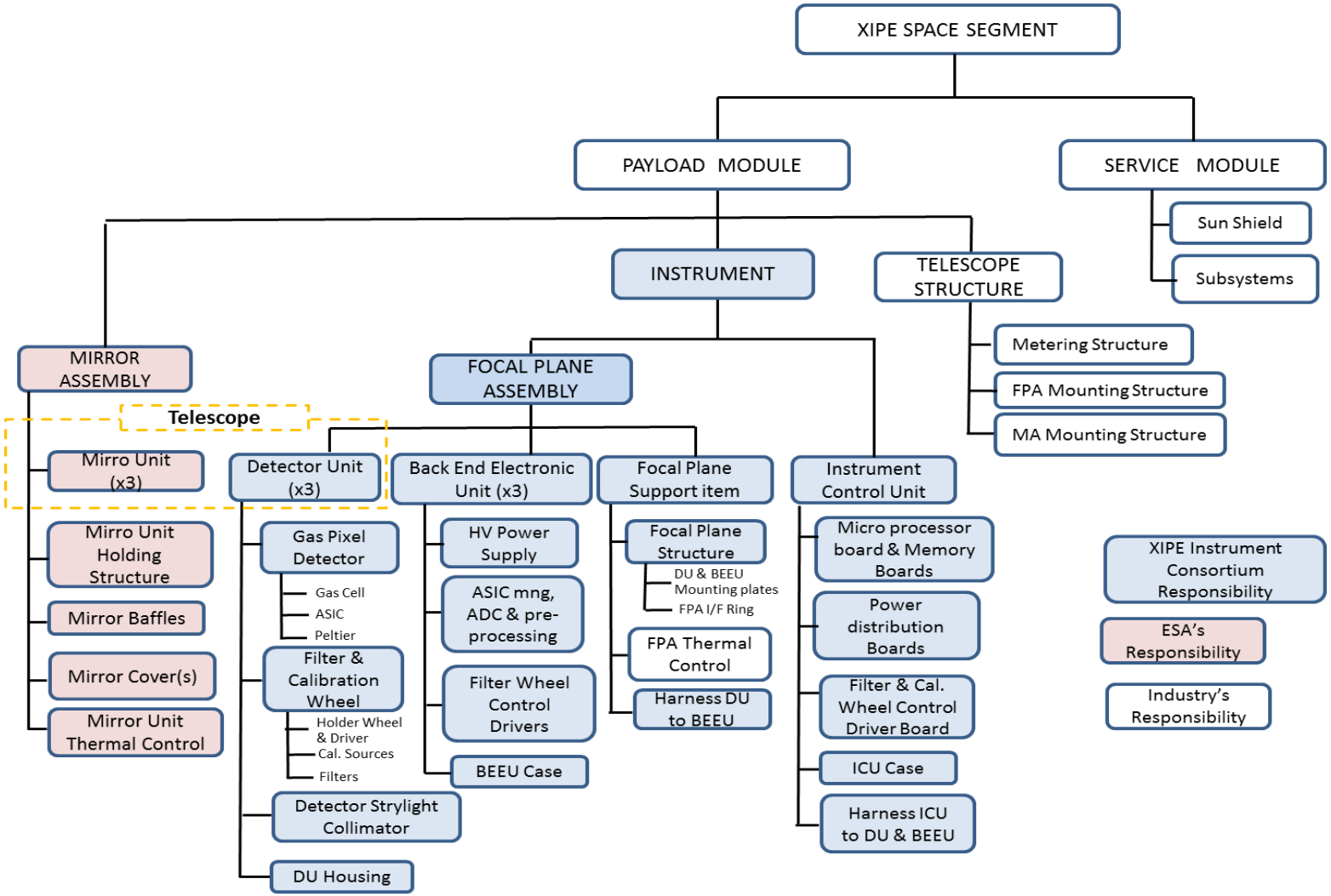

XIPE SPACE SEGMENT
PAYLOAD MODULE
SERVICE MODULE
Sun Shield
Subsystems
INSTRUMENT
TELESCOPE STRUCTURE
Metering Structure
FPA Mounting Structure
MA Mounting Structure
MIRROR ASSEMBLY
FOCAL PLANE ASSEMBLY
Telescope
Mirro Unit (x3)
Mirro Unit Holding Structure
Mirror Baffles
Mirror Cover(s)
Mirror Unit Thermal Control
Detector Unit (x3)
Gas Pixel Detector
Gas Cell
ASIC
Peltier
Filter & Calibration Wheel
Holder Wheel & Driver
Cal. Sources
Filters
Detector Strylight Collimator
DU Housing
Back End Electronic Unit (x3)
HV Power Supply
ASIC mng, ADC & pre-processing
Filter Wheel Control Drivers
BEEU Case
Focal Plane Support item
Focal Plane Structure
DU & BEEU Mounting plates
FPA I/F Ring
FPA Thermal Control
Harness DU to BEEU
Instrument Control Unit
Micro processor board & Memory Boards
Power distribution Boards
Filter & Cal. Wheel Control Driver Board
ICU Case
Harness ICU to DU & BEEU
XIPE Instrument Consortium Responsibility
ESA's Responsibility
Industry's Responsibility

		Responsibility	Note	Heritage
XIPE Instrument		**INAF/IAPS**	Integrated Instrument calibraion and E2E at INAF facility. Follow-on Telescope test at MPE/PANTER Support of UCL/SSL in the thermal/structural design at Unit/FPA level.	TBW
Detector Unit		**INFN/Pisa**	MGSE for transport and AIT supported by INAF/IAPS	TBW
GPD		INFN/Pisa	Tsinghua University/CNSA for fine tuning Gas Cell mixture & high energy source for PANTER/MPE	TBW
	Gas Cell	INFN/Pisa	Gas cell from Oxford with GEM from Scienergy/Riken	TBW
	ASIC	INFN/Pisa		TBW
	Peltier	INFN/Pisa		TBW
Filter & Cal. Wheel		UCL/SSL		TBW
	Wheel & Driver	UCL/SSL		TBW
	Calibration sources	INAF/IAPS	possible tagged source option (ASTRO-H/ATHENA) from SRON	TBW
	Filters	Tsinghua University /CNSA		TBW
Stray light Collimator		INFN/Pisa		TBW
DU Housing		INFN/Pisa		TBW
Back-End Electronic Unit		**INFN/Pisa**		TBW
HV & LV Power Supply		SRC of Polish academy of science		TBW
ASIC mng, ADC & pre-processing		INFN/Pisa	low mass anticoincidence as contribution of SNSB	TBW
BEEU Case		INFN/Pisa		TBW
FPA Support Items		**Univ. of Valencia**	AIV/AIT activities will be performed by INTA	TBW
FPA Support Structure		Univ. of Valencia		TBW
	DU & BEEU Mounting Plate	Univ. of Valencia	AIV/AIT of FPA by INTA	TBW
	FPA Int. Ring	Univ. of Valencia		TBW
FPA Thermal control		ESA/Prime		TBW
Harness DUs to BEEUs		INFN/Pisa		TBW
Instrument Controll Unit		**IAAT**	IAAT/DRL contribution includes EGSE and Calibration at MPE/Panter	TBW
Micro processor & Memory boards		IAAT		TBW
Power distribution boards		IAAT		TBW
Filter Wheel controll drivers board		IAAT		TBW
ICU Case		IAAT		TBW
Harness ICU to DU and BEEU		IAAT		TBW

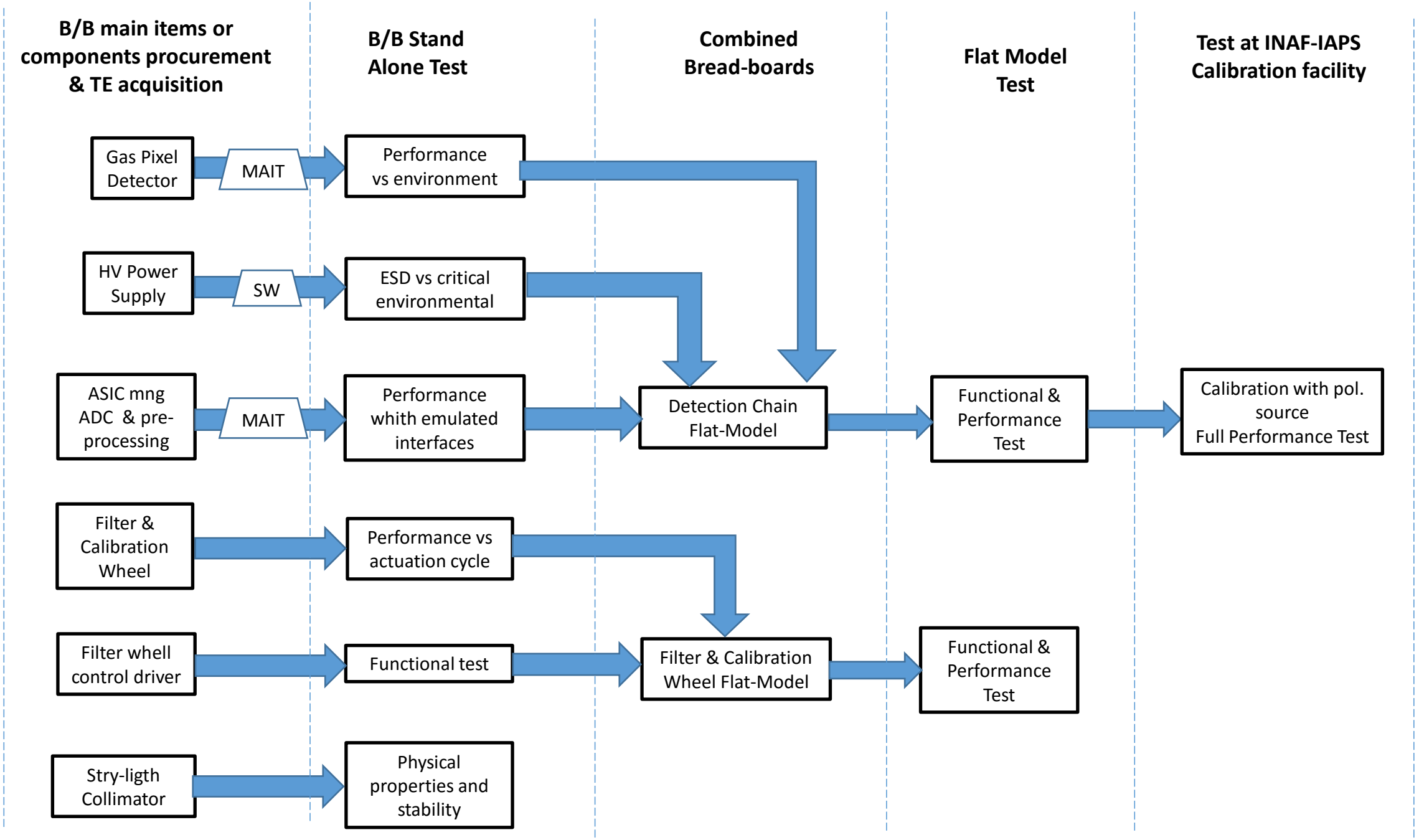
	Acroym	Unit Mass (kg)	Current TRL	BB	SM	STM (**)	Sim.	EM	El.Mod.	EQM	QM (***)	PFM	FM	Spare	Note
XIPE Instrument															
Detector Unit	**DU**	**0,0**	**6**			**1+2D**					**1**		**3**	**1**	**EM and QM are not deliverable**
Gas Pixel Detector	**GPS**		**6**	**2**		**1+2D**					**1**		**3**	**1**	
Gas Cell	GC		6	2		1+2D					1		3	1	
ASIC Miniboard	AM		6	2		1+2D					1		3	1	
Peltier Cooler	PC		6	2		1+2D					1		3	1	
Filter & Cal. Wheel	**FCW**		**6**	**2**		**1+2D**					**1**		**3**	**1**	
Wheel & Driver	W&C		9	2*		1+2D					1		3	1	
Calibration sources	CS		6	2*		1+2D					1		3	1	
Filters Set	FIS		6	2*		1+2D					1		3	1	
Strylight Collimator	**STC**		**6**	**1**		**1+2D**					**1**		**3**	**1**	
DU Housing	**DUH**		**6**			**1+2D**					**1**		**3**	**1**	
Back-End Electronic Unit	**BEEU**	**0,0**	**6**			**1+2D**					**1**		**3**	**1**	**QM is not deliverable**
HV Power Supply	**HVPS**		**6**	**1**		**1+2D**					**1**		**3**	**1**	
ASIC mng, ADC & pre-processing	**AAPM**		**6**	**1**		**1+2D**					**1**		**3**	**1**	
BEEU Case	**BUC**		**6**			**1+2D**					**1**		**3**	**1**	
FPA Support Items	**FSI**	**0,0**	**6**			**1**					**1**		**1**	**1**	**QM is not deliverable**
FPA Support Structure	**FSS**		**6**			**1**					**1**		**1**	**1 kit**	
DU & BEEU Mounting Plate	DBMP		6			1					1		1		
FPA Int. Ring	FPAR		6			1					1		1		
FPA Thermal control	**FTC**		**6**			**1**					**1**		**1**	**1 kit**	prime is responsible of design & procurement
Harness DUs to BEEUs	**HDB**		**6**						**1**		**1**		**1**		
Instrument Controll Unit	**ICU**	**0,0**	**6**			**1**	**1**	**1 (***)**	**1 (TBC)**			**1**		**1**	**EM is not deliverable**
Micro processor & Memory boards	**MPMB**		**6**			**1*D**	**1**	**1**	**1**			**1**		**1**	
Power distribution boards	**PDB**		**6**			**1*D**	**1**	**1**	**1**			**1**		**1**	
FCW control drivers board	**FCB**		**6**			**1*D**	**1**	**1**	**1**			**1**		**1**	
ICU Case	**ICUC**		**6**			**1*D**	**1**	**1**	**1**			**1**		**1**	
Harness ICU to DU and BEEU	**HIDB**		**6**						**1**			**1**			prime is responsible of harness layout

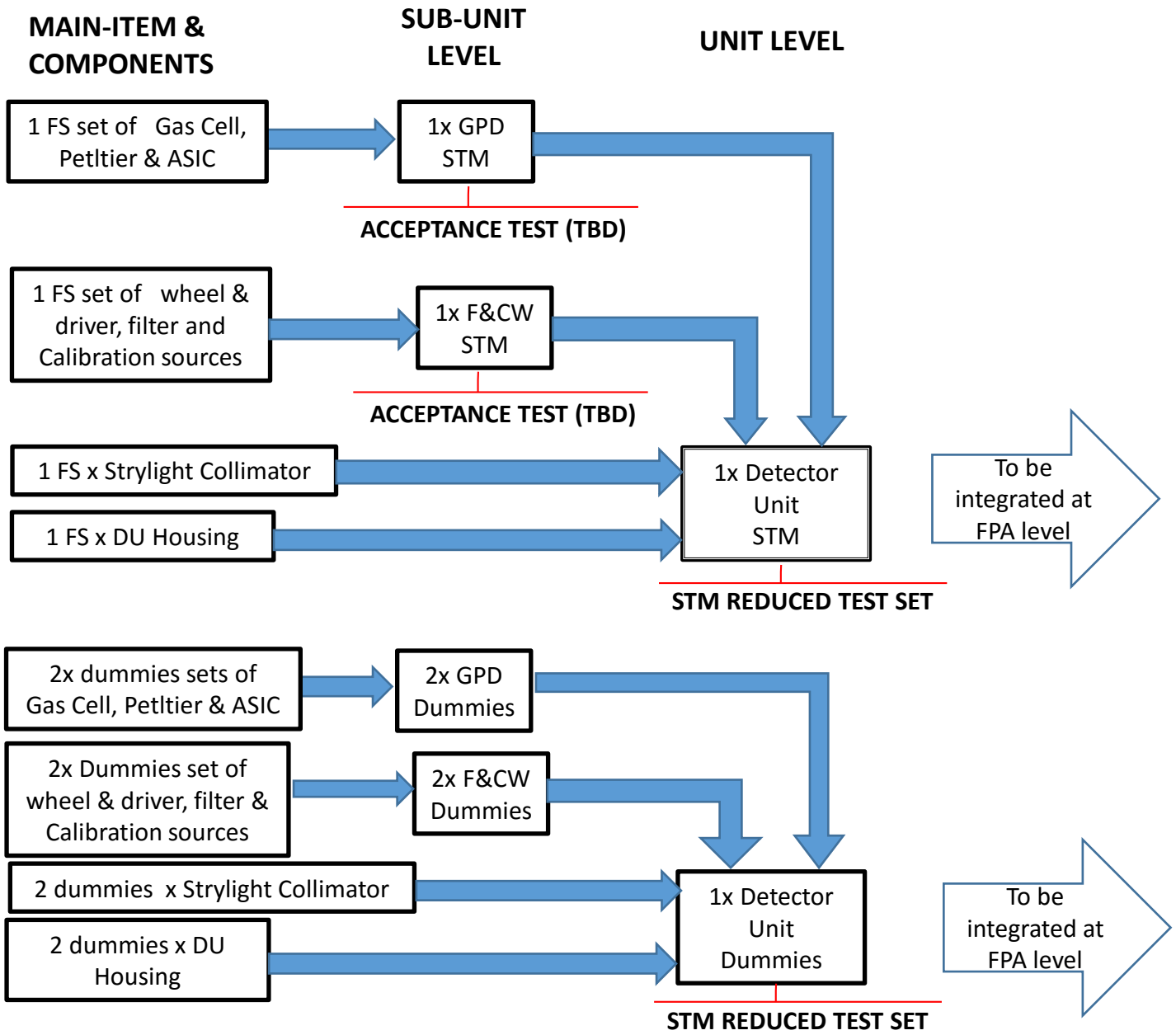
D=dummy representative of mass, MoI and CoG only

(*) Electrical Motor is flight reppresentative while the wheel (as well sources and filters) is a dummy representative of mass and CoG only

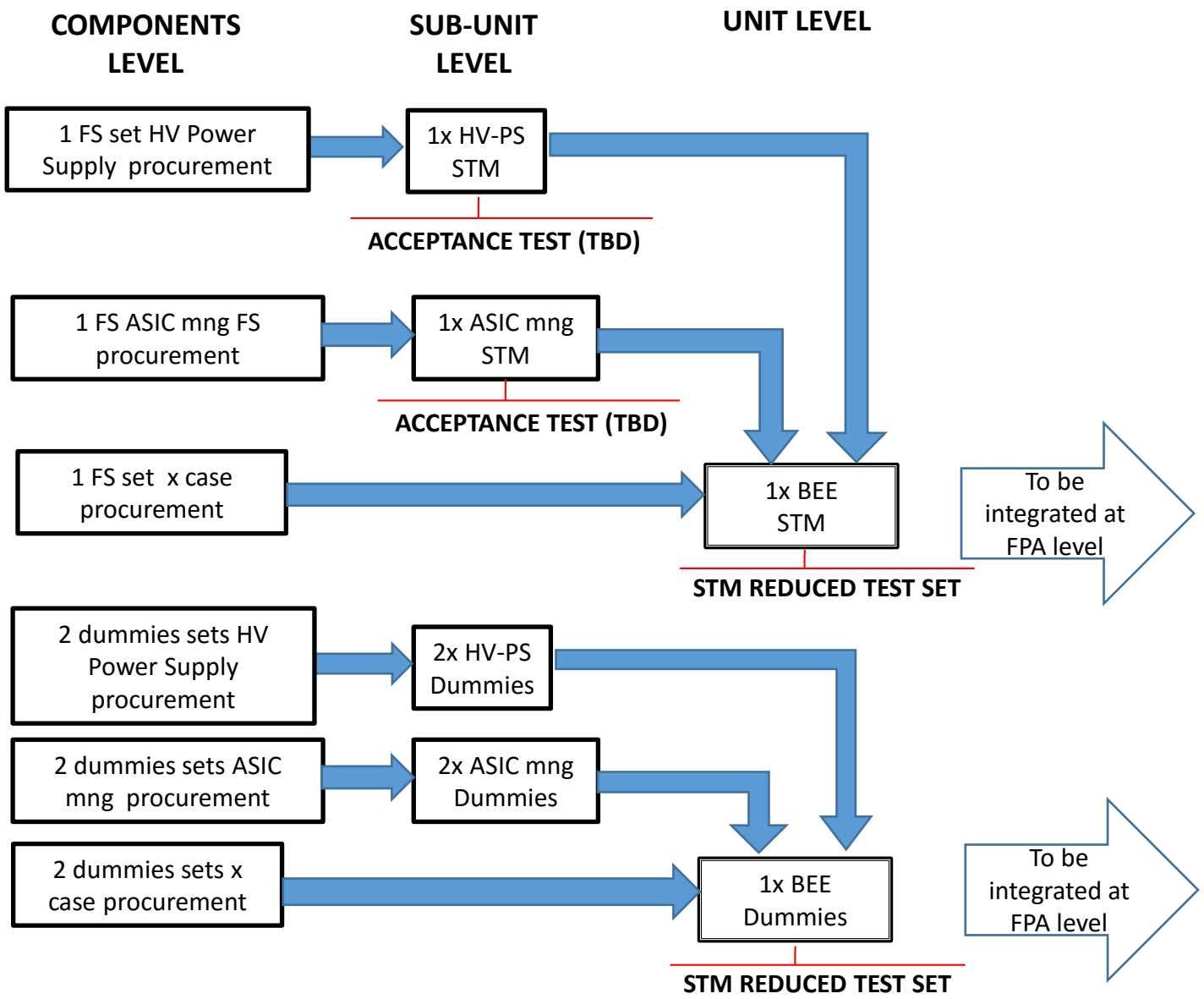
(**) DU STM can be provided of Flight Standard assembly (e.g. Filter & calibration Wheel) with the aim to performe a funcional/performance qualification in the occurence of satellite STM test campaign

(***) QM of DU, BEEU and EM of ICU shall be utilised for integrated instrument functional/performance test in advance w.r.t. the development of FM/PFM units

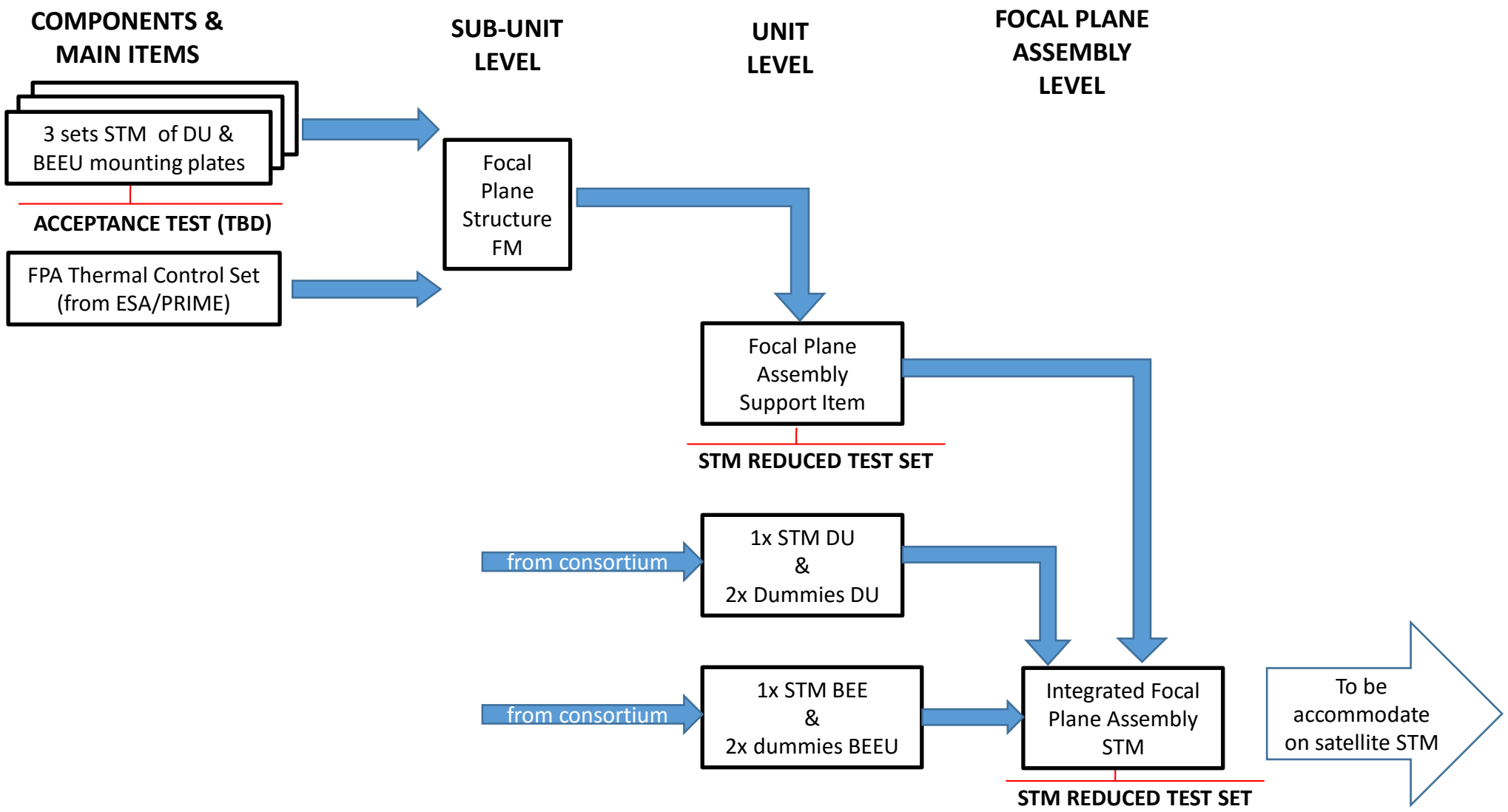

B/B main items or components procurement & TE acquisition
B/B Stand Alone Test
Combined Bread-boards
Flat Model Test
Test at INAF-IAPS Calibration facility
Gas Pixel Detector
MAIT
Performance vs environment
HV Power Supply
SW
ESD vs critical environmental
ASIC mng ADC & pre-processing
MAIT
Performance whith emulated interfaces
Detection Chain Flat-Model
Functional & Performance Test
Calibration with pol. source Full Performance Test
Filter & Calibration Wheel
Performance vs actuation cycle
Filter whell control driver
Functional test
Filter & Calibration Wheel Flat-Model
Functional & Performance Test
Stry-ligth Collimator
Physical properties and stability



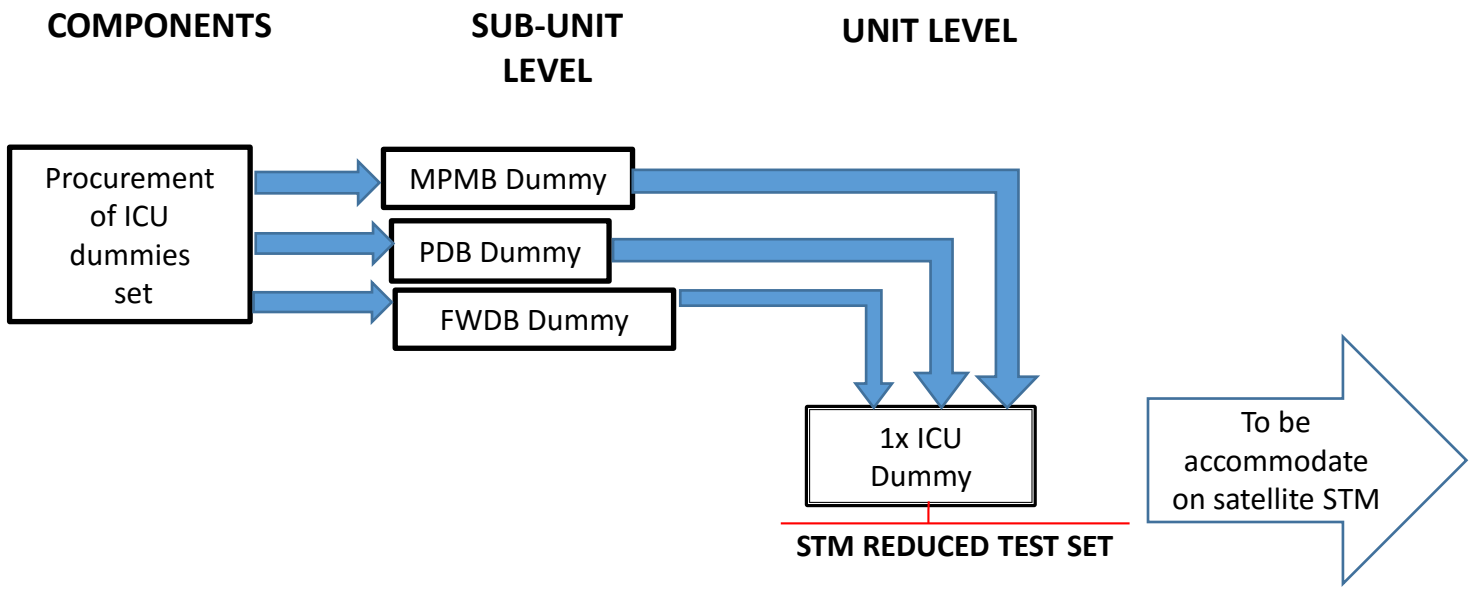
Detector Unit STM



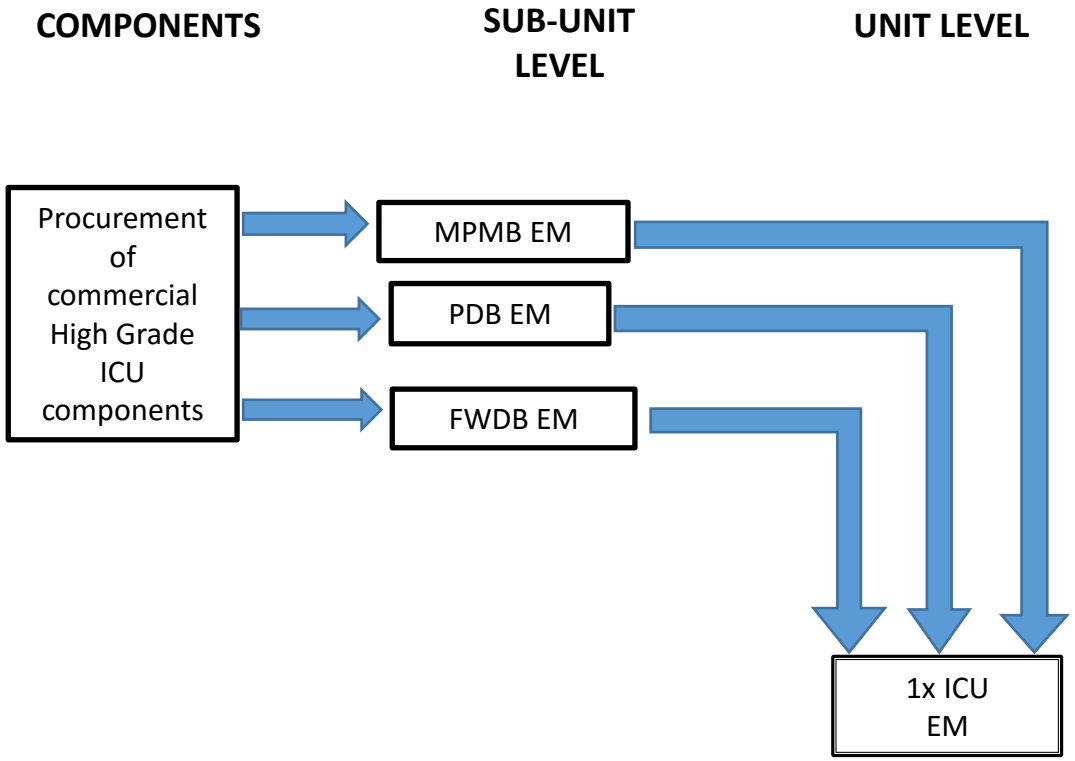
Back-End Electronic Unit STM



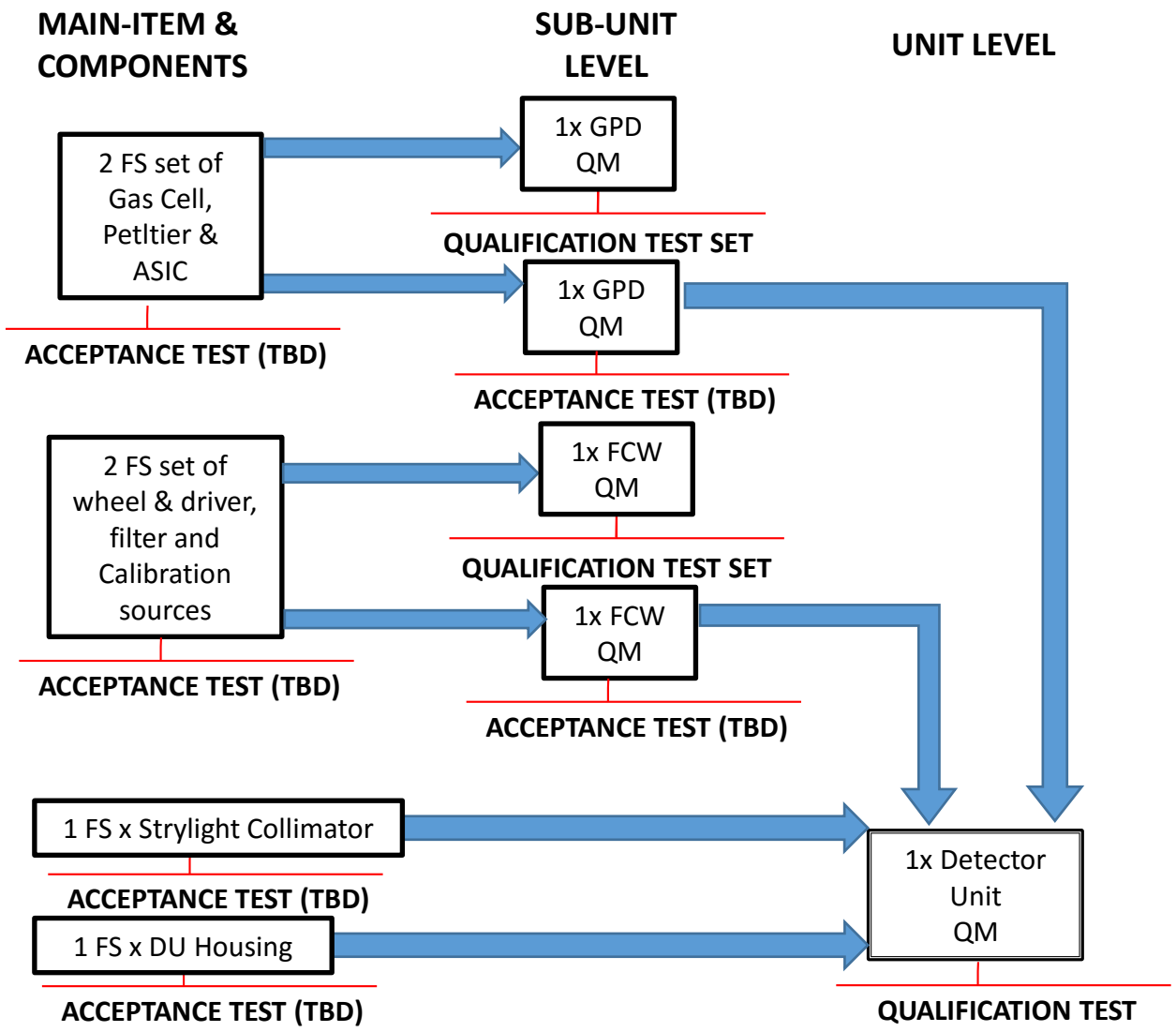
Focal Plane Assembly Support Items STM



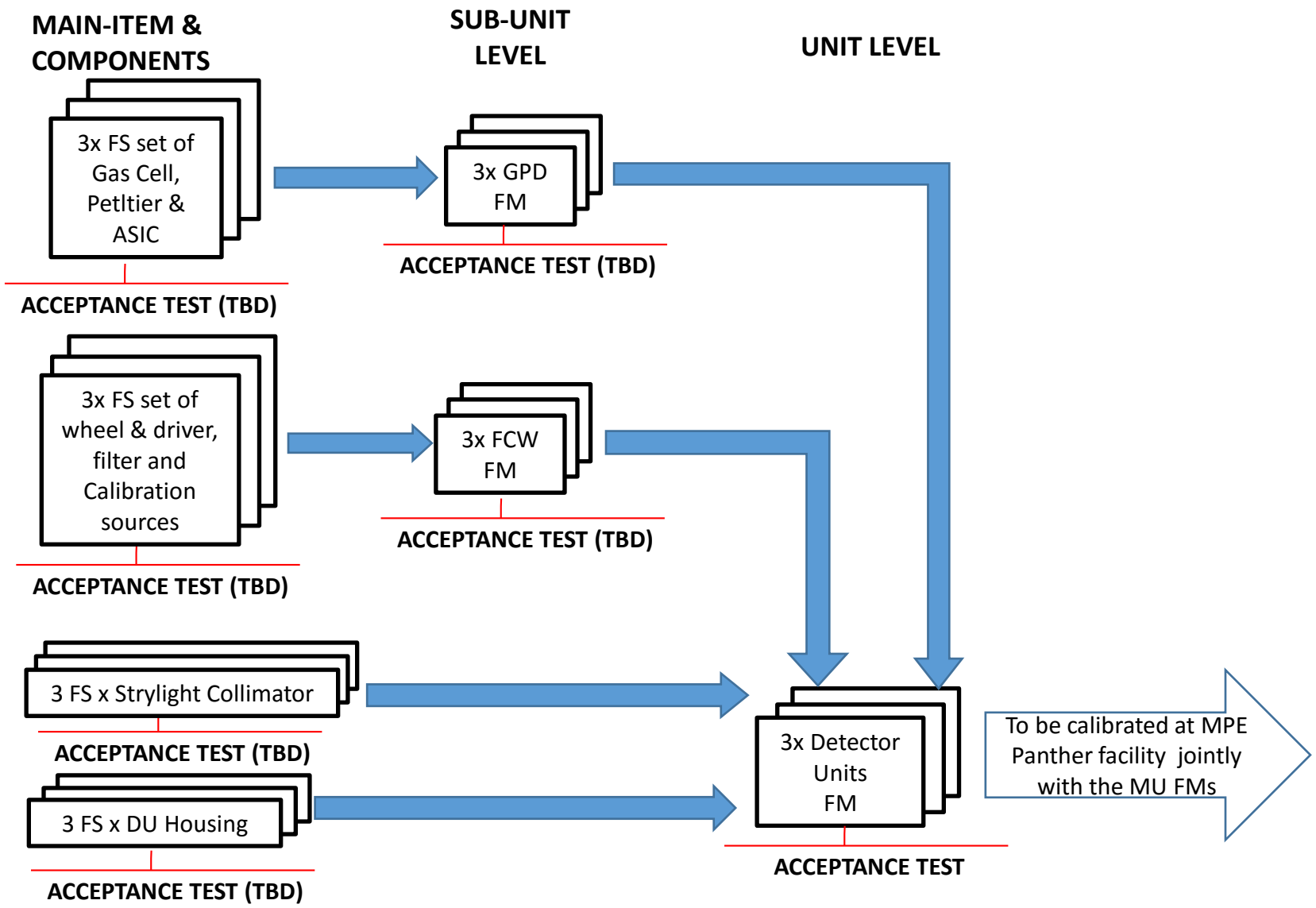
Instrument Control Unit Dummy



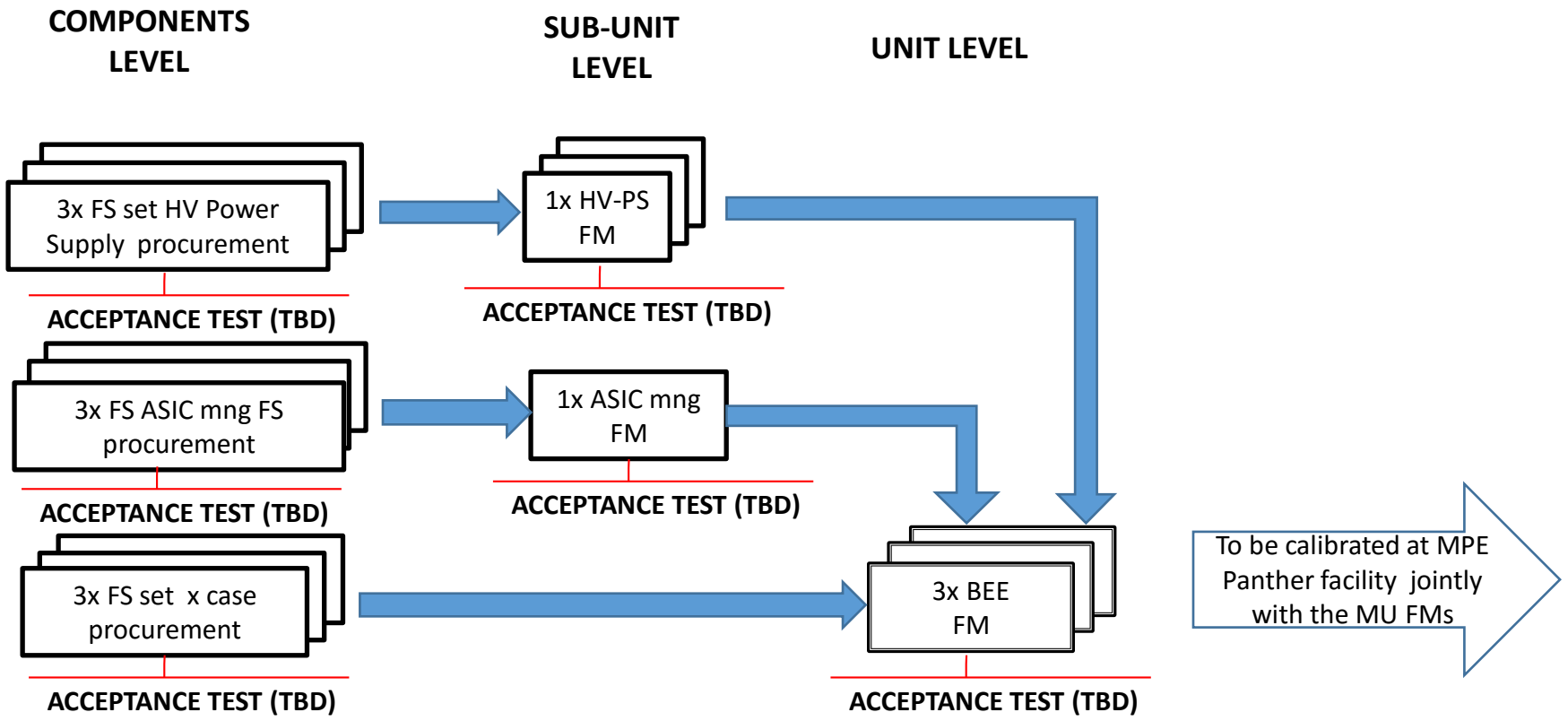
Instrument Control Unit EM



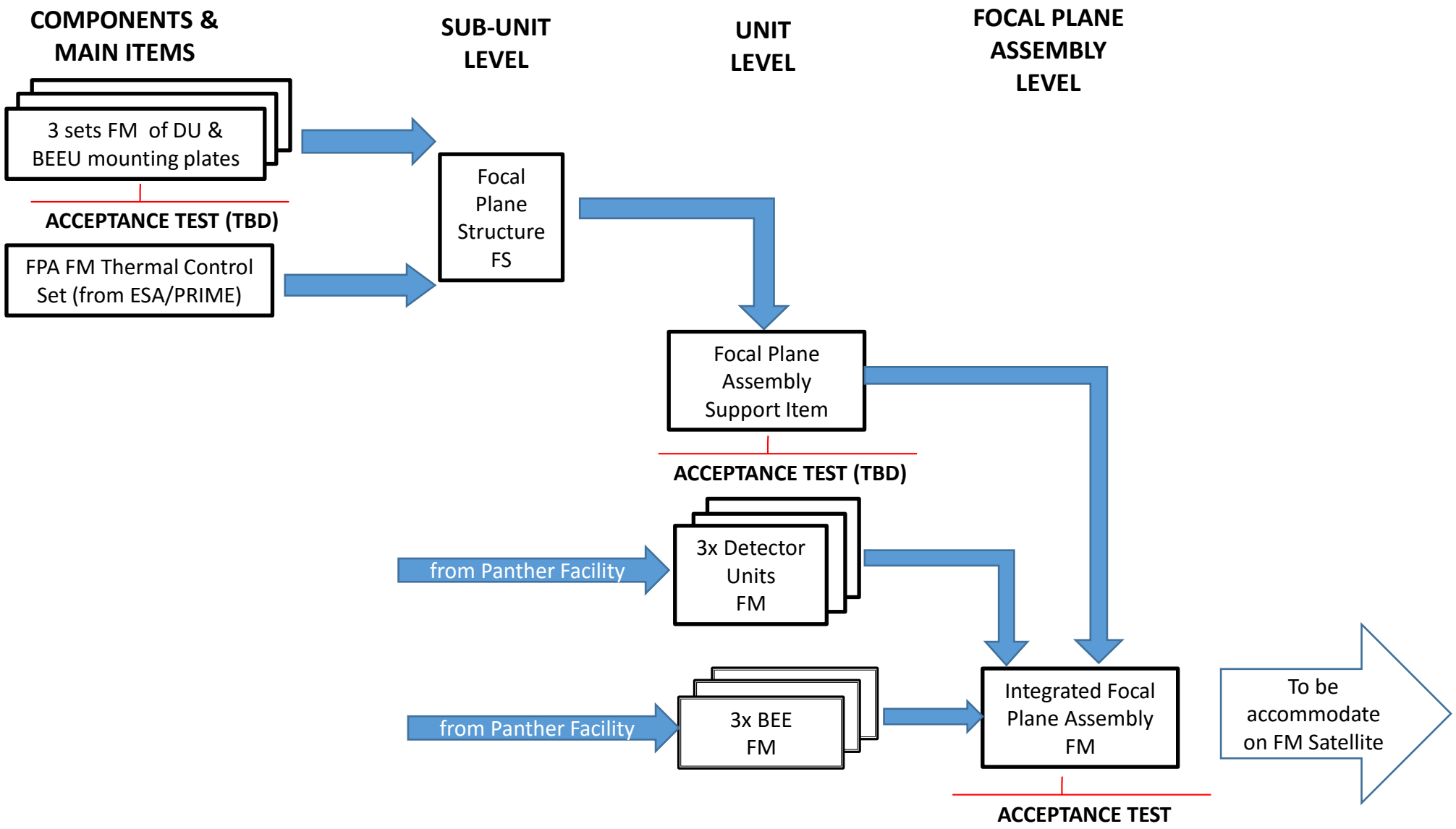
Detector Unit QM



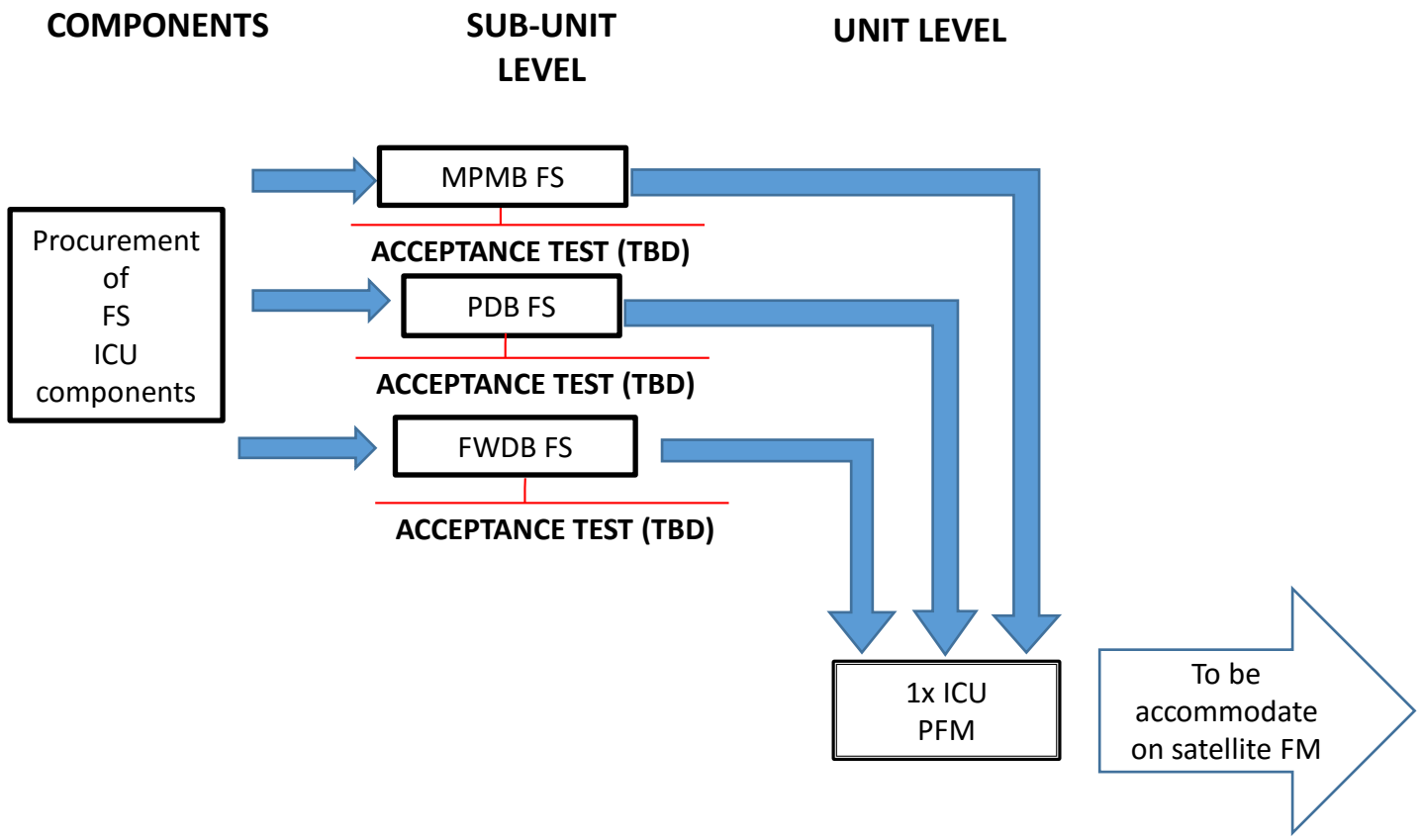
Detector Units FMs



Back-End Electronic Units FMs



Focal Plane Assembly Support Items FM



Instrument Control Unit PFM