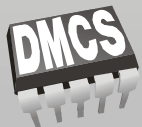


# DMCS-LUT status report

Wojciech Cichalewski

22.03.2019

**Department of Microelectronics and Computer Science, Lodz University of Technology**  
<http://www.dmcs.p.lodz.pl>





# In-Kind project scope and original schedule

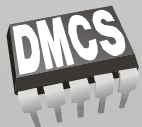
Task no.	Deliverables	Delivery Deadline / Delivery MS
<b>WU 1</b>	MTCA.4 RTM Carrier board integration	2019-09-11
<b>WU 2</b>	icBLM and nBLM controls and realization	2019-09-11
<b>WU 3</b>	IPMI EPICS integration	2019-09-11



# Defined milestones (1/3)



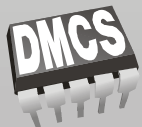
Milestone ID	Short description	Planned/Baseline date	Location	Comment
MS0	Kick-off meeting	T0	DMCS, Lodz	
MS1	Specification and requirement analysis phase for all 3 topics.	T0+3 months	Video conference	
MS2	Conceptual design for software for all WUs	T0+6 months	ESS, Lund	
MS3	Prototype version of the FW and software components for all WU	T0+8 months	Video conference	WU2, with scope limited to demonstrating basic data acquisition.
MS4	PDR of WU1 and WU3	T0+9 months	ESS, Lund	

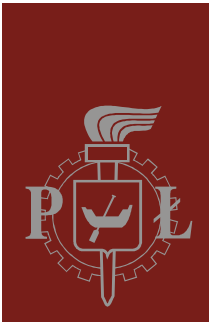


# Defined milestones (2/3)



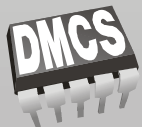
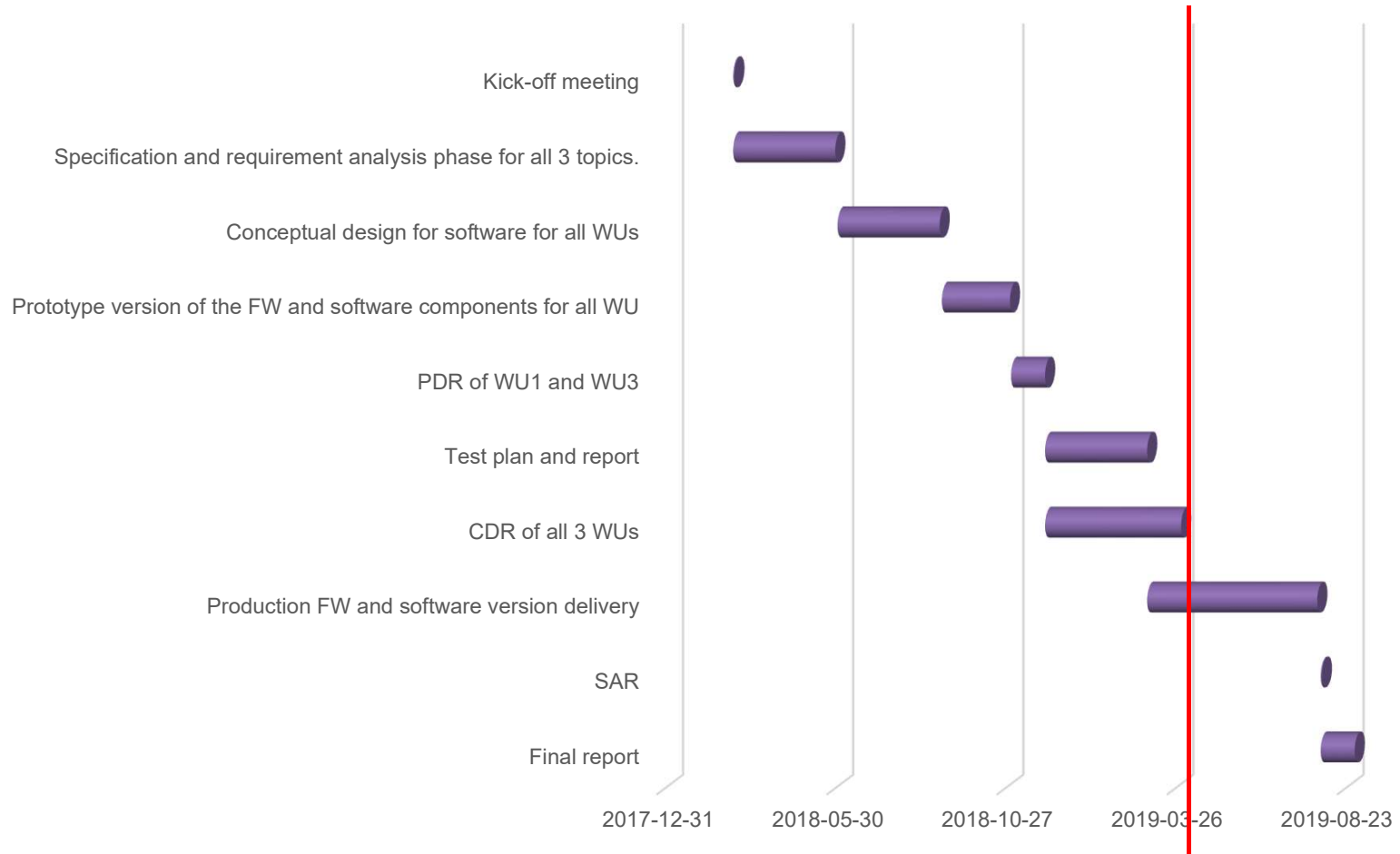
Milestone ID	Short description	Planned/Baseline date	Location	Comment
MS5	Progress meetings	T0+ 12 weeks	ESS, Lund/Partner premises	Q1.2019 - ongoing
MS6	Test plan and report	T0 + 11 months	Video conference	
MS7	CDR of all 3 WUs	T0 + 12 months	Partner premises	nBLM related CDR 02.2019
MS8	Production FW and software version delivery	T0 + 17 months		
MS9	SAR	T0 + 17 months	ESS premises	
MS10	Final report	T0 + 18 months		





# Defined milestones (3/3)

Original Milestones schedule





# WU 1 - MTCA.4 RTM Carrier board integration - Deliverables

Task no.	Main deliverables	Delivery Deadline / Delivery MS	Acceptance Criteria type
D1.1	Investigation report	MS1	Review
D1.2	Driver part	MS10	Review
D1.3	EPICS device support and OPI	MS10	Review
D1.4	Test plan and report	MS10	Test report

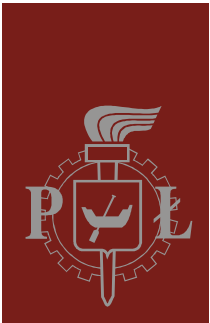




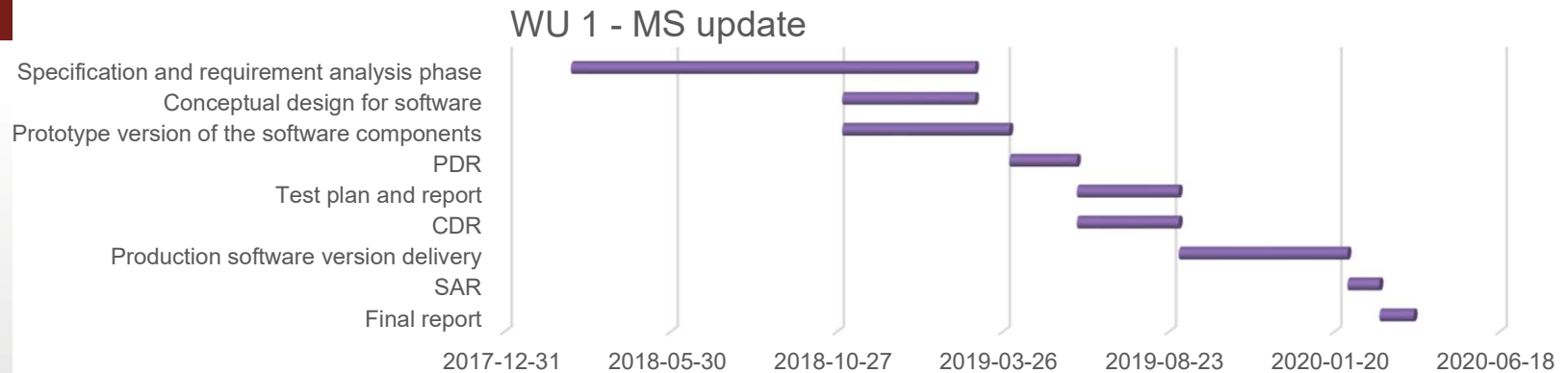
# WU 1 – Deliverables - Status

- ⇒ RTM Carrier hardware:
  - ⇒ second prototype (M-beta type) delivered 08.2018 (2 pieces received - used in Piezo Driver test stand and the LLRF reference system setup),
  - ⇒ HW access limited – shared between different development activities,
- ⇒ Piezo Driver board (M-Beta version – in production, first batch of pre-production modules expected in ~2 months),
- ⇒ Dedicated HW setup needed for „Production software and firmware delivery”
- ⇒ On-going work on BSP firmware (by NCBJ) for the RTM carrier, synchronized with FW framework (by Christian),
- ⇒ Firmware development for the RTM piezo driver in progress (firmware adjusted to first and M-beta prototypes),
- ⇒ Software part including driver and API (command line tools) layer – first version provided and under evaluation,
- ⇒ E3 integration and EPICS layer – to be done,
- ⇒ EPICS training will be beneficial – to provide consistent solutions for code to be delivered.





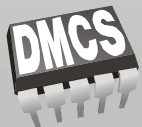
# WU 1 – Schedule update



Milestone ID	Short description	Date beg.	Date end
MS1	Specification and requirement analysis phase	2018-03-01	2019-03-01
MS2	Conceptual design for software	2018-11-01	2019-03-01
MS3	Prototype version of the software components	2018-11-01	2019-04-01
MS4	PDR	2019-04-01	2019-06-01
MS6	Test plan and report	2019-06-01	2019-09-01
MS7	CDR	2019-06-01	2019-09-01
MS8	Production software version delivery	2019-09-01	2020-02-01
MS9	SAR	2020-02-01	2020-03-01
MS10	Final report	2020-03-01	2020-04-01

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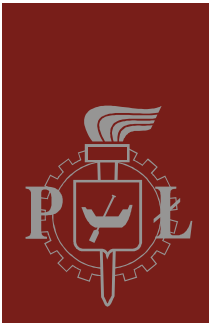




# WU 2 - icBLM and nBLM controls and realization - Deliverables

Task no.	Main deliverables	Delivery Deadline / Delivery MS	Acceptance Criteria type
D2.1	Specification revision	MS1	Review
D2.2	Firmware with functionality realization	MS10	Review
D2.3	Device driver and User space driver	MS10	Review
D2.4	EPICS device support	MS10	Review
D2.5	OPI GUI	MS10	Review
D2.6	Test plan	MS10	Test report

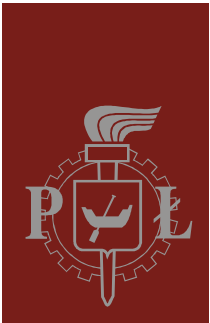




## WU 2 – Deliverables - Status

- ⇒ nBLM dedicated FW/SW development in progress,
- ⇒ Neutron count algorithm implemented – Linac 4 successful tests 12.2018 ,
- ⇒ FW release in git repository - feedback from ESS and CEA side, CEA in progress with EPICS layer, evaluated @ESS,
- ⇒ HW platform IFC1410 + FMC digitizers tested,
- ⇒ icBLM dedicated FW/SW development in progress,
- ⇒ Unresolved issues: smart trigger, timing, DOD, etc...
- ⇒ EPICS training will be beneficial – to provide consistent solutions for code to be delivered.
- ⇒ Progress and issues discussed on the weekly meetings

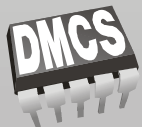
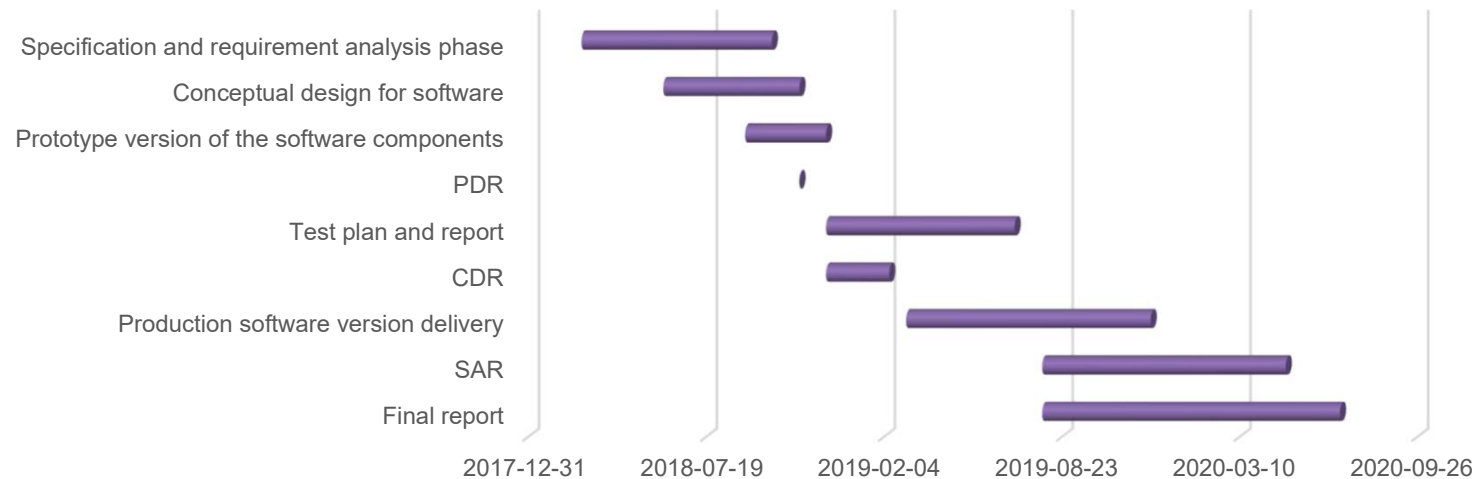


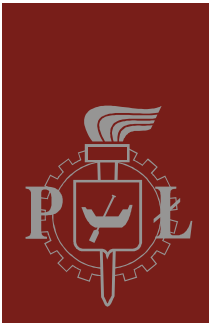


# WU 2 – Schedule update – nBLM

Milestone ID	Short description	Date beg.	Date end - nBLM	Date end - icBLM
MS1	Specification and requirement analysis phase.	2018-03-01	2018-10-01	2019-05-01
MS2	Conceptual design for software	2018-06-01	2018-11-01	2019-06-01
MS3	Prototype version of the FW and software components	2018-09-01	2018-12-01	2019-09-01
MS4	PDR - not for WU2	2018-11-01		
MS6	Test plan and report	2018-12-01	2019-07-01	2019-10-01
MS7	CDR	2018-12-01	2019-02-10	2019-12-01
MS8	Production FW and software version delivery	2019-03-01	2019-12-01	2020-04-01
MS9	SAR	2019-08-01	2020-05-01	2020-07-01
MS10	Final report	2019-08-01	2020-07-01	2020-09-01

WU 2 - MS update

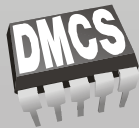
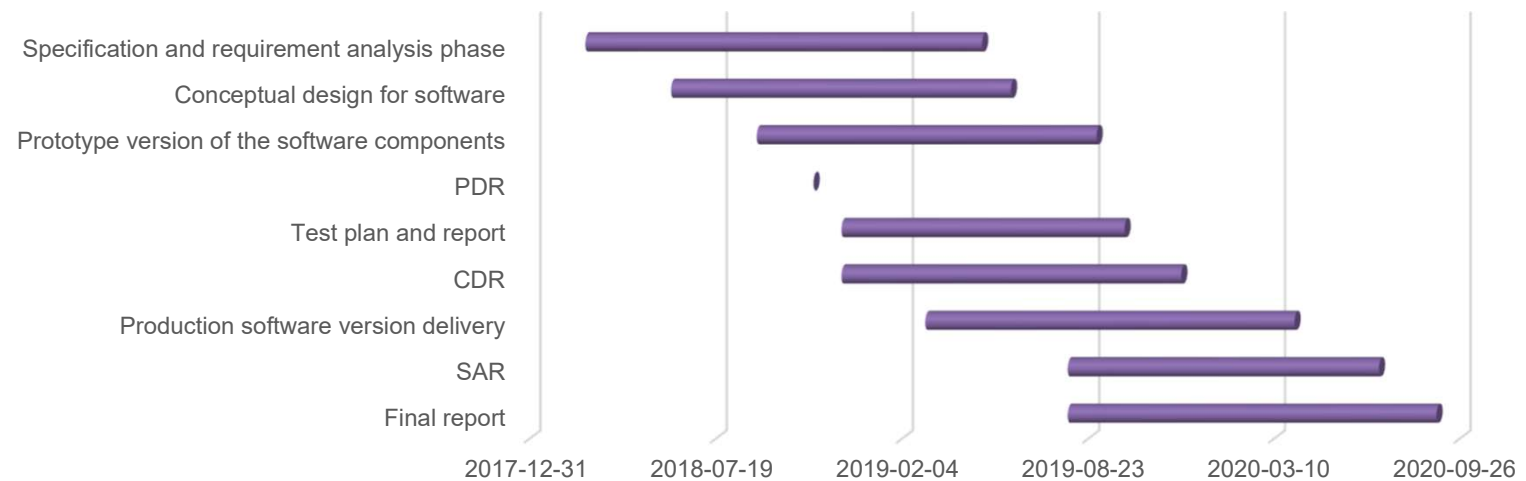




# WU 2 – Schedule update - icBLM

Milestone ID	Short description	Date beg.	Date end - nBLM	Date end - icBLM
MS1	Specification and requirement analysis phase.	2018-03-01	2018-10-01	2019-05-01
MS2	Conceptual design for software	2018-06-01	2018-11-01	2019-06-01
MS3	Prototype version of the FW and software components	2018-09-01	2018-12-01	2019-09-01
MS4	PDR - not for WU2	2018-11-01		
MS6	Test plan and report	2018-12-01	2019-07-01	2019-10-01
MS7	CDR	2018-12-01	2019-02-10	2019-12-01
MS8	Production FW and software version delivery	2019-03-01	2019-12-01	2020-04-01
MS9	SAR	2019-08-01	2020-05-01	2020-07-01
MS10	Final report	2019-08-01	2020-07-01	2020-09-01

WU 2 - MS update

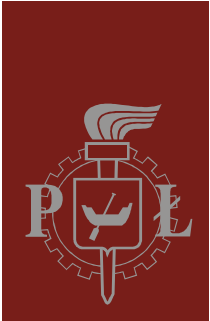




# WU 3 – IPMI EPICS integration - Deliverables

Task no.	Main deliverables	Delivery Deadline / Delivery MS	Acceptance Criteria type
D3.1	Specification revision	MS1	Review
D3.2	Low level library (comm. with MCH)	MS10	Review
D3.3	Daemon service for constant monitoring	MS10	Review
D3.4	EPICS device support	MS10	Review
D3.5	IOC integration	MS10	Review
D3.6	GUI delivery	MS10	Review
D3.7	Test plan and report	MS10	Test report





## WU 3 – Deliverables - Status

- ➔ Specification to be reviewed? – are there any other requests (apart from this specified in the TA)?
- ➔ available libraries solutions studies concluded,
- ➔ HW/SW test-stand to be established in DMCS – foreseen MTCA HW components list and samples required from ICS,
- ➔ More information, details, future plans – see presentation by Piotr Perek,
- ➔ EPICS training will be beneficial – to provide consistent solutions for code to be delivered.

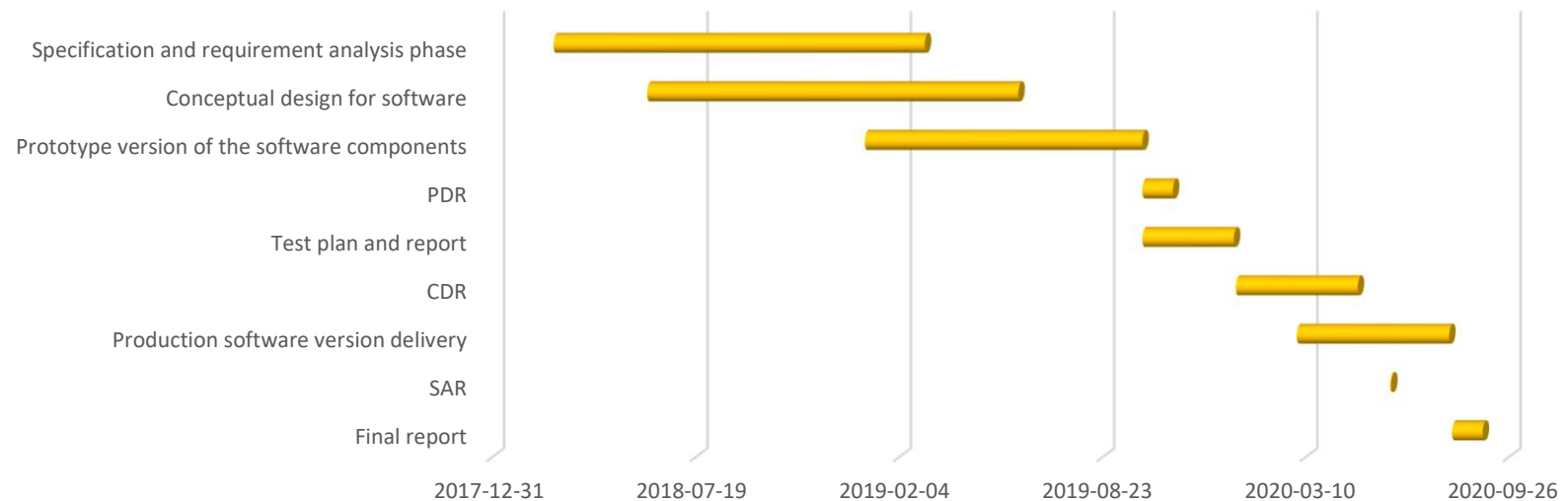


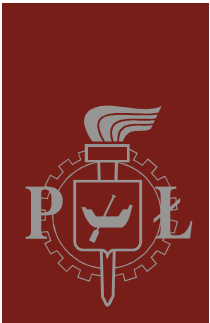


# WU 3 – Schedule - update

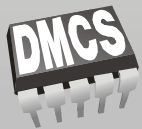
Milestone ID	Short description	Date beg.	Duration (days)	End date
MS1	Specification and requirement analysis phase	2018-03-01	365	2019-03-01
MS2	Conceptual design for software	2018-06-01	365	2019-06-01
MS3	Prototype version of the software components	2019-01-01	273	2019-10-01
MS4	PDR	2019-10-01	30	
MS6	Test plan and report	2019-10-01	90	2020-01-01
MS7	CDR	2020-01-01	120	2020-03-01
MS8	Production FW and software version delivery	2020-03-01	150	2020-06-01
MS9	SAR	2020-06-01	1	2020-08-01
MS10	Final report	2020-08-01	30	2020-09-01

WU 3 - MS update





Thank you for your attention



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