DDI Alliance Scientific Work Plan, 2021 – 2022

Preface

The Scientific Board of the DDI Alliance was reorganized by a change in the Bylaws as approved by the membership in 2020. The reorganization was based on the proposal of a temporary working group to create a more proactive and larger entity with a clearer oversight and administrative role. The members of the new Scientific Board were elected in 2020 and serve 4-year terms (January 2021 – December 2024). Note that for the initial board half the members will serve 2-year terms so that in the future the terms of board members will be staggered with elections taking place every 2 years. The Scientific Board has elected a chair and vice-chair from within its membership and these positions will serve 2 year terms.

The first DDI Scientific Plan covers a 2-year period, January 2021 through December 2022. The initial 2-year plan reflects the fact that the Scientific Board only became fully operational in spring of 2021. The Scientific Plan for this initial planning period focuses on the need for the board to establish its internal process as well as provide oversight to the on-going scientific work of the DDI Alliance. This will include clarifying relationships with the Executive Board and its relationship to the Technical Committee and other Working Groups of the Scientific Board.

The Scientific Work Plan is therefore divided into four sections

    I.   Proceedings and Workflow of the new Scientific Board internally and externally
    II.   Reachable Short-Term Goals for 2021 and 2022
    III.   Preparations of issues to be covered within the next Scientific Plan for 2023
    IV.   Long Term Vision for DDI products and processes

Sections I and II are the actual work plan for 2021 and 2022 as they contain measurable goals which should be reachable within this timeframe. Section III contains goals we consider to be viable for the next Scientific Plan beginning in 2023. The intent of this section is to identify areas for preparation and planning for future work. Section IV contains long term visions for DDI products which can be reached in timeframes of three to five years. The current Scientific Board will not be able to initiate those processes in the near term, but provide this information to provide context for current activities and clarify longer term goals.

This iteration of the Scientific Work Plan incorporates large parts of the DDI Alliance Strategic Plan as it existed at the time this document was created. The Scientific Board accepted the Strategic Plan in its general outline. The internal planning discussions of the Scientific Board as well as the work plans submitted by the different Working Groups fit within the Strategic Plan. In the future, the scientific section of the Strategic Plan should arise out of the long-term goals of the Scientific Plan as reviewed by the Scientific Representatives and approved by the membership of the DDI Alliance.

    I.   Proceedings and Workflow of the new Scientific Board internally and externally

As stated, the Scientific Board is a new entity for which the new roles and responsibilities have to be clarified. The focus of this first year will be to clarify the internal roles, processes, and operating rules, as well as establishing relations with other existing groups. These will be specified in a procedures document which can be modified periodically to meet changes in the operating environment. This document will serve as a set of clear guidelines for the operations of the Scientific Board.

Therefore, the Scientific Board will have to clarify the following issues:

1. Internal proceedings and operational guidelines, e.g.
   a. Number and timeline of physical and virtual meetings of the Scientific Board
   b. Engagement of the Scientific Community
   c. Voting procedure for Chair and Vice-Chair
   d. Voting procedures on decisions (e.g. possibility of remote votes between meetings)
2. Collaboration of Scientific Board members between the meetings
3. Working relationships between and among the Scientific Board, Technical Committee and all Working Groups
4. Working relationship with the Executive Board
5. The establishment and promotion of new working groups (short and long-term groups) to accomplish the work of the Scientific Plan

II. Reachable Short-Term Goals for 2021 and 2022

These action items are issues we evaluated to be short term enough to be covered within the next 1.5 years.

1.) Define a first draft of a roadmap for portability between versions. This action item has to be further developed as a medium- and long-term goal.
2.) Promote more collaboration between the Working Groups, e.g. to achieve better documentation. This action item has to be further developed as a medium- and long-term goal.
3.) Plan a new laboratory environment to explore new features and technical platforms.
4.) Plan the creation of a new software development group similar to the DDI Developers group in the past to promote DDI Tool development.
5.) Provide guidance for the community on which DDI specification and which parts of DDI are the preferred solution for specific use cases.
6.) Promote the development of technical DDI services, especially resolution of DDI URNs to the physical location of DDI resources (identified by URLs).
7.) Promote the role of DDI in external projects like e.g. European Open Science Cloud (EOSC) and FAIR.
8.) Explore a base architecture for existing and growing DDI metadata repositories.
9.) Initiate the establishment of organization-level relationships with external standards bodies where needed/appropriate. This action item has to be further developed as a medium- and long-term goal.
10.) Review DDI Alliance communication on e.g. web pages on current products, the learn pages and development products.
11.) Support and facilitate the following action items provided by the different working groups:
   a. CDI
      - Finalize the first production version of the Cross Domain Integration specification.
      - Collaborate on activities to implement and get feedback on the specification, in particular with data providers, RIs, EOSC and cross-domain case studies.
      - Provide more complete mappings to other DDI specifications (Codebook and Lifecycle), and some mappings to external standards which were not included in the review package, notably to SDMX and DCAT.
      - Create a modular architecture for the specification.

b. TC
- Review, vote for publication, and publication of approved specifications (CDI 1.0, Codebook 2.6) and add support for new products (XKOS, SDTL).
- Create content model for overall DDI coverage, product coverage, and mapping, and define roles of individual products.
- XKOS support – work with group managing XKOS maintenance and development and ensure clear expression of the role of XKOS in DDI Suite.
- Setting up the publication process for CVs.
- DDI resolution support (e.g. CV, XKOS).
- Setting up an automated production system.

c. Training
- Continue the development of online training resources.
- Conduct training outreach activities as regular webinars, facilitate training on request, organize training sessions at workshop and conferences, and explore alternative outreach possibilities.
- Increase/continue collaboration with CODATA to reach out to new communities of users.
- Establish training collaborations with FAIR related organizations (FAIRsFAIR, GO FAIR, RDA, EOSC etc.).
- Coordinate all of these activities with the Marketing Group.

d. Controlled Vocabularies
- Identify DDI elements that are good candidates for creating CVs.
- Create, and publish new Controlled Vocabularies for DDI elements, with a focus on DDI Lifecycle CodeValueType elements.
- Review and revise existing Controlled Vocabularies and publish new versions as appropriate.
- Work with Technical Committee and ICPSR to set up the process for publishing CVs on the DDI Alliance site, including resolution support.
- Coordinate the publication of CVs in SKOS with TC and CESSDA.

e. SDTL
- Perform minor adjustments
- Initiate project to work to cover statistical analyses in SDTL, if accepted.

f. Paradata
- Form group and discuss work plans with the Scientific Board.

g. XKOS
- Form group and discuss work plans with the Scientific Board.

### III.	Preparations of issues to be covered within the next Scientific Plan for 2023

The following action items are also out of scope for the upcoming work period. The Scientific Board will discuss and begin to frame these issues in preparation for the next Scientific Plan beginning in January 2023:

1. Discuss and advise processes for product lifecycle management in collaboration with the Technical Committee and other Working Groups.
2. Support the further development of implementation guides to help software architects and developers i.e. recommending the appropriate subset of a specification. Ideally, implementation guidelines should include code snippets or examples and have a consistent presentation across the product line
3. Discuss and define a policy for testing of specifications and instances.
4. Promote standardized query and exchange protocols which enable building repositories and reuse of DDI metadata in the web.
5. Identify and plan building blocks for establishing portals for supporting existing and growing DDI metadata repositories.

### IV.	Long Term Vision for DDI products and processes

The issues included in this paragraph reflect guidelines for addressing the development of long-term goals for the Scientific Board:

1. The Scientific Board will evaluate the development work undertaken in the past 7-10 years to both clearly document that work and determine what aspects should be incorporated into one or more products within the DDI Suite of Products
2. The Scientific Board will establish guidelines and strategies to improve interoperability and modularity between the different versions
3. The Scientific Board will monitor and provide support for the ongoing maintenance of the different products
4. The Scientific Board will promote interoperability and collaboration with other metadata standards
5. The Scientific Board will re-ignite the discussion of certifying DDI as an official ISO or similar standard
6. The Scientific Board will establish organization-level relationships with external standards bodies where needed/appropriate