

Business Case – Company Quality Items Part III

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Plan Iteration for Quality Items Project

Plan Iteration

Sprint #1

- **Planning**

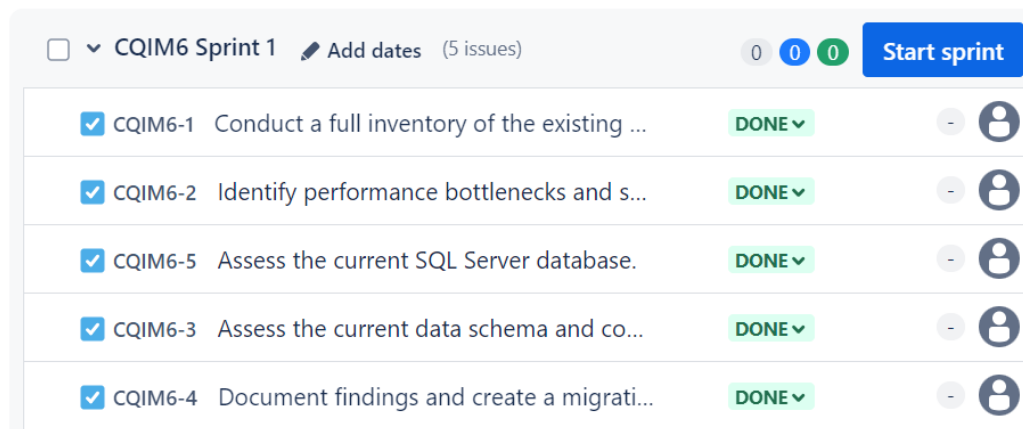
Iteration 1	
Sprint	4 weeks
Duration	
1. Planning and requirements	
Goal	To understand the current existing SQL Server database and be able to set strategies to mitigate future risks during and after the migration.
Activities	Conduct a full inventory of the existing SQL Server database. Identify performance bottlenecks and security vulnerabilities.
2. Analysis and design	
Goal	We aim to make the necessary adjustments before migrating to Azure and prevent any data loss, issues in the system functionality, or performance degradation after the migration.
Activities	Assess the current SQL Server database. Assess the current data schema and compatibility with Azure.
3. Implementation	
Goal	This stage's purpose is to consolidate and present the results to the stakeholders by showing findings, highlighting potential risks, and outlining recommendations.
Activities	Document findings and create a migration readiness report.
4. Testing	
Goal	To ensure that all systems function without data loss.
Activities	Validate the migration.
5. Evaluation and review	
Goal	Evaluate the result of the migration to guarantee compliance with the objectives.
Activities	Review report.
Outcome	In this sprint it is planned to have a migration readiness assessment, which evaluates the current infrastructure, identifying potential risks, challenges,

and compatibility issues to ensure smooth, secure, and efficient migration of the system.

- **Sprinting**

Figure 1

Sprint 1 in Jira



- **Stand-up meetings**

Objective: This type of meeting will take place to report progress and accomplishments since the last stand-up meeting and to identify blockers within the project. Every committed team member, such as the SCRUM Master, Product Owner, and development team, must participate.

Time: 9:00 AM

Duration: 15 minutes

Location: Virtual meeting in Teams

Meeting Details:

- ✓ Each one of the members shares the progress of their tasks from the previous day.
- ✓ They discuss the tasks for the day and plan activities based on priorities and sprint goals.
- ✓ The members communicate their challenges so that the team can cooperate, propose solutions or escalate the issues if it necessary.

- **Iteration Review**

Achievement: With the Migration Readiness Assessment, it was possible to have a clear view of the current database at Quality Items and the possible risks that may arise.

User Story: “As a project manager, I need to evaluate the current local SQL server and integrate the system environment to identify the principal challenges of the migration.”

Challenges:

- Some complex dependencies, integrations, or configurations may arise and complicate the development team to fully assess the current SQL Server Environment on time.
- The analysis may show incompatibility with Microsoft Azure in terms of functionality that will require redesign, which implies potential delays or require additional work.

Feedback: The results during this sprint were successful and met the expectations. It is recommended to keep working closely with the architecture team to identify and assess the components that need to be redesigned. By having constant communication between specialists, delays will be avoided, and the team can act faster.

Refinement for the next Spring: A task to categorize and prioritize risks based on their likelihood and impact should be included.

- **Iteration Retrospective**

Table 1

Iteration Retrospective for Sprint 1

Date	Objective	Start	Stop	Continue	Action Items
November 4 th , 2024	*Evaluate the current local SQL server and identify its principal challenges for the migration.	*Work on the database inventory. *Proceed with the database assessment. *Submit a report with the sprint results to all stakeholders for feedback or approval.	*Avoid pushing forward without addressing risks from the migration readiness assessment. *Insufficient and weak communication with stakeholders.	*Focus on detailed assessment. *Keep analyzing the compatibility of the current system with Azure.	*Check regularly during the daily meeting what has been done.

Note. Self-made

Sprint #2

- **Planning**

Iteration 2	
Sprint Duration	4 weeks

1. Planning and requirements	
Goal	Ensure that the migration is executed efficiently through a detailed migration plan that includes scheduling and resource allocation.
Activities	Plan the migration process, including scheduling and resource allocation.
2. Analysis and design	
Goal	To ensure a smooth migration considering technical features, and possible risks.
Activities	<ul style="list-style-type: none"> • Evaluate if it is required to make any adjustments from the planning phase and if the plan effectively addresses the risks previously identified.
3. Implementation	
Goal	To implement Azure SQL Database with the right performance and scalability settings.
Activities	<ul style="list-style-type: none"> • Set up Azure SQL Database instances with appropriate scaling options. • Configure security settings, including encryption and access controls. • Implement backup and disaster recovery configurations in Azure.
4. Testing	
Goal	To ensure that the new Azure SQL Database environment is completely prepared for operational usage and meets the requirement of performance, security, and recovery.
Activities	<ul style="list-style-type: none"> • Test the Azure environment to ensure readiness for data migration.
5. Evaluation and review	
Goal	As a project team, we aim to receive approval from stakeholders.
Activities	<ul style="list-style-type: none"> • Review report.
Outcome	In this sprint, the target environment will be set up to be ready for the migration.

- **Sprinting**

Figure 2

Sprint 2 in Jira

▼

CQIM6 Sprint 2

Add dates

(5 issues)

0

0

0

Start sprint

✓

CQIM6-6

Set up Azure SQL Database instances wi...

TO DO ▼

-

✓

CQIM6-7

Configure security settings, including e...

TO DO ▼

-

✓

CQIM6-8

Implement backup and disaster recover...

TO DO ▼

-

✓

CQIM6-9

Test the Azure environment to ensure re...

TO DO ▼

-

✓

CQIM6-10

Plan the migration process, including s...

TO DO ▼

-

- **Stand-up meetings**

Objective: Report progress and accomplishments since the last stand-up meeting and identify blockers within the project. All committed team members (the SCRUM Master, Product Owner, and development team) must participate.

Time: 9:00 AM

Duration: 15 minutes

Location: Virtual meeting through Teams

Meeting Details:

- ✓ Each member shares the progress of their tasks from the previous day.
- ✓ Discuss today's tasks and plan activities based on priorities and sprint goals.
- ✓ Members communicate challenges so the team can collaborate on solutions or escalate issues if necessary.

- **Iteration Review**

Achievement: The target environment will be ready for migration after basic tests of changes have been implemented in the development environment, which is the playground where developers code and test new features.

User Story: As a data engineer, I need to configure the Azure SQL cloud Database environment to ensure it is ready to receive the migrated data.

Challenges:

- The target environment (Microsoft Azure) could present differences in software, versioning or architecture that can lead to performance bottlenecks.
- Developers must ensure that all the data migrates without loss or corruption.
- SCRUM Master must provide an environment where there is cross-functional coordination and collaboration between the team members and enhance communication within the group to avoid mismatches, delays or other issues.

Feedback:

- It is highly recommended to work closely with the architecture team.

Refinement for the next Spring:

- Nothing to add.
- **Iteration Retrospective**

Table 2

Iteration Retrospective for Sprint 2

Date	Objective	Start	Stop	Continue	Action Items
December 1 st , 2025	*Make sure the target environment is prepared to proceed with the data migration meeting the performance, security, and recovery requirements ..	*Planning and making necessary adjustments based on the feedback from the previous sprint. *Start allocating resources. *Test compatibility and performance tests for Azure SQL.	*Allocating resources without considering team feedback or changing requirements. *Designing or deploying without considering the architecture team's observations.	*Involve stakeholders in all the review meetings.	*Design Adjustments. *Security and scalability testings.

Note. Self-made

Sprint #3

- **Planning**

Iteration 3	
Sprint	4 weeks
Duration	
1. Planning and requirements	
Goal	Define clear objectives, understand the existing SQL environment, and ensure the migration is aligned with technical and business requirements.

Activities	<p>Assess the existing SQL Server environment (database size, usage patterns, dependencies).</p> <p>Configure the destination environment in Azure.</p> <p>Choose the appropriate Azure SQL Database tier based on requirements.</p> <p>Perform full backups of on-premises databases.</p> <p>Perform data migration from SQL Server to Azure Cloud SQL.</p> <p>Monitor data consistency and performance during synchronization.</p> <p>Configure encryption protocols for data in transit and at the test.</p> <p>Set up automated backups and disaster recovery plans.</p> <p>Test data recovery to ensure no data loss during failures.</p>
2. Analysis and design	
Goal	Develop a technical migration plan and select the appropriate Azure SQL resources
Activities	<p>Design network and security protocols.</p> <p>Create a detailed data migration and synchronization plan.</p> <p>Define monitoring and validation processes.</p>
3. Implementation	
Goal	Execute the migration process and configure Azure resources as planned.
Activities	<p>Configure virtual networks, target storage accounts in Azure.</p> <p>Make backup copies of local databases to ensure a backup in case of problems.</p> <p>Configure encryption protocols for data in transit and at rest to ensure compliance and security.</p>
4. Testing	
Goal	Validate the migration to ensure that all systems function without data loss.
Activities	<p>Run performance tests on Azure SQL to ensure compliance with usage patterns and performance requirements.</p> <p>Configure and test backups and recovery plans to ensure data recovery.</p> <p>Test data recovery procedures during a simulated failure.</p>
5. Evaluation and review	
Goal	Evaluate the result of the migration to guarantee compliance with the objectives.
Activities	<p>Review the migration process and report on performance, issues and lessons learned.</p> <p>Gather feedback from stakeholders and end users on the new Azure SQL environment.</p> <p>Document any remaining tasks or improvements needed for future sprints.</p>
Outcome	Successfully migrate on-premises SQL Server database to Azure Cloud SQL without data loss. In addition to implementing adequate encryption, backup and information recovery plans.

- **Sprinting**

Figure 3

Sprint 3 in Jira

<input type="checkbox"/>	▼ CQIM6 Sprint 3	Add dates	(9 issues)	0	0	0	Start sprint	...
<input checked="" type="checkbox"/>	CQIM6-11	Assess the existing SQL Server environment (database size, ...	TO DO ▼	-				
<input checked="" type="checkbox"/>	CQIM6-14	Perform full backups of on-premises databases.	TO DO ▼	-				
<input checked="" type="checkbox"/>	CQIM6-12	Configure the destination environment in Azure.	TO DO ▼	-				
<input checked="" type="checkbox"/>	CQIM6-13	Choose the appropriate Azure SQL Database tier based on r...	TO DO ▼	-				
<input checked="" type="checkbox"/>	CQIM6-15	Perform data migration from SQL Server to Azure Cloud SQL.	TO DO ▼	-				
<input checked="" type="checkbox"/>	CQIM6-16	Monitor data consistency and performance during synchron...	TO DO ▼	-				
<input checked="" type="checkbox"/>	CQIM6-17	Configure encryption protocols for data in transit and at the...	TO DO ▼	-				
<input checked="" type="checkbox"/>	CQIM6-18	Set up automated backups and disaster recovery plans	TO DO ▼	-				
<input checked="" type="checkbox"/>	CQIM6-19	Test data recovery to ensure no data loss during failures	TO DO ▼	-				

- **Stand-up meetings**

Objective: Ensure team alignment, share progress updates, and plan the day's work.

Time: 9:00 AM

Duration: 20 minutes

Location: Virtual meeting via Teams

Meeting Details:

- ✓ Each member shares the progress of their tasks from the previous day.
- ✓ Discuss today's tasks and plan activities based on priorities and sprint goals.
- ✓ Members communicate challenges so the team can collaborate on solutions or escalate issues if necessary.

- **Iteration Review**

Achievement:

- **Evaluated Database Environment:** Successfully completed the evaluation of the existing SQL Server environment, including database size, usage patterns, and dependencies.
- **Configured Azure environment:** It was configured with the necessary resources (virtual networks, storage, etc.).

- **Azure SQL database level chosen:** The appropriate Azure SQL level was selected based on performance and cost requirements.
- **Backups:** Local SQL Server databases were created successfully.
- **Initial Migration:** Started the process of migrating data from SQL Server to Azure SQL and monitored data performance and consistency during the synchronization process.
- **Configured Encryption:** Successfully implemented encryption protocols for data in transit and at rest.

User Story: Evaluation of existing SQL Server ensures proper migration planning. Configure the target Azure environment to ensure databases with optimal performance.

Challenges:

- **Performance Issues:** Some performance degradation was observed during data migration due to higher-than-expected load on local servers.
- **Delays in data synchronization:** It took longer than estimated causing delays in the testing phases.
- **Recovery plan complexity:** Configuring recovery plans took longer due to integration with additional services in Azure.

Feedback:

- The team considered that the sprint was productive, but efficiency could be improved by adjusting times and planning for data synchronization.
- Stakeholders expressed satisfaction with the data migration and security implementation but requested more testing for data recovery and performance improvements in the next sprint.

Refinement for the next Spring:

- **Performance Optimization:** Investigate and address performance degradation during data migration and synchronization.
- **Improve synchronization planning:** Provide additional time and resources for the data synchronization process to avoid delays.
- **Complete recovery testing:** Complete recovery plan setup and perform comprehensive testing.
- **Improve monitoring:** Monitor closely to proactively detect performance or consistency issues in real time during migration.

- **Iteration Retrospective**

Table 3

Iteration Retrospective for Sprint 3

Date	Objective	Start	Stop	Continue	Action Items
December 16 th , 2024	Reflect and evaluate what went well, identify areas for improvement, and plan actionable steps to improve the effectiveness of future sprints.	<ul style="list-style-type: none"> * Use detailed performance metrics at the beginning of the sprint. * Implement techniques to improve planning accuracy. * Increase team communication to resolve problems faster. 	<ul style="list-style-type: none"> * Avoid overloading the migration process with multiple simultaneous tasks that generate performance problems. * Stop using generic time estimates to ensure estimates are based on detailed analysis. * Reduce dependencies on non-essential configurations during critical migration phases to avoid delays. 	<ul style="list-style-type: none"> * Maintain documentation and communication throughout the migration process to ensure the team is aligned. * Continue to use effective encryption and security practices that were successfully implemented. * Continue to engage stakeholders to get feedback and adjust. 	<ul style="list-style-type: none"> * Improve performance monitoring to better manage and address issues during data migration and synchronization. * Adjust task estimates based on recent sprint data and lessons learned. * Improve team communication to proactively address potential obstacles.

Note. Self-made

Sprint #4

- Planning**

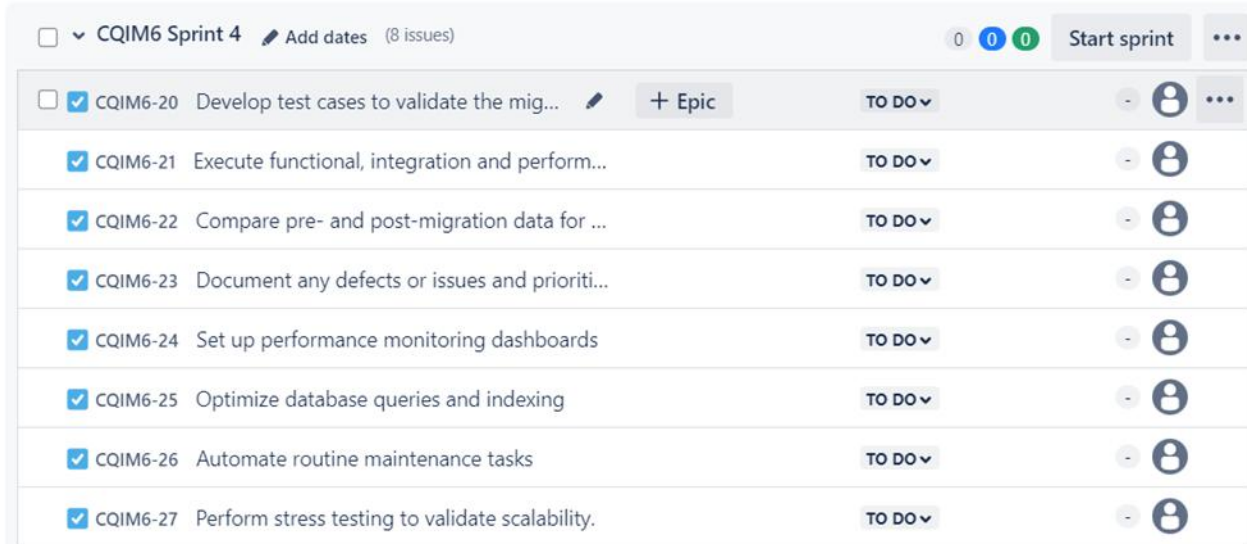
Iteration 4
Sprint Duration 2 weeks

1. Planning and requirements	
Goal	Comprehensive testing and optimization of the newly migrated SQL environment.
Activities	<p>Develop test cases to validate the migrated data.</p> <p>Execute functional, integration and performance tests on the new environment.</p> <p>Compare pre- and post-migration data for consistency.</p> <p>Document any defects or issues and prioritize them for resolution.</p> <p>Set up performance monitoring dashboards.</p> <p>Optimize database queries and indexing.</p> <p>Automate routine maintenance tasks.</p> <p>Perform stress testing to validate scalability.</p>
2. Analysis and design	
Goal	Design test plans, monitoring dashboards and optimization strategies.
Activities	<p>Analyze the migrated database for required testing.</p> <p>Design performance dashboards for tracking.</p> <p>Develop automation scripts for routine maintenance tasks.</p>
3. Implementation	
Goal	Run tests, configure monitoring, and implement optimization and automation strategies.
Activities	<p>Compare pre- and post-migration data to ensure consistency.</p> <p>Document and prioritize any issues found during testing.</p> <p>Automate backup and index maintenance tasks</p>
4. Testing	
Goal	Validate the stability, performance and scalability of the migrated environment.
Activities	<p>Perform stress tests to validate the scalability of the new environment.</p> <p>Ensure test cases are executed and validated.</p> <p>Test any documented issues</p>
5. Evaluation and review	
Goal	Evaluate results and identify areas for improvement.
Activities	<p>Review test results and resolve critical issues.</p> <p>Evaluate performance tracking data and optimize it.</p> <p>Have a retrospective meeting to gather feedback and plan future sprints.</p>
Outcome	Migrated data validated with comprehensive tests confirming the performance and scalability of the new environment

- **Sprinting**

Figure 4

Sprint 4 in Jira



- **Stand-up meetings**

Objective: Ensure team alignment, review progress, address any issues and plan the day's work.

Time: 9:00 AM

Duration: 20 minutes

Location: Virtual meeting via Teams

Meeting Details:

- ✓ Update on the tasks you completed the previous day.
- ✓ Description of the day's plan and the tasks to be performed
- ✓ Share any obstacles to address or climb.

- **Iteration Review**

Achievement:

- **Test cases developed:** Accuracy and integrity of migrated data were validated.
- **Tests executed:** The integration and performance were executed in the new environment.
- **Data consistency:** Comparison of before and after migration to confirm consistency and accuracy.
- **Documented defects:** To prioritize their resolution.
- **Dashboard setup:** Tracking key metrics is required.

- **Automated routine maintenance:** Automated tasks to improve system efficiency and reduce manual effort.
- **Stress tests performed:** To validate the scalability of the new environment.

User Story: Develop test cases to validate the accuracy and integrity of migrated data. This requires executing functional, integration and performance tests in the new environment.

Challenges:

- **Performance Bottlenecks:** Some performance bottlenecks were found during initial stress testing, which required additional optimization.
- **Delays in resolving defects:** Some defects took time to resolve due to their complexity or interdependencies with other components.
- **Dashboard setup:** Setting up the performance monitoring dashboards took more time than expected due to integration with multiple Azure services

Feedback:

- The team believes that better preparation for performance testing and earlier resolution of defects would have improved overall efficiency.
- Stakeholders were satisfied with the successful validation and optimization of the migration but suggested focusing more on resolving defects more quickly and refining dashboards.

Refinement for the next Spring:

- **Improve preparation for performance testing:** Plan and allocate more time for performance testing and optimization activities.
- **Optimize defect resolution:** Develop strategies for faster defect identification and resolution.
- **Monitoring Setup:** Streamline setup of performance monitoring dashboards to reduce integration time.

- **Iteration Retrospective**

Table 4

Iteration Retrospective for Sprint 4

Date	Objective	Start	Stop	Continue	Action Items
January 6 th , 2025	Evaluate good	* Plan and prepare	*Avoid last-minute	*Maintain documentation	* Improve performance

	practices and identify areas to improve the effectiveness and efficiency of future sprints.	<p>detailed performance and stress tests.</p> <p>* Identify and prioritize defects to accelerate resolution.</p> <p>* Incorporate comprehensive training on dashboards and monitoring tools</p>	<p>adjustments during performance testing because they cause delays.</p> <p>* Leave integration challenges behind monitoring tools because they add unexpected setup time.</p> <p>* Reduce dependence on manual processes to apply automation.</p>	<p>and communication throughout the sprint to ensure alignment and clarity.</p> <p>* Continue to engage stakeholders to gather feedback and make necessary adjustments.</p> <p>* Continue automating tasks to improve efficiency and reduce manual errors.</p>	<p>testing planning: Include resource allocation and schedules.</p> <p>* Optimize panel configuration : Simplify the control panel configuration process and provide additional training or resources.</p> <p>* Improve the transition from manual to automated processes: Assess and identify automation opportunities to improve efficiency and reduce delays.</p>
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Note. Self-made

Sprint #5

- **Planning**

Iteration 5

Sprint Duration	Two weeks
1. Planning and requirements	
Goal	Finalize the implementation process, prepare the documentation maintenance guides, and analyze the performance.
Activities	Conduct a Sprint Planning meeting to address the requirements of the last testing and documentation phases. Discuss and clarify the steps of the user stories with the team.
2. Analysis and design	
Goal	Analyze the new system with the Cloud database state and design the tests and structure for the documentation process, ensuring technical feasibility and alignment with the product architecture.
Activities	Cloud Architecture Documentation. Analyze the database structure and current performance data of the new system. Identify the common troubleshooting issues and design transparent resolution processes. Review system changes since the last update.
3. Implementation	
Goal	Execute the tasks related to documentation, optimization, and system improvements based on the analysis and design phase for the optimization.
Activities	Cloud Architecture and Configuration Documentation. Implement indexing and other query performance improvements. Draft and finalize the troubleshooting guide for the principal possible cases. Update system documentation with all recent changes (new features, capacity and optimization).
4. Testing	
Goal	Validate the stability, performance and scalability of the migrated environment.
Activities	Perform stress tests to validate the scalability of the new environment. Ensure test cases are executed and validated. Test any documented issues.
5. Evaluation and review	
Goal	Validate the implemented changes to ensure they meet the acceptance criteria, function correctly, and do not introduce new issues.

Activities	<p>Test queries after optimization to measure improvements.</p> <p>Re-test the entire system post-query optimization to ensure there are no performance regressions.</p> <p>Validate documentation with key stakeholders (cloud architecture and troubleshooting guide).</p> <p>Have the operations team perform mock scenarios to validate troubleshooting steps.</p>
Outcome	<p>Delivery of optimized cloud architecture documentation, a comprehensive maintenance and troubleshooting guide, updated system documentation, and enhanced query performance through indexing and optimization.</p>

- **Sprinting**

Figure 5

Sprint 5 in Jira

<input type="checkbox"/> CQIM6 Sprint 5 Add dates (6 incidents)			0	0	0	Start sprint	...
<input checked="" type="checkbox"/>	CQIM6-28	Document the cloud architecture and configuration	COMPLETED	▼	-	AF	
<input checked="" type="checkbox"/>	CQIM6-29	Create a maintenance and troubleshooting guide.	COMPLETED	▼	-	AF	
<input checked="" type="checkbox"/>	CQIM6-30	Update documentation as the system evolves	COMPLETED	▼	-	AF	
<input checked="" type="checkbox"/>	CQIM6-31	Analyze query performance and identify bottlenecks	COMPLETED	▼	-	AF	
<input checked="" type="checkbox"/>	CQIM6-32	Implement indexing and query optimization.	COMPLETED	▼	-	AF	
<input checked="" type="checkbox"/>	CQIM6-33	Re-test system performance after optimizations	COMPLETED	▼	-	AF	

- **Stand-up meetings**

Objective: Ensure team alignment, review progress, address any issues and plan the day's work.

Time: 9:00 AM

Duration: 15 minutes

Location: Virtual meeting via Teams

Meeting Details:

- ✓ Update on the tasks you completed the previous day.
- ✓ Description of the day's plan and the tasks to be performed
- ✓ Share any obstacles to address or climb.
- ✓ Address the final obstacles and inquiries for finishing the transition and testing processes.

- **Iteration Review**

Achievement:

- **Cloud Architecture Code Document:** After analyzing and assessing each part of the cloud architecture and its connections, make a comprehensive document for future interventions.

User Story: As a system administrator, I need to document the cloud architecture and configuration so the system is easier to manage and maintain.

- **Maintenance and Troubleshooting Guide:** The elaboration of a detailed guide of the created code and architecture to assess the maintenance and the possible troubleshooting responses to ensure a rapid response and efficient issue resolution.

User Story: As a system operator, I need a guide for maintaining and troubleshooting the cloud system to ensure efficient issue resolution.

Challenges:

- **Complexity in documenting cloud architecture:** Making detailed and accurate documentation required additional time and collaboration with multiple teams
- **Query performance bottlenecks:** Some bottlenecks in the system can appear during the transition process, which takes more time than anticipated.
- **Updating documentation of the new cloud database and system:** Some constant changes in the system add additional effort to keep documentation up to date in real-time.

Feedback:

- The documentation and troubleshooting guide results were appreciated by the stakeholders (client, administrator and direct users) and will be helpful for future problems and maintenance sessions.
- Recommend team members allocate more time in future sprints for system documentation updates as they evolve in projects with similar scopes.
- Acknowledge the significant improvement in query performance, and it is necessary to increase the frequency of performance reviews to catch bottlenecks more rapidly.
- Suggest improving collaboration between development and testing teams to minimize delays in re-testing sessions.

Refinement for the release and project delivery:

- It should include important delivery documents to the stakeholders and clients and a functional system with a cloud database that will increase its capacity to hold more information and services.

- **Iteration Retrospective**

Table 5

Iteration Retrospective for Sprint 5

Date	Objective	Start	Stop	Continue	Action Items
February 3 rd , 2025	Evaluate good practices and identify areas to improve the effectiveness and efficiency of future sprints.	<ul style="list-style-type: none">* Identify and prioritize the delays to accelerate the testing process.* Incorporate guides for the developing team to make better documentation of the transition process.* Collaborating on indexing and optimization strategies earlier in the sprint to avoid last-minute delays.	<ul style="list-style-type: none">* Delaying documentation updates until the end of the sprint. This led to gaps in communication and incomplete knowledge transfer.* Addressing query bottlenecks late in the process. Early identification and resolution can reduce delays.	<ul style="list-style-type: none">* Regular review of cloud architecture and configuration to ensure consistency with evolving system requirements.* Collaborative approach across teams, particularly between the development and testing teams, to improve efficiency.* Re-testing the system performance after significant changes to ensure no regression in performance.	<ul style="list-style-type: none">* Set up a process for continuous documentation updates throughout the sprint. Assign a team member to track and document changes as they occur.* Enhance collaboration between developers and testers, conducting parallel testing while new features are implemented to avoid delays in identifying bugs or issues.

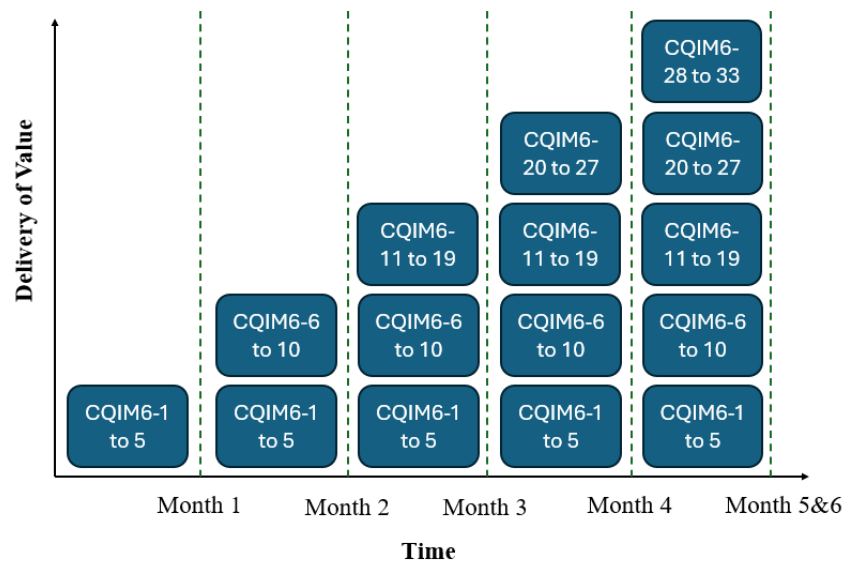
Product Increment

The project was divided into an incremental, iterative sequence, addressing stories according to the team's capacity. It will also require the client's approval to ensure the value

delivery of the database transition. The product backlog was divided into five sprints that covered different and specific features. Each sprint needs the validation of the stakeholders and the Product Owner of all the stories, and the load of work is not the same in each sprint to have enough time to analyze the current database and system, make the transition to the cloud environment and test all the integrations and features of the new services.

Figure 6

Product Increment



Note. Self-made

The team needs to keep the artifacts updated constantly, as it allows them to monitor and review important deliverables to effectively track the progress of the data migration project that the team is currently working on. The idea is that these artifacts can be a transparent way of communicating to stakeholders and the team about the evolving nature of the project by adding new information to be updated in the project's progress.

Additionally, one of the purposes of updating these artifacts is to foster the team to be more agile by adapting the project based on the changes gathered through feedback. Complementing the previous idea, the artifacts will allow the team to adjust the plans and tasks in a more realistic landscape, resulting in feasible sprint goals and timelines by enhancing their current planning. In the current data migration project that the team is working on, it is important to have the burndown chart, sprint backlog, and product backlog updated to be able to effectively communicate to stakeholders the progress of the project, fostering trust and credibility through transparency, and, at the same time, improving the team capacity into being adaptable and in their current planning.

Burndown Chart

The team considered the usage of burndown charts in each sprint in order to communicate the status of the data migration project to the stakeholders. As the team is working with JIRA, this artifact will provide real-time insights into progress and new needs that may appear in the middle of the data migration project, allowing the team to track their progress, identify bottlenecks to take actions to fix them as soon as possible and foster accountability, transparency and collaboration by communicating the team and stakeholders about the current status, bugs, and tasks that have been completed.

Sprint Backlog

Considering the importance of following the same directions for the success of the project, managing the sprint backlog in JIRA has become a valuable artifact for the data migration project, given the nature of the sensitive information that is being migrated to another cloud. Hence, the artifact provides the team with the capacity to have a record of the task selected from the product backlog that the team will fulfill to complete the current sprints, which you can see above in the sprints section of this document. The sprint backlog in JIRA provides the team with a clear focus for the current sprints, helping them break down more significant tasks into smaller and more manageable activities to achieve measurable and feasible goals while increasing their flexibility at the same time.

Product Backlog

In the current data migration project, the team is managing the product backlog in JIRA, which contains the information about all the tasks that need to be done to complete the project, as shown above in each sprint section. Through this artifact, the team can be updated, as they will be able to see the work that remains in each sprint, which will indirectly support the speed of the team, considering the tight deadlines that this approach comes with. Additionally, keeping the product backlog updated with any need of the clients will enable the team to focus on tasks that add more value to the project while providing the team with a roadmap that can be used to follow the right direction for the successful completion of the data migration to a new cloud.

Incremental Delivery and Releases

Considering the importance of this project for Quality Items, and the impact across operational areas, the migration project must remain manageable and agile, ensuring long-term success through short-term deliverables. To ensure a successful migration, keep stakeholders informed and aligned, reduce downtime, and mitigate potential risks that could affect the migration process, specific deliverables and release phases were defined for this type of project. Delivering incremental progress and releases ensures continuous value and minimizes risk. And given the importance of the databases, testing and validation throughout the project must be performed to have a successful implementation.

Release 1 (Environment and System Assessment)

This release delivers the complete migration strategy, including key assessments and deliverables, providing stakeholders with a clear vision of the project objectives, scope, and impact.

Deliverables

1. Current environment assessment (database inventory, performance, dependencies, infrastructure requirements).
2. Compatibility and risk assessment
3. Key requirements and project scope
4. Migration roadmap

Release 2 (Prepare Target Environment)

This release ensures the database is compatible and adaptable to Azure requirements and provides the optimization for further migrations, testing, and backups.

Deliverables

1. Defined database structure for Azure
2. Compatibility and migration report
3. Backups and disaster recovery plans
4. Data Architecture Design

Release 3 (Initial Data Migration and Data Synchronization)

This release aims to deploy a fully functional cloud-based environment on Azure with the primary dataset migrated and ready for testing and validation.

Deliverables

1. Functional environment on Azure
2. Initial data migration to the cloud
3. Setup and configuration of Azure SQL Database
4. Backup and disaster recovery plans
5. Test case generation
6. Security and Compliance

Release 4 (Testing and Validation)

Real-time data flow and synchronization with the Azure environment. Functional and performance testing is validated.

Deliverables

1. Functional, integration, and performance tests
2. Testing results

3. Detailed reports of data consistency and management
4. Data synchronization

Release 5 (Final Data Cutover and System Documentation)

In the final release, databases are officially migrated to Azure cloud environments, and the system goes live, ensuring that business operations continue.

Deliverables

1. Final data migration
2. Fully operational databases on Azure
3. Monitoring and support plans in place for effective data management
4. Documentation of new cloud infrastructure, maintenance schedules, and best practices
5. Upskilling path for staff

Conclusion

To conclude, the project comprehends a data migration for the company named “Quality Items” from its current SQL server to a scalable Azure cloud-based solution that can lead to operational efficiencies and data security that can make the company scalable and support its long-term growth, considering the limited local server that the firm is currently facing challenges related to data management, storage and security due to the server saturation without enough safety measures that leaves the sensitive information of different stakeholders exposed to any potential data breach.

To do so, through an agile methodology, the team have separated the current project into three different phases that cover the business case and project charter that includes relevant information about the team and the project, the agile project lifecycle, and the implementation phase of the tasks captured in the product backlog in JIRA for the completion of the project. The purpose of this project is to ensure a safe data migration to an Azure cloud-based solution that enhances the operational performance and security measures of “Quality Items.” Considering the deadlines and nature of this industry and the changing demands regarding the features to add or safety procedures, taking an agile approach is an optimal decision to handle the project.

Link Jira: <https://myucw-team-juhpf0ii.atlassian.net/jira/software/projects/CQIM6/boards/3/backlog?atlOrigin=eyJpIjoiNzY5YWExYWUwNDA0NDYyY2EzOTE1MzIyNDY0NDYyN2MiLCJwIjoiaj9&cloudId=39c8a311-af21-45dc-b237-bd16193b9689>