Communication du Conseil de l'IBPT du 19 juin 2026 concernant la révision du rapport de Capgemini Invent de 2020 sur l'évolution des données mobiles liées au spectre sous licence en Belgique et l'impact sur la présence des médias

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Contexte

1. En 2019, à la demande du ministre des Télécommunications de l'époque, l'IBPT avait fait appel à un consultant indépendant pour analyser l'évolution des données mobiles liées au spectre sous licence en Belgique pour les services mobiles publics et déterminer la part des médias.

2. Les opérateurs de réseaux mobiles belges disposent de leurs propres réseaux d'accès radioélectriques et licences de spectre leur permettant de transporter le trafic de données depuis et vers les utilisateurs finaux à l'aide de différentes générations de technologie mobile (2G, 3G et 4G). La question centrale de l'ancienne étude consistait à savoir comment les données mobiles allaient évoluer au sein du spectre existant et quel en serait l'impact sur la présence des médias.

3. Le but de l'étude était de dresser un état des lieux ainsi que d'identifier les futurs développements attendus (2019–2040). Dans ce cadre, la présence des médias a été analysée en termes de volumes de données et de revenus qui en découlent. Les résultats devaient également contribuer à la constitution d'une base objective pour la distribution des revenus liés au spectre entre l'autorité fédérale et les communautés, à la lumière de leurs compétences respectives en matière de communications électroniques et de services de médias audiovisuels.

4. Vu le retard encouru au niveau de la mise aux enchères du spectre et les évolutions récentes en matière de technologie et de consommation des données, l'IBPT a décidé en 2024, à la demande du gouvernement fédéral[1], de faire réaliser une mise à jour de l'étude en ce qui concerne les volumes de données.

5. La révision de l'étude de 2020 visait à mettre à jour les hypothèses et paramètres originaux sur la base de nouvelles informations et à confronter les projections aux évolutions récentes. La méthodologie générale, la modélisation, la définition des médias et l'horizon temporel n'ont en revanche pas été modifiés. La mission a été confiée à Capgemini Invent et a débouché sur un rapport actualisé en avril 2025. L'IBPT a reporté la publication jusqu'à ce que l'étude puisse être présentée aux cabinets fédéraux et fédérés concernés. Ces explications ayant entre-temps été données, l'IBPT publie aujourd'hui le rapport.

[1] Accord de coalition fédérale 2025-2029, p. 65 : « Le gouvernement fédéral s'engage à trouver un accord avec les entités fédérées sur la répartition de la redevance unique provenant de la mise aux enchères du spectre et utilisera une clé de répartition basée sur une étude objective concernant la part respective des médias et des communications électroniques dans l'utilisation totale des bandes de fréquence mises aux enchères. »

Résultats de l'étude

6. À l'instar de l'étude originale de 2020, deux approches ont été suivies pour déterminer la présence des médias dans l'ensemble du trafic de données mobiles. L'approche 1 utilise une définition plus stricte des médias, tandis que l'approche 2 repose sur une interprétation plus large.

	Approche 1	Approche 2
1. Être un service	Économique	Économique et non économique
2. Responsabilité rédactionnelle	Oui	Non
3. Objectif principal	Oui	Non
4. Fourniture de programmes audiovisuels	Oui	Oui
5. Pour informer, divertir ou éduquer	Oui	Oui
6. Pour le grand public	Oui	Oui
7. Par le biais de réseaux de communications électroniques	Oui	Oui

Tableau 1. Résumé de l'interprétation des médias de l'approche 1 par rapport à l'approche 2.

7. La version actualisée de l'étude avait pour objectif de vérifier dans quelle mesure les évolutions projetées en matière de volumes de données mobiles et la présence des médias connexe divergeaient des attentes précédentes. Dans ce cadre, l'on a notamment examiné les paramètres sous-jacents, ainsi que leur évolution, la base de la modification des hypothèses et l'impact des récentes évolutions en matière de consommation de données. Le cas échéant, des réalisations récentes de ces dernières années ont également été reprises dans l'analyse.

8. L'analyse n'a apporté aucune modification à la structure générale de l'étude originale. La révision se limite à une adaptation des paramètres et des hypothèses de l'étude originale. La méthodologie et modélisation générales, la définition des médias (approches 1 et 2), l'analyse de la présence des médias en termes de revenus ainsi que l'horizon temporel utilisé restent inchangés.

9. L'étude originale de 2020 conclut que la part moyenne projetée des médias au sein du volume total de données mobiles s'élève à 4,94 % selon l'approche 1 et 17,79 % selon l'approche 2. Selon la révision, cette part s'élève respectivement à 3,12 % et 19,09 %. Les adaptations sont en général limitées. L'approche 1 montre une légère révision à la baisse, tandis que l'approche 2 affiche une légère correction à la hausse. Ces résultats confirment ainsi les conclusions de l'étude initiale et les conclusions générales restent valables.

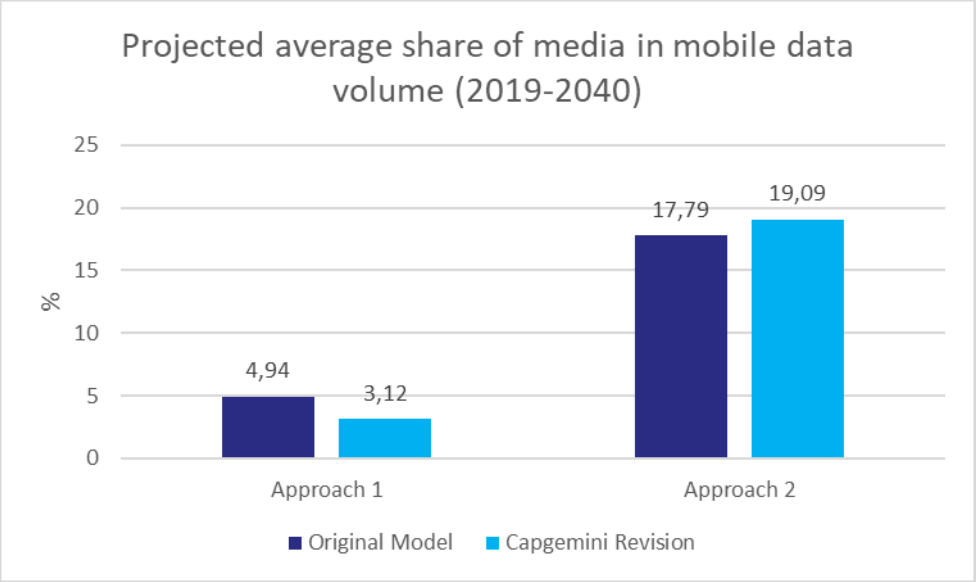

Tableau 2 : Résumé des résultats.

Annexe

Le rapport est repris ci-après.

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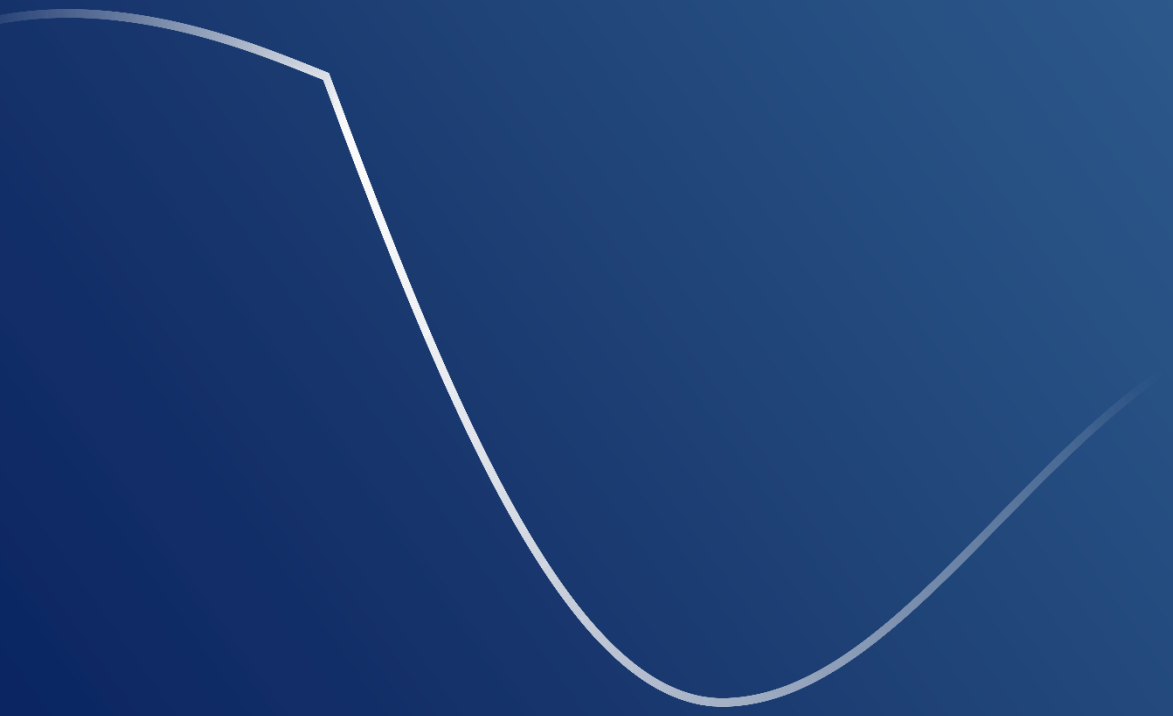
Président du Conseil

Revision of the Media in Mobile data report (2020) on the evolution of mobile data in the Belgian spectrum for public mobile services and its impact on media share

Brussels, April 2025



Capgemini

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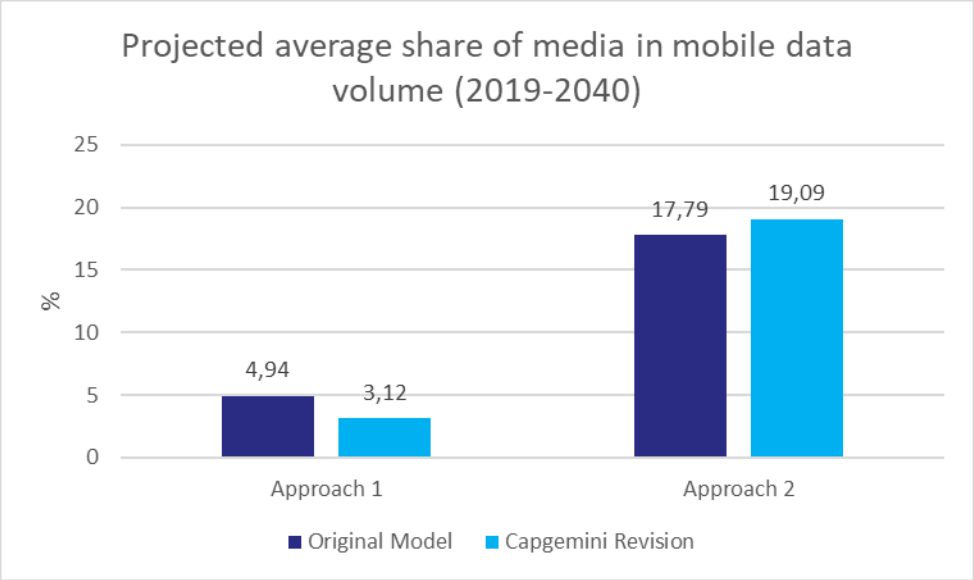
1. Management summary

1. In 2019 Capgemini performed an independent market study, commissioned by the BIPT to determine the projected average media share in mobile data. The results were published in March 2020. In 2024, Capgemini performed a revision of the original market study. The revision is required in the light of fast-evolving mobile data markets as well as the 2-year delay in spectrum auctions.

2. The original 2020 market study concludes that the projected average media share in total mobile data volume is 4,94% for Approach 1 and 17,79% for Approach 2. The 2024 revision concludes that the projected average media share in total mobile data volume is 3,12% for Approach 1 and 19,09% for Approach 2. Overall, the adjustments are minimal. Approach 1 shows a slight downward adjustment, while Approach 2 reflects a modest upward revision. Hence, the 2024 revision reaffirms the findings of the original 2020 study and therefore confirms that the overall conclusions remain valid.



3. Fully aligned to the original study, the concept of media should be understood within the meaning of Article 4(6) of the Special Law of August 8, 1980 on the reform of the institutions. The concept of 'audiovisual media service' should be interpreted in the light of the AVMS Directive. Based on this, media services have been identified in the first place by withholding the (content) providers which are registered at the Media NRAs. Secondly, the interpretation of the AVMS directive has been applied. Furthermore, different interpretations are given to the AVMS directive.

4. Neither the original study nor this update aims to intervene in the regulatory discussion on what can be considered as Media and hence the two approaches have again been applied. Approach 1 should be considered as the more restricted view on Media, whereas Approach 2 applies a broader view. To apply these rules in the Individuals pillar of the model, the media percentage per service category and per approach (to identify media) has been identified by analysing the main media channels and platforms (such as Facebook, Instagram, TikTok, …). The figure below summarizes the conditions determining the categorization as Media under each approach.

	Approach 1	Approach 2
1. be a service	Economical	Economical and non-economical
2. editorial responsibility	Yes	No
3. principal purpose	Yes	No
4. provision of audio-visual programmes	Yes	Yes
5. in order to inform, educate or entertain	Yes	Yes
6. to the general public	Yes	Yes
7. via electronic communications networks	Yes	Yes

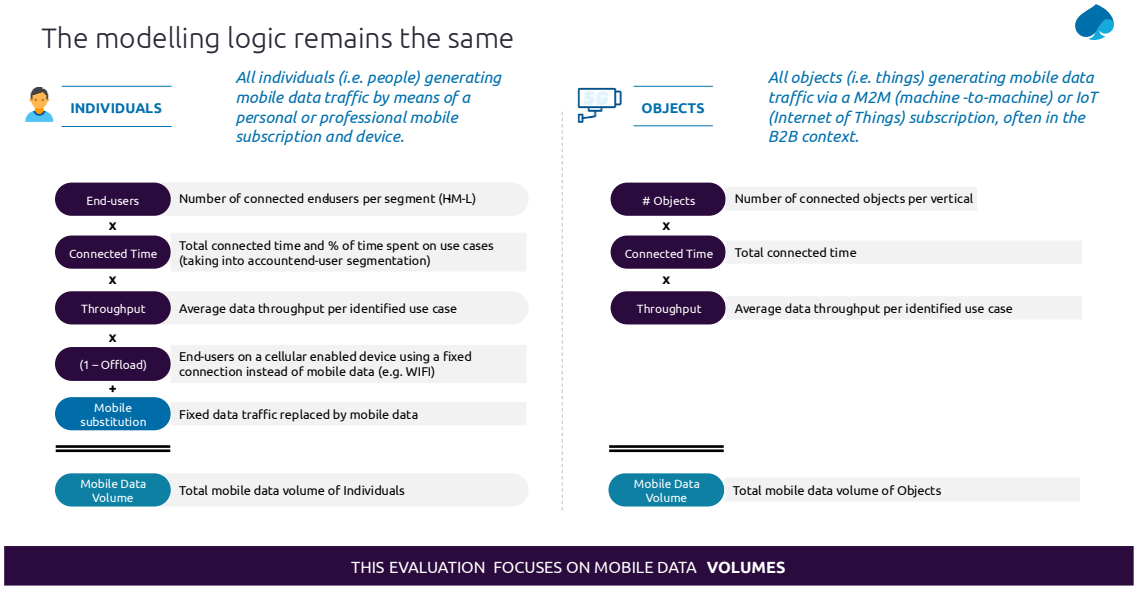
5. The original 2020 study assessed mobile data volumes as well as prices and the entailed revenues. However, the scope of the current evaluation is limited to mobile data volumes. The share of media in mobile data is therefore only reassessed based on volumes, not revenues. The horizon of the projection remains until 2040.

6. In the revision, Capgemini adjusted certain parameters in the model and made some core assumptions. Additionally, Capgemini conducted 2 review activities in parallel.

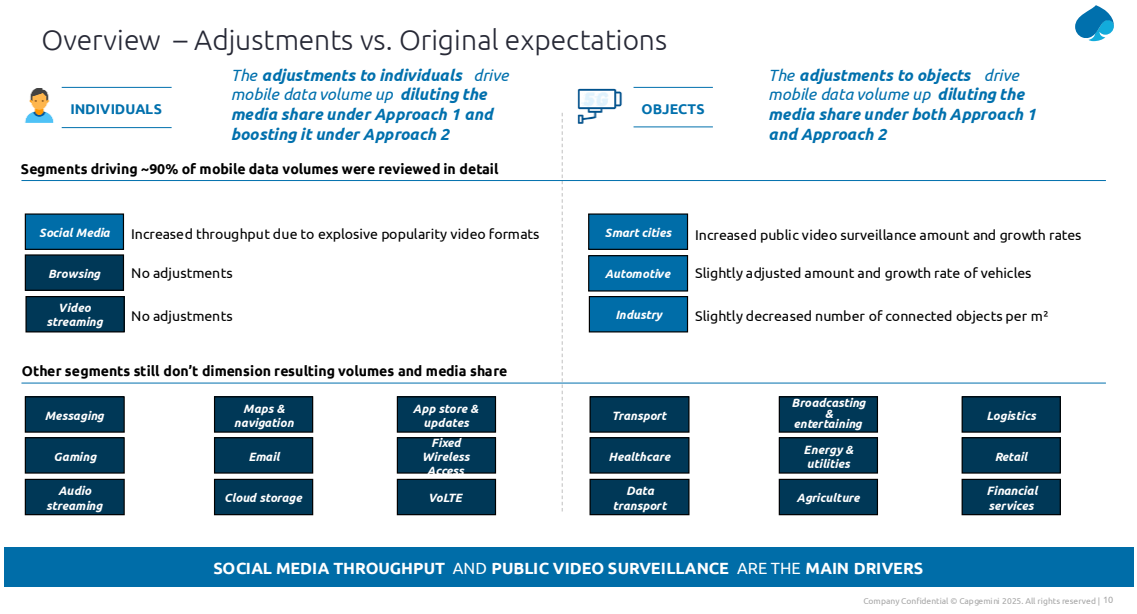
    6.1. To ensure completeness of the adjusted parameters, Capgemini performed a **top-down trend analysis**, combining both publicly available resources and input from its expert network. Capgemini only identifies and considers a trend when there is a significant new insight compared to 2019.

    6.2. To ensure maximally informed parameter estimates, Capgemini also performed a **bottom-up parameter analysis** where the parameters driving 80% to 90% of the results have been reviewed individually. Capgemini considers a parameter adjustment as necessary only when there is significant new information compared to 2019.

7. The modelling logic is out of scope of this revision and therefore remains the same as in the original model. The figure below provides a reminder of the core modelling logic. Individuals' refers to all people generating mobile data traffic by means of a personal or professional mobile subscription and device. 'Objects' refers to all objects generating mobile data traffic via a machine-to-machine (M2M) or Internet of Things (IoT) subscription, typically in a B2B context. The mobile data volume is calculated separately for individuals and objects, taking into account the number of users, connection time, and average throughput per use case. For individuals, fixed offload and mobile substitution are also taken into account.



8. As a result of the performed revision, Capgemini suggests adjusting 1 broad segment under individuals and 3 broad segments under objects. The adjustments to social media and to smart cities are the main drivers of revised figures both for mobile data volumes and the media shares. For social media the throughput of mobile use is adjusted upward due to the unexpectedly increased popularity of video formats, especially *shorts* and *reels*. This adjustment drives mobile data volume up and dilutes the media share under Approach 1 while it boosts the media share under Approach 2. For smart cities, the amount and growth of (cellular enabled) public video surveillance cameras has been adjusted both due the existence of new relevant data, and due to their popularity increasing beyond expectations from 5 years ago. This adjustment drives mobile data volume up and has a diluting effect on the share of media under both Approaches 1 and 2. The figure below provides a high-level summary of the adjustments and their impact.



2. Revision of the Media in Mobile data report (2020) & proposed adjustments

2.1. Individuals

2.1.1. End-user pool

9. Capgemini has updated the pool of end-users with the most recent observations and projections from Statbel. The incorporation of these updated demographic figures has led to a slight increase in the projected media-share.

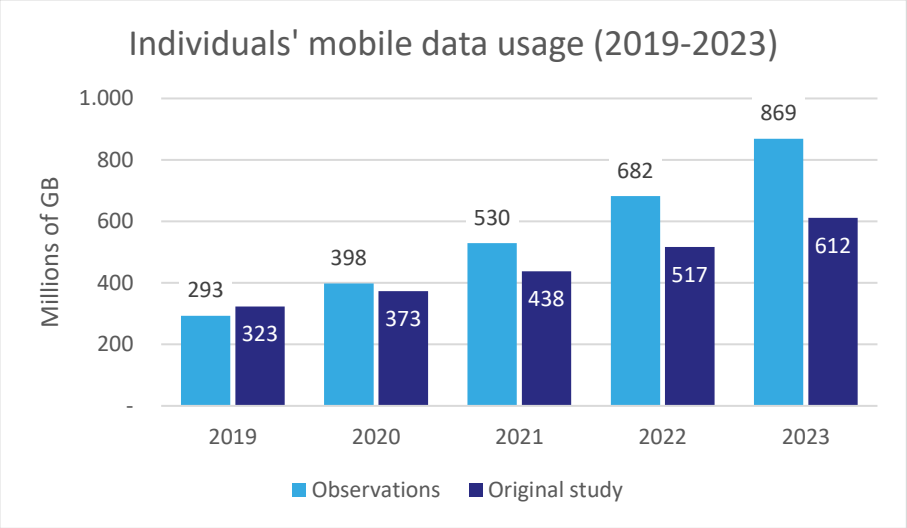
2.1.2. 5G adoption

10. Capgemini updated the 5G penetration rate based on IDATE data, leading to a 16 %-point decrease of 5G penetration by the end of 2028, down from 100% to 84%. This adjustment does not impact the media-share. Capgemini finds no evidence to suggest that the shift in technology from 4G to 5G will significantly impact consumer behaviour from individuals. Therefore, the absence of an impact on the media-share is a reasonable conclusion.

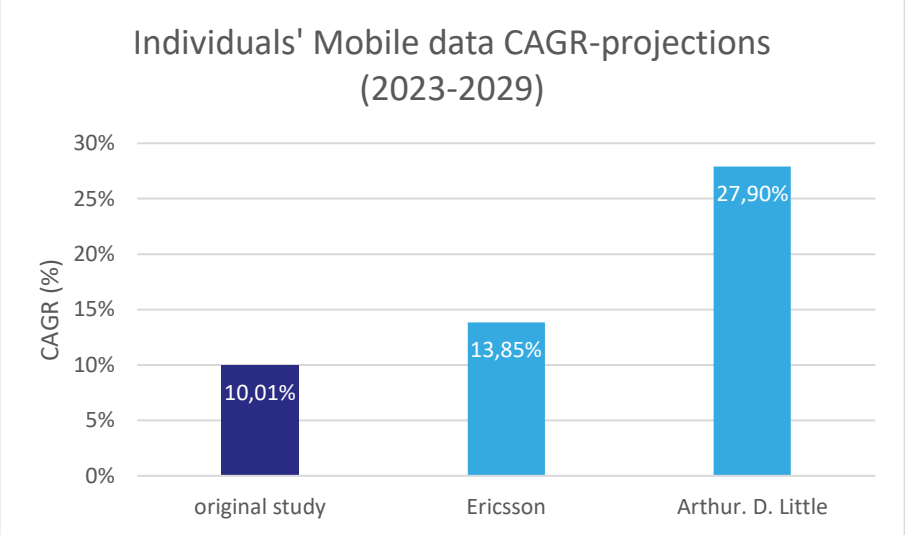
11. European Capgemini 5G experts have indicated that a slowed down implementation of 5G-core architecture does slow down the roll-out of industrial applications. We have taken this trend into account when re-evaluating the number of connected objects per m² in production plants and smart warehouses. A report from Ericsson suggests that the estimated number of smart objects is 0,50/m² in 2023. This is identical to the starting value used in the original model for 2019, and therefore justifies a downward revision of the current number. Additionally, European Capgemini 5G experts indicate that abroad the introduction of 5G with 4G core has not yet produced the initially expected uptake in smart manufacturing and logistics use cases. This uptake does however follow the introduction of 5G core architecture. Expert experience therefore suggests that the uptake will happen a few years later than originally expected. Concluding from the above, we suggest to recalibrate 2024 to 0,50 objects per m² whereas original expectations estimated 0,58/m². The impact on objects' total mobile data consumption is negligible.

2.1.3. Individuals' mobile data usage

12. Capgemini compared the individuals' observed mobile data usage, based on the latest operator data, with the projections made in the original model. This comparison reveals that the original model underestimated the evolution of individual's mobile data consumption. The figure below shows this discrepancy.



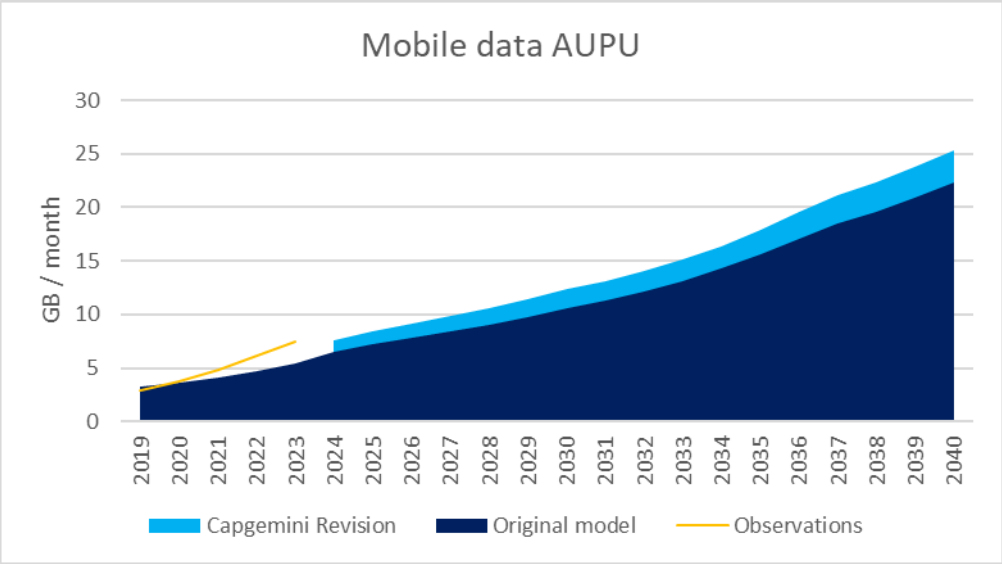
13. To resolve this observed discrepancy, Capgemini made an adjustment to the overall CAGR for individuals' mobile data usage, drawing on studies from Ericsson and Arthur D. Little. The respective CAGR figures are shown in the figure below.



14. Capgemini chose to adopt the more prudent CAGR of the Ericsson study and refined the forecast based on the combination of a top-down trends analysis and a detailed bottom-up parameter analysis. This led to a revised AUPU forecast, the breakdown of which is provided below.

15. From a top-down trend perspective, the main relevant trend driving individuals' mobile data usage and therefore the AUPU upward, is that there are more applications using more video, audio and other data-heavy formats than expected 5 years ago. The most significant sub-trend here is the accelerated popularity increase of *shorts*, *reels*, and other short video formats on social media. A smaller, similar trend is likely to be observed across other service categories, like browsing and messaging.

16. Following a detailed bottom-up parameter analysis, Capgemini found enough evidence to review the throughput for social media upward. The original model projected a social media throughput of 0,11 MB/s in 2024. We have reviewed this upward and adjusted the model to have a throughput of 0,15 MB/s in 2024. While our top-down trend analysis suggests an upward revision of the throughput for other service categories like browsing and messaging, the detailed bottom-up analysis has not provided enough evidence to make such adjustments to the model. The resulting mobile data AUPU is shown in the figure below. A difference in the long-term growth rate compared to the first adjustment above can be observed. This is because, looking at the driver being the popularity explosion of short video formats, we do not believe this explosive *growth* to sustain through 2040 while we do believe the shift in *level* is likely definitive.



17. The figure above shows that adjusting the throughput for the social media service category as of 2024 brings the projected AUPU closer to the extrapolation rate used in the original model while it is still consistent with the actual AUPU observed up to 2023. Particularly, Individuals' total mobile data usage for 2024 is 907M GB, well above the observed mobile data usage of 869M GB in 2023. The adjustments made therefore effectively recalibrate the model to observations for 2024.

2.1.4. Average throughput per service category

18. Capgemini has identified several trends potentially driving the throughput for service categories upward. The increased share of video in social media, messaging and browsing among other service categories is one of those trends, as also stated in the previous section.

19. Another trend Capgemini has identified, is the general increase in quality to be expected for both audio and video formats. The original model assumes that compression techniques will evolve equally with the higher quality of content. Capgemini found no evidence to refute this assumption. Particularly, GenAI is advancing 'semantic compression' research, which could accelerate compression techniques while higher-quality video becomes more standard. While this technique is still in development and not yet mainstream, it does not require adjustments to the original assumptions. Although higher quality of video demands more data, improved compression techniques offset this increase. The net effect on AUPU is therefore zero. See for example this study.

20. The revision of the model by Capgemini does update the throughput for social media. The original model projected a social media throughput of 0,11 MB/s in 2024. We have reviewed this upward and adjusted the model to have a new starting throughput of 0,15 MB/s in 2024. The reason for this adjustment is that the relative presence of video-format-heavy social media platform TikTok has gone up from the originally projected 1% to 20% while the other major social media platforms (Facebook and Instagram) have seen the share of video in their usage go up significantly to 90% whereas original expectations were between 20% and 5%. Our trend analysis also suggests the possibility of an upward revision for the throughput of other service categories like browsing and messaging, but a detailed bottom-up analysis does not provide enough evidence to make such adjustments.

21. The increased weight of TikTok is consistent with its explosive user base growth - from 133M in 2018 to more than 1.5B in 2023, a more than tenfold increase. This is supported by various sources, see for example here or here. The rebalancing was based on the assumption that Instagram, TikTok, and Facebook together still account for 89% of mobile data traffic among social media platforms. Within that total, the share was redistributed according to each platform's (active) user base.

22. An increased share of video across Meta platforms (Instagram & Facebook) leads to an increased media share compared to original expectations. The table below summarized the increased media shares. The reasoning goes as follows:

		Media shares – 2020 study			Media shares – 2024 update		
		2019-2024	2025-2029	2030-2040	2019-2024	2025-2029	2030-2040
Approach 2	Instagram	49%	45%	42%	63%	77%	90%
	Facebook	14%	22%	28%	45%	77%	90%
	TikTok	100%	100%	100%	100%	100%	100%

22.1. The calculation we want to achieve boils down to:

$$\%\ \text{of mobile data usage going to public videos} =$$

$$\%\ \text{of mobile data going to video} \times \%\ \text{of video content being public}$$

22.2. **The % of mobile data going to video = 90%** based on the following reasoning: Recent figures show that 38,5% of all posts are reels, and 50% of time spent on Instagram is dedicated to reels. (Source) Time spent is the most appropriate proxy to estimate impact on mobile data usage, but we still need to consider the different throughput for video- vs. non-video-use. Data from the original model shows that for non-video-Facebook-use, the average throughput is 0,01 mb/s whereas for video-Facebook-use the average throughput is 0,1 mb/s which we can by assumption generalize to mean that the social-media-video-throughput is 10x the social-media-non-video-throughput. Note that, considering we adjust the throughput to 0,15mb/s in 2024, the 10x multiple is a conservative estimate. However, pushing the throughput multiple from 10x to 15x does not have a significant impact on the social media share due to decreasing returns. Combining the 50/50 split in time spent with the 10x throughput multiple yields the conclusion that 90% of mobile data volume usage goes to video-use whereas 10%

goes to non-video use. (For a 15x multiple it would be 93% of mobile data volume going to video-use.)

22.3. **The % of video content being public = 85%** based on the following reasoning: Following the definition of Approach 2, we assume that video content accessible without the content-poster needing to accept your access to the content is considered public, whereas private videos require acceptance/friendship from the poster. We assume that 'public' video content is 'media' under Approach 2 whereas 'private' video content is not. This leads to the question: what proportion of reels, shorts, and similar content is public versus private? While clear data is lacking, several observations inform a best estimate. First, most reels are public because they are designed to reach a wide audience. For instance, One report indicates that reels from accounts with over 50,000 followers reach an average of 67,000 users. Second, a significant portion of Instagram users keep their account public, though specific data is unavailable. According to Instagram, around 200B reels are viewed daily while the active user base is about 2B. Based on the two previous observations, our best estimate is that 85% of reels are public. This assumption is supported by the fact that most reels, regardless of whether the viewer's own account is public or private, are posted by large public accounts aiming to reach a broad audience. Intuitively, this means for every 10 reels viewed by the average person, approximately 1 is private, which seems reasonable.

22.4. Thus: **% of mobile data usage going to public videos = 77%**, which equals 90% (the % of mobile data going to video) multiplied by 85% (the % of video content being public).

23. As a conclusion, while the increase in quality of video content on the one hand and improved compression techniques leading to lower throughput on the other hand could potentially level out, the increased share of video content in social media represents the main driver justifying an upward adjustment of the throughput. This throughput being higher than projected by the original model is the main driver for the increase in individuals' mobile data usage. This results in a diluted media share under Approach 1 and a boosted media share under Approach 2.

2.1.5. Fixed offload and mobile substitution

24. Capgemini has not found significant evidence of divergence from original expectation for either fixed offload or mobile substitution.

2.2. Objects

25. Regarding the Objects pillar, Capgemini concludes that, the mobile data volume projections of the original model are likely conservative, considering the latest trends and literature. Capgemini has conducted an extensive top-down trend analysis and bottom-up parameter analysis for the three primary verticals driving over 80% of the results for the objects pillar: smart cities, automotive, and manufacturing. The net result of adjustments made to all three of the primary verticals leads to a significant upward revision of the mobile data volume generated by objects.

26. The mobile data volume due to objects is being driven upward mostly by new data and insights relating to public video surveillance. New data is available because the Belgian Surveillance Camera Act came into force in May 2018, leading to accelerated registration of public cameras until 2021, and a stable dataset as of 2022. Additionally, the growing trend of public video surveillance is being fuelled by evolving political sentiments on

security issues, as well as increasing government and law enforcement use of public video surveillance.

27. There are **two driving parameters related to the objects pillar and both concern public video surveillance**:

    27.1. The **number of public video surveillance cameras** is increased. Data from VRT shows that the amount of (registered) public surveillance cameras far exceeds the initially projected number. While the originally projected amount of surveillance cameras for 2024 is 222k, observations show that the true total amount is 475k. This new total amount includes cameras in public spaces owned by police (9,4k), government (6,1k), companies and households.

    27.2. The **fraction of public surveillance cameras being cellular enabled** is increased. Assuming most of the 15k police and government cameras are cellular enabled, and almost none of the household and company owned cameras are cellular enabled, we arrive at 3,17% of public cameras being cellular enabled. The trend of increase of first responders evolving towards mobile network has been accounted for in the increase from 0,51% earlier to 3,17%. There is no indication that this trend will continue to rise further.

28. **Other adjusted parameters related to public video surveillance** are the following:

    28.1. The annual **growth rate of the number of public surveillance cameras** is increased from 3,39% to 5,75% through 2030. Between January 2019 and December 2024, a CAGR of 30,13% for registered public cameras has far exceeded the initially assumed growth rate of 3,39%. However, as the Belgian Surveillance Camera Act came into force in May 2018, the heightened growth for 2019 and 2020 should be considered as an uptick in the registration of existing cameras for the purpose of compliance. Looking only from January 2021 to December 2024, we find a CAGR of 7,03%. We also find that the European market for outdoor surveillance cameras is set to grow at a CAGR of 4,50% between 2023 and 2030. We therefore suggest an annual growth rate of 5,75% until 2030, and 3,39% thereafter, as we have no evidence to suggest a new growth rate after 2030.

    28.2. The **annual growth rate of the fraction of public surveillance cameras being cellular enabled** is stabilized throughout the study at 16%. In the original model, this growth rate varies between 140% and 0%, changing every year based on expert input. We have now found evidence to stabilize it at 16%, based on this study and deciding to err on the conservative side. The model then predicts a rise to about 330k public video surveillance cameras being cellular enabled by 2040. Considering the trends on traffic management, security in general as a political topic, law enforcement, and bodycams for all first responders, this projection seems acceptable.

    28.3. We have ***not*** **adjusted the throughput (and growth rate thereof) for public video surveillance** despite a general tendency toward higher quality imagery. We support the assumption from the original study stating that quality increase and compression capabilities could middle out. GenAI is advancing 'semantic compression' research, which is particularly relevant to video surveillance. See for example this study.

29. The **adjusted parameters related to the automotive industry** are not dimensioning, but here is the overview:

29.1. The **number of cars** is recalibrated downward from 6,24M to 6,09M based on observations published by Statbel.

29.2. The **growth rate of the number of cars** is revised downward. On average, the number of cars has increased by 0,92% annually between 2014-2024, as published by Statbel. The growth rate is therefore lowered compared to the average annual growth rate of 1,27% observed between 2010-2020. As we don't have information to suggest either that it's a temporary slowdown, or that the annual growth rate will continue trending downward, we suggest using the new annual growth rate of 0,92% as opposed to the growth rate of 1,16% currently in the model.

29.3. The **number of trucks and its annual growth rate** is recalibrated based on the annual reports of Viapass, the interregional government agency that manages and coordinates the kilometer charge for HGVs on behalf of the 3 Belgian regions. We observe the following figures for the number of trucks per workday: 146,971 in 2021, 150,000 in 2022, and 150,000 in 2023. From this, we can draw two conclusions. First, in 2023, there were an average of 107,143 trucks per day on Belgian roads. Second, we see a growth of +2% between 2021 and 2022, and no growth between 2022 and 2023. Provided the negative growth rate of -0,83% in the original model, we propose adjusting the average annual growth to 0%. There is likely to be a standard fluctuation of +/- 2%, if we had the timeseries to perform a thorough analysis.

30. As discussed in section 2.1.2. on 5G adoption, European Capgemini 5G experts have indicated that delays in the implementation of 5G-core architecture does slow down the roll-out of industrial applications. This trend is taken into account when re-evaluating the **number of connected objects per m² in production plants and smart warehouses**. A report from Ericsson suggests that the estimated number of smart objects is 0,50/m² in 2023. This is identical to the starting value used in the original model for 2019, and therefore justifies a downward revision of the current number. Additionally, European Capgemini 5G experts indicate that abroad the introduction of 5G with 4G core has not yet produced the initially expected uptake in smart manufacturing and logistics use cases. This uptake does however follow the introduction of 5G core architecture. Expert experience therefore suggests that the uptake will happen a few years later than originally expected. Concluding from the above, we suggest to recalibrate 2024 to 0,50 objects per m² whereas original expectations estimated 0,58/m². The impact on objects' total mobile data consumption is negligible.

2.3. Conclusion: net impact on media share

31. The implementation of the adjustments outlined above, results in **a moderate upward revision of the media share under Approach 2** compared to the original study. This upward adjustment is primarily driven by the explosive rise in the popularity of *public* videos across social media platforms over the past years. While this marks a clear structural shift in how media is consumed, the resulting increase in media share under Approach 2 remains moderate, due to the following two key factors:

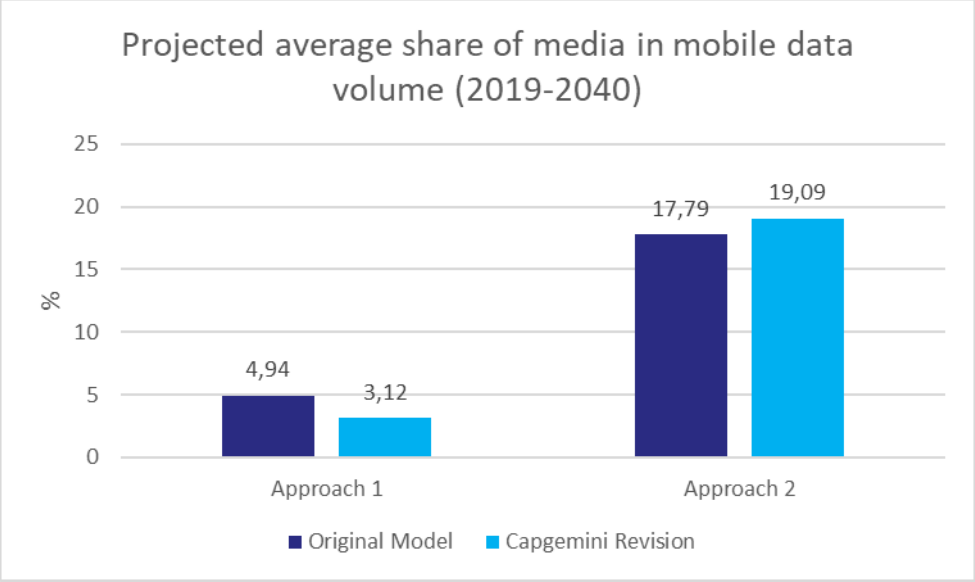
31.1. Although the current *level* of video popularity is expected to persist, we do not anticipate that the same rapid *growth rate* will continue through to 2040.

31.2. The significant increase in non-media video streaming, particularly from Video Surveillance Objects, results in a dilution of the overall media share. Since this type of video traffic does not qualify as media, it contributes to the overall growth in

data usage and therefore lowers the proportional weight of media content in the total data traffic.

32. Conversely, the media share under **Approach 1 is subject to a downward revision** compared to the original study. This is because most of the public video content driving social media mobile data volume upward does not satisfy the **"principal purpose" clause**, which is required for public video content to be classified as 'media' under Approach 1, whereas the increased mobile data volume of both Objects and Individuals dilutes the media share.

33. The figure below summarizes the results.



ANNEX I: Overview of top-down trends

This section contains an overview of the identified top-down trends, where we see potential differences vs. expectations 5 years ago.

New insights (vs. 2020) impacting media and mobile data usage

Increase in mobile data usage

1. There are more applications using more video, audio and other **streaming** than expected 5 years ago:
   - 1.1 Social media: TikTok, reels and shorts
   - 1.2 Messaging and communication behavior is trending towards voice and video
     - 1.2.1 Adoption of virtual meetings on the go (Covid and hybrid working)
     - 1.2.2 Adoption of video calls (norm for across generation)
   - 1.3 Accelerated increase in streaming of movies, series and sports
     - 1.3.1 There is more content available (growth streaming platforms, increased content diversity, e.g. e-sports)
     - 1.3.2 The audience is getting larger (penetration)
     - 1.3.3 The watch time per viewer is getting larger (watch time optimization)
   - 1.4 Accelerated increase in mobile gaming
   - 1.5 Surveillance and security (accelerated impact due to advanced AI and political preferences)
     - 1.5.1 Accelerated increase in fixed public surveillance cameras used by government and police
     - 1.5.2 Accelerated increase in the use of body cameras by first responders
     - 1.5.3 Communications first responders evolving towards mobile network
   - 1.6 Industrial and agricultural applications (accelerated impact due to advanced AI)
     - 1.6.1 Drones with high resolution cameras for monitoring and intervention
     - 1.6.2 Energy grid optimization
     - 1.6.3 Other use cases, especially with advanced AI, which needs high volume and resolution input for accuracy
2. Increased **connectivity** for customers in "remote" areas (e.g. FWA, trains)
3. Increased **quality** of streaming across all streaming types
4. Increased popularity of **private networks**

Decrease in mobile data usage

5. Several **use cases are expected to be shifted later in time** due to the slower than expected 5G roll-out and associated choices
   - 5.1 5G stand-alone adoption is going slower than expected leading to an impact on use cases shifted later in time
   - 5.2 Slicing is expected to enable use cases later in time, due to the slowed down 5G roll-out
6. GenAI breakthroughs of the past years have accelerated (contextual) **data compression** capabilities (e.g. surveillance cameras)
7. **AR/VR** and the metaverse are picking up more slowly than expected, could be a hype
8. Increased **offload** due to several influences
   - 8.1 **Satellite** network is an accelerating trend causing increased offload as it takes data off the standard 4/5G spectrum
   - 8.2 FTTH and **wifi 6** roll-out are evolving beyond expectations, leaking to offload from mobile network

No effect on mobile data usage

9. **FWA**: To service remote areas in BE, we expect FWA to ramain the preferred solution over FTTH and satellite connectivity

ANNEX II: Legal disclaimer

The projections and analyses presented in this study are based on current data and trends available at the time of publication. Capgemini Belgium makes no representations or warranties regarding the accuracy, completeness, or reliability of the information provided.

Capgemini shall not be held liable for any regulatory, financial, or monetary decisions made by any government body, including but not limited to decisions regarding revenue allocation, policy changes, or future regulatory impacts. Capgemini's scope of work is limited solely to the forecasting of expected mobile data volumes and does not encompass any analysis or prediction regarding the legal, regulatory, or financial outcomes stemming from the study's results. Any use of this study for purposes other than forecasting mobile data trends is at the discretion and responsibility of the respective users.

The findings and recommendations are intended for informational purposes only and should not be construed as financial, legal, or regulatory advice.