

ERTMS National Program

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ERTMS Portfolio Application in RFI



ATO: AUTOMATIC TRAIN OPERATION (CAPACITY; DRIVELESS; ENERGY SAVING)

Public Bearer: 5G

ERTMS IN ITALY: line in operation and ongoing projects

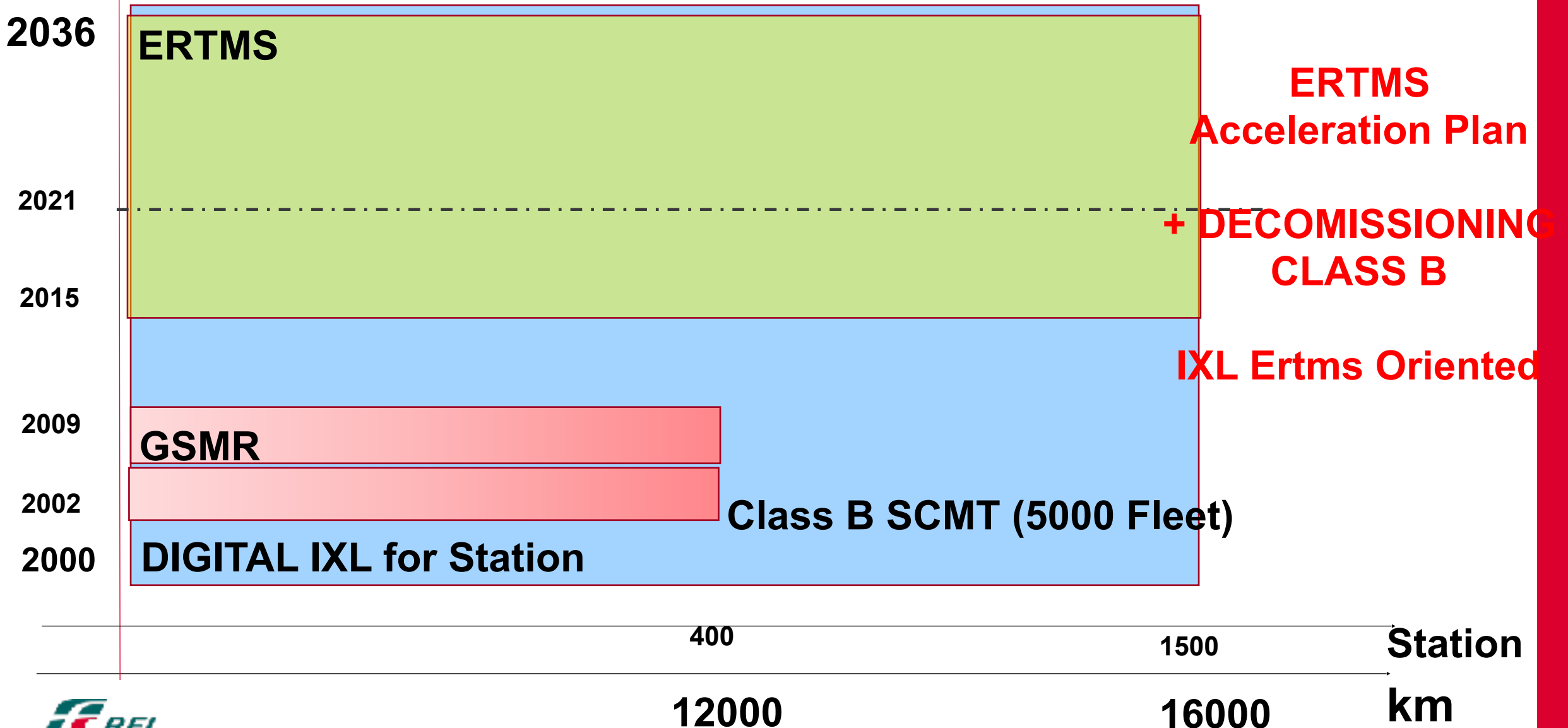
Category	Line	Level	Year	Distance
HS/HC	ROMA – NAPOLI HS/HC	LEVEL 2 BL 2	2005	801 km
	TORINO – MILANO HS/HC	LEVEL 2 BL 2	2009	
	MILANO - BOLOGNA HS/HC	LEVEL 2 BL 2	2008	
	BOLOGNA – FIRENZE HS/HC	LEVEL 2 BL 2	2009	
	TREVIGLIO – BRESCIA HS/HC	LEVEL 2 BL2	2016	
	DD FIRENZE – AREZZO SUD HS/HC	LEVEL 2 BL2	2020	
	DD AREZZO SUD – ROMA HS/HC	LEVEL 2 BL 2		
CORE CORRIDOIS	BRESCIA – VERONA HS/HC	LEVEL 2 BL 3		53 Km
	MILANO GENOVA HS/HC	LEVEL 2 BL 3		73 Km
	ISELLE – DOMODOSSOLA	LEVEL 1 LS BL 3	2018	20 km
	DOMODOSSOLA – NOVARA	LEVEL 1 RIU BL 3	2020	90 km
	RANZO – LUINO	LEVEL 1 LS BL 3	2019	15 km
	NOVARA – RHO	LEVEL 2 BL 3	2021	35 Km
	MILANO – CHIASSO	LEVEL 2 BL 3		67 Km
	BRENNERO – VERONA	LEVEL 2 BL 3		234 Km
	MILANO – GENOVA	LEVEL 2 BL 3		129 Km
	PIOLTELLO – PADOVA – VENEZIA	LEVEL 2 BL 3		398 Km
REGIONAL	VICENZA – TRIESTE/VILLA OPICINA	LEVEL 1/2 BL 3		217 Km
	HIGH DENSITY URBAN NODES ERSAT MILANO, ROMA, FIRENZE	LEVEL 2/3 BL 3		85 km
	ERSAT NOVARA - RHO	LEVEL 2/3 BL 3		35 km
	REGIONAL ROCCASECCA - AVEZZANO	LEVEL 2/3 BL 3		25 km



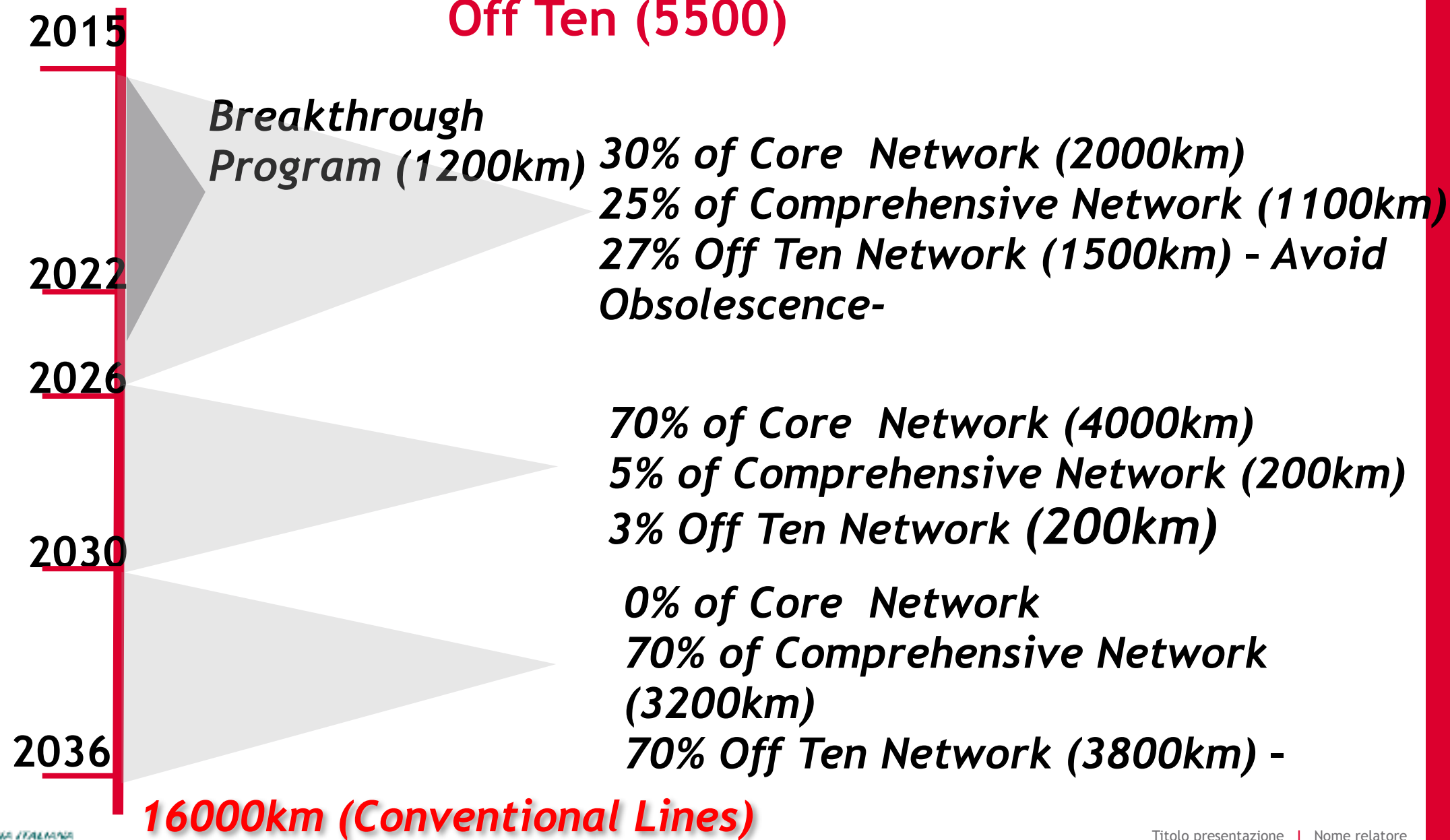
ERTMS IN OPERATION
ERTMS IN CONSTRUCTION

Different Technological Strategies in RFI towards ERTMS

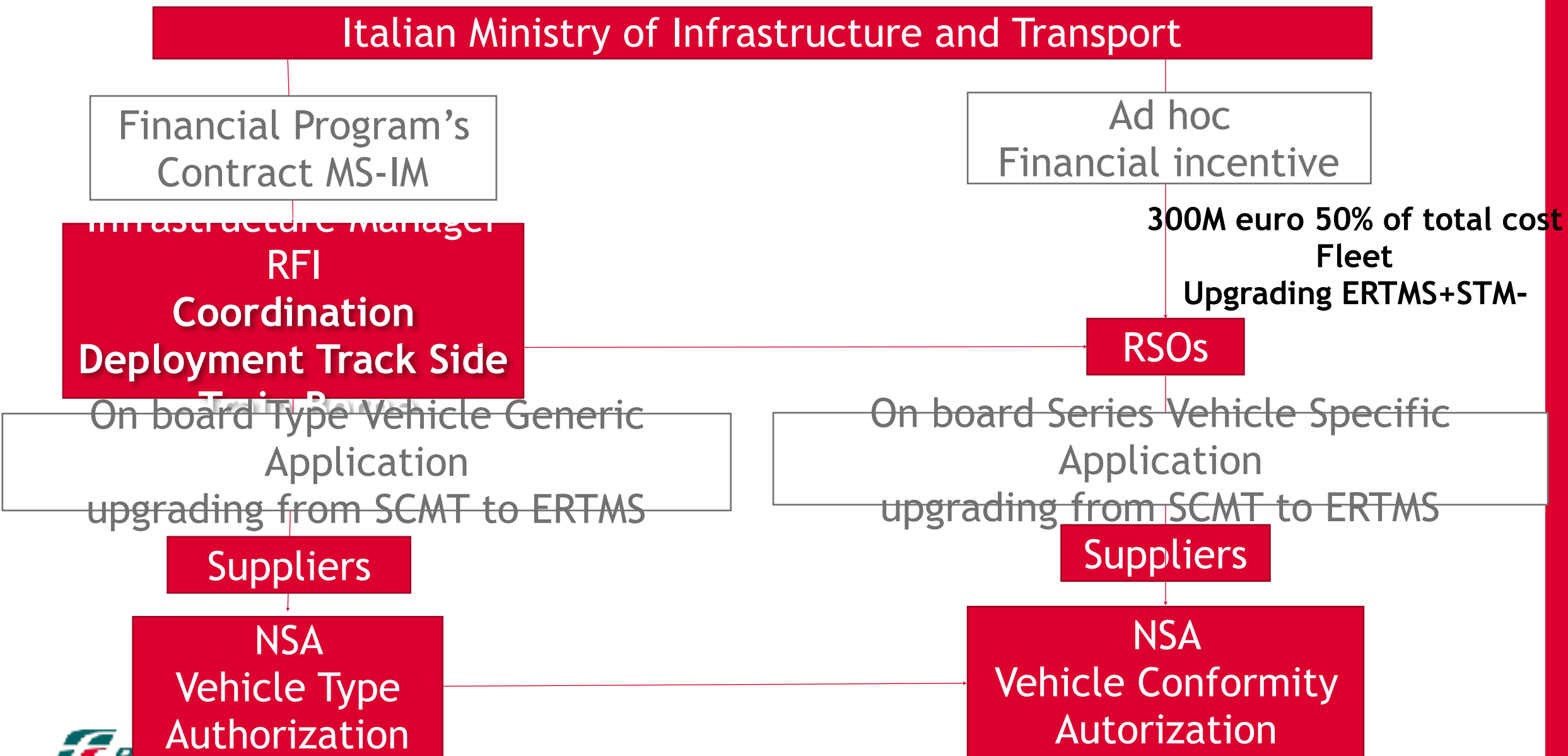
Years



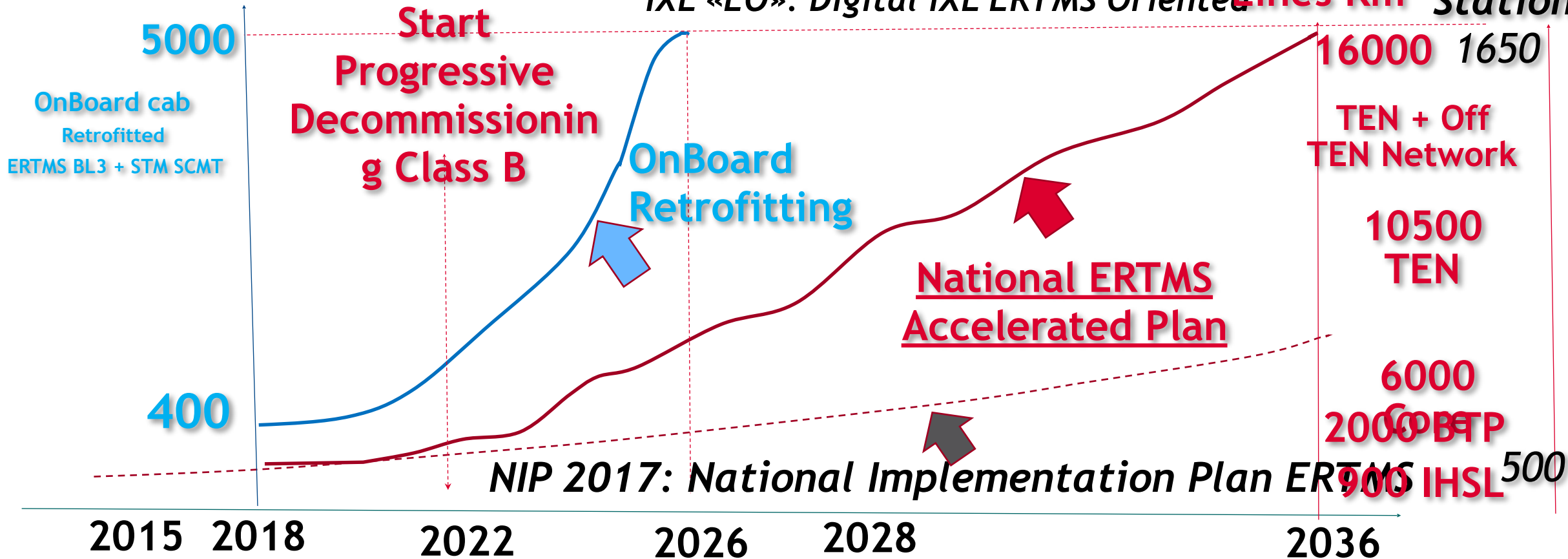
ERTMS Accelerated Plan: TenT Core (6000km), Comprehensive (4500km) Off Ten (5500)



ERTMS ON BOARD retrofit strategy in Italy



Forecast



BTP Breakthrough Program
IXL «EO»: Digital IXL ERTMS Oriented

IXL Digital
Station

2015 2018 2022 2026 2028 2036

Digital IXL + Class B **Digital IXL «EO» Only Ertms**

1G€ National Funds + CEF Contract on going **3 G€ Recovery Fund New Tender** **9 G€ National Funds + CEF New Tender**



IXL Innovation Fund