

# The Commons As Knowledge Federation Infrastructure

Opening keynote by John Wilbanks

Traditional systems for federating knowledge - journals, monographs, storytelling - have been dramatically disrupted by the advent of digital communications networks. New models based on free information and knowledge are actively competing with models that support the publication and distribution of knowledge via its protection and control. But these are just changes in scale and business model, not changes that reflect disruption in our models of knowledge itself. The emergence of ubiquitous, cheap technologies to measure complex systems, via sensors, robotics, array technologies, and more, are creating data on a scale that is unprecedented. And though society has had hundreds of years to develop systems to create, distribute, and reward knowledge work in a document context, few of those systems function in a world immersed in data - especially those based on a vision of perfect control of information (either from a property perspective \*or\* from a philosophical perspective). This talk will explore the changes and challenges posed by the transition to a culture of knowledge abundance, some existing approaches that facilitate knowledge sharing, aggregation, and federation, and the role of the "digital commons" as a new piece of foundational infrastructure that supports knowledge federation.