

# Game Changers: The Big Green Challenge and the Role of Challenge Grants in Social Innovation

OLA TJORNBO & FRANCES R. WESTLEY

*Waterloo Institute of Social Innovation and Resilience, University of Waterloo, Waterloo, Ontario, Canada*

**ABSTRACT** *A key challenge for governments faced with increasingly limited financial resources lies in finding new ways of partnering with the not-for-profit sector to deliver innovative solutions to intractable social problems. This allows government to tap into previously inaccessible resources contained in local communities, and to harness them to produce social goods. However, it also requires that government take on a new role as a facilitator of social innovation rather than a direct actor, which poses a challenge for both theorists and practitioners. This paper is based on a qualitative investigation of the Big Green Challenge, a competition designed to stimulate community groups to generate programs to tackle climate change in their localities. It examines the role that similar challenge grants and competitions might play in stimulating social innovation and asks questions about how government can help innovations to scale up and out.*

**KEY WORDS:** Social innovation, social finance, challenge grants

## Introduction

In the wake of the global financial crisis, and in view of the ongoing public debt crises in many western democracies, governments throughout the industrialized world have fewer resources to spend on public services at a time when the demands placed on the welfare state are especially high. In order to fill this gap, governments increasingly have been turning to partnerships with business and the not-for-profit sector in search of new ways to deliver public services more cheaply and effectively. Whilst not a new

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*Correspondence Address:* Ola Tjornbo, Social Innovation Generation, University of Waterloo, School of Environment Enterprise and Development, 200 University Avenue West, Waterloo, Ontario, N2L 3G1, Canada. Email: ola.tjornbo@gmail.com

phenomenon in itself (see, for example, Osbourne and Gaebler 1993), the last five years has seen a rapid acceleration in moves to ‘reinvent government’ in many developed – and some developing – countries. In this context, community led initiatives have a huge potential to help governments cope with their current challenges (Bunt and Harris 2010). However, in working with these new partners, governments must adapt to a new role as facilitator and stimulator of such initiatives. Establishing a theoretical and practical understanding of how to do this effectively is a vital task. Social innovation theory provides one tool for exploring and explaining patterns that emerge from government experiences in this particular role.

Social innovation theory (Mulgan *et al.* 2007, Westall 2007, Westley *et al.* 2007, Westley and Antadze 2010, Nicholls and Murdock 2011) is a growing field of study that is concerned with projects that aim to address intractable social problems, and investigates how social systems are able to transform to respond to these problems. Social innovation theory is a whole systems and multi-scale approach that looks at the influence of micro-, meso-, and macro-level drivers of transformation. One of the core arguments in the field has concentrated on the need for different forms of capital – social, intellectual, and financial – in order to generate social innovations. Research on networks and social entrepreneurs (Moore and Westley 2011a, Olsson *et al.* 2006, Nicholls 2006, Dees 1998) has provided insight into the mobilization of the first two forms of capital. The exploration of the latter, known as social finance, has attracted the attention of both scholars and practitioners in recent years (see, for example, Nicholls 2010, Canadian Task Force on Social Finance 2010). Yet, empirical evidence that explains how to invest financial capital to resolve complex, multi-scale challenges, and the strengths and weaknesses of different types of investment approaches, remains limited. The objective of this paper is to explore one such experimental approach: a challenge grant project, known as the Big Green Challenge (BGC).

The BGC was an experiment created by the National Endowment for Science, Technology, and the Arts (NESTA) in 2007. NESTA is a quasi-governmental agency that aims to drive innovation across the UK. It was designed as a competition with a one million pound prize pool and was open to community organizations that agreed to create projects to reduce carbon emissions. The entrants competed to see which projects were best able to meet NESTA’s criteria, which focused on carbon reduction, the potential for growth and long-term impact, and the engagement of local communities in contributing resources and energy to the projects. The BGC provides an opportunity to examine how challenge grants can be used to stimulate social innovation, and may provide practical insight for governments interested in using this approach as a policy tool. Indeed, the UK Department for Energy and Climate Change (DECC) was sufficiently impressed with BGC to work with NESTA on a follow up project, called the Big Green Challenge Plus. This paper draws on the experience of the competitors, members of NESTA, and external consultants to discover how the BGC can inform both social innovation theory and governments about the challenges involved in using this type of policy tool to stimulate social innovation.

Of particular interest here is the distinction between how social innovations emerge and grow by spreading through a local market and replicating themselves in new markets (described as ‘scaling out’ in the social innovation literature), and how they can grow by influencing the broader system in order to make it more responsive to the innovation (described as ‘scaling up’: Westley and Antadze 2010). The analysis in this paper suggests that while the BGC was generally successful in encouraging innovations to scale out, more attention needs to be paid to the challenges of scaling up. It is also proposed that government policy may have a critical role to play in the latter particularly.

### **The Big Green Challenge**

NESTA was set up in 1997 through an Act of Parliament, and endowed with £250 million raised through the UK National Lottery. Its mandate was to stimulate excellence in the cultural and scientific sectors. The Public Services Lab is an offshoot of NESTA, created with the intention of using a portion of the endowment to experiment with innovative ways of delivering public services. In particular, it was aimed at discovering new ways to tackle intractable problems such as an aging population and climate change (NESTA 2011). One of these experiments was the BGC, launched in 2007 and completed in 2010. The competition had three phases.

1. Initial submissions were solicited by an extensive effort to publicize the competition. In this phase, 350 submissions were received (Capener 2009).
2. A shortlist of 100 submissions was created and the applicants invited to submit more detailed proposals in person. Of these, ten finalists were chosen.
3. Each of the ten contestant organizations was given £20,000 to assist with launching their projects; they were also provided with professional support from NESTA and UnLtd Consulting, a social enterprise that specialized in developing innovative organizations. With these resources they had one year in which to launch their projects, during which NESTA’s evaluators and judge monitored their progress. At the end of the year, the winners were announced, based on NESTA’s criteria, and given a share of the prize pool (Capener 2009, Bunt and Harris 2010).

Fourth place and a prize of £100,000 went to *Low Carbon West Oxford*, which worked to improve the energy efficiency of houses in their urban community. The remainder of the prize money was shared evenly between three winners, which were awarded £300,000 each: the *Isle of Eigg*, off the coast of Scotland, for a proposal submitted on behalf of the entire island community to reduce their carbon emissions to zero; the *Green Valleys* project, in the heart of the Brecon Beacons National Park in Wales, which set up micro hydro generators on the park’s abundant fast flowing streams, in

cooperation with local communities and land owners; *Household Energy Services*, located in the village of Bishop's Castle outside of Birmingham, which helped householders to improve the energy efficiency of their homes. A representative from UnLtd Consulting noted that every one of the finalists had an exciting innovation to offer:

The ten finalists of the Big Green Challenge could actually make a really big splash if they reach their full potential. (UnLtd)

Using NESTA's own criteria, the BGC can be considered a success. The winning projects reduced targeted emissions between 10 and 32% during the year of monitoring, with many more significant reductions anticipated for the future (Bunt and Harris 2010). Moreover, the competition certainly made an impact on policy makers. The DECC responded by launching a competition of its own called Low Carbon Communities; it also partnered with NESTA to create the Big Green Challenge Plus, which allowed it to work with a number of promising projects that had not made it into the final group of ten. However, the data gathered in the course of this study also revealed some limitations of the challenge grant approach as a means of stimulating social innovation.

The BGC competition to tackle climate change was also an example of an increasingly popular approach to stimulating social innovation, the challenge grant. Challenge grants, such as the BGC and the X-PRIZE Foundation in the US (X PRIZE 2011), support innovation by providing cash prizes as incentives for innovative projects. In addition to reducing carbon emissions, one of NESTA's primary objectives was to demonstrate through the BGC how tools such as challenge grants can be used to stimulate community action for public benefit. NESTA's way of accessing this potential is outlined in a report, entitled *Mass localism: a way to help small communities solve big social challenges* (Bunt and Harris 2010). Mass localism is an approach in which a multitude of small, community-based projects can collectively make a big difference in addressing large-scale problems such as climate change. Primarily, it is about utilizing resources present in communities. Indeed, Bunt and Harris (2010) pointed out that the voluntary sector has become a large sector in the UK, with an income in excess of £33 billion annually.

Bunt and Harris (2010) argued that to make effective use of these resources, communities must themselves generate initiatives tailored to meet local needs and make best use of local resources. In keeping with this approach, NESTA hoped to involve communities and individuals who would not normally participate in carbon reduction initiatives, and to stimulate a broad range of innovations from across the UK tailored to different local contexts. As the report notes:

Rather than looking for just one breakthrough solution, a fundamental objective in how NESTA designed the Big Green Challenge was to galvanize as much community action as possible. (Bunt and Harris 2010, p. 10)

From NESTA's own analysis of the competition, the mass localism approach emerged as key to the success of the Big Green Challenge, and both Bunt and Harris (2010) and Capener (2009) noted that the BGC stimulated the creation of a number of new organizations; that is, the process encouraged a new range of actors to become engaged and contribute to solving a complex challenge. Moreover, there was geographic diversity in both the range of submissions and the chosen finalists, and a mix between urban and rural initiatives.

### **Case Analysis**

The analysis presented here is based on in-depth descriptive case study methods of the type described by Yin (2009).<sup>1</sup> The interviews done with project participants and NESTA were analyzed,<sup>2</sup> and the data divided into three broad categories descriptive of the competition: successes, shortcomings, and missed opportunities. The first category includes what interviewees perceived worked best about the competition; the second highlights the challenges that they believed hindered their work; the third category contains the comments made by many competitors beyond the competition itself and about its role within a broader context of the UK not-for-profit sector, including the ways it failed to address some of the underlying problems they face in this environment. Each of these three categories has subcategories representing the themes that emerged through multiple interviews. These are discussed in turn in the remainder of this paper.

#### *Strengths of the BGC*

*Low barriers to entry.* As already noted, the Big Green Challenge met NESTA's key goals for the experiment: stimulating community action and reaching out to individuals who would not otherwise have been involved in community responses to climate change. A critical reason for this success was NESTA's effective communication: they spread the word beyond the usual networks in such a way that the idea reached 'two blokes' who 'went down to the pub and had a few ideas,' as well as other finalists who had their finger on the pulse of community needs:

But what I did know therefore was that they were planning something on carbon. I did actively keep in touch with NESTA. (HES)

Moreover, NESTA deliberately set low entry barriers so that no one was deterred from joining the competition. One of the competitors described how easy it was to enter the competition:

So it took me a week or two to write down the applications to NESTA. This was, like, literally a couple of pages. (GV)

Thus, an important lesson from the BGC is that the capacity for social innovation was widely distributed and was not necessarily located in already

active organizations. Policies that do not reach out and actively encourage communities to act run the risk of missing out on innovative potential from the outset.

*Freedom to innovate.* A second reason for NESTA's success in attracting entrants was the attraction of the prize:

More importantly they were offering a million quid. (GV)

What made this prize so appealing and perhaps unique was that NESTA did not stipulate how the money could be spent. Several finalists stressed that this was highly unusual and a significant incentive to innovate. As one participant explained:

They weren't policing us, again it was just like, do it. Which is bloody liberating. (GV)

Another participant contrasted this approach to the way governments usually distribute grant money:

The entire structure of grant funding by local authorities is based on that – safe, risk averse, obvious outcomes, tick the box, move on to the next projects. It doesn't matter if in the long term it's a folly. (HES)

In return, NESTA was rewarded by projects with the potential for lasting creative impacts; the lesson for government is that innovators have to be trusted to spend award money as they see fit. However, it is not an easy lesson to learn and many interviewees pointed out that the DECC competition inspired by the BGC failed to grasp the importance of the freedom that NESTA gave its finalists:

And you are seeing all the other competitions like this Low Carbon Community Challenge, which is coming from DECC, and we would have loved to have done that, but when you looked at the fine print, it's just like we don't qualify because we do all the installations ourselves.

*Developing the most promising proposals.* The study results do not suggest that the BGC was a free-for-all. Part of its design philosophy was gradually to identify the most promising projects, and to provide the community groups with the support they needed to bring their proposals to a high professional standard. Hence, the competition was structured around a number of stages by which the entrants were gradually winnowed down to the most promising ten, and at each stage the remaining projects were given a little more support to help them develop further. Part of this support came in the form of a professional consultancy, UnLtd Consulting, that was paid by NESTA to help the finalists realize their innovations. Both UnLtd Consulting and the

finalists themselves acknowledge the importance of this level of professional support:

And if we wanted to marry, unlock change, we identified that what you needed to do was to marry the power of community, the passion, the commitment, with the professional back office. (HES)

NESTA was not afraid to pick winners, and understood that with low barriers to entry, finalists would require help in order to realize the full potential of their innovations.

*Building personal relationships.* Commenting on the support that NESTA offered, special praise was reserved for UnLtd Consulting:

Yes, we had a guy, they paid for a consultant support, XXX, worked for UnLtd and he was really really useful ... the main thing he did, he actually provided us some outside level of support. (HCF)

This praise seems to have stemmed from the willingness of UnLtd Consulting to provide a very personal level of help that recognized the different project participants as individuals. UnLtd Consulting confirmed that this is a core aspect of their philosophy:

We tried to be in a sense a member of their team, but more of a critical friend as well. (UnLtd)

On the other hand, other outside agencies involved in the project (such as evaluation firms) were criticized for being unresponsive to the organizations' needs:

Y were also coming along at the exact same time saying you need to give us 25 people. Get all these people together, by the way you are going to pay for it and we are not going to provide sandwiches or refreshments or anything like that and can you do it by next Tuesday. (HCF)

In short, such an engaged and individualized approach was critical in giving different project leaders the impetus and direction to push their projects forward to a successful outcome.

### *Failures of the BGC*

*Onerous and unrepresentative evaluation.* The criticisms the BGC received seem to reflect the obverse of the things it did well. For example, NESTA was criticized for imposing evaluation criteria that restricted the participants' freedom to innovate. Many of the finalists complained that the evaluation procedures placed a large burden on their organizations and prevented them from effectively spending the seed money they had received:

So of the £20,000, most of that went on employing someone to fulfill that judging criteria. (GV)

The carbon audit that NESTA performed was singled out for particular criticism, with several finalists complaining that it was a poor tool for assessing their impact and progress:

We had to record the carbon of these 100 homes or whatever. We found 155, we started recording that and then we had to keep those 155 people engaged for an entire year. Which was a sub-project. It was nothing to do with what we were doing. (GV)

Finalists also complained that evaluation was carried out without their input and – despite of the fact that some organizations had established their own methods for tracking carbon – their perspectives went unheeded. This seems to point both to the importance of ensuring that freedom to innovate is not sacrificed when it comes to evaluation, and to the imperative of developing the approach to evaluation in conjunction with the projects that will be using them.

*Inadequate resources provided.* Similarly, although the BGC was praised for providing support to the finalists, some parties also criticized it for providing inadequate support. In particular, a number of finalists noted that the £20,000 of seed money was too small a sum to support the development of a worthwhile project, and many finalists had to supplement this amount:

We needed £75,000 to pay for the administration and do survey work . . . on the £20,000 from NESTA we couldn't have done that. (GV)

Some finalists also complained that the prize money of one million pounds was divided among too many winners, noting that they had hoped that the full amount would be given to one project:

A million pound prize is laid out, I would be very happy and very usefully spending £800,000 which is what we said we needed to do all the things we want to do. (HES)

It was not only financial resources that were felt to be lacking, and UnLtd Consulting in particular expressed concern that human resources were lacking in many of the projects:

So looking at the team that's actually involved in doing the project and looking at their capacity to deliver. One of the things that's really come up is skills and time. Do people have the right skills to link up with their social intention and do they have time? (UnLtd Consulting)

From the point of view of UnLtd Consulting, developing a social innovation is not easy and requires considerable investment. Ensuring that there is



enough support and that burnout does not become a problem is thus key to preventing resources from being invested in projects that ultimately fall by the wayside.

*Lack of a personal relationship.* Finally, while the personal relationships that UnLtd Consulting took care to form with many of the finalists were praised, NESTA itself was often criticized for remaining aloof and unresponsive:

They asked us what we wanted, we told them what we wanted, and they said ‘ah we are not giving you that, we are giving you something else’. (HCF)

At its worst, this attitude resulted in waste, as NESTA tried to provide the projects with support for which they had no need:

OK so what we’ll do is a web site... well we don’t have broadband around here. (GV)

Overall, some project participants felt that they were poorly treated, and that as a result the competition did not work as well as it might have:

So I think NESTA has got a huge amount to learn about how to work with social enterprises. (HES)

Thus, both in their praise and in their criticism, the competitors emphasized the importance of having a close personal relationship between those involved in the social innovation and those supporting them – one that allows for two-way communication and thus helps to ensure that resources are used as effectively as possible.

### *Missed Opportunities*

The analysis moves now to interviewees’ comments on the broader context of social innovation within which the BGC operated. Although this section is entitled ‘missed opportunities,’ the analysis is not necessarily a criticism of NESTA or the BGC; rather, the results reflect the interviewees’ broader concerns about their capacity to create meaningful change, given some of the challenges they face.

*Systemic barriers to innovation not addressed.* Several interviewees, for example, noted that they faced institutional barriers to innovation that threatened the viability of their projects. Often, these came in the shape of rules and regulations that prevented them from being able to carry out their work:

Two really big problems, planning permission and the bigger problem is environmental assessments. (GV)

Participants noted that the broader regulatory environment was poorly designed to handle innovative projects so that, for example, a proposal to construct a low impact micro hydro generator on a small hillside stream was subject to the same approval procedure as a proposal to construct a nuclear waste disposal facility next to a major river.

At other times, finalists were struggling with the norms of the volunteering community, which were not always conducive to sustainable organizational growth:

Most of the tension in the organization came from this idea of wanting to be nice, cute and friendly environmental groups and community-based groups versus that actual heart of the organization which is, yes we are going to do all that, but it is a business, if we don't make any money then we don't exist and we can't do any of this work. (HES)

Many finalists ended up having to push for reform of the institutional environment in which they were operating:

A lot of the projects, some have come across policy barriers and some have come up with really interesting ways to overcome them like the prisons project. (NESTA)

Overall, the majority of finalists faced some kind of systemic obstacle to the innovation they were attempting to introduce, and while many of these were overcome, others remained a threat to the long-term future of the innovations. Thus, an important role for social innovation policy is to address systemic barriers directly, or to support social innovators in facing these challenges.

*Long-term financial future.* One of the primary challenges facing social innovators that emerged in the interviews is that of securing the long-term financial future of their enterprises. As already noted, the prize money from NESTA was both a huge incentive that stimulated community action, yet, insufficient to secure the future for the winners. Thus, many of the finalists were seeking other ways of creating reliable revenue streams:

That's what we are struggling to crack, how we earn our living off the back of the savings. (HES)

In doing so, they found themselves working against the expectations of both government and the community, neither of which was accustomed to the idea of volunteer organizations seeking to make a profit:

It's just utterly bizarre, that when you analyze it in that sense, they seem to think it's very odd that we want to make money. (HES)

Moreover, although some finalists were able to use the money from NESTA as a lever to find more financing, others remained vulnerable, for example to

sudden changes in government, which remained a primary source of funding for many of the finalists:

Hackney city council went bankrupt, GLA took over, funding went from £60,000 to £20,000. (HCF)

Securing the long-term financial future of social innovations is a primary challenge, and more techniques and support are needed to improve the durability of new ideas.

## Discussion

Although social innovation is a diverse field of study (Moulaert *et al.* 2005, Nicholls and Murdock 2011), it is concerned, like the BGC, with the role of new ideas and models that aim to tackle societal and environmental challenges (Wheatley and Frieze 2006, Mulgan *et al.* 2007, Moore and Westley 2011a). Examining the BGC with the benefit of insights from research and theory leads to a deeper understanding of its strengths and failures as a vehicle for social innovation, and some broader insight into the role that challenge grants might play in the realm of social innovation policy.

What is apparent from the literature is that processes of social innovation move through distinct stages that involve first, the generation of new ideas in response to observed needs, and second, the establishment and diffusion of these ideas in an existing system (Mulgan *et al.* 2007, Westall 2007, Biggs *et al.* 2010, Westley and Antadze 2010, Moore *et al.* 2011). Importantly, according to this argument, the types of resources and skills needed to move an innovation forward are different at each stage (Moore and Westley 2011b, Moore *et al.* 2011).

The BGC lends empirical support to this claim. If the pattern of strengths and weaknesses that was drawn from the interview data is examined (Table 1), the majority of the strengths relate to the stimulation of new ideas, whereas the weaknesses typically concern a lack of resources needed to develop those ideas further. Interviewees were especially happy to be given the freedom to innovate, and a lot of new projects were created as a result. But there was criticism of both the lack of resources needed for further refinement, and the lack of ‘tailored’ support at this stage. While untapped local resources may be uncovered through competitions such as the BGC (Bunt and Harris 2010), the local ideas and capacity need carefully targeted investment to develop a fully-fledged social innovation. As one finalist noted, ‘Volunteering is a competitive game’ (HES).

Although there are resources to be accessed in communities, maintaining enthusiasm for projects as they transition into a ‘scaling out’ process can be challenging. Although interviewees praised NESTA for recognizing the need to refine the innovations, and particularly appreciated the support of UnLtd Consulting, the overall message is that the competition was more successful in stimulating ideas than in developing them.

**Table 1.** Sample interview quotes concerning the successes, failures and missed opportunities of the BGC

Successes of the Big Green Challenge	Quotes from interviews
Competitors given freedom to innovate	Offering up a million pounds of no strings attached funding. It sparked people's imagination. (GV) DECC finds it very difficult to trust communities to do it. So they feel they have to set up guidelines and criteria and judge it and actually the projects that got through were projects that were approved by civil servants. (HES) £300,000 inside us that we can do what the hell we like with. That is a once-in-a-generation opportunity. (GV)
Best proposals were identified and developed	And if we wanted to marry, unlock change, we identified that what you needed to do was to marry the power of community, the passion, the commitment, with the professional back office. (HES) We've got to become business-like we've got to become focused, turn a profit and reinvest that profit into our true goal. (HES) Main thing is it's made us do a proper environmental audit. (HCF)
Building personal relationships	He had vision, they needed organization and structure. (UnLtd) Most of his meetings were actually taking me to the pub, we have a good blow out, let it all out and I wake up the next morning invigorated, not realizing what he's actually done is given me new structure. So he was actually a very soft touch sort of skill. (GV) We tried to be in a sense a member of their team, but more of a critical friend as well. (UnLtd) Yes we had a guy, they paid for a consultant support, worked for UnLtd and he was really really useful . . . the main thing he did, he actually provided us some outside level of support. (HCF)
Low barriers to entry sparked the creation of new projects	So it was, to me a week or two to write down the applications to NESTA. This was like literally a couple of pages. (GV) And then we got whittled down to the top 21, had to go down to London and pitch our idea. And again still it was just an idea amongst 2 blokes. (GV) NESTA has good networks and used them to spread the message. (UnLtd)
Failures of the Big Green Challenge	
Evaluation costly and unrepresentative	And actually what they've done is downgraded our 29% cut to a 17% cut. (HES) So of the 20,000 pounds, most of that went on employing someone to fulfill that judging criteria. (GV) One big hiccup was the carbon auditing. (HCF)
Competitors not treated as partners	NESTA I think actually treated us like guinea pigs as opposed to partners. (HES) It made no impact upon them what our plans were, what our needs were. (HCF) And that's now a grown up adult relationship whereas throughout the Big Green Challenge it wasn't. We were treated like children. (HES)

(continued)

**Table 1.** (Continued)

Failures of the Big Green Challenge	Quotes from interviews
Inadequate resources provided	<p>We needed £75,000 to pay for the administration and do survey work, on the £20,000 from NESTA we couldn't have done that. (GV)</p> <p>In honestly I didn't really know at the time. I went into it rather foolishly thinking 'oh I can do all this'. After sort of like ten 80-hour weeks on the truck I thought actually I don't think I can do it all. (GV)</p> <p>We are deeply under-resourced. I think we have just won £300,000 but honestly that is not a lot. (HES)</p>
Missed opportunities	
Systemic barriers to innovation not addressed	<p>And it's centralized now, so all decisions are made up in Sheffield. Now those people up in Sheffield would have no idea what the stream eco-systems are like here. So they were communicating with local staff and then they would have to feed that back they would, Sheffield would send out consultees, they would then come back, it's just insane. (GV)</p> <p>We are still awaiting bureaucratic circles, CCW, environmental protection agencies, whatever, to agree on the mechanism for doing that. (GV)</p>
Long term financial future of projects in doubt	<p>That's what we are struggling to crack, how we earn our living off the back of the savings. So here there are 400 households, what's 400 times 400, that's £160,000 worth of money in this town. (HES)</p> <p>But if this were operating on the commercial scale, I'd construct a contract with each of these clients. And that's not possible because that piece of paper called a contract is one of the barriers why people say no. (HES)</p> <p>Hackney city council went bankrupt, GLA took over, funding went from £60,000 to £20,000. (HCF)</p>

The emphasis on 'tailored' support is also particularly noteworthy, since the social innovation literature has rarely been specific about what types of resources are needed to develop new social innovations, and the hypothesis raised by this case is that there is not a one-size-fits-all answer to this question, but rather that successful social innovation processes require social financiers to work closely with each individual project to discover their unique needs. The development stage is also one where the number of ideas must be winnowed, since typically there will not be enough resources to support them all. Hence, both in order to provide tailored assistance to innovations, and in order to sort the best ideas from the less effective ones, evaluation is crucial. As the data show, NESTA ran into difficulties evaluating the projects, as their procedures were perceived as onerous and counter-productive. This is not surprising, since standard evaluation practices often fail to accurately represent the potential values of fledgling social innovations (Patton 1979, 2010). The Big Green

Challenge might have benefited from the use of more innovative assessment techniques, such as developmental evaluation, which avoids the use of blunt quantitative measures in favor of a more tailored approach that identifies the specific challenges and accomplishments of individual projects as they unfold (Patton 1979, 2010).

Another theme emerging from the BGC focuses on the later stages of a social innovation process – diffusion and establishment. The social innovation literature presents alternative models of how this occurs (Mulgan *et al.* 2007); however, this paper uses the distinction between ‘scaling out’ and ‘scaling up’ first made by Westley and Antadze (2010) (see also Moore and Westley 2011b). Scaling out refers to the replication and growth of the innovation in new markets and locations through market mechanisms; scaling up refers to a change strategy that targets institutions, resource flows, and beliefs at a broader systemic scale.

A new social ‘product’ might be a new social program, a government policy or simply an idea that changes behavior. For example, the Green Valleys product is a community organization that helps to finance, design, and install micro hydro dams. Their success in scaling out depends on ‘effective supply,’ that is, the ability of the innovation to suit a social need, and ‘effective demand,’ the ability of potential customers of the innovation to access and pay for it (Mulgan *et al.* 2007). However, the ‘scaling up’ approach holds that unlike regular products, social innovations often cannot be sold directly to a market, in part because truly radical innovations do not have ready markets and may in fact disrupt existing ones (Geels 2002), and also because the demand for social innovation typically comes from users who lack the means to finance it themselves (Westley and Antadze 2010). ‘Scaling up’ therefore involves altering rules, behaviors, and resource flows at the systemic level in order to create an environment more conducive to the innovation being proposed.

To an extent, these two approaches to social innovation are complementary. The former leads to incremental change, whereby new innovations gradually trickle through a system until they become widespread, whereas the latter involves more sudden, radical shifts (Mulgan *et al.* 2007, Biggs *et al.* 2010, Geels 2002). However, there is also a sense in which these are alternative understandings about what social innovations involve, and what it ought to do. In the first case, social innovations can provide services, stepping in to fill a vacuum when government services do not meet individuals’ needs (Moulaert *et al.* 2005, Mulgan *et al.* 2007). This kind of service delivery is, in part, related to notions of social entrepreneurship and social enterprise, which look at the role of entrepreneurs and businesses in launching new organizations that serve a social purpose while also making a profit (Martin and Osberg 2007). In the second, however, innovation is seen as inherently disruptive, requiring changes to existing rules and behavior in order to become established (Geels 2002, Westley *et al.* 2007, Moore and Westley 2011a). Much of the literature on social innovation tends towards this second view, where a systemic impact of social innovation is seen as either highly desirable (Moulaert *et al.* 2005) or even central to its essence (Westall 2007, Westley *et al.* 2007, Phills *et al.* 2008, Westley and Antadze 2010, Nicholls and Murdock 2011).

This tension between incremental innovation and more radical systemic change is evident in analyzing the Big Green Challenge. On the one hand, the competition seems to have best supported market-driven diffusion. 'Mass localism' as an approach, with its emphasis on the adaptation of innovation to local markets and the use of local resources, speaks best to notions of 'scaling out.' On the other hand, the idea of systemic change seems to have been important to both NESTA and the finalists. As the former noted, 'we were looking for game changers that change the way systems work' (NESTA).

Overall, the experience of the BGC confirms that social innovation is inherently disruptive, as many of the innovations ran into (and sometimes overcame) regulatory and attitudinal barriers to their progress. A particularly important barrier was the lack of social finance models that adequately rewarded the finalists for the social goods they were providing. It was a goal of both NESTA and the challengers that they should become financially independent, over and above the prize money the BGC might provide. However, long-term financial viability remained a concern in many cases. In part, this was due to the culture of a not-for-profit sector unfamiliar with the idea of community organizations wanting to make a profit. The finalists in the BGC largely rejected the idea of simply receiving handouts or grants; instead they hoped to create profit-making businesses, and in doing so they hoped to treat government as a client rather than a benefactor. Thus, one finalist spoke of selling the energy savings they were providing to the local council, since energy savings meant that more money stayed in the local economy.

In other published social innovation cases, the capacity to scale up has often relied on the actions of an individual, often termed a 'social entrepreneur' or simply a leader (Westley *et al.* 2007), and indeed there is an established literature on both social entrepreneurship and leadership in complex organizations that emphasizes this capacity (Dorado 2005, Plowman *et al.* 2007, Lichtenstein and Plowman 2009). But the BGC case suggests that policy can also play this role (Moore *et al.* 2011). Although NESTA itself did not provide any assistance to help the competitors scale up, the importance of policy in assisting such transition was nevertheless confirmed by the experience of the Green Valleys project, since the viability of this project relied in part on the introduction of feed-in tariffs provided by government to support green energy production. As they noted, 'our system works because government introduced feed-in tariffs' (GV).

Overall, in this case, the projects that focused primarily on strategies for scaling innovations outwards experienced difficulties, both in terms of barriers to their establishment but also as their objectives did not align with the opportunities afforded by the BGC.

## **Conclusion**

NESTA's Big Green Challenge was both a real competition between community groups to gain a prize of one million pounds by creating projects

to reduce carbon emissions in their communities, and also an experiment in the use of a challenge grant to stimulate social innovation. The competition was designed to encourage groups not normally involved in social programs to create innovations with a positive social impact. In NESTA's eyes, it met with success, demonstrating how challenge grants of this type can lead to the creation of a high number of ideas with the potential to positively impact the systems they address. However, interviewees also identified problems with the approach that might offer some lessons to governments or individuals and organizations interested in social investment about how they can play a role in stimulating social innovation.

NESTA outlined some of these lessons in its report based on the BGC (Bunt and Harris 2010). The report pointed out that there are valuable and untapped resources located in communities that can be mobilized to produce social goods. They advocated that to unleash this potential, flexible sources of funding and support should be actively used to solicit input from communities. This funding or social finance should come with few strings attached, so that communities are given the freedom to use it in innovative ways based on their particular needs and skills. Moreover, it should be widely advertised to stimulate as much interest in innovation as possible, so that the most promising projects can be identified and given further support.

By and large, the BGC speaks to the immense benefits of such an approach. Many of the projects involved in the competition noted that it was precisely the freedom they were given, as well as having the one million pound prize as an incentive, that gave them the impetus to launch their innovations. They compared the experience of the BGC very favorably with similar types of programs that contain too many constraints on how money can be spent to achieve innovation.

However, in the overall process of a social innovation, the creation of new ideas and projects represents only the first step. In order to be successful, innovative projects also need to be supported as they seek to establish themselves within existing systems. The amount of support that social innovation start-ups require cannot be underestimated. The message from these interviews is that the seed money provided by NESTA, £20,000 for each finalist for a year, was generally inadequate, and three or four times that amount may have been more suitable. Equally important, however, is the provision of guidance and personal support to the social innovators themselves; in the view of UnLtd, many of the BGC projects may have failed to live up to their potential due to a lack of specialized resources. In particular, the interview data identified that 'tailored' support, based on a personal relationship with supporters, was lacking in this case, and that the evaluation procedures employed by NESTA did a poor job of reflecting true potential, at the same time imposing an excessive burden on resources.

The interview data also suggests that 'scaling up' was a priority for many of the finalists, who saw themselves as actively engaged in system-changing activities, as it was for NESTA, which cited a desire to promote 'game-changing' innovations. Not surprisingly, many of the projects encountered institutional barriers that needed to be overcome in order to make their



enterprises viable. Although previous literature has emphasized the role of individuals in this process, this case offers support for the idea that government has a vital role to play, given that government often has the power to change regulatory frameworks in response to the needs of innovative projects.

## Notes

1. The purpose of the case study approach used here is to gain a comprehensive understanding of complex social phenomena through gathering a variety of different types of information. In particular, to paraphrase Yin (2009, p. 10), case studies are useful for understanding how and why programs succeed or fail, as is the aim in this case. Qualitative case studies are particularly good at illuminating rich descriptions of relatively unstudied phenomena in order to generate new theoretical insights (King *et al.* 1994, Young *et al.* 2006). The BGC presents a rare opportunity since experiments explicitly using challenge grants to stimulate social innovation do not occur often, making it a highly suitable target for adding to the understanding in this field.
2. Most of the information presented here is drawn from eight in-depth, open-ended interviews with individuals who had been intimately involved with the cases (Rubin and Rubin 1995, Kvale 1996). Efforts were made to ensure representation from the key groups involved in the BGC, including NESTA, the competitors, and external consultants involved in the process, in order to assure a diversity of perspectives. Interviews from the following organizations are quoted in the paper. Individuals have not been identified for reasons of confidentiality: NESTA: National Endowment for Science Technology and the Arts; UnLtd Consulting: UnLtd Consulting; HCF: Hackney City Farm; GV: Green Valleys; HES: Household Energy Services.

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