

Institutional work at field-configuring events: Shaping industry change within sustainable transitions

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INTRODUCTION

The energy industry, along with many others, is under increasing pressure to respond to low carbon agendas by utilising modern technologies, reconfiguring systems and introducing new practices. This kind of field-level change is, however, extremely difficult to instigate because institutional systems, rules, norms, roles and routines tend to be persistent and act as a barrier to change (Verbong & Geels, 2010; Seo and Creed, 2002, Zucker, 1977). To better understand sustainability transitions we must address how incumbent actors within these industries work to overcome these barriers.

To shed light on this issue, we examined the institutional work of actors during a series of industry conferences which were organized in response to the UK Government's mandate to install smart energy meters in every domestic household in Great Britain by 2020 (DECC, 2009). Industry forums such as this are becoming increasingly common as infrastructure industries use them to grapple with a variety of low carbon agendas (e.g. smart meters, smart grids, alternative fuels, transport). These conferences represent critical field-configuring events (FCEs) because they provide social spaces where diverse actors within organizational fields can come together to explore future possibilities, propagate accounts, mobilise action and build collective understandings, which in turn, can alter institutional fields and shape socio-technical pathways (Garud, 2008; Hardy & Maguire, 2010; Lampel & Meyer 2008; McInerney, 2008). Despite their pervasiveness, FCEs are still a poorly understood phenomena and we still only have a limited understanding of what actors collectively do and say at these events and how these micro-activities impact the organizational field and shape the trajectory of innovations (Garud, 2008; McInerney, 2008). Yet, these sites can offer important insights into the dynamics, politics and governance of sustainability transitions. Methodologically, they provide a rare opportunity to study entire fields at work and allow us to "link field evolution at the macro-level with individual action at the micro-level" (Lampel and Meyer, 2008: 1025). Studying the fine-grained discursive practices that take place during these events can help to reveal important clues about how incumbent actors translate policy and deconstruct cultural-institutional barriers, thereby creating a path for sustainability transitions. Our aim, then, is to demonstrate the importance of conferences as settings for empirical research to address some of the key research priorities in sustainability transitions (STRN, 2010; Smith et al., 2010).

To advance theory in this area, we examined the institutional work of actors at a series of industry forums. Institutional work describes "the purposive action of individuals and organizations aimed at creating, maintaining and disrupting institutions" (Lawrence & Suddaby, 2006: 215). Institutional work is rooted in the practice turn (Bourdieu, 1977; Lave & Wenger, 1991) and focuses on the mechanisms, actions and discursive work heterogeneous actors employ to alter the shape of an organizational field (Hardy & Maguire, 2010; Zietsma & Lawrence, 2010). While there are many forms of institutional work (see Lawrence & Suddaby, 2006), our primary concern here is on the front-stage performances of actors during multiple FCEs and the influence of this work on the field and the trajectory of technological innovations. Here the literature on institutional work and

FCEs is in need of development. Research on FCEs is often highly descriptive and concerned with the functions of conferences e.g. as venues for collective sensemaking (Garud, 2008; Oliver & Montgomery, 2008). Although this body of work has started to explore how actors use accounts (McInerney, 2008) narrative acts (Zilber, 2007; 2009) and discursive work (Hardy & Maguire, 2010) within field-configuring contexts, much more work is needed to understand how these micro-activities play out in large mature industries, like UK energy, which are characterised by path dependence and lock-in, but must somehow respond to low carbon agendas (Verbong & Geels, 2010).

Our case study contributes to this nascent body of work by focusing on the institutional work of energy suppliers, regulators, distribution companies and others at seven industry forums, stretching over a 3½-year period. Each forum was specifically convened to address the implementation of electricity and gas smart meters in the UK, which had been mandated by the UK Government in 2008 (DECC, 2009a). Our analysis focuses on the front-stage performances of actors during conference presentations (n=104) and interactions during the less scripted panel discussions (n= 18).

The findings reveal new insights about how institutional change unfolds, alongside technological transitions, in particular, we show how discursive work unfolds across multiple events. The paper offers three contributions. First, the study responds to calls for more research examining FCEs and the role they play in transforming institutional fields. Second, the emergent findings extend research on institutional work by advancing our understanding of a specific site of institutional work, namely a face-to-face inter-organizational arena. Finally, in line with the research agenda for innovation studies and sustainability transitions elaborated by Smith et al (2010), the paper illustrates how actors in a social system respond to, translate, and enact interventions designed to promote industrial transformation, ultimately shaping the sustainability transition pathway.

THEORETICAL BACKGROUND

Institutions

Organizational fields, sometimes referred to as institutional fields, refers to a collection of actors (e.g. suppliers, operators, regulators, consumers, professional associations, manufacturers etc.) that “in the aggregate, constitute a recognized area of institutional life” (DiMaggio & Powell, 1983: 148). By institutional life, we mean the enduring patterns – e.g. role identities, routines, rules, shared meanings and social relations – that enable, and constrain, the beliefs and actions of actors in the field (Thornton and Ocasio 2008). According to Scott (2008), an institution has three central ingredients; the regulative rules that promote and sanction behaviour, the normative systems that specify what is valued and how things should be done and the cultural-cognitive beliefs that underpin common meanings and shared logics of action. Organizational actors tend to conform with these rules, norms, and beliefs which encourages isomorphism, habituated behaviour and cultural persistence (DiMaggio & Powell, 1983; Hoffman, 1999; Zucker, 1977). In

the case of energy infrastructure, this institutional persistence is further reinforced by complex technological system architectures that lock the parties into reinforcing patterns of behaviour (Verbong & Geels, 2010).

These institutional systems provide “stability and meaning to social life” (Scott, 2008: 48), however, this is problematic when field-level change is required to exploit modern technologies and introduce new practices that will meet low carbon agendas. Whilst work on socio-technical pathways has emphasised the value of introducing new technology, by for example, creating technological niches (Geels, 2010; Raven, 2006), we believe more work is needed to understand how incumbents collectively make sense of new technologies and engage in institutional work to change the institutional system and shape the trajectory of a technological innovation once it enters the primary field. Government interventions, such as the smart metering mandate studied here, will disrupt, or jolt, institutional orders, but the nature of their impact will be mediated by powerful incumbents whose beliefs and interests are rooted in existing institutional prescriptions.

Institutional work

The nature of this response is a form of institutional work. Institutional work describes “the purposive action of individuals and organizations aimed at creating, maintaining and disrupting institutions” (Lawrence & Suddaby, 2006: 215). This body of literature switches the focal point in the institution action relationship. Work in the neo-institutional tradition had been primarily concerned with explaining how powerful institutional forces constrain and shape field-level action. However, this work was criticised for portraying actors as “cultural dopes” and for its inability to explain institutional change dynamics (Lawrence, Suddaby & Leca, 2009). In response, scholars started to turn the table and look at how actors create and change institutions. This gave rise to work examining how so-called institutional entrepreneurs “leverage resources to create new institutions or transform existing ones” (Maguire, Hardy & Lawrence, 2004: 657). This body of work generated some important insights about how key actors shape the development of new institutional fields by drawing on macro-cultural discourses (Lawrence & Phillips, 2004); constructing discursive arguments (Maguire, Hardy, and Lawrence, 2004) and engaging in political work (Maguire, Hardy, and Lawrence, 2004) to build a broad base of support and shape behaviour and practices within nascent fields. In more mature fields, institutional entrepreneurship research has also offered insights about the trajectory of technological innovations. For example, Munir and Phillips (2005) analysed the texts created, and disseminated, by Kodak over a 60-year period to show how the company encouraged the adoption of its new roll-film cameras by transforming the way people think about, and use, photography. Garud and colleagues (2002) describe how Sun Microsystems promoted a new technological standard, Java, by adopting an open systems strategy and projecting an appealing vision to attract partners, mobilise institutional support and create a bandwagon effect. These studies are valuable because they help us to appreciate how firms’ mobilise support for their technologies and highlight the political, and contested nature of technological change. However,

they are also limited because they study macro-level changes over relatively long periods and focus on the entrepreneurial activity of single actors.

The concept of institutional work addresses this problem by retreating to a middle ground where actions and institutions are seen to coexist in a recursive, messy, day-to-day relationship. (Lawrence et al., 2009). It seeks to shine a light on the day-to-day micro-activities incumbents employ to create, maintain and disrupt institutions. Rather than focussing on heroic all-powerful entrepreneurs, the focus switches to the more mundane efforts of multiple embedded actors to shape their institutional environments. It was Lawrence & Suddaby (2006) who first defined the concept and synthesised previous empirical work to offer three main categories of institutional work used to (1) create institutions (e.g. mobilizing support, creating new rule systems, defining role relationships, changing normative associations, constructing networks, associating practices and theorizing, (2) maintain institutions (e.g. policing compliance, establishing barriers to change, valorising and demonizing, creating and sustaining myths), and (3) disrupt institutions (e.g. by altering rewards and sanctions, disassociating the practice, rule or technology from its moral foundation, decreasing the perceived risks on innovation by undermining core assumptions and beliefs (see table 1).

These detailed forms of institutional work contrast with Zietsma's and Lawrence's (2010) approach in which the transformation of an organizational field occurs through boundary work and practice work, where boundary work "represents the attempts of actors to create, shape and disrupt boundaries" and practice work "refer to actors' efforts to affect the recognition and acceptance of sets of routines, rather than simply engage in those routines". (p190). Their interview-based study of the forestry sector in British Columbia, from 1985 to 2006, identified four distinct cycles of stability or change underpinned by specific patterns of boundary and practice work; the cycles related to institutional stability, institutional conflict, institutional innovation and institutional restabilization (p. 201). However, it is unclear how these kinds of boundary and practice work unfold in the context of radical technological change or field configuring events.

Discursive practices within field configuring events

The creation, maintenance and disruption of institutions necessarily involves interaction across organizational boundaries and this can take many forms. The interaction may be public or conducted in private, may be dyadic or multiplex, may involve actors linked through vertical (hierarchical) or horizontal relations, may be direct between key agents, or may involve principals (such as trade associations). However, very few of these interactions involve actors from across the field working in public settings.

Field configuring events provide a unique social space for "actors from diverse social organizations to assemble temporarily, with the conscious, collective intent to construct an organizational field" (Meyer, Gaba & Colwell, 2005: 467). Within these spaces, multifarious

actors can exchange of information and explore technological possibilities. They can propagate accounts (McInerney, 2008: 1093) and generate texts to try and influence the trajectory of an innovation and the organizational field (Hardy & Maguire, 2010). As such, we would expect to see a degree of contestation as powerful incumbents try to dominate discourses and move the field in favourable directions (Garud, 2008; McInerney, 2008). On the other hand, the implementation of a radical innovation also requires a degree of pragmatic collaboration and consensus. That is, actors must find a way to “cooperate and compete at the same time” (Zilber, 2007: 1036).

In this study we seek to uncover these processes and examine how micro-discursive practices are used within FCEs to construct technologies and shape systems of meaning and action (Hardy & Maguire, 2010; Phillips, Lawrence & Hardy, 2004; Zilber, 2007). A discursive lens focuses on the production, dissemination and consumption of texts and their influence on collective sensemaking and action (Phillips et al., 2004). We focus especially on the interrelated patterns of situated talk that emerged during presentations, panel discussions and Q&A sessions across several FCEs. Discourse represents “a system of statements” which construct reality, by giving objects meaning (Parker, 1992: 5). As such, the talk of actors is a form of social practice that has the capacity to both maintain and reshape institutions (Fairclough, 1992). Our interest was in understanding how institutional actors’ language developed over time to collectively construct the new ‘smart world’, which included, for example, defining the smart technology, defining roles, redrawing boundaries and altering existing structures.

Recent studies have started to build and understanding of how discursive and institutional work is used during these FCEs. For example, Zilber (2007) explored the role and usage of stories during a high-tech industry conference and found that actors simultaneously narrated supporting stories and counter-stories to both reproduce and disrupt the institutional status quo. Garud’s (2008) analysis of conferences in the emerging field of cochlear implants shows how firms used the conferences to try and make sense of what is happening, construct new socio-material associations and generate certainty. However, he describes how these events were also characterized by disagreements, contestation and “battles to win the hearts and minds” (pg. 1081). Whilst these studies have described activities at single events, more recent work has started to examine how discourses unfold over multiple discursive spaces. In a recent study, Hardy & Maguire (2010) studied a United Nations conference which convened to discuss the issue of Persistent Organic Pollutants (POPs). Their in-depth case study, which relied on an analysis of meetings, documents and reports associated with the conference, plus interviews, illustrated how conflicting narratives concerning the insecticide “DDT” emerged and led to field-level change, that is, changes in positions, understandings, and rules.

While these studies have all advanced our understanding of how discursive and institutional work is used during these FCEs, they are also limited in certain respects. Most obviously, these studies do not explain how repeated dramaturgical presentations (Garud, 2008; Goffman, 1959) delivered

by industry actors over a sustained period of time can impact more mature organizational fields. Second, existing work largely fails to explain how multiple institutional actors in a field collectively absorb, exploit and leverage innovative technologies to transform existing institutional fields. Understanding these discursive processes may offer important new insights about how institutional work mediates and shapes the trajectory of technological innovations and the consequential development of organizational fields (Lampel & Meyer, 2008).

RESEARCH METHODS

The Case Study

To address these gaps, we examined the institutional work of actors during a series of industry conferences that were organized in response to the UK Government's mandate to install smart energy meters in every domestic household in Great Britain by 2020 (DECC, 2010). This major change programme promised to facilitate the transition to a low carbon economy and revolutionise the UK energy system, however, it also presented an enormous challenge to the UK's competitive energy industry. These field-configuring events (FCEs) provided a unique forum for actors from across the institutional field – i.e. government officials, the big six energy companies, distribution network operators (DNOs), technology systems companies, meter operators, communications companies and many others – to openly discuss these opportunities and challenges and ultimately influence the trajectory of the transition.

We employed a longitudinal, case study approach (Pettigrew, 1994, Yin, 2003) to investigate how representative actors worked within these events to shape the transition and ultimately change the organizational field. Our aim was to gain a deeper understanding of how discursive work unfolds across multiple events. This type of event sequencing is becoming increasingly common as industries, like energy and water, attempt to respond to the low carbon agenda. Moreover, the high-profile nature of these events means that they are visible and well documented, allowing for a sustained period of analysis.

Research context

So called "smart meters" exploit modern communications technologies and allow two-way communications between the home and energy providers. In addition to providing more accurate energy readings and consumer bills, smart meters offer new opportunities for controlling energy demand through, for example, the use of real-time displays, time-of-use tariffs and automated communications with in-home appliances. They are also seen as the cornerstones of a new, more sustainable, smart system for power generation, distribution and consumption, helping to support micro-generation and more active network management. While the UK energy industry has recognised the potential of smart meters for some years, a mass roll out of this technology would require a transformational change to the industry. The liberalised energy market in the UK, left to its own devices, failed to either build the business case for smart metering or mobilise the collective action necessary to negotiate system and regulatory barriers (Ofgem, 2006).

Following a series of energy reviews (HM Government, 2006) and consultations (Owen & Ward, 2006), the UK Government stepped in and announced its intention to work with energy companies to roll out smart meters to every household in Great Britain, (HM Government, 2007). These proposals were technologically, commercially and politically contentious. Despite the abandonment of a similar initiative in the Netherlands, in October 2008, the Government confirmed its intention to mandate a roll out of electricity and gas smart meters to all homes in Great Britain (DECC, 2009). An industry consultation followed in May 2009 wherein the Department for Energy and Climate Change (DECC, 2009a) set out the Government's proposals on the implementation programme, along with proposals for new market arrangements, delivery models and functional requirements. DECC received over 270 responses to the consultation from a range organisations and individuals, which it claimed to summarise in its formal response (DECC, 2009b). This response set out the Government's high-level conclusions and decisions, arguing that this provided "platform for the detailed Implementation Programme work which will be needed to prepare the way for the start of the mass roll out of smart meters." (DECC, 2009b, pg.4).

The industry conferences that form the basis of this analysis were a direct response to this smart metering mandate. Whilst largely welcome, the Government mandate represented a significant jolt for the industry, and was followed by a series of industry forums in which regulators, energy companies, technology companies, and others talked extensively about how to implement the technological changes and transform the industry (see Table 1). These conferences were organised by two organizations, the institution of Engineering and Technology (IET), a professional network for the engineering and technology community, and Marketforce, a professional events management company. The sponsors of the events were varied and many, but included high-profile professional services companies, incumbent companies and new entrants (e.g. communications companies) who were interested in the opportunities smart metering presented. Many of these events were held in prestigious locations in London and attracted large numbers of senior executives from the core energy actors. For example, conference 4 (C4) was attended by over 250 delegates from over 76 companies.

The format of the conferences were very similar. Each day was broken into themed sessions. Each session had a number presentations, followed by a panel discussion where the audience and Chair could ask the conference speakers questions. Many of the speakers, particularly those from the big six utilities (e.g. Centrica, E.ON, Scottish Power, NPower, EDF Energy and Scottish & Southern Energy), the Government (e.g. DBERR, Ofgem) and the Energy Networks would regularly speak at events. Thus, one very quickly became very familiar with the main protagonists and their central messages. Around these main characters were a large, and more diverse, group of industry participants, including distribution network operators (DNOs), technology companies, meter operators, communications companies, professional service firms and many others.

Data collection and analysis

We collected data at seven smart meter industry forums over a 3½-year period. To develop our contextual understanding we collected conference documentation, flyers, pamphlets and reports relating to the smart metering mandate. We also studied Government reports and the websites of regulators and trade bodies. These industry conferences offered delegates the opportunity to access video replays of the conference presentations. We took extensive ethnographic notes of these presentations and used these video webcasts to produce comprehensive transcripts.

Data analysis is proceeding in five stages. First we transcribed all the conferences presentations, re-reading the transcripts several times to familiarise ourselves with the actors and the dominant objects of the talk. In particular, we note how particular themes are discussed across all the conferences, such as the meaning of smart meters, customer relations in the new world, changing industry boundaries and roles, and the need for new systems and structures. The second step involves grouping these discursive objects. Each set of transcripts (for each conference) are analysed in NVivo and coded by object. Thus we generated several streams of discourse (talk) that run across all the conferences; the initial list is provided below.

1. Enabling microgeneration / distributed generation
2. Enabling smart home
3. Enabling changes in customer behaviour
4. Shaping smart meter 'identity' – what is it? How smart is smart?
5. Encouraging innovation and differentiation while ensuring interoperability (technical standards)
6. Coordinating data (central communications agency . datacommsco DCC)
7. Reconfiguring the network of actors (and business models?)
8. Profiting from smart metering
9. Organizing the roll out
10. Reshaping/rebuilding the relationship between providers and customers
11. Gaining customer support
12. Reforming tariffs/pricing
13. Contributing to smart grid
14. Regulating – balancing coordination and competition
15. Learning – from pilots/early adopters, internationally

The third step involves opening up each stream further. We notice, for example, that the language and ideas of actors within the same category (e.g. energy suppliers, regulators, distributors etc.) tends to be collective (“we think”) and increasingly consistent in terms of the central ideas they promote. We are therefore in the process of sub dividing each stream by actors to facilitate a temporal and comparative analysis. The fourth step involves a systematic processes analysis of each sub stream to identify recurring discursive patterns (Glaser & Strauss, 1967; Strauss & Corbin, 1990). To help structure the data and make the analysis more

manageable we are following Langley's advice and using a temporal bracketing strategy (Langley, 1999). We also chose to focus initially on the dominant actors who spoke regularly at the conferences. This analysis is helping us to identify and organise distinctive themes within each temporal period. In the final step, we will compare these dominant themes across all the discourses to identify to what extent less powerful discourses were consistent with, or at odds with, these themes.

DISCUSSION

The earliest stages of analysis suggest findings will provide insights to several aspects of the knowledge of institutional work in sustainable transitions. Looking at the draft set of themes, we observe that some are technology focused, others relate to the context for technology – the accompanying system/infrastructure – and a third set relate to the potential role and impact of smart metering in the wider context of power generation and distribution. There is evidently a good fit with the multi-level perspective here. From the innovation studies literature, we can identify smart metering as a niche level innovation, within the electricity regime (Raven, 2006; Geels & Schot, 2007) and its transition to low(er) carbon status. In Geel and Schot's terms, smart metering is a 'window of opportunity' (2007: 401) which can allow major re-configuration of the technological, user and market, socio-cultural, policy and science regimes that constitute the electricity socio-technical regime.

A 'jolt' to the regime of UK power generation and supply will lead, eventually, to radical innovation. In due course we will be able to conduct a retrospective analysis of the adoption and developments in the use of smart metering. We contend that 'institutional work' is important to help us understand agency in the long-term, complex and large scale transition.

As identified by Garud (2008) sensemaking is a central activity at these smart metering conferences, but we also recognise the dominant voices of some of the more powerful incumbents and note the relevance of sensegiving (Gioia and Chittipeddi, 1991) too.

At the conferences, multiple actors are actively constructing the field. By adopting a 'collective action perspective' (Hargraves and van de Ven, 2006) attention is drawn to struggles over the meanings of new issues and technologies and to the purposeful enactment of both the networks of actors that compose the organizational field and the institutional arrangements governing the organizational field. The generative mechanism... is dialectics... Change is a field level property that emerges from interactions among the members of the field" (2006: 883-4). But other views of change are also likely to be helpful, in highlighting the impact of purposeful cooperation towards achieving shared goals (Van de Ven and Poole, 1995).

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References to be added:

Pettigrew 1994; Bourdieu 1977; Lave and Wenger 1991; Yin 2003; Fairclough 1992

APPENDICES

Table 1. Chronology of Industry Forums

| Forum | Description |
|---|--|
| F1. Feb-12, 2008, Savoy Place, London, UK | Smart Metering – Gizmo or Revolutionary Technology? IET Seminar “Smart metering is a technological development that has the prospect of changing the manner in which many of the energy supply activities are managed. It could also be used to further wider government policy objectives such as helping to reduce CO2 emissions, encourage energy efficiency and assist the fuel poor. However, there are many barriers to adopting the technology which need to be understood and addressed.” |
| C2. Feb-19, 2009, London | Smart metering 2009: making it happen. IET Seminar “This event will bring together the regulators, government and the leading energy and utility organisations, so you can hear their visions for the future.” |
| C3 Dec-02-03, 2009, Le Méridien London | Smart metering forum. Marketforce “Towards smarter customers and a smarter grid: The leading strategic event for the UK energy industry. “Topics to be addressed include: (i) outlining the role of industry, Government and Regulator in financing and delivering future-proof and interoperable national smart meter network; (ii) changing behaviour: understanding how to engage the customer through smart meters; (iii) the role of the Central Communications model: discussing design and implementation challenges; (iv) how we can secure efficient, secure and interoperable data management? (v) what impact will smart metering have on retail supply markets? (vi) the role of DNOs in smart metering and a future smart grid; (vii) smart meters as a start point for the home: exploring future possibilities.” |
| C4 March-02, 2009, Portland Place, London | Smart Metering 2010 – Delivering a Smart UK. IET Seminar “Smart metering will undoubtedly have a vast impact on the energy industry...This year’s event will bring together many of the leading minds in the industry, discuss ensuring the industry progresses, delivering on many of the key challenges and opportunities going forward. The programme will include: (i) how government and regulators will finance and deliver a smart meter program; (ii) successfully engaging with the customer through smart metering; (iii) delivering efficient, secure and interoperable data management; (iv) producing a conducive communications strategy for smart metering roll out; (v) forging the future smart grid; (vi) harnessing demand side management, and (vii) dedicated panel sessions to hear from utility companies and manufacturers - how do we overcome the barriers and move the business forward in the next 12 months?” |
| C5 June -08, 2010, Waldorf Hilton Hotel, London | Smart Metering Update: From policy to practice: taking the next steps. Marketforce. “Building on the success of our December Smart Metering Forum, this event provides a key industry update in a concise one day format. Stakeholders from Ofgem, DECC, the suppliers and DNOs will gather to explore the progress of the Smart Metering Implementation Programme. With Phase I drawing to a close, initial conclusions will be considered and actions for Phase II and Phase III discussed. Much is yet to be decided about functionality, the communications network and the roll out. Secure your place at this conference to join the debate and ensure you have the insights needed to progress to a smarter future.” |
| C6 December 6-7, 2010, Radisson, London | Smart Metering Forum: Planning and delivering smart metering: taking practical steps and assessing strategic opportunities. Marketforce. Last year’s Smart Metering Forum fell on the same day as the publication of the DECC Response to the Consultation on Electricity and Gas Smart Metering and we provided a strategic forum for expert analysis of the announcement. The event attracted leading speakers and delegates from across the energy industry including senior executives, policy makers, academics & regulators. This year’s conference will see expert figures unite again, to consider what actions need to be taken to successfully move through Phase II of the Smart Metering Implementation Programme to Phase III and beyond. |
| C7 March 8-9, 2011, the Hatton, London | Smart Metering: Engineering the Smart World, the road to 2020. IET Seminar The conference took place across two days and featured a combination of technical sessions, discussion panels and plenary sessions providing delegates with all the key information to ensure they are able to place themselves and their organisation(s) are at the forefront of the Smart Meter industry in 2011 and beyond. Delegates came away with the core knowledge and skills to drive the UK’s smart meter roll out in 2012. |

| Creating institutions | Definitions |
|-------------------------------------|--|
| Advocacy | The mobilization of political and regulatory support through direct and deliberate techniques of social suasion |
| Defining | The construction of rule systems that confer status or identity, define boundaries of membership or create status hierarchies within a field |
| Vesting | The creation of rule structures that confer property rights |
| Constructing identities | Defining the relationship between an actor and the field in which that actor operates |
| Changing normative associations | Re-making the connections between sets of practices and the moral and cultural foundations for those practices |
| Constructing normative networks | Constructing of interorganizational connections through which practices become normatively sanctioned and which form the relevant peer group with respect to compliance, monitoring and evaluation |
| Mimicry | Associating new practices with existing sets of taken-for-granted practices, technologies and rules in order to ease adoption |
| Theorizing | The development and specification of abstract categories and the elaboration of chains of cause and effect |
| Educating | The educating of actors in skills and knowledge necessary to support the new institution |
| Maintaining institutions | |
| Enabling work | The creation of rules that facilitate, supplement and support institutions, such as the creation of authorizing agents or diverting resources |
| Policing | Ensuring compliance through enforcement, auditing and monitoring |
| Deterring | Establishing coercive barriers to institutional change |
| Valourizing and demonizing | Providing for public consumption positive and negative examples that illustrate the normative foundations of an institution |
| Mythologizing | Preserving the normative underpinnings of an institution by creating and sustaining myths regarding its history |
| Embedding and routinizing | Actively infusing the normative foundations of an institution into the participants' day to day routines and organizational practices |
| Disrupting Institutions | |
| Disconnecting sanctions | Working through state apparatus to disconnect rewards and sanctions from some set of practices, technologies or rules |
| Disassociating moral foundations | Disassociating the practice, rule or technology from its moral foundation as appropriate within a specific cultural context |
| Undermining assumptions and beliefs | Decreasing the perceived risks of innovation and differentiation by undermining core assumptions and beliefs |

Table 2: Forms of institutional work Source: Lawrence & Suddaby (2006)