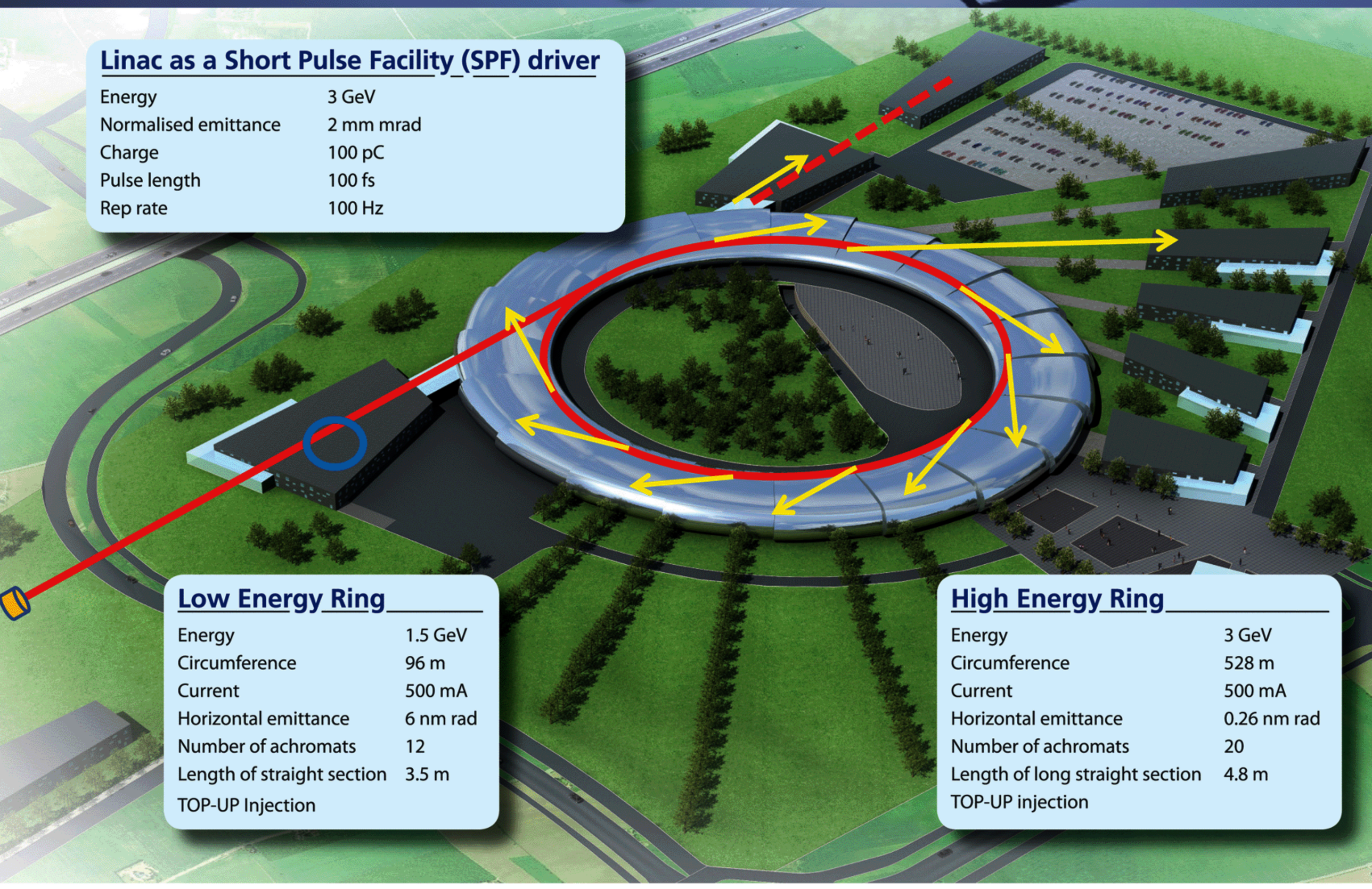
MAX IV
– Our future lightsource



Linac as a Short Pulse Facility (SPF) driver

Energy	3 GeV
Normalised emittance	2 mm mrad
Charge	100 pC
Pulse length	100 fs
Rep rate	100 Hz

Low Energy Ring

Energy	1.5 GeV
Circumference	96 m
Current	500 mA
Horizontal emittance	6 nm rad
Number of achromats	12
Length of straight section	3.5 m
TOP-UP Injection	

High Energy Ring

Energy	3 GeV
Circumference	528 m
Current	500 mA
Horizontal emittance	0.26 nm rad
Number of achromats	20
Length of long straight section	4.8 m
TOP-UP injection	

The MAX IV project currently under construction in Lund will provide the Swedish and international scientific community with a state-of-the-art facility for research on properties of materials in a wide range of areas. It includes two electron storage rings aimed at producing high brightness and highly stable light beams in a wide wavelength range, covering from the infrared to hard X-rays. It also contains a Linac based lightsource for ultrashort pulses. The high performance linear accelerator is used for both injection and TOP-UP into the two storage rings, as well as a driver for a Short Pulse Facility. The linear accelerator design is prepared for a possible future Free Electron Laser (MAX FEL).

Innovative technological solutions developed and tested over several years at the existing MAX-lab facility (MAX I, II and III) will be used in the MAX IV project. This will open up for new research opportunities.

MAX-lab

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