Introduction to collaborative cloud mapping

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Terminology:	Definition:
Characteristics:	
On demand self service	A single user can facilitate computing capabilities as needed.
Broad network access	Capabilities can be accessed over high speed internet connections using various platforms e.g. mobile phones, tablets, laptops and/or workstations.
Resource pooling	Resources are shared among various users without knowing the exact location of the resources.
Rapid elasticity	Resources can be scaled in and out as needed, often automatically. This gives the illusion of unlimited resources to the user.
Measured service	Measuring services monitor the usage and health of systems. This is crucial because it assists with optimizing resources and provides transparency for both consumers and providers.

Service Models:	
Software as a Service (SaaS):	Applications running on cloud infrastructure to provide services to end- users.
Platform as a Service (Paas):	Tools and resources running on cloud infrastructure to provide services to end-users
Infrastructure as a Service (IaaS):	The computing resources such storage, networks, servers and operating systems used to provide services to clients.

Deployment Models:	
Private Cloud	Is owned or rented by a single organization and the whole resource is dedicated to the single organization.
Community Cloud	The resources are shared among organizations or members of a closed community with similar interests. This model is very similar to the private cloud.
Public Cloud	Is owned by a service provider that sells or rents resources to organizations. The resources are shared among many organizations and end-users.
Hybrid Cloud	This is a combination of two or more cloud infrastructures. A hybrid cloud provides extra resources when needed e.g. migrating from a private to a public cloud for intensive computational tasks.

Deployment Models	Private Cloud	Public Cloud	Community Cloud	Hybrid Cloud
Service Models	Infrastructure as a Service (IaaS)		Platform as a Service (PaaS)	Software as a Service (SaaS)
Essential Characteristics	On demand self service, Broad network access, Resource pooling, Rapid elasticity, Measured services			

- Examples
  - Open Street Map, Natural Earth Data, Google Maps – Public/Community
  - ArcGIS Pro, ArcGIS Online, Mapbox, GISCloud, MangoMap, CartoDB – Private/Community
  - Humanitarian demining would be a private community based collaborative cloud

- Issues
  - Security, privacy and transparency

- Advantages
  - Savings in costs, flexible, increased productivity, computing power (grid, parallel, utility), management of projects, etc.

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- Thank you.

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