# FHIR at Scale Taskforce *(FAST)*
## SME Session Summary Report

Scalable FHIR Testing & Certification Platform Proposed Solution

**July 13, 2020**

# Meeting Introduction

The FHIR at Scale Taskforce (*FAST*) obtained industry subject matter expert (SME) input to further refine the Taskforce's proposed solutions to FHIR scalability challenges.

Twelve SMEs from across the healthcare ecosystem participated in the *FAST* Testing & Certification Proposed Solution Expert Panel Discussion on July 13, 2020, providing feedback based on their individual expertise and domain knowledge. The needs and challenges of a broad range of stakeholders were represented, including testing organizations, interchange associations/Health Information Exchanges (HIEs), testing system vendors/developers, The Office of the National Coordinator for Health Information Technology (ONC), providers, payers, and electronic health record (EHR) vendors.

The SMEs shared their experience and input with ONC *FAST* facilitators concerning a proposed testing platform and certification process; open questions and discussion topics specific to each solution; as well as learnings from the SMEs' experiences. The *FAST* team received positive feedback on this session, and the participating SMEs indicated interest in future discussions on the topic.

Feedback received through the SME Sessions will advance the Taskforce's proposed solutions into actionable proposals and support the development of the *FAST* Action Plan. The *FAST* Action Plan is intended to define and communicate Taskforce proposed solutions and next steps to the industry.

To learn more about the *FAST* solutions development process as well as the objectives and meeting materials for each SME Session, please visit the *FAST Proposed Solutions – Subject Matter Expert Panel Sessions* Confluence pages.
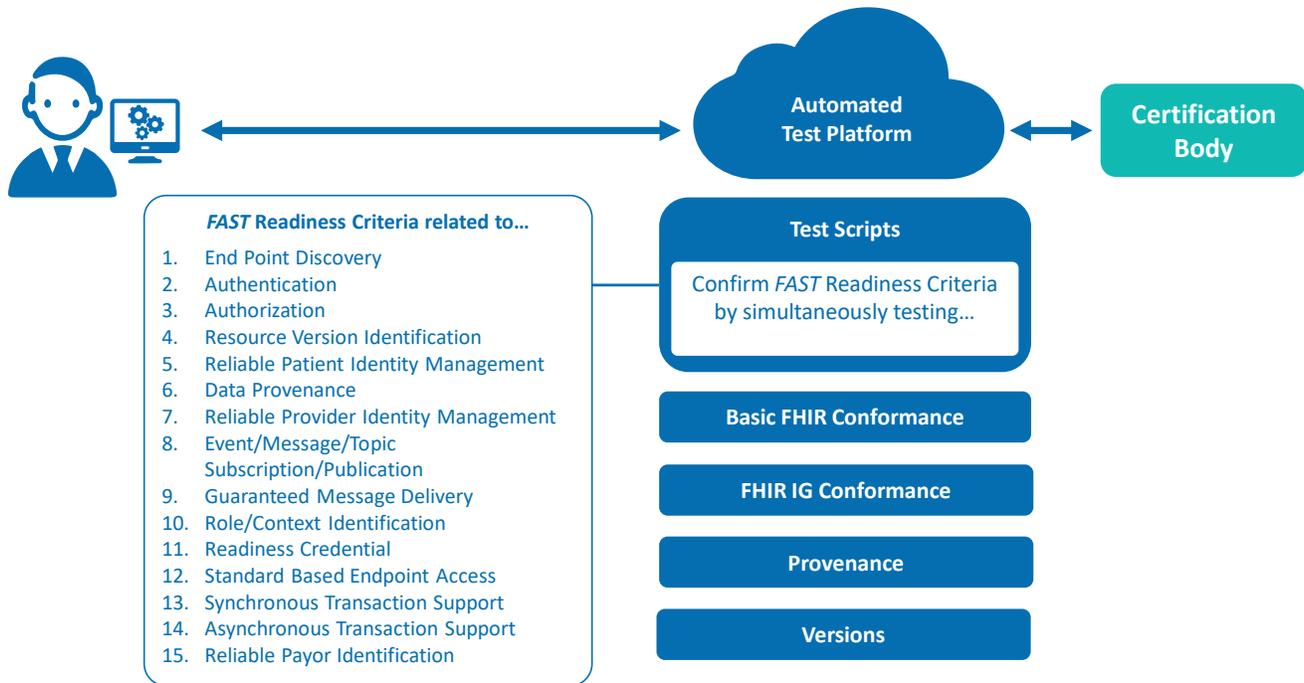
# Solution Overview

The *FAST* team presented a proposed solution with two components to address the need for tested, verifiable system capabilities to support large scale use of FHIR solutions:

1.  a testing platform supporting the base FHIR specification and *FAST* readiness criteria, and

2.  a *FAST* Testing & Certification Program

The proposed solution creates a scalable testing and certification platform based upon the requirements and specifications of the base HL7 FHIR standard, *FAST* solution requirements, and the applicable Implementation Guides. The platform will enable simultaneous validation of *FAST* Readiness Criteria and related FHIR conformance.

The following diagram depicts the scope of the testing platform and relationship between its components, which validate conformance to:

•   the base FHIR specification

•   FHIR Implementation Guides developed to meet the *FAST* criteria

•   in-use versions of the FHIR specification

•   requirements for capturing the provenance of exchanged resources

**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

To learn more about these proposed solutions, please review the pre-reading and presentation materials available on the _FAST_ Testing & Certification Proposed Solution – Subject Matter Expert Panel Discussion Confluence page.

# Discussion Topics

During the three hour session, the group discussed various aspects of the proposed testing and certification solution. The discussions covered the characteristics of the proposed solution and a range of related considerations and challenges. These topics are summarized below.

## 1. Overall Solution Approach

The group's response to the overall proposed testing and certification platform approach was positive.

Discussion included clarification on which organizations would participate in testing and certification. There was feedback that the primary focus should be on the software developer instead of on individual site installations. However, the group noted that such an approach would not ensure that all deployments meet requirements. It was also suggested that payers perform testing and certification as well, so that all participants have confidence in the process.

The group discussed whether a request for information (RFI) should be issued to gather stakeholder input on requirements, process, and governance. There was agreement that an RFI would be a useful tool in going forward to ensure stakeholder buy-in and use of the solutions.

## 2. Scope of Testing

Many details of the organization and testing process were discussed. The group considered whether certification testing should be administered by a centralized authority. A range of opinions were expressed. Some participants raised concerns about having a single certifier, although there was openness to the coordination and consistency that a central authority could provide. A commenter also stated that a central authority is needed to provide the means for ensuring that stakeholders maintain their certification and to handle non-compliance in the field, complaints, and legal and administrative issues.

The scope of testing and certification was also considered by the group. The role of FHIR as a data storage specification was discussed—in addition to its function as a transmission standard. Any testing and certification processes must ensure conformance to *FAST* readiness criteria and scalability solutions. Ultimately, the group set the priority on testing data exchange using FHIR.

## 3. Solution Process and Timing

Another topic that received attention was the degree to which FHIR implementation guides should be included in testing and certification. The group pointed out the risk of incompatibility between Implementation Guides (IGs) when implemented together and the potential for an implementation guide to include aspects that are incompatible with the *FAST* capabilities.

The group expressed urgency around the need for developing a consistent, automated test platform, which will be key to overall program success. Similarly, there is urgency around developing a testing program that ensures conformance to the FHIR standard and *FAST* core capabilities to enable scaling of FHIR use.

There was agreement that testing and automated testing tools should be open to all stakeholder groups. Expectations will need to be set on what certification means; for example, what product or version of a product needs to be certified. Level setting also will be needed on how—and how often--testing and certification should be performed. Details will need to be fleshed out about how

the certification program will be used in the industry and the value proposition to certified entities. The group agreed that certification and testing should probably be voluntary.

## 4. Governance

The group weighed considerations related to governance of the testing and certification processes. The value of a central authority was promoted—ideally one directed by a heterogenous group representing a wide range of stakeholders. Participants explored factors that would impact a particular entity's ability to perform the role. For example, a participant asked whether ONC would have the authority for certification beyond EHR systems, to entities such as payers, registries, public health, and other entities.

Such a central authority would need to define common rules and guidance. ONC was pointed out as a model because it develops and owns the rules for EHR certification, while other parties administer them. The group expressed a preference for a separation between the rule-making authority and the entities administering testing.

The discussions were at a fairly high level. However, some critical details of a governance structure were briefly touched on. For example, the group noted several organizational, ownership, and funding models already in the field including public, private, and blended paradigms. The group noted that sustainability will be key.

## 5. Overlaps and Coordination with Other Efforts

There likely will be the need to address possible overlaps and duplication of effort, given the many certification and testing entities and programs already involved in health information technology. As a result, redundancies must be identified, efforts coordinated, and efficiencies created.

The group agreed that it is too soon to delve into identifying possible duplication of efforts and coordination activities. These will need to be done at a later time, once *FAST*'s testing scope is more fully developed.

## 6. Proposed Solution Implications

Certification and testing are important linchpins to ensuring the consistency and usability of implementations of FHIR readiness criteria.

The group reinforced the positive impact of the proposed solution, while noting that stakeholder input and buy in will be imperative.

# Moving Forward

After the productive SME session, the *FAST* Testing & Certification Team is analyzing the feedback they received and working to incorporate what they learned into the next iteration of their solution documentation. As the team further develops their action plan, they will take the following SME suggestions into account:

## Immediate Next Steps

- Work through other Tiger Team proposed solutions to identify test assertions; get to the next level of detail

- Clarify scope with respect to certifying the base FHIR API vs IGs (and consider possible incompatibility when IGs are implemented together)

- Consider how to adapt the approach to the increased pace of development and certification need, such as use of computable conformance rules

## Path Forward

- Coordinate with related efforts
    - Understand overlaps between *FAST*'s scope and that of other efforts
    - Understand which aspects of *FAST*'s scope are outside of and complementary to others' scope

- Get industry input on the detail-level approach, after incorporating Tiger Team solution specifics

- Prepare requirements for an RFI to parties that would provide a testing platform or support for the administration of testing

- Further define governance model and central authority

- Consider how to accommodate vendor/ system characteristics that differ from those involved in current certification programs