Discussion Document

Standards Harmonization Use Case Committee Update

Report to the Healthcare Information Technology Standards Panel – Use Case Committee

Arlington, VA
December 12, 2005

This briefing is being provided to the HITSP Use Case Committee

This material is intended to facilitate discussions during the HITSP Use Case Committee meeting.

All information contained in this briefing is draft.

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▸ Background Information

▸ Current status of activity

▸ Standards harmonization process

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HITSP guides, informs, and enables the standards harmonization process

▸ American Health Information Community (AHIC) is a new 'Community' announced on September 13, 2005

▸ Purpose is to advance efforts of President Bush's call for most Americans to have an electronic health record in ten years

▸ Federally-chartered by HHS to provide input and recommendations regarding the interoperability of the electronic health records

▸ HITSP is a cooperative partnership between the public and private sectors to achieve a widely accepted and useful set of standards that will enable and support widespread interoperability among healthcare software applications in a Nationwide Health Information Network for the United States

▸ Mission is to harmonize relevant standards in the health care industry to enable and advance interoperability of health care applications, and the interchange of health care data, both supporting the delivery of care and public health

▸ The standards harmonization process is a Use Case driven process

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A Common set of Use Cases will be used across the ONC contracts - HITSP, CCHIT, and NHIN prototype projects

A Use Case provides a narrative and graphical description (*a storyboard with figures and diagrams*) of the behaviors of persons or things (actors), and/or a sequence of actions, in a targeted area of interest (*domain*).

Linking real-world situations with the technology required to support them

A Use Case presents a technical specification that guides how systems and technology must be implemented to meet the use case requirements. Includes a *data model*, *process flows*, and *criteria* to test whether the system can fully support the actions described in the story board.

The HITSP Use Case Committee identified four Use Cases as candidates for the Common Use Cases

▶ The original contract work statement required each ONC contract team to identify three candidate use cases thirty days after contract award

▶ We formed a Use Case Committee to identify candidate Use Cases
  – Volunteers* representing different stakeholder perspectives met for a face-to-face work sessions
  – Presented more than 17 use case scenarios for consideration
  – Established consensus on a set of ranking criteria
  – Selected four Use Cases to recommend to the HITSP

▶ Four Use Cases were ratified at the inaugural HITSP meeting on September 27th

*ACC, ACCE, ACP, AHIMA, AMA, ASTM, CDC, DoD, Eclipsys Corp, Mayo Clinic, NCPDP, Pfizer, HL7, EHR VA, IHE, Liberty Alliance, CCHIT, RSNA, Siemens, U.S. TAG, and X12N with ANSI, HIMSS, Booz Allen, eHealthsign and ATI in supporting roles.

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Use Case Teams worked to develop the next level of definitions for each Use Case

▶ **UC1 Electronic Prescribing**

- Ambulatory Electronic Prescribing Interoperability
- Electronic Processing of Prior Authorization Requirements
- Comprehensive Medication History Exchange

An early success . . .

▶ **UC2 Chronic Disease Management**

- Diabetic Patient Management
- Cancer Patient Management
- Practitioner Access to Med Summary
- Patient Referral
- E-Transfer of Assessment and Orders

Enabling community care . . .

An ounce of prevention . . .

Maximizing and collaborating . . .

▶ **UC3 Well Child Care with Immunization**

- Hospital Discharge, healthy newborn
- First Office Visit, healthy newborn
- First Well Child visit

▶ **UC4 Care Coordination**

- Acute care to inpatient
- Acute care to primary care
- Primary care to specialist

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Background . . .

These Interoperability 'Building Blocks' have been identified by the Use Case Committee

ID#	Title	#	Title
1	Authenticate User across Enterprises	21	Manage Patient Communications across Enterprises
2	Collect and Communicate Audit Trail	22	Maintain Consistent Time across Enterprises
3	Provide Secure Data Messaging	23	Notify Document Availability across Enterprises
4	Digitally Sign Documents	25	Provide Node Authentication and Secured Communication Channel
5	Share Medical Summaries across Enterprises	26	Manage User Credentials
6	Share Diagnostic Images across Enterprises	27	Communicate Scheduling and Appointment Information across Enterprises
7	Share Lab Reports across Enterprises	28	Communicate Batch Data
8	Identify a Patient across Enterprises	29	Communicate Eligibility Benefit & Coverage Info
9	Share Patient Demographics across Enterprises	30	Communicate Treatment Authorization Information
10	Manage and Control Data Access	31	Communicate Referral Information
11	Share Clinical Decision Support Info across Enterprises	32	Communicate Claim, Encounter, or EOB Information
12	Share Order Info across Enterprises	33	Communicate Claim Status Information
13	Communicate Real-time data	34	Communicate Claim Payment or Payment Advice Information
15	Verify Patient Consent, Authorizations and Advance Directives	35	Communicate Healthcare Attachment Information
16	Share Patient Medication History across Enterprises		
18	Access Terminology Service		
19	Anonymize and Pseudonymize Data		

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With the early formation of the American Health Information Community, the approach to Use Case identification changed

▸ Soon after contract award, The Community adopted a different approach to ensuring integration of results across the ONC contractors

  – The community would identify the common use cases, or "breakthroughs" as they are being called

▸ The ONC Project Office initiated an effort to establish a common template for Use Case development to facilitate cross-contractor team integration and communication

  – The HITSP Use Case Committee Use Case template served as the starting point for the effort

  – The Electronic Prescribing Use Case content was re-used to test the template

▸ The Community is about to announce the specifics around key breakthrough areas

  – Bio-surveillance

  – Consumer Empowerment

  – Chronic Disease Management

  – Quality Monitoring

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ONC Use Case Template and Guidance Document

▸ Once ONC distributes the official list of breakthroughs, ONC contractors and other entities will prepare more detailed use cases in accordance with the Use Case Template

▸ By utilizing a common format and nomenclature, ONC will be able to converge the details of the use cases

▸ Once harmonized the use cases will be easily exchangeable among the involved parties, facilitate the identification of common actions and activities for coordination and standardization, and be used to drive subsequent activities

▸ The HITSP Use Case Committee work group leaders were instrumental in providing feedback to the development of the ONC Use Case Template and Guidance

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Use Case Committee work group leaders participated in dry run of draft template with ONC

▸ November 2 - Draft use case template received from ONC and distributed to Use Case Committee work group leaders

▸ November 4 – Initial feedback on use case template submitted to ONC

▸ November 16 – Single use case instance for e-prescribing submitted to ONC

▸ November 23 – ONC circulated draft use case template, use case guidance, example e-prescribing use case, and draft delivery schedule to other contractors

▸ November 28 – Full depth of detail for e-prescribing use case submitted to ONC

▸ November 29 – Feedback on use case template and draft schedule submitted to ONC

▸ November 29 - AHIC meeting – refinement of breakthroughs

▸ December 12 – ONC announcement of breakthrough areas and meeting of the HITSP Use Case Committee

The Community's Breakthroughs

November 29

▸ Bio-surveillance
  - Real-time public health event monitoring system
  - Individual and population health
  - Communities and government agencies

▸ Consumer Empowerment
  - Widespread access to a portable, longitudinal and consumer controlled health record
  - Electronic clipboard – Registration info, Med History

▸ Quality Monitoring
  - Streamline and standardize quality reporting
  - Immunization records

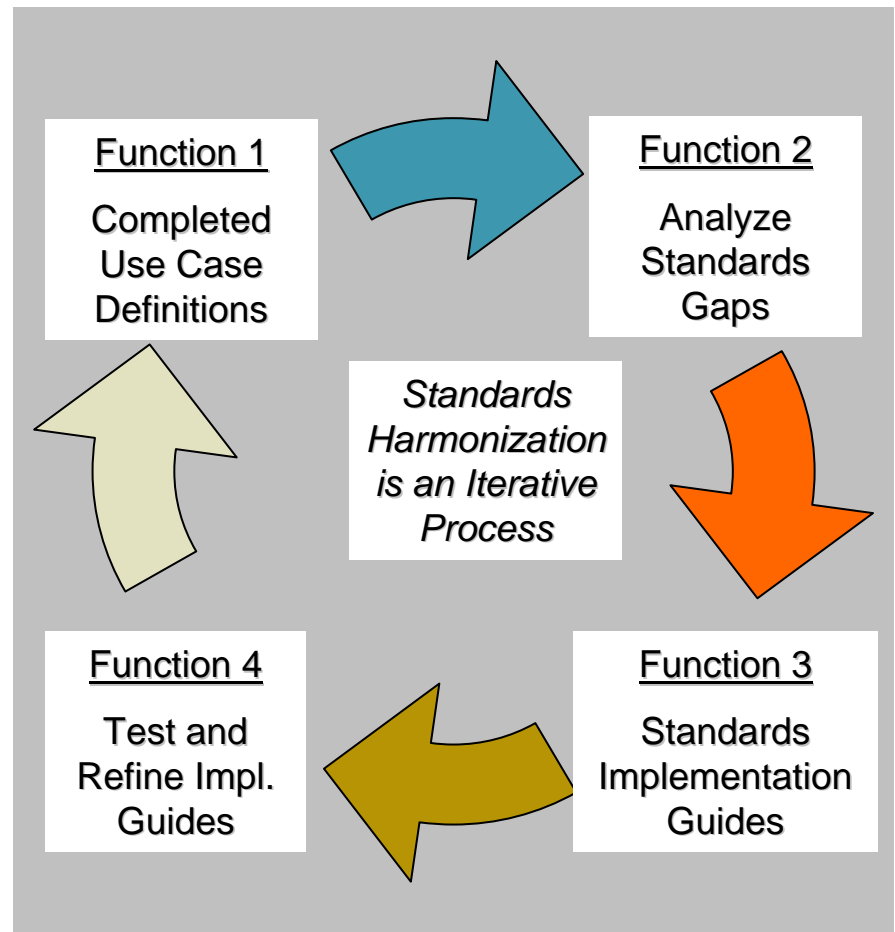## Use Cases will be detailed to support these primary areas

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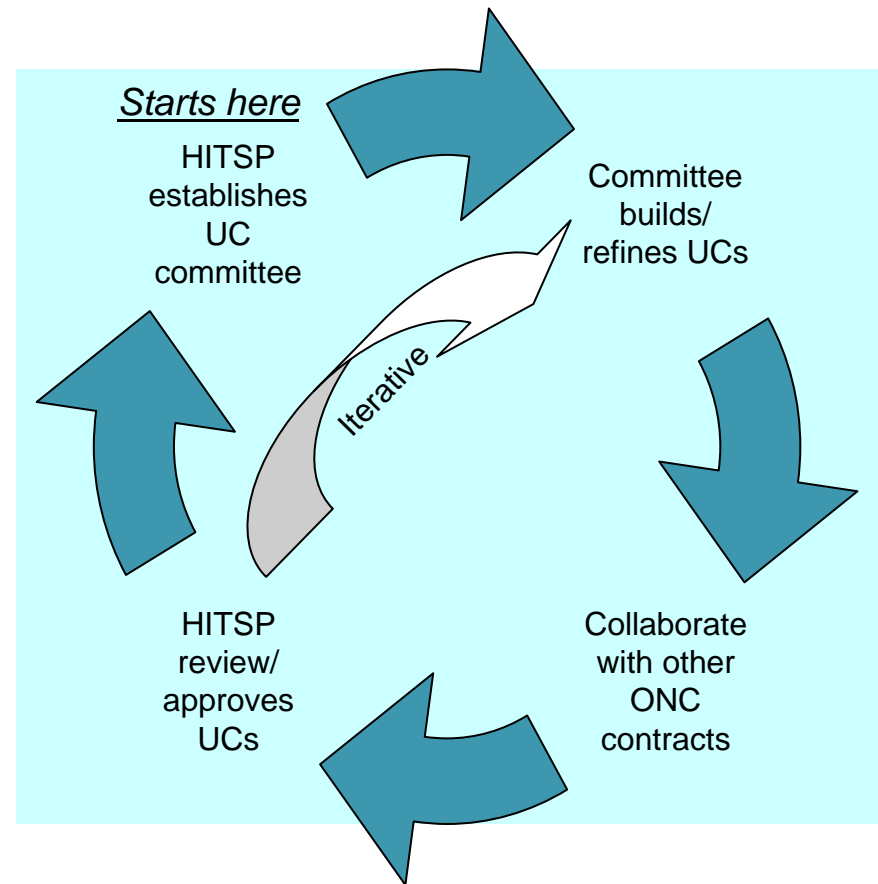
▸ Standards harmonization process

▸ Next steps

The Standards Harmonization Process contains four functions

▶ Use cases will be developed in support of the AHIC breakthrough areas

▶ Use case development is an iterative and collaborative process

▶ During Gap Analysis, HITSP will resolve standards gaps and overlaps for all three use cases

▶ Implementation Guides will be developed and tested in an iterative process

▶ Lessons learned from execution of testing will inform final versions of the Implementation Guides

▶ Implementation Guides will be published through NIST upon completion

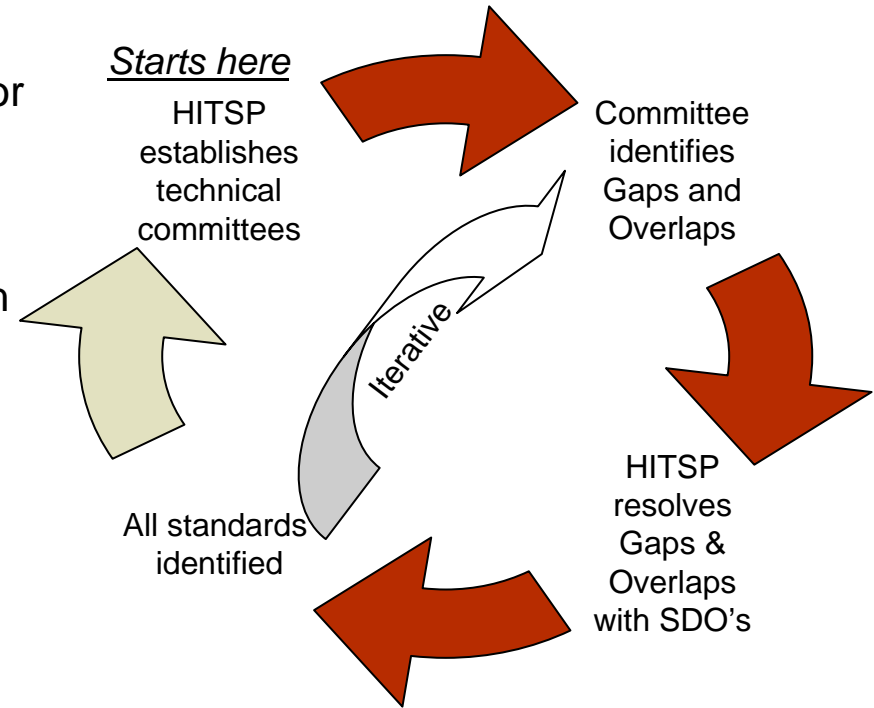**Function 1**

Completed Use Case Definitions

Function 2

Analyze Standards Gaps

Standards Harmonization is an Iterative Process

Function 4

Test and Refine Impl. Guides

Function 3

Standards Implementation Guides

Function 1 - Use Case Development will require collaboration and iteration with multiple stakeholders

▸ Use Case Committee members will attend facilitated sessions to develop use cases according to the ONC template

▸ HITSP will review/approve them

▸ There will be collaboration through the project office with other ONC contracts

▸ This annual process would be used for years 2, 3 and beyond

Starts here

HITSP establishes UC committee

Committee builds/ refines UCs

Iterative

Collaborate with other ONC contracts

HITSP review/ approves UCs

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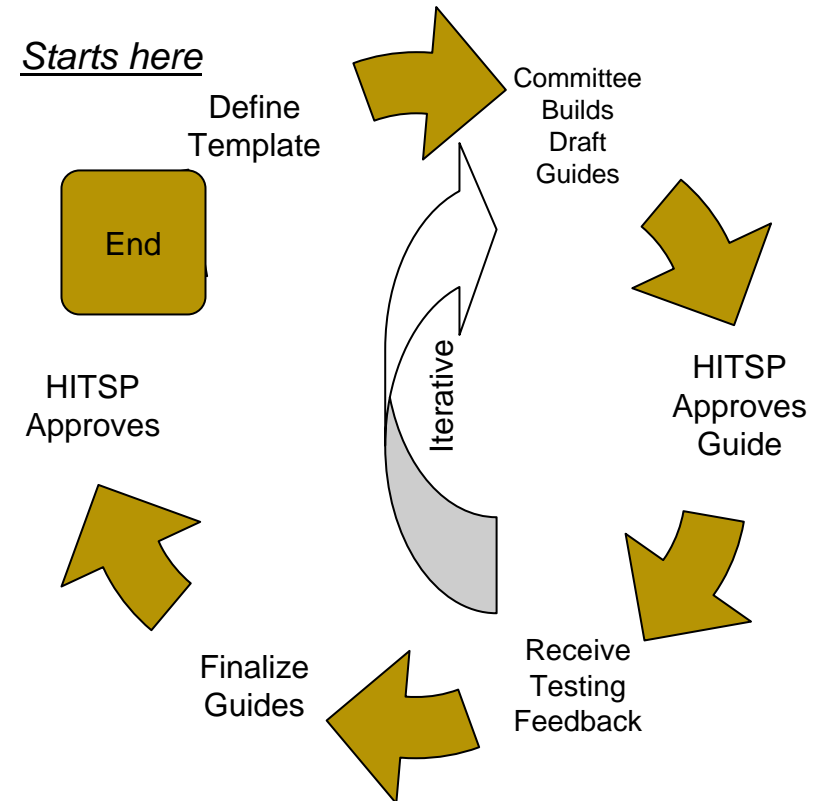# Function 2 -- The Gap Analysis process will define and resolve standards gaps and overlaps

▸ The Use Case Committees will identify the gaps and overlaps and forward to HITSP for resolution

▸ The standards harmonization process will be governed by HITSP in collaboration with SDO's

▸ This is an ongoing, iterative process

▸ Once all standards are identified for a use case, it will move into the Implementation Guide Development process

Starts here

HITSP establishes technical committees

Committee identifies Gaps and Overlaps

Iterative

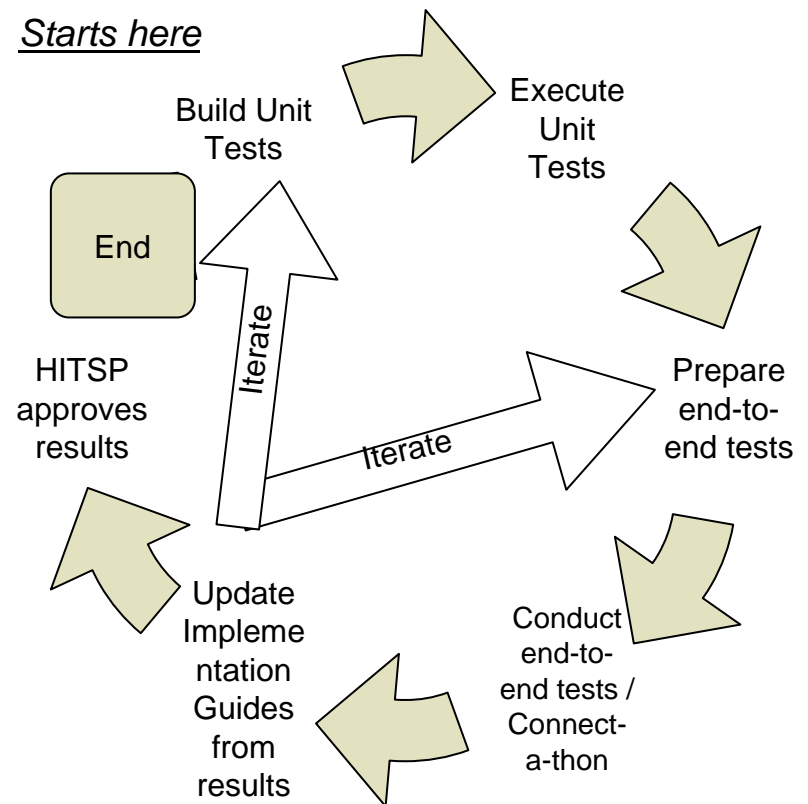All standards identified

HITSP resolves Gaps & Overlaps with SDO's

Function 3 -- Implementation Guides will be developed in an intensive, iterative process

▶ Implementation Guides will be developed, approved by HITSP and endorsed by AHIC

▶ Implementation Guides will not be finalized until after a public comment period, a testing process and refinement

▶ Input will be received from ONC and the other contractors

Starts here

Define Template

End

Committee Builds Draft Guides

HITSP Approves Guide

Iterative

HITSP Approves

Receive Testing Feedback

Finalize Guides

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Function 4 - Testing is required to complete the Implementation Guides

▸ Unit test scripts and test tools will be developed

▸ After completing unit testing, use cases will be paired together to create end to end test scripts in preparation for a Connectathon-like testing event

▸ This validation process will work out the technical details

▸ Results of the testing event will be reviewed/approved by HITSP and used to make required updates to the implementation guides

Starts here

Build Unit Tests

Execute Unit Tests

End

Iterate

HITSP approves results

Iterate

Prepare end-to-end tests

Update Implementation Guides from results

Conduct end-to-end tests / Connect-a-thon

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Conclusions . . .

This process will continue to evolve

AHIC Breakthrough Areas

Other Contractor Inputs

Lessons Learned

Function 1

Completed Use Case Definitions

Function 2

Analyze Standards Gaps

Standards Harmonization is an Iterative Process

Function 4

Test and Refine Impl. Guides

Function 3

Standards Implementation Guides

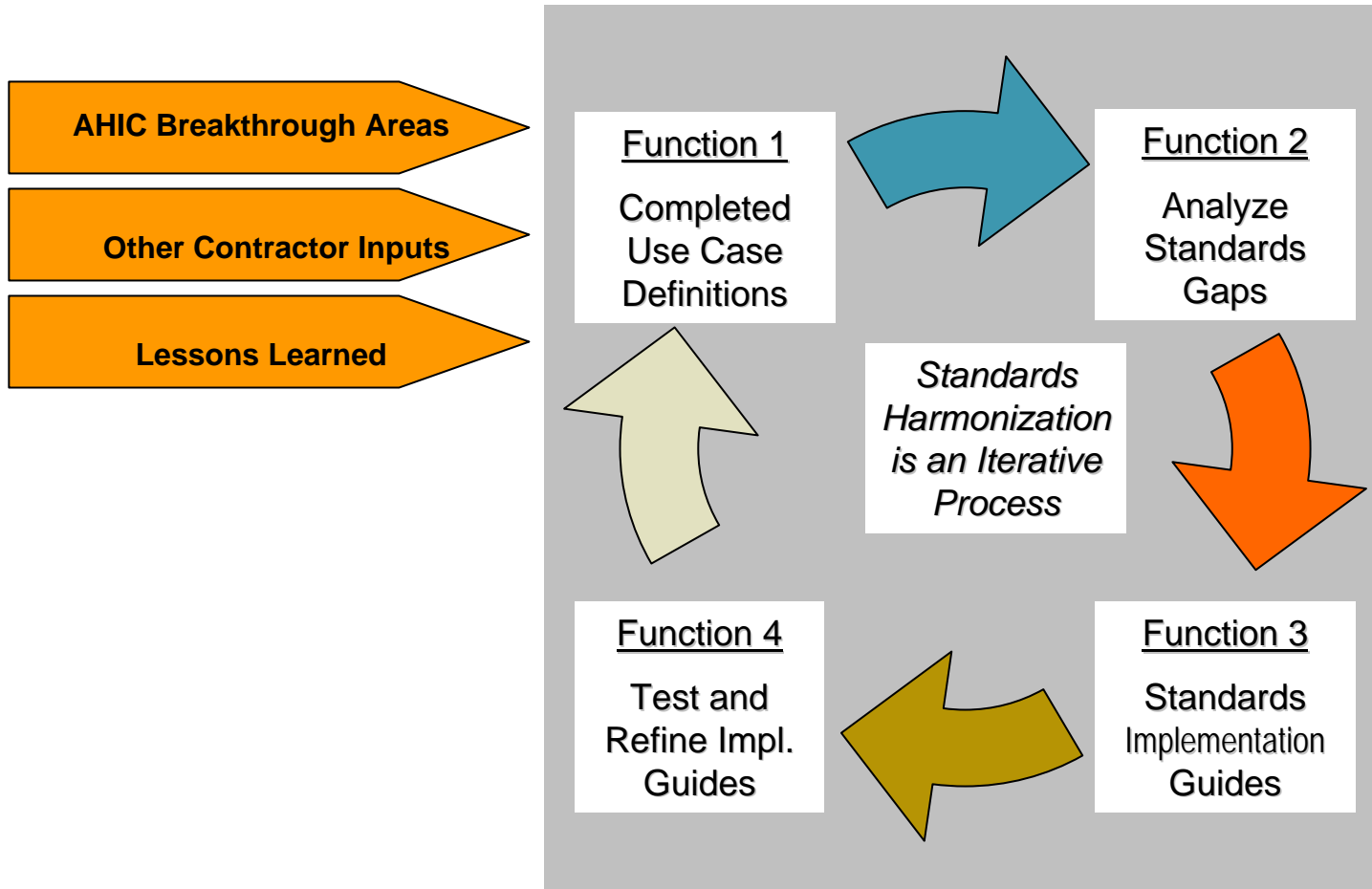**Healthcare Information Technology Standards Panel**

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Next Steps

▶ December 12 - Use Case Committee convenes
  – Review ONC template
  – Begin development of 1st Use Case

▶ December 13 – HITSP Board meeting

▶ January 5 – HITSP full membership meeting

▶ January 17 – AHIC meeting

▶ January 23–27 Use Case Technical Committee convenes

▶ May 29 – Gap analysis due

▶ July 29 – Recommended standards due

▶ September 29 – Implementation guides due