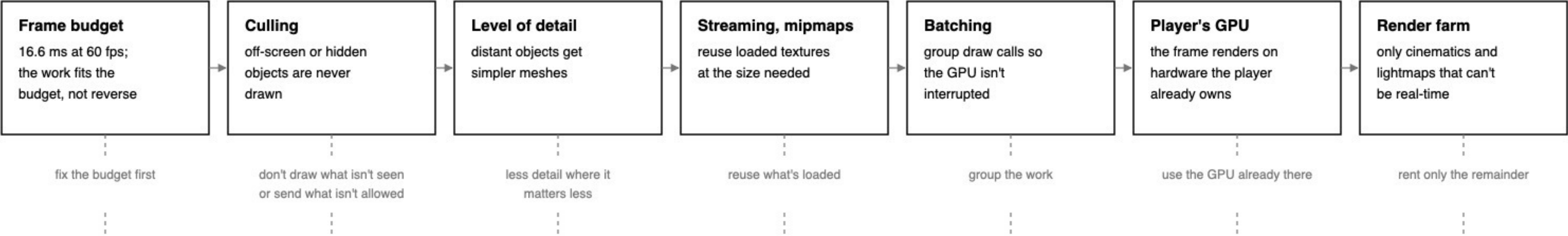


THE FRAME-BUDGET ORIGIN — GAME ENGINES ALREADY BIND BEFORE THEY ALLOCATE

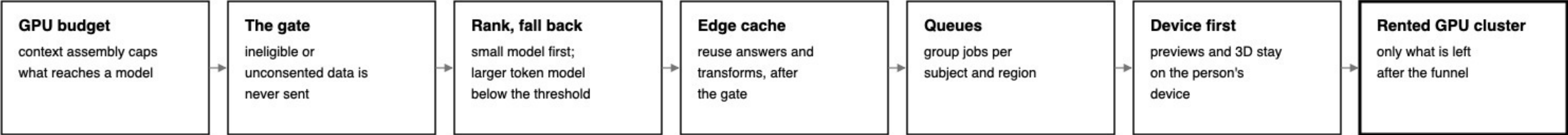
the GPU was born rationed: a game spends it only on what the player can see; AI allocation by contract dropped that discipline, this article restores it

Columns pair by role. Red dashed = a C or C++ renderer. Heavy box = where the work ends up.

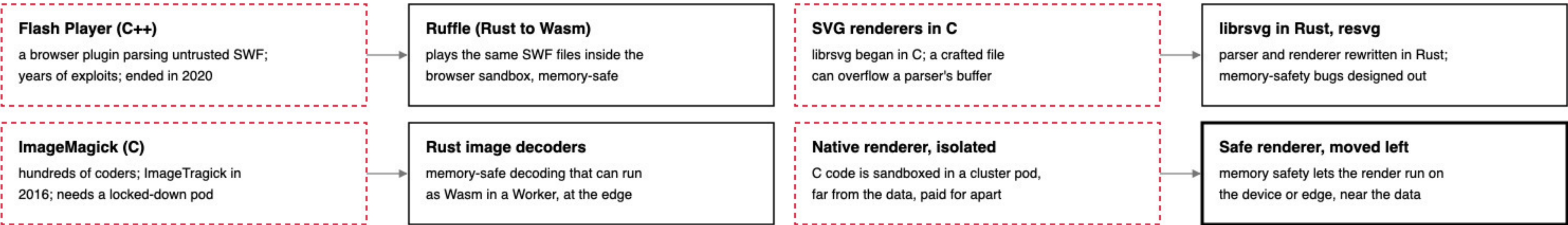
GAME ENGINE · A 16.6 MS FRAME BUDGET ON THE PLAYER'S GPU



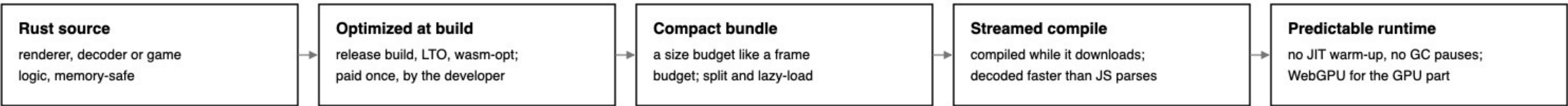
BIND BEFORE YOU ALLOCATE · A GPU AND TOKEN BUDGET



THE RENDERERS · C AND C++ PARSERS ON THE LEFT, THEIR RUST REPLACEMENTS ON THE RIGHT



COMPILE ONCE, RENDER CHEAP · THE WASM BUNDLE MOVES WORK FROM EVERY RUN TO ONE BUILD



FROM THE PLAYER'S DESK TO THE DATA CENTER

