

Independent Verification and Validation White Paper

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Project Due Diligence: Independent Verification and Validation

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Preface

How do you make sure, really sure, that your mission-critical software project is going to turn out the way you need and expect? Anyone paying attention to the state of software development can readily see the continuing disarray in software projects and the lack of consistent implementation success. Projects turned over to contractors are the most susceptible to failure, much to the dismay of the responsible in-house project manager. So how do you avoid the pitfalls, including the soft non-technical/business potholes like conflicting organizational objectives and peripheral political issues? This White Paper explores the solution offered through Independent Verification and Validation.

Overview

We are often asked, “What is the difference between verification and validation?” Verification is the process of ensuring the accuracy of a project based on written specifications and requirements. Validation is our certification at the end of the audit or review that states our findings.

Organizations requiring very high levels of accuracy in the estimation, design, construction, execution, and management of their projects have long used some form of independent verification and validation to assure quality. This process is sometimes used internally in an organization as a “sanity check.” But, it is also used in cases where a company, department, or other organization needs to provide credible accounts of their status to one or more external groups. Certified progress may even be tied to outsource provider payment schedules.

Based on recent events with accounting and auditing firms, it is clear that there is a need for an objective, professional opinion made by consultants with the business and technical knowledge to know if something is truly working. Not only as designed – but with a design that can be implemented. This is where the real value is added.

We have developed several “systems” to consistently accomplish this. These systems maximize the value of top-notch people, expert guidance, and team collaboration, to provide *results* that are consistently well above average. These systems include [Accountability Plus®](#) and [Realist View®](#). It is systems like these, combined with top-notch consultants, which allow us to provide outstanding value, integrity, and the ability to deliver practical, comprehensive solutions as part of every engagement.

What is Independent Verification and Validation?

Independent Verification and Validation (IV&V) means that a completely independent entity evaluates the work products generated by the team that is designing and/or executing a given project. The IV&V provider will often monitor and evaluate every aspect of the project itself from inception to completion. That is a best-case scenario since it is far easier and more cost effective to correct problems that are identified early in the project than later in the project. Still, it is still better to identify a serious issue at the end of a project than after a project has had a production rollout, so IV&V still makes sense as a final review.

This scope of this work implies that the IV&V team has the experience and expertise to review all aspects of the project. Having expertise with IT Assessments, Due Diligence Reporting, IT Process and Procedures Audits, Project Management, and Systems Analysis and Design are all beneficial to successfully performing a comprehensive verification and validation project.

Why Independent?

One of the major advantages of an independent evaluation is that the person or group performing the evaluation will be unbiased. There are no emotional ties to the project. There is no hidden agenda or ulterior motive. In fact, just the opposite is true. The company that performs the IV&V process is placing their reputation on their findings. Any good company would not take this responsibility lightly. Professional reputations are hard to build and easy to lose.

Another of the benefits is that in complex projects, especially large complex projects, it commonly becomes difficult for the project manager to ‘see the forest for the trees.’ Being intimately involved on a day-to-day basis with the details of a project can distort the view any project manager has of the functional status and progress of said project. Even objective evaluation of deliverables becomes difficult to achieve. Projects may fall into difficulty before the project manager has a chance to become aware of the problem and find a way to mitigate it. An independent, detached consultant will often be able to identify issues that have escaped competent developers and project managers.

Looking at a project in progress from the perspective of an outsider, and not allowing him-or-herself to become engulfed in details or assumptions, enables the independent evaluator to recognize the warning signs of impending problems while they can still be corrected or otherwise mitigated.

What should you expect of your IV&V service provider?

Honesty, integrity, business savvy, technical prowess, superior analytical skills. That is just for starters.

In addition to core competency, you should expect highly developed skills in both written and verbal communications. The ability to effectively communicate is such an important attribute it cannot be emphasized too strongly. The ability not only to analyze, but to distill and communicate the results of that analysis in a form that will help direct a project to success is mandatory. And, being able to present findings at either a technical or executive level is imperative.

The value you receive is the confidence you have at the end of the project. Are things on track? Are there hidden problems? Are we doing the best we can – are there simple things that can significantly improve the process or product? Is the project likely to be a success? These are questions that are answered by this process.

Define the role

An essential concept in effectively utilizing the services of an independent evaluator is to clearly define what you expect. This is true of any type of consulting engagement.

Some companies want the IV&V service provider to guide the Project Manager to success by identifying problems on an ongoing basis. Some companies seek to independently evaluate a project’s concepts and related business requirements up-front, and then periodically review the progress and deliverables. Other companies may just want a periodic “sanity check” to ensure the project is on track.

Or, you may settle on a role which is somewhere between these levels of involvement. We are willing to recommend a specific level of involvement based on your goals and requirements.

Our Approach

The key to success is making a lot of progress quickly while being thorough enough to really get a good understanding of what needs to be done, where things are, and what the problems are. For most projects this can be done within four (4) days, which includes the time required to produce the final deliverable report. It takes project management expertise and experience with many large projects to be able to do this efficiently and accurately.

A high-level outline of the process followed includes:

1. An in-depth review of the foundational project documents (charter, scope statement, business case justification, selection criteria)
2. A review of project status documents, meeting minutes, etc.
3. A review of the various planning documents (project plan, communication plan, risk management information, regulatory compliance plans, test plans and acceptance criteria, etc.)
4. Interviews with the project sponsor, stakeholders, and various team members

These steps provide an understanding of what is working well, and allow us to identify problem and potential problem areas. Throughout the process we will refine our understanding, validate our findings, and focus on identifying specific improvements that will make a tangible difference to the project. It is a process that can and should be repeated throughout the life of the project at periodic intervals (time, milestone, areas of greatest risk, etc.)

In Summary

Independent Verification and Validation is a process that can identify issues in a project based on written requirements. It is more than just a simple checklist – when done properly it helps ensure a project will be successful, delivering what is *required* (not just what is documented). It is a way to demonstrate progress to interested parties. And, it is a way to know for sure when things are really going well.

Is the use of **IV&V** right for your project? If you can answer yes to one or more of the following questions, you should seriously consider these services.

1. Is your project large, complex, or mission-critical?
2. Is your project manager and/or project team working with new technology or new methodologies?

3. Do your customers expect a high level of accuracy and quality in the final product(s) of your project
4. Is your project of high visibility? Will it be scrutinized and used as a template for future projects?
5. Do you require or desire validation of a project for your management or an external group?

About the Author

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Let Us Help You Succeed!

Call today to discuss ways that Comprehensive Solutions can help your organization save money and achieve better results with your IT projects. We provide the *confidence* that you want and deliver the *results* that you need.

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