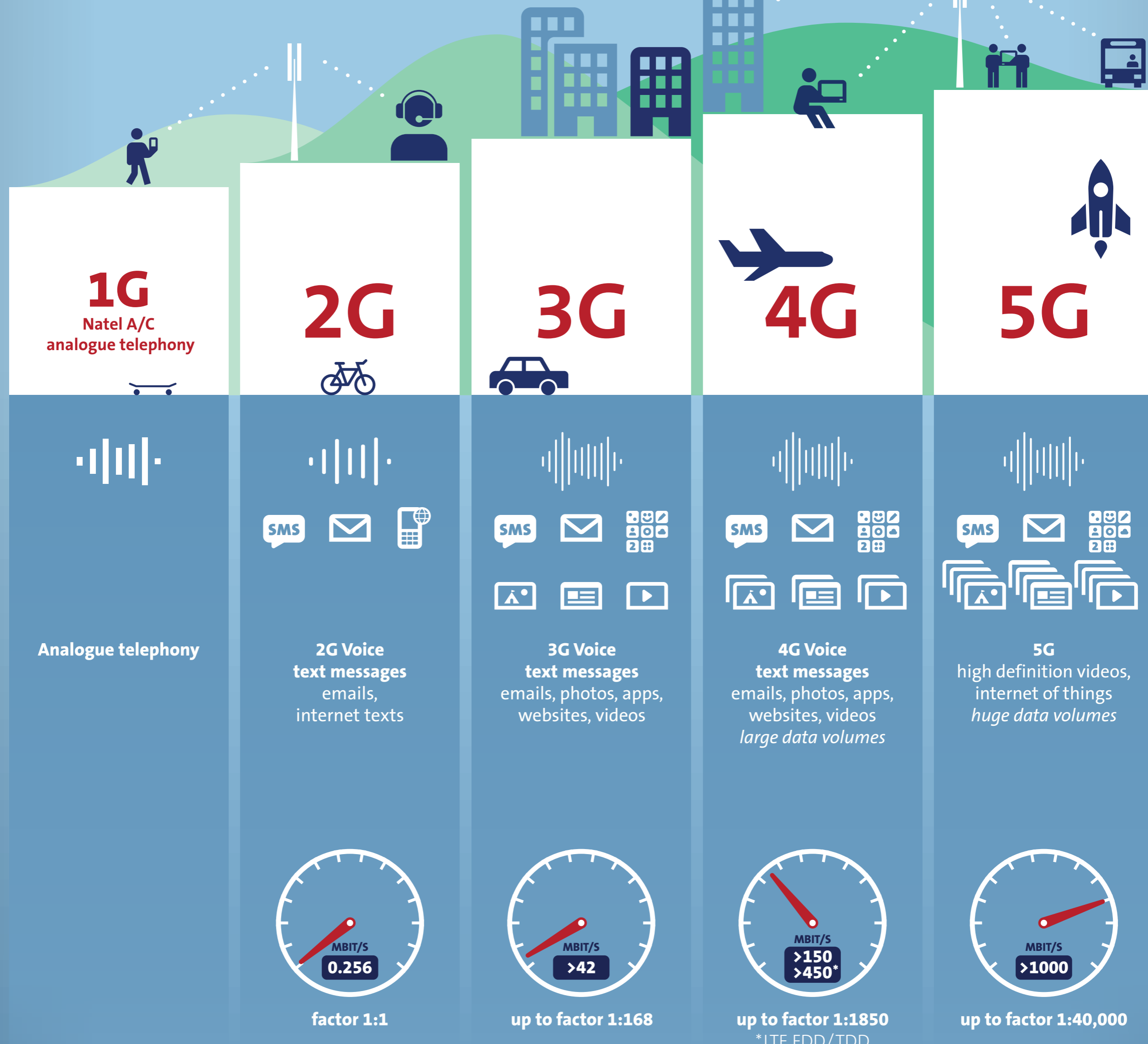


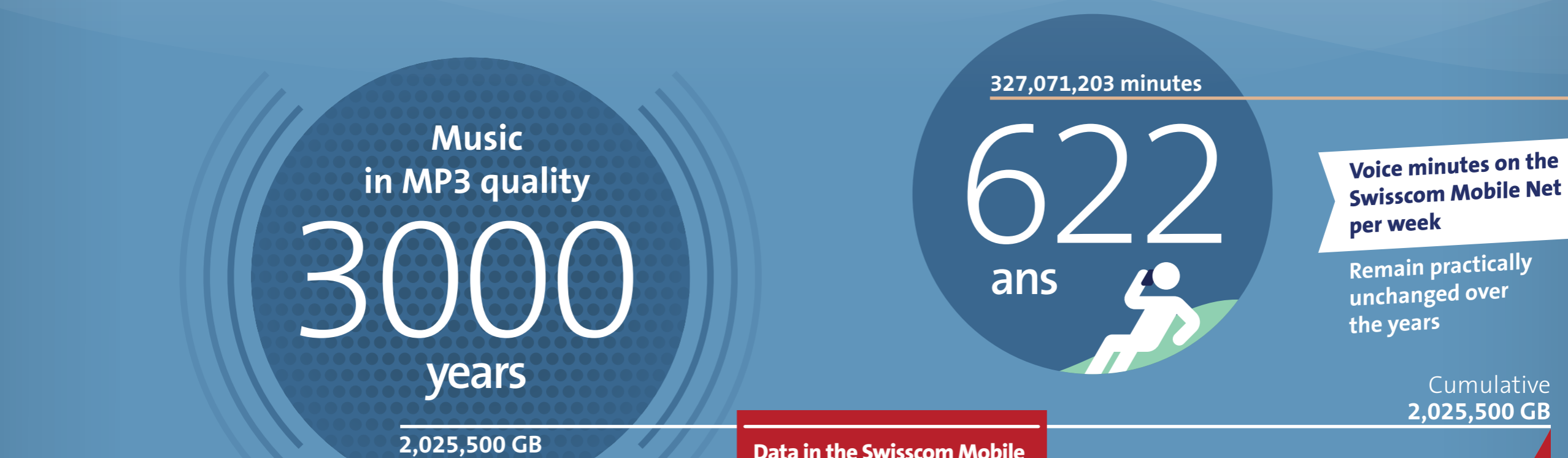
Always a step ahead The Swisscom Mobile Network 1990 – 2020

Worldwide networking between people, organizations, machines and things is moving relentlessly ahead. What were the difficulties and what developments are driving them forward?

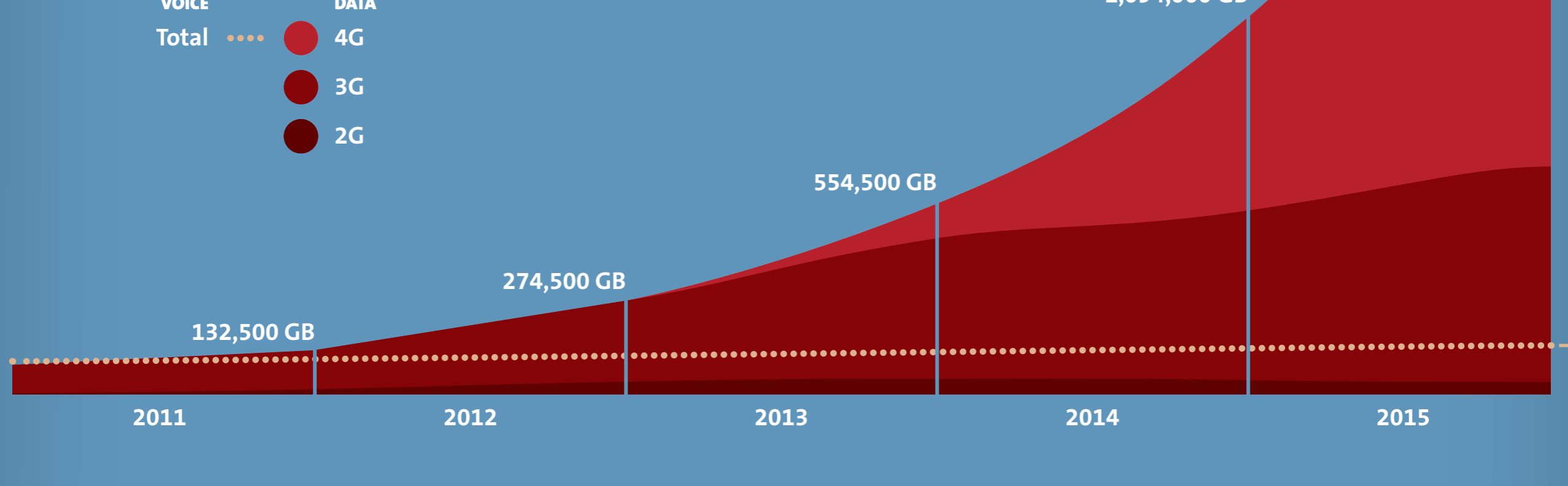


5G will provide a 40,000 times more rapid data transmission rate

One week in the Swisscom Mobile Network



Voice volumes and data downloads per week

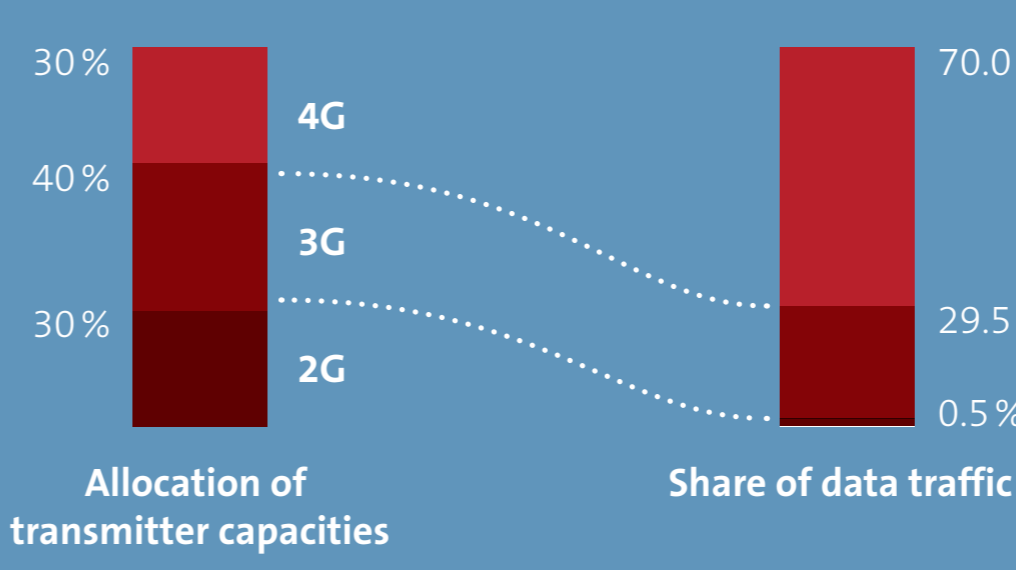


The data volume **doubles** every twelve months

The rapid development of mobile network

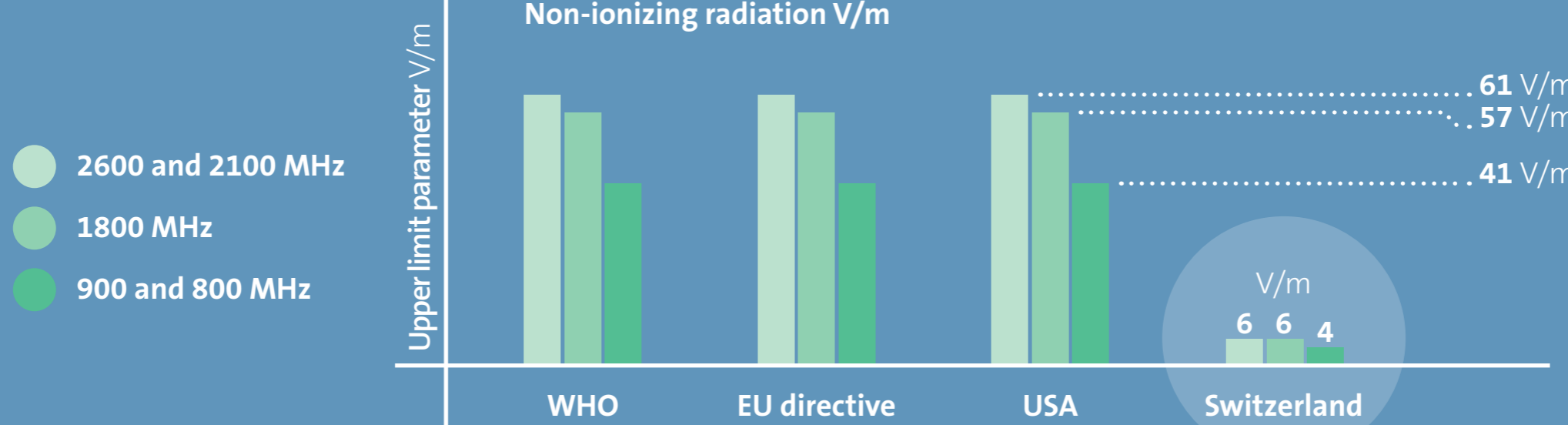


Data volumes versus network demand



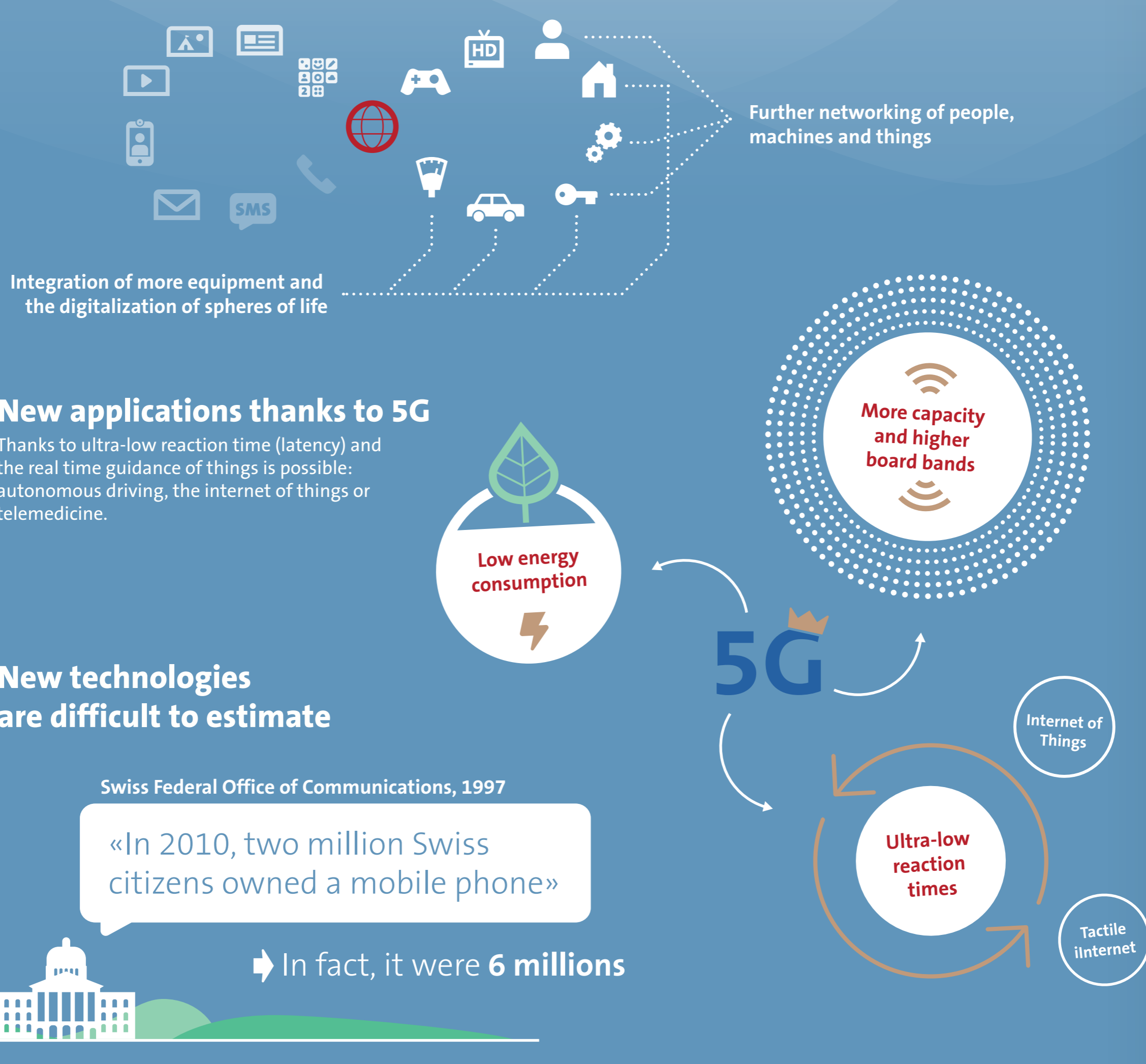
The 1993 introduced 2G mobile network currently occupies 30 percent of the transmitter capacity, but only transfers **0,5 percent** of the data volume

Ten times stricter exposure limits, in comparison with abroad impede and make the expansion of mobile networks more expensive

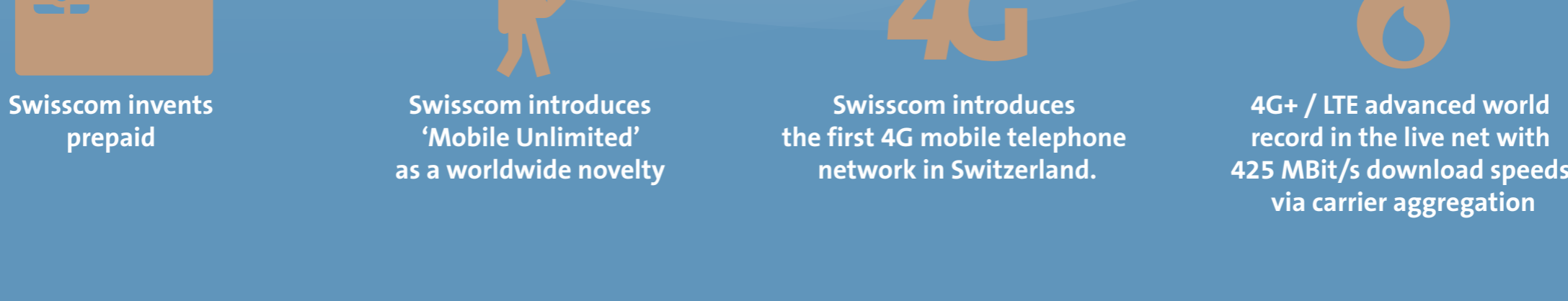


Statutory requirements and the topography pose great challenges, but Swisscom has still managed to provide an excellent network coverage.

New requirements demand new technologies



Swisscom makes it mark on mobile networks – both nationally and internationally



Sources

Number of mobile network user: Swiss Federal Statistical Office
Forecast of mobile telephone network user in 2010: Swiss Federal Office of Communications
Comparison 'NISV' parameters: Information text: «Wireless to Wire»: Swisscom, 2014
Additional data: own measurement data, deadline date: in the week 31.08.2015
Properties of 5G: This Standard is currently under development

Implementation

Swisscom; Michael Lieberherr, Michael Berger and Marietta Werder / Nemuk AG; Konrad Mazanowski
Free for use with source code indication: Swisscom