



**Structure for Packaging, Integrating and  
Re-using IP within Tool-flows**

## **Synopsys Interoperability Breakfast**

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Chairman SPIRIT Verification Working Group

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# What is SPIRIT?

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**SPIRIT is a consortium consisting of leading EDA, IP and SoC integrators aiming at increasing the efficiency of SoC integration by defining new standards for support in EDA environments and IP packaging**

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# Why SPIRIT

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The industry needs a standard mechanism for the importing of IP into any EDA tooling environment, and for describing IP in such a manner that IP integration can be automated

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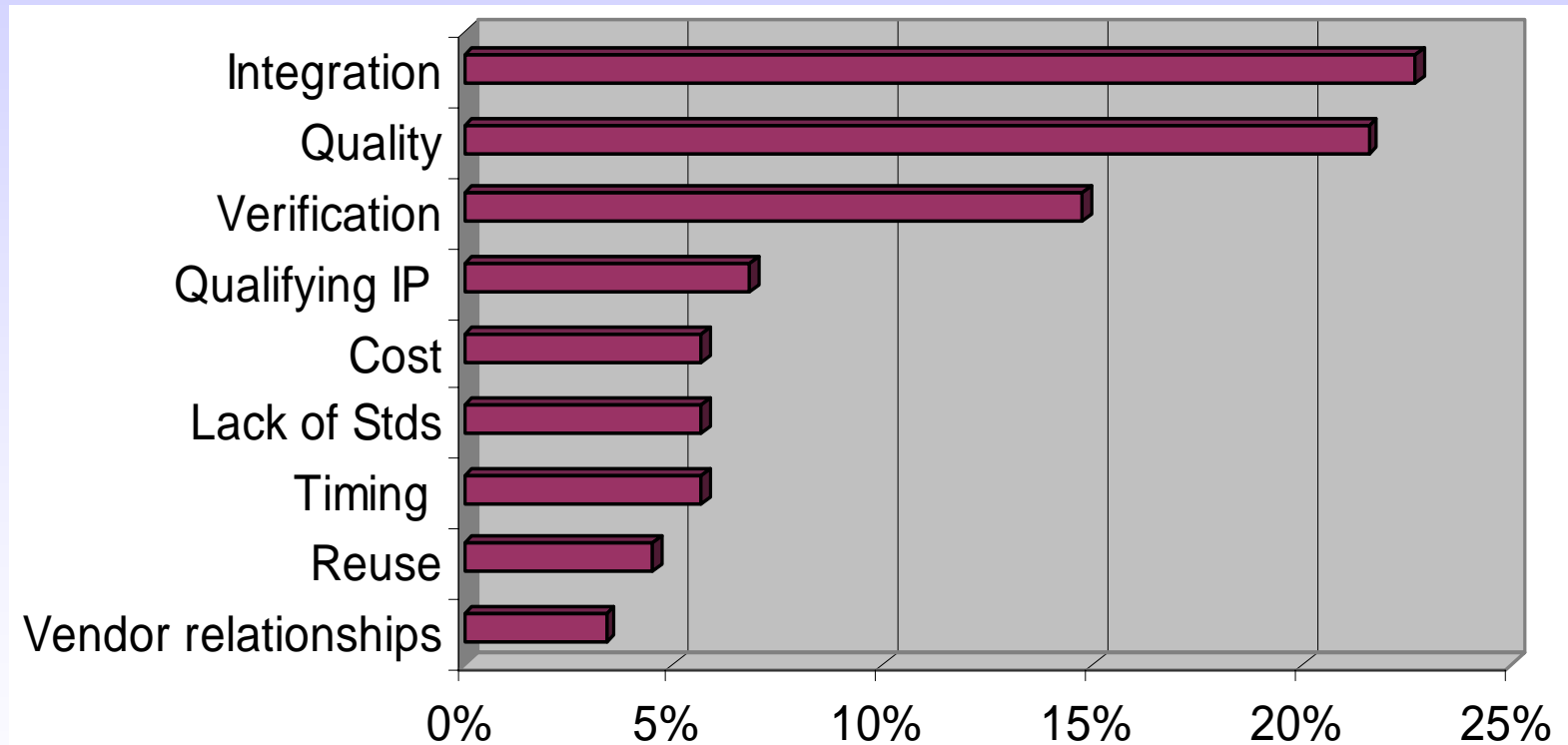
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# DAC Study

Q: What is the biggest challenge for the IP User of the future



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# Pressure from This Person – The Consumer

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“I want it all in **ONE DEVICE.**”

“I want it to fit **UNDER MY HAT.**”

“I want it to **RUN ALL DAY.**”

Your nightmare  
“We need to finish design and  
verification **NOW**”



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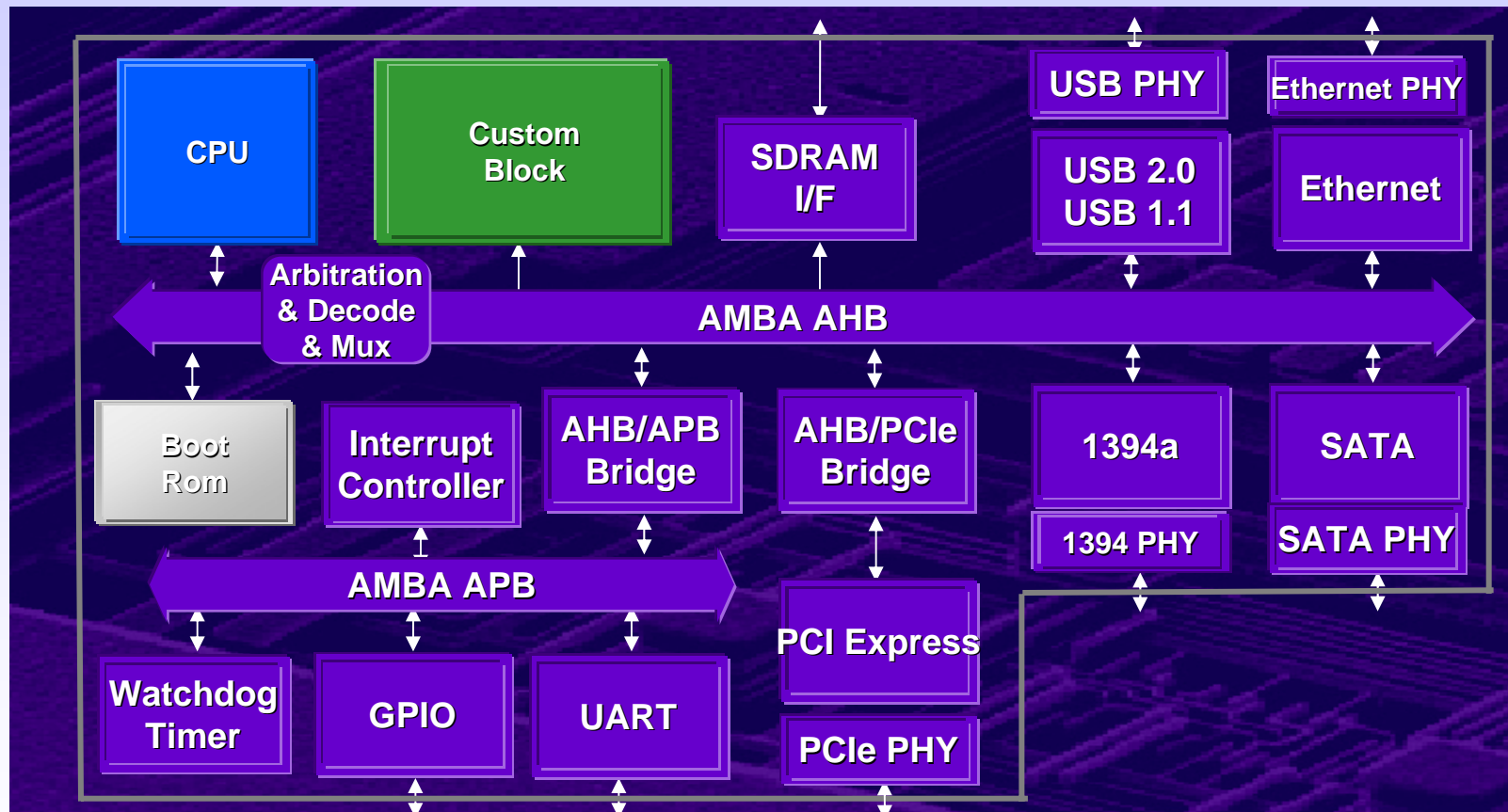
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# Example: An SoC with Multiple IP components



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# SPIRIT IP support from Synopsys TODAY!

USB 2.0	Host, Device, PHY, FS/HS On-The-Go (OTG), OTG PHY	
USB 1.1	Host, Hub, Device	
PCI Express	Endpoint Controller, Root Port, Dual Mode, Switch Port & PHY	
PCI / PCI-X	32 32 Asynchronous-Synchronous, 64 64 Asynchronous-Synchronous 32 32 Multifunction AHB PPCI	
AMBA 2.0	AMBA Bus Logic and Peripherals (also in Library)	
SATA	Serial ATA Host	
SD-MMC	Secure Digital, Multi-Media Card	
IEEE 1394	AV Link Controller, Cable PHY	
JPEG	Codec, Encoder, Decoder	
Microcontrollers	8051 & 6811 8-bit Microcontrollers	
Ethernet	10/100, Gigabit, GbE Subsystem	

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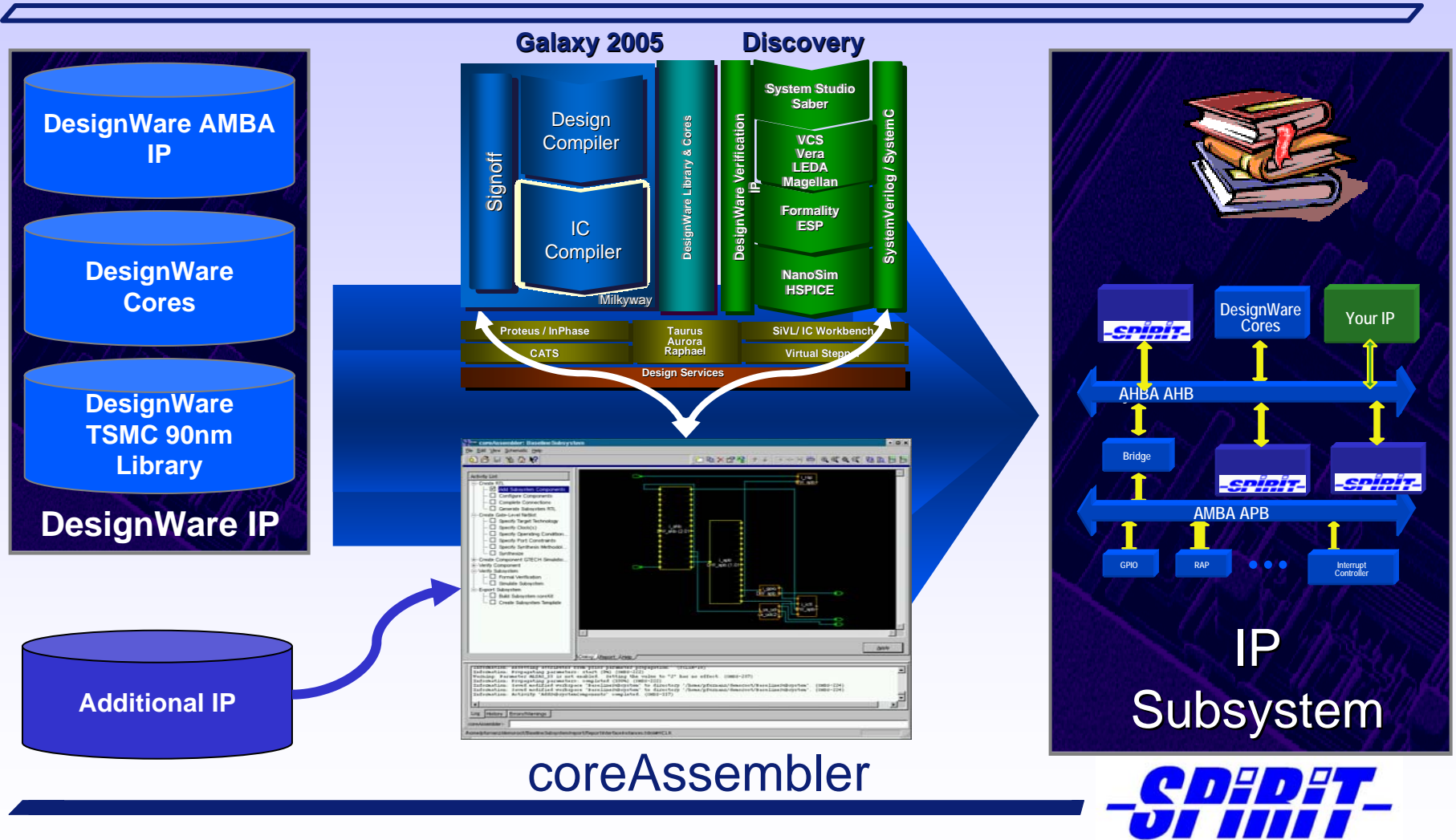
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# SPIRIT tool support from Synopsys TODAY!



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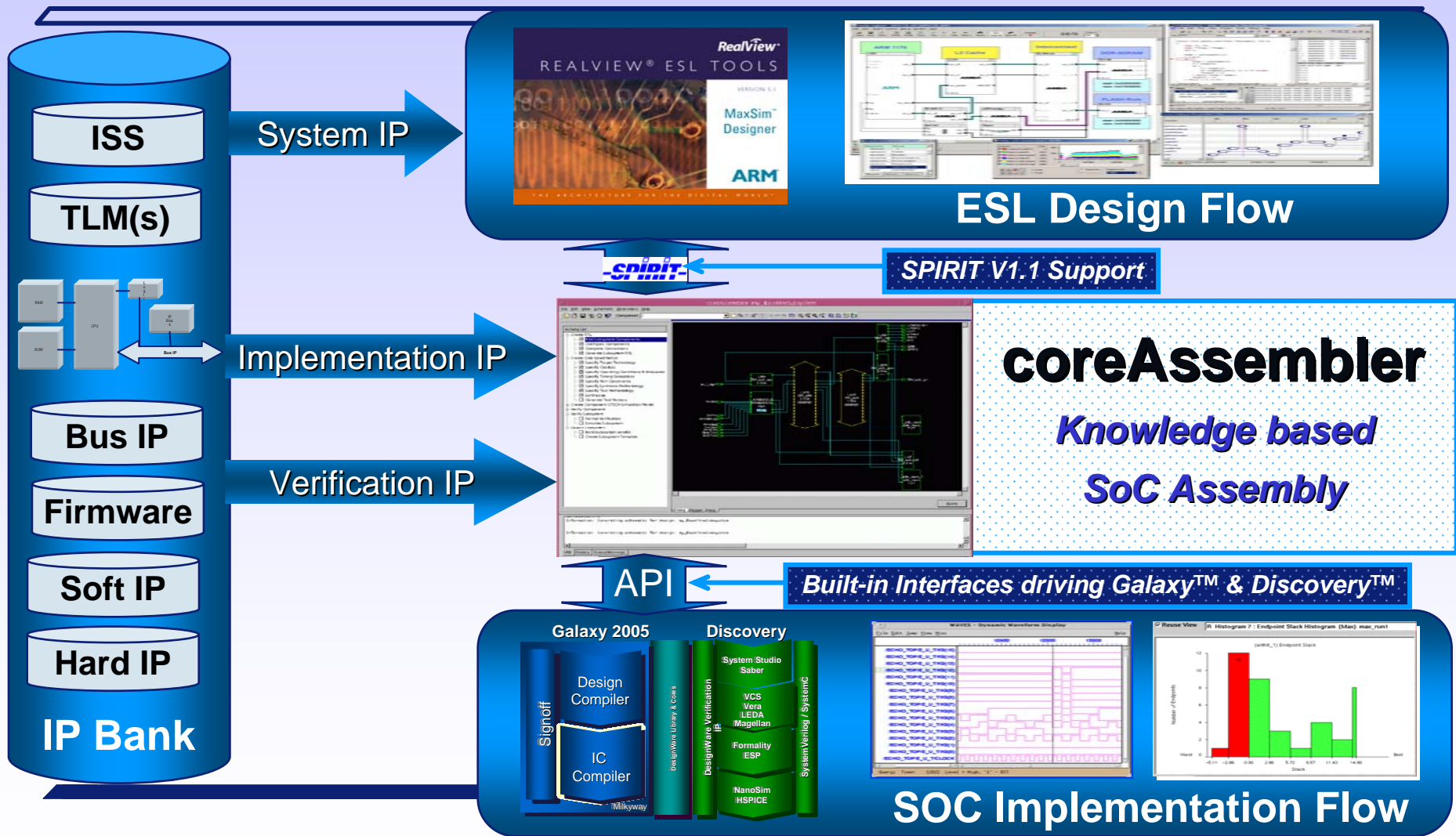
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# Multi-Vendor tool flow support!



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Thank You

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