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HEALTH AND SAFETY EXECUTIVE

Senior Management Team

Knowledge management in HSE

A Paper by Patrick McDonald

Advisor: Richard Lewis

Cleared by Patrick McDonald on 18 November 2009

Issue

1. Summarises the thoughts of some SMT members about making progress with managing knowledge.

Timing

2. in the course of business

Recommendation

3. SMT is asked to note and comment on the views expressed in discussions with the CSA and indicate whether they agree with the conclusions that:
   - HSE needs to improve knowledge management
   - multiple and targeted approaches would have more success than a single approach
   - a toolkit of practices and techniques should be developed for units to use
   - senior managers' attention should principally be on improving people's behaviours and managers' leadership skills
4. This paper aims to record SMT's view before developing a firm proposition. SMT are asked to consider if and how they wish to progress following the CSA's discussions.

Background

5. In recent years, there have been a number of proposals to SMT that HSE establishes and develops its approach to Knowledge Management.[1]
6. CSAG was commissioned to propose approaches HSE could take. This paper outlines the points made in discussions between Patrick McDonald and five members of SMT[2]. These discussions addressed:
   - what good knowledge management looks like
   - whether HSE values its knowledge and manages it well

[1] Including *Managing information and knowledge in HSE* (HSE/04/056); *Science, evidence and innovation – taking HSE forward* (HSE/06/111);
[2] David Ashton, Kerr Wilson, Jane Willis, Gordon MacDonald & Eddie Morland

- giving emphasis to behaviour, technology or process
- leadership as a success factor
- next steps

7. The note prepared for these discussions is at Annex 1. It includes a chart at Annex 1.2 that lists some tools and techniques that enable organisations to share and manage knowledge.

Argument

8. There was broad consensus on definition. Knowledge Management was described as accessing the right knowledge and know-how from the right people at the right time. Doing it well requires much more than having technology and procedures: it requires people making the right connections with each other at the right time.
9. By managing and sharing knowledge better, HSE staff would be (for example):
    - codifying information for the future, including what has been done up to now and what's been achieved. A good example of this is stress management policy
    - developing a supportive lessons-learned culture where staff share learning before, during and after projects
    - searching out and talking to people with know-how and memory of past events
    - having more objective conversations with each other based on evidence, rather than rejecting evidence when its inconvenient
10. Recent examples of effective Knowledge Management in HSE include:
    - compiling the narrative of HSE's policy work going back to the early 90's by accessing records and people's recollections, on topics including workplace temperatures and violence at work
    - identifying who has critical knowledge in process safety leadership and land use planning, for 'harvesting' their knowledge before they retire
11. HSE was less effective when:
    - Routinely identifying people with the right knowledge or know-how was urgent
    - sharing knowledge between teams within and beyond directorates
    - demonstrating our systems worked as designed to the courts or to the Information Commissioner
    - a central or specific imperative is missing in HSE
    - individuals don't feel motivated or sense they lack permission to share knowledge
12. A single, universal approach in HSE would not work. How staff share knowledge - and how they are motivated to share it - varies. Staff donate knowledge more readily when they can clearly see the benefits of doing so to themselves and/or immediate colleagues. Whilst obvious, this is not often made explicit. Some frontline staff are not primarily gathering new knowledge, but they are applying existing knowledge which has been codified into their procedures. Here, it is important to motivate staff to keep the right data in COIN by demonstrating its

value to later events. By contrast, HSL staff generate and apply new knowledge which is a strong motivator for staff to share knowledge.

13. There are business risks with the current undefined approach, especially risks to business continuity and reputation. Examples included:
    - Where staff don't perceive that they have a knowledge role and don't make a connection between what they observe in inspections and investigations and a broader need for others to know;
    - where experienced staff leave HSE without managers assuring themselves that knowledge had been captured and shared beforehand;
    - serious consequences for HSE in the courts when similar information was not systematically or consistently handled in approvals' casework; or
    - where HSE fails to use existing evidence to make or support its negotiation position.
14. HSE has some way to go to embed ways of managing data and information including: organising and retrieving content from increasing volumes of information; the reliability of important content which can degrade unless they are kept current; the inelegance of systems where procedures are not fixed and where staff can chose what they do and don't do.
15. There is uncertainty about which issues to tackle first to have most impact. There is no sense that things are out of control, and equally, no sense of how mature HSE is at managing knowledge. SMT members recognised that they are responsible for motivating their staff to manage and share knowledge, including establishing the culture in which their staff thrive, and that this can't be delegated to one senior manager alone.
16. Knowledge Management maturity models identify leadership as a success factor. Leadership skills are required both to lead and support changes in systems and procedures, and to transform the environment where staff work together. Guidance for leaders to develop their approach in knowledge management is limited. While it's unclear how far leadership can be systematised for managing knowledge, it should be possible to develop ideas and approaches based on leadership training. These would principally address behaviours like breaking the silo mentality and having more objective debate.
17. Previous decisions of senior managers had unplanned consequences for sharing knowledge. For example, refocusing our efforts on core operational tasks and outputs in recent years may have given staff a wider impression of senior managers toughening up. A consequence is that there are fewer topic-based meetings and conferences, although senior managers recognise the value of these events in sharing knowledge and have shown they are willing to accept proposals to hold them.
18. Senior managers have a responsibility for and a role in developing excellence in all parts of their business. Senior managers can emphasise and demonstrate the value they place on knowledge by developing a work climate where staff understand what knowledge management can do for them.
19. There is a list of tools and techniques at Annex 1.2 that can enable improved performance during the knowledge lifecycle. Reviewing this list suggested HSE has adequate technology and processes in place. Attention needs to be given to all stages of organisational activity (including behaviours) and to the sharing and

re-use of information and knowledge. In particular, HSE should work on sharing knowledge at conferences and away days, supporting new teams with people with complementary knowledge and skills, storytelling, buddying, fairs, formal and informal networking, improvement teams, and action inquiry groups. A better understanding of the use of evidence in HSE would be needed.

20. Whichever tools are used, knowledge skills sets for senior managers and staff are required, and staff need to know which tools they are encouraged or required to use.

21. The discussions concluded that:

- HSE needs to improve knowledge management
- multiple and targeted approaches would have more success than a single approach
- a toolkit of practices and techniques should be developed for units to use
- senior managers' attention should principally be on improving people's behaviours and managers' leadership skills

22. What other government departments are doing helps place this in context. The Knowledge Council was established in 2007 to improve knowledge and information management in government. Its membership mainly includes Heads of Knowledge and Information Management and Chief Information Officers.

23. So far, it has focussed on issues like information rights, records policy, digital continuity, information security, information skills, professional development, collaboration etc. The emphasis is on transactional work, rather than on supporting staff to manage and share knowledge better.

24. Only a few are progressing beyond this, giving equal emphasis to the behavioural issues included in the CSA's discussions. For example, GCHQ has a programme to support managers deliver improvements in learning and sharing lessons before, during and after doing important work.

25. An approach that is being used in BIS is the creation of their own knowledge council. Senior staff from business units and across disciplines are responsible for establishing and implementing their own knowledge management priorities, but use the council as a means of sharing ideas and learning from each other, and agreeing corporate approaches when they are required.

Action

26. SMT is asked to note and comment on the views expressed in discussions with the CSA and indicate whether they agree with the conclusions given at paragraph 21.

27. SMT are asked to consider if and how they wish to progress following the CSA's discussions.

28. This paper is being taking in conjunction with another on the creation of Chief Knowledge and Information Officer in the SCS. SMT are asked to consider how HSE might combine the outcome of discussing both papers.

ANNEX 1

To: David Ashton
Gordon MacDonald
Jane Willis
Eddie Morland
Kerr Wilson

From: Richard Lewis
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Date: 27 August 2009

Cc: Patrick McDonald

HSE and knowledge management

For information and a request at para 2

1. In recent years, there have been a number of proposals to SMT that HSE clarifies and progresses its overall approach to Knowledge Management.[3]

2. CSAG has been commissioned to propose HSE's approach. Patrick wishes to clarify SMT members' views – on the requirement and on addressing key success factors - before formally responding to SMT. We're proposing separate discussions with a sub-set of SMT members to explore the approach HSE could adopt, and will be in touch shortly to set this up.

3. The debate on definition seems endless and distracting.[4] A practical view of managing knowledge is about how we support our people, and nurture the culture and the technology that will get them exchanging their knowledge with each other. It isn't about creating a document that captures everything that anybody ever knew.

4. Technology and process are important enablers: organisational factors that support, encourage and motivate people are more important. I propose we stress behaviours like leadership, communicating and sharing.

5. The remainder of this note contains points on
- Risks to manage and benefits to gain
- A view of HSE's maturity
- An outline of the tools available to improve how we share and manage knowledge, and
- An outline of the programme HSL is running to improve capability in HSL and HSE

which we can include in discussion.

Richard Lewis

[3] Including *Managing information and knowledge in HSE* (HSE/04/056); *Science, evidence and innovation – taking HSE forward* (HSE/06/111);

[4] HM Government's Knowledge Council defines ***information*** as 'produced through processing, manipulating and organising data to answer questions, adding to the knowledge of the receiver' and ***knowledge*** as 'what is known by a person or persons. Involves interpreting information received, adding relevance and context to clarify the insights the information contains.'

Background

1. Knowledge management lacks an agreed core rationale, and the case for it isn't as immediately compelling as managing finance or HR.

> *"You can't manage knowledge – nobody can. What you can do, what an organisation should do, is to manage the environment that optimises knowledge." Larry Prusak, IBM.*

2. It could be argued that HSE has come this far without agreed knowledge management activity. Value is being delivered from HSE's staff knowledge, perhaps at disproportionate effort to themselves, even where we don't

- Connect people to people to create, share and exploit knowledge more effectively
- Connect people to the information they need to develop their knowledge in new ways, or
- Connect people to the tools they need to process information and knowledge.

Business Risk

3. Shortcomings in information and knowledge management are business risks: risks of continuity and consistency of approach in our engagement with stakeholders and ultimately, a risk of a damaged reputation. For example, HSE is seeking to mitigate some of these by making improvements in knowledge sharing in its LPG action plan.

4. The government's recent response to data losses identified four information risks to manage: governance and culture; information management and information strategy; the human dimension; information availability and use. It is stronger on process and technology than on behaviour, but the guidance does focus on helping people to do the right thing. (Annex 1.1)

Benefit

5. By contrast, the benefits of improving knowledge management in the public service include:

- Meeting rising public expectations of our services
- Delivering more service with fewer resources
- Increased flexibility and responsiveness, and
- Improved partnership working

Our maturity

6. There are maturity models which can be used to assess our position and our ability to deliver further value. PA Consulting assessed central government departments in 2008 against key success factors such as information and data, business process and technology and against other key success factors such as skills, people/culture and leadership.

7. HSE's performance is comparable with other government departments – we could all do better. In particular, HSE has some way to go on the leadership, people/culture and technology factors.

8. PA Consulting's view of central government is that

- Departments have the potential to double the return on intellectual capital
- Departments get more benefit from their staff than they deserve

- Senior managers are not aware of the symptoms of poor knowledge health in the business
- A one-size-fits-all approach will not work
- Staff are working harder than their contract says they should, and managers are wasting their commitment

Tools: organisation, process and technology

9. There isn't a single solution: there are many tools in the toolkit that we use and some we can start using. (Annex 1.2) The annex includes some of the tools available for managing knowledge at different stages of a cycle and identifies organisational factors alongside process and technology.

What we are doing

10. HSE and HSL are working together to improve our knowledge management capability by building on what we have already delivered and identifying what else needs doing that we can achieve.

11. In the first year of a three-year programme, we are

- identifying existing KM approaches within HSE, to assess their usefulness and wider application in HSE
- examining organisational issues of KM in HSE, initially by addressing KM needs within a business unit
- progressing straight-forward techniques for knowledge sharing and retention which HSE managers can use (e.g. knowledge harvesting)
- addressing other factors that improve knowledge sharing, such as ensuring staff apply lessons learned
- examining options for organising and retrieving information from unstructured sources (documents)

The generic information risks to manage are[5]:

Governance and culture

- Lack of comprehensive oversight and control (so anything can go wrong)
- When something goes wrong, handling it badly and not learning (so it can happen again)
- Third parties let you down (letting down your customers and your reputation suffers)
- New business processes don't take information risk into account (with serious consequences)

Information management and information integrity

- Critical information is wrongly destroyed, not kept or can't be found when needed (leading to reputational damage or large costs)
- Lack of basic records management disciplines (can have wide-ranging consequences)
- Inaccurate information (causes the wrong decision to be made or the wrong action to be taken)
- Vital electronic information becomes unreadable due to technical obsolescence (with legal, reputational or financial consequences)
- Critical information is lost (with legal, reputational or financial consequences)

The human dimension

- Despite having procedures and rules, staff, acting in error, do the wrong thing (and things go badly wrong)
- Despite having procedure and rules, 'insiders', acting deliberately, do the wrong thing (and things go badly wrong)
- External parties get your information illegally (and expose it, act maliciously or defraud you or your customers)

Information availability and use

- Inappropriate disclosure of sensitive personal information (causing reputational damage or worse)
- Failure to disclose critical information for case management / protection (at worst leading to loss of life) failure to utilise the value of an information asset (leading to a waste of public money)
- Failure to allow information to get to the right people at the right time (leading your service to fail your customers)

[5] HM Government. *Managing information risk: a guide for accounting officers, board members and senior information risk owners.* 2008: http://www.nationalarchives.gov.uk/services/publications/information-risk.pdf

Annex 1.2

Knowledge cycle	Knowledge and information enablers		
	Organisational – enabling 50% improvement	Processes – enabling 30% improvement	Technology – enabling 20% improvement
Creation & acquisition *of knowledge and information*	• Vision and strategy • Leadership and sponsorship • Ownership and Culture • Networks, communities and contacts • Research skills • Knowledge agents • Ideas pipeline	• External information channels • Library and information services • Planning new activities with a knowledge lens • Learning before doing • Creativity-based meetings processes	• Portal – based information access • Search, browsing and navigation tools • Cross-source retrieval • Text and Data mining • Informatics • Alerting services
Capturing, structuring & maintenance *of knowledge and information*	• Information Architecture and standards • Organisational taxonomy • Information Policy • Good information management practice • KIM team champions • Communities • Domain Managers	• Information and Knowledge Audits • Operational IM processes • Learning whilst doing • Knowledge harvesting • KIM Implementation Plan • Measurement and improvement • Taxonomy and metadata • Stories and anecdotes	• Automated document templates • Team file/folder structures • EDRMS • Content management tools • Expertise profiling • Knowledge assets • intranet and extranet • Information classification
Sharing & re-use *of knowledge and information*	• Communities • Knowledge agent role • Share fairs • Facilitated audience with…	• After Action Reviews • Learning after doing • Reward, recognition and incentives • Shared events calendar • Internal communication channels	• Yellow pages – know who • Knowledge assets • Groupware and collaboration • E-learning • Best practice data bases

Source: Creatifica Associates Ltd. Knowledge Management Foundation 2009

Colour key (personal view from R Lewis – added after discussions)

We do this well
Sometimes we do this well (or not very often)
We don't do this (or not very well)