

## Innovative Contribution to Organisational Knowledge Management

### Strategy: A Team Action Learning Initiative

#### Abstract

The paradoxical requirements of knowledge sharing and information security bring various knowledge management (KM) issues that affect both individuals' day-to-day work and the overall organisation's performance. This was the basis of a case study tackled by a team from Loughborough University.

The Energy Technologies Institute (ETI) is an organisation that combines knowledge and expertise from partnerships with academia, industry and the UK government, in order to deliver innovative low carbon solutions. Operating within a complex governance structure, the organisation works to meet the expectations of various stakeholders, comply with legal parameters of its membership model (to protect its unique knowledge and arising intellectual property), deliver innovative solutions many of which are of a competitive nature, and, disseminate this knowledge effectively and on time. Thus, the management of both, 'knowledge sharing' and 'information security', is an operational challenge for the ETI.

The aim of the KM initiative was to (i) understand the current knowledge sharing and information security practices at the ETI and (ii) identify ways of improving knowledge sharing within and beyond the organisation.

The KM initiative consisted of the development of an innovative and creative Action Learning (AL) approach through which ETI project teams combined their knowledge and experiences to identify their organisation's current knowledge sharing and information security practices and collectively devised practical solutions. Thus, through the combined effort of its project teams, the ETI was able to learn effectively and efficiently as an organisation about its challenges and the subsequent changes required, incorporate these in its KM strategy and initiate relevant changes to improve its KM. In addition to the value and benefits it has brought for the ETI, this innovative initiative has made methodological, theoretical and practical contributions to and received excellent feedback from international KM and AL communities.

## Contents

1. Introduction to the nature of the Knowledge Management and/or Intellectual Capital initiative and its specific objectives .....	3
1.1 Objectives of the Knowledge Management initiative .....	4
2. The infrastructure i.e. people, systems, hardware, software etc. required to launch the initiative .....	5
2.1 Role of people .....	5
2.2 Approach and steps used to launch the initiative .....	5
2.3 Role of technology .....	7
3. The challenges that were encountered, how they developed and how they were overcome .	8
4. How the initiative was received by the users or participants .....	9
5. The efficiency, effectiveness or competitive advantage outcomes that were achieved and how they were measured and evaluated.....	9
6. Plans to further develop the initiative.....	10
The Knowledge Management Case Study Team .....	11

## 1. Introduction to the nature of the Knowledge Management and/or Intellectual Capital initiative and its specific objectives

Knowledge sharing is recognised as an essential activity for organisational success, hence organisations continuously aim to exploit existing knowledge, seek new ways to improve and increase knowledge sharing activities, as well as to identify and reduce possible knowledge sharing barriers. Similarly, protecting their valuable knowledge and intellectual property (IP) through information security measures is equally important for organisations. Information security measures aim to prevent the loss or leakage of an organisation's valuable information and manage the resulting cost of any loss. So, on the one hand knowledge sharing aims to encourage individuals to share knowledge with colleagues, organisational partners and suppliers, and on the other hand, information security initiatives aim to apply controls and restrictions to the knowledge that can be shared and how it is shared.



**Figure 1: The conflict of interest between knowledge sharing and information security**

The intrinsically paradoxical requirements of knowledge sharing and information security (see Figure 1) bring various challenges that affect both individuals' day-to-day work and the overall organisation's performance. These challenges formed the basis of a case study tackled by a team from Loughborough University.

The case study was carried out with the Energy Technologies Institute (ETI) – a UK-based organisation that is a public-private partnership set-up by the UK government and global energy

and engineering companies - BP, Caterpillar, EDF Energy, Rolls-Royce and Shell. By combining the knowledge and expertise from partnerships with academia, industry and the UK government, the ETI researches, develops and delivers innovation in low carbon energy solutions that will help the UK address its long term emissions reductions targets. Operating within a complex governance structure, the ETI works to meet the expectations of various stakeholders, comply with legal parameters of its membership model (to protect its unique knowledge and arising IP), deliver innovative solutions (many of which are of a competitive nature) and, disseminate this knowledge effectively and on time. Thus, the management of both, 'knowledge sharing' and 'information security', is an operational challenge for the ETI.

### **1.1 Objectives of the Knowledge Management initiative**

In order to identify ways in which the ETI can improve its knowledge sharing by effectively managing the relationship between its knowledge sharing and information security practices, understanding the current state of the two practices was vital. Therefore, the objectives of the KM initiative were to:

- I. understand the current knowledge sharing and information security practices at the ETI, and,
- II. identify ways of improving knowledge sharing within and beyond the organisation.

Using an Action Learning (AL) approach, central to the KM initiative design was the input from employees. The employees involved in the initiative not only participated by sharing their knowledge and experiences of the two practices and identifying the current issues, but they also became more empowered as teams to develop appropriate solutions that informed the organisation's KM strategy and initiated effective organisational change.

This case history discusses the infrastructure of the KM initiative and how an innovative and successful team AL approach was developed (section 2), the challenges that were encountered, how they developed and were overcome (section 3), as well as, how the initiative was received by the users or participants (section 4). How the efficiency and effectiveness outcomes were achieved and how they were measured (section 5) will also be discussed, followed by how the initiative was taken forward and what its contribution to the KM and AL communities is (section 6).

## 2. The infrastructure i.e. people, systems, hardware, software etc. required to launch the initiative

### 2.1 Role of people

Knowledge sharing is an activity that happens intentionally and voluntarily, and much of it in an organisation occurs between *individuals*. Equally, although information security measures are typically implemented and governed by dedicated individuals or teams in the organisation (such as IT), their impact in practice can only really be assessed through understanding the employees' day-to-day experiences of information security.

By taking into account the integral role of employees in the current practices, it was recognised that the KM initiative would need to be designed with the knowledge and experiences of the employees at its core. To elicit individual's knowledge and experiences and develop a snapshot of the knowledge sharing and information security practices, any qualitative data collection method, such as one-to-one interviews, questionnaires or focus groups, would have been sufficient. However, the aim of this initiative was more than understanding the current practices; the intention was to develop ways of improving practice, which would subsequently lead to improved organisational effectiveness and efficiency. Therefore, it was critical that the employees were engaged and become an active part of the initiative that would drive organisational change. With that in mind, a creative and novel AL approach was developed.

### 2.2 Approach and steps used to launch the initiative

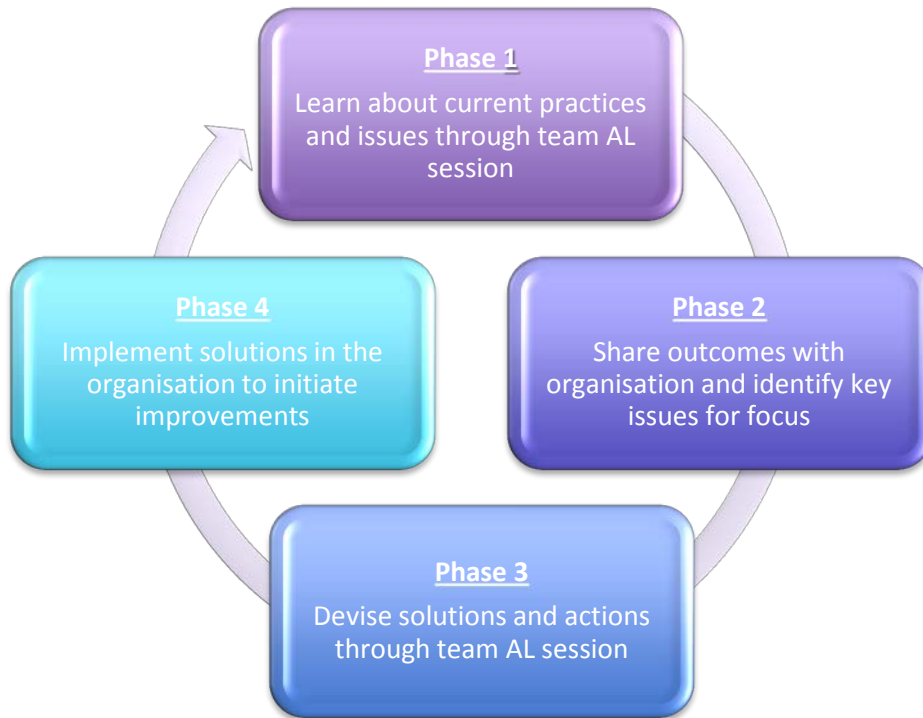
*"The end of learning is action, not knowledge" -Peter Honey*

AL is a process of reflection and learning to address and solve real organisation problems. The AL environment is specifically designed to be conducive to reflection, openness, knowledge sharing and learning. Additional to the learning that is generated by and for the employees involved in AL, the process can also facilitate organisational learning and be a powerful tool for transforming organisation culture, increasing learning capacity and empowering employees.

In conventional AL, a set of individuals are brought together for the purpose of AL, as opposed to using an intact team e.g. a departmental team or project team because of the additional complexities and group dynamics of an intact team such as relationships, hierarchy and the challenges of sticking to the AL principles e.g. confidentiality. However, for this initiative a novel and creative AL approach was developed where intact *project teams* at the ETI were specifically selected for participation in the AL sessions. The relationship between knowledge sharing and information security becomes even more important to explore in project environments as both

practices are equally important to ensure that a novel product or service is achieved from the project (through the collective knowledge sharing of the team), yet it should give the organisation advantage over its competitors by protecting the knowledge which leads to that product or service being generated.

The KM initiative consisted of a cyclic AL approach with three project teams at the ETI.



**Figure 2: Design of the KM initiative**

### **Phase 1**

The aim of Phase 1 was to learn about the current knowledge sharing and information security practices. Three team AL sessions were set-up (with a duration of three hours each), all consisting of the following discussion themes.

- Theme 1: Knowledge sharing (i.e. strengths and weaknesses, level of awareness and the challenges).
- Theme 2: The organisational culture (i.e. what motivates people culturally to share knowledge and the role of management in supporting and nurturing knowledge sharing).
- Theme 3: Information security (i.e. strengths and weaknesses, level of awareness and the challenges).

Each theme consisted of a set of questions, encouraging participants to reflect on and share relevant experiences. For example, one of the questions in Theme 1 was *'What do you think the strengths and weaknesses are of knowledge sharing externally for the ETI?'*. By sharing their

knowledge and experiences, the team engaged in deep discussions and reflection, and collectively developed a hierarchy of the key strengths and weaknesses of the ETI's knowledge sharing and information security practices.

Participants were also asked to complete a brief questionnaire by rating the effectiveness of various aspects of knowledge sharing and information security at the ETI.

## **Phase 2**

Phase 2 of the initiative consisted of the analysis of the findings from Phase 1, a summary report for the ETI and a meeting with the ETI to share the findings and progress. Next, based on the Phase 1 findings, the second set of AL workshops were designed.

## **Phase 3**

Phase 3 consisted of the second set of AL sessions (duration of three hours each) with the three project teams. During each session, the team's respective findings from Phase 1 were shared, focusing particularly on the issues identified, which led to deeper discussions and the development of appropriate actions and solutions to help the ETI overcome these issues and improve its knowledge sharing.

## **Phase 4**

In Phase 4, the outcomes of Phase 3 were analysed and the actions and solutions that the teams devised were shared with the ETI. The actions and solutions were then mapped against the existing KM activities to identify where they would be best aligned. Engagement took place with the project managers from each of the participating teams to help initiate the implementation of the KM initiative.

## **2.3 Role of technology**

Since the initiative's purpose was to identify current knowledge sharing and information security problems and improve knowledge sharing throughout and beyond the organisation, the focus was on the social dimensions (such as the employees' knowledge, experiences and organisational processes), rather than technological dimensions. However, technology does play an important role in both knowledge sharing and information security, and therefore a number of technology related areas were specifically explored under each of the three themes discussed in section 2.2 (e.g. systems, electronic sharing tools and technical access controls).

### 3. The challenges that were encountered, how they developed and how they were overcome

Although the KM initiative was overall successful, a number of challenges were faced along the way that can be expected from an initiative that intends to drive organisational level change.

During Phase 1, a major challenge was obtaining buy-in from the three participating teams. During the session, some individuals questioned whether there was value for them in participating, what significance their involvement held and how they would benefit from it. This challenge was overcome by explaining the integral role of the participants in the initiative and how their collective reflection, knowledge and experience sharing would enable the ETI to learn about its current practices and the associated issues. Further, it was also explained that the findings from this phase of the initiative (in particular the problems identified) would inform the subsequent phases and the team would use this learning and have the authority to develop suitable actions and solutions.

Another challenge faced during the first phase of the initiative was to get the participants in the project teams to focus on their experiences of the current practices '*as they are*', as opposed to how they '*should be*' (in theory). Thus, the participants had to be regularly reminded of this throughout the sessions.

During the second session (Phase 3) the teams were reminded of the outcomes of the first session and the issues they identified, and were asked to devise appropriate solutions and actions. It was challenging to shift the team's mindset from focusing on the problems to developing solutions. Some resistance was experienced from some of the participants in taking ownership of the solutions and actions they were devising. However, this was overcome once it was clarified that the solutions and actions being developed were not the sole responsibility of the team to implement and drive, but more so for them to champion the organisational level changes that will occur. Once the teams understood the value of the initiative and their role in driving organisational change, they became proactively engaged in developing the solutions and actions and took responsibility for championing the subsequent changes.

A logistical challenge faced was finding a suitable timeslot to set-up each of the sessions due to the busy schedules of the teams. After experiencing some difficulty with this in Phase 1, the subsequent sessions were planned and set-up well in advance.



#### **4. How the initiative was received by the users or participants**

For the KM initiative, three project teams were invited to voluntarily participate and each team responded positively. At the start, each participant was informed about the process of the initiative and what will be required from him or her in the form of participation, following which a consent form was completed. The participants were also briefed and assured of anonymity of their participation which helped to develop confidence and enabled them to participate without hesitation.

As discussed in section 3 earlier, during the initial stage of the initiative, buy-in from all of the participants was challenging and required further explanation of the aims and benefits. Once this was clear, the participants engaged enthusiastically and shared their knowledge, experiences and problems openly and honestly.

Further, in the second session (in Phase 3), despite the initial struggle, the participants in each of three project teams acted as a community and collectively devised solutions to the ETI's knowledge sharing and information security problems. The approach each of the teams took to devise the solutions and take ownership of championing the actions strongly suggested that the participants felt a sense of empowerment and responsibility in improving the organisation's practices through the KM initiative.

#### **5. The efficiency, effectiveness or competitive advantage outcomes that were achieved and how they were measured and evaluated**

The KM initiative enabled the ETI to learn about its current knowledge sharing and information security practices, their associated strengths and weaknesses, and the nature of the relationship between the two conflicting practices. More importantly, the ETI learned about the impact of information security measures on knowledge sharing. Being too cautious and overprotective of its knowledge and IP had previously created knowledge sharing barriers that affected day-to-day activities of employees, resulted in missed opportunities for timely exploitation of project outcomes and consequently impacted the organisation's performance as a knowledge generating and disseminating organisation whose outputs are knowledge driven. Becoming aware of the issues that employees experience and receiving proposed solutions by those employees, provided the ETI with a distinctive and enriched view of where it was at that stage and which changes needed to be initiated to improve the efficiency and effectiveness of its KM.

The effectiveness and efficiency of the KM initiative were evaluated through the outputs achieved. Through the initiative, the ETI generated individual, team and organisational level

learning as well as a new capacity to initiate organisational change through the engagement, trust and empowerment of its employees. Thus, the KM initiative has been important for initiating thoughtful and inclusive change. The learning and solutions developed throughout the KM initiative were incorporated in the ETI's KM strategy and aligned with relevant activities to improve knowledge sharing within and beyond the organisation.

## **6. Plans to further develop the initiative**

The KM initiative was a part of a PhD research in collaboration with the ETI. The initiative has not only been fruitful for the ETI in initiating improvements to achieve more efficiency and effectiveness in its KM activities, but has also had international impact and brought methodological, theoretical and practical benefits for the KM and AL communities.

For the KM arena, this initiative has introduced a fresh and powerful methodological approach underpinned by AL that can drive effective organisational change. Very often, the focus of KM initiatives is on technological interventions or solutions, despite the employees, practices and processes playing an integral role in an organisation's KM. In terms of the practical benefits, through this initiative, it is evident that by focusing on and empowering employees, an organisation can learn about its specific KM related practices, identify the strengths and weaknesses and develop informed solutions. Further, the involvement of employees throughout the initiative and their buy-in strengthens the organisation's capability and forms a strong foundation from which to implement KM changes and improves the chances of their success. The methodology of this initiative was shared in the International Conference on Intellectual Capital and Knowledge Management (ICICKM 2014) in Sydney where it received considerable positive feedback and was awarded the prize for 'Best PhD paper and presentation'.

The AL community has received this KM initiative extremely favorably. The case study was shared in the Action Learning and Action Research Association (ALARA) conference Australia in November 2014 and also in a workshop run by the Action Learning for Facilitators (ALF) network in London in March 2015. Both audiences acknowledged the novelty of the approach and praised the innovative theoretical and practical application of AL at the team level to address and improve organisational practices. It was recognised that the team-based approach has the potential to change mindsets in the AL community about the ways and settings in which AL can be used. Subsequently, the ALF network has invited further contribution and enlightenment on this KM initiative in a workshop in December 2015.

## The Knowledge Management Case Study Team

Ghosia Ahmed<sup>1</sup>, Gillian Ragsdell<sup>1</sup>, Wendy Olphert<sup>1</sup>, Mike Colechin<sup>2</sup>

<sup>1</sup>Loughborough University, Loughborough, United Kingdom

<sup>2</sup>The Energy Technologies Institute, Loughborough, United Kingdom