**(Section 3)** **SD/Ethical Implications of follow-on products/markets**

RISC-V is a new, simple, open, and free instruction set architecture that can be freely used by any academic institution or business organization. With RISC-V, many new products can be produced, for example, using the RISC-V architecture to develop artificial intelligence chips for low-power devices, and providing lower-cost chips for intelligent driving.

RISC-V meets the Sustainable Development regulations, because it meets the Technocentric concerns, Eco-centric concerns and Sociocentric concern.

RISC-V is aimed at the Internet of Things market. With a budding market, RISC-V has its market opportunities. At this time, RISC-V is defined as a national standard instruction set by many countries, such as India. Furthermore, it has also attracted the attention of many chip manufacturers in the industry, many companies have joined the RISC-V Foundation and expressed support for it, including Samsung, Google, Huawei. This shows that RISC-V has good Eco-centric concerns.

The reason why RISC-V has become popular is that it has five advantages. These advantages indicate that RISC-V meets the technical needs of users and has great Technocentric concerns.

1. Minimalist. With its technical advantages, RISC-V has a streamlined length. Compared with traditional commercial architectures that are long, numerous instructions, and incompatible with each other, the advantages are obvious.

2. Clean. RISC-V clearly distinguishes between user and privileged instruction subsets, it avoids the requirements for special micro-architectures and special processes. Therefore, it is universal and could reduce costs significantly.

3. Modular. RISC-V instructions are divided into a core basic instruction set and a standard extensible instruction subset. The basic instruction set is small, but the extension set can be loaded according to user needs, which ensures that the instructions can be applied to different scenarios.

4. Scalable. Because RISC-V fully considers the scalability and specificity requirements of the chip design, it has variable-length instruction encoding, and reserves a large amount of available encoding space, making future instruction extensions convenient and feasible.

5. Stability. After several years of iteration, the benchmark instructions and some standard extensible instructions have been determined, and the implementation of new functions only needs to increase the extended subset without the need to release a new version of the entire instruction set.

In addition, because RISC-V uses the BSD License open source protocol, the instruction set of it is completely open. RISC-V gives users a lot of freedom and allows users to modify and redistribute open source code, it also allows commercial software release and sales based on open source code. Due to the monopoly status, patent restrictions, and high patent fees of the two giants, ARM's RISC architecture and Intel's CISC architecture, industry users are becoming increasingly overwhelmed. In this situation, RISC-V gives users the opportunity to avoid ARM's high chip royalties and Intel x86 intellectual property system lock-up, so it greatly attracts those countries that promote an innovative economy and companies in the global chip industry. This shows that it has great Sociocentric concern.