Principle	Some implications for annotations
Findable	
F1. (meta)data are assigned a globally unique and persistent identifier:	Web annotations are uniquely addressable and they therefore can be issued a GUID such as a DOI. But as annotations are anchored to specific fragments inside of an object, e.g., a span of text, or a part of an image, how are these identified?
F2. data are described with rich metadata (defined by R1 below)	A critical piece for science is to link annotation capability to standardized and rich metadata via community ontologies and data models.
F3. metadata clearly and explicitly include the identifier of the data it describes	Annotations include an explicit reference to the DOI and URL of a document, but what about books? Book chapters?
F4. (meta)data are registered or indexed in a searchable resource	Currently,individual systems provide structured and free text search across all annotations made. What about annotations made by other platforms?
Accessible	
A1. (meta)data are retrievable by their identifier using a standardized communications protocol	Annotations are retrievable individually through their identifiers and through the DOI of the annotated document. The community has not yet defined a standard query syntax for annotations. By working through the Accessibility requirement, we will be able to define an open standards-based API for biomedical annotations.
A1.1 the protocol is open, free, and universally implementable	An explicit goal of AAK. The protocol is a W3C open standard and any API's should be open, free and universally implementable.
A1.2 the protocol allows for an authentication and	The W3C has defined the protocol that standard annotation servers and clients will use to exchange annotations

authorization procedure, where necessary	(https://www.w3.org/TR/annotation-protocol/). But how will this be managed across platforms?
A2. metadata are accessible, even when the data are no longer available	How should systems handle orphan annotations, i.e., annotations that anchor to content that has been removed? Metadata added via annotation should persist, including the target of the annotation, even if the content disappears.
Interoperable	
I1. (meta)data use a formal, accessible, shared, and broadly applicable language for knowledge representation.	With the release of the W3C web standard, the basics of interoperability are in place. The AAK Coalition has begun the process of further defining what interoperability means for annotation.[7]
I2. (meta)data use vocabularies that follow FAIR principles	The ability to utilize FAIR ontologies and controlled vocabularies in a way that preserves their FAIRness; some systems do this already; some do not.
I3. (meta)data include qualified references to other (meta)data	Annotations natively include relationships between the target of the annotation and the annotation, which may include tags. In addition, annotations can contain links that form relationships among them.
Reusable	
R1. meta(data) are richly described with a plurality of accurate and relevant attributes	Annotations provide the ability to update metadata that has already been provisioned.
R1.1. (meta)data are released with a clear and accessible data usage license	Annotations should be released with a machine-readable CC0 license; but it is possible to allow individual organizations to choose additional licenses. To be FAIR, the license should be returned with the annotation metadata.

R1.2. (meta)data are associated with detailed provenance	As indicated, annotations are a powerful way to capture provenance as they automatically create a link between the source material and the annotation. But to be FAIR, annotations must also expose the source of things like controlled vocabularies.
R1.3. (meta)data meet domain-relevant community standards	The W3C standard provides the means for annotations to be FAIR, but to use annotations to make other objects FAIR requires the ability to annotate to relevant community standards.