

2020 GA4GH Strategic Roadmap

[Clinical and Phenotypic Data Capture](#)

Deliverable Name	Projected Submission Date
Pedigree V1.0	Q3 2021
Phenopackets schema FHIR Implementation Guide V1.0	Q4 2020
Phenopackets V1.1	?

[Cloud](#)

Deliverable Name	Projected Submission Date
Cloud APIs and Interoperability <ul style="list-style-type: none">• FASP• Deployment Kit• Registry of known implementations• Update existing APIs, WES, DRS, TES• White Paper	?

[Data Security](#)

Deliverable Name	Projected Submission Date
Authentication and Authorization Infrastructure (AAI)	
Risk Assessment Methodology for Software Stacks	
Rulesets for detecting suspicious behavior	
Federated Cohort Exploration and Analysis	Q4 2021
Cloud Security and Privacy	Q4 2021
BlockChains for Query Recording	

[Data Use and Researcher Identities](#)

Deliverable Name	Projected Submission Date
Data Use Ontology V2.0	
Computable Consent Forms (Standardized Data Sharing Language Guidance: Integrating the Data Use Ontology into consent forms)	
GA4GH Passport V2.0	

[Discovery](#)

Deliverable Name	Projected Submission Date
Discovery Search API	Q2 2020
Service Registry / Service Info	Q4 2020
Beacon API V2	

[Genomic Knowledge Standards](#)

Deliverable Name	Projected Submission Date
Variant Representation V2.0	2021
Variant Annotation V1.0	Q4 2020

[Large Scale Genomics](#)

Deliverable Name	Projected Submission Date
VCF	
SAM/BAM/CRAM	
htsget API	
RNAget API	
refget API	Q4 2020
Crypt4GH	

[Regulatory and Ethics](#)

Deliverable Name	Projected Submission Date
Clinical and Familial Consent Clauses	October 2020
Standard Genomic Data Licenses and Agreements	October 2021
Participant Engagement	October 2020
GDPR Forum	Ongoing
Participant Values Survey	Ongoing