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Authors	Cummins, Valerie;Verdin, Paul;Edmondson, Amy
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UCC
University College Cork, Ireland
Coláiste na hOllscoile Corcaigh

Managing Cross-Boundary Collaboration for Value Creation:

Lessons from a 'Blue Growth' Initiative

Abstract

New growth initiatives require collaboration across traditional sectors to develop eco-systems that can deliver sustainable sources of value. Collaborating across academic disciplines, the authors analyse a recent case of unprecedented collaboration between academia, government and industry in Ireland concerning marine innovation. Our analysis investigates: the effects of organizational structure and the characteristics of innovators; interpersonal dynamics that frustrate or enable cross-boundary teaming; and the role of senior executives in detecting, and responding to small deviations in expectations to avoid large-scale organizational failures. To leverage the potential benefits of cross-sector collaboration, we argue that leaders must engage in strategic error management. This paper extracts the value from the Irish case to find ways to avoid the mistakes of the relatively short-lived collaboration in future innovation efforts.

Managing Cross-Boundary Collaboration for Value Creation:

Lessons from a 'Blue Growth' Initiative

Introduction

It is often argued that fostering new growth initiatives requires collaboration across traditional "sectors" (private, public, non-profit) to develop "eco-systems" that can deliver new and sustainable sources of value creation for the future. Collaborating across academic disciplines, the authors of this case study combine expertise in marine research and development, innovation management, organizational behavior, strategy, economics, and public policy to analyse a unique case of unprecedented collaboration between academia, government and private business partners that occurred recently in Ireland.

The objective of this extended abstract is to present a high-level summary of the 'Blue Growth' case we studied, with a preview of the insights our analysis will offer.

The paper will present findings from our original case study research, involving detailed analysis of archival materials and interview data. The goal of the paper is to further scholarly and practical understanding of the challenges of facilitating the cross-boundary collaboration we believe is vital to addressing complex problems in today's society (Edmondson, 2016; Edmondson and Harvey, 2017). More specifically, the paper will highlight the strategic management challenges of creating value as part of a growth agenda, in leading specific initiatives for sustained success.

Context

Following the crash of the Celtic Tiger during the global economic recession in 2009, the Irish government looked for new ways to rebuild the economy. The objective was to develop a more sustainable model, avoiding the overreliance on construction that drove much tenuous indigenous investment in the ten years prior to 2008 (McDonald, 2010). 'Blue Growth' – a term coined by the European Commission (2012) to represent business from maritime innovation in such areas as marine biotechnology and marine renewable energy – became a topic of Irish political interest. The objective was to replicate the model for 'Blue Growth' envisaged by the European Commission in high potential areas such as offshore aquaculture, coastal tourism, biotechnology, ocean energy and seabed mining, in addition to explosive growth in Europe's offshore wind farm installations (Government of Ireland, 2012).

The potential for Blue Growth on the Island is considerable. During the Celtic Tiger period, scientists had been mapping the seabed of the continental shelf and inshore waters, leading to significant discoveries of new habitats such cold water corals deep in the North East Atlantic (Dorschel *et al.,* 2010). Ireland's marine jurisdiction is ten times the size of its landmass; taken together, this makes Ireland one of the largest countries in Europe (Figure 1).

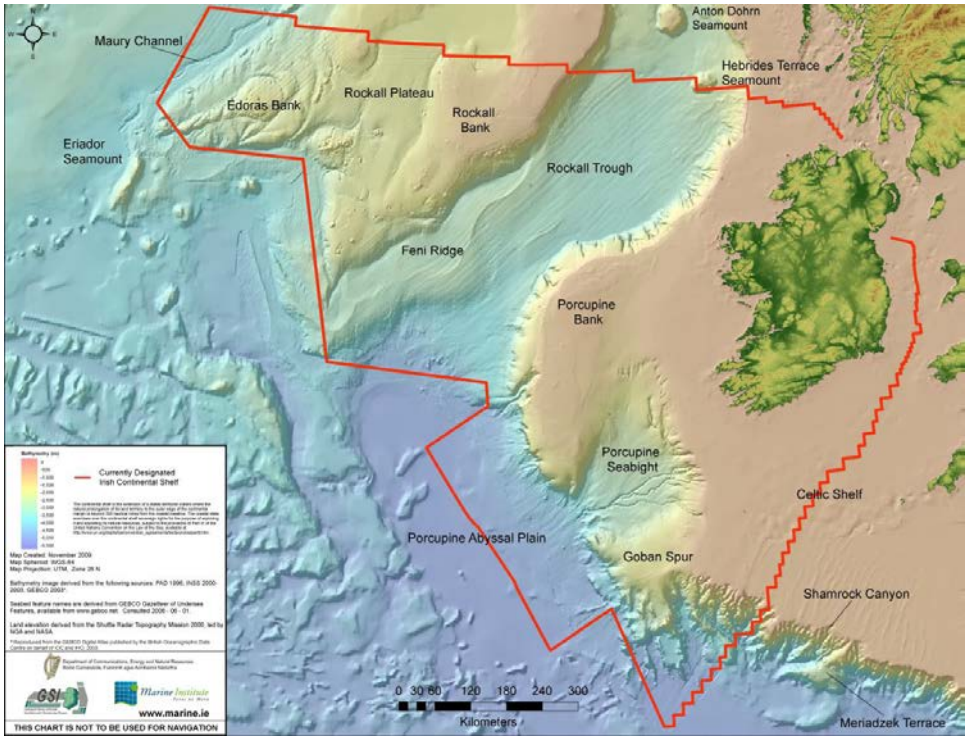


Figure 1. The Real Map of Ireland showing Ireland's marine territory, which extends up to 220 million acres, and area ten times the land mass. Source: Marine Institute, Ireland.

A unique group of collaborators in Cork sensed the potential for Ireland to become a global leader in Blue Growth. Founded in 2010, the Irish Marine and Energy Research Cluster (IMERC) partners set out to think strategically about the opportunity to create jobs from the sea. Prior to formalizing a partnership and a shared vision, the IMERC collaboration's three core partners - University College Cork (UCC), the Cork Institute of Technology (CIT) and the Irish Naval Service (INS) – had worked in relative silos. Each

had specific maritime domain expertise, which combined provided a platform of supports for sharing naval test-bed infrastructure, R&D capability, training facilities, and human capital (IMERC, 2011).

The strategic rationale for collaboration was the shared sense of opportunity, along with a shared appreciation that the whole could be greater than the sum of the parts. While pursuing a shared vision, each of the founding organizations also legitimately were pursuing their own agendas. The academic partners hoped to develop industry-leading R&D capabilities, and strategic rationale for the unique engagement of the Irish Naval Service is worth noting. The case for collaboration was framed around the need to attack unemployment as the center of gravity of the enemy of the state (Cummins, 2012). This approach took a broad view of security, noting that stability of the country was undermined when economic uncertainty prevailed, arguing that best way to attack the enemy was to focus on job creation and to open the doors of the Naval Service to an unprecedented new era of support for research and enterprise. The Naval Service took an unprecedentedly proactive approach, enabled by the IMERC MOU, to lending its brain power, test bed infrastructure, and wealth of marine operational expertise to these new collaborative arrangements with research and industry.

A Memorandum of Understanding (MOU), signed by the three partners in 2010, gave credence to a vision for a globally significant innovation cluster in lower Cork Harbour. The MOU set job creation targets of up to 3,000 jobs by 2025 (University of Liverpool, 2014). The aim was to embrace the extraordinary challenge of disrupting the traditionally conservative maritime sector by generating opportunities from 'wicked problems' (Rittel & Webber, 1973), including mitigating the effects of climate change in the global ocean and of overfishing, as well as transitioning to a low carbon economy. Attention was turned towards creating technological solutions, such as the application of autonomous vehicles, data analytics, sensors and robotics, to marine related issues (Morrissey & Cummins, 2016).

To achieve the desired impact on the economy and social challenges, the plan spelled out the need for collaboration and sharing. The partners understood from the outset that tackling such complex issues would require new governance arrangements to facilitate open innovation and drive change. At a time when austerity prevailed, public sector transformation was seen as a priority for delivering more value with less resources. The IMERC collaboration was a compelling case of potential value creation; its core message was about collaboration leading to innovation and job creation through Blue Growth.

A Successful Failure

The content of the collaboration, once legitimized by strategic rationales, was enacted through everyday activities such as exploratory workshops, industry-led horizon scanning, communication and awareness raising, holding conferences, and developing masterplans and roadmaps, planning applications, business plans, and proposals.

The ability to collaborate across organizational boundaries was fostered by four informal values, agreed upon as operating principles in the IMERC MOU: Collaboration, Communication, Trust and Reciprocity. Moving towards an innovation ecosystem required establishing a small core team to facilitate sharing and to manage the 'discipline of innovation' across industry, academia, government, military and civil society groups. Building trust among this large and diverse set of stakeholders, who were engaged in

exploratory processes where outcomes were characterized by uncertainty, was vital to making progress. As opportunities for collaboration were unlocked, mutual benefits were realized and reciprocity was embedded as a norm.

The IMERC Governing Authority provided both direction and approval for major activities, by bringing together the principals of the founding organizations to agree on the collaboration's priorities. An advisory board consisted of a representative set of parties from industry, such as the Port of Cork, national development agencies, local authorities, and commercial interests. The IMERC Director reported into the board and managed the small, core enabling team.

The collaboration led to funding from the government for a new marine innovation campus in lower Cork Harbour as part of the IMERC master plan. This investment included the development of a new €15m national ocean energy test facility (The Beaufort Building), €30m for industry-led research into marine renewables (MaREI), and €1.3m for site development works including the creation of a Blue Growth incubator facility called The Entrepreneur Ship. Several companies, ranging from start-ups to Foreign Direct Investment (FDI), gravitated to the region. A €60m remediation project had already been underway to clean up the legacy of the Irish Steel factory that had previously been co-located on Haulbowline Island, the Naval Service head-quarters in Cork Harbour. The vision for Haulbowline Island was well aligned with the innovation of agenda of IMERC, supporting the co-location of public and private sector marine interests. IMERC was recognized with awards for the impact of the collaboration from national and international peers.

By 2016, IMERC seemed to have reached a tipping point. With its foundation built through strategic collaboration, IMERC was poised to enact a new stage of public and private sector investment for significant job creation, adding to the circa 250 jobs it had already created. The government's capital plan committed €25m for further infrastructure investment (Government of Ireland, 2015). Start-ups incubating in The Entrepreneur Ship were raising private equity finance. Technical results included new technology patents and prototypes being tested; business successes included new companies hiring and the creation of an innovation network to connect ideas and people across diverse areas, including marine robotics, data analytics, marine renewable energy, and sensor technology.

Even though the gains were tangible, with measurable accomplishments, the collaboration became a target of mounting criticism – and even sabotage – by key stakeholders. The institutional landscape became busy, when new brands entered the fray. The collaborative process was thwarted as some of these brands started to compete for attention and funding. In some ways, IMERC was at risk of becoming a victim of its own success; the effectiveness of the collaboration's messaging generated insecurity among senior management in the academic institutes. Further, an examination of interpersonal relationships reveals how the social makeup of the initiative changed as the result of the involvement of new individual actors.

After a highly controversial review process in June 2016, IMERC was dismantled. A number of key issues came to the fore; notably a lack of fit-for-purpose governance arrangements, problems with buy-in to a common brand, and ultimately a failure in leadership. Certain principals struggled to reconcile the

messiness and risks required to drive innovation and change, with the pressure to conform to business as usual from certain quarters.

This disrupted the pace of change and strained institutional relationships as trust eroded. The IMERC partners returned to their siloes, and wary investors and new companies were left confused about the future. And yet, the collaboration had had an impact. Start-up initiatives continued to scale and grow, spurred by market forces. A positive legacy of the collaboration was that Blue Growth appeared to be growing, accompanied by greater appreciation and awareness of the opportunity in both the local and national populations in Ireland. A new Marine Development Team was established in 2017, with the goal of working across departments and agencies; some observers expected this to fill some of the gaps left by IMERC. Ireland has some ground to make up. Alternative locations are progressing their own Blue Growth agendas. For example, the Canadian government has since committed $950 million for ocean 'superclusters' to find solutions to challenges around extracting resources from the ocean.

Discussion

Our initial analysis of the case identifies factors that contribute to the creation of value when key players work together across sectors to innovate in a new area of economic activity. Leadership factors such as shared norms and principles can be effective, but they are by no means a panacea, and they cannot mitigate against ultimate erosion of the collaborative arrangement stemming from contextual factors. Our analysis also identifies obstacles along the way, which, if not anticipated, noticed and managed, can lead to the downfall and collapse of such an initiative. Our analysis investigates several factors, including:

(i) Effects of organizational structure and the characteristics of the innovators themselves that enable and inhibit innovation (Cannon and Edmondson, 2005);
(ii) Interpersonal dynamics that frustrate or enable cross-boundary teaming among stakeholders with diverse personal and institutional agendas, history, culture and norms (Edmondson and Harvey, 2017);
(iii) The role of senior executives in detecting, assessing, and responding to small deviations in expectations to avoid large-scale organizational failures (Edmondson and Harvey, 2017; Giolito and Verdin, 2016 & 2017).

Our case study will use detailed analysis of a strategic cross-sector collaboration to identify factors that contribute to successes and failures of such efforts. We draw from the data in the case to delineate opportunities for strategic error management and cross-boundary teaming in cross-sector innovation initiatives.

To be effective in an increasingly complex world, collaboration is vital to unlocking new possibilities. At the same, cross-boundary collaboration is vulnerable to misunderstanding, error, and breakdown. To

avoid these undesired outcomes and instead leverage the potential benefits of cross-sector collaboration, we argue that organizational leaders must engage in strategic error management. This paper extracts the value from the IMERC case study to find ways to avoid the mistakes of the relatively short-lived collaboration in future innovation efforts.

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