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DONES: the development line of high intensity injectors.

DONES, Demo Oriented Neutron Source, is the European version of IFMIF, i.e. a facility based on high intensity linear accelerator, for the test of fusion reactor structural materials. This in view of DEMO, that will be the first fusion reactor for electrical power production.

Thanks to the successful INFN participation to IFMIF EVEDA, INFN is ready to play a very important role in the realization of DONES, that should be launched soon, as a European project with national in-kind contributions.

The results of the prototype linac in Japan (IFMIF-EVEDA), with the realization of the RFQ (built by the INFN LNL, Bologna, Padova and Torino), the participation to the development of the linac in Japan (Broader Approach2), the technological challenges and developments for high intensity injectors will be discussed, together with longer term perspectives.