

Big Ideas for San Diego (2017-11)

Idea	Summary Description	Financial Impact
Advertise, Promote, Sponsor	Test a range of advertising opportunities; expand and improve our promotion programs; find new ways to attract sponsors.	Branding assessment = \$30K; advertising tests \$30K in first three months, up to \$250K during year; 2 part-time employees to do analysis and sell sponsorships.
Document Health Benefits	Encourage well-designed, broad-scale studies that will identify and prove the health benefits of playing bridge.	Up to \$10K to assess and distribute results. Will seek grants from outside entities to fund studies.
Expert Player Guild	Encourage expert players to form a guild that would provide them both benefits (health, retirement, discounts) and a voice in how high-level bridge develops.	Seed funding from ACBL = \$10K to fund conference and \$10K to set-up benefits and discount programs.
Improve Teaching Results	Study different teaching methods and use the results to strengthen bridge education in general; improve ACBL's TAP certification program; enable the development of master teacher programs.	\$150K to research approaches and \$50K to update teaching materials. Will seek funding from the ACBL Educational Foundation and other educational institutions.
Integrate Social Bridge	Create systems and change rules to encourage social players to integrate into both clubs and tournaments.	Minimal costs. Will require some TD training and printing of materials.
Money Bridge	Create a money-bridge tournament platform that will bring attention and sponsorship opportunities to bridge.	Final event cost estimated at \$60K: prizes \$25K; venue \$20K; staff \$10K; supplies \$5K. Half to all of this recovered from fees and sponsors.
Redistribute Tournament Activity	Reorganize regionals into four levels; Shift sectional activity into clubs and create regional and national STaCs; Change how clubs, units and districts get paid for member tournament activity.	No funding required. Fewer tournament tables would be offset by bigger regionals and increased club play.
Simplify Masterpoints	Rebuild our masterpoint methodology so that it is easier to understand and administer.	Up to \$14K for committee meetings to develop proposals.
Strength-Based Ratings	Offer members a new way to follow their progress by building a big data-driven methodology for estimating strength.	One full-time employee to specify and lead effort plus \$20K over two years to "seed" projects.
Upgrade Table Technology	Improve the integration of device and software technology into both tournament and club bridge.	One full-time employee and \$50K per year for hardware and testing software.

Advertise, Promote, Sponsor

Current Situation

- ACBL's budget for advertising is \$100k per year:
 - Co-op advertising (50% of club spend) = \$65k
 - Other advertising = \$35k
- Three recruitment incentives for clubs and teachers cost about \$12k per year:
 - \$100 gift certificate for 25 recruited members within a year (teacher/club)
 - \$500 check for 100 members recruited (teacher/club)
 - Upgraded club championship for 10 members (club only)
- ACBL gets little revenue from advertisers and sponsors
 - No corporate sponsorship/partnerships
 - Advertising (bridge and daily bulletins) revenue in 2016 was \$260k
 - Tournament sponsorships at NABC are sporadic and generate low revenue.
 - No ACBL program for regional or sectional sponsorships.
- Lifetime value of a new member is at least \$250 and may be >\$350. (We will share further research on this, soon.)

Problems

- "Bridge" and "ACBL" brands are weak outside our member community. Prospective sponsors and advertisers do not know about our brands.
- Not clear who we should target with advertising—who is likely to be interested in bridge?
- Not clear which advertising channels we should employ to reach our target market.
- Not clear how to measure the return (effectiveness) of our advertising and promotion efforts. Number of new members? How often people play bridge? Revenue from membership + clubs + tournaments? Happiness of members? Success of clubs and teachers?
- Recruitment incentives are not compelling to motivate teachers and clubs. No incentives for regular members to recruit.
- Unclear where responsibility lies for attracting sponsorship and advertisers: could be marketing; could be operations; could be local districts and units. No person responsible for this area.
- Past efforts in this area did not appear to have enough return to justify the expenditure. As a result, past programs remained small in scope and duration.

Possible Solutions

- Review our brand description. Understand our current strengths and adjust the design of our web site, publications, and other public-facing communications to emphasize these strengths.
- Review our coop advertising program. Either expand it, kill it, or improve it.

- Look for advertising methods we can afford that will allow us to both test the attractiveness of bridge to various markets and track the return/results. On-line ads may be especially attractive due to the wide range of options, the narrow targeting that is possible, and their trackability.
- Review and revise the promotion plans for teachers and clubs.
- Develop a clear offering for corporate sponsorships. Look for long-term partnerships such as HCL.
- Seek new Bulletin and web site advertisers.

Approach

- Consider using an outside firm (or a business school study group?) to examine our brand. We feel we know ourselves and our product, but it is hard for us to be objective.
- Reach out to five clubs that use a lot of coop advertising money, five who use a little, and five who use none. Try to understand what is working and what needs to be changed.
- Design ads that reflect our brand needs. Run tests in a range of web sites (these tests will be very inexpensive) and see which produce good ROI.
- Start running \$3,000 to \$5,000 ad tests. Consider web, print, co-operative advertising and other forms of outreach. Run at least six tests in the first three months of the program. Carefully measure the response and return on advertising investments.
- Start running bigger campaigns (\$20,000 to \$30,000 per month) for the ads and channels that show a positive return on advertising investment. If we can establish a strong return on investment, we should consider ramping to an even larger campaign size.
- Reach out to a group of clubs and teachers and get feedback on the current programs. Test changes in selected districts.
- Clarify which area will manage sponsorships and sell advertisements.
 - Hire a new person or engage an outside group to do this, if needed.
 - Offer different levels of sponsorship, that may include promotional space only, or also technology partnership (Think Rolex for horse competitions, or Omega for Olympics)
 - Sell a comprehensive sponsorship package for each NABC (Maybe “Coca-Cola Summer NABC”)

Funding

- A third-party analysis of our branding would cost between \$15,000 and \$30,000
- Each ad test will cost between \$3,000 and \$5,000. We expect to run at least six tests in the first three months.
- Invest \$20,000 to \$30,000 per month in advertising and promotion to support our brand
- We will need one person to help with advertising analysis (part time) and one to help with sponsorship (part time).

Document Health Benefits

Current Situation

- Several studies on the benefits of bridge play have been completed by a variety of research groups. See list below.
- Many of the studies suggest, but do not confirm, that bridge play has health benefits.
- The ACBL has not sponsored or participated in these studies.
- The ACBL has committed to fund research to Alzheimer, via the Longest Day campaign, which raised over \$3.4 million from ACBL Members from 2013 to 2017. This indicates that bridge-related health issues could be of interest to ACBL members.

Problems

- Many of the studies are over 10 years old.
- There is no centralized storage of information about bridge-related health studies.
- Because the studies' findings are not centrally stored, the findings are not easily available and are not communicated; therefore, both ACBL members and non-members don't know the evidence for the health benefits of bridge.
- The ACBL has no way of learning if new studies are under way. It has no way to influence the direction of studies or contribute to making them more productive.
- ACBL gets little or no "brand benefit" from promoting a sport that may generate important health benefits and learning skills.
- Some ACBL members engage in unhealthy activities. We would benefit from helping them to improve their lifestyle.

Solution

- The ACBL should create and maintain a repository for all related research studies.
- We should sponsor a series of studies on the benefits of bridge play.
- We could understand any unhealthy aspects of bridge (or patterns of unhealthy behavior among our members) and develop outreach and educational programs to address them.
- We should systematically communicate any proof of health benefits to ACBL's members.
- We should use research results regarding health benefits in ACBL marketing.
- The results will also benefit marketing efforts of Clubs and Teachers.

Approach

- Gather all bridge play research studies findings and catalog/communicate them on acbl.org. Encourage linking to our catalog of studies and start a "list serve" that would distribute new studies to a list of researchers who are interested in the area. As part of this effort, we would:
 - Identify and interview researchers of previous studies to determine their interest of performing an updated study
 - Publish a quarterly summary of new research findings via all ACBL communication channels

- Reach out to senior centers and groups that support retirees. Inform them about the potential benefits bridge could provide their communities. (This could become a path for recruiting new members.)
- Provide research funding for health-related studies through an ACBL Foundation. We need to determine whether the Charity Foundation, Ed Foundation, and/or Foundation of the Preservation of Bridge is the best group to support this, or if we need to establish a new health-related fund. We would also:
 - Serve as a consultative partner in selected studies and help guide their direction.
 - Help recruit bridge players to participate in research studies.
 - Encourage a broadening of focus to include topics such as the scholastic achievement benefits for children who play bridge.
 - Encourage matching contributions from ACBL members or other organizations such as the Bill and Melinda Gates Foundation.

Funding

While most of the funding for this initiative should come from either outside charities or the ACBL Charity Fund, there may be costs involved in helping researchers identify bridge players for their studies. There may also be costs to inventory the results of studies and distribute them. We estimate these costs would total no more than \$10,000 per year over the next two years.

Bridge Play Research Findings/Claims

- 2000 Berkeley University
Bridge play boosts the immune system
- 2003 Albert Einstein College of Medicine
Seniors who engage in pastimes that stretched minds lowered risk of developing Alzheimer's
- 2005 Dr. Christopher Shaw, Carlinville, IL
Children who play bridge perform better on standardized tests than their non-bridge playing counterparts
- 2009 University of Southern California & University of California-Irvine
People who engage regularly in social interaction and mental activities may be at a reduced risk of developing dementia
- 2014 University of Wisconsin-Madison
People who engage in mentally challenging games that offer intellectual and social stimulation retain their mental sharpness
- 2016 Ashworth, R., Punch, S., and Small, C.
A Review of Possible Interventions into Healthy Ageing (sic) & Cognitive Stimulation: Exploring the Links Between Bridge & Dementia

2017 McDonnell, D., Punch, S., and Small C.
Individual Wellbeing & Bridge: An Empirical Analysis

McGill University Department of Psychiatry & Medicine
Bridge play fends off Alzheimer or Parkinson disease

Stirling University
English Longitudinal Study of Aging
Bridge play offers mental stimulation and a greater sense of well being

Expert Player Guild

Current Situation

- The skill level and accomplishments of bridge experts are primarily known by word of mouth and “titles” won at past events.
- Expert bridge players benefit from ACBL’s activities. They earn money from paid play (as “teaching partner” to an ACBL member) and when they compete on a sponsored team. Experts would like to see ACBL grow its membership, run events well, and ensure that play is fair (i.e., enforce rules and prevent cheating).
- Expert players pay some extra fees to ACBL and add value in several ways.
 - Some games have “plus” add-ons (typically in the range of \$1.50 per player).
 - Experts tend to play most often in higher-end tournaments (Regionals and NABCs) that have higher entry fees.
 - Experts and their sponsors occupy more rooms than average and play in more sessions per event than average.
 - Experts write articles, speak at events, and develop new methods of bidding and play that enhance the game.

Problems

- There is no set criteria for defining which players are experts. As a result:
 - Experts may not receive the treatment they expect (and deserve) when they play. They may not be seeded correctly or allowed to “drop in” on a different event, etc.
 - Poor-quality experts can degrade the reputation of experts as a whole.
- Experts do not have access to the benefits normally associated with a profession: they do not have lower-cost group health care benefits; they do not get the benefits of a 401k pension plan; there are no discount programs for hotel rooms or car rentals; there is no house publication or expert-only conference; there is no place to advertise services or share fee structure, contract terms, and other business-related information; and they do not have the right to discipline their own members. Because they do not have clear status as a profession, expert players may face legal issues such as unclear tax liability (both income and sales tax), unclear U.S. or foreign Visa requirements, and potential liability for errors, omissions and injury matters.
- Players who do not claim expert status do not believe it is fair that they have to compete on an equal basis with experts. They would appreciate a clearer distinction between experts and non-experts.
- A previous effort to form a “professional bridge players” organization failed. Those who remember this failure may not wish to try again.

Solution

- Encourage expert bridge players to create a guild that will represent their interests. The guild would be operated by the experts. ACBL would provide support to organize the guild and might offer some administrative services (for a fee).
- Support the guild with tools that will encourage responsible marketing and enable transparent feedback on expert player performance.

- Establish an expert tour:
 - Create and host a series of events that expert players could use to attract sponsors, solidify their reputation, illustrate/advertise their abilities and improve their skills.
 - Publicize the tour and attract interest (and sponsors) for the game(s).
- Separate some aspects of expert play from non-expert play via:
 - Non-expert-only events.
 - Trophies given for both expert and non-expert winners.
 - Separate ACBL Masterpoint® awards given for both expert and non-expert winners.
- Integrate the guild into Zone 2's NBOs. Guild membership fees would cover USBF, CBF or MBF membership dues. Only guild members would have the right to participate in and compete for NBO-sponsored events.

Approach

- Interview/survey expert bridge players to determine their needs and wants. Determine which benefits are attractive and discuss various approaches for governing the guild. ACBL may seek advice from other sports guilds (e.g., Professional Bowlers' Association, Professional Golf Association) or hire an outside consultant to facilitate this process.
- Recruit a starting set of bridge professionals and help them form and establish the guild.
- Establish a fee structure for guild membership. Use ACBL resources (at least initially) to manage the guild's finances, benefit systems, etc. (ACBL would receive a fee for these services.)
- Create a website to list and promote experts.
- Set up and publicize the first expert tour (2019).
- Allow foreign players to form chapters that could join and expand the scope of the guild.
- Allow the guild to conduct its own disciplinary process. This would allow more vigorous pursuit of cheating and exclusion from play of experts who do not practice Zero Tolerance or show appropriate levels of courtesy to other expert players.

Funding

ACBL would seed fund this effort as follows:

- \$10,000—Convene a guild organizational conference.
- \$10,000—Set up guild benefit and discount programs.

These funds would be recaptured/repaid from the first two years of guild dues. On an ongoing basis, we would expect a financial structure such as the following (on a per member basis):

Guild membership = \$500 / year.

Less: NBO membership = \$100 / year.

ACBL management fee = \$50 / year.

Fees to benefits groups = \$250 / year.

Costs of internal operations and discipline = \$50 / year

Net for publicity and conferences = \$50 / year

We would expect the guild to start with 150 members and grow to 500 members over its first five years. This implies total revenue of \$250,000 by that point—sufficient to enable the guild to hire its own full-time director, if it wishes.

Improve Teaching Results

Current Situation

- About 1,600 teachers are registered in ACBL's online teacher directory (these teachers opted to be listed, after receiving at least one accreditation).
- ACBL has about 7,000 accredited teachers in its database, some with multiple accreditations:
 - ACBL TAP 6,704
 - Better Bridge Teachers 1,051
 - ABTA Teachers 702
 - Easybridge! Presenters 1,058
 - LBIAD Accreditation 214
 - ABTA Master Teacher 88
- Many teachers do not encourage students to play at clubs and tournaments, or join ACBL. However, about 76% of ACBL's rookie members (0-5 MPs) attended some bridge lessons
- Teachers determine their own curriculum and method to follow
- Some teachers are associated with a club—others are not
- ACBL spends about \$12k per year in recruitment incentives for teachers and clubs
- ACBL spent about \$8k in 2016 to accredit 163 teachers (NABC and Regional TAPs). It hosts three morning sessions at each NABC for teacher training and employs one full-time employee to liaise with teachers.
- Many teacher may not “report” their activities (and so aren't counted in the stastics above). Some teachers focus on coaching intermediate and advanced players and so do not contribute a lot of new members.

Problems

- ACBL-accredited teachers train an estimated 30,000 students per year. Only 5,000 to 6,000 of these (average for the past three years) become ACBL members. Only 4,692 (40%) of the 11,741 members recruited in 2013 and 2014 are still members at this point in 2017. While 3,429 of these students (29%) have won at least some masterpoints to date, only 96 (less than 1%) have won points during the first 8 months of 2017. The students-signed-up to teacher ratio of 5,000/7,000 is low. The “conversion rate” from student to active ACBL member of under one percent is extremely low.
- No metrics show how effective teachers are at improving player skills. No metrics show that teachers effectively motivate new and existing players to play more frequently, and go to clubs and tournaments. See attached evidence drawn from ACBL data sets.
- There is no standard for evaluating and ranking teachers:
 - Each accreditation program has its own test for graduation.
 - There is disagreement on the correct measure of teacher performance (e.g., subsequent social play, play in clubs, play in tournaments, winning masterpoints).

- Teachers don't share a common curriculum. Many teaching materials are outdated:
 - They exclude newer bidding techniques
 - They are not engaging and relevant (example is an over-emphasis on bidding instead of play)
 - They do not take advantage of e-learning opportunities.
- ACBL offers (and charges for) a Teacher Accreditation Program (TAP). This program is out of date and it is unclear if its requirements actually fit the teaching market's needs.
- The only "master teacher" program (system for teaching bridge teachers) is controlled by the ABTA (American Bridge Teachers Association). It is not clear that this program is consistent with TAP and that these master teachers are being used effectively to improve teaching quality.

Solutions

- Research teaching effectiveness. Three possible, non-exclusive approaches:
 - **Statistical analysis:** track and measure how different teaching methods correlate with students' game activity
 - **Pedagogical Methodology:** evaluate teacher and student materials based on current educational techniques, research and best practices
 - **Teaching Techniques:** investigate how modern classroom best practices can help bridge teachers increase student interest, engagement and performance.
- This research would be supervised by ACBL. Statistical analysis work could be done by ACBL staff. Pedagogical studies and in-classroom observation of teaching techniques would be done by outside partners.
- Encourage sharing of ideas or, if required, cross-licensing of curricula and content.

Implementation

- Based on the results of this research, document best practice for bridge teaching. Ask those involved in the existing systems to integrate ACBL's findings into their system.
- Rebuild TAP. Integrate ACBL's documented best practice approach into TAP. Require all existing TAP holders to re-certify over a reasonable time period.
- Develop effective incentives for teachers to sign students up as ACBL members:
 - Require anyone who holds TAP to sign up all students as trial ACBL members. Reduce cost of trial membership as low as possible (\$5-\$7?).
 - Pay teachers a substantial commission (up to half of first year membership payment) if their students elect to become full members of ACBL.
 - Consider paying additional bonuses if players renew their membership.
 - Consider paying additional bonuses to teachers if their students participate in club play and/or tournament play.

- Improve the web site teacher referral system. Site should list class location and times. Show the association between teachers and the clubs they work with. Publish teacher statistics (number of students trained, average club play and tournament play performance of students) for teachers. Consider setting up a Yelp-style review opportunity for students.
- Partner with the ABTA or other organizations to develop a method of evaluating a player's level of performance. This will allow improved long-term tracking of teaching methods.
- Partner with one or more educational course providers and shift administration of TAP to these outside firms.
- Involve the Educational Foundation in this project.

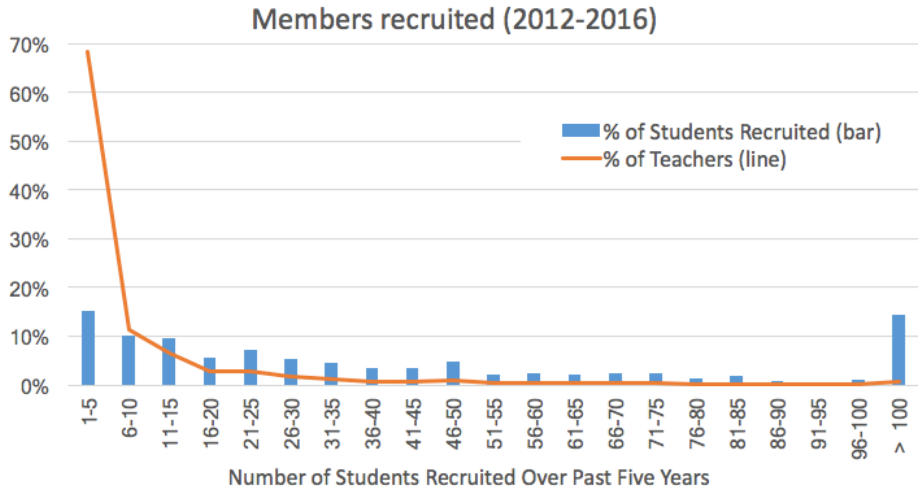
Funding

- Research--\$150K
 - Statistical analysis:
 - Collaborate with ABTA and teachers to define teaching factors to track (number of lessons, location, textbook method, lecture vs. play time, etc.)
 - identify participating teachers and clubs
 - Measure students' game activity at clubs, tournaments and social events (new CRM system and improved ability to capture game activity are key requirements)
 - Pedagogical Methodology and Teaching Techniques: either project will require to be outsourced to a specialized educational research vendor
- Update of materials--\$50K
 - Revise TAP.
 - Update basic learning guide (acquire rights to redistribute an existing guide).
- Some funding may come from Educational Foundation. We may also be able to involve one or more educational institutions either as funding sources or as vehicles for administering the revised TAP.

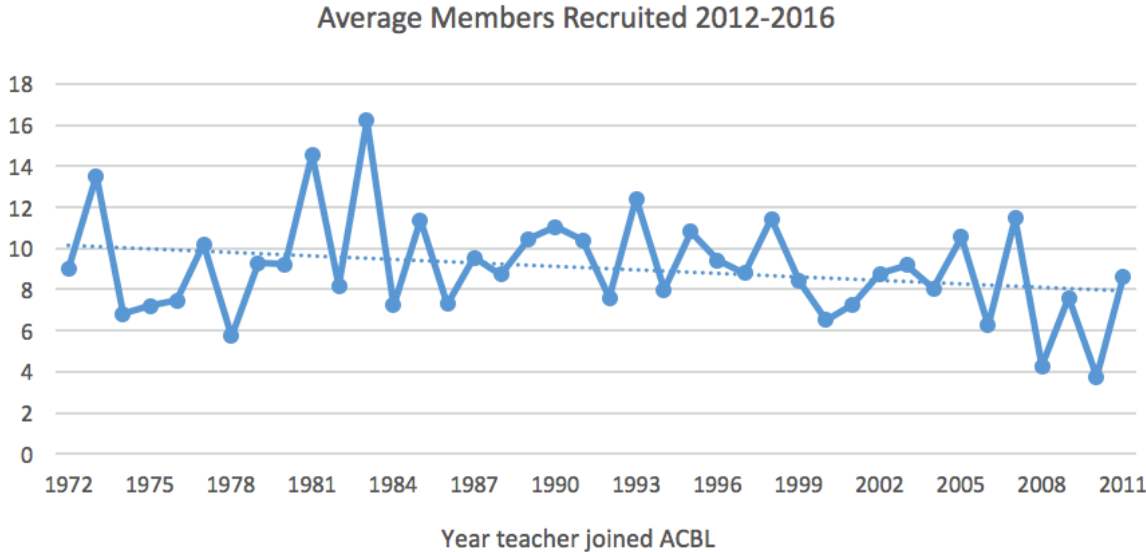
Some Statistics

While we do not have meaningful data about teacher’s intrinsic performance (number of students, quality of teaching), we have some data about teachers and their ACBL member recruitment performance.

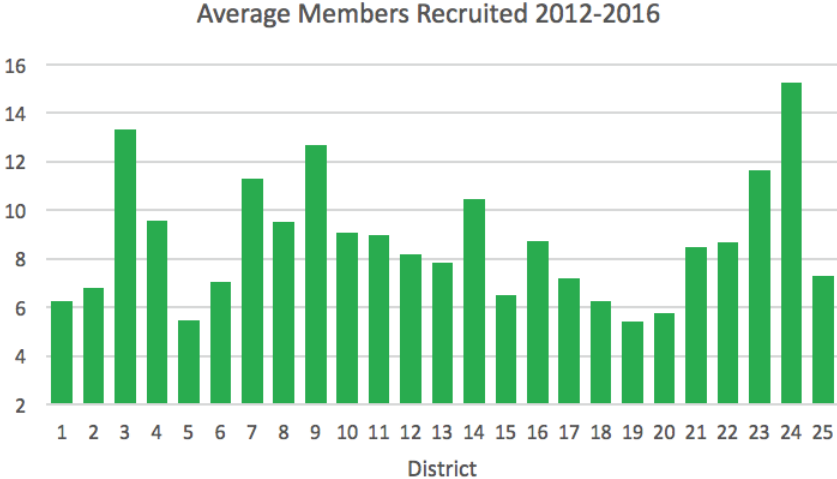
A few teachers are strong recruiters. Most teachers are not: In the last 5 years, about 25,000 new members were recruited by 2,900 teachers. The top 21 teachers recruited as many students as the bottom 2,170 teachers:



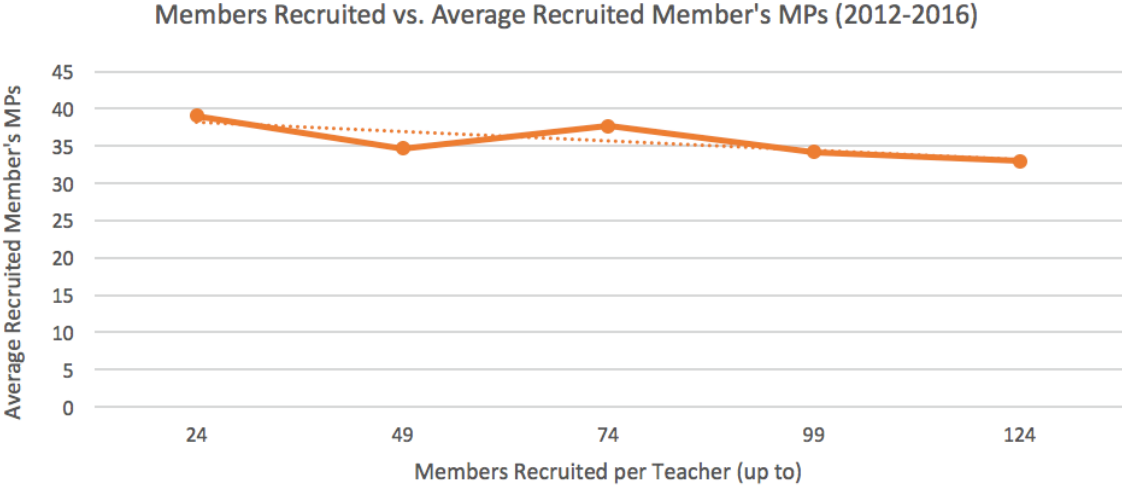
Average member recruitment, by teacher’s tenure with ACBL: Our data shows that teacher’s tenure as ACBL member doesn’t seem to affect their recruitment performance, specially for teachers who have been members over 10 years:



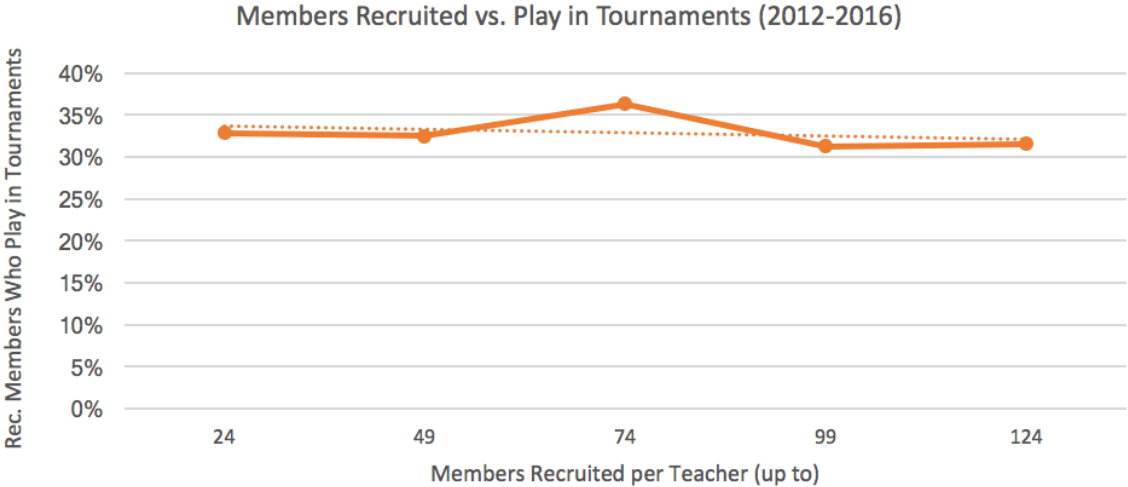
Average member recruitment, by teacher's district: Recruitment varies among districts. It is uncertain whether this is caused by uneven potential (“Districts with larger cities can attract more members?”), or to differences in teaching programs or higher focus in duplicate bridge:



Average recruited member's MP accrual, by teacher's recruitment performance level: while teachers who recruit less seem to produce new members who win more MPs, the difference is very small:



Rate of recruited members who play in tournaments, by teacher's recruitment performance level: The teacher's recruiting performance does not seem to affect the recruited members' (students) interest in tournaments:



Integrate Social Bridge

Current Situation

- Hundreds of thousands of people in North America play social bridge. They enjoy it but seem to have no motivation to become ACBL members.
- When social bridge players come to ACBL-sanctioned clubs to play duplicate bridge, they encounter rules and procedures that confuse them.
 - Duplicate boards, bidding boxes, and movement patterns.
 - Complex bidding methods.
 - Complex lead and play signals.
 - Disciplinary procedures.

Problems

- There is a “sanction” for a “homestyle pairs” game at the club level. However, few clubs seem to be using this type of “relaxed” game (we could not find any evidence of its use across our club network). Some clubs host social games, separate from their duplicate activities. But this does not help bring the social players into duplicate play.
- Some clubs host “mentored games” or “newcomer games.” These games have a more friendly environment and are reported to work well. But there is no “next step” at the tournament level. Novice and Non-Life Master events are run under the same strict rules as other tournaments.
- Disciplinary issues are one of the most troubling areas. Many ACBL members play less duplicate bridge than they would otherwise—and many do not play at all in tournaments—because they do not enjoy director calls and the possible appeals and other wrangling these calls may spark:
 - ACBL members experience ACBL’s “disciplinary” process resulting from simple bridge rule infractions several hundred thousand times per year. Most clubs have one or two “Director Please! calls” per session. Almost every tournament session has them as well.
 - A few times per month, an individual director’s ruling, felt by the player as “discipline”, is appealed to a committee of directors at a tournament. These appeals are time-consuming and often generate bad feelings and a desire for retribution and revenge on the part of the players involved.
 - A few times per year, a disciplinary issue resulting from a player’s conduct at, or away from, the table is so severe or controversial that it violates the formal written rules in the ACBL’s Code of Disciplinary Regulations (CDR) and must be heard by one of ACBL’s disciplinary committees. In some cases, these decisions are largely pro forma. In a few instances, there are extensive recitals of facts and rules, and lengthy deliberations over the proper outcome.
 - At-table “discipline” is unpleasant for both the charging party and the party who is claimed to have made an infraction. Resolving them takes time and slows the game. It requires extra work from directors. It can result in bad feelings by either side of the dispute.
 - Many players believe that directors often do not make the correct ruling regarding an infraction that is disputed. Whether or not this is true is unclear, as at-table director calls in clubs or at tournaments are not recorded.

- It is time consuming and confusing to lodge an appeal regarding a director's ruling that a player disagrees with. While there are established rules for this process, many players do not know them.
- The obscurity of the appeal process and the opacity of the rules gives an advantage in an appeals situation to more experienced players. Less experienced players believe, as a result, that this "disciplinary" process is "stacked against them."

Solution

- Codify "Relaxed Play" rules (RP). These rules would allow at table conversations, eliminate most director calls, and encourage a friendly atmosphere during a game. While players would keep score in the normal manner and "cheating" would be prohibited, RP games would typically have few or no director calls. Masterpoint awards might be reduced from what would be normal for a particular game size. But TDs would award prizes (stuffed animals, necklaces, hats) and some prizes might be given at the mid-point of a game (based on the scores achieved to that point).
- Encourage a "RP track" at most larger tournaments. Card fees could be reduced for these events. They would help players bring spouses and friends who do not enjoy normal "Tight Play" (TP) games.
- Work to improve the tone in TP games. For TP games, simplify the infractions that can and should be resolved at the table by the players.
 - Codify the standard responses to the "Big Five" infractions and put them onto a small card that can be glued to the bottom of each bidding box.
 - Ask TP players to self-administer the correct response to the Big Five infractions. Any player could object and call a director but, in most cases, it should not be required.
 - Record director calls and the ruling that was delivered. Report these statistics, from both clubs and tournaments, so that ACBL can find technology or other solutions to the recurring issues. For instance, playing hands of cards electronically (e.g., on a tablet) would eliminate dropped cards, lead out of turn, and revoke penalties.
 - Describe the appeals process using another small card that can be pasted to the bottom of a Bridgemate (and include a description of the appeals process in the published conditions of contest for the event). Make the filing of a request for an appeal an "e-form" that would automatically be delivered to the tournament director. (It may be possible to enable this transmission through the Bridgemate?)
 - Consolidate the review of appeals of disciplinary committee decisions from lower level disciplinary committees at the District level. Avoid sending disciplinary committee cases to Unit disciplinary committees.
 - Improve the investigation of conduct that allegedly violates the CDR. If possible, eliminate Unit Recorders and improve the training of District Recorders. Report to the ACBL the result of every disciplinary hearing held at the club, tournament, Unit and District level.

- Create a separate, higher standard for Expert Play (EP). Study and summarize the rulings that trigger issues for expert players.
 - Develop a “Big Five” list for EP and institute procedures that will reduce the frequency of the occurrence of these events.
 - When a director’s call dealing with a serious infraction requires special attention, implement a “body camera” video (camera would be worn by the TD) recording of the process. Require that these recordings be saved and transmitted, or otherwise made available, to supervisory directors. This will ensure that the actions of a director can be properly reviewed at a later date.

Approach

- Gather input from clubs and teachers about how best to encourage social players to also play duplicate bridge.
- Exchange best practice information and track the recruitment benefit from each idea.
- Test Relaxed Play at Newcomer, NLM, and higher-level events.
- Encourage relaxed players to appreciate the challenge of tight play. Encourage tight players to appreciate the challenge of expert play. More clearly distinguishing the goals of each group will encourage acceptance of their differences.
- Gather data on director calls at all levels of the game. Seek methods to make duplicate discipline less daunting for social players.
 - Describe the approach to resolving the ordinary player’s “Big Five” in layperson’s terms and ask a group of ordinary players to review them to provide feedback and suggestions for improvement. Do the same with the written description of the appeals process.
 - Invite a selected group of expert players to review and comment on the expert “Big Five”. Incorporate workable ideas into the processes being developed.
 - Train TDs on the new approach for both ordinary players and experts. Test the approach for at least six months and solicit formal feedback from all levels of players and all types of club games and tournaments.
 - Submit the changes that work and that receive a high level of acceptance and/or favorable feedback as a revision of the CDR as necessary.

Funding

No special funding would be required to implement this proposal, other than the cost of training TDs and printing any new descriptive materials.

Money Bridge

Current Situation

- There are two well-known Money Bridge games: the Cavendish in Monaco, and OurGame (based in China but expected to expand soon to other venues).
- To date, money bridge has not become an organized or widespread sport for reasons such as:
 - Concern regarding how bridge would be treated under gaming and tax laws.
 - Questions regarding taxation of winnings and losses.
 - Lack of a strong business model (enough revenue to support both paying prizes and also organizing the games).

Problems

- Other games/sports in the same space as Bridge (such as Poker, Scrabble, various electronic games) compete for large cash prizes.
- ACBL members, at this point, can only compete for Masterpoints. Membership has been flat for more than 20 years. This limits the extent to which ACBL can motivate additional play.
- While Federal laws allow money prizes for skill-based games such as bridge, each state has its own gambling rules. It is possible that a money bridge game would be opposed at the state or local level.
- Some bridge players could be concerned that money bridge would corrupt the game. For instance, money prizes might increase interest in cheating.
- Some players may not be able or willing to pay the fees needed to drive a prize pool.
- Various efforts to build a money bridge game (e.g., by Larry King) have failed in the past.

Solution

- ACBL would start developing a money bridge model. We would consult legal experts on gaming and seek input from members of the bridge community.
- We would consult with similar skill based associations (ie: Chess Federation, Professional Bowling Association, Professional Dart Association, etc.) to see how they run their Money tournaments.
- If the outcome of this investigation is favorable, The ACBL would launch a Money Game Bridge operation.
- Money bridge could incorporate a “fantasy” element. “Fans” could participate in money events by picking players and teams they admire and feel will do well in the event.

Approach

- The game would be run in a new format. Each player would be isolated from all others and would play via entry into a table provide by the organizers. Players would be prohibited from using any electronic device other than the tablet and all players would be observed via video at all times. We may use an “open room/closed room” format for larger events, but smaller events could be run from clubs or other venues.

- Convene a panel of experts who are available (and potentially paid) to be on call to review any questionable activity for a more timely response.
 - Option 1:
 - Run the Event as a stand-alone tournament in addition to all other existing tournaments and scheduled to not compete with the Cavendish which occurs in February.
 - Option 2:
 - Add the event to existing tournaments in states that have favorable gaming laws (i.e. Las Vegas Regional, Atlantic City Regional, and Tunica Regional).
 - Option 3:
 - Investigate the possibility of partnering with various international bridge unions to create a World Bridge Tour similar to the World Poker Tour.
- As money events grow in popularity, ACBL could sponsor and help administer “satellite” tournaments at clubs to make these events more accessible to the average player. Further, a series of satellite events could be run beginning in clubs and culminating in a large-scale Money Bridge event.
- Some experts and other ACBL members might be interested in competing in these events, but our goal would be to attract a new group of players who are motivated by both the challenge of bridge and opportunity to earn money from playing it.

Financial Assumptions:

- Option 1:
 - The ACBL would put up a \$50,000 prize pool to support competition between a field of 64 teams. The ACBL would sell sponsorships and charge \$100/person entry fees (64 x 4 x \$100 = \$25,000) to recoup half of the prize pool. The top team gets 40% while the next 7 teams earn the remainder. This is in line with the percentages that the World Series of Poker pays out.
 - Expenses include 4 days of a tournament for three tournament directors, a marketing/ PR person, a surveillance person, and the Director of Tournament Operations which we expect to be approximately \$10,000. We expect the cost of supplies and shipping to be an additional \$5,000. Venue rental for 4 days is expected to cost \$20,000 for a total expenditure of \$35,000.
- Option 2:
 - Each District would run a local pool.
- Option 3:
 - ACBL would invite Clubs to organize a local team. Competition would begin at the club level and then roll upward. Prize money would come from a combination of Club “stakes,” player contributions, ACBL contributions, and sponsor payments.

We will seek an outside Sponsor/Advertisers to attempt to cover administrative costs.

Redistribute Tournament Activity

Current Situation

- ACBL ran 1,133 tournaments in 2016:
 - 3 National championships.
 - 131 Regional tournaments (including 4 cruise regionals and 8 Non-Life Master events).
 - 910 Sectional tournaments (including 4 cruise sectionals and a number of Non-Life Master events).
 - 89 STaCs.
- About 40% of ACBL members played in non-STaC events in 2016. At least 28% of the other 60% play at least sometimes in local clubs. (We do not have good data on club play activity.) Some portion of members (10%?) do not play in either clubs or tournaments.
- ACBL also ran hundreds of special games at clubs:
 - International Fund
 - Charity Fund
 - Worldwide
 - Instant Matchpoint
 - Grassroots
 - Junior Fund
 - “Upgraded Club Championship” (awarded to clubs for recruiting performance)
 - Longest Day
- Profits from running tournaments are an important component of the revenue stream for both the ACBL and for District and Unit organizations. In 2016, ACBL tournaments generated over \$9 million in gross profit for Districts and Units. Net profit was much less—probably about \$1 million. ACBL received \$4.5 million in fees from tournament play.

District and Unit Aggregate Tournament P&L	Open Regionals	Open Sectionals	STaCs	Total
Estimated Total Revenues	\$7,726,128	\$5,639,788	\$620,720	\$13,986,636
Less: ACBL TD & Sanc. Costs	\$3,311,310	\$2,193,293	\$469,091	\$5,973,694
Gross Profit	\$4,414,818	\$3,446,495	\$151,629	\$8,012,942
Estimated Expenses	\$3,796,728	\$2,995,312	\$101,971	\$6,894,011
Estimated Net	\$618,090	\$451,183	\$49,658	\$1,118,931

Problems

- Attendance at tournaments is down. The Tournament Task Force (TTF) estimated that there could be a 6% to 10% drop in tables played in 2017, compared to the previous year.
- Causes have been cited for the drop in attendance such as:
 - Members are older and less able to travel.
 - Too many tournaments.
 - Some tournaments are not well run, are in poor venues, or are poorly promoted.

- Number of masterpoints needed to reach Life Master was increased and this demotivated those who felt they could not reach the new level.
- More members have reached Life Master status and no longer need pigmented points.
- Tournaments are stale and all seem the same.
- Director and other costs have risen and made tournaments unprofitable to run.
- Volunteers are burned out and not able to focus on each event.
- Tournaments hurt club revenue. A few Districts and Units will compensate Clubs for lost business, but most do not. As a result, Clubs do not support tournaments (with advertising or by encouraging attendance by their members or volunteers).
- If a tournament does not do well, a Unit (or District) may suffer financially. This happened recently with the Las Vegas Unit.
- Units and Districts must negotiate contracts with hotels and other tournament support groups. They must recruit volunteers and do promotion and marketing. Many Units are not experienced at these tasks. As a result, the player experience at many tournaments is poor and their size has been shrinking.
- Each tournament has its own schedule of sessions and game types. Players have trouble planning and predicting their tournament experience in advance.
- Expert player teams do not know which tournaments will be large enough to provide a good scope for practice and advancement. They also do not know if an event's schedule will allow them to participate in high quality competition throughout their planned stay.
- It is hard to ensure that each event has teaching sessions, side trips for spouses, and other activities that increase player satisfaction.
- It is hard to recruit volunteers to run so many tournaments and a heavy schedule of events can burn out volunteers.
- The huge number of tournaments played each week make it hard for ACBL to schedule and supervise TDs. Travel and other expenses mount, as TDs must zoom from one place to another.

Solutions

- Eliminate sectional events. Replace the revenue they generate for units and districts via fees from new events (see below), through increased attendance at regional events, and through a reallocation of membership and club fees received by HQ.
- Expand the number of STaC events. Add "RTaC" and "NTaC" (Regional Tournament at Clubs and National Tournament at Clubs) events. Continue to offer silver points at STaC events. Offer red or Red/Gold points at RTaCs and Gold/Red at NTaCs. The goal would be to have one STaC per week for any given club, one RTaC per month, and at least three NTaCs per year.
- Have no more than one regional per two-week period in any broad geographic region (e.g., Northeast, West Coast, Southeast). The total number of traditional regionals might drop to around 120. In place of NLM sectionals and sectionals that serve small remote areas, offer NLM regionals and split-venue regionals.
- Establish a standard number of days for regional events (e.g., 7 or 8 days). Standardize the schedule of events so that each regional has the same core event structure. Ensure that those who are knocked out of a high-level event have high-level side games (swiss, pairs) available. This will encourage expert teams to move from regional to regional on a "circuit" of events.

- Classify regionals as either A, B, or C level. ACBL will provide staff to help with hotel negotiations, manage side events, and organize volunteer activities (in conjunction with the host District) for all A level events. This will improve their quality and bring them close to the standard for NABCs. Host Districts will receive a per-table (or per participant) payment for A regionals similar to (but smaller) than the one they receive for an NABC. Each District will have at least one A level event per year. Districts may elect to have ACBL provide similar support for B level events—or they may run them without ACBL support. C level events will be handled locally, by either Districts or Units (as each District prefers).
- All Districts and Units will receive a small share of the revenue ACBL generates from table fees for all events. All Clubs will receive a small share of the revenue ACBL generates from table fees for any event held in their District. These payments will only be made if the District, Unit, and Club participates in promoting the event. Their size will depend on how many of the Unit and Club members participate in the event. We will strengthen the assignment of members to Units and Clubs, but will allow a member to “belong” to up to three of each type of organization. This will allow a District or Unit to benefit from events held in other Districts and will encourage Clubs to send their members to as many tournaments as possible.
- We will eliminate “upgraded championships” and other special Club games. Instead, we will run them as part of RTaCs and NTaCs.
- The current Tournament Director staffing levels would be unaffected. We believe that by eliminating Sectional events we will drive more attendees to the Regional events. This should result in a negligible effect on the required staffing levels.

Approach

- HQ will respect “tradition.” Certain events have long-established followings and should be encouraged to remain in their existing time slots and locations. By upgrading and expanding the schedule for these events, HQ will help to increase attendance and ensure that these events continue to be popular.
- There will no longer be a per district allocation of events. The new sharing payments will both ensure that District and Unit finances are secure and will also encourage recruitment of new members (since each new member will generate revenue for Districts, Units, and Clubs by attending events).
- Clubs must use duplicated boards and upload results immediately, if they want to participate in RTaC and NTaC events. We may experiment with a variety of game options such as:
 - Team games. We can replace the GNT series with appropriate club-based team games.
 - Player’s choice events. We can hold multi-session events (such as NAP) by allowing players to play in three out of five or five out of ten qualifying sessions.
 - Two-way competitions. Players could compete for a normal award but pay for and also compete for a multi-session award. The multi-session games could give higher pigment awards than single session games.
 - Club versus Club games. Clubs could compete against each other in special team games. This game format would also accommodate competitions between universities (e.g., Collegiate Bowl preliminaries) and corporations (who in turn might become bridge sponsors).

- Mid-Level versus simple General Convention Chart games. The same hands could be played by groups of players who agreed in advance to use either complex high chart convention system or to be limited to simple card systems.
- Mixed physical/on-line games. In some cases, and with appropriate controls, on-line players could be invited to compete against physical players using the same hands.
- The Common Game could become a component of some of the hand sharing, comparative scoring and reporting required to implement RTaC and NTaC events.
- Awards for RTaC and NTaC events would be less than for similar-sized in-person events until we are able to adjust for “strength of field” differences between clubs. “Sections” would probably be done by District although larger or smaller groupings may be required. In theory, a player could reach Life Master or other goals without traveling to a tournament.
- The Level A Regionals would be strung together in “tours.” Expert teams would need to participate in most of the regionals in a tour to get preferred seeding at the following NABC.
- Additional fees for RTaC and NTaC events would go towards the appropriate charity, junior, or other beneficiary and to the Units and Districts. Clubs would be compensated directly by the additional play that would occur with clubs and the reduced competition from tournaments.
- This new approach would make it virtually impossible for a Unit or District to lose money unless it overspent on things such as volunteer benefits, teaching and recruitment or if it decided to run its own Level B and C events (instead of using ACBL resources). ACBL should see more stable revenue from Clubs and less year to year variation in tournament play. Clubs should see a dramatic increase in traffic. Members would feel wanted by both Clubs and Units, since each additional member would generate additional revenue shares.
- This proposal would require massive changes in ACBL rules and codification. We would start the process as follows:
 - HQ will analyze past attendance at events. It will make a list of regionals and sectionals and recommend which should be converted into STaC or other events and which regional level is appropriate for the remainder. The Board those large sectionals that could be promoted to A, B, or C regional level.
 - HQ will survey players and Clubs to determine how they would react to the proposed changes.
 - HQ will propose a draft calendar for 2019. (It will take one to two years to fully adjust the physical tournament schedule, due to hotel contracts, space contracts, etc.)
 - HQ would offer an estimate of the financial impact on units and districts. HQ may need to commit to minimum payments or other means to reassure all part of ACBL that they will have the funding they need to move forward with this plan.
 - Based upon the calendar and estimates of how playing patterns would change when there are more local Club events and fewer tournaments, HQ would propose a revenue sharing structure. HQ would need to have additional staff to handle planning and running Level A and some Level B Regionals. But, it would need fewer TDs and could transition some TDs into TC assistant roles.
 - HQ would test the RTaC and NTaC concepts by running these types of games.

- Units would focus on recruitment of new members, training of teachers and club directors, and support for regional events. Districts would support unit activities and add value to local recruiting efforts. They would also ensure the continued success of their flagship regionals.

Funding

ACBL would run around 400 tournaments per year after this change: approximately 3 NABC, 120 regionals, 25 NLM and split-venue regionals, 200 STaCs, 50 RTaCs, and 3 NTaCs. This would be one third of the former number.

Due to lengthening all regionals to 7 days and running RTaCs over 5 days and NTaCs over 7 days, the number of “tournament days” would drop only 54%: from around 3,800 days to around 1,750 days.

Before moving forward, HQ would have to present credible evidence that there would be no additional or special funding required to pursue this project. While tournament table days played would drop, club tables should rise. ACBL revenue might remain similar because it would capture all of the revenue at many regionals rather than just table fees and club table fees would rise.

Simplify ACBL Masterpoints®

Current Situation

- Masterpoint awards are based on rules in a 36-page Masterpoint® Book.
- There are many different types of Masterpoint colors. Players must get a certain mix of colors to reach goals such as Life Master.
- Masterpoint awards drive player behavior. Players seek games where they believe they can earn more points and are especially interested in those that have the colored points they need to achieve a goal.
- ACBL has tweaked and manipulated Masterpoint awards constantly over the past twenty years, to motivate changes in player behavior.
- 134,560 of ACBL's members (80%) earned Masterpoints during the last 12 months. 23,207 of ACBL's members (14%) currently have less than 5 Masterpoints and are considered rookies. 10,707 rookies (46%) earned Masterpoints in the last 12 months.

Problems

- Masterpoint rules are complex and confusing. Only a handful of those in the ACBL community understand how masterpoint awards are calculated.
- Masterpoint awards vary in many ways and for reasons that are hard to understand:
 - A Tournament Director can change awards based on his/her interpretation of a game's environment.
 - Masterpoint awards in Clubs and Tournaments are different for games of the same size and strength.
 - Club Masterpoint awards can be manipulated in ways that are hard to detect.
 - There are errors and conflicts hidden in the current system.
- It is hard to write software to calculate masterpoint awards.
- Weak software systems and confusing rules make it easy for Tournament Directors and Club managers to make mistakes entering the information required to make proper awards.
- Players do not believe awards are fair. Players do not always react as expected to a change in awards.
- Masterpoint awards have "inflated" over time. It is easier to win points now than it was 10 or 20 years ago.

Solution

- Simplify the Masterpoint rules so that they are easy to understand. Remove special cases.
- Make Masterpoint calculations transparent by making the code in our Masterpoint Engine "open source."
- Build a small application that will allow anyone to predict the masterpoint award for any game situation. Put this application on the web and make it freely available.
- Encourage other groups who need a Masterpoint Engine to use the ACBL code or to add their rules into the ACBL official database of rules. This will allow ACBL to exchange point awards with other groups (e.g. ABA, WBF) and simplify issues of seeding and stratification.

Approach

Assemble a “lead group” to examine the issue and make recommendations. Some believe this group should be math whizzes. Some feel the group should include ordinary players.

At some point, the group’s work should be reviewed by Tournament Directors, Club owners (both small clubs and large one), members of the Board of Directors, and expert players.

This lead group would gather at the ACBL headquarters for two days of meetings at the ACBL’s expense. At the conclusion, this group would deliver:

- Three Options for simplifying Masterpoint awards.
- A description of the effect implementation each of these options would have on current holders of Masterpoints.
- Guidance to the Field Ops and IT teams regarding how each option would be implemented.
- An estimate of the cost of implementing each option.

The three options and additional information would be shared with the communities mentioned above and then discussed formally at a Board meeting. The Board would choose at least one option for further review and development.

The lead group would help review the Board’s input. It would further develop its proposal and receive input from the ACBL (and the world award point generating) community. The Board would then discuss the revised proposal at a second Board meeting and hopefully would approve it there.

Funding

The cost for the lead group meeting should be between \$500 and \$2,000 per non-HQ attendee or between \$4,000 and \$16,000.

Strength-Based Ratings

Current Situation

- The only tool ACBL has to stratify games, match up partners, and award recognition for winning performances are masterpoints.
- Most serious players of bridge do not feel that the number of masterpoints someone has is tightly tied to that person's ability as a player.
- A number of people have tried to develop new, better methods of measuring strength. Not of these new measures has become widely accepted.

Problems

- The masterpoint system has become complex, with black, silver, red, gold, and platinum points available at rates that are unclear.
- New players get very few points (and therefore have few incentives to play or improve). Experienced players get the most masterpoints—even though they have only low reinforcement value for someone with many points.
- Players who reach “life master” level often stop playing or slow down their rate of play. Life Master is the only meaningful achievement level that is currently available. Efforts to make other higher levels important have failed, to date.
- Without a clear way of measuring strength and changes in strength, it is hard to determine:
 - Which method of teaching players produces the best players?
 - Which bidding systems are most effective?
 - Which defensive signals (and lead conventions) are most effective?
 - Which pairs should be “seeded” ahead of others? How should an NBO pick the right teams to compete in international championships?
 - Which pair in a partnership (or which person in a team) is strongest and which is weaker?
- Expert players compete directly with non-expert players for masterpoints. They should instead have a separate scale of achievement.

Solution

- Use results of both tournaments and club games to determine each player's individual playing strength.
- Novice players begin at some non-zero level (e.g., a strength of 100). They can move down, but most will move up fairly rapidly to join the bulk of players in the middle strength area.
- Experts will be defined as either above a certain score (e.g., above 2,000) or as within the top percentage of all players. Experts will move up or down in strength when they play other experts. Play between experts and non-experts will generally result in no change for the non-expert or a strength increase. (This will encourage “playing up.”)

- Use duplicated hands (e.g., Common Game, tournament hands, or on-line play) to create a distribution of possible score outcomes. Use these outcomes to scale a player's performance, rather than "par" results (theoretical best play on a double-dummy basis). We can also use the result of simulated robot play of these hands as a standard. Several special analysis routines must be developed:
 - Analyze the dispersion in results. Hands with a large dispersion will be a better test of strength than those with little dispersion.
 - Analyze the number of paths through a hand. Hands that show many variations in play, due to either different decisions by the declarer or the defenders, are better tests of playing ability.
 - Analyze the types of contracts declared and compare them to the par calculation of the potential tricks that can be made in each suit. Hands where some players did better than par or where most did worse than par are likely to be more difficult to bid and play.
 - To avoid treating both players in a partnership the same, factor in which partner played each hand or which one made the opening lead.
 - Use the analysis results above to determine which types of hands are more complex and which are less. Use this process to determine in advance whether a particular hand is likely to be more or less difficult. (This would allow expert games to include more of the difficult hands and novice games to include fewer of them.)
 - Develop test hands that can be used to determine a new member's strength before he/she begins playing. These tests can also be used to correct a strength error, if one occurs. Players could request a test if they feel their strength is too low (or too high).

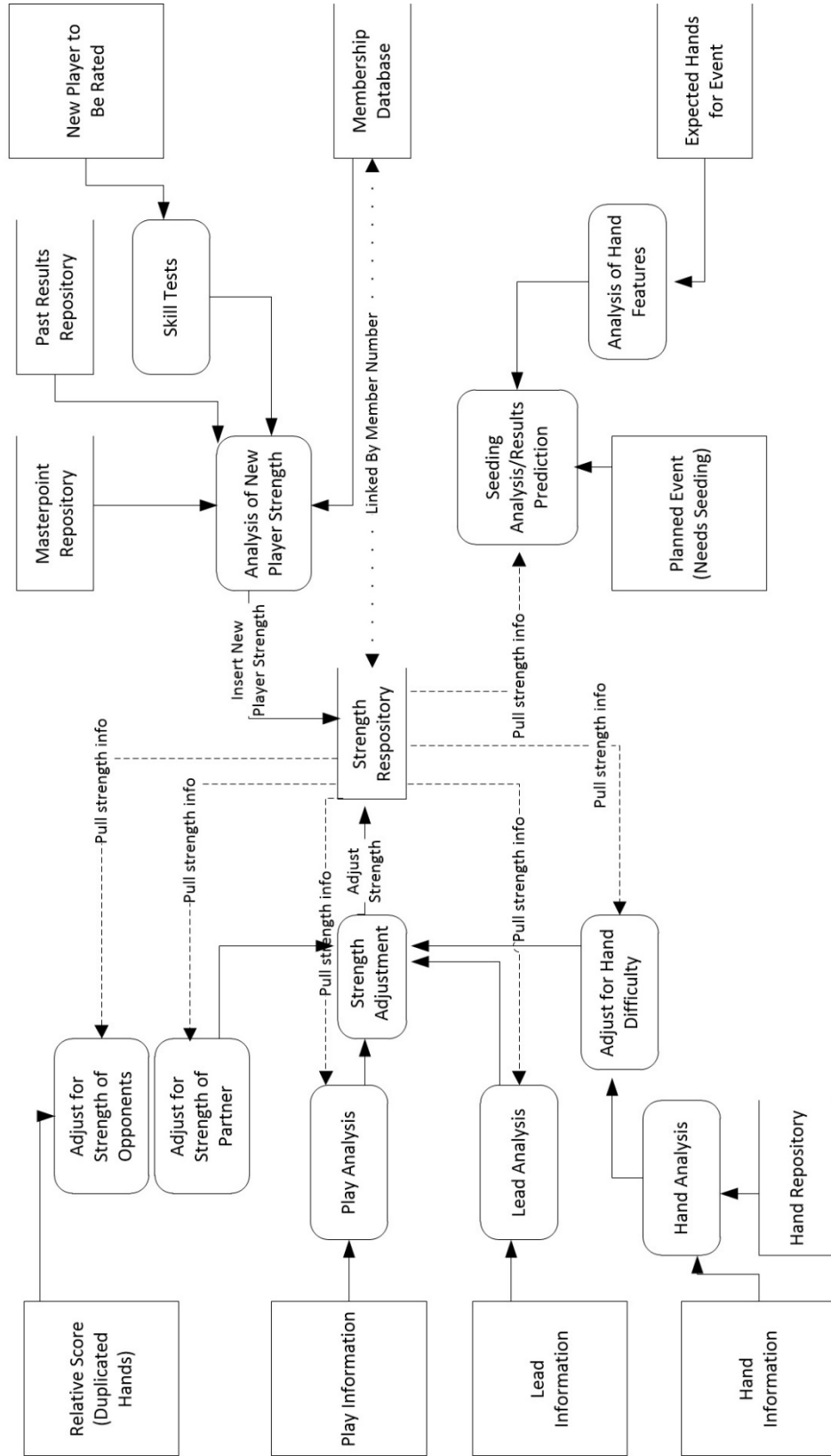
Approach

- Issue a proposal to the bridge community at large to develop this rating system. Define the broad outlines of the system and offer to supply "feed stock" of game results (anonymized so no player personal information is exposed).
- Set up an open source repository for the code the community generates. Pay developers to contribute code. This will ensure that the system remains available to all under one or more of these license types: <https://opensource.org/licenses> .
- Encourage WBF and other bridge associations to recognize and to eventually adopt the ACBL system.
- After a suitable period (three years?), shift stratification, partnership, and championship qualifiers to the new system.
- Continue awarding and recording masterpoints. However, at some point, these points will transition into a loyalty and frequent-play reward system (e.g., exchange 5,000 points for a discount on a cruise ticket).

Funding

ACBL would need to hire someone to specify and lead this effort. It may need to "seed" certain projects. This could add another \$10,000 of expense per year, over the next two years.

Strength-Based Ratings System Architecture (DRAFT 2017-09-11)



Upgrade Table Technology

Current Situation

- Online play has continued to grow and now represents one third of all ACBL-sponsored play.
- ACBL-sponsored in-person play generally uses no technology support, other than “Bridgemate” for score entry.
- In-person play in Europe has started to incorporate tablets.
- The ACBL has piloted a few events that have used online technology (tablets running online games) instead of physical cards, but has spent little time researching the use of table top technology for enhancing the player experience.
- A few clubs have experimented with using online technology to fill a table with a pair of robots, and avoid sit outs.

Problems

- Clubs are financially unable to pursue new virtual play technologies.
- Many games of skill originated as non-electronic products (e.g., Warcraft) have adopted electronic technology. Bridge risks looking old fashioned.
- Our membership is getting older and more members find it difficult to get to the club to play. If we cannot provide a technology solution to allow them to play remotely, our overall game activity will decrease.
- Our Tournament attendance is falling in part to the cost of travel and accommodations. If we cannot provide a technology solution to allow playing remotely, our tournaments will suffer.
- Electronic/virtual play technology may make it easier to prevent cheating, capture of play and game activity statistics, and otherwise allow bridge theory to advance.

Proposal

- ACBL will work with development partners, both existing and aspiring, to develop new virtual and electronic tools for bridge. These may include:
 - Apps that would run on iPads or cell phones that would support both in-person and remote game play in a duplicate/tournament setting.
 - Video capture systems that would allow observation of behavior (e.g., cheating), capture of play, and sharing of observations about play.
 - Devices for directly distributing hands to tables or capturing dealt hand patterns.
- Some of these tools would be “open source.” Others might be owned by an ACBL partner. There is no intention that ACBL would own or patent this technology.
- Some development might be done in partnership with ACBL vendors or with other bridge organizations.

Approach

- Each tool will be tested by ACBL. If it passes certain criteria, it will be “certified” as consistent with ACBL laws and principles.
- Once developed, these tools will be made available to clubs and tournaments. Some tools may be offered free—some may require a license payment or purchase. ACBL may retain a service fee in instances where it handles a license payment or purchase transaction.
- Goal should be to encourage experimentation and improvement. Move the field forward and let smart people introduce new ideas and opportunities that will excite existing players and attract new ones.

Funding

- Most projects will not require direct ACBL funding.
- ACBL will have expenses associated with participating in supporting projects and with certifying them.
- We believe we can pursue this work through adding one additional full-time person to the IT staff.
- We expect we will need to spend an additional \$50,000 per year on testing software and to purchase hardware components that are needed to test specific software products.