



Ham Radio in the 21st Century

Revenue Growth Subcommittee

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JULY 14TH, 2022

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Charter and Goals



- Identify and quantify tactical opportunities for profitable near-term revenue growth
- Target operational performance metrics:
 - Achieve business results from our recommended actions within a 2 year or shorter timeframe
 - Marketing Return On investment (MROI) of 5:1 or more
 - Gross Margin (GM) performance of at least 50%
- Consider investment levels, execution requirements, and risk
- We will defer any potential actions that would require strategic changes to a later date. Examples include:
 - Fundamental changes in our business model
 - Inorganic growth moves (ex. M&A)
 - Initiating major new lines of business

Subcommittee meets weekly for 1 hour

Notes on Financial Projections

Rough order of magnitude models



- As much as possible, we have done our work using data and quantitative models and estimates to better understand and plan our recommendations
 - ***NOTE THAT THE ESTIMATES INCLUDED HERE ARE NOT COMMITMENTS AND REQUIRE SIGNIFICANT WORK AND REFINEMENT BEFORE BECOMING COMMITMENTS***
 - The information in this presentation is ***ARRL Board Confidential*** and is not to be disclosed without written permission
- Items in this update are, in some cases, still a work in progress and some will likely change as we complete our work.

ARRL's Current Situation

A Starting Point



ARRL's current financial situation is governed by

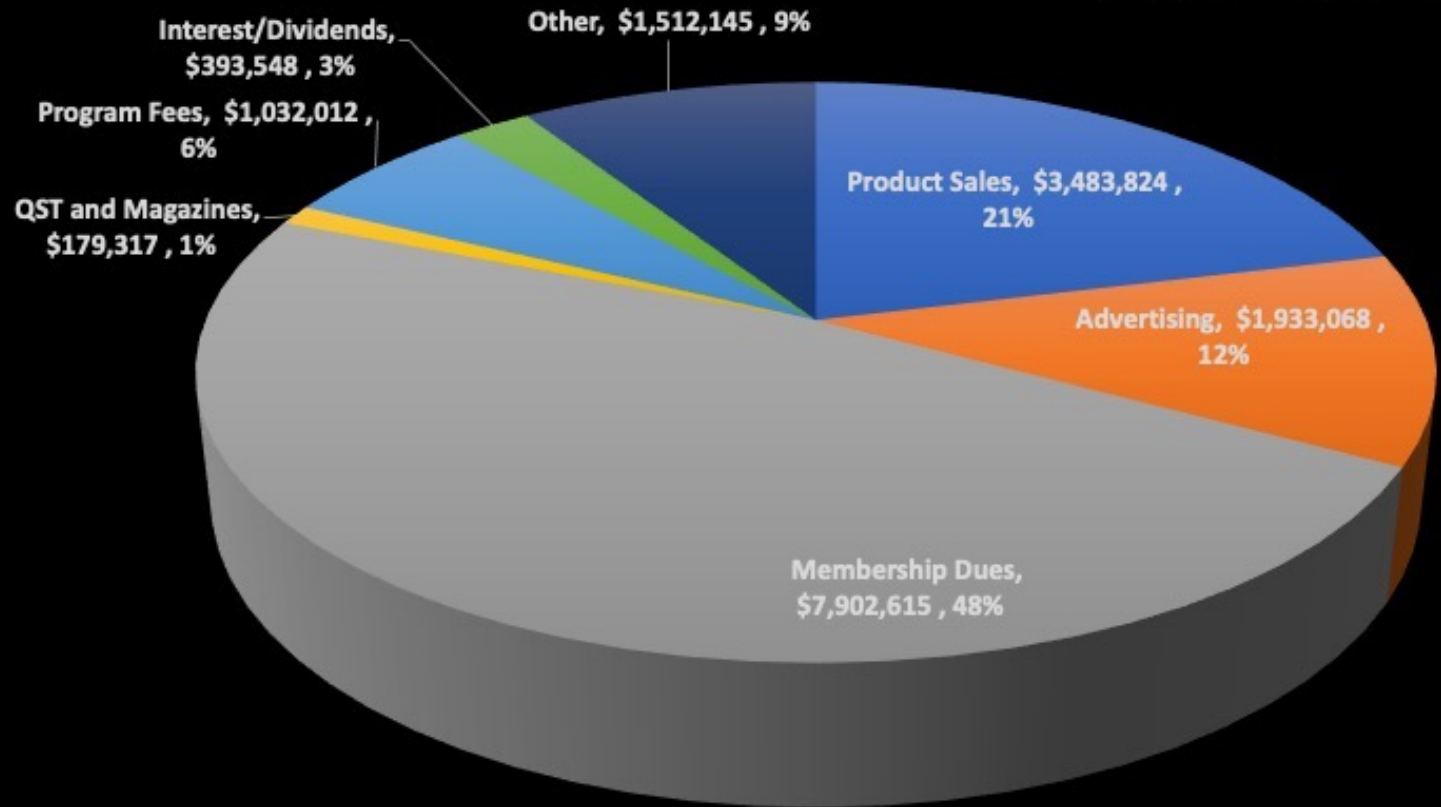
- A revenue and income model that is mostly membership based with dues being the primary source of revenue (~50%)
- Inflation is driving important operational costs upward and will likely have an amplified impact on employee and other costs over time
- This means that our approximate \$1M/year operating income gap will likely increase

Understanding the Current Situation

A Starting Point – Trailing 12 Month (TTM) Revenues



Actual Revenues, TTM Ending May 2022



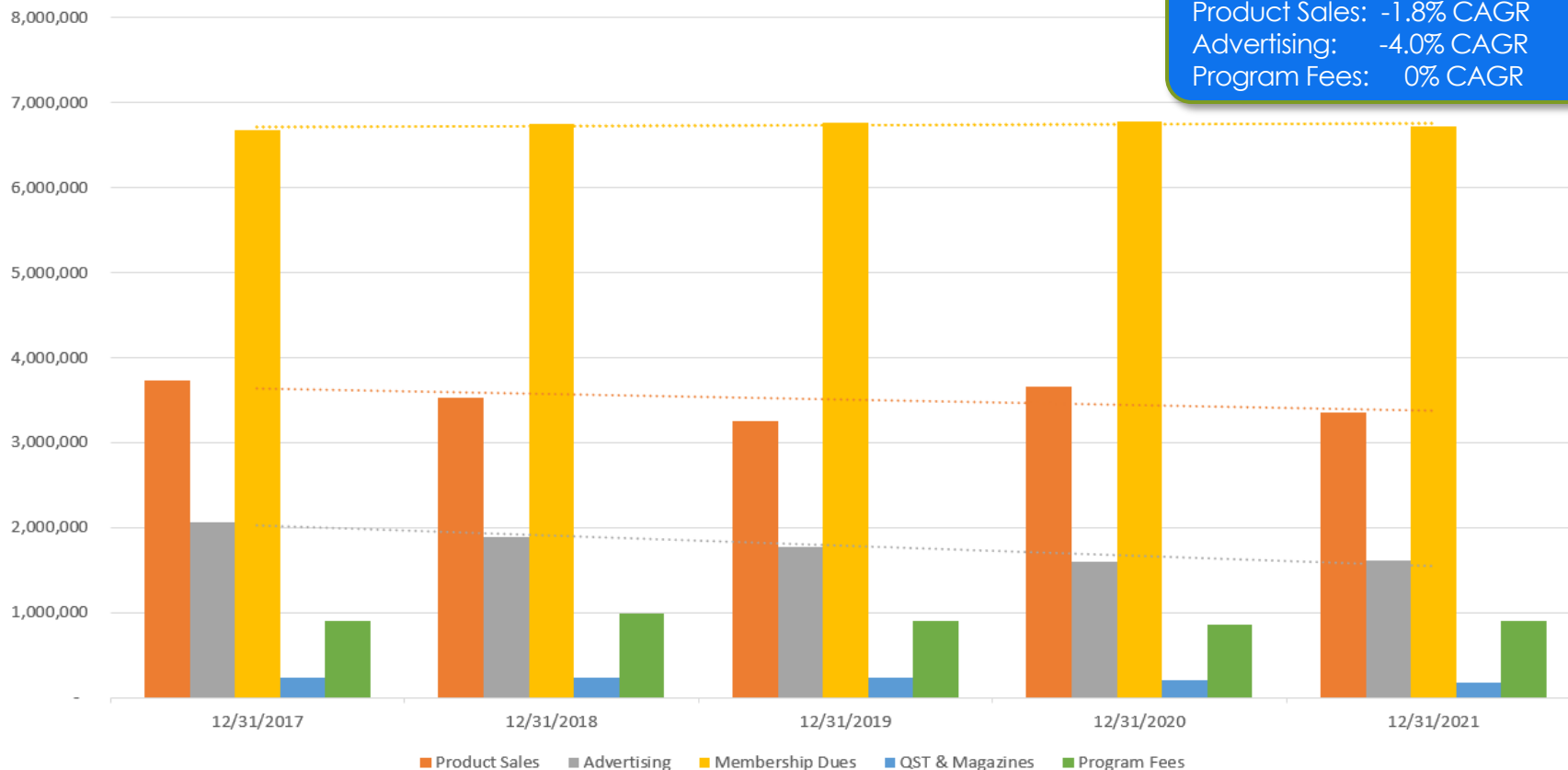
- Product Sales
- Advertising
- Membership Dues
- QST and Magazines
- Program Fees
- Interest/Dividends
- Other

Revenue Trends

5-Year View



Revenue Sources by Year



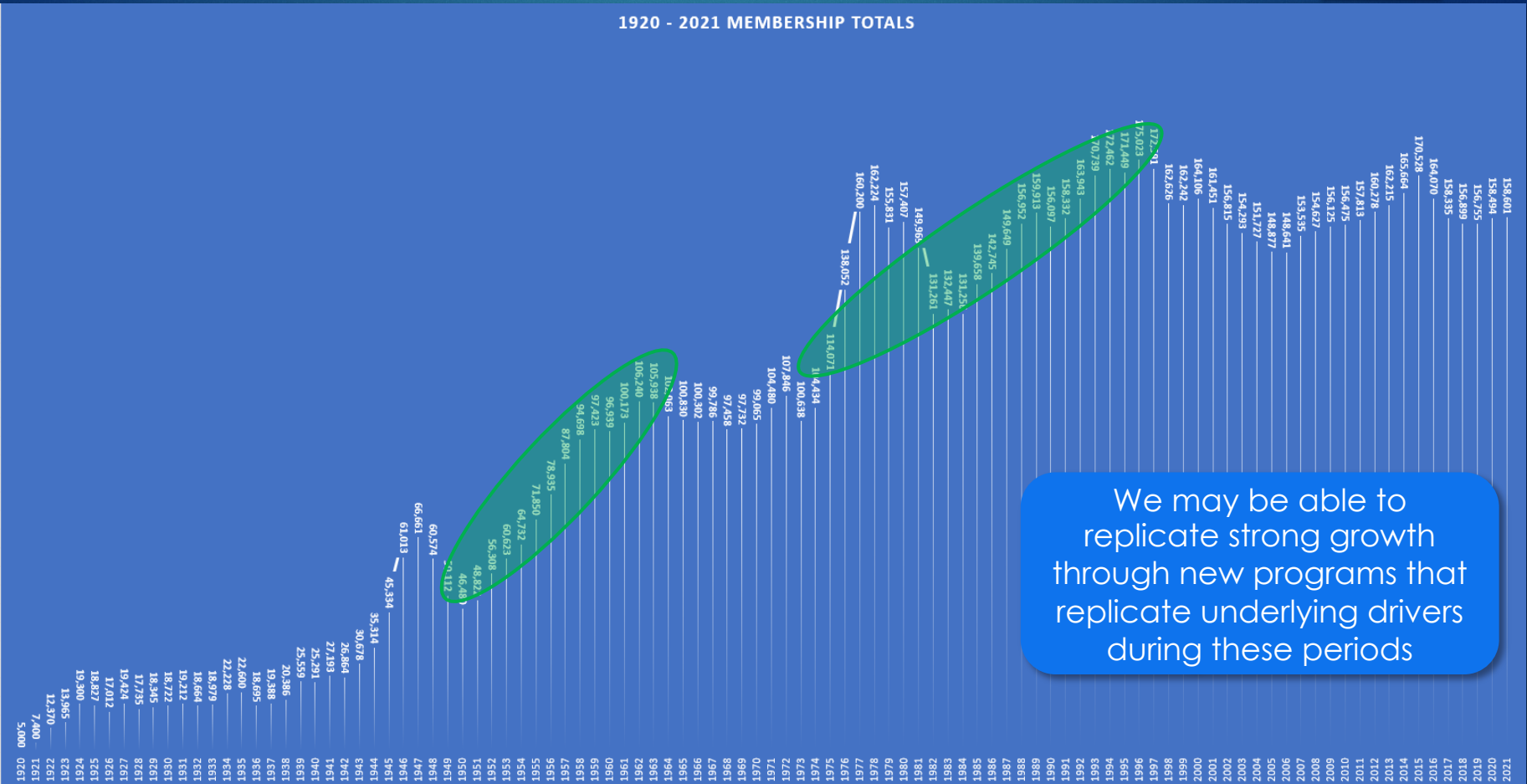
ARRL revenue streams are trending slightly down to flat over the period.

ARRL Membership Trends

The Long View



1920 - 2021 MEMBERSHIP TOTALS



We may be able to replicate strong growth through new programs that replicate underlying drivers during these periods

Wide availability of inexpensive surplus commercial radio equipment

Strong interest in and growth in CB Radio

Source: Tony Marcin, W7XM analysis of ARRL data

ARRL Membership Trends

Recommendations



- *Two large spikes in ARRL membership have occurred since 1950, We believe:*
 - The first was driven by the widespread availability of inexpensive military surplus and follow-on commercial radio equipment in the 1950's
 - **Recommendation**: create a program to promote portable operating and how to put together and use portable stations. Focus on inexpensive approaches.
 - **Recommendation**: create a program to stimulate and promote broad availability of remotely accessible stations that are publicly accessible to the Amateur Radio community at low-cost
 - **Recommendation**: create a program facilitate Tech Licensee use of 10m/6m privileges and FTx. Focus on inexpensive approaches.
- The second was driven by the CB radio craze in the 1970's
- **Recommendation**: develop a program designed to reach out to people who are utilizing consumer radio services for outdoor use, or in preparation for potential wide-spread disasters
 - Create a short study license book for entry level licensing (i.e., Tech). Need to keep the price low to be accessible to entry level folks.

Membership Growth



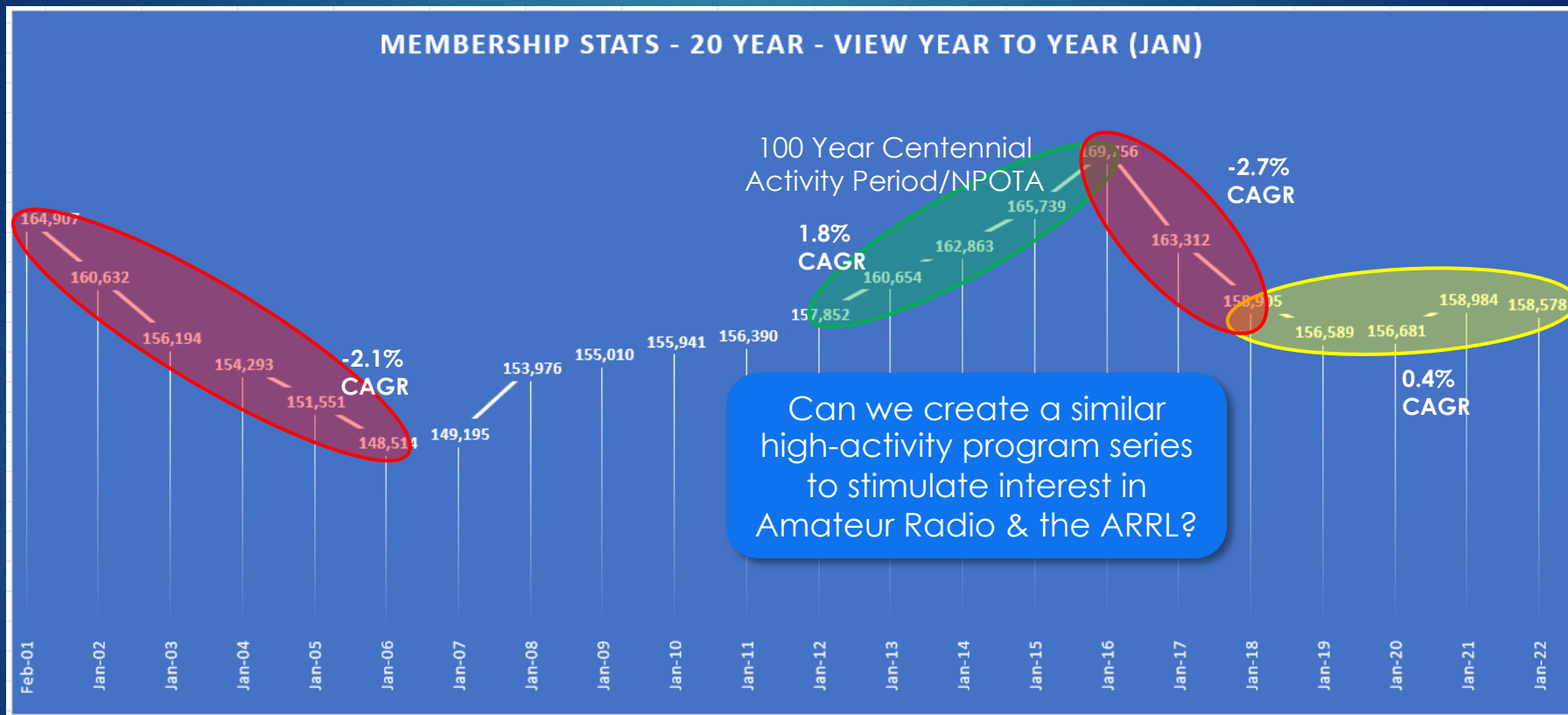
Program to promote use 10m/6m by Technicians

- GOTA help for a simple station
 - Antennas, Transceivers, Feedlines, etc. – recommended packages of equipment
 - Options for kits/homebrewing
 - POTA/SOTA approaches
 - Format training as live help sessions, videos, dedicated modern web presence, how-to guides and quick sheets
 - QST articles to promote this program
- Provide training on applicable digital modes
 - WSJT-X/FTx
 - Additional training on other digital modes as well (ex VARA chat)
- Add additional 10m contesting opportunities toward mid-year when VHF bands are at their peak propagation wise
 - Should be done in a beginner friendly format
- Consider products (ex. a 10m end-fed kit) to make 10m accessible via homebrewing
 - Possible partnership with antenna suppliers and distributors

ARRL Membership Trends



MEMBERSHIP STATS - 20 YEAR - VIEW YEAR TO YEAR (JAN)



Can we create a similar high-activity program series to stimulate interest in Amateur Radio & the ARRL?

ARRL Membership Dues Increased by \$5 (9%)

Morse Code Licensing Requirement Removed

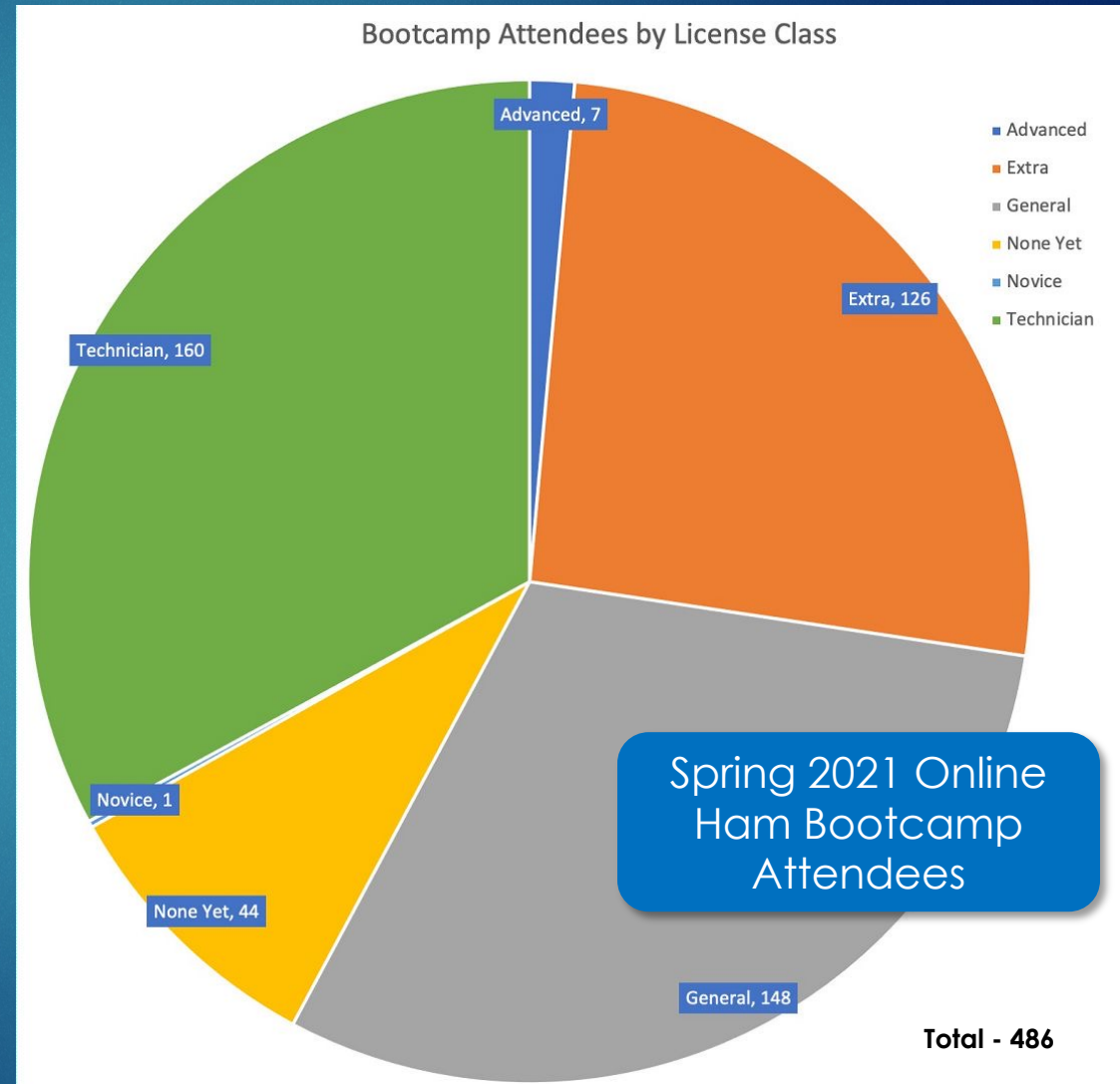
ARRL Membership Dues Increased by \$10 (20%)

Hams are looking for Mentoring

Stats from Licensing Classes & Ham Bootcamp



- Less than 20%* of the folks who earn a Technician License are active on the air after 1 year
- We believe that more than 50% of licensed US Hams are inactive
- Hams with General Class licenses and higher are looking for Mentoring & Skills Development help
 - Ham Bootcamp is a basic online Get On The Air program
 - ~60% at Ham Bootcamp attendees have a General or higher license
- Its important to include folks who don't have a license yet
 - ~10% of Boot Campers did not have a license yet



* ~400 Students served via Nashua Area Radio Society license classes, ~50% are new licensees

Previous Membership Surveys

Some observations and questions



- Our communications are currently weighted toward the most experienced (and active) hams who tend to hold general class licenses and above
 - ARRL's brand and programs (awards, contesting, services, etc.) are heavily weighted toward this portion of the Amateur Radio population
- Some of best opportunities for membership growth reside with Technician licensees and inactive hams
 - Frequent, new ham-oriented communications and training materials/programs are import for this group
 - How well do we understand and appreciate the current "Technician Licensee" Amateur Radio experience?
 - Is the ARRL the leading place for Techs to go to begin their AR experience and grow? If not, why not?

ARRL Membership Trends

Recommendations



- Broad based ARRL activities (ex. the ARRL Centennial Program) appear to accelerate membership growth rates
 - **Recommendation**: develop a plan including marketing for and launch a similar program of activities in 2022. We should also involve clubs here.
- We believe the current percentage of new licensees that are active a year after becoming licensed is in the range of 15% - 25%
 - Estimate less than 50% of the total U.S. License population are likely “active”
 - **Recommendation**: Develop and market a comprehensive ARRL program to assist hams who are newly licensed and those who are inactive to get on the air and utilize their license privileges. Engage field staff (ex. clubs) to help execute.
 - **Recommendation**: aggressively pursue the pending FCC action to enhance HF privileges for Technician licensees.
 - **Recommendation**: develop materials to help Hams with limited time to engage in Amateur Radio.

Membership Growth

Ham Development Programs



- Recommended program components
 - Live License classes – paid with possible ARRL book rebate
 - Live GOTA program (ex. Ham Bootcamp like) – free with paywall model for follow-up (see below)
 - Live interactive training sessions to learn new skills – possible paid subscription
 - Record these, implement a Paywall model for access follow on access
- Possible membership incentive models
 - Example – License class \$99 with book and 1-year ARRL membership
- Member instructor driven program - new role for the Learning Center
 - Set quality standards and formats for content
 - Administer delivery and Paywall platforms
 - Recruit member instructors
 - Setup rebate program to encourage member instructor participation
 - Possible tie in with Teacher's Institute
- Local ARRL Affiliated Club referral with mentoring programs
- Need to develop an effective marketing plan

Ham Development Driven Growth



Potential Return Analysis

- Base of all US Hams (~745K), believe more than 50% are inactive
 - We can attack 1 in 3 of the inactive 50 % which is ~122K Hams
 - Cumulative capture of inactive base of US Hams -> 35% at 5 years
- New hams licensed each year is 31.5K plus 11.5K license upgrades
 - 80% New Licensees and 20% of the upgrades will likely become inactive hams totaling ~27.5K hams per year
 - For both groups, our conversion success will peak at 35%
- Ramp up period for programs that support this growth is 3 years
- Retention rate for new members resulting from this program is 85%
- Potential membership/revenue growth profile (avg. dues \$48/year)

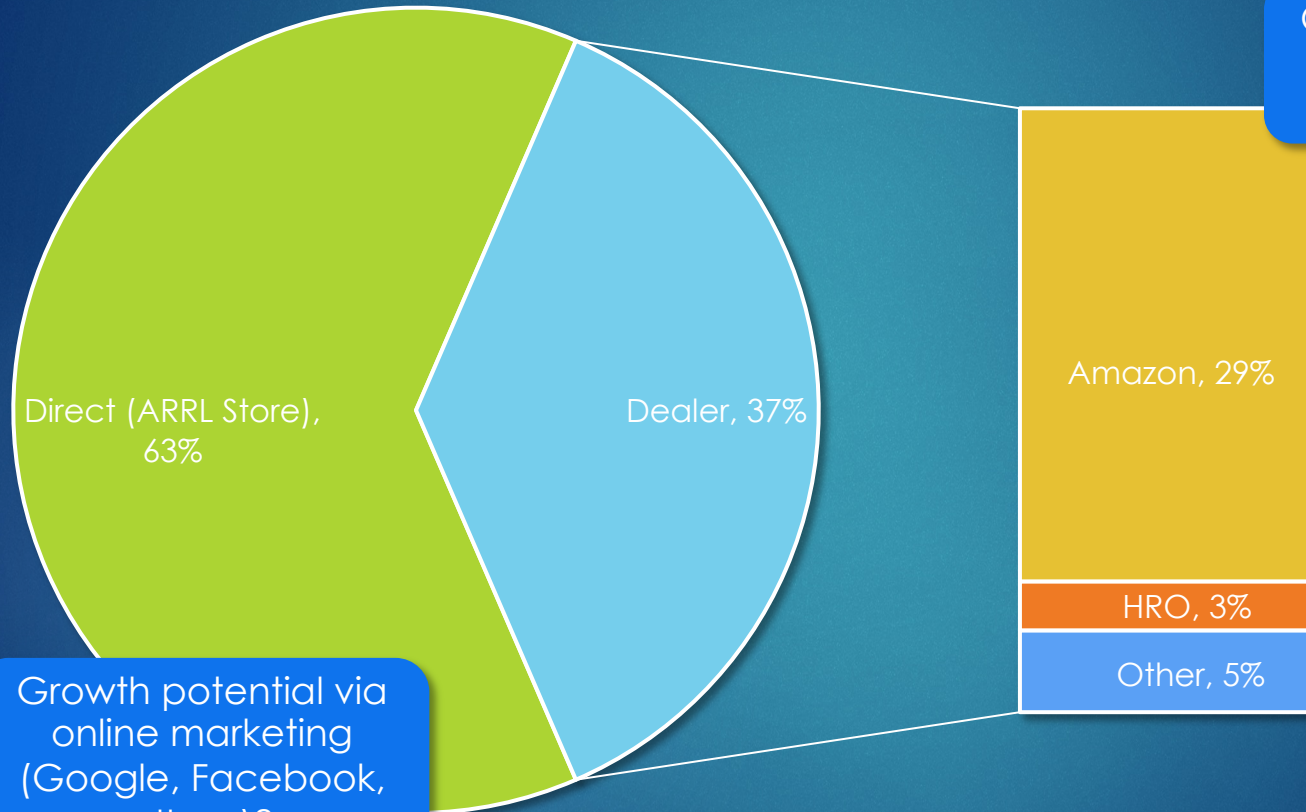
Contribution Component	2023	2024	2025	2026	2027
Inactive Base Conversion Rate	4%	9%	11%	9%	4%
New Licensee Conversion Rate	5%	18%	35%	35%	35%
Upgraded Licensee Conversion Rate	5%	18%	35%	35%	35%
In Year New Members	5,023	13,159	17,714	15,564	9,111
Cumulative New Members	5,023	17,429	32,529	43,213	45,842
In Year Incremental Revenue Growth	\$ 241,113	\$ 631,636	\$ 850,296	\$ 747,052	\$ 437,320
Cumulative Revenue Impact	\$ 241,113	\$ 836,582	\$ 1,561,390	\$ 2,074,234	\$ 2,200,418

Product Revenue Structure

Breakdown by Channel



2021 Product Sales Breakdown by Channel



Growth potential via online marketing (Google, Facebook, others)?

Growth potential via Amazon marketing services?

For trailing 5 years...

- Our total product revenues are flat
- The Direct/Dealer mix is stable
- Amazon's share of the Dealer segment is increasing at a rate roughly equal to HRO's decline

Amazon Channel

- 30% discount
- 3% return shield fee
- Shipping costs covered
- Carries top titles only

■ Direct (ARRL Store) ■ Dealer (Amazon) ■ Dealer (HRO) ■ Dealer (Other)

Product Revenue Structure

Top 10 Publication Titles in 2021



Top 10 Grossing Publication Titles and Merchandise Lines for 2021

Product Description	QTY	Gross Sales	Net Sales	% Total Net
ARRL Ham Radio License Manual	21,911	\$514,244	\$470,429	23%
ARRL Handbook	9,320	\$413,227	\$266,209	13%
ARRL General Class License Manual	10,399	\$245,456	\$216,715	11%
ARRL Extra Class License Manual	8,026	\$192,220	\$166,700	8%
ARRL Antenna Book	3,886	\$152,152	\$111,420	5%
End-Fed Half-Wave Antenna Kit	2,044	\$133,893	\$40,287	2%
ARRL Field Day 2021 Merchandise	6,225	\$69,892	\$37,856	2%
ARRL Operating Manual	3,784	\$66,487	\$57,252	3%
Grounding and Bonding	2,826	\$51,056	\$44,645	2%
Understand Basic Electronics	2,176	\$47,521	\$39,799	2%
TOTAL – Top 10		\$1,886,148	\$1,451,312	
TOTAL – All Products		\$2,854,546	\$2,049,073	
Top 10 as a percentage of total sales		66%	71%	

Amazon Channel Growth

Online Marketing Investment Potential



Potential Impact of Amazon Online Marketing Investment

Baseline Amazon Sales (2022)	\$ 850,000	/year			
Current Structural Product Sales Growth Rate:	-1.8%				
Gross Margin on Amazon Sales:	64%				
Total Amazon Sales Impact after 3 years:	150%	after 3 years			
Marketing ROI	5	:1 (Incr. Sales:Incr. Channel Marketing Cost)			
Model Component	2023	2024	2025	2026	2027
Baseline Product Sales through Amazon Channel	\$ 850,000.00	\$ 834,700	\$ 819,675	\$ 804,921	\$ 790,433
Amazon Sales Growth (%)	75%	120%	150%	150%	150%
Incremental Sales Growth (\$)	\$ 1,487,500	\$ 1,836,340	\$ 2,049,189	\$ 2,012,303	\$ 1,976,082
Gross Operating Return on Sales Growth (\$)	\$ 952,000	\$ 1,175,258	\$ 1,311,481	\$ 1,287,874	\$ 1,264,692
Incremental Cost of Sales	\$ 297,500	\$ 367,268	\$ 409,838	\$ 402,461	\$ 395,216
Net Operating Income Improvement	\$ 654,500	\$ 807,990	\$ 901,643	\$ 885,413	\$ 869,476

Recommendation: Pursue implementation of this program and review accurate financial projections before final investment commitment.

Product Revenue Growth

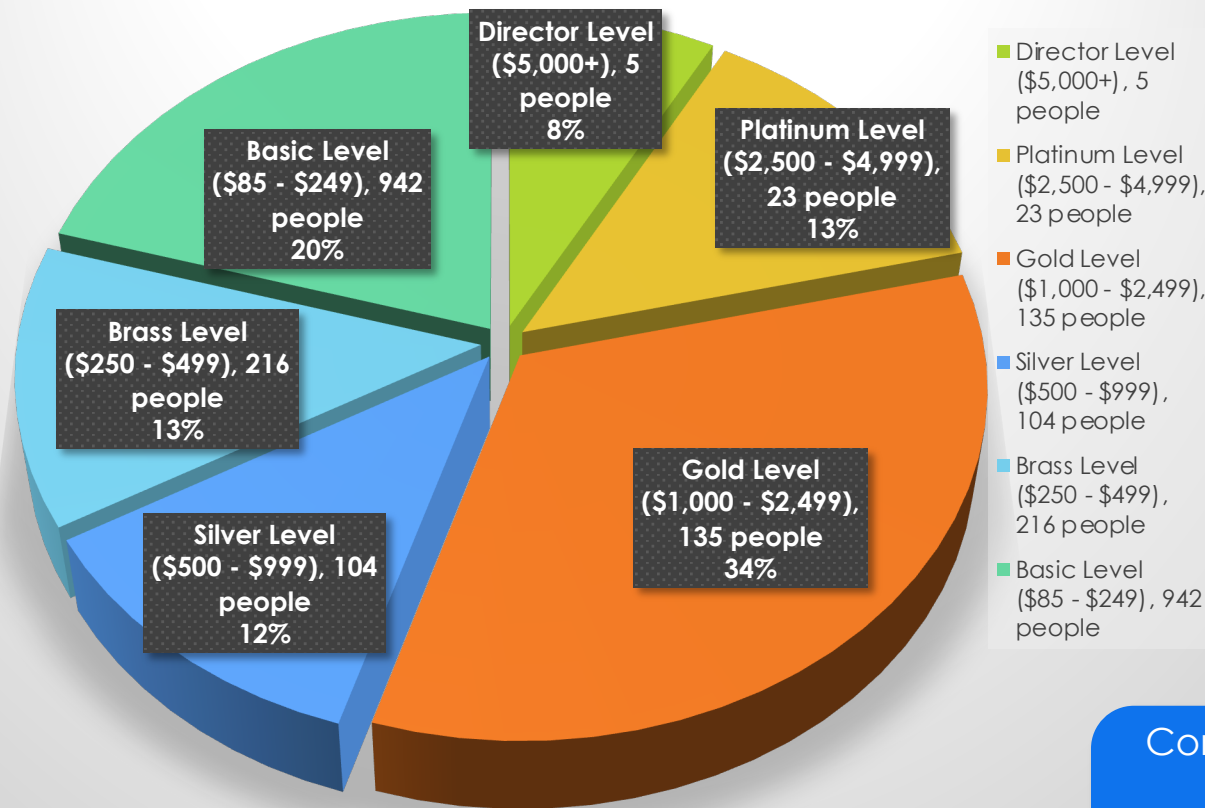
Recommendations



- **Recommendation**: Actively pursue and fund a program to use Amazon marketing tools to stimulate growth in the dealer side of the business. As investment proves effect, extend to additional retail channels.
- **Recommendation**: Engage additional consulting resources to look at how we can utilize Internet marketing tools to stimulate growth in our direct product channel (i.e., the ARRL Store).
- **Additional work to be done**: We need to continue to look at trends in the type and current mix of products to determine if we need to adjust our portfolio for better growth and profit performance
 - We should consider revitalizing some of the long tail content that we've pruned in the form of online and perhaps interactive content
 - We should also consider how our membership growth recommendations can be supported by our products and channels

Donor Programs

Diamond Club Contributions



- Director Level (\$5,000+), 5 people
- Platinum Level (\$2,500 - \$4,999), 23 people
- Gold Level (\$1,000 - \$2,499), 135 people
- Silver Level (\$500 - \$999), 104 people
- Brass Level (\$250 - \$499), 216 people
- Basic Level (\$85 - \$249), 942 people

Highest Contribution Impacts

- Gold (\$1K – 2.49K)
- Basic (\$85 - \$249)

Top Participation Categories

- Small donors < \$250
- Large donors above \$1K

Consider what motivates donors at different levels (small recognition items vs. visible contribution impact, recognition, access to leaders, and influence)

Trailing 12 Months (TTM) Ending December 2021
Total Contributions of \$387K by 1,425 donors in 2021

Donor Development 2.0

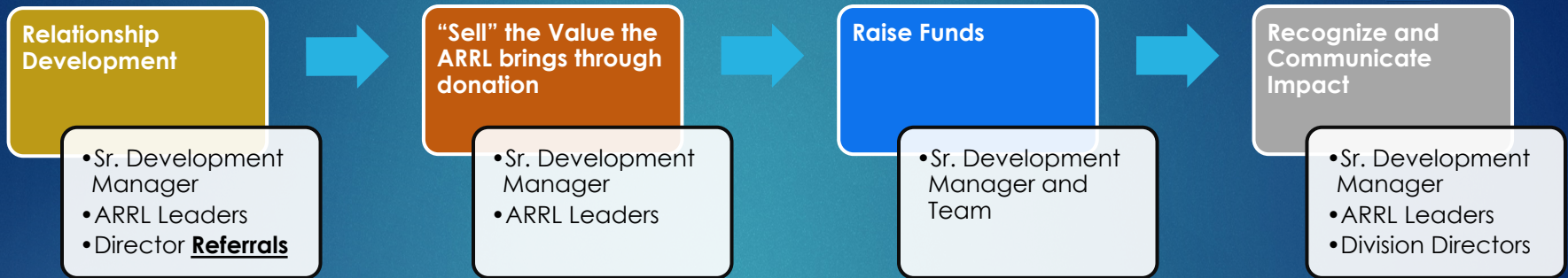
A Model for Donor Development

WORK IN PROGRESS

dreamstime.com



Develop additional Donors through Donor Networking



- Separate donor development and engagement from fundraising
- "Sell" the value that ARRL donations create
 - Reduce/consolidate donor directed options to a more manageable set
 - Develop and market support for a few "major projects"
- Recognition and communication of donor impact is essential
 - Division Directors have a key role to play here
- Redefine and modernize our approach to fund raising
 - **Recommendation** – hire an experienced Sr. Development Director to lead this effort
- We all have important roles to play to make this work
 - ARRL Leaders, Directors, Sr. Development Manager

Donor Development 2.0

Program Attributes

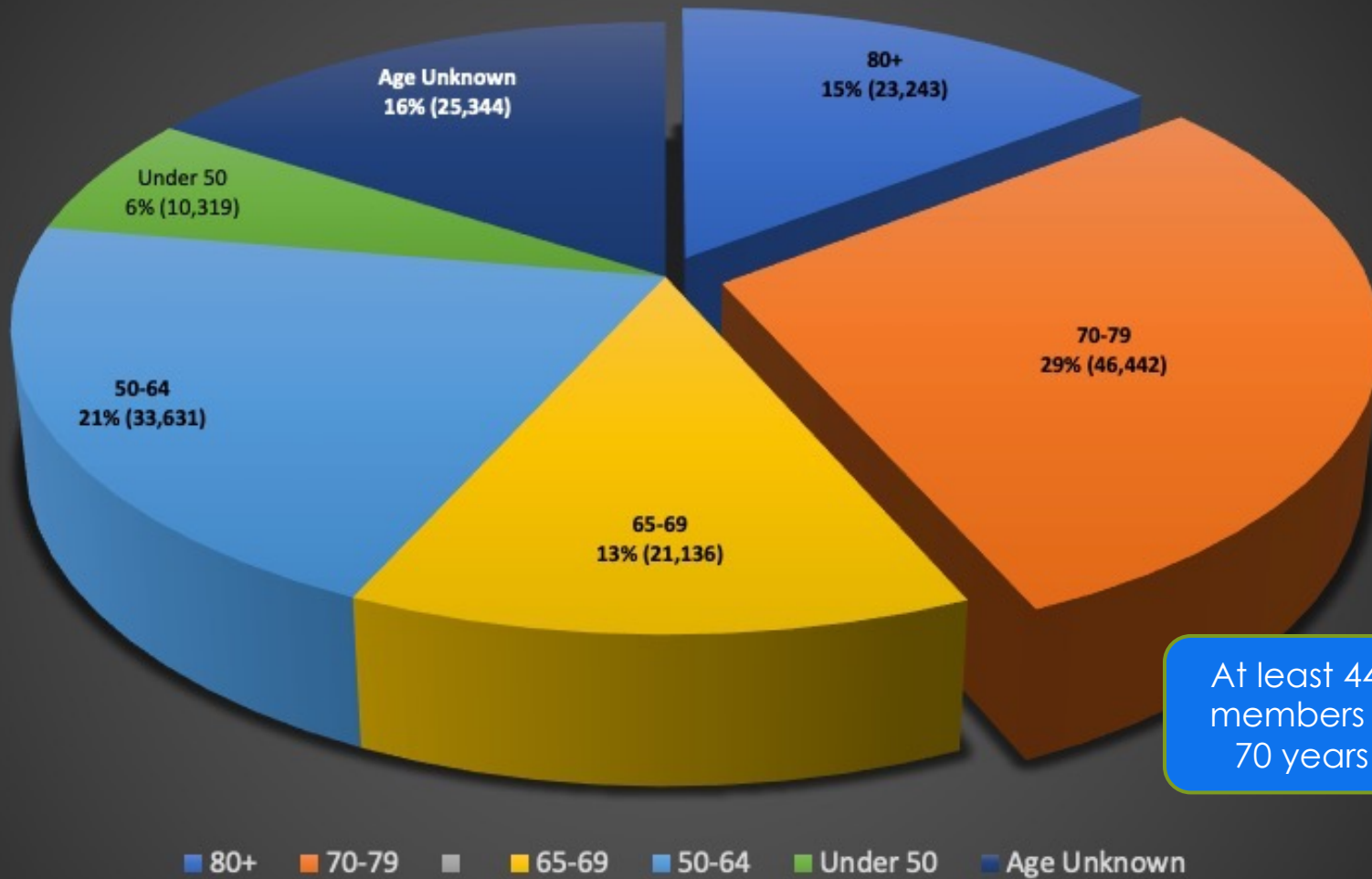
WORK IN PROGRESS



dreamstime.com

- Sr. Development Director leads effort to update and operate our Donor Programs
- Create and deploy a modern donor development process
 - Outline roles and provide training to players
- Set goals for both donor development and fund raising. Create a process for routine (quarterly) reports on progress and results to the Board.
- Cultivate committed donors to assist with networking to identify and introduce additional donors
- Provide tools and budget for multiple levels of recognition including at the Division level
 - Directors should have list of significant donors in their division
 - Budget for and facilitate Division Level (Director) as well as national level donor recognition events
- Provide regular and professional communications on impacts of donations
 - Annual report
 - Donor newsletter (quarterly)
 - Presentations (live, online, social media)

ARRL Membership Demographics



At least 44% of our members are over 70 years of age

Source: Diane Middleton CFO, data is as of March 2022

Adjustment in Benefits

Some Important Considerations



- Current monthly measures of the annual US inflation rate are running at over 8%
- Inflation rates will likely continue to impact ARRL's costs
 - This means that we have more than a \$1M/year operating gap to close
- At least 44% of our membership is 70 years of age or older
 - Many of these folks are likely in fixed income situations
 - High inflation levels are likely putting significant financial pressure on many of these folks
 - A significant portion of this group is likely modestly active on the air and seeks participation in Amateur Radio through QST
- Making access to optional printed QST expensive will likely trigger many in this group to make difficult choices
- A full transition to digital delivery of print pubs needs to be done in a way that transitions member participation and advertisers
 - Doing this will require us to transition our digital delivery platform to a more modern system, especially the ad components

Adjustment in Benefits or Dues

Three possible scenarios (so far)



- **Scenario #1** – Maintain current dues levels and charge for printed publications on a cost-plus basis
 - Online pubs can be downloaded and printed
 - Can purchase mailed print publications for an add-on fee (\$25/year price is approx. cost +30%). Adjust pricing yearly for inflation.
 - Estimate 20% loss in membership over the 3 following years
- **Scenario #2** – printed QST as an option at a loss
 - Like Scenario #1 with less incremental cost for printed and mailed QST
 - Initial print QST priced at \$10/year; adjust pricing yearly for inflation.
 - Estimate 12% loss in membership over the 3 following years
- **Scenario #3** – Raise dues \$20/year to cover operating income shortfall (no other changes)
 - 25% loss in membership over the 3 following years
 - Inflation effects quickly erode the impact of this adjustment

Financial models include the impact on Ad revenue, print pub volume effects, and inflation impacts.

Adjustment in Benefits or Dues

Scenarios

Scenario #1:

QST as optional add-on starting at \$25/year w/yearly inflation adj.

Scenario #1	2022	2023	2024	2025	2026
Pre-adjustment projected membership	157,330	155,757	154,199	152,657	151,131
Members lost due to adjustment:	14.0%	17.0%	20.0%	20.0%	20.0%
Adjusted projected membership:	135,304	129,278	123,359	122,126	120,904
Total lost dues contribution:	(\$1,057,258)	(\$1,270,975)	(\$1,480,312)	(\$1,465,509)	(\$1,450,853)
Projected Ad Revenue	\$ 1,500,000	\$1,440,000	\$1,382,400	\$1,327,104	\$1,274,020
Lost Ad Revenue due to reduction in print QST distribution (%)	12%	30%	30%	30%	30%
Lost Ad Revenue due to reduction in print QST distribution (\$)	(\$180,000)	(\$432,000)	(\$414,720)	(\$398,131)	(\$382,206)
Cost to print and mail QST per member at current vol. (inflation adjusted)	\$14.40	\$15.41	\$16.18	\$16.99	\$17.84
Savings due to reduction in mailed pubs:	\$1,948,375	\$1,991,916	\$1,995,756	\$2,074,589	\$2,156,535
Members ordering print pubs:	20.0%	20.0%	20.0%	20.0%	20.0%
Inflation adjusted price for add on print QST	\$25.00	\$26.75	\$28.09	\$29.49	\$31.56
Volume Adjusted Cost for QST	\$16.27	\$17.41	\$18.63	\$19.93	\$20.93
Contribution to operating margin by print pub members:	\$236,186	\$241,465	\$233,339	\$233,455	\$256,939
Scenario #1 - Net yearly impact on operating income:	\$947,303	\$530,406	\$334,063	\$444,404	\$580,415

Scenario #2:

QST as optional add-on starting at \$10/year w/yearly inflation adj.

Scenario #2	2022	2023	2024	2025	2026
Pre-adjustment projected membership	157,330	155,757	154,199	152,657	151,131
Members lost due to adjustment:	8.4%	10.2%	12.0%	12.0%	12.0%
Adjusted projected membership:	144,114	139,870	135,695	134,338	132,995
Total lost dues contribution:	(\$634,355)	(\$762,585)	(\$888,187)	(\$879,305)	(\$870,512)
Projected Ad Revenue	\$ 1,500,000	\$1,440,000	\$1,382,400	\$1,327,104	\$1,274,020
Lost Ad Revenue due to reduction in print QST distribution (%)	7%	10%	10%	10%	10%
Lost Ad Revenue due to reduction in print QST distribution (\$)	(\$105,000)	(\$144,000)	(\$138,240)	(\$132,710)	(\$127,402)
Cost to print and mail QST per member at current vol. (inflation adjusted)	\$ 14.40	\$15.41	\$16.18	\$16.99	\$17.84
Savings due to reduction in mailed pubs:	\$2,075,246	\$2,155,110	\$2,195,332	\$2,282,047	\$2,372,188
Members ordering print pubs:	80.0%	80.0%	80.0%	80.0%	80.0%
Inflation adjusted price for add on print QST	\$10.00	\$10.70	\$11.24	\$11.80	\$12.39
Volume Adjusted Cost for QST	\$14.71	\$15.74	\$16.84	\$18.02	\$19.28
Contribution to operating margin by print pub members:	(\$543,253)	(\$564,160)	(\$608,867)	(\$669,121)	(\$733,902)
Scenario #1 - Net yearly impact on operating income:	\$792,638	\$684,365	\$560,038	\$600,911	\$640,372

Scenario #3:

Raise dues \$20/year to cover operating shortfall

Scenario #3	2022	2023	2024	2025	2026
Pre-adjustment projected membership	157,330	155,757	154,199	152,657	151,131
Members lost due to adjustment:	17.5%	20.0%	25.0%	25.0%	25.0%
Adjusted projected membership:	129,757	122,658	115,649	114,493	113,348
Total lost dues contribution:	(\$1,321,572)	(\$1,588,718)	(\$1,850,390)	(\$1,831,886)	(\$1,813,567)
Projected Ad Revenue	\$ 1,500,000	\$1,440,000	\$1,382,400	\$1,327,104	\$1,274,020
Lost Ad Revenue due to reduction in print QST distribution (%)	7%	10%	10%	10%	10%
Lost Ad Revenue due to reduction in print QST distribution (\$)	(\$105,000)	(\$144,000)	(\$138,240)	(\$132,710)	(\$127,402)
Contribution due to dues increase:	\$2,595,945	\$2,453,168	\$2,312,987	\$2,289,857	\$2,266,959
Scenario #3 - Net yearly impact on operating income:	\$1,169,373	\$720,450	\$324,357	\$325,261	\$325,990

Benefits Adjustments

Conclusions to Date



- We need to do more work to refine the assumptions that underpin the scenarios including:
 - Projected impact on advertising revenue
 - QST pricing vs. membership impact
 - QST volume impact on costs
 - Inflation profile and effects
- We also plan to look at some options to tier benefits and costs. Variables to consider include:
 - Print pubs (QST, On The Air, ...)
 - Awards and LoTW Credits
 - VEC Fees
 - ...
- We need to execute a well thought out communication program **BEFORE** deploying changes

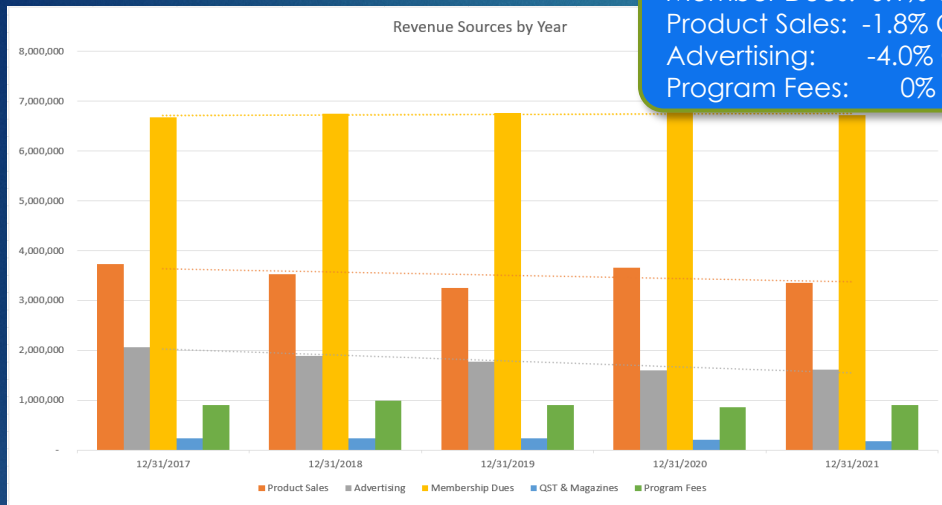
What Does All Of This Tell Us?

And what should we next?



Revenue Trends

And what they tell us about our Business Model



Member Dues: 0.1% CAGR
Product Sales: -1.8% CAGR
Advertising: -4.0% CAGR
Program Fees: 0% CAGR

Revenue enhancements based upon current business models buy time at best. We need to make fundamental shifts in our business models to create growth.

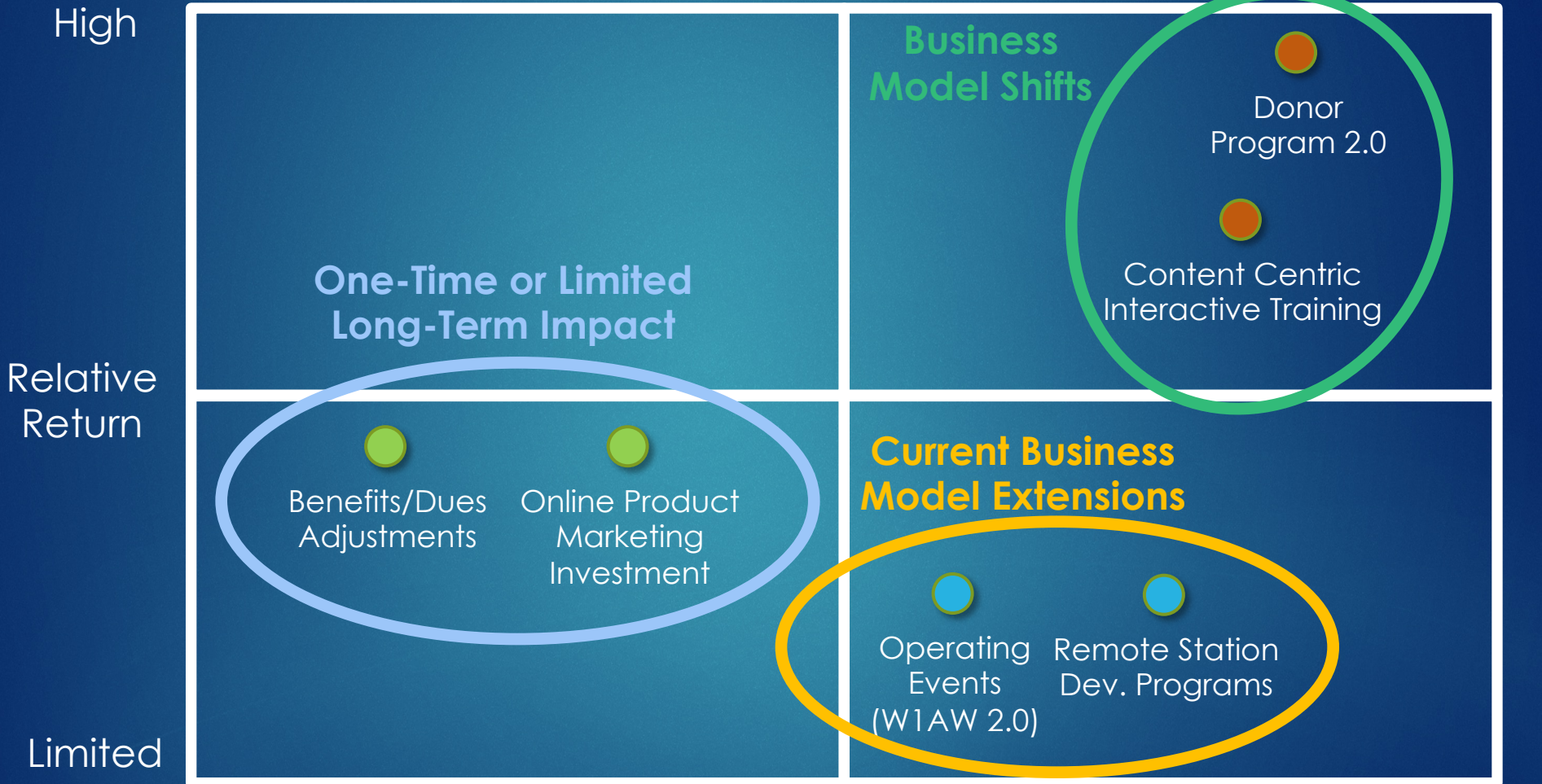
- All major revenue streams show flat to declining trends
- Underpinning drivers are based on a combination of flat to declining business models
 - Addressable membership population (US Licensees) is flat and suffering from increasing downward pressure due to age and a lack of offsetting replacement by younger Hams
 - Demand for learning resources such as books is shifting to online, multimedia-based and interactive products that are monetized via indirect business models
 - Overall declines in the Amateur Radio equipment market along with shifts in demand to online content are causing a decline in Ad revenue

Income Enhancement Options

Tactical vs. Structural Choices

Implementation Cost

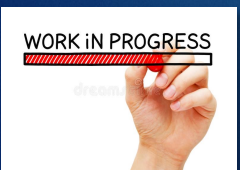
- Low
- Medium
- High



Tactical

Type for Income Enhancement

Long Term Structural Growth



Recommended Path Forward



- Online marketing improves productivity of our sales channels and extends the value of our current print publications business
- Operating Events (W1AW 2.0) and Remote Station Programs are important ways to grow membership via our existing model
- Content Centric Interactive Training programs (ex. Interactive Ham Development program) should be an anchor in a transition to content paywall models

- Continue work on programs to encourage broad Remote Station availability and access at reasonable costs
- Benefits adjustment scenarios need more work but may be necessary to buy time to implement the other initiatives
- A modern Donor Program has the potential to fund the other initiatives and is being considered as foundational component of our plans

The first three items are important ways to extend our current models' effectiveness while we transition to models with stronger growth potential

Begin execution planning

More work is required

Next Steps



- We are continuing our work through 2H2022 to
 - Refine "roughly right" financial projections for the various options
 - Refine the details of our implementation recommendations
 - Develop recommendations for content-based business model additions and for an updated Donor program
 - Better understand the impacts of service adjustment options
- We need to broaden the implementation planning for the options and recommendations identified to date
 - Undertaking discussions with Sr. Leaders and their teams to refine recommendations and plans
 - Develop plan for HQ team ownership and accountability for execution
- Our recommendations will require in-year investments, some new programs, and some additional HQ staffing