

InterSystems FHIR SQL Builder



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FHIR - Fast Healthcare Interoperability Resources

FHIR is a RESTful specification

- **Client and Server** - the client does not take care of persistence and the server does not take care of presentation (user interface)
- Uniform interface - **resources** identified by URLs and represented in different ways (XML, JSON)
- **Stateless** interactions - no client context is saved on the server between calls
- Cacheable - Answers may be 'cached'
- Layered system - the client does not distinguish the server - if it is final or intermediate



FHIR - Fast Healthcare Interoperability Resources

Organized around a Server (Repository)

<http://www.intersystem-iris-for-health.com/fhir/Patient/12345>

[URL Base]/[Type]/[Id]

Base URL - FHIR server identifier. Server exposing data / information according to the FHIR specification

Type - Identifier that manages a collection of resources. The types have to be defined in the FHIR specification

Id - Identifier that manages an instance of a resource in a collection

There are currently more than 150 resources



FHIRing Individuals - Interoperability

- Patient Centric
- Interoperability Focused
- Single Personal Health Record
- Internet Based
- Standardized Application Programming Interface (API)



InterSystems depiction of the HL7 FHIR standard.

FHIRing Populations - Analytics

- Population Health Management
- Public Health Surveillance
- Anonymized Research Data Sets
- Risk Stratification
- Cohort Management
- Quality and Cost Metrics
- Build Machine Learning Models

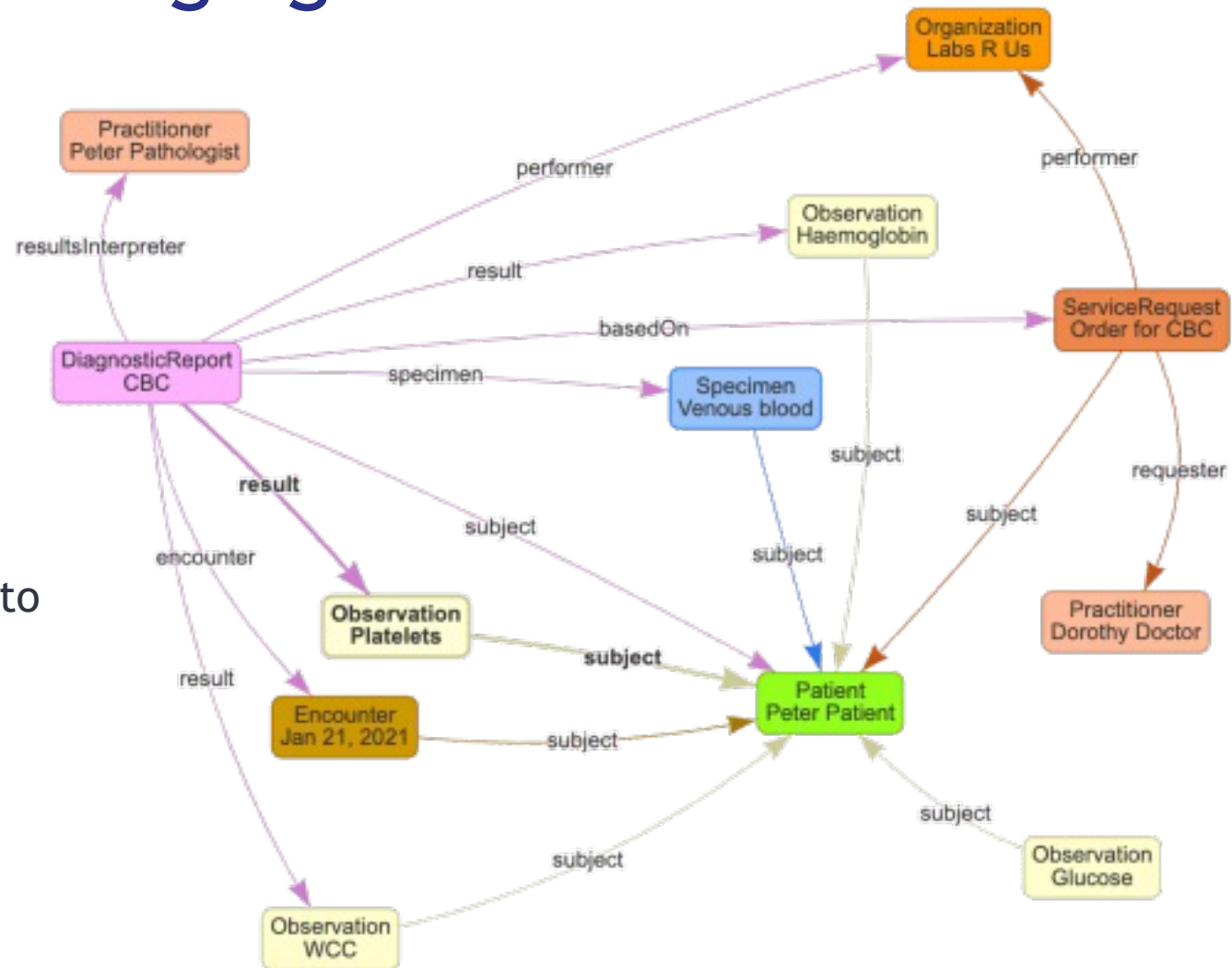


From Single Patient to Population Management

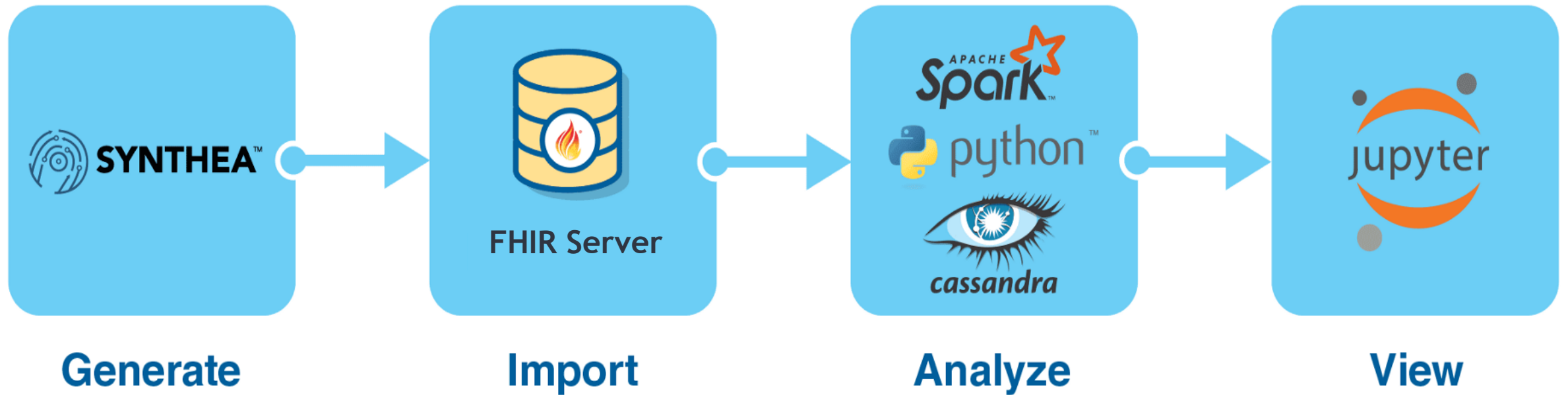
What makes it Challenging?

FHIR is a complex directed graph

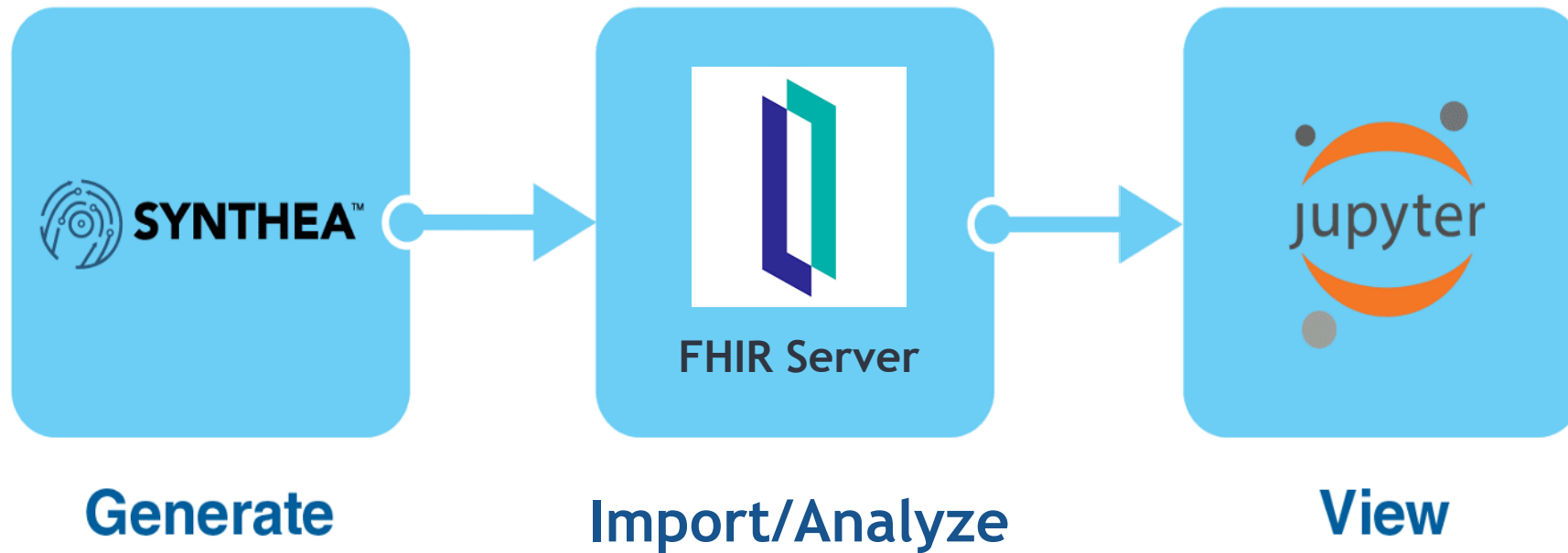
Resources have one-way links to other resources



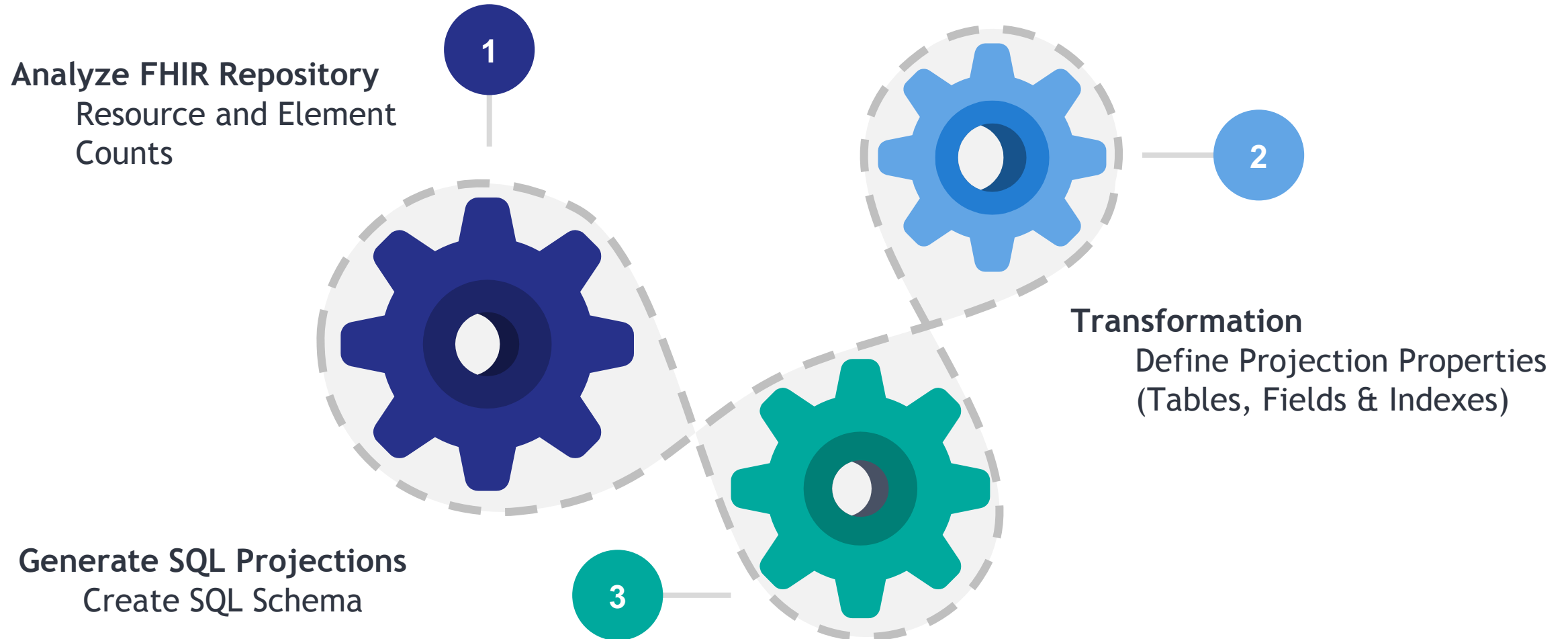
How to do Analytics on FHIR



How to do it w/InterSystems IRIS for Health



SQL Builder Steps





Thank you.

