Developing an Open-Source Silicon Ecosystem: The Silicon Commons

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Open-source silicon design and verification code + processes to maintain and evolve the code = The Silicon Commons

The Four Layers of the Silicon Commons
Enabling collaboration from project governance to development practices involving 100+ contributors across multiple organizations.

Contribution Workflow
Ensuring quality and consensus from complex changes to improving details with rigorous code reviews, standardized IC blocks, and auto-generated DV collateral and SW interfaces.

Continuous Integration & Verification
Preventing divergence and integration conflicts through automated checks from simulation to FPGA execution and automated artifact builds.

Abstract

lowRISC is a not-for-profit company with a full stack engineering team in Cambridge, UK, and Zurich, Switzerland. The Silicon Commons has been developed and is actively applied in OpenTitan.

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