

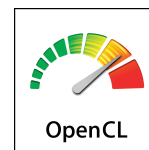


Update & AMA

XDC, Montreal, October 2019

www.khronos.org

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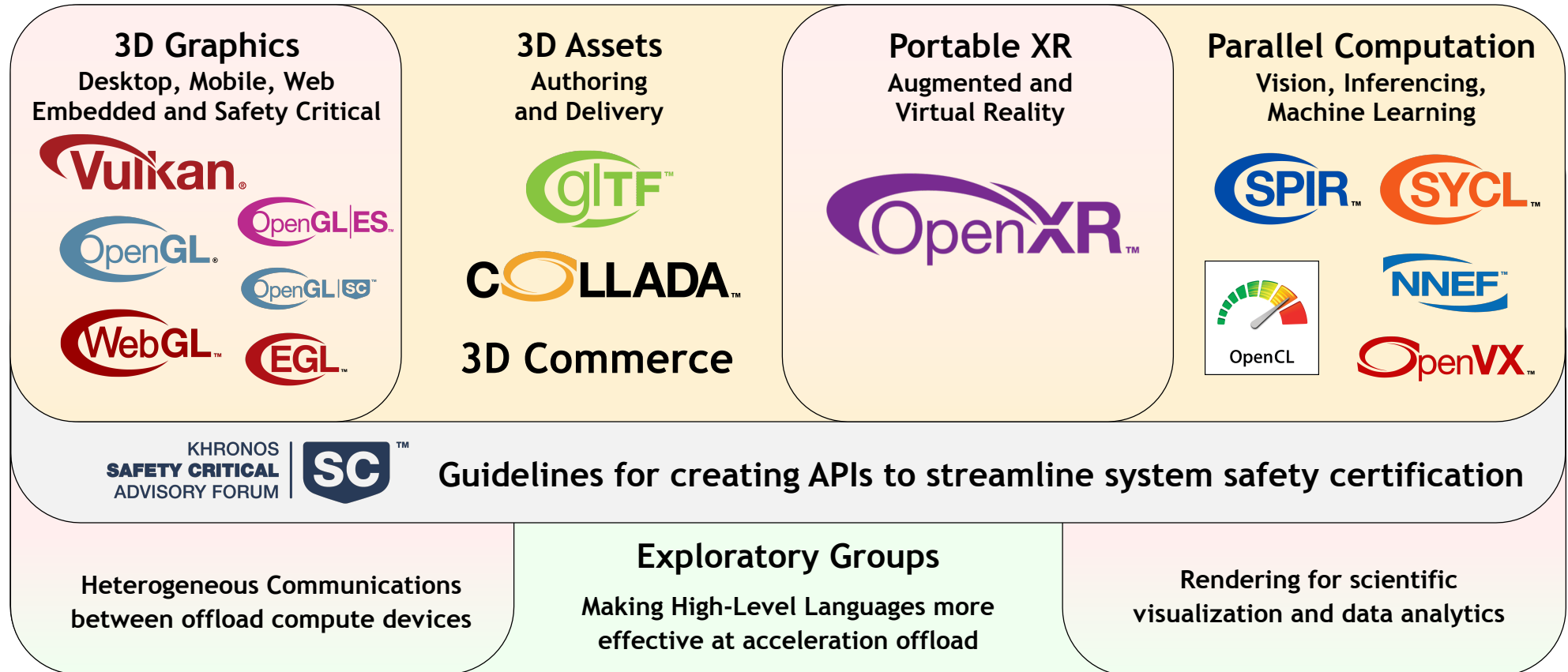


Khronos Mission



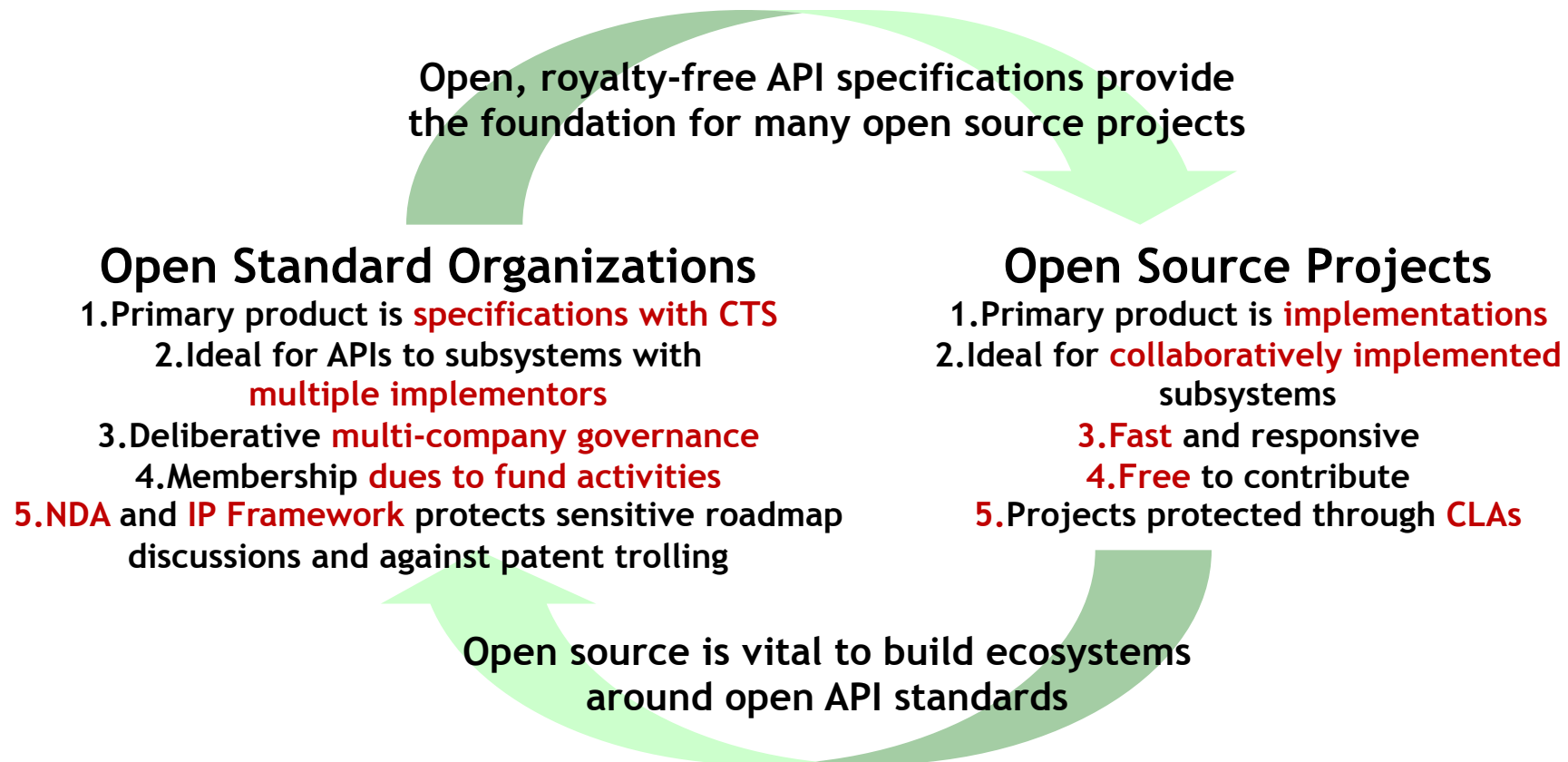
Khronos is an **open, non-profit**, member-driven industry consortium developing **royalty-free standards**, and vibrant ecosystems, to harness the power of **silicon acceleration** for demanding **graphics rendering** and **computationally intensive** applications

Khronos Active Initiatives



Open Source and Open Standards

Two complementary ways to build, open, portable software ecosystems



Khronos Principles of Organization

Open membership.
Any company is welcome to join.
One company one vote

Open specifications.
ROYALTY-FREE through a strong,
modern IP Framework: Khronos
members agree not assert patents
against conformant implementations

Open New Initiative Process.
Any member, or non-member, can
propose new standards initiatives

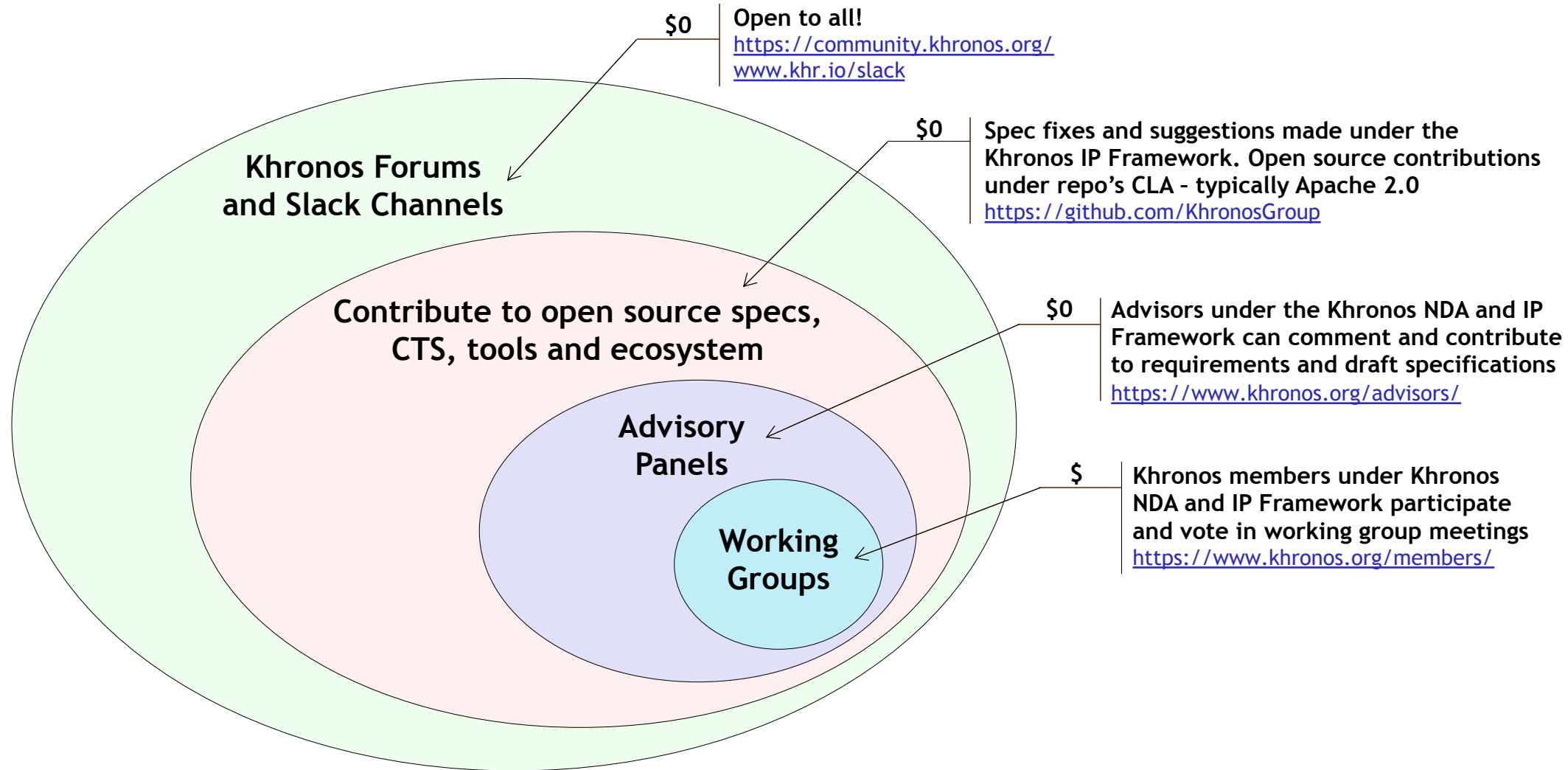


(Increasingly) Open Source
Conformance Tests and Adopters
Programs for defining conformance,
specification integrity and cross-
vendor portability

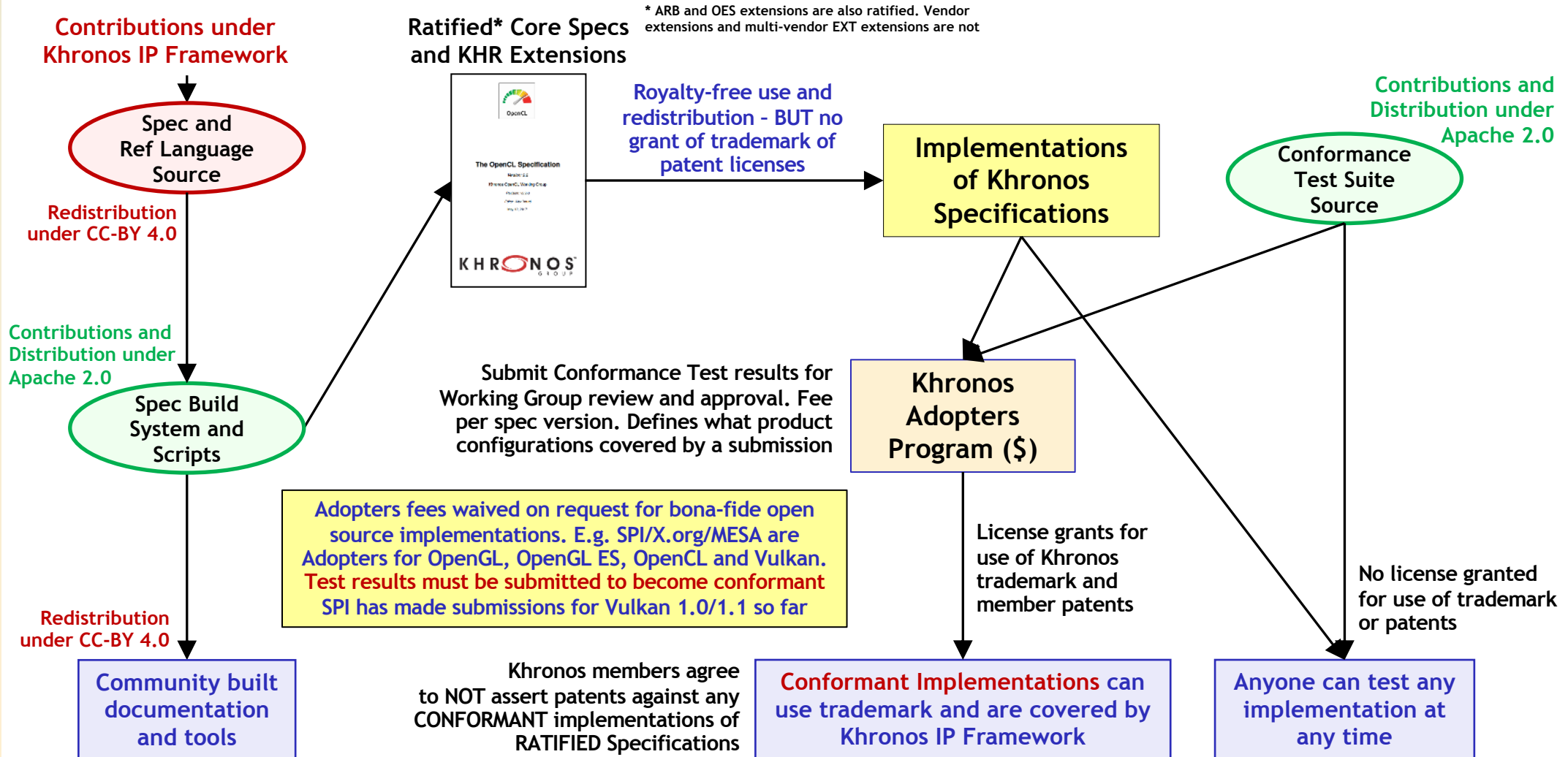
Non-profit organization -
Membership and Adopters fees
cover operating, marketing and
engineering expenses

Invest where there is strong
industry momentum and
relevance - let Darwinism rule!

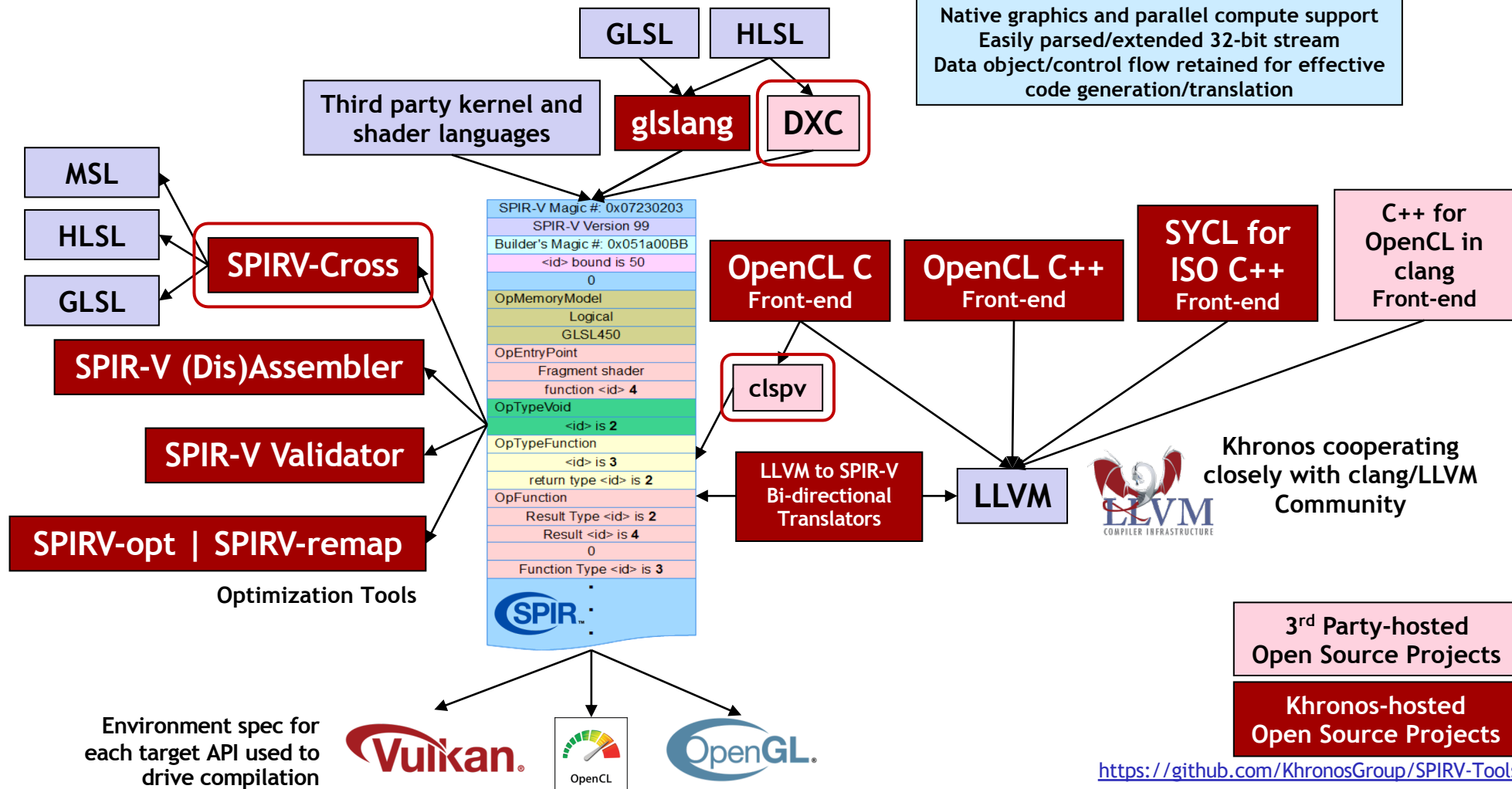
Khronos Ecosystem Engagement



Khronos Specification and Adoption Flow

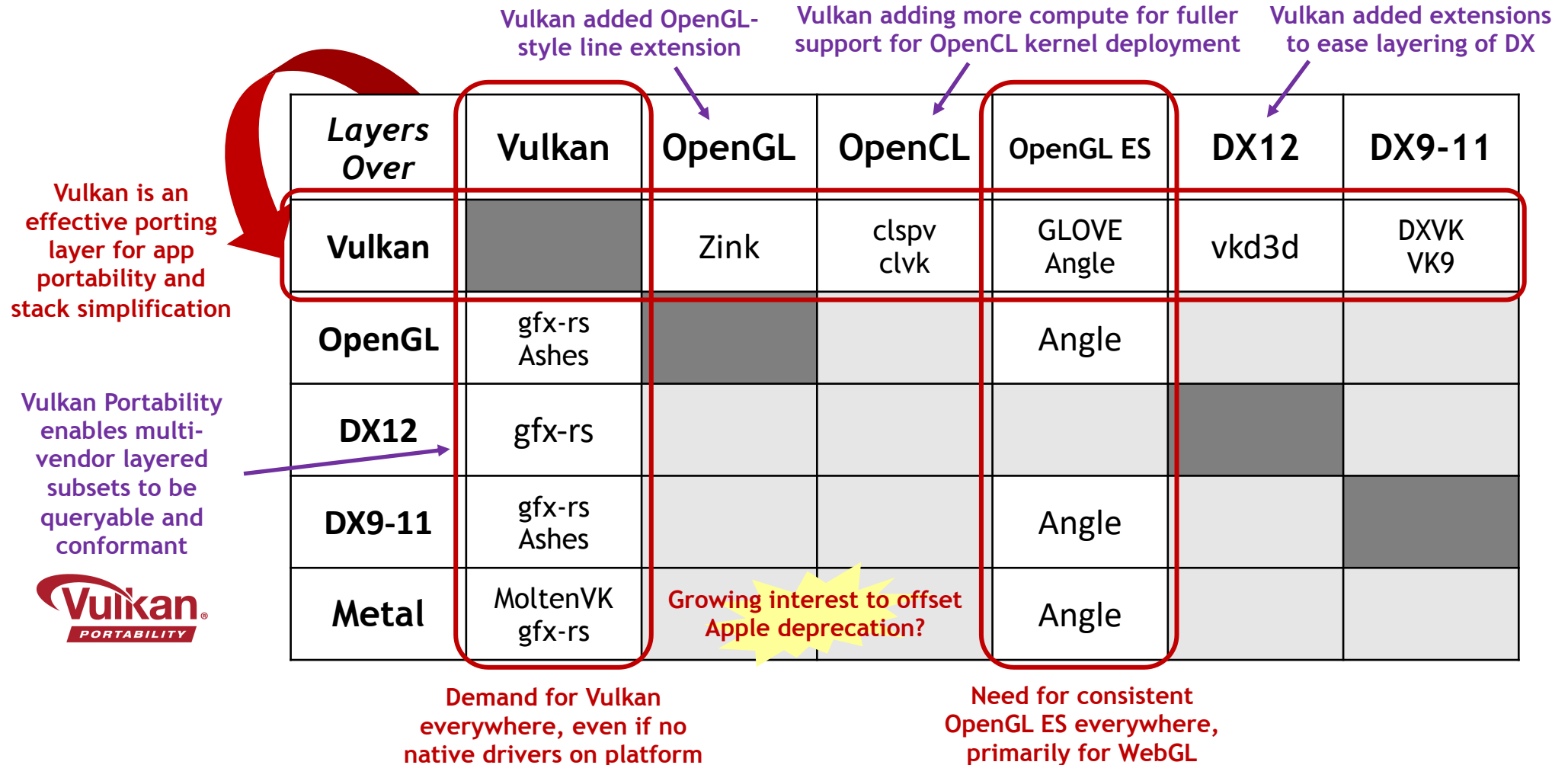


SPIR-V Ecosystem



Open Source Layering Projects

Breaking through platform fragmentation



Vulkan Portability Initiative

Enabling Vulkan applications on platforms without native drivers by layering cleanly queryable subsets of Vulkan over DX12, Metal and other APIs

Multiple Layered Vulkan Implementations

Additional open source run-times over additional backends
E.g. gfx-rs for Vulkan over Metal and DX12 - useful for Vulkan on UWP platforms such as Windows 10 S, Polaris, Xbox One.

Secondary backends include OpenGL/D3D11

<https://github.com/gfx-rs/gfx>
<https://github.com/gfx-rs/portability>



Portability Extension

Layered implementations can portably expose what Vulkan functionality is not supported



Extend Vulkan Conformance Test Suite

To handle layered implementations - what is present must work!

Enhanced Vulkan Layers

Extend DevSim/Validation Layers to flag or simulate queries for features not present



TODAY

Open source tools, SDKs and libraries to bring Vulkan 1.0 applications to Apple using Metal



Inviting Closer Collaboration

Both organizations are working to enable developers with an effective, royalty-free graphics ecosystem



How can we better work together?