

# Reducing M&A risks based on facts

Leveraging the most advanced, ISO-based, machine-generated intelligence for high-accuracy technology due diligence

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## Blackbox reality

The software of your target is a maze of technologies, millions of lines of code, and thousands of objects. How can your advisory objectively know if it's rock-solid, efficient, and safe? Guesswork, interviews, commodity tools are only scratching the surface.

## Removing subjectivity

[ISO 5055](#) provides the only way today to accurately unearth hidden flaws and avoid post-deal surprises. It codifies the toughest rules for resiliency, efficiency, maintainability, security of software. It's the result of a ten-year collaboration by [CMU](#), [MIT](#), [CISQ](#), [Mitre](#), and [OMG](#).

## MRI-like precision

[CAST](#) automatically 'understands' how complex software works. It deciphers the internal structures and finds all you should know about its actual condition. Today, it is the only product fully applying [ISO 5055](#), the new global standard for software structural quality.

## High-accuracy value & risk assessment done in a week

Machine-generated software intelligence enables deep, ISO-based technology due diligence

- Composition**  
Complete software bill of material - own source, open source, 3<sup>rd</sup>-party components.
- IP risks**  
Legal exposures, security risks, obsolescence of open-source used in the software.
- Architectural flaws**  
Critical flaws in the application construction. Remediation actions and effort estimates.
- Structural condition**  
[ISO 5055](#)-based view of the application Reliability, Security, Efficiency, Maintainability.
- Technical debt**  
Cost of corrective maintenance based on [OMG-ATDM](#) spec and [ISO 5055](#) standard.
- Cost savings**  
Opportunities to reduce the costs of software maintenance and infrastructure use.
- Cloud maturity**  
Cloud optimization blockers, estimated remediation effort, best-fit cloud native services.
- Green impact**  
Opportunities for changing the code for reducing energy consumption.
- Benchmarks**  
Unique comparison of the application against peers in same industry.



ISO 5055 based



Without developers



Any size application



Any mix of technologies



At the heart of due diligence done by



## Sample report excerpts

**App1 has good compliance with ISO-5055 (1/2)**

ISO 5055 ISO 5055 SECURITY ISO 5055 RELIABILITY ISO-5055 Security

Violations: 62

**App1 IP risks identified from Open-Source Software (OSS) analysis**

Violations: 109

**App1 changes to reduce ITs costs and increase Green Impact**

Green IT Index

**App1 architecture and modernization readiness**

Explanation: Dashboard is composed of angularJS frontend application, Touching Touchpad modules.

### Executive Summary

**TARGET has one software application with:**

- good overall health per ISO 5055
- no showstopper issues, however
- red flags in security and performance that can be fixed with low cost.

The Cloud Migration assessment, Architecture Deep Dive and Changeability analysis indicate the application will require significant modernization effort to enable the anticipated boost in business agility.

Scope: App1

Robustness	Efficiency	Security	Changeability	Transferability
2.94	2.17	2.81	2.85	3.15

**127 Cloud Blockers and remediation plan**

**Immediate remediation of App1 estimated at maximum XX person-days**

**Action plan to mitigate identified risks and improve bottom line**

Criteria	Current score	New score	Gain
Fix before signing or between signing & closing	0%	44%	44%
Near term after closing	0%	101%	101%
Mid & Long-term actions	0%	24%	24%

**Findings**

- Review and address Security vulnerabilities
  - x immediate priority violation found in custom application components that should be reviewed ASAP
  - x direct license risks and x components with x unique critical CVEs identified out of xx open-source components detected. Consult an IP lawyer to clear up the impact or explore alternative libraries. For CVEs, upgrade to newer versions when possible.
- Opportunities for strengthening Robustness, Security and Efficiency of the application
  - xxx violations added to the action plan for near term, including xx cases of error and exception handling, x for sqj and data handling performance and xx for input validation.
- Opportunities for securing open-source components
  - xx components with xx high CVEs and x components with x medium CVEs identified. These should be reviewed for production risk.
- Opportunities for strengthening Changeability, Transferability, Efficiency and Security of the application
  - xx violations added to the action plan for mid term, including xx cases of expensive calls in loops, xx for memory and network and disk space management.
  - xx violations added to the action plan for long term, including xx cases of volume of comments.

**Estimated Development Effort**

- \$x development cost
  - x person-day for own code
  - x person-days for 3<sup>rd</sup> party code
- \$xx development cost
  - xx person-days for own code
  - x person-days for 3<sup>rd</sup> party code
- Continuous improvement

Download the sample report [castsoftware.com/dd-report](https://castsoftware.com/dd-report)