Zoom Meeting Interface and Basic Logistics

*image above is a publicly available tutorial image obtained from Zoom website

- **VIDEO:**
  - **Panelists/Presenters/Facilitators - Please enable your video using bottom left video button with camera icon.**
  - **Attendees -** If you did not receive an invitation to be a panelist, you are in attendee only mode and **will not have access to enable video**

- **AUDIO:**
  - **Panelists/Presenters/Facilitators -** Adjust your audio settings as needed (choose computer audio, call in, mute, etc.) using **audio button bottom left, microphone icon. Please remain muted unless speaking.**
  - **Attendees -** If you did not receive an invitation to be a panelist, you are in attendee only mode and **will not be able to enable audio**

- **CHAT:** The chat function is open to ***ALL*** participants (bottom, middle right, highlighted in orange in this image). Those in Attendee only mode are encouraged to provide feedback and questions via chat throughout the discussion. Chat will be monitored by the *FAST* team and key themes will be pulled into the discussion.

- **TECHNICAL DIFFICULTIES:** Having trouble hearing the presenters or seeing the shared screen? Put your issue in chat and the Meeting Host will help you.

FHIR AT SCALE TASKFORCE

FAST Solution Interdependencies

ONC *FAST* Workshop

September 14, 2020

FAST Taskforce Antitrust Notice

- The ONC FHIR At Scale Taskforce (*FAST*) (Hereinafter "Taskforce") is committed to full compliance with existing federal and state antitrust laws.
- All members involved in the Taskforce effort, including its advisory groups, will comply with all applicable antitrust laws during the course of their activities. During Taskforce meetings and other associated activities, including all informal or social discussions, each member shall refrain from discussing or exchanging competitively sensitive information with any other member. Such information includes, but may not be limited to:
  - Price, premiums, or reimbursement charged or paid for products or services
  - Allocation of customers, enrollees, sales territories, sales of any products or contracts with providers
  - Any other competitively sensitive information that is proprietary to a member company
- If you have any specific questions or concerns, seek guidance from your own legal counsel.
- Members should not bring confidential information or intellectual property (hereinafter "Intellectual Property") owned by their respective member companies into Taskforce meetings. To the extent such Intellectual Property is shared with the Taskforce that shall not be construed as a waiver of member company's rights to, or ownership in, the Intellectual Property.

Session Facilitator

PATRICK MURTA

Chief Interoperability Architect & Fellow

Humana

FAST Chief Architect

Agenda

Session Duration: 1 hour, 50 minutes

- **Welcome & Introductions**
- **Session Goals**
- **Overview**
- **Discussion Topics**
  - Interactive Panel
  - Participant Q&A
- **Wrap Up/ Key Takeaways**

FAST Key Panelists

***FAST* Panelists**	
Bob Dieterle	Enablecare, *FAST Directory, Versions & Scale Tiger Team Lead*
Brett Stringham	Optum, *FAST Security Tiger Team Lead*
Meena Jambulingam	Optum, *FAST Identity Tiger Team Lead*

Roles & Logistics: Panelist vs. Attendee Modes

FAST Key Panelists

- Invited to join, actively engage and support the conversation
- Encouraged to communicate verbally (mics on) and to turn on video
- Monitor the attendee chat box for feedback, address questions via chat or promote questions that are significant to the discussion topic or warrant a verbal debate /reaction with the panel group

Industry Expert Reaction Panelist (in panelist mode)

- Invited to join the live interactive discussion with the *FAST* team
- Encouraged to communicate verbally (mics on) and to turn on video
- Provide their industry expertise and feedback
- Discuss or debate the topic with the facilitator and the panelist group
- Raise questions or concerns
- Feedback will inform *FAST* next steps

General Audience and *FAST* Technical Learning Community Members (in attendee mode)

- Encouraged to engage and contribute feedback and questions via the chat box
- Do not have the ability to contribute verbally to the conversation (mics off)
- No ability to be on video

FAST Solution Interdependencies

Session Description

The ability to locate FHIR endpoints, ensure proper security and identity, and route via intermediaries when most efficient, are key to reliable electronic health information exchange.

Scaling the way we exchange information across the health care ecosystem using FHIR relies on a set of core capabilities with potential interdependencies.

Through a collaborative conversation with industry experts, this session will explore the interdependencies between the *FAST* proposed solutions, and the architecture of a FHIR ecosystem running at scale.

FAST Solution Interdependencies

Session Goals

1. Confirm that each one of the proposed solutions can be implemented independently
2. Explore if there are potential groupings of solutions to implement simultaneously
3. Gather from participants the things that they would rather have sooner

Overview

FAST Proposed Solutions

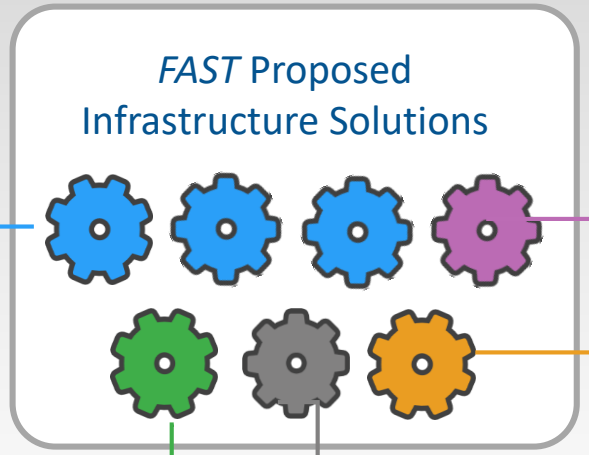
Directory, Version & Scale (3) | Identity (4) | Exchange Process (1) | Testing & Certification (1) | Security (4)

A US Wide Solution for FHIR Endpoint Discovery (Version 2)

A US Wide Methodology for Supporting Multiple Production Versions of FHIR (Version 2)

US Wide Scaling Requirements for FHIR RESTful Exchange Intermediaries (Version 2)

Standards Based Approaches for Individual Identity Management (Version 2)
- Mediated Patient Matching
- Collaborative Patient Matching
- Networked Identity Management
- Distributed Identity Management



An HL7 FHIR Standard Based Solution for Intermediary-to-Intermediary Exchange and Reliable Routing with Metadata (Version 3 Draft)
- Reliable Routing with Metadata Across Intermediaries

A Scalable FHIR Testing & Certification Platform (Version 2)

US Wide Model(s) for Scalable Security Solutions (Version 3 Draft)
- UDAP Trusted Dynamic Client Registration
- UDAP Tiered OAuth for User Authentication
- UDAP JWT-Based Client Authentication
- UDAP JWT-Based Authorization Assertions

Example FHIR Transaction Journey

Patient visits Primary Care Physician (PCP)

PCP needs information from Payer

Payer receives PCP request

REQUESTING SYSTEM

RECEIVING SYSTEM

1 → 2 → 3 → 4 → 5a → 5b → 6

1 Formulates FHIR Request

2 Looks Up the FHIR Endpoint for Recipient

Transaction Information (eg, Header) Appropriately Configured

3 Receives Transaction, Validates Requestor, Validates Version

4 Performs Patient Matching and Sends Back Not Found If Unable To Do So

5a Authenticates FHIR User's Role

5b Filters Out Data That Does Not Have Consent

6 Generates & Returns FHIR Response

7 Requesting System Receives Data

PCP views Patient information

DIRECTORY

EXCHANGE

IDENTITY

VERSIONING

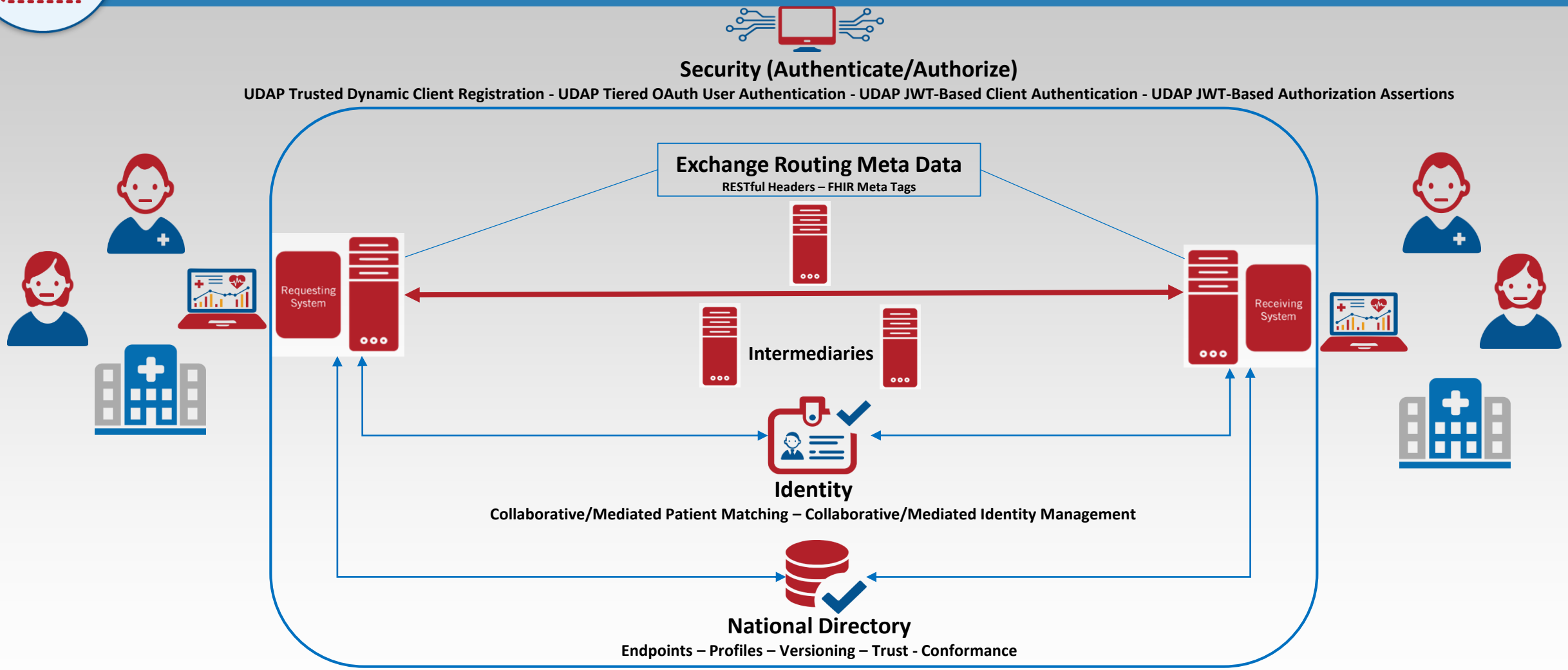
DIRECTORY EXCHANGE VERSIONING

CONFORMANCE & CERTIFICATION

SECURITY

PILOTS

Conceptual Integrated Architecture



CONFORMANCE & CERTIFICATION (Testing & Certification Program)

PILOTS (*FAST* Capability Vetting with Existing HL7 Accelerators)

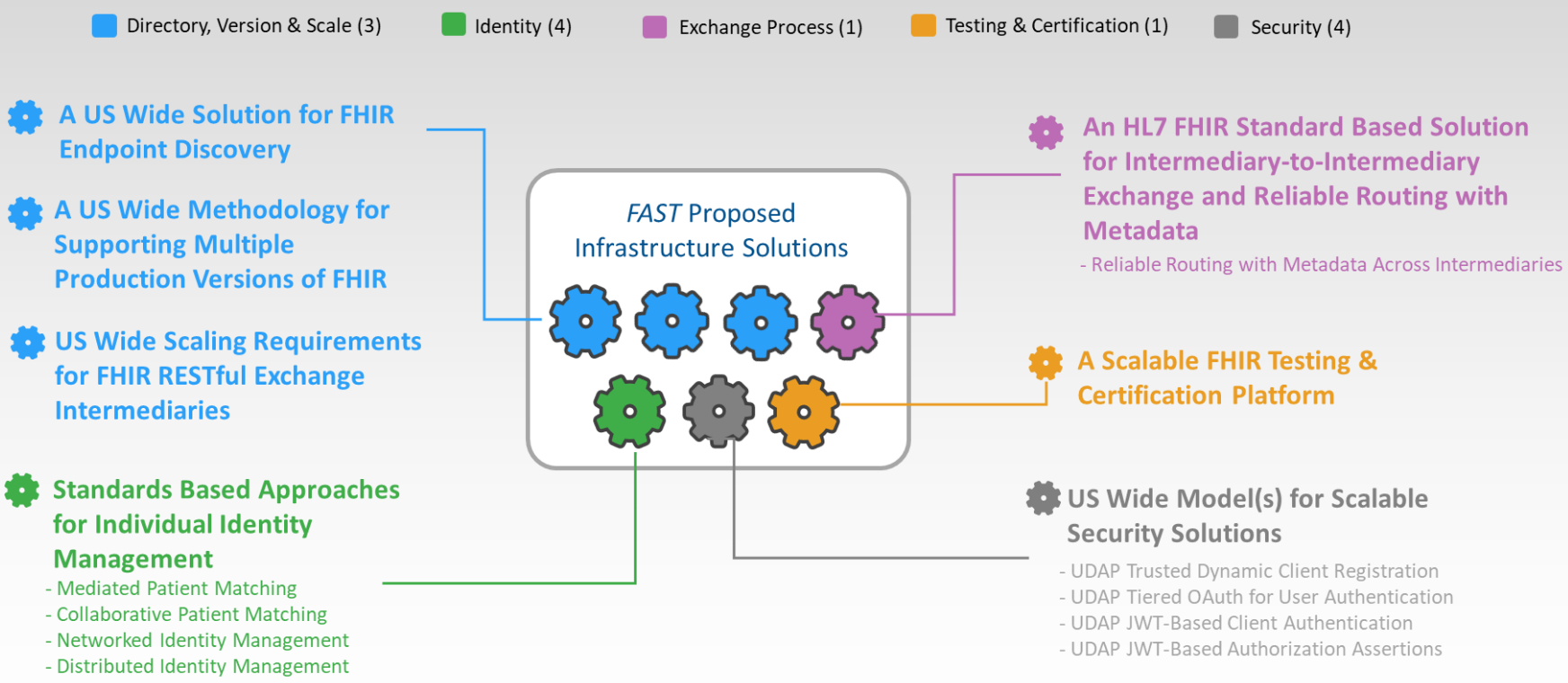
Discussion

Discussion: Session Goal 1

Session Goal 1: Confirm that each one of the proposed solutions can be implemented independently

?

Determine consensus of the standalone nature of the solutions



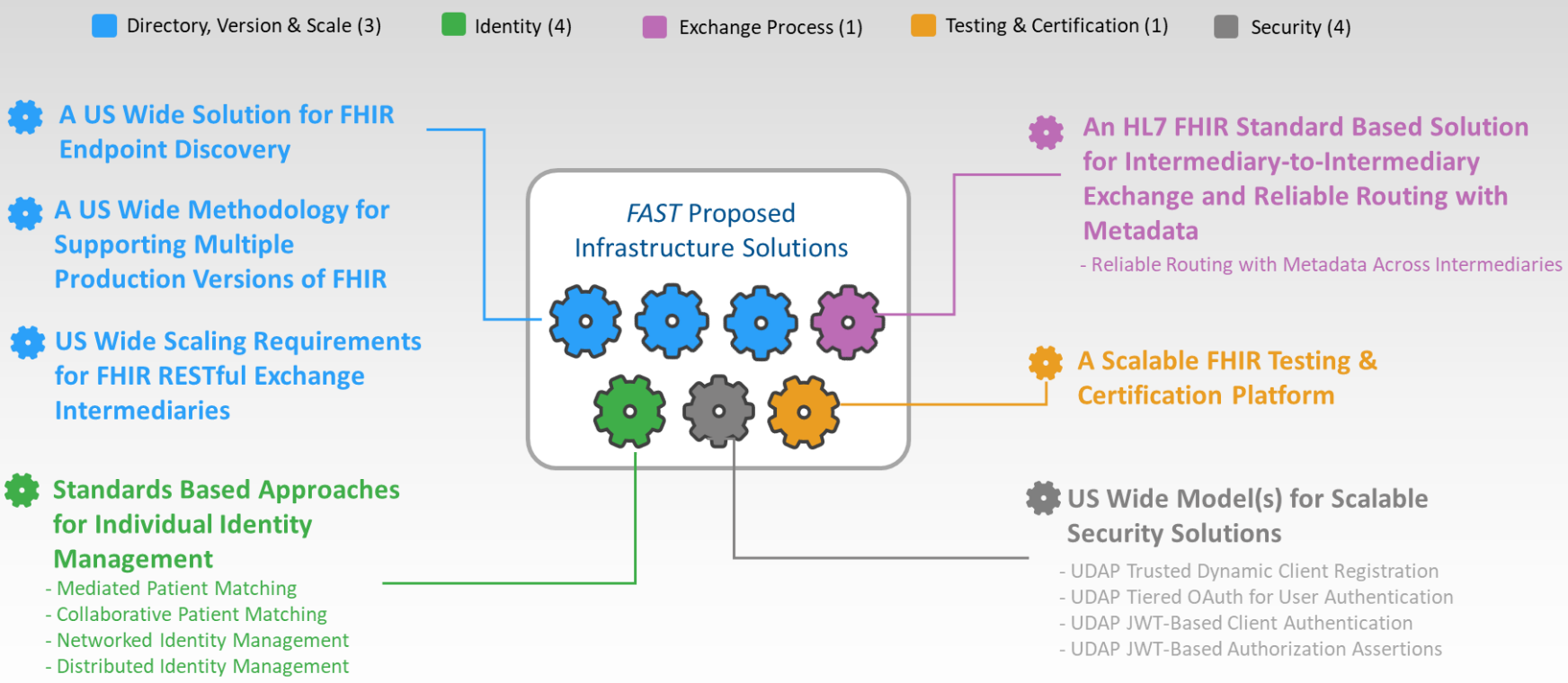
Discussion: Session Goal 1

Session Goal 1: Confirm that each one of the proposed solutions can be implemented independently

?

Value vs. Time to Market

Which solution(s) add value quickly and are reasonable to implement?



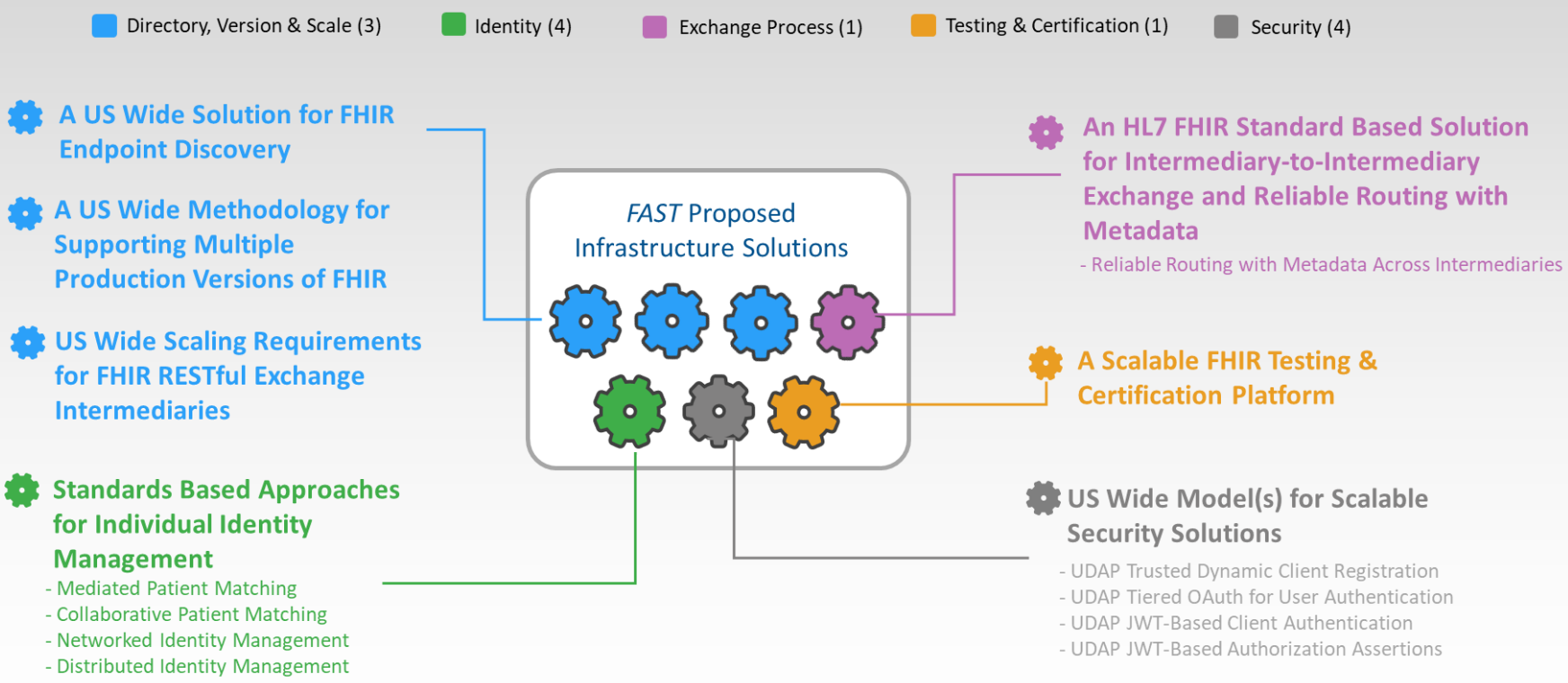
Discussion: Session Goal 1

Session Goal 1: Confirm that each one of the proposed solutions can be implemented independently

?

Are there solutions that provide more immediate near-term impact?

What solution(s) can wait?



Discussion

Session Goal 2: Explore if there are potential groupings of solutions to implement simultaneously

?

What are the potential recommended groupings and why?

SOLUTION FRAMEWORK	SOLUTION FEATURE	USE CASE EXAMPLE GROUPINGS			
		CMS Payer to Payer	CMS Patient Access API	CMS Directory	CMS Formulary
Directory	Payer Directory	X			
	Provider Directory				
	App Directory				
	Supported Profiles				
	Supported Trust Frameworks				
Version	Availability in Directory				
Scale	Intermediary Guidelines				
Exchange Metadata	RESTful Header Tags				
	FHIR Metadata Tags				
Testing & Certification	Conformance Level				
	Automated Tool				
	Governance				
Identity	Collaborative Patient Matching	X			
	Mediated Patient Matching				
	Networked Identity Management				
	Distributed Identity Management				
Security	UDAP Trusted Dynamic Client Registration				
	UDAP Tiered OAuth				
	UDAP JWT-Based Authorization Assertions				
	UDAP JWT-Based Client Assertions				
Pilot	Synergy with Da Vinci				
	Coalition of the Willing				

Discussion

Session Goal 2: Explore if there are potential groupings of solutions to implement simultaneously

?

Are the groupings different by healthcare constituents (e.g., payer, EHR, etc.)?

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		CMS Payer to Payer	CMS Patient Access API	CMS Directory	CMS Formulary
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	Coalition of the Willing				

Discussion

Session Goal 2: Explore if there are potential groupings of solutions to implement simultaneously

?

Are groupings a “must have” or a “nice to have”?

SOLUTION FRAMEWORK	SOLUTION FEATURE	USE CASE EXAMPLE GROUPINGS			
		CMS Payer to Payer	CMS Patient Access API	CMS Directory	CMS Formulary
Directory	Payer Directory	X			
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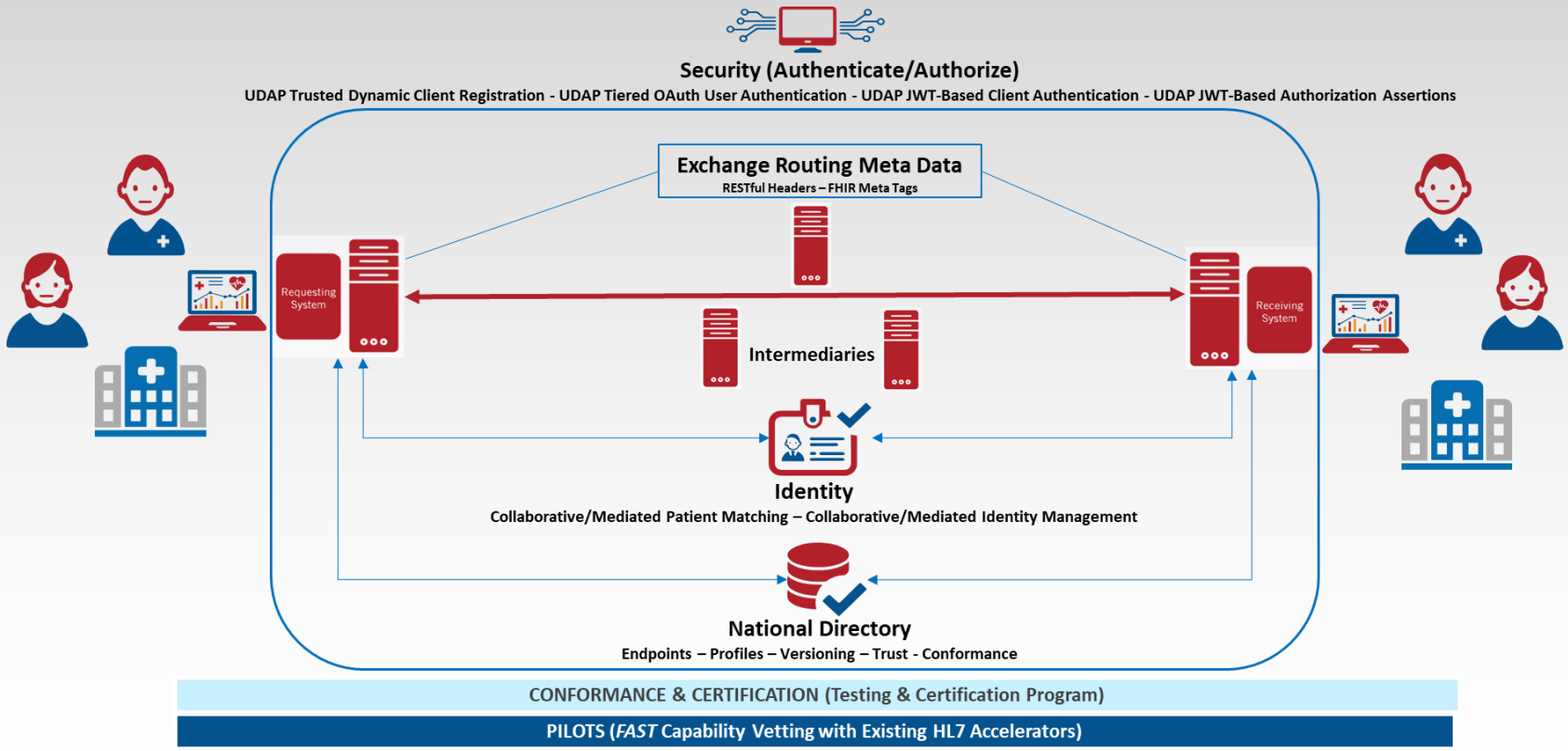
Pilot	Synergy with Da Vinci				
	Coalition of the Willing				

Discussion: Session Goal 3

Session Goal 3: Gather from participants the things that they would rather have sooner

?

What information is needed for organizations to formulate a plan for implementation?

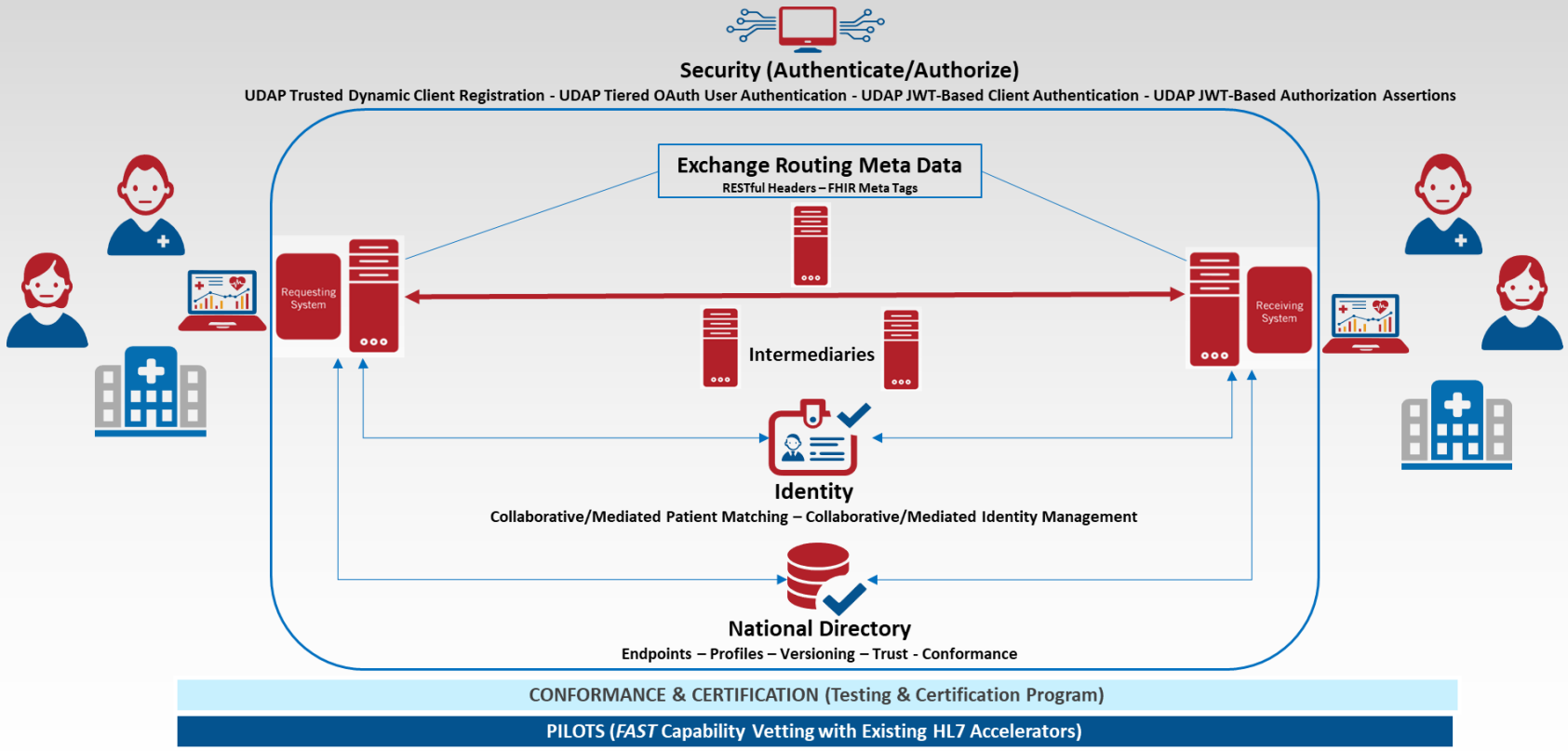


Discussion: Session Goal 3

Session Goal 3: Gather from participants the things that they would rather have sooner

?

What level of piloting or ecosystem testing is recommended? (i.e., Connectathon)



Wrap Up

Breakout Sessions Schedule

12pm – 1pm: **Lunch Break**

1:00pm – 2:30pm: **Afternoon Breakouts Part 1 - *FAST* Pathways to Implementation** (limited attendance, concurrent)

Room #1: ***Standards***	**Room #2:** ***Regulations***	**Room #3:** ***Process***
Session Goals: 1. Discuss why the *FAST* community believes that standards are key 2. Discuss and identify where the *FAST* standards should reside long term	**Session Goals:** 1. Consider the current regulatory landscape and how it presents opportunities or challenges related to each of the proposed solutions 2. Explore policy concepts and considerations that would allow for transparent and predictable update cycles in response to industry need. 3. Discuss ways to mitigate impact of understanding and implementing regulatory requirements for smaller organizations.	**Session Goals:** 1. Explore process related elements for implementation of FHIR-enabled interoperability at scale (e.g. process related governance, funding, and operational considerations, etc.) 2. Identify key things necessary to deploy solutions in a sustainable manner. 3. Explore limitations and opportunities to convene related groups that need to avoid any implication of anti-trust.

FAST Workshop – Full Day Agenda and Resources

- View the *FAST* Workshop Summary and Detailed Agenda
  - Morning and Closing Plenary
  - Breakout Room Sessions Schedule
  - Handouts and Resources
- Explore these *FAST* resources
  - New to *FAST*? Breakout sessions target interactive discussion and references the *FAST* work to date. Please consider exploring any of the following *FAST* artifacts before attending these breakout sessions:
    - The *FAST* 2020 Mid-Year Report
    - The *FAST* 2019 End of Year Report
    - SME Panel Session Pages

CONTINUE THE CONVERSATION!

Join the Technical Learning Community to stay up to date – receive updates about FAST presentations & events, provide additional input and follow our progress.

JOIN THE LINKEDIN GROUP

&

SIGN UP FOR THE TLC

All content is available on the ***FAST* Project Page** *or* **https://tinyurl.com/ONC-FAST**

Thank You

Connect with *FAST* on LinkedIn to stay informed

For more information on the *FAST* Initiative,
visit the *FAST* Project Page or https://tinyurl.com/ONC-FAST

Have any further questions/suggestions?

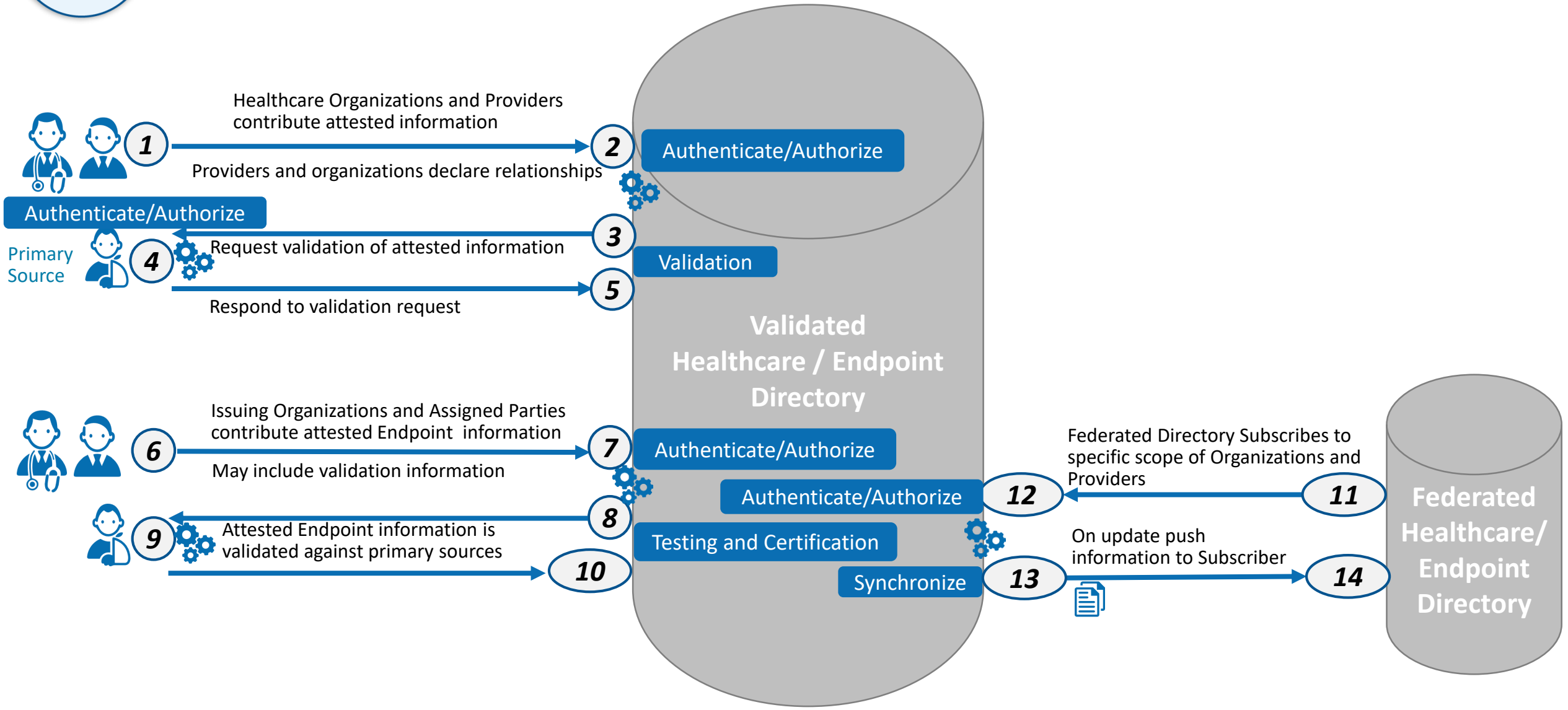
Please contact Stephen Konya at Stephen.Konya@hhs.gov
& Diana Ciricean at Diana.Ciricean@hhs.gov

SK

APPENDIX

FAST Endpoint Directory

FAST Endpoint Directory – Architecture and Workflow



PO

Overview and status

BARRIER

The industry lacks a generally available method to find all FHIR endpoints and their associated capabilities and attributes, as well as a common process for maintaining the information and validating its accuracy

SOLUTION

One national source for validated directory information that is available to any national or local directory workflow environment

IN SCOPE

Individual and entity demographics to determine endpoint relationships, computable endpoint information such as accessibility requirements, metadata for routing, trust framework, implementation guides and certification status

Federated access by HIEs, state directories, EHRs

A FHIR standard implementation guide for use of the directory

OUT OF SCOPE

Manual / portal access, creation of a trust framework, non-FHIR related endpoints, application certification process

STATUS

Incorporating feedback from industry stakeholders

OPEN ITEMS

Define the minimum viable product (MVP) and outline the incremental steps/roadmap to build a directory of endpoints

CURRENT SOLUTION

FAST Endpoint directory proposed solution document

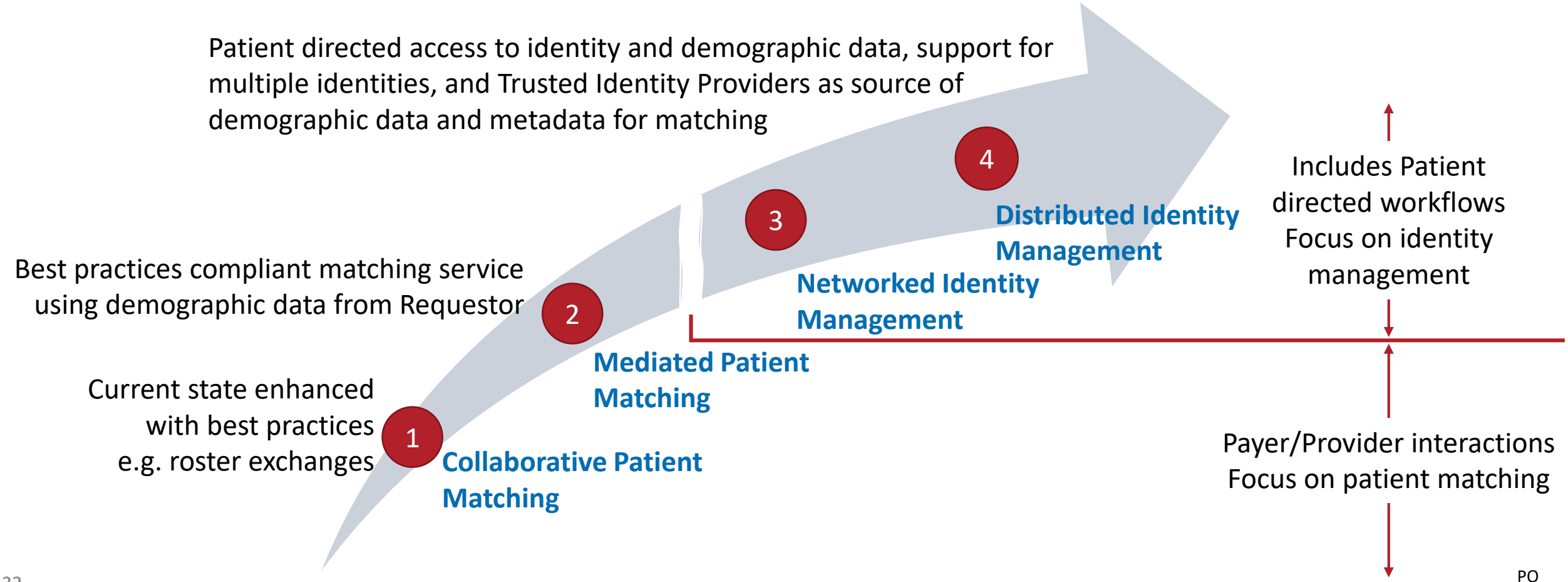
(version 3 in progress)

PO

FAST Identity Management

Solution Options: Low to High Complexity

Multiple options progressing from low to high complexity (technical and process)



PO

Overview and status

BARRIER

The industry currently employs a range of patient matching and identity management processes with inconsistencies and limited scalability as volume and the number of participants increase

SOLUTION

Establish a set of patient matching and identity management patterns and best practices that the industry can adopt to reduce the variations that exist today and provide a bridge to new approaches in the future

IN SCOPE

Patient matching during payer/provider interactions: *Collaborative* and *Mediated Patient Matching*

Patient-directed workflows focusing on identity management: *Networked* and *Distributed Identity Mgmt.*

OUT OF SCOPE

Patient as a requester or responder, contractual arrangements. (Security and directory considerations are addressed by other *FAST* solutions)

STATUS

Incorporating feedback from industry stakeholders

OPEN ITEMS

Pursue provider identity matching. Apply proposed solutions to use cases, capture patient matching recommendations, explore steps to Distributed Identity Management, consider how regulation/policy might address challenges that can't be solved by the market

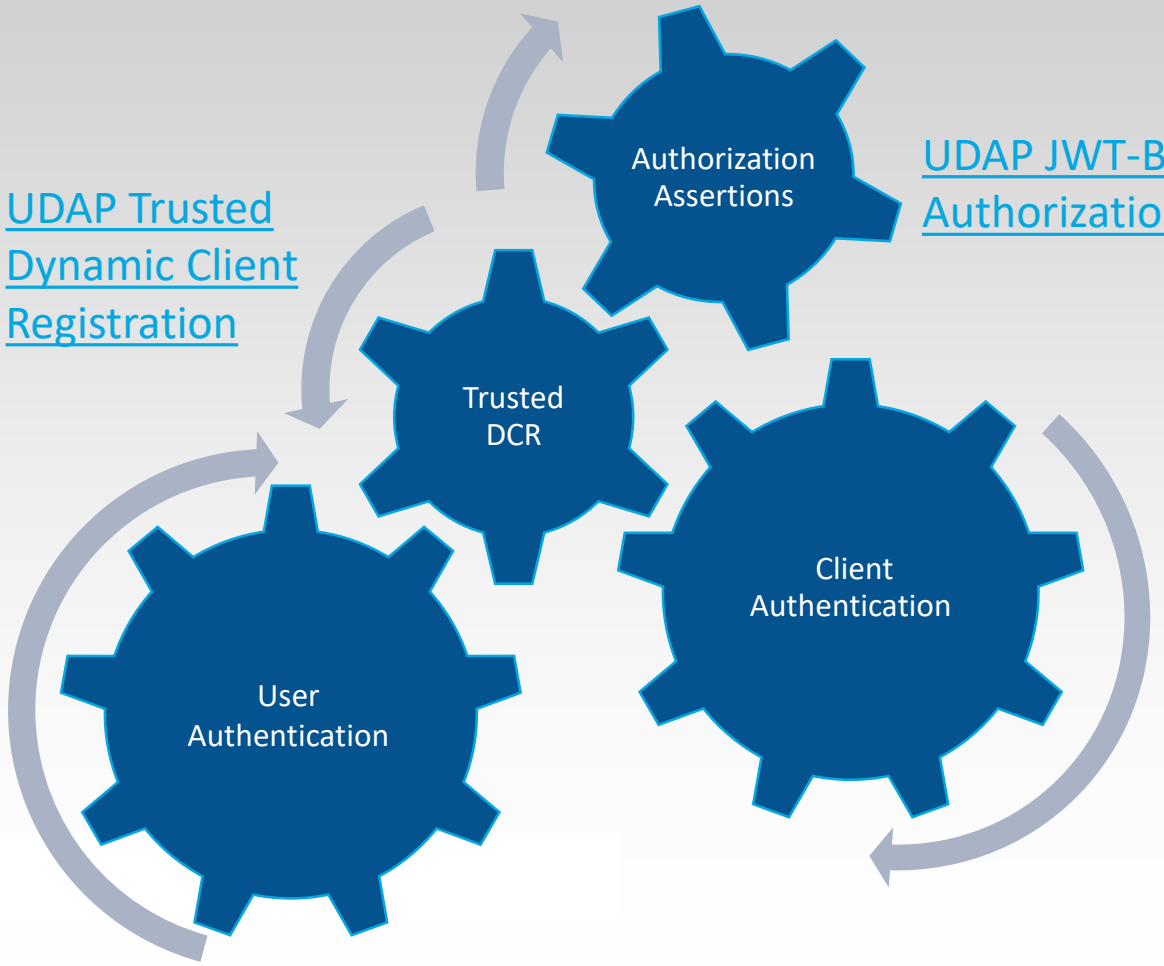
CURRENT SOLUTION

FAST Identity proposed solution document
(version 3 in progress)

PO

FAST Security

Proposed Solution: Trusted Ecosystem



UDAP Trusted Dynamic Client Registration

UDAP JWT-Based Authorization Assertions

UDAP Tiered OAuth

UDAP JWT-Based Client Authentication

PM

Overview and status

BARRIER

Today, we have limitations on our ability to ensure, in a scalable way, that the requestor of information using a FHIR based information exchange is appropriately authenticated and has the authorization to see the data requested. Current registration processes are manual and too time-consuming to support expected growth

SOLUTION

Leverage existing credentials and authorizations and best practice standards to establish common security processes that facilitate automated exchange and reuse existing infrastructure where possible

IN SCOPE

Trusted Dynamic Client Registration using Unified Data Access Profiles (UDAP)

JWT-Based Client Authentication & Authorization

OUT OF SCOPE

Directory for Endpoint Discovery, Trust Policy Governance, Requirements for a specific architecture, Patient/provider or provider/patient

STATUS

Incorporating feedback from industry stakeholders

OPEN ITEMS

Cross-solution overlaps, explore standard authorization metadata requirements, recommendations related to privacy

CURRENT SOLUTION

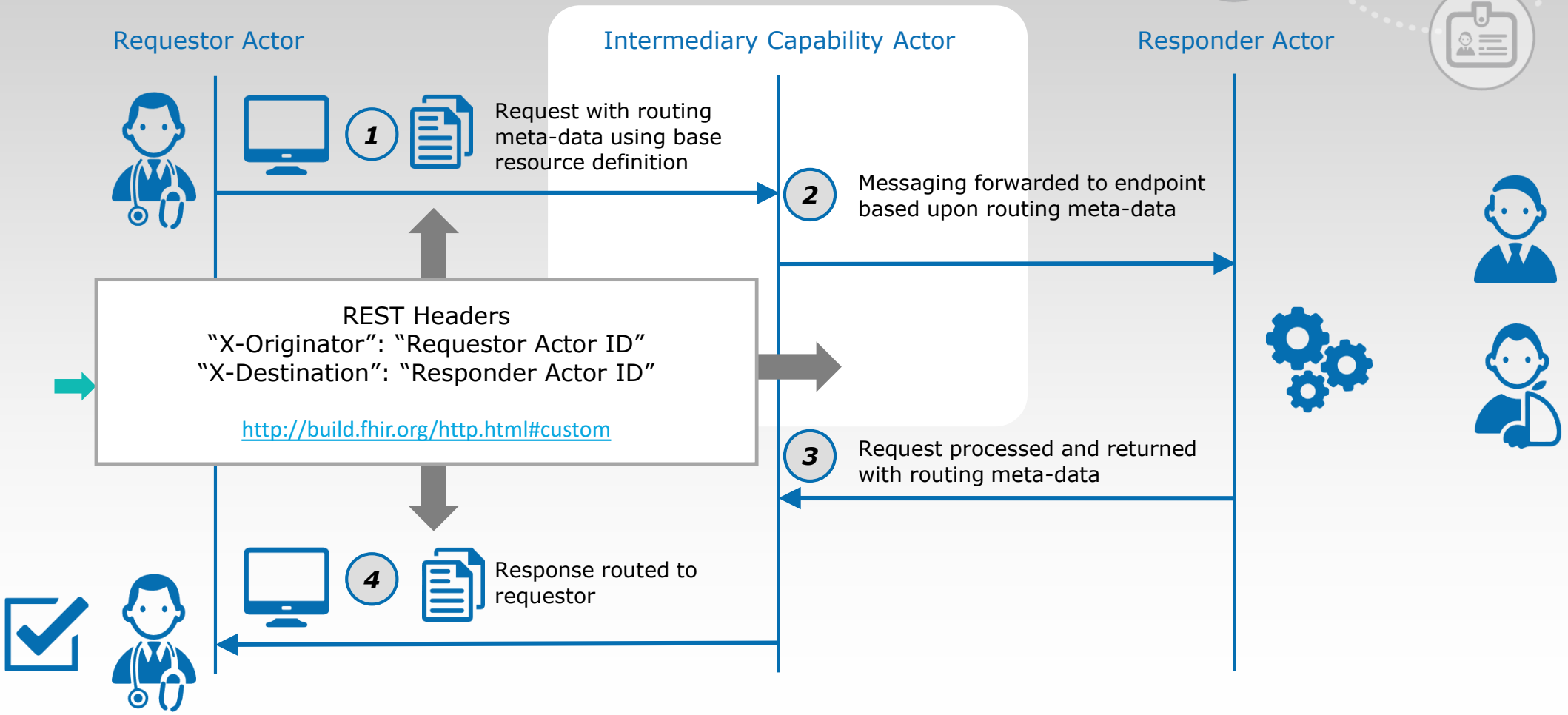
FAST Security proposed solution document
(version 3 in progress)

PM

FAST Exchange

FAST Exchange Solution for Routing Metadata – Process Flow

Planning for a hybrid future while learning from existing models such as CAQH CORE and clearing house patterns



PM

Overview and status

BARRIER

FHIR information exchange is typically performed “point to point” between trusted system endpoints. Because healthcare participants may also wish to leverage intermediaries in FHIR exchanges, a solution for conveying routing metadata is needed

SOLUTION

Employ RESTful header parameters to send originator and destination information for use by exchange intermediaries

IN SCOPE

Exchange using intermediaries in addition to point to point connections

Method for exchanging of a minimum set of metadata as HTTP REST headers, or alternatively within FHIR resource .meta tags

OUT OF SCOPE

Value set defining exchange identifiers

Capturing provenance information from exchange through multiple intermediary “hops”

STATUS

Incorporating feedback from industry stakeholders

OPEN ITEMS

Expand direction on usage of the alternative solution employing FHIR .meta elements

CURRENT SOLUTION

FAST Exchange solution document

(version 3 in progress)

PM

FAST Testing & Certification

Proposed Solution: ONC *FAST* Testing & Certification Program

DEVELOPER

Automated Test Platform

HL7 FHIR Validation Engine

Basic FHIR Conformance

FHIR IG Conformance

+

FAST Criteria Test Scripts

Certification Body

FAST Readiness Criteria related to…

1. End Point Discovery
2. Authentication
3. Authorization
4. Resource Version Identification
5. Reliable Patient Identity Management
6. Data Provenance
7. Reliable Provider Identity Management
8. Event/Message/Topic Subscription/Publication
9. Guaranteed Message Delivery
10. Role/Context Identification
11. Readiness Credential
12. Standard Based Endpoint Access
13. Synchronous Transaction Support
14. Asynchronous Transaction Support
15. Reliable Payor Identification

PM

Overview and status

BARRIER

FHIR testing capabilities and an associated accreditation/certification are needed to support reliable, trustable exchange between healthcare participants. It must be a process in which specification/ requirements that are well established and broadly shared can be absolutely confirmed

SOLUTION

Testing platform supporting the base FHIR Specification and *FAST* Readiness Criteria

ONC FHIR Testing & Certification Program

IN SCOPE

Testing and certification to the base FHIR Specification and *FAST* Readiness Criteria

OUT OF SCOPE

HL7 FHIR Validation Engine, RFP development to select entity to provide services

Validate ease of establishing connections, conformance to non-blocking requirements, conformance to HIPAA patient privacy

STATUS

Incorporating feedback from industry stakeholders

OPEN ITEMS

Capture test assertions in greater detail, clarify aspects, coordinate with related efforts

CURRENT SOLUTION

FAST Testing & Certification solution document

(version 3 in progress)

PM