

Top PRISM Solutions

<u>Team Member Name</u>	<u>Year</u>	<u>Major</u>
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Topic Title: The Cloudy Story: Assessing the Risks of Amazon Web Services

Audience: Board of Directors of Amazon

Sustainable Development Goal

SDG #7: Affordable and Clean Energy: Ensure access to affordable, reliable, sustainable, and modern energy for all

SDG #12: Responsible Consumption and Production: Ensure sustainable consumption and production patterns

Executive Summary

Cloud computing has revolutionized business and personal computing in the last decade as a result of digital advancements. It is projected that the global cloud computing market size will hit approximately \$1.6 trillion by 2030. However, the industry's exponential growth has come at a cost: the cloud now has a greater carbon footprint than the airline industry. A single data center can consume the equivalent electricity of 50,000 homes, generating emissions that contribute to global warming.

Amazon Web Services (AWS), which is the largest cloud computing company, owns 34% of the global cloud service providers' market share. While AWS has made progress towards achieving net-zero carbon by 2040, it must address two significant challenges: the environmental impact of producing energy for powering data centers and the disposal of electronic waste generated by its operations. These challenges will become increasingly critical in the next decades as the demand for AWS is expected to increase manifold.

Top PRISM Solutions aims to advance sustainable digital transformation by providing cleaner energy solutions and ensuring responsible consumption. We suggest that the company should increase its renewable energy usage and be more transparent in reporting renewable energy adoption to the public. Additionally, we propose that AWS should create an internal recycling center, responsible for reusing and reprocessing electronic waste generated by data centers. Lastly, partnership with hardware manufacturers could open a new paradigm of producing eco-friendly hardware for cloud computing. We expect the implementation of these solutions will strengthen AWS's success in cloud computing services while enhancing the long term sustainability in ethical, legal, and financial aspects.