

Doyle, Eleanor; McGovern, Damien; McCarthy, Stephen

Conference Paper

Compliance-Innovation: Supporting Regional Growth

53rd Congress of the European Regional Science Association: "Regional Integration: Europe, the Mediterranean and the World Economy", 27-31 August 2013, Palermo, Italy

Provided in Cooperation with:

European Regional Science Association (ERSA)

Suggested Citation: Doyle, Eleanor; McGovern, Damien; McCarthy, Stephen (2013) : Compliance-Innovation: Supporting Regional Growth, 53rd Congress of the European Regional Science Association: "Regional Integration: Europe, the Mediterranean and the World Economy", 27-31 August 2013, Palermo, Italy, European Regional Science Association (ERSA), Louvain-la-Neuve

This Version is available at:

<https://hdl.handle.net/10419/123950>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.

Compliance-Innovation: Supporting Regional Growth

The authors would like to thank the College of Business and Law in University College Cork, Ireland for their invaluable support.

Introduction

This paper introduces *Compliance-Innovation* and its potential to drive major improvements in quality, productivity and sustainability. We explain how processes enabling conformity with requirements coupled with processes for commercialisation of knowledge offer potential for strategic business growth.

The current lack of integration of Governance Risk and Compliance (GRC), Innovation, IT and Strategy results in lost opportunities for growth. If a recent KPMG (2011) Report reflects the true picture, less than 10% of businesses today demonstrate full integration of GRC activities with their business strategy. This paper argues for Board level support for better ‘Absorptive Capacity’ across the entire organization to drive innovation, growth and sustainability.

Sustained growth can only come with change – in the things organisations do, the ways people work alone and with others, and in why and how they share what they do and learn. Whatever creative talent and support for innovating exists in an organization the better its ‘Absorptive Capacity’ and the more good innovations of all kinds that are likely.

For instance, Compliance Knowledge Management Systems (CKMSs) can potentially be used to facilitate *Compliance-Innovation*. A CKMS is a relational database and knowledge management workbench comprising of highly structured regulatory content (smart regulation) mapped to a range of other objects in the database including product categories, materials and substances, business activities, other legal and non-legal requirements, and supported by workflow, collaboration and reporting tools. CKMSs are designed to support the development of Absorptive Capacity and must therefore integrate appropriately with other IT platforms and data sources allowing cross-functional teams to share and collaborate.

It supports, in particular, the goal of ‘Mind of the Product’ whereby structured content and derived knowledge flow automatically to help users get work done sooner, faster and better.

Strategic growth can be delivered through *Compliance-Innovation* a process through which conformity with requirements drives improvements in quality, productivity, and sustainability. *Compliance* here relates to conformity with *all* requirements, both legal and beyond such as business best practices and choices made to improve any operational activities, or self-imposed requirements to target the types and range of customers that have been identified in practice or from market analysis. In this process the GRC function is perceived as an engine for growth by facilitating innovation and business sustainability.

Limitations of Current GRC and Innovation Management Practices

This section directs attention to current paradigms at play within the GRC and innovation management domains. Although links between GRC and innovation management are seldom made, a range of inter-linkages between GRC and innovation management point to the untapped potential of organising business activities around such connections.

Balancing the Upside and Downside of Risk Management

In the wake of the financial crisis and ensuing global economic recession, companies are increasingly conscious of the importance of risk management. The rise in economic, environmental, and social regulation (e.g. Sarbanes-Oxley Act, RoHS, REACH, WEEE), have brought compliance and business sustainability to the forefront of the management agenda (Dyllick and Hockerts, 2002; Butler and McGovern, 2008). Monitoring and reducing risk and meeting compliance requirements are obviously key activities in all areas of decision-making and the GRC function has become a focal point for these tasks. The OCEG’s (2012a) recent *GRC Maturity Report* indicated that most GRC professionals identify their primary task as risk management (50%), followed by compliance (43%), internal audit (36%) and governance (32%).

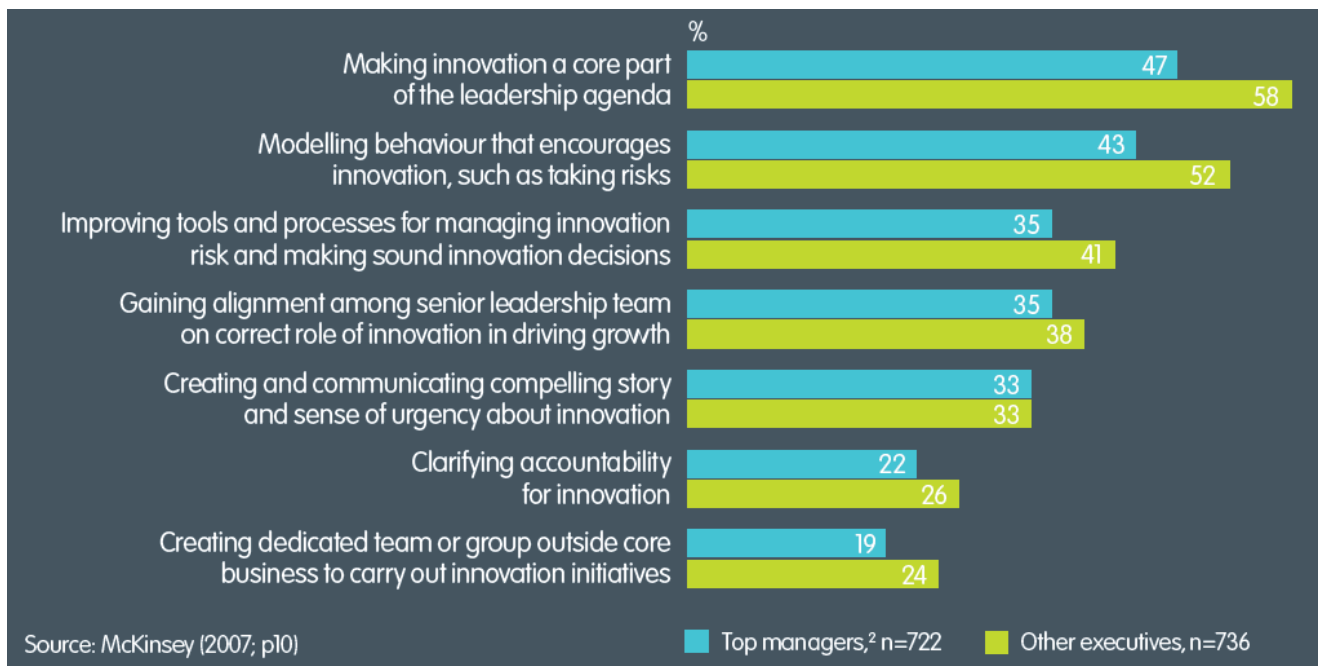
In essence, risk management arises due to the inherent uncertainty of future events and their associated probabilities of occurrence (Tarantino, 2008). Indeed *within* many companies opinions diverge as to whether risk management should be opportunity (upside) or risk (downside) focused. A risk management survey carried out by KPMG (2011) suggests that, on the one hand, CEOs tend to view risk as an opportunity while Boards and Risk Officers, on the other, are more likely to view risk as a threat to be reduced at all costs. Furthermore, 66% of respondents said their “board is unable to leverage risk information it receives to improve strategy” and risk management is often focused on a more operational level (KPMG, 2011; pg. 13). This is a worrying statistic, as unless decision makers are fully aware of all the potential business opportunities and risk emanating from internal and external contexts they are unlikely to take effective action.

While risk management can potentially drive performance, many companies are not yet prioritising GRC as an engine for sustainable growth which can open up new opportunities for innovation and enhanced decision-making. The implication is that opportunities are lost when GRC’s full value-adding potential is not recognised and businesses’ perspective on GRC needs to balance *both* the up-side *and* down-side of risk management. Relevant challenges are examined next.

Misfit between GRC and Innovation Management Practices

A survey conducted by McKinsey (2007; pg. 2) on approaches to innovation found many “leaders lack confidence in their innovation decisions”. McKinsey (2007; pg. 2) reported that, according to one third of top managers one of the primary reasons for the absence of sound governance and risk management in innovation activities is because companies “govern innovation in an ad hoc way” i.e. they do not feel in control of the innovation process. In addition, companies were found to lack a structured approach for decision making for innovation and require enhanced risk management and modelling tools (see Figure 1).

Figure 1: Processes with Greatest Impact on Innovation Performance.



A different survey by McKinsey (2012) found that half of organizations segregate their innovation portfolio among distinct innovation functions and so independent silos characterise the functions. This implies that numerous innovation models are being employed across business units with little, if any, integration across projects. Again, a lack of consistent governance among innovation activities is identified as contributing to poor performance tracking and bounded decision-making across siloed innovation structures. To achieve sustainable innovative performance a business needs strong corporate governance to influence decisions, allocate resources and exert organizational control for cohesion of purpose. Corporate governance refers to the structured management of processes, systems and controls that contribute to an organisation’s operations. Corporate governance can involve activities such as decision-making and resource deployment to protect a stakeholder’s interests and meet requirements. However, the link between GRC and innovation management is not often made, thereby ignoring implicitly or explicitly the positive influence that GRC may exert on a company’s innovation processes – available opportunities for growth can be overlooked and missed.

“Compliance should be incorporated in the strategic planning process and is fundamental to innovation. Companies make large investments in R&D and marketing when taking products to market. If compliance requirements are not incorporated in the ideation and go/no-go decision process, this may result in non-compliance with standards and regulations in certain

countries. Financial costs associated with downstream product design modifications or product recalls may delay market entry or cause reputational damage. Compliance should be at the forefront of product innovation strategies.”

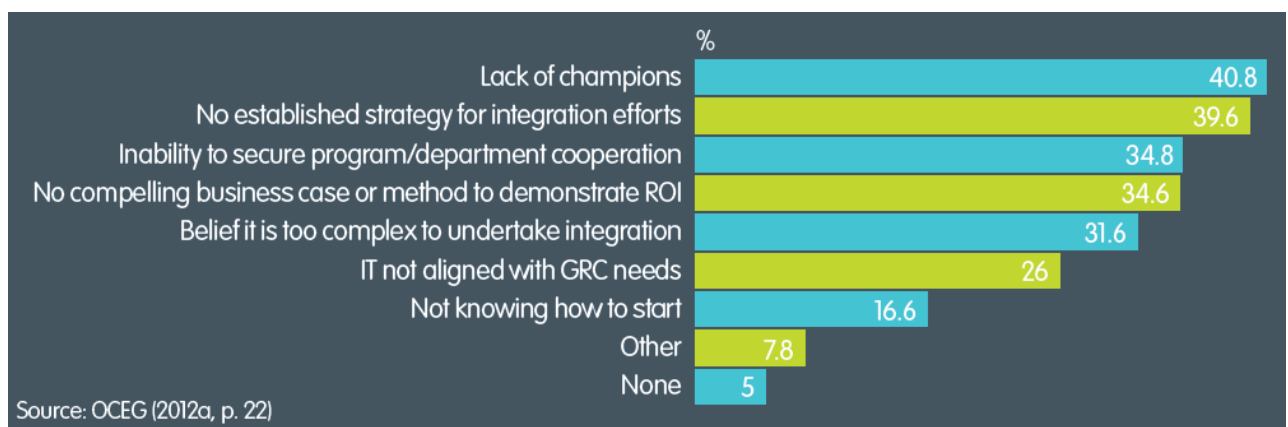
James Carlo Cascone, Principal at Deloitte & Touche, LLP

In the following section we contend that one important reason why GRC has not yet been identified or prioritised as a driver of growth is that the prevalence of siloed GRC systems has impeded progress (PWC, 2012).

The Millstone of Siloed GRC Systems

As the pace of production of regulations increased over recent years organizations reacted logically by developing internal risk and control activities. However, since many investments were made at a tactical and geographical level by different budget holders, there was often little thought given to the integration of similar activities - governance, compliance, and risk functions were left disconnected across the business (Price Waterhouse Coopers, 2012). In many firms, issues such as siloed structures and resulting data duplication adversely affect the information management practices of GRC functions (OCEG, 2012b; Price Waterhouse Coopers, 2012). In addition, an exorbitant level of spending is often required to maintain these siloed GRC systems, as process inefficiencies rise with increased business complexity.

Figure 2: Organizational Barriers to an Integrated GRC Approach.



As business environments continue to grow in complexity, and the ‘avalanche of regulation’ mounts increasing pressure on firms’ compliance capabilities, a divergent approach to GRC systems can lead to the duplication of data and responsibilities across departments, and often hidden absence of responsibility where the extent of the avalanche is not perceived or ignored. As a result, decision-making and quality management are also hindered as critical knowledge is not readily accessible and workflow cannot be managed in a transparent way. Therefore, GRC to date has failed to deliver Boards with a comprehensive profile of its role and potential impact in terms of the function’s ability to contribute to manage the uncertainty around both favourable and unfavourable events.

“Well what I’ve basically seen (used for managing GRC activities) was typically home grown solutions. People will track and trace on Excel spread sheets. Some departments have built internet databases; some were using Outlook and its associated tools... And that is typically something that is never as well realised as when you have an automated system which facilitates a complete networking of all this knowledge. Because it breaks down as soon as things rely on email and telephone and there’s not a central knowledge system that allows and mandates people to enter things that happen in a certain country, where developments are going.... People change and there’s a lot of things that need to happen again and again because the knowledge is not really well managed.”

Theo Schoenmakers, Director of Schoenmakers Sustainability Consulting

Therefore, a change in mind-set is required to alter and enlarge the perspective on GRC above and beyond risk aversion to encompass an opportunity-orientated view. A means of achieving this is provided in the form of the concept of *Compliance-Innovation* which is explained and unpacked next.

Compliance-Innovation

Our growth-oriented perspective on GRC is termed *Compliance-Innovation* where GRC activities are integrated with innovation processes. To unpack what the concept entails we explain how it builds on the practices and theory of innovation management and the concept of Absorptive Capacity.

The Nature of Compliance-Innovation

Boards of Management and CEOs are always seeking ways to increase innovation and drive growth, while still meeting business sustainability goals through compliance requirements and risk mitigation (KPMG, 2011). Based on discussions with interviewees, the primary obstacles to unifying departments were the following: limited resources, lack of top management support, and the inherent complexity in implementing an integrated GRC system. Also many interviewees took the view that there was no concrete reason to invest in large scale redevelopments when the status quo is currently meeting the business's needs. For instance, GRC has traditionally been more focused on risk mitigation activities rather than pursuing opportunities for growth, while marketing departments tend to be more focused on getting a product to market quickly, sometimes to the detriment of GRC requirements.

Compliance-Innovation refers to an integrated approach to innovation processes and GRC activities across an organization. It requires elevating GRC from its traditional tactical-level focus to a more strategic role where opportunity recognition, innovation, and business sustainability are at the heart of all strategic thinking (Zahra & George, 2002; Hansen & Birkinshaw, 2007).

In defining *Compliance-Innovation*, each element is first 'unpacked';

- Compliance is a process which, if successful, leads to conformance to requirements including both legal (involuntary) and supra-legal (voluntary) requirements covering the spectrum from laws, statutory requirements, regulations, all the way to businesses' voluntary codes, guidelines and strategic goals (Doyle, 2007; Tarantino, 2008).
- Innovation is a process which, if successful, leads to the *commercial exploitation* of new or existing knowledge (Freeman, 1997; O'Sullivan & Dooley, 2009). In essence, innovation involves taking either a new or pre-existing idea from its conceptual state and orienting it towards satisfying consumer need before finally offering a new product or service to a market.

Both innovation and compliance processes rely on the production and consumption of information and knowledge to deliver on their purpose. *Absorptive Capacity* offer conceptual bridging between the two domains since it relates to what information and knowledge is

identified and perceived and how it is acted upon. *Absorptive Capacity* can be defined as “a set of organizational routines and processes by which firms acquire, assimilate, transform, and exploit knowledge to produce a dynamic organizational capability” (Zahra and George, 2002; pg. 18). Knowledge is a key element and enabler of both innovation and compliance management, while concurrently influencing a firm’s value chain and other organizational competencies (Cohen and Levinthal, 1990; Zahra and George, 2002; Butler & McGovern, 2008).

We contend that compliance imperatives (whether driven by external regulations or within-firm objectives, *or both*) offer an additional and separate source of innovation-related knowledge to those already widely addressed in research. CKMSs can become a fertile source of innovation for companies through the integration of diverse contextual requirements within a single IT platform. Knowledge workers can then work to commercially exploit information hosted in the central CKMS repository, which can originate from internal or external sources.

Therefore, GRC and innovation activities can be directly linked which in turn solidifies the notion of growth-oriented GRC as a means to achieve competitive advantage. Based on this proposition, *Compliance-Innovation* is defined as:

the processes by which the knowledge bases of the GRC and innovation domains are integrated to drive both commercial exploitation and business sustainability, through knowledge-enabled decision-making processes.

To deliver *Compliance-Innovation* requires coordinating and integrating organizational routines in new ways - demanding changes in habits and routines to refocus managers’ attention.

In the next section the role of platforms or CKMSs is explained in greater detail by focusing on how the platform can help firms manage their contextual requirements and build effective decision-making processes in the context of Absorptive Capacity.

The ‘Golden Line’ of Absorptive Capacity

Context is a critical component of decision theory referring to the past, present, and future conditions that affect all decision processes i.e. the characteristics of internal and external

business environments. Sutcliffe and McNamara (2001) argue that decision-making behaviour and judgement are embedded in organisational and subunit contexts and, therefore, a chosen course of action is influenced by more than just an individual's experience and cognition. The decision context determines what data and information is useful to decision makers based on such dimensions as timeliness and completeness. The decision context can be augmented to the extent that a corporate memory exists in the form of a knowledge platform and repository.

GRC plays an important function in managing decision-making contexts (OCEGb, 2012). For instance governance primarily concerns strategy and aims to bring structure to decision-making and resource deployment. Risk management and compliance meanwhile are concerned with the uncertainty and binding regulations inherent in day-to-day decision making and organisational behaviour. Therefore, GRC can enable better decision making, and help a firm to capture business opportunities while simultaneously mitigating risk.

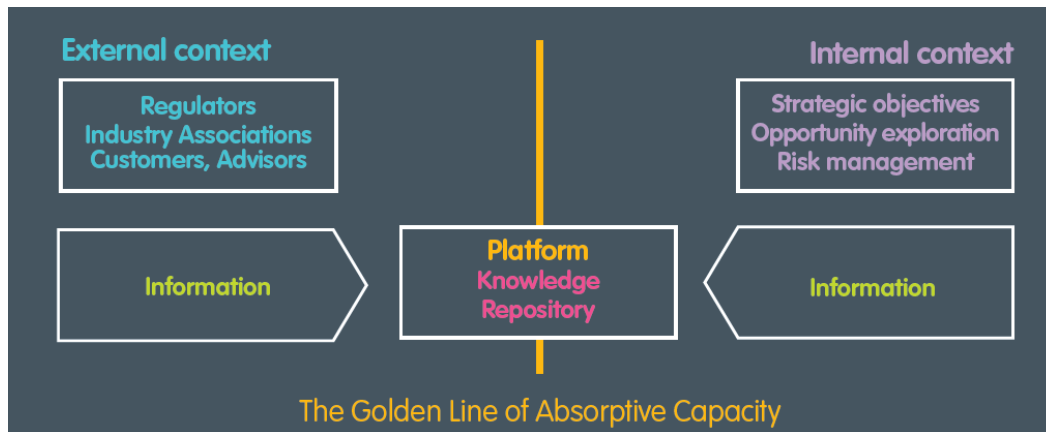
In order to achieve the organizational objective of strategic growth, strategic thinkers must identified and supported to consider the entire business environment which includes both internal and external contexts (Mintzberg, 1987, Barney, 1991; Penrose, 1995 [1959]). Effective strategy formulation and implementation requires a holistic and consistent view of the internal organization (including compliance-innovation processes) and its external business environment (marketplace, regulation, competitor positioning etc.). Developing this contextual knowledge-base is needed to ensure that both decision-making processes and action plans are in line with shared meanings of current circumstances (Mintzberg, 1987).

“In the environmental, compliance, sustainability space, there are two aspects to it generally: one is strategic and the other is implementation. And again for many companies more often than not they react to (requirements) in an implementation way – so here are the requirements now, how do I fix it, how do I continue to sell my products. And it's important to understand – and there are companies that understand this, the strategic part is stepping back and saying things such as how can I organise to make this not only a neutral issue but a benefit... I always say that it's not an either or, it's both.”

Ken Jennings, Managing Director K2J Environmental and Adjunct Professor Environmental Management at University of Maryland University College

Absorptive Capacity as it relates to *Compliance-Innovation* emerges as a ‘golden line’ on the border of two knowledge contexts – one relating to internal business objectives, activities and functions and the other to the external regulatory environment (Figure 3).

Figure 3: The Golden Line of Absorptive Capacity.



Once acquired, information from both contexts can be organized effectively and business domains including legal, marketing, environment, design, quality, and CSR can develop their cumulative *Absorptive Capacity* to assimilate and transform contextual knowledge for *Compliance-Innovation* purposes. These *Compliance-Innovation* purposes are then used to guide and support the organization’s innovation processes contributing to the delivery of high quality products and/or services i.e. to a positive customer experience.

This integrating capacity of CKMSs characterizes the demands on the contemporary Knowledge Worker who is required to make conceptual as well as instrumental use of data - in this case compliance and regulatory data. As Maltz et al. (2001) explain, instrumental use relates to solving a specific problem whereas conceptual use of information requires using it in a way that changes thinking processes - without necessarily leading to relatively immediate concrete action. As a result, rebalancing the use of compliance information towards the conceptual facilitates and supports its potential for strategic purposes to emerge.

“So far the EU was good in generating lots of legal standards and requirements but was lagging behind heavily with its ability to enforce them. We now see a new focus on enforcement – including coordinated market surveillance, sharing of best practice, development of a support infrastructure. As a consequence, there is an increased likelihood

that enforcement authorities will identify non-compliant products, which will trigger an increased demand by companies selling product in the EU for systematic and comprehensive Compliance Knowledge Management Systems.”

Ulrich Ellinghaus, Partner, Baker & McKenzie

By developing a central CKMS incorporating GRC and Innovation activities, it follows that a company's knowledge workers are better facilitated to acquire, assimilate, transform and exploit knowledge for commercial gain (Alavi & Leidner, 1999; Zahra and George, 2002). The channels through which *Compliance-Innovation* is enacted within an organization is outlined next by focusing on the 'Innovation Value Chain' and considering how competitive advantage may be secured through innovation.

Delivering Compliance-Innovation through the Innovation Value Chain

The Innovation Value Chain is examined by considering the main categories and activities of innovation and the importance of linkages across business activities. The benefits both strategic and operational that result from *Compliance-Innovation* are identified outlining how the Innovation Value Chain can be enhanced through transforming GRC into an asset for strategic growth.

The Value Chain and Innovation

Hansen & Birkinshaw (2007) explain that innovation should be viewed analytically using a value chain perspective incorporating three distinct phases: idea generation, conversion and diffusion (see Figure 4). Within the three phases, six knowledge-related activities are identified: “internal sourcing, cross-unit sourcing, external sourcing, selection, development, and company-wide spread of the ideas” (Hansen & Birkinshaw, 2007; pg. 122). The authors recommend the Innovation Value Chain as a model for enhancing innovative capabilities, arguing that its application helps companies optimise their entire Innovation Value Chain, rather than looking to improve each activity in isolation. Senior managers, in their perspective, must view the Innovation Value Chain as an “integrated flow”, where innovation processes transform “ideas into commercial outputs” (Hansen & Birkinshaw, 2007; pg. 122).

Figure 4: The Innovation Value Chain.



Source: Hansen & Birkinshaw, 2007; p 24

In essence the activities outlined in the Innovation Value Chain deal with those same concepts relevant to the Absorptive Capacity of a firm - knowledge acquisition, assimilation, transformation and exploitation. These knowledge-related activities are the unifying factor linking the elements within the Chain as innovation is pursued. The motivation for firms to engage in the risky, uncertain and costly activity of innovation arises from the attention they pay to shareholder expectations, competitive pressures and opportunities. It follows that an organisation's innovation orientation is both a cause *and* a consequence of its stance to compliance and GRC activities.

Given finite resources available to companies and the need to manage risk effectively, managers must ensure their Innovation Value Chain is optimised in all three key areas. Proper and timely management (identification, categorisation, risk assessment, prioritisation, action) of all compliance events demands an IT system capable of facilitating the anticipation of rather than reaction to problems.

Compliance-Innovation across Innovation Phases

The main ways in which *Compliance-Innovation* helps companies develop stronger Innovation Value Chains is through influencing three critical phases of the innovation activity: idea generation, conversion and diffusion.

Hansen & Birkinshaw (2007; pg. 125) assert that “a company's capacity to innovate is only as good as the weakest link in its Innovation Value Chain”, and, therefore, firms must have, or create, an end-to-end view of the value chain in order to optimise innovation. *Compliance-Innovation* offers such a holistic solution by the integration and improvement of each stage of

the Innovation Value Chain, through ability to facilitate operational effectiveness gains *and* solidify strategic positioning. It becomes possible for a business to achieve sustainable competitive advantage within their unique context through *Compliance-Innovation*.

Idea Generation: As the compliance environment is always shifting, companies must be able to accurately monitor, assess and, at times, predict market changes to identify opportunities while simultaneously managing risks. To support the development of *Absorptive Capacity* it is essential that the CKMS integrates several data sources into the one repository and allows cross-functional teams to share ideas and collaborate (Leonard & Sensiper, 1998; Alavi & Leidner, 2001). By continuously creating, transferring, and applying knowledge within the organisation, innovation groups can solidify knowledge assets and foster a strategic approach to GRC (Alavi & Leidner, 2001) by, for example, evaluating new markets and segments to enter while monitoring product/service performance to ensure quality across portfolios.

Conversion: *Compliance-Innovation* aids funding assessment and further development of ideas by providing decision-makers with actionable information to evaluate the viability of action plans in light of commercialisation and sustainability goals. CKMS dashboards provide a platform to assess business cases according to their associated compliance requirements, risks, costs *and* potential for adding value, while also helping executives prioritise investments based on the overarching governance strategy. This generates a more solid and structured approach to business cases analysis overall, supporting the fit between investments and strategic objectives.

Diffusion: *Compliance-Innovation* helps generate momentum behind new ideas across an organisation through its integrated CKMS. As *Compliance-Innovation* can offer a useful business cases tool for quantifying potential benefits and risk of projects, the resulting business cases can, in turn, build a strong value proposition for an innovation project and can foster buy-in across the firm (Hansen & Birkinshaw, 2007; O'Sullivan & Dooley, 2008). Furthermore, the CKMS's social functionality through, for example, content tagging, forums, and secure messaging, allows a company to spread approved ideas across communication networks, and break down silos to facilitate consensus (Cohen & Levinthal, 1990; Alavi & Leidner, 2001).

“The more geographical areas you want to start selling into, the more complex your regulatory framework or portfolio becomes, and therefore the more sophisticated the tool you need to manage that complexity. When you’re being innovative you’re setting yourself into an extremely vulnerable position, think of it as being very fragile... What that ultimately means is that you as the start-up company have to know your stuff, and have dotted your i’s and crossed your t’s, and done your compliance homework.”

Andy Baynes, Director Business Development and Energy Efficiency, NA.

The Quality concept is explored in further detail next and is used as a unifying principle for *Compliance-Innovation*.

Quality as a Unifying Goal of Compliance-Innovation

We contend that Quality should become *Compliance-Innovation’s* principle objective to unify departments under an overarching goal of ‘conformance to requirements’ (Crosby 1979). A Quality orientation strengthens the proposition of *Compliance-Innovation* further and creates an impetus for further change in the GRC domain. The importance of cross-functional collaboration in driving and managing these changes is considered.

Defining Quality for Compliance-Innovation

Compliance-Innovation is a transformational concept that provides organizations with a means to develop stronger Innovation Value Chains through the integration of GRC and innovation knowledge bases, in turn supporting commercialisation and business sustainability. Technology plays a crucial role here and optimally integrated ICT platforms are essential in fostering strong lines of interdepartmental communication, and more importantly, enabling continuous recording, storage and retrieval of knowledge. However, companies still need to create a unifying goal to ensure employees in different functions understand and are committed and enabled to achieve *Compliance-Innovation*. The concept of Quality offers such a unifying property for *Compliance-Innovation*. Once a consistent definition has been agreed the notion of Quality can be embedded into *Compliance-Innovation* activities which, in turn, can support cross-functional collaboration throughout the Innovation Value Chain.

“I would say that compliance and quality are connected within our company. We have environmental divisions that basically provide advice to engineers, designers, and R & D teams regarding questions around regulation and quality. Due to the size of our company compliance and quality have to be integrated in this way as otherwise it would be only take place at a corporate level which would be detached with what is going on in the business units.”

David Scuderi, Environmental Affairs Manager, Samsung

As the organizational definition of Quality can strongly influence the nature of knowledge worker productivity companies must take care to form a consensual definition. This is especially important for *Compliance-Innovation* given the strategic impact of *Compliance-Innovation* activities. A weak definition of Quality can affect knowledge worker engagement and motivation in knowledge management tasks and, therefore, affect the successful adoption and continual development of *Compliance-Innovation* practices.

Compliance-Innovation essentially aims to balance the upside and downside perspective of risk management, through the integration of GRC and innovation knowledge, to ensure that decision processes meet all contextual requirements. Therefore, we contend that *Compliance-Innovation Quality* aims to generate commercial benefit from *Compliance-Innovation* knowledge throughout activities across the Innovation Value Chain. The implied characterisation of knowledge work quality in *Compliance-Innovation* draws on Crosby’s (1979) definition of quality as conformance to requirements. Crosby (1979) viewed the concept of quality as a business opportunity rather than just a risk that needs to be mitigated – an idea that closely resonates with the key principles of *Compliance-Innovation*.

By communicating this characterisation of *Compliance-Innovation* quality, knowledge workers can seek out opportunities in the Innovation Value Chain while continuing to balance risks and business sustainability goals in their daily tasks. Integrated platforms accelerate this cycle by facilitating workers in meeting all quality requirements (Alavi and Leidner 2001) . In addition, a company can then begin to analyse knowledge work processes in order to identify waste and reshape job structures to support quality management (Crosby 1979; Drucker 1999) i.e. automate administration activities through IT, to allow knowledge workers to focus more on value- adding activities such as opportunity recognition and customer service.

Based on our qualitative research, cross-functional collaboration is essential to the successful implementation of a quality driven *Compliance-Innovation* approach. Intradepartmental functions must work together to achieve the unified value-adding proposition of Quality. We use the term ‘*Compliance-Innovation Quality Loops*’ (ICQLs) to describe the requisite collaborative process needed for *Compliance-Innovation*. Essentially, ICQL teams come together to solve problems or work on opportunities, and typically consist of a team of representatives across different departments or functional areas, set with the task of ensuring Quality is accurately defined and implemented across the organization; the exact composition of the Quality Loop varies with the unique context of each organization.

“There needs to be collaboration when you are innovating – you’d need the detailed material knowledge, and the ability to test, you’d need to know if you can actually manufacture it, and you’d need to know that it’s scalable. I think there would definitely be an opportunity for a technology platform that would share knowledge about innovation in the whole area... There’s so much going on that having all the (compliance) information in the one place is vital.”

Therese Deane, Program Manager (Technical), Environmental Product Compliance, EMC

Figure 5: The Compliance-Innovation Quality Loop (ICQL)



Figure 5 offers an example of one such Quality Loop, where the cross-functional team revolves in a cyclical motion around the principal concept of Quality. Circles represent departments which are permanently central to the Quality Loop, while squares denote business units which periodically audit how information is being captured so it can deliver value not only at one point in time but for the future i.e. breaking down silos to ensure that knowledge is effectively captured and shared. Figure 5, involves departments such as regulatory affairs, environment, design, engineering, marketing, and sales. Meanwhile, Human Resources (HR), IT, and quality assurance would involve themselves periodically to audit issues and verify whether the information is being treated with a view to maximising usefulness both to current objectives and future value extraction.

A collaborative culture must first be fostered, through effective leadership, freedom to express doubt, and strong communication mechanisms, to allow ICQL teams to achieve innovation while adhering to constraints. This means that cross-functional teams will engage more effectively throughout the Innovation Value Chain while also meeting constraints such as GRC requirements and budget targets. Collaborative environments also help overcome any inherent resistance to knowledge sharing as team members more readily share information and knowledge when they feel that it would be beneficial to the team's common goal (Leonard and Sensiper 1998; Osterloh and Frey 2000).

Conclusion

Responding to the pace of regulation production many organizations reacted logically by developing their internal risk and control activities. However, since many investments were made tactically rather than strategically, integration of key related activities such as governance, compliance, and risk functions, was lacking (Price Waterhouse Coopers, 2012). Many firms host siloed structures and data duplication that adversely affect the information management practices within their GRC functions (OCEG, 2012b; Price Waterhouse Coopers, 2012). Substantial expenditures required to maintain siloed GRC systems, as process inefficiencies rise with increased business complexity, can be more productively exploited if perceived as sources of further and enhanced productive services for their organisations.

A similar picture emerges when considering innovation processes. McKinsey (2012) report that half of organizations segregate innovation across distinct innovation functions. This implies that numerous innovation models are being employed across business units with little, if any, integration across projects. Again, a lack of consistent governance among innovation activities is identified as contributing to poor performance tracking and bounded decision-making across siloed innovation structures. Such siloed orientations and practices are at odds with a world where knowledge integration is increasingly the basis of competitive advantage.

Compliance-Innovation offers a quality-based orientation to drive intensified efforts towards conformity to requirements by responding to business imperatives of knowledge commercialisation, business sustainability in addition to risk and control activities. Involving the GRC department centrally in innovation activities, a firm can improve its decision-making processes regarding the various stages of its Innovation Value Chain i.e. idea generation (in-house, cross-pollination, external), conversion (selection, development), and diffusion (spread). The infrastructural practice of using a CKMS can help this process by holding all innovation ideas, strategies, and contextual requirements in one central repository enabling continuous recording, updating, storage and retrieval of information and the generation of knowledge.

A consensual notion of quality as an overarching goal underlies the value proposition of *Compliance-Innovation* ensuring that knowledge workers are both united in their quest and supported to achieve conformance to requirements. Delivering innovation in how Knowledge Workers are supported and how their contributions at work are validated represents in itself a quality approach to human resources that may require innovation in business practices. Building cross-functional collaboration, for instance through Compliance-Innovation Quality Loops (implemented through Six-Sigma processes, for example) can drive systematic changes in the organization's GRC and innovation practices through the process of negotiating innovation goals and organizational constraints.

We set out the concept of *Compliance-Innovation* as a means to address the current challenges and shortcomings of GRC and innovation management practices. *Compliance-Innovation* delivers ability to integrate, build, and reconfigure knowledge assets from the

GRC *and* innovation domains across the Innovation Value Chain to achieve sustainable competitive advantage.

We contend that through knowledge-base integration of the GRC and innovation domains - using a platform as a central repository for such collective knowledge - knowledge workers can apply their cumulative absorptive capacity to acquire, assimilate, and transform key contextual knowledge. In turn, organizations can build stronger decision-making processes relative to the Innovation Value Chain by incorporating governance, compliance and risk management mechanisms throughout their innovation portfolio. *Compliance-Innovation* is, therefore, a transformational concept that provides organizations with a means to develop stronger Innovation Value Chains through the integration of GRC and innovation knowledge bases, in turn leading to commercialisation and business sustainability.

References

- Alavi, M., & Leidner, D. E. (2001). Review: Knowledge Management and Knowledge Management Systems: Conceptual Foundation and Research Issues. *MIS Quarterly*, 25(1), 107–137.
- Barney, J. B. (1991). Firm Resources and Sustained Competitive Advantage, *Journal of Management* (17:1), pp. 99–120.
- Butler, & McGovern. (2008). Adopting IT to Manage Compliance And Risks- An Institutional Perspective. *Proceedings of the 16th European Conference on Information Systems, 2008*, 1043.
- Cohen, W. M., and Levinthal, D. A. (1990). Absorptive Capacity: A New Perspective on Learning and Innovation, *Administrative Science Quarterly* (35:1), pp. 128–152.
- Crosby, P. B. (1979). *Quality is free: the art of making quality certain*, New American Library, pp. 270.
- Doyle, E. (2007). Compliance Obstacles to Competitiveness. *Corporate Governance*, 7(5), 612–622.
- Drucker, P. F. (1999). Knowledge-Worker Productivity: The Biggest Challenge, *California Management Review* (41:2), pp. 79–94.
- Dyllick, T., & Hockerts, K. (2002). Beyond the Business Case for Corporate Sustainability. *Business Strategy and the Environment*, 11(2), 130-141.
- Eisenhardt, K. M., & Martin, J. a. (2000). Dynamic capabilities: what are they? *Strategic Management Journal*, 21(10-11), 1105–1121.

- Freeman, C (1997). *The Economics of Industrial Innovation - 3rd Edition*. third edition. The MIT Press.
- Hansen, M. T., and Birkinshaw, J. (2007). The Innovation Value Chain., *Harvard business review* (85:6), pp. 121–30, 142.
- KPMG. (2011). The Convergence Evolution - Global Survey into the Integration of Governance, Risk and Compliance, 1–27.
- Leonard, D., & Sensiper, S. (1998). The Role of Tacit Knowledge in Group Innovation. *California Management Review*, 40(3).
- Maltz, E., Souder, W.E., Kumar, A., (2001). Influencing R&D/Marketing integration and the use of market information by R&D managers: intended and unintended effects of managerial actions. *Journal of Business Research* 52, 69–82.
- McKinsey & Company. (2007). How companies approach innovation: A McKinsey Global Survey, 1–13.
- McKinsey & Company. (2012). McKinsey Global Survey Results - Making innovation structures work, 1–8.
- Mintzberg, H. (1987). “The strategy concept I: Five Ps for strategy,” *California Management Review* (30:1)Fall, pp. 11–24.
- OCEG. (2012a). *OCEG 2012 GRC Maturity Survey OCEG*, pp. 1–48.
- OCEG. (2012b). OCEG Red Book™ GRC Capability Model version 2.1, pp. 1–171.
- Osterloh, M., and Frey, B. (2000). Motivation, Knowledge Transfer and Organisational Forms, *INFORMS* (11:5), pp. 538–550.
- O’Sullivan D, and Dooley L. (2009). *‘Applying Innovation’*: Sage Publications, Inc. 1-424
- Penrose, E. T. (1995). *The Theory of the Growth of the Firm*, (Third Ed.,)USA: Oxford University Press.
- Porter, M. E. (1985). *Competitive Advantage: Creating and Sustaining Superior Performance*. Simon and Schuster.
- Price Waterhouse Coopers. (2012). Broader perspectives; Higher performance. State of Compliance: 2012 Study, (June), pp. 1–24.
- Roper, S., Du, J., & Love, J. H. (2008). Modelling the Innovation Value Chain. *Research Policy*, 37(6-7), 961–977.
- Sutcliffe, K. M., & McNamara, G. (2001). Controlling Practice in Organizations. *Organisational Science*, 12(4), 484–501.
- Tarantino, A. (2008). *Governance, Risk, and Compliance Handbook: Technology, Finance, Environmental, and International Guidance and Best Practices*. Wiley.
- Zahra, S., and George, G. (2002). Absorptive Capacity: A Review, Reconceptualization, and Extension, *Academy of Management Review* (27:2), pp. 185–203.