



## Integrating Diverse Data Systems for International Collaboration

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International collaborations, especially ones that arise with little or no financial resources, still face challenges in opening up data collections via a wide variety of differing and often non-interoperable means.

In turn, this hampers the collaborative process, slows or even prevents scientific exchange. Early efforts that proposed a centralized, and project specific data archive encountered many difficulties, ranging from little or no adoption, to the inability to provide required documentation and metadata to make the datasets findable or usable. In time, virtualized approaches appeared to gain traction, for e.g. virtual observatories.

In this contribution, we report on several international collaboration case studies with distributed data systems; their needs, successes, challenges and failures and synthesize a set of suggested practices to inform future international collaboration efforts.