Osteoporosis (“porous bone”) is a very common bone disease. It occurs when the body loses too much bone, as a result bones become so weak and brittle that a fall or even mild stresses can cause a fracture. The GIOTTO project is funded by the European Union under the Horizon 2020 research and innovation programme, call H2020-NMBP-TR-IND-2018-2020 (TRANSFORMING EUROPEAN INDUSTRY), and it will exploit the most recent materials and manufacturing technological advancements to help healthcare systems fight the consequences of bone fractures caused by osteoporosis. Medical doctors will work together with scientists and medical device producers to develop and test new solutions based on cutting edge technologies such as 3D printing and smart nano-biomaterials. Ad hoc devices will be designed for the different types of osteoporotic fractures stimulating bone regeneration while reducing bone loss. In addition to 3D-printing and the most updated technologies for bone scaffold manufacturing, also the most advanced technologies will be put in place such as the nano-functionalisation for the smart release of active molecules.