

Group-4  
Week-1 Day-5- Task-6  
Devid Kumar Deka, Disha Shakyawal,  
Chandan Kumar, Badal Singh, Chhavi  
Nath,B N Mallikarjuna, Balusu Devashish

Case Study Analysis: Choice of SPLD, FPGA, or ASIC influences development timelines and market success.

Product Description

Medical imaging device integrating  
advanced image processing algorithms.

**Initial Development:** Prototype using  
FPGA for flexibility in algorithm  
development.  
**Production Version:** Transition to ASIC  
for cost reduction, performance  
optimization, and regulatory compliance.

SPLD

**Development Timeline:SPLD:**  
Facilitated quick implementation of glue logic and simpler functions, supporting rapid proof of concept.

**Strategy for Optimizing Time to Market:**  
Utilize SPLDs for initial prototyping of simpler logic tasks and interfacing functions, ensuring flexibility and rapid iteration.

FPGA

**FPGA Prototyping:**  
Accelerated initial development with rapid iteration and validation of complex algorithms.

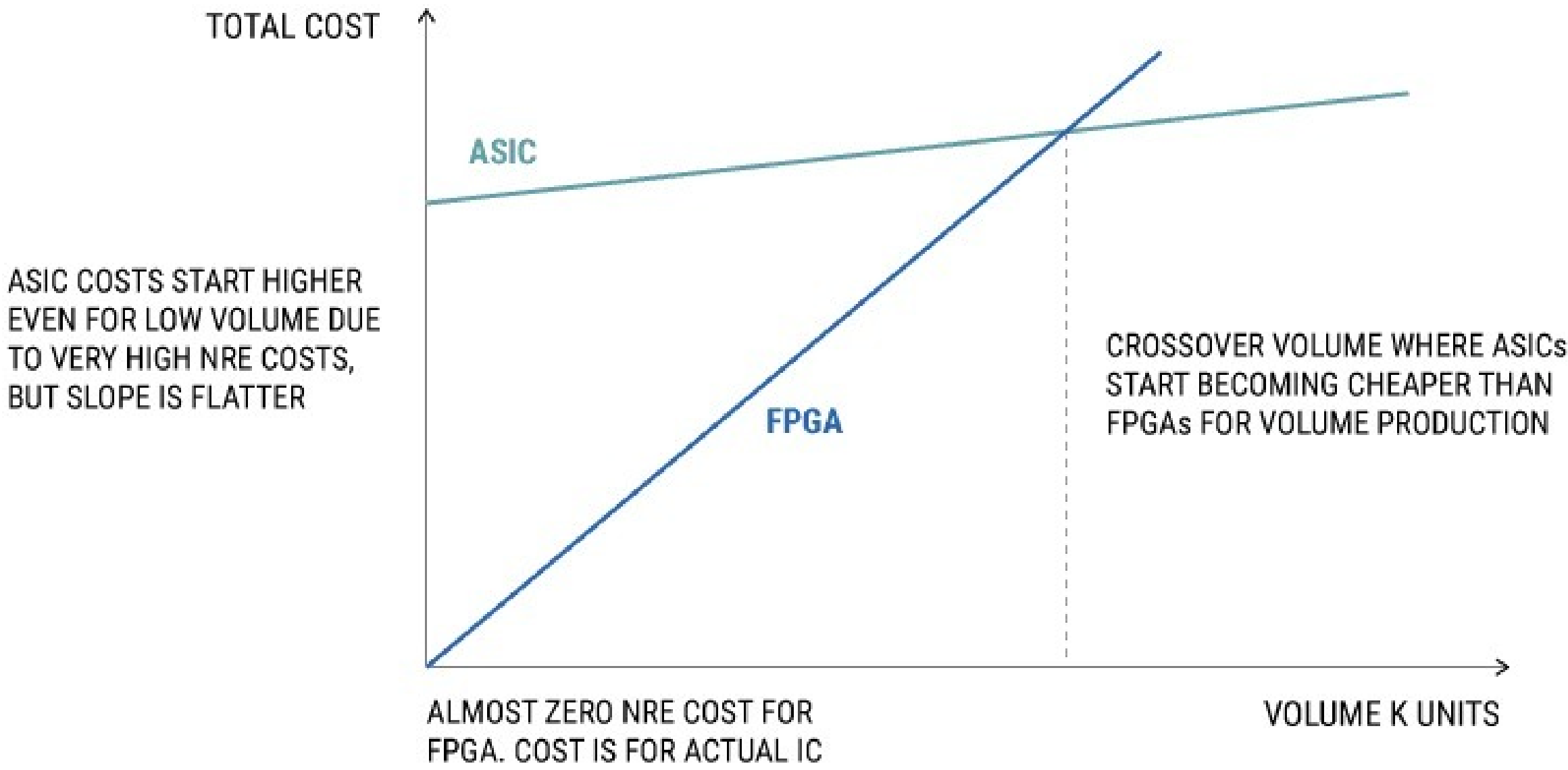
**Early Market Entry:**  
FPGA prototype enabled showcasing capabilities early, attracting interest and feedback.

ASIC

**ASIC Transition:**  
Extended timeline due to ASIC design, fabrication, and testing phases, but crucial for optimized performance and cost-efficiency in production.

**Competitive Advantage:** ASIC deployment enhanced product performance and reliability, key factors for market adoption and regulatory compliance.

FPGA vs ASIC Cost Analysis



FPGA vs ASIC COST ANALYSIS