



FHIR at Scale Taskforce: 2020 End-of-Year Report

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What is *FAST*?

The [FHIR at Scale Taskforce \(FAST\)](#) initiative was launched in 2017 in response to the industry recognized need to address shared *FAST* Healthcare Interoperability Resources (FHIR®) scalability challenges. Acting as a neutral convener, Office of the National Coordinator (ONC) facilitated the engagement of a highly representative group of volunteer healthcare industry stakeholders and health information technology experts, who together worked to capture these FHIR scalability infrastructural challenges and defined the core capabilities and approaches to address these technical or policy barriers.

This *FAST* 2020 End of the Year report aims to bring forward pivotal aspects of the taskforce work in 2020, summarize the progress and work completed by the initiative, and offer a preview into the work underway in 2021.

FAST ACCOMPLISHMENTS & KEY ARTIFACTS

[2020 Mid-Year Report](#)

[2019 Annual Report](#)

[FAST 101 Presentation](#)

[2020 SME Sessions](#)

[2020 FAST Workshop](#)

The *FAST* Process: Collaboration, Feedback, and Iteration

The *FAST* Initiative adopted an [internal taskforce model](#) to better harness the knowledge, expertise and feedback from a diverse group of volunteer Subject Matter Experts (SMEs) across the industry continuum in a transparent way. Each of the seven *FAST* tiger teams was tasked with exploring the challenges and proposing solutions to address focus-area-specific infrastructural barriers to scalability. Two chief architects lead the vision and the conceptual infrastructure architecture required for the FHIR based solutions to scale. The *FAST* Coordinating Committee and Executive Steering Committees provide ongoing input and leadership to support *FAST*'s work.

Another critical component of the *FAST* model is the [external collaboration and coordination](#) with the industry at large. In 2020, the *FAST* industry engagement and feedback gathering activities expanded in order to support the accelerated *FAST* work and progress. Three major 2020 collaboration milestones enabled crucial discussions to gain broader industry perspectives and support iterative solution development:

- Convened diverse external SMEs in a series of SME Working Sessions
- Presented at several large industry events, numerous stakeholder group meetings and continuously engaged the *FAST* Technical Learning Community (TLC)
- A ONC *FAST* full-day workshop with opening & closing plenaries & multiple tracks of live working sessions.

These 2020 *FAST* collaboration efforts led to successful maturation of the *FAST* proposed solutions, achieving industry readiness, and helped ensure *FAST* solutions align with industry needs and support compliance with the regulatory drivers such as the Centers for Medicare and Medicaid Services ([CMS](#)) and [ONC](#) interoperability rules published in early 2020.

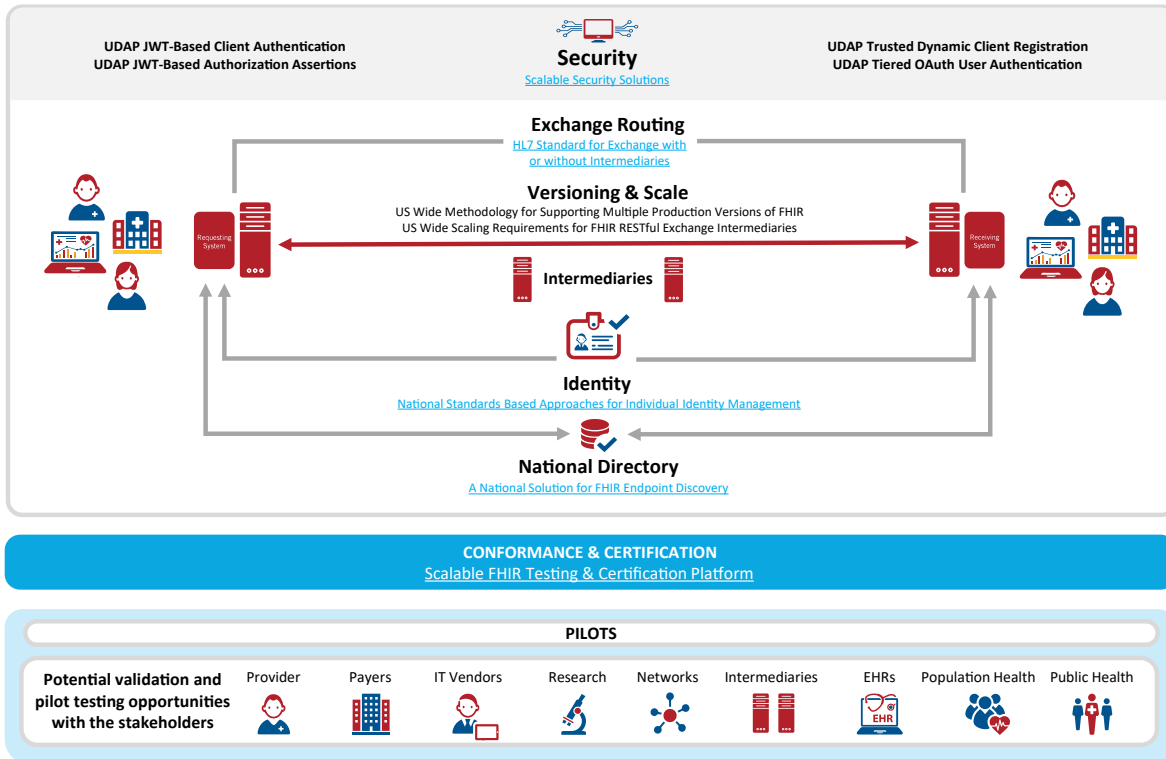
Equally important, these collaborations further informed the *FAST* proposed infrastructure Action Plan which will communicate the strategy and key components to help make *FAST* solutions persistent, available and ready for implementation in 2021 and beyond.



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The *FAST* conceptual architecture and the full battery of *FAST* proposed solutions in context of each other is represented below. In the *FAST* architecture, the individual solutions can be implemented on their own, but provide additional value when implemented together.



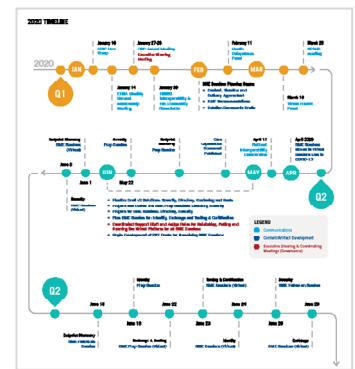
What *FAST* Accomplished in 2020

The primary focus of *FAST* in 2020 was to:

- seek and obtain broader industry SME input to further develop, refine and validate the *FAST* proposed solutions
- continue the iterative maturation of *FAST* solutions, incorporating SME input and larger industry feedback
- publish matured, finalized *FAST* recommended solutions
- strategically incorporate industry feedback on the potential path forward to ensure solutions become permanent and can be successfully implemented

FAST strategically identified and engaged a diverse group of SMEs, with various backgrounds (eg, healthcare, finance, software development), in a series of active working sessions. The goal of these sessions was to socialize the *FAST* proposed solutions, drive intensive discussions, identify any remaining gaps or barriers to be addressed, and to collect any other insights that further strengthen the *FAST* solutions.

Following the SME working sessions larger industry feedback was captured during the ONC *FAST* full-day workshop, continuing the consensus building and solutions validation by the industry. The strategic approach and specific *FAST* accomplishments of 2020 are detailed in this project [timeline](#), while the highlights are captured in the section below.



[Click to see the full timeline](#)



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2020 *FAST* Accomplishments in a Nutshell



Artifacts

- Core capabilities documents published
- Tiger Teams focused on completing V2 solutions documents based on feedback gained from Technical Learning Community sessions in late 2019



Artifacts

- Iterative solution development integrating SME feedback into v3 solutions continued
- Produced 2 publicly available [SME session summary reports](#)



ONC *FAST* Workshop Gaining Further Validation

The ONC *FAST* Full-day Workshop, held in September 2020, was a key milestone in further validating the *FAST* solutions to FHIR scalability challenges. This meeting, open to the public, included two plenaries, three tracks with 3-4 concurrent working sessions in each track fostered focused, in-depth discussions to explore:

- solution interdependencies
- potential drivers for solution adoption based on stakeholder nuances
- how each of the solutions could develop into standard, process, or policy
- the potential roles of the intermediaries
- pilot testing
- potential governance process

Who Was at the Table?

130 panelists representing over 65 organizations

Stakeholders Represented

- 4 Government Agencies
- 9 Payers
- 13 Health IT Vendors
- 11 Provider Organizations
- 11 Industry Associations & Accrediting Organizations
- 8 Standards Organizations & Multi-stakeholder Collaboratives
- 4 Other



Begin Development of the *FAST* Action Plan



FAST SME Session Series Gathering Industry Input

FAST convened **8 virtual SME sessions**

149 SMEs were nominated • 84 SMEs were invited to participate • SMEs contributed 362 hours of their expertise

SMEs across multiple disciplines and stakeholder groups (payers, Health IT vendors, providers, etc) voiced consensus that:

- *FAST* proposed infrastructure solutions are aligned with where the industry is headed across the care continuum
- additional work on standardization and best practices is beneficial to drive the *FAST* solutions forward and make them enduring and adoptable
- This led to the publication of 8 internal *FAST* SME session feedback summary reports to support solution development



Artifacts

- Published [Version 3 draft *FAST* solutions](#) documentation after incorporating SME session feedback
- Finalized recommendations for Patient Matching & Identity Management patterns
- Defined testing assertions, and exploration of a potential Request for Information (RFI) for automated testing tools for a Testing and Certification Program
- Finalized security model including Trusted Dynamic Registration, Client Authentication and Authorization, and Tiered OAuth on a path for an HL7 Implementation Guide development project in 2021
- Finalized Validated Healthcare Directory solution including electronic endpoints and methods for populating, validating, and accessing that information
 - Submitted and gained approval of the [HL7 Project Scope Statement \(PSS\)](#) initiating development of three HL7 Implementation Guides
- Finalized an exchange model to include transaction routing information, which led to the submission and approval of an [HL7 Project Scope Statement \(PSS\)](#) to develop an Implementation Guide for Exchange with or without intermediaries
- Established initial framework for Pilots plan using HL7 Da Vinci Project use cases



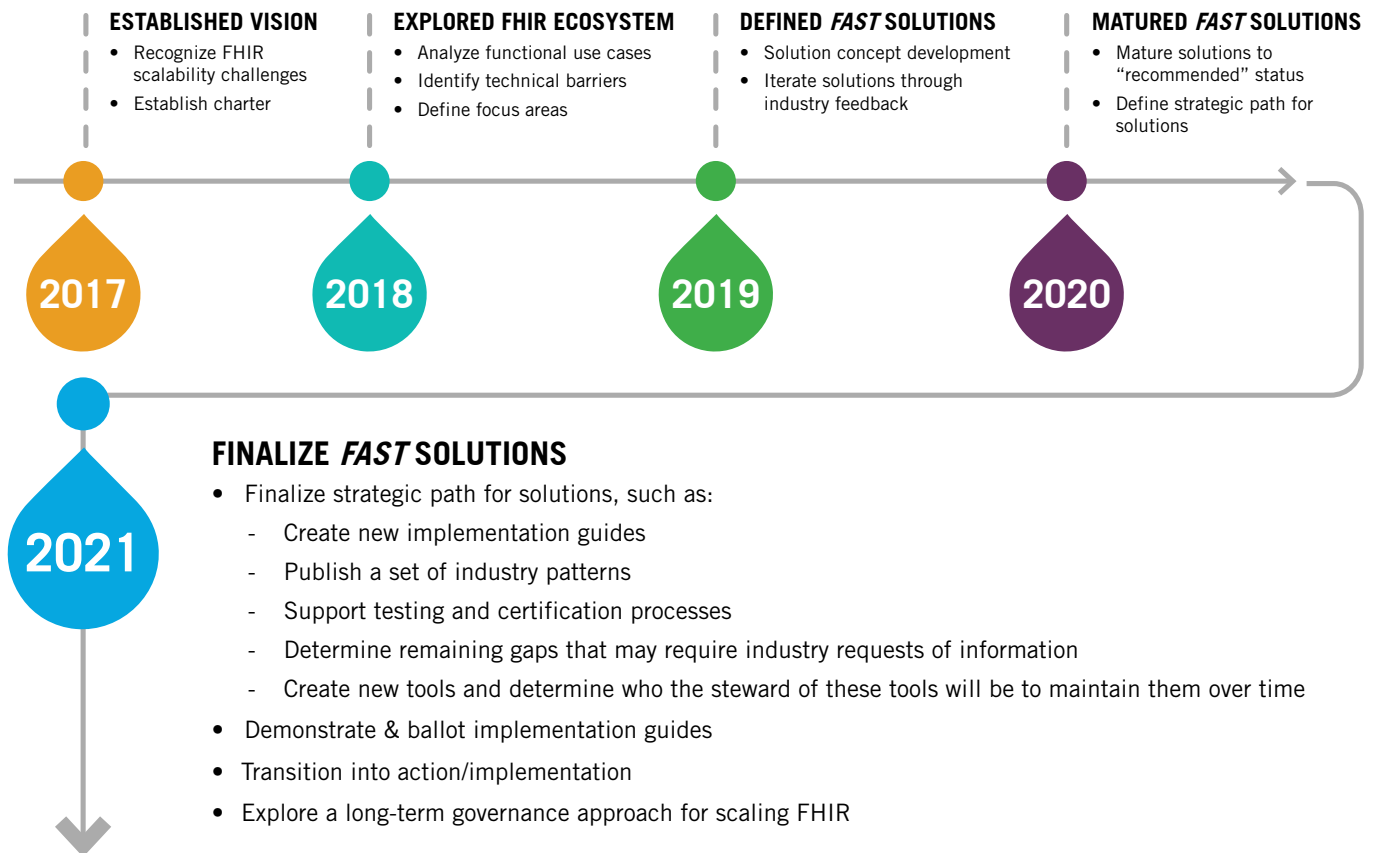
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FAST Solutions Spring Into Action in 2021

Through exploration, commitment, active participation, iteration, and collaboration the *FAST* team completed a great deal of foundational and solution development work. This work spanned over 4 years since the taskforce's inception and addressed a range of industry-wide relevant infrastructural barriers and FHIR scalability challenges. However, the *FAST* work doesn't stop here, but rather will morph its focus toward progressing the *FAST* work into actionable and implementable industry-wide solutions, through standards development, recommended best practices and processes, and tool development. The *FAST* members will continue their volunteer contribution to evolve and foster a path forward for the *FAST* solutions, led by the *FAST* Chief Architects and with ONC as the convener.



Action Plan Coming in Spring 2021

Different barriers, different solutions, different paths forward. The *FAST* Initiative is currently drafting the *FAST* Action Plan that will:









- Detail final recommended solutions (version 3 of the *FAST* solution documents)
- Provide a roadmap of which solutions need to be pursued through standards (Implementation Guides, etc), process, and/or policy
- Identify architectural relationships between solutions
- Identify appropriate long-term 'owners' for further development and maintenance of outputs beyond *FAST*
- Detail proposed *FAST* framework for scalability validation and pilot testing



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High Level Preview of the Action Plan Considerations

Current <i>FAST</i> Solutions	Action Plan	Status
An HL7 FHIR Standard Based Solution for Exchange with or without Intermediaries	 HL7 IG: <i>FAST</i> : Exchange with or without Intermediaries	PSS Approved. IG development in progress 2021 Connectathons Targeting HL7 May 2021 STU Ballot
A US Wide Solution for FHIR Endpoint Discovery	 HL7 IG: Update VHDir for US Realm	PSS Approved. IG development in progress 2021 Connectathons
	 HL7 IG: Endpoint Query	Targeting HL7 September 2021 STU Ballot
	 HL7 IG: Attestation and Validation	PSS Approved. IG development in progress 2021 Connectathons Targeting HL7 Sept 2021 Ballot for Comment and Jan 2022 STU Ballot
	 Build Asset: Endpoint Directory	Explore/assess industry endpoint directories in development or existing directories with the potential to be enhanced (eg, CAQH Payer Endpoint Directory, CAQH/AMA Application Directory, NPPES Provider Directory, etc)
US Wide Model(s) for Scalable Security Solutions	 HL7 Implementation Guide	PSS in development 2021 Connectathons Targeting HL7 Sept 2021 STU Ballot
US Wide Standards Based Approaches for Individual Identity Management	 Set of Patterns & Vocabulary Resources Guide	Finalizing proposed solution path forward
A US Wide Scalable FHIR Testing & Certification Platform	Exploring potential for Request for Information (RFI)	Finalizing proposed solution path forward
A US Wide Methodology for Supporting Multiple Production Versions of FHIR	SME Session to be scheduled	Finalizing proposed solution path forward
US Wide Scaling Requirements for FHIR RESTful Exchange Intermediaries	SME Session to be scheduled	Finalizing proposed solution path forward
Strategy for Pilot Testing <i>FAST</i> Solutions	 Development of an incremental approach to test and pilot <i>FAST</i> solutions including Connectathon testing, development of a “ <i>FAST</i> Pilot Toolkit” to be leveraged by FHIR Accelerators, other FHIR initiatives, demonstration projects, and multi-stakeholder pilots as needed	Initial exploration of partnering with Da Vinci to test <i>FAST</i> Solutions through their current use cases & pilot environments



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Stay Connected With *FAST*

Stay up to date on upcoming events, new solutions, artifacts, and the latest *FAST* Action Plan by visiting the [FAST Project Page](#) or by joining the *FAST* Technical Learning Community via the [FAST LinkedIn Group](#).

Acknowledgments

Thank you to all the volunteers and taskforce staff for your hard work and dedication! We look forward to a productive 2021!

UPCOMING *FAST* EVENTS:

HL7 *FAST* ACTION PLAN WEBINAR

March 18, 2021

FAST ACTION PLAN PUBLICATION

Early Spring

Leadership & Contact Information



PATRICK MURTA

Chief Interoperability
Architect & Fellow, Humana
FAST Chief Architect



PAUL OATES

Senior Enterprise Architect and Lead
for the IT M&A Practice, Cigna
FAST Chief Architect

For more information on the *FAST* Initiative, visit the [FAST Project Page](#)

Do You Have Questions, Suggestions or Want to Get Involved?

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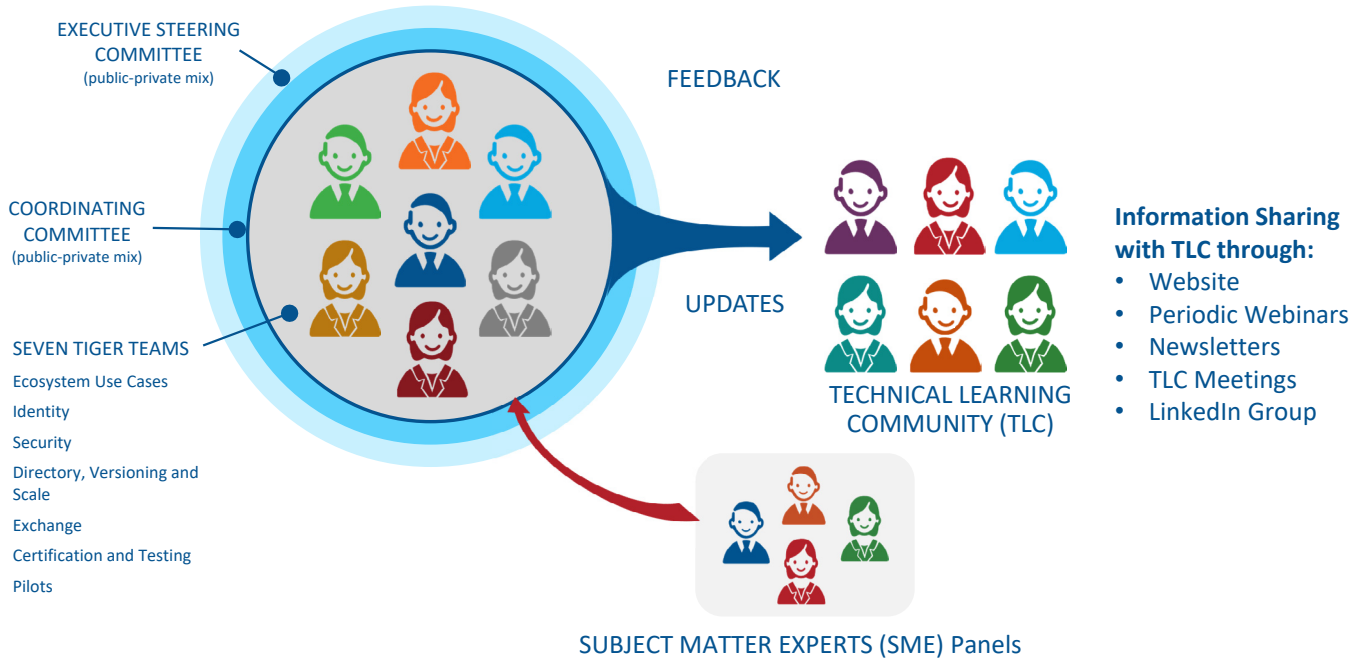


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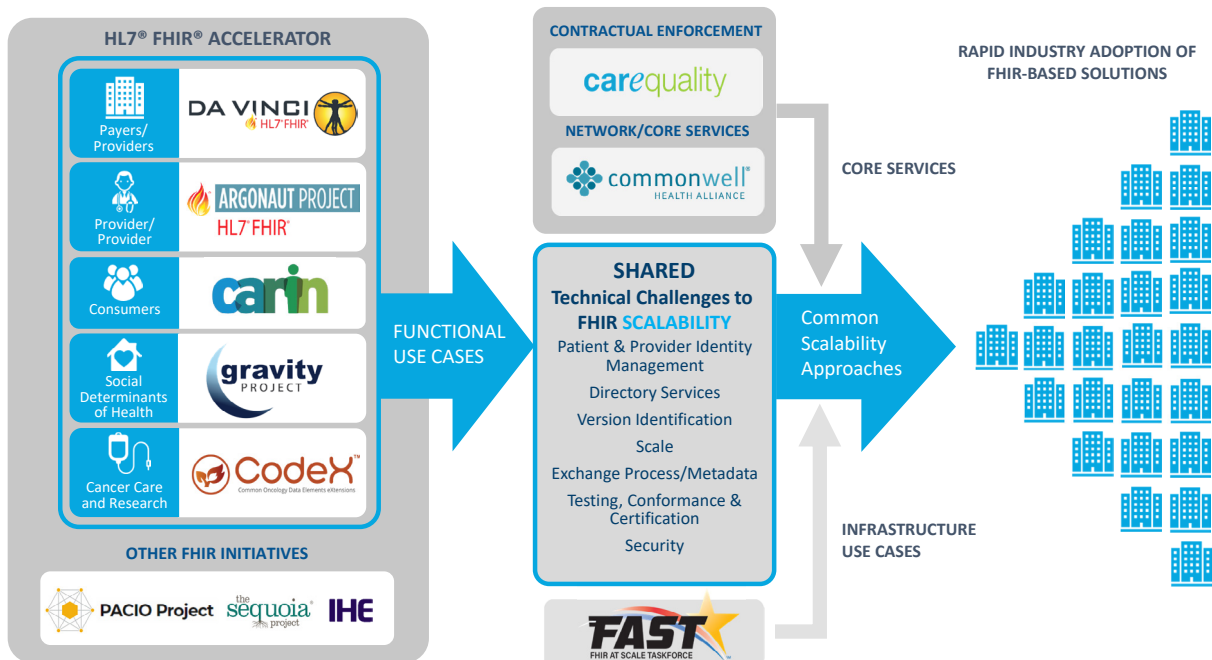
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FHIR AT SCALE TASKFORCE (*FAST*) STRUCTURE



PAVING THE WAY TOWARD FHIR "AT SCALE"

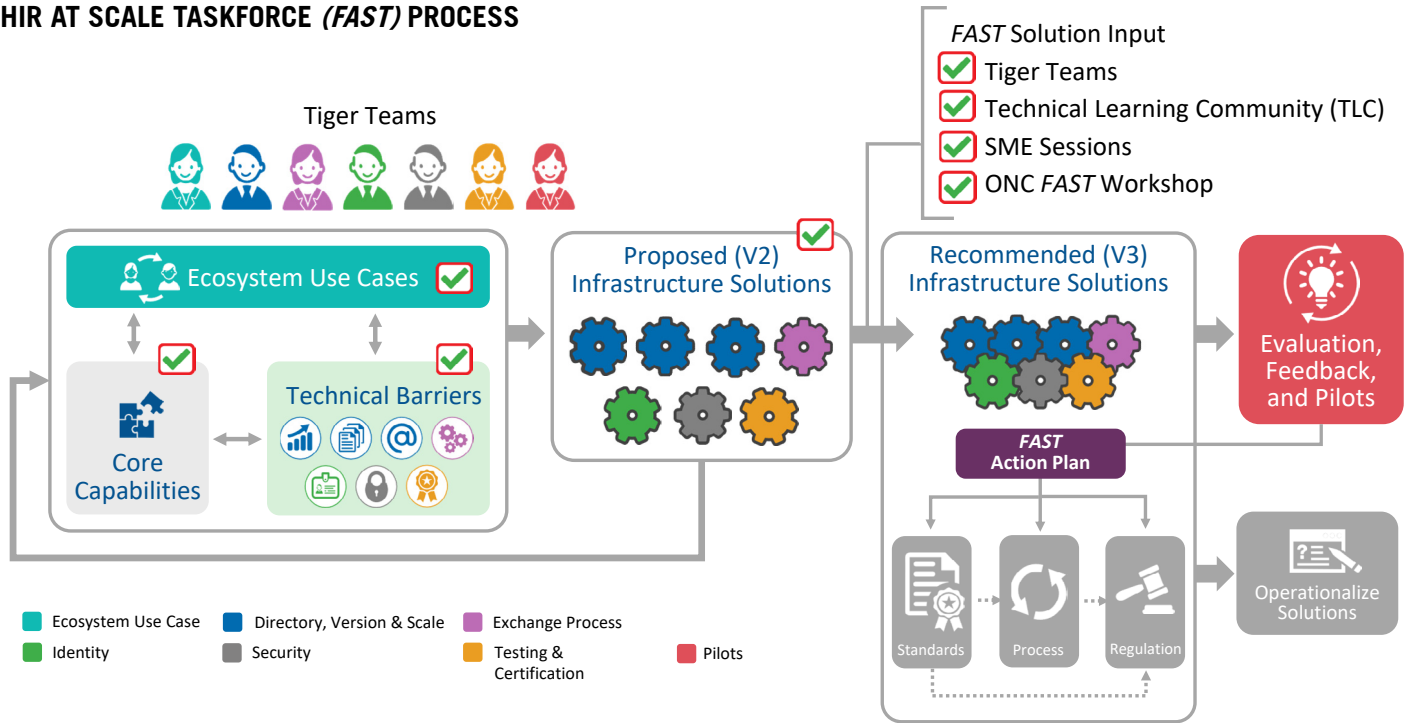




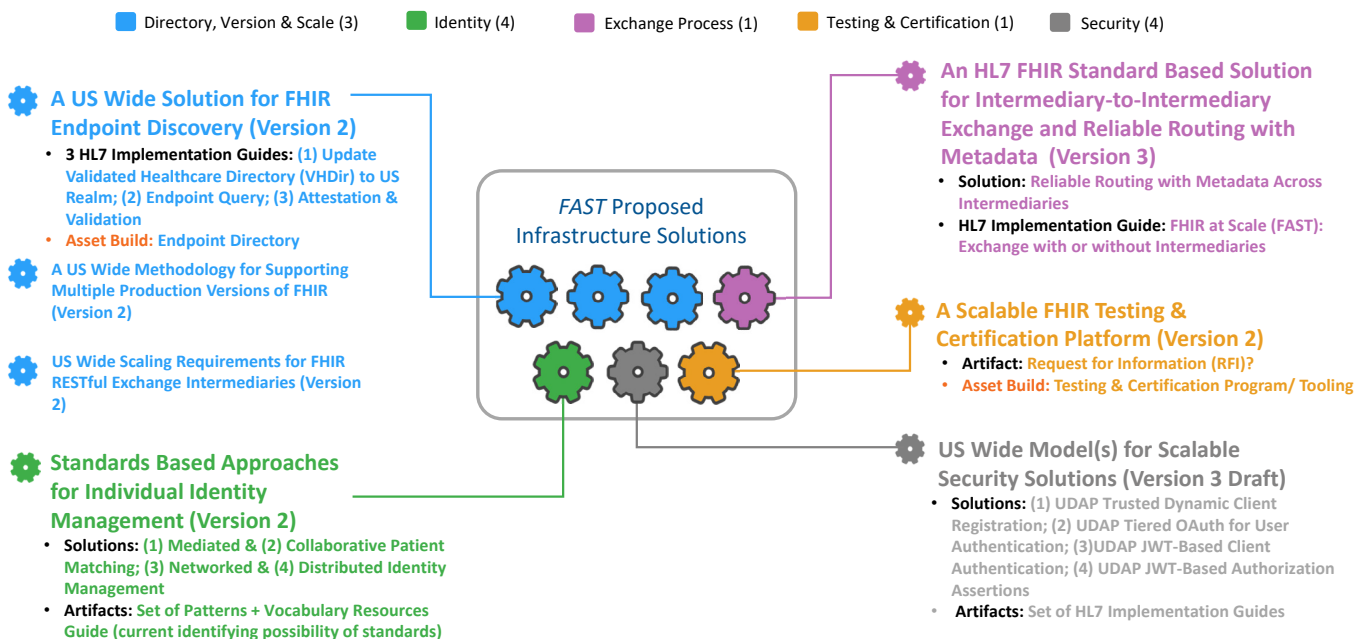
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FHIR AT SCALE TASKFORCE (*FAST*) PROCESS



OVERVIEW *FAST* SOLUTIONS CONSIDERATIONS: STANDARD, ARTIFACT, ASSET

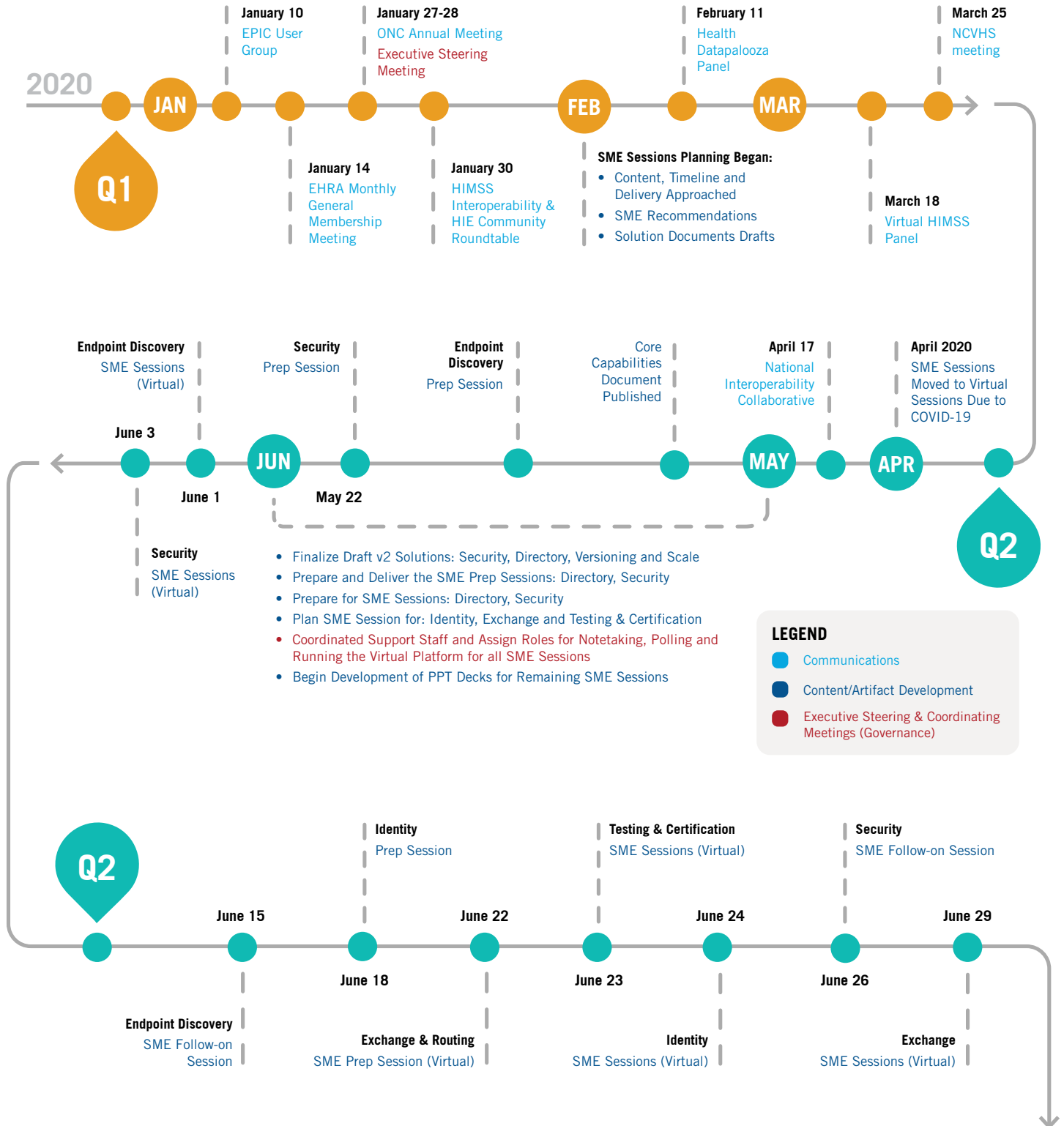




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2020 TIMELINE





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