

## Sustainable Software Engineering Checklist

Adopting Green Coding Principles		Tick all that apply
<b>Engineering Energy Efficiency</b>	Ensured your application is taking responsibility for the electricity it consumes and considered whether you have designed it to consume as little energy as possible	<input type="checkbox"/>
<b>Carbon Efficiency</b>	Minimised the amount of carbon emitted per unit of work and wherever possible, made choices to consume electricity with the lowest carbon intensity available	<input type="checkbox"/>
<b>Hardware Efficiency</b>	Focused on extending the lifespan of hardware through more efficient use of resources (e.g., running your workload on as few servers as possible with high utilisation rates) and ensured that your application has been designed to be able to run on older hardware components	<input type="checkbox"/>
<b>Data Efficiency</b>	Made choices to reduce the amount of data and distance it has to travel to reduce energy demand and associated carbon emissions	<input type="checkbox"/>
<b>Measurement</b>	Selected tools that can help measure, baseline and identify actions to reduce the carbon impact of your software, and used the data to set targets that you can track and to monitor performance	<input type="checkbox"/>
Applying Sustainable Software Engineering Techniques		Tick all that apply
<b>Software Power Consumption</b>	Considered using appropriate energy profiling tools and selected an energy consumption technique suitable for your code / project	<input type="checkbox"/>
<b>Data Caching</b>	Selected a data caching technique with appropriate attention on approach and configuration to help improve energy efficiency, and have actively considered whether data caching on server or remotely via a network is most suitable for application	<input type="checkbox"/>
<b>Data Exchanges</b>	Selected an appropriate data exchange method to more efficiently process, transfer and store data	<input type="checkbox"/>
<b>Data Compression, Aggregation and Retention</b>	Applied effective data compression methods, data aggregation techniques appropriate to your application, and selected a data retention policy that balances the processing and data storage requirements of your software	<input type="checkbox"/>
<b>Image Sizing</b>	Adopted various optimisation techniques and format choices to reduce image size and improve the energy efficiency of your website or image intensive application	<input type="checkbox"/>
<b>Unused Features</b>	Assessed and removed unused features and code to improve energy efficiency and increase carbon savings	<input type="checkbox"/>
<b>Logging, Loops and Polling</b>	Devised an efficient and optimised logging strategy and identified and removed loops from your code, and have considered how polling affects performance and implemented changes in your application	<input type="checkbox"/>
<b>Power Adaptation</b>	Applied techniques to monitor power levels and optimise power consumption based on available power features relevant to your application	<input type="checkbox"/>
<b>Computational Accuracy</b>	Applied accuracy, precision and tolerance based methods to your application and code, and made choices that will lead to reduced data processing transfer and storage to help lower energy consumption	<input type="checkbox"/>
<b>Monitoring Energy Consumption</b>	Considered techniques to optimise your code and application for lower energy consumption, balanced performance with energy usage and devised approaches and selected tools to monitor energy consumption	<input type="checkbox"/>
<b>Programming Language Efficiency</b>	Reviewed and considered your programming language, compilation and interpretation choices and balanced selection based on the different dimensions of energy, time and memory usage	<input type="checkbox"/>
<b>Reusable Assets</b>	Devised a code reuse strategy and selected balanced methods and approaches based on deployment challenges whilst lowering energy consumption	<input type="checkbox"/>