

**INDEPENDENT
VERIFICATION AND
VALIDATION (IV&V)
OVERVIEW**

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APPROACH

Ascellon's approach to Independent Verification and Validation (IV&V) services extends beyond software development verification and validation to cover program V&V, quality assurance, security and risk management. Our IV&V experts leverage a proven standards based framework, which minimizes risk to the organization, while being agile enough to adjust to ever changing project requirements and constraints.

Ascellon's Rapid Assessment approach utilizes a high-touch and low tech paradigm, which ensures that our experts are asking the "right" questions of people, not spreadsheets. Our high-touch system has been refined to ensure that our experts seamlessly blend into the assessed organization to minimize the disruption often linked to IV&V activities.

Integrity, surety and precision form the foundation of our IV&V approach. Our experts unite these three elements to ensure that each IV&V engagement, whether large or small, produces *astounding* results for our clients. Our in-house expertise is ready to assess current management processes and in-depth technical components of enterprise-wide programs and projects. Our approach, expansive knowledge and real- world experience in multiple domains ensure that IV&V services are deployed with speed and agility.

FRAMEWORK

Ascellon's IV&V framework is based on IEEE Std. 1012-2012 System and Software Verification and Validation, which addresses IV&V activities throughout the software development process. Ascellon's framework expands coverage beyond software to cover additional non-software processes, project and product components; incorporating methods and best practices from disciplines such as risk management quality management and business process re-engineering.

Ascellon's framework is *adaptable*, allowing Ascellon's experts to develop tools and templates as required to facilitate the assessment of artifacts delivered for evaluation. Ascellon's framework in turn produces only the critical artifacts necessary to aid in the delivery of solutions that are compliant with the project's technical and contractual requirements.

Ascellon's framework integrates a number of complementary processes to ensure a comprehensive and holistic approach to error detection and correction. Our framework can be easily tailored to accommodate different organizational styles and missions while maintaining the essence and integrity of the V&V process.

release acceptance



STANDARDS

Ascellon's approach to IV&V and framework are based on international standards and best practices including:

- ISO 9001:2008 Quality management systems — Requirements, ISO/IEC 12207:2008 Software Life Cycle Processes
- IEEE 1012-2012 System and Software Verification and Validation, IEEE 829-2008 Software Test Documentation, ANSI/IEEE 1008-1987 Software Unit Testing, IEEE 1028-2008 Software Review and Audits
- CMMI (Capability Maturity Model Integration)
- American Society for Quality (ASQ) standards
- Project Management Institute (PMI) Standards
- Control Objectives for Information and related Technology (COBIT)

Due to applicable IV&V standards not existing in specific industries, Ascellon leverages and adapts standards and best practices from other industries as necessary.

SERVICES

Below is a sub-set of Ascellon's IV&V offering:

- Concept documentation evaluation
- Requirements analysis
- Traceability analysis
- Source code and source code documentation evaluation
- Interface analysis
- Criticality analysis
- Hazard analysis
- Security analysis
- Risk analysis
- Governance analysis
- Security compliance

ABOUT ASCELLON

Founded in 1996, Ascellon is a widely respected information Technology (IT) and Management Consulting company specializing in innovative enterprise-wide solutions that address the unique challenges of our customers. Our Quality Management System is ISO 9001:2008 Registered. We provide comprehensive professional services for organizations of all sizes focusing on enterprise IT infrastructure. IT portfolio management, technology integration, security and risk management. Ascellon is able to fast-track projects, reduce risk and apply best practices so our customers can see excellent results, faster.

Our customers include public and private companies, government agencies and non-profits. We have developed a reputation for delivering Quality results on time and within budget.

