IT Mechanisms for Success

By John Kosh

Don't bring a knife to a gunfight!

Unless you're in a small dark room...

Choose Your Weapons Carefully

So **generally** the common truism of "Don't bring a knife to a gunfight" applies if you really are unfortunate to be in a gunfight. Imagine 2 unfortunate combatants locked in a life and death confrontation where both parties are committed to killing each other. One combatant armed only with a knife standing 1,000 yards away from the other combatant, a modern military trained sniper.

Without some random act of fate, such as a meteor falling from the heavens and striking the combatant with a gun, or a random hippopotamus attack, the combatant with the knife has a near absolute chance of 0% to survive. However, reduce the distance from 1,000 yards to 10 yards and the odds start to approach equality. In fact, if you continue to reduce the odds to 1 yard or less the odds completely invert in favor of the combatant with the knife.

So What is the Lesson Here

From an object oriented inheritance perspective in programming the knife and rifle would naturally inherit from an object of tool. Both tools have certain characteristics and functionality valuable in a combat to the death. Thankfully most of us will never face such a scenario. You likely as an individual and your organization need to compete or provide adequate results employing tools of some type or another on a daily basis.

Understanding the context or contexts in which the tools are used, the difficulty of use, the expense of employing, the reliability, and ability to employ when and where needed are all vital in effectively being able to choose the right tool for the job no matter what type of tool that may be.

How does this apply to IT?

Today's Information Technology can be looked at as the organization, maintenance, designing, and employing processes and systems based around the inter-networked devices performing calculations and I/O across a broad spectrum of uses and abstract planes. No longer is IT limited to a small set of responsibilities keeping desktop PCs and servers maintained or help desk tasks.

Sure, some IT professionals may employ a screwdriver, pliers, KVM switch, or a keyboard and mouse connected directly to a device occasionally. Fewer and fewer of these professionals ever even need to use these tools in their daily activities. Well the responsibilities and tasks of IT professionals have not gone away, in fact, the amount of responsibilities of IT has actually increased to keep pace with today's ever more connected world. So where are all of the tools? The tools are now not found within the hardware cabinet, but have moved almost entirely into the software space. There are continually more and more tools needed to effectively manage IT within organizations. The importance of choosing the right weapon when you get into the life and death struggles of IT still exists, but the complexity of choosing the right weapons have grown.

Always use the right tool!

Yesterday afternoon I unexpectedly spent part of the afternoon replacing the O2 sensor on my son's car. The removal of the sensor requires a 22mm specialized socket, a wrench, or some locking pliers equivalent. I had not prepared for laying on my back on hot asphalt and had very little tools. So while purchasing the sensor I add the specialized $30 O2 Sensor Socket kit to the bill.

This by far was one of the best decisions I could have ever made! It had only been about a month since we replaced that portion of his exhaust and we could have attempted to not pay for the socket. Well sure enough once we began trying to remove the sensor it became completely clear that

the only way to loosen it was by applying additional brute force to the ratchet and socket. The rear end of a hatchet we borrowed from his roommate was another good call since the small framing hammer we first tried was a complete and utter failure (not the hammers fault, just the wrong tool for the job). With our mission accomplished I handed him the $30 socket and receipt and left him to go get my money back (of course he got to pocket the cash).

One of the worst decisions I made happened when replacing the rear brake drums on one of our other cars in the fleet. As would be the case, on the car I was fixing the brake drum includes a small set screw to hold the drum in place. Of course a large Phillips head screwdriver I had was the perfect size and after applying some rust penetrant I went to work. Within a few moments trying to remove the screw I had completely stripped it (not the right weapon for sure). Leading me down an entirely different path of failure of finding the drill and boring out the guts of the screw.

With my new found failed experience, I ended up purchasing the above photographed impact driver the next time I needed to replace brake drums on a car. This $30 investment is not just a rental, it will be nearly guaranteed that I will have to replace brake drums again, unlike the O2 sensor which was just an edge case.

Tools in the Toolbox

Regardless of your technical profession, craft, or task at hand you are going to need a minimum set of tools in your toolbox. In IT we have many needs that are generally serviced by common infrastructure and hardware tools: notebook computers; keyboards; VoIP desk phones (not sure I understand the need for those anymore?); switches; NAS; SAN; servers; gateways; etc.

Some of the common software tools in the basic IT toolboxes: are virus scan software, email clients, softphone / video conference software, RDBMS and "Not only SQL" servers, LDAP and Directory services, firewall, network monitoring, accounting systems, and a plethora of other common on-prem solutions.

What's in Your Tool Belt?

Chances are unless you still are living with all of the same tools from the 1990's in your toolbox you likely have at least a couple of SaaS, PaaS, IaaS cloud products or some hybrid version of the same. Warning, if you work for an organization stuck that far in the past, you are being technologically surpassed by the Amish. Trust me, I know, I live in a large Amish area and every one of them I ever see is constantly on a smartphone.

Does this mean that all of the Amish are driving electric cars, and have smart homes? The tools and tech they use in their lives and livelihood is a mix of ancient and modern. It is a productive balance of most effective, proven, reliable, and appropriate tools for the job. This is likely because as a culture they nurture master craftsmanship and have found a way to deliver exceptional quality without waste.

Jack of All Trades...Master of None!

I have worked with various enterprise services and software solutions over the years and have made my fair share of mistakes in picking the right tool for the job. When organizations make large scale and critical IT infrastructure and software purchases the impact of choosing the right tools becomes far more important. There have been a large number of products and services looking to capture business by bolting on upsell opportunities and additional features. Sometimes this drives up the expense and difficulty in integrating these products into your organization. It also often detracts from the tools usefulness overall.

Take for instance a swiss army knife. Sure it has a toothpick, corkscrew, screwdriver, bottle opener, file and more. The tool serves some great purposes, but only marginally. I can open some junk mail, cut some fishing line, or open a beer bottle. Beyond that it is pretty weak at being even a quality knife.

When making decisions on tools it is critical to brush past the clever marketing features and gizmos and judge the tool on it's quality to deliver usefulness of purpose for the task at hand. Oftentimes the well engineered and simple tool is the one you really need.

Avoid the Shiny Lure!

In today's IT ecosystem it becomes easy to fall victim to trendy acronyms and product hype that put forward the idea that simply going out and buying an expensive set of tools will turn any team of junior IT professionals (or worse yet unskilled labor) into master craftsman and super productive employees. More often than not the benefit is marginal at a higher cost and it just works to mask deficiencies within the team.

Agile software development, Scrum, and lean methodology are some good examples of the shiny lure at it's best (or worst if you are the fish). So many companies forked over buckets of cash for training in these techniques even though the organizations were not capable of implementing them. Absolutely these methodologies are fantastic if employed by highly skilled teams, however the cash would have been better suited building or hiring more qualified team members.

The number of companies making money as consultants for DevOps, cloud services, data engineering, IoT and the like are just the latest round of shiny lure purveyors. So, before backing up the armored truck full of cash make sure the decision is sound and your team is able to wield those tools effectively. More often than not the most effective tools are inexpensive, simple, and easy to use and fit well in your toolbelt.