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Orchestrating Global Solutions Networks
A Guide for Organizational Entrepreneurs

From poverty to financial regulation, global health to climate change, national governments and international organizations are finding it increasingly difficult to address pressing transnational challenges. To help fill these governance gaps, a host of *global solution networks* (GSNs) are emerging, enabling companies, cities, civil society groups, individuals, and other actors to join traditional organizations in addressing global problems.

We often think of GSNs as self-organizing, "bottom-up" arrangements. In fact, a significant number are products of *orchestration,* a strategy in which organizational entrepreneurs—including NGOs, business leaders, governments, and intergovernmental organizations (IGOs)—consciously act to initiate, support, and shape GSNs.

Orchestration is a potentially powerful tool for entrepreneurs that seek to effect beneficial changes in behavior but lack the formal authority to mandate such change. It is also an underused tool; of the 223 GSNs we surveyed, we found that only 53 (fewer than a quarter) were at least in part a product of orchestration. Moreover, most of these involved just six "super-orchestrators," including the U.S. and UK governments, the United Nations Environment Programme, the World Bank, and WWF. The implication is that many more organizational entrepreneurs—including "traditional" actors like national governments and IGOs—can use orchestration as a strategy to tackle global problems.

This memo introduces the strategy of orchestration and offers practitioners guidance on how to employ it. To be successful, an orchestrator must (1) be seen as legitimate by the organizations with which it aims to work; (2) occupy a central

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position in its issue area; (3) be able to offer collaborating organizations moral, technical, financial, or other resources; and (4) nurture an organizational culture that is conducive to innovation and collaboration. Orchestrators also must be able to identify potential intermediaries that (1) pursue goals aligned with those of the orchestrator and (2) possess the capabilities needed to bring about the desired change. When these conditions are met, orchestration offers numerous techniques for promoting GSNs.

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ORCHESTRATION:
A STRATEGY FOR ORGANIZATIONAL ENTREPRENEURS

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The Global Solution Networks program highlights the emergence of transnational, multi-stakeholder, networked organizations to address global challenges, from poverty to climate change, human rights to corruption. These innovative participatory arrangements, known as global solution networks or GSNs, go beyond traditional state-based cooperation. Whether they focus on developing new knowledge and ideas, proposing policies, setting standards, or advocating for change, GSNs offer one of the most promising ways to strengthen global governance and improve the human condition.

It is often said that networked institutions are self-organizing, and it is true that networks are formed by participating stakeholders rather than by official mandate. But this is only part of the story. The civil society organizations, business groups, city governments, and other stakeholders that make up GSNs face serious information and collective action problems that can inhibit cooperation before they can organize into a cooperative network. Therefore, the actors must be persuaded of the network's potential and informed about the participants and the process. They also must build mutual confidence and find ways to overcome their natural incentives to operate independently and pursue their own preferred solutions. And, finally, they must construct communications and organizational links that enable them to work together.

Organizational entrepreneurs are essential to this process. They take the lead in providing information, encouraging cooperation, building links, providing resources, and resolving conflicts. In most cases, however, entrepreneurs cannot demand cooperation; they must catalyze, encourage, and support it. In short, they must "orchestrate" the actors that make up the network. As orchestrators, entrepreneurs work with and through intermediaries—including networks and their component actors—to achieve their governance goals more effectively. Orchestration is the most workable and effective strategy for organizational entrepreneurs in the polycentric, voluntary world of GSNs.

A few prominent examples illustrate the possibilities of orchestration for GSNs.

The Global Reporting Initiative (GRI)

Two US-based nonprofit organizations, working with the United Nations Environment Programme (UNEP), convened stakeholders to form GRI; they also endorsed the organization and provided administrative support for its early activities.

GRI is now an independent, multi-stakeholder, network-based organization. Its governing and advisory bodies include representatives of business, civil society, investors, labor, and other sectors, as well as experts in reporting.

GRI is the source of the world's leading social and environmental reporting standard, which is used by over 1,800 companies worldwide.

The Extractive Industries Transparency Initiative (EITI):

The British Department for International Development (DFID) convened NGOs, major oil companies, and government representatives from the North and South to address corruption in the extractive sector.

EITI is now an independent multi-stakeholder organization.

The EITI Principles and associated criteria promote transparency in corporate payments and national revenues for mining, oil, and other extractive projects. More than 40 countries now implement EITI standards.

The C40 Cities

When he was mayor of London, Ken Livingstone convened representatives from 18 megacities to address greenhouse gas emissions at the local level. The C40 network has grown to include 40 major cities.

C40 works closely with the William J. Clinton Foundation's Climate Initiative (CCI) to manage on-the-ground emissions mitigation projects in developing and developed countries.

C40 and CCI also provide a platform for cities to share best practices and manage practical initiatives, such as carbon finance capacity-building.

The Global Sustainable Electricity Partnership (GSEP)

The chairmen of Electricité de France and Hydro-Québec invited their counterparts at other electric utilities in the G8 countries to meet in Canada to consider collaborating on global issues.

The GSEP network is now organized as a nonprofit organization. Utilities from major emerging markets, such as China, South Africa, Brazil, and Mexico, have joined in recent years.

More than just an industry association, GSEP functions as a network of industry leaders on sustainability. It provides technology and capacity-building for sustainable energy and manages renewable energy demonstration projects in developing countries.
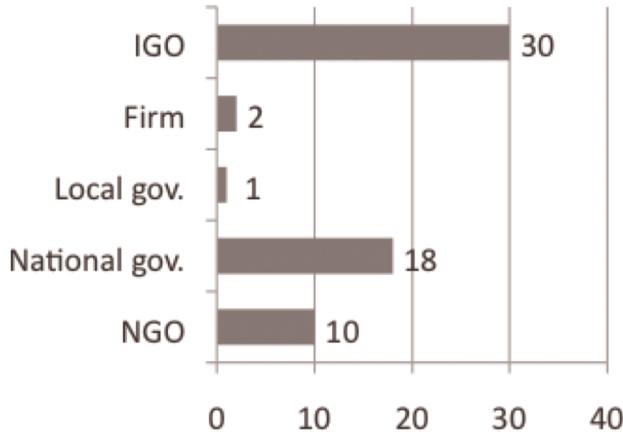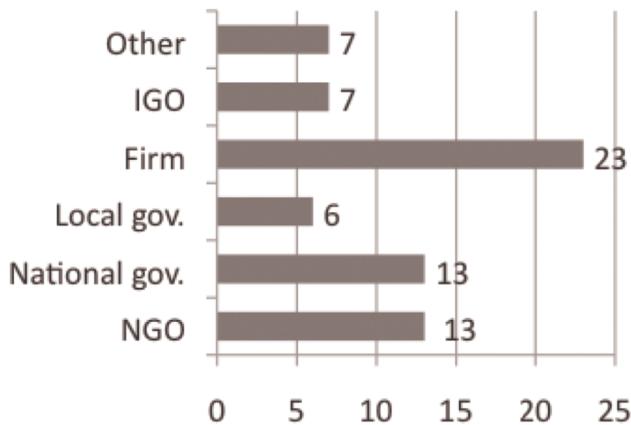
Figure 1. Orchestrators by sector

Figure 2. Intermediaries by sector

MAPPING ORCHESTRATION

How widespread is orchestration? Who engages in it? For what purpose? To map this phenomenon, we collected information about a large number of GSNs identified in the academic literature and by the Global Solution Networks project, a total of 297. We were able to identify whether orchestration was at work for 223 of them, and found that 53 GSNs, or 23 percent, were at least in part the product of orchestration (Appendix 1 identifies the orchestrated GSNs). IGOs account for half of all orchestrators, while national governments account for nearly a third and NGOs just 16 percent. The intermediaries that make up GSNs, however, most frequently come from the private sector (one-third of orchestrated GSNs include firms), followed by national governments and NGOs (figures 1 and 2).
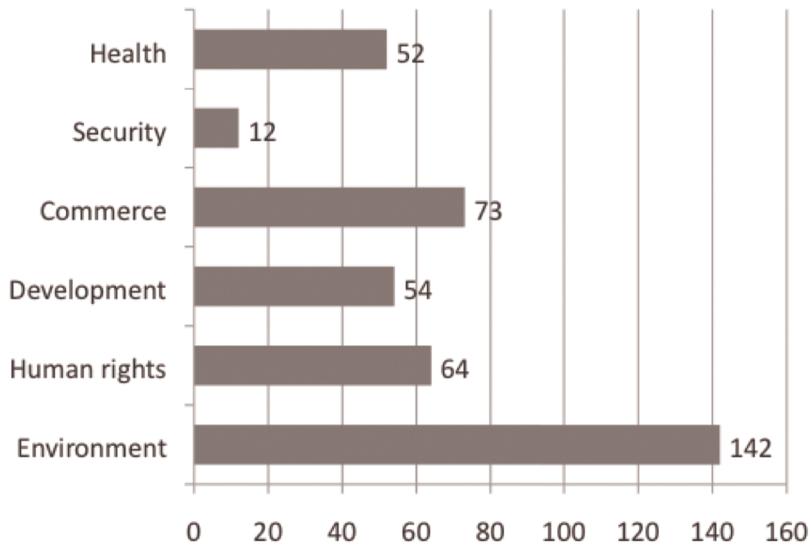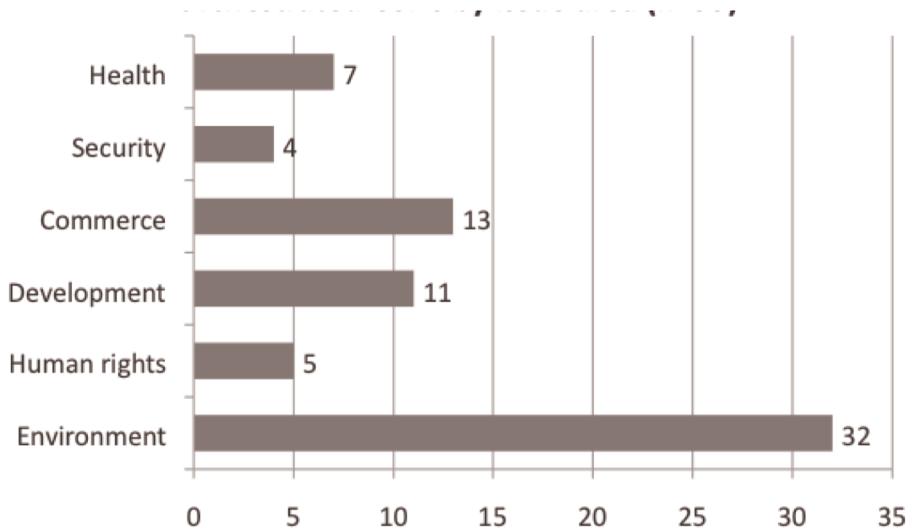
Figure 3. GSNs by issue area

Figure 4. Orchestrated GSNs by issue area

The number of organizations engaging in orchestration is surprisingly small. Two governments (the US and the UK), one NGO (WWF), and three IGOs (UNEP, the World Bank, and the World Health Organization [WHO]) account for the bulk of orchestrated GSNs. At least one of these six actors was involved in 42 of the 53 orchestrated initiatives we identified. Yet these are clearly not the only organizations with the capacity to orchestrate (see section 5 below). Additional

Figure 5. The orchestration process

IGOs, NGOs, governments, and other organizational entrepreneurs should consider orchestration as a strategy.

We find orchestration across a wide range of issue areas, but it is more prevalent in some spheres than in others. It is most common in the environmental realm: orchestrated environmental GSNs constitute 44 percent of the observed cases, although environmental networks make up only about a third of all GSNs. Orchestrated human rights GSNs, in contrast, are uncommon, both absolutely and as a share of the overall numbers (figures 3 and 4, prior page).

UNDERSTANDING ORCHESTRATION

We now can develop a fuller understanding of orchestration. In its scholarly definition, orchestration is an indirect mode of governance in which a lead organization (the orchestrator) enlists intermediary actors and organizations (the intermediaries) to influence the behavior of other actors (the targets) in accordance with the orchestrator's goals (figure 5). Some targets are largely passive, whereas others take a more active role in governance, even participating directly in the intermediary organization. The orchestrator pursues this indirect strategy rather than (or in addition to) attempting to influence the targets directly, often because it lacks access to the targets or authority over them.

In the case of GRI, for example, UNEP (a co-orchestrator) had interacted directly with business firms (the targets) for several years, encouraging them to publish corporate sustainability reports and working to develop standards to make those reports informative and comparable to one another. After making only limited progress, UNEP decided it needed a different approach. It then joined with the NGOs CERES and the Tellus Institute (co-orchestrators) to catalyze the formation of a new multi-stakeholder network, organized as GRI (the intermediary). GRI developed a social and environmental reporting standard, which it promotes to businesses and other organizations (the targets) and regularly updates with stakeholder and expert input. UNEP also supported GRI by providing administrative assistance in its early years and publicly endorsing it, thereby increasing its visibility and legitimacy.

As this example shows, orchestration relies on voluntary collaboration among organizations that have similar goals. Aligned goals are always important between the orchestrator and intermediaries, frequently important among intermediaries

and among co-orchestrators, and sometimes important between targets and inter-mediaries. All these forms of collaboration are very much in the spirit of net-worked governance. Orchestration is valuable whenever an organization (like UNEP in this example) seeks to bring about social change, but lacks both the authority to require it and the capabilities essential to achieving it, such as expert-ise or direct access to targets.

Once created or enlisted, intermediaries interact with targets in many ways.

Sometimes target actors play key roles in shaping the goals and activities of the intermediary, as they do in EITI. It is important, however, that targets not domi-nate the intermediary, lest it be unable to perform its independent governance functions.

Some intermediaries, such as the Investor Network on Climate Risk (INCR), also orchestrated by CERES, engage in advocacy, lobbying, campaigning, or other forms of persuasion, and provide platforms for sharing information and experi-ences among targets.

Other intermediaries, including GRI and EITI, seek to "regulate" targets by adopting voluntary standards, encouraging their adoption, monitoring their implementation, and pressing for compliance.

In other cases, intermediaries provide benefits to targets, such as expertise or material resources, as C40 Cities and GSEP do. Another important example is the Global Outbreak Alert and Response Network (GOARN), a network that includes technical organizations and laboratories, humanitarian NGOs, the Red Cross, and United Nations bodies and is orchestrated by the WHO. GOARN helps participat-ing organizations share information and coordinate on-the-ground responses to serious disease outbreaks.

Some intermediaries obtain information from and about targets to help the orchestrator achieve its goals. For example, the WHO supports the Global Public Health Intelligence Network in obtaining real-time electronic information on dis-ease outbreaks, while the Convention on International Trade in Endangered Species relies on the NGO network TRAFFIC to monitor species trade.

Orchestration is beneficial whenever GSNs or other intermediaries can carry out these activities more effectively than the orchestrator itself.

ORCHESTRATION AND GLOBAL SOLUTION NETWORKS

As these examples make clear, GSNs are frequently enlisted or established as inter-mediaries as part of strategies of orchestration. The orchestrator is an organiza-tional entrepreneur; it may be an NGO, an IGO, or some other organization. The orchestrator catalyzes, mobilizes, supports, and/or enables a networked set of actors (the GSN) as an intermediary, so that the GSN can take action on some global problem in accordance with the orchestrator's overall goals. The orchestra-tor and intermediary are mutually supportive: the orchestrator can achieve its goals more effectively by working through the GSN; the GSN, whose goals are aligned with those of the orchestrator, can operate more legitimately and effective-

ly with the support of the orchestrator. Together they can achieve governance outcomes that neither could achieve alone.

Orchestrated GSNs take a variety of forms, which are tailored to the specific circumstances they face and the activities in which they engage. In some cases, the actors that make up the GSN may be loosely linked in a network structure: for example, the Roll Back Malaria (RBM) partnership, orchestrated by the WHO, includes more than 500 partners, including international organizations, donor governments, NGOs, foundations, business groups, and researchers. Digital technologies enable many of their communications. In other cases, the partners may establish a formal organization, such as GRI. While we cannot yet draw firm conclusions as to why these variations exist, it seems likely that looser structures are satisfactory (and less costly) for relatively modest activities, such as information-sharing and coordination (RBM), while higher and more costly levels of organization are necessary for more demanding joint activities, such as adopting and implementing standards (GRI) or carrying out sophisticated projects (CCI).

In many of our examples, the orchestrator is an influential organization *outside* the GSN, or outside the group from which its members are drawn. For example, UNEP, an IGO, was outside the network of civil society groups and businesses that formed GRI; the NGO CERES was outside the network of investment managers that formed INCR. External orchestration may be necessary when potential intermediary actors cannot overcome collective action problems on their own; an external orchestrator also may have special influence or persuasive ability.

In other cases, however, the orchestrator acts *within* its peer group: it is able to convene and coordinate peer organizations, participates in the resulting GSN, and provides support, coordination, and guidance. For example, Mayor Livingston orchestrated the creation of C40 Cities by convening other mayors (just as the mayor of Kyoto convened the World Mayors' Conference on Climate Change after the Kyoto Protocol entered into force); the chairs of two electric utilities orchestrated the creation of the GSEP network of utilities.

Of course, not all GSNs emerge through orchestration, and not all orchestration creates or involves GSNs. However, our research suggests that orchestration is one of the major ways in which GSNs emerge and prosper.

Both conceptually and in practice, then, orchestration of GSNs is a feasible and effective strategy, whether it comes from inside or outside the relevant network. States, government agencies, local governments, IGOs, NGOs, business groups, and other organizational entrepreneurs can employ the strategy of orchestration to tackle global issues where traditional forms of governance are gridlocked or ineffective.

ENABLING CONDITIONS AND OBSTACLES

What factors cause orchestrators to succeed or fail? A common set of enabling conditions can be observed across most successful examples.

First, the orchestrator must possess one or more of four specific characteristics: legitimacy, focality, material or subjective resources that are of value to intermediaries, and an organizational culture that supports engaging with sub- and non-state actors. An orchestrator need not have all four of these characteristics to be successful; for example, some organizations are able to orchestrate with only limited focality or modest resources. However, orchestration is unlikely to succeed where the orchestrator lacks legitimacy within the relevant community, and where it has no resources to offer intermediaries. Furthermore, by definition the orchestration of GSNs is unlikely to succeed when the orchestrator is unwilling or unable to interact with sub- and non-state actors. In general, the more of these characteristics orchestrators have, the more likely they are to succeed, although the relative importance of each attribute will vary across contexts.

Second, the orchestrator must operate within a favorable context, with intermediaries that are willing and able to contribute to the solution. While orchestrators and intermediaries need not have wholly equivalent goals and priorities, they must have a sufficient commonality of interests to be able to collaborate. Intermediaries must also possess capabilities that *complement* those of the orchestrator, so that together they can provide effective governance. In addition, some targets may be more responsive to orchestrated governance than others; powerful targets that adamantly resist the relatively soft techniques of orchestration may defeat this and other modes of governance.

When these two conditions are present, organizations can reap substantial benefits from orchestration. When they do not apply or when other barriers are present, orchestration may not be a viable strategy.

Characteristics of successful orchestrators

Legitimacy

Because orchestration is a way of governing without legal authority or coercive power, it is crucial for orchestrators to be seen as legitimate by the intermediaries and targets they wish to organize and influence. Legitimacy is especially important when an orchestrator seeks to steer the activities of GSNs or other intermediaries. For present purposes, we can understand legitimacy as the belief amongst intermediaries and targets that an orchestrator is an appropriate organization to direct policy on a given issue.

Legitimacy can derive from multiple sources; here we outline three of the most important. First, legitimacy may stem from the moral authority of the orchestrator. Multilateral IGOs often derive such legitimacy from their membership and procedures. UN agencies, for example, have near-universal state membership and are widely seen as neutral, public-spirited organizations. Civil society groups may obtain moral authority from consistent adherence to admirable principles such as respect for human rights or the environment. However, all actors do not necessarily perceive an institution's moral authority in the same way. Would-be orchestra-

tors must be legitimate in the eyes of the intermediaries and targets whose behavior they aim to shape.

Second, legitimacy may derive from the expertise of the orchestrator. Individuals and organizations are often willing to be guided by the organizations they believe have the best information or greatest technical proficiency on an issue. For example, the World Bank's Oil, Gas, and Mining Unit was able to convince oil companies to reduce gas flaring via the Global Gas Flaring Reduction Initiative because it could provide technical expertise that helped the companies commercialize the natural gas released by oil drilling instead of flaring it into the atmosphere.

Third, legitimacy may be based on the orchestrator's record of success. If an organization can demonstrate that it has performed consistently well in addressing an issue, others with similar goals are more likely to view it as a proper authority to guide their own actions. The WHO, for example, has a proven record of successful health interventions, which gives it credibility with the governmental, NGO, and business partners it convened to form RBM.

Focality

Focality—an organization's position as an acknowledged governance leader within an issue area—helps determine an organization's convening power and influence. Focal institutions can reach out to the full range of relevant actors with a reasonable expectation that they will respond. Focality also allows an orchestrator to bring together organizations that might otherwise find it difficult to work together, such as companies and NGOs. While such groups may come together on their own (NGOs and business have jointly created many private schemes), a focal orchestrator can attract more diverse actors and can thus create broader, stronger governance institutions.

Two interrelated characteristics determine an institution's focality. First, focal institutions are the hubs that actors look to and converge around in a particular issue area or within a certain network. Some realms of global governance have a relatively clear "anchor" institution that plays the central role in policymaking. For example, the World Trade Organization and ICANN currently have high focality within the domains of international trade and Internet governance, respectively. Other fields, such as environmental protection and financial regulation, are more fragmented: multiple organizations overlap and even compete for influence. Anchor institutions can also lose focality as other influential organizations enter their domains; in the field of global health, for example, the activities of the World Bank and the Gates Foundation, among others, have undercut the focality of the WHO.

Second, focal actors have strong connections with the many other organizations working in an issue area. In network analysis, "centrality" measures the relative importance of an organization based on the number of connections it has with other organizations, its "distance" from other organizations, and the distri-

bution of organizations around it. In practical terms, an organization's centrality can be measured in terms of the number of interactions or working relationships between its staff and those of other organizations in the field, the number of people who read its publications or attend its events, and similar tangible indicia.

Importantly, our examples show that a truly dominant position may not be essential to successful orchestration. In appropriate circumstances, actors such as CERES, Électricité de France, and the mayor of London have shown they possess sufficient centrality, legitimacy, and other attributes to convene and steer significant GSNs.

Resources

Because orchestrators lack coercive power, they must enlist, encourage, and guide intermediaries using softer methods. As we discuss below, providing positive incentives is a central technique of orchestration. Thus, orchestrators need to have financial, technical, administrative, or subjective resources that they can offer as support to potential intermediaries.

Money is an obvious way to motivate action, and governments and IGOs often contract with private actors for services. Such relationships are distinct from orchestration, however, as they follow a more traditional principal-agent model. Many orchestrators (IGOs, NGOs) lack financial resources, and most face constraints in transferring them to others. As a result, financial support is a minor factor in most cases of orchestration.

Technical support is more common. By offering information and advice that show actors new ways to achieve their goals and enhance their capacity to do so, orchestrators can induce actors to take on desired governance functions. The Global Gas Flaring Initiative again provides a useful example. The World Bank's Oil, Gas, and Mining Unit had access to state-of-the-art knowledge on methods to capture and commercialize natural gas byproducts. By sharing its technical expertise with oil companies, the World Bank was able to draw them into commitments to phase out gas flaring.

Orchestrators often provide administrative support during the startup phase of a GSN or other intermediary. For example, UNEP did this in the early years of GRI; it also helped persuade the Dutch government to host GRI's organizational secretariat. Some orchestrators host the staffs of the intermediaries they support.

Finally, legitimate focal orchestrators frequently provide non-material resources to collaborating actors and organizations. Particularly important is reputational support. New GSNs and other intermediary organizations must rapidly gain recognition and legitimacy in relevant communities if they are to be effective. Endorsement and similar modes of support help launch startup organizations in strong positions. The UN, for example, endorsed GRI by hosting its launch event at the General Assembly.

Organizational culture

An equally intangible but important trait for orchestrators is an organizational culture geared toward collaborative, indirect governance. Organizations that work in a closed manner are unlikely to see how other organizations can help them achieve their goals, or how they might motivate those organizations to collaborate. In contrast, successful orchestrators habitually interact with actual and potential partners outside the organization.

Bureaucratic organizations that perform well-defined functions through long-standing procedures and processes are less likely to orchestrate—and to do so effectively—than organizations that seek innovative strategies to confront existing and emerging problems. It is often organizations that lack the capacity to address problems in traditional bureaucratic ways (for example, those without sufficient legal authority or financial resources) that turn to innovative methods such as orchestration and do what is necessary to make them work.

Finally, public organizations such as government agencies and IGOs must be willing and able to engage with sub- and non-state actors. This often requires specific organizational policies, as well as appropriate staffing and training. In some intergovernmental bodies, however, member states resist such engagement. For example, a number of developing countries have resisted efforts to recognize bottom-up initiatives in the UN climate negotiations. Similarly, in the International Labor Organization (ILO), in which workers and employers (the "social partners") enjoy a privileged position, those groups have resisted ILO engagement with other NGOs and private groups. Such barriers must be overcome if orchestration is to be successful.

A conducive context: Willing and able intermediaries

If orchestration is governance through intermediaries, suitable intermediaries must be available if orchestration is to succeed. First, GSNs and other intermediaries must have the capabilities to address the issue at hand. For example, multi-stakeholder groups such as EITI are well-suited to adopting consensus standards, although they often lack the capacity to monitor implementation; city networks such as C40 have the administrative capacity to improve their own operations and to influence others through demonstration projects; and on-the-ground operational GSNs such as GOARN are able to coordinate information-sharing and the provision of benefits.

Second, orchestrators typically seek intermediaries whose capacities complement their own. For example, UNEP and the UN Global Compact orchestrated formation of the Principles for Responsible Investment (PRI), a network of socially responsible and conventional investors that urges investment institutions to incorporate social and environmental considerations into their investment decisions. UNEP is legitimate, focal, and expert, but it lacks both effective access to business targets and influence over them. PRI has both qualities in abundance, and it in turn benefits from UNEP's support and endorsement. In this and many

When does orchestration fail?

Organizations that attempt to orchestrate without key attributes are likely to fail. In 2009, the UK's Department for Energy and Climate Change (DECC) became concerned about the proliferation of carbon-offsetting programs, which purported to allow consumers or businesses to compensate for their carbon emissions by purchasing an equivalent amount of carbon mitigation in the form of afforestation, energy efficiency, clean technology deployment, and the like. While some of these programs offered real benefits, others were less scrupulous, so DECC decided to adopt a standard to distinguish good offsets from bad. To do so, it created an intermediary organization, the Carbon Offset Quality Assurance Scheme (QAS), which reviewed different programs and awarded a seal of quality to those that met its standards.

The UK government was no stranger to this strategy, having orchestrated a number of successful climate GSNs, including the Carbon Disclosure Project and the Renewable Energy and Energy Efficiency Partnership. It had an amenable organizational culture and ample material resources. However, in 2011, just two years after its launch, the QAS was forced to close, having failed to shift carbon-offsetting programs toward its standards. Three missteps led to this failure.

First, DECC adopted controversial standards for what constituted a "quality" offset program without having the normative legitimacy to do so. For example, QAS allowed only "compliance" standards, which excluded some dominant private standards like the Voluntary Carbon Standard. DECC similarly refused to incorporate sustainable development and other "side benefits" into its carbon-offset standards, as a number of existing schemes had done. The effect was to exclude a large number of projects undertaken by offset providers, many of which believed that their standards, not those of QAS, led to higher quality offsets.

Second, DECC did not bring sufficient technical resources to bear. QAS's knowledge of the carbon markets was widely questioned by market participants. Without sufficient expertise, QAS had little ability to influence its targets.

Third, despite its central governmental position, DECC lacked focality. Industry bodies like the International Carbon Reduction and Offset Alliance and the Carbon Markets and Investors Association argued that the government had failed to keep up with positive developments in the sophistication and quality of self-regulation in the voluntary carbon market. These bodies had come to be seen as the global leaders in offsetting issues, and they functioned as competing sources of expertise and legitimacy that undermined the formal focality of DECC.
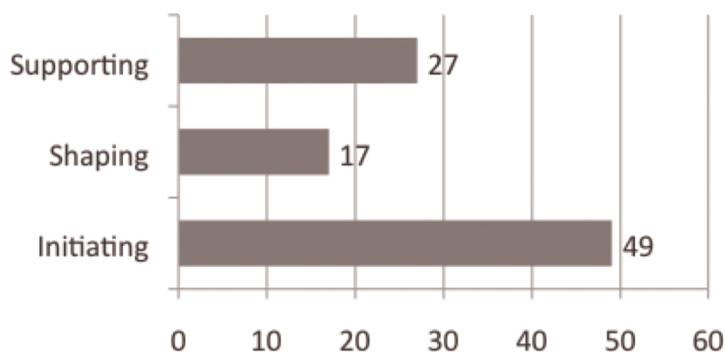
Figure 6. Distribution of orchestration strategies across GSNs

other cases, the orchestrator may create intermediaries where suitable ones do not exist.

In contrast, in cases where the orchestrator is part of a network, all members have similar capabilities. For example, the mayor of Kyoto did not seek complementary capacities when he formed the World Mayors' Council, nor did Electricité de France do so when convening GSEP. These orchestrators focused on building the scale and extending the reach of a GSN, rather than on adding missing capabilities.

Third, intermediaries' goals must be aligned with those of the orchestrator. Because an orchestrator cannot "control" intermediaries, it must seek out organizations that will independently act in accordance with the orchestrator's aims. That said, having perfectly harmonious goals is not essential; as long as there is a sufficient commonality of interests between the orchestrator and intermediaries—even if there are some differences in priorities and tactics—orchestration is worthwhile. It is unlikely that any multi-stakeholder organization such as GRI or EITI, or indeed any multi-member organization such as C40 or GSEP, will have exactly the same priorities as its orchestrator.

TECHNIQUES FOR ORCHESTRATION

Orchestrators can activate the governance abilities of sub-state, non-state, and multi-stakeholder intermediaries in three basic ways: initiating, supporting, and shaping. Some orchestrators will engage in all of these techniques over the course of a project; others will apply only one or two of them. Initiating is by far the most common strategy, followed by supporting and shaping (figure 6).

Initiating

The first step for any orchestrator is to enlist appropriate intermediaries. Ideally, the orchestrator can identify existing organizations with aligned goals and the nec-
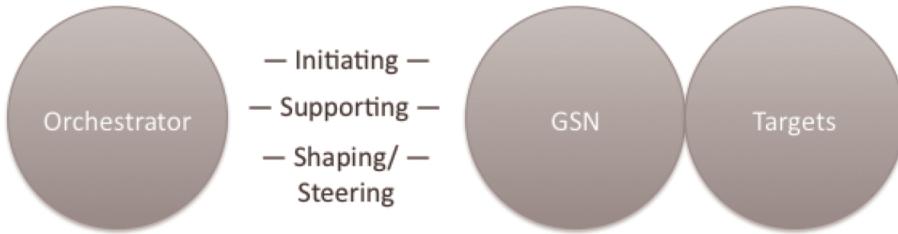
Figure 7. Techniques of orchestration

essary capabilities. The orchestrator then enlists those organizations to collaborate through persuasion and the offer of support.

Often, however, appropriate intermediaries do not exist. In these situations, the orchestrator may play a catalytic role in creating new ones. Lacking formal authority and control, the orchestrator uses the "convening power" that its focality and legitimacy provide to bring together the actors it hopes will participate, encourage them to collaborate in an organized way, and guide their interactions. The orchestrator frequently conceptualizes the overall project and even provides its core design. For example, the International Finance Corporation (IFC), a unit of the World Bank, convened major banks and guided them to adopt the Equator Principles, which apply social and environmental safeguards parallel to those of the IFC in private project lending; the IFC and Equator meet regularly to keep their standards aligned. Many of the examples discussed above reflect a similar process.

Supporting

Once appropriate intermediaries have been identified or created, the orchestrator strengthens their governance impact by providing support. As discussed above, an orchestrator may provide material support, such as financial contributions, administrative assistance, or hosting staff; these strengthen intermediaries' operational capacities. An orchestrator may also supply subjective support such as technical expertise, access to information, access to other influential actors, a clear agenda, and political or legal endorsement. These enhance intermediaries' visibility, legitimacy, and reputation, and also strengthen their capacities.

Shaping

An orchestrator may seek to shape or steer the goals, structures, and activities of its intermediaries to keep them in line with its own goals and priorities. Shaping and steering are especially significant for governmental orchestrators like UNEP and DFID, which must ensure that publicly adopted mandates and norms are observed. They can also be used to promote such goals as the inclusion of devel-

oping country actors or other key stakeholders, or the adoption of more democratic or efficient internal procedures.

The attributes of the orchestrator and its relationships with intermediaries, especially the forms and levels of support it offers, may give it a modest degree of leverage to shape individual intermediaries and steer their activities. Several shaping techniques are available. As part of catalyzing new intermediaries, orchestrators can choose whom to include in an initiative and whom not to invite; for example, only certain organizations were asked to participate in framing EITI. Orchestrators also can provide information and guide deliberations on organizational forms, standards, and activities, as the IFC did with deliberations on the Equator Principles.

If appropriate intermediaries exist—or once they are formed—orchestrators can steer them by providing support. Orchestrators create positive incentives by directing support to desired actions or making support conditional upon those actions; they provide negative incentives by implicitly or explicitly threatening to terminate support if an intermediary strays from its commitments. For example, the World Bank provided technical assistance to oil companies only for gas conversion projects.

Orchestrators can also single out certain organizations for support and endorsement. This approach strengthens the selected organizations vis-à-vis less representative, effective, or ambitious competitors in the same issue space. For example, the UN and the 2002 World Summit on Sustainable Development gave such broad support to GRI that they established its reporting protocols as the de facto global standard. Ideally, especially when decisions are based on explicit criteria, the possibility of receiving a valuable endorsement or other support will set off a "race to the top," with organizations competing for recognition.

Finally, orchestration is used to shape complexes of institutions. For example, while numerous cities, investment firms, and electric utilities have adopted environmental programs, orchestrators still considered it worthwhile to structure and coordinate their activities through C40, INCR, and GSEP, respectively. Broad multi-stakeholder partnerships such as RBM have similar goals. Here the most important tools of steering include setting agendas, sharing information, guidance, and coordination, although the positive and negative incentives of support are also relevant.

An area ripe for this kind of shaping is the world of voluntary transnational governance initiatives. In many issue areas, multiple transnational organizations compete with each other. For example, multiple product-certification schemes address sustainable forest management, worker rights, and other issues; multiple schemes also compete to certify carbon-offset projects. Such fragmentation is often less than optimal because it confuses consumers (who are unable to distinguish between competing schemes), burdens producers, and consumes excessive organizational resources. By strategically supporting better governed and more effective schemes, orchestrators could significantly enhance transnational governance. Sustainable development governance has focused similarly in recent years

on encouraging voluntary partnerships and commitments from non-state actors and organizations; hundreds of these initiatives have been created. Orchestration is sorely needed to encourage good internal governance and effective programs, coordinate dispersed actions, and increase accountability.

IMPLICATIONS FOR NETWORK LEADERS

In a world of rising global challenges, orchestration represents a powerful strategy for organizational entrepreneurs to unlock innovative governance solutions. While some GSNs emerge organically from the bottom up, this memo demonstrates that many have been brought to life in more intentional fashion by orchestrators that catalyze their formation, shape their memberships and organizations, support their programs, and steer their activities. While a handful of "superorchestrators" have been especially active, a wide range of organizations have orchestrated successfully, including both "new" transnational actors, such as NGOs and city officials, and "traditional" international actors, such as states and IGOs.

To succeed, an orchestrator must possess a set of key characteristics: legitimacy, focality, material and intellectual resources, and an organizational culture disposed to collaboration and experimentation. These qualities can be developed, but they can also be undermined by missteps and competition. There also must be a sufficient number of willing and able intermediaries—that is, organizations that share a broad commonality of interests with the orchestrator and possess the essential complementary capacities to address the problem. If such intermediaries do not exist, an orchestrator may be able to catalyze their formation, but collective action problems and the costs of active cooperation can block this process.

While orchestration is not appropriate for every actor, problem, or context, we believe it is undersupplied. Research does identify successful cases of orchestration in a variety of fields, from environment to financial regulation to human rights. Nonetheless, too few organizations work in this way, even though they have many of the requisite attributes and operate in facilitative contexts, with a growing number of highly capable non-state actors available to serve as intermediaries. As a result, most GSNs have been formed bottom-up, without the catalyzing effects, support, and steering orchestrators can provide.

Organizational culture is likely a key factor in the undersupply of orchestration. Even within UNEP, one of the most active orchestrators, the Division of Technology, Industry, and Economics and the entrepreneurial team at the UNEP Finance Initiative have led most of the initiatives. Fortunately, organizational culture is something that policymakers and leaders can control, although not always easily or quickly. By following the guidelines outlined here, organizations that aspire to promote social change through entrepreneurship can determine if orchestration makes sense for them, and can then apply strategies that have worked elsewhere.

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