



# Welcome to CompactLight Glasgow Virtual Meeting June 16-18, 2020





- As you know, due to the COVID-19 outbreak, in agreement with Adrian Cross (Strathclyde Univ.) we have been obliged to postpone the third XLS mid term plenary meeting, already scheduled in Glasgow for June, to the last quarter of 2020 (the exact date is still to be fixed).
- Nevertheless, to avoid breaks and keep our Collaboration running, we have organized a "Glasgow Virtual" meeting, from remote, to discuss the recent XLS progress and achievements.



According with decisions taken in Athens meeting (end of Jan 2020), we started to prepare the paper work to ask EU for a six months project extension for:

- *Implementing a new work package, WP8: Instrumentation and Beam Diagnostics* (led by Dr. Alessandro Cianchi, Università di Tor Vergata, Roma).
- *Adding a new Partner, “Bilfinger Noell GmbH”, in WP5.*

Later, in March, the situation quickly changed due to the COVID-19 outbreak and to cope with crisis, we have asked EU for a project extension of **12 months**.



**Our request for 12 months project extension  
Accepted !!!**

Il 15/05/2020 09:22, Rene.MARTINS@ec.europa.eu ha scritto:

Dear Gerardo, Andrea, Regina,

Please find here our comments regarding your drafted amendment request:

**Concerning the 12 months extension:** We can accept this as justified by you on one hand by the COVID-19 outbreak and on the other hand by the addition of a new WP.

**Reporting Periods:** I have added a third reporting period of 12 months.

**Budgetary implications:** The amendment request letter should clearly state if there have been any changes to the budget.

Kind regards,

René

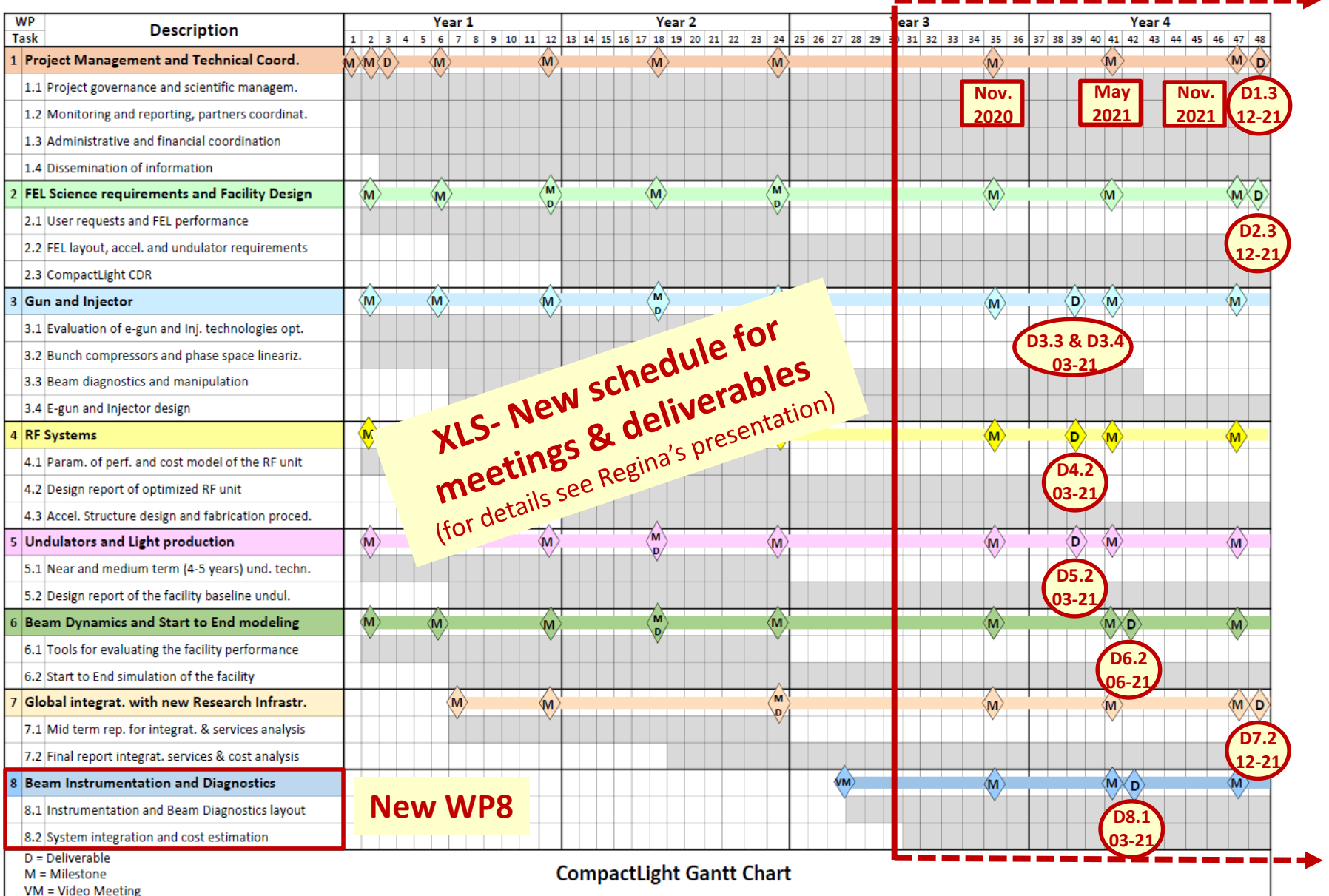
**René MARTINS, PhD**  
Research Policy Officer

**European Commission**  
DG Research & Innovation  
Research & Industrial Infrastructure

**EU Amendment signature: 08 June 2020**  
**Project new end date: 31 December 2021**



# New XLS Gantt Chart



**XLS- New schedule for meetings & deliverables**  
(for details see Regina's presentation)

**New WP8**

CompactLight Gantt Chart

D = Deliverable  
M = Milestone  
VM = Video Meeting



WP2 with WP5 are working on the undulator options and their optimum operational parameters for the best FEL performance

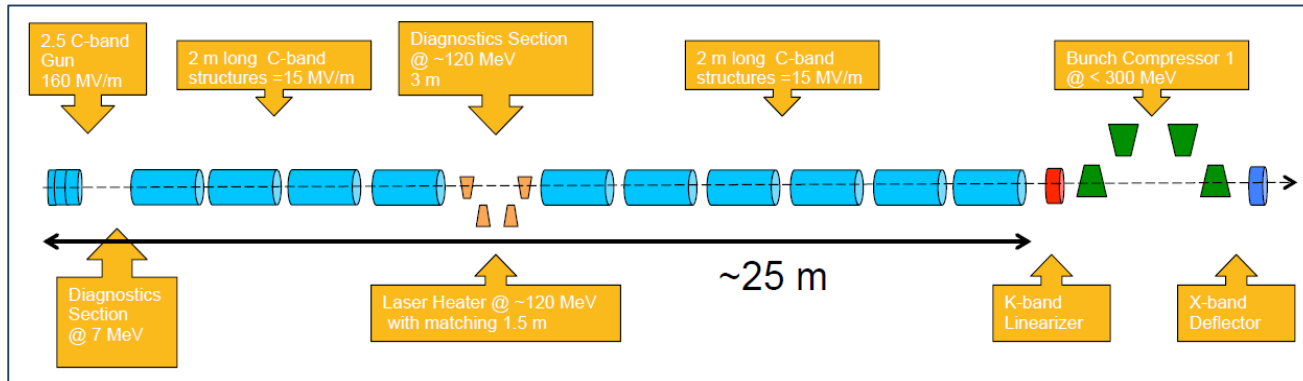
A re-balance of SXR wrt HXR FEL pulse energies study, on the NbTi SCU, was presented by N. Thompson considering:

- the minimum gap choice
- tuning range choice
- period choice.



**13 mm period looks the best choice, assuming 4.2 mm gap**  
(see Neil's presentation)

WP3 team is working on a full C-band injector design to be used with the same operating parameters for both low and high repetition rates regimes



Its integration in the overall linac layout with start-to-end simulations are being evaluated within WP6



WP4 is continuing to refine various aspects of the accelerator design:

- Linac RF system and its operational aspects (low and high repetition rates, wakefields issues,...)
- Linac module layout
- High frequency linearizer/RF sources
- Deflecting cavities (used also for the bunch separator)

+

WP4 is also supporting Cost Analysis through the PBS  
(see Carlo's presentation)





Accurate measurements of the beam parameters along the accelerator and the undulator chain will be fundamental for a stable and reliable operation of the linac and for FEL performance.

Beam instrumentation and Diagnostics, WP8, in close collaboration with all the WPs, is selecting the most appropriate and performing “tools” for XLS beam diagnostics.

**A CAD model of the XLS layout is underway  
(see Nick’s presentation)**



Takuji Kimura from CPI will give a presentation on the X-band power source developments at CPI.

For the XLS injector it would be also useful to discuss the C-band klystron availability in the coming 3-5 years.

In particular:

- Possibility for a frequency scaling at European C-band (from 5.712 GHz to 5.996 GHz)
- Possibility to have a 10-15 MW peak power klystron (23-30 KW average) operating at 1 KHz p.r.r.



# Thank you!

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