Breaking Down Barriers to Collaboration

Understanding and Classifying the Diversity of Collaborative Efforts

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July 18, 2014

ollaboration: generally seen as a preferred method of attaining goals or outcomes, organizations and individuals often claim they engage in collaboration without either evidencing the claim or even fully understanding what collaboration really means or how to break down barriers to collaboration. This research is intended to provide a starting point by developing and employing a classification system for collaborative efforts. By better understanding the attributes of collaboration, the barriers to the collaborative process and successful outcomes can be better understood by stakeholders interested in engaging in and promoting collaboration.

Pushing Collaboration

Collaboration is often discussed as a best practice in many sectors. It is recognized that collaboration in industry, education, and other areas can and does produce better results than pure competition. As such, many firms and organizations have made collaboration a top priority. Several prominent periodicals such as Businessweek, Forbes, Harvard Business Review, and The New York Times have featured pieces focused on reducing the barriers

to collaboration in order to promote cooperation.

The barriers to collaboration uncovered by observers of the business world and other sectors are several. Phrases such as "silo mentality" and "cooperative culture" are indicative of a general inability to cooperate that permeates all sectors, rooted in adversarial organizational structures and individualistic rewards for productivity.¹ The realization that much of the time collaboration is forced and not meaningful points to poorly defined expecta-

tions, processes, and outcomes.² Collaboration appears to be difficult, almost unnatural behavior despite the recent trend for organizations to claim they engage in this type of cooperation.

For truly engaged prospective collaborators as well as philanthropic organizations willing to fund collaborative efforts, tension between the normative desire for good collaboration and the apparent lack of a supporting culture of cooperation makes it difficult to engage in, identify, and support the collaborative efforts that are attempting to break down barriers and affect meaningful change. How can the barriers to collaboration be broken down, and how can the culture of cooperation be built?

In order to understand the collaboration and the barriers that prevent it, it is useful to explore the underlying elements of the culture of cooperation. Then, a classification system is outlined based on the attributes of collaboration as described by thinkers and practitioners of such processes. The classification scheme is applied to a sample of collaborations, and the report concludes with some lessons learned and future avenues of research on the barriers to collaboration.

The Culture of Cooperation

The barriers to collaboration that grow out of the silo mentality and a lack of cooperative culture are most apparent in politics in the United States, especially in Congress. Political deadlock is not preferred by the vast majority of the voting public, academics, business interests, or even the legislators themselves.³ Yet as the past four years have shown, deadlock is the new status quo. Even worse, there are solutions that are already in practice by state governments and in other countries that could be used as a template for overcoming

tions, processes, and outcomes.² Collabora- the barriers to cooperation that the federal tion appears to be difficult, almost unnatural government is experiencing.⁴

The resistance to cooperation in U.S. national politics reflects an underlying culture that exists in other sectors as well. Where some business, education, and nonprofit organizations have managed to overcome this culture of noncooperation, other organizations (and politics generally) seems to be stuck. That is because politics, business, and other areas of competition are set up as zero-sum interactions. When one firm or political party cooperates, it is seen as negative; at worst it is considered traitorous. Only by outmaneuvering the competition can the firm or political party be successful, since gains by one entail losses by the other. This is commonly referred to in game-theoretic terms as a "Prisoner's Dilemma."

Competition The Prisoner's Dilemma is typically framed in the following way: two criminals are arrested and imprisoned in their own cells without the ability to talk with the other. The police admit they don't have enough evidence to convict the pair for the crime suspected, and they plan to sentence both on a lesser charge. However, each prisoner is given the opportunity either to betray the other by testifying that the other committed the crime (the nark goes free, the other gets both sentences: ten years in prison). Alternatively, they can "cooperate" with each other by remaining silent (only one year in prison for each). Despite the collectively better outcome of both staying silent, the Nash equilibrium of this game is that each chooses the self-serving strategy and implicates the the other. This gives the police what they need to sentence both to five years in prison for the suspected crime.

In this view of interaction, collaboration is impossible, because those involved pursue individual interests. This mirrors the "silo mentality" – that your organization, department, or team loses if you cannot outmaneuver your competition. The culture of cooperation is notably absent in this view on interaction, but many observers of even the most competitive industries will point out that the Prisoner's Dilemma outcome, so often seen in contemporary U.S. politics, does not always reflect the reality of collaboration in practice. For instance, the tech industry in Silicon Valley reveals that highly competitive firms will engage in collaboration to secure greater profits, better products, and greater market share; some argue that there is a lesson here for politics.⁵

Collaboration Argosy Foundation founder and chairman John Abele sees collaboration as a challenge to the status quo, as a restructuring of the interaction of competitors from a zero-sum game to a positive-sum one.⁶ Abele points out that although collaboration faces several challenges (see the Problems section below) and as such is rare, when it does occur it is because collaborators see cooperation to be in their best interests. When there is a culture of cooperation, the Prisoner's Dilemma becomes a coordination dilemma instead.

In game theory, there are many coordination dilemma games; the one referred to here is the "Stag Hunt" game. There are two hungry hunters, and they can either choose to hunt a stag or a hare. Each player requires the assistance of the other to take down the stag, which is much more food than a hare. If both hunters go for a hare, they can each catch one. The worst outcome is if one player goes for a hare and the other for the stag, since both will be relatively worse off than if they coordinate to catch either animal. In this view of interaction, the goal is for each side to match strategies, rather than to outsmart the other. This view better reflects the collabora-

tion Abele refers to; the kind of cooperation that exists in Silicon Valley, other industries, and other sectors.

Information Cooperation in either version of interaction outlined above relies on information to succeed. The ability to plan together and to monitor each other can change the Prisoner's Dilemma to be more like the Stag Hunt. The coordination dilemma also is more likely to end in a Pareto optimal outcome (successful cooperation to hunt the stag) if there is open communication between the hunters. There are a variety of communication tools that can assist with collaboration, particularly the internet and related communication technology.

Social media theorist Clay Shirky has pointed out the benefits of virtual, mass-based collaboration to solve complex problems (often referred to as crowd sourcing). The connectivity of the web is a recent addition to the toolbox for collaborators, however. There are many tools that can break down information barriers to collaboration that are not exclusively technology-based.

The Good Collaboration Project, an ongoing Harvard study led by Dr. Howard Gardner has collected several best practices and communication tools in the form of a collaboration toolkit.⁸ Some of their information-sharing tools involve structured written and oral communication between collaborators to develop the goals, processes, and to evaluate outcomes of a collaborative effort to ensure success.

Another aspect of the Good Collaboration Project is its research into the relationships between higher education institutions, which focuses on information sharing, governance, and resource distribution.⁹ This research uncovers the nexus between the culture of cooperation that breaks down barriers and the tools that foster information sharing. This nexus can be described by attributes that reflect both the culture and toolkit employed by diverse collaborative efforts. This is the foundation of the classification scheme.

The Classification Scheme

The classification scheme outlined in Table 1 and explained in detail below is derived from the ideas reviewed in the previous section. However, without matching these ideas to observed collaborations, it is difficult to create a classification system that contains all the relevant attributes. The difficulty in developing a useful classification scheme is further compounded by the fact that there are potentially many thousands of self-identified

Each of these eight attributes has many potential values. Sets of values for these attributes are explained below. The values described here by no means represent the totality of any of these attributes; rather, the extent of the values explored here has been limited to increase comparability between the collaborations classified in the next section.

or endogenously determined collaborations to classify.

In order to develop a proper classification scheme, several collaborations were identified and a survey was distributed to a contact for each collaboration. The survey answers provided were used to shape the classification scheme to reflect the reality of collaborative efforts as well as to classify the collaborations for which the contact responded to the survey. See the research note in the appendix for more information on the survey methodology employed in this research.

The resulting classification scheme is composed of eight attributes of collaboration which can be used to classify collaborations. These are listed below in Table 1. The utility and values for each attribute are explained in the following subsections.

Purpose The first attribute of collaboration is the main goal behind the collaborative effort, the initial reasoning for collaboration. The Purpose of the collaboration is often framed in terms of the specific mission that it pursues. Rather than use this narrow understanding of the goal behind the collaborative effort, this attribute generalizes the purpose to a few broad categories.

Table 1: Classification Scheme

Attribute	Description
Purpose	main reason for the collaboration
Locale	area(s) collaboration is situated
Level	the complexity of the collaboration
Type	how collaboration is structured (governance)
Form	temporal and physical manifestation of collaboration
Communication	style of collaborative communication
Problem	issue(s) collaboration must overcome
Impact	how the collaboration builds the commons

Purposes for collaboration include: strategizing, problem solving/solution implementing, brainstorming, project management, accomplishing a mission, or governance.

Locale The second attribute of collaboration is the Locale of the collaboration. This attribute captures the area of interest of a collaborative effort. Locale can also be understood as the scope of the collaboration. Some efforts span multiple locales, and others are more specific.

Different values for the Locale attribute include: business, government/public policy, education, sports, arts, science, or family.

Level The third attribute of collaboration captures the complexity of a collaborative effort. This attribute is unlikely to vary much for the type of collaboration examined in this research, yet theoretically there are many values possible. Another way to understand the Level attribute is the institutionalization of the collaboration.

Levels include: intuitive (occurs without exogenous directive, no institution), rules (exogenous directive/institution), skills (mutually beneficial to collaborators, self-directed institution with exogenous relevance), creative (artistic, self-directed institution with internal relevance), complex (highly institutionalized), and massively complex (interinstitutional/multiple layers).

Type The fourth attribute of collaboration accounts for the structure of a collaborative effort. The Type attribute accounts for the governance structure of the collaboration as well as the general behaviors of collaborators. This attribute also reflects how information is gathered and disseminated.

Different Types include: command and control, facilitated, self-organizing, egalitarian, adversarial, pseudo, mass, crowd-sourcing, and combinations of these.

Form The fifth attribute of collaboration is the form the collaboration takes. The expected duration of instances of collaboration and number of collaborators as well as the manifestation and simultaneity of the collaborative effort are the focus of this attribute.

Different values of the Form attribute are: physical or virtual, synchronous or asynchronous (simultaneous or independent), short-term or long-term, big or small.

Communication The sixth attribute of collaboration is the communication style of the collaborative effort. This attribute is different from the Type attribute in that Communication is about how the collaborators interact, rather than how leadership controls information dissemination and collaborative discourse.

There are three styles of communication:¹⁰ point-to-point two-way (conversational), one-to-many outbound (educational), and many-to-many two-way (socializing).

Problem The seventh attribute of collaboration is the problem faced by potential collaborators that led to the formation of a collaborative effort. This root issue behind collaboration is important to identify, as it is related to the other seven attribute values as well.

Values for the Problem attribute include: collective action, conflicting cultures or silos, strong egos and biases, messenger killers, hidden agendas, vested interests, group think, or diverse levels of understanding.

Impact The eighth and final attribute has less defined values than the previous seven. Impact involves how the collaborative effort builds the commons. It is essential for good collaboration to not simply achieve a narrow goal, but also to create or reinforce public goods. The value of this attribute is dependent on the values of the previous seven, and has seven general categories.

Impact can range from a "specific-mission focus" (little far-reaching impact) to "strategic partnerships and information dissemination within Locale" to "utilizing specificmission outcomes to establish communication and cooperation across Locales." ditionally, Impact can "reach beyond Locale to promote collaborative outcomes" or be one of three categories that involve collaborations that move beyond specific-mission outcomes. These three are "establishes communication and cooperation with others in Locale," "establishes communication and cooperation with others in other Locales," "works within Locale at many Levels to coordinate action and promote multiple goals."

Now that the eight attributes have been outlined, they can be employed in classifying the collaborations which responded to the survey.

Classifying Collaboration

A total of 46 identified collaborations were surveyed, and 25 responded for a response rate of about 54 percent. A directory of all 46 collaborations is available in the appendix. Contacts for each of these collaborations were asked three questions (see the methodology research note in the appendix), and their answers were used to catalog them according to the classification scheme presented above. When necessary, additional information on the collaboration was elicited via email or from

an official website. The classifications also appear in the appendix, with each attribute listed separately.

For each attribute, there were similar values across several collaborations. Table 2 contains a list of the modal values for each attribute as well as the percentage of responses that were in the modal category.

Table 2: Most Common Collaboration Variants by Attribute

	Value	Total
Purpose	strategizing, problem solv-	20 %
	ing/solution implementing	
Locale	education	8 %
	environment	8 %
	politics, public policy	8 %
Level	complex	64~%
Type	facilitated	64~%
Form	physical, synchronous, long-	28~%
	term, small	
Commun.	educational	44~%
Problem	collective action	24~%
Impact	establishes communication	16~%
	and cooperation with others	
	in Locale	

Of particular interest here is that over half of the responding collaborations (64 percent) are classified as "complex" in terms of Level and the same percent are of "facilitated" Type, although not all collaborations that are classified as complex are also classified as facilitated. Additionally, nearly half of collaborations which answered the survey were classified as the "educational" communication style.

Since the sample is not random, the results presented here cannot be considered to be representative of collaborations generally. However, there are still some important findings that can be gleaned from the survey results and subsequent classification.

Comparisons There are several ways which the classification system can be used to compare the similarities and differences between collaborations. Each attribute represents a possible point of comparison; for instance, those collaborations which are of the "facilitated" Type or of the "complex" Level can be can be compared with other "facilitated" or "complex" collaborations. Alternatively, differences on one attribute and similarities on another allow for a more nuanced comparison. Ultimately, the way collaborations are compared depends on the goals of the researcher.

There are several groups that emerge when the classified collaborations are compared, and for illustrative purposes four of these are explored in detail below. Each group can incorporate as few as two and as many as 16 collaborations, depending on what the delineating criteria are. The four selected below are illustrated with examples of two organizations each.

Massively complex problem solvers: The first group of collaborations involves those which have similar values on the Purpose, Level, Form, and Communication attributes, but differ in terms of Locale, Type, and Problem faced. Most importantly, the Impact for these collaborations is the same despite the differences mentioned. Massively complex problem solvers are collaborations that focus on problem solving/solution implementing, are highly institutionalized (often at multiple levels), and are usually physical, asynchronous, long-term, and large collaborations.

This group of collaborations involves many individuals and organizations working together to solve problems in diverse Locales. Massively complex problem solvers can be different Types; depending on this attribute and Locales are better positioned to have a more their Locale, these collaborations may face very different problems. The outcome is al- Locale to promote collaborative outcomes.

ways the same, however. Massively complex problem solvers move beyond mission-specific outcomes and establish communication and cooperation with others in the Locale that they are engaging in problem solving in.

A pair of collaborations which exemplify this group is California Forward and Conservation Centers for Species Survival. The former is a public policy and economic revitalization advocacy collaborative that facilitates multiple sectors, organizations, and individuals towards a common purpose: problem solving/solution implementing to improve California's public policy and economy. The latter is a self-organizing environmental collaborative that tackles problems related to endangered species (such as breeding and care) through implementing novel solutions and sharing resources. Each collaboration faces a different set of potential barriers to their collaborative effort.

Mission-oriented silo-busters: The second group of collaborations reveals the diverging effect of taking on multiple Locales. This group has many attributes that are the same across collaborations, and only the Locale and Impact attributes are different. The Purpose for these collaborations is to accomplish a mission, they are relatively institutionalized (complex Level), they are of the facilitated Type, they are physical and synchronous, and their Communication style is educational. The barrier to collaboration faced by this group is typically conflicting cultures or silos, although some may experience other barriers as well.

The differences within this group rest solely on the Locales they involve themselves in. Those collaborations which resist the temptation to stretch their mission across multiple far-reaching Impact: reaching beyond their

Among the collaborations which responded to the survey, those which apply their mission to multiple Locales appear to have some difficulty in obtaining the same far-reaching Impact as the more limited collaborations. Instead, they may only form strategic partnerships to engage in information dissemination within the Locales they already claim, or may only do so in a one or two of their multiple Locales.

Two collaborations which represent this dichotomy are Connect2Educate Collaborative, an education collaborative which has reached out to organizations in other Locales, and the Health Law Partnership, a collaboration of law and public policy groups which has extended it mission to other Locales. The latter collaboration has outreach in the education and poverty Locales, but within the relatively narrow confines of how the law Locale can affect mission outcomes there. This is in contrast to the activities of Connect2Educate, which pursues collaboration with organizations in other Locales to augment its mission rather than extend it. This prevents potential duplication of effort or unequal voice for collaborators, thus affecting the Impact attribute.

Virtual socializers: The third group of classified collaborations represents a unique facet of collaboration that has been brought about by technology and the internet. Virtual socializers are of many Locales and may have very different Purposes, but share a common Form: virtual and asynchronous. Many are short-term collaborations, as the day-to-day goals tend to shift as the collaborators change. This is because virtual socializers share at least one value on the Type attribute, "crowd sourcing." This group of collaborations also uses socializing Communication patterns, and often faces common barriers: collective action and diverse levels of understanding.

Beyond the similarities mentioned above,

the Impact that virtual socializers have is also similar. Due to the nature of these collaborations, their outcomes often build the commons in unexpected ways. The Impact members of this group have reaches beyond specific-mission outcomes and into other Locales.

Two collaborations included in the survey are not only ideal descriptors of the virtual socializer group, but are likely some of the premier collaborations of this kind available for research. GitHub and Government and Creative Commons/School of Open are each well-known collaborations in the open source and open web communities. The former is an offshoot of the popular crowd sourcing platform for open source software that deals with using crowd sourcing and technology to improve and open government. The latter is a collaboration between the organization that literally wrote the guidelines for the open web and a virtual, open source educational option for students interested in web development, software development, and open source policy. Both collaborations evidence the power of virtual socialization and crowd sourcing to produce cross-Locale outcomes that build the commons.

Facilitated bridge builders: The last example of classified collaboration groups again focuses on similar Impacts despite diversity on the Purpose, Locale, and Form attributes. These collaborations are complex and facilitated, and exhibit socializing Communication patterns. Despite facing different Problems, the Impact these collaborations have is the same: each utilizes specific-mission outcomes to establish communication and cooperation across Locales.

There are two examples of this group in the surveyed collaborations, *Emerging Lead*ers In Science and Society (ELISS) and the Civic Collaboratory. These collaborations even share some Locales, although this is not necessary to be a facilitated bridge builder, other, and collaborations can learn from oth-Instead, each of these collaborations promotes discussion and future collaboration across diverse Locales by creating what are essentially collaboration "ambassadors" who are originally from different Locales, but are socialized together in a facilitated environment and then return to their Locale of origin to further promote interdisciplinary and inter-sector cooperation. ELISS does this by coordinating graduate students to strategize on various issue areas, and the Civic Collaboratory does it by gathering stakeholders and interested citizens through its parent organization, Civic University, for a variety of talks and brainstorming sessions.

There are more groups that can be formed from these 25 classified collaborations, but the four examples above illustrate that the classification scheme is flexible depending on which attributes the researcher or funder is interested in drawing out.

Looking Forward

Beyond the flexibility of the classification scheme in grouping collaborations according to various descriptive attributes, this research contributes to the understanding of collaboration and the barriers to it in a few ways.

Replicability Groups (however defined) share similar qualities. Therefore, it is likely that they can share strategies for breaking down barriers. What works for one massively complex problem solver could work for an-

ers in their group. Collaborations may not always be aware of which group they are in or what collaborations are similar to them. This could be a useful role for funders, since they typically have a wider view of the Locale collaborations are working in.

The role of Argosy in funding collaboration is consistent with this vision. As a part of selective grantmaking, Argosy could either identify the grantee collaboration as a member of a group, or task the grantee with selfidentifying. Part of this process could also be uncovering where grantees are duplicating outcomes within a Locale and challenging them to reshape their effort or reach out to others in the group.

Barrier Breaking This research is only the first stage of a much larger research agenda. In order to understand the barriers to collaboration, it is necessary to first understand the attributes of collaboration and how different collaborative efforts can be compared. The next stage may add an evaluative layer to the classification scheme, which determines what kinds of collaboration are best, and which groups of collaborations are ideal for grantmakers such as Argosy.

Whatever the next research stage holds, one thing is clear: the future of collaboration is dependent on the culture of cooperation. The survey responses have indicated that there is a multifaceted challenge to the status quo of collaboration as an obstacle to individual benefit, yet barriers to collaboration remain.

Notes

¹Gratton, Linda. 2009. "How to Foster a Cooperative Culture." Harvard Business Review Blog Network. Accessed April 15, 2014. http://blogs.hbr.org/2009/01/four-ways-to-encourage-more-pr/. Rosen, Evan. 2010. "Smashing Silos." BloombergBusinessweek Companies & Industries Blogs. Accessed April 15, 2014. http://www.businessweek.com/managing/content/feb2010/ca2010025_358633.htm.

²Gleeson, Brent and Megan Rozo. 2013. "The Silo Mentality: How to break Down the Barriers." Forbes.com Blogs. Accessed April 15, 2014. http://www.forbes.com/sites/brentgleeson/2013/10/02/the-silo-mentality-how-to-break-down-the-barriers/.

³Kranish, Michael. 2013. "Ideas Abound for Breaking Logjam, but D.C. Isn't Listening." *Boston Globe*. Accessed January 14,2014. http://www.bostonglobe.com/news/politics/2013/12/08/broken-city-solutions-abound-but-washington-takes-little-heed/UQjwTzNcJMmyjLOdrVRedP/story.html.

⁴Ibid.

⁵Friedman, Thomas L. 2013. "Collaborate vs. Collaborate." *The New York Times.* Accessed May 22, 2014. http://www.nytimes.com/2013/01/13/opinion/sunday/friedman-collaborate-vs-collaborate.html.

⁶Abele, John. 2011. "Bringing Minds Together." Harvard Business Review. 89(7–8) pp. 86–93.

⁷Shirky, Clay. 2010. Cognitive Surplus: Creativity and Generosity in a Connected Age. London: Penguin.

⁸The Harvard research group was kind enough to share many of their materials with Argosy, some of which are works in progress and many of which are confidential at this time.

⁹Redding, Alexis Brooke. 2013. "Collaboration Among Tertiary Institutions: Testing the taxonomy - An evaluation of The Five College Consortium in Western Massachusetts." Good Work Project Report Series No. 88. Cambridge, MA: Harvard University, Project Zero. Also see: Redding, Alexis Brooke. 2011. "Collaborations Among Elite Tertiary Institutions: State of the Art." Good Work Project Report Series No. 75. Cambridge, MA: Harvard University, Project Zero.

¹⁰Shirky, Clay. (2003). A Group is its Own Worst Enemy. Keynote delivered at the O'Reilly Emerging Technology conference in Santa Clara on April 24, 2003. Transcript available at http://www.shirky.com/writings/herecomeseverybody/group_enemy.html.

Appendix

This appendix contains the following information: (1) a methodology research note regarding the survey employed in this research as well as related comments on the research process, and (2) a complete listing of the values for each attribute of each of the 25 collaborations classified. Where additional information is available in supplemental documentation, it is noted.

Special thanks go to John Abele for continuous and constructive guidance, John Bunzl (ISPO) for his thought-provoking discussion of the game-theoretic representation of the culture of cooperation, Melanie Roberts (ELISS) for her helpful discussion, the Harvard *Good Project* team (Wendy Fischman, Alexis Redding, Margaret Rundle, Howard Gardner) for their materials and feedback, Jane Park (Creative Commons/Open School) for her willingness to share information above and beyond the scope of the survey, and all the other respondents who took the time to follow up and check in on the progress of this research.

Research Note

The research design employed here contains four parts. First, collaborations were identified. Next, a classification scheme was developed. Then, a survey was constructed. Last, the responses were classified (given values) based on the scheme. Each of these parts is covered in detail below.

Collaborations were identified using a variety of methods. Even carefully worded internet searches are a relatively inefficient way to find collaborations. Instead, an online research tool geared towards nonprofits¹ discovered a list of several hundred potential collaborations. However, since acquiring contact information for the correct individual for each collaboration is time consuming and difficult, the list was reduced to just 46 collaborations which had a reasonably good chance of participating. Some of these collaborations were previous Argosy partners, although most were not (see Table ?? below).

Once the list was created, a survey with four questions was distributed to all 46 contacts. Three questions were open-ended and designed to elicit response that would indicate values for the attributes of the classification scheme. The survey was constructed using Google Forms, and responses were collected between May 22, 2014 and June 18, 2014. A generic email was used to introduce the study and provide a link to the survey. If the contact did not respond within a week, a reminder was sent with another link to the survey. For contacts previously known to Argosy, a more personalized email message was used to distribute the survey. Only one contact for each collaboration was surveyed. The survey is an internal Argosy Foundation document available by request.

Values for each attribute were qualitatively coded from the survey responses. Often the responses did not contain explicit attribute values; many values were coded by interpreting the text of the response in reference to publicly available information on the collaboration or personal correspondence with contacts.

Classification of Collaborations

Table 3 on the following pages contains the values of each attribute for each collaboration which responded to the survey. The answers to the survey questions that provided the reasoning for the values listed here are available by request in a confidential internal Argosy Foundation document.

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 Table 3: Classification of Collaborations

Collaboration	Purpose	Locale	Level	Туре	Form	Communication	Problem	Impact
Alliance for Innova- tion	strategizing, problem solv- ing/solution implementing	politics, public policy	complex	facilitated	physical, asyn- chronous, short- term, big	educational	diverse levels of understanding	strategic partnerships and in- formation dissemination within Locale
Betty Irene Moore School of Nursing, UC Davis	brainstorming, problem solv- ing/solution implementing	health, education	complex	facilitated	physical, syn- chronous, long- term, big	conversational, socializing	conflicting cul- tures/silos	moves beyond specific-mission outcomes; establishes communica- tion and cooperation with others in Locale
California Forward	strategizing, problem solv- ing/solution implementing	politics, public policy, education, health, poverty, environment, business, industry, public safety	massively complex	facilitated	physical, asyn- chronous, long- term, big	educational, so- cializing	conflicting cul- tures/silos, vested interests	moves beyond specific-mission outcomes; establishes communica- tion and cooperation with others in Locale
Citizen university/Civic Collaboratory	brainstorming, accomplishing a mission	politics, public policy, education	complex	facilitated	physical, syn- chronous, long- term, small	educational, so- cializing	vested interests, diverse levels of understanding	utilizes specific-mission outcomes to establish communication and cooperation across Locales
Collaborative Leaders Network	strategizing, brainstorming, problem solv- ing/solution implementing	politics, public pol- icy, education, envi- ronment, business, in- dustry, unfunded lia- bilities	skills	facilitated	physical, asyn- chronous, short- term, small	conversational	strong egos, di- verse levels of un- derstanding	strategic partnerships and in- formation dissemination within Locale
Connect2Educate Collaborative	accomplishing a mission	$\operatorname{education}$	complex	facilitated	physical, syn- chronous, long- term, big	educational	conflicting cul- tures/silos, collective action	reaches beyond Locale to promote collaborative outcomes
Conservation Centers for Species Survival	problem solv- ing/solution implementing, governance	environment	massively complex	self- organizing	physical, asyn- chronous, long- term, big	socializing	collective action	moves beyond specific-mission outcomes; establishes communica- tion and cooperation with others in Locale
Creative Commons; School of open	strategizing, gov- ernance	politics, public policy, education, busi- ness, industry, cul- ture/cultural heritage, science	complex	facilitated, crowd- sourcing	virtual, asyn- chronous, short- term, small	educational, so- cializing	collective action, diverse levels of understanding	moves beyond specific-mission outcomes; establishes communica- tion and cooperation with others in other Locales
Design Trust for Public Space	strategizing, problem solv- ing/solution implementing	politics, public policy, environment, business, industry	complex	facilitated	physical, syn- chronous, long- term, big	conversational, socializing	vested interests	strategic partnerships and in- formation dissemination within Locale
Domestic Violence Institute	strategizing, problem solv- ing/solution implementing	education, health, do- mestic violence and sexual assault	complex	facilitated	physical, syn- chronous, long- term, small	educational	diverse levels of understanding	strategic partnerships and information dissemination within Locale
Emerging Leaders in Science and Society (ELISS)	strategizing	politics, public policy, education, health, en- vironment	complex	facilitated	virtual, syn- chronous, short- term, small	conversational, socializing	conflicting cul- tures/silos	utilizes specific-mission outcomes to establish communication and cooperation across Locales
FeedMore, Inc.	problem solv- ing/solution implementing, project manage- ment	health, poverty	complex	facilitated	physical, syn- chronous, long- term, big	educational	collective action	strategic partnerships and information dissemination within Locale
Fund for Our Economic Future	project man- agement, gover- nance	economy	complex	facilitated	physical, syn- chronous, long- term, small	educational	collective action	strategic partnerships and in- formation dissemination within Locale
GitHub	problem solving, brainstorming, project manage- ment	politics, public policy, education, business, industry, software	skills	self- organizing, crowd- sourcing	virtual, asyn- chronous, short- term, large	socializing	collective action, diverse levels of understanding	moves beyond specific-mission outcomes; establishes communica- tion and cooperation with others in other Locales

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Table 3: continued Туре Form Collaboration Purpose Locale Level Communication Problem Impact Health Law Partnerconflicting politics, public polspecific-mission focus accomplishing a complex facilitated physical, syneducational culship mission icy, education, health, chronous, longtures/silos term, small poverty International Simultastrategizing, politics, public policy massively facilitated, virtual, syneducational, socollective action, moves beyond specific-mission neous Policy Organizachronous, cializing outcomes; works within Locale at accomplishing a complex mass longvested interests. tion (ISPO) many Levels to coordinate action mission term, large biases and promote multiple goals accomplishing a Land Heritage Instieducation, health, encomplex command physical. svneducational collective action. strategic partnerships and invested interests formation dissemination within tute mission, govervironment, archeology, and control chronous. longnance culture, arts, history, term, small Locale recreation Metaintegral Foundabrainstorming, politics, public polmassively facilitated, virtual, socializing strong egos, dimoves beyond specific-mission asvn- $_{
m tion}$ problem chronous, outcomes; works within Locale at icy, education, health, complex egalitarian longverse levels of unsolving/solution poverty, environment, term, big derstanding many Levels to coordinate action implementing business, industry, varand promote multiple goals ious other fields such as art, psychology, religion Mississippi River Netproblem solvenvironment complex facilitated physical, syneducational collective action moves beyond specific-mission work (Bluestem Coming/solution outcomes; establishes communicachronous, longmunications) implementing, term, big tion and cooperation with others governance in Locale physical, strategic partnerships and in-National Network of strategizing, education complex facilitated socializing hidden agendas, svn-Schools in Partnership formation dissemination within accomplishing a chronous, longdiverse levels of mission term, small understanding Locale National Policy Conconflicting strategic partnerships and inbrainstorming, politics, public polcomplex facilitated physical, conversational. synsensus Center problem icy, implementation of chronous, shorteducational tures/silos, formation dissemination within ing/solution community-based priterm, small vested interests Locale implementing orities Pittsburgh problem politics, public polcollective strategic partnerships and insolvmassively selfphysical, synsocializing ing/solution tion, conflicting Initiative formation dissemination within icy, education, envicomplex organizing, chronous, shortimplementronment egalitarian term, big cultures/silos, Locale diverse levels of ing, project management, understanding accomplishing a mission Prevention Institute strategizing, politics, public policy, complex facilitated physical, syneducational collective action moves beyond specific-mission problem solvhealth chronous outcomes: establishes communicalonging/solution term, small tion and cooperation with others implementing in other Locales Strategic Alliance for problem solvpolitics, public policy, skills pseudo virtual, syneducational collective action specific-mission focus Volume Expenditures ing/solution public purchasing chronous, longimplementing (SAVE) term, small Triangle J Council of strategizing, govpolitics, public polmassively command physical, educational conflicting strategic partnerships and inforsyn-Governments icy, regional public sercomplex chronous, longtures/silos, mation dissemination within Loernance and con vices trol, faciliterm, big vested interests cale

tated

Argosy

Foundation