

Use-cases versus requirements cross-check matrix

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1. Acronyms

HCSS	Herschel Common Science System
UC	Use-Case
URD	User Requirement Document

2. Applicable documents

The present matrix is based on cross checking two sets of documents: the SPIRE ICC User Requirement Documents, and the SPIRE ICC use-cases.

- SPIRE ICC URD: version 2.0, referred to here as R1.
- SPIRE ICC use-cases: There is not yet a version number for this document as it is still in a draft form. The document used here is the compilation of Use-Cases made on June 1, 2001, referred to here as R2.

3. Principle of this document

Use-Cases and User Requirement Documents are two different approaches of the same task, that of building a complex system. However, the Use-Case approach is object-oriented and is therefore, from the very principles, incompatible with the URD approach.

How can a cross-check between the two be made? The principle that guided this exercise is the following: a Use-Case is, as the name indicates, the description of the path followed when performing a certain action with the system. User Requirements are statements describing what the system shall be able to do or deliver. Thus I have taken every Use-Case one by one and I have scan the requirements to see which requirement had to be fulfilled to allow completion of the action described in the Use-Case.

It is very important to remember that, by construction, Use-Case do not fulfill requirements. They assume the requirements have been fulfilled. It is also important to keep in mind that the Use-Cases we currently have are the summary level ones, i.e. those that describe the classes of action that can be performed with the ICC system. Elementary actions are called the user-level Use-Cases and are not included in this matrix.

4. Missing bits

This document is a work in progress. There are still a number of requirements that are not connected to Use-Cases, which means that we are still missing a number of summary level use-cases. There are also a number of Use-Cases that are pointing to non-existing requirements (although this does not appear in this matrix), either because these requirements belong to the HCSS or because we are still missing an element of our description of the ICC.

5. Miscellaneous notes

For completeness I include in this document the notes I took during the compilation of the matrix.

- The use cases mention an **instrument simulator** which is not described in any URD (e.g. UC-CUS010).

- The **RIO URD** is too vague.
- There is nothing covering such elements of the use cases such as:
 - **run the command sequence** on the instrument (UC-AIV040)
 - **notify the instrument users** that a change in OBS has been made (UC-AIV020)
- **UC-AIV050** is not complete but it is superseded by UC-CUS-10
- The **calibration URD** never mentions the necessity to publish calibration reports (either regularly or topic-oriented).
- The **MOC URD** does not mention the fact that the ICC should in principle inform the MOC of every change in the status of the instrument as found from calibration. In particular, the calibration reports (if regular) should be delivered to MOC. Or a procedure to transfer information from the ICC to the MOC should exist. Currently the URD is silent on the exchange of information between ICC and MOC.
- We need an **information database** (i.e. a place to store reports, short notes, things that are not data). Is it FINDAS? The AIV mentions the capacity to store data and procedures within the ICC but I think there lack (in the ICC URD) explicit requirements regarding a local information database (where do we put the consortium expert knowledge that we capture?). Also touched upon in UC-CON040
- **UC-CON020** is not fully covered by requirements. In particular, the Consortium URD does not mention algorithms as information that can be obtained from the consortium. The photometer and FTS URD are not explicit either on the integration of externally provided algorithms. The UC mentions that the algorithm may not comply with the IA coding standards, but it does not say what we do about it.
- **UC-CUS010 and UC-CUS011** mention our relations with the instrument team. What is this instrument team? Shouldn't a URD covers our relation with such a team? Clearly that is a problem.
- I am not satisfied by the way **UC-CUS010** covers or is covered by the URD. The **Mission Information Database** is not mentioned in the URD (at least in the CUS one).
- I don't understand **UC-CUS011**: the numbering scheme of the MSS is odd, sometimes the comment is a new one, sometimes it is a new one... Needs more work.
- I'm not sure that **UC-CUS030** (View schedules of the CUS, a badly chosen title to my view) fits in the summary level use cases. I am not sure it is worth mentioning. A more general use case would be something like "ICC check on HSC activities"... Furthermore this UC is almost not covered by the requirements.
- The **instrument simulator** that is described in UC-ENG010 is NOT one that could allow to check the safety of a newly designed command sequence. I must say that even though I wrote both the AOP URD and this UC, I don't think they have much in common... This instrument simulator is once again mentioned in UC-OBS020 to check the safety of an OBS update.
- **UC-ENG020** does not really cover any requirements. I think this is because most of them would be in the **Routine Instrument Operations URD**.
- **UC-FSC010 "Training in software tool"** could be made more general. Currently it only describes training of ICC members in tools like Java, but the ICC will also have to train non-ICC people for the software we are developing (it is mentioned in some URDs explicitly). As it is this UC covers only some of the training requirements while both the MOC and the AOP URD refer to training non-ICC members into software use.
- **USC-FSC020** only covers one requirement.
- **UC-ICC060 (Maintain ICC web page)** has no satisfying intersection with the requirements. The only context in which the web is mentioned in the URD is that of public relation. The web is not foreseen as a work tool in the ICC (from the URD point of view).

- In the **HSC URD** the text for requirement UR-HSC-520 “responding to FSC PR request” does not seem correct to me: the text refers to supply of manpower to participate in ground segment integration tests, validation tests and simulations, while to me PR means public relations.
- The list of requirements provided by Seb for the **PHOT and FTS URDs** is not in line with the contents of these URDs...
- **UC-OBS010** identifies an **instrument team and an on-board software maintenance team**. It was not clear from the URDs themselves that these teams exist independently of the ICC.
- **UC-OBS030** is not complete but has been superseded by UC-OBS010.

6. The Matrix

Requirement Number	Requirement Title	Relevant Use-Cases
AIV Requirements (ILT, IST, etc) (Ken King; Bruce Swinyard, RAL)		
SPIRE-ICS-PRJ-000543		
UR-AIV-100	Commanding Capabilities	UC-AIV010, UC-AIV040, UC-CAL010, UC-CUS010, UC-CUS011
UR-AIV-110	Command Sequences	UC-AIV010, UC-AIV040, UC-CAL010
UR-AIV-120	Command Sequence Scripts	UC-AIV010, UC-AIV040, UC-CAL010
UR-AIV-130	Observations	UC-AIV010, UC-AOP010, UC-CAL010
UR-AIV-140	OBS Maintenance	UC-AIV020, UC-CUS010, UC-OBS010, UC-OBS020
UR-AIV-200	Storage Capabilities	UC-AIV030, UC-CAL010, UC-CAL020, UC-ENG030, UC-ICC030
UR-AIV-210	Data storage	UC-AIV030, UC-CAL010, UC-ENG030, UC-ICC030, UC-ICC080
UR-AIV-220	Test Input Data Storage	UC-AIV030, UC-ICC030, UC-ICC080
UR-AIV-230	Telemetry Data Storage	UC-AIV030, UC-AIV040, UC-ICC030, UC-ICC080
UR-AIV-300	Analysis Capabilities	UC-CAL010
UR-AIV-310	Data Analysis	UC-CAL010
UR-AIV-320	Real-time processing	
UR-AIV-330	Real-time Display	
UR-AIV-400	Constraints	
UR-AIV-410	Test Environment	UC-AIV030, UC-AIV040, UC-ICC010, UC-OBS010

UR-AIV-420	Network Isolation	UC-AIV030
UR-AIV-430	Development tools	UC-AIV010
UR-AIV-440	Hardware	
UR-AIV-500	Maintenance	
UR-AIV-510	Test Data and Scripts	UC-AIV010, UC-AIV040, UC-ICC010, UC-ICC050, UC-ICC100
UR-AIV-520	Software	UC-AIV010, UC-AIV020, UC-AIV040, UC-ICC050, UC-ICC100
Calibration Requirements (Seb Oliver, Sussex)		
SPIRE-ICS-PRJ-000544		
UR-CAL-100	Calibration Files	UC-CAL010
UR-CAL-110	Defining Calibration Files	UC-CAL010
UR-CAL-120	Defining Calibration Procedures	UC-AIV040, UC-CAL010, UC-ICC100
UR-CAL-130	Maintaining Calibration files	UC-AIV030, UC-CAL010
UR-CAL-140	Improving calibration files	UC-AIV030, UC-CAL010
UR-CAL-200	Calibration observations & Analysis Pre-Launch	UC-CAL010
UR-CAL-210	Calibration plan	UC-AOP-010, UC-CAL010, UC-CAL020, UC-ICC100
UR-CAL-220	Ground based Laboratory measurements	UC-CAL010, UC-CAL020
UR-CAL-230	Ground based preparatory observations	UC-CAL010, UC-CAL020, UC-CON010
UR-CAL-240	Space based preparatory observations	UC-CAL010, UC-CAL020, UC-CON010
UR-CAL-250	Calibration Analysis	UC-CAL010, UC-CAL020
UR-CAL-300	Calibration observations & Analysis Post-Launch	UC-CAL010
UR-CAL-310	Calibration plan.	UC-AOP-010, UC-CAL010, UC-CAL020, UC-ICC100
UR-CAL-320	SPIRE calibration observations	UC-AOP-010, UC-CAL010, UC-CAL020
UR-CAL-330	Calibration Analysis	UC-CAL010
UR-CAL-340	Scientific Assessment of Calibration	UC-CAL010
UR-CAL-	Repeat Observations (RD-4 2.1.1)	UC-CAL010

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UR-CAL-360	Observation Time-scales (RD-4 2.1.2)	UC-CAL010
UR-CAL-370	Observation Day (RD-4 2.1.3)	UC-CAL010
UR-CAL-380	Failed Observations (RD-4 2.1.4)	UC-CAL010
UR-CAL-390	Rejected Observations (RD-4 2.1.5).	UC-CAL010
UR-CAL-400	Removed Observations (RD-4 2.1.5)	UC-CAL010
Photometer processing (Walter Gear, Cardiff. Seb Oliver, Sussex)		
SPIRE-ICS-PRJ-000545		
UR-PHT-100	Instrument Modes	
UR-PHT-110	Definition of instrument modes	UC-CAL010, UC-CUS011, UC-ENG010
UR-PHT-115	Support specific modes	UC-CAL010, UC-ENG010
UR-PHT-120	Process specific modes	UC-CAL010, UC-ENG010
UR-PHT-130	Define AOTs	UC-CAL010, UC-CUS011, UC-ENG010
UR-PHT-200	Development	UC-CAL010, UC-CON020
UR-PHT-210	Design	UC-CAL010, UC-ICC010
UR-PHT-220	Implementation	UC-CAL010, UC-CON020, UC-ICC010
UR-PHT-230	Test	UC-CON020, UC-ICC010
UR-PHT-240	Validation	UC-CON020, UC-ICC010
UR-PHT-250	Improvement	UC-CAL010, UC-CON020, UC-ICC010
UR-PHT-260	Archive Tools	UC-CAL010
UR-PHT-300	Interactive Analysis: General	UC-CAL010
UR-PHT-310	Platforms	
UR-PHT-320	Modularity	UC-CON020
UR-PHT-330	IA consists of different generic types of modules	

UR-PHT-340	Interfaces	
UR-PHT-350	Data format	
UR-PHT-360	Interfaces to other software	
UR-PHT-370	User Help	
UR-PHT-380	Source code	
UR-PHT-390	History	
UR-PHT-400	Data Products	
UR-PHT-410	POF1: Chop Without Jiggling	
UR-PHT-420	POF2: Seven-Point Jiggle Map	
UR-PHT-430	POF3: N-Point Jiggle Map	
UR-PHT-440	POF4: Raster Map	
UR-PHT-450	POF5: Scan Map Without Chopping	
UR-PHT-460	POF6: Scan Map With Chopping	
UR-PHT-470	POF7: Photometer Peak-Up (TBD)	
UR-PHT-480	POF8: Operate photometer internal calibrator	
UR-PHT-490	POF9: Special engineering modes (TBD)	
UR-PHT-500	Interactive Analysis: Processing of Observing Modes	UC-CAL010
UR-PHT-510	General	UC-CAL010
UR-PHT-520	POF1: Chop Without Jiggling	UC-CAL010
UR-PHT-530	POF2: Seven-Point Jiggle Map	UC-CAL010
UR-PHT-540	POF3: N-Point Jiggle Map	UC-CAL010
UR-PHT-550	POF4: Raster Map	UC-CAL010
UR-PHT-560	POF5: Scan Map Without Chopping	UC-CAL010
UR-PHT-570	POF6: Scan Map With Chopping	UC-CAL010

UR-PHT-580	POF7: Photometer Peak-Up (TBD)	UC-CAL010
UR-PHT-590	POF8: Operate photometer internal calibrator	UC-CAL010
UR-PHT-600	POF9: Special engineering modes (TBD)	UC-CAL010
FTS Processing (Jean-Paul Baluteau, LAM)		
SPIRE-ICS-PRJ-000546		
UR-FTS-100	Instrument Modes	UC-CAL010
UR-FTS-110	Definition of instrument modes	UC-CAL010, UC-CUS011, UC-ENG010
UR-FTS-115	Support specific modes	UC-CAL010, UC-ENG010
UR-FTS-120	Process specific modes	UC-CAL010, UC-ENG010
UR-FTS-130	Define AOTs	UC-CAL010, UC-CUS011, UC-ENG010
UR-FTS-200	Development	UC-CAL010, UC-CON020
UR-FTS-210	Design	UC-CAL010, UC-ICC010
UR-FTS-220	Implementation	UC-CAL010, UC-CON020, UC-ICC010
UR-FTS-230	Test	UC-CON020, UC-ICC010
UR-FTS-240	Validation	UC-CON020, UC-ICC010
UR-FTS-250	Improvement	UC-CAL010, UC-CON020, UC-ICC010
UR-FTS-260	Archive Tools	UC-CAL010
UR-FTS-300	Interactive Analysis: General	UC-CAL010
UR-FTS-310	Platforms	
UR-FTS-320	Modularity	UC-CON020
UR-FTS-330	IA consists of different generic types of modules	
UR-FTS-340	Interfaces	
UR-FTS-350	Data formats	
UR-FTS-360	Interfaces to other software	
UR-FTS-370	User Help	
UR-FTS-380	Source code	
UR-FTS-390	History	
UR-FTS-400	Data Products	
UR-FTS-500	Interactive Analysis: Processing of Observing Modes	UC-CAL010
UR-FTS-510	General	UC-CAL010
UR-FTS-560	Engineering Modes	UC-CAL010
Routine Instrument Operation (Gillian Wright, ATC)		

SPIRE-ICS-PRJ-000547		
No numbers		
UR-RIO-100		UC-AIV020, UC-AOP-010, UC-CAL010, UC-CAL020, UC-CUS030(?), UC-ENG010, UC-ENG020, UC-ICC070, UC-ICC090, UC-OBS010
Instrument Engineering (Gillian Wright, ATC)		
SPIRE-ICS-PRJ-000548		
UR-IE-100	Modeling	UC-AOP-010, UC-ENG010
UR-IE-200	Data Acquisition	
UR-IE-210	Command Sequences	UC-AIV010, UC-AIV040, UC-CUS011
UR-IE-220	Preparation tool	UC-AOP010
UR-IE-230	Scheduling	
UR-IE-240	Status Information	UC-CAL020, UC-ENG020, UC-OBS010
UR-IE-300	Data Reduction	
UR-IE-310	Analysis	
UR-IE-320	Data storage	UC-AIV030, UC-ICC030, UC-ICC080
ICC as a whole system (Neal Todd, ICSTM)		
SPIRE-ICS-PRJ-000549		
UR-ICC-100	SPIRE Software	
UR-ICC-110	Common environment	UC-AOP-010, UC-ICC010, UC-ICC040, UC-ICC050, UC-OBS020
UR-ICC-120	CVS	UC-ICC010, UC-ICC020
UR-ICC-130	Sandbox environment	UC-AIV040, UC-CON020, UC-ICC010, UC-ICC040
UR-ICC-140	Information local to ICC	UC-CON010(?), UC-CON040, UC-ICC080
UR-ICC-150	Common system environment	UC-ICC040
UR-ICC-200	Documentation	
UR-ICC-210	Document format	UC-AIV020, UC-AIV040, UC-CAL020, UC-CON030, UC-ICC020, UC-ICC100
UR-ICC-220	Document templates	UC-AIV020, UC-AIV040, UC-CAL020, UC-CON030, UC-ICC020, UC-ICC100
UR-ICC-230	Document formats	UC-CAL020, UC-CON030,

		UC-ICC020, UC-ICC100
UR-ICC-300	FINDAS and local computing system	
UR-ICC-310	Local FINDAS nodes	UC-AIV030, UC-CON010, UC-CON030, UC-CON040, UC-ENG030, UC-ICC020, UC-ICC030
UR-ICC-320	Local FINDAS support	UC-AIV030, UC-CON010, UC-ICC030, UC-ICC050
UR-ICC-330	Local accounts	UC-ICC030, UC-ICC040
UR-ICC-340	Remote connection for ICC actors	UC-ICC030, UC-ICC040
UR-ICC-350	Security	UC-ICC030, UC-ICC040, UC-ICC060
UR-ICC-400	Communication	
UR-ICC-410	Contact info for SPIRE members	UC-ICC070, UC-ICC090
UR-ICC-420	Staff on call	UC-ICC070, UC-ICC090
UR-ICC-430	Video link and common desktop	UC-ICC090
UR-ICC-440	Staff availability schedule	UC-ICC070, UC-ICC090
UR-ICC-500	Management	
UR-ICC-510	Managing the ICC	UC-ICC090, UC-OBS010, UC-OTH010
FSC (Neal Todd, ICSTM)		
SPIRE-ICS-PRJ-000550		
UR-HSC-100	Common Uplink System/ Mission Planning.	
UR-HSC-110	Repetitive observations	
UR-HSC-120	Time-scale for observation planning	
UR-HSC-130	Mixing calibration and science on OD	UC-CAL010
UR-HSC-140	Re-requesting failed observations	UC-CUS030(?)
UR-HSC-150	Modifying observations	UC-CUS030(?)
UR-HSC-160	Observation rejection by MP	
UR-HSC-170	Replacement of schedule by PS	UC-CUS030(?)
UR-HSC-200	IA/QCP	UC-CAL010
UR-HSC-210	Java	UC-CAL010, UC-FSC010
UR-HSC-220	Coding standards	UC-CAL010, UC-FSC010

UR-HSC-230	Provide quality check tools	UC-CAL010
UR-HSC-240	Provide interactive analysis	UC-CAL010
UR-HSC-250	Scope of quality check tools	UC-CAL010
UR-HSC-260	Review Instrument parameters after QCP	UC-CAL010
UR-HSC-270	Calibration reports	UC-CAL010, UC-CAL020, UC-CON030, UC-ICC100
UR-HSC-280	Provide/Update calibration plan	UC-CAL010, UC-CAL020
UR-HSC-300	FINDAS	
UR-HSC-310	Support FINDAS at ICC	UC-FSC010, UC-ICC030, UC-ICC050
UR-HSC-400	FCSS Maintenance/ Configuration Control System	
UR-HSC-410	Updating the OBS	UC-AIV020, UC-OBS010, UC-OBS020
UR-HSC-420	Using a common CC system	UC-AIV020, UC-CON030, UC-ICC010, UC-ICC020, UC-OBS010, UC-OBS020
UR-HSC-430	Update of calibration/engineering files	UC-AIV040, UC-ICC030
UR-HSC-440	Changing a system artifact	UC-AIV010, UC-AIV020, UC-ICC010, UC-ICC020, UC-ICC030, UC-OBS010, UC-OBS020
UR-HSC-450	Responding to an SCR	UC-AIV010, UC-AIV020, UC-ICC030, UC-ICC070, UC-OBS010, UC-OBS020
UR-HSC-460	Traceability of configuration and inputs	UC-AIV020, UC-AIV030, UC-AIV040
UR-HSC-470	Updating software delivered to HSC	UC-AIV020, UC-CON020, UC-CUS010, UC-CUS011, UC-ICC030, UC-OBS010, UC-OBS020
UR-HSC-500	Community Support	UC-CON030, UC-FSC020
UR-HSC-510	Interface with HSC	UC-CON030, UC-FSC020, UC-ICC090
UR-HSC-520	Responding to HSC PR requests	UC-CON030, UC-FSC020, UC-ICC090
UR-HSC-530	Information for PR	UC-FSC020, UC-ICC090
UR-HSC-540	Joint Information Provision	UC-ICC090, UC-ICC100

UR-HSC-550	Instrument Information Provision	UC-ICC090, UC-ICC100
UR-HSC-600	Training	
UR-HSC-610	Development Staff Training	ICC-FSC010, UC-ICC090
UR-HSC-620	Operations Staff Training	ICC-FSC010, UC-ICC090
UR-HSC-630	HSC/MOC Staff Training	UC-ICC090
UR-HSC-700	Archive	
UR-HSC-710	Archive Support	UC-OTH010
Common Uplink System (Sunil Sidher, RAL)		
SPIRE-ICS-PRJ-000551		
UR-CUS-100	Instrument Information	
UR-CUS-110	Provision Of CUS DB Information	UC-AIV010, UC-CUS010, UC-ICC100
UR-CUS-120	CUS & Instrument Command Database	UC-AIV010, UC-AIV040, UC-CUS010
UR-CUS-130	Telemetry Contents	
UR-CUS-140	Configuration Control	UC-AIV010, UC-CUS010
UR-CUS-200	Installation & Testing	
UR-CUS-210	Installation	UC-AIV010, UC-CUS010, UC-CUS011
UR-CUS-220	Test facility	UC-AIV010, UC-AIV040, UC-CUS010, UC-CUS011, UC-OBS010
UR-CUS-230	Testing of observation modes	UC-AIV010, UC-AIV040, UC-CUS010, UC-CUS011
UR-CUS-300	Problem reporting	
UR-CUS-310	Problem reporting	UC-AIV010, UC-ICC070, UC-OBS010
UR-CUS-400	Access to the HSC system	
UR-CUS-410	Access to the HSC system	UC-AIV010, UC-CUS010, UC-ICC030

Astronomical Observation Preparation (Marc Sauvage, CEA)		
SPIRE-ICS-PRJ-000552		
	SYSTEM REQUIREMENTS	
UR-AOP-100	development	UC-AOP010
UR-AOP-110	Readiness	UC-AOP010
UR-AOP-120	Flexibility	UC-AOP010
UR-AOP-130	Supported AOTs	UC-AOP010
UR-AOP-140	Files for instrument parameters	UC-AIV030, UC-AOP010
UR-AOP-150	Values of instrument parameters	UC-AIV030, UC-AOP010
UR-AOP-160	Instrument's logic	UC-AOP010, UC-OBS020
UR-AOP-170	Outputs	UC-AOP010
UR-AOP-200	Maintenance	UC-AOP010, UC-ICC050
UR-AOP-210	Documentation	UC-AOP010, UC-ICC020, UC-ICC050, UC-ICC100
UR-AOP-220	Versions	UC-AOP010, UC-ICC050
UR-AOP-230	Evolving calibration	UC-AIV030, UC-AOP010
UR-AOP-300	OBSERVER REQUIREMENTS.	
UR-AOP-300	Inputs	UC-AOP010
UR-AOP-310	Minimal input	UC-AOP010
UR-AOP-320	Sources	UC-AOP010
UR-AOP-330	Backgrounds	UC-AOP010
UR-AOP-340	Spectral energy distribution	UC-AOP010
UR-AOP-350	Noises	UC-AOP010
UR-AOP-400	Outputs	UC-AOP010
UR-AOP-410	Synthetic output formats	UC-AOP010
UR-AOP-	Easy replay	UC-AOP010

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UR-AOP-500	Interaction with the tool	UC-AOP010
UR-AOP-510	Main command mode	UC-AOP010
UR-AOP-520	Replay mode	UC-AOP010
UR-AOP-600	HOST REQUIREMENTS	
UR-AOP-610	Common elements	UC-AOP010
UR-AOP-620	Overview	UC-AOP010
UR-AOP-630	User's training	UC-AOP010, UC-ICC090
UR-AOP-640	Interface with the FIRST Science Center - Development.	UC-AOP010, UC-ICC090
UR-AOP-650	Interface with the FIRST Science Center _ Delivery	UC-AOP010, UC-ICC090
UR-AOP-660	Interface with the FIRST Science Center _ Person	UC-AOP010, UC-ICC090
Digital Processing Unit On-board Software (Sunil Sidher, RAL)		
SPIRE-ICS-PRJ-000553		
UR-OBS-100	Provision of OBS information	UC-ICC100, UC-OBS020
UR-OBS-110	Provision of OBS maintenance facility	UC-AIV020, UC-OBS010, UC-OBS020
UR-OBS-120	Testing of OBS	UC-AIV020, UC-OBS010, UC-OBS020
UR-OBS-130	Configuration control	UC-AIV020, UC-OBS010, UC-OBS020
UR-OBS-140	Installation	UC-AIV020
UR-OBS-150	Problem reporting and resolving	UC-AIV020, UC-ICC070, UC-OBS010, UC-OBS020
SPIRE Consortium (Seb Oliver, Sussex)		
SPIRE-ICS-PRJ-000554		
UR-CONS-100	Information Input	
UR-CONS-110	Solicited Information Retrieval	UC-CON010
UR-CONS-	Unsolicited Information Collection	UC-CON010

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UR-CONS-130	Information Storage and Retrieval	UC-AIV030, UC-CON010, UC-CON040
UR-CONS-200	Information Output & Feedback	UC-CAL010, UC-CAL020, UC-CON030, UC-CON040, UC-ICC100
UR-CONS-210	Beta Testing	UC-CON020
MOC (Seb Oliver, Sussex)		
SPIRE-ICS-PRJ-000555		
UR-MOC-100	Functional Requirements	
UR-MOC-110	Definition of Interfaces	UC-ICC090, UC-OBS010
UR-MOC-120	Delivery of Hardware	UC-ICC090
UR-MOC-200	Operational Requirements	
UR-MOC-210	Provision of Staff	UC-ICC090
UR-MOC-220	Provision of Training	UC-ICC090
UR-MOC-230	Update of Instrument Databases	UC-AIV010, UC-CAL010, UC-CAL020, UC-CUS010, UC-CUS011
Other ICCs (PACs and HIFI) (Marc Sauvage, CEA)		
SPIRE-ICS-PRJ-000556		
UR-OTHER-100	DEVELOPMENT OF ICC SYSTEMS.	
UR-OTHER-110	Commonality	UC-OTH010
UR-OTHER-120	Visibility	UC-ICC090, UC-OTH010
UR-OTHER-130	Notification	UC-ICC090, UC-OTH010
UR-OTHER-200	INSTRUMENT CONTROL AND MONITORING	
UR-OTHER-210	Preparatory program	UC-CAL010, UC-CAL020, UC-OTH010
UR-OTHER-220	Calibration sources	UC-CAL010, UC-OTH010
UR-OTHER-	Calibration models	UC-CAL010, UC-OTH010

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UR-OTHER-240	Publication of calibration sources and models	UC-CAL010, UC-CON030, UC-ICC020, UC-ICC100, UC-OTH010
UR-OTHER-250	Instrument status	UC-CAL010, UC-CAL020, UC-CON030, UC-CON040, UC-ENG020, UC-OTH010
UR-OTHER-260	Satellite status	UC-CAL010, UC-CAL020, UC-CON030, UC-CON040, UC-ENG020, UC-OTH010
UR-OTHER-270	Observing expertise	UC-CON030, UC-CON040, UC-OTH010
UR-OTHER-280	Instrumental effects	UC-CAL010, UC-CAL020, UC-OTH010
UR-OTHER-290	PACS and HIFI expertise	UC-OTH010
UR-OTHER-300	External SPIRE expertise - resources	UC-OTH010
UR-OTHER-310	External SPIRE expertise - persons	UC-OTH010
Public (Seb Oliver, Sussex)		
SPIRE-ICS-PRJ-000557		
UR-PUS-100	Reactive Requirements	
UR-PUS-110	Press Releases	UC-CON030, UC-ICC090, UC-OTH010
UR-PUS-120	Public WWW pages	UC-CON030, UC-ICC060, UC-ICC090
UR-PUS-130	Other Public Relations	UC-CON030, UC-ICC090
UR-PUS-140	Visits	UC-ICC090
UR-PUS-200	Proactive Requirements	
UR-PUS-210	Press Releases	UC-CON030, UC-ICC090, UC-OTH010
UR-PUS-220	Public WWW pages	UC-CON030, UC-ICC060, UC-ICC090
UR-PUS-230	Other Public Relations	UC-CON030, UC-ICC090
UR-PUS-240	Access to Herschel PR	UC-CON030, UC-ICC090, UC-OTH010