Michael Gorriarán

President, Arjuna Solutions

› 4+ Years, Arjuna Solutions

› 30+ Years Microsoft, Xerox
  • Advanced Tech Solutions & Services

› USA, LATAM, Europe, Global Leadership Roles

› MBA, Kellogg School of Mgt, Northwestern U.

› Former Chairman, OCHA
  • Oregon Council Hispanic Advancement 501(c)(3)

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Decisions-as-a-Service for Nonprofit Fundraising
Behavioral Economics Modeling and AI Services

Founded by a Professor of Decision Sciences, Johns Hopkins University

2013	Established in Business as LLC
2014	Patents Awarded. R&D for ~4 years.
2018	Available to Nonprofits. Direct response fundraising, annual giving $15–$10,000
2018–22	AI Technology/Service Delivery, and Domain Expertise. C-Corp
2018–22	~10B Records Processed. Influenced over $100M+ in donations

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Agenda

› Today's giving environment

› Responding to inflation

1. Focus on improving net proceeds

2. Optimize donor lifetime value

3. Personalize relationship investment decisions at scale

4. Find new value in lapsed donor campaigns

5. Measuring fundraising performance

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Today's Fundraising Environment

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Fundraising Environment

Post-COVID-19 Vaccinations: Q4 Spending +

› $$$+ entertainment, dining, clothes, travel, cars…

Inflation

› Less disposable income
  • Donor elasticity declining <$75
  • Donations < $100 Annually (73% Pop.)

› Fundraising cost increases
  • Direct mail: rising cost of paper, envelopes, postage, freight, labor (+15% to 20% YoY)
  • Digital: increasing cost of platform, apps, integration, ongoing management and labor

Episodic giving increasing +

› War, courts, laws, natural disasters, social

COVID-19 and philanthropy: How donor behaviors are shifting amid pandemic

The NonProfit Times
The Leading Business Publication For Nonprofit Management

Articles & Reports   Store   Software Reviews   Training   Hiring   NPT Finance (NEW)   About

Special Report
Giving USA Data Shows $18.6B Lift Flattened By Inflation

by Paul Clolery and Peggy Wright   Tuesday | June 21st, 2022

Direct Mail Paper Costs are Increasing
March 3, 2021   Blog, PMG News

Here's what you need to know about increasing paper costs:

Paper costs have been stable for quite some ti...
supplier partners have alerted us to pri...
mills beginning in March. These...
and uncoated stocks com...
packages.

Record-breaking donations raise almost £62m for Ukraine in a week

By Eleonora Pilastro
Published 12 May 2022

National Council of Nonprofits

New Giving Data and Reports: Giving Stays Flat, and Worrisome Trend of Fewer Donors Continues

June 23, 2022   By Amy Silver O'Leary | Posted in: Fundraising | Giving | Data

**Fewer donors. Smaller gifts.
Net-negative growth after inflation**

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1

Focus On Improving Net Proceeds From Fundraising Campaigns

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Maintain Dynamic Economic Models for Each Donor
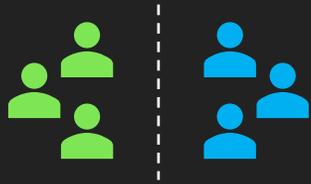
Improve Net Proceeds (NP)

$$NP = (\text{Avg gift} \times \text{\# Donors}) - (\text{Cost of solicitations})$$

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Improve Net Proceeds
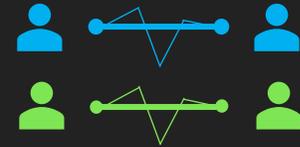## Behavioral Economics Modeling with AI (BEM-AI)

Enhance lift in
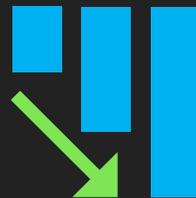annual giving

Optimize
lifetime giving

Advance donors
across segments

Optimize solicitation costs
10 - 30%

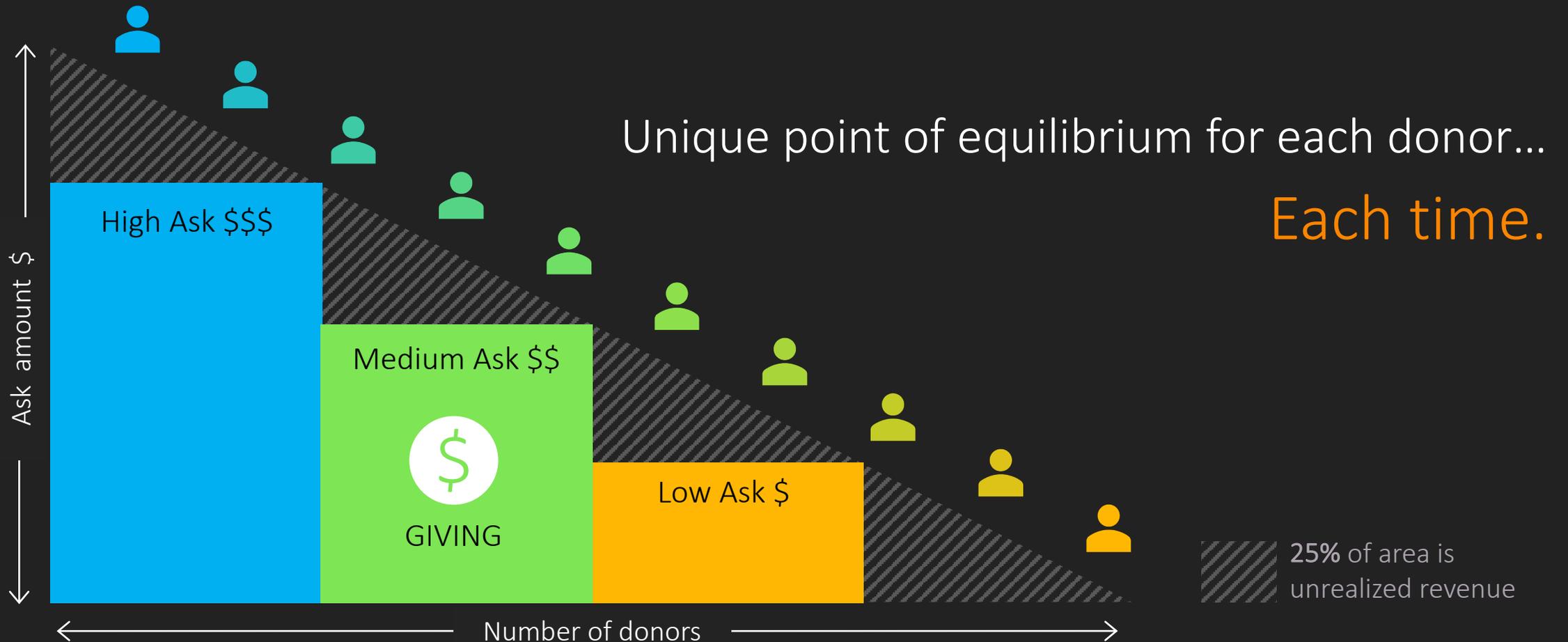ARJUNA

2

Optimize Donor Lifetime Value

› Retain donors—first

› Know precisely how much to ask today

› Advance donors across giving segments

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Improve Giving Levels

Problem: Suboptimized giving performance

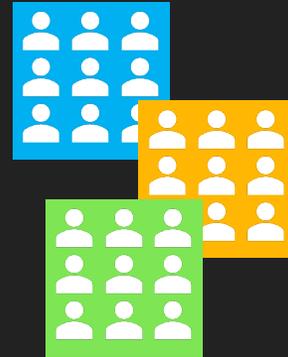Solution: AI personalized, optimized, time sensitive, gift array values

Unique point of equilibrium for each donor…

Each time.

High Ask $$$

Medium Ask $$

$ GIVING

Low Ask $

Ask amount $

Number of donors

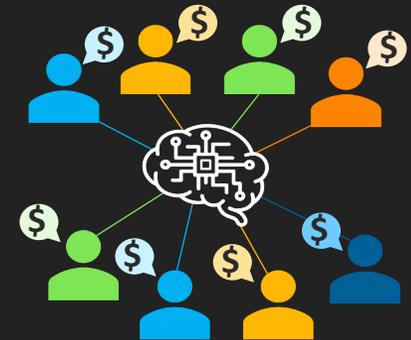25% of area is unrealized revenue

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Fundraising Methods

Major giving

Requires a one-to-one "ask"

Deep relationship cultivation

Useful for substantial gifts

Broad giving segments

Standard gift arrays (RFM)

Transactional relationship

Useful for simplicity in fundraising

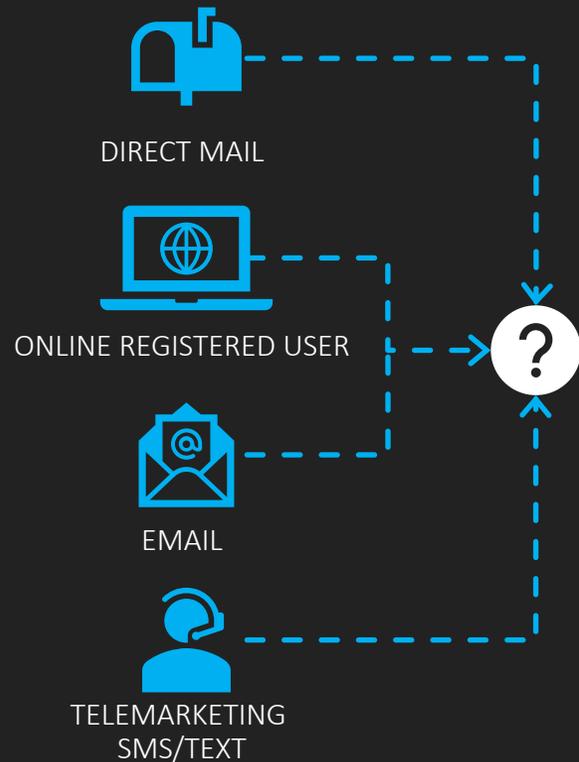## Segment of 1 @ scale

Individually optimized gift arrays

Personalized giving insights at scale

Useful in optimizing lifetime giving

Dynamic personalization and optimization at scale

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Dynamic Personalization and Optimization at Scale

Donor experience
Gift solicitation channels

DIRECT MAIL

ONLINE REGISTERED USER

EMAIL

TELEMARKETING
SMS/TEXT

Speculating vs. knowing

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Influencing Behavior: A Statistically Material Shift

Three-year Avg. Donor Giving Behavior
Distribution of Historic Control vs Treatment

$0 $50 $100 $150 $200 $250 $300 $350

Control Group		Treatment Group	
Avg single gift	Stdev	Avg single gift	Stdev
$68.38	$94.49	$69.18	$96.91

Source: Anonymous Arjuna Customers

Gifts After AI Treatment
Distribution of Pilot Time Period Donation Amounts

Curve shift yields
+$142,831

$0 $50 $100 $150 $200 $250 $300 $350

Control Group		Treatment Group	
Avg single gift	Stdev	Avg single gift	Stdev
$53.21	$81.53	$56.75	$112.33

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Optimize Donor Value While Maintaining Retention

Average Donation Amount

Active Donor Count

Source: Anonymous Arjuna Customer

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Donor Advancement Across Giving Segments

	% Dollars	% Donors
0. No Historic Avg	0%	0%
1. Less than $25	9%	26%
2. $25 - $49	24%	38%
3. $50 - $99	24%	20%
4. $100 - $499	38%	15%
5. $500 - $999	3%	0%

Donor Advancement

13%

-93%
15%

-46%
36%

-27%
31%

-28%
38%

-718%
49%

($110) ($100) ($90) ($80) ($70) ($60) ($50) ($40) ($30) ($20) ($10) $0 $10 $20 $30 $40 $50 $60 $70

Average Difference from Historic Baseline

	% Dollars	% Donors
6. $1,000 - $2,499	1%	0%
7. Over $2,500	1%	0%

-1517%
54%

-753%
69%

($3,500)   ($3,000)   ($2,500)   ($2,000)   ($1,500)   ($1,000)   ($500) $0

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Arjuna BEM-AI Learning Cycles

Final Lift
4.2%

Round 3 Lift
3.3%

Round 2 Lift
2.9%

Round 1 Lift
2.6%

$20,000,000

$15,000,000

$10,000,000

$5,000,000

$-

Total Campaign Contributions

Incremental
Funds Raised
$795,750
(223% ROI)

Control

ExactAsk Treatment

Baseline   Round 1   Round 2   Round 3   End

Source: Anonymous Arjuna Customer in Emergency Response sector

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3

Personalize Relationship Investment Decisions at Scale

› Optimize solicitation cadence model monthly

› Reduce the cost-per-dollar raised

› Sustain brand equity

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Personalize, Optimize Individual Solicitation Investment Decisions

Improve net proceeds available to invest in mission

No gift response
Quickly identify and dramatically reduce solicitation volume

One gift response
Solicit the fewest times needed to optimize lifetime giving levels

Multiple gift responses
Solicit more often and optimize lifetime giving across campaigns

Distinct count of Solicitation

Month of Campaign Date

March 2020 | June 2020 | September 2020 | December 2020 | March 2021 | June 2021 | September 2021 | December 2021 | March 2022

Response statistics

› 93.9% of solicitations produce $0

› 69.8% of solicitations sent to individuals who did not provide donation

Reduce solicitations by 10 - 30%

› Keep donors engaged

› Sustain brand equity

› Reduce cost per dollar raised

› Minimize carbon footprint

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Dynamically Personalize Solicitation Cadence at Scale

$ giving relative to number of times donors are solicited

More Solicitations Produce Less Money

Personalize solicitation decisions to improve fundraising performance and preserve brand equity

Source: Anonymous Arjuna customers

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Implementing Solicitation Volume Optimization

BEM-AI Model Ranks the Value of Solicitations

Keeps Gross Revenues Flat while Reducing Costs

30% Reduction
$1,248K Gross
$898K Net
$350K cost

No Reduction
$1,250K Gross
$750K Net
$500K cost

Legend:
- Mail Production Cost
- Gross Revenue
- Net Proceeds

Y-axis: $1,400,000 / $1,200,000 / $1,000,000 / $800,000 / $600,000 / $400,000 / $200,000 / $-

X-axis: 95% 90% 85% 80% 75% 70% 65% 60% 55% 50% 45% 40% 35% 30% 25% 20% 15% 10%

% reduction of mail volume for campaign

Optimize Net Proceeds

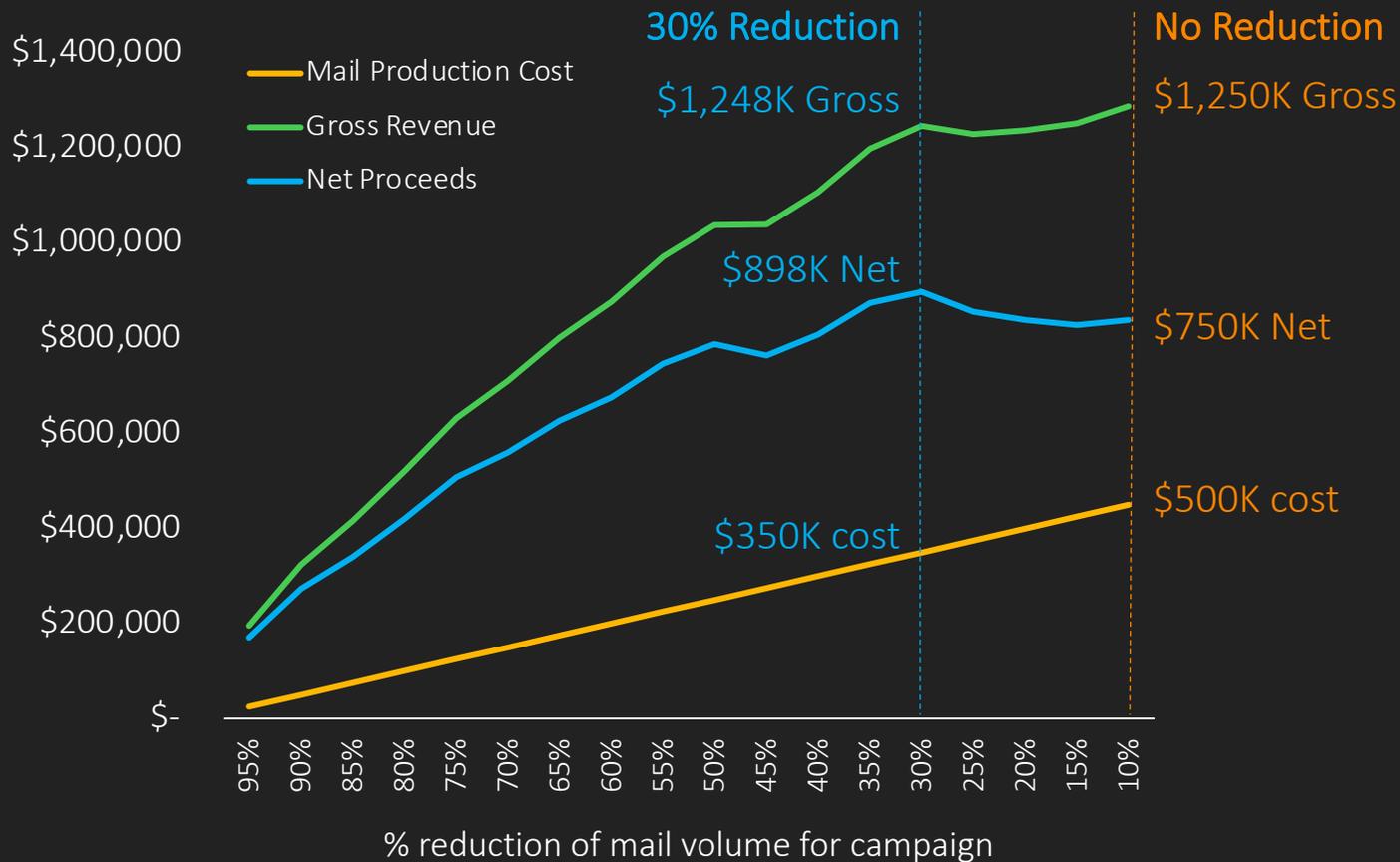| Mail volume reduction	Gross revenue	Mail production cost	Net proceeds
10%	$1,288,571	($450,000)	$838,571
15%	$1,251,954	($425,000)	$826,954
20%	$1,238,447	($400,000)	$838,447
25%	$1,230,477	($375,000)	$855,477
30%	$1,247,532	($350,000)	$897,532
35%	$1,199,557	($325,000)	$874,557
40%	$1,107,416	($300,000)	$807,416
45%	$1,039,156	($275,000)	$764,156
50%	$1,038,134	($250,000)	$788,134
55%	$971,694	($225,000)	$746,694
60%	$876,344	($200,000)	$676,344
65%	$801,485	($175,000)	$626,485
70%	$710,075	($150,000)	$560,075
75%	$632,397	($125,000)	$507,397
80%	$519,949	($100,000)	$419,949
85%	$415,434	($75,000)	$340,434
90%	$323,429	($50,000)	$273,429
95%	$195,451	($25,000)	$170,451

Gain
$147,532

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Monthly Consultation
Ideal monthly solicitation volume

1. Inputs and Assumptions

Response Rate	5.00%
Solicitations	500,000
Average Gift	$50
Mail Production Cost	$1.00
% Proposed	30%

2. Status Quo

Revenue	$1,250,000
Cost	($500,000)
Net	$750,000
Responses	25,000
Avg Gift	$50
Cost / $1 Raised	**$0.40**

3. Using ExactDonor

Revenue	$1,247,532
Cost	($350,000)
Net	$897,532
Responses	19,069
Avg Gift	$65
Cost / $1 Raised	**$0.28**

4. ExactDonor ROI

ED Revenue	$147,532
ED Cost	$52,500
ED ROI	181%

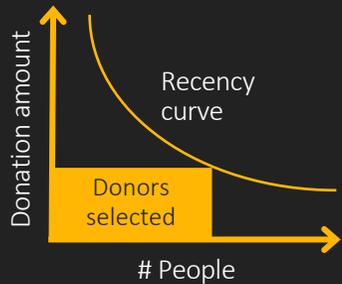**30% Reduction in Cost per $ Raised**

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4

Find New Value In Lapsed Donor Campaigns

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Lapsed Reactivation Optimization

The selection game: identifying today's optimal donor...

Recency
Latest gift

Propensity
Likelihood to Donate

ExactDonor
Likelihood to increase DLV

Produces +35% Gift Value $ than competing models

Strong participation, but lower gift levels

Strong donation level, but fewer donors

Multi-dimensional behavioral modeling

Calibrated through experience curve at enterprise scale volume

Lapsed Campaign: Donor inactive for 25 - 59 months
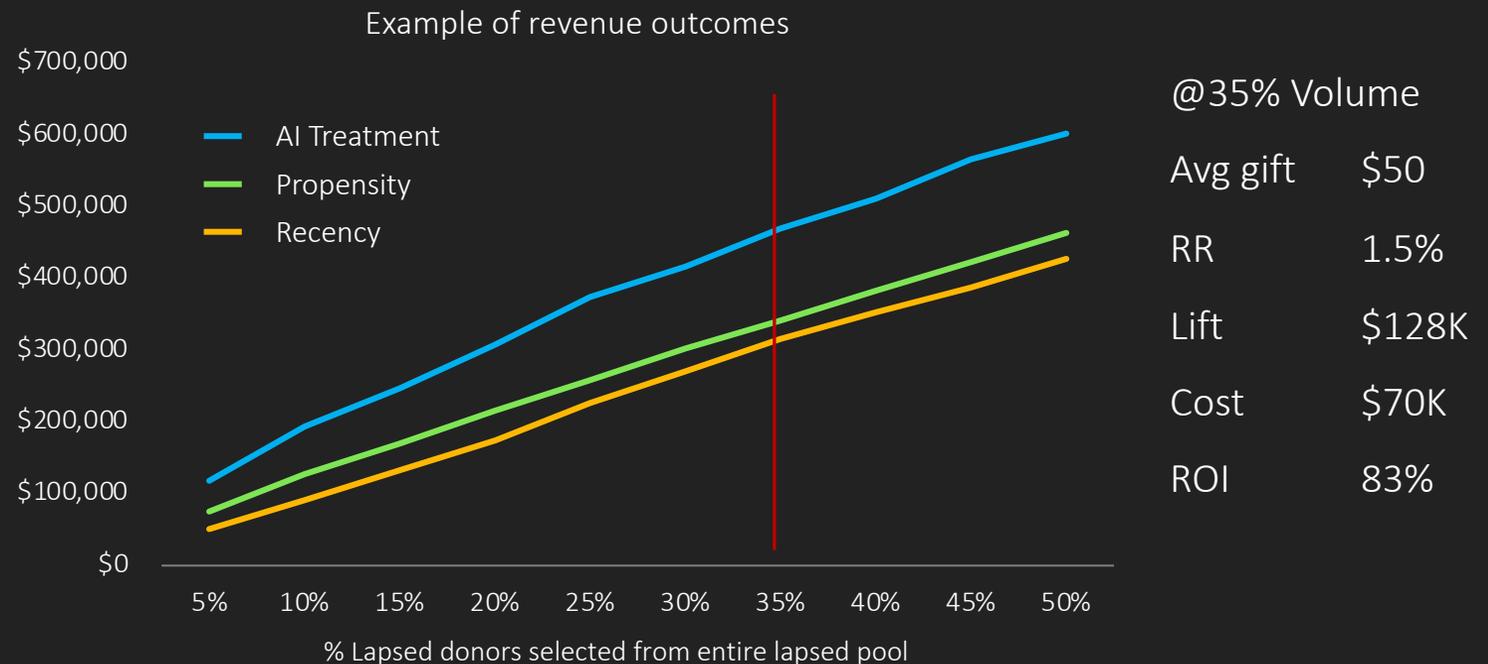
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Lapsed Donor Selection Model Options
BEM-AI selection compared to recency and propensity models

BEM-AI Selection Performance

% of solicitations from selection pool	BEM-AI selection vs. recency	BEM-AI selection vs. propensity
5%	2.44	1.65
10%	2.23	1.59
15%	1.94	1.52
20%	1.85	1.50
25%	1.74	1.52
30%	1.62	1.45
35%	**1.56**	**1.44**
40%	1.52	1.40
45%	1.54	1.41
50%	1.48	1.36

Varies. Above assumes 5% response rate and $50 avg gift

Results From Three Ranking Methodologies

Example of revenue outcomes

% Lapsed donors selected from entire lapsed pool

@35% Volume	
Avg gift	$50
RR	1.5%
Lift	$128K
Cost	$70K
ROI	83%

Acquiring a new donor can cost 5x more than retaining an existing donor
Increasing donor retention by 5% can increase giving from 25 - 65%

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BEM-AI Learning Curve

Baseline Discovery Period

1ˢᵗ Round Applied Learning

2ⁿᵈ Round Applied Learning

Cumulative campaign contributions

$60,000
$50,000
$40,000
$30,000
$20,000
$10,000
$0

Lift: +25.67%

Lift: +51.29%

Lift: +62.74%

Control
Treatment

Day 1 — Day 60   Day 1 — Day 60   Day 1 — Day 60

Total investment of ($5,936) raised an incremental $22,919

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Why Deploy BEM-AI for Fundraising Optimization?

› Measure specific donor sentiment rather than capacity for giving

› Develop a nonprofit and donor-specific, continuously learning model

› Adapt proactively to changing environment in real time

› Scale personalization: dynamic lifetime giving and cadence optimization

› Avoid confirmation & selection bias of PII, recency, propensity models
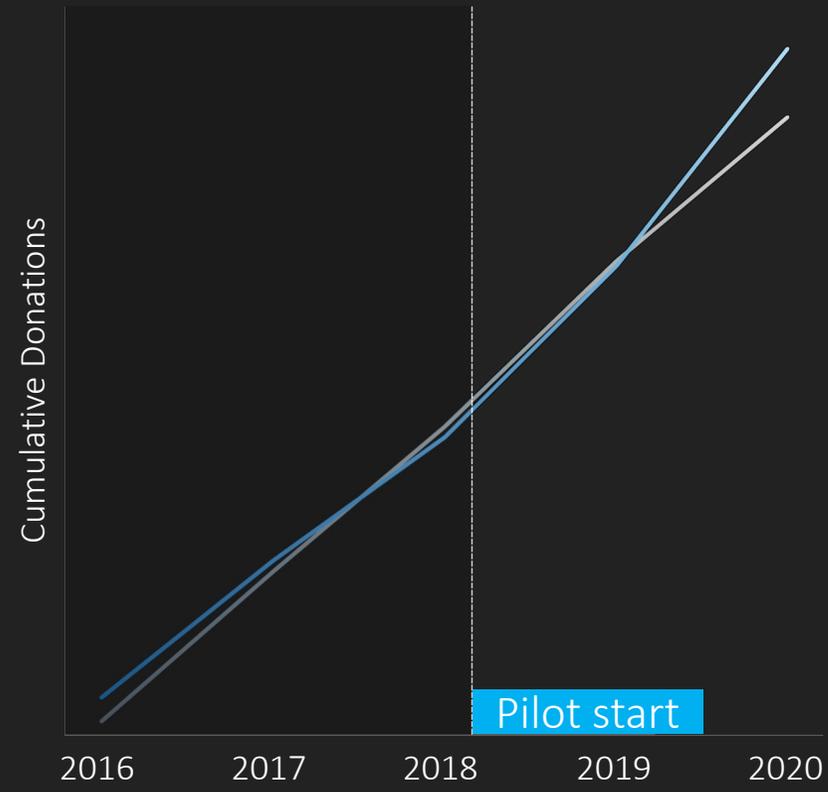
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5
Measure Performance
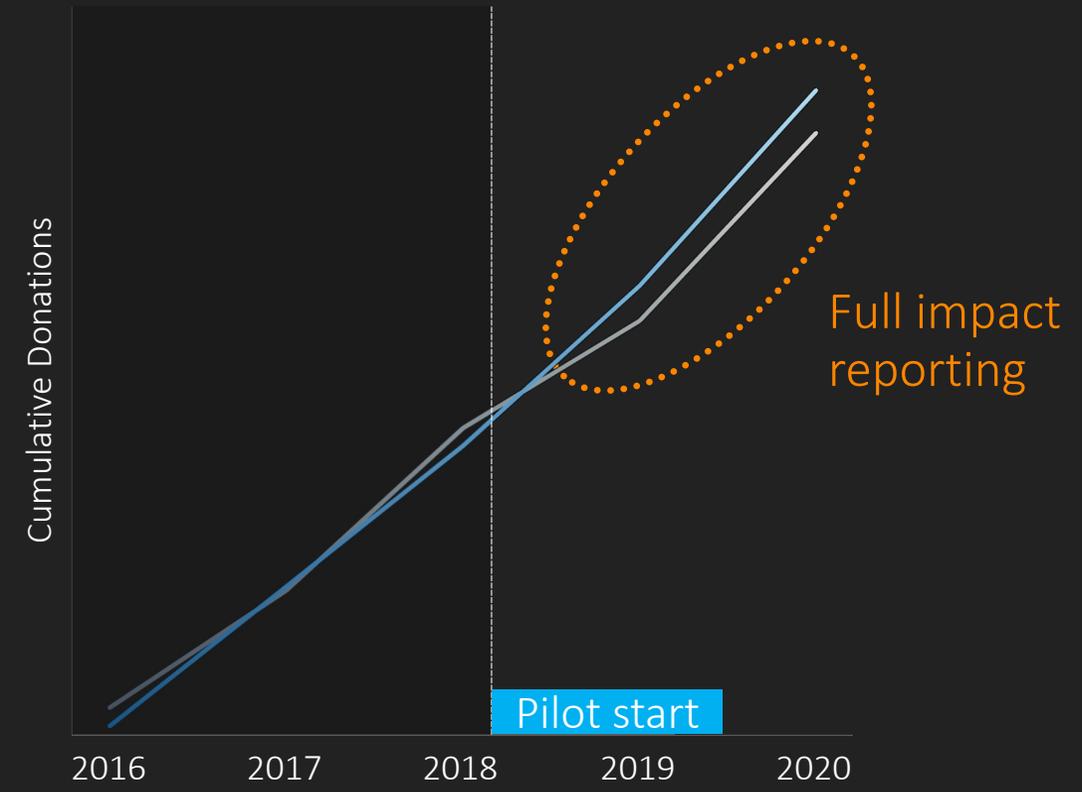
› Holistically

› Objectively

› Transparently

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Measure and Win as an Enterprise

Direct and indirect influence of touchpoints on donor behavior

Direct Attribution

Indirect Attribution

Cumulative Donations

Cumulative Donations

Pilot start

Pilot start

Full impact reporting

2016   2017   2018   2019   2020

2016   2017   2018   2019   2020

Source: Anonymous Arjuna customer in Multipurpose Human Services sector

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Re-evaluate Budget Setting

Zero-based budgeting

› Brought by today's environment

Apply zero-based budgeting methods/philosophy

› Start with zero every year, and justify every dollar:

- Strategic value scoring, project risk/viability, and ROI%, IRR% or NPV
- Build project business cases: reviewed approved, in performance review
- Environment requires quarterly evaluation & reallocation of $$$

Be uniform, transparent with budget criteria and hurdle-rate targets

› Measure upside in revenue and cost elimination uniformly

› Apply consistent up/downside risk rates factors

› Define mandatory compliance and discretionary spending

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Summary

› Today's giving environment

› Responding to inflation

1. Focus on improving net proceeds

2. Optimize donor lifetime value

3. Personalize relationship investment decisions at scale

4. Find new value in lapsed donor campaigns

5. Measuring fundraising performance

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Teşekkürler

Tack

Hvala

متشكرم

Obrigado

Cám ơn

Ďakujem

благодаря

Salamat Po

நன்றி

Grazie

ध्यवाद

ευχαριστώ

дякую

谢谢

감사합니다

शुक्रिये

Thank You!

شكراً

Dziękuję

Gracias

Danke

Dank u Wel

ขอบคุณครับ

תודה

ありがとうございます

Terima Kasih

Mulţumesc

Köszönöm

Tak

Kiitos

спасибо

多謝晒

Děkuji

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Arjuna's BEM-AI Pilot Results Summary

			Donation amount (excluding outliers)		KPIs		
Campaign Type	Solicitations	Investment	Control Group	ExactAsk Treatment Group	Lift $	Lift %	ROI
ExactAsk HDC	82,000 (35%)	($246,000)	$22,774,340	$23,656,253	$795,750	4.2%	223%

Customer invested ($246,000) in ExactAsk and raised an incremental $795,750

Source: Anonymous Arjuna Customer in Emergency Response sector

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Performance With Lapsed Donors ($129M)

Campaign date	Campaign type & # of C/T	Control	Treatment	Delta	Lift	Investment	ROI
September 11, 2017	Lapsed: N=37,500 each	$11,473	$17,192	$5,719	50%	($3,713)	154%
April 3, 2018	Lapsed: N=11,448 each	$5,393	$9,861	$4,468	83%	($1,133)	394%
June 1, 2018	Lapsed: N=11,516 each	$8,472	$21,204	$12,732	151%	($1,140)	1,117%
	Total Lapsed	$25,338	$48,257	$22,919	90%	($5,986)	383%

Total investment ($5,936) in BEM-AI services and raised an incremental $22,919

*Reported numbers are donations within 60 Days of the campaign

Source: Anonymous Arjuna customer in Health and Human Services
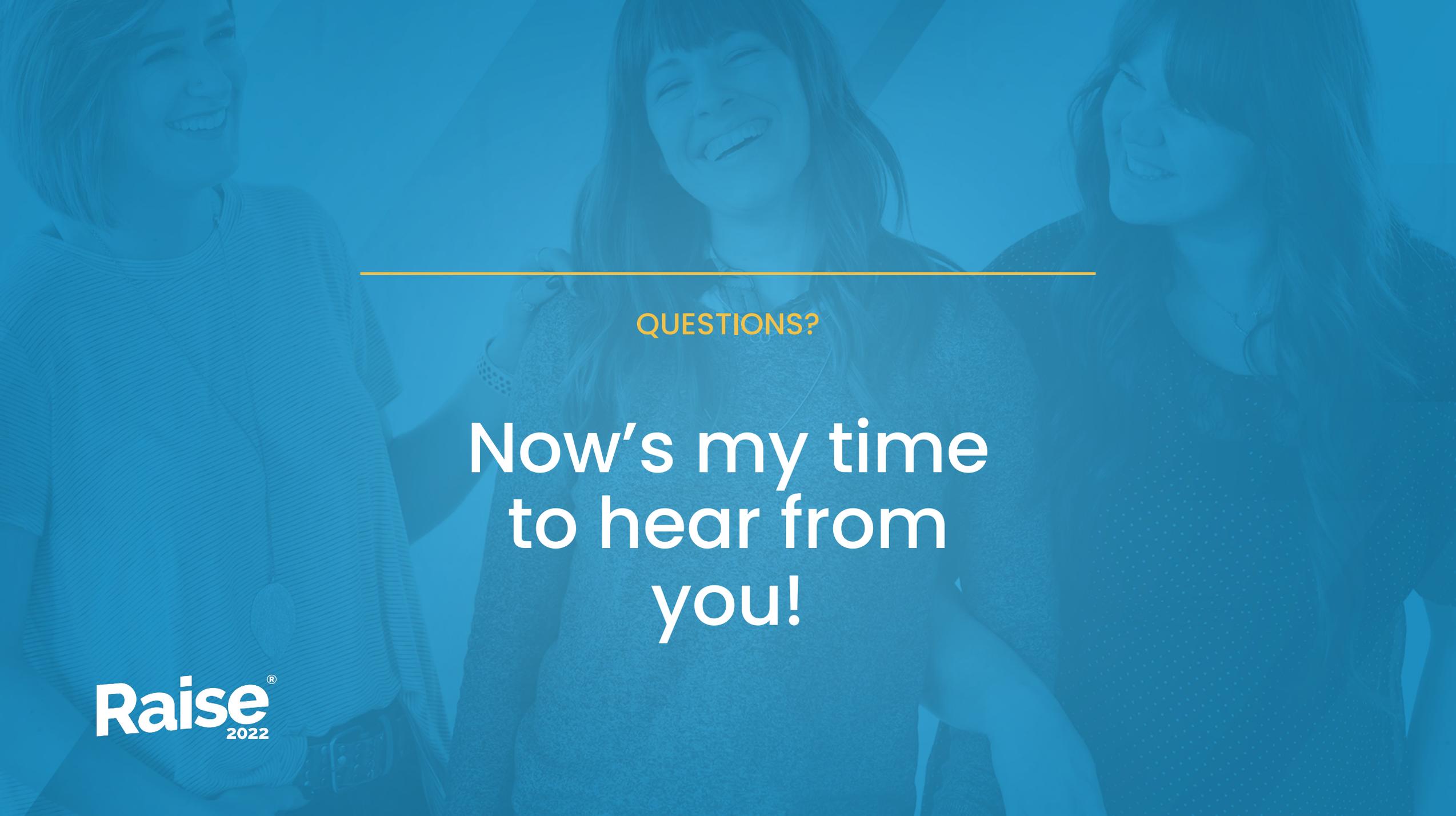
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QUESTIONS?

Now's my time to hear from you!

Raise®
2022

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linkedin.com/in/katieappold

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Message

OneCause
We've helped 10,000+ nonprofits raise over 4 Billion dollars. Building a better tomorrow full of #FearlessFundraisers
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OC TEAM   RAISE NA...   RAISE 2021   Indy Tech...   RAISE 20...   RAISE

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