

Executive Summary

Software powers the processes in your business. Your firm's ability to continue being a market leader requires the commitment and investment to optimize your Software Development Life Cycle (**SDLC**). We know this to be true because we have observed that firms that have taken this journey realize:

- Greater Innovation – increased speed of delivery of capabilities to market, incorporate feedback from customers more quickly to meet their needs
- Risk Reduction – system configuration is managed, deployed, and tested with the same discipline as code itself in all environments through automation
- Improved Capacity – teams spend less time diagnosing issues. Development teams can focus on features and Operations can manage more applications with the same team
- Increased Uptime - reductions in production disruptions when organizations are both confident in the procedures to deploy a release and are fast when a release needs to be rolled back or updated

Elyxor believes that your competition is evaluating these realities as well, and if your firm does not begin this journey, your competition could become faster with superior quality. The detail in this document describes how to start this process and what type of work will occur.

SDLC Reference Model

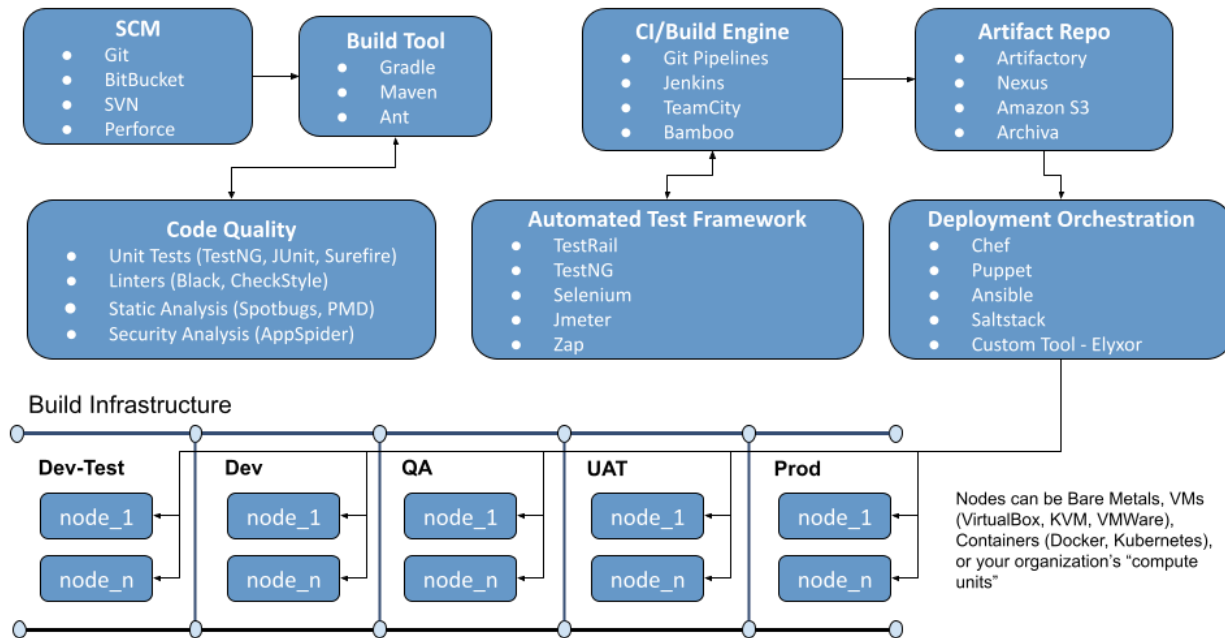
Elyxor specializes in helping organizations transform their software development process for faster innovation and continuous delivery. This is critical to keep up with business and market needs, reduce operational risk, and lower the overall time and dollars spent by development and operations teams to get applications out to clients.

In Elyxor's practice, we've seen large organizations that have numerous development teams, different technical stacks, and myriad build/deployment processes, struggle with integrating and deploying interdependent services. Often companies will start a "new platform" initiative only to leave existing ("legacy") applications with little attention despite the fact these applications continue to drive revenue and remain the primary point of interaction between themselves and their customers. Elyxor has successfully helped our clients analyze their current **SDLC** by looking for specific steps that introduce risk, are inefficient for intra-team build and testing, and more importantly, inter-team deployments.

A well-functioning **SDLC** provides:

- earlier feedback to stakeholders and development teams
- audit and traceability of the state of the system at any point in time
- automated deployments
- configuration validation/verification
- a process not only used by TechOps teams managing deployments, but teams managing every environment the software hits prior to production.

The diagram below illustrates Elyxor’s SDLC reference model.



This SDLC allows for multiple teams to work independently on features sets, makes integrating these products simpler, and delivers empirical results and feedback earlier in the development lifecycle. It lets the business know exactly how a system is configured and what runs where, by using automation on top of SCM to get it there. A TechOps team can scale up how much software they manage because it mitigates the risk of misconfigured software being deployed. Software that is released more frequently means less versions in production: customers are on more current versions, there is less management required by the business to coordinate releases, releases are pre-planned and executed in prod-parallel environments for verification prior to going live, and there are smaller differences between releases significantly decreasing the complexity of the test/debug matrix which directly correlates to lowering the Mean Time To Recovery (MTTR).

Improving your SDLC does not have to be a monumental effort, but it requires both the precise analysis of the current procedures and tooling and an understanding of your goal-state SDLC. The reference model above is Elyxor's starting point with you. A gap analysis comparing your current SDLC against the reference is created, customized to your organization's skills, needs, and priorities; this serves as the source for project planning and backlog generation. With this, the uplift of your organization's SDLC can begin.

The term DevOps means, "the culture and workflow of delivering software at velocity*." It means fluid and frequent communication across functional groups, from business to dev to operations by applying a process and leveraging tools to achieve it. In detail, it is:

- Define the business requirements based on what is known now
- Write software to implement the requirements that is automatically tested
- Provide a well-formed contract on how specific versions of software are allowed to be configured
- Leverage automation and configuration management tools which deploy software in valid and tested configurations, on right-sized, provisioned as a service, infrastructure
- Evaluate the results and gather feedback to make more informed choices on the next set of business requirements.

Elyxor is skilled at performing discovery, risk assessment, gap analysis, and backlog creation, particularly for large business in highly regulated markets and/or that operate their systems within the four walls of their organization. Concrete results of this uplift are realized in months, not years, and it provides a solution that serves the strategic plan for new product development, as well as allowing "legacy" applications to leverage much of the security, validation, and improvements in the interim. It is critically important to include legacy systems in this process as they need to be supported while new business systems are created, deployed, and clients are migrated onto them.

* Barry Christ – CEO, Chef Software

Principles of Engagement Success

Beyond analysis and strategic planning, Elyxor participates in the SDLC uplift process, and we use our experience to accelerate the implementation of the SDLC. Several principles guide us to ensure success for the project and our clients:

- Always have a hybrid (Elyxor/Client) team to build the new skills into our clients' organization
- Always have demos after every sprint, the work output needs to be visible, the process is more effective with immediate feedback, and we need to create energy around the changes. This includes both the technical team and client leadership; something transformational is happening and needs to be recognized
- Test with an end-to-end reference implementation (solution) to validate the process and framework – the champion developer and/or tester from the client must participate
- Elyxor crafts a plan with our clients to onboard other applications following the reference implementation. This ensures knowledge is shared across the organization and how culture is changed. The client team members must do the work to migrate their application, with Elyxor support, to change how software is constructed, tested, and deployed. Your culture and processes will have lasting change when your people are doing something different; it won't be forced change, rather it will happen because it is faster and is more successful
- Elyxor employs a model where Elyxor team members work off-premises, so they have access to other Elyxor expertise, and work on-site for key milestones and sessions with client team members to make key decisions, share progress with leadership, and build the rapport needed to transform a culture.

In addition to these principles, Elyxor works very hard at the onset to build the right hybrid team with our clients. We have found that while we have our beliefs on what is a model implementation, it is essential that we work with our clients to craft a solution that fits with the existing organization's values and skill sets. A great solution is useless if the organization does not buy into all aspects of it. As such, we are technology agnostic; our goal is to work with our clients to get them developing/testing/deploying/operating software using methodologies and tools that make sense for each individual organization. There are many very good software solutions available both off the shelf and in the open-source community; Elyxor team members will find a best-fit solution for your organization's journey to a new and efficient SDLC to power your business.