

# **An Independent Commentary on Technology at Manitoba Public Insurance**

Presented as evidence and filed with the Public Utilities Board on behalf of the Manitoba Branch of the Consumers' Association based on information provided in the 2024 General Rate Application of Manitoba Public Insurance

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## **2 IMPORTANT NOTICES**

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### **2.1 NOTICE OF CONFIDENTIALITY**

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For further clarity, THIS DOCUMENT AND THE INFORMATION IN IT ARE PROVIDED IN CONFIDENCE, FOR THE SOLE USE BY THE PUBLIC INTEREST LAW CENTRE , ON BEHALF OF THEIR CLIENT, CAC MANITOBA, MANITOBA PUBLIC INSURANCE, AND THE PUBLIC UTILITIES BOARD OF MANITOBA AND MAY NOT BE DISCLOSED TO ANY THIRD PARTY OR USED FOR ANY OTHER PURPOSE WITHOUT THE EXPRESS WRITTEN PERMISSION OF THE PUBLIC INTEREST LAW CENTRE OR THE AUTHOR.

### **2.2 STATEMENT OF INDEPENDENCE**

I, Scott Greenlay, hereby affirm my independence and impartiality in conducting the consulting services and preparing this report for the Public Interest Law Centre, on behalf of their client, CAC Manitoba, for purposes of the Public Utilities Board(PUB) of Manitoba. I have no financial or personal interest in the subject matter of this report, and I have not been influenced by any external factors that could compromise the objectivity of my findings and recommendations.


My role as a consultant is to provide an unbiased assessment and professional expertise to assist the Public Utilities Board in making informed decisions. I have conducted this engagement in accordance with the highest ethical standards and professional guidelines, ensuring that the analysis and recommendations presented herein are based solely on the information and data available and my professional judgment.

In carrying out my duties under my retainer with the Public Interest Law Centre, on behalf of the Manitoba Branch of the Consumers' Association of Canada (CAC Manitoba), I understand it is my duty to provide evidence and advice which:

- is fair, objective and non-partisan;
- is related only to matters that are within my areas of expertise; and
- provide such additional assistance as the PUB may reasonably require to determine an issue.

In regard to my duty in providing assistance for PUB, I understand that this duty overrides any obligation to CAC Manitoba or the Public Interest Law Centre.

I am committed to delivering the highest quality of service and maintaining the integrity of this report. If any questions or concerns regarding my independence arise during the course of this engagement, please do not hesitate to contact me immediately.



Scott Greenlay

### **3 ABOUT THE AUTHOR: SCOTT GREENLAY**

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Drawing on over 35 years of experience, Scott's blend of business, management, technology, and human resources knowledge provides him with a unique perspective on optimal strategy and execution. Scott boasts extensive experience in strategy, governance, planning, executing, and managing information technology projects, especially those related to large, enterprise-scale transformative endeavors.

Throughout his career, Scott has collaborated with Federal, Provincial, and Crown Corporations, as well as private sector organizations across Canada, the United States, and Europe. His interactions span from board members, CEOs, and executives to practitioners and technologists. In his leadership role at MNP, serving as the National Director of Technology Services, he often advised clients on major technology initiatives, especially when they faced crisis and challenges.

As National Director of Technology Consulting for a prominent consulting firm, Scott oversaw various domains such as strategy, cybersecurity, project oversight, audits, digital transformation, and general guidance for Corporate Executives. His experience and expertise aligns well with the IT-related topics presented in MPI's GRA.

Having worked with and for public sector organizations, including Crown Corporations across Canada, Scott ardently believes in the significance of prudent technology investment and management in the public sector. He champions the idea that technological investment is crucial for enhancing services to Canadians and underscores its importance for future effective and efficient service delivery.

A comprehensive profile of Scott can be located in Appendix 8.1 of this document.

## 4 INTRODUCTION

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The primary focus of this document is the technology at Manitoba Public Insurance (MPI) and Program Nova, which encompasses Project Nova. The most insightful introduction to the challenges faced by MPI comes from their own consultants and a past CEO:

""NOVA is the largest initiative MPI has ever undertaken and **more complex than other industry transformations.**"  
- PWC<sup>1</sup>(emphasis added)

""MPI having(sic) taken on a program that appears to be **too ambitious** based on where the organization stands and its capabilities"  
- Eric Herbelin, CEO <sup>2</sup>(emphasis added)

From the information provided as part of the GRA2024 process, it's evident that the size and complexity of Nova are immense. In my experience, organizations dealing with initiatives of this magnitude face enormous challenges in successfully navigating and implementing them.

The foundational business case for Nova was established after thorough consultations with staff and involved the expertise of the globally renowned consulting firm, Deloitte. This business case offered a detailed analysis of current business and technological expenses, technological advancement opportunities, and the prospective business benefits of such enhancements. With a robust NPV of \$12.7 million and a payback period of 14 years, the case for change was compelling. It aligned perfectly with the decision-making protocols typical of a Crown Corporation in Manitoba.

As Nova progressed it soon ran into challenges. After engaging with external consulting firms, Nova's strategy underwent significant revision. It shifted from a "big bang" methodology to a more segmented "phase project" approach. This phased approach aims to break down the work into more manageable modules, reduce risks, and set clear milestones. At these milestones, MPI can decide whether to pause, adjust, or continue with the project.

This document will further explore Nova and the technology in use at MPI, examining the facts disclosed in the GRA2024 process and discussing them in light of industry norms.

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<sup>1</sup> PWC Executive Update 2021 Q1 dated January 15 2021, 2024 GRA Round Information Requests, CAC (MPI) CI2-4(a) Appendix 1 - Confidential, Page 4"

<sup>2</sup> 2024 GRA Round 2 Information Requests, CAC (MPI) CI 2-4(a) Appendix 1 - Confidential McKinsey R2 ebook (secured)

## 5 CURRENT SITUATION AND ANALYSIS

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This section will focus on the factual information provided in the GRA2024 process and provide commentary. In reviewing the current situation, MPI faces a number of challenges. Three primary challenges include governance, capability, and capacity as identified by PWC.<sup>3</sup> These challenges are important, but in addition, it is also important to consider:

- MPI is a Crown-corporation, public sector organization and its implications;
- MPI's experience with large transformation initiatives; and
- the complexity of Nova.

Finally, there are also several complex challenges which are discussed later in this section.

### 5.1 CROWN CORPORATION AND ITS IMPLICATIONS

The Manitoba Public Insurance Corporation (MPI) is a non-profit Crown corporation responsible for administering public auto insurance, motor vehicle registration, and driver licensing in Manitoba. Established by the Government of Manitoba in 1971, MPI was created under legislation, The Manitoba Public Insurance Corporation Act, which provides it with legal protections and provisions. As a result, it operates as a monopoly in the provision of compulsory Basic insurance with limited liabilities and market protection. These attributes of MPI should serve to inform the corporation's management and decision in a variety of ways.

#### 5.1.1 Benchmarking

One of the most challenging aspects of operating a Crown corporation is determining reasonable expenditure levels. Benchmarks play a critical role in this, offering a comparative metric among similar organizations. MPI has embarked on benchmarking initiatives with AON for general comparisons and with Gartner for technical benchmarks. This method is widely accepted and reassures MPI's stakeholders that its expenditures align with those of analogous entities.

However, ensuring the selected benchmarks are relevant and customized to MPI's specific operational environment is crucial. Choosing an inapt "peer group" could skew the benchmarks, potentially leading to misinformation. Although MPI primarily operates as a Property and Casualty (P&C) service provider, its unique status as a Crown Corporation, monopolistic nature, and substantial legislative protections to differentiate it. This uniqueness indicates that many benchmark standards from the broader insurance industry might not be apt. For example, in the intensely competitive P&C insurance sector, IT investments are often strategic, aiming to surpass competitors and capture a more substantial market share.

Considering MPI's absence of competitive pressures and its assured market, benchmarking its IT investments against the highly competitive private P&C sector is inappropriate. A more

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<sup>3</sup> PWC Executive Update 2021 Q1 dated January 15 2021, 2024 GRA Round Information Requests, CAC (MPI) CI2-4(a) Appendix 1 - Confidential, Page 4

relevant comparison would be with organizations having similar operational frameworks. Entities like the Saskatchewan Government Insurance(SGI), the Insurance Corporation of British Columbia(ICBC), and Société de l'assurance automobile du Québec are more fitting comparatives for MPI. While MPI has performed benchmarking in general against SGI and ICBC, technology-specific benchmarking is required. For example, the AON Benchmarking peer group is largely outside the Public Sector peer group. Further AON's technology data is limited to financial expenditures and headcount. <sup>4</sup> Gartner's benchmarking is far more appropriate, but the peer group used for MPI is "insurance industry peers" rather than the public sector.<sup>5</sup> Gartner, who has a large public sector client base, has substantial data on Public Sector peers and this data would be insightful.

MPI shares numerous traits with the Public Sector, such as public ownership, legislative provisions, political oversight, and resource-sharing capabilities. For instance, Manitoba Hydro, Manitoba Liquor and Lotteries, and MPI, all Crown corporations based in Winnipeg, have analogous cost structures encompassing salaries, facility expenses, capital access, and local operational costs.

### **5.1.2 Establishing Value for Money:**

As a public sector organization procuring products and services, MPI has a responsibility to ensure its purchases represent prudent investments.<sup>6</sup> The generally accepted theory to ensure value for money revolves around several principles:

#### **5.1.2.1 Tendering of Contracts**

The tendering process itself isn't the main benefit to the public. Instead, it's the methodology by which a tender is crafted. Typically, the purchaser, in this case, MPI, formulates a set of specifications and requirements. This phase is paramount since it ensures MPI determines its purchasing needs independently of vendors, safeguarding the public from undue influence. Once these are set, multiple vendors are then invited to submit proposals through the public tendering process. This introduces an element of price competition, ensuring goods and services are bought at a fair price and gives vendors an opportunity for innovation, potentially proposing alternative specifications.

MPI did not tender the McKinsey contract. However, reviewing the documentation provided by MPI through the 2024 GRA process, it's evident from the former CEO, Eric

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<sup>4</sup> 2024 GENERAL RATE APPLICATION, Part IV - BMK Attachment B – Confidential, AON Report dated March 7, 2023.

<sup>5</sup> MPI Exhibit #5, 2024 GENERAL RATE APPLICATION, Part V - IT Attachment A, "Manitoba Public Insurance Information Technology Benchmark (FY2021/22), Findings and Recommendations Report", Page 10

<sup>6</sup> See "Regulatory Principles" in particular "Prudence Standard" which states "Under this principle, customers should be charged only for prudently incurred costs. This recognizes the fact that regulated entities have a responsibility to manage themselves in a prudent manner. This principle is central to the PUB hearing process and the wealth of evidence collected and examined by the Board in its proceedings." See PUB website: <http://www.pubmanitoba.ca/v1/about-pub/regulatoryprinciples.html>



Herbelin's email to McKinsey on August 30, 2021<sup>7</sup>, that MPI had indeed crafted specifications and requirements. In my experience, without the openness of a tender, vendors often mold client requirements to fit products and services they've already developed. This minimizes risk to the vendor, optimizes vendor staff resources, and maximizes profits. Given the vendor's expertise in selling, proposals, and contracts, it's not surprising that no formal statement of work was established by MPI for McKinsey. By examining the materials from the correspondence between the former CEO Herbelin and McKinsey, the resulting work proposed by McKinsey significantly diverged from the initial MPI leadership specifications. It's unclear how this transition occurred, but based on the provided correspondence, it raises concerns. Ultimately, the question lingers: Did MPI receive what it required, or did the vendor substantially modify and influence the delivered work?

### ***5.1.2.2 Rigour around Defining and Monitoring Work***

To ensure value for money, both Public Sector organizations and most private sector organizations with whom I have worked, which represent some of the largest companies in Canada, recognize the importance of developing their own "Statement of Work" (SOW) and then measure the work performed by suppliers against this SOW. This naturally creates tension between the purchaser and supplier but ensures the work meets the purchaser's needs. Essential to this process are:

- a. A well-defined description of the work to be performed, ideally with a payment schedule based on milestones;
- b. Regular accounting of the delivered work against the SOW, including identification of deviations and measures to address them. Necessary deviations require reflection and potential SOW adjustments by the purchaser;
- c. A review by the purchaser of the final delivered work against the SOW to ensure compliance;
- d. Post-delivery tracking of any work quality deviations, with remediation requested if necessary.

Examining the McKinsey contract, due to its informal nature, this process was challenging to apply. This calls into question the means of ensuring value for money. Further evidence of the lack of rigor by MPI in this process is also seen when Nova diverged significantly from Deloitte's initial work at the project's outset. For example, when costing information came back to MPI from the vendor community for implementing early phases of Nova, a pertinent question for Deloitte would be, "Why is there such a significant deviation in costs from the work you performed?"

### ***5.1.2.3 The use of Financial Measures as part of the decision-making process***

As a public institution, MPI has an obligation to ensure judicious decisions regarding fund allocation. Every expenditure by MPI, be it operational or capital, entails the use of

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<sup>7</sup> 2024 GRA Round 2 Information Requests, CAC (MPI) CI 2-4(a) Appendix 1 – Confidential, Page 177-179

ratepayer funds. It's crucial that such spending acknowledges the significance of prudence. Failure to exercise caution means allocating resources that might have been used for other programs, lowering premiums, or fulfilling other mandates from the Shareholder. Therefore, integrating financial measures into any decision-making process is a fundamental responsibility of a Crown corporation. Examining the development of Nova, it's evident that the original decision-making incorporated the expected rigor, using both Net Present Value and Payback calculations as justifications. However, as Nova progressed, MPI recognized that it no longer aligned with the standard NPV and Payback criteria.

The original 2019 business case prepared by MPI and Deloitte established a project budget of \$85.4 Million plus \$21.4 Million contingency for a total of \$106.8 Million and a project completion timeframe of 40 months. As of the February 2022 Board of Directors Technology Committee minutes, the budget has expanded to \$224.1 Million plus \$65.8 Million contingency for a total of \$ 289.9 and 60 months. The original 2019 business case identified \$423.7 Million in business benefits with a \$12.7M NPV and a 14-year payback period. As things stand now, Nova's business benefits have been reduced to \$296.5 Million and a negative NPV of \$188.9 Million and no payback.

The initial business case for Nova was meticulously developed, drawing from widespread staff consultations and the expertise of a renowned consulting firm, Deloitte. This process provided a comprehensive assessment of current business costs, technology expenses, potential technology enhancements, and their respective business benefits. With a robust NPV of \$12.7 million and a payback period of 14 years, the proposition for change was logical and aligned with the decision-making standards of Manitoba's Crown Corporations.

However, during the execution of Nova, MPI encountered budgetary excesses and project delays. In light of the escalating costs and slipping timelines, MPI engaged an external consulting firm for review and guidance. The firm's mandate, in line with MPI's statement that they had not contemplated revising or trimming down aspects of Nova, was to "evaluate the existing technologies and operations at MPI to ascertain its suitability for legacy modernization."<sup>8</sup> Subsequently, McKinsey was engaged to analyze the Nova program. Their focus primarily centered on streamlining Nova's delivery. While the original statement of work did hint at examining "expected benefits," the primary emphasis was on executing Nova without a parallel conversation on aligning expenses with savings to ensure a viable ROI.

It is important to recall that MPI is a crown corporation bound by the operating standards of the Government of Manitoba (GOM). Based on my experience on working with GOM over 30 years, as well as working with other provincial governments and the federal government, the GOM, like its peers, expects its crown corporations to act responsibly, make decisions in line with industry norms, and adhere to accepted business practices.

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<sup>8</sup> 2024 GRA Round 1 Information Requests, CAC (MPI) CI 1-17 Attachment B – Confidential, Page 7

Similarly, in my experience, large corporations expect that significant decisions involving monetary expenditure be rooted in comprehensive business cases. Standard business case practices dictate decision criteria that encompass financial analysis, necessitate a defined return on investment (e.g., a positive Net Present Value), and may stipulate a reasonable payback period. Importantly, a positive NPV indicates that a project's predicted financial return will be more than the current investment, indicating that the project is worthwhile.<sup>9</sup> In fact, NPV is considered by many to provide a superior tool for project selection.<sup>10</sup>

It's worth noting that while the public sector has extensively deliberated on the importance of financial considerations and acknowledges that in some instances financial aspects aren't paramount, as highlighted in the Government of Canada's cost-benefit analysis guidance<sup>11</sup>, in such cases, significant intangible benefits are recognized. These benefits can include health improvements, public safety, and other advantages that generally pertain to the well-being of society at large. However, when it comes to Crown corporations, the NPV (Net Present Value) is regarded as the gold standard, similar to its standing in most corporations, with abundant evidence supporting its relevance.<sup>12</sup>

An analysis of events to date reveals a clear shift in Nova's trajectory. Initially grounded in a business case aligned with industry standards—a balanced evaluation of business value, costs, savings, and non-financial benefits—it deviated towards a project indifferent to financial savings as a means to offset its expenses. In my experience with both Private and Public Sector organizations, such an approach contrasts sharply with both industry benchmarks and the expectations set by the GOM for its Crown entities.

## **5.2 EXPERIENCE OF MPI AND THE CHALLENGE OF SIMILAR INITIATIVES**

Nova is an ambitious venture. As characterized by PWC in the opening quotation of this report, Nova is “more intricate than other industry transformations.” While MPI's primary function is to offer insurance services to Manitobans, it does not specialize in executing large-scale transformation projects or operating expansive projects.

The track record of the industry with initiatives on the scale and magnitude of Nova is less than reassuring. The Standish Group, renowned for its biennial 'Chaos Report', delves into the performance of large-scale projects. Although the figures may fluctuate mildly over the years,

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<sup>9</sup> N.P. Archer, F. Ghasemzadeh, An integrated framework for project portfolio selection. *International Journal of Project Management*, vol.17(4), 1999, pp. 207-216

<sup>10</sup> Flaig, John. (2005). Improving Project Selection Using Expected Net Present Value Analysis. *Quality Engineering*. 17. 535-538.

<sup>11</sup> Canada's Cost-Benefit Analysis Guide for Regulatory Proposals, Treasury Board of Canada. Updated May 15, 2023.

<sup>12</sup> A Literature Review on the Net Present Value(NPV) Valuation Method. Tianle Shou, *Advances in Economics, Business and Management Research*, Volume 219. Proceedings of the 2022 2nd International Conference on Enterprise Management and Economic Development (ICEMED 2022).

Standish consistently reports<sup>13</sup> that only about 31% of large-scale projects succeed. The success rate drops dramatically to 15% for projects that are both large and intricate. Standish emphasizes that the key to project success hinges on the involvement of "smart, trained individuals."<sup>14</sup> While MPI undoubtedly employs competent and well-trained personnel, they lack the experience needed to navigate sophisticated initiatives like Nova. The typical remedy in such cases is to bolster the existing team with such "smart, trained individuals" sourced from suppliers. The effectiveness of engaging and supervising these suppliers is crucial (refer to the section titled "Rigour around Defining and Monitoring Work").

The hurdles MPI faces when relying on external suppliers to bridge their experience gap in complex projects like Nova include:

- Allocating adequate resources for diligent oversight.
- Maintaining discipline and expertise when outlining work packages and supervision, ensuring that delivered work aligns with stipulated requirements.

Addressing these challenges is far from trivial. MPI's background in supplier oversight is rather limited. A majority of MPI's extended history in supplier oversight revolves around a handful of vendors, ones that have remained consistent over the years and primarily offered services with which MPI is deeply familiar and experienced.

### **5.3 USE OF A GOVERNANCE VENDOR**

Due to the magnitude and complexity of Nova, combined with MPI's inexperience in managing projects of a similar scale and scope, it was determined from the outset that a project governance vendor should be engaged. This vendor would report directly to the leadership, ensuring vendor and project oversight, and thereby aiding in the project's success. To this point:

- PWC was initially engaged by MPI to oversee Nova;
- PWC's contract has since concluded, and currently, no governance oversight vendor is in place;
- MPI explained that PWC was not retained further because the PWC contract didn't have a provision for extension<sup>15</sup>;
- MPI is in the process of engaging another Governance Vendor, however this vendor will lack the experience with Nova to date and require learning curve to understand the complexities and nuances of Nova.

Like most organizations, MPI rarely undertakes technology projects with the magnitude, scope, and impact represented by Nova. Success in such a technology project is typically defined by the achievement of the original business objectives, adherence to the budget, and timely completion – often referred to as the "three-legged stool of successful project management." By engaging external vendors, MPI aims to leverage their expertise to minimize risks. However, working with contractors also introduces inherent risks, such as cost overruns, scope creep, and

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<sup>13</sup> Standish Report, 2015, see Appendix 8.3, Page 8

<sup>14</sup> Ibid, Page 10

<sup>15</sup> 2024 GRA Round 2 Information Requests, CAC (MPI) CI 2-6 – Confidential, Pages 1-2

ongoing vendor dependencies. To counter these risks, MPI should have robust vendor management capabilities and experience in supervising large-scale projects. Recognizing their shortfall in these skills, MPI decided to hire a third-party expert to play this role.

PWC, a globally recognized vendor with extensive expertise in overseeing large-scale projects, was assigned governance oversight responsibilities. Review of the PWC reports to MPI suggests that PWC effectively played its role by offering candid feedback to MPI's leadership. However, after PWC's contract ended, MPI found itself without this crucial oversight. Despite this, they chose to continue with Nova and are now in the process of appointing a new oversight vendor.

It is perplexing that MPI, citing urgency, chose a non-competitive contract to engage McKinsey yet did not do the same for an oversight vendor. It's significant to note that PWC was contracted through a competitive bidding process. This suggests that MPI could have readily justified re-engaging them. When examining the forthrightness of PWC's commentaries and the remarks made by the former CEO, Mr. Herbelin,<sup>16</sup> concerns arise that MPI's decision to not continue with PWC might have stemmed from their frank and direct feedback. Given PWC's experience and proficiency in projects similar to Nova, coupled with the pressing need for governance support, one might anticipate that MPI would pursue means to extend PWC's contract with the same enthusiasm they demonstrated when engaging McKinsey.

## **5.4 COMPLEXITY, CAPABILITY AND CAPACITY**

In reviewing the PWC governance reports, the recurring themes of complexity, capability, and capacity were ongoing challenges faced by MPI.<sup>17</sup> One of the major contributing factors to these challenges for MPI was the decision to act as the general contractor. By taking on the role of general contractor, MPI was burdened with integrating and coordinating numerous suppliers towards a defined set of requirements and outcomes. The sheer number of suppliers is overwhelming. PWC pointed out that "Nova is not delivering at the pace required to successfully meet its deadlines. We continue to believe this is largely due to the lack of expertise in key General Contractor / Delivery roles, as well as more generalized capacity constraints. There continues to be staff turnover which points to this risk not being mitigated at an acceptable pace to delivery releases."<sup>18</sup> In simpler terms, MPI is not equipped to be the general contractor.

Beyond the challenge of overseeing a vast number of suppliers is the multitude of projects currently in play at MPI. During the GRA2024 process, MPI identified over 40 active projects, not including NOVA.<sup>19</sup> The sheer volume of projects and ongoing changes would overwhelm many organizations of similar size to MPI. According to North Highland, a respected leader in understanding change in the workplace, the risks of change saturation encompass employee

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<sup>16</sup> "I would say that their findings are essentially displaying symptoms rather than root causes", Statement by CEO Eric Herbelin in email to McKinsey dated August 24, 2021. 2024 GRA Round 2 Information Requests. CAC (MPI) CI 2-4(a) Appendix 1 – Confidential. Page 1.

<sup>17</sup> CAC\_CI\_2\_006\_a\_Appendix\_04\_PWC Reports\_1\_to\_24

<sup>18</sup> Ibid, Feb 2022, Report 20, Page 468.

<sup>19</sup> CAC (MPI) 1-45 Appendix 1 and Part V Value Assurance Chapter, pages 65 to 141.

stress, confusion, and disengagement, which can negatively impact the outcomes of strategic initiatives and the bottom line through:

1. Loss of productivity: Unmanaged or poorly managed change disrupts the workforce's ability to be productive. When employees are stretched thin, they lack the needed time to adjust between impacts.
2. Loss of quality: When employees are pushed too hard and lack clear direction, the foundation of consistent, quality delivery is compromised, reducing overall performance.
3. Loss of resources: Competing changes can escalate costs and reduce employee mindshare, causing delays in project progress. Additionally, change saturation often leads to higher employee attrition rates.<sup>20</sup>

Evidence of these adverse effects is apparent in the turnover of key MPI personnel and NOVA personnel, deadline slippages, and even PWC's observation: "Nova exited the formal Discovery phase without meeting 55% of its objectives".<sup>21</sup> PWC also stated, "Nova is a long and difficult program that requires stamina for its complexity and sustained pace... Departure of key resources coupled with burnout."<sup>22</sup> All of these are warning signs that Nova has significant flaws that border on detrimental.

The stark reality is that NOVA has overwhelmed MPI with complexity, capability, and capacity challenges, affecting MPI's staff, ability to deliver, and its financial position. These challenges will not be resolved without a major shift in direction.

## **5.5 COMPLEX CHALLENGES**

In addition to the difficulties surrounding MPI and Nova, several other issues have emerged as the initiative has advanced:

### **5.5.1 Proceeding without a Governance Vendor in Place**

Recognizing their inexperience and heavy workload, MPI astutely decided to enlist a 3rd party for governance oversight. This was intended to bolster MPI's supervision of Nova and ensure its effectiveness and efficiency. However, it's concerning that since PWC's departure, Nova has been advancing without a governance vendor in place. Further concerning is that Gartner, in its benchmarking report, grades MPI's Strategy and Execution maturity as declining since it's last report<sup>23</sup>, reinforcing the need for MPI to engage outside assistance.

### **5.5.2 Shift from Prudent Investment**

As noted earlier, allowing Nova to deviate from a cost-efficient investment to one without a positive NPV is concerning. Moreover, there's no evidence that the Minister or Board recognized Nova as an Investment—an initiative that might not meet strict financial criteria but is essential for the ratepayer's future. When conventional financial metrics (like payback and NPV)

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<sup>20</sup> North Highland Corporation, "How Much Change is too much Change?", 2023

URL: <https://www.northhighland.com/insights/blogs/how-much-change-is-too-much-change>

<sup>21</sup> CAC\_CI\_2\_006\_a\_Appendix\_04\_PWC Reports\_1\_to\_24, March 8, 2021 Report, Page 352.

<sup>22</sup> Ibid, page 550

<sup>23</sup> MPI Exhibit #5, 2024 GENERAL RATE APPLICATION, Part V - IT Attachment A, Page 33

don't apply, a significant decision of this magnitude typically requires in-depth consideration by the "owners"—the Board—and often after consultations with the Minister and the Government. PWC's statement that “there is currently no validated perspective on R3 costs”<sup>24</sup> suggests that costs are anticipated to rise further.

### **5.5.3 Changing Horses Mid-Race**

Key Suppliers for Nova have been switched out periodically. For instance, Deloitte initially outlined the business case, then Avasant was brought on board. When costs escalated beyond the original plan, McKinsey was consulted instead of reverting to Deloitte or Avasant.

Governance is transitioning PWC to MNP. Each supplier shift carries risks of knowledge loss, increased ramp-up costs, and accountability challenges.

### **5.5.4 Scope Creep & MPI 2.0**

Nova started as a Legacy Modernization initiative. Its scope then expanded to a digital transformation initiative, and now is moving to include concepts from “MPI 2.0”. This significant scope expansion typically warrants a new business case, ensuring a rigorous evaluation of costs and benefits.

### **5.5.5 Lack of Team Buy-in on MPI 2.0**

As Nova has evolved and appears to reflect the themes of MPI 2.0, a review of documents from the 2024 GRA revealed a concerning statement: “The vision of MPI 2.0 was predominantly crafted by Eric Herbelin, former CEO of MPI, with minimal input from internal stakeholders.”<sup>25</sup>

Considering the pivotal role that team buy-in holds in transformative projects, this revelation warrants a thorough reevaluation of the MPI 2.0 initiative. Moreover, such an unexpected disclosure about a major initiative raises questions about the extent of team involvement during the Nova revision process under Mr. Herbelin's leadership.

### **5.5.6 Turnover of Key Personnel**

MPI has seen changes in leadership with three CEOs to date: Mr. Graham, Mr. Herbelin, and now Ms. Kacher. Additionally, there was a loss of key project personnel including the departure of the COO, Program Director, and exits of multiple Directors<sup>26</sup>. Such turnover poses significant challenges, as the original visionaries and their understanding of supplier roles, commitments, and accountabilities are lost. It also raises concerns about the root cause of the number of departures and a concern this may be a symptom of Nova's burden on MPI personnel.

### **5.5.7 Completion Bias**

Despite observing cost escalations since its inception, MPI, instead of reducing scope or exploring more cost-effective alternatives, chose to expand the Nova budget and elongated the timeline. When external entities were engaged to help advise on Nova, their goals didn't include

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<sup>24</sup> CAC\_CI\_2\_006\_a\_Appendix\_04\_PWC Reports\_1\_to\_24, March 8, 2021 Report, Page 550.

<sup>25</sup> PUB (MPI) 1-110

<sup>26</sup> “There has been a significant amount of people changes to date at senior levels of the program (CEO, CIO, COO, Chief Actuary, Program Director, Program Manager), and multiple Directors and leads within Nova and MPI in a challenging talent market.”, MPI CI Exhibit #25, 2024 GRA Information Requests - Round 2, CAC (MPI) CI 2-6 Appendix 4a, Page 25.

recalibrating Nova's investment to ensure a reasonable return for MPI and its ratepayers. There's no indication that any consulting engagement included directives to pare down the project's scope or to adjust the financial framework to yield a positive NPV. However, in the face of escalating costs, broadening scope, key personnel transitions, and concerns voiced by the Minister, PUB, and its interveners, the question arises: why does this initiative continue and expand?

Historically, numerous projects exhibiting such red flags have faltered, prompting extensive research in this area. A study which reviewed large projects in the UK over two decades, points to a historic inclination towards optimism bias, leading to overly rosy project estimates. It points out that

“planning is a process of defining our intentions and objectives and quantifying the resources required to get there. By definition, set-backs and over-spends do not form part of these intentions and objectives, and so naturally tend to be poorly accounted for. There are also a range of psychological phenomena, including confirmation bias, self-serving bias, an illusion of control, and a tendency to mis-estimate the probabilities of events, all of which can exacerbate our optimistic approach to planning.”<sup>27</sup>

From my experience, large IT initiatives face challenges partly because project leaders often overlook past experiences with analogous tasks, concentrating predominantly on anticipated outcomes. They also tend to “anchor future outcomes on plans and available scenarios of success, rather than past results, which leads to overly optimistic predictions.”<sup>28</sup> These elements exist in most projects, but their impact is magnified in large-scale endeavors, evident in Nova. In summary, Nova persists even as its probability of success—defined by adherence to budget, timeline, and scope—diminishes over time.

## **5.6 INVESTMENTS IN TECHNOLOGY SECURITY**

Technology security, more commonly known as cybersecurity, is a paramount concern for every organization with a public technological footprint. A review of MPI's current cybersecurity trajectory and expenditures, based on the 2022 KPMG study are:

- MPI's current security posture is rated at 2.46.
- The public sector average is 2.25.
- The standard for the insurance industry is 2.75<sup>29</sup>

While the Board has approved a goal to reach 4.2<sup>30</sup>, the KPMG study indicates the industry average to be 2.75. It's worth noting that MPI already had a rating of 2.46.

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<sup>27</sup> A review of optimism bias, planning fallacy, sunk cost bias and groupthink in project delivery and organisational decision making, The Behavioral Insights Team, An Exploration of Behavioral Biases in Project Delivery at the Department for Transport, July 2017. Pages 5-9.

<sup>28</sup> Ibid, Page 6.

<sup>29</sup> 2024 GRA Round 1 Information Requests, CAC (MPI) CI 1-16 – Confidential, Page 4

<sup>30</sup> Ibid, page 3.



This data prompts two critical questions:

1. What are the financial implications of transitioning to a 4.2 rating?
2. What is the rationale behind setting such an ambitious goal?

MPI cites its cybersecurity protocols as foundational not just for Nova, but for a host of technological endeavors currently underway. Intriguingly, MPI's security stance already outstrips that of many Canadian governmental entities. Still, MPI is intent on reaching a 4.2 rating. Aiming for a target that far surpasses industry norms is praiseworthy, but it may also strain resources.

Considering MPI's identity as a publicly-owned Crown Corporation, the PUB and MPI's stakeholders should thoroughly reflect on whether investing so considerably beyond the benchmarks of provincial and federal governments is judicious and economically sound.

MPI appears to frequently behave as if it were a private sector insurance company. This mindset shapes its ambitions and leads to a spending pattern that might appear excessive for a Crown Corporation. In the private sector, technology security investments are offset by an imperative to maintain profitability and ensure a respectable ROI. In contrast, MPI doesn't operate under these fiscal pressures. This discrepancy underscores the importance of mechanisms to curb over-expenditure. Without such checks, an intense focus on cybersecurity risks might disproportionately sway decision-makers. This could prompt approval of projects and costs that other bodies might find unwarranted.

## **5.7 OVERSIGHT OF SUPPLIERS**

A significant portion of MPI's technology spending is allocated to 3rd party vendors for the acquisition of goods and services. Employing third-party vendors is a strategic move when a corporation lacks in-house expertise, is looking to expedite time to market, or chooses to direct its internal resources towards more strategic endeavors. Nonetheless, even when third parties manage the delivery, the onus of oversight rests with MPI. A lapse in oversight can precipitate escalated costs, subpar service delivery, or even an outright failure to render the promised services.

When enlisting the services of external entities, it's essential for the purchaser to articulate their requirements lucidly. Additionally, consistent monitoring and holding third parties accountable are paramount to ensure the delivered products and services adhere to the agreed-upon standards. A review of MPI's historical transactions points raises concerns in their vendor oversight practices. Consider the following:

- **Deloitte and Avasant's Accountability:** A noticeable variance exists between the estimated costs for Legacy Modernization/Nova that Deloitte and Avasant were tasked with, and the actual expenses accrued.<sup>31</sup> It would be both judicious and logical for MPI to seek a reckoning from these vendors when there are cost overruns. Should MPI have reached out, it's conceivable that Deloitte/Avasant might have proffered insights on prospective budgetary or scope adjustments. Using the "reasonable person" criterion, if

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<sup>31</sup> 2024 GENERAL RATE APPLICATION, Part V - NOV Appendix 12 – Confidential, Page number not provided, but page 377 of the eBook.

MPI financed a study that included cost estimates, the ensuing contracts would likely align with the forecasts provided by experienced consultants. Any discrepancy should oblige the client to seek an explanation from the consultant, at the very least.

- McKinsey's Statement of Work (SOW): An analysis of the McKinsey SOW gives the impression it was predominantly crafted by McKinsey, not MPI. The ideal approach would have been for MPI to draft comprehensive specifications outlining the desired outcomes. However, the documents presented to PUB and CAC indicate that the McKinsey SOW more closely resembles a marketing slide, filled with vague descriptions of deliverables and lacking in clear accountability metrics. Such vagueness complicates the process of holding McKinsey responsible.
- Gartner Report's Observations: The Gartner Report accentuates these oversight deficiencies. As stated on page 59 of the report, "Project benefits are not routinely tracked," and "The review process is not consistently applied."<sup>32</sup>

Overall, there is a need to improve MPI's vendor oversight process, especially given MPI's reliance on vendors for large initiatives.

## 5.8 IT SPENDING

Determining appropriate IT expenditure is vital for the Shareholder's oversight of MPI. Since MPI does not have a direct peer within Manitoba, it engaged a benchmarking vendor, Gartner, to analyze its own position against comparable firms. However, there are several concerns regarding the information MPI has shared from Gartner's benchmark report on its IT spending<sup>33</sup>:

1. The Gartner Report indicates that IT spending is 0.5% above the peer average (excluding Project NOVA)<sup>34</sup>. This discrepancy is concerning, particularly given the next point.
2. Gartner's benchmarks are based on private sector insurance firms. As previously outlined in this document, MPI operates as a government-owned monopoly with market and liability legislated protections. A more suitable benchmark would include crown corporations in Canada and other public sector benchmarks. MPI's decision not to use public sector benchmarks is likely to lead to an overrepresentation of its technology expenditure.
3. The decision to use a private sector benchmark becomes even more significant considering MPI's shift away from requiring a return on investment/payback approach for all projects.

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<sup>32</sup> MPI Exhibit #5, 2024 GENERAL RATE APPLICATION, Part V - IT Attachment A, Page 59

<sup>33</sup> Ibid

<sup>34</sup> Ibid, Page 11. MPI spend excluding Nova is at 5.6% of OpEx, Peer average is 5.1%

## 6 RECOMMENDATIONS

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In reviewing the GRA2024 documents, the information request responses provided, and the above commentary, the following recommendations should be considered regarding Nova and technology management at MPI in general:

### 1. Pause, De-risk, and Rescope

Paramount to success, MPI should consider pausing work on Nova R3 and beyond immediately. The scope of Nova is vast. Its complexity is overwhelming, and MPI's capacity to manage such a large initiative is understandably questionable. To continue on the current course, especially given indicators of system problems, will likely lead to additional cost overruns and questionable value to ratepayers. Given the factors previously discussed, it is recommended that MPI:

- a. **Stop work on Nova R3 and Beyond:** Consider a “pause” on the initiative. This could be achieved by completing R2 and R1 and then halting further work.
- b. **Separate Legacy:** Consider separating the Legacy Modernization work from Nova. Conduct a thorough analysis of other options for these systems, including maintaining the status quo.
- c. **Step Back:** Allow the MPI leadership team to review MPI 2.0 and Nova. Evaluate organizational realities, the public sector mandate (not the private sector insurance competitive model) and determine priorities. Given that there is effectively a new team at MPI, guidance from the Minister and Board emphasizing MPI as a public sector insurance monopoly with a strong commitment to prudent investment should help frame the decision-making process.
- d. **Break Nova into smaller components:** Nova should be segmented into smaller work components, each with its own business value, defined benefits, and costs. These smaller components should focus on manageable work packages within shorter timeframes, moving away from the “mega project” nature of the current Nova initiative.
- e. **Reintroduce Financial Measures:** Every project should feature a rigorous cost/benefit analysis, including NPV and Payback measures. Given MPI's monopoly status and lack of competitive factors, a substantial oversight process should be required for Projects which fail financial NPV and Payback criteria to protect ratepayers.
- f. **Consider the other 40+ Projects in the work queue:** MPI is suggesting discontinuing projects unrelated to Nova which are not deemed critical.<sup>35</sup> By breaking Nova into smaller projects, and financial criteria/thresholds reattached to the project selection process, it is quite conceivable that other initiatives would be considered.
- g. **Assess and prioritize the new “smaller” components:** Use criteria such as the public sector mandate, value to ratepayers, risk, financial metrics, complexity, and fit within MPI's experience/skills to select and prioritize projects.

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<sup>35</sup> CAC (MPI) 2-1

- h. **Source Needed Experience and Skills:** Reflect on the necessary skills and experiences to execute the planned projects. This could involve sourcing from the internal team, external hires, individual contracts for personnel, or engaging 3rd-party suppliers for complete solutions. Where sourcing is unsuccessful, consider pausing the applicable project(s). Where a deficiency exists, MPI should reconsider the project.
- i. **Regularly review projects:** Ensure plans continue to align with current corporate needs. Reviews should include a review of work completed to date vs planned, costs to date vs. planned, a discussion of variances, and plans for the next period that includes any remediation.
- j. **Adopt clear approval and accountability frameworks:** This is crucial, especially for handling ongoing project variances.

The above work is not easy and represents a shift for MPI. It may be prudent for MPI to engage a 3rd party to assist them in implementing the above changes, especially given the reoccurring theme of continuing what appears to be a focus on continuing Nova and the tendency of organizations in similar situations towards a “completion bias”.

## 2. Reframing of MPI as a Public Sector Crown in the Insurance Business

As previously discussed, MPI is a legislated monopoly in a no-fault jurisdiction. It is not a private sector P&C company in a hyper competitive marketplace. The benchmark for MPI should include:

- a. Other Crowns in Canada offering similar services (British Columbia, Saskatchewan, and Quebec).
- b. Provincial and Federal Governments
- c. Private Sector Car Insurance organizations

When reviewing investments, expenditures, staffing, and other benchmark activities within these frames, MPI leadership, MPI’s Board, PUB, and the ratepayer will be better positioned to understand variances and discuss what's appropriate for MPI. MPI is a legislated monopoly in a no-fault jurisdiction. Thus, it's more fitting to frame decisions within the low-risk, low-cost service provider model than a leading-edge provider in the fiercely competitive private insurance industry. Benchmarks from the private P&C industry should be viewed more as "upper limits" rather than direct comparatives.

## 3. Improve Processes

### a. Governance

- **Project Scope:** Expand the governance process to mandate that if a project substantially exceeds its original parameters—be it scope, budget, or timeline—a new business case and process should be initiated.
  - **Continuity of Governance:** If an external vendor is chosen for governance, efforts should be made to retain that vendor for the entire duration of the initiative.
- b. **Effective Use of Vendors:** Given MPI’s reliance on external suppliers, it must excel in engaging them. This includes developing expertise in requirements and holding suppliers accountable.

- i. **Detailed Requirements:** Draft precise specifications detailing the work. Define "success" clearly so both parties can unequivocally determine satisfactory delivery.
    - ii. **Vendor Delivery Monitoring:** Before hiring a vendor, strategize monitoring methods. If MPI lacks in-house expertise, consider hiring a third party for oversight. Develop a process with timely feedback to address vendor issues efficiently.
  - c. **Track Large System Investments:** Consider establishing an annual statement of inflight and completed projects to simplify accountability. Included for each system should be the lifespan of the project per the business case (for example, 15 years), the current year in the lifespan(i.e.. 3 year), a yearly accounting of capital and operating expenses for the current year and the budget for the next year, as well as capital/operating expenditures since inception versus the original approved budget. By providing the above information on an annual basis, it would serve as a summary instrument to MPI Executive, the Board, PUB and the Minister. It would also provide transparency on expenditures for projects, improving accountability and future initiatives.
- 4. **IT Spending:** PUB might direct MPI to use Canadian Crowns and public sector organizations as benchmarks. If MPI prefers comparisons to the private sector, the PUB could request dual benchmarking. In cases where MPI leans towards the private sector benchmark, they should provide justifications. Otherwise, the public sector benchmark should be the default.
- 5. **Cybersecurity** – Consider directing MPI to reconsider its Cybersecurity goals in light of those of its Public Sector peer group. Furthermore, MPI should provide a granular analysis of the cost of attaining their currently approved benchmark vs. the Public Sector aspirational benchmark. The variance should be reviewed in terms of risk vs. value for the ratepayer.

## 7 CONCLUSION

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MPI is a vital institution for Manitobans. It offers cost-effective services and plays a crucial role in the public sector landscape of Manitoba. Innovating and changing public sector organizations is always challenging due to the inherent inclination towards low investment.

Upon reviewing MPI's GRA submissions for 2024, it's evident that MPI's approach to Nova and its overarching Information Technology strategy diverges from the typical expectations of a provincially-owned Crown Corporation. Furthermore, the 2024 GRA does not suggest any significant changes in MPI's trajectory for Nova and its IT infrastructure, despite significant concerns and directions expressed by the PUB in the 2023 GRA.<sup>36</sup>

Without substantial reforms and adjustments, there is a heightened risk that Nova will face further cost escalations exceeding MPI's current contingencies.

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<sup>36</sup> PUB Order 4/23, page 110-112

## **8 APPENDICES**

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## 8.1 PROFILE OF SCOTT GREENLAY



**Scott  
Greenlay**  
MBA, BSc

### Contact



[Redacted]



[Redacted]



[Redacted]



### Education

*Master of Business Administration*

*Bachelor of Science*

### Current and Past Associations

*Institute of Corporate Directors (ICD)*

*Information Systems Audit and Control  
Association (ISACA)*

*Association of Computing Machinery (ACM)*

*Institute of Electrical and Electronics Engineers  
(IEEE)*

Scott Greenlay is an experienced consultant who brings a unique combination of strategy and execution experience to engagements. Scott has held a number of senior roles in both the public and private sector. Scott's combination of industry knowledge, management, technology, and human resources experience provide a unique insight into optimal strategy and execution.

Scott has extensive experience working with many types of private, publicly traded and government organizations. He has worked with boards, CEOs, executives, politicians, and technologists.

Scott's industry expertise includes experience in the insurance, financial services industry, healthcare, professional services, retail/logistics, government/non-profit Organizations, telecommunications, social services, natural resources and manufacturing.

Scott's experience covers all aspects of technology and includes significant experience in strategy, new technology adoption, re-organization, software development and deployment, vendor management, security, IT operations and support. He has overseen complex, multi-country, multi-million-dollar, multi-year projects. His work includes overseeing project teams which include staff, sub-contractors, and offshore contractors. He has coordinated national and international projects ranging from over 12,000 end users with hundreds of offices to small, local projects. He has overseen a variety of projects including research and development projects, custom software development, large system implementations, and infrastructure projects.

Scott holds a Bachelor of Science degree in Computer Science. He received a master's degree in business administration (MBA), graduating as valedictorian. He also holds several certifications in human resources, as well as a number of technical certifications. Scott's honours include receiving the Governor General's medal in recognition of significant contribution to the Citizens of Canada, as well as the Excellence in Entrepreneurship Award. He was also a grant recipient of the Natural Sciences and Engineering Research Council of Canada.



## Work Experience

Organization	Title	Timeframe	Role Description / Responsibilities
College of Physicians and Surgeons of Manitoba	Public Representative	June 2023 to Present	Appointed to represent Manitoban's interests in disciplinary matters in regard to the medical profession.
TDG/DSG o.a. Ashley Furniture and Dufresne	Board of Advisors	2020 to Present	Providing on-going advice and assistance to The Dufresne Group and the Dufresne Spencer Group.
The Workers Compensation Board of Manitoba	Audit Committee Member	2020 to Present	Member of the WCB Audit Committee, providing oversight and guidance on issues regarding the Corporation. Work as an advisor to the Board Chair and CEO as required.
D3A Investments LLP United Kingdom	Partner	2020 to 2022	Provided technology consulting and served as a member of the management committee. Worked with European and American clients.
MNP LLP	National Director, Technology Consulting  Principal Partner	2011 – 2019	Responsible for the delivery of technology consulting services to many Canadian businesses and governments as well as organizations in the United States, Africa, and Europe. With the assistance of over 350 professionals, led the delivery of services which included strategy, governance, digital transformation, cyber security, risk, analytics, software development, privacy, audit, and operations.
MNP LLP	Chief Information Officer & Member Firm's Executive Management Committee	2011 - 2014	Responsible for the internal information technology function servicing over 5,000 employees and 85 offices across Canada.
Greenridge Business Systems	Managing Partner	1996 - 2011	Managed this consulting firm from inception to a national technology consulting firm working with public and private sector clients across Canada and the United States.
Civica (formerly Momentum Software Corporation)	Chief Operating Officer	1995-1996	Responsible for the operations of this leading international medical software firm for providing acute and long-term health care solutions in Canada, the United States, and Europe.
Province of Manitoba	Director of Information Services & Chair Systems Counsel	1992 – 1995	Given an incredible opportunity to create a new technology organization for the Province. Created the new organization, established its mandate, and oversaw strategy and operations to delivery technology services.

Organization	Title	Timeframe	Role Description / Responsibilities
Government of Canada, Health and Welfare Canada	Various Roles up to Chief Informatics Officer	1985-1992	Responsible for the Information Technology function within this Federal government department. Key projects included the Healthcare systems for the over 100 clinics and hospitals operated by the Department, Canada Pension Plan, food and drug recall systems, implementing HR and financial systems, and working on Canada's healthcare strategy.
Quantum Electronics Ltd.	Various Roles	1982-1985	Worked with some of the first technology in Canada such as the Intel Chip Development system, developing products such as McDonald's first electronic cash register and, together with Servo USA, the "black box" which eventually replaced the caboose.

## Examples of Current and Previous Community Involvement

- President, Delta Beach Association –Lakeside community organization provides some municipal services and works with other government agencies to provide overall services to residents.
- Board Chair, St. Mary's Academy, Winnipeg, Manitoba – Established and became first board chair for this all-girls catholic school. Work included governance formation, developing a 21<sup>st</sup> century strategic plan, working with over stakeholder groups, and overseeing the transition of the school to a lay leadership model, including hiring it's first non-religious, professional CEO, and establishing its first board.
- Techapalooza – Helped found and continue to be part of this yearly event for the technology community to raise money for cancer research. To date this event has raised over \$800,000
- Mentor – York University, Lassonde School of Business – Provides mentoring to recent business school graduates who have started their own companies.
- Scouting – From an early age, participated in scouts until high school. Became a Patrol Leader, Senior Patrol Leader, and Troop Leader through this experience, and learned many skills, as well as worked to provide services to the community.

## Awards

- Governor General's Award for Significant Contribution to the Citizens of Canada
- Excellence in Entrepreneurship Award

## **8.2 STATEMENT OF LIMITATION OF LIABILITY**

Except as specified in any separate writing between the Author and CAC Manitoba and PUB Manitoba, the Author's total liability under this Agreement, whether for breach of contract, warranty, negligence, strict liability, in tort or otherwise, is limited to the fees paid for providing this report. In no event will the Author be liable for any loss of use, loss of time, inconvenience, commercial loss, loss of profits or savings or other incidental, special or consequential damages to the full extent such use may be disclaimed by law.

## **8.3 STANDISH REPORT**

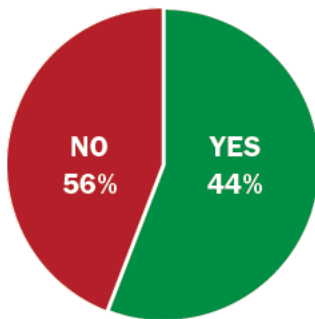
# CHAOS REPORT 2015



The *CHAOS Report 2015* is a model for future *CHAOS Reports*. There have only been two previous *CHAOS Reports*, the original in 1994 and the 21<sup>st</sup> edition of 2014. This new type of *CHAOS Report* focuses on presenting the data in different forms with many charts. Most of the charts come from the new *CHAOS* database from the fiscal years 2011 to 2015. The *CHAOS* fiscal year starts March 1 and runs until the end of February. A few of the charts are from the new *SURF* database to highlight certain information. The purpose of this report is to present the data in the purest form without much analysis and little thought leadership. Analysis and thought leadership are offered in the *CHAOS Manifesto* series of reports.

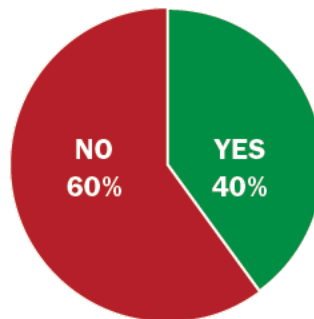
Another major change is how we define success. We have multiple definitions, including our newest. We coded the new *CHAOS* database with six individual attributes of success: OnTime, OnBudget, OnTarget, OnGoal, Value, and Satisfaction. Our Traditional definition is OnTime, OnBudget, and OnTarget. This means the project was resolved within a reasonable estimated time, stayed within budget, and contained a good number of the estimated features and functions. Our new Modern definition is OnTime, OnBudget, with a satisfactory result. This means the project was resolved within a reasonable estimated time, stayed within budget, and delivered customer and user satisfaction regardless of the original scope. We have the flexibility to present the results for one to six of these attributes in any combination.

## ONBUDGET



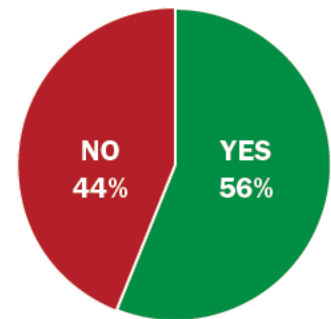
The percentage of projects that were OnBudget from FY2011–2015 within the new *CHAOS* database.

## ONTIME



The percentage of projects that were OnTime from FY2011–2015 within the new *CHAOS* database.

## ONTARGET



The percentage of projects that were OnTarget from FY2011–2015 within the new *CHAOS* database.

## TRADITIONAL RESOLUTION FOR ALL PROJECTS

	2011	2012	2013	2014	2015
<b>SUCCESSFUL</b>	39%	37%	41%	36%	36%
<b>CHALLENGED</b>	39%	46%	40%	47%	45%
<b>FAILED</b>	22%	17%	19%	17%	19%

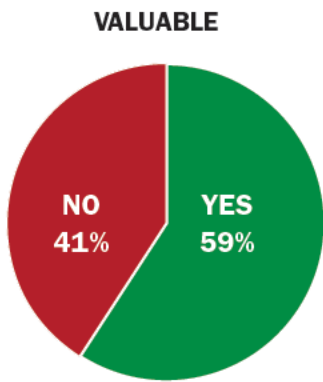
The Traditional resolution of all software projects from FY2011–2015 within the new *CHAOS* database.

\*All data, unless otherwise noted, represents results from FY2011-2015. The total number of software projects is 25,000-plus, with an average of 5,000 per yearly period.

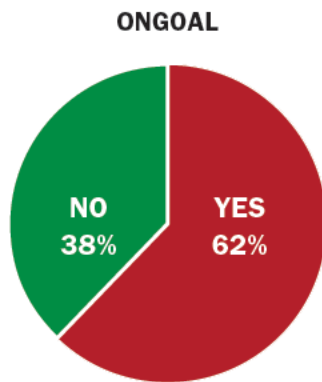
**Our Modern Resolution definition is** OnTime, OnBudget, with a satisfactory result. This definition encompasses both a success rate for the project management of a project and for the project itself. The Traditional Resolution of OnTime, OnBudget, and OnTarget clearly supports the goals of project management, but not the customer or user of the product or project. The reason we consider this to be the best definition is that it combines the project management process and the end results of a project. We have seen many projects that meet the triple constraints of OnTime, OnBudget, and OnTarget, but the customer was not satisfied with the outcome. This is evident in the data, which shows a 7% decrease in the success rate and a 7% increase in the challenged rate.



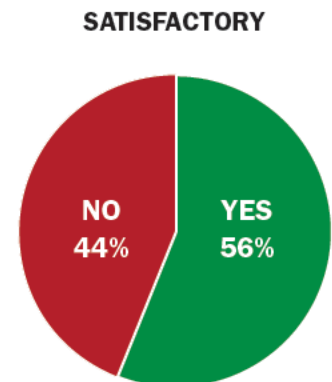
In changing from the OnTarget constraint to satisfactory we avoid penalizing a project for having an evolving target, which all projects have, even the very small ones. Customers have a clear opinion on the satisfaction level whether or not all the features and functions that they asked for in the beginning of the project are realized. In our research we found that both satisfaction and value are greater when the features and functions delivered are much less than originally specified and only meet obvious needs. In other research we found that most features and functions of software are not used. These additional features increase cost, risk, and quality but do not necessarily provide value.



The percentage of projects considered valuable from FY2011–2015 within the new CHAOS database.



The percentage of projects that were OnGoal from FY2011–2015 within the new CHAOS database.



The percentage of projects considered satisfactory from FY2011–2015 within the new CHAOS database.

**MODERN RESOLUTION FOR ALL PROJECTS**

	2011	2012	2013	2014	2015
<b>SUCCESSFUL</b>	29%	27%	31%	28%	29%
<b>CHALLENGED</b>	49%	56%	50%	55%	52%
<b>FAILED</b>	22%	17%	19%	17%	19%

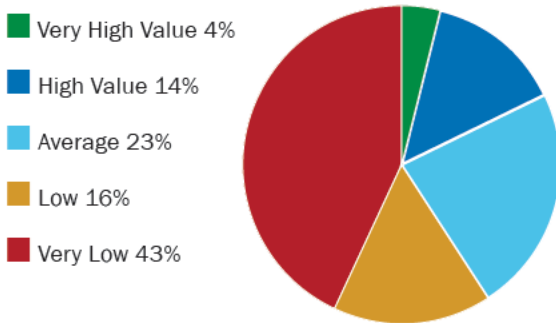
The Modern Resolution (OnTime, OnBudget, with a satisfactory result) of all software projects from FY2011–2015 within the new CHAOS database. Please note that for the rest of this report CHAOS Resolution will refer to the Modern Resolution definition not the Traditional Resolution definition.



**Project size has always been** a major element in the CHAOS research. It was clear from the very beginning of the CHAOS research that size was the single most important factor in the resolution of project outcome. On this page we show two tables: resolution of all software projects by size; and size of the software projects by resolution. These tables clearly show the impact of size on the results of OnTime, OnBudget, with a satisfactory result. It is also clear that the larger the project, the less valuable the return rate. In many cases larger projects never return value to an organization. The faster the projects go into production the quicker the payback starts to accumulate.

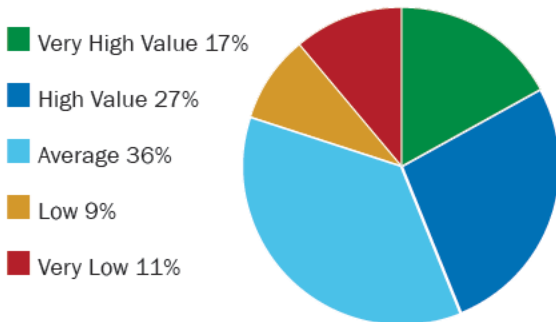
One of the major services of our Value Portfolio Optimization and Management Service is to break up large software projects into multiple small projects, with early delivery for success, quicker return on value, and greater customer and user satisfaction. We have found that most software projects only require a small team for a short duration in order to deliver value to the organization; only in very rare cases do projects need to be larger and longer. Most, if not all, large, complex, multi-year projects are unnecessary. This is especially true for standard infrastructure software—such as middleware, databases, and system management.

### VALUE FOR LARGE PROJECTS



The return of value for large projects from FY2011–to 2015 within the new CHAOS database.

### VALUE FOR SMALL PROJECTS



The return of value for small projects from FY2011–2015 within the new CHAOS database.

### PROJECT SIZE BY CHAOS RESOLUTION

	SUCCESSFUL	CHALLENGED	FAILED	TOTAL
Grand	6%	51%	43%	100%
Large	11%	59%	30%	100%
Medium	12%	62%	26%	100%
Moderate	24%	64%	12%	100%
Small	61%	32%	7%	100%

The size of software projects by the Modern Resolution definition from FY2011–2015 within the new CHAOS database.

### CHAOS RESOLUTION BY PROJECT SIZE

	SUCCESSFUL	CHALLENGED	FAILED
Grand	2%	7%	17%
Large	6%	17%	24%
Medium	9%	26%	31%
Moderate	21%	32%	17%
Small	62%	16%	11%
<b>TOTAL</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

The resolution of all software projects by size from FY2011–2015 within the new CHAOS database.



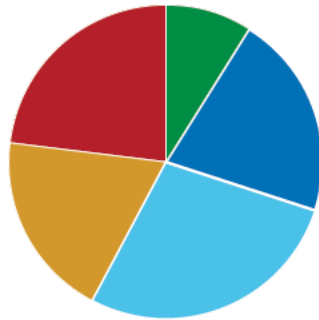


**Looking at project resolution by industry provides** another view of the CHAOS database. The table on this page shows the resolution of all software projects by industry from FY2011–2015 within the new CHAOS database. The results show that retail projects had the highest success rate at 35% using the Modern definition of success. The results also show that government projects had the highest failure rate at 24%, and financial and government projects had the highest challenged rate at 56%. The comparison of satisfaction level for banking versus retail shows that retail also has better results.

Many of our Benchmark clients like to compare their results to other organizations in the same industry and we do this as matter of course. However, we found that industry is not the most accurate or important metric of comparison. The most accurate is to consider industry as a minor filter, with project type, size, skills, and methodology as primary filters. Other minor filters would include organizational size and geography. In our Resolution Benchmark Membership we use this technique to benchmark project portfolios.

### BANKING PROJECTS

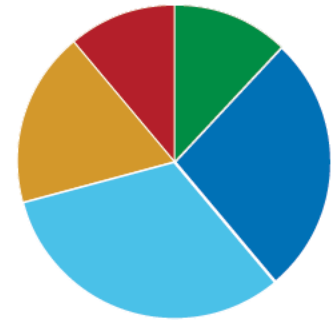
- Very Satisfied 9%
- Satisfied 21%
- Somewhat Satisfied 28%
- Not Satisfied 19%
- Disappointed 23%



*The satisfaction level for banking projects from FY2011–2015 within the new CHAOS database.*

### RETAIL PROJECTS

- Very Satisfied 12%
- Satisfied 27%
- Somewhat Satisfied 32%
- Not Satisfied 18%
- Disappointed 11%



*The satisfaction level for retail projects from FY2011–2015 within the new CHAOS database.*

### CHAOS RESOLUTION BY INDUSTRY

	SUCCESSFUL	CHALLENGED	FAILED
<b>Banking</b>	30%	55%	15%
<b>Financial</b>	29%	56%	15%
<b>Government</b>	21%	55%	24%
<b>Healthcare</b>	29%	53%	18%
<b>Manufacturing</b>	28%	53%	19%
<b>Retail</b>	35%	49%	16%
<b>Services</b>	29%	52%	19%
<b>Telecom</b>	24%	53%	23%
<b>Other</b>	29%	48%	23%

*The resolution of all software projects by industry from FY2011–2015 within the new CHAOS database.*

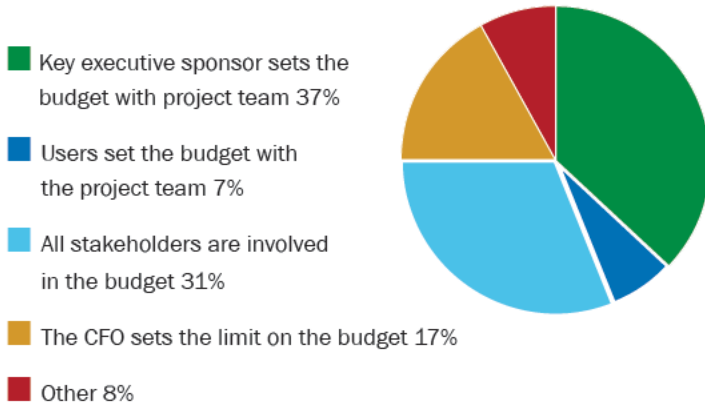




In our **CHAOS Report 2014** we showed that project resolution differed slightly by most of the areas of the world. In that report we used the traditional success metrics of OnTime, OnBudget, and OnTarget. In this report we used the Modern definition of success of Ontime, OnBudget, with a satisfactory result. We see a major bifurcation with North America and the rest of the world; North America has a 31% success rate versus Europe at 25%, Asia at 22%, and the rest of world at 24%. We have seen that North America has some of the highest emotional maturity skills. These skills include managing expectations and gaining consensus, which in turn would cause a high satisfaction level. On the other hand, Asia has the lowest emotional maturity scores according to our emotional maturity appraisals and benchmarks.

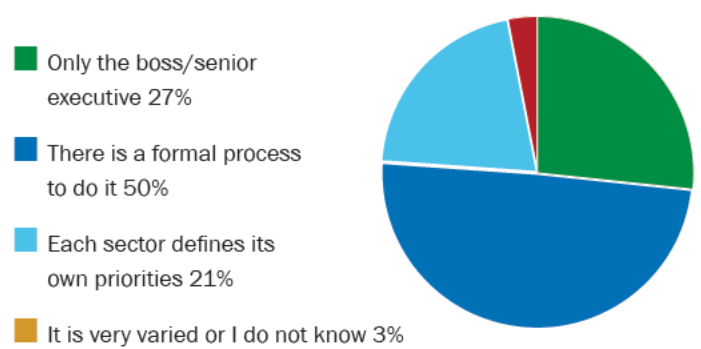
As we reported in the *Factors of Success 2015* report, emotional maturity is the second-ranked Factor of Success. In that report we stated that having a skilled emotional maturity environment helps 80% of projects enjoy success. The No. 1 Factor of Success is a skilled executive sponsor. These two factors, along with the other eight, are appraised as the first step in the Resolution Benchmark. If we find during the skills appraisal that the executive sponsorships and/or emotional maturity skills are deficient then we will provide advice on how to improve the score and help improve future Benchmark results. For more information on the Factors of Success, please see the *Factors of Success 2015* report.

### BUDGET PROCESS



We asked IT executives, "What is your general practice on project budgeting and cost collaboration?" This is based on 300 responses in the SURF database.

### PROJECT SELECTION PROCESS



We asked the 37% of SURF respondents who said that the key executive sponsor sets the budget with the project team, "In general, who participates in project selection/approval in your organization?" This is based on 111 responses in the SURF database.

### CHAOS RESOLUTION BY AREA OF THE WORLD

	SUCCESSFUL	CHALLENGED	FAILED
North America	31%	51%	18%
Europe	25%	56%	19%
Asia	22%	58%	20%
Rest of World	24%	55%	21%

The resolution of all software projects from FY2011-2015 by the four major areas of the world.

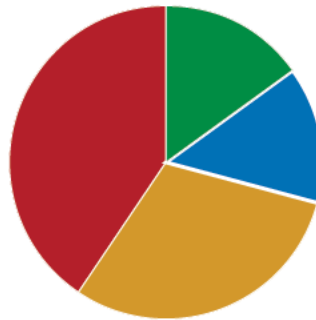


**The type of project has** a major effect on resolution. The table on this page shows the resolution of all software projects by project type from FY2011–2015 within the new CHAOS database using the Modern definition of success. Projects using a purchased application with no modification had the highest success rate at 57%. Projects that were developed from scratch using modern methodologies had a 23% failure rate. This is the highest failure rate other than the “other” category. The results also show that projects that were developed from scratch using traditional languages and methods had the highest challenged rate at 61%.

Modernization projects had the second highest success rate at 53%. The Standish Group has a very specific definition and development method for modernization projects. In fact, we modified “modernization” by adding “in place” so as not to confuse the general modernization of applications by the other techniques such as developing from scratch using modern methodologies or purchasing components. For more information on modernization in place, please see our *Modernization in Place* report.

### ROI FOR REQUIREMENTS

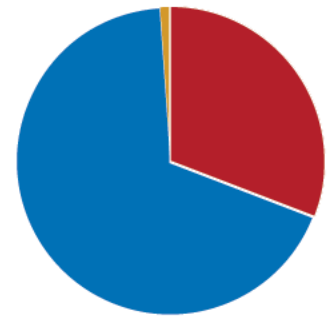
- Calculate overall project and allocate over individual requirements 15%
- Calculate each requirement and add up to overall project ROI 14%
- Calculate overall project, calculate major requirements, and allocate the rest 30%
- Do not calculate individual requirements 40%



We asked IT executives, “How do you calculate ROI for individual requirements?” This is based on 300 responses in the SURF database.

### GAIN VERSUS RISK METRICS

- Painful 31%
- Restrained 68%
- Painless 1%



We asked the 40% of SURF respondents who said they do not calculate individual requirements, “How would you describe your organization’s efforts in developing and maintaining financial and risk metrics for project requirements?” This is based on 121 responses in the SURF database.

### CHAOS RESOLUTION BY PROJECT TYPE

PROJECT TYPE	SUCCESSFUL	CHALLENGED	FAILED
Developed from scratch using traditional languages and methods	22%	61%	17%
Developed from scratch using modern methodologies	23%	54%	23%
Developed some components and purchased others	24%	59%	17%
Purchased components and assembled the application	25%	59%	16%
Purchased application and modified	42%	37%	21%
Purchased application and performed no modifications	57%	28%	15%
Modernization	53%	38%	9%
Other	28%	47%	25%

The resolution of all software projects by project type from FY2011–2015 within the new CHAOS database.

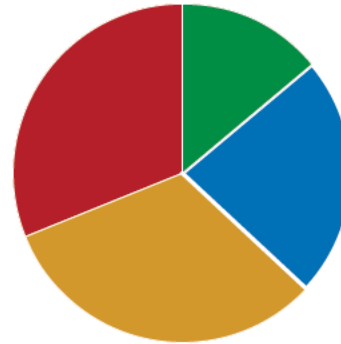


**The table on this page compares** the resolution of all software projects from FY2011–2015 within the new CHAOS database, segmented by the agile process and waterfall method. The total number of software projects is more than 10,000. The results for all projects show that agile projects have almost four times the success rate as waterfall projects, and waterfall projects have three times the failure rate as agile projects. The results are also broken down by project size: large, medium, and small. The overall results clearly show that waterfall projects do not scale well, while agile projects scale much better. However, note that the smaller the project, the smaller the difference is between the agile and the waterfall process.

As we stated in the *Factors of Success 2015* report, we have identified two trump cards that together create a winning hand. The trump cards are the agile process and small projects. As measured by Modern metrics, small projects using an agile process only have a 4% failure rate. For more information on trump cards, please see the *Factors of Success 2015* report.

### TIME BOXES

- Always 14%
- Yes, most of the time 23%
- Yes, some of the time 32%
- No 31%



We asked IT executives, "In general, do you utilize time boxes to optimize your projects? This is based on 300 responses in the SURF database."

### CHAOS RESOLUTION BY AGILE VERSUS WATERFALL

SIZE	METHOD	SUCCESSFUL	CHALLENGED	FAILED
<b>All Size Projects</b>	Agile	39%	52%	9%
	Waterfall	11%	60%	29%
<b>Large Size Projects</b>	Agile	18%	59%	23%
	Waterfall	3%	55%	42%
<b>Medium Size Projects</b>	Agile	27%	62%	11%
	Waterfall	7%	68%	25%
<b>Small Size Projects</b>	Agile	58%	38%	4%
	Waterfall	44%	45%	11%

The resolution of all software projects from FY2011–2015 within the new CHAOS database, segmented by the agile process and waterfall method. The total number of software projects is over 10,000.

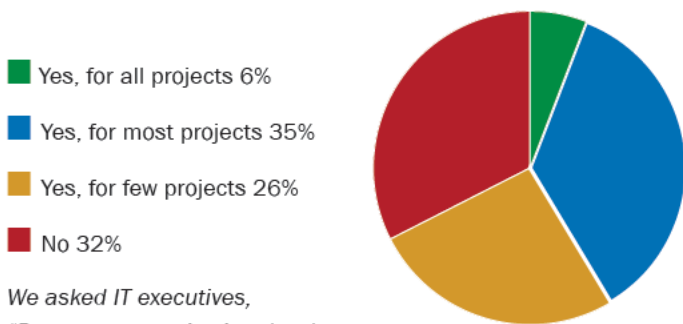


**We use two tables to determine** and appraise complexity. There are five attributes in each table. We then add up the points based on the attributes of the project to determine the complexity level. A complexity level is entered for each project in the CHAOS database. We also use the level in the Size-Complexity Matrix. Our Size-Complexity Matrix provides a guideline for categorizing a project either by size or complexity.

For more information about the Size-Complexity Matrix, please review prior *CHAOS Manifestos* including *CHAOS Manifesto 2014*. In addition, The Standish Group's Portfolio Optimization and Management Service can help develop strategies for reducing complexity and gaining success.

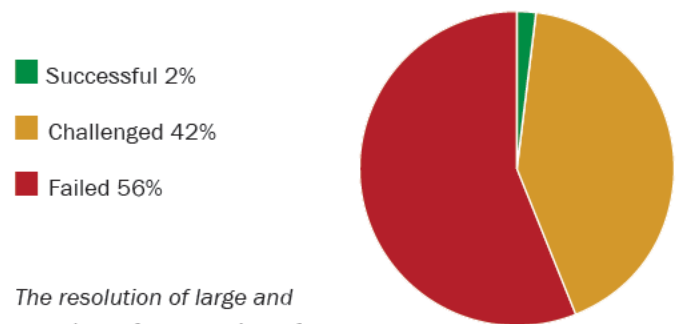
Complexity is one of the main reasons for project failure. The table on this page shows the resolution of all software projects by complexity from FY2011–2015 within the new CHAOS database using the Modern definition of success. The results show that 38% of very easy projects were successful. Very complex projects have both the highest challenged (57%) and failure (28%) rates. Inside of every complex problem are simple solutions. Complexity is often caused by size, conflicting goals, large budgets, and executive sponsor egos.

### COMPLEXITY APPRAISAL



We asked IT executives, "Does your organization develop any appraisal of complexity on its projects?" This is based on 300 responses in the SURF database.

### LARGE, COMPLEX PROJECTS



The resolution of large and complex software projects from FY2011–2015 within the new CHAOS database.

### CHAOS RESOLUTION BY COMPLEXITY

	SUCCESSFUL	CHALLENGED	FAILED
<b>Very Complex</b>	15%	57%	28%
<b>Complex</b>	18%	56%	26%
<b>Average</b>	28%	54%	18%
<b>Easy</b>	35%	49%	16%
<b>Very Easy</b>	38%	47%	15%

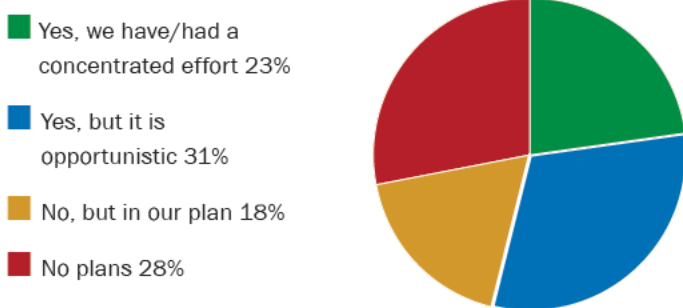
The resolution of all software projects by complexity from FY2011–2015 within the new CHAOS database.

**The Standish Group has stated** for many years that clear goals are achieved when all the stakeholders are focused on and understand the core values of the project. We believed that goal clarity and focus were essential to a successful project. However, measuring success by both the Traditional and Modern metrics we found the opposite to be true. We coded the database with a 5-point scale, from precise to distant, in order to measure the effect on success rates. It is clear from the research that goals closer to the organization’s strategy have the opposite effect on higher satisfaction and success rates.



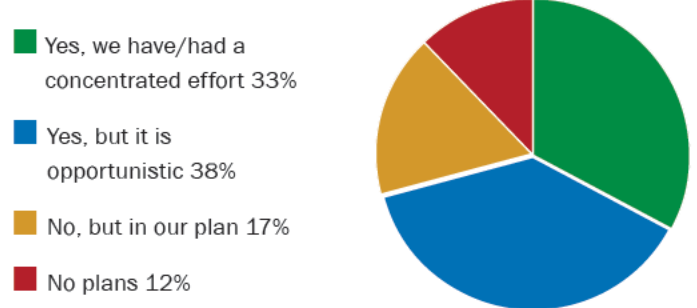
The Standish Group uses goal as one of the seven constraints as part of the Optimization Clinic. The Optimization Clinic is the third step in our Value Portfolio Optimization and Management Service. We also use goal as one of the measurements for our Resolution Benchmark. The Standish Group is now suggesting that your organization take action over trying to achieve clarity. Many of the most satisfying projects start out as vague. The business objectives are dynamic as the project progresses. Project teams should reduce or give up control of the business objectives to encourage and promote innovation.

### LOW-VALUE BUSINESS PROCESSES



We asked IT executives: “Do you have an active program to optimize business processes by eliminating low-value business processes?” This is based on 300 responses in the SURF database.

### COST/BENEFIT ANALYSIS



We asked IT executives, “Do you have an active program to optimize business processes by doing cost/benefit analysis for new business processes?” This is based on 300 responses in the SURF database.

### CHAOS RESOLUTION BY GOAL

	SUCCESSFUL	CHALLENGED	FAILED
<b>Precise</b>	22%	53%	25%
<b>Close</b>	23%	54%	23%
<b>Loose</b>	27%	52%	21%
<b>Vague</b>	38%	46%	16%
<b>Distant</b>	34%	58%	8%

The resolution of all software projects by goal from FY2011–2015 within the new CHAOS database.

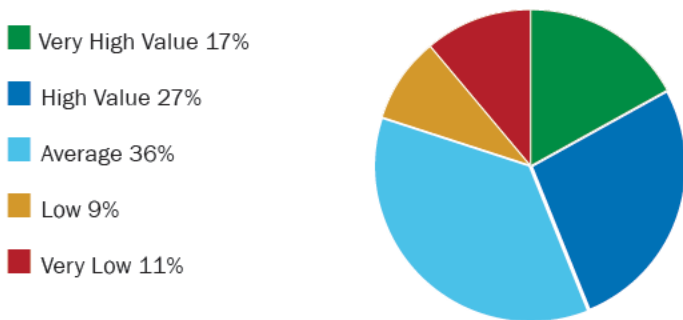




**Successful projects need** smart, trained people. Not surprisingly, one of the key project success factors identified in Standish Group’s CHAOS research is a competent staff. There are five key fundamentals to ensure staff competency. First, identify the required competencies and alternative skills. Second, provide a good, continuous training program to enhance the staff skills. Third, recruit both internally and externally to provide a balance of experiences. Fourth, provide incentive to motivate the staff. Finally, ensure the staff is project-focused. When a project has both teamwork and skilled resources, it can prevail under even the direst of circumstances. To ensure a competent staff you must match the skills of the team to correspond with the needed skills of the project. This is one of the seven constraints we use to prioritize your project portfolio.

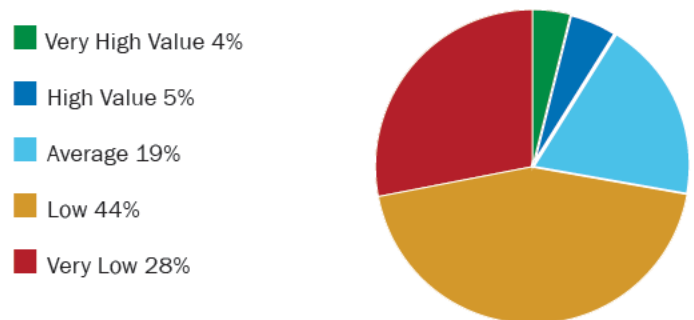
Here we look at project resolution by capability. The table on this page shows the resolution of all software projects by capability from FY2011–2015 within the new CHAOS database using the Modern definition of success. The results show that 38% of gifted resources were on successful projects. Projects that had unskilled people had both the highest challenged (60%) and failure (23%) rates. The decisions around project priority include: Do you go forward with a project if you lack skilled capability? This decision is especially pertinent for large projects with a large staff who have a mix of good and poor resources. This is one of the reasons that small projects have a higher success rate since small projects are easier to staff with high-performing teams.

### GIFTED AGILE TEAMS



The value rating of medium to large original software development projects with gifted agile teams from FY2011–2015 within the new CHAOS database.

### UNSKILLED AGILE TEAMS



The value rating of medium to large original software development projects with unskilled agile teams from FY2011–2015 within the new CHAOS database.

### CHAOS RESOLUTION BY CAPABILITY

	SUCCESSFUL	CHALLENGED	FAILED
<b>Gifted</b>	38%	45%	17%
<b>Talented</b>	31%	53%	16%
<b>Competent</b>	28%	53%	19%
<b>Able</b>	24%	54%	22%
<b>Unskilled</b>	17%	60%	23%

The resolution of all software projects by capability from FY2011–2015 within the new CHAOS database.

**As we wrote** in the *Factors of Success 2015* report, the table below reflects our opinion of the importance of each attribute and our recommendation of the amount of effort and investment that should be considered to improve project success. It is clear to us that the four primary investments should be focused on: executive sponsorship skills, emotional maturity environment, user involvement, and optimization services. It is our tradition to assign points to each factor to highlight its relevance. These points should also be considered as an investment guideline for project management improvement. For example, if you are spending \$50 million on IT projects then 2% of the money should be going toward improving the value of those projects. Based on this amount, our recommended breakdown of money to be allocated to each factor is calculated next to the point value on the chart. So, if you want your projects to be more successful, with higher value and greater customer satisfaction, you should carefully consider where you invest your project improvement money.



The law of diminishing returns states that in all productive processes, adding one or more factors of production, while holding others constant, will at some point yield lower returns. Project management expertise, process methods, and tools are affected by the physics law of diminishing returns. The proof point of this law is the United States government. The U.S. government has the highest level of project management expertise, the most sophisticated tools, and the highest level of governance. Yet, U.S. government projects cost exponentially more than commercial projects and have greater failure rates. While the Factors of Success can help improve project performance, the key to project management success is moderation.

### CHAOS FACTORS OF SUCCESS

FACTORS OF SUCCESS	POINTS	INVESTMENT
<b>Executive Sponsorship</b>	15	15%
<b>Emotional Maturity</b>	15	15%
<b>User Involvement</b>	15	15%
<b>Optimization</b>	15	15%
<b>Skilled Resources</b>	10	10%
<b>Standard Architecture</b>	8	8%
<b>Agile Process</b>	7	7%
<b>Modest Execution</b>	6	6%
<b>Project Management Expertise</b>	5	5%
<b>Clear Business Objectives</b>	4	4%

*The 2015 Factors of Success. This chart reflects our opinion of the importance of each attribute and our recommendation of the amount of effort and investment that should be considered to improve project success.*