

UPGRADE



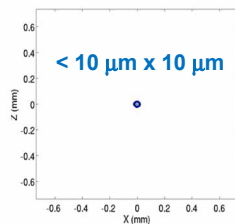
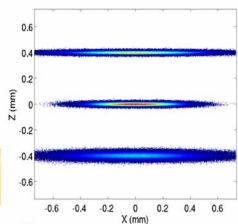
- **Major Upgrade** of the accelerators and Beamlines addresses new scientific and societal challenges
- The upgrade will bring the unique range of SOLEIL techniques to unprecedented **spatial and temporal resolutions**



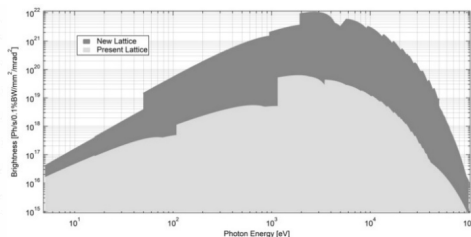
- Better performances for Accelerator and photon sources

- Reaching an emittance **< 100 pm.rad.**
- Keeping the same electron beam energy : **2.75 GeV**
- Preserving a maximum current of **500 mA** in the multibunch mode.

- New access mode with **more efficient use** of the SOLEIL Beamline



Beam SIZES



Brightness



EXPERIMENTS UP TO
10,000 TIMES FASTER



NANOSCALE RESOLUTION



EXPERIMENTS UP TO
1000 TIMES MORE SENSITIVE



STUDY OF DEVICES
IN REAL OPERATING CONDITIONS



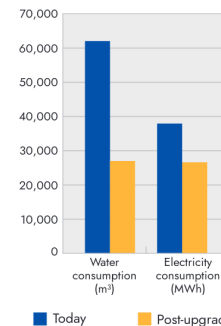
UNIQUE LIGHT SOURCE,
FROM INFRARED TO HARD X-RAYS



COMPLEMENTARY BEAMLINES AND TECHNIQUES

- Green infrastructure

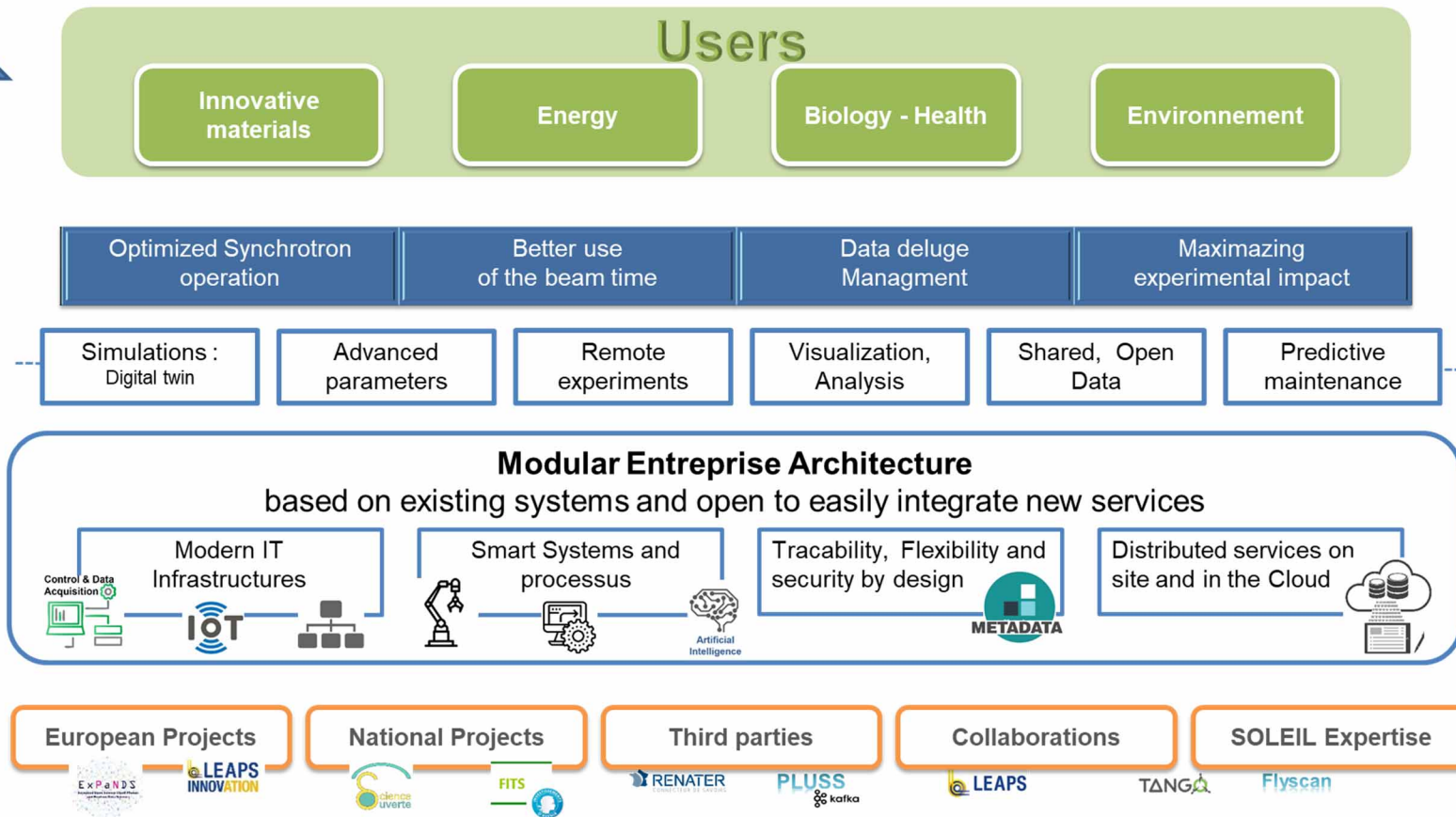
- Reduction in the facility environmental footprint
- Lower power and waterconsumption
- Reduce operational cost



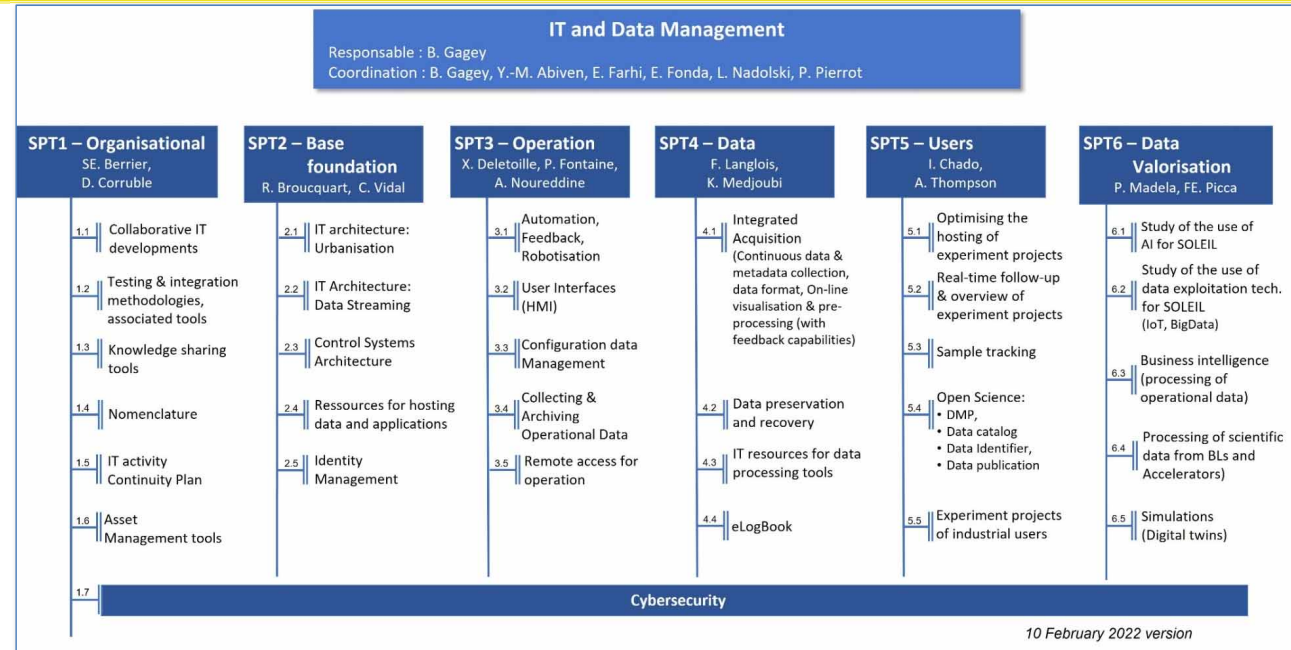
■ Today ■ Post-upgrade

User and Data Centric Approach

Continuous transformation and Data centric



TDR, IT and data management program



- Transverse program of SOLEIL upgrade to support accelerators and beamlines programs
- Transversal cross-disciplinary organization involving accelerators, scientific and computing teams.
- Program managed by a steering committee which reports to SOLEIL's board of Directors.
- 6 work packages lead by pair. 32 sub-tasks addressed to improve organization, control architecture, future operation, Data acquisition, User experience improvement, New Data processing including AI.