All applications for consideration of the PMINAC Project of the Year Award must address the criteria listed below. The submission must consist of **no more than twenty pages** with each criteria limited to two pages maximum in 10 point font. Please submit this material in the order noted below.

**Project Abstract**

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| --- | --- |
| **Project Name:** | Data Collection and Validation |
| **Project Category:** | *Information Technology* |
| **Submitter Name:** | John Doe |
| **Submitter email:** | john.doe@gov.ab.ca |
| **Submitter Phone:** | 780-111-1111 |
| **Submitter Organization:** | Government of Alberta |
| **Submitter Role:** | *Project Manager* |

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| --- | --- |
| **Project Sponsor:** | Jane Doe |
| **Project Manager:** | John Doe |
| **Project Team Location(s):** | Edmonton |
| **Project Start Date:** | August 28, 2013 |
| **Project Completion Date:** | March 31, 2016 |

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| --- | --- |
| **Releases** | (Yes / No / Na) |
| Submitter/Organization has permission to use any copyrighted materials included in this submission | Yes |
| Submitter/Organization is the owner of a research or development project, which may contain proprietary or confidential, technical, or commercial information which can be disclosed publicly | Yes |
| Submitter/Organization has permission to use any images, logos, drawings and all other material submitted | Yes |

**Project Submission**

*Please use the following table of contents for your submission. Each criterion should be addressed individually. Projects must have been completed by December 31, 2016 to be eligible.*

**Sponsor Letter**

*Describe the project’s objectives and confirm that they were achieved. Describe the value that this project delivered to your organization and / or your organization’s stakeholders. As the project sponsor, describe why you believe this project is a worthy candidate for Project of the Year. Consider factors such as innovative practices / solutions, significant challenges, etc.*

The Data Collection and Validation (DCaV) Project was initiated in order to develop a long term enterprise framework for standardizing the way in which data is collected, validated, and analyzed within the Ministry of Advanced Education.

The project created a secure and centralized framework that modernized legacy business processes, empowered internal business and external stakeholder – Post Secondary Institutions and Private Career Colleges, and increased overall process transparency. These changes had immediate results. Existing legacy data collection and validation applications where expeditiously retired in favour of DCAV. In its first year of use, the DCAV framework improved business efficiencies, dramatically shortened data submission cycles, and increased data fidelity.

As a robust, scalable, and reusable framework, the Data Collection and Validation project created a technically innovative framework that has also offered significant reusability. To date, several new modules have been quickly integrated within the DCAV framework resulting in significant cost savings.

I believe that the Data collection and Validation project is a worthy choice for Project of the Year. The project team, working in conjunction with business stakeholders, have produced an innovative solution that has helped us continue to evolve our evidence based decision making capabilities and thereby developing a more comprehensive and holistic understand of Alberta’s post-secondary system.

**Triple Constraint**

*Show that the project scope, schedule and budget were effectively managed. Include descriptions of the processes / techniques employed and describe the results / outcomes achieved.*

The Data Collection and Validation project was managed using best practice methodology as defined by the ministry’s Project Management Office (PMO). At the core of this project was the project charter. The project charter clearly identified the project’s goals, objectives, schedule, governance, stakeholders, as well as roles and responsibilities. Once the project charter was approved by steering, the project established a highly structured framework for effectively managing scope, schedule, and budget.

Scope was managed through regularly scheduled working committees and joint application design sessions (JADS). Attendees of the JADS included technical team members – database architect, solution developer, enterprise architect, business analyst, Project Manager – as well as business stakeholders and subject matter experts. Regularly scheduled JADS focused on exploring two use cases: a relatively simple use case, and a complex use case. The result was that the project team was able to quickly establish momentum for delivering a working solution to business users while exploring and refine requirements for the complex use cases. This pattern established a fail fast attitude that allowed both the technical team and business users to validate and confirm business and technical requirements. As requirements were identified in the JADS, they were added to the project plan and estimated. In addition to estimates, the project plan also contained milestone dates. As new opportunities were uncovered in the JADS, the impact of implementing them was weighed against the project milestones. If the opportunity posed a significant risk to milestones but was of low value to the business, the opportunity was captured in a project backlog for future review. However, if the opportunity was of a high value, a change request was raised and brought forward to the project’s steering committee. Change requests were used to formally capture the description of the change and the impact of the change to scope, schedule, and budget. Based on the information contained within the change request, the project’s steering committee would either approve or reject the request. The change request would then be formally archived as an appendix to the project’s charter.

Schedule and budget were always evaluated against scope. Although the project had a target schedule of delivery dates, a premium was placed on delivering value to internal and external stakeholders. As such, changes to schedule and budget were formally acknowledged via formal change management processes. By having a fully engaged and active business owners, schedule extension were rationalized and approved by steering.

**Quality**

*Show that the project managed quality effectively throughout the project. Include descriptions of the processes / techniques employed to achieve quality standards specified for the project deliverables.*

The Data Collection and Validation project had remarkably high quality in how the framework was technically crafted as well as its end user usability. The quality delivered by the project team was a result of how the team implemented agile best practice methodology. Ascribing to the principles of fail fast and that which doesn’t fail continue to refine, the project team continually delivered a working solution into the hands of the business. Doing so allowed the project team to verify the framework’s utility and functionality through continually refinement and refactoring of the project solution. Delivering early releases of the application also allowed the project’s quality control resource to be engaged early and often.

The quality control resource used a variety of methodologies to ensure the project maintained its high standard of quality. With each release of the framework, the quality control resource performed a suite a manual regression tests. As a member of the joint application design session, the quality control resource continued to refine and enhance test cases as requirements evolved. Additionally, the quality control resource also implemented automated test cases and load performance testing. Cyclomatic evaluations were also implemented to evaluate the complexity of the underlying code base. Any function that was identified beyond a threshold was marked for refactoring. This refactoring resulted in a code base that was significantly easier to maintain and extend.

The quality of the solution can also be attributed to process put in place by the development team. After the completion of a particular piece of functionality. Developers would regularly perform peer code review to ensure their work was consistently implemented and applied throughout the application. Not only did this ensure code was of a high quality, it also fostered the growth and development of the project team’s skillset.

**Project Team**

*Show that the team operated as a high performing team, aligned and focused on the achievement of project goals. Include descriptions of the processes / techniques employed and describe the results / outcomes achieved.*

The project team was able to quickly transform into a fully formed, mature, high performing team due to formalized processes, documentation, and communication.

At the onset, ambiguity on the project was removed using the principles established by the project management office. The PMO established a highly productive environment by providing project team’s with formal process and documentation standards. With the project’s roles and responsibilities outlined in the project charter, each member of the team had a clear understanding of what they were expected to do and accomplish on the project.

Communication through regularly scheduled scrums, joint application meeting minutes, peer reviews, and ad hoc meetings formed the foundation for effective communication that allowed the project team excel. Communication served as a backbone, ensuring that the team was aware of what one another were doing, project milestones, and any challenges that were incurred. Peer code reviews was another means by which the project team ensured continually high performance. During code reviews, the project’s technical team would meet and provide direction and guidance. From the onset of the peer review sessions, the developers clearly understood that the intention of the review was not to criticize or diminish anyone’s work but to inform and grow the team’s collective understanding.

The project team’s being collocated also had a significant impact on establishing and maintaining a high performing team. Senior project members established a code of conduct that served as a pattern of proper behaviour for the entire team. Colocation also allowed the team to develop a bound and friendship further reducing impedance to being high performing.

With a highly mature and capable technical team that required little coaching and oversight, the project manager was able to focus greater effort on providing effective communication to stakeholders, mitigate risk, and ensuring the business was getting value.

# Risk

*Show that risks were effectively managed during the project. Include descriptions of the processes / techniques employed and describe the results / outcomes achieved.*

Throughout the course of the project, risks were collected in a project risk register and regularly reviewed at monthly steering committee meetings. The project team sought out to actively mitigate risk through proactive means. Risks that couldn’t be mitigated by the project team were escalated to the project sponsors who then make decision on how best to mitigate the risk.

# Procurement

*Show that procurement was effectively managed during the project. Include descriptions of the processes / techniques employed and describe the results / outcomes achieved.*

# The procurement of project team members was greatly determined by schedule and the team’s ability to deliver to project milestones. When schedule milestones were in jeopardy of being missed or additional scope was added, a formal request for additional resources was submitted to the project’s steering committee. The request contained a detailed project GANTT chart outlining optimistic and pessimistic scenarios for project delivery. Supplementary documentation was also included to steering, identifying if there was enough work for the resource beyond the immediate project concern. Based on current project need, projected future work, and budget availability, the project’s steering committee decided on whether new resources could be added to the project team. Once a decision was made to add new project team members, the government’s procurement policies came into practice. A formal request for proposal was released and prospective candidates were screened. A short list of potential candidates was selected and an interview process was carried out. If a suitable candidate was identified after the process, steps would be taken to have the new resource added to the project team.

# Stakeholders *Show that the stakeholder expectations, impacts, and communications (both internal and external) were effectively managed. Include descriptions of the processes / techniques employed and describe the results / outcomes achieved.*

At the onset of the project, a stakeholder catalogue was established that listed all stakeholders and their interest and impact on the project. Depending on the classification of the stakeholder, different techniques and processes were employed to manage expectations and communications. For internal business stakeholders that had a vested interest in the project, working group meetings and joint application design sessions where held. These regularly scheduled, in person meetings enabled the team to develop strong working relationships with the business. As such, these meetings fostered an environment that bolstered greater understanding and permitted a frank and unfettered exchange of ideas, opinions, and concerns. Having developed a strong rapport with the business, project team members felt comfortable to engage the business in ad hoc discussion. The result was that the internal business stakeholders always had a strong sense that their interests were being represented by the project team.

Managing expectations and communication for other internal stakeholders was carried out using more formalized channels of communication. These individuals received monthly project status reports from the project manager which highlighted previous achievements, current deliverables, and any general comments/issue/concerns that were noteworthy.

Expectations for external stakeholders, both passive and active, were managed via formal communication channels such as emails and presentation through internal business users. Internal business users, working in conjunction with the project manager, would send formal updates via email to external stakeholders. Issues and concerns would then be collected by the internal business stakeholders and evaluated during the regular joint application design sessions. The result of this process was a clear and unified message to a large and diverse group of external stakeholders.

# Change

*Show that proposed changes (scope, time, budget, etc.) to the project were effectively managed. Include descriptions of the processes / techniques employed and describe the results / outcomes achieved.*

From the onset of the project, the project team and sponsors embraced change. As an Agile project, joint application design sessions were the main drivers of changes. During these sessions, the project team in conjunction with business stakeholders continually reviewed and refined functional processes and framework design. When a change was introduced that had a significant impact to schedule, it was formally captured in a change request form. The Change Request form, captured the description of the change, the reason for the change, the impact of the change, estimated time and cost to complete the change, as well as the recommendation of the project team. Once completed, the change request was submitted to the project’s steering committee for formal review. If approved, the project’s schedule including milestones was adjusted to accommodate the newly introduced change. For changes that had little impact on schedule, the project manager and technical architect would review the change and determine which developer would work on the task and when.

# Lessons Learned

*Show that lessons learned from previous experiences, as well as those learned during the course of the project, were effectively integrated. Include descriptions of the processes / techniques employed and describe the results / outcomes achieved.*

Lessons learned from previous experiences played a pivotal role in the success of the project. The team, drawing from previous project experience, was able to effectively incorporate tactics and strategies from previous projects. Previous project experience greatly influenced many aspects within the project. The most notable influence was the culture and behaviour of the project team. The project team functioned with no micro management. Each member of the project team understood what was expected of them and was provided the tools to accomplish their task. Working within their role, as outlined in the charter, each resource was given the freedom to explore and improve upon how the team functioned. This bolstered a sense of pride and ownership in what the project team was doing which in turn resulted in the successful delivery of the project.

# Project Complexity

*Describe the factors that made this project complex to manage. This question refers to management complexity, not product complexity.*

The Data Collection and Validation project was a complex project to manage. As a government IT initiative, the project team had to effectively balance competing interests and concerns from multiple internal and external stakeholders. To compound stakeholder complexity, the internal business stakeholders were reorganized numerous times resulting in new directors taking control and sponsorship over the project. Adding to the complexity for internal business stakeholders, the project completely modernized and revamped how the business collects, validates, and analyzes data.

The project was also complex in its technical implementation. As a central data collection framework, the project has multiple dependencies amongst various other enterprise systems. The project team had to work closely with other project teams to ensure proper integration and to collaborate on schedule. As an enterprise framework, the project team had to balance business requirements, with existing enterprise policy, and with other inflight projects. This required a tremendous amount of collaboration and communication to ensure all involved technical stakeholders were operating in lockstep with one another.

# Supplementary Project Information

## *(If there is additional relevant project information that would assist the evaluation team in reviewing the project submission, please include it in this section)*

## Submission Checklist:

* Obtain Letter of Recommendation from the project client/sponsor.
* Completed Project Abstract table (replace all *Italic* text)
* Completed Project Submission table of contents
* Attached any Appendices you feel important
* Email the complete submission (PDF or MS Word) to: [directory@pminac.com](mailto:directorpoy@pminac.com)

***Please send in your submission before 11:59 pm on April 24, 2017 Award receipts will be invited to the PMINAC Conference to a special session on   
June 7th, 2017 where the winner will be announced!***