# Vodafone Portugal

Enabling Data Monetisation
for Enhanced
Decision-Making

"Celfocus emerged as the ideal partner for this project for several compelling reasons. Our prior successful collaborations assured us that Celfocus demonstrated an exceptional ability to create engaging and visually appealing methods for representing Vodafone's collected data, particularly through the development of interactive dashboards. This capacity not only enhanced the accessibility of complex data but also showcased a creative approach that aligned with Vodafone's objectives."

Vodafone Business Unit, Vodafone Portugal

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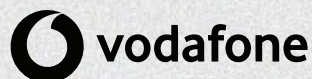
Unveiling Valuable Insights
for Business Growth

In today's digital landscape, data has emerged as one of the most valuable resources, revolutionising industries and transforming the way businesses operate. Communication Service Providers (CSPs) are no exception, as they navigate a rapidly evolving market where traditional revenue streams are being reshaped. Amid these changes, **data monetisation has emerged as a critical strategy for CSPs to thrive in the digital age.**

By moving beyond traditional connectivity and enabling innovative digital technologies on 5G, IoT, cloud and Edge services across industries, CSPs are helping business customers progress and thrive towards a better-connected future and digital society. Further to the investment in next-generation connectivity, CSPs are investing in Big Data capabilities to enable data-driven insights based on the vast amounts of data flowing through their networks.
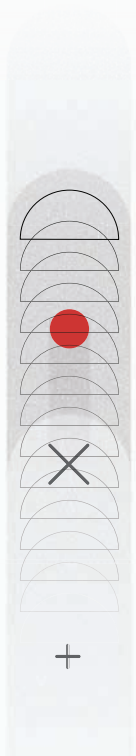
With the CSPs aggregating access to **5-8x more user data information with their service subscribers than any other internet company**, distinguishing use cases can be delivered to improve business. Not only does every smartphone run on a CSP network, but a significant part of IoT devices do as well. Location-based data, mobility insights and IoT analytics, which can be provided or supported by CSPs, represent a ground value for use cases benefiting businesses with revenue gains or efficiency improvements.

By extracting meaningful patterns, analysing trends, identifying correlations, and predicting future outcomes, CSPs can help their clients to make informed decisions that drive growth and innovation, enabling their offerings to meet individual needs, thereby boosting customer satisfaction and loyalty.

The ability to transform **raw and anonymised data** into valuable insights and products presents new opportunities for CSPs to thrive in a data-driven world. As we move forward, the organisations that **harness the power of data will undoubtedly stand at the forefront of progress.**
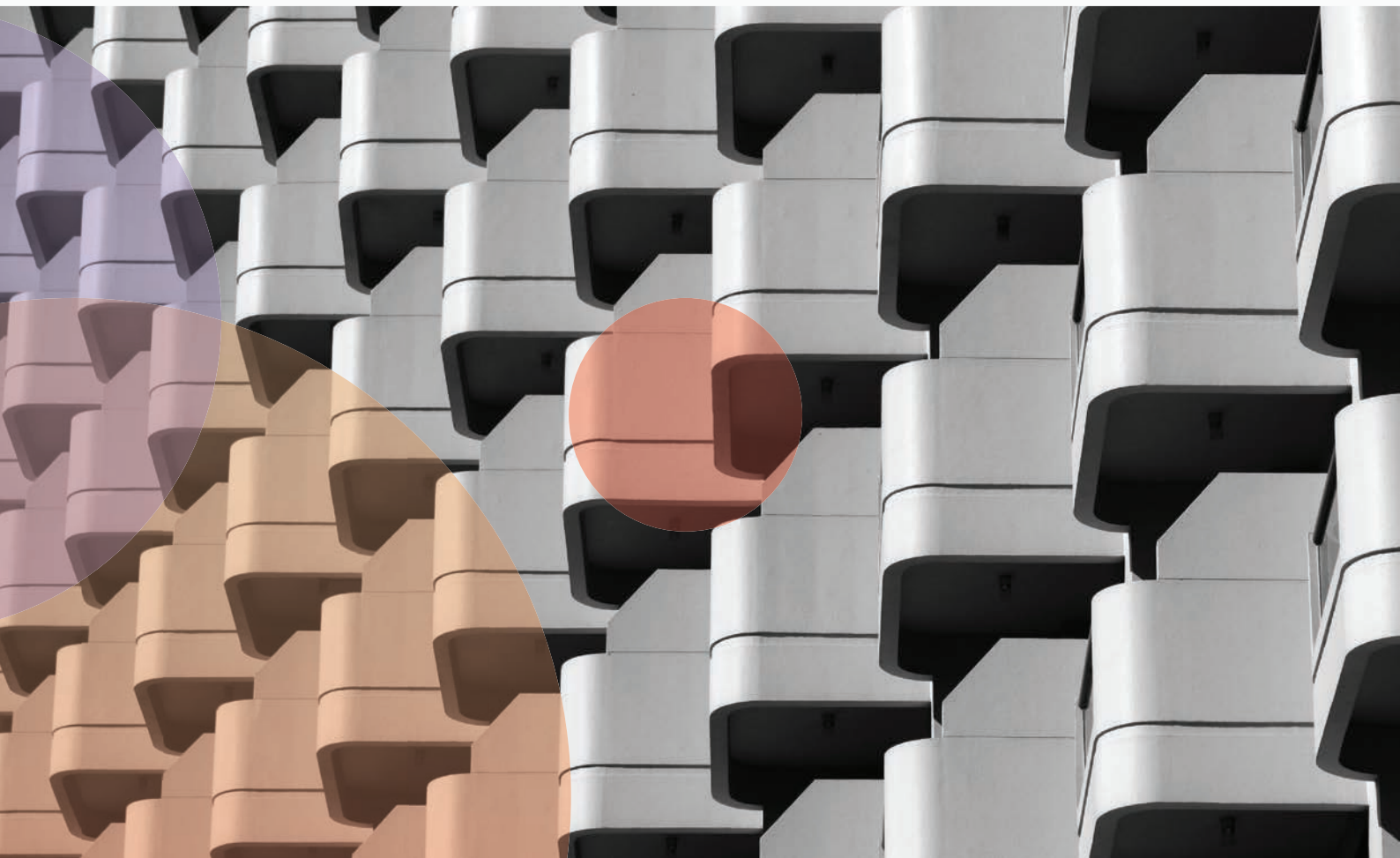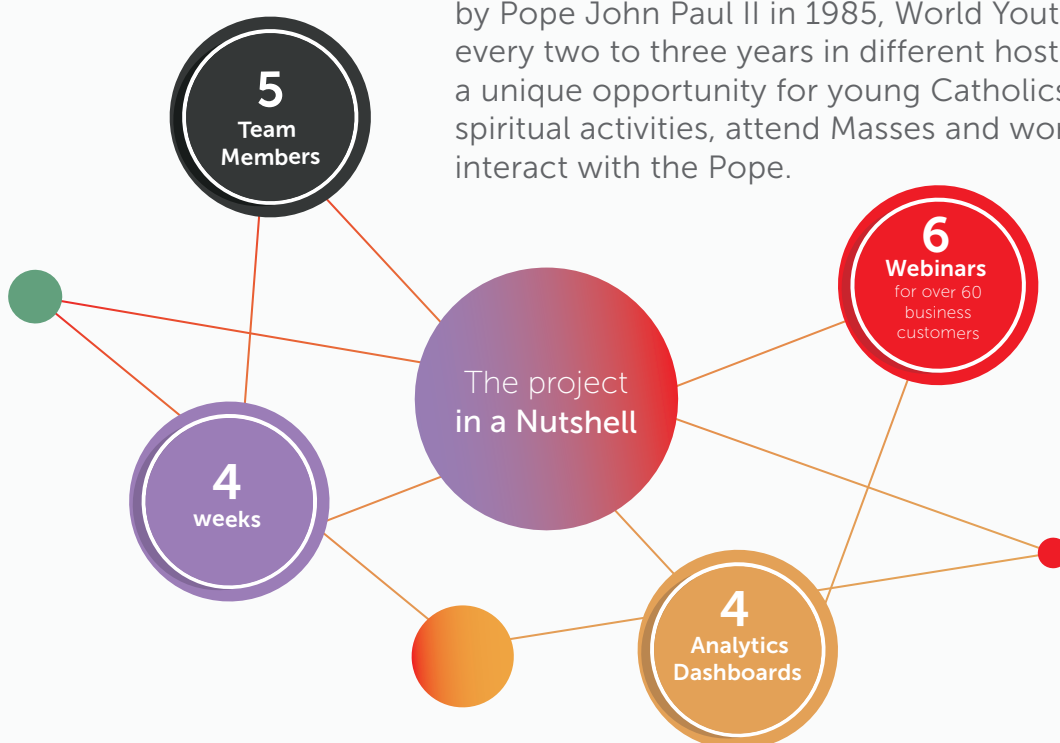
About
Vodafone Portugal

Vodafone is the largest pan-European and African telecoms company. The company's purpose is to connect for a better future by using technology to improve lives, digitalise critical sectors and enable inclusive and sustainable digital societies. As of March 31, 2023, Vodafone Portugal holds over 4.7 million mobile customers and has nationwide coverage that reaches 4.6 million homes and businesses with its fast next-generation network (including partnerships).

In 2023, World Youth Day took place in the city of Lisbon, Portugal, from 1 to 6 August, with the presence of Pope Francis.

About
World Youth Day

World Youth Day is a global event that brings together young people from various countries and cultures to celebrate their faith within the Catholic Church. Initiated by Pope John Paul II in 1985, World Youth Day is held every two to three years in different host cities, offering a unique opportunity for young Catholics to engage in spiritual activities, attend Masses and workshops, and interact with the Pope.

5
Team Members

6
Webinars
for over 60 business customers

The project in a Nutshell

4
weeks

4
Analytics Dashboards

The
Challenge

Vodafone Portugal wanted to understand the mobility of the huge flux of people expected in Lisbon during World Youth Day, sharing the insights generated daily with the media and public in general, and promoting **Vodafone Analytics** – a Big Data solution capable of making business and strategy decisions with insights collected from millions of mobile customers.

The operator's goal was to transform **anonymised network** data into **actionable insights**. Then share this **relevant, meaningful, and trustworthy information,** including key findings on data **patterns and insights** with which the public could identify, while showcasing the capabilities and value of Vodafone's solution.
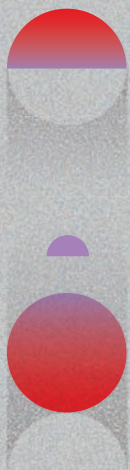
The Solution

Celfocus partnered with Vodafone Analytics team to develop a **portal containing multiple dashboards**, with the objective of **showcasing the usage of mobility data** (event attendance, mobility patterns, visitors' footfall and segmentation, etc.) to different customer industries/segments during the World Youth Day.

The Celfocus team's first challenge was to define which insights dashboards would be interesting to explore. To achieve this, segments such as Tourism, Events, and Retail were defined. Once this cluster of insights was implemented, the team started to analyse the **raw & anonymised data collected by the Vodafone network,** particularly in WYD's areas of influence, trying to find interesting details about what was happening during the event.

This process in particular proved to be complex as the event took place in different locations, and managing all the details of each location, as well as the general WYD agenda, was a great challenge.

The distinctive proposition of selecting engaging Analytics Metrics and Insights also set this project apart while introducing a new challenge: the team had to be creative in choosing measurements that caught the public's attention and were different from the usual.
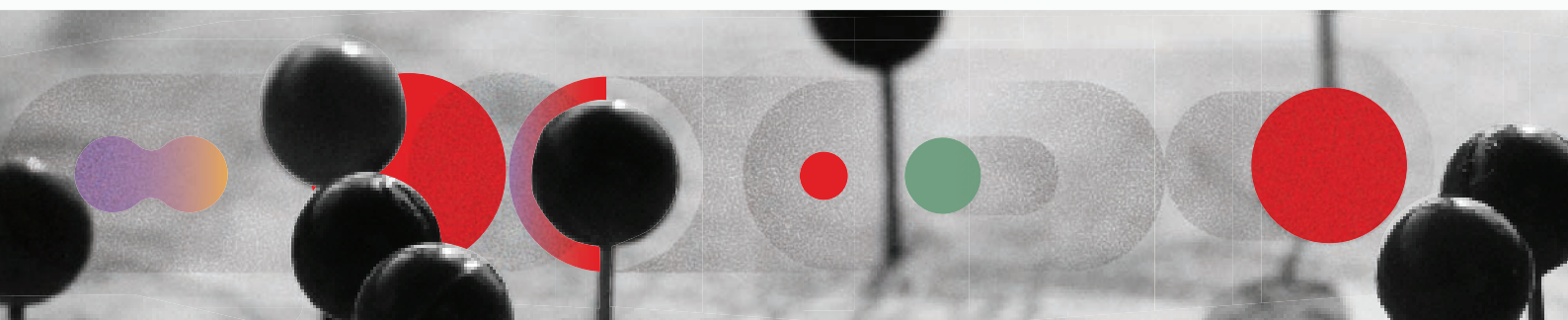
Thus, one of the team's main objectives was to try to find relevant patterns that the public was unaware of, while showcasing to companies the potential of knowing these same patterns and insights to **boost their own businesses.** That is because, by knowing, up to the minute, **how their potential customers behave**, companies could offer their products and services more effectively.

The Celfocus team – consisting of Business Analysts, UX and UI Specialists, Architects, Data Scientists, and Front-end Specialists – and the Vodafone team – made up of Go To Market, Brand, and Big Data Specialists – **worked closely together** to plan and sometimes re-plan the datasets to be analysed. Throughout the project, some changes and adjustments were necessary in order to obtain the appropriate information.

The result of this data analysis went beyond the usual reports with static information. The Analytics Dashboards were interactive, **allowing the exploration of data freely so that the information could be filtered, segmented, and/or related** in a way that the users could get the insights they were looking for or even discover relevant patterns they weren't considering initially.

Basic data alone does not provide all the information available, so it was essential to have a **processing phase,** that is, combining the data to obtain more complex and valuable insights, such as the **flow trends of the visitors, their demographic characterisation and location, and behavioural patterns of mobility.**
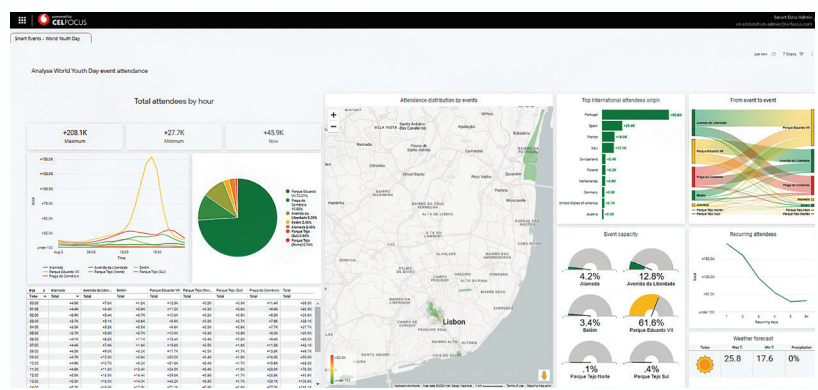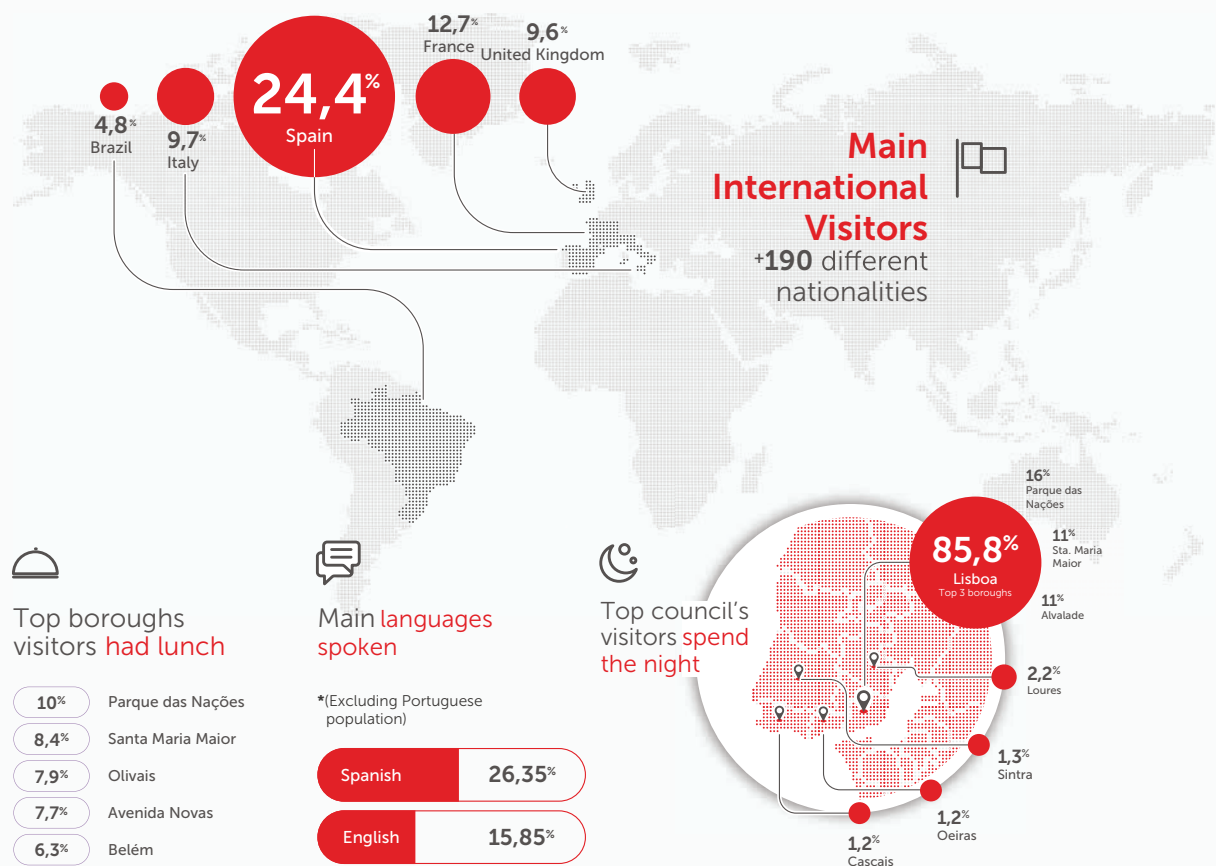

In terms of operationalisation**, Vodafone Analytics** – a solution developed by Vodafone in partnership with Celfocus – collected and interpreted data from the mobile network in Lisbon, throughout the entire week of the event. The platform was automated so that the Celfocus team could receive data from the event on an hourly basis. Afterward, the data was organised according to specific metrics, since **all information sent by Vodafone was anonymised.** Once organised, the data was automatically ingested into the platform and placed in the Celfocus database, where the Analytics dashboards were generated.

Leveraging Google Cloud, Celfocus set up the required data modelling, data ingestion and processing then creating and embedding rich analytics visualisations into a web application, easing the user experience focused on vertical industry use cases. With this project, Vodafone Portugal and Celfocus successfully implemented a **data monetisation revolution through groundbreaking technology,** transforming raw and anonymised data into actionable & operational effectiveness.

Benefits

During the previous week and the six days of World Youth Day, **Vodafone Analytics** monitored the flux of people in the city of Lisbon, processing anonymised data coming from Vodafone's network and generating valuable insights that supported **informed decisions for day-to-day planning and intra-day operations.**

The Celfocus and Vodafone teams aimed to provide **insights that the public could relate to** (e.g.: the variation in the number of national and international visitors, their overnight areas, their distribution across the main venues of the event and even the percentage of residents who left the city of Lisbon), presented intuitively through maps and charts, so that the overall audience could analyse and draw conclusions about the event as it unfolded.

4,8% Brazil

9,7% Italy

24,4% Spain

12,7% France

9,6% United Kingdom

Main International Visitors
+**190** different nationalities

Top boroughs visitors had lunch

10%	Parque das Nações
8,4%	Santa Maria Maior
7,9%	Olivais
7,7%	Avenida Novas
6,3%	Belém

Main languages spoken

*(Excluding Portuguese population)

| Spanish | 26,35% |
| English | 15,85% |

Top council's visitors spend the night

85,8% Lisboa Top 3 boroughs

16% Parque das Nações

11% Sta. Maria Maior

11% Alvalade

2,2% Loures

1,3% Sintra

1,2% Oeiras

1,2% Cascais

9

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10,8% Porto

4,5% Leiria

6,1% Santarém

31,2% Setúbal

8,9% Faro

Main **National Visitors***

*(Excluding Lisbon since it was impossible to differentiate pilgrims from inhabitants)

3,4% Albufeira

6,4% Loulé

3,1% Sintra

10%

Lisbon population left the city before the WYD. Top 3 main destinations

The insights shared were also used by many communication news agencies to inform their public about the event, resonating across media **as reliable and substantial information, thus reinforcing the accuracy of Celfocus & Vodafone's insights.**

The creation of a dedicated landing page about the project attracted more than **2.000 visits in the period of 7 days and engaged 1,350 unique visitors** during the week of the WYD, displaying **strong audience interest.** Additionally, the series of webinars conducted as part of the project proved highly effective in terms of both attendance and lead generation. The project's impact extended beyond marketing efforts. The design of the specialised dashboards for the Vodafone retail team facilitated streamlined data visualisation and analysis, thereby **empowering the team to make informed decisions and optimise their strategies** for resource allocation to Vodafone's own shops. Furthermore, an internal session conducted for Vodafone's sales team resulted in improved solution knowledge. This, in turn, provided them with enhanced insights for effectively approaching clients and enhancing sales processes. As a result, the project's outcomes serve as a valuable resource for **refining strategies and enhancing internal processes within the realm of Vodafone Analytics.**

Ultimately, the project reinforced the platform's potential, **resonating as a testament to clients and validating Vodafone's prowess in data-driven insights**, mainly for the government, transport, retail, and emergency & security sectors. Celfocus collaboration made it possible to showcase the true extent of Vodafone Analytics' capabilities, opening the door to new projects and possibilities in the future.

"Vodafone Analytics allows organisations to transform seemingly disconnected information into valuable insights, fine-tuning their decisions and even their strategy. In the case of WYD, we gained visibility into hidden mobility patterns, unscheduled trends, and response opportunities, empowering organisations to create memorable and impactful experiences."

Mafalda Alves Dias

Head of Large Accounts and Public Sector, Vodafone Portugal.

10%

Parque das Nações was the **top place to have lunch**

10%

of Lisbon habitants left the city **mainly to Algarve**

6,4% Loulé
3,4% Albufeira

Insights Highlights

24,4%

Main international **visitors coming from Spain**

31,2%

Main national **visitors coming from Setúbal**

+190

Nationalities **Detected**

Why
Celfocus?

Celfocus possesses an extensive track record in implementing analytics projects and vast experience in capturing the value of data. Furthermore, the company's market experience and deep knowledge of Vodafone's platform made it the right partner to understand and successfully deliver the project.

With a lasting working relationship, Celfocus and the Vodafone Analytics team worked closely together as a single unit, favouring collaboration and transparency to leverage each team's skills and strengths in order to achieve the best results.

"Working with the Celfocus team has been a highly positive experience marked by professionalism and availability. The team exhibited a consistent level of commitment to the project, demonstrating a remarkable dedication to delivering results in line with the project's goals and timelines. Overall, this experience can be described as both productive and enjoyable, characterized by a strong spirit of partnership and a shared pursuit of excellence, substantiating Celfocus's suitability as a partner."

Vodafone Business Unit

Vodafone Portugal.

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