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# Nova Scotia Player Card Research Project

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## ***STAGE III RESEARCH REPORT***

Prepared by Omnifacts Bristol Research



# Table of Contents

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<b>Executive Summary .....</b>	<b>i</b>
<b>Section 1: Background.....</b>	<b>1</b>
Nova Scotia Player Card Research Project Summary .....	1
The Card-System and Features .....	1
Developing a Solid Research Approach .....	2
The Stages of the Nova Scotia Player Card Research Project .....	3
Stage III Introduction & Objectives.....	4
Stage III Methodology .....	5
Data and Information Sources .....	6
Data Sets and Subsets .....	9
<b>Section 2: The VLT Playing Environment .....</b>	<b>15</b>
Environmental Changes .....	15
Summary of Challenges and Limitations.....	16
<b>Section 3: Analysis of Play Data .....</b>	<b>19</b>
Background.....	19
Summary Results .....	19
Behavioral Changes .....	22
Perceptions of Features by Change in Spending.....	25
Impact of Feature Use.....	26
Perceptions of Features by Use of Features .....	26
<b>Section 4: Analysis of Panelist and Non-Panelist Results.....</b>	<b>28</b>
Ease of Enrolment.....	29
Accessibility of VLTs .....	29
Awareness and Use of Features .....	30
Experiences with the Card-System .....	33
Unintended Outcomes.....	37
Suggested Improvements .....	37
Understanding Limit-Setting .....	38
Changes in Behavior .....	39
Support for Mandatory Card Use.....	39
Highlights from Focus Groups.....	40

<b>Section 5: Analysis of General Public Data .....</b>	<b>45</b>
Awareness and Evaluation of the Card-System.....	46
Video Lottery Play .....	48
<b>Section 6: Outcome Measures &amp; Findings.....</b>	<b>50</b>
Background.....	50
Summary of Outcome Measures.....	51
Awareness Measures.....	52
Awareness Findings .....	54
Attitude Measures .....	55
Attitude Findings .....	57
Behavior Measures.....	60
Behavior Findings.....	62
<b>Section 7: Options &amp; Recommendations .....</b>	<b>66</b>
Options.....	66
Recommendations.....	67

## Executive Summary

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In May 2001, the Nova Scotia Gaming Corporation was the first gaming jurisdiction in North America to introduce product-based, responsible gaming features on its VLTs. These features were thoroughly researched and viewed as a solid first step toward social responsibility. In addition to the research conducted on the original four features, the results of the Video Lottery Self-Exclusion Process Test also demonstrated the need for a technological solution. In December 2004, NSGC announced its intention to conduct a field test of a card-based system, the Techlink Responsible Gaming Device (card-system).

In April 2005, the Province of Nova Scotia released *A Better Balance: Nova Scotia's First Gaming Strategy* (NS Gaming Strategy). The five-year strategy included a number of targeted initiatives including effective tools to promote responsible gaming. One such initiative was a “pilot of card-based player management tools on VLTs.” NSGC commissioned an independent research firm, Omnifacts Bristol Research (Omnifacts) to conduct a field test known as the Nova Scotia Player Card Research Project. NSGC was charged with leading this research initiative on behalf of the Province and partnered with the Atlantic Lottery Corporation (ALC) for the execution of the test.

### *Goals & Objectives*

The objective of the project was to examine the effectiveness of a Responsible Gaming Device (RGD) card-system in encouraging responsible play related to VLTs. The RGD is a tool to help people manage their play and is not considered to be a “cure” or a treatment mechanism for problem gamblers. Instead, its target groups are the no, low-risk players, as well as some of the moderate-risk players who still have the capacity to change their behaviour.

With that in mind, the objectives of the project were to assess:

- Awareness of the RGD, and awareness and usage of the features.
- Attitudes of players, site holders and non-players towards:
  - This type of card-based play management tool;
  - Mandatory card usage; and,
  - Its impact on attitudes towards the video lottery program and responsible gambling efforts in general.
- Behaviour amongst all player groups in terms of time spent, amount of money spent and level of usage of the features.

## ***Approach***

Techlink Entertainment International developed the card-system and features used during the study. The specific features tested included an Account Summary to track spending, wins and losses over time; a Live Action feature showing statistics about the current playing session; the option of setting a spending limit; an option for players to exclude themselves from play for a given period; and a 48-hour “cool-down” option.

The card-system was set up as a separate unit attached to each VLT in the test area. A total of 70 VLTs at 10 sites began the test, reducing to 53 VLTs at 9 sites by the end of the study. For the duration of the research, all those wanting to play VLTs in that area were required to insert a player’s card into the card-system and enter a Personal Identification Number (PIN) to activate the VLT for play. While card use was mandatory, use of the specific features was optional.

Before launching the live field test (Stage III), Omnifacts engaged in two preparatory stages. These included a smaller group test involving 10 sites and 120 players (Stage I), followed by a planning and modification stage (Stage II). An in-depth ethics review by well-known researchers and problem gambling experts also took place during Stage II and throughout the research to ensure that the research methodology complied with the Canadian standard for research ethics, the Tri-Council Policy Guidelines.

The third stage of the project, which is the focus of this report, was the live field test, conducted from October 2005 to March 2006 at all video lottery establishments in the Windsor and Mount Uniacke area of Nova Scotia. The research drew on three types of information, namely play data from the card-system, survey results and focus group discussions. This included information from players, site holders and the general public in the Windsor and Mount Uniacke area.

The primary source of information was from a group of players selected as a panel, who agreed to ongoing dialogue about the system and its features. Panelists agreed to certain conditions like providing information on their play behaviour. Those who did not play VLTs on a monthly basis were excluded from the study, as were those who regularly played VLTs outside the test area.

## ***Challenges & Questions***

The research process encountered a number of challenges as the live test proceeded. This included an initial reluctance on the part of the players to participate in the panel group because of fears that playing levels could be monitored and attributed to a specific person, issues with panelists playing outside the test area, sharing of cards, and occasional issues with the technology/ network. The end result was a smaller panel than originally planned and a smaller useable panel than recruited.

The panel began with 161 VLT players and ended with 137 panelists for whom survey results were analyzed for awareness and attitudinal measures.

For behavioral measures (which required information from the card-system) these 137 were pared down to 88 panelists who essentially used the device as intended and whose play data could be considered for the research. These 88 were similar to the remaining panelists and the other VLT players in the Windsor and Mount Uniacke area in terms of their PGSI categories and general demographics. While 88 is a sufficient number for the overall sample, it is more limiting as results by PGSI group are examined – particularly for problem gamblers. As well, there were insufficient numbers of people who had not used any features to allow definitive conclusions on feature use. In fact, only 6 out of 88 reported having used no features at all; meaning that comparisons between those who had used features and those who had not were not possible.

Finally, the authors recognize that the nature of the research design around the 88 panelists (referred to as the “compliant sample” in this report) may introduce some bias into the results via the potential Hawthorne effect<sup>1</sup>. That is to say, changes in behavior while using the card-system may have been influenced by the panelists awareness they were being studied. While there is no particular evidence to suggest that this effect may have occurred, it is a consideration to keep in mind.

### ***Findings & Conclusions***

Overall, there were positive indicators of success from this study and several indicators that suggest the card-system did encourage responsible play among VLT players.

One interesting finding was that players underestimated the time and money they were spending on VLTs which suggests this type of tool could be helpful in knowing this information. Self-reported cash-in amounts were under-estimated by an average factor of seven, while the number of sessions played was under-estimated by a factor of three.

Other findings included:

- Strong support for a mandatory card-system, especially with the panelists and general public, mainly because it was seen as a proactive effort to help people manage their play.
- Support for making it tougher for people to avoid the system and its features. (For example, making features like the summary of play more readily visible.)
- Support for requiring a play limit on the cards, either by day or by week (though opinions on the actual amount varied.)
- A general desire to eliminate card sharing and enforce a one card per player system.

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<sup>1</sup> The Hawthorne effect refers to the tendency of subjects to act differently when they know they are being studied, especially if they think they have been singled out for some experimental treatment.

- Positive awareness and opinions on the card-system among the general public in the test area.
- Positive perceptions about the card features among panelists, saying the card-system encouraged responsible play, helped them set a budget and stick to it. Non-panelists were less positive about the system.
- Indications of change in play patterns by some players in order to avoid using the card-system, including playing in areas outside the test area.
- Decreases in spending for people who more actively used the system as designed.
- Decreases in spending even for those who were light or non-active users of the system's features (non- and light users were combined for this analysis).

### *Options and Recommendation*

There are three options that flow from the findings:

- 1) Do nothing. Do not implement any such play management system.
- 2) Make such a system/similar features available for those who want to use it.
- 3) Make the system more stringent by enhancing the controls to reduce card sharing and encourage more active use of features. This option would require further testing of the revised system.

There are pros and cons associated with each option:

- 1) The first, do nothing, can be easily dismissed. While all results were not conclusive, there were too many positive indicators to argue that nothing should be done.
- 2) The second option can be recommended based on the research findings to date. There were sufficient positive indicators to suggest that the system did work for a portion of the VLT playing group and would be expected to offer benefits to a similar portion of players in other areas. Even though card use was mandatory while the test was being conducted, the system could be avoided by borrowing a card or by leaving the area, making card use essentially voluntary. This supports making such a system available – on either some or all of Nova Scotia's VLTs – for players who want to use the system and its features. A more stringent system (as in option 3) may eventually benefit a higher proportion of VLT players, but a system like the current system will benefit some players now.
- 3) Many players suggested a more stringent mandatory system that would eliminate the practice of sharing cards, which means the third option, could be considered. However, it cannot be recommended based on findings from Stage III because this more stringent type of a system has been largely untested<sup>2</sup> and the impact of the suggested changes

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<sup>2</sup> The system that was tested was not impenetrable to the extent that it would not prevent players from avoiding the registration process and/or from borrowing or sharing a card for the purpose of playing a VLT. As such, players could decide the degree to which they would comply with the mandatory nature of system as-tested.

remains largely unknown. Additional research can answer many of the remaining questions and help address some of the issues identified during this round of research.

### *Considerations Relating to Recommendation*

Concerns about privacy of the playing data and the personal information necessary to obtain a card seemed to be the main reasons for not getting a card and the subsequent need to borrow cards to play. This is an important finding from Stage III because it impacted the willingness to both get and use the card-system and impacted the quality of the data available for analysis.

If a system like the card-system is implemented for those who want to use it, it has to be readily available, convenient to use and players need to understand or be willing to experience the benefits they will receive. Efforts need to be made to encourage registration and feature use so such a system can benefit more people.

**Recommendation: Make such a system/similar features available for those who want to use it.**

## **Section 1: Background**

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### ***Nova Scotia Player Card Research Project Summary***

Across the globe, the use of player management tools to encourage responsible gaming is relatively uncharted territory. There is little in the way of existing research from other jurisdictions and comparisons are difficult to make.

In April 2005 with the release of *A Better Balance: Nova Scotia's First Gaming Strategy* was released. The strategy was aimed at "...building a better, more balanced gaming environment...that benefits Nova Scotians and their communities."

The five-year strategy included a number of targeted initiatives to reach this goal, including effective tools to promote responsible gaming. One such initiative was a "pilot of card-based player management tools on VLTs," leading to a decision about the wider provincial implementation of such a play management tool.

This resulted in the Nova Scotia Gaming Corporation (NSGC) initiating the Nova Scotia Player Card Research Project on behalf of the Government.

### ***The Card-System and Features***

Card-based player management systems help players manage their own play with a range of features to promote more responsible play. For the purpose of this project, the card-system was a separate unit or console that was attached to existing VLTs. Players used a card which was inserted into the card-system and activated with a Personal Identification Number (PIN) selected by the player. This card was needed to play the VLT when an active card-system was attached.

The card allowed players to use four responsible gaming features:

- **Account Summary:** tracked dollar amount spent, wins and losses over time. (Live Action was similar to this but showed statistics about the current playing session; it was also the default screen that players saw while playing.)
- **Money Limits:** allowed players to set specific spending limits for certain time periods.
- **Play Limits:** allowed players to exclude themselves from play for a given period.
- **48-Hour Stop:** allowed players the ability to quickly exclude themselves for a 48-Hour "cool-down" period.

During the study, use of the cards was mandatory to activate a VLT. However, use of the specific responsible gaming features was optional.

## ***Developing a Solid Research Approach***

Before the field test of the card-system and features got underway, significant efforts were undertaken to ensure a solid research approach was developed. These efforts included:

- Preliminary focus groups held with players in November 2003. These groups allowed for preliminary assessment of initial attitudes and potential implications of the features.
- A comprehensive Request for Proposal (RFP) process to select an independent research firm to run the study.
- The inclusion of two research firms to consult on the design and execution of the study. This ensured objectivity regarding the methodology and product development (conducted by Nucleus) and the subsequent evaluation (conducted by Omnifacts).
- The inclusion of a usability expert which allowed for the evaluation of the card-system and the potential impact on the end user.
- The completion of two rounds of usability research (November 2004 and January 2005) with actual players in a non-live setting to assess how the card-system may impact them and to understand potential unintended outcomes.
- Ongoing consultation with experts in problem gambling, responsible gambling, research, and consumer behaviour who provided feedback on the features and card-system and evaluated the proposed research approach. Experts consulted include Dr. Robert Ladouceur, Dr. Mark Dickerson, and Dr. Jamie Wiebe.
- A staged-approach to research which included the use of a smaller panel of players to assess potential implications before moving to a broader adoption of the card-system in the field.
- An ethics review completed in October 2005 prior to proceeding with the intensive six-month research stage. Omnifacts conducted the research following all standard research guidelines and ethical principles. A panel of experts was assembled to ensure the research methodology was in compliance with the Canadian National Standard for research ethics, the Tri-Council Policy Guidelines. The ethics review was conducted by three experts skilled in research ethics:
  - Harold Wynne, Ph.D., CEO of Wynne Resources and Chair of the Research Ethics Board of the Addictions Foundation of Manitoba;

- John McMullan, Ph.D., Professor of Sociology and Criminology at Saint Mary's University, accomplished researcher in socioeconomic impacts of gambling.
- Robert Davis, RPN (registered psychiatric nurse), certified addictions counselor and CEO of Davis Consulting.

## ***The Stages of the Nova Scotia Player Card Research Project***

Overall, the Nova Scotia Player Card Research Project was designed to include four stages. Table 1 below provides a summary of each project stage.

**TABLE 1: Summary of Stages**

<b>Stage</b>	<b>Details</b>
<b>Stage I – Complete</b> <i>(March 2005 – July 2005)</i>	<ul style="list-style-type: none"> <li>• Research conducted at all 10 Windsor/Mount Uniacke sites with 120 pre-recruited players who used a card before playing VLTs. Use of the actual responsible gaming features was optional.</li> <li>• The purpose of the research was to get player feedback on if/how the card-system could be effective based on its initial use in a real life setting. (Usability study)</li> <li>• See Appendix 1 for Stage I highlights.</li> </ul>
<b>Stage II – Complete</b> <i>(July 2005 - October 2005)</i>	<ul style="list-style-type: none"> <li>• Modifications/re-testing of the card-system took place based on the results of Stage I and planning the execution of Stage III took place, based on the results of Stage I</li> </ul>
<b>Stage III – Complete</b> <i>(October 2005 – March 2006)</i>	<ul style="list-style-type: none"> <li>• All players in the Windsor and Mount Uniacke area were issued a personal card and were required to use this card to play a VLT. Use of the card-system features remained voluntary.</li> <li>• The purpose of the research was to determine whether the features would encourage responsible play.</li> <li>• This stage included an ethics review.</li> </ul>
<b>Stage IV</b> <i>(April 2006 – June 2006)</i>	<ul style="list-style-type: none"> <li>• Analysis to be conducted on the research data from Stage III.</li> <li>• Conclusions and next steps will be determined.</li> </ul>

The field test of the new card-system began in March 2005 in the Windsor and Mount Uniacke areas of Nova Scotia. NSGC commissioned an independent firm, Omnifacts, to conduct the research on its behalf. NSGC partnered with ALC for the execution of the test.

## ***Stage III Introduction & Objectives***

The third stage of the project was the live field test, conducted from October 2005 to March 2006 at all video lottery establishments in the Windsor and Mount Uniacke areas of Nova Scotia. A total of 70 VLTs at 10 sites were involved in the test at the commencement of Stage III. Through planned reductions, and the closure of one location, 53 VLTs at 9 sites were participating in the study by the end of Stage III.

The first step in this stage was enrolling players and providing them with the card required to play. Independent agents enrolled the majority of players, and then transferred this role to site holders who became responsible for new and replacement cards being issued.

The overall objective of Stage III was to examine the effectiveness of a card-system with responsible gaming features – and whether or not it encouraged positive behavioral change related to VLTs. The research activity monitored the progress of the test and attempted to provide more definitive answers relating to indications of positive behavioral change.

While Stage I only involved a panel of players that voluntarily used the card and card-system, Stage III involved the mandatory use of cards by all players in the Windsor and Mount Uniacke area. That is, players in this area needed a card to play a VLT. However, the use of the responsible gaming features on the card-system remained voluntary.

Where Stage I had focused on the functionality of the card-system and preliminary attitudes and opinions relating to its potential efficacy, Stage III concentrated on the system's actual and perceived usefulness in encouraging responsible play. This was based upon a broader scale adoption and assessments of actual behavior change.

Overall, through all four stages, the test was intended to assess whether the features provide effective play management tools that enable no-risk, low-risk and moderate-risk gamblers to make responsible decisions about their VLT play. The objectives were based on a preventative model, and from the outset, it was recognized that the card-system itself would not be sufficient to help problem gamblers. As well, these tools were not intended to be treatment or recovery programs for individuals who require help.

Specifically, the objectives of Stage III included:

- Assessing awareness of the RGD, and awareness and usage of the features.
- Assessing attitudes of players, site holders and non-players towards:
  - This type of card-based play management tool;
  - Mandatory card usage; and,
  - Its impact on attitudes towards the video lottery program and responsible gambling efforts in general.

- Assessing behavior amongst all players groups in terms of time spent, amount of money spent and level of usage of the features.

### ***Stage III Methodology***

After collecting recommendations and suggestions from the aforementioned ethics review process, Omnifacts utilized a combination of qualitative and quantitative methods in its approach to the research for Stage III. Information was gathered from a variety of individuals within the test area including players who had cards, players who did not have cards, non-players, and site holders. Specific approaches included:

- A research panel consisting of card-holding players who typically played on a monthly basis;
- Intercept surveys with players who were not members of the panel;
- Play data from the card-system;
- Focus groups with players and site holders or site managers/employees; and,
- A general population survey of the Windsor and Mount Uniacke area.

Within Stage III there were five key periods, which were preceded by a baseline self-reported measurement of play before players utilized the card-system. The five periods included:

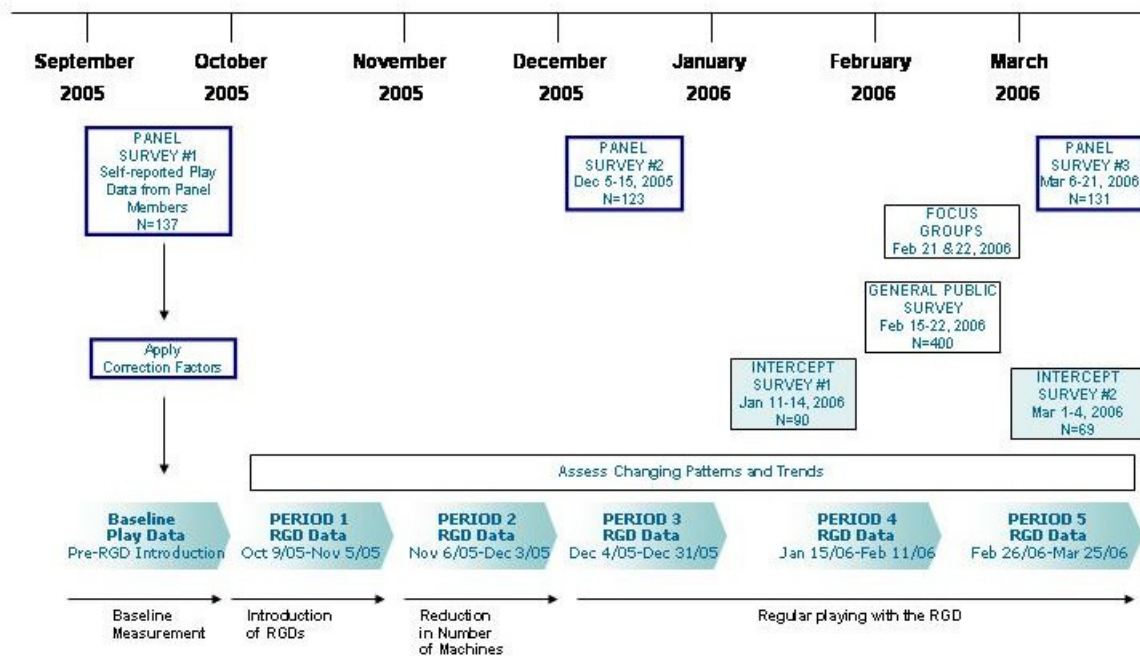
- 1) October play data before a number of VLTs were removed across the province as per the NS Gaming Strategy<sup>1</sup> (Period 1)
- 2) November play data after a number of VLTs were removed as per the NS Gaming Strategy (Period 2)
- 3) Play data for December (Period 3)
- 4) Play data for January/February (Period 4)
- 5) Play data for February/March (Period 5).

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<sup>1</sup> Details about the removal of VL machines are presented on pages 15-16.

Chart 1 below outlines the schedule of data collection during the six-month test period.

**CHART 1: Stage III Methodology at a Glance**



## ***Data and Information Sources***

In order to best assess the effectiveness of the system, the research utilized a variety of feedback and data from a number of sources.

### ***Research Panel***

Recruiting for a research panel of regular (at least monthly) players began on September 14, 2005. Two waves of collection garnered a total of 161 monthly VLT players.

Panelists were recruited from three sources:

- 1) Those who participated in Stage I and agreed to be contacted again for future research;
- 2) On-site recruiting at the VLT retail establishment; and,
- 3) Telephone referrals from members recruited through Stage I or the on-site process

All panelists signed a consent form which outlined the extent of their participation. Data was collected from the panelists in two ways – by survey and focus group participation (self-reports) and by card-system play data.

At the outset, panelists were given an initial screening survey which collected some preliminary information. This was followed by three panelist surveys to measure perceptions and attitudes regarding the card-system (September/November 2005, December 2005 and March 2006). These surveys provided evaluations of the field test and the card-system, focusing mostly on measuring attitudes and opinions, as well as collecting some information about play behaviors. Survey results were also compared to actual play data information. The surveys contained a combination of questions unique to each survey, as well as several consistent (or tracking) questions asked on two or more surveys.

Questions about whether players used their own cards to play were asked at each survey. Prompted largely by feedback gathered from focus groups in late February regarding the level of card sharing activity among players, Panel Survey #3, the final panelist survey, included specific questions on card lending and borrowing, playing when the card-system was down and when a card could not be used, and playing outside the test area. Responses to these survey questions were used to determine which research panelist's play data was reliable to meet the criteria of a "compliant" player.

Over time, the number of panelists decreased – from 161 to 137 monthly players by the end of the final survey collection period. This was anticipated and factored into recruiting at the outset. Reasons for the attrition included opting out of the panel, non-completion of surveys, failure to use the cards, or no card activity.

### ***Card-System Play Data***

In addition to the research panel, Omnifacts obtained card-based play data directly from the system. The system was designed to track a number of variables each time a card was inserted into a card-system and, hence captured data from every card that was used during the test. This included cash-in, wins, and the use of various features. Other than panelists who consented to participate in the research panel and provided their card number, all data from the card-system was anonymous and was not linked to any particular individual.

Data from the system was provided to Omnifacts on a regular basis throughout the study. This data included:

- A weekly summary of card activity;
- A cumulative statistics report on all cards – which provided overall information such as the number of enrollments, number of replacement cards, and number of games played on a weekly summary basis;
- A cumulative limits report – which provided on-going information regarding limit-setting on a per-card basis; and,
- An additional report tracking replacement cards and their associated original cards – which was implemented during the test period.

The card data was meant to help assess changes in play patterns among players during each of the five periods of Stage III.

### ***On-site Intercept Surveys with Non-Panelists***

Omnifacts also conducted on-site interviews with a random selection of video lottery players in the Windsor and Mount Uniacke area who were not already participating in the research panel. This group is referred to as non-panelists during this report. These interviews were conducted twice during the six-month test period – once in early January 2006 and once in early March 2006. Interviewers visited the sites over two four-day periods for each round of data collection and completed 90 and 69 interviews. The goal of the intercept surveys with non-panelists was to compare and check their attitudes and opinions against those of the research panelists; minimal behavioral information was collected. Like the panelist surveys, intercept questionnaires contained a combination of questions unique to each survey, as well as several consistent questions asked on both surveys.

### ***Focus Groups***

A series of five focus groups were conducted on February 21 and 22, 2006 in Windsor, Nova Scotia, towards the end of the research project. Each focus group was used to evaluate the card-system and to provide richer discussion of several topics, including the card-system's features, the usefulness of the card-system, the acceptance of the card-system, the activity of sharing player cards, opportunities for improvement, and options for limit-setting.

Three of the groups were with research panelists who were divided based on their Problem Gambling Severity Index (PGSI)<sup>2</sup> scores. One group was with no-risk and low-risk players (PGSI scores of 0, 1 or 2; 8 participants); one was with moderate-risk players (PGSI scores of 3 to 7; 9 participants); and one was with problem gamblers (PGSI scores of 8 or higher; 8 participants).

A fourth player group was held with non-panelist card holders who had a range of PGSI scores (8 participants), all of whom had a players' card. The fifth group consisted of 11 bar owners, managers and staff.

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<sup>2</sup> The Problem Gambling Severity Index (PGSI) is a nine-item sub-scale of the Canadian Problem Gambling Index (CPGI). The CPGI, a 31-item questionnaire, was designed for the purpose of distinguishing between respondents who have gambling problems and those who do not, and between gamblers who are at a low or moderate-risk of developing problems. The PGSI distinguishes four gambler sub-types, namely: non-problem, low-risk, moderate-risk, and problem. The non-problem group is further divided into gamblers and non-gamblers, as these sub-types are known to display different characteristics (Smith, G. J. & Wynne, H. J. (2002). *Measuring Gambling and Problem Gambling in Alberta: Using the Canadian Problem Gambling Index (CPGI)*. Prepared by the Alberta Gaming Research Institute.)

### ***General Population Survey***

A survey of 400 residents of Windsor and Mount Uniacke was conducted between February 15 and 22, 2006. A sample of this size yields a margin of error of  $\pm 5\%$  at a 95% confidence interval. Data collection quotas were based on proportionate age, gender and geographic representation within the test area (Windsor area versus Mount Uniacke area). The purpose of the General Population Survey was to gauge awareness and opinions of the project, the features available on the VLT, and whether this research initiative improved their opinion on efforts being made to improve the responsible use of VLTs in their communities.

### ***Other Sources***

Information from other sources was also considered and included in the research such as information from the ALC's Lottery Support Services (LSS), general revenue and financial activity. Revenue data from the ALC's Video Lottery Central System allowed a comparison of revenues in Windsor and Mount Uniacke to revenues in the surrounding area and the rest of Nova Scotia.

### ***Data Sets and Subsets***

The information used to evaluate awareness, behaviors and attitudes was gathered from a number of sources including the previously mentioned surveys, focus groups, and play data collected from the card-systems. The majority of analysis in this report is based on surveys completed by qualified research panelists (for whom PGSI scores are available) and their corresponding play data.

Three main data sets/subsets were used in the analysis and are referred to regularly throughout this report:

#### ***DATA SET #1: Card-System Play Data for All Valid Cards***

As outlined in Stage III Methodology earlier in this section, play data and card-system feature usage were collected for all cards each time the card was inserted into the card-system.

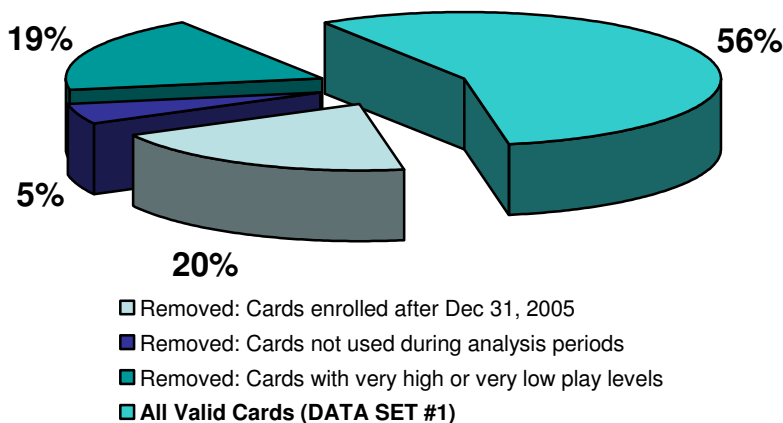
- A total of 1,918 cards were enrolled, not including replacement cards issued when a card was lost or a player wished to replace a card.
- A number of cards were removed from the play data set:
  - 1) Late enrollment: First, cards issued late in the test (on or after January 1, 2006) were removed due to the fact that: 1) there would be insufficient data from which to draw conclusions, and 2) to ensure that players who

may have entered the test area specifically seeking VL machines that retained the stop button function and non-reduced game speed (as per the changes being rolled out across the province according to the NS Gaming Strategy) were not included in the analysis. Three-hundred eighty-five (385) cards were removed for this reason.

- 2) Unused cards: Cards that were enrolled *before* January 1, 2006 and were not used (had no play activity) during any of the 5 data collection periods were also removed. This represented an additional 95 cards being removed.
  - 3) Outliers or non-legitimate cards (very low or very high play): Cards that a) had cumulative cash-in amounts over the five periods of \$5 or less; b) two playing sessions or less over the five periods; c) used the card for five minutes or less over the five periods; and d) cumulative cash-in amounts over the five periods that exceeded \$20,000. In total, 299 cards were removed due to very low levels of the play activity on the card, and 58 cards were removed due to very high levels of play activity (as a result of card sharing); 357 cards, or 19% of all cards enrolled, were removed from the analysis.
- After the above exclusions, 1,081 valid cards (or 56% of all enrolments) remained in the play data set. Throughout this report, these 1,081 records represent the card-system **play data for all valid cards**. A summary of the distribution of all enrolled cards appears in Chart 2 below.

**CHART 2: Distribution of all Enrolled Cards**

N= 1918



## DATA SET #2: Panelist Survey Results

As outlined in Stage III Methodology, the research panel began with 161 VLT players who played at least monthly. As a result of expected attrition, the study ended with 137 valid panelists for whom survey results were analyzed. Throughout this report, this group is typically referred to as simply the “panelists.”

- These 137 panelists represent approximately 13% of the “all valid cards” group mentioned above.
- The 137 panelists completed the Baseline Survey (also known as Panel Survey #1), and one or both of: Panel Survey #2 and Panel Survey #3.

When **Panel Survey Results** are discussed throughout this report, they refer to – in whole or in part – these 137 panelists. A profile of these panelists is presented in Table 2 below. Note the small sample sizes, and the table includes numbers, not percentages.

**TABLE 2: Profile of Panel Participants (n-values)**

		Total	No-Risk	Low –Risk	Moderate-Risk	Problem Gambler
<b>Total (n)</b>		<b>137</b>	<b>48</b>	<b>34</b>	<b>39</b>	<b>16</b>
Gender	Male	48	18	10	15	5
	Female	89	30	24	24	11
Age	19 – 35 yrs old	19	3	8	6	2
	36 – 50 yrs old	47	21	8	12	6
	Over 50 yrs old	71	24	18	21	8
Employment Status	Employed by company/organization, or self-employed	79	34	18	16	11
	Retired, or not employed and not looking	50	13	14	18	5
	Not employed and looking for work	7	0	2	5	0
	Student	1	1	0	0	0
Education	Less than H. School	42	9	9	19	5
	Graduated H. School	43	18	11	11	3
	Some or Graduated Trade School	42	17	11	7	7
	Some or Graduated University	9	3	3	2	1
Income	\$25,000 or less	49	16	12	15	6
	\$25,001 - \$50,000	53	18	15	14	6
	\$50,001 or more	26	12	4	7	3
Frequency of Play	Once or more per week	89	26	20	30	13
	Less than once per week	48	22	14	9	3

Source: Panel Surveys

### ***DATA SET #3: Card-System Play Data for Compliant Panelists***

Of the 137 research panelists, there were a number of players who indicated they:

- Did not use their own card every time they played;
- Lent their card to another player;
- Played when the card-system network was not accessible and not collecting play information; and,
- Regularly played outside of the test area during the study.

For these panelists, it is clear that not all of their VLT play activity was recorded on their card during the test. Therefore, analysis of these panelists' card-system play data could potentially under-represent their actual play levels, or could over-represent their play levels in the case of sharing with other players. As a result, the 137 panelists were pared-down to 88 panelists who had reliable play data that represented their actual play activity, as presented in Chart 3 below. These 88 panelists were the focus of the majority of analysis contained within this report.

The following are some characteristics of these 88 **Compliant Panelists**:

- Borrowed a card no more than once or rarely (or not at all);
- Lent their card no more than once or rarely (or not at all);
- Only played once or twice (or not at all) when the card-system network was unavailable; and,
- Did not regularly play outside the Windsor and Mount Uniacke area during the test period of October 4, 2005 through March 25, 2006.

The compliant panelists compare closely to the entire panel of players and to the non-panelists interviewed. This suggests that the compliant panelists may be a fair indication of what might be expected to happen in the general video lottery player group. The table below shows the percentage of people in each PGSI category for each of the important groups in the research. As can be seen, the PGSI categories are similar for each group.

<b>PGSI Category</b>	<b>All Panelists n=137</b>	<b>Compliant Panelists n=88</b>	<b>Compliant Panelists who Decreased Spend n= 55</b>	<b>Non-Panelists (Survey 1/Survey2) n=90 &amp; 69</b>
No-risk	35%	34%	31%	42% / 43%
Low-risk	25%	27%	24%	22% / 26%
Moderate	28%	30%	33%	22% / 23%
Problem	12%	9%	13%	12% / 9%

The differences in demographic composition across groups is relatively similar, with “compliant panelists” and “compliant panelist who decreased their spending” having a slightly higher proportion of younger and female participants as compared to the “all

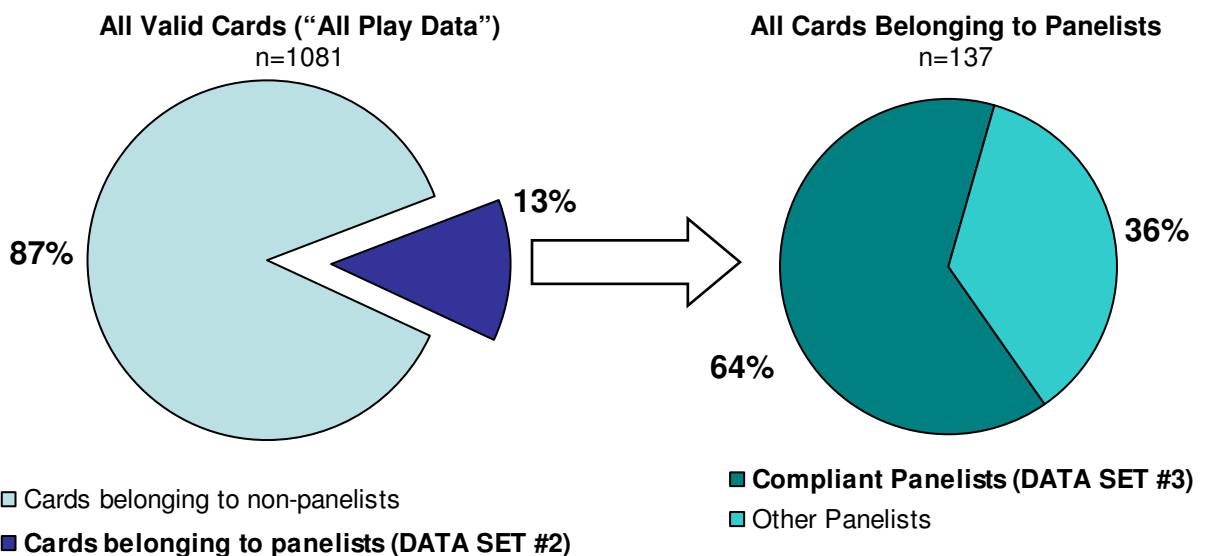
panelists” category. As the table below summarizes, older players were less likely to share cards, play outside the area or play VLTs when the card-system was not active than younger participants. They were also less likely to have decreased their spending.

Demographic Description		All Panelists n=137	Compliant Panelists n=88	Compliant Panelists who Decreased Spend n= 55
AGE	19 – 35	14%	16%	22%
	36 – 50	34%	41%	45%
	51 or older	52%	43%	33%
GENDER	Male	35%	30%	27%
	Female	65%	70%	73%
HOUSEHOLD INCOME	Up to \$25, 000	38%	34%	29%
	\$25,001 - \$50,000	41%	43%	45%
	\$50,001 or more	20%	23%	25%

The margin of error for the sample of 88 compliant panelists is  $\pm 10.2\%$  at 95% confidence level. This is calculated based on the population of monthly VLT players in the Windsor/Mount Uniacke area being approximately 600. The population of monthly video lottery players was calculated by averaging two separate pieces of information:

1. There were approximately 500 different cards played each week; and,
2. Applying the 14% from the General Population Survey who said they had played VLTs in the past year to the population in Windsor and Mount Uniacke older than 20 (from the 2001 census) gives a number just over 700.

### CHART 3: Distribution of Valid Cards & Cards Belonging to Panelists



As the panel was pared-down to the compliant players for whom their card data was representative of their actual playing, it became even more important to use a combination of analysis methods. This included utilizing the three information sources, as previously mentioned (card-system play data for all valid cards, panelist surveys, and compliant play data) in conjunction with the intercept survey results from non-panelists and General Public survey results. This combination was essential to garner a cross-section of experiences and attitudes.

Table 3 outlines all of the various data sets (including the three previously mentioned data sets) and groups of respondents utilized throughout this report.

**TABLE 3: Summary of Data Sets**

<b>Data Set</b>	<b>Number of Records (n)</b>	<b>Source</b>	<b>Description</b>
<i>Play Data for All Valid Cards</i>	1081	Card-system play data	Play Data for cards enrolled prior to Jan 1, 2006 that were not deemed to be "outliers" with very low or very high activity
<i>Compliant Panelist Play Data</i>	88	Card-system play data	Research panelists with limited (or no) card sharing, regular play outside the test area, or playing when the card-system/features were unavailable
<i>Panelist Survey Results</i>	Up to 137	Panel Surveys	Survey results for research panelists who completed surveys; 137 completed Panel Survey #1 (also known as Baseline Survey), 123 completed Panel Survey #2, and 131 completed Panel Survey #3
<i>Non-Panelist Survey Results (#1 and #2)</i>	Up to 90 and 69	Intercept Surveys	Results for intercept surveys completed with non-panelist VL players in Windsor and Mount Uniacke; Not all respondents were card-holders
<i>General Public</i>	Up to 400	General Public Survey	Results for respondents to a general public survey conducted in Windsor and Mount Uniacke including both VL and non-VL players (panelists were not screened out)
<i>Focus Group Results</i>	Not applicable; Qualitative in nature	Focus Groups	Feedback from focus group participants (44 participants in total)

## **Section 2: The VLT Playing Environment**

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### ***Environmental Changes***

Three specific environmental changes occurred during the test period:

- 1) A reduction in VLTs as per the NS Gaming Strategy; and,
- 2) The stop button function being disabled on VLTs and 30% reduction in game speed as per the NS Gaming Strategy.
- 3) The addition of VLTs at nearby Glooscap First Nation;

While the changes that resulted from the Gaming Strategy were anticipated and accounted for, the addition of VLTs at the Glooscap First Nation was not anticipated, however people who said they regularly played outside the test area were excluded.

#### ***1) VLT Reduction – Anticipated Change***

As anticipated, on November 1, 2005 there was a reduction of 17 VLTs in the Windsor and Mount Uniacke area, coinciding with the VLT-related changes outlined in the NS Gaming Strategy. This was part of the province-wide reduction of a total of 800 VLTs removed in early November 2005. All 800 terminal removals occurred simultaneously and proportionately throughout the province.

Respondents to player surveys had varied experiences and evaluations with the availability of VLTs following the removal of the machines. Of the panelists who responded to a December 2005 survey, 36% felt they were more accessible – and most attributed this to there being fewer people playing since the test started. Another 44% found that there was no change in accessibility, and 21% reported that the VLTs were less accessible. Half of those noting less accessibility cited the reduction in the number of machines as the reason.

In order to assess the impact of the reduction in VLTs along with the card-system, measurements were taken before the card-system was implemented, after the system was in place, and after the reduction in terminals. This included looking at play patterns and self-reports from players.

#### ***2) Removal of Stop Button Functionality and 30% Reduction in Game Speed – Anticipated Change***

As anticipated, between January 1 and March 31, 2006, the speed of VLT games was reduced by 30%, and the stop button functionality was disabled in a staged approach from all terminals in the province. The Windsor and Mount Uniacke area, however, was not adjusted until after the conclusion of data collection for Stage III on March 25, 2006.

### ***3) Additional VLTs at Nearby Glooscap First Nation – Unanticipated Change***

The Glooscap First Nation is located approximately 15 minutes from Windsor. Effective November 8, 2005, their total allotment of VLTs increased from 20 VLTs to 30. Migration of play between regions and over time was tracked by the ALC via weekly average net revenues on a per terminal basis. The panel, intercepts, and surveys also reveal occurrence of play pattern changes, including play outside of the test area (which includes Glooscap First Nation).

## ***Summary of Challenges and Limitations***

A number of activities in the general environment provided challenges in the research design and execution. Since the test occurred in a live setting, it was not possible to anticipate, control and/or compensate for a number of these variables. These challenges necessitated incremental changes to the original research design. The challenges and limitations are outlined below:

- 1) A limited number of regular players in Mount Uniacke and Windsor who *did not* regularly play outside the area, and who were willing to participate in the research panel. In other words, many players typically play both in and out of the test area;
- 2) Sharing of cards; and,
- 3) Card-system interruptions and data collection disruptions.

### **1) Number of Regular, Local Players Interested in Research Panel**

To qualify to be a panelist, players had to be willing to participate in the test, agree to share some personal information and complete a number of surveys.

Recruiting a large number of regular video lottery players who regularly played in the test area and not outside it proved to be difficult. Evidence in the card-system play data suggests that there are approximately 600 regular VLT players in the Windsor and Mount Uniacke area. Some undoubtedly played outside the test areas as well, which reduced the population of potential recruits.

Another challenge in recruiting players for the panel was a lack of trust. Many players believed it was possible for someone (the government) to monitor their play through the card-system. As such, many felt their playing and spending levels were nobody's business but their own, or felt it might identify something in their play or income they did not want known.

In addition to greater difficulty recruiting panelist, this distrust resulted in other challenges for the research project:

- Players deciding not to obtain a card;
- Borrowing cards from others or from local establishments;
- Contamination of card data by sharing; and,
- Making a conscious choice to play outside the area for some or all of their play.

## 2) Card Sharing

Strong evidence of card sharing among panelists was most strongly noted in the focus groups conducted in February 2006. This raised concerns about the reliability of the data and challenged the presumption that one card represented one player.

This was factored into the analysis of individual play patterns. In fact, as a result of this finding, Panel Survey #3 was used to validate the overall incidence of card sharing. Also, the survey served as a tool to define those panelists who had complied by using the cards as they were intended, and those who had shared or borrowed cards.

Participants noted several reasons for sharing cards. The first item in the list below was the most common. The other three reasons were less common.

- Sharing when someone had forgotten or lost their own card, did not have their own card, or who were from outside the area;
- Not having own card due to resistance to the card-system and the test in general;
- Not having own card due to concerns about privacy and tracking of data on an individual level. This was related to the concern that government would know how much they were playing; and,
- Not having own card because they did not have a government-issued photo identification card.

Panel Survey #3 showed that just under 20% of the panelists borrowed a card at some point during the test. The likelihood of borrowing increased with PGSI scores. Almost half of the problem gamblers had borrowed a card at some point. Many of those panelists who had borrowed had not done so very often with almost everyone describing it as “one time” or “rarely.”

Almost 30% of panelists said they had lent their card at some point during the test. In most cases, they had lent their card to someone who did not have a card, was from outside the area, or had forgotten or lost their card.

In total, 37% of panelists reported borrowing and/or lending their card.

Evidence exists that card sharing was not limited to the research panel; 29% of the non-panelists who responded to the second intercept survey said they had lent and/or borrowed cards.

Site holders themselves reported providing shared ‘community’ cards (along with the corresponding PIN) to players to activate a VLT. This was seen by the site holders as a customer service to players.

Card sharing was accounted for in the analysis of the card-system play data by isolating those research panelists who reported any more than a very limited amount of borrowing and lending. Panelists who regularly played when the card-system wasn’t available and/or played outside the test area were also isolated. (“Compliant panelists” are discussed on page 12.)

### **3) Card-System Interruptions and Resolutions**

Technical issues with the card-system network occurred in two instances during the test period, including a power disruption in the area. These instances disrupted the use of the features and compromised portions of the data. The two main disruptions were accounted for by re-allocating the periods (as depicted in the diagram named “Methodology at a Glance” on page 6). A third group of smaller disruptions were deemed to be relatively insignificant and did not cause significant data issues.

## Section 3: Analysis of Play Data

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### ***Background***

Originally, the analysis of play data from the system was to come from two sources: 1) play data from all players (one card representing one player); and 2) data from research panelists with a PGSI classification and corresponding self-reported play and survey results.

Since data was collected and organized based on card number, the activity of sharing cards resulted in data from many cards, including many research panelists, being potentially unreliable; this data was subsequently not included in the analysis. Panelists who had reliable data were identified and considered the compliant panelists since they:

- Only borrowed a card once or rarely, or not at all;
- Only lent a card once or rarely, or not at all;
- Did not regularly play outside Windsor and Mount Uniacke during the test; and,
- Only played once or twice when the card-system was not available, or not at all.

The 88 compliant panelists were used as one of the sources for this portion of the analysis. Card-system play data for compliant panelists along with perceptions and self-reports collected from panel surveys were both evaluated.

A secondary source for card-system play data comes from all valid cards enrolled prior to January 1, 2006 and used during the study. Sharing made it difficult to rely on playing data to draw individual player profiles of spending, since one card does not necessarily represent one player. However, regardless of who was using the card, it was possible to identify the level of feature use from the overall group.

### ***Summary Results***

Table 9 summarizes several pieces of data for the 88 compliant panelists<sup>2</sup>. The baseline data for the compliant research panelists utilizes self-reported data from surveys collected just before the features were introduced in the test area. (Also, a correction factor was applied to self-reported information to account for discrepancies between reported and actual play.)

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<sup>2</sup> Note that, owing to the difficulty in interpreting mean results where the data can have a large variance, statistical testing has been conducted to identify true significant differences.

As a reminder, Period 1 was the October 2005 timeframe and included the introduction of the card-systems with features active into the test sites. The second period corresponded to November 2005 and was the period when machines were removed from across Nova Scotia including the test area and also corresponded to when 10 VLTs were added to Glooscap First Nation.

**TABLE 9: Average Play and Feature-Use Statistics for Compliant Panelists by Period (n= 88)**

Source: Card system Play data and Self-Reported Baseline Survey

	Baseline (Self-Reported)	Period 1	Period 2	Period 3	Period 4	Period 5
Total Number of Sessions	20	24	20	18	18	17
Total Minutes Played	785	631	665	637	593	591
Minutes Played per Session	44	31	37	39	42	40
Total Cash In <sup>1</sup>	\$1,393.24	\$1,557.57	\$1,614.33	\$1,231.10	\$1,209.70	\$1,116.96
Cash In per Session	\$79.04	\$65.50	\$76.18	\$69.20	\$74.66	\$65.86
% of players who viewed: My Account		52%	51%	41%	33%	36%
My Account Day		27%	31%	24%	22%	16%
My Account Week		26%	31%	31%	18%	11%
My Account Month		27%	32%	21%	14%	10%
My Account Year		23%	32%	23%	17%	16%
Live Action Screen		48%	48%	35%	42%	40%
% of players who set a: Day Limit		14.0%	5.7%	1.1%	0.0%	0.0%
Week Limit		1.1%	2.3%	1.1%	0.0%	0.0%
Month Limit		1.1%	1.1%	0.0%	0.0%	0.0%
% who used 48-hr stop feature		1.1%	2.3%	1.1%	0.0%	0.0%
% who set a play limit; not including using the 48-Hour Stop feature		1.1%	1.1%	1.1%	0.0%	0.0%
% who used 1 or more of the card-system's features*		68%	69%	57%	52%	51%

\* Viewed My Account, My Account Day, My Account Week, My Account Month, My Account Year, Live Action Screen (not including default screen views), used 48-Hour Stop feature, set Day, Week or Month Limit (Money Limits), or excluded themselves for a period or time (Play Limits)

1. Mean results are significantly different across the five periods.

According to analysis, it does not seem that the removal of the 17 machines within the test site at the beginning of November greatly impacted overall play levels for these compliant panelists. The total cash in for period 2 is \$1,614, which is in-line with the \$1,557 from period 1.

Table 9 shows a decline in the number of sessions from 24 (in period 1) to 17 (in period 5) with a decline in cash-in and a decline in total minutes played, although only the latter is significantly different. Minutes played per session appeared to increase during the test periods from 31 (in period 1) to 40 (in period 5), though the results were not statistically significant.

Feature use was concentrated in using My Account and the Live Action Screen. Aside from a day limit that was set by 14% of these compliant panelists in period 1 and 6% in period 2, use of limit features was very low and fell off to nothing in the final two periods. It was not possible to quantifiably conclude reasons for decreases in feature use.

Comparatively, Table 10 represents the average feature use for all qualified cards. A card qualified for this analysis by having: 1) cumulative cash-in amounts over the 5 periods exceeding \$5; 2) more than 2 playing sessions over the 5 periods; 3) used the card for more than 5 minutes over the 5 periods; 4) cumulative cash-in amounts over the 5 periods less than \$20,000; and, 5) originally enrolled for the card on December 31, 2005 or earlier.

*As a reminder, sharing made it difficult to rely on playing data to draw individual player profiles of spending, since one card does not necessarily represent one player. However, regardless of who was using the card, it was possible to identify the level of feature use from the overall group.*

**TABLE 10: Average Feature-Use Statistics for All Cards by Period  
(n= 1081)**

*Source: Card system Play data*

	Period 1	Period 2	Period 3	Period 4	Period 5
% of cards with views of: My Account	38%	31%	27%	22%	22%
My Account Day	22%	18%	17%	13%	12%
My Account Week	18%	14%	12%	10%	7%
My Account Month	18%	16%	13%	10%	7%
My Account Year	17%	18%	17%	14%	12%
Live Action Screen	32%	27%	25%	22%	21%
% of cards with a: Day Limit	7.7%	3.2%	2.2%	1.0%	0.6%
Week Limit	0.4%	0.5%	0.3%	0.0%	0.1%
Month Limit	0.2%	0.3%	0.3%	0.0%	0.0%
% of cards using 48-hr stop feature	1.3%	1.2%	0.7%	0.6%	0.6%
% of cards setting a play limit; not including using the 48-Hour Stop feature	1.6%	0.6%	0.9%	0.5%	0.2%
% of cards using one or more of the card-system's features*	49%	42%	38%	31%	30%

\* Viewed My Account, My Account Day, My Account Week, My Account Month, My Account Year, Live Action Screen (not including default screen views), used 48-Hour Stop feature, set Day, Week or Month Limit (Money Limits), or excluded themselves for a period or time (Play Limits)

Overall, the compliant panelists had higher rates of feature usage. In both groups, feature usage dropped-off over time, with overall feature usage (“% of cards using one or more of the card-system’s features”) decreasing by almost 20 percentage points. However, feature use was concentrated in the same area for the “all cards” data set as for the compliant panelists with the most use being the My Account and Live Action screens. In general, players seemed to be more apt to use features that monitored their play rather than features that actively controlled their play.

## Behavioral Changes

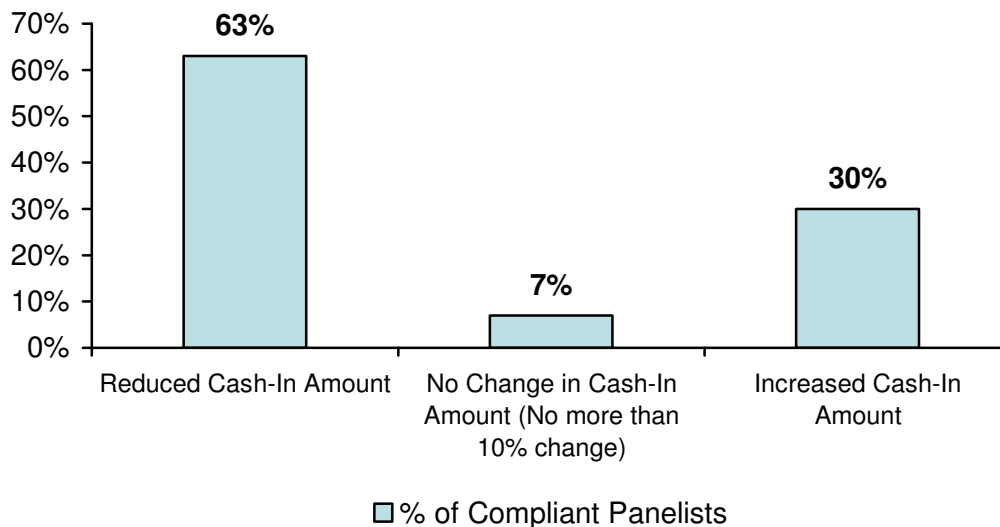
Once a corrected baseline play figure was established for the 88 compliant panelists (factoring in the correction factor for under-reporting of play), comparisons were made between the average of their play in Period 3, 4 and 5 and baseline data. This process allowed for changes in play to be determined, including players identified as having increased play, decreased play or unchanged play. An increase or decrease was defined as more than a 10% change in play<sup>3</sup>. A calculation using all 5 periods was also made with virtually identical results. Since Periods 3, 4 and 5 were not influenced by changes in the playing environment; these were used to determine increases or decreases in play.

Within the compliant panelists, 63% reduced their spending, 30% increased their spending and 7% stayed the same, as depicted in Chart 8. Spending is defined as the amount of money put into the VLTs. It is important to keep in mind that these 88 compliant panelists have already demonstrated that they only had minimal borrowing and lending of their card as well as limited play outside the test area, all of which would have affected their data had they done these things. Therefore, changes that are noted here were actual changes in play.

### CHART 8: Percentage of Compliant Panelists who Decreased, Did not Change or Increased their Spending

#### Average of Periods 3, 4 and 5 Compared to Baseline

Source: Card system Play data (n=88)

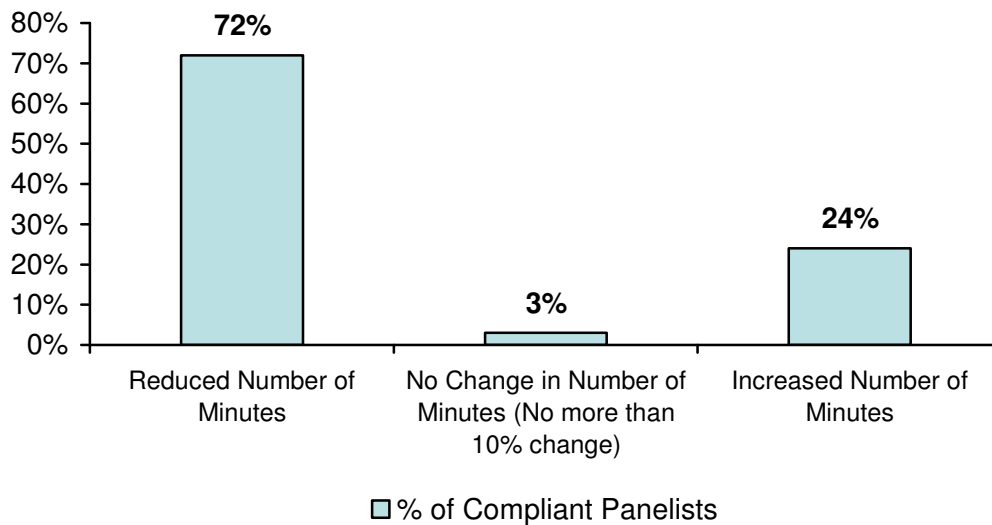


<sup>3</sup> Statistical testing was conducted to ensure that the 10% change in play also meant a statistically significant difference in the mean measure for baseline compared to the mean measure of combined periods 3, 4, and 5. As an example, for the 63% of the panelists who decreased their spending, their mean Cash-In for the baseline was significantly different to the mean Cash-In for combined periods 3, 4, and 5. Similarly, for the 30% of the panelists who increased their spending, their mean Cash-In for the baseline was significantly different to the mean Cash-In for combined periods 3, 4, and 5. This testing was similarly repeated for number of minutes and number of sessions, with all differences being statistically significant.

Exploring differences in the change in average number of sessions and average number of minutes play from before the test started to an average of their playing for the last three periods of the test was also important in understanding any overall behavioral changes. Number of sessions was defined as the number of times the card user inserted their card into a card-system. Number of minutes was defined as the length of time the card remained in a card-system device. For the 88 compliant panelists, 72% decreased the number of minutes played from the baseline period to their average number of minutes played in Periods 3, 4 and 5, 24% increased the number of minutes played, and about 3% had no change. Similarly, 63% of compliant panelists decreased their number of sessions, 25% increased the number of sessions played, and 12% did not change. See Charts 9 and 10 for a graphic representation of these statistics.

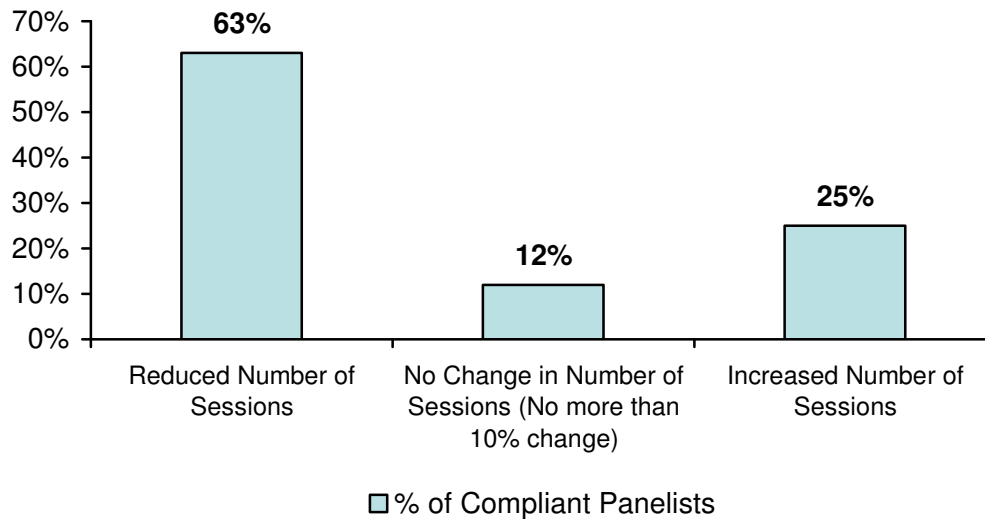
**CHART 9: Percentage of Compliant Panelists who Decreased, Did not Change or Increased their Number of Minutes Average of Periods 3, 4 and 5 Compared to Baseline**

*Source: Card system Play data (n=88)*



**CHART 10: Percentage of Compliant Panelists who Decreased, Did not Change or Increased their Number of Sessions Average of Periods 3, 4 and 5 Compared to Baseline**

*Source: Card system Play data (n=88)*



With 88 records in the data set, a detailed analysis by PGSI was not possible, but some general directional comments can be made. Only one of eight problem gamblers and four of sixteen moderate-risk players increased their spending. Those who increased their spending were more likely to be no and low-risk players, who are the primary target group for such a system.

In terms of changes in time spent playing, there were no remarkable differences across categories. Eighteen out of 24 moderate-risk and problem gamblers decreased their playing time while a similar portion of no and low-risk players decreased their time. About 25% of all four PGSI groups increased their time spent playing.

In general, compliant panelists who had higher PGSI scores tended to be more likely to have decreased the number of sessions. About half of the lowest category of PGSI compliant panelists (the no-risk group) decreased their number of sessions, while about three-quarters of moderate-risk and problem gamblers had a decrease. When looking at whether players increased their frequency of play, all PGSI groups were in the range of 20% to 30%, with an average of 25% increasing their number of sessions in a period.

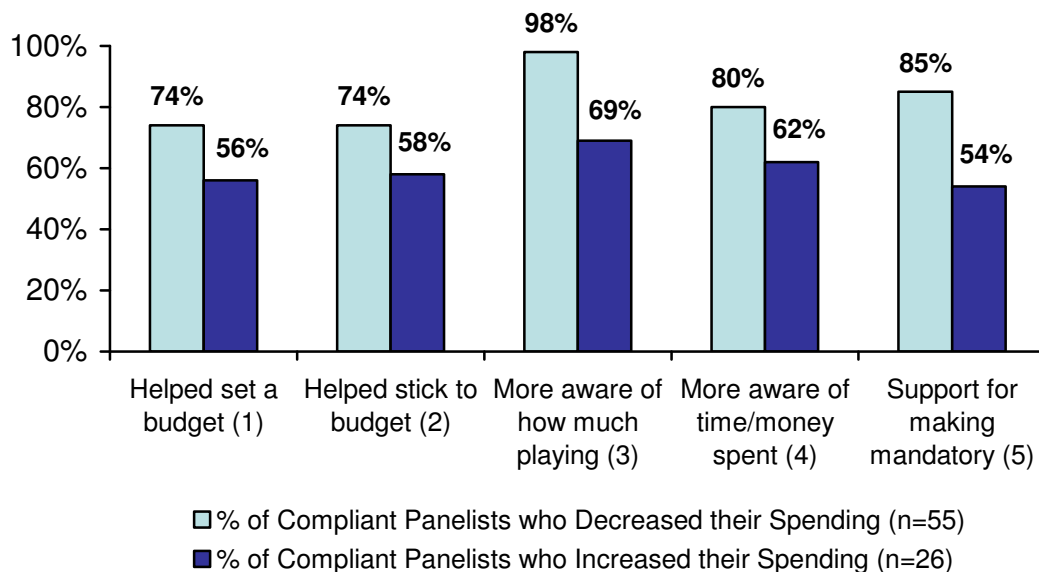
These calculations and comparisons in behavior changes are not possible for the “all cards” group of data since a baseline measurement of play behavior prior to the test was not collected and because sharing of cards means one card does not necessarily represent one player in the “all cards” group. However, since the compliant panelist group was similar to the remaining players in terms of PGSI profile and demographics, the changes seen in that group would be reasonably expected to be seen in the larger group as well if they used the system as intended.

## Perceptions of Features by Change in Spending

As might be expected, those compliant panelists who decreased their spending tended to be more favorable towards the features than those who had increased their spending, although the differences were not always large or statistically significant. For example, 75% of those who had decreased their spending gave a rating of 8 or higher for the card-system helping them set and stick to a budget compared to just fewer than 60% for those who had increased their spending. Similarly, most of those who had decreased their spending agreed they were more aware of how much they played (statistically significant difference), how much money they spent and how much time they spent as a result of the test. In all cases, agreement levels for those who had increased their spending were 20 to 30 percentage points lower, but the majority tended to still be positive. Support for making such a card-system mandatory was also higher for those who decreased their spending, coming in at 85% support compared with 54% support from those who increased their spending (statistically significant difference). Compliant panelists' perceptions of the card-system and its features are presented in Chart 11 with significant differences noted. (Due to insufficient sample, no comments can be made about the compliant panelists who did not change their spending by less than 10%.)

**CHART 11: Evaluating the Card system and Features by Change in Spending**

*Source: Panelist Surveys*



(1) and (2): Results from Panel Survey #2; % who gave a score of 8 or higher on a 10-point scale question

(3): Results from Panel Survey #2; % who agree or strongly agree; results are statistically significant

(4): Results from Panel Survey #3; % who agree or strongly agree

(5): Results from Panel Survey #3; % who support or strongly support; results are statistically significant

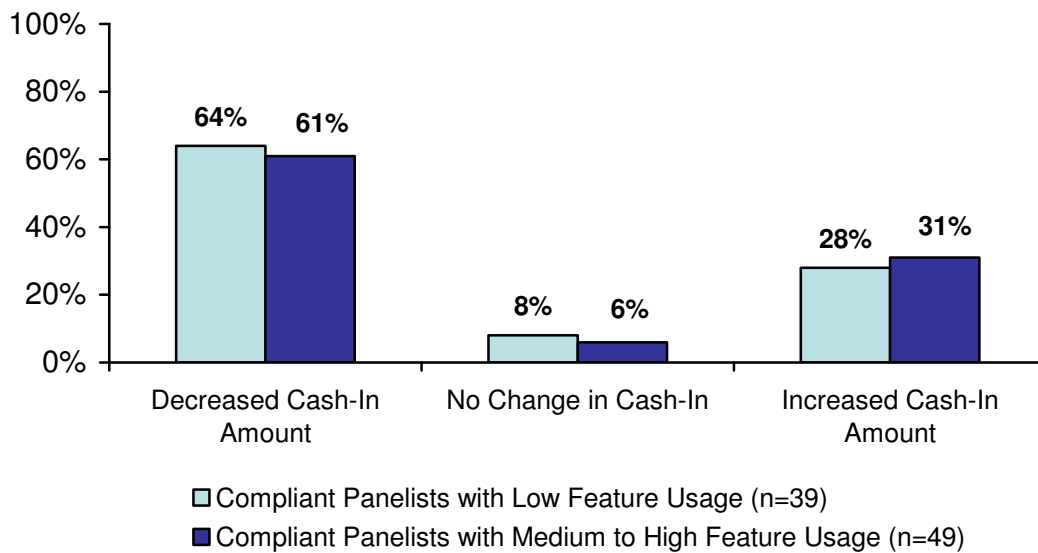
## Impact of Feature Use

There were only 6 people of the 88 who had not used any features during the entire test period. Unfortunately this is too small a number to analyze. As such, the people who used any of the features during the entire test period 10 times or less (39 people including those who used none are considered low usage) were compared to those who used any of the features more than 10 times (49 people who are considered medium to high users of features). There is no differentiation between the actual features used for two reasons: 1) different people may find different features more useful; and, 2) few people used anything other than My Account and Live Action screen.

Chart 12 shows the portion of compliant panelists who increased, decreased or did not change their VLT spending by their corresponding feature-use. The differences are not statistically different, showing that using or not using features does not have an impact on spending.

**CHART 12: Change in Spending by Feature Usage**

*Source: Card system Play Data*

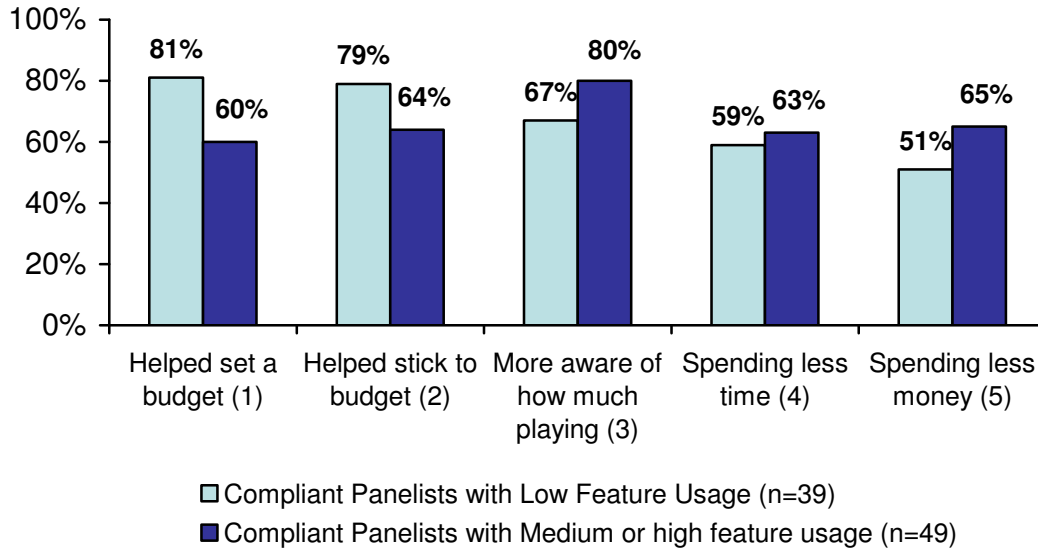


## Perceptions of Features by Use of Features

Examining the perception of the card-system by feature usage was interesting in that those with lower uses of features were more generous in their ratings of the system in helping them set a budget and stick to a budget (81% gave a rating of 8 or higher for the card-system helping them set a budget compared to 60% for those using features more frequently).

Those who were medium or high users of features were more likely to agree they were spending less time and money since using the system (approximately two-thirds compared to half for spending money from the low feature users). The medium and high users also agreed they were more aware (80% agree compared with 67% for the low users). Results are summarized in Chart 13.

**CHART 13: Evaluating the Card system and Features by Level of Feature Usage**  
*Source: Panelist Surveys*



(1) and (2): Results from Panel Survey #2; % who gave a score of 8 or higher on a 10-point scale question  
 (3), (4) and (5): Results from Panel Survey #3; % who agree or strongly agree

## Section 4: Analysis of Panelist and Non-Panelist Results

Data sources for panelists and non-panelists included card-system play data, panel surveys and intercept surveys. When discussing panelist play data, this included the 88 compliant panelists, while panelist survey data included up to 137 panelists (number of responses varied by survey and by question). The number of responses to non-panelist intercept surveys also varied by survey and question.

As previously mentioned, panelists were classified into one of four PGSI categories when they were recruited. Panelists were administered the nine PGSI statements a second time in Panel Survey #3. Of the panelists who completed the final survey, 128 responded to all nine statements. Interestingly, while over half of the panelists fell into the same PGSI category as the beginning of the study, a portion of the panelists changed categories. More panelists decreased their designation (such as from low-risk to no-risk) than moved into a higher category (such as from moderate-risk to problem gambler). No panelist increased by more than one category. Table 11 presents the actual shifts in panelist PGSI from the baseline survey to the final one. In summary, the following proportion of the 128 panelists changed (or did not change) their category in the following ways:

- 34% dropped into a lower PGSI category
- 52% did not change PGSI categories
- 14% moved into a higher PGSI category.

**TABLE 11: Change in PGSI Category from Baseline to Final—ALL Panelists  
(n= 128)**

*Source: Baseline Panelist Survey and Final Panelist Survey*

		Baseline PGSI Category			
		No-risk	Low-risk	Moderate	Problem
Final PGSI Category	No-risk	36*	18↓	7↓	1↓
	Low-risk	7↑	10*	10↓	4↓
	Moderate		6↑	14*	4↓
	Problem			5↑	6*

↑ indicates a panelist moved into a higher PGSI category at the end of the study

↓ indicates a panelist moved into a lower PGSI category at the end of the study

\* Indicates no change in PGSI category.

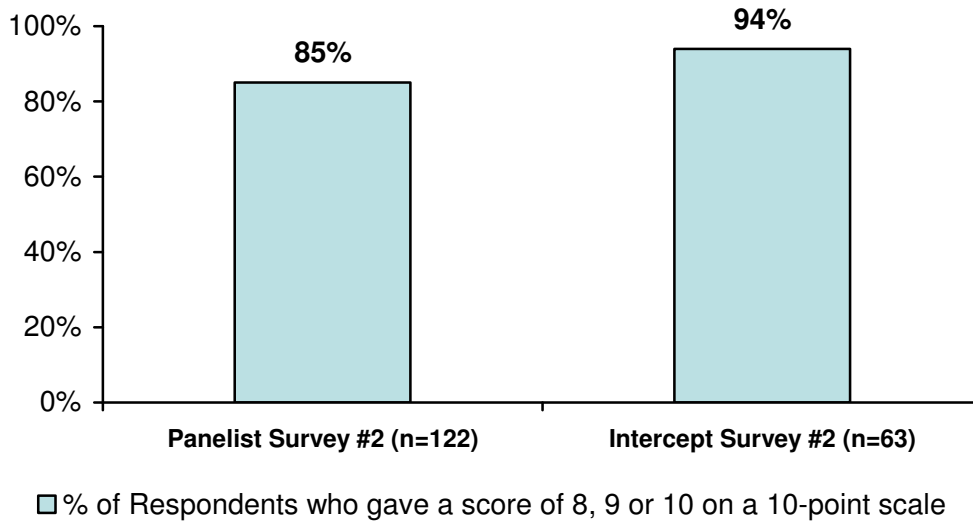
Since PGSI questions are asked in the context of the past 12 months, the cause or causes of this unanticipated finding is unknown. Possible reasons for the changes can only be speculated upon (not derived directly from research analysis); two of which may include:

- Participation in the research process (and the messages being delivered to players during the research) changed players perceptions of their own play, and they adjusted their responses to the PGSI questions accordingly; and,
- The card-system measures allowed players to better track their own behavior, therefore “educating” them about their own play, and, hence, caused them to re-evaluate their responses to the PGSI questions accordingly.

### **Ease of Enrolment**

On Panel Survey #2, respondents were asked to evaluate the ease of enrolment using a 10-point scale. Ratings of 8 or higher were considered positive ratings, and 85% of the respondents gave a score of 8, 9 or 10 out of 10 for the enrolment being easy. The results were consistent across PGSI categories, suggesting that enrolment was not an issue for most people. As depicted in Chart 14, ratings from non-panelists were similarly high with over 90% giving a rating of 8 or higher for the ease of enrolment.

**CHART 14: Evaluating the Ease of the Enrolment Process**  
*Source: Surveys*



### **Accessibility of VLTs**

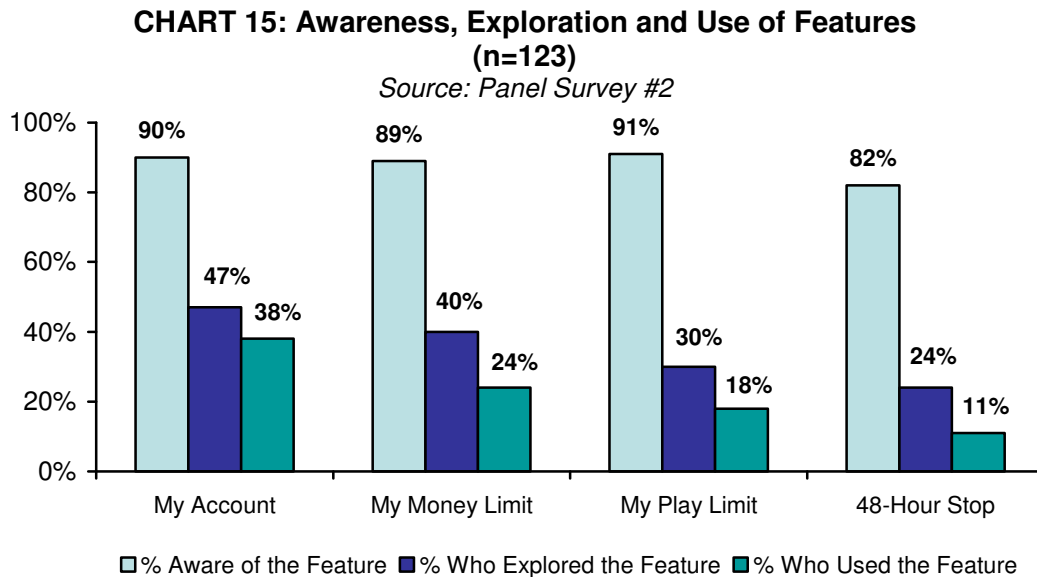
Panelists were asked their perceptions about the accessibility of VLTs in their area. This was in light of the changes as a result of the NS Gaming Strategy, the need to use a card to play VLTs in Windsor and Mount Uniacke, and the addition of 10 VLTs at Glooscap First Nation. Eight in 10 respondents to the second panelist survey felt the VLTs were either more accessible (36%) or the same (44%).

## Awareness and Use of Features

In the second panelist survey, respondents were asked of which features they were aware. With these panelists, awareness ranged from 82% for the 48-Hour Stop feature to approximately 90% for the other features. At the time of the second panelist survey, 53% said they had explored at least one of the features with the Account Summary and Money Limit-setting being the most common. At that point, 38% of the panelists had used My Account, 24% a Money Limit, 18% a Play Limit and 11% the 48-Hour Stop. Those who had used the various features rated them well with at least 70% of users giving a rating of 8 or higher for each feature.

The default screen that appeared during play was called Live Action and showed the account summary for the current playing session. Players could also choose to view this screen as they actively navigated through the screens of the card-system. Questions regarding use of this screen were asked on the third panelist survey.

A summary of awareness, exploration and usage of the four main features are presented in Chart 15 for Panelist Survey #2.

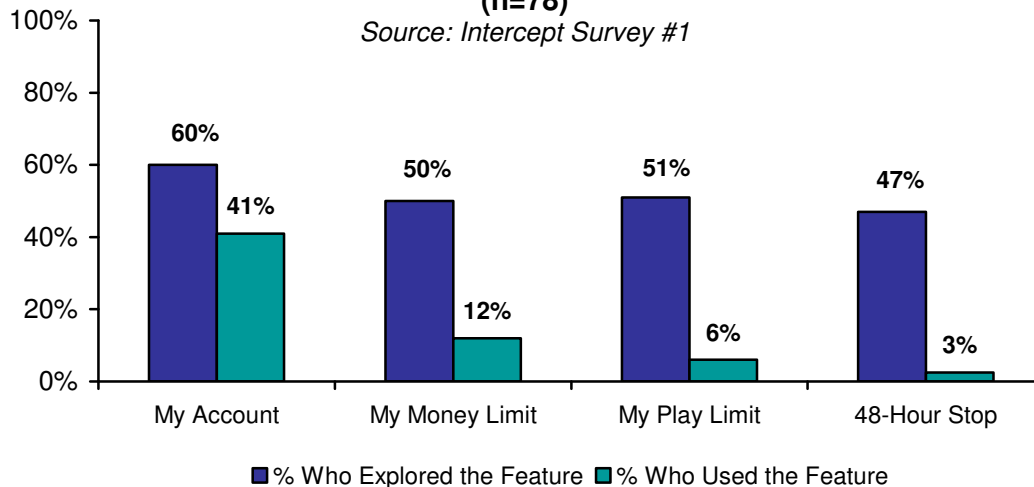


The proportion of non-panelists who reported exploring at least one feature was higher than for panelists. In their first survey, approximately 68% of non-panelists said they had explored any features. When asked about which specific features they used, My Account was used by the highest portion of respondents, as presented graphically in Chart 16.

**CHART 16: Exploration and Use of Features**

(n=78)

Source: Intercept Survey #1

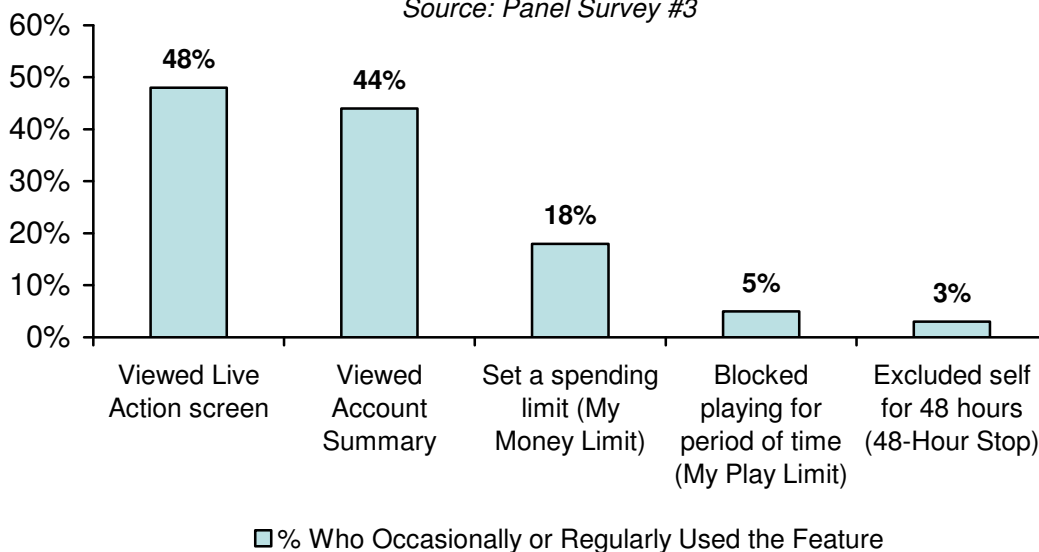


At the end of the study during the third panelist survey, respondents were asked again about their use of the various card-system features: the Account Summary, the Live Action Screen, set spending limit, time exclusion limit, or the 48-Hour Stop feature. As in previous surveys and actual usage, it is the My Account summary and the previously mentioned Live Action screen that have the most use. The Chart 17 shows the percentage of the sample that reported regularly or occasionally using each feature.

**CHART 17: Use of Features**

(n=131)

Source: Panel Survey #3



Respondents to Panel Survey #3 were also asked about how often they used their Players' Card as a key to turn on the VLTs without actually using any of the features (including

looking at their account summary). Approximately 60% of respondents indicated that they occasionally or regularly used their card as a key to access the VLTs.

Panelists who did not set a spending limit were asked why. Most of them, across all PGSI categories, said they had their own limits and did not need the help of the features. One problem gambler and two of those at moderate risk said they did not want their play to be restricted if they reached a limit.

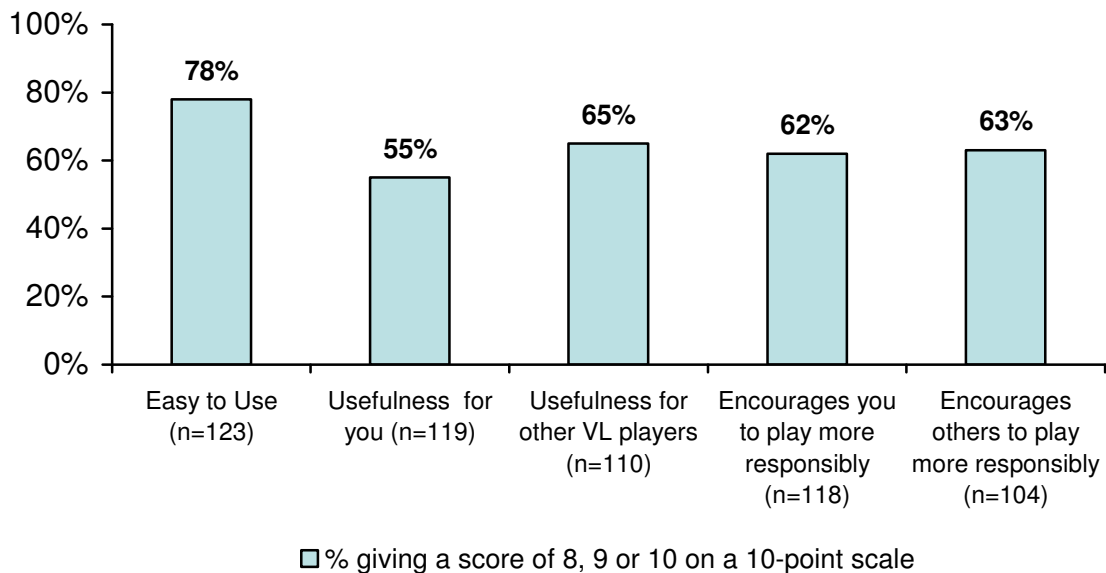
Prompted by focus group discussions about limit-setting, Panel Survey #3 asked how often panelists did not set a limit because they were waiting for a bonus to pay-out. Thirteen per cent indicated that they had either occasionally or regularly not set a limit because they were waiting for a bonus. While some players may not have used the limit-setting features because they felt they did not need the help, some avoided these features because it would interfere with their playing patterns.

## Experiences with the Card-System

Respondents to the second panelist survey were asked to evaluate the card-system's features by providing a rating between 1 and 10 (10 means excellent). All of these ratings were generally positive and are presented in Charts 18-A and 18-B.

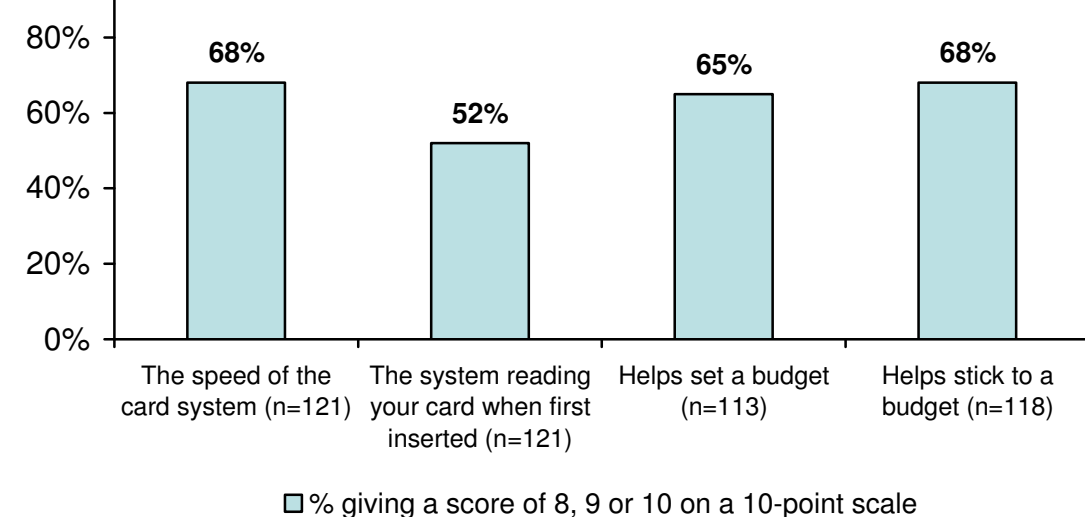
**CHART 18-A: Evaluation of the card system using 10-point scale  
(10 means excellent and 1 means poor)**

Source: Panel Survey #2



**CHART 18-B: Evaluation of the card system using 10-point scale  
(10 means excellent and 1 means poor)**

Source: Panel Survey #2

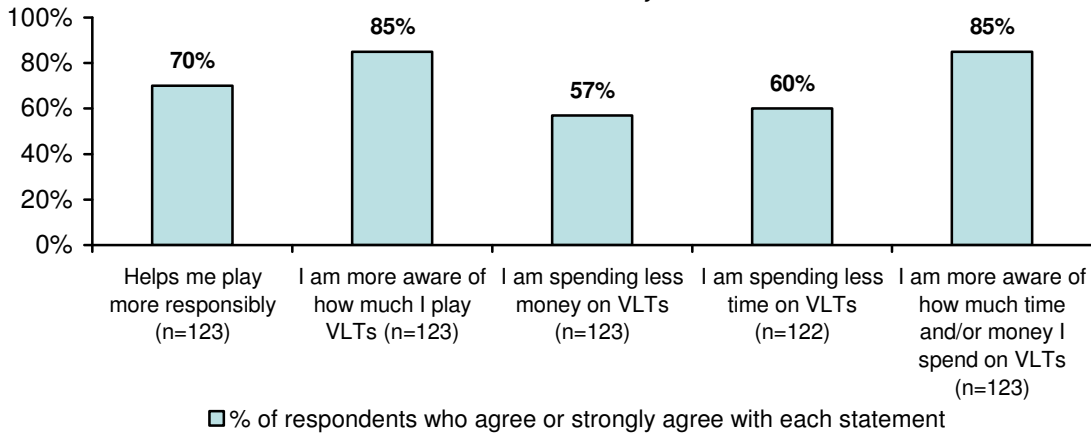


In Stage I, there was an issue with the card-system not reading a card when inserted. Results show that this issue was not entirely resolved. Only 52% gave a rating of 8 or higher for “the system reading your card when first inserted.”

A series of strongly agree to strongly disagree statements were also included on the second panelist survey. Agreement levels suggest a positive perception of the features offered on the card-system. Several of the agreement levels for these statements are shown in the Charts 19-A and 19-B. Agreement levels for feeling the features helps one play more responsibly at the overall level was 70%. Overall 57% of all panelists agreed they were spending less with a slightly higher percentage for the moderate-risk. A similar figure (60%) of all panelists agreed they were spending less time.

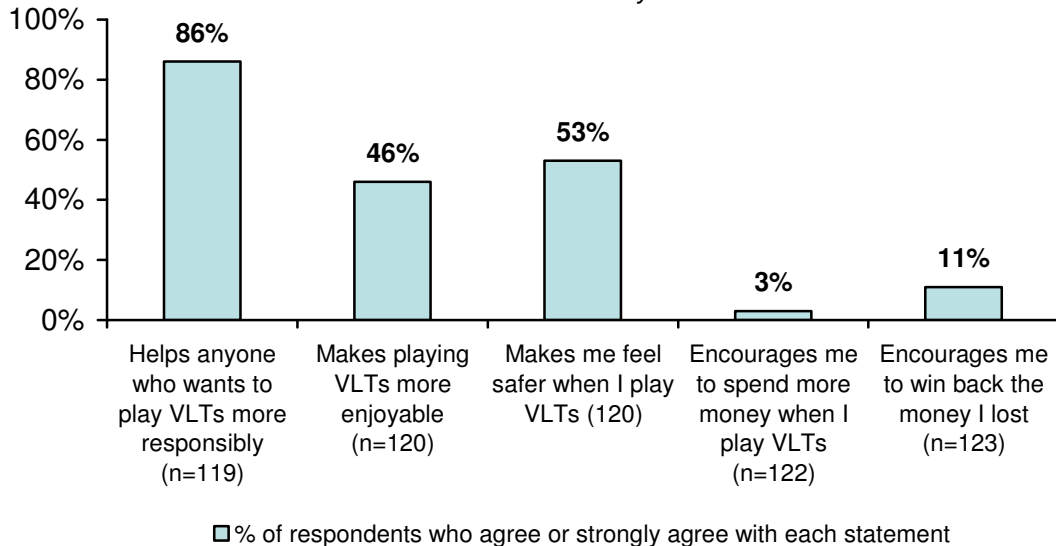
**CHART 19-A: Evaluation of the Card system Using Agree/ Disagree scale**

Source: Panel Survey #2



**CHART 19-B: Evaluation of the Card system Using Agree/ Disagree scale**

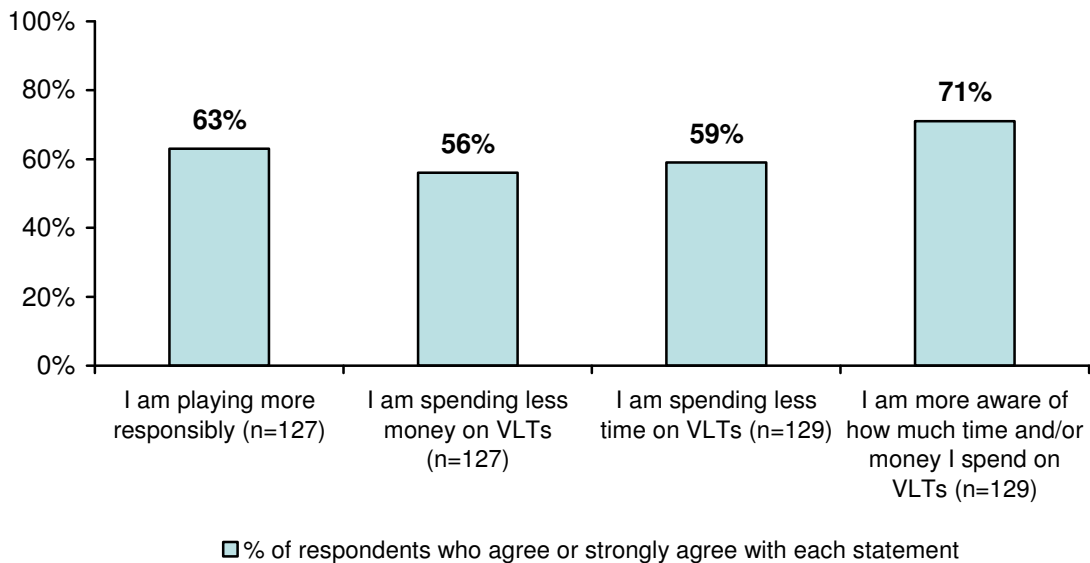
Source: Panel Survey #2



A similar series of strongly agree to strongly disagree statements were included on the final panelist survey. The statements dealt with responsible play, reduction of loss chasing, spending less time and money playing VLTs, and greater awareness of play. The evaluation results are presented in Charts 20-A and 20-B.

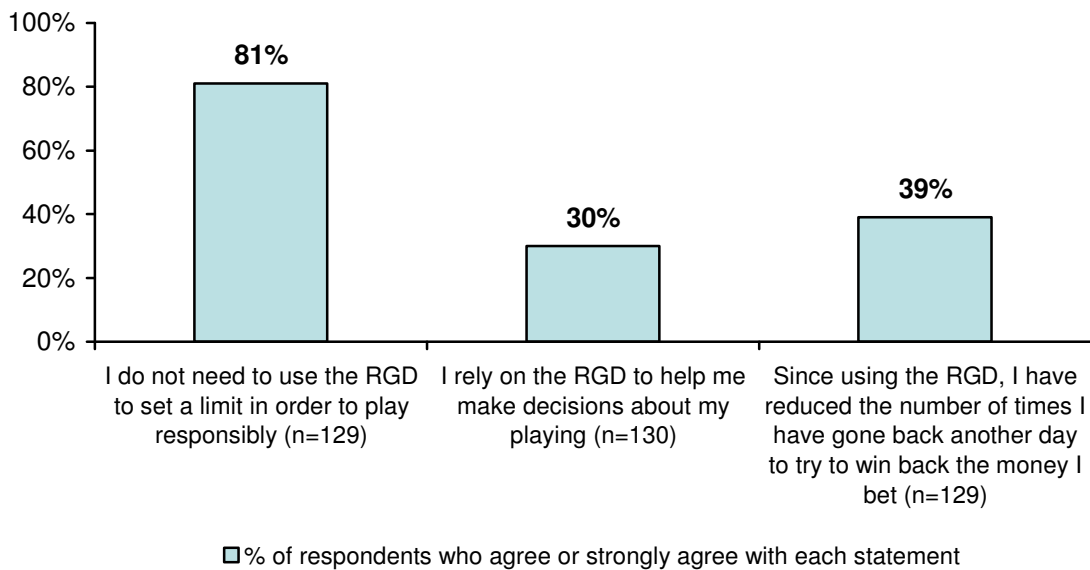
**CHART 20-A: Evaluation of the card system Using Agree/ Disagree scale**

*Source: Panel Survey #3*



**CHART 20-B: Evaluation of the card system Using Agree/ Disagree scale**

*Source: Panel Survey #3*



Almost two-thirds of the panelists agreed they were playing more responsibly since the card-system test began and this level of agreement is consistent across PGSI categories. Just over 20% of the non-panelists agreed the card-system helps them play more responsibly, which was in the range of the outcome measures that were established before the study began.

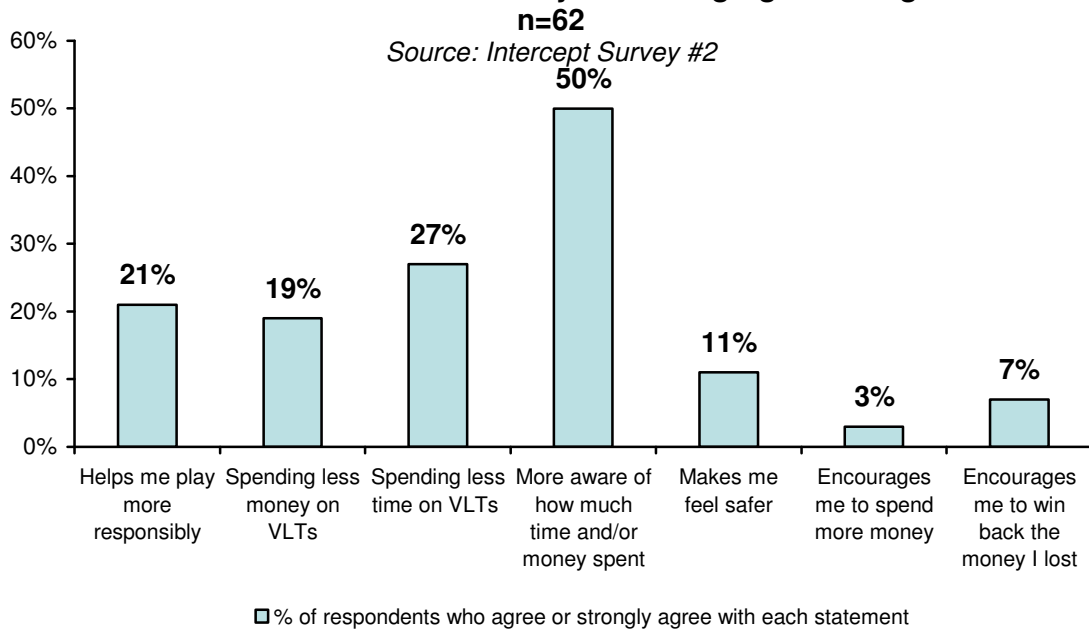
Almost all the low and no-risk players agreed they did not need the card-system to play responsibly. While the majority of moderate and problem gamblers also agreed they did not need the card-system for responsible play, their agreement levels were lower.

Thirty per cent of the panelists who responded to the Panel Survey #3 said they relied on the card-system to help make decisions about their playing. Agreement levels were lowest for the no-risk players and the problem gamblers.

Almost 40% of the panelists said they reduced their incidence of loss chasing. This figure was reasonably consistent across all the PGSI categories. Almost 60% agreed they were spending less money and less time playing VLTs since the test began. Finally, about 70% agreed they were more aware of their VLT play. All of these points suggest positive perceptions, control and awareness of play from those participating in the player panel.

The results for the non-panelists were less favorable than those gathered from panelists. Nineteen percent felt they were spending less money and 27% felt they were spending less time. Half (50%) felt they were more aware of their play. These lower scores were not unexpected, due to the nature of non-panelist participants being more resistant to the study in general. Non-panelist results from Intercept Survey #2 are presented in the following table:

**CHART 21: Evaluation of the Card system Using Agree/ Disagree scale**

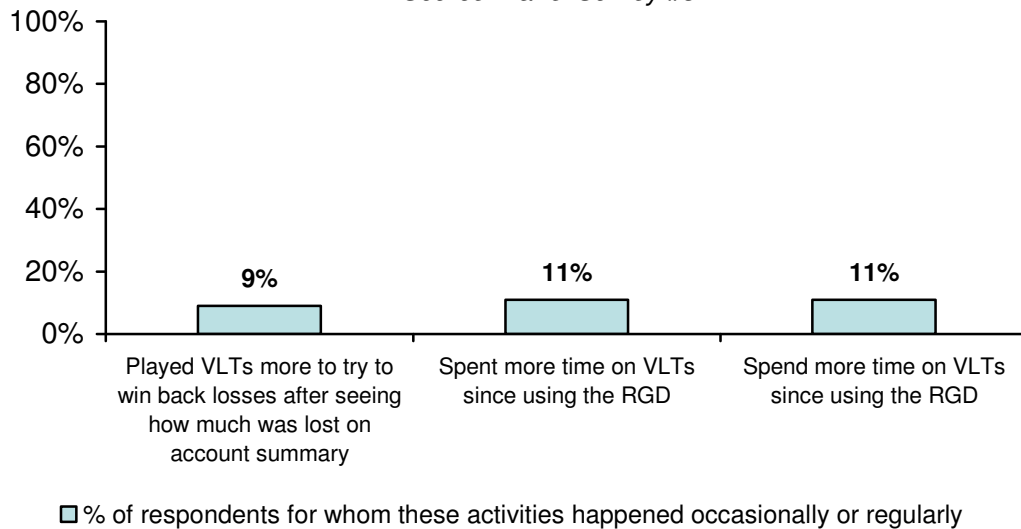


## Unintended Outcomes

As depicted in Chart 22, approximately 10% of the sample said they had played to try and win back money they lost after seeing their account summary, had spent more time or had spent more money since using the card-system. In all cases, prevalence was higher with the moderate-risk and problem gamblers. Approximately 20% of all survey respondents had one or more of the three listed unintended outcomes happen occasionally or regularly.

**CHART 22: Occurrence of Unintended Outcomes  
(n=131)**

Source: Panel Survey #3

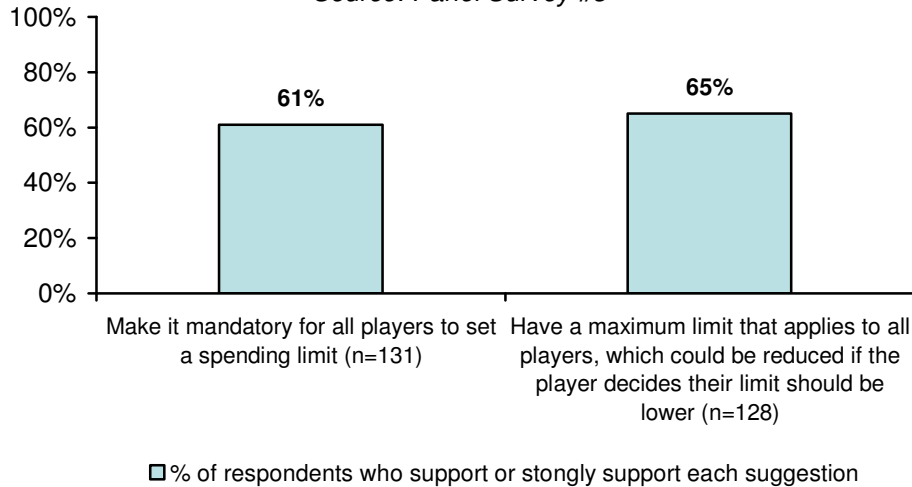


## Suggested Improvements

A number of suggestions to improve the card-system and features were made during the focus groups (see page 40) and in Panel Survey #3. Two suggestions - a mandatory spending limit and a preset maximum limit - were specifically tested for support in Panel Survey #3, which was the final panelist survey. Among panelists there was strong support for both of these suggestions with 61% supporting the mandatory setting of a spending limit and 65% supporting a preset maximum, as shown in Chart 23. A majority supported each suggestion in all PGSI groups.

**CHART 23: Support for Suggested Improvements**

Source: Panel Survey #3



### ***Understanding Limit-Setting***

Although not specifically a topic, some effort was made to explore limit-setting in Stage I. At that time, there was a lack of consistent agreement on: (a) whether limits should have to be set or not; (b) whether there should be a preset maximum; and (c) what that maximum should be. The topic of limit-setting was explored more extensively and intentionally in Stage III of the research project.

As just noted, the majority of panelists supported having to set a limit before someone can play VLTs. Half felt this should be a daily limit and the remaining half were split between having to set a weekly limit or a monthly limit. Support for a daily limit was stronger with moderate and problem gamblers.

A relatively small group of players felt that the limit should be set for, and to apply to, the playing session that is just about to happen. Most see the limit as being set less frequently but applying to every playing session. This sentiment was the same as expressed in the focus groups with a desire to have a limit set when the player was not “in the heat of the moment.”

Those who felt there should be a daily, weekly or monthly limit set were asked how high such a limit should be. The number of people who supported the daily, the weekly, or the monthly time periods were each small, so their suggestions should be considered guidelines. Over 60% of those suggesting a daily limit felt it should be \$100 or less. Almost half of those suggesting a weekly limit also thought it should be \$100 or less. Finally, seven out of ten of those suggesting a monthly limit felt it should be \$300 or less. One obvious problem with limits comes from those who want longer periods of time – a daily limit of \$100 would allow the player to spend \$700 through the week, but most of those who wanted a weekly limit set it much lower than this.

## Changes in Behavior

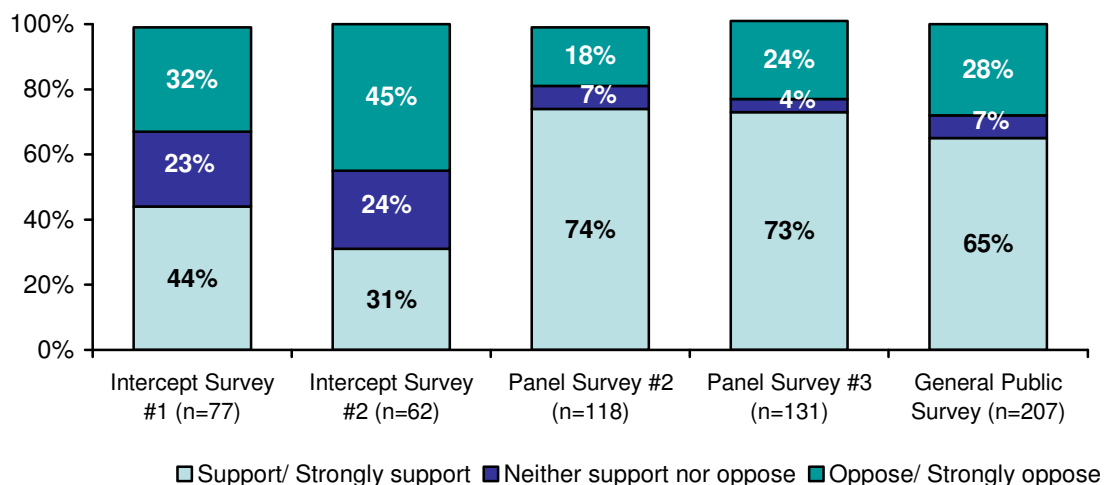
Recognizing that change happens in stages, three questions were included in Panel Survey #3. The first question asked if the card-system had caused them to *consider* treatment, help or other resources. Six of the 10 problem gamblers and 2 of the 23 moderate-risk panelist said it had. Two of the 10 problem gamblers and 2 of the 23 moderate-risk panelist said they were *planning* to seek treatment, help or some other responsible gambling resource and one in 10 said they had. Three (1 moderate-risk and 2 problem gamblers) of the 131 respondents indicated that they had *actively sought* treatment or requested help or other resources. None of the no-risk and low-risk respondents indicated that they had thought about, planned to, or had sought treatment of help as a result of the card-system.

## Support for Mandatory Card Use

Those who strongly supported or supported making a card-system such as the RGD mandatory across Nova Scotia are shown in Chart 24 for each of the surveys conducted. A clear majority of panelists and the general public support mandatory use of the player cards. For non-panelists, the figure is below the 50% target set prior to the beginning of this stage of the study.

**CHART 24: Support for Making a Card System such as the RGD Mandatory for Everyone who wants to Play VLTs in Nova Scotia**

Source: Surveys



## ***Highlights from Focus Groups***

The focus groups were largely consistent with the findings from the survey data. Because of the nature of focus groups, and the possibility for depth in questioning and exploration of specific topics, the messages from focus group participants were sometimes stated much stronger and could be explored in more depth for greater understanding than was possible from the survey data.

### ***INITIAL EVALUATION OF RGD***

At the beginning of each session, participants were asked to record a number between one and ten to describe how they felt about the card-system (10 is a high score). If we consider a score of 8 or higher to be a positive score, two of the four player groups were reasonably positive. Five out of eight of the moderate-risk players and four out of eight of the high-risk players gave an 8 or higher as their initial rating. Only two of eight of the no- and low-risk and one of eight of the non-panelists gave equally high scores.

The higher scores for the card-system related to the player having a greater awareness of their playing.

#### **PARTICIPANTS' COMMENTS:**

- Sometimes I do not realize how much I spend; gives me an opportunity to cut back myself.
- It gives you the truth; a true indication of what you are doing.
- Didn't make me [more aware personally], but I have two or three friends who it did make them aware instead of me pointing it out.
- They are useful to me; having a card I am more comfortable playing because it really tells me how much I am playing.
- The card helps you make good decisions; you can see the real numbers you have spent.

The lower ratings of the card-system often related to players knowing that it was not necessary to have to set a limit, and about it being easy to borrow cards from another players or from the playing establishments.

## ***SHARING OF CARDS***

The activity of sharing cards, and the high prevalence of the sharing among players was not expected prior to the commencement of the research. There was, however, an expectation that “bar cards” would exist (cards obtained by bar owners or staff, with the intention of lending them to people who did not want to get a card or use their own card, as a customer service to players) and plans were established in advance of Stage III to identify and remove these cards from the final data set.

Certainly, most players and retailers were aware that sharing of cards defeated the purpose of the card-system, and they recognized that the system was designed to be a one-player one-card system (players themselves noted: otherwise why have the process to obtain a card, why have a PIN, and why have replacement cards replicate the original card?). Even so, focus group participants estimated that as many as 20% to 30% or more of the players were sharing cards. Participants even reported situations where a card would be borrowed for up to a week and the borrower would take the card to several different locations to play.

### **PARTICIPANTS’ COMMENTS:**

- Bars have cards that they give out – seeing lots of it.
- Lots of people didn’t get a card; some stopped playing and some borrowed a card.
- You can just borrow from the bar and also there is sharing amongst players.
- Why lend? What difference [not to lend] does it make?
- Lots of people are using borrowed cards – about 20 out of 50 would be using someone else’s card.

## ***PLAYING OUTSIDE THE TEST AREA***

The regular players who did not get a card and those who opted to play exclusively outside of Windsor were not part of the panel or these focus groups so their rationale for not getting a card was offered from third-party sources via the focus group participants. A casual player might simply not want to bother with a card for their limited or infrequent play, but the main reason given for regular players not participating was concern that someone (i.e. the government) would know what they were spending.

### **PARTICIPANTS’ COMMENTS:**

- Concerned about privacy and personal information; why do you need all that information?

- Some people think the government is tracking them.
- [They will] track their spending and ask where the money is coming from.
- Seniors are scared they are going to lose their supplements.
- I heard a lot of people say they wouldn't get a card because they are worried the government is getting their information.

### ***USING FEATURES***

More active feature usage (such as limit-setting) was reportedly quite low amongst focus group participants. In general, the account summary was being used most often when people were using features. The sense was that since they didn't have to set limits they wouldn't.

### ***SUGGESTED CHANGES***

Participants were split into pairs during the sessions and asked to develop a short list of changes they would make to improve the card-system. These suggestions were very consistent across all player groups.

1. Players should have to set a limit.
2. Sharing of cards should be eliminated.
3. The card-system should be mandatory in all areas of the province (including First Nations locations).
4. People should be shown their account summaries (rather than allowing the player to decide if they want to look at it by pressing a button).

There were other suggested changes, but the four listed above were consistent across all the groups. The following discussion explores these four suggestion in greater depth:

Most participants felt the player should have to set a limit (either monthly or daily) when they first received their card, and that this limit would be in effect for the future. There were several comments about it being difficult to establish or stick to limits when “in the heat” of playing or when “on a roll”, so forcing the player to setting an initial limit was seen to be more effective.

Participants were adamant about eliminating the practice of lending and borrowing cards. They suggested a thumbprint scan to both assist in enrolment and as the player is signing-in to play (as opposed to a PIN) would be beneficial. As a further precaution, they felt the

players should be prompted to place their thumb on the screen to verify (from time to time) that the original player was still playing. This regular prompting to re-scan the fingerprint would make it more difficult for a player to lend cards to someone else to play with and then leave. They also suggested imposing fines for establishments caught providing cards (not the customer's card) to players, as well as penalties for "lenders" that including not allowing them to play for a period of time.

Having the card-system available in all areas of the province would simply prevent someone from avoiding the device if they have exceeded a limit. There was considerable anecdotal evidence that "many" people who formerly played in Windsor had decided not to get a card and were either playing elsewhere or were playing in Windsor with borrowed cards.

A few participants noted they had viewed their account summary early in the test, had been surprised by the amount they were spending, and had reduced that amount or adjusted their play as a result but did not necessarily use the card-system to set limits. Several said they were afraid to look at their account summary because they did not want to see how much they had spent (knowing that it was high). The fourth suggestion for improvement was made to ensure that players had to look at their account summary. Two suggestions were to print the account summary on the player's ticket or to display it before the player can access the VLT (the player would have to acknowledge the display by pressing an "OK" or "Continue" button)

### ***THE TECHNOLOGY***

Issues with the card reader not reading the card on the first insertion continued to be prominent with players. Many participants suggesting that they had to insert their card several times before it would be accepted, and indicated that this is more of an annoyance. Another issue that was raised was the use of a beep or "alarm" that sounds when the player has left their card in the device and had not played for a period of time, and also when they are trying to wager an amount that exceeds the amount they have left in their account. This was seen by a few people as the device requesting more money – possibly encouraging them to play more.

### ***SETTING LIMITS***

As noted, participants generally agreed that each player should have to set a limit as they enrolled to get their card. There was some debate over whether this should be a daily or

monthly limit and there was some debate over whether there should be a preset maximum on the card which no player could exceed – the majority felt it should be up to the player, and that there should not be a preset maximum. There were suggestions that people should have to undergo some sort of “means” test to determine what they can afford and what their limit should be, but this idea was not acceptable to most.

The concept of a card-system function that monitored their play and would alert the player to significant changes in their playing patterns was introduced and discussed in each group. The function would begin with a screen warning of the change in play and could possibly escalate to shutting the session down or a personal intervention. There was some limited interest in the concept of the screen warning and almost no interest in a system that included the more intrusive interventions.

### ***SITEHOLDERS***

The bar owners, managers and staff were notably more negative about the whole test and the card-system than were the players. In their initial rating, no siteholder gave a score for the card-system that was higher than 5 out of 10. They felt they had lost considerable business, that the test had discouraged casual play, and that many players were simply borrowing cards – thus defeating the purpose of the study. They were also quite critical of the technology itself, commenting on the number of times the machines were “down” and had to be serviced.

Siteholders strongly agreed the system should be removed at the end of the test, but if it was to be extended, that it should be introduced into all locations in the province. This was more of a “level playing field” comment from a business perspective, whereas the players felt something like the card-system should be in all locations so a player could not easily avoid it.

## Section 5: Analysis of General Public Data

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The General Public Survey was intended to gauge awareness, perceptions and support for the research initiative, the card-system and its features. Survey data for this component of the study was collected by telephone between February 15 and 22. A total of 400 interviews were completed. Data collection quotas were based on proportionate age<sup>4</sup>, gender and geographic representation (Windsor area versus Mount Uniacke area) within the test area. Households within each geographic area and the participants within each household were selected at random.

Overall, the margin of error (MOE) for results reported on the entire general public survey sample is  $\pm 5\%$ . The MOE increases for the analysis of key subgroups within the population. The reliability of the sample is considered quite positive, though, as with all telephone surveys conducted, there does exist the possibility of a non-response bias.

All respondents were asked an unaided and aided awareness question regarding the test, and of those who were aware, participants were asked further questions regarding the card-system and responsible gaming features.

Besides examining awareness and perceptions of the card-system, the General Public Survey was also designed to measure the following unintended outcomes:

- Evidence that the card-system may have discouraged casual players from playing VLTs;
- Evidence that the card-system may have encouraged VLT players to leave the Windsor and Mount Uniacke area for VLT play; and
- Evidence of players borrowing or sharing cards to play.

Given the sample size of 400 and an expected small group of VLT players (based upon the approximate incidence of VLT players in general), it was recognized that it would not be possible to arrive at definitive statements regarding the amounts of play that was discouraged and migration of play from Windsor and Mount Uniacke.

As noted earlier, revenues from the test area and the surrounding area also illustrated that play migrated from the Windsor and Mount Uniacke area to surrounding locations.

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<sup>4</sup> Despite the presence of data collection quotas, the final sample did not perfectly correspond with the population with respect to age, with a slight skew away from the youngest age category (18-29) to the middle age categories. This was not considered a significant issue in reporting the results of the survey.

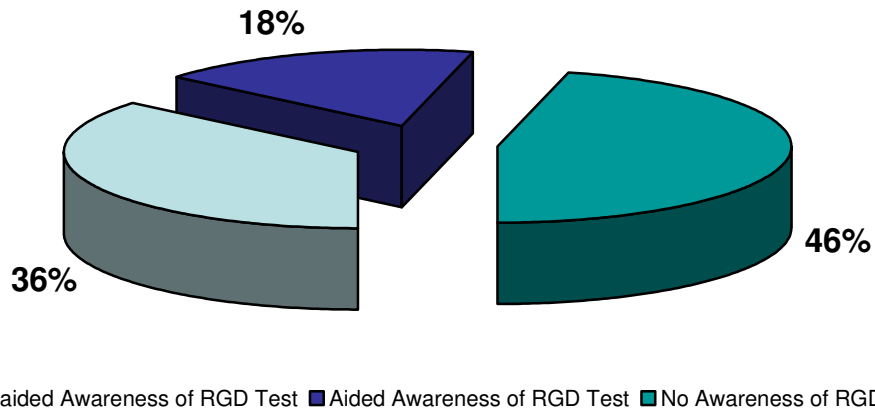
## **Awareness and Evaluation of the Card-System**

The General Public Survey posed questions to measure both unaided and aided awareness of the testing of the card-system. On an unaided basis, 36% of the sample was aware of the test. When given an additional short description, awareness increased to a total of 54%. The overall levels of awareness are presented in Chart 25.

Respondents were also asked how many times they were in a bar or Legion in the test area in the past month. Given that only 31% of respondents had been to a bar or legion within Windsor or Mount Uniacke at least once in the previous month, this was a high level of awareness.

**CHART 25: Awareness of the Test**  
(n=400)

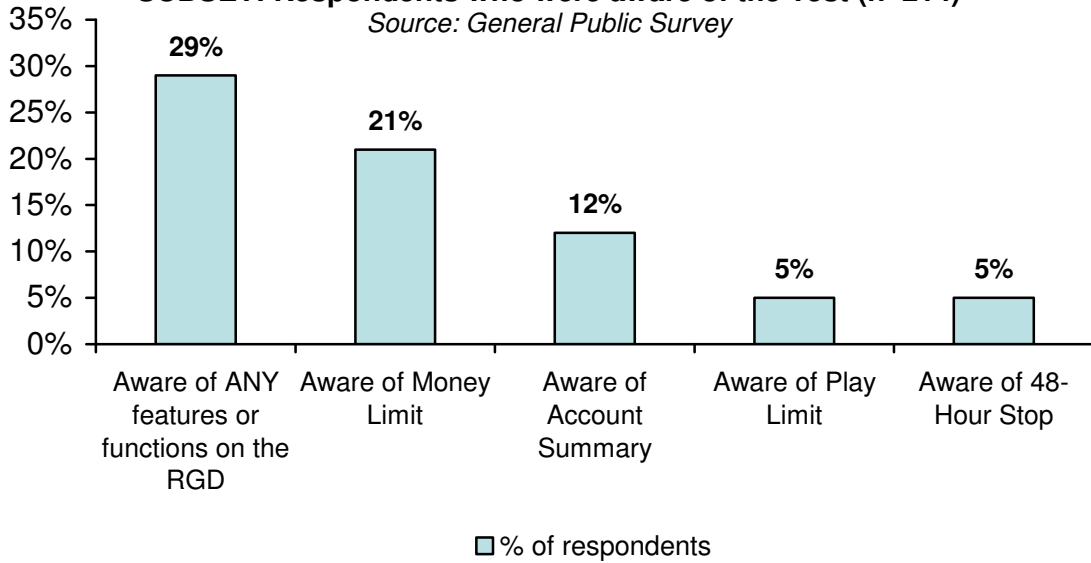
Source: General Public Survey



Of the 54% of respondents aware of the test, approximately one-third (29%) were specifically aware of at least one of the features of the card-system. About 20% of respondents who were aware of the test were aware that players could set money limits and 12% knew players could view account information. Only 5% of those who were aware of the test were aware of the 48-Hour Stop feature and the ability to block play on certain days. These statistics are presented graphically in Chart 26.

**CHART 26: Awareness of Features**  
**SUBSET: Respondents who were aware of the Test (n=214)**

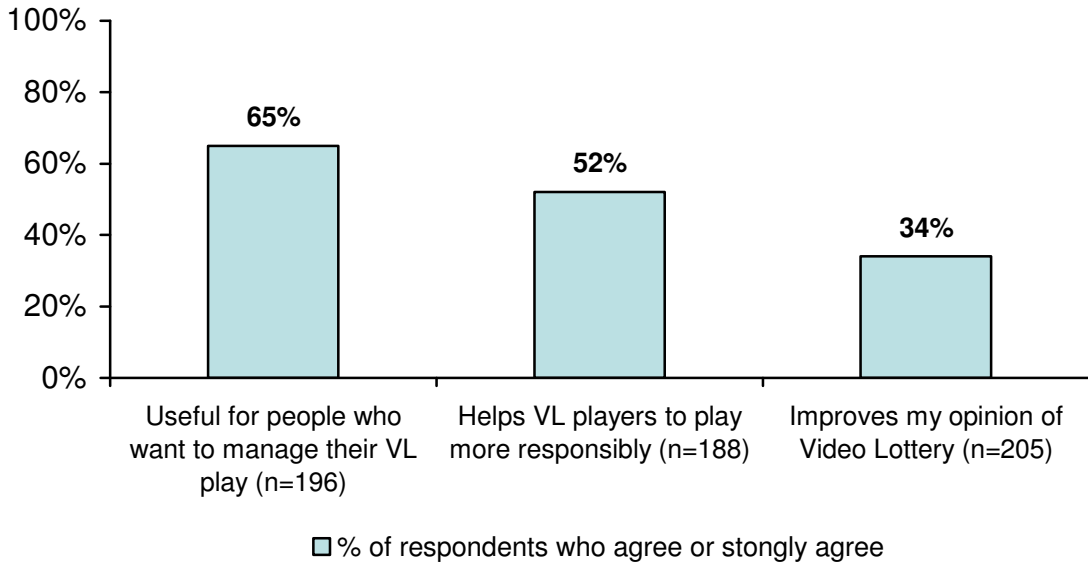
Source: General Public Survey



Those who were aware of the card-system were asked for their level of agreement with three statements. These results are shown in the Chart 27 which depicts the percentage of respondents who agree or strongly agree with each statement about the card-system. A majority believed the card-system was useful for people who wanted to manage their video lottery play. Approximately half believed it helped with more responsible play, and one third stated having the card-system available improved their opinion of video lottery.

**CHART 27: Evaluation of the Card system**  
**SUBSET: Respondents who were aware of the Test**

Source: General Public Survey



Those who were aware of the card-system were also asked if they supported or opposed making such a card-system mandatory for anyone who wants to play VLTs in Nova Scotia. As presented in Chart 24 on page 56, respondents showed strong support for mandatory use (65% strongly support or support).

### **Video Lottery Play**

This survey included randomly selected adults in the Windsor and Mount Uniacke area. No attempt was made to over or under-sample VLT players. As such, the proportion of VLT players in the sample is representative of the proportion in the population (within the margin of error of 5%). As a caution, the percentage of VLT players was not expected to be more than 10 – 15% of the sample. Therefore, any analysis of VLT players will have a higher margin of error and should be considered directional in nature.

A total of 55 people or 14% of the sample said they had played VLTs in the past year. This is similar to the 15.4% found in the ALC's ongoing monthly tracking studies. These players divided almost evenly into three groups – those who had played only in the test area, those who played outside the test area, and those who had done both.

Of those questioned who had played in the past year, 6 in 10 responded they had played since the test began in October. Most of the reasons for not playing since October were not related to the card-system or the player's card. These included not playing regularly enough, not being interested in playing, having concerns about the amount of money being spent, and fears of developing problems with gambling. Three people did refer to the card-system and suggested they had stopped playing because the process involved with getting a card was a "bother."

Those who were aware of the study but were not video lottery players were as likely to support mandatory use of the card (66% compared with 65% for the whole sample).

The 31 people who said they had played VLTs since October (considered "current players") were asked a series of questions about where they played, how much they played, and whether they felt their play had increased or decreased.

Most of the people identified as current players did not play frequently. Less than half said they played monthly or less, about one-third played a few times a month, about one-quarter played a few times a week or once a week, and only a few people said they played more than once a week.

Although the sample of current players was relatively small within the data set, and the number of responses was obviously even smaller, a couple of current players indicated playing *more* often, spending *more* time and/or spending *more* money since the test

began. None of the reasons offered by these respondents regarding why they were playing more were directly related to the card-system.

Some respondents indicated spending *less* time (13 of 30 respondents) or *less* money (11 of 29 respondents). Again, the number of records was small but there were a few references which attributed playing less to the card-system and features. One person who said they were playing less often noted that the card disrupted their play and one person said they felt there was less chance to win with the card. One person who offered that they were spending less time said the card made them more aware of the time they were spending on the VLTs.

One quarter (or 8 of 31) of the current players said they did not have a player's card. Two of those people said the reason they did not have their own card was because they could borrow a card from someone else. About one-third of the current players said they regularly played outside Windsor and Mount Uniacke before October, and about half had done so since October.

## **Section 6: Outcome Measures & Findings**

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The focus of Stage III was to assess the actual behavioral impact of the card-system and its' features. A number of outcome measures and other findings were set for Stage III as a means to measure the effectiveness of the card-system and features, and whether positive behavioral changes occurred.

### ***Background***

Using results from Stage I and in consultation with NSGC and ALC, outcome measures were developed for Stage III. Several factors were considered in setting targets for these measures and the following guiding principles were incorporated:

- The target had to be set high enough so that the features were deemed to have made a measurable difference (i.e., the same result would not have happened without the features). Having said that, the target was not to be set so high that even strong performance would be considered failure;
- Measures were not all mutually exclusive. This meant that achieving or exceeding most measures and not achieving others did not necessarily mean the card-system was not effective; and,
- There were no “sentimental” targets (i.e., if one person felt the card-system was helpful, then it was a success).

Based on the outlined objectives for Stage III, the outcome measures and related targets for this project were classified into three categories:

- 1) Awareness;
- 2) Attitude; and,
- 3) Behavior.

Additional information was also collected and analyzed to assist with the overall assessment. The outcome measures were reviewed by research and problem gambling expert, Dr. David Korn from the University of Toronto, to ensure validity and appropriateness.

As well, a variety of sources were used to draw findings about the effectiveness of the card-system and its features. Specific attention was paid to whether or not the system resulted in positive behavioral change.

Much of this behavioral change analysis was conducted using data from the 88 panelists who used their own card all or almost all of the time they played. These panelists were similar in PGSI profile and demographics to those panelists who were more active in the sharing of their cards. The 88 panelists were also similar to the non-panelists in the

Windsor area, when comparing their PGSI profile and demographics. This leads to the conclusion that the 88 panelists are considered to be reasonably representative of other video lottery players. However, there are not sufficient numbers to allow for analysis by all of the PGSI groups. If the no and low-risk categories are considered together, some comments can be made. In particular, there were not enough problem gamblers to make definitive conclusions about them. However, it is important to note that the system is targeted at the no, low-risk players, as well as some moderate-risk players.

Overall, there are positive indicators from this study, several of which suggest that the card-system did have an impact.

### Summary of Outcome Measures

Table 4 summarizes the outcome measures established prior to the beginning of Stage III data collection. Detailed descriptions of each measure are presented in the following table. **Please keep in mind that, in some cases, results are based on a relatively small number of records and, as such, some are directional results.** Also keep in mind that panelists tended to be more positive than non-panelists in their evaluations of the card-system and the test in general, and that the compliant panelists used in any analysis of play data represent only those who generally used the card as expected. Those who avoided the card or the test in general may not be as strongly represented here.

**TABLE 4: Summary of Outcome Measures**

Legend	● = Reached Target
	● = Insufficient Sample
	● = Did not Reach Target

		CPGI Category	Outcome Measure	Target	Reached Target?
<b>Awareness Measures</b>	1	All Players	Indicate awareness of available features and functionality	50%	●
	2	All Players	Indicate actual usage of at least 1 feature	50%	●
<b>Attitude Measures</b>	3	No-risk	Felt the card and features helped them continue to make healthy, informed decisions about their play	20%	●
	4	Low-risk	Felt the card and features encourage responsible play	20%	●

		CPGI Category	Outcome Measure	Target	Reached Target?
	5	Moderate-risk	Felt that using the card and features helped them to spend less time and/or money	20%	●
	6	Problem Gamblers	Indicate that use of the card and features has changed their attitude about their personal play habits (i.e. made them realize they had a problem)	10%	●
	7	All Players	Support mandatory use of player cards	50%	●
Behavior Measures	8	No-risk/ Low-risk	Reduction in the average monthly spending	No more than 15%	●
	9	No-risk/ Low-risk	Migration to playing areas outside the test region as a result of the test	No more than 5%	●
	10	Moderate-risk	Reduce their average monthly spending	20%	●
	11	Moderate-risk	Reduce the length of their sessions by 10%	20%	●
	12	Moderate-risk	Reduce their frequency of play	20%	●
	13	Problem Gamblers	Indicate that, as a result of using the card and features, they are considering, are planning to or have decided to actively seek treatment and/or request help or other resources for their problem	10%	●
	14	All Players	Have an active pre-set spending limit on the card-system during each play session	10%	●

## **Awareness Measures**

***Outcome Measure #1: At least 50% of all participating players indicate awareness of available features and functionality***

Although awareness varied across groups, according to surveys conducted with panelists and non-panelists (through the General Population Survey and intercept surveys), this measure was reached.

Panelists, non-panelist video lottery players and the general public were asked about their awareness of the various features. More specifically, Panel Survey #2 conducted in December 2005 collected responses from 123 panelists about their awareness of the four categories of features, Intercept Survey #1 (conducted in January 2006 with non-panelist VLT players) asked 78 respondents if they had explored any features and, if so, which ones (list was read), and the General Public Survey (conducted in February 2006) asked 27 VLT players about their awareness of features. If the respondents to the General Public Survey were aware of any features, they were asked to identify the feature or features, and the responses were coded appropriately. The list of features was not read. A summary of the results are shown in Table 5.

**TABLE 5: Summary of Feature Awareness**

	Panel Survey #2 (n=123)	Intercept Survey #1 (n=78)	General Public Survey (n=27)
Overall Awareness	n/a	68%	74%
My Account	90%	60%	52%
My Money Limit	89%	49%	56%
My Play Limit	91%	50%	22%
48-Hour Stop	82%	46%	19%

***Outcome Measure #2: At least 50% of all participating players indicate actual usage of at least 1 feature during the test***

Questions regarding usage of features were asked in Panel Survey #2, Intercept Survey #1, Panel Survey #3, and information was also collected from the play data for compliant panelists.

As with outcome measure #1, usage varied across groups. It is clear from the results in Panel Survey #3 and from the play data that over 50% of players used at least one feature by the end of the test. Panel Survey #2 (conducted in December 2005) and Intercept Survey #1 (conducted in January 2006) both listed the features and asked which of them the respondent had used. Panel Survey #3 (conducted in March 2006 near the end of the test) asked respondents how often they used each of the features (including viewing the Live Action screen) – the results presented in Table 6 are the percentage of respondents who used the feature at least once. The play data in Table 6 is for the 88 compliant panelists and represents the percentage of respondents who actually used the feature at least once. (See page 14 for a description of compliant panelists).

**TABLE 6: Summary of Feature Usage**

	Panel Survey #2 (n=122)	Intercept Survey #1 (n=78)	Panel Survey #3 (n=131)	Play Data (n=88)
My Account	38%	41%	61%	84%
My Money Limit	24%	12%	36%	17%
My Play Limit	18%	6%	16%	8%
48-Hour Stop	11%	3%	11%	4%
Live Action	n/a	n/a	59%	75%

## **Awareness Findings**

### ***Finding #1 – General public awareness and perceptions of the card-system were positive.***

The general public in the Windsor and Mount Uniacke area knew about the card-system and had positive things to say about it. Just over half of the adult population in the area was aware of the card-system, and approximately 33% knew about at least one of the card features. Of those who were aware of the card-system, 65% felt it was useful for people who wanted to manage their play, 52% felt it helped with more responsible play, and 34% thought it improved their own opinion of video lottery.

### ***Finding #2 – People underestimated how much time and money they were spending on VLTs.***

A comparison of self-reported play levels versus actual levels recorded by the card-system showed that people underestimated the time and money they were spending on VLTs.

Self-reported play patterns compared with actual play data was used to assess the effectiveness of the card-system and its features among the panelist group. The key element of play patterns included cash-in, minutes played and number of sessions played. Comparing information from panelist surveys with actual play data, some key findings emerged for these three key pieces of play information.

Self-reported cash-in amounts were under-estimated by a factor of seven on average. The number of sessions played was under-estimated by a factor of three. The number of minutes of play reported varied by activity level. For example, panelists who estimated that they played up to four hours in the month tended to have under-estimated by a factor of 2.5; panelists who reported spending more than four hours and up to 12 hours playing in the month tended to be under by a factor of 1.3; and panelists who reported playing more than 12 hours in the month actually tended to have just slightly over-estimated and hence have a correction factor of 0.9. This is summarized below:

**TABLE 7: Summary of Correction Factors**

<b>Playing Attribute</b>	<b>Under/Over Estimated</b>	<b>Multiplier</b>
Cash-In Amount	Under	7 x
Number of Sessions	Under	3 x
Minutes Played (up to 4 hours)	Under	2.5 x
Minutes Played (4 -12 hours)	Under	1.2 x
Minutes Played (more than 12 hours)	Over	0.9 x

It is clear from an examination of reported play levels and actual levels as recorded by the card-system that players were underestimating the amount of money and time they spent on VLTs. This finding has implications for studies that rely on self-reported data because it can clearly be inaccurate.

## ***Attitude Measures***

Results for these measures were quite positive in Stage I. For example, 87% of Stage I panelists support mandatory card use. The rationale for setting relatively lower targets for Stage III was based on the fact that use of the card-system was no longer voluntary (those who volunteered in Stage I may have been more receptive to changing their playing and attitudes) and that the test period was significantly longer (some may have changed their attitudes for a short time and then changed back).

### ***Outcome Measure #3: At least 20% of no-risk players feel the card and features helped them continue to make healthy, informed decisions about their play***

This outcome measure was based on the assumption that no-risk players (who scored 0 out of a potential 27 points on the PGSI portion of the CPGI) were making healthy, informed decisions prior to the study beginning, which was when they were classified as being a no-risk player. Because it is difficult to directly measure whether a person continues a pre-existing, positive behavior, results of negative behavioral changes were considered.

Of the sixty-two no-risk panelists to respond to Panel Survey #3, none played VLTs more to try to win back their losses after seeing how much they lost on their account summary, 3% did not set a limit because they were waiting for a bonus to pay-out, 5% spent more money on VLTs since using the card-system, and 6% reported spending more time on VLTs since using the card-system. This suggests that the majority of no-risk panelists did not adopt negative behaviors as a result of the card-system test. Also supportive of this finding was the tendency toward positive behavior changes such as the 27% of no-risk players who reduced their loss-chasing and the 18% who relies on the card-system to help them make decisions about their play. All of these results indicate that this outcome measure was reached.

### ***Outcome Measure #4: At least 20% of low-risk players feel the card and features encourage responsible play***

Analysis for this measure originated from three sources: Intercept Survey #1, Intercept Survey #2 and Panel Survey #3. In each of these cases, the sample size was small, ranging from 16 to 31 responses from low-risk players. While the results presented below tend to be directional, they suggest that this outcome measure was reached, keeping in mind that non-panel intercept participants tended to be less positive of the project in general, and that the more encouraging results come from the panelists.

Results from Intercept Surveys with non-panelist players who were classified as being “low-risk”:

- 7 out of 17 gave a score of eight (8) or higher on a 10-point scale for the card-system encouraging them to play responsibly
- 6 out of 16 gave a score of eight (8) or higher on a 10-point scale for the card-system encouraging others to play more responsibly
- 4 out of 16 agreed or strongly agreed that the card-system helped them play more responsibly

Results from Panelist Surveys for participants who were classified as low-risk:

- 21 out of 31 gave a score of eight (8) or higher on a 10-point scale for the card-system encouraging them to play more responsibly
- 14 out of 25 gave a score of eight (8) or higher on a 10-point scale for the card-system encouraging others to play more responsibly
- 23 out of 31 agreed or strongly agreed that the card-system helped them play more responsibly
- 27 out of 31 agreed or strongly agreed that the card-system helped anyone who wanted to play more responsibly
- 20 out of 29 agreed or strongly agreed that they were playing more responsibly since the test started

***Outcome Measure #5: At least 20% of moderate-risk players felt that using the card and features helped them to spend less time and/or money***

Again, a relatively small number of respondents of each survey were categorized as being moderate-risk players. Panelists tended to generally be more positive than non-panelist players on most factors and this is the case for this measure. Three of 14 moderate-risk respondents to the intercept surveys (conducted with non-panelists) agreed or strongly agreed that they were spending less money since using the card-system, and three agreed or strongly agreed that they were spending less time on VLTs since using the card-system. Alternatively, the panelists, who were more positive, tended to be more likely to feel that they were spending less time or less money since using the card-system. Results are summarized in Table 8. While it is not possible to confidently report that this outcome measure was reached with the group of non-panelists who responded to the intercept surveys due to the small sample size and subsequent directionality of that data, the results from panelists indicate that the 20% threshold has been met and exceeded.

**TABLE 8: Summary of Spending Less Time or Less Money**

	Intercept Survey #2	Panel Survey #2	Panel Survey #3
Spending less money on VLTs since using the RGD (n-values)	21% (n=14)	64% (n=39)	71% (n=23)
Spending less time on VLTs since using the RGD (n-values)	21% (n=14)	74% (n=39)	71% (n=24)

***Outcome Measure #6: At least 10% of problem gamblers indicate that use of the card and features has changed their attitude about their personal play habits (i.e. made them realize they had a problem)***

According to the results from Panelist #2, 5 of the 13 problem gamblers who responded to the survey indicated that, as a result of using the card-system, they had realized something about their VLT playing that was bothering them. The majority of the issues that were bothering them were related to the recognition that they were playing more than they thought they were, or that they realized they had a problem. As indicated in outcome measure #8, panelists may be more cognitive of changes as a result of their participation in the study. With such a small number of records, it is difficult to say that 10% of all problem gamblers would have changed their opinion about their personal playing habits. It is not possible to confidently report that this outcome measure was reached with the number of responses available.

***Outcome Measure #7: At least 50% of all participating players support mandatory use of player cards***

A question regarding the level of support for making such a system mandatory for everyone who wanted to play VLTs in Nova Scotia to use a card such as the one being tested in Windsor and Mount Uniacke. The General Public Survey, from which a subset of video lottery players was analysed, showed that 63% of video lottery players support or strongly support making the cards mandatory. Non-panelist intercept surveys showed lower degrees of support (44% in Intercept Survey #1 and 31% in Intercept Survey #2), and panelist surveys showed a higher levels of support (74% in both Panelist Survey #2 and Panelist Survey #3). The General Public Survey, which provided a balance between those who were heavily involved in the test to those who may have been more resistant to the test, indicated that this outcome measure was reached.

## ***Attitude Findings***

***Finding #3 – Panelists had positive perceptions of the features offered on the card-system. Non-panelists were less positive.***

Virtually all of the panelists were aware of the various features on the card-system. Those who had experience with the features were asked to evaluate them, and these ratings were positive. For example, approximately 60% of those who had experience with the features gave a rating of eight or higher on a 10-point scale for encouraging more responsible play, helping them set a budget and stick to it.

Panelists agreed the features helped them to play more responsibly (70%), to spend less money (57%) and less time (60%), and to be more aware of their play (85%).

Non-panelists were less positive with 19% saying they were spending less money, 27% agreeing they were spending less time and 50% saying they were more aware of their play. Reasons for the less positive experiences of non-panelists would be speculative, but would likely be related to their level of support for the system in general; more likely than not, most of those who completed the non-panelist surveys were asked at some point to participate in the research study as a panelist, and would have declined. Overall resistance to the technology and/or the test could be assumed to be stronger for this group as opposed to their “engaged” counterparts: the research panelists.

***Finding #4 – Those who decreased their spending were even more positive about the system.***

Seventy-five per cent of those who decreased their spending gave the card-system a rating of eight or higher for helping them set and stick to a budget. For those who had increased their spending, 60% gave a rating of eight or higher. Similarly, most of those who had decreased their spending agreed they were more aware of how much they played and how much time and money they spent as a result of the test. Support for making such a system mandatory was also higher for those who decreased their spending (85% support from Panelist Survey #3), compared with 54% support from those who increased their spending.

***Finding #5 – Site holders had generally negative perceptions of the test.***

The site holders were notably more negative about the whole test and the RGD than were the players. In their initial rating, no participant was higher than 5 out of 10. They felt they had lost considerable business, that the test had discouraged casual play and that many players were simply borrowing cards from establishments – thus defeating the purpose of the study. They were also quite critical of the technology itself, commenting on the number of times the machines were down and had to be serviced.

Site holders definitely agreed the system should be removed at the end of the test, but if it was to be extended, it should exist in all locations in the province. This was more of a “level playing field” comment, whereas the players felt the system should be in all locations so a player could not easily avoid it.

***Finding #6 – Many players were supportive of making such a system as the one tested mandatory across the province.***

There was strong support for mandatory use of a card-system from panelists and the general public, but less support from other, non-panelist, VLT players. Mandatory use of the card-system was supported by 75% of the panelists, while 65% of the general public supported mandatory use. Approximately 40% of non-panelists supported mandatory use early in the test period, but this had dropped to 30% closer to the end of the study.

***Finding #7 – Many players wanted a more stringent system to manage their play.***

A more stringent system including looking at issues like ways to avoid card sharing, ways to improve use of the features and limit-setting.

Many players simply used their cards as a “key” to activate the VLT, especially once players realized limit-setting or feature usage was not mandatory. Some of the most consistent criticisms of the card-system included the fact that the player could use the card and avoid all of the features if they wanted. There were strong perceptions from players that the features would have been more useful if they could not be avoided as easily. Participants in the focus groups seemed to be disappointed that the system did not force them to make choices as they expected it would. (It is questionable whether those who did not use any features could have received any benefit from the system.)

Among panelists, there was support for making the system and its features more active, with numerous suggestions for improvement. None of these suggestions actually involved changing what the card-system could do – they just made it so the player had more difficulty avoiding the system and its features. For example, they suggested requiring limits to be set, displaying play history on the screen so the player can not avoid looking at it, and making it more difficult to share cards. One way this can be done is by requiring a bio-metric at registration, such as a thumb print, that is checked while the player is playing. Overall, if the system was a card-based system, people wanted it to be one card per player, but other systems that ensure one player and one set of play data could be considered.

Panelists also wanted more restrictive limit-setting requirements. A majority of panelists believed that limits should be required. A minority thought setting limits should apply to the current playing session, just before they start playing; while most thought setting limits should apply to playing sessions in the future. Most of those suggesting a daily limit suggested one that was \$100 or less and half of those who wanted a weekly limit also suggested \$100. Two limit options were specifically tested and supported in the final panelist survey with 61% agreeing that a spending limit be required and 65% supporting a preset maximum. A pre-set maximum is a standard limit that would apply to all players

(all cards), but could be adjusted if the player decides to set a lower, more restrictive limit.

## ***Behavior Measures***

The primary focus on the behavior measures was time spent playing and the amount of spending.

The features were expected to have more of a positive impact with regards to time and money on moderate-risk gamblers rather than problem gamblers (who are felt to need more specific interventions) so targets for moderate-risk players were set higher. The intent of the features was not to discourage no and low-risk players from playing VLTs so targets were set accordingly for those players.

It should be noted that use of a research panelists in any research design may introduce some bias into results via the potential Hawthorne effect<sup>5</sup>. That is to say, changes in behavior while using the card-system may have been influenced by the panelists awareness they were being studied. While there is no particular evidence to suggest that this effect may have occurred, it is a consideration to keep in mind.

### ***Outcome Measure #8: No more than 15% reduction in the average monthly spending of no-risk and low-risk players***

Sixty-three of the 88 compliant panelists (or 72%) were classified as no-risk or low-risk. Not only did panelists *not* reduce their spending, on average, these panelists actually increased their spending by 14%. These results show that the outcome measure was reached.

### ***Outcome Measure #9: No more than 5% of no-risk and low-risk players regularly migrated to playing areas outside the test region (including Glooscap First Nation) as a result of the test***

While there was evidence of migration out of the test area in general, less than 5% of the no-risk and low-risk panelists regularly migrated out of Windsor and Mount Uniacke.

As a prerequisite for being invited to participate in the panel, players needed to play at least monthly and to not regularly play outside of Windsor or Mount Uniacke. Players who occasionally or rarely played outside the test area were admitted into the research panel.

As was found in Panel Survey #3, none of the no-risk and low-risk panelists reported regularly playing outside of the test area during the test. However, 30% of the no-risk and

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<sup>5</sup> The Hawthorne effect refers to the tendency of subjects to act differently when they know they are being studied, especially if they think they have been singled out from some experimental treatment.

low-risk respondents indicated that they played outside of the test area at some point since October 2005; about 5% reported playing occasionally outside the test area, about 15% played rarely and about 8% played outside of Windsor or Mount Uniacke once during the test.

***Outcome Measure #10: At least 20% of moderate-risk players reduce their average monthly spending***

Although the results might suggest that this measure was reached, the small sample size related to these results carries with it a margin of error. Again, making broad conclusions based on a small number of records should be avoided. Within the data set of 88 compliant panelists, 16 were classified as moderate-risk. Of these 16 moderate-risk panelists, 11 reduced their spending, 1 did not change their average monthly spending by more than 10%, and 4 increased their spending.

Survey results from the last panelist survey conducted in March 2006 showed that 16 of 23 moderate-risk panelists who responded to the survey agreed or strongly agreed that they are spending less money on VLTs since using the card-system. Both pieces of information suggest that the majority of moderate-risk players might have reduced their average monthly spending. Due to insufficient sample, it is not possible to confidently report that this outcome measure was reached.

***Outcome Measure #11: At least 20% of moderate-risk players reduce the length of their sessions by 10%***

As mentioned previously, only 16 of 88 compliant panelists were classified as moderate-risk players and were used in determining whether this outcome measure was reached. According to the play data, 12 of the 16 panelists decreased the number of minutes they spent playing by more than 10% while the remaining 4 of the 16 panelists increased their number of minutes.

According to results collected from panelists in the last telephone survey conducted in March 2006, 17 of 24 moderate-risk respondents agreed or strongly agreed that they were spending less time on VLTs since using the card-systems. Both of these findings suggested that more than 20% of moderate-risk players might have reduced the time they spent playing VLTs. Due to insufficient sample, it is not possible to confidently report that this outcome measure was reached.

***Outcome Measure #12: At least 20% of moderate-risk players reduce their frequency of play***

Again, of the 16 moderate-risk compliant panelists, the majority of them decreased their average number of sessions from the baseline period to the last three periods of the test. Eleven of the 16 decreased their number of sessions, 1 did not change by more than 10%, 3 increased their number of sessions per month, and data is not available for 1 person

(this person was unable to provide an average number of play sessions in the baseline survey). Due to insufficient sample, it is not possible to confidently report that this outcome measure was reached.

***Outcome Measure #13: At least 10% of problem gamblers indicate that, as a result of using the card and features, they are considering, are planning to or have decided to actively seek treatment and/or request help or other resources for their problem***

In Panel Survey #3 conducted near the end of the study, 131 responses were collected, 11 of which were classified as problem gamblers. Overall, 8% of the respondents indicated that they were either considering, planning to, or had actively sought treatment and/or requested help or resources as a result of using the card-system. These 8% (or 10) of responses were concentrated in the moderate-risk and problem gambler categories. Over half of the 11 problem gamblers indicated that they were in one of the three stages of change listed above. However, since this was such a small number of records, and since these were panelists, all of whom had been asked several times if they would like to receive problem gambling information or materials, it is possible that these respondents were more likely than the general population to be open to treatment or seeking information. Thus, it is not possible to report that this outcome measure was reached.

***Outcome Measure #14: At least 10% of all participating players have an active pre-set spending limit on the card-system during each play session***

According to play data, this measure was not reached. While players may have indicated using the My Play Limit or My Money Limit feature, this does not translate into using the features every time they play, or even regular use. In order to meet the target, 9 of the 88 players would have needed to have a pre-set spending limit set each time they play. A total of 15 of the 88 (or 17%) compliant panelist set a limit. Seven of those fifteen (8%) set only one spending limit during the entire 5 periods, 2 compliant panelists set only two spending limits (2%), and 6 (7%) set three or more spending limits. While this shows that more than 10% of the compliant panelists set at least one limit, the average number of sessions played for these 15 panelists was 62 sessions during the entire 5 periods.

## ***Behavior Findings***

***Finding #8 – People who actively used the system as designed decreased their spending.***

People who used the system as designed were more likely to decrease their spending than increase it. There were a number of possible explanations, but most of them relate at least indirectly to the presence of the card-system:

- There was generally heightened awareness of play because of the test;

- There was more available information and materials in the area and panelists would have been offered these materials through the interviewing process;
- Even limited use of features might have increased awareness of play; and,
- The possibility for passive viewing of the default “Live Action” screen may have increased awareness of play.

***Finding #9 – Even those who were not active users of the system decreased their spending.***

Even relatively passive information may have been enough to help people control their play. This would help explain why both those who actively used the features and those who did not (or used them less) were equally likely to reduce their spending. One example of passive information is the Live Action Screen, which was the default screen on the card-system, showing players their cash position for that playing session.

***Finding #10 – Revenues in the test area dropped 25% – and a portion of that reduction can be attributed to the card-system.***

Overall, when the entire test period (October 4<sup>th</sup>, 2005 through March 25<sup>th</sup>, 2006) was compared to the same period the year prior, overall net revenue decreased by:

- 25% in the test sites
- 14% in the locations surrounding the test sites
- 12% across all of Nova Scotia (excluding First Nations).

These figures are based on ALC monitoring of VLT activity in Nova Scotia. It is important to note that not all of the reduction can be attributed to the implementation of the card-system. ALC’s financial figures show that 10% of this decrease was attributable to the planned reduction in VLT play hours and terminal reduction strategies. This left a 15% reduction that was related to the test – caused by migration away from the test area and reduction in play in the test area.

It is difficult to be precise concerning the relative impact of the card-system and migration away to play VLTs elsewhere. Initially, there was more migration away from the test area, but that seemed to mitigate as the test continued. Overall, based on ALC financial calculations and survey estimates of play outside the test area, approximately half of the impact (7–8%) can be attributed to the card-system and half (7-8%) can be attributed to migration from the area.

Finally, it is important to note that due to the small number and composition of the field test site holders, the financial impacts seen in the Windsor and Mount Uniacke area may not be representative of a full provincial-wide rollout of the card-system device.

***Finding #11 – Some players will change their play patterns in order to avoid using the card-system.***

As just noted, there was evidence that the test resulted in play migrating to areas outside the test area. In fact, revenues increased in the area closest to the test area.

Surveys and focus groups also showed more evidence of video lottery players playing outside the test area. Results from Panel Survey #2 showed that approximately 20% of respondents said they played outside the test area at that point in the test. As of Panel Survey #2, most respondents indicated the reason for playing outside the test area being that they happened to be out of the area and decided to play. In Panel Survey #3 conducted in March, the proportion of panelists who played outside the test area doubled to 40%. Since panelists were not asked why they played elsewhere, any reasons for the increase would be speculative. Those who did play outside the test area tended to have higher PGSI scores. This was the case for both surveys.

Overall net revenue increased by approximately 40% at the neighboring Glooscap First Nation. The Glooscap First Nation figures were calculated on a base of 30 machines compared to 51 terminals in the test area so the percentage increase seems more dramatic.

Overall, panelists felt that it should not be easy to avoid the system by simply going somewhere else to play.

There was also some evidence that the system discouraged casual players from obtaining a card, but this was based on a very small number of people and did not seem to be a significant issue. The general population survey was included in this research, partly to identify if there were casual players who were discouraged from playing. The sub-sample of VLT players from the general population survey was only 55 (played in the past year), and 24 of them had not played since October. A small number (3 people) said they had actually completely discontinued playing due to the process involved with getting a card, which was evidence of a minimal degree of discouraging casual players.

Of the participants of the general population survey who were considered to be “current VL players” (meaning they had played since the study began), a number of respondents indicated that they had decreased their playing. While the findings represent only 12 responses, the main reason for playing less was due to the player feeling that they were simply spending too much money. A number of respondents could not identify a specific reason for their decrease in playing, and two cited reasons related to the card itself (“the card disrupts play”, and “less chance of winning when playing with card”). These respondents were not categorized by play levels.

***Finding #12 – Feature use was concentrated in the more passive and informational features of the system.***

My Account and Live Action were the two most popular features used throughout the study. Both of these features provide information on the relative cash position of the player. On the other hand, only one in 6 compliant panelists set a spending limit in period one. By the final two periods, this was reduced to no one setting a spending limit.

***Finding #13 – There is some evidence of unintended outcomes from this study, but on balance, reactions indicate an increase in responsible play.***

While approximately one in ten said the system encouraged them to try to win back money, more than half say they feel safer playing with the system and two-thirds said they were playing more responsibly. Further, almost 40% said they reduced the number of times they have gone back to try and win money they have lost.

## Section 7: Options & Recommendations

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Many of the findings from the test are positive and there were several indicators that suggest the card-system did have an impact. While definitive statements are difficult to make on the specific impact of feature use, there are sufficient positives and learnings to evaluate three options for consideration. The three options form a continuum from no system, to a voluntary system to a more stringent system.

### ***Options***

The three options that flow from the findings include:

- 1) Doing nothing. Do not implement any such play management system.
- 2) Making the system available, but optional for those who want to use it.
- 3) Make the system more stringent by enhancing the controls to reduce card sharing and encourage more active use of features.

#### ***1) Doing nothing. Do not implement any play management system.***

The province does not currently use a card-system on any of its regular VLTs outside the test area. The choice could be made to keep the current system, and to not proceed with any such play management system in Nova Scotia. Based on the research conducted to date, however, this would mean players miss out on a system that is potentially beneficial. While a variety of factors had an impact on play patterns and card sharing was an issue for the research, more players reduced their spending during the test periods. While there was certainly avoidance of the system, others found it useful and evaluated it positively.

#### ***2) Making the system optional for those who want to use it.***

Throughout the test there was evidence that people wanted to and did use the features when they were available. However, the research also showed that many people will avoid the card-system and its features, at least some of the time, if they can. This was evidenced by card sharing, moving outside of area to play, and the fact that many people played without using any features.

It is difficult to avoid the fact that the majority of panelists did reduce their play. As well, people did feel that the system helped them be more aware of their play and play more responsibly. Overall, there is a desire among players for a tool to help them manage their play with more information and greater awareness of their actions.

***3) Make the system more stringent by enhancing the controls to reduce card sharing and encourage more active use of features. This option would require further testing of the revised system.***

Players felt there should be improvements to the system as tested. Namely:

- Sharing of cards should be eliminated – there should be one card per person;
- A play-management tool such as the card-system should be mandatory in all areas of the province (including First Nations);
- Players should have to set a limit;
- There should be a preset maximum -- a standard limit that would apply to all players (all cards), but could be adjusted if the player decides to set a lower, more restrictive limit; and,
- Show players their account summaries instead of having the player opt to look at it if they want.

Some might argue that the results from the research were positive enough to justify implementing a more stringent system. However, without additional research, we cannot definitively say that making the card-system more stringent will make it more effective. The current test was not designed to evaluate a more stringent system. There may also be unanticipated (and to date untested) risks associated with a much stricter testing environment.

Therefore, the third option requires further research to determine if the players' suggestions really would result in a more beneficial system. Future research would apply the learnings taken from this stage and close the various loopholes that were identified. It could explore ways to avoid card sharing with different forms of technology. It could look at the impact of limit-setting or pre-set maximums, and ways to encourage more active use of other features. Ways to mitigate the issue of players moving out of the research area to play could also be explored.

### ***Recommendations***

Doing nothing and not implementing any kind of play management system would not seem to make sense. There is inherent value in the system, a level of demand and benefits for those who want to use the system. Not moving forward would be unfortunate for many players who could potentially be helped by such a system and its features.

Moving ahead to make a system with features such as those tested is a prudent next step. It addresses the fact that the card-system works for those who use it as intended, and addresses the level of support for the card as demonstrated during the test. It also recognizes that those who do not want to use the system will find ways around it. It does

not address the various recommendations for improvement made by players; however, most of these were untested, it would be premature to recommend them at this stage.

Communication to players about the benefits of the features and how they should be used should be a central part of any future implementation. They need to know how use of the features can help them manage their play. Privacy of personal information is another important point that needs to be addressed. Concerns over who might know their playing levels made players reluctant to get a card and resulted in card sharing. In order to encourage maximum participation, the system should be easily available to those who want to use it without being so intrusive that players actively try to play without using it.

While there is a good deal of support for making such a system mandatory and increasing the “intrusiveness” of the features, it does raise many questions. It requires putting in place a clear solution for card sharing, possibly using bio-metrics requiring a player to scan their thumb or finger print in order to play. It also involves exploring how to implement mandatory limit-setting and pre-set maximums, which were not tested during the research. Right now, the impact of mandatory limit-setting is not known. The limit-setting topics covered in this research were not conclusive on what those maximum limits should be or for what time periods they should be in place. As well, the system would have to be implemented on a wide enough geographic scale that it can not conveniently be avoided. In the field test, sites without systems on their VLTs could be found within a short distance of the community. Overall, there may also be unanticipated (and to date untested) risks associated with a much stricter environment. While there is some demand from the test group, the bottom line is that it is difficult to recommend a system that is, as of yet, untried and untested.

Future research would apply the learnings taken from this phase and close the various loopholes that were identified. If pursuing additional research to test a more stringent or intrusive system, there are some key things that must be in place. First, there can be no sharing. Each player has to generate and see their own play history. This does not mean the system has to be a card-based system. Again, a bio-metric solution based on the player’s thumb or finger print was preferred by many in the study. As well, research would have to be conducted on a wide enough geographic scale to minimize the migration factor. Finally, there are some other elements that could be explored with more research, such as limit-setting, pre-set maximums, and ways to make features more difficult to avoid.

If a decision is made to move forward with an optional system, a stronger mandatory system, or more research, there are some key elements that should be in place. This includes offering essentially the same features and functionality. The most frequently used features were the ones dealing with account summaries, but participants either used or could understand the usefulness of each of the features on the card-system that was tested. It is also important to ensure that the system is reliable and provides accurate information.

In summary, there are pros and cons associated with each option. The only one that can be easily dismissed is the “do nothing” approach. A stronger, mandatory system was largely untested and the impact remains largely unknown. Additional research can answer many of the remaining questions and help address some of the issues identified during this round of research. However, the system tested clearly benefited those who chose to use it. Overall, regardless of the option selected, a prudent approach that involves continued monitoring and evaluation will be the one that works best.