

ZOONOMICS WORKING GROUP

NOVEMBER 18TH, 2025

MEETING AGENDA

12:00-12:05

Updates (Rachel J.)

12:05-12:30

Presentation from Angela Page, Global Alliance for Genomics & Health (GA4GH)

12:30-1:20

Next phase of Working Group (Breakout Groups)

1:20-1:25

Working Group survey

1:25-1:30

Wrap up and next steps



A coordinated biobank alliance for the zoological and conservation community

This is a Preprint and has not been peer reviewed. This is version 1 of this Preprint.

1 **A coordinated biobank alliance for the zoological and conservation community**
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4 Jennifer D'Agostino⁶, Marietta D. Danforth⁷, Jimmy Erkens^{1,2,8}, Alex J. Garretson⁹, Diane P.
5 Genereux², John A. Griffioen¹⁰, Shelly Grow⁴, Katherine D. Heineman^{5,11}, Adrienne Horrigan¹²,
6 Christina Hvilsom¹³, Debbie Johnson¹⁴, Elinor K. Karlsson^{2,15}, Jennifer R. Kropf¹⁶, Kim
7 Labuschagne¹⁷, Paula M. Mackie¹⁸, Carla B. Madelaire⁵, Anna Mekarska¹⁹, Sarah U.
8 Morton^{2,20,21}, Piper Mullins²², Francis J. Oliaro²³, Tahlia Perry^{1,2}, Budhan S. Pukazhenthi²⁴,
9 Andrea S. Putnam²⁵, Tanya M. Salvey²³, Rachel Thompson²⁶, Andrew C. Richardson⁵, M.
10 Kameron Roth⁵, Cynthia C. Steiner⁵, Andrew W. Torrance^{27,28}, Gregory J. Watkins-Colwell²⁹,
11 Michelle White², Eric J. Baitchman^{1,2,*}
12
13 1. Zoo New England, Boston, Massachusetts, USA
14 2. Broad Institute of MIT and Harvard, Cambridge, Massachusetts, USA
15 3. Center for Bioethics, Harvard Medical School, Boston, Massachusetts, USA
16 4. Association of Zoos and Aquariums, Silver Spring, Maryland, USA
17 5. San Diego Zoo Wildlife Alliance, San Diego, California, USA
18 6. Oklahoma City Zoo and Botanical Garden, Oklahoma City, Oklahoma, USA
19 7. Great Ape Heart Project, Detroit Zoological Society, Royal Oak, Michigan, USA
20 8. Boston University, Boston, Massachusetts, USA
21 9. AZA Population Management Center, Lincoln Park Zoo, Chicago, Illinois, USA

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Authors

Rachel A. Johnston, Lisa Moses, Danica Wolfe, Megan E. Brown, Asako Y. Chaille, Jennifer D'Agostino, Marietta D. Danforth, Jimmy Erkens, Alex J. Garretson, ... [more](#)

Abstract

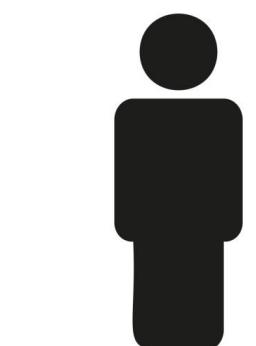
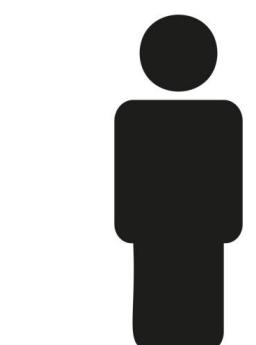
With dramatic advancements in biological data generation, genetic rescue and reproductive technologies, and inter-institutional coordination of care across entire animal populations, zoos, aquariums, and their collaborators are uniquely positioned to lead

Organization

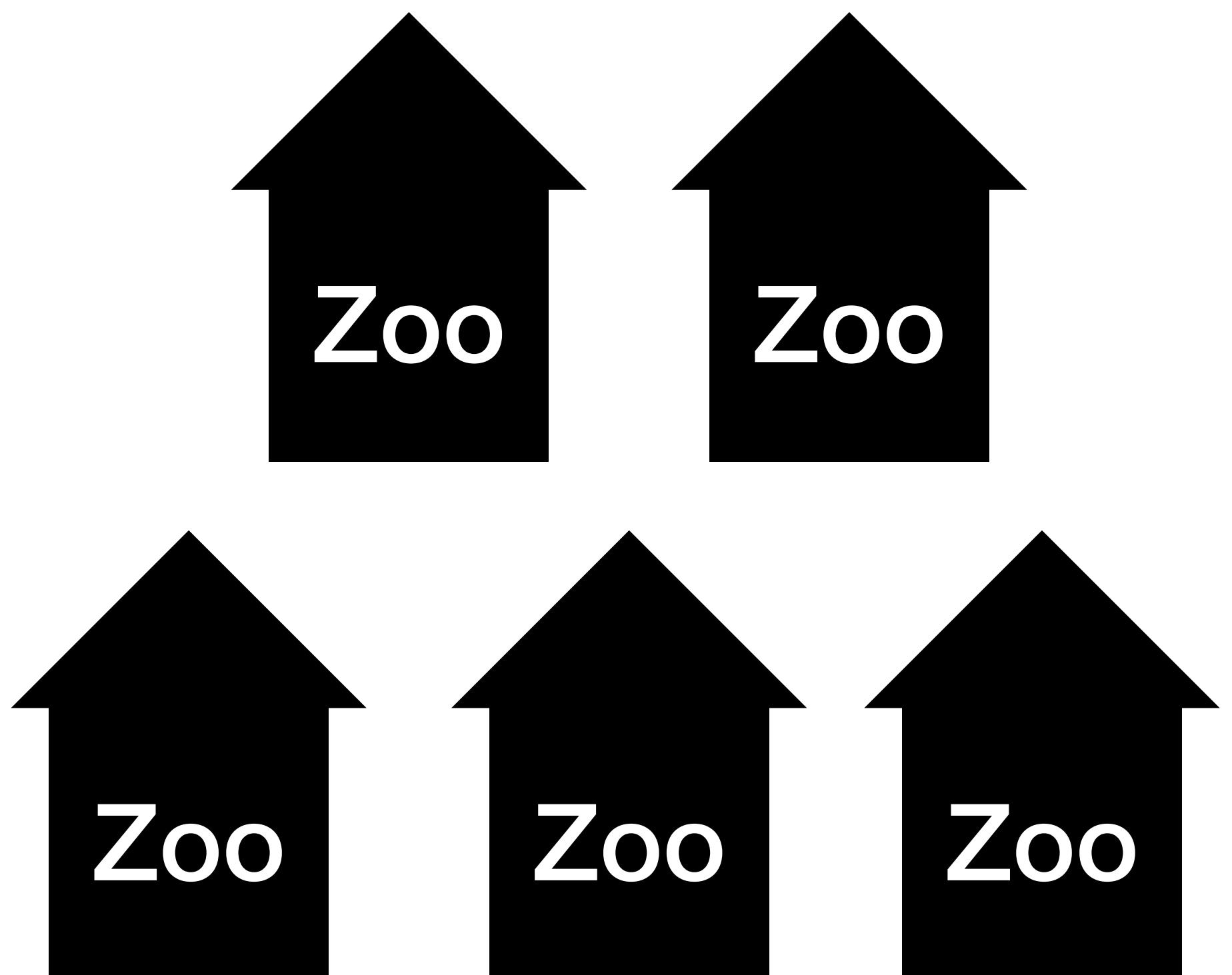
Organization

Center for Zoonomics

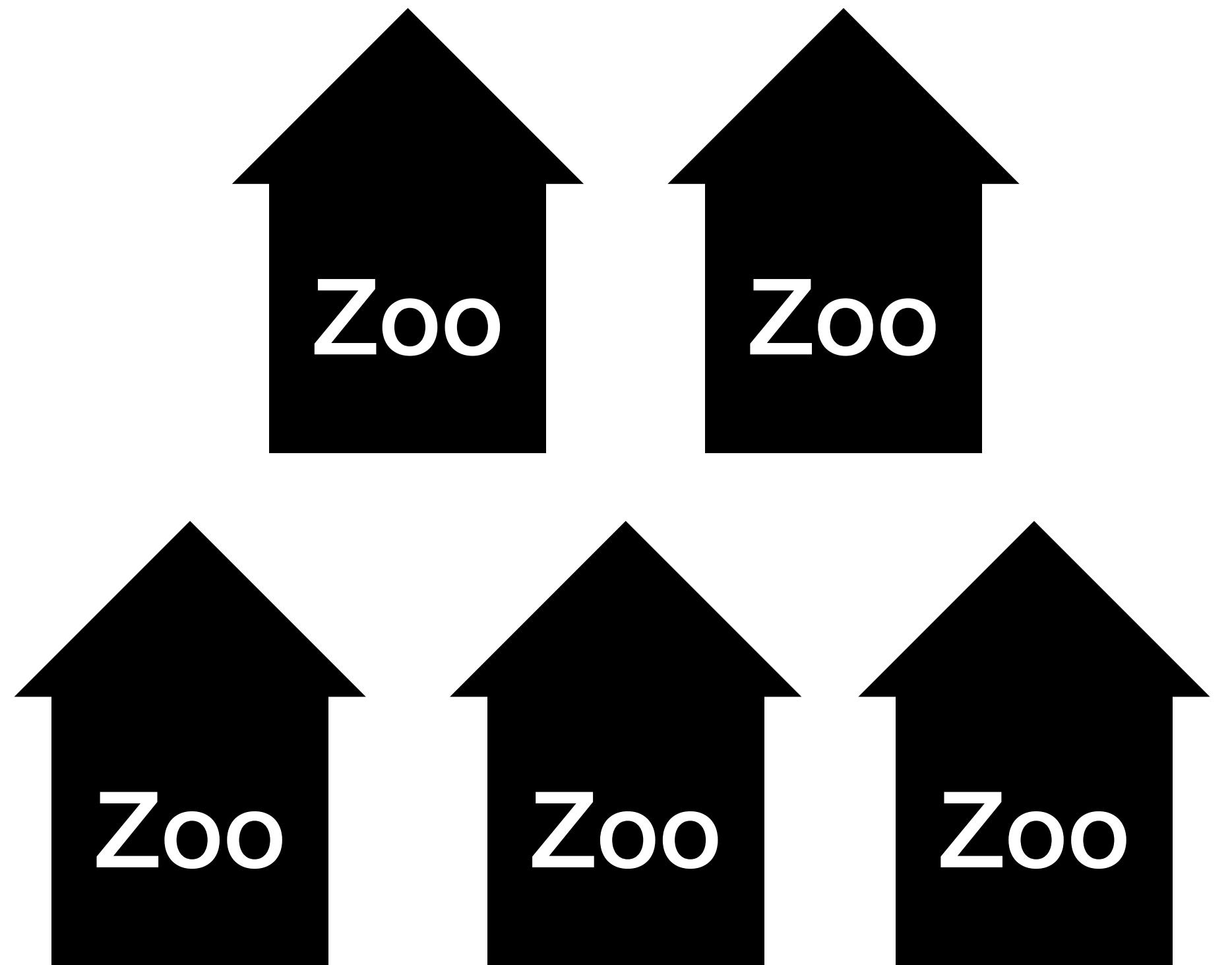
Organization



Institutions



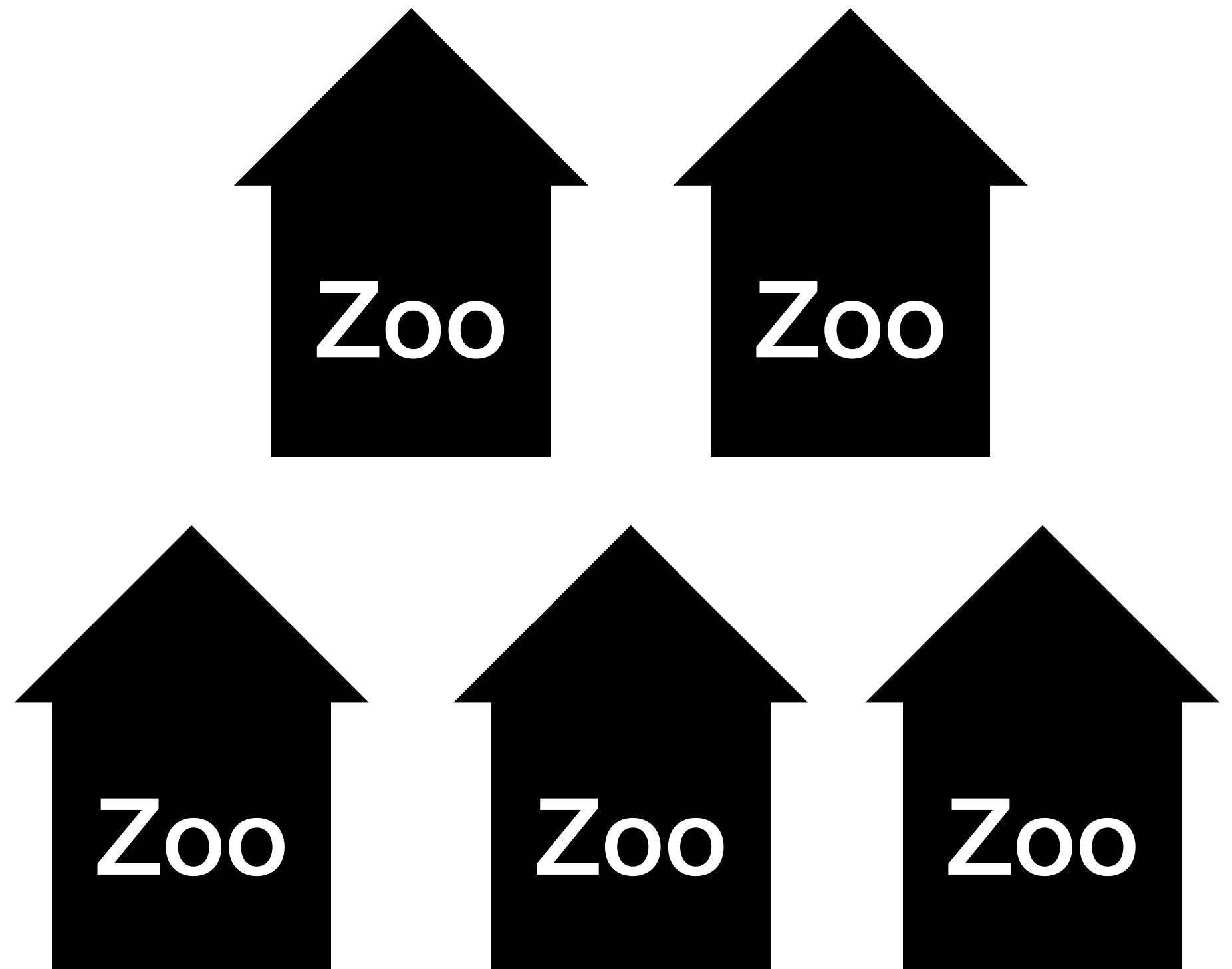
Constituency



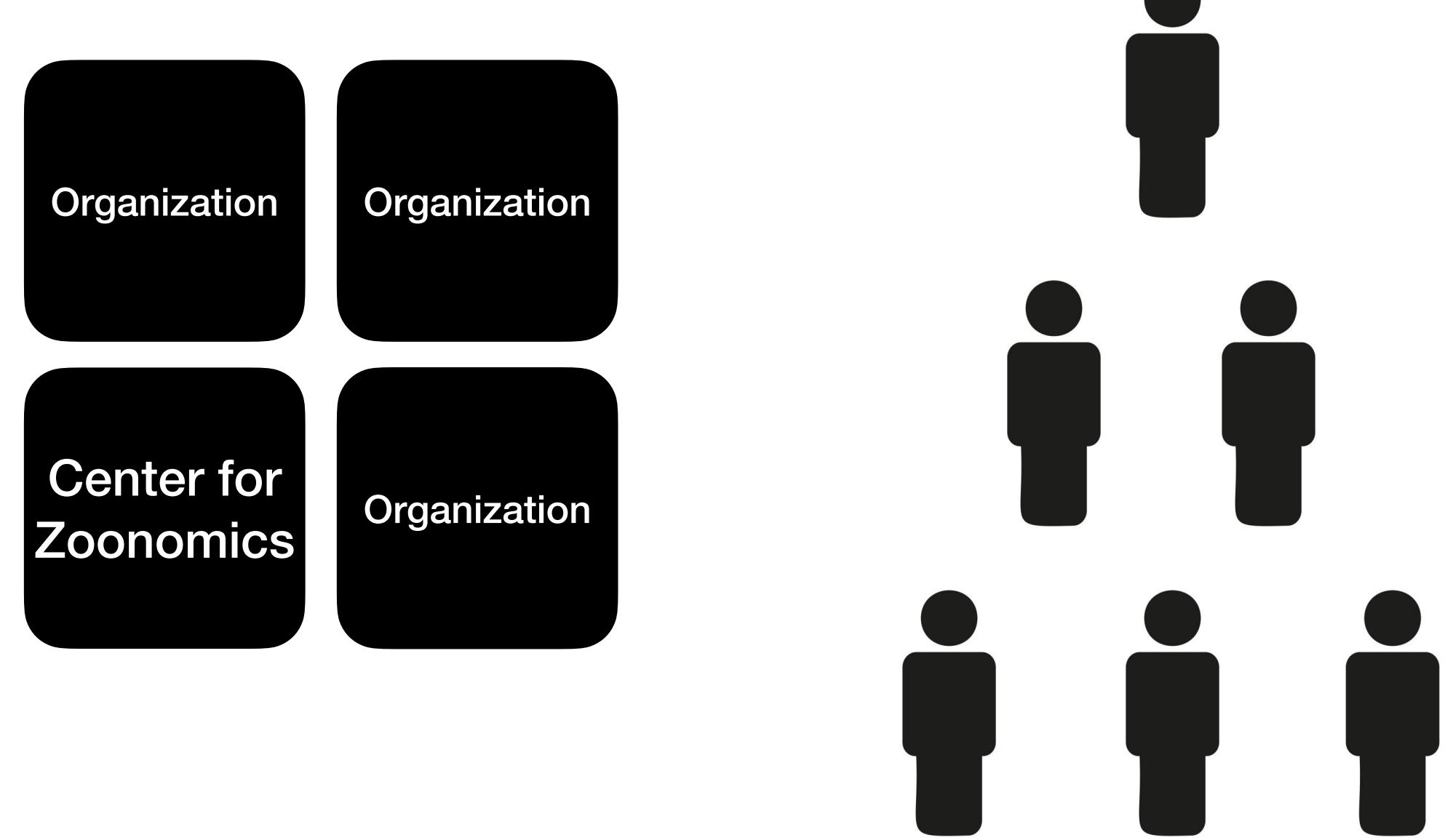
Proposal



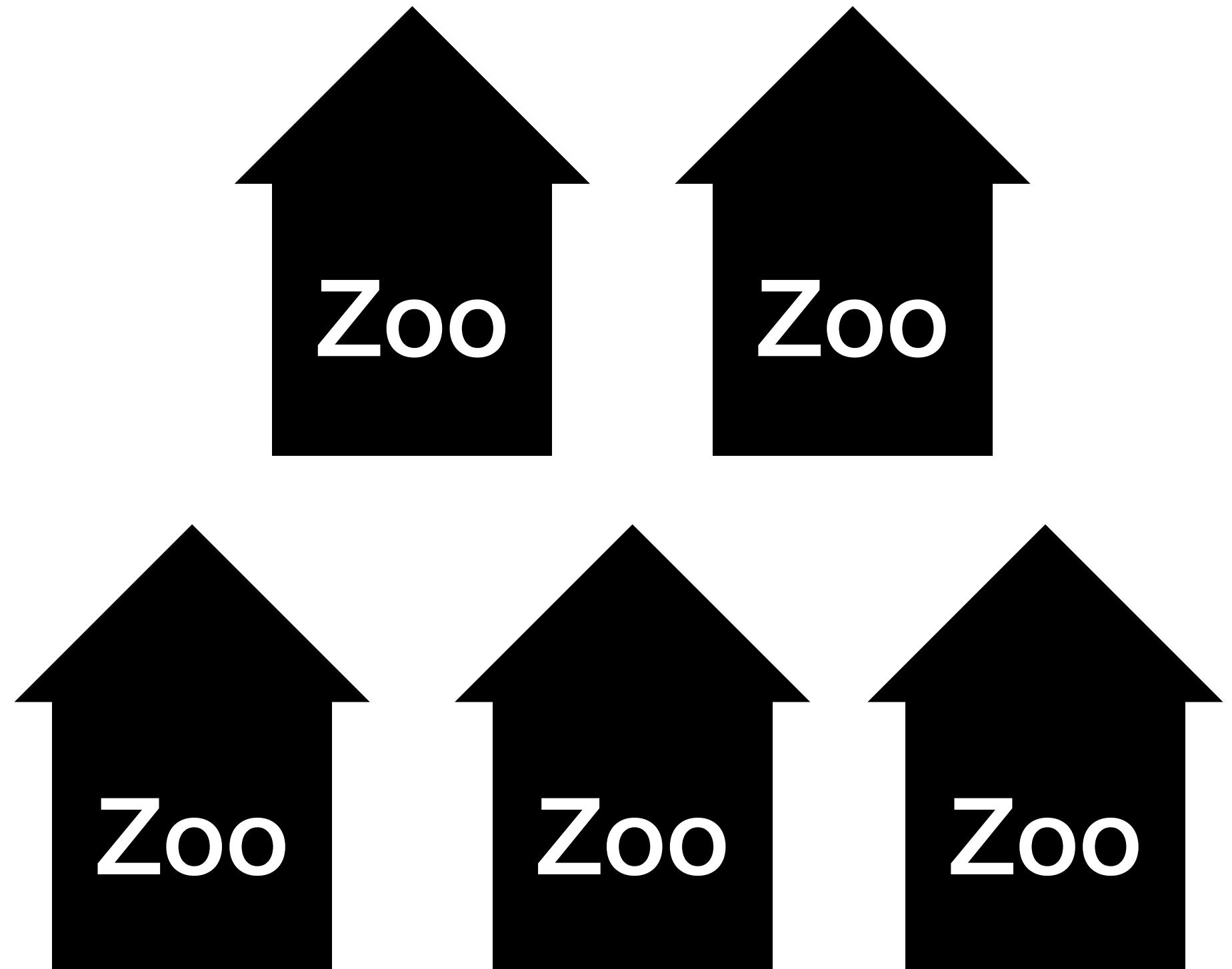
Constituency



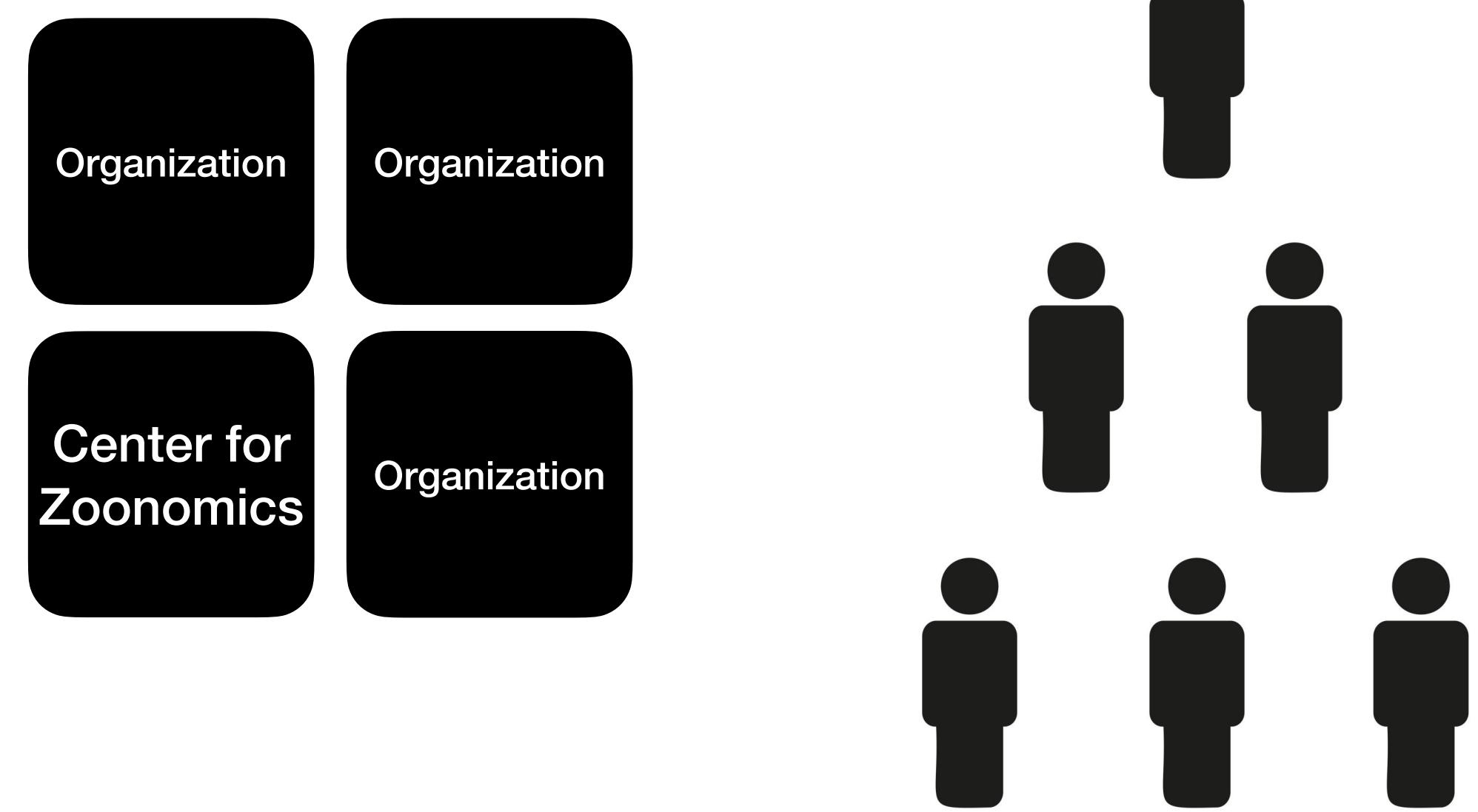
Input



Decision-makers



Input



Working group structure

Decision-making

Input

Input

Neutral

Institutional Representative

Partner Organization Representative

Advisory Network Member

Convener/Facilitator

Working group structure

Decision-making

Input

Input

Neutral

	Institutional Representative	Partner Organization Representative	Advisory Network Member	Convener/Facilitator
What	Formally represents a zoo or aquarium institution that holds biological samples and data (1/institution)			
Commitment	Actively participate in discussions and contribute to the formulation of the alliance (monthly)			
	Become an institutional signatory to the proposal once finalized			
	Hold goal of adopting the alliance outcomes once finalized			
	Attend most monthly meetings to ensure consistent representation.			
Voting rights	Full vote on proposal development and alliance policy decisions			
Examples	AZA accredited institutions			

Working group structure

Decision-making

Input

Input

Neutral

	Institutional Representative	Partner Organization Representative	Advisory Network Member	Convener/Facilitator
What	Formally represents a zoo or aquarium institution that holds biological samples and data (1/institution)	Formally represents an organization that actively provides resources, expertise or infrastructure to improve biobanking or sample/data accessibility and wants to coordinate activities with alliance (1/organization)		
Commitment	Actively participate in discussions and contribute to the formulation of the alliance (monthly)	Provide updates for coordination (2-3 bullet point updates quarterly; 1-4 times/year zoom call)		
	Become an institutional signatory to the proposal once finalized	Become a partner organizational signatory to the proposal once finalized		
	Hold goal of adopting the alliance outcomes once finalized	Regular attendance to maintain coordination.		
	Attend most monthly meetings to ensure consistent representation.			
Voting rights	Full vote on proposal development and alliance policy decisions	No formal vote; may provide advisory input on operational or resource-related issues		
Examples	AZA accredited institutions	AZA, AZA BBAG, AZA MSAG, AZA Research & Technology Committee, Center for Zoonomics, EAZA Biobank, IUCN SSC Animal Biobanking for Conservation Specialist Group, IUCN SSC Center for Species Survival Biodiversity Banking, Pan-Smithsonian Cryo-Initiative, Revive & Restore, SDZWA Conservation Genetics Dpt, Species360, ZooMu		

Working group structure

Decision-making

Input

Input

Neutral

	Institutional Representative	Partner Organization Representative	Advisory Network Member	Convener/Facilitator
What	Formally represents a zoo or aquarium institution that holds biological samples and data (1/institution)	Formally represents an organization that actively provides resources, expertise or infrastructure to improve biobanking or sample/data accessibility and wants to coordinate activities with alliance (1/organization)	Provides expert input or feedback on alliance development and implementation, in an individual advisory capacity	
Commitment	Actively participate in discussions and contribute to the formulation of the alliance (monthly)	Provide updates for coordination (2-3 bullet point updates quarterly; 1-4 times/year zoom call)	Provide expertise or feedback by joining select meetings or reviewing materials upon invitation as needed	
	Become an institutional signatory to the proposal once finalized	Become a partner organizational signatory to the proposal once finalized	Does not sign the proposal.	
	Hold goal of adopting the alliance outcomes once finalized	Regular attendance to maintain coordination.	Option to make an individual bio available as part of the alliance	
	Attend most monthly meetings to ensure consistent representation.			
Voting rights	Full vote on proposal development and alliance policy decisions	No formal vote; may provide advisory input on operational or resource-related issues	No formal vote; advisory input only	
Examples	AZA accredited institutions	AZA, AZA BBAG, AZA MSAG, AZA Research & Technology Committee, Center for Zoonomics, EAZA Biobank, IUCN SSC Animal Biobanking for Conservation Specialist Group, IUCN SSC Center for Species Survival Biodiversity Banking, Pan-Smithsonian Cryo-Initiative, Revive & Restore, SDZWA Conservation Genetics Dpt, Species360, ZooMu	Anyone with expertise and interest	

Working group structure

Decision-making

Input

Input

Neutral

	Institutional Representative	Partner Organization Representative	Advisory Network Member	Convener/Facilitator
What	Formally represents a zoo or aquarium institution that holds biological samples and data (1/institution)	Formally represents an organization that actively provides resources, expertise or infrastructure to improve biobanking or sample/data accessibility and wants to coordinate activities with alliance (1/organization)	Provides expert input or feedback on alliance development and implementation, in an individual advisory capacity	Coordinates and facilitates the working group and alliance processes, ensuring communication, transparency, and documentation
Commitment	Actively participate in discussions and contribute to the formulation of the alliance (monthly)	Provide updates for coordination (2-3 bullet point updates quarterly; 1-4 times/year zoom call)	Provide expertise or feedback by joining select meetings or reviewing materials upon invitation as needed	Organize and facilitate meetings and discussions
	Become an institutional signatory to the proposal once finalized	Become a partner organizational signatory to the proposal once finalized	Does not sign the proposal.	Does not sign the proposal.
	Hold goal of adopting the alliance outcomes once finalized	Regular attendance to maintain coordination.	Option to make an individual bio available as part of the alliance	Support drafting, review, and integration of feedback on the proposal and alliance framework
	Attend most monthly meetings to ensure consistent representation.			Attend all meetings.
Voting rights	Full vote on proposal development and alliance policy decisions	No formal vote; may provide advisory input on operational or resource-related issues	No formal vote; advisory input only	No formal vote; neutral facilitative role
Examples	AZA accredited institutions	AZA, AZA BBAG, AZA MSAG, AZA Research & Technology Committee, Center for Zonomics, EAZA Biobank, IUCN SSC Animal Biobanking for Conservation Specialist Group, IUCN SSC Center for Species Survival Biodiversity Banking, Pan-Smithsonian Cryo-Initiative, Revive & Restore, SDZWA Conservation Genetics Dpt, Species360, ZooMu	Anyone with expertise and interest	Danica; Rachel J.

Zoonomics Working Group Charter

Purpose and Scope: The Working Group will develop a formal proposal to the Association of Zoos and Aquariums (AZA) for establishing a biobank alliance. By “biobank alliance,” we mean a community-guided effort of shared resources, standards, ethos, and practices for collecting, storing, and sharing biological samples and associated data voluntarily through transparent processes, consistent with professional accreditation standards and international best practices. The alliance upholds and advances the principle to “protect personal data while sharing vital knowledge that could benefit all” (GA4GH 2025), alongside the FAIR (Findable, Accessible, Interoperable, and Reusable) and CARE (Collective Benefit, Authority to Control, Responsibility, and Ethics) principles, to support collaborative research and conservation. Such a framework will help the zoological community navigate the ethical, legal, and practical challenges of managing biospecimen collections, making access more efficient, reliable, and robust.

The Working Group will develop a proposal outlining how the alliance could operate, its governance and leadership structure, and initial priorities and resources. While initially focused on the regulatory landscape of U.S. institutions, the framework is designed for broader international applicability.

Two phases guide this process:

1. Exploration and Research Phase: Institutional representatives will review potential alliance models, governance options, and operational frameworks, drawing on expertise from advisors as needed.
2. Proposal Development Phase: Institutional representatives will consolidate findings, make decisions, and finalize the formal proposal for submission to AZA. Advisors may provide input but do not participate in decision-making.

Timeline: January 2026 – June 2027

Questions

1. What parts of the proposed structure work well for the community?
2. What concerns or improvements do you suggest?
3. Does anything in the Charter feel unclear, missing, or misaligned?
4. Suggestions for working group names that reflect shared ownership?

Homework (by Dec 18)

Institution	Contact Person	Working Group Member Reaching Out
Lincoln Park Zoo		Alex J. Garretson; Adrienne Horrigan
Dallas Zoo		Andrea Putnam
San Diego Zoo Wildlife Alliance		Asako Chaille; Katie Heineman; Carla Madelaire; Andy Richardson; Kameron
Brookfield Zoo Chicago		Debbie Johnson
Zoo New England		Eric Baitchman
John G. Shedd Aquarium		Frank Oliaro; Tanya M. Salvey
Oklahoma City Zoo and Botanical Garden		Jennifer D'Agostino
Sedgwick County Zoo		Jennifer Kropf
Fort Worth Zoo		John A. Griffioen
Detroit Zoological Society		Marietta D. Danforth
Toronto Zoo		Paula Mackie
Smithsonian's National Zoo & Conservation Biology Institute		Piper Mullins; Budhan S. Pukazhenthi
Duke Lemur Center	Amanda Mazza	Rachel Johnston; Danica Wolfe
Henry Doorly Zoo	Taylor Yaw	Rachel Johnston; Danica Wolfe
Memphis Zoo	Sheila Poo	Rachel Johnston; Danica Wolfe
WCS	John Sykes?	Rachel Johnston; Danica Wolfe
St. Louis Zoo	Karen Bauman; David Powell	Rachel Johnston; Danica Wolfe
Georgia Aquarium	Pilar Nelson	Rachel Johnston; Danica Wolfe

Partner Organization	Contact Person	Working Group Member Reaching Out
AZA Population Management Center		Alex Garretson
AZA Molecular Data for Population Mngmnt Scientific Advisory Group		Andrea Putnam
Earth BioGenome Project		Andrew Torrance
EAZA Biobank		Anna Mekarska; Christina Hvilsom
AZA Biobanking Scientific Advisory Group		Buddha
Society for the Preservation of Natural History Collections		Greg Watkins-Colwell
ZooMu		Greg Watkins-Colwell
IUCN SSC Center for Species Survival Biodiversity Biobanking		Katie Heineman
AZA		Megan Brown; Shelly Grow
AZA Research and Technology Committee	Jen Tobey (SDZWA) and Jason Wark (LPZ)	Rachel Johnston; Danica Wolfe
IUCN SSC Animal Biobanking for Conservation	Oliver Ryder	Rachel Johnston; Danica Wolfe
Global Genome Biodiversity Network	Katie Barker and Gabi Droege	Rachel Johnston; Danica Wolfe
GBIF	David Bloom	Rachel Johnston; Danica Wolfe
USFW	Brian Small	Rachel Johnston; Danica Wolfe
UC Berkeley	Michelle Koo (also Arctos)	Rachel Johnston; Danica Wolfe
Revive and Restore	Ryan Phelan; Ben Novak	Rachel Johnston; Danica Wolfe
Species360		Rachel Thompson

NEXT MEETING

THURSDAY, DECEMBER 18th

12:00-12:30pm EST via Zoom