ANALYZING THE CURRENT BIOBANK IT LANDSCAPE AT AUSTRIAN BBMRI NODE PARTNERS

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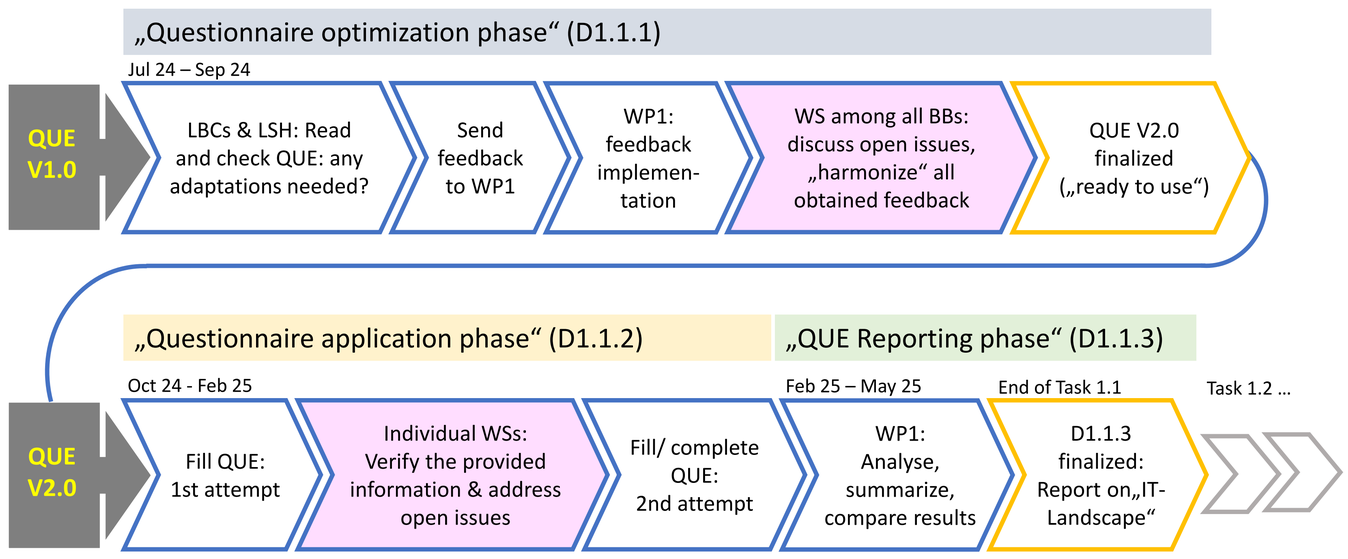
THE PROCESS OF COLLECTING INFORMATION

Place among BBMRI.at activities: the initial step of implementing the solution which will connect the Austrian Biobank-IT systems to BBMRI-ERIC Platforms

Means of collecting information: a self-developed in-depth questionnaire consisting of **67 questions**

Target audience: representatives of the AT biobanks responsible for their IT infrastructure

Process: consists of three phases:
- Questionnaire optimization phase
- Questionnaire application phase
- Questionnaire reporting phase



THE STRUCTURE OF THE IT QUESTIONNAIRE

Covered topics belong to 4 categories:

1. ***Biobank system as a whole***
   - main components of the biobank system
   - biobank IT team and its duties
   - available system documentation
2. ***Stored data***
   - biobank data model
   - internal regulations and external standards
   - data security and privacy
3. ***Communication interfaces***
   - system input and output interfaces
   - external data sources
4. ***Data flow***
   - events occurring in the biobank system
   - standardized processes for data management

QUE No.	Chapter Name	Main Question
1.1	Biobank System	Describe the main components in your biobank system, and how they communicate with each other and with external systems (its system architecture).
1.2	Biobank System	Describe which category: non-configured, configured, or custom best describes the software solution which is used to manage the biobank data. If no category fits your solution, explain why.
…	…	…
1.9	Biobank System	Which certification is supported by your biobank system?

QUE No.	Chapter Name	Main Question
2.1	Stored data	Which real-world entities related to your biobank are described by your data i.e. are a part of your data model?
2.2	Stored data	Describe the approach to implementing your data model in a database. If different parts of the model are implemented differently, specify which and how.
…	…	…
2.22	Stored data	Which data quality characteristics are addressed in your biobank system and how?

QUE No.	Chapter Name	Main Question
3.1	Communication interfaces	Which interfaces are supported to get the data into your system?
3.2	Communication interfaces	List the external data sources for your biobank. If possible, connect these sources to the import interfaces. For the specific sources in the list specify to which degree the biobank has control over them and is aware of their data models.
…	…	…
3.17	Communication interfaces	Do you have relevant data that is only available in paper form / on cards etc. that you have plans to digitize?

QUE No.	Chapter Name	Main Question
4.1	Data Flow	List events which can occur in your biobank system which are related to data input, output, or management. How often do they occur?
4.2	Data Flow	Which are typical usage scenarios involving data input, output, or management? Connect scenarios to the triggering events.
…	…	…
4.22	Data Flow	Are there measures in place to ensure efficient reuse of the data? If so, how is this done technically? Who is responsible for this?

RESULTS

1. ***Biobank Participation: Q4 2024***
   - The biobank representatives provided detailed answers to both questionnaire and live interviews
2. ***Questionnaire/interview analysis: Q1 2025***
   - Combining individual answers
   - Comparing the answers provided to the specific questions
3. ***Conclusions***
   - The IT infrastructures/architectures are very heterogeneous
   - New standards like OMOP or FHIR are currently low prioritized at the local sites due to the lack of resources

FURTHER ACTIVITIES

1. ***Analysis report***
   - The total picture of the IT landscape *documenting each biobank's current IT maturity, identify specific technology gaps*
   - A summary of common findings *common advantages and problems, recommendations for further work*
2. ***Requirements analysis***
   - Document findings on technical level
   - Derive requirements for data transfer and integration

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Federal Ministry Women, Science and Research Republic of Austria

Funded by the Austrian Federal Ministry of Women, Science and Research (BMFWF)
Grant number: 2023-0.752.780 (2023-2028)

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