

**FAIR 2021** 

Re-Baselining

BINP - FAIR Workshop 09.11.2020

Natalya Winters & Nico Oepen

**PMO Planning** 

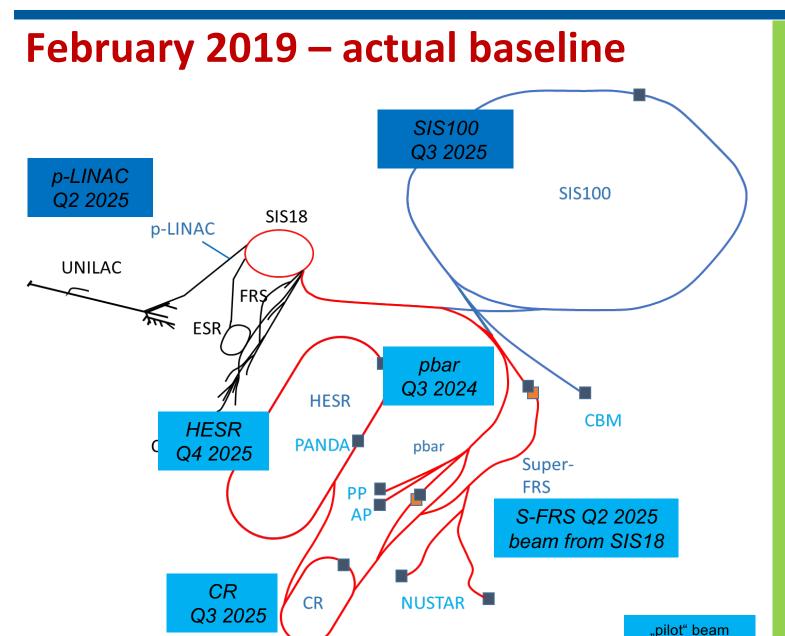
'A goal without a plan is just a wish' «Цель без плана - просто желание»

**Antoine de Saint-Exupery** 



#### Baseline 2019





Situation in 2019 (past)

#### **Buildings:**

Building Shell Construction north

✓ awarded

Building Shell Construction south

contract open

Technical Building Installation packages

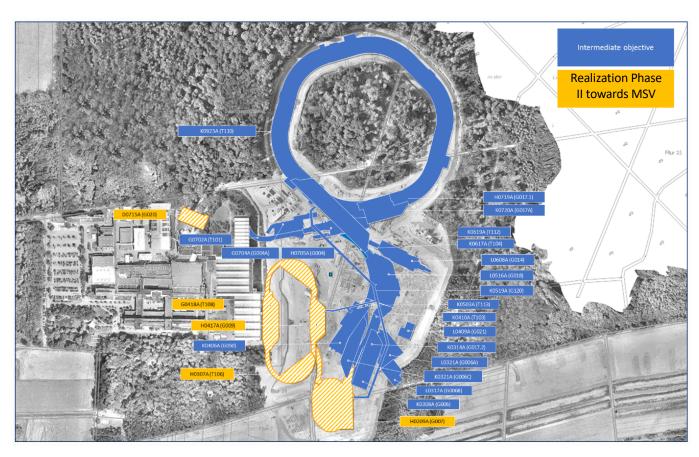
o contract open

Full MSV not fully financed

## Status FSB - new project baseline is required

Scope of work "Intermediate objective (IO)" and "Realization phase II towards MSV"





new project baseline is required

✓ Start of Building Shell Construction South (IO)

September 2020 (Award in April 2020)

new timeline

 Awarding Technical Building Installation packages - TBI (IO)

Q4 2020 - Q1 2021

new timeline

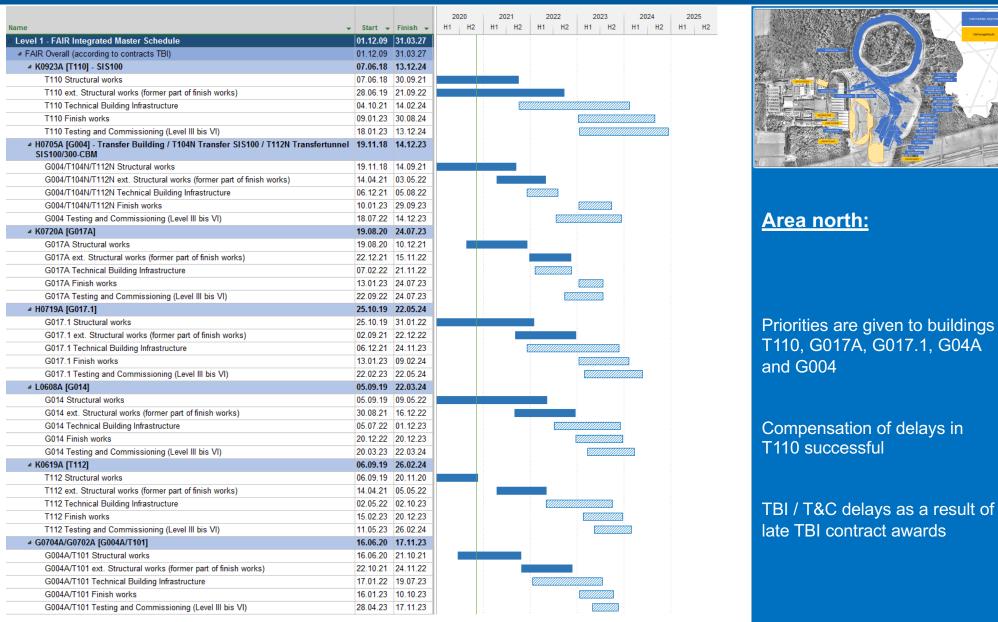
uncertainty

Full MSV: not yet fully financed

new assumption is required

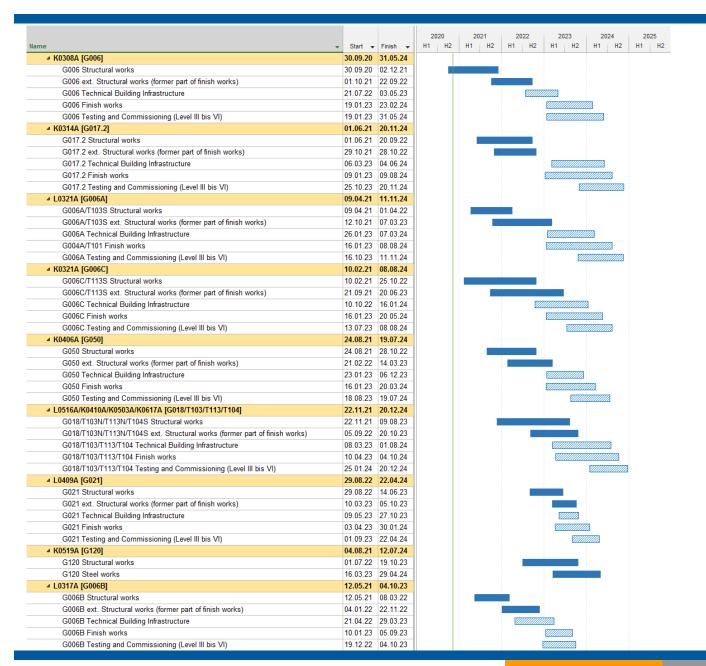
### FSB - Area north (RP I)





### FSB - Area south (RP I)







#### Area south:

General delay of about 9 months results of delayed structural works award

TBI delay results of structural works delay and structural works executive contracts

## FSB – Area south (RPII) - draft



			2020		2021		202			2023		2024		2025
ne	▼ Start ▼	Finish ▼	H1 H2	2	H1 H:	2	H1	H2	H1	H2	H1	H2	H1	1
△ [G020] - p-linac (RP II)	23.03.23	18.06.25												
G020 Sheeting and pit works	23.03.23	21.04.23												
G020 Structural works	24.04.23	06.02.24												
G020 Finish works	23.11.23	16.04.25												
G020 Technical Building Infrastructure	15.03.24	27.02.25												
G020 Testing and Commissioning	27.09.24	18.06.25												
△ [G007] - CR / [T106] Transfer CR-HESR (RP II)	20.01.22	17.12.25												
G007/T106 Sheeting and pit works	20.01.22	30.03.22												
G007/T106 Structural works	11.11.22	02.02.24												
G007/T106 Finish works	23.08.23	14.01.25												
G007/T106 Technical Building Infrastructure	18.06.24	11.08.25												
G007/T106 Testing and Commissioning	04.03.25	17.12.25												
△ [G009] - HESR PANDA (RP II)	13.03.23	14.10.25												
G009 Sheeting and pit works	13.03.23	25.04.23												
G009 Structural works	26.04.23	07.03.24												
G009 Finish works	29.12.23	23.01.25												
G009 Technical Building Infrastructure	07.03.24	20.02.25												
G009 Testing and Commissioning	27.11.24	14.10.25												
△ [T108] - HESR (RP II)	08.02.23	16.10.25												
T108 Sheeting and pit works	08.02.23	05.05.23												
T108 Structural works	05.04.23	17.07.24												
T108 Finish works	21.02.24	16.10.25												
T108 Technical Building Infrastructure	21.02.24	04.02.25												
T108 Testing and Commissioning	19.08.24	04.07.25												



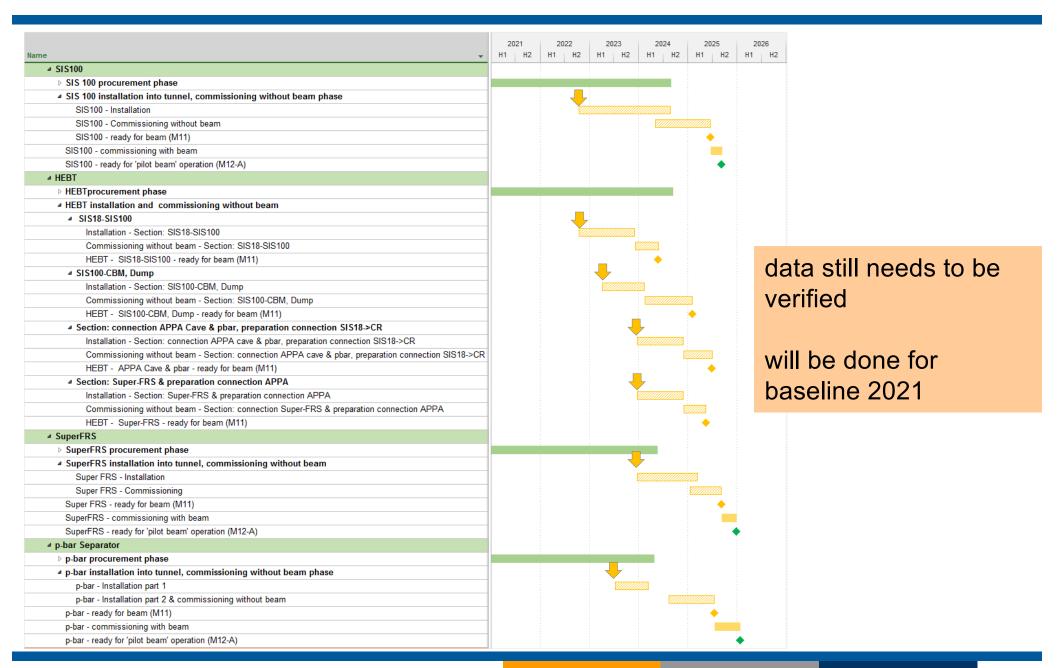
data still needs to be verified

will be done for baseline 2021

#### RP II (Realization phase II)

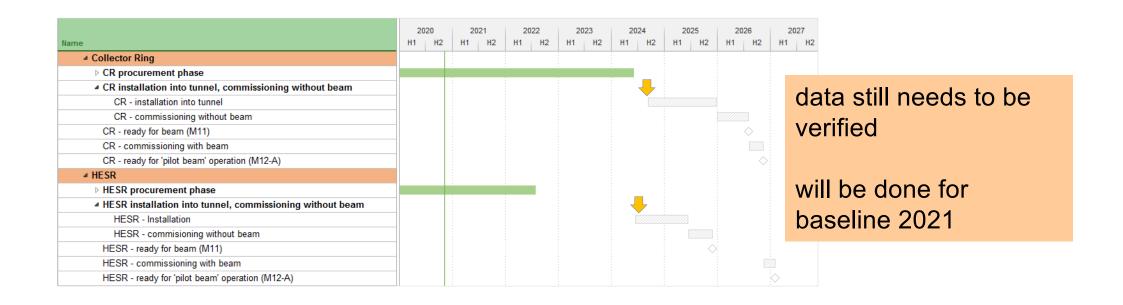
- <u>approach for Baseline 2021</u>: missing budget will be made available from July 2022 onwards (Council Decision in December 2021)
- schedule corresponds to optimized options in actual structural works contract
- buildings except G020 are currently not included in the TBI contracting process. They will require a separate tendering process.

#### **ACC Installation - draft**



#### **ACC Installation - draft**





#### **ACC & EXP Project steering & tracking process overview**



planning phase \$002 manufacturing phase S004 & S005 shipment & SATA S006 installation & commissioning without beam \$007

commissioning with beam S008

procurement tracking & expediting

Supplier Satus Report

pre - & installation status

the

responsible = WPL's (SPL) & reporting data bank for planning = MS Project

Input for MSP:

- progress reporting/S-Curve
- critical path analysis
- project prognosis
- resource planning
- cost planning (RN)

Input for SAP:

cost planning (obligo)

Input for PLM: for logistics

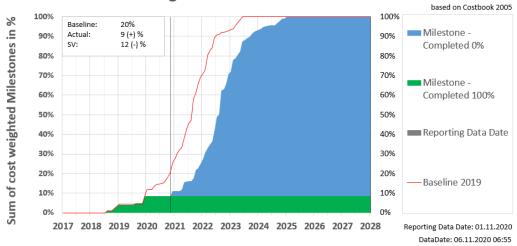
Installation planning

# **Progress analysis: S-Curve**











#### Our forecasts have to get better

**Action** for new baseline:

realistic forecast for FAT und delivery date for all ACC & Exp components

# **BINP – Provider Tracking Status**



											n	Without forecast		repo	ort not necessar
~	Provider tracking status	\$ ▼	▼ ▼						Output 1	racking		No report			
Subproject	Components Name	Quantity	Production Start		Q1			Q2			QЗ			Q4	
	· ·	•		Jan	Feb	Mar	April	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
CR															
CR	CR/TCR1 Dipole Magnets	24+2	24.01.2020										14.10.2020		
CR	CR/TCR1 wide Quadrupoles Magnets	29	27.08.2021										14.10.2020		
CR	CR/TCR1 Narrow Quadrupoles Magnets	11 😪	07.09.2021										14.10.2020		
CR	CR/TCR1 Sextupole Magnets	26 ⋖	05.03.2021										14.10.2020		
CR	CR/TCR1 Steerer Magnets	21+4	05.03.2021										14.10.2020		
CR	CR/TCR1 Dipole Power Converter	2+1	18.03.2021 / 26.11.2020										30.10.2020		
CR	CR/TCR1 wide Quadrupole Power Converter	15+6	26.01.2021 / 26.02.2021										30.10.2020		
CR	CR/TCR1 Sextupole Power Converter	6+2 ⋖	25.12.2020 / 08.11.2021										30.10.2020		
CR	CR/TCR1 Steerer Power Converters	86 🛚	02.12.2020 / 15.12.2021										30.10.2020		
CR	CR/TCR1 Beam Position Monitor	19+5	02.10.2020										30.10.2020		
CR	CR/TCR1 Dip Vacuum Chambers	24	7 17.01.2020 / 20.10.2021										30.10.2020		
CR	CR/TCR1 wide Quad-sext chamber	29	18.08.2020										30.10.2020		
CR	CR/TCR1 Quad Vacuum Chambers	29+? ⋖	26.05.2022										30.10.2020		
pbar															
pbar	NC wide Quadrupoles	8 %	08.04.2022										15.10.2020		
pbar	p-Bar radiation resistant Magnets		no contract												
Super FRS															
Super FRS	NC Dipoles	2 %	14.09.2020					25.05.2020					02.10.2020		
Super FRS	SC Dip. Vacuum Chambers	21 %	/			-							19.10.2020		
Super FRS	Diagnostic Chambers		22.02.2021			02.03.2020							15.10.2020		
Super FRS	Feedboxes		no contract												
Commons															
HEBT	Magnets Batch 2&3&4	303	9	31.01.2020	28.02.2020	13.04.2020	04.05.2020	01.06.2020	30.06.2020		02.08.2020	30.09.2020	02.11.2020		
HEBT	Vacuum Batch 1	51	/												
HEBT	Vacuum Batch 2&3	272	/			06.03.2020	16.04.2020	06.05.25020	30.06.2020		04.08.2020		07.10.2020		
HEBT	Vacuum Batch 4	1175													

#### **BINP Components:**

new steering FAIR - BINP Meeting & good BINP PMO & CR Lead support

Prio: Super FRS & HEBT



# **BINP – Delivery Matrix**

Nico Oepen

## **BINP – Delivery dates HEBT Magnets**



							11	12	2	e	4 1	n 9	, ,	00	6	9	11	12	1 0	m	4	ro.	9 1	<b>,</b>	ω σ	9	11	12	н	2
Quantity 🕌 1	Work Package	→ Assembly → S	tart delivery 🕶	Finish delivery 🔻	Contract statu 🕶	delivered 💂	202	20					2021										202	2						
310	HEBT Magnets					58	15	34 3	0 16	12	21	17	29 1	7 9	4	12	4		21		4								5	2
6	Dipole 10 (HEBT 100 Divider) - dip10	HEBT dip10	06/20	08/21	signed	1		1 1		1			1	1																
4	Dipole 15 (HEBT18) - dip15_0	HEBT dip15	08/19	09/19	signed	4																								
1	Dipole 15 (HEBT18) - dip15_1	HEBT dip15	12/20	12/20	signed			1																						
1	Dipole 16 (HEBT18) - dip16	HEBT dip16	12/20	12/20	signed			1																						
1	Dipole 17 (HEBT18) - dip17_0	HEBT dip17	01/21	01/21	signed			1																						
4	Dipole 19 (HEBT100) - dip19_0	HEBT dip19	02/21	05/21	signed				1	1	1	1																		
2	Dipole 13 (SIS100) - dip13_0	HEBT dip13	12/20	01/21	signed			1 1																						
3	Dipole 13 (SIS100) - dip13_3	HEBT dip13	02/21	06/21	signed				1		1		1																	
2	Dipole 4 - dip4 FBL	HEBT dip4 FBL	10/21	11/21	signed											1	1													
2	CR-type dip3_3	CR-type dip3_3	02/23	02/23	open																									2
81	Quadrupole 2 (SIS18 HEBT-Type long)	HEBT quad2	11/17	01/22	signed	32		8	2	4	6	5 !	5 5	2	4		1		7											
4	Quadrupole 10 (CBM Target-Focus Type long)	HEBT quad10	11/20	11/20	signed		4																							
69	Quadrupole 11 (HEBT100)	HEBT quad11	07/20	10/21	signed	5	5	6 6					5 5			7														
12	Quadrupole 12 (HEBT100)	HEBT quad12	12/20	06/21	signed			1 5					6																	
10	Quadrupole 2 FBL	HEBT quad2 FB	01/22	03/22	signed														6	4										
4	Quadrupole 2 (SIS18 HEBT-Type long) HED	HEBT quad2 HE	01/22	01/22	signed														4											
1	Quadrupole 11 (HEBT100) HED	HED quad11 HE	11/21	11/21	signed												1													
5	CR-type quad3_3	CR-type quad3	01/23	01/23	open																								5	
5	Steering Magnets HEBT18 (large aperture, S13)	HEBT S18 (large	11/21	01/22	signed												1		4											
44	Steering Magnets HEBT18	HEBT S18	08/19	07/21	signed	6	6	14 8			2		4 4																	
43	Steering Magnets HEBT100	HEBT S100	01/18	07/21	signed	10		9	6		5	5 !																		
2	Steering Magnet HEBT100 HED	HEBT S100 HED	06/21	06/21	signed								2																	
4	Steering Magnet HEBT18 FBL	HEBT S18 FBL	10/21	10/21	signed											4														

Country	Provider	CB 8.1 2005	Pieces series	BIMP components	Contract M4 actual	Start actual baseline	FAT - M9	Finish actual baseline	Finish delay	SPI	Start actual baseline	Delivery - M92	Finish actual baseline	Finish	SPI	Start actual baseline	SAT - M10	Finish actual baseline	Finish	SPI
Russia	BINP	11,56	282	Magnets Batch 2&3	02.11.2015 signed	10-17 10-17 10-17	13%	01-22 04-21 04-21	9	14%	11-17 11-17 11-17	13%	01-22 04-21 04-21	9	14%	04-19 02-19 04-19	11%	03-22 06-21 05-21	9	12%

#### Information about next deliveries uncertain:

- 54 more magnet deliveries were scheduled for 2020, but couldn't take place so far
- Concept for next FATs at BINP not approved
- Further shifts of the general schedule are likely. A realistic forecast for baseline 2021 is very difficult

## **BINP – Delivery dates HEBT Vacuum**



													11	12	1	2	ω 4		n o	7	œ	6	11	12	н	7	ω 4	ro.
Quantity	Work Pack	age				Asse	embly 🕌	Start delivery	Finish de	livery 🖵 🤇	Contract sta	tu delivered	d 🖵	2020					:	2021								
1726	HEBT	Vacuum							_						6	;	8 5	65	62	4	9	36	53	698			283	2
6	Dipole	chamber d	ip 10 D	Divider		HE	BT dip10	04/21	04,	21	signed							6										
5	Dipole	chamber d	ip 13			HE	BT dip13	01/21	05,	21	signed				3				2									
5	Dipole	chanber di	p 15			HE	BT dip15	01/21	06,	21	signed				1				4									
1	Dipole	chamber d	lip 16			HE	BT dip16	01/21	01,	21	signed				1													
1	Dipole	chamber d	ip 17			HE	BT dip17	01/21	01,	21	signed				1													
4	Dipole	chamber d	lip 19			HE	BT dip19	03/21	03,	21	signed						4											
1	Dipole	chamber d	lip 4 (be	ending) FBL		HE	BT dip4 FBL	10/21	10,	21	signed												1					
1	Dipole	chamber d	lip 4 (br	ranching) FBL		HE	BT dip4 FBL	10/21	10,	21	signed												1					
2	CR-Ty	e Dipole Cl	hamber	r dip3_3		CR	t-type dip3_3	05/22	05,	22																		2
4	Quadr	upole cham	ber qua	ad10		HE	BT quad10	03/21	03,	21	signed						4											
69	Quadr	upole cham	ber qua	ad 11		HE	BT quad11	09/21	10,	21	signed											36	33					
17	Quadr	upole cham	ber qua	ad 12		НЕ	BT quad12	10/21	10,	21	signed												17					
81	Quadr	upole cham	ber qua	ad 2		HE	BT quad2	04/21	05,	21	signed						3	35	46									
10	Quadr	upole cham	ber qua	ad 2 FBL		HE	BT quad2 FE	05/21	05,	21	signed							_	10									
4	Quadr	upole Cham	ber qu	ad2 HED		HE	BT quad2 HI	05/21	05,	21	signed?	•							4									
1	Quadr	upole Cham	ber qu	ad11 HED		HE	D quad11 H	10/21	10,	21	signed?	•											1					
5	CR-Ty	e Quadrup	ole Cha	amber quad3_3		CR	-type quad3_	05/22	05,	22	open										5							
29	Steere	r chamber s	5100			HE	BT S100	04/21	04,	21	signed						2	29										
2	Steere	r Chambers	s100 H	HED		HE	BT S100 HEC	04/21	04,	21	signed?	•					_	2										
31	Steere	r chamber s	518h/v			HE	BT S18	04/21	04,	21	signed						3	31										
3	Steere	r chamber s	518h/v I	FBL		HE	BT S18 FBL	08/21	04,	21	signed							3										
4	Steere	r chamber s	s13 larg	ge aperture		HE	BT S18 (larg	08/21	08,	21	signed										4							
1440	Batch	4 (Bellows,	Pumpir	ng Chambers, Straigh	t Tubes)			04/21	03,	22	signed						4	59						698			283	
Country P	rovider 2	9 8.1 Piece serie	HE	EBT components	Contract M4 actual	Start actual baseline contract	FA	AT - M9	Finish actua baselin contra	Fillisii	SPI	Start actual baseline contract	Delive	ery - IV	192	a ba	inish actual aseline antract	inish delay <sub>month</sub>	SPI	cont	tual eline tract		SAT - M	10		Finish actual baseline contract	Finish delay month	SPI
Russia	BINP 1	,13 272	2 Vacu	uum Batch 2&3	04.04.2019 signed	11-20 04-20 12-19	0%		07-21 09-21 12-20	-1	0%	12-20 05-20 03-20				0	0-21 9-21 3-21	1	0%	04-	-20 ( -20	)%				11-21 10-21 04-21	2	0%
Russia	BINP 2	,82 1440	0 Vacu	uum Batch 4	22.11.2019 signed	03-21 06-21 01-21	0%		02-22 06-21 12-21	8		04-21 07-21 02-21				0	3-22 7-21 1-22	8		05- 08- 03-	-21 (	)%				04-22 08-21 02-22	7	

#### An updated forecast is needed:

- Last update about the general delivery schedule was generated after last workshop in May 2020
- A new forecast is needed for baseline 2021

# **BINP** – **Delivery dates CR**



iantit 🐷	Work Package	Assembly - S	tart deliver - Ei	inish deliver.	Contract stati 🔻 delivered	2020			2021							202	2						2	023							2024			
_	CR Magnets	Usernory V	Aut deliver 1	misir deliver)	Communication of the communica	1	1	3	1 1	1 2	2 4	4 4	4	3 6	5			R 5	3 5	3 4	1 5	2 4			5 3	4 3	2	3 3	2	3 1		1 1	1	1
141		CR/TCR1 dip	12/20	04/24	signed	1	1	1	1	1 1		1 1	1	1	1	1	7 1	1	1	1	1	1	1	1	1	1 1		1 1	1	1			Ť	Ť
9		CR quad wide	01/22	07/24	signed								1	1	1 1		1 1	1 1		1 1	1	1	1 1		1 1		1		1 1	1	1 1			+
		TCR1 quad wid	07/24	12/24	signed											$\overline{}$			$\top$													1 1	1 :	
1		CR quad narro	04/22	04/23	signed										1		1 1	1 1	1	1 1	1 1	1												т
		CR quad narro	05/23	05/23	signed																		1											$\top$
6		CR quad wide	07/21	10/23	signed				1		1	1 1	1 1	1	1 1	1	1 1	1 1	1	1 1	1 1	1	1 1	1	1 1	1								$\top$
2	CR Octupole Correctors	CR quad wide	05/23	04/24	signed				$\overline{}$																	1 1	1 1	1 1	1 1					$\top$
	CR Injection Septum		08/22	08/23	signed												1				1				1									T
	CR Extr. Septum magnet		11/22	05/23	signed														1				1											T
	CR Combined Steering Magnets	CR/TCR1 steer	09/21	03/22	signed					1	1	1		1																				$\top$
1	CR/TCR1 Vertical Steering Magnets	CR/TCR1 stee	05/21	09/22	signed			2			2	2 1	2 1	. 2	2 1	2	1 2	1																T
		CR/TCR1 stee	08/22	08/22	signed											$\top$	1																	T
415	CR Vacuum									8	8		18	8		115	90 122	2 10 :	10		8			10				2		9 7		6		
1	CR Dipole Chamber	CR/TCR1 dip	09/21	02/23	signed					8						8					8													Т
	TCR1 Dipole Chamber	CR/TCR1 dip	02/24	02/24	signed																							2						Т
1	CR Wide Quad+Sext Chamber	CR quad wide	09/22	04/24	signed													10						10					9					Т
	TCR1 Wide Quadrupole Chamber	TCR1 quad wid	09/24	09/24	signed																											6		Т
	Straight Tubes	CR quad narro	02/22	05/24	signed								18	3			18													7				Т
1	Pumps/Valves/Roughing Stations/Adaptors/Support Frame	es	06/22	10/22	signed											107		2 1	0															П
103	CR Power Converter							1	3			2 1		8	7	8 6	5 6	5 4	4 5	4 5	5 5	10 8	9	1	1									
	CR Dipole Power Conveter		03/22	03/22	signed									1																				
	TCR1 Dipole Power Conveter		12/21	03/22	signed							1		1																				
5	CR Quadrupole Power Conveter		07/21	05/23	signed				1												1 5		4											
	TCR1 Quadrupole Power Conveter		07/21	05/23	signed				1											1			1											
	CR Sextupole Power Conveter		11/21	08/22	signed							1			1 1																			Т
	TCR1 Sextupole Power Conveter		11/21	03/22	signed							1		1																				
В	CR Steering Magnet Power Conveter		07/21	05/23	signed				1					1									4											
	TCR1 Steering Magnet Power Conveter		05/21	06/22	signed			1						1		1																		
2	CR Octupole Power Conveter		03/22	12/22	signed									3						1														
	CR Injection/Extraction Power Conveter		11/22	08/23	signed														1		1			1	1									
41	CR Beam Instrumentation											2	:	1				5			2	1 1	7		18	3 1								
	DC Transformer		11/21	11/21	signed							1																						
1		CR/TCR1 steer	02/23	09/23	signed																2				17								$\perp$	_
		CR/TCR1 stee	10/23	10/23	signed																					3							1	_
	CR Fast Current Transformer		11/21	11/21	signed							1																					4	_
	TCR1 Fast Current Transformer		03/23	03/23	open									1		$\perp$														$\perp$			$\perp$	_
	CR Residual Gas Profile Monitor		09/23	09/23	signed				$\perp$		$\perp$			$\perp$		$\perp$						$\perp$			1					$\perp$			$\perp \perp$	_
	CR Scintillation Screen		05/23	05/23	signed											$\perp$							5										$\perp \perp$	4
	TCR1 Scintillation Screen		02/22	11/23	open								1									1				1							4	4
	CR Beam Stopper		05/23	05/23	signed																	$\perp$	2										1	_
	CR Beam Scraper		09/22	09/22	signed													5															ш	$\perp$
2	CR Injection/Extraction																				2													
	Injection/Extraction Kickers		02/23	02/23	signed																2													

An updated forecast was sent in October 2020:

- Delivery dates according the newest supplier status report
- High quality of information for rebaselining 2021

# BINP – Delivery dates pbar



						11 12	1 2	ω 4	2 9	7	9 9	1 1 9	1 1	v w	4 7	9	7 8	6	10	12	1 2	m	4 7	9 7
Quantity	Work Package 🔻	Assembly 🗸 S	tart delivery	Finish delivery 🗸	Contract status delivered	2020				2021						20	22							2023
166	obar														1 :	3 1	59	2 2	2	8 3	3	5 2	2 6	2 11
23	pbar Magnets														1	3 1	1	2 2	2	1 3	3	1 1	2	
1	Bending Magnet		01/23	01/23	open																1			
2	CR-type narrow quad. Radiation hard		04/22	09/22	open										1			1						
1	Wide quad. Radiation hard		05/22	05/22	open										1									
4	Sextupole wide	pbar Sextupole	06/22	01/23	open											1	1		1		1			
3	Steerer horizontal	pbar Steerer h	05/22	04/23	open										1					1			1	
3	Steerer vertical	pbar Steerer v	05/22	04/23	open										1					1			1	
1	Steerer vertical radiation hard		03/23	03/23	open																	1		
8	CR-type NC quad. wide	pbar quad wide	07/22	02/23	signed																	L		
120	pbar Vacuum																58						6	2
8	Chamber quadrupole wide	pbar quad wide	05/23	05/23	signed																		8	
4	Sextupole Chambers	pbar Sextupole	07/22	07/22	open												4							
3	p-Bar Horiz. Correctors	pbar Steerer h	05/23	05/23	open																		3	
3	Vertical Correctors	pbar Steerer v	07/22	07/22	open												3							
102	Pumps/Valves/Roughing Stations/Adaptors/Support Frames		07/22	05/32	open												51						51	
23	pbar Power Converter																			7		4 1		11
1	Dipole Power Converter		03/32	03/32	open																	1		
8	Wide Quadrupole pulsed mode		06/32	06/32	signed																			8
3	narrow Quadrupole pulsed mode + wide QD pulsed		04/23	04/23	open																			3
4	Sextupole Power Converter		02/23	02/23	open																4	1		
7	Steerer Power Converter		11/22	11/22	open															7				

Country	Provider	CB 8.1 2005 mio	Pieces series	pbar components	Contract M4 actual	Start actual baseline contract	FAT - M9	actual baseline	Finish delay month	SPI	Start actual baseline contract	Delivery - M92		Finish delay month	SPI	Start actual baseline contract	SAT - M10	Finish actual baseline contract	Finish delay month	SPI
Russia	BINP	0,44	8	NC wide Quadrupoles	27.05.2020 signed	06-22 11-21 10-22	0%	01-23 11-21 10-22			07-22 12-21 05-23	0%	02-23 12-21 05-23	14		08-22 02-22 06-23	0%	03-23 02-22 06-23	13	

An updated forecast for NC wide quadrupoles was sent in October 2020:

- Is the delivery sequence, as shown here, realistic?
- Most pbar components at BINP not yet under contract, new forecast for baseline 2021 is needed

# **BINP** – Delivery dates Super-FRS



							11 12	1 2	ю <b>4</b>	D 9	7 8	9 01	11 12	1 2 0	e 4 г	9 1	- 8	9 10	11 12	7 7	u 4 ru	9 7
Quantity 🖵	Work Package	Assembly		Finish delivery	Contract status	delivered 💂	2020			20	021					202	2					2023
185	Super-FRS					2				3			4		1 1	33	6	1 5	1	5 25		
2	Super-FRS Magnets																	1	1	,		
1	Dipole 1.2	SFRS dip	09/22	09/22	signed													1				
1	Dipole 1.3	SFRS dip	11/22	11/22	signed														1			
178	Super-FRS Vacuum					2				3			4		13	33	6	5	i	4 22		
3	NC dipole chambers	SFRS dip	08/22	08/22	open (EOI+R&D)												3					
23	SC Standard-Dipole Chambers		06/21	02/23	signed					1										22		
21	Diagnostic Cambers		01/20	01/23	signed	1				2			4			5		5		4		
3	Branched dipole chamber		08/22	08/22	return PSP?												3					
128	Beam pipes/bellows/pumping chambers		05/22	05/22	not assigned										12	28						
1	Super-FRS Beam Instrumentation																			1		
1	BPM (in front of Target Station)		02/23	02/23	not assigned															1		
4	Super-FRS Local Cryogenics														1					1 2		
1	Branch box		02/23	02/23	open (EOI)															1		
1	Warm piping		04/22	04/22	open (EOI)										1							
1	Transfer lines		02/23	02/23	open (EOI)															1		
1	Installation local cryogenics		01/23	06/23	open (EOI)																1	

Country	Provider	CB 8.1 2005 mio	Pieces series	Super-FRS components	Contract M4 actual	Start actual baseline contract	FAT - M9		Finish delay month	SPI	Start actual baseline contract	Delivery - M92		Finish delay month	SPI	Start actual baseline contract	SAT - M10	contract	Finish delay month	SPI
Russia	BINP	2,02	2	NC Dipoles	15.03.2019 signed	09-22 01-22 03-22	0%	11-22 08-22 03-22	3		09-22 02-22 03-22	0%	11-22 10-22 03-22	1		03-23 11-22 08-22	0%	03-23 11-22 08-22	4	
Russia	BINP	0,56	21	Dip. Vacuum Chambers	12.09.2019 signed		0%	02-23 08-22	6		05-21 02-21	0%	03-23 09-22	5		12-21 03-21	0%	04-23 01-23	3	
Russia	BINP	0,78	21	Diagnostic Chambers	15.03.2019 signed	12-20 05-21	0%	12-22 05-21	20		01-13 01-20	0%	01-23 01-20	36	0%	06-21 07-21	0%	03-23 07-21	20	

- NC Dipoles: the delivery dates shown in the contract may not be realistic anymore. FDR is delayed by 10 months. A new schedule is needed
- Delivery sequence for vacuum components is under discussion, first supplier status reports arrived in October 2020
- Many Super-FRS components at BINP not yet under contract, new forecast for baseline 2021 is needed

#### Summary



- Realization of FAIR Project Construction is making good progress
- New milestones for shell construction south and realistic dates for TBI are available
- FAIR budget for MSV (missing budget for Buildings) must be made available from July 2022 (Council Decision in December 2021) so that the CR, pLinac and HESR machines can be installed as planned
- ACC progress is much lower than prognosis
- Realistic und reliable planning is urgently needed -> please take your time for it
- Priorization for BINP: HEBT and SuperFRS pbar CR



# Спасибо за внимание Thanks for your attention

'A goal without a plan is just a wish'

**Antoine de Saint-Exupery**