Software development cycle time improvement for a network equipment supplier

Background

Client situation
- A top tier supplier of enterprise class switches and routers
- Developing software for next generation switching solution for secure enterprise applications
- Significant risks: New hardware, new functionality, geographically dispersed development team
- Highly competitive situation – significant loss of revenue/share to a competitor if product is not delivered on schedule

Engagement objectives
- Develop a high integrity plan to achieve the time-to-market goal
- Find and fix risks which threaten on-time product delivery

How impact was measured
- Actual cycle time is compared to the duration if corrective steps had not been taken

Approach

Establish capability baseline
- Measured R&D performance of teams on 4 prior generations of this switching product

Complexity Measurement
- Measured the new software's complexity early in the planning phase
- Sized each change request in terms of the impact on project effort, cost and risk-to-schedule

Schedule Risk Analysis
- Identified and fixed high-risk execution assumptions using analytic methods. Discovered underestimation of test effort.

Analytics-based planning
- Simulated various alternatives & developed "fact-based" cost, resource & time estimates

Impact

- 4-6 months reduction in project duration and TTM slips captured through identification of unrealistic test and verification assumptions

Project duration before (weeks)	Impact	Project duration after (weeks)
108	22	86
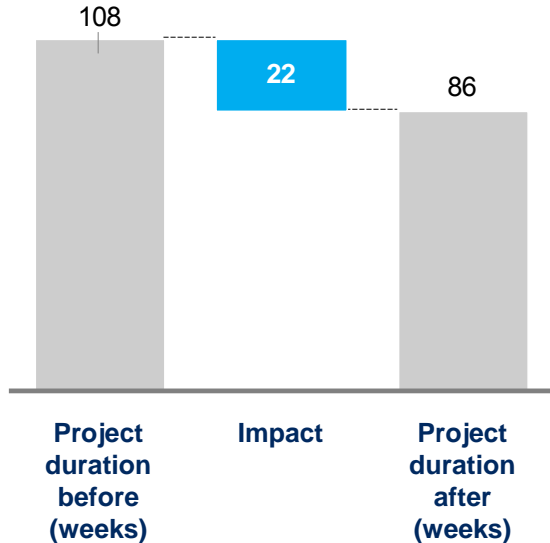
"We had an intuitive feel that we consistently underestimate project effort, but it wasn't until we saw the baseline in Numetrics that we could break the cycle"

- Enterprise program manager