Between 2014 and 2016 Italferr, the engineering company of Italian State Railways Group, has designed, developed, implemented and provided a two-year long training program in infrastructure and railway systems addressed to 10 engineers of the new-born Omani railways company. The program has been tailored and carried out with the Civil, Buildings and Environmental Engineering Department of La Sapienza University of Rome and was included in the Oman National Railway Network design project as part of the transfer of knowledge framework. The training path included various phases, methodologies and assessments and its objective was to train ten fresh engineers newly hired by the national railway company in a country with no-railway background. The paper will explain how Italferr made it, which were the most significant challenges and the solutions found to achieve the best results in these young professionals' preparation.