

**COLORADOLOTTERY.COM /**  
**DIGITAL SERVICES & HOSTING**

**REQUEST FOR PROPOSALS**

October 14, 2019



# TABLE OF CONTENTS

## BACKGROUND

Cactus / Colorado Lottery / Digital Agency.....Pg 4

Current Website Functional Description .....Pg 5

Player Demographics.....Pg 9

Content Management System.....Pg 10

Email Management.....Pg 10

Loyalty Program Management.....Pg 10

Security.....Pg 11

Technical Specifications.....Pg 11

## DELIVERABLES

1. Migration and Transition of Account.....Pg 13

2. Maintenance process and cost .....Pg 13

3. Hosting.....Pg 16

4. Scoping Additional Projects.....Pg 17

5. Future Technology.....Pg 17

6. Value Added.....Pg 18

## RESPONSE GUIDELINES

Key Deadlines.....Pg 19

Proposal Submission.....Pg 19

Contract.....Pg 19

## RESPONSE REQUIREMENTS

Deliverables.....Pg 21

Additional Questions. ....Pg 21

Company Background / Key Clients.....Pg 21

Organizational Structure & Essential Personnel.....Pg 22



Additional Mandates .....Pg 22

Compensation .....Pg 22

**ADDENDUMS**

A. Colorado Lottery Player Motivational Study .....Pg 23

B. Tracking Study – Player Demographics .....Pg 79

C. Technical Specification Document.....Pg 83

D. Web File Configurations .....Pg 127

E. Mobile App Scanner Response.....Pg 158

F. Information Architecture.....Pg 161

G. Example Scope of Work.....Pg 165

H. Sample Maintenance Hours Breakout .....Pg 169

I. Digital Producer Job Description .....Pg 173

J. Alpha & Beta Releases.....Pg 177

K. Glossary.....Pg 180

L. Insurance Requirements.....Pg 183



## **BACKGROUND**

### **CACTUS / COLORADO LOTTERY / DIGITAL AGENCY**

#### **Cactus Communications**

As the advertising agency of record for the Colorado Lottery, Cactus Communications provides digital strategy and interactive design services to the Lottery. Cactus also provides day-to-day marketing and advertising support for the Lottery's traditional advertising channels.

#### **Colorado Lottery**

The Colorado Lottery offers Coloradans the opportunity to play various games for the chance to win big. Profits from Colorado Lottery games – Powerball, Mega Millions, Colorado Lotto+, Lucky for Life, Cash 5, Pick 3 and Scratch - stay in Colorado to improve the quality of life in the state. The Lottery has returned more than \$3.4 billion to the state, since it was established. Through Great Outdoors Colorado, the Conservation Trust Fund and Colorado State Parks, the Lottery has provided funding for new trails, precious open space and wildlife protection.

#### **Digital Agency**

The selected digital agency will have daily contact with Cactus and the Colorado Lottery's Interactive Communications Manager. Among other things, the digital agency will handle all web and mobile development tasks, site maintenance tasks, provide information architecture, email management, and lead weekly status meetings in which all three parties will review open projects, discuss upcoming initiatives and plan upcoming promotional periods. A partner with strong account management skills, a foundational understanding of security requirements that come along with a client such as the Lottery, and the ability to appreciate the creativity of the brand will flourish in this relationship. The Lottery desires the selected digital agency to be located in Colorado.



### **CURRENT WEBSITE – FUNCTIONAL DESCRIPTION**

ColoradoLottery.com is a highly trafficked website, with about 500,000 visitors per month, of which over half are unique visits. The average visit duration is approximately two minutes and the top ten most popular pages are:

- 1) Home
- 2) Colorado Lotto+ Landing Page
- 3) Powerball Landing Page
- 4) Mega Millions Landing Page
- 5) Cash 5 Landing Page
- 6) Lucky for Life Landing Page
- 7) Games Landing Page
- 8) Pick 3 Landing Page
- 9) Powerball Past Winning Numbers
- 10) Colorado Lotto+ Past Winning Numbers

Key areas of the website are summarized below, as well as functions necessary for its effective management.

### **Games**

The site provides up-to-date information on jackpot amounts and winning numbers for the Lottery's drawing games and detailed information about Scratch games. It also offers free digital games in its Free Play Zone.

### **Bonus Draws & Contests**

Players can enter Bonus Draws for select games. Specific non-winning Scratch tickets are eligible for entry into a second-chance Bonus Draw. To enter a second-chance Scratch Bonus Draw, the user can sign into the website as a MyLottery member or proceed as a guest. The Scratch ticket number entered is validated upon entry and confirmation is provided to the participant. A player can also use the Colorado Lottery's mobile app. When they are signed into their MyLottery account (the Lottery's membership program), and they scan the barcode beneath the scratch-off coating of the eligible Scratch ticket, they will be automatically entered into the Scratch Bonus Draw. We conduct anywhere from 10 to 15 Scratch second-



chance Bonus Draws at a time. Validated entries for Scratch Bonus Draws can range from 50,000 to 350,000 entries.

Players can enter select Jackpot game tickets into a Bonus Draw. To enter, players must use the Colorado Lottery's mobile app and be signed into their MyLottery account. When they scan the barcode on top of the eligible Jackpot game ticket, they will be automatically entered into the Jackpot Bonus Draw. Jackpot Bonus Draws can range from 20,000 to over 2 million entries. Both winning and non-winning tickets can be entered into Jackpot Bonus Draws.

Ticket eligibility can be determined by a combination of game, purchase and entry date, number of plays (boards), ticket price, and other attributes, and varies by Bonus Draw.

The Lottery also conducts 3-5 promotional digital contests per year that are advertised on both owned and un-owned media.

### **Winners**

This area allows users to dream about winning big by checking out past winners. It is also a resource for those who have won and provides information on how to claim their prize.

### **MyLottery**

The loyalty program (MyLottery) is popular with over 250,000 members, and offers players the advantage of being the first to hear about winning numbers, new games, events, contests and promotions that the Lottery makes available to them.

Members can subscribe to receive emails and push notifications about the following:

**GENERAL INFORMATION:** This is the general opt-in where members can receive promotional information from the Lottery. Members who select this option will receive an email with information about events and promotions within a 30-mile radius (or greater) of the zip code that they provide in their profile.

- **WINNING NUMBERS:** Players can opt-in to receive a text, email or push notification whenever their favorite game's numbers are drawn.
- **JACKPOT NOTIFICATIONS:** An email, text or push notification can be sent to inform players when a game's jackpot reaches a particular amount. Mobile subscribers can have a text sent to them when their Favorite Numbers have been drawn.



- **SCRATCH GAMES:** Players can receive an email or push notification when new Scratch games are added to the market.
- **BONUS DRAWS:** Members can receive an email summary report of all of the entries that they submitted during the week. They can also receive an email telling them the name of the winner of each Bonus Draw.

### **Giving Back**

The site provides information about the statewide work that is being done with the proceeds that the Lottery generates for the State.

### **Game Tools**

Players interested in diving deeper into the statistics of Lottery games use this area of the site. It provides query options to retrieve customized and downloadable reports in Excel format. Examples of these reports include Drawing History, Who's Winning, Luckiest Stores, Scratch Insider and Unclaimed Prizes.

### **News**

This area of the website provides current information about featured winners and stories about Lottery proceeds. It also provides a calendar of events and promotions.

### **Media Center**

This section provides the media with easy access to information such as winning numbers and jackpot amounts, press releases, logos and brand standards, and proceeds information.

### **Retailers Website**

This area of the Lottery website provides retailers with information to help them manage their Lottery business. It includes a secure area that they can log in to that is dedicated to ensuring Lottery retailers have access to their financial information that they need to be successful in selling Lottery games. Visit [retailers.coloradolottery.com](http://retailers.coloradolottery.com) to review the retailer section.



### **Mobile Traffic**

The Lottery's website is responsive in design. The website gets roughly 60 percent of its traffic from mobile devices.

### **Mobile Application**

The Colorado Lottery mobile application is available for iOS and Android. The app provides updated product information, allows MyLottery members to manage their accounts and subscribe to push notifications, and includes a retailer locator. The app has barcode scanning functionality to determine the winning status of Jackpot and Scratch games. Eligible tickets can also be entered into Bonus Draws. For Scratch barcode decryption, it relies on decoding hash data maintained on a server which resides within the hosting environment. For Scratch tickets eligible for a Bonus Draw, entries are stored within the hosting environment and are also sent to a server which resides within the Lottery's offices for security purposes. Jackpot tickets have a PDF417 barcode that contains all information relevant to the ticket purchase and is read and compared to the parameters set for a Bonus Draw promotion to determine eligibility. Once validated, an entry is stored in a database located on the host server, and a duplicate entry is sent to the Lottery's server.

### **Analytics**

The Lottery leverages the Google Analytics platform for web analytics. UTM codes are used for campaign specific links and event tracking is used for certain points of conversion throughout the site. Currently, the Lottery utilizes MailChimp and Mandrill, which are integrated into the CMS to manage and report on email analytics. The content management system (CMS) also provides Lottery management with tools to analyze entries in Bonus Draws and monitor MyLottery growth and purge activity.

### **Data Imports/Exports**

Several pieces of data are imported by the Lottery's IT team via a secure VPN connection. See Section 5 of Addendum C for more detail around these imports. This data includes:





- **BUSINESS REVIEW:** Used to provide information to the retailers about their Lottery sales.
- **WEEKLY STATEMENTS:** Used to provide information to retailers about their sales and Scratch ticket inventory.
- **RETAILER UPDATE:** Used to communicate the full list of retailers who sell Lottery products and to manage communications to retailers about their licensing status.
- **WINNERS UPDATE:** Used to communicate who has won the games.
- **LUCKIEST STORES:** Used to communicate which retailers are selling winning tickets.
- **PRIZES REMAINING UPLOAD:** Used to update information about the prizes still remaining for all Scratch games.
- **WINNING NUMBERS & RESULTS UPLOAD:** Used to update winning numbers and results throughout the website, and to execute media and MyLottery emails.
- **SCRATCH HASH DATA:** Scratch hash data is maintained for all Scratch games. Currently, the files range from 16 – 150 mb and consist of encrypted data that is used to determine eligibility of entries submitted into second-chance drawings.
- **UNCLAIMED JACKPOT PRIZES:** Prizes not claimed within 30 to 180 days are reported by amount and product.
- **DRAWING TOKEN DATABASE:** The web vendor is required to create redundant drawing databases that reside on the Lottery's token server.

## **DEMOGRAPHICS**

### **Players**

In 2017, the Colorado Lottery commissioned a research agency to conduct a study to understand motivational differences among Coloradans with regard to Lottery play. The study revealed that when thinking about a large prize, there are generally two types of players: those who dream about what that would be like, and those who have a difficult time imagining it. We refer to these as Dreamers and Realists. Because Dreamers have bigger plans for all the things they could do with their winnings, they spend considerably more on Lottery games and engage with the Lottery in many ways. They are typically younger, hard-working and more



ethnically diverse. Realists, on the other hand, are less likely to believe they will win, and as a result are decidedly more restrained in terms of Lottery play and are not easily motivated to purchase more tickets.

The study identified five key segments that the Lottery has identified as having an interest in the Lottery's products: Living Large Dreamers, Karma-Seeking Dreamers, Fun Money Dreamers, Jump Start Dreamers and Retirement-Driven Realists. To learn more about these segments in relationship to their behavior with the Lottery, see Addendum A.

Colorado Lottery players' demographics closely match the demos of the Coloradan population as a whole (based on the 2010 US Census). Players skew slightly more male, a little bit older, and with higher incomes. For a more robust view of player demographics, see Addendum B.

### **Retailers**

The Colorado Lottery provides retailers with a portal of information that is relevant to conducting Lottery business. Information includes announcements about new games, new systems, trouble-shooting guides for Lottery equipment, and much more. Retailers, via password, can access financial reports provided in pdf or text. Visit [retailers.coloradolottery.com](http://retailers.coloradolottery.com).

### **Colorado Constituents**

The Colorado Lottery serves Colorado constituents who have an interest in the overall goals of the agency. The website details information about how Lottery profits are disseminated, and features successful projects.

### **CONTENT MANAGEMENT**

The current ColoradoLottery.com website content management system (CMS) is built in Django and allows for content in both English and Spanish. The system offers three templated layouts: columns and sidebar with a number of available widgets. Please reference Addendum C for further detail on the content management system.



## **EMAIL MANAGEMENT**

The Colorado Lottery currently uses MailChimp and Mandrill as its email utility. In 2018, 29 million emails were sent via MailChimp and 5,661,000+ emails were delivered through Mandrill. Push notifications are managed via Twilio with over 185,000 sent per month. Please reference Addendum C for further detail on automated emails, text and push notifications.

## **LOYALTY PROGRAM (MYLOTTERY)**

The Lottery continually engages with members through promotions, contests and by providing members-only information. MyLottery members can see an accounting of their Bonus Draw and contest entries, save their favorite numbers and subscribe to receive information from the Lottery. We encourage you to create a MyLottery account to familiarize your agency with the features offered on the website and to receive email communications.

## **SECURITY**

Security is a very important factor in the day-to-day procedures of the Lottery. A demonstrated ability to handle the security challenges of the Lottery is required. Any personnel with access to the content management system and to the Lottery's databases are required to submit and pass an intensive background check at the digital agency's expense. The Lottery requires secure measures in the transfer of information including Scratch ticket information (VIRN numbers), Jackpot games results and database entries for Bonus Draws and contests. For drawings and contests, the digital agency is required to provide two duplicate databases to the security team and drawing manager. The Lottery requires that the system monitor the Bonus Draw entry area of the site and check for bots. The Lottery requires significant security measures in the transmission of data. The website is monitored and the Lottery security team will attempt to hack the site and will provide detailed reports to the digital agency identifying potentially compromised areas. Further details on Security & Privacy Considerations can be found in Addendum C.

## **TECHNICAL SPECIFICATIONS**

The Colorado Lottery's digital assets are an integral part of the service we provide to our customers. There are many facets to our digital ecosystem, and over the last 10 years, its



complexity has increased exponentially. Addendum C provides a high-level technical design specification that includes:

- User Experience and Information Architecture
- Content management system
- MyLottery Email, Text and Notifications
- Technology and Hosting Architecture
- Data Architecture and Integration
- QA Process

Please review this document carefully, as this will provide a record of systems requirements and processes of which the selected vendor must adhere to ensure continued performance at an optimal level.



## DELIVERABLES

### 1. MIGRATION AND TRANSITION OF ACCOUNT

We anticipate that the selected vendor will require a two-month transition period where you will work directly with the current digital agency to ensure you understand the ins and outs of the existing Lottery website and its environment. This time should be used to migrate the website, databases and domains to the new hosting environment and bring all assets under your control. At the end of this two month period, you will be responsible for the ongoing maintenance and development on the Colorado Lottery website. The existing site is built on Python language and leverages the Django framework, which you will be required to maintain. The mobile application uses React Native framework, which you will be required to maintain. Please address how you will ensure a seamless customer service experience for the Lottery as this migration takes place.

### 2. MAINTENANCE & CONTINUED SUPPORT

The selected vendor will work with advertising agency of record and the Lottery in an ongoing capacity to implement new online campaigns and promotions that meet the Lottery's marketing & advertising goals. On average, the Lottery utilizes about 1,050 hours per year for ongoing maintenance and development time. In addition to these development hours, the selected vendor will be expected to perform operational, administrative and general management services and should be considered in pricing.

Administrative and general management services shall be performed 1) on a regular basis; 2) on an as needed basis; 3) as reasonably requested; 4) as necessary to maintain performance, accessibility and functionality of all Colorado Lottery Digital Assets in accordance with the highest industry standards. These services include:

- Conduct weekly status meetings, record minutes & notes, document any action items, communicate same to Lottery, Cactus and Digital Agency staff
- Maintain accurate and current data in Basecamp including project status updates, bug tracking, approvals, new feature requests, to-do lists, detailed schedules, and other pertinent information
- Prepare and provide monthly invoices including time reports and any other documents requested or required
- Project manager discovery for potential services and projects as requested



- Project manager preparation of scopes of work and budget/hours estimates for Development Services and or services to be performed outside of the SOW
- Identify and vet qualified resources and secure relationships and agreements with sub-contractors and vendors as needed
- Submit vendor invoices to Cactus as necessary
- Provide quarterly reporting on Mailchimp (eCRM), Twilio (SMS), website and app analytics including recommendations for improvements based on metrics and tracking as they relate to Lottery business objectives
- Comply with SOC2 audit when required
- Maintain SSL certificate and domain registration (hard costs can be passed through to Cactus)
- Monitor, manage and maintain all digital asset security, performance, and availability in accordance with the highest industry standards including software upgrades and patches
- Identify and address any faults found within the environment
- Creation and management of Lottery gmail account and email addresses as needed
- Immediately notify Cactus and Lottery in instances of website / app downtime or technical emergencies
- Maintain ability to respond to outages and server issues 24/7
- Ensure that data at rest is always encrypted
- Ensure that cloud hosting is based in the continental U.S., preferably in the western states
- Manage costs of hosting environment to avoid paying for unused resources
- Manage vendor and sub-contractor relationships and their proper performance and quality assurance

To give you a sense of the level of work that will be expected of the digital agency, we have provided a sample scope of work in Addendum G, as well as a sample monthly report for development hours in Addendum H. Please include scope for how you will handle both these development hours and administrative services as a retainer agreement.

24/7 support is required for this account, after-hours support is required for site outages, during periods when the jackpot amount is high, when new Jackpot games are introduced, when Lottery IT operators experience errors uploading files, and when modifications to system



functions require that the after-hour automatic functions (like email delivery) need to be monitored.

The selected agency will be required to employ a full-time, skilled and experienced digital project manager with no less than five years experience directly managing website development projects from beginning to end. A recommended job description for this position is attached here as Addendum I. The digital project manager will be dedicated to the advertising agency of record/Lottery account for a minimum of 28 hours per week. This role may not be filled by a developer, programmer or principal of the agency. The digital project manager will act as the liaison between developer resources within the agency, advertising agency of record and the Lottery. The digital project manager will provide ongoing project consulting and management including scoping meetings, status meetings and reports, accurate proposal and estimate generation, monthly hours reports and provide other miscellaneous support. The digital project manager will be responsible for providing timely communications with advertising agency of record and the Lottery, including prompt return of phone calls and emails, approvals, responses, and the provision of any documents, files, or other information required by Cactus or Lottery regarding provided services. In addition, the digital project manager will participate in UX planning for all Lottery projects to ensure all parties are in agreement regarding the desired scope of functionality for a given project. The digital project manager will ensure that all pre-alpha, alpha and beta releases are not only delivered on time, but also adhere to the requirements as outlined in "Alpha & Beta Release Expectation" which is attached here as Addendum J.

The selected vendor must maintain a staging and development environment for the Colorado Lottery website. In addition, the following will be required:

- Website must be maintained on the Python language and Django framework
- The Lottery iOS and Android application is built in React Native. The selected agency will be responsible for the maintenance of this application, as well as all future releases.
- Log files: The Lottery must have the ability to review log files at its own discretion.
- Secure VPN: The digital agency must have the capability of providing a secure VPN with the ability for encryption to transfer files associated with, for example, the Bonus Draw information.
- ADA Compliance: The website must meet Americans with Disabilities Act and Bobby compliance standards.



Please describe how your agency will address the ongoing maintenance needs as outlined above.

### **3. HOSTING**

Addendum C details the current hosting environment that the Lottery website and databases operate within.

Heroku is the current cloud-hosting provider. Heroku is a cloud application platform that runs on AWS infrastructure. All of the Lottery's data and infrastructure is physically located in the continental US, with the exception of content delivery.

DevOps Services are provided by the current digital agency, and provide 24/7 on call support for any outages. Services include maintaining the hosting environment for the Colorado Lottery including Heroku configuration, RDS instances, object cache services, and supporting infrastructure.

DevOps activities include:

- Ensuring that the sites will be performant, stable, and secure.
- Maintaining the Heroku configuration.
- Monitoring available updates for the environment and recommending appropriate action when applicable.
- Maintaining the automation and configuration of servers.
- Creating and updating environment documentation.
- Providing website and database backups, as well as restores (as requested or as necessitated by a server failure).
- Monitoring site availability, performance, and security 24/7 and contacting the appropriate parties at the Colorado Lottery whenever necessary.
- Responding within 1 hour to system alerts 24/7/365.
- Monitoring and managing all Heroku and AWS costs to maximize budget.
- Capacity planning and scaling resources when necessary.

In reviewing the current hosting and development operations workflow, is it aligned with your experience, and how would you improve it? As part of your response, please provide details





regarding whether you would recommend maintaining or migrating the hosting. If migrating, detail your reasoning, and describe how you will successfully manage the transition. This provider must ensure that the Django framework will run securely, efficiently and effectively. A cost proposal for this hosting environment is required as part of your response, but can come from an organization for which you choose to partner with to provide these services.

Please note that 99.95% uptime is a requirement for the website even during heavy traffic times such as when a large jackpot is about to be drawn. For reference, after a drawing with a large jackpot, the Lottery's website can receive up to 15,000 simultaneous hits per second.

#### **4. SCOPING ADDITIONAL PROJECTS**

The Lottery will periodically have initiatives that do not fall within the maintenance scope of work detailed in this RFP, or that they would like to scope incrementally. For example, a new Jackpot game may be added to the Lottery's portfolio of games. Please provide a description of your software development process from discovery through design and deployment. In the compensation portion of the response, define in detail how will you bill for project-based work that would fall outside of the ongoing maintenance retainer. This is not intended to be an actual project estimate, but rather a request for documentation around process and estimation approach.

#### **5. FUTURE TECHNOLOGY**

Recognizing that the lottery industry is dynamic and that technology changes, the Lottery and the Contractor(s), on a continuing basis, shall evaluate the most cost-effective, reliable, and market-oriented secure systems. As part of this process, the Lottery may require the Contractor(s) to incorporate new technology or systems that become available. The emphasis should be on stable, proven services the Contractor(s) can support at the same level as similar products or services already described in this RFP. It is probable in the future that the Lottery will be given the authorization to sell lottery games via the internet. The Contractor(s) is expected to continually monitor the market and to develop, prepare and submit technology enhancement change proposals as part of the contract (and covered under Administrative costs). The Contractor(s) and the Lottery shall meet to discuss any potential technology enhancements on an annual basis. The Lottery shall have the option to procure these items/services via a mechanism set forth in the resulting contract. For any additional



items/services required by the Lottery, not already included in the contract pricing, the Lottery and the Contractor(s) shall negotiate for additional compensation. This is not a request for an actual project estimate but a request to provide us with your level of experience in designing and developing state-of-the-art ecommerce systems.

#### **6. VALUE ADDED**

Contractor(s) may want to propose elements or enhancements to the Lottery related to the scope of services to be provided as a result of this RFP. Value added means the elements or enhancements will result in additional material value to the Lottery. Examples of value added elements may include but are not limited to such things as no-cost research support, players club features, no-cost training programs, etc.



## RESPONSE GUIDELINES

### KEY DEADLINES

RFP Published – October 14, 2019

Vendors submit questions – November 11, 2019

Vendor questions answered – November 15, 2019

Proposals due – **December 9, 2019 by 5pm**

Selected vendors invited to present – January 24, 2019

Vendor presentations – Week of February 10, 2020

Site Visit – Week of February 17, 2020

Vendor selection – February 28, 2020

### PROPOSAL SUBMISSION

Please follow the order of the response requirements section as detailed on the following pages.

Submit a total of six hard copies and email an electronic copy to [ethan@cactusinc.com](mailto:ethan@cactusinc.com).

Proposals must be received on or before the due date. Late proposals will not be accepted. It is the responsibility of the offerer to ensure that its proposal is received by Cactus on or before the due date. Please send all submissions to:

Cactus Communications  
Ethan Nosky  
2128 15<sup>th</sup> Street  
Denver, CO 80202  
303-455-4545  
[Ethan@cactusinc.com](mailto:Ethan@cactusinc.com)

### CONTRACT

Cactus Communications will issue a contract to the selected vendor for a period of approximately two (2) years, based on the award date. At the sole discretion of Cactus, in consultation with the Colorado Lottery, the resulting contract may be renewed for three (3) additional one-year periods.

A successful offerer and its staff will be required to go through a background check conducted by the Colorado Lottery. Background investigations may be at the digital agency's expense. In



addition, the vendor and its employees will forfeit their ability to play any Colorado Lottery or multi-state games (Powerball, Mega Millions, Lucky for Life) during the contract period.

All source code will be owned by the Colorado Lottery.



## RESPONSE REQUIREMENTS

### DELIVERABLES

Please respond to how you will address each of the six deliverables as outlined in the deliverables section.

### ADDITIONAL QUESTIONS

Please also respond to the following questions:

1. What communication tools and/or software do you implement with clients?
2. Do you have experience building loyalty programs for other brands? If yes, please provide an example.
3. Does your agency have experience developing React Native applications?
4. In reviewing the current processes, do you have any recommendations for how we could improve Quality Assurance?
5. In reviewing Sec. 3 of the digital spec doc (Addendum C), do you have recommendations for improvement or optimization of the MyLottery Email, text and notification ecosystem? The Lottery has customer service concerns about MailChimp and is interested in exploring alternative options.
6. What is your experience hardening web applications for security performance, penetration testing and security audits. Please share any experience you have reacting to security breaches.
7. Looking at the current Lottery industry's digital environment and determining best practices, do you have any general creative ideas or programs you would suggest?

### COMPANY BACKGROUND / KEY CLIENTS

Please provide the following information about your company.

- Number of years your company has been in business
- Description of the services your company offers
- Number of people your company employs
- Who are your top three key clients? What are your annual billings for each? Provide references.



### **ORGANIZATIONAL STRUCTURE & ESSENTIAL PERSONNEL**

Detail the organizational structure of your company. Please include:

- Essential personnel who will be assigned to this account
- Experience of each of the essential personnel
- Roles and responsibilities pertaining to each person who will work on the account
- Length of time working for the company
- An estimate of the time commitment on this account by each staff member
- Please provide us with the name, title and contact information for the person who will be our day to day contact for this account

### **ADDITIONAL MANDATES**

Please provide pricing broken out by deliverable as outlined in the Deliverables section. In addition, provide information regarding the following:

- Agencies located in Colorado are preferred.
- The Colorado Lottery, Cactus and the digital agency meet weekly for status meetings. The costs for these meetings should be included as part of your proposal.
- Any hard costs for project management tools or third party services not directly impacting the Lottery's technology ecosystem should be included in the pricing presented in this RFP. The Colorado Lottery is exempt from paying sales tax.
- The Lottery will not consider proposals that base any charges on a per-email cost.
- The Lottery will require a \$100,000 performance bond from the selected vendors. The vendor(s) will be solely responsible for the payment of the performance bond.
- The Lottery will require that the vendor shall obtain and maintain insurance as specified in Addendum L. The vendor(s) will be solely responsible for the payment of these policies.
- The Lottery and Cactus will perform an annual performance review of the web hosting provider and the selected digital agency.

### **COMPENSATION**

In a separate and sealed envelope, please provide five (5) copies of your pricing broken out by each of the six (6) deliverables. All information about pricing should remain separate from the services response. In addition, provide information regarding the following:

What is your hourly rate?



**ADDENDUM A /**  
**COLORADO LOTTERY PLAYER MOTIVATIONAL STUDY**



## Colorado Lottery Player Motivational Segmentation Study







# Survey Methodology

---

2,501 Coloradoans were surveyed between April 8<sup>th</sup> and May 5<sup>th</sup>, 2017

- 2,126 online
- 375 by phone

Participants were:

- 18+
- Colorado residents
- Not “Strongly Opposed” to the Lottery

The survey instrument was extensive:

- 228 questions, averaging approximately 30 minutes online and 45 minutes by phone

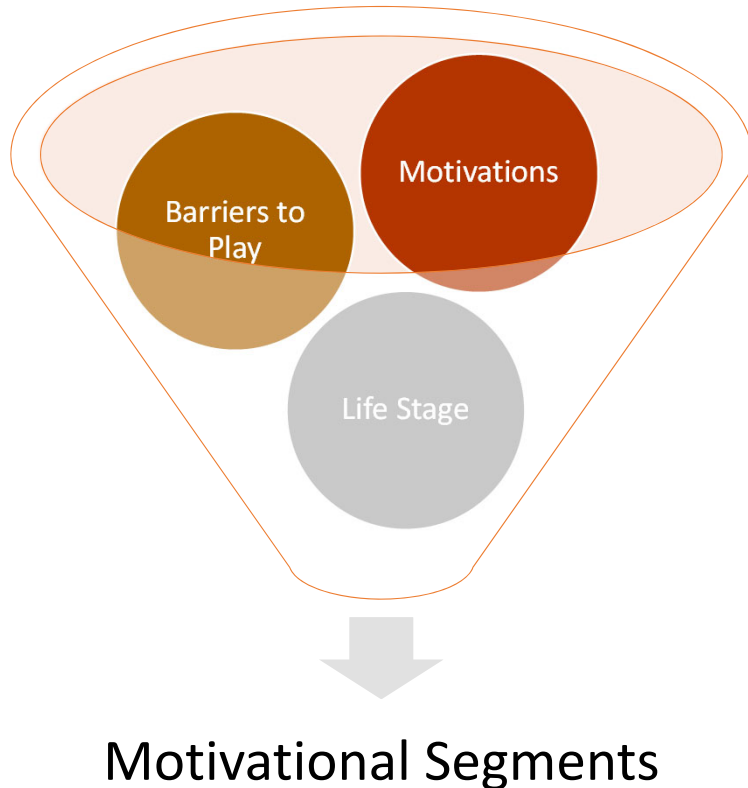
Quotas were established by geography, age, ethnicity and income, mirroring the most recent census data.

The maximum margin of sampling error on 2,501 interviews is +/- 2.0 points

---



# Motivational Segmentation



These segments are about  
**human beings**

We will not only see what they play but **WHY** they play, how they **THINK** and what they **ASPIRE** to achieve in their lives





# THE DREAM SPECTRUM



# DREAMER S

Dream big  
Assume they will win  
Spend more  
Play more games, more often  
Believe they are lucky  
More superstitious  
More conflicted



Don't dream as much  
So they play less  
Often view play as an investment  
Do not believe they are lucky  
Do not expect to win  
Less superstitious  
Less conflicted

# REALISTS

# DREAMERS

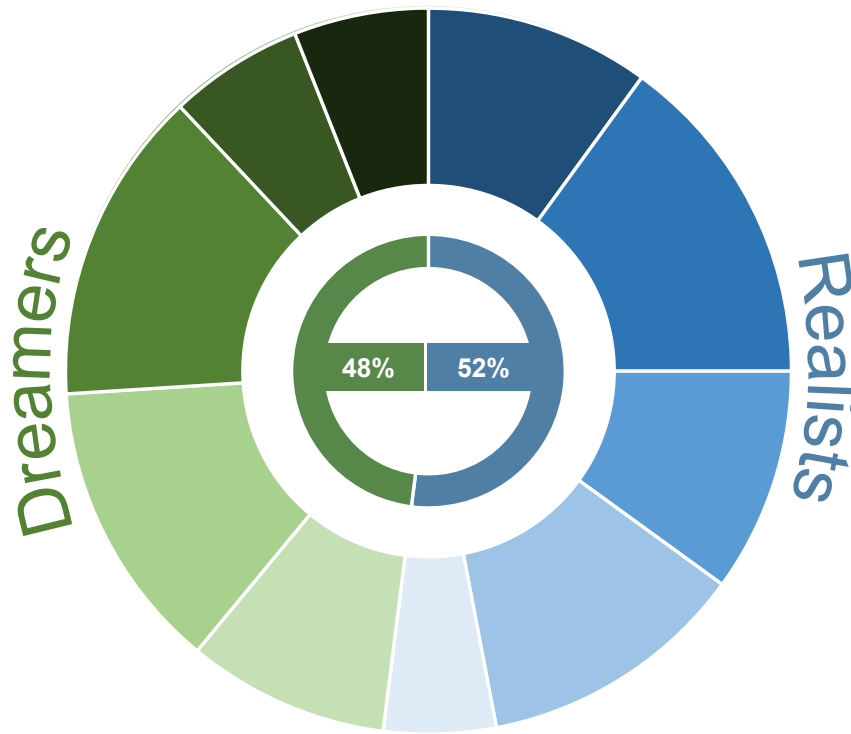


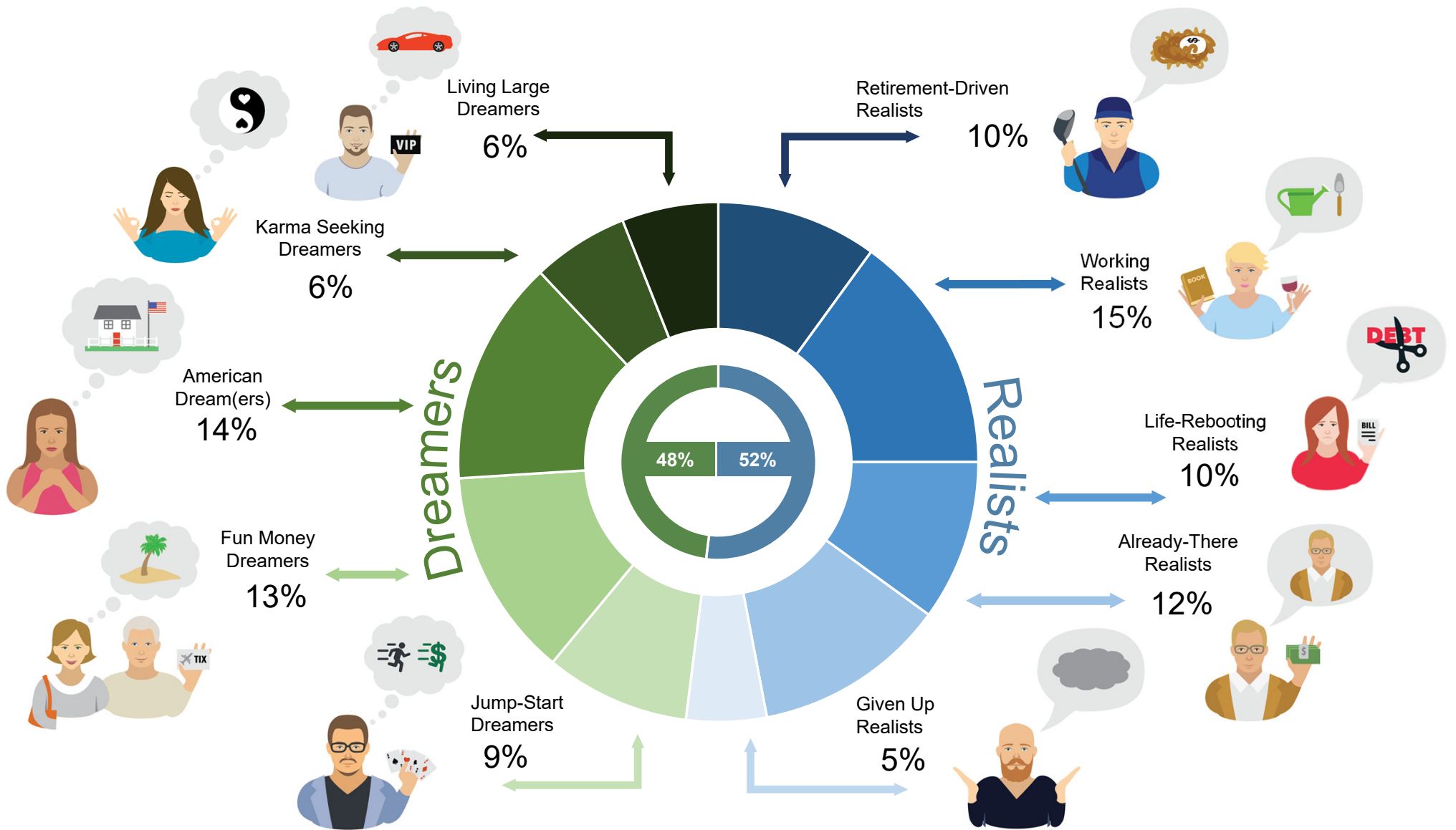
48%

# REALISTS



52%







# Five Key Motivational Segments of People

**Living Large Dreamers**

**Karma Seeking Dreamers**

**Fun Money Dreamers**

**Jump-Start Dreamers**

**Retirement-Driven Realists**





# Living Large Dreamers





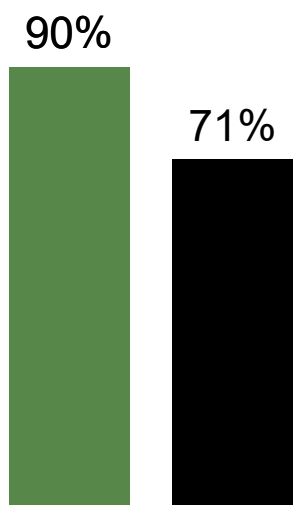
# Living Large Dreamers (6%)



“Live the life you deserve!”

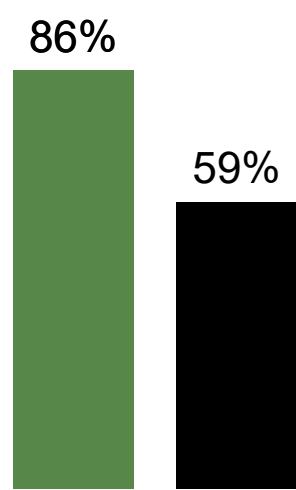


# Living Large Dreamers' Dreams



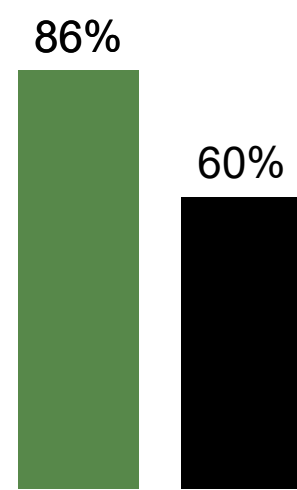
Financial Freedom

- House
- Eliminate debt
- No more bills
- Spend time with children
- Paying for college



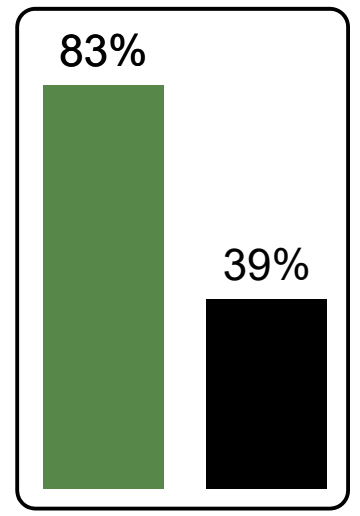
Retirement/Travel

- Retiring early
- Vacation home
- Traveling more/exotic
- Not working



Charitable

- Help others in need
- Volunteering
- Spoiling others
- Donating

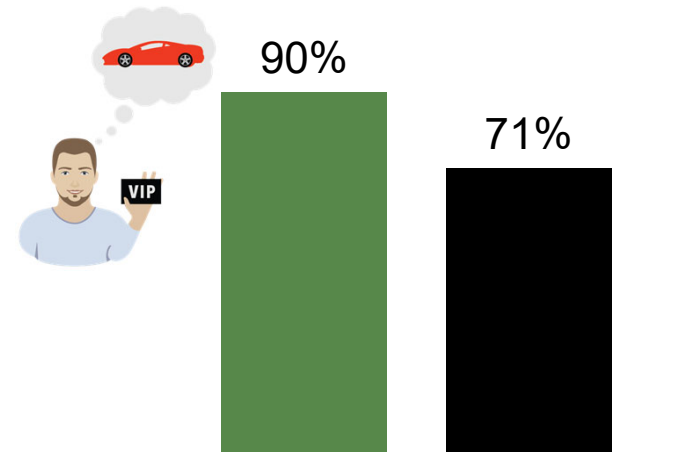


Personal Branding

- New car
- Having land
- Owning a business
- Going back to school



# Living Large Dreamers' Barriers



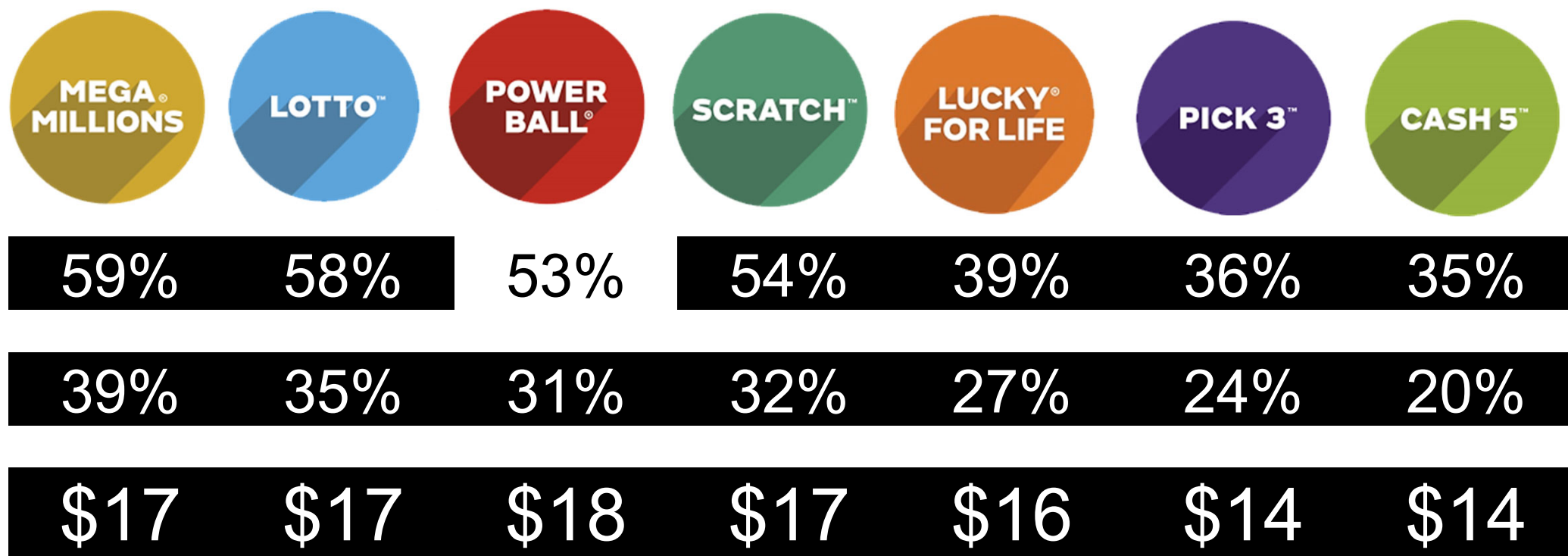
## Spending Constraints

You can only pay using cash and I don't always have cash

I have a fixed budget and will not go over that amount



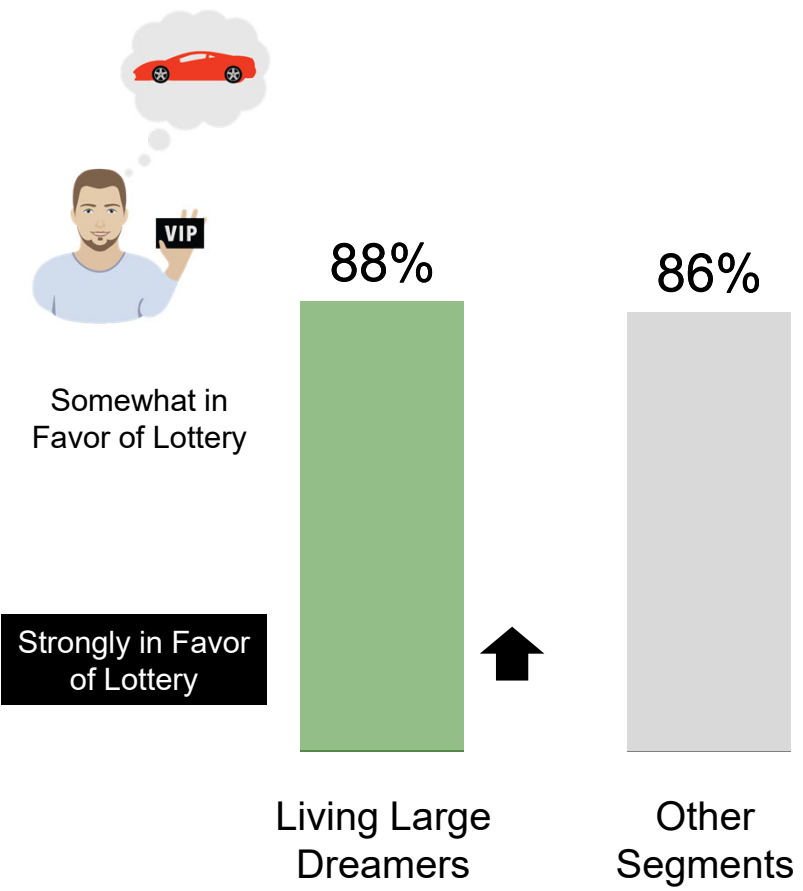
# How do Living Large Dreamers play



**\$1,400 Per Year** ↑



# Interacting with the Lottery



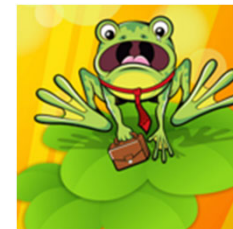
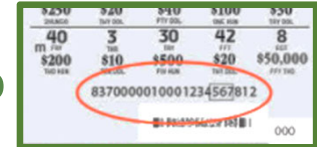
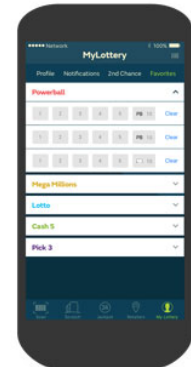
My Lottery Account: 36%

Downloaded the App: 38%

Signed up for Communications: 40%

Entered Second-Chance Drawing: 50%

Play Online Lottery Games:



43%

30%

21%

# Everything Matters



## Impulse/Communications



When I have a little extra money  
Just when I feel lucky  
I know it's a draw day  
Hearing about the lottery on the news



Seeing a vending machine  
Clerk says the game is lucky  
Design/visual appeal of the ticket  
Seeing advertising





# Living Large Dreamers' Attitudes



65%



32%



Investing

Playing for the big prize  
Motivation is financial

59%



20%



Loving Lottery

It's fun  
Feel good about playing

58%



27%



Compulsive

Play in particular ways  
I make sure I get tickets  
when the jackpot is big

58%



10%



Superstitious

Buy at particular stores  
I'm superstitious





# Living Large Dreamers' Attitudes

## Identity

Playing the lottery is a part of who I am. I play regularly and don't need any reminders to buy a ticket.

## The need to play a lot

I like to purchase multiple drawings at a time so I don't miss out on a chance to win.

## Superstition

I like to buy my lottery tickets at the same place because I think I will be luckier.

## Strategy

When playing a jackpot game, I pay attention to the numbers that come up most often and try to pick those.

## Winning is inevitable

I think of myself as a lucky person.



# Karma Seeking Dreamers



# A Closer Look at Karma Seeking Dreamers



## More Defining Demographic Characteristics

Middle-Aged

Diverse

Democrat



## lifestyle Characteristics

Mass Media Consumers

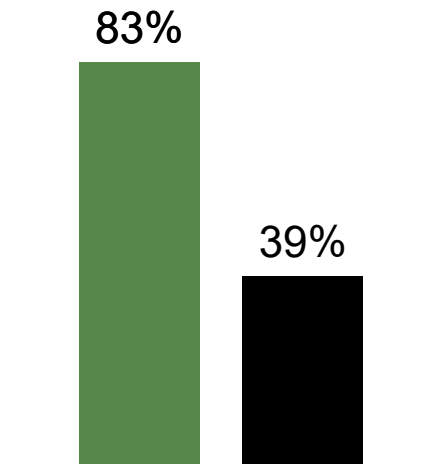
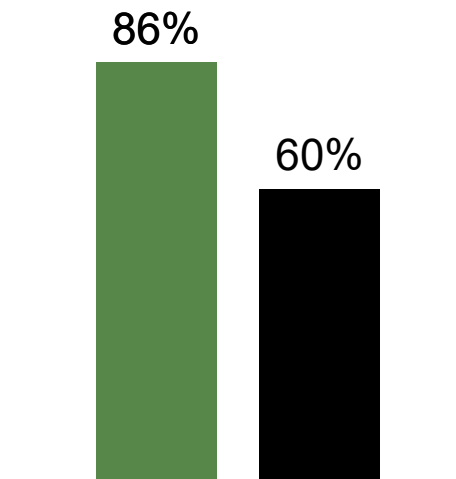
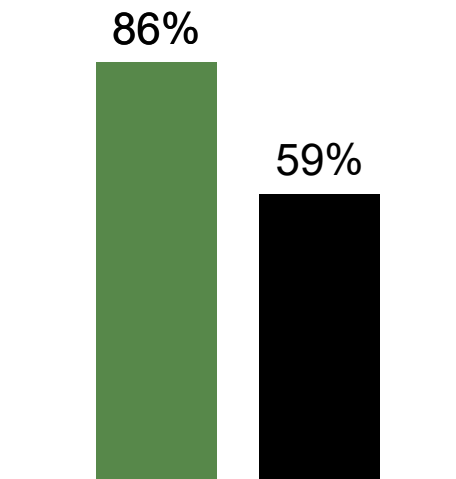
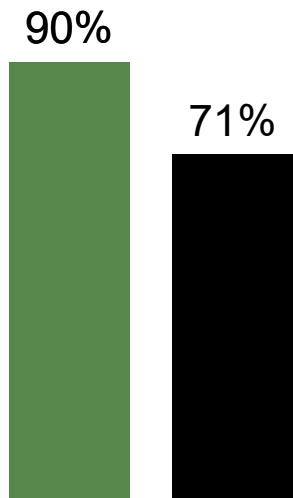
Phone Gamer

Very active

Enjoys other games



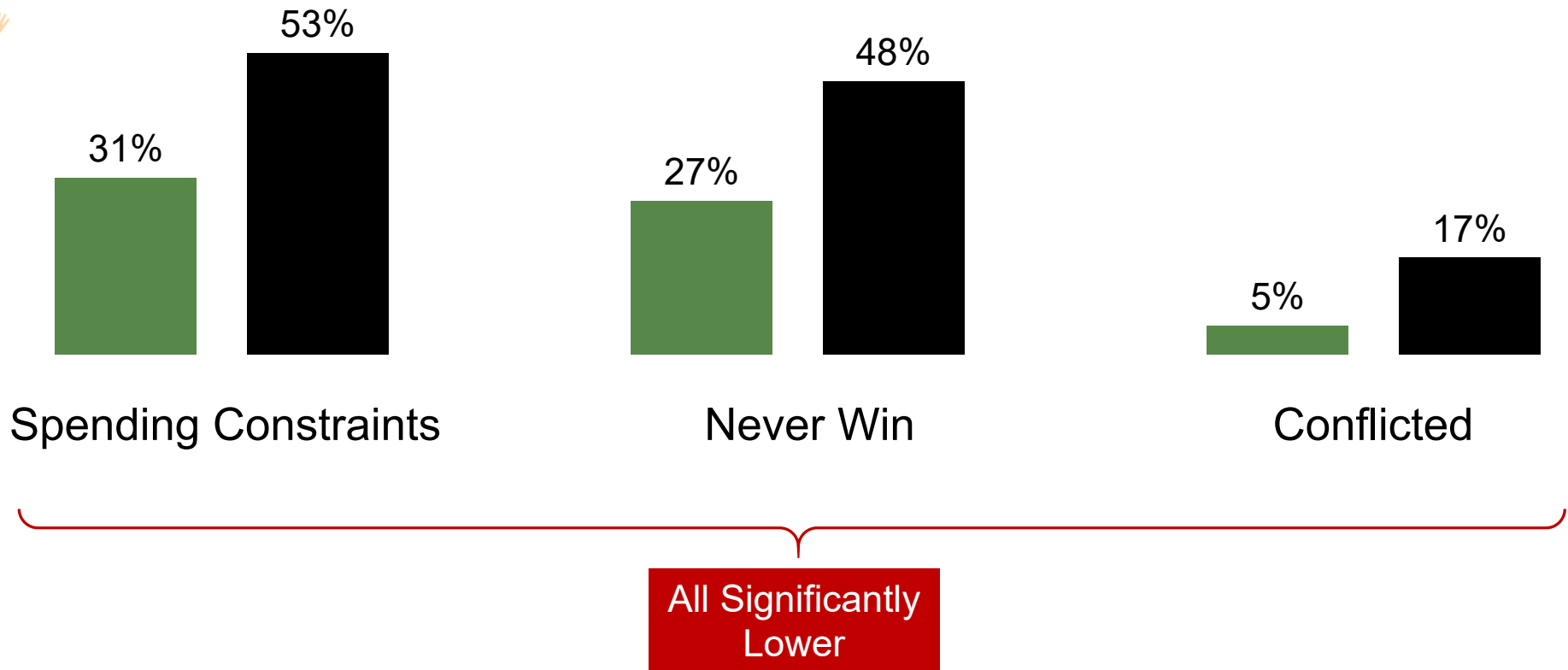
# Karma Seeking Dreamers' Dreams



All Significantly Higher



# Karma Seeking Dreamers' Barriers



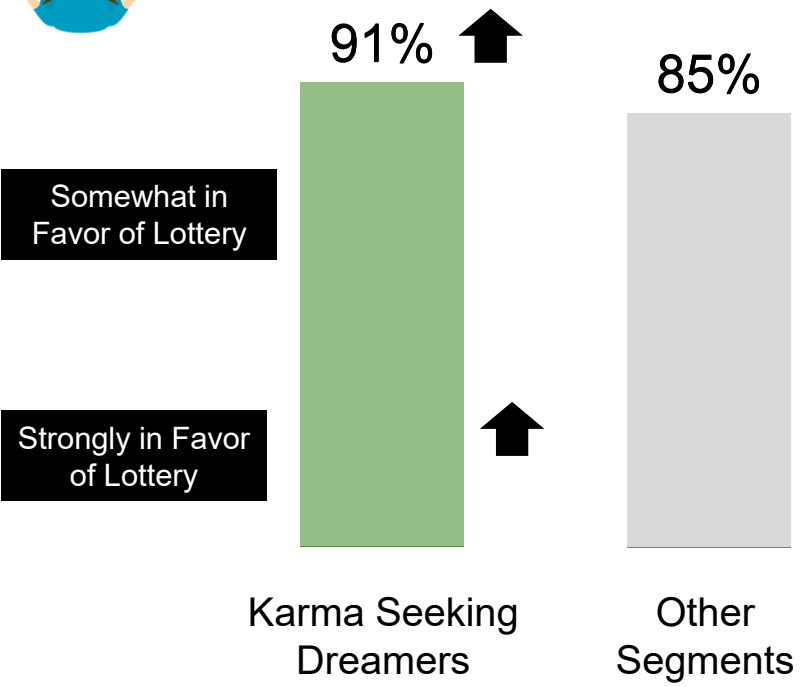


# How do Karma Seeking Dreamers play

POWER BALL®	SCRATCH™	LOTTO™	MEGA MILLIONS	PICK 3™	CASH 5™	LUCKY FOR LIFE
63%	54%	53%	42%	21%	20%	20%
25%	20%	19%	20%	10%	10%	10%
\$11	\$5	\$9	\$10	\$6	\$7	\$6
\$600 Per Year ↑						



# Interacting with the Lottery



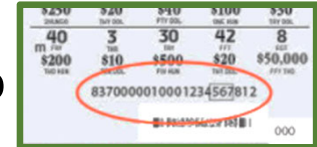
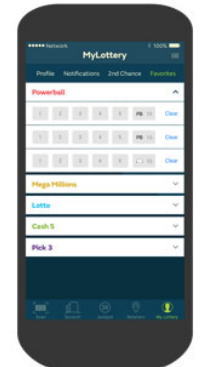
My Lottery Account: 15%

Downloaded the App: 13%

Signed up for Communications: 18%

Entered Second-Chance Drawing: 31%

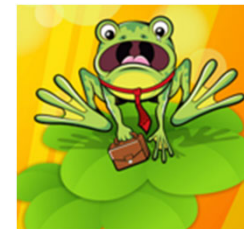
Play Online Lottery Games:



18%



11%



17%



# Most things matter

## Impulse/Communications and Game Style



When I have a little extra money  
I know it's draw day  
Hearing about it on the news  
Seeing it on a billboard

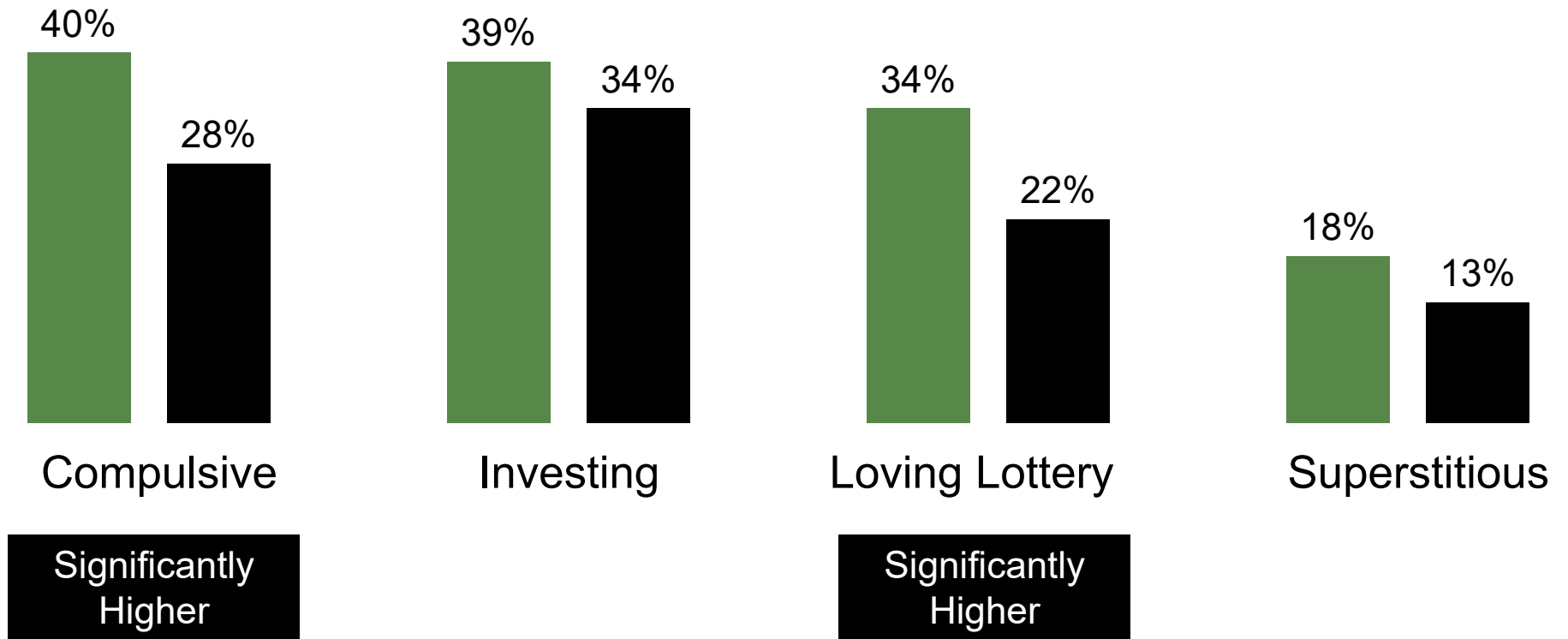
Having a play style I enjoy  
Licensed brand or logo I recognize  
Saw the advertising







# Karma Seeking Dreamers' Attitudes





# Karma Seeking Dreamers' Attitudes

## Fun

I mostly like to play the Lottery because it's fun...and if I can win something every now and then, all the better.

## Enjoyment

When I play one of the scratch games, I will sometimes scratch off small areas one at a time so that it takes longer.

## Compulsive

When the jackpot gets really big and I realize I forgot to buy a ticket, I'll sometimes go out to the store to buy one.

## A

## Contradiction

If I forget to buy a lottery ticket, it makes me uncomfortable.

Playing the lottery is a not part of who I am.

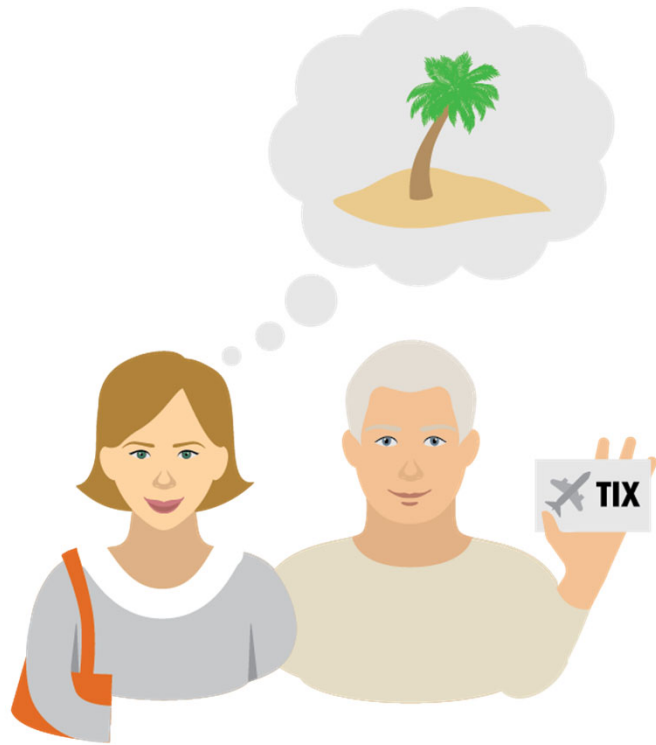


# Fun Money Dreamers





# Fun Money Dreamers (13%)



"Take it easy!"

# A Closer Look at Fun Money Dreamers



## More Defining Demographic Characteristics

Often Female

Older

Typically Married

More Educated

Often Retired

Often Republican



## Lifestyle Characteristics

Mainstream Media

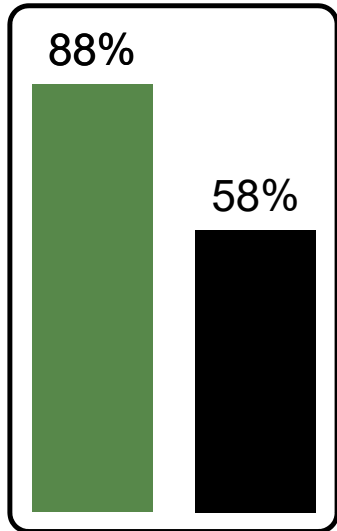
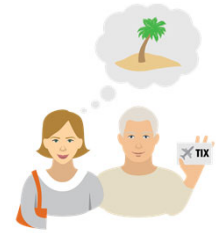
Less Mobile-Focused

Enjoy the Finer Things

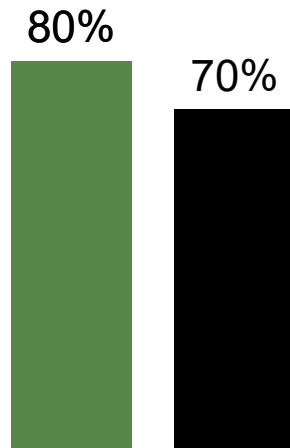
Less Interested in Other Games



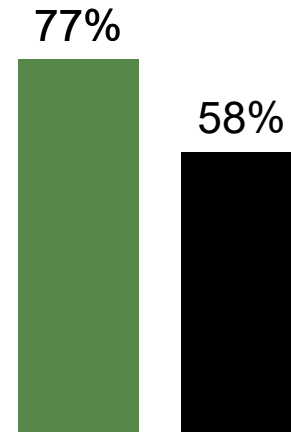
# Fun Money Dreamers' Dreams



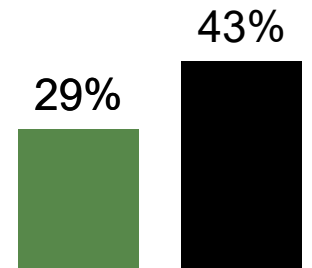
Financial Freedom



Retirement/Travel



Charitable



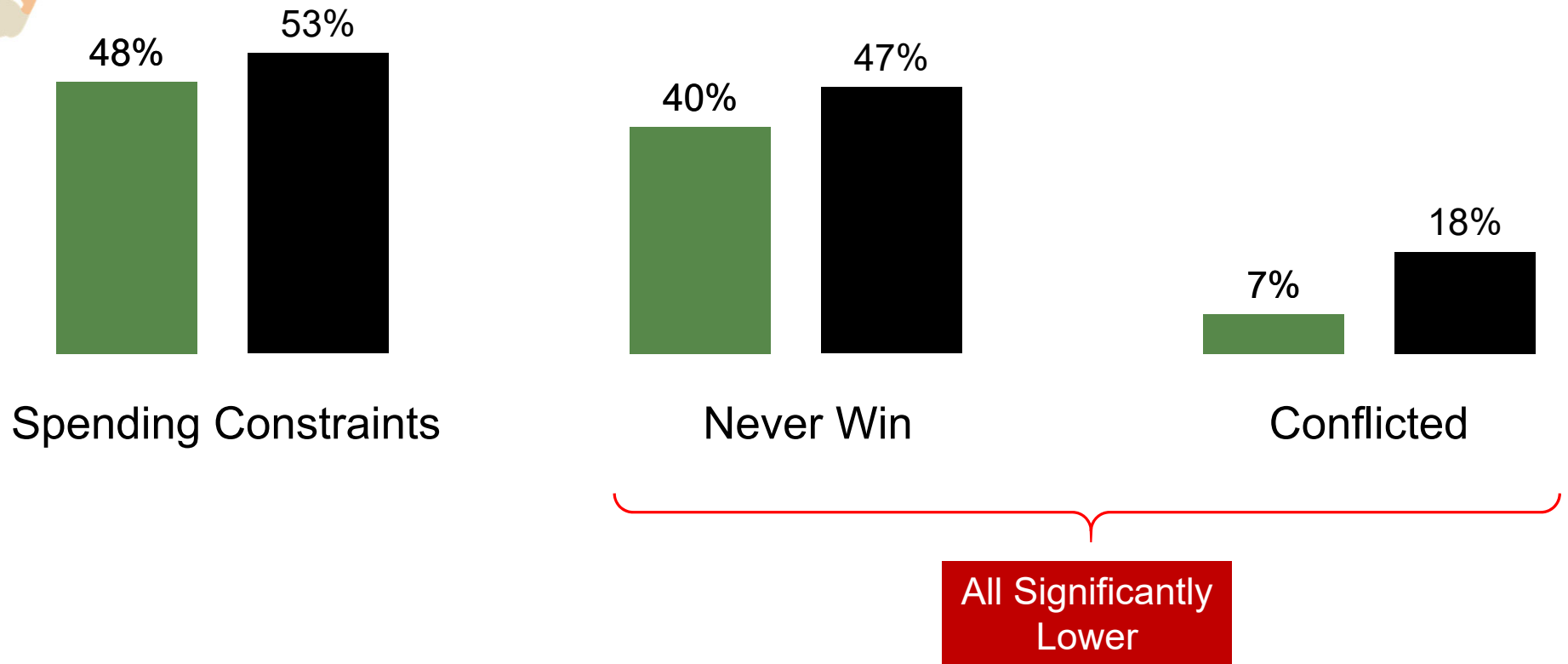
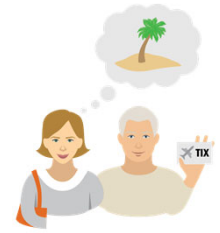
Personal Branding

Significantly Higher

Significantly Lower

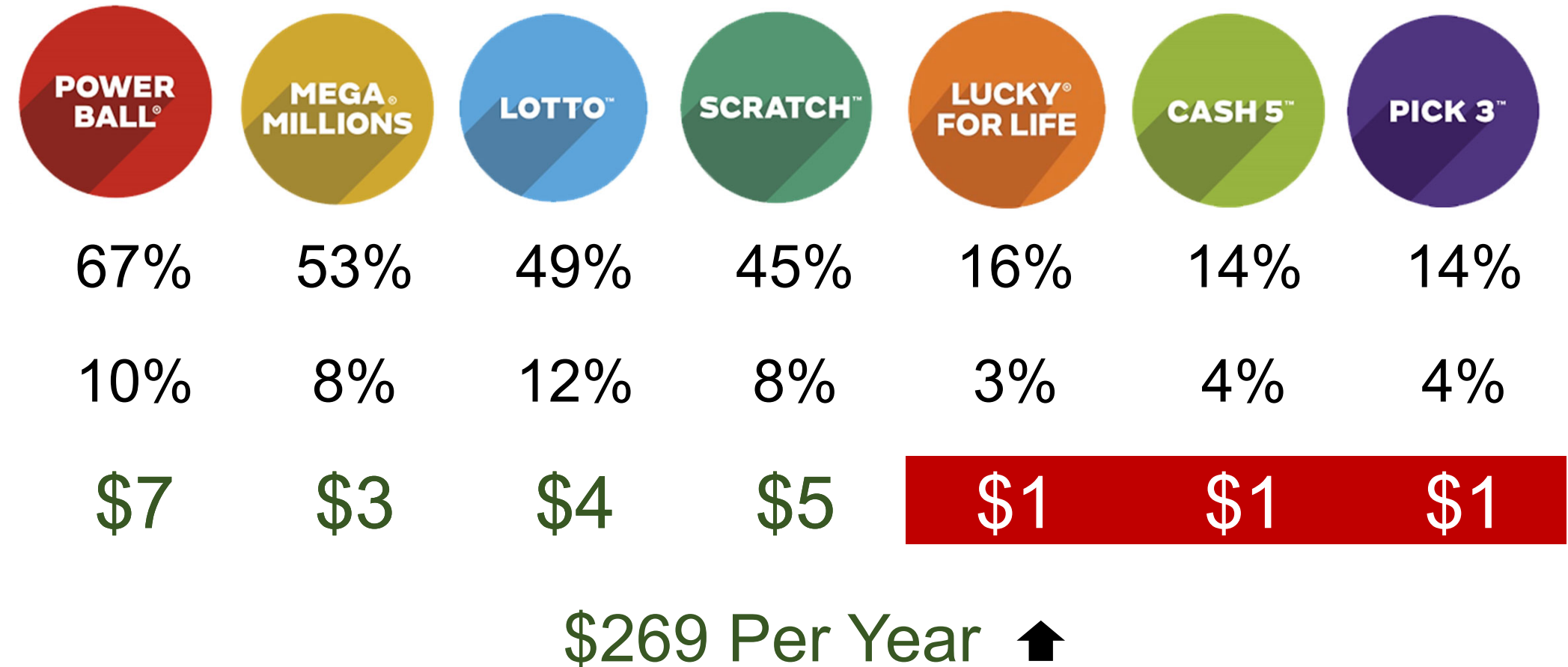


# Fun Money Dreamers' Barriers





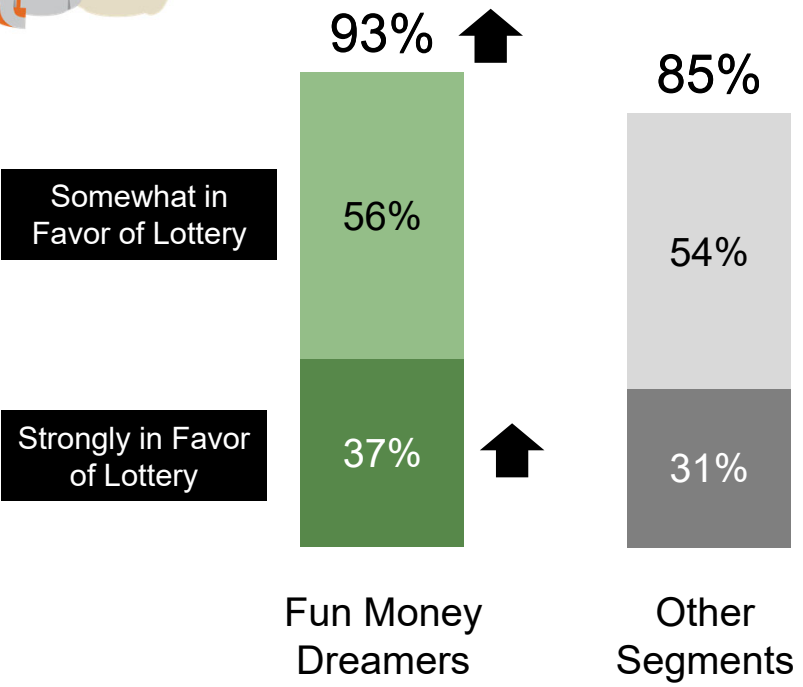
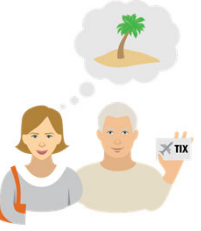
# How do Fun Money Dreamers play







# Interacting with the Lottery



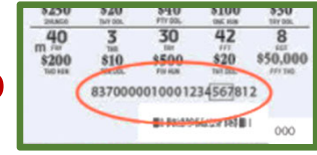
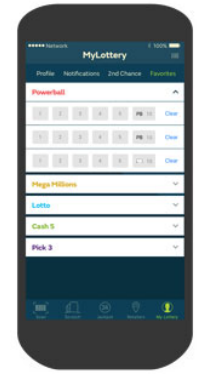
My Lottery Account: **10%**

Downloaded the App: **5%**

Signed up for Communications: **9%**

Entered Second-Chance Drawing: **27%**

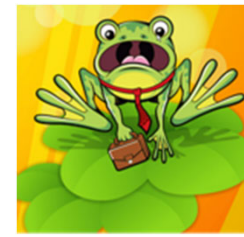
Play Online Lottery Games:



**5%**



**1%**



**6%**



# Few things matter

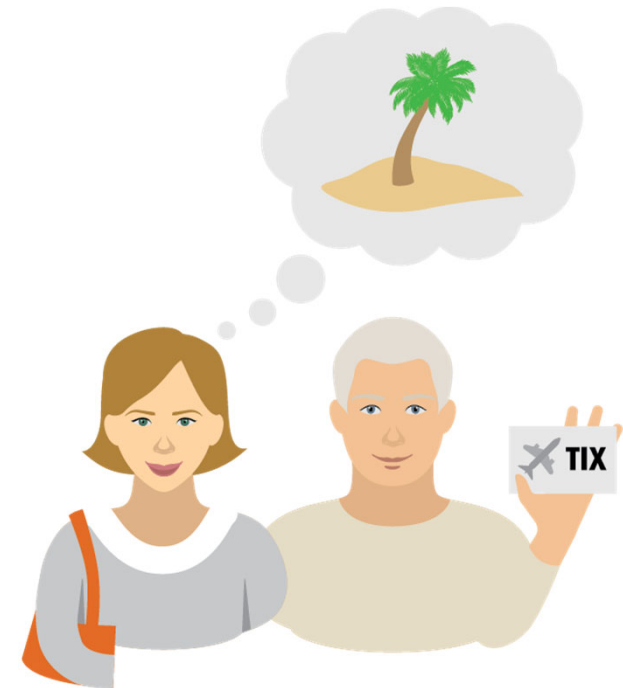
## Prizes and Enjoyability



Jackpot size  
Knowing there has not been a winner

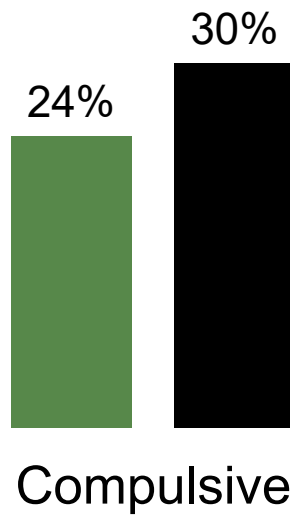
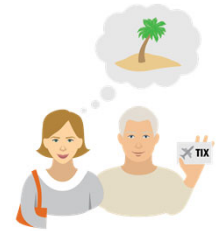
Nothing really, just when I feel like playing  
The way the game is played  
Play style I enjoy

Not impulse or communications

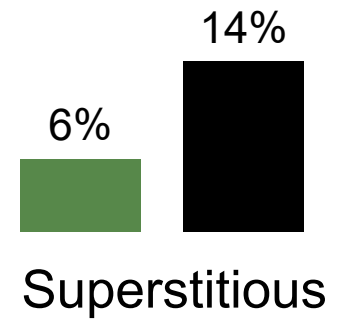
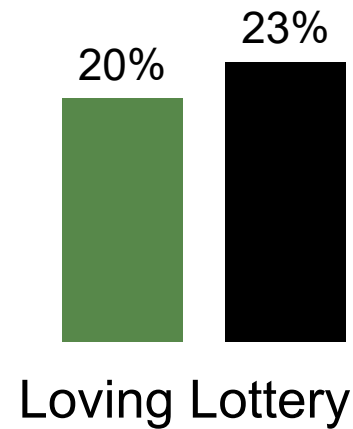




# Fun Money Dreamers' Attitudes



Significantly Lower



Significantly Lower



# Fun Money Dreamers' Attitudes

## **Big Prize Focus**

When I buy a Lottery ticket, I'm not looking to win \$50 or even \$100 - I'm playing for a big prize

## **Fun**

I mostly like to play the Lottery because it's fun...and if I can win something every now and then, all the better

## **A Donation**

Even when I don't win I still feel good about the money I spent on Lottery tickets because it goes to good causes

## **Joy of Playing**

When I play one of the scratch games, I will sometimes scratch off small areas one at a time so that it takes longer



# Jump-Start Dreamers





# Jump-Start Dreamers (9%)



"It only takes one!"

# A Closer Look at Jump-Start Dreamers



## More Defining Demographic Characteristics

Often Male

Younger

More Diverse

Often Single

Often Less Educated

Most Employed

Often Living in Metro Area



## Lifestyle Characteristics

Nothing but Mainstream Media

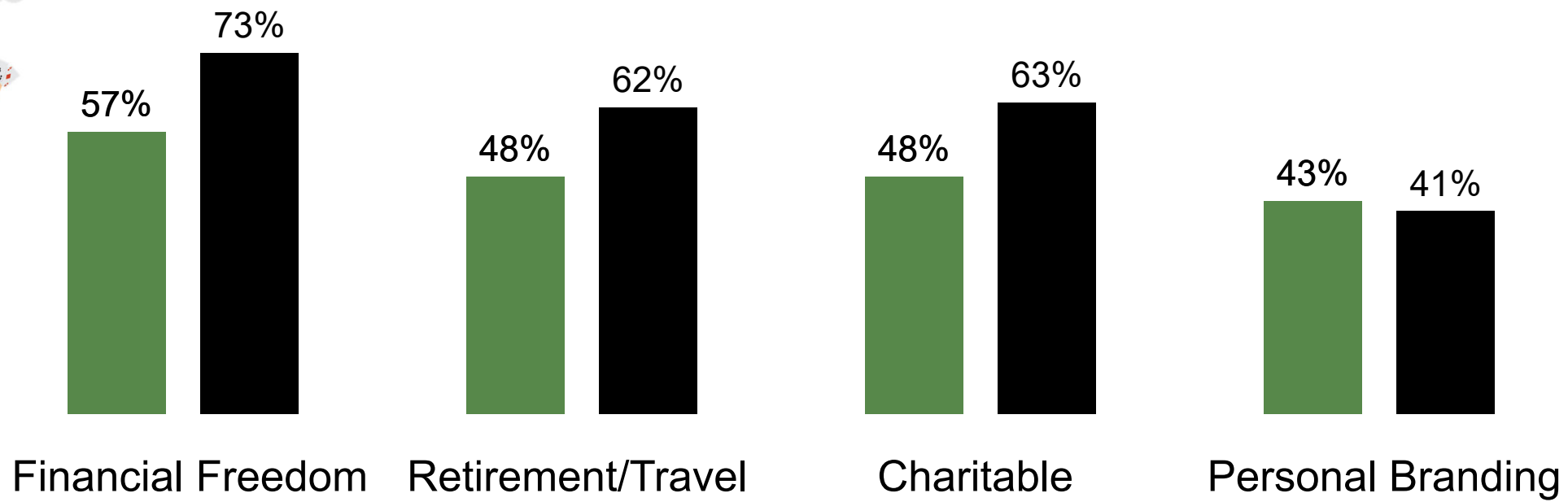
Less Mobile-Focused

Loves Automotive, Exercise and Shopping Activities

Plays Board Games and Cards



# Jump-Start Dreamers' Dreams

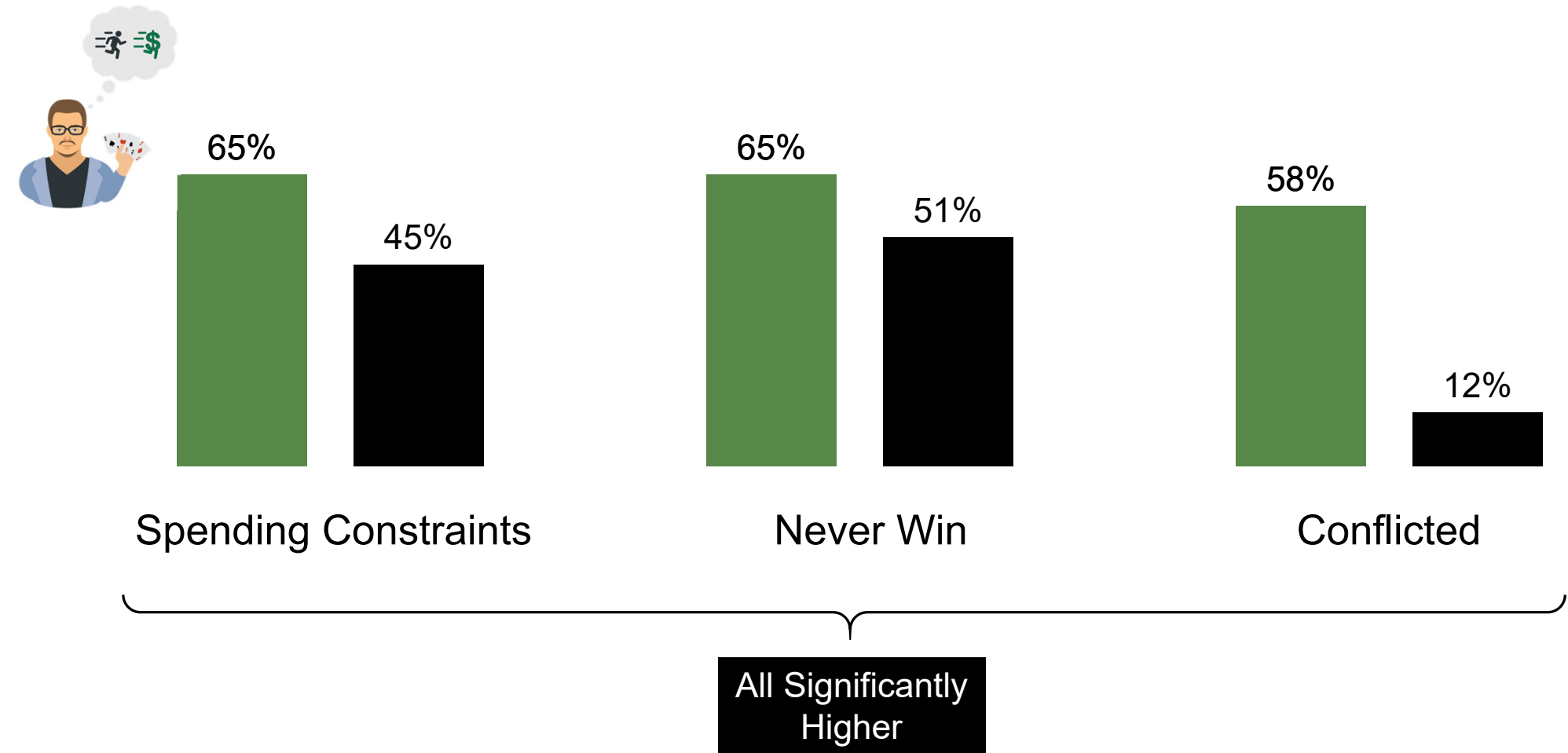


All Significantly Lower



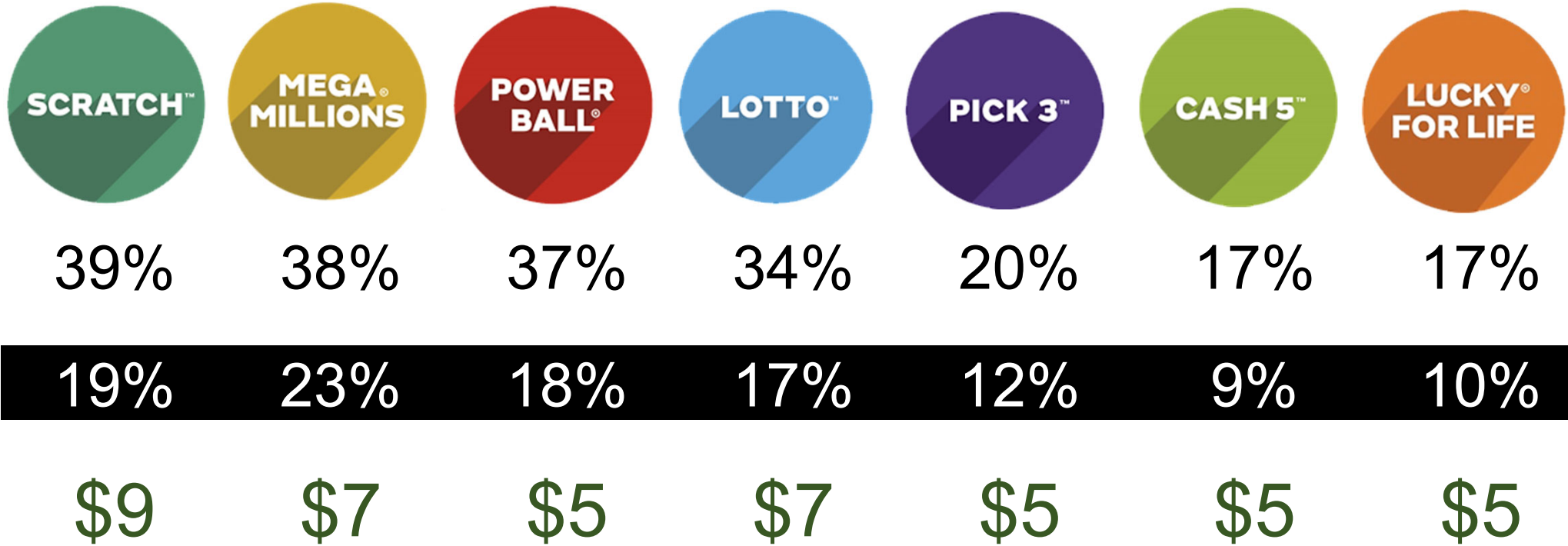


# Jump-Start Dreamers' Barriers





# How do Jump-Start Dreamers play



**\$765 Per Year** ↑



# Interacting with the Lottery



Somewhat in Favor of Lottery

Strongly in Favor of Lottery



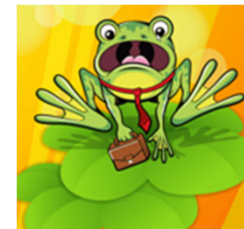
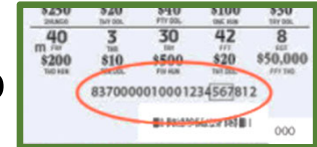
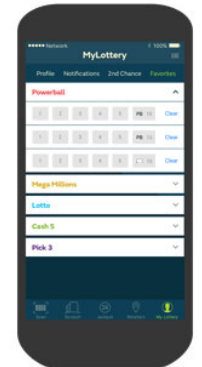
My Lottery Account: 24%

Downloaded the App: 21%

Signed up for Communications: 28%

Entered Second-Chance Drawing: 35%

Play Online Lottery Games:



32%

15%

20%

# Triggers matter



## Communications and Design



- Hearing about it on the news
- Seeing a sign for the game
- Hearing about a winner
- Seeing a billboard
- Seeing a lottery machine

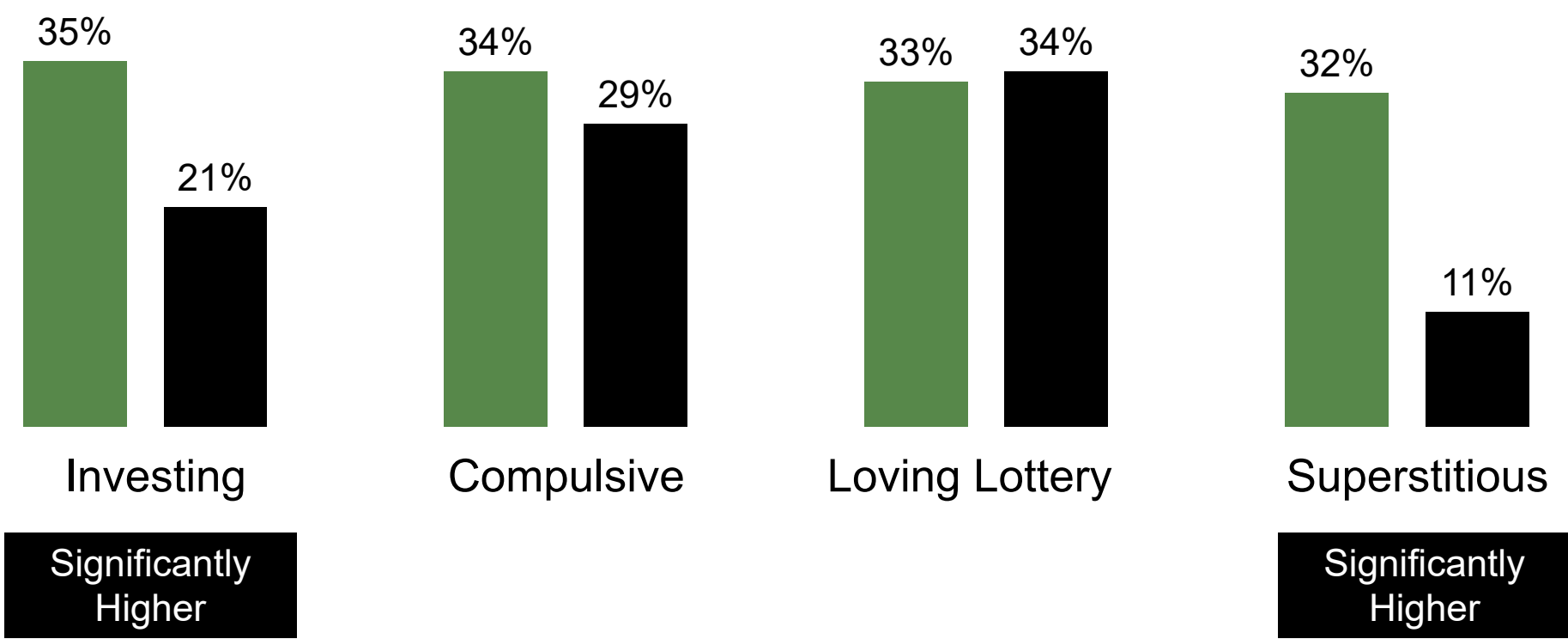
- Design, color and visual appeal
- License brand or logo

Not just when they feel like it





# Jump-Start Dreamers' Attitudes



# Jump-Start Dreamers' Attitudes



## Urge to Play

I like to purchase multiple drawings at a time so I don't miss out on a chance to win

## Shame

I don't let my friends know that I play the lottery, or at least, not how much I play

## Conflict

I feel bad buying lottery tickets in the check-out line, because everyone must wait for me to buy my tickets

I'm sometimes embarrassed to buy a Lottery ticket when there are people around me

## Just Who They Are

Playing the lottery is a part of who I am. I play regularly and don't need any reminders to buy a ticket



# Retirement-Driven Realists





# Retirement-Driven Realists (10%)



"Freedom from the grind!"



# A Closer Look at Retirement-Driven Realists



## More Defining Demographic Characteristics

Typically Male

Middle-Aged

Less Diverse

Often Married

Highly Educated

Most Employed/Higher Income

Most Likely to Live in Metro Area



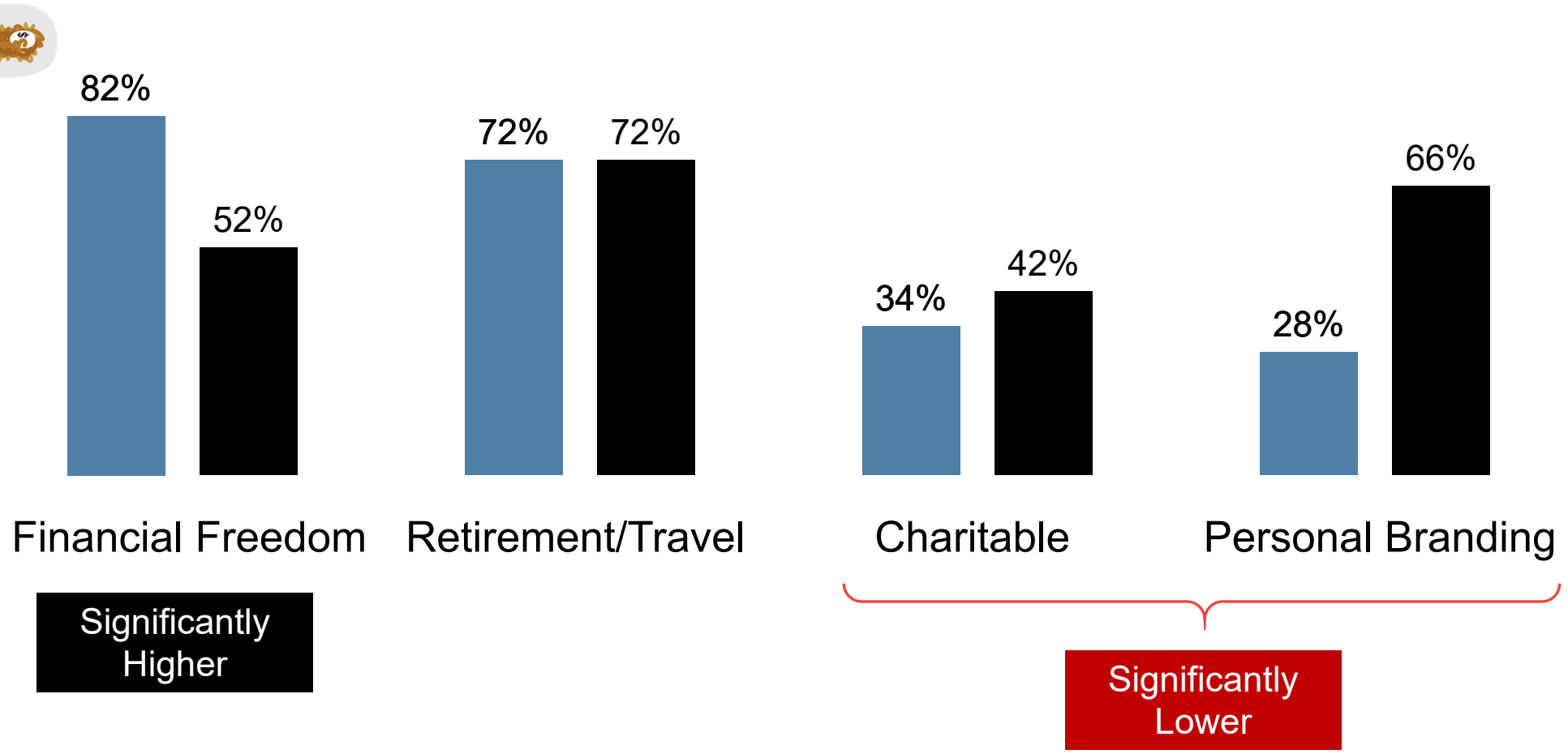
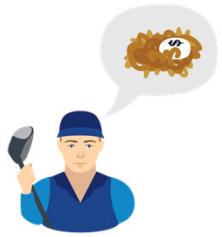
## Lifestyle Characteristics

Print, Major Network Programming, Online News

Enjoy Golf, Travel, Eating Out and Sporting Events

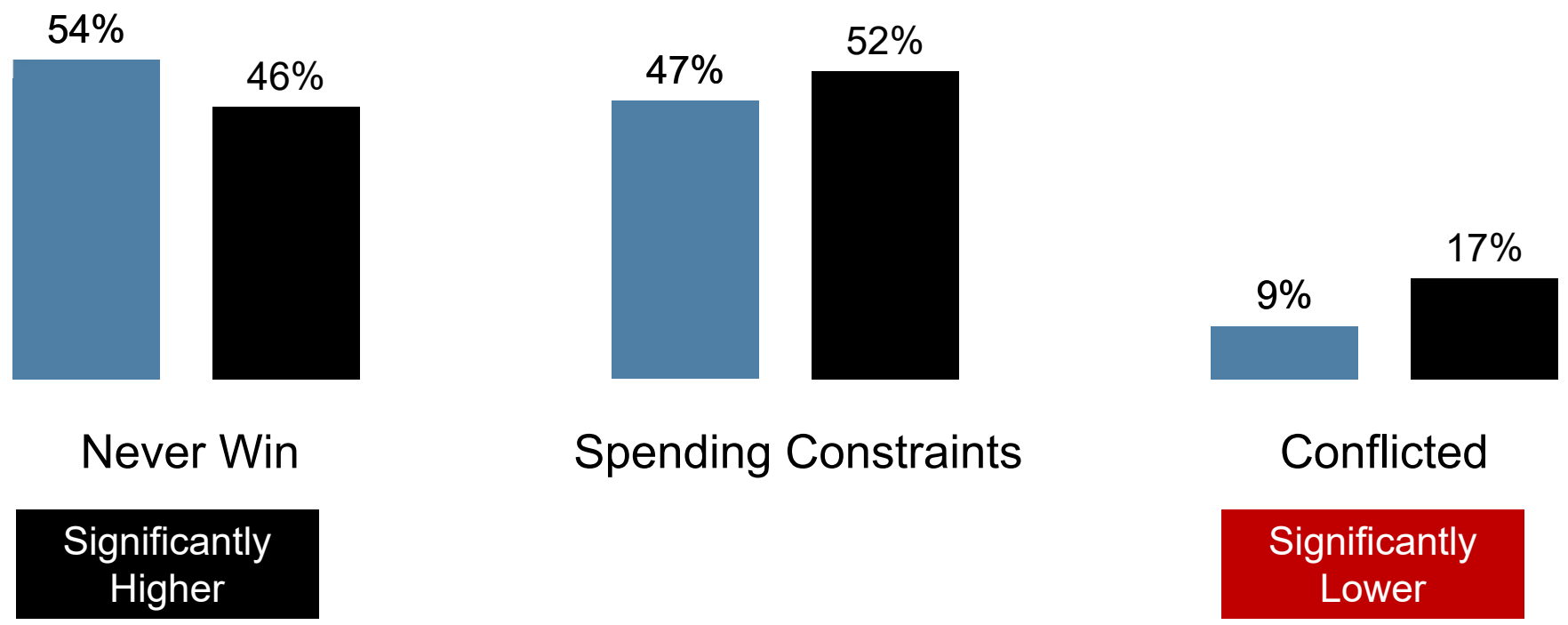
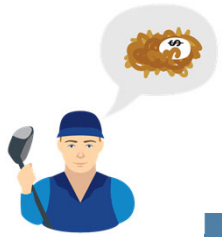


# Retirement-Driven Realists' Dreams



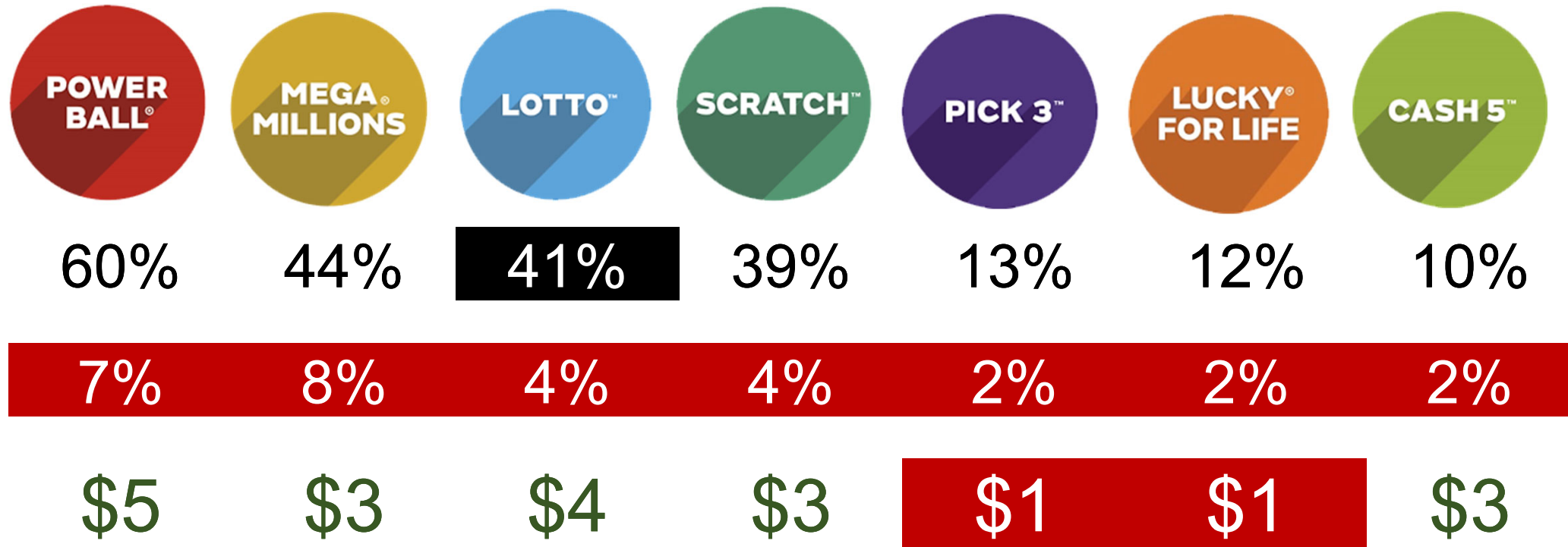


# Retirement-Driven Realists' Barriers





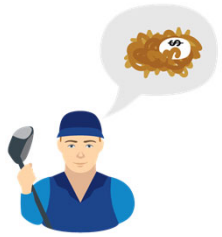
# How do Retirement-Driven Realists play



\$216 Per Year ↓

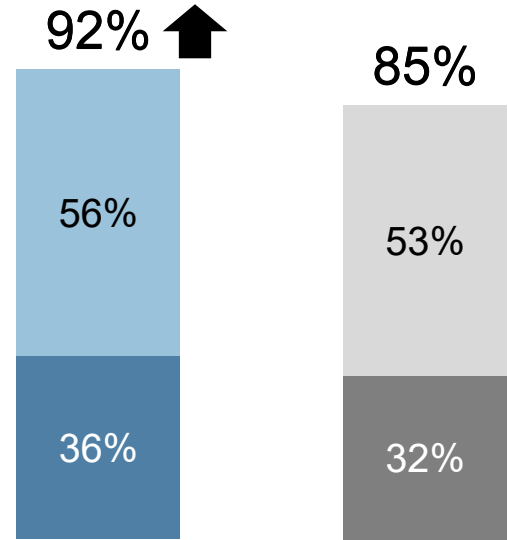


# Interacting with the Lottery



Somewhat in Favor of Lottery

Strongly in Favor of Lottery



Retirement-Driven Dreamers

Other Segments

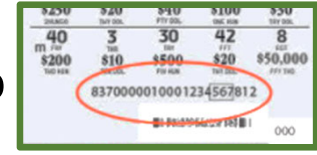
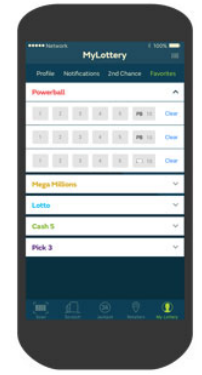
My Lottery Account: **9%**

Downloaded the App: **4%**

Signed up for Communications: **11%**

Entered Second-Chance Drawing: **24%**

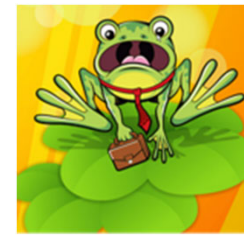
Play Online Lottery Games:



**5%**



**1%**



**6%**



# Few Influences

## Jackpot Size and Ticket Price



The size of the jackpot



Size of the top prize  
Price of the ticket





**ADDENDUM B /**  
**TRACKING STUDY – PLAYER DEMOGRAPHICS**

ADDENDUM B - PLAYER DEMOGRAPHICS

Colorado Lottery

	COLORADO POPULATION 2010 US CENSUS ESTIMATES	Powerball Sample Size 955	Mega Millions Sample Size 527	Scratch Games Sample Size 674	Lotto Sample Size 465	Cash 5 Sample Size 124	Pick 3 Sample Size 89	Lucky for Life Sample Size 70	All Players Sample Size 1313
<b>CO LOTTERY TRACKING STUDY - PAST 6 MONTH PLAYERS DEMOGRAPHICS WAVE 17,18,19,20 ROLLED</b>									
<b>Gender</b>									
Male	49%	55%	57%	46%	52%	52%	51%	59%	51%
Female	51%	45%	43%	54%	48%	48%	49%	41%	49%
<b>Age</b>									
18-24	13%	4%	7%	11%	5%	6%	11%	11%	8%
25-34	19%	19%	17%	20%	12%	14%	21%	19%	19%
35-44	18%	22%	24%	22%	22%	25%	20%	20%	22%
45-54	20%	24%	23%	22%	24%	19%	18%	16%	22%
55-64	16%	18%	16%	17%	23%	26%	22%	20%	17%
65+	14%	12%	13%	9%	16%	10%	7%	14%	12%
<b>Race</b>									
Caucasian	85%	82%	80%	80%	78%	65%	67%	77%	81%
Asian	3%	3%	3%	2%	4%	2%	3%	1%	3%
African American	4%	5%	8%	7%	8%	22%	20%	14%	6%
Other	10%	12%	12%	15%	12%	15%	12%	10%	12%
<b>Ethnicity</b>									
Hispanic	21%	25%	25%	28%	26%	23%	20%	26%	25%
<b>Income</b>									
UNDER \$35,000 (Net)	30%	13%	14%	21%	15%	20%	21%	13%	17%
Under \$15,000	11%	3%	2%	5%	3%	5%	3%	0%	4%
\$15,000 - \$24,999	9%	4%	4%	6%	6%	7%	2%	1%	5%
\$25,000 - \$34,999	10%	7%	8%	10%	6%	8%	16%	11%	8%
\$35,000 - \$99,999 (Net)	45%	49%	49%	51%	54%	51%	56%	50%	50%
\$35,000 - \$49,999	13%	10%	12%	14%	11%	14%	16%	14%	12%
\$50,000 - \$74,999	18%	20%	19%	22%	22%	20%	24%	20%	20%
\$75,000 - \$99,999	13%	18%	18%	15%	21%	17%	17%	16%	18%
\$100,000+ (Net)	25%	33%	32%	25%	26%	20%	17%	31%	28%
\$100,000 - \$149,999	15%	21%	19%	18%	18%	13%	11%	23%	19%
\$150,000 - \$199,999	6%	7%	8%	5%	6%	6%	6%	7%	6%
\$200,000 and over	5%	5%	5%	2%	2%	1%	0%	1%	4%
Don't Know/Refused		5%	5%	4%	6%	9%	6%	6%	5%
Mean Income		\$89,383	\$88,489	\$74,584	\$80,849	\$72,765	\$68,482	\$84,432	\$82,934
<b>Education</b>									
Less than High School	11%	1%	1%	2%	1%	2%	4%	0%	1%
High School Graduate/Vocational Training/GED	23%	12%	13%	15%	12%	19%	13%	14%	13%
Some College	22%	26%	26%	31%	28%	23%	29%	37%	26%
College Graduate	31%	38%	37%	36%	37%	32%	37%	27%	38%
Post Graduate Degree or Study	13%	23%	23%	15%	21%	25%	16%	20%	22%
<b>Employment Status</b>									
Employed Full time		63%	62%	58%	57%	58%	62%	59%	60%
Employed Part time		8%	6%	10%	8%	6%	7%	6%	9%
Student		2%	3%	5%	2%	4%	7%	1%	3%
Retired / Homemaker		21%	22%	19%	26%	23%	17%	24%	22%
Not employed		6%	6%	8%	7%	8%	8%	10%	6%

	COLORADO POPULATION 2010 US CENSUS ESTIMATES	Powerball Sample Size 955	Mega Millions Sample Size 527	Scratch Games Sample Size 674	Lotto Sample Size 465	Cash 5 Sample Size 124	Pick 3 Sample Size 89	Lucky for Life Sample Size 70	All Players Sample Size 1313
<b>LOTERY BELIEFS - % STRONGLY AGREE</b>									
The Lottery preys on poor people.	n/a	4%	5%	4%	4%	7%	6%	10%	5%
I worry that the Lottery will corrupt our society	n/a	1%	1%	1%	1%	3%	4%	6%	2%
The Lottery takes advantage of uneducated people	n/a	5%	5%	4%	4%	7%	6%	13%	5%



	COLORADO POPULATION 2010 US	Powerball Sample Size 1237	Mega Millions Sample Size 723	Scratch Games Sample Size 803	Lotto Sample Size 588	Cash 5 Sample Size 160	Pick 3 Sample Size 141	Lucky for Life Sample Size 76	All Players Sample Size 1603
<b>CO LOTTERY TRACKING STUDY - PAST YEAR PLAYERS</b>									
<b>DEMOGRAPHICS WAVE 17,18,19,20 ROLLED</b>									
<b>CENSUS ESTIMATES</b>									
<b>Gender</b>									
Male	49%	52%	53%	45%	51%	50%	48%	55%	50%
Female	51%	48%	47%	55%	49%	50%	52%	45%	50%
<b>Age</b>									
18-24	13%	6%	7%	11%	5%	5%	13%	11%	8%
25-34	19%	20%	20%	19%	13%	14%	19%	17%	20%
35-44	18%	23%	22%	22%	22%	25%	18%	22%	22%
45-54	20%	23%	22%	21%	24%	21%	21%	16%	22%
55-64	16%	16%	16%	16%	21%	23%	19%	18%	16%
65+	14%	12%	13%	11%	15%	12%	10%	16%	12%
<b>Race</b>									
Caucasian	85%	83%	81%	80%	78%	66%	72%	78%	82%
Asian	3%	4%	3%	2%	3%	4%	4%	1%	4%
African American	4%	5%	7%	6%	8%	19%	16%	14%	5%
Other	10%	12%	11%	14%	13%	16%	13%	9%	12%
<b>Ethnicity</b>									
Hispanic	21%	24%	25%	27%	27%	24%	23%	28%	24%
<b>Income</b>									
UNDER \$35,000 (Net)	30%	14%	14%	20%	16%	21%	22%	16%	16%
Under \$15,000	11%	3%	3%	5%	3%	5%	4%	1%	4%
\$15,000 - \$24,999	9%	4%	4%	5%	6%	8%	4%	3%	5%
\$25,000 - \$34,999	10%	8%	8%	10%	7%	9%	13%	12%	8%
\$35,000 - \$99,999 (Net)	45%	48%	50%	50%	52%	51%	54%	50%	48%
\$35,000 - \$49,999	13%	11%	12%	13%	12%	13%	13%	13%	12%
\$50,000 - \$74,999	18%	20%	19%	21%	21%	23%	23%	20%	20%
\$75,000 - \$99,999	13%	17%	19%	16%	19%	16%	18%	17%	17%
\$100,000+ (Net)	25%	32%	31%	26%	27%	19%	17%	29%	29%
\$100,000 - \$149,999	15%	20%	19%	18%	17%	13%	11%	21%	18%
\$150,000 - \$199,999	6%	7%	8%	5%	6%	5%	4%	7%	7%
\$200,000 and over	5%	5%	4%	3%	3%	2%	1%	1%	4%
Don't Know/Refused		6%	5%	4%	6%	8%	7%	5%	6%
Mean Income		\$88,870	\$87,657	\$76,922	\$82,215	\$72,075	\$69,504	\$81,493	\$84,658
<b>Education</b>									
Less than High School	11%	1%	1%	2%	1%	3%	4%	0%	1%
High School Graduate/Vocational Training/GED	23%	12%	12%	14%	13%	18%	13%	14%	12%
Some College	22%	24%	26%	29%	27%	26%	31%	36%	25%
College Graduate	31%	40%	39%	37%	39%	32%	38%	30%	39%
Post Graduate Degree or Study	13%	23%	22%	17%	20%	21%	13%	18%	22%
<b>Employment Status</b>									
Employed Full time		62%	62%	57%	57%	58%	62%	57%	59%
Employed Part time		8%	7%	10%	8%	8%	9%	7%	9%
Student		3%	4%	5%	3%	3%	4%	1%	4%
Retired / Homemaker		21%	22%	20%	25%	22%	17%	25%	22%
Not employed		6%	6%	7%	7%	9%	9%	9%	6%

	COLORADO POPULATION 2010 US	Powerball Sample Size 1237	Mega Millions Sample Size 723	Scratch Games Sample Size 803	Lotto Sample Size 588	Cash 5 Sample Size 160	Pick 3 Sample Size 141	Lucky for Life Sample Size 76	All Players Sample Size 1603
<b>LOTTERY BELIEFS - % STRONGLY AGREE</b>									
The Lottery preys on poor people.	n/a	5%	6%	5%	5%	9%	6%	9%	6%
I worry that the Lottery will corrupt our society	n/a	1%	1%	1%	1%	3%	3%	5%	1%
The Lottery takes advantage of uneducated people	n/a	5%	5%	4%	5%	8%	5%	12%	5%

- Wave 17: December 7 – December 23 2015
- Wave 18: April 18 – April 29 2016
- Wave 19: August 18 – August 31 2016
- Wave 20: October 17 – October 31 2016



## **ADDENDUM C / TECHNICAL SPEC DOC:**

- **USER EXPERIENCE AND INFORMATION ARCHITECTURE**
- **CONTENT MANAGEMENT SYSTEM**
- **MYLOTTERY EMAIL, TEXT AND NOTIFICATION ECOSYSTEM**
- **TECHNOLOGY AND HOSTING ARCHITECTURE**
- **DATA ARCHITECTURE AND INTEGRATION**
- **QA AND USER TESTING**



# 1. User Experience & Information Architecture

See Addendum F for site maps.

## 1.1 Website Design

The Colorado Lottery's website is designed to provide players with the information that they seek in a user-friendly way while encouraging them to interact with the site by making it fun and relevant.

Analytical tools are used to identify what works and what can be improved on in terms of the user interface (UI) and ease-of-use (UX) of the site. This is a continuous process and should be reviewed at least twice per year.

### 1.1.1 Navigation

The website offers shortcuts at the top of the main navigation to areas of the site that are used frequently: 1) Enter a Scratch Bonus Draw, 2) Where to Play retailer locator, 3) Sign-in to MyLottery loyalty program, 4) log-out and 5) Search engine. An "Español" link allows players to switch to pages written in Spanish.

The main navigation of the site is comprised of 1) Games, 2) Game Tools, 3) About, 4) Winners, 5) News, and 6) Giving Back.

Above the industry standard footer of the website there is a strong visual to direct players to the FAQ section of the site. The standard footer, in addition to the full expanded navigation of the site, also includes a Media Center with three sub-pages, and a link to the Retailers Locator Map, to a Become a Retailer internal page, and a link to the retailer extranet, and a sitemap.

### 1.1.2 Homepage

The homepage feature (hero) should be eye-catching and encourage click-through.

Many Jackpot game players want to hit the site and get winning numbers immediately. For this reason, winning numbers are available on the homepage. We understand that this results in high bounce rates, however, by employing other strategies we have been able to manage the bounce rate effectively. These players are also offered a Check Your Numbers widget so they can quickly find out if the ticket they purchased is a winner or not.

The most recent Scratch games are featured as well as a "News" area that is populated with topics such as promotions, winners, and state projects.



### 1.1.3 Jackpot Games

#### Games Landing Page

The Games landing page offers players a page that includes the winning numbers widget for all games. The page offers a “Print this page” feature that allows users to print a printer-friendly version of it.

#### Jackpot Game Landing Pages

Each game has its own landing page. The Jackpot games pages (Powerball, Mega Millions, Lucky for Life, Colorado Lotto+, Cash 5 and Pick 3) each offer 1) the winnings number widget, 2) the Check Your Numbers widget, 3) links to game tools and 4) content.

### 1.1.4 Jackpot Games Widgets

#### Jackpot Games Winning Numbers Widget

The winning numbers widgets show 1) the date and numbers of the most recent drawing and the estimated jackpot/jackpot for that drawing, 2) a link to view more details about the latest drawing, 3) a link to view all past drawings for that game, 3) the next drawing date and its estimated jackpot/jackpot for that game.

*Powerball Winning Numbers Widget*

Saturday, 7/27 Winning Numbers

**1 19 31 48 61** **6** **x2**

Powerball Power Play

Saturday's Jackpot  
**\$75,800,000** \$49,500,000 cash value

LATEST DRAWING DETAILS → ALL PAST DRAWINGS →

Wednesday's Estimated Jackpot:  
**\$88,000,000**  
\$57,400,000 cash value

Next Drawing:  
**Wednesday, 7/31**

Sign Up for MyLottery to get Powerball winning numbers, jackpot notifications and automatically enter Jackpot Bonus Draws using the mobile app.

DOWNLOAD THE APP →

#### Check Your Numbers Widget

Jackpot game players can use the widget to check to see if any of the numbers input into the widget come up as being drawn for a particular Jackpot game within a timeframe. Players can select timeframes of 7-14-30-60-90 or 180 days or since the game started. The widget accounts for old and new game matrixes. Results show the drawing date that any of the numbers were drawn, numbers that match are in bold, and the table shows the amount that would have been won, if winnings are associated with the numbers drawn. The following columns are sortable: Date Drawn; Matches; Jackpot Amount.

*Powerball Check Your Numbers Results*



Some or all of your numbers have come up on **9 occasions** in the last 90 days.

Your numbers and prize amounts are highlighted in **bold** below.

Date Drawn →	Matches →	Powerball Winning Numbers	Powerball	Power Play	You Won	Jackpot Winners	Jackpot Amount →
<a href="#">July 17, 2019</a>	1	19 - 43 - 47 - 60 - 68	<b>10</b>	2	<b>\$4</b>	0	\$40,000,000
<a href="#">July 13, 2019</a>	1	<b>13</b> - 23 - 32 - 35 - 68	21	3	\$0	1	\$198,000,000
<a href="#">June 29, 2019</a>	1	<b>13</b> - 17 - 24 - 59 - 62	8	2	\$0	0	\$136,400,000
<a href="#">June 26, 2019</a>	1	1 - 5 - <b>16</b> - 22 - 54	24	3	\$0	0	\$123,000,000
<a href="#">June 22, 2019</a>	1	3 - 6 - 11 - <b>14</b> - 66	21	2	\$0	0	\$108,700,000
<a href="#">June 15, 2019</a>	2	8 - 11 - <b>14</b> - <b>16</b> - 49	14	3	\$0	0	\$80,200,000
<a href="#">June 8, 2019</a>	1	9 - <b>13</b> - 42 - 48 - 60	18	2	\$0	0	\$53,800,000
<a href="#">June 1, 2019</a>	1	6 - <b>15</b> - 34 - 45 - 52	8	2	\$0	1	\$344,600,000
<a href="#">May 4, 2019</a>	1	6 - <b>16</b> - 23 - 30 - 61	2	2	\$0	0	\$199,500,000

### Pick 3 Check Your Numbers Results

Some or all of your numbers have come up on **6 occasions** in the last 7 days.

Your numbers and prize amounts are highlighted in **bold** below.

Date Drawn →	Matches →	Pick 3 Winning Numbers	You Won (Based On \$1 Wager)
<a href="#">July 29, 2019: Midday</a>	1	3 - 7 - 2	No bet wins
<a href="#">July 26, 2019: Evening</a>	2	7 - 5 - 8	No bet wins
<a href="#">July 26, 2019: Midday</a>	1	5 - 5 - 0	No bet wins
<a href="#">July 25, 2019: Evening</a>	2	5 - 7 - 5	• Front Pair - <b>\$60</b>
<a href="#">July 24, 2019: Evening</a>	1	7 - 4 - 9	No bet wins
<a href="#">July 23, 2019: Midday</a>	1	9 - 7 - 0	No bet wins

## 1.1.5 Scratch

The Scratch landing page features all Scratch games that are in the market, as well as those games that are ending (once an end date has been determined based on market factors a player has 180 days to claim).

Players can view all games or filter by 1) price point, 2) games that are eligible for a second-chance Bonus Drawing, and 3) by last day to claim with the option to show within 90 or 180 days. A user can also sort by 1) price high to low, 2) price low to high, and 3) by last day to claim.

Viewers can see the game card that is merchandised at retail along with the game name, price point and top instant prize.

When the image is rolled over, the following snapshot of information is displayed: 1) game name, 2) ticket price, 3) top prizes remaining, 4) last day to claim, and 5) overall odds, and then a link is provided for more details.

When the image is clicked or the “more details” link is chosen from the screen provided on roll-over, an image of the front of the Scratch ticket is shown and viewers are provided the option to view the uncovered ticket showing the game’s



playstyle or they can flip the card to view the back of the Scratch ticket. Players can also view Game Details that provides 1) ticket price, 2) top prize, 3) top prizes remaining, 4) last day to claim, 5) Overall odds, 6) payout percentage, 7) game rules linking to a pdf, 8) a link to the game's eligible Bonus Draw promotion page, and 9) a table listing the probability of winning prizes.

### **1.1.6 FAQs**

FAQs are integrated with the Search Engine.

### **1.1.7 News**

The Lottery utilizes the News section of the website to showcase the various things that are going on with the Lottery including events, promotions and announcements about proceeds projects. The page offers users the ability to select news based on the categories that may interest them. A short teaser is provided, and viewers can select the thumbnail to open to view more detailed information.

### **1.1.8 Events**

Information input in the CMS populates the Calendar section under the News navigation. It provides viewers with the following information, 1) title, 2) date of the activity, 3) location address and 4) category. Only current events are shown. To see archived events, users can click on a link. Clicking on the calendar event snapshot, it opens providing more detailed information. The detailed event page includes more content, imagery and provides a Google map of the location's address.

### **4.1.9 Widgy Content**

Throughout the site, the website provides content pages using four page layout options.

### **1.1.10 Bonus Draws**

The website provides players with information about Jackpot and Scratch Bonus Draws. Viewers can access a list of Bonus Draws and click on the drawing to get more detailed information.

Players can enter Scratch Bonus Draws (not Jackpot Bonus Draws) using the website.

There are two ways players can enter Scratch Bonus Draws: 1) as a Guest or 2) as a MyLottery member. We always encourage players, by advertising the benefits of MyLottery, to become a member.

#### **1.1.10.1 Guest Second-Chance Bonus Draw Entry**

As a Guest, players must provide us with 1) a 22-digit number located beneath the scratch-off coating of an eligible Scratch ticket, 2) full name, 3) email, 4) phone number, 5) address, 6) city, 7) state, 8) zipcode, 9) country and 10) date of birth. At



the bottom of the form, we provide an option to use the information provided to sign up for a MyLottery account.

When a ticket is validated for entry, the user will receive a confirmation number and a message that confirms their entry. A Guest will be prompted to enter another ticket without having to enter their personal information again. A Guest will receive a running tally of all of the tickets they enter during a session. A Guest user will be given the option to print the summary of entries from their session or have an email with the information sent to them.

#### **1.1.10.2 MyLottery Second-Chance Bonus Draw Entry**

When a user signs into their MyLottery account, we can directly tie their second-chance Bonus Draw entries to their account. MyLottery account users will be able to see their address information and phone number on any screens where they are prompted to enter a second-chance Scratch Bonus Draw. They will not see their birthdate. They will be prompted to enter the 22-digit (VIRN) number. They will receive a confirmation of the entry and be given the option to continue entering tickets. MyLottery members can request to receive a summary of all of their entries submitted during a week.

#### **1.1.10.3 Entry Validation**

When a player enters a 22-digit number, the following validation messages may be returned: 1) if the first three digits are not recognized (the digits identify the game number) as eligible, a message is returned saying the ticket is not eligible; 2) if less than or more than 22-digits are entered, an error message is returned telling the player that there are only 22-digits.

### **1.1.11 MyLottery**

#### **1.1.11.1 MyLottery Sign-Up**

Viewers are given many opportunities to sign-up for MyLottery throughout the website. To become a MyLottery member, the following information is required: 1) Name, 2) email address, 3) city, 4) state, 5) zip code, 6) country, 7) phone number (international numbers accepted), 8) gender identity, and 9) date of birth. Birthdate entered confirms whether user is 18 years or older. If it isn't, then an error message is returned to the user instructing them that they have to be 18 years or older to have a MyLottery account.

The system will determine whether there is an existing MyLottery account using the email address input by the user, and inform them if there is. The user will be instructed to sign in to the account using their email address and password.

Once a user has created an account, an email is sent to the email address they provided to confirm the opt-in. User must click on the link in the email to confirm their account, and provide a password. The password requirement is a minimum of eight characters including at least one capital letter, one number and one symbol.





At sign-up, players can immediately opt-in to receive the Lottery's general newsletter.

#### **1.1.11.2 Forgotten Password**

A MyLottery member can input their email address and select the Forgotten Password link. A message will display instructing the player that an email has been sent to their email account. The player will click on a link in the email to be directed to the site where they will be instructed to create a new password (showing password requirements).

#### **1.1.11.3 MyLottery Edit Profile**

A player can edit information in their profile. The player's date of birth is hidden from view and a message denotes this. Players can update their password by inputting their old password, and then creating a new password, inputting it twice for verification. Within their profile, they can update notification preferences and change their email address. Any entries associated with the old email address will be visible to players in a new account with the new account. (The entry itself is not updated.) Any email notifications are updated, as well, with the new email address.

#### **1.1.11.4 MyLottery Notification Preferences**

Players have the option to subscribe to: 1) the general newsletter, 2) winning numbers notifications, 3) Jackpot alerts, 4) new Scratch games, and 5) Bonus Draw information.

Winning numbers information can be sent via email or via SMS text. If a player selects text as an option, they must provide a phone number. To receive texts, they will have to go through a double-opt in by replying to a message sent to their mobile device. After opting-in, they will receive a welcome text message.

Jackpot notifications are sent at specific levels. For Powerball, they can select \$40, \$60, \$100, \$150 or \$200 million as the threshold for notification. For Mega Millions, they can select \$15, \$20, \$30, \$50 and \$200 million as the threshold. For Lotto, they can select \$1, \$2, \$3, \$4 or \$5 million. Players can opt-in to receive a summary of their Bonus Draws submitted during a week period. They can also subscribe to receive the results (winner drawn) from a Bonus Draw.

As players select options for notifications, a counter provides them with a weekly estimate of how many emails they may expect to receive. Players are given the option, in one click, to unsubscribe to all notifications.

#### **1.1.11.5 MyLottery Bonus Draw Entries**

MyLottery members can see a Bonus Draw Summary that lists all current Bonus Draws, the entry deadline, its drawing date, the number of entries that player account has submitted, and the type of Bonus Draw (Scratch or Jackpot). Each

Bonus Draw name is a link that directs to a promotional page with that drawing's details.



Members can select to view all of their Bonus Draws. They can search entries using a to and from date range, they can use a search filter. The search filter allows searching by game name, 22-digit entry number (VIRN), or confirmation number. List is sorted most recent first. Information provided includes the entry game name (Scratch or Jackpot), the date of the entry and time stamp, it's 22-digit number (if relevant), its confirmation number, and the drawing count (a ticket may be eligible for more than one drawing). On select the count of the drawings, and information pop-up provides detail on the specific drawings the ticket has been entered into and these drawings then link to the promotional pages of those specific drawings.

The table is paginated to assist with download function.

MyLottery members can download all entries up to a maximum of 15,000 entries in an Xcel format. Members can also print the list of entries.

#### **1.1.11.6 Contact Us**

Viewers can contact the Colorado Lottery by submitting a form. The form requires them to provide 1) name, 2) city, 3) email address, 4) a subject from a dropdown list, and 5) comments. Players can also provide a screenshot/image. Category subjects are 1) winning numbers, 2) claiming prizes, 3) mobile app, 4) How to Play/Odds, 5) Bonus Draws, 6) retail, 7) MyLottery account, and 8) Other. Emails are forwarded to a Lottery account, [consumersupport@state.co.us](mailto:consumersupport@state.co.us)

#### **1.1.11.7 Free Play Zone**

The Colorado Lottery offers free digital games just for the fun of it. The games are web-based and concepted/developed by the advertising agency. The digital agency is responsible for integrating the games into the Free Play Zone.

#### **1.1.11.8 Giving Back**

The Giving Back section of the website is a microsite integrated into the Colorado Lottery website. This section is managed by the advertising agency. Files are delivered to the digital agency for deployment.

#### **1.1.11.9 Game Tools**

The Game Tools section of the website is one of the most popular areas amongst core Lottery game players. The games tools information also provides internal Lottery staff with a resource to acquire information about games that is not otherwise available elsewhere.

All table columns are sortable. All data tables can be downloaded into an Excel format. All tables need to be paginated to assist with downloading.

#### *Drawing History*

Drawing History data comes from file downloads. Refer to Addendum C. Players can select the Jackpot game that interests them, and then choose a date range of within the last 7, 14, 30, 60, 90, or 180 days or since game start, to view.



#### *Scratch Insider*

Scratch Insider data comes from file downloads. Refer to Addendum C. Players can filter to view 1) Scratch game pulses by price point, 2) show only games eligible for a second-chance Bonus Draw and 3) by a specified minimum top prize amount (\$1,000>, \$5,000>, \$10,000>, \$50,000>, \$250,000>, \$500,000>, \$1 million and \$3 million). Players can also search by 1) last day to claim, and 2) by game name. Only current games are shown, but players can choose to see past expired games, as well.

#### *Who's Winning*

Who's Winning data comes from file downloads. Refer to Addendum C. Players must search by game using keywords such as 1) winner's name and 2) location address, city or zip. When a zip is input, they must select a radius within which to search from that zip code. Players must select a drawing date range of within the last 7, 14, 30, 60, 90, or 180 days or since game start, to view.

#### *Luckiest Stores*

Luckiest Stores data comes from file downloads. Refer to Addendum C. Players must search by game and select a date range of within the last 7, 14, 30, 60, 90, or 180 days or since game start, to view. They can also search by 1) retailer name and 2) address, city or zip. When a zip code is input, they must select a radius within which to search from that zip code. Players can also filter the results to show only lucky stores that have a Lottery vending machine.

#### *Luckiest Numbers*

This file is compiled by an algorithm computing the values from the drawing data. Players must search by game and select a drawing date range of within the last 7, 14, 30, 60, 90, or 180 days or since game start, to view.

#### *Unclaimed Prizes*

Unclaimed Prizes data comes from file downloads. Refer to Addendum C. Players search by game. Prizes not claimed within 30 to 180 days are reported. The starting value for each game is as follows: Powerball \$100>; Mega Millions \$50>; Lucky for Life \$150>; Lotto \$40>; Cash 5 \$200> and Pick 3 \$40>.

#### **1.1.11.10 Retailer Locator Map**

Retailer locations are geocoded with the Google maps geocoding API. The result of geocoding is stored in the database to search by and display on the map. Viewers can search by 1) a retailer's name and/or by 2) address, city and zip. When a zip code is input, they must select a radius within which to search from that zip code. Players can also filter the results to show only stores that have a Lottery vending machine. When no search results are available, the map centers over Colorado.



## 1.2 Retailer Extranet Design

The retailer microsite is how Lottery retailers and chains view Lottery support collateral and business statements. A chain account person has access to information about any of their retail accounts. An individual retailer must log in to view their business statements.

### 1.2.1 Login Management

Retailers authenticate by their retailer ID and password. Retailers can update their password and email. Retailers can view statements, quarterly business reviews and yearly business reviews that have been uploaded. See Addendum C. When financial information is uploaded through the content management system (CMS) retailers who have provided an email address will receive a notification with a link directing them to where they can sign into their account.

Any authorized Chain Account Site Administrator will have the ability to add, edit and delete logins that will provide users with specific permissions within the Retailer Extranet. Each User Account will contain ID (either Retailer ID or Chain ID), Password (pre-determined by the Lottery and generated by the CMS) and Email Address. The Site Administrator can create any of the following login types:

- Stores (both Independent and Chain) – has full access to his/her store documents and can modify his/her own login profile.
- Chain – has full access to all of his/her stores and their corresponding documents. Also has access to a set of *Summary* reports. This user can modify both his/her own and any of the Store login profiles assigned to his/her particular Chain.

A Forgot Your Password feature will send a password reset link to the user's registered email account. Users can update their login information, with the exception of their ID.

### 1.2.2 User-interface

Once a user successfully logs into the Extranet, he/she will view a list of available documents using link names such as: Billing Statement August 26, 2020. These link names will automatically be created by the system by pulling this information from the file name itself. Once the user clicks on a link, the PDF file will be available to view, print and/or download. The system will archive up to one year's worth of documents and will automatically remove older documents during each upload session. There is also a Contact Us form that the user can use to submit a question or comment to the Lottery.



## 1.3 Mobile App

The Colorado Lottery mobile application allows players to scan Scratch and Jackpot game tickets, enter Bonus Draws, check Jackpot game numbers, provides information about Jackpot and Scratch games, allows players to find retailers, and manage their MyLottery profiles. The app is written in React Native and is available in Android and iOS.

The feature to enter Bonus Draws is only available to authenticated MyLottery users. Other functionality does not require authentication.

The app communicates with the backend using JSON over HTTP. After authentication, an authorization token is provided, and must be provided for all subsequent requests as a custom Authorization Header.

When opening the app, the initial page will be the most recently used tab.

The app does not require the user to log in each time they open the app. They will remain logged in until they explicitly sign out.

The app is switchable between the live server and staging server as a back-end (this option is not visible to normal users.)

### 1.3.1 Introduction Tutorial

The first time the app opens, a user will view a screen show tutorial. After being viewed once, it will not reappear but is available to view again in the About section.

### 1.3.2 MyLottery

#### 1.3.2.1 Register for MyLottery or Sign In

To become a MyLottery member, the following information is required: 1) Name, 2) email address, 3) city, 4) state, 5) zip code, 6) country, 7) phone number (international numbers accepted), 8) gender identity, and 9) date of birth. Birthdate entered confirms whether user is 18 years or older. If it isn't, then an error message is returned to the user instructing them that they have to be 18 years or older to have a MyLottery account.

The system will determine whether there is an existing MyLottery account using the email address input by the user, and inform them if there is. The user will be instructed to sign in to the account using their email address and password.

Once a user has created an account, an email is sent to the email address they provided to confirm the opt-in. User must click on the link in the email to confirm their account, and provide a password. The password requirement is a minimum of eight characters including at least one capital letter, one number and one symbol.



At sign-up, players can immediately opt-in to receive the Lottery's general newsletter.

#### **1.3.2.2 Forgotten Password**

A MyLottery member can input their email address and select the Forgotten Password link. The entry of the new password will be through the website, not the app. A message will display instructing the player that an email has been sent to their email account. The player will click on a link in the email to be directed to the site where they will be instructed to create a new password (showing password requirements).

#### **1.3.2.3 MyLottery Edit Profile**

A player can edit information in their profile. The player's date of birth is hidden from view and a message denotes this. Players can update their password by inputting their old password, and then creating a new password, inputting it twice for verification. Within their profile, they can update notification preferences and change their email address. Any entries associated with the old email address will be visible to players in a new account with the new account. (The entry itself is not updated.) Any email notifications are updated, as well, with the new email address.

#### **1.3.2.4 MyLottery Notification Preferences**

Players have the option to subscribe to: 1) the general newsletter, 2) winning numbers notifications, 3) Jackpot alerts, 4) new Scratch games, and 5) Bonus Draw information. (These are the same options provided via the website.)

Winning numbers information can be sent via email or via SMS text. If a player selects text as an option, they must provide a phone number. To receive texts, they will have to go through a double-opt in by replying to a message sent to their mobile device. After opting-in, they will receive a welcome text message.

Jackpot notifications are sent at specific levels. For Powerball, they can select \$40, \$60, \$100, \$150 or \$200 million as the threshold for notification. For Mega Millions, they can select \$15, \$20, \$30, \$50 and \$200 million as the threshold. For Lotto, they can select \$1, \$2, \$3, \$4 or \$5 million. Players can opt-in to receive a summary of their Bonus Draws submitted during a week period. They can also subscribe to receive the results (winner drawn) from a Bonus Draw.

The mobile app offers the option to receive push notifications for the following: 1) new Scratch games; 2) new Bonus Draws; 3) Bonus Draw deadlines approaching; 4) general information; 5) reminder me to play (on draw days; every other Friday; on the 1st and 15h of every month); 6) winning numbers for Jackpot games; 7) Jackpot threshold notifications for Powerball, Mega Millions and Lotto; and 8) notifications when any of a user's Favorite Numbers are drawn.

As players select options for notifications, a counter provides them with a weekly estimate of how many emails they may expect to receive.



Players are given the option, in one click, to unsubscribe to all notifications.

#### **1.3.2.5 MyLottery Bonus Draw Entries**

MyLottery members can see a Bonus Draw Summary that lists all current Bonus Draws, the entry deadline, its drawing date, the number of entries that player account has submitted, and the type of Bonus Draw (Scratch or Jackpot). Each Bonus Draw name is a link that opens a pop-up that includes 1) name of Bonus Draw; 2) start date; 3) entry deadline; and 4) drawing date.

Members can select to view individual entries for Bonus Draws. Entries are categorized into Scratch and Jackpot. Only current entries are shown. For Scratch, the entry includes: 1) the date of entry, 2) the name of the ticket; 3) number of eligible draws the ticket is entered into (with an info pop out showing the names of the Bonus Draw(s) linking to the information pop-up); 4) ticket VERN; and 5) confirmation number. For Jackpot games, the entry detail includes: 1) the date of entry; 2) name of the Bonus Draw; 3) number of eligible entries (with an info pop out showing the names of the Bonus Draw(s) linking to the information pop-up); and 4) confirmation number.

#### **1.3.2.6 Manage Favorite Numbers**

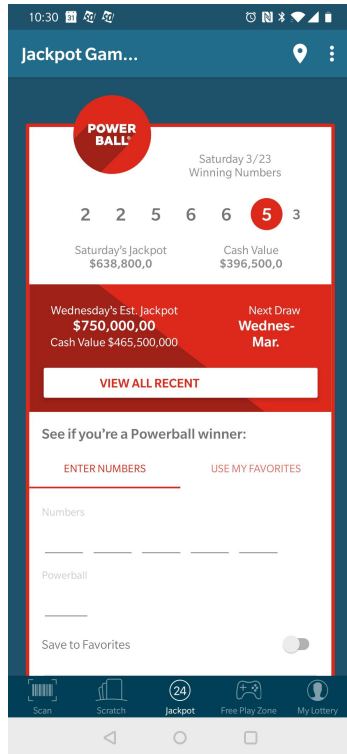
MyLottery members can also manage their Jackpot favorite numbers within the MyLottery section of the app. It allows them to edit numbers, delete and add more. There is no limit to the Favorite Numbers that players can store.

### **1.3.3 Jackpot Games**

#### **1.3.3.1 Jackpot Games**

The Jackpot Games section shows 1) the date and numbers of the most recent drawing and the estimated jackpot/jackpot for that drawing linking to all recent past drawings, 2) the next draw date for that game and its estimated jackpot; 3) a link to view all past drawings for that game, 4) a Check Your Numbers widget 5) an option to Use Your Favorite Numbers and 6) to Save Numbers to your Favorites when input in the Check Your Numbers widget.

*Powerball Winning Numbers with Widget*



When viewing all past winning numbers, users can sort by 1) show most recent first and 2) show highest jackpot first. They have the option of viewing numbers within the past 7, 14, 30, 90 and 180 days.

### 1.3.3.2 Check Your Numbers Widget

Jackpot game players can use the widget to check to see if any of the numbers input into the widget come up as being drawn for a particular Jackpot game. They have the option to save the numbers input to their Favorites and then have the option to see the Favorites stored by tapping on them. Players have the option of viewing the results by 1) the most recent shown first; 2) those with the most matches shown first or 3) those with the highest jackpot amounts shown first. They can also choose to show only results that resulted in a win. The widget accounts for old and new game matrices. Results show the drawing date that any of the numbers were drawn, numbers that match are in bold, and the table shows the amount that would have been won, if winnings are associated with the numbers drawn. When viewing Favorites, players have the option to Manage Favorites by editing, deleting or adding additional Favorite numbers. (Note, players also can access the Manage Favorites within the MyLottery section of the app.)

### 1.3.4 Scratch Games

The Scratch section features all Scratch games that are in the market, as well as those games that are ending (once an end date has been determined based on market factors a player has 180 days to claim).





Players can view all games or filter by 1) price point, 2) games that are eligible for a second-chance Bonus Drawing, 3) by last day to claim with the option to show within 7, 30 90 or any days. A user can also sort by 1) price high to low, 2) price low to high, 3) by last day to claim and 4) top prizes remaining.

Viewers can see the game card that is merchandised at retail along with 1) game name; 2) price point; 3) top instant prize; 4) number of top prizes remaining and 5) whether the game is eligible for a second-chance Bonus Draw.

When the image is tapped on, the following snapshot of information is displayed: 1) game ticket image; 2) ticket price; 3) top prize; 4) top prizes remaining; 5) overall odds along with a table that list: 1) prize levels, 2) winning tickets within that prize level, and 3) odds for winning the prize at that prize level. If a second-chance Bonus Draw(s) is/are available for the game, a user can tap on a second-chance drawing tab that will provide: 1) the name of the Bonus Draw; 2) entry deadline; 3) drawing date.

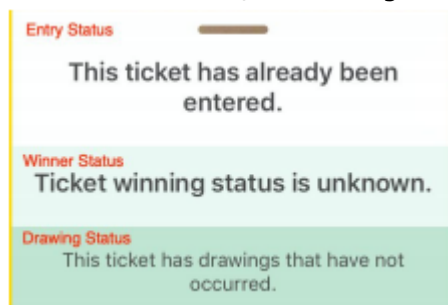
### 1.3.5 Scan Game Tickets

The mobile app allows users to scan Jackpot and Scratch tickets to determine if they are potentially winners, or not. For players that are signed in to their MyLottery accounts, if they scan a ticket that is eligible for a Bonus Draw, it will automatically be entered after being scanned.

The barcode is decoded on the phone according to PDF417 and the decoded data is sent to the server. Unauthenticated users can scan a ticket to see if it's a winner, but cannot enter into a Bonus Draw.

#### 1.3.5.1 Scan Messages

Each valid barcode will produce a combination of up to three messages: an entry status, a winner status, and a drawing status. A user can receive any combination of these responses (by selecting one option from each category). Only logged-in MyLottery members can receive an entry status. Anonymous users will only receive a winner status and/or drawing status.



See Addendum D for conditions.

### 1.3.6 Contact Us



Viewers can contact the Colorado Lottery by submitting a form. The form requires them to provide 1) email address, 2) a subject from a dropdown list, and 3) comments.

Emails are forwarded to a Lottery account, [consumersupport@state.co.us](mailto:consumersupport@state.co.us)

### **1.3.7 Retailer Map**

Retailer locations are geocoded with the Google maps geocoding API. The result of geocoding is stored in the database to search by and display on the map. Viewers can search by 1) a retailer's name and/or by 2) address, city and zip. When a zipcode is input, they must select a radius within which to search from that zip code. The map should use the user's current location if the user allows it. Players can also filter the results to show only stores that have a Lottery vending machine. When no search results are available, the map centers over Colorado. When clicking on a retailer pin, the retailer's name, address, and count of recent winners is shown, where a "recent winner" is a winner who won at least \$1000 with a claim date in the last 60 days.

### **1.3.8 About**

The mobile app includes a section that provides the version number of the app and its terms and conditions of use.



## 2. Content Management System (CMS)

The content management system (CMS) is built in Django and allows for content in both English and Spanish. The system offers three templated layouts: columns and sidebar. A number of widgets are used: Accordion; Button; Audio; Callout; Figure; File Download; File Download Button; Form; Google Map; HTML; Icon List; Image; Image Download Link; Image Link; Jackpot Last Drawing; Jackpot Odds, Retailer Scratch List; Sidebar Bucket; Slideshow; Table; Tabs; Thumbnail Line; Unsafe HTML; Video and Forms. CMS pages are searchable. Admins have the ability to edit pages for the consumer website and the retailer microsite.

Administrators have the ability to post urgent messages at the top of the website's navigation that will appear on all pages of every site. The content management system offers a robust filing manager.

The website offers a News Center that is driven by the CMS. This is specially designed for the consumer site.

Dependent on user permissions, content can be created, and placed in review for approval before committing to publishing.

### 2.1 Admin Center

Admins must use two-factor authentication (TOTP and backup codes to sign in to the admin center.

Admins can add, edit and delete 301 redirects.

### 2.2 Security Logging and User Permissions

The following actions are recorded. Record User, Timestamp and Tag when any of these actions take place: 1) Unsuccessful user login, 2) successful user login, 3) user logout, 4) retailer login, 5) XML file upload, 6) retailer ZIP uploaded, 7) retailer edited, 8) initiate Jackpot notifications, 9) perform second-chance drawing, 10) widgy page operations including the URL of the page (create, commit and edit metadata), 11) news operations including the URL of the page (create and commit); 12) MyLottery profile edited and 13) winner edited.

An admin may be assigned any subset of these permissions: 1) Create XML upload, 2) CUD User groups, 3) CUD users, 4) CUD MyLottery profiles, 5) CUD winners, 6) CUD second-chance drawings, 7) CUD Scratch games, 8) CUD Jackpot drawings and results, 9) CUD retailers (including passwords), 10) CUD Retailer documents, 11) upload retailer documents, 12) edit retailer microsite pages, 13) edit coloradolottery.com pages, 14) CUD News, 15) CUD events, 16) CUD 301 redirects and 17) View security logs.

### 2.3 File Uploads



Lottery staff uploads files into the CMS to update the website with current information, to drive communication to broadcast emails and update Twitter, and provide financial information to Lottery retailers. Operators go to one location to upload various types of files including xml and zip files containing pdf and txt. XML files are validated with an XSD schema before processing.

### **2.3.1 Winning Numbers and Results**

After a winning numbers file (xml) is uploaded, a screen with a summary of the data contained therein is shown on screen. Lottery operators must confirm that the information is correct, and accept the data as shown, before it is published to the website and distributed to send email and update Twitter.

After a Lottery operator uploads winning numbers, in the evening after all drawings have been completed, they will trigger all pending notifications (email and SMS). The layout for the email is editable in MailChimp as a "Code Your Own" template. The SMSs are sent using Twilio.

Winning numbers are automatically posted to Twitter as soon as they become available:

Mega Millions for 11/10/19: 8-17-20-45-48 MB:4 MP:4 #MegaMillions

Administrators have the ability to manually enter and edit Jackpot drawing information that has been previously entered via xml file.

### **2.3.2 Other Files**

#### **Bigprize.xml**

This file contains information about the winners of Jackpot games and large Scratch game prizes. The game\_number field values for Jackpot games are 1) Colorado Lotto+ = 1; 2) Colorado Lotto+ Plus = 18; 3) Cash 5 = 2; 4) Pick 3 = 3; 5) Powerball = 5; 4) Mega Millions = 7; and 5) Lucky for Life = 9.

If the game is three digits (that is, greater than or equal to 100), it is assumed to be a Scratch game number and must correspond to a Scratch game in the database. It is an error for any other value to be used as a game number. The retailer\_name and game\_name fields are ignored; those values are instead looked up from the database based on the retailer\_id and game\_number.

#### **retailer.xml**

This file contains updates for retailer address information and account status. district, route, and bill-type have no semantics but should be stored for filtering. terminal\_type equals 1 or 2: 2 identifies a vending machine and is used to filter on the retailer locator map. chain\_id is a reference to ID. Retailers sign in using their retailer ID.

#### **unclaimedJP.xml**



This file contains information about where Jackpot tickets were bought that haven't been claimed. (Game numbers listed in bigprize.xml and in Addendum C.) Uploading a file replaces all other existing data. Administrators have the ability to manually edit a previously uploaded file.

### **webfile.xml**

This file contains Scratch game information. It updates the number of prizes remaining for Scratch games. If a game in the file isn't in the database, a warning should be shown, but the rest of the file should be processed.

### **Jackpot Numbers and Results Files**

webCash5.xml; webLottoC5.xml; webPICK3.xml; cash5EZMatch.xml; PICK3MD.xml; webMMNumbers.xml; webMMResults.xml; webLLNumbers.xml; webLLResults.xml; webLottoC5.xml; webLotto.xml; webPBNumbers.xml; webPBResults.xml

### **Luckiest Stores**

The information compiled for the Luckiest Stores report displayed on the website is compiled from the retailer.xml file and the Bigprize.xml file.

## **2.4 Player Tools - Winners**

Administrators can add or edit the winners database in the CMS. They can filter by 1) game name; 2) Second-Chance Drawing; 3) Bonus Drawing; 4) EZ Match; or 5) Contest. An administrator can also search using first and last name.

## **2.5 Users**

An administrator can view users in the database with a filter by 1) SuperUser Status; 2) Staff Status; 3) Active; 4) Last Login (more than 6 mos; more than 1 yr; more than 2 yrs; more than 3 yrs); 5) general newsletter; 6) Has MyLottery Profile; 7) Gets MailChimp Emails; and 8) by Groups. A user can also search by username or telephone number (XXXXXXXXXX). An administrator can delete users, and can export a list of users to a csv file.

Administrators can view profile information of MyLottery members and edit. An authorized administrator can change a user's password, but can't see the user's "current" password.

MyLottery members notifications preferences are synced with MailChimp. Admins can edit a member's notifications preferences, view and print.

An administrator can also view Bonus Draw submissions of a MyLottery member, and can print them.

## **2.6 News**

News posts have 1) a start and end date; 2) title; 3) category; 4) tag string; 5) and widgy content. News posts can be queued for publication in the future. There is a paginated news list page filterable by category.



## 2.7 Events

An event has 1) a timestamp range; 2) title, 3) category, 4) set of locations, 5) and widgy content. Events are search by location and distance. There is a paginated events list page filterable by category. There is an event detail page that show all of the locations on a map.

An event category is created and edited in the CMS and drives the distance requirement to use when sending event information to MyLottery members who have subscribed to receive the general newsletter. The zip code of the event is compared to the subscriber's zip code in their profile, and the category of the event determines the distance (e.g.: 30 miles). Subscribers to the General Email will only receive information about events that are relevant to them. The CMS is integrated with MailChimp/Mandrill. Within the CMS, administrators have the ability to place a message on top of the General Newsletter email. The administrator can send a preview of the email to a specific email address before broadcasting to subscribers.

## 2.8 SiteMap

There is an automatically generated XML sitemap containing Widgy Pages, Events and News.

## 2.9 Scratch Games

### 2.9.1 Loading Hash Data

In order to process Scratch games so that the mobile application can determine a ticket's winning status, and so that eligible games can be entered into second-chance Bonus Draws, the system performs the following functions.

Hash data for a game is downloaded from an sftp and decrypted, and then loaded into the database to validate submissions. There may be multiple files for one game.

L = Lottery initials (CO)

G = Game Number

S = Starting Pool

E = Ending Pool

Each entry number will consist of the following elements unique to each ticket delivered: GGG000000TTTTVVVVVVVV00 where

G = game number

6 zeros

T -= ticket number

V = validation number

2 zeros



The file will be a text file with one md5 hash of a masked entry number per line. There will be no duplicate lines. Each line in the file represents exactly one non-winning ticket. As such, no two entries should be able to claim the same hash value. If a VIRN hashes to the same value as a VIRN that has already been entered, the entry should be rejected and an email notification sent to select administrators.

Unencrypted hash files are stored indefinitely.

The hash data is loaded in the staging environment and tested using test entries.

In the CMS, an administrator can view any hash data that is available for download. To download the data, the administrator goes into the specific Scratch game, and simply initiates the download.

### **2.9.2 Setting Up Games**

Scratch games have pulses. A Scratch game is identified by its game number. A Scratch game can have multiple pulses (most often it is four). You can distinguish a new pulse because the graphics of the game change; sometimes in a minor way and other times drastically. Sometimes the pulse names are different, and some times they are not different. The Lottery does this so that a game that is in the market for a long period of time can appear new and fresh at retail.

Administrators will get an email notification email a week (or shorter) before a pulse is scheduled to begin. The group name is "Scratch Game Notification."

The CMS allows administrators to schedule Scratch games so that they can appear or expire on the consumer website. To set up a game, the following information is provided: 1) game number; 2) name of game; 3) total top prizes; 4) total tickets; 5) ticket prize (with dropdown of \$1; \$2; \$3; \$5; \$10; \$20); 6) prize amounts; 7) number of winning tickets at specific prize amount; 8) game pulse name; 9) game pulse start date; 10) game pulse end date; 11) ICM card graphic image download; 12) Scratch front image download; 13) Scratch back image download; 14) Scratch uncovered image download; 15) Scratch game "rules" download; and 15) hash data download.

Administrators also manage expired games (after 180 days tickets can no longer be claimed) and must "turn off" the scan function of a game so that the mobile app returns a message to app users that the game is no longer valid.

In the Scratch game area of the CMS, an administrator can also trigger the mobile application to display a message title, text and URL link to the mobile app user when they scan a particular game.

To set up a game, the Scratch games Product Manager inputs basic information once authorization is received to release a game. The Interactive Communications Manager inputs odds information and graphics. The Drawing Manager uploads the



game rules. Since data is provided at different times, no fields are required before saving. All administrators have the ability to pull up a game to edit it as needed.

All games are searchable in the CMS and can be filtered by 1) ticket price, and 2) whether scanning has been turned off. Administrators with permissions, can delete games within the list.

### **2.9.3 Creating Scratch Bonus Draws**

Certain Scratch games offer a second-chance Bonus Draw. In most cases, \$10, \$20 and \$50 games offer a Bonus Draw, but we also conduct promotional Bonus Draws that will include Scratch games with lower price points.

Players can enter Scratch Bonus Draws as a Guest by providing the following information: 1) 22-digit VIRN Scratch ticket number; 2) full name; 3) email; 4) phone number; 5) address; 6) city, state and zip code; 7) country; and 8) date-of-birth. MyLottery members can also enter Scratch Bonus Draws by signing into their MyLottery account.

Administrators can see a list of drawings that were created along with 1) publish date; 2) entry deadline and 3) draw date.

A counter of all entries is visible. When filtered to a specific Scratch Bonus Draw, the count of entries will show along with the total count of entries.

Administrators set up a Bonus Draw by entering the following information into the CMS: 1) name of drawing; 2) select games in drawing (via dropdown) or by selecting a date driven option for games that live within a certain timeframe; 3) publish-on-site date; 4) entry deadline date and time; 5) draw date and time; 6) HTML description; 7) raw HTML; 8) image download; and 9) drawing guidelines download.

A promotional page will appear on the website based on the dates applied. Information provided will appear on the front-end of the website. The entry of information dictates when eligible entries will be gathered into the database for a Bonus Draw.

### **2.9.4 Scratch Bonus Draw Entries**

Administrators can view Scratch Bonus Draw entries. They can see 1) a list of entries (most recent submitted, first); 2) along with full name of the entrant; 3) their email; 4) confirmation number of the entry; and 5) when the entry was created. They can search by confirmation number, name, and 22-digit VIRN number. Admins can filter the list by game name, whether the entry was created by a test account, within a date range, or by source (API or website).

Selecting an entry provides detail including 1) confirmation number; 2) creation date and time; 3) VIRN; 4) full name; 5) email address; 6) phone number; 7) address, city, state and zip; 8) country; 9) date-of-birth; 9) MyLottery profile (link to); 10) source (API/website); 11) whether it is a test account; 12) date/time stamp of token





submission; and 13) a list of any drawings the entry was included in and whether the entry resulted in a win.

Once an entry is accepted into the database, information for that entry cannot be changed.

In the event that an entry was from a MyLottery member, by selecting the profile link, we can see if the member changed any of their profile information. This assists the Drawing Manager in the event that the information in the entry is no longer accurate.

Admins can also view all Bonus Draw entries from any entrant (regardless of whether they belong to MyLottery), and have the ability to download and print the information.

### **2.9.5 Conduct a Scratch Bonus Draw**

After a Scratch second-chance Bonus Draw has ended, the Drawing Manager will go into the created drawing and proceed to conduct the drawing. The administrator will confirm that the entry details (pulled from the creation of the drawing parameters) is correct and then she will create the drawing. All drawing entries will be compiled, and the database will be duplicated and sent to the Lottery's "token" database as a security measure. The Drawing Manager will download the entries, and will be given a total count of eligible entries for that drawing. Using a separate random number generator machine (RNG), she will select the winners. She will input the numbers into the CMS and the identity of the winner is provided along with the information of the entry.

Once the winner is verified, the Drawing Manager will return to the drawing to confirm the winner which then triggers and email to MyLottery subscribers who have asked to receive information about the winner. The email includes the first name(s) and first initial of the last name(s), and the name of the drawing(s), and the prize(s).

The winner's information populates the Who's Winning section of the website under the category of Second Chance/Bonus Draw.

## **2.10 Jackpot Games Bonus Draws**

Administrators can create Bonus Draws for Jackpot games using specific criteria for entry. Eligibility can require the purchase of one game or multiple games during a specified time period. Eligibility may require a specific type of purchase for a specific dollar amount.

Unlike Scratch second-chance Bonus Draws, Jackpot Bonus Draws will accept both winning and non-winning tickets that are purchased within a specific time frame meeting the specific eligibility requirements of the Bonus Draw.

Players must have a MyLottery account in order to enter Jackpot Bonus Draws. The only way to enter Jackpot Bonus Draws is by using the Colorado Lottery mobile app.



### **2.10.1 Creating Jackpot Bonus Draws**

Administrators can see a list of all Jackpot Bonus Draws created along with 1) publish date; 2) entry deadline and 3) draw date.

Administrators set up a Jackpot Bonus Draw by entering the following information into the CMS: 1) name of drawing; 2) select games in drawing (via dropdown); 3) purchase time date range; 4) entry time date range; 5) publish date/time; 6) draw date and time; 6) HTML description; 7) raw HTML; 8) image download and 9) guidelines download. Eligibility requirement options are 1) minimum boards; 2) require multiplier (PowerPlay or Megaplier); 3) require Plus; 4) require advance play; and 5) minimum ticket cost.

A promotional page will appear on the website based on the dates applied. Information provided will appear on the front-end of the website. The entry of information dictates when eligible entries will be gathered into the database for a Bonus Draw.

### **2.10.2 Jackpot Bonus Draw Entries**

Both winning and non-winning Jackpot games are eligible for entry into a Bonus Draw when they meet the requirements. Possible eligibility criteria are 1) game type (multi-select); 2) purchase time (between two date/times; 3) minimum number of boards on ticket (multiples of minimum do not grant extra submissions); 4) multiplier (only applied to entries for Powerball and Mega Millions); 5) EZ Match (only applies to Cash 5); 6) Plus (only applies to Colorado Lotto+ Plus); and 7) Advance Play.

Administrators can view Jackpot Bonus Draw entries. They can see 1) a list of entries (most recent submitted, first); 2) along with full name of the entrant; 3) their email; 4) confirmation number of the entry; and 5) when the entry was created. They can search by confirmation number, name, or game. Admins can filter the list by game name, whether the entry was created by a test account, within a date range, or by source (API or website).

Selecting an entry provides detail including 1) confirmation number; 2) terminal ID; 3) creation date and time; 4) wager timestamp; 5) game; 6) number of boards; 7) number of draws; 8) start date; 9) end date; 10) ez match; 11) multiplier; 12) ticket cost; 13) draw time; 14) full name; 15) email address; 16) phone number; 17) address, city, state and zip; 18) country; 19) date-of-birth; 20) MyLottery profile (link to); 21) test account; 22) token submission date/time and 23) a list of any drawings the entry was included in and whether the entry resulted in a win.

A counter of all entries is visible. When filtered to a specific Jackpot Bonus Draw, the count of entries will show along with the total count of entries.

Once an entry is accepted into the database, information for that entry cannot be changed.



In the event that an entry was from a MyLottery member, by selecting the profile link, we can see if the member changed any of their profile information. This assists the Drawing Manager in the event that the information in the entry is no longer accurate.

Admins can also view all Bonus Draw entries from any entrant (regardless of whether they belong to MyLottery), and have the ability to download and print the information.

Exchange tickets (Advance Play tickets that are redeemed early before all draws have been conducted - the player is given an exchange ticket with the remaining draws) are not eligible to be entered into any Bonus Draws.

### **2.10.3 Conduct a Jackpot Bonus Draw**

After a Jackpot Bonus Draw has ended, the Drawing Manager will go into the created drawing and proceed to conduct the drawing. The administrator will confirm that the entry details (pulled from the creation of the drawing parameters) is correct and then she will create the drawing. All drawing entries will be compiled, and the database will be duplicated and sent to the Lottery's "token" database as a security measure. The Drawing Manager will download the entries, and will be given a total count of eligible entries for that drawing. Using a separate random number generator machine (RNG), she will select the winners. She will input the numbers into the CMS and the identity of the winner is provided along with the information of the entry.

Once the winner is verified, the Drawing Manager will return to the drawing to confirm the winner which then triggers and email to MyLottery subscribers who have asked to receive information about the winner. The email includes the first name(s) and first initial of the last name(s), and the name of the drawing(s), and the prize(s).

The winner's information populates the Who's Winning section of the website under the category of Second Chance/Bonus Draw.

### **2.10.4 Viewing Bonus Draws**

Administrator can filter drawings to show or hide incomplete drawings.

## **2.11 Contests**

The Lottery conducts approximately one contest per quarter year.

### **2.11.1 Creating Contests**

Administrators can see a list of all Contests created along with 1) contest type; 2) entry count; and 3) drawing state (not started, choosing winners or complete). Administrators set up a Contest by entering the following information into the CMS: 1) name of contest; 2) HTML description; 3) contest type (text field, multiple choice, dropdown, photo or captioned photo); 4) start date and time; 5) end date and time; 6) image on page; 7) image banner; 8) success message that is shown to entrant



after entry is received; 9) rules download and 9) policy URL. The following information is available to the administrator: 1) drawing state and 2) entry count.

After a drawing is created, the administrator completes the operation to define the contest type. If "multiple choice" is selected those options are provided. Note that all answers are acceptable for entry. If a entrant selects the "wrong answer," the confirmation message will state what the correct answer is, and give confirmation of the entry.

Contest type determines the page layout and entry mechanism used.

A promotional page will appear on the website based on the dates applied. Information provided will appear on the front-end of the website. The entry of information dictates when eligible entries will be gathered into the database for a Bonus Draw.

### **2.11.2 Contest Entries**

Administrators can view Contest entries by name. They can see 1) a list of entries (most recent submitted, first); 2) along with full name of the entrant; 3) their email; 4) phone number; 5) whether they're a winner; and 6) when the entry was created. They can search by name or email address. Admins can filter the list by contest name.

A counter of all entries is visible. When filtered to a specific contest, the count of entries will show along with the total count of entries.

Selecting an entry provides detail including 1) confirmation number; 2) terminal ID; 3) creation date and time; 4) wager timestamp; 5) game; 6) number of boards; 7) number of draws; 8) start date; 9) end date; 10) ez match; 11) multiplier; 12) ticket cost; 13) draw time; 14) full name; 15) email address; 16) phone number; 17) address, city, state and zip; 18) country; 19) date-of-birth; 20) MyLottery profile (link to); 21) test account; 22) token submission date/time and 23) a list of any drawings the entry was included in and whether the entry resulted in a win. Once an entry is accepted into the database, information for that entry cannot be changed.

In the event that an entry was from a MyLottery member, by selecting the profile link, we can see if the member changed any of their profile information. This assists the Drawing Manager in the event that the information in the entry is no longer accurate.

Admins can also view all Bonus Draw entries from any entrant (regardless of whether they belong to MyLottery), and have the ability to download and print the information.

### **2.11.3 Conduct a Contest**



After a Contest has ended, the Drawing Manager will conduct the contest drawing by selecting from a list of available contests that have ended and that have entries. The administrator will then return to the contest detail page where it will identify the total count of available entries. The administrator will confirm that the entry details are correct. Using a separate random number generator machine (RNG), she will select the winners. She will input the numbers into the CMS and the identity of the winner is provided along with the information of the entry.

Once the winner is verified, the Drawing Manager will manually enter the winner in the Winner section of the CMS. This will populate the Who's Winning tool on the website under the category of "contest."

## 2.12 Reports

**MyLottery Sign-ups:** The CMS provides the following information about MyLottery sign-ups during a month and compares the information with data from the previous year's month. The report provides: 1) month; 2) total signups; 3) entry sign-ups (garnered from contests); 4) entry percent of total signups; 5) year-over-year change; 6) total accounts; and 7) growth of accounts.

**Promotional Drawing Entries:** This report provides a count of total entries for both Scratch and Jackpot Bonus Draws. It includes 1) month; 2) Jackpot total entries; 3) Scratch total entries; 4) Scratch web entries; and 5) Scratch mobile entries.

**Jackpot Bonus Draw Upcoming Drawing Counts:** This report provides a count of Jackpot Bonus entries associated with it. It is updated once per day. It includes: 1) name of Jackpot Bonus Draw; 2) entry count; 3) distinct email count; 4) Powerball entries; 5) Mega Millions entries; 6) Lucky for Life entries; 7) Lotto entries; 8) Cash 5 entries; and 9) Pick 3 entries.

**Scratch New Entrants:** This report allows an administrator to compare the performance of one or more Scratch second-chance Bonus Draws against each other. It determines if email addresses in a Bonus Draw from previous Bonus Draws are new, thereby providing valuable information to marketers. This data is available for csv download.

## 2.13 Mobile Functions

### 2.13.1 Scan Tickets

The mobile app allows users to scan Jackpot and Scratch tickets to determine if they are potentially winners, or not. For players that are signed in to their MyLottery accounts, if they scan a ticket that is eligible for a Bonus Draw, it will automatically be entered after being scanned.

The app will determine if the ticket scanned is a Scratch or Jackpot ticket based on the format of the barcode. Barcodes starting with LOTCO will be processed as



Jackpot tickets; barcodes consisting of 25 decimal digits will be processed as Scratch tickets. If neither format matches, the user will be displayed an error message.

The Scratch barcode is decoded on the phone according to PDF417 and the decoded data is sent to the server. Unauthenticated users can scan a ticket to see if it's a winner, but cannot enter into a Bonus Draw.

For Jackpot game tickets, the board data is compared against historical winning numbers data that was entered through XML uploads to make the determination. The barcode is verified for authenticity. Invalid barcodes are saved for reference. If 5 invalid scans come from a single IP address in 10 seconds, that IP address will not be able to scan for another 60 seconds.

There are 26 different possible responses.

ScanResult =

- MyLotteryScanResult DrawingStatus EntryStatus
- | AnonymousScanResult DrawingStatus
- | InvalidBarcode

DrawingStatus =

- NoneDrawn
- | SomeDrawn WinnerStatus
- | AllDrawn WinnerStatus

WinnerStatus =

- Winner | NonWinner

EntryStatus =

- Entered [UpcomingDrawing]
- | ExchangeTicket
- | NoDrawingEligibility
- | AlreadyEntered

The barcode on a ticket includes two representations of the time of purchase. One is formatted as a hours and minutes. The other is encoded as seconds from midnight.

Seconds identifier:

The time at which the ticket was purchased in hh:mm:ss notation can be extracted from the 'seconds identifier' value as follows:

```
hh = seconds // 3600
mm = (seconds % 3600) // 60
ss = seconds % 60
```

Where // is floor division and % is modulo. The hh and mm values extracted from 'seconds identifier' must match the hh and mm values from the 'Time



identifier' field.

CDC Identifier:

The CDC identifier encodes the date on which the ticket was purchased. Its decoded value matches the date in the 'Date identifier' field.

### **2.13.2 Device Profiles**

Tickets entered into Bonus Draws are tracked for filtering (app or desktop).

### **2.13.3 Mobile Notifications**

Administrators can view a list of past mobile notifications sent, with the most recent listed first. The list includes: 1) creation date and time; 2) title and 3) sent date and time.

To create and send a mobile notification, the following information is required: 1) title; 2) message; 3) platform (dropdown iOS, Android, or both); 4) subscribers. Subscribers selection includes 1) General Newsletter; 2) New Scratch Game opt-in; 3) New Bonus Draws; 4) Bonus Draw deadlines.

### **2.13.4 Sent Notification Log**

A log of sent notification and its success is available. It includes: 1) creation date; 2) registration token; 3) device profile; 4) title; 5) message and 6) success. Administrators can search by registration token and filter by success.

### **2.13.5 Mobile Alerts**

Mobile alerts are in-app messages that are managed through the CMS. Administrators have access to a list of mobile alerts sent. The dashboard view includes: 1) header; 2) active/non-active; 3) creation date. Admins can search by title or creation date, and can filter by 1) active/non-active; 2) by platform (iOS or Android) and 3) app version.

To create a mobile alert, an administrator 1) creates a header; 2) body of the message; 3) frequency (number of days to wait before resending the alert); 4) platform (Android, iOS or both); 5) max version (version specified and below receive alert) and 6) activation.

This feature is used to encourage users to update the app when a new version is available.

### **2.13.6 Mobile Contact Form**

Administrators have access to a list of data collected from mobile app users who have submitted contact forms. Available at a glance is 1) creation date; 2) subject (Winning Numbers, Claiming Prizes; Mobile App; How to Play/Odds, Bonus Draws,



Retail Stores, MyLottery Account and Other); 3) comment field; 4) file/screenshot upload. Users can submit multiple screenshots. Admins can filter by subject.

### **2.13.7 Sting Games**

When a barcode that starts with a "9" (i.e. the game number is between 900 and 999) is scanned, Lottery staff is notified of 1) the remote IP address; 2) time of scan; 3) barcode identification number; 4) decrypted ticket number; and 5) MyLottery profile, if available. When the ticket is scanned, the user will receive the "This ticket may be a winner." message. Notifications are sent to members of the "Sting Game Notification" group.

### **2.13.8 Mobile App**

MyLottery members can turn off all SMS notifications by replying "Stop" or "Unsubscribe"

Synchronize notifications preferences with MailChimp.

## **2.14 Retailers**

Administrators can view a list of retailers. The list includes 1) name of retailer; 2) retailer ID; 3) chain (if applicable); and 4) renewal date. Admins can search using retailer name or retailer ID. You can filter the list by 1) is an email address present; 2) by chain; and 3) terminal type (vending machine). Admins can add, edit and delete retailers as well as assign a password for the retailer or chain.

Administrators can access a list of all downloaded reports for retailers. A list includes 1) retailer name, 2) tag description (quarterly report, business review, etc); 3) and date. The list can be sorted by year. The list can be filtered by tag. These reports can be download.

The admin can also view retailer document uploads by most recent. The list includes: 1) created at; 2) uploaded by (name of admin downloading the file); 3) original file name; and 4) note processing status. Selection of a file upload provides a log of activity showing how many files were processed, how many updated and how many skipped, and any errors associated with the download.

## **2.15 Miscellaneous**

**Twitter Winning Numbers Feed:** When winning numbers are uploaded to the CMS, the Lottery Draw Operators trigger a feed that updates the numbers on Twitter.

**MyLottery Rate Limit:** Through the website and the mobile app, there is a rate limit of 200 successful registrations per hour. This rate is high enough to permit foreseeable legitimate use cases, but low enough to limit other coordinated attacks.





## **3. MyLottery Email, Text, and Notification Ecosystem**

As of April 2019, the Lottery's loyalty group, MyLottery, is comprised of approximately 250,000 members. MyLottery members can sign up for customized notifications that are sent to them via email, text, or push notifications. The Colorado Lottery currently uses MailChimp and Mandrill as its email utility. In 2018, 29 million emails were sent via MailChimp and 5,661,000+ emails were delivered through Mandrill. Push notifications are managed via Twilio with over 185,000 sent per month.

### **3.1 Transactional Emails**

1. Double opt-in registration email
2. MyLottery Welcome message – complete a profile request
3. Password reset (link expires in 3 days)
4. Retailer password reset (link expires in X days)
5. Contact Us (website)
6. Contact Us (mobile app)
7. Email confirmation
8. Email change confirmation
11. Scratch game pre-publication notification
12. Retailer document upload notification
13. Sting game scanned notification

### **3.2 Automated Emails, Texts and Push Notifications**

1. Jackpot Winning Numbers (Email, Text Push Notification)
2. Favorite Jackpot Numbers - Sent when a user's favorite numbers are drawn (Push Notification)
3. Jackpot Alerts – Sent when the Powerball, Mega Millions Lotto jackpots reach a predetermined level (5 levels per game) chosen by a subscriber. Average emails sent is one per week. (Email, Push notification)
4. Jackpot Reminders - Sent to opted-in subscribers on draw days, 1st and 15th of month, and/or every other Friday for eligible games. (Push notification)
5. Bonus Draw Results - Sent to opted-in subscribers when someone wins a Bonus Draw. (Email)



6. New Bonus Draws - Sent to opted-in subscribers when a new Bonus Draw is published. (Push notification)
7. Bonus Draw deadline - Sent to opted-in subscribers when a Bonus Draw deadline is approaching. (Push notification)
8. New Scratch games: Sent to opted-in subscribers. (Email, Push Notification)
9. Promotions & Events: Sent to opted-in subscribers. Subscribers will only see the events that are within a specified radius of the zip code they provide in their profile. (Email)
10. Weekly Bonus Draw submissions: An email is sent to MyLottery subscribers providing them with a summary of their entries received during the week.
11. Bonus Draw submissions: Sent to Guest player after submitting entries.

Players are provided with an “estimate” of the numbers of emails and texts they can anticipate to receive when subscribing to the various options.

Based on the users’ options and delivery preference (email, text or push notifications), the system supports a wide variety of combinations for automated notifications. For reference:

<b>Games</b>	<b>Emails per Week</b>
C5	7
C5 + PB	7
C5 + PB+ MM	7
C5 + PB + MM + LTO	7
C5 + PB + MM + LTO + P3	7
C5 + PB + MM + LTO + P3 + L4L	7
C5 + MM	7
C5 + MM + LTO	7
C5 + MM + LTO + P3	7
C5 + MM + LTO + P3 + L4L	7
C5 + MM + LTO + L4L	7
C5 + MM + P3	7
C5 + LTO	7
C5 + LTO + P3	7
C5 + P3	7
C5 + L4L	7
MM	2
MM+ PB	4
MM+ PB + LTO	4
MM + PB + LTO + P3	7
MM + PB + LTO + P3 + L4L	7



MM + LTO	4
MM + LTO + P3	7
MM + P3	7
MM + P3 + L4L	7
MM + L4L	2
PB + LTO	2
PB + LTO + P3	7
PB + LTO + P3 + L4L	7
PB + P3	7
PB + L4L	4
LTO	2
LTO + P3	7
LTO + L4L	4
P3	7
L4L	2
Jackpot Alerts (PB-MM-LTO)	1 per week
Bonus Draw submissions	1 per week
Promotional emails	1 per week
New Scratch games	0 per week

### 3.3 General Newsletter

Members can also opt-in to receive general information from the Lottery including promotional emails, invitations to surveys and other general announcements. These emails are manually developed by the advertising agency and internal Lottery staff. This segment also receives the Promotions & Events email that is described in section 3.2.



## 4. Technology and Hosting Architecture

Hosting: AWS – Cloud-based, scaling, EC2, redundancy and failover support, 24/7 full stack DevOps management; 99.95% uptime

Patching and maintain server and platform software on a regular basis with expedited response for critical patches.

Perform website and database backups according to schedule.

Website Backend:

- Python 3.6
- Django
- Widy
- Mezzanine
- DRF

Mobile Application:

- React Native
- Firebase
- Sentry
- Xcode
- Android Studio
- Rest API (<https://api.coloradolottery.com/v1/>)
- Google Vision Library

Hosting:

- Heroku
- AWS
  - RDS PostgreSQL (database)
  - Cloudfront
  - S3
  - Lambda
  - Route53
  - Cloudwatch
- Datadog (monitoring)
- Sentry

The service we use to run the Lottery is spanned across multiple "Availability Zones" and is kept synchronized at all times. Each Availability Zone is geographically distinct with their own redundant Internet and power connections. When users visit the site they hit any one of the multiple availability zones, so none of them are a "disaster recovery site". If an Availability Zone is impacted, users are routed away from that one and to the others.



Modifications to the database are streamed to multiple redundant locations within the AZ instantaneously. If something happens to the location the main database is running in we may lose the ability to write to it temporarily (minutes, while one of the replicas is promoted to main) but no data will be lost.

The database is backed up continuously to multiple locations. Further snapshots are taken monthly and moved to another independent service. We have the ability to restore the database to any state it was in previously within 35 days. For timeframes older than that we can restore to a monthly resolution.

Tracking:

- FB pixel
- Hotjar
- Google Analytics

External Services

- Twilio
- Mandril
- Mailchimp
- Firebase
- Google geocoding
- cloudwatch
- SFTP
- Token server
- blackbox

Token Server:

- django
- postgresql
- drf
- vmware on prem



## 5. Data Architecture & Integrations

### 5.1 Data Imports

Several pieces of data are imported by the Lottery's IT team via a secure VPN connection. This data includes:

- BUSINESS REVIEW: Used to provide information to the retailers about their Lottery sales.
- WEEKLY STATEMENTS: Used to provide information to retailers about their sales and Scratch ticket inventory.
- RETAILER UPDATE: Used to communicate the full list of retailers who sell Lottery products and to manage communications to retailers about their licensing status.
- WINNERS UPDATE: Used to communicate who has won the games.
- LUCKIEST STORES: Used to communicate which retailers are selling winning tickets.
- PRIZES REMAINING UPLOAD: Used to update information about the prizes still remaining for all Scratch games.
- WINNING NUMBERS & RESULTS UPLOAD: Used to update winning numbers and results throughout the website, and to execute media and MyLottery emails.
- SCRATCH HASH DATA: Scratch hash data is maintained for all Scratch games. Currently, the files range from 16 – 150 mb and consist of encrypted data that is used to determine eligibility of entries submitted into second-chance drawings.
- UNCLAIMED JACKPOT PRIZES: Prizes not claimed within 30 to 180 days are reported by amount and product.
- DRAWING TOKEN DATABASE: The web vendor is required to create redundant drawing databases that reside on the Lottery's token server.

### 5.2 File Uploads to CMS

Files are created and uploaded to the website's CMS to update the Colorado Lottery's website.

webCash5.xml  
Cash5EZMatch.xml  
webfile.xml  
webPICK3.xml  
PICK3MD.xml  
bigprize.xml  
unclaimedJP.xml  
webMMNumbers.xml  
webMMResult.xml  
webLLNumbers.xml  
webLLResults.xml



webLottoC5.xml  
webLOTTO.xml  
webPBNumbers.xml  
webPBResults.xml  
statements.zip (which may contain...)

RS-chainID-retailerID-date.pdf  
CS-chainID-date.pdf  
CSS-chainID-date.pdf  
RR-chainID-retailerID-date.pdf  
CR-chainID-date.pdf  
CRFY-chainID-retailerID-date.pdf  
CRCY-chainID-retailerID-date.pdf  
RRFY-chainID-retailerID-date.pdf  
RRCY-chainID-retailerID-date.pdf  
CR-chainID-date.pdf  
CRFY-chainID-retailerID-date.pdf  
CRCY-chainID-retailerID-date.pdf  
CRS-chainID-date.pdf  
CRSFY-chainID-retailerID-date.pdf  
CRSCY-chainID-retailerID-date.pdf  
IR-chainID\_retailer\_id optional\_date.txt  
FB-chainID\_retailer\_id optional\_date.txt



## 5.3 File Specifications

### 5.3.1 Document Management Retailer Files

The Lottery Retailer Extranet services both Independent Retailers and Chain Accounts who sell Lottery tickets in their stores. This service consists of a secure document repository system that gives retailers access to **billing statements, chain billing statements** and **quarterly business reviews**. Items are available as PDF or TXT files that users can view, download or print. The information is retained indefinitely.

The Retailer Extranet consists of two *primary* document types: Billing Statements and Business Reviews. Each of these primary document types are broken down into the following *secondary* types: Retailer Reports (individual store documents), Chain Reports (combination of all store documents for that chain) and Chain Summary Reports.

Any authorized Lottery Site Administrator will have the ability to upload a zipped file containing a set of PDF files that will follow this naming convention:

*Document Identifier (RS-CS-CSS or RR-CR-CRS) followed by Retailer or Chain ID Number followed by Date (4-digit year, 2-digit month, 2-digit day).*

#### Class Reports

- Retailer Billing Statement = RS (individual store statement – all chains and independents)
- Chain Billing Statements = CS (appended statements for all stores in a specific chain)
- Chain Billing Statement Summary = CSS (chain summary)

*(RS-chainID-retailerID-date.pdf)*

*(CSS-chainID-date.pdf)*

*(CS-chainID-date.pdf)*

- FY = Fiscal Year; CY = Calendar Year
- Retailer Business Review = RR (individual store review – for all chains and independents)

*(RR-chainID-retailerID-date.pdf)*

*(RRFY-chainID-retailerID-date.pdf)*

*(RRCY-chainID-retailerID-date.pdf)*





- Chain Business Reviews = CR (appended business reviews for all stores in a chain)

*(CR-chainID-date.pdf)*  
*(CRFY-chainID-retailerID-date.pdf)*  
*(CRCY-chainID-retailerID-date.pdf)*

- Chain Business Review Summary = CRS (chain business review summary)

*(CRS-chainID-date.pdf)*  
*(CRSFY-chainID-retailerID-date.pdf)*  
*(CRSCY-chainID-retailerID-date.pdf)*

- Text Inventory Reports and Financial Billings

Type = IR (inventory Reports)    Type = FB (Financial Billings)

*{type}\_{chain\_id}\_{retailer\_id optional}\_{date}.{extension}*

If there is a single ID in the filename, it's used as the chain ID. For independent retailers, the chain ID should be 000000. Specifically, the filename for these should be FB\_000000\_138877\_2018-06-07.txt

### 5.3.2 File Upload Schedule

#### Monday Night/Tuesday Morning

PICK3MD.xml 13:45 – 14:00 (except Christmas)  
webCash5.xml - 20:00 (except Christmas)  
webLLNumbers.xml - 21:30  
webLLResults.xml - 22:00 - 03:00  
webfile.xml - 03:00 - 04:00  
webPICK3 - 03:00 - 04:00 (except Christmas)  
Cash5EZMatch.xml 03:00 – 04:00  
bigprize.xml - 03:00 - 04:00 (only if a big prize was claimed at a claim center)  
unclaimedJP.xml - 03:00 - 04:00

#### Tuesday Night/Wednesday Morning

PICK3MD.xml 13:45 – 14:00 (except Christmas)  
webCash5.xml - 20:00 (except Christmas)  
webMMNumbers.xml - 21:30  
webMMResult.xml - 23:00 - 03:00  
webfile.xml - 03:00 - 04:00  
webPICK3.xml - 03:00 - 04:00 (except Christmas)  
Cash5EZMatch.xml 03:00 – 04:00



bigprize.xml - 03:00 - 04:00 (only if a big prize was claimed at a claim center)  
unclaimedJP.xml - 03:00 - 04:00

**Wednesday Night/Thursday Morning**

PICK3MD.xml 13:45 – 14:00 (except Christmas)  
webLottoC5.xml - 20:30 (except Christmas)  
webPBNumbers.xml - 21:30  
webPBResults.xml - 23:00 - 03:00  
webLOTTO.xml 3:00 – 4:00  
webfile.xml - 03:00 - 04:00  
webPICK3.xml - 03:00 - 04:00 (except Christmas)  
Cash5EZMatch.xml 03:00 – 04:00  
bigprize.xml - 03:00 - 04:00 (only if a big prize was claimed at a claim center)  
unclaimedJP.xml - 03:00 - 04:00

**Thursday Night/Friday Morning**

PICK3MD.xml 13:45 – 14:00 (except Christmas)  
webCash5.xml - 20:00 (except Christmas)  
webLLNumbers.xml - 21:30  
webLLResults.xml - 22:00 - 03:00  
webfile.xml - 03:00 - 04:00  
webPICK3 - 03:00 - 04:00 (except Christmas)  
Cash5EZMatch.xml 03:00 – 04:00  
bigprize.xml - 03:00 - 04:00 (only if a big prize was claimed at a claim center)  
unclaimedJP.xml - 03:00 - 04:00

**Friday Night/Saturday Morning**

PICK3MD.xml 13:45 – 14:00 (except Christmas)  
webCash5.xml - 20:00 (except Christmas)  
webMMNumbers.xml - 21:30  
webMMResult.xml - 23:00 - 03:00  
webLOTTO.xml 3:00 – 4:00  
webfile.xml - 03:00 - 04:00  
webPICK3.xml - 03:00 - 04:00 (except Christmas)  
Cash5EZMatch.xml 03:00 – 04:00  
bigprize.xml - 03:00 - 04:00 (only if a big prize was claimed at a claim center)  
unclaimedJP.xml - 03:00 - 04:00  
retailer.xml - 03:00 - 04:00

**Saturday Night/Sunday Morning**

PICK3MD.xml 13:45 – 14:00 (except Christmas)



webLottoC5.xml - 20:30 (except Christmas)  
webPBNumbers.xml - 21:30  
webPBResults.xml - 23:00 - 03:00  
webfile.xml - 03:00 - 04:00  
Cash5EZMatch.xml 03:00 - 04:00  
webPICK3.xml - 03:00 - 04:00 (except Christmas)  
unclaimedJP.xml - 03:00 - 04:00

### **Sunday Night/Monday Morning**

PICK3MD.xml 13:45 - 14:00 (except Christmas)  
webCash5.xml - 20:00 (except Christmas)  
webfile.xml - 03:00 - 04:00  
webPICK3 - 03:00 - 04:00 (except Christmas)  
Cash5EZMatch.xml 03:00 - 04:00  
unclaimedJP.xml - 03:00 - 04:00

### **Manual Updates**

Manual updates vary based upon non-scheduled issues: jackpot increases, operator or program errors, etc.

### **VPN File Transfers**

statements.zip - Friday mornings - 10:30 - 12:00  
Business Reviews - zip file names vary based on quarter, calendar year, and fiscal year, but begin w/ **BusReviews** - uploaded a few weeks after the quarter ends, time varies.

The files are zipped ([statements.zip](#)). Once the file is successfully uploaded, the system will automatically unzip the file and parse out the individual PDF or TXT files into their corresponding locations to be made available to the appropriate users. The Lottery Site Administrator will also have the ability to upload individual files into individual accounts or to delete files within individual accounts. New file uploads with the same naming convention will overwrite/replace existing files to correct files with errors, or if there are problems with system uploads.

## **5.3.3 File Conventions**

Refer to Addendum D.

## **5.4 Security & Privacy Considerations**

The Colorado Lottery website must encompass the security triad or the CIA; Confidentiality, Integrity, and Availability. Personal information is collected from



players that must be protected maintaining confidentiality. The website allows for Bonus Draws where the integrity of the entries is crucial. And finally, but equally important, the website must be available at all times.

The expectation is to protect against all Open Web Application Secure Project (OWASP) Top 10 attacks:

- SQL injections
- Broken Authentication
- Sensitive Data Exposure
- XML External Entities (XXE)
- Broken Access Control
- Security Misconfiguration
- Cross Site Scripting (XSS)
- Insecure Deserialization
- Using Components with Known Vulnerabilities
- Insufficient Logging and Monitoring

The following are required security measures where applicable:

- Server communications utilize SSL (and browser requests over HTTPS)
- PII Protection compliant with State of CO House Bill 18-1128.
- Encryption of data (where deemed necessary by Lottery Security) using an industry standard encryption scheme
- Audits – Third party annual vulnerability scans, penetration testing, review of identified process flows by Lottery
- Bot protection
- 2-factor authentication – CMS – MyLottery
- Security logs maintained and backed up
- Hosting: Priority I, II, and III notifications
- Backups - redundancy
- Disaster Recovery Plan provided to Lottery
- Security Plan provided to Lottery
- Security Scanning Tools - [www.detectify.com](http://www.detectify.com)



## 6. Processes

### 6.1 QA & User Testing

The Digital Agency performs a variety of testing to ensure the best possible experience for users of the Colorado Lottery website and mobile application. The Digital Agency, the Lottery team, and Cactus provide the following types of testing:

- Design validation
- Bug Testing
- Cross-browser testing
- W3C Compliance
- 508 Compliance Testing
- Performance Testing
- Usability Testing
- User Acceptance Testing

New features are developed and tested in a dedicated staging environment. New features, potential bug fixes, or other design changes must be verified in this environment before they can be released to production users.

The current Digital Agency QA team tests changes to the website using a combination of physical devices and an emulator to ensure that the site is functional and user-friendly on a variety of hardware and browsers. The Digital Agency has also engaged a third-party vendor with a library of mobile devices to assist in troubleshooting the mobile app and preparing for mobile releases.

In addition to manual testing, the digital agency uses a tool to scan the website for W3C and 508 compliance on a quarterly basis.

To test new builds of the Colorado Lottery mobile application, the team uses TestFlight to distribute to iOS devices, and Google Play to distribute to Android devices. New users must be invited through TestFlight and Google Play consoles in order to receive test builds.

Any bug reports should be submitted, and include the following information:

- Website Bug:
  - Description of Bug
  - Location (URL)
  - Steps to Reproduce
  - Expected Result
  - Actual Result
  - OS & Version
  - Browser & Version
  - Screenshots (when applicable)
- App Bug:



- Description of Bug
- Location (Tab/Page)
- Steps to Reproduce
- Expected Result
- Actual Result
- Device
- OS & Version
- App Version
- Build Number (when applicable)
- Environment (staging or production)
- Screenshots (when applicable)



**ADDENDUM D /**  
**WEB FILE CONFIGURATIONS**

# ADDENDUM D - WEB FILE CONFIGURATIONS

## Colorado Lottery

### FILE CONVENTIONS

#### webCash5

<?xml version="1.0" standalone="yes" ?

> <resultsupload>

<c5numbers>

<Draw\_Date>06/18/2018</Draw\_Date>

<Number1>03</Number1>

<Number2>08</Number2>

<Number3>18</Number3>

<Number4>29</Number4>

<Number5>32</Number5>

<End\_Date>12/15/2018</End\_Date>

*(last day of validation)*

<lotteryDrawID>6647</lotteryDrawID>

</c5numbers>

<p3numbers>

<Draw\_Date>06/18/2018</Draw\_Date>

<Draw\_Type>EV</Draw\_Type>

<Number1>5</Number1>

<Number2>8</Number2>

<Number3>5</Number3>

<End\_Date>12/15/2018</End\_Date>

<lotteryDrawID>2470</lotteryDrawID>

</p3numbers>

<c5results>

<Draw\_Date>06/18/2018</Draw\_Date>

<WinnerCt\_5of5>0</WinnerCt\_5of5>

<FiveofFive>20000</FiveofFive>

<WinnerCt\_4of5>21</WinnerCt\_4of5>

<FourofFive>200</FourofFive>

<WinnerCt\_3of5>717</WinnerCt\_3of5>



ADDENDUM D  
WEB REQUIREMENTS

<ThreeofFive>10</ThreeofFive>

<WinnerCt\_2of5>6385</WinnerCt\_2of5>

<TwoofFive>1</TwoofFive>

<lotteryDrawID>6647</lotteryDrawID>

</c5results>

</resultsupload>

ADDENDUM D WEB  
REQUIREMENTS

**cash5EZMatch**

```
<?xml version="1.0"?>
```

```
<resultsupload>
```

```
<webCash5EZMatch>
```

```
<Date>06/18/2018</Date>
```

```
<count_2>809</count_2>
```

```
<count_3>505</count_3>
```

```
<count_4>110</count_4>
```

```
<count_5>80</count_5>
```

```
<count_10>47</count_10>
```

```
<count_15>8</count_15>
```

```
<count_20>2</count_20>
```

```
<count_50>2</count_50>
```

```
<count_100>0</count_100>
```

```
<count_250>0</count_250>
```

```
<count_500>0</count_500>
```

```
</webCash5EZMatch>
```

```
</resultsupload>
```

ADDENDUM D  
WEB REQUIREMENTS

**webfile**

```
<?xml version="1.0" encoding="utf-8"?>  
<scratch_prize_remaining>  
  <game>  
    <number>684</number>  
    <name>FIRE & ICE</name>  
    <unclaimed> 3</unclaimed>  
    <totalprizes> 9</totalprizes>  
    <claimed> 6</claimed>  
    <ticketprice> 2</ticketprice>  
    <topprizeamount> 10000</topprizeamount>  
  </game>
```

ADDENDUM D  
WEB REQUIREMENTS

**webPICK3**

*(results for both midday and evening noted by draw ID number)*

```
<?xml version="1.0" standalone="yes" ?>
<resultsupload>
  <p3results>
    <LotteryDrawID>2469</LotteryDrawID>
    <ExactTwoWinners>0</ExactTwoWinners>
    <ExactTwoPrize>1000.00</ExactTwoPrize>
    <ExactFiveWinners>0</ExactFiveWinners>
    <ExactFivePrize>2500.00</ExactFivePrize>
    <ExactFullWinners>0</ExactFullWinners>
    <ExactFullPrize>500.00</ExactFullPrize>
    <ExactWinners>1</ExactWinners>
    <ExactPrize>250.00</ExactPrize>
    <AnyOrderTwoWinners>1</AnyOrderTwoWinners>
    <AnyOrderTwoPrize>160.00</AnyOrderTwoPrize>
    <AnyOrderFiveWinners>0</AnyOrderFiveWinners>
    <AnyOrderFivePrize>400.00</AnyOrderFivePrize>
    <AnyOrderFullWinners>4</AnyOrderFullWinners>
    <AnyOrderFullPrize>80.00</AnyOrderFullPrize>
    <AnyOrderWinners>3</AnyOrderWinners>
    <AnyOrderPrize>40.00</AnyOrderPrize>
    <AnyOrderTwoComboWinners>3</AnyOrderTwoComboWinners>
    <AnyOrderTwoComboPrize>80.00</AnyOrderTwoComboPrize>
    <AnyOrderFiveComboWinners>0</AnyOrderFiveComboWinners>
    <AnyOrderFiveComboPrize>200.00</AnyOrderFiveComboPrize>
    <AnyOrderComboWinners>17</AnyOrderComboWinners>
    <AnyOrderComboPrize>40.00</AnyOrderComboPrize>
    <ExactAnyTwoComboWinners>0</ExactAnyTwoComboWinners>
    <ExactAnyTwoComboPrize>580.00</ExactAnyTwoComboPrize>
    <ExactAnyFiveComboWinners>0</ExactAnyFiveComboWinners>
```

ADDENDUM D WEB  
REQUIREMENTS

<ExactAnyFiveComboPrize>1450.00</ExactAnyFiveComboPrize>

<ExactAnyComboWinners>1</ExactAnyComboWinners>

<ExactAnyComboPrize>290.00</ExactAnyComboPrize>

<FrontPairTwoWinners>0</FrontPairTwoWinners>

<FrontPairTwoPrize>120.00</FrontPairTwoPrize>

<FrontPairFiveWinners>0</FrontPairFiveWinners>

<FrontPairFivePrize>300.00</FrontPairFivePrize>

<FrontPairWinners>0</FrontPairWinners>

<FrontPairPrize>30.00</FrontPairPrize>

<FrontPairFullWinners>0</FrontPairFullWinners>

<FrontPairFullPrize>60.00</FrontPairFullPrize>

<BackPairTwoWinners>0</BackPairTwoWinners>

<BackPairTwoPrize>120.00</BackPairTwoPrize>

<BackPairFiveWinners>0</BackPairFiveWinners>

<BackPairFivePrize>300.00</BackPairFivePrize>

<BackPairWinners>0</BackPairWinners>

<BackPairPrize>30.00</BackPairPrize>

<BackPairFullWinners>1</BackPairFullWinners>

<BackPairFullPrize>60.00</BackPairFullPrize>

<Draw\_Date>06/18/2018</Draw\_Date>

</p3results>

<p3results>

<LotteryDrawID>2470</LotteryDrawID>

<ExactTwoWinners>0</ExactTwoWinners>

<ExactTwoPrize>1000.00</ExactTwoPrize>

<ExactFiveWinners>0</ExactFiveWinners>

<ExactFivePrize>2500.00</ExactFivePrize>

<ExactFullWinners>1</ExactFullWinners>

<ExactFullPrize>500.00</ExactFullPrize>

<ExactWinners>3</ExactWinners>

## ADDENDUM D WEB REQUIREMENTS

<ExactPrize>250.00</ExactPrize>  
<AnyOrderTwoWinners>0</AnyOrderTwoWinners>  
<AnyOrderTwoPrize>320.00</AnyOrderTwoPrize>  
<AnyOrderFiveWinners>0</AnyOrderFiveWinners>  
<AnyOrderFivePrize>800.00</AnyOrderFivePrize>  
<AnyOrderFullWinners>0</AnyOrderFullWinners>  
<AnyOrderFullPrize>160.00</AnyOrderFullPrize>  
<AnyOrderWinners>6</AnyOrderWinners>  
<AnyOrderPrize>80.00</AnyOrderPrize>  
<AnyOrderTwoComboWinners>5</AnyOrderTwoComboWinners>  
<AnyOrderTwoComboPrize>160.00</AnyOrderTwoComboPrize>  
<AnyOrderFiveComboWinners>0</AnyOrderFiveComboWinners>  
<AnyOrderFiveComboPrize>400.00</AnyOrderFiveComboPrize>  
<AnyOrderComboWinners>9</AnyOrderComboWinners>  
<AnyOrderComboPrize>80.00</AnyOrderComboPrize>  
<ExactAnyTwoComboWinners>1</ExactAnyTwoComboWinners>  
<ExactAnyTwoComboPrize>660.00</ExactAnyTwoComboPrize>  
<ExactAnyFiveComboWinners>0</ExactAnyFiveComboWinners>  
<ExactAnyFiveComboPrize>1650.00</ExactAnyFiveComboPrize>  
<ExactAnyComboWinners>3</ExactAnyComboWinners>  
<ExactAnyComboPrize>330.00</ExactAnyComboPrize>  
<FrontPairTwoWinners>2</FrontPairTwoWinners>  
<FrontPairTwoPrize>120.00</FrontPairTwoPrize>  
<FrontPairFiveWinners>0</FrontPairFiveWinners>  
<FrontPairFivePrize>300.00</FrontPairFivePrize>  
<FrontPairWinners>2</FrontPairWinners>  
<FrontPairPrize>30.00</FrontPairPrize>  
<FrontPairFullWinners>1</FrontPairFullWinners>  
<FrontPairFullPrize>60.00</FrontPairFullPrize>  
<BackPairTwoWinners>2</BackPairTwoWinners>

ADDENDUM D WEB  
REQUIREMENTS

<BackPairTwoPrize>120.00</BackPairTwoPrize>

<BackPairFiveWinners>0</BackPairFiveWinners>

<BackPairFivePrize>300.00</BackPairFivePrize>

<BackPairWinners>0</BackPairWinners>

<BackPairPrize>30.00</BackPairPrize>

<BackPairFullWinners>0</BackPairFullWinners>

<BackPairFullPrize>60.00</BackPairFullPrize>

<Draw\_Date>06/18/2018</Draw\_Date>

</p3results>

</resultsupload>

ADDENDUM D  
WEB REQUIREMENTS

**PICK3MD**

```
<?xml version="1.0"?>
```

```
<resultsupload>
```

```
<p3numbers xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"  
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
```

```
<Draw_Date>06/18/2018</Draw_Date>
```

```
<Draw_Type>MD</Draw_Type>
```

```
<Number1>5</Number1>
```

```
<Number2>9</Number2>
```

```
<Number3>6</Number3>
```

```
<End_Date>12/15/2018</End_Date>
```

*(last day of validation)*

```
<lotteryDrawID>2469</lotteryDrawID>
```

```
</p3numbers>
```

```
</resultsupload>
```



ADDENDUM D  
WEB REQUIREMENTS

**bigprize**

(Data from actual winners' claims and from retailer claims.)

<?xml version="1.0" encoding="utf-8"?>

<winners\_upload>

<winner>

<first\_name>TIM</first\_name>

<last\_name>ENGLES</last\_name>

<winner\_city>DENVER</winner\_city>

<amount\_won> 1000.00</amount\_won>

<retailer\_name>7-ELEVEN #13184B</retailer\_name>

<retailer\_id> 31713</retailer\_id>

<game\_name>\$50 SERIES II</game\_name>

<game\_number>856</game\_number>

<claim\_date>07/10/2019</claim\_date>

<draw\_date></draw\_date>

</winner>

<winner>

<first\_name></first\_name>

<last\_name></last\_name>

<winner\_city></winner\_city>

<amount\_won> 400.00</amount\_won>

<retailer\_name>KING SOOPERS #57</retailer\_name>

<retailer\_id> 34083</retailer\_id>

<game\_name>PICK 3</game\_name>

<game\_number>3</game\_number>

<claim\_date></claim\_date>

<draw\_date>07/10/2019</draw\_date>

```
WHEN %TRIMR(UNCLGAME)='Colorado
Lotto+';
  GAMENBR='1';
WHEN %TRIMR(UNCLGAME)='Plus';
  GAMENBR='18';
WHEN %TRIMR(UNCLGAME)='Cash 5';
  GAMENBR='2';
WHEN %TRIMR(UNCLGAME)='Pick 3';
  GAMENBR='3';
WHEN %TRIMR(UNCLGAME)='Powerball';
  GAMENBR='5';
WHEN %TRIMR(UNCLGAME)='Mega Millions';
  GAMENBR='7';
WHEN %TRIMR(UNCLGAME)='Lucky For Life';
  GAMENBR='9';
```

(From Scratch winners' claims => \$1,000.)

(From retailers' claims => \$250.)

ADDENDUM D  
WEB REQUIREMENTS

</winner>

<winner>

<first\_name></first\_name>

<last\_name></last\_name>

<winner\_city></winner\_city>

<amount\_won> 100.00</amount\_won>

<retailer\_name>MURPHY EXPRESS #8697</retailer\_name>

<retailer\_id>137347</retailer\_id>

<game\_name>C5 EZ</game\_name>

(From retailers' claims => \$100.)

<game\_number>17</game\_number>

<claim\_date></claim\_date>

<draw\_date>07/10/2019</draw\_date>

</winner>

</winners\_upload>

ADDENDUM D  
WEB REQUIREMENTS

**UnclaimedJP**

```
<?xml version="1.0" encoding="UTF-8"?>
<unclaimed_prizes>
<prize>
<game>5</game>
<prizeamount>200.00</prizeamount>
<drawdate>01/05/2019</drawdate>
<lotterydrawid>1819</lotterydrawid>
<retailer>136037</retailer>
</prize>
</unclaimed_prizes>
```

```
WHEN %TRIMR(UNCLGAME)='Colorado Lotto+';
  GAMENBR='1';
WHEN %TRIMR(UNCLGAME)='Plus';
  GAMENBR='18';
WHEN %TRIMR(UNCLGAME)='Cash 5';
  GAMENBR='2';
WHEN %TRIMR(UNCLGAME)='Pick 3';
  GAMENBR='3';
WHEN %TRIMR(UNCLGAME)='Powerball';
  GAMENBR='5';
WHEN %TRIMR(UNCLGAME)='Mega Millions';
  GAMENBR='7';
WHEN %TRIMR(UNCLGAME)='Lucky For Life';
  GAMENBR='9';
```

Values:

```
Powerball =>$100
Mega Millions =>$50
Lucky for Life =>$150
Colorado Lotto+ =>$42
Cash 5 =>$200
Pick 3 =>$40
```

ADDENDUM D  
WEB REQUIREMENTS

**webMMNumbers**

```
<?xml version="1.0" standalone="yes" ?>
```

```
<resultsupload>
```

```
<mmnumbers>
```

```
<Draw_Date>06/15/2018</Draw_Date>
```

```
<Number1>01</Number1>
```

```
<Number2>11</Number2>
```

```
<Number3>37</Number3>
```

```
<Number4>47</Number4>
```

```
<Number5>51</Number5>
```

```
<Megaball>06</Megaball>
```

```
<MegaPlier>02</MegaPlier>
```

```
<End_Date>12/12/2018</End_Date>
```

*(last day of validation)*

```
<Total_Price>161000000</Total_Price>
```

```
<Cash_Price>95400000</Cash_Price>
```

```
<lotteryDrawId>844</lotteryDrawId>
```

```
</mmnumbers>
```

```
</resultsupload>
```

ADDENDUM D  
WEB REQUIREMENTS

**webMMResults**

```
<?xml version="1.0" standalone="yes" ?>
<resultsupload><MMresults>
  <Draw_Date>06/15/2018</Draw_Date>
  <Five_5MBTotalWinners>0</Five_5MBTotalWinners>
  <Five_5MBColoradoWinners>0</Five_5MBColoradoWinners>
  <Five_5MBAnnuitizedPrize>161000000</Five_5MBAnnuitizedPrize>
  <Five_5MBCashPrize>96600000</Five_5MBCashPrize>
  <Five_5Winners>0</Five_5Winners>
  <Five_5PrizeAmount>1000000</Five_5PrizeAmount>
  <Four_5MBWinners>0</Four_5MBWinners>
  <Four_5MBPrizeAmount>10000</Four_5MBPrizeAmount>
  <Four_5Winners>1</Four_5Winners>
  <Four_5PrizeAmount>500</Four_5PrizeAmount>
  <Three_5MBWinners>8</Three_5MBWinners>
  <Three_5MBPrizeAmount>200</Three_5MBPrizeAmount>
  <Three_5Winners>136</Three_5Winners>
  <Three_5PrizeAmount>10</Three_5PrizeAmount>
  <Two_5MBWinners>131</Two_5MBWinners>
  <Two_5MBPrizeAmount>10</Two_5MBPrizeAmount>
  <One_5MBWinners>979</One_5MBWinners>
  <One_5MBPrizeAmount>4</One_5MBPrizeAmount>
  <Zero_5MBWinners>2265</Zero_5MBWinners>
  <Zero_5MBPrizeAmount>2</Zero_5MBPrizeAmount>
  <Five_5MegaPlierWinners>0</Five_5MegaPlierWinners>
  <Five_5MegaPlierPrizeAmount>2000000</Five_5MegaPlierPrizeAmount>
  <Four_5MBMegaPlierWinners>0</Four_5MBMegaPlierWinners>
  <Four_5MBMegaPlierPrizeAmount>20000</Four_5MBMegaPlierPrizeAmount>
  <Four_5MegaPlierWinners>1</Four_5MegaPlierWinners>
  <Four_5MegaPlierPrizeAmount>1000</Four_5MegaPlierPrizeAmount>
```

ADDENDUM D  
WEB REQUIREMENTS

```
<Three_5MBMegaPlierWinners>8</Three_5MBMegaPlierWinners>  
<Three_5MBMegaPlierPrizeAmount>400</Three_5MBMegaPlierPrizeAmount>  
<Three_5MegaPlierWinners>99</Three_5MegaPlierWinners>  
<Three_5MegaPlierPrizeAmount>20</Three_5MegaPlierPrizeAmount>  
<Two_5MBMegaPlierWinners>80</Two_5MBMegaPlierWinners>  
<Two_5MBMegaPlierPrizeAmount>20</Two_5MBMegaPlierPrizeAmount>  
<One_5MBMegaPlierWinners>661</One_5MBMegaPlierWinners>  
<One_5MBMegaPlierPrizeAmount>8</One_5MBMegaPlierPrizeAmount>  
<Zero_5MBMegaPlierWinners>1608</Zero_5MBMegaPlierWinners>  
<Zero_5MBMegaPlierPrizeAmount>4</Zero_5MBMegaPlierPrizeAmount>  
<NextMMJackpot>175000000</NextMMJackpot>  
<NextMMCashValue>105100000</NextMMCashValue>  
<lotteryDrawID>844</lotteryDrawID>  
</MMresults>  
</resultsupload>
```

ADDENDUM D  
WEB REQUIREMENTS

**webLLNumbers**

```
<?xml version="1.0" standalone="yes" ?>
```

```
<resultsupload>
```

```
<llnumbers>
```

```
<Draw_Date>06/18/2018</Draw_Date>
```

```
<Number1>01</Number1>
```

```
<Number2>22</Number2>
```

```
<Number3>27</Number3>
```

```
<Number4>31</Number4>
```

```
<Number5>34</Number5>
```

```
<Luckyball>06</Luckyball>
```

```
<End_Date>12/15/2018</End_Date>
```

*(last day of validation)*

```
<lotteryDrawId>201</lotteryDrawId>
```

```
</llnumbers>
```

```
</resultsupload>
```

ADDENDUM D  
WEB REQUIREMENTS

**webLLResults**

```
<?xml version="1.0" standalone="yes" ?>
<resultsupload><LLresults>
  <Draw_Date>06/18/2018</Draw_Date>
  <Five_5LBTotallWinners>0</Five_5LBTotallWinners>
  <Five_5LBColoradoWinners>0</Five_5LBColoradoWinners>
  <Five_5LBAnnuitizedPrize>1000</Five_5LBAnnuitizedPrize>
  <Five_5LBCashPrize>5750000</Five_5LBCashPrize>
  <Five_5TotalWinners>0</Five_5TotalWinners>
  <Five_5ColoradoWinners>0</Five_5ColoradoWinners>
  <Five_5AnnuitizedPrize>25000</Five_5AnnuitizedPrize>
  <Five_5CashPrize>390000</Five_5CashPrize>
  <Four_5LBTotallWinners>5</Four_5LBTotallWinners>
  <Four_5LBColoradoWinners>0</Four_5LBColoradoWinners>
  <Four_5LBPrizeAmount>5000</Four_5LBPrizeAmount>
  <Four_5Winners>8</Four_5Winners>
  <Four_5PrizeAmount>200</Four_5PrizeAmount>
  <Three_5LBWinners>23</Three_5LBWinners>
  <Three_5LBPrizeAmount>150</Three_5LBPrizeAmount>
  <Three_5Winners>362</Three_5Winners>
  <Three_5PrizeAmount>20</Three_5PrizeAmount>
  <Two_5LBWinners>312</Two_5LBWinners>
  <Two_5LBPrizeAmount>25</Two_5LBPrizeAmount>
  <Two_5Winners>5633</Two_5Winners>
  <Two_5PrizeAmount>3</Two_5PrizeAmount>
  <One_5LBWinners>1503</One_5LBWinners>
  <One_5LBPrizeAmount>6</One_5LBPrizeAmount>
  <Zero_5LBWinners>2471</Zero_5LBWinners>
  <Zero_5LBPrizeAmount>4</Zero_5LBPrizeAmount>
  <lotteryDrawID>201</lotteryDrawID>    </LLresults>    </resultsupload>
```



ADDENDUM D  
WEB REQUIREMENTS

**webLottoC5**

<?xml version="1.0" standalone="yes" ?>

<resultsupload><c5numbers>

<Draw\_Date>09/25/2019</Draw\_Date>

<Number1>15</Number1>

<Number2>17</Number2>

<Number3>23</Number3>

<Number4>26</Number4>

<Number5>29</Number5>

<End\_Date>03/23/2020</End\_Date>

*(last day of validation)*

<lotteryDrawID>7106</lotteryDrawID>

</c5numbers><Inumbers>

<Draw\_Date>09/25/2019</Draw\_Date>

<Number1>04</Number1>

<Number2>07</Number2>

<Number3>23</Number3>

<Number4>32</Number4>

<Number5>34</Number5>

<Number6>35</Number6>

<Number1Plus>01</Number1Plus>

<Number2Plus>02</Number2Plus>

<Number3Plus>03</Number3Plus>

<Number4Plus>07</Number4Plus>

<Number5Plus>13</Number5Plus>

<Number6Plus>23</Number6Plus>

<End\_Date>03/23/2020</End\_Date>

*(last day of validation)*

<Total\_Price>2100000</Total\_Price>

<Cash\_Price>1050000</Cash\_Price>

<lotteryDrawID>3115</lotteryDrawID>

</Inumbers><p3numbers>

ADDENDUM D  
WEB REQUIREMENTS

<Draw\_Date>09/25/2019</Draw\_Date>

<Draw\_Type>EV</Draw\_Type>

<Number1>3</Number1>

<Number2>5</Number2>

<Number3>9</Number3>

<End\_Date>03/23/2020</End\_Date>

*(last day of validation)*

<lotteryDrawID>3566</lotteryDrawID>

</p3numbers><c5results>

<Draw\_Date>09/25/2020</Draw\_Date>

<WinnerCt\_5of5>0</WinnerCt\_5of5>

<FiveofFive>20000</FiveofFive>

<WinnerCt\_4of5>31</WinnerCt\_4of5>

<FourofFive>200</FourofFive>

<WinnerCt\_3of5>837</WinnerCt\_3of5>

<ThreeofFive>10</ThreeofFive>

<WinnerCt\_2of5>7032</WinnerCt\_2of5>

<TwoofFive>1</TwoofFive>

<lotteryDrawID>7106</lotteryDrawID>

</c5results>

</resultsupload>

ADDENDUM D  
WEB REQUIREMENTS

**webLOTTO**

```
<?xml version="1.0" standalone="yes" ?>
<resultsupload>
  <lresults>
    <Draw_Date>09/25/2019</Draw_Date>
    <WinnerCt_6of6>0</WinnerCt_6of6>
    <SixofSix>2000000</SixofSix>
    <SixofSixCashValue>1000000</SixofSixCashValue>
    <WinnerCt_5of6_2x>3</WinnerCt_5of6_2x>
    <FiveofSix_2x>500</FiveofSix_2x>
    <WinnerCt_4of6_2x>18</WinnerCt_4of6_2x>
    <FourofSix_2x>50</FourofSix_2x>
    <WinnerCt_3of6_2x>2807</WinnerCt_3of6_2x>
    <ThreeofSix_2x>6</ThreeofSix_2x>
    <WinnerCt_5of6_3x>2</WinnerCt_5of6_3x>
    <FiveofSix_3x>750</FiveofSix_3x>
    <WinnerCt_4of6_3x>10</WinnerCt_4of6_3x>
    <FourofSix_3x>75</FourofSix_3x>
    <WinnerCt_3of6_3x>1237</WinnerCt_3of6_3x>
    <ThreeofSix_3x>9</ThreeofSix_3x>
    <WinnerCt_5of6_4x>1</WinnerCt_5of6_4x>
    <FiveofSix_4x>1000</FiveofSix_4x>
    <WinnerCt_4of6_4x>5</WinnerCt_4of6_4x>
    <FourofSix_4x>100</FourofSix_4x>
    <WinnerCt_3of6_4x>1218</WinnerCt_3of6_4x>
    <ThreeofSix_4x>12</ThreeofSix_4x>
    <WinnerCt_5of6_5x>1</WinnerCt_5of6_5x>
    <FiveofSix_5x>1250</FiveofSix_5x>
    <WinnerCt_4of6_5x>3</WinnerCt_4of6_5x>
    <FourofSix_5x>125</FourofSix_5x>
```

ADDENDUM D  
WEB REQUIREMENTS

<WinnerCt\_3of6\_5x>278</WinnerCt\_3of6\_5x>  
<ThreeofSix\_5x>15</ThreeofSix\_5x>  
<WinnerCt\_6of6\_Plus>1</WinnerCt\_6of6\_Plus>  
<SixofSix\_Plus>250000</SixofSix\_Plus>  
<WinnerCt\_5of6\_2x\_Plus>1</WinnerCt\_5of6\_2x\_Plus>  
<FiveofSix\_2x\_Plus>600</FiveofSix\_2x\_Plus>  
<WinnerCt\_4of6\_2x\_Plus>6</WinnerCt\_4of6\_2x\_Plus>  
<FourofSix\_2x\_Plus>60</FourofSix\_2x\_Plus>  
<WinnerCt\_3of6\_2x\_Plus>1333</WinnerCt\_3of6\_2x\_Plus>  
<ThreeofSix\_2x\_Plus>8</ThreeofSix\_2x\_Plus>  
<WinnerCt\_5of6\_3x\_Plus>0</WinnerCt\_5of6\_3x\_Plus>  
<FiveofSix\_3x\_Plus>900</FiveofSix\_3x\_Plus>  
<WinnerCt\_4of6\_3x\_Plus>3</WinnerCt\_4of6\_3x\_Plus>  
<FourofSix\_3x\_Plus>90</FourofSix\_3x\_Plus>  
<WinnerCt\_3of6\_3x\_Plus>618</WinnerCt\_3of6\_3x\_Plus>  
<ThreeofSix\_3x\_Plus>12</ThreeofSix\_3x\_Plus>  
<WinnerCt\_5of6\_4x\_Plus>1</WinnerCt\_5of6\_4x\_Plus>  
<FiveofSix\_4x\_Plus>1200</FiveofSix\_4x\_Plus>  
<WinnerCt\_4of6\_4x\_Plus>2</WinnerCt\_4of6\_4x\_Plus>  
<FourofSix\_4x\_Plus>120</FourofSix\_4x\_Plus>  
<WinnerCt\_3of6\_4x\_Plus>637</WinnerCt\_3of6\_4x\_Plus>  
<ThreeofSix\_4x\_Plus>16</ThreeofSix\_4x\_Plus>  
<WinnerCt\_5of6\_5x\_Plus>0</WinnerCt\_5of6\_5x\_Plus>  
<FiveofSix\_5x\_Plus>1500</FiveofSix\_5x\_Plus>  
<WinnerCt\_4of6\_5x\_Plus>1</WinnerCt\_4of6\_5x\_Plus>  
<FourofSix\_5x\_Plus>150</FourofSix\_5x\_Plus>  
<WinnerCt\_3of6\_5x\_Plus>133</WinnerCt\_3of6\_5x\_Plus>  
<ThreeofSix\_5x\_Plus>20</ThreeofSix\_5x\_Plus>  
<Next\_Jackpot>2100000</Next\_Jackpot>  
<Next\_Jackpot\_Cash\_Value>1050000</Next\_Jackpot\_Cash\_Value>

ADDENDUM D  
WEB REQUIREMENTS

<lotteryDrawID>3115</lotteryDrawID>

</Iresults>

</resultsupload>

ADDENDUM D  
WEB REQUIREMENTS

**webPBNumbers**

```
<?xml version="1.0" standalone="yes" ?>
```

```
<resultsupload>
```

```
<pbnumbers>
```

```
<Draw_Date>06/16/2018</Draw_Date>
```

```
<Number1>09</Number1>
```

```
<Number2>45</Number2>
```

```
<Number3>57</Number3>
```

```
<Number4>58</Number4>
```

```
<Number5>65</Number5>
```

```
<Powerball>09</Powerball>
```

```
<PowerPlay>02</PowerPlay>
```

```
<End_Date>12/13/2018</End_Date>
```

*(last day of validation)*

```
<Total_Price>137000000</Total_Price>
```

```
<Cash_Price>81900000</Cash_Price>
```

```
<lotteryDrawId>1761</lotteryDrawId>
```

```
</pbnumbers>
```

```
</resultsupload>
```

ADDENDUM D  
WEB REQUIREMENTS

**webPBResults**

```
<?xml version="1.0" standalone="yes" ?>
<resultsupload><PBresults>
  <Draw_Date>06/16/2018</Draw_Date>
  <Total_Jackpot_Winners>0</Total_Jackpot_Winners>
  <Match5_PB_Jackpot>0</Match5_PB_Jackpot>
  <Jackpot_Amount>136000000</Jackpot_Amount>
  <Jackpot_CashValue>81700000</Jackpot_CashValue>
  <Match5>0</Match5>
  <Match5_Prize>1000000</Match5_Prize>
  <Match4_PB>2</Match4_PB>
  <Match4_PB_Prize>50000</Match4_PB_Prize>
  <Match4>2</Match4>
  <Match4_Prize>100</Match4_Prize>
  <Match3_PB>6</Match3_PB>
  <Match3_PB_Prize>100</Match3_PB_Prize>
  <Match3>196</Match3>
  <Match3_Prize>7</Match3_Prize>
  <Match2_PB>156</Match2_PB>
  <Match2_PB_Prize>7</Match2_PB_Prize>
  <Match1_PB>1362</Match1_PB>
  <Match1_PB_Prize>4</Match1_PB_Prize>
  <Match0_PB>3434</Match0_PB>
  <Match0_PB_Prize>4</Match0_PB_Prize>
  <PP_Match5>0</PP_Match5>
  <PP_Match5_Prize>2000000</PP_Match5_Prize>
  <PP_Match4_PB>0</PP_Match4_PB>
  <PP_Match4_PB_Prize>100000</PP_Match4_PB_Prize>
  <PP_Match4>1</PP_Match4>
  <PP_Match4_Prize>200</PP_Match4_Prize>
```

























ADDENDUM D  
WEB REQUIREMENTS

<PP\_Match3\_PB>10</PP\_Match3\_PB>  
<PP\_Match3\_PB\_Prize>200</PP\_Match3\_PB\_Prize>  
<PP\_Match3>162</PP\_Match3>  
<PP\_Match3\_Prize>14</PP\_Match3\_Prize>  
<PP\_Match2\_PB>150</PP\_Match2\_PB>  
<PP\_Match2\_PB\_Prize>14</PP\_Match2\_PB\_Prize>  
<PP\_Match1\_PB>1287</PP\_Match1\_PB>  
<PP\_Match1\_PB\_Prize>8</PP\_Match1\_PB\_Prize>  
<PP\_Match0\_PB>3086</PP\_Match0\_PB>  
<PP\_Match0\_PB\_Prize>8</PP\_Match0\_PB\_Prize>  
<Next\_Jackpot>151000000</Next\_Jackpot>  
<Next\_Jackpot\_Cash\_Value>90700000</Next\_Jackpot\_Cash\_Value>  
<lotteryDrawID>1761</lotteryDrawID>  
</PBresults>  
</resultsupload>



ADDENDUM D  
WEB REQUIREMENTS

BusReviewsCY2018 (zip file containing pdfs)
































BusReviewsCY2018		1/28/2019 2:48 PM	Compressed (zipped) Folder	962,090 KB		
> ET-XML > BusReviewsCY2018 <span style="float: right;">             Search BusReviewsCY2018           </span>						
Name	Type	Compressed size	Password ...	Size	Ratio	
 CY_CR_024003_000000_2018-12-31	Adobe Acrobat Document	479 KB	No	535 KB	11%	
 CY_CR_028523_000000_2018-12-31	Adobe Acrobat Document	249 KB	No	259 KB	5%	
 CY_CR_034953_000000_2018-12-31	Adobe Acrobat Document	393 KB	No	433 KB	10%	
 CY_CR_034983_000000_2018-12-31	Adobe Acrobat Document	392 KB	No	431 KB	10%	
 CY_CR_034993_000000_2018-12-31	Adobe Acrobat Document	397 KB	No	437 KB	10%	
 CY_CR_036403_000000_2018-12-31	Adobe Acrobat Document	646 KB	No	738 KB	13%	
 CY_CR_041204_000000_2018-12-31	Adobe Acrobat Document	246 KB	No	256 KB	4%	
 CY_CR_042173_000000_2018-12-31	Adobe Acrobat Document	261 KB	No	274 KB	5%	
 CY_CR_044313_000000_2018-12-31	Adobe Acrobat Document	250 KB	No	262 KB	5%	
 CY_CR_047064_000000_2018-12-31	Adobe Acrobat Document	275 KB	No	290 KB	6%	
 CY_CR_047903_000000_2018-12-31	Adobe Acrobat Document	244 KB	No	254 KB	4%	
 CY_CR_051384_000000_2018-12-31	Adobe Acrobat Document	270 KB	No	284 KB	5%	
 CY_CR_053533_000000_2018-12-31	Adobe Acrobat Document	244 KB	No	254 KB	4%	
 CY_CR_053534_000000_2018-12-31	Adobe Acrobat Document	244 KB	No	254 KB	4%	
 CY_CR_053549_000000_2018-12-31	Adobe Acrobat Document	248 KB	No	258 KB	5%	
 CY_CR_060344_000000_2018-12-31	Adobe Acrobat Document	244 KB	No	254 KB	4%	
 CY_CR_061654_000000_2018-12-31	Adobe Acrobat Document	468 KB	No	523 KB	11%	
 CY_CR_064043_000000_2018-12-31	Adobe Acrobat Document	255 KB	No	266 KB	5%	
 CY_CR_064393_000000_2018-12-31	Adobe Acrobat Document	244 KB	No	254 KB	4%	
 CY_CR_066653_000000_2018-12-31	Adobe Acrobat Document	258 KB	No	270 KB	5%	
 CY_CR_066703_000000_2018-12-31	Adobe Acrobat Document	247 KB	No	257 KB	5%	
 CY_CR_066713_000000_2018-12-31	Adobe Acrobat Document	246 KB	No	256 KB	4%	
 CY_CR_066723_000000_2018-12-31	Adobe Acrobat Document	244 KB	No	254 KB	4%	
 CY_CR_066733_000000_2018-12-31	Adobe Acrobat Document	246 KB	No	256 KB	4%	

ADDENDUM D  
WEB REQUIREMENTS

Statements20180614

statements20180614 6/15/2018 7:52 AM Compressed (zipped) Folder 555,619 KB

ET-XML > statements20180614 Search statements20180614

Name	Type	Compressed size	Password ...	Size	Ratio
 CS_024003_000000_2018-06-14	Adobe Acrobat Document	862 KB	No	918 KB	7%
 CS_028523_000000_2018-06-14	Adobe Acrobat Document	180 KB	No	185 KB	3%
 CS_034953_000000_2018-06-14	Adobe Acrobat Document	682 KB	No	727 KB	7%
 CS_034983_000000_2018-06-14	Adobe Acrobat Document	668 KB	No	712 KB	7%
 CS_034993_000000_2018-06-14	Adobe Acrobat Document	680 KB	No	724 KB	7%
 CS_036403_000000_2018-06-14	Adobe Acrobat Document	1,234 KB	No	1,319 KB	7%
 CS_041204_000000_2018-06-14	Adobe Acrobat Document	182 KB	No	187 KB	3%
 CS_042173_000000_2018-06-14	Adobe Acrobat Document	231 KB	No	239 KB	4%
 CS_047064_000000_2018-06-14	Adobe Acrobat Document	267 KB	No	278 KB	4%
 CS_051384_000000_2018-06-14	Adobe Acrobat Document	239 KB	No	248 KB	4%
 CS_053533_000000_2018-06-14	Adobe Acrobat Document	176 KB	No	180 KB	3%
 CS_060344_000000_2018-06-14	Adobe Acrobat Document	176 KB	No	181 KB	3%
 CS_061654_000000_2018-06-14	Adobe Acrobat Document	867 KB	No	924 KB	7%
 CS_064043_000000_2018-06-14	Adobe Acrobat Document	213 KB	No	221 KB	4%
 CS_066653_000000_2018-06-14	Adobe Acrobat Document	228 KB	No	237 KB	4%
 CS_066703_000000_2018-06-14	Adobe Acrobat Document	175 KB	No	179 KB	3%
 CS_066713_000000_2018-06-14	Adobe Acrobat Document	178 KB	No	183 KB	3%
 CS_066723_000000_2018-06-14	Adobe Acrobat Document	175 KB	No	179 KB	3%
 CS_066733_000000_2018-06-14	Adobe Acrobat Document	178 KB	No	183 KB	3%
 CS_071754_000000_2018-06-14	Adobe Acrobat Document	468 KB	No	495 KB	6%
 CS_073623_000000_2018-06-14	Adobe Acrobat Document	200 KB	No	207 KB	4%
 CS_075553_000000_2018-06-14	Adobe Acrobat Document	197 KB	No	203 KB	3%
 CS_078914_000000_2018-06-14	Adobe Acrobat Document	179 KB	No	184 KB	3%
 CS_081445_000000_2018-06-14	Adobe Acrobat Document	177 KB	No	182 KB	3%
 CS_084404_000000_2018-06-14	Adobe Acrobat Document	200 KB	No	206 KB	3%
 CS_090854_000000_2018-06-14	Adobe Acrobat Document	189 KB	No	194 KB	3%
 CS_092894_000000_2018-06-14	Adobe Acrobat Document	199 KB	No	205 KB	4%
 CS_094144_000000_2018-06-14	Adobe Acrobat Document	187 KB	No	192 KB	3%
 CS_094593_000000_2018-06-14	Adobe Acrobat Document	181 KB	No	186 KB	3%
 CS_095364_000000_2018-06-14	Adobe Acrobat Document	182 KB	No	187 KB	3%
 CS_095434_000000_2018-06-14	Adobe Acrobat Document	534 KB	No	566 KB	6%

ADDENDUM D  
WEB REQUIREMENTS

BusReviewsFY2019Q2

BusReviewsFY2019Q2 1/25/2019 11:43 AM Compressed (zipped) Folder 898,021 KB						
ET-XML > BusReviewsFY2019Q2						Search BusReviewsFY2019Q2
Name	Type	Compressed size	Password ...	Size	Ratio	
CR_024003_000000_2018-12-31	Adobe Acrobat Document	464 KB	No	519 KB	11%	
CR_028523_000000_2018-12-31	Adobe Acrobat Document	247 KB	No	258 KB	5%	
CR_034953_000000_2018-12-31	Adobe Acrobat Document	387 KB	No	426 KB	10%	
CR_034983_000000_2018-12-31	Adobe Acrobat Document	383 KB	No	421 KB	10%	
CR_034993_000000_2018-12-31	Adobe Acrobat Document	386 KB	No	425 KB	10%	
CR_036403_000000_2018-12-31	Adobe Acrobat Document	628 KB	No	717 KB	13%	
CR_041204_000000_2018-12-31	Adobe Acrobat Document	246 KB	No	256 KB	4%	
CR_042173_000000_2018-12-31	Adobe Acrobat Document	261 KB	No	273 KB	5%	
CR_047064_000000_2018-12-31	Adobe Acrobat Document	272 KB	No	287 KB	6%	
CR_051384_000000_2018-12-31	Adobe Acrobat Document	269 KB	No	283 KB	6%	
CR_053533_000000_2018-12-31	Adobe Acrobat Document	244 KB	No	254 KB	4%	
CR_053534_000000_2018-12-31	Adobe Acrobat Document	244 KB	No	254 KB	4%	
CR_053549_000000_2018-12-31	Adobe Acrobat Document	247 KB	No	257 KB	5%	
CR_060344_000000_2018-12-31	Adobe Acrobat Document	244 KB	No	254 KB	4%	
CR_061654_000000_2018-12-31	Adobe Acrobat Document	445 KB	No	498 KB	11%	
CR_064043_000000_2018-12-31	Adobe Acrobat Document	254 KB	No	266 KB	5%	
CR_064393_000000_2018-12-31	Adobe Acrobat Document	244 KB	No	254 KB	4%	
CR_066653_000000_2018-12-31	Adobe Acrobat Document	257 KB	No	269 KB	5%	
CR_066703_000000_2018-12-31	Adobe Acrobat Document	244 KB	No	254 KB	4%	
CR_066713_000000_2018-12-31	Adobe Acrobat Document	246 KB	No	256 KB	4%	
CR_066723_000000_2018-12-31	Adobe Acrobat Document	244 KB	No	254 KB	4%	
CR_066733_000000_2018-12-31	Adobe Acrobat Document	246 KB	No	256 KB	4%	
CR_071754_000000_2018-12-31	Adobe Acrobat Document	347 KB	No	378 KB	9%	
CR_073623_000000_2018-12-31	Adobe Acrobat Document	252 KB	No	264 KB	5%	

ADDENDUM D  
WEB REQUIREMENTS

Statement File (Open Item Record)

AR-CHAIN	Chain Headquarter ID	Integer (6 digits)
AR-OPEN-CUSTOMER-NO	Retailer ID	Integer (6 digits)
AR-OPEN-DOCUMENT-DATE	Date of Entry (YYYYMMDD)	Integer (8 digits)
AR-OPEN-DOC-GAME	Game Number	Integer (3 digits)
AR-OPEN-DOCUMENT-TYPE	Type of Entry Values: C=CREDIT D=DEBIT I=INVOICE S=SUMMARY (PREVIOUS WEEK) P=EFT SWEEP T=TOTAL (THIS WEEK)	Character (1)
AR-OPEN-AMOUNT	Amount of Entry	Decimal (S99999999.99) S=" " if positive S="-" if negative
AR-OPEN-REFERENCE	Reference Text	Character (24)
AR-OPEN-SOURCE	Source of Entry Values: BB=CASH5 CASHING BONUS BF=BOND FEE CB=SCRATCH CASHING BONUS CC=CASH5 CANCEL CO=SALES COMMISSION CR=CASH5 REDEEM CS=CASH5 SALES EF=EFT PAYMENT IC=SCRATCH-COMMISSION JD=JACKPOT DISCOUNT (deprecated) LB=LOTTO CASHING BONUS LC=LOTTO CANCEL (deprecated) LF=LICENSE FEE LR=LOTTO REDEEM LS=LOTTO SALES MB=MATCHPLAY CASHING BONUS (deprecated) MR=MATCHPLAY REDEEM (deprecated) MS=MATCHPLAY SALES (deprecated) PC=PROMO-FREE-TKT-CREDIT PK=PRIZES-SOLD-BONUS-KENO PN=POWERBALL CASHING BONUS PR=MANUAL ADJUSTMENT PS=POWERBALL SALES PW=POWERBALL REDEEM RB=RAISE SALES BONUS PLAN RC=RETURN COMMISSION RD=SCRATCH REDEEM RT=RETURN-TICKETS S0=SETTLEMENT SB=SELLING BONUS SC=LOTTO COMMISSION SM=SUMMARY TC=LINE FEE WB=PICK3-CASHING BONUS WC=PICK3-CANCELS WR=PICK3-REDEEMS WS=PICK3-SALES XB=MEGAMILLIONS-CASHING BONUS XR=MEGAMILLIONS-REDEEMS XS=MEGAMILLIONS-SALES YB=RAFFLE CASHING BONUS (deprecated) YR=RAFFLE REDEEM (deprecated) YS=RAFFLE SALES (deprecated) ZB=LUCKY-FOR LIFE CASHING BONUS ZR=LUCKY FOR LIFE-REDEEMS ZS=LUCKY FOR LIFE SALES	Character (2)

ADDENDUM D  
WEB REQUIREMENTS

**Inventory File (Inventory Record)**

INV-CHAIN	Chain Headquarter ID	Integer (6 digits)
INV-CUSTOMER	Retailer ID	Integer (6 digits)
INV-DATE	Date of Entry (YYYYMMDD)	Integer (8 digits)
INV-GAME	Game Number	Integer (3 digits)
INV-PACK	Pack Number	Integer (6 digits)
INV-STATUS	Pack Status Values: A=ACTIVATED D=DELIVERED/NOT ACTIVATED S=SETTLED DETAIL FROM STATEMENT I=DELIVERY TRANSACTION T=TRANSFER TRANSACTION R=RETURN FOR CREDIT TRANSACTION	Character (1)
INV-SETTLED-TYPE	Type of Record/Settlement Values: " "=N/A T=TOTAL RECORD	Character (1)
INV-TICKET-COST	Per Ticket Retail Value	Integer (2 digits)
INV-PACK-RETAIL-COST	Total Retail Value	Decimal (9999999.99) [Unsigned]

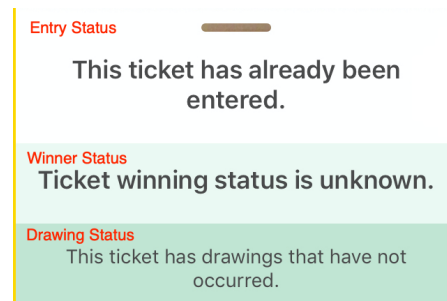


**ADDENDUM E /**  
**MOBILE APP SCANNER RESPONSE**

# App Scanner Responses

## Valid Barcodes

Each valid barcode will produce a combination of **up to three messages**: an entry status, a winner status, and a drawing status. A user can receive any combination of these responses (by selecting one option from each category below). Only logged-in MyLottery members can receive an entry status. Anonymous users will only receive a winner status and/or drawing status. (See example responses in screenshot on the right.)



### Entry Status

Condition:

This ticket is eligible for a bonus draw.

This ticket has already been entered.

This ticket is not eligible for any bonus draws.

User's MyLottery profile is not complete.

Response:

This ticket has been entered into [Drawing Name(s)].

This ticket has already been entered.

*NA - no entry status will be displayed.*

Please update your profile.

### Winner Status

Condition:

No drawings for this ticket have occurred.

This ticket may be a winner.

This ticket is not a winner.

Response:

Ticket winning status is unknown.

WOO HOO! You may be a winner! Take this ticket to your nearest retailer to confirm if you've won.

Sorry, this ticket is not a winner.

### Drawing Status

Condition:

No drawings for this ticket have occurred.

Some drawings for this ticket have occurred.

All drawings for this ticket have occurred.

Response:

Drawings for this ticket have not yet occurred.

This ticket has drawings that have not occurred.

*NA - no entry status will be displayed.*

## ADDENDUM E

### Invalid Barcodes

A user may scan a barcode that the app recognizes as invalid. This can occur when the user scans a barcode that is not on a valid ticket, scans a ticket while not connected to the internet, or scans an encrypted scratch ticket during a blackbox outage.

### Invalid Status

Condition:

User may have scanned a barcode from an object other than a Lottery ticket.

User has scanned several invalid barcodes in a short period of time.

User has scanned an exchange ticket.

User may have scanned the **bottom** barcode on a Jackpot ticket.

User may not have an internet connection, or may be scanning an encrypted ticket during a blackbox outage.

User may have scanned a ticket from an expired game (where “can scan” is unchecked in the admin).

Response:

We're unable to validate the barcode. Scan the barcode on top of Jackpot game tickets or underneath the scratch-off coating for Scratch games.

You have scanned too many invalid barcodes. Please try again later.

Ticket is not eligible for entry. It is an Exchange Ticket. Only originally purchased tickets may be considered eligible for Bonus Draws.

Oops! We didn't recognize that barcode. For Jackpot Games, scan the barcode located at the top of the ticket.

There was an error checking this ticket. We were able to scan your ticket, but are unable to verify its status at the moment. Please try again later.

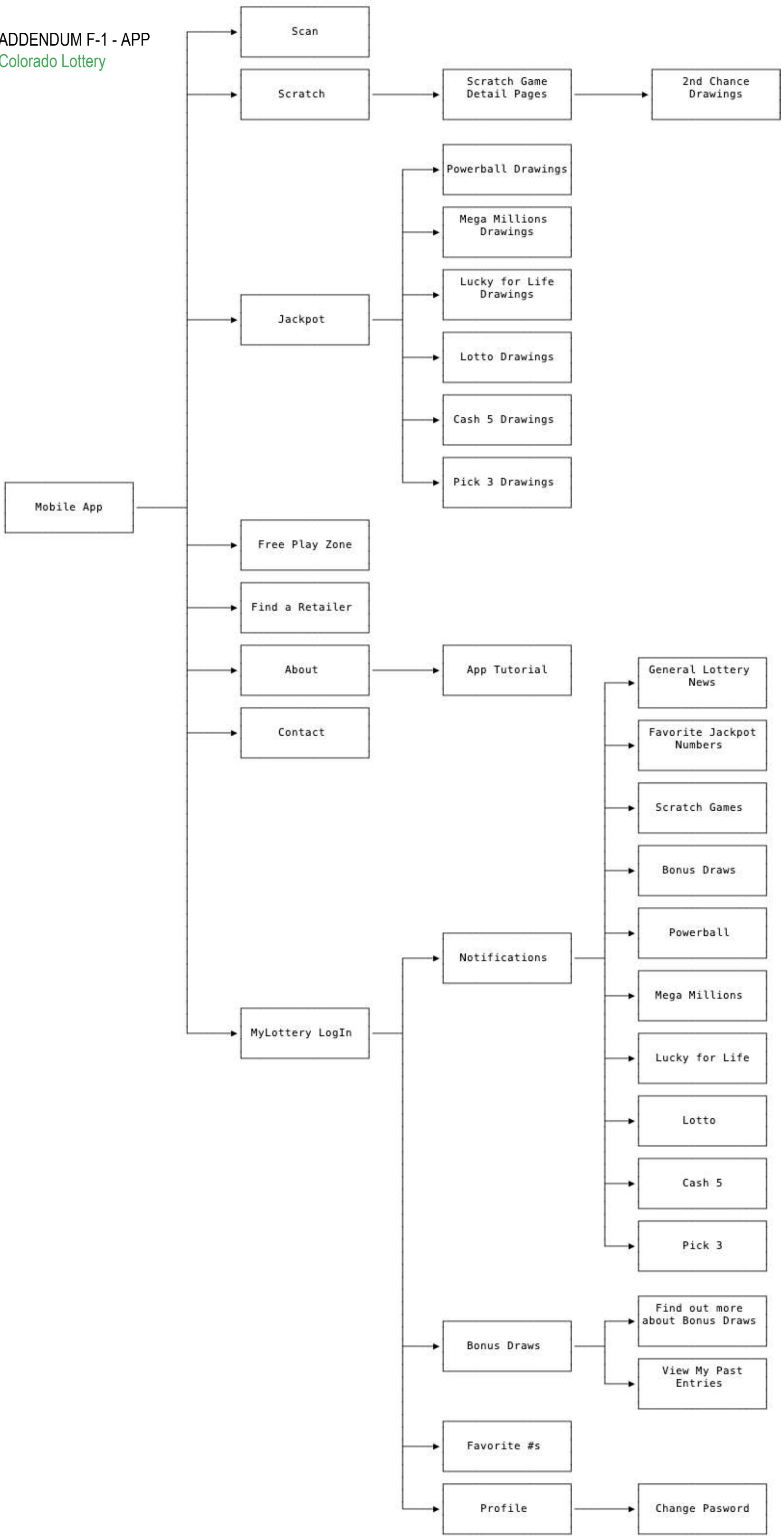
There was an error checking this ticket. Sorry, we are unable to process this ticket's game.





**ADDENDUM F /**  
**INFORMATION ARCHITECTURE**

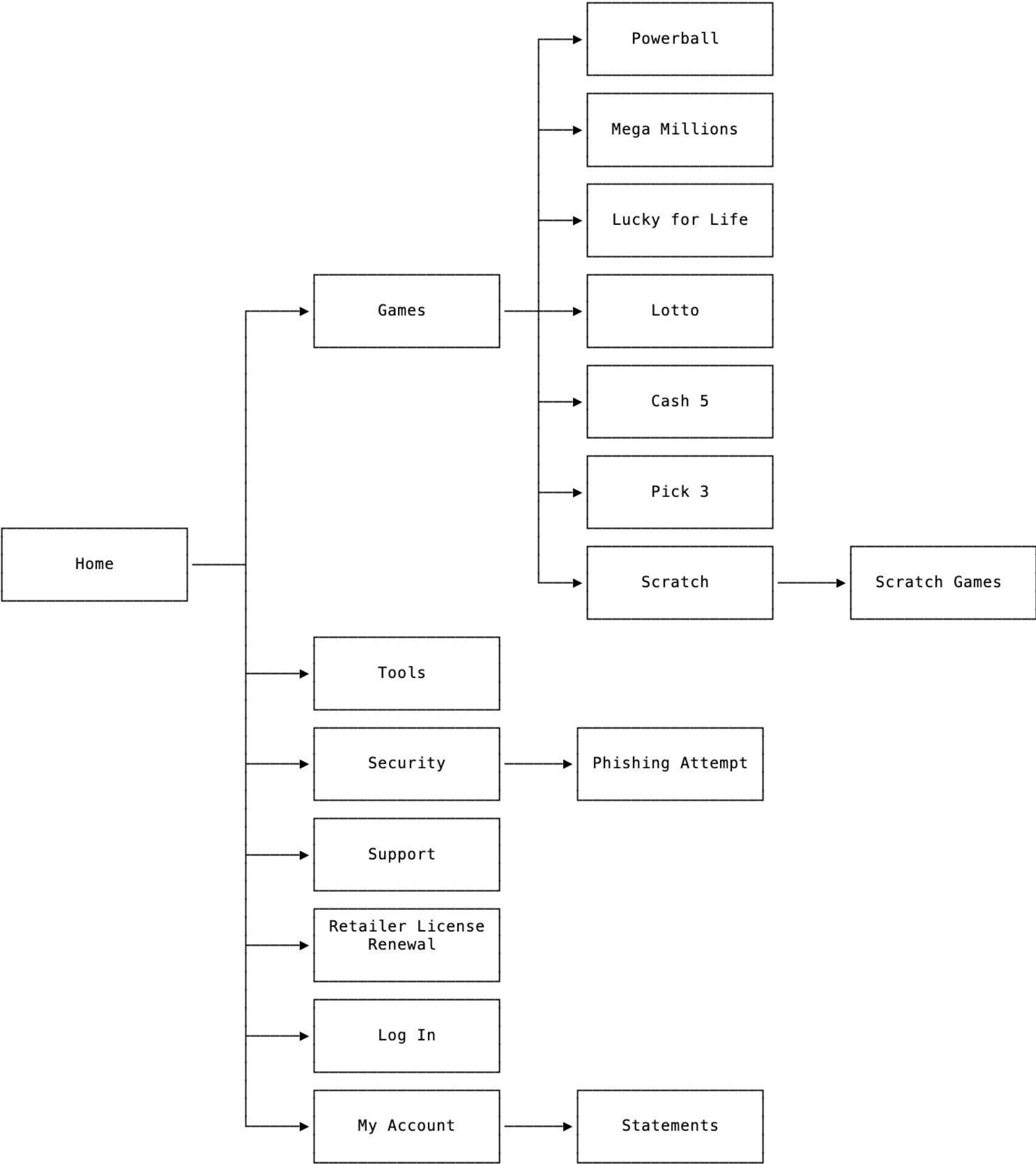
ADDENDUM F-1 - APP  
Colorado Lottery



ADDENDUM F-2 -  
 COLORADO  
 LOTTERY  
 Colorado Lottery



ADDENDUM F-3 - RETAILERS  
Colorado Lottery





**ADDENDUM G /**  
**EXAMPLE SCOPE OF WORK**



### **ADMINISTRATIVE SERVICES**

Digital Agency will provide staff with the appropriate skills, experience and knowledge, for the appropriate amount of time required to provide the following services in an efficient, effective and professional manner reflective of industry best practices and standards. Services shall be performed 1) on a regular basis; 2) on an as needed basis; 3) as reasonably requested; 4) as described below; and 5) as necessary to maintain performance, accessibility and functionality of all Colorado Lottery Digital Assets in accordance with the highest industry standards.

- Conduct weekly status meetings, record minutes & notes, document any action items, communicate same to Lottery, Cactus and Digital Agency staff
- Maintain accurate and current data in Basecamp including project status updates, bug tracking, approvals, new feature requests, to-do lists, detailed schedules, and other pertinent information
- Prepare and provide monthly invoices including time reports and any other documents requested or required
- Project manager discovery for potential services and projects as requested
- Project manager preparation of scopes of work and budget/hours estimates for Development Services and or services to be performed outside of this SOW
- Identify and vet qualified resources and secure relationships and agreements with sub-contractors and vendors as needed
- Submit vendor invoices to Cactus as necessary
- Provide quarterly reporting on Mailchimp (eCRM), Twillio (SMS), website and app analytics including recommendations for improvements based on metrics and tracking as they relate to Lottery business objectives
- Comply with SOC2 audit if required
- Maintain SSL certificate and domain registration (hard costs can be passed through to Cactus)
- Monitor, manage and maintain all digital asset security, performance, and availability in accordance with the highest industry standards
- Identify and address any faults found within the environment
- Creation and management of Lottery gmail account and email addresses as needed
- Immediately notify Cactus and Lottery in instances of website / app downtime or technical emergencies
- Maintain ability to respond to outages and server issues 24/7
- Ensure that data at rest is always encrypted



- Manage vendor and sub-contractor relationships and their proper performance and quality assurance for the following services:
  - Hosting Services
  - Email Services
  - SMS Services
  - Other Services
    - Digital Agency will source, manage, and secure the successful performance including quality assurance of any non-employee developers, sub-contractors, or independent contractors as needed
    - Digital Agency will source, manage, and secure the successful performance including quality assurance of additional vendors and services as agreed upon by the Parties

#### **DEVELOPMENT SERVICES**

Digital Agency shall provide a total of 1050 hours per fiscal year to perform all Development Services, not to include the Administrative Services as defined above, for the Colorado Lottery Digital Assets as they currently exist or are hereafter developed. Lottery, Cactus and Digital Agency will cooperatively manage the prioritization of projects and allocation of Development Services hours. Development Services shall include all design, development, creation, implementation, updates, or enhancements requested by Cactus or Colorado Lottery, or as required to maintain optimal functionality, accessibility, content and performance of all Digital Assets. Development Services shall include, but not be limited, to:

- Implementation and integration of new products, games, campaigns and promotions
- Custom design and development for any existing or new assets, features or functionality
- Design updates
- Site content updates
- UX/UI Planning including strategy, wireframing, prototyping
- Planning, reporting, UX recommendations
- Front and back-end development of all web properties
- Mobile application development for Colorado Lottery IOS and Android applications
- Maintenance of full performance and functionality of mobile application(s)
- Implementation of new features or functionality of mobile application(s)
- Mobile application development, as necessary, including testing, to ensure performance on new mobile devices as identified/requested by Cactus or Lottery
- Mobile application development, as necessary, including testing, to ensure performance and usability on operating system updates or releases for all supported devices



- Prompt resolution of any issues affecting performance and functionality of mobile application(s)
- Database design, maintenance and management
- Quality assurance testing including cross-browser, cross-device, usability and accessibility / ADA compliance
- Other designer and developer services necessary to support and process Lottery projects
- Code refactoring
- Bug fixes
- Technical support
- CMS training and support
- Miscellaneous user support
- Design and development backlog
- Respond to Lottery security scans
- CRM assistance
- Maintain all widgets and number feeds
- MyLottery development and support
- Support, serve and maintain all contests including, but not limited to, Bonus Drawings:
  - Prepare secure database and token database for second-chance drawings and other contests
  - Maintain full performance and functionality by immediately addressing any issues that prevent users from entering a second-chance drawing or other contest
  - Generate security and promotional reports
- Obtain final approval / sign-off from Lottery or Cactus at the conclusion of all Development Services projects





**ADDENDUM H /**  
**SAMPLE MAINTENANCE HOURS BREAKOUT**

Sample Maintenance Hours Breakout - Two month timeframe

Date	Task	Notes	Hours	Roles
2019-07-01	Programming	Relax out of country phone numbers requirement	4.75	Development
2019-07-01	Project Management	IA documentation updates & QA documentation	0.75	Project Management
2019-07-01	Project Management	Incident report	0.25	Project Management
2019-07-01	QA/Testing	Reviewing reports of white screen on android	0.5	Project Management
2019-07-01	Programming	CSV output of mobile contact form submissions	1	Development
2019-07-02	Programming	Add message column to mobile contact forms admin	6.25	Development
2019-07-02	Support	.ru accounts, Jackpot notifications, date columns for Jackpot drawings and upcoming drawings, mobile contact form submission list view & export, out of country phone numbers for my lottery signup	1	Project Management
2019-07-02	Programming	Add date columns to Jackpot Promo Drawings	0.5	Development
2019-07-03	Programming	Add date columns to Jackpot promo drawing	2	Development
2019-07-03	Programming	Missing commas in email	2.5	Development
2019-07-03	Programming	jackpot comma email	0.75	Development
2019-07-03	Design	Status meeting	0.75	Design
2019-07-03	Programming	Abuse mitigation	2	Development
2019-07-08	Programming	Debugging AWS alert	0.25	Development
2019-07-08	QA/Testing	refreshing numbers on 4.2.5/s8, commas in jackpot emails, dates on promo drawing lists, messages on mobile form submissions, mobile form submission export	1	Project Management
2019-07-11	Support	Can scan checkbox	0.25	Project Management
2019-07-11	Project Management	standup	0.25	Project Management
2019-07-11	Programming	allow filtering entries in token server	2	Development
2019-07-11	Programming	phone number input	0.5	Development
2019-07-12	Programming	Phone number plugin	3.25	Development
2019-07-12	Programming	phone number input	0.75	Development
2019-07-15	Programming	Change help text on scratch games	1	Development
2019-07-15	Programming	Bug, game tools whos winning	1.25	Development
2019-07-15	Project Management	Sprint planning with Nolan	0.25	Project Management
2019-07-15	Project Management	New kanban tickets - 4 digit game number, timeout on game tools	0.5	Project Management
2019-07-15	Programming	Install released packages instead of compiled	3.25	Development
2019-07-15	Programming	use released versions of packages	2	Development
2019-07-15	Programming	503 error player tools	0.5	Development
2019-07-15	Programming	game expired help text	0.25	Development
2019-07-15	Programming	Staging alert investigation and resolution	4	Development
2019-07-16	Programming	proceeds map in search	0.5	Development
2019-07-16	Programming	Investigate failing mobile_notifications test	4	Development
2019-07-16	QA/Testing	Testing out of country phone numbers, search for proceeds map	0.25	Project Management
2019-07-16	Project Management	Marketing segments	1	Project Management
2019-07-17	Project Management	MC segments	0.5	Project Management
2019-07-17	Programming	status meeting	0.5	Development
2019-07-17	Design	Winning numbers concept	0.5	Design
2019-07-17	Programming	captcha, rate limiting, game numbers discussion	0.5	Development
2019-07-17	Programming	2546: 504 Error adding unclaimed prize in admin	0.5	Development
2019-07-17	Project Management	kanban accounts for cactus	0.25	Project Management
2019-07-18	Programming	backup codes	2.5	Development
2019-07-18	Programming	Jackpot notifications failure investigation -- staging	4	Development
2019-07-19	Programming	backup codes	2	Development
2019-07-22	Programming	investigate health check failures	0.5	Development
2019-07-22	Programming	datdog/mailchimp failure	2	Development
2019-07-22	Programming	generate backup codes	0.25	Development
2019-07-22	Project Management	Tickets from Eliza	1	Project Management
2019-07-22	Programming	Investigate staging queue errors	0.5	Development
2019-07-22	Programming	Help Anthony deploy new token server version	0.75	Development
2019-07-22	Programming	#2269 Update Free Play Zone. Use correct url for Play On game. Do not launch games in a webview on iOS.  # 2341 Set up 64 bit version of app.	6	Development
2019-07-23	Project Management	Notifications plan	1	Project Management
2019-07-23	Programming	notifications	0.75	Development

2019-07-23	Design	Email template designs	1.5	Design
2019-07-24	Support	Questions about token server, recovery site/frequency, extra tickets for qa, access to qa document, more mailchimp manipulation	4	Project Management
2019-07-24	Design	VW units on homepage draw numbers, fix for retailers layout; status meeting; Email template updates	3.5	Design
2019-07-24	Programming	Answering backup questions	1	Development
2019-07-25	Support	Kanban access, backup codes, sting ticket messaging	1.5	Project Management
2019-07-25	Programming	upload giving back site	1	Development
2019-07-25	Design	App design considerations for Lotto	0.25	Design
2019-07-25	Programming	giving back upload	0.25	Development
2019-07-25	Project Management	Alerting procedures	2	Project Management
2019-07-25	Programming	mailchimp rep investigation	2	Development
2019-07-29	Project Management	Sting messaging ticket, app publication question, proceeds callout deliverables, bouncing email addresses, apple submission date, twilio	1	Project Management
2019-07-29	Support	Troubleshooting contest 404	0.25	Project Management
2019-07-30	Project Management	Call with Cactus re proceeds banner	0.25	Project Management
2019-07-30	Design	rate limit writeup	0.25	Development
2019-07-30	Programming	Call with Cactus about Proceeds	0.25	Development
2019-07-31	Design	Email template revamp	1	Design
2019-08-01	Programming	start sting ticket API message fix	3.75	Development
2019-08-01	Project Management	Questions from Eliza: documentation, TestFlight, mailchimp	0.5	Project Management
2019-08-01	Programming	contest entry not submitted investigation	0.5	Development
2019-08-02	Programming	finish sting ticket API message fix	7	Development
2019-08-02	Programming	sting tickets response	0.25	Development
2019-08-05	Design	maintenance tickets; investigating mailchimp preferences link	4	Design
2019-08-05	Support	Wait on phone for Eliza to call into MC training	0.5	Project Management
2019-08-05	Support	Troubleshooting Mailchimp preferences link	0.5	Project Management
2019-08-06	Project Management	Token server/blackbox outage	0.25	Project Management
2019-08-06	Programming	Deploy proceeds map	0.5	Development
2019-08-06	Support	proceeds map deploy	0.5	Project Management
2019-08-06	Design	Email template design	3.5	Design
2019-08-06	HTML	global/retailers footer fix	0.5	Design
2019-08-06	Programming	Queue fixes for frequent blocking tasks	4	Development
2019-08-06	Programming	blackbox downtime mitigation	7.5	Development
2019-08-07	QA/Testing	Testing 1679/79/2612/2618/1588/2509/2433/2685	0.75	Project Management
2019-08-07	HTML	Retailers nav; email design	2	Design
2019-08-08	HTML	Retailers subnav; overlapping forms on notifications page; event detail HTML styles	6	Design
2019-08-08	QA/Testing	1634, 2207, 2394	0.25	Project Management
2019-08-09	Design	maintenance tickets; UI cleanup	1	Design
2019-08-12	Design	Subnav / retailers issue; maintenance tickets	2.5	Design
2019-08-12	Project Management	KF comments	1	Project Management
2019-08-12	Programming	Fix DOB field - Rewrite parts of for fields components: - Require date of birth field in profile form - Use validators lib for Android date field - Remove usage of keyboard avoiding view lib	6.75	Development
2019-08-13	Programming	Fix a few improper uses of non-safe-area view that were causing rendering problems on iPhone X.  Fix JS static checker tool for development	5.25	Development
2019-08-14	Programming	password autocomplete explanation	0.5	Development
2019-08-14	Programming	Make room for field validation messages with keyboard avoiding view	6	Development
2019-08-15	Design	New email template - mailchimp reformatting, testing, debugging	4	Design
2019-08-16	Design	Email template - mailchimp; getting outlook to look right	3	Design
2019-08-16	Programming	Redirect investigations	2	Development
2019-08-19	Programming	Deploying to Production	0.75	Development
2019-08-19	QA/Testing	Testing prod deploy of 2394, 2685, 2509, 2612, 2195, 2618, 1679, 79, 2311, 2433, 1634, 1588, 2207, 2264	0.75	Project Management
2019-08-19	Programming	deploy mailchimp templates	0.5	Development
2019-08-20	Project Management	new tickets, testing prod deploy	0.5	Project Management
2019-08-21	HTML	Update live retailers site subnavs; fix subnav loop; status meeting; email template exploration	2.5	Design
2019-08-21	Programming	Pair with Steve	1.5	Development

2019-08-21	Programming	export profile task	2.5	Development
2019-08-21	Programming	Weekly meeting. Covering Free Play zone removal form apps	1	Development
2019-08-22	HTML	Subnavigation fixes / retailers vs. main site fix	4	Design
2019-08-22	Programming	Remove Free Play Zone	1.75	Development
2019-08-27	Programming	mailchimp templates	0.25	Development
2019-08-27	Programming	Resubmit iOS app	1	Development
2019-08-28	Programming	XML uploads 504	1.25	Development
2019-08-28	Programming	shadow w/ Nolan on XML schema	0.5	Development
2019-08-28	HTML	Resolve subnav issue	0.25	Design
2019-08-28	HTML	Migrate new winning numbers template to repo	2	Design
2019-08-28	Programming	Deploy Justin's retailer fixes	0.5	Development
2019-08-29	Programming	xml upload validation error	1	Development
2019-08-29	Programming	json feed question	0.25	Development
2019-08-29	Programming	broncos banner	0.25	Development
2019-08-29	HTML	Update banner with Broncos promo	1	Design
2019-08-29	Programming	split code branches for XML upload schema.	2	Development
2019-08-29	Project Management	request for banner update	0.25	Project Management
2019-08-29	Project Management	json feed request	0.25	Project Management
2019-08-30	Programming	Check my numbers fix	8	Development
		Total Hours:	203.25	



**ADDENDUM I /**  
**DIGITAL PRODUCER JOB DESCRIPTION**



## Addendum I – Digital Producer Job Description

### SUMMARY

The Digital Producer supports projects from discovery to deployment and ongoing iteration, whether small or large, simple or complex. The Digital Producer has a firm understanding of production best practice including client communication, project management, and product management. They can articulate the intersection between our users' needs and our clients' goals, and can support projects that drive business results. Beyond all else, the digital producer ensures that projects move through the agency on time, on budget, and in alignment with our clients' goals.

- Support the agency's creative technology projects from start to finish. Bringing together teams from all internal departments and external vendors.
- With support from department head, brand directors, and strategy team, be able to provide digital strategy both from a tactical and an overarching client perspective.
- Contribute to ongoing improvement of internal processes to allow for smooth execution of projects and improved efficiency across departments and project team members.
- Work with internal staff and project planning tools to ensure all projects are tracking to their assigned timelines.
- Manage third-party contracts and lead communication between Cactus and external agency partners (developers, animators, consultants, etc.)
- Proactively grow client relationships by understanding and being sensitive to all aspects of their business; proactively determine needs to propose appropriate solutions and new projects that fit within their budgets.
- Collaborate with department and account leadership on scoping, financial management, and staff needs for all digital projects.
- Create detailed SOW's and technical requirement documents.
- Champion and facilitate UX process on all technology projects.
- Utilize Google Analytics to provide analysis of website traffic, trends and goals.
- Collect and manage content for digital projects.
- Understand content strategy as it applies to UX and SEO
- Coordinate with Cactus technology vendors to answer questions, streamline processes and provide project assets and updates.
- Create and track many project schedules while balancing agency resource allocation.
- Provide accurate feedback and updates to internal Cactus departments and clients as needed.
- Coordinate with internal staff and external freelance teams to ensure responsible parties have the information and assets needed to be successful.



- Interact with eCRM platforms (Mail Chimp, Sendgrid, Vertical Response, etc.) to setup HTML emails and lists to facilitate email blasts for our clients.
- Participate in business development and help grow Cactus' client base.

### **POSITION REQUIREMENTS**

- Support the agency's Vision of bringing a powerful voice to brands that matter.
- Deliver the agency's Mission of creating meaningful work that makes a huge impact.
- Deep knowledge of web and mobile technologies and associated processes.
- Passionate curiosity about the intersection of technology and culture, and a keen desire to build products that move society and brands forward.
- Cool under pressure; you are the calm in the storm.
- Firm understanding of UX best practice
- Ability to analyze and make recommendations on SEO best practice.
- Experience creating clickable prototypes for client approval.
- Ability to produce documents in Keynote, Sketch and the Microsoft Office Suite.
- Superior organizational skills and ability to manage multiple projects simultaneously.
- Strong communication skills and attention to detail.
- Able to tactically organize and structure activities and tasks, paying particular attention to detail.
- Excellent collaboration, interpersonal and communication skills with the ability to build productive relationships with co-workers, clients and other external contacts.
- Excellent written and verbal communications skills.
- Able to effectively manage time and prioritize projects in order to meet established deadlines and budgets.
- Basic understanding of front-end web languages (HTML, CSS, Javascript.)
- Experience working in content management systems (CMS) such as WordPress, Drupal, and Keystone JS.
- Help facilitate discovery tactics such as stakeholder interviews, card sort exercises, and user testing.

### **EDUCATION & WORK EXPERIENCE REQUIRED**

- 2-3 year(s) digital project management / production experience.
- Experience managing websites, native apps, experiential, and digital products.
- Experience with project management software.
- Understanding of and experience with agile, waterfall, and hybrid process methodologies and associated tools.



- Bachelor's degree in a business, advertising, or similar.
- Experience with ad serving platforms like Sizmek preferred.
- Agency experience required.





**ADDENDUM J /**  
**ALPHA & BETA RELEASES**



#### **Addendum J – Alpha and Beta Releases**

##### **UNIT TEST:**

Released to Digital Agency only

At this point the testing is in “White Box” environment, focusing on underlying code (testing code paths through the program looking for faults).

- 1) Unit tests are created in test-driven development (TDD) before the code itself is written. When the tests pass, that code is considered complete.
- 2) The same unit tests are run against that function frequently as the larger code base is developed either as the code is changed or via an automated process with the build.

Pre-Requisites: Complete approved functional specifications & all design assets.

##### **PRE-ALPHA:**

Released to CACTUS only

At this point the testing shifts to “Black Box” environment, focusing on User exposure, and which elements of the system the users can interact with through that exposure.

- 1) The product is feature complete, meaning all functionality is in place but there are bugs
- 2) The front end has been sliced and implemented but the styling may not be complete (expectation should be styling only roughly matches at this point)

Prerequisites: Design assets if modified, functional plug-ins if supplied by another source

Examples of helpful feedback: Broad functionality (user flow, obvious security issues, major usability concerns with the approach)



**ALPHA:**

Released to CACTUS and THE COLORADO LOTTERY

It is still expected that bugs will be documented at this stage and is very important that user flow issues are addressed and resolved. Styling should begin matching consistently with comps.

- 1) The product is feature complete & fully functional
- 2) All identified bugs from Pre-Alpha have been resolved
- 3) Styling is complete and cross-browser & cross-platform testing is complete

Examples of helpful feedback: Spot checking (making sure features are returning verified, accurate results versus results that just look accurate and don't cause errors)

**BETA (Release Candidate):**

Released to CACTUS and THE COLORADO LOTTERY

\*Product will go live following this review

Testing focus shifts to trying to get as many systems and people as is viable to start testing and providing their feedback. Within this stage fringe cases will be revealed and the team will collaborate on outcome consensus, e.g., some Users with smaller monitors can't view certain elements.

- 1) The product is fully functional and appears as expected on all identified browsers and platforms
- 2) All identified bugs from Alpha have been resolved
- 3) System testing has ensured the process will not corrupt its operating environment or cause other processes within that environment to become inoperative (this includes image load factors and any parallel processes)

Examples of helpful feedback: Notes should include steps to reproduce problems, operating systems, browsers, and exact steps to reproduce the problem. The expected outcome and what actually occurred should be detailed.



## **ADDENDUM K /** **GLOSSARY**



## **Addendum K – Glossary**

### **BACKGROUND INVESTIGATIONS**

All Lottery vendors are required to submit to a background investigation per Colorado State Statute #24-35-205. The Colorado Lottery will provide background applications for the business owners to complete as well as for those employees who are assigned to the account. In addition, business owners and assigned employees are required to be fingerprinted by the Colorado Lottery Investigators. Colorado Lottery Investigators will also perform an on-site visit of the vendor's facility as well as the facility that provides web hosting services.

### **BAR CODE**

The symbol on a Scratch ticket beneath its scratch-off coating that uniquely identifies each ticket.

### **HASH DATA**

HASH data is the encrypted Scratch game ticket information that is received by the Lottery's web host via secure VPN or FTP that is utilized to verify VIRN numbers entered into the Lottery's internet second-chance Bonus Draw system. Hashing is the transformation of a string of characters into a usually shorter fixed-length value of key that represents the original string. Hashing is used to index and retrieve items in a database because it is faster to find the item using the shorter hashed key than to find it using the original value. It is used in encryption algorithms.

### **INSTANT GAME**

A game that is played on a ticket whose play action is activated to reveal instant game winners through the scratching and removal of a coating from a Scratch game.

### **OFFEROR**

An entity submitting a proposal as a result of this RFP that is responsive to RFP requirements.

### **RETAILER**

A sales agent for Lottery products.

### **RFP**



Request-for-Proposal

**SCRATCH GAME**

A game that is synonymous with Instant game.

**SOW**

Statement-of-Work

**VALIDATION NUMBER**

The unique serial number on the face of a Lottery ticket whereby the validity and pay status of the ticket is determined.

**VIRN**

A VIRN number is the 22-digit number identified on each Scratch ticket. Players who wish to participate in an internet second chance Bonus Draw are requested to enter this number to the Lottery's internet second-chance Bonus Draw system.



## **ADDENDUM L / INSURANCE REQUIREMENTS**



## **Addendum L – Insurance Requirements**

Contractor shall obtain and maintain, and ensure that each Subcontractor shall obtain and maintain, insurance as specified in this section at all times during the term of this Contract. All insurance policies required by this Contract shall be issued by insurance companies with an AM Best rating of A-VIII or better.

### **A. Workers’ Compensation**

Workers’ compensation insurance as required by state statute, and employers’ liability insurance covering all Contractor or Subcontractor employees acting within the course and scope of their employment.

### **B. General Liability**

Commercial general liability insurance written on an Insurance Services Office occurrence form, covering premises operations, fire damage, independent contractors, products and completed operations, blanket contractual liability, personal injury, and advertising liability with minimum limits as follows:

- i. \$1,000,000 each occurrence;
- ii. \$1,000,000 general aggregate;
- iii. \$1,000,000 products and completed operations aggregate; and
- iv. \$50,000 any 1 fire.

### **C. Automobile Liability**

Automobile liability insurance covering any auto (including owned, hired and non-owned autos) with a minimum limit of \$1,000,000 each accident combined single limit.

### **D. Protected Information**

Liability insurance covering all loss of State Confidential Information, such as PII, PHI, PCI, Tax Information, and CJII, and claims based on alleged violations of privacy rights through improper use or disclosure of protected information with minimum limits as follows:

- i. \$1,000,000 each occurrence; and
- ii. \$2,000,000 general aggregate.

### **E. Professional Liability Insurance**

Professional liability insurance covering any damages caused by an error, omission or any negligent act with minimum limits as follows:

- i. \$1,000,000 each occurrence; and
- ii. \$1,000,000 general aggregate.

### **F. Crime Insurance**

Crime insurance including employee dishonesty coverage with minimum limits as follows:

- i. \$1,000,000 each occurrence; and
- ii. \$1,000,000 general aggregate.

### **G. Additional Insured**

The State shall be named as additional insured on all commercial general liability policies (leases and construction contracts require additional insured coverage for completed operations) required of Contractor and Subcontractors.





H. Primacy of Coverage

Coverage required of Contractor and each Subcontractor shall be primary over any insurance or self-insurance program carried by Contractor or the State.

I. Cancellation

The above insurance policies shall include provisions preventing cancellation or non-renewal, except for cancellation based on non-payment of premiums, without at least 30 days prior notice to Contractor and Contractor shall forward such notice to the State within 7 days of Contractor's receipt of such notice.

J. Subrogation Waiver

All insurance policies secured or maintained by Contractor or its Subcontractors in relation to this Contract shall include clauses stating that each carrier shall waive all rights of recovery under subrogation or otherwise against Contractor or the State, its agencies, institutions, organizations, officers, agents, employees, and volunteers.

K. Public Entities

If Contractor is a "public entity" within the meaning of the Colorado Governmental Immunity Act, §24-10-101, et seq., C.R.S. (the "GIA"), Contractor shall maintain, in lieu of the liability insurance requirements stated above, at all times during the term of this Contract such liability insurance, by commercial policy or self-insurance, as is necessary to meet its liabilities under the GIA. If a Subcontractor is a public entity within the meaning of the GIA, Contractor shall ensure that the Subcontractor maintains at all times during the terms of this Contract, in lieu of the liability insurance requirements stated above, such liability insurance, by commercial policy or self-insurance, as is necessary to meet the Subcontractor's obligations under the GIA.

L. Certificates

Contractor shall provide to the State certificates evidencing Contractor's insurance coverage required in this Contract within 7 Business Days following the Effective Date.