective, EY-P and the BIPT adopted an alternative approach: leveraging publicly available sustainability trends and sector-wide benchmarks within Belgium. A normalization method using a 100-point scale[1] was applied to assess operator performance relative to broader national trends. This approach allowed for indicative conclusions to be drawn, despite data limitations.

#### Data analysis process

The data analysis process began with the transformation of raw input files (IRL) into a dashboard-ready format using Microsoft Excel. The goal was to model and monitor sustainability performance in a consistent and transparent manner. Alteryx was used to clean, structure, and transform the submitted data, ensuring traceability and consistency throughout the process.




This workflow not only enabled visual monitoring of sustainability efforts through a dedicated dashboard but was also designed with repeatability in mind. By embedding historical data directly into the analytical tool, future iterations of the analysis will benefit from improved comparability over time and a reduced need for rework.

1. The approach used to derive a 100-point scale involves dividing each value associated with a specific year by the baseline year for every data category and multiplying that ratio by 100. This allows for an evaluation of evolution, with 100 serving as the consistent value for the baseline year.

# Limitations in data granularity, relevance and consistency, compounded by materiality shifts and M&A activity, affected comparability across operators and over time

Limitations

**NO RESEARCH WITHOUT LIMITATIONS**

## Challenges in data availability

Despite clear guidelines and multiple follow-ups, **obtaining the full dataset proved difficult**. Some requested data points were not equally relevant for all operators, and in certain cases, the required level of granularity could not be provided. This posed significant challenges in enabling meaningful comparisons between operators

## Lack of country-specific data

Several operators that are part of larger **international groups were unable to isolate sustainability data specific to Belgium**. Their internal reporting structures typically aggregate data at a regional or global level, making localized reporting difficult or, in some cases, impossible

## Impact of materiality assessments

Double materiality assessments—core to sustainability reporting—evolve over time, causing **certain topics to become material while others are deprioritized**. As a result, some indicators measured in previous years were no longer tracked in the current reporting cycle, limiting the ability to conduct year-over-year comparisons across all topics

## Data disruptions from M&A

**Mergers and acquisitions introduce structural changes that impact data continuity**. In many cases, post-M&A consolidation efforts result in shifts in reporting baselines, especially when historical data from one of the merging parties is unavailable. This creates inconsistencies and discontinuities—such as sudden jumps or gaps—in the dataset used for analysis

02

# Market analysis

# 2.1.

# Trends in the Belgian telecommunications market

# The Belgian telecommunications market is shaped by various trends that can influence the business and environmental performance of operators

General overview of all trends[1]

### Ongoing infrastructure deployment

Belgium has faced **delays in both 5G and fiber-to-the-home (FTTH) rollout** due to complex permitting, regional fragmentation, and EMF-related public debates. Fiber deployment started later, given the strong legacy copper and coax networks, while 5G was further delayed by a late spectrum auction

### Market consolidation and infrastructure sharing

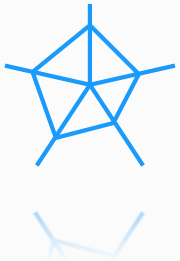
The Belgian market has seen increasing **infrastructure sharing agreements** and **strategic consolidation** efforts

### Regulatory directives towards sustainability

New sustainability directives, such as the **Corporate Sustainability Reporting Directive (CSRD)** and the new **EU Taxonomy rules and Code of Conduct**, impose requirements on market players to measure and disclose their environmental performance

### Stakeholder expectations towards businesses

Despite reduced resonance in today's society, there are still strong **consumer and societal expectations** for business players to improve their environmental performance and assess the impact of their activities on the planet



### Aligning business- and environmental performance

Market players in the telecommunications landscape sometimes need to make a **trade-off between stronger technical performance and environmental performance**, as prioritizing one can sometimes cannibalize the other

1. Deep dives per trend (incl. sources) to be found from pages 18-22

# Ongoing rollout of telecom infrastructure prevented consumers from accessing high-connectivity solutions and hindered realization of environmental benefits

Deep dive into market trends (1/5)

## Ongoing infrastructure deployment

### Trend description

- Belgium falls behind in the **rollout of critical telecom infrastructure**:
  - By 2023, only 40% of Belgian households were covered by 5G, compared to nearly 90% across Europe. However, this figure rose sharply to 97% in Belgium by 2024
  - Fiber-to-the-home (FTTH) coverage was similarly low in 2023, reaching just 25% of households versus a 63,99% EU average, with a modest increase to 31% in 2024
- This lag is not due to a lack of investment - over €1bn was injected by operators into fixed networks in 2021 - but rather to **market hurdles**:
  - Fiber rollout in Belgium started later than in other countries due to the strong performance of the existing copper network and extensive cable coverage, reducing operators' immediate need to deploy fiber
  - 5G deployment was primarily delayed by the late auction of the necessary spectrum frequencies

### Impact

- From a **business perspective**:
  - Delays in infrastructure deployment prevent operators from meeting evolving consumer demand for higher-speed connectivity, limiting their ability to create additional value in the market.
  - These delays risk exacerbating performance disparities between operators that remain dependent on legacy copper-based infrastructure and those actively investing in advanced fiber networks
- From an **environmental perspective**:
  - Delays in infrastructure rollout was a choice from operators to continue relying on good performing, yet older technologies (e.g. legacy coaxial/copper cables, 2G-4G networks), which are generally more energy-intensive than modern alternatives and hence prevent operators to recue their direct environmental impact

Source: EY-Parthenon analysis; Agoria (2025); Brussels Times (2022, 2024); Science Feedback (2020)

# Trends toward market consolidation, but especially innovative solutions for infrastructure sharing, provided opportunities for cost reductions and environmental efficiency gains

Deep dive into market trends (2/5)

## Market consolidation and infrastructure sharing

### Trend description

- The Belgian telecom market is undergoing increasing consolidation and infrastructure sharing to **accelerate network deployment and reduce costs**:
  - A key example is the 2019 joint venture, MWingz, between Proximus and Orange Belgium, which enables shared mobile access infrastructure while maintaining separate core networks. This agreement had the goal to reduce 20% of antenna sites and respective energy consumption and is expected to deliver €300m in cost savings over 10 years
  - Significant market consolidation occurred in 2023, when Orange Belgium acquired a 75% stake in VOO, strengthening its position in both fixed and mobile networks
- These strategic moves reflect a broader industry **trend toward collaboration** to improve financial and environmental efficiency, expand coverage, and compete more effectively

### Impact

- From a **business perspective**:
  - Infrastructure sharing allows operators to reduce costs by jointly investing in, upgrading, and maintaining network infrastructure. This can improve the return on investment for all parties involved.
  - Moreover, infrastructure sharing agreements enable operators without spectrum to offer services to end-users, thereby promoting competition among providers delivering comparable connectivity
- From an **environmental perspective**:
  - Network sharing agreements hold strong potential to reduce the environmental impact of telecom infrastructure, as fewer physical assets are required
  - A key challenge remains the fair allocation of environmental responsibility between operators sharing the same infrastructure

Source: EY-Parthenon analysis; Brussels Times (2023); Mobile Europe (2019); Proximus Press Release (2019); Orange Press Release (2023)

# While the regulatory framework has become more complex over the last years, it also enables operators to consider their environmental footprint and openly report on it

Deep dive into market trends (3/5)

## Regulatory directives towards sustainability

**Trend description**

- Telecom operators in Belgium are increasingly subject to sustainability reporting obligations driven by evolving EU regulations:
  - Under the Corporate Sustainability Reporting Directive (CSRD) and EU Taxonomy rules, operators are required to measure, disclose, and improve their environmental performance in line with the European Sustainability Reporting Standards (ESRS).
  - To reduce administrative burdens, a recent proposal from February 2025 suggests limiting CSRD obligations to companies with the largest environmental and societal impacts, while protecting smaller firms in the value chain from indirect pressure.
- In parallel, the EU Code of Conduct on the Sustainability of Telecommunications Networks encourages operators to adopt best practices in designing, operating, and maintaining their networks

**Impact**

- From a **business perspective**:
  - Increasing regulatory directives require telecom operators to monitor and report on their environmental performance, creating additional effort to collect and update data over time
  - Smaller players, even if exempted, may struggle to gather the necessary data across a broad range of sustainability metrics
- From an **environmental perspective**:
  - Regulations can help reshape strategic priorities by pushing operators to invest in more sustainable alternatives (such as renewable energy, fleet electrification, and improved waste management, etc.) ultimately contributing to a lower environmental footprint

Source: EY-Parthenon analysis; European Commission

# Rising expectations from stakeholders also offer opportunities for a strategic shift and unlock organic business growth options while enabling a positive environmental impact

Deep dive into market trends (4/5)

## Stakeholder expectations towards businesses

### Trend description

- Governments are increasingly **emphasizing environmental performance for telecom providers** through regulations such as the EU Green Deal, which sets emission reduction targets for 2030–2040, alongside industry commitments like those in the European Green Digital Coalition
- As a result, sustainability **has become a strategic priority** – not only to meet expectations, but also to unlock new business opportunities:
  - Reducing energy consumption, transitioning to renewable energy, and lowering carbon footprints can help cut operational costs while enhancing brand reputation and customer loyalty
  - A strategic shift also creates room for organic growth in emerging areas such as green service offerings, renewable energy ventures, aligning long-term business value with societal impact

### Impact

- From a **business perspective**:
  - Rising expectations from both B2C and B2B customers are prompting telecom companies to rethink their strategies.
  - This shift not only supports more efficient operations - leading to potential cost reductions - but also creates opportunities for new revenue streams by addressing evolving customer needs, such as offering smartphone refurbishment or repair services.
  - However, a critical note: customers can be seduced by rapid technical innovations, which may increase pressure on environmental goals. Telecom companies must therefore strike a balance between meeting customer demand and maintaining sustainability commitments
- From an **environmental perspective**:
  - Stakeholder expectations push organizations to critically assess their environmental impact and identify areas of inefficiency
  - This can drive concrete actions, such as shifting to cleaner energy sources, improving waste reduction and recycling practices, or electrifying vehicle fleets to lower direct (Scope 1) emissions

Source: EY-Parthenon analysis; World Broadband Association

# Aligning the environmental performance of operators' services with rising consumer expectations for technical performance can limit long-term environmental value creation

Deep dive into market trends (5/5)

## Aligning business- and environmental performance

### Trend description

- After having interviewed the market, it appears that while upgrading infrastructure equipment can enhance energy efficiency, it is **essential that this does not come at the expense of the service level** offered to consumers. More specifically:
  - As operators are increasingly compared based on their technical performance (e.g. connectivity speeds in Gbps), there is growing pressure to maintain a competitive edge
  - This performance-driven mindset can make operators hesitant to adopt newer, more energy-efficient technologies - especially if these are perceived to slightly compromise service levels from a technical perspective
- As the deployment of network equipment continues to grow and investments in modern infrastructure are made, this trade-off becomes worth monitoring

### Impact

- From a **business perspective**:
  - As consumers increasingly focus on the technical performance of operators - such as connection speed - optimizing service levels can sometimes come at the expense of using more environmentally friendly equipment, particularly when it does not match the highest technical specifications
- From an **environmental perspective**:
  - Continuously balancing business performance with environmental goals in response to shifting consumer expectations can be challenging for operators.
  - This tension may prevent them from fully realizing the potential environmental benefits of more sustainable technologies

Source: EY-Parthenon analysis; Ericsson (2025)

# 2.2.

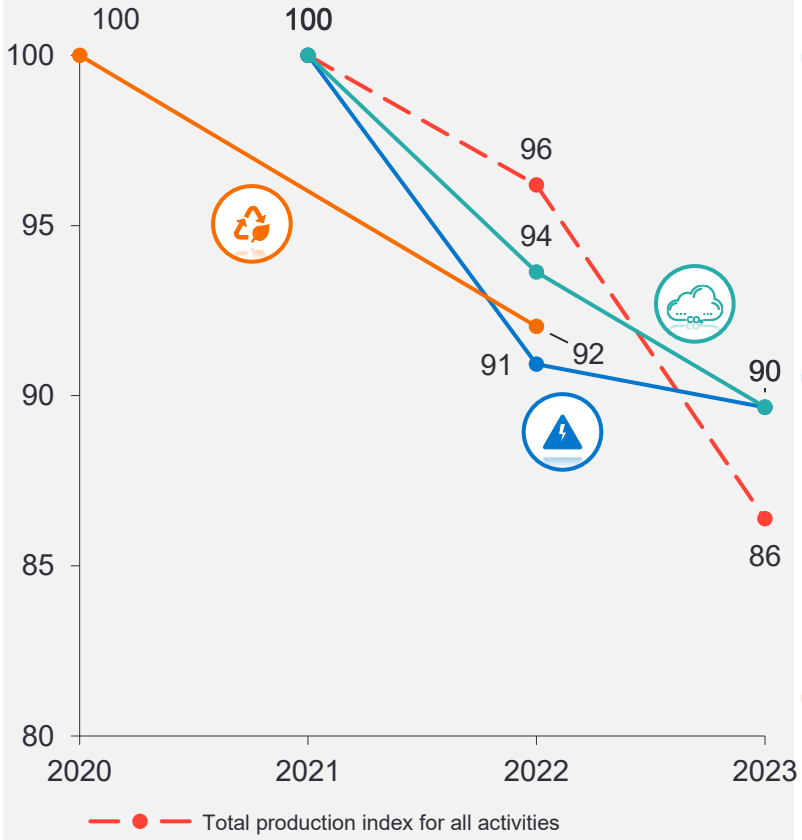
# Analysis of the economic activities of Belgian industries

# Despite a contraction in activities across all sectors in Belgium, this does not directly result in similar improvements in environmental performance across all 3 categories

## Summary of economic and environmental performance

### Economical performance of Belgian industries[1]

**Summary of the performance of Belgian industries**
*(100-scaled index – by performance category)*




### Takeaway of performance vs production output

**CO2e emissions**

- Benchmarking the evolution of CO2e emissions across Belgian industries against their reduction in production volume reveals that both have decreased between 2021 and 2023
- However, it should be noted that while the production index has declined by approximately 14% during this period, CO2e emissions only decreased by about 10%. This discrepancy suggests **inefficiencies in aligning the decline in production activities with a corresponding reduction in emissions**
- Our deeper analysis of specific sectors and sub-industries indicates that the **utilities sector drives the largest proportion of the decline in CO2 emissions**, while the transport sector has shown only a slight increase in emissions over the same timeframe

**Energy consumption**

- As it can be retrieved from the chart, industries in Belgium have also reduced their energy consumption between 2021 and 2023, with a reduction of more than 10%, while production activities have decreased by about 14%. This suggests that while the **production activity has decreased across all industries, this has not translated into a proportional direct decrease in energy consumption**.
- As noted in our analyses, all sectors in Belgium have experienced a similar decline in energy consumption – besides the road transport industry which has shown a slight increase – suggesting a structural trend towards energy reduction in all sectors in Belgium

**Waste & recycling**

- Despite the contraction observed in the volume of production activities in Belgium, the waste output generated by various industries has decreased by almost half as much compared to the overall reduction in production volume. This suggests strong inefficiencies across industries in reducing waste, even though the time periods of the analyses are not perfectly aligned.
- Our deeper analysis of the waste generated by various sectors and sub-industries reveals that while the utilities sector has made substantial progress in reducing the volume of waste produced, the industry sector has experienced an increase in waste volume, despite a contraction in its production output.

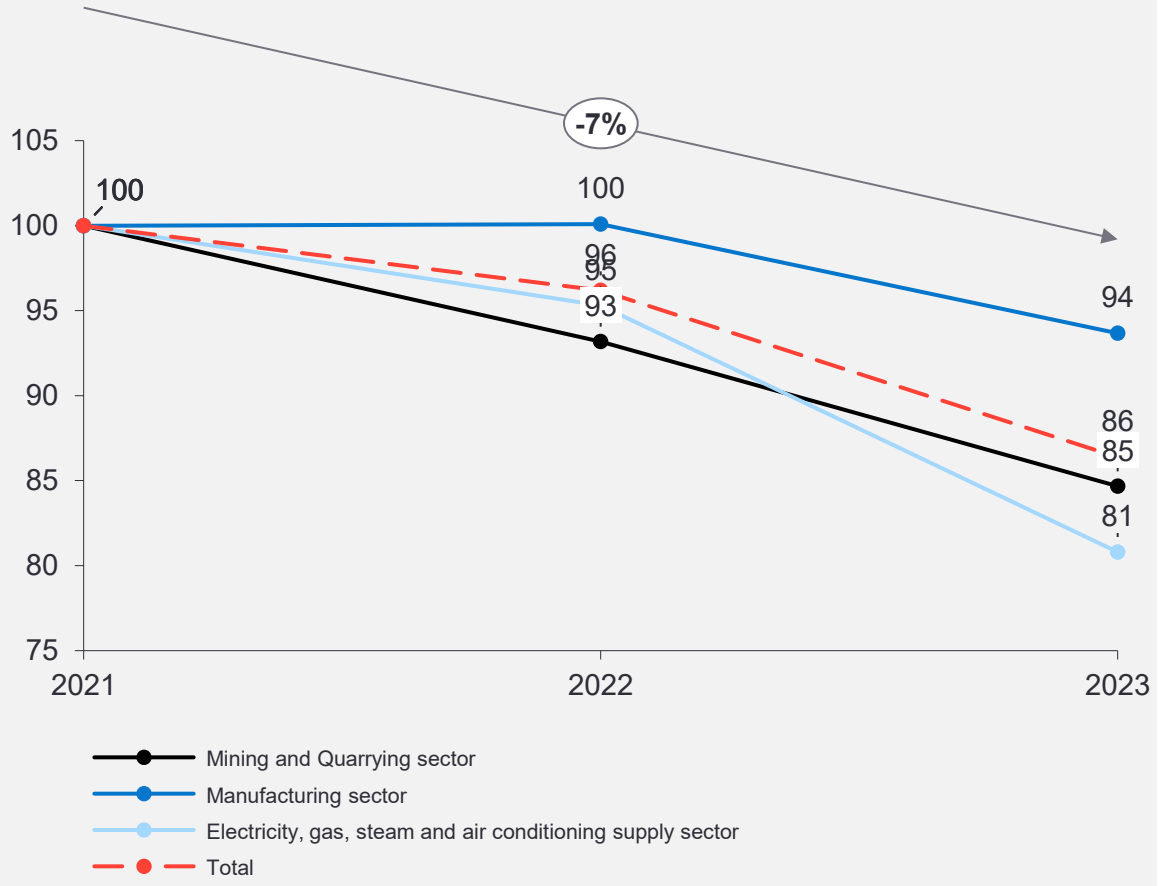
1. This analysis is intended to provide a visual overview of the performance of industries in Belgium and to highlight general trends across various performance metrics. As observed in our deeper analysis for each category, the industries and time periods are not consistent throughout all analyses, as they originate from different sources. This variability further limits the extent to which direct one-on-one comparisons can be made, although general trends can still be interpreted.

Source: Klimaat/Climat.be ; Statbel ; EY-Parthenon analysis

# Decline in value-added volume across all sectors in Belgium from 2021 to 2023 indicates reduced production activities

## Overview of activity trends per sector

**Industrial Production Index (IPI) in Belgium**
*(100-scaled index, reference year 2021 – by sector)*




### Key takeaways

- The Industrial Production Index (IPI)[1] was chosen to assess the evolution and relative scale of industrial activities in Belgium as it provides a volume-based measure of production, independent of price effects, allowing for a more accurate understanding of real activity trends across sectors. As a result, it becomes possible to determine whether there is an increase or decrease in production activity, which indirectly influences environmental performance across sectors
- As it can be seen, Belgium has experienced a contraction in production activities across all sectors between 2021 and 2023, with a total CAGR of -7,1%. Notable differences emerge when analyzing the performance of various sectors:
  - The **electricity, gas, steam, and air conditioning supply** sector (NACE[2] code D) has seen the most significant decrease, with a decline of nearly 20% during this three-year period.
  - In contrast, the **manufacturing sector** (NACE code C) has shown the smallest decline in production volume, with a reduction of about 6% over the same timeframe.
  - The **mining and quarrying** sector (NACE code B) has experienced an average contraction in production activities, declining by approximately 15% during this period.
- The overall contraction in production activities across sectors suggests a corresponding decrease in activities and, consequently, a potential reduction in environmental harm resulting from these activities

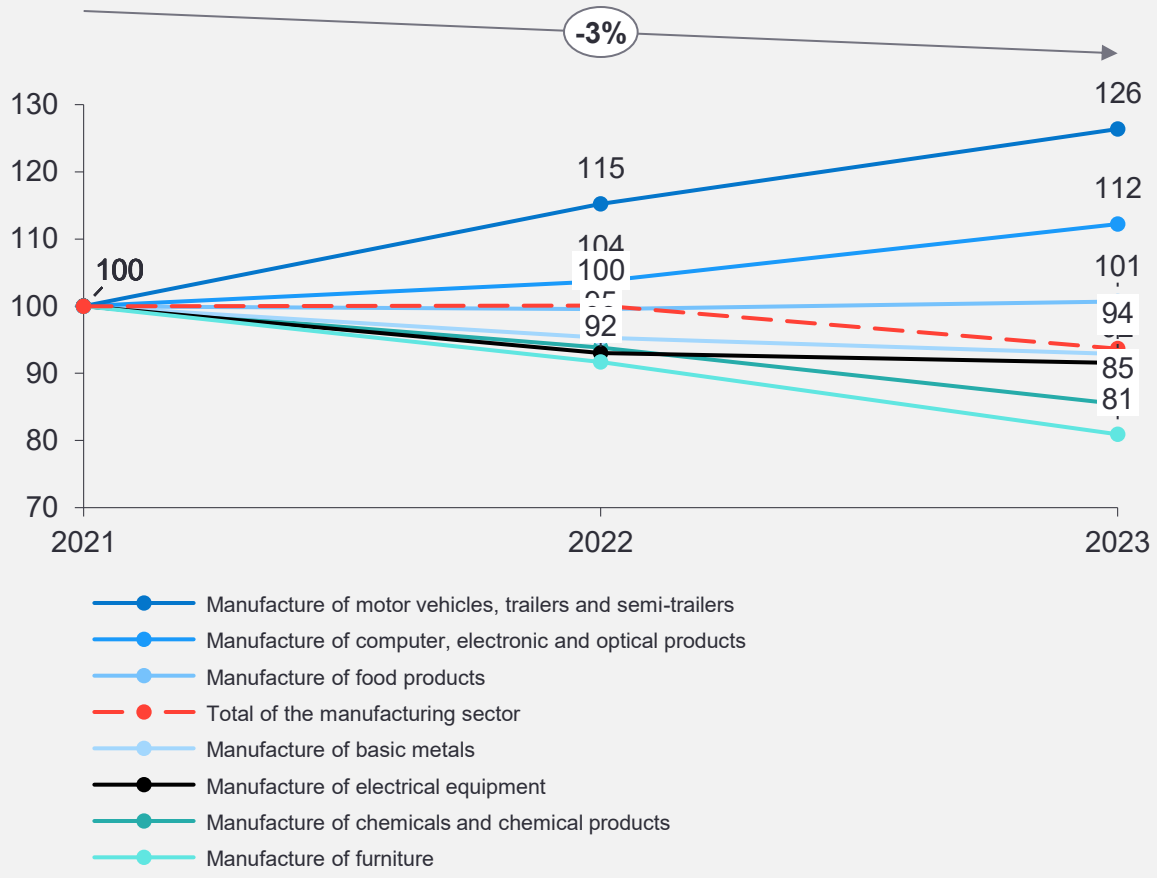
1. The Industrial Production Index (IPI) reflects the evolution in volume of value added at factor cost. Since full value-added data is not available monthly, the index is constructed using proxy indicators such as deflated turnover, physical volumes, gross production values, working hours, or energy use, depending on data availability and sector characteristics.
2. NACE code is a European classification system for economic activities. It stands for "Nomenclature statistique des Activités économiques dans la Communauté Européenne" (Statistical Classification of Economic Activities in the European Community)

Source: Statbel

# While there are notable discrepancies in the analysis of manufacturing activities, the overall trend indicates a clear reduction in production activities across Belgium

## Overview of activity trends in the manufacturing sector

**Industrial Production Index (IPI) in Belgium**
*(100-scaled index, reference year 2021 – deep dive in the manufacturing sector)*




### Key takeaways

- Total manufacturing activities in Belgium have shown a decline in Belgian with a CAGR of -3,2% between 2021 and 2023. Analyzing the performance within the sector more deeply, notable differences can be observed :
  - **Manufacture of motor vehicles, trailers, and semi-trailers** has experienced a significant increase in production activities, with a growth of approximately 26% from 2021 to 2023
  - In contrast, **manufacture of furniture** has faced the steepest decline, contracting by about 20% during the same period
- **Manufacture of computer, electronic, and optical products** – a sector linked to the telecommunications industry - has shown a positive trend, with production activities increasing by around 12%. However, **manufacture of electrical equipment** has experienced a decrease of about 9%
- Differences in production activities across sectors complicate the ability to draw relevant conclusions specifically about the telecommunications sector - even tough the larger trend clearly indicates an overall reduction in production activities in Belgium between 2021 and 2023
- Yet, it will be interesting to look at the overall trend of the IPI as it influences environmental performance, which is examined in *chapter 2.3: Analysis of the environmental performance of Belgian industries*

Source: Statbel

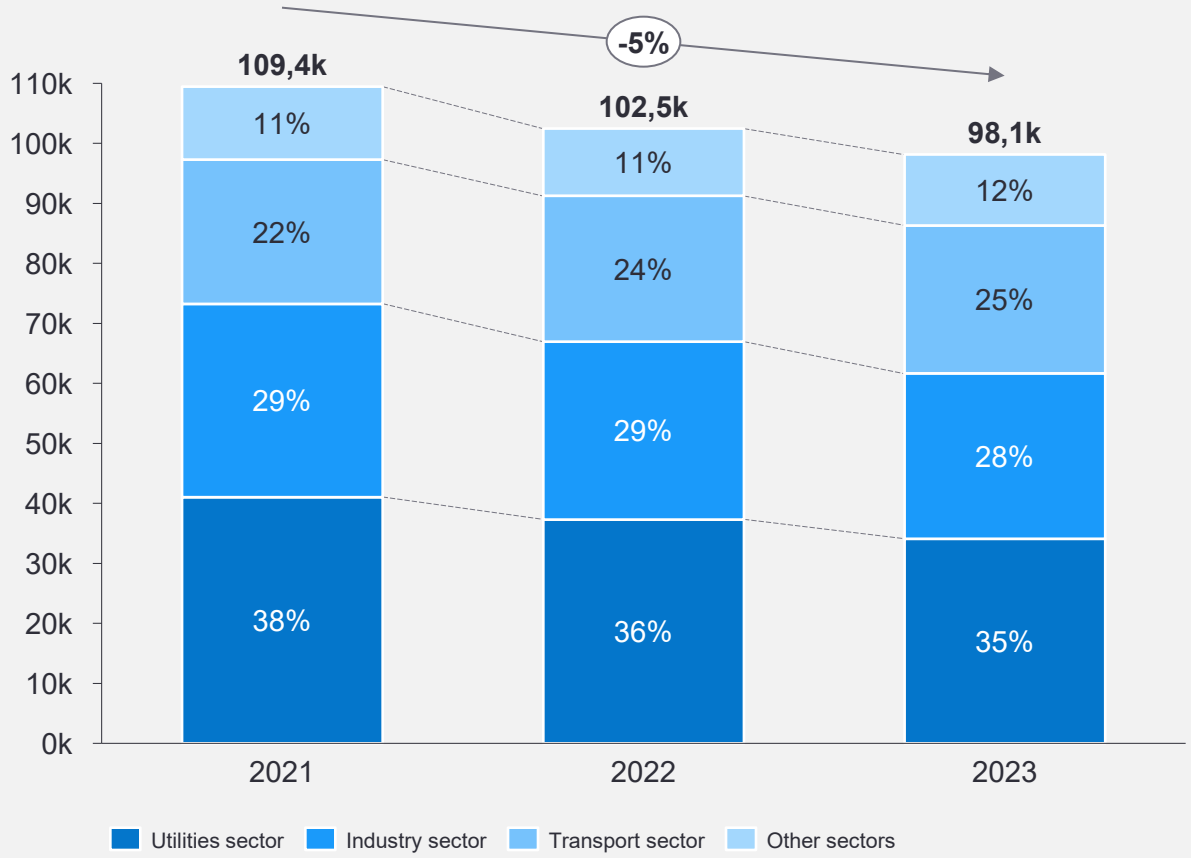
# 2.3.

# Analysis of the environmental performance of Belgian industries

# CO2 emissions declined across all sectors with a CAGR of 5,3% - except for transport where structural road traffic trends were able to drive growth

## Analysis on CO2 emissions

**Annual emissions in key sectors in Belgium**
*(Kton CO2e – by sector)*




### Key takeaways

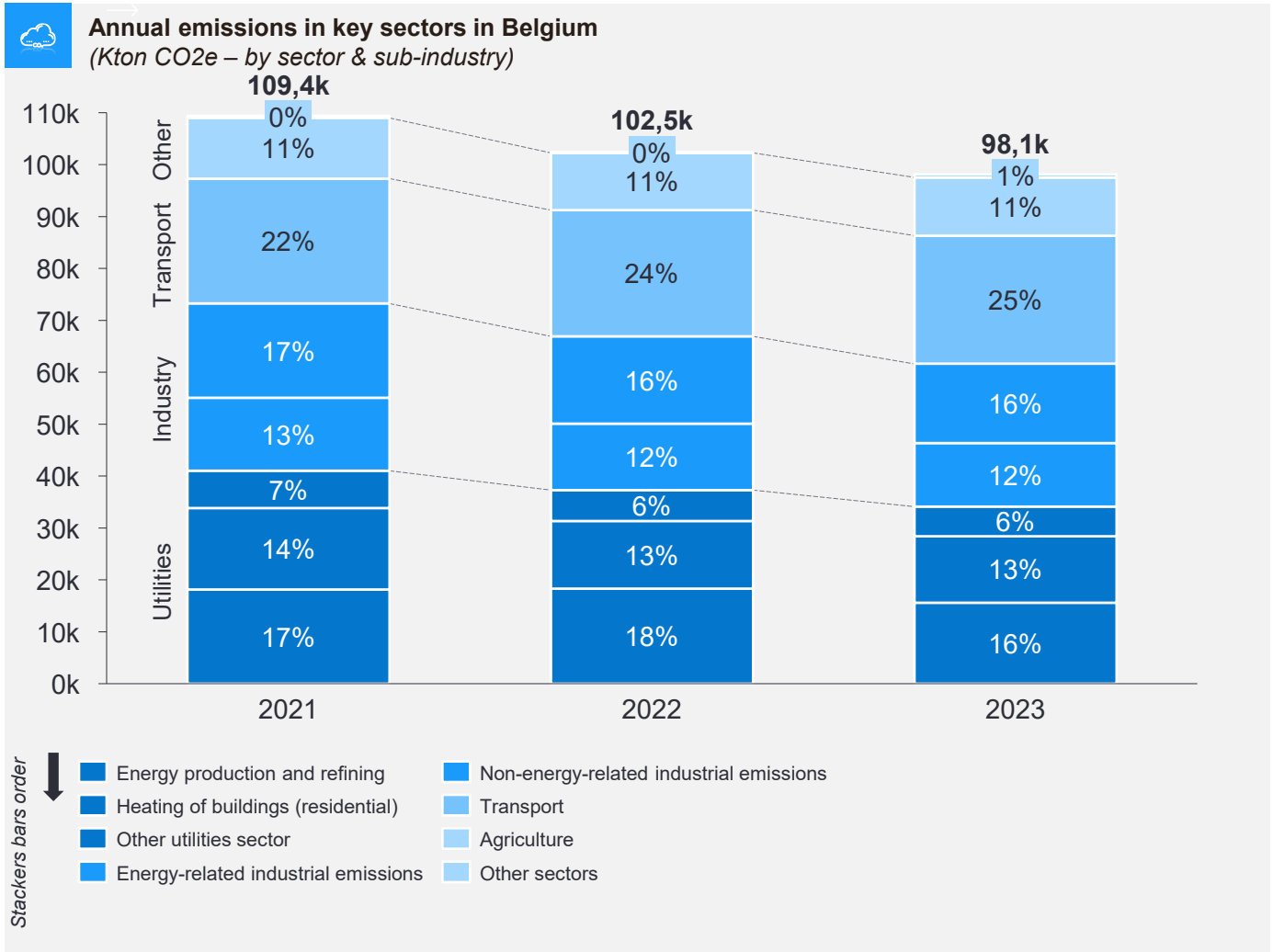
- Between 2021 and 2023, Belgium's total $CO_2$ emissions decreased by a CAGR of 5,3%, from 109,4 to 98,1 thousand kilotons of $CO_2$ equivalents
- This overall reduction masks contrasting sector dynamics:
  - The **utilities sector** recorded the sharpest decline (CAGR of -8,8%), followed by the **industry sector** (-7,6%) and **other sectors** (-1,4%)
  - In contrast, the **transport sector** saw a modest increase in emissions (+1,3%), making it the only sector with growing emissions over the period. As a result, its share of total $CO_2$ emissions rose from 22,0% in 2021 to 25,1% in 2023.
  - Meanwhile, the **utilities** and **industry sectors**, although still the largest contributors, saw their shares slightly decrease to 34,8% and 28,1% respectively in 2023
- The composition of emissions by sector remained relatively stable overall, but the upward trend in transport emissions contrasts with the generalized decline seen elsewhere.
- According to Klimaat/Climat.be, the increase in transport-related emissions is largely driven by trends in road transport, which consistently accounts for over 96% of the sector's total $CO_2$ output. Structural factors explain this trend: rise in vehicle fleet size, increasing freight activity, growing preference for larger and more powerful vehicles such as SUVs)

1. Due to a lack of data granularity, it is not possible to separate the CO2 emissions of the telecommunications sector specifically. The goal of this analysis is to benchmark operators' performance against averages in the Belgian industry.

Source: Klimaat/Climat.be

# CO2 emissions also declined across sub-industries, confirm the sector wide trend – besides for transport which remains a growing outlier in Belgium

## Analysis on CO2 emissions




### Key takeaways

- Most sub-industries saw a decline in $CO_2$ emissions for the past 3 years, in line with broader sector-level trends.
  - Within the **utilities sector**, emissions from *energy production and refining* decreased by a CAGR of -7,3%, while *residential heating* recorded a sharper decline of -9,6%. *Other utilities activities* saw the largest drop, at -11,1%. Despite these reductions, energy production and refining remained the largest emitter within the utilities sector, accounting for nearly 46% of its emissions in 2023.
  - In the **industry sector**, both *energy-related* (-6,7%) and *non-energy-related* (-8,3%) emissions decreased, with the latter continuing to make up the majority of industrial emissions at 56% in 2023.
  - The **transport sector** stands out as the only segment with increasing emissions (+1,3%), maintaining its position as the sole contributor within its category.
  - In the **other sectors**, *agriculture* remained the dominant emitter, representing 95% of the category's $CO_2$ output in 2023, while other activities showed higher volatility but relatively small overall impact.
- The results confirm the earlier observation of a generalized contraction in emissions across most sectors and sub-industries, with a notable exception in transport, which continues to rise and thus plays an increasingly prominent role in Belgium's total emissions footprint.

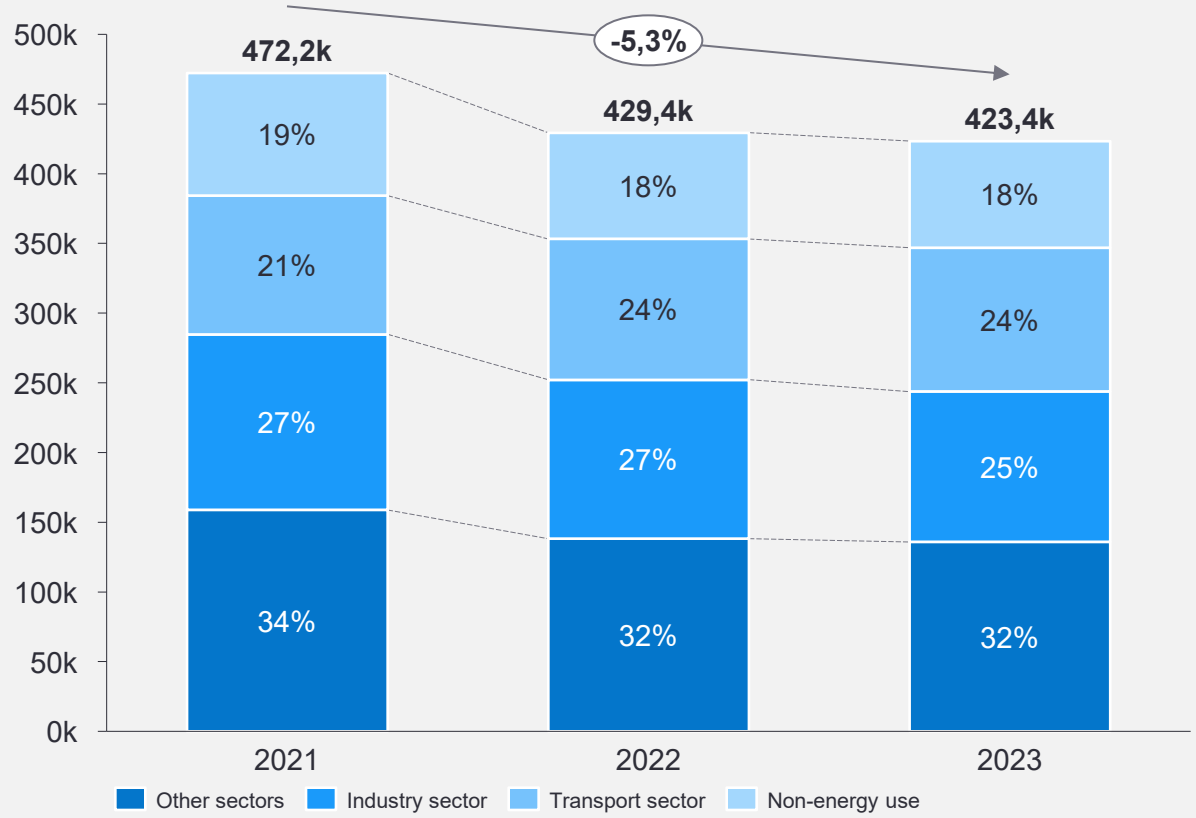
1. Due to a lack of data granularity, it is not possible to separate the CO2 emissions of the telecommunications sector specifically. The goal of this analysis is to benchmark operators' performance against averages in the Belgian industry.

Source: Klimaat/Climat.be

# Belgium's energy consumption contracts with a CAGR of -5,3% across all sectors without structural shifts in the energy consumption mix

## Analysis on energy consumption

**Energy consumption statistics in Belgium**
*(GWh - by sector)*




### Key takeaways

- Between 2021 and 2023, Belgium's total energy consumption declined at a CAGR of 5,3%, dropping from 472,2 TWh to 423,4 TWh. This decrease was not uniform across all sectors:
  - While **other sectors**, the **industry sector** and the **non-energy use sector** showed relatively similar declines, with CAGRs of -7,5%, -7,4%, and -6,8% respectively, the **transport sector** was the only one to exhibit an increase in energy use, with a CAGR of 1,8%
- Analyzing the respective contributions of each category over time, similar conclusions can be drawn:
  - The proportion of **other sectors** and the **industry sector** in total energy consumption has decreased by about 2% during this period
  - The proportion of **non-energy** use has decreased by about 1%
  - The **transport sector**, as indicated by the increase in total energy consumption against other sectors, has shown a rise in its total proportion of energy emissions during this timeframe
- Overall, the decline in energy consumption was broadly uniform across sectors, except for the transport sector, which experienced a slight increase over the years. However, as there has been no major structural shift in the overall energy mix, this suggests a general decrease in energy use rather than sector-specific changes.

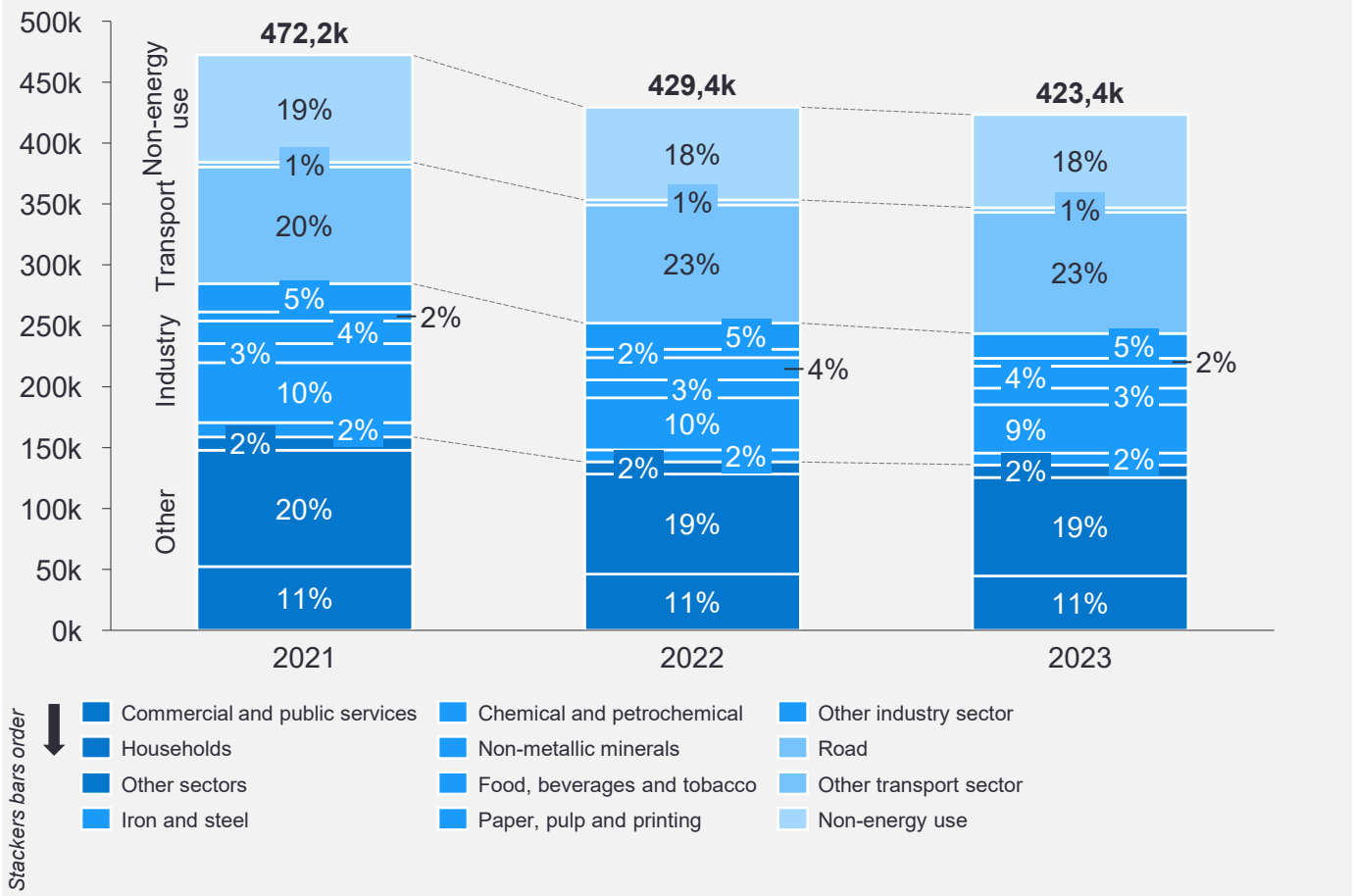
1. Due to a lack of data granularity, it is not possible to separate the energy consumption of the telecommunications sector specifically. The goal of this analysis is to benchmark operators' performance against averages in the Belgian industry.

Source: Statbel

# The energy decline is proportionally similar across industries within each sector, even though road transport drove the increase in energy consumption of the transport sector

## Analysis on energy consumption

**Energy consumption statistics in Belgium**
*(GWh - by sector & sub-industry)*




### Key takeaways

- Between 2021 and 2023, most industries within each sector recorded a decline in energy use, consistent with their respective sector trends:
  - In the **other sectors category**, *households* maintained the largest share at around 60%, followed by *commercial and public services* at approximately 33%
  - In the **industry sector**, the most significant reductions can be attributed to the *non-metallic minerals*, *chemical and petrochemical*, and *iron and steel* industries, with respective CAGRs of -11,4%, -10,1%, and -9,5%.
  - Conversely, the *paper, pulp, and printing* industries, as well as the *food, beverage, and tobacco sectors*, showed moderate decreases in the industry sector with respective CAGRs of -5,7% and -1,5%
- In the **transport sector**, *road transport* consistently accounted for over 96% of energy consumption and increased at a CAGR of about 1,9% during this period.
- The **non-energy-use sector** also experienced a decrease in energy consumption, with a CAGR of -6,8% during the same timeframe.
- As observed at the sector level, the declines in energy consumption across individual industries within each sector were broadly uniform, although road transport drove the increase in energy consumption within the transport sector

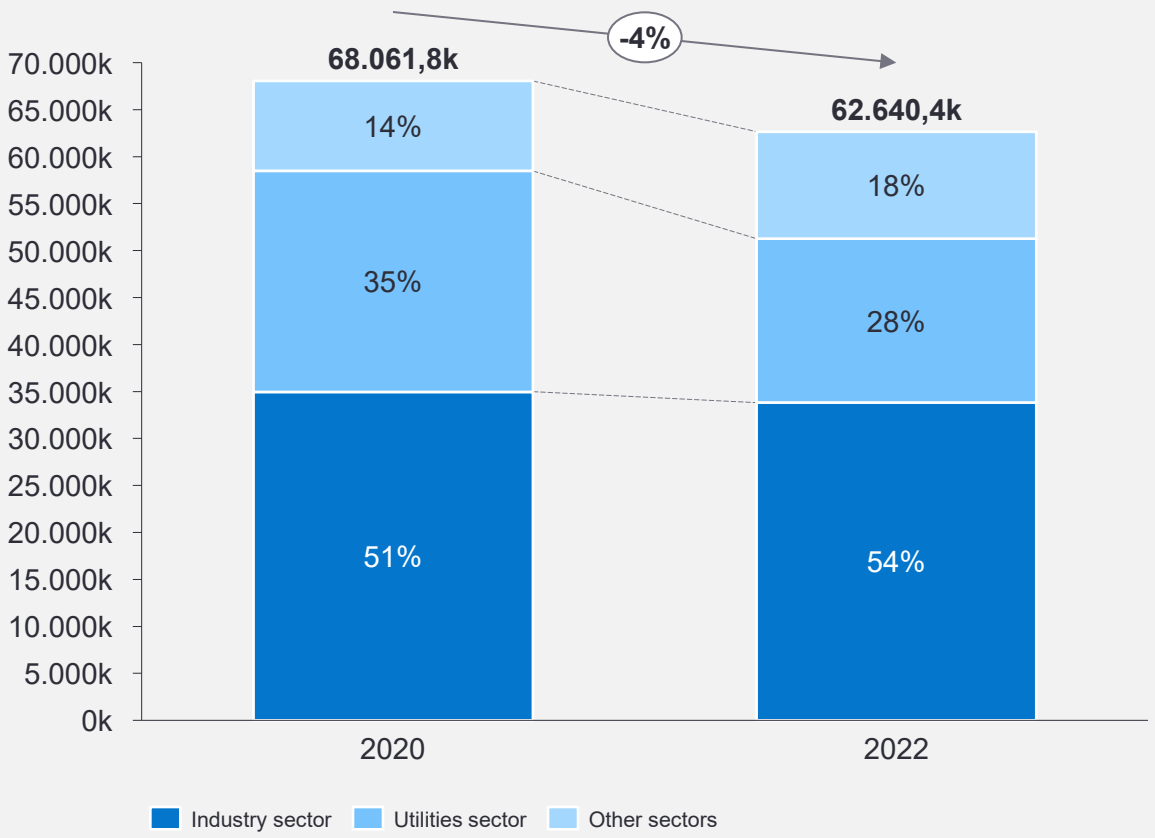
1. Due to a lack of data granularity, it is not possible to separate the energy consumption of the telecommunications sector specifically. The goal of this analysis is to benchmark operators' performance against averages in the Belgian industry.

Source: Statbel

# Belgium's waste footprint shifts as the utilities sector shrinks, industry sector consolidates, and other sectors grow

## Analysis on waste production

**Waste produced per sector activity**
*(Ton - by sector)*




### Key takeaways

- Between 2020 and 2022, Belgium's total waste generation decreased modestly, primarily driven by a sharp reduction in the utilities sector. More specifically:
  - While the **industry sector** remained the largest contributor in absolute terms, it recorded a slight decline of -3,3%, generating 33,8m tons in 2022 and accounting for 54% of the total.
  - In contrast, the **utilities sector** saw a significant drop of -25,8%, with its share falling from 34,6% to 27,9%.
  - Meanwhile, the category of **other sectors** experienced an 18,7% increase in waste generation, raising its share from 14,1% to 18,2%.
- These evolutions point to a shifting distribution of waste production across sectors, with **industry** consolidating its position as the main source, while **utilities** reduced their footprint and **other** sectors gained in relative importance.

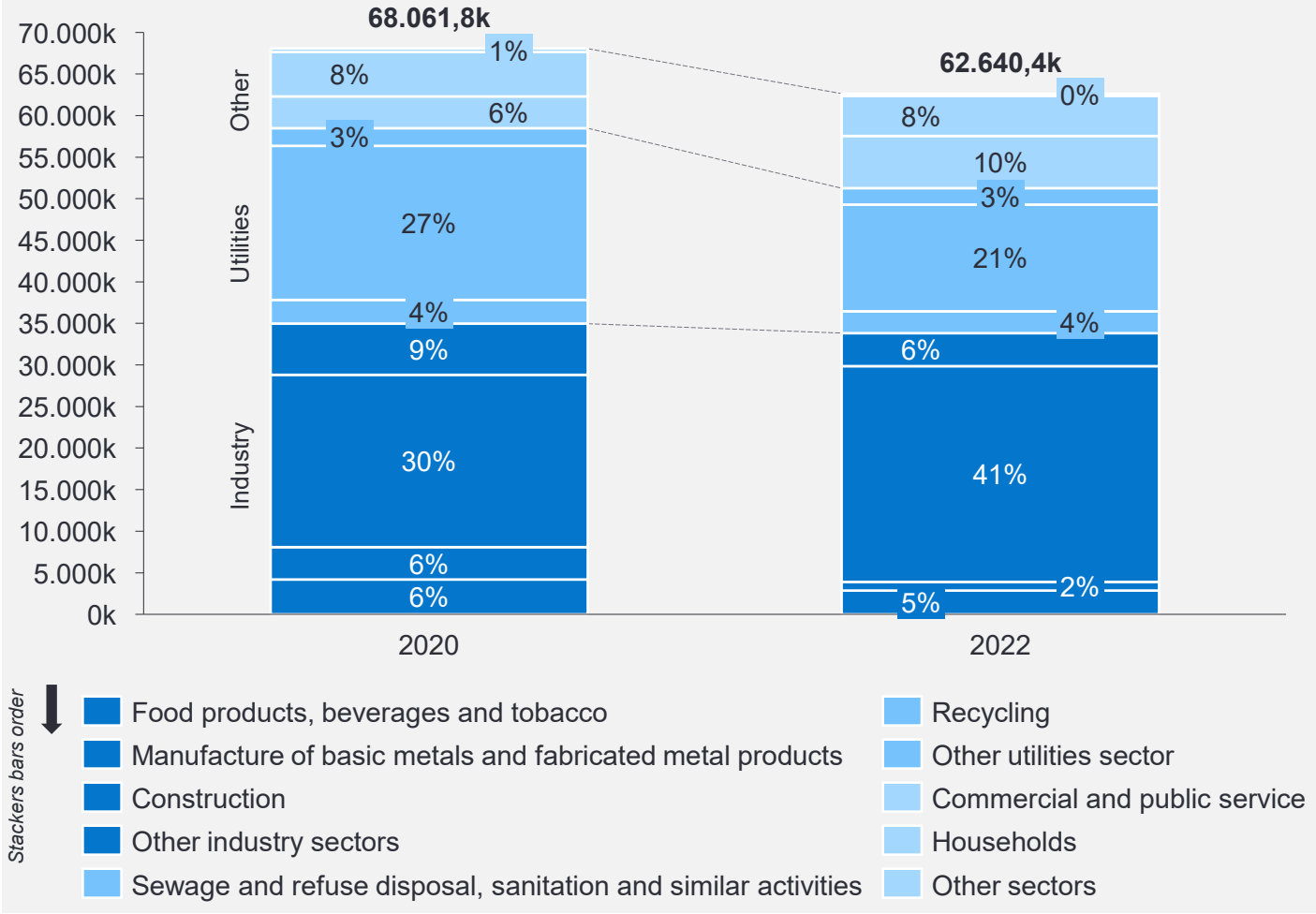
1. Due to a lack of data granularity, it is not possible to separate the waste produced by the telecommunications sector specifically. The goal of this analysis is to benchmark operators' performance against averages in the Belgian industry.

Source: Statbel

# Diverging waste trends shape Belgium's waste footprint as construction and commercial public services grow while most industries decline their waste generation

## Analysis on waste production

**Waste produced per sector activity**
*(Ton - by sector & sub-industry)*




### Key takeaways

- While total waste volumes declined between 2020 and 2022, this masks strong divergences between industries:
  - Within the **industry sector**, *construction* waste surged by +25%, now accounting for over 76% of total industrial waste in 2022 (vs. 59% in 2020), making it the primary driver of industrial waste. Conversely, all other industrial segments saw double-digit declines, most notably basic metals (-72,9%) and food-related industries (-31,6%).
  - In the **utilities sector**, all components contributed to the overall decline, with *recycling* activities recording the steepest drop (-30,6%), though still making up nearly 74% of the sector's waste.
  - In the **other sectors** category, *commercial and public services* showed strong growth (+64,7%), now generating more than half of the waste in this group, while *household waste* fell by 10%.
- The evolutions highlight significant discrepancies in waste generation trends across industries. While most segments recorded notable declines, *construction and commercial services* moved in the opposite direction, with substantial increases in waste output.
- As a result, the overall picture is not one of uniform reduction, but rather of contrasting dynamics that reshaped the internal composition of waste across sectors between 2020 and 2022.

1. Due to a lack of data granularity, it is not possible to separate the waste produced by the telecommunications sector specifically. The goal of this analysis is to benchmark operators' performance against averages in the Belgian industry.

Source: Statbel

# 03

# Analysis of the performance of telco players in Belgium

# 3.1.

# Quantitative assessment of performance

# Telenet's performance showcases stable revenues, robust growth in network capacity and usage, and a strong commitment to sustainability

## Telenet background

### Description

Telenet Group Holding, a wholly owned subsidiary of Liberty Global, comprises multiple entities and employs approx. 3.700 people in 2024. Environmental and climate data are reported at holding level, covering all entities under operational control (+50%). It encompasses not only telecom operations but also media & entertainment. Reflecting the full scope of the Group's mobile & fixed network services

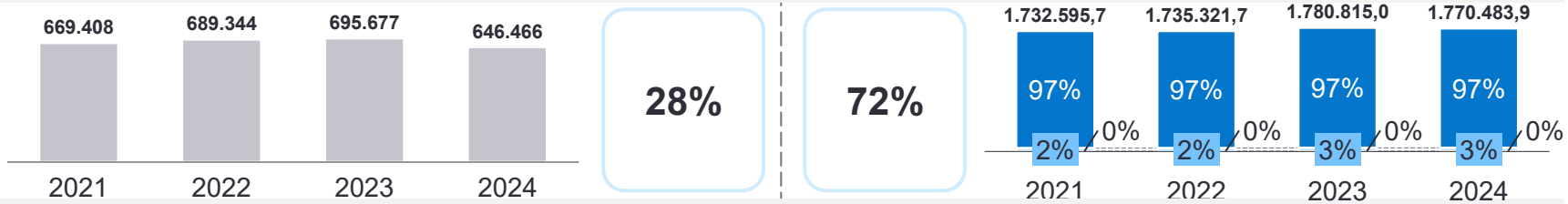
### Collaboration / legal agreements

- Part of Liberty Global
- FMC services (Belgium & Luxemburg)
- Wholesale agreement for fixed network services with Orange (regions without own network)

### Mobile

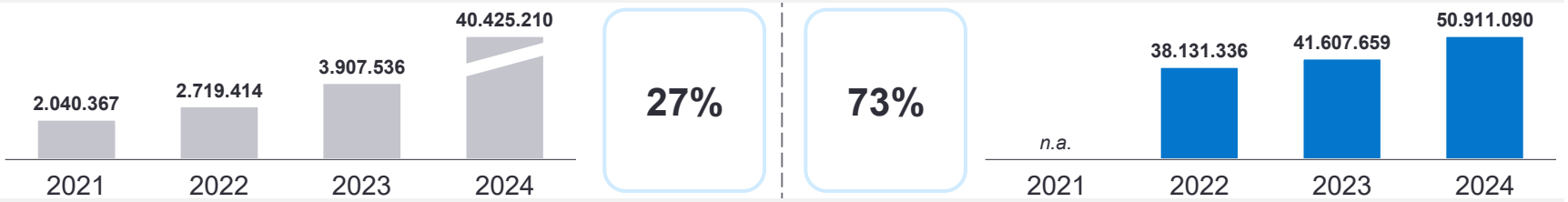
### Fixed

**Revenues** *(x1.000, mobile & fixed, €)*

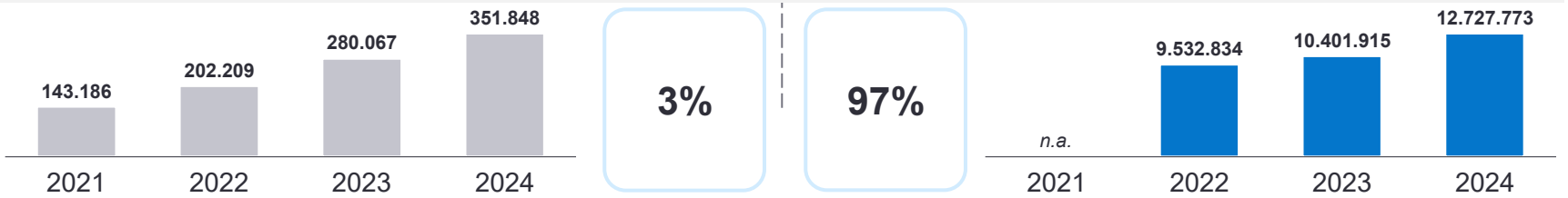



**Network capacity** *(x1.000, mobile, GB)* [1, 2]

**Network capacity** *(fixed, GB)* [1]




**Network usage** *(x1.000, mobile & fixed, GB)* [1]




### Governance of sustainability

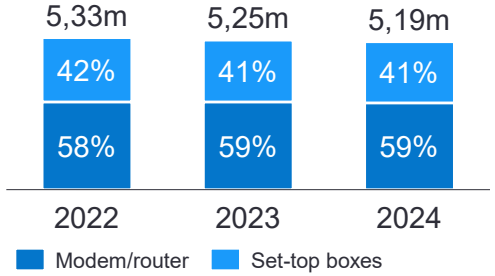
- **Sustainability governance** is coordinated by the Sustainability Program Office, reporting directly to the CEO/CFO; policies are validated by the Senior Leadership Team
- **Policy and investment decisions** are approved by the Board of Directors of Telenet Group Holding, with close oversight from Liberty Global
- **Sustainability performance** is reported in line with CSRD, SBTi, CDP and Ecovadis standards
- Selected $CO_2e$ footprint data is audited annually at Liberty Global's consolidated level
- As of 2025, an **additional audit** covers all Scope 1, 2, and 3 emissions for SBTi target monitoring
- **Intra- and intercompany spend** is excluded from the consolidated footprint calculations of Telenet Group Holding

1. Data includes Telenet group (Telenet BV, Telenet Retail & Telenet Group) and Wyre
2. In 2024, Significant increase in mobile capacity in 2024 driven by the activation of N7 and the rollout of 100 MHz on N35

# Telenet has shown a gradual decrease in its connections and units in use but managed to bring more energy-efficient products to the market

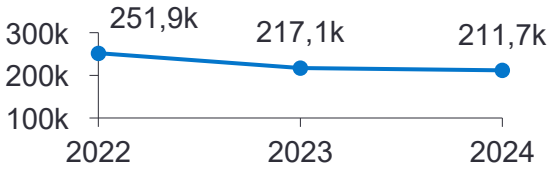
## Business specifics

### Number of units in use *(#)*



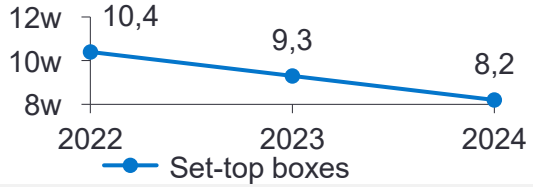

- As observed, the number of units in use from Telenet has slightly decreased between 2022 and 2024
- It should be noted that despite this small decrease, the proportion of modems/routers and set-top boxes has remained stable, indicating that the decrease is structural rather than being driven by a specific product category

### Number of smartphones sent to direct customers *(#)*



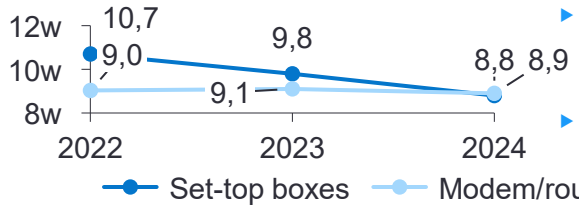

- Regarding the number of smartphones sent to direct customers has also decreased by about 16% during this time period

### Standby consumption across product categories *(W)*



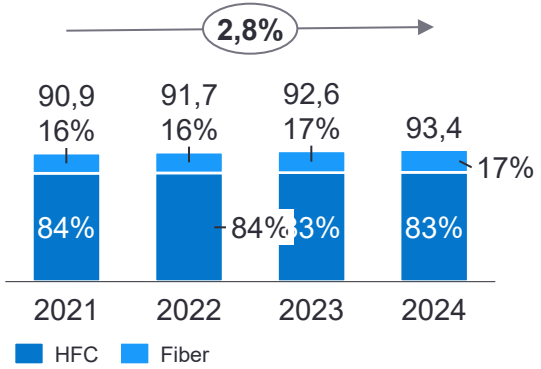

- As observed, the standby energy consumption of Telenet's set-top boxes decreased by more than 20% between 2022 and 2024
- No data was available for the other product categories

### Powered-on consumption across product categories *(W)*



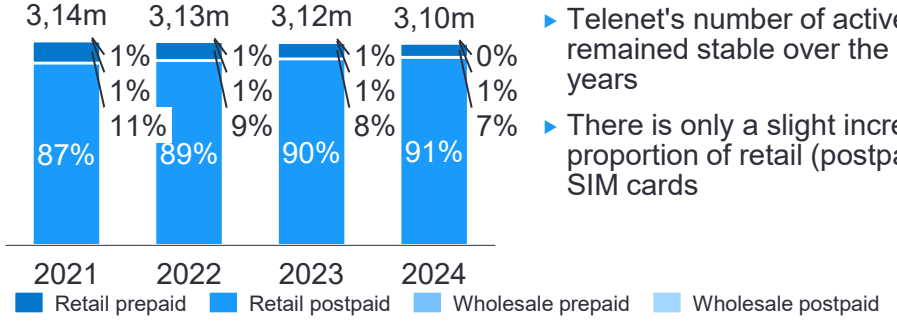

- As observed, the powered-on consumption of set-top boxes decreased by about 17% during this time period.
- On the other hand, the powered-on consumption of modems/router remained stable

### Cabling per infrastructure type *(km)*



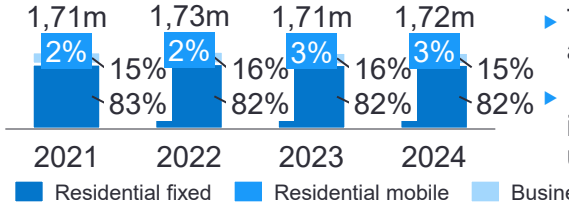

- Telenet has gradually increased the length of its cabling by about 3% during this time period
- It is also interesting to note that the proportion of fiber versus HFC has remained stable over time.

### Active cards in use *(#)*




- Telenet's number of active cards has remained stable over the last four years
- There is only a slight increase in the proportion of retail (postpaid) active SIM cards

### Internet lines *(#)*




- Telenet's number of internet lines has also remained stable over the years
- The vast majority of internet lines are intended for residential use and utilize fixed connectivity.

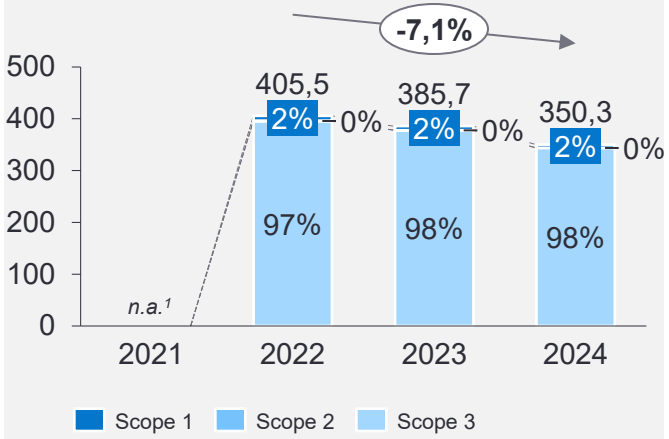


EY Parthenon

# Telenet has cut emissions since 2021, driven by greener energy and fleet electrification

## CO2 emissions

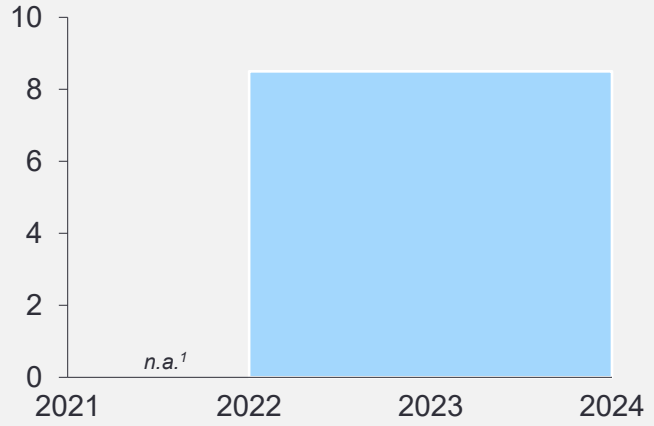
**Annual emissions of all gases converted to CO2 equivalent[1]**
*(Kton CO2e)*



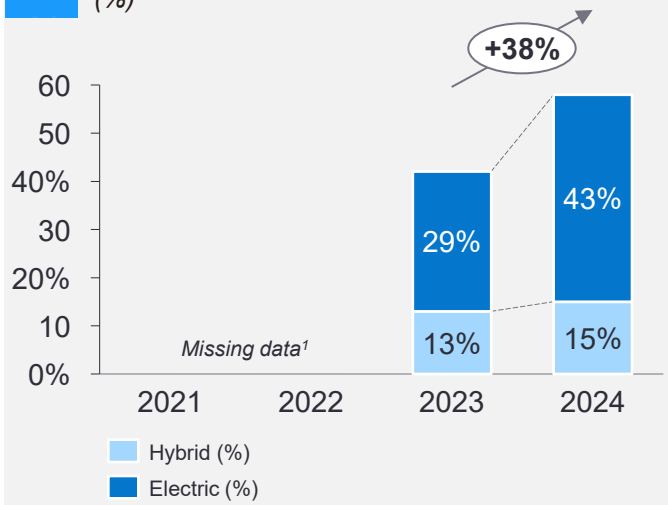

- Scope 1: Emissions declined by more than 30% between 2022-2024 – mainly driven by the fleet electrification
- Scope 2: Decreased by 99,9% from '22 to '24, from 1.1 Kton to near-zero levels – driven by high proportions of renewable energy sources in total energy consumption
- Scope 3: The dominant contributor. While still high, emissions were reduced by 12,9% from 2022 to 2024 — driven by reduced costs, a decline in set-top boxes, EEIO[2] factors decreasing over time, and the transition to supplier-specific emission factors

- Carbon offsetting has been consistently applied at 8,5 Kton $CO_2e$ per year since 2021.
- From 2023 onward, offsets fully cover Scope 1 & 2 emissions, effectively achieving carbon neutrality in their operations.

**CO2 emissions offset by carbon credits (scope 1 and 2)**
*(Kton CO2e)*




**Share of the fleet that is electric and hybrid [1]**
*(%)*



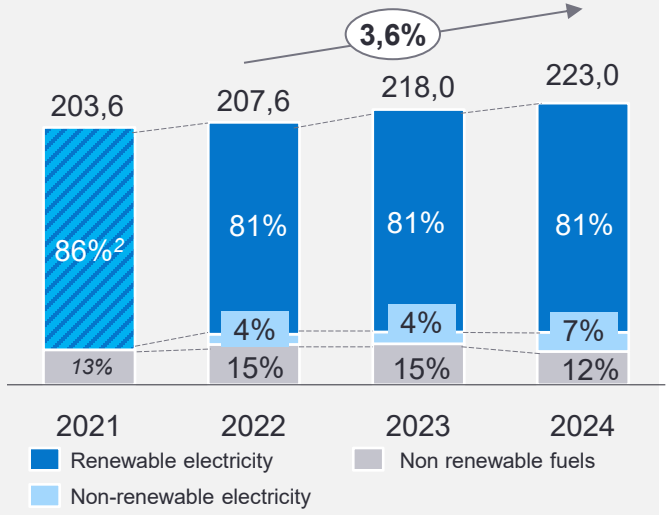

- Significant progress in electrification: electric fleet share grew from 29% to 43% in one year (2023–2024), a 48% relative increase.
- Hybrid adoption rose modestly from 13% to 15%.
- Combined, 58% of the fleet is now low-emission (electric or hybrid), aligning with decarbonization and ESG goals.
- Suggests a strong shift away from fossil fuel-based mobility, contributing to Scope 1 reductions

1. Telenet Group Holding uses 2022 as its base year. Comparisons with data prior to 2022 are not possible due to differences in scope and entity coverage. In line with their SBTi targets, reporting is done at the Telenet Group Holding level, covering all entities under operational control (≥50%), including, for example, entertainment. Reported data reflect the global activities of these entities.
2. Environmentally Extended Input-Output (EEIO) models provide industry-average emission factors (EFs) used in carbon accounting to estimate greenhouse gas (GHG) emissions

# Since 2023, there is an increased use of renewables and a gradual phase-out of fossil fuel-based systems

## Energy consumption (1/2)[1]

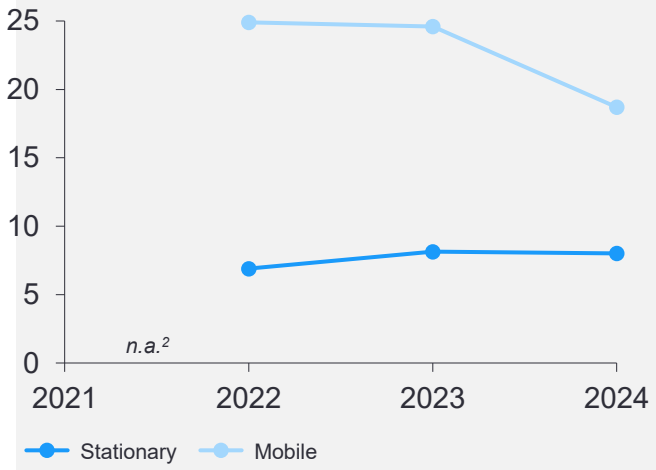
**Energy consumption**
*(GWh - by source)*



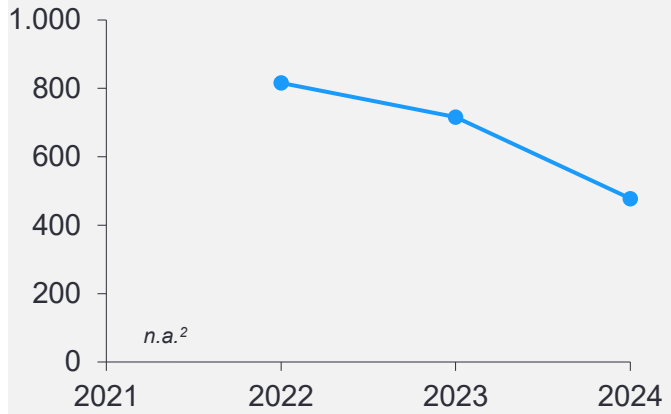

- Renewables recordings was not provided before 2022 with 167,5 GWh, rising to 181,5 GWh in 2024, increasing by 3,4% year-over-year
- The proportion of non-renewables fuels decreased significantly 2023 to 2024 (14.9% to 11,9%)
- The increase of energy consumption with a CAGR of about 3,6% is driven by 3 factors:
  - The electrification of the fleet
  - Growth in data consumption (incl. 5G roll-out)
  - The integration of Eltrona (Luxembourg) and Caviar in Telenet Group Holding

- Static combustion peaked at 8,14 GWh, a ~18% increase compared to 2022. 2024 shows a small reduction but remains above the 2022 level. This is driven from the construction of various sites who are gradually connected to the grid and the refill of fuel levels at data centers
- Mobile combustion use for offices decreased from 24,9 GWh in 2022 to 18,7 GWh in 2024 – driven by fleet electrification

**Consumption of combustion**
*(GWh - by source)*




**Consumption from other sources**
*(ton CO2e - by source)*



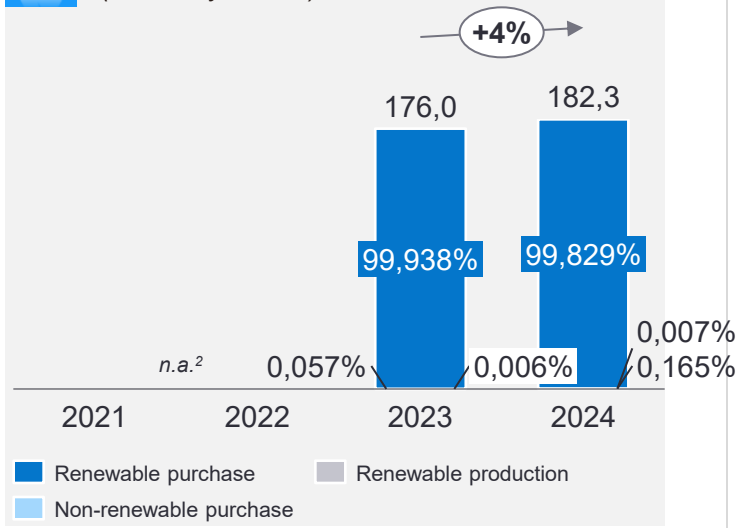

- Emissions in 2022 ware at 816 t $CO_2e$, and decreased by 12% to 716 t $CO_2e$ in 2023, which was due to Caviar & Eltrona being included and taking into account all fire extinguishers
- By 2024, emissions dropped sharply to 478 t $CO_2e$, falling below 2022 levels by approximately 41%. This originated from fixing a leakage in 2023, which reduced the emissions with around 50% and fire extinguishers are only taken into account when replaced

1. Reporting is done at the Telenet Group Holding level, covering all entities under operational control (≥50%), including, for example, entertainment.
2. Telenet Group Holding uses 2022 as its base year. Comparisons with data prior to 2022 are not possible due to differences in scope and entity coverage. In line with their SBTi targets, reporting is done at the Telenet Group Holding level, covering all entities under operational control (≥50%), including, for example, entertainment. Reported data reflect the global activities of these entities.

# Increase in renewable electricity purchases and consumption, alongside negligible non-renewable use, suggests a commitment to green energy

## Energy consumption (2/2)[1]

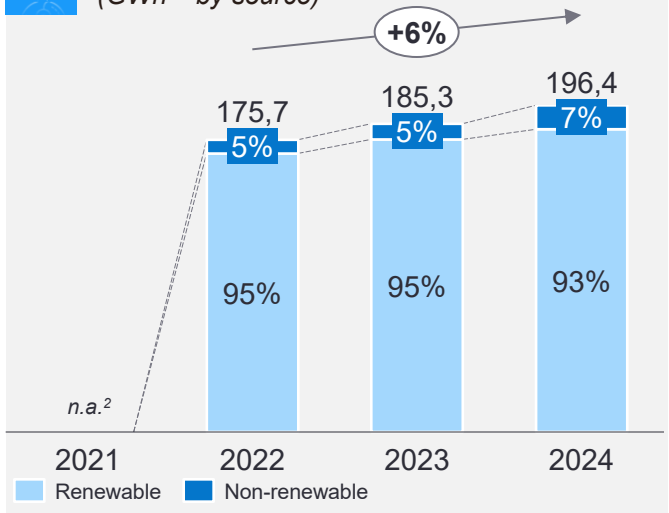
**Electricity purchase & production**
*(GWh - by source)*



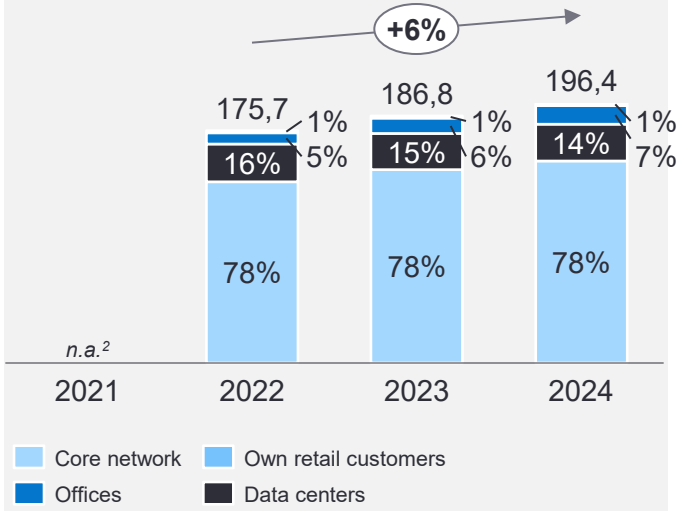

- Significant increase in renewable electricity purchase, rising from 175,9 GWh in 2023 to 182 GWh in 2024
- Non-renewable electricity purchases remain negligible, around 0,01–0,012 GWh, indicating a strong preference for green electricity procurement
- Onsite electricity production is very limited, with renewable production increasing slightly by 0,2 GWh in 2023-2024. No non-renewable electricity production is reported

- Renewable electricity consumption has steadily increased from 167,5 GWh in 2022 to 182,0 GWh in 2024.This reflects a 8,6% absolute increase over 3 years, aligned with a growing commitment to green energy
- Non-renewable electricity consumption increased from 8,2 GWh to 14 GWh between 2022-2024, an increase of about 70% during the reported time period. This is caused by the transition to an EV-fleet with a lot of charging in third-party charging stations.Telenet aims to source 100% of its electricity from renewable sources

**Electricity consumption[3]**
*(GWh – by source)*




**Electricity consumption[3]**
*(GWh – by end-usage)*



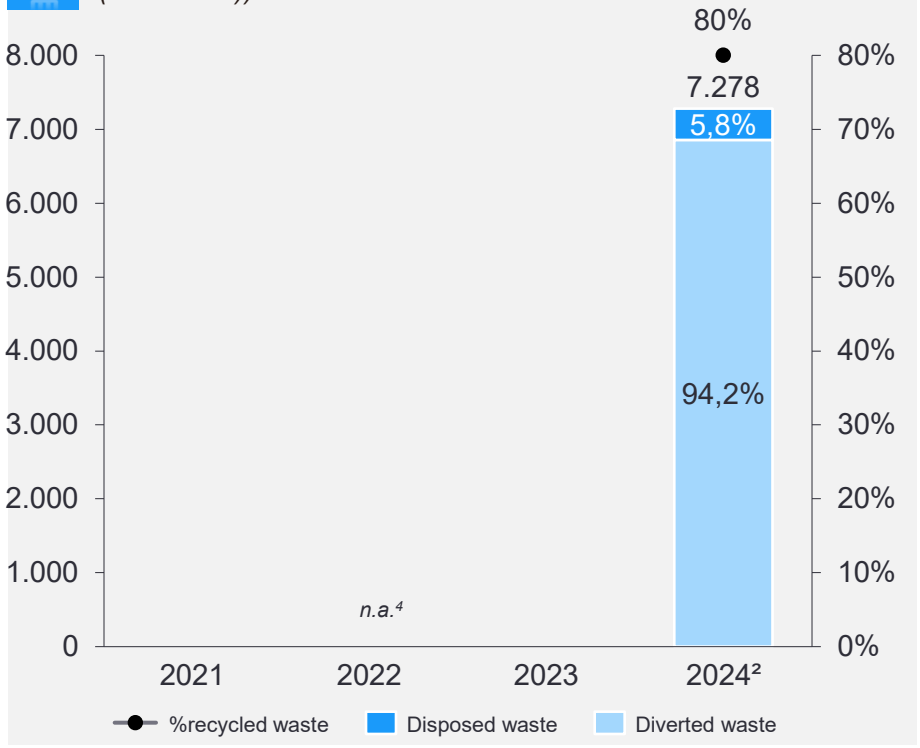

- Core network is the largest and growing driver, it rising from 137,0 GWh (2022) to 152,8 GWh (2024), now ~75% of total electricity use. The increase from ’22-’23 is due to reporting of Eltrona. Whilst the increase from ’23-’24 is due to 5G roll-out and data consumption growth
- Office consumption is a minor contributor represents ~6–7% of total electricity use
- The proportion from the retail network is minimal but increased slightly from 1,6 GWh in 2022 to 1,8 GWh in 2024
- Data centers are stabilizing around 27–29 GWh and now constitute ~15% of total electricity consumption

1. Reporting is done at the Telenet Group Holding level, covering all entities under operational control (≥50%), including, for example, entertainment.
2. Telenet Group Holding uses 2022 as its base year. Comparisons with data prior to 2022 are not possible due to differences in scope and entity coverage. In line with their SBTi targets, reporting is done at the Telenet Group Holding level, covering all entities under operational control (≥50%), including, for example, entertainment. Reported data reflect the global activities of these entities.
3. Telenet was unable to explain the discrepancy in total energy consumption when analyzed by source and end-use, although it assumed that the delta between the totals may be attributed to solar energy production.

# Reduction in waste removal and increase in diversion efforts reflect sustainability commitments

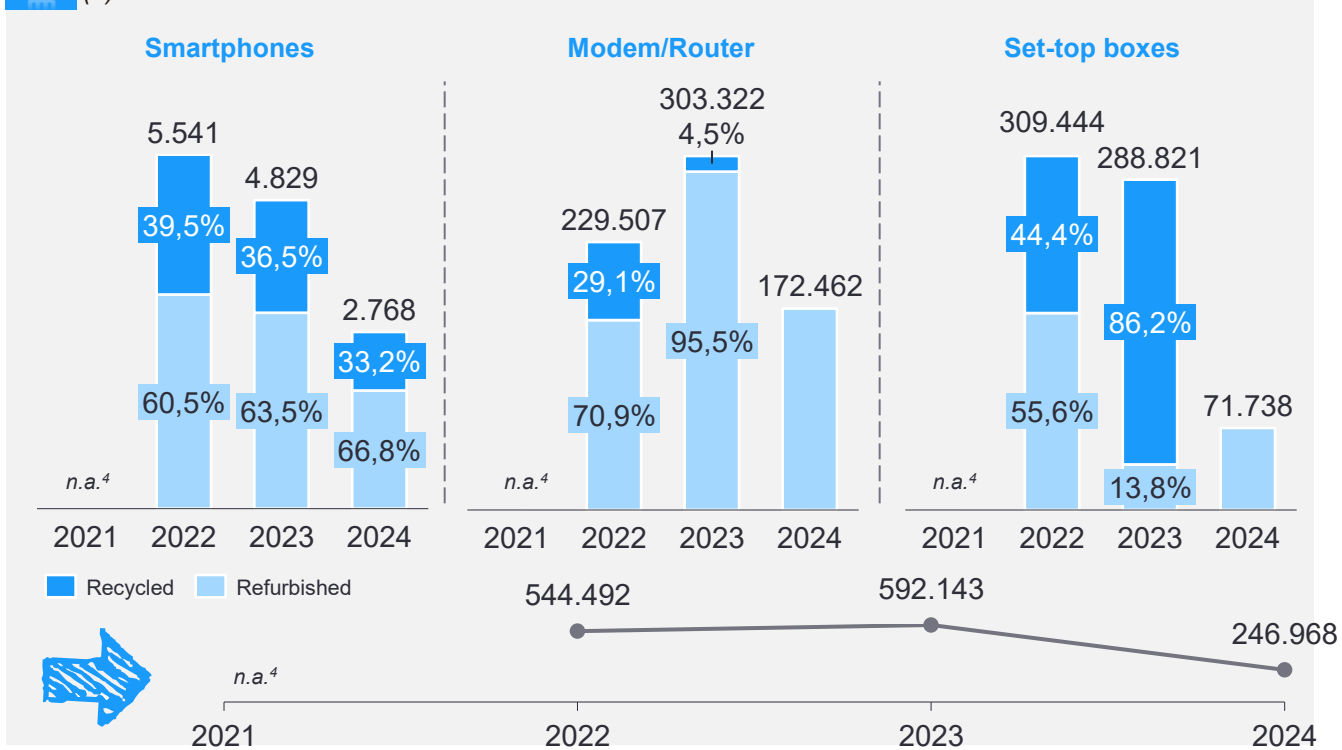
## Waste & recycling

**Waste produced and recycled [1]**
*(Ton and %))*




- In 2024, Telenet generated 7.278 tons of waste, with around 80% of it being recycled
- It is also noteworthy that a significant portion of waste was diverted from disposal

**Recycled / reusable electronic devices [3]**
*(#)*




- Telenet is clearly invested in reuse and recycling, particularly with network equipment.
- Refurbishment outweighs recycling in total volume. However, smartphone returns declined

1. Reporting is not done on a hazardous vs. non-hazardous basis and is an estimation based on subcontractors spend
2. From 2024 onward, waste related to fiber roll-out activities is included. For this data, assumptions were used based on the limited information currently available. As a result, this figure carries a high degree of uncertainty.
3. For '21 not all data was available, in '24: modes & set-top boxes were not included as it was measured in tons
4. Comparisons with data prior to 2024 are not possible due to differences in methodologies, scope, and entity coverage. In line with their SBTI targets, reporting is done at the Telenet Group Holding level, covering all entities under operational control (≥50%), including, for example, entertainment. Reported data reflect the global activities of these entities.

# Telenet has shown strong efforts to reduce its CO2e emissions and increased its energy consumption

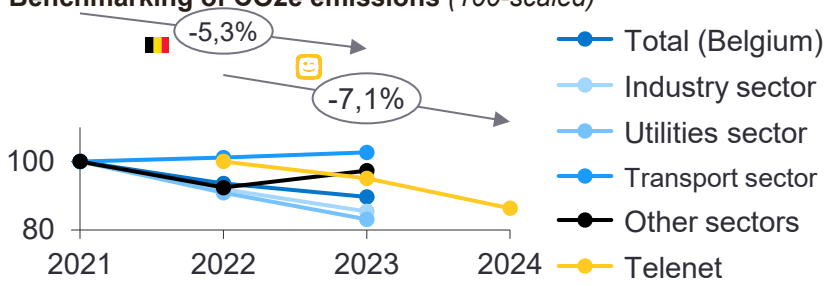
## Conclusion

### Performance vs industries in Belgium[1]

### Takeaways

**CO2e emissions**

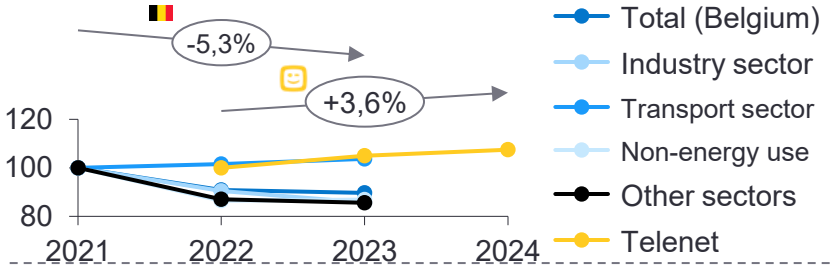
**Benchmarking of CO2e emissions** *(100-scaled)*




- It should first be noted that benchmarking the performance of Telenet against other industries in Belgium is theoretically not directly possible due to discrepancies in the time frames of both analyses. Nevertheless, between 2022 and 2024, it appears that Telenet managed to reduce its emissions more effectively compared to other industries in Belgium during the period from 2021 to 2023
- As our analysis shows, the primary driver of the reduction in CO2e emissions for Telenet comes from its decrease in scope 3 emissions, which represent more than 97% of its total emissions and decreased by about 13% between 2022 and 2024. This reduction has strongly impacted Telenet's overall performance regarding CO2e emissions

**Energy consumption**

**Benchmarking of energy consumption** *(100-scaled)*




- Despite discrepancies in the reported data, Telenet has shown a rise in energy consumption from 2022 to 2024 – whereas Belgian industries have shown a decline in a comparable timeframe. As noted in the analyses, the major increase in energy consumption is driven by the electrification of the vehicle fleet, a rise in data consumption, and the integration of entities
- As noted in our analysis, despite the growing energy consumption, it should be emphasized that Telenet's energy mix has also evolved, showing less reliance in the proportion of non-renewable energy sources and traditional electricity, heating, cooling, or steam. There has been a strong increase in the proportion of renewable energy sources over the last two years, which now represent more than 80% of the total energy consumed

**Waste & recycling**

**Benchmarking of waste production** *(100-scaled)*

*Data inconsistency prevents direct comparisons*

- Because of alterations in methodologies, scope, and the entities reported, it is not possible to directly compare the waste data for Telenet from 2021 to 2024, as only one data point is available for 2024

1. The purpose of this analysis is solely to estimate how well operators perform compared to other industries in Belgium. While differences in business models within each industry can also explain significant variations in performance, the intention is not to make direct comparisons but to provide a general benchmark for evaluating how well an operator performs on various environmental metrics analyzed in this study.

# Proximus's performance showcases an increase in revenues between 2021-2024 and adheres to various sustainability frameworks to measure its environmental performance

## Proximus background

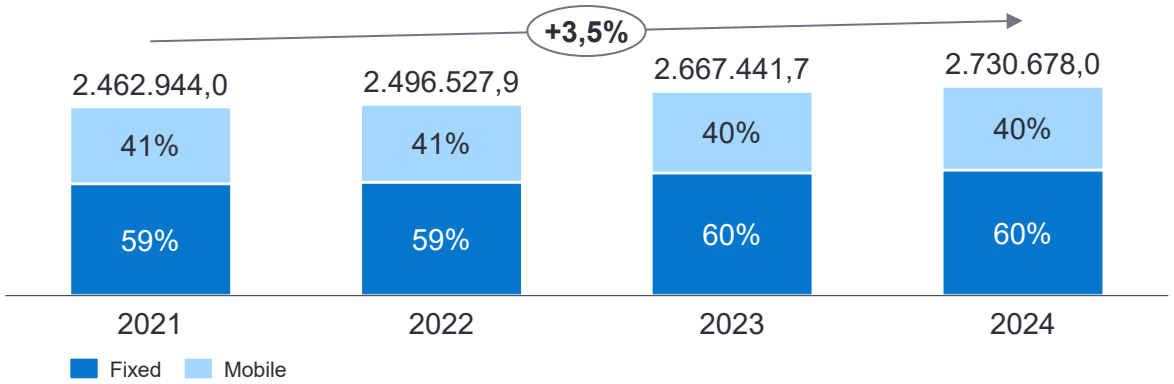
### Description

- Proximus is a leading telecommunications operator in Belgium, providing both mobile and fixed network services.
- Proximus plays a crucial role in the Belgian telecommunications landscape, offering a wide range of services throughout the entire country.

### Collaboration / legal agreements

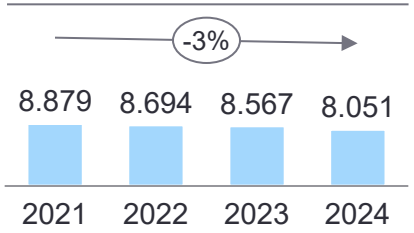
- Proximus has legal affinities with Scarlet, Mobile Vikings, Jim Mobile, Unifiber, GoFiber, Mwingz, and Fiberklaar
- Proximus engages in network sharing collaborations with EDP Net, and Digi

### Revenues *(x1.000, €)*




- As observed, Proximus managed to increase its revenues from €2,4bn in 2021 to €2,7bn in 2024, achieving a CAGR of 3,5% during this period
- It is interesting to note, when analyzing the revenues further, the stable proportion of revenues coming from both mobile and fixed (i.e., Fiber & xDSL) segments, even though the fixed segment has shown a slight increase over the years. This suggests that Proximus managed to structurally improve on the revenues side of its business
- It should be noted that the revenues of Scarlet have been included in retail as of October 1st, 2022, and that the figures represent revenues from the service activities of Proximus

### Employees



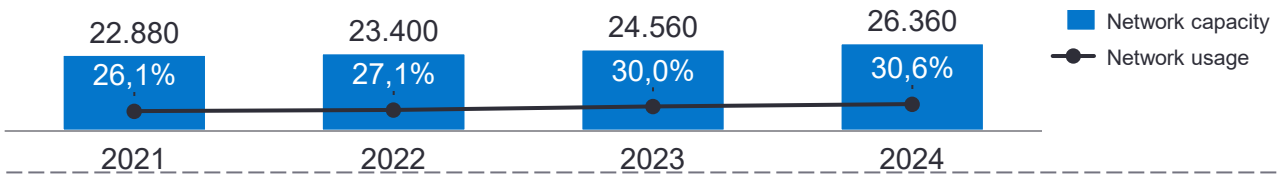

### Governance of sustainability

- To measure and report progress on sustainability objectives, Proximus adheres to several frameworks, including the Science Based Targets initiative (SBTi), the Carbon Disclosure Project (CDP), and the Corporate Sustainability Reporting Directive (CSRD)
- Proximus ensures that its sustainability reporting is compliant with CSRD standards, providing stakeholders with clear insights into its sustainability performance through publicly available annual reports. There is also an external verification through an audit process, enhancing the credibility of the reported data
- Proximus employs a consolidation process at the Group level, ensuring accurate and reliable reporting across its sub-entities

# Proximus has seen an increase in its internet connections and active cards while also increasing its network capacity and usage

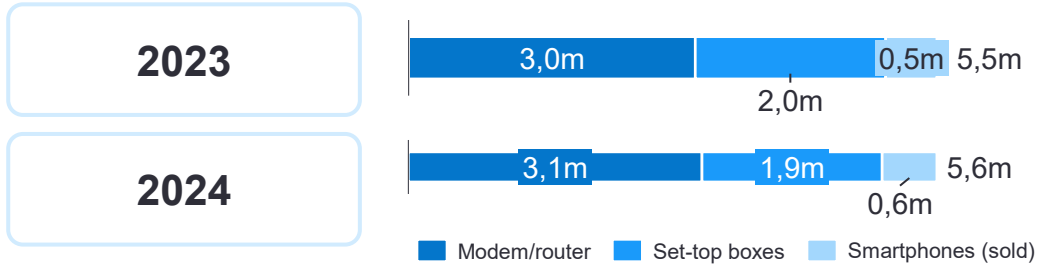
## Business specifics

### Network capacity and usage[1] *(GB/s)*

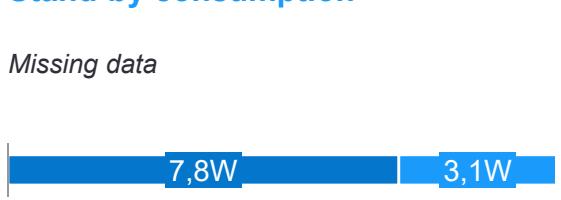



- As observed, the network capacity of Proximus has increased by about 15% between 2021 and 2024.
- It is interesting to note that network usage has strongly increased by about 35% during the same time period, thereby increasing its proportion of network usage by about 4%. This highlights that Proximus has increased the utilization of its network

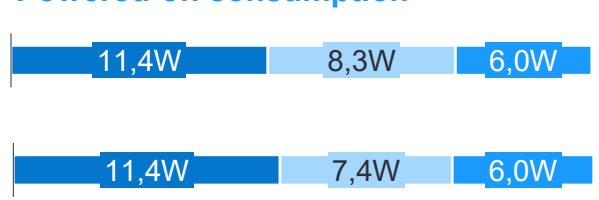
### Number of units in use



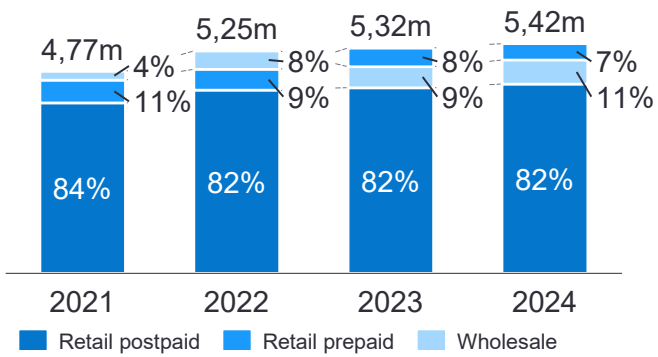

### Stand-by consumption




### Powered-on consumption

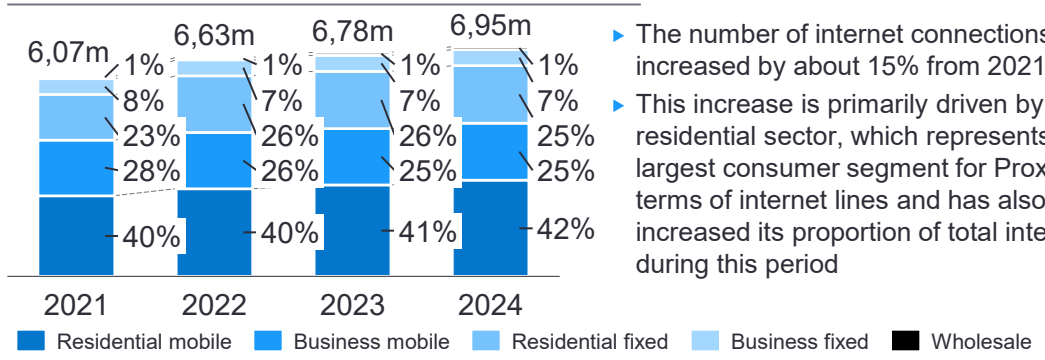



### Number of active cards in use (#)




- The number of active cards in use from Proximus has increased by about 13% between 2021 and 2024
- While most categories have shown proportional growth over this period, it is noteworthy that the number of active cards for wholesale has nearly tripled during the same timeframe

### Number of internet connections (#)



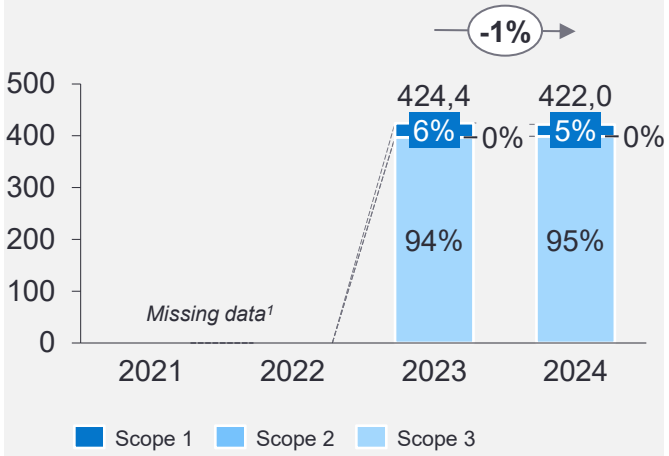

- The number of internet connections has increased by about 15% from 2021-2024
- This increase is primarily driven by the residential sector, which represents the largest consumer segment for Proximus in terms of internet lines and has also increased its proportion of total internet lines during this period

1. The figures presented here pertain to the transport network peak usage between the access network and the services of Proximus. This metric reflects the volume of traffic from access networks that is transmitted during peak times. It is important to note that traffic is managed without differentiation between access types; therefore, the measured usage cannot be disaggregated by access type.

# Proximus shows advances in direct emission reductions, reduced carbon credit dependence, and transition to sustainable fleet options

## CO2 emissions

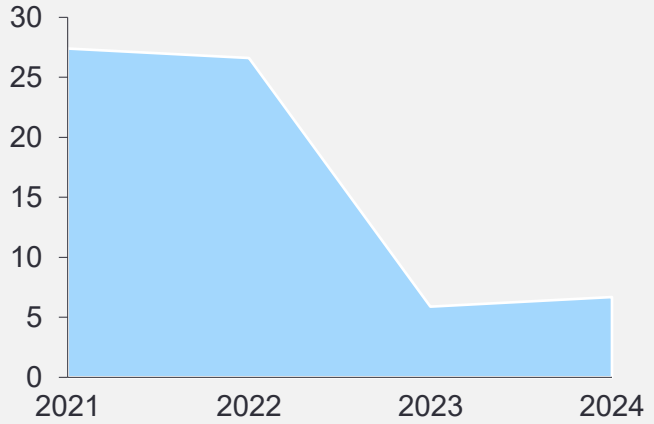
**Annual emissions of all gases converted to CO2 equivalent**
*(Kton CO2e)*



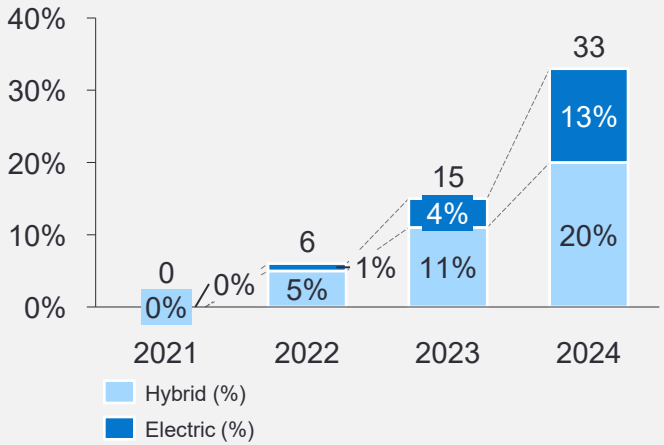

- Takeaways on the emissions over the 3 scopes:
  - **Scope 1** emissions decreased from 27,4 Kton CO2e in 2023 to 23 Kton CO2e in 2024
  - Proximus reported zero **Scope 2** emissions for both 2023 and 2024
  - **Scope 3** emissions show a slight increase from 397 Kton CO2e in 2023 to 399 Kton CO2e in 2024 – explained by the acquisition of Fiberklaar and RouteMobile
- Overall, there is a decreasing trend in direct emissions (Scope 1) while Scope 3 emissions remain influenced by organizational changes, particularly through acquisitions

- In 2021, Proximus compensated 27,4 Kton CO2e through carbon credits, which slightly decreased to 26,6 Kton CO2e in 2022
- There was a notable decline in the compensation amounts in subsequent years, with only 5,9 Kton CO2e compensated in 2023 and a slight increase to 6,7 Kton CO2e in 2024 - reflecting Proximus's strategy towards decarbonization and carbon renewal rather than carbon compensation, which is aligned with its SBTi guidelines

**CO2 emissions offset by carbon credits (scope 1 and 2)**
*(Kton CO2e)*




**Share of the fleet that is electric and hybrid**
*(%)*



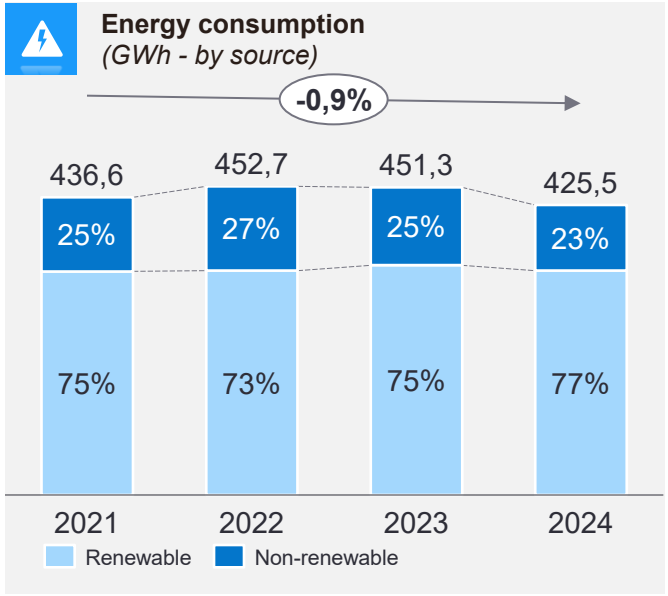

- Trends arise from data on Proximus's fleet:
  - The share of the fleet that is **electric** has risen from 0% in 2021 to 1% in 2022, 4% in 2023, and significantly increased to 13% in 2024. This highlights a growing commitment to integrating electric vehicles into the fleet
  - The share of fleet that is **hybrid** has risen from 0% in 2021, 5% in 2022, 11% in 2023, and reached 20% in 2024.

- Data reflects a clear trend of shifting towards more sustainable vehicle options

1. Emissions data for 2021 and 2022 is not comparable due to a significant methodology update that required a rebase lining of figures.

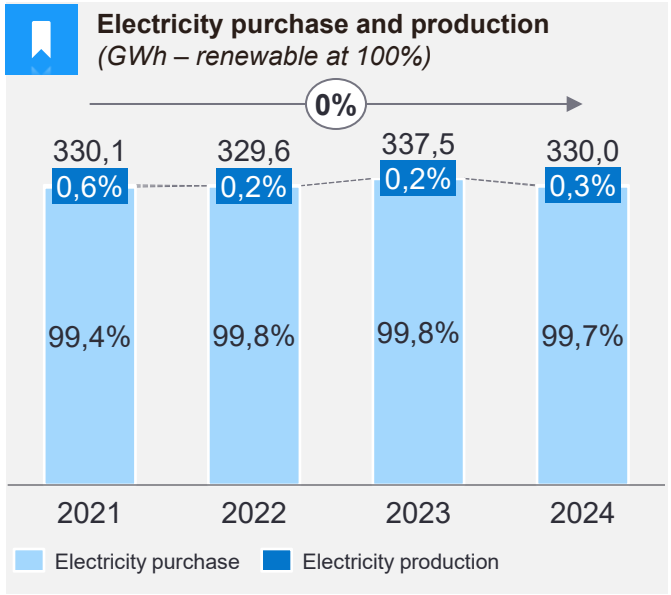
# Proximus shows a steady reliance on renewable energy sources, dynamic usage of non-renewables, and consistent end-usage patterns

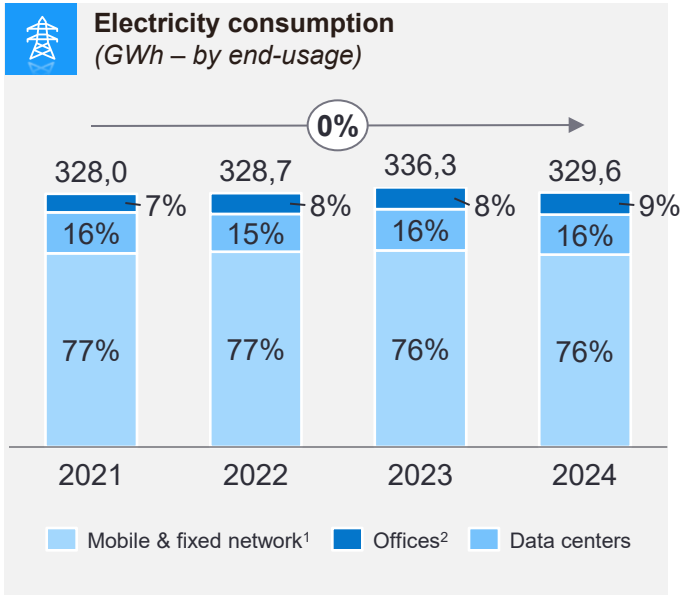
## Energy consumption




- Proximus's energy consumption data reveals notable trends in the use of renewable and non-renewable energy sources:
  - **Renewable energy** consumption has increased, reaching a peak of 337 GWh in 2023 before slightly declining to 329 GWh in 2024
  - **Non-renewable energy** consumption has risen from 109 GWh in 2021 to 124 GWh in 2022, decreased to 114 GWh in 2023 and further declined to 97 GWh in 2024
- It should also be noted that about 25% of the non-renewable energy consumption is consumed from stationary combustion and 75% from mobile combustion

- Proximus has shown a steady increase in renewable electricity purchases, rising from 328 GWh in 2021 to 337 GWh in 2023
- Renewable electricity production has fluctuated, peaking at 2,1 GWh in 2021, decreasing to 0,56 GWh in 2022 and 0,53 GWh in 2023, before increasing to 1,02 GWh in 2024
- Proximus has not engaged in non-renewable electricity purchases or production, emphasizing its focus on renewable energy



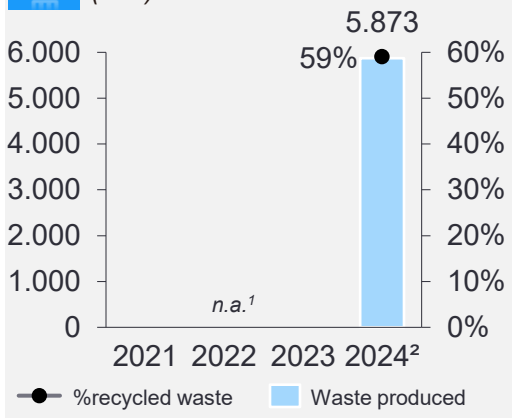

- Electricity consumption across end-usage categories shows a stable pattern:
  - Consumption from the **mobile & fixed network** was recorded at 251 GWh in 2021, increasing to 253 GWh in 2022, and 254 GWh in 2023, and a slight decrease to 249,1 GWh in 2024
  - Electricity consumption for **data centers** remained stable– slightly decreasing from 53 GWh in 2021 to 51,9 GWH in 2024
  - **Office consumption**, has shown a gradual increase from 24 GWh in 2021 to 28,6 GWh in 2024

1. Mobile and fixed network consumption are reported together, limiting the ability to analyze each segment separately.
2. The electricity consumption data for offices encompasses usage from retail shops as well

# Proximus reduced waste production while increasing the volume of recycled and refurbished products over recent years

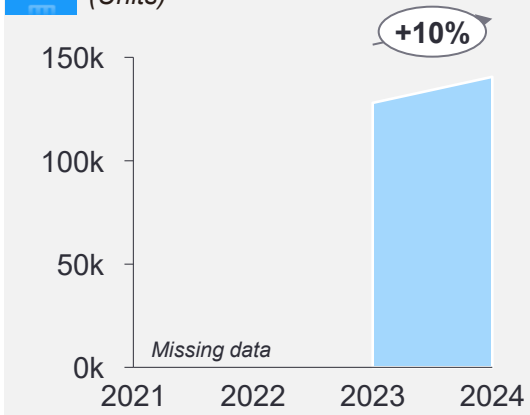
## Waste & recycling

### Total waste produced
*(Ton)*




- In 2024, Proximus produced about 5.873 tons of waste, out of which 59% is recycled
- Proximus also used 2.354 tons of waste for energy recovery

### Recycled smartphones[3]
*(Units)*

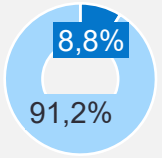



- Proximus has shown an increase in the recycling of smartphones over the past few years. In 2023, the company recycled 128.002 smartphones, which rose to 140.587 units in 2024 – a CAGR of +10%
- This increase is driven by:
  - An internal monitoring of this KPI, particularly linked to sustainable finance and short-term incentives
  - Commercial initiatives encouraging consumers to return their smartphones by monetary incentives

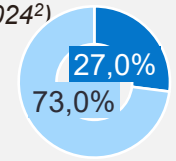
In 2024, Proximus reported a minimal amount of waste that was disposed of, totaling 68 tons. This includes 6 tons of hazardous waste and 62 tons of non-hazardous waste

Proximus successfully diverted a significant amount of waste from disposal, totaling 5.805 tons. This includes 1.569 tons of hazardous waste and 4.236 tons of non-hazardous waste

### Waste that has been disposed of[2]
*(Ton - 2024[3])*




### Waste diverted from disposal
*(Ton - 2024[2])*



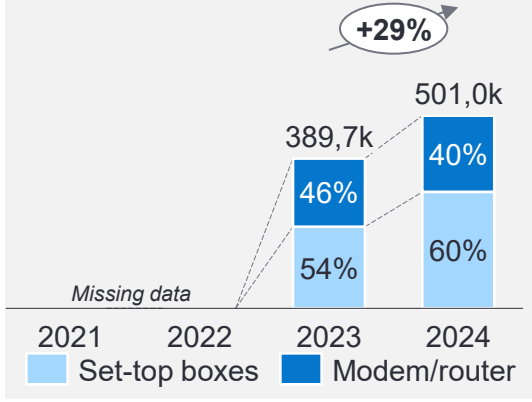




Proximus has demonstrated a consistent increase in the number of refurbished products over the past two years, achieving a CAGR of 29% and stable across product categories

This performance is attributed to the seasonal release of new versions of set-top boxes and modems/routers, which are leased and replace older generations of devices used by customers. This replacement process can result in variations in the proportions between different product categories

### Refurbished products[4]
*(Units – by product type)*




1. Due to changes in methodologies, comparisons prior to 2024 are not possible. As of 2024, Proximus uses the CSRD reporting standards to record waste production
2. Waste disposal is defined by Proximus as the combination of landfill and incineration without energy recuperation.
3. Due to changes in definitions and data that has not been restated, analysis of other years in not possible
4. In 2023, Proximus collected 927.434 recycled and refurbished electronic devices, which increased to 1.075.965 devices in 2024. This total includes collected mobile phones for recycling and refurbishing activities.

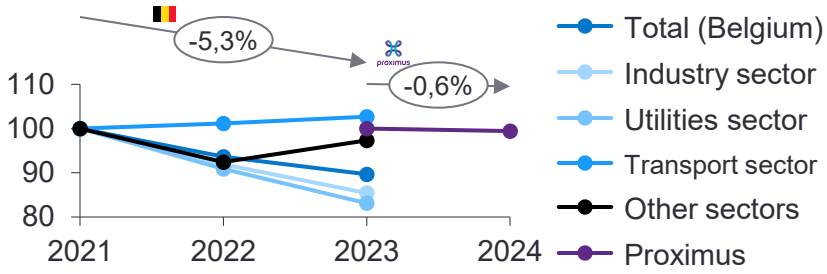
# Proximus successfully reduced waste production despite below-average reductions in $CO_2$ emissions and energy consumption

## Conclusion

### Performance vs industries in Belgium[1]

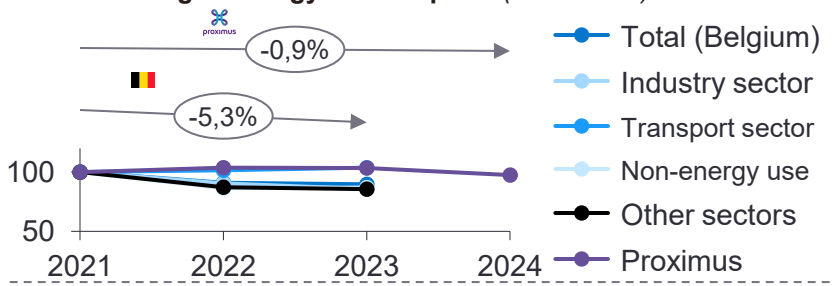
**CO2e emissions**

**Benchmarking of CO2e emissions** *(100-scaled)*




**Energy consumption**

**Benchmarking of energy consumption** *(100-scaled)*




**Waste & recycling**

**Benchmarking of waste production** *(100-scaled)*

*Data inconsistency prevents direct comparisons*

### Takeaways

- Benchmarking Proximus's $CO_2$ emissions performance against other industries is not directly feasible due to the lack of data for the years 2021-2022 regarding Proximus's $CO_2$ emissions. However, it appears that Proximus's trend in $CO_2$ emissions reduction is below the average of other industries in Belgium
- It should be noted that the acquisition of Fiberklaar and RouteMobile has contributed to an increase in Proximus's Scope 3 emissions, while Scope 1 emissions have decreased. Additionally, Proximus relies less on carbon credits to offset Scope 1 and 2 emissions. The company has also increased the proportion of its electric and hybrid vehicle fleet, further impacting Scope 1 emissions

- Benchmarking Proximus's energy consumption performance against other industries in Belgium is challenging due to discrepancies in reported data regarding the time series. However, while all industries in Belgium have managed to reduce their energy consumption over the past few years, Proximus has shown only a smaller decrease in energy consumption during the reported time period
- In terms of energy sources, Proximus has maintained its emphasis on renewable energy, with an average of around 75% of its energy coming from renewable sources. Additionally, Proximus has demonstrated consistent purchasing, production, and usage of electricity over the years

- Due to changes in methodologies, direct comparison of Proximus waste data between 2021 and 2024 is not feasible, as only a single data point exists for 2024.
- In 2024, Proximus follows the CSRD reporting standards and has updated its waste recording practices accordingly

1. The purpose of this analysis is solely to estimate how well operators perform compared to other industries in Belgium. While differences in business models within each industry can also explain significant variations in performance, the intention is not to make direct comparisons but to provide a general benchmark for evaluating how well an operator performs on various environmental metrics analyzed in this study.

# Orange has shown an increase in its revenues between 2023-2024, adhered to various environmental frameworks and audits its performance externally

## Orange background

### Description

**Orange** is headquartered in Belgium and operates both a **mobile and fixed network provider in Belgium** with 2.822 employees in 2024.

### Collaboration / legal agreements

- 100% owner of VOO *(since May 2024)*
- Hey! *(B-brand, no separate judicial entity)*
- Mwingz *(joint venture with Proximus, for the management & consolidation of mobile network antennas)*

### Firmographics

**Share of revenues in 2024**[1]

Confidential data

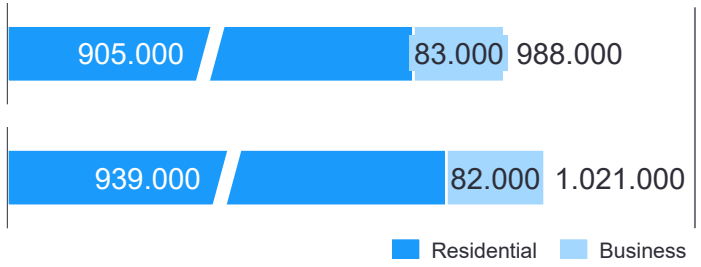
### Governance of sustainability

- **Monitoring and reporting framework**: In addition to compliance with the CSRD, sustainability progress is monitored through Science Based Targets (set at group level) and internal quarterly ESG performance reviews
- **Emissions accounting and scope management**: To prevent double-counting across scopes 1, 2, and 3, sub entities like Orange Luxembourg independently collect and calculate their carbon footprint following standardized Orange Group methodologies
- **Verification and audit**: Key ESG indicators are externally verified or audited. The CSRD annual report is audited by Deloitte, alongside a group-level audit conducted by Orange Group

**# Active SIM cards**
*(Number - by customer type)*

Confidential data

**# Fixed broadband connections**
*(Number - by customer type)*



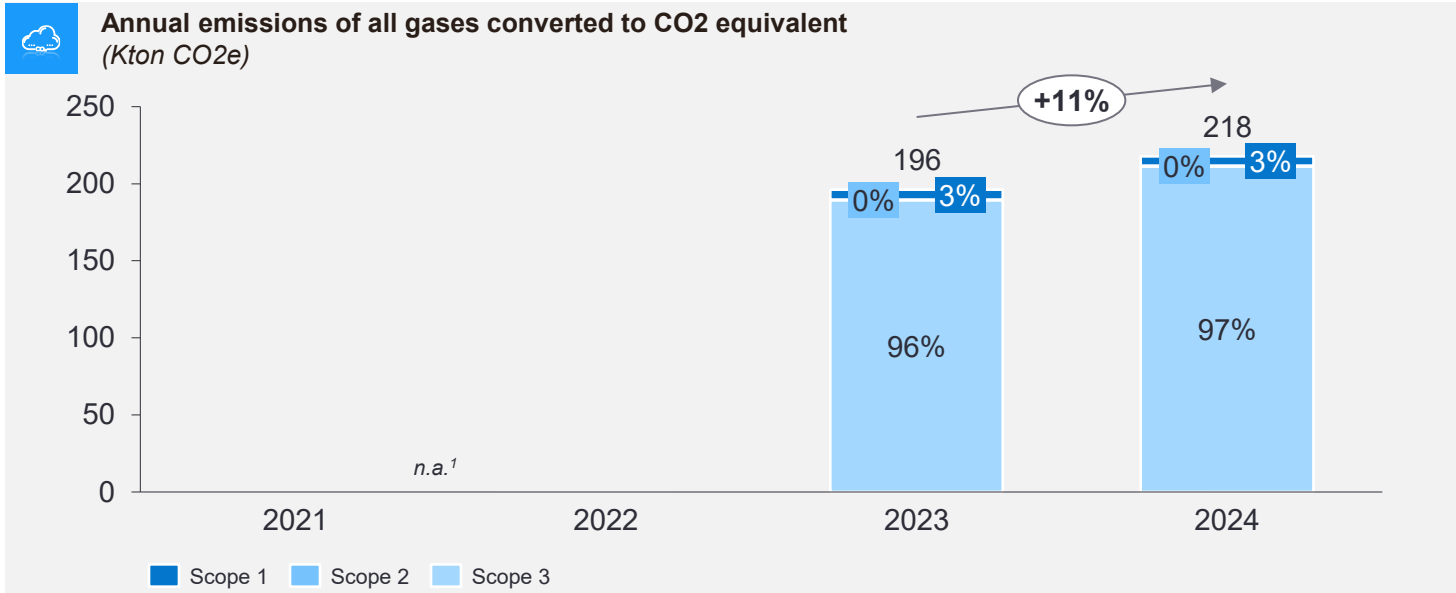

**Consumption of products in 2024**
*(W - by product type)*

Confidential data

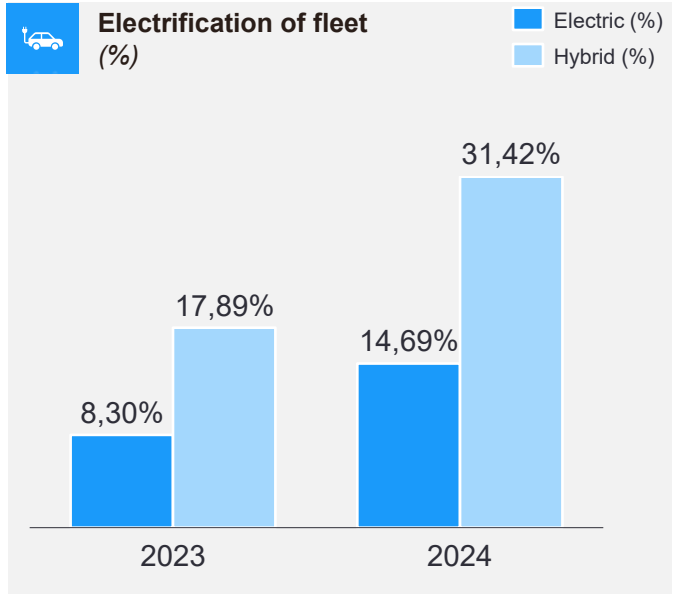
1. Revenues are the sum of VOO and OBE retail mobile or retail fixed, and excludes revenue related to broadcasting or wholesale

# Total Emissions increased by a 11% from 2023 to 2024, driven by Scope 2 and 3, while declining fleet electrification challenge decarbonization efforts

## CO2 emissions




- Total emissions increased by a CAGR of 11% from 2023 to 2024, driven largely by rising Scope 3 emissions.
- Scope 3 emissions remain the largest proportion of all emissions and have also driven the increase as they grew by 11,6% between the two years while scope 1 and 2 emissions have remained stable
- It should also be noted that no removals are currently in use; credits related to removals will be introduced in the coming years, pending project development, verification, and regulatory alignment

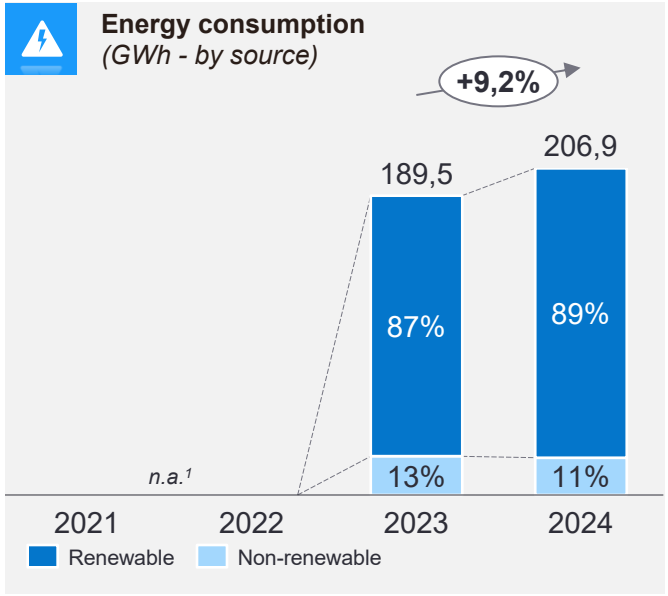



- The share of electric vehicles (EVs) in the fleet increased from 8,30% in 2023 to 14,69% in 2024
- Similarly, the hybrid vehicle share increased from 17,89% to 31,42%

1. According to the CSRD reporting standards in 2024, Orange has only covered the periods of 2023-2024, which prevents a direct comparison with 2021-2022

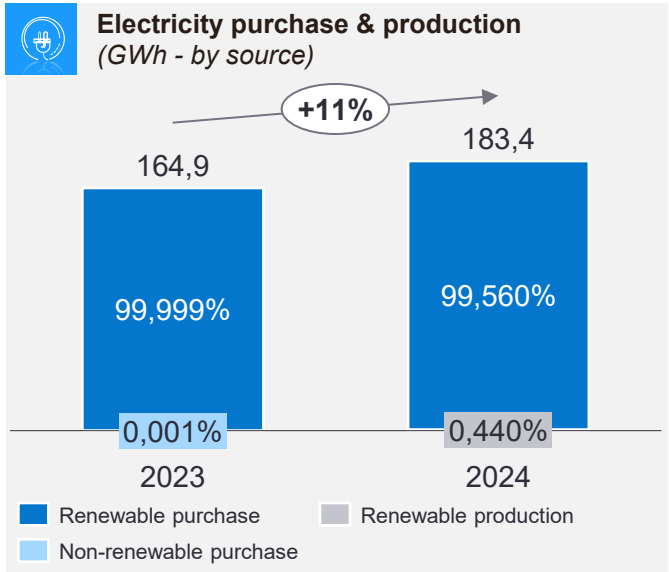
# Despite doubling energy consumption, a €11,5m investment in energy efficiency led to over 99% of electricity sourced from renewables

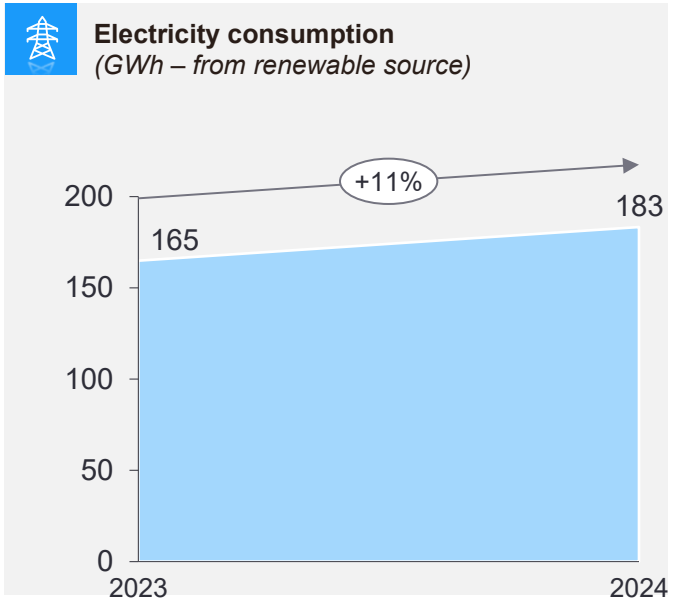
## Energy consumption




- Total energy consumption increased from ~190 GWh in 2023 to ~207 GWh in 2024, increasing by a CAGR of 9,2% over the years
- The data shows a strong reliance on renewable energy, with renewables making about 89% of energy sources
- Non-renewable consumption decreased slightly between the two years by only about 1GWh

- In both 2023 and 2024, virtually all electricity purchased is renewable (>99%), indicating a fully decarbonized procurement strategy
- On-site renewable electricity production began in 2024 (0,806 GWh), representing the start of energy autonomy or infrastructure investment
- There is no recorded non-renewable electricity production, underscoring a strategic avoidance of fossil-based generation



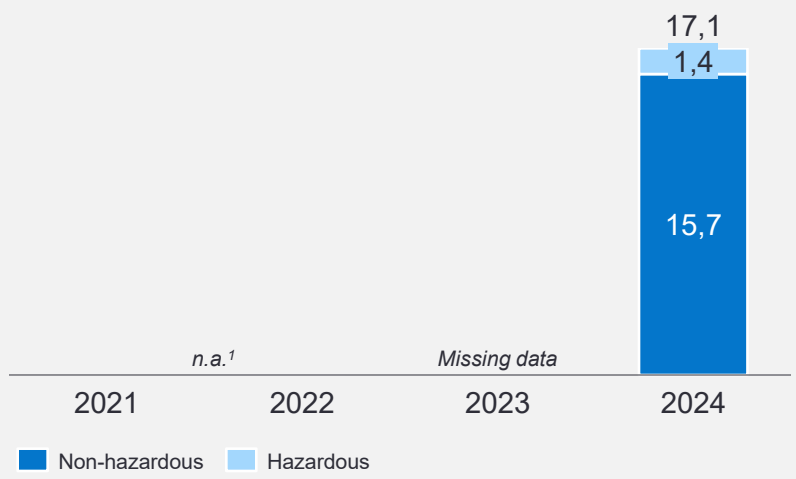

- Electricity use (100% from renewable sources) increased by 11,1% between 2023 and 2024 (from 165,0 GWh to 183,4 GWh), driven by an increase in business activity, consumption from the network and buildings, and an increase in the number of shops following the acquisition of Voo
- It should be noted that despite rising mobile consumption, as technologies become more energy efficient, the ratio of energy consumption to mobile consumption should decrease over time[2]

1. According to the CSRD reporting standards in 2024, Orange has only covered the periods of 2023-2024, which prevents a direct comparison with 2021-2022
2. Based on a study of Orange on the energy efficiency of 5G technology done in 2019

# Insights on waste & recycling are limited considering discrepancies in reporting standards between 2021-2024

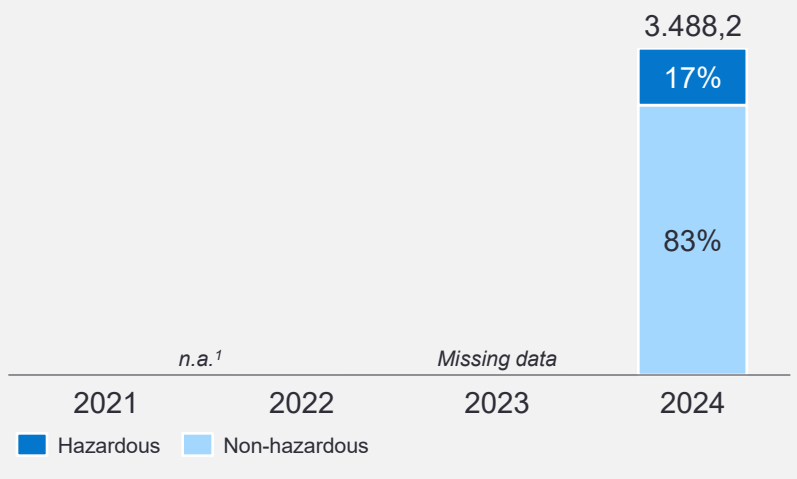
## Waste & recycling

**Waste that has been disposed of[1]**
*(Ton - by source)*




- Unfortunately, due to changes in reporting standards between 2021 and 2024, discrepancies in the data prevent meaningful comparisons.
- Specifically, as of 2024, Orange Belgium adheres to the CSRD reporting standards, whereas in 2021, waste monitoring was based on EU waste code categories. As the measurement methods and parameters have changed since then, direct comparison is not feasible.

**Waste diverted from disposal[1]**
*(Ton - by source)*




- Unfortunately, due to changes in reporting standards between 2021 and 2024, discrepancies in the data prevent meaningful comparisons.
- Specifically, as of 2024, Orange Belgium adheres to the CSRD reporting standards, whereas in 2021, waste monitoring was based on EU waste code categories. As the measurement methods and parameters have changed since then, direct comparison is not feasible.
- Still, the proportion of non-hazardous waste that has been diverted from disposal is dominant as opposed to hazardous waste diverted from disposal

1. Data between 2021-2022 do not include VOO and Orange Luxemburg

# Orange's environmental performance shows increases in $CO_2e$ emissions and energy consumption, likely due to its acquisition of Voo

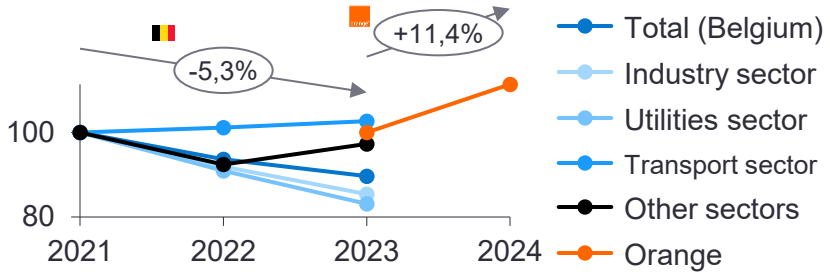
## Conclusion

### Performance vs industries in Belgium[1]

### Takeaways

**CO2e emissions**

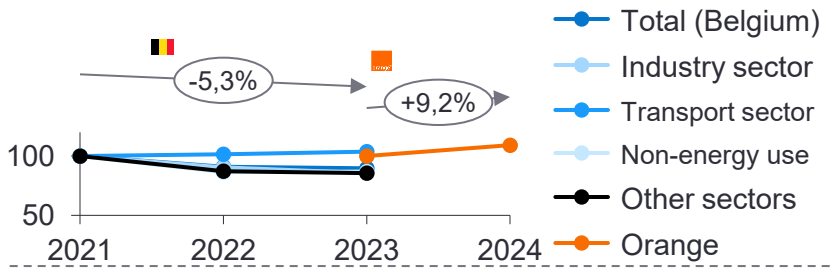
**Benchmarking of CO2e emissions** *(100-scaled)*




- Even though direct comparisons with other industries in Belgium are difficult due to differences in time series, the data clearly indicate that Orange's $CO_2e$ emissions have strongly increased over the last two years, moving in the opposite direction of other industries in Belgium
- This increase is largely driven by a rise in Scope 3 emissions which are the largest and grew by about 11% between 2023-2024

**Energy consumption**

**Benchmarking of energy consumption** *(100-scaled)*




- Similarly to $CO_2e$ emissions, Orange's energy consumption has increased over the last two years, in contrast to other industries in Belgium, which have managed to reduce their energy consumption levels
- Deeper insights into the sources of energy consumption reveal a slight increase in the consumption of renewable energy over the 2 years
- Analyzing the sources of energy consumption further, Orange's electricity consumption has also shown a strong increase over the years, even though it should be noted that almost 100% of its electricity is purchased from renewable sources

**Waste & recycling**

**Benchmarking of waste production** *(100-scaled)*

*Missing data prevents direct comparisons*

- Due to the lack of data on waste production at Orange, direct benchmarking with other industries in Belgium is unfortunately not possible

1. The purpose of this analysis is solely to estimate how well operators perform compared to other industries in Belgium. While differences in business models within each industry can also explain significant variations in performance, the intention is not to make direct comparisons but to provide a general benchmark for evaluating how well an operator performs on various environmental metrics analyzed in this study.

# As a new arrival on the Belgian market since 2024, Digi shows moderate revenues and adheres to the CSRD standards

*As Digi entered the Belgian market in 2024, data has been provided for that year only*

## Digi background

### Description

Digi is a telecommunications operator headquartered in Brussels, Belgium, with its global headquarters situated in Bucharest, Romania. Digi focuses on delivering competitive mobile offerings while simultaneously expanding its fiber-optic fixed-line services in the Belgian market, aiming to provide high-speed internet access to a broader audience

### Collaboration / legal agreements

- Wholesale Radio Access Network (RAN) agreement Proximus
- Collaborates on network sharing with Citymesh

### Infrastructure factsheet

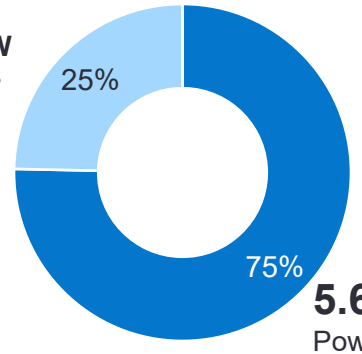
Confidential data

### Modem/routers general information

Confidential data

**7.500w**
Total consumption

**1.850w**
Stand-by[5]




**5.650w**
Powered-on[6]

### Firmographics

Confidential data

### Governance of sustainability

- Sustainability performance are reported in accordance with the Corporate Sustainability Reporting Directive (CSRD)
- Digi is working towards obtaining ISO 14001 certification
- Next to the CSRD required KPI's, Digi measures the number of ESG training hours per employee
- KPIs are currently not being externally audited or verified

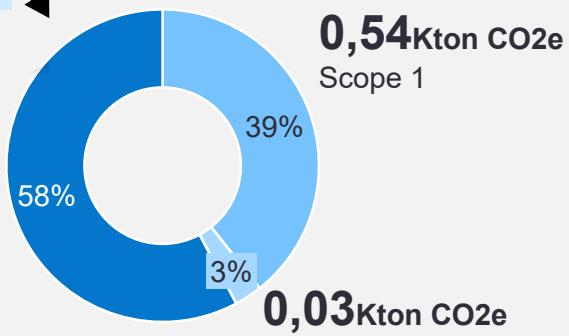
1. €31,085 for mobile revenue and €323 for fixed (fiber) revenue in 2024 (excl. interconnect revenue)
2. Excluding interns & freelancers
3. 500 Mbps & 1 Gbps connections utilize 2 modem/routers, 10 Gbps connections use 1 modem/router
4. All equipment installed by a technician
5. Accumulated consumption based on the total # devices (theoretical consumption)
6. Powered-on consumption is based on the specific models of routers used (theoretical consumption)

# In 2024, Digi's total emissions reached 1,37 Kton CO2e, primarily from fleet fuel consumption and flights by detached workers

## CO2 emissions

**Annual emissions of all gases converted to CO2 equivalent**
*(Kton CO2e)*

**1,37 Kton CO2e**
Total emissions (2024)




**0,54Kton CO2e**
Scope 1

**0,79Kton CO2e**
Scope 3

**0,03Kton CO2e**
Scope 2

- Notable trends were seen across the 3 scopes:
  - **Scope 1** emissions, totaled 0,542 Kton CO2e. This figure was primarily driven by the consumption of 208.000 liters of fuel by the Digi Belgium fleet in 2024. These emissions are expected to rise with ongoing infrastructure development, though fleet electrification should help offset some of the increase
  - **Scope 2** emissions totaled 0,039 Kton CO2e. This total includes emissions from the Oostkamp office, contributing 0,020 Kton CO2e, and the Brussels office, which accounted for 0,019 Kton CO2e. And are likely to increase significantly, driven by network expansion and the Brussels office relocation, though precise forecasting remains difficult
  - **Scope 3** emissions, were estimated at 0,796 Kton CO2e for Digi. This estimate includes emissions from 1,401 round-trip flights taken by 771 detached workers traveling between Romania and Belgium to deploy the network. These are projected to rise sharply due to network deployment and retail activity growth

**Share of the fleet that is electric and hybrid**
*(%)*

**0%**
Share of the fleet that is hybrid (2024)

**10%**
Share of the fleet that is electric (2024)

- 10% of Digi's fleet was electric in 2024.The percentage is based on assumptions related to both the construction fleet and the employee fleet, and it is subject to confirmation
- There are currently no hybrid vehicles in the fleet

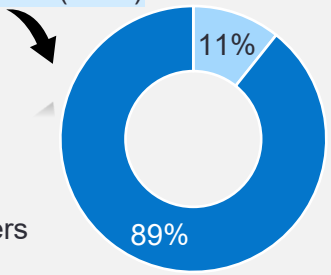
# In 2024, Digi consumed 0,084 GWh of renewable energy and 0,7 GWh of non-renewable energy, mainly for data centers

## Energy consumption

**Energy consumption**
*(GWh - by source)*

**0,78 GWh**
Total energy consumption (2024)

**0,08 GWh**
Renewable




**0,61 GWh**
For data centers

**0,17 GWh**
For offices

**0,70 GWh**
Non-renewable

- In 2024, 0,084 GWh of Digi's energy consumption was derived from renewable sources and 0,7 GWh from non-renewable sources. Electricity consumed at the Brussels office is sourced from renewable energy, a fact supported by a traceability certificate provided by Engie
- It should be noted that 2024 is not representative of Digi's general performance, as the company concentrated on building its network and providing power to its sites. During this period, Digi did not have the option to be selective regarding the source of energy used

- In 2024, Digi's consumption of mobile combustion fuel, specifically vehicle fuel, was estimated at 1,79 GWh. This figure is based on the consumption of 208.000 liters of diesel for the company fleet
- In 2024, Digi's consumption of fuel from other sources, specifically in air conditioning units and fire suppression systems, was recorded at 0,613 GWh. This figure is based on the reserved power for the data centers located in Geleen and Hasselt

**Fuel consumption from non-renewable sources**
*(GWh)*

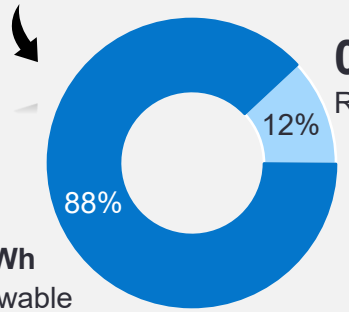
**1,79 GWh**
Mobile fuel consumption - for *offices* (2024)

**0,61 GWh**
Fuel Consumption from other sources – for *data centers* (2024)

**Electricity consumption**
*(GWh)*

**0,69 GWh**
Total electricity consumption (2024)

**0,08 GWh**
Renewable



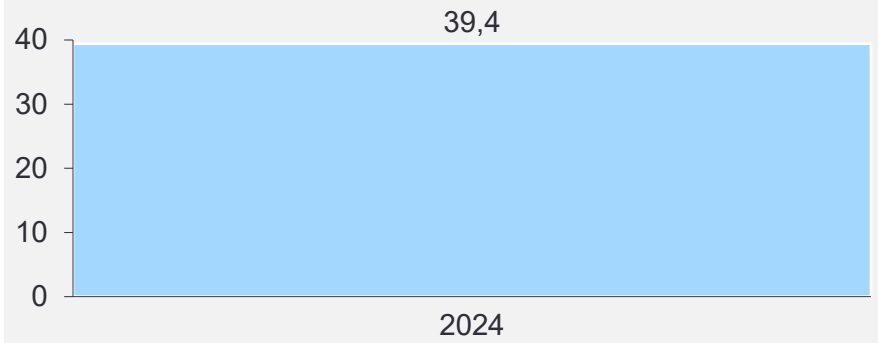

**0,61 GWh**
Non-renewable

- In 2024, Digi's total electricity consumption from renewable sources amounted to 0,084 GWh, while non-renewable sources accounted for 0,613 GWh, primarily from the data centers located in Geleen and Hasselt
- In the future, as the deployment of the network and related commercial and operational activities continues, Digi's electricity consumption is expected to increase. It will be important to monitor the sources of that electricity over time

# In 2024, Digi generated 39 tons of waste, with 36 tons disposed of out of which 31,18 tons was non-hazardous

## Waste & recycling

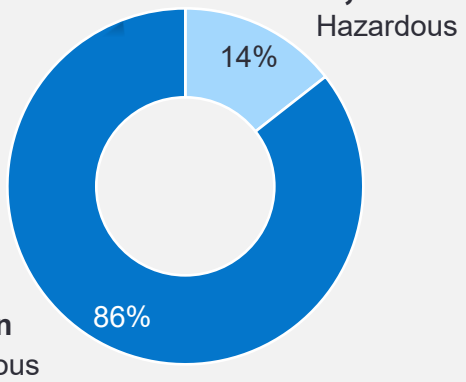
**Waste produced**
*(Ton)*




- In 2024, Digi produced a total of 39,39 tons of waste, a figure derived from invoices provided by Renewi. Of this total, 3,95 tons correspond to waste generated at the Brussels office, while another portion of the waste originates from Digi's warehouses
- With the expansion of business activities, waste production is expected to increase in the coming years, primarily driven by consumption-related waste

**Waste that has been disposed of**
*(Ton)*

**36,44Ton**
Waste disposed of (2024)




- Regarding waste disposal Digi managed a total of 36,44 tons of waste in 2024, segmented into hazardous and non-hazardous types. Of this total, 5,26 tons were classified as hazardous waste, while 31,18 tons were non-hazardous. These figures are also based on data from Renewi

# Benchmarking Digi's environmental performance isn't possible yet, but its evolution will be interesting to monitor

## Conclusion

| | Performance vs industries in Belgium | Takeaways |
|---|---|---|
| CO2e emissions | **Benchmarking of CO2e emissions** *(100-scaled)*<br><br>*Comparisons impossible as Digi entered the market only in 2024* | ▸ Analyzing Digi's performance on $CO_2e$ emissions, it can be concluded that Scope 3 emissions encompass the largest proportion of its total emissions. It will be interesting to monitor Digi's performance related to $CO_2e$ emissions over time as it deploys its network.<br>▸ Notably, the proportion of vehicles that are electric or hybrid is low, with only 10% of the total fleet being electric in 2024 and 0% being hybrid. |
| Energy consumption | **Benchmarking of energy consumption** *(100-scaled)*<br><br>*Comparisons impossible as Digi entered the market only in 2024* | ▸ Analyzing Digi's energy consumption, it is noteworthy that a relatively high proportion (89%) of its energy comes from non-renewable sources. The same conclusion can be drawn from its electricity consumption, which also derives the majority (89%) from non-renewable sources. It will be interesting to monitor how this proportion evolves over time.<br>▸ Additionally, when analyzing the usage patterns of the energy consumed, it is interesting to note the relatively high proportion of energy used by Digi's offices compared to its data centers, which tend to be very energy-intensive. Again, it will be interesting to monitor how this evolves over time, as Digi's network and data centers usage is likely to increase as it deploys its network and establishes itself in the Belgian market. |
| Waste & recycling | **Benchmarking of waste production** *(100-scaled)*<br><br>*Comparisons impossible as Digi entered the market only in 2024* | ▸ It's interesting to note that a large proportion of the waste at Digi is disposed of and that the proportion of this waste is mainly non-hazardous<br>▸ As for the other metrics, it will be interesting to monitor this performance over time |

# Eurofiber has seen an increase in revenues over the last years, a slight decrease in its cabling infrastructure, and adhered to the CSRD reporting standards

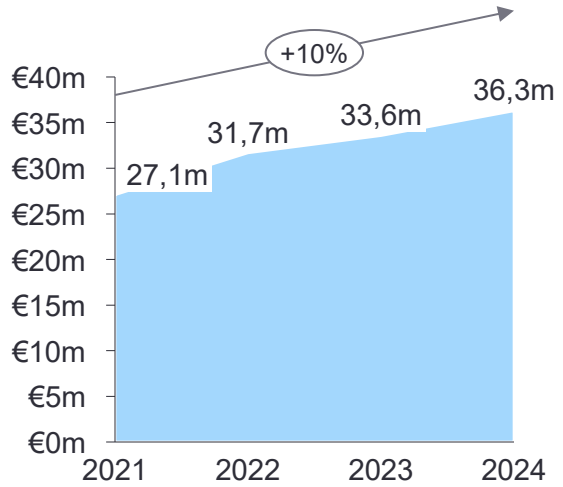
## Eurofiber background

### Description

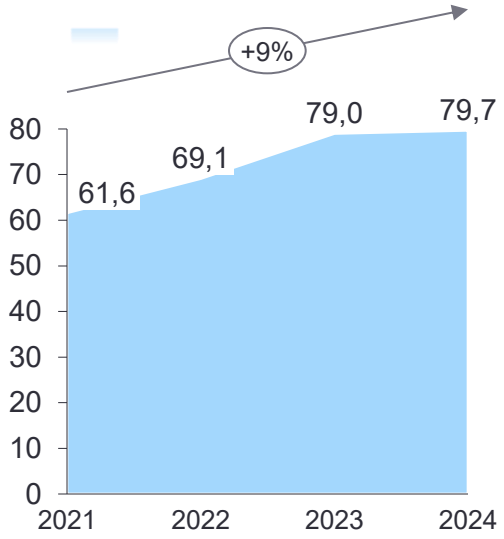
Eurofiber is a prominent fixed network provider operating throughout Belgium, dedicated to delivering high-quality connectivity solutions. Although not headquartered in Belgium, Eurofiber has established a significant presence in the region, providing robust network infrastructure

### Firmographics

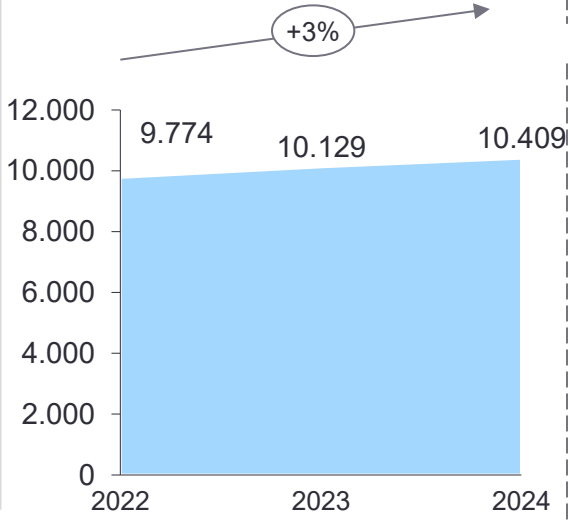
**Revenue evolution[1]** *(€)*




**Number of employees[2]** *(FTEs)*




**Cabling infrastructure[3]** *(km)*




1. Revenue is exclusively business-to-business and pertains specifically to the fixed and fiber segment
2. The number of employees computed in full-time equivalents (FTE)
3. Specifically focusing on its core network. This figure excludes the network operated by its joint venture, Unifiber.

### Collaboration / legal agreements

- In 2021, Eurofiber entered into a 50/50 joint venture with Proximus to create Unifiber, a company tasked with deploying an open-access fiber optic network across Wallonia. The objective is to connect at least 500.000 households and small businesses by 2028
- In addition to its co-ownership, Eurofiber has also signed a collaboration agreement with Unifiber, allowing it to access the network and offer secure, symmetrical fiber connections to enterprise clients

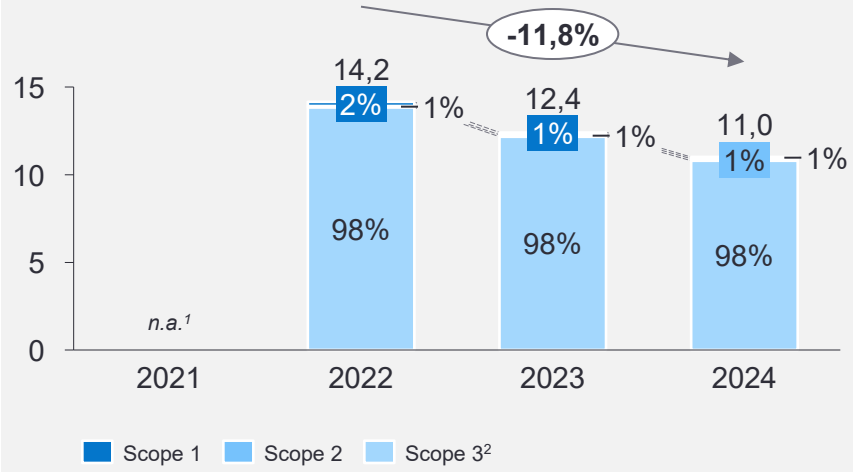
### Governance of sustainability

- Eurofiber adheres to the CSRD and employs additional frameworks such as Science Based Targets
- Own annual ESG reporting, which is externally validated (incl. assessments through KEY ESG and GRESB, as well as Ecovadis) and are publicly available
- In addition to required KPI's, Eurofiber measures % of female managers and reports on signed Supplier Code of Conduct

# Eurofiber significantly reduced emissions across all scopes, while increasing its electric vehicle fleet share from 16% to 68%

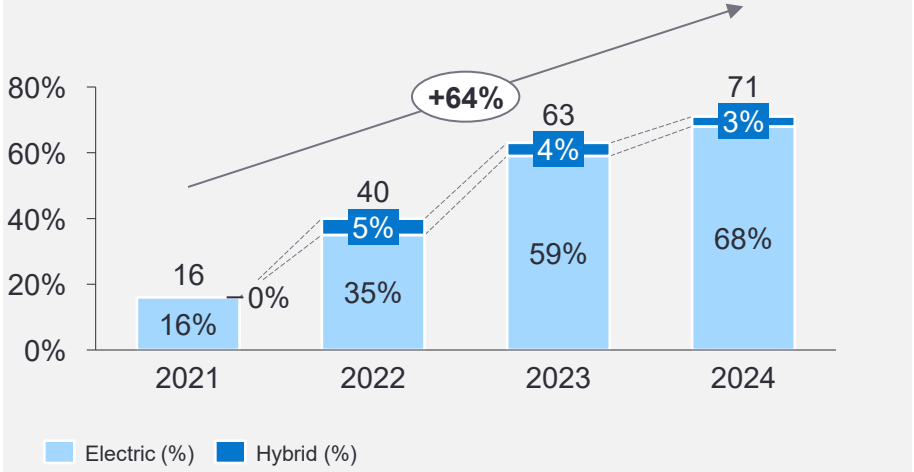
## CO2 emissions

**Annual emissions of all gases converted to CO2 equivalent**
*(Kton CO2e)*




- There was a decline in emissions by a CAGR of 11,8% between 2022 and 2024, with a similar distribution across all scopes
- As of 2024, Eurofiber's calculations are based on the spend-based methodology, which may lead to an increase in Scope 3 emissions in the future as investments in infrastructure are being made

**Share of the fleet that is electric and hybrid**
*(%)*



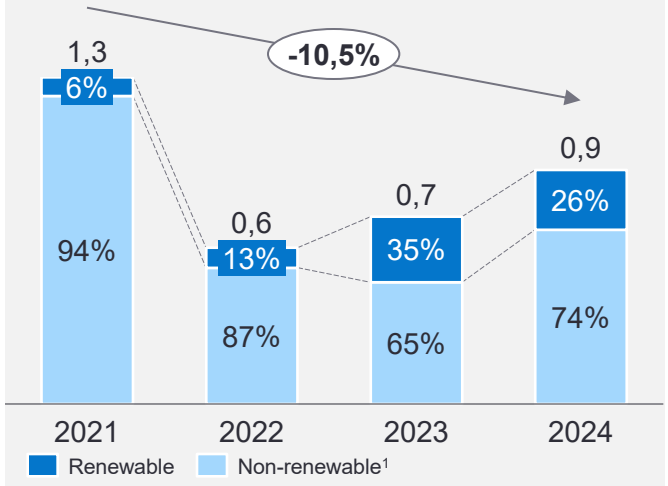

- As of 2024, 68% of Eurofiber's fleet is comprised of electric vehicles, a significant increase from 16% in 2021. Since January 2022, Eurofiber Belgium has implemented a 100% EV lease policy, allowing only new lease vehicles that are fully electric. This policy aims to phase out fossil fuel and hybrid lease vehicles over the coming years
- The share of hybrid vehicles in the fleet has decreased from 5% in 2022 to 3% in 2024, reflecting the company's commitment to transitioning to a fully electric fleet

1. Change in methodology of data collection, used to calculate Scope 3 emissions, resulted in a more accurate computation starting in 2022
2. The reported figures for Scope 3 may be slightly underestimated due to certain costs being attributed to the holding company, which falls within the CO2 footprint of Eurofiber Nederland

# Eurofiber has shifted towards sustainability, increasing renewable energy consumption, whilst reducing non-renewable consumption

## Energy consumption

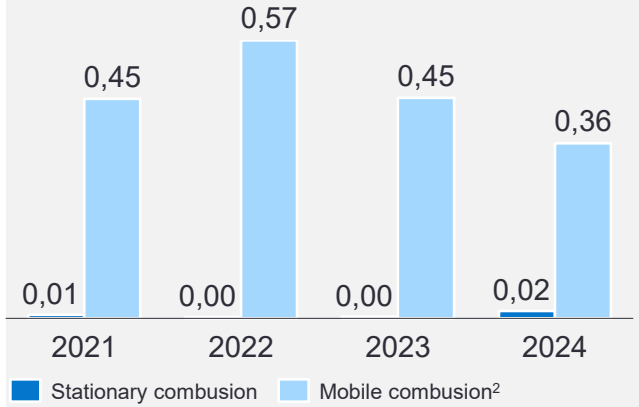
**Energy consumption**
*(GWh - by source)*



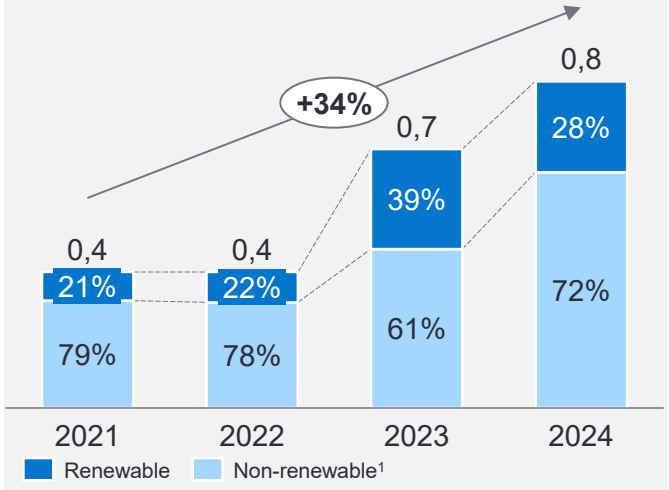

- Eurofiber shows a shift in energy consumption over the last years with renewable energy increasing in the proportion of total energy consumption
- The reduction has been driven by:
  - Offices: since 2018, offices have been powered by 100% renewable energy
  - The network: Energy consumption from the portion of the Eurofiber network supplied by Infrabel is classified as non-renewable, as Infrabel cannot confirm whether the energy source is renewable
  - The electrification of the fleet

- Eurofiber's fuel consumption from stationary combustion has been minimal throughout the years as it only reflects the use of diesel for emergency generators at various locations. It should be noted that in 2024, there was also a consumption of 0,07GWh for officed, on top of the consumption from the core network
- Eurofiber's fossil fuel consumption from mobile combustion shows a declining trend as the company transitions to a more sustainable fleet

**Fuel consumption from non-renewable sources**
*(GWh – for the core network)*




**Electricity consumption[3]**
*(GWh – by source)*




- Between 2021 and 2024, Eurofiber's total electricity consumption has shown a significant strong trend, with a CAGR of +34% - partially driven by the electrification of the fleet
- Notably, the share of renewable electricity has increased over the years, while the share of non-renewable electricity has decreased. It is important to mention that if Infrabel can certify the source of its electricity, the proportion of renewable electricity is likely to rise further, as it would not be classified as non-renewable by default

1. Non-renewable energy consumption includes electricity used for charging electric lease vehicles and power sourced from Infrabel, for which the origin is unclear. If the average Belgian energy mix were specifically calculated, the share of renewable energy would likely be higher than reported for Eurofiber.
2. Refers to fossil fuel consumption of Eurofiber Belgium's lease vehicle fleet.
3. 100% of the electricity consumed has been purchased and is exclusively used for the core network. Since 2022, the office building that Eurofiber partially occupies has been equipped with solar panels. A portion of the electricity consumption in the office comes directly from the solar panels, but this is not separately metered. The electricity that Eurofiber itself purchases has been 100% renewable since 2018.

# The absence of sufficient data and inconsistencies in attributing waste to Eurofiber's operations hinder direct comparisons regarding waste

## Waste & recycling

- Unfortunately, there is currently no available data on the total amount of produced (e-)waste for the years 2021-2024. This is due to the fact that IT management of Eurofiber is centralized from the Netherlands, and therefore, no specific waste data for Belgium is recorded. The e-waste generated is managed in the Netherlands, where it is submitted to WEEE-certified organizations for material recycling
- The disposal methods for waste streams remain unclear, as Eurofiber does not have information on how the waste collector manages these streams. This means that there is a general lack of data and information on waste disposal
- Additionally, the building-related waste of Eurofiber is managed by a centralized company and allocated to tenants based on rented square meters, not actual waste produced. This means Eurofiber's reported waste can be influenced by other tenants' activity, affecting accuracy and trend interpretation

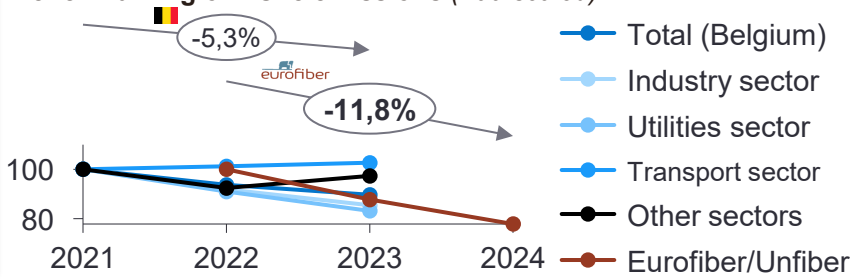
# Eurofiber's environmental performance shows declining $CO_2$ emissions and decreasing energy consumption

## Conclusion

### Performance vs industries in Belgium[1]

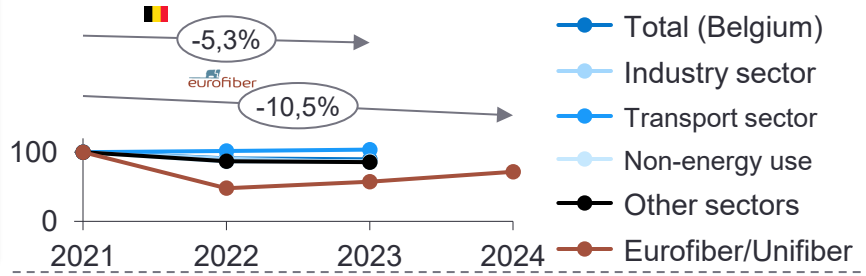
**CO2e emissions**

**Benchmarking of CO2e emissions** *(100-scaled)*




**Energy consumption**

**Benchmarking of energy consumption** *(100-scaled)*




**Waste & recycling**

**Benchmarking of waste production** *(100-scaled)*

*Missing data prevents direct comparisons*

### Takeaways

- In comparison to other sectors in Belgium, Eurofiber also exhibits a downward trend in $CO_2e$ emissions performance, with emissions decreasing at a CAGR of 11,8% from 2022 to 2024.
- Starting in 2024, Eurofiber's emissions calculations follow the spend-based methodology, which could result in higher Scope 3 emissions going forward due to ongoing investments in infrastructure.
- Eurofiber's total energy consumption shows a declining trend over the years, even about twice as much as the decrease in energy consumption seen from other industries in Belgium. It should also be noted that while energy consumption at Eurofiber decreased, its proportion of renewable energy significantly increased over the years, rising from 6% to 26%
- Additionally, there has been a strong increase in electricity consumption during this period – driven by the network, the electrification of the fleet, and consumption from offices. Even though total energy consumption decreased, electricity consumption increased significantly, indicating that the company is shifting its energy sources towards electricity while also putting the priority on renewable sources
- The lack of data unfortunately prevents drawing conclusions about waste production for Eurofiber

1. The purpose of this analysis is solely to estimate how well operators perform compared to other industries in Belgium. While differences in business models within each industry can also explain significant variations in performance, the intention is not to make direct comparisons but to provide a general benchmark for evaluating how well an operator performs on various environmental metrics analyzed in this study.

# Fiberklaar has shown a strong expansion in revenues and employees over the last years and adheres to the CSRD reporting standards and the SBTI

## Fiberklaar background

### Description

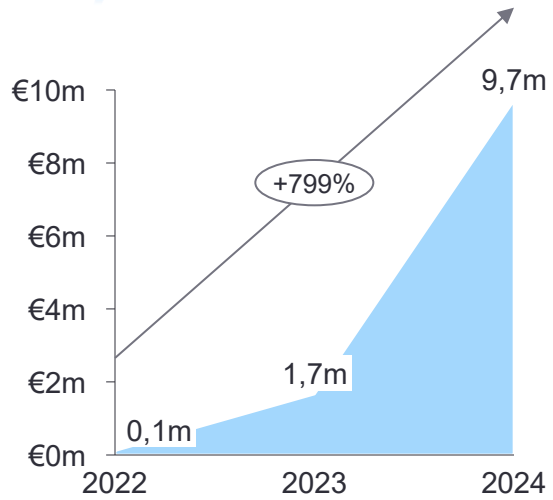
Fiberklaar BV is headquartered in Belgium and operates as a fixed network provider in Flanders. It is formed through a joint venture between Proximus and EQT Infrastructure, with the goal of rolling out a fiber-optic network across the region. It operates on both B2B *(open-access fiber network that is leased by internet service providers)* and B2C *(installing fiber connections to individual homes)* levels.

### Collaboration / legal agreements

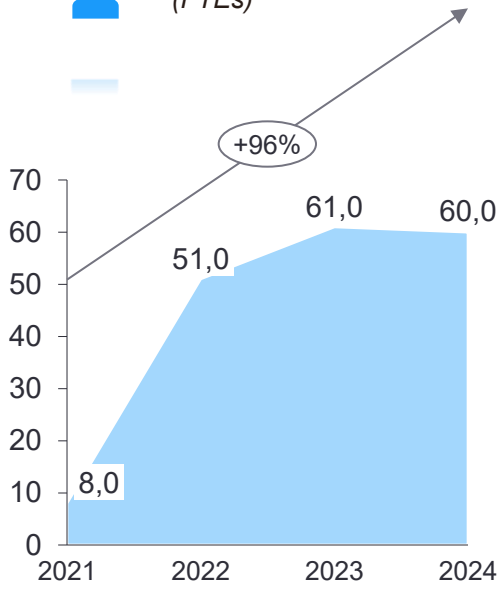
- Legal affiliations with Proximus regarding the use of their network

### Firmographics

**Revenue evolution**
*(€)*




**Number of employees[1]**
*(FTEs)*




**9.371 km**
of total fixed network capacity
*(2024 | Duct cable)[2]*

**6.184 km**
of installed fiber cables

### Governance of sustainability

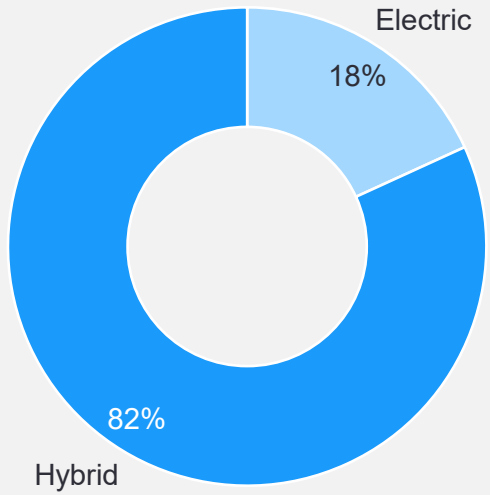
- Sustainability initiative decisions:
  - Made by management
  - Execution and follow-up are the responsibilities of the Finance and Operations departments
- Fiberklaar reports in alignment with
  - Corporate Sustainability Reporting Directive (CSRD)
  - Science Based Targets initiative (SBTi)

1. Excluding additional freelance staff
2. Fiberklaar is a passive fiber infrastructure provider and does not offer active end-user services. These are delivered by its ISP clients, currently including Proximus and some of its wholesale partners. The figures reflect the total kilometers of ducts installed to date

# Fiberklaar's commitment to sustainability is evident in its fleet electrification, alongside an increase in renewable energy consumption

## Sustainability at Fiberklaar

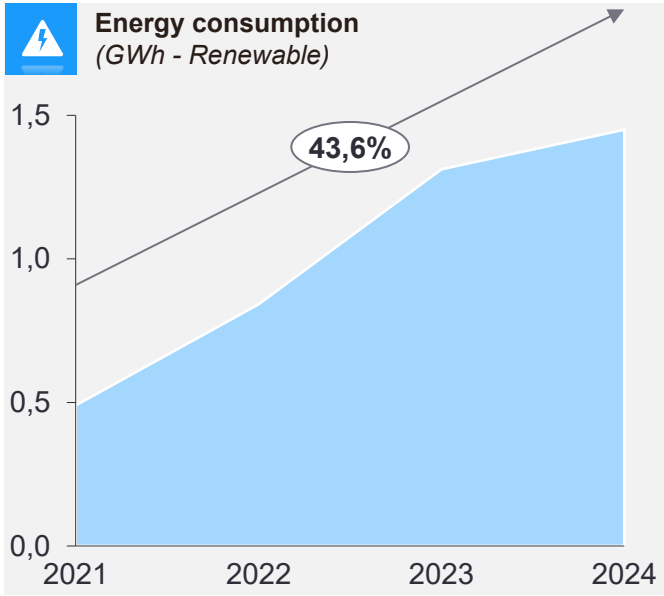
**Electrification of the fleet**
*(%)*




- Fiberklaar currently has 33 vehicles, of which 6 are fully electric and 27 are hybrid

- From 2021 to 2024, the company's consumption of renewable energy increased steadily from 0,49 GWh to 1,45 GWh, while no non-renewable energy was used during this period

**Energy consumption**
*(GWh - Renewable)*




**Waste and recycling**

Fiberklaar does not provide active services and therefore does not supply any devices, making recycling not applicable at this stage

Regarding the materials used in its fiber network, recycling is also not yet relevant, as Fiberklaar is a young company still in the process of deploying its infrastructure

# The lack of data limits the assessment of Fiberklaar's environmental performance, despite a noted increase in energy consumption

## Conclusion

### CO2e emissions

**Performance vs industries in Belgium[1]**

**Benchmarking of CO2e emissions** *(100-scaled)*

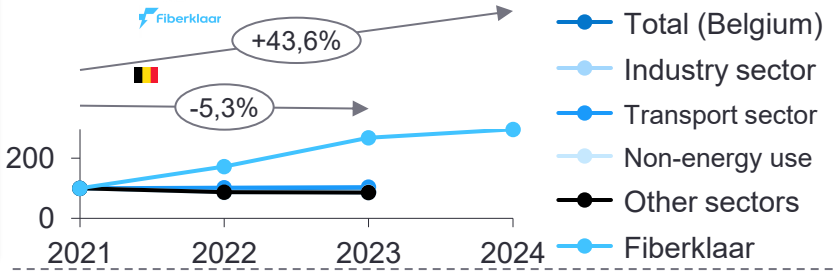
*Missing data prevents direct comparisons*

**Takeaways**

- The lack of data on $CO_2$ emissions prevents any conclusions about Fiberklaar's performance in this area
- However, it is noteworthy that 100% of Fiberklaar's fleet consists of electric and hybrid vehicles, with a significant proportion being hybrids. This positively influences its Scope 1 emissions

### Energy consumption

**Benchmarking of energy consumption** *(100-scaled)*




- Fiberklaar's energy consumption shows a strong upward trend, which strongly contradicts the overall decrease observed in most industries in Belgium
- Even though there is a lack of data from Fiberklaar to understand the drivers of this significant increase in energy usage, it should be noted that 100% of this energy comes from renewable sources

### Waste & recycling

**Benchmarking of waste production** *(100-scaled)*

*Missing data prevents direct comparisons*

- Unfortunately, no data was available on Fiberklaar's waste and recycling performance, preventing any conclusions from being drawn in this area

1. The purpose of this analysis is solely to estimate how well operators perform compared to other industries in Belgium. While differences in business models within each industry can also explain significant variations in performance, the intention is not to make direct comparisons but to provide a general benchmark for evaluating how well an operator performs on various environmental metrics analyzed in this study.

# BT follows the CSRD reporting standards to report on its environmental performance, adheres to the ISO 14001 certification and audits its performance externally

## BT background

### Description

BT Global Services is a telecom provider with a strong presence in Belgium, specializing in fixed network services for enterprise and public sector clients. As part of BT Group, it delivers secure, high-performance connectivity and supports multinational operations through its global telecom infrastructure

### Collaboration / legal agreements

- BT company is active throughout the country, leveraging local loops to connect with and serve its customer base

### Network capacity

**516 GB**
of core network capacity

**1.457 GB**
of fixed fiber network capacity

**1.973 GB**
of total network capacity

### Cabling infrastructure

**409 km**
of fixed network cables[1]

**22.533 km**
of fibers

### Governance of sustainability

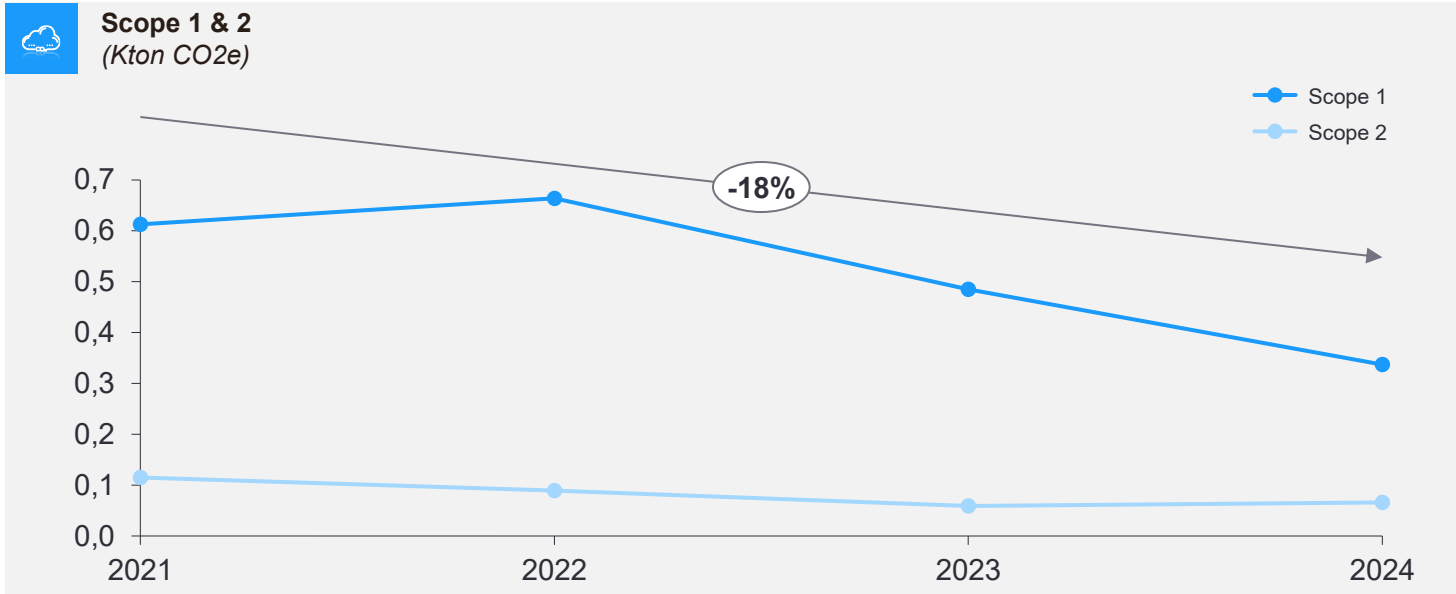
- Sustainability initiative decisions:
  - Made by COO
  - Execution and follow-up are the responsibilities of the Regulatory & Compliance (R&C) team
- BT reports its sustainability goals and outcomes in alignment with the Corporate Sustainability Reporting Directive (CSRD)
- Also pursuing ISO 14001 certification and conducts external audits
- Sustainability performance is clearly disclosed in the company's annual group-level reports

1. Core network cables (=0 km) as it is based on leased dark fiber

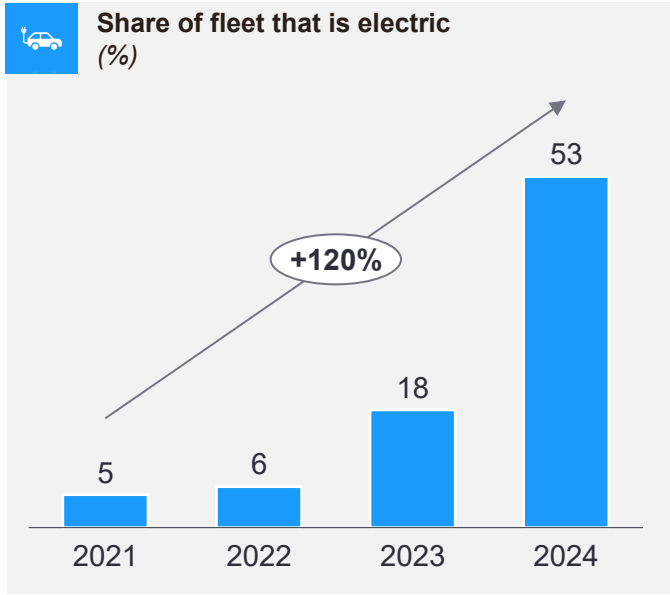
# BT significantly reduced its Scope 1 & 2 emissions, while electrifying its fleet reflecting a commitment to sustainability and cleaner mobility solutions

## CO2 emissions

### Annual emissions of all gases converted to CO2 equivalent




- From 2021 to 2024, BT demonstrated a clear downward trend in its direct (Scope 1) and indirect (Scope 2) greenhouse gas emissions, measured in kilotons of CO2 equivalent
- Scope 1 emissions decreased significantly from 0,61 Kton CO2e in 2021 to 0,34 Kton CO2e in 2024, reflecting a strong commitment to reducing on-site emissions
- Similarly, Scope 2 emissions declined from 0,12 Kton CO2e in 2021 to 0,06 Kton CO2e in 2024, indicating improvements in energy sourcing and efficiency

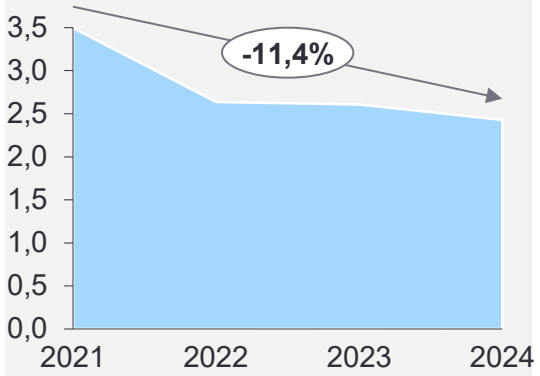



- Between 2021 and 2024, the share of electric vehicles in the fleet grew significantly, rising from just 5% to 53,1%
- This substantial increase highlights the BT's commitment to sustainable transportation and reflects a CAGR of +120%, marking a major shift toward cleaner mobility solutions

# Total electricity supply from renewable sources declined, demonstrating improved energy efficiency and a steadfast commitment to clean energy

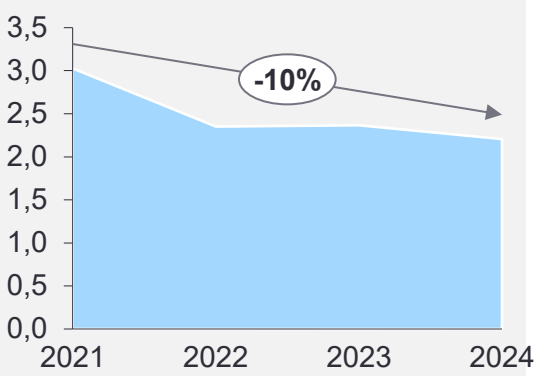
## Energy consumption

**Energy consumption**
*(GWh – from renewable source)*




- Between 2021 and 2024, BT's total energy consumption—comprising electricity and city heating—showed a gradual decline, decreasing from 3,49 GWh in 2021 to 2,43 GWh in 2024
- All reported energy usage during this period came from renewable sources, with no recorded consumption of non-renewable energy

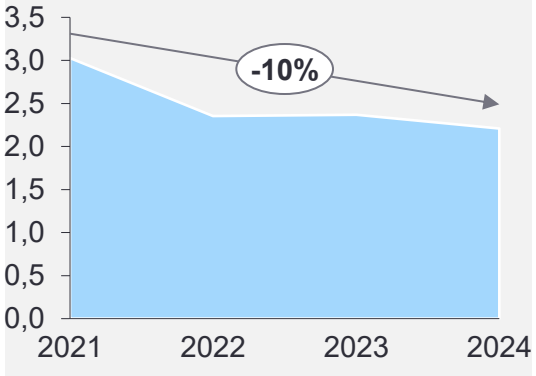
**Electricity consumption**
*(GWh - from renewable source)*




- Between 2021 and 2024, BT's total electricity consumption declined from 3,03 GWh to 2,21 GWh, reflecting a steady improvement in energy efficiency
- Notably, 100% of the electricity consumed during this period was sourced from renewable energy, with no reliance on non-renewable sources

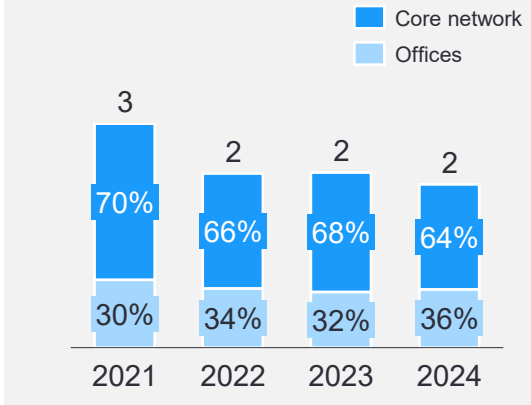
- BT's total electricity supply—sourced entirely from renewable energy—decreased steadily from 3,027 GWh to 2,207 GWh during 2021 to 2024
- Throughout this period, there was no reliance on non-renewable sources for either electricity purchase or production
- Consistent use of renewable electricity underscores commitment to clean energy and decarbonization

**Electricity purchase & production**
*(GWh - from renewable source)*




- Between 2021 and 2024,BT's electricity use in the core mobile network decreased significantly from 2,11 GWh in 2021 to 1,42 GWh in 2024
- Similarly, data centers used for the company's own operations saw a reduction in electricity consumption, falling from 0,92 GWh in 2021 to 0,79 GWh in 2024

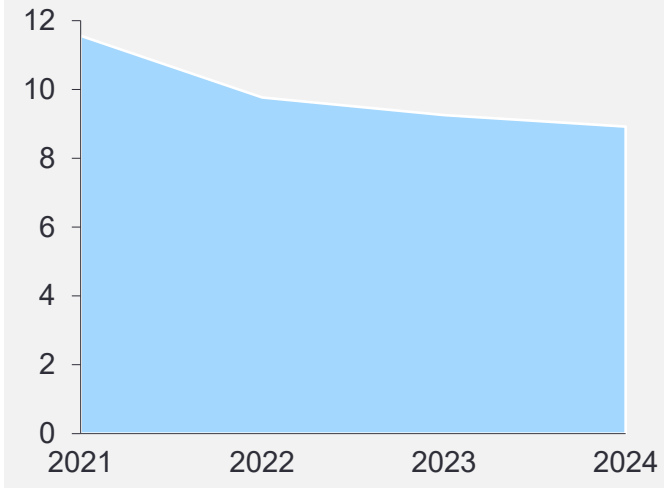
**Electricity consumption**
*(GWh - by end-use purpose)*



# E-waste decreased, alongside declining non-hazardous waste disposal and recycling rates, highlighting the need for enhanced recycling efforts

## Waste & recycling

**Waste produced**
*(Ton – e-waste)* [1]

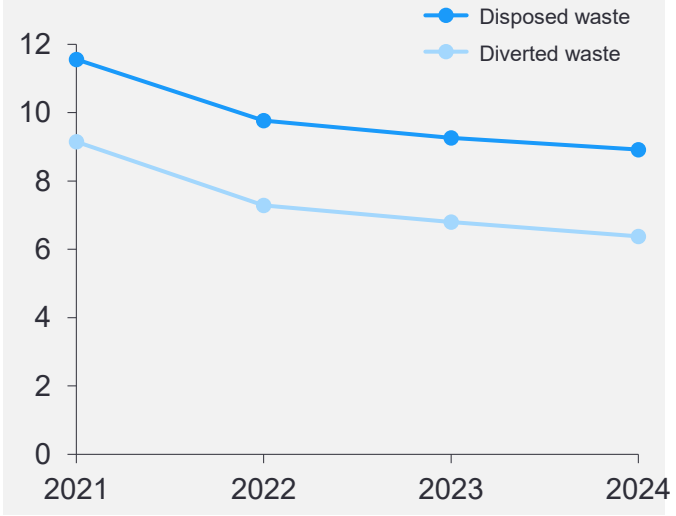



- From 2021 to 2024, the total amount of e-waste produced by BT steadily declined from 11,56 tons to 8,92 tons, reflecting the effectiveness of its waste management practices

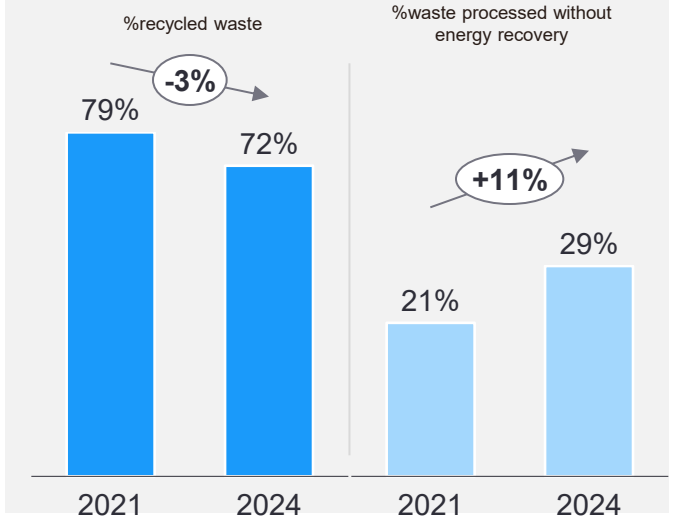
Overall reduction in waste generation:

- Between 2021 and 2024, BT showed a consistent decrease in the total amount of non-hazardous waste disposed of, dropping from 11,56 tons to 8,92 tons
- Simultaneously, the volume of non-hazardous waste diverted from disposal also declined, from 9,15 tons in 2021 to 6,38 tons in 2024

**Non-hazardous waste**
*(Ton)*




**Waste & recycling**
*(%)* [1]




- Between 2021 and 2024, the percentage of recycled waste experienced a gradual decline, decreasing from 79,2% to 71,5%
- At the same time, the proportion of waste processed without energy recovery increased from 20,8% to 28,5%
- This trend highlights potential areas for improvement in enhancing recycling efforts and optimizing waste processing strategies

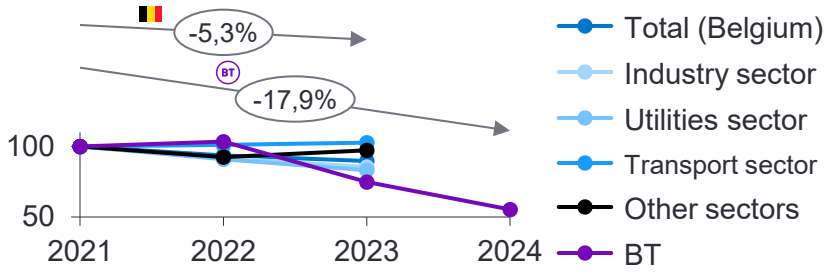
1. Measured per m2 in Multi-tenant building

# BT shows strong environmental performance, with decreasing trends in all categories, particularly in $CO_2$ emissions reduction

## Conclusion

### CO2e emissions

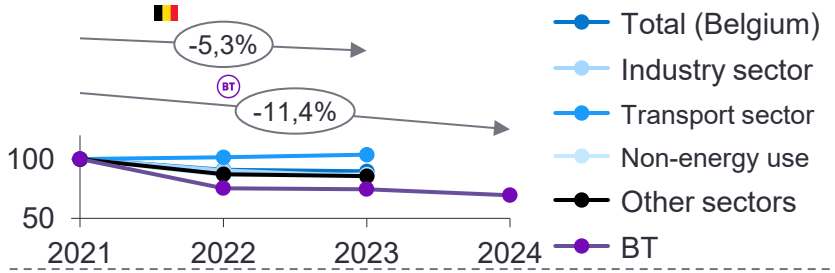
**Benchmarking of CO2e emissions** *(100-scaled)*




- BT has shown very strong $CO_2e$ emissions performance over the reported time period, with an overall emissions decrease that is approximately three times greater than that of other industries in Belgium.
- Analyzing BT's performance further, it is evident that Scope 1 emissions are a significant driver of this performance, having more than halved over the reported period. Additionally, the significant increase in electric vehicles within its fleet has contributed to the reduction of Scope 1 emissions.

### Energy consumption

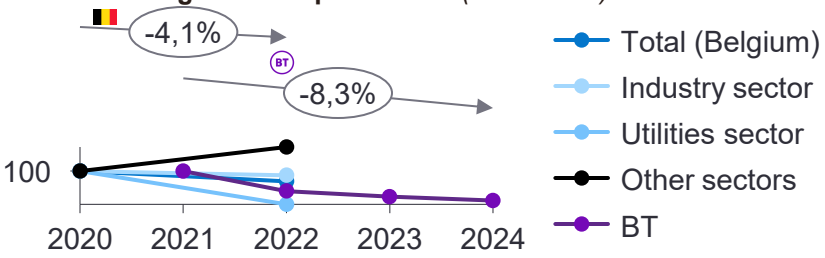
**Benchmarking of energy consumption** *(100-scaled)*




- Similar to other industries in Belgium, BT has managed to reduce its energy consumption over the reported period, more than twice as much as the Belgian average. Notably, BT sourced 100% of its energy from renewable sources throughout this period.
- There has also been a significant decline in BT's electricity consumption, which mirrors the overall energy consumption trend, suggesting that electricity is its primary energy source.
- Additionally, there has been a relative increase in the proportion of electricity used for offices compared to the core network over the reported period.

### Waste & recycling

**Benchmarking of waste production** *(100-scaled)*




- BT demonstrates strong performance in waste production, having significantly reduced its output between 2021 and 2024 – more than twice the reduction seen in Belgian industries from 2020 to 2022. This trend is also reflected in the proportion of non-hazardous waste, which has declined significantly over the years, along waste disposed of and waste diverted from disposal.
- Interestingly, despite the reduction in waste production, the proportion of waste recycled has decreased, while the proportion of waste treated without energy recovery has increased. However, the provided data does not clarify the drivers behind these two trends

1. The purpose of this analysis is solely to estimate how well operators perform compared to other industries in Belgium. While differences in business models within each industry can also explain significant variations in performance, the intention is not to make direct comparisons but to provide a general benchmark for evaluating how well an operator performs on various environmental metrics analyzed in this study.

# 3.2.

# Qualitative assessment of objectives and initiatives

# Operators are adhering to a variety of sustainability performance metrics

## Summary of sustainability objectives and initiatives

**Summary of sustainability performance metrics adherence per operator**

| Sustainability performance metrics | proximus | Telenet | orange / hey! | DIGI | eurofiber / unifiber | Fiberklaar | BT | verizon |
|---|---|---|---|---|---|---|---|---|
| Corporate Sustainability Reporting Directive (CSRD) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Science Based Targets initiative (SBTi) | ✓ | ✓ | ✓ | | ✓ | ✓ | | ✓ |
| Carbon Disclosure Project (CDP) | ✓ | ✓ | | | | | | |
| EcoVadis Standards | ✓ | ✓ | | | ✓ | | | |
| ISO 14001 Certification[1] | | | | ✓ | | | ✓ | |

### Key takeaways

**Corporate Sustainability Reporting Directive (CSRD)**

Adoption of the CSRD is broadening as companies prepare for enhanced reporting obligations and scrutiny from investors and regulators.

**Science Based Targets initiative (SBTi)**

By aligning with the SBTi, companies such as Proximus, Telenet, and Orange are committing to emission reductions that are consistent with the latest climate science. This shows a meaningful shift from voluntary pledges to evidence-based targets, reinforcing credibility and helping align with EU climate goals.

**Carbon Disclosure Project (CDP)**

Engagement with the CDP—notably by Proximus and Telenet—reflects a growing culture of climate transparency. Reporting through CDP provides a mechanism to benchmark climate performance, identify risks and respond proactively to investor and customer expectations.

**EcoVadis Standards**

The adoption of EcoVadis by companies, like Proximus, Telenet and Eurofiber/Unifiber demonstrates a strong focus on supply chain sustainability, risk assessment and responsible sourcing. With supply chains contributing significantly to Scope 3 emissions, such evaluations play a pivotal role in driving upstream impact and enhancing ESG performance visibility.

**ISO 14001 Certification**

Although not yet widespread, DIGI and BT are paving the way by working toward or securing ISO 14001 certification, reinforcing their commitment to systematic environmental management.

1. DIGI & BT are working towards the ISO certification

✓ *Explicitly stated in the IRL*

# And they are focusing on core areas to advance their sustainability objectives

## Summary of sustainability objectives and initiatives

**Summary[1,2] of core focus areas for corporate sustainability objectives and initiatives**

| | proximus | wyre | orange / voo / hey! | DIGI | eurofiber / unifiber | Fiberklaar | BT | verizon |
|---|---|---|---|---|---|---|---|---|
| **CO2 emissions** | | | | | | | | |
| Net zero GHG emissions | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ |
| Reduction Scope 1 and Scope 2 GHG emissions | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ |
| Reduction Scope 3 GHG emissions | ✓ | ✓ | | ✓ | ✓ | | ✓ | ✓ |
| **Energy consumption** | | | | | | | | |
| Renewable electricity | ✓ | ✓ | ✓ | | ✓ | | | ✓ |
| Energy efficiency | ✓ | ✓ | | ✓ | | | ✓ | |
| **Waste & Recycling** | | | | | | | | |
| Circularity | ✓ | ✓ | ✓ | ✓ | | | ✓ | ✓ |
| Ecofriendly packaging | ✓ | ✓ | | | | | | |

1. A detailed overview of the objectives and initiatives per operator is provided in the appendix
2. Fiberklaar did not provide any information regarding sustainability objectives and initiatives

## Key takeaways

### CO2 emissions

The push toward net-zero greenhouse gas emissions is well underway, with most companies setting ambitious long-term goals (2040 or earlier) and adopting concrete interim targets, particularly in Scope 1 and 2 reductions. Electrification of fleets and the decarbonization of infrastructure (buildings, networks) are recurring strategies. However, the management of Scope 3 emissions—often the largest and most complex category—remains uneven. Leading organizations are beginning to address this through supplier engagement, life cycle assessments, and circular procurement, but broader, standardized action is still needed across the value chain

### Energy consumption

There is a shared strategic shift toward 100% renewable electricity sourcing, with most companies targeting full adoption by 2030. Notably, early adopters like Orange and Eurofiber have already achieved this milestone, while others like Verizon and Telenet are on a clear path. Parallel efforts in energy efficiency—such as network modernization, data center optimization, and phasing out legacy technologies—are essential to ensure that renewable energy gains are not offset by growing digital demand. These efforts also support cost control and grid resilience

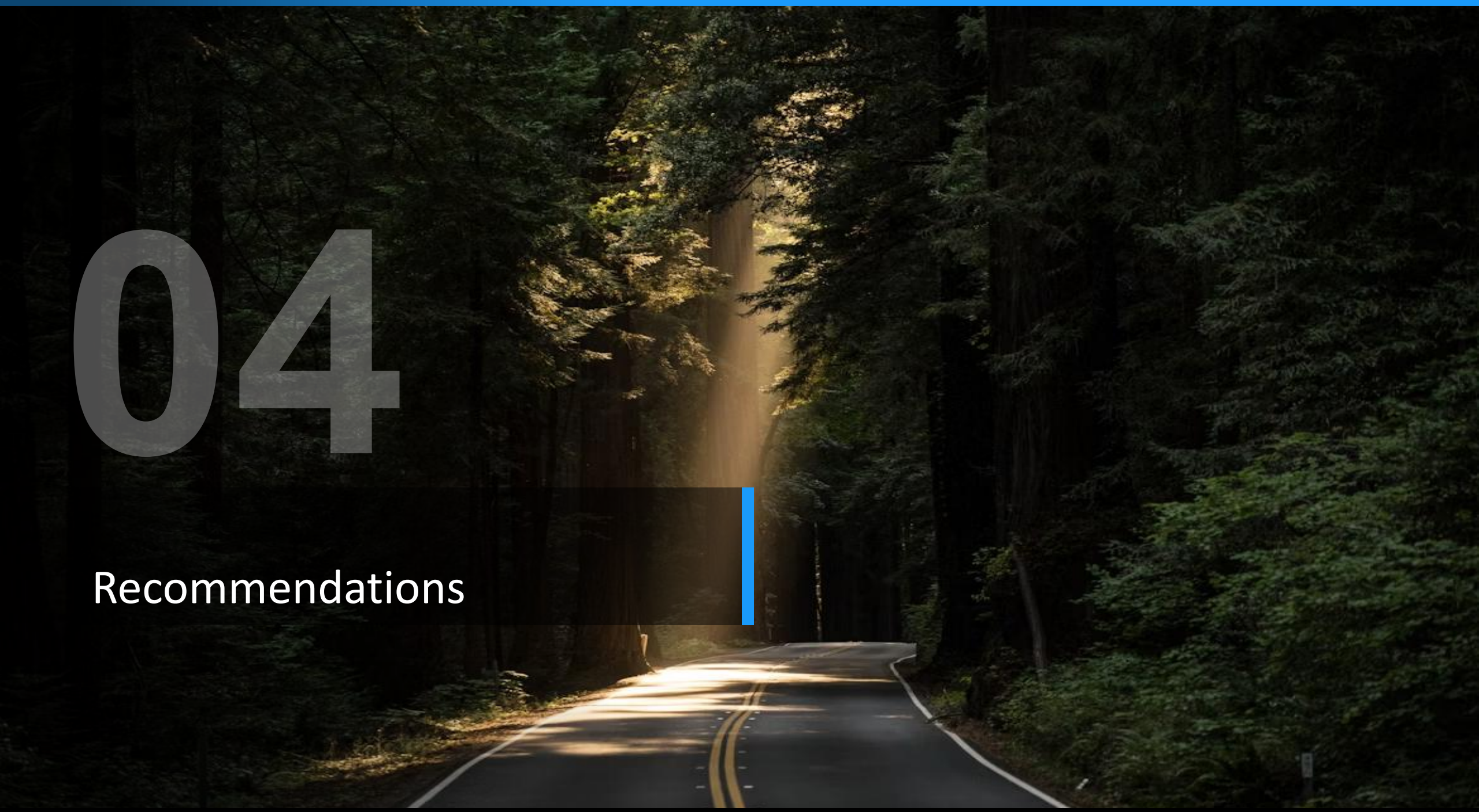
### Waste & Recycling

Circular economy initiatives are gaining traction, especially through device refurbishment, material reuse, and recycling programs. Companies like Proximus, Orange, and Telenet are implementing device leasing, eco-design, and customer return schemes that both reduce waste and create new business value. Eco-friendly packaging is also an emerging area of focus, with initiatives to reduce plastic and shift to recycled materials gaining momentum

✓ *Explicitly stated objective and/or initiative in the IRL*



EY Parthenon



# 04

## Recommendations

# Main recommendations focus on a consistent use of frameworks for reporting and measurement, as well as the need to educate consumers about environmental value

## Summary of recommendations

### For market players

- **Measurement and reporting of environmental performance:** Establish clear targets and adopt industry-standard frameworks to enhance credibility in environmental performance
- **Consistent framework for environmental reporting**: Ensure a consistent framework is followed to report on the sustainability performance and have periodic verifications to build stakeholder trust
- **Emphasizing the focus on scope 3 emissions**: Engage stakeholders across the value chain to effectively reduce total CO2e emissions
- **Investments in renewable energy sources**: Invest in renewable energy and set specific usage targets to drive sustainability progress
- **Consumer education on technical and environmental performance**: Educate consumers towards the meaning and value related to the technical and environmental performance of various solutions

### For regulators

- **Alignment and monitoring of sustainability standards**: Align on the latest sustainability reporting standards (e.g. upcoming EU Code of Conduct for the sustainability of telecom networks) and engage operators to collaboratively define KPIs (in line with Code of Conduct and/or sustainability indicators from BEREC[1]) for consistent environmental performance assessment over the years
- **Promoting sustainability and transparency**: Persuade operators to report on key environmental metrics and create an annual sustainability study to provide insights into industry performance and highlight leaders and where the are areas for improvement
- **Consumer education**: Develop interactive tools for consumers to compare the environmental performance of different operators, fostering informed choices that value sustainability alongside technical performance

### For consumers

- **Consumer awareness and responsibility**: Avoid focusing solely on technical performance when choosing a telecommunications provider and include environmental metrics in the evaluation criteria to encourage operators to invest in sustainable options.

1. Body of European Regulators for Electronic Communications

# Market players are advised to use of a consistent framework for reporting and measuring initiatives and involve all stakeholders in the value chain to reduce emissions

## Deep dive into recommendations (1/2)

**For market players**

- **Measurement and reporting of environmental performance**: Despite the goodwill and motivation to create a positive environmental impact, the maturity level in measuring and reporting environmental performance among operators remains relatively low. Establishing clear business and environmental performance targets is essential, utilizing specific metrics such as carbon footprint, energy consumption, and waste generation. Adopting industry-standard frameworks like the Science-Based Targets (SBT) can enhance the credibility and comparability of the efficiency of sustainability initiatives
- **Consistent framework for environmental reporting**: Following a consistent framework(such as the CSRS-standards) for environmental reporting is crucial. Implementing this framework with annual reporting cycles and conducting periodic audits can ensure compliance and accuracy. This approach builds trust with stakeholders and allows for a direct and consistent assessment of environmental performance over time
- **Emphasizing the focus on scope 3 emissions**: Scope 3 emissions represent the largest proportion of total CO2e emissions for all operators and have remained largely stable over the past years. Engaging stakeholders throughout the entire value chain in a real ecosystem orchestration is important for decreasing the environmental impact across the entire value chain, not just within individual operators' spaces
- **Investments in renewable energy sources**: Continuing to invest in renewable energy sources minimizes the environmental damage caused by non-renewable sources. Setting specific targets for renewable energy usage, such as achieving 100% renewable energy by a specific year, can drive progress. Exploring partnerships with renewable energy providers may enhance sustainability efforts and potentially reduce costs
- **Consumer education on technical and environmental performance**: Educating consumers about the technical performance required from products and services based on their specific needs is vital. Developing clear communication strategies that highlight the environmental impact of various offerings can be beneficial. Creating an easily accessible online platform for consumers to compare both technical specifications and environmental performance empowers informed decision-making

CITYMESH

- Having interviewed various market players during this study, Citymesh had an interesting example for setting clear targets, involving internal and external stakeholders to refine its sustainability efforts, and measure the efficiency of initiatives
- In 2024 and 2025, Citymesh gathered insights from internal and external stakeholders through questionnaires and roundtable discussions to refine its performance and objectives related to sustainability.
- In 2022, Citymesh set the target of using 100% renewable electricity by January 1st, 2023. Establishing clear, tangible, and measurable targets with specific data points enables operators to be accountable and monitor their performance against predefined metrics over time.
- The innovative "SENSE" initiative aims to deploy a network of 70 drones throughout Belgium, controlled via 5G, to assist public authorities in assessing the appropriate interventions needed for emergency situations. This approach helps prevent the unnecessary dispatch of support vehicles when not required. Citymesh monitored the environmental benefits of this initiative, estimating a reduction of approximately 10,4 tons of CO2 emissions during the project by avoiding unnecessary vehicle deployments. Monitoring the performance of various initiatives with clear and predefined environmental metrics is important for evaluating their efficiency over time.

# Regulators are encouraged to align on a consistent environmental framework for monitoring of performance and consumers to be aware of environmental value

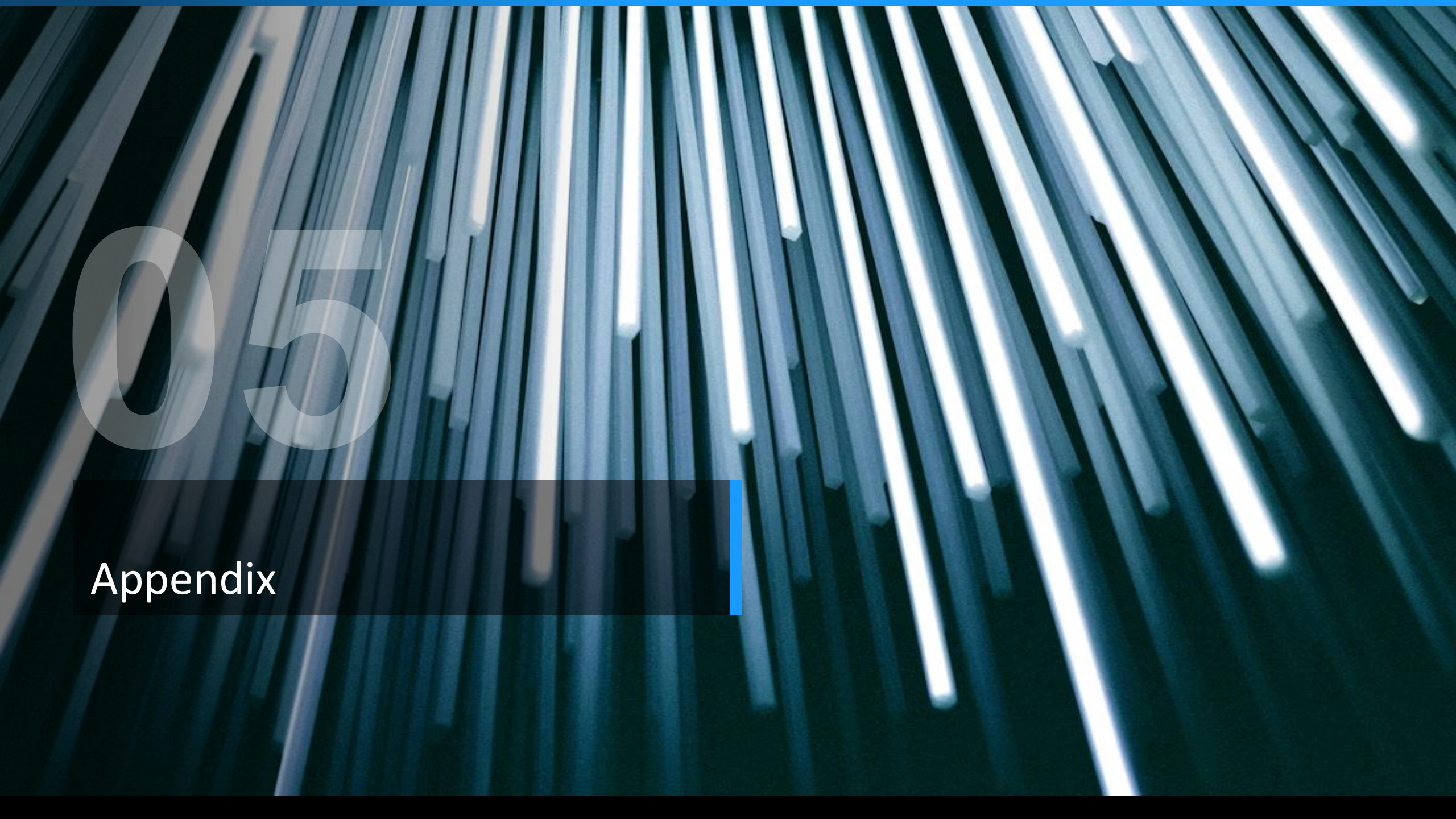
## Deep dive into recommendations (2/2)

**For regulators**

- **Alignment and monitoring of sustainability standards**: Aligning on the latest standards for sustainability reporting, such as the Corporate Sustainability Reporting Directive (CSRD), is essential. Engaging operators in this alignment process is also recommended to collaboratively define KPIs to ensure that performance can be assessed over time using a consistent set of environmental metrics (e.g. BEREC sustainability indicators). Establishing a centralized database or platform for operators to submit their environmental performance data is also recommended. This will facilitate consistent reporting and allow for benchmarking across operators, identifying best practices and areas for improvement
- **Promoting sustainability and transparency**: Continuing to promote sustainability by requiring operators to report on key environmental performance metrics over time is important, as much as communicating transparently about it. Creating an annual sustainability study that aggregates data from all operators can provide insights into overall industry performance, highlight leaders in sustainability, and identify areas needing attention
- **Consumer education**: Develop interactive tools or resources that allow consumers to compare the environmental performance of different operators. This may include calculators that show the environmental impact of different offerings, fostering a more informed consumer base that values sustainability as well as technical performance

**For consumers**

- **Consumer awareness and responsibility**: Avoid focusing solely on the technical performance of telecommunications providers when choosing a provider. Instead, strive to understand the range of technical performance needed for daily consumption and ensure that environmental metrics are included in the evaluation criteria – as otherwise operators may sometimes prioritize technical performance at the expense of environmentally friendly alternatives which still offer sufficient performance from a technical perspective. By placing a strong emphasis on both technical and environmental performance in the selection criteria, consumers can encourage operators to invest in more sustainable options, ultimately driving positive change in the telecommunications landscape


05
Appendix

# 5.1.

# Information Request Letter (IRL)

# Overview of the business-specific information provided by each operator

## Overview of quantitative data received per operator

| Business-specific information | proximus | | orange | DIGI | eurofiber | Fiberklaar | verizon | BT |
|---|---|---|---|---|---|---|---|---|
| *Network capacity* | *Only total number* | | | | *N/A* | *Only 2024* | | *Only 2024* |
| *Network usage* | *Only total number* | | | | *N/A* | *N/A* | | |
| *Kilometers of cabling* | | | | | *Missing 2021* | *Only 2024* | | *Only 2024* |
| *# units in use* | *Only 2023-2024* | *Missing 2021* | | | *N/A* | *N/A* | | |
| *# units sent to customers* | *Only 2023-2024* | *Missing 2021* | | | *N/A* | *N/A* | | |
| *Stand-by consumption*[1] | | *Missing 2021* | *Only 2024* | | *N/A* | *N/A* | | |
| *Powered-on consumption*[1] | | *Missing 2021* | *Only 2024* | | *N/A* | *N/A* | | |
| *# active SIM cards* | | | *Only 2023-2024* | | *N/A* | *N/A* | | |
| *# internet connections* | | | *Only 2023-2024* | | *N/A* | *N/A* | | |
| *Total revenue* | *Only mobile vs fix* | | *Only 2023-2024* | | | *Missing 2021* | | |
| *# employees* | | | *Only 2023-2024* | | | | | |

**Only** data for **2024**

**No** BE data

*Not applicable or no BE data* | *No data* | *Data for 1 year* | *Data for 2 years or total only* | *Data for 3 years* | *Full data*

*"Must have" vs "nice to have"*

1. The stand-by and powered-on consumption were requested for each product type for smartphones, set-top boxes, and modems/routers



EY Parthenon

# Overview of the environmental information on $CO_2$ emissions provided by each operator

## Overview of quantitative data received per operator

| | proximus | | orange | DIGI | eurofiber | Fiberklaar | verizon | BT |
|---|---|---|---|---|---|---|---|---|
| **$CO_2$ emissions** | | | | | | | | |
| *Annual emissions* | *Only 2023-2024* | | | | | | | |
| *Carbon credits compensation* | | | | | | | | |
| *Electric vehicle fleet* | | *Only 2023-2024* | *Only 2023-2024* | | | *Only 2024* | | |
| *Hybrid vehicle fleet* | | *Only 2023-2024* | *Only 2023-2024* | | | *Only 2024* | | |

**Only** data for **2024**

**No** BE data

*Not applicable or no BE data* | *No data* | *Data for 1 year* | *Data for 2 years or total only* | *Data for 3 years* | *Full data*

*"Must have" vs "nice to have"*



EY Parthenon

# Overview of the environmental information on energy consumption provided by each operator

## Overview of quantitative data received per operator

| Energy consumption | proximus | | orange | DIGI | eurofiber | Fiberklaar | verizon | BT |
|---|---|---|---|---|---|---|---|---|
| *Energy consumption* | ● | ● | ● | ● | ● | ● | ● | ● |
| *Stationary combustion* | ● *Only total number* | ● | ● | ● | ● | ● | ● | ● |
| *Mobile combustion* | ● *Only total number* | ● | ● | ● | ● | ● | ● | ● |
| *Other sources* | ● | ● | ● | ● | ● | ● | ● | ● |
| *Electricity purchase and production* | ● | ● | ● *Only 2023-2024* | ● | ● | ● | ● | ● |
| *Electricity consumption (by source)* | ● | ● | ● *Only 2023-2024* | ● | ● | ● | ● | ● |
| *Electricity consumption (by end-use purpose)* | ● | ● | ● | ● | ● | ● | ● | ● |
| *Total HVAC sold* | ● | ● *Only 2023-2024* | ● *Only 2023-2024* | ● | ● | ● | ● | ● |
| *CAPEX invested* | ● | ● | ● *Only 2024* | ● | ● | ● | ● | ● |

**Only** data for **2024**

**No** BE data

● *Not applicable or no BE data* ● *No data* ● *Data for 1 year* ● *Data for 2 years or total only* ● *Data for 3 years* ● *Full data*

*"Must have" vs "nice to have"*



EY Parthenon

# Overview of the environmental information on waste & recycling provided by each operator

## Overview of quantitative data received per operator

| Waste & recycling | proximus | | orange | DIGI | eurofiber | Fiberklaar | verizon | BT |
|---|---|---|---|---|---|---|---|---|
| *Total waste (incl. e-waste) produced* | | *Only total number* | | | *No BE data* | | | |
| *Waste disposed of* | *Missing 2023* | *Only total number* | *Missing 2023* | | *Only 2023-2024* | | | |
| *Waste diverted from disposal* | *Only 2024* | *Only total number* | *Missing 2023* | | | | | |
| *Recycled devices* | *Only 2023-2024* | *Missing 2021* | | | | *N/A* | | |
| *Refurbished devices* | *Only 2023-2024* | | | | | *N/A* | | |
| *% of recycled waste* | *Only 2024* | | *Only 2024* | | *N/A* | | | |
| *Number of recycled/reusable electronic devices* | *Only 2023-2024* | | | | *N/A* | | | |
| *% of waste processed without energy recovery* | *Only 2024* | | | | *N/A* | | | |
| *Expected lifespan of devices* | | | | | *N/A* | | | |
| *Amount of waste used for energy recovery* | *Only 2024* | | | | *N/A* | *N/A* | | |

**Only** data for **2024**

**No** BE data

*Not applicable or no BE data* | *No data* | *Data for 1 year* | *Data for 2 years or total only* | *Data for 3 years* | *Full data*

*"Must have" vs "nice to have"*



EY Parthenon

# Overview of the qualitative information on firmographics provided by each operator

## Overview of qualitative data received per operator

| | proximus | | orange | DIGI | eurofiber | Fiberklaar | verizon | BT |
|---|---|---|---|---|---|---|---|---|
| **Firmographics** | | | | | | | | |
| *Name of company* | ● | ● | ● | ● | ● | ● | ● | ● |
| *Headquarters* | ● | ● | ● | ● | ● | ● | ● | ● |
| *Type of network operator* | ● | ● | ● | ● | ● | ● | ● | ● |
| *Region* | ● | ● | ● | ● | ● | ● | ● | ● |
| *Legal affiliations* | ● | ● | ● | ● | ● | ● | ● | ● |
| *Collaboration* | ● | ● | ● | ● | ● | ● | ● | ● |

● *Not applicable or no BE data* ● *No data* ● *Data for 1 year* ● *Data for 2 years or total only* ● *Data for 3 years* ● *Full data*

*"Must have" vs "nice to have"*

# Overview of the qualitative information on environmental objectives and initiatives taken by each operator

Overview of qualitative data received per operator

| Objectives and initiatives | proximus | | orange | DIGI | eurofiber | Fiberklaar | verizon | BT |
|---|---|---|---|---|---|---|---|---|
| *$CO_2$ emissions (objectives)* | ● | ● | ● | ● | ● | ● | ● | ● |
| *Energy (objectives)* | ● | ● | ● | ● | ● | ● | ● | ● |
| *Waste (objectives)* | ● | ● | ● | ● | ● | ● | ● | ● |
| *$CO_2$ emissions (initiatives)* | ● | ● | ● | ● | ● | ● | ● | ● |
| *Energy (initiatives)* | ● | ● | ● | ● | ● | ● | ● | ● |
| *Waste (initiatives)* | ● | ● | ● | ● | ● | ● | ● | ● |

● *Not applicable or no BE data* ● *No data* ● *Data for 1 year* ● *Data for 2 years or total only* ● *Data for 3 years* ● *Full data*

*"Must have" vs "nice to have"*

# Overview of the environmental and financial performance of initiatives taken by operators

## Overview of qualitative data received per operator

| | proximus | | orange | DIGI | eurofiber | Fiberklaar | verizon | BT |
|---|---|---|---|---|---|---|---|---|
| **Deep-dives** | | | | | | | | |
| *$CO_2$ emissions : reduction potential* | ● | ● | ● | ● | ● | ● | ● | ● |
| *$CO_2$ emissions : CAPEX* | ● | ● | ● | ● | ● | ● | ● | ● |
| *$CO_2$ emissions : OPEX* | ● | ● | ● | ● | ● | ● | ● | ● |
| *Energy : reduction potential* | ● | ● | ● | ● | ● | ● | ● | ● |
| *Energy : CAPEX* | ● | ● | ● | ● | ● | ● | ● | ● |
| *Energy : OPEX* | ● | ● | ● | ● | ● | ● | ● | ● |
| *Waste : reduction potential* | ● | ● | ● | ● | ● | ● | ● | ● |
| *Waste : CAPEX* | ● | ● | ● | ● | ● | ● | ● | ● |
| *Waste : OPEX* | ● | ● | ● | ● | ● | ● | ● | ● |

**No** BE data

● *Not applicable or no BE data* ● *No data* ● *Data for 1 year* ● *Data for 2 years or total only* ● *Data for 3 years* ● *Full data*

*"Must have" vs "nice to have"*



EY Parthenon

# Overview of the information related to the governance of operators' sustainability performance

Overview of qualitative data received per operator

| | proximus | | orange | DIGI | eurofiber | Fiberklaar | verizon | BT |
|---|---|---|---|---|---|---|---|---|
| **Governance** | | | | | | | | |
| *Responsibilities* | ● | ● | ● | ● | ● | ● | ● | ● |
| *Measuring & reporting* | ● | ● | ● | ● | ● | ● | ● | ● |
| *Transparency* | ● | ● | ● | ● | ● | ● | ● | ● |
| *KPI's* | ● | ● | ● | ● | ● | ● | ● | ● |
| *External audit* | ● | ● | ● | ● | ● | ● | ● | ● |
| *Sub-entities* | ● | ● | ● | ● | ● | ● | ● | ● |

● *Not applicable or no BE data* ● *No data* ● *Data for 1 year* ● *Data for 2 years or total only* ● *Data for 3 years* ● *Full data*

*"Must have" vs "nice to have"*

# 5.2.

# Sustainability objectives and initiatives per operator

# Overview of the CO2 emissions initiatives per operator

## Initiatives CO2 emissions

| Objective | Company specific | Initiative | Company specific | Initiative | Company specific | Initiative |
|---|---|---|---|---|---|---|
| Net zero GHG emissions | Achieving net zero GHG emissions across the entire value chain by 2040 *(over a 2020 baseline)* | ▸ Cutting at least 90% of direct and indirect total emissions<br>▸ Using carbon removal technologies for the remaining emissions *(less than 10%)* | Becoming net-zero in 2040 *(over a 2022 baseline)* | ▸ Investing in a carbon offset program<br>▸ 5G rollout using the most sustainable configuration *(energy efficiency & embodied emissions)* | Reducing greenhouse gas (GHG) emissions by 45% by 2030 *(over a 2020 baseline)* | ▸ No information provided |
| Reduction Scope 1 and Scope 2 GHG emissions | Reducing absolute Scope 1 and Scope 2 GHG emissions by 66% in 2030 *(over a 2020 baseline)* | ▸ Fleet & buildings decarbonization | Reducing Scope 1 and Scope 2 emissions by 70% in 2030 | ▸ Electrification of fleet *(100% EV)* | Reducing Scope 1 and Scope 2 emissions | ▸ Electrification of fleet *(84% by 2030)*<br>▸ The remaining 16% concerns technical vehicles, for which a feasibility study will be conducted |
| Reduction Scope 3 GHG emissions | Reducing absolute Scope 3 GHG emissions by 42% in 2030 *(over a 2020 baseline)* | ▸ Supply chain engagement | Reducing Scope 3 emissions by 55% in 2040 *(over a 2022 baseline)* | ▸ No information provided | | |

# Overview of the CO2 emissions initiatives per operator

## Initiatives CO2 emissions

| | eurofiber \| unifiber | | Fiberklaar | |
|---|---|---|---|---|
| **Objective** | **Company specific** | **Initiative** | **Company specific** | **Initiative** |
| Net zero GHG emissions | "Race-to-zero" | ▸ Circular Transition Indicators | | |
| Reduction Scope 1 and Scope 2 GHG emissions | Cut Scope 1 and Scope 2 GHG emissions by 2030 | ▸ Electrification of fleet | | |
| Reduction Scope 3 GHG emissions | Cut Scope 3 GHG emissions by 2040 | ▸ Encouraging supply chain partners to make products more sustainable and more circular<br>▸ Opting for train travel instead of air travel for long-distance business trips whenever possible<br>▸ Lifecycle analyses of passive and active products purchased from suppliers | | |

# Overview of the CO2 emissions initiatives per operator

## Initiatives CO2 emissions

| Objective | BT – Company specific | BT – Initiative | Verizon – Company specific | Verizon – Initiative |
|---|---|---|---|---|
| Net zero GHG emissions | Cutting BT carbon emissions intensity by 87% by March 31st, 2031 compared to FY17 levels | ▸ No information provided | Expect to achieve net-zero operational emissions by 2035 | ▸ No information provided |
| Reduction Scope 1 and Scope 2 GHG emissions | Becoming a net zero carbon emissions business *(Scopes 1 and 2 market-based)* by FY31 | ▸ Electrification of fleet | Expect to achieve a 53% reduction in scope 1 and 2 operational emissions to limit global warming to 1.5°C by 2030 *(over a 2019 baseline)* | ▸ No information provided |
| Reduction Scope 3 GHG emissions | Reducing supply chain carbon emissions by 42%, compared to FY17 levels *(Scope 3 categories 1 - 8)* by FY31<br>Becoming net zero for supply chain and customer carbon emissions *(Scope 3)* by FY41 | ▸ Reducing footprint network | Expect to achieve a 40% reduction in our scope 3 emissions from our value chain to limit global warming to well-below 2°C y 2030 *(over a 2019 baseline)* | ▸ No information provided |

# Overview of the energy initiatives per operator

## Initiatives energy consumption

| Objective | Company specific | Initiative | Company specific | Initiative | Company specific | Initiative |
|---|---|---|---|---|---|---|
| Renewable electricity | 100% renewable electricity sourcing across the Group to reach zero scope 2 emissions | ▸ Exploring the potential of demand flexibility *(adapting electricity demand to renewables availability & market prices)* and energy storage *(e.g. through batteries)* | Purchasing of electricity from renewable energy sources, aiming for 100% by 2030 *(for contracts under own control)* | ▸ No information provided | Using 100% renewable electricity by 2030 | ▸ Achieved energy efficiency target, and electricity already comes entirely from renewable sources<br>▸ Increasing share of renewable electricity used at third parties' sites *(renting)* |
| Energy efficiency | Increasing the energy efficiency by continuously improving and optimizing energy consumption across the network, buildings and datacenters | ▸ Phasing out old technologies *(e.g. copper)*<br>▸ Modernizing our network *(e.g. fiber deployment)* or by sharing agreements | Increasing the energy efficiency | ▸ Increasing the energy efficiency of data centers to achieve a Power Usage Effectiveness *(PUE)* of 1.5 or less on an annual basis<br>▸ Accelerated phase-out of the oldest generation of devices installed at customers' premises and replacement with more recent CPE models that consume 80% less energy | | |

# Overview of the energy initiatives per operator

## Initiatives energy consumption

| | eurofiber \| unifiber | | Fiberklaar | |
|---|---|---|---|---|
| **Objective** | **Company specific** | **Initiative** | **Company specific** | **Initiative** |
| Renewable electricity | 100% green power | ▸ Using 100% renewable electricity for offices, data centers, and local sites | | |

# Overview of the energy initiatives per operator

## Initiatives energy consumption

| Objective | BT Company specific | BT Initiative | verizon Company specific | verizon Initiative |
|---|---|---|---|---|
| Renewable electricity | | | Expect to source renewable energy equivalent to 50% of annual electricity usage by 2025<br>Expect to source renewable energy equivalent to 100% of annual electricity usage by 2030 | ▸ No information provided |
| Energy efficiency | Increasing the energy efficiency | ▸ Reducing energy consumption | | |

# Overview of the waste initiatives per operator

## Initiatives waste & recycling

| Objective | Company specific | Initiative | Company specific | Initiative | Company specific | Initiative |
|---|---|---|---|---|---|---|
| Circularity | Blueprint for circularity by 2030 | ▸ Extending lifecycle of devices through eco-design, refurbishing, reuse, and recycling<br>▸ Recycling old copper network<br>▸ Offering leasing models to business customers | Increasing the circular economy | ▸ Recycling and refurbishing of CPE (modems & STB)<br>▸ Recycling and reuse of third-party hardware *(tablets, mobile phones, and IT equipment)* | Increasing the circular economy | ▸ OSCAR program for IT and network equipment<br>▸ RE program for mobile and fixed devices *(e.g. Eco-design, increasing share of refurbished mobile phones, promoting repairs, encouraging responsible use, collection of used mobile phones)* |
| Ecofriendly packaging | Use environmentally friendly packaging | ▸ Using 20% less plastic in packaging and opting for recycled materials | Use environmentally friendly packaging | ▸ Shifting towards smart and environmentally friendly packaging | | |

# Overview of the waste initiatives per operator

## Initiatives waste & recycling

| Objective | BT Company specific | BT Initiative | verizon Company specific | verizon Initiative |
|---|---|---|---|---|
| Circularity | Increasing the circular economy | ▸ Reusing packaging materials<br>▸ Using mugs instead of plastic/paper cups | Increasing the circular economy | ▸ Diverting 100% of e-waste from landfills by reusing or responsibly recycling materials<br>▸ Sustainable sourcing and use of paper: At east 50% of the paper Verizon sources annually will include at least 10% recovered fiber content and/or at least 10% post-consumer waste (PCW) content |

# Overview of Digi's sustainability initiatives

## Initiatives DIGI[1]

| Objective | Company specific | Initiative |
|---|---|---|
| CO2-emissions and energy consumption | To reduce $CO_2$ emissions and energy consumption through sustainable energy sourcing, infrastructure modernization and increased efficiency | ▸ Work-from-home policy 2 days/week<br>▸ Eco-driving training for field employees<br>▸ Office close to train station<br>▸ Energy efficient active components |
| Waste & recycling | To expand initiatives on e-waste recovery and recycling of customer equipment | ▸ Circular economy practices such as refurbishing and reusing devices |

1. Digi Belgium is developing a sustainability strategy and ESG governance structure. Environmental KPIs will be integrated into the strategic framework and monitored for continuous improvement