# Proposed DDI Roadmap for Discussion by Scientific Board

Summary of discussion at Technical Committee, October 2019 Working Meeting

DDI Technical Committee – 2019-12-19

This roadmap builds on the 2017 DDI Roadmap accepted by the Executive Board in 2017 and presented to the Scientific Board at the 2018 annual meeting. It reflects discussions taking place within the Technical Committee during the October 2019 week-long working session in Minneapolis. The general approach has been shared with the Modeling, Representation, and Testing Lifecycle Working Group in terms of the pursuing a “DDI Suite” of products. The purpose of this document is to layout the approach and implications for the work-plan of the Technical Committee and the Scientific Board. It notes implications for each product and possible use by the Marketing and Training groups as they present DDI to the public.

## DDI Suite of Products

This approach presents a means of presenting DDI as a suite of products each providing coverage of all or part of the DDI conceptual area. Products are differentiated primarily by the type of application areas they support and the level of technical infrastructure required.

* Products are defined in terms of:
  + Coverage of DDI conceptual area
  + Types of applications supported
  + Technical infrastructure requirements
* The user should use the product that addresses their needs
* There is not the assumption that one should/must move from one DDI product to another except to access different functionality
* Development of products will work within the defined technical infrastructure requirements and intended application areas, but will extend coverage of the conceptual area to meet the needs of the user community

## Implications for Product Design Rules, Coverage, and Definition

The currently published products of the DDI Alliance include:

* DDI-Codebook
* DDI-Lifecycle
* DDI Controlled Vocabularies
* XKOS

Additional products currently in active development:

* Disco
* DDI4 Core – working name

Each product should be reviewed and defined in terms of the following aspects:

* Name should reflect its role in the overall suite of products and each product will have its own semantic versioning (semver.org)
* Relationship of coverage to an overall DDI conceptual model
* Definition of intended audience
* Supported applications
* Technical requirements

### Changes in Design Rules:

DDI Codebook:

* Move to COGS providing a development environment that is more accessible to implementers and supports a more iterative development cycle
* Review based on coverage limitations and backward compatibility constraints and rewrite in terms of technical infrastructure constraints and intended applications
* Review appropriate binding options in terms of supporting applied use
* Initiation of a product specific versioning system

DDI Lifecycle:

* Move to COGS providing a development environment that is more accessible to implementers and supports a more iterative development cycle
* Review current XML construction rules in particular:
  + XML management structure approach vs. full serialization of content
  + XML centric content that requires generalization to support multiple binding formats
* Review appropriate binding options in terms of supporting applied use
* Initiation of a product specific versioning system

DDI Controlled Vocabularies:

* Review and track appropriate usage across the full range of DDI products

XKOS:

* Review relationship between XKOS and other DDI products
* Define in terms of supported applications and interactions with other DDI products and other products in its coverage area

### Definition of a DDI Coverage Area

* Complete mapping of current and actively developed products
  + Include primary related models including GSIM, GSBPM, etc.
* Extrapolate a conceptual model of the DDI Coverage Area (upper model)
* Map each product to the upper conceptual model
* Identify areas where alignment is needed to better support the transfer of content from one product to another to support different applications
  + Example: common descriptive information should be captured in a similar way with known translation path so that metadata content can be exported within different product to support different applications or provide a user with a familiar format
  + Develop rules for verifying and maintaining alignment over time

### Managing Future Development Requests

#### Content Coverage

* Requests for added content coverage will be handled as described in the Bylaws and “Standards Development and Review: Process and Procedures.” In addition, the content request would be evaluated for its appropriate inclusion in each product, for example,
  + Codebook may add coverage at a descriptive level
  + Lifecycle may add coverage at an increased depth to support metadata driven systems
  + Controlled Vocabularies may identify and provide related vocabularies

#### Supported Applications

* Requests for support of additional application areas would be evaluated for inclusion in one or more products, or provide impetus for a new product
* Developments in technology and application areas should be monitored to identify new needs and opportunities
* Relationships to related standards should be monitored and pursued to provide clear points of contact and interaction between standards to support increased cross-community research and data access
* Applications should be reviewed to ensure a continued mix of support across the OAIS model and FAIR data practices as well as Discovery, Dissemination, and Implementation

## Short-term Activities for Current Scientific Board Working Groups

#### Technical Committee:

* Codebook
  + Review current issues for update
  + Map to conceptual model and identify alignment requirements
  + Set up structured electronic meetings with members and users about options for Codebook structure and content
  + Define product in terms of supported applications and technical requirements
  + Develop a proposed set of new development rules for this product
* Lifecycle
  + Map to conceptual model and identify alignment requirements
  + Generate 3.3 content in a new serialized structure using COGS system for review
  + Generate optional bindings for review
  + Develop a proposed set of new development rules for this product
  + Define product in terms of supported applications and technical requirements
* XKOS
  + Map to conceptual model and currently existing models of Statistical Classification (DDI Lifecycle, DDI4 Core, GSIM, and Neuchâtel)
  + Define product in terms of supported applications and technical requirements
* Overall
  + Review conceptual model in terms of potential inclusion in product mix

#### MRT:

* Map to conceptual model and identify alignment requirements
* Define product in terms of supported applications and technical requirements

#### Controlled Vocabularies:

* Map controlled vocabulary intended usage points to conceptual map
* Identify potential locations for development of DDI Controlled Vocabularies

#### Marketing:

* Explore ways to leverage this cross product content as a means of marketing and describing DDI
* Shift focus of marketing content to intended best use “happy path” of each product
* Refine definitions of audience in terms of marketing. Some suggested audiences have included:
  + Decision makers – High level decision makers. General high level functionality. What the standard does and how it works with others (marketing world)
  + Content providers – information on how objects work together (Training world)
  + Developers who are focused on the model and how to implement use of the standard (technical world)

#### Training:

* Explore ways to leverage this cross product content as a means of describing the coverage of DDI and supported applications