

## **DFX Production strategy and plan**

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## **DFX in WP6a Master Plan**

Master plan		2018			2019			2020			2021			2022			2023				2024			2025								
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## **Current production plan – Key points**

- End of March 2019 (40 working days) until scheduled DDR
  - Transition CDR model to CATIA format with the help of CERN design office
  - Complete specification drawings for all sub-assemblies continuously checked by CERN design office and use as much as possible CERN standard practices
  - Compliance to relevant pressure and cryogenic vessel standards and ALARA, again advised and verified by CERN
  - Advance discussion with potential vendors about going from specifications to manufacturing
- End of August 2019 (110 working days) Completion of procurement contracts :
  - invite tenders/quotes together with proposal for manufacturing (drawings)
  - finalise weld qualification
  - place contracts/orders with manufacturers/suppliers
- End of December 2019 (110 working days) Component manufactured
  - Applying quality control and acceptance criteria for sub-assemblies
- End of March 2020 (70 working days) for full DFX assembly and testing
- Consistent with the Master Plan



## Current production plan: CDR – DFX prototype completion

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Task Name	Duration	Resource	Chard	Finish	Half 2, 2017	Half 1, 2018	Half 2, 2018	Half 1, 2019	Half 2, 2	019 Half 1, 2020	Half 2, 2020	Half 1, 2021
Completion of CDP	O dave	CERNI	Thu 21/01/10	Thu 21/01/10	MJJASU	NUJEMA	M J J A S O N D	▲ 31/01	AMJJA	S U N U J F M	AMJJASUI	V D J F M A M
4 Working towards DDR	40 days	CENIN	Mop 04/02/19	Mop 01/04/19								
Define sub-assemblies	6 days	UOS/CERN	Mon 04/02/19	Mon 11/02/19					ERN			
Convert 3D model from Inventor to CATIA	21 days	UOS/CERN	Mon 04/02/19	Mon 04/03/19					S/CERN			
Compile detailed specification drawings for all sub-sections	30 days	UOS/CERN	Mon 18/02/19	Fri 29/03/19					JOS/CERN			
Initial Interfacing with manufacturing companie to define the specifrication for complex and non-stardard components/sub-assmblies/processes	s 21 days	UOS	Mon 25/02/19	Mon 25/03/19				<b>•</b>	IOS			
DDR	0 days	CERN	Mon 01/04/19	Mon 01/04/19				<b>↓</b> ◆	01/04			
Working towards manufacture	114 days		Mon 01/04/19	Thu 05/09/19				Г		٦		
Invite vendors to tender/quote based on specification drawings	30 days		Mon 01/04/19	Fri 10/05/19				L.	-			
Generate manufacturing drawings	60 days	UOS/CERN	Mon 15/04/19	Fri 05/07/19					UOS	CERN		
Define qualification of welds and inspection criteria with manfacturing	30 days	UOS/CERN	Mon 06/05/19	Fri 14/06/19					UOS/CI	RN		
Validate qualification of welds procedure and paper trail with CERN approval	14 days	CERN	Mon 17/06/19	Thu 04/07/19					Gern	I		
Approval of manufacturing drawings	14 days	UOS/CERN	Mon 08/07/19	Thu 25/07/19					• <u> </u>	OS/CERN		
Place contracts and begin procurement of standard "off the shelf" parts/materials	30 days	UOS	Fri 26/07/19	Thu 05/09/19					<b>F</b>	UOS		
<ul> <li>Manufacturing period</li> </ul>	110 days		Mon 19/08/19	Fri 17/01/20								
Maintain contact with manufacturers and suppliers to ensure delivery targets and resolve snagging issues	110 days	UOS	Mon 19/08/19	Fri 17/01/20					I	UOS		
<ul> <li>Acceptance and quality control of components and sub-assemblies</li> </ul>	33 days	UOS	Mon 11/11/19	Wed 25/12/19						<b></b>		
Cryogenic shock testing of small sub-assemblies	18 days	UOS	Mon 11/11/19	Wed 04/12/19						uos 🔤		
Helium leak detection of welds of small sub-assemblies to complement any weld radiography	18 days	UOS	Mon 25/11/19	Wed 18/12/19						uos 🔤		
Pressure testing of small sub-assmblies	18 days	UOS	Mon 02/12/19	Wed 25/12/19						UOS 🗾		
Assembly and testing	56 days		Mon 20/01/20	Mon 06/04/20								
General assembly at UOS laboratory	40 days	UOS	Mon 20/01/20	Fri 13/03/20						UC	DS	
Pressure testing of full assembly	5 days	UOS	Mon 16/03/20	Fri 20/03/20						μ	os	
Cryogenic shock testing of full assembly	5 days	UOS	Mon 23/03/20	Fri 27/03/20						9 <b>1</b> -1	JOS	
Readiness for delivery	5 days		Tue 31/03/20	Mon 06/04/20								
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