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# Solution Selection

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Criterion | Description | Measurement Method | Scoring System (1-5) | Score |
| Cost | Assessment of the cost implications related to the solution option, together with initial funding, ongoing costs, and potential long-time period benefits. | Cost-benefit analysis | 1 - High cost, 5 - Cost optimization potential or significant financial benefits | 4 |
| Impact on Business Objectives | Evaluation of how properly the answer aligns with BMO's strategic goals and contributes to business increase, efficiency, and competitive advantage. | Key performance indicators (KPIs) alignment assessment | 1 - Low impact, 5 - High impact on business objectives | 3 |
| Resource Utilization | Analysis of the usage of inner and external assets required for solution implementation and ongoing protection, which includes workforce, technology, and external partnerships. | Resource allocation and utilization assessment | 1 - High resource utilization, 5 - Optimal resource utilization | 5 |
| Risk | Identification and assessment of potential risks associated with the answer, together with data security, implementation challenges, and reliance on external carriers, along with the techniques for risk mitigation. | Risk assessment and mitigation plan review | 1 - High risk, 5 - Effective risk mitigation or low-risk potential | 2 |
| Implementation Readiness | Evaluation of the readiness and feasibility of imposing the solution choice, considering factors together with technical readiness, organizational readiness, and stakeholder alignment. | Implementation readiness assessment | 1 - Not ready, 5 - Ready for implementation | 4 |

**Evaluation Criteria**

## Budget associated with solution number 1.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Aspect | Main Benefit | Benefit Impact (1 High - 3 Low) | Cost Estimate | Risk Impact (1 High - 3 Low) |
| Cost of Implementation | Infrastructure, Software Licenses, Professional Services | 3 | $100,000 | 1 |
| Technical Integration | Enhanced System Compatibility and Efficiency | 3 | $70,000 | 1 |
| Aligned with Business Goals | Improved Market Position and Customer Loyalty | 3 | $30,000 | 1 |
| Innovation | New Features and Market Differentiation | 3 | $25,000 | 1 |
| Competitive Advantage | Increased Market Share and Customer Satisfaction | 2 | $35,000 | 2 |
| Total Investment |  |  | $260,000 |  |

## Detail cost by component and year.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Item | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Total |
| **Cost of Implementation** |  |  |  |  |  |  |
| **Cloud Infrastructure** | **$60,000** |  |  |  |  | $60,000 |
| **Digital Marketing** | **$4,000** | **$4,000** | **$4,000** | **$4,000** | **$4,000** | $20,000 |
| **Data Protection** | **$15,000** | **$2,000** | **$2,000** | **$2,000** | **$2,000** | $23,000 |
| **Customer Support** | **$7,000** | **$2,000** | **$2,000** | **$2,000** | **$2,000** | $15,000 |
| **Training** | **$8,000** |  |  |  |  | $8,000 |
| **Technical Integration** | **$45,000** | **$5,000** | **$5,000** | **$5,000** | **$5,000** | $65,000 |
| **Aligned with Business Goals** | **$10,000** | **$5,000** | **$5,000** | **$5,000** | **$5,000** | $30,000 |
| **Innovation** | **$12,000** | **$3,000** | **$3,000** | **$3,000** | **$3,000** | $24,000 |
| **Competitive Advantage** | **$12,000** | **$8,000** | **$8,000** | **$8,000** | **$8,000** | $44,000 |
| Total Yearly | $174,000 | $24,000 | $24,000 | $24,000 | $24,000 | $270,000 |

## ROI Analysis:

**Assumptions for ROI Calculation:**

* **Annual Revenue Increase:** Due to stronger efficiency and customer reach, there's a predicted annual sales boom of $50,000 in Year 1, developing through $25,000 every year.
* **Savings from Efficiency:** Estimated at $20,000 yearly from reduced operational prices due to cloud efficiency.

**ROI Calculation:**

* **Total Costs (5 Years):** $270,000
* **Total Benefits (5 Years):** $600,000
* **ROI:** [(Total Benefits - Total Costs) / Total Costs] \* 100 = [(600,000 - 270,000) / 270,000] \* 100 = 122.22%

This simplified ROI analysis demonstrates a sizable return over five years, justifying the investment inside the cloud-primarily based data management gadget.

# Risk Log

1.Risk: Integration Complexity

* Severity/Impact: High
* Probability: Medium
* Mitigation: Conduct thorough system integration testing to identify and address any issues early in the project lifecycle. Implement a phased integration approach to manage complexity.

2.Risk: Regulatory Compliance Changes

* Severity/Impact: Medium
* Probability: High
* Mitigation: Establish a dedicated team to monitor regulatory changes and assess their impact on the project. Develop a flexible architecture to quickly adapt to new compliance requirements.

3.Risk: Data Security Breach

* Severity/Impact: High
* Probability: Low
* Mitigation: Implement robust data encryption and access control measures. Conduct regular security audits and penetration testing to identify and address vulnerabilities.

4.Risk: Vendor Dependency

* Severity/Impact: Medium
* Probability: High
* Mitigation: Establish clear contractual agreements with vendors, including service level agreements (SLAs) and contingency plans in case of vendor failure. Identify and onboard alternative vendors as backup options.

5.Risk: Scope Creep

* Severity/Impact: Medium
* Probability: Medium
* Mitigation: Define a clear project scope and change control process. Educate stakeholders about the impact of scope changes on project timelines and resources, and obtain formal approval for any scope changes.

6.Risk: Technology Obsolescence

* Severity/Impact: Medium
* Probability: Low
* Mitigation: Conduct regular technology assessments to identify potential obsolescence risks. Develop a technology roadmap to ensure timely upgrades and replacements of outdated technology components.

7.Risk: Stakeholder Resistance

* Severity/Impact: Medium
* Probability: Medium
* Mitigation: Implement a comprehensive stakeholder engagement plan, including regular communication and feedback mechanisms. Address stakeholder concerns and involve them in decision-making processes to gain their buy-in.

8.Risk: Resource Constraints

* Severity/Impact: High
* Probability: Medium
* Mitigation: Conduct a thorough resource assessment and planning process to identify and allocate resources efficiently. Implement resource management tools and techniques to track resource utilization and identify potential bottlenecks.

9.Risk: Business Process Disruption

* Severity/Impact: High
* Probability: Low
* Mitigation: Develop a robust business continuity plan (BCP) to mitigate the impact of potential disruptions. Conduct regular BCP drills and simulations to test the effectiveness of the plan.

10.Risk: Change Management Resistance

* Severity/Impact: Medium
* Probability: Medium
* Mitigation: Implement a comprehensive change management plan, including stakeholder engagement, communication, and training. Address employee concerns and provide support throughout the change process.

# IMPLEMENTATION STRATEGY

## 1. Scope:

To enhance and modernize the BMO's data management capabilities, through the implementation of a cloud-based system, ensuring improved data accessibility, security, and analytics capabilities across the organization.

## 2. Implementation Overview:

The project aims to transition BMO's current data management systems to a more scalable, cloud-based platform, incorporating state of the newest and latest analytics and security protocols to support the bank's digital transformation goals.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Task | Task Description | Begin Date | End Date | Key Person(s) Responsible | Dependencies | Milestone | Cost Estimate |
| T-01 | Initial System Assessment | April 2024 | May 2024 | IT Director | None | Project Kick-off | $50,000 |
| T-02 | Infrastructure Upgrade | June 2024 | July 2024 | Infrastructure Team Lead | Successful Initial Assessment | Infrastructure Ready | $200,000 |
| T-03 | Pilot Deployment | August 2024 | September 2024 | Project Manager, IT Team | Infrastructure Upgrade Completion | Pilot Success | $100,000 |
| T-04 | Training Program Development | June 2024 | July 2024 | Training Coordinator | N/A | Training Materials Ready | $30,000 |
| T-05 | Phased Roll-Out | October 2024 | March 2025 | Deployment Team | Pilot Deployment Success | Full System Live | $300,000 |
| T-06 | Post-Deployment Support Setup | March 2025 | Continuous | Support Team Lead | Full Deployment | Ongoing Support Initiated | $120,000 |
| T-07 | Final System Evaluation | April 2025 | April 2025 | Quality Assurance Lead | Complete Deployment | Project Closure | $15,000 |

## 3. Implementation Schedule:

## 4. Implementation Support:

Support could be supplied through a dedicated helpdesk, workforce schooling classes, and non-stop technical help from the cloud service provider companies. An exchange management group could be set up to facilitate the new machine's adoption.

## 5. Implementation/Deployment Approach:

* **Phased Approach:** Gradual migrations to the cloud system, with less key facts and services.
* **Big Bang for Specific Features:** Certain new features, like better or improved security protocols, might be rolled out across all departments simultaneously.
* **Backout Strategy:** In case of vast problems, a plan to revert to the previous structures or to a stable version or state of the brand-new machine.

## 6. Training of Implementation Staff:

Comprehensive training will include:

* **Technical Training for IT Staff:** Focused on systems maintenance, security, and troubleshooting.
* **Operational Training for End-Users:** Ensuring all employees are comfortable with the new systems interface and functionalities.

## 7. Client Resource Allocation:

Resource allocation covers hardware enhancements if wanted; software licensing for the cloud platform, and schooling resources. A project crew, along with a venture manager, cloud professionals, and a training coordinator, will be assigned.

## 8. Client Communication Plan:

A structured conversation plan to keep stakeholders knowledgeable consists of regular project information updates, make time or a session before the major rollouts, and comments mechanisms post-implementation.

## 9. Cost Implications and Required Manpower for Initialization:

The projected budget for the implementation is estimated at 5 million CAD, which covers software licenses, hardware upgrades, training programs, and personnel costs. The project will need the project management team to be involved full time, also select the required IT staff, and temporary contractors for any specialized roles that we need.

## 10. Implementation/Deployment Strategy Impact:

The successful implementation of the cloud-based data management system is expected to significantly improve or better BMOs data processing competencies, enhance data driven selection making, and improves information security features, contributing to better customer service and a strong competitive position in the market.

# BMO Cloud-Based Data Management Solution Test Strategy

## 1. Scope and Overview

**Objective:** Based on the requirements acquired during the project start phase, BMO's first testing scope would be established. The components of the program or system that must be evaluated to guarantee its dependability and quality are described in this scope. We aim to improve efficiency and customer satisfaction.

* Performance optimization with maximizing efficiency with reduced cost.
* Use data efficiently to enhance decision-making capabilities.
* Enhance security measures.
* Make a better interface for customers for good customer experience and satisfaction.

## 2. Testing Methodology

* **Levels of Testing:**
  + **Unit Testing:** This testing is conducted by developers focusing on individual components of the cloud system.
  + **Integration Testing:** In this testing phase the tester ensures that integrated components work together smoothly like when new digital implementations are used in the existing system.
  + **System Testing:** To validate the complete and integrated software product.
  + **User Acceptance Testing (UAT):** To confirm the system meets BMO's requirements and is ready for live deployment.

|  |  |  |
| --- | --- | --- |
| Name | Roles | Responsibilities |
| Froyd Francis | QA Lead | To oversee the testing process, ensure coverage, and manage defect tracking. |
| Harmanpreet Singh | IT Department | To provide technical support and ensure environment readiness. |
| Dikshita Jain | Business Analysts | To validate testing scopes and align with business requirements. |

* **Roles and Responsibilities:**

## 3. Test Environment

* **Setup Requirements:** Mirrors production environment with test data migrated.
* **Backup and Restore Strategy:** To ensure test data integrity and availability throughout the testing phases.

## 4. Testing Tools

* **Automation Tools:** Selenium for web interface testing, and JMeter for performance testing.
* **Test Management Tools:** JIRA for test case management, defect tracking, and reporting.

## 5. Release Control

* Includes version control practices to manage code deployments across environments ensuring traceability.

## 6. Risk Analysis

* **Data Loss:** Implement rigorous data backup and validation checks.
* **Security Breach:** Regular security audits and penetration testing to identify vulnerabilities.
* **Integration Failures:** Extensive integration testing with legacy systems.

## 7. Review and Approvals

* Regular review meetings with stakeholders for progress updates and to address any concerns.
* Final sign-off from Business Owners, IT Security, and Compliance Teams upon successful completion of UAT.

## Specific Test Activities for BMO’s Cloud-Based Solution

**Test Activity Timeline:**

|  |  |  |
| --- | --- | --- |
| Activity | Description | Timeline |
| Data Migration Testing | Ensure all data is accurately transferred and intact. | July 2024- August 2024 |
| Security Testing | Validate encryption, access controls, and compliance with financial industry standards. | August 2024 -September 2024 |
| Performance Testing | Assess system behavior under peak loads. | October 2024- December 2024 |
| UAT | Conducted by end-users to ensure the system meets operational needs. | January 2025 – March 2025 |

## Handling Defects:

* **Defect Tracking:** Utilize JIRA for recording, tracking, and managing defects.
* **Retesting:** Defects fixed by developers will be retested to ensure issues are resolved.
* **Regression Testing:** Conducted post-fix to ensure no new issues were introduced.

## Sign-offs Required:

* **QA Lead:** Post each major testing phase.
* **Project Sponsor:** After UAT completion and before production deployment.

|  |  |  |
| --- | --- | --- |
| Position | Name | Date |
| Project Sponsor | JB Abbas | April 04, 2024 |
| Project Manager | Aum Patel | April 04, 2024 |
| QA Lead | Froyd Francis | April 04, 2024 |