

Sparked Clinical Design Group

23 April Workshop

Online



Acknowledgement of Country

We acknowledge the Traditional Custodians of the land on which we all gather today.

We pay our respect to elders past, present, and emerging and extend our respect to all Aboriginal and/or Torres Strait Islander people, acknowledging the First Peoples as the first scientists, educators and healers.





Agenda

Item	Item	Time	Lead/facilitator
1	Welcome	5 mins	Kate Ebrill
2	Recap of last meetings - AUeReqDI - Sex and Gender	20 mins	Kylynn Loi
3	Dive into the clinical model - Service request - Laboratory request - Imaging request - Implanted device summary	60 mins	Heather Leslie
5	Wrap up and close	3 mins	Kate Ebrill



Sparked Team

FHIR@csiro.au





Kate Ebrill – Sparked Lead



Michael Hosking – Sparked Deputy Lead



Kylynn Loi – Clinical Design Lead



Dr Heather Leslie

– Lead Clinical

Data Modeller



Danielle Tavares-Rixon – FHIR Technical Lead



Steph Ong – Infrastructure Lead



Dusica Bojicic - FHIR IG Author



Brett Esler – FHIR Expert



Olivia Carter– Engagement Analyst



Matt Cordell – Clinical Terminology Specialist



Michael Osborne
- FHIR
Terminologist



Heath Frankel – FHIR Expert



Nisha Subramanian – Business Analyst



Chris Kellalea-Maynard -Snr Business Analyst



Michael Wilson – FHIR Solution Architect



Ilya Beda – FHIR Expert



Madison Black

– Engagement



Bernadette Cranston – Program Director





Sparked CDG team



Kate Ebrill – Sparked Lead



Michael Hosking – Sparked Deputy Lead



Kylynn Loi – Clinical Design Lead



Dr Heather Leslie

– Lead Clinical

Data Modeller



Matt Cordell – Clinical Terminology Specialist



Michael Osborne

– FHIR

Terminologist





Sparked CDG Clinical Co-Leads

To remind us and keep us focused & on track based on scope



Chris Moy



Harry Iles-Mann



Charlotte Hespe



Andrew Hugman



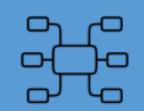
Chaturica Athukorala



What is AU eReq IG and Australian eRequesting Data for Interoperability (AUeReqDI)?

CDG is here

AU `eReq



Specifies "WHAT" clinical information

(and corresponding data elements and terms) should be included for data entry, data use and sharing information supporting eRequesting





Specifies "HOW" the core set of data (above) and information should be <u>structured</u>, <u>accessed</u> and <u>shared</u> between systems for the eRequesting use case

TDG is here



Sparked: Australian eRequesting Data for Interoperability (AUeReqDI)

Support current workflows

Start small and grow iteratively

- First priorities are imaging examinations and laboratory/pathology tests
- No simple "undo" impact of change can be high
- Data elements can be added to over time
 - Work through backlog
 - Add more use cases
 - More functionality available

Stick with our design principles

Leverage and align with AUCDI

• Identify core data elements that should go into future releases of AUCDI

Leverage and align with work locally and internationally were possible

• Where we differ, need to understand the impact







Core Draft Principles of Data Set Design

- 1 Reduce duplication Single entry, single development (multiple use and reuse)
- Supports person-centred care driven by a clinical quality and safety use case
- No data for data's sake
- Driven by primary clinical data use not secondary data use needs
- Supports best practice care, clinical guidelines and clinician workflow
- Systems can support now or with minimal effort, supporting a strategic roadmap with an agile iterative process
- Alignment with national health data standards and initiatives
- 8 Alignment with international standards and initiatives
- 9 Involve and consider all healthcare domains and care modalities

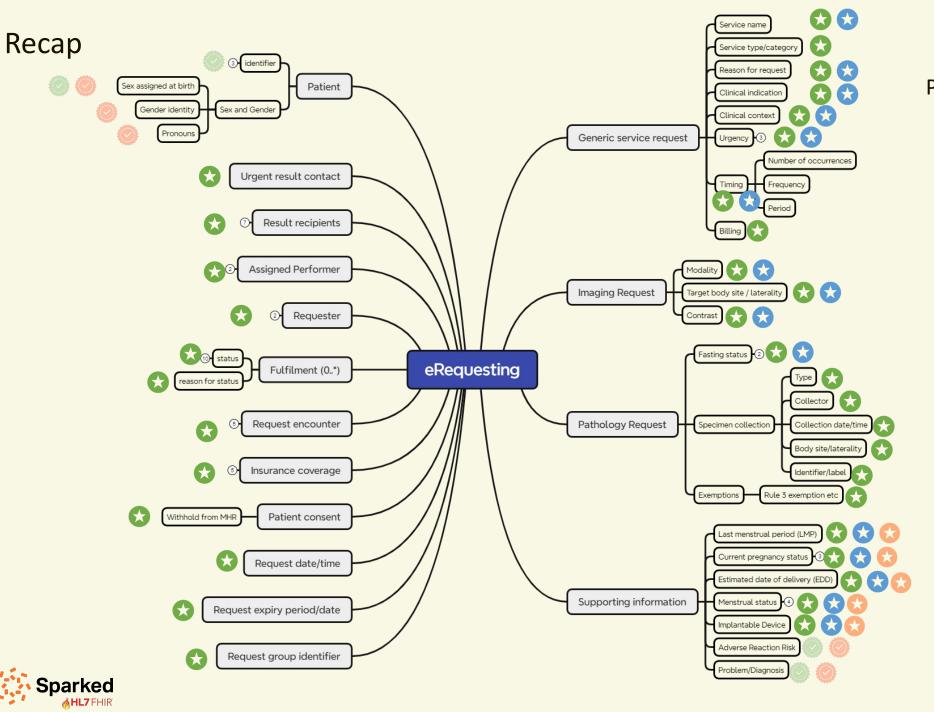




Additional Principles of AU eReqDI design

- Supports current workflows for laboratory/pathology test and imaging examination requests
- eRequesting DI will focus on the clinical aspects
 - Responsibility of the technical items will fall to the TDG/AU eRequesting FHIR IG with CDG support. This includes
 - Administrative
 - Billing
 - Technical data items
 - Security
 - Privacy/Consent
 - Non-clinical context e.g. provenance information
 - MBS workflow items Self determined (SD), Rule 3 exemptions
 - Other out of scope areas include
 - User interface/form implementation requirements eg. MBS mandated requirements, such as patient advisory statements, privacy notes, etc.

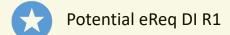


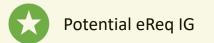


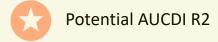












Recap

Proposed AUeReqDI

scope

scope U Proposed

AUeReqDI R1 proposed scope (March 2024)

Service request (generic)

- Service name
- Clinical indication/Reason for Request
- Clinical context
- Urgency
- Timing

Service request (Laboratory/ Pathology)

- Test name ("Service name")
- Clinical indication/Reason for Request
- Clinical context
- Urgency
- Timing
- Fasting status

Service request (Imaging examination)

- Examination name ("Service
- Clinical indication/Reason for Request
- Clinical context
- Urgency
- Timing
- Target body site/laterality
- Modality

Current pregnancy status

Estimated Date of Delivery

Last menstrual period

Menstruation summary

Medical device summary*

Service request (generic)

- Requester order identifier
- Billing
- Requester
- Receiver order identifier
- Receiver
- Distribution list

Service request (Laboratory/ Pathology)

- Specimen collection
 - Collector
 - Collection date/time
 - Identifier/label
 - Body site/laterality
- Self determination
- Rule 3 exemption
- S4B(3) exemption
- Result recipient
- Urgent result contact

Service request (Imaging examination)

- Result recipient
- Urgent result contact

TDG is

You are

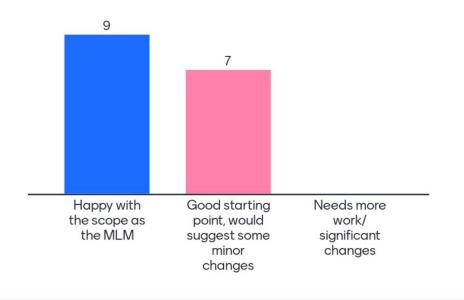
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Recap

Will this scope support a minimum lovable model (MLM)?







Last meeting we asked - Concept names

• Labs/Path

- "Laboratory test request"OR
- "Pathology test request" may be confused with 'anatomical pathology'

Imaging

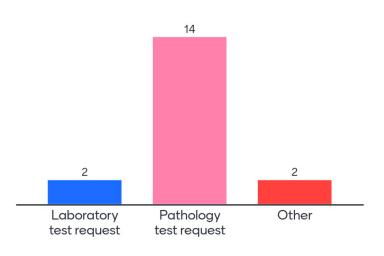
- "Imaging examination request" OR
- "Imaging request" may be confused with medical photography
 OR
- "Radiology request" may confuse by limiting to the requesting of only radiation-based imaging



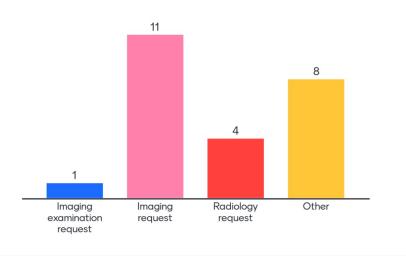
Naming

- Pathology test request
- Imaging/radiology naming still unclear
 - Avoid medical photography
 - MBS uses Diagnostic imaging
 - But acknowledge not always 'diagnostic'
 - Let's try again
 - Imaging request
 - Diagnostic imaging request
 - Medical imaging request
 - Radiology request





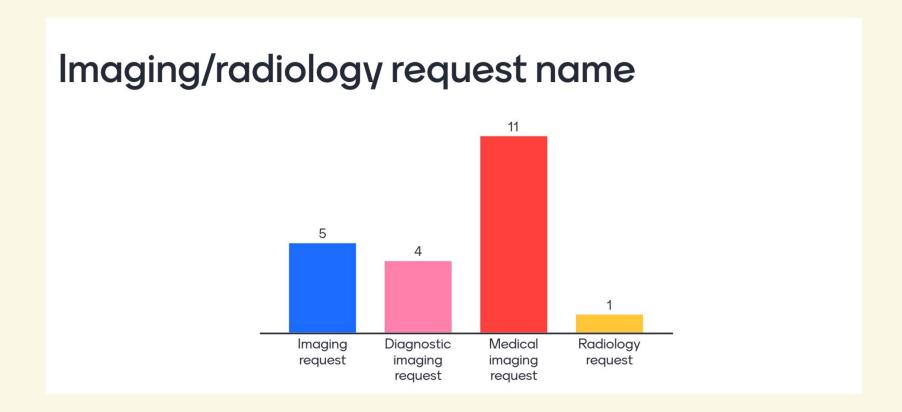
Naming-radiology





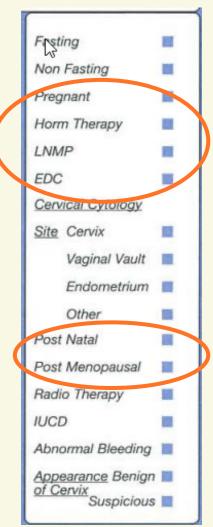
In meeting results







eRequesting: clinical screening



	Lab1	Lab2	Lab3	Lab4	Lab5	Lab6	Imaging1	Imaging 2
Pregnant	[X]			[X]	[X]	[X]	[Yes/No]	
LMP/LNMP	LMP			LNMP	LNMP	LMP		LMP
EDC	EDC			EDC		EDC		
Gestational age		Pregnant weeks	Gestational Age		Gestational age (weeks)			
Hormone therapy	[X]			[X]	[X]	[X]		
Postnatal/ postpartum	[X]			[X]		[X]		
Post menopause				[X]				

Identify/communicate risk/issues/clinically important information

Considerations:

- Source forms often historical; original reasoning lost; worth replicating?
 Questionnaires messy, inconsistent, poorly defined, reactive; no coordination
- Opportunity to reimagine:

 What should be in scope? "NOT go backwards"
 How should it be represented?

 - O Does standardising this information matter?





Last meeting we asked

Should this data be in scope for eReqDI R1?

	VOTING R	ACTION	
	Pathology	Radiology	
Pregnancy information - Pregnancy Y/N - Pregnancy status	NOT for inclusion in eReqDI R1	NOT for inclusion in eReqDI R1	Propose 'Pregnancy status' for AUCDI R2
Pregnancy duration - Gestation - Gestational age - EDC - EDD	NOT for inclusion in eReqDI R1	NOT for inclusion in eReqDI R1	Propose 'Estimated date of delivery EDD) for AUCDI R2
LMP/LNMP	NOT for inclusion in eReqDI R1	Not for inclusion in eReqDI R1	Propose 'Last Menstrual Period (LMP)' for AUCDI R2





Last meeting we asked

Should this data be in scope for eReqDI R1?

	VOTING	ACTION	
	Pathology	Radiology	
Perimenopausal information	NOT for inclusion in eReqDI R1	Out and to be modelled in AUCDI R2	Propose 'Menstrual summary data group' > 'Menstrual status' for AUCDI R2
Medical device information	NOT for inclusion in eReqDI R1	INCLUDED in eReqDI R1, to be modelled as proposed for AUCDI	Propose 'Medical device summary' for eReqDI R1



Sex and Gender – out of session meeting

- Last week had CDG and eReq TDG meeting
- Quick recap of AUCDI
 - Sex assigned at birth
 - Gender identity
 - Pronouns
- Introduced Gender
 Harmony project with a focus of 'Sex Parameter for Clinical Use' (SPCU)

- Open discussion considering
- Are there any current implementations of Sex Assigned at Birth?
- Are there any current implementations of SPCU?
- How should <u>eRequests</u> capture the relevant sex information for a request (e.g. to inform pathology reference ranges)?

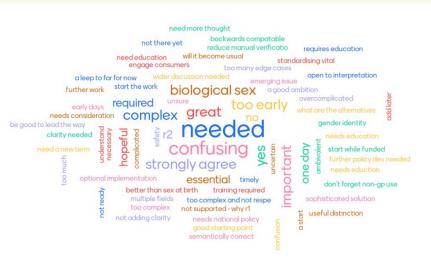
- Sex Parameter for Clinical Use
 - What are the benefits?
 - What are the problems?
 - Are there medicolegal implications?
 - Is it clinically safe and reliable?
 - Is introducing this new data element feasible?
 - At scale?
 - Onus on "sending" clinician to categorise correctly/appropriately
 - Will it be enough for the "receiving" clinician





Menti results

- Post discussion
 - Thoughts on SPCU



Vo:	Thoughts about Sex Parameter for Clinical Use (SPCU): 1	Thoughts about Sex Parameter for Clinical Use (SPCU): 2	Thoughts about Sex Parameter for Clinical Use (SPCU): 3		Thoughts about Sex Parameter for Clinical Use (SPCU): 5
1	Hopeful Better than Sex at Birth Needed	Strongly_Agree Strongly_Agree Strongly_Agree		· · · · · · · · · · · · · · · · · · ·	
2	needed	backwards compatable			
3	Not adding clarity	No	Confusing	Too early	
4	Confusing Emerging issue Complex		<u> </u>		
5	Not ready Too complex Need education	Add later Confusion One day	Will it become usual	One day	
6	Too early				
7	A leep to far for now	confusing			
8	hopeful needed great	-			
9	too complex and not respe	understand	yes No	Yes yes	
10	important			·	
11	sophisticated_solution necessary good_starting_point				
12	Needed A_start				
13	A_good_ambition Wider_discussion_needed	Biological_sex			
14	What are the alternatives				
15	great	important	needed		
16	Start_the_work Optional_implementation R2	start_while_funded	Complex Engage_consumers Needs	s_education	
17	Too_much				
18	Too_early	Not_supportedwhy_R1	R2		
19	Essential Further_policy_dev_needed				
20	required				
21	Clarity needed				
22					
23	complex	needed	be good to lead the way	needs national policy	
24	Uncertain Open_to_interpretation	further_work	confusing	overcomplicated	biological_sex
25	essential	reduce_manual_verificatio	don't_forget_non-GP_use		
26	complicated	multiple_fields			
27	Useful_distinction	Needed	Requires_education		
28					
29	needed confusing				
30	needed				
31	needed				
32	unsure				
33	Early_days Standardising_vital Needs_eduction	Need_a_new_term			
34	Required Needs_consideration				
35	training_required	timely			
36	Important	Need_more_thought			
37					
38	ambivalent too_many_edge_cases				
39	Safety				
40	Great	semantically_correct			
41	gender_identity	Biological_sex	not_there_yet		



Menti results – first look

- For each participant, scored answers against
 - Positive
 - 'needed', 'important', 'required', 'strongly agree', 'great'
 - Negative/against
 - 'not adding clarity', 'too complex', 'confusing',
 - 'need more thought'
 - Now
 - 'timely'
 - 'be good to lead the way'
 - Later
 - 'Too early', 'R2', 'not there yet'

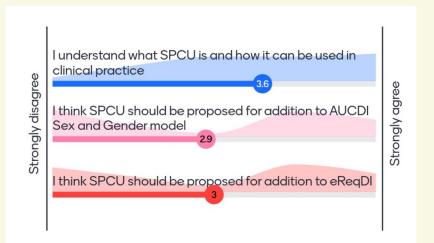
- A participant could have answers against more than one category
 - 'needed' and 'confusing'
 - 'confusing' and 'too early'
 - 'important' and 'need more thought'

	Count
Positive	21
Now	2
Later	13
Negative	11

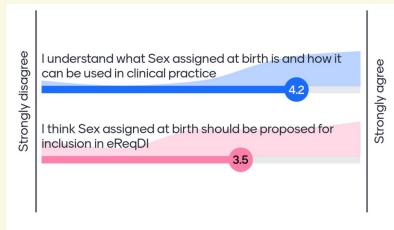
Number of participants = 38



Sex Parameter Clinical Use



Sex assigned at birth



Gender identity







Takeaways

- There is no clear way forward for SPCU in AUCDI R1 and AUEReqDI R1
- Call for national policy and education
- Clarity on Sex and Gender data are important and necessary
- SPCU may be a good starting point, but more work is needed to understand its clinical implications and to clear confusion

- It is too early for Sparked to adopt SPCU and has been placed in the backlog for further discussion
 - Recommend this is taken up by all jurisdictions to agree national policy



AUeReqDI R1 updated scope (April 2024)

scope **AUeReqDI** Proposed

scope

U

Proposed

Service request (generic)

- Service name
- Clinical indication/Reason for Request
- Clinical context
- Urgency
- Timing
- Comment

Implanted device summary* (for radiology)

Service request (Pathology test request)

- Test name ("Service name")
- Clinical indication/Reason for Request
- Clinical context
- Urgency
- Timing
- Comment
- **Fasting status**

Service request (Imaging request)

- Test name ("Service name")
- Clinical indication/Reason for Request
- Clinical context
- Urgency
- Timing
- Comment
- Target body site/laterality
- Modality
- Contrast use

CDG is here

Incorporated from AUCDI

Problem/ Diagnosis

Adverse reaction risk

Sex and gender

Service request (generic)

- Requester order identifier
- Billing
- Requester
- Receiver order identifier
- Receiver
- Distribution list

Service request (Pathology test request)

- Specimen collection
 - Collector
 - Collection date/time
 - Identifier/label
 - Body site/laterality
 - Self determination
- Rule 3 exemption
- S4B(3) exemption
- Result recipient
- Urgent result contact

Service request (Medical imaging request)

- Result recipient
- Urgent result contact

TDG is

Identified for AUCDI Backlog

Current pregnancy status

Estimated Date of Delivery

Last menstrual period

Menstruation summary

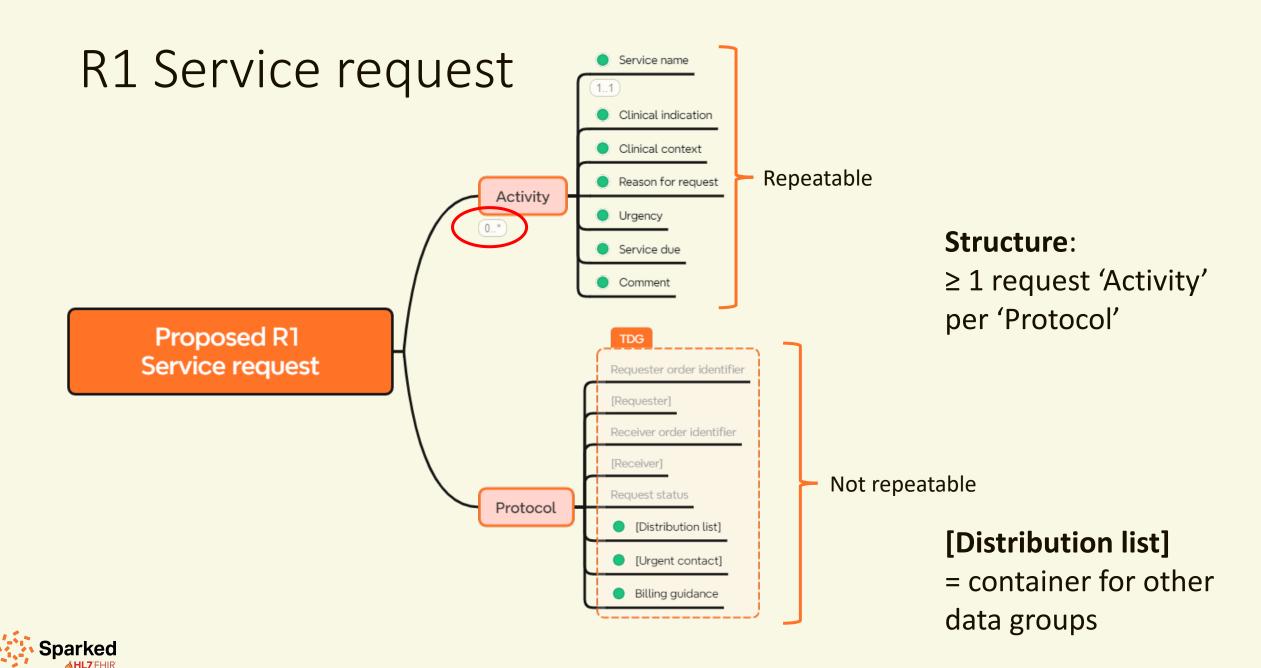


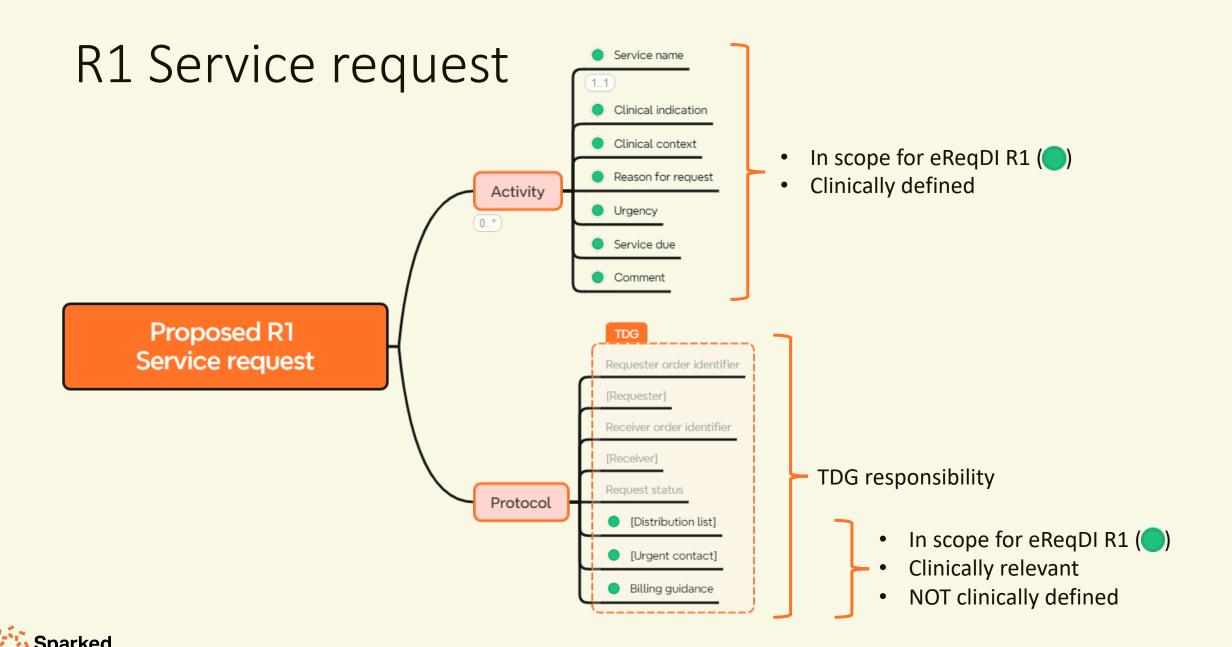


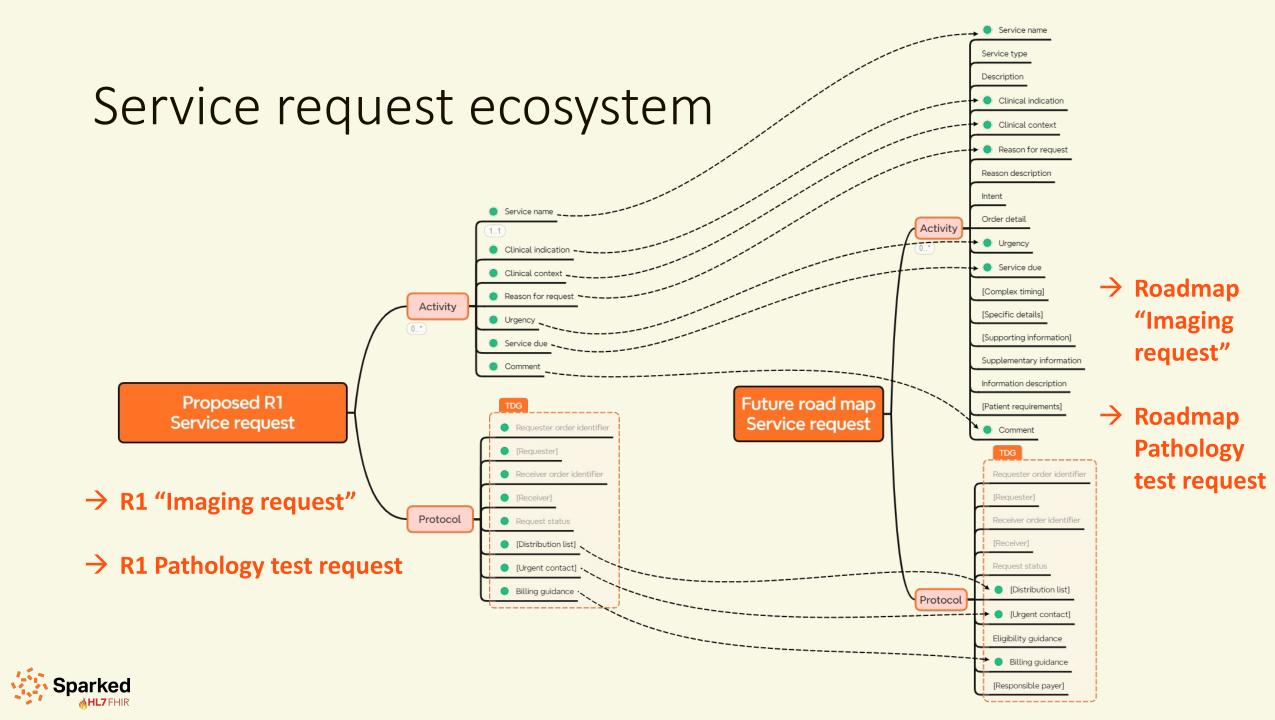
Service request

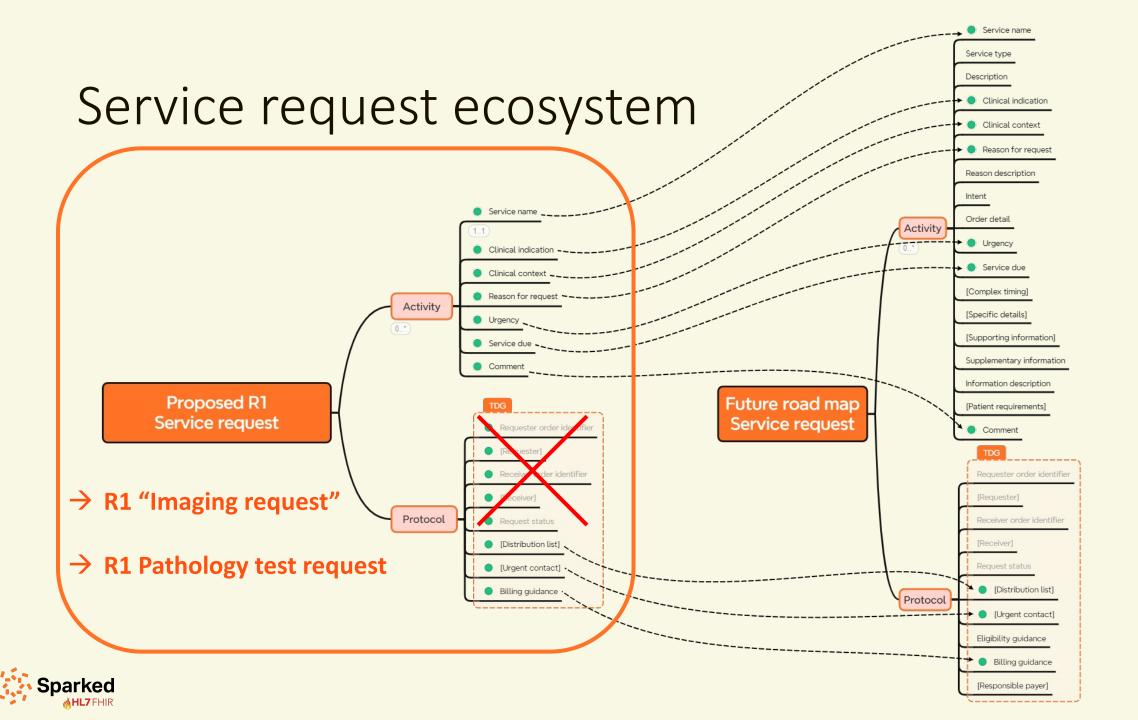
Concept description	Request for a health-related service or activity to be delivered by a clinician, organisation or agency.
Considerations for use	 Generic framework for a wide range of requests: Referral – specialist, emergency department 'Meals on wheels' from local council 4-hourly vital signs monitoring post-op Multiple services/tests from a single service provider 'Specialised'/extended for specific use cases "Pathology test request" "Medical imaging request"
Design components	 Clinical: Request details and clinical context Admin/logistics eg Urgent contact, Billing guidance Technical – exchange-related

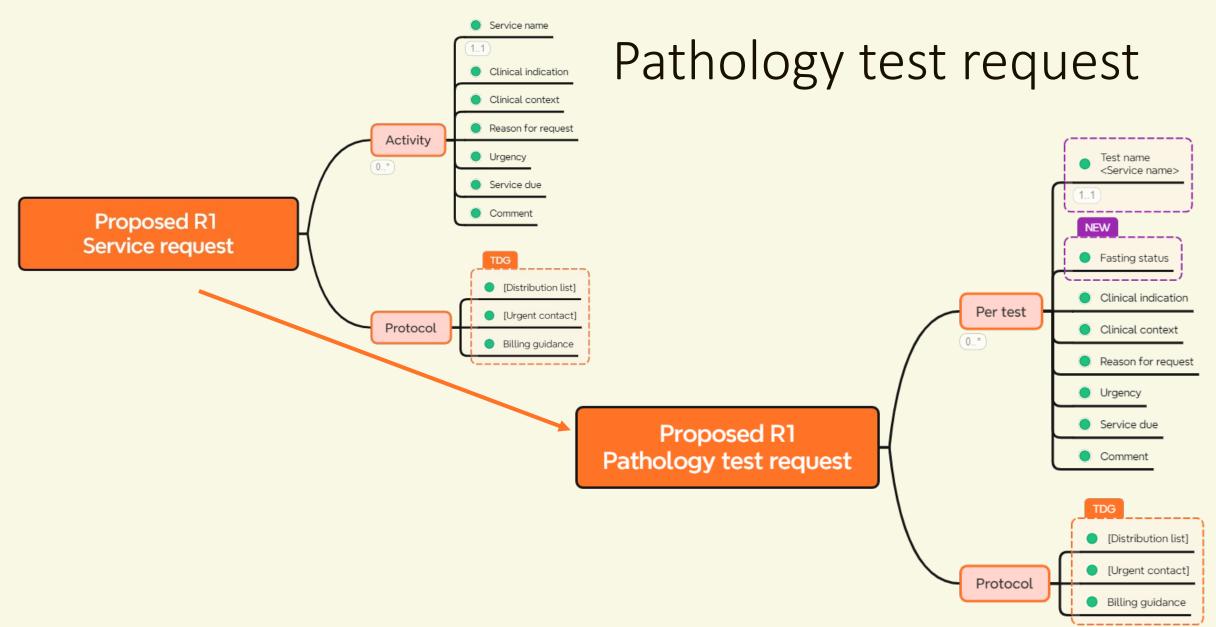














Pathology test request

An order or instruction for laboratory test service.

Record one instance per request

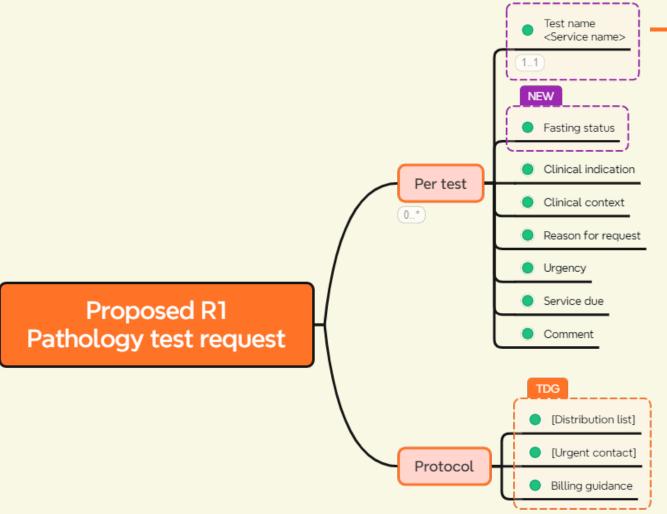
Carrying details about one or more requested tests



Test name <Service name>



Pathology test request – clinically relevant

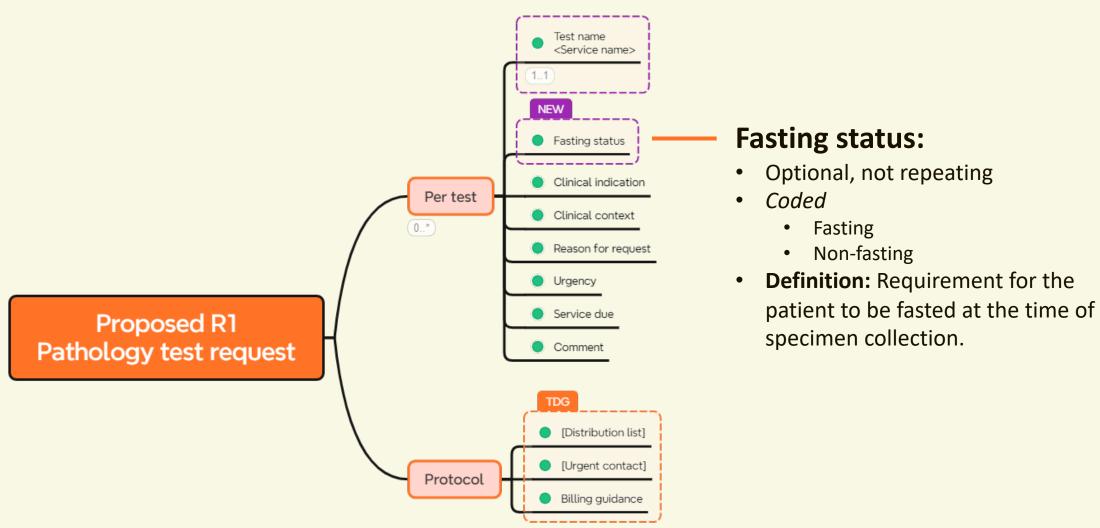


Test name:

- Renamed for purpose from 'Service name'
- Mandatory, not repeating
- CodeableConcept
- Definition: The name of the pathology test requested.
- Considerations for use: Coding of the 'Test name' with an external terminology is strongly recommended, if available.

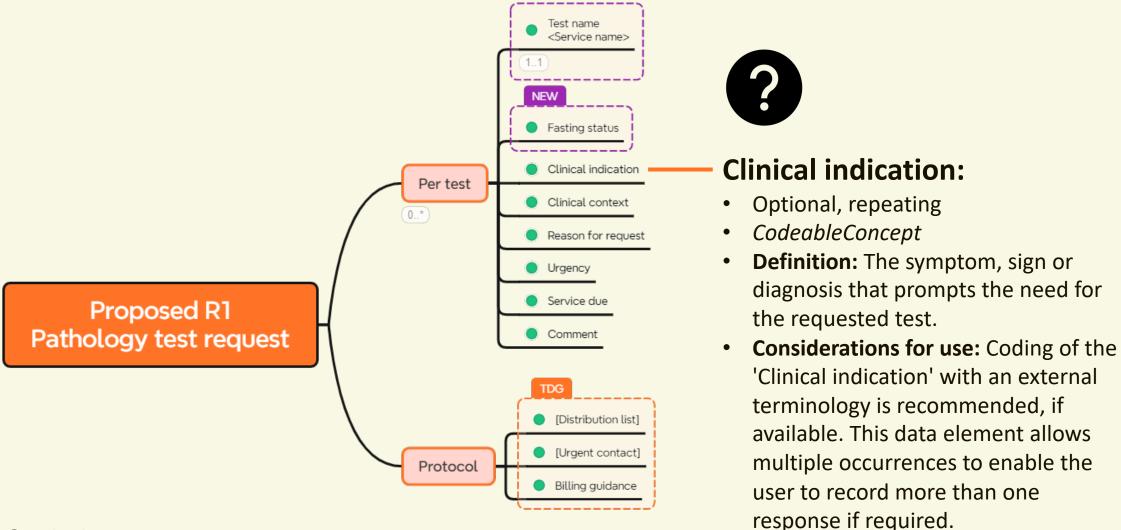


Pathology test request – new, clinically relevant

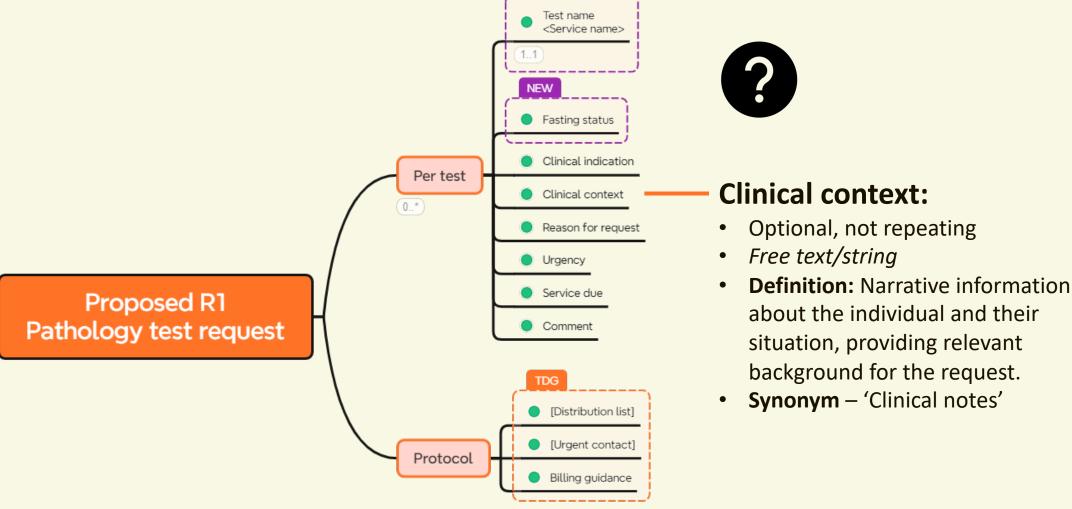




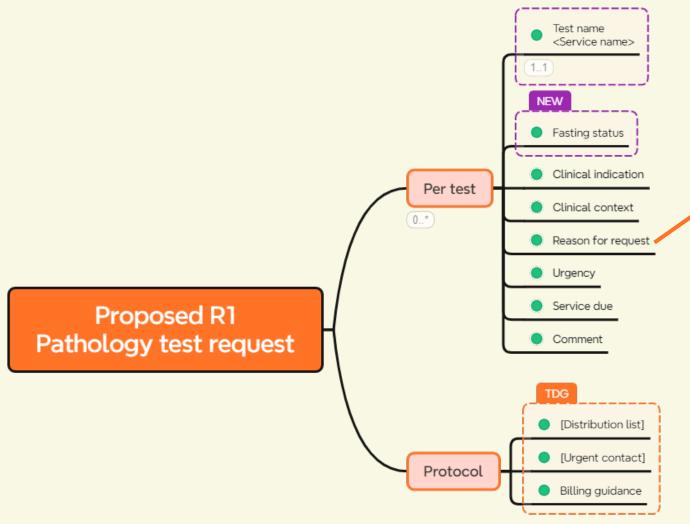
Pathology test request – clinically relevant













Reason for request:

- Optional, repeating
- CodeableConcept
- Definition: The clinical concern or question that needs to be addressed or resolved by the requested test.
- Consideration for use: Coding of the 'Reason for request' with an external terminology is desirable, if available. This data element allows multiple occurrences to enable the user to record more than one response if required.



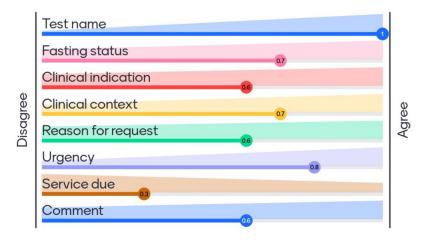


Clinical indication (Optional, repeating)	The symptom, sign or diagnosis that prompts the need for the requested test. Coding is recommended; free text if no code available	Path example: 'Type 2 Diabetes'; 'Diabetic retinopathy' Imaging example: 'Swollen left leg'
Clinical context (Optional, not repeating)	Narrative information about the individual and their situation, providing relevant background for the request. Free text	Path example: 'Recent eye check — worsening retinal changes.' Imaging example: '3 days of increasing swelling of left leg. No known trauma. Pitting oedema to mid-calf.'
Reason for request (Optional, repeating)	The clinical concern or question that needs to be addressed or resolved by the requested test. Coding is desirable, if available; free text if no code available Note: may be prefaced with 'confirm', 'exclude', 'monitor' etc	Path example: 'Monitor glucose control' Imaging example: 'Exclude DVT'





Pathology request - agree to include the following data elements



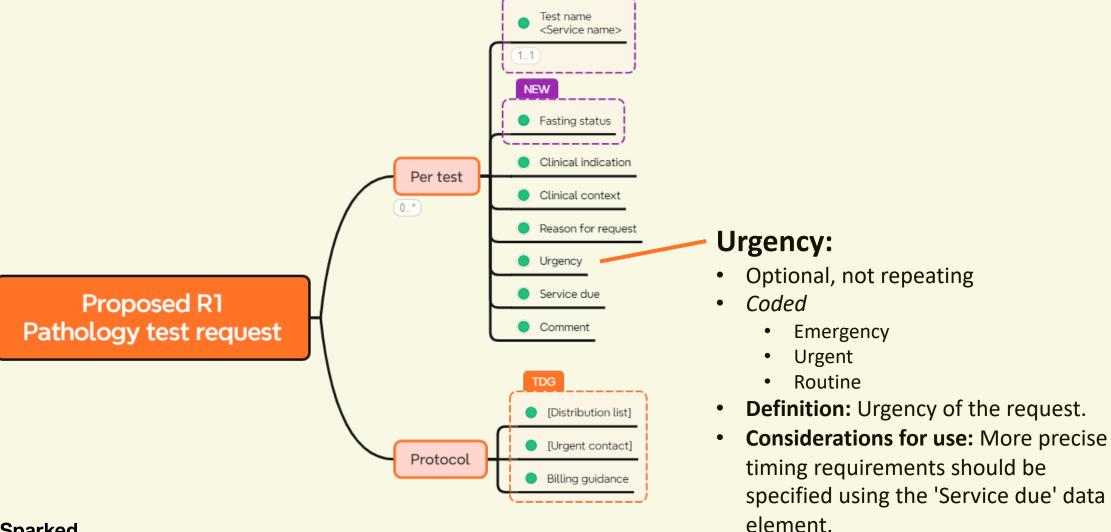




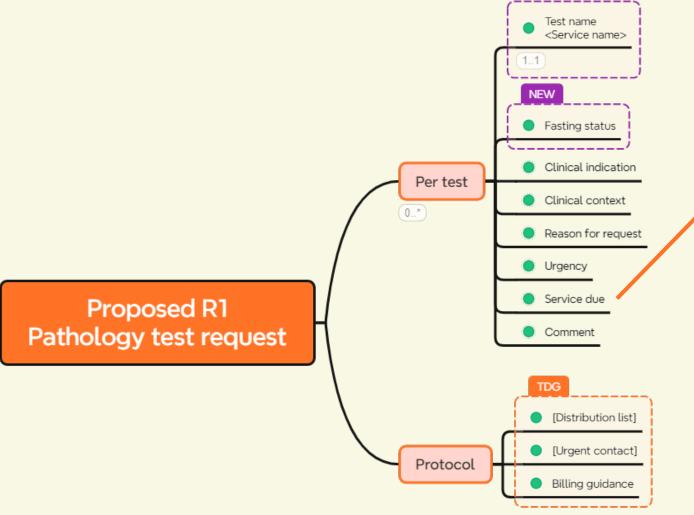
Questions

- Knowing most systems have a single field (and value set) for clinical indication and reason for request
 - Does the group see value in defining two separate fields?
 - What is the value of having both Clinical Indication and Reason for Request?
 - Is the distinction clear?
- Is it valuable to have a specific clinical context (aka clinical notes) field separate to a general comment field?





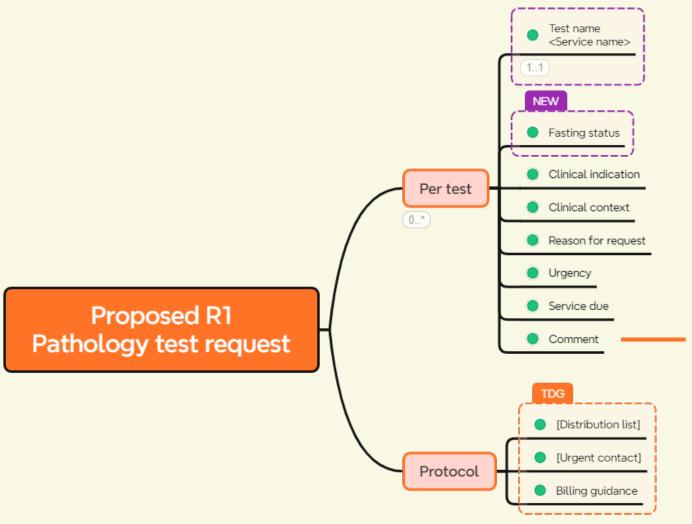




Service due:

- Optional, not repeating
- Date/Time OR Interval of Date/Time OR Free text/String
- Definition: The date/time or description about the timing for the provision of the service.
- Considerations for use:
 - For example:
 - April 23, 2024
 - April 23, 2024 April 30, 2024
 - 'Next available'

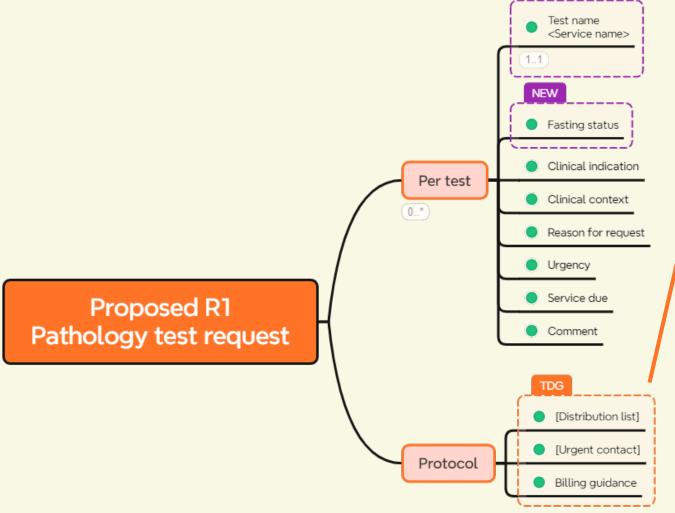




Comment:

- · Optional, not repeating
- Free text/string
- Definition: Additional narrative about the service request not captured in other fields.





TDG responsibility

Distribution list:

Details of additional clinicians, organisations or agencies who require copies of any communication.

Urgent Contact:

Details about the designated contact person and preferred mode of contact for urgent or emergency notifications related to this request.

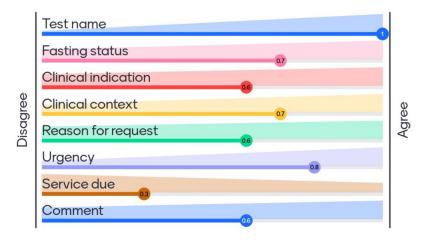
Billing guidance

A recommendation from the requester to the receiver about the method of payment for the service.



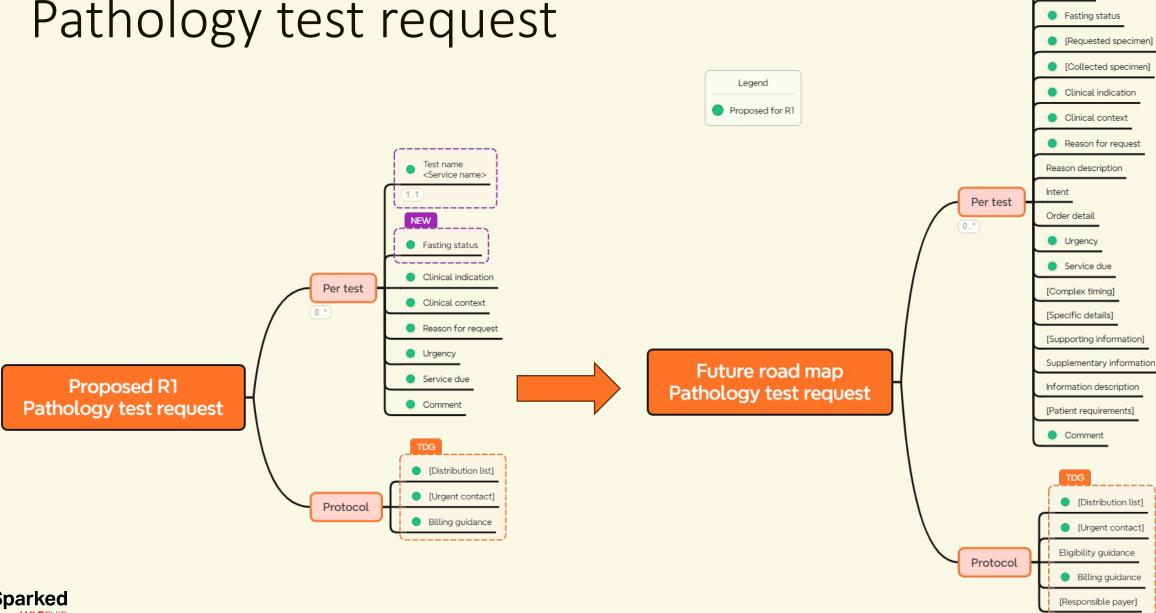


Pathology request - agree to include the following data elements





Pathology test request



Test name <Service name>

Service type Description



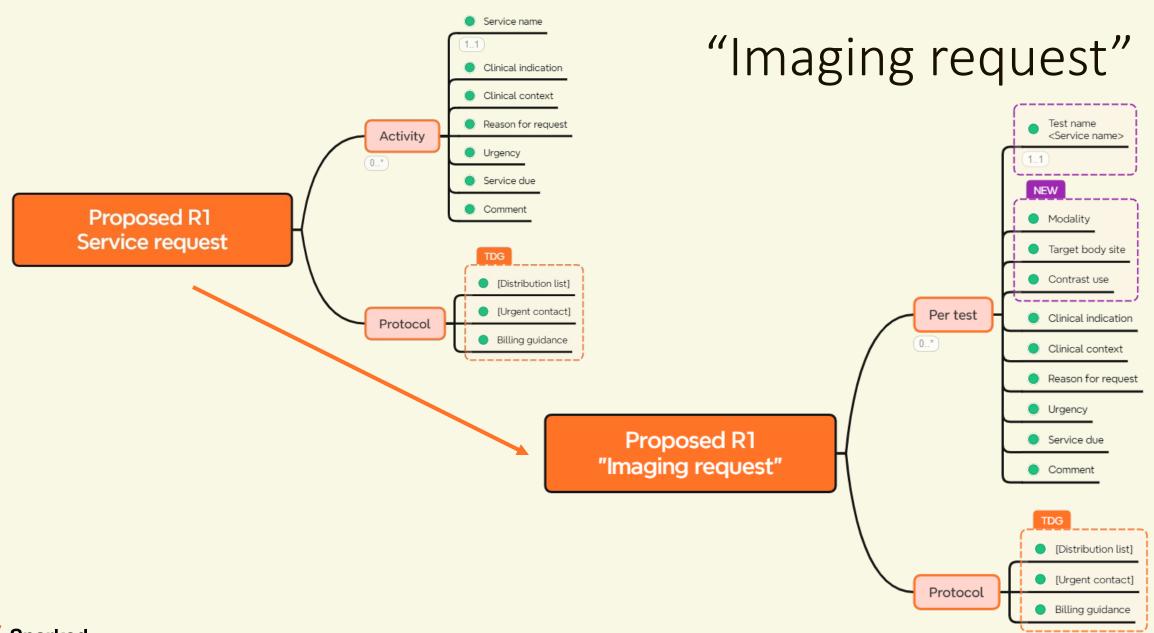


Any red flags for missing elements for Pathology request R1

14 responses









"Imaging request"

An order or instruction for a medical or diagnostic imaging service.

Record one instance per request

Carrying details about one or more requested tests

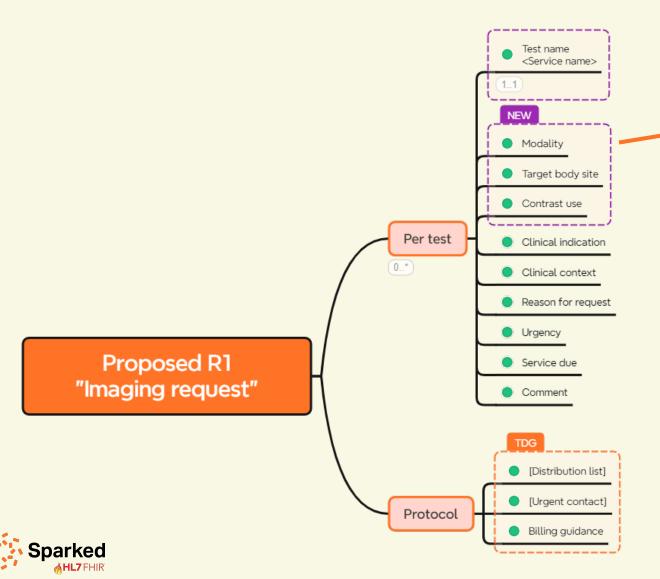


Test name <Service name>

Modality
 Target body site



"Imaging request" – new, clinically relevant

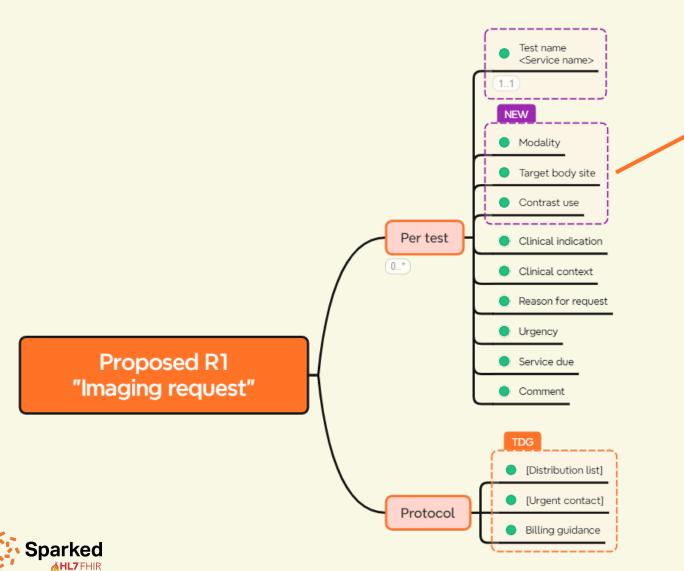


Modality:

- Optional, not repeating
- CodeableConcept
- Definition: The type of device, process or method used to acquire or produce the image or data.
- Considerations for use: Coding of the 'Modality' with an external terminology is recommended, if available.

For example: 'X-Ray'; 'Ultrasound'; 'Medical Resonance Imaging (MRI)'; 'Positron Emission Tomography (PET)'; 'Mammography'; 'Fluoroscopy'; or 'Digital Subtraction Angiography (DSA)'.

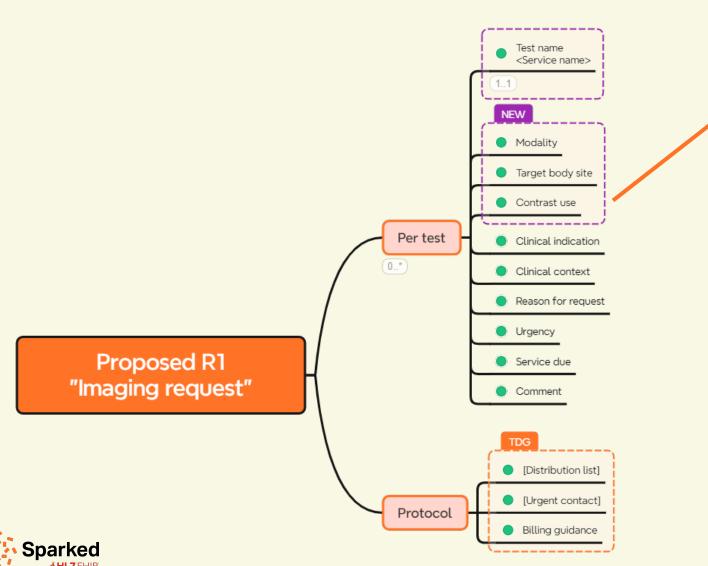
"Imaging request" – new, clinically relevant



Target body site:

- Optional, repeating
- CodeableConcept
- Definition: Identification of the area of the body targeted for the imaging test.
- Considerations for use: Coding of the 'Target body site' with an external terminology is desirable, if available. This data element allows multiple occurrences to enable the user to record more than one body site for the selected modality, if required. For example: 'heart'; 'both lungs'; 'right breast'; and 'left upper limb'; 'right ankle' and 'right knee'.

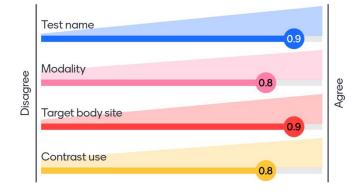
"Imaging request" – new, clinically relevant



Contrast use:

- Optional, not repeating
- Coded
 - With contrast
 - Without contrast
- Definition: Inclusion of contrast as a component of the imaging test.
- Considerations for use: For example:
 to clearly state that contrast should
 be administered in a specific clinical
 scenario; or to clearly state that
 contrast should NOT be administered,
 to highlight a known risk of adverse
 reaction to the contrast.

Imaging request - agree to include the following data elements (1/2)

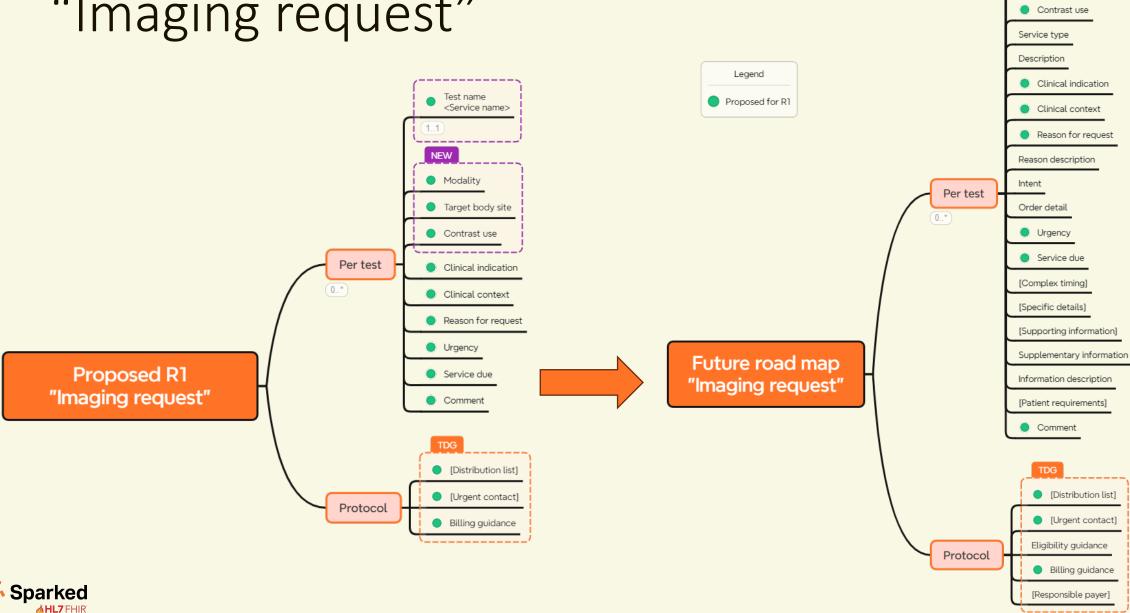


Imaging request - agree to include the following data elements (2/2)





"Imaging request"



Modality

Target body site



Any red flags for missing elements for Imaging request R1

14 responses

copies to other clinician

procedures **none**

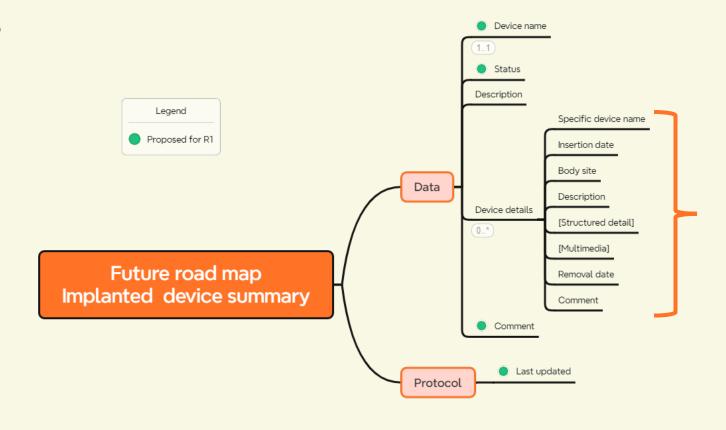
adding procedures

allergies follow-on procedures

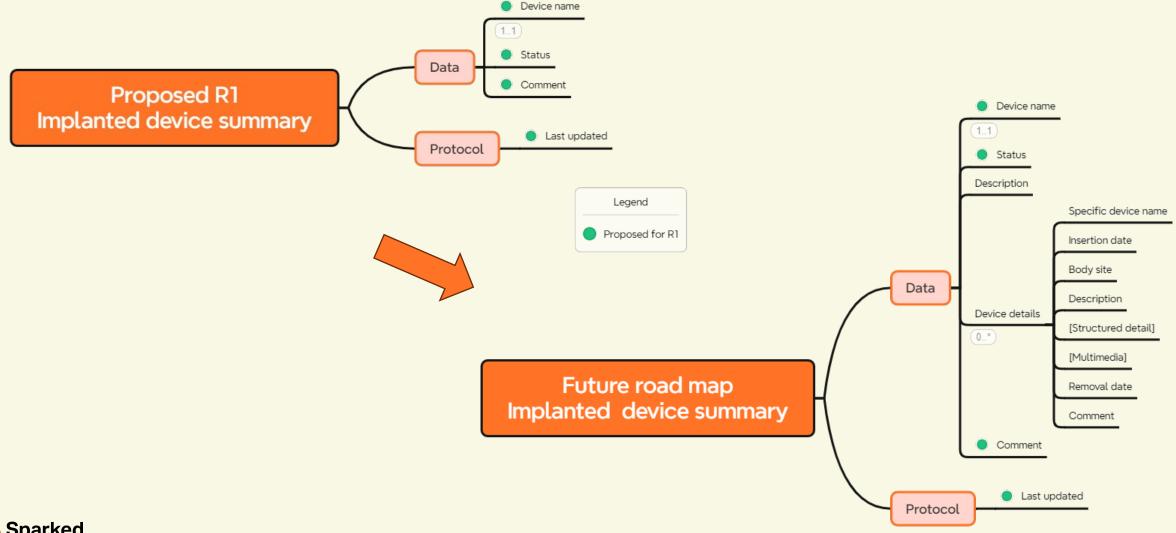


A summary or overview of a single medical device, or category of device, that can be surgically inserted into the body.

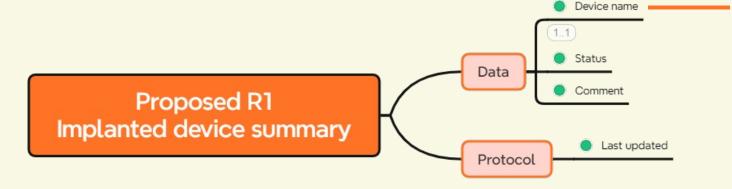
Record one instance per device or device class within a health record; changes or updates over time are captured as a revision rather than a new entry.











Device name:

- Mandatory, not repeating
- CodeableConcept
- **Definition:** Name of the medical device or device category.
- Considerations for use: Coding of the 'Device name' with an external terminology is strongly recommended, if available.

For example:

- cochlear implant;
- Intracardiac pacemaker;
- aneurysm clip;
- femoral head prosthesis;
- coronary stent;
- bone fixation device eg screws or plates; or
- deep brain stimulator

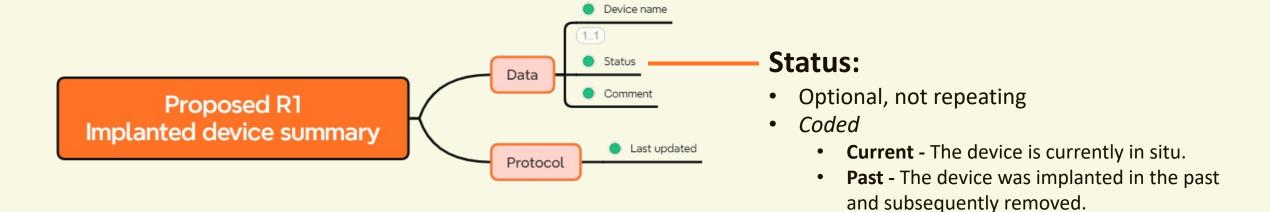




Question

- Device name terminology as a first step for AUeReqDI R1 -
 - Should we create a simple SNOMED CT value set of common devices relevant for radiology?
 - Derived from existing forms
 - Leave this to be free text?
 - Other options?





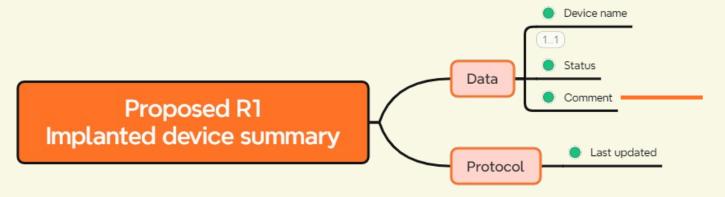
Never - The device has never been implanted.

Definition: Assertion about the implantation

of the identified medical device or class of

device.

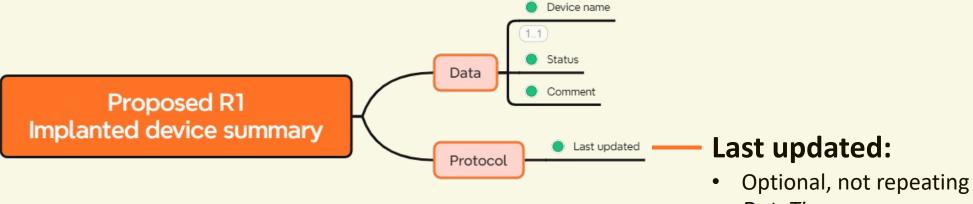
Sparke



Comment:

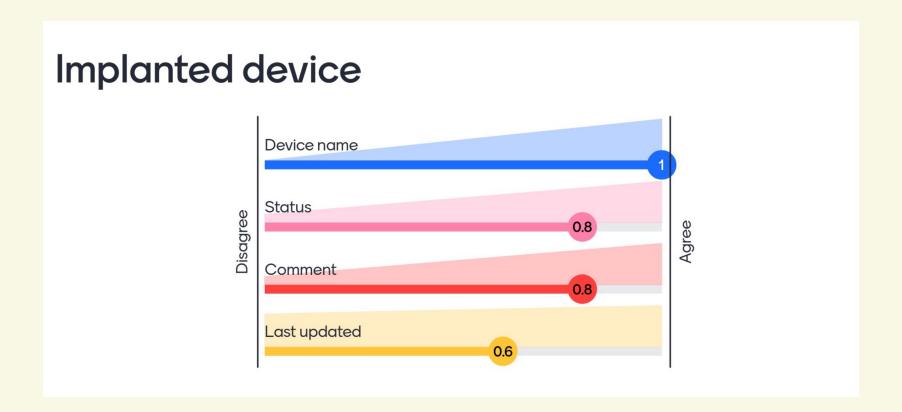
- Optional, not repeating
- Free text/string
- Definition: Additional narrative about the implanted device not captured in other fields.



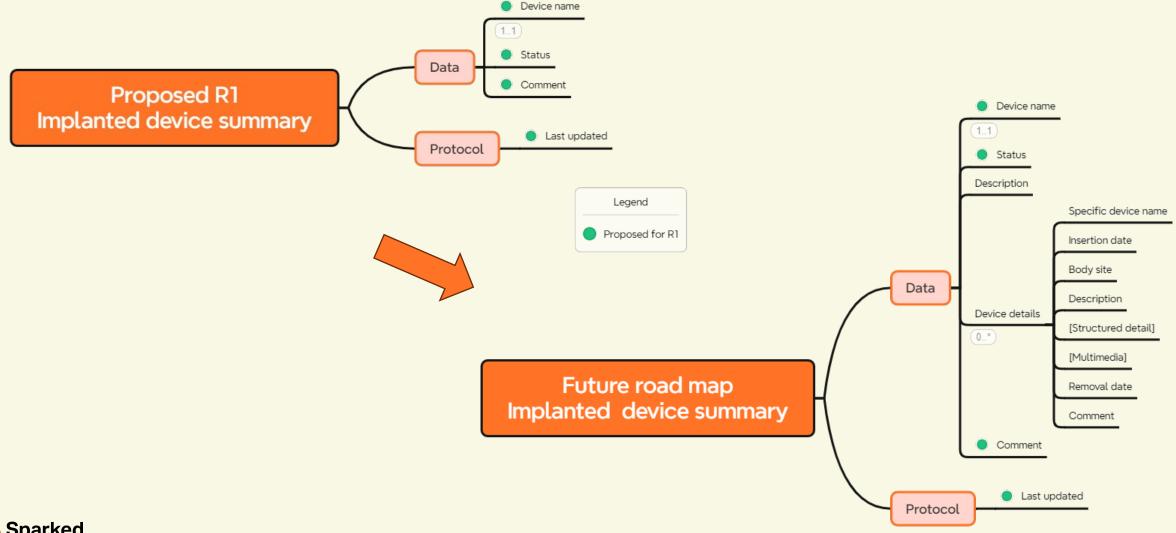


- DateTime
- **Definition:** The date, and optional time, when the Implanted device summary data group was last updated.

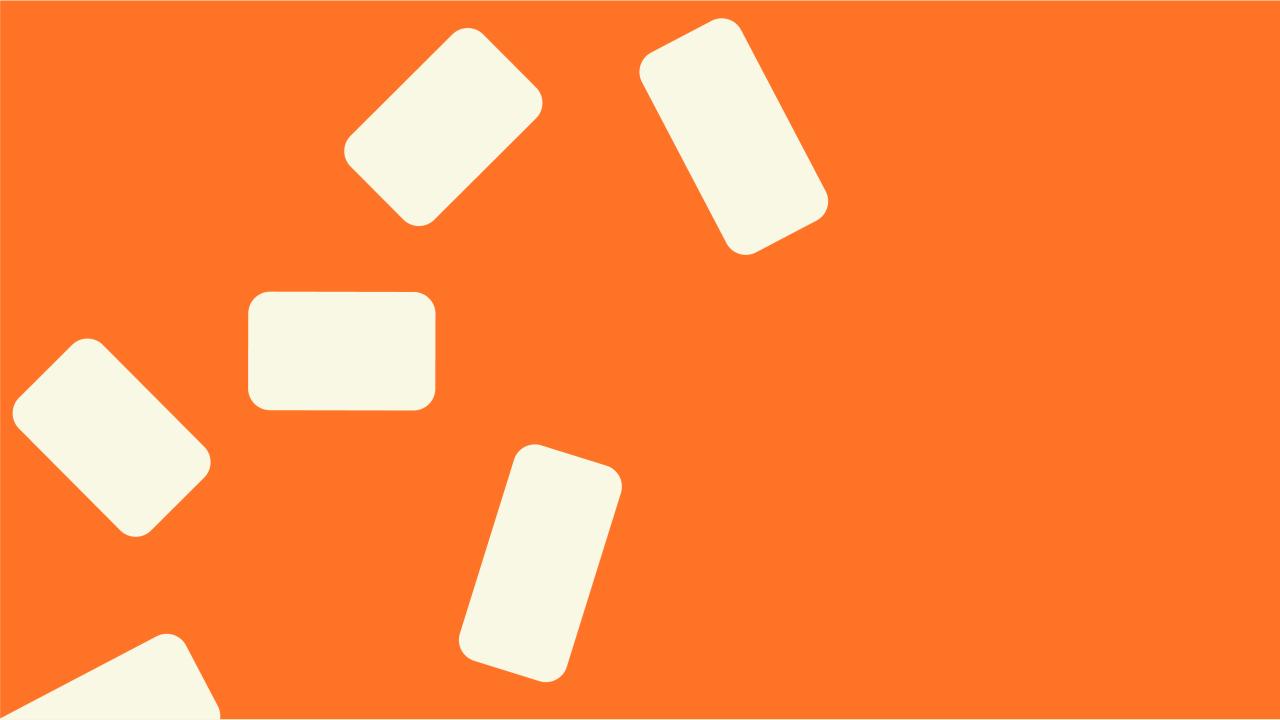














Timelines

- Draft for Community review Mid May
- Publish R1 October





Next steps

- Slides and minutes of this meeting will be posted on Sparked CDG confluence page
 - Please provide feedback by emailing fhir@csiro.au





Upcoming items

- Next face to face meeting
 - 15 May 2024 Sydney





