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5G Balkans

Coordinator: CETIN Bulgaria

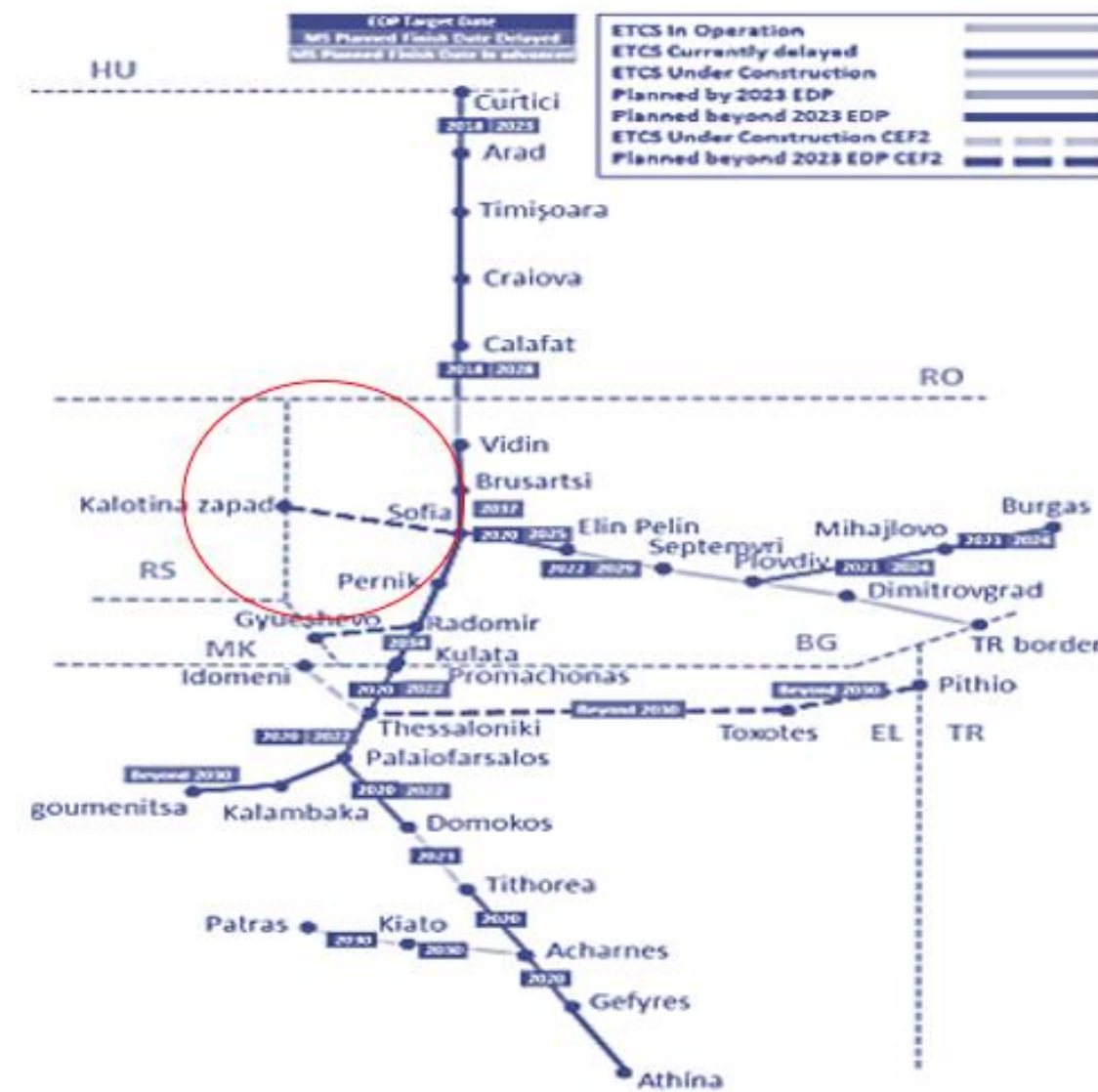
 **CETIN**
MEMBER OF PPF GROUP



Orient / East-Med corridor

About the TEN-T Corridor

- ▶ 5G Balkans's scope is within [Orient / East-Med corridor](#) (OEM).
- ▶ The total length of the corridor is **6 480 km**, including the Connecting Europe Facility 2 (CEF 2) extension;
- ▶ OEM crosses 8 countries: Germany, Czechia, Slovakia, Austria, Hungary, Romania, Bulgaria and Greece;



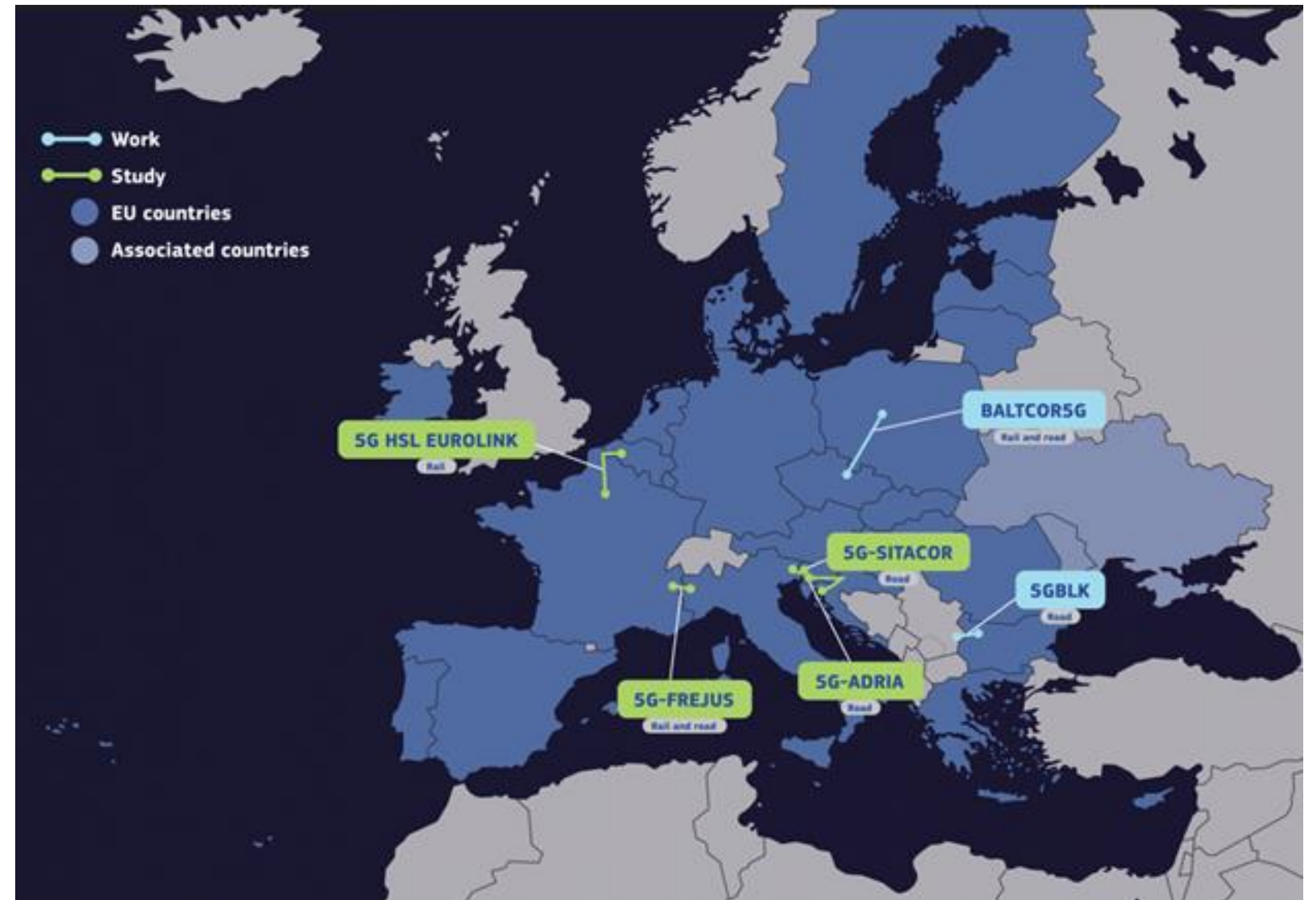
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5G Balkans

Project Specifics

- ▶ Route **Sofia – Dimitrovgrad (~110km + 25km inner city)**, part of *Sofia - Thessaloniki – Beograde*
- ▶ **2 countries:** Bulgaria & Serbia;
- ▶ 5G Balkans has a **strong cross-border element**, crossing the border of Serbia as an EU neighboring country;
- ▶ Spectrum bands enabled along the sections: **700 MHz+**
- ▶ Enabling Classical CAM Scenarios:
 - ▶ Average inter-site distance: **3 km**,
 - ▶ Average data rate for each vehicle: **2 Mbps**



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5G BALKANS: Highlights

Summary

5GBLK aims at improving 5G infrastructure along the Sofia-Dimitrovgrad cross-border corridor, part of the core network corridor "Orient/East-Med" Beograd-Sofia-Thessaloniki. The project's primary goal is to significantly upgrade the current backbone and radio network infrastructure to ensure the delivery of the necessary throughput and operations in the 5G bandwidth to facilitate connected and automated mobility, enable seamless communication (as per Minimum & Classic scenarios).

Scope

5G Balkans is to be executed in the period Jan. 2024 – Dec. 2026 and will include:

- ▶ ~25km fiber optic upgrade inner-city Sofia
- ▶ ~110km new FO from Sofia to Dimitrovgrad and fiber to the existing 15 base stations covering the respective route
- ▶ Fiber optic and & 5G survey and analysis performed by the Technical University of Sofia, including analysis of any potential interferences with 5.9 GHz

	Total Cost (EUR)	EU Contribution (EUR)
5G Balkans	6 728 805	3 364 402

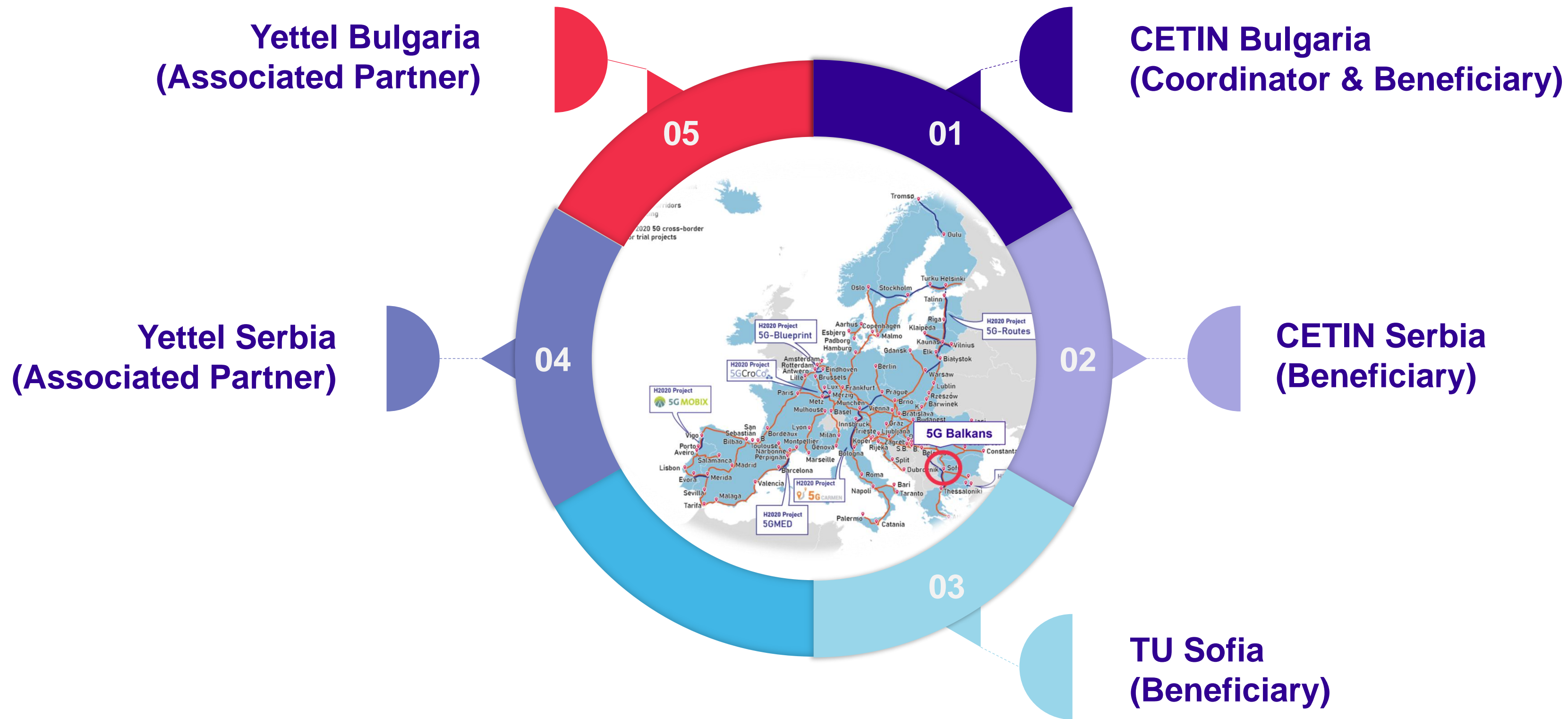


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		MINIMUM 5G Scenario	CLASSIC 5G Scenario	BREAKING 5G Scenario	FUTURE PROOF 5G Scenario
BACKHAUL NETWORK	Existing Backhaul along 5G corridors	50% available		20% available	
	k€/km	12	12	19	19
5G CELLULAR NETWORK	CAM use case	1 Mbps Guaranteed bitrate in highly traffic period	2 Mbps Guaranteed bitrate in highly traffic period	30 Mbps Average bitrate normal conditions	100 Mbps Average bitrate normal conditions
	Available Frequencies	700Mhz & 3500Mhz, 260Mhz nationwide BW			
	Business Model	Multi-operators & Active Ran Sharing		Standalone & Passive Ran Sharing	
	Inter-site distance evaluated	≈4 km	≈3 km	≈1 km	≈0,4 km
	5G corridor dist.	26 000 km			
Existing radio sites		1 every 10 km			

5G Balkans Consortium



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Thank you!

