The Shifting, Whispering Sands…

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The shifting, whispering sands of silicon never stay still as the market continues to move from general purpose chips to custom or semi-custom solutions. It's happening everywhere and all the big platform names now have their own in-house chip design teams including Apple, Amazon, Facebook (Meta), Google, Microsoft and even Tesla.

Custom solutions give maximum performance and power efficiency with an optimum feature set tightly targeted at the end application. Apple and Google, for example, now have AI/ML accelerators in their chips, something they would still be waiting for if they used off-the-shelf solutions. It's not just the big names of course and a lot of other companies are looking at how to reduce cost and increase performance by creating their own chips. The trend is being driven by the need for smaller, lower power devices as well as larger more powerful ones like servers and data centres along with the availability of IP (e.g. RISC-V or Arm cores) and more sophisticated EDA and SDK tools which accelerate custom chip development and allow software and hardware teams to work in parallel.

Ashling's Tools-as-a-Service (*TaaS™)* model allows development of a comprehensive, sophisticated SDK tool suite tailored and optimised for your specific device. Using off-the-shelf "generic" SDK tools will only allow your customers to scratch the surface of your devices capabilities and to allow you and them to get the best out of your device, you need a toolset tailored to take advantage of all the compelling unique features your device offers whether these be Custom Instruction Extensions, Hardware Accelerators, Multiple Heterogenous or Homogenous Cores, Real-time Trace and Performance Monitoring Logic, Crypto-processors, Custom Peripherals, Graphical Processors/GPUs, Data Processing Units, Hardware Threading etc.

Ashling's *TaaS* model allows us to jointly develop and rapidly bring this custom tool solution including an SDK, IDE, Debugger, Compiler Toolchain, Instruction/Cycle-accurate Simulators, Hardware Debug and Trace Probes, Reference Boards, OS/RTOS Ports, BSPs, HAL etc. to the market thus giving your device a key, competitive advantage and ensuring your customers can take maximum advantage of everything your device has to offer.

For more, see here and here.

Thank you for reading.
Hugh O'Keeffe, Ashling CEO.