Hidden Software Costs - How To Spot Them

Jay McGuerty – Dec 12, 2018
Leidos Chief Cyber Security Engineer & Author of Network Field Survival Guide
[thewayofthepacket.com]
Your Take Away

• Not intended to cover all risks – just the ones you may not usually consider
• Increase cost estimate accuracy
• Protect profit margin
• How to point project mgrs. to the areas that they are under estimating and some possible mitigations
Metrics Indicating Effects of Hidden Cost

- Schedule slips
- Software defects
- Out of sequence maintenance releases
- Growth of backlog items
- Length of time items remain in backlog
- Developer turn over
- Extended work hours are authorized
The “Voldemort” Of Software Mgt

• The reality of software management that will not be spoken
• Delivery schedules override security
Contract/SOW

• Hidden costs are transferred to project when its underbid
• Hidden costs are incurred when Project Mgt unable/unwilling to limit customer induced scope creep
Hidden Cost of Productivity Killers

- Project Mgt centric (scrooge)style of management
- Let them eat cake
- Developers are treated as expendables
- Lower morale = reduced productivity
- Good developers will leave (because they can) – brain drain
The “Process” Has Taken Over

- To some, the process has become their product
- Adds a lot of overhead – creates the appearance of progress but has little effect on actual productivity
- This is an example of a “Project Mgt” centric style of running a contract
Hidden Cost of Liability Transfer

• Legal liability of corporate officers has put them on notice
• Solution: liability transfer via costly software scanning software
• Integration and user learning curves are hugely under estimated
• Adding insult to injury, these products have high false positives and developers turn the checks off to code checked in
Not So Agile

• Like any great idea some things get lost in translation
• The agile process needs to go on diet
• Sprint Retrospectives - Really?
• Changes in Project Mgt/Technical leads usually come with re-alignment of software development priorities and philosophies such as what “agile” means
Vicious Cycles

• When testing software – many projects test to pass, not test to fail
• Leaving many undiscovered software bugs to be discovered in production
• When they are discovered it creates panic, re-allocating labor resources and unscheduled maintenance releases
• This also creates a vicious cycle of reactionary software management – more cost
Classified Projects

• Standing up and working under DoD rules of developing classified applications probably increase cost of a project by 25%+

• $$$$$$$
Onboarding

• It’s on the WIKI – right
Onboarding (cont’d)

• Sr/Existing developers don’t document well if at all
• If they do – only they understand it
• It’s not kept up to date
• Onboarding new developer frequently takes more time and resources than it should
Common Desktop Environment

• Sounds good, rarely delivers as promised
• Hidden cost of inefficiencies of re-install’s, onboarding etc..
Encryption

• Encryption is a component on any software development project
• Some need more/have special needs
• This is often overlooked in pricing contracts
• Encryption is not “canned” and the skillset isn’t cheap
• $$$$$$$
Hidden Cost of Different Locations

• Culture differences
• Especially when one team is the prime and the other is a sub
• $$$$$$$
Hidden Cost of Purity

• The insidious and “un-accounted for” cost of pursuing code purity and the continuing search for unicorns.
Cost Impact of Project Culture

- Pace of productivity
- Varies by regional
- Varies by Company/project
- How do you quantify it? Examine past performance of the Proj Mgr/Dev Team
- What are you looking for? Schedule slips, increases in cost, maint release
- All Signs of un-accounted cost