

## Exercise 3\_2 – Solution

### ***PTFL-3.3.1 (K4) Analyze performance risks for a given product across the software lifecycle***

#### **Scenario:**

A shipping company is working on a major initiative to transform many of their legacy systems to more modern technology. Some of the systems can be modified, others will need to be re-written and some will be replaced by commercial-off-the-shelf software.

Like many companies, this organization does not have a single unified software development lifecycle. Instead, some teams work in a sequential lifecycle that resembles a waterfall approach. There are other teams that use an agile approach. There is also a special “systems integration” team that acquires, installs and integrates commercial software and systems.

For this project, senior management has mandated that each team provide their performance testing approach that reflects an integrated view of performance and the related testing of the system’s performance.

The project manager has asked that each team complete the following templates in accordance with the respective lifecycle approaches they will use for the project.

The company has just acquired a new performance test tool, but no one has been trained in the use of the tool. In fact, no one has been trained in performance testing and only one person in the company has any experience in performance testing.

Current internal user load levels are known, however, it is unknown if or when shipment requests may increase suddenly.

There is no dedicated test environment for any testing. Currently, the testers use a shared environment with development. The environment is not always available for testing.

The company has just completed a project risk assessment using a formal risk assessment approach.

There were over 20 findings and recommendations.

75% of the risks were rated “high”, 25% were rated “moderate, 25% were rated “low”.

It took 3 weeks to complete the assessment. Some people have observed that the risks have already changed.

Management’s concerns are:

- There is no way all the risks can be addressed in a cost-effective way.
- Some of the findings are “trivial”.
- There may be risks yet to be discovered.

A sampling of some of the identified risks are shown below. Your assignment is to assign a magnitude to the risks, along with your rationale, mitigation actions and areas responsible for each risk.

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<b>ID</b>	<b>Risks</b>	<b>Magnitude</b>	<b>Rationale</b>	<b>Mitigation</b>	<b>Responsibility</b>
1	Business stakeholders may not be able to define their performance expectations in specific terms.	10 - High	An undefined target will be difficult to meet.	Define possible levels of system performance and seek agreement.	Business analysts
2	The lack of a unified project lifecycle may result in inconsistent system quality, including levels of performance.	9 - High	The work products will be of varying quality, plus the delivery times may be out of sync.	Define specific criteria for work products and delivery targets.	Project manager
3	A new test tool may take longer than expected to implement, learn and use.	9 - High	New tools are often a point of risk and distraction.	Conduct a proof-of concept.	QA/Test/Training
4	There is no training on performance tools or practices	8 - High	If people don't know how to conduct a performance test, the tools will be of little help.	Get the proper training both on tools and on performance testing processes.	QA/Test/Training
5	Only one person has performance test experience	7 - Moderate	We don't know how adequate this person's experience is.	Find out how much the person actually knows. If needed, a second person with deeper knowledge and experience may be needed.	QA/Test/Training
6	Lack of a performance test environment	8 - High	Without a reliable and available test environment, the performance test results will also be unreliable.	Create a dedicated performance test environment.	IT Management

### Exercise 3\_1

Which other performance risks do you see in this case study?

<b>ID</b>	<b>Risks</b>	<b>Magnitude</b>	<b>Rationale</b>	<b>Mitigation</b>	<b>Responsibility</b>
7	Commercial software may have performance issues that may not be detected until integration.	7 - Moderate	It is not uncommon for this to occur.	Check with other users of the product(s). Try to conduct preliminary testing.	Customer (Developers and Testers)
8	Too many risks to address completely.	8 -High	This means some risks may go unaddressed.	Form a task force to ensure at least every risk is tracked.	QA, Project management
9	Unknown risks may be significant.	7 - Moderate	"Unknown unknowns" are always a risk.	Keep a risk watch list and re-assess risk often.	QA, Project management