



Testing to Ensure Accurate & Comprehensive C-CDA Exchange

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eHealth Exchange™

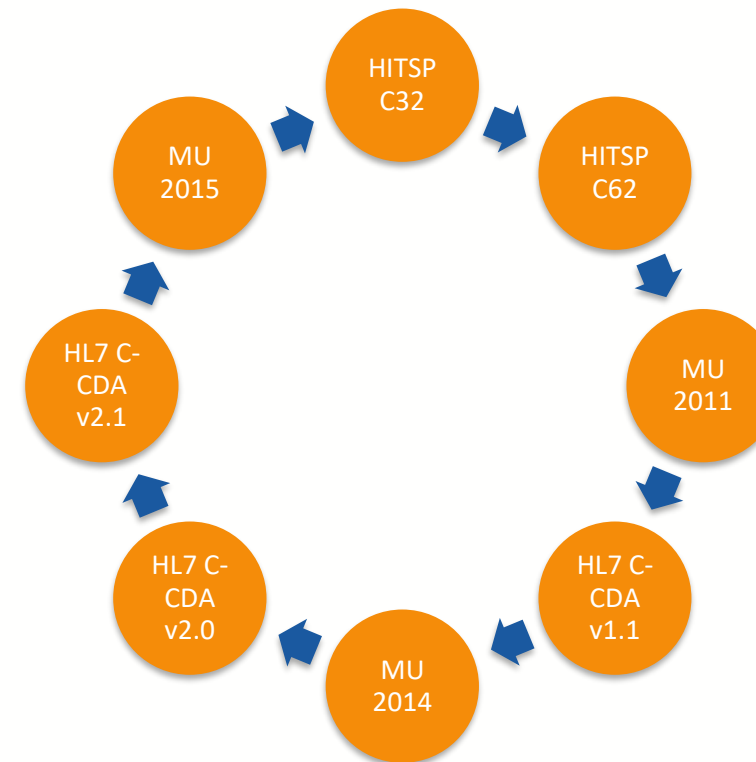
An initiative of the sequoia
project

Agenda

- Background
 - eHealth Exchange Content Testing Evolution
 - Testing Workgroup (TWG) Background & Overview
 - Industry-wide Content Pain Points
- New Content Testing Program Details
 - Enhanced Content Testing Documentation Package
 - Content Testing Process
 - Available Content Testing Tooling
 - Enhanced Content Testing – Milestones/Timeline
- Questions and Discussion

eHealth Exchange Content Testing Evolution

- No Content Testing Required: If Participant or Vendor's architecture is certified for MU 2011 edition, 2014 edition or 2015 edition
- If not MU certified: Required to test one or more of the following:
 - [The Basic C32 \(ONC 2011 Edition\)](#)
 - [The Bridge C32](#)
 - [The Consolidated CDA \(C-CDA\) \(ONC 2014 Edition\)](#)
- In June 2015, Coordinating Committee approves launch of Testing Workgroup with initial focus on Content Testing



Sequoia Project Content Testing Objectives



Develop
testing requirements
to test and validate
Health IT Modules



Create
review and approve
testing documentation,
checklists and Use Cases



Determine
interoperability testing
requirements to enable
robust testing of
information exchange
among participants

Testing Workgroup (TWG) Background & Overview

1. Testing Workgroup approved by the eHealth Exchange Coordinating Committee (CC) June 2015
2. Testing Workgroup Launched 6/30/2015 – 2 co-chairs
3. Draft Enhanced Content Testing Documentation Published 11/5/2015
4. Industry Content Testing Tools Evaluation and Scoring Completed 1/5/2016
5. Public Comments resolved and Enhanced Content Testing Documentation Published April 2016
6. Content Testing Pilot April – July 2016
 - <https://ehealth-exchange-testing.wikispaces.com/Content+Testing+Pilot+2016>
7. Lessons Learned – Published Enhanced Content Testing Documentation
 - Public Comment – November 15, 2016 – Approved – January 9, 2017
 - <https://ehealth-exchange-testing.wikispaces.com/Documentation+for+Comment>

Industry-wide Content Pain Points



Optionality:

More than one way to do things
and inconsistent
implementations across vendors



Terminology:

Inconsistent terminology usage



Specification Ambiguity

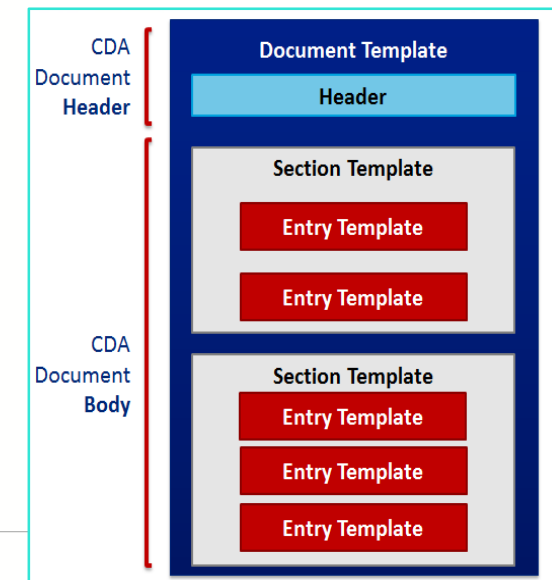


Complexity:

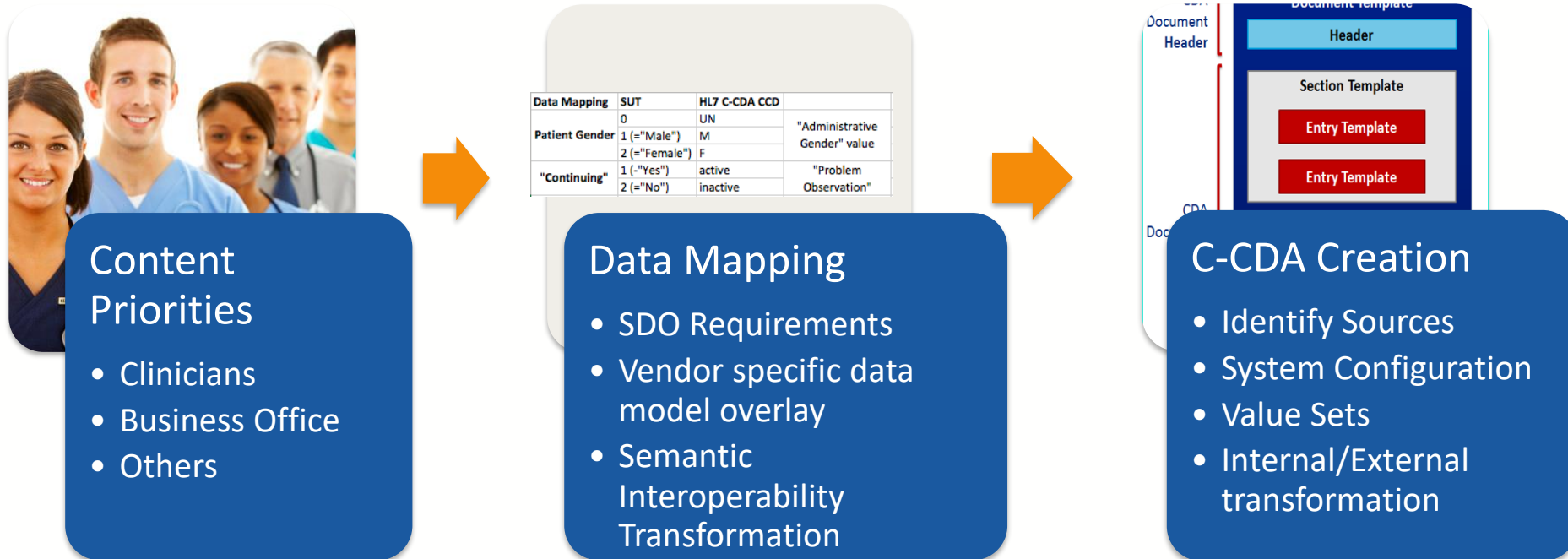
The C-CDA standard is difficult to
understand and consume and is
lacking in clearly documented
examples

What is the Enhanced Content Testing Program?

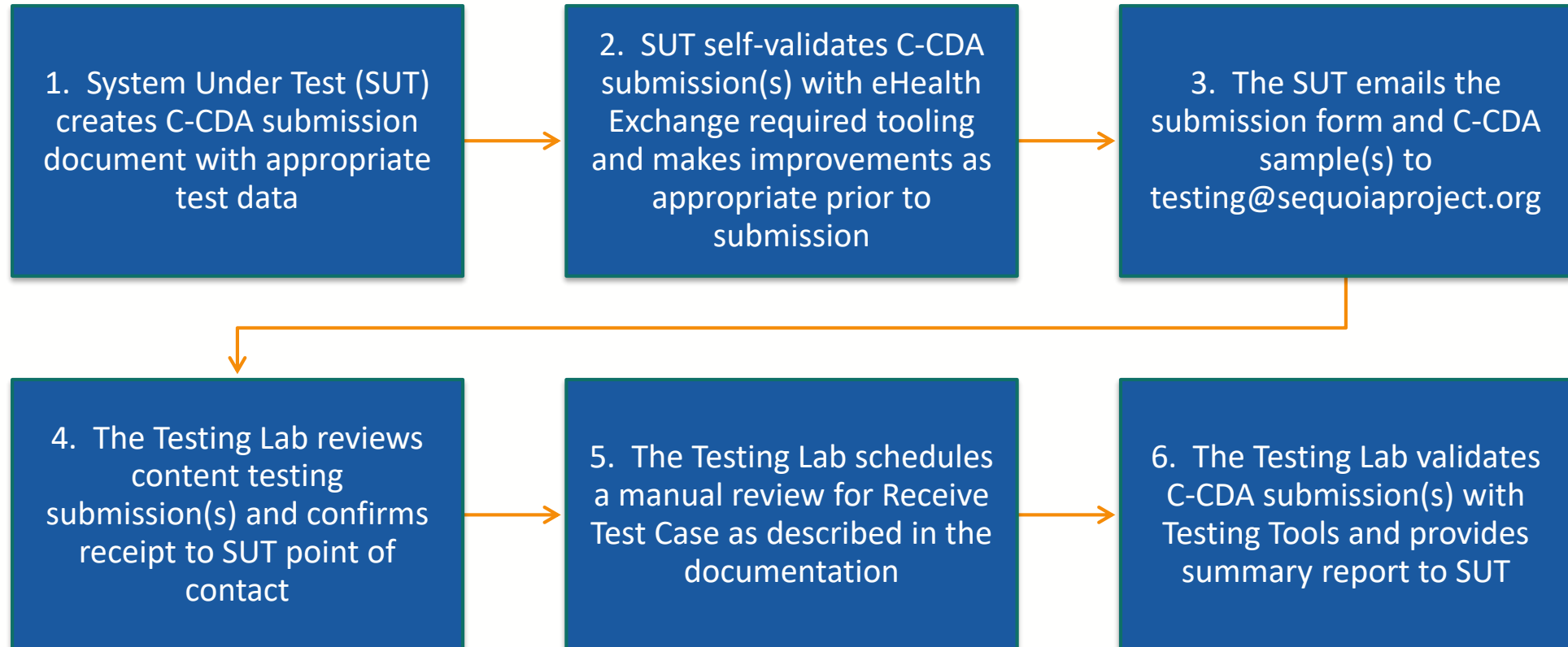
- Focused on HITSP C32/CCD, HL7 Consolidated CDA (C-CDA) R1.1 and R2.1
- Enhanced Testable Assertions
- Meaningful Use (MU) requirements/Transitions of Care
- Enhanced test cases and procedures
- Designed to enable interoperability and assure specification compliance
- Implementation-hardened by years of operations and documented pain points that continue to be coordinated with HL7 for inclusion in future documentation:
 - HL7 Implementation Guides/Companion Guides
 - [Improved Scorecard Rubrics](#)
 - (Quantitative Scoring Criteria)
 - [HL7 C-CDA Companion Guide for MU Guidance for R2.1](#)
 - [Relevant & Pertinent Documentation Publication](#)
 - [HL7 CDA Example Search](#)



Process for Creating Consistent & Robust HL7 C-CDAs



Content Testing Process



Submit HL7 C-CDA CCD sample(s) and [submission form](#) to testing@sequoiaproject.org

Content Testing Tooling Available to Industry



ART DÉCOR/GAZELLE OBJECTS CHECKER

- Hosted by IHE Services as part of the IHE International Scheme Testing
- Tooling was piloted in April 2015 and is ISO 17025 Compliant for Conformity Assessment
- Found to report on warnings and errors not found by other testing tooling



DIAMETER HEALTH

- Focused on using C-CDA documents
- CCD Analyzer tool has 280+ rules that score C-CDA for semantic and clinical completeness and syntax
- Emphasis beyond simple schema/schematron rules available in in the Meaningful Use/NIST ETT tool



SITE: STANDARDS IMPLEMENTATION & TESTING ENVIRONMENT – C-CDA SANDBOX

- A centralized collection of tools and resources
- Assists the developers and implementers of Health Information Technology standards to achieve interoperability
- Consolidated CDA (C-CDA) Sandbox
- C-CDA Scorecard - makes it possible for organizations to rate themselves against other organizations

Enhanced Content Testing - Milestones

Milestone Descriptions	Target Date	Status
Present to CC for Review/approval	11/15/16	Completed
Participant Input (Post draft to eHealth Exchange Wiki)	11/15/16	Completed
Participant Input Informational Call (Review documentation)	12/02/16	Completed
30 day notice to Participants	12/02/16	Completed
30+ day Objection Period Ends	01/09/17	Completed
Target Effective Date	01/10/2017	Completed
eHealth Exchange Tooling Implementation/Training	Q2/2017	Not Started
Testing Workgroup Feedback to HL7/ONC	Ongoing	Ongoing

Content Testing Future Timeline

- Public Comment of Updated Documentation through December 2016
- Testing Tooling chosen for Production Content Testing by February 2017
- Production Content Testing to begin Q2/2017
 - All New participants will be required to test Content
 - Existing Production Participants will have 12 months to test content
 - Errors Encountered with Initial testing will have to be corrected within 18 months of initial testing report
- Enable continuous improvements to clinical content exchanged
- Ongoing Feedback to HL7 from industry to improve standards

Questions/Thank You!