2.3 MyHealth@EU Preparation of an Action Plan for the implementation of New Use Cases

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22nd eHN Meeting

New data categories

- Laboratory results and reports
- Medical images and medical imaging reports
- (Hospital) discharge reports

+ the implementation of the X-eHealth Rare Disease Scenario as part of the Patient Summary exchange

Laboratory results

- eHN Guidelines are available (July 2022).
- Two scenarios in the eHN Guidelines on Laboratory Results:
  - Scenario 1A: Request for Laboratory summary from Country A
    - 1-step approach, provides the Health Professional with a Laboratory summary (for example containing the latest result for every observation type or a cumulative report)
  - Scenario 1B: Request for Laboratory result reports from Country A
    - First, provides a list of reports (documents). Pre-filtering possible if suitable metadata is defined and used, e.g. time interval, lab specialty, study type, and test code.
    - Second, the Health Professional needs to fetch the required documents (one at a time) and study them in order to learn the laboratory results in each report.

Laboratory results

- The scenarios may be combined:
  - In 1A, a Laboratory summary might include links to laboratory reports documenting how and where the specific observations were obtained
  - In 1B, metadata on laboratory result documents might contain some basic information on observations
  - All available documents might be fetched, and their overall contents presented as a summary (multiple document fetch is not implemented in MyHealth@EU, but could be implemented)
- Should 1A, 1B or a combination be implemented in MyHealth@EU?
  - (A Change Proposal has been submitted, proposing to implement 1B)
- **A decision regarding the summary element should be made prior to the start of the implementation**

Medical images and medical imaging reports

- No eHN Guidelines available yet.
- Exchange of medical imaging reports (and medical images) as PDF documents is currently available in MyHealth@EU (OrCD service).
- A Change Proposal has been submitted, suggesting to implement the following use case.

The retrieval of an Imaging Report supports scenarios like the following example:

> *The Patient is traveling abroad, when the Patient feels sick with the need to visit a health professional.*
>
> *The health professional in the Country of Treatment needs to check if there are medical Imaging Reports available for the Patient that can help the health professional in diagnosing the patient's condition.*

Note: The retrieval of an Imaging Report does not include the retrieval of imaging studies that were performed to produce this imaging report. However, the Imaging Report can include references to the Imaging Study. The retrieval of DICOM images will be specified in a future change proposal.

(Hospital) discharge reports

- No eHealth Network guidelines on the use case are yet available
- A Change Proposal has been submitted, suggesting to implement the following use case:

> The retrieval of a Hospital Discharge Report supports scenarios like the following example:
>
> *The Patient, is abroad, feels sick and needs to visit a health professional at a hospital.*
> *After consulting the patient's Patient Summary, the health professional in Country of Treatment decides to request additional information relating to the patient's previous inpatient stays and checks to confirm if there are. previous hospital discharge reports for the patient that may affect the patient's treatment.*

Technology choice for MyHealth@EU

- Currently MyHealth@EU is based on HL7 CDA documents.
- Some Member States are mentioning the increasing use of HL7 FHIR in their national infrastructures.
- The implementation of new services could in principle be based on a new technology.
- Support for **both** CDA and FHIR **for the same service** would increase complexity.
  - Patient Summary and ePrescription continue on CDA until further notice, as the change of technology for these services could disrupt ongoing deployments.
  - A choice needs to be made for each new service: either CDA **or** FHIR to implement, not both
- For medical image exchange, DICOM support needs to be introduced

HL7 CDA vs HL7 FHIR – draft comparison

	HL7 CDA	HL7 FHIR
Interoperability pattern support	Documents	Documents, Messages, Representational state transfer (REST)
Data granularity	Wholeness	Wholeness + granular data access
Focus	Mirroring document-oriented workflows	Also enables richer interactions with data (e.g. mobile applications)
Technology support	XML data format only	XML and JSON support, broad support for modern technologies such as RESTful Webservices, APIs
Status and strategy	In current use	Recommended for new projects
Community	Stable and limited	Vital and large: Chat, Connectathons, Accelerator Programmes, etc
Tooling	Templating, registries – no further active development of tooling	Existing and growing: profiling, registries, test and reference servers
Flexibility	Good flexibility within the use case (document)	Good flexibility, extensions as a standard feature
Further standard development (HL7)	Less in focus, no further versions planned	In focus, continuously gaining more coverage and uptake

https://build.fhir.org/comparison-cda.html

HL7 CDA for the new use cases?

- Rather straightforward implementation in the current MyHealth@EU infrastructure
- Availability of validation and profiling tools in MyHealth@EU (support for new doc types needs to be added)

- Strategically, choosing an older technology for the implementation of a new service can be seen as a drawback

HL7 FHIR for the new use cases?

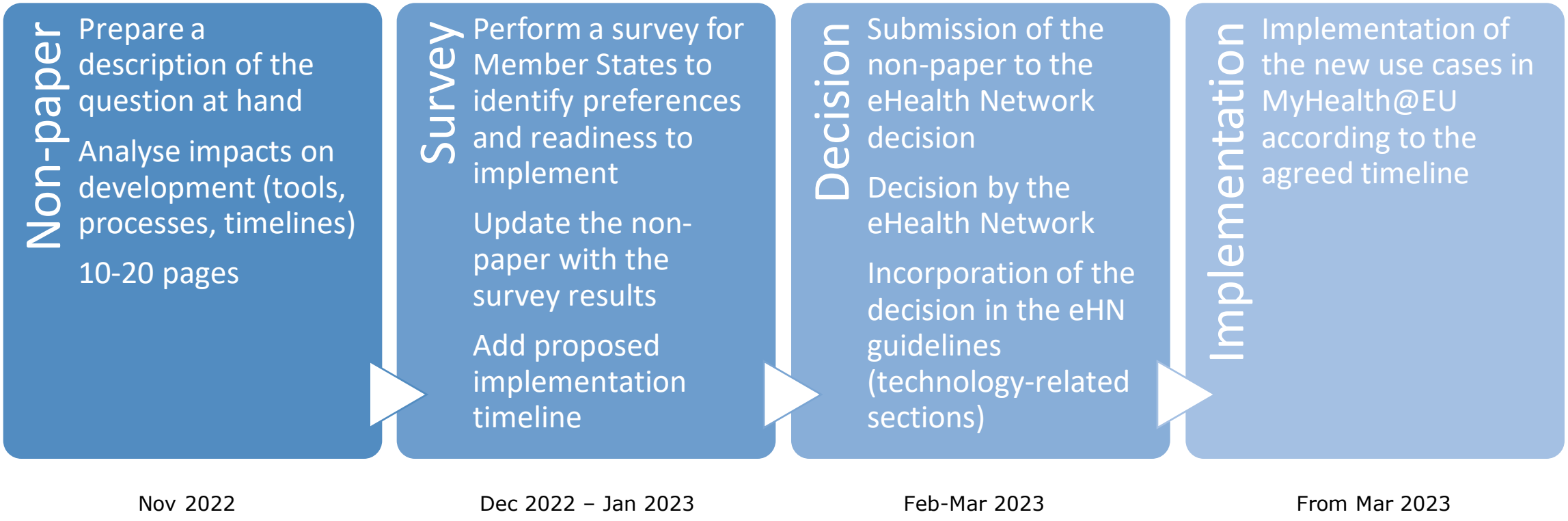
- Strategically, can be seen as forward-looking and keeping up with the overall development
- More granular and flexible access to data can be offered (not document-based paradigm only)

- Likely delay in implementation by 1 year or more
  - Need to introduce new validation and profiling tools in MyHealth@EU (potential increase in expenditure)
  - Need to add support in OpenNCP
- Need for additional trainings in MS not currently using FHIR

Common for both technologies

- Technically, possible to implement
- IHE profiles exist for both technologies (currently used in MyHealth@EU for CDA, may be used for FHIR if so decided)
- Implementation of the new use cases will consume time and resources in any case
- Trainings and knowledge exchange is needed, especially for new team members

Proposed way forward

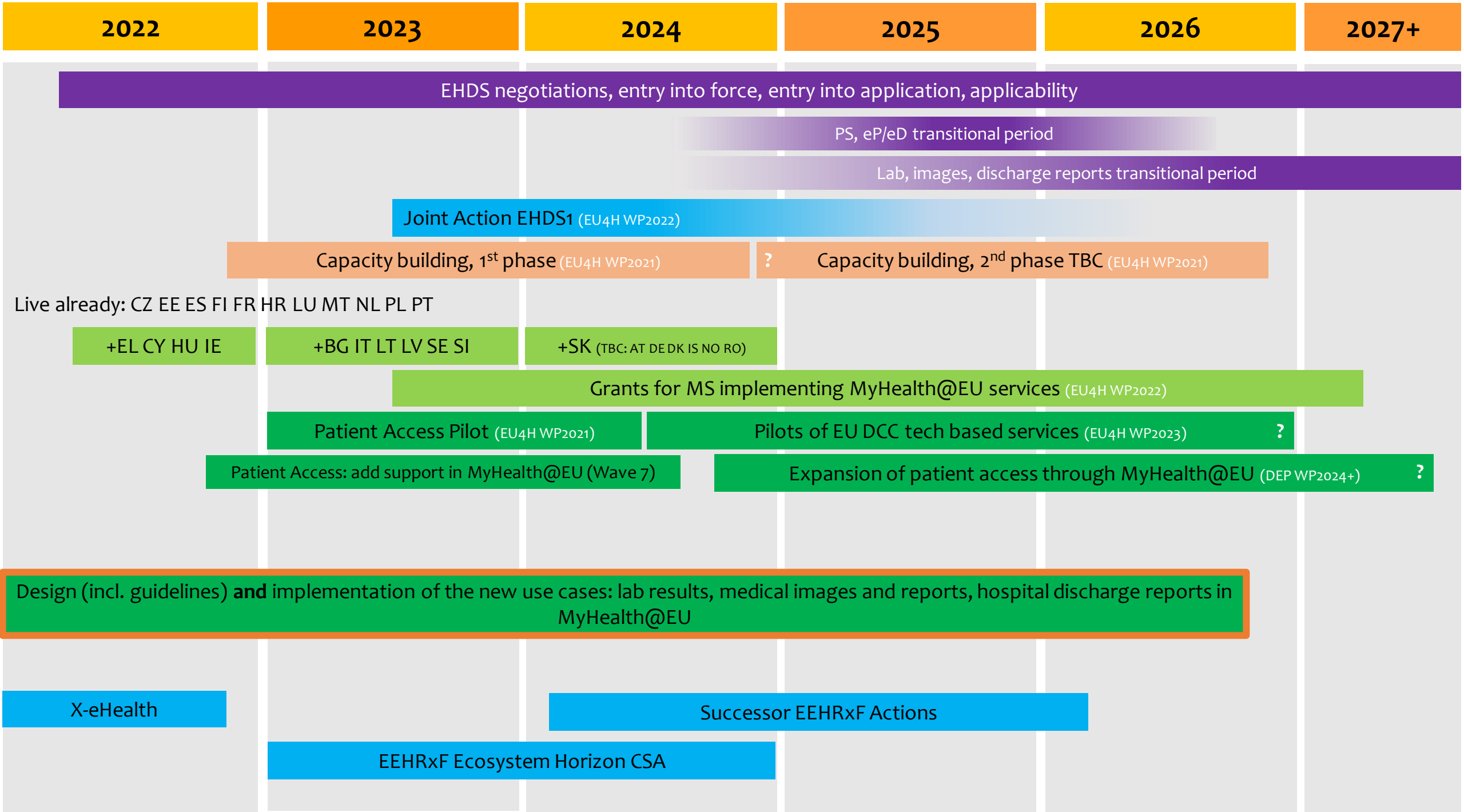


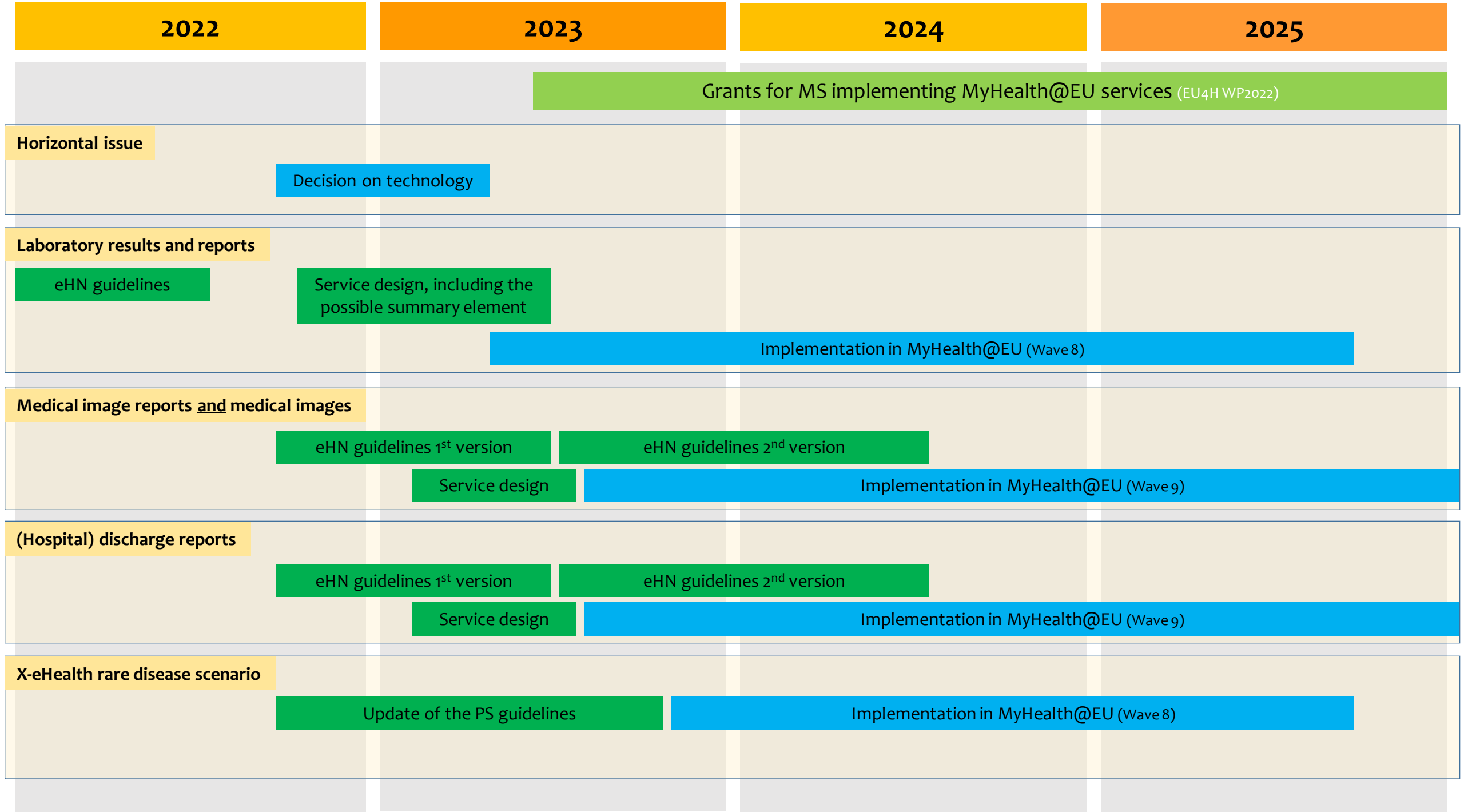
Topics to be addressed in the non-paper and supporting survey

- Availability of tools for profiling, validation, testing, conversions, mappings, etc
- Timelines needed for finalising specifications and doing implementation
- Possible implementation options for FHIR (FHIR over XDS, FHIR over REST, FHIR documents/bundles, FHIR messaging)
- For the survey: Readiness and willingness of Member States to implement the standards
  - Existing national strategies or specific plans regarding the selection of technical standards
  - Existing national implementations based on CDA and on FHIR
  - Support that should be provided by the Commission or through actions by MS

Out of scope of the non-paper

- Other standards, implementation technologies and profiles (DICOM, IHE, OpenEHR, HL7 v2, etc)
- Detailed analysis of specific data structures used in new use cases (CDA implementation guides, FHIR profiles, etc)
- Trials, pilots or other implementation efforts
- Existing services (Patient Summary and ePrescription/eDispensation)
- Other use cases or domains (except lab results, hospital discharge reports, medical image reports)


2022
2023
2024
2025
2026
2027+
EHDS negotiations, entry into force, entry into application, applicability
PS, eP/eD transitional period
Lab, images, discharge reports transitional period
Joint Action EHDS1 (EU4H WP2022)
Capacity building, 1st phase (EU4H WP2021)
?
Capacity building, 2nd phase TBC (EU4H WP2021)
Live already: CZ EE ES FI FR HR LU MT NL PL PT
+EL CY HU IE
+BG IT LT LV SE SI
+SK (TBC: AT DE DK IS NO RO)
Grants for MS implementing MyHealth@EU services (EU4H WP2022)
Patient Access Pilot (EU4H WP2021)
Pilots of EU DCC tech based services (EU4H WP2023)
?
Patient Access: add support in MyHealth@EU (Wave 7)
Expansion of patient access through MyHealth@EU (DEP WP2024+)
?
Design (incl. guidelines) and implementation of the new use cases: lab results, medical images and reports, hospital discharge reports in MyHealth@EU
X-eHealth
Successor EEHRxF Actions
EEHRxF Ecosystem Horizon CSA


2022
2023
2024
2025
Grants for MS implementing MyHealth@EU services (EU4H WP2022)
Horizontal issue
Decision on technology
Laboratory results and reports
eHN guidelines
Service design, including the possible summary element
Implementation in MyHealth@EU (Wave 8)
Medical image reports and medical images
eHN guidelines 1st version
eHN guidelines 2nd version
Service design
Implementation in MyHealth@EU (Wave 9)
(Hospital) discharge reports
eHN guidelines 1st version
eHN guidelines 2nd version
Service design
Implementation in MyHealth@EU (Wave 9)
X-eHealth rare disease scenario
Update of the PS guidelines
Implementation in MyHealth@EU (Wave 8)

Proposal on a way forward – does the eHN agree?

The choice of technology (HL7 CDA/FHIR)

- A non-paper to be prepared and decision taken by the eHealth Network before the launch of relevant implementation efforts – timeline as presented (ending March 2023)

→ Technical IOP SG

Laboratory Result Reports

- *A decision regarding the Laboratory Result Summary should be taken before the launch of relevant implementation efforts – by June 2023*

→ *Preparation by a Task Force under the Semantic SG*

Medical Image Reports + Images

- At least outline versions of eHealth Network guidelines should be prepared before the launch of relevant implementation efforts – by June 2023

→ Task Forces under the Semantic SG

Hospital Discharge Reports

- At least outline versions of eHealth Network guidelines should be prepared before the launch of relevant implementation efforts – by June 2023

→ Task Forces under the Semantic SG

Integration of the x-eHealth Rare Disease Scenario

- A minor update of the Patient Summary guidelines should be prepared before the launch of relevant implementation efforts – by June 2023

→ Task Force under the Semantic SG

Questions?

Further information

eHealth Network
https://ec.europa.eu/health/ehealth/policy/network_en

All events
https://ec.europa.eu/health/ehealth/events_en#anchor0