Summary of Design Norms for Technology

Design Norm	Description	Sample Questions
Cultural Appropriateness	Technology products should consider the culture into which they are embedded, cultivating improvement without disrespectful or unnecessary disruption	Does the technology relieve burdens while preserving what is good in a cultural context?
Transparency	Technology ought to be sufficiently understandable by the user, so that they recognize potential dangers and can diagnose failures. For example, software and dashboards that clearly communicate status and errors.	Is the documentation clear? Does the product perform as advertised or does it exaggerate its claims? Are potential dangers clearly indicated to users?
Stewardship	Use of creational resources should be respectful, frugal, and caring; concern for sustainability and the environment.	Does the design consider the entire life cycle of the product? Does it use energy and other resources wisely?
Aesthetics	The form of the technological device should align with, and even suggest the function. For example, a hammer's form implies its function (of pounding).	Can new users easily intuit the function of this design? Is the user interface clear and pleasing to use? Is it delightful?
Justice 1	Technology should correct (not cause) injustice and should encourage justice, i.e., equity and fairness. Intellectual property should be respected.	Does this device promote fairness? Are copyrights and intellectual property respected? Could this design be easily used for unjust purposes?
Caring	Our tools should help us serve one another, promote wellness, contribute to healing, show love to our neighbor, and enable fellow creatures to flourish.	In what ways does this design show care for others? Who might be harmed if this device is used?
Trust	Technological devices ought to be reliable. Does the device contribute to practices that might distract us from God or put our trust elsewhere?	Can the user depend on the design for its intended purpose. Is the design safe and secure? What "liturgical practices" are associated with the device?

For more details on how these apply to **engineering**, see: Ethan J. Brue, Derek C. Schuurman, and Steven H. VanderLeest, <u>A Christian Field Guide to Technology for Engineers and Designers</u>, IVP Academic, 2022.

For more details on how these apply to **computer science and data science**, see: Derek C. Schuurman, <u>Shaping a Digital World: Faith, Culture and Computer Technology</u>, IVP Academic, 2013.