The Data Management & Sharing (DMS) plan details our approach towards implementing machine actionability and FAIR principles within our project. Centralized IT resources at Drexel will be able to cover most of our infrastructure needs such as HIPAA compliant storage servers, high-performance-computer clusters, and licenses for proprietary software. However, there are still parts of our infrastructure proposed within the DMS that are not available at Drexel University for which we will need to provision a budget. These items fall largely into two domains: 1) cloud infrastructure 2) AI-assistance.

Firstly, cloud infrastructure gives us flexibility to leverage cloud infrastructure to build/deploy domain-specific interfaces to interact with our data both for internal and external users. Our general approach is to utilize modern best practices in both DevOps (serverless infrastructure) and web development (full stack component-based JavaScript frameworks) to deliver the most performant and cost-effective solutions for this project. Specific services along with year budgets include: Azure Blob/Data-Lake storage ($0 - $1000), Azure Synapse storage ($0 - $1000), Azure static web app hosting ($0 - $200 per year), commercial APIs such as Algolia’s Search API ($0 - $100), Azure Serverless Functions ($0 - $300 per year).

Secondly, we want to explicitly include funding for AI-assistance. We believe that AI has become a high value product that can accelerate the rate of both our research, data management and sharing initiatives. There are two domains of AI’s assistance for which we want to set aside budget for. Firstly, OpenAI’s natural language AI model ChatGPT ($240 per person per year) to accelerate coding, writing and knowledge acquisition. Secondly, Midjourney image-generation AI ($200 per year) to assist our teams in image based tasks such as web design, UI/UX, dissemination content design.